



150W Single Output with PFC Function

HRPG-150 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- High efficiency up to 88% (typ.)
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- 1U low profile 38mm
- Built-in remote ON-OFF control
- Stand by 5V@0.3A
- Built-in remote sense function
- No load power consumption<0.5W
- 5 years warranty



SPECIFICATION

MODEL		HRPG-150-3.3	HRPG-150-5	HRPG-150-7.5	HRPG-150-12	HRPG-150-15	HRPG-150-24	HRPG-150-36	HRPG-150-48
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	36V	48V
	RATED CURRENT	30A	26A	20A	13A	10A	6.5A	4.3A	3.3A
	CURRENT RANGE	0 ~ 30A	0 ~ 26A	0 ~ 20A	0 ~ 13A	0 ~ 10A	0 ~ 6.5A	0 ~ 4.3A	0 ~ 3.3A
	RATED POWER	99W	130W	150W	156W	150W	156W	154.8W	158.4W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	100mVp-p	120mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	2.8 ~ 3.8V	4.3 ~ 5.8V	6.8 ~ 9V	10.2 ~ 13.8V	13.5 ~ 18V	21.6 ~ 28.8V	28.8 ~ 39.6V	40.8 ~ 55.2V
	VOLTAGE TOLERANCE Note.3	±2.5%	±2.5%	±2.5%	±1.5%	±1.5%	±1.5%	±1.5%	±1.5%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	3000ms, 50ms/230VAC 3000ms, 50ms/115VAC at full load							
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load							
INPUT	VOLTAGE RANGE Note.5	85 ~ 264VAC 120 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR (Typ.)	PF>0.95/230VAC PF>0.99/115VAC at full load							
	EFFICIENCY (Typ.)	78.5%	84%	86%	87%	87%	87%	88%	88%
	AC CURRENT (Typ.)	2.3A/115VAC 1.3A/230VAC							
	INRUSH CURRENT (Typ.)	35A/115VAC 70A/230VAC							
	LEAKAGE CURRENT	<1mA / 240VAC							
PROTECTION	OVERLOAD	105 ~ 135% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed							
	OVER VOLTAGE	3.96 ~ 4.62V	6 ~ 7V	9.4 ~ 10.9V	14.4 ~ 16.8V	18.8 ~ 21.8V	30 ~ 34.8V	41.4 ~ 48.6V	57.6 ~ 67.2V
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover							
		95°C (3.3V ~ 7.5V), 85°C (12V ~ 48V) (TSW1 : detect on heatsink Q1 of power transistor)							
		105°C (3.3V ~ 7.5V), 100°C (12V ~ 48V) (TSW2 : detect on heatsink HS4 of power transistor)							
FUNCTION	5V STANDBY	5VSB : 5V@0.3A; tolerance ± 5%, ripple : 50mVp-p(max.)							
	REMOTE CONTROL	RC+ / RC- : 4 ~ 10V or open = power on ; 0 ~ 0.8V or short = power off							
	WORKING TEMP.	-30 ~ +70°C (Refer to output load derating curve)							
ENVIRONMENT	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.04%/°C (0 ~ 50°C)							
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes							
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved							
SAFETY & EMC (Note 4)	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH							
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B							
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3							
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN61000-6-2, heavy industry level, criteria A							
OTHERS	MTBF	213.4K hrs min. MIL-HDBK-217F (25°C)							
	DIMENSION	159*97*38mm (L*W*H)							
	PACKING	0.63Kg; 24pcs/16Kg/0.76CUFT							
NOTE		1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Derating may be needed under low input voltages. Please check the derating curve for more details.							

