



20W Single Output Encapsulated Type

IRM-20 series



■ Features :

- Universal AC input / Full range
- Compact size.
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Isolation class II
- No load power consumption<0.1W
- 100% full load burn-in test
- · High reliability
- 3 years warranty

LPS c LUS LPS CBCE

SPECIFICATION

MODEL		IRM-20-3.3	IRM-20-5	IRM-20-12	IRM-20-15	IRM-20-24
ОИТРИТ	DC VOLTAGE	3.3V	5V	12V	15V	24V
	RATED CURRENT	4.5A	4A	1.8A	1.4A	0.9A
	CURRENT RANGE	0~4.5A	0 ~ 4A	0 ~ 1.8A	0 ~ 1.4A	0 ~ 0.9A
	RATED POWER	14.85W	20W	21.6W	21W	21.6W
	RIPPLE & NOISE (max.) Note.2	200mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p
	VOLTAGE TOLERANCE Note.3	±2.5%	±2.5%	±2.5%	±2.5%	±2.5%
	LINE REGULATION	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%
	LOAD REGULATION	±1%	±1%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1000ms, 20ms/230VAC 1000ms, 20ms/115VAC at full load				
	HOLD UP TIME (Typ.)	40ms/230VAC 8ms/115VAC at full load				
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 440Hz				
	EFFICIENCY (Typ.)	76%	79%	84%	84%	85%
	AC CURRENT (Typ.)	0.6A/115VAC 0.4A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC 40A/230VAC				
	LEAKAGE CURRENT	< 0.25mA/240VAC				
PROTECTION	OVERLOAD	115%~160% rated output power				
		Protection type: Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	3.8 ~ 4.46V	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V
		Protection type : Shut off o/p voltage, clamping by zener diode				
ENVIRONMENT	WORKING TEMP.	-30 \sim +70 $^{\circ}$ C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	$\pm 0.03\%^{\circ}$ C (0 ~ 50°C)				
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes				
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved				
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC				
EMC (Note 4)	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25 / 70% RH				
	EMC EMISSION	Compliance to EN55032 (CISPR32) 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				
	MTBF	970.3Khrs min. MIL-HDBK-217F (25°C)				
	DIMENSION	52.4*27.2*24mm (L*W*H)				
	PACKING	0.05Kg/240pcs/13Kg/0.97CUFT				
NOTE	 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. 					



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■ Mechanical Specification Case No.219A Unit:(mm) 52.4 24 3.2 AC/N 3.5±1mn +V 🕁 27.2 20.8 BOTTOM VIEW ♠ AC/L P/N diameter:1.04 ■ Block Diagram fosc: 100KHz RECTIFIERS RECTIFIERS POWER -O +V EMI & FILTER & FILTER FILTER SWITCHING - → V PWM DETECTION CONTROL CIRCUIT ■ Output Derating VS Input Voltage ■ Derating Curve OTHERS 100 80 80 3.3V,5V 60 LOAD (%) LOAD (%) 40 50 20 70 (HORIZONTAL) 40 45 50 115 120 140 160 180 200 220 240 264 AMBIENT TEMPERATURE (°C) INPUT VOLTAGE (VAC) 60Hz



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