SMF series
Power Metal Film Chip Resistor

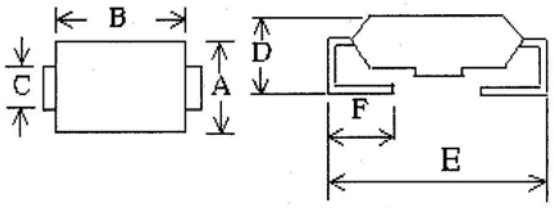
◆ Features
» Flameproof UL94V0 molded package, resistant to heat, humidity & insulation
» Special design for automatic surface mounting
» Excellent mechanical strength & electrical stability
» RoHS Compliant

◆ Application
» Consumer electronics, computers
» Telecommunications, control instruments.

◆ Part Number

SMF	200	J	10R
Type	Watt	Tolerance	R value
SMF	2W = 200	J = ± 5%	10Ω= 10R
	3W = 300	F = ± 1%	200Ω = 200R
	5W = 500		

◆ Dimensions



STYLE	DIMENSION (mm)						Operating Temperature	VALUE RANGE	Max. Working Voltage
	A±0.3	B±0.3	C±0.3	D±0.3	E max.	F±0.3			
SMF200 (2W)	4	6.7	1.4	3.55	7.9	1.5	-55℃ ～+200℃	10R-2M	300V
SMF300 (3W)	5.5	10.5	1.7	5	12	2.3		10R-2M	500V
SMF500 (5W)	7.3	13.5	1.7	6.8	17	2.5		10R-2M	500V

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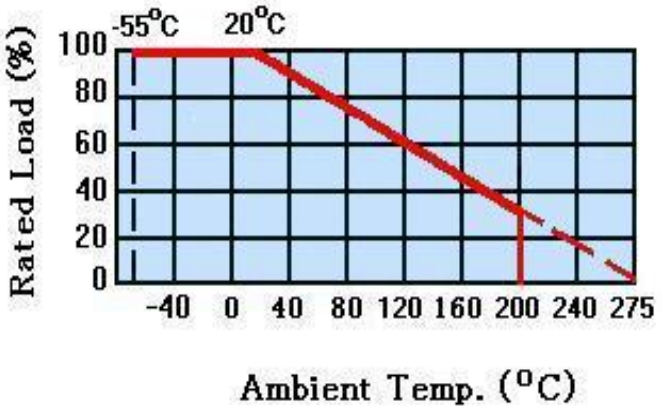
◆ Power Derating Curve



» For resistors operated in ambient temperatures above 20 ℃, power rating must be derated in accordance with the curve as left.

◆ Electrical Performance

Test Items	Condition	Spec.	Test Method
Resistance Temp. Coefficient	T.C(ppm/℃)= 〔(R2-R1)÷R1〕x 〔1÷(T2-T1)〕x10 ^{6}	± 100 ppm /℃	JIS-C-5201
Short Time Overload	5 times of rated wattage for 5 sec.	± 0.5%	
Temperature Cycle	Steps / Temperature(℃) / Time(minutes): 1st: -55 ± 3 / 30; 2nd: Room temp. / 2~3; 3rd: +200 ± 3 / 30; 4th: Room temp. / 2~3	± 1%	
Insulation Resistance	500V DC	10,000 MΩ	
Load Life	70℃ on-off cycle 1,000 hours	± 1%	
Moisture-proof Load Life	40±2℃ and humidity 90~95%, RH on-off cycle 500 hours (including cut-off time).	± 1%	

R1: resistance value at reference temperature

R2: resistance value at test temperature

T1: reference temperature (usu. 25℃)

T2: rest temperature (about 75℃)

Rated voltage: It is calculated through the following formula:

where E: rated voltage (V)

$E = \sqrt{PXR}$ **P: rated power (W)**

R: total nominal resistance (Ω)

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