

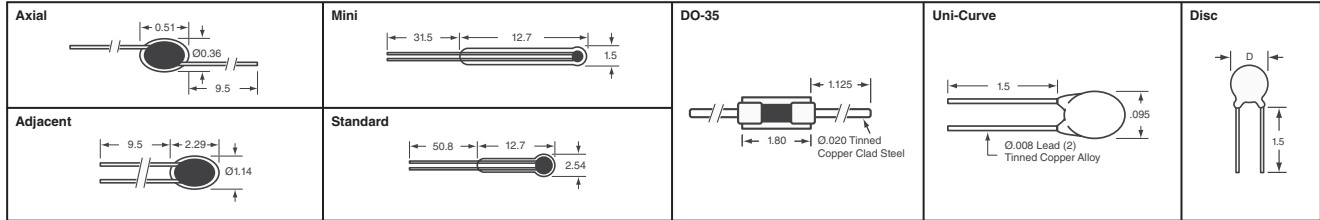
Bead Thermistors: Features: • Relatively uniform size • Offer ultra-fast time response • Highly sensitive to electric power Specifications: • Operating Temperature Range: -60°C – 300°C • Encapsulation: Glass hermetic seal • Lead Material: Platinum Iridium • Dissipation constant (DC): 0.1 mW/°C (in still air) minimum • Time constant: 1s (in still air) maximum

Glass Probe Thermistors: Features: • Operating Temperature Range: -60°C – 300°C • Encapsulation: Glass • Lead Material: Dumet (copper clad Ni-Fe wire) • Dissipation constant (DC): Standard: 1.0 mW/°C in still air minimum, Mini: 0.7 mW/°C (in still air) minimum • Time constant: Standard: 22s (in still air) maximum, Mini: 10s (in still air) maximum

Glass Encapsulated Chip Thermistors: Features: • High quality line of low cost hermetically sealed, glass-encapsulated units • Evolved from highly successful and field proven Honeywell Standard Chip Series • DO-35 package

Uni-Curve® Series: Features: • High quality, low cost resistance temperature matched interchangeable thermistors • Accuracy • High stability • Epoxy coated

Disc Thermistors: Features: • Ideally suited for low cost applications with a maximum temperature of 150°C • PC Board mountable • Solderable leads • Tinned copper leads



Resistance @25°C (Ω)	Tolerance @25°C (%)	Digi-Key Part No.	Price Each			Honeywell Sensing Part No.
Small Bead Thermistors						
Axial						
2K	±25.0	480-3113-ND	6.16	4.62	3.85	111-202CAK-H01
2K	±25.0	480-3114-ND	8.32	6.40	5.37	111-202CAK-H02
Large Bead Thermistors						
Adjacent						
1K	±20.0	480-3115-ND	7.58	5.77	4.95	112-102EAJ-B01
10K	±20.0	480-3116-ND	7.91	6.02	5.16	112-103FAJ-B01
100K	±20.0	480-3117-ND	8.36	6.43	5.39	112-104KAJ-B01
2K	±20.0	480-3118-ND	8.21	6.32	5.29	112-202EAJ-B01
Glass Probe Thermistors						
Mini						
1K	±20.0	480-3119-ND	7.19	5.25	4.50	120-102EAJ-Q01
2K	±20.0	480-3120-ND	16.01	13.05	11.21	120-202EAD-Q02
2K	±20.0	480-3121-ND	8.23	6.33	5.31	120-202EAG-Q01
Standard						
1K	±20.0	480-3122-ND	14.67	11.96	10.27	121-102EAJ-Q01
10K	±20.0	480-3123-ND	7.33	5.58	4.78	121-103FAJ-Q01
100K	±20.0	480-3124-ND	8.89	6.83	5.73	121-104KAH-Q01
2K	±20.0	480-3125-ND	7.34	5.59	4.79	121-202EAJ-Q01
Glass Encapsulated Thermistors						
DO-35						
1K	±10.0	480-3126-ND	.76	.47	.35	135-102DAG-J01
10K	±10.0	480-3127-ND	.85	.55	.40	135-103FAD-J01
10K	±5.0	480-3128-ND	.72	.44	.33	135-103FAF-J01
10K	±10.0	480-3129-ND	.68	.40	.29	135-103FAG-J01
10K	±10.0	480-3130-ND	.73	.46	.34	135-103FBX-J01
10K	±5.0	480-3131-ND	.75	.47	.34	135-103LAF-J01
10K	±10.0	480-3132-ND	.75	.47	.34	135-103LAG-J01
100K	±1.0	480-3133-ND	.76	.48	.35	135-104LAG-J01
100K	±5.0	480-3134-ND	.68	.40	.30	135-104LAF-J01
100K	±10.0	480-3135-ND	.68	.40	.30	135-104LAG-J01
100K	±5.0	480-3136-ND	.68	.40	.30	135-104LBF-J01
100K	±10.0	480-3137-ND	.75	.47	.35	135-104QAD-J01
1M	±10.0	480-3138-ND	.73	.46	.34	135-105QAG-J01
200K	±10.0	480-3139-ND	.74	.46	.34	135-204QAG-J01
50K	±10.0	480-3140-ND	.75	.47	.34	135-503LAG-J01

