



# Test Report: SLD-150-12

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150W Constant Voltage + Constant Current LED Driver

## ■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Component Stress Test

## ■ SAFETY & E.M.C. TEST

Safety Test

E.M.C. Test

## ■ RELIABILITY TEST

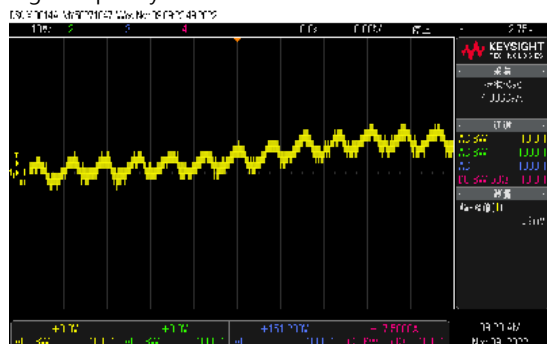
ENVIRONMENT TEST

## ■ DESIGN VERIFY TEST

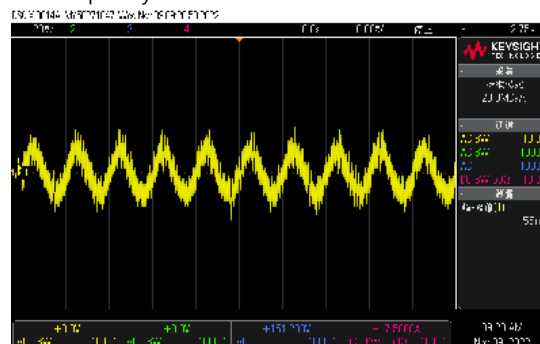
### OUTPUT FUNCTION TEST

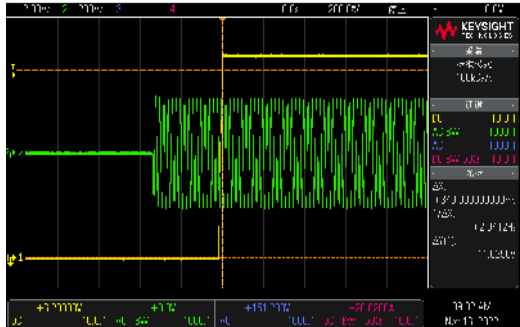
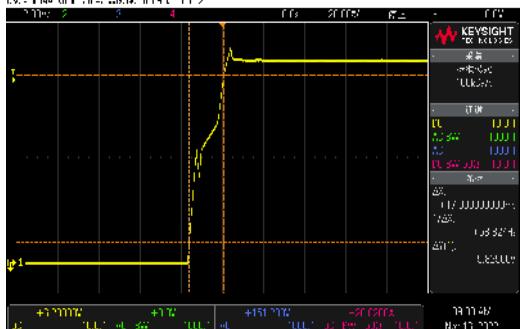
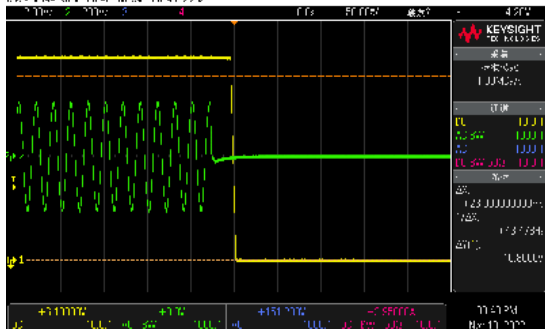
| NO | TEST ITEM                      | SPECIFICATION      | TEST CONDITION                                                         | RESULT                                                                                                        |
|----|--------------------------------|--------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 1  | CURRENT ACCURACY               | ±5%                | I/P: 230 VAC<br>I/P:120VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CV MODE TEST | 12.02A /230VAC@CV MAX-1V<br>12.03A /230VAC@CV MIN<br>12.01A/120VAC@CV MAX-1V<br>12.04A/120VAC@CV MIN<br>0.33% |
| 2  | CONSTANT CURRENT REGION        | CH1: 8.4 V~ 12 V   | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CV MODE TEST               | 7.19V~ 11.97V /230VAC                                                                                         |
| 3  | OUTPUT VOLTAGE TOLERANCE (Max) | V1: -4% ~ +4%      | I/P:120VAC /305AC<br>O/P:FULL/ MIN LOAD<br>Ta:25°C                     | V1: -1.67~ 0.33 %                                                                                             |
| 4  | LINE REGULATION (Max)          | V1: -0.5 % ~ 0.5 % | I/P: 120VAC~305AC<br>O/P:FULL LOAD<br>Ta:25°C                          | V1: -0.00 %~ +0.00 %                                                                                          |
| 5  | LOAD REGULATION (Max)          | V1: -1% ~ +1 %     | I/P: 230 VAC<br>O/P:FULL ~MIN LOAD<br>Ta:25°C                          | V1: -0.17 %~ -0.17 %                                                                                          |
| 6  | RIPPLE & NOISE (Max )          | V1: 180mVp-p       | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CCH MODE TEST              | V1: 230VAC /55mVp-p                                                                                           |

