SMD 0805, Glass Protected NTC Thermistors

FEATURES

- TCR ranging from - 6 %/K at - 40 °C to - 2 %/K at 150 °C
- Tolerance on R_{25} down to 1 %, and on $B_{25/85}$ down to 1 %
- Suitable for wave or reflow soldering
- NiSn terminations
- Fully glass coated and protected
- cUL recognized for safety applications (file E148885)
- AEC-Q200 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE

RoHS COMPLIANT

HALOGEN FREE

APPLICATIONS

- Temperature sensing, protection and compensation in automotive, industrial, telecom and consumer applications. Examples are:
  - Battery chargers
  - Power suppliers
  - Office equipment
  - LCD compensation
  - In-car entertainment

DESCRIPTION

Size 0805 chip thermistors with a negative temperature coefficient. The device has no marking.

PACKAGING

Available in 8 mm punched paper tape on reel package of 4000 units.

DESIGN-IN SUPPORT

For complete Curve Computation, visit:
www.vishay.com/resistors-non-linear/curve-computation-list/

QUICK REFERENCE DATA

PARAMETER	VALUE	UNIT
Resistance value at 25 °C	2.2K to 680K	Ω
Tolerance on R_{25}-value	± 1; ± 2; ± 3; ± 5	%
$B_{25/85}$-value	3430 to 4125	K
Tolerance on $B_{25/85}$-value	± 1; ± 3	%
Maximum dissipation at 25 °C	210	mW
Thermal time constant τ	≈ 10	s
Dissipation factor D	3.5	mW/K
Operating temperature range at zero power	- 40 to + 150	°C
Weight	≈ 0.008	g

ELECTRICAL DATA AND ORDERING INFORMATION

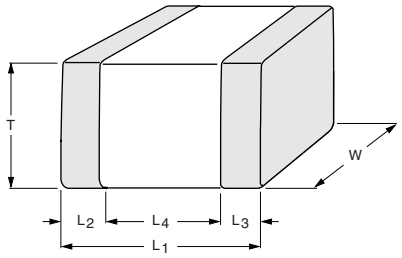
R_{25}-VALUE (kΩ)	$B_{25/85}$-VALUE (K)	TOLERANCE ON $B_{25/85}$ (%)	SAP MATERIAL AND ORDERING NUMBER NTCS0805E3... (1)	12NC OLD MATERIAL NUMBER 2381 615 5... (2)
2.2	3600	± 1	222*MT	*222
4.7	3500	± 1	472*MT	*472
10	3430	± 3	103*LT	-
10	3570	± 3	103*MT	*103
10	3940	± 1	103*HT	-
15	3700	± 1	153*MT	*153
22	3800	± 1	223*HT	*223
33	3920	± 1	333*HT	*333
47	3960	± 1	473*HT	*473
68	4100	± 1	683*XT	*683
100	3590	± 1	104*MT	-
100	4100	± 1	104*XT	*104
330	3930	± 1	334*HT	*334
470	4025	± 1	474*XT	*474
680	4125	± 1	684*XT	*684

Notes

(1) Replace * in SAP by J for 5 %, H for 3 %, G for 2 %, F for 1 % tolerance on R_{25}

(2) Replace * in 12NC by 3 for 5 %, 6 for 3 %, 4 for 2 %, 5 for 1 % tolerance on R_{25}

DIMENSIONS in millimeters



L_1	W	T	L_2 AND L_3 MIN.	L_4 MIN.
2.0 ± 0.2	1.25 ± 0.15	0.8 ± 0.15	0.2	0.55

For complete Curve Computation, visit: www.vishay.com/resistors-non-linear/curve-computation-list/

