



NTC thermistors for temperature measurement

Leaded NTC,
lead spacing 2.5 mm

Series/Type: **B57891**
Date: March 2006

Applications

- Temperature compensation
- Temperature measurement
- Temperature control

Features

- Wide resistance range
- Cost-effective
- Lacquer-coated thermistor disk
- Leads: copper-clad Fe wire, tinned
- Marked with resistance and tolerance

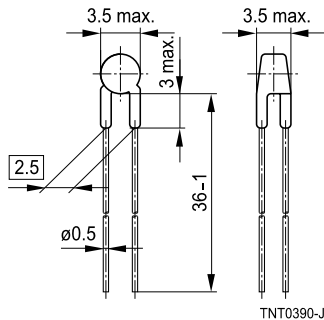
Options

Lead spacing 5 mm available on request

Delivery mode

Bulk (standard),
cardboard tape, reeled or in Ammo pack

Dimensional drawing



Dimensions in mm

Approx. weight 0.2 g

General technical data

Climatic category	(IEC 60068-1)	P_{25}	40/125/56	
Max. power	(at 25 °C)	$\Delta R_R/R_R$	200	mW
Resistance tolerance		T_R	$\pm 5, \pm 10$	%
Rated temperature		δ_{th}	25	°C
Dissipation factor	(in air)	τ_c	approx. 3.5	mW/K
Thermal cooling time constant	(in air)	C_{th}	approx. 12	s
Heat capacity			approx. 40	mJ/K

Electrical specification and ordering codes

R_{25} Ω	No. of R/T characteristic	$B_{25/100}$ K	Ordering code
1 k	1009	3930 $\pm 3\%$	B57891M0102+000
1.5 k	1008	3560 $\pm 3\%$	B57891M0152+000
2.2 k	1013	3900 $\pm 3\%$	B57891M0222+000
3.3 k	2003	3980 $\pm 3\%$	B57891M0332+000
4.7 k	2003	3980 $\pm 3\%$	B57891M0472+000
6.8 k	2003	3980 $\pm 3\%$	B57891M0682+000
10 k	4901	3950 $\pm 3\%$	B57891M0103+000
15 k	2004	4100 $\pm 3\%$	B57891M0153+000
22 k	2904	4300 $\pm 3\%$	B57891M0223+000

+ = Resistance tolerance

J = $\pm 5\%$

K = $\pm 10\%$

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

R_{25} Ω	No. of R/T characteristic	$B_{25/100}$ K	Ordering code
33 k	2904	4300 $\pm 3\%$	B57891M0333+000
47 k	4012	4355 $\pm 3\%$	B57891M0473+000
68 k	4012	4355 $\pm 3\%$	B57891M0683+000
100 k	4003	4450 $\pm 3\%$	B57891M0104+000
150 k	2005	4600 $\pm 3\%$	B57891M0154+000
220 k	2005	4600 $\pm 3\%$	B57891M0224+000
330 k	2007	4830 $\pm 3\%$	B57891M0334+000
470 k	2006	5000 $\pm 3\%$	B57891M0474+000

+ = Resistance tolerance

J = $\pm 5\%$

K = $\pm 10\%$

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	< 3%	No visible damage
Storage in damp heat, steady state	IEC 60068-2-78	Temperature of air: 40 °C Relative humidity of air: 93% Duration: 56 days	< 2%	No visible damage
Rapid temperature cycling	IEC 60068-2-14	Lower test temperature: -40 °C Upper test temperature: 125 °C Number of cycles: 100	< 2%	No visible damage
Endurance		P_{max} : 200 mW t: 1000 h	< 3%	No visible damage
Long-term stability (empirical value)		Temperature: 70 °C t: 10000 h	< 5%	No visible damage

R/T characteristics

	B57891M0102J000					
R/T No.	1009					
T (°C)	$B_{25/100} = 3930 \text{ K}$, $R_{25} = 1000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha (\%/K)$
-55.0	85423	68721	102120	19.6	2.9	6.8
-50.0	60781	49634	71929	18.3	2.7	6.7
-45.0	43650	36150	51150	17.2	2.6	6.5
-40.0	31629	26545	36713	16.1	2.5	6.4
-35.0	23118	19648	26589	15.0	2.4	6.2
-30.0	17040	14656	19425	14.0	2.3	6.0
-25.0	12649	11003	14296	13.0	2.2	5.9
-20.0	9486	8341	10632	12.1	2.1	5.7
-15.0	7154	6355	7954	11.2	2.0	5.5
-10.0	5448	4886	6010	10.3	1.9	5.4
-5.0	4173	3778	4569	9.5	1.8	5.2
0.0	3226	2946	3505	8.7	1.7	5.1
5.0	2515	2316	2713	7.9	1.6	4.9
10.0	1976	1835	2117	7.1	1.5	4.8
15.0	1565	1464	1665	6.4	1.4	4.6
20.0	1248	1177	1320	5.7	1.3	4.5
25.0	1000.0	950.0	1050	5.0	1.2	4.3
30.0	809.6	763.4	855.7	5.7	1.4	4.2
35.0	657.3	615.6	698.9	6.3	1.5	4.1
40.0	537.0	499.7	574.3	6.9	1.7	4.0
45.0	441.7	408.4	475.0	7.5	2.0	3.9
50.0	365.3	335.7	395.0	8.1	2.2	3.8
55.0	303.3	277.0	329.6	8.7	2.4	3.7
60.0	253.1	229.8	276.4	9.2	2.6	3.5
65.0	212.7	192.0	233.4	9.7	2.8	3.5
70.0	179.6	161.2	198.0	10.2	3.0	3.4
75.0	152.2	135.9	168.5	10.7	3.3	3.3
80.0	129.5	115.0	144.0	11.2	3.5	3.2
85.0	110.7	97.75	123.6	11.7	3.8	3.1
90.0	94.95	83.44	106.5	12.1	4.0	3.0
95.0	81.78	71.50	92.06	12.6	4.3	2.9
100.0	70.69	61.50	79.88	13.0	4.5	2.9
105.0	61.38	53.15	69.62	13.4	4.8	2.8
110.0	53.49	46.09	60.88	13.8	5.1	2.7
115.0	46.73	40.09	53.37	14.2	5.3	2.7
120.0	40.95	34.97	46.94	14.6	5.6	2.6
125.0	36.01	30.61	41.40	15.0	5.9	2.5

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

	B57891M0102K000					
R/T No.	1009					
T (°C)	B _{25/100} = 3930 K, R ₂₅ = 1000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	85423	64450	106400	24.6	3.6	6.8
-50.0	60781	46595	74968	23.3	3.5	6.7
-45.0	43650	33967	53333	22.2	3.4	6.5
-40.0	31629	24963	38295	21.1	3.3	6.4
-35.0	23118	18492	27745	20.0	3.2	6.2
-30.0	17040	13804	20277	19.0	3.1	6.0
-25.0	12649	10370	14928	18.0	3.1	5.9
-20.0	9486	7866	11107	17.1	3.0	5.7
-15.0	7154	5997	8312	16.2	2.9	5.5
-10.0	5448	4614	6282	15.3	2.8	5.4
-5.0	4173	3569	4777	14.5	2.8	5.2
0.0	3226	2785	3667	13.7	2.7	5.1
5.0	2515	2190	2839	12.9	2.6	4.9
10.0	1976	1736	2216	12.1	2.6	4.8
15.0	1565	1386	1744	11.4	2.5	4.6
20.0	1248	1114	1382	10.7	2.4	4.5
25.0	1000.0	900.0	1100	10.0	2.3	4.3
30.0	809.6	722.9	896.2	10.7	2.5	4.2
35.0	657.3	582.8	731.7	11.3	2.8	4.1
40.0	537.0	472.8	601.1	11.9	3.0	4.0
45.0	441.7	386.3	497.1	12.5	3.2	3.9
50.0	365.3	317.4	413.2	13.1	3.5	3.8
55.0	303.3	261.8	344.7	13.7	3.7	3.7
60.0	253.1	217.2	289.1	14.2	4.0	3.5
65.0	212.7	181.4	244.0	14.7	4.3	3.5
70.0	179.6	152.3	207.0	15.2	4.5	3.4
75.0	152.2	128.2	176.1	15.7	4.8	3.3
80.0	129.5	108.5	150.5	16.2	5.1	3.2
85.0	110.7	92.21	129.1	16.7	5.4	3.1
90.0	94.95	78.69	111.2	17.1	5.7	3.0
95.0	81.78	67.41	96.15	17.6	6.0	2.9
100.0	70.69	57.97	83.41	18.0	6.3	2.9
105.0	61.38	50.08	72.69	18.4	6.6	2.8
110.0	53.49	43.42	63.55	18.8	6.9	2.7
115.0	46.73	37.75	55.71	19.2	7.2	2.7
120.0	40.95	32.93	48.98	19.6	7.5	2.6
125.0	36.01	28.81	43.20	20.0	7.9	2.5

	B57891M0152J000					
R/T No.	1008					
T (°C)	$B_{25/100} = 3560 \text{ K}$, $R_{25} = 1500 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{nom}[\Omega]$	$R_{min}[\Omega]$	$R_{max}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha (\%/K)$
-55.0	79655	65169	94142	18.2	3.0	6.1
-50.0	58976	48898	69055	17.1	2.9	6.0
-45.0	43988	36932	51044	16.0	2.7	5.8
-40.0	33045	28076	38014	15.0	2.6	5.7
-35.0	25000	21481	28518	14.1	2.5	5.5
-30.0	19044	16539	21548	13.2	2.4	5.4
-25.0	14588	12798	16377	12.3	2.3	5.2
-20.0	11276	9988	12563	11.4	2.2	5.1
-15.0	8753	7825	9681	10.6	2.1	4.9
-10.0	6853	6180	7525	9.8	2.0	4.8
-5.0	5407	4918	5897	9.1	1.9	4.7
0.0	4300	3942	4658	8.3	1.8	4.5
5.0	3436	3174	3698	7.6	1.7	4.4
10.0	2766	2573	2958	6.9	1.6	4.3
15.0	2238	2097	2379	6.3	1.5	4.1
20.0	1823	1720	1926	5.7	1.4	4.0
25.0	1500	1425	1575	5.0	1.3	3.9
30.0	1245	1174	1315	5.6	1.5	3.8
35.0	1030	965.6	1093	6.2	1.7	3.7
40.0	856.5	798.6	914.5	6.8	1.9	3.6
45.0	720.2	667.6	772.8	7.3	2.1	3.5
50.0	608.2	560.6	655.7	7.8	2.3	3.4
55.0	512.6	469.9	555.2	8.3	2.5	3.3
60.0	434.3	396.0	472.5	8.8	2.7	3.2
65.0	370.7	336.3	405.1	9.3	3.0	3.1
70.0	317.7	286.8	348.7	9.7	3.2	3.1
75.0	272.9	245.1	300.7	10.2	3.4	3.0
80.0	235.2	210.2	260.2	10.6	3.7	2.9
85.0	203.9	181.3	226.4	11.1	3.9	2.8
90.0	177.3	157.0	197.7	11.5	4.1	2.8
95.0	155.1	136.7	173.5	11.9	4.4	2.7
100.0	136.1	119.4	152.8	12.2	4.7	2.6
105.0	119.5	104.4	134.5	12.6	4.9	2.6
110.0	105.2	91.49	118.8	13.0	5.2	2.5
115.0	92.83	80.43	105.2	13.4	5.5	2.4
120.0	82.18	70.91	93.44	13.7	5.7	2.4
125.0	73.06	62.80	83.32	14.0	6.0	2.3

