



## Features

- RoHS compliant\* versions available
- Overcurrent/lightning protection to TELCORDIA GR-1089 Issue 4
- Typical application is secondary protection on telecom line cards
- UL497A recognition
- Thermal fuse links
- Must be used in conjunction with a solid state primary protector, or a GDT primary protector

# 4B06B-DR1-12R5LF - Surge Line Protection Module

### Electrical Characteristics

Resistance Value .....	12.5 ohms
Resistance Tolerance .....	±5 %
TCR .....	100 ppm/°C
Ratio Tolerance .....	±0.5 %
Temperature Range.....	-40 °C to +85 °C

### Physical Characteristics

Body Style .....	Dual In Line SMD - Twin Pack
Substrate Material .....	.96 % Alumina
Lead Frame Material.....	Copper, solder coated
Flammability .....	Conforms to UL94V-0
Processability.....	Unit is only suitable for no-clean processing
Convection Reflow.....	Unit will withstand 260 °, 20 seconds

### Functional Characteristics @ 25 °C (per Telcordia GR-1089 Issue 3)

#### 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,  
60 Seconds Between Pulses:  
Number of Pulses .....25 each resistor each polarity

2500 Volts Peak, 500 Amp Peak Current,  
Max. Rise/Min. Decay Time 2x10 µs,  
60 Seconds Between Pulses:  
Number of Pulses .....10 simultaneous each polarity

Meets Protection Coordination as defined in Telcordia Section 4.6.7.1, Condition A.

#### First Level AC Power Fault -

Resistors will remain within tolerance after testing.

50 Vrms, 0.33 Amp Short Circuit Current:  
Duration.....15 minutes

100 Vrms, 0.17 Amp Short Circuit Current:  
Duration.....15 minutes

600 Vrms, 1.00 Amp Short Circuit Current:  
Duration.....Sixty 1-second pulses

440 Vrms, 2.2 Amp Short Circuit Current:  
Duration.....Five 2-second pulses,  
cooling to ambient between pulses

600 Vrms, 3.00 Amp Short Circuit Current:  
Duration.....Five 1.1-second pulses,  
cooling to ambient between pulses

### Functional Characteristics @ 25 °C (Continued)

#### 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

#### Second Level AC Power Fault -

Resistor package must fail safely causing no fire, electrical, or fragmentation hazard. Device will fail prior to Bussman MDQ 1-6/10 A fuse in series.

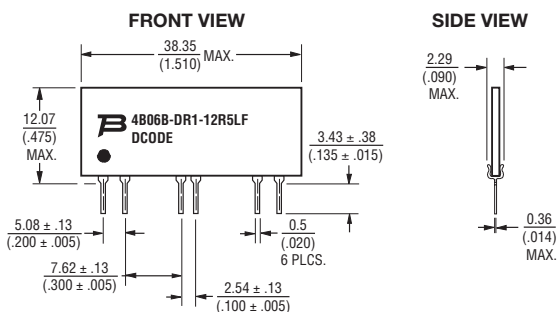
100 Vrms, 2.2 Amp Short Circuit Current:  
Duration.....15 minutes

600 Vrms, 7 Amp Short Circuit Current:  
Duration.....5 seconds

250 Vrms, 25 Amp Short Circuit Current:  
Duration.....15 minutes

600 Vrms, 60 Amp Short Circuit Current:  
Duration.....5 seconds

### Product Dimensions



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

\*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.

# 4B06B-DR1-12R5LF - Surge Line Protection Module **BOURNS®**

## How To Order

**4B 06 B - DR1 - 12R5 LF**

Model \_\_\_\_\_  
 (4B = Open Frame)

Number of Pins \_\_\_\_\_

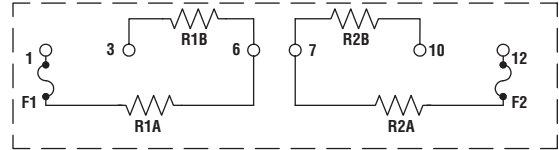
Physical Configuration \_\_\_\_\_

Electrical Configuration \_\_\_\_\_  
 DR1 = Custom

Resistance Code \_\_\_\_\_  
 12R5 = 12.5 Ohms

RoHS Compliant Option \_\_\_\_\_  
 Blank = Standard Product  
 LF = RoHS Compliant Product

## Electrical Schematic



### NOTES:

R1A + R1B + F1 = 12.5 OHMS ±5 %.

R2A + R2B + F2 = 12.5 OHMS ±5 %.

RATIO MATCH: R1 / R2 = 1 ± 2.5 %.

CO-PLANARITY = 0.004 INCHES.

## **BOURNS®**

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