



NTC thermistors for temperature measurement

Miniature sensors
with bendable wires

Series/Type: **B57861**
Date: March 2006

Applications

- Heating systems
- Industrial electronics
- Automotive electronics

Features

- Fast response
- High measuring accuracy
- Different tolerances available
- Epoxy resin encapsulation
- PTFE-insulated leads of silver-plated nickel wire, AWG 30
- UL approval (E69802)

Options

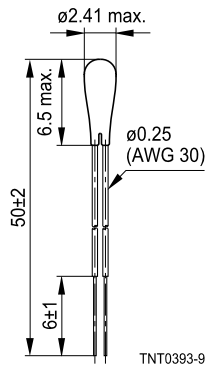
Non-standard lead lengths.

Also available with close B value tolerance.

Delivery mode

Bulk

Dimensional drawing



Dimensions in mm

Approx. weight 60 mg

General technical data

Climatic category	(IEC 60068-1)		55/155/56	
For types with close B value tolerance	±0.3%		40/100/56	
Max. power	(at 25 °C)	P_{25}	60	mW
Resistance tolerance		$\Delta R_R/R_R$	±1, ±3, ±5	%
Rated temperature		T_R	25	°C
Dissipation factor	(in air)	δ_{th}	approx. 1.5	mW/K
Thermal cooling time constant	(in air)	τ_c	approx. 15	s
Heat capacity		C_{th}	approx. 22.5	mJ/K

Electrical specification and ordering codes

R_{25} Ω	No. of R/T characteristic	$B_{25/100}$ K	Ordering code
B value tolerance = 0.3%, resistance tolerance = $\pm 1\%$			
5 k	8016	$3988 \pm 0.3\%$	B57861S0502F045
10 k	8016	$3988 \pm 0.3\%$	B57861S0103F045
30 k	8018	$3964 \pm 0.3\%$	B57861S0303F045
B value tolerance = 1.0%, resistance tolerance = $\pm 1\%$, $\pm 3\%$ or $\pm 5\%$			
2 k	1008	$3560 \pm 1\%$	B57861S0202+040
3 k	8016	$3988 \pm 1\%$	B57861S0302+040
5 k	8016	$3988 \pm 1\%$	B57861S0502+040
10 k	8016	$3988 \pm 1\%$	B57861S0103+040
30 k	8018	$3964 \pm 1\%$	B57861S0303+040
50 k	2901	$3760 \pm 1\%$	B57861S0503+040
100 k	2014	$4540 \pm 1\%$	B57861S0104+040

+ = Resistance tolerance

F = $\pm 1\%$

H = $\pm 3\%$

J = $\pm 5\%$

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: 155 °C t: 1000 h	< 2%	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	< 1%	No visible damage
Rapid temperature cycling	IEC 60068-2-14	Lower test temperature: -55 °C Upper test temperature: 155 °C Number of cycles: 100	< 1%	No visible damage
Long-term stability (empirical value)		Temperature: 70 °C t: 10000 h	< 2%	No visible damage

R/T characteristics

B57861S0502F045						
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 5000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{noml} [Ω]	R _{minl} [Ω]	R _{maxl} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-40.0	168250	164600	171900	2.2	0.3	6.7
-35.0	121300	118800	123790	2.1	0.3	6.4
-30.0	88500	86767	90232	2.0	0.3	6.2
-25.0	65185	63973	66396	1.9	0.3	6.0
-20.0	48535	47679	49391	1.8	0.3	5.8
-15.0	36465	35855	37074	1.7	0.3	5.6
-10.0	27665	27227	28103	1.6	0.3	5.4
-5.0	21158	20840	21475	1.5	0.3	5.3
0.0	16325	16094	16556	1.4	0.3	5.1
5.0	12694	12524	12864	1.3	0.3	5.0
10.0	9950	9824	10076	1.3	0.3	4.8
15.0	7854	7760	7947	1.2	0.3	4.7
20.0	6245	6175	6315	1.1	0.2	4.5
25.0	5000	4950	5050	1.0	0.2	4.4
30.0	4029	3984	4073	1.1	0.3	4.3
35.0	3266	3227	3304	1.2	0.3	4.1
40.0	2664	2630	2697	1.2	0.3	4.0
45.0	2184	2156	2213	1.3	0.3	3.9
50.0	1802	1777	1826	1.4	0.4	3.8
55.0	1493	1472	1514	1.4	0.4	3.7
60.0	1244	1226	1262	1.5	0.4	3.6
65.0	1042	1026	1057	1.5	0.4	3.5
70.0	876.0	862.2	889.8	1.6	0.5	3.4
75.0	740.7	728.6	752.7	1.6	0.5	3.3
80.0	629.0	618.5	639.5	1.7	0.5	3.2
85.0	536.2	526.9	545.4	1.7	0.5	3.2
90.0	458.8	450.7	467.0	1.8	0.6	3.1
95.0	394.3	387.1	401.4	1.8	0.6	3.0
100.0	340.0	333.7	346.3	1.9	0.6	2.9

B57861S0103F045						
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 10000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{noml} [Ω]	R _{minl} [Ω]	R _{maxl} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-40.0	336500	329200	343800	2.2	0.3	6.7
-35.0	242590	237590	247590	2.1	0.3	6.4
-30.0	177000	173540	180470	2.0	0.3	6.2
-25.0	130370	127950	132790	1.9	0.3	6.0

Temperature measurement
B57861
Miniature sensors with bendable wires
S861

B57861S0103F045						
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 10000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-20.0	97070	95358	98782	1.8	0.3	5.8
-15.0	72929	71710	74148	1.7	0.3	5.6
-10.0	55330	54454	56206	1.6	0.3	5.4
-5.0	42315	41681	42949	1.5	0.3	5.3
0.0	32650	32187	33113	1.4	0.3	5.1
5.0	25388	25048	25727	1.3	0.3	5.0
10.0	19900	19649	20151	1.3	0.3	4.8
15.0	15708	15521	15895	1.2	0.3	4.7
20.0	12490	12350	12630	1.1	0.2	4.5
25.0	10000	9900	10100	1.0	0.2	4.4
30.0	8057	7967	8147	1.1	0.3	4.3
35.0	6531	6454	6608	1.2	0.3	4.1
40.0	5327	5261	5393	1.2	0.3	4.0
45.0	4369	4312	4426	1.3	0.3	3.9
50.0	3603	3554	3652	1.4	0.4	3.8
55.0	2986	2944	3029	1.4	0.4	3.7
60.0	2488	2451	2525	1.5	0.4	3.6
65.0	2083	2051	2115	1.5	0.4	3.5
70.0	1752	1724	1780	1.6	0.5	3.4
75.0	1481	1457	1505	1.6	0.5	3.3
80.0	1258	1237	1279	1.7	0.5	3.2
85.0	1072	1054	1091	1.7	0.5	3.2
90.0	917.7	901.5	933.9	1.8	0.6	3.1
95.0	788.5	774.2	802.8	1.8	0.6	3.0
100.0	680.0	667.4	692.6	1.9	0.6	2.9

B57861S0303F045						
R/T No.	8018					
T (°C)	B _{25/100} = 3964 K, R ₂₅ = 30000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-40.0	907060	887450	926670	2.2	0.3	6.4
-35.0	663280	649650	676910	2.1	0.3	6.2
-30.0	489810	480250	499370	2.0	0.3	6.0
-25.0	365130	358360	371900	1.9	0.3	5.8
-20.0	274640	269810	279480	1.8	0.3	5.6
-15.0	208370	204900	211850	1.7	0.3	5.4
-10.0	159410	156890	161920	1.6	0.3	5.3
-5.0	122920	121080	124750	1.5	0.3	5.1
0.0	95501	94149	96852	1.4	0.3	5.0

Temperature measurement
B57861
Miniature sensors with bendable wires
S861

	B57861S0303F045					
R/T No.	8018					
T (°C)	B _{25/100} = 3964 K, R ₂₅ = 30000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nomL} [Ω]	R _{minL} [Ω]	R _{maxL} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
5.0	74745	73745	75744	1.3	0.3	4.8
10.0	58911	58168	59654	1.3	0.3	4.7
15.0	46745	46189	47300	1.2	0.3	4.6
20.0	37332	36914	37749	1.1	0.3	4.4
25.0	30000	29700	30300	1.0	0.2	4.3
30.0	24253	23982	24523	1.1	0.3	4.2
35.0	19720	19487	19952	1.2	0.3	4.1
40.0	16123	15923	16323	1.2	0.3	4.0
45.0	13252	13080	13425	1.3	0.3	3.9
50.0	10949	10800	11098	1.4	0.4	3.8
55.0	9091	8962	9219	1.4	0.4	3.7
60.0	7584	7473	7696	1.5	0.4	3.6
65.0	6356	6259	6453	1.5	0.4	3.5
70.0	5351	5267	5435	1.6	0.5	3.4
75.0	4524	4450	4597	1.6	0.5	3.3
80.0	3840	3776	3904	1.7	0.5	3.2
85.0	3273	3217	3329	1.7	0.5	3.2
90.0	2800	2751	2850	1.8	0.6	3.1
95.0	2405	2361	2448	1.8	0.6	3.0
100.0	2073	2034	2111	1.9	0.6	2.9