Resistance @25°C (Ω)	Tolerance @25°C (%)	Digi-Key Part No.	Price Each			Honeywell Sensing Part No.
Uni-Curve® Series						
1K	±1.0	480-3157-ND	2.81	1.94	1.58	192-102DEW-A01
10K	±0.2	480-3158-ND	2.90	2.03	1.67	192-103LET-A01
100K	±0.2	480-3159-ND	2.58	1.78	1.45	192-104QET-A01
2.2K	±0.2	480-3160-ND	2.66	1.84	1.50	192-222LET-A01
3K	±0.2	480-3161-ND	2.56	1.71	1.40	192-302LET-A01
30K	±1.0	480-3162-ND	2.58	1.78	1.45	192-303KET-A01
500	±0.2	480-3163-ND	2.80	1.94	1.58	192-501DET-A01
5K	±0.2	480-3164-ND	2.58	1.78	1.45	192-502LET-A01
50K	±0.2	480-3165-ND	2.58	1.72	1.40	192-503QET-A01

Dim. D (Inch)	Resistance @25°C (Ω)	Tolerance @25°C (%)	Digi-Key Part No.	Price Each			Honeywell Sensing Part No.
Disc Thermistors							
.1	1K	±10.0	480-3141-ND	1.77	1.20	.93	140-102FAG-RB1
.1	10K	±10.0	480-3142-ND	1.77	1.20	.93	140-103LAG-RB1
.1	500	±10.0	480-3143-ND	1.77	1.20	.93	140-501FAG-RB1
.1	5K	±10.0	480-3144-ND	1.77	1.20	.93	140-502LAG-RB1
.2	100	±10.0	480-3145-ND	1.96	1.29	1.05	143-101FAG-RC1
.2	1K	±10.0	480-3146-ND	2.11	1.44	1.13	143-102LAG-RC1
.2	200	±10.0	480-3147-ND	1.96	1.29	1.05	143-201FAG-RC1
.2	3K	±10.0	480-3148-ND	1.96	1.29	1.05	143-302LAG-RC1
.2	30K	±10.0	480-3149-ND	1.96	1.29	1.05	143-303QAG-RC1

Size Code	Resistance @25°C (Ω)	Tolerance @25°C (%)	Digi-Key Part No.	Cut Tape Price Each			T&R Pricing 3,000	Honeywell Sensing Part No.
SMD Thermistors								
0805	10K	±2.0	480-3150-1-ND	3.45	2.18	1.64	1270.50/M	173-103LAD-301
	47K	±5.0	480-3151-1-ND	3.01	1.93	1.39	1099.89/M	173-473LAF-301
	5K	±5.0	480-3152-1-ND	2.31	1.37	1.00	760.85/M	173-502GAF-301
1206	10K	±3.0	480-3153-1-ND	3.79	2.36	1.80	1433.85/M	175-103LAE-301
	440K	±5.0	480-3154-1-ND	3.26	2.06	1.55	1201.53/M	175-444QBF-301
	5K	±5.0	480-3155-1-ND	3.50	2.24	1.68	1305.35/M	175-502GAF-301
	50K	±10.0	480-3156-1-ND	3.87	2.41	1.83	1463.62/M	175-503LAG-301

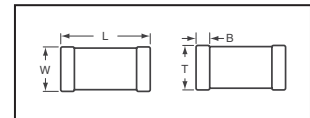
‡ For Tape and Reel Part Number Change 1-ND to 2-ND

TDK Surface Mount NTC Thermistors

NTC (Negative Temperature Coefficient) Thermistors are manufactured from sintered metal oxides. TDK thermistors have low thermal time constraints, which result in extremely high rates of resistance change to accurately track the temperature.

- Features:**
- Layered internal electrode structure
 - Good stability of resistance value after soldering

Size Code	Dimensions - mm			
	L	W	T	B
0402	1.0 ±0.05	0.5 ±0.05	0.5 ±0.05	0.1 Min.
0603	1.6 ±0.1	0.8 ±0.1	0.8 ±0.1	0.2 Min.



Size Code	Nominal Resistance @ B25/85° (Ω)	B Constant		Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel Pricing		TDK Part No.
		25/85°C	25/50°C		1	10	100		Qty.	Pricing	
0402	10K	3435K ±1%	3380K ±1%	445-2550-1-ND	.23	.20	.16	445-2550-2-ND	10,000	73.33/M	NTCG103JF103F
	100K	4500K ±1%	4498K ±1%	445-2552-1-ND	.23	.20	.16	—	—	—	NTCG104KF104F
0603	10K	3435K ±1%	3380K ±1%	445-2554-1-ND	.25	.23	.18	445-2554-2-ND	4,000	95.84/M	NTCG163JF103F
	10K	4100K ±3%	4067K ±3%	445-2555-1-ND	.21	.19	.15	445-2555-2-ND	4,000	79.86/M	NTCG164BH103H
	100K	4500K ±1%	4498K ±1%	445-2556-1-ND	.25	.23	.18	445-2556-2-ND	4,000	95.84/M	NTCG164KF104F

