Features :

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 5"x3" compact size
- Free air convection for 110W and 160W with 20.5 CFM forced air
- With power good and fail signal output
- Built-in remote sense function for 5~15V
- No load power consumption under 0.75W by PS-ON control (G model)
- Standby 5V@0.8A with fan, @0.6A without fan (G model)
- 3 years warranty

RPS G – 160 – 12

G: With 5Vsb & no load power consumption < 0.75 W
Blank: Basic function (without 5Vsb)

SPECIFICATION

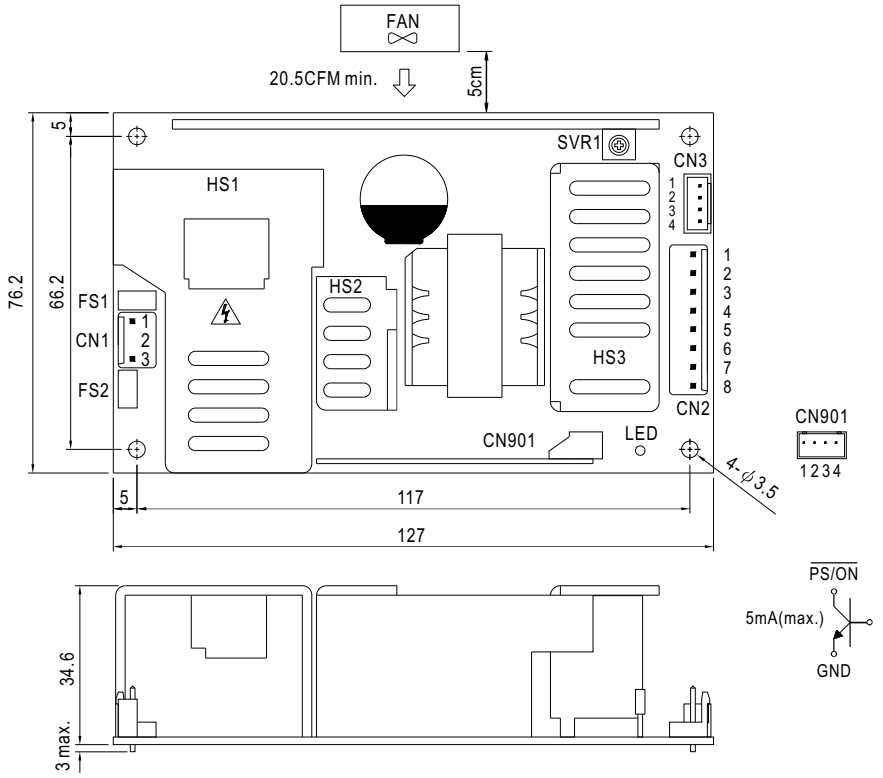
MODEL		RPS□-160-5	RPS□-160-12	RPS□-160-15	RPS□-160-24	RPS□-160-48
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	48V
	RATED CURRENT (20.5CFM)	30A	12.9A	10.3A	6.5A	3.25A
	CURRENT RANGE (convection)	0 ~ 20A	0 ~ 9.1A	0 ~ 7.3A	0 ~ 4.6A	0 ~ 2.3A
	CURRENT RANGE (20.5CFM)	0 ~ 30A	0 ~ 12.9A	0 ~ 10.3A	0 ~ 6.5A	0 ~ 3.25A
	RATED POWER (convection) Note.7	103W	112.2W	112.5W	113.4W	113.4W
	RATED POWER (20.5CFM) Note.8	155W	159.8W	159.5W	161W	161W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	120mVp-p	150mVp-p	250mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.5 ~ 5.5V	CH1:10.8 ~ 13.2V	CH1:13.5 ~ 16.5V	CH1:22 ~ 27V	CH1:43.2 ~ 52.8V
	VOLTAGE TOLERANCE Note.3	±4.0%	±3.0%	±3.0%	±2.0%	±2.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	1200ms, 30ms/230VAC 2500ms, 30ms/115VAC at full load				
	HOLD UP TIME (Typ.)	16ms/230VAC/115VAC at full load				
INPUT	VOLTAGE RANGE Note.6	90 ~ 264VAC 127 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF>0.93/230VAC PF>0.98/115VAC at full load				
	EFFICIENCY (Typ.)	85%	87%	87%	87%	88%
	AC CURRENT (Typ.)	2A/115VAC 1.1A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 35A/115VAC 70A/230VAC				
	LEAKAGE CURRENT	Earth leakage current <300uA / 264VAC, patient leakage current <100uA/264VAC				
PROTECTION	OVERLOAD	105 ~ 135% rated output power				
		Protection type : Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V
		Protection type : Shut down o/p voltage, re-power on to recover				
	OVER TEMPERATURE	110℃(5V),105℃(12V,15V,24V,48V) (TSW1 : detect on heatsink of power transistor)				
		95℃(5V),90℃(12V,15V,24V,48V) (TSW2 : detect on heatsink of power transistor)				
		Protection type : (TSW1)Shut down o/p voltage, recovers automatically after temperature goes down				
		Protection type : (TSW2)Shut down o/p voltage, re-power on to recover				
FUNCTION	5V STANDBY (G model)	5VSB : 5V@0.6A without fan, 0.8A with fan 20.5CFM ; tolerance ± 2%, ripple : 50mVp-p(max.)				
	PS-ON INPUT SIGNAL (G model)	Power on: PS-ON = "Hi" or " > 2 ~ 5V" ; Power off: PS-ON = "Low" or " < 0 ~ 0.5V"				
	POWER GOOD / POWER FAIL	500ms>PG>10ms PF>1ms				
	REMOTE SENSE	5 ~ 15V				
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to output load derating curve)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60601-1, TUV EN60601-1 approved				
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC 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℃/ 70% RH				
	EMI CONDUCTION & RADIATION	Compliance to EN55011 (CISPR11), 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, EN60601-1-2, EN61204-3, medical level, criteria A				
OTHERS	MTBF	230.5Khrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	127*76.2*34.6mm (L*W*H)				
	PACKING	0.32Kg; 36pcs/12.5Kg/0.79CUFT				

