



# Test Report: BIC-2200-24

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AC<->DC Bidirectional Power Supply with Energy Recycle Function

## ■ DESIGN VERIFY TEST

Output Function Test (AC to DC Direction)

Input Function Test(AC to DC Direction)

Output Function Test (DC to AC Direction)

Input Function Test(DC to AC Direction)

Protection Function Test

Control Function Test

Component Stress Test

## ■ SAFETY & E.M.C. TEST

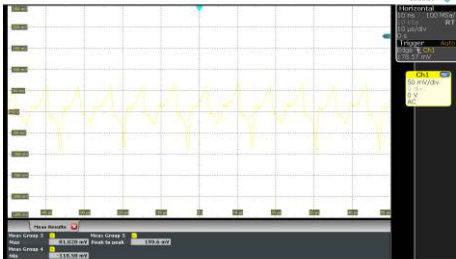
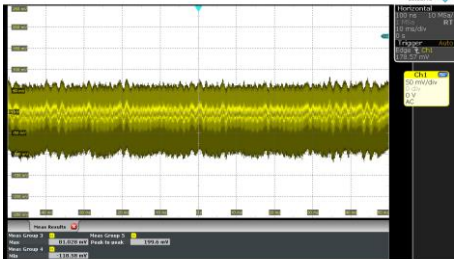
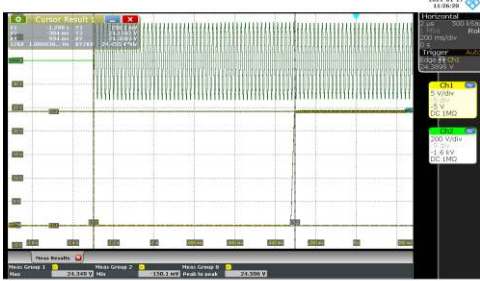
Safety Test

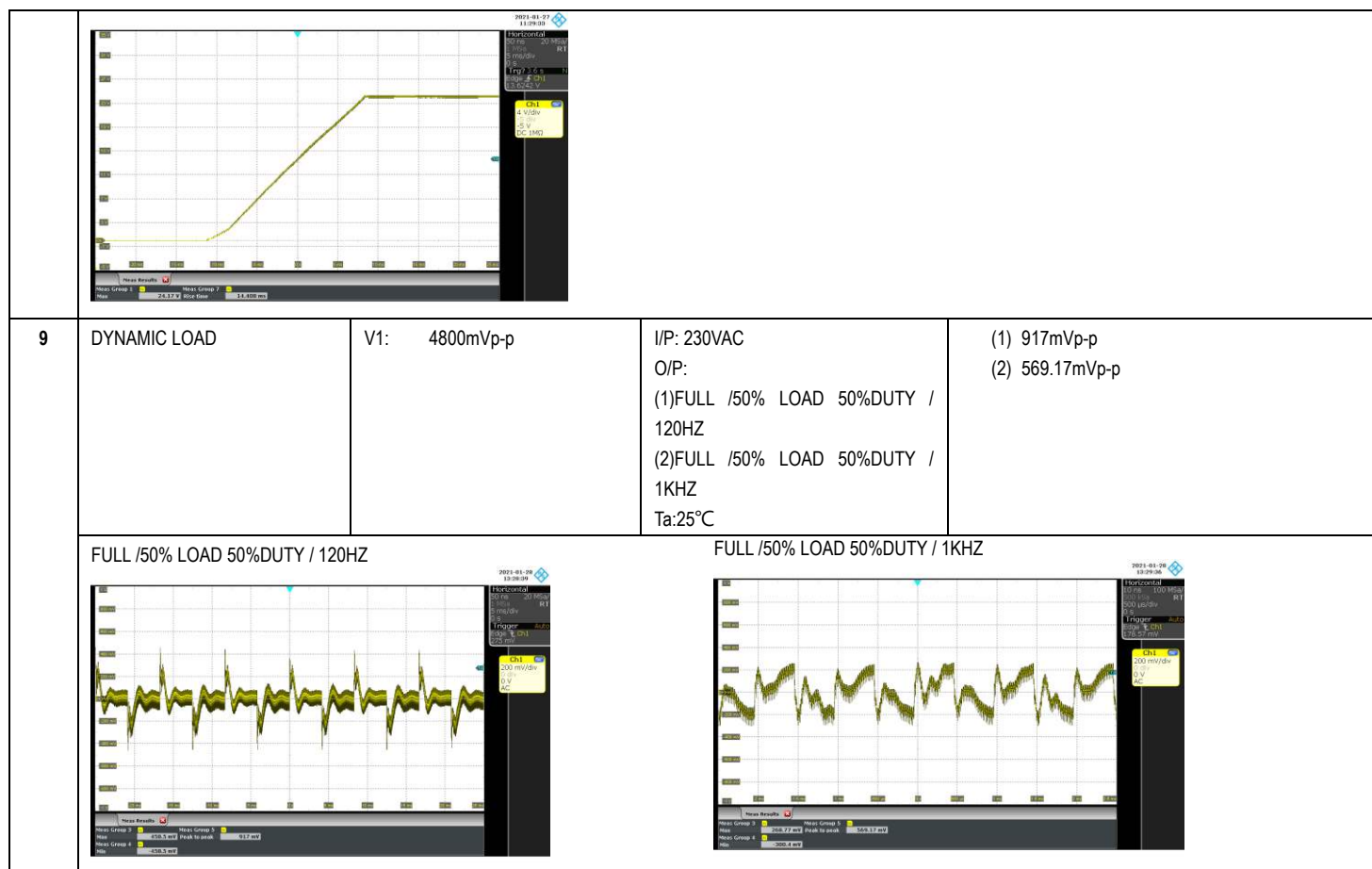
E.M.C. Test

## ■ RELIABILITY TEST

ENVIRONMENT TEST

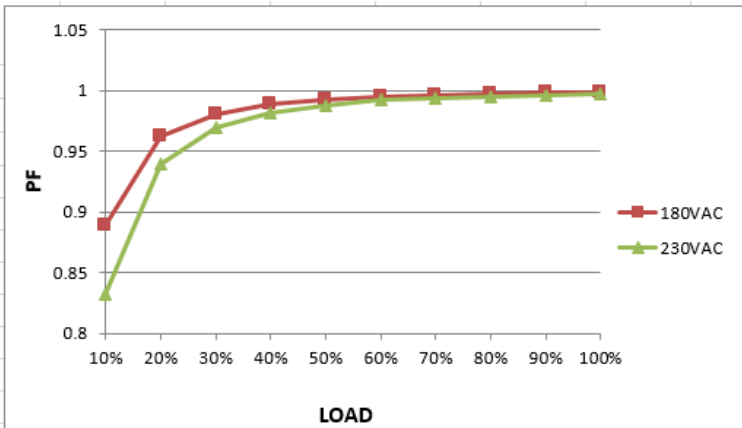
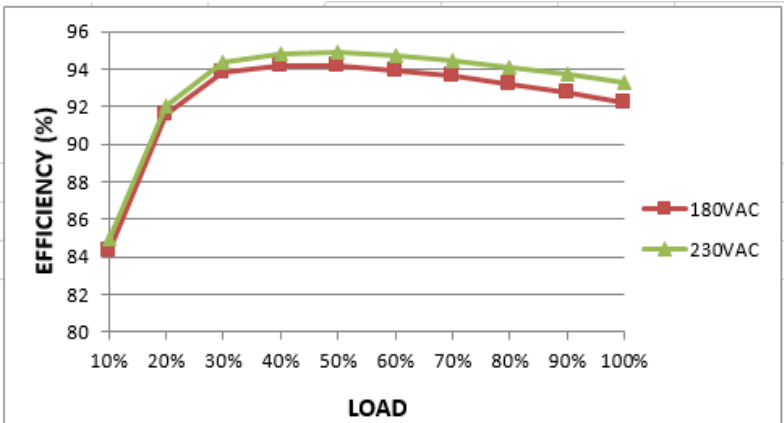
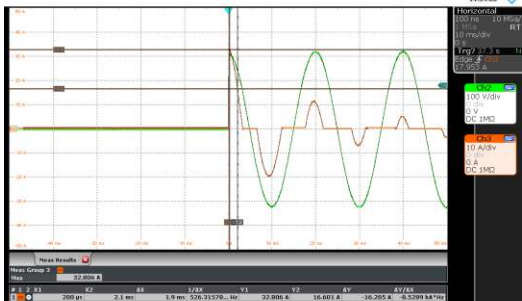
## DESIGN VERIFY TEST

