

POWrTherm™ BN-LG10Y Series Features

- Power NTC thermistor for Inrush Current Limiting (ICL)
- 10 mm disc diameter with wide resistance range
- Highly stable electrical characteristics
- Flame retardant coating material meets UL 94V-0 requirements
- RoHS* compliant and halogen free**
- Agency recognition: c UL us

BN-LG10Y Series – Power NTC Thermistors for ICL

Electrical Characteristics

Model	Resistance @ 25 °C (Ω)	Resistance Tolerance[1]	I_{max} (A)	R_{Imax} @ 25 °C (Ω)	Max. Load Capacitance @ 240 VAC (µF)	P_{max} (W)	Dissipation Factor Typical δ (mW/°C)	Thermal Time Constant Typical (sec.)	Operating Temperature Range (°C)
BN-LG10Y1R0Mx	1.0	±20 %	5.0	0.081	150	2.3	Approx. 16	Approx. 40	-40 to +170
BN-LG10Y1R3Mx	1.3	±20 %	5.0	0.083					
BN-LG10Y1R5Mx	1.5	±20 %	5.0	0.096					
BN-LG10Y2R0Mx	2.0	±20 %	5.0	0.107	200				
BN-LG10Y2R5Mx	2.5	±20 %	5.0	0.118	220				
BN-LG10Y3R0Mx	3.0	±20 %	5.0	0.127	330				
BN-LG10Y4R0Mx	4.0	±20 %	4.0	0.160					
BN-LG10Y5R0Mx	5.0	±20 %	4.0	0.176					
BN-LG10Y6R0Mx	6.0	±20 %	3.0	0.234					
BN-LG10Y6R8Mx	6.8	±20 %	3.0	0.265					
BN-LG10Y7R0Mx	7.0	±20 %	3.0	0.273					
BN-LG10Y8R0Mx	8.0	±20 %	3.0	0.287					
BN-LG10Y100Mx	10.0	±20 %	3.0	0.303					
BN-LG10Y120Mx	12.0	±20 %	3.0	0.318					
BN-LG10Y130Mx	13.0	±20 %	3.0	0.345					
BN-LG10Y150Mx	15.0	±20 %	2.5	0.407					
BN-LG10Y160Mx	16.0	±20 %	2.5	0.410					
BN-LG10Y200Mx	20.0	±20 %	2.0	0.576					
BN-LG10Y220Mx	22.0	±20 %	2.0	0.586	150				
BN-LG10Y250Mx	25.0	±20 %	2.0	0.595	330				
BN-LG10Y300Mx	30.0	±20 %	2.0	0.714					
BN-LG10Y470Mx	47.0	±20 %	2.0	0.795					
BN-LG10Y500Mx	50.0	±20 %	2.0	0.801					
BN-LG10Y800Mx	80.0	±20 %	1.0	2.217	390				
BN-LG10Y101Mx	100.0	±20 %	1.0	2.275	220				
BN-LG10Y121Mx	120.0	±20 %	1.0	2.693	390				

Notes:
"x" denotes lead type. "Y" = Kinked, "S" = Straight.
[1] ±15 % resistance tolerance is available upon request.

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
**Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.
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Users should verify actual device performance in their specific applications.
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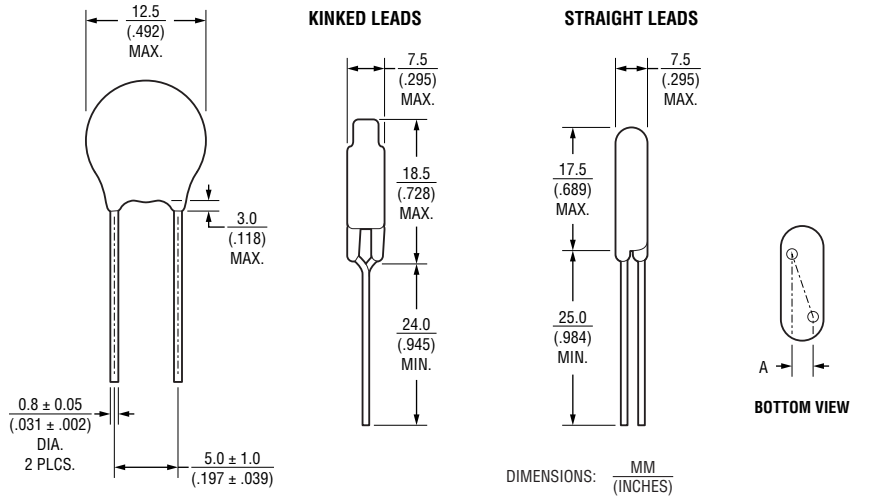
Additional Information

