



Test Report: RSP-1600-36

1600W Power Supply with Single Output

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Control Function Test

Component Stress Test

■ SAFETY & E.M.C. TEST

Safety Test

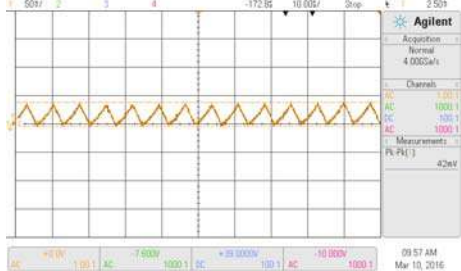
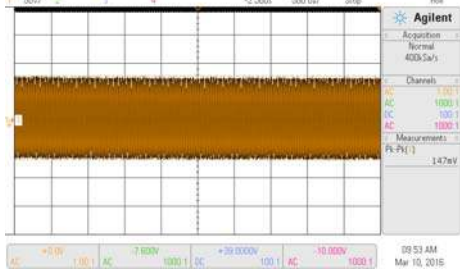
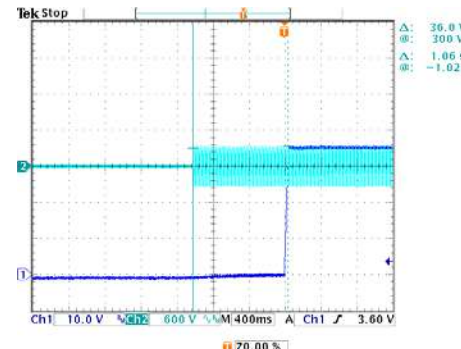
E.M.C. Test

