# 15W AC-DC PCB-Mount Green Power Module IRM-15 series

## SPECIFICATION

| MODEL | | IRM-15-3.3 | IRM-15-5 | IRM-15-12 | IRM-15-15 | IRM-15-24 |
|---|---|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 3.3V | 5V | 12V | 15V | 24V |
| | RATED CURRENT | 3.5A | 3A | 1.25A | 1A | 0.63A |
| | CURRENT RANGE | 0 ~ 3.5A | 0 ~ 3A | 0 ~ 1.25A | 0 ~ 1A | 0 ~ 0.63A |
| | RATED POWER | 11.55W | 15W | 15W | 15W | 15.12W |
| | 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 10ms/115VAC at full load | | | | |
| INPUT | VOLTAGE RANGE | 85 ~ 305VAC 120 ~ 430VDC | | | | |
| | FREQUENCY RANGE | 47 ~ 440Hz | | | | |
| | EFFICIENCY (Typ.) | 74% | 78% | 82% | 82% | 83% |
| | AC CURRENT (Typ.) | 0.35A/115VAC 0.2A/230VAC 0.17A/277VAC | | | | |
| | INRUSH CURRENT (Typ.) | COLD START 20A/115VAC 40A/230VAC | | | | |
| | LEAKAGE CURRENT | < 0.25mA/277VAC | | | | |
| PROTECTION | OVERLOAD | 115%~190% rated output power | | | | |
| | | Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | |
| | OVER VOLTAGE | 3.8 ~ 4.95V | 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 ~ +70℃ (Refer to "Derating Curve") | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85℃, 10 ~ 95% RH | | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 50℃) | | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | | |
| | LEAD TEMPERATURE | 260±5℃,5s (max.) | | | | |
| | OPERATING ALTITUDE Note.4 | 2000 meters | | | | |
| SAFETY & EMC (Note.5) | SAFETY STANDARDS | IEC62368-1, UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004, BSMI CNS14336-1 approved | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH | | | | |

| EMC EMISSION | Parameter | Standard | Test Level / Note |
|---|---|---|---|
| | Conducted | BS EN/EN55032(CISPR32), CNS13438 | Class B |
| | Radiated | BS EN/EN55032(CISPR32), CNS13438 | Class B |
| | Harmonic Current (Note 5) | BS EN/EN61000-3-2 | Class A |
| | Voltage Flicker | BS EN/EN61000-3-3 | ------- |

| EMC IMMUNITY | BS EN/EN55035, BS EN/EN61000-6-2 | | |
|---|---|---|---|
| | Parameter | Standard | Test Level /Note |
| | ESD | BS EN/EN61000-4-2 | Level 3, 8KV air; Level 2, 4KV contact, criteria A |
| | Radiated Susceptibility | BS EN/EN61000-4-3 | Level 3, criteria A |
| | EFT/Burest | BS EN/EN61000-4-4 | Level 3, criteria A |
| | Surge | BS EN/EN61000-4-5 | Level 4,2KV/L-N, criteria A |
| | Conducted | BS EN/EN61000-4-6 | Level 3, criteria A |
| | Magnetic Field | BS EN/EN61000-4-8 | Level 4, criteria A |
| | Voltage Dips and interruptions | BS EN/EN61000-4-11 | ＞95% dip 0. 5 periods, 30% dip 25 periods, ＞95% interruptions 250 periods |

| OTHERS | MTBF | 970.3Khrs min. MIL-HDBK-217F (25℃) |
|---|---|---|
| | DIMENSION | 52.4*27.2*24mm (L*W*H) |
| | PACKING | 0.05Kg/240pcs/13Kg/0.94CUFT |