	B57861S0202F040					
R/T No.	1008					
T (°C)	B _{25/100} = 3560 K, R ₂₅ = 2000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nomL} [Ω]	R _{minL} [Ω]	R _{maxL} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	106210	100440	111970	5.4	0.9	6.1
-50.0	78635	74654	82616	5.1	0.8	6.0
-45.0	58650	55886	61415	4.7	0.8	5.8
-40.0	44060	42131	45989	4.4	0.8	5.7
-35.0	33333	31980	34686	4.1	0.7	5.5
-30.0	25392	24439	26344	3.8	0.7	5.4
-25.0	19450	18778	20122	3.5	0.7	5.2
-20.0	15034	14557	15511	3.2	0.6	5.1
-15.0	11671	11332	12009	2.9	0.6	4.9
-10.0	9137	8896	9378	2.6	0.5	4.8
-5.0	7210	7038	7382	2.4	0.5	4.7
0.0	5733	5610	5856	2.1	0.5	4.5
5.0	4581	4494	4669	1.9	0.4	4.4
10.0	3688	3625	3750	1.7	0.4	4.3

B57861S0202F040						
R/T No.	1008					
T (°C)	B _{25/100} = 3560 K, R ₂₅ = 2000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
15.0	2984	2940	3028	1.5	0.4	4.1
20.0	2431	2400	2461	1.3	0.3	4.0
25.0	2000	1980	2020	1.0	0.3	3.9
30.0	1660	1639	1680	1.2	0.3	3.8
35.0	1373	1353	1392	1.4	0.4	3.7
40.0	1142	1124	1161	1.6	0.5	3.6
45.0	960.3	943.0	977.6	1.8	0.5	3.5
50.0	810.9	794.9	826.9	2.0	0.6	3.4
55.0	683.4	668.8	698.0	2.1	0.6	3.3
60.0	579.0	565.7	592.4	2.3	0.7	3.2
65.0	494.3	482.1	506.5	2.5	0.8	3.1
70.0	423.7	412.6	434.7	2.6	0.9	3.1
75.0	363.9	353.8	373.9	2.8	0.9	3.0
80.0	313.6	304.5	322.7	2.9	1.0	2.9
85.0	271.8	263.5	280.1	3.1	1.1	2.8
90.0	236.4	228.9	244.0	3.2	1.2	2.8
95.0	206.8	199.9	213.7	3.3	1.2	2.7
100.0	181.5	175.2	187.7	3.4	1.3	2.6
105.0	159.3	153.6	165.0	3.6	1.4	2.6
110.0	140.2	135.0	145.4	3.7	1.5	2.5
115.0	123.8	119.1	128.5	3.8	1.6	2.4
120.0	109.6	105.3	113.9	3.9	1.6	2.4
125.0	97.41	93.47	101.4	4.0	1.7	2.3
130.0	86.83	83.22	90.44	4.2	1.8	2.3
135.0	77.44	74.14	80.75	4.3	1.9	2.2
140.0	69.23	66.20	72.26	4.4	2.0	2.2
145.0	62.10	59.32	64.88	4.5	2.1	2.1
150.0	55.82	53.26	58.37	4.6	2.2	2.1
155.0	50.39	48.03	52.74	4.7	2.3	2.0

B57861S0202H040						
R/T No.	1008					
T (°C)	B _{25/100} = 3560 K, R ₂₅ = 2000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 3%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	106210	98317	114100	7.4	1.2	6.1
-50.0	78635	73081	84189	7.1	1.2	6.0
-45.0	58650	54713	62588	6.7	1.2	5.8
-40.0	44060	41250	46871	6.4	1.1	5.7
-35.0	33333	31313	35352	6.1	1.1	5.5

	B57861S0202H040					
R/T No.	1008					
T (°C)	$B_{25/100} = 3560 \text{ K}$, $R_{25} = 2000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 3\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha (\%/K)$
-30.0	25392	23931	26852	5.8	1.1	5.4
-25.0	19450	18389	20511	5.5	1.0	5.2
-20.0	15034	14256	15812	5.2	1.0	5.1
-15.0	11671	11099	12242	4.9	1.0	4.9
-10.0	9137	8713	9561	4.6	1.0	4.8
-5.0	7210	6894	7526	4.4	0.9	4.7
0.0	5733	5495	5970	4.1	0.9	4.5
5.0	4581	4402	4761	3.9	0.9	4.4
10.0	3688	3552	3823	3.7	0.9	4.3
15.0	2984	2881	3087	3.5	0.8	4.1
20.0	2431	2352	2510	3.3	0.8	4.0
25.0	2000	1940	2060	3.0	0.8	3.9
30.0	1660	1606	1713	3.2	0.9	3.8
35.0	1373	1326	1420	3.4	0.9	3.7
40.0	1142	1101	1183	3.6	1.0	3.6
45.0	960.3	923.8	996.8	3.8	1.1	3.5
50.0	810.9	778.7	843.1	4.0	1.2	3.4
55.0	683.4	655.1	711.7	4.1	1.2	3.3
60.0	579.0	554.1	604.0	4.3	1.3	3.2
65.0	494.3	472.2	516.3	4.5	1.4	3.1
70.0	423.7	404.1	443.2	4.6	1.5	3.1
75.0	363.9	346.5	381.2	4.8	1.6	3.0
80.0	313.6	298.2	329.0	4.9	1.7	2.9
85.0	271.8	258.1	285.6	5.1	1.8	2.8
90.0	236.4	224.2	248.7	5.2	1.9	2.8
95.0	206.8	195.8	217.8	5.3	2.0	2.7
100.0	181.5	171.6	191.4	5.4	2.1	2.6
105.0	159.3	150.4	168.2	5.6	2.2	2.6
110.0	140.2	132.2	148.2	5.7	2.3	2.5
115.0	123.8	116.6	131.0	5.8	2.4	2.4
120.0	109.6	103.1	116.1	5.9	2.5	2.4
125.0	97.41	91.52	103.3	6.0	2.6	2.3
130.0	86.83	81.48	92.18	6.2	2.7	2.3
135.0	77.44	72.59	82.30	6.3	2.8	2.2
140.0	69.23	64.82	73.64	6.4	2.9	2.2
145.0	62.10	58.07	66.12	6.5	3.0	2.1
150.0	55.82	52.15	59.49	6.6	3.2	2.1
155.0	50.39	47.02	53.75	6.7	3.3	2.0

	B57861S0202J040					
R/T No.	1008					
T (°C)	B _{25/100} = 3560 K, R ₂₅ = 2000 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	106210	96193	116220	9.4	1.5	6.1
–50.0	78635	71508	85762	9.1	1.5	6.0
–45.0	58650	53540	63761	8.7	1.5	5.8
–40.0	44060	40368	47752	8.4	1.5	5.7
–35.0	33333	30647	36019	8.1	1.5	5.5
–30.0	25392	23424	27360	7.8	1.4	5.4
–25.0	19450	18000	20900	7.5	1.4	5.2
–20.0	15034	13956	16112	7.2	1.4	5.1
–15.0	11671	10865	12476	6.9	1.4	4.9
–10.0	9137	8531	9744	6.6	1.4	4.8
–5.0	7210	6750	7670	6.4	1.4	4.7
0.0	5733	5381	6085	6.1	1.4	4.5
5.0	4581	4311	4852	5.9	1.3	4.4
10.0	3688	3478	3897	5.7	1.3	4.3
15.0	2984	2821	3147	5.5	1.3	4.1
20.0	2431	2303	2559	5.3	1.3	4.0
25.0	2000	1900	2100	5.0	1.3	3.9
30.0	1660	1572	1747	5.2	1.4	3.8
35.0	1373	1298	1447	5.4	1.5	3.7
40.0	1142	1078	1206	5.6	1.6	3.6
45.0	960.3	904.6	1016	5.8	1.7	3.5
50.0	810.9	762.5	859.3	6.0	1.8	3.4
55.0	683.4	641.4	725.4	6.1	1.9	3.3
60.0	579.0	542.5	615.5	6.3	2.0	3.2
65.0	494.3	462.3	526.2	6.5	2.1	3.1
70.0	423.7	395.6	451.7	6.6	2.2	3.1
75.0	363.9	339.3	388.5	6.8	2.3	3.0
80.0	313.6	291.9	335.3	6.9	2.4	2.9
85.0	271.8	252.7	291.0	7.1	2.5	2.8
90.0	236.4	219.5	253.4	7.2	2.6	2.8
95.0	206.8	191.7	221.9	7.3	2.7	2.7
100.0	181.5	168.0	195.0	7.4	2.8	2.6
105.0	159.3	147.2	171.4	7.6	3.0	2.6
110.0	140.2	129.4	151.0	7.7	3.1	2.5
115.0	123.8	114.1	133.5	7.8	3.2	2.4
120.0	109.6	100.9	118.3	7.9	3.3	2.4
125.0	97.41	89.57	105.3	8.0	3.4	2.3
130.0	86.83	79.74	93.91	8.2	3.6	2.3
135.0	77.44	71.04	83.85	8.3	3.7	2.2

B57861S0202J040						
R/T No.	1008					
T (°C)	B _{25/100} = 3560 K, R ₂₅ = 2000 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)
140.0	69.23	63.43	75.03	8.4	3.8	2.2
145.0	62.10	56.83	67.36	8.5	4.0	2.1
150.0	55.82	51.03	60.61	8.6	4.1	2.1
155.0	50.39	46.02	54.76	8.7	4.3	2.0

