



Features

- SMD NTC thermistor for thermal sense
- Highly stable electrical characteristics
- Highly reliable structure
- Operating temperature: -40 °C to +125 °C
- Agency recognition:
- RoHS compliant* and halogen free**

Applications

- Battery packs
- NBPC, smartphones
- LED display, lighting
- Communication equipment
- AC adapters
- OA equipment

BTN04G Series – SMD NTC Thermistor for Thermal Sense

Electrical Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Bourns Part No.	Resistance @ 25 °C (Ω)	Resistance Tolerance	B Value 25/50 °C	B Value 25/85 °C	B Value Tolerance	Dissipation Factor σ (mW/°C)	Thermal Time Constant (sec.)	Max. Power Rating @ 25 °C (mW)	Operating Temperature Range (°C)																				
BTN04G103F3HFT00	10k	±1 %	3380	(3435)	±1 %	Approx. 1.7	Approx. 3.0	170	-40 to +125																				
BTN04G103G3HFT00		±2 %																											
BTN04G103H3HFT00		±3 %																											
BTN04G103J3HFT00		±5 %																											
BTN04G103F3TFT00	10k	±1 %	3900	(3970)						±1 %	Approx. 1.7	Approx. 3.0	170	-40 to +125															
BTN04G103G3TFT00		±2 %																											
BTN04G103H3TFT00		±3 %																											
BTN04G103J3TFT00		±5 %																											
BTN04G333F4AFT00	33k	±1 %	4050	(4100)											±1 %	Approx. 1.7	Approx. 3.0	170	-40 to +125										
BTN04G333G4AFT00		±2 %																											
BTN04G333H4AFT00		±3 %																											
BTN04G333J4AFT00		±5 %																											
BTN04G473F4AFT00	47k	±1 %	4050	(4100)																±1 %	Approx. 1.7	Approx. 3.0	170	-40 to +125					
BTN04G473G4AFT00		±2 %																											
BTN04G473H4AFT00		±3 %																											
BTN04G473J4AFT00		±5 %																											
BTN04G104F4EFT00	100k	±1 %	4250	(4300)																					±1 %	Approx. 1.7	Approx. 3.0	170	-40 to +125
BTN04G104G4EFT00		±2 %																											
BTN04G104H4EFT00		±3 %																											
BTN04G104J4EFT00		±5 %																											

How to Order

BTN 04 G 103 F 3H F TXX

Series Code _____

Product Size (EIA) _____
04 = 0402

Grade _____
G = General

Resistance / R25 _____
103 = 10k Ω 473 = 47k Ω
333 = 33k Ω 104 = 100k Ω

Tolerance / R25 _____
F = ±1 % H = ±3 %
G = ±2 % J = ±5 %

B Value (K) _____
3A = 3000-3050 4A = 4000-4050
3B = 3051-3100 4B = 4051-4100
3D = 3151-3200 4D = 4151-4200
3E = 3201-3250 4E = 4201-4250
3H = 3351-3400 4H = 4351-4400
3J = 3401-3450 4J = 4401-4450
3T = 3851-3900 4T = 4851-4900
3U = 3901-3950 4U = 4901-4950

B Tolerance _____
F = ±1 % H = ±3 % G = ±2 % J = ±5 %

Internal Code _____

Additional Information

Click these links for more information:



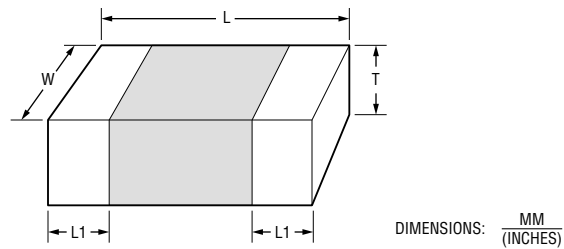
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

* 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.
Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

BTN04G Series – SMD NTC Thermistor for Thermal Sense

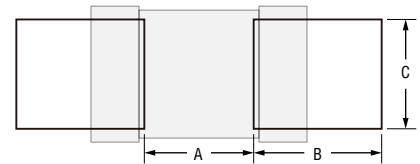
BOURNS®

Product Dimensions



Size (EIA)	L	W	T	L1
BTN04 (0402)	1.00 ± 0.15 (.039 $\pm$.006)	0.50 ± 0.15 (.020 $\pm$.006)	0.50 ± 0.10 (.020 $\pm$.004)	0.25 ± 0.10 (.010 $\pm$.004)

