




## 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: 



## BN-LG15Y 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>lmax</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-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	3.7	Approx. 21	Approx. 80	-40 to +200
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					
BN-LG15Y250Mx	25.0	±20 %	3.0	0.415	680				
BN-LG15Y300Mx	30.0	±20 %	3.0	0.449	470				
BN-LG15Y330Mx	33.0	±20 %	3.0	0.452	1000				
BN-LG15Y400Mx	40.0	±20 %	3.0	0.500	680				
BN-LG15Y470Mx	47.0	±20 %	3.0	0.524	1000				
BN-LG15Y800Mx	80.0	±20 %	2.5	0.699	1500				
BN-LG15Y121Mx	120.0	±20 %	2.0	1.042					
BN-LG15Y221Mx	220.0	±20 %	1.0	3.455					

Notes:

"x" denotes lead type. "Y" = Kinked, "S" = Straight.

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



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://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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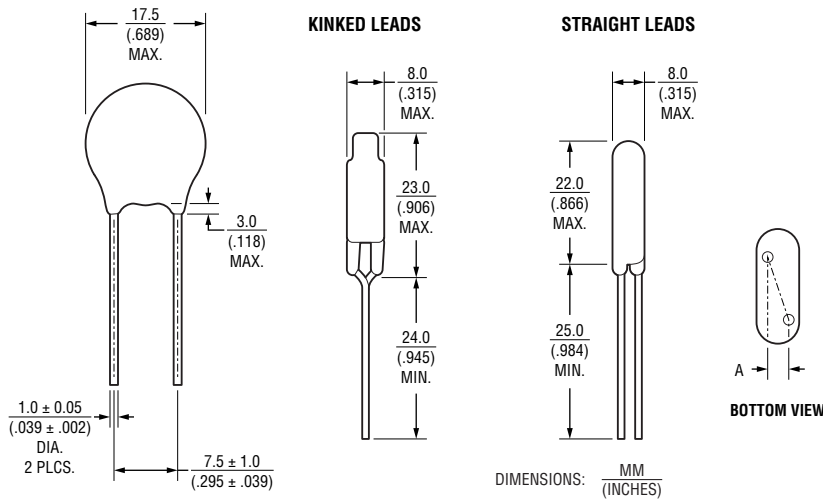


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# BN-LG15Y Series – Power NTC Thermistors for ICL



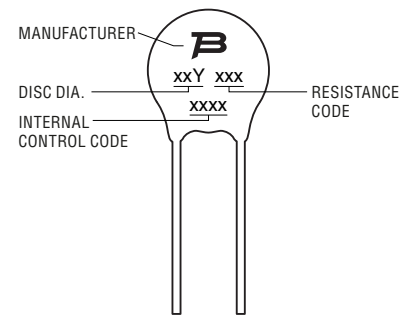
## Product Dimensions



## Agency Recognition

UL US ..... File number: [E307915](#)  
 CSA ..... 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

R <sub>25</sub> Ω	A dim.
0.7	$\frac{2.5 \pm 0.8}{(.098 \pm .031)}$
1.0	
1.3	
1.5	
2.0	$\frac{2.8 \pm 0.8}{(.110 \pm .031)}$
2.5	$\frac{2.5 \pm 0.8}{(.098 \pm .031)}$
3.0	$\frac{2.7 \pm 0.8}{(.106 \pm .031)}$
4.0	$\frac{2.6 \pm 0.8}{(.102 \pm .031)}$
4.7	
5.0	

R <sub>25</sub> Ω	A dim.
6.0	$\frac{2.6 \pm 0.8}{(.102 \pm .031)}$
7.0	$\frac{2.7 \pm 0.8}{(.106 \pm .031)}$
8.0	
10	
12	$\frac{3.2 \pm 0.8}{(.126 \pm .031)}$
15	
16	$\frac{3.6 \pm 0.8}{(.142 \pm .031)}$
18	
20	$\frac{3.8 \pm 0.8}{(.150 \pm .031)}$
22	

R <sub>25</sub> Ω	A dim.
25	$\frac{4.2 \pm 0.8}{(.165 \pm .031)}$
30	$\frac{2.8 \pm 0.8}{(.110 \pm .031)}$
33	$\frac{3.3 \pm 0.8}{(.130 \pm .031)}$
40	$\frac{3.6 \pm 0.8}{(.142 \pm .031)}$
47	
80	$\frac{2.4 \pm 0.8}{(.094 \pm .031)}$
120	$\frac{2.9 \pm 0.8}{(.114 \pm .031)}$
220	$\frac{3.9 \pm 0.8}{(.154 \pm .031)}$

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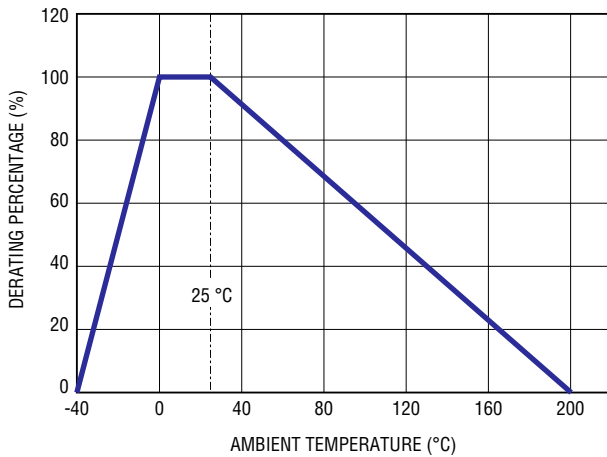
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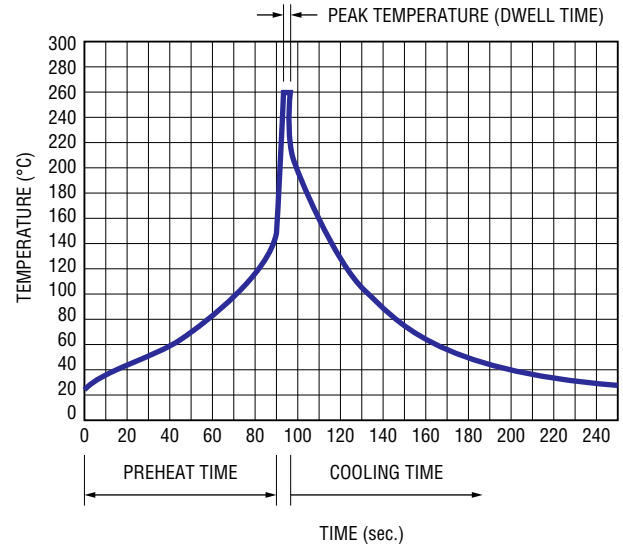
# BN-LG15Y Series – Power NTC Thermistors for ICL



## 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
0R7 ~ 6R0	1,000	750	500
7R0	750		
8R0	1,000	500	
100 ~ 120		750	
150 ~ 160	1,000		
180 ~ 250		750	
300 ~ 330	1,000	500	
400 ~ 470	750		
800 ~ 121	1,000	750	
221	750	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

## 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<sub>25</sub> \_\_\_\_\_  
 L = ±15 %      M = ±20 %

Lead Type \_\_\_\_\_  
 Y = Kinked      S = Straight

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

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