Data Sheet No.: E16016
Version: V0
Date: 2023/4/27

睿思

PWWR

Silicone Cement Coating Leaded High Power Wirewound Resistor

Resistance	0.24Ω-20KΩ
Tolerance	±1%
TCR	+100ppm/K
Rated Power	16W

Applications

Precision Instrumentation
Semiconductor Testing Equipment
Medical Equipment
Capacitor Charging & Discharging

Better Solution for Sustainable High End Manufacturing

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Silicone Cement Coating Leaded High Power Wirewound Resistor

Wide Operating Temperature Range
High Reliability, Strong Overload Capability

Introduction

PWWR series adopts two different diameter specifications of alumina ceramic cores, providing higher rated power than traditional axial wirewound through-hole resistor. High quality winding wire combined with specialized coating materials and processes enables PWWR to operate at higher temperature and have greater overload capacity.

The general axial through-hole wirewound resistor operates under rated power of up to 10W and maximum operating temperature of +270 ℃. PWWR series effectively improves the rated power and overload capacity by increasing the length and diameter of the ceramic core, while using high-quality resistive wire and insulation coating. At an ambient temperature of +70 ℃, the rated power is 13.5W and 16W, respectively, and the surface of the resistor can withstand high temperatures up to +350 ℃ and +370 ℃.

Electrical Parameters

Size	Rated Power (+70℃)	Operating Temperature	E-Series Value	TCR ppm/K	Resistance Ω	Tolerance %
PWWR0013	13.5W	-55℃~+350℃	E24	+100	0.24≤R≤20K	±1, ±2, ±5, ±10
PWWR0016	16W	-55℃~+370℃	E24	+100	0.33≤R≤20K	±1, ±2, ±5, ±10

Dimensions & Packaging

Unit: mm

Size	L	D	d	F	Packaging	Quantity Per Bulk	Net Weight
PWWR0013	49.5±0.5	9.5±0.5	0.8±0.03	30.0+3.0	Bulk	50pcs	6.5g
PWWR0016	51.5±0.5	11.5±0.5	1.0±0.03	30.0+3.0	Bulk	30pcs	13g

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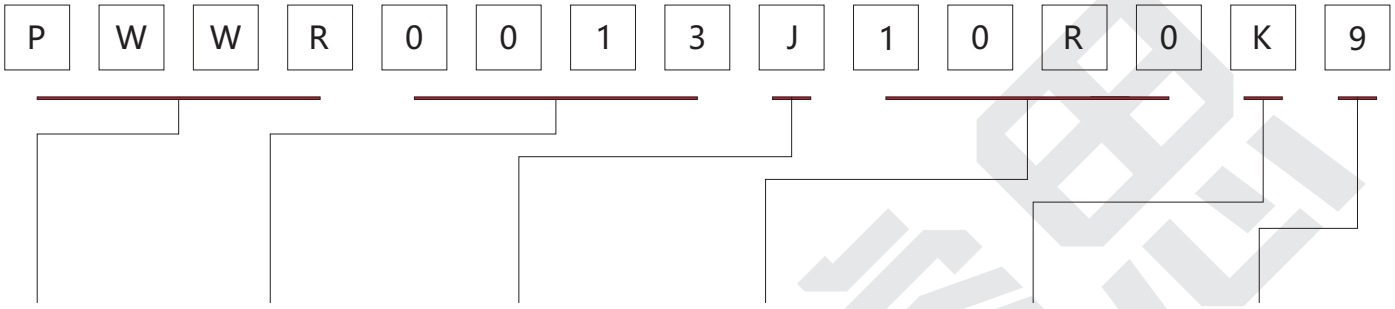
Part Number Information

Example: PWWR0013J10R0K9 (PWWR 0013 ±5% 10Ω +100ppm/K Standard)



Series	Power	Tolerance	Resistance	TCR	Code
PWWR	0013=13.5W 0016=16W	F=±1.0% G=±2.0% J=±5.0% K=±10.0%	R240=0.24Ω 1R00=1Ω 1K00=1000Ω 20K0=20000Ω	K=+100ppm/K	9=Standard 0-8=Custom

For more options of resistance, tolerance and TCR, please contact us.

