

POWrTherm™ BN-LG15Y Series Features

- Power NTC thermistor for Inrush Current Limiting (ICL)
- 15 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, VDE

BN-LG15Y 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-LG15Y0R7Mx	0.7	±20 %	8.0	0.027	470	3.7	Approx. 21	Approx. 80	-40 to +200
BN-LG15Y1R0Mx	1.0	±20 %	8.0	0.038					
BN-LG15Y1R3Mx	1.3	±20 %	8.0	0.054					
BN-LG15Y1R5Mx	1.5	±20 %	8.0	0.058					
BN-LG15Y2R0Mx	2.0	±20 %	8.0	0.059					
BN-LG15Y2R5Mx	2.5	±20 %	8.0	0.074					
BN-LG15Y3R0Mx	3.0	±20 %	7.0	0.095					
BN-LG15Y4R0Mx	4.0	±20 %	6.0	0.106					
BN-LG15Y4R7Mx	4.7	±20 %	6.0	0.108					
BN-LG15Y5R0Mx	5.0	±20 %	6.0	0.111					
BN-LG15Y6R0Mx	6.0	±20 %	6.0	0.117	680				
BN-LG15Y7R0Mx	7.0	±20 %	6.0	0.122					
BN-LG15Y8R0Mx	8.0	±20 %	6.0	0.126					
BN-LG15Y100Mx	10.0	±20 %	5.0	0.194					
BN-LG15Y120Mx	12.0	±20 %	5.0	0.202					
BN-LG15Y150Mx	15.0	±20 %	4.0	0.231					
BN-LG15Y160Mx	16.0	±20 %	4.0	0.252					
BN-LG15Y180Mx	18.0	±20 %	4.0	0.267					
BN-LG15Y200Mx	20.0	±20 %	4.0	0.285					
BN-LG15Y220Mx	22.0	±20 %	4.0	0.317	470				
BN-LG15Y250Mx	25.0	±20 %	3.0	0.415	680				
BN-LG15Y300Mx	30.0	±20 %	3.0	0.449					
BN-LG15Y330Mx	33.0	±20 %	3.0	0.452	470				
BN-LG15Y400Mx	40.0	±20 %	3.0	0.500	1000				
BN-LG15Y470Mx	47.0	±20 %	3.0	0.524					
BN-LG15Y800Mx	80.0	±20 %	2.5	0.699	680				
BN-LG15Y121Mx	120.0	±20 %	2.0	1.042	1000				
BN-LG15Y221Mx	220.0	±20 %	1.0	3.455	1500				

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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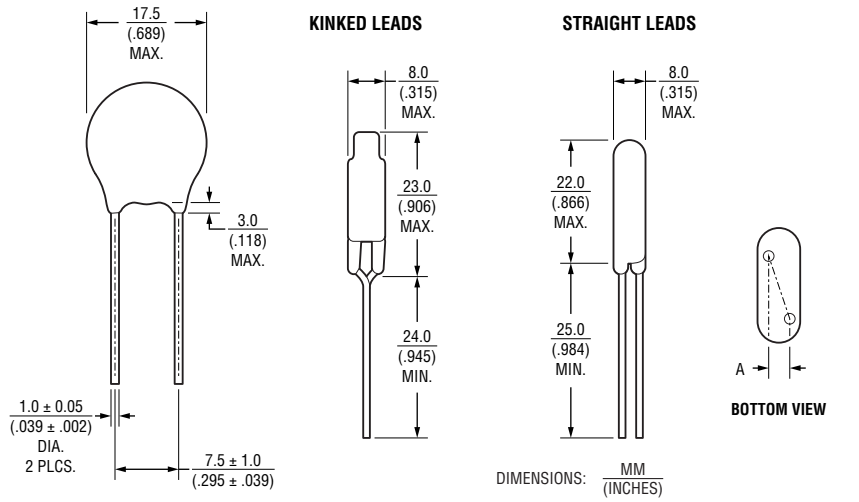
Additional Information

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Product Dimensions



R_{25} Ω	A dim.
0.7	2.5 ± 0.8 (.098 ± .031)
1.0	
1.3	
1.5	
2.0	2.8 ± 0.8 (.110 ± .031)
2.5	2.5 ± 0.8 (.098 ± .031)
3.0	2.7 ± 0.8 (.106 ± .031)
4.0	2.6 ± 0.8 (.102 ± .031)
4.7	
5.0	