| NO                                                                                                                                                                                                                                           | TEST ITEM                      | SPECIFICATION     | TEST CONDITION                                        | RESULT              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------|-------------------------------------------------------|---------------------|
| 1                                                                                                                                                                                                                                            | OUTPUT VOLTAGE<br>ADJUST RANGE | CH1: 19V~ 28 V    | I/P : 230 VAC<br>O/P : MIN LOAD<br>Ta : 25°C          | 18.4V~28.9V/230VAC  |
| 2                                                                                                                                                                                                                                            | VOLTAGE TOLERANCE (Max)        | V1: 1%~ -1 %      | I/P: 180VAC /264VAC<br>O/P:FULL/ MIN. LOAD<br>Ta:25°C | V1: 0.66%~ -0.59 %  |
| 3                                                                                                                                                                                                                                            | LINE REGULATION (Max)          | V1: 0.5 %~ -0.5 % | I/P: 180VAC~ 264VAC<br>O/P:FULL LOAD<br>Ta:25°C       | V1: 0.06 %~ -0.06 % |
| 4                                                                                                                                                                                                                                            | LOAD REGULATION(Max)           | V1: 0.5%~ -0.5%   | I/P: 230VAC<br>O/P:FULL ~MIN LOAD<br>Ta:25°C          | V1: 0.05 %~ 0.03 %  |
| 5                                                                                                                                                                                                                                            | OVER/UNDERSHOOT TEST           | < ±10%            | I/P: 230VAC<br>O/P:FULL LOAD<br>Ta:25°C               | <10%                |
| 6                                                                                                                                                                                                                                            | RIPPLE & NOISE(Max )           | V1: 260mVp-p      | I/P:230VAC<br>O/P:FULL LOAD<br>Ta:25°C                | V1: 199.6mVp-p      |
| <div> <div>high frequency :</div>  <div>low frequency :</div>  </div> |                                |                   |                                                       |                     |
| 7                                                                                                                                                                                                                                            | SET UP TIME(Max)               | 230VAC/1800ms     | I/P : 230 VAC<br>O/P : FULL LOAD<br>Ta : 25°C         | 230VAC/ 994ms       |
| INPUT=230VAC/50HZ @ FULL LOAD<br>CH1 : Output Voltage CH2 : AC Input Voltage<br>                                                                          |                                |                   |                                                       |                     |
| 8                                                                                                                                                                                                                                            | RISE TIME (Max)                | 230VAC/60ms       | I/P : 230 VAC<br>O/P : FULL LOAD<br>Ta : 25°C         | 230VAC/14.4ms       |
| INPUT=230VAC/50HZ @ FULL LOAD<br>CH1 : Output Voltage                                                                                                                                                                                        |                                |                   |                                                       |                     |



### INPUT FUNCTION TEST(AC to DC Direction)

| NO | TEST ITEM             | SPECIFICATION            | TEST CONDITION                                                                                                                                                      | RESULT                         |
|----|-----------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| 1  | INPUT VOLTAGE RANGE   | 180VAC~264VAC            | (1) I/P: TESTING<br>O/P: FULL LOAD<br>Ta:25°C                                                                                                                       | (1) 165V~264V                  |
|    |                       |                          | I/P:<br>LOW-LINE-3V=177 V<br>HIGH-LINE+15%=300 V<br>O/P: FULL/MIN LOAD<br>(PLEASE CHECK DERATING CURVE)<br>ON: 30 Sec OFF: 30 Sec 10MIN<br>(POWER ON/OFF NO DAMAGE) | TEST: OK                       |
| 2  | INPUT FREQUENCY RANGE | 47HZ ~63 HZ<br>NO DAMAGE | I/P: 180VAC ~264 VAC<br>O/P: FULL~MIN LOAD<br>Ta:25°C                                                                                                               | TEST: OK                       |
| 3  | INPUT CURRENT (Typ.)  | 230V/ 11A                | I/P : 230 VAC<br>O/P : FULL LOAD<br>Ta : 25°C                                                                                                                       | I =10.34A/ 230VAC              |
| 4  | LEAKAGE CURRENT       | < 2mA / 230 VAC          | I/P : 230 VAC<br>O/P : Min LOAD<br>Ta : 25°C                                                                                                                        | L-FG : 1.2 mA<br>N-FG : 1.2 mA |
| 5  | POWER FACTOR (Typ.)   | 0.98/ 230VAC             | I/P : 230 VAC<br>O/P : FULL LOAD<br>Ta : 25°C                                                                                                                       | PF=0.9965/230VAC               |

|   |                                                                                                                                                                    |                                                                                     |                                               |                                     |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------|
|   | P.F vs LOAD                                                                                                                                                        |   |                                               |                                     |
| 6 | EFFICIENCY(Typ.)                                                                                                                                                   | 93%                                                                                 | I/P:230 VAC<br>O/P: 75% LOAD<br>Ta:25°C       | 93.02%                              |
|   | EFFICIENCY vs LOAD                                                                                                                                                 |  |                                               |                                     |
| 7 | INRUSH CURRENT(Typ.)                                                                                                                                               | 230V/35A<br>COLD START                                                              | I/P : 230 VAC<br>O/P : FULL LOAD<br>Ta : 25°C | I =32.8A/ 230VAC<br>T50=1900us/230V |
|   | INPUT=230VAC/50HZ @ FULL LOAD<br>CH2 : AC Input Voltage CH4 : Input current<br> |                                                                                     |                                               |                                     |
| 8 | TOTAL DISTORTION HARMONIC                                                                                                                                          | <3%                                                                                 | I/P : 230VAC<br>O/P : FULL LOAD<br>Ta : 25°C  | THD = 1.9%                          |

### OUTPUT FUNCTION TEST(DC to AC Direction)

| NO | TEST ITEM                                  | SPECIFICATION            | TEST CONDITION                              | RESULT             |
|----|--------------------------------------------|--------------------------|---------------------------------------------|--------------------|
| 1  | RATED OUTPUT POWER<br>(Typ.) (@230V, 50Hz) | 1725VA                   | I/P:12VDC<br>O/P: FULL LOAD<br>Ta:25°C      | 1707.5VA           |
| 2  | VOLTAGE RANGE                              | 180VAC~264VAC            | I/P:24VDC<br>O/P: TESTING<br>Ta:25°C        | (1) 170 VAC~270VAC |
| 3  | FREQUENCY RANGE                            | 47HZ ~63 HZ<br>NO DAMAGE | I/P:24VDC<br>O/P:FULL~MIN LOAD<br>Ta:25°C   | TEST: OK           |
| 4  | AC CURRENT (Typ.)                          | 230VAC/ 7.5 A            | I/P : 24VDC<br>O/P : FULL LOAD<br>Ta : 25°C | I =7.3A/ 230VAC    |
| 5  | POWER FACTOR (Typ.)                        | 0.99/ 230VAC             | I/P : 24VDC<br>O/P : FULL LOAD<br>Ta : 25°C | PF=0.994/230VAC    |
| 6  | EFFICIENCY(Typ.)                           | 93%                      | I/P: 24VDC<br>O/P:75%LOAD<br>Ta:25°C        | 93.3%              |
| 7  | TOTAL HARMONIC<br>DISTORTION               | <3%                      | I/P : 24VDC<br>O/P : FULL LOAD<br>Ta : 25°C | THD = 2.7 %        |

### INPUT FUNCTION TEST(DC to AC Direction)

| NO | TEST ITEM         | SPECIFICATION | TEST CONDITION                              | RESULT                                                      |
|----|-------------------|---------------|---------------------------------------------|-------------------------------------------------------------|
| 1  | RATED INPUT POWER | 1800W         | I/P : 24VDC<br>O/P : FULL LOAD<br>Ta : 25°C | 1828W                                                       |
| 2  | DC VOLTAGE RANGE  | 19VDC ~28VDC  | I/P : 24VDC<br>O/P : FULL LOAD<br>Ta : 25°C | 19VDC/76.14A<br>24VDC/75.06A<br>28VDC/64.68A/ AUTO DERATING |
| 3  | MAX INPUT CURRENT | 75A           | I/P : 24VDC<br>O/P : FULL LOAD<br>Ta : 25°C | 75.06A                                                      |

