

NTC Thermistors, Insulated Rugged



LINKS TO ADDITIONAL RESOURCES



QUICK REFERENCE DATA		
PARAMETER	VALUE	UNIT
Resistance value at 25 °C	10 000	Ω
Tolerance on R_{25} -value	± 1	%
$B_{25/85}$ -value	3984	K
Tolerance on $B_{25/85}$ -value	± 0.5	%
Operating temperature range at zero dissipation	-55 to +185 (100 h at 200 °C)	°C
Maximum power dissipation at 55 °C	100	mW
Minimum dielectric strength between end terminals, wire insulation and / or epoxy bead (in metal balls / 0.5 mA max. / 25 °C / t = 60 s)	3750	V
Dissipation factor δ (for information only)	8	mW/K
Response time (in oil at 85 °C)	3	s
Weight	≈ 0.25	g

DESIGN-IN SUPPORT

For complete curve computation, please visit:
www.vishay.com/thermistors/ntc-curve-list/

FEATURES

- Rigid silver plated AWG #22 copper lead wire for special mounting in assembly requirements, customizable in length and packaging
- Best accuracy at 25 °C: ± 0.2 °C
- Electrical features of “accuracy line” sensors
- Mounting: radial insulated leads
- AEC-Q200 qualified (rev. E), SVHC, and RoHS-compliant
- Smallest head diameter compatible with insulation level, with response time in oil around 3 s
- Compatible with any device requiring the IP67 compliance
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



APPLICATIONS

Temperature measurement sensing and control in automotive and industrial applications, like charging sockets for electrical vehicles, battery packs, and motors in robotics and automation applications.

DESCRIPTION

These negative temperature coefficients thermistors consist of a temperature sensitive ceramic die between two AWG #22 7 strands PEEK insulated silver plated copper leads and coated with black colored epoxy. High adhesive strength between PEEK wire and encapsulating lacquer.

PACKAGING

The components are supplied in bulk (plastic bags of 100 pieces) and, on request, can also be delivered on cardboard strips.

MARKING

The component is not marked.

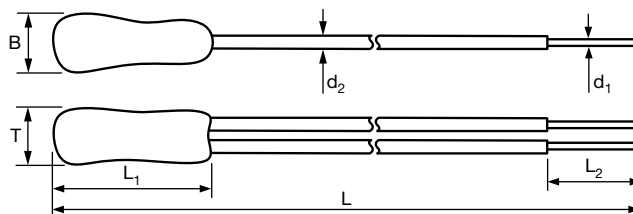
MOUNTING

Important mounting and handling instructions: see www.vishay.com/doc?29222

By soldering or crimping the wire end in any position. During manipulation, do not apply more than 3 N peeling force on the wires. If higher forces are required, a suitable high temperature shrink tube can be applied on the lead wires, just below the coating body. The body can be inserted in a tube, free in air, tape attached or glued.

The full lead (Pb)-free version is limited to 210 °C effectively applied at die level, during potting, molding, or reflow soldering. The RoHS version with exemption is limited to 290 °C effectively seen at die level.

Intended for time limited fluid immersion (1000 h in salt water with electrical bias). Can be potted, molded in suitable designs.

DIMENSIONS in millimeters


MODEL	T	B	L	L ₁	L ₂	Ø d ₂ MAX.	Ø d ₁
NTCLE322E4103F042(A)	4.5 max.	4.5 max.	42 ± 2	8 ± 2	8 ± 1	1.62 max.	AWG22 7 strands
NTCLE322E4103F075(A)	4.5 max.	4.5 max.	75 ± 2	8 ± 2	8 ± 1	1.62 max.	AWG22 7 strands

ELECTRICAL DATA AND ORDERING INFORMATION

R_{25} (Ω)	R_{25} -TOL. (± %)	$B_{25/85}$ (K)	$B_{25/85}$ -TOL. (± %)	SAP MATERIAL AND ORDERING NUMBER	
				FULLY LEAD (Pb)-FREE; RoHS-COMPLIANT WITHOUT CALLING ANY EXEMPTION	RoHS-COMPLIANT WITH EXEMPTION ⁽¹⁾
10 000	1	3984	0.5	NTCLE322E4103F042A	NTCLE322E4103F042
10 000	1	3984	0.5	NTCLE322E4103F075A	NTCLE322E4103F075

Notes

Preferred versions for new designs

⁽¹⁾ RoHS-compliant making use of Exemption 7(a)-III for lead in high-melting-temperature solders (≥ 85 wt.% Pb), where technically justified



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