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. HS1,HS2 & HS3 can not be shorted.
6. Derating may be needed under low input voltages. Please check the derating curve for more details.
7. The rated power includes 5Vsb @ 0.6A.
8. The rated power includes 5Vsb @ 0.8A.

■ Mechanical Specification

Unit:mm



AC Input Connector (CN1) : JST B3P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	AC/N	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/L		

DC Output Connector (CN2) : JST B8P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1,2,3,4	+V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
5,6,7,8	-V		

Power Good Connector(CN3):JST B4B-XH or equivalent

Pin No.	Status	Mating Housing	Terminal
1	PG	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	GND		
3	-S		
4	+S		

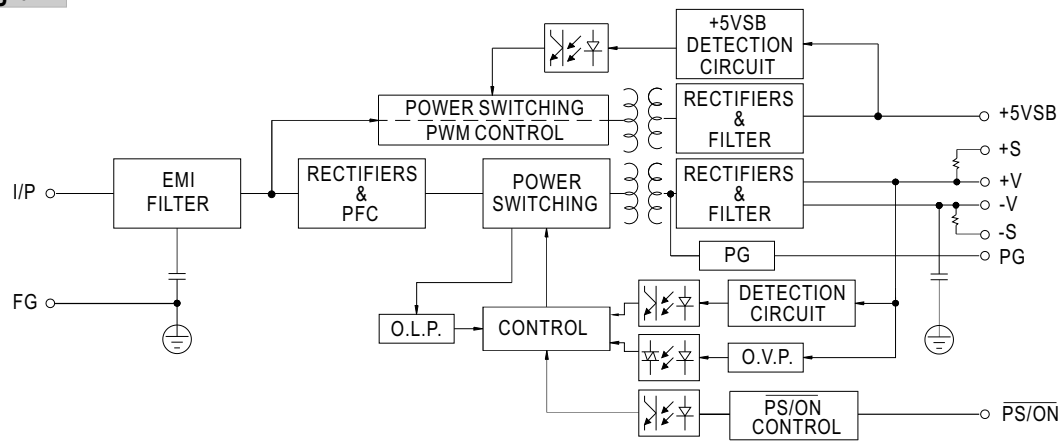
5VSB Connector(CN901) : JST B-XH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	$\overline{\text{PS/ON}}$	JST XHP or equivalent	JST SXH-001T or equivalent
2,4	GND		
3	5VSB		