■ Mechanical Specification

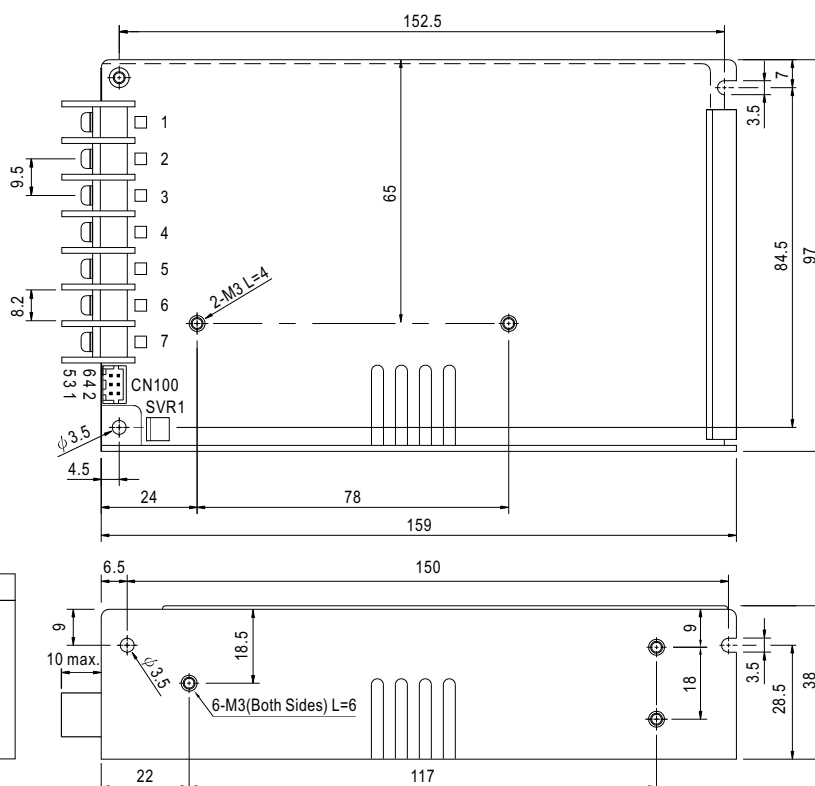
Case No.901I Unit:mm

Terminal Pin No. Assignment

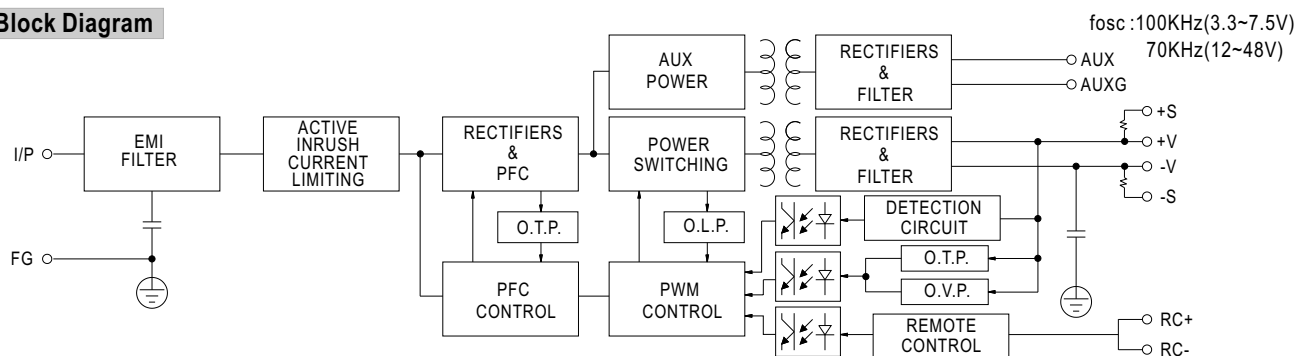
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	EG $\perp$		

Connector Pin No. Assignment (CN100) :
HRS DF11-6DP-2DS or equivalent

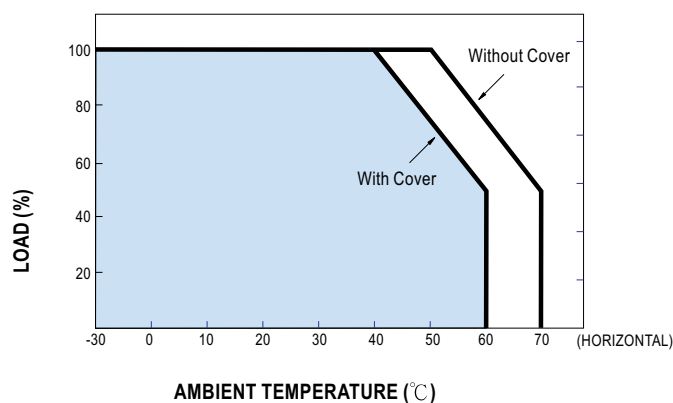
Pin No.	Assignment	Mating Housing	Terminal
1	-S	HRS DF11-6DS or equivalent	HRS DF11-**SC or equivalent
2	+S		
3	AUXG		
4	AUX		
5	RC-		
6	RC+		