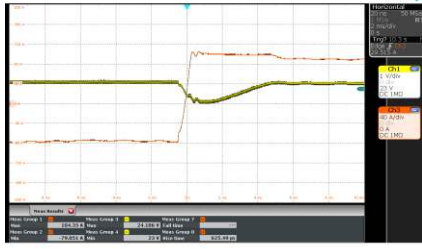
### PROTECTION FUNCTION TEST

| NO | TEST ITEM            | SPECIFICATION                                                                                                                                                                                                                                      | TEST CONDITION                                                                                                                                                                | RESULT                                                                                                                                                                                                                                                                                                                  |
|----|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | OVER LOAD PROTECTION | 105%~ 115 %<br><br><b>AC to DC Direction:</b><br>Constant current limiting, shut down DC O/P voltage 5 sec. after DC O/P voltage is down low, re-power on to recover<br><br><b>DC to AC Direction:</b><br>Not accurable with constant power design | <b>AC to DC Direction</b><br>I/P: 264VAC<br>I/P: 230VAC<br>I/P: 180VAC<br><br><b>DC to AC Direction</b><br>I/P: 19VDC<br>I/P: 24VDC<br>I/P: 28VDC<br>O/P:FULL LOAD<br>Ta:25°C | <b>AC to DC Direction</b><br>112.2%/ 264VAC<br>112.2%/ 230VAC<br>112.2%/180VAC<br>PROTECTION TYPE :<br>Constant current limiting, shut down DC O/P voltage 5 sec. after DC O/P voltage is down low, re-power on to recover<br><b>DC to AC Direction:</b><br>19VDC/76.14A<br>24VDC/75.06A<br>28VDC/64.68A/ AUTO DERATING |

|   |                             |                                                                                             |                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
|---|-----------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                             |                                                                                             |                                                                                                                                           | PROTECTION TYPE :<br>Not accurable with constant power design                                                                                                                                                                                                                                |
| 2 | OVER VOLTAGE PROTECTION     | 33.6V~39.2V<br>Protection type :Shut down o/p voltage, re-power on to recover               | I/P: 264VAC<br>I/P: 230VAC<br>I/P: 180VAC<br>O/P:MIN LOAD<br>Ta:25°C                                                                      | <b>AC to DC Direction</b><br>35.17V/ 264VAC<br>35.17V/ 230VAC<br>35.17V/ 180VAC<br><b>PROTECTION TYPE :</b><br>Shut down o/p voltage, re-power on to recover                                                                                                                                 |
| 3 | OVER TEMPERATURE PROTECTION | Protection type : Shut down o/p voltage, recovers automatically after temperature goes down | <b>AC to DC Direction</b><br>I/P: 264VAC<br>I/P: 180VAC<br><br><b>DC to AC Direction</b><br>I/P: 19VDC<br>I/P: 28VDC<br><br>O/P:FULL LOAD | <b>AC to DC Direction</b><br>O.T.P. Active<br>Protection type :<br>Shut down o/p voltage, recovers automatically after temperature goes down<br><b>DC to AC Direction</b><br>O.T.P. Active<br>Protection type :<br>Shut down o/p voltage, recovers automatically after temperature goes down |
| 4 | SHORT PROTECTION            | SHORT EVERY OUTPUT<br>1 HOUR NO DAMAGE                                                      | I/P: 264VAC<br>I/P: 180VAC<br><br>I/P: 19VDC<br>I/P: 28VDC<br><br>O/P: FULL LOAD<br>Ta:25°C                                               | <b>AC to DC Direction</b><br>NO DAMAGE<br><b>PROTECTION TYPE :</b><br>Shut down o/p current, re-power on to recover<br><br><b>DC to AC Direction</b><br>NO DAMAGE<br><b>PROTECTION TYPE :</b><br>shut down O/P voltage. re-power on to recover                                               |
| 5 | ISLANDING PROTECTION        | NO DAMAGE<br><b>PROTECTION TYPE :</b><br>Shut down o/p voltage, re-power on to recover      | IEC62116<br>I/P: 108.4VDC<br>O/P: FULL LOAD<br><br>I/P: 94VDC<br>O/P: 50% LOAD<br><br>I/P: 79.6VDC<br>O/P: 10% LOAD<br><br>Ta:25°C        | <b>DC to AC Direction</b><br>NO DAMAGE<br><b>PROTECTION TYPE :</b><br>Shut down o/p voltage, re-power on to recover                                                                                                                                                                          |

## CONTROL FUNCTION TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|-----------|---------------|----------------|--------|
|----|-----------|---------------|----------------|--------|

| 1                  | AUXILIARY POWER (AUX)                                               | <p>Auxiliary voltage output, 11.4~12.6V, referenced to GND-AUX (pin 2,4). The maximum output current is 0.5A. This output is not controlled by the Remote ON/OFF control.</p> <p>I/P: 230 VAC /12VDC<br/>O/P:FULL LOAD<br/>Ta:25°C</p> <p>Test Result :</p> <table> <tr> <th></th><th>TOLERANCE</th><th>RIPPLE</th></tr> <tr> <td>SPEC</td><td>11.4~12.6 V</td><td>150mVp-p</td></tr> <tr> <td>TEST RESULT</td><td>11.74V</td><td>50mV</td></tr> </table>                                                                                                               |      | TOLERANCE                                                           | RIPPLE              | SPEC               | 11.4~12.6 V         | 150mVp-p | TEST RESULT         | 11.74V  | 50mV               |          |    |         |     |
|--------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------|---------------------|--------------------|---------------------|----------|---------------------|---------|--------------------|----------|----|---------|-----|
|                    | TOLERANCE                                                           | RIPPLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| SPEC               | 11.4~12.6 V                                                         | 150mVp-p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| TEST RESULT        | 11.74V                                                              | 50mV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| 2                  | REMOTE ON/OFF CONTROL                                               | <p>I/P: 230 VAC /12VDC<br/>O/P:FULL LOAD<br/>Ta:25°C</p> <p>Test Result :</p> <table> <tr> <th>MODE</th><th>electrical signal or dry contact between Remote ON/OFF and +12V-AUX</th><th>Power Supply Status</th></tr> <tr> <td rowspan="2">AC to DC Direction</td><td>SW SHORT</td><td>ON</td></tr> <tr> <td>SW OPEN</td><td>OFF</td></tr> <tr> <td rowspan="2">DC to AC Direction</td><td>SW SHORT</td><td>ON</td></tr> <tr> <td>SW OPEN</td><td>OFF</td></tr> </table>                                                                                                | MODE | electrical signal or dry contact between Remote ON/OFF and +12V-AUX | Power Supply Status | AC to DC Direction | SW SHORT            | ON       | SW OPEN             | OFF     | DC to AC Direction | SW SHORT | ON | SW OPEN | OFF |
| MODE               | electrical signal or dry contact between Remote ON/OFF and +12V-AUX | Power Supply Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| AC to DC Direction | SW SHORT                                                            | ON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
|                    | SW OPEN                                                             | OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| DC to AC Direction | SW SHORT                                                            | ON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
|                    | SW OPEN                                                             | OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| 3                  | BIDIRECTION SWITCH TIME(DEFAULT)                                    | <p>I/P: 230 VAC /24VDC<br/>O/P:FULL LOAD<br/>Ta:25°C</p> <p>Test Result :</p> <table> <tr> <th>MODE</th><th>BIDIRECTION SWITCH TIME</th><th>Result</th></tr> <tr> <td>AC to DC Direction</td><td>1ms</td><td>626 us</td></tr> <tr> <td>DC to AC Direction</td><td>1ms</td><td>750 us</td></tr> </table> <div>   </div>                                                                           | MODE | BIDIRECTION SWITCH TIME                                             | Result              | AC to DC Direction | 1ms                 | 626 us   | DC to AC Direction  | 1ms     | 750 us             |          |    |         |     |
| MODE               | BIDIRECTION SWITCH TIME                                             | Result                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| AC to DC Direction | 1ms                                                                 | 626 us                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| DC to AC Direction | 1ms                                                                 | 750 us                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| 4                  | ALARM SIGNAL                                                        | <p>1. DC OK SIGNAL<br/>High (4.5 ~ 5.5V) : When the <math>V_{out} \leq 80\% \pm 5\%</math>.<br/>Low (-0.5 ~ 0.5V) : When the <math>V_{out} \geq 80\% \pm 5\%</math>.<br/>The maximum sourcing current is 4mA and only for output.</p> <p>I/P: 230 VAC/12VDC<br/>O/P:FULL LOAD<br/>Ta:25°C</p> <p>Test Result :</p> <table> <tr> <th>MODE</th><th>Vout</th><th>DC OK SIGNAL</th></tr> <tr> <td rowspan="2">AC to DC Direction</td><td><math>V_{out} \leq 75\%</math></td><td>4.994V</td></tr> <tr> <td><math>V_{out} \geq 85\%</math></td><td>-0.038V</td></tr> </table> | MODE | Vout                                                                | DC OK SIGNAL        | AC to DC Direction | $V_{out} \leq 75\%$ | 4.994V   | $V_{out} \geq 85\%$ | -0.038V |                    |          |    |         |     |
| MODE               | Vout                                                                | DC OK SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
| AC to DC Direction | $V_{out} \leq 75\%$                                                 | 4.994V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |
|                    | $V_{out} \geq 85\%$                                                 | -0.038V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |                                                                     |                     |                    |                     |          |                     |         |                    |          |    |         |     |

