



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:



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	560				
BN-LG13Y100Mx	10.0	±20 %	5.0	0.129					
BN-LG13Y120Mx	12.0	±20 %	4.0	0.302					
BN-LG13Y150Mx	15.0	±20 %	3.0	0.317					
BN-LG13Y160Mx	16.0	±20 %	3.0	0.338	470				
BN-LG13Y180Mx	18.0	±20 %	3.0	0.360					
BN-LG13Y200Mx	20.0	±20 %	2.8	0.400	560				
BN-LG13Y250Mx	25.0	±20 %	2.0	0.763					
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.

"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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Agency Recognition

File number: [E307915](#)
 File number: [R50571116](#)
(Test for EN 60539-1:2016)

Environmental Characteristics

Storage Conditions

Temperature.....+15 °C to +40 °C

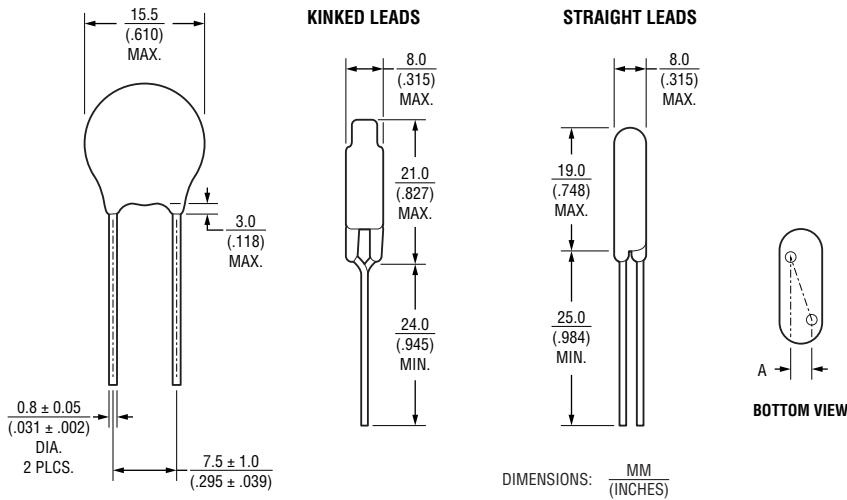
Humidity20 to 70 %

Moisture Sensitivity Level 1

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Product Dimensions

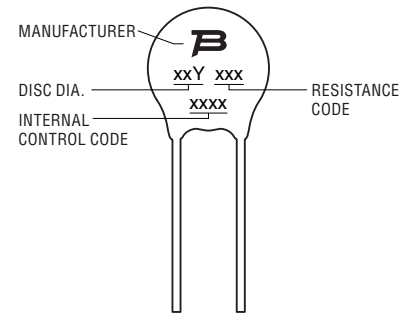


R ₂₅ Ω	A dim.
1.0	$\frac{1.7 \pm 0.8}{(.067 \pm .031)}$
1.3	$\frac{1.9 \pm 0.8}{(.075 \pm .031)}$
2.0	
2.5	
3.0	
4.0	
4.7	

R ₂₅ Ω	A dim.
5.0	$\frac{2.0 \pm 0.8}{(.079 \pm .031)}$
6.0	
7.0	$\frac{2.2 \pm 0.8}{(.087 \pm .031)}$
8.0	
10	
12	
15	

R ₂₅ Ω	A dim.
16	$\frac{2.6 \pm 0.8}{(.102 \pm .031)}$
18	$\frac{2.9 \pm 0.8}{(.114 \pm .031)}$
20	$\frac{2.7 \pm 0.8}{(.106 \pm .031)}$
25	$\frac{3.1 \pm 0.8}{(.122 \pm .031)}$
50	$\frac{2.9 \pm 0.8}{(.114 \pm .031)}$

Typical Part Marking



How to Order

BN - LG 13Y 2R5 M Y B

POW^rTherm™
 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 R₂₅
 L = ±15 %
 M = ±20 %
 Lead Type
 Y = Kinked
 S = Straight
 Packaging Type
 B = Bulk
 R = Tape & Reel
 M = Ammo Pack

Specifications are subject to change without notice.

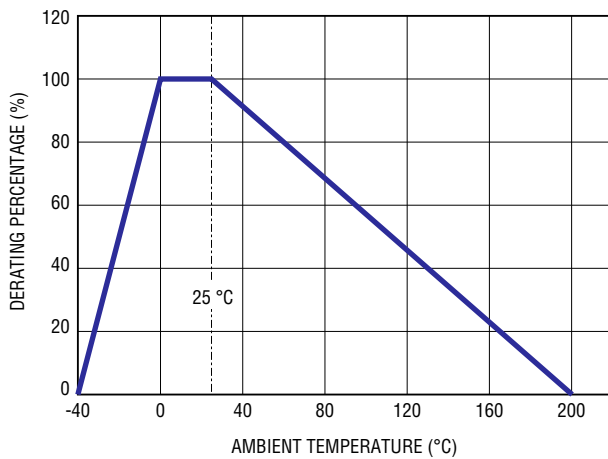
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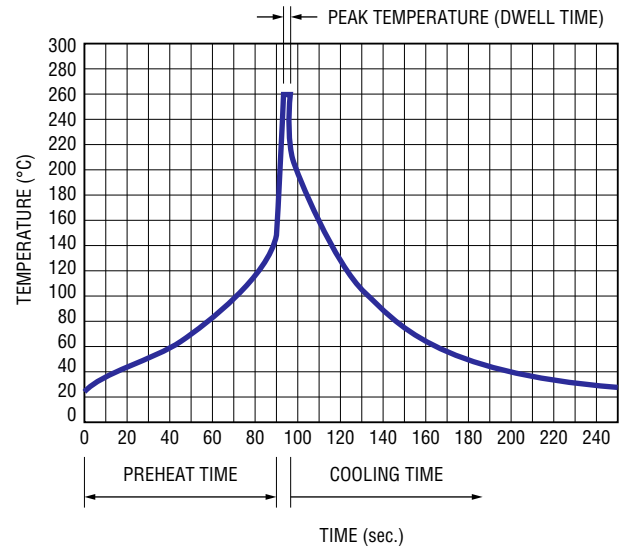
I_{\max} Derating vs. Ambient Temperature Curves



