

Features

- Formerly a Riedon™ product
- Resistance values as low as 1 mΩ
- Power rating to 40 W
- Resistance stability to ±0.1 %
- Low thermal EMF: <1 μV/°C
- Metal foil technology

Applications

- Current sensing
- Power supplies
- Stepper motor drives
- Input amplifiers

FWP2324 Series – Riedon™ Precision Foil Power Resistors by Bourns

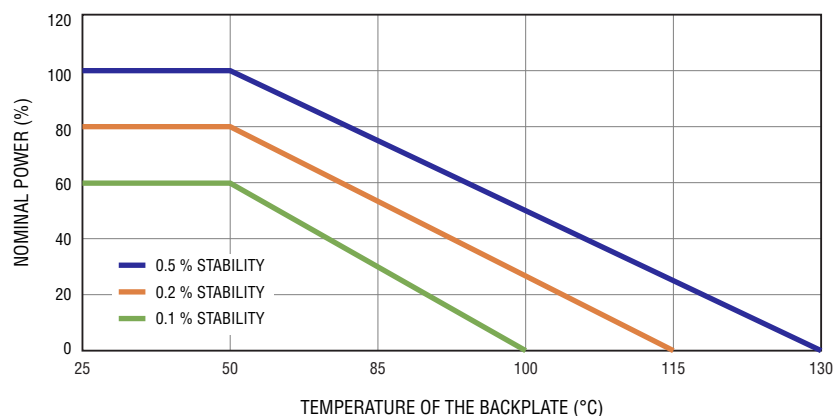
Electrical Characteristics

Bourns Model	Power Rating @ 70 °C		Resistance Range	Tolerance (%)	TCR 20 °C to 60 °C (PPM/°C)	Max. Current (A)	Dielectric Withstanding Voltage (VDC)	Max. Torque (Nm)
FWP2324	Free Air Heat Sink	2.5 W 15 W	1 mΩ to 9 mΩ	±0.5 ±1 ±2 ±5	±25 ±15	150	500	0.8
			10 mΩ to 50 Ω					
FWP2324H	Free Air Heat Sink	3 W 40 W	1 mΩ to 5 mΩ	±0.1 ±0.25 ±0.5 ±1 ±2 ±5	±10 ±5 ±2		300	
			6 mΩ to 20 Ω				500	

Environmental Characteristics

Specification	Value
Operating Temperature	-40 °C to +130 °C
Thermal EMF	< 1 μV/°C
Thermal Resistance	2.0 K/W
Storage Conditions Temperature Humidity	+5 °C to +35 °C 40 % to 75 %
Moisture Sensitivity Level	1

Current Rating Thermal Derating Curve



The FWP2324 Series resistors must be attached to a suitable heat sink. The maximum internal resistor temperature is 130 °C

Additional Information

Click these links for more information:



CALIFORNIA WARNING:
Can expose you to lead, a carcinogen and reproductive toxicant.
See www.P65Warnings.ca.gov

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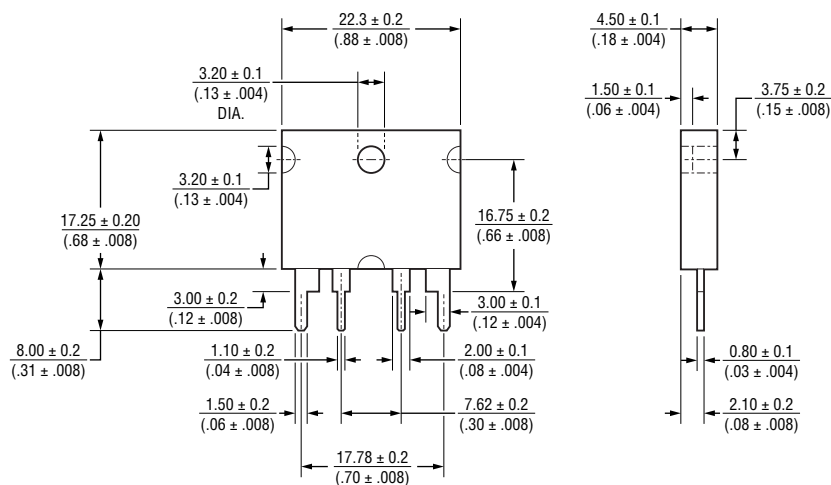
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Performance Characteristics