|                    |                                                    | <div>2. T-ALARM<br/>High (4.5 ~ 5.5V) : When the internal temperature exceeds the limit of temperature alarm, or when fan fails.<br/>Low (-0.5 ~ 0.5V) : When the internal temperature is normal, and when fan works normally.<br/>The maximum sourcing current is 4mA and only for output.<br/><br/>I/P: 230 VAC/12VDC<br/>O/P:FULL LOAD<br/>Ta:25°C<br/><br/>Test Result :</div> <table><tr><th>MODE</th><th>P.SU STATUS</th><th>Vo</th><th>T-ALARM SPEC</th><th>T-ALARM TEST</th></tr><tr><td rowspan="3">AC to DC Direction</td><td>NORMAL</td><td>100%±2%</td><td>-0.5 ~0.5V</td><td>-0.038V</td></tr><tr><td>OTP</td><td>0V</td><td>4.5~5.5V</td><td>4.94V</td></tr><tr><td>FAN LOCK</td><td>0V</td><td>4.5~5.5V</td><td>4.94V</td></tr></table> <div>3. FAULT<br/>High (4.5 ~ 5.5V) : When the input voltage is <math>\geq 175V_{rms}</math> · OLP, SCP,OTP,OVP,AC Fail,fan lock,islanding protection<br/>Low (-0.5 ~ 0.5V) : When the input voltage is <math>\leq 165V_{rms}</math>.<br/>The maximum sourcing current is 4mA and only for output.</div> <table><tr><th>MODE</th><th>Vout</th><th>FAULT SIGNAL</th></tr><tr><td rowspan="2">AC to DC Direction</td><td><math>VAC \geq 175V_{rms}</math></td><td>5.027v</td></tr><tr><td><math>VAC \leq 165V_{rms}</math>.</td><td>-0.004V</td></tr></table> |                                                                                                   |                                                                                                                                                                                                                     |                                                                                                                                                                                                                        | MODE | P.SU STATUS | Vo | T-ALARM SPEC | T-ALARM TEST | AC to DC Direction | NORMAL | 100%±2% | -0.5 ~0.5V | -0.038V | OTP | 0V | 4.5~5.5V | 4.94V | FAN LOCK | 0V | 4.5~5.5V | 4.94V | MODE | Vout | FAULT SIGNAL | AC to DC Direction | $VAC \geq 175V_{rms}$ | 5.027v | $VAC \leq 165V_{rms}$ . | -0.004V |
|--------------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|----|--------------|--------------|--------------------|--------|---------|------------|---------|-----|----|----------|-------|----------|----|----------|-------|------|------|--------------|--------------------|-----------------------|--------|-------------------------|---------|
| MODE               | P.SU STATUS                                        | Vo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | T-ALARM SPEC                                                                                      | T-ALARM TEST                                                                                                                                                                                                        |                                                                                                                                                                                                                        |      |             |    |              |              |                    |        |         |            |         |     |    |          |       |          |    |          |       |      |      |              |                    |                       |        |                         |         |
| AC to DC Direction | NORMAL                                             | 100%±2%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -0.5 ~0.5V                                                                                        | -0.038V                                                                                                                                                                                                             |                                                                                                                                                                                                                        |      |             |    |              |              |                    |        |         |            |         |     |    |          |       |          |    |          |       |      |      |              |                    |                       |        |                         |         |
|                    | OTP                                                | 0V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4.5~5.5V                                                                                          | 4.94V                                                                                                                                                                                                               |                                                                                                                                                                                                                        |      |             |    |              |              |                    |        |         |            |         |     |    |          |       |          |    |          |       |      |      |              |                    |                       |        |                         |         |
|                    | FAN LOCK                                           | 0V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4.5~5.5V                                                                                          | 4.94V                                                                                                                                                                                                               |                                                                                                                                                                                                                        |      |             |    |              |              |                    |        |         |            |         |     |    |          |       |          |    |          |       |      |      |              |                    |                       |        |                         |         |
| MODE               | Vout                                               | FAULT SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                   |                                                                                                                                                                                                                     |                                                                                                                                                                                                                        |      |             |    |              |              |                    |        |         |            |         |     |    |          |       |          |    |          |       |      |      |              |                    |                       |        |                         |         |
| AC to DC Direction | $VAC \geq 175V_{rms}$                              | 5.027v                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                   |                                                                                                                                                                                                                     |                                                                                                                                                                                                                        |      |             |    |              |              |                    |        |         |            |         |     |    |          |       |          |    |          |       |      |      |              |                    |                       |        |                         |         |
|                    | $VAC \leq 165V_{rms}$ .                            | -0.004V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                   |                                                                                                                                                                                                                     |                                                                                                                                                                                                                        |      |             |    |              |              |                    |        |         |            |         |     |    |          |       |          |    |          |       |      |      |              |                    |                       |        |                         |         |
| 5                  | CURRENT SHARING                                    | CURRENT SHARING<br>TOLERANCE $\pm 10\%$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | I/P : 230 VAC<br>O/P : 95/50% LOAD<br>Ta : 25°C                                                   | AC to DC Direction<br>O/P : 95%<br>PSU1 : 86.35A<br>PSU2 : 86.55A<br>PSU3 : 83.82 A<br>PSU4 : 83.29A<br>PSU5 : 86A<br>O/P : 50%<br>PSU1 : 45.62 A<br>PSU2 : 45.8A<br>PSU3 : 44.07A<br>PSU4 : 43.76A<br>PSU5 : 45.6A | DC to AC Direction<br>O/P : 100%<br>PSU1 : 74.57A<br>PSU2 : 74.63A<br>PSU3 : 74.2A<br>PSU4 : 74.2A<br>PSU5 : 74.2A<br>O/P : 50%<br>PSU1 : 36.75 A<br>PSU2 : 36.82A<br>PSU3 : 36.74A<br>PSU4 : 36.04 A<br>PSU5 : 37.01A |      |             |    |              |              |                    |        |         |            |         |     |    |          |       |          |    |          |       |      |      |              |                    |                       |        |                         |         |
| 6                  | BATTERY MODE RATED<br>CURRENT( CAN BUS model only) | AC to DC Direction:80A<br>DC to AC Direction:64A<br>Can be adjusted by communication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | AC to DC Direction<br>I/P: 230VAC<br>DC to AC Direction<br>I/P: 24VDC<br>O/P:FULL LOAD<br>Ta:25°C | AC to DC Direction:<br>80.22A/230VAC<br><br>DC to AC Direction<br>63.8A/24VDC                                                                                                                                       |                                                                                                                                                                                                                        |      |             |    |              |              |                    |        |         |            |         |     |    |          |       |          |    |          |       |      |      |              |                    |                       |        |                         |         |

