



Features

- Formerly a Riedon™ product
- Resistances from 0.001 to 100 Ω
- Resistance tolerances to $\pm 0.1\%$
- TCR to ± 25 PPM/ $^{\circ}\text{C}$
- Power rating to 80 watts
- Load stability to 0.1 %
- RoHS compliant*

FWP227x Series – Riedon™ Foil Power Resistors by Bourns

Specifications

Bourns Model	FWP2272P	FWP2274P	FWP2272N	FWP2274N
Terminals	2	4 (kelvin connection)	2	4 (kelvin connection)
Resistance Range (Ω)	0.01 to 100	0.001 to 50	0.01 to 100	0.001 to 50
Power Rating with Heat Sink (W)	60		80	
Thermal Resistance R_{thj-c} (K/W)	1.3		1.0	
Tolerances (depends on resistance)	0.1 % ¹ / 1 % / 2 % / 5 % (others upon request)			
Stability	0.1 % / 0.2 % / 0.5 % (depends on stress)			
Temperature Coefficient ²	± 25 PPM/ $^{\circ}\text{C}$ (20 to 60 $^{\circ}\text{C}$) ± 50 PPM/ $^{\circ}\text{C}$ (-40 to +130 $^{\circ}\text{C}$) FWP2272P / FWP2272N TK Shift depends on resistance value (see the corresponding graph on the following page)			
Voltage Proof	1.5 kVDC (higher upon request)			
Thermal EMF	< 1 $\mu\text{V/K}$			
Max. Current	45 A (85 A on request)		50 A (100 A on request)	
Operating Temperature Range	-40 to +130 $^{\circ}\text{C}$			
Resistor Material	Metal Foil CuNiMn (DIN 17471)			
Substrate	Al_2O_3		AlN	
Housing	Epoxy			
Connector Material	Cu / tinned or nickel plated			
Max. Torque	back plate: 1.5 Nm terminals: 1.3 Nm			
MSL Level	MSL 1			

1 Please inquire for low ohm values.

2 Contact Bourns for additional TCR values.

How To Order

FWP227 2 P - R010 - F

Model _____
FWP227

Terminals _____
2 = 2 terminals
4 = 4 terminals

Power Rating _____
P = 60 W
N = 80 W

Resistance (Ω) _____
"R" represents decimal point
(example: R002 = 0.002 Ω ,
5R00 = 5.00 Ω , 10R0 = 10 Ω)

Tolerance (%) _____
B = ± 0.1 G = ± 2
F = ± 1 J = ± 5

Packaging Information

Bulk 50 pcs. per box

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

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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"Riedon Logo" is a registered trademark of BE Services Company, Inc., in the United States.

"Riedon" is a trademark of BE Services Company, Inc.

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BOURNS®

Temperature Coefficient

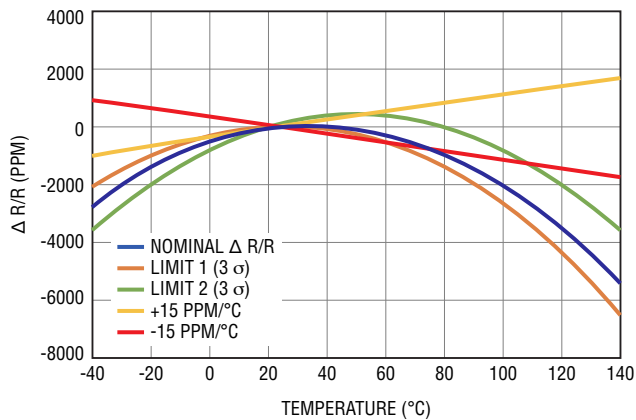
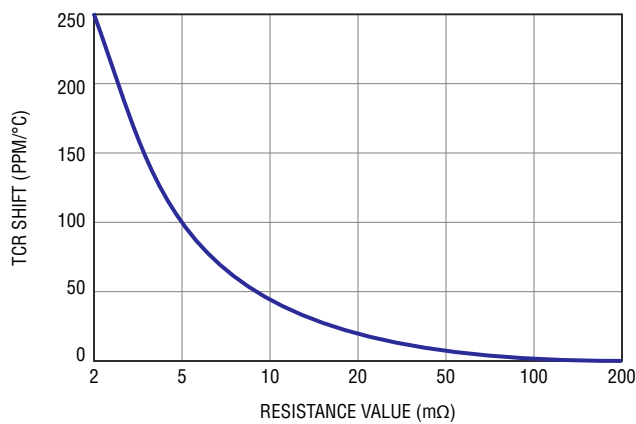
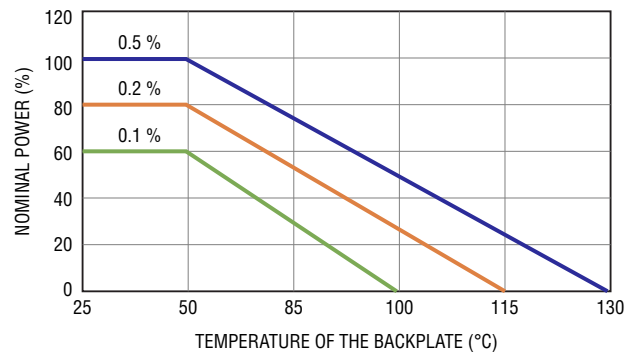


Table A



Power Derating Curve



Power Rating Notes

The FWP Series Resistors must be attached to a suitable heat sink. The maximum internal resistor temperature is 130 °C for a 0.5 % stabile part.

