



NTC thermistors for temperature measurement

SMD NTC thermistors
with nickel barrier termination,
case size 0805

Series/Type: B574**V2
Date: June 2008

SMD
Applications

- Temperature measurement and compensation

Features

- Multilayer SMD NTC with inner electrodes
- Excellent long-term ageing stability in high-temperature and high-humidity environment
- Superior resistance stability during soldering (change <1%)

Options

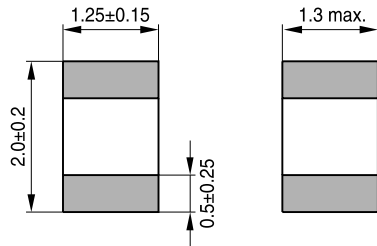
Alternative resistance ratings, resistance tolerance and B value tolerances available on request

Delivery mode

Blister tape, 180-mm reel (standard); 330-mm reel (on request)

General technical data

Climatic category	(IEC 60068-1)		55/125/56	
Max. power	(at 25 °C, on PCB)	$P_{25}^{(1)}$	210	mW
Resistance tolerance		$\Delta R_R / R_R$	$\pm 3, \pm 5$	%
Rated temperature		T_R	25	°C
Dissipation factor	(on PCB)	$\delta_{th}^{(1)}$	approx. 3.5	mW/K
Thermal cooling time constant	(on PCB)	$\tau_c^{(1)}$	approx. 10	s
Heat capacity		$C_{th}^{(1)}$	approx. 35	mJ/K

Dimensional drawing

 Termination

TNT0473-1

Dimensions in mm

Approx. weight 13 mg

1) Depends on mounting situation

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Electrical specification and ordering codes

R ₂₅ Ω	No. of R/T characteristic	B _{25/50} K	B _{25/85} K	B _{25/100} K	Ordering code
100	8501	3500	3540	3550 ±3%	B57411V2101+062
150	8501	3500	3540	3550 ±3%	B57411V2151+062
220	8501	3500	3540	3550 ±3%	B57411V2221+062
330	8501	3500	3540	3550 ±3%	B57411V2331+062
470	8502	3940	3980	4000 ±3%	B57421V2471+062
680	8502	3940	3980	4000 ±3%	B57421V2681+062
1.0 k	8502	3940	3980	4000 ±3%	B57421V2102+062
1.5 k	8502	3940	3980	4000 ±3%	B57421V2152+062
2.2 k	8502	3940	3980	4000 ±3%	B57421V2222+062
3.3 k	8502	3940	3980	4000 ±3%	B57421V2332+062
4.7 k	8500	3590	3635	3650 ±3%	B57401V2472+062
4.7 k	8507	4386	4455	4480 ±3%	B57471V2472+062
6.8 k	8507	4386	4455	4480 ±3%	B57471V2682+062
10 k	8502	3940	3980	4000 ±3%	B57421V2103+062
10 k	8507	4386	4455	4480 ±3%	B57471V2103+062
22 k	8502	3940	3980	4000 ±3%	B57421V2223+062
22 k	8507	4386	4455	4480 ±3%	B57471V2223+062
33 k	8502	3940	3980	4000 ±3%	B57421V2333+062
33 k	8507	4386	4455	4480 ±3%	B57471V2333+062
47 k	8507	4386	4455	4480 ±3%	B57471V2473+062
100 k	8507	4386	4455	4480 ±3%	B57471V2104+062
470 k	8507	4386	4455	4480 ±3%	B57471V2474+062

+ = Resistance tolerance

H = ±3%

J = ±5%

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Reliability data

SMD NTC thermistors are tested in accordance with IEC 60068. The parts are mounted on a standardized PCB in accordance with IEC 60539-1.

Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
Storage in dry heat	IEC 60068-2-2 JIS C 0021	Storage at upper category temperature T: (125 ±2) °C t: 1000 h	< 2%	
Storage in damp heat, steady state	IEC 60068-2-78 JIS C 0022	Temperature of air: (40 ±2) °C Relative humidity of air: (93 +2/-3)% Duration: 56 days	< 2%	
Rapid temperature cycling	IEC 60068-2-14 JIS C 0025	Lower test temperature: -55 °C Upper test temperature: 125 °C Number of cycles: 100	< 2%	
Endurance		P_{max} : 210 mW T: (65 ±2) °C t: 1000 h	< 2%	
Solderability	IEC 60068-2-58 JIS C 0054	Solderability: (215 ±3) °C, (3 ±0.3) s (235 ±5) °C, (2 ±0.2) s Resistance to soldering heat: (260 ±5) °C, (10 ±1) s		95% of terminations wetted
Resistance drift after soldering		Reflow soldering profile Wave soldering profile	< 1%	

SMD
R/T characteristics

B57411V2101H062						
R/T No.	8501					
T (°C)	B _{25/100} = 3550 K, R ₂₅ = 100 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	5663	4749	6578	16.1	2.5	6.5
-50.0	4113	3494	4733	15.1	2.4	6.3
-45.0	3021	2598	3444	14.0	2.3	6.1
-40.0	2242	1950	2534	13.0	2.2	5.9
-35.0	1681	1478	1883	12.0	2.1	5.7
-30.0	1272	1130	1414	11.1	2.0	5.5
-25.0	971.6	872.0	1071	10.2	1.9	5.3
-20.0	748.5	678.2	818.9	9.4	1.8	5.1
-15.0	581.5	531.6	631.4	8.6	1.7	5.0
-10.0	455.4	419.8	490.9	7.8	1.6	4.8
-5.0	359.3	334.0	384.6	7.0	1.5	4.7
0.0	285.6	267.5	303.6	6.3	1.4	4.5
5.0	228.6	215.7	241.4	5.6	1.3	4.4
10.0	184.2	175.1	193.3	4.9	1.2	4.3
15.0	149.3	142.9	155.7	4.3	1.0	4.1
20.0	121.8	117.4	126.3	3.7	0.9	4.0
25.0	100.00	97.00	103.0	3.0	0.8	3.9
30.0	82.54	79.53	85.54	3.6	1.0	3.8
35.0	68.49	65.61	71.38	4.2	1.1	3.7
40.0	57.14	54.42	59.86	4.8	1.3	3.6
45.0	47.91	45.37	50.44	5.3	1.5	3.5
50.0	40.36	38.01	42.70	5.8	1.7	3.4
55.0	34.16	32.00	36.32	6.3	1.9	3.3
60.0	29.04	27.06	31.02	6.8	2.1	3.2
65.0	24.80	22.99	26.60	7.3	2.3	3.1
70.0	21.26	19.61	22.90	7.7	2.5	3.0
75.0	18.30	16.80	19.80	8.2	2.8	3.0
80.0	15.81	14.45	17.17	8.6	3.0	2.9
85.0	13.71	12.48	14.95	9.0	3.2	2.8
90.0	11.94	10.81	13.07	9.4	3.4	2.7
95.0	10.43	9.401	11.45	9.8	3.7	2.7
100.0	9.137	8.203	10.07	10.2	3.9	2.6
105.0	8.033	7.181	8.885	10.6	4.2	2.5
110.0	7.085	6.307	7.862	11.0	4.4	2.5
115.0	6.267	5.556	6.977	11.3	4.7	2.4
120.0	5.559	4.910	6.209	11.7	4.9	2.4
125.0	4.945	4.351	5.540	12.0	5.2	2.3

SMD
R/T characteristics

B57411V2101J062						
R/T No.	8501					
T (°C)	B _{25/100} = 3550 K, R ₂₅ = 100 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	5663	4635	6691	18.1	2.8	6.5
-50.0	4113	3412	4815	17.1	2.7	6.3
-45.0	3021	2537	3504	16.0	2.6	6.1
-40.0	2242	1906	2579	15.0	2.6	5.9
-35.0	1681	1445	1917	14.0	2.5	5.7
-30.0	1272	1105	1439	13.1	2.4	5.5
-25.0	971.6	852.6	1091	12.2	2.3	5.3
-20.0	748.5	663.2	833.9	11.4	2.2	5.1
-15.0	581.5	520.0	643.1	10.6	2.1	5.0
-10.0	455.4	410.7	500.0	9.8	2.0	4.8
-5.0	359.3	326.8	391.8	9.0	1.9	4.7
0.0	285.6	261.8	309.3	8.3	1.8	4.5
5.0	228.6	211.2	246.0	7.6	1.7	4.4
10.0	184.2	171.4	196.9	6.9	1.6	4.3
15.0	149.3	139.9	158.7	6.3	1.5	4.1
20.0	121.8	114.9	128.7	5.7	1.4	4.0
25.0	100.00	95.00	105.0	5.0	1.3	3.9
30.0	82.54	77.88	87.19	5.6	1.5	3.8
35.0	68.49	64.24	72.75	6.2	1.7	3.7
40.0	57.14	53.28	61.00	6.8	1.9	3.6
45.0	47.91	44.41	51.40	7.3	2.1	3.5
50.0	40.36	37.20	43.51	7.8	2.3	3.4
55.0	34.16	31.32	37.00	8.3	2.5	3.3
60.0	29.04	26.48	31.60	8.8	2.7	3.2
65.0	24.80	22.50	27.10	9.3	3.0	3.1
70.0	21.26	19.19	23.33	9.7	3.2	3.0
75.0	18.30	16.44	20.16	10.2	3.4	3.0
80.0	15.81	14.13	17.49	10.6	3.7	2.9
85.0	13.71	12.20	15.23	11.0	3.9	2.8
90.0	11.94	10.57	13.30	11.4	4.2	2.7
95.0	10.43	9.192	11.66	11.8	4.4	2.7
100.0	9.137	8.020	10.25	12.2	4.7	2.6
105.0	8.033	7.021	9.046	12.6	5.0	2.5
110.0	7.085	6.165	8.004	13.0	5.2	2.5
115.0	6.267	5.431	7.102	13.3	5.5	2.4
120.0	5.559	4.799	6.320	13.7	5.8	2.4
125.0	4.945	4.252	5.639	14.0	6.1	2.3

SMD
R/T characteristics

B57411V2151H062						
R/T No.	8501					
T (°C)	B _{25/100} = 3550 K, R ₂₅ = 150 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	8495	7123	9867	16.1	2.5	6.5
-50.0	6170	5241	7099	15.1	2.4	6.3
-45.0	4531	3896	5166	14.0	2.3	6.1
-40.0	3363	2926	3800	13.0	2.2	5.9
-35.0	2521	2217	2825	12.0	2.1	5.7
-30.0	1908	1696	2120	11.1	2.0	5.5
-25.0	1457	1308	1607	10.2	1.9	5.3
-20.0	1123	1017	1228	9.4	1.8	5.1
-15.0	872.3	797.4	947.2	8.6	1.7	5.0
-10.0	683.1	629.8	736.3	7.8	1.6	4.8
-5.0	539.0	501.0	576.9	7.0	1.5	4.7
0.0	428.4	401.3	455.4	6.3	1.4	4.5
5.0	342.9	323.6	362.1	5.6	1.3	4.4
10.0	276.2	262.6	289.9	4.9	1.2	4.3
15.0	224.0	214.4	233.6	4.3	1.0	4.1
20.0	182.8	176.1	189.5	3.7	0.9	4.0
25.0	150.0	145.5	154.5	3.0	0.8	3.9
30.0	123.8	119.3	128.3	3.6	1.0	3.8
35.0	102.7	98.42	107.1	4.2	1.1	3.7
40.0	85.71	81.63	89.79	4.8	1.3	3.6
45.0	71.86	68.05	75.66	5.3	1.5	3.5
50.0	60.54	57.02	64.06	5.8	1.7	3.4
55.0	51.24	48.00	54.47	6.3	1.9	3.3
60.0	43.56	40.60	46.52	6.8	2.1	3.2
65.0	37.19	34.49	39.90	7.3	2.3	3.1
70.0	31.89	29.42	34.35	7.7	2.5	3.0
75.0	27.45	25.20	29.69	8.2	2.8	3.0
80.0	23.72	21.68	25.76	8.6	3.0	2.9
85.0	20.57	18.71	22.43	9.0	3.2	2.8
90.0	17.91	16.22	19.60	9.4	3.4	2.7
95.0	15.64	14.10	17.18	9.8	3.7	2.7
100.0	13.71	12.30	15.11	10.2	3.9	2.6
105.0	12.05	10.77	13.33	10.6	4.2	2.5
110.0	10.63	9.461	11.79	11.0	4.4	2.5
115.0	9.400	8.335	10.47	11.3	4.7	2.4
120.0	8.339	7.365	9.313	11.7	4.9	2.4
125.0	7.418	6.526	8.310	12.0	5.2	2.3

SMD
R/T characteristics

B57411V2151J062						
R/T No.	8501					
T (°C)	B _{25/100} = 3550 K, R ₂₅ = 150 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	8495	6953	10037	18.1	2.8	6.5
-50.0	6170	5118	7222	17.1	2.7	6.3
-45.0	4531	3806	5257	16.0	2.6	6.1
-40.0	3363	2858	3868	15.0	2.6	5.9
-35.0	2521	2167	2875	14.0	2.5	5.7
-30.0	1908	1658	2159	13.1	2.4	5.5
-25.0	1457	1279	1636	12.2	2.3	5.3
-20.0	1123	994.8	1251	11.4	2.2	5.1
-15.0	872.3	779.9	964.6	10.6	2.1	5.0
-10.0	683.1	616.1	750.0	9.8	2.0	4.8
-5.0	539.0	490.2	587.7	9.0	1.9	4.7
0.0	428.4	392.7	464.0	8.3	1.8	4.5
5.0	342.9	316.7	369.0	7.6	1.7	4.4
10.0	276.2	257.1	295.4	6.9	1.6	4.3
15.0	224.0	209.9	238.1	6.3	1.5	4.1
20.0	182.8	172.4	193.1	5.7	1.4	4.0
25.0	150.0	142.5	157.5	5.0	1.3	3.9
30.0	123.8	116.8	130.8	5.6	1.5	3.8
35.0	102.7	96.36	109.1	6.2	1.7	3.7
40.0	85.71	79.91	91.50	6.8	1.9	3.6
45.0	71.86	66.62	77.10	7.3	2.1	3.5
50.0	60.54	55.81	65.27	7.8	2.3	3.4
55.0	51.24	46.98	55.50	8.3	2.5	3.3
60.0	43.56	39.73	47.39	8.8	2.7	3.2
65.0	37.19	33.74	40.64	9.3	3.0	3.1
70.0	31.89	28.78	34.99	9.7	3.2	3.0
75.0	27.45	24.65	30.24	10.2	3.4	3.0
80.0	23.72	21.20	26.24	10.6	3.7	2.9
85.0	20.57	18.30	22.84	11.0	3.9	2.8
90.0	17.91	15.86	19.96	11.4	4.2	2.7
95.0	15.64	13.79	17.49	11.8	4.4	2.7
100.0	13.71	12.03	15.38	12.2	4.7	2.6
105.0	12.05	10.53	13.57	12.6	5.0	2.5
110.0	10.63	9.248	12.01	13.0	5.2	2.5
115.0	9.400	8.147	10.65	13.3	5.5	2.4
120.0	8.339	7.198	9.480	13.7	5.8	2.4
125.0	7.418	6.378	8.458	14.0	6.1	2.3

