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Jameco Part Number 212362



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

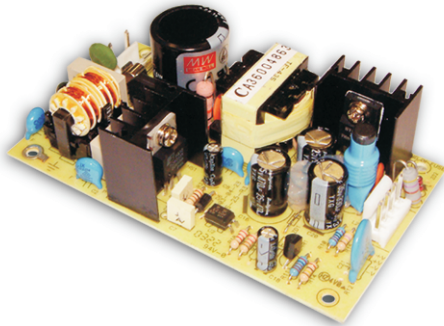
The serial number on each PSU originally was Cxxxxxxxx and right now will be changed to Rxxxxxxxx or Exxxxxxxx (or add "R" for serial number that only specify the production weeks) for RoHS compliance products for the ease of identification.

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**

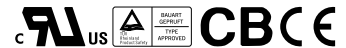
**** For other products not listed above, please contact our sales representatives for availability**

2007.04 update



■ Features :

- Universal AC input / Full range
- Low leakage current <0.5mA
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 100KHz
- Low cost
- High reliability
- 2 years warranty

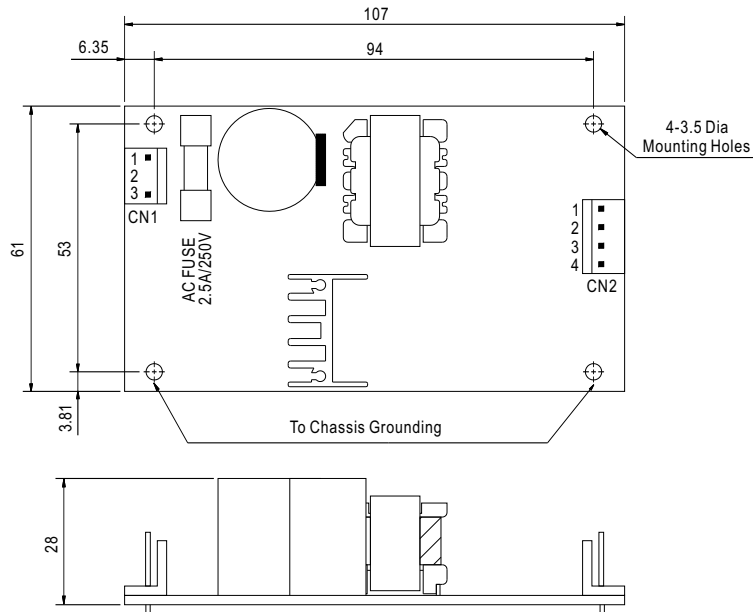


SPECIFICATION

MODEL	PS-25-3.3	PS-25-5	PS-25-7.5	PS-25-12	PS-25-13.5	PS-25-15	PS-25-24	PS-25-27	PS-25-48		
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	48V	
	RATED CURRENT	5A	5A	3.3A	2.1A	1.9A	1.7A	1A	0.9A	0.5A	
	CURRENT RANGE	0 ~ 5A	0 ~ 5A	0 ~ 3.3A	0 ~ 2.1A	0 ~ 1.9A	0 ~ 1.7A	0 ~ 1A	0 ~ 0.9A	0 ~ 0.5A	
	RATED POWER	16.5W	25W	24.8W	25.2W	25.7W	25.5W	24W	24.3W	24W	
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	80mVp-p	100mVp-p	100mVp-p	100mVp-p	240mVp-p	240mVp-p	350mVp-p	
	VOLTAGE TOLERANCE Note.3	±3.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%	
	LOAD REGULATION	±2.5%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME	200ms, 20ms/230VAC		200ms, 30ms/115VAC at full load							
HOLD UP TIME (Typ.)	100ms/230VAC		20ms/115VAC at full load								
INPUT	VOLTAGE RANGE	85 ~ 264VAC		120 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz									
	EFFICIENCY(Typ.)	66%	74%	76%	78%	78%	78%	79%	79%	79%	
	AC CURRENT (Typ.)	0.6A/115VAC		0.4A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 36A									
LEAKAGE CURRENT	<0.5mA / 240VAC										
PROTECTION	OVERLOAD	Above 105% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed									
	OVER VOLTAGE	3.8 ~ 4.46V	5.75 ~ 6.75V	8.6 ~ 10.1V	13.8 ~ 16.2V	15.5 ~ 18.2V	17.3 ~ 20.3V	27.6 ~ 32.4V	31 ~ 36.5V	55.2 ~ 64.8V	
	OVER TEMPERATURE	Tj 135°C typically (U1) detect on main control IC Protection type : Shut down o/p voltage, recovers automatically after temperature goes down									
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)									
VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min.each along X, Y, Z axes										
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, 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, light industry level, criteria A										
OTHERS	MTBF	576.4Khrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	107*61*28mm (L*W*H)									
	PACKING	0.14Kg; 96pcs/15Kg/1.3CUFT									
NOTE	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. 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) : Molex 41791-03 or equivalent

