

# NRCE

## Epoxy sealed radial lead NTC thermistor



### Product features

- Epoxy sealed radial NTC thermistor
- Temperature compensation
- 5 millimeter disk type
- Wide resistance range 5 Ω to 470 KΩ
- Non-linear change in resistance vs temperature

### Packaging information

- Bulk: 1000 parts per poly bag

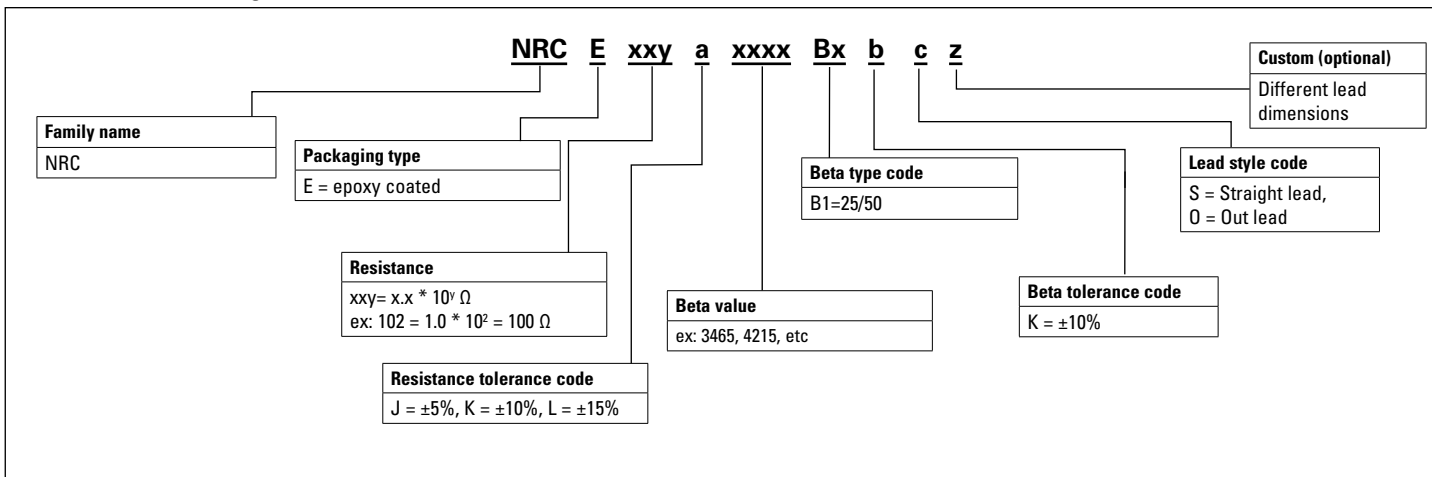
### Applications

- Industrial Process Control
- Commercial appliances
- Battery, supercapacitor and energy storage systems
- Uninterruptible power supplies
- Consumer appliances
- Medical devices
- Heating, ventilation and air conditioning, Refrigeration (HVACR)
- Food service equipment
- IoT
- White goods/household appliances
- Computer and peripheral products

### Environmental compliance and general specifications



Table 1. Part numbering



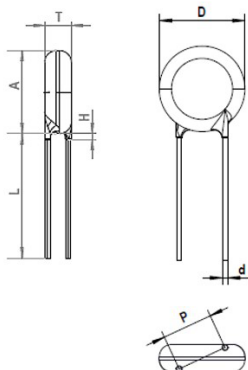
See electrical specification table for option details



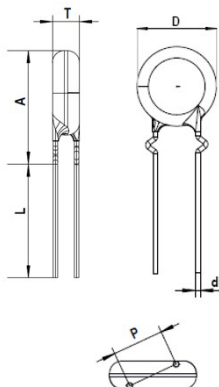
Powering Business Worldwide

**Mechanical parameters- mm**

**S style (straight lead)**



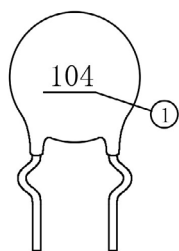
**O style (out lead)**



Millimeters		
Dimension	S style (straight lead)	O style (out lead)
D maximum	6.5	6.5
P	2.5 ± 0.5	3.5 ± 0.5
d	0.5 ± 0.02	0.5 ± 0.02
H maximum	3.0	–
A maximum	6.5	11.0
L	6.5 ± 1.0	3.5 ± 0.5
T maximum	5.0	5.0

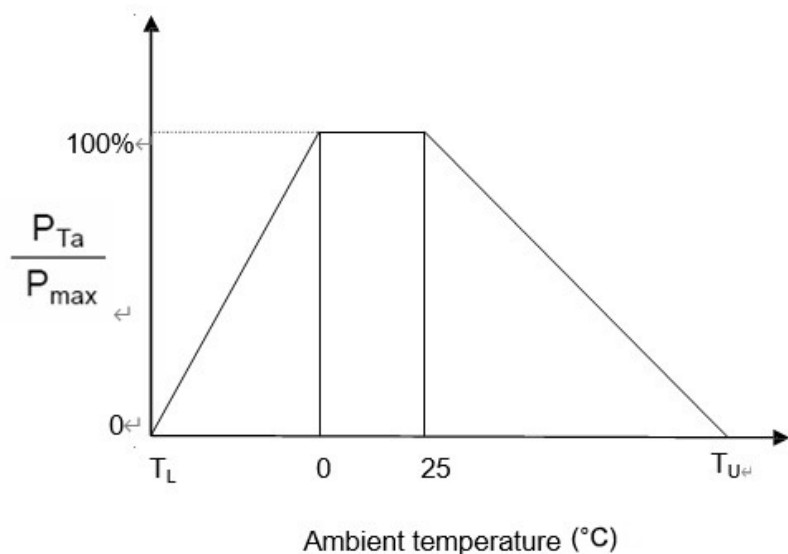
Leads: Tin plated copper clad steel

**Marking**



Item	Parameter	Code marking	Specification
1	Zero power resistance at +25 °C	005	5 Ω
		101	10*10 <sup>1</sup> =100 Ω
		104	10*10 <sup>4</sup> =100 kΩ

**Power derating curve**



$T_U$ : Upper limit of working temperature (°C)  
 $T_L$ : Lower limit of working temperature (°C)  
 Example:  
 Ambient temperature ( $T_a$ )= 55 °C  
 Upper limit of working temperature ( $T_U$ )=125 °C  
 $P_{Ta} = (T_U - T_a) / (T_U - 25) \times P_{max} = 315 \text{ mW}$   
 $P_{Ta} / P_{max} = 315 / 450 = 70\% \text{ of } P_{max}$

Note:  $P_{Ta}$  calculation for temperatures > 25 °C

**Electrical specifications**

Part number	Zero power resistance @ 25°C R <sub>25</sub> (Ω)	Resistance tolerance (R <sub>25</sub> ) (Part number code)	B value (K)	Beta type (Part number code)	Beta tolerance (Part number code)	Lead style (Part number code)	Maximum power @ +25°C P <sub>max</sub> (mW)	Dissipation factor (mW/°C)	Thermal time constant T (second)	Operation temperature TL~TU(°C)
NRCE500axxxxBxbcd	5	±10% (K), ±15% (L)	2450	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE101axxxxBxbcd	10	±10% (K), ±15% (L)	2750	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE151axxxxBxbcd	15	±10% (K), ±15% (L)	2800	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE201axxxxBxbcd	20	±10% (K), ±15% (L)	2800	25/50 (B1)	±10% (K)	"Straight lead (S) Out lead (O) "	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE251axxxxBxbcd	25	±10% (K), ±15% (L)	2900	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE331axxxxBxbcd	33	±10% (K), ±15% (L)	2900	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE451axxxxBxbcd	45	±10% (K), ±15% (L)	3000	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE501axxxxBxbcd	50	±10% (K), ±15% (L)	3050	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE851axxxxBxbcd	85	±10% (K), ±15% (L)	3100	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE102axxxxBxbcd	100	±10% (K), ±15% (L)	3200	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE152axxxxBxbcd	150	±10% (K), ±15% (L)	3250	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE202axxxxBxbcd	200	±10% (K), ±15% (L)	3400	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE302axxxxBxbcd	300	±10% (K), ±15% (L)	3600	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE332axxxxBxbcd	330	±10% (K), ±15% (L)	3600	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE472axxxxBxbcd	470	±10% (K), ±15% (L)	3600	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE502axxxxBxbcd	500	±10% (K), ±15% (L)	3650	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE682axxxxBxbcd	680	±10% (K), ±15% (L)	3700	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125

a= Enter resistance tolerance code from table above (J = ±5%, K = ±10%, L = ±15%)

Bx= Enter Beta code from table above (B1=25/50)

b= Enter Beta tolerance code from table above (K = ±10%)

c= Enter Lead style code from table above (S=Straight lead, O=Out lead)

**Electrical specifications**

Part number	Zero power resistance @ 25°C R <sub>25</sub> (Ω)	Resistance tolerance (R <sub>25</sub> ) (Part number code)	B value (K)	Beta type (Part number code)	Beta tolerance (Part number code)	Lead style (Part number code)	Maximum power @ +25°C P <sub>max</sub> (mW)	Dissipation factor (mW/°C)	Thermal time constant T (second)	Operation temperature TL~TU(°C)
NRCE103axxxxBxbcd	1000	±10% (K), ±15% (L)	3800	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE153axxxxBxbcd	1500	±10% (K), ±15% (L)	3900	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE203axxxxBxbcd	2000	±10% (K), ±15% (L)	3950	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE253axxxxBxbcd	2500	±10% (K), ±15% (L)	4000	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE303axxxxBxbcd	3000	±10% (K), ±15% (L)	4000	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE333axxxxBxbcd	3300	±10% (K), ±15% (L)	4000	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE473axxxxBxbcd	4700	±10% (K), ±15% (L)	4050	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE503axxxxBxbcd	5000	±10% (K), ±15% (L)	4050	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE603axxxxBxbcd	6000	±10% (K), ±15% (L)	4050	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE683axxxxBxbcd	6800	±10% (K), ±15% (L)	4050	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE803axxxxBxbcd	8000	±10% (K), ±15% (L)	4050	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE104axxxxBxbcd	10000	±5% (J), ±15% (L)	4050	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE124axxxxBxbcd	12000	±5% (J), ±15% (L)	4050	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE154axxxxBxbcd	15000	±5% (J), ±15% (L)	4200	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE204axxxxBxbcd	20000	±5% (J), ±15% (L)	4250	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE304axxxxBxbcd	30000	±5% (J), ±15% (L)	4250	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE474axxxxBxbcd	47000	±5% (J), ±15% (L)	4300	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125

a= Enter resistance tolerance code from table above (J = ±5%, K = ±10%, L = ±15%)

Bx= Enter Beta code from table above (B1=25/50)

b= Enter Beta tolerance code from table above (K = ±10%)

c= Enter Lead style code from table above (S=Straight lead, O=Out lead)

**Electrical specifications**

Part number	Zero power resistance @ 25°C R <sub>25</sub> (Ω)	Resistance tolerance (R <sub>25</sub> ) (Part number code)	B value (K)	Beta type (Part number code)	Beta tolerance (Part number code)	Lead style (Part number code)	Maximum power @ +25°C P <sub>max</sub> (mW)	Dissipation factor (mW/°C)	Thermal time constant T (second)	Operation temperature TL~TU(°C)
NRCE504axxxxBxbcd	50000	±5% (J), ±15% (L)	4300	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE105axxxxBxbcd	100000	±5% (J), ±15% (L)	4400	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE155axxxxBxbcd	150000	±5% (J), ±15% (L)	4500	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE205axxxxBxbcd	200000	±5% (J), ±15% (L)	4600	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE225axxxxBxbcd	220000	±5% (J), ±15% (L)	4650	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE335axxxxBxbcd	330000	±5% (J), ±15% (L)	4700	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125
NRCE475axxxxBxbcd	470000	±5% (J), ±15% (L)	4750	25/50 (B1)	±10% (K)	Straight lead (S) Out lead (O)	450	Approximately 4.5	Approximately 20	-40 to +125

a= Enter resistance tolerance code from table above (J = ±5%, K = ±10%, L = ±15%)