B57861S0302F040						
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 3000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nomL} [Ω]	R _{minL} [Ω]	R _{maxL} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	288910	271710	306120	6.0	0.8	7.4
-50.0	201030	189880	212180	5.5	0.8	7.1
-45.0	141510	134210	148800	5.2	0.7	6.9
-40.0	100950	96126	105770	4.8	0.7	6.7
-35.0	72777	69560	75993	4.4	0.7	6.4
-30.0	53100	50936	55264	4.1	0.7	6.2
-25.0	39111	37646	40576	3.7	0.6	6.0
-20.0	29121	28123	30119	3.4	0.6	5.8
-15.0	21879	21196	22562	3.1	0.6	5.6
-10.0	16599	16129	17069	2.8	0.5	5.4
-5.0	12695	12371	13018	2.5	0.5	5.3
0.0	9795	9572	10018	2.3	0.4	5.1
5.0	7616	7463	7769	2.0	0.4	5.0
10.0	5970	5865	6075	1.8	0.4	4.8
15.0	4712	4641	4784	1.5	0.3	4.7
20.0	3747	3699	3795	1.3	0.3	4.5
25.0	3000	2970	3030	1.0	0.2	4.4
30.0	2417	2386	2448	1.3	0.3	4.3
35.0	1959	1930	1988	1.5	0.4	4.1
40.0	1598	1571	1625	1.7	0.4	4.0
45.0	1311	1286	1335	1.9	0.5	3.9
50.0	1081	1058	1103	2.1	0.5	3.8
55.0	895.9	875.5	916.2	2.3	0.6	3.7
60.0	746.4	728.1	764.7	2.5	0.7	3.6
65.0	624.9	608.5	641.4	2.6	0.8	3.5
70.0	525.6	510.9	540.3	2.8	0.8	3.4
75.0	444.4	431.2	457.6	3.0	0.9	3.3
80.0	377.4	365.6	389.2	3.1	1.0	3.2
85.0	321.7	311.1	332.3	3.3	1.0	3.2
90.0	275.3	265.8	284.8	3.4	1.1	3.1

Temperature measurement
B57861
Miniature sensors with bendable wires
S861

	B57861S0302F040					
R/T No.	8016					
T (°C)	$B_{25/100} = 3988 \text{ K}$, $R_{25} = 3000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 1\%$					
	$R_{\text{nom}}[\Omega]$	$R_{\text{min}}[\Omega]$	$R_{\text{max}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha \text{ } (\%/K)$
95.0	236.6	228.1	245.1	3.6	1.2	3.0
100.0	204.0	196.4	211.6	3.7	1.3	2.9
105.0	176.6	169.7	183.4	3.9	1.4	2.9
110.0	153.4	147.2	159.5	4.0	1.4	2.8
115.0	133.6	128.1	139.2	4.2	1.5	2.7
120.0	116.8	111.8	121.8	4.3	1.6	2.7
125.0	102.5	97.99	107.0	4.4	1.7	2.6
130.0	90.27	86.18	94.36	4.5	1.8	2.5
135.0	79.63	75.93	83.34	4.7	1.9	2.5
140.0	70.44	67.08	73.80	4.8	2.0	2.4
145.0	62.50	59.44	65.55	4.9	2.1	2.4
150.0	55.59	52.81	58.37	5.0	2.2	2.3
155.0	49.60	47.07	52.14	5.1	2.3	2.3

	B57861S0302H040					
R/T No.	8016					
T (°C)	$B_{25/100} = 3988 \text{ K}$, $R_{25} = 3000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 3\%$					
	$R_{\text{nom}}[\Omega]$	$R_{\text{min}}[\Omega]$	$R_{\text{max}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha \text{ } (\%/K)$
-55.0	288910	265930	311900	8.0	1.1	7.4
-50.0	201030	185860	216200	7.5	1.1	7.1
-45.0	141510	131380	151630	7.2	1.0	6.9
-40.0	100950	94107	107790	6.8	1.0	6.7
-35.0	72777	68105	77449	6.4	1.0	6.4
-30.0	53100	49874	56326	6.1	1.0	6.2
-25.0	39111	36864	41358	5.7	1.0	6.0
-20.0	29121	27540	30702	5.4	0.9	5.8
-15.0	21879	20758	22999	5.1	0.9	5.6
-10.0	16599	15797	17401	4.8	0.9	5.4
-5.0	12695	12117	13272	4.5	0.9	5.3
0.0	9795	9376	10214	4.3	0.8	5.1
5.0	7616	7311	7922	4.0	0.8	5.0
10.0	5970	5746	6194	3.8	0.8	4.8
15.0	4712	4547	4878	3.5	0.8	4.7
20.0	3747	3624	3870	3.3	0.7	4.5
25.0	3000	2910	3090	3.0	0.7	4.4
30.0	2417	2338	2496	3.3	0.8	4.3
35.0	1959	1891	2028	3.5	0.8	4.1
40.0	1598	1539	1657	3.7	0.9	4.0
45.0	1311	1260	1362	3.9	1.0	3.9

B57861S0302H040						
R/T No.	8016					
T (°C)	$B_{25/100} = 3988 \text{ K}$, $R_{25} = 3000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 3\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha \text{ } (\%/K)$
50.0	1081	1037	1125	4.1	1.1	3.8
55.0	895.9	857.6	934.1	4.3	1.2	3.7
60.0	746.4	713.1	779.7	4.5	1.2	3.6
65.0	624.9	596.0	653.9	4.6	1.3	3.5
70.0	525.6	500.3	550.9	4.8	1.4	3.4
75.0	444.4	422.3	466.5	5.0	1.5	3.3
80.0	377.4	358.0	396.8	5.1	1.6	3.2
85.0	321.7	304.7	338.7	5.3	1.7	3.2
90.0	275.3	260.3	290.3	5.4	1.8	3.1
95.0	236.6	223.3	249.8	5.6	1.9	3.0
100.0	204.0	192.3	215.7	5.7	2.0	2.9
105.0	176.6	166.2	187.0	5.9	2.1	2.9
110.0	153.4	144.1	162.6	6.0	2.2	2.8
115.0	133.6	125.4	141.8	6.2	2.3	2.7
120.0	116.8	109.5	124.1	6.3	2.4	2.7
125.0	102.5	95.94	109.1	6.4	2.5	2.6
130.0	90.27	84.37	96.17	6.5	2.6	2.5
135.0	79.63	74.33	84.93	6.7	2.7	2.5
140.0	70.44	65.67	75.21	6.8	2.8	2.4
145.0	62.50	58.19	66.80	6.9	2.9	2.4
150.0	55.59	51.70	59.48	7.0	3.0	2.3
155.0	49.60	46.08	53.13	7.1	3.1	2.3

B57861S0302J040						
R/T No.	8016					
T (°C)	$B_{25/100} = 3988 \text{ K}$, $R_{25} = 3000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha \text{ } (\%/K)$
-55.0	288910	260150	317680	10.0	1.3	7.4
-50.0	201030	181840	220220	9.5	1.3	7.1
-45.0	141510	128550	154460	9.2	1.3	6.9
-40.0	100950	92088	109810	8.8	1.3	6.7
-35.0	72777	66649	78905	8.4	1.3	6.4
-30.0	53100	48812	57388	8.1	1.3	6.2
-25.0	39111	36082	42140	7.7	1.3	6.0
-20.0	29121	26958	31284	7.4	1.3	5.8
-15.0	21879	20320	23437	7.1	1.3	5.6
-10.0	16599	15465	17733	6.8	1.3	5.4
-5.0	12695	11863	13526	6.5	1.2	5.3
0.0	9795	9180	10410	6.3	1.2	5.1

B57861S0302J040						
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 3000 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)
5.0	7616	7158	8074	6.0	1.2	5.0
10.0	5970	5626	6314	5.8	1.2	4.8
15.0	4712	4452	4972	5.5	1.2	4.7
20.0	3747	3549	3945	5.3	1.2	4.5
25.0	3000	2850	3150	5.0	1.1	4.4
30.0	2417	2290	2544	5.3	1.2	4.3
35.0	1959	1852	2067	5.5	1.3	4.1
40.0	1598	1507	1689	5.7	1.4	4.0
45.0	1311	1233	1388	5.9	1.5	3.9
50.0	1081	1015	1147	6.1	1.6	3.8
55.0	895.9	839.7	952.1	6.3	1.7	3.7
60.0	746.4	698.2	794.6	6.5	1.8	3.6
65.0	624.9	583.5	666.4	6.6	1.9	3.5
70.0	525.6	489.8	561.4	6.8	2.0	3.4
75.0	444.4	413.4	475.4	7.0	2.1	3.3
80.0	377.4	350.5	404.3	7.1	2.2	3.2
85.0	321.7	298.2	345.2	7.3	2.3	3.2
90.0	275.3	254.8	295.8	7.4	2.4	3.1
95.0	236.6	218.6	254.5	7.6	2.5	3.0
100.0	204.0	188.2	219.8	7.7	2.6	2.9
105.0	176.6	162.7	190.5	7.9	2.8	2.9
110.0	153.4	141.1	165.7	8.0	2.9	2.8
115.0	133.6	122.7	144.5	8.2	3.0	2.7
120.0	116.8	107.1	126.5	8.3	3.1	2.7
125.0	102.5	93.89	111.1	8.4	3.2	2.6
130.0	90.27	82.57	97.97	8.5	3.4	2.5
135.0	79.63	72.74	86.52	8.7	3.5	2.5
140.0	70.44	64.26	76.62	8.8	3.6	2.4
145.0	62.50	56.94	68.05	8.9	3.8	2.4
150.0	55.59	50.59	60.59	9.0	3.9	2.3
155.0	49.60	45.08	54.12	9.1	4.0	2.3

