



POWrTherm™ BN-LG20Y Series Features

- Power NTC thermistor for Inrush Current Limiting (ICL)
- 20 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-LG20Y 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-LG20Y0R7Mx | 0.7 | ±20 % | 13 | 0.029 | 1000 | 4.9 | Approx. 28 | Approx. 110 | -40 to +200 |
| BN-LG20Y1R0Mx | 1.0 | ±20 % | 13 | 0.037 | | | | | |
| BN-LG20Y1R3Mx | 1.3 | ±20 % | 10 | 0.042 | | | | | |
| BN-LG20Y1R5Mx | 1.5 | ±20 % | 10.5 | 0.042 | | | | | |
| BN-LG20Y2R0Mx | 2.0 | ±20 % | 10 | 0.059 | | | | | |
| BN-LG20Y2R2Mx | 2.2 | ±20 % | 9.5 | 0.066 | | | | | |
| BN-LG20Y2R5Mx | 2.5 | ±20 % | 9.0 | 0.083 | | | | | |
| BN-LG20Y3R0Mx | 3.0 | ±20 % | 8.5 | 0.076 | | | | | |
| BN-LG20Y4R0Mx | 4.0 | ±20 % | 8.0 | 0.076 | | | | | |
| BN-LG20Y4R7Mx | 4.7 | ±20 % | 7.5 | 0.116 | | | | | |
| BN-LG20Y5R0Mx | 5.0 | ±20 % | 7.5 | 0.118 | | | | | |
| BN-LG20Y6R0Mx | 6.0 | ±20 % | 7.0 | 0.120 | | | | | |
| BN-LG20Y6R8Mx | 6.8 | ±20 % | 6.5 | 0.122 | | | | | |
| BN-LG20Y7R0Mx | 7.0 | ±20 % | 6.5 | 0.124 | | | | | |
| BN-LG20Y8R0Mx | 8.0 | ±20 % | 6.0 | 0.128 | | | | | |
| BN-LG20Y100Mx | 10.0 | ±20 % | 6.0 | 0.135 | | | | | |
| BN-LG20Y120Mx | 12.0 | ±20 % | 5.0 | 0.165 | | | | | |
| BN-LG20Y130Mx | 13.0 | ±20 % | 5.0 | 0.179 | | | | | |
| BN-LG20Y150Mx | 15.0 | ±20 % | 4.5 | 0.255 | | | | | |
| BN-LG20Y160Mx | 16.0 | ±20 % | 4.5 | 0.263 | | | | | |
| BN-LG20Y180Mx | 18.0 | ±20 % | 4.0 | 0.278 | | | | | |
| BN-LG20Y200Mx | 20.0 | ±20 % | 4.0 | 0.308 | | | | | |
| BN-LG20Y121Mx | 120.0 | ±20 % | 2.0 | 1.075 | 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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Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Additional Information

Click these links for more information:

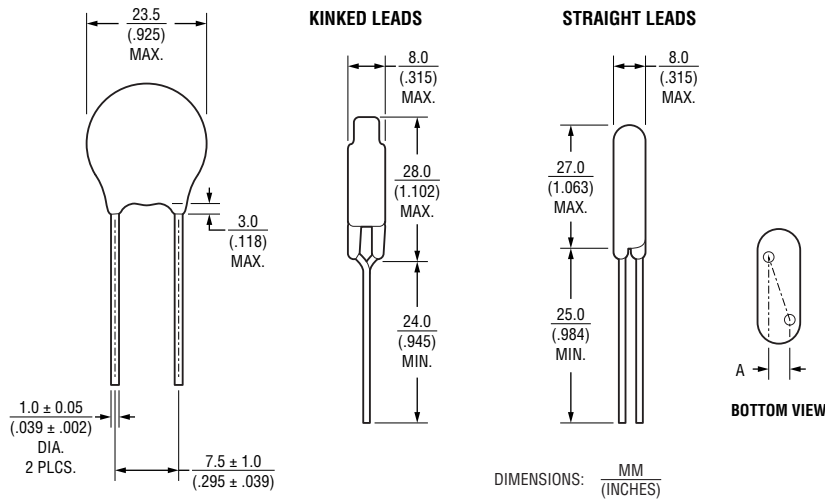


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BN-LG20Y Series – Power NTC Thermistors for ICL

BOURNS®

Product Dimensions



| R ₂₅ Ω | A dim. |
|-------------------|---------------------------------------|
| 0.7 | $\frac{2.4 \pm 0.8}{(.094 \pm .031)}$ |
| 1.0 | $\frac{2.6 \pm 0.8}{(.102 \pm .031)}$ |
| 1.3 | |
| 1.5 | |
| 2.0 | $\frac{3.1 \pm 0.8}{(.122 \pm .031)}$ |
| 2.5 | $\frac{2.6 \pm 0.8}{(.102 \pm .031)}$ |
| 3.0 | |
| 4.0 | |