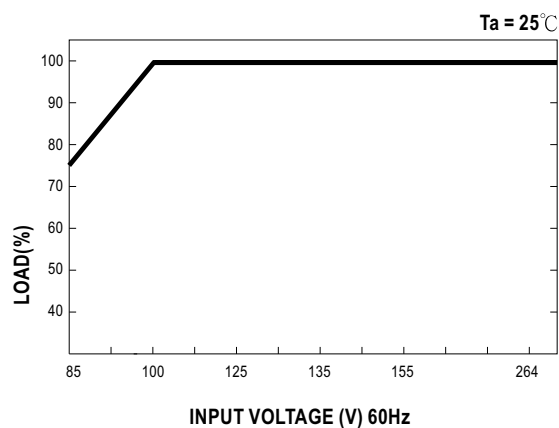
■ Block Diagram



Derating Curve



■ Output Derating VS Input Voltage



Function Description of CN100

Pin No.	Function	Description
1	-S	Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V.
2	+S	Positive sensing. The +S signal should be connected to the positive terminal of the load. The +S and -S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V.
3	AUXG	Auxiliary voltage output ground. The signal return is isolated from the output terminals (+V & -V).
4	AUX	Auxiliary voltage output, 4.6~5.25V, referenced to pin 3(AUXG). The maximum load current is 0.3A. This output has the built-in oring diodes and is not controlled by the "remote ON/OFF control".
5	RC-	Remote control ground.
6	RC+	Turns the output on and off by electrical or dry contact between pin 5 (RC-). Short: Power OFF, Open: Power ON.

Function Manual

1.Remote Control

The PSU can be turned ON/OFF by using the "Remote ON/OFF" function

Between RC-(pin5) and RC+(pin6)	Output Status
SW ON (Short)	OFF
SW OFF (Open)	ON

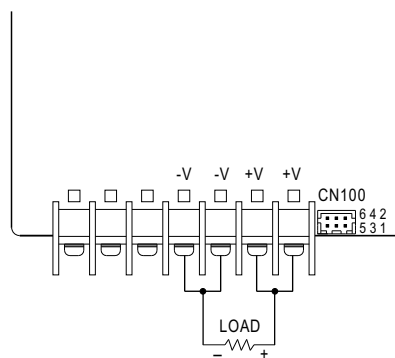
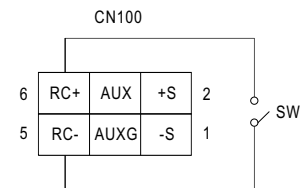


Fig 1.1



2.Remote Sense

The remote sensing compensates voltage drop on the load wiring up to 0.5V.

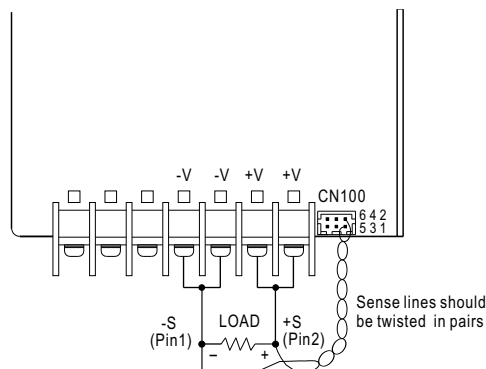
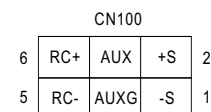