B57861S0502F040						
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 5000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	481520	452850	510200	6.0	0.8	7.4
-50.0	335050	316470	353630	5.5	0.8	7.1
-45.0	235840	223690	248000	5.2	0.7	6.9

	B57861S0502F040					
R/T No.	8016					
T (°C)	$B_{25/100} = 3988 \text{ K}$, $R_{25} = 5000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 1\%$					
	$R_{\text{nom}}[\Omega]$	$R_{\text{min}}[\Omega]$	$R_{\text{max}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha (\%/K)$
-40.0	168250	160210	176290	4.8	0.7	6.7
-35.0	121300	115930	126660	4.4	0.7	6.4
-30.0	88500	84893	92107	4.1	0.7	6.2
-25.0	65185	62744	67626	3.7	0.6	6.0
-20.0	48535	46871	50199	3.4	0.6	5.8
-15.0	36465	35326	37603	3.1	0.6	5.6
-10.0	27665	26882	28448	2.8	0.5	5.4
-5.0	21158	20619	21696	2.5	0.5	5.3
0.0	16325	15954	16696	2.3	0.4	5.1
5.0	12694	12438	12949	2.0	0.4	5.0
10.0	9950	9775	10125	1.8	0.4	4.8
15.0	7854	7735	7973	1.5	0.3	4.7
20.0	6245	6165	6325	1.3	0.3	4.5
25.0	5000	4950	5050	1.0	0.2	4.4
30.0	4029	3977	4080	1.3	0.3	4.3
35.0	3266	3217	3314	1.5	0.4	4.1
40.0	2664	2618	2709	1.7	0.4	4.0
45.0	2184	2143	2226	1.9	0.5	3.9
50.0	1802	1764	1839	2.1	0.5	3.8
55.0	1493	1459	1527	2.3	0.6	3.7
60.0	1244	1213	1275	2.5	0.7	3.6
65.0	1042	1014	1069	2.6	0.8	3.5
70.0	876.0	851.4	900.6	2.8	0.8	3.4
75.0	740.7	718.7	762.7	3.0	0.9	3.3
80.0	629.0	609.3	648.7	3.1	1.0	3.2
85.0	536.2	518.5	553.8	3.3	1.0	3.2
90.0	458.8	443.0	474.7	3.4	1.1	3.1
95.0	394.3	380.1	408.4	3.6	1.2	3.0
100.0	340.0	327.3	352.7	3.7	1.3	2.9
105.0	294.3	282.9	305.7	3.9	1.4	2.9
110.0	255.6	245.3	265.9	4.0	1.4	2.8
115.0	222.7	213.5	231.9	4.2	1.5	2.7
120.0	194.7	186.3	203.0	4.3	1.6	2.7
125.0	170.9	163.3	178.4	4.4	1.7	2.6
130.0	150.5	143.6	157.3	4.5	1.8	2.5
135.0	132.7	126.5	138.9	4.7	1.9	2.5
140.0	117.4	111.8	123.0	4.8	2.0	2.4
145.0	104.2	99.07	109.3	4.9	2.1	2.4
150.0	92.65	88.02	97.28	5.0	2.2	2.3
155.0	82.67	78.45	86.90	5.1	2.3	2.3

	B57861S0502H040					
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 5000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 3%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	481520	443220	519830	8.0	1.1	7.4
-50.0	335050	309770	360330	7.5	1.1	7.1
-45.0	235840	218970	252720	7.2	1.0	6.9
-40.0	168250	156840	179660	6.8	1.0	6.7
-35.0	121300	113510	129080	6.4	1.0	6.4
-30.0	88500	83123	93877	6.1	1.0	6.2
-25.0	65185	61440	68930	5.7	1.0	6.0
-20.0	48535	45901	51169	5.4	0.9	5.8
-15.0	36465	34597	38332	5.1	0.9	5.6
-10.0	27665	26329	29001	4.8	0.9	5.4
-5.0	21158	20196	22119	4.5	0.9	5.3
0.0	16325	15627	17023	4.3	0.8	5.1
5.0	12694	12185	13203	4.0	0.8	5.0
10.0	9950	9576	10324	3.8	0.8	4.8
15.0	7854	7578	8130	3.5	0.8	4.7
20.0	6245	6040	6450	3.3	0.7	4.5
25.0	5000	4850	5150	3.0	0.7	4.4
30.0	4029	3897	4160	3.3	0.8	4.3
35.0	3266	3152	3379	3.5	0.8	4.1
40.0	2664	2565	2762	3.7	0.9	4.0
45.0	2184	2099	2269	3.9	1.0	3.9
50.0	1802	1728	1875	4.1	1.1	3.8
55.0	1493	1429	1557	4.3	1.2	3.7
60.0	1244	1189	1299	4.5	1.2	3.6
65.0	1042	993.3	1090	4.6	1.3	3.5
70.0	876.0	833.9	918.1	4.8	1.4	3.4
75.0	740.7	703.9	777.5	5.0	1.5	3.3
80.0	629.0	596.7	661.3	5.1	1.6	3.2
85.0	536.2	507.8	564.5	5.3	1.7	3.2
90.0	458.8	433.9	483.8	5.4	1.8	3.1
95.0	394.3	372.2	416.3	5.6	1.9	3.0
100.0	340.0	320.5	359.5	5.7	2.0	2.9
105.0	294.3	277.0	311.6	5.9	2.1	2.9
110.0	255.6	240.2	271.0	6.0	2.2	2.8
115.0	222.7	209.0	236.4	6.2	2.3	2.7
120.0	194.7	182.4	206.9	6.3	2.4	2.7
125.0	170.9	159.9	181.8	6.4	2.5	2.6
130.0	150.5	140.6	160.3	6.5	2.6	2.5
135.0	132.7	123.9	141.6	6.7	2.7	2.5

B57861S0502H040						
R/T No.	8016					
T (°C)	$B_{25/100} = 3988 \text{ K}$, $R_{25} = 5000 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 3\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha \text{ (}\%/\text{K)}$
140.0	117.4	109.4	125.4	6.8	2.8	2.4
145.0	104.2	96.99	111.3	6.9	2.9	2.4
150.0	92.65	86.16	99.14	7.0	3.0	2.3
155.0	82.67	76.79	88.55	7.1	3.1	2.3

B57861S0502J040						
R/T No.	8016					
T (°C)	$B_{25/100} = 3988 \text{ K}$, $R_{25} = 5000 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha \text{ (}\%/\text{K)}$
-55.0	481520	433590	529460	10.0	1.3	7.4
-50.0	335050	303070	367030	9.5	1.3	7.1
-45.0	235840	214260	257430	9.2	1.3	6.9
-40.0	168250	153480	183020	8.8	1.3	6.7
-35.0	121300	111080	131510	8.4	1.3	6.4
-30.0	88500	81353	95647	8.1	1.3	6.2
-25.0	65185	60136	70234	7.7	1.3	6.0
-20.0	48535	44930	52140	7.4	1.3	5.8
-15.0	36465	33867	39062	7.1	1.3	5.6
-10.0	27665	25776	29554	6.8	1.3	5.4
-5.0	21158	19772	22543	6.5	1.2	5.3
0.0	16325	15301	17349	6.3	1.2	5.1
5.0	12694	11931	13457	6.0	1.2	5.0
10.0	9950	9377	10523	5.8	1.2	4.8
15.0	7854	7421	8287	5.5	1.2	4.7
20.0	6245	5915	6575	5.3	1.2	4.5
25.0	5000	4750	5250	5.0	1.1	4.4
30.0	4029	3816	4241	5.3	1.2	4.3
35.0	3266	3087	3445	5.5	1.3	4.1
40.0	2664	2512	2815	5.7	1.4	4.0
45.0	2184	2056	2313	5.9	1.5	3.9
50.0	1802	1692	1911	6.1	1.6	3.8
55.0	1493	1399	1587	6.3	1.7	3.7
60.0	1244	1164	1324	6.5	1.8	3.6
65.0	1042	972.4	1111	6.6	1.9	3.5
70.0	876.0	816.4	935.6	6.8	2.0	3.4
75.0	740.7	689.1	792.3	7.0	2.1	3.3
80.0	629.0	584.1	673.9	7.1	2.2	3.2
85.0	536.2	497.1	575.3	7.3	2.3	3.2
90.0	458.8	424.7	493.0	7.4	2.4	3.1

Temperature measurement
B57861
Miniature sensors with bendable wires
S861

	B57861S0502J040					
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 5000 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)
95.0	394.3	364.3	424.2	7.6	2.5	3.0
100.0	340.0	313.7	366.3	7.7	2.6	2.9
105.0	294.3	271.1	317.5	7.9	2.8	2.9
110.0	255.6	235.1	276.1	8.0	2.9	2.8
115.0	222.7	204.6	240.9	8.2	3.0	2.7
120.0	194.7	178.5	210.8	8.3	3.1	2.7
125.0	170.9	156.5	185.2	8.4	3.2	2.6
130.0	150.5	137.6	163.3	8.5	3.4	2.5
135.0	132.7	121.2	144.2	8.7	3.5	2.5
140.0	117.4	107.1	127.7	8.8	3.6	2.4
145.0	104.2	94.90	113.4	8.9	3.8	2.4
150.0	92.65	84.31	101.0	9.0	3.9	2.3
155.0	82.67	75.14	90.21	9.1	4.0	2.3

