

Power Wire Wound Chip Resistors / Power Metal Film Chip Resistors

Non-Inductive Power Wire Wound Chip Resistors / Non-Inductive Power Metal Film Chip Resistors

- Flameproof UL94V0 molded package, resistance to heat, humidity & insulation.
- Special design for automatic surface mounting.
- Excellent mechanical strength & electrical stability.
- Reduced assembly costs.
- Non-Inductive type : Very low inductance. (less than 1μH.)
- RoHS & Halogen Free Compliant.
- Consumer electrics, computers, telecommunications, control instruments etc.



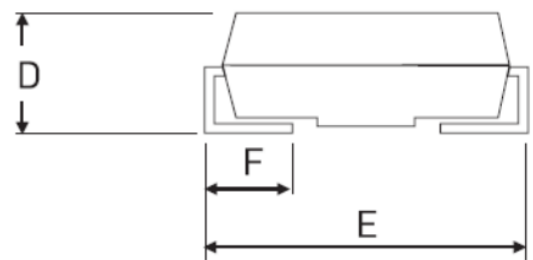
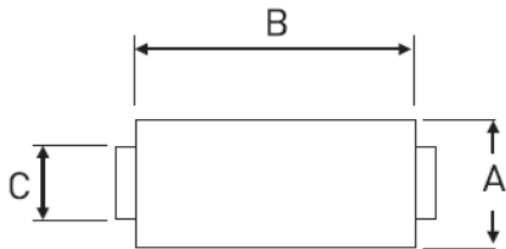
GENERAL SPECIFICATIONS

*** Inductive type**

Model	Dimensions [mm]						Resistance Range [Ω]	Max. Working Voltage	Tolerance [%]
	A±0.3	B±0.3	C±0.3	D±0.3	E max.	F±0.3			
SMW 2W	4.0	6.7	1.4	3.55	7.9	1.5	0.1~200	V=√P×R	F [±1%] J [±5%]
SMW 3W	5.5	10.5	1.7	5.00	12.0	2.3	0.1~300		
SMW 5W	7.3	13.5	1.7	6.80	17.0	2.5	0.1~680		
SMF 2W	4.0	6.7	1.4	3.55	7.9	1.5	10~2M	300V	
SMF 3W	5.5	10.5	1.7	5.00	12.0	2.3	10~2M	500V	
SMF 5W	7.3	13.5	1.7	6.80	17.0	2.5	10~2M	500V	

*** Non-Inductive type**

Model	Dimensions [mm]						Resistance Range [Ω]	Max. Working Voltage	Tolerance [%]
	A±0.3	B±0.3	C±0.3	D±0.3	E max.	F±0.3			
NSMW 2W	4.0	6.7	1.4	3.55	7.9	1.5	0.1~5	V=√P×R	G [±2%] J [±5%]
NSMW 3W	5.5	10.5	1.7	5.00	12.0	2.3	0.1~10		
NSMW 5W	7.3	13.5	1.7	6.80	17.0	2.5	0.1~20		
NSMF 2W	4.0	6.7	1.4	3.55	7.9	1.5	10~20K		F [±1%] J [±5%]
NSMF 3W	5.5	10.5	1.7	5.00	12.0	2.3	10~20K		
NSMF 5W	7.3	13.5	1.7	6.80	17.0	2.5	10~20K		



Note : (SMW, NSMW, NSMF series) Too low or too high ohmic values can be supplied only case by case.

(SMF series) 1. Max. Overload Voltage is 2times of Max. Working Voltage.