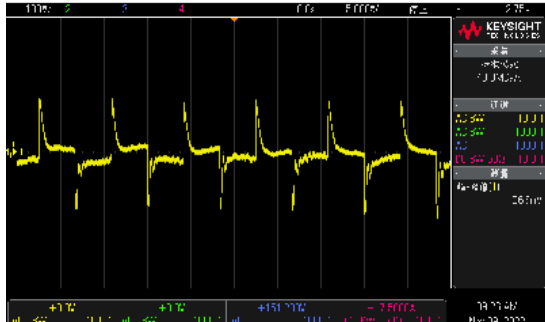
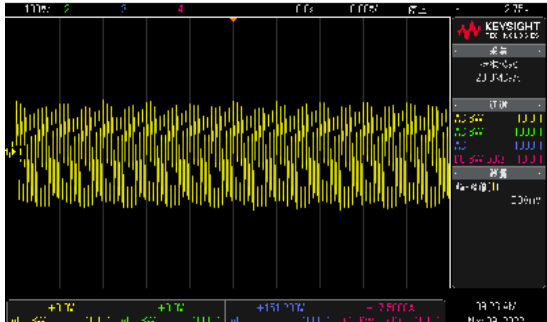
high frequency :



low frequency :

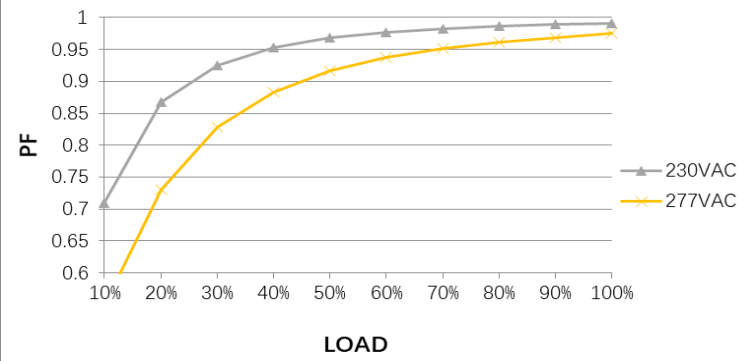
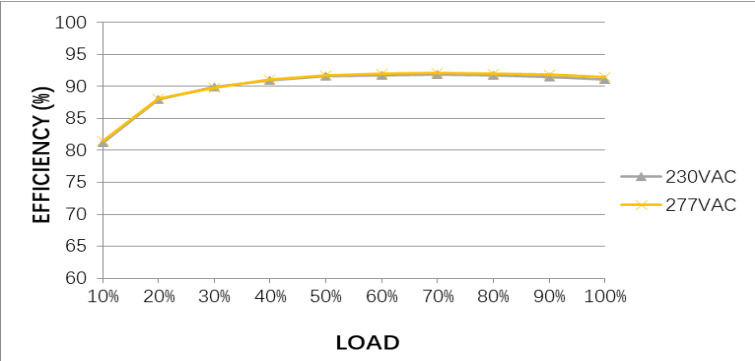
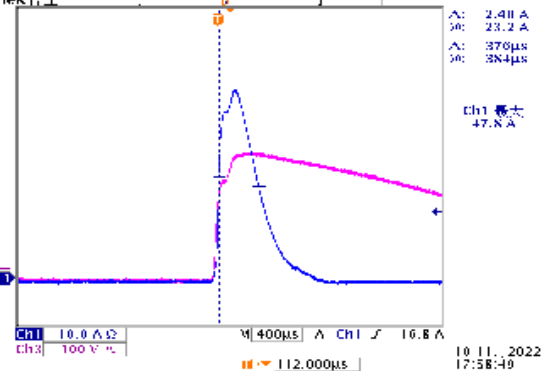


