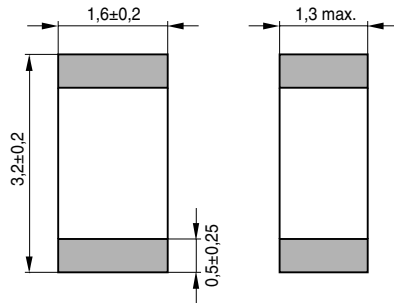



**Applications**

- Temperature measurement and compensation in
  - hybrid circuits
  - data systems
  - telecom systems
  - automotive electronics

**Features**

- Silver palladium termination (AgPd)
- Cost-effective
- Suitable for wave and reflow soldering



■ Termination

TNT0398-F

**Options**

Alternative resistance ratings and resistance tolerance  
 < 5% available on request

Dimensions in mm/Approx. weight 18 mg

**Delivery mode**

Blister tape, 180-mm reel, PU: 4000 or 2000 pcs, depending on chip thickness

Climatic category (IEC 60068-1)		55/125/21	
Max. power at 25 °C (on PCB)	$P_{25}$	300	mW
Resistance tolerance	$\Delta R_N/R_N$	$\pm 5\%, \pm 10\%, \pm 20\%$	
Rated temperature	$T_N$	25	°C
B value tolerance	$\Delta B/B$	$\pm 3\%$	
Dissipation factor (on PCB)	$\delta_{th}^{(1)}$	approx. 5	mW/K
Thermal cooling time constant (on PCB)	$\tau_c^{(1)}$	approx. 10	s
Heat capacity	$C_{th}^{(1)}$	approx. 50	mJ/K

$R_{25}$	No. of R/T characteristic	$B_{25/50}$	$B_{25/85}$	$B_{25/100}$	Ordering code
$\Omega$		K	K	K	
2,2 k	1308	3010	3040	3060	B57621C0222+062
3,3 k	1309	3430	3500	3520	B57621C0332+062
4,7 k	1309	3430	3500	3520	B57621C0472+062
10 k	1010	3470	3510	3530	B57621C0103+062
15 k	1008	3480	3550	3560	B57621C0153+062
22 k	1008	3480	3550	3560	B57621C0223+062
33 k	2003	3930	3960	3980	B57621C0333+062
47 k	2001	3860	3890	3920	B57621C0473+062
68 k	2001	3860	3890	3920	B57621C0683+062

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

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

 M for  $\Delta R_N/R_N = \pm 20\%$ 

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	
100 k	4901	3870	3930	3950	B57621C0104+062
150 k	2903	4120	4190	4200	B57621C0154+162
220 k	2903	4120	4190	4200	B57621C0224+062
330 k	1014	4090	4210	4250	B57621C0334+062
470 k	1014	4090	4210	4250	B57621C0474+062

+: J for  $\Delta R_N/R_N = \pm 5\%$   
 K for  $\Delta R_N/R_N = \pm 10\%$   
 M for  $\Delta R_N/R_N = \pm 20\%$

### 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 $T: (125 \pm 2)^\circ\text{C}$ $t: 1000\text{ h}$	< 3 %	
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: 21 days	< 3 %	No visible damage
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: 10	< 3 %	
Endurance		$P_{\text{max}}$ : 300 mW $T: (65 \pm 2)^\circ\text{C}$ $t: 1000\text{ h}$	< 5 %	
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	< 5 %	

**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.