	B57891M0152K000					
R/T No.	1008					
T (°C)	B _{25/100} = 3560 K, R ₂₅ = 1500 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	79655	61186	98124	23.2	3.8	6.1
-50.0	58976	45949	72004	22.1	3.7	6.0
-45.0	43988	34733	53243	21.0	3.6	5.8
-40.0	33045	26424	39666	20.0	3.5	5.7
-35.0	25000	20231	29768	19.1	3.4	5.5
-30.0	19044	15587	22501	18.2	3.4	5.4
-25.0	14588	12069	17107	17.3	3.3	5.2
-20.0	11276	9424	13127	16.4	3.2	5.1
-15.0	8753	7387	10118	15.6	3.2	4.9
-10.0	6853	5838	7868	14.8	3.1	4.8
-5.0	5407	4647	6168	14.1	3.0	4.7
0.0	4300	3727	4873	13.3	2.9	4.5
5.0	3436	3002	3870	12.6	2.9	4.4
10.0	2766	2435	3096	11.9	2.8	4.3
15.0	2238	1985	2491	11.3	2.7	4.1
20.0	1823	1629	2018	10.7	2.6	4.0
25.0	1500	1350	1650	10.0	2.6	3.9
30.0	1245	1112	1377	10.6	2.8	3.8
35.0	1030	914.1	1145	11.2	3.0	3.7
40.0	856.5	755.8	957.3	11.8	3.3	3.6
45.0	720.2	631.6	808.8	12.3	3.5	3.5
50.0	608.2	530.2	686.1	12.8	3.8	3.4
55.0	512.6	444.3	580.9	13.3	4.0	3.3
60.0	434.3	374.3	494.3	13.8	4.3	3.2
65.0	370.7	317.7	423.7	14.3	4.5	3.1
70.0	317.7	270.9	364.6	14.7	4.8	3.1
75.0	272.9	231.4	314.4	15.2	5.1	3.0
80.0	235.2	198.4	272.0	15.6	5.4	2.9
85.0	203.9	171.2	236.6	16.1	5.7	2.8
90.0	177.3	148.1	206.5	16.5	6.0	2.8
95.0	155.1	128.9	181.2	16.9	6.3	2.7
100.0	136.1	112.6	159.6	17.2	6.6	2.6
105.0	119.5	98.40	140.5	17.6	6.9	2.6
110.0	105.2	86.23	124.1	18.0	7.2	2.5
115.0	92.83	75.79	109.9	18.4	7.5	2.4
120.0	82.18	66.81	97.55	18.7	7.8	2.4
125.0	73.06	59.14	86.97	19.0	8.2	2.3

	B57891M0222J000					
R/T No.	1013					
T (°C)	$B_{25/100} = 3900 \text{ K}$, $R_{25} = 2200 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha (\%/K)$
-55.0	170030	136970	203080	19.4	2.8	6.9
-50.0	120860	98819	142910	18.2	2.7	6.7
-45.0	86914	72061	101770	17.1	2.6	6.5
-40.0	63188	53084	73292	16.0	2.5	6.3
-35.0	46417	39484	53350	14.9	2.5	6.1
-30.0	34434	29638	39229	13.9	2.4	5.9
-25.0	25772	22433	29112	13.0	2.3	5.7
-20.0	19479	17136	21821	12.0	2.2	5.5
-15.0	14835	13184	16486	11.1	2.1	5.4
-10.0	11399	10229	12570	10.3	2.0	5.2
-5.0	8822	7989	9655	9.4	1.9	5.0
0.0	6882	6288	7477	8.6	1.8	4.9
5.0	5405	4980	5831	7.9	1.7	4.8
10.0	4276	3972	4581	7.1	1.5	4.6
15.0	3404	3186	3623	6.4	1.4	4.5
20.0	2729	2573	2885	5.7	1.3	4.4
25.0	2200	2090	2310	5.0	1.2	4.3
30.0	1784	1683	1886	5.7	1.4	4.1
35.0	1455	1363	1547	6.3	1.6	4.0
40.0	1194	1111	1276	6.9	1.8	3.9
45.0	984.0	910.0	1058	7.5	2.0	3.8
50.0	815.5	749.5	881.4	8.1	2.2	3.7
55.0	679.0	620.4	737.7	8.6	2.4	3.6
60.0	568.2	516.0	620.3	9.2	2.6	3.5
65.0	477.6	431.3	523.8	9.7	2.8	3.4
70.0	403.1	362.0	444.2	10.2	3.0	3.3
75.0	341.8	305.3	378.3	10.7	3.3	3.3
80.0	290.9	258.4	323.4	11.2	3.5	3.2
85.0	248.6	219.7	277.5	11.6	3.7	3.1
90.0	213.3	187.5	239.0	12.1	4.0	3.0
95.0	183.7	160.7	206.7	12.5	4.2	3.0
100.0	158.7	138.2	179.2	12.9	4.5	2.9
105.0	137.6	119.3	156.0	13.4	4.7	2.8
110.0	119.7	103.3	136.2	13.8	5.0	2.8
115.0	104.5	89.73	119.3	14.1	5.3	2.7
120.0	91.51	78.21	104.8	14.5	5.5	2.6
125.0	80.37	68.39	92.35	14.9	5.8	2.6

	B57891M0222K000					
R/T No.	1013					
T (°C)	B _{25/100} = 3900 K, R ₂₅ = 2200 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	170030	128470	211580	24.4	3.5	6.9
-50.0	120860	92776	148950	23.2	3.5	6.7
-45.0	86914	67715	106110	22.1	3.4	6.5
-40.0	63188	49925	76452	21.0	3.3	6.3
-35.0	46417	37163	55671	19.9	3.3	6.1
-30.0	34434	27917	40951	18.9	3.2	5.9
-25.0	25772	21144	30400	18.0	3.1	5.7
-20.0	19479	16163	22795	17.0	3.1	5.5
-15.0	14835	12442	17228	16.1	3.0	5.4
-10.0	11399	9659	13140	15.3	2.9	5.2
-5.0	8822	7548	10096	14.4	2.9	5.0
0.0	6882	5943	7821	13.6	2.8	4.9
5.0	5405	4709	6101	12.9	2.7	4.8
10.0	4276	3758	4795	12.1	2.6	4.6
15.0	3404	3016	3793	11.4	2.5	4.5
20.0	2729	2436	3021	10.7	2.5	4.4
25.0	2200	1980	2420	10.0	2.4	4.3
30.0	1784	1593	1975	10.7	2.6	4.1
35.0	1455	1290	1620	11.3	2.8	4.0
40.0	1194	1051	1336	11.9	3.0	3.9
45.0	984.0	860.8	1107	12.5	3.3	3.8
50.0	815.5	708.8	922.2	13.1	3.5	3.7
55.0	679.0	586.4	771.6	13.6	3.8	3.6
60.0	568.2	487.6	648.7	14.2	4.0	3.5
65.0	477.6	407.4	547.7	14.7	4.3	3.4
70.0	403.1	341.9	464.4	15.2	4.5	3.3
75.0	341.8	288.2	395.4	15.7	4.8	3.3
80.0	290.9	243.9	337.9	16.2	5.1	3.2
85.0	248.6	207.3	290.0	16.6	5.4	3.1
90.0	213.3	176.9	249.7	17.1	5.6	3.0
95.0	183.7	151.5	215.8	17.5	5.9	3.0
100.0	158.7	130.2	187.2	17.9	6.2	2.9
105.0	137.6	112.4	162.9	18.4	6.5	2.8
110.0	119.7	97.28	142.2	18.8	6.8	2.8
115.0	104.5	84.50	124.5	19.1	7.1	2.7
120.0	91.51	73.63	109.4	19.5	7.4	2.6
125.0	80.37	64.37	96.37	19.9	7.7	2.6

	B57891M0332J000					
R/T No.	2003					
T (°C)	$B_{25/100} = 3980 \text{ K}$, $R_{25} = 3300 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha \text{ } (\%/K)$
-55.0	322010	258460	385560	19.7	2.6	7.4
-50.0	223250	181920	264570	18.5	2.6	7.2
-45.0	156870	129680	184070	17.3	2.5	6.9
-40.0	111640	93541	129750	16.2	2.4	6.7
-35.0	80385	68215	92554	15.1	2.3	6.5
-30.0	58585	50320	66851	14.1	2.3	6.2
-25.0	43120	37463	48776	13.1	2.2	6.0
-20.0	32085	28181	35990	12.2	2.1	5.8
-15.0	24092	21380	26803	11.3	2.0	5.6
-10.0	18269	16373	20165	10.4	1.9	5.5
-5.0	13970	12638	15301	9.5	1.8	5.3
0.0	10778	9838	11717	8.7	1.7	5.1
5.0	8379	7715	9044	7.9	1.6	5.0
10.0	6568	6097	7039	7.2	1.5	4.8
15.0	5184	4850	5518	6.4	1.4	4.7
20.0	4122	3886	4359	5.7	1.3	4.5
25.0	3300	3135	3465	5.0	1.1	4.4
30.0	2659	2507	2811	5.7	1.3	4.3
35.0	2156	2019	2293	6.3	1.5	4.1
40.0	1759	1636	1881	7.0	1.7	4.0
45.0	1443	1333	1552	7.6	1.9	3.9
50.0	1190	1093	1287	8.1	2.1	3.8
55.0	987.0	901.0	1073	8.7	2.4	3.7
60.0	822.8	746.6	898.9	9.3	2.6	3.6
65.0	689.3	621.8	756.7	9.8	2.8	3.5
70.0	580.1	520.3	639.8	10.3	3.0	3.4
75.0	490.5	437.5	543.5	10.8	3.3	3.3
80.0	416.5	369.5	463.5	11.3	3.5	3.2
85.0	355.2	313.4	397.0	11.8	3.7	3.1
90.0	304.1	267.0	341.3	12.2	4.0	3.1
95.0	261.4	228.3	294.6	12.7	4.2	3.0
100.0	225.6	196.0	255.1	13.1	4.5	2.9
105.0	195.5	169.1	222.0	13.5	4.7	2.9
110.0	170.1	146.4	193.7	13.9	5.0	2.8
115.0	148.2	127.0	169.5	14.3	5.3	2.7
120.0	129.6	110.5	148.7	14.7	5.6	2.7
125.0	113.5	96.33	130.6	15.1	5.8	2.6

	B57891M0332K000					
R/T No.	2003					
T (°C)	B _{25/100} = 3980 K, R ₂₅ = 3300 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	322010	242360	401660	24.7	3.3	7.4
-50.0	223250	170760	275730	23.5	3.3	7.2
-45.0	156870	121830	191920	22.3	3.2	6.9
-40.0	111640	87959	135330	21.2	3.2	6.7
-35.0	80385	64195	96574	20.1	3.1	6.5
-30.0	58585	47391	69780	19.1	3.1	6.2
-25.0	43120	35307	50932	18.1	3.0	6.0
-20.0	32085	26577	37594	17.2	2.9	5.8
-15.0	24092	20176	28008	16.3	2.9	5.6
-10.0	18269	15460	21078	15.4	2.8	5.5
-5.0	13970	11940	15999	14.5	2.8	5.3
0.0	10778	9300	12256	13.7	2.7	5.1
5.0	8379	7296	9463	12.9	2.6	5.0
10.0	6568	5768	7367	12.2	2.5	4.8
15.0	5184	4591	5777	11.4	2.5	4.7
20.0	4122	3680	4565	10.7	2.4	4.5
25.0	3300	2970	3630	10.0	2.3	4.4
30.0	2659	2374	2944	10.7	2.5	4.3
35.0	2156	1911	2400	11.3	2.7	4.1
40.0	1759	1548	1969	12.0	3.0	4.0
45.0	1443	1261	1624	12.6	3.2	3.9
50.0	1190	1034	1347	13.1	3.5	3.8
55.0	987.0	851.7	1122	13.7	3.7	3.7
60.0	822.8	705.5	940.1	14.3	4.0	3.6
65.0	689.3	587.3	791.2	14.8	4.2	3.5
70.0	580.1	491.3	668.9	15.3	4.5	3.4
75.0	490.5	413.0	568.0	15.8	4.8	3.3
80.0	416.5	348.7	484.3	16.3	5.0	3.2
85.0	355.2	295.7	414.7	16.8	5.3	3.1
90.0	304.1	251.8	356.5	17.2	5.6	3.1
95.0	261.4	215.3	307.6	17.7	5.9	3.0
100.0	225.6	184.7	266.4	18.1	6.2	2.9
105.0	195.5	159.3	231.7	18.5	6.5	2.9
110.0	170.1	137.9	202.3	18.9	6.8	2.8
115.0	148.2	119.6	176.9	19.3	7.1	2.7
120.0	129.6	104.1	155.2	19.7	7.4	2.7
125.0	113.5	90.66	136.3	20.1	7.8	2.6