Performance

Test	Test Method	Standards	Test Limits
Moisture Resistance	40±2℃. 90~95%RH for 500hours	GB/T5729 4.24	ΔR≤± (3%R+0.05Ω) No mechanical damage. Clear marking
Load Life	100% rated power. Load 90 min/ON 30 min/OFF. 500hours	GB/T5729 4.25.2	ΔR≤± (5%R±0.05Ω) No mechanical damage. Clear marking
Short Time Overload	5 times rated power, 5s	GB/T5729 4.14	ΔR≤± (2%R+0.05Ω) No mechanical damage
Vibration	10~55Hz. 1min/cycle. 1.5mm wide in the three directions. Keeping 2 hours in each direction	GB/T5729 4.22	ΔR≤± (1%R+0.05Ω) No mechanical damage
Resistance to Solder Heat	350℃ for 10s（Tin Plating）	GB/T5729 4.18	ΔR≤± (1%R+0.05Ω) No mechanical damage
Solderability	275℃ for 5s（Tin Plating）	GB/T5729 4.17	90% coverage min.
Terminal Strength	Axial force 20N for 10s	GB/T5729 4.16	Lead wire no breaking or no loosening of termination
Body Strength	Vertical force 40N for 30s	GB/T5729 4.15	No mechanical damage

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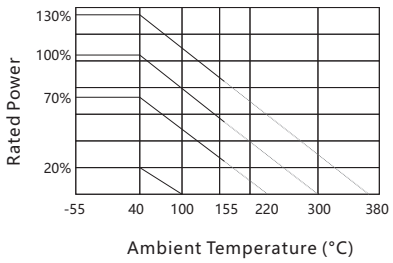
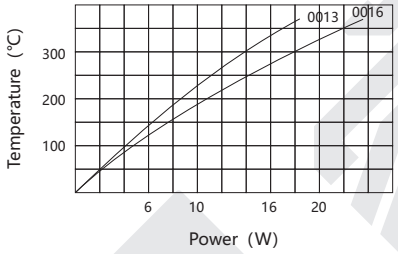
Derating Curve



Overtemperature Curve



Marking

The first line (four digits) represents brand.
The second line (fifteen digits) represents part number.
The third line (four digits) represents date code.

Illustration

RESI（Brand）、PWWR0013F1R00K9（Part Number）、2316（Date Code. Week 16 of 2023）

常备型号

Part Number	Power	Tolerance	Resistance	TCR
PWWR0013F1R00K9	13.5W	±1%	1Ω	+100ppm/K
PWWR0013F2R00K9	13.5W	±1%	2Ω	+100ppm/K
PWWR0013F5R00K9	13.5W	±1%	5Ω	+100ppm/K
PWWR0013F10R0K9	13.5W	±1%	10Ω	+100ppm/K
PWWR0013F20R0K9	13.5W	±1%	20Ω	+100ppm/K
PWWR0013F50R0K9	13.5W	±1%	50Ω	+100ppm/K
PWWR0013F100RK9	13.5W	±1%	100Ω	+100ppm/K
PWWR0013F1K00K9	13.5W	±1%	1KΩ	+100ppm/K
PWWR0016FR500K9	16W	±1%	0.5Ω	+100ppm/K
PWWR0016F1R00K9	16W	±1%	1Ω	+100ppm/K
PWWR0016F2R00K9	16W	±1%	2Ω	+100ppm/K
PWWR0016F5R00K9	16W	±1%	5Ω	+100ppm/K
PWWR0016F10R0K9	16W	±1%	10Ω	+100ppm/K
PWWR0016F20R0K9	16W	±1%	20Ω	+100ppm/K
PWWR0016F50R0K9	16W	±1%	50Ω	+100ppm/K
PWWR0016F100RK9	16W	±1%	100Ω	+100ppm/K
PWWR0016F1K00K9	16W	±1%	1KΩ	+100ppm/K

Revision

Version	Revised Content	Date	Approver
V0	Initial Issue	2023/04/27	LFY

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