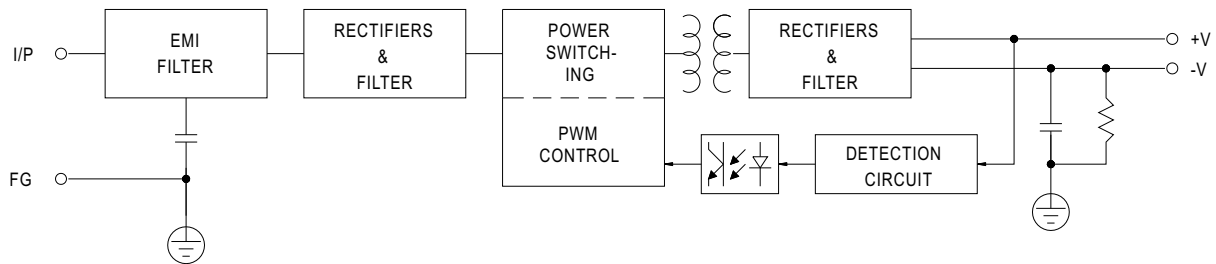
Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	Molex 2139 or equivalent	Molex 2478 or equivalent
2	No Pin		
3	AC/N		

DC Output Connector (CN2) : Molex 41791-04 or equivalent

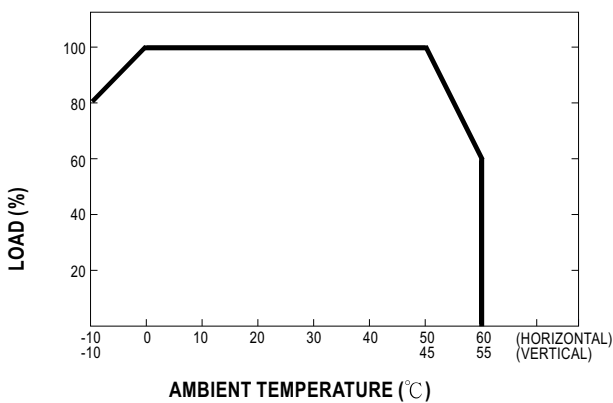
Pin No.	Assignment	Mating Housing	Terminal
1,2	+V	Molex 2139 or equivalent	Molex 2478 or equivalent
3,4	-V		

■ Block Diagram

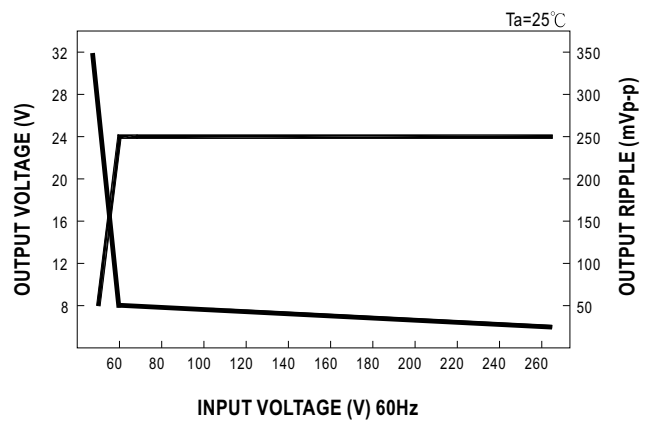
fosc : 100KHz



■ Derating Curve



■ Static Characteristics (24V)



