



### 1W Single Output Encapsulated Type

## IRM-01 series







#### Features

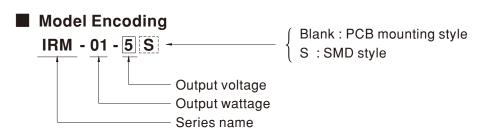
- Universal AC input / Full range
- No load power consumption<0.075W</li>
- Compact size
- Comply with EN55022 Class B without any additional components
- Protections: Short circuit / Overload / Over voltage
- · Cooling by free air convection
- · Isolation Class II
- · High reliability, low cost
- 3 years warranty

## Applications

- Industrial electrical equipment
- Mechanical equipment
- Factory automation equipment
- · Handheld electronic device

## Description

IRM-01 is a 1W miniature (33.7\*22.2\*15mm) AC-DC module-type power supply, ready to be soldered onto the PCB boards of various kinds of electronic instruments or industrial automation equipments. This product allows a universal input voltage range of 85~305VAC. The phenolic case and the fully-potted silicone enhance the heat dissipation and meet the anti-vibration demand up to 5G; moreover, it provides the fundamental resistance to dust and moisture. With the high efficiency up to 77% and the extremely low no-load power consumption below 0.075W, IRM-01 series fulfills the worldwide regulation for the low power consumption requirement for electronics. The entire series is a Class II design (no FG pin), incorporating the built-in EMI filtering components, enabling the compliance with EN55022 Class B; the supreme EMC features keep the end electronic units from electromagnetic interference. In addition to module-type model, IRM-01 series also offers the SMD style model.





