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Jameco Part Number 1919019



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Declaration of RoHS Conformity

To minimize the environmental impact and take more responsibility to the earth we live, MEAN WELL hereby confirms that the following product series comply with Directive 2002/95/EC of the European Parliament - RoHS (Restriction of Hazardous Substances).

Content of Compliance

Lead	<0.1 % by weight (1000 ppm)
Mercury	<0.1 % by weight (1000 ppm)
Cadmium	<0.01 % by weight (100 ppm)
Hexavalent Chrome (Cr ⁺⁶)	<0.1 % by weight (1000 ppm)
PBBs	<0.1 % by weight (1000 ppm)
PBDEs	<0.1 % by weight (1000 ppm)

Product Series

Please refer to the attached list for details.

Delivery

The actual delivery date for RoHS compliance products will depend on our inventory status.

Please contact our sales representatives for details.

How to Recognize

The serial number on each PSU originally was Cxxxxxxxx and right now will be changed to Rxxxxxxxx or Exxxxxxxx (or add "R" for serial number that only specify the production weeks) for RoHS compliance products for the ease of identification.

Jerry Lin / President
MEAN WELL Enterprises Co., Ltd.

Product Family	Series
G3	RS-25/35/50/75/100/150, RD-35/50/65/85/125, RID-50/65/85/125, RT-50/65/85/125, RQ-50/65/85/125
G2	S-25/40/60/100F/150/240, T-40, D/ID/T/IT/Q/IQ-60, D/T/Q-120, SC-150
PFC	SP-75/100/150/200/320/480/500/750, USP-225/350, TP-75/100/150, QP-100/150/200/320/375
AD	ADS-55/155, AD-55/155, ADD-55/155
CL/PL	CLG-60/100, PLN-30/60/100
DIN	MDR-20/40/60, DR-30/45/60/75/100/120, DRH-120, DRP-240/480/480S, DRT-240/480/960, DR-RDN20, DR-UPS40
Modular	MP-450/650/1K0, MS-75/150/300, MD-100
Parallel	PSP-500/600/1000/1500, RSP-1000/1500, RCP-1000, RCP-1U
Open Frame	NFM-05/10/15/20, PM-05/10/15/20, PS/PD-25, PS-35, PS/PD/PT-45, PS/PD/PT-65, RPD/RPT-65, PD-110, PQ-100, PPQ-100, PPS/PPT-125, LPS-50/75/100, LPP-100/150, ASP-150, PPS-200, PID-250, MPS-30, MPS/MPD/MPT-45, RPS/RPD/RPT-60, MPS/MPD/MPT-65, RPS/RPD/RPT-75, MPS/MPD/MPT/MPQ-120, MPS/MPD/MPT/MPQ-200
Charger	GC-30, PA/PB/PS-120, ESC/ESP-120, ESC/ESP-240, PB-300/360
Adaptor	GS-06/15/18/25, ES-18/25, P25, P30, P40, P50, P66, U65S, MES-30/50, ATX-100, AS-120P
PC/IPC Power	YP-350J, IPC-200/250/300
DC/DC Converter	SD-25/50/100/150/200/350, SDM30, ASD10H/15H, NSD10/15, SBT, SFT, DET, SRS, SUS, SPR, SPU, SCW, SLW, SKE SKA, DCW, DLW, DKE, DKA, TKA
Inverter	TN/TS-1500, A301/A302
Power Cord	YP** + YC**

**** For other products not listed above, please contact our sales representatives for availability**

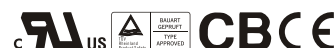
2007.04 update

ISO-9001 CERTIFIED
Your Reliable Power Partner



■ Features :

- Universal AC input/Full range
- Protections:Short circuit/Over load/Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 60KHz
- 2 years warranty