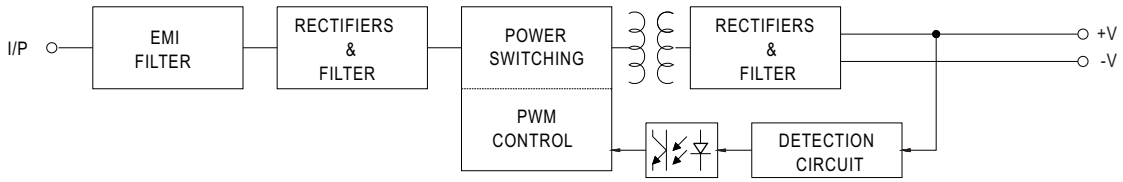
**NOTE**

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).
5. The power supply is considered as an independent unit ,but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies.” (as available on http://www.meanwell.com)

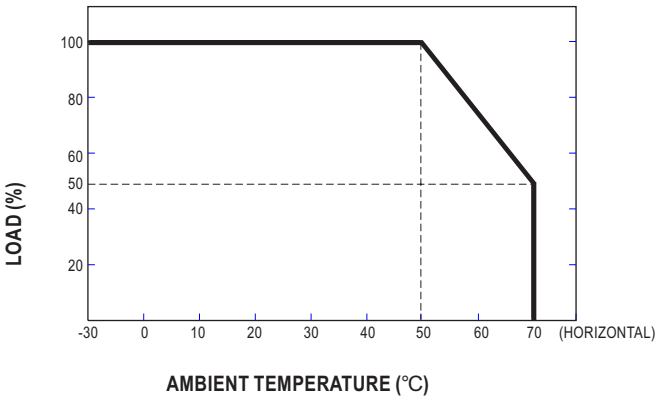
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

## ■ Block Diagram

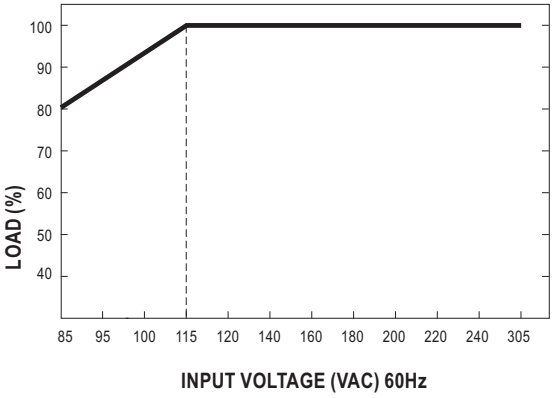
fosc : 65KHz




## ■ Derating Curve

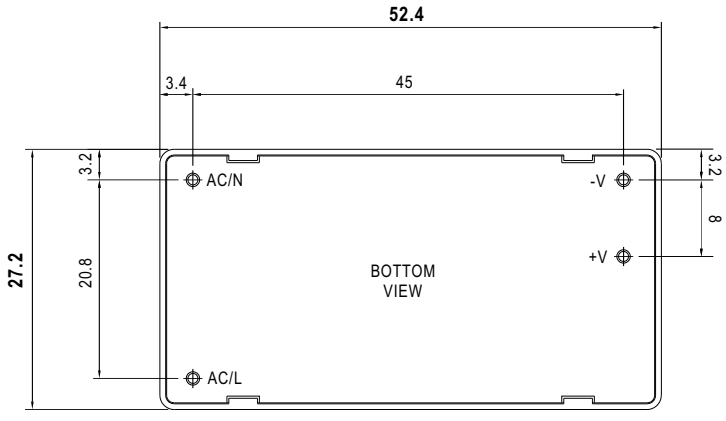


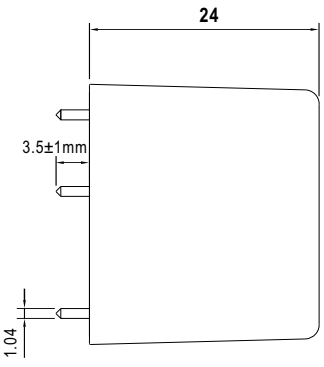

## ■ Output Derating VS Input Voltage




## ■ Mechanical Specification

Case No.219A Unit:(mm)




P/N diameter:1.04

## ■ Installation Manual

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