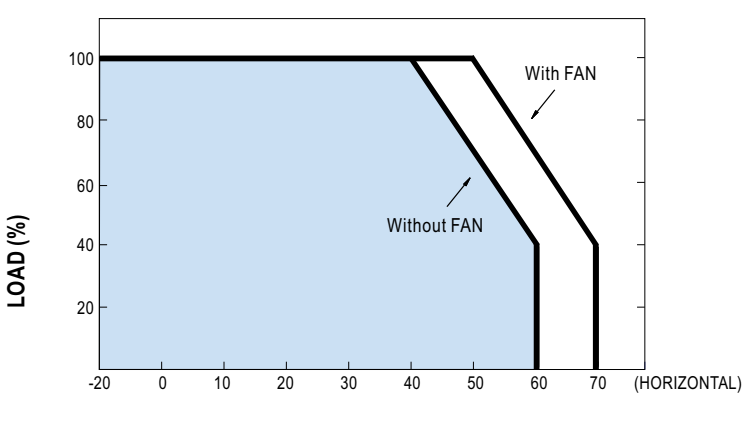
⚠ HS1,HS2,HS3 can not be shorted

■ Block Diagram

fosc :100KHz(5V)
70KHz(12~48V)

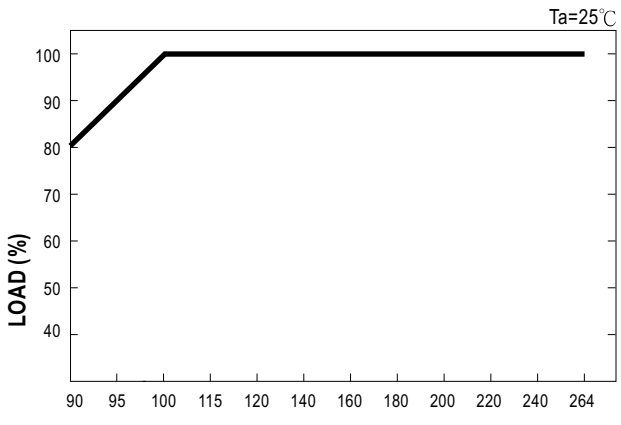


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (VAC) 60Hz

MODEL：RPSG-160-5

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1：100 mVp-p (Max)	I/P：230VAC O/P：FULL LOAD Ta：25 ℃	V1： 32 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1：4.5 V~ 5.5 V	I/P：230 VAC I/P：115 VAC O/P：MIN LOAD Ta：25 ℃	4.311 V~ 5.611 V/ 230 VAC 4.309 V~ 5.611 V/ 115 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1：4%~ -4 % (Max)	I/P：100 VAC / 264 VAC O/P：FULL/ MIN LOAD Ta：25 ℃	V1： 0.12 %~ -0.12 %	P
4	LINE REGULATION	V1： 0.5 %~ -0.5 % (Max)	I/P：100 VAC ~ 264 VAC O/P：FULL LOAD Ta：25 ℃	V1： 0.12 %~ -0.12 %	P
5	LOAD REGULATION	V1： 1 %~ -1 % (Max)	I/P：230 VAC O/P：FULL ~MIN LOAD Ta：25 ℃	V1： 0.12 %~ -0.12 %	P
7	SET UP TIME	230VAC： 1200 ms (Max) 115 VAC： 2500 ms (Max)	I/P：230 VAC I/P：115 VAC O/P：FULL LOAD Ta：25 ℃	230VAC/ 1080 ms 115VAC/ 2160 ms	P
8	RISE TIME	230VAC： 30 ms (Max) 115VAC： 30 ms (Max)	I/P：230 VAC I/P：115 VAC O/P：FULL LOAD Ta：25 ℃	230VAC/ 4.8 ms 115VAC/ 4.8 ms	P
9	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 ℃	230VAC/ 29 ms 115VAC/ 21 ms	P
10	OVER/UNDERSHOOT TEST	< ±5%	I/P：230 VAC O/P：FULL LOAD Ta：25 ℃	TEST： < 5 %	P
11	DYNAMIC LOAD	V1： 1000 mVp-p	I/P：230 VAC O/P：FULL /Min LOAD 90%DUTY/1KHZ Ta：25 ℃	699 mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	**INPUT VOLTAGE RANGE**	100VAC~264 VAC	I/P：TESTING O/P：FULL LOAD Ta：25 ℃	73V~264V	P
			I/P： LOW-LINE-3V= 97V 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 ℃	TEST：OK	P
3	**POWER FACTOR**	0.93 / 230 VAC(TYP) 0.98 / 115 VAC(TYP)	I/P：230 VAC I/P：115 VAC O/P：FULL LOAD Ta：25 ℃	PF= 0.953 / 230 VAC PF= 0.99 / 115 VAC	P
