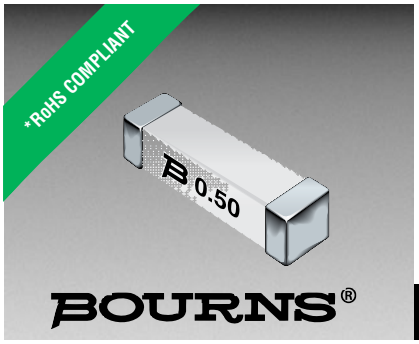
THE DATASHEET OF

B0500T



Features

- For use in telecommunication circuit applications requiring low current protection with high surge tolerance
- Overcurrent protection to Telcordia GR-1089-CORE Issue 4 (B1250T only) & UL 1950/60950
- Bourns® TISP® products are recommended for the overvoltage section of the circuit

These models are currently available but not recommended for new designs.

- Agency recognition: File: E198545
- RoHS compliant*

Telefuse™ SMD Power Cross Protection Fuse

Electrical Characteristics

Model Number	Ampere Rating (A)	Voltage Rating (VRMS)	Typical Cold Resistance (Ohms)	Volt-drop @ 100 % In (Volts) Max.	Melting I2T < 10 msec (A2 sec.)	Melting I2T @ 10 In (A2 sec.)	Maximum Power Dissipation (W)
B0500T	0.500	600	0.350	0.23	2	2.3	0.20
B1250T	1.25	600	0.075	0.18	14	17	0.40
B2000T	2.0	600	0.056	0.16	33	37	0.52

Temperature Range
.....-55 °C to +125 °C

Environmental Characteristics

Thermal Shock ..... MIL-STD-202, Method 107, Test Condition B (-65 °C to +125 °C)
Shock..... MIL-STD-202, Method 213, Test Condition I (100 Gs peak for 6 milliseconds)
Vibration ..... MIL-STD-202, Method 201 (10-55 Hz, 0.06 inch total excursion)
Salt Spray... MIL-STD-202, Method 101, Test Condition B (48 hrs.)
Insulation Resistance ..... MIL-STD-202, Method 302, Test Condition A (after opening) 10,000 ohms minimum
Solderability
..... MIL-STD-202, Method 208
Resistance to Solder Heat
..... MIL-STD-202, Method 210, Test Condition J (235 °C, 30 sec.)

Physical Characteristics

Body Material
..... Ceramic with tin plated brass caps
Solder ..... RoHS 6 Compliant lead free RoHS reflow compatible; reference 240 °C, 30 sec. max.
Soldering Process Window
IR Reflow 240 °C for 30 seconds max. (Not recommended for Wave solder direct immersion)
Packaging.....2,000 pcs. per 13 ” reel

Lightning Surge Withstand Capabilities

Max. Rise/ Min. Decay (µs)	Repetitions		Minimum Peak Voltage (V)	Minimum Withstand Peak Current (A)		
	Total	Each Polarity		B0500T	B1250T	B2000T
10/1000	50	25	1000	25	100	120
10/360	50	25	1000	30	125	150
2/10	20	10	2500	120	500	600
10/360	10	5	1000	30	125	150
2/10	2	1	5000	120	500	600
8/20	2	1	5000	75	300	350

Test Methods per GR-1089/TIA-968-A (FCC Pt. 68)

AC Power Fault Tests

GR-1089 1st Level Test	Voltage (VRMS)	Short Circuit Current (A)	Applications	Duration	Fuse Characteristics		
					B0500T	B1250T	B2000T
1	50	0.33	1	15 min.	Parts pass all 1st Level tests		
2	100	0.17	1	15 min.			
3	200, 400, 600	1	60	1 sec.			
4	1000	1	60	1 sec.			
6	600	0.5	1	30 sec.			
7	440	2.2	5	2 sec.	Will open	Parts pass all 1st Level tests	
8	600	3	5	1.1 sec.	Will open		
9	1000	5	5	0.4 sec.	Will open		

AC Current Limiting Protector Tests/Fusing Coordination Tests

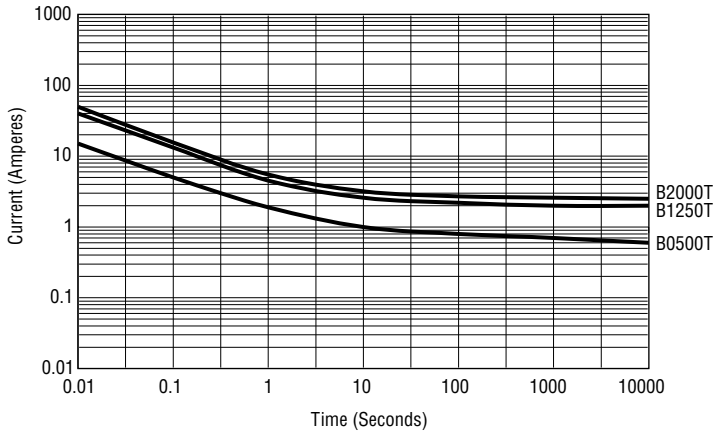
Voltage (Vac)	Current (A)	Duration	Maximum Time for Fuse to Open (Seconds)		
			B0500T	B1250T	B2000T
600	2.2	Up to 15 Min.	1.0	900	Will not open
600	2.6		0.8	50	2000
600	3.0		0.5	10	100
600	3.75		0.3	5	10
600	5		0.2	2	3
600	7		0.08	1	2
600	10		0.04	0.5	0.7
600	12.5		0.01	0.2	0.3
600	20		0.005	0.07	0.1
600	25		0.004	0.04	0.07
600	30		0.003	0.02	0.05

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.

