

# RW Series

## High Power SMD Wirewound Resistors 5 and 7 watt



Ohmite has used its thermal management expertise to produce a unique resistor design. The resistor body incorporates fins identical to a heatsink. These fins, as with a heatsink, increase the surface area of the part and allow for greater power dissipation. This unique design allows a small footprint for the SMD device and a high power dissipation. These 5 and 7 watt resistors are extremely stable with a load life drift of only 1%. A special flat has been designed in to the part for pick and place operations.

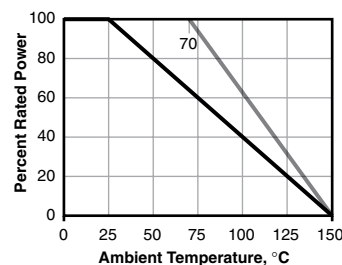
### FEATURES

- Finned design facilitates cooling
- High Power Density
- Wide Resistance Range
- Tight Tolerance
- Low TCR

### CHARACTERISTICS

	RW5S0	RW7S0	
<b>Power</b>	at 25°C	7 watts	10 watts
	at 70°C	5 watts	7 watts
<b>Resistance range</b>	0.1Ω ~ 50K	0.1Ω ~ 100K	
<b>Non-inductive range</b>	0.1Ω ~ 12.5K	0.1Ω ~ 20K	
<b>Tolerance</b>	0.5%, 1%, 5%		
<b>Temperature Coefficient</b>	0.1Ω ~ 0.99Ω: ±90ppm 1Ω ~ 10Ω: ±50ppm 10Ω+: ±20ppm		
<b>Operating temp. range</b>	-55°C ~ +155°C		
<b>Max. working voltage</b>	$(P \times R)^{1/2}$		
<b>Weight</b>	5.67g	11.34g	

### Derating



### PERFORMANCE DATA

<b>Temp. cycle</b>	(-55°C to 125°C, 1000 cycles)	±0.5%+.05Ω
<b>Load Life</b>	(1000 hours at 25°C)	±1.0%+.05Ω
<b>Immersion</b>	(260°C for 10 sec.)	±0.1%+.05Ω
<b>Leaching</b>	(260°C Solder immersion, 60 sec.)	No visible leaching
<b>Thermal Shock</b>	(Units at -55°C, then rated power applied)	No mechanical damage
<b>Flammability</b>	UL Material rating	UL94V0

(continued)

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### DIMENSIONS

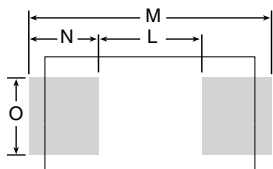
±0.020 in. / ±0.51 mm

#### Overall Dimensions

	Length	Width	Height
RW5S0	0.806 / 20.47	0.365 / 9.27	0.406 / 10.31
RW7S0	1.128 / 28.65	0.471 / 11.96	0.51 / 12.95

#### Land Pattern

	L	M	N	O
5S0 (FA)	0.600 / 15.24	1.000 / 25.40	0.200 / 5.08	0.450 / 11.43
7S0 (FB)	0.890 / 22.61	1.330 / 29.59	0.220 / 5.59	0.520 / 13.21

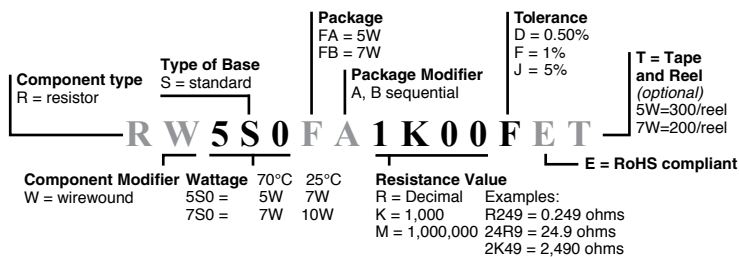


Power Rating and Temperature Rise data based on the recommended Land Patterns using 10 oz. copper PCB. FR-4 material. 0.062" thick. 4 layer.

#### Tape and Reel

	FA (5S0)	FB (7S0)
Reel Hub Diameter	77mm	77mm
Reel Outer Diameter	560mm	560mm
Reel Width	46mm	46mm
Tape Width	44mm	44mm
Pitch	20mm	24mm

### ORDERING INFORMATION



#### Standard part numbers For RW Series

Resistance	Tolerance	Part Number
0.10	1%	RW5S0FAR100FE
1.0	1%	RW5S0FA1R00FE
10	5%	RW5S0FA10R0JE
20	5%	RW5S0FA20R0JE
47	5%	RW5S0FA47R0JE
100	5%	RW5S0FA100RJE
470	5%	RW5S0FA470RJE
1000	5%	RW5S0FA1K00JE
4700	5%	RW5S0FA4K70JE
10,000	5%	RW5S0FA10K0JE
1.0	1%	RW7S0FB1R00FE
10	1%	RW7S0FB10R0FE
100	1%	RW7S0FB100RFE
1000	1%	RW7S0FB1K00FE
10,000	1%	RW7S0FB10K0FE
100,000	1%	RW7S0FB100KFE