SMD
R/T characteristics

B57411V2221H062						
R/T No.	8501					
T (°C)	B _{25/100} = 3550 K, R ₂₅ = 220 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	12459	10447	14471	16.1	2.5	6.5
-50.0	9049	7687	10412	15.1	2.4	6.3
-45.0	6646	5715	7577	14.0	2.3	6.1
-40.0	4932	4291	5574	13.0	2.2	5.9
-35.0	3698	3252	4143	12.0	2.1	5.7
-30.0	2799	2487	3110	11.1	2.0	5.5
-25.0	2137	1918	2356	10.2	1.9	5.3
-20.0	1647	1492	1802	9.4	1.8	5.1
-15.0	1279	1170	1389	8.6	1.7	5.0
-10.0	1002	923.7	1080	7.8	1.6	4.8
-5.0	790.5	734.8	846.2	7.0	1.5	4.7
0.0	628.3	588.6	668.0	6.3	1.4	4.5
5.0	502.9	474.6	531.1	5.6	1.3	4.4
10.0	405.2	385.1	425.2	4.9	1.2	4.3
15.0	328.5	314.5	342.6	4.3	1.0	4.1
20.0	268.1	258.2	277.9	3.7	0.9	4.0
25.0	220.0	213.4	226.6	3.0	0.8	3.9
30.0	181.6	175.0	188.2	3.6	1.0	3.8
35.0	150.7	144.3	157.0	4.2	1.1	3.7
40.0	125.7	119.7	131.7	4.8	1.3	3.6
45.0	105.4	99.81	111.0	5.3	1.5	3.5
50.0	88.79	83.63	93.95	5.8	1.7	3.4
55.0	75.15	70.40	79.89	6.3	1.9	3.3
60.0	63.89	59.54	68.23	6.8	2.1	3.2
65.0	54.55	50.58	58.52	7.3	2.3	3.1
70.0	46.77	43.15	50.39	7.7	2.5	3.0
75.0	40.26	36.97	43.55	8.2	2.8	3.0
80.0	34.79	31.79	37.78	8.6	3.0	2.9
85.0	30.17	27.45	32.90	9.0	3.2	2.8
90.0	26.26	23.78	28.74	9.4	3.4	2.7
95.0	22.94	20.68	25.20	9.8	3.7	2.7
100.0	20.10	18.05	22.16	10.2	3.9	2.6
105.0	17.67	15.80	19.55	10.6	4.2	2.5
110.0	15.59	13.88	17.30	11.0	4.4	2.5
115.0	13.79	12.22	15.35	11.3	4.7	2.4
120.0	12.23	10.80	13.66	11.7	4.9	2.4
125.0	10.88	9.572	12.19	12.0	5.2	2.3

SMD
R/T characteristics

B57411V2221J062						
R/T No.	8501					
T (°C)	B _{25/100} = 3550 K, R ₂₅ = 220 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	12459	10198	14721	18.1	2.8	6.5
-50.0	9049	7506	10593	17.1	2.7	6.3
-45.0	6646	5582	7710	16.0	2.6	6.1
-40.0	4932	4192	5673	15.0	2.6	5.9
-35.0	3698	3178	4217	14.0	2.5	5.7
-30.0	2799	2431	3166	13.1	2.4	5.5
-25.0	2137	1876	2399	12.2	2.3	5.3
-20.0	1647	1459	1835	11.4	2.2	5.1
-15.0	1279	1144	1415	10.6	2.1	5.0
-10.0	1002	903.6	1100	9.8	2.0	4.8
-5.0	790.5	719.0	862.0	9.0	1.9	4.7
0.0	628.3	576.0	680.5	8.3	1.8	4.5
5.0	502.9	464.5	541.2	7.6	1.7	4.4
10.0	405.2	377.0	433.3	6.9	1.6	4.3
15.0	328.5	307.9	349.2	6.3	1.5	4.1
20.0	268.1	252.9	283.2	5.7	1.4	4.0
25.0	220.0	209.0	231.0	5.0	1.3	3.9
30.0	181.6	171.3	191.8	5.6	1.5	3.8
35.0	150.7	141.3	160.0	6.2	1.7	3.7
40.0	125.7	117.2	134.2	6.8	1.9	3.6
45.0	105.4	97.70	113.1	7.3	2.1	3.5
50.0	88.79	81.85	95.73	7.8	2.3	3.4
55.0	75.15	68.90	81.40	8.3	2.5	3.3
60.0	63.89	58.26	69.51	8.8	2.7	3.2
65.0	54.55	49.49	59.61	9.3	3.0	3.1
70.0	46.77	42.22	51.32	9.7	3.2	3.0
75.0	40.26	36.16	44.36	10.2	3.4	3.0
80.0	34.79	31.10	38.48	10.6	3.7	2.9
85.0	30.17	26.84	33.50	11.0	3.9	2.8
90.0	26.26	23.26	29.27	11.4	4.2	2.7
95.0	22.94	20.22	25.66	11.8	4.4	2.7
100.0	20.10	17.64	22.56	12.2	4.7	2.6
105.0	17.67	15.45	19.90	12.6	5.0	2.5
110.0	15.59	13.56	17.61	13.0	5.2	2.5
115.0	13.79	11.95	15.62	13.3	5.5	2.4
120.0	12.23	10.56	13.90	13.7	5.8	2.4
125.0	10.88	9.354	12.41	14.0	6.1	2.3

SMD
R/T characteristics

B57411V2331H062						
R/T No.	8501					
T (°C)	B _{25/100} = 3550 K, R ₂₅ = 330 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	18689	15671	21707	16.1	2.5	6.5
-50.0	13574	11530	15618	15.1	2.4	6.3
-45.0	9969	8572	11365	14.0	2.3	6.1
-40.0	7399	6436	8361	13.0	2.2	5.9
-35.0	5546	4878	6215	12.0	2.1	5.7
-30.0	4198	3731	4665	11.1	2.0	5.5
-25.0	3206	2878	3535	10.2	1.9	5.3
-20.0	2470	2238	2702	9.4	1.8	5.1
-15.0	1919	1754	2084	8.6	1.7	5.0
-10.0	1503	1385	1620	7.8	1.6	4.8
-5.0	1186	1102	1269	7.0	1.5	4.7
0.0	942.4	882.9	1002	6.3	1.4	4.5
5.0	754.3	711.9	796.7	5.6	1.3	4.4
10.0	607.7	577.7	637.8	4.9	1.2	4.3
15.0	492.8	471.7	514.0	4.3	1.0	4.1
20.0	402.1	387.4	416.8	3.7	0.9	4.0
25.0	330.0	320.1	339.9	3.0	0.8	3.9
30.0	272.4	262.5	282.3	3.6	1.0	3.8
35.0	226.0	216.5	235.5	4.2	1.1	3.7
40.0	188.6	179.6	197.5	4.8	1.3	3.6
45.0	158.1	149.7	166.5	5.3	1.5	3.5
50.0	133.2	125.4	140.9	5.8	1.7	3.4
55.0	112.7	105.6	119.8	6.3	1.9	3.3
60.0	95.83	89.31	102.4	6.8	2.1	3.2
65.0	81.82	75.87	87.78	7.3	2.3	3.1
70.0	70.15	64.73	75.58	7.7	2.5	3.0
75.0	60.39	55.45	65.33	8.2	2.8	3.0
80.0	52.18	47.69	56.68	8.6	3.0	2.9
85.0	45.26	41.17	49.35	9.0	3.2	2.8
90.0	39.39	35.67	43.11	9.4	3.4	2.7
95.0	34.41	31.02	37.79	9.8	3.7	2.7
100.0	30.15	27.07	33.24	10.2	3.9	2.6
105.0	26.51	23.70	29.32	10.6	4.2	2.5
110.0	23.38	20.81	25.94	11.0	4.4	2.5
115.0	20.68	18.34	23.02	11.3	4.7	2.4
120.0	18.35	16.20	20.49	11.7	4.9	2.4
125.0	16.32	14.36	18.28	12.0	5.2	2.3

SMD
R/T characteristics

B57411V2331J062						
R/T No.	8501					
T (°C)	B _{25/100} = 3550 K, R ₂₅ = 330 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	18689	15297	22081	18.1	2.8	6.5
-50.0	13574	11259	15889	17.1	2.7	6.3
-45.0	9969	8373	11565	16.0	2.6	6.1
-40.0	7399	6288	8509	15.0	2.6	5.9
-35.0	5546	4767	6326	14.0	2.5	5.7
-30.0	4198	3647	4749	13.1	2.4	5.5
-25.0	3206	2813	3599	12.2	2.3	5.3
-20.0	2470	2189	2752	11.4	2.2	5.1
-15.0	1919	1716	2122	10.6	2.1	5.0
-10.0	1503	1355	1650	9.8	2.0	4.8
-5.0	1186	1078	1293	9.0	1.9	4.7
0.0	942.4	864.0	1021	8.3	1.8	4.5
5.0	754.3	696.8	811.7	7.6	1.7	4.4
10.0	607.7	565.6	649.9	6.9	1.6	4.3
15.0	492.8	461.8	523.8	6.3	1.5	4.1
20.0	402.1	379.3	424.8	5.7	1.4	4.0
25.0	330.0	313.5	346.5	5.0	1.3	3.9
30.0	272.4	257.0	287.7	5.6	1.5	3.8
35.0	226.0	212.0	240.1	6.2	1.7	3.7
40.0	188.6	175.8	201.3	6.8	1.9	3.6
45.0	158.1	146.6	169.6	7.3	2.1	3.5
50.0	133.2	122.8	143.6	7.8	2.3	3.4
55.0	112.7	103.3	122.1	8.3	2.5	3.3
60.0	95.83	87.40	104.3	8.8	2.7	3.2
65.0	81.82	74.24	89.41	9.3	3.0	3.1
70.0	70.15	63.33	76.98	9.7	3.2	3.0
75.0	60.39	54.24	66.54	10.2	3.4	3.0
80.0	52.18	46.64	57.72	10.6	3.7	2.9
85.0	45.26	40.26	50.25	11.0	3.9	2.8
90.0	39.39	34.89	43.90	11.4	4.2	2.7
95.0	34.41	30.33	38.48	11.8	4.4	2.7
100.0	30.15	26.47	33.84	12.2	4.7	2.6
105.0	26.51	23.17	29.85	12.6	5.0	2.5
110.0	23.38	20.35	26.41	13.0	5.2	2.5
115.0	20.68	17.92	23.44	13.3	5.5	2.4
120.0	18.35	15.84	20.86	13.7	5.8	2.4
125.0	16.32	14.03	18.61	14.0	6.1	2.3

SMD
R/T characteristics

B57421V2471H062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 470 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	45194	37145	53243	17.8	2.4	7.4
-50.0	31439	26227	36651	16.6	2.3	7.1
-45.0	22150	18739	25560	15.4	2.2	6.9
-40.0	15795	13541	18049	14.3	2.1	6.6
-35.0	11394	9891	12897	13.2	2.1	6.4
-30.0	8310	7300	9320	12.2	2.0	6.2
-25.0	6125	5442	6809	11.2	1.9	6.0
-20.0	4560	4095	5025	10.2	1.8	5.8
-15.0	3427	3109	3746	9.3	1.7	5.6
-10.0	2600	2381	2818	8.4	1.5	5.4
-5.0	1989	1839	2140	7.6	1.4	5.3
0.0	1535	1432	1638	6.7	1.3	5.1
5.0	1194	1123	1265	5.9	1.2	4.9
10.0	935.6	887.1	984.1	5.2	1.1	4.8
15.0	738.6	705.8	771.5	4.4	1.0	4.7
20.0	587.2	565.3	609.2	3.7	0.8	4.5
25.0	470.0	455.9	484.1	3.0	0.7	4.4
30.0	378.6	364.5	392.7	3.7	0.9	4.3
35.0	306.9	293.5	320.2	4.4	1.1	4.1
40.0	250.2	237.7	262.6	5.0	1.2	4.0
45.0	205.1	193.7	216.6	5.6	1.4	3.9
50.0	169.1	158.7	179.5	6.2	1.6	3.8
55.0	140.2	130.7	149.6	6.7	1.8	3.7
60.0	116.7	108.2	125.2	7.3	2.0	3.6
65.0	97.70	90.07	105.3	7.8	2.2	3.5
70.0	82.15	75.31	88.99	8.3	2.4	3.4
75.0	69.39	63.26	75.51	8.8	2.6	3.3
80.0	58.86	53.37	64.34	9.3	2.9	3.2
85.0	50.14	45.23	55.05	9.8	3.1	3.2
90.0	42.88	38.48	47.27	10.3	3.3	3.1
95.0	36.81	32.87	40.75	10.7	3.6	3.0
100.0	31.72	28.19	35.25	11.1	3.8	2.9
105.0	27.43	24.26	30.60	11.6	4.0	2.9
110.0	23.80	20.95	26.66	12.0	4.3	2.8
115.0	20.73	18.16	23.29	12.4	4.5	2.7
120.0	18.10	15.79	20.42	12.8	4.8	2.7
125.0	15.86	13.78	17.95	13.2	5.0	2.6