	B57891M0472J000					
R/T No.	2003					
T (°C)	B _{25/100} = 3980 K, R ₂₅ = 4700 Ω, T _R = 25 °C, ΔR _R /R _R = ± 5%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	458620	368100	549130	19.7	2.6	7.4
-50.0	317960	259100	376810	18.5	2.6	7.2
-45.0	223430	184690	262160	17.3	2.5	6.9
-40.0	159010	133230	184790	16.2	2.4	6.7
-35.0	114490	97154	131820	15.1	2.3	6.5
-30.0	83440	71668	95212	14.1	2.3	6.2
-25.0	61413	53356	69469	13.1	2.2	6.0
-20.0	45697	40136	51258	12.2	2.1	5.8
-15.0	34313	30451	38175	11.3	2.0	5.6
-10.0	26020	23320	28720	10.4	1.9	5.5
-5.0	19896	18000	21792	9.5	1.8	5.3
0.0	15350	14012	16688	8.7	1.7	5.1
5.0	11934	10988	12880	7.9	1.6	5.0
10.0	9354	8683	10025	7.2	1.5	4.8
15.0	7383	6908	7859	6.4	1.4	4.7
20.0	5871	5535	6208	5.7	1.3	4.5
25.0	4700	4465	4935	5.0	1.1	4.4
30.0	3787	3571	4003	5.7	1.3	4.3
35.0	3070	2875	3265	6.3	1.5	4.1
40.0	2505	2330	2679	7.0	1.7	4.0
45.0	2055	1899	2210	7.6	1.9	3.9
50.0	1695	1557	1833	8.1	2.1	3.8
55.0	1406	1283	1528	8.7	2.4	3.7
60.0	1172	1063	1280	9.3	2.6	3.6
65.0	981.7	885.6	1078	9.8	2.8	3.5
70.0	826.2	741.1	911.3	10.3	3.0	3.4
75.0	698.6	623.1	774.0	10.8	3.3	3.3
80.0	593.2	526.2	660.1	11.3	3.5	3.2
85.0	505.9	446.4	565.4	11.8	3.7	3.1
90.0	433.1	380.2	486.1	12.2	4.0	3.1
95.0	372.4	325.2	419.5	12.7	4.2	3.0
100.0	321.3	279.2	363.4	13.1	4.5	2.9
105.0	278.5	240.8	316.1	13.5	4.7	2.9
110.0	242.2	208.4	275.9	13.9	5.0	2.8
115.0	211.1	180.9	241.4	14.3	5.3	2.7
120.0	184.6	157.4	211.8	14.7	5.6	2.7
125.0	161.6	137.2	186.0	15.1	5.8	2.6

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

	B57891M0472K000					
R/T No.	2003					
T (°C)	B _{25/100} = 3980 K, R ₂₅ = 4700 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	458620	345170	572060	24.7	3.3	7.4
-50.0	317960	243210	392710	23.5	3.3	7.2
-45.0	223430	173520	273330	22.3	3.2	6.9
-40.0	159010	125270	192740	21.2	3.2	6.7
-35.0	114490	91430	137540	20.1	3.1	6.5
-30.0	83440	67496	99384	19.1	3.1	6.2
-25.0	61413	50285	72540	18.1	3.0	6.0
-20.0	45697	37852	53543	17.2	2.9	5.8
-15.0	34313	28735	39890	16.3	2.9	5.6
-10.0	26020	22019	30020	15.4	2.8	5.5
-5.0	19896	17005	22787	14.5	2.8	5.3
0.0	15350	13245	17455	13.7	2.7	5.1
5.0	11934	10391	13477	12.9	2.6	5.0
10.0	9354	8215	10492	12.2	2.5	4.8
15.0	7383	6539	8228	11.4	2.5	4.7
20.0	5871	5241	6501	10.7	2.4	4.5
25.0	4700	4230	5170	10.0	2.3	4.4
30.0	3787	3381	4193	10.7	2.5	4.3
35.0	3070	2722	3419	11.3	2.7	4.1
40.0	2505	2205	2804	12.0	3.0	4.0
45.0	2055	1796	2313	12.6	3.2	3.9
50.0	1695	1472	1918	13.1	3.5	3.8
55.0	1406	1213	1598	13.7	3.7	3.7
60.0	1172	1005	1339	14.3	4.0	3.6
65.0	981.7	836.5	1127	14.8	4.2	3.5
70.0	826.2	699.8	952.6	15.3	4.5	3.4
75.0	698.6	588.2	808.9	15.8	4.8	3.3
80.0	593.2	496.6	689.8	16.3	5.0	3.2
85.0	505.9	421.1	590.7	16.8	5.3	3.1
90.0	433.1	358.6	507.7	17.2	5.6	3.1
95.0	372.4	306.6	438.1	17.7	5.9	3.0
100.0	321.3	263.1	379.4	18.1	6.2	2.9
105.0	278.5	226.9	330.0	18.5	6.5	2.9
110.0	242.2	196.3	288.1	18.9	6.8	2.8
115.0	211.1	170.3	252.0	19.3	7.1	2.7
120.0	184.6	148.2	221.0	19.7	7.4	2.7
125.0	161.6	129.1	194.1	20.1	7.8	2.6

B57891M0682J000						
R/T No.	2003					
T (°C)	B _{25/100} = 3980 K, R ₂₅ = 6800 Ω, T _R = 25 °C, ΔR _R /R _R = ± 5%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	663530	532580	794480	19.7	2.6	7.4
-50.0	460020	374870	545170	18.5	2.6	7.2
-45.0	323260	267210	379300	17.3	2.5	6.9
-40.0	230050	192750	267360	16.2	2.4	6.7
-35.0	165640	140560	190720	15.1	2.3	6.5
-30.0	120720	103690	137750	14.1	2.3	6.2
-25.0	88852	77196	100510	13.1	2.2	6.0
-20.0	66115	58070	74161	12.2	2.1	5.8
-15.0	49644	44056	55231	11.3	2.0	5.6
-10.0	37645	33739	41552	10.4	1.9	5.5
-5.0	28786	26043	31529	9.5	1.8	5.3
0.0	22209	20273	24144	8.7	1.7	5.1
5.0	17266	15897	18636	7.9	1.6	5.0
10.0	13533	12563	14504	7.2	1.5	4.8
15.0	10682	9994	11370	6.4	1.4	4.7
20.0	8495	8008	8982	5.7	1.3	4.5
25.0	6800	6460	7140	5.0	1.1	4.4
30.0	5479	5166	5792	5.7	1.3	4.3
35.0	4442	4160	4724	6.3	1.5	4.1
40.0	3624	3371	3876	7.0	1.7	4.0
45.0	2973	2748	3198	7.6	1.9	3.9
50.0	2452	2253	2652	8.1	2.1	3.8
55.0	2034	1857	2211	8.7	2.4	3.7
60.0	1695	1538	1852	9.3	2.6	3.6
65.0	1420	1281	1559	9.8	2.8	3.5
70.0	1195	1072	1318	10.3	3.0	3.4
75.0	1011	901.5	1120	10.8	3.3	3.3
80.0	858.2	761.4	955.1	11.3	3.5	3.2
85.0	731.9	645.9	818.0	11.8	3.7	3.1
90.0	626.7	550.1	703.2	12.2	4.0	3.1
95.0	538.7	470.5	607.0	12.7	4.2	3.0
100.0	464.8	403.9	525.7	13.1	4.5	2.9
105.0	402.9	348.4	457.4	13.5	4.7	2.9
110.0	350.4	301.6	399.2	13.9	5.0	2.8
115.0	305.5	261.7	349.3	14.3	5.3	2.7
120.0	267.1	227.8	306.5	14.7	5.6	2.7
125.0	233.8	198.5	269.2	15.1	5.8	2.6

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

	B57891M0682K000					
R/T No.	2003					
T (°C)	B _{25/100} = 3980 K, R ₂₅ = 6800 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	663530	499400	827660	24.7	3.3	7.4
-50.0	460020	351870	568170	23.5	3.3	7.2
-45.0	323260	251050	395460	22.3	3.2	6.9
-40.0	230050	181250	278860	21.2	3.2	6.7
-35.0	165640	132280	199000	20.1	3.1	6.5
-30.0	120720	97653	143790	19.1	3.1	6.2
-25.0	88852	72753	104950	18.1	3.0	6.0
-20.0	66115	54764	77466	17.2	2.9	5.8
-15.0	49644	41574	57714	16.3	2.9	5.6
-10.0	37645	31857	43434	15.4	2.8	5.5
-5.0	28786	24603	32969	14.5	2.8	5.3
0.0	22209	19163	25255	13.7	2.7	5.1
5.0	17266	15034	19499	12.9	2.6	5.0
10.0	13533	11886	15180	12.2	2.5	4.8
15.0	10682	9460	11904	11.4	2.5	4.7
20.0	8495	7583	9406	10.7	2.4	4.5
25.0	6800	6120	7480	10.0	2.3	4.4
30.0	5479	4892	6066	10.7	2.5	4.3
35.0	4442	3938	4946	11.3	2.7	4.1
40.0	3624	3190	4057	12.0	3.0	4.0
45.0	2973	2599	3346	12.6	3.2	3.9
50.0	2452	2130	2775	13.1	3.5	3.8
55.0	2034	1755	2313	13.7	3.7	3.7
60.0	1695	1454	1937	14.3	4.0	3.6
65.0	1420	1210	1630	14.8	4.2	3.5
70.0	1195	1012	1378	15.3	4.5	3.4
75.0	1011	851.0	1170	15.8	4.8	3.3
80.0	858.2	718.4	998.0	16.3	5.0	3.2
85.0	731.9	609.3	854.6	16.8	5.3	3.1
90.0	626.7	518.8	734.6	17.2	5.6	3.1
95.0	538.7	443.6	633.9	17.7	5.9	3.0
100.0	464.8	380.7	549.0	18.1	6.2	2.9
105.0	402.9	328.3	477.5	18.5	6.5	2.9
110.0	350.4	284.1	416.8	18.9	6.8	2.8
115.0	305.5	246.4	364.5	19.3	7.1	2.7
120.0	267.1	214.4	319.8	19.7	7.4	2.7
125.0	233.8	186.8	280.9	20.1	7.8	2.6

