

POWrTherm™ BN-LG13Y Series Features

- Power NTC thermistor for Inrush Current Limiting (ICL)
- 13 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-LG13Y 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-LG13Y1R0Mx	1.0	±20 %	7.0	0.042	330	3.2	Approx. 18	Approx. 60	-40 to +200
BN-LG13Y1R3Mx	1.3	±20 %	7.0	0.055					
BN-LG13Y2R0Mx	2.0	±20 %	5.0	0.141					
BN-LG13Y2R5Mx	2.5	±20 %	6.0	0.101					
BN-LG13Y3R0Mx	3.0	±20 %	6.0	0.104					
BN-LG13Y4R0Mx	4.0	±20 %	5.0	0.124					
BN-LG13Y4R7Mx	4.7	±20 %	5.0	0.146					
BN-LG13Y5R0Mx	5.0	±20 %	5.0	0.115					
BN-LG13Y6R0Mx	6.0	±20 %	5.0	0.138					
BN-LG13Y7R0Mx	7.0	±20 %	4.0	0.174					
BN-LG13Y8R0Mx	8.0	±20 %	4.0	0.199					
BN-LG13Y100Mx	10.0	±20 %	5.0	0.129					
BN-LG13Y120Mx	12.0	±20 %	4.0	0.302	560				
BN-LG13Y150Mx	15.0	±20 %	3.0	0.317					
BN-LG13Y160Mx	16.0	±20 %	3.0	0.338					
BN-LG13Y180Mx	18.0	±20 %	3.0	0.360					
BN-LG13Y200Mx	20.0	±20 %	2.8	0.400	470				
BN-LG13Y250Mx	25.0	±20 %	2.0	0.763	560				
BN-LG13Y500Mx	50.0	±20 %	2.0	0.636					

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

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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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Agency Recognition

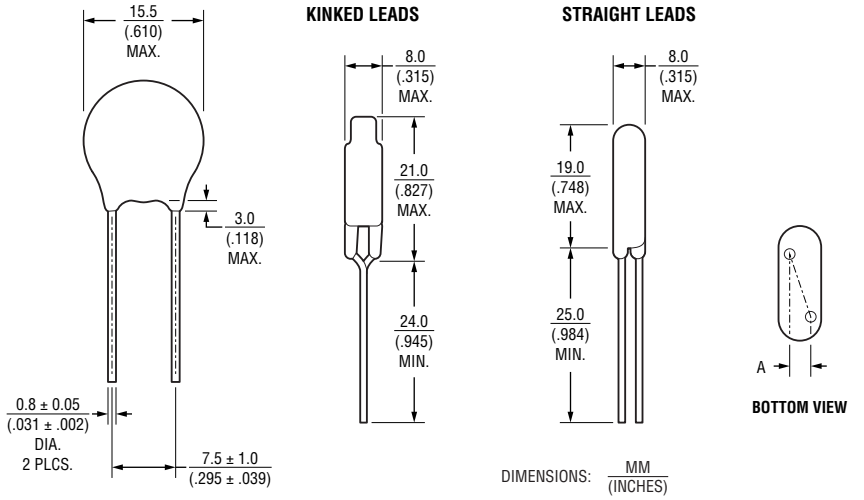
c UL us ..... File number: E307915
VDE .....File number: R50571116
(Test for EN 60539-1:2016)

Environmental Characteristics

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

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Product Dimensions

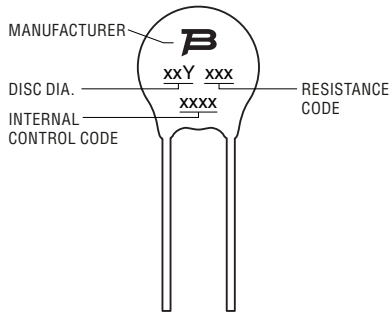


R_{25} Ω	A dim.
1.0	1.7 ± 0.8 (.067 ± .031)
1.3	1.9 ± 0.8 (.075 ± .031)
2.0	
2.5	
3.0	
4.0	
4.7	

