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Vishay BCcomponents

NTC Thermistors, Standard Lug Sensors





LINKS TO ADDITIONAL RESOURCES









| QUICK REFERENCE DATA | | | | | | |
|---|----------------|-----------------|--|--|--|--|
| PARAMETER | VALUE | UNIT | | | | |
| Resistance value at 25 °C (1) | 4.7K to 100K | Ω | | | | |
| Tolerance on R ₂₅ -value ⁽¹⁾ | ± 1 to ± 5 | % | | | | |
| B _{25/85} -value ⁽¹⁾ | 3435 to 4190 | K | | | | |
| Tolerance on B _{25/85} -value | ± 0.5 to ± 1.5 | % | | | | |
| Operating temperature range at: | °C | | | | | |
| Zero dissipation | -40 to +150 | 1 .0 | | | | |
| Dissipation factor (2) | ≈ 23 | mW/K | | | | |
| Thermal time constant (2) | ≈ 7.5 | S | | | | |
| Min. dielectric withstanding voltage between terminals and lug | 1500 | V _{AC} | | | | |
| Min. insulation resistance between terminals and lug at 500 V _{DC} | 100 | МΩ | | | | |
| Climatic category (LCT / UCT / days) | 40 / 150 / 56 | | | | | |
| Weight | 1.5 to 2.3 | g | | | | |

Notes

- (1) Other R₂₅-values, B_{25/85}-values, and tolerances are available upon request
- (2) Measured with screw mounted on an aluminum heatsink of $100~\text{cm}^2$, thickness 1.5 mm, in still air at T_{amb} = +25 °C

AGENCY APPROVALS

- cUL certificate XGPU8.E148885
- ULus certificate XGPU2.E148885

Note

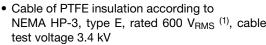
 Agency approval documents, please see: www.vishav.com/ppg?29092&documents

DESIGN-IN SUPPORT

- Other resistance curves and tolerances are available on request
- Consult Vishay for other lead length, other connector crimping, or other features
 - https://info.vishay.com/vishay-ntc-modification-request
- 3D solid models: www.vishay.com/doc?29144
- NTC curve computation: <u>www.vishay.com/thermistors/ntc-rt-calculator/</u>

FEATURES

- · Easy mounting using ring tongue terminal
- Rugged construction





• AEC-Q200 qualified (grade 1)

- cULus recognized, file E148885 (UL category XGPU2/XGPU8)
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

Note

(1) Formerly MIL-W-16878/4, type E

APPLICATIONS

Suitable for surface sensing applications, especially when a good electrical insulation and a good thermal contact with the chassis is required.

DESCRIPTION

A NTC thermistor chip is soldered to AWG#24 stranded silver plated copper leads with PTFE insulation and insulated with epoxy coating. The insulated sensor is attached to a tin plated copper ring lug. The lead wires are stripped, twisted and dipped in a tin-silver solder alloy.

PACKAGING

The thermistors are packed in cardboard boxes; the smallest packaging quantity is 500 units.

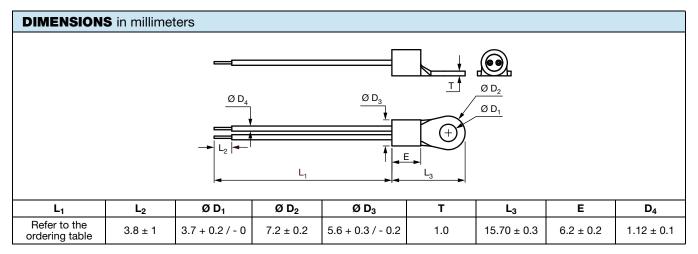
CAUTIONS AND WARNINGS ON MOUNTING AND HANDLING

Please read the special instructions: see www.vishav.com/doc?29221.