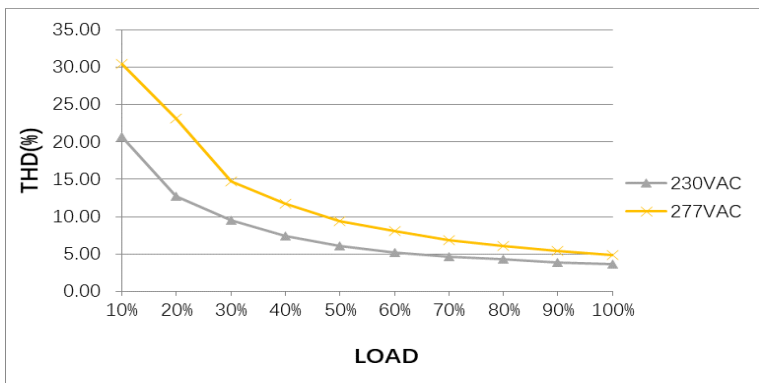
|                                                                                                                                                                     |                     |               |                                                           |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------|-----------------------------------------------------------|----------------|
| 7                                                                                                                                                                   | SET UP TIME (Max)   | 230VAC/500 ms | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CCH MODE TEST | 230VAC/340ms   |
| INPUT=230VAC/50HZ @ FULL LOAD<br>CH1 : Output Voltage CH2 : AC Input Voltage<br>   |                     |               |                                                           |                |
| 8                                                                                                                                                                   | RISE TIME (Max)     | 230VAC/80 ms  | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CCH MODE TEST | 230VAC/17ms    |
| INPUT=230VAC/50HZ @ FULL LOAD<br>CH1 : Output Voltage<br>                        |                     |               |                                                           |                |
| 9                                                                                                                                                                   | HOLD UP TIME (Typ.) | 230VAC/ 10 ms | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CCH MODE TEST | 230VAC/ 23.0ms |
| INPUT=230VAC/50HZ @ FULL LOAD<br>CH1 : Output Voltage CH2 : AC Input Voltage<br> |                     |               |                                                           |                |

|                                |              |                                                                                    |                                                                                                         |                          |
|--------------------------------|--------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------|
| 10                             | DYNAMIC LOAD | V1: 1200 mVp-p                                                                     | I/P: 230VAC<br>O/P:<br>(1)FULL /50% LOAD 50%DUTY / 120HZ<br>(2)FULL /50% LOAD 50%DUTY / 1KHZ<br>Ta:25°C | 366mVp-p<br><br>338mVp-p |
| FULL /50% LOAD 50%DUTY / 120HZ |              |   |                                                                                                         |                          |
| FULL /50% LOAD 50%DUTY / 1KHZ  |              |  |                                                                                                         |                          |

## INPUT FUNCTION TEST

| NO | TEST ITEM                 | SPECIFICATION                   | TEST CONDITION                                                                                                                                                                               | RESULT                                                                                                                          |
|----|---------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 1  | INPUT VOLTAGE RANGE       | 120VAC~305 VAC<br>170VDC~431VDC | (1) I/P:TESTING<br>O/P:FULL LOAD<br>(2) I/P:DC TESTING(L: + N:-)<br>O/P: FULL / 50% LOAD<br>(3) I/P:DC TESTING(L:- N: +)<br>O/P: FULL / 50% LOAD<br>(PLEASE CHECK DERATING CURVE)<br>Ta:25°C | (1) 155 V~305V<br>(2)283Vdc~431Vdc/FULL LOAD<br>170Vdc~431Vdc/50% LOAD<br>(3) 283Vdc~431Vdc/FULL LOAD<br>170Vdc~431Vdc/50% LOAD |
|    |                           |                                 | I/P:<br>LOW-LINE120-3V=117V<br>HIGH-LINE+10V=315 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: 120VAC ~305VAC<br>O/P:FULL~MIN LOAD<br>Ta:25°C                                                                                                                                          | OK                                                                                                                              |
| 3  | INPUT CURRENT (TYP)       | 277VAC/ 0.8 A<br>230 VAC/ 1.0A  | I/P: 277VAC/230 VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CCH MODE TEST                                                                                                                             | I= 0.57A/277VAC<br>I =0.68A/ 230VAC                                                                                             |
| 4  | NO LOAD POWER CONSUMPTION | <0.5W                           | I/P : 230VAC<br>O/P : NO LOAD<br>Ta : 25°C                                                                                                                                                   | 0.26W                                                                                                                           |

|   |                                                                                                                                                                            |                                                                                     |                                                                  |                                                     |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|
| 5 | POWER FACTOR(TYP)                                                                                                                                                          | 0.95/230 VAC FULL LOAD<br>0.92/277 VAC FULL LOAD                                    | I/P: 230 VAC/277VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CCH MODE TEST | PF= 0.991 /230V/100%LOAD<br>PF= 0.975/277V/100%LOAD |
|   | P.F vs LOAD                                                                               |                                                                                     |                                                                  |                                                     |
| 6 | EFFICIENCY (TYP)                                                                                                                                                           | 92 %                                                                                | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CCH MODE TEST        | 92.42%                                              |
|   | EFFICIENCY vs LOAD                                                                       |                                                                                     |                                                                  |                                                     |
| 7 | INRUSH CURRENT (TYP)                                                                                                                                                       | 230 V/65A<br>COLD START<br><br>(twidh=500us measured<br>at 50% Ipeak) COLD<br>START | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C<br>CCH MODE TEST        | I = 47.8A/ 230VAC<br>T50= 376us                     |
|   | INPUT=230VAC/50HZ @ FULL LOAD<br>CH2 : AC Input Voltage CH4 : Input current (1V=1A)<br> |                                                                                     |                                                                  |                                                     |

| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TOTAL HARMONIC DISTORTION | THD < 10% (@ load ≥ 60% at 230VAC, @load ≥ 75% at 277VAC | I/P : 230VAC/277VAC<br>O/P : 60% LOAD<br>75%LOAD<br>Ta : 25°C | THD : 5.23%230V /60%<br><br>THD : 6.83%277V /75% |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------|----------|------------------|------------------|----|-------|-------|----|-------|-------|----|-------|-------|----|------|-------|----|------|-------|----|------|------|----|------|------|----|------|------|----|------|------|-----|------|------|
| <div>THD&amp;LOAD</div> <div><table><caption>THD (%) vs LOAD (%) Data</caption><thead><tr><th>LOAD (%)</th><th>THD (%) - 230VAC</th><th>THD (%) - 277VAC</th></tr></thead><tbody><tr><td>10</td><td>20.00</td><td>30.00</td></tr><tr><td>20</td><td>13.00</td><td>22.00</td></tr><tr><td>30</td><td>10.00</td><td>15.00</td></tr><tr><td>40</td><td>8.00</td><td>12.00</td></tr><tr><td>50</td><td>7.00</td><td>10.00</td></tr><tr><td>60</td><td>6.00</td><td>9.00</td></tr><tr><td>70</td><td>5.50</td><td>8.00</td></tr><tr><td>80</td><td>5.00</td><td>7.00</td></tr><tr><td>90</td><td>4.50</td><td>6.00</td></tr><tr><td>100</td><td>4.00</td><td>5.00</td></tr></tbody></table></div> |                           |                                                          |                                                               |                                                  | LOAD (%) | THD (%) - 230VAC | THD (%) - 277VAC | 10 | 20.00 | 30.00 | 20 | 13.00 | 22.00 | 30 | 10.00 | 15.00 | 40 | 8.00 | 12.00 | 50 | 7.00 | 10.00 | 60 | 6.00 | 9.00 | 70 | 5.50 | 8.00 | 80 | 5.00 | 7.00 | 90 | 4.50 | 6.00 | 100 | 4.00 | 5.00 |
| LOAD (%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | THD (%) - 230VAC          | THD (%) - 277VAC                                         |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 20.00                     | 30.00                                                    |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 13.00                     | 22.00                                                    |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10.00                     | 15.00                                                    |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 8.00                      | 12.00                                                    |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 7.00                      | 10.00                                                    |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6.00                      | 9.00                                                     |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5.50                      | 8.00                                                     |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5.00                      | 7.00                                                     |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4.50                      | 6.00                                                     |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4.00                      | 5.00                                                     |                                                               |                                                  |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LEAKAGE CURRENT           | IEC/EN60335-1:<br>< 0.35mA peak/ 294VAC,<br>60Hz         | I/P: 295VAC<br>O/P:Min LOAD<br>Ta:25°C                        | L-FG:0.017 mA<br>N-FG: 0.018mA                   |          |                  |                  |    |       |       |    |       |       |    |       |       |    |      |       |    |      |       |    |      |      |    |      |      |    |      |      |    |      |      |     |      |      |

## PROTECTION FUNCTION TEST

| NO | TEST ITEM                   | SPECIFICATION  | TEST CONDITION                                                       | RESULT                                                                                                                                                                                                                   |
|----|-----------------------------|----------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | OVER LOAD PROTECTION        | 95%~ 108%      | I/P: 305VAC<br>I/P: 230VAC<br>I/P: 120VAC<br>O/P:TESTING<br>Ta:25°C  | 106.67%/ 305VAC<br>106.66%/ 230VAC<br>105.89%/120VAC<br>PROTECTION TYPE :<br>Constant current limiting<br>continuous increase of load will be hiccup protection, recovers automatically after fault condition is removed |
| 2  | OVER VOLTAGE PROTECTION     | V1: 14 V~ 17 V | I/P: 305VAC<br>I/P: 230VAC<br>I/P: 120VAC<br>O/P:MIN LOAD<br>Ta:25°C | 15.9V/ 305VAC<br>15.5V/ 230VAC<br>15.5V/ 120VAC<br>PROTECTION TYPE : Shut down output voltage, repower on to recovery                                                                                                    |
| 3  | OVER TEMPERATURE PROTECTION | NO DAMAGE      | I/P: 305 VAC<br>I/P: 200VAC<br>O/P:FULL LOAD                         | O.T.P Active OK<br>PROTECTION TYPE :<br>Shut down output voltage, repower on to recovery                                                                                                                                 |

|   |                  |                                        |                                                          |                                                                                                              |
|---|------------------|----------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 4 | SHORT PROTECTION | SHORT EVERY OUTPUT<br>1 HOUR NO DAMAGE | I/P: 308VAC<br>I/P: 200 VAC<br>O/P: FULL LOAD<br>Ta:25°C | NO DAMAGE<br>PROTECTION TYPE :<br>Hiccup mode, recovers<br>automatically after fault condition<br>is removed |
|---|------------------|----------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