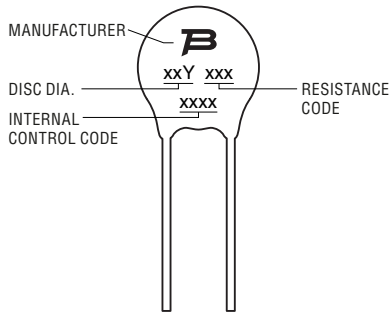
R_{25} Ω	A dim.
6.0	2.6 ± 0.8 (.102 ± .031)
7.0	2.7 ± 0.8 (.106 ± .031)
8.0	
10	
12	
15	3.2 ± 0.8 (.126 ± .031)
16	
18	3.6 ± 0.8 (.142 ± .031)
20	
22	3.8 ± 0.8 (.150 ± .031)

R_{25} Ω	A dim.
25	4.2 ± 0.8 (.165 ± .031)
30	2.8 ± 0.8 (.110 ± .031)
33	3.3 ± 0.8 (.130 ± .031)
40	3.6 ± 0.8 (.142 ± .031)
47	
80	2.4 ± 0.8 (.094 ± .031)
120	2.9 ± 0.8 (.114 ± .031)
220	3.9 ± 0.8 (.154 ± .031)

Agency Recognition

c UL us ..... File number: E307915
..... File number: R50571116
(Test for EN 60539-1:2016)

Typical Part Marking



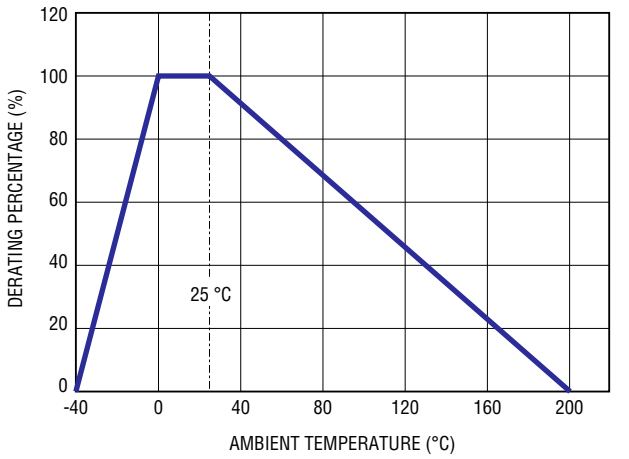
Environmental Characteristics

Storage Conditions
Temperature.....+15 °C to +40 °C
Humidity.....20 to 70 %
Moisture Sensitivity Level.....1

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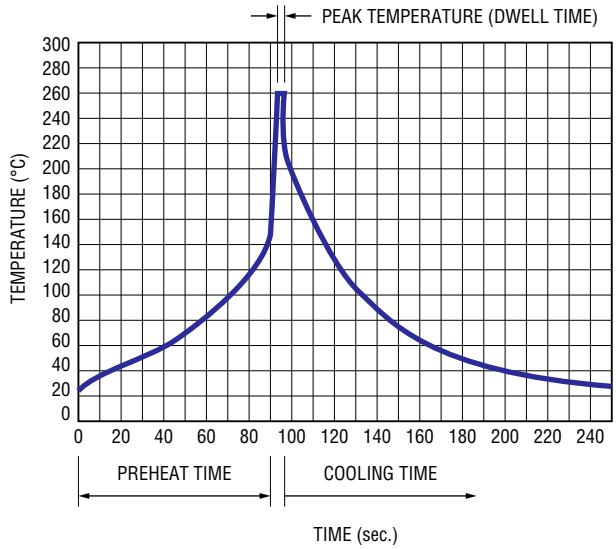
I_{max} Derating vs. Ambient Temperature Curves



Standard Packaging Quantities

Resistance R_{25}	Packaging Type		
	Bulk pcs./box	Tape & Reel pcs./reel	Ammo Pack pcs./box
0R7 ~ 6R0	1,000	750	500
7R0	750		
8R0		500	
100 ~ 120	1,000		
150 ~ 160		750	
180 ~ 250	750		
300 ~ 330	1,000		
400 ~ 470	750	500	
800 ~ 121	1,000	750	
221	750	500	

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

How to Order

BN - LG 15Y 2R5 M Y B

POWrTherm™ Product Designator

Series
LG = For Inrush Current Limiting (ICL)