	B57861S0103F040					
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 10000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	963050	905700	1020400	6.0	0.8	7.4
-50.0	670100	632940	707260	5.5	0.8	7.1
-45.0	471690	447380	496000	5.2	0.7	6.9
-40.0	336500	320420	352580	4.8	0.7	6.7
-35.0	242590	231870	253310	4.4	0.7	6.4
-30.0	177000	169790	184210	4.1	0.7	6.2
-25.0	130370	125490	135250	3.7	0.6	6.0
-20.0	97070	93743	100400	3.4	0.6	5.8
-15.0	72929	70652	75206	3.1	0.6	5.6
-10.0	55330	53765	56895	2.8	0.5	5.4
-5.0	42315	41237	43393	2.5	0.5	5.3
0.0	32650	31907	33393	2.3	0.4	5.1
5.0	25388	24877	25898	2.0	0.4	5.0
10.0	19900	19550	20250	1.8	0.4	4.8
15.0	15708	15470	15946	1.5	0.3	4.7
20.0	12490	12330	12650	1.3	0.3	4.5
25.0	10000	9900	10100	1.0	0.2	4.4
30.0	8057	7955	8159	1.3	0.3	4.3
35.0	6531	6434	6628	1.5	0.4	4.1
40.0	5327	5237	5417	1.7	0.4	4.0
45.0	4369	4286	4451	1.9	0.5	3.9

B57861S0103F040						
R/T No.	8016					
T (°C)	$B_{25/100} = 3988 \text{ K}$, $R_{25} = 10000 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 1\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha \text{ (}\%/\text{K)}$
50.0	3603	3528	3678	2.1	0.5	3.8
55.0	2986	2918	3054	2.3	0.6	3.7
60.0	2488	2427	2549	2.5	0.7	3.6
65.0	2083	2028	2138	2.6	0.8	3.5
70.0	1752	1703	1801	2.8	0.8	3.4
75.0	1481	1437	1525	3.0	0.9	3.3
80.0	1258	1219	1297	3.1	1.0	3.2
85.0	1072	1037	1108	3.3	1.0	3.2
90.0	917.7	886.1	949.3	3.4	1.1	3.1
95.0	788.5	760.2	816.9	3.6	1.2	3.0
100.0	680.0	654.6	705.4	3.7	1.3	2.9
105.0	588.6	565.8	611.4	3.9	1.4	2.9
110.0	511.2	490.7	531.7	4.0	1.4	2.8
115.0	445.4	426.9	463.9	4.2	1.5	2.7
120.0	389.3	372.6	406.0	4.3	1.6	2.7
125.0	341.7	326.6	356.8	4.4	1.7	2.6
130.0	300.9	287.3	314.5	4.5	1.8	2.5
135.0	265.4	253.1	277.8	4.7	1.9	2.5
140.0	234.8	223.6	246.0	4.8	2.0	2.4
145.0	208.3	198.1	218.5	4.9	2.1	2.4
150.0	185.3	176.0	194.6	5.0	2.2	2.3
155.0	165.3	156.9	173.8	5.1	2.3	2.3

B57861S0103H040						
R/T No.	8016					
T (°C)	$B_{25/100} = 3988 \text{ K}$, $R_{25} = 10000 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 3\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha \text{ (}\%/\text{K)}$
-55.0	963050	886440	1039700	8.0	1.1	7.4
-50.0	670100	619540	720660	7.5	1.1	7.1
-45.0	471690	437940	505430	7.2	1.0	6.9
-40.0	336500	313690	359310	6.8	1.0	6.7
-35.0	242590	227020	258160	6.4	1.0	6.4
-30.0	177000	166250	187750	6.1	1.0	6.2
-25.0	130370	122880	137860	5.7	1.0	6.0
-20.0	97070	91801	102340	5.4	0.9	5.8
-15.0	72929	69193	76665	5.1	0.9	5.6
-10.0	55330	52658	58002	4.8	0.9	5.4
-5.0	42315	40391	44239	4.5	0.9	5.3
0.0	32650	31254	34046	4.3	0.8	5.1

Temperature measurement
B57861
Miniature sensors with bendable wires
S861

B57861S0103H040						
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 10000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 3%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
5.0	25388	24369	26406	4.0	0.8	5.0
10.0	19900	19152	20648	3.8	0.8	4.8
15.0	15708	15156	16260	3.5	0.8	4.7
20.0	12490	12081	12899	3.3	0.7	4.5
25.0	10000	9700	10300	3.0	0.7	4.4
30.0	8057	7793	8321	3.3	0.8	4.3
35.0	6531	6304	6759	3.5	0.8	4.1
40.0	5327	5130	5524	3.7	0.9	4.0
45.0	4369	4199	4539	3.9	1.0	3.9
50.0	3603	3456	3750	4.1	1.1	3.8
55.0	2986	2859	3114	4.3	1.2	3.7
60.0	2488	2377	2599	4.5	1.2	3.6
65.0	2083	1987	2180	4.6	1.3	3.5
70.0	1752	1668	1836	4.8	1.4	3.4
75.0	1481	1408	1555	5.0	1.5	3.3
80.0	1258	1193	1323	5.1	1.6	3.2
85.0	1072	1016	1129	5.3	1.7	3.2
90.0	917.7	867.7	967.7	5.4	1.8	3.1
95.0	788.5	744.4	832.6	5.6	1.9	3.0
100.0	680.0	641.0	719.0	5.7	2.0	2.9
105.0	588.6	554.0	623.2	5.9	2.1	2.9
110.0	511.2	480.4	542.0	6.0	2.2	2.8
115.0	445.4	418.0	472.8	6.2	2.3	2.7
120.0	389.3	364.8	413.8	6.3	2.4	2.7
125.0	341.7	319.8	363.6	6.4	2.5	2.6
130.0	300.9	281.2	320.6	6.5	2.6	2.5
135.0	265.4	247.8	283.1	6.7	2.7	2.5
140.0	234.8	218.9	250.7	6.8	2.8	2.4
145.0	208.3	194.0	222.7	6.9	2.9	2.4
150.0	185.3	172.3	198.3	7.0	3.0	2.3
155.0	165.3	153.6	177.1	7.1	3.1	2.3

B57861S0103J040						
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 10000 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	963050	867180	1058900	10.0	1.3	7.4
-50.0	670100	606140	734070	9.5	1.3	7.1
-45.0	471690	428510	514870	9.2	1.3	6.9

	B57861S0103J040					
R/T No.	8016					
T (°C)	B _{25/100} = 3988 K, R ₂₅ = 10000 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)
-40.0	336500	306960	366040	8.8	1.3	6.7
-35.0	242590	222160	263020	8.4	1.3	6.4
-30.0	177000	162710	191290	8.1	1.3	6.2
-25.0	130370	120270	140470	7.7	1.3	6.0
-20.0	97070	89860	104280	7.4	1.3	5.8
-15.0	72929	67735	78124	7.1	1.3	5.6
-10.0	55330	51551	59108	6.8	1.3	5.4
-5.0	42315	39545	45085	6.5	1.2	5.3
0.0	32650	30601	34699	6.3	1.2	5.1
5.0	25388	23861	26914	6.0	1.2	5.0
10.0	19900	18754	21046	5.8	1.2	4.8
15.0	15708	14842	16574	5.5	1.2	4.7
20.0	12490	11831	13149	5.3	1.2	4.5
25.0	10000	9500	10500	5.0	1.1	4.4
30.0	8057	7632	8482	5.3	1.2	4.3
35.0	6531	6173	6889	5.5	1.3	4.1
40.0	5327	5024	5630	5.7	1.4	4.0
45.0	4369	4111	4626	5.9	1.5	3.9
50.0	3603	3384	3822	6.1	1.6	3.8
55.0	2986	2799	3174	6.3	1.7	3.7
60.0	2488	2327	2649	6.5	1.8	3.6
65.0	2083	1945	2221	6.6	1.9	3.5
70.0	1752	1633	1871	6.8	2.0	3.4
75.0	1481	1378	1585	7.0	2.1	3.3
80.0	1258	1168	1348	7.1	2.2	3.2
85.0	1072	994.2	1151	7.3	2.3	3.2
90.0	917.7	849.4	986.0	7.4	2.4	3.1
95.0	788.5	728.6	848.4	7.6	2.5	3.0
100.0	680.0	627.4	732.6	7.7	2.6	2.9
105.0	588.6	542.2	635.0	7.9	2.8	2.9
110.0	511.2	470.2	552.2	8.0	2.9	2.8
115.0	445.4	409.1	481.7	8.2	3.0	2.7
120.0	389.3	357.1	421.5	8.3	3.1	2.7
125.0	341.7	313.0	370.4	8.4	3.2	2.6
130.0	300.9	275.2	326.6	8.5	3.4	2.5
135.0	265.4	242.5	288.4	8.7	3.5	2.5
140.0	234.8	214.2	255.4	8.8	3.6	2.4
145.0	208.3	189.8	226.8	8.9	3.8	2.4
150.0	185.3	168.6	202.0	9.0	3.9	2.3
155.0	165.3	150.3	180.4	9.1	4.0	2.3