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Product Dimensions



R_{25} Ω	A dim.
1.0	1.6 ± 0.8 (.063 ± .031)
1.3	1.9 ± 0.8 (.075 ± .031)
1.5	
2.0	
2.5	
3.0	
4.0	
5.0	2.2 ± 0.8 (.087 ± .031)
6.0	

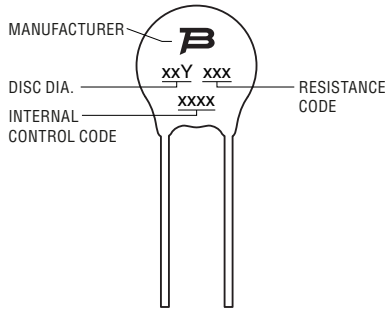
R_{25} Ω	A dim.
6.8	2.4 ± 0.8 (.094 ± .031)
7.0	
8.0	2.0 ± 0.8 (.079 ± .031)
10	2.2 ± 0.8 (.087 ± .031)
12	2.0 ± 0.8 (.079 ± .031)
13	2.2 ± 0.8 (.087 ± .031)
15	
16	
20	

R_{25} Ω	A dim.
22	2.2 ± 0.8 (.087 ± .031)
25	
30	2.5 ± 0.8 (.098 ± .031)
47	2.0 ± 0.8 (.079 ± .031)
50	
80	2.6 ± 0.8 (.102 ± .031)
100	3.1 ± 0.8 (.122 ± .031)
120	1.5 ± 0.8 (.059 ± .031)

Agency Recognition

c UL us ..... File number: E307915

Typical Part Marking



Environmental Characteristics

Storage Conditions
- Temperature.....+15 °C to +40 °C
- Humidity.....20 to 70 %

Moisture Sensitivity Level.....1

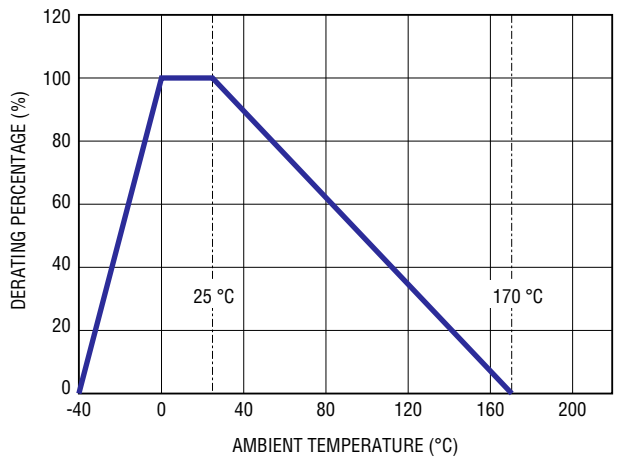
Standard Packaging Quantities

Bulk	2,500 pcs./box
Tape & Reel	1,500 pcs./reel
Ammo Pack	1,000 pcs./box

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I_{max} Derating vs. Ambient Temperature Curves



How to Order

BN - LG 10Y 2R5 M Y B

POWrTherm™ Product Designator

Series
LG = For Inrush Current Limiting (ICL)

Disc Diameter
10Y = 10 mm

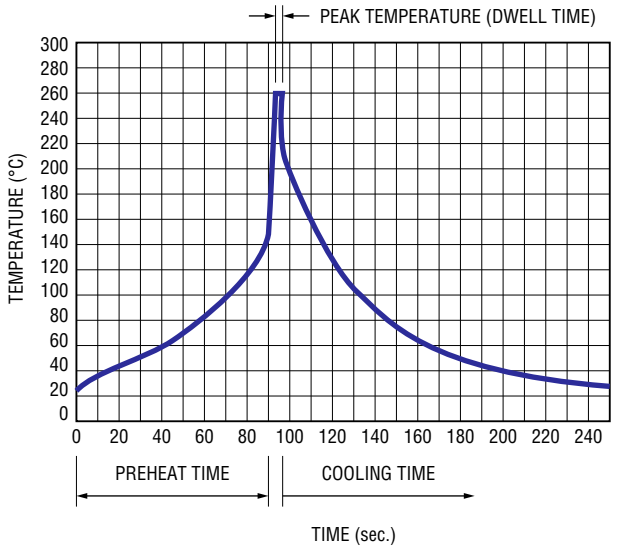
Resistance @ 25 °C
2R5 = 2.5 Ω
100 = 10 Ω