Bx= Enter Beta code from table above (B1=25/50)

b= Enter Beta tolerance code from table above (K = ±10%)

c= Enter Lead style code from table above (S=Straight lead, O=Out lead)

Temperature characteristics

Part number	NRCE500 2450	NRCE101 2750	NRCE151 2800	NRCE201 2800	NRCE251 2900	NRCE331 2900	NRCE451 3000	NRCE501 3050	NRCE851 3100	NRCE102 3200	NRCE152 3250
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
-40	42.47	117.53	180.57	244.69	338.16	465.1	710.6	777.01	1433.94	1659.28	2834.13
-39	40.84	112.22	172.38	233.45	321.95	442.14	673.77	737.74	1358.47	1575.1	2680.15
-38	39.29	107.17	164.61	222.79	306.62	420.47	639.12	700.71	1287.49	1495.68	2535.55
-37	37.79	102.39	157.23	212.69	292.12	400.01	606.5	665.78	1220.72	1420.72	2399.72
-36	36.37	97.85	150.23	203.1	278.4	380.69	575.77	632.81	1157.86	1349.94	2272.06
-35	35	93.54	143.58	194.01	265.41	362.43	546.83	601.69	1098.67	1283.1	2152.03
-34	33.7	89.44	137.27	185.38	253.1	345.18	519.54	572.3	1042.91	1219.94	2039.13
-33	32.45	85.55	131.27	177.19	241.45	328.86	493.81	544.53	990.36	1160.26	1932.9
-32	31.25	81.86	125.57	169.41	230.4	313.43	469.54	518.28	940.82	1103.84	1832.9
-31	30.1	78.34	120.15	162.02	219.93	298.82	446.63	493.47	894.09	1050.48	1738.72
-30	29	75	115	155	210	285	425	470	850	1000	1650
-29	27.95	71.82	110.1	148.33	200.58	271.91	404.57	447.8	808.38	952.24	1566.38
-28	26.94	68.8	105.43	141.98	191.64	259.51	385.27	426.78	769.08	907.02	1487.55
-27	25.97	65.92	101	135.94	183.16	247.76	367.02	406.89	731.95	864.21	1413.19
-26	25.04	63.18	96.77	130.2	175.11	236.62	349.76	388.05	696.87	823.67	1343.03
-25	24.15	60.57	92.75	124.74	167.46	226.05	333.44	370.2	663.7	785.25	1276.8
-24	23.3	58.08	88.91	119.54	160.19	216.03	317.99	353.28	632.33	748.84	1214.27
-23	22.48	55.71	85.26	114.58	153.28	206.52	303.36	337.24	602.66	714.33	1155.21
-22	21.69	53.45	81.78	109.87	146.71	197.49	289.51	322.03	574.57	681.6	1099.39
-21	20.94	51.3	78.46	105.37	140.47	188.92	276.39	307.6	547.98	650.56	1046.63
-20	20.21	49.24	75.3	101.09	134.53	180.78	263.95	293.91	522.79	621.1	996.74
-19	19.52	47.29	72.28	97	128.88	173.04	252.15	280.92	498.93	593.14	949.54
-18	18.85	45.42	69.4	93.11	123.5	165.68	240.97	268.57	476.32	566.6	904.88
-17	18.21	43.63	66.65	89.4	118.37	158.69	230.35	256.85	454.87	541.39	862.61
-16	17.59	41.93	64.03	85.85	113.5	152.03	220.28	245.71	434.54	517.45	822.57
-15	17	40.31	61.53	82.47	108.85	145.7	210.72	235.13	415.25	494.69	784.65
-14	16.43	38.75	59.13	79.24	104.42	139.68	201.63	225.06	396.93	473.07	748.71
-13	15.88	37.27	56.85	76.16	100.2	133.94	193	215.49	379.55	452.51	714.65
-12	15.36	35.85	54.67	73.22	96.17	128.48	184.79	206.38	363.04	432.96	682.35
-11	14.85	34.49	52.58	70.41	92.34	123.27	176.99	197.72	347.35	414.36	651.71
-10	14.36	33.2	50.59	67.72	88.67	118.31	169.57	189.47	332.45	396.66	622.64
-9	13.9	31.96	48.68	65.15	85.18	113.58	162.52	181.62	318.28	379.82	595.05
-8	13.44	30.77	46.85	62.7	81.84	109.07	155.8	174.14	304.8	363.79	568.86
-7	13.01	29.64	45.11	60.35	78.66	104.77	149.4	167.01	291.98	348.52	543.97
-6	12.59	28.55	43.44	58.1	75.62	100.67	143.31	160.22	279.79	333.98	520.34
-5	12.19	27.51	41.84	55.95	72.71	96.75	137.51	153.74	268.18	320.12	497.87
-4	11.81	26.51	40.31	53.89	69.94	93.01	131.98	147.57	257.12	306.91	476.51
-3	11.43	25.56	38.84	51.92	67.28	89.44	126.71	141.68	246.59	294.33	456.21
-2	11.08	24.65	37.44	50.04	64.75	86.03	121.69	136.07	236.56	282.32	436.89
-1	10.73	23.77	36.09	48.23	62.32	82.77	116.89	130.71	227.01	270.88	418.5
0	10.4	22.93	34.8	46.5	60	79.65	112.32	125.59	217.89	259.96	401.01
1	10.08	22.13	33.57	44.84	57.78	76.68	107.96	120.7	209.2	249.53	384.35
2	9.77	21.36	32.38	43.25	55.65	73.83	103.79	116.04	200.92	239.59	368.49
3	9.47	20.61	31.25	41.73	53.62	71.1	99.81	111.58	193.01	230.09	353.37
4	9.18	19.9	30.16	40.27	51.67	68.5	96.01	107.32	185.46	221.03	338.97
5	8.91	19.22	29.11	38.87	49.81	66	92.38	103.24	178.26	212.37	325.25
6	8.64	18.57	28.11	37.53	48.02	63.62	88.91	99.35	171.38	204.09	312.16
7	8.38	17.94	27.14	36.24	46.31	61.33	85.59	95.63	164.8	196.19	299.68
8	8.13	17.34	26.22	35	44.67	59.14	82.42	92.07	158.53	188.63	287.77
9	7.89	16.76	25.33	33.81	43.09	57.04	79.38	88.66	152.52	181.4	276.4
10	7.66	16.2	24.48	32.67	41.59	55.03	76.48	85.4	146.79	174.49	265.56
11	7.44	15.67	23.66	31.57	40.14	53.1	73.7	82.27	141.3	167.88	255.2
12	7.22	15.15	22.87	30.52	38.75	51.25	71.04	79.28	136.06	161.56	245.31
13	7.01	14.66	22.12	29.51	37.42	49.48	68.49	76.42	131.03	155.51	235.86
14	6.81	14.18	21.39	28.54	36.14	47.78	66.05	73.68	126.23	149.72	226.83
15	6.62	13.73	20.69	27.6	34.91	46.15	63.71	71.05	121.63	144.17	218.21
16	6.43	13.29	20.02	26.7	33.74	44.58	61.47	68.53	117.23	138.86	209.96
17	6.25	12.86	19.37	25.84	32.6	43.08	59.32	66.11	113.01	133.78	202.07
18	6.07	12.46	18.75	25.01	31.52	41.64	57.26	63.79	108.97	128.91	194.52

Temperature characteristics, cont.

Part number	NRCE500 2450	NRCE101 2750	NRCE151 2800	NRCE201 2800	NRCE251 2900	NRCE331 2900	NRCE451 3000	NRCE501 3050	NRCE851 3100	NRCE102 3200	NRCE152 3250
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
19	5.91	12.06	18.15	24.21	30.47	40.25	55.29	61.57	105.1	124.24	187.3
20	5.74	11.69	17.58	23.44	29.47	38.92	53.39	59.44	101.39	119.76	180.39
21	5.58	11.32	17.02	22.7	28.5	37.64	51.57	57.4	97.83	115.47	173.78
22	5.43	10.97	16.49	21.98	27.58	36.41	49.83	55.43	94.42	111.36	167.44
23	5.28	10.64	15.97	21.3	26.68	35.23	48.15	53.55	91.15	107.41	161.38
24	5.14	10.31	15.48	20.64	25.83	34.09	46.55	51.74	88.01	103.63	155.57
25	5	10	15	20	25	33	45	50	85	100	150
26	4.87	9.7	14.54	19.39	24.21	31.95	43.52	48.33	82.11	96.52	144.66
27	4.74	9.41	14.1	18.8	23.44	30.94	42.09	46.73	79.33	93.17	139.55
28	4.61	9.13	13.67	18.23	22.7	29.96	40.72	45.18	76.67	89.96	134.64
29	4.49	8.86	13.26	17.68	22	29.03	39.4	43.7	74.11	86.88	129.94
30	4.37	8.6	12.86	17.15	21.31	28.12	38.13	42.28	71.65	83.92	125.43
31	4.26	8.34	12.48	16.64	20.66	27.25	36.91	40.91	69.29	81.07	121.1
32	4.15	8.1	12.11	16.14	20.02	26.42	35.74	39.59	67.01	78.34	116.94
33	4.04	7.87	11.75	15.67	19.41	25.61	34.61	38.32	64.83	75.71	112.95
34	3.94	7.64	11.41	15.21	18.82	24.83	33.53	37.1	62.73	73.19	109.12
35	3.84	7.42	11.08	14.77	18.26	24.09	32.48	35.92	60.71	70.76	105.44
36	3.74	7.21	10.76	14.34	17.71	23.36	31.47	34.79	58.77	68.42	101.91
37	3.64	7.01	10.45	13.93	17.18	22.67	30.5	33.7	56.9	66.18	98.51
38	3.55	6.81	10.15	13.53	16.67	22	29.57	32.65	55.1	64.02	95.25
39	3.46	6.62	9.86	13.14	16.18	21.35	28.67	31.64	53.37	61.94	92.11
40	3.38	6.44	9.58	12.77	15.71	20.72	27.8	30.67	51.7	59.94	89.09
41	3.29	6.26	9.31	12.41	15.25	20.12	26.97	29.73	50.09	58.02	86.19
42	3.21	6.09	9.05	12.06	14.81	19.54	26.16	28.83	48.55	56.16	83.4
43	3.14	5.92	8.8	11.73	14.38	18.98	25.39	27.96	47.06	54.38	80.72
44	3.06	5.76	8.55	11.4	13.97	18.44	24.64	27.12	45.62	52.66	78.14
45	2.99	5.6	8.32	11.09	13.57	17.91	23.91	26.3	44.24	51.01	75.65
46	2.91	5.45	8.09	10.79	13.19	17.41	23.22	25.52	42.9	49.41	73.26
47	2.84	5.31	7.87	10.5	12.82	16.92	22.54	24.77	41.62	47.87	70.96
48	2.78	5.17	7.66	10.21	12.46	16.45	21.89	24.04	40.38	46.39	68.74
49	2.71	5.03	7.45	9.94	12.11	15.99	21.27	23.34	39.18	44.97	66.6
50	2.65	4.9	7.25	9.67	11.78	15.55	20.66	22.66	38.03	43.59	64.54
51	2.59	4.77	7.06	9.41	11.46	15.12	20.08	22.01	36.91	42.26	62.56
52	2.53	4.65	6.87	9.17	11.14	14.71	19.51	21.37	35.84	40.98	60.65
53	2.47	4.53	6.69	8.92	10.84	14.31	18.96	20.76	34.8	39.75	58.8
54	2.41	4.41	6.52	8.69	10.55	13.93	18.44	20.17	33.8	38.56	57.03
55	2.36	4.3	6.35	8.47	10.26	13.55	17.93	19.6	32.83	37.41	55.31
56	2.3	4.19	6.18	8.25	9.99	13.19	17.43	19.05	31.89	36.3	53.66
57	2.25	4.08	6.03	8.04	9.72	12.84	16.96	18.52	30.99	35.23	52.07
58	2.2	3.98	5.87	7.83	9.47	12.5	16.5	18.01	30.12	34.19	50.53
59	2.15	3.88	5.72	7.63	9.22	12.18	16.05	17.51	29.28	33.2	49.04
60	2.1	3.79	5.58	7.44	8.98	11.86	15.62	17.03	28.46	32.23	47.61
61	2.06	3.69	5.44	7.25	8.74	11.55	15.2	16.56	27.68	31.3	46.23
62	2.01	3.6	5.3	7.07	8.52	11.26	14.8	16.11	26.91	30.4	44.89
63	1.97	3.52	5.17	6.89	8.3	10.97	14.41	15.68	26.18	29.53	43.6
64	1.92	3.43	5.04	6.72	8.09	10.69	14.03	15.26	25.47	28.69	42.35
65	1.88	3.35	4.92	6.56	7.88	10.42	13.66	14.85	24.78	27.88	41.15
66	1.84	3.27	4.8	6.4	7.68	10.16	13.31	14.45	24.11	27.1	39.99
67	1.8	3.19	4.68	6.24	7.49	9.9	12.97	14.07	23.47	26.34	38.86
68	1.77	3.11	4.57	6.09	7.3	9.66	12.63	13.7	22.84	25.6	37.78
69	1.73	3.04	4.46	5.95	7.12	9.42	12.31	13.34	22.24	24.9	36.73
70	1.69	2.97	4.35	5.8	6.94	9.18	12	13	21.65	24.21	35.71
71	1.66	2.9	4.25	5.66	6.77	8.96	11.7	12.66	21.09	23.54	34.73
72	1.62	2.83	4.15	5.53	6.61	8.74	11.4	12.33	20.54	22.9	33.78
73	1.59	2.77	4.05	5.4	6.45	8.53	11.12	12.02	20.01	22.28	32.86
74	1.56	2.7	3.95	5.27	6.29	8.33	10.84	11.71	19.49	21.68	31.97
75	1.52	2.64	3.86	5.15	6.14	8.13	10.57	11.42	18.99	21.1	31.11
76	1.49	2.58	3.77	5.03	5.99	7.93	10.31	11.13	18.51	20.53	30.28
77	1.46	2.52	3.68	4.92	5.85	7.74	10.06	10.85	18.04	19.99	29.47