■ RELIABILITY TEST

ENVIRONMENT TEST

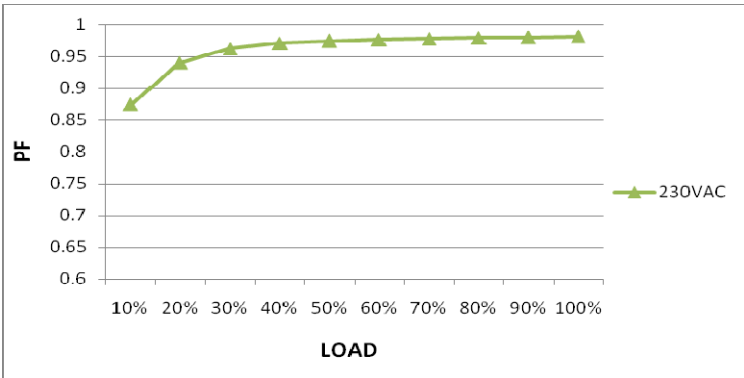
DESIGN VERIFY TEST

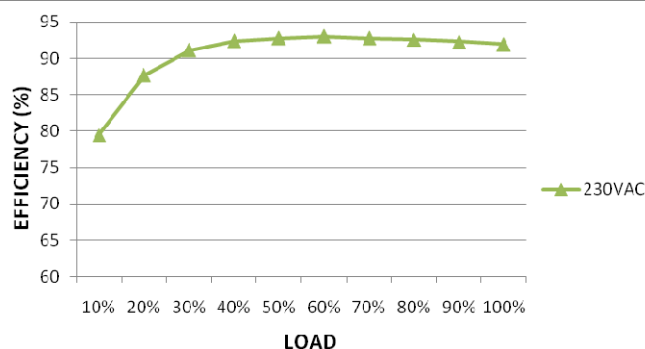
OUTPUT FUNCTION TEST

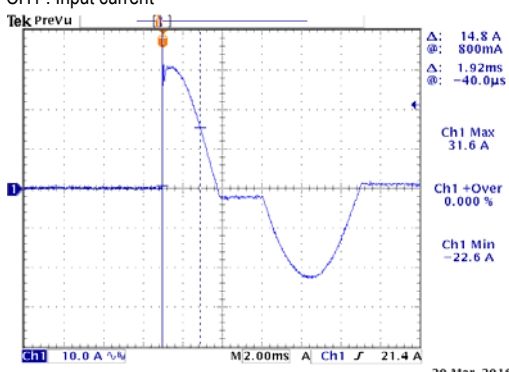
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1: 35.5 V~ 45V	I/P : 230 VAC I/P : 90 VAC O/P : MIN LOAD Ta : 25°C	46.08V~34.19V/230VAC 46.08V~34.21V/90VAC
2	OUTPUT VOLTAGE(Max) TOLERANCE	V1: 1 %~ -1 %	I/P: 180VAC /264VAC O/P:FULL/ MIN. LOAD Ta:25°C	V1:-0.02 %~ 0.02 %
3	LINE REGULATION (Max)	V1: 0.5 %~ -0.5 %	I/P: 180VAC~264VAC O/P:FULL LOAD Ta:25°C	V1: -0.02 %~-0.02 %
4	LOAD REGULATION(Max)	V1: 0.5 %~ -0.5 %	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0 %~ 0.02 %
5	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230VAC O/P:FULL LOAD Ta:25°C	0.43 %
6	RIPPLE & NOISE(Max)	V1: 250 mVp-p	I/P:230VAC O/P:FULL LOAD Ta:25°C	V1:147 mVp-p
high frequency :  low frequency : 				
7	SET UP TIME(Max)	230VAC/1500ms	I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	230VAC/ 1056 ms
INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage 				
8	RISE TIME (Max)	230VAC/60ms	I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	230VAC/36.8 ms

INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage				
9	HOLD UP TIME (Typ.)	230VAC/10ms /FULL LOAD 230VAC/16ms /75% LOAD	I/P : 230 VAC O/P : FULL LOAD /75% LOAD Ta : 25°C	230VAC/ 13.4 ms /FULL LOAD 230VAC/ 20.2 ms /75% LOAD
INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage				
INPUT=230VAC/50HZ @75% LOAD CH1 : Output Voltage CH2 : AC Input Voltage				
10	DYNAMIC LOAD	V1: 3600 mVp-p	I/P: 230VAC O/P: (1)FULL /50% LOAD 50%DUTY / 120HZ (2)FULL /50% LOAD 50%DUTY / 1KHZ Ta:25°C	422mVp-p 342mVp-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	90V~264VAC	I/P: TESTING O/P: FULL LOAD O/P: 60% LOAD Ta: 25℃	150 V~ 264 V 87V~264V																						
			I/P: (1)LOW-LINE-3V=87 V HIGH-LINE+15%=300 V O/P:FULL/MIN LOAD (PLEASE CHECK DERATING CURVE) ON: 30 Sec OFF: 30 Sec 10MIN (2)230Vac ON: 0.5 Sec OFF: 0.5 Sec 20MIN (3)230Vac ON:3Sec OFF:3Sec 12HOURS (POWER ON/OFF NO DAMAGE)	TEST:OK																						
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P:90 VAC ~264 VAC O/P:FULL~MIN LOAD Ta:25℃	TEST: OK																						
3	INPUT CURRENT (Typ.)	230V/ 8.5 A 115V/ 15 A	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD (PLEASE CHECK DERATING CURVE) Ta : 25℃	I =7.88A/ 230VAC I =12.45A/ 115VAC																						
4	LEAKAGE CURRENT	<2 mA / 240 VAC	I/P : 240 VAC O/P : Min LOAD Ta : 25℃	L-FG : 0.76 mA N-FG : 0.76 mA																						
5	POWER FACTOR (Typ.)	0.97 / 230VAC	I/P : 230 VAC O/P : FULL LOAD Ta : 25℃	PF=0.9808/230VAC																						
P.F vs LOAD																										
<table><caption>Approximate data points from P.F vs LOAD graph</caption><thead><tr><th>LOAD (%)</th><th>PF</th></tr></thead><tbody><tr><td>10</td><td>0.87</td></tr><tr><td>20</td><td>0.94</td></tr><tr><td>30</td><td>0.96</td></tr><tr><td>40</td><td>0.97</td></tr><tr><td>50</td><td>0.975</td></tr><tr><td>60</td><td>0.978</td></tr><tr><td>70</td><td>0.98</td></tr><tr><td>80</td><td>0.982</td></tr><tr><td>90</td><td>0.984</td></tr><tr><td>100</td><td>0.986</td></tr></tbody></table>					LOAD (%)	PF	10	0.87	20	0.94	30	0.96	40	0.97	50	0.975	60	0.978	70	0.98	80	0.982	90	0.984	100	0.986
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6	EFFICIENCY(Typ.)	92%	I/P:230 VAC O/P:FULL LOAD Ta:25℃	92.45%																						
EFFICIENCY vs LOAD																										



