NTC Thermistors, Standard Lug Sensors

LINKS TO ADDITIONAL RESOURCES

3D Models | Design Tools | SPICE Models | Related Documents

QUICK REFERENCE DATA		
PARAMETER	VALUE	UNIT
Resistance value at 25 °C (1)	10K	Ω
Tolerance on R_{25}-value (1)	± 2 to ± 3	%
$B_{25/85}$-value (1)	3435 to 3984	K
Tolerance on $B_{25/85}$-value	± 0.5 to ± 1	%
Operating temperature range at: Zero dissipation	 -40 to +150	°C
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	MΩ
Climatic category (LCT / UCT / days)	40 / 150 / 56	
Weight	1.6 to 4.3	g

Notes

(1) Other R_{25}-values, $B_{25/85}$-values, and tolerances are available upon request

(2) Measured with screw mounted on an aluminum heatsink of 100 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.vishay.com/ppg?29194&documents

FEATURES

Pb-free Available

e4

RoHS COMPLIANT

- Easy mounting using ring tongue terminal
- Rugged construction
- Cable of PTFE insulation according to NEMA HP-3, type E, rated 600 V_{RMS} (1)
- AEC-Q200 qualified (grade 1)
- cULus recognized, file E148885 (UL category XGPU2/XGPU8)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Note

(1) Formerly MIL-W-16878/4, type E, cable test voltage 3.4 kV

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.

PACKAGING

The thermistors are packed in cardboard boxes.

CAUTIONS AND WARNINGS ON MOUNTING AND HANDLING

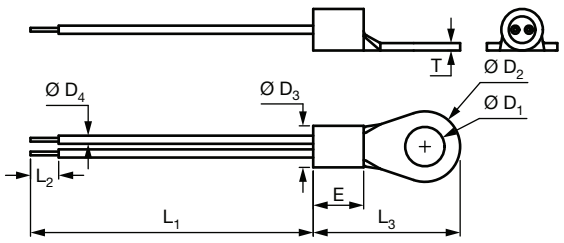
Please read the special instructions:
see www.vishay.com/doc?29221

- By means of M5 (stud #10) 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

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?29199
- NTC curve computation: www.vishay.com/thermistors/ntc-rt-calculator/

DIMENSIONS in millimeters



L_1	L_2	Ø D_1	Ø D_2	Ø D_3	T	L_3	E	D_4
Refer to the ordering table	2.5 ± 1	5.3 +0.2 / -0	9.5 ± 0.2	5.6 +0.3 / -0.2	1.0	19.8 ± 0.4	6.8 ± 0.3	1.12 ± 0.1

ELECTRICAL DATA AND ORDERING INFORMATION

R_{25} (Ω)	R_{25}-TOL. (± %)	$B_{25/85}$ (K)	$B_{25/85}$-TOL. (± %)	L_1 (mm)	DESCRIPTION	UL RECOG.	SAP MATERIAL AND ORDERING NUMBER	
							RoHS-COMPLIANT WITH EXEMPTION (1)	RoHS-COMPLIANT
10 000	2	3984	0.5	38.1 ± 3.8	NTC Lug54 M5 10K 2 % 3984 K PTFE AWG#24 38 mm	✓	NTCALUG54A103G	NTCALUG54A103GA
10 000	2	3435	1	38.1 ± 3.8	NTC Lug54 M5 10K 2 % 3435 K PTFE AWG#24 38 mm	✓	NTCALUG54A103GL	NTCALUG54A103GLA
10 000	2	3984	0.5	350 +10 / -5	NTC Lug54 M5 10K 2 % 3984 K PTFE AWG#24 350 mm	✓	NTCALUG54A103G351	NTCALUG54A103G351A
10 000	3	3984	0.5	150 +10 / -5	NTC Lug54 M5 10K 3 % 3984 K PTFE AWG#24 150 mm	✓	NTCALUG54A103H151	NTCALUG54A103H151A

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

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