Temperature characteristics, cont.

Part number	NRCE500 2450	NRCE101 2750	NRCE151 2800	NRCE201 2800	NRCE251 2900	NRCE331 2900	NRCE451 3000	NRCE501 3050	NRCE851 3100	NRCE102 3200	NRCE152 3250
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
78	1.43	2.47	3.6	4.8	5.71	7.56	9.82	10.58	17.59	19.46	28.69
79	1.4	2.41	3.52	4.69	5.58	7.39	9.58	10.32	17.15	18.94	27.93
80	1.38	2.36	3.44	4.59	5.44	7.21	9.35	10.06	16.72	18.45	27.2
81	1.35	2.31	3.36	4.48	5.32	7.05	9.13	9.82	16.3	17.97	26.49
82	1.32	2.26	3.28	4.38	5.19	6.88	8.91	9.58	15.9	17.5	25.8
83	1.3	2.21	3.21	4.29	5.07	6.73	8.7	9.34	15.51	17.05	25.14
84	1.27	2.16	3.14	4.19	4.96	6.57	8.5	9.12	15.13	16.61	24.49
85	1.25	2.11	3.07	4.1	4.85	6.42	8.3	8.9	14.77	16.19	23.87
86	1.22	2.07	3	4.01	4.74	6.28	8.11	8.69	14.41	15.78	23.26
87	1.2	2.02	2.94	3.92	4.63	6.14	7.92	8.48	14.07	15.38	22.68
88	1.18	1.98	2.87	3.84	4.52	6	7.74	8.28	13.73	14.99	22.11
89	1.15	1.94	2.81	3.75	4.42	5.87	7.56	8.09	13.4	14.61	21.55
90	1.13	1.9	2.75	3.67	4.32	5.74	7.39	7.9	13.09	14.25	21.02
91	1.11	1.86	2.69	3.59	4.23	5.61	7.22	7.71	12.78	13.9	20.5
92	1.09	1.82	2.63	3.52	4.14	5.49	7.06	7.53	12.48	13.55	19.99
93	1.07	1.78	2.58	3.44	4.05	5.37	6.9	7.36	12.19	13.22	19.5
94	1.05	1.74	2.52	3.37	3.96	5.25	6.75	7.19	11.91	12.9	19.03
95	1.03	1.71	2.47	3.3	3.87	5.14	6.6	7.03	11.64	12.58	18.57
96	1.01	1.67	2.42	3.23	3.79	5.03	6.45	6.87	11.37	12.28	18.12
97	0.9946	1.64	2.37	3.16	3.71	4.92	6.31	6.71	11.11	11.98	17.69
98	0.9766	1.61	2.32	3.1	3.63	4.82	6.17	6.56	10.86	11.7	17.26
99	0.9591	1.57	2.27	3.03	3.55	4.72	6.04	6.42	10.61	11.42	16.85
100	0.942	1.54	2.23	2.97	3.48	4.62	5.91	6.27	10.38	11.15	16.46
101	0.9252	1.51	2.18	2.91	3.4	4.52	5.78	6.14	10.15	10.89	16.07
102	0.9089	1.48	2.14	2.85	3.33	4.43	5.66	6	9.92	10.63	15.69
103	0.8929	1.45	2.09	2.8	3.26	4.34	5.54	5.87	9.7	10.38	15.33
104	0.8773	1.43	2.05	2.74	3.2	4.25	5.42	5.74	9.49	10.14	14.97
105	0.8621	1.4	2.01	2.69	3.13	4.16	5.31	5.62	9.28	9.9	14.63
106	0.8472	1.37	1.97	2.63	3.07	4.08	5.2	5.5	9.08	9.68	14.29
107	0.8326	1.34	1.93	2.58	3	4	5.09	5.38	8.88	9.45	13.97
108	0.8183	1.32	1.89	2.53	2.94	3.92	4.98	5.26	8.69	9.24	13.65
109	0.8044	1.29	1.86	2.48	2.88	3.84	4.88	5.15	8.51	9.03	13.34
110	0.7908	1.27	1.82	2.43	2.83	3.76	4.78	5.04	8.32	8.83	13.04
111	0.7775	1.24	1.79	2.39	2.77	3.69	4.68	4.94	8.15	8.63	12.75
112	0.7645	1.22	1.75	2.34	2.71	3.61	4.59	4.83	7.98	8.43	12.47
113	0.7517	1.2	1.72	2.29	2.66	3.54	4.5	4.73	7.81	8.25	12.19
114	0.7393	1.18	1.68	2.25	2.61	3.47	4.41	4.64	7.65	8.06	11.92
115	0.7271	1.15	1.65	2.21	2.56	3.41	4.32	4.54	7.49	7.89	11.66
116	0.7151	1.13	1.62	2.17	2.51	3.34	4.23	4.45	7.33	7.71	11.41
117	0.7035	1.11	1.59	2.13	2.46	3.28	4.15	4.36	7.18	7.54	11.16
118	0.6921	1.09	1.56	2.09	2.41	3.21	4.07	4.27	7.03	7.38	10.92
119	0.6809	1.07	1.53	2.05	2.36	3.15	3.99	4.18	6.89	7.22	10.68
120	0.6699	1.05	1.5	2.01	2.32	3.09	3.91	4.1	6.75	7.06	10.46
121	0.6592	1.03	1.48	1.97	2.28	3.04	3.83	4.02	6.62	6.91	10.23
122	0.6487	1.02	1.45	1.94	2.23	2.98	3.76	3.94	6.48	6.77	10.02
123	0.6385	0.9982	1.42	1.9	2.19	2.92	3.69	3.86	6.35	6.62	9.81
124	0.6284	0.9806	1.4	1.87	2.15	2.87	3.62	3.78	6.23	6.48	9.6
125	0.6186	0.9634	1.37	1.83	2.11	2.82	3.55	3.71	6.1	6.35	9.4



Temperature characteristics

Part number	NRCE202 3400	NRCE302 3600	NRCE332 3600	NRCE472 3600	NRCE502 3650	NRCE682 3700	NRCE103 3800	NRCE153 3900	NRCE203 3950	NRCE253 4000
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
-40	4437.95	8674.93	9374.49	12207.58	13333.37	20329.88	31068.51	46546.03	63377.79	79985.7
-39	4182.26	8121.94	8782.74	11474.08	12529.72	19041.2	29102.74	43661.86	59446.46	75046.04
-38	3943.06	7608.44	8232.78	10789.51	11779.69	17843.32	27274.28	40973.26	55781.32	70438.32
-37	3719.18	7131.34	7721.36	10150.3	11079.37	16729.25	25572.72	38465.92	52362.95	66138.55
-36	3509.54	6687.79	7245.53	9553.17	10425.18	15692.58	23988.46	36126.62	49173.41	62124.58
-35	3313.15	6275.21	6802.55	8995.09	9813.8	14727.42	22512.71	33943.2	46196.19	58375.97
-34	3129.09	5891.21	6389.93	8473.28	9242.18	13828.37	21137.37	31904.42	43416.03	54873.81
-33	2956.5	5533.61	6005.38	7985.15	8707.49	12990.48	19855.01	29999.92	40818.84	51600.67
-32	2794.6	5200.4	5646.81	7528.33	8207.14	12209.19	18658.78	28220.13	38391.64	48540.42
-31	2642.66	4889.76	5312.27	7100.63	7738.72	11480.32	17542.38	26556.21	36122.39	45678.13
-30	2500	4600	5000	6700	7300	10800	16500	25000	34000	43000
-29	2366.01	4329.57	4708.36	6324.58	6888.93	10164.7	15526.29	23543.95	32014.19	40493.26
-28	2240.09	4077.05	4435.85	5972.62	6503.59	9571.14	14616.31	22181.07	30155.47	38146.09
-27	2121.72	3841.12	4181.09	5642.53	6142.24	9016.32	13765.51	20904.92	28415.03	35947.52
-26	2010.4	3620.59	3942.8	5332.81	5803.24	8497.47	12969.69	19709.49	26784.74	33887.41
-25	1905.66	3414.35	3719.8	5042.08	5485.07	8012.02	12224.98	18589.27	25257.06	31956.35
-24	1807.07	3221.36	3511.02	4769.06	5186.34	7557.61	11527.78	17539.11	23824.99	30145.61
-23	1714.23	3040.69	3315.45	4512.58	4905.74	7132.06	10874.78	16554.28	22482.07	28447.1
-22	1626.78	2871.47	3132.16	4271.53	4642.08	6733.36	10262.93	15630.34	21222.27	26853.3
-21	1544.37	2712.9	2960.32	4044.9	4394.23	6359.64	9689.39	14763.23	20040.03	25357.25
-20	1466.68	2564.23	2799.12	3831.73	4161.14	6009.19	9151.52	13949.14	18930.17	23952.47
-19	1393.4	2424.78	2647.83	3631.15	3941.87	5680.41	8646.92	13184.56	17887.9	22632.93
-18	1324.27	2293.92	2505.79	3442.35	3735.51	5371.82	8173.32	12466.21	16908.75	21393.05
-17	1259.01	2171.06	2372.37	3264.55	3541.23	5082.06	7728.63	11791.05	15988.57	20227.63
-16	1197.4	2055.66	2246.99	3097.06	3358.24	4809.86	7310.93	11156.27	15123.51	19131.82
-15	1139.21	1947.21	2129.11	2939.21	3185.84	4554.06	6918.42	10559.24	14310	18101.14
-14	1084.22	1845.25	2018.23	2790.41	3023.35	4313.55	6549.44	9997.51	13544.69	17131.39
-13	1032.24	1749.36	1913.9	2650.07	2870.14	4087.35	6202.44	9468.81	12824.49	16218.67
-12	983.09	1659.12	1815.68	2517.66	2725.63	3874.5	5875.98	8971.04	12146.51	15359.36
-11	936.6	1574.17	1723.18	2392.7	2589.27	3674.13	5568.73	8502.22	11508.07	14550.06
-10	892.6	1494.17	1636.03	2274.72	2460.57	3485.44	5279.45	8060.51	10906.64	13787.62
-9	850.96	1418.79	1553.88	2163.29	2339.05	3307.68	5006.99	7644.22	10339.92	13069.11
-8	811.52	1347.74	1476.42	2058.01	2224.27	3140.15	4750.27	7251.74	9805.71	12391.78
-7	774.16	1280.74	1403.35	1958.5	2115.81	2982.2	4508.29	6881.6	9301.99	11753.07
-6	738.76	1217.54	1334.4	1864.42	2013.3	2833.22	4280.12	6532.4	8826.87	11150.59
-5	705.21	1157.89	1269.3	1775.44	1916.37	2692.65	4064.9	6202.85	8378.57	10582.12
-4	673.39	1101.57	1207.81	1691.25	1824.69	2559.96	3861.82	5891.75	7955.46	10045.57
-3	643.2	1048.38	1149.72	1611.57	1737.95	2434.66	3670.12	5597.98	7555.99	9538.99
-2	614.57	998.12	1094.81	1536.13	1655.85	2316.31	3489.11	5320.47	7178.72	9060.58
-1	587.38	950.61	1042.89	1464.69	1578.12	2204.47	3318.12	5058.24	6822.31	8608.62
0	561.57	905.69	993.78	1397	1504.5	2098.74	3156.55	4810.38	6485.5	8181.53
1	537.06	863.19	947.32	1332.85	1434.75	1998.76	3003.82	4576.03	6167.12	7777.82
2	513.77	822.98	903.33	1272.04	1368.66	1904.18	2859.41	4354.37	5866.07	7396.1
3	491.63	784.91	861.67	1214.37	1306	1814.68	2722.81	4144.66	5581.32	7035.07
4	470.59	748.85	822.21	1159.67	1246.57	1729.95	2593.55	3946.2	5311.9	6693.51
5	450.58	714.69	784.82	1107.75	1190.21	1649.71	2471.21	3758.32	5056.92	6370.27
6	431.54	682.32	749.38	1058.48	1136.72	1573.7	2355.37	3580.41	4815.53	6064.3
7	413.42	651.63	715.76	1011.69	1085.96	1501.67	2245.65	3411.89	4586.95	5774.58
8	396.18	622.52	683.88	967.25	1037.75	1433.39	2141.69	3252.22	4370.42	5500.17
9	379.76	594.91	653.62	925.03	991.97	1368.64	2043.17	3100.88	4165.25	5240.2
10	364.13	568.7	624.89	884.9	948.48	1307.22	1949.76	2957.4	3970.8	4993.83
11	349.23	543.82	597.62	846.75	907.15	1248.94	1861.18	2821.33	3786.45	4760.29
12	335.03	520.19	571.71	810.48	867.86	1193.62	1777.14	2692.26	3611.62	4538.86
13	321.5	497.75	547.09	775.97	830.5	1141.09	1697.39	2569.79	3445.79	4328.84
14	308.59	476.41	523.69	743.13	794.96	1091.2	1621.7	2453.55	3288.44	4129.6
15	296.29	456.13	501.44	711.88	761.16	1043.8	1549.82	2343.18	3139.09	3940.54
16	284.54	436.85	480.28	682.13	728.98	998.75	1481.54	2238.38	2997.31	3761.08
17	273.34	418.5	460.14	653.79	698.35	955.91	1416.68	2138.82	2862.67	3590.69
18	262.64	401.04	440.98	626.8	669.18	915.18	1355.03	2044.22	2734.78	3428.88