R_{25} Ω	A dim.
5.0	2.0 ± 0.8 (.079 ± .031)
6.0	
7.0	2.2 ± 0.8 (.087 ± .031)
8.0	
10	
12	
15	2.6 ± 0.8 (.102 ± .031)

R_{25} Ω	A dim.
16	2.6 ± 0.8 (.102 ± .031)
18	2.9 ± 0.8 (.114 ± .031)
20	2.7 ± 0.8 (.106 ± .031)
25	3.1 ± 0.8 (.122 ± .031)
50	2.9 ± 0.8 (.114 ± .031)

Typical Part Marking



How to Order

BN - LG 13Y 2R5 M Y B

POWrTherm™ Product Designator

Series
- LG = For Inrush Current Limiting (ICL)

Disc Diameter
- 13Y = 13 mm

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

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

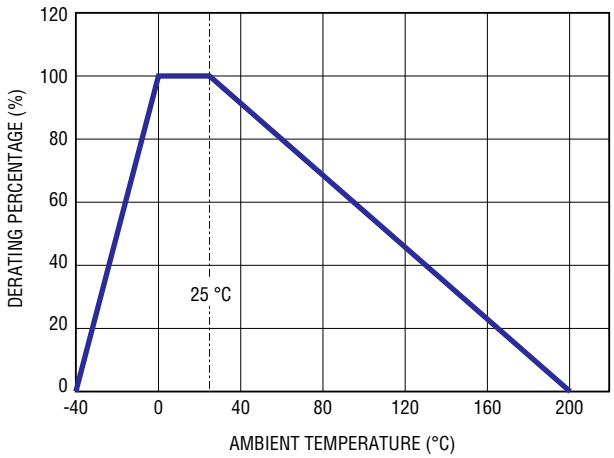
Lead Type
- Y = Kinked
- S = Straight

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

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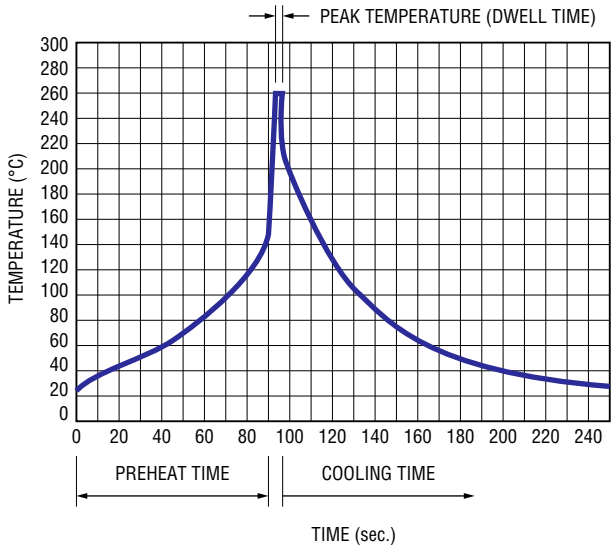
I_{max} Derating vs. Ambient Temperature Curves



Standard Packaging Quantities

Resistance R_{25}	Packaging Type		
	Bulk pcs./box	Tape & Reel pcs./reel	Ammo Pack pcs./box
1R0 ~ 1R3	2,000	750	500
2R0 ~ 4R7	1,500		
5R0	2,000		
6R0 ~ 8R0	1,500		
100 ~ 160		500	
180 ~ 250		750	
500		500	