SMD
R/T characteristics

B57421V2471J062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 470 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	45194	36241	54147	19.8	2.7	7.4
-50.0	31439	25599	37280	18.6	2.6	7.1
-45.0	22150	18296	26003	17.4	2.5	6.9
-40.0	15795	13225	18365	16.3	2.4	6.6
-35.0	11394	9663	13125	15.2	2.4	6.4
-30.0	8310	7134	9486	14.2	2.3	6.2
-25.0	6125	5319	6931	13.2	2.2	6.0
-20.0	4560	4003	5116	12.2	2.1	5.8
-15.0	3427	3041	3814	11.3	2.0	5.6
-10.0	2600	2329	2870	10.4	1.9	5.4
-5.0	1989	1799	2179	9.6	1.8	5.3
0.0	1535	1401	1669	8.7	1.7	5.1
5.0	1194	1099	1289	7.9	1.6	4.9
10.0	935.6	868.4	1003	7.2	1.5	4.8
15.0	738.6	691.0	786.3	6.4	1.4	4.7
20.0	587.2	553.5	620.9	5.7	1.3	4.5
25.0	470.0	446.5	493.5	5.0	1.1	4.4
30.0	378.6	357.0	400.2	5.7	1.3	4.3
35.0	306.9	287.3	326.4	6.4	1.5	4.1
40.0	250.2	232.7	267.6	7.0	1.7	4.0
45.0	205.1	189.6	220.7	7.6	1.9	3.9
50.0	169.1	155.3	182.9	8.2	2.1	3.8
55.0	140.2	127.9	152.4	8.7	2.4	3.7
60.0	116.7	105.9	127.6	9.3	2.6	3.6
65.0	97.70	88.12	107.3	9.8	2.8	3.5
70.0	82.15	73.67	90.64	10.3	3.0	3.4
75.0	69.39	61.87	76.90	10.8	3.2	3.3
80.0	58.86	52.20	65.52	11.3	3.5	3.2
85.0	50.14	44.22	56.05	11.8	3.7	3.2
90.0	42.88	37.62	48.13	12.3	4.0	3.1
95.0	36.81	32.13	41.49	12.7	4.2	3.0
100.0	31.72	27.55	35.89	13.1	4.5	2.9
105.0	27.43	23.71	31.15	13.6	4.7	2.9
110.0	23.80	20.48	27.13	14.0	5.0	2.8
115.0	20.73	17.75	23.71	14.4	5.3	2.7
120.0	18.10	15.43	20.78	14.8	5.5	2.7
125.0	15.86	13.46	18.27	15.2	5.8	2.6

SMD
R/T characteristics

B57421V2681H062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 680 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	65387	53742	77033	17.8	2.4	7.4
-50.0	45486	37946	53027	16.6	2.3	7.1
-45.0	32046	27112	36981	15.4	2.2	6.9
-40.0	22852	19591	26113	14.3	2.1	6.6
-35.0	16485	14311	18659	13.2	2.1	6.4
-30.0	12023	10562	13485	12.2	2.0	6.2
-25.0	8862	7873	9851	11.2	1.9	6.0
-20.0	6597	5924	7271	10.2	1.8	5.8
-15.0	4959	4498	5419	9.3	1.7	5.6
-10.0	3761	3445	4077	8.4	1.5	5.4
-5.0	2878	2661	3095	7.6	1.4	5.3
0.0	2221	2071	2370	6.7	1.3	5.1
5.0	1727	1625	1830	5.9	1.2	4.9
10.0	1354	1284	1424	5.2	1.1	4.8
15.0	1069	1021	1116	4.4	1.0	4.7
20.0	849.6	817.9	881.4	3.7	0.8	4.5
25.0	680.0	659.6	700.4	3.0	0.7	4.4
30.0	547.8	527.4	568.1	3.7	0.9	4.3
35.0	444.0	424.6	463.3	4.4	1.1	4.1
40.0	362.0	343.9	380.0	5.0	1.2	4.0
45.0	296.8	280.2	313.3	5.6	1.4	3.9
50.0	244.7	229.6	259.8	6.2	1.6	3.8
55.0	202.8	189.1	216.4	6.7	1.8	3.7
60.0	168.9	156.6	181.2	7.3	2.0	3.6
65.0	141.4	130.3	152.4	7.8	2.2	3.5
70.0	118.9	109.0	128.8	8.3	2.4	3.4
75.0	100.4	91.53	109.3	8.8	2.6	3.3
80.0	85.16	77.22	93.09	9.3	2.9	3.2
85.0	72.54	65.43	79.64	9.8	3.1	3.2
90.0	62.03	55.67	68.40	10.3	3.3	3.1
95.0	53.26	47.56	58.96	10.7	3.6	3.0
100.0	45.89	40.78	51.00	11.1	3.8	2.9
105.0	39.69	35.10	44.28	11.6	4.0	2.9
110.0	34.44	30.31	38.57	12.0	4.3	2.8
115.0	29.99	26.27	33.70	12.4	4.5	2.7
120.0	26.19	22.85	29.54	12.8	4.8	2.7
125.0	22.95	19.93	25.97	13.2	5.0	2.6

SMD
R/T characteristics

B57421V2681J062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 680 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	65387	52434	78341	19.8	2.7	7.4
-50.0	45486	37036	53936	18.6	2.6	7.1
-45.0	32046	26471	37622	17.4	2.5	6.9
-40.0	22852	19134	26570	16.3	2.4	6.6
-35.0	16485	13981	18989	15.2	2.4	6.4
-30.0	12023	10322	13725	14.2	2.3	6.2
-25.0	8862	7696	10028	13.2	2.2	6.0
-20.0	6597	5792	7403	12.2	2.1	5.8
-15.0	4959	4399	5518	11.3	2.0	5.6
-10.0	3761	3370	4153	10.4	1.9	5.4
-5.0	2878	2603	3153	9.6	1.8	5.3
0.0	2221	2027	2415	8.7	1.7	5.1
5.0	1727	1590	1864	7.9	1.6	4.9
10.0	1354	1256	1451	7.2	1.5	4.8
15.0	1069	999.8	1138	6.4	1.4	4.7
20.0	849.6	800.9	898.4	5.7	1.3	4.5
25.0	680.0	646.0	714.0	5.0	1.1	4.4
30.0	547.8	516.5	579.1	5.7	1.3	4.3
35.0	444.0	415.7	472.2	6.4	1.5	4.1
40.0	362.0	336.7	387.2	7.0	1.7	4.0
45.0	296.8	274.3	319.3	7.6	1.9	3.9
50.0	244.7	224.7	264.6	8.2	2.1	3.8
55.0	202.8	185.1	220.5	8.7	2.4	3.7
60.0	168.9	153.2	184.6	9.3	2.6	3.6
65.0	141.4	127.5	155.2	9.8	2.8	3.5
70.0	118.9	106.6	131.1	10.3	3.0	3.4
75.0	100.4	89.52	111.3	10.8	3.2	3.3
80.0	85.16	75.52	94.80	11.3	3.5	3.2
85.0	72.54	63.98	81.09	11.8	3.7	3.2
90.0	62.03	54.43	69.64	12.3	4.0	3.1
95.0	53.26	46.49	60.02	12.7	4.2	3.0
100.0	45.89	39.86	51.92	13.1	4.5	2.9
105.0	39.69	34.30	45.07	13.6	4.7	2.9
110.0	34.44	29.63	39.25	14.0	5.0	2.8
115.0	29.99	25.67	34.30	14.4	5.3	2.7
120.0	26.19	22.32	30.06	14.8	5.5	2.7
125.0	22.95	19.47	26.43	15.2	5.8	2.6

SMD
R/T characteristics

B57421V2102H062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 1000 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	96158	79032	113280	17.8	2.4	7.4
-50.0	66892	55803	77980	16.6	2.3	7.1
-45.0	47127	39870	54384	15.4	2.2	6.9
-40.0	33606	28810	38402	14.3	2.1	6.6
-35.0	24243	21045	27440	13.2	2.1	6.4
-30.0	17681	15532	19830	12.2	2.0	6.2
-25.0	13032	11578	14486	11.2	1.9	6.0
-20.0	9702	8712	10692	10.2	1.8	5.8
-15.0	7292	6615	7969	9.3	1.7	5.6
-10.0	5531	5067	5996	8.4	1.5	5.4
-5.0	4232	3913	4552	7.6	1.4	5.3
0.0	3266	3046	3486	6.7	1.3	5.1
5.0	2540	2389	2691	5.9	1.2	4.9
10.0	1991	1888	2094	5.2	1.1	4.8
15.0	1572	1502	1641	4.4	1.0	4.7
20.0	1249	1203	1296	3.7	0.8	4.5
25.0	1000.0	970.0	1030	3.0	0.7	4.4
30.0	805.5	775.6	835.4	3.7	0.9	4.3
35.0	652.9	624.4	681.3	4.4	1.1	4.1
40.0	532.3	505.8	558.8	5.0	1.2	4.0
45.0	436.4	412.1	460.8	5.6	1.4	3.9
50.0	359.8	337.6	382.0	6.2	1.6	3.8
55.0	298.2	278.1	318.3	6.7	1.8	3.7
60.0	248.4	230.3	266.4	7.3	2.0	3.6
65.0	207.9	191.6	224.1	7.8	2.2	3.5
70.0	174.8	160.2	189.3	8.3	2.4	3.4
75.0	147.6	134.6	160.7	8.8	2.6	3.3
80.0	125.2	113.6	136.9	9.3	2.9	3.2
85.0	106.7	96.23	117.1	9.8	3.1	3.2
90.0	91.23	81.87	100.6	10.3	3.3	3.1
95.0	78.32	69.94	86.70	10.7	3.6	3.0
100.0	67.49	59.97	75.01	11.1	3.8	2.9
105.0	58.36	51.61	65.11	11.6	4.0	2.9
110.0	50.65	44.58	56.71	12.0	4.3	2.8
115.0	44.10	38.64	49.56	12.4	4.5	2.7
120.0	38.52	33.60	43.44	12.8	4.8	2.7
125.0	33.75	29.31	38.19	13.2	5.0	2.6

SMD
R/T characteristics

B57421V2102J062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 1000 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	96158	77109	115210	19.8	2.7	7.4
-50.0	66892	54465	79318	18.6	2.6	7.1
-45.0	47127	38927	55326	17.4	2.5	6.9
-40.0	33606	28138	39074	16.3	2.4	6.6
-35.0	24243	20560	27925	15.2	2.4	6.4
-30.0	17681	15179	20184	14.2	2.3	6.2
-25.0	13032	11317	14747	13.2	2.2	6.0
-20.0	9702	8518	10886	12.2	2.1	5.8
-15.0	7292	6469	8115	11.3	2.0	5.6
-10.0	5531	4956	6107	10.4	1.9	5.4
-5.0	4232	3828	4637	9.6	1.8	5.3
0.0	3266	2981	3551	8.7	1.7	5.1
5.0	2540	2338	2742	7.9	1.6	4.9
10.0	1991	1848	2134	7.2	1.5	4.8
15.0	1572	1470	1673	6.4	1.4	4.7
20.0	1249	1178	1321	5.7	1.3	4.5
25.0	1000.0	950.0	1050	5.0	1.1	4.4
30.0	805.5	759.5	851.5	5.7	1.3	4.3
35.0	652.9	611.4	694.4	6.4	1.5	4.1
40.0	532.3	495.1	569.4	7.0	1.7	4.0
45.0	436.4	403.4	469.5	7.6	1.9	3.9
50.0	359.8	330.4	389.2	8.2	2.1	3.8
55.0	298.2	272.2	324.2	8.7	2.4	3.7
60.0	248.4	225.3	271.4	9.3	2.6	3.6
65.0	207.9	187.5	228.3	9.8	2.8	3.5
70.0	174.8	156.7	192.8	10.3	3.0	3.4
75.0	147.6	131.6	163.6	10.8	3.2	3.3
80.0	125.2	111.1	139.4	11.3	3.5	3.2
85.0	106.7	94.09	119.3	11.8	3.7	3.2
90.0	91.23	80.05	102.4	12.3	4.0	3.1
95.0	78.32	68.37	88.27	12.7	4.2	3.0
100.0	67.49	58.62	76.36	13.1	4.5	2.9
105.0	58.36	50.45	66.28	13.6	4.7	2.9
110.0	50.65	43.57	57.73	14.0	5.0	2.8
115.0	44.10	37.76	50.44	14.4	5.3	2.7
120.0	38.52	32.83	44.21	14.8	5.5	2.7
125.0	33.75	28.64	38.87	15.2	5.8	2.6

SMD
R/T characteristics

B57421V2152H062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 1500 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	144240	118550	169930	17.8	2.4	7.4
-50.0	100340	83704	116970	16.6	2.3	7.1
-45.0	70690	59805	81576	15.4	2.2	6.9
-40.0	50409	43215	57603	14.3	2.1	6.6
-35.0	36364	31567	41160	13.2	2.1	6.4
-30.0	26522	23299	29746	12.2	2.0	6.2
-25.0	19548	17367	21730	11.2	1.9	6.0
-20.0	14553	13068	16038	10.2	1.8	5.8
-15.0	10938	9923	11954	9.3	1.7	5.6
-10.0	8297	7600	8994	8.4	1.5	5.4
-5.0	6349	5869	6828	7.6	1.4	5.3
0.0	4899	4569	5228	6.7	1.3	5.1
5.0	3810	3584	4036	5.9	1.2	4.9
10.0	2986	2831	3141	5.2	1.1	4.8
15.0	2357	2253	2462	4.4	1.0	4.7
20.0	1874	1804	1944	3.7	0.8	4.5
25.0	1500	1455	1545	3.0	0.7	4.4
30.0	1208	1163	1253	3.7	0.9	4.3
35.0	979.3	936.7	1022	4.4	1.1	4.1
40.0	798.4	758.7	838.2	5.0	1.2	4.0
45.0	654.7	618.1	691.2	5.6	1.4	3.9
50.0	539.7	506.5	573.0	6.2	1.6	3.8
55.0	447.3	417.2	477.4	6.7	1.8	3.7
60.0	372.6	345.4	399.7	7.3	2.0	3.6
65.0	311.8	287.5	336.2	7.8	2.2	3.5
70.0	262.2	240.4	284.0	8.3	2.4	3.4
75.0	221.5	201.9	241.0	8.8	2.6	3.3
80.0	187.8	170.3	205.4	9.3	2.9	3.2
85.0	160.0	144.3	175.7	9.8	3.1	3.2
90.0	136.8	122.8	150.9	10.3	3.3	3.1
95.0	117.5	104.9	130.1	10.7	3.6	3.0
100.0	101.2	89.96	112.5	11.1	3.8	2.9
105.0	87.54	77.42	97.67	11.6	4.0	2.9
110.0	75.97	66.87	85.07	12.0	4.3	2.8
115.0	66.15	57.96	74.34	12.4	4.5	2.7
120.0	57.78	50.40	65.16	12.8	4.8	2.7
125.0	50.63	43.97	57.29	13.2	5.0	2.6