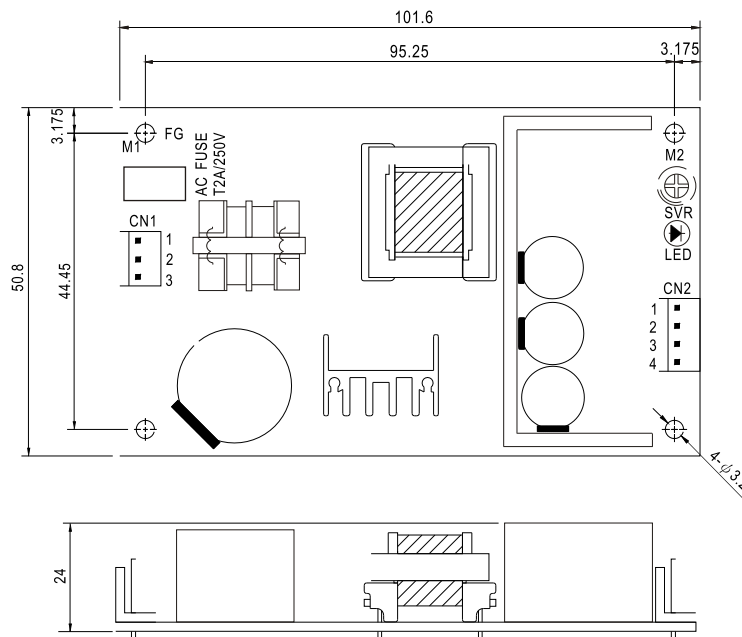


SPECIFICATION

MODEL		PS-35-3.3	PS-35-5	PS-35-7.5	PS-35-12	PS-35-13.5	PS-35-15	PS-35-24	PS-35-48
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	48V
	RATED CURRENT	6A	6A	4.7A	3A	2.6A	2.4A	1.5A	0.75A
	CURRENT RANGE	0 ~ 6A	0 ~ 6A	0 ~ 4.7A	0 ~ 3A	0 ~ 2.6A	0 ~ 2.4A	0 ~ 1.5A	0 ~ 0.75A
	RATED POWER	19.8W	30W	35.25W	36W	35.1W	36W	36W	36W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	100mVp-p	100mVp-p	120mVp-p	120mVp-p	150mVp-p	200mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	3.14 ~ 3.63V	4.75 ~ 5.5V	7.13 ~ 8.25V	10.8 ~ 13.2V	12.15 ~ 14.85V	13.5 ~ 16.5V	21.6 ~ 26.4V	43.2 ~ 52.8V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1%	±1%	±1%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1200ms, 30ms/230VAC, 1200ms,30ms/115VAC at full load							
HOLD TIME (Typ.)	50ms/230VAC,10ms/115VAC at full load								
INPUT	VOLTAGE RANGE	90 ~ 264VAC 127 ~370VDC							
	FREQUENCY RANGE	47 ~ 440Hz							
	EFFICIENCY(Typ.)	70%	78%	80%	81%	81%	81%	85%	84%
	AC CURRENT (Typ.)	0.75A/115VAC 0.5A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 23A/115VAC 45A/230VAC							
	LEAKAGE CURRENT	<2mA / 240VAC							
PROTECTION	OVER LOAD	105 ~ 150% rated output power (3.3V:105 ~ 160% rated output power) Protection type : Hiccup mode, recovers automatically after fault condition is removed.							
	OVER VOLTAGE	3.8 ~ 4.95V	5.75 ~ 6.75V	8.63 ~ 10.5V	13.8 ~ 16.2V	15.5 ~ 18.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 62.4V
ENVIRONMENT	WORKING TEMP.	-20 ~ +65℃ (Refer to output load derating curve)							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.05%/℃ (0 ~ 50℃)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, Period for 60min.each along X, Y, Z axes							
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950, TUV EN60950-1 Approved							
	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							
	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, Light industry level, criteria A							
OTHERS	MTBF	588.8Khrs							
	DIMENSION	101.6*50.8*24mm (L*W*H)							
	PACKING	0.124Kg;96PCS/12.9Kg/0.8CUFT							
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.								

