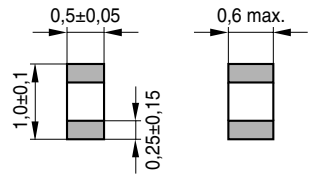



Applications

- 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 TNT0395-Q

 Dimensions in mm
 Approx. weight 4,5 mg

Options

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

Delivery mode

Cardboard tape, 180-mm reel, PU: 10000 pcs

Climatic category (IEC 60068-1)		55/125/56	
Max. power at 25 °C (on PCB)	$P_{25}^{(1)}$	150	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. 2,5	mW/K
Thermal cooling time constant (on PCB)	$\tau_c^{(1)}$	approx. 3,0	s
Heat capacity	$C_{th}^{(1)}$	approx. 7,5	mJ/K

R_{25}	No. of R/T characteristic	$B_{25/50}$	$B_{25/85}$	$B_{25/100}$	Ordering code
Ω		K	K	K	
100	8501	3470	3540	3550	B57211V2101+060
150	8501	3470	3540	3550	B57211V2151+060
220	8501	3470	3540	3550	B57211V2221+060
330	8501	3470	3540	3550	B57211V2331+060
470	8501	3470	3540	3550	B57211V2471+060
1,0 k	8502	3940	3980	4000	B57221V2102+060
1,5 k	8502	3940	3980	4000	B57221V2152+060
2,2 k	8502	3940	3980	4000	B57221V2222+060
3,3 k	8502	3940	3980	4000	B57221V2332+060
4,7 k	8502	3940	3980	4000	B57221V2472+060
10 k	8502	3940	3980	4000	B57221V2103+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	
10 k	8503	4390	4470	4500	B57231V2103+060
15 k	8503	4390	4470	4500	B57231V2153+060
22 k	8503	4390	4470	4500	B57231V2223+060
33 k	8503	4390	4470	4500	B57231V2333+060
47 k	8503	4390	4470	4500	B57231V2473+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°C Upper test temperature: 125°C Number of cycles: 100	< 2 %	
Endurance		$P_{\max}: 150\text{ mW}$ $T: (65 \pm 2)^\circ\text{C}$ $t: 1000\text{ h}$	< 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	< 1 %	

Herausgegeben von EPCOS AG

Unternehmenskommunikation, Postfach 80 17 09, 81617 München, DEUTSCHLAND

☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2002. Vervielfältigung, Veröffentlichung, Verbreitung und Verwertung dieser Broschüre und ihres Inhalts ohne ausdrückliche Genehmigung der EPCOS AG nicht gestattet.

Bestellungen unterliegen den vom ZVEI empfohlenen Allgemeinen Lieferbedingungen für Erzeugnisse und Leistungen der Elektroindustrie, soweit nichts anderes vereinbart wird.

Diese Broschüre ersetzt die vorige Ausgabe.

Fragen über Technik, Preise und Liefermöglichkeiten richten Sie bitte an den Ihnen nächstgelegenen Vertrieb der EPCOS AG oder an unsere Vertriebsgesellschaften im Ausland. Bauelemente können aufgrund technischer Erfordernisse Gefahrstoffe enthalten. Auskünfte darüber bitten wir unter Angabe des betreffenden Typs ebenfalls über die zuständige Vertriebsgesellschaft einzuholen.

Published by EPCOS AG

Corporate Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY

☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2002. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.