Fig 2.1



MODEL : HRPG-150-48

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1 : 240 mVp-p (Max)	I/P : 230VAC O/P : FULL LOAD Ta : 25°C	V1 : 72.8 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1 : 40.8V ~55.2 V	I/P : 230 VAC I/P : 115 VAC O/P : MIN LOAD Ta : 25°C	36.72 V~ 57.6 V/ 230 VAC 36.72 V~ 57.6 V/ 115 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1 : 1.5 %~ -1.5 % (Max)	I/P : 100 VAC / 264 VAC O/P : FULL/ MIN LOAD Ta : 25°C	V1 : 0.02 %~ -0.02 %	P
4	LINE REGULATION	V1 : 0.2 %~ -0.2 % (Max)	I/P : 100 VAC ~ 264 VAC O/P : FULL LOAD Ta : 25°C	V1 : 0.02 %~ -0.02 %	P
5	LOAD REGULATION	V1 : 0.5 %~ -0.5 % (Max)	I/P : 230 VAC O/P : FULL ~MIN LOAD Ta : 25°C	V1 : 0.02 %~ -0.02 %	P
6	SET UP TIME	230VAC : 3000 ms (Max) 115 VAC : 3000 ms (Max)	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	230VAC/ 1062 ms 115VAC/ 1062 ms	P
7	RISE TIME	230VAC : 50 ms (Max) 115VAC : 50 ms (Max)	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	230VAC/ 19 ms 115VAC/ 18 ms	P
8	HOLD UP TIME	230VAC : 16 ms (TYP) 115VAC : 16 ms (TYP)	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	230VAC/ 28 ms 115VAC/ 26 ms	P
9	OVER/UNDERSHOOT TEST	< ±5%	I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	TEST : < 5 %	P
10	DYNAMIC LOAD	V1 : 4800 mVp-p	I/P : 230 VAC O/P : FULL /Min LOAD 90%DUTY/1KHZ Ta : 25°C	701 mVp-p	P
11	No load overconsumption	<0.5W	I/P : 240 VAC O/P : TESTING Ta : 25°C	0.28 W	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	85VAC~264 VAC	I/P : TESTING O/P : FULL LOAD Ta : 25°C	70 V~264V	P
			I/P : LOW-LINE-3V= 97 V HIGH-LINE+15%=300 V O/P : FULL/MIN LOAD ON : 30 Sec . OFF : 30 Sec 10MIN (AC POWER ON/OFF NO DAMAGE)	TEST : OK	
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE OSC	I/P : 100 VAC ~ 264 VAC O/P : FULL~MIN LOAD Ta : 25°C	TEST : OK	P
3	POWER FACTOR	0.95 / 230 VAC(TYP) 0.99 / 115 VAC(TYP)	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	PF= 0.975 / 230 VAC PF= 0.998 / 115 VAC	P
4	EFFICIENCY	88% (TYP)	I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	88.7 %	P
5	INPUT CURRENT	230V/ 1.3 A (TYP) 115V/ 2.3 A (TYP)	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I = 0.79 A/ 230 VAC I = 1.58 A/ 115 VAC	P
6	INRUSH CURRENT	230V/ 70 A (TYP) 115V/ 35 A (TYP) COLD START	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I = 64 A/ 230 VAC I = 31 A/ 115 VAC	P
7	LEAKAGE CURRENT	< 1 mA / 240 VAC	I/P : 264 VAC O/P : Min LOAD Ta : 25°C	L-FG : 0.14 mA N-FG : 0.14 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105 %~ 135 %	I/P : 230 VAC I/P : 115 VAC O/P : TESTING Ta : 25°C	118 %/ 230 VAC 117 %/ 115 VAC Constant Current Limiting	P
2	OVER VOLTAGE PROTECTION	CH1 : 57.6 V~ 67.2 V	I/P : 230 VAC I/P : 115 VAC O/P : MIN LOAD Ta : 25°C	62 V/ 230 VAC 62 V/ 115 VAC Shut down Re- power ON	P
3	OVER TEMPERATURE PROTECTION	SPEC : TSW1 : 85 ± 5°C O.T.P. TSW2 : 100 ± 5°C O.T.P. NO DAMAGE	I/P : 230 VAC O/P : FULL LOAD	O.T.P. Active Shut down o/p voltage , recovers automatically after temperature goes down	P
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P : 264 VAC O/P : FULL LOAD Ta : 25°C	NO DAMAGE Constant Current Limiting	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	REMOTE CONTROL	Rc+ / Rc- SHORT : POWER OFF OPEN : POWER ON	I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	OK	P
2	REMOTE SENSE	>0.3V	I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	>0.3V	P
3	AUX POWER	4.6V~5.25V/0.3A RIPPLE=50mV	I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	5VSB : 4.93 V RIPPLE : 10 mV	P