Mechanical Specification

Unit:mm



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

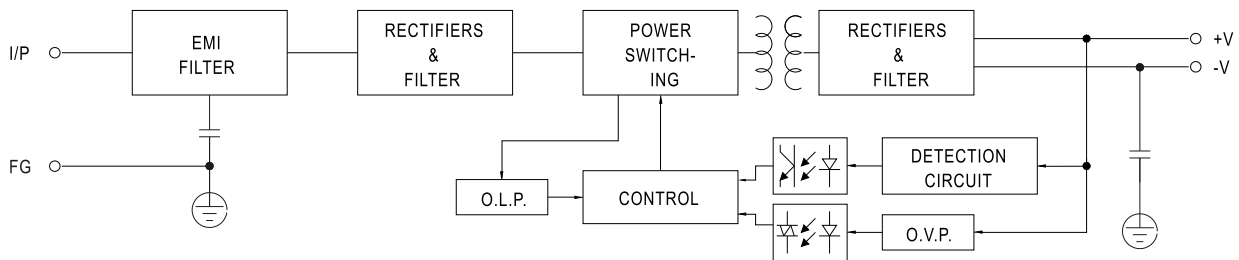
Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
3	AC/N		
2	NC		

DC Output Connector (CN2) : JST B4P-VH-B or equivalent

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

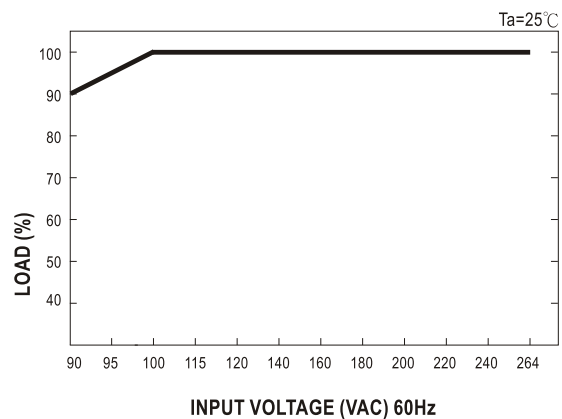
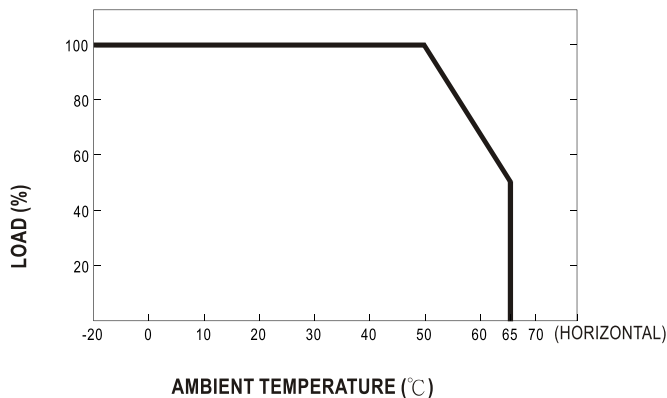
Block Diagram