- By means of M3 (stud #3, #4) or M3,5 (stud #5, #6) screw.
 Leads to be soldered or crimped
- The device is suitable for screwing e.g. on metal surface
- The leads are suitable for soldering e.g. on PCB



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| ELECTRICAL DATA AND ORDERING INFORMATION | | | | | | | | | |
|--|------------------------------------|---------------------------|----------------------|-------------------|---|-------------------|--------------------------------------|--------------------|--|
| | P | | B _{25/85} - | ÖL. (mm) | DESCRIPTION | UL RECOG. c | SAP MATERIAL AND ORDERING NUMBER | | |
| | R ₂₅ - TOL. (± %) | B _{25/85} (K) | TOL. (± %) | | | | RoHS-COMPLIANT WITH EXEMPTION (1) | RoHS-COMPLIANT | |
| 4700 | 3 | 3984 | 0.5 | 38.1 ± 3.8 | NTC Lug01 4.7K 3 % 3984K PTFE AWG#24 38 mm | | NTCALUG01A472H | NTCALUG01A472HA | |
| 10 000 | 1 | 3435 | 1 | 38.1 ± 3.8 | NTC Lug01 10K 1 % 3435K PTFE AWG#24 38 mm | ✓ | NTCALUG01A103FL | NTCALUG01A103FLA | |
| 10 000 | 1 | 3984 | 0.5 | 38.1 ± 3.8 | NTC Lug01 10K 1 % 3984K PTFE AWG#24 38 mm | √ | NTCALUG01A103F | NTCALUG01A103FA | |
| 10 000 | 1 | 3984 | 0.5 | 80 ± 5 | NTC Lug01 10K 1 % 3984K PTFE AWG#24 80 mm | √ | NTCALUG01A103F800 | NTCALUG01A103F800A | |
| 10 000 | 1 | 3435 | 1 | 80 ± 5 | NTC Lug01 10K 1 % 3435K PTFE AWG#24 80 mm | √ | NTCALUG01A103F800L | NTCALUG01A103F804A | |
| 10 000 | 1 | 3984 | 0.5 | 160 + 10 / - 5 | NTC Lug01 10K 1 % 3984K PTFE AWG#24 160 mm | ✓ | NTCALUG01A103F161 | NTCALUG01A103F161A | |
| 10 000 | 1 | 3435 | 1 | 160 + 10 / - 5 | NTC Lug01 10K 1 % 3435K PTFE AWG#24 160 mm | √ | NTCALUG01A103F161L | NTCALUG01A103F165A | |
| 10 000 | 2 | 3984 | 0.5 | 38.1 ± 3.8 | NTC Lug01 10K 2 % 3984K PTFE AWG#24 38 mm | √ | NTCALUG01A103G | NTCALUG01A103GA | |
| 10 000 | 3 | 3984 | 0.5 | 38.1 ± 3.8 | NTC Lug01 10K 3 % 3984K PTFE AWG#24 38 mm | √ | NTCALUG01A103H | NTCALUG01A103HA | |
| 10 000 | 5 | 3984 | 0.5 | 38.1 ± 3.8 | NTC Lug01 10K 5 % 3984K PTFE AWG#24 38 mm | √ | NTCALUG01A103J (2) | NTCALUG01A103JA | |
| 47 000 | 3 | 4090 | 1.5 | 38.1 ± 3.8 | NTC Lug01 47K 3 % 4090K PTFE AWG#24 38 mm | | NTCALUG01A473H | NTCALUG01A473HA | |
| 100 000 | 1 | 4190 | 1.5 | 38.1 ± 3.8 | NTC Lug01 100K 1 % 4190K PTFE AWG#24 38 mm | | NTCALUG01A104F | NTCALUG01A104FA | |
| 100 000 | 2 | 4190 | 1.5 | 38.1 ± 3.8 | NTC Lug01 100K 2 % 4190K PTFE AWG#24 38 mm | | NTCALUG01A104G | NTCALUG01A104GA | |

Notes

Preferred versions for new designs

⁽¹⁾ RoHS exemption 7(c)-I: electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezo-electronic devices, or in a glass or ceramic matrix compound

⁽²⁾ NTCALUG01A103J identical to NTCALUGE2C90169 = 2381 645 90169



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