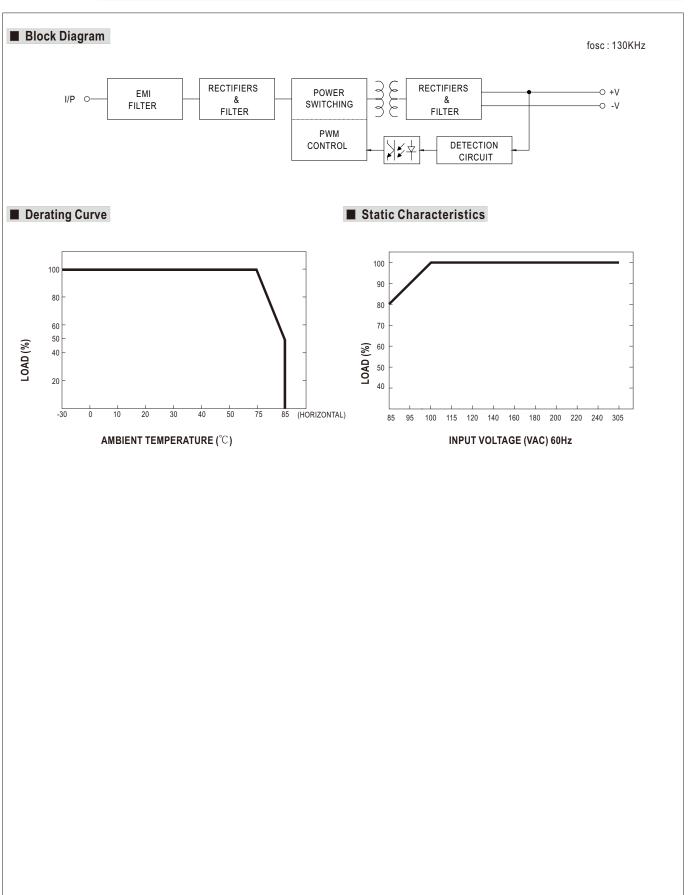
## **SPECIFICATION**

MODEL		IRM-01-3.3	IRM-01-5	IRM-01-9	IRM-01-12	IRM-01-15	IRM-01-24	
OUTPUT	DC VOLTAGE	3.3V	5V	9V	12V	15V	24V	
	RATED CURRENT	300mA	200mA	111mA	83mA	67mA	42mA	
	CURRENT RANGE	0 ~ 300mA	0 ~ 200mA	0 ~ 111mA	0 ~ 83mA	0 ~ 67mA	0 ~ 42mA	
	RATED POWER	1W	1W	1W	1W	1W	1W	
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	
	VOLTAGE TOLERANCE Note.3	±2.5%	±2.5%	±2.5%	±2.5%	±2.5%	±2.5%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME	600ms, 30ms/230VAC 600ms, 30ms/115VAC at full load						
	HOLD UP TIME (Typ.)	40ms/230VAC 12ms/115VAC at full load						
INPUT	VOLTAGE RANGE	85 ~ 305VAC 120 ~ 430VDC						
	FREQUENCY RANGE	47 ~ 63Hz						
	EFFICIENCY (Typ.)	66%	70%	72%	74%	75%	77%	
	AC CURRENT (Typ.)	25mA/115VAC 18mA/230VAC 16mA/277VAC						
	INRUSH CURRENT (Typ.)	5A/115VAC 10A/230VAC						
	LEAKAGE CURRENT	< 0.25mA/277VAC						
PROTECTION		≥110% rated output power						
	OVERLOAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE	3.8 ~ 4.9V	5.2 ~ 6.8V	10.3 ~ 12.2V	12.6 ~ 16.2V	15.7 ~ 20.3V	25.2 ~ 32.4V	
		Protection type : Shut off o/p voltage, clamping by zener diode						
ENVIRONMENT	WORKING TEMP.	-30 ~ +85°C (Refer to "Derating Curve")						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +100°C, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/°C (0~75°C)						
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes						
SAFETY & EMC	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved, Meet IEC60601-1, EN60335-1, EN61558-1/-2-16						
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC						
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH						
	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3						
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, heavy industry level (surge L-N: 1KV), criteria A						
OTHERS	MTBF	1960Khrs min. MIL-HDBK-217F (25°C)						
	DIMENSION	PCB mounting style : 33.7*22.2*15mm (L*W*H) SMD style : 33.7*22.2*16mm (L*W*H)						
	PACKING	PCB mounting style	: 0.019Kg; 640pcs/ 13.	2 Kg/ 0.95CUFT	SMD style: 0.019	Kg; 640 pcs/ 13.2 Kg/	0.95CUFT	
NOTE	All parameters NOT special Ripple & noise are measure Tolerance : includes set up	ed at 20MHz of band	width by using a 12" t	wisted pair-wire termi				



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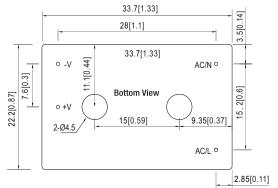


#### ■ Mechanical Specification

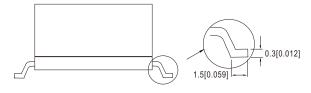
O PCB mounting style

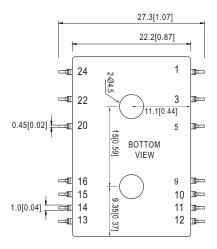


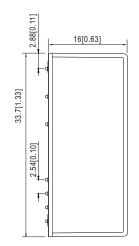
Case No.IRM02 Unit:mm[inch] Tolerance:±0.5[±0.02] unless otherwise specified



O SMD style

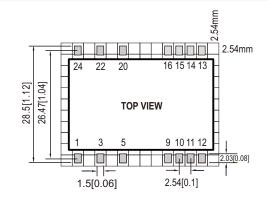


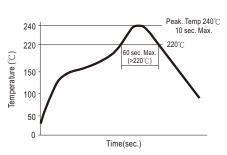




Pin No.	Assignment		
1	AC/L		
24	AC/N		
13	-Vo		
12	+Vo		
others	N.C.		

#### ■ Recommended PCB Layout (for SMD style) (Reflow soldering method available)





Remark : The curve applies only to the "Hot Air Reflow Soldering"

#### ■ Installation Manual

Please refer to: http://www.meanwell.com/webnet/search/InstallationSearch.html