Temperature characteristics, cont.

Part number	NRCE202 3400	NRCE302 3600	NRCE332 3600	NRCE472 3600	NRCE502 3650	NRCE682 3700	NRCE103 3800	NRCE153 3900	NRCE203 3950	NRCE253 4000
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
19	252.42	384.42	422.73	601.08	641.4	876.43	1296.42	1954.31	2613.27	3275.18
20	242.67	368.6	405.36	576.57	614.93	839.56	1240.69	1868.83	2497.79	3129.13
21	233.35	353.53	388.81	553.2	589.71	804.46	1187.68	1787.54	2388.01	2990.32
22	224.44	339.17	373.04	530.91	565.66	771.05	1137.24	1710.23	2283.62	2858.36
23	215.93	325.49	358	509.65	542.73	739.22	1089.23	1636.66	2184.34	2732.88
24	207.79	312.44	343.67	489.36	520.86	708.9	1043.52	1566.65	2089.88	2613.54
25	200	300	330	470	500	680	1000	1500	2000	2500
26	192.55	288.13	316.96	451.52	480.09	652.45	958.54	1436.54	1914.44	2391.96
27	185.43	276.81	304.51	433.86	461.09	626.19	919.04	1376.1	1832.99	2289.12
28	178.61	266	292.63	417	442.94	601.14	881.38	1318.51	1755.41	2191.21
29	172.08	255.68	281.29	400.9	425.61	577.24	845.49	1263.64	1681.52	2097.97
30	165.82	245.83	270.45	385.5	409.06	554.43	811.26	1211.34	1611.11	2009.16
31	159.83	236.41	260.1	370.79	393.24	532.66	778.61	1161.48	1544.02	1924.55
32	154.1	227.42	250.21	356.72	378.12	511.87	747.46	1113.93	1480.05	1843.91
33	148.6	218.82	240.75	343.26	363.67	492.02	717.74	1068.57	1419.07	1767.05
34	143.33	210.6	231.71	330.39	349.85	473.05	689.36	1025.3	1360.9	1693.78
35	138.27	202.74	223.07	318.07	336.64	454.93	662.26	984.01	1305.42	1623.9
36	133.43	195.22	214.79	306.28	323.99	437.6	636.38	944.59	1252.48	1557.24
37	128.78	188.03	206.88	295	311.89	421.04	611.66	906.95	1201.95	1493.65
38	124.32	181.14	199.3	284.19	300.31	405.2	588.03	871.01	1153.72	1432.96
39	120.04	174.55	192.05	273.84	289.22	390.04	565.45	836.68	1107.66	1375.04
40	115.93	168.24	185.1	263.93	278.61	375.55	543.86	803.87	1063.68	1319.73
41	111.99	162.19	178.45	254.43	268.44	361.67	523.22	772.53	1021.66	1266.93
42	108.2	156.4	172.07	245.32	258.7	348.39	503.47	742.56	981.52	1216.49
43	104.57	150.85	165.97	236.59	249.36	335.67	484.58	713.92	943.15	1168.3
44	101.07	145.53	160.11	228.22	240.42	323.49	466.5	686.52	906.48	1122.26
45	97.71	140.43	154.49	220.2	231.84	311.82	449.2	660.31	871.41	1078.25
46	94.49	135.54	149.11	212.5	223.61	300.63	432.63	635.24	837.87	1036.18
47	91.38	130.84	143.94	205.11	215.73	289.92	416.76	611.25	805.8	995.96
48	88.4	126.34	138.98	198.01	208.16	279.64	401.56	588.29	775.11	957.49
49	85.53	122.02	134.23	191.21	200.9	269.79	387	566.3	745.74	920.69
50	82.77	117.87	129.66	184.67	193.93	260.34	373.05	545.25	717.63	885.48
51	80.12	113.89	125.27	178.39	187.24	251.27	359.68	525.09	690.72	851.79
52	77.56	110.06	121.06	172.36	180.82	242.58	346.85	505.77	664.95	819.54
53	75.1	106.39	117.02	166.57	174.65	234.23	334.56	487.26	640.27	788.66
54	72.73	102.86	113.13	161	168.73	226.21	322.76	469.53	616.63	759.1
55	70.45	99.46	109.39	155.65	163.03	218.52	311.45	452.53	593.97	730.79
56	68.26	96.2	105.8	150.51	157.56	211.13	300.59	436.22	572.26	703.66
57	66.14	93.07	102.35	145.56	152.31	204.02	290.17	420.59	551.45	677.68
58	64.1	90.05	99.03	140.8	147.25	197.2	280.17	405.6	531.5	652.77
59	62.14	87.15	95.84	136.23	142.39	190.65	270.56	391.21	512.37	628.9
60	60.24	84.36	92.76	131.83	137.72	184.34	261.34	377.41	494.02	606.01
61	58.42	81.68	89.81	127.59	133.23	178.29	252.48	364.16	476.42	584.07
62	56.66	79.09	86.96	123.51	128.9	172.46	243.96	351.45	459.53	563.02
63	54.96	76.6	84.22	119.58	124.74	166.85	235.78	339.24	443.32	542.84
64	53.32	74.21	81.58	115.8	120.73	161.46	227.92	327.51	427.76	523.47
65	51.74	71.9	79.04	112.16	116.88	156.27	220.36	316.25	412.82	504.88
66	50.22	69.68	76.59	108.65	113.17	151.28	213.09	305.43	398.48	487.04
67	48.75	67.54	74.24	105.28	109.59	146.48	206.09	295.04	384.7	469.91
68	47.33	65.47	71.96	102.02	106.15	141.85	199.37	285.05	371.47	453.47
69	45.95	63.48	69.77	98.88	102.83	137.39	192.9	275.44	358.75	437.68
70	44.63	61.57	67.66	95.86	99.63	133.1	186.67	266.21	346.54	422.51
71	43.35	59.72	65.62	92.94	96.55	128.96	180.68	257.33	334.79	407.94
72	42.12	57.93	63.66	90.13	93.58	124.98	174.91	248.79	323.5	393.94
73	40.92	56.21	61.77	87.41	90.72	121.14	169.35	240.58	312.65	380.49
74	39.77	54.55	59.94	84.79	87.96	117.44	164	232.68	302.21	367.55
75	38.65	52.95	58.18	82.27	85.29	113.87	158.84	225.07	292.17	355.12
76	37.57	51.41	56.47	79.83	82.73	110.43	153.88	217.75	282.51	343.16
77	36.53	49.91	54.83	77.48	80.25	107.11	149.09	210.71	273.22	331.67

Temperature characteristics, cont.