RESISTANCE VALUES AT INTERMEDIATE TEMPERATURES WITH R_{25} AT 2.2 kΩ AND 4.7 kΩ

T_{OPER} (°C)	PART NUMBER NTCS0805E3222*MT		PART NUMBER NTCS0805E3472*MT		$\Delta R/R$ DUE TO $B_{tol.}$ (± %)
	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	
- 40	57 658	- 6.26	101 275	- 5.75	7.58
- 35	42 410	- 6.03	76 325	- 5.57	6.83
- 30	31 537	- 5.82	58 034	- 5.39	6.13
- 25	23 698	- 5.61	44 505	- 5.22	5.45
- 20	17 986	- 5.42	34 413	- 5.06	4.80
- 15	13 782	- 5.23	26 821	- 4.91	4.18
- 10	10 657	- 5.06	21 065	- 7.76	3.58
- 5	8312.0	- 4.89	16 667	- 4.61	3.01
0	6537.1	- 4.72	13 280	- 4.47	2.46
5	5182.1	- 4.57	10 654	- 4.34	1.93
10	4139.2	- 4.42	8603.2	- 4.21	1.42
15	3330.1	- 4.28	6991.1	- 4.09	0.93
20	2697.8	- 4.14	5715.6	- 3.97	0.46
25	2200.0	- 4.02	4700.0	- 3.86	0.00
30	1805.5	- 3.89	3886.6	- 3.75	0.22
35	1490.7	- 3.77	3231.2	- 3.64	0.43
40	1237.9	- 3.66	2700.3	- 3.54	0.64
45	1033.7	- 3.55	2267.9	- 3.44	0.84
50	867.85	- 3.45	1913.9	- 3.35	1.03
55	732.31	- 3.35	1622.6	- 3.26	1.22
60	620.96	- 3.25	1381.7	- 3.17	1.40
65	529.02	- 3.16	1181.7	- 3.09	1.58
70	452.73	- 3.07	1014.7	- 3.01	1.75
75	389.13	- 2.99	874.85	- 2.93	1.92
80	335.85	- 2.90	757.13	- 2.85	2.08
85	291.02	- 2.83	657.67	- 2.78	2.23
90	253.15	- 2.75	573.31	- 2.71	2.54
95	221.03	- 2.68	501.48	- 2.64	2.85
100	193.66	- 2.61	440.10	- 2.58	3.14
105	170.27	- 2.54	387.47	- 2.52	3.43
110	150.20	- 2.48	342.18	- 2.46	3.71
115	132.91	- 2.41	303.09	- 2.40	3.98
120	117.98	- 2.35	269.24	- 2.34	4.24
125	105.03	- 2.20	239.83	- 2.29	4.50
130	93.766	- 2.24	214.20	- 2.23	4.76
135	83.943	- 2.19	191.82	- 2.18	5.00
140	75.349	- 2.13	172.20	- 2.13	5.25
145	67.807	- 2.08	154.96	- 2.09	5.48
150	61.172	- 2.04	139.78	- 2.04	5.71

For complete Curve Computation, visit: www.vishay.com/resistors-non-linear/curve-computation-list/

