

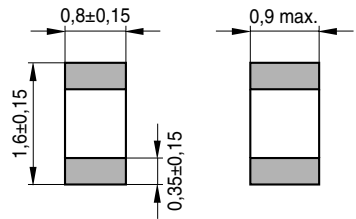


Applications

- Temperature measurement and compensation in
 - mobile phone applications (e.g. battery pack, TCXO, LCD)
 - data systems
 - automotive electronics

Features

- Multilayer SMD NTC with inner electrodes
- Ni barrier termination (Ag/Ni/Sn)
- High accuracy: $\pm 5\%$ in resistance, B value tolerance down to $\pm 1,5\%$ available on request
- Excellent long-term ageing stability in high-temperature and high-humidity environment
- Superior resistance stability during soldering (change $< 1\%$)



Termination

TNT0396-Y

Dimensions in mm
Approx. weight 6 mg

Options

Alternative resistance ratings, resistance tol. $< 5\%$ and B value tol. $< 3\%$ available on request

Delivery mode

Cardboard tape, 180-mm reel, PU: 4000 pcs (standard); 330-mm reel, PU: 16000 pcs (on request)

Climatic category (IEC 60068-1)		55/125/56	
Max. power at 25 °C (on PCB)	$P_{25}^{(1)}$	180	mW
Resistance tolerance	$\Delta R_N/R_N$	$\pm 5\%, \pm 10\%$	
Rated temperature	T_N	25	°C
B value tolerance	$\Delta B/B$	$\pm 3\%$	
Dissipation factor (on PCB)	$\delta_{th}^{(1)}$	approx. 3,0	mW/K
Thermal cooling time constant (on PCB)	$\tau_c^{(1)}$	approx. 4,0	s
Heat capacity	$C_{th}^{(1)}$	approx. 12,0	mJ/K

R_{25}	No. of R/T characteristic	$B_{25/50}$	$B_{25/85}$	$B_{25/100}$	Ordering code
Ω		K	K	K	
47	8501	3470	3540	3550	B57311V2470+060
100	8501	3470	3540	3550	B57311V2101+060
150	8501	3470	3540	3550	B57311V2151+060
220	8501	3470	3540	3550	B57311V2221+060
330	8501	3470	3540	3550	B57311V2331+060
470	8502	3940	3980	4000	B57321V2471+060
680	8502	3940	3980	4000	B57321V2681+060
1,0 k	8502	3940	3980	4000	B57321V2102+060
1,5 k	8502	3940	3980	4000	B57321V2152+060
10 k	8502	3940	3980	4000	B57321V2103+060

1) Depends on mounting situation



R_{25}	No. of R/T characteristic	$B_{25/50}$	$B_{25/85}$	$B_{25/100}$	Ordering code
Ω		K	K	K	
2,2 k	8503	4390	4470	4500	B57331V2222+060
3,3 k	8503	4390	4470	4500	B57331V2332+060
4,7 k	8503	4390	4470	4500	B57331V2472+060
6,8 k	8503	4390	4470	4500	B57331V2682+060
10 k	8503	4390	4470	4500	B57331V2103+060
15 k	8503	4390	4470	4500	B57331V2153+060
22 k	8503	4390	4470	4500	B57331V2223+060
33 k	8503	4390	4470	4500	B57331V2333+060
47 k	8503	4390	4470	4500	B57331V2473+060
68 k	8503	4390	4470	4500	B57331V2683+060
100 k	8503	4390	4470	4500	B57331V2104+060

+: J for $\Delta R_N/R_N = \pm 5\%$

K for $\Delta R_N/R_N = \pm 10\%$



Reliability data

SMD NTC thermistors are tested in accordance with IEC 60068. The parts are mounted on a standardized PCB in accordance with IEC 60539-1.

Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
Storage in dry heat	IEC 60068-2-2 JIS C 0021	Storage at upper category temperature $T: (125 \pm 2) ^\circ\text{C}$ $t: 1000 \text{ h}$	< 2 %	
Storage in damp heat, steady state	IEC 60068-2-3 JIS C 0022	Temperature of air: $(40 \pm 2) ^\circ\text{C}$ Relative humidity of air: $(93 +2/-3) \%$ Duration: 56 days	< 2 %	
Rapid temperature cycling	IEC 60068-2-14 JIS C 0025	Lower test temperature: $-55 ^\circ\text{C}$ Upper test temperature: $125 ^\circ\text{C}$ Number of cycles: 100	< 2 %	
Endurance		P_{max} : 180 mW $T: (65 \pm 2) ^\circ\text{C}$ $t: 1000 \text{ h}$	< 2 %	
Solderability	IEC 60068-2-58 JIS C 0054	Solderability: $(215 \pm 3) ^\circ\text{C} / (3 \pm 0,3) \text{ s}$ $(235 \pm 5) ^\circ\text{C} / (2 \pm 0,2) \text{ s}$ Resistance to soldering heat: $(260 \pm 5) ^\circ\text{C} / (10 \pm 1) \text{ s}$		95 % of terminations wetted
Resistance drift after soldering		Reflow soldering profile Wave soldering profile	< 1 %	

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