

Metal Film Resistor Surface Mount Type

MFS Series

MERITEK

FEATURE

- Temperature Coefficient of Resistance: $\pm 100\text{ppm}/^\circ\text{C}$ at $-55\sim 200^\circ\text{C}$
- High Power Rating up to 5W
- Superior Surge Capability
- Excellent Stability at Environmental Conditions
- Excellent Mechanical Strength and Electrical Stability
- Molded Encapsulation
- UL Flammability Classification Rating 94V-0



PART NUMBERING SYSTEM

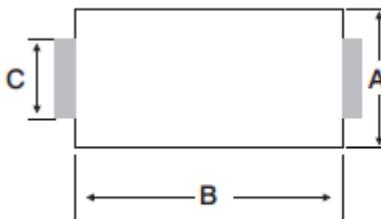
MFS 2W 100 J
(1) (2) (4) (5)



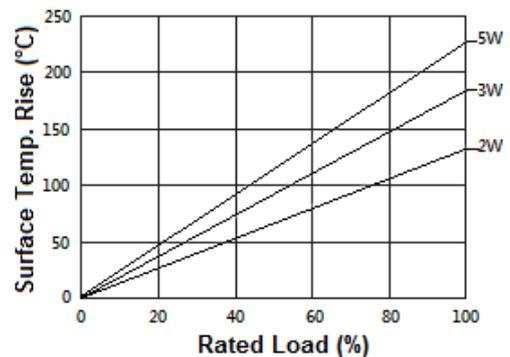
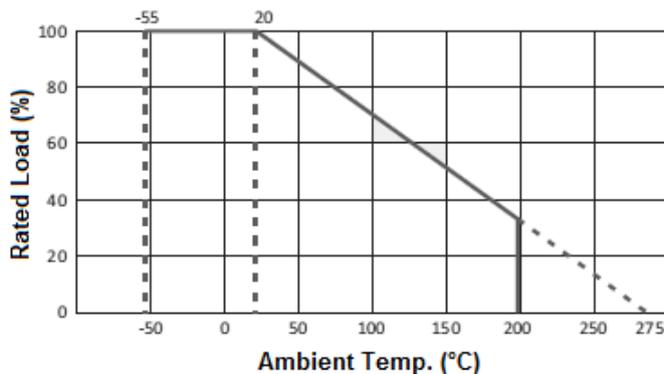
No	Item	Code	Description	Series Reference
(1)	Meritek Series	MFS	Metal Film Resistor	Surface Mount Type
(2)	Power Rating	2W	2W: 2W	3W, 5W
(4)	Resistance	100	100: 10Ω	100: 10Ω (E24) ~ 2004: 2MΩ (E96)
(5)	Tolerance	J	J: $\pm 5\%$	F: $\pm 1\%$

ELECTRICAL CHARACTERISTICS AND DIMENSIONS

Rated Power	Resistance	Dimensions (mm)						Working Voltage
		A	B	C	D	E Max	F	
2W	10~2MΩ	4.0 \pm 0.3	6.7 \pm 0.3	1.4 \pm 0.3	3.55 \pm 0.3	7.9	1.5 \pm 0.3	300V max
3W	10~2MΩ	5.5 \pm 0.3	10.5 \pm 0.3	1.7 \pm 0.3	5.0 \pm 0.3	12	2.3 \pm 0.3	500V max
5W	10~2MΩ	7.3 \pm 0.3	13.5 \pm 0.3	1.7 \pm 0.3	6.8 \pm 0.3	17	2.5 \pm 0.3	500V max



POWER DERATING CURVE AND SURFACE TEMPERATURE RISE



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RELIABILITY TEST CONDITION AND REQUIREMENT

Item	Test Condition	Requirement
Temperature Coefficient of Resistance (TCR)	-55 °C~200 °C	±100ppm/°C
Power Rating Load	Rated voltage for 30 minutes	ΔR/R≤ ±1%, Surface temp. 275°C Max
Short Time Overload	5 times rated power for 5 seconds	ΔR/R≤ ±0.5%
Dielectric Withstanding Voltage	500VAC for 1 minute	No evidence of mechanical damage or insulation breakdown.
Insulation Resistance	500VDC megger	10,000MΩ
Solderability	235±5°C for 2 seconds	95% minimum coverage
Resistance to Soldering Heat	270±5°C for 10±1 seconds	ΔR/R≤ ±1%, No evidence of mechanical damage
Temperature Cycle	55 °C(30min), Room Temp.(3min), 200 °C(30min), Room Temp.(3min) 5 Cycles	ΔR/R≤ ±1%
Load Life	Rated power load 90min ON, 30min OFF 70°C for 1000 hours	ΔR/R≤ ±1%
Load Life in Humidity	Rated power load 90min ON, 30min OFF 40°C, 95% R.H. for 500 hours	ΔR/R≤ ±1%

Reference Standard: IEC 60115-1, JIS C 5201-1

*Specifications subject to change without notice.