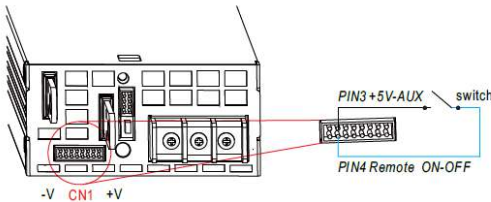
7	INRUSH CURRENT(Typ.)	230V/35 A COLD START	I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	I = 31.6A/ 230VAC T50= 1920 us/230V
INPUT=230VAC/50HZ @ FULL LOAD CH1 : Input current  Tek PreVu Δ: 14.8 A @: 800mA Δ: 1.92ms @: -40.0μs Ch1 Max 31.6 A Ch1 +Over 0.000 % Ch1 Min -22.6 A Ch1 10.0 A %/u M2.00ms A Ch1 21.4 A 29 Mar 2016 18:39:57				

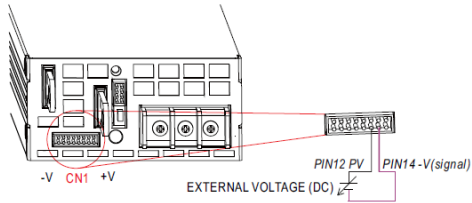
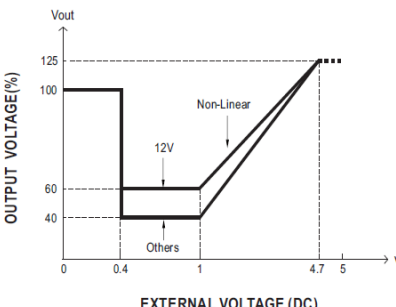
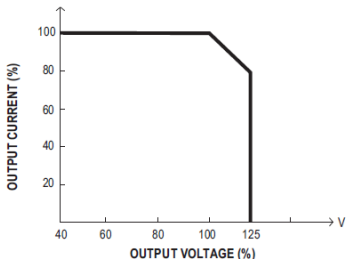
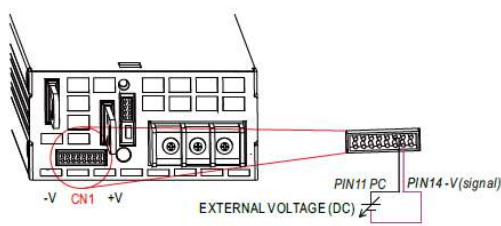
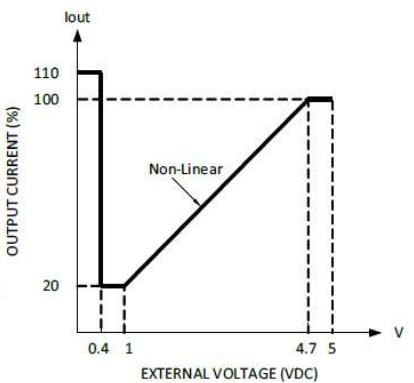
PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	105 %~ 115 % PROTECTION TYPE : Constant current limiting, unit will shut down o/p voltage after 5 sec. re-power on to recover	I/P: 264VAC I/P: 230VAC I/P: 180VAC O/P: TESTING Ta: 25°C	110.74%/ 264VAC 110.46%/ 230VAC 110.69%/180VAC PROTECTION TYPE : Constant current limiting, unit will shut down o/p voltage after 5 sec. re-power on to recover
2	OVER VOLTAGE PROTECTION	47.2 V~ 56.3 V PROTECTION TYPE : Shut down o/p voltage, re-power on to recover	I/P: 264VAC I/P: 230VAC I/P: 90VAC O/P: MIN LOAD Ta: 25°C	51.3V/ 264VAC 51.3V/ 230VAC 51.3V/ 90VAC PROTECTION TYPE : Shut down o/p voltage, re-power on to recover
3	OVER TEMPERATURE PROTECTION	NO DAMAGE PROTECTION TYPE : Shut down o/p voltage, recovers automatically after temperature goes down	I/P: 264VAC I/P: 180VAC O/P: FULL LOAD	O.T.P. Active PROTECTION TYPE : Shut down o/p voltage, recovers automatically after temperature goes down
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE PROTECTION TYPE : Constant current limiting, unit will	I/P: 264VAC I/P: 90VAC O/P: FULL LOAD Ta: 25°C	NO DAMAGE PROTECTION TYPE : Constant current limiting, unit will shut down o/p voltage after 5 sec. re-power on to