Part number	NRCE202 3400	NRCE302 3600	NRCE332 3600	NRCE472 3600	NRCE502 3650	NRCE682 3700	NRCE103 3800	NRCE153 3900	NRCE203 3950	NRCE253 4000
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
78	35.52	48.47	53.24	75.21	77.86	103.9	144.48	203.92	264.28	320.61
79	34.55	47.08	51.71	73.02	75.55	100.81	140.04	197.39	255.67	309.97
80	33.61	45.74	50.23	70.9	73.32	97.83	135.75	191.1	247.38	299.73
81	32.69	44.44	48.8	68.85	71.17	94.96	131.62	185.04	239.4	289.88
82	31.81	43.19	47.42	66.88	69.1	92.18	127.63	179.2	231.72	280.4
83	30.96	41.97	46.09	64.97	67.09	89.5	123.79	173.57	224.31	271.27
84	30.13	40.8	44.8	63.12	65.15	86.91	120.08	168.15	217.18	262.48
85	29.33	39.67	43.55	61.34	63.28	84.4	116.5	162.92	210.31	254.01
86	28.55	38.57	42.35	59.62	61.47	81.99	113.04	157.88	203.69	245.86
87	27.8	37.51	41.18	57.95	59.72	79.65	109.71	153.02	197.31	238
88	27.08	36.49	40.05	56.34	58.04	77.4	106.49	148.33	191.16	230.44
89	26.37	35.5	38.96	54.78	56.4	75.22	103.38	143.81	185.23	223.14
90	25.69	34.54	37.91	53.27	54.82	73.11	100.38	139.45	179.51	216.11
91	25.03	33.61	36.88	51.81	53.3	71.07	97.47	135.24	173.99	209.34
92	24.39	32.71	35.9	50.4	51.82	69.1	94.67	131.18	168.67	202.81
93	23.77	31.84	34.94	49.04	50.39	67.19	91.96	127.25	163.54	196.51
94	23.16	31	34.01	47.72	49.01	65.35	89.35	123.47	158.59	190.43
95	22.58	30.19	33.12	46.44	47.67	63.56	86.82	119.81	153.8	184.57
96	22.01	29.4	32.25	45.2	46.38	61.84	84.37	116.28	149.19	178.92
97	21.46	28.63	31.41	44	45.12	60.17	82.01	112.87	144.74	173.46
98	20.93	27.89	30.59	42.83	43.91	58.55	79.72	109.58	140.43	168.2
99	20.42	27.17	29.8	41.71	42.74	56.99	77.51	106.4	136.28	163.12
100	19.91	26.48	29.04	40.62	41.6	55.47	75.37	103.32	132.27	158.22
101	19.43	25.8	28.29	39.56	40.5	54	73.3	100.35	128.39	153.48
102	18.95	25.15	27.57	38.54	39.43	52.58	71.3	97.48	124.65	148.91
103	18.5	24.52	26.88	37.55	38.4	51.2	69.36	94.7	121.03	144.49
104	18.05	23.9	26.2	36.58	37.4	49.87	67.48	92.02	117.54	140.23
105	17.62	23.31	25.55	35.65	36.43	48.58	65.67	89.42	114.16	136.11
106	17.2	22.73	24.91	34.75	35.49	47.32	63.91	86.91	110.89	132.13
107	16.79	22.17	24.29	33.87	34.57	46.11	62.2	84.48	107.73	128.28
108	16.4	21.62	23.69	33.02	33.69	44.93	60.55	82.13	104.68	124.57
109	16.01	21.09	23.11	32.19	32.83	43.79	58.96	79.86	101.72	120.97
110	15.64	20.58	22.55	31.39	32	42.68	57.41	77.66	98.87	117.5
111	15.27	20.08	22	30.62	31.19	41.61	55.91	75.53	96.1	114.14
112	14.92	19.6	21.47	29.86	30.41	40.57	54.45	73.46	93.43	110.89
113	14.58	19.13	20.96	29.13	29.65	39.56	53.04	71.47	90.84	107.75
114	14.24	18.68	20.46	28.42	28.92	38.58	51.68	69.54	88.34	104.71
115	13.92	18.23	19.97	27.73	28.2	37.63	50.35	67.66	85.91	101.77
116	13.6	17.81	19.5	27.06	27.51	36.71	49.07	65.85	83.56	98.93
117	13.3	17.39	19.04	26.41	26.84	35.81	47.83	64.1	81.29	96.18
118	13	16.98	18.59	25.78	26.18	34.94	46.62	62.4	79.09	93.51
119	12.71	16.59	18.16	25.17	25.55	34.1	45.45	60.75	76.96	90.93
120	12.43	16.2	17.74	24.57	24.93	33.28	44.31	59.15	74.9	88.44
121	12.15	15.83	17.33	23.99	24.33	32.48	43.21	57.6	72.9	86.02
122	11.88	15.47	16.93	23.43	23.75	31.71	42.14	56.1	70.96	83.68
123	11.62	15.12	16.55	22.88	23.19	30.96	41.1	54.65	69.08	81.42
124	11.37	14.78	16.17	22.35	22.64	30.23	40.09	53.24	67.26	79.22
125	11.12	14.44	15.8	21.83	22.11	29.52	39.11	51.87	65.5	77.09

Temperature characteristics

Part number	NRCE303 4000	NRCE333 4000	NRCE473 4050	NRCE503 4050	NRCE603 4050	NRCE683 4050	NRCE803 4050	NRCE104 4050	NRCE124 4050	NRCE154 4200
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
-40	91829.72	102312.75	133411.37	156389.65	177538.22	211194.5	256759.55	352489.95	352746.16	473769.95
-39	86279.21	96089.01	125699.18	146915.16	167064.2	198439.22	241002.93	329859.95	331985.67	445595.36
-38	81092.81	90276.53	118467.24	138062.43	157257.52	186518.29	226295.66	308815.41	312545.01	419220.51
-37	76244.88	84846.09	111683.58	129787.7	148072.67	175373.16	212562.66	289236.57	294334.32	394522.81
-36	71711.69	79770.71	105318.51	122050.49	139467.43	164949.69	199734.62	271013.32	277270.25	371388.48
-35	67471.29	75025.43	99344.42	114813.34	131402.64	155197.73	187747.46	254044.4	261275.47	349711.96
-34	63503.34	70587.17	93735.63	108041.55	123841.93	146070.87	176541.93	238236.63	246278.2	329395.23
-33	59789.05	66434.55	88468.26	101703.01	116751.56	137526.08	166063.26	223504.25	232211.77	310347.28
-32	56310.96	62547.81	83520.09	95767.95	110100.19	129523.53	156260.75	209768.25	219014.27	292483.55
-31	53052.94	58908.61	78870.42	90208.81	103858.69	122026.25	147087.48	196955.87	206628.17	275725.47
-30	50000	55500	74500	85000	98000	115000	138500	185000	195000	260000
-29	47138.26	52306.24	70390.89	80117.81	92498.94	108412.98	130458.07	173838.77	184080.03	245239.22
-28	44454.82	49312.76	66526.36	75540.23	87332.13	102235.69	122924.39	163415.08	173822	231379.94
-27	41937.74	46506.01	62890.86	71246.83	82477.77	96440.74	115864.39	153676.23	164182.89	218363.39
-26	39575.92	43873.46	59469.84	67218.66	77915.61	91002.7	109246	144573.57	155122.64	206134.85
-25	37359.03	41403.46	56249.76	63438.09	73626.79	85897.94	103039.48	136062.14	146603.96	194643.37
-24	35277.5	39085.18	53218	59888.76	69593.73	81104.49	97217.22	128100.37	138592.11	183841.51
-23	33322.43	36908.58	50362.76	56555.46	65800.08	76601.94	91753.6	120649.84	131054.74	173685.05
-22	31485.53	34864.33	47673.03	53424.04	62230.58	72371.3	86624.81	113675.02	123961.69	164132.81
-21	29759.12	32943.74	45138.55	50481.34	58871.03	68394.89	81808.73	107142.99	117284.83	155146.38
-20	28136.02	31138.74	42749.72	47715.12	55708.16	64656.29	77284.8	101023.32	110997.96	146689.95
-19	26609.57	29441.82	40497.56	45113.99	52729.61	61140.18	73033.93	95287.78	105076.61	138730.12
-18	25173.57	27846.01	38373.71	42667.35	49923.85	57832.3	69038.33	89910.25	99497.96	131235.71
-17	23822.22	26344.79	36370.33	40365.3	47280.11	54719.38	65281.47	84866.49	94240.7	124177.64
-16	22550.16	24932.12	34480.1	38198.64	44788.35	51789.05	61747.96	80134.04	89284.95	117528.76
-15	21352.35	23602.34	32696.17	36158.8	42439.18	49029.76	58423.46	75692.05	84612.11	111263.7
-14	20224.11	22350.21	31012.13	34237.77	40223.82	46430.76	55294.63	71521.18	80204.85	105358.76
-13	19161.09	21170.82	29421.98	32428.1	38134.1	43982.02	52349.03	67603.46	76046.93	99791.82
-12	18159.21	20059.61	27920.12	30722.83	36162.34	41674.17	49575.08	63922.21	72123.18	94542.17
-11	17214.68	19012.32	26501.29	29115.46	34301.4	39498.47	46961.97	60461.93	68419.44	89590.49
-10	16323.94	18024.97	25160.56	27599.93	32544.57	37446.76	44499.63	57208.21	64922.42	84918.66
-9	15483.69	17093.85	23893.32	26170.57	30885.59	35511.42	42178.65	54147.66	61619.73	80509.78
-8	14690.82	16215.49	22695.25	24822.11	29318.6	33685.34	39990.26	51267.79	58499.75	76348
-7	13942.46	15386.66	21562.3	23549.6	27838.11	31961.84	37926.27	48557.03	55551.59	72418.51
-6	13235.9	14604.33	20490.67	22348.41	26438.98	30334.72	35979.03	46004.56	52765.09	68707.42
-5	12568.62	13865.69	19476.79	21214.25	25116.4	28798.16	34141.4	43600.34	50130.69	65201.75
-4	11938.25	13168.08	18517.34	20143.06	23865.86	27346.71	32406.71	41334.99	47639.47	61889.32
-3	11342.57	12509.05	17609.16	19131.06	22683.14	25975.29	30768.71	39199.78	45283.03	58758.72
-2	10779.54	11886.27	16749.33	18174.74	21564.28	24679.12	29221.56	37186.57	43053.54	55799.27
-1	10247.2	11297.58	15935.06	17270.76	20505.56	23453.75	27759.82	35287.77	40943.62	53000.94
0	9743.74	10740.97	15163.78	16416.05	19503.5	22295	26378.38	33496.3	38946.37	50354.34
1	9267.47	10214.54	14433.04	15607.69	18554.83	21198.95	25072.45	31805.54	37055.3	47850.65
2	8816.8	9716.51	13740.55	14842.96	17656.49	20161.93	23837.57	30209.33	35264.34	45481.62
3	8390.23	9245.22	13084.16	14119.32	16805.6	19180.51	22669.55	28701.9	33567.76	43239.47
4	7986.37	8799.11	12461.85	13434.38	15999.45	18251.45	21564.46	27277.86	31960.21	41116.92
5	7603.91	8376.73	11871.71	12785.9	15235.52	17371.75	20518.63	25932.19	30436.66	39107.14
6	7241.61	7976.69	11311.96	12171.78	14511.41	16538.56	19528.6	24660.17	28992.36	37203.69
7	6898.33	7597.73	10780.92	11590.05	13824.9	15749.22	18591.16	23457.41	27622.87	35400.56
8	6572.97	7238.62	10277	11038.85	13173.86	15001.23	17703.26	22319.78	26324.02	33692.07
9	6264.53	6898.25	9798.71	10516.46	12556.33	14292.25	16862.07	21243.44	25091.86	32072.89
10	5972.05	6575.54	9344.64	10021.23	11970.43	13620.07	16064.92	20224.78	23922.71	30538.02
11	5694.63	6269.51	8913.49	9551.65	11414.43	12982.62	15309.31	19260.42	22813.09	29082.74
12	5431.43	5979.22	8503.99	9106.27	10886.68	12377.97	14592.88	18347.2	21759.73	27702.63
13	5181.65	5703.77	8114.99	8683.73	10385.62	11804.27	13913.43	17482.16	20759.54	26393.52
14	4944.56	5442.36	7745.38	8282.77	9909.8	11259.82	13268.88	16662.5	19809.62	25151.49
15	4719.45	5194.2	7394.12	7902.2	9457.84	10742.99	12657.29	15885.63	18907.26	23972.86
16	4505.67	4958.56	7060.22	7540.88	9028.46	10252.27	12076.82	15149.11	18049.87	22854.14
17	4302.59	4734.75	6742.76	7197.76	8620.42	9786.22	11525.76	14450.64	17235.03	21792.06
18	4109.63	4522.12	6440.88	6871.84	8232.59	9343.5	11002.47	13788.07	16460.47	20783.56

Temperature characteristics, cont.