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT																																																																																																									
1	TEMPERATURE RISE TEST	MODEL : HRPG-150-24 1. ROOM AMBIENT BURN-IN : 1.5 HRS I/P : 230VAC O/P : FULL LOAD Ta= 24.2 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta= 41 °C <table><tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta= 24.2 °C</th><th>HIGH AMBIENT Ta= 41 °C</th></tr><tr><td>1</td><td>LF2</td><td>TR781</td><td>59.8°C</td><td>74.9°C</td></tr><tr><td>2</td><td>BD1</td><td>BD 4A/600V D3SB60</td><td>69.4°C</td><td>84.7°C</td></tr><tr><td>3</td><td>L3</td><td>TF1592</td><td>56.8°C</td><td>74.5°C</td></tr><tr><td>4</td><td>Q1</td><td>IRFP460A 20A/500V</td><td>57.0°C</td><td>72.9°C</td></tr><tr><td>5</td><td>D1</td><td>BYC8-600 8A/600V</td><td>60.9°C</td><td>76.7°C</td></tr><tr><td>6</td><td>C5</td><td>100u/400V 105°C 18*25 KMG</td><td>71.9°C</td><td>89.1°C</td></tr><tr><td>7</td><td>CN2</td><td>85°C (NEAR Q1)</td><td>55.7°C</td><td>71.6°C</td></tr><tr><td>8</td><td>C61</td><td>470u/16V 105°C KY</td><td>81.0°C</td><td>98.6°C</td></tr><tr><td>9</td><td>T2</td><td>TR435-R3</td><td>72.0°C</td><td>88.4°C</td></tr><tr><td>10</td><td>Q3</td><td>2SK3568 12A/500V TO220F</td><td>80.1°C</td><td>97.9°C</td></tr><tr><td>11</td><td>U1</td><td>FAN4801</td><td>81.2°C</td><td>98.6°C</td></tr><tr><td>12</td><td>T1</td><td>TF1589</td><td>81.5°C</td><td>99.2°C</td></tr><tr><td>13</td><td>Q101</td><td>STPS20170C 20A/170V</td><td>78.4°C</td><td>94.3°C</td></tr><tr><td>14</td><td>L100</td><td>TR824</td><td>80.1°C</td><td>96.7°C</td></tr><tr><td>15</td><td>C105</td><td>680u/35V UL10Kh 10*23 ZLH</td><td>59.6°C</td><td>74.6°C</td></tr><tr><td>16</td><td>CN101</td><td>100°C (NEAR Q101)</td><td>77.3°C</td><td>93.1°C</td></tr><tr><td>17</td><td>U900</td><td>TNY275</td><td>82.8°C</td><td>99.9°C</td></tr><tr><td>18</td><td>ZD900</td><td>TVS ST02D-200</td><td>81.8°C</td><td>98.2°C</td></tr><tr><td>19</td><td>T900</td><td>TF1593</td><td>83.4°C</td><td>99.2°C</td></tr><tr><td>20</td><td>C955</td><td>220u/35V UL8Kh 8*11.5 ZLH</td><td>75.7°C</td><td>90.9°C</td></tr></table>			NO	Position	P/N	ROOM AMBIENT Ta= 24.2 °C	HIGH AMBIENT Ta= 41 °C	1	LF2	TR781	59.8°C	74.9°C	2	BD1	BD 4A/600V D3SB60	69.4°C	84.7°C	3	L3	TF1592	56.8°C	74.5°C	4	Q1	IRFP460A 20A/500V	57.0°C	72.9°C	5	D1	BYC8-600 8A/600V	60.9°C	76.7°C	6	C5	100u/400V 105°C 18*25 KMG	71.9°C	89.1°C	7	CN2	85°C (NEAR Q1)	55.7°C	71.6°C	8	C61	470u/16V 105°C KY	81.0°C	98.6°C	9	T2	TR435-R3	72.0°C	88.4°C	10	Q3	2SK3568 12A/500V TO220F	80.1°C	97.9°C	11	U1	FAN4801	81.2°C	98.6°C	12	T1	TF1589	81.5°C	99.2°C	13	Q101	STPS20170C 20A/170V	78.4°C	94.3°C	14	L100	TR824	80.1°C	96.7°C	15	C105	680u/35V UL10Kh 10*23 ZLH	59.6°C	74.6°C	16	CN101	100°C (NEAR Q101)	77.3°C	93.1°C	17	U900	TNY275	82.8°C	99.9°C	18	ZD900	TVS ST02D-200	81.8°C	98.2°C	19	T900	TF1593	83.4°C	99.2°C	20	C955	220u/35V UL8Kh 8*11.5 ZLH	75.7°C	90.9°C	P
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11	U1	FAN4801	81.2°C	98.6°C																																																																																																										
12	T1	TF1589	81.5°C	99.2°C																																																																																																										
13	Q101	STPS20170C 20A/170V	78.4°C	94.3°C																																																																																																										
14	L100	TR824	80.1°C	96.7°C																																																																																																										
15	C105	680u/35V UL10Kh 10*23 ZLH	59.6°C	74.6°C																																																																																																										
16	CN101	100°C (NEAR Q101)	77.3°C	93.1°C																																																																																																										
17	U900	TNY275	82.8°C	99.9°C																																																																																																										
18	ZD900	TVS ST02D-200	81.8°C	98.2°C																																																																																																										
19	T900	TF1593	83.4°C	99.2°C																																																																																																										
20	C955	220u/35V UL8Kh 8*11.5 ZLH	75.7°C	90.9°C																																																																																																										
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P : 230 VAC O/P : 120 % LOAD Ta : 25°C	TEST : OK	P																																																																																																									
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 230 VAC O/P : 100 % LOAD Ta= -35 °C	TEST : OK	P																																																																																																									
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 40 °C NO DAMAGE	I/P : 272 VAC O/P : FULL LOAD Ta= 40 °C HUMIDITY= 95 %R.H	TEST : OK	P																																																																																																									
5	TEMPERATURE COEFFICIENT	± 0.04 %(0~50°C)	I/P : 230 VAC O/P : FULL LOAD	± 0 %(0~50°C)	P																																																																																																									
6	VIBRATION TEST	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 10~500Hz (3) Sweep Time : 10min/sweep cycle (4) Acceleration : 5G (5) Test Time : 1 hour in each axis (X.Y.Z) (6) Ta : 25°C		TEST : OK	P																																																																																																									

