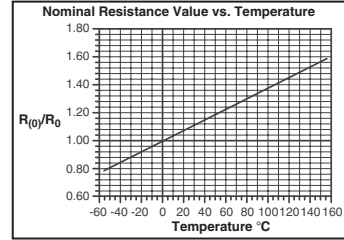


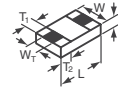


## PTS Series Platinum SMD Flat Chip Temperature Sensors



PTS SMD Flat Chip Temperature Sensors are the perfect choice for temperature control of electronics operating under varying environmental conditions. The highly controlled platinum thin film manufacturing process guarantees an outstanding stability of temperature characteristics which ensures reliable operation even under harsh conditions. **Applications:** • Automotive electronics • Aviation electronics • Industrial electronics **Specifications:** • Temperature Coefficient (0°C – 100°C): 3850ppm/K • Temperature Range: -55°C – 155°C • Insulation Resistance: >10MΩ • Tolerance Class: B

Size Code	Dimensions - mm					Mass (mg)
	H	L	W	WT	T1	
0603	0.45 ±0.1/-0.05	1.55 ±0.05	0.85 ±0.1	>75% of W	0.3 ±0.15/-0.2	1.9
0805	0.45 ±0.1/-0.05	2.0 ±0.1	1.25 ±0.15	>75% of W	0.4 ±0.1/-0.2	4.6
1206	0.55 ±0.1	3.2 ±0.1/-0.2	1.6 ±0.15	>75% of W	0.4 ±0.1/-0.2	9.2



Size Code	Resistance Value R0 at 0°C (Ω)	Thermal Response Time† (s)		Measurement Current I meas. (DC) (mA)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel Pricing 1,000	Vishay Part No.
		t0.5	t0.9			1	10	100			
0603	100	≤1.0	≤2.0	0.1 – 0.25	PTS0603100CT-ND	1.78	1.56	1.22	PTS0603100TR-ND	665.46	PTS060301B100RP100
	100	≤1.5	≤3.0	0.1 – 1.0	PTS0805100CT-ND	2.23	1.95	1.54	PTS0805100TR-ND	834.83	PTS080501B100RP100
	500	≤1.5	≤3.0	0.1 – 0.25	PTS0805500CT-ND	2.23	1.95	1.54	PTS0805500TR-ND	834.83	PTS080501B500RP100
1206	100	≤2.0	≤5.0	0.1 – 1.0	PTS1206100CT-ND	2.93	2.57	2.02	PTS1206100TR-ND	1099.10	PTS120601B100RP100
	500	≤2.0	≤5.0	0.1 – 0.25	PTS1206500CT-ND	2.93	2.57	2.02	PTS1206500TR-ND	1099.10	PTS120601B500RP100
	1000	≤2.0	≤5.0	0.1 – 0.25	PTS12061.0KCT-ND	2.93	2.57	2.02	PTS12061.0KTR-ND	1099.10	PTS120601B1K00RP100

† Flowing Air (v = 3.0 m/s)



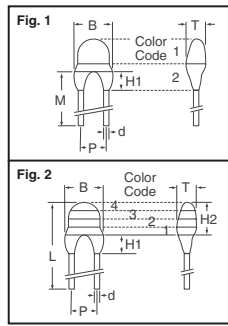
## Leaded NTC Thermistors — Accuracy Line



These thermistors have a negative temperature coefficient. **Fig. 1** – The device consists of a chip with two tinned Ni-leads and is color coded. **Fig. 2** – The device consists of a chip with two tinned solid copper-plated leads, is gray lacquered and color coded, but not insulated. **Applications:** Temperature sensing and control.

Fig.	Dimensions - mm						
	B (max.)	d	H1 (max.)	H2 (max.)	L	M	P
1	3.4	0.4	2.0 ±1.0	—	—	40.0 ±1.5	2.54
2	3.3 ±0.5	0.6 ±0.06	2.0 ±1.0	6.0	24.0 ±1.5	—	2.54