Quality Engineering Test Report

SERIES: PS-25 25W AC-DC SIGLE OUTPUT SWITCHING POWER SUPPLY OPEN FRAME TYPE

SAMPLE:	A.PS-25-3.3	3.3V / 5A	D.PS-25-12	12V /2.1A	G.PS-25-24	24V /1A
	B.PS-25-5	5V /5A	E.PS-25-13.5	13.5V /1.9A	H.PS-25-27	27V /0.9A
	C.PS-25-7.5	7.5V /3.3A	F.PS-25-15	15V /1.7A	I.PS-25-48	48V /0.5A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:85~264VAC O/P:FULL LOAD	A:74VAC~267VAC	P
2	LINE REGULATION	I/P:85~264VAC SPEC: A: ±0.5% O/P:FULL LOAD B: ±0.5% C: ±0.5% D: ±0.3% E: ±0.3% F: ±0.3% G: ±0.2% H: ±0.2% I: ±0.2%	A: 0% ~ 0.183% B: 0% ~ 0.1% C: 0% ~ 0% D: 0% ~ 0.05% E: -0.04% ~ 0% F: 0% ~ 0% G: -0.03% ~ 0% H: 0% ~ 0% I: -0.03% ~ 0.01%	P
3	LOAD REGULATION	I/P:230VAC SPEC: A: ±2.5% O/P: B: ±2% MIN. TO FULL LOAD C: ±2% D: ±1% E: ±1% F: ±1% G: ±0.5% H: ±0.5% I: ±0.5%	A: -0.36% ~ 0.54% B: -0.24% ~ 0.12% C: -0.158% ~ 0.238% D: 0% ~ 0.05% E: -0.04% ~ 0.08% F: 0% ~ 0.04% G: -0.03% ~ 0% H: -0.022% ~ 0.022% I: -0% ~ 0.01%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:85~264VAC SPEC: A: ±3% O/P: B: ±2% MIN. TO FULL LOAD C: ±2% D: ±2% E: ±2% E: ±2% E: ±2%	A: -0.96% ~ 0% B: -0.25% ~ 0.12% C: -0.4% ~ 0.09% D: -0.05% ~ 0.06% E: -0.06% ~ +0.10% F: -0.04% ~ 0.04% G: -0.06% ~ 0.08% H: -0.069% ~ 0.25% I: -0.04% ~ 0.1%	P
5	RIPPLE & NOISE	I/P:230VAC SPEC: A:80mV O/P: FULL LOAD B:80mV C:80mV D:100mV E:100mV F:100mV G:240mV H:240mV I:350mV	A: 11mV B: 12mV C: 7mV D: 11mV E: 10mV F: 11mV G: 14mV H: 8mV I: 65mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC: 0.4A O/P:FULL LOAD	A:0.222A	P
7	MAX. INRUSH CURRENT	I/P:230VAC SPEC: 40A O/P:FULL LOAD	A:31.781A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC:FIXED O/P:MIN. LOAD	A:3.325V B:5.08V C:7.593V D:12.06V E:13.512V F:14.96V G:24.03V H:27.237V I:47.98V	P

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
9	SET UP TIME	I/P:230VAC O/P:FULL LOAD SPEC:200ms	A:94.38mS	P
10	HOLD UP TIME	I/P:230VAC O/P:FULL LOAD SPEC:80mS	A:202.969mS	P
11	EFFICIENCY	I/P:230VAC O/P: FULL LOAD SPEC: A: 66% B: 74% C: 76% D: 78% E: 78% F: 78% G: 79% H: 79% I : 79%	A: 68.59% B: 75.87% C: 78.51% D: 79.70% E: 79.1% F: 81.19% G: 83.11% H: 80.2% I : 80.58%	P
12	OVER LOAD PROTECTION	I/P:230VAC O/P: TESTING SPEC: ABOVE 105% FOLDBACK CURRENT SHUTDOWN AUTO RECOVERY	A: 205% B: 180% C: 187% D: 209% E: 211% F: 187% G: 325% H: 322% I : 320%	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC O/P:TESTING SPEC:115~135%	A: 127.3% B: 124% C: 118.6% D: 118% E: 128% F: 116% G: 119% H: 135% I: 119%	P
14	OVER TEMPERATURE PROTECTION & FAN ON/OFF TEST	I/P:230VAC O/P:FULL LOAD SPEC: U1 Tj 135°C TYPICAL	B:OTP:121°C	P
15	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<0.5mA N-FG--<0.5mA	A: L-FG:0.25 mA N-FG:0.24mA	P
16	INSULATION RESISTANCE	SPEC: I/P-O/P 500VDC/100M Ohms MIN. I/P-FG 500VDC/100M Ohms MIN.	A: O/P-FG >100M Ohms I/P-O/P >100M Ohms	P
17	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3000VAC/ 1 sec(10mA CUT-OFF) I/P - FG: 1500VAC/ 1 sec(10mA CUT-OFF)	A: I/P-O/P :0.881mA I/P-FG :1.531mA	P
18	BURN-IN TEST	I/P: 230VAC O/P:FULL LOAD TA:25.3°C BURN-IN DURATION : 1 hrs	B:NON BREAK	P
19	ENVIRONMENT TEST (SAMPLE B:)	1.LOW TEMPERATURE TEST I/P:80 VAC O/P:FULL LOAD AMBIENT TEMPERATURE:-9.0°C	AFTER 1.5 hrs POWER ON OK	P
		2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230VAC O/P:FULL LOAD AMBIENT TEMPERATURE:55.1°C	AFTER 40 hrs NON BREAK	
		3.ACCELERATED LIFE TEST I/P:265VAC O/P:FULL LOAD POWER ON :3 min POWER OFF :5 sec AMBIENT TEMPERATURE:85°C AMBIENT HUMIDITY:95%	AFTER 16 hrs NON BREAK	

