

## NTC- Thickfilm-Temperature Sensors

Type: TNS

Sizes: 0402, 0603, 0805, 1206, 1210

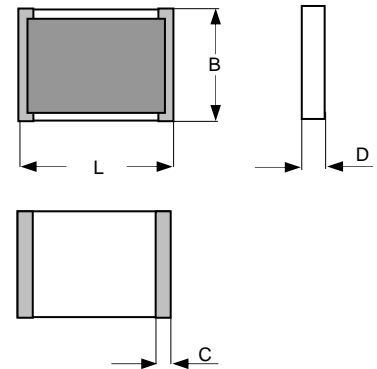
### Merkmale:

- NTC-Chip Resistors in Thickfilm
- Contact areas PtAg
- Non-magnetic
- Untrimmed for higher Working Voltage
- Versions with heater and for active trimming available
- High temperature application possible (up to 250°C)



### Dimensions:

Size	L	B	D	C
0402	1,04 $\pm 0,05$	0,50 $\pm 0,05$	0,30 $+0,15/-0,05$	0,1 $+0,1/-0,05$
0603	1,50 $+0,15/-0,05$	0,80 $+0,15/-0,05$	0,40 $+0,15/-0,05$	0,2 $+0,2/-0,1$
0805	2,00 $+0,15/-0,05$	1,25 $+0,15/-0,05$	0,40 $+0,15/-0,05$	0,3 $+0,2/-0,1$
1206	3,20 $+0,15/-0,05$	1,50 $+0,2/-0,05$	0,40 $+0,15/-0,05$	0,3 $+0,2/-0,1$
1210	3,20 $+0,15/-0,05$	2,50 $+0,2/-0,05$	0,50 $+0,15/-0,05$	0,8 $\pm 0,2$



L = Length, B = Width, D = Thickness, C = Width of wrap around (in mm)

### Packaging:

Bulk in plastic bags – minimum quantity 100 pieces per value  
 Blister tape acc. to IEC 60286-3 – minimum 1000 pieces per value  
 Reel diameter 180 mm or 330 mm

### Bestellangaben:

Type – value – tolerance – TCR – TCR-tolerance – packaging  
 Example: TPS 0805 1 k  $\pm 5\%$  TCR +2000  $\pm 400$  ppm/K Tape 180 mm

Untrimmed parts are indicated by the extension "NA" in the order code:

Type – value – tolerance – NA – TCR - TCR-tolerance - packaging  
 Example: TPS 0805 1 k  $\pm 5\%$  NA TCR +2000  $\pm 400$  ppm/K Tape 180 mm

If no requirements for TCR and taping are given, the higher TCR-value will be supplied and packaging is bulk.

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### Technical data – depending on size:

Size	0402	0603	0805	1206	1210
Power rating P <sub>70</sub> (mW) (P <sub>155</sub> = 0 mW)	25	50	65	125	250
Working voltage U <sub>-</sub> , U <sub>eff</sub> (V) trimmed	30	75	100	200	300
untrimmed	90	220	300	600	1000

Value Ranges					
Resistance	100 R – 10 M	100 R – 10 M	50 R – 40 M	50 R – 80 M	25 R – 150 M
Tolerance	5/10/20%	5/10/20%	5/10/20%	5/10/20%	5/10/20%
TCR (ppm/K)	-1000 ... -6000	-1000 ... -6000	-1000 ... -6000	-1000 ... -6000	-1000 ... -6000

Standard-TCR-Tolerance: ± 400 ppm/K; closer tolerances of value and TCR on request

### Technical data – general:

Temperature range	- 55°C ... + 125°C
Climatic category acc. to DIN EN 60068-1	55/125/56
Humidity- / contact protection	Lacquer coating

Extended temperature range up to 250°C possible

Long term stability	
Storage 125°C/1000h	<1%
Load P <sub>70</sub> /70°C/1000h	<1%
Damp heat (56d/40°C/96%)	<1%

Data not specified according CECC 40401-802

<sup>1)</sup> Up to 6 months after shipment resp. at storage in Nitrogen

All data are preliminary.

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