RESISTANCE VALUES AT INTERMEDIATE TEMPERATURES WITH R_{25} AT 10 kΩ							
T_{OPER} (°C)	PART NUMBER NTCS0805E3103*LT		PART NUMBER NTCS0805E3103*MT		PART NUMBER NTCS0805E3103*HT		$\Delta R/R$ DUE TO $B_{tol.}$ (± %)
	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	
- 40	182 928	- 5.47	232 634	- 5.92	335 922	- 6.60	11.22
- 35	139 839	- 5.28	173 538	- 5.71	242 721	- 6.40	10.14
- 30	107 902	- 5.10	130 769	- 5.51	177 179	- 6.19	9.10
- 25	83 986	- 4.93	99 489	- 5.33	130 625	- 6.00	8.11
- 20	65 904	- 4.77	76 385	- 5.15	97 234	- 5.81	7.15
- 15	52 111	- 4.62	59 157	- 4.98	73 056	- 5.63	6.24
- 10	41 501	- 4.48	46 194	- 4.82	55 387	- 5.45	5.35
- 5	33 276	- 4.35	36 356	- 4.67	42 358	- 5.28	4.50
0	26 851	- 4.23	28 829	- 4.52	32 666	- 5.11	3.68
5	21 799	- 4.11	23 025	- 4.38	25 396	- 4.96	2.89
10	17 798	- 4.00	18 515	- 4.25	19 898	- 4.80	2.13
15	14 612	- 3.89	14 986	- 4.12	15 708	- 4.66	1.40
20	12 058	- 3.79	12 205	- 4.00	12 490	- 4.51	0.69
25	10 000	- 3.69	10 000	- 3.88	10 000	- 4.38	0.00
30	8332.5	- 3.60	8240.3	- 3.77	8060.1	- 4.25	0.66
35	6974.6	- 3.51	6827.5	- 3.66	6538.4	- 4.12	1.31
40	5863.2	- 3.43	5686.6	- 3.56	5336.7	- 4.00	1.93
45	4949.5	- 3.35	4760.3	- 3.46	4381.9	- 3.88	2.53
50	4194.8	- 3.27	4004.2	- 3.37	3618.5	- 3.77	3.11
55	3568.8	- 3.19	3383.8	- 3.28	3004.5	- 3.67	3.68
60	3047.5	- 3.12	2872.3	- 3.19	2507.9	- 3.56	4.23
65	2611.5	- 3.05	2448.5	- 3.11	2104.1	- 3.46	4.76
70	2245.5	- 2.99	2095.9	- 3.03	1774.0	- 3.37	5.28
75	1937.2	- 2.92	1801.2	- 2.95	1502.7	- 3.27	5.78
80	1676.6	- 2.86	1553.8	- 2.88	1278.7	- 3.18	6.27
85	1455.4	- 2.80	1345.3	- 2.81	1092.8	- 3.10	6.74
90	1267.2	- 2.74	1168.9	- 2.74	937.89	- 3.02	7.20
95	1106.5	- 2.68	1019.2	- 2.67	808.21	- 2.94	7.65
100	968.83	- 2.63	891.48	- 2.61	699.18	- 2.86	8.09
105	850.57	- 2.53	782.28	- 2.54	607.15	- 2.79	8.51
110	748.69	- 2.53	688.56	- 2.48	529.14	- 2.71	8.93
115	660.67	- 2.48	607.85	- 2.43	462.78	- 2.65	9.33
120	584.42	- 2.43	538.14	- 2.37	406.10	- 2.58	9.73
125	518.20	- 2.38	477.73	- 2.32	357.54	- 2.52	10.11
130	460.53	- 2.34	425.24	- 2.26	315.77	- 2.45	10.48
135	410.19	- 2.29	379.49	- 2.21	279.73	- 2.39	10.85
140	366.15	- 2.25	339.51	- 2.17	248.53	- 2.34	11.20
145	327.52	- 2.21	304.47	- 2.12	221.44	- 2.28	11.55
150	293.56	- 2.17	273.69	- 2.07	197.84	- 2.23	11.89

For complete Curve Computation, visit: www.vishay.com/resistors-non-linear/curve-computation-list/