To specify an appropriate heat sink use the following formula:

$$R_{\theta H} = \frac{T_{MAX} - (P \times R_{\theta R}) - T_A}{P}$$

Where: $R_{\theta H}$ = Thermal Resistance of Heat Sink (K/W)

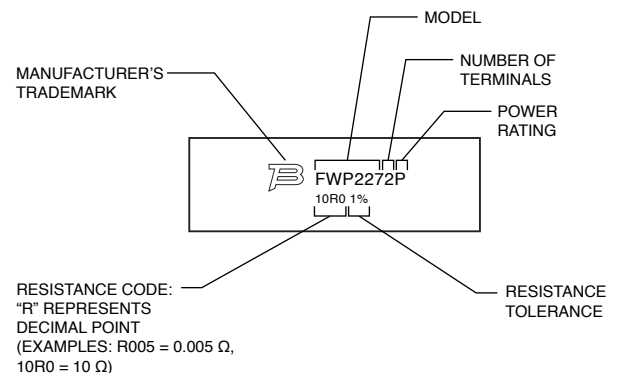
$R_{\theta R}$ = Thermal Resistance of Resistor (K/W)

T_{MAX} = Maximum Temperature of Resistor

T_A = Ambient Temperature of Heat Sink (°C)

P = Power Through Resistor (W)

Typical Part Marking



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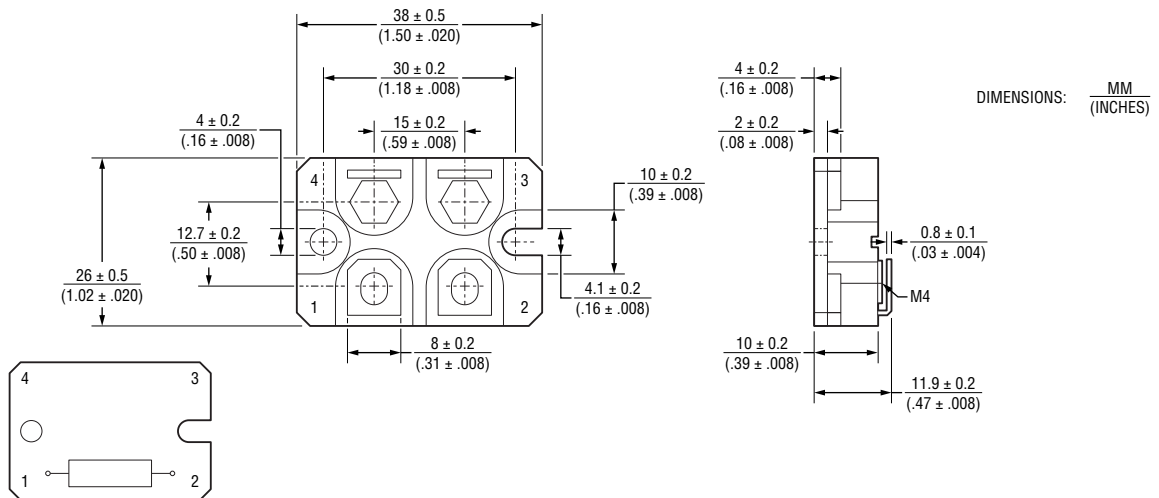
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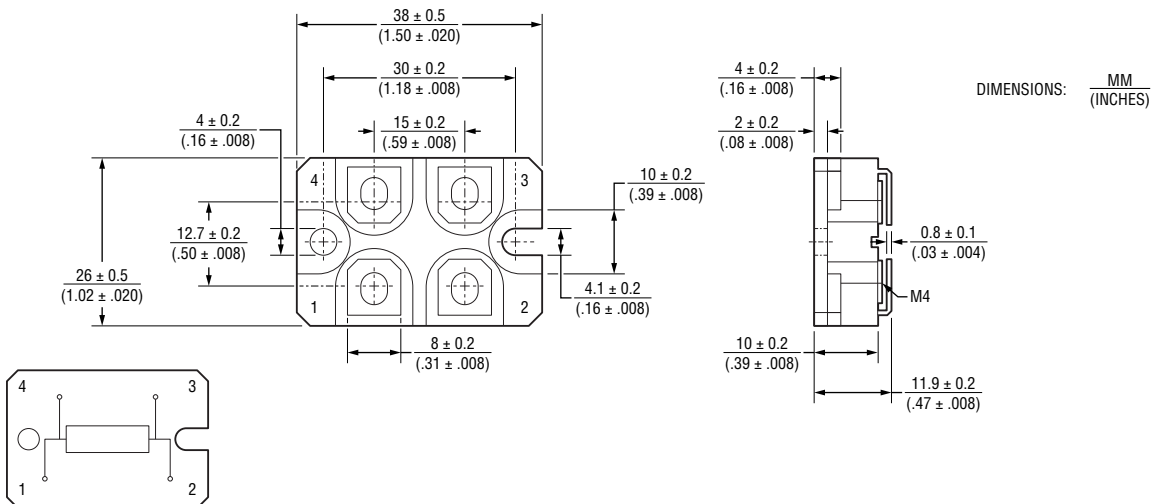
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Product Dimensions

FWP2272



FWP2274



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