Wall Industries, Inc.

PSPD25 Series
Dual Output
Up to 25 Watts
AC/DC Power Supply

FEATURES

- **Low Cost**
- **High Reliability**
- **2 Year Warranty**
- **100% Full Load Burn-In Test**
- **Low Leakage Current < 0.5mA**
- **Universal AC Input/ Full Range**
- **Cooling by Free Air Convection**
- **Fixed Switching Frequency at 100KHz**
- **Short Circuit, Overload, Over Voltage, and Over Temperature Protected**



SPECIFICATIONS: *PSPD25 Series*	
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.	
INPUT SPECIFICATIONS	
Input Voltage	85 – 264VAC (120 – 370VDC)
Input Frequency	47 ~ 63Hz
AC Current (typical)	0.65A @ 115VAC 0.4A @ 230VAC
Inrush Current	32A cold start.
Leakage Current	< 0.5mA @ 240VAC
OUTPUT SPECIFICATIONS	
Output Voltage	See Table
Output Voltage Tolerance (See Note 3)	PSPD-25A & PSPD-25B (CH 1: ±2%, CH 2: ±6%) PSPD-2505 (CH 1: ±6%, CH 2: ±6%) PSPD-2512 & PSPD-2515 (CH 1: ±4%, CH.2: ±4%)
Line Regulation	PSPD-25A & PSPD-25B (CH 1: ±0.5%, CH 2: ±2%) PSPD-2505 (CH 1: ±1%, CH 2: ±1%) PSPD-2512 & PSPD-2515 (CH 1: ±0.5%, CH.2: ±0.5%)
Load Regulation	PSPD-25A & PSPD-25B (CH 1: ±1%, CH 2: ±4%) PSPD-2505 (CH 1: ±4%, CH 2: ±4%) PSPD-2512 & PSPD-2515 (CH 1: ±3%, CH.2: ±3%)
Output Current	See Table
Ripple & Noise (See Note 2)	See Table
Setup, Rise Time	250ms, 50ms @ 230VAC 250ms, 30ms @ 115VAC and full load
Hold Up Time	100ms @ 230VAC 16ms @ 115VAC and full load
Temperature Coefficient	±0.03%/°C (0~50°C) on CH 1 output.
PROTECTION	
Over Voltage Protection	See Table Protection Type: Shut off output voltage, clamping by Zener diode.
Overload Protection	Above 105% rated output power Protection Type: Hiccup mode, recovers automatically after fault condition is removed.
Over Temperature Protection	Tj 135°C typically (U1) detect on main control IC Shut down output voltage, recovers automatically after temperature goes down.
GENERAL SPECIFICATIONS	
Switching Frequency (fixed)	100KHz
Efficiency (typical)	See Table
Withstand Voltage	3KVAC (input to output), 1.5KVAC (input to FG), 0.5KVAC (output to FG).
Isolation Resistance	100MΩ / 500VDC (input to output, input to FG, output to FG)
ENVIRONMENTAL SPECIFICATIONS	
Working Temperature	-10°C to +60°C (refer to output load derating curve)
Storage Temperature	-20°C to +85°C
Working Humidity (non-condensing)	20% ~ 90% RH non-condensing
Storage Humidity (non-condensing)	10% ~ 95% RH
Vibration	10~500Hz, 2G 10min./1cycle, Period for 60 minutes each along X, Y, and Z axes.
MTBF	507,900 hours min. MIL-HDBK-217 (25°C)
PHYSICAL SPECIFICATIONS	
Weight	10 oz.
Dimensions	107(L) x 61(W) x 28(H) mm
Warranty	2 years
SAFETY & EMC	
Safety Standards	UL60950-1, TUV EN60950-1 Approved
EMI Conduction and 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.

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OUTPUT VOLTAGE / CURRENT RATING CHART