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT																																
20	TEMPERATURE RISE TESTT rise OF PARTS	I/P :230VAC AFTER 1 hr BURN-IN O/P :FULL LOAD TA:25.3°C <table border="1"> <thead> <tr> <th>POSITION</th> <th>P/N</th> <th>TEMP</th> <th>T rise</th> </tr> </thead> <tbody> <tr> <td>BD1</td> <td>BRIDGE DIODE</td> <td>54.3°C</td> <td>29.0°C</td> </tr> <tr> <td>U1</td> <td>MAIN TRANSISTOR</td> <td>51.2°C</td> <td>25.9°C</td> </tr> <tr> <td>T1</td> <td>MAIN TRANSFORMER</td> <td>62.6°C</td> <td>37.3°C</td> </tr> <tr> <td>D7</td> <td>O/P DIODE</td> <td>67.9°C</td> <td>42.6°C</td> </tr> <tr> <td>C17</td> <td>O/P FILTER CAPACITOR</td> <td>54.5°C</td> <td>29.2°C</td> </tr> <tr> <td>C5</td> <td>I/P FILTER CAPACITOR</td> <td>38.7°C</td> <td>13.4°C</td> </tr> <tr> <td>D5</td> <td>CLAMP DIODE</td> <td>53.2°C</td> <td>27.9°C</td> </tr> </tbody> </table>	POSITION	P/N	TEMP	T rise	BD1	BRIDGE DIODE	54.3°C	29.0°C	U1	MAIN TRANSISTOR	51.2°C	25.9°C	T1	MAIN TRANSFORMER	62.6°C	37.3°C	D7	O/P DIODE	67.9°C	42.6°C	C17	O/P FILTER CAPACITOR	54.5°C	29.2°C	C5	I/P FILTER CAPACITOR	38.7°C	13.4°C	D5	CLAMP DIODE	53.2°C	27.9°C		P
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21	LIFE CYCLE	B: SUPPOSE C17 IS THE MOST CRITICAL COMPONENT I/P:230VAC O/P:FULL LOAD Ta:25°C Tc17:54°C Life: 169368 hrs I/P:230VAC O/P:FULL LOAD Ta:50°C Tc17:74°C Life: 42342 hrs		P																																
22	CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)	B: FUSE : 2.5A/250VAC CQ GTE BRIDGE DIODE : LT KBP208G(GLASS) LINE FILTER : TF-416 ET-20V TRANSFOMER : SF TF-433 EI-28 POWER SWITCHER : PHIL TOP223Y OUTPUT DIODE : C82-004 TO-220 OUTPUT CAPACITOR : N.C.C 2200uF/10V , 105°C, RJH INPUT CAPACITOR : HITACHI 82uF/400V,85°C HP3 P.C.B : PS-25,CEM-1 2 OZ 61mm x 107mm																																		
DATE	SAMPLE	TEST RESULT	TEST	APPROVAL																																
19980417	PS-25	PASS	H.C.LIOU	Max Lin																																
20010226	PS-25-3.3,7.5,13.5,27	PASS	SAM	Max Lin																																