Solder Reflow Recommendations



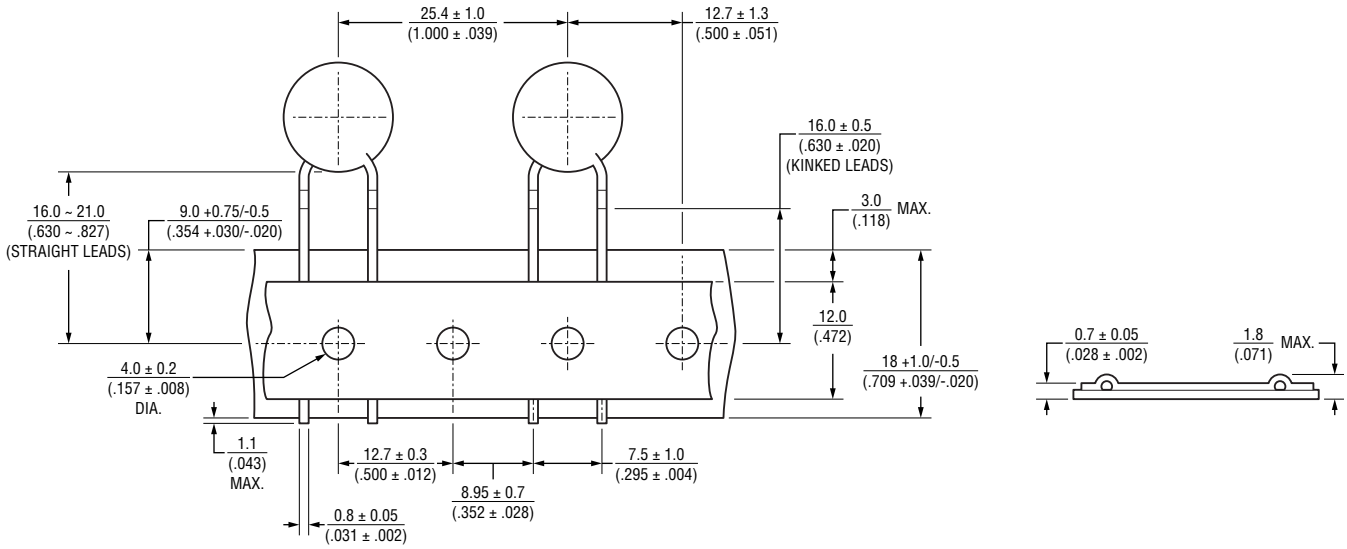
Profile Feature	Pb-Free Assembly
Preheat Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	 150 °C 60~90 seconds
Solder Pot Temperature	260 °C max.
Solder Dwell Time	2-3 seconds

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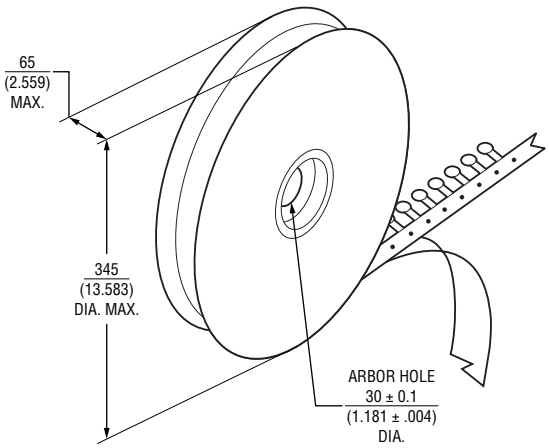
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Packaging Specifications

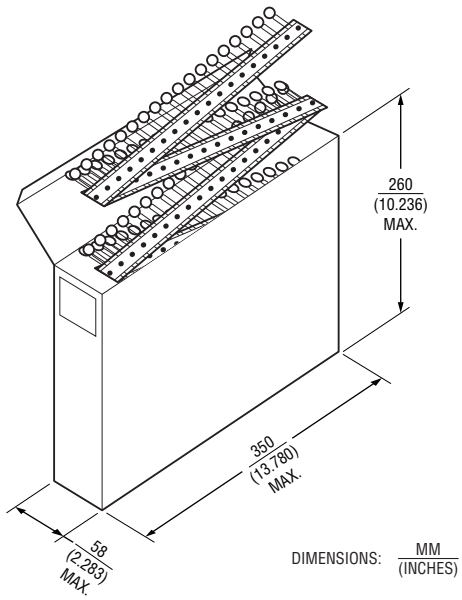
Tape



Reel



Ammo Pack



REV. 07/23

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