

# Metal Film Resistors

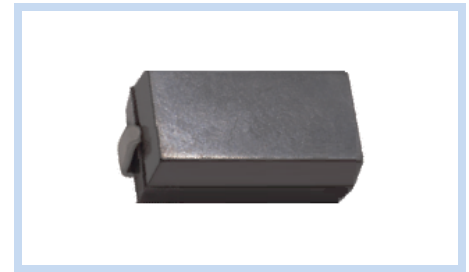
## Surface Mount Molded AEC-Q200

MSMF-A Series

MERITEK

### FEATURE

- Excellent Mechanical Strength and Electrical Stability
- Special Design for Automatic Surface Mounting
- Flameproof Classification: UL94-V0
- AEC-Q200 Compliant

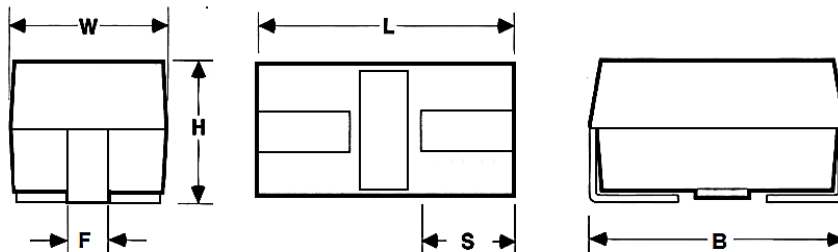


### ELECTRICAL CHARACTERISTICS AND DIMENSIONS

Rated Power	Resistance Range	Max Working Voltage	Max Overload Voltage	TCR ppm/°C	Dimensions (mm)					
					W ±0.3	L ±0.3	F ±0.3	H ±0.3	B Max	S ±0.3
1W	10~2MΩ	300V	600V	±100	4.0	6.7	1.4	3.55	7.9	1.5
2W	10~2MΩ	500V	1000V	±100	5.5	10.5	1.7	5.00	12.0	2.3
3W	10~2MΩ	500V	1000V	±100	7.3	13.5	1.7	6.80	17.0	2.5

**Notes:**

1. Rated Continuous Working Voltage (RCWV) =  $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$ , or Max Permissible Voltage, Whichever less
2. Max. Overload Voltage is 2 times of Max. Working Voltage
3. Too low or too high ohmic values can be supplied only case by case
4. Operating Temperature: -55°C~150 °C



### PART NUMBERING SYSTEM

MSMF   3W   331J   A  
 (1)        (2)        (4)        (5)

No	Item	Code	Description	
(1)	Product Code	MSMF	Metal Film Resistor, Surface Mount Molded Type	
(2)	Power Rating	3W	3W	1W, 2W
(4)	Resistance	331J	330Ω ±5% (J)	First two digits: Significant, Third: Multiplier
(5)	Series Code	A	AEC-Q200 Compliant	

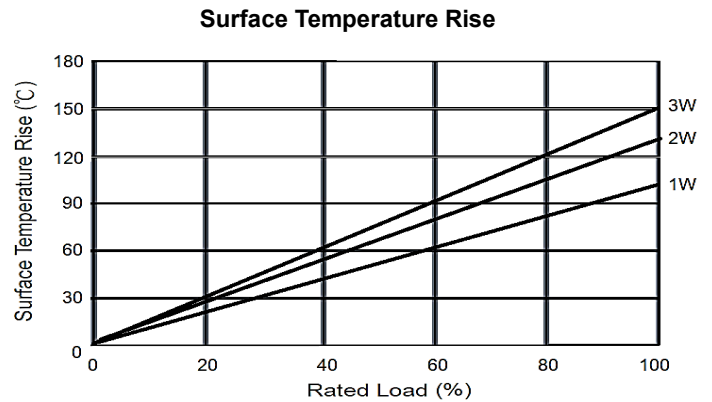
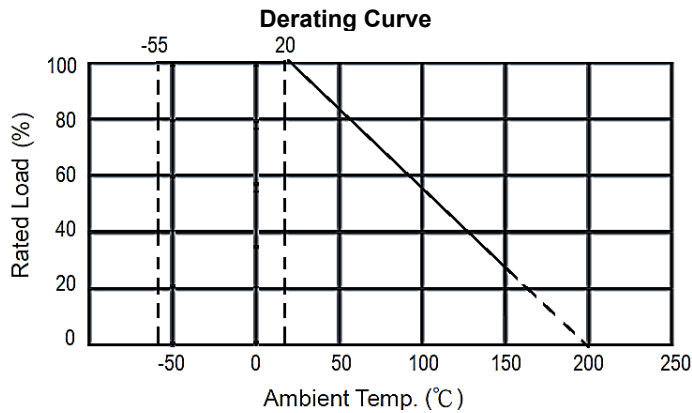
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### CHARACTERISTIC CURVES



### RELIABILITY TEST CONDITION AND REQUIREMENT

Item	Condition	Requirement
Resistance Tolerance	J: $\pm 5\%$ , F: $\pm 1\%$	--
Temperature Coefficient (TCR)	-55 °C~150 °C	$\pm 100\text{ppm}/^\circ\text{C}$
Power Rating Load	Rated voltage for 30 minutes	$\Delta R/R \leq \pm 1\%$ , Surface temp. 200°C Max
Short Time Overload	5 times rated power for 5 seconds	$\pm 0.5\%$
Dielectric Withstanding Voltage	500VAC for 1 minute	No evidence of mechanical damage or
Insulation Resistance	500VDC megger	10,000M $\Omega$
Solderability	235 $\pm$ 5°C for 2 seconds	95% minimum coverage
Resistance to Soldering Heat	270 $\pm$ 5°C for 10 $\pm$ 1 second	$\Delta R/R \leq \pm 1\%$ , No evidence of mechanical damage
Temperature Cycle	-55 °C(30min), Room Temp.(3min), 150°C(30min), Room Temp.(3min) 5 Cycles	$\Delta R/R \leq \pm 1\%$
Load Life	Rated power load 90min ON, 30min OFF 70°C for 1000 hours	$\Delta R/R \leq \pm 1\%$
Load Life in Humidity	Rated power load 90min ON, 30min OFF 40°C, 95% R.H. for 500 hours	$\Delta R/R \leq \pm 1\%$

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

\*Specifications subject to change without notice.