RESISTANCE VALUES AT INTERMEDIATE TEMPERATURES WITH R_{25} AT 15 kΩ, 22 kΩ AND 47 kΩ

T_{OPER} (°C)	PART NUMBER NTCS0805E3153*MT		PART NUMBER NTCS0805E3223*HT		PART NUMBER NTCS0805E3333*MT		$\Delta R/R$ DUE TO $B_{tol.}$ (± %)
	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	
- 40	391 251	- 6.14	641 004	- 6.40	1 104 739	- 6.79	7.58
- 35	289 245	- 5.94	468 038	- 6.18	793 249	- 6.53	6.83
- 30	215 960	- 5.75	345 469	- 5.97	576 683	- 6.28	6.13
- 25	162 779	- 5.56	257 644	- 5.77	424 161	- 6.05	5.45
- 20	123 815	- 5.38	194 045	- 5.57	315 430	- 5.84	4.80
- 15	95 001	- 5.21	147 521	- 5.39	237 022	- 5.63	4.18
- 10	73 505	- 5.05	113 159	- 5.22	179 865	- 5.44	3.58
- 5	57 329	- 4.89	87 544	- 5.05	137 767	- 5.26	3.01
0	45 058	- 4.74	68 281	- 4.89	106 459	- 5.08	2.46
5	35 674	- 4.60	53 672	- 4.74	82 958	- 4.92	1.93
10	28 445	- 4.46	42 503	- 4.59	65 162	- 4.76	1.42
15	22 834	- 4.33	33 898	- 4.46	51 572	- 4.61	0.93
20	18 450	- 4.20	27 220	- 4.32	41 112	- 4.47	0.46
25	15 000	- 4.08	22 000	- 4.20	33 000	- 4.34	0.00
30	12 268	- 3.96	17 892	- 4.07	26 663	- 4.21	0.22
35	10 092	- 3.85	14 638	- 3.96	21 678	- 4.08	0.43
40	8347.4	- 3.74	12 045	- 3.84	17 730	- 3.97	0.64
45	6941.1	- 3.64	9965.0	- 3.74	14 585	- 3.86	0.84
50	5801.1	- 3.54	8288.3	- 3.63	12 063	- 3.75	1.03
55	4872.1	- 3.44	6928.4	- 3.54	10 030	- 3.65	1.22
60	4111.1	- 3.35	5819.8	- 3.44	8381.6	- 3.55	1.40
65	3484.7	- 3.26	4911.4	- 3.35	7037.8	- 3.45	1.58
70	2966.6	- 3.18	4163.4	- 3.26	5936.8	- 3.36	1.75
75	2536.2	- 3.09	3544.6	- 3.18	5030.3	- 3.27	1.92
80	2176.9	- 3.02	3030.2	- 3.10	4280.4	- 3.19	2.08
85	1875.8	- 2.94	2600.9	- 3.02	3657.2	- 3.11	2.23
90	1622.5	- 2.87	2241.0	- 2.94	3137.1	- 3.03	2.54
95	1408.4	- 2.79	1938.0	- 2.87	2701.2	- 2.96	2.85
100	1226.8	- 2.73	1682.0	- 2.80	2334.4	- 2.89	3.14
105	1072.3	- 2.66	1464.9	- 2.73	2024.4	- 2.82	3.43
110	940.20	- 2.60	1280.0	- 2.67	1761.6	- 2.75	3.71
115	827.00	- 2.54	1122.0	- 2.60	1538.0	- 2.69	3.98
120	729.62	- 2.48	986.60	- 2.54	1346.9	- 2.63	4.24
125	645.60	- 2.42	870.11	- 2.48	1183.23	- 2.57	4.50
130	572.86	- 2.36	769.60	- 2.43	1042.4	- 2.51	4.76
135	509.71	- 2.31	682.59	- 2.37	921.02	- 2.45	5.00
140	454.71	- 2.26	607.05	- 2.32	815.99	- 2.40	5.25
145	406.69	- 2.21	541.28	- 2.27	724.85	- 2.35	5.48
150	364.64	- 2.16	483.86	- 2.22	645.54	- 2.30	5.71

For complete Curve Computation, visit: www.vishay.com/resistors-non-linear/curve-computation-list/

