

Metal Film Resistor

Ultra Small Flame Proof Type

MFP(SS) Series

MERITEK

FEATURE

- Operating temperature: -55 ~ 155°C
- Low noise
- Low T.C.R.: 200ppm/°C, 100ppm/°C, 50ppm/°C and 25ppm/°C
- Flameproof multi-layer coating meets UL-94V-0
- Flameproof feature meets overload test UL-1412



PART NUMBERING SYSTEM

MFP (1) 2W (2) SS (3) C (4) 105 (5) J (6) TA (7)

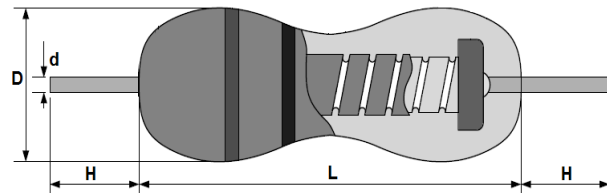


| No | Item | Code | Description | Series Reference |
|-----|----------------|------|----------------------|---|
| (1) | Meritek Series | MFP | Metal Film Resistor | Flame Proof Type, Ultra Small size |
| (2) | Power Rating | 2W | 2W: 2W | 1/4W, 1W, 3W, 4W |
| (3) | Size Code | SS | SS: Ultra Small size | S: Small, Blank: Standard Size |
| (4) | T.C.R. | C | C: ±100ppm/°C | G: ±25ppm/°C, E: ±50ppm/°C, B: ±200ppm/°C |
| (5) | Resistance | 105 | 105: 1MΩ | 5R0: 5.0Ω ~ 105: 1MΩ |
| (6) | Tolerance | J | J: ±5% | D: ±0.5%, F: ±1% |
| (7) | Packaging Type | TA | TA: Tape and Ammo | B: Bulk |

ELECTRICAL CHARACTERISTICS AND DIMENSIONS

| Power Rating | Dimensions (mm) | | | | Max Working Voltage | Max Overload Voltage | Dielectric Withstand Voltage |
|--------------|-----------------|----------|--------|-----------|---------------------|----------------------|------------------------------|
| | D | L | H | d | | | |
| 1/2W | 1.8±0.3 | 3.1~4.0 | 29±2.0 | 0.45±0.03 | 200V | 400V | 300V |
| 1W | 2.3±0.3 | 6.3±0.5 | 28±2.0 | 0.55±0.03 | 350V | 600V | 400V |
| 2W | 3.2±0.5 | 9.0±0.5 | 26±2.0 | 0.65±0.03 | 500V | 700V | 500V |
| 3W | 4.5±0.5 | 11.5±1.0 | 35±2.0 | 0.78±0.03 | 750V | 1000V | 700V |
| 4W | 5.0±0.5 | 15.5±1.0 | 32±2.0 | 0.78±0.03 | 800V | 1000V | 1000V |

| Power Rating | Resistance (Ω) | Tolerance |
|--------------|----------------|-----------------|
| 1/2W | 10K~1M | ±0.5%, ±1%, ±5% |
| 1W | 5R~1M | ±0.5%, ±1%, ±5% |
| 2W | 5R~1M | ±0.5%, ±1%, ±5% |
| 3W | 10K~1M | ±0.5%, ±1%, ±5% |
| 4W | 10K~1M | ±0.5%, ±1%, ±5% |



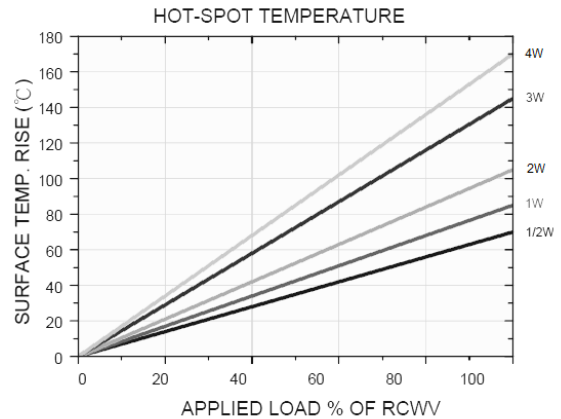
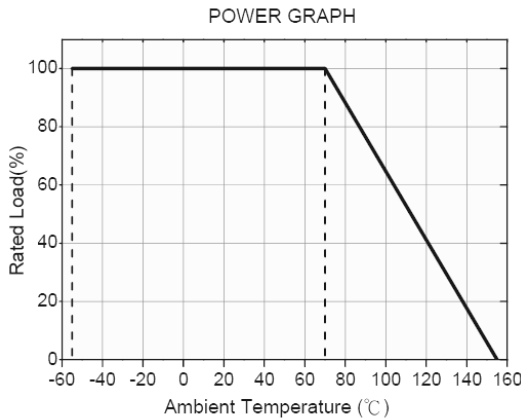
Flame Proof Silicone Coating Resistor Body Color: Ultra Size: Blue