	B57861S0303F040					
R/T No.	8018					
T (°C)	B _{25/100} = 3964 K, R ₂₅ = 30000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	2472200	2325700	2618700	5.9	0.8	7.0
-50.0	1750300	1653700	1846900	5.5	0.8	6.8
-45.0	1253200	1189000	1317500	5.1	0.8	6.6
-40.0	907060	863910	950200	4.8	0.7	6.4
-35.0	663280	634100	692460	4.4	0.7	6.2
-30.0	489810	469940	509680	4.1	0.7	6.0
-25.0	365130	351510	378740	3.7	0.6	5.8
-20.0	274640	265270	284020	3.4	0.6	5.6
-15.0	208370	201890	214850	3.1	0.6	5.4
-10.0	159410	154910	163900	2.8	0.5	5.3
-5.0	122920	119800	126030	2.5	0.5	5.1
0.0	95501	93336	97666	2.3	0.5	5.0
5.0	74745	73245	76244	2.0	0.4	4.8
10.0	58911	57877	59944	1.8	0.4	4.7
15.0	46745	46038	47451	1.5	0.3	4.6
20.0	37332	36855	37808	1.3	0.3	4.4
25.0	30000	29700	30300	1.0	0.2	4.3
30.0	24253	23945	24561	1.3	0.3	4.2
35.0	19720	19428	20012	1.5	0.4	4.1
40.0	16123	15851	16395	1.7	0.4	4.0
45.0	13252	13002	13502	1.9	0.5	3.9
50.0	10949	10721	11177	2.1	0.6	3.8
55.0	9091	8885	9297	2.3	0.6	3.7
60.0	7584	7399	7770	2.4	0.7	3.6
65.0	6356	6189	6523	2.6	0.8	3.5
70.0	5351	5201	5500	2.8	0.8	3.4
75.0	4524	4390	4657	3.0	0.9	3.3
80.0	3840	3720	3960	3.1	1.0	3.2
85.0	3273	3166	3380	3.3	1.0	3.2
90.0	2800	2704	2896	3.4	1.1	3.1
95.0	2405	2319	2491	3.6	1.2	3.0
100.0	2073	1995	2150	3.7	1.3	2.9
105.0	1792	1723	1862	3.9	1.3	2.9
110.0	1555	1493	1618	4.0	1.4	2.8
115.0	1354	1298	1410	4.1	1.5	2.7
120.0	1182	1132	1233	4.3	1.6	2.7
125.0	1036	990.3	1081	4.4	1.7	2.6
130.0	910.0	868.9	951.0	4.5	1.8	2.6
135.0	801.7	764.6	838.9	4.6	1.8	2.5

B57861S0303F040						
R/T No.	8018					
T (°C)	$B_{25/100} = 3964 \text{ K}$, $R_{25} = 30000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 1\%$					
	$R_{nom}[\Omega]$	$R_{min}[\Omega]$	$R_{max}[\Omega]$	$\Delta R_R/R_R[\pm \%]$	$\Delta T[\pm ^\circ\text{C}]$	$\alpha \text{ (}\%/\text{K)}$
140.0	708.3	674.6	741.9	4.8	1.9	2.5
145.0	627.4	596.9	658.0	4.9	2.0	2.4
150.0	557.2	529.5	585.0	5.0	2.1	2.3
155.0	496.1	470.9	521.4	5.1	2.2	2.3

B57861S0303H040						
R/T No.	8018					
T (°C)	$B_{25/100} = 3964 \text{ K}$, $R_{25} = 30000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 3\%$					
	$R_{nom}[\Omega]$	$R_{min}[\Omega]$	$R_{max}[\Omega]$	$\Delta R_R/R_R[\pm \%]$	$\Delta T[\pm ^\circ\text{C}]$	$\alpha \text{ (}\%/\text{K)}$
-55.0	2472200	2276300	2668200	7.9	1.1	7.0
-50.0	1750300	1618700	1881900	7.5	1.1	6.8
-45.0	1253200	1163900	1342600	7.1	1.1	6.6
-40.0	907060	845770	968340	6.8	1.1	6.4
-35.0	663280	620830	705730	6.4	1.0	6.2
-30.0	489810	460140	519480	6.1	1.0	6.0
-25.0	365130	344210	386040	5.7	1.0	5.8
-20.0	274640	259780	289510	5.4	1.0	5.6
-15.0	208370	197730	219020	5.1	0.9	5.4
-10.0	159410	151720	167090	4.8	0.9	5.3
-5.0	122920	117340	128490	4.5	0.9	5.1
0.0	95501	91426	99576	4.3	0.9	5.0
5.0	74745	71750	77739	4.0	0.8	4.8
10.0	58911	56699	61122	3.8	0.8	4.7
15.0	46745	45103	48386	3.5	0.8	4.6
20.0	37332	36108	38555	3.3	0.7	4.4
25.0	30000	29100	30900	3.0	0.7	4.3
30.0	24253	23460	25046	3.3	0.8	4.2
35.0	19720	19033	20406	3.5	0.9	4.1
40.0	16123	15528	16717	3.7	0.9	4.0
45.0	13252	12737	13767	3.9	1.0	3.9
50.0	10949	10503	11396	4.1	1.1	3.8
55.0	9091	8703	9479	4.3	1.2	3.7
60.0	7584	7247	7921	4.4	1.2	3.6
65.0	6356	6062	6650	4.6	1.3	3.5
70.0	5351	5094	5607	4.8	1.4	3.4
75.0	4524	4299	4748	5.0	1.5	3.3
80.0	3840	3643	4037	5.1	1.6	3.2
85.0	3273	3100	3446	5.3	1.7	3.2
90.0	2800	2648	2952	5.4	1.8	3.1

Temperature measurement
B57861
Miniature sensors with bendable wires
S861

B57861S0303H040						
R/T No.	8018					
T (°C)	B _{25/100} = 3964 K, R ₂₅ = 30000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 3%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
95.0	2405	2271	2539	5.6	1.9	3.0
100.0	2073	1954	2191	5.7	1.9	2.9
105.0	1792	1687	1897	5.9	2.0	2.9
110.0	1555	1462	1649	6.0	2.1	2.8
115.0	1354	1271	1437	6.1	2.2	2.7
120.0	1182	1108	1257	6.3	2.3	2.7
125.0	1036	969.6	1102	6.4	2.4	2.6
130.0	910.0	850.7	969.2	6.5	2.5	2.6
135.0	801.7	748.5	854.9	6.6	2.6	2.5
140.0	708.3	660.5	756.1	6.8	2.8	2.5
145.0	627.4	584.4	670.5	6.9	2.9	2.4
150.0	557.2	518.4	596.1	7.0	3.0	2.3
155.0	496.1	461.0	531.3	7.1	3.1	2.3

B57861S0303J040						
R/T No.	8018					
T (°C)	B _{25/100} = 3964 K, R ₂₅ = 30000 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	2472200	2226900	2717600	9.9	1.4	7.0
-50.0	1750300	1583700	1916900	9.5	1.4	6.8
-45.0	1253200	1138800	1367700	9.1	1.4	6.6
-40.0	907060	827630	986480	8.8	1.4	6.4
-35.0	663280	607570	718990	8.4	1.4	6.2
-30.0	489810	450340	529280	8.1	1.4	6.0
-25.0	365130	336910	393350	7.7	1.3	5.8
-20.0	274640	254280	295000	7.4	1.3	5.6
-15.0	208370	193560	223190	7.1	1.3	5.4
-10.0	159410	148540	170270	6.8	1.3	5.3
-5.0	122920	114880	130950	6.5	1.3	5.1
0.0	95501	89516	101490	6.3	1.3	5.0
5.0	74745	70255	79234	6.0	1.2	4.8
10.0	58911	55521	62301	5.8	1.2	4.7
15.0	46745	44168	49321	5.5	1.2	4.6
20.0	37332	35362	39302	5.3	1.2	4.4
25.0	30000	28500	31500	5.0	1.2	4.3
30.0	24253	22975	25531	5.3	1.3	4.2
35.0	19720	18639	20801	5.5	1.3	4.1
40.0	16123	15206	17040	5.7	1.4	4.0
45.0	13252	12472	14032	5.9	1.5	3.9

B57861S0303J040						
R/T No.	8018					
T (°C)	$B_{25/100} = 3964 \text{ K}$, $R_{25} = 30000 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha \text{ (}\%/\text{K)}$
50.0	10949	10284	11615	6.1	1.6	3.8
55.0	9091	8521	9660	6.3	1.7	3.7
60.0	7584	7095	8073	6.4	1.8	3.6
65.0	6356	5935	6777	6.6	1.9	3.5
70.0	5351	4987	5714	6.8	2.0	3.4
75.0	4524	4209	4838	7.0	2.1	3.3
80.0	3840	3567	4114	7.1	2.2	3.2
85.0	3273	3035	3511	7.3	2.3	3.2
90.0	2800	2592	3008	7.4	2.4	3.1
95.0	2405	2223	2587	7.6	2.5	3.0
100.0	2073	1912	2233	7.7	2.6	2.9
105.0	1792	1651	1933	7.9	2.7	2.9
110.0	1555	1431	1680	8.0	2.9	2.8
115.0	1354	1244	1464	8.1	3.0	2.7
120.0	1182	1085	1280	8.3	3.1	2.7
125.0	1036	948.9	1123	8.4	3.2	2.6
130.0	910.0	832.5	987.4	8.5	3.3	2.6
135.0	801.7	732.5	870.9	8.6	3.4	2.5
140.0	708.3	646.3	770.3	8.8	3.6	2.5
145.0	627.4	571.8	683.1	8.9	3.7	2.4
150.0	557.2	507.2	607.3	9.0	3.8	2.3
155.0	496.1	451.1	541.2	9.1	4.0	2.3