RESISTANCE VALUES AT INTERMEDIATE TEMPERATURES WITH R_{25} AT 47 kΩ, 68 kΩ AND 100 kΩ									
T_{OPER} (°C)	PART NUMBER NTCS0805E3473*HT		PART NUMBER NTCS0805E3683*XT		PART NUMBER NTCS0805E3104*MT		PART NUMBER NTCS0805E3104*XT		$\Delta R/R$ DUE TO $B_{tol.}$ (± %)
	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	
- 40	1 536 095	- 6.60	2 596 437	- 6.92	2 245 445	- 5.82	3 833 689	- 6.96	7.58
- 35	1 110 020	- 6.37	1 848 208	- 6.68	1 686 623	- 5.63	2 724 206	- 6.71	6.83
- 30	811 212	- 6.15	1 331 164	- 6.45	1 278 403	- 5.45	1 959 612	- 6.47	6.13
- 25	599 204	- 5.94	969 559	- 6.23	977 431	- 5.28	1 426 014	- 6.25	5.45
- 20	447 111	- 5.74	713 753	- 6.02	753 552	- 5.12	1 049 150	- 6.03	4.80
- 15	336 851	- 5.56	530 805	- 5.82	585 597	- 4.97	779 950	- 5.83	4.18
- 10	256 116	- 5.38	398 593	- 5.64	458 561	- 4.82	585 575	- 5.64	3.58
- 5	196 435	- 5.21	302 091	- 5.45	361 719	- 4.67	443 786	- 5.45	3.01
0	151 917	- 5.05	230 981	- 5.28	287 337	- 4.54	339 343	- 5.28	2.46
5	118 422	- 4.89	178 104	- 5.12	229 790	- 4.40	261 695	- 5.11	1.93
10	93 012	- 4.74	138 441	- 4.96	184 958	- 4.28	203 455	- 4.96	1.42
15	73 583	- 4.60	108 442	- 4.81	149 796	- 4.16	159 402	- 4.81	0.93
20	58 615	- 4.47	85 571	- 4.67	122 043	- 4.04	125 811	- 4.66	0.46
25	47 000	- 4.34	68 000	- 4.53	100 000	- 3.93	100 000	- 4.52	0.00
30	37 925	- 4.22	54 403	- 4.40	82 389	- 3.82	80 021	- 4.39	0.22
35	30 788	- 4.10	43 806	- 4.27	68 238	- 3.72	64 447	- 4.27	0.43
40	25 139	- 3.99	35 493	- 4.15	56 805	- 3.62	52 224	- 4.15	0.64
45	20 641	- 3.88	28 928	- 4.03	47 518	- 3.52	42 570	- 4.03	0.84
50	17 038	- 3.78	23 712	- 3.92	39 936	- 3.43	34 897	- 3.92	1.03
55	14 136	- 3.68	19 543	- 3.81	33 716	- 3.34	28 763	- 3.81	1.22
60	11 786	- 3.58	16 192	- 3.71	28 589	- 3.26	23 830	- 3.71	1.40
65	9872.9	- 3.49	13 483	- 3.61	24 342	- 3.17	19 842	- 3.61	1.58
70	8308.1	- 3.40	11 282	- 3.52	20 811	- 3.10	16 601	- 3.52	1.75
75	7021.9	- 3.31	9484.2	- 3.43	17 861	- 3.02	13 954	- 3.43	1.92
80	5959.7	- 3.23	8008.8	- 3.34	15 386	- 2.95	11 781	- 3.34	2.08
85	5078.7	- 3.15	6792.1	- 3.25	13 303	- 2.87	9988.4	- 3.26	2.23
90	4344.9	- 3.08	5784.2	- 3.17	11 542	- 2.81	8503.6	- 3.18	2.54
95	3731.0	- 3.00	4945.7	- 3.09	10 048	- 2.74	7268.2	- 3.10	2.85
100	3215.5	- 2.93	4245.0	- 3.02	8775.2	- 2.68	6236.0	- 3.03	3.14
105	2781.0	- 2.86	3657.2	- 2.94	7688.1	- 2.61	5370.1	- 2.95	3.43
110	2413.2	- 2.80	3162.1	- 2.87	6756.2	- 2.55	4640.8	- 2.88	3.71
115	2101.0	- 2.73	2743.5	- 2.81	5954.7	- 2.50	4024.3	- 2.82	3.98
120	1834.9	- 2.67	2388.2	- 2.74	5263.2	- 2.44	3501.2	- 2.75	4.24
125	1607.3	- 2.61	2085.7	- 2.68	4664.8	- 2.39	3055.8	- 2.69	4.50
130	1412.2	- 2.55	1827.2	- 2.62	4145.4	- 2.33	2675.3	- 2.63	4.76
135	1244.2	- 2.50	1605.5	- 2.56	3693.3	- 2.28	2349.2	- 2.57	5.00
140	1099.3	- 2.44	1414.9	- 2.50	3298.7	- 2.24	2068.7	- 2.51	5.25
145	973.81	- 2.39	1250.4	- 2.44	2953.4	- 2.19	1826.8	- 2.46	5.48
150	864.87	- 2.34	1108.0	- 2.39	2650.5	- 2.14	1617.5	- 2.41	5.71

For complete Curve Computation, visit: www.vishay.com/resistors-non-linear/curve-computation-list/