	B57891M0103J000					
R/T No.	4901					
T (°C)	$B_{25/100} = 3950 \text{ K}$, $R_{25} = 10000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha \text{ } (\%/K)$
-55.0	878900	706410	1051400	19.6	2.8	7.1
-50.0	617590	503900	731280	18.4	2.7	6.9
-45.0	439340	363580	515100	17.2	2.6	6.7
-40.0	316180	265180	367180	16.1	2.5	6.5
-35.0	230060	195410	264720	15.1	2.4	6.3
-30.0	169150	145400	192900	14.0	2.3	6.1
-25.0	125550	109150	141940	13.1	2.2	5.9
-20.0	94143	82738	105550	12.1	2.1	5.7
-15.0	71172	63195	79150	11.2	2.0	5.5
-10.0	54308	48695	59922	10.3	1.9	5.4
-5.0	41505	37563	45446	9.5	1.8	5.2
0.0	32014	29233	34795	8.7	1.7	5.0
5.0	25011	23033	26988	7.9	1.6	4.9
10.0	19691	18282	21100	7.2	1.5	4.7
15.0	15618	14614	16622	6.4	1.4	4.6
20.0	12474	11759	13188	5.7	1.3	4.5
25.0	10000	9500	10500	5.0	1.2	4.3
30.0	8080	7619	8541	5.7	1.4	4.2
35.0	6569	6153	6985	6.3	1.6	4.1
40.0	5372	4998	5746	7.0	1.8	4.0
45.0	4424	4090	4757	7.5	2.0	3.9
50.0	3661	3364	3958	8.1	2.2	3.8
55.0	3039	2775	3303	8.7	2.4	3.7
60.0	2536	2302	2770	9.2	2.6	3.6
65.0	2128	1921	2336	9.8	2.8	3.5
70.0	1794	1610	1978	10.3	3.0	3.4
75.0	1518	1355	1682	10.8	3.3	3.3
80.0	1290	1145	1435	11.2	3.5	3.2
85.0	1100	971.4	1229	11.7	3.7	3.1
90.0	941.8	827.2	1056	12.2	4.0	3.1
95.0	809.0	707.0	910.9	12.6	4.2	3.0
100.0	697.2	606.3	788.1	13.0	4.5	2.9
105.0	604.0	522.7	685.3	13.5	4.7	2.9
110.0	524.9	452.1	597.7	13.9	5.0	2.8
115.0	457.3	392.1	522.6	14.3	5.2	2.7
120.0	399.6	341.1	458.2	14.7	5.5	2.7
125.0	350.6	297.9	403.3	15.0	5.8	2.6

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

	B57891M0103K000					
R/T No.	4901					
T (°C)	B _{25/100} = 3950 K, R ₂₅ = 10000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	878900	662470	1095300	24.6	3.5	7.1
-50.0	617590	473020	762160	23.4	3.4	6.9
-45.0	439340	341610	537060	22.2	3.3	6.7
-40.0	316180	249370	382990	21.1	3.3	6.5
-35.0	230060	183900	276220	20.1	3.2	6.3
-30.0	169150	136940	201360	19.0	3.1	6.1
-25.0	125550	102880	148220	18.1	3.1	5.9
-20.0	94143	78030	110260	17.1	3.0	5.7
-15.0	71172	59636	82708	16.2	2.9	5.5
-10.0	54308	45980	62637	15.3	2.9	5.4
-5.0	41505	35488	47522	14.5	2.8	5.2
0.0	32014	27632	36396	13.7	2.7	5.0
5.0	25011	21782	28239	12.9	2.6	4.9
10.0	19691	17297	22084	12.2	2.6	4.7
15.0	15618	13833	17403	11.4	2.5	4.6
20.0	12474	11136	13812	10.7	2.4	4.5
25.0	10000	9000	11000	10.0	2.3	4.3
30.0	8080	7215	8945	10.7	2.5	4.2
35.0	6569	5824	7314	11.3	2.8	4.1
40.0	5372	4730	6014	12.0	3.0	4.0
45.0	4424	3868	4979	12.5	3.2	3.9
50.0	3661	3181	4142	13.1	3.5	3.8
55.0	3039	2623	3455	13.7	3.7	3.7
60.0	2536	2175	2897	14.2	4.0	3.6
65.0	2128	1814	2442	14.8	4.3	3.5
70.0	1794	1520	2068	15.3	4.5	3.4
75.0	1518	1279	1758	15.8	4.8	3.3
80.0	1290	1081	1500	16.2	5.0	3.2
85.0	1100	916.4	1284	16.7	5.3	3.1
90.0	941.8	780.1	1103	17.2	5.6	3.1
95.0	809.0	666.5	951.4	17.6	5.9	3.0
100.0	697.2	571.5	823.0	18.0	6.2	2.9
105.0	604.0	492.5	715.5	18.5	6.5	2.9
110.0	524.9	425.9	624.0	18.9	6.8	2.8
115.0	457.3	369.2	545.4	19.3	7.1	2.7
120.0	399.6	321.1	478.2	19.7	7.4	2.7
125.0	350.6	280.4	420.8	20.0	7.7	2.6

B57891M0153J000						
R/T No.	2004					
T (°C)	B _{25/100} = 4100 K, R ₂₅ = 15000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 5%					
	R _{nomL} [Ω]	R _{minL} [Ω]	R _{maxL} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	1493300	1192000	1794600	20.2	2.6	7.7
-50.0	1028700	834140	1223300	18.9	2.6	7.4
-45.0	719450	592050	846850	17.7	2.5	7.0
-40.0	510290	425830	594740	16.6	2.5	6.7
-35.0	366720	310090	423360	15.4	2.4	6.5
-30.0	266810	228440	305180	14.4	2.3	6.2
-25.0	196240	170020	222460	13.4	2.2	6.0
-20.0	145880	127810	163940	12.4	2.1	5.8
-15.0	109740	97183	122300	11.4	2.0	5.6
-10.0	83317	74538	92096	10.5	1.9	5.4
-5.0	63797	57631	69963	9.7	1.8	5.3
0.0	49254	44907	53601	8.8	1.7	5.1
5.0	38268	35200	41336	8.0	1.6	5.0
10.0	29959	27791	32127	7.2	1.5	4.8
15.0	23607	22077	25138	6.5	1.4	4.7
20.0	18732	17654	19809	5.8	1.3	4.5
25.0	15000	14250	15750	5.0	1.1	4.4
30.0	12012	11324	12700	5.7	1.3	4.3
35.0	9710	9090	10330	6.4	1.5	4.2
40.0	7894	7339	8449	7.0	1.7	4.1
45.0	6490	5993	6986	7.6	1.9	4.0
50.0	5356	4915	5798	8.2	2.1	3.9
55.0	4411	4022	4800	8.8	2.3	3.8
60.0	3651	3309	3994	9.4	2.5	3.7
65.0	3042	2740	3344	9.9	2.7	3.6
70.0	2545	2278	2811	10.5	3.0	3.5
75.0	2138	1904	2373	11.0	3.2	3.4
80.0	1804	1597	2011	11.5	3.4	3.4
85.0	1529	1346	1712	12.0	3.6	3.3
90.0	1301	1140	1463	12.4	3.9	3.2
95.0	1107	964.3	1250	12.9	4.1	3.1
100.0	944.6	818.6	1071	13.3	4.4	3.1
105.0	814.1	702.0	926.3	13.8	4.6	3.0
110.0	704.1	604.1	804.1	14.2	4.9	2.9
115.0	608.6	519.7	697.6	14.6	5.1	2.9
120.0	527.6	448.4	606.9	15.0	5.4	2.8
125.0	459.6	388.7	530.4	15.4	5.6	2.7

	B57891M0153K000					
R/T No.	2004					
T (°C)	B _{25/100} = 4100 K, R ₂₅ = 15000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	1493300	1117300	1869300	25.2	3.3	7.7
-50.0	1028700	782700	1274700	23.9	3.2	7.4
-45.0	719450	556080	882820	22.7	3.2	7.0
-40.0	510290	400310	620260	21.6	3.2	6.7
-35.0	366720	291750	441690	20.4	3.2	6.5
-30.0	266810	215100	318520	19.4	3.1	6.2
-25.0	196240	160210	232270	18.4	3.1	6.0
-20.0	145880	120520	171240	17.4	3.0	5.8
-15.0	109740	91696	127780	16.4	2.9	5.6
-10.0	83317	70372	96262	15.5	2.9	5.4
-5.0	63797	54441	73153	14.7	2.8	5.3
0.0	49254	42444	56064	13.8	2.7	5.1
5.0	38268	33287	43249	13.0	2.6	5.0
10.0	29959	26293	33624	12.2	2.5	4.8
15.0	23607	20897	26318	11.5	2.5	4.7
20.0	18732	16717	20746	10.8	2.4	4.5
25.0	15000	13500	16500	10.0	2.3	4.4
30.0	12012	10723	13301	10.7	2.5	4.3
35.0	9710	8604	10816	11.4	2.7	4.2
40.0	7894	6945	8843	12.0	2.9	4.1
45.0	6490	5669	7310	12.6	3.2	4.0
50.0	5356	4647	6065	13.2	3.4	3.9
55.0	4411	3801	5021	13.8	3.6	3.8
60.0	3651	3126	4176	14.4	3.9	3.7
65.0	3042	2588	3496	14.9	4.1	3.6
70.0	2545	2151	2938	15.5	4.4	3.5
75.0	2138	1797	2480	16.0	4.6	3.4
80.0	1804	1507	2101	16.5	4.9	3.4
85.0	1529	1270	1789	17.0	5.2	3.3
90.0	1301	1074	1528	17.4	5.4	3.2
95.0	1107	909.0	1305	17.9	5.7	3.1
100.0	944.6	771.3	1118	18.3	6.0	3.1
105.0	814.1	661.3	967.0	18.8	6.3	3.0
110.0	704.1	568.9	839.3	19.2	6.6	2.9
115.0	608.6	489.3	728.0	19.6	6.9	2.9
120.0	527.6	422.0	633.2	20.0	7.2	2.8
125.0	459.6	365.7	553.4	20.4	7.5	2.7

	B57891M0223J000					
R/T No.	2904					
T (°C)	$B_{25/100} = 4300 \text{ K}$, $R_{25} = 22000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha \text{ } (\%/K)$
-55.0	2672100	2113200	3231000	20.9	2.9	7.3
-50.0	1857700	1493700	2221600	19.6	2.7	7.1
-45.0	1303400	1064500	1542200	18.3	2.6	7.0
-40.0	922640	764760	1080500	17.1	2.5	6.9
-35.0	658850	553750	763940	16.0	2.4	6.7
-30.0	474480	404080	544880	14.8	2.3	6.5
-25.0	344090	296720	391470	13.8	2.2	6.3
-20.0	252250	220110	284380	12.7	2.1	6.2
-15.0	185920	164070	207780	11.8	2.0	6.0
-10.0	138440	123480	153400	10.8	1.9	5.8
-5.0	103570	93325	113810	9.9	1.8	5.6
0.0	78239	71189	85288	9.0	1.6	5.5
5.0	59661	54792	64530	8.2	1.5	5.3
10.0	45891	42522	49261	7.3	1.4	5.2
15.0	35650	33314	37985	6.6	1.3	5.0
20.0	27904	26289	29519	5.8	1.2	4.9
25.0	22000	20900	23100	5.0	1.1	4.7
30.0	17472	16465	18479	5.8	1.3	4.6
35.0	13919	13021	14817	6.5	1.4	4.5
40.0	11163	10368	11958	7.1	1.6	4.3
45.0	9026	8325	9727	7.8	1.8	4.2
50.0	7340	6723	7956	8.4	2.0	4.1
55.0	5993	5454	6533	9.0	2.3	4.0
60.0	4921	4449	5394	9.6	2.5	3.9
65.0	4061	3648	4474	10.2	2.7	3.8
70.0	3367	3006	3728	10.7	2.9	3.7
75.0	2806	2490	3122	11.3	3.1	3.6
80.0	2349	2072	2626	11.8	3.4	3.5
85.0	1978	1735	2222	12.3	3.6	3.4
90.0	1674	1459	1888	12.8	3.8	3.3
95.0	1420	1231	1608	13.3	4.1	3.2
100.0	1209	1043	1375	13.7	4.3	3.2
105.0	1034	887.2	1181	14.2	4.6	3.1
110.0	887.9	757.8	1018	14.6	4.8	3.0
115.0	764.3	649.1	879.6	15.1	5.1	3.0
120.0	660.1	557.8	762.5	15.5	5.4	2.9
125.0	572.1	481.1	663.2	15.9	5.6	2.8

