



## 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 <sup>1</sup>	I <sub>max</sub> (A)	R <sub>imax</sub> @ 25 °C (Ω)	Max. Load Capacitance @ 240 VAC (μF)	P <sub>max</sub> Typical (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	560				
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					
BN-LG13Y180Mx	18.0	±20 %	3.0	0.360					
BN-LG13Y200Mx	20.0	±20 %	2.8	0.400	470	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.

<sup>1</sup> ±15 % resistance tolerance is available upon request.

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\*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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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

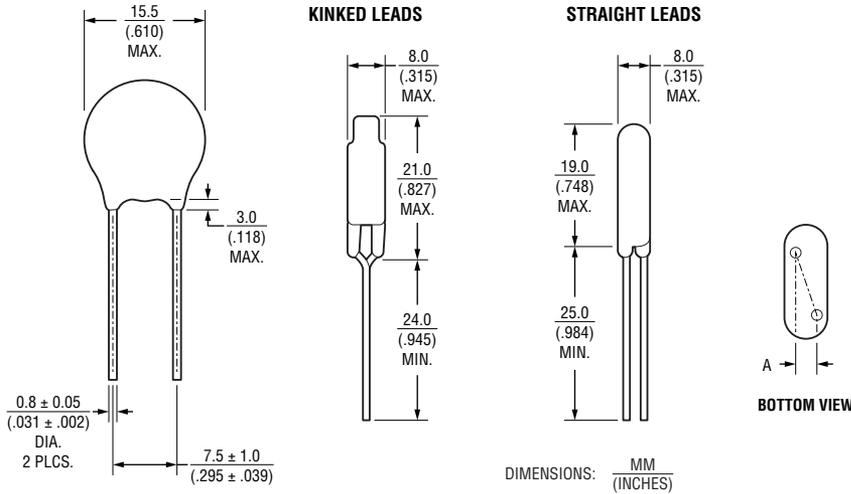
Storage Conditions

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

# BN-LG13Y Series – Power NTC Thermistors for ICL



## Product Dimensions

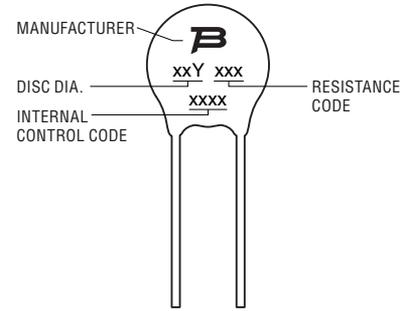


R <sub>25</sub> Ω	A dim.
1.0	$\frac{1.7 \pm 0.8}{(.067 \pm .031)}$
1.3	$\frac{1.9 \pm 0.8}{(.075 \pm .031)}$
2.0	
2.5	
3.0	
4.0	
4.7	

R <sub>25</sub> Ω	A dim.
5.0	$\frac{2.0 \pm 0.8}{(.079 \pm .031)}$
6.0	$\frac{2.2 \pm 0.8}{(.087 \pm .031)}$
7.0	
8.0	
10	
12	
15	$\frac{2.6 \pm 0.8}{(.102 \pm .031)}$

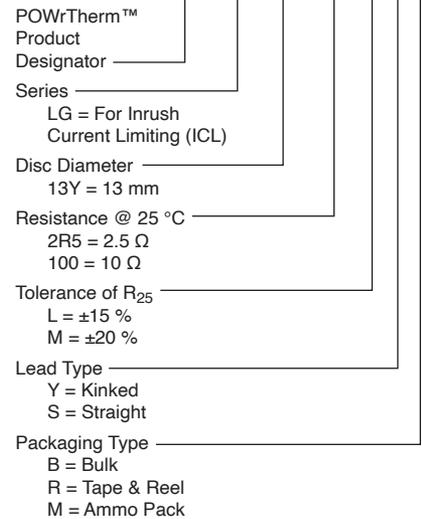
R <sub>25</sub> Ω	A dim.
16	$\frac{2.6 \pm 0.8}{(.102 \pm .031)}$
18	$\frac{2.9 \pm 0.8}{(.114 \pm .031)}$
20	$\frac{2.7 \pm 0.8}{(.106 \pm .031)}$
25	$\frac{3.1 \pm 0.8}{(.122 \pm .031)}$
50	$\frac{2.9 \pm 0.8}{(.114 \pm .031)}$