B57861S0503F040						
R/T No.	2901					
T (°C)	$B_{25/100} = 3760 \text{ K}$, $R_{25} = 50000 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 1\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha \text{ (}\%/\text{K)}$
−55.0	3198400	3016900	3379900	5.7	0.9	6.4
−50.0	2308900	2186800	2431000	5.3	0.8	6.3
−45.0	1686900	1603900	1769900	4.9	0.8	6.1
−40.0	1246300	1189400	1303200	4.6	0.8	6.0
−35.0	930550	891210	969890	4.2	0.7	5.8
−30.0	701670	674280	729050	3.9	0.7	5.6
−25.0	533960	514780	553130	3.6	0.7	5.5
−20.0	409900	396410	423390	3.3	0.6	5.3
−15.0	315620	306130	325100	3.0	0.6	5.1
−10.0	245070	238390	251750	2.7	0.5	5.0
−5.0	191050	186350	195750	2.5	0.5	4.9
0.0	150140	146830	153450	2.2	0.5	4.7

Temperature measurement
B57861
Miniature sensors with bendable wires
S861

B57861S0503F040						
R/T No.	2901					
T (°C)	B _{25/100} = 3760 K, R ₂₅ = 50000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
5.0	119010	116680	121340	2.0	0.4	4.6
10.0	94998	93366	96630	1.7	0.4	4.5
15.0	76284	75149	77418	1.5	0.3	4.3
20.0	61651	60871	62431	1.3	0.3	4.2
25.0	50000	49500	50500	1.0	0.2	4.1
30.0	40839	40326	41353	1.3	0.3	4.0
35.0	33583	33093	34073	1.5	0.4	3.9
40.0	27764	27304	28223	1.7	0.4	3.8
45.0	23048	22623	23472	1.8	0.5	3.7
50.0	19229	18840	19619	2.0	0.6	3.6
55.0	16092	15737	16446	2.2	0.6	3.5
60.0	13534	13213	13856	2.4	0.7	3.4
65.0	11453	11162	11745	2.5	0.8	3.3
70.0	9734	9471	9997	2.7	0.8	3.2
75.0	8304	8066	8541	2.9	0.9	3.2
80.0	7111	6896	7325	3.0	1.0	3.1
85.0	6109	5916	6302	3.2	1.1	3.0
90.0	5267	5092	5441	3.3	1.1	2.9
95.0	4562	4404	4719	3.4	1.2	2.9
100.0	3964	3822	4106	3.6	1.3	2.8
105.0	3453	3325	3582	3.7	1.4	2.7
110.0	3017	2901	3133	3.8	1.4	2.7
115.0	2644	2539	2749	4.0	1.5	2.6
120.0	2324	2229	2419	4.1	1.6	2.6
125.0	2049	1963	2136	4.2	1.7	2.5
130.0	1812	1733	1890	4.3	1.8	2.4
135.0	1605	1534	1676	4.4	1.9	2.4
140.0	1425	1360	1490	4.6	1.9	2.3
145.0	1269	1209	1328	4.7	2.0	2.3
150.0	1132	1078	1186	4.8	2.1	2.3
155.0	1012	962.2	1061	4.9	2.2	2.2

B57861S0503H040						
R/T No.	2901					
T (°C)	B _{25/100} = 3760 K, R ₂₅ = 50000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 3%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	3198400	2953000	3443900	7.7	1.2	6.4
-50.0	2308900	2140600	2477200	7.3	1.2	6.3
-45.0	1686900	1570200	1803600	6.9	1.1	6.1

	B57861S0503H040					
R/T No.	2901					
T (°C)	$B_{25/100} = 3760 \text{ K}$, $R_{25} = 50000 \text{ } \Omega$, $T_R = 25 \text{ } ^\circ\text{C}$, $\Delta R_R/R_R = \pm 3\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm^\circ\text{C}]$	$\alpha \text{ } (\%/K)$
-40.0	1246300	1164500	1328200	6.6	1.1	6.0
-35.0	930550	872600	988500	6.2	1.1	5.8
-30.0	701670	660250	743080	5.9	1.1	5.6
-25.0	533960	504110	563810	5.6	1.0	5.5
-20.0	409900	388210	431590	5.3	1.0	5.3
-15.0	315620	299820	331410	5.0	1.0	5.1
-10.0	245070	233480	256650	4.7	0.9	5.0
-5.0	191050	182530	199570	4.5	0.9	4.9
0.0	150140	143820	156450	4.2	0.9	4.7
5.0	119010	114300	123720	4.0	0.9	4.6
10.0	94998	91466	98530	3.7	0.8	4.5
15.0	76284	73623	78944	3.5	0.8	4.3
20.0	61651	59638	63664	3.3	0.8	4.2
25.0	50000	48500	51500	3.0	0.7	4.1
30.0	40839	39509	42170	3.3	0.8	4.0
35.0	33583	32421	34745	3.5	0.9	3.9
40.0	27764	26749	28778	3.7	1.0	3.8
45.0	23048	22162	23933	3.8	1.0	3.7
50.0	19229	18455	20003	4.0	1.1	3.6
55.0	16092	15416	16768	4.2	1.2	3.5
60.0	13534	12942	14126	4.4	1.3	3.4
65.0	11453	10933	11974	4.5	1.4	3.3
70.0	9734	9276	10192	4.7	1.5	3.2
75.0	8304	7900	8707	4.9	1.5	3.2
80.0	7111	6754	7467	5.0	1.6	3.1
85.0	6109	5793	6424	5.2	1.7	3.0
90.0	5267	4987	5546	5.3	1.8	2.9
95.0	4562	4313	4810	5.4	1.9	2.9
100.0	3964	3743	4186	5.6	2.0	2.8
105.0	3453	3256	3651	5.7	2.1	2.7
110.0	3017	2841	3193	5.8	2.2	2.7
115.0	2644	2486	2802	6.0	2.3	2.6
120.0	2324	2182	2466	6.1	2.4	2.6
125.0	2049	1922	2177	6.2	2.5	2.5
130.0	1812	1697	1926	6.3	2.6	2.4
135.0	1605	1502	1709	6.4	2.7	2.4
140.0	1425	1332	1519	6.6	2.8	2.3
145.0	1269	1184	1353	6.7	2.9	2.3
150.0	1132	1055	1208	6.8	3.0	2.3
155.0	1012	942.0	1081	6.9	3.1	2.2

	B57861S0503J040					
R/T No.	2901					
T (°C)	B _{25/100} = 3760 K, R ₂₅ = 50000 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	3198400	2889000	3507900	9.7	1.5	6.4
-50.0	2308900	2094500	2523400	9.3	1.5	6.3
-45.0	1686900	1536400	1837300	8.9	1.5	6.1
-40.0	1246300	1139600	1353100	8.6	1.4	6.0
-35.0	930550	853990	1007100	8.2	1.4	5.8
-30.0	701670	646220	757120	7.9	1.4	5.6
-25.0	533960	493430	574490	7.6	1.4	5.5
-20.0	409900	380010	439790	7.3	1.4	5.3
-15.0	315620	293510	337720	7.0	1.4	5.1
-10.0	245070	228580	261560	6.7	1.3	5.0
-5.0	191050	178710	203390	6.5	1.3	4.9
0.0	150140	140820	159450	6.2	1.3	4.7
5.0	119010	111920	126100	6.0	1.3	4.6
10.0	94998	89566	100430	5.7	1.3	4.5
15.0	76284	72097	80470	5.5	1.3	4.3
20.0	61651	58405	64897	5.3	1.3	4.2
25.0	50000	47500	52500	5.0	1.2	4.1
30.0	40839	38692	42987	5.3	1.3	4.0
35.0	33583	31750	35417	5.5	1.4	3.9
40.0	27764	26194	29333	5.7	1.5	3.8
45.0	23048	21701	24394	5.8	1.6	3.7
50.0	19229	18071	20388	6.0	1.7	3.6
55.0	16092	15094	17090	6.2	1.8	3.5
60.0	13534	12671	14397	6.4	1.9	3.4
65.0	11453	10704	12203	6.5	2.0	3.3
70.0	9734	9082	10387	6.7	2.1	3.2
75.0	8304	7734	8873	6.9	2.2	3.2
80.0	7111	6612	7609	7.0	2.3	3.1
85.0	6109	5671	6546	7.2	2.4	3.0
90.0	5267	4882	5651	7.3	2.5	2.9
95.0	4562	4222	4901	7.4	2.6	2.9
100.0	3964	3664	4265	7.6	2.7	2.8
105.0	3453	3187	3720	7.7	2.8	2.7
110.0	3017	2780	3254	7.8	2.9	2.7
115.0	2644	2433	2855	8.0	3.0	2.6
120.0	2324	2136	2512	8.1	3.2	2.6
125.0	2049	1881	2218	8.2	3.3	2.5
130.0	1812	1661	1963	8.3	3.4	2.4
135.0	1605	1469	1741	8.4	3.5	2.4

B57861S0503J040						
R/T No.	2901					
T (°C)	B _{25/100} = 3760 K, R ₂₅ = 50000 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)
140.0	1425	1303	1548	8.6	3.6	2.3
145.0	1269	1159	1379	8.7	3.8	2.3
150.0	1132	1032	1231	8.8	3.9	2.3
155.0	1012	921.7	1101	8.9	4.0	2.2