Part number	NRCE303 4000	NRCE333 4000	NRCE473 4050	NRCE503 4050	NRCE603 4050	NRCE683 4050	NRCE803 4050	NRCE104 4050	NRCE124 4050	NRCE154 4200
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
19	3926.24	4320.07	6153.73	6562.2	7863.88	8922.85	10505.44	13159.37	15724.02	19825.71
20	3751.91	4128.02	5880.56	6267.94	7513.28	8523.06	10033.24	12562.65	15023.67	18915.8
21	3586.15	3945.44	5620.63	5988.24	7179.82	8143.02	9584.51	11996.13	14357.49	18051.24
22	3428.5	3771.81	5373.24	5722.31	6862.59	7781.66	9157.98	11458.14	13723.7	17229.61
23	3278.52	3606.66	5137.75	5469.42	6560.74	7437.99	8752.46	10947.09	13120.57	16448.61
24	3135.82	3449.53	4913.53	5228.86	6273.47	7111.06	8366.82	10461.51	12546.51	15706.09
25	3000	3300	4700	5000	6000	6800	8000	10000	12000	15000
26	2870.71	3157.67	4496.62	4782.21	5739.63	6503.96	7651	9561.26	11479.61	14328.43
27	2747.59	3022.16	4302.86	4574.9	5491.67	6222.15	7318.87	9144.05	10983.99	13689.55
28	2630.34	2893.11	4118.23	4377.53	5255.48	5953.84	7002.72	8747.22	10511.86	13081.66
29	2518.64	2770.18	3942.27	4189.57	5030.46	5698.31	6701.72	8369.66	10062.02	12503.15
30	2412.21	2653.07	3774.54	4010.55	4816.03	5454.91	6415.08	8010.36	9633.32	11952.47
31	2310.78	2541.46	3614.62	3840	4611.66	5223	6142.04	7668.34	9224.69	11428.2
32	2214.09	2435.08	3462.11	3677.48	4416.83	5002	5881.9	7342.68	8835.11	10928.97
33	2121.89	2333.66	3316.66	3522.57	4231.05	4791.36	5634	7032.53	8463.62	10453.49
34	2033.97	2236.94	3177.9	3374.9	4053.89	4590.53	5397.71	6737.08	8109.31	10000.54
35	1950.1	2144.69	3045.5	3234.09	3884.89	4399.02	5172.43	6455.56	7771.32	9568.98
36	1870.08	2056.68	2919.15	3099.79	3723.65	4216.37	4957.61	6187.24	7448.83	9157.72
37	1793.72	1972.7	2798.55	2971.68	3569.79	4042.11	4752.71	5931.45	7141.06	8765.73
38	1720.83	1892.54	2683.42	2849.45	3422.93	3875.85	4557.23	5687.53	6847.3	8392.03
39	1651.24	1816.02	2573.48	2732.8	3282.74	3717.16	4370.7	5454.9	6566.85	8035.72
40	1584.79	1742.95	2468.48	2621.45	3148.88	3565.69	4192.67	5232.96	6299.05	7695.9
41	1521.32	1673.17	2368.19	2515.14	3021.05	3421.06	4022.71	5021.17	6043.29	7371.77
42	1460.68	1606.5	2272.37	2413.62	2898.94	3282.95	3860.44	4819.03	5798.97	7062.54
43	1402.75	1542.81	2180.81	2316.65	2782.28	3151.03	3705.46	4626.05	5565.55	6767.47
44	1347.38	1481.94	2093.31	2224.02	2670.81	3024.99	3557.41	4441.78	5342.49	6485.87
45	1294.45	1423.75	2009.67	2135.51	2564.27	2904.56	3415.97	4265.77	5129.29	6217.06
46	1243.84	1368.12	1929.7	2050.92	2462.43	2789.46	3280.8	4097.63	4925.48	5960.43
47	1195.45	1314.93	1853.23	1970.06	2365.06	2679.43	3151.59	3936.95	4730.62	5715.38
48	1149.16	1264.05	1780.09	1892.74	2271.95	2574.23	3028.08	3783.39	4544.26	5481.34
49	1104.87	1215.37	1710.13	1818.81	2182.89	2473.63	2909.96	3636.58	4366.02	5257.78
50	1062.5	1168.8	1643.2	1748.1	2097.7	2377.4	2797	3496.2	4195.5	5044.2
51	1021.95	1124.23	1579.15	1680.45	2016.19	2285.34	2688.94	3361.94	4032.34	4840.11
52	983.12	1081.56	1517.86	1615.72	1938.18	2197.25	2585.54	3233.51	3876.2	4645.05
53	945.96	1040.71	1459.18	1553.78	1863.52	2112.95	2486.6	3110.62	3726.75	4458.6
54	910.36	1001.59	1403.01	1494.48	1792.05	2032.25	2391.89	2993.01	3583.67	4280.35
55	876.27	964.13	1349.22	1437.71	1723.61	1954.99	2301.22	2880.43	3446.67	4109.9
56	843.61	928.23	1297.7	1383.35	1658.07	1881	2214.4	2772.64	3315.47	3946.89
57	812.32	893.84	1248.36	1331.29	1595.3	1810.14	2131.25	2669.42	3189.8	3790.96
58	782.32	860.89	1201.08	1281.41	1535.16	1742.27	2051.59	2570.55	3069.4	3641.78
59	753.58	829.29	1155.78	1233.63	1477.54	1677.23	1975.28	2475.83	2954.04	3499.05
60	726.02	799.01	1112.37	1187.83	1422.32	1614.9	1902.15	2385.06	2843.49	3362.44
61	699.59	769.96	1070.76	1143.94	1369.4	1555.17	1832.05	2298.06	2737.52	3231.69
62	674.24	742.11	1030.87	1101.87	1318.66	1497.9	1764.86	2214.67	2635.94	3106.52
63	649.93	715.39	992.63	1061.53	1270.01	1442.99	1700.43	2134.71	2538.53	2986.67
64	626.6	689.76	955.95	1022.84	1223.36	1390.34	1638.64	2058.02	2445.12	2871.9
65	604.22	665.16	920.77	985.73	1178.61	1339.83	1579.38	1984.47	2355.53	2761.97
66	582.73	641.55	887.03	950.13	1135.68	1291.38	1522.52	1913.9	2269.58	2656.66
67	562.11	618.88	854.65	915.98	1094.5	1244.89	1467.97	1846.18	2187.12	2555.77
68	542.31	597.12	823.58	883.2	1054.97	1200.27	1415.62	1781.19	2107.99	2459.09
69	523.29	576.22	793.77	851.74	1017.04	1157.45	1365.36	1718.79	2032.03	2366.43
70	505.03	556.15	765.15	821.53	980.63	1116.34	1317.12	1658.89	1959.13	2277.61
71	487.49	536.87	737.67	792.53	945.67	1076.87	1270.79	1601.36	1889.13	2192.45
72	470.63	518.35	711.29	764.68	912.09	1038.97	1226.3	1546.1	1821.91	2110.8
73	454.44	500.55	685.95	737.93	879.85	1002.56	1183.56	1493.02	1757.36	2032.5
74	438.87	483.43	661.62	712.23	848.88	967.58	1142.51	1442.01	1695.35	1957.4
75	423.9	466.99	638.24	687.54	819.13	933.98	1103.06	1392.99	1635.78	1885.35
76	409.52	451.17	615.78	663.81	790.54	901.68	1065.14	1345.87	1578.54	1816.23
77	395.68	435.96	594.2	641	763.07	870.64	1028.7	1300.57	1523.54	1749.9

Temperature characteristics, cont.

Part number	NRCE303 4000	NRCE333 4000	NRCE473 4050	NRCE503 4050	NRCE603 4050	NRCE683 4050	NRCE803 4050	NRCE104 4050	NRCE124 4050	NRCE154 4200
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
78	382.37	421.33	573.46	619.08	736.66	840.81	993.67	1257.01	1470.67	1686.23
79	369.57	407.26	553.52	598.00	711.27	812.12	959.98	1215.11	1419.84	1625.13
80	357.26	393.73	534.36	577.72	686.86	784.53	927.58	1174.81	1370.98	1566.46
81	345.41	380.70	515.93	558.23	663.39	758.00	896.42	1136.04	1323.99	1510.14
82	334.00	368.16	498.21	539.47	640.82	732.48	866.44	1098.73	1278.80	1456.04
83	323.02	356.09	481.17	521.43	619.10	707.93	837.60	1062.82	1235.33	1404.09
84	312.46	344.47	464.77	504.07	598.21	684.31	809.84	1028.25	1193.52	1354.18
85	302.28	333.28	449.00	487.36	578.11	661.57	783.13	994.97	1153.28	1306.24
86	292.48	322.50	433.83	471.27	558.77	639.69	757.41	962.93	1114.56	1260.17
87	283.04	312.12	419.22	455.79	540.15	618.62	732.65	932.06	1077.30	1215.89
88	273.95	302.12	405.17	440.88	522.23	598.33	708.81	902.33	1041.43	1173.34
89	265.19	292.49	391.64	426.52	504.97	578.80	685.84	873.69	1006.89	1132.43
90	256.74	283.20	378.61	412.69	488.36	559.99	663.72	846.09	973.64	1093.10
91	248.61	274.25	366.07	399.37	472.35	541.87	642.41	819.49	941.62	1055.29
92	240.76	265.63	353.99	386.54	456.94	524.41	621.88	793.85	910.77	1018.92
93	233.20	257.31	342.36	374.17	442.09	507.58	602.09	769.13	881.06	983.94
94	225.91	249.29	331.15	362.25	427.78	491.37	583.01	745.30	852.44	950.29
95	218.88	241.55	320.36	350.76	414.00	475.74	564.63	722.31	824.85	917.91
96	212.10	234.09	309.95	339.69	400.71	460.68	546.90	700.14	798.27	886.76
97	205.55	226.89	299.93	329.01	387.91	446.16	529.80	678.75	772.65	856.78
98	199.24	219.95	290.27	318.71	375.56	432.15	513.32	658.12	747.95	827.92
99	193.15	213.24	280.95	308.78	363.66	418.64	497.41	638.20	724.14	800.15
100	187.27	206.77	271.98	299.20	352.18	405.62	482.07	618.98	701.18	773.40
101	181.60	200.53	263.32	289.95	341.11	393.05	467.27	600.43	679.04	747.65
102	176.12	194.50	254.97	281.04	330.43	380.92	452.98	582.51	657.68	722.85
103	170.83	188.68	246.92	272.43	320.13	369.22	439.19	565.22	637.08	698.97
104	165.72	183.06	239.15	264.12	310.19	357.92	425.89	548.51	617.21	675.96
105	160.79	177.63	231.66	256.10	300.60	347.02	413.04	532.38	598.03	653.79
106	156.02	172.38	224.43	248.36	291.34	336.50	400.63	516.79	579.52	632.44
107	151.42	167.31	217.45	240.89	282.41	326.34	388.65	501.73	561.66	611.85
108	146.97	162.42	210.72	233.67	273.78	316.52	377.08	487.18	544.42	592.02
109	142.68	157.68	204.22	226.69	265.45	307.05	365.90	473.11	527.77	572.90
110	138.52	153.11	197.95	219.96	257.41	297.89	355.10	459.51	511.70	554.46
111	134.51	148.69	191.89	213.45	249.65	289.05	344.66	446.37	496.18	536.69
112	130.62	144.41	186.05	207.17	242.14	280.51	334.58	433.66	481.19	519.55
113	126.87	140.28	180.40	201.09	234.90	272.25	324.83	421.37	466.71	503.02
114	123.24	136.28	174.95	195.22	227.90	264.27	315.41	409.48	452.72	487.08
115	119.73	132.41	169.68	189.54	221.13	256.56	306.30	397.98	439.21	471.70
116	116.34	128.67	164.59	184.05	214.60	249.10	297.49	386.86	426.15	456.87
117	113.05	125.05	159.67	178.75	208.28	241.89	288.97	376.10	413.53	442.55
118	109.87	121.55	154.92	173.61	202.17	234.92	280.73	365.68	401.33	428.74
119	106.80	118.16	150.32	168.65	196.27	228.18	272.76	355.60	389.54	415.40
120	103.82	114.88	145.88	163.85	190.56	221.66	265.06	345.84	378.14	402.53
121	100.94	111.71	141.59	159.21	185.04	215.35	257.60	336.39	367.12	390.11
122	98.15	108.63	137.45	154.71	179.70	209.25	250.38	327.24	356.46	378.11
123	95.45	105.66	133.43	150.36	174.54	203.35	243.39	318.38	346.16	366.53
124	92.84	102.78	129.55	146.16	169.55	197.63	236.63	309.80	336.19	355.34
125	90.31	99.99	125.80	142.08	164.71	192.10	230.08	301.49	326.54	344.54