		shut down o/p voltage after 5 sec. re-power on to recover		recover
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CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT																					
1	AUXILIARY POWER (AUX)	1. 5V±10%@0.3A ripple:150mVp-p 2. 12V±10%@0.8A ripple:250mVp-p	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	5.02V 0.3A / 72mVp-p 11.13V 0.794 A /201 mVp-p																					
2	REMOTE ON/OFF CONTROL	※ The power supply can be turned ON/OFF individually or along with other units by using the "Remote ON-OFF" function.  <table><tr><td>Between Remote ON-OFF and +5V-AUX</td><td>Power Supply Status</td></tr><tr><td>Switch Short</td><td>ON</td></tr><tr><td>Switch Open</td><td>OFF</td></tr></table> I/P: 230 VAC O/P:FULL LOAD Ta:25℃ Test Result : <table><tr><td>Between Remote ON-OFF and +5V-AUX</td><td>Power Supply Status</td></tr><tr><td>SW SHORT</td><td>ON</td></tr><tr><td>SW OPEN</td><td>OFF</td></tr></table>			Between Remote ON-OFF and +5V-AUX	Power Supply Status	Switch Short	ON	Switch Open	OFF	Between Remote ON-OFF and +5V-AUX	Power Supply Status	SW SHORT	ON	SW OPEN	OFF									
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SW OPEN	OFF																								
3	REMOTE SENSE	S+ / S- >0.5V Compensate voltage drop on the load wiring up to 0.5V.	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	> 0.5V																					
4	ALARM SIGNAL	1. DC OK SIGNAL High (4.5 ~ 5.5V) : When the Vout≤ 80%±5%. Low (-0.1 ~ 0.5V) : When Vout≥ 80%±5%. The maximum sourcing current is 10mA and only for output. I/P: 230 VAC O/P:FULL LOAD Ta:25℃ Test Result : <table><tr><td>Vout</td><td>DC OK SIGNAL</td></tr><tr><td>Vout≤ 75%</td><td>5.38V</td></tr><tr><td>Vout≥ 85%</td><td>0.01V</td></tr></table> 2. T-ALARM <table><tr><td>P.S.U STATUS</td><td>Vo</td><td>T-ALARM</td></tr><tr><td>NORMAL</td><td>100%±2%</td><td>-0.1 ~0.5V</td></tr><tr><td>OTP OR FAN LOCK</td><td>0V</td><td>4.5~5.5V</td></tr></table> I/P: 230 VAC O/P:FULL LOAD Ta:25℃ Test Result : <table><tr><td>P.S.U STATUS</td><td>T-ALARM</td></tr><tr><td>NORMAL</td><td>0.01 V</td></tr><tr><td>OTP OR FAN LOCK</td><td>5.38V</td></tr></table>			Vout	DC OK SIGNAL	Vout≤ 75%	5.38V	Vout≥ 85%	0.01V	P.S.U STATUS	Vo	T-ALARM	NORMAL	100%±2%	-0.1 ~0.5V	OTP OR FAN LOCK	0V	4.5~5.5V	P.S.U STATUS	T-ALARM	NORMAL	0.01 V	OTP OR FAN LOCK	5.38V
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5	OUTPUT VOLTAGE PROGRAMMABLE(PV)	※ In addition to the adjustment via the built-in potentiometer, the output voltage can be trimmed by applying EXTERNAL VOLTAGE.  PIN12 PV PIN14 -V(signal) EXTERNAL VOLTAGE (DC) ◎ For Remote Sense / Local Sense, please refer to "Voltage Drop Compensation" section.  OUTPUT VOLTAGE (%) EXTERNAL VOLTAGE (DC)  OUTPUT CURRENT (%) OUTPUT VOLTAGE (%) ◎ The rated current should change with the Output Voltage Programming accordingly. ◎ For Remote Sense / Local Sense, please refer to "Voltage Drop Compensation" section. I/P: 230 VAC O/P:FULL LOAD Ta:25℃ Test Result : <table><tr><td></td><td>PV</td><td><0.4V</td><td>1V</td><td>5V</td></tr><tr><td>MODEL</td><td></td><td></td><td></td><td></td></tr><tr><td>SPEC</td><td></td><td>36V±5%</td><td>14.4V±5%</td><td>45V±5%</td></tr><tr><td>Vout</td><td></td><td>36.01V</td><td>14.5V</td><td>45.5V</td></tr></table>		PV	<0.4V	1V	5V	MODEL					SPEC		36V±5%	14.4V±5%	45V±5%	Vout		36.01V	14.5V	45.5V
	PV	<0.4V	1V	5V																		
MODEL																						
SPEC		36V±5%	14.4V±5%	45V±5%																		
Vout		36.01V	14.5V	45.5V																		
6	OUTPUT CURRENT PROGRAMMABLE (PC)	 PIN11 PC PIN14 -V(signal) EXTERNAL VOLTAGE (DC) ◎ For Remote Sense / Local Sense, please refer to "Voltage Drop Compensation" section.  OUTPUT CURRENT (%) EXTERNAL VOLTAGE (VDC) I/P: 230 VAC O/P:TESTING Ta:25℃ Test Result : <table><tr><td>ADJ V</td><td>1V</td><td>4.7V</td><td>5V</td></tr><tr><td>SPEC</td><td>20%±10%</td><td>100%±10%</td><td>100%±10%</td></tr><tr><td>Iout</td><td>18.9%</td><td>101.1%</td><td>102.2%</td></tr></table>	ADJ V	1V	4.7V	5V	SPEC	20%±10%	100%±10%	100%±10%	Iout	18.9%	101.1%	102.2%								
ADJ V	1V	4.7V	5V																			
SPEC	20%±10%	100%±10%	100%±10%																			
Iout	18.9%	101.1%	102.2%																			
7	CURRENT SHARING	< ±5%	I/P : 230 VAC O/P : FULL/50% LOAD	O/P : 100% PSU1 : 45.83 A																		