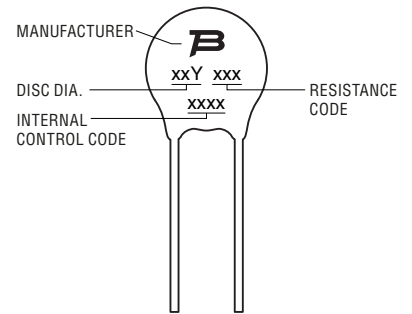
| R ₂₅ Ω | A dim. |
|-------------------|---------------------------------------|
| 4.7 | $\frac{2.7 \pm 0.8}{(.106 \pm .031)}$ |
| 5.0 | |
| 6.0 | $\frac{2.6 \pm 0.8}{(.102 \pm .031)}$ |
| 6.8 | |
| 7.0 | $\frac{2.7 \pm 0.8}{(.106 \pm .031)}$ |
| 8.0 | $\frac{3.0 \pm 0.8}{(.118 \pm .031)}$ |
| 10 | $\frac{3.2 \pm 0.8}{(.126 \pm .031)}$ |
| 12 | $\frac{3.6 \pm 0.8}{(.142 \pm .031)}$ |

| R ₂₅ Ω | A dim. |
|-------------------|---------------------------------------|
| 13 | $\frac{3.6 \pm 0.8}{(.142 \pm .031)}$ |
| 15 | |
| 16 | |
| 18 | |
| 20 | $\frac{2.9 \pm 0.8}{(.114 \pm .031)}$ |
| 120 | $\frac{3.8 \pm 0.8}{(.150 \pm .031)}$ |

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

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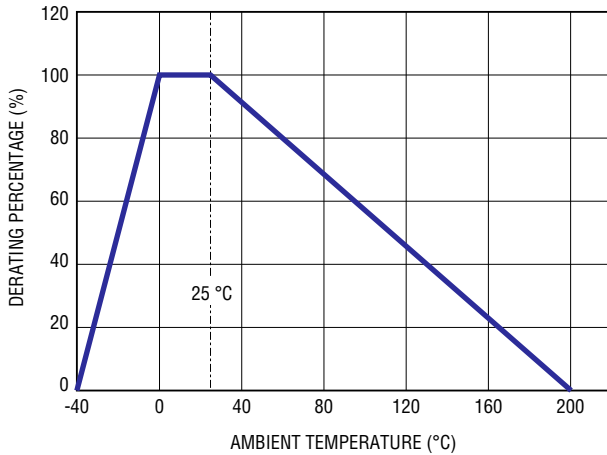
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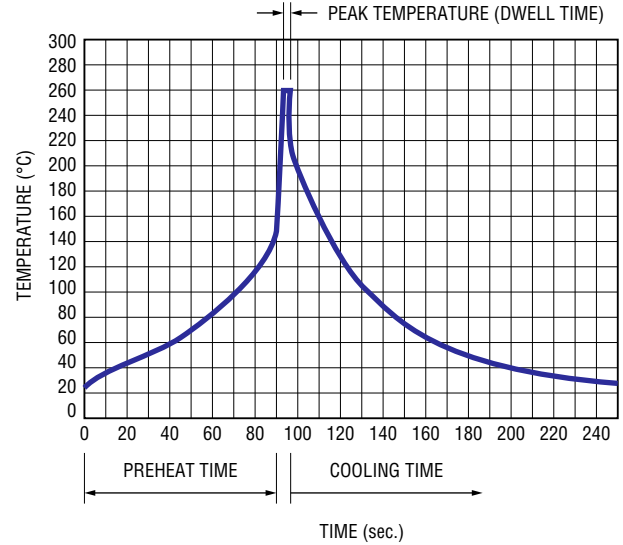
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I_{max} Derating vs. Ambient Temperature Curves



Solder Reflow Recommendations



Standard Packaging Quantities

| Resistance R ₂₅ | Packaging Type | | |
|----------------------------|----------------|-----------------------|--------------------|
| | Bulk pcs./box | Tape & Reel pcs./reel | Ammo Pack pcs./box |
| 0R7 ~ 200 | 750 | 500 | 500 |
| 121 | 450 | | |

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

How to Order

BN - LG 20Y 2R5 M Y B

POW^{er}Therm™ Product Designator _____

Series _____
 LG = For Inrush Current Limiting (ICL)

Disc Diameter _____
 20Y = 20 mm

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

Tolerance of R₂₅ _____
 L = ±15 % M = ±20 %

Lead Type _____
 Y = Kinked S = Straight

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

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