

# SMD POWER METAL FILM RESISTORS

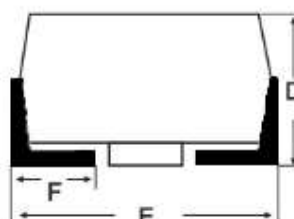
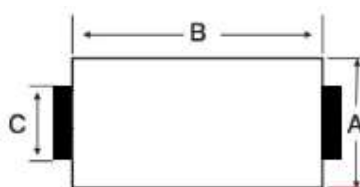
## SMF SERIES

### Features

1. Flameproof UL94V0 molded package, resistant to heat, humidity & insulation.
2. Special design for automatic surface mounting
3. Excellent mechanical strength & electrical stability.
4. Reducing assembly cost



### Dimensional Specifications



Unit: mm

Rated Wattage	A $\pm 0.3$	B $\pm 0.3$	C $\pm 0.3$	D $\pm 0.3$	E Max.	F $\pm 0.3$	Resistance Range( $\Omega$ )	MAX. Working Voltage
2W	4	6.7	1.4	3.55	7.9	1.5	10~2M	300V
3W	5.5	10.5	1.7	5	12	2.3	10~2M	500V
5W	7.3	13.5	1.7	6.8	17	2.5	10~2M	500V

Note: 1. Max. Overload Voltage is 2 times of Max Working Voltage

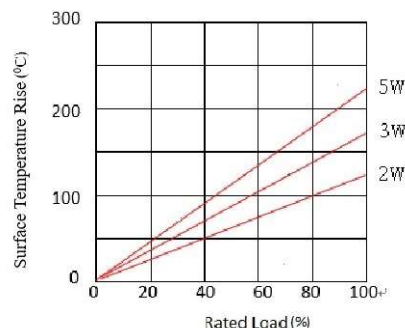
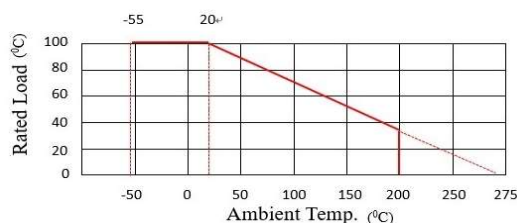
2. Resistances beyond above range available upon request.

Rate Continuous Working Voltage (RCWV) shall be determined  $\sqrt{\text{Rated Power} \times \text{Resistance Value}}$  or Max. Working Voltage listed above, which less.

### DERATING CURVE

### Surface Temperature Rise

For resistors operated in ambient temperatures above 20°C, power rating must be derated in accordance with the curve below:



## Electrical and Mechanical Performance

Characteristics	Standards	Test Methods
Resistance tolerance	$\pm 5\%(J)$ or $\pm 1\%(F)$	
Resistance Temp. Coeff.	$\pm 200\text{ppm}/^{\circ}\text{C}$	$-55^{\circ}\text{C}\sim 200^{\circ}\text{C}$
Power Rating Load	Surface temp. $275^{\circ}\text{C}$ Max., $\Delta R/R \leq \pm 1\%$	Rated voltage for 30 minutes
Short Time Overload	$\pm 1$	5 times of rated wattage for 5 seconds.
Dielectric withstanding Voltage	No evidence of mechanical damage or insulation breakdown.	AC 500V for 1 minutes.
Insulation Resistance	10,000M $\Omega$	DC500V megger
Solder-ability	Minimum 95% coverage	$235\pm 5^{\circ}\text{C}$ for 2 seconds
Resistance to Soldering Heat	No evidence of mechanical damage. $\Delta R/R \leq \pm 1\%$	$270\pm 5^{\circ}\text{C}$ for $10\pm 1$ second

## Environmental Characteristics

Characteristics	Standards	Test methods
Temp. Cycle	$\Delta R/R \leq \pm 1\%$	$-55^{\circ}\text{C}(20\text{min.}) \rightarrow \text{Room Temp.}(3\text{min.}) \rightarrow +200^{\circ}\text{C}(30\text{min.})$ $\rightarrow \text{Room Temp.}(3\text{min.})/(5 \text{ cycles})$
Load Life	$\Delta R/R \leq \pm 1\%$	Rated power load 90 minutes ON 30minutes OFF $70^{\circ}\text{C}$ 1000hours
Moisture-proof Load Life	$\Delta R/R \leq \pm 1\%$	Rated power load 90 minutes ON 30 minutes OFF $40^{\circ}\text{C}$ 95%RH 500hours

Reference Standards: IEC60115-1 & JIS C 5201-1

## Parts Number System

Series	Wattages	Resistance	Tolerance	Packing Code
SMF - SMD POWER METAL FILM RESISTORS	2W 3W 5W	4-digit code for 1% 1000 = 100ohm 3-digit code for 5% 101=100ohm	J=5% F=1%	R= Tape reel