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

	B57891M0223K000					
R/T No.	2904					
T (°C)	B _{25/100} = 4300 K, R ₂₅ = 22000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	2672100	1979600	3364600	25.9	3.6	7.3
-50.0	1857700	1400800	2314500	24.6	3.4	7.1
-45.0	1303400	999350	1607400	23.3	3.3	7.0
-40.0	922640	718630	1126700	22.1	3.2	6.9
-35.0	658850	520810	796880	21.0	3.1	6.7
-30.0	474480	380360	568600	19.8	3.0	6.5
-25.0	344090	279510	408670	18.8	3.0	6.3
-20.0	252250	207490	297000	17.7	2.9	6.2
-15.0	185920	154770	217070	16.8	2.8	6.0
-10.0	138440	116560	160320	15.8	2.7	5.8
-5.0	103570	88147	118990	14.9	2.6	5.6
0.0	78239	67277	89200	14.0	2.6	5.5
5.0	59661	51809	67513	13.2	2.5	5.3
10.0	45891	40227	51555	12.3	2.4	5.2
15.0	35650	31531	39768	11.6	2.3	5.0
20.0	27904	24893	30914	10.8	2.2	4.9
25.0	22000	19800	24200	10.0	2.1	4.7
30.0	17472	15592	19353	10.8	2.3	4.6
35.0	13919	12325	15513	11.5	2.6	4.5
40.0	11163	9810	12516	12.1	2.8	4.3
45.0	9026	7873	10178	12.8	3.0	4.2
50.0	7340	6356	8323	13.4	3.3	4.1
55.0	5993	5154	6833	14.0	3.5	4.0
60.0	4921	4203	5640	14.6	3.8	3.9
65.0	4061	3445	4677	15.2	4.0	3.8
70.0	3367	2838	3896	15.7	4.3	3.7
75.0	2806	2350	3262	16.3	4.5	3.6
80.0	2349	1955	2743	16.8	4.8	3.5
85.0	1978	1636	2321	17.3	5.1	3.4
90.0	1674	1376	1971	17.8	5.3	3.3
95.0	1420	1160	1679	18.3	5.6	3.2
100.0	1209	982.1	1435	18.7	5.9	3.2
105.0	1034	835.5	1233	19.2	6.2	3.1
110.0	887.9	713.4	1062	19.6	6.5	3.0
115.0	764.3	610.8	917.8	20.1	6.8	3.0
120.0	660.1	524.8	795.5	20.5	7.1	2.9
125.0	572.1	452.5	691.8	20.9	7.4	2.8

	B57891M0333J000					
R/T No.	2904					
T (°C)	$B_{25/100} = 4300 \text{ K}$, $R_{25} = 33000 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha \text{ (}\%/\text{K)}$
-55.0	4008100	3169800	4846500	20.9	2.9	7.3
-50.0	2786500	2240600	3332400	19.6	2.7	7.1
-45.0	1955000	1596800	2313300	18.3	2.6	7.0
-40.0	1384000	1147100	1620800	17.1	2.5	6.9
-35.0	988270	830630	1145900	16.0	2.4	6.7
-30.0	711720	606120	817320	14.8	2.3	6.5
-25.0	516140	445080	587200	13.8	2.2	6.3
-20.0	378370	330160	426580	12.7	2.1	6.2
-15.0	278880	246100	311660	11.8	2.0	6.0
-10.0	207660	185220	230090	10.8	1.9	5.8
-5.0	155350	139990	170720	9.9	1.8	5.6
0.0	117360	106780	127930	9.0	1.6	5.5
5.0	89491	82188	96795	8.2	1.5	5.3
10.0	68837	63783	73891	7.3	1.4	5.2
15.0	53474	49971	56978	6.6	1.3	5.0
20.0	41856	39433	44278	5.8	1.2	4.9
25.0	33000	31350	34650	5.0	1.1	4.7
30.0	26209	24698	27719	5.8	1.3	4.6
35.0	20878	19531	22226	6.5	1.4	4.5
40.0	16744	15551	17937	7.1	1.6	4.3
45.0	13539	12487	14591	7.8	1.8	4.2
50.0	11010	10085	11934	8.4	2.0	4.1
55.0	8990	8181	9800	9.0	2.3	4.0
60.0	7382	6674	8090	9.6	2.5	3.9
65.0	6092	5472	6711	10.2	2.7	3.8
70.0	5051	4509	5592	10.7	2.9	3.7
75.0	4209	3735	4683	11.3	3.1	3.6
80.0	3524	3108	3939	11.8	3.4	3.5
85.0	2968	2603	3333	12.3	3.6	3.4
90.0	2510	2189	2831	12.8	3.8	3.3
95.0	2129	1847	2412	13.3	4.1	3.2
100.0	1813	1564	2062	13.7	4.3	3.2
105.0	1551	1331	1771	14.2	4.6	3.1
110.0	1332	1137	1527	14.6	4.8	3.0
115.0	1147	973.6	1319	15.1	5.1	3.0
120.0	990.2	836.7	1144	15.5	5.4	2.9
125.0	858.2	721.6	994.8	15.9	5.6	2.8

	B57891M0333K000					
R/T No.	2904					
T (°C)	$B_{25/100} = 4300 \text{ K}$, $R_{25} = 33000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 10\%$					
	$R_{\text{nom}}[\Omega]$	$R_{\text{min}}[\Omega]$	$R_{\text{max}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha (\%/K)$
-55.0	4008100	2969400	5046900	25.9	3.6	7.3
-50.0	2786500	2101200	3471700	24.6	3.4	7.1
-45.0	1955000	1499000	2411000	23.3	3.3	7.0
-40.0	1384000	1077900	1690000	22.1	3.2	6.9
-35.0	988270	781220	1195300	21.0	3.1	6.7
-30.0	711720	570540	852900	19.8	3.0	6.5
-25.0	516140	419270	613010	18.8	3.0	6.3
-20.0	378370	311240	445490	17.7	2.9	6.2
-15.0	278880	232160	325610	16.8	2.8	6.0
-10.0	207660	174840	240480	15.8	2.7	5.8
-5.0	155350	132220	178490	14.9	2.6	5.6
0.0	117360	100920	133800	14.0	2.6	5.5
5.0	89491	77713	101270	13.2	2.5	5.3
10.0	68837	60341	77333	12.3	2.4	5.2
15.0	53474	47297	59651	11.6	2.3	5.0
20.0	41856	37340	46371	10.8	2.2	4.9
25.0	33000	29700	36300	10.0	2.1	4.7
30.0	26209	23388	29030	10.8	2.3	4.6
35.0	20878	18487	23270	11.5	2.6	4.5
40.0	16744	14714	18774	12.1	2.8	4.3
45.0	13539	11810	15268	12.8	3.0	4.2
50.0	11010	9535	12485	13.4	3.3	4.1
55.0	8990	7731	10249	14.0	3.5	4.0
60.0	7382	6305	8459	14.6	3.8	3.9
65.0	6092	5168	7015	15.2	4.0	3.8
70.0	5051	4256	5845	15.7	4.3	3.7
75.0	4209	3525	4894	16.3	4.5	3.6
80.0	3524	2932	4115	16.8	4.8	3.5
85.0	2968	2454	3481	17.3	5.1	3.4
90.0	2510	2064	2957	17.8	5.3	3.3
95.0	2129	1740	2518	18.3	5.6	3.2
100.0	1813	1473	2153	18.7	5.9	3.2
105.0	1551	1253	1849	19.2	6.2	3.1
110.0	1332	1070	1594	19.6	6.5	3.0
115.0	1147	916.3	1377	20.1	6.8	3.0
120.0	990.2	787.2	1193	20.5	7.1	2.9
125.0	858.2	678.7	1038	20.9	7.4	2.8

	B57891M0473J001					
R/T No.	4012					
T (°C)	B _{25/100} = 4355 K, R ₂₅ = 47000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 5%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	5440900	4291800	6590000	21.1	2.8	7.5
-50.0	3764800	3020200	4509400	19.8	2.7	7.2
-45.0	2635100	2147800	3122500	18.5	2.6	7.0
-40.0	1864800	1542800	2186800	17.3	2.5	6.8
-35.0	1333600	1119000	1548200	16.1	2.4	6.6
-30.0	963330	819190	1107500	15.0	2.3	6.4
-25.0	702600	605080	800110	13.9	2.2	6.2
-20.0	517190	450780	583590	12.8	2.1	6.0
-15.0	384090	338610	429560	11.8	2.0	5.9
-10.0	287680	256380	318970	10.9	1.9	5.7
-5.0	217230	195610	238850	10.0	1.8	5.5
0.0	165330	150350	180310	9.1	1.7	5.4
5.0	126780	116380	137170	8.2	1.6	5.2
10.0	97920	90702	105140	7.4	1.4	5.1
15.0	76162	71158	81166	6.6	1.3	5.0
20.0	59637	56180	63094	5.8	1.2	4.8
25.0	47000	44650	49350	5.0	1.1	4.7
30.0	37272	35120	39423	5.8	1.3	4.6
35.0	29735	27810	31659	6.5	1.5	4.5
40.0	23859	22154	25565	7.1	1.6	4.3
45.0	19252	17749	20754	7.8	1.8	4.2
50.0	15618	14299	16936	8.4	2.0	4.1
55.0	12735	11582	13889	9.1	2.2	4.0
60.0	10437	9429	11445	9.7	2.5	3.9
65.0	8595	7715	9474	10.2	2.7	3.8
70.0	7111	6343	7879	10.8	2.9	3.7
75.0	5910	5239	6580	11.3	3.1	3.7
80.0	4933	4347	5519	11.9	3.3	3.6
85.0	4135	3623	4647	12.4	3.6	3.5
90.0	3480	3031	3929	12.9	3.8	3.4
95.0	2941	2547	3334	13.4	4.0	3.3
100.0	2494	2149	2840	13.9	4.3	3.3
105.0	2123	1819	2427	14.3	4.5	3.2
110.0	1814	1546	2082	14.8	4.7	3.1
115.0	1555	1319	1792	15.2	5.0	3.0
120.0	1338	1129	1547	15.6	5.2	3.0
125.0	1154	969.1	1340	16.1	5.5	2.9

