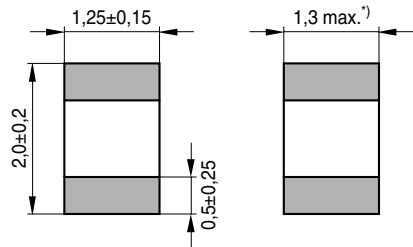



**Applications**

- 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 (AgNiSn)
- 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

TNT0421-1-E

\* Slimline version 0,9 max. available upon request

 Dimensions in mm  
Approx. weight 13 mg

**Options**

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

**Delivery mode**

Blister tape, 180-mm reel, PU: 3000 pcs (standard); 330-mm reel, PU: 12000 pcs (on request)

Climatic category (IEC 60068-1)		55/125/56	
Max. power at 25 °C (on PCB)	$P_{25}^{1)}$	210	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. 3,5	mW/K
Thermal cooling time constant (on PCB)	$\tau_c^{1)}$	approx. 10,0	s
Heat capacity	$C_{th}^{1)}$	approx. 35,0	mJ/K

$R_{25}$	No. of $R/T$ characteristic	$B_{25/50}$	$B_{25/85}$	$B_{25/100}$	Ordering code
$\Omega$		K	K	K	
47	8501	3470	3540	3550	B57411V2470+062
100	8501	3470	3540	3550	B57411V2101+062
150	8501	3470	3540	3550	B57411V2151+062
220	8501	3470	3540	3550	B57411V2221+062
330	8501	3470	3540	3550	B57411V2331+062

1) Depends on mounting situation



$R_{25}$	No. of $R/T$ characteristic	$B_{25/50}$	$B_{25/85}$	$B_{25/100}$	Ordering code
$\Omega$		K	K	K	
470	8502	3940	3980	4000	B57421V2471+062
680	8502	3940	3980	4000	B57421V2681+062
1,0 k	8502	3940	3980	4000	B57421V2102+062
1,5 k	8502	3940	3980	4000	B57421V2152+062
10 k	8502	3940	3980	4000	B57421V2103+062
2,2 k	8503	4390	4470	4500	B57431V2222+062
3,3 k	8503	4390	4470	4500	B57431V2332+062
4,7 k	8503	4390	4470	4500	B57431V2472+062
6,8 k	8503	4390	4470	4500	B57431V2682+062
10 k	8503	4390	4470	4500	B57431V2103+062
15 k	8503	4390	4470	4500	B57431V2153+062
22 k	8503	4390	4470	4500	B57431V2223+062
33 k	8503	4390	4470	4500	B57431V2333+062
47 k	8503	4390	4470	4500	B57431V2473+062
68 k	8503	4390	4470	4500	B57431V2683+062
100 k	8503	4390	4470	4500	B57431V2104+062

+: 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		$P_{\text{max}}$ : 210 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 %	

**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.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## EPCOS:

[B57431V2103J62](#) [B57431V2104J62](#) [B57431V2222J62](#) [B57431V2223K62](#) [B57431V2684K62](#) [B57431V2684J062](#)  
[B57431V2223K062](#) [B57431V2472K62](#) [B57431V2333K062](#) [B57431V2153K062](#) [B57431V2103K062](#)  
[B57431V2472M062](#) [B57431V2682K062](#) [B57431V2472J62](#) [B57431V2223J062](#) [B57431V2682J62](#) [B57431V2333J62](#)  
[B57431V2104K62](#) [B57431V2473J62](#) [B57431V2333J062](#) [B57431V2153J062](#) [B57431V2682J062](#) [B57431V2222K062](#)  
[B57431V2682K62](#) [B57431V2472K062](#) [B57431V2223J62](#) [B57431V2153J62](#) [B57431V2333K62](#) [B57431V2222K62](#)  
[B57431V2153K62](#) [B57431V2684K062](#) [B57431V2332J062](#) [B57431V2332J62](#) [B57431V2474J62](#) [B57431V2472M62](#)  
[B57431V2103K62](#) [B57431V2103J162](#) [B57431V2104K062](#) [B57431V2222J062](#) [B57431V2473K62](#) [B57431V2684J62](#)  
[B57431V2472J062](#) [B57431V2473K062](#)