Tolerance of R_{25}
L = ±15 %
M = ±20 %

Lead Type
Y = Kinked
S = Straight

Packaging Type
B = Bulk
R = Tape & Reel
M = Ammo Pack

Solder Reflow Recommendations



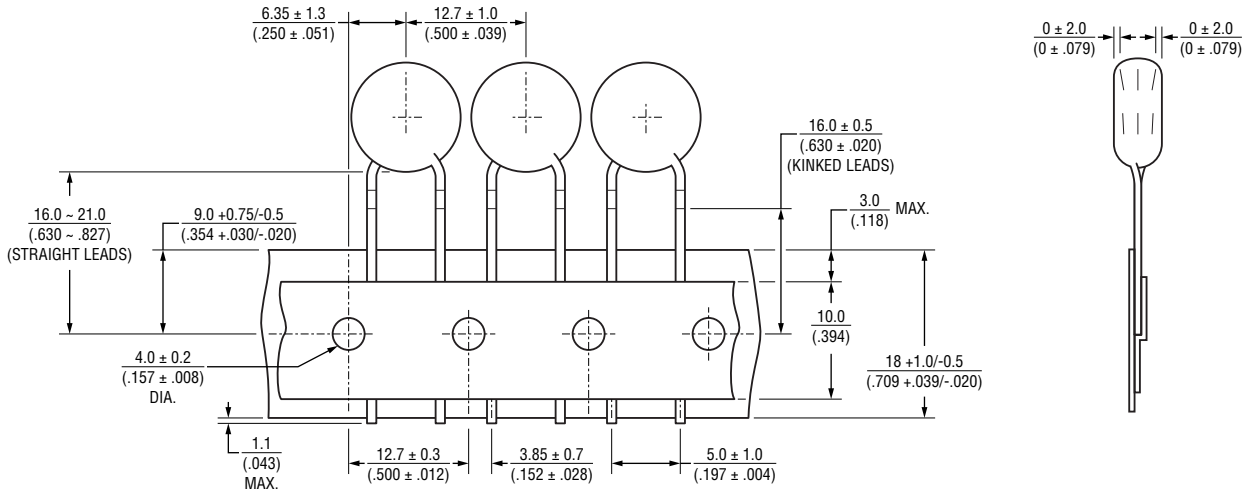
Profile Feature	Pb-Free Assembly
Preheat Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	 150 °C 60~90 seconds
Solder Pot Temperature	260 °C max.
Solder Dwell Time	2-3 seconds

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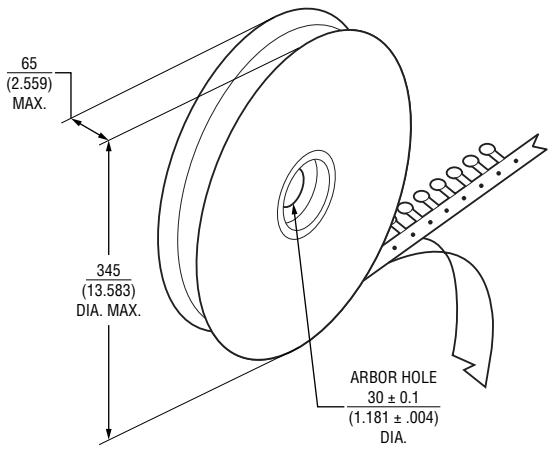
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Packaging Specifications

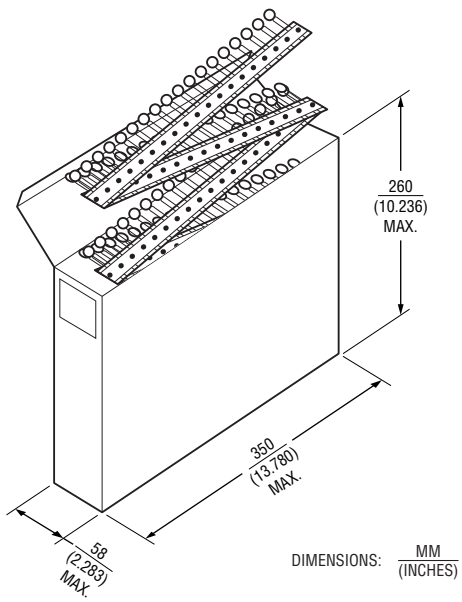
Tape



Reel



Ammo Pack



BOURNS®

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