## Typical Part Marking



## How to Order

**BN - LG 13Y 2R5 M Y B**

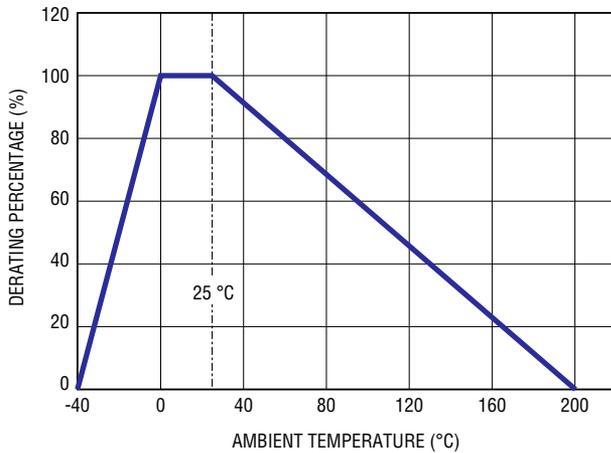


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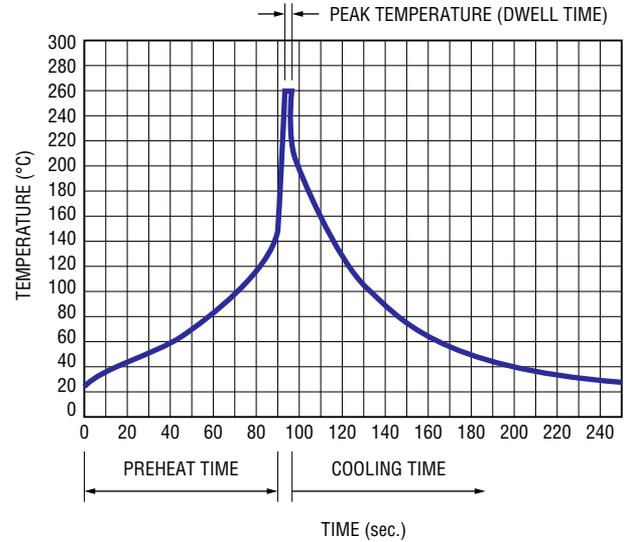
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### I<sub>max</sub> Derating vs. Ambient Temperature Curves



### Solder Reflow Recommendations



### Standard Packaging Quantities

Resistance R <sub>25</sub>	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	

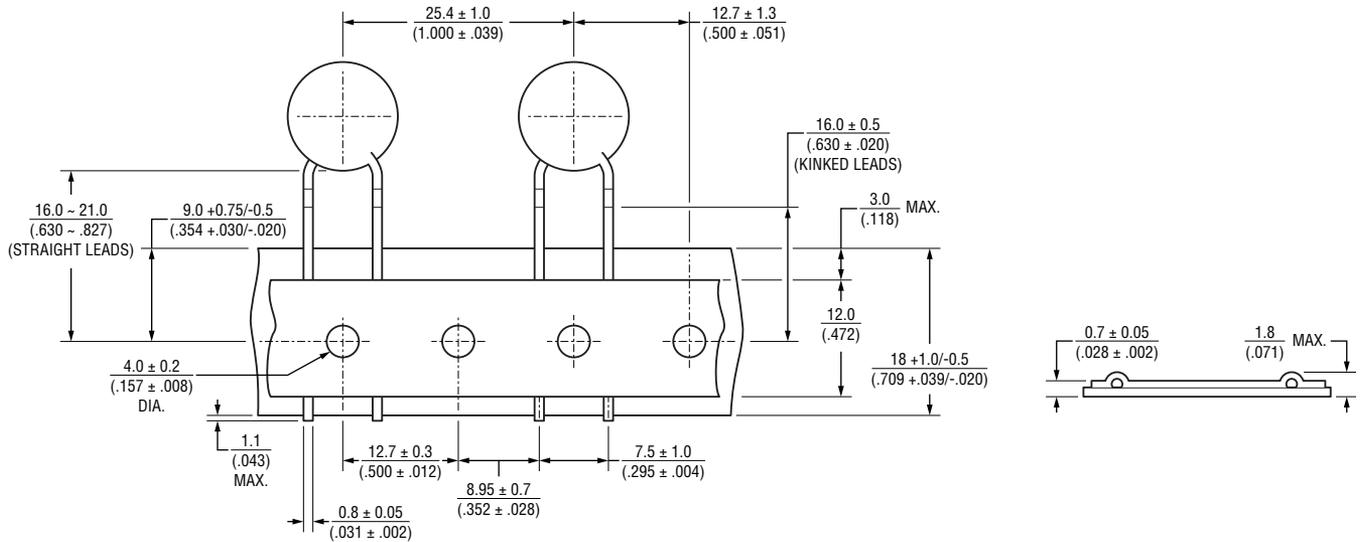
Profile Feature	Pb-Free Assembly
Preheat Temperature Max. (T <sub>smax</sub> )	150 °C
Time (t <sub>s</sub> ) from (T <sub>smin</sub> to T <sub>smax</sub> )	60~90 seconds
Solder Pot Temperature	260 °C max.
Solder Dwell Time	2-3 seconds

# BN-LG13Y Series – Power NTC Thermistors for ICL

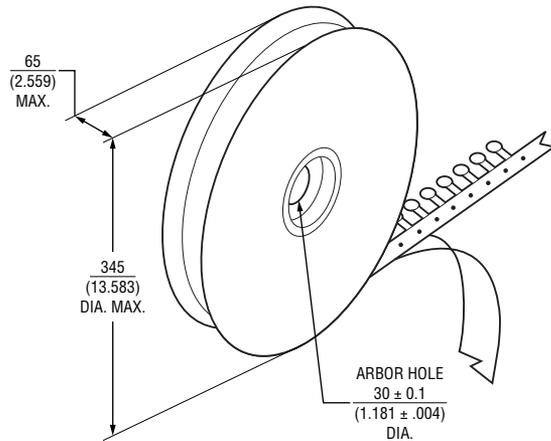


## Packaging Specifications

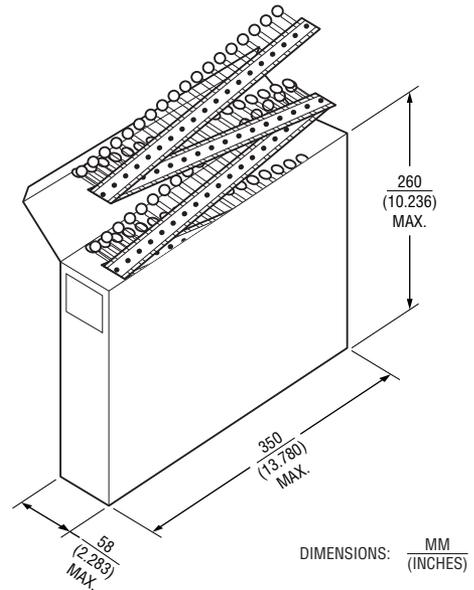
Tape



Reel



Ammo Pack



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