

NTC Thermistors, Standard Lug Sensors



DESIGN SUPPORT TOOLS

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3D
Models
Available


Design Tools
Available

- SPICE models available: www.vishay.com/doc?29178
- NTC curve computation:
www.vishay.com/thermistors/ntc-curve-list/

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 cm², thickness 1.5 mm, in still air at T_{amb} = 25 °C

FEATURES

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



RoHS
COMPLIANT

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

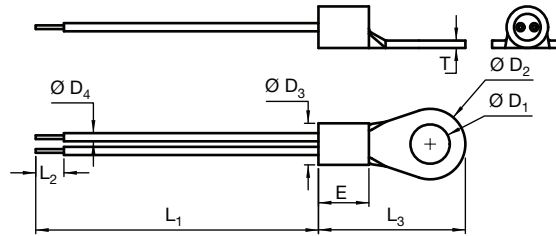
A NTC thermistor chip is soldered to AWG#24 stranded silver plated copper leads with PTFE insulation and insulated with epoxy coating. The insulated sensor is attached to a tin plated copper ring lug. The lead wires are stripped.

PACKAGING

The thermistors are packed in cardboard boxes.

MOUNTING

- 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
- Consult Vishay for other cable length, cable section, screw sizes, insulation, connector crimping, or other features

DIMENSIONS in millimeters


L_1	L_2	$\varnothing D_1$	$\varnothing D_2$	$\varnothing D_3$	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. (\pm %)	$B_{25/85}$ (K)	$B_{25/85}$ -TOL. (\pm %)	L_1 (mm)	DESCRIPTION	SAP MATERIAL AND ORDERING NUMBER		UL REC. (Y / N)
						WITH RoHS EXEMPTION ⁽¹⁾	WITHOUT RoHS EXEMPTION ⁽¹⁾	
10 000	2	3984	0.5	38.1 ± 3.8	NTC Lug54 M5 10K 2 % 3984 K PTFE AWG#24 38 mm	NTCALUG54A103G	NTCALUG54A103GA	Y
10 000	2	3435	1	38.1 ± 3.8	NTC Lug54 M5 10K 2 % 3435 K PTFE AWG#24 38 mm	NTCALUG54A103GL	NTCALUG54A103GLA	Y
10 000	2	3984	0.5	$350 +10 / -5$	NTC Lug54 M5 10K 2 % 3984 K PTFE AWG#24 350 mm	NTCALUG54A103G351	NTCALUG54A103G351A	Y
10 000	3	3984	0.5	$150 +10 / -5$	NTC Lug54 M5 10K 3 % 3984 K PTFE AWG#24 150 mm	NTCALUG54A103H151	NTCALUG54A103H151A	Y

Note

⁽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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