



- 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  us   CBCE

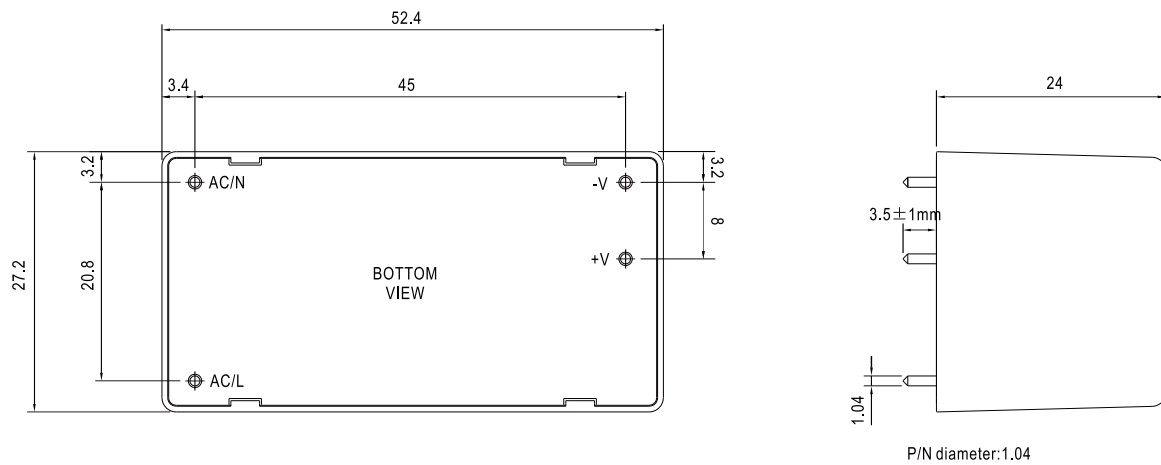
## SPECIFICATION

| MODEL                 |                              | IRM-20-3.3   | IRM-20-5     | IRM-20-12    | IRM-20-15      | IRM-20-24    |
|-----------------------|------------------------------|--|--------------|--------------|----------------|--------------|
| OUTPUT                | 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%        |
| INPUT                 | SETUP, RISE TIME             | 1000ms, 20ms/230VAC 1000ms, 20ms/115VAC at full load   |              |              |                |              |
|                       | HOLD UP TIME (Typ.)          | 40ms/230VAC 8ms/115VAC at full load  |              |              |                |              |
|                       | 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  |              |              |                |              |
| PROTECTION            | INRUSH CURRENT (Typ.)        | COLD START 20A/115VAC 40A/230VAC   |              |              |                |              |
|                       | LEAKAGE CURRENT              | < 0.25mA/240VAC  |              |              |                |              |
|                       | OVERLOAD                     | 115%~160% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |              |              |                |              |
| ENVIRONMENT           | OVER VOLTAGE                 | 3.8 ~ 4.46V  | 5.75 ~ 6.75V | 13.8 ~ 16.2V | 17.25 ~ 20.25V | 27.6 ~ 32.4V |
|                       | WORKING TEMP.                | -30 ~ +70°C (Refer to "Derating Curve")  |              |              |                |              |
|                       | WORKING HUMIDITY             | 20 ~ 90% RH non-condensing   |              |              |                |              |
|                       | STORAGE TEMP., HUMIDITY      | -40 ~ +85°C, 10 ~ 95% RH   |              |              |                |              |
|                       | TEMP. COEFFICIENT            | ±0.03%/°C (0 ~ 50°C)   |              |              |                |              |
|                       | VIBRATION                    | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes  |              |              |                |              |
| SAFETY & EMC (Note 4) | LEAD TEMPERATURE             | 260±5°C, 5s (max.)   |              |              |                |              |
|                       | SAFETY STANDARDS             | UL60950-1, TUV EN60950-1, EAC TP TC 004 approved   |              |              |                |              |
|                       | WITHSTAND VOLTAGE            | I/P-O/P:3KVAC  |              |              |                |              |
| OTHERS                | ISOLATION RESISTANCE         | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH   |              |              |                |              |
|                       | EMC EMISSION                 | Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020   |              |              |                |              |
|                       | EMC IMMUNITY                 | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, heavy industry level(surge L-N:1KV), criteria A, EAC TP TC 020        |              |              |                |              |
| NOTE                  | 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  |              |              |                |              |

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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 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.
5. 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).

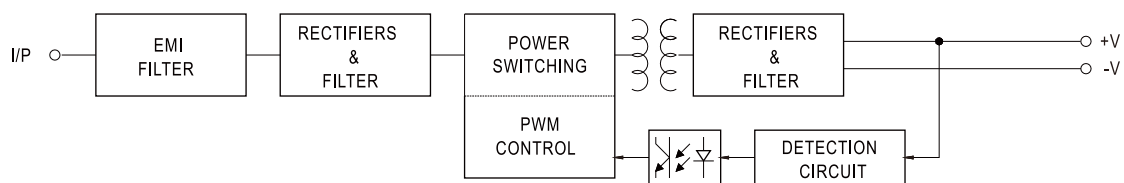
## Mechanical Specification

Case No.219A Unit:(mm)

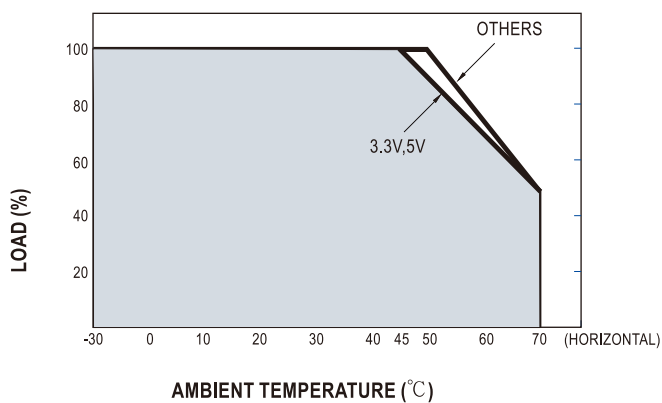


## Block Diagram

fosc : 100KHz



## Derating Curve



## Output Derating VS Input Voltage