4	**EFFICIENCY**	85% (TYP)	I/P：230 VAC O/P：FULL LOAD Ta：25 ℃	86.5 %	P
5	**INPUT CURRENT**	230V/ 1.1 A (TYP) 115V/ 2 A (TYP)	I/P：230 VAC I/P：115 VAC O/P：FULL LOAD Ta：25 ℃	I = 0.82 A/ 230 VAC I = 1.63 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 ℃	I = 56 A/230 VAC I = 28 A/ 115 VAC	P
7	**LEAKAGE CURRENT**	EARTH LEAKAGE CURRENT<300 uA PATIENT LEAKAGE CURRENT<100 uA	I/P：264 VAC O/P：Min LOAD Ta：25 ℃	FOR EARTH： L-FG： 142 uA N-FG： 142 uA FOR PATIENT L-FG： 79 uA N-FG： 79 uA	P
8	**No load power consumption**	<0.75W/240VAC	I/P：264 VAC O/P：NO LOAD PS/ON –GND SHORT Ta：25 ℃	0.26W/240VAC	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 ℃	117%/ 230 VAC 117%/ 115 VAC Hiccup Mode	P
2	**OVER VOLTAGE PROTECTION**	CH1：5.75V~6.75 V	I/P：230 VAC I/P：115 VAC O/P：MIN LOAD Ta：25 ℃	6.10V/ 230 VAC 6.10V/ 115 VAC Shut down Re- power ON	P
3	**OVER TEMPERATURE PROTECTION**	SPEC： TSW1：110 ± 5℃ O.T.P. NO DAMAGE TSW2：95 ± 5℃ O.T.P. NO DAMAGE	I/P：230 VAC O/P：FULL LOAD	O.T.P. Active 1、Shut down o/p voltage，recovers automatically after temperature goes down 2、Shut down Re-power ON	P
4	**SHORT PROTECTION**	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P：264 VAC O/P：FULL LOAD Ta：25 ℃	NO DAMAGE Hiccup Mode	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	**POWER GOOD SIGNAL**	DELAY 10ms ~ 500ms	I/P：230 VAC I/P：115 VAC O/P：FULL LOAD Ta：25 ℃	92ms/ 230 VAC 92ms/ 115 VAC	P
2	**POWER FAIL SIGNAL**	> 1ms	I/P：230 VAC I/P：115 VAC O/P：FULL LOAD Ta：25 ℃	4.3ms/ 230 VAC 4.3ms/ 115 VAC	P
3	**PS-ON INPUT SIGNAL**	Power on：PS-ON="Hi" or ">2V" Power off：PS-ON="Low" or "<0.5V"	I/P：230 VAC O/P：FULL LOAD Ta：25 ℃	PS-ON= 1.6 V PS-ON= 1.5 V	P
4	**REMOTE SENSE**	>0.3V	I/P：230 VAC O/P：FULL LOAD Ta：25 ℃	➢ 0.3 V	P