Temperature characteristics

Part number	NRCE204 4250	NRCE304 4250	NRCE474 4300	NRCE504 4300	NRCE105 4400	NRCE155 4500	NRCE205 4600	NRCE225 4650	NRCE335 4700	NRCE475 4750
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
-40	712936.24	1122216	1815479.96	1929723.89	3972308.37	5714151.47	12965861.68	9085425.99	13566039.7	32536773.07
-39	668445.61	1050603.96	1698836.64	1805782.16	3717708.3	5359481.55	11973201.91	8513097.07	12718111.96	30039370.98
-38	626946.9	983929.51	1590280.47	1690430.63	3480645.04	5028308.12	11063094.18	7979106.53	11926420.6	27749036.18
-37	588225.11	921828.19	1489211.72	1583032.47	3259830.22	4718978.34	10228160.87	7480734.91	11187021.4	25647397.83
-36	552081.64	863964.1	1395077.89	1483001.01	3054075.85	4429962.29	9461727.19	7015466.32	10496261.84	23717816.48
-35	518332.97	810027.61	1307369.8	1389795.54	2862286.05	4159843.36	8757750.24	6580972.37	9850758.36	21945211.75
-34	486809.44	759733.14	1225618.02	1302917.57	2683449.49	3907309.4	8110755.66	6175097.47	9247375.57	20315907.94
-33	457354.19	712817.19	1149389.55	1221907.27	2516632.57	3671144.61	7515780.95	5795845.38	8683207.13	18817495.85
-32	429822.08	669036.55	1078284.89	1146340.36	2360973.03	3450222.06	6968324.71	5441366.76	8155558.1	17438708.81
-31	404078.79	628166.64	1011935.23	1075825.17	2215674.27	3243496.9	6464301.29	5109947.86	7661928.82	16169311.46
-30	380000	590000	950000	1010000	2080000	3050000	6000000	4800000	7200000	15000000
-29	357470.54	554344.89	892164.58	948530.7	1953269.49	2868832.21	5572048.68	4510050.02	6767619.05	13922312.51
-28	336383.72	521024.08	838138.19	891108.43	1834853.09	2699159	5177380.91	4238731.41	6362787.49	12928548.38
-27	316640.67	489873.61	787652.01	837447.66	1724168.21	2540205.62	4813206.61	3984776.21	5983649.31	12011695.89
-26	298149.72	460741.83	740457.39	787284.3	1620675.58	2391252.51	4476985.62	3747007.51	5628480.35	11165366.98
-25	280825.83	433488.34	696324.27	740373.96	1523875.87	2251631.24	4166403.92	3524332.59	5295678.41	10383738.58
-24	264590.12	407983.17	655039.7	696490.47	1433306.58	2120720.61	3879352.28	3315736.57	4983754.18	9661499.71
-23	249369.39	384105.89	616406.51	655424.37	1348539.1	1997943.18	3613907.02	3120276.6	4691322.89	8993803.8
-22	235095.65	361744.96	580242.04	616981.64	1269176.19	1882761.99	3368312.66	2937076.45	4417096.61	8376225.73
-21	221705.79	340796.94	546377.06	580982.48	1194849.45	1774677.62	3140966.3	2765321.58	4159877.1	7804722.98
-20	209141.13	321165.93	514654.66	547260.23	1125217.18	1673225.33	2930403.55	2604254.57	3918549.24	7275600.65
-19	197347.19	302762.97	484929.36	515660.33	1059962.3	1577972.63	2735285.78	2453170.9	3692075.02	6785479.73
-18	186273.26	285505.5	457066.19	486039.38	998790.51	1488516.85	2554388.68	2311415.04	3479487.86	6331268.54
-17	175872.23	269316.89	430939.9	458264.33	941428.49	1404482.98	2386591.84	2178376.93	3279887.5	5910136.83
-16	166100.25	254125.97	406434.23	432211.64	887622.41	1325521.71	2230869.43	2053488.59	3092435.19	5519492.32
-15	156916.51	239866.6	383441.19	407766.61	837136.38	1251307.51	2086281.64	1936221.1	2916349.3	5156959.52
-14	148283.02	226477.37	361860.48	384822.64	789751.17	1181536.99	1951967.07	1826081.78	2750901.17	4820360.51
-13	140164.41	213901.14	341598.88	363280.7	745262.92	1115927.25	1827135.73	1722611.57	2595411.41	4507697.49
-12	132527.72	202084.81	322569.74	343048.73	703482.03	1054214.47	1711062.79	1625382.61	2449246.34	4217137.02
-11	125342.26	190978.95	304692.46	324041.07	664232.1	996152.53	1603082.77	1533996	2311814.8	3946995.63
-10	118579.39	180537.59	287892.1	306178.1	627348.94	941511.75	1502584.48	1448079.78	2182565.11	3695726.84
-9	112212.44	170717.91	272098.88	289385.66	592679.69	890077.76	1409006.22	1367286.97	2060982.34	3461909.31
-8	106216.51	161480.07	257247.86	273594.77	560082.02	841650.4	1321831.54	1291293.81	1946585.7	3244236.11
-7	100568.38	152786.92	243278.58	258741.15	529423.29	796042.73	1240585.37	1219798.17	1838926.18	3041504.93
-6	95246.38	144603.87	230134.7	244764.94	500579.93	753080.12	1164830.47	1152517.96	1737584.35	2852609.19
-5	90230.26	136898.67	217763.74	231610.38	473436.74	712599.4	1094164.24	1089189.78	1642168.29	2676529.96
-4	85501.15	129641.23	206116.77	219225.46	447886.3	674448.04	1028215.76	1029567.62	1552311.7	2512328.56
-3	81041.37	122803.52	195148.17	207561.7	423828.41	638483.43	966643.18	973421.62	1467672.15	2359139.87
-2	76834.45	116359.36	184815.39	196573.88	401169.58	604572.22	909131.24	920536.97	1387929.44	2216166.21
-1	72864.97	110284.31	175078.74	186219.82	379822.57	572589.67	855389.13	870712.89	1312784.07	2082671.71
0	69118.51	104555.58	165901.16	176460.13	359705.91	542419.05	805148.4	823761.63	1241955.87	1957977.27
1	65581.6	99151.87	157248.07	167258.05	340743.54	513951.12	758161.15	779507.61	1175182.63	1841455.89
2	62241.62	94053.27	149087.15	158579.24	322864.39	487083.62	714198.39	737786.57	1112218.94	1732528.4
3	59086.78	89241.19	141388.24	150391.63	306002.06	461720.77	673048.43	698444.84	1052835.06	1630659.59
4	56106.03	84698.25	134123.13	142665.25	290094.48	437772.9	634515.55	661338.56	996815.81	1535354.68
5	53289.03	80408.19	127265.46	135372.08	275083.62	415155.96	598418.68	626333.06	943959.68	1446156.05
6	50626.08	76355.81	120790.58	128485.91	260915.22	393791.22	564590.24	593302.26	894077.86	1362640.29
7	48108.13	72526.89	114675.45	121982.25	247538.5	373604.86	532875.04	562128.04	846993.41	1284415.43
8	45726.67	68908.11	108898.5	115838.17	234905.95	354527.68	503129.36	532699.77	802540.49	1211118.54
9	43473.71	65487	103439.53	110032.22	222973.11	336494.78	475219.98	504913.75	760563.63	1142413.35
10	41341.8	62251.9	98279.66	104544.29	211698.33	319445.3	449023.4	478672.81	720917.03	1077988.23
11	39323.93	59191.86	93401.19	99355.6	201042.62	303322.11	424425.08	453885.83	683463.94	1017554.24
12	37413.51	56296.65	88787.55	94448.51	190969.45	288071.62	401318.73	430467.39	648076.05	960843.36
13	35604.38	53556.66	84423.21	89806.52	181444.59	273643.51	379605.67	408337.34	614632.98	907606.91
14	33890.74	50962.89	80293.61	85414.16	172435.95	259990.54	359194.27	387420.52	583021.75	857614.03
15	32267.17	48506.88	76385.11	81256.91	163913.44	247068.36	339999.41	367646.38	553136.27	810650.33
16	30728.55	46180.74	72684.91	77321.18	155848.86	234835.28	321941.95	348948.7	524876.94	766516.65
17	29270.08	43977	69181.02	73594.21	148215.74	223252.14	304948.33	331265.33	498150.22	725027.91
18	27887.27	41888.72	65862.17	70064.02	140989.25	212282.16	288950.11	314537.89	472868.24	686012

Temperature characteristics

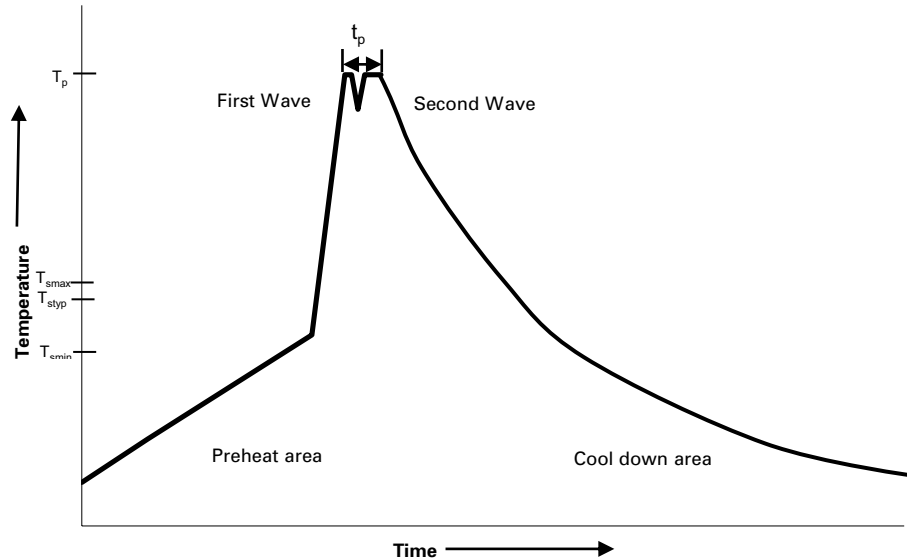
Part number	NRCE204 4250	NRCE304 4250	NRCE474 4300	NRCE504 4300	NRCE105 4400	NRCE155 4500	NRCE205 4600	NRCE225 4650	NRCE335 4700	NRCE475 4750
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
19	26575.87	39909.32	62717.79	66719.38	134146.07	201890.75	273883.61	298711.57	448948.42	649308.88
20	25331.9	38032.67	59737.96	63549.74	127664.33	192045.38	259689.55	283734.87	426313.18	614769.64
21	24151.63	36252.97	56913.36	60545.19	121523.47	182715.47	246312.73	269559.38	404889.58	582255.65
22	23031.51	34564.81	54235.25	57696.42	115704.21	173872.25	233701.69	256139.65	384609.06	551637.87
23	21968.25	32963.08	51695.39	54994.7	110188.4	165488.67	221808.52	243432.9	365407.12	522796.07
24	20958.73	31442.98	49286.06	52431.8	104959	157539.24	210588.52	231398.96	347223.12	495618.25
25	20000	30000	47000	50000	100000	150000	200000	220000	330000	470000
26	19089.31	28629.89	44830.37	47692.04	95296.33	142848.38	190004.07	209200.48	313684.08	445843.95
27	18224.05	27328.67	42770.76	45501.08	90833.82	136063.12	180564.43	198966.93	298224.83	423059.29
28	17401.78	26092.57	40815.11	43420.71	86599.16	129624.21	171647.17	189267.89	283574.7	401561.27
29	16620.18	24918.05	38957.73	41444.86	82579.8	123512.8	163220.65	180073.7	269688.9	381270.8
30	15877.08	23801.78	37193.28	39567.85	78763.93	117711.1	155255.26	171356.49	256525.28	362114
31	15170.42	22740.64	35516.71	37784.31	75140.46	112202.39	147723.37	163089.98	244044.1	344021.88
32	14498.27	21731.65	33923.28	36089.2	71698.92	106970.87	140599.1	155249.42	232207.97	326929.96
33	13858.81	20772.04	32408.51	34477.76	68429.45	102001.66	133858.27	147811.53	220981.63	310777.99
34	13250.31	19859.17	30968.19	32945.51	65322.78	97280.72	127478.24	140754.34	210331.86	295509.61
35	12671.16	18990.58	29598.35	31488.23	62370.16	92794.83	121437.84	134057.17	200227.34	281072.11
36	12119.81	18163.92	28295.25	30101.94	59563.34	88531.48	115717.21	127700.5	190638.55	267416.19
37	11594.82	17377	27055.35	28782.88	56894.55	84478.89	110297.78	121665.95	181537.65	254495.68
38	11094.83	16627.75	25875.32	27527.51	54356.47	80625.94	105162.14	115936.2	172898.39	242267.36
39	10618.55	15914.18	24752.03	26332.49	51942.18	76962.14	100293.97	110494.88	164696.01	230690.75
40	10164.75	15234.47	23682.52	25194.67	49645.16	73477.55	95677.96	105326.57	156907.14	219727.94
41	9732.29	14586.86	22663.97	24111.07	47459.25	70162.84	91299.76	100416.73	149509.72	209343.39
42	9320.08	13969.69	21693.77	23078.89	45378.66	67009.14	87145.9	95751.62	142482.96	199503.77
43	8927.09	13381.41	20769.4	22095.48	43397.89	64008.11	83203.75	91318.28	135807.2	190177.84
44	8552.34	12820.56	19888.52	21158.32	41511.77	61151.85	79461.44	87104.48	129463.9	181336.29
45	8194.92	12285.72	19048.89	20265.06	39715.41	58432.9	75907.82	83098.66	123435.55	172951.63
46	7853.96	11775.6	18248.43	19413.45	38004.2	55844.22	72532.43	79289.92	117705.61	164998.02
47	7528.64	11288.94	17485.14	18601.38	36373.77	53379.12	69325.43	75667.95	112258.44	157451.24
48	7218.17	10824.57	16757.13	17826.86	34819.98	51031.3	66277.57	72223.03	107079.29	150288.52
49	6921.83	10381.37	16062.65	17088	33338.96	48794.81	63380.15	68945.94	102154.21	143488.48
50	6638.9	9958.3	15400	16383	31927	46664	60625	65828	97470	137031
51	6368.74	9554.35	14767.6	15710.18	30580.63	44633.53	58004.41	62860.99	93014.21	130897.2
52	6110.71	9168.58	14163.94	15067.94	29296.54	42698.35	55511.15	60037.15	88775.05	125069.31
53	5864.22	8800.11	13587.6	14454.76	28071.61	40853.67	53138.39	57349.13	84741.37	119530.62
54	5628.72	8448.07	13037.23	13869.21	26902.91	39094.98	50879.72	54789.98	80902.64	114265.4
55	5403.66	8111.68	12511.56	13309.94	25787.62	37417.99	48729.07	52353.14	77248.89	109258.86
56	5188.56	7790.16	12009.37	12775.66	24723.11	35818.63	46680.76	50032.38	73770.68	104497.06
57	4982.91	7482.82	11529.53	12265.14	23706.86	34293.06	44729.4	47821.83	70459.1	99966.89
58	4786.29	7188.95	11070.95	11777.24	22736.52	32837.65	42869.93	45715.92	67305.68	95655.99
59	4598.24	6907.92	10632.6	11310.87	21809.83	31448.93	41097.58	43709.38	64302.44	91552.71
60	4418.37	6639.11	10213.51	10864.99	20924.66	30123.64	39407.83	41797.22	61441.81	87646.08
61	4246.29	6381.94	9812.75	10438.61	20079	28858.67	37796.44	39974.72	58716.61	83925.77
62	4081.63	6135.86	9429.45	10030.81	19270.93	27651.1	36259.38	38237.41	56120.07	80382
63	3924.04	5900.35	9062.78	9640.7	18498.64	26498.12	34792.87	36581.04	53645.76	77005.59
64	3773.2	5674.9	8711.95	9267.44	17760.41	25397.11	33393.33	35001.61	51287.57	73787.85
65	3628.78	5459.06	8376.21	8910.23	17054.61	24345.54	32057.37	33495.31	49039.75	70720.6
66	3490.49	5252.37	8054.85	8568.34	16379.7	23341.05	30781.8	32058.54	46896.82	67796.08
67	3358.04	5054.4	7747.21	8241.02	15734.21	22381.37	29563.6	30687.88	44853.6	65007.01
68	3231.17	4864.76	7452.63	7927.62	15116.75	21464.37	28399.91	29380.1	42905.19	62346.49
69	3109.62	4683.06	7170.52	7627.47	14525.99	20588.01	27288.04	28132.11	41046.91	59808
70	2993.15	4508.93	6900.3	7339.97	13960.67	19750.36	26225.42	26941.01	39274.37	57385.38
71	2881.52	4342.03	6641.41	7064.54	13419.62	18949.6	25209.64	25804.05	37583.36	55072.81
72	2774.51	4182.03	6393.34	6800.61	12901.7	18183.97	24238.42	24718.59	35969.91	52864.8
73	2671.92	4028.62	6155.6	6547.67	12405.83	17451.83	23309.58	23682.16	34430.27	50756.13
74	2573.55	3881.5	5927.71	6305.21	11930.99	16751.6	22421.08	22692.39	32960.84	48741.89
75	2479.2	3740.38	5709.22	6072.76	11476.21	16081.8	21570.98	21747.04	31558.25	46817.42
76	2388.7	3605.01	5499.71	5849.86	11040.58	15441.01	20757.42	20844	30219.27	44978.31
77	2301.88	3475.11	5298.79	5636.09	10623.21	14827.88	19978.68	19981.25	28940.84	43220.39