			Ta : 25°C	PSU2 : 46.28 A PSU3 : 44.67 A PSU4 : 45.38 A PSU5 : 44.07 A PSU6 : 44.82 A O/P : 50% PSU1 : 22.86 A PSU2 : 23.32 A PSU3 : 22.76 A PSU4 : 22.86 A PSU5 : 22.21 A PSU6 : 22.61 A
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COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q901 Rated 29A/600V	I/P:High-Line +3V =267V AC ON/OFF VDS: O/P: (1)Full Load (2)Output Short (3)Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4)Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5)Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6)Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7)0%→400% Load. Ta:25°C	VDS: (1)469V (2)448V (3)428V (4)432V (5)432V (6)432V (7)436V
2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q52 Rated 52A/ 600V	I/P:High-Line +3V =267 V AC ON/OFF O/P: (1)Full Load (2)Output Short (3)Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4)Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5)Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6)Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7)0%→400% Load. Ta:25°C	VDS: (1)457V/19.1A (2) 408V/18.7A (3)440 V/14.2A (4)444 V/14.6A (5)457 V/13.4A (6)428V/10.3A (7)412V/11.1A
3	Diode Peak Voltage	Q101 Rated 104A/150 V Q104 Rated 104A/150 V	I/P:High-Line +3V =267 V AC ON/OFF O/P: (1)Full Load (2)Output Short (3)Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4)Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5)Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6)Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz	Q101: Q104: VDS: VDS: (1)140V (1)140V (2)136V (2)136V (3)138V (3)136V (4)138V (4)140V (5)140V (5)138V (6)136V (6)134V (7)136V (7)138V (8)142V (8)140V

			(7)0%→400% Load. (8).NO LOAD Ta:25°C	
4	Input Capacitor Voltage	C5 Rated: 680μ/400 V	I/P:High-Line +3V =267 V O/P: (1)Full Load Ta:25°C	(1)389V
5	Control IC Voltage Test	PWM IC U901 Rated 6.5 V~24V PFC IC U51 Rated 4.5V~ 15V	I/P:High-Line +3V =267 V AC ON/OFF O/P(1)FULL LOAD (2) Output Short (3)O.L.P (4)O.V.P. Ta:25°C	(1) 14.4V (2) 15.0V (3) 14.8V (4) 13.2V (1)13.6V (2)13.4V (3)13.4V (4)13.4V

