NTC Thermistors, 2-Point Mini Chip Sensor, Flexible Leads

QUICK REFERENCE DATA		
PARAMETER	VALUE	UNIT
Resistance value at 25 °C	3K to 10K	Ω
Tolerance on R_{25}-value	± 2.18	%
$B_{25/85}$-value	3977	K
Tolerance on $B_{25/85}$-value	± 0.75	%
Operating temperature range at zero dissipation	- 40 to + 125	°C
Accuracy for T measured between 0 °C and 50 °C	± 0.5	°C
Maximum power dissipation at 55 °C	100	mW
Minimum dielectric withstanding voltage (RMS) between leads and coating	500	V
Climatic category (LCT/UCT/days)	40/125/56	
Weight	≈ 0.2	g

FEATURES

- Accuracy of 0.5 °C between 0 °C and 50 °C
- Small diameter
- High stability over a long life
- Long and flexible leads for special mounting or assembly requirements
- AEC-Q200 qualified
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

AUTOMOTIVE GRADE

RoHS COMPLIANT

APPLICATIONS

- Temperature measurement, sensing and control in automotive, industrial and consumer electronic equipment

DESCRIPTION

These negative temperature ceofficient thermistors consist of a mini-chip soldered between two EFTE insulated (LE300) or non-insulated (LE201) nickel leads and coated with a solid ochre epoxy lacquer.

PACKAGING

The thermistors are packed in cardboard boxes; the smallest packing quantity is 1000 units.

MARKING

The body is colored with ochre lacquer and not marked.

MOUNTING

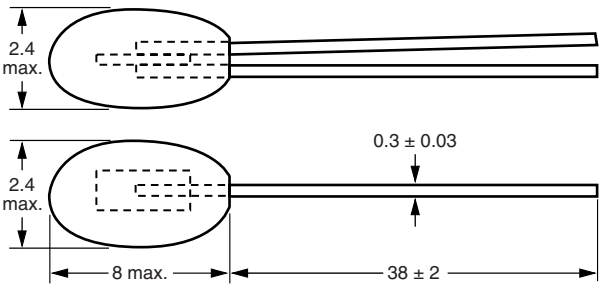
By soldering in any position.

ELECTRICAL DATA AND ORDERING INFORMATION

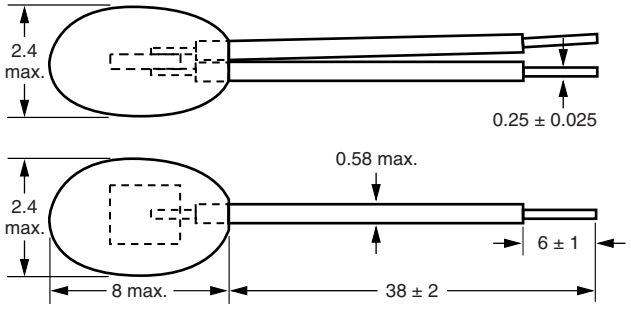
R_{25}-VALUE (kΩ)	$B_{25/85}$-VALUE (K)	SAP MATERIAL AND ORDERING NUMBER NTCLE201E3...	OLD 12NC CODE 2381 645....
3	3977	302SB	10302
5	3977	502SB	10502
10	3977	103SB	10103
R_{25}-VALUE (kΩ)	$B_{25/85}$-VALUE (K)	SAP MATERIAL AND ORDERING NUMBER NTCLE300E3...	OLD 12NC CODE 2381 645....
3	3977	302SB	20302
5	3977	502SB	20502
10	3977	103SB	20103

DIMENSIONS in millimeters

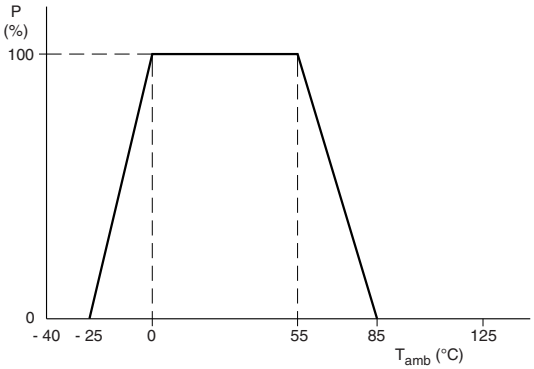
Component outline for NTCLE201E3...



Component outline for NTCLE300E3...



DERATING



Power derating curve

Note

- Zero power is considered as measuring power max. 1 % of max. power

RESISTANCE VALUES AT INTERMEDIATE TEMPERATURES

T_{OPER} (°C)	R_T/R_{25}	ΔT (K)	TCR (%/K)	R_{25}-VALUE (kΩ) NTCLE201E3...SB OR NTCLE300E3...SB		
				302	502	103
- 40	33.21	0.68	6.57	99.63	166.1	332.1
- 35	23.99	0.66	6.36	71.97	120.0	239.9
- 30	17.52	0.64	6.15	52.56	87.60	175.2
- 25	12.93	0.62	5.95	38.79	64.65	129.3
- 20	9.636	0.59	5.76	28.91	48.18	96.36
- 15	7.250	0.57	5.58	21.75	36.25	72.50
- 10	5.505	0.55	5.40	16.51	27.52	55.05
- 5	4.216	0.52	5.24	12.65	21.08	42.16
0	3.255	0.50	5.08	9.766	16.28	32.56
5	2.534	0.50	4.92	7.602	12.67	25.34
10	1.987	0.50	4.78	5.962	9.936	19.87
15	1.570	0.50	4.64	4.710	7.849	15.70
20	1.249	0.50	4.50	3.746	6.244	12.49
25	1.000	0.50	4.37	3.000	5.000	10.00
30	0.8059	0.50	4.25	2.418	4.030	8.059
35	0.6535	0.50	4.13	1.960	3.267	6.535
40	0.5330	0.50	4.02	1.599	2.665	5.330
45	0.4372	0.50	3.91	1.312	2.186	4.372
50	0.3605	0.50	3.80	1.082	1.803	3.606
55	0.2989	0.55	3.70	0.8966	1.494	2.989
60	0.2490	0.61	3.60	0.7470	1.245	2.490
65	0.2084	0.66	3.51	0.6253	1.042	2.084
70	0.1753	0.72	3.42	0.5259	0.8765	1.753
75	0.1481	0.77	3.33	0.4443	0.7405	1.481
80	0.1256	0.83	3.25	0.3769	0.6282	1.256
85	0.1070	0.89	3.16	0.3211	0.5352	1.070
90	0.09154	0.95	3.09	0.2746	0.4577	0.9154
95	0.07860	1.02	3.01	0.2358	0.3930	0.7860
100	0.06773	1.08	2.94	0.2032	0.3387	0.6773
105	0.05858	1.14	2.87	0.1757	0.2929	0.5858
110	0.05083	1.21	2.80	0.1525	0.2542	0.5083
115	0.04426	1.27	2.73	0.1328	0.2213	0.4426
120	0.03866	1.34	2.67	0.1160	0.1933	0.3866
125	0.03387	1.41	2.61	0.1016	0.1694	0.3387

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