Disc Diameter
15Y = 15 mm

Resistance @ 25 °C
2R5 = 2.5 Ω 100 = 10 Ω 121 = 120 Ω

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

Lead Type
Y = Kinked S = Straight

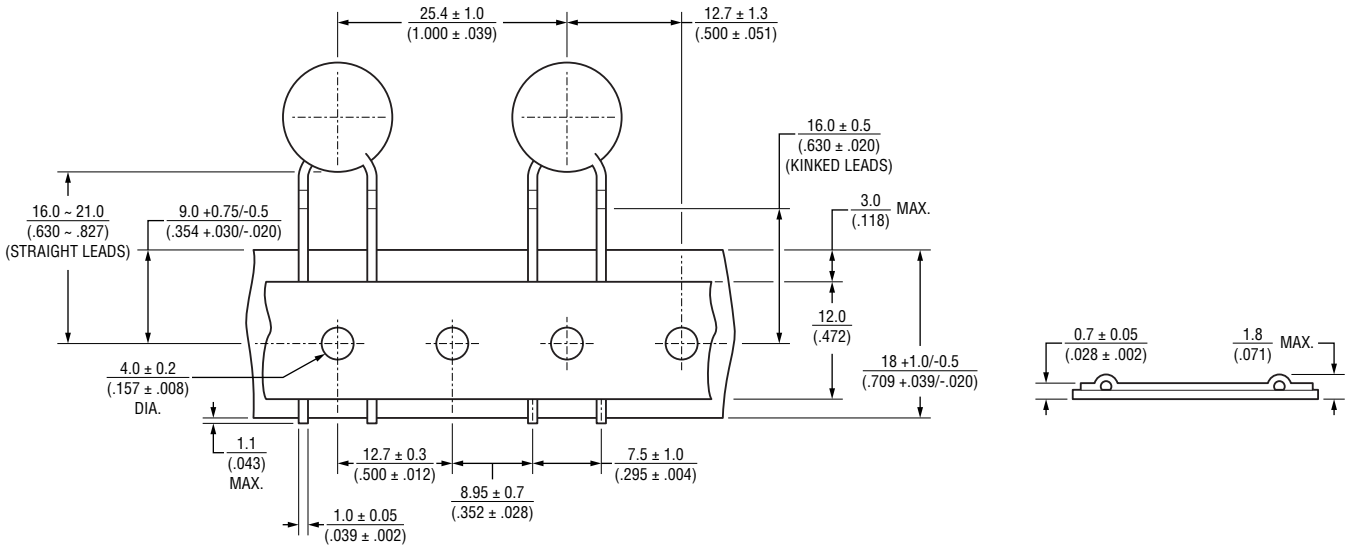
Packaging Type
B = Bulk R = Tape & Reel M = Ammo Pack

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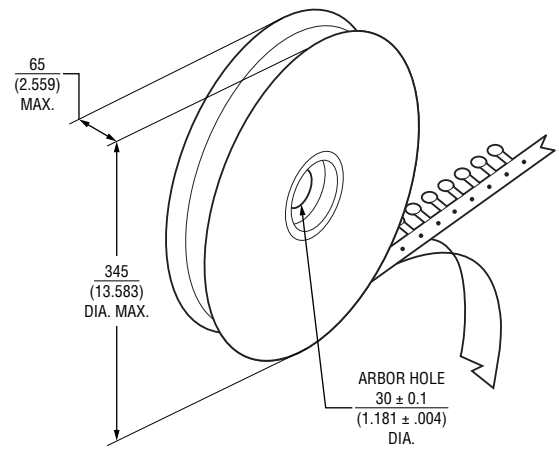
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Packaging Specifications

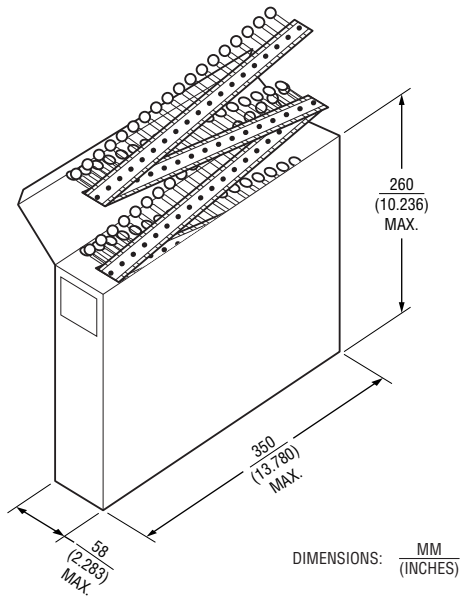
Tape



Reel



Ammo Pack



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