2. Too low or too high ohmic values can be supplied only case by case.

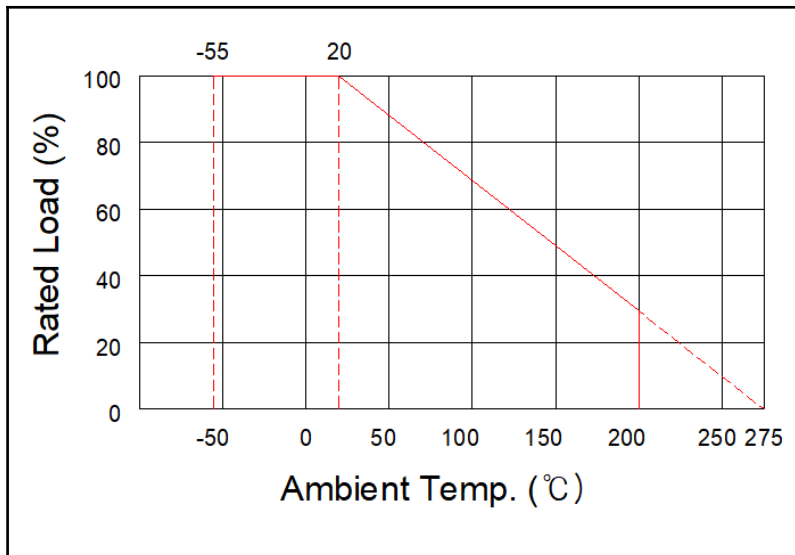
Rated Continuous Working Voltage (RCWV) shall be determined $\sqrt{\text{Rated Power} \times \text{Resistance Value}}$ or Max. Working Voltage listed above, whichever less.

CHARACTERISTICS

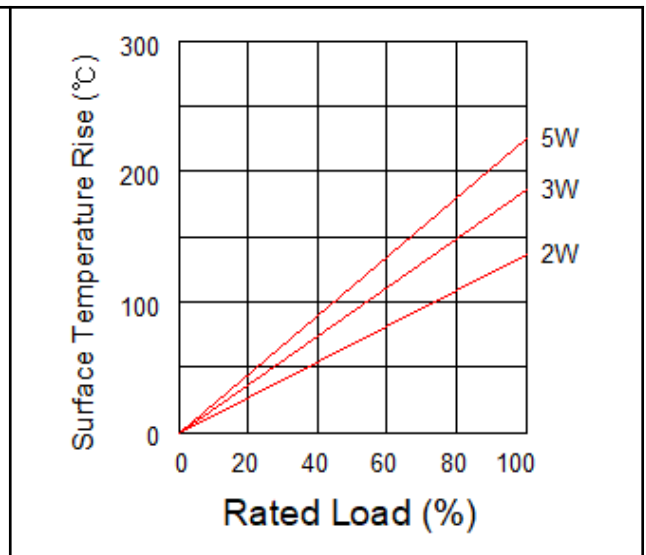
Item	Standards				Test Method
	SMW	NSMW	SMF	NSMF	
Temperature Coefficient	±200ppm/°C		±100ppm/°C		-55°C ~ +200°C.
Power Rating Load	±1%	±2%	±1%	±2%	Rated voltage for 30minutes (Surface Temp. Max. 275°C)
Short Time Overload	±1%	±2%	±0.5%	±2%	5×Power rating, 5seconds
Dielectric Withstanding Voltage	No evidence of mechanical damage or insulation breakdown				AC500V for 1minute
Insulation Resistance	10,000MΩ				DC500V megger
Solder-ability	Minimum 95% coverage				235°C±5°C for 2seconds
Resistance to Soldering Heat	No evidence of mechanical damage, ±1%				270°C±5°C for 10±1seconds
Temperature Cycle	±1%	±2%	±1%	±2%	-55°C 30min., +200°C 30min., 5cycles
Load Life	±2%	±5%	±1%	±5%	Power rating 1.5hours on, 0.5hours off, 1,000hours (at 70°C oven)
Moisture Load Life	±2%	±5%	±1%	±5%	40°C±2°C / RH90-95%, Power rating 1.5hours on, 0.5hours off, 500hours

* Reference Standards : (SMW, SMF) IEC 60115-1, JIS C 5201-1
(NSMW, NSMF) JIS C 5201

