

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.



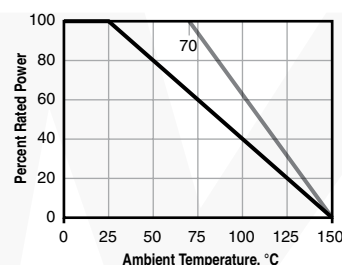
FEATURES

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

CHARACTERISTICS

	RW5S0	RW7S0
Power	at 25°C 7 watts at 70°C 5 watts	10 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×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

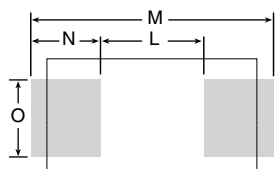
±0.51mm/±0.020in.

Overall Dimensions

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

Land Pattern

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



Power Rating and Temperature Rise data based on the recommended Land Patterns using 5 oz. copper PCB, FR-4 material, 1.57mm 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

Component type R = resistor	Type of Base S = standard	Package FA = 5W FB = 7W	Package Modifier A, B sequential	Tolerance D = 0.50% F = 1% J = 5%	T = Tape and Reel (optional) 5W=300/reel 7W=200/reel
RW5S0FA1K00FET					
Component Modifier W = wirewound	Wattage 5S0 = 5W 7S0 = 7W	70°C 25°C	Resistance Value R = Decimal K = 1,000 M = 1,000,000	Examples: R249 = 0.249 ohms 24R9 = 24.9 ohms 2K49 = 2,490 ohms	E = RoHS compliant

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