B57861S0104F040						
R/T No.	2014					
T (°C)	B _{25/100} = 4540 K, R ₂₅ = 100000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nomL} [Ω]	R _{minL} [Ω]	R _{maxL} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	14200000	13258000	15142000	6.6	0.8	7.8
-50.0	9661500	9065600	10257000	6.2	0.8	7.6
-45.0	6656200	6275300	7037000	5.7	0.8	7.3
-40.0	4640000	4394300	4885700	5.3	0.7	7.1
-35.0	3270800	3111000	3430600	4.9	0.7	6.9
-30.0	2330200	2225500	2435000	4.5	0.7	6.7
-25.0	1677000	1607900	1746100	4.1	0.6	6.5
-20.0	1218600	1172800	1264400	3.8	0.6	6.3
-15.0	893700	863230	924170	3.4	0.6	6.1
-10.0	661250	640920	681590	3.1	0.5	5.9
-5.0	493420	479840	507010	2.8	0.5	5.8
0.0	371200	362130	380270	2.4	0.4	5.6
5.0	281450	275410	287480	2.1	0.4	5.5
10.0	215000	211010	219000	1.9	0.3	5.3
15.0	165440	162830	168050	1.6	0.3	5.2
20.0	128190	126510	129870	1.3	0.3	5.0
25.0	100000	99000	101000	1.0	0.2	4.9
30.0	78514	77493	79536	1.3	0.3	4.8
35.0	62031	61073	62989	1.5	0.3	4.7
40.0	49304	48427	50181	1.8	0.4	4.5
45.0	39417	38626	40208	2.0	0.5	4.4
50.0	31690	30984	32396	2.2	0.5	4.3
55.0	25616	24990	26242	2.4	0.6	4.2
60.0	20815	20263	21367	2.6	0.6	4.1
65.0	17000	16515	17484	2.9	0.7	4.0
70.0	13952	13527	14377	3.0	0.8	3.9
75.0	11505	11132	11877	3.2	0.8	3.8
80.0	9530	9204	9856	3.4	0.9	3.7
85.0	7930	7644	8215	3.6	1.0	3.6
90.0	6626	6376	6876	3.8	1.1	3.5

Temperature measurement
B57861
Miniature sensors with bendable wires
S861

	B57861S0104F040					
R/T No.	2014					
T (°C)	B _{25/100} = 4540 K, R ₂₅ = 100000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 1%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
95.0	5560	5341	5779	3.9	1.1	3.5
100.0	4684	4492	4877	4.1	1.2	3.4
105.0	3962	3793	4131	4.3	1.3	3.3
110.0	3363	3214	3512	4.4	1.4	3.2
115.0	2866	2735	2997	4.6	1.4	3.2
120.0	2451	2335	2566	4.7	1.5	3.1
125.0	2103	2000	2205	4.9	1.6	3.0
130.0	1810	1719	1901	5.0	1.7	3.0
135.0	1563	1483	1644	5.2	1.8	2.9
140.0	1354	1283	1426	5.3	1.9	2.8
145.0	1177	1113	1241	5.4	2.0	2.8
150.0	1026	968.9	1083	5.5	2.0	2.7
155.0	896.6	845.7	947.5	5.7	2.1	2.7

	B57861S0104H040					
R/T No.	2014					
T (°C)	B _{25/100} = 4540 K, R ₂₅ = 100000 Ω, T _R = 25 °C, ΔR _R /R _R = ± 3%					
	R _{nom} [Ω]	R _{min} [Ω]	R _{max} [Ω]	ΔR _R /R _R [±%]	ΔT[±°C]	α (%/K)
-55.0	14200000	12974000	15426000	8.6	1.1	7.8
-50.0	9661500	8872400	10451000	8.2	1.1	7.6
-45.0	6656200	6142200	7170200	7.7	1.1	7.3
-40.0	4640000	4301500	4978500	7.3	1.0	7.1
-35.0	3270800	3045600	3496000	6.9	1.0	6.9
-30.0	2330200	2178900	2481600	6.5	1.0	6.7
-25.0	1677000	1574400	1779600	6.1	0.9	6.5
-20.0	1218600	1148400	1288700	5.8	0.9	6.3
-15.0	893700	845360	942050	5.4	0.9	6.1
-10.0	661250	627690	694810	5.1	0.9	5.9
-5.0	493420	469970	516880	4.8	0.8	5.8
0.0	371200	354710	387700	4.4	0.8	5.6
5.0	281450	269780	293110	4.1	0.8	5.5
10.0	215000	206710	223300	3.9	0.7	5.3
15.0	165440	159520	171360	3.6	0.7	5.2
20.0	128190	123950	132440	3.3	0.7	5.0
25.0	100000	97000	103000	3.0	0.6	4.9
30.0	78514	75922	81106	3.3	0.7	4.8
35.0	62031	59832	64229	3.5	0.8	4.7
40.0	49304	47441	51168	3.8	0.8	4.5
45.0	39417	37837	40996	4.0	0.9	4.4

B57861S0104H040						
R/T No.	2014					
T (°C)	$B_{25/100} = 4540 \text{ K}$, $R_{25} = 100000 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 3\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha (\%/K)$
50.0	31690	30350	33030	4.2	1.0	4.3
55.0	25616	24478	26754	4.4	1.1	4.2
60.0	20815	19847	21783	4.6	1.1	4.1
65.0	17000	16175	17824	4.9	1.2	4.0
70.0	13952	13248	14656	5.0	1.3	3.9
75.0	11505	10902	12107	5.2	1.4	3.8
80.0	9530	9013	10047	5.4	1.5	3.7
85.0	7930	7486	8374	5.6	1.5	3.6
90.0	6626	6244	7009	5.8	1.6	3.5
95.0	5560	5230	5891	5.9	1.7	3.5
100.0	4684	4398	4971	6.1	1.8	3.4
105.0	3962	3713	4210	6.3	1.9	3.3
110.0	3363	3147	3580	6.4	2.0	3.2
115.0	2866	2677	3054	6.6	2.1	3.2
120.0	2451	2286	2615	6.7	2.2	3.1
125.0	2103	1958	2247	6.9	2.3	3.0
130.0	1810	1683	1937	7.0	2.4	3.0
135.0	1563	1451	1675	7.2	2.5	2.9
140.0	1354	1256	1453	7.3	2.6	2.8
145.0	1177	1090	1264	7.4	2.7	2.8
150.0	1026	948.4	1103	7.5	2.8	2.7
155.0	896.6	827.8	965.4	7.7	2.9	2.7

B57861S0104J040						
R/T No.	2014					
T (°C)	$B_{25/100} = 4540 \text{ K}$, $R_{25} = 100000 \Omega$, $T_R = 25 \text{ °C}$, $\Delta R_R/R_R = \pm 5\%$					
	$R_{\text{nomL}}[\Omega]$	$R_{\text{minL}}[\Omega]$	$R_{\text{maxL}}[\Omega]$	$\Delta R_R/R_R[\pm\%]$	$\Delta T[\pm\text{°C}]$	$\alpha (\%/K)$
-55.0	14200000	12690000	15710000	10.6	1.4	7.8
-50.0	9661500	8679100	10644000	10.2	1.3	7.6
-45.0	6656200	6009100	7303300	9.7	1.3	7.3
-40.0	4640000	4208700	5071300	9.3	1.3	7.1
-35.0	3270800	2980100	3561500	8.9	1.3	6.9
-30.0	2330200	2132300	2528200	8.5	1.3	6.7
-25.0	1677000	1540900	1813100	8.1	1.3	6.5
-20.0	1218600	1124100	1313100	7.8	1.2	6.3
-15.0	893700	827490	959920	7.4	1.2	6.1
-10.0	661250	614470	708040	7.1	1.2	5.9
-5.0	493420	460100	526750	6.8	1.2	5.8
0.0	371200	347280	395120	6.4	1.1	5.6

	B57861S0104J040					
R/T No.	2014					
T (°C)	B _{25/100} = 4540 K, R ₂₅ = 100000 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)
5.0	281450	264150	298740	6.1	1.1	5.5
10.0	215000	202410	227600	5.9	1.1	5.3
15.0	165440	156210	174670	5.6	1.1	5.2
20.0	128190	121390	135000	5.3	1.1	5.0
25.0	100000	95000	105000	5.0	1.0	4.9
30.0	78514	74352	82676	5.3	1.1	4.8
35.0	62031	58592	65470	5.5	1.2	4.7
40.0	49304	46455	52154	5.8	1.3	4.5
45.0	39417	37049	41785	6.0	1.4	4.4
50.0	31690	29716	33663	6.2	1.4	4.3
55.0	25616	23966	27266	6.4	1.5	4.2
60.0	20815	19431	22199	6.6	1.6	4.1
65.0	17000	15835	18164	6.9	1.7	4.0
70.0	13952	12969	14935	7.0	1.8	3.9
75.0	11505	10672	12337	7.2	1.9	3.8
80.0	9530	8823	10237	7.4	2.0	3.7
85.0	7930	7327	8532	7.6	2.1	3.6
90.0	6626	6111	7141	7.8	2.2	3.5
95.0	5560	5118	6002	7.9	2.3	3.5
100.0	4684	4304	5064	8.1	2.4	3.4
105.0	3962	3634	4289	8.3	2.5	3.3
110.0	3363	3080	3647	8.4	2.6	3.2
115.0	2866	2620	3112	8.6	2.7	3.2
120.0	2451	2237	2664	8.7	2.8	3.1
125.0	2103	1916	2289	8.9	2.9	3.0
130.0	1810	1647	1973	9.0	3.0	3.0
135.0	1563	1420	1706	9.2	3.2	2.9
140.0	1354	1229	1480	9.3	3.3	2.8
145.0	1177	1066	1288	9.4	3.4	2.8
150.0	1026	927.8	1124	9.5	3.5	2.7
155.0	896.6	809.9	983.3	9.7	3.6	2.7

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.
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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.
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