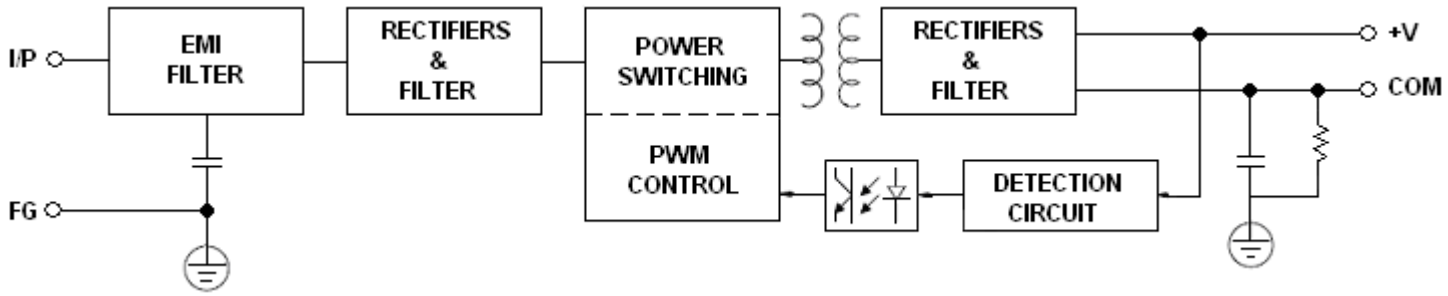
Model		Input Voltage	Output Voltage	Over Voltage Protection	Current Range	Rated Current	Ripple & Noise	Output Power	Efficiency
PSPD-25A	Channel 1	85~264 VAC (120~370 VDC)	5 VDC	5.75 ~ 6.75V	0.2 ~ 2.5A	2.1A	50mVp-p	25W	71%
	Channel 2		12 VDC	13.8 ~ 16.2V	0.1 ~ 1.5A	1.2A	150mVp-p		
PSPD-25B	Channel 1		5 VDC	5.75 ~ 6.75V	0.2 ~ 2A	1.2A	50mVp-p	25.2W	77%
	Channel 2		24 VDC	27.6 ~ 32.4V	0.1 ~ 1A	0.8A	200mVp-p		
PSPD-2505	Channel 1		5 VDC	5.75 ~ 6.75V	0.1 ~ 3A	2.5A	50mVp-p	25W	73%
	Channel 2		-5 VDC	-5.75 ~ -6.75V	0.1 ~ 2.5A	2.5A	50mVp-p		
PSPD-2512	Channel 1		12VDC	13.8 ~ 16.2V	0.1 ~ 1.2A	1A	50mVp-p	24W	74%
	Channel 2		-12VDC	-13.8 ~ -16.2V	0.1 ~ 1.2A	1A	50mVp-p		
PSPD-2515	Channel 1		15VDC	17.3 ~ 20.3V	0.1 ~ 1A	0.8A	50mVp-p	24W	75%
	Channel 2		-15VDC	-17.3 ~ -20.3V	0.1 ~ 1A	0.8A	50mVp-p		

NOTES

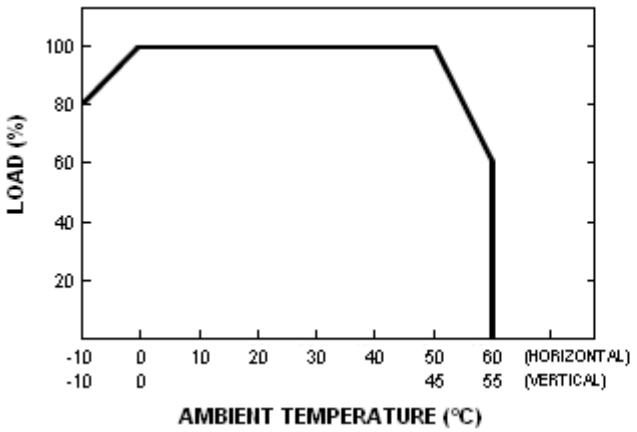
1. All parameters not specially mentioned are measured at 230VAC input, rated load, and 25°C ambient temperature.
2. Ripple & noise are measured at 20MHz using a 12" twisted pair-wire terminated with 0.1uF & 47uF capacitors in parallel.
3. Tolerance: includes set up tolerance, line regulation, and load regulation.
4. The power supply is considered a component, which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