## COMPONENT STRESS TEST

| NO | TEST ITEM                                            | SPECIFICATION                                                                                         | TEST CONDITION                                                                                                                                                                                                                                   | RESULT                                                                                                                                                                                                                                     |
|----|------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | PWM Transistor<br>( D to S) or (C to E) Peak Voltage | <p><b>AC to DC Direction &amp; DC to AC Direction</b></p> <p>Q903 Rated: 36A/ 600V<br/>VGS :± 20V</p> | <p>AC ON/OFF<br/><b>AC to DC Direction</b><br/>I/P:High-Line +3V =267V<br/>VDS:<br/>O/P: (1)Full Load<br/>(2)Output Short<br/>(3)0%→400% Load.</p> <p>I/P:Low-Line -3V = 177V<br/>O/P: (1)Full Load<br/>(2)Output Short<br/>(3)0%→400% Load.</p> | <p><b>AC to DC Direction</b><br/>I/P:High-Line +3V =267V<br/>VDS:<br/>(1) 419V/20.38A<br/>(2) 408V/ 15.21A<br/>(3) 403V/16.05 A</p> <p>I/P:Low-Line -3V = 177V<br/>VDS:<br/>(1) 406V/ 19.98A<br/>(2) 398V/ 14.85A<br/>(3) 402V/ 16.03A</p> |

|   |                                                           |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                             |
|---|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                                                           |                                                                                                                                                                                                                                                                                                | <b>DC to AC Direction</b><br>I/P: 28VDC<br>VDS:<br>O/P: (1)Full Load<br>(2)+100%Io/1S~~100%Io/1S<br>(3)-100%Io AC Off<br>I/P: 19VDC<br>O/P: (1)Full Load<br>(2)+100%Io~~100%Io<br>(3)-100%Io AC Off<br>Ta:25℃                                                                                                                                                                                                                  | <b>DC to AC Direction</b><br>I/P: 28VDC<br>VDS:<br>(1) 423 V/5.32A<br>(2) 431 V/6.91A<br>(3) 510 V/6.29A<br>I/P: 19VDC<br>VDS:<br>(1) 424V/ 5.34A<br>(2) 435V/6.57A<br>(3) 510V/6.37A                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                             |
| 2 | P.F.C Transistor<br>( D to S) or (C to E) Peak<br>Voltage | <b>AC to DC Direction</b><br>Q2 Rated : 53A/ 650V<br>VGS :-8~19V<br><br><br>Q4 Rated : 52A/ 600V<br>VGS :± 25V                                                                                                                                                                                 | I/P:High-Line +3V =267 V<br>AC ON/OFF<br>(1)Full Load<br>(2)Output Short<br>(3)0%→400% Load.<br><br>I/P:Low-Line -3V = 177V<br>AC ON/OFF<br>O/P:(1)Full Load<br>(2)Output Short<br>(3)0%→400% Load.<br><br>Ta:25℃                                                                                                                                                                                                              | I/P:High-Line +3V =267V<br>Q2 VDS:<br>(1) 469V/21.8A<br>(2) 423V/10.9A<br>(3) 418V/9.56A<br><br>Q4 VDS:<br>(1) 411V/18.5A<br>(2) 412V/10.29A<br>(3) 412V/11.28A<br><br>I/P:Low-Line -3V = 177V<br>Q2 VDS:<br>(1) 429V/13.61A<br>(2) 413V/9.5A<br>(3) 417V/15.58A<br><br>Q4 VDS:<br>(1) 441V/15.65A<br>(2) 441V/13.98A<br>(3) 417V/13.81A                    |                                                                                                                                                                                                                                                                                                                                                                             |
| 3 | Diode Peak Voltage                                        | <b>AC to DC Direction &amp;<br/>DC to AC Directio n</b><br><br>Q950 Rated: 24A/250V<br>VGS :±20V<br><br>Q951 Rated: 24A/250V<br>VGS :±20V<br><br>Q958 Rated: 225A/ 60V<br>VGS :±20V<br><br>Q959 Rated: 24A/250V<br>VGS :±20V<br><br>AC to DC Direction only<br>Q74 Rated:24A/250V<br>VGS :±20V | <b>AC to DC Direction</b><br>AC ON/OFF<br>I/P:High-Line +3V =267 V<br><u>VO=SPEC VR MAX</u><br>O/P: (1)Full Load<br>(2)Output Short<br>(3)0%→400% Load.<br><br><u>VO=RATED VOLTAGE</u><br>O/P: (1)Full Load<br><br><b>DC to AC Direction</b><br><br>I/P:28VDC<br><u>VO=SPEC VR MAX</u><br>O/P: (1)Full Load<br>(2)+100%Io/1S~~100%Io/1S<br>(3)-100%Io AC Off<br><br><u>VO=RATED VOLTAGE</u><br>O/P: (1)Full Load<br><br>Ta:25℃ | <b>AC to DC Direction</b><br>Q950:<br><u>VO=SPEC VR MAX</u><br>VDS:<br>(1) 46.1V<br>(2) 43.3V<br>(3) 54.1V<br><br><u>VO=RATED VOLTAGE</u><br>(1) 45.7V<br><br>Q951:<br><u>VO=SPEC VR MAX</u><br>VDS:<br>(1) 44.1V<br>(2) 42.1V<br>(3) 44.1V<br><u>VO=RATED VOLTAGE</u><br>(1) 45.7V<br><br>Q958:<br><u>VO=SPEC VR MAX</u><br>VDS:<br>(1) 46.5V<br>(2) 41.7V | <b>DC to AC Direction</b><br>Q950:<br><u>VO=SPEC VR MAX</u><br>VDS:<br>(1) 50.1V 542<br>(2) 52.1V 543<br>(3) 58.9V 544<br><br><u>VO=RATED VOLTAGE</u><br>(1) 49.3V 538<br><br>Q951:<br><u>VO=SPEC VR MAX</u><br>VDS:<br>(1) 49.7V<br>(2) 50.1V<br>(3) 57.3V<br><u>VO=RATED VOLTAGE</u><br>(1) 48.9V<br><br>Q958:<br><u>VO=SPEC VR MAX</u><br>VDS:<br>(1) 48.5V<br>(2) 48.9V |

|   |                         |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                  |
|---|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                         |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  | <div><div>(3) 54.9V<br/><u>VO=RATED VOLTAGE</u><br/>(1) 45.7V</div><div>Q959:<br/><u>VO=SPEC VR MAX</u><br/>VDS:<br/>(1) 44.1V<br/>(2) 45.7V<br/>(3) 43.7V<br/><u>VO=RATED VOLTAGE</u><br/>(1) 43.7V</div><div>Q74<br/><u>VO=SPEC VR MAX</u><br/>VDS:<br/>(1) 48.1V<br/>(2) 48.1V<br/>(3) 47.7V<br/><u>VO=RATED VOLTAGE</u><br/>(1) 48.5V</div></div>                                                      | <div><div>(3) 57.3V<br/><u>VO=RATED VOLTAGE</u><br/>(1) 49.3V</div><div>Q959:<br/><u>VO=SPEC VR MAX</u><br/>VDS:<br/>(1) 49.3V<br/>(2) 50.9V<br/>(3) 58.5V<br/><u>VO=RATED VOLTAGE</u><br/>(1) 49.3V</div></div> |
| 4 | Input Voltage           | Capacitor<br>C6 Rated: 470μ/ 450V                                                                                                                                                         | I/P:High-Line +3V =267V<br><b>AC to DC Direction</b><br>O/P: (1)Full Load input on/off<br>(2) Min load input on /Off<br>(3)Full Load /Min load Change<br>(4)Full load continue<br><b>DC to AC Direction</b><br>(1)+100%Io~~100%Io<br>(2)-100%Io AC Off<br>Ta:25℃ | <b>AC to DC Direction</b><br>(1) 414.3V<br>(2) 410.1V<br>(3) 429.9V<br>(4) 412.1V<br><b>.DC to AC Direction</b><br>(1)429.84V<br>(2)515.8V                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                  |
| 5 | Control IC Voltage Test | PWM IC U57 Rated<br>-0.3V~ 20V<br><br>PFC IC U551 Rated<br>-0.3V~ 20V<br><br>O/P IC U308 Rated<br>-0.3V~ 20V<br><br>MCU IC U201 Rated<br>1.71V~3.6V<br><br>AUX IC U701 Rated<br>-0.3V~35V | AC ON/OFF<br><b>AC to DC Direction</b><br><br>I/P:High-Line +3V =267 V<br>O/P(1)FULL LOAD<br>(2) Output Short<br>(3)O.L.P<br>(4)O.V.P.<br>(5)NO LOAD VRmin(LOW LINE)<br>Ta:25℃                                                                                   | U57:<br>(1) 11.39V<br>(2) 11.39V<br>(3) 11.39V<br>(4) 11.4V<br>(5) 11.4V<br>U551:<br>(1) 11.95V<br>(2) 11.95V<br>(3) 11.94V<br>(4) 11.95V<br>(5) 11.95V<br>U308:<br>(1) 12.46V<br>(2) 12.45V<br>(3) 12.46V<br>(4) 12.44V<br>(5)12.43V<br><br>U201:<br>(1) 3.304V<br>(2) 3.302V<br>(3) 3.301V<br>(4) 3.302V<br>(5) 3.303V<br><br>U701:<br>(1) 13.69V<br>(2) 13.76V<br>(3) 13.57V<br>(4) 13.76V<br>(5)13.96V |                                                                                                                                                                                                                  |
| 6 | STAND BY POWER          | Q700 Rated: 4.5A/ 800V                                                                                                                                                                    | AC ON/OFF<br><b>AC to DC Direction</b><br>I/P:High-Line +3V =267 V<br>O/P: (1)Full Load<br>(2)Remote On/Off<br>I/P:Low-Line -3V =177V                                                                                                                            | I/P:High-Line +3V =267 V<br>(1) 557V/1.976 A<br>(2) 561V/ 2.052A<br>I/P:Low-Line -3V =177V                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                  |

