

Wirewound Resistors

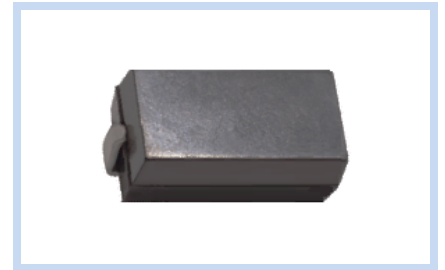
Surface Mount Molded Type

MSMW Series

MERITEK

FEATURE

- High Power Rating up to 7W
- Superior Surge Capability
- Excellent Stability at Environmental Conditions
- Excellent Mechanical Strength and Electrical Stability
- Flameproof Classification: UL94-V0



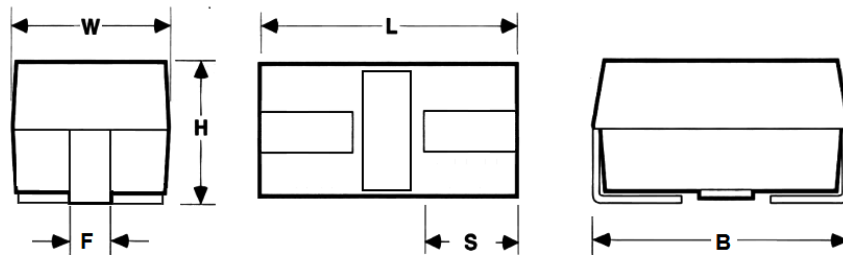
ELECTRICAL CHARACTERISTICS AND DIMENSIONS



Rated Power	Resistance Range	TCR ppm/°C	Dimensions (mm)					
			W ±0.3	L ±0.3	F ±0.3	H ±0.3	B Max	S ±0.3
2W	0.1~200Ω	±200	4.0	6.7	1.4	3.55	7.9	1.5
3W	0.1~300Ω	±200	5.5	10.5	1.7	5.0	12.0	2.3
5W	0.1~680Ω	±200	7.3	13.5	1.7	6.8	17.0	2.5
7W	0.1~1KΩ	±200	9.5	23.0	5.0	9.6	24.5	4.5

Notes:

1. Operating Temperature: -55 °C~200 °C
2. Rated Continuous Working Voltage (RCWV) = $\sqrt{\text{Power Rating} * \text{Resistance Value}}$, or Max Permissible Voltage, Whichever less



PART NUMBERING SYSTEM

MSMW 7W 331 J
 (1) (2) (4) (5)

No	Item	Code	Description	
(1)	Product Code	MSMW	Wirewound Resistor, Surface Mount Molded Type	
(2)	Power Rating	7W	7W	2W, 3W, 5W
(4)	Resistance	331	330Ω	5R0: 5.0Ω
(5)	Tolerance	J	±5%	F: ±1%

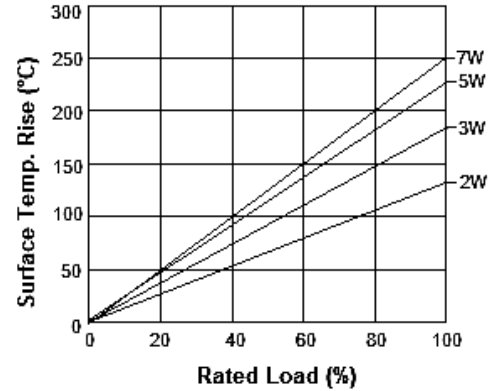
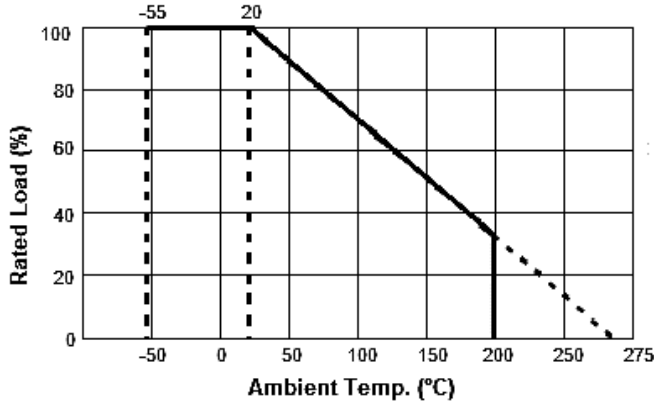
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POWER DERATING CURVE AND SURFACE TEMPERATURE RISE



RELIABILITY TEST CONDITION AND REQUIREMENT

Item	Condition	Requirement
Resistance Tolerance	J: $\pm 5\%$, F: $\pm 1\%$	--
Temperature Coefficient (TCR)	-55 °C~200 °C	$\pm 200\text{ppm}/^\circ\text{C}$
Power Rating Load	Rated voltage for 30 minutes	$\Delta R/R \leq \pm 3\%$, Surface temp. 275°C Max
Short Time Overload	5 times rated power for 5 seconds	$\Delta R/R \leq \pm 1\%$
Dielectric Withstanding Voltage	500VAC for 1 minute	No evidence of mechanical damage or insulation breakdown.
Insulation Resistance	500VDC megger	10,000M Ω
Solderability	235 $\pm 5^\circ\text{C}$ for 2 seconds	95% minimum coverage
Resistance to Soldering Heat	270 $\pm 5^\circ\text{C}$ for 10 ± 1 second	$\Delta R/R \leq \pm 1\%$, No evidence of mechanical damage
Temperature Cycle	55 °C(30min), Room Temp.(3min), 200 °C(30min), Room Temp.(3min) 5 Cycles	$\Delta R/R \leq \pm 1\%$: 2W, 3W, 5W $\Delta R/R \leq \pm 1\%$: 7W
Load Life	Rated power load 90min ON, 30min OFF 70°C for 1000 hours	$\Delta R/R \leq \pm 2\%$: 2W, 3W, 5W $\Delta R/R \leq \pm 5\%$: 7W
Load Life in Humidity	Rated power load 90min ON, 30min OFF 40°C, 95% R.H. for 500 hours	$\Delta R/R \leq \pm 2\%$: 2W, 3W, 5W $\Delta R/R \leq \pm 5\%$: 7W

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

LEGACY PART NUMBERING SYSTEM

MFS 5W 5R0 F
(1) (2) (3) (4)

No	(1)	(2)	(3)	(4)
Item	Meritek Series	Power Rating	Resistance	Tolerance

*Specifications subject to change without notice.