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P: 3KVAC/min I/P-FG :2KVAC/min O/P-FG:1.5KVAC/min	I/P-O/P: 3.6 KVAC/min I/P-FG: 2.4 KVAC/min O/P-FG:1.8 KVAC/min Ta:25°C	I/P-O/P:7.31mA I/P-FG:7.08mA O/P-FG:7.51mA NO DAMAGE
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG: 500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C	I/P-O/P: 20.1GΩ I/P-FG: 15.9GΩ O/P-FG:27.4 GΩ NO DAMAGE
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40A / 2min Ta:25°C	17 mΩ

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	EN61000-3-2 CLASS A	I/P:230VAC/50HZ O/P:100% LOAD Ta:25°C	PASS
2	CONDUCTION	EN55022 CLASS B	I/P : 230 VAC (50HZ) O/P : FULL/50% LOAD Ta : 25°C	PASS Test by certified Lab
3	RADIATION	EN55022 CLASS A	I/P : 230 VAC (50HZ) O/P : FULL LOAD Ta : 25°C	PASS Test by certified Lab
4	E.S.D	EN61000-4-2 INDUSTRY AIR : 8KV / Contact : 4KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	CRITERIA A
5	E.F.T	EN61000-4-4 INDUSTRY INPUT : 2KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	CRITERIA A
6	SURGE	IEC61000-4-5 INDUSTRY L-N : 2KV L,N-PE : 4KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	CRITERIA A
7	Test by certified Lab & Test Report Prepare			

RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT																																																																																																								
1	TEMPERATURE RISE TEST	MODEL : RSP-1600-24 1. ROOM AMBIENT BURN-IN : 1 HRS I/P : 230VAC O/P : FULL LOAD Ta= 28.3 °C 2. HIGH AMBIENT BURN-IN : 3 HRS I/P : 230VAC O/P : FULL LOAD Ta= 52.5 °C																																																																																																										
		<table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta= 28.3 °C</th><th>HIGH AMBIENT Ta= 52.5 °C</th></tr><tr><td>1</td><td>Q901</td><td>63.0°C</td><td>93.0°C</td></tr><tr><td>2</td><td>Q904</td><td>60.8°C</td><td>89.5°C</td></tr><tr><td>3</td><td>Q52</td><td>63.1°C</td><td>89.3°C</td></tr><tr><td>4</td><td>D50</td><td>70.3°C</td><td>97.8°C</td></tr><tr><td>5</td><td>BD1</td><td>44.2°C</td><td>69.2°C</td></tr><tr><td>6</td><td>L900</td><td>54.9°C</td><td>80.5°C</td></tr><tr><td>7</td><td>T3</td><td>53.4°C</td><td>80.3°C</td></tr><tr><td>8</td><td>RG301</td><td>71.8°C</td><td>98.9°C</td></tr><tr><td>9</td><td>RG302</td><td>66.6°C</td><td>92.5°C</td></tr><tr><td>10</td><td>T1</td><td>60.5°C</td><td>88.0°C</td></tr><tr><td>11</td><td>Q101</td><td>63.9°C</td><td>94.7°C</td></tr><tr><td>12</td><td>Q104</td><td>61.3°C</td><td>90.9°C</td></tr><tr><td>13</td><td>U921</td><td>43.7°C</td><td>68.2°C</td></tr><tr><td>14</td><td>C5</td><td>38.5°C</td><td>62.4°C</td></tr><tr><td>15</td><td>L100</td><td>71.9°C</td><td>96.4°C</td></tr><tr><td>16</td><td>ZNR1</td><td>29.2°C</td><td>53.3°C</td></tr><tr><td>17</td><td>L2</td><td>47.4°C</td><td>71.9°C</td></tr><tr><td>18</td><td>RY1</td><td>33.3°C</td><td>58.0°C</td></tr><tr><td>19</td><td>C101</td><td>31.3°C</td><td>55.1°C</td></tr><tr><td>20</td><td>T52</td><td>41.7°C</td><td>66.6°C</td></tr><tr><td>21</td><td>RTH21</td><td>55.7°C</td><td>82.7°C</td></tr><tr><td>22</td><td>RTH9</td><td>44.4°C</td><td>68.5°C</td></tr><tr><td>23</td><td>U671</td><td>31.3°C</td><td>55.2°C</td></tr><tr><td>24</td><td>U82</td><td>59.7°C</td><td>86.3°C</td></tr><tr><td>25</td><td>Q151</td><td>40.9°C</td><td>65.0°C</td></tr></table>			NO	Position	ROOM AMBIENT Ta= 28.3 °C	HIGH AMBIENT Ta= 52.5 °C	1	Q901	63.0°C	93.0°C	2	Q904	60.8°C	89.5°C	3	Q52	63.1°C	89.3°C	4	D50	70.3°C	97.8°C	5	BD1	44.2°C	69.2°C	6	L900	54.9°C	80.5°C	7	T3	53.4°C	80.3°C	8	RG301	71.8°C	98.9°C	9	RG302	66.6°C	92.5°C	10	T1	60.5°C	88.0°C	11	Q101	63.9°C	94.7°C	12	Q104	61.3°C	90.9°C	13	U921	43.7°C	68.2°C	14	C5	38.5°C	62.4°C	15	L100	71.9°C	96.4°C	16	ZNR1	29.2°C	53.3°C	17	L2	47.4°C	71.9°C	18	RY1	33.3°C	58.0°C	19	C101	31.3°C	55.1°C	20	T52	41.7°C	66.6°C	21	RTH21	55.7°C	82.7°C	22	RTH9	44.4°C	68.5°C	23	U671	31.3°C	55.2°C	24	U82	59.7°C	86.3°C	25	Q151	40.9°C	65.0°C
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P : 230 VAC O/P : 105% LOAD Ta : 25°C	TEST : OK																																																																																																								
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 230VAC/180VAC O/P : 100 % LOAD Ta= -35°C / -30°C	TEST : OK																																																																																																								
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 °C NO DAMAGE	I/P : 272 VAC O/P : FULL LOAD Ta= 50 °C HUMIDITY= 95 %R.H	TEST : OK																																																																																																								
5	TEMPERATURE COEFFICIENT	± 0.03 %/°C (0~50°C)	I/P : 230 VAC O/P : FULL LOAD	± 0.002 %/°C (0~50°C)																																																																																																								

6	STORAGE TEMPERATURE TEST	1. Thermal shock Temperature : -45°C ~ +90°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 5 CYCLE 5. Input/Output condition : STATIC	OK
7	THERMAL SHOCK TEST	1. Thermal shock Temperature : -35°C ~ +55°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 10 CYCLE 5. Input/Output condition : 15cycle:230V/ FULL LOAD AC ON 3sec/AC OFF 1sec TEST(13500 TIMES) 1cycle:230V/ FULL LOAD Burn In Test	OK
8	VIBRATION TEST	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 10~500Hz (3) Sweep Time : 12min/sweep cycle (4) Acceleration : 2G (5) Test Time : 60min in each axis (X.Y.Z) (6) Ta : 25°C	TEST : OK
9	CAPACITOR LIFE CYCLE	SUPPOSE C101 IS THE MOST CRITICAL COMPONENT (1) I/P : 230VAC O/P : FULL LOAD Ta= 25°C LIFE TIME (2) I/P : 230VAC O/P : FULL LOAD Ta= 50°C LIFE TIME (3) I/P : 230VAC O/P : 75% LOAD Ta= 50°C LIFE TIME (4) I/P : 230VAC O/P : 50% LOAD Ta= 50°C LIFE TIME	(1) 2451612HRS (2) 445544HRS (3) 480914HRS (4) 490935HRS
10	MTBF	Conducted by Parts Stress Analysis Prediction 160.9K hrs min. Telcordia SR-332 (Bellcore) ; 42.1K hrs min. MIL-HDBK-217F (25°C)	
11	DMTBF/Accelerated Life Test	Demonstration Mean Time Between Failure (Expected Life): Above 50,000 hours @ TA 50°C	

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

12.10.30 A50-F031