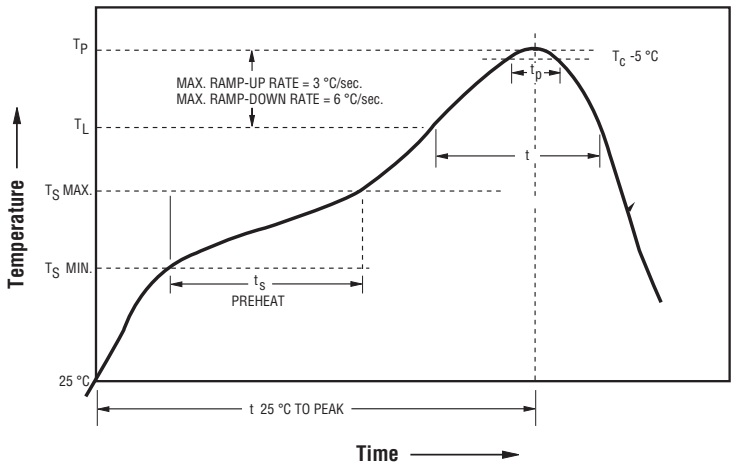
Telefuse™ SMD Power Cross Protection Fuse

BOURNS®

Time/Current Characteristic Curve

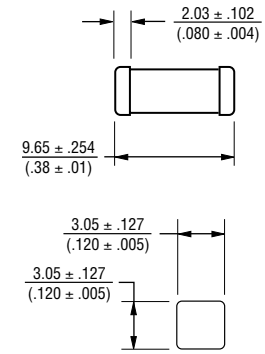


Solder Profile

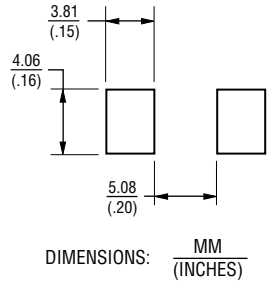


IR Reflow Profile	
Reflow Parameter	Value
Minimum Preheat Temperature (T_SMIN)	130 °C
Maximum Preheat Temperature (T_SMAX)	170 °C
Preheat Time	60-180 seconds
T_SMAX to T_L Ramp-Up Rate	3 °C / second max.
Time above Temperature T_L (t_L)	200 °C for 60-120 seconds
Peak Temperature (T_P)	240 °C max.
Time within 5 °C of Peak T_P	20-30 seconds
Ramp-Down Rate	6 °C / second. max.

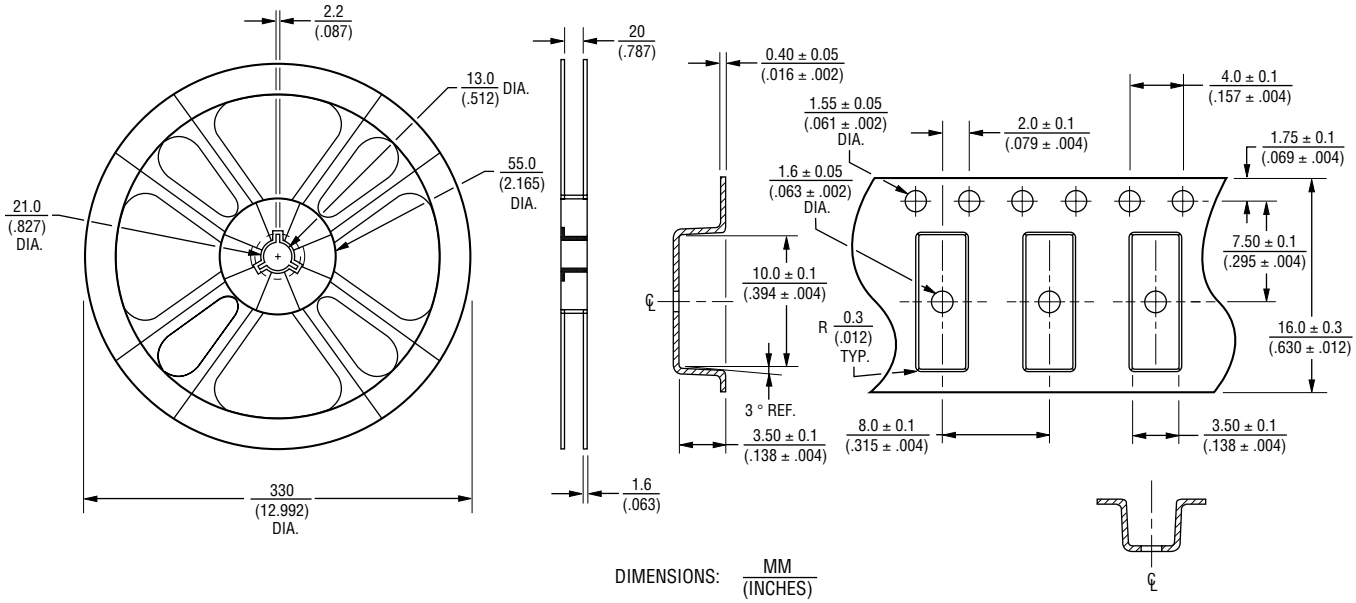
Product Dimensions



Recommended Pad Layout



Packaging Specifications



REV. 11/16

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