BLOCK DIAGRAM

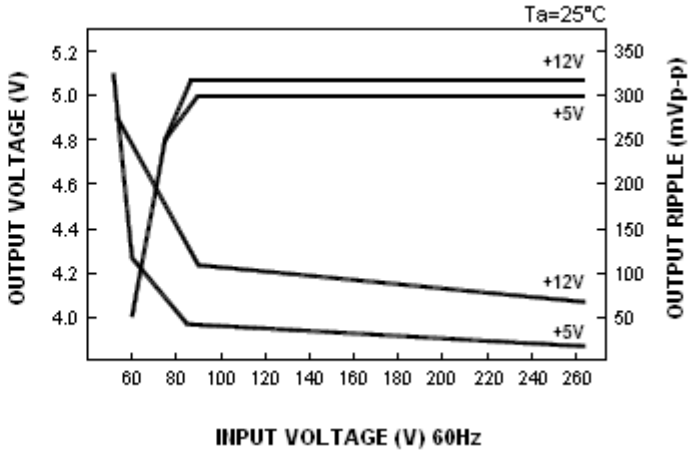
fosc: 100KHz



DERATING CURVE



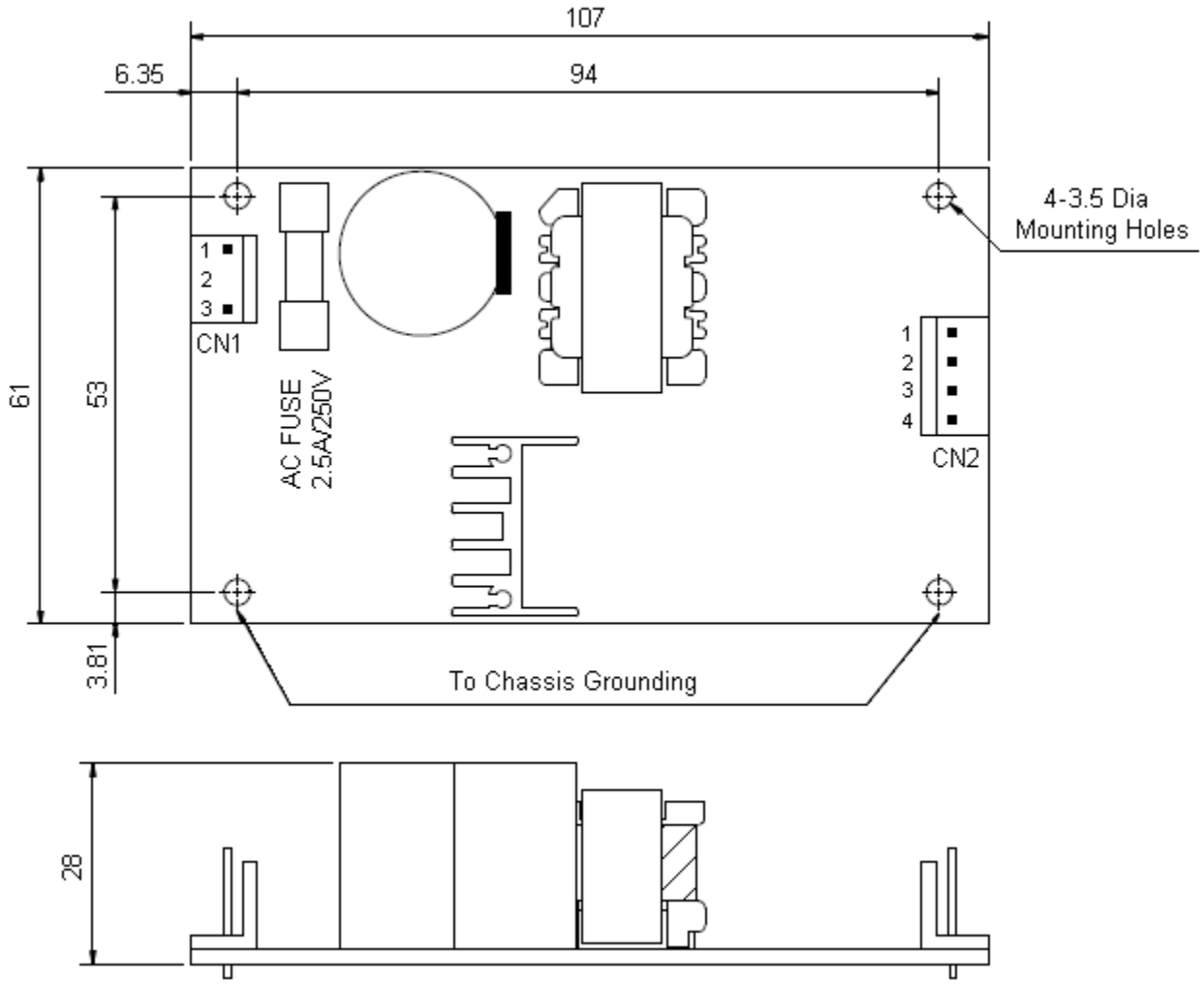
STATIC CHARACTERISTICS (A)



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MECHANICAL DRAWING

Unit: mm



AC INPUT CONNECTOR (CN1)	
Pin. No	**Assignment**
1	AC/L
2	No Pin
3	AC/N

DC OUTPUT CONNECTOR (CN2)	
Pin No.	**Assignment**
1	V1
2,3	COM
4	V2