Recommended Pad Layout



A	B	C
0.50 (.020)	0.60 (.024)	0.51 (.020)

Environmental Characteristics

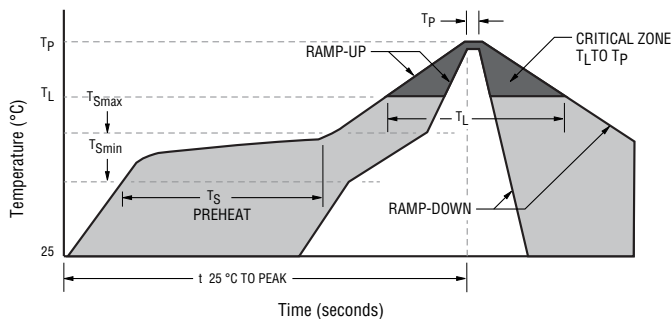
Storage Conditions

Temperature.....+15 °C to +40 °C
Humidity..... 20 % to 70 %

Agency Recognition

Description	
UL	E307915
TÜV	R50648033 (EN60539-1,-2)

Solder Reflow Recommendations



A	Stage 1 Preheat Ramp	Ambient to Preheating Temperature	3 °C/s max.
B	Stage 2 Preheat	Preheat Min./Max. Temperature Range	150 °C to 200 °C 60 s to 180 s
C	Stage 3 Preheat to Main Heating	Max. Time Above Stated Temperature	217 °C 60 s to 150 s
D	Main Heating	Max. Time Within 5 °C of Peak Temperature (260 °C)	255 °C 20 s to 40 s
E	Cool Down	Rate from Peak Temperature	6 °C/s max.

CAUTION:

- This product can be damaged by rapid heating, cooling or localized heating.
- Heat shocks should be avoided. Preheating and gradual cooling recommended.
- Solder gun tip temperature should be kept below 280 °C and should not touch the device directly. Contact should be less than 3 seconds. A solder gun under 30 watts is recommended.
- Excess solder volume can damage the body of the product.

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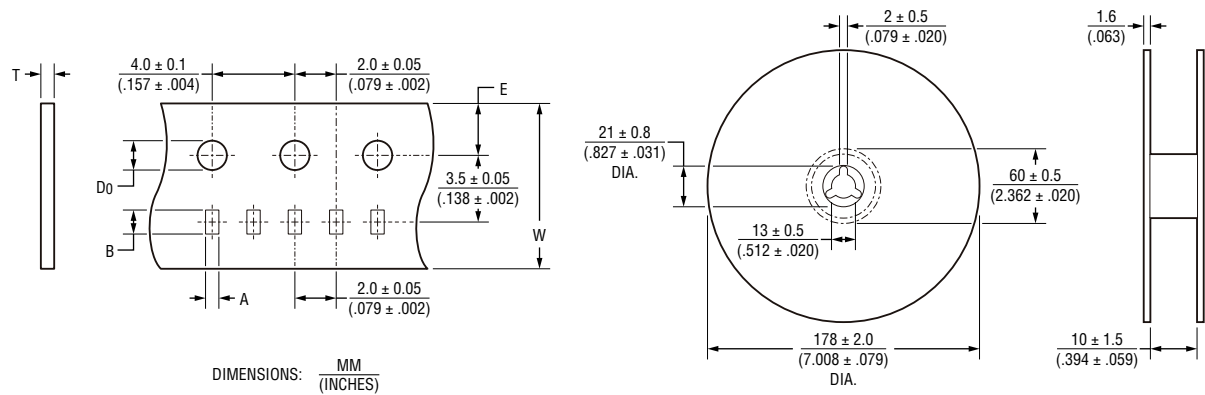
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BTN04G Series – SMD NTC Thermistor for Thermal Sense

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Packaging Information



Size (EIA)	A	B	W	E	D ₀	T Max.
BTN04 (0402)	0.38 ± 0.1 (.015 ± .004)	0.68 ± 0.1 (.027 ± .004)	8.0 ± 0.03 (.315 ± .001)	1.75 ± 0.10 (.069 ± .004)	1.55 ± 0.05 (.061 ± .002)	1.1 (.043)

Number of Packages

Pcs. / Reel	Reel / Box	Pcs. / Box
10,000	5	50,000

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