|  |  |  |                                                  |                                      |
|--|--|--|--------------------------------------------------|--------------------------------------|
|  |  |  | O/P: (1)Full Load<br>(2)Remote On/Off<br>Ta:25°C | (1) 557V/ 1.846A<br>(2) 565V/1.862 A |
|--|--|--|--------------------------------------------------|--------------------------------------|

## SAFETY& E.M.C. TEST

### SAFETY TEST

| NO | TEST ITEM            | SPECIFICATION                                                       | TEST CONDITION                                                                | RESULT                                                            |
|----|----------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1  | WITHSTAND VOLTAGE    | I/P-O/P: 3KVAC/min<br>I/P-FG :2KVAC/min<br>O/P-FG:0.5KVAC/min       | I/P-O/P: 3.6KVAC/min<br>I/P-FG: 2.4 KVAC/min<br>O/P-FG:0.6KVAC/min<br>Ta:25°C | I/P-O/P: 16.5mA<br>I/P-FG: 15.59mA<br>O/P-FG:10.3 mA<br>NO DAMAGE |
| 2  | ISOLATION RESISTANCE | I/P-O/P:500VDC>100MΩ<br>I/P-FG: 500VDC>100MΩ<br>O/P-FG:500VDC>100MΩ | I/P-O/P: 500 VDC<br>I/P-FG: 500 VDC<br>O/P-FG: 500 VDC<br>Ta:25°C             | I/P-O/P: 30GΩ<br>I/P-FG: 26.2GΩ<br>O/P-FG: 27.7GΩ<br>NO DAMAGE    |
| 3  | GROUNDING CONTINUITY | FG(PE) TO CHASSIS<br>OR TRACE < 100 mΩ                              | 40A / 2min<br>Ta:25°C                                                         | 13mΩ                                                              |

### E.M.C TEST

| NO | TEST ITEM                                                                                                                         | SPECIFICATION                                         | TEST CONDITION                                           | RESULT                        |
|----|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|-------------------------------|
| 1  | HARMONIC                                                                                                                          | EN61000-3-2<br>CLASS A                                | I/P:230VAC/50HZ<br>O/P:FULL LOAD<br>Ta:25°C              | PASS                          |
| 2  | CONDUCTION                                                                                                                        | EN55032<br>CLASS B                                    | I/P : 230 VAC (50HZ)<br>O/P : FULL/50% LOAD<br>Ta : 25°C | PASS<br>Test by certified Lab |
| 3  | RADIATION                                                                                                                         | EN55032<br>CLASS A                                    | I/P : 230 VAC (50HZ)<br>O/P : FULL LOAD<br>Ta : 25°C     | PASS<br>Test by certified Lab |
| 4  | E.S.D                                                                                                                             | EN61000-4-2<br><br>AIR : 8KV / Contact : 4KV          | I/P : 230 VAC/50HZ<br>O/P : FULL LOAD<br>Ta : 25°C       | CRITERIA A                    |
| 5  | E.F.T                                                                                                                             | EN61000-4-4<br><br>INPUT : 2KV                        | I/P : 230 VAC/50HZ<br>O/P : FULL LOAD<br>Ta : 25°C       | CRITERIA A                    |
| 6  | SURGE                                                                                                                             | IEC61000-4-5<br>INDUSTRY<br>L-N : 2KV<br>L,N-PE : 4KV | I/P : 230 VAC/50HZ<br>O/P : FULL LOAD<br>Ta : 25°C       | CRITERIA A                    |
| 7  | Test by certified Lab & Test Report Prepare<br>Any contradictions of the test results, please refer to the latest EMC test report |                                                       |                                                          |                               |

