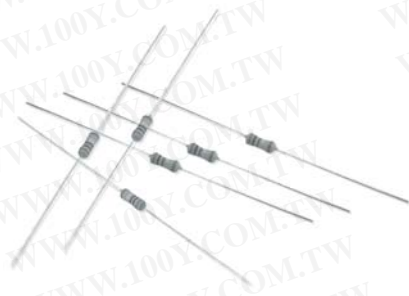


Metal Film Resistors

High Power Type

Ultra Miniature Style [FMP Series]



INTRODUCTION

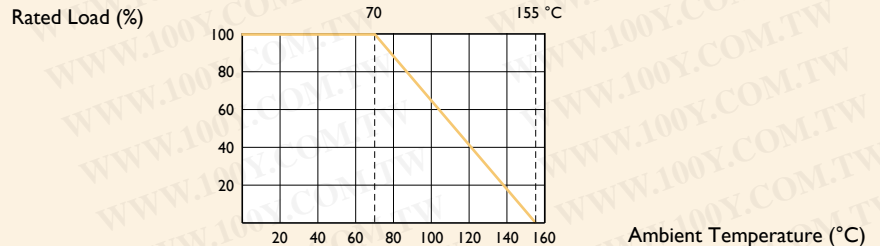
The FMP Series Metal Film High Power Resistors are manufactured using a vacuum sputtering system to deposit multiple layers of mixed metal alloys and passivative materials onto a carefully treated high grade ceramic substrate. After a helical groove has been cut in the resistive layer; tinned connecting leads of electrolytic copper are welded to the end-caps. The resistors are coated with layers of pink color lacquer.

FEATURES

| | |
|--|----------------------|
| Power Rating | 1/2W, 1W, 2W, 3W, 4W |
| Resistance Tolerance | ±1%, ±5% |
| T.C.R. | ±100ppm/°C |
| Flameproof Multi-layer Coating Meets | UL-94V-0 |
| Flameproof Feature Meets Overload Test | UL-1412 |

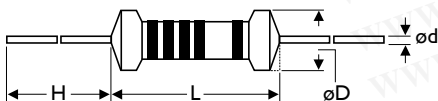
DERATING CURVE

For resistors operated in ambient temperatures above 70°C, power rating must be derated in accordance with the curve below.



DIMENSIONS

Unit: mm



| STYLE | DIMENSION | | | |
|-----------------|-----------|---------|--------|-----------|
| Ultra Miniature | L | øD | H | ød |
| FMP-50 | 3.4±0.3 | 1.9±0.2 | 28±2.0 | 0.45±0.05 |
| FMP100 | 6.3±0.5 | 2.4±0.2 | 28±2.0 | 0.55±0.05 |
| FMP200 | 9.0±0.5 | 3.9±0.3 | 26±2.0 | 0.55±0.05 |
| FMP3WS | 11.5±1.0 | 4.5±0.5 | 35±2.0 | 0.8±0.05 |
| FMP300 | 15.5±1.0 | 5.0±0.5 | 33±2.0 | 0.8±0.05 |
| FMP4WV | 17.0±1.0 | 7.5±0.5 | 32±2.0 | 0.8±0.05 |

Note:

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

ELECTRICAL CHARACTERISTICS

| STYLE | FMP-50 | FMP100 | FMP200 | FMP3WS | FMP300 | FMP4WV |
|--------------------------|--|--------|--------|--------|--------|--------|
| Power Rating at 70°C | 1/2W | 1W | 2W | 3W | | 4W |
| Maximum Working Voltage | 200V | 350V | 500V | | 750V | |
| Maximum Overload Voltage | 400V | 600V | 700V | | 1,000V | |
| Voltage Proof | 300V | 500V | | | 750V | |
| Resistance Range | 1 Ω - 10M Ω & 0 Ω for E24 & E96 series value | | | | | |
| Operating Temp. Range | -55°C to +155°C | | | | | |
| Temperature Coefficient | ±100ppm/°C | | | | | |

Note: Special value is available on request

ENVIRONMENTAL CHARACTERISTICS

| PERFORMANCE TEST | TEST METHOD | APPRAISE |
|-------------------------------|---|---|
| Short Time Overload | IEC 60115-1 4.13 2.5 times RCWV for 5 Sec. | ±0.5%+0.05 Ω |
| Voltage Proof | IEC 60115-1 4.7 in V-block for 60 Sec., test voltage by type | By type |
| Temperature Coefficient | IEC 60115-1 4.8 -55°C to +155°C | By type |
| Insulation Resistance | IEC 60115-1 4.6 in V-block for 60 Sec. | >1,000M Ω |
| Solderability | IEC 60115-1 4.17 235±5°C for 3±0.5 Sec. | 95% Min. coverage |
| Solvent Resistance of Marking | IEC 60115-1 4.30 IPA for 5±0.5 Min. with ultrasonic | No deterioration of coatings and markings |
| Robustness of Terminations | IEC 60115-1 4.16 Direct load for 10 Sec. in the direction of the terminal leads | ≥2.5kg (24.5N) |
| Periodic-pulse Overload | IEC 60115-1 4.39 4 times RCWV 10,000 cycles (1 Sec. on, 25 Sec. off) | ±1.0%+0.05 Ω |
| Damp Heat Steady State | IEC 60115-1 4.24 40±2°C, 90-95% RH for 56 days, loaded with 0.1 times RCWV | ±2.0%+0.05 Ω |
| Endurance at 70°C | IEC 60115-1 4.25 70±2°C at RCWV for 1,000 Hr. (1.5 Hr. on, 0.5 Hr. off) | ±2.0%+0.05 Ω |
| Temperature Cycling | IEC 60115-1 4.19 -55°C ⇄ Room Temp. ⇄ +155°C ⇄ Room Temp. (5 cycles) | ±1.0%+0.05 Ω |
| Resistance to Soldering Heat | IEC 60115-1 4.18 260±3°C for 10±1 Sec., immersed to a point 3±0.5mm from the body | ±0.25%+0.05 Ω |
| Accidental Overload Test | IEC 60115-1 4.26 4 times RCWV for 1 Min. | No evidence of flaming or arcing |

Note: Rated Continuous Working Voltage (RCWV) = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$