SMD
R/T characteristics

B57421V2152J062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 1500 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	144240	115660	172810	19.8	2.7	7.4
-50.0	100340	81697	118980	18.6	2.6	7.1
-45.0	70690	58391	82989	17.4	2.5	6.9
-40.0	50409	42207	58611	16.3	2.4	6.6
-35.0	36364	30840	41888	15.2	2.4	6.4
-30.0	26522	22768	30276	14.2	2.3	6.2
-25.0	19548	16976	22121	13.2	2.2	6.0
-20.0	14553	12777	16329	12.2	2.1	5.8
-15.0	10938	9704	12173	11.3	2.0	5.6
-10.0	8297	7434	9160	10.4	1.9	5.4
-5.0	6349	5742	6955	9.6	1.8	5.3
0.0	4899	4471	5326	8.7	1.7	5.1
5.0	3810	3507	4113	7.9	1.6	4.9
10.0	2986	2772	3200	7.2	1.5	4.8
15.0	2357	2205	2509	6.4	1.4	4.7
20.0	1874	1767	1982	5.7	1.3	4.5
25.0	1500	1425	1575	5.0	1.1	4.4
30.0	1208	1139	1277	5.7	1.3	4.3
35.0	979.3	917.1	1042	6.4	1.5	4.1
40.0	798.4	742.7	854.2	7.0	1.7	4.0
45.0	654.7	605.0	704.3	7.6	1.9	3.9
50.0	539.7	495.7	583.8	8.2	2.1	3.8
55.0	447.3	408.2	486.3	8.7	2.4	3.7
60.0	372.6	338.0	407.1	9.3	2.6	3.6
65.0	311.8	281.2	342.4	9.8	2.8	3.5
70.0	262.2	235.1	289.3	10.3	3.0	3.4
75.0	221.5	197.5	245.4	10.8	3.2	3.3
80.0	187.8	166.6	209.1	11.3	3.5	3.2
85.0	160.0	141.1	178.9	11.8	3.7	3.2
90.0	136.8	120.1	153.6	12.3	4.0	3.1
95.0	117.5	102.6	132.4	12.7	4.2	3.0
100.0	101.2	87.93	114.5	13.1	4.5	2.9
105.0	87.54	75.67	99.42	13.6	4.7	2.9
110.0	75.97	65.35	86.59	14.0	5.0	2.8
115.0	66.15	56.63	75.66	14.4	5.3	2.7
120.0	57.78	49.24	66.32	14.8	5.5	2.7
125.0	50.63	42.95	58.30	15.2	5.8	2.6

SMD
R/T characteristics

B57421V2222H062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 2200 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	211550	173870	249220	17.8	2.4	7.4
-50.0	147160	122770	171560	16.6	2.3	7.1
-45.0	103680	87714	119640	15.4	2.2	6.9
-40.0	73933	63383	84484	14.3	2.1	6.6
-35.0	53334	46299	60368	13.2	2.1	6.4
-30.0	38899	34171	43627	12.2	2.0	6.2
-25.0	28671	25471	31870	11.2	1.9	6.0
-20.0	21344	19166	23523	10.2	1.8	5.8
-15.0	16043	14553	17533	9.3	1.7	5.6
-10.0	12169	11146	13192	8.4	1.5	5.4
-5.0	9311	8608	10015	7.6	1.4	5.3
0.0	7185	6701	7668	6.7	1.3	5.1
5.0	5588	5256	5920	5.9	1.2	4.9
10.0	4379	4153	4606	5.2	1.1	4.8
15.0	3457	3304	3611	4.4	1.0	4.7
20.0	2749	2646	2851	3.7	0.8	4.5
25.0	2200	2134	2266	3.0	0.7	4.4
30.0	1772	1706	1838	3.7	0.9	4.3
35.0	1436	1374	1499	4.4	1.1	4.1
40.0	1171	1113	1229	5.0	1.2	4.0
45.0	960.2	906.6	1014	5.6	1.4	3.9
50.0	791.6	742.8	840.4	6.2	1.6	3.8
55.0	656.0	611.9	700.2	6.7	1.8	3.7
60.0	546.4	506.6	586.2	7.3	2.0	3.6
65.0	457.3	421.6	493.0	7.8	2.2	3.5
70.0	384.5	352.5	416.6	8.3	2.4	3.4
75.0	324.8	296.1	353.5	8.8	2.6	3.3
80.0	275.5	249.8	301.2	9.3	2.9	3.2
85.0	234.7	211.7	257.7	9.8	3.1	3.2
90.0	200.7	180.1	221.3	10.3	3.3	3.1
95.0	172.3	153.9	190.7	10.7	3.6	3.0
100.0	148.5	131.9	165.0	11.1	3.8	2.9
105.0	128.4	113.6	143.2	11.6	4.0	2.9
110.0	111.4	98.08	124.8	12.0	4.3	2.8
115.0	97.02	85.00	109.0	12.4	4.5	2.7
120.0	84.74	73.92	95.57	12.8	4.8	2.7
125.0	74.25	64.48	84.03	13.2	5.0	2.6

SMD
R/T characteristics

B57421V2222J062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 2200 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	211550	169640	253460	19.8	2.7	7.4
-50.0	147160	119820	174500	18.6	2.6	7.1
-45.0	103680	85640	121720	17.4	2.5	6.9
-40.0	73933	61904	85963	16.3	2.4	6.6
-35.0	53334	45232	61435	15.2	2.4	6.4
-30.0	38899	33393	44405	14.2	2.3	6.2
-25.0	28671	24898	32444	13.2	2.2	6.0
-20.0	21344	18739	23949	12.2	2.1	5.8
-15.0	16043	14232	17854	11.3	2.0	5.6
-10.0	12169	10903	13435	10.4	1.9	5.4
-5.0	9311	8422	10201	9.6	1.8	5.3
0.0	7185	6557	7812	8.7	1.7	5.1
5.0	5588	5144	6032	7.9	1.6	4.9
10.0	4379	4065	4694	7.2	1.5	4.8
15.0	3457	3235	3680	6.4	1.4	4.7
20.0	2749	2591	2906	5.7	1.3	4.5
25.0	2200	2090	2310	5.0	1.1	4.4
30.0	1772	1671	1873	5.7	1.3	4.3
35.0	1436	1345	1528	6.4	1.5	4.1
40.0	1171	1089	1253	7.0	1.7	4.0
45.0	960.2	887.4	1033	7.6	1.9	3.9
50.0	791.6	727.0	856.2	8.2	2.1	3.8
55.0	656.0	598.8	713.3	8.7	2.4	3.7
60.0	546.4	495.7	597.1	9.3	2.6	3.6
65.0	457.3	412.5	502.2	9.8	2.8	3.5
70.0	384.5	344.8	424.3	10.3	3.0	3.4
75.0	324.8	289.6	360.0	10.8	3.2	3.3
80.0	275.5	244.3	306.7	11.3	3.5	3.2
85.0	234.7	207.0	262.4	11.8	3.7	3.2
90.0	200.7	176.1	225.3	12.3	4.0	3.1
95.0	172.3	150.4	194.2	12.7	4.2	3.0
100.0	148.5	129.0	168.0	13.1	4.5	2.9
105.0	128.4	111.0	145.8	13.6	4.7	2.9
110.0	111.4	95.85	127.0	14.0	5.0	2.8
115.0	97.02	83.06	111.0	14.4	5.3	2.7
120.0	84.74	72.22	97.26	14.8	5.5	2.7
125.0	74.25	63.00	85.51	15.2	5.8	2.6

SMD
R/T characteristics

B57421V2332H062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 3300 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	317320	260810	373840	17.8	2.4	7.4
-50.0	220740	184150	257340	16.6	2.3	7.1
-45.0	155520	131570	179470	15.4	2.2	6.9
-40.0	110900	95074	126730	14.3	2.1	6.6
-35.0	80000	69448	90553	13.2	2.1	6.4
-30.0	58349	51257	65440	12.2	2.0	6.2
-25.0	43006	38207	47805	11.2	1.9	6.0
-20.0	32017	28750	35284	10.2	1.8	5.8
-15.0	24065	21830	26299	9.3	1.7	5.6
-10.0	18254	16720	19788	8.4	1.5	5.4
-5.0	13967	12912	15022	7.6	1.4	5.3
0.0	10777	10051	11503	6.7	1.3	5.1
5.0	8382	7884	8880	5.9	1.2	4.9
10.0	6569	6229	6910	5.2	1.1	4.8
15.0	5186	4956	5417	4.4	1.0	4.7
20.0	4123	3969	4277	3.7	0.8	4.5
25.0	3300	3201	3399	3.0	0.7	4.4
30.0	2658	2560	2757	3.7	0.9	4.3
35.0	2154	2061	2248	4.4	1.1	4.1
40.0	1757	1669	1844	5.0	1.2	4.0
45.0	1440	1360	1521	5.6	1.4	3.9
50.0	1187	1114	1261	6.2	1.6	3.8
55.0	984.0	917.8	1050	6.7	1.8	3.7
60.0	819.6	760.0	879.3	7.3	2.0	3.6
65.0	686.0	632.4	739.6	7.8	2.2	3.5
70.0	576.8	528.8	624.9	8.3	2.4	3.4
75.0	487.2	444.2	530.2	8.8	2.6	3.3
80.0	413.3	374.8	451.8	9.3	2.9	3.2
85.0	352.0	317.5	386.5	9.8	3.1	3.2
90.0	301.1	270.2	331.9	10.3	3.3	3.1
95.0	258.5	230.8	286.1	10.7	3.6	3.0
100.0	222.7	197.9	247.5	11.1	3.8	2.9
105.0	192.6	170.3	214.9	11.6	4.0	2.9
110.0	167.1	147.1	187.2	12.0	4.3	2.8
115.0	145.5	127.5	163.5	12.4	4.5	2.7
120.0	127.1	110.9	143.4	12.8	4.8	2.7
125.0	111.4	96.72	126.0	13.2	5.0	2.6

SMD
R/T characteristics

B57421V2332J062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 3300 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	317320	254460	380180	19.8	2.7	7.4
-50.0	220740	179730	261750	18.6	2.6	7.1
-45.0	155520	128460	182580	17.4	2.5	6.9
-40.0	110900	92856	128950	16.3	2.4	6.6
-35.0	80000	67848	92153	15.2	2.4	6.4
-30.0	58349	50090	66607	14.2	2.3	6.2
-25.0	43006	37346	48665	13.2	2.2	6.0
-20.0	32017	28109	35924	12.2	2.1	5.8
-15.0	24065	21349	26781	11.3	2.0	5.6
-10.0	18254	16355	20153	10.4	1.9	5.4
-5.0	13967	12633	15302	9.6	1.8	5.3
0.0	10777	9836	11718	8.7	1.7	5.1
5.0	8382	7716	9048	7.9	1.6	4.9
10.0	6569	6097	7041	7.2	1.5	4.8
15.0	5186	4852	5521	6.4	1.4	4.7
20.0	4123	3887	4360	5.7	1.3	4.5
25.0	3300	3135	3465	5.0	1.1	4.4
30.0	2658	2506	2810	5.7	1.3	4.3
35.0	2154	2018	2291	6.4	1.5	4.1
40.0	1757	1634	1879	7.0	1.7	4.0
45.0	1440	1331	1549	7.6	1.9	3.9
50.0	1187	1090	1284	8.2	2.1	3.8
55.0	984.0	898.1	1070	8.7	2.4	3.7
60.0	819.6	743.6	895.7	9.3	2.6	3.6
65.0	686.0	618.7	753.3	9.8	2.8	3.5
70.0	576.8	517.2	636.4	10.3	3.0	3.4
75.0	487.2	434.4	540.0	10.8	3.2	3.3
80.0	413.3	366.5	460.0	11.3	3.5	3.2
85.0	352.0	310.5	393.5	11.8	3.7	3.2
90.0	301.1	264.2	337.9	12.3	4.0	3.1
95.0	258.5	225.6	291.3	12.7	4.2	3.0
100.0	222.7	193.4	252.0	13.1	4.5	2.9
105.0	192.6	166.5	218.7	13.6	4.7	2.9
110.0	167.1	143.8	190.5	14.0	5.0	2.8
115.0	145.5	124.6	166.5	14.4	5.3	2.7
120.0	127.1	108.3	145.9	14.8	5.5	2.7
125.0	111.4	94.50	128.3	15.2	5.8	2.6

SMD
R/T characteristics

B57401V2472H062						
R/T No.	8500					
T (°C)	B _{25/100} = 3650 K, R ₂₅ = 4700 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	300410	250790	350030	16.5	2.4	6.8
-50.0	215680	182480	248880	15.4	2.4	6.5
-45.0	156720	134280	179150	14.3	2.3	6.3
-40.0	115170	99862	130470	13.3	2.2	6.1
-35.0	85545	75020	96069	12.3	2.1	5.8
-30.0	64190	56900	71480	11.4	2.0	5.6
-25.0	48632	43550	53714	10.5	1.9	5.5
-20.0	37184	33622	40745	9.6	1.8	5.3
-15.0	28679	26172	31186	8.7	1.7	5.1
-10.0	22303	20534	24073	7.9	1.6	4.9
-5.0	17483	16232	18735	7.2	1.5	4.8
0.0	13808	12923	14694	6.4	1.4	4.6
5.0	10985	10360	11610	5.7	1.3	4.5
10.0	8799	8360	9239	5.0	1.1	4.4
15.0	7095	6788	7402	4.3	1.0	4.2
20.0	5757	5546	5969	3.7	0.9	4.1
25.0	4700	4559	4841	3.0	0.8	4.0
30.0	3859	3718	4000	3.7	0.9	3.9
35.0	3186	3051	3322	4.2	1.1	3.8
40.0	2645	2518	2772	4.8	1.3	3.7
45.0	2207	2089	2325	5.4	1.5	3.6
50.0	1851	1742	1960	5.9	1.7	3.5
55.0	1559	1459	1659	6.4	1.9	3.4
60.0	1319	1228	1411	6.9	2.1	3.3
65.0	1122	1039	1204	7.4	2.3	3.2
70.0	957.4	882.1	1033	7.9	2.5	3.1
75.0	820.6	752.3	888.9	8.3	2.7	3.0
80.0	706.1	644.1	768.0	8.8	3.0	3.0
85.0	609.8	553.7	665.9	9.2	3.2	2.9
90.0	528.6	477.7	579.5	9.6	3.4	2.8
95.0	459.8	413.7	506.0	10.0	3.6	2.8
100.0	401.4	359.5	443.2	10.4	3.9	2.7
105.0	351.5	313.4	389.5	10.8	4.1	2.6
110.0	308.7	274.2	343.3	11.2	4.4	2.6
115.0	272.1	240.6	303.5	11.6	4.6	2.5
120.0	240.4	211.8	269.1	11.9	4.9	2.4
125.0	213.1	186.9	239.2	12.3	5.1	2.4