ENVIRONMENT TEST

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>SPECIFICATION</th><th>TEST CONDITION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>1</td><td>TEMPERATURE RISE TEST</td><td colspan="3">MODEL：RPSG-160-5 WITH FAN
1. ROOM AMBIENT BURN-IN：1.5 HRS
I/P： 230VAC O/P： FULL LOAD Ta= 42.8 ℃
2. HIGH AMBIENT BURN-IN： 3 HRS
I/P： 230VAC O/P： FULL LOAD Ta= 47.1 ℃

<table>
<tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT
Ta= 42.8 ℃</th><th>HIGH AMBIENT
Ta= 47.1 ℃</th></tr>
<tr><td>1</td><td>BD1</td><td>4A/800V US4KB80R</td><td>62.1℃</td><td>66.8℃</td></tr>
<tr><td>2</td><td>L3</td><td>TF1669-R2</td><td>58.8℃</td><td>63.2℃</td></tr>
<tr><td>3</td><td>LF2</td><td>TR865</td><td>54.2℃</td><td>89.0℃</td></tr>
<tr><td>4</td><td>Q4</td><td>2SK3568</td><td>71.2℃</td><td>76.1℃</td></tr>
<tr><td>5</td><td>T2</td><td>TR816</td><td>63.0℃</td><td>68.4℃</td></tr>
<tr><td>6</td><td>D1</td><td>BYC10X-600 10A/600V</td><td>70.4℃</td><td>75.7℃</td></tr>
<tr><td>7</td><td>U1</td><td>FAN4801NY</td><td>52.5℃</td><td>59.4℃</td></tr>
<tr><td>8</td><td>T1</td><td>TF1671</td><td>78.7℃</td><td>82.3℃</td></tr>
<tr><td>9</td><td>Q103</td><td>STP85N3LH5 80A/30V</td><td>78.3℃</td><td>87.2℃</td></tr>
<tr><td>10</td><td>C5</td><td>120u/420V 105℃ PT</td><td>58.3℃</td><td>64.4℃</td></tr>
<tr><td>11</td><td>C106</td><td>2200u/10V UL10Kh ZLH</td><td>52.6℃</td><td>60.8℃</td></tr>
<tr><td>12</td><td>L100</td><td>TR763</td><td>75.5℃</td><td>84.1℃</td></tr>
<tr><td>13</td><td>C61</td><td>22u/50V L5Kh KY</td><td>63.6℃</td><td>72.6℃</td></tr>
<tr><td>14</td><td>ZD901</td><td>ST02D-200 AX078</td><td>82.4℃</td><td>89.1℃</td></tr>
<tr><td>15</td><td>U903</td><td>TNY 275</td><td>82.3℃</td><td>89.6℃</td></tr>
<tr><td>16</td><td>TSW1</td><td>110℃</td><td>57.1℃</td><td>61.9℃</td></tr>
<tr><td>17</td><td>T900</td><td>TF1670</td><td>81.4℃</td><td>85.6℃</td></tr>
<tr><td>18</td><td>TSW2</td><td>95℃</td><td>64.3℃</td><td>72.0℃</td></tr>
</table></td><td>P</td></tr>
<tr><td>2</td><td>OVER LOAD BURN-IN TEST</td><td>NO DAMAGE
1 HOUR (MIN)</td><td>I/P：230 VAC
O/P：126 % LOAD
Ta： 25 ℃</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>3</td><td>LOW TEMPERATURE
TURN ON TEST</td><td>TURN ON AFTER 2 HOUR</td><td>I/P：230 VAC
O/P：100 % LOAD
Ta： -25 ℃</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>4</td><td>HIGH HUMIDITY
HIGH TEMPERATURE
HIGH VOLTAGE
TURN ON TEST</td><td>AFTER 12 HOURS
IN CHAMBER ON
CONTROL 50 ℃
NO DAMAGE</td><td>I/P：272 VAC
O/P：FULL LOAD
Ta= 50 ℃
HUMIDITY= 95 %R.H</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>5</td><td>TEMPERATURE
COEFFICIENT</td><td>± 0.03 %(0~50℃)</td><td>I/P：230 VAC
O/P：FULL LOAD</td><td>± 0.01 %(0~50℃)</td><td>P</td></tr>
<tr><td>6</td><td>VIBRATION TEST</td><td colspan="2">1 Carton & 1 Set
(1) Waveform：Sine Wave
(2) Frequency：10~500Hz
(3) Sweep Time：10min/sweep cycle
(4) Acceleration：2G
(5) Test Time：1 hour in each axis (X.Y.Z)
(6) Ta：25 ℃</td><td>TEST：OK</td><td>P</td></tr>
</table>

