

Features

- Formerly a Riedon™ product
- Resistances from 0.002 to 20 Ω
- Resistance tolerances to ±0.25 %
- TCR to ±30 PPM/°C
- Power rating to 30 watts
- TO-247 housing

- Non-inductive planar construction
- Load stability to 0.1 %
- RoHS compliant*

FWP218 – Riedon™ Precision Power Resistors by Bourns

Specifications

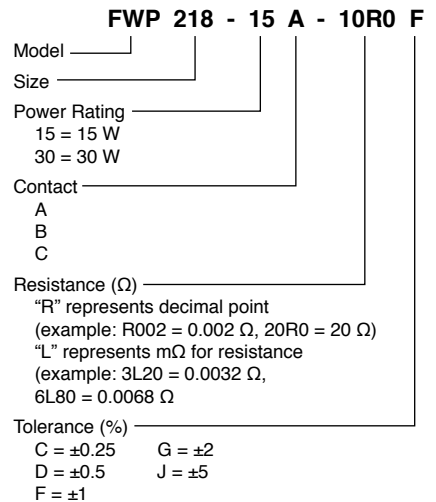
Bourns Model	FWP218	
Resistance Range (Ω)	0.002 to 20	21 to 50
Power Rating – Free Air 70 °C (W)	2	
Power Rating – with Heat Sink (W)	30	15
Tolerances from 0.002 Ω from 0.01 Ω from 0.02 Ω	1 % / 2 % / 5 % 0.5 % / 1 % / 2 % / 5 % 0.25 % (0.02 to 20) / 0.5 % / 1 % / 2 % / 5 %	
Thermal Resistance (°C/W)	2.5	
Stability (1000 h)	0.1 % / 0.2 % / 0.5 % (depends on stress)	
Temperature Coefficient R ≤ 0.01 Ω R ≤ 0.05 Ω R ≤ 0.5 Ω R > 0.5 Ω	±300 PPM/°C ±100 PPM/°C ±50 PPM/°C ±30 PPM/°C	±50 PPM/°C
Voltage Proof (VDC)	300	
Thermal EMF	< 0.1 μV/°C	
Operating Temperature Range	-40 to +130 °C	
Resistor Material	CuNiMn-Foil	
Substrate	Anodized Aluminium	
Housing	PPS	
Connector Material	Cu / Tinned	
Terminals	2	
Maximum Torque	1 Nm	

Additional Information

Click these links for more information:



How To Order



Packaging Information

Tube 25 pcs.



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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.
Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Temperature Coefficient

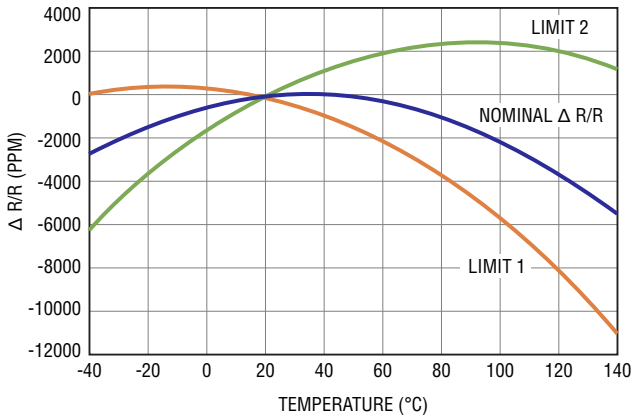
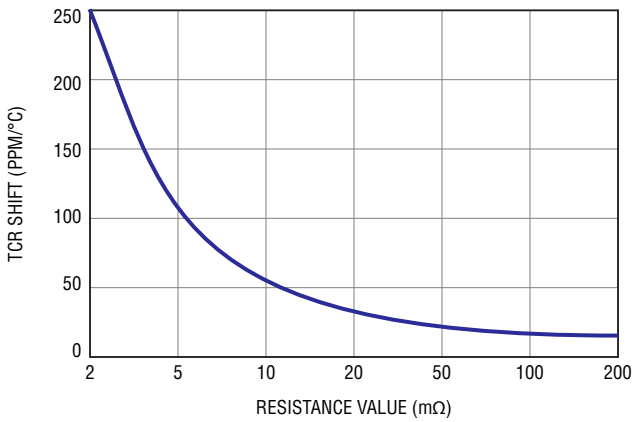
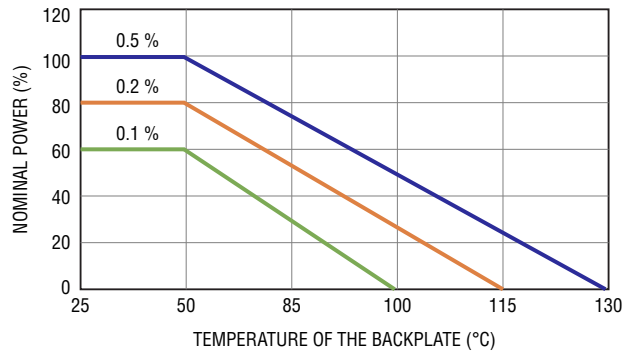


Table A



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.