SMD
R/T characteristics

B57401V2472J062						
R/T No.	8500					
T (°C)	B _{25/100} = 3650 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	300410	244780	356040	18.5	2.7	6.8
-50.0	215680	178170	253190	17.4	2.7	6.5
-45.0	156720	131140	182290	16.3	2.6	6.3
-40.0	115170	97559	132780	15.3	2.5	6.1
-35.0	85545	73309	97780	14.3	2.4	5.8
-30.0	64190	55616	72764	13.4	2.4	5.6
-25.0	48632	42577	54687	12.5	2.3	5.5
-20.0	37184	32878	41489	11.6	2.2	5.3
-15.0	28679	25598	31759	10.7	2.1	5.1
-10.0	22303	20088	24519	9.9	2.0	4.9
-5.0	17483	15882	19084	9.2	1.9	4.8
0.0	13808	12647	14970	8.4	1.8	4.6
5.0	10985	10140	11830	7.7	1.7	4.5
10.0	8799	8184	9415	7.0	1.6	4.4
15.0	7095	6646	7544	6.3	1.5	4.2
20.0	5757	5430	6084	5.7	1.4	4.1
25.0	4700	4465	4935	5.0	1.3	4.0
30.0	3859	3641	4077	5.7	1.5	3.9
35.0	3186	2988	3385	6.2	1.7	3.8
40.0	2645	2465	2825	6.8	1.9	3.7
45.0	2207	2045	2369	7.4	2.1	3.6
50.0	1851	1705	1997	7.9	2.3	3.5
55.0	1559	1428	1690	8.4	2.5	3.4
60.0	1319	1202	1437	8.9	2.7	3.3
65.0	1122	1016	1227	9.4	2.9	3.2
70.0	957.4	862.9	1052	9.9	3.2	3.1
75.0	820.6	735.8	905.3	10.3	3.4	3.0
80.0	706.1	630.0	782.1	10.8	3.6	3.0
85.0	609.8	541.5	678.1	11.2	3.9	2.9
90.0	528.6	467.2	590.1	11.6	4.1	2.8
95.0	459.8	404.5	515.2	12.0	4.4	2.8
100.0	401.4	351.5	451.3	12.4	4.6	2.7
105.0	351.5	306.4	396.5	12.8	4.9	2.6
110.0	308.7	268.0	349.5	13.2	5.2	2.6
115.0	272.1	235.1	309.0	13.6	5.4	2.5
120.0	240.4	206.9	273.9	13.9	5.7	2.4
125.0	213.1	182.7	243.5	14.3	6.0	2.4

SMD
R/T characteristics

B57471V2472H062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 K, R ₂₅ = 4700 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	670720	539390	802050	19.6	2.5	7.9
-50.0	455490	372590	538390	18.2	2.4	7.6
-45.0	313190	260320	366060	16.9	2.3	7.4
-40.0	217920	183890	251950	15.6	2.2	7.1
-35.0	153360	131260	175450	14.4	2.1	6.9
-30.0	109100	94648	123550	13.2	2.0	6.7
-25.0	78426	68911	87942	12.1	1.9	6.5
-20.0	56940	50641	63240	11.1	1.8	6.3
-15.0	41738	37549	45926	10.0	1.6	6.1
-10.0	30875	28082	33668	9.0	1.5	5.9
-5.0	23042	21177	24906	8.1	1.4	5.8
0.0	17341	16097	18586	7.2	1.3	5.6
5.0	13157	12330	13985	6.3	1.2	5.4
10.0	10061	9514	10608	5.4	1.0	5.3
15.0	7751	7394	8109	4.6	0.9	5.1
20.0	6015	5785	6245	3.8	0.8	5.0
25.0	4700	4559	4841	3.0	0.6	4.9
30.0	3697	3557	3837	3.8	0.8	4.7
35.0	2927	2795	3059	4.5	1.0	4.6
40.0	2332	2210	2453	5.2	1.2	4.5
45.0	1869	1759	1979	5.9	1.3	4.4
50.0	1506	1408	1605	6.5	1.5	4.3
55.0	1221	1133	1308	7.2	1.7	4.1
60.0	994.6	917.1	1072	7.8	1.9	4.0
65.0	814.6	746.3	882.9	8.4	2.1	3.9
70.0	670.5	610.4	730.6	9.0	2.3	3.8
75.0	554.5	501.7	607.3	9.5	2.5	3.8
80.0	460.8	414.4	507.2	10.1	2.8	3.7
85.0	384.6	343.8	425.3	10.6	3.0	3.6
90.0	322.4	286.5	358.2	11.1	3.2	3.5
95.0	271.4	239.8	302.9	11.6	3.4	3.4
100.0	229.3	201.6	257.1	12.1	3.6	3.3
105.0	194.6	170.1	219.1	12.6	3.9	3.2
110.0	165.7	144.1	187.4	13.1	4.1	3.2
115.0	141.7	122.5	160.8	13.5	4.4	3.1
120.0	121.5	104.6	138.5	13.9	4.6	3.0
125.0	104.6	89.58	119.6	14.4	4.8	3.0

SMD
R/T characteristics

B57471V2472J062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 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	670720	525970	815470	21.6	2.7	7.9
-50.0	455490	363480	547500	20.2	2.7	7.6
-45.0	313190	254060	372320	18.9	2.6	7.4
-40.0	217920	179530	256310	17.6	2.5	7.1
-35.0	153360	128200	178520	16.4	2.4	6.9
-30.0	109100	92466	125740	15.2	2.3	6.7
-25.0	78426	67342	89510	14.1	2.2	6.5
-20.0	56940	49502	64379	13.1	2.1	6.3
-15.0	41738	36715	46761	12.0	2.0	6.1
-10.0	30875	27465	34286	11.0	1.9	5.9
-5.0	23042	20716	25367	10.1	1.7	5.8
0.0	17341	15750	18932	9.2	1.6	5.6
5.0	13157	12066	14248	8.3	1.5	5.4
10.0	10061	9313	10809	7.4	1.4	5.3
15.0	7751	7239	8264	6.6	1.3	5.1
20.0	6015	5665	6365	5.8	1.2	5.0
25.0	4700	4465	4935	5.0	1.0	4.9
30.0	3697	3483	3911	5.8	1.2	4.7
35.0	2927	2736	3118	6.5	1.4	4.6
40.0	2332	2164	2500	7.2	1.6	4.5
45.0	1869	1721	2016	7.9	1.8	4.4
50.0	1506	1377	1635	8.5	2.0	4.3
55.0	1221	1109	1333	9.2	2.2	4.1
60.0	994.6	897.2	1092	9.8	2.4	4.0
65.0	814.6	730	899.1	10.4	2.6	3.9
70.0	670.5	597	744	11.0	2.9	3.8
75.0	554.5	490.6	618.4	11.5	3.1	3.8
80.0	460.8	405.1	516.4	12.1	3.3	3.7
85.0	384.6	336.1	433	12.6	3.5	3.6
90.0	322.4	280.1	364.7	13.1	3.8	3.5
95.0	271.4	234.4	308.3	13.6	4.0	3.4
100.0	229.3	197	261.7	14.1	4.2	3.3
105.0	194.6	166.2	223	14.6	4.5	3.2
110.0	165.7	140.8	190.7	15.1	4.7	3.2
115.0	141.7	119.7	163.6	15.5	5.0	3.1
120.0	121.5	102.2	140.9	15.9	5.3	3.0
125.0	104.6	87.49	121.7	16.4	5.5	3.0

SMD
R/T characteristics

B57471V2682H062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 K, R ₂₅ = 6800 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	970400	780390	1160400	19.6	2.5	7.9
-50.0	659010	539060	778950	18.2	2.4	7.6
-45.0	453130	376640	529620	16.9	2.3	7.4
-40.0	315290	266050	364530	15.6	2.2	7.1
-35.0	221880	189910	253850	14.4	2.1	6.9
-30.0	157850	136940	178760	13.2	2.0	6.7
-25.0	113470	99701	127240	12.1	1.9	6.5
-20.0	82382	73268	91496	11.1	1.8	6.3
-15.0	60386	54327	66446	10.0	1.6	6.1
-10.0	44671	40630	48711	9.0	1.5	5.9
-5.0	33337	30639	36035	8.1	1.4	5.8
0.0	25089	23289	26890	7.2	1.3	5.6
5.0	19036	17839	20234	6.3	1.2	5.4
10.0	14556	13765	15348	5.4	1.0	5.3
15.0	11215	10697	11732	4.6	0.9	5.1
20.0	8702	8370	9035	3.8	0.8	5.0
25.0	6800	6596	7004	3.0	0.6	4.9
30.0	5349	5146	5552	3.8	0.8	4.7
35.0	4235	4044	4426	4.5	1.0	4.6
40.0	3374	3198	3549	5.2	1.2	4.5
45.0	2703	2544	2863	5.9	1.3	4.4
50.0	2179	2037	2321	6.5	1.5	4.3
55.0	1766	1639	1893	7.2	1.7	4.1
60.0	1439	1327	1551	7.8	1.9	4.0
65.0	1179	1080	1277	8.4	2.1	3.9
70.0	970.1	883.1	1057	9.0	2.3	3.8
75.0	802.3	725.9	878.7	9.5	2.5	3.8
80.0	666.6	599.5	733.8	10.1	2.8	3.7
85.0	556.4	497.4	615.4	10.6	3.0	3.6
90.0	466.4	414.5	518.3	11.1	3.2	3.5
95.0	392.6	347	438.2	11.6	3.4	3.4
100.0	331.8	291.6	372	12.1	3.6	3.3
105.0	281.5	246.1	317	12.6	3.9	3.2
110.0	239.8	208.5	271.1	13.1	4.1	3.2
115.0	205	177.3	232.6	13.5	4.4	3.1
120.0	175.8	151.3	200.3	13.9	4.6	3.0
125.0	151.4	129.6	173.1	14.4	4.8	3.0

SMD
R/T characteristics

B57471V2682J062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 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	970400	760980	1179800	21.6	2.7	7.9
-50.0	659010	525880	792130	20.2	2.7	7.6
-45.0	453130	367580	538680	18.9	2.6	7.4
-40.0	315290	259740	370830	17.6	2.5	7.1
-35.0	221880	185480	258280	16.4	2.4	6.9
-30.0	157850	133780	181910	15.2	2.3	6.7
-25.0	113470	97432	129500	14.1	2.2	6.5
-20.0	82382	71620	93144	13.1	2.1	6.3
-15.0	60386	53119	67654	12.0	2.0	6.1
-10.0	44671	39736	49605	11.0	1.9	5.9
-5.0	33337	29972	36701	10.1	1.7	5.8
0.0	25089	22787	27391	9.2	1.6	5.6
5.0	19036	17458	20614	8.3	1.5	5.4
10.0	14556	13474	15639	7.4	1.4	5.3
15.0	11215	10473	11956	6.6	1.3	5.1
20.0	8702	8196	9209	5.8	1.2	5.0
25.0	6800	6460	7140	5.0	1.0	4.9
30.0	5349	5039	5659	5.8	1.2	4.7
35.0	4235	3959	4511	6.5	1.4	4.6
40.0	3374	3130	3617	7.2	1.6	4.5
45.0	2703	2490	2917	7.9	1.8	4.4
50.0	2179	1993	2365	8.5	2.0	4.3
55.0	1766	1604	1928	9.2	2.2	4.1
60.0	1439	1298	1580	9.8	2.4	4.0
65.0	1179	1056	1301	10.4	2.6	3.9
70.0	970.1	863.7	1076	11.0	2.9	3.8
75.0	802.3	709.8	894.8	11.5	3.1	3.8
80.0	666.6	586.2	747.1	12.1	3.3	3.7
85.0	556.4	486.3	626.5	12.6	3.5	3.6
90.0	466.4	405.2	527.6	13.1	3.8	3.5
95.0	392.6	339.1	446.1	13.6	4.0	3.4
100.0	331.8	285	378.6	14.1	4.2	3.3
105.0	281.5	240.5	322.6	14.6	4.5	3.2
110.0	239.8	203.7	275.9	15.1	4.7	3.2
115.0	205	173.2	236.7	15.5	5.0	3.1
120.0	175.8	147.8	203.9	15.9	5.3	3.0
125.0	151.4	126.6	176.1	16.4	5.5	3.0