fosc : 60KHz



Derating Curve

Output Derating VS Input Voltage



MODEL : PS-35-15

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 150 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	V1: 8 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 13.5 V~ 16.5V	I/P: 230 VAC I/P:115VAC O/P:MIN LOAD Ta:25°C	12.686V~17.942V/230vAC 12.688V~17.748V/115VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: -1%~ 1 % (Max)	I/P: 100VAC / 264 VAC O/P:FULL/ 0 % LOAD Ta:25°C	V1: -0.09 %~ 0.04 %	P
4	LINE REGULATION	V1: -0.5%~ 0.5 % (Max)	I/P: 100 VAC ~ 264VAC O/P:FULL LOAD Ta:25°C	V1: - 0.04 %~ 0.04 %	P
5	LOAD REGULATION	V1: -0.5%~ 0.05 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: -0.04 %~ 0.04 %	P
6	SET UP TIME	230VAC/ 1200 ms (Max) 115VAC/ 1200 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/187.009 ms 115 VAC/ 180.369 ms	P
7	RISE TIME	230VAC/30 ms (Max) 115 VAC/30 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/6.016 ms 115 VAC/6.33 ms	P
8	HOLD UP TIME	230VAC/50 ms (Typ) 115VAC/10 ms (Typ)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 76.105ms 115 VAC/16.035 ms	P
9	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST:1.3%	P
10	DYNAMIC LOAD	V1: 1500 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	156 mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	90VAC~ 264 VAC (Typ)	I/P:TESTING O/P:FULL LOAD Ta:25°C	59.731 V~ 264 V	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 (Typ) NO DAMAGE OSC	I/P: 100 VAC ~264 VAC O/P:FULL-MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	81% (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	81.38 %	P
4	INPUT CURRENT	230 V/ 0.5 A (Typ) 115 V/ 0.75 A (Typ)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 0.442 A/ 230VAC I = 0.682 A/ 115VAC	P
5	INRUSH CURRENT	230 V/ 45 A (Typ) 115 V/ 23 A (Typ) COLD START	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 32.265 A/ 230VAC I = 15.632 A/ 115VAC	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105%~ 150 % (Typ)	I/P: 115 VAC I/P: 230 VAC O/P:TESTING Ta:25°C	115VAC / 131.5 % 230VAC / 132.6 % Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 17.25 V~ 20.25 V(Typ)	I/P: 115 VAC I/P: 230 VAC O/P:MIN LOAD Ta:25°C	18.40 V/ 115VAC 18.35 V/ 230VAC Shunt down Re- power ON	P
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 264 VAC O/P: 100% LOAD Ta:25°C	NO DAMAGE Hiccup Mode	P

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT																																																																	
1	TEMPERATURE RISE TEST	MODEL : PS-35-24 1. ROOM AMBIENT BURN-IN : 12 HRS I/P: 230VAC O/P: FULL LOAD Ta= 30.6 °C 2. HIGH AMBIENT BURN-IN : 1.5 HRS I/P: 230 VAC O/P: FULL LOAD Ta= 51.6 °C <table><tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta= 30.6 °C</th><th>HIGH AMBIENT Ta= 51.6 °C</th></tr><tr><td>1</td><td>BD1</td><td>KBP208G 2A/800V LT</td><td>63.8°C</td><td>78.7°C</td></tr><tr><td>2</td><td>D1</td><td>HER206 2A/600V REC</td><td>84.4°C</td><td>99.8°C</td></tr><tr><td>3</td><td>Q2</td><td>K2545 6A/600V TOS</td><td>82.7°C</td><td>98.5°C</td></tr><tr><td>4</td><td>ZD1</td><td>5.6K/2W R/MO</td><td>108.2°C</td><td>121.8°C</td></tr><tr><td>5</td><td>C36</td><td>100U/35V RUB 105°C YXF</td><td>71.6°C</td><td>85.6°C</td></tr><tr><td>6</td><td>LF1</td><td>LF-158</td><td>54.9°C</td><td>69.2°C</td></tr><tr><td>7</td><td>C5</td><td>68U/400V CAPX 85°C GW</td><td>55.1°C</td><td>72.3°C</td></tr><tr><td>8</td><td>T1 COIL</td><td>TF-6070 TWI</td><td>73.6°C</td><td>87.4°C</td></tr><tr><td>9</td><td>U1</td><td>1203D</td><td>70.4°C</td><td>84.6°C</td></tr><tr><td>10</td><td>D100</td><td>BYQ28X-200 10A/200V PH</td><td>72.4°C</td><td>86.4°C</td></tr><tr><td>11</td><td>C105</td><td>470U/35V CAPX 105°C GL</td><td>66.2°C</td><td>77.1°C</td></tr><tr><td>12</td><td>L100</td><td>RB009E</td><td>65.5°C</td><td>74.9°C</td></tr></table>			NO	Position	P/N	ROOM AMBIENT Ta= 30.6 °C	HIGH AMBIENT Ta= 51.6 °C	1	BD1	KBP208G 2A/800V LT	63.8°C	78.7°C	2	D1	HER206 2A/600V REC	84.4°C	99.8°C	3	Q2	K2545 6A/600V TOS	82.7°C	98.5°C	4	ZD1	5.6K/2W R/MO	108.2°C	121.8°C	5	C36	100U/35V RUB 105°C YXF	71.6°C	85.6°C	6	LF1	LF-158	54.9°C	69.2°C	7	C5	68U/400V CAPX 85°C GW	55.1°C	72.3°C	8	T1 COIL	TF-6070 TWI	73.6°C	87.4°C	9	U1	1203D	70.4°C	84.6°C	10	D100	BYQ28X-200 10A/200V PH	72.4°C	86.4°C	11	C105	470U/35V CAPX 105°C GL	66.2°C	77.1°C	12	L100	RB009E	65.5°C	74.9°C	P
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P: 230 VAC O/P: 137% LOAD Ta:25°C	TEST : OK	P																																																																	
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 230VAC O/P: 100% LOAD Ta= -20 °C	TEST : OK	P																																																																	
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	P																																																																	
5	TEMPERATURE COEFFICIENT	± 0.05 %(0~50°C)	I/P: 230 VAC O/P:FULL LOAD	± 0.01 %(0~50°C)	P																																																																	
6	VIBRATION TEST	1 Carton & 1 Set Operating (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°C		TEST : OK	P																																																																	

SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 3 KVAC/min I/P-FG:1.5 KVAC/min O/P-FG:0.5KVAC/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℃	I/P-O/P: 5.98 mA I/P-FG:5.12 mA O/P-FG:4.15 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℃	I/P-O/P: 16G Ω I/P-FG: 17.8G Ω O/P-FG: 10.5G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40A / 2min Ta:25℃	2 mΩ	P
4	LEAKAGE CURRENT	< 2 mA / 240VAC	I/P: 254 VAC O/P:Min LOAD Ta:25℃	L-FG: 0.82 mA N-FG: 0.82 mA	P
5	APPROVAL	TUV: Certificate NO : R50090375 UL: File NO :			P

E.M.C TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25℃	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25℃	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25℃	PASS Test by certified Lab	P
4	E.S.D	EN61000-4-2 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25℃	CRITERIA A	P
5	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25℃	CRITERIA A	P
6	SURGE	IEC61000-4-5 LIGHT INDUSTRY L-N :1KV L,N-PE:2KV	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	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C105 IS THE MOST CRITICAL COMPONENT PS-35-24 : I/P: 230VAC O/P:FULL LOAD Ta= 25℃ LIFE TIME= 127980 HRS I/P: 230VAC O/P:FULL LOAD Ta= 50℃ LIFE TIME= 45568 HRS I/P: 230VAC O/P:75% LOAD Ta= 50℃ LIFE TIME= 45214 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 588.8K HRS			P

COMPONENT STRESS TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) Peak Voltage	Q 1 Rated 2SK2545 : 600 V 6 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2)Output Short Ta:25°C	(1) 476V (2) 492 V	P
2	Diode Peak Voltage	D 100 Rated FMX-12SL : 200 V 10 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2)Output Short Ta:25°C	(1) 105 V (2) 98.8 V	P
3	Clamp Diode Peak Voltage	D 1 Rated HER206 : 600 V 2 A	I/P:High-Line +3V = 267 V O/P:(1) Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 460 V	P
4	Control IC Voltage Test	U 1 Rated 1203P : 16 V	I/P:High-Line +3V =267 V O/P:(1) Output Short (2)O.L.P (3)O.V.P. Ta:25°C	(1) 13.6 V (2) 13.6 V (3) 13.8 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2006/7/7	RD SAMPLE	PASS	Wangdz	MAX LIN

2003/12/12 A50-F023