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

	B57891M0473K001					
R/T No.	4012					
T (°C)	B _{25/100} = 4355 K, R ₂₅ = 47000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	5440900	4019700	6862000	26.1	3.5	7.5
-50.0	3764800	2831900	4697600	24.8	3.4	7.2
-45.0	2635100	2016000	3254200	23.5	3.3	7.0
-40.0	1864800	1449600	2280000	22.3	3.3	6.8
-35.0	1333600	1052300	1614800	21.1	3.2	6.6
-30.0	963330	771030	1155600	20.0	3.1	6.4
-25.0	702600	569950	835240	18.9	3.0	6.2
-20.0	517190	424920	609450	17.8	3.0	6.0
-15.0	384090	319410	448770	16.8	2.9	5.9
-10.0	287680	242000	333360	15.9	2.8	5.7
-5.0	217230	184750	249710	15.0	2.7	5.5
0.0	165330	142080	188570	14.1	2.6	5.4
5.0	126780	110040	143510	13.2	2.5	5.2
10.0	97920	85806	110040	12.4	2.4	5.1
15.0	76162	67349	84974	11.6	2.3	5.0
20.0	59637	53198	66076	10.8	2.2	4.8
25.0	47000	42300	51700	10.0	2.1	4.7
30.0	37272	33257	41287	10.8	2.4	4.6
35.0	29735	26324	33146	11.5	2.6	4.5
40.0	23859	20961	26758	12.1	2.8	4.3
45.0	19252	16787	21717	12.8	3.0	4.2
50.0	15618	13519	17717	13.4	3.3	4.1
55.0	12735	10945	14525	14.1	3.5	4.0
60.0	10437	8908	11966	14.7	3.7	3.9
65.0	8595	7286	9904	15.2	4.0	3.8
70.0	7111	5988	8234	15.8	4.2	3.7
75.0	5910	4944	6876	16.3	4.5	3.7
80.0	4933	4101	5765	16.9	4.7	3.6
85.0	4135	3416	4854	17.4	5.0	3.5
90.0	3480	2857	4103	17.9	5.3	3.4
95.0	2941	2400	3481	18.4	5.5	3.3
100.0	2494	2024	2964	18.9	5.8	3.3
105.0	2123	1713	2534	19.3	6.1	3.2
110.0	1814	1455	2173	19.8	6.4	3.1
115.0	1555	1241	1870	20.2	6.6	3.0
120.0	1338	1062	1614	20.6	6.9	3.0
125.0	1154	911.4	1398	21.1	7.2	2.9

B57891M0683J001						
R/T No.	4012					
T (°C)	B _{25/100} = 4355 K, R ₂₅ = 68000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 5%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	7871900	6209400	9534400	21.1	2.8	7.5
-50.0	5446900	4369600	6524200	19.8	2.7	7.2
-45.0	3812500	3107400	4517600	18.5	2.6	7.0
-40.0	2698000	2232200	3163900	17.3	2.5	6.8
-35.0	1929400	1619000	2239900	16.1	2.4	6.6
-30.0	1393700	1185200	1602300	15.0	2.3	6.4
-25.0	1016500	875440	1157600	13.9	2.2	6.2
-20.0	748270	652200	844340	12.8	2.1	6.0
-15.0	555700	489910	621500	11.8	2.0	5.9
-10.0	416210	370940	461490	10.9	1.9	5.7
-5.0	314290	283010	345570	10.0	1.8	5.5
0.0	239200	217520	260870	9.1	1.7	5.4
5.0	183420	168380	198460	8.2	1.6	5.2
10.0	141670	131230	152120	7.4	1.4	5.1
15.0	110190	102950	117430	6.6	1.3	5.0
20.0	86283	81281	91286	5.8	1.2	4.8
25.0	68000	64600	71400	5.0	1.1	4.7
30.0	53925	50812	57038	5.8	1.3	4.6
35.0	43021	40236	45805	6.5	1.5	4.5
40.0	34520	32052	36988	7.1	1.6	4.3
45.0	27854	25680	30028	7.8	1.8	4.2
50.0	22596	20689	24503	8.4	2.0	4.1
55.0	18426	16757	20094	9.1	2.2	4.0
60.0	15100	13643	16558	9.7	2.5	3.9
65.0	12435	11163	13708	10.2	2.7	3.8
70.0	10288	9177	11399	10.8	2.9	3.7
75.0	8550	7580	9520	11.3	3.1	3.7
80.0	7137	6290	7984	11.9	3.3	3.6
85.0	5982	5241	6724	12.4	3.6	3.5
90.0	5035	4386	5684	12.9	3.8	3.4
95.0	4254	3685	4824	13.4	4.0	3.3
100.0	3609	3109	4109	13.9	4.3	3.3
105.0	3072	2632	3512	14.3	4.5	3.2
110.0	2625	2237	3012	14.8	4.7	3.1
115.0	2250	1908	2592	15.2	5.0	3.0
120.0	1936	1633	2238	15.6	5.2	3.0
125.0	1670	1402	1939	16.1	5.5	2.9

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

	B57891M0683K001					
R/T No.	4012					
T (°C)	B _{25/100} = 4355 K, R ₂₅ = 68000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	7871900	5815800	9928000	26.1	3.5	7.5
-50.0	5446900	4097300	6796500	24.8	3.4	7.2
-45.0	3812500	2916800	4708300	23.5	3.3	7.0
-40.0	2698000	2097300	3298800	22.3	3.3	6.8
-35.0	1929400	1522500	2336400	21.1	3.2	6.6
-30.0	1393700	1115500	1672000	20.0	3.1	6.4
-25.0	1016500	824610	1208400	18.9	3.0	6.2
-20.0	748270	614780	881760	17.8	3.0	6.0
-15.0	555700	462120	649280	16.8	2.9	5.9
-10.0	416210	350130	482300	15.9	2.8	5.7
-5.0	314290	267300	361290	15.0	2.7	5.5
0.0	239200	205560	272830	14.1	2.6	5.4
5.0	183420	159210	207630	13.2	2.5	5.2
10.0	141670	124150	159200	12.4	2.4	5.1
15.0	110190	97442	122940	11.6	2.3	5.0
20.0	86283	76967	95600	10.8	2.2	4.8
25.0	68000	61200	74800	10.0	2.1	4.7
30.0	53925	48116	59734	10.8	2.4	4.6
35.0	43021	38085	47956	11.5	2.6	4.5
40.0	34520	30326	38714	12.1	2.8	4.3
45.0	27854	24287	31420	12.8	3.0	4.2
50.0	22596	19559	25633	13.4	3.3	4.1
55.0	18426	15836	21015	14.1	3.5	4.0
60.0	15100	12888	17313	14.7	3.7	3.9
65.0	12435	10541	14329	15.2	4.0	3.8
70.0	10288	8663	11913	15.8	4.2	3.7
75.0	8550	7153	9948	16.3	4.5	3.7
80.0	7137	5933	8341	16.9	4.7	3.6
85.0	5982	4942	7023	17.4	5.0	3.5
90.0	5035	4134	5936	17.9	5.3	3.4
95.0	4254	3472	5036	18.4	5.5	3.3
100.0	3609	2928	4289	18.9	5.8	3.3
105.0	3072	2478	3666	19.3	6.1	3.2
110.0	2625	2106	3144	19.8	6.4	3.1
115.0	2250	1795	2705	20.2	6.6	3.0
120.0	1936	1536	2335	20.6	6.9	3.0
125.0	1670	1319	2022	21.1	7.2	2.9

	B57891M0104J000					
R/T No.	4003					
T (°C)	$B_{25/100} = 4450 \text{ K}$, $R_{25} = 100000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nom}}[\Omega]$	$R_{\text{min}}[\Omega]$	$R_{\text{max}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha (\%/K)$
-55.0	10381000	8152300	12610000	21.5	3.1	6.8
-50.0	7370700	5889300	8852200	20.1	3.0	6.7
-45.0	5272300	4281700	6262900	18.8	2.8	6.6
-40.0	3798800	3132700	4464800	17.5	2.7	6.5
-35.0	2756500	2306400	3206700	16.3	2.6	6.4
-30.0	2014200	1708500	2320000	15.2	2.4	6.2
-25.0	1480100	1271800	1688400	14.1	2.3	6.1
-20.0	1097600	954790	1240400	13.0	2.2	6.0
-15.0	817440	719450	915440	12.0	2.1	5.8
-10.0	614070	546490	681650	11.0	1.9	5.7
-5.0	463310	416700	509920	10.1	1.8	5.5
0.0	352440	320190	384680	9.1	1.7	5.4
5.0	269950	247620	292270	8.3	1.6	5.3
10.0	208310	192850	223770	7.4	1.4	5.1
15.0	161890	151200	172580	6.6	1.3	5.0
20.0	126660	119300	134030	5.8	1.2	4.9
25.0	100000	95000	105000	5.0	1.1	4.8
30.0	78351	73816	82886	5.8	1.2	4.6
35.0	62372	58316	66428	6.5	1.4	4.5
40.0	49937	46344	53530	7.2	1.6	4.4
45.0	40218	37055	43381	7.9	1.8	4.3
50.0	32557	29785	35329	8.5	2.0	4.2
55.0	26402	23988	28816	9.1	2.2	4.1
60.0	21527	19427	23627	9.8	2.4	4.0
65.0	17693	15863	19524	10.3	2.6	3.9
70.0	14616	13019	16212	10.9	2.8	3.8
75.0	12097	10708	13485	11.5	3.1	3.8
80.0	10053	8845	11262	12.0	3.3	3.7
85.0	8376	7325	9427	12.6	3.5	3.6
90.0	7004	6089	7919	13.1	3.7	3.5
95.0	5894	5094	6693	13.6	3.9	3.4
100.0	4978	4278	5677	14.0	4.2	3.4
105.0	4215	3603	4827	14.5	4.4	3.3
110.0	3580	3044	4117	15.0	4.6	3.2
115.0	3050	2580	3521	15.4	4.9	3.2
120.0	2607	2193	3020	15.9	5.1	3.1
125.0	2233	1869	2597	16.3	5.4	3.0

	B57891M0104K000					
R/T No.	4003					
T (°C)	B _{25/100} = 4450 K, R ₂₅ = 100000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	10381000	7633200	13129000	26.5	3.9	6.8
-50.0	7370700	5520700	9220700	25.1	3.7	6.7
-45.0	5272300	4018100	6526500	23.8	3.6	6.6
-40.0	3798800	2942800	4654700	22.5	3.5	6.5
-35.0	2756500	2168500	3344500	21.3	3.3	6.4
-30.0	2014200	1607800	2420700	20.2	3.2	6.2
-25.0	1480100	1197800	1762400	19.1	3.1	6.1
-20.0	1097600	899910	1295200	18.0	3.0	6.0
-15.0	817440	678570	956310	17.0	2.9	5.8
-10.0	614070	515790	712350	16.0	2.8	5.7
-5.0	463310	393540	533080	15.1	2.7	5.5
0.0	352440	302570	402300	14.1	2.6	5.4
5.0	269950	234130	305770	13.3	2.5	5.3
10.0	208310	182430	234190	12.4	2.4	5.1
15.0	161890	143110	180680	11.6	2.3	5.0
20.0	126660	112970	140360	10.8	2.2	4.9
25.0	100000	90000	110000	10.0	2.1	4.8
30.0	78351	69898	86804	10.8	2.3	4.6
35.0	62372	55198	69547	11.5	2.5	4.5
40.0	49937	43847	56027	12.2	2.8	4.4
45.0	40218	35044	45392	12.9	3.0	4.3
50.0	32557	28157	36956	13.5	3.2	4.2
55.0	26402	22668	30136	14.1	3.4	4.1
60.0	21527	18351	24703	14.8	3.7	4.0
65.0	17693	14978	20408	15.3	3.9	3.9
70.0	14616	12289	16943	15.9	4.1	3.8
75.0	12097	10103	14090	16.5	4.4	3.8
80.0	10053	8342	11765	17.0	4.6	3.7
85.0	8376	6906	9846	17.6	4.9	3.6
90.0	7004	5739	8269	18.1	5.1	3.5
95.0	5894	4800	6988	18.6	5.4	3.4
100.0	4978	4029	5926	19.0	5.7	3.4
105.0	4215	3392	5037	19.5	5.9	3.3
110.0	3580	2865	4296	20.0	6.2	3.2
115.0	3050	2427	3674	20.4	6.5	3.2
120.0	2607	2063	3151	20.9	6.7	3.1
125.0	2233	1758	2709	21.3	7.0	3.0