## COMPONENT STRESS TEST

| NO | TEST ITEM                                               | SPECIFICATION          | TEST CONDITION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RESULT                                                                                                                                                                                                           |
|----|---------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | PWM Transistor<br>( D to S) or (C to E)<br>Peak Voltage | Q3<br>Rated: 11A/ 600V | AC ON/OFF<br>I/P:High-Line +3V =308V<br>VDS:<br>O/P: (1)Full Load<br>(2)Output Short<br>(3)Dynamic Load Full Load/<br>Min. Load 90%Duty/1KHz<br>(4)Dynamic Load Full Load/<br>Min. Load 90%Duty/3KHz<br>(5)Dynamic Load Full Load/<br>Min. Load 90%Duty/5KHz<br>(6)Dynamic Load 100% Load/<br>Min. Load 50%Duty/120Hz<br>(7)0%→400% Load.<br>(8)NO LOAD<br><br>I/P:Low-Line -3V = 117V<br>O/P: (1)Full Load<br>(2)Output Short<br>(3)Dynamic Load Full Load/<br>Min. Load 90%Duty/1KHz<br>(4)Dynamic Load Full Load/<br>Min. Load 90%Duty/3KHz<br>(5)Dynamic Load Full Load/<br>Min. Load 90%Duty/5KHz<br>(6)Dynamic Load 100% Load/<br>Min. Load 50%Duty/120Hz<br>(7)0%→400% Load.<br>(8)NO LOAD<br>Ta:25°C | VDS:<br>(1) 457V<br>(2) 473V<br>(3) 457V<br>(4) 449V<br>(5) 453V<br>(6) 457V<br>(7) 477V<br>(8) 441V<br><br>VDS:<br>(1) 445V<br>(2) 473V<br>(3) 445V<br>(4) 445V<br>(5) 445V<br>(6) 445V<br>(7) 469V<br>(8) 437V |

|   |                                                           |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                      |
|---|-----------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | P.F.C Transistor<br>( D to S) or (C to E)<br>Peak Voltage | Q1<br>Rated: 15A/ 650V | AC ON/OFF<br><br>I/P:High-Line +3V =308 V<br>O/P: (1)Full Load<br>(2)Output Short<br>(3)Dynamic Load Full Load/<br>Min. Load 90%Duty/1KHz<br>(4)Dynamic Load Full Load/<br>Min. Load 90%Duty/3KHz<br>(5)Dynamic Load Full Load/<br>Min. Load 90%Duty/5KHz<br>(6)Dynamic Load 100% Load/<br>Min. Load 50%Duty/120Hz<br>(7)0%→400% Load.<br>(8)NO LOAD<br><br>I/P:Low-Line -3V = 117V<br>O/P: (1)Full Load<br>(2)Output Short<br>(3)Dynamic Load Full Load/<br>Min. Load 90%Duty/1KHz<br>(4)Dynamic Load Full Load/<br>Min. Load 90%Duty/3KHz<br>(5)Dynamic Load Full Load/<br>Min. Load 90%Duty/5KHz<br>(6)Dynamic Load 100% Load/<br>Min. Load 50%Duty/120Hz<br>(7)0%→400% Load.<br>(8)NO LOAD<br><br>Ta:25°C | VDS:<br>(1) 505V<br>(2) 513V<br>(3) 501V<br><br>(4) 505V<br>(5) 505V<br>(6) 497V<br>(7) 481V<br>(8) 453V<br><br>VDS:<br>(1) 529V<br>(2) 497V<br>(3) 513V<br>(4) 517V<br>(5) 517V<br>(6) 505V<br>(7) 497V<br>(8) 461V |
| 3 | P.F.C DIODE                                               | D5<br>Rated: 600V/9A   | AC ON/OFF<br><br>I/P:High-Line +3V =308 V<br>O/P: (1)Full Load<br>(2)Output Short<br>(3)Dynamic Load Full Load/<br>Min. Load 90%Duty/5KHz<br>(4)Dynamic Load 100% Load/<br>Min. Load 50%Duty/120Hz<br><br>I/P:Low-Line -3V = 117V<br>O/P: (1)Full Load<br>(2)Output Short<br>(3)Dynamic Load Full Load/<br>Min. Load 90%Duty/5KHz<br>(4)Dynamic Load 100% Load/<br>Min. Load 50%Duty/120Hz<br><br>Ta:25°C                                                                                                                                                                                                                                                                                                     | 308VAC<br>(1)453V<br>(2)441V<br>(3)445V<br>(4)441V<br><br>117VAC<br>(1)453V<br>(2)445V<br>(3)449V<br>(4)445V                                                                                                         |