RESISTANCE VALUES AT INTERMEDIATE TEMPERATURES WITH R_{25} AT 330 kΩ, 470 kΩ AND 680 kΩ

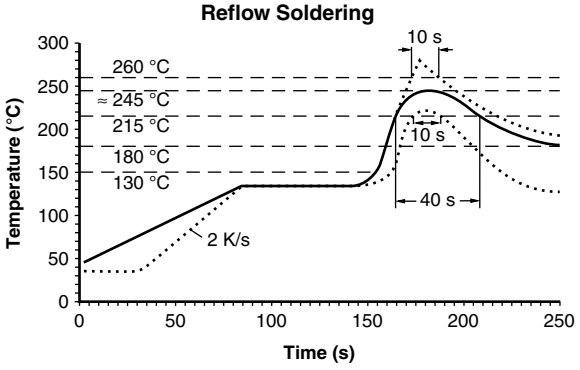
T_{OPER} (°C)	PART NUMBER NTCS0805E3334*HT		PART NUMBER NTCS0805E3474*XT		PART NUMBER NTCS0805E3684*XT		$\Delta R/R$ DUE TO $B_{tol.}$ (± %)
	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	R_T (Ω)	TCR (%/K)	
- 40	10 488	- 6.53	16 325	- 6.70	23 477	- 6.58	7.58
- 35	7608.4	- 6.31	11 742	- 6.48	16 980	- 6.38	6.83
- 30	5579.1	- 6.10	8539.8	- 6.26	12 404	- 6.18	6.13
- 25	4133.1	- 5.90	6276.8	- 6.05	9147.1	- 6.00	5.45
- 20	3092.0	- 5.71	4660.3	- 5.86	6807.4	- 5.82	4.80
- 15	2334.8	- 5.53	3493.6	- 5.67	5110.7	- 5.65	4.18
- 10	1778.8	- 5.35	2643.2	- 5.49	3869.3	- 5.48	3.58
- 5	1366.9	- 5.19	2017.4	- 5.32	2953.2	- 5.33	3.01
0	1058.9	- 5.03	1552.8	- 5.15	2271.5	- 5.17	2.46
5	826.75	- 4.87	1204.7	- 5.00	1760.2	- 5.03	1.93
10	650.33	- 4.73	941.99	- 4.85	1373.89	- 4.89	1.42
15	515.22	- 4.59	741.96	- 4.70	1079.7	- 4.75	0.93
20	410.99	- 4.45	588.54	- 4.56	854.12	- 4.62	0.46
25	330.00	- 4.33	470.00	- 4.43	680.00	- 4.50	0.00
30	266.64	- 4.20	377.77	- 4.31	544.69	- 4.38	0.22
35	216.75	- 4.08	305.53	- 4.18	438.89	- 4.26	0.43
40	177.22	- 3.97	248.58	- 4.07	355.64	- 4.15	0.64
45	145.70	- 3.86	203.40	- 3.96	289.76	- 4.04	0.84
50	120.43	- 3.76	167.35	- 3.85	237.33	- 3.94	1.03
55	100.06	- 3.66	138.42	- 3.75	195.38	- 3.84	1.22
60	83.541	- 3.56	115.06	- 3.65	161.62	- 3.75	1.40
65	70.081	- 3.47	96.120	- 3.55	134.33	- 3.65	1.58
70	59.059	- 3.38	80.672	- 3.46	112.16	- 3.56	1.75
75	49.989	- 3.29	68.012	- 3.37	94.052	- 3.48	1.92
80	42.491	- 3.21	57.588	- 3.29	79.204	- 3.39	2.08
85	36.265	- 3.13	48.966	- 3.20	66.973	- 3.31	2.23
90	31.074	- 3.05	41.803	- 3.12	56.855	- 3.24	2.54
95	26.726	- 2.98	35.826	- 3.05	48.449	- 3.16	2.85
100	23.070	- 2.91	30.819	- 2.97	41.439	- 3.09	3.14
105	19.985	- 2.84	26.608	- 2.90	35.569	- 3.02	3.43
110	17.371	- 2.77	23.053	- 2.83	30.636	- 2.95	3.71
115	15.149	- 2.71	20.039	- 2.77	26.474	- 2.89	3.98
120	13.253	- 2.64	17.477	- 2.70	22.952	- 2.82	4.24
125	11.630	- 2.58	15.290	- 2.64	19.961	- 2.76	4.50
130	10.236	- 2.52	13.417	- 2.58	17.412	- 2.70	4.76
135	9.0345	- 2.47	11.808	- 2.53	15.233	- 2.65	5.00
140	7.9963	- 2.41	10.422	- 2.47	13.364	- 2.59	5.25
145	7.0964	- 2.36	9.2239	- 2.42	11.757	- 2.54	5.48
150	6.3142	- 2.31	8.1851	- 2.36	10.371	- 2.48	5.71