SMD
R/T characteristics

B57421V2103H062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 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)
-55.0	961580	790320	1132800	17.8	2.4	7.4
-50.0	668920	558030	779810	16.6	2.3	7.1
-45.0	471270	398700	543840	15.4	2.2	6.9
-40.0	336060	288100	384020	14.3	2.1	6.6
-35.0	242430	210450	274400	13.2	2.1	6.4
-30.0	176810	155320	198300	12.2	2.0	6.2
-25.0	130320	115780	144860	11.2	1.9	6.0
-20.0	97020	87120	106920	10.2	1.8	5.8
-15.0	72923	66151	79695	9.3	1.7	5.6
-10.0	55314	50666	59962	8.4	1.5	5.4
-5.0	42325	39128	45522	7.6	1.4	5.3
0.0	32657	30458	34856	6.7	1.3	5.1
5.0	25400	23890	26910	5.9	1.2	4.9
10.0	19907	18875	20938	5.2	1.1	4.8
15.0	15716	15017	16415	4.4	1.0	4.7
20.0	12494	12027	12961	3.7	0.8	4.5
25.0	10000	9700	10300	3.0	0.7	4.4
30.0	8055	7756	8354	3.7	0.9	4.3
35.0	6529	6244	6813	4.4	1.1	4.1
40.0	5323	5058	5588	5.0	1.2	4.0
45.0	4364	4121	4608	5.6	1.4	3.9
50.0	3598	3376	3820	6.2	1.6	3.8
55.0	2982	2781	3183	6.7	1.8	3.7
60.0	2484	2303	2664	7.3	2.0	3.6
65.0	2079	1916	2241	7.8	2.2	3.5
70.0	1748	1602	1893	8.3	2.4	3.4
75.0	1476	1346	1607	8.8	2.6	3.3
80.0	1252	1136	1369	9.3	2.9	3.2
85.0	1067	962.3	1171	9.8	3.1	3.2
90.0	912.3	818.7	1006	10.3	3.3	3.1
95.0	783.2	699.4	867.0	10.7	3.6	3.0
100.0	674.9	599.7	750.1	11.1	3.8	2.9
105.0	583.6	516.1	651.1	11.6	4.0	2.9
110.0	506.5	445.8	567.1	12.0	4.3	2.8
115.0	441.0	386.4	495.6	12.4	4.5	2.7
120.0	385.2	336.0	434.4	12.8	4.8	2.7
125.0	337.5	293.1	381.9	13.2	5.0	2.6

SMD
R/T characteristics

B57421V2103J062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 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	961580	771090	1152100	19.8	2.7	7.4
-50.0	668920	544650	793180	18.6	2.6	7.1
-45.0	471270	389270	553260	17.4	2.5	6.9
-40.0	336060	281380	390740	16.3	2.4	6.6
-35.0	242430	205600	279250	15.2	2.4	6.4
-30.0	176810	151790	201840	14.2	2.3	6.2
-25.0	130320	113170	147470	13.2	2.2	6.0
-20.0	97020	85179	108860	12.2	2.1	5.8
-15.0	72923	64693	81153	11.3	2.0	5.6
-10.0	55314	49560	61068	10.4	1.9	5.4
-5.0	42325	38282	46368	9.6	1.8	5.3
0.0	32657	29805	35510	8.7	1.7	5.1
5.0	25400	23382	27418	7.9	1.6	4.9
10.0	19907	18477	21336	7.2	1.5	4.8
15.0	15716	14703	16729	6.4	1.4	4.7
20.0	12494	11778	13211	5.7	1.3	4.5
25.0	10000	9500	10500	5.0	1.1	4.4
30.0	8055	7595	8515	5.7	1.3	4.3
35.0	6529	6114	6944	6.4	1.5	4.1
40.0	5323	4951	5694	7.0	1.7	4.0
45.0	4364	4034	4695	7.6	1.9	3.9
50.0	3598	3304	3892	8.2	2.1	3.8
55.0	2982	2722	3242	8.7	2.4	3.7
60.0	2484	2253	2714	9.3	2.6	3.6
65.0	2079	1875	2283	9.8	2.8	3.5
70.0	1748	1567	1928	10.3	3.0	3.4
75.0	1476	1316	1636	10.8	3.2	3.3
80.0	1252	1111	1394	11.3	3.5	3.2
85.0	1067	940.9	1193	11.8	3.7	3.2
90.0	912.3	800.5	1024	12.3	4.0	3.1
95.0	783.2	683.7	882.7	12.7	4.2	3.0
100.0	674.9	586.2	763.6	13.1	4.5	2.9
105.0	583.6	504.5	662.8	13.6	4.7	2.9
110.0	506.5	435.7	577.3	14.0	5.0	2.8
115.0	441.0	377.6	504.4	14.4	5.3	2.7
120.0	385.2	328.3	442.1	14.8	5.5	2.7
125.0	337.5	286.4	388.7	15.2	5.8	2.6

SMD
R/T characteristics

B57471V2103H062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 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)
-55.0	1427100	1147600	1706500	19.6	2.5	7.9
-50.0	969130	792740	1145500	18.2	2.4	7.6
-45.0	666370	553880	778850	16.9	2.3	7.4
-40.0	463660	391250	536070	15.6	2.2	7.1
-35.0	326290	279280	373300	14.4	2.1	6.9
-30.0	232130	201380	262880	13.2	2.0	6.7
-25.0	166870	146620	187110	12.1	1.9	6.5
-20.0	121150	107750	134550	11.1	1.8	6.3
-15.0	88803	79892	97714	10.0	1.6	6.1
-10.0	65692	59750	71634	9.0	1.5	5.9
-5.0	49025	45057	52992	8.1	1.4	5.8
0.0	36896	34249	39544	7.2	1.3	5.6
5.0	27994	26233	29755	6.3	1.2	5.4
10.0	21406	20242	22570	5.4	1.0	5.3
15.0	16492	15731	17253	4.6	0.9	5.1
20.0	12798	12309	13286	3.8	0.8	5.0
25.0	10000	9700	10300	3.0	0.6	4.9
30.0	7866	7568	8165	3.8	0.8	4.7
35.0	6228	5947	6509	4.5	1.0	4.6
40.0	4961	4703	5219	5.2	1.2	4.5
45.0	3976	3742	4210	5.9	1.3	4.4
50.0	3204	2995	3414	6.5	1.5	4.3
55.0	2597	2411	2783	7.2	1.7	4.1
60.0	2116	1951	2281	7.8	1.9	4.0
65.0	1733	1588	1878	8.4	2.1	3.9
70.0	1427	1299	1554	9.0	2.3	3.8
75.0	1180	1067	1292	9.5	2.5	3.8
80.0	980.3	881.6	1079	10.1	2.8	3.7
85.0	818.2	731.5	905	10.6	3.0	3.6
90.0	685.9	609.6	762.1	11.1	3.2	3.5
95.0	577.4	510.3	644.4	11.6	3.4	3.4
100.0	488	428.9	547.1	12.1	3.6	3.3
105.0	414	361.9	466.1	12.6	3.9	3.2
110.0	352.6	306.6	398.6	13.1	4.1	3.2
115.0	301.4	260.7	342.1	13.5	4.4	3.1
120.0	258.6	222.5	294.6	13.9	4.6	3.0
125.0	222.6	190.6	254.6	14.4	4.8	3.0

SMD
R/T characteristics

B57471V2103J062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 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	1427100	1119100	1735000	21.6	2.7	7.9
-50.0	969130	773360	1164900	20.2	2.7	7.6
-45.0	666370	540550	792180	18.9	2.6	7.4
-40.0	463660	381970	545340	17.6	2.5	7.1
-35.0	326290	272760	379830	16.4	2.4	6.9
-30.0	232130	196740	267520	15.2	2.3	6.7
-25.0	166870	143280	190450	14.1	2.2	6.5
-20.0	121150	105320	136980	13.1	2.1	6.3
-15.0	88803	78116	99491	12.0	2.0	6.1
-10.0	65692	58436	72948	11.0	1.9	5.9
-5.0	49025	44076	53973	10.1	1.7	5.8
0.0	36896	33511	40282	9.2	1.6	5.6
5.0	27994	25673	30315	8.3	1.5	5.4
10.0	21406	19814	22999	7.4	1.4	5.3
15.0	16492	15401	17583	6.6	1.3	5.1
20.0	12798	12053	13542	5.8	1.2	5.0
25.0	10000	9500	10500	5.0	1.0	4.9
30.0	7866	7411	8322	5.8	1.2	4.7
35.0	6228	5822	6633	6.5	1.4	4.6
40.0	4961	4603	5319	7.2	1.6	4.5
45.0	3976	3662	4289	7.9	1.8	4.4
50.0	3204	2931	3478	8.5	2.0	4.3
55.0	2597	2359	2835	9.2	2.2	4.1
60.0	2116	1909	2323	9.8	2.4	4.0
65.0	1733	1553	1913	10.4	2.6	3.9
70.0	1427	1270	1583	11.0	2.9	3.8
75.0	1180	1044	1316	11.5	3.1	3.8
80.0	980.3	862	1099	12.1	3.3	3.7
85.0	818.2	715.1	921.3	12.6	3.5	3.6
90.0	685.9	595.9	775.9	13.1	3.8	3.5
95.0	577.4	498.7	656	13.6	4.0	3.4
100.0	488	419.1	556.8	14.1	4.2	3.3
105.0	414	353.6	474.4	14.6	4.5	3.2
110.0	352.6	299.6	405.7	15.1	4.7	3.2
115.0	301.4	254.7	348.2	15.5	5.0	3.1
120.0	258.6	217.4	299.8	15.9	5.3	3.0
125.0	222.6	186.1	259	16.4	5.5	3.0

SMD
R/T characteristics

B57421V2223H062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 22000 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	2115500	1738700	2492200	17.8	2.4	7.4
-50.0	1471600	1227700	1715600	16.6	2.3	7.1
-45.0	1036800	877140	1196400	15.4	2.2	6.9
-40.0	739330	633830	844840	14.3	2.1	6.6
-35.0	533340	462990	603680	13.2	2.1	6.4
-30.0	388990	341710	436270	12.2	2.0	6.2
-25.0	286710	254710	318700	11.2	1.9	6.0
-20.0	213440	191660	235230	10.2	1.8	5.8
-15.0	160430	145530	175330	9.3	1.7	5.6
-10.0	121690	111470	131920	8.4	1.5	5.4
-5.0	93115	86082	100150	7.6	1.4	5.3
0.0	71846	67008	76684	6.7	1.3	5.1
5.0	55880	52558	59201	5.9	1.2	4.9
10.0	43795	41525	46064	5.2	1.1	4.8
15.0	34575	33037	36112	4.4	1.0	4.7
20.0	27487	26460	28515	3.7	0.8	4.5
25.0	22000	21340	22660	3.0	0.7	4.4
30.0	17721	17063	18380	3.7	0.9	4.3
35.0	14363	13738	14989	4.4	1.1	4.1
40.0	11710	11127	12293	5.0	1.2	4.0
45.0	9602	9066	10138	5.6	1.4	3.9
50.0	7916	7428	8404	6.2	1.6	3.8
55.0	6560	6119	7002	6.7	1.8	3.7
60.0	5464	5066	5862	7.3	2.0	3.6
65.0	4573	4216	4930	7.8	2.2	3.5
70.0	3845	3525	4166	8.3	2.4	3.4
75.0	3248	2961	3535	8.8	2.6	3.3
80.0	2755	2498	3012	9.3	2.9	3.2
85.0	2347	2117	2577	9.8	3.1	3.2
90.0	2007	1801	2213	10.3	3.3	3.1
95.0	1723	1539	1907	10.7	3.6	3.0
100.0	1485	1319	1650	11.1	3.8	2.9
105.0	1284	1136	1432	11.6	4.0	2.9
110.0	1114	980.8	1248	12.0	4.3	2.8
115.0	970.2	850.0	1090	12.4	4.5	2.7
120.0	847.4	739.2	955.7	12.8	4.8	2.7
125.0	742.5	644.8	840.3	13.2	5.0	2.6

SMD
R/T characteristics

B57421V2223J062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 22000 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	2115500	1696400	2534500	19.8	2.7	7.4
-50.0	1471600	1198200	1745000	18.6	2.6	7.1
-45.0	1036800	856400	1217200	17.4	2.5	6.9
-40.0	739330	619040	859630	16.3	2.4	6.6
-35.0	533340	452320	614350	15.2	2.4	6.4
-30.0	388990	333930	444050	14.2	2.3	6.2
-25.0	286710	248980	324440	13.2	2.2	6.0
-20.0	213440	187390	239490	12.2	2.1	5.8
-15.0	160430	142320	178540	11.3	2.0	5.6
-10.0	121690	109030	134350	10.4	1.9	5.4
-5.0	93115	84220	102010	9.6	1.8	5.3
0.0	71846	65571	78121	8.7	1.7	5.1
5.0	55880	51441	60319	7.9	1.6	4.9
10.0	43795	40649	46940	7.2	1.5	4.8
15.0	34575	32346	36804	6.4	1.4	4.7
20.0	27487	25911	29064	5.7	1.3	4.5
25.0	22000	20900	23100	5.0	1.1	4.4
30.0	17721	16709	18734	5.7	1.3	4.3
35.0	14363	13450	15276	6.4	1.5	4.1
40.0	11710	10893	12528	7.0	1.7	4.0
45.0	9602	8874	10330	7.6	1.9	3.9
50.0	7916	7270	8562	8.2	2.1	3.8
55.0	6560	5988	7133	8.7	2.4	3.7
60.0	5464	4957	5971	9.3	2.6	3.6
65.0	4573	4125	5022	9.8	2.8	3.5
70.0	3845	3448	4243	10.3	3.0	3.4
75.0	3248	2896	3600	10.8	3.2	3.3
80.0	2755	2443	3067	11.3	3.5	3.2
85.0	2347	2070	2624	11.8	3.7	3.2
90.0	2007	1761	2253	12.3	4.0	3.1
95.0	1723	1504	1942	12.7	4.2	3.0
100.0	1485	1290	1680	13.1	4.5	2.9
105.0	1284	1110	1458	13.6	4.7	2.9
110.0	1114	958.5	1270	14.0	5.0	2.8
115.0	970.2	830.6	1110	14.4	5.3	2.7
120.0	847.4	722.2	972.6	14.8	5.5	2.7
125.0	742.5	630.0	855.1	15.2	5.8	2.6