|   |                         |                                                                        |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                          |
|---|-------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Diode Peak Voltage      | Q101<br>Rated: 40V/80A                                                 | AC ON/OFF<br>I/P:High-Line +3V =308 V<br>O/P: (1)Full Load<br>(2)Output Short<br>(3)Dynamic Load Full Load/<br>Min. Load 90%Duty/1KHz<br>(4)Dynamic Load Full Load/<br>Min. Load 90%Duty/3KHz<br>(5)Dynamic Load Full Load/<br>Min. Load 90%Duty/5KHz<br>(6)Dynamic Load 100% Load/<br>Min. Load 50%Duty/120Hz<br>(7)0%→400% Load.<br>(8).NO LOAD<br><br>Ta:25°C | Q101:<br>VDS:<br>(1) 30.9V<br>(2) 9.16V<br>(3) 30.9V<br>(4) 31.3V<br>(5) 31.7V<br>(6) 33.3V<br>(7) 29.7V<br>(8) 29.7V                                                                                    |
| 5 | Input Capacitor Voltage | C5 Rated:<br>33μ / 450 V<br>Surge voltage: 500V                        | I/P:High-Line +3V =308V<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><br>Ta:25°C                                                                                                                                                                                                 | (1)477V<br>(2)481V<br>(3)448V<br>(4)444V                                                                                                                                                                 |
| 6 | Control IC Voltage Test | PFC/PWM IC U1 Rated<br>-0.3V~19V<br><br>O/P IC U101 Rated<br>-0.3V~26V | AC ON/OFF<br>I/P:High-Line +3V =308 V<br><br>FOR C.V MODE TYPE<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>FOR C.C MODE TYPE<br>O/P(6)LEDmax<br>(7)LEDmin<br><br>Ta:25°C                                                                                                                                     | U1:<br>(1) 17.0V<br>(2) 17.0V<br>(3) 17.0V<br>(4) 17.0V<br>(5) 11.6V<br><br>(6) 17.0V<br>(7) 17.0V<br><br>U101:<br>(1) 11.0V<br>(2) 4.8V<br>(3) 8.6V<br>(4) 11.0V<br>(5) 11.0V<br>(6) 11.0V<br>(7) 11.0V |

## SAFETY & EMC TEST REPORT

### SAFETY TEST

| NO | TEST ITEM            | SPECIFICATION                           | TEST CONDITION                     | RESULT                           |
|----|----------------------|-----------------------------------------|------------------------------------|----------------------------------|
| 1  | WITHSTAND VOLTAGE    | IEC/EN61347-1:<br>I/P-O/P: 3.86KVAC/min | I/P-O/P: 4.246 KVAC/min<br>Ta:25°C | I/P-O/P: 1.25mA<br><br>NO DAMAGE |
| 2  | ISOLATION RESISTANCE | I/P-O/P:500VDC>100MΩ                    | I/P-O/P: 500 VDC<br><br>Ta:25°C    | I/P-O/P:>9999MΩ<br><br>NO DAMAGE |