Test	Conditions	Test Method	
		Reference	Limit
Load Life	1000 hours, on/off with rated power at +25 °C	MIL-STD-202 Method 108	$\Delta R < \pm 0.5 \%$
High Temperature Exposure	+130 °C for 1000 hours	MIL-STD-202 Method 303	$\Delta R < \pm 0.5 \%$
Low Temperature Storage	-40 °C for 24 hours	MIL-STD-202 Method 303	$\Delta R < \pm 0.5 \%$
Thermal Shock	-40 °C to +130 °C, 5 cycles	MIL-STD-202 Method 107	$\Delta R < \pm 0.1 \%$
Humidity Resistance	+40 °C / 90 % for 240 hours	MIL-STD-202 Method 103	$\Delta R < \pm 0.1 \%$
Resistance to Solder Heat	Solder dipping at 260 °C for 10 sec.	MIL-STD-202 Method 210	$\Delta R < \pm 0.1 \%$
Short Time Overload	2.5x rated power for 5 sec.	MIL-STD-202 Method 303	$\Delta R < \pm 0.1 \%$

Product Dimensions



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

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FWP2324 Series – Riedon™ Precision Foil Power Resistors by Bourns

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How To Order

FWP232 4 H - F P - R005 T

Model _____
FWP232 = Power Resistor

Pin Terminals _____
4 = 4 Pins

Power Type _____
(blank) = 15 W
H = 40 W

Resistance Tolerance _____
B = $\pm 0.1\%$ D = $\pm 0.5\%$
G = $\pm 0.2\%$ F = $\pm 1\%$
C = $\pm 0.25\%$ J = $\pm 5\%$

TCR (PPM/°C) _____
L = ± 2 P = ± 15
M = ± 5 Q = ± 25
N = ± 10

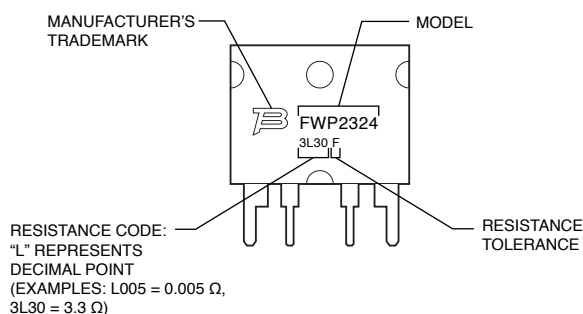
Resistance Value Code _____
"L" represents m Ω for resistance values below 1 m Ω
(example: 1L50 = 1.5 m Ω , 3L30 = 3.3 m Ω)
"R" represents decimal point
(example: R005=0.005 Ω , 1R00=1.00 Ω)

Packaging _____
T = Tube (25 pcs. per plastic tube)

Packaging Information

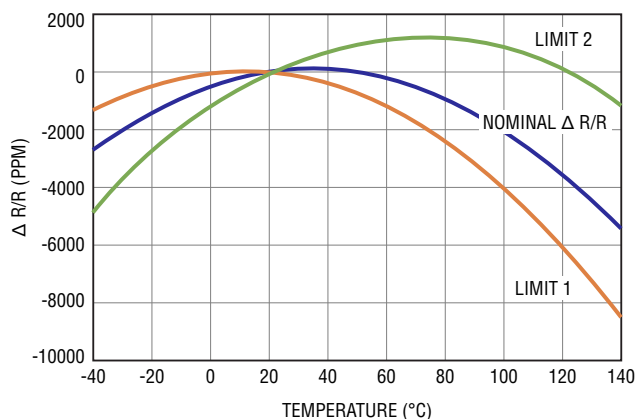
Tube 25 pcs. per tube

Typical Part Marking

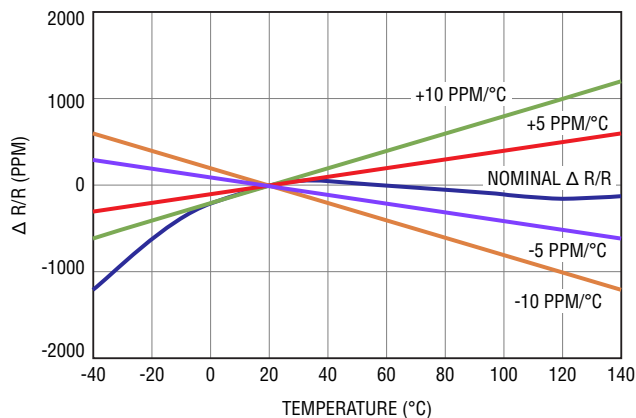


Temperature Coefficient Charts

PWR2324



PWR2324P



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