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P : 3 KVAC/min I/P-FG : 1.5 KVAC/min O/P-FG : 0.5 KVAC/min	I/P-O/P : 3.6 KVAC/min I/P-FG : 1.8 KVAC/min O/P-FG : 0.6 KVAC/min Ta : 25°C	I/P-O/P : 3.23 mA I/P-FG : 1.485 mA O/P-FG : 1.34 mA NO DAMAGE	P
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 /70%RH	I/P-O/P : 30 GΩ I/P-FG : 9.96 GΩ O/P-FG : 30 GΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta : 25°C / 70%RH	2 mΩ	P
4	APPROVAL	TUV : Certificate NO : R50147701 UL : File NO : E183223			P

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A CLASS D	I/P : 230/240/220 VAC/50HZ O/P : 100/75/50/25%LOAD Ta : 25°C	PASS	P
2	CONDUCTION	EN55022 EN55011 CLASS B	I/P : 230 VAC (50HZ)/115V60(HZ) O/P : FULL/50% LOAD Ta : 25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 EN55011 CLASS B	I/P : 230 VAC (50HZ)/115V60(HZ) O/P : FULL/50% LOAD Ta : 25°C	PASS Test by certified Lab	P
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	P
5	E.F.T	EN61000-4-4 INDUSTRY INPUT : 2KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	CRITERIA A	P
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	P
7	Test by certified Lab & Test Report Prepare				

M.T.B.F & LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	HRPG-150-24 : SUPPOSE C105 I/P : 230VAC O/P : FULL LOAD I/P : 230VAC O/P : FULL LOAD	IS THE MOST CRITICAL COMPONENT Ta= 25 °C LIFE TIME= 266321 HRS Ta= 40 °C LIFE TIME= 106722 HRS		P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE : 213.4K HRS			P

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) Peak Voltage	Q 3 Rated 2SK4106 12A/500V	I/P : High-Line +3V = 267 V O/P : (1)Full Load Turn on (2) Output Short Ta : 25°C	(1) 472 V (2) 352 V	P
2	Diode Peak Voltage	Q101 Rated SF20LC30 20A/300V Q103 Rated FCF10A40:10A/400V	I/P : High-Line +3V = 267 V O/P : (1)Full Load Turn on (2)Output Short O/P : (1)Full Load Turn on (2)Output Short Ta : 25°C	(1) 218 V (2) 161 V (1) 344 V (2) 362 V	P
3	PFC Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated : IRFP460A 20A/500V	I/P : High-Line +3V = 267 V O/P : (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta : 25°C	(1) 430 V (2) 434 V	P
4	Input Capacitor Voltage	C5 Rated 100u/400V 105°C KMG	I/P : High-Line +3V = 267 V O/P : (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta : 25°C	(1) 374.5 V (2) 374.9 V (3) 374.9 V	P
5	Control IC Voltage Test	U 2 Rated FAN4801 : 12V~30V	I/P : High-Line +3V = 267 V O/P : (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta : 25°C	(1) 18.2 V (2) 16.8 V (3) 18.2 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2008/12/1	RD SAMPLE	PASS	SANFORD SU	VINCENT TSENG
2009/3/25	PRODUCT SAMPLE W0812D43	PASS	SANFORD SU	VINCENT TSENG
2009/6/16	PRODUCT SAMPLE W0905A31	PASS	SANFORD SU	VINCENT TSENG

2003/12/12 A50-F023