

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.

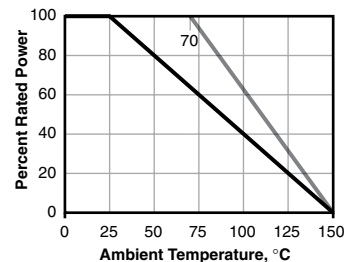
FEATURES

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

CHARACTERISTICS

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

Derating



PERFORMANCE DATA

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

(continued)

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DIMENSIONS

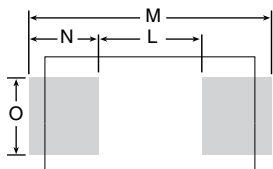
±0.020 in. / ±0.51 mm

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

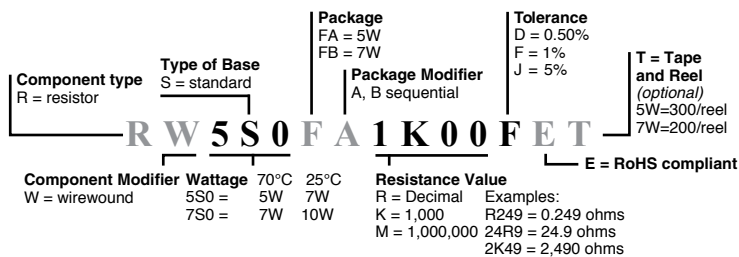


Power Rating and Temperature Rise data based on the recommended Land Patterns using 10 oz. copper PCB. FR-4 material. 0.062" thick. 4 layer.

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