Fig.	Resistance @ 25°C (Ω)	Tolerance @ 25°C	B Value/B Tolerance @ B25/B5	Color Code				Digi-Key Part No.	Price Each			Vishay Part No.
				1	2	3	4		1	10	50	
1	10k	±1%	3977K ±0.75%	Blue	Blue	—	—	BC2299-ND	.99	.68	.64	NTCLE203E3103FB0
	100k	±1%	4190K ±1.5%	Brown	Brown	—	—	BC2300-ND	.99	.68	.64	NTCLE203E3104FB0
	10k	±2%	3977K ±0.75%	Blue	Blue	—	—	BC2298-ND	.70	.48	.45	NTCLE203E3103GB0
2	6.8k	±2%	3977K ±0.75%	Blue	Gray	Red	Red	BC2560-ND	.54	.37	.35	NTCLE100E3682GB0
	2.7k	±3%	3977K ±0.75%	Red	Violet	Red	Orange	BC2312-ND	.36	.25	.24	NTCLE100E3272HB0
	4.7k	±3%	3977K ±0.75%	Yellow	Violet	Red	Orange	BC2313-ND	.36	.25	.24	NTCLE100E3472HB0
	10k	±3%	3977K ±0.75%	Brown	Black	Orange	Orange	BC2311-ND	.36	.25	.24	NTCLE100E3103HB0
	4.7k	±3%	4090K ±1.5%	Yellow	Violet	Orange	Orange	BC2314-ND	.36	.25	.24	NTCLE100E3473HB0
	2.2k	±5%	3977K ±0.75%	Red	Red	Red	Gold	BC2304-ND	.31	.22	.20	NTCLE100E3222JB0
	3.3k	±5%	3977K ±0.75%	Orange	Orange	Red	Gold	BC2307-ND	.31	.22	.20	NTCLE100E3332JB0
	6.8k	±5%	3977K ±0.75%	Blue	Gray	Red	Gold	BC2310-ND	.31	.22	.20	NTCLE100E3682JB0
	10k	±5%	3977K ±0.75%	Brown	Black	Orange	Gold	BC2301-ND	.31	.22	.20	NTCLE100E3103JB0
	15k	±5%	3740K ±2%	Brown	Green	Orange	Gold	BC2303-ND	.31	.22	.20	NTCLE100E3153JB0
	22k	±5%	3740K ±2%	Red	Red	Orange	Gold	BC2305-ND	.31	.22	.20	NTCLE100E3223JB0
	33k	±5%	4090K ±1.5%	Orange	Orange	Orange	Gold	BC2308-ND	.31	.22	.20	NTCLE100E3333JB0
	47k	±5%	4090K ±1.5%	Yellow	Violet	Orange	Gold	BC2309-ND	.31	.22	.20	NTCLE100E3473JB0
	68	±5%	3390K ±3%	Blue	Gray	Black	Gold	BC2554-ND	.31	.22	.20	NTCLE100E3689JB0
	100k	±5%	4190K ±1.5%	Brown	Black	Yellow	Gold	BC2302-ND	.31	.22	.20	NTCLE100E3104JB0
	220k	±5%	4370K ±2.5%	Red	Red	Yellow	Gold	BC2306-ND	.31	.22	.20	NTCLE100E3224JB0

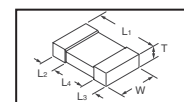


## Surface Mount NTC Chip Thermistors



Surface Mount NTC Chip Thermistors have a negative temperature coefficient. The device has no marking. **Terminations:** • 0402 and 0603: NiSn • 0805: Ni **Applications:** • Temperature compensation, sensing and protection in: battery chargers, consumer equipment, and office equipment **Features:** • High accuracy over wide ranges of operating temperature (-40°C – 150°C) • Suitable for wave or reflow soldering • High sensitivity • Taped on reel

Size Code	Dimensions - mm				
	L1	W	T	L2 and L3 Minimum	L4 Minimum
0402	1.0 ±0.15	0.5 ±0.15	0.5 ±0.15	0.1	0.3
0603	1.6 ±0.15	0.8 ±0.15	0.8 ±0.15	0.2	0.4
0805	2.0 ±0.2	1.25 ±0.15	0.8 ±0.15	0.2	0.55