## ■ RELIABILITY TEST

### ENVIRONMENT TEST

| NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TEST ITEM             | SPECIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TEST CONDITION            | RESULT                   |                           |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
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| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | TEMPERATURE RISE TEST | <div>MODEL :    BIC-2200-12</div> <div>AC to DC Direction:</div> <div>1. ROOM AMBIENT    BURN-IN : 1.5 HRS</div> <div>I/P : 230VAC    O/P : FULL LOAD    Ta= 25 °C</div> <div>2. HIGH AMBIENT    BURN-IN : 1.5 HRS</div> <div>I/P : 230VAC    O/P : FULL LOAD    Ta= 40 °C</div> <div>DC to AC Direction:</div> <div>1. ROOM AMBIENT    BURN-IN : 0.5 HRS</div> <div>I/P : 12VDC    O/P : FULL LOAD    Ta= 25 °C</div> <div>2. HIGH AMBIENT    BURN-IN : 1.5 HRS</div> <div>I/P : 12VDC    O/P : FULL LOAD    Ta= 40 °C</div> |                           |                          |                           |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| <table><tr><th rowspan="2">NO</th><th rowspan="2">Position</th><th colspan="2">AC to DC Direction:</th><th colspan="2">DC to AC Direction:</th></tr><tr><th>ROOM AMBIENT<br/>Ta= 25°C</th><th>HIGH AMBIENT<br/>Ta= 40 °C</th><th>ROOM AMBIENT<br/>Ta= 25°C</th><th>HIGH AMBIENT<br/>Ta= 40 °C</th></tr><tr><td>1</td><td>Q1</td><td>67.4°C</td><td>84.0°C</td><td>49.5°C</td><td>68.9°C</td></tr><tr><td>2</td><td>Q4</td><td>38.1°C</td><td>56.3°C</td><td>32.4°C</td><td>49.7°C</td></tr><tr><td>3</td><td>Q906</td><td>51.5°C</td><td>74.5°C</td><td>38.9°C</td><td>55.6°C</td></tr><tr><td>4</td><td>Q907</td><td>60.4°C</td><td>83.8°C</td><td>42.4°C</td><td>61.2°C</td></tr><tr><td>5</td><td>T1 coil</td><td>81.9°C</td><td>103.9°C</td><td>56.6°C</td><td>75.5°C</td></tr><tr><td>6</td><td>Q950</td><td>87.9°C</td><td>109.0°C</td><td>59.6°C</td><td>81.0°C</td></tr><tr><td>7</td><td>Q957</td><td>79.3°C</td><td>99.6°C</td><td>55.7°C</td><td>76.8°C</td></tr><tr><td>8</td><td>Q700</td><td>40.4°C</td><td>56.8°C</td><td>35.4°C</td><td>55.2°C</td></tr><tr><td>9</td><td>T55</td><td>45.1°C</td><td>60.6°C</td><td>43.2°C</td><td>60.8°C</td></tr><tr><td>10</td><td>Q3</td><td>37.5°C</td><td>57.1°C</td><td>32.2°C</td><td>49.2°C</td></tr><tr><td>11</td><td>Q959</td><td>80.4°C</td><td>104.5°C</td><td>58.1°C</td><td>75.7°C</td></tr><tr><td>12</td><td>Q964</td><td>97.1°C</td><td>110°C</td><td>66.0°C</td><td>84.4°C</td></tr><tr><td>13</td><td>D972</td><td>99.3°C</td><td>111°C</td><td>66.9°C</td><td>85.7°C</td></tr><tr><td>14</td><td>T1 core</td><td>50.2°C</td><td>70.0°C</td><td>39.0°C</td><td>58.2°C</td></tr><tr><td>15</td><td>C722</td><td>38.1°C</td><td>53.3°C</td><td>35.8°C</td><td>53.7°C</td></tr><tr><td>16</td><td>L700</td><td>35.7°C</td><td>48.5°C</td><td>33.2°C</td><td>52.0°C</td></tr><tr><td>17</td><td>D707</td><td>36.1°C</td><td>51.7°C</td><td>33.6°C</td><td>52.0°C</td></tr><tr><td>18</td><td>U701</td><td>40.5°C</td><td>57.8°C</td><td>37.3°C</td><td>54.5°C</td></tr><tr><td>19</td><td>C711</td><td>39.2°C</td><td>57.2°C</td><td>36.8°C</td><td>53.6°C</td></tr><tr><td>20</td><td>RG70</td><td>48.0°C</td><td>66.3°C</td><td>46.5°C</td><td>64.4°C</td></tr><tr><td>21</td><td>D706</td><td>58.0°C</td><td>74.9°C</td><td>58.9°C</td><td>73.8°C</td></tr><tr><td>22</td><td>D705</td><td>50.1°C</td><td>67.5°C</td><td>43.1°C</td><td>62.8°C</td></tr><tr><td>23</td><td>U551</td><td>48.2°C</td><td>64.7°C</td><td>38.7°C</td><td>59.1°C</td></tr><tr><td>24</td><td>U201</td><td>50.7°C</td><td>66.0°C</td><td>40.3°C</td><td>59.7°C</td></tr></table> |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                          | NO                        | Position | AC to DC Direction: |  | DC to AC Direction: |  | ROOM AMBIENT<br>Ta= 25°C | HIGH AMBIENT<br>Ta= 40 °C | ROOM AMBIENT<br>Ta= 25°C | HIGH AMBIENT<br>Ta= 40 °C | 1 | Q1 | 67.4°C | 84.0°C | 49.5°C | 68.9°C | 2 | Q4 | 38.1°C | 56.3°C | 32.4°C | 49.7°C | 3 | Q906 | 51.5°C | 74.5°C | 38.9°C | 55.6°C | 4 | Q907 | 60.4°C | 83.8°C | 42.4°C | 61.2°C | 5 | T1 coil | 81.9°C | 103.9°C | 56.6°C | 75.5°C | 6 | Q950 | 87.9°C | 109.0°C | 59.6°C | 81.0°C | 7 | Q957 | 79.3°C | 99.6°C | 55.7°C | 76.8°C | 8 | Q700 | 40.4°C | 56.8°C | 35.4°C | 55.2°C | 9 | T55 | 45.1°C | 60.6°C | 43.2°C | 60.8°C | 10 | Q3 | 37.5°C | 57.1°C | 32.2°C | 49.2°C | 11 | Q959 | 80.4°C | 104.5°C | 58.1°C | 75.7°C | 12 | Q964 | 97.1°C | 110°C | 66.0°C | 84.4°C | 13 | D972 | 99.3°C | 111°C | 66.9°C | 85.7°C | 14 | T1 core | 50.2°C | 70.0°C | 39.0°C | 58.2°C | 15 | C722 | 38.1°C | 53.3°C | 35.8°C | 53.7°C | 16 | L700 | 35.7°C | 48.5°C | 33.2°C | 52.0°C | 17 | D707 | 36.1°C | 51.7°C | 33.6°C | 52.0°C | 18 | U701 | 40.5°C | 57.8°C | 37.3°C | 54.5°C | 19 | C711 | 39.2°C | 57.2°C | 36.8°C | 53.6°C | 20 | RG70 | 48.0°C | 66.3°C | 46.5°C | 64.4°C | 21 | D706 | 58.0°C | 74.9°C | 58.9°C | 73.8°C | 22 | D705 | 50.1°C | 67.5°C | 43.1°C | 62.8°C | 23 | U551 | 48.2°C | 64.7°C | 38.7°C | 59.1°C | 24 | U201 | 50.7°C | 66.0°C | 40.3°C | 59.7°C |
| NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Position              | AC to DC Direction:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           | DC to AC Direction:      |                           |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       | ROOM AMBIENT<br>Ta= 25°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | HIGH AMBIENT<br>Ta= 40 °C | ROOM AMBIENT<br>Ta= 25°C | HIGH AMBIENT<br>Ta= 40 °C |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Q1                    | 67.4°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 84.0°C                    | 49.5°C                   | 68.9°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Q4                    | 38.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 56.3°C                    | 32.4°C                   | 49.7°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Q906                  | 51.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 74.5°C                    | 38.9°C                   | 55.6°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Q907                  | 60.4°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 83.8°C                    | 42.4°C                   | 61.2°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T1 coil               | 81.9°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 103.9°C                   | 56.6°C                   | 75.5°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Q950                  | 87.9°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 109.0°C                   | 59.6°C                   | 81.0°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Q957                  | 79.3°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 99.6°C                    | 55.7°C                   | 76.8°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Q700                  | 40.4°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 56.8°C                    | 35.4°C                   | 55.2°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T55                   | 45.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 60.6°C                    | 43.2°C                   | 60.8°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Q3                    | 37.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 57.1°C                    | 32.2°C                   | 49.2°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Q959                  | 80.4°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 104.5°C                   | 58.1°C                   | 75.7°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Q964                  | 97.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 110°C                     | 66.0°C                   | 84.4°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | D972                  | 99.3°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 111°C                     | 66.9°C                   | 85.7°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | T1 core               | 50.2°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 70.0°C                    | 39.0°C                   | 58.2°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | C722                  | 38.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 53.3°C                    | 35.8°C                   | 53.7°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | L700                  | 35.7°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 48.5°C                    | 33.2°C                   | 52.0°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | D707                  | 36.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 51.7°C                    | 33.6°C                   | 52.0°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | U701                  | 40.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 57.8°C                    | 37.3°C                   | 54.5°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | C711                  | 39.2°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 57.2°C                    | 36.8°C                   | 53.6°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RG70                  | 48.0°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 66.3°C                    | 46.5°C                   | 64.4°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | D706                  | 58.0°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 74.9°C                    | 58.9°C                   | 73.8°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | D705                  | 50.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 67.5°C                    | 43.1°C                   | 62.8°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | U551                  | 48.2°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 64.7°C                    | 38.7°C                   | 59.1°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |
| 24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | U201                  | 50.7°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 66.0°C                    | 40.3°C                   | 59.7°C                    |          |                     |  |                     |  |                          |                           |                          |                           |   |    |        |        |        |        |   |    |        |        |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |         |        |         |        |        |   |      |        |         |        |        |   |      |        |        |        |        |   |      |        |        |        |        |   |     |        |        |        |        |    |    |        |        |        |        |    |      |        |         |        |        |    |      |        |       |        |        |    |      |        |       |        |        |    |         |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |    |      |        |        |        |        |