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)

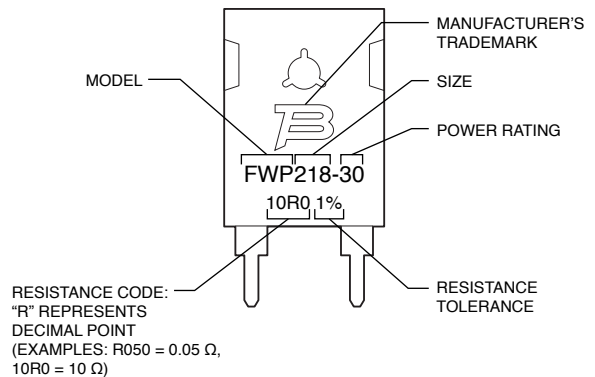
$R_{\theta R}$ = Thermal Resistance of Resistor (K/W)

T_{MAX} = Maximum Temperature of Resistor

T_A = Ambient Temperature of Heat Sink (°C)

P = Power Through Resistor (W)

Typical Part Marking



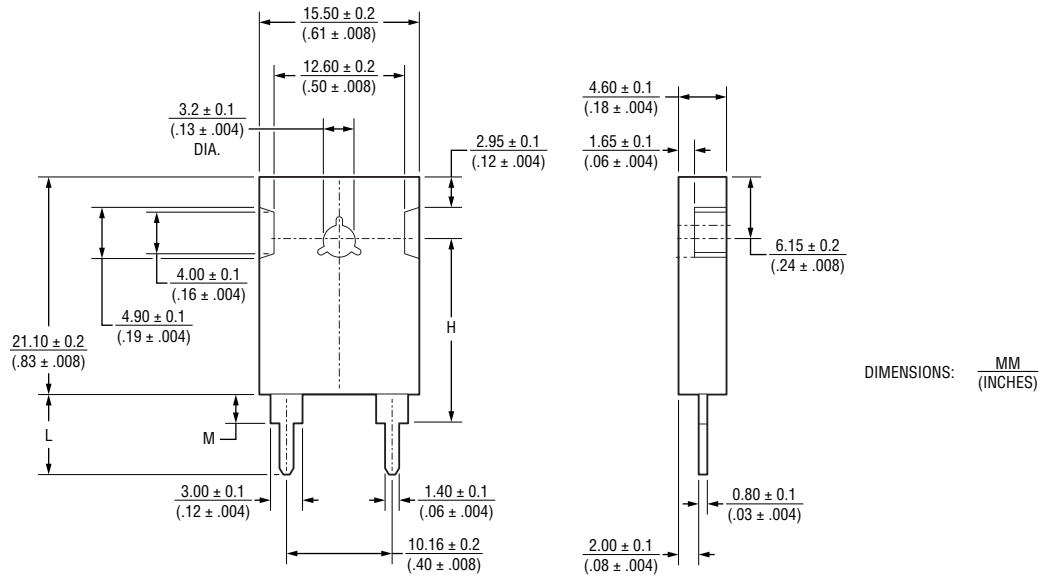
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Product Dimensions



Dimension	A Contact	B Contact	C Contact
H	$\frac{17.65 \pm 0.2}{(.69 \pm .008)}$	$\frac{16.85 \pm 0.2}{(.66 \pm .008)}$	$\frac{17.75 \pm 0.2}{(.70 \pm .008)}$
L	$\frac{7.70 \pm 0.2}{(.30 \pm .008)}$	$\frac{5.00 \pm 0.2}{(.20 \pm .008)}$	$\frac{14.50 \pm 0.2}{(.57 \pm .008)}$
M	$\frac{2.70 \pm 0.1}{(.11 \pm .004)}$	$\frac{1.90 \pm 0.1}{(.07 \pm .004)}$	$\frac{2.80 \pm 0.1}{(.11 \pm .004)}$

REV. 11/25

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