SOLDERING CONDITIONS

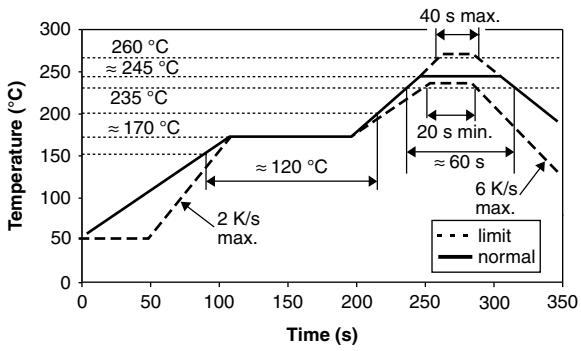
This SMD thermistor is only suitable for wave or reflow soldering, in accordance with JEDEC J-STD-020. The maximum temperature of 260 °C during 40 s should not be exceeded.

Typical examples of a soldering processes that will provide reliable joints without damage, are shown below.

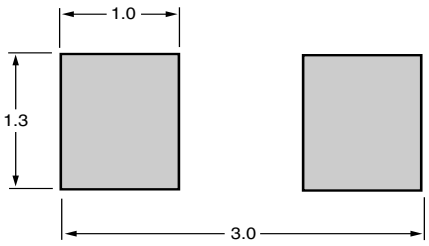
Reflow Soldering



Lead (Pb)-free Reflow Soldering Profile



Dimensions of the solder lands



TESTS AND REQUIREMENTS

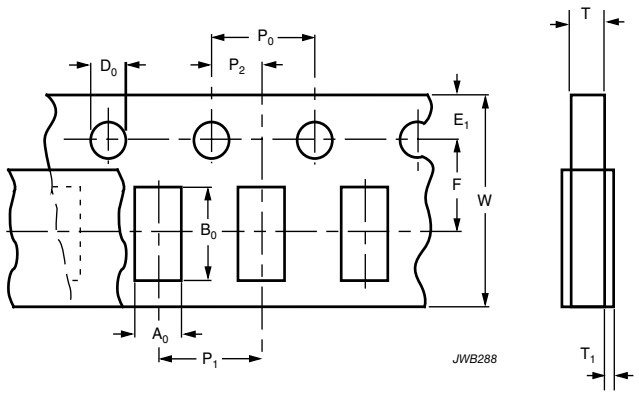
SOLDERABILITY AND RESISTANCE TO SOLDERING HEAT				
IEC 60068-2-58	TEST METHOD	TEST	PROCEDURE	REQUIREMENTS
6	T_C	Solderability	2 s at 235 °C	Min. 95 % of surface wetted
		Resistance to soldering heat	10 s at 260 °C	$\Delta R/R < 5$ %

PACKAGING

TAPE SPECIFICATIONS

All tape specifications are in accordance with IEC 60286-3. Basic dimensions are given below. Carrier tape material is paper.

PAPER TAPE



DIMENSIONS OF PAPER TAPE in millimeters		
PARAMETER	DIMENSION	TOLERANCE
A_0 (1)	1.7	± 0.2
B_0 (1)	2.35	± 0.1
W	8.0	± 0.2
E_1	1.75	± 0.1
F	3.5	± 0.05
D_0	1.55	± 0.05
P_0 (2)	4.0	± 0.1
P_1	4.0	± 0.1
P_2	2.0	± 0.05
T tape thickness	1.1	Max.
T_1 cover tape	< 0.1	-

Notes

(1) Measured 0.3 mm above base pocket

(2) P_0 pitch cumulative error over any 10 pitches ± 1.0 mm

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay’s knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.

OCEAN CHIPS
Океан Электроники
Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».

AVIC JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

FORSTAR®

Телефон: 8 (812) 309-75-97 (многоканальный)
Факс: 8 (812) 320-03-32
Электронная почта: ocean@oceanchips.ru
Web: http://oceanchips.ru/
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А