

Applications

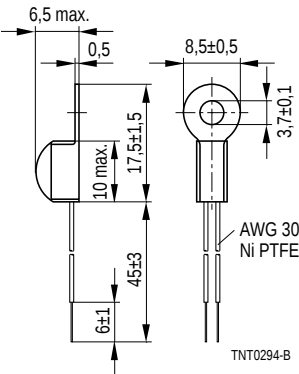
- Surface temperature measurement, e.g. on housings and pipes

Features

- High accuracy
- Easy mounting
- Good thermal coupling through metal tag
- Thermistor encapsulated in metal-tag case
- PTFE-insulated leads of silver plated nickel wire, AWG 30, $\varnothing$ 0,25 mm

Options

Alternative resistance ratings, rated temperatures, resistance tolerances and lead lengths available on request



Dimensions in mm
Approx. weight 0,8 g

Climatic category (IEC 68-1)		55/125/56	
Max. power at 25 °C	P_{25}	150	mW
Resistance tolerance	$\Delta R/R_N$	$\pm 2 \%$	
Rated temperature	T_N	25	°C
B value tolerance	$\Delta B/B$	$\pm 1 \%$	
Dissipation factor (in air)	$\delta_{th}^{(1)}$	approx. 2,6	mW/K
Thermal cooling time constant (in air)	$\tau_c^{(1)}$	approx. 28	s
Heat capacity	$C_{th}^{(1)}$	approx. 73	mJ/K
Test voltage ($t = 1$ s)		1	kV

Type	R_{25} Ω	No. of R/T characteristic	$B_{25/100}$ K	Ordering code
M 703/5 k/G40	5 k	8016	3988	B57703-M502-G40
M 703/10 k/G40	10 k	8016	3988	B57703-M103-G40
M 703/30 k/G40	30 k	8018	3964	B57703-M303-G40

1) Depends on mounting situation

Reliability data

Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
Storage in dry heat	IEC 60068-2-2	Storage at upper category temperature T: 125 °C t: 1000 h	< 1 %	No visible damage
Storage in damp heat, steady state	IEC 60068-2-3	Temperature of air: 40 °C Relative humidity of air: 93 % Duration: 56 days	< 1 %	No visible damage
Rapid temperature cycling	IEC 60068-2-14	Lower test temperature: – 55 °C Upper test temperature: 125 °C Number of cycles: 10	< 0,5 %	No visible damage
Endurance		$P_{\max}$: 150 mW Duration: 1000 h	< 1 %	No visible damage
Long-term stability (empirical value)		Temperature: 70 °C Duration: 10 000 h	< 2 %	No visible damage

Standardized R/T Characteristics

Number	4901		8016		8018		
$T (^{\circ}\text{C})$	$B_{25/100} = 3950 \text{ K}$		$B_{25/100} = 3988 \text{ K}$		$B_{25/100} = 3964 \text{ K}$		
	R_T/R_{25}	$\alpha (\%/K)$	R_T/R_{25}	$\alpha (\%/K)$	R_T/R_{25}	$\alpha (\%/K)$	
- 55,0	87,890	7,1	96,30	7,4	—	—	
- 50,0	61,759	6,9	67,01	7,2	—	—	
- 45,0	43,934	6,7	47,17	6,9	—	—	
- 40,0	31,618	6,5	33,65	6,7	30,24	6,3	
- 35,0	23,006	6,3	24,26	6,4	22,10	6,1	
- 30,0	16,915	6,1	17,70	6,2	16,32	5,9	
- 25,0	12,555	5,9	13,04	6,0	12,17	5,8	
- 20,0	9,4143	5,7	9,707	5,8	9,153	5,6	
- 15,0	7,1172	5,5	7,293	5,6	6,945	5,4	
- 10,0	5,4308	5,4	5,533	5,5	5,313	5,2	
- 5,0	4,1505	5,2	4,232	5,3	4,097	5,1	
0,0	3,2014	5,0	3,265	5,1	3,183	4,9	
5,0	2,5011	4,9	2,539	5,0	2,491	4,8	
10,0	1,9691	4,7	1,990	4,8	1,963	4,7	
15,0	1,5618	4,6	1,571	4,7	1,557	4,6	
20,0	1,2474	4,5	1,249	4,5	1,244	4,4	
25,0	1,0000	4,3	1,000	4,4	1,000	4,3	
30,0	0,80800	4,2	0,8057	4,3	0,8083	4,2	
35,0	0,65690	4,1	0,6531	4,1	0,6572	4,1	
40,0	0,53720	4,0	0,5327	4,0	0,5373	4,0	
45,0	0,44235	3,9	0,4369	3,9	0,4418	3,9	
50,0	0,36610	3,8	0,3603	3,8	0,3650	3,7	
55,0	0,30393	3,7	0,2986	3,7	0,3030	3,7	
60,0	0,25359	3,6	0,2488	3,6	0,2527	3,6	
65,0	0,21283	3,5	0,2083	3,5	0,2118	3,5	
70,0	0,17942	3,4	0,1752	3,4	0,1783	3,4	
75,0	0,15183	3,3	0,1481	3,3	0,1508	3,3	
80,0	0,12901	3,2	0,1258	3,2	0,1280	3,2	
85,0	0,11002	3,1	0,1072	3,2	0,1091	3,2	
90,0	0,094179	3,1	0,09177	3,1	0,09330	3,1	
95,0	0,080896	3,0	0,07885	3,0	0,08016	3,0	
100,0	0,069722	2,9	0,06800	2,9	0,06910	2,9	
105,0	0,060397	2,9	0,05886	2,9	0,05974	2,9	
110,0	0,052493	2,8	0,05112	2,8	0,05183	2,8	
115,0	0,045733	2,7	0,04454	2,7	0,04512	2,8	
120,0	0,039963	2,7	0,03893	2,6	0,03940	2,7	
125,0	0,035059	2,6	0,03417	2,6	0,03450	2,6	
130,0	0,030844	2,6	0,03009	2,5	0,03032	2,6	
135,0	0,027192	2,5	0,02654	2,5	0,02672	2,5	

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	R_T/R_{25}	$\alpha (\%/K)$	R_T/R_{25}	$\alpha (\%/K)$	R_T/R_{25}	$\alpha (\%/K)$	
140,0	0,024034	2,4	0,02348	2,4	0,02361	2,5	
145,0	0,021285	2,4	0,02083	2,4	0,02091	2,4	
150,0	0,018895	2,4	0,01853	2,3	0,01857	2,4	
155,0	0,016813	2,3	0,01653	2,3	0,016537	2,3	