

PTC-Thickfilm Temperature Sensors

Type: TPS

Sizes: 0402, 0603, 0805, 1206, 1210

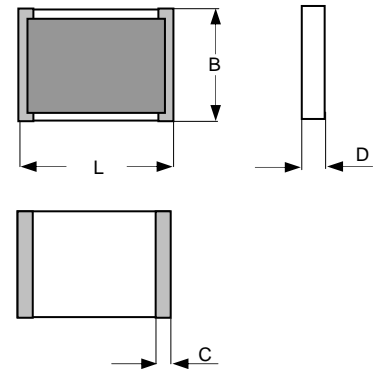
Features:

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



Dimensions:

Size	L	B	D	C
0402	1.04 ± 0.05	0.50 ± 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

Ordering Data:

Type – value – tolerance – TCR – contact material – packaging
Example: TPS 0805 1 k $\pm 5\%$ TCR +2000 ± 400 PtAg Tape 180 mm

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

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

If no requirements for TCR, contact material and taping are given, the higher TCR-value, contact material PtAg 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_{70} (mW) ($P_{155} = 0$ mW)	25	50	65	125	250
Working voltage U_{-} , U_{eff} (V) trimmed untrimmed	30 90	75 220	100 300	200 600	300 1000

Ranges / Tolerances / TCR / VCR					
1R – 9R1	+3600 10/20%	+3600 10/20%	+3600 5/10/20%	+3600 5/10/20%	+3600 5/10/20%
10R – 95R3	+3000/ +3500 5/10/20%	+3000/ +3500 5/10/20%	+3000/ +3500 2/5/10%	+ 3000/ +3500 2/5/10%	+ 3000/ +3500 2/5/10%
100R – 953R	+2000/ +2800 5/10/20%	+2000/ +2800 5/10/20%	+ 2000/ +2800 2/5/10%	+ 2000/ +2800 2/5/10%	+ 2000/ +2800 2/5/10%
1K – 2K05	+1600/ +2000/ +2800 5/10/20%	+1600/ +2000/ +2800 5/10/20%	+1600/ +2000/ +2800 2/5/10%	+1600/ +2000/ +2800 2/5/10%	+1600/ +2000/ +2800 2/5/10%
2K15 – 5K	–	–	+1600/ +2000/ +2800 5/10/20%	+1600/ +2800 2/5/10%	+1600/ +2800 2/5/10%
5k11– 40k	–	–	–	+1600/+2800 5/10/20%	+1600/+2800 5/10/20%
40k2 – 100k	–	–	–	–	+1600/+2800 5/10/20%

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

Technical data – general:

Temperature range ¹⁾	- 55°C ... + 155°C
Climatic category acc. to DIN EN 60068-1	55/155/56
Solderability acc. DIN EN 60068-2-58 (lead-free and lead-containing) ²⁾	3s @ 250°C
Max. soldering temperature acc. DIN EN 60068-2-58	10s @ 260°C

¹⁾ Extended temperature range up to 250°C possible

Long term stability	
Storage 125°C/1000h	<1%
Storage 155°C/1000h	<2%
Load P_{70} /70°C/1000h	<1%
Damp heat (56d/40°C/96%)	<1%

²⁾ PtAg: Up to 6 months after shipment resp. at storage in Nitrogen
Data not specified according CECC 40401-802

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