DERATING CURVE

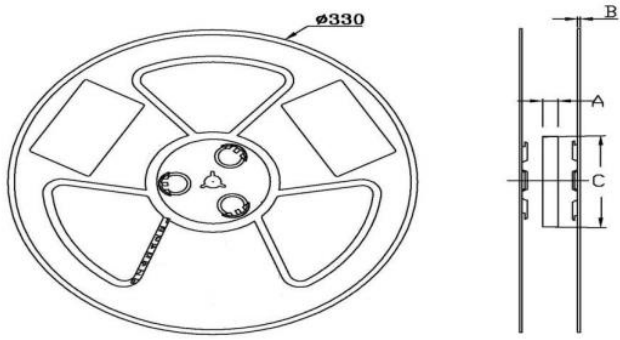
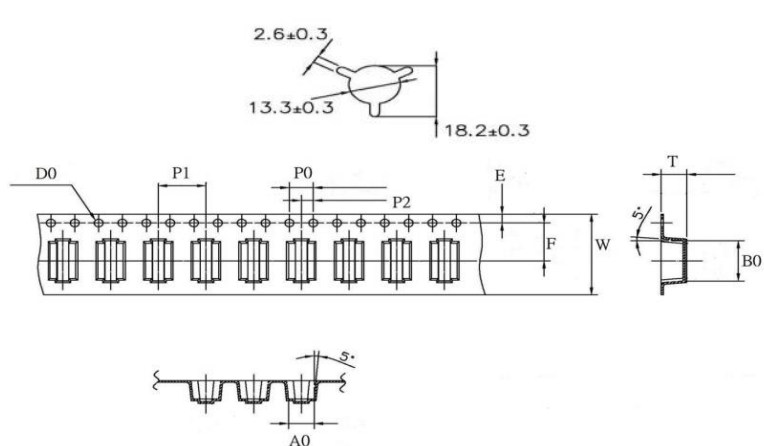
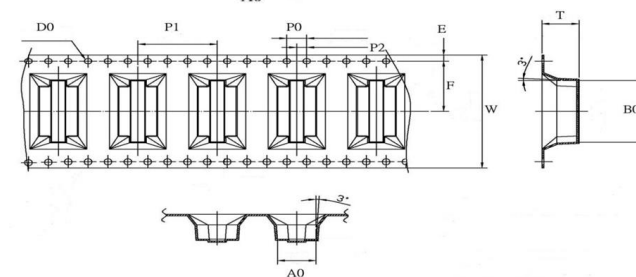


SURFACE TEMPERATURE RISE



TAPE & REEL

Unit : mm

	Rated Power	2W	3W	5W
	B0±0.2	8.0	11.8	17.5
<p>2W & 3W</p> 	A0±0.2	4.3	5.8	7.8
	P1±0.1	8.0	12.0	16.0
	P2±0.1		2.0	
	D0±0.1		4.0	
	D0±0.1		1.5	
	E±0.1		1.75	
	F±0.1	7.5	11.5	14.2
	W±0.3	16.0	24.0	32.0
	T±0.1	4.15	5.8	7.5
	A±1	16.4	24.4	32.4
<p>5W</p> 	B±0.2		2.2	
	C±1		100	
	pcs/reel	2K	1K	500

ORDERING PROCEDURE EXAMPLE

Model	Rated Power	Resistance	Tolerance
SMW	2W	10R	F
SMF	3W	1M	J
NSMW	5W	1R	G
NSMF	2W	1K	J

- Model : SMW (Power Wire Wound Chip Resistors)
- SMF (Power Metal Film Chip Resistors)
- NSMW (Non-Inductive Power Wire Wound Chip Resistors)
- NSMF (Non-Inductive Power Metal Film Chip Resistors)
- Rated Power : 2W, 3W, 5W
- Resistance : 10Ω, 1MΩ, 1Ω, 1KΩ
- Tolerance : F (±1%) / G (±2%) / J (±5%)