Size Code	Resistance @ 25°C (kΩ)	Tolerance @ 25°C	B Value/ B Tolerance @ B25/B5	Digi-Key Part No.	Cut Tape Price Each			Tape and Reel†		Vishay Part No.	
					1	10	50	Qty.	Pricing		
0402	4.7	±3%	3595K ±3%	BC2326CT-ND	.21	.15	.14	10,000	118.31/M	NTCS0402E3472HMT	
	10	±3%	3490K ±3%	BC2328CT-ND	.21	.15	.14	10,000	118.31/M	NTCS0402E3103HLT	
	15	±3%	3600K ±3%	BC2330CT-ND	.21	.15	.14	10,000	118.31/M	NTCS0402E3153HHT	
	22	±3%	3590K ±3%	BC2332CT-ND	.24	.17	.16	10,000	118.31/M	NTCS0402E3223HMT	
	33	±3%	3670K ±3%	BC2334CT-ND	.21	.15	.14	10,000	118.31/M	NTCS0402E3333HMT	
	47	±3%	4075K ±3%	BC2336CT-ND	.21	.15	.14	10,000	118.31/M	NTCS0402E3473HXT	
	68	±3%	3910K ±3%	BC2338CT-ND	.21	.15	.14	10,000	100.06/M	NTCS0402E3683HHT	
	100	±3%	3950K ±3%	BC2340CT-ND	.21	.15	.14	10,000	118.31/M	NTCS0402E3104HMT	
	4.7	±5%	3595K ±3%	BC2327CT-ND	.17	.12	.11	10,000	98.49/M	NTCS0402E3472JMT	
	10	±5%	3490K ±3%	BC2329CT-ND	.17	.12	.11	10,000	83.39/M	NTCS0402E3103JLT	
	15	±5%	3600K ±3%	BC2331CT-ND	.17	.12	.11	—	—	NTCS0402E3153JMT	
	22	±5%	3590K ±3%	BC2333CT-ND	.20	.14	.13	10,000	98.49/M	NTCS0402E3223JMT	
	33	±5%	3670K ±3%	BC2335CT-ND	.17	.12	.11	10,000	98.49/M	NTCS0402E3333JMT	
	47	±5%	4075K ±3%	BC2337CT-ND	.17	.12	.11	10,000	83.39/M	NTCS0402E3473JXT	
	68	±5%	3910K ±3%	BC2339CT-ND	.17	.12	.11	10,000	98.49/M	NTCS0402E3683JHT	
	100	±5%	3950K ±3%	BC2341CT-ND	.20	.14	.13	10,000	98.49/M	NTCS0402E3104JHT	
	0603	10	±3%	3610K ±1%	BC2290CT-ND	.21	.19	.18	4,000	136.94/M	NTCS0603E3103HMT
		68	±3%	3985K ±1%	BC1547CT-ND	.31	.22	.20	4,000	154.96/M	NTCS0603E3683JHT
100		±3%	4100K ±1%	BC2291CT-ND	.27	.19	.18	4,000	136.94/M	NTCS0603E3104HXT	
4.7		±5%	3830K ±1%	BC1538CT-ND	.22	.16	.15	—	—	NTCS0603E3472JHT	
10		±5%	3610K ±1%	BC2289CT-ND	.22	.15	.14	4,000	106.41/M	NTCS0603E3103JMT	
15		±5%	3600K ±1%	BC1540CT-ND	.30	.20	.19	4,000	176.58/M	NTCS0603E3153JMT	
0805	22	±1%	3800K ±1%	BC2571CT-ND	.48	.33	.31	4,000	240.84/M	NTCS0805E3223FHT	
	100	±1%	4100K ±1%	BC2562CT-ND	.48	.33	.31	4,000	240.84/M	NTCS0805E3104FXT	
	15	±2%	3700K ±1%	BC2568CT-ND	.43	.30	.28	4,000	215.92/M	NTCS0805E3153GMT	
	33	±2%	3920K ±1%	BC2572CT-ND	.43	.30	.28	8,000	211.60/M	NTCS0805E3333GHT	
	2.2	±5%	3600K ±1%	BC2294CT-ND	.22	.16	.15	4,000	112.02/M	NTCS0805E3222JMT	
	4.7	±5%	3500K ±1%	BC2296CT-ND	.22	.16	.15	4,000	112.02/M	NTCS0805E3472JMT	
	10	±5%	3570K ±3%	BC2292CT-ND	.22	.16	.15	4,000	112.02/M	NTCS0805E3103JMT	
	10	±5%	3940K ±1%	BC2561CT-ND	.22	.16	.15	4,000	112.02/M	NTCS0805E3103JHT	
	15	±5%	3700K ±1%	BC2293CT-ND	.22	.16	.15	4,000	112.02/M	NTCS0805E3153JMT	
	22	±5%	3800K ±1%	BC2295CT-ND	.21	.15	.14	4,000	102.11/M	NTCS0805E3223JHT	
	47	±5%	3960K ±1%	BC2297CT-ND	.22	.16	.15	4,000	112.02/M	NTCS0805E3473JHT	
	330	±5%	3930K ±1%	BC2575CT-ND	.22	.16	.15	4,000	112.02/M	NTCS0805E3334JHT	
470	±5%	4025K ±1%	BC2581CT-ND	.22	.16	.15	4,000	112.02/M	NTCS0805E3474JXT		

† For Tape and Reel part number change CT-ND to TR-ND.

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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