SMD
R/T characteristics

B57471V2223H062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 K, R ₂₅ = 22000 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	3139500	2524800	3754300	19.6	2.5	7.9
-50.0	2132100	1744000	2520100	18.2	2.4	7.6
-45.0	1466000	1218500	1713500	16.9	2.3	7.4
-40.0	1020000	860740	1179300	15.6	2.2	7.1
-35.0	717840	614420	821260	14.4	2.1	6.9
-30.0	510680	443040	578330	13.2	2.0	6.7
-25.0	367100	322560	411640	12.1	1.9	6.5
-20.0	266530	237040	296020	11.1	1.8	6.3
-15.0	195370	175760	214970	10.0	1.6	6.1
-10.0	144520	131450	157600	9.0	1.5	5.9
-5.0	107850	99125	116580	8.1	1.4	5.8
0.0	81171	75347	86996	7.2	1.3	5.6
5.0	61587	57713	65462	6.3	1.2	5.4
10.0	47094	44533	49655	5.4	1.0	5.3
15.0	36282	34608	37956	4.6	0.9	5.1
20.0	28155	27080	29230	3.8	0.8	5.0
25.0	22000	21340	22660	3.0	0.6	4.9
30.0	17306	16649	17962	3.8	0.8	4.7
35.0	13701	13083	14319	4.5	1.0	4.6
40.0	10914	10346	11483	5.2	1.2	4.5
45.0	8746	8232	9261	5.9	1.3	4.4
50.0	7050	6589	7510	6.5	1.5	4.3
55.0	5713	5304	6123	7.2	1.7	4.1
60.0	4655	4293	5018	7.8	1.9	4.0
65.0	3813	3493	4132	8.4	2.1	3.9
70.0	3138	2857	3420	9.0	2.3	3.8
75.0	2596	2348	2843	9.5	2.5	3.8
80.0	2157	1940	2374	10.1	2.8	3.7
85.0	1800	1609	1991	10.6	3.0	3.6
90.0	1509	1341	1677	11.1	3.2	3.5
95.0	1270	1123	1418	11.6	3.4	3.4
100.0	1074	943.5	1204	12.1	3.6	3.3
105.0	910.9	796.2	1026	12.6	3.9	3.2
110.0	775.8	674.5	877	13.1	4.1	3.2
115.0	663.1	573.6	752.7	13.5	4.4	3.1
120.0	568.9	489.6	648.2	13.9	4.6	3.0
125.0	489.7	419.3	560.1	14.4	4.8	3.0

SMD
R/T characteristics

B57471V2223J062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 K, R ₂₅ = 22000 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	3139500	2462000	3817100	21.6	2.7	7.9
-50.0	2132100	1701400	2562800	20.2	2.7	7.6
-45.0	1466000	1189200	1742800	18.9	2.6	7.4
-40.0	1020000	840340	1199800	17.6	2.5	7.1
-35.0	717840	600070	835620	16.4	2.4	6.9
-30.0	510680	432820	588550	15.2	2.3	6.7
-25.0	367100	315220	418980	14.1	2.2	6.5
-20.0	266530	231710	301350	13.1	2.1	6.3
-15.0	195370	171860	218880	12.0	2.0	6.1
-10.0	144520	128560	160490	11.0	1.9	5.9
-5.0	107850	96968	118740	10.1	1.7	5.8
0.0	81171	73723	88620	9.2	1.6	5.6
5.0	61587	56481	66694	8.3	1.5	5.4
10.0	47094	43591	50597	7.4	1.4	5.3
15.0	36282	33882	38682	6.6	1.3	5.1
20.0	28155	26517	29793	5.8	1.2	5.0
25.0	22000	20900	23100	5.0	1.0	4.9
30.0	17306	16303	18308	5.8	1.2	4.7
35.0	13701	12809	14593	6.5	1.4	4.6
40.0	10914	10127	11701	7.2	1.6	4.5
45.0	8746	8057	9436	7.9	1.8	4.4
50.0	7050	6448	7651	8.5	2.0	4.3
55.0	5713	5189	6237	9.2	2.2	4.1
60.0	4655	4200	5111	9.8	2.4	4.0
65.0	3813	3417	4209	10.4	2.6	3.9
70.0	3138	2794	3482	11.0	2.9	3.8
75.0	2596	2297	2895	11.5	3.1	3.8
80.0	2157	1896	2417	12.1	3.3	3.7
85.0	1800	1573	2027	12.6	3.5	3.6
90.0	1509	1311	1707	13.1	3.8	3.5
95.0	1270	1097	1443	13.6	4.0	3.4
100.0	1074	922	1225	14.1	4.2	3.3
105.0	910.9	778	1044	14.6	4.5	3.2
110.0	775.8	659	892.5	15.1	4.7	3.2
115.0	663.1	560.3	765.9	15.5	5.0	3.1
120.0	568.9	478.2	659.6	15.9	5.3	3.0
125.0	489.7	409.5	569.8	16.4	5.5	3.0

SMD
R/T characteristics

B57421V2333H062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 33000 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	3173200	2608100	3738400	17.8	2.4	7.4
-50.0	2207400	1841500	2573400	16.6	2.3	7.1
-45.0	1555200	1315700	1794700	15.4	2.2	6.9
-40.0	1109000	950740	1267300	14.3	2.1	6.6
-35.0	800000	694480	905530	13.2	2.1	6.4
-30.0	583490	512570	654400	12.2	2.0	6.2
-25.0	430060	382070	478050	11.2	1.9	6.0
-20.0	320170	287500	352840	10.2	1.8	5.8
-15.0	240650	218300	262990	9.3	1.7	5.6
-10.0	182540	167200	197880	8.4	1.5	5.4
-5.0	139670	129120	150220	7.6	1.4	5.3
0.0	107770	100510	115030	6.7	1.3	5.1
5.0	83820	78837	88802	5.9	1.2	4.9
10.0	65692	62288	69096	5.2	1.1	4.8
15.0	51862	49556	54168	4.4	1.0	4.7
20.0	41231	39691	42772	3.7	0.8	4.5
25.0	33000	32010	33990	3.0	0.7	4.4
30.0	26582	25595	27569	3.7	0.9	4.3
35.0	21545	20606	22483	4.4	1.1	4.1
40.0	17566	16691	18440	5.0	1.2	4.0
45.0	14403	13599	15206	5.6	1.4	3.9
50.0	11874	11142	12606	6.2	1.6	3.8
55.0	9840	9178	10503	6.7	1.8	3.7
60.0	8196	7600	8793	7.3	2.0	3.6
65.0	6860	6324	7396	7.8	2.2	3.5
70.0	5768	5288	6249	8.3	2.4	3.4
75.0	4872	4442	5302	8.8	2.6	3.3
80.0	4133	3748	4518	9.3	2.9	3.2
85.0	3520	3175	3865	9.8	3.1	3.2
90.0	3011	2702	3319	10.3	3.3	3.1
95.0	2585	2308	2861	10.7	3.6	3.0
100.0	2227	1979	2475	11.1	3.8	2.9
105.0	1926	1703	2149	11.6	4.0	2.9
110.0	1671	1471	1872	12.0	4.3	2.8
115.0	1455	1275	1635	12.4	4.5	2.7
120.0	1271	1109	1434	12.8	4.8	2.7
125.0	1114	967.2	1260	13.2	5.0	2.6

SMD
R/T characteristics

B57421V2333J062						
R/T No.	8502					
T (°C)	B _{25/100} = 4000 K, R ₂₅ = 33000 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	3173200	2544600	3801800	19.8	2.7	7.4
-50.0	2207400	1797300	2617500	18.6	2.6	7.1
-45.0	1555200	1284600	1825800	17.4	2.5	6.9
-40.0	1109000	928560	1289400	16.3	2.4	6.6
-35.0	800000	678480	921530	15.2	2.4	6.4
-30.0	583490	500900	666070	14.2	2.3	6.2
-25.0	430060	373460	486650	13.2	2.2	6.0
-20.0	320170	281090	359240	12.2	2.1	5.8
-15.0	240650	213490	267810	11.3	2.0	5.6
-10.0	182540	163550	201530	10.4	1.9	5.4
-5.0	139670	126330	153020	9.6	1.8	5.3
0.0	107770	98357	117180	8.7	1.7	5.1
5.0	83820	77161	90478	7.9	1.6	4.9
10.0	65692	60974	70410	7.2	1.5	4.8
15.0	51862	48519	55205	6.4	1.4	4.7
20.0	41231	38866	43596	5.7	1.3	4.5
25.0	33000	31350	34650	5.0	1.1	4.4
30.0	26582	25063	28101	5.7	1.3	4.3
35.0	21545	20175	22914	6.4	1.5	4.1
40.0	17566	16340	18791	7.0	1.7	4.0
45.0	14403	13311	15494	7.6	1.9	3.9
50.0	11874	10905	12843	8.2	2.1	3.8
55.0	9840	8981	10699	8.7	2.4	3.7
60.0	8196	7436	8957	9.3	2.6	3.6
65.0	6860	6187	7533	9.8	2.8	3.5
70.0	5768	5172	6364	10.3	3.0	3.4
75.0	4872	4344	5400	10.8	3.2	3.3
80.0	4133	3665	4600	11.3	3.5	3.2
85.0	3520	3105	3935	11.8	3.7	3.2
90.0	3011	2642	3379	12.3	4.0	3.1
95.0	2585	2256	2913	12.7	4.2	3.0
100.0	2227	1934	2520	13.1	4.5	2.9
105.0	1926	1665	2187	13.6	4.7	2.9
110.0	1671	1438	1905	14.0	5.0	2.8
115.0	1455	1246	1665	14.4	5.3	2.7
120.0	1271	1083	1459	14.8	5.5	2.7
125.0	1114	945.0	1283	15.2	5.8	2.6

SMD
R/T characteristics

B57471V2333H062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 K, R ₂₅ = 33000 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	4709300	3787200	5631400	19.6	2.5	7.9
-50.0	3198100	2616000	3780200	18.2	2.4	7.6
-45.0	2199000	1827800	2570200	16.9	2.3	7.4
-40.0	1530100	1291100	1769000	15.6	2.2	7.1
-35.0	1076800	921630	1231900	14.4	2.1	6.9
-30.0	766030	664550	867500	13.2	2.0	6.7
-25.0	550650	483840	617460	12.1	1.9	6.5
-20.0	399800	355570	444030	11.1	1.8	6.3
-15.0	293050	263640	322460	10.0	1.6	6.1
-10.0	216780	197170	236390	9.0	1.5	5.9
-5.0	161780	148690	174870	8.1	1.4	5.8
0.0	121760	113020	130490	7.2	1.3	5.6
5.0	92381	86569	98193	6.3	1.2	5.4
10.0	70641	66800	74483	5.4	1.0	5.3
15.0	54423	51912	56935	4.6	0.9	5.1
20.0	42232	40619	43845	3.8	0.8	5.0
25.0	33000	32010	33990	3.0	0.6	4.9
30.0	25959	24974	26943	3.8	0.8	4.7
35.0	20551	19624	21479	4.5	1.0	4.6
40.0	16371	15519	17224	5.2	1.2	4.5
45.0	13120	12348	13892	5.9	1.3	4.4
50.0	10574	9883	11266	6.5	1.5	4.3
55.0	8570	7956	9185	7.2	1.7	4.1
60.0	6983	6439	7527	7.8	1.9	4.0
65.0	5719	5240	6199	8.4	2.1	3.9
70.0	4708	4286	5129	9.0	2.3	3.8
75.0	3894	3523	4264	9.5	2.5	3.8
80.0	3235	2909	3561	10.1	2.8	3.7
85.0	2700	2414	2986	10.6	3.0	3.6
90.0	2263	2012	2515	11.1	3.2	3.5
95.0	1905	1684	2127	11.6	3.4	3.4
100.0	1610	1415	1805	12.1	3.6	3.3
105.0	1366	1194	1538	12.6	3.9	3.2
110.0	1164	1012	1316	13.1	4.1	3.2
115.0	994.7	860.4	1129	13.5	4.4	3.1
120.0	853.3	734.3	972.3	13.9	4.6	3.0
125.0	734.5	629	840.1	14.4	4.8	3.0

SMD
R/T characteristics

B57471V2333J062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 K, R ₂₅ = 33000 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	4709300	3693000	5725600	21.6	2.7	7.9
-50.0	3198100	2552100	3844200	20.2	2.7	7.6
-45.0	2199000	1783800	2614200	18.9	2.6	7.4
-40.0	1530100	1260500	1799600	17.6	2.5	7.1
-35.0	1076800	900100	1253400	16.4	2.4	6.9
-30.0	766030	649230	882820	15.2	2.3	6.7
-25.0	550650	472830	628480	14.1	2.2	6.5
-20.0	399800	347570	452020	13.1	2.1	6.3
-15.0	293050	257780	328320	12.0	2.0	6.1
-10.0	216780	192840	240730	11.0	1.9	5.9
-5.0	161780	145450	178110	10.1	1.7	5.8
0.0	121760	110590	132930	9.2	1.6	5.6
5.0	92381	84722	100040	8.3	1.5	5.4
10.0	70641	65387	75895	7.4	1.4	5.3
15.0	54423	50824	58023	6.6	1.3	5.1
20.0	42232	39775	44690	5.8	1.2	5.0
25.0	33000	31350	34650	5.0	1.0	4.9
30.0	25959	24455	27463	5.8	1.2	4.7
35.0	20551	19213	21890	6.5	1.4	4.6
40.0	16371	15191	17552	7.2	1.6	4.5
45.0	13120	12085	14154	7.9	1.8	4.4
50.0	10574	9672	11477	8.5	2.0	4.3
55.0	8570	7784	9356	9.2	2.2	4.1
60.0	6983	6300	7666	9.8	2.4	4.0
65.0	5719	5126	6313	10.4	2.6	3.9
70.0	4708	4192	5224	11.0	2.9	3.8
75.0	3894	3445	4342	11.5	3.1	3.8
80.0	3235	2845	3626	12.1	3.3	3.7
85.0	2700	2360	3040	12.6	3.5	3.6
90.0	2263	1966	2560	13.1	3.8	3.5
95.0	1905	1646	2165	13.6	4.0	3.4
100.0	1610	1383	1837	14.1	4.2	3.3
105.0	1366	1167	1566	14.6	4.5	3.2
110.0	1164	988.5	1339	15.1	4.7	3.2
115.0	994.7	840.5	1149	15.5	5.0	3.1
120.0	853.3	717.3	989.3	15.9	5.3	3.0
125.0	734.5	614.3	854.8	16.4	5.5	3.0