|   |                                                                   |                                                                       |    |      |       |                                                                                                                                                                                                                     |       |                   |  |
|---|-------------------------------------------------------------------|-----------------------------------------------------------------------|----|------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------|--|
|   |                                                                   |                                                                       | 25 | Q2   | 66.8℃ | 85.1℃                                                                                                                                                                                                               | 49.5℃ | 68.0℃             |  |
|   |                                                                   |                                                                       | 26 | T550 | 33.9℃ | 51.4℃                                                                                                                                                                                                               | 31.2℃ | 47.5℃             |  |
|   |                                                                   |                                                                       | 27 | L900 | 63.0℃ | 82.7℃                                                                                                                                                                                                               | 44.9℃ | 61.0℃             |  |
|   |                                                                   |                                                                       | 28 | T3   | 40.4℃ | 60.4℃                                                                                                                                                                                                               | 34.7℃ | 51.1℃             |  |
|   |                                                                   |                                                                       | 29 | RT51 | 47.0℃ | 66.8℃                                                                                                                                                                                                               | 39.4℃ | 56.5℃             |  |
|   |                                                                   |                                                                       | 30 | RT52 | 35.7℃ | 55.1℃                                                                                                                                                                                                               | 29.9℃ | 50.1℃             |  |
|   |                                                                   |                                                                       | 31 | L1   | 40.6℃ | 56.5℃                                                                                                                                                                                                               | 31.9℃ | 51.1℃             |  |
|   |                                                                   |                                                                       | 32 | BD1  | 28.3℃ | 43.0℃                                                                                                                                                                                                               | 23.0℃ | 42.8℃             |  |
|   |                                                                   |                                                                       | 33 | RY1  | 28.3℃ | 42.0℃                                                                                                                                                                                                               | 24.3℃ | 43.0℃             |  |
|   |                                                                   |                                                                       | 34 | Q902 | 57.0℃ | 77.4℃                                                                                                                                                                                                               | 38.4℃ | 55.4℃             |  |
|   |                                                                   |                                                                       | 35 | LF3  | 31.6℃ | 50.6℃                                                                                                                                                                                                               | 26.9℃ | 44.8℃             |  |
|   |                                                                   |                                                                       | 36 | C2   | 24.2℃ | 42.4℃                                                                                                                                                                                                               | 23.0℃ | 40.9℃             |  |
|   |                                                                   |                                                                       | 37 | C962 | 29.4℃ | 46.0℃                                                                                                                                                                                                               | 26.8℃ | 44.3℃             |  |
|   |                                                                   |                                                                       | 38 | C958 | 29.9℃ | 46.7℃                                                                                                                                                                                                               | 25.5℃ | 44.7℃             |  |
|   |                                                                   |                                                                       | 39 | L950 | 56.7℃ | 71.2℃                                                                                                                                                                                                               | 39.9℃ | 59.2℃             |  |
|   |                                                                   |                                                                       | 40 | RG61 | 37.4℃ | 56.2℃                                                                                                                                                                                                               | 30.9℃ | 50.5℃             |  |
|   |                                                                   |                                                                       | 41 | T92  | 49.4℃ | 68.5℃                                                                                                                                                                                                               | 38.0℃ | 56.1℃             |  |
|   |                                                                   |                                                                       | 42 | U405 | 36.0℃ | 55.1℃                                                                                                                                                                                                               | 34.0℃ | 50.2℃             |  |
|   |                                                                   |                                                                       | 43 | U51  | 33.6℃ | 55.6℃                                                                                                                                                                                                               | 31.5℃ | 47.3℃             |  |
|   |                                                                   |                                                                       | 44 | R143 | 44.6℃ | 68.5℃                                                                                                                                                                                                               | 41.1℃ | 57.4℃             |  |
|   |                                                                   |                                                                       | 45 | D906 | 38.3℃ | 60.6℃                                                                                                                                                                                                               | 37.9℃ | 55.7℃             |  |
|   |                                                                   |                                                                       | 46 | D905 | 38.6℃ | 59.5℃                                                                                                                                                                                                               | 38.3℃ | 57.3℃             |  |
|   |                                                                   |                                                                       | 47 | U120 | 42.6℃ | 60.8℃                                                                                                                                                                                                               | 35.1℃ | 52.9℃             |  |
|   |                                                                   |                                                                       | 48 | Q74  | 50.3℃ | 68.1℃                                                                                                                                                                                                               | 39.4℃ | 58.0℃             |  |
|   |                                                                   |                                                                       | 49 | RG50 | 30.9℃ | 47.2℃                                                                                                                                                                                                               | 27.9℃ | 45.7℃             |  |
|   |                                                                   |                                                                       | 50 | R938 | 38.2℃ | 50.4℃                                                                                                                                                                                                               | 29.8℃ | 49.4℃             |  |
|   |                                                                   |                                                                       | 51 | C6   | 48.2℃ | 67.1℃                                                                                                                                                                                                               | 39.3℃ | 56.1℃             |  |
|   |                                                                   |                                                                       | 52 | Q903 | 61.5℃ | 84.4℃                                                                                                                                                                                                               | 42.9℃ | 59.5℃             |  |
|   |                                                                   |                                                                       | 53 | Q952 | 80.1℃ | 101.0℃                                                                                                                                                                                                              | 58.0℃ | 77.0℃             |  |
|   |                                                                   |                                                                       | 54 | D982 | 72.8℃ | 92.5℃                                                                                                                                                                                                               | 53.5℃ | 74.4℃             |  |
| 2 | OVER LOAD BURN-IN TEST                                            | NO DAMAGE<br>1 HOUR ( MIN )                                           |    |      |       | I/P : 230 VAC<br>O/P : 110% LOAD<br>Ta : 25℃                                                                                                                                                                        |       | TEST : OK         |  |
| 3 | LOW TEMPERATURE<br>TURN ON TEST                                   | TURN ON AFTER 2 HOUR                                                  |    |      |       | I/P : 264VAC/100VAC<br>O/P : 100 %LOAD<br>Ta= -35 °C                                                                                                                                                                |       | TEST : OK         |  |
| 4 | HIGH HUMIDITY<br>HIGH TEMPERATURE<br>HIGH VOLTAGE<br>TURN ON TEST | AFTER 12 HOURS<br>IN CHAMBER ON<br>CONTROL 40 °C/95 %R.H<br>NO DAMAGE |    |      |       | I/P : 268 VAC<br>O/P : FULL LOAD<br>Ta= 40 °C<br>HUMIDITY= 95 %R.H                                                                                                                                                  |       | TEST : OK         |  |
| 5 | TEMPERATURE<br>COEFFICIENT                                        | ± 0.03%/°C(0~45℃)                                                     |    |      |       | I/P : 230 VAC<br>O/P : FULL LOAD                                                                                                                                                                                    |       | ± 0.01%/°C(0~45℃) |  |
| 6 | STORAGE TEMPERATURE<br>TEST                                       | -40~85℃                                                               |    |      |       | 1. Thermal shock Temperature : -45℃~ +90℃<br>2. Temperature change rate : 25℃ / MIN<br>3. Dwell time low and high temperature : 30 MIN/EACH<br>4. Total test cycle : 10 CYCLE<br>5. Input/Output condition : STATIC |       |                   |  |

|    |                          |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                               |
|----|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7  | THERMAL SHOCK TEST       | -30~45°C                                                                                                                                                                                                                                                                 | 1. Thermal shock Temperature : -35°C~ +50°C<br>2. Temperature change rate : 25°C / MIN<br>3. Dwell time low and high temperature : 30 MIN/EACH<br>4. Total test cycle : 16 CYCLE<br>5. Input/Output condition :<br>15cycle:230V/ FULL LOAD AC ON 3sec/AC OFF 1sec TEST<br>1cycle:230V/ FULL LOAD Burn In Test |
| 8  | VIBRATION TEST           | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                                                                                                                                             | 1 Carton & 1 Set<br>(1) Waveform : Sine Wave<br>(2) Frequency : 10~500Hz<br>(3) Sweep Time : 10min/sweep cycle<br>(4) Acceleration : 3G<br>(5) Test Time : 180min in each axis (X.Y.Z)<br>(6) Ta : 25°C                                                                                                       |
| 9  | CAPACITOR LIFE CYCLE     | SUPPOSE C962 IS THE MOST CRITICAL COMPONENT<br>(1) I/P : 230VAC O/P : FULL LOAD Ta= 25 °C LIFE TIME<br>(2) I/P : 230VAC O/P : FULL LOAD Ta= 40 °C LIFE TIME<br>(3) I/P : 230VAC O/P : 75% LOAD Ta= 40°C LIFE TIME<br>(4) I/P : 230VAC O/P : 50% LOAD Ta= 40 °C LIFE TIME | (1) 519622HRS<br>(2) 164428HRS<br>(3) 481868HRS<br>(4) 784370HRS                                                                                                                                                                                                                                              |
| 10 | MTBF                     | Conducted by Parts Stress Analysis Prediction<br>155.56K hrs min. Telcordia SR-332 (Bellcore) ; 46K hrs min. MIL-HDBK-217F (25°C)                                                                                                                                        |                                                                                                                                                                                                                                                                                                               |
| 11 | Ongoing Reliability Test | I/P : 230VAC O/P : FULL LOAD TA=40°C<br>Demonstration Mean Time Between Failure : 50,000 hours                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                               |

| TEST RESULT | TESTER     | REVIEW     | APPROVAL      |
|-------------|------------|------------|---------------|
| PASS        | DANIEL GAO | SANFORD SU | VINCENT TSENG |

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