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	500	
100 ~ 160		750	
180 ~ 250		500	
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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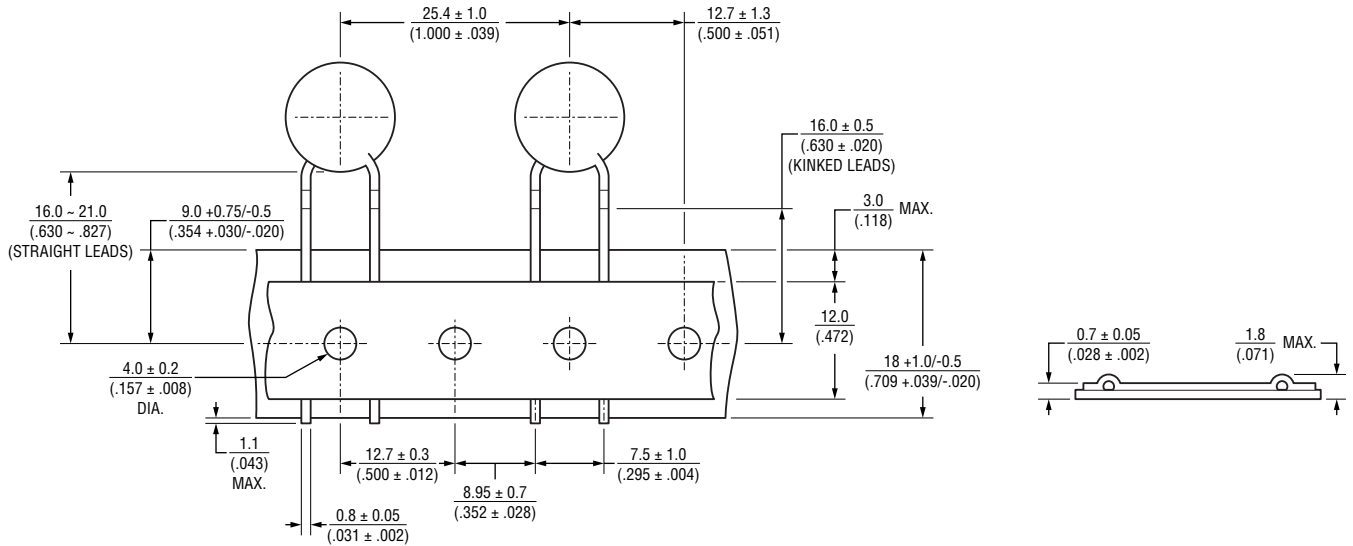
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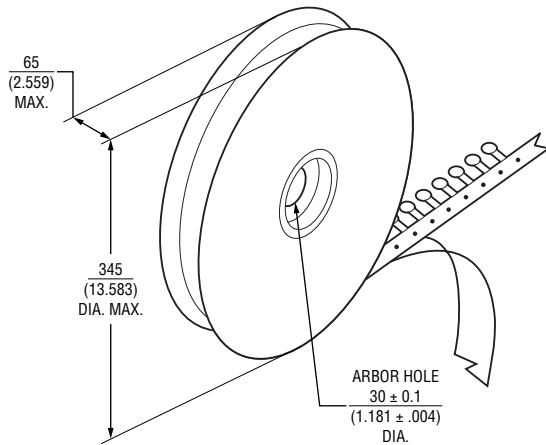
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Packaging Specifications

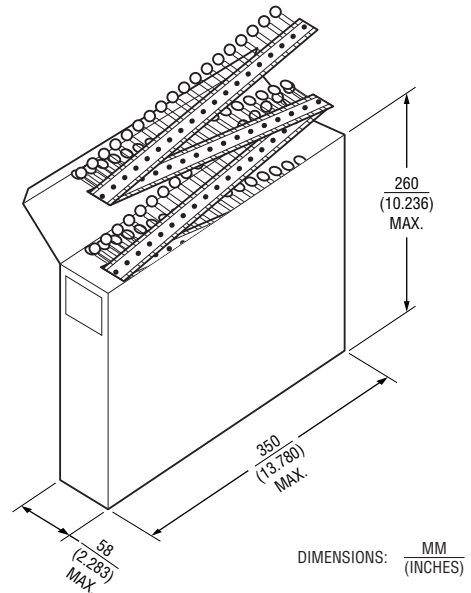
Tape



Reel



Ammo Pack



REV. 07/23

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