Metal Film Resistor Ultra Small Flame Proof Type

MFP(SS) Series

MERITEK

CHARACTERISTIC CURVES



RELIABILITY TEST CONDITION AND REQUIREMENT

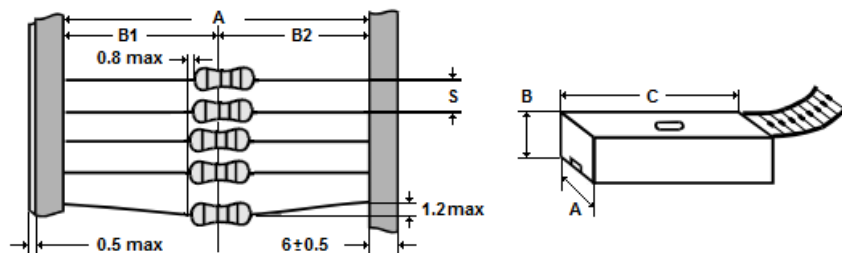
| Test | Condition | Requirement |
|-----------------------|---|--|
| Short Time Overload | 2.5 times RCWV for 5sec. | $\Delta R = \pm(0.5\% \pm 0.05\Omega)$ |
| Pulse Overload | 4 times RCWV for 1000 cycles (1sec. on, 25sec. off) | $\Delta R = \pm(1.0\% \pm 0.05\Omega)$ |
| Insulation Resistance | In V-Block- | > 10000M Ω |
| Load Life | 70°C at RCWV for 1000 hrs. (1.5hrs on, 0.5hrs off) | $\Delta R = \pm(2.0\% \pm 0.05\Omega)$ |
| Load Life in Humidity | 40 \pm 2°C; 90~95% RH at RCWV for 1000 hrs. (1.5 hrs on, 0.5hrs. off) | $\Delta R = \pm(2.0\% \pm 0.05\Omega)$ |
| Solderability | 260 \pm 5°C for 2 \pm 0.5sec. | 95% minimum coverage |
| Resistance to Solvent | Trichloroethane for 1min. with ultrasonic | No deterioration of coatings or markings |
| Terminal Strength | Direct load for 10sec. in the direction of the terminal leads. | Tensile: \geq 2.5kg |

Notes:

Reference Standards: IEC 60115-1, Storage Temperature: 25 \pm 3°C; Humidity < 80% RH

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

PACKAGING SPECIFICATION



| Power Rating | Tape Option1 (mm) | | Tape Option2 (mm) | | Spacing(mm) | Box Dimensions (mm) | | | Quantity Per Box |
|--------------|-------------------|-------|-------------------|-------|-------------|---------------------|-----|-----|------------------|
| | A | B1-B2 | A | B1-B2 | | A | B | C | |
| 1/2W | 26~27 | 1 | 52~53 | 1.2 | 5 | 80 | 75 | 264 | 5,000 |
| 1W | 26~27 | 1 | 52~53 | 1.2 | 5 | 80 | 105 | 264 | 5,000 |
| 2W | 52~53 | 1.2 | - | - | 5 | 80 | 46 | 264 | 1,000 |
| 3W | 52~53 | 1.5 | 73~74 | 1.5 | 5 | 103 | 82 | 265 | 1,000 |
| 4W | 52~53 | 1.5 | 73~74 | 1.5 | 10 | 103 | 96 | 265 | 1,000 |

Notes: Max. deviation of space is 1mm per 10 spacing.

*Specifications subject to change without notice.