	B57891M0154J000					
R/T No.	2005					
T (°C)	B _{25/100} = 4600 K, R ₂₅ = 150000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 5%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	18033000	14062000	22005000	22.0	3.2	6.8
-50.0	12822000	10180000	15464000	20.6	3.0	6.8
-45.0	9150500	7389000	10912000	19.3	2.8	6.8
-40.0	6556900	5379600	7734100	18.0	2.7	6.7
-35.0	4718900	3930300	5507500	16.7	2.5	6.6
-30.0	3411900	2882400	3941400	15.5	2.4	6.4
-25.0	2473400	2117900	2829000	14.4	2.3	6.3
-20.0	1810600	1570200	2051000	13.3	2.1	6.2
-15.0	1326800	1164700	1489000	12.2	2.0	6.0
-10.0	981690	871680	1091700	11.2	1.9	5.9
-5.0	732790	657830	807740	10.2	1.8	5.7
0.0	551710	500480	602940	9.3	1.7	5.6
5.0	419150	384040	454270	8.4	1.5	5.5
10.0	320870	296800	344940	7.5	1.4	5.3
15.0	247600	231120	264080	6.7	1.3	5.2
20.0	192350	181120	203580	5.8	1.2	5.1
25.0	150000	142500	157500	5.0	1.0	4.9
30.0	117590	110750	124430	5.8	1.2	4.8
35.0	92733	86657	98809	6.6	1.4	4.7
40.0	73580	68233	78927	7.3	1.6	4.6
45.0	58673	54003	63344	8.0	1.8	4.5
50.0	47056	42995	51117	8.6	2.0	4.3
55.0	38008	34480	41535	9.3	2.2	4.2
60.0	30848	27790	33906	9.9	2.4	4.1
65.0	25143	22497	27790	10.5	2.6	4.1
70.0	20589	18300	22879	11.1	2.8	4.0
75.0	16918	14939	18897	11.7	3.0	3.9
80.0	13958	12247	15669	12.3	3.2	3.8
85.0	11577	10094	13059	12.8	3.5	3.7
90.0	9639	8354	10925	13.3	3.7	3.6
95.0	8052	6936	9167	13.9	3.9	3.5
100.0	6749	5781	7718	14.4	4.1	3.5
105.0	5688	4843	6532	14.8	4.4	3.4
110.0	4809	4073	5546	15.3	4.6	3.3
115.0	4074	3431	4717	15.8	4.8	3.3
120.0	3462	2900	4024	16.2	5.1	3.2
125.0	2952	2460	3444	16.7	5.3	3.1

	B57891M0154K000					
R/T No.	2005					
T (°C)	B _{25/100} = 4600 K, R ₂₅ = 150000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	18033000	13160000	22906000	27.0	4.0	6.8
-50.0	12822000	9538700	16105000	25.6	3.8	6.8
-45.0	9150500	6931400	11370000	24.3	3.6	6.8
-40.0	6556900	5051800	8061900	23.0	3.4	6.7
-35.0	4718900	3694300	5743400	21.7	3.3	6.6
-30.0	3411900	2711800	4112000	20.5	3.2	6.4
-25.0	2473400	1994200	2952700	19.4	3.1	6.3
-20.0	1810600	1479700	2141500	18.3	3.0	6.2
-15.0	1326800	1098300	1555300	17.2	2.9	6.0
-10.0	981690	822600	1140800	16.2	2.8	5.9
-5.0	732790	621190	844380	15.2	2.7	5.7
0.0	551710	472890	630530	14.3	2.6	5.6
5.0	419150	363080	475230	13.4	2.5	5.5
10.0	320870	280750	360980	12.5	2.3	5.3
15.0	247600	218740	276460	11.7	2.2	5.2
20.0	192350	171500	213200	10.8	2.1	5.1
25.0	150000	135000	165000	10.0	2.0	4.9
30.0	117590	104870	130310	10.8	2.3	4.8
35.0	92733	82021	103450	11.6	2.5	4.7
40.0	73580	64554	82606	12.3	2.7	4.6
45.0	58673	51070	66277	13.0	2.9	4.5
50.0	47056	40642	53470	13.6	3.1	4.3
55.0	38008	32580	43436	14.3	3.4	4.2
60.0	30848	26247	35448	14.9	3.6	4.1
65.0	25143	21240	29047	15.5	3.8	4.1
70.0	20589	17271	23908	16.1	4.1	4.0
75.0	16918	14093	19743	16.7	4.3	3.9
80.0	13958	11549	16367	17.3	4.6	3.8
85.0	11577	9515	13638	17.8	4.8	3.7
90.0	9639	7872	11407	18.3	5.1	3.6
95.0	8052	6534	9569	18.9	5.3	3.5
100.0	6749	5443	8056	19.4	5.6	3.5
105.0	5688	4559	6816	19.8	5.8	3.4
110.0	4809	3832	5787	20.3	6.1	3.3
115.0	4074	3227	4921	20.8	6.4	3.3
120.0	3462	2727	4197	21.2	6.6	3.2
125.0	2952	2312	3592	21.7	6.9	3.1

	B57891M0224J000					
R/T No.	2005					
T (°C)	$B_{25/100} = 4600 \text{ K}$, $R_{25} = 220000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha (\%/K)$
-55.0	26449000	20624000	32274000	22.0	3.2	6.8
-50.0	18806000	14930000	22681000	20.6	3.0	6.8
-45.0	13421000	10837000	16004000	19.3	2.8	6.8
-40.0	9616700	7890100	11343000	18.0	2.7	6.7
-35.0	6921000	5764400	8077600	16.7	2.5	6.6
-30.0	5004100	4227500	5780800	15.5	2.4	6.4
-25.0	3627700	3106200	4149200	14.4	2.3	6.3
-20.0	2655500	2302900	3008100	13.3	2.1	6.2
-15.0	1946000	1708200	2183800	12.2	2.0	6.0
-10.0	1439800	1278500	1601200	11.2	1.9	5.9
-5.0	1074800	964820	1184700	10.2	1.8	5.7
0.0	809170	734030	884320	9.3	1.7	5.6
5.0	614760	563260	666270	8.4	1.5	5.5
10.0	470610	435300	505910	7.5	1.4	5.3
15.0	363150	338980	387320	6.7	1.3	5.2
20.0	282110	265640	298580	5.8	1.2	5.1
25.0	220000	209000	231000	5.0	1.0	4.9
30.0	172460	162440	182490	5.8	1.2	4.8
35.0	136010	127100	144920	6.6	1.4	4.7
40.0	107920	100080	115760	7.3	1.6	4.6
45.0	86054	79205	92904	8.0	1.8	4.5
50.0	69015	63059	74972	8.6	2.0	4.3
55.0	55745	50571	60919	9.3	2.2	4.2
60.0	45243	40758	49728	9.9	2.4	4.1
65.0	36877	32995	40758	10.5	2.6	4.1
70.0	30198	26840	33556	11.1	2.8	4.0
75.0	24813	21910	27715	11.7	3.0	3.9
80.0	20472	17962	22981	12.3	3.2	3.8
85.0	16979	14805	19153	12.8	3.5	3.7
90.0	14138	12253	16023	13.3	3.7	3.6
95.0	11809	10173	13445	13.9	3.9	3.5
100.0	9899	8478	11320	14.4	4.1	3.5
105.0	8342	7104	9580	14.8	4.4	3.4
110.0	7054	5973	8134	15.3	4.6	3.3
115.0	5975	5032	6918	15.8	4.8	3.3
120.0	5077	4253	5902	16.2	5.1	3.2
125.0	4330	3608	5052	16.7	5.3	3.1

	B57891M0224K000					
R/T No.	2005					
T (°C)	B _{25/100} = 4600 K, R ₂₅ = 220000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	26449000	19301000	33596000	27.0	4.0	6.8
-50.0	18806000	13990000	23621000	25.6	3.8	6.8
-45.0	13421000	10166000	16675000	24.3	3.6	6.8
-40.0	9616700	7409300	11824000	23.0	3.4	6.7
-35.0	6921000	5418400	8423600	21.7	3.3	6.6
-30.0	5004100	3977300	6031000	20.5	3.2	6.4
-25.0	3627700	2924800	4330600	19.4	3.1	6.3
-20.0	2655500	2170200	3140900	18.3	3.0	6.2
-15.0	1946000	1610900	2281100	17.2	2.9	6.0
-10.0	1439800	1206500	1673200	16.2	2.8	5.9
-5.0	1074800	911080	1238400	15.2	2.7	5.7
0.0	809170	693570	924770	14.3	2.6	5.6
5.0	614760	532520	697000	13.4	2.5	5.5
10.0	470610	411770	529440	12.5	2.3	5.3
15.0	363150	320820	405480	11.7	2.2	5.2
20.0	282110	251530	312690	10.8	2.1	5.1
25.0	220000	198000	242000	10.0	2.0	4.9
30.0	172460	153820	191110	10.8	2.3	4.8
35.0	136010	120300	151720	11.6	2.5	4.7
40.0	107920	94679	121160	12.3	2.7	4.6
45.0	86054	74902	97207	13.0	2.9	4.5
50.0	69015	59608	78423	13.6	3.1	4.3
55.0	55745	47783	63706	14.3	3.4	4.2
60.0	45243	38496	51990	14.9	3.6	4.1
65.0	36877	31152	42602	15.5	3.8	4.1
70.0	30198	25330	35066	16.1	4.1	4.0
75.0	24813	20670	28956	16.7	4.3	3.9
80.0	20472	16939	24005	17.3	4.6	3.8
85.0	16979	13956	20002	17.8	4.8	3.7
90.0	14138	11546	16730	18.3	5.1	3.6
95.0	11809	9583	14035	18.9	5.3	3.5
100.0	9899	7983	11815	19.4	5.6	3.5
105.0	8342	6687	9997	19.8	5.8	3.4
110.0	7054	5621	8487	20.3	6.1	3.3
115.0	5975	4734	7217	20.8	6.4	3.3
120.0	5077	3999	6155	21.2	6.6	3.2
125.0	4330	3391	5268	21.7	6.9	3.1

	B57891M0334J000					
R/T No.	2007					
T (°C)	B _{25/100} = 4830 K, R ₂₅ = 330000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 5%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	61337000	47308000	75366000	22.9	2.7	8.4
-50.0	40665000	31969000	49361000	21.4	2.7	8.1
-45.0	27353000	21893000	32813000	20.0	2.6	7.8
-40.0	18660000	15189000	22130000	18.6	2.5	7.5
-35.0	12890000	10661000	15119000	17.3	2.4	7.3
-30.0	9016100	7569600	10463000	16.0	2.3	7.0
-25.0	6377600	5431000	7324200	14.8	2.2	6.8
-20.0	4561500	3937000	5185900	13.7	2.1	6.6
-15.0	3300400	2885200	3715600	12.6	2.0	6.4
-10.0	2411200	2133600	2688800	11.5	1.8	6.2
-5.0	1764000	1579000	1949000	10.5	1.7	6.1
0.0	1303000	1179200	1426700	9.5	1.6	5.9
5.0	976640	893190	1060100	8.5	1.5	5.7
10.0	737820	681570	794080	7.6	1.4	5.6
15.0	561020	523230	598820	6.7	1.2	5.4
20.0	429690	404430	454950	5.9	1.1	5.3
25.0	330000	313500	346500	5.0	1.0	5.2
30.0	255950	240970	270930	5.9	1.2	5.0
35.0	199670	186440	212910	6.6	1.4	4.9
40.0	156740	145180	168310	7.4	1.5	4.8
45.0	123860	113820	133900	8.1	1.7	4.7
50.0	98415	89745	107090	8.8	1.9	4.6
55.0	78419	70974	85863	9.5	2.1	4.5
60.0	62836	56454	69217	10.2	2.3	4.4
65.0	50673	45201	56145	10.8	2.5	4.3
70.0	41059	36368	45749	11.4	2.7	4.2
75.0	33433	29411	37455	12.0	3.0	4.1
80.0	27344	23893	30794	12.6	3.2	4.0
85.0	22441	19481	25402	13.2	3.4	3.9
90.0	18490	15948	21033	13.7	3.6	3.8
95.0	15305	13118	17492	14.3	3.8	3.7
100.0	12716	10832	14600	14.8	4.0	3.7
105.0	10616	8988	12243	15.3	4.3	3.6
110.0	8894	7486	10302	15.8	4.5	3.5
115.0	7477	6257	8697	16.3	4.7	3.4
120.0	6307	5248	7366	16.8	5.0	3.4
125.0	5346	4424	6269	17.3	5.2	3.3