SMD
R/T characteristics

B57471V2473H062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 K, R ₂₅ = 47000 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	6707200	5393800	8020500	19.6	2.5	7.9
-50.0	4554900	3725900	5383900	18.2	2.4	7.6
-45.0	3131900	2603200	3660600	16.9	2.3	7.4
-40.0	2179200	1838900	2519500	15.6	2.2	7.1
-35.0	1533600	1312600	1754500	14.4	2.1	6.9
-30.0	1091000	946490	1235500	13.2	2.0	6.7
-25.0	784260	689110	879420	12.1	1.9	6.5
-20.0	569410	506410	632400	11.1	1.8	6.3
-15.0	417380	375490	459260	10.0	1.6	6.1
-10.0	308750	280820	336680	9.0	1.5	5.9
-5.0	230420	211770	249060	8.1	1.4	5.8
0.0	173410	160970	185860	7.2	1.3	5.6
5.0	131570	123300	139850	6.3	1.2	5.4
10.0	100610	95139	106080	5.4	1.0	5.3
15.0	77512	73935	81089	4.6	0.9	5.1
20.0	60149	57852	62446	3.8	0.8	5.0
25.0	47000	45590	48410	3.0	0.6	4.9
30.0	36971	35569	38374	3.8	0.8	4.7
35.0	29270	27949	30591	4.5	1.0	4.6
40.0	23317	22102	24532	5.2	1.2	4.5
45.0	18686	17586	19785	5.9	1.3	4.4
50.0	15060	14076	16045	6.5	1.5	4.3
55.0	12206	11331	13081	7.2	1.7	4.1
60.0	9946	9171	10720	7.8	1.9	4.0
65.0	8146	7463	8829	8.4	2.1	3.9
70.0	6705	6104	7306	9.0	2.3	3.8
75.0	5545	5017	6073	9.5	2.5	3.8
80.0	4608	4144	5072	10.1	2.8	3.7
85.0	3846	3438	4253	10.6	3.0	3.6
90.0	3224	2865	3582	11.1	3.2	3.5
95.0	2714	2398	3029	11.6	3.4	3.4
100.0	2293	2016	2571	12.1	3.6	3.3
105.0	1946	1701	2191	12.6	3.9	3.2
110.0	1657	1441	1874	13.1	4.1	3.2
115.0	1417	1225	1608	13.5	4.4	3.1
120.0	1215	1046	1385	13.9	4.6	3.0
125.0	1046	895.8	1196	14.4	4.8	3.0

SMD
R/T characteristics

B57471V2473J062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 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	6707200	5259700	8154700	21.6	2.7	7.9
-50.0	4554900	3634800	5475000	20.2	2.7	7.6
-45.0	3131900	2540600	3723200	18.9	2.6	7.4
-40.0	2179200	1795300	2563100	17.6	2.5	7.1
-35.0	1533600	1282000	1785200	16.4	2.4	6.9
-30.0	1091000	924670	1257300	15.2	2.3	6.7
-25.0	784260	673430	895100	14.1	2.2	6.5
-20.0	569410	495020	643790	13.1	2.1	6.3
-15.0	417380	367150	467610	12.0	2.0	6.1
-10.0	308750	274650	342860	11.0	1.9	5.9
-5.0	230420	207160	253670	10.1	1.7	5.8
0.0	173410	157500	189320	9.2	1.6	5.6
5.0	131570	120660	142480	8.3	1.5	5.4
10.0	100610	93127	108090	7.4	1.4	5.3
15.0	77512	72385	82639	6.6	1.3	5.1
20.0	60149	56649	63649	5.8	1.2	5.0
25.0	47000	44650	49350	5.0	1.0	4.9
30.0	36971	34829	39113	5.8	1.2	4.7
35.0	29270	27364	31176	6.5	1.4	4.6
40.0	23317	21636	24998	7.2	1.6	4.5
45.0	18686	17212	20159	7.9	1.8	4.4
50.0	15060	13775	16346	8.5	2.0	4.3
55.0	12206	11087	13326	9.2	2.2	4.1
60.0	9946	8972	10919	9.8	2.4	4.0
65.0	8146	7300	8991	10.4	2.6	3.9
70.0	6705	5970	7440	11.0	2.9	3.8
75.0	5545	4906	6184	11.5	3.1	3.8
80.0	4608	4051	5164	12.1	3.3	3.7
85.0	3846	3361	4330	12.6	3.5	3.6
90.0	3224	2801	3647	13.1	3.8	3.5
95.0	2714	2344	3083	13.6	4.0	3.4
100.0	2293	1970	2617	14.1	4.2	3.3
105.0	1946	1662	2230	14.6	4.5	3.2
110.0	1657	1408	1907	15.1	4.7	3.2
115.0	1417	1197	1636	15.5	5.0	3.1
120.0	1215	1022	1409	15.9	5.3	3.0
125.0	1046	874.9	1217	16.4	5.5	3.0

SMD
R/T characteristics

B57471V2104H062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 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	14271000	11476000	17065000	19.6	2.5	7.9
-50.0	9691300	7927400	11455000	18.2	2.4	7.6
-45.0	6663700	5538800	7788500	16.9	2.3	7.4
-40.0	4636600	3912500	5360700	15.6	2.2	7.1
-35.0	3262900	2792800	3733000	14.4	2.1	6.9
-30.0	2321300	2013800	2628800	13.2	2.0	6.7
-25.0	1668600	1466200	1871100	12.1	1.9	6.5
-20.0	1211500	1077500	1345500	11.1	1.8	6.3
-15.0	888030	798920	977150	10.0	1.6	6.1
-10.0	656920	597500	716340	9.0	1.5	5.9
-5.0	490250	450570	529920	8.1	1.4	5.8
0.0	368960	342490	395440	7.2	1.3	5.6
5.0	279940	262330	297560	6.3	1.2	5.4
10.0	214060	202420	225710	5.4	1.0	5.3
15.0	164920	157310	172530	4.6	0.9	5.1
20.0	127980	123090	132860	3.8	0.8	5.0
25.0	100000	97000	103000	3.0	0.6	4.9
30.0	78663	75679	81647	3.8	0.8	4.7
35.0	62277	59466	65087	4.5	1.0	4.6
40.0	49610	47026	52195	5.2	1.2	4.5
45.0	39757	37417	42096	5.9	1.3	4.4
50.0	32044	29949	34138	6.5	1.5	4.3
55.0	25970	24108	27833	7.2	1.7	4.1
60.0	21161	19513	22809	7.8	1.9	4.0
65.0	17331	15879	18784	8.4	2.1	3.9
70.0	14265	12987	15544	9.0	2.3	3.8
75.0	11799	10675	12922	9.5	2.5	3.8
80.0	9803	8816	10791	10.1	2.8	3.7
85.0	8182	7315	9050	10.6	3.0	3.6
90.0	6859	6096	7621	11.1	3.2	3.5
95.0	5774	5103	6444	11.6	3.4	3.4
100.0	4880	4289	5471	12.1	3.6	3.3
105.0	4140	3619	4661	12.6	3.9	3.2
110.0	3526	3066	3986	13.1	4.1	3.2
115.0	3014	2607	3421	13.5	4.4	3.1
120.0	2586	2225	2946	13.9	4.6	3.0
125.0	2226	1906	2546	14.4	4.8	3.0

SMD
R/T characteristics

B57471V2104J062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 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)
-55.0	14271000	11191000	17350000	21.6	2.7	7.9
-50.0	9691300	7733600	11649000	20.2	2.7	7.6
-45.0	6663700	5405500	7921800	18.9	2.6	7.4
-40.0	4636600	3819700	5453400	17.6	2.5	7.1
-35.0	3262900	2727600	3798300	16.4	2.4	6.9
-30.0	2321300	1967400	2675200	15.2	2.3	6.7
-25.0	1668600	1432800	1904500	14.1	2.2	6.5
-20.0	1211500	1053200	1369800	13.1	2.1	6.3
-15.0	888030	781160	994910	12.0	2.0	6.1
-10.0	656920	584360	729480	11.0	1.9	5.9
-5.0	490250	440760	539730	10.1	1.7	5.8
0.0	368960	335110	402820	9.2	1.6	5.6
5.0	279940	256730	303150	8.3	1.5	5.4
10.0	214060	198140	229990	7.4	1.4	5.3
15.0	164920	154010	175830	6.6	1.3	5.1
20.0	127980	120530	135420	5.8	1.2	5.0
25.0	100000	95000	105000	5.0	1.0	4.9
30.0	78663	74105	83220	5.8	1.2	4.7
35.0	62277	58221	66333	6.5	1.4	4.6
40.0	49610	46034	53187	7.2	1.6	4.5
45.0	39757	36622	42891	7.9	1.8	4.4
50.0	32044	29308	34779	8.5	2.0	4.3
55.0	25970	23589	28352	9.2	2.2	4.1
60.0	21161	19090	23232	9.8	2.4	4.0
65.0	17331	15532	19131	10.4	2.6	3.9
70.0	14265	12702	15829	11.0	2.9	3.8
75.0	11799	10439	13158	11.5	3.1	3.8
80.0	9803	8620	10987	12.1	3.3	3.7
85.0	8182	7151	9213	12.6	3.5	3.6
90.0	6859	5959	7759	13.1	3.8	3.5
95.0	5774	4987	6560	13.6	4.0	3.4
100.0	4880	4191	5568	14.1	4.2	3.3
105.0	4140	3536	4744	14.6	4.5	3.2
110.0	3526	2996	4057	15.1	4.7	3.2
115.0	3014	2547	3482	15.5	5.0	3.1
120.0	2586	2174	2998	15.9	5.3	3.0
125.0	2226	1861	2590	16.4	5.5	3.0

SMD
R/T characteristics

B57471V2474H062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 K, R ₂₅ = 470000 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	67072000	53938000	80205000	19.6	2.5	7.9
-50.0	45549000	37259000	53839000	18.2	2.4	7.6
-45.0	31319000	26032000	36606000	16.9	2.3	7.4
-40.0	21792000	18389000	25195000	15.6	2.2	7.1
-35.0	15336000	13126000	17545000	14.4	2.1	6.9
-30.0	10910000	9464800	12355000	13.2	2.0	6.7
-25.0	7842600	6891100	8794200	12.1	1.9	6.5
-20.0	5694000	5064100	6324000	11.1	1.8	6.3
-15.0	4173800	3754900	4592600	10.0	1.6	6.1
-10.0	3087500	2808200	3366800	9.0	1.5	5.9
-5.0	2304200	2117700	2490600	8.1	1.4	5.8
0.0	1734100	1609700	1858600	7.2	1.3	5.6
5.0	1315700	1233000	1398500	6.3	1.2	5.4
10.0	1006100	951390	1060800	5.4	1.0	5.3
15.0	775120	739350	810890	4.6	0.9	5.1
20.0	601490	578520	624460	3.8	0.8	5.0
25.0	470000	455900	484100	3.0	0.6	4.9
30.0	369710	355690	383740	3.8	0.8	4.7
35.0	292700	279490	305910	4.5	1.0	4.6
40.0	233170	221020	245320	5.2	1.2	4.5
45.0	186860	175860	197850	5.9	1.3	4.4
50.0	150610	140760	160450	6.5	1.5	4.3
55.0	122060	113310	130810	7.2	1.7	4.1
60.0	99457	91713	107200	7.8	1.9	4.0
65.0	81457	74629	88285	8.4	2.1	3.9
70.0	67048	61039	73056	9.0	2.3	3.8
75.0	55453	50172	60734	9.5	2.5	3.8
80.0	46076	41436	50716	10.1	2.8	3.7
85.0	38457	34380	42534	10.6	3.0	3.6
90.0	32237	28652	35821	11.1	3.2	3.5
95.0	27136	23982	30289	11.6	3.4	3.4
100.0	22934	20157	25712	12.1	3.6	3.3
105.0	19459	17010	21909	12.6	3.9	3.2
110.0	16573	14411	18736	13.1	4.1	3.2
115.0	14167	12254	16080	13.5	4.4	3.1
120.0	12153	10459	13848	13.9	4.6	3.0
125.0	10461	8958	11965	14.4	4.8	3.0

SMD
R/T characteristics

B57471V2474J062						
R/T No.	8507					
T (°C)	B _{25/100} = 4480 K, R ₂₅ = 470000 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	67072000	52597000	81547000	21.6	2.7	7.9
-50.0	45549000	36348000	54750000	20.2	2.7	7.6
-45.0	31319000	25406000	37232000	18.9	2.6	7.4
-40.0	21792000	17953000	25631000	17.6	2.5	7.1
-35.0	15336000	12820000	17852000	16.4	2.4	6.9
-30.0	10910000	9246600	12573000	15.2	2.3	6.7
-25.0	7842600	6734200	8951000	14.1	2.2	6.5
-20.0	5694000	4950200	6437900	13.1	2.1	6.3
-15.0	4173800	3671500	4676100	12.0	2.0	6.1
-10.0	3087500	2746500	3428600	11.0	1.9	5.9
-5.0	2304200	2071600	2536700	10.1	1.7	5.8
0.0	1734100	1575000	1893200	9.2	1.6	5.6
5.0	1315700	1206600	1424800	8.3	1.5	5.4
10.0	1006100	931270	1080900	7.4	1.4	5.3
15.0	775120	723850	826390	6.6	1.3	5.1
20.0	601490	566490	636490	5.8	1.2	5.0
25.0	470000	446500	493500	5.0	1.0	4.9
30.0	369710	348300	391130	5.8	1.2	4.7
35.0	292700	273640	311770	6.5	1.4	4.6
40.0	233170	216360	249980	7.2	1.6	4.5
45.0	186860	172130	201590	7.9	1.8	4.4
50.0	150610	137750	163460	8.5	2.0	4.3
55.0	122060	110870	133260	9.2	2.2	4.1
60.0	99457	89724	109190	9.8	2.4	4.0
65.0	81457	73000	89914	10.4	2.6	3.9
70.0	67048	59698	74397	11.0	2.9	3.8
75.0	55453	49063	61843	11.5	3.1	3.8
80.0	46076	40515	51638	12.1	3.3	3.7
85.0	38457	33611	43303	12.6	3.5	3.6
90.0	32237	28008	36466	13.1	3.8	3.5
95.0	27136	23439	30832	13.6	4.0	3.4
100.0	22934	19698	26170	14.1	4.2	3.3
105.0	19459	16621	22298	14.6	4.5	3.2
110.0	16573	14079	19068	15.1	4.7	3.2
115.0	14167	11971	16363	15.5	5.0	3.1
120.0	12153	10216	14091	15.9	5.3	3.0
125.0	10461	8749	12174	16.4	5.5	3.0

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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 $-25\text{ °C} \dots +45\text{ °C}$, 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.

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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 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 an electronic component could endanger human life or health (e.g. in accident prevention or lifesaving 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 an 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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