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	**WITHSTAND VOLTAGE**	I/P-O/P：4 KVAC/min I/P-FG：1.5 KVAC/min O/P-FG：0.5 KVAC/min	I/P-O/P：4.4 KVAC/min I/P-FG：1.8 KVAC/min O/P-FG：0.6 KVAC/min Ta：25 ℃	I/P-O/P： 1.704 mA I/P-FG： 2.431 mA O/P-FG： 0.202 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 ℃/70%RH	I/P-O/P： 30 GΩ I/P-FG： 30 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 ℃ / 70%RH	7 mΩ	P
4	**APPROVAL**	TUV：Certificate NO： UL：File NO：			N/A

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	**HARMONIC**	EN61000-3-2 CLASS A CLASS D	I/P：230 VAC/50HZ O/P：FULL LOAD Ta：25 ℃	PASS	P
2	**CONDUCTION**	EN55022 EN55011 CLASS B	I/P：230 VAC (50HZ)115V/60HZ O/P：FULL/50% LOAD Ta：25 ℃	PASS Test by certified Lab	P
3	**RADIATION**	EN55022 EN55011 CLASS B	I/P：230 VAC (50HZ) O/P：FULL LOAD Ta：25 ℃	PASS Test by certified Lab	P
4	**E.S.D**	EN61000-4-2 MEDICAL AIR：8KV / Contact：6KV	I/P：230 VAC/50HZ O/P：FULL LOAD Ta：25 ℃	CRITERIA A	P
5	**E.F.T**	EN61000-4-4 MEDICAL	I/P：230 VAC/50HZ O/P：FULL LOAD Ta：25 ℃	CRITERIA A	P
6	**SURGE**	IEC61000-4-5 MEDICAL	I/P：230 VAC/50HZ O/P：FULL LOAD Ta：25 ℃	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**	RPSG-160-5 WITH FAN：SUPPOSE C106 IS THE MOST CRITICAL COMPONENT I/P：230VAC O/P：FULL LOAD Ta= 25 ℃ LIFE TIME= 1456243 HRS I/P：230VAC O/P：FULL LOAD Ta= 50 ℃ LIFE TIME= 196462 HRS			P
2	**MTBF**	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE： 230.5 k 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 2SK3568 12A/500V	I/P：High-Line +3V = 267 V O/P：(1)Full Load Turn on (2) Output Short Ta：25 ℃	(1) 450 V (2) 458 V	P
2	**Diode Peak Voltage**	Q101 Rated IRL3103PbF 64A/30V	I/P：High-Line +3V = 267 V O/P：(1)Full Load Turn on (2)Output Short Ta：25 ℃	(1) 26 V (2) 26.4 V	P
3	**PFC Transistor** **(D to S) or (C to E) Peak Voltage**	Q 1 Rated IRFP460A 20A/500V	I/P：High-Line +3V = 267 V O/P：(1)Full Load Turn on (2) Output Short Ta：25 ℃	(1) 436 V (2) 430 V	P
4	**Input Capacitor Voltage**	C 5 Rated 120u/420V 105℃	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 ℃	(1) 379.9 V (2) 380.7 V (3) 380.8 V	P
5	**Control IC Voltage Test**	U 1 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 ℃	(1) 14.36 V (2) 14.4 V (3) 14.4 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2008/9/17	RD SAMPLE	PASS	SANFORD SU	VINCENT TSENG
2009/3/11	PRODUCT SAMPLE W0810A12	PASS	SANFORD SU	VINCENT TSENG
2009/3/25	PRODUCT SAMPLE W0902B22	PASS	SANFORD SU	VINCENT TSENG

2003/12/12 A50-F023