



Features

- Lead free versions available (RoHS compliant*)
- Matched pair of resistors plus thermal fuse
- Power line fault/lightning protection to BELLCORE GR-1089
- Typical application is secondary protection on telecom line cards
- UL 497A recognition
- Thermal fuse links
- Bourns TISP® products are recommended for the overvoltage section of the protection circuit

4B04B-524-RC - Line Protection Module

Matched Pair of Resistors plus Thermal Fuse

Electrical Characteristics

Resistance Values (R1 = R2)	15 ohms- 60 ohms
Resistance Tolerance	
>34 Ω	±2 %
<34 Ω	±5 %
TCR	100 ppm/°C
Ratio Tolerance	
>34 Ω	±0.5 %
<34 Ω	±2 %
Temperature Range.....	-40 °C to +85 °C

Physical Characteristics

Body Style	Open Frame SIP
Substrate Material96 % Alumina
Lead Frame Material	Copper, solder coated
Flammability.....	Conforms to UL94V-0

Functional Characteristics (per Bellcore GR-1089)

First Level Lightning Surge -

Resistors will remain within tolerance after testing.

1000 Volts Peak, 100 Amp Peak Current, Max. Rise/Min. Decay Time 10x1000 μs, Number of Pulses	25 each resistor each polarity 25 simultaneous each polarity
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2500 Volts Peak, 500 Amp Peak Current, Max. Rise/Min. Decay Time 2x10 μs, Number of Pulses	10 simultaneous each polarity
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First Level AC Power Fault -

Resistors will remain within tolerance after testing.

50 Vrms, .33 Amp Short Circuit Current, Duration.....	15 minutes
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100 Vrms, .17 Amp Short Circuit Current, Duration.....	15 minutes
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600 Vrms, 1.0 Amp Short Circuit Current, Duration	60 One-second pulses
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Second Level Lightning Surge -

Resistor package must fail safely causing no fire, electrical, or fragmentation hazard.

5000 Volts Peak, 500 Amp Peak Current, Max. Rise/Min. Decay Time 2x10 μs, Number of Pulses	1 simultaneous each polarity
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Second Level AC Power Fault -

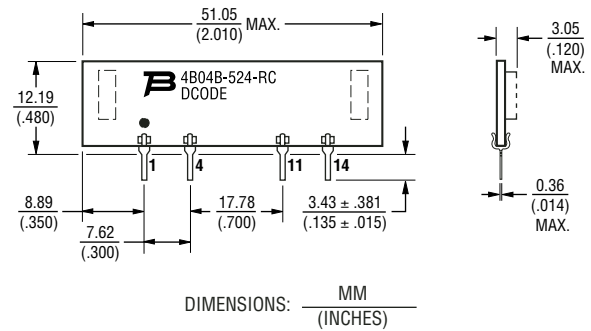
Resistor package must fail safely causing no fire, electrical, or fragmentation hazard.

Standard Resistance Values

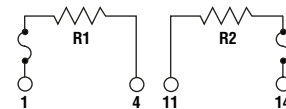
Resistance (ohms)	Resistance Code
20	200
40	400
50	500

*RoHS Directive 2002/95/EC Jan 27 2003 including Annex.
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

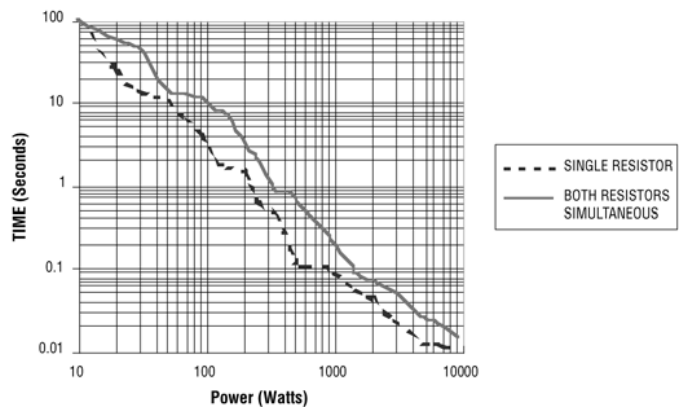
Product Dimensions



Electrical Schematic



Break Open Time



How To Order

4B 04 B - 524 - RC LF

Model _____
(4B = Open Frame)

Number of Pins _____

Physical Configuration _____

Electrical Configuration _____
• 524 = Matched Pair of Resistors plus Thermal Fuse

Resistance Code _____
• First 2 digits are significant
• Third digit represents the number of zeros to follow

Lead Free Option _____
Blank = Standard Product
LF = Lead Free / RoHS Compliant Product