



BS EN/EN60335-1 ANSI/AAMI ES60601-1 BS EN/EN60601-1 IEC60601-1 TPTC004

Features

- 2.06"x1.07" compact size
• Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
• Suitable for BF application with appropriate system consideration
• No load power consumption<0.1W
• Extremely low leakage current
• Wide operating temp. range -40 ~ +85°C
• EMI class B for class II configuration
• Protections: Short circuit / Overload / Over voltage / Over temperature
• No minimum load required
• 3 years warranty

Applications

- Portable medical device
• Mobile clinical workstation
• Medical computer monitor
• Medical examination instrument

GTIN CODE

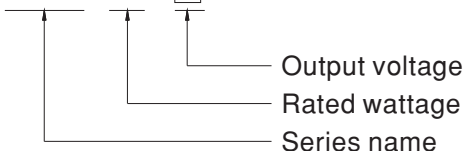
MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

MPM-15 is a 15W high density and small size (52.4*27.2*24mm) AC/DC module type medical power supply series offered in pin type. It features the operation for 80~264VAC, a low no load power consumption less than 0.1W, a high efficiency up to 87%, Class II (no FG) double insulation, outstanding dissipation and high lifespan thanks to the interior potting, 2G anti-vibration, high EMC performance, 4KVAC isolation, etc. The design observes IEC/BS EN/EN60601-1 and ANSI/AAMI ES60601-1 version three with 2xMOPP level and ultra-low leakage current (<80 μA). It is very suitable for BF (patient contact) type medical device or relevant equipment.