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

	B57891M0334K000					
R/T No.	2007					
T (°C)	B _{25/100} = 4830 K, R ₂₅ = 330000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	61337000	44241000	78433000	27.9	3.3	8.4
-50.0	40665000	29936000	51395000	26.4	3.3	8.1
-45.0	27353000	20525000	34181000	25.0	3.2	7.8
-40.0	18660000	14256000	23063000	23.6	3.1	7.5
-35.0	12890000	10016000	15764000	22.3	3.1	7.3
-30.0	9016100	7118800	10913000	21.0	3.0	7.0
-25.0	6377600	5112200	7643100	19.8	2.9	6.8
-20.0	4561500	3709000	5414000	18.7	2.8	6.6
-15.0	3300400	2720200	3880600	17.6	2.7	6.4
-10.0	2411200	2013000	2809400	16.5	2.6	6.2
-5.0	1764000	1490800	2037200	15.5	2.6	6.1
0.0	1303000	1114100	1491900	14.5	2.5	5.9
5.0	976640	844360	1108900	13.5	2.4	5.7
10.0	737820	644670	830970	12.6	2.3	5.6
15.0	561020	495180	626870	11.7	2.2	5.4
20.0	429690	382940	476430	10.9	2.1	5.3
25.0	330000	297000	363000	10.0	1.9	5.2
30.0	255950	228180	283720	10.9	2.2	5.0
35.0	199670	176460	222890	11.6	2.4	4.9
40.0	156740	137340	176140	12.4	2.6	4.8
45.0	123860	107630	140090	13.1	2.8	4.7
50.0	98415	84824	112010	13.8	3.0	4.6
55.0	78419	67053	89784	14.5	3.3	4.5
60.0	62836	53313	72359	15.2	3.5	4.4
65.0	50673	42667	58679	15.8	3.7	4.3
70.0	41059	34316	47802	16.4	3.9	4.2
75.0	33433	27739	39126	17.0	4.2	4.1
80.0	27344	22526	32161	17.6	4.4	4.0
85.0	22441	18359	26524	18.2	4.7	3.9
90.0	18490	15024	21957	18.7	4.9	3.8
95.0	15305	12353	18258	19.3	5.2	3.7
100.0	12716	10196	15236	19.8	5.4	3.7
105.0	10616	8457	12774	20.3	5.7	3.6
110.0	8894	7041	10747	20.8	5.9	3.5
115.0	7477	5883	9071	21.3	6.2	3.4
120.0	6307	4932	7681	21.8	6.5	3.4
125.0	5346	4157	6536	22.3	6.7	3.3

	B57891M0474J000					
R/T No.	2006					
T (°C)	B _{25/100} = 5000 K, R ₂₅ = 470000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 5%					
	R _{nomL} [Ω]	R _{minL} [Ω]	R _{maxL} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	94260000	72109000	116410000	23.5	2.7	8.7
-50.0	61577000	48056000	75099000	22.0	2.6	8.3
-45.0	40971000	32577000	49364000	20.5	2.6	7.9
-40.0	27725000	22436000	33013000	19.1	2.5	7.6
-35.0	19056000	15678000	22434000	17.7	2.4	7.3
-30.0	13288000	11105000	15471000	16.4	2.3	7.1
-25.0	9398700	7971300	10826000	15.2	2.2	6.9
-20.0	6717300	5777300	7657300	14.0	2.1	6.7
-15.0	4864500	4239600	5489300	12.8	2.0	6.5
-10.0	3553900	3136600	3971100	11.7	1.9	6.3
-5.0	2601100	2323400	2878900	10.7	1.7	6.1
0.0	1920400	1735000	2105900	9.7	1.6	6.0
5.0	1427600	1303800	1551300	8.7	1.5	5.8
10.0	1069700	987190	1152200	7.7	1.4	5.7
15.0	807850	752950	862750	6.8	1.2	5.5
20.0	614470	578170	650770	5.9	1.1	5.4
25.0	470000	446500	493500	5.0	0.9	5.3
30.0	361840	340570	383120	5.9	1.1	5.2
35.0	279840	261140	298540	6.7	1.3	5.1
40.0	217800	201560	234050	7.5	1.5	4.9
45.0	170740	156710	184760	8.2	1.7	4.8
50.0	134590	122560	146630	8.9	1.9	4.7
55.0	106310	96055	116570	9.6	2.1	4.6
60.0	84476	75745	93207	10.3	2.3	4.5
65.0	67584	60149	75019	11.0	2.5	4.4
70.0	54330	48002	60658	11.6	2.7	4.3
75.0	43849	38467	49232	12.3	2.9	4.2
80.0	35543	30963	40122	12.9	3.1	4.1
85.0	28961	25057	32864	13.5	3.3	4.1
90.0	23695	20364	27025	14.1	3.5	4.0
95.0	19520	16667	22373	14.6	3.8	3.9
100.0	16147	13699	18595	15.2	4.0	3.8
105.0	13407	11303	15511	15.7	4.2	3.7
110.0	11174	9362	12985	16.2	4.5	3.6
115.0	9330	7771	10890	16.7	4.7	3.6
120.0	7817	6472	9162	17.2	4.9	3.5
125.0	6587	5422	7753	17.7	5.2	3.4

Temperature measurement
B57891
Leaded NTC, lead spacing 2.5 mm
M891

	B57891M0474K000					
R/T No.	2006					
T (°C)	B _{25/100} = 5000 K, R ₂₅ = 470000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 10%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	94260000	67396000	121120000	28.5	3.3	8.7
-50.0	61577000	44977000	78178000	27.0	3.3	8.3
-45.0	40971000	30529000	51412000	25.5	3.2	7.9
-40.0	27725000	21050000	34399000	24.1	3.2	7.6
-35.0	19056000	14725000	23387000	22.7	3.1	7.3
-30.0	13288000	10440000	16135000	21.4	3.0	7.1
-25.0	9398700	7501400	11296000	20.2	2.9	6.9
-20.0	6717300	5441500	7993100	19.0	2.9	6.7
-15.0	4864500	3996400	5732600	17.8	2.8	6.5
-10.0	3553900	2958900	4148800	16.7	2.7	6.3
-5.0	2601100	2193300	3008900	15.7	2.6	6.1
0.0	1920400	1639000	2201900	14.7	2.5	6.0
5.0	1427600	1232500	1622700	13.7	2.3	5.8
10.0	1069700	933700	1205700	12.7	2.2	5.7
15.0	807850	712560	903140	11.8	2.1	5.5
20.0	614470	547440	681500	10.9	2.0	5.4
25.0	470000	423000	517000	10.0	1.9	5.3
30.0	361840	322480	401210	10.9	2.1	5.2
35.0	279840	247140	312530	11.7	2.3	5.1
40.0	217800	190670	244940	12.5	2.5	4.9
45.0	170740	148180	193300	13.2	2.7	4.8
50.0	134590	115830	153360	13.9	2.9	4.7
55.0	106310	90739	121890	14.6	3.2	4.6
60.0	84476	71521	97431	15.3	3.4	4.5
65.0	67584	56770	78398	16.0	3.6	4.4
70.0	54330	45285	63375	16.6	3.8	4.3
75.0	43849	36274	51424	17.3	4.1	4.2
80.0	35543	29186	41900	17.9	4.3	4.1
85.0	28961	23609	34312	18.5	4.6	4.1
90.0	23695	19180	28210	19.1	4.8	4.0
95.0	19520	15691	23349	19.6	5.1	3.9
100.0	16147	12891	19402	20.2	5.3	3.8
105.0	13407	10632	16181	20.7	5.6	3.7
110.0	11174	8804	13544	21.2	5.8	3.6
115.0	9330	7304	11356	21.7	6.1	3.6
120.0	7817	6081	9553	22.2	6.4	3.5
125.0	6587	5093	8082	22.7	6.6	3.4

Cautions and warnings

General

See "Important notes" at the end of this document.

Storage

- Store thermistors only in original packaging. Do not open the package before storage.
- Storage conditions in original packaging: storage temperature $-25\text{ }^{\circ}\text{C} \dots +45\text{ }^{\circ}\text{C}$, relative humidity $\leq 75\%$ annual mean, maximum 95%, dew precipitation is inadmissible.
- Do not store SMDs where they are exposed to heat or direct sunlight. Otherwise, the packing material may be deformed or SMDs may stick together, causing problems during mounting.
- Avoid contamination of thermistors surface during storage, handling and processing.
- Avoid storage of thermistor in harmful environments like corrosive gases (SO_x, Cl etc).
- After opening the factory seals, such as polyvinyl-sealed packages, use the SMDs as soon as possible.
- Solder thermistors after shipment from EPCOS within the time specified:
SMDs: 12 months
Leaded components: 24 months

Handling

- NTC thermistors must not be dropped. Chip-offs must not be caused during handling of NTCs.
- Components must not be touched with bare hands. Gloves are recommended.
- Avoid contamination of thermistor surface during handling.

Soldering

- Use resin-type flux or non-activated flux.
- Insufficient preheating may cause ceramic cracks.
- Rapid cooling by dipping in solvent is not recommended.
- Complete removal of flux is recommended.

Mounting

- When NTC thermistors are encapsulated with sealing material or overmolded with plastic material, the precautions given in chapter "Mounting instructions", "Sealing, potting and overmolding" must be observed.
- Electrode must not be scratched before/during/after the mounting process.
- Contacts and housings used for assembly with thermistor have to be clean before mounting.
- During operation, the thermistor's surface temperature can be very high (ICL). Ensure that adjacent components are placed at a sufficient distance from the thermistor to allow for proper cooling of the thermistors.
- Ensure that adjacent materials are designed for operation at temperatures comparable to the surface temperature of the thermistor. Be sure that surrounding parts and materials can withstand this temperature.
- Make sure that thermistors (ICLs) are adequately ventilated to avoid overheating.
- Avoid contamination of thermistor surface during processing.

Operation

- Use thermistors only within the specified operating temperature range.
- Use thermistors only within the specified voltage and current ranges (ICLs).
- Environmental conditions must not harm the thermistors. Use thermistors only in normal atmospheric conditions.
- Contact of NTC thermistors with any liquids and solvents should be prevented. It must be ensured that no water enters the NTC thermistor (e.g. through plug terminals). For measurement purposes (checking the specified resistance vs. temperature), the component must not be immersed in water but in suitable liquids (e.g. Galden).
- Avoid dewing and condensation.
- Be sure to provide an appropriate fail-safe function to prevent secondary product damage caused by malfunction (e.g. use VDR for limitation of overvoltage condition).

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of passive electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of a passive electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of a passive electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as “hazardous”)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.
We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the “General Terms of Delivery for Products and Services in the Electrical Industry” published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, EPCOS-JONES, Baoke, CeraDiode, CSSP, MLSC, PhaseCap, PhaseMod, SIFI, SIKOREL, SilverCap, SIMID, SIOV, SIP5D, SIP5K, UltraCap, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.