### E.M.C TEST

| NO | TEST ITEM                                                                                                                         | SPECIFICATION                                              | TEST CONDITION                                     | RESULT                            |
|----|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------|-----------------------------------|
| 1  | HARMONIC                                                                                                                          | EN61000-3-2<br>CLASS C                                     | I/P: 230 VAC/50HZ<br>O/P:FULL LOAD<br>Ta:25°C      | PASS                              |
| 2  | CONDUCTION                                                                                                                        | EN55015/ EN55014<br><br>CLASS B                            | I/P: 230 VAC /50HZ<br>O/P:FULL/50% LOAD<br>Ta:25°C | PASS<br><br>Test by certified Lab |
| 3  | RADIATION                                                                                                                         | EN55015/ EN55014<br><br>CLASS B                            | I/P: 230 VAC /50HZ<br>O/P:FULL LOAD<br>Ta:25°C     | PASS<br><br>Test by certified Lab |
| 4  | E.S.D                                                                                                                             | EN61000-4-2<br>LIGHT INDUSTRY<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>LIGHT INDUSTRY<br>INPUT: 1KV                | I/P: 230 VAC/50HZ<br>O/P:FULL LOAD<br>Ta:25°C      | CRITERIA A                        |
| 6  | SURGE                                                                                                                             | IEC61000-4-5<br><br>LIGHT INDUSTRY<br>L-N :1KV             | 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    |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
|----|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------|----|----------|------------------------|-------------------------|---|------|--------|--------|---|-----|--------|--------|---|----|--------|--------|---|----|--------|--------|---|----|--------|--------|---|----|--------|--------|---|----|--------|--------|---|----|--------|--------|---|----|--------|--------|----|----|--------|--------|----|----|--------|--------|----|-----|--------|--------|----|-----|--------|--------|----|----|--------|--------|----|----|--------|--------|----|--------|--------|--------|----|------|--------|---------|----|------|--------|---------|----|------|--------|--------|----|------|--------|--------|----|------|--------|--------|----|------|--------|--------|----|----|--------|--------|
| 1  | TEMPERATURE RISE TEST                                             | <div>MODEL : SLD-150-12</div> <div>1. ROOM AMBIENT BURN-IN : HRS</div> <div>I/P : 230VAC O/P : FULL LOAD Ta=30.9 °C</div> <div>2. HIGH AMBIENT BURN-IN : HRS</div> <div>I/P : 230VAC O/P : FULL LOAD Ta=41.9 °C</div> <table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta=30.9°C</th><th>HIGH AMBIENT Ta=41.9 °C</th></tr><tr><td>1</td><td>RTH1</td><td>83.0°C</td><td>88.0°C</td></tr><tr><td>2</td><td>BD1</td><td>80.9°C</td><td>88.0°C</td></tr><tr><td>3</td><td>C8</td><td>70.9°C</td><td>79.4°C</td></tr><tr><td>4</td><td>L2</td><td>71.5°C</td><td>80.2°C</td></tr><tr><td>5</td><td>D5</td><td>74.1°C</td><td>83.0°C</td></tr><tr><td>6</td><td>Q1</td><td>72.0°C</td><td>80.8°C</td></tr><tr><td>7</td><td>C6</td><td>67.3°C</td><td>77.2°C</td></tr><tr><td>8</td><td>Q2</td><td>81.5°C</td><td>92.0°C</td></tr><tr><td>9</td><td>Q3</td><td>81.4°C</td><td>92.7°C</td></tr><tr><td>10</td><td>Q4</td><td>74.1°C</td><td>94.4°C</td></tr><tr><td>11</td><td>U1</td><td>71.6°C</td><td>81.8°C</td></tr><tr><td>12</td><td>C13</td><td>76.8°C</td><td>85.9°C</td></tr><tr><td>13</td><td>C51</td><td>73.0°C</td><td>83.3°C</td></tr><tr><td>14</td><td>L3</td><td>79.0°C</td><td>88.4°C</td></tr><tr><td>15</td><td>T1</td><td>89.4°C</td><td>99.1°C</td></tr><tr><td>16</td><td>T1core</td><td>88.3°C</td><td>97.7°C</td></tr><tr><td>17</td><td>Q100</td><td>90.6°C</td><td>100.5°C</td></tr><tr><td>18</td><td>Q101</td><td>93.7°C</td><td>102.7°C</td></tr><tr><td>19</td><td>U101</td><td>86.7°C</td><td>97.6°C</td></tr><tr><td>20</td><td>C105</td><td>85.2°C</td><td>96.0°C</td></tr><tr><td>21</td><td>Q300</td><td>82.5°C</td><td>93.5°C</td></tr><tr><td>22</td><td>RTH2</td><td>82.6°C</td><td>75.1°C</td></tr><tr><td>23</td><td>TC</td><td>68.6°C</td><td>77.2°C</td></tr></table> |                                                                   |           | NO | Position | ROOM AMBIENT Ta=30.9°C | HIGH AMBIENT Ta=41.9 °C | 1 | RTH1 | 83.0°C | 88.0°C | 2 | BD1 | 80.9°C | 88.0°C | 3 | C8 | 70.9°C | 79.4°C | 4 | L2 | 71.5°C | 80.2°C | 5 | D5 | 74.1°C | 83.0°C | 6 | Q1 | 72.0°C | 80.8°C | 7 | C6 | 67.3°C | 77.2°C | 8 | Q2 | 81.5°C | 92.0°C | 9 | Q3 | 81.4°C | 92.7°C | 10 | Q4 | 74.1°C | 94.4°C | 11 | U1 | 71.6°C | 81.8°C | 12 | C13 | 76.8°C | 85.9°C | 13 | C51 | 73.0°C | 83.3°C | 14 | L3 | 79.0°C | 88.4°C | 15 | T1 | 89.4°C | 99.1°C | 16 | T1core | 88.3°C | 97.7°C | 17 | Q100 | 90.6°C | 100.5°C | 18 | Q101 | 93.7°C | 102.7°C | 19 | U101 | 86.7°C | 97.6°C | 20 | C105 | 85.2°C | 96.0°C | 21 | Q300 | 82.5°C | 93.5°C | 22 | RTH2 | 82.6°C | 75.1°C | 23 | TC | 68.6°C | 77.2°C |
| NO | Position                                                          | ROOM AMBIENT Ta=30.9°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | HIGH AMBIENT Ta=41.9 °C                                           |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 1  | RTH1                                                              | 83.0°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 88.0°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 2  | BD1                                                               | 80.9°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 88.0°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 3  | C8                                                                | 70.9°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 79.4°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 4  | L2                                                                | 71.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 80.2°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 5  | D5                                                                | 74.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 83.0°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 6  | Q1                                                                | 72.0°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 80.8°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 7  | C6                                                                | 67.3°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 77.2°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 8  | Q2                                                                | 81.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 92.0°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 9  | Q3                                                                | 81.4°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 92.7°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 10 | Q4                                                                | 74.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 94.4°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 11 | U1                                                                | 71.6°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 81.8°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 12 | C13                                                               | 76.8°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 85.9°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 13 | C51                                                               | 73.0°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 83.3°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 14 | L3                                                                | 79.0°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 88.4°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 15 | T1                                                                | 89.4°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 99.1°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 16 | T1core                                                            | 88.3°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 97.7°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 17 | Q100                                                              | 90.6°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 100.5°C                                                           |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 18 | Q101                                                              | 93.7°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 102.7°C                                                           |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 19 | U101                                                              | 86.7°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 97.6°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 20 | C105                                                              | 85.2°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 96.0°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 21 | Q300                                                              | 82.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 93.5°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 22 | RTH2                                                              | 82.6°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 75.1°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 23 | TC                                                                | 68.6°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 77.2°C                                                            |           |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 2  | OVER LOAD BURN-IN TEST                                            | NO DAMAGE<br>1 HOUR ( MIN )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | I/P : 230 VAC<br>O/P : 106 % LOAD<br>Ta : 25°C                    | TEST : OK |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |
| 3  | LOW TEMPERATURE<br>TURN ON TEST                                   | TURN ON AFTER 2<br>HOUR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | I/P : 305VAC/120VAC<br>O/P : 100 % LOAD<br>Ta= -30 °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<br>NO DAMAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | I/P : 315 VAC<br>O/P : FULL LOAD<br>Ta=40 °C<br>HUMIDITY= 95 %R.H | TEST : OK |    |          |                        |                         |   |      |        |        |   |     |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |   |    |        |        |    |    |        |        |    |    |        |        |    |     |        |        |    |     |        |        |    |    |        |        |    |    |        |        |    |        |        |        |    |      |        |         |    |      |        |         |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |

|    |                          |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                               |                   |
|----|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 5  | TEMPERATURE COEFFICIENT  | ± 0.03 %(0°C~60°C)                                                                                                                                                                                                                                               | I/P : 230 VAC<br>O/P : FULL LOAD                                                                                                                                                                                                                                                                              | ± 0.008 %(0~60°C) |
| 6  | STORAGE TEMPERATURE TEST | -40~85°C                                                                                                                                                                                                                                                         | 1. Thermal shock Temperature : -45°C~ +90°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 : 10CYCLE<br>5. Input/Output condition : AC OFF STATIC<br>TEST : OK                                                                     |                   |
| 7  | THERMAL SHOCK TEST       | -25~40°C                                                                                                                                                                                                                                                         | 1. Thermal shock Temperature : -30°C~ +45°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<br>10min./1cycle, 60min. each<br>along X, Y, Z axes                                                                                                                                                                                               | 1 Carton & 1 Set<br>(1) Waveform : Sine Wave<br>(2) Frequency : 10~500Hz<br>(3) Sweep Time : 12min/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     | SLD-150-12 SUPPOSE C105 IS THE MOST CRITICAL COMPONENT<br>(1) I/P : 230VAC O/P : FULL LOAD Tc=75 °C LIFE TIME (1) 21042HRS<br>(2) I/P : 230VAC O/P : 75% LOAD Tc=75 °C LIFE TIME (2) 50824HRS<br>(3) I/P : 230VAC O/P : 50% LOAD Tc=75 °C LIFE TIME (3) 90794HRS |                                                                                                                                                                                                                                                                                                               |                   |
| 10 | MTBF                     | Conducted by Parts Stress Analysis Prediction<br>2883.5K hrs min. Telcordia SR-332 (Bellcore) ; 298.8K 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        | WUWQ/HUANGMK | WENF   | LINKX    |

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