Model Encoding

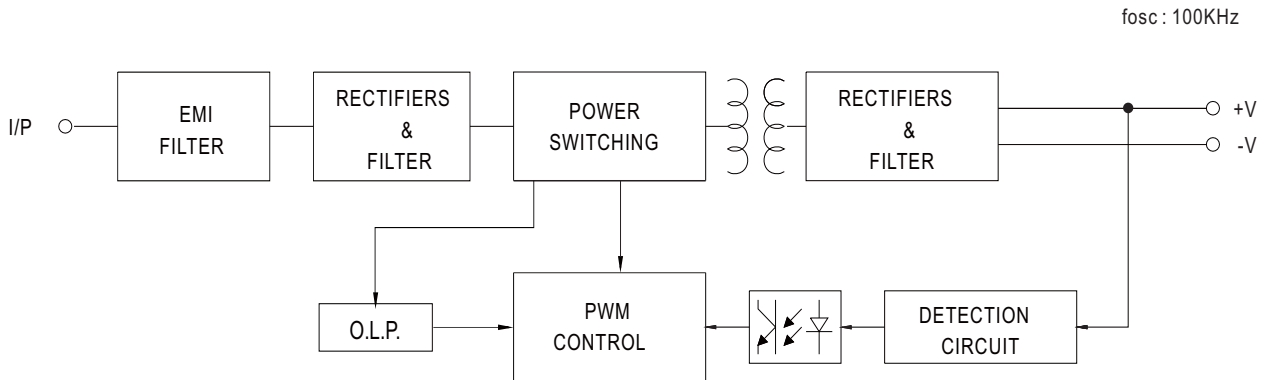
MPM - 15 - 5



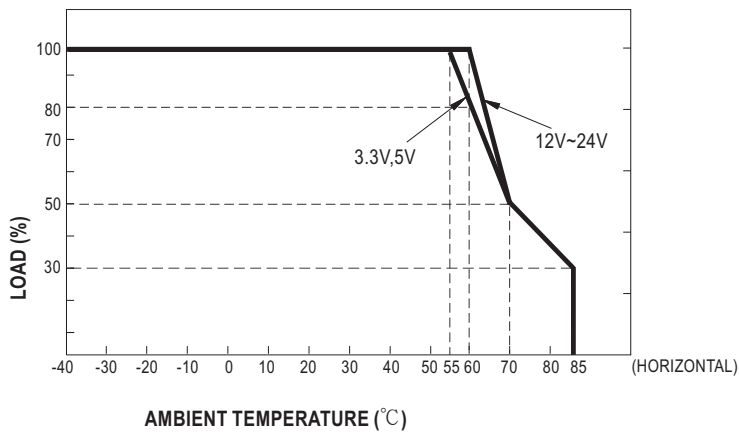
SPECIFICATION

MODEL		MPM-15-3.3	MPM-15-5	MPM-15-12	MPM-15-15	MPM-15-24	
OUTPUT	DC VOLTAGE	3.3V	5V	12V	15V	24V	
	RATED CURRENT	3.5A	3A	1.25A	1A	0.63A	
	CURRENT RANGE <small>Note.2</small>	0 ~ 3.5A	0 ~ 3A	0 ~ 1.25A	0 ~ 1A	0 ~ 0.63A	
	PEAK CURRENT	3.85A	3.3A	1.38A	1.1A	0.69A	
	RATED POWER	11.6W	15W	15W	15W	15.1W	
	PEAK LOAD(10sec.) <small>Note.3</small>	12.7W	16.5W	16.6W	16.5W	16.6W	
	RIPPLE & NOISE (max.) <small>Note.4</small>	150mVp-p	150mVp-p	150mVp-p	180mVp-p	180mVp-p	
	VOLTAGE TOLERANCE <small>Note.5</small>	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
SETUP, RISE TIME	1500ms, 30ms/230VAC 1500ms, 30ms/115VAC at full load						
HOLD UP TIME (Typ.)	40ms/230VAC 10ms/115VAC at full load						
INPUT	VOLTAGE RANGE <small>Note.6</small>	80 ~ 264VAC	113V~370VDC				
	FREQUENCY RANGE	47 ~ 440Hz					
	EFFICIENCY (Typ.)	83.5%	85.5%	86.5%	87%	86.5%	
	AC CURRENT (Typ.)	0.6A/115VAC	0.3A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START	20A/115VAC	45A/230VAC			
	LEAKAGE CURRENT (max.) <small>Note.7</small>	Touch current <80µA/264VAC					
PROTECTION	OVERLOAD	110% ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	3.8 ~ 5V	5.8 ~ 6.8V	13.8 ~ 16.2V	17.3 ~ 20.3V	27.6 ~ 32.4V	
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, recovers automatically after temperature goes down					
ENVIRONMENT	WORKING TEMP.	-40 ~ +85°C (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)					
	SOLDERING TEMPERATURE	Wave soldering: 265°C, 5s (max.); Manual soldering: 390°C, 3s (max.)					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes					
	OPERATING ALTITUDE <small>Note.8</small>	5000 meters					
SAFETY & EMC (Note.9)	SAFETY STANDARDS	IEC 60601-1:2005+A1, TUV BS EN/ EN 60601-1:2006+A1+A12+A2, ANSII/AAMI ES60601-1:2005/A2:2021, CAN/CSA C22.2 No. 60601-1:2014+A2, IEC 60335-1:2010/AMD2:2016, Dekra BS EN/ EN 60335-1:2012+A11+A13+A14+A15, EAC TP TC 004 approved					
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP					
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC					
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH					
	EMC EMISSION	Parameter	Standard		Test Level / Note		
		Conducted emission	BS EN/EN55011 (CISPR11)		Class B		
		Radiated emission	BS EN/EN55011 (CISPR11)		Class B		
		Harmonic current	BS EN/EN61000-3-2		Class A		
	EMC IMMUNITY	BS EN/EN55035, BS EN/EN60601-1-2					
		Parameter	Standard		Test Level / Note		
ESD		BS EN/EN61000-4-2		Level 4, 15KV air ; Level 4, 8KV contact			
RF field susceptibility		BS EN/EN61000-4-3		Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz)			
EFT bursts		BS EN/EN61000-4-4		Level 3, 2KV			
Surge susceptibility		BS EN/EN61000-4-5		Level 3, 1KV/Line-Line			
Conducted susceptibility		BS EN/EN61000-4-6		Level 3, 10V			
Magnetic field immunity		BS EN/EN61000-4-8		Level 4, 30A/m			
OTHERS	MTBF	7319.8K hrs min. Telcordia SR-332 (Bellcore) ; 1210.0K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	52.4*27.2*24mm (L*W*H) or 2.06**1.07**0.94" inch					
	PACKING	0.056Kg; 240pcs/14.4Kg/0.94CUFT					
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. No minimum load required.</p> <p>3. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.</p> <p>4. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 µ F & 47 µ F parallel capacitor.</p> <p>5. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>6. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>7. Touch current was measured from primary input to DC output.</p> <p>8. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>9. 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. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>						

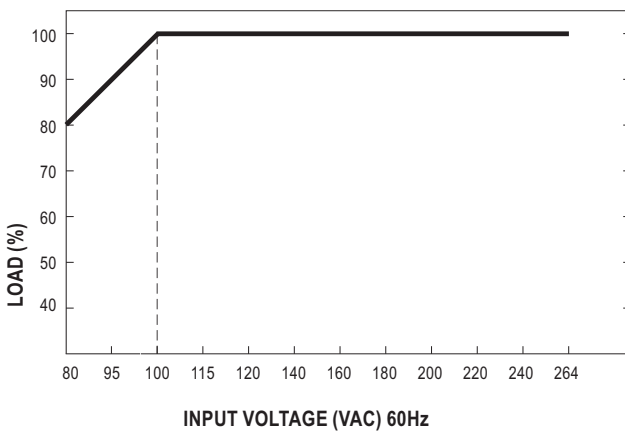
Block Diagram



Derating Curve



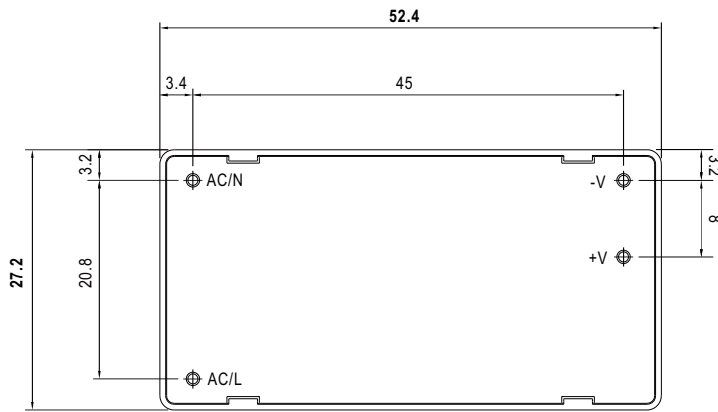
Output Derating VS Input Voltage



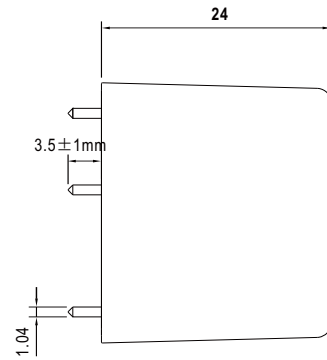
■ Mechanical Specification

(Unit: mm , tolerance $\pm 0.5\text{mm}$)

Case No.219A



BOTTOM VIEW



P/N diameter:1.04

SIDE VIEW

■ Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>