Temperature characteristics

Part number	NRCE204 4250	NRCE304 4250	NRCE474 4300	NRCE504 4300	NRCE105 4400	NRCE155 4500	NRCE205 4600	NRCE225 4650	NRCE335 4700	NRCE475 4750
B type	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50	B25/50
Temperature (°C)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)	Resistance (Ω)
78	2218.57	3350.46	5106.05	5431.04	10223.27	14241.13	19233.1	19156.86	27720.06	41539.71
79	2138.61	3230.81	4921.14	5234.31	9839.97	13679.55	18519.11	18369.03	26554.19	39932.53
80	2061.87	3115.94	4743.7	5045.54	9472.56	13141.96	17835.22	17616.02	25440.6	38395.3
81	1988.19	3005.65	4573.42	4864.37	9120.32	12627.29	17180.02	16896.19	24376.8	36924.66
82	1917.44	2899.74	4409.96	4690.47	8782.56	12134.47	16552.19	16207.99	23360.45	35517.43
83	1849.51	2798.01	4253.03	4523.51	8458.65	11662.51	15950.44	15549.93	22389.29	34170.6
84	1784.25	2700.28	4102.35	4363.2	8147.95	11210.47	15373.57	14920.6	21461.2	32881.3
85	1721.57	2606.38	3957.64	4209.25	7849.89	10777.43	14820.45	14318.68	20574.15	31646.82
86	1661.34	2516.15	3818.63	4061.37	7563.9	10362.55	14289.97	13742.87	19726.22	30464.59
87	1603.47	2429.42	3685.1	3919.3	7289.45	9965.01	13781.12	13191.99	18915.58	29332.16
88	1547.84	2346.05	3556.79	3782.79	7026.03	9584.03	13292.91	12664.87	18140.49	28247.21
89	1494.38	2265.89	3433.48	3651.61	6773.17	9218.86	12824.41	12160.42	17399.3	27207.55
90	1442.97	2188.81	3314.96	3525.53	6530.39	8868.8	12374.73	11677.6	16690.44	26211.09
91	1393.54	2114.68	3201.03	3404.32	6297.26	8533.19	11943.04	11215.42	16012.41	25255.83
92	1346.01	2043.37	3091.49	3287.78	6073.37	8211.37	11528.52	10772.95	15363.79	24339.9
93	1300.28	1974.77	2986.15	3175.72	5858.3	7902.75	11130.42	10349.27	14743.23	23461.51
94	1256.3	1908.75	2884.84	3067.94	5651.69	7606.73	10748.02	9943.55	14149.43	22618.95
95	1213.98	1845.23	2787.38	2964.26	5453.17	7322.77	10380.62	9554.97	13581.18	21810.6
96	1173.26	1784.08	2693.62	2864.52	5262.39	7050.34	10027.57	9182.75	13037.31	21034.93
97	1134.07	1725.21	2603.4	2768.54	5079.02	6788.93	9688.24	8826.16	12516.71	20290.48
98	1096.34	1668.54	2516.58	2676.17	4902.76	6538.07	9362.04	8484.5	12018.33	19575.85
99	1060.02	1613.96	2433	2587.27	4733.29	6297.29	9048.41	8157.1	11541.15	18889.71
100	1025.05	1561.4	2352.55	2501.68	4570.34	6066.17	8746.79	7843.32	11084.22	18230.82
101	991.37	1510.76	2275.09	2419.28	4413.62	5844.28	8456.69	7542.57	10646.63	17597.97
102	958.94	1461.98	2200.5	2339.93	4262.89	5631.22	8177.6	7254.26	10227.51	16990.02
103	927.69	1414.98	2128.66	2263.51	4117.88	5426.63	7909.06	6977.83	9826.04	16405.88
104	897.59	1369.68	2059.45	2189.89	3978.36	5230.14	7650.62	6712.78	9441.41	15844.52
105	868.59	1326.02	1992.79	2118.97	3844.1	5041.39	7401.87	6458.6	9072.89	15304.96
106	840.63	1283.94	1928.55	2050.64	3714.89	4860.07	7162.39	6214.8	8719.76	14786.25
107	813.69	1243.36	1866.64	1984.79	3590.52	4685.86	6931.8	5980.95	8381.33	14287.5
108	787.72	1204.23	1806.98	1921.32	3470.79	4518.46	6709.73	5756.6	8056.96	13807.86
109	762.68	1166.5	1749.46	1860.13	3355.51	4357.58	6495.82	5541.34	7746.02	13346.52
110	738.54	1130.1	1694.01	1801.15	3244.5	4202.95	6289.75	5334.78	7447.93	12902.69
111	715.26	1094.99	1640.54	1744.27	3137.58	4054.3	6091.18	5136.53	7162.12	12475.64
112	692.8	1061.11	1588.97	1689.42	3034.6	3911.39	5899.82	4946.26	6888.05	12064.67
113	671.14	1028.43	1539.24	1636.52	2935.39	3773.98	5715.37	4763.6	6625.21	11669.1
114	650.24	996.88	1491.26	1585.49	2839.8	3641.84	5537.56	4588.23	6373.11	11288.3
115	630.07	966.43	1444.97	1536.25	2747.68	3514.76	5366.1	4419.85	6131.29	10921.64
116	610.61	937.03	1400.31	1488.74	2658.9	3392.51	5200.76	4258.16	5899.3	10568.54
117	591.82	908.65	1357.2	1442.9	2573.33	3274.92	5041.28	4102.86	5676.72	10228.45
118	573.69	881.24	1315.6	1398.64	2490.84	3161.77	4887.44	3953.69	5463.13	9900.84
119	556.19	854.77	1275.44	1355.93	2411.3	3052.9	4739	3810.4	5258.16	9585.18
120	539.28	829.21	1236.66	1314.68	2334.6	2948.13	4595.76	3672.72	5061.43	9281.01
121	522.96	804.51	1199.22	1274.86	2260.64	2847.29	4457.52	3540.43	4872.6	8987.84
122	507.2	780.65	1163.07	1236.41	2189.29	2750.22	4324.06	3413.31	4691.32	8705.24
123	491.97	757.59	1128.15	1199.26	2120.46	2656.78	4195.22	3291.12	4517.27	8432.79
124	477.26	735.31	1094.41	1163.38	2054.06	2566.81	4070.81	3173.68	4350.15	8170.08
125	463.05	713.77	1061.82	1128.72	1989.99	2480.17	3950.66	3060.78	4189.67	7916.71

## Wave solder profile



## Reference EN 61760-1:2006

Profile feature	Standard SnPb solder	Lead (Pb) free solder
Preheat		
• Temperature min. ( $T_{smin}$ )	100 °C	100 °C
• Temperature typ. ( $T_{styp}$ )	120 °C	120 °C
• Temperature max. ( $T_{smax}$ )	130 °C	130 °C
• Time ( $T_{smin}$ to $T_{smax}$ ) ( $t_s$ )	70 seconds	70 seconds
$\Delta$ preheat to max Temperature	150 °C max.	150 °C max.
Peak temperature ( $T_p$ )*	235 °C – 260 °C	250 °C – 260 °C
Time at peak temperature ( $t_p$ )	10 seconds max 5 seconds max each wave	10 seconds max 5 seconds max each wave
Ramp-down rate	~ 2 K/s min ~3.5 K/s typ ~5 K/s max	~ 2 K/s min ~3.5 K/s typ ~5 K/s max
Time 25 °C to 25 °C	4 minutes	4 minutes

## Manual solder

+360 °C (3 seconds maximum, distance between soldering position and coating is 2 mm minimum, by soldering iron), generally manual/hand soldering is not recommended.

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