




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: 



BN-LG10Y Series – Power NTC Thermistors for ICL

Electrical Characteristics

Model	Resistance @ 25 °C (Ω)	Resistance Tolerance ¹	I _{max} (A)	R _{lmax} @ 25 °C (Ω)	Max. Load Capacitance @ 240 VAC (μF)	P _{max} Typical (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	150				
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	330				
BN-LG10Y250Mx	25.0	±20 %	2.0	0.595					
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	390				
BN-LG10Y800Mx	80.0	±20 %	1.0	2.217	220				
BN-LG10Y101Mx	100.0	±20 %	1.0	2.275	390				
BN-LG10Y121Mx	120.0	±20 %	1.0	2.693					

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.

"POWrTherm" is a trademark of Bourns, Inc.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Additional Information

Click these links for more information:

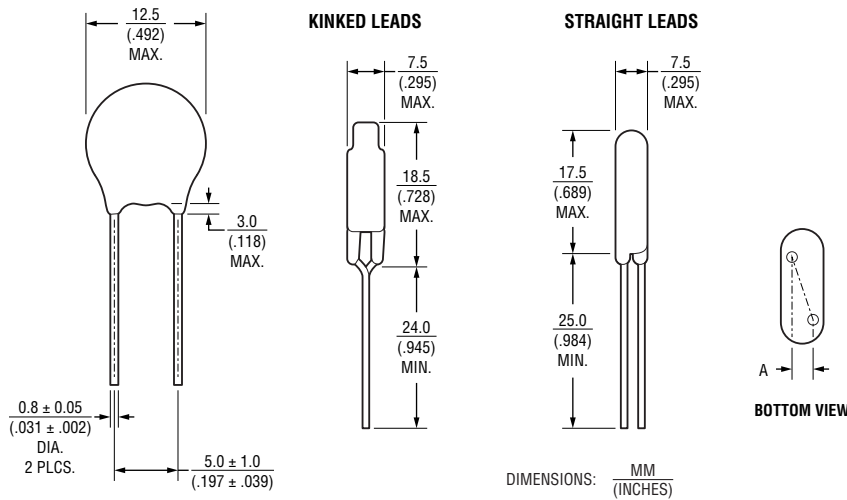


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BN-LG10Y Series – Power NTC Thermistors for ICL



Product Dimensions



R ₂₅ Ω	A dim.
1.0	$\frac{1.6 \pm 0.8}{(.063 \pm .031)}$
1.3	$\frac{1.9 \pm 0.8}{(.075 \pm .031)}$
1.5	
2.0	
2.5	
3.0	
4.0	$\frac{2.2 \pm 0.8}{(.087 \pm .031)}$
5.0	
6.0	

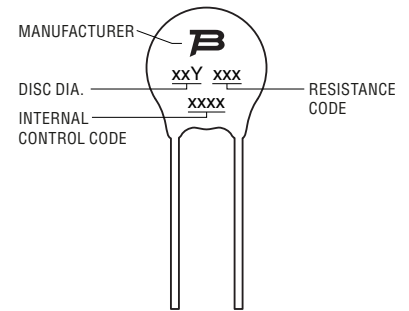
R ₂₅ Ω	A dim.
6.8	$\frac{2.4 \pm 0.8}{(.094 \pm .031)}$
7.0	$\frac{2.0 \pm 0.8}{(.079 \pm .031)}$
8.0	
10	$\frac{2.2 \pm 0.8}{(.087 \pm .031)}$
12	$\frac{2.0 \pm 0.8}{(.079 \pm .031)}$
13	$\frac{2.2 \pm 0.8}{(.087 \pm .031)}$
15	
16	
20	

R ₂₅ Ω	A dim.
22	$\frac{2.2 \pm 0.8}{(.087 \pm .031)}$
25	$\frac{2.5 \pm 0.8}{(.098 \pm .031)}$
30	
47	$\frac{2.0 \pm 0.8}{(.079 \pm .031)}$
50	$\frac{2.6 \pm 0.8}{(.102 \pm .031)}$
80	
100	
120	$\frac{1.5 \pm 0.8}{(.059 \pm .031)}$

Agency Recognition

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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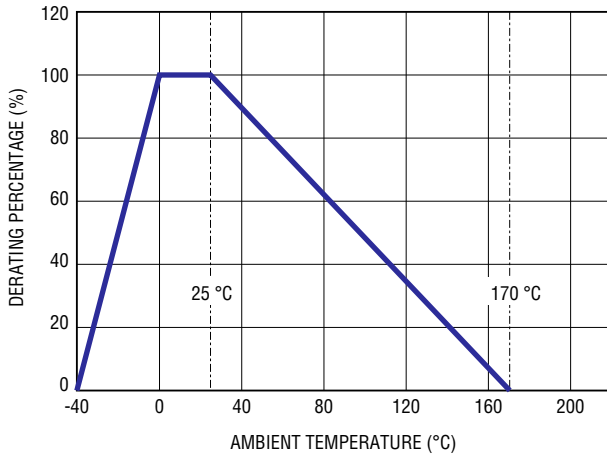
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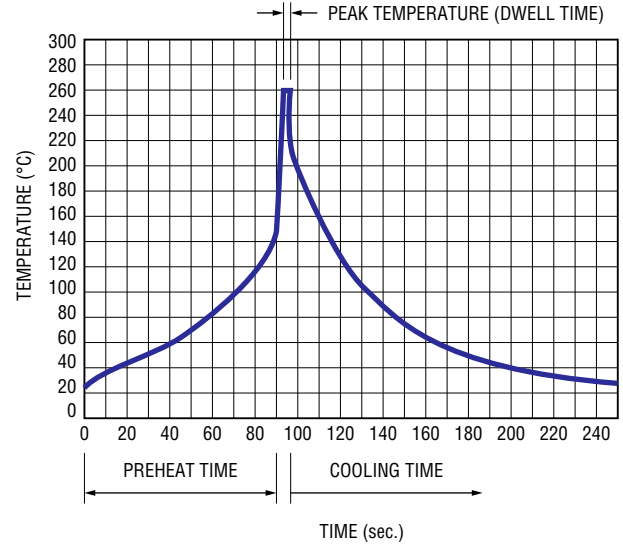
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I_{max} Derating vs. Ambient Temperature Curves



Solder Reflow Recommendations



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 R₂₅ _____
 L = ±15 % M = ±20 %

Lead Type _____
 Y = Kinked S = Straight

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

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