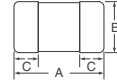
Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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SMD NTC Thermistors



Size Code	Dimensions - mm		
	A	B	C
0201	0.6	0.3	0.15
0402	1.0	0.5	0.25
0603	1.6	0.8	0.6
0805	2.0	1.25	0.7

Features: • Excellent solderability and high stability in environment • Long time aging stability • High accuracy in resistance and B-constant • Reflow soldering possible • Lead is not contained in the product • Operating Temperature Range -40°C - 125°C • Free Thermistor design tool - "Output Voltage Simulator" is available at <http://murata.com/designlib/index.html>

Resistance 25°C Ω	B-Constant 25-50°C (k) ±3%	Tolerance 25°C (%)	Max. Operating Current 25°C (mA)	Rated Electric Power 25°C (mW)	Typical Dissipation Constant 25°C (mW/°C)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		Murata Part No.
							1	10	100		Qty.	Pricing	
0201 Series													
11	2750	±5	9.50	100	1	490-4637-1-ND	.18	1.56	12.24	490-4637-2-ND	15,000	63.17/M	NCP03YS110J05RL
22	2750	±5	6.70	100	1	490-4638-1-ND	.18	1.56	12.24	490-4638-2-ND	15,000	63.17/M	NCP03YS220J05RL
33	2750	±5	5.50	100	1	490-4639-1-ND	.18	1.56	12.24	490-4639-2-ND	15,000	63.17/M	NCP03YS330J05RL
47	2750	±5	4.60	100	1	490-4640-1-ND	.18	1.56	12.24	490-4640-2-ND	15,000	63.17/M	NCP03YS470J05RL
68	2750	±5	3.80	100	1	490-4641-1-ND	.18	1.56	12.24	490-4641-2-ND	15,000	63.17/M	NCP03YS680J05RL
100	2750	±5	3.10	100	1	490-4642-1-ND	.18	1.56	12.24	490-4642-2-ND	15,000	63.17/M	NCP03YS101J05RL
6.8k	3380	±5	0.38	100	1	490-4643-1-ND	.18	1.56	12.24	490-4643-2-ND	15,000	63.17/M	NCP03XH682J05RL
10k	3380	±5	0.31	100	1	490-4644-1-ND	.18	1.56	12.24	490-4644-2-ND	15,000	63.17/M	NCP03XH103J05RL
15k	3380	±5	0.25	100	1	490-4645-1-ND	.18	1.56	12.24	490-4645-2-ND	15,000	63.17/M	NCP03XH153J05RL
22k	3380	±5	0.21	100	1	490-4646-1-ND	.18	1.56	12.24	490-4646-2-ND	15,000	63.17/M	NCP03XH223J05RL
33k	4250	±5	0.17	100	1	490-4647-1-ND	.18	1.56	12.24	490-4647-2-ND	15,000	63.17/M	NCP03WF333J05RL
47k	4050	±5	0.14	100	1	490-4648-1-ND	.18	1.56	12.24	490-4648-2-ND	15,000	63.17/M	NCP03WB473J05RL
68k	4250	±5	0.12	100	1	490-4649-1-ND	.18	1.56	12.24	490-4649-2-ND	15,000	63.17/M	NCP03WF683J05RL
100k	4250	±5	0.10	100	1	490-4650-1-ND	.18	1.56	12.24	490-4650-2-ND	15,000	63.17/M	NCP03WF104J05RL
0402 Series													
22	3100	±5	6.70	100	1	490-2408-1-ND	.11	.94	7.37	490-2408-2-ND	10,000	38.18/M	NCP15XC220J03RC
33	3100	±5	5.50	100	1	490-2409-1-ND	.11	.94	7.37	490-2409-2-ND	10,000	38.18/M	NCP15XC330J03RC
47	3100	±5	4.60	100	1	490-2410-1-ND	.11	.94	7.37	—	—	—	NCP15XC470J03RC
68	3100	±5	3.80	100	1	490-2411-1-ND	.11	.94	7.37	—	—	—	NCP15XC680J03RC
100	3250	±5	3.10	100	1	490-2412-1-ND	.11	.94	7.37	—	—	—	NCP15XF101J03RC
150	3250	±5	2.50	100	1	490-2413-1-ND	.11	.94	7.37	490-2413-2-ND	10,000	38.18/M	NCP15XF151J03RC
220	3500	±5	2.10	100	1	490-2415-1-ND	.11	.94	7.37	490-2415-2-ND	10,000	38.18/M	NCP15XM221J03RC
470	3650	±5	1.40	100	1	490-2419-1-ND	.11	.94	7.37	490-2419-2-ND	10,000	38.18/M	NCP15XQ471J03RC
1.0k	3650	±5	1.00	100	1	490-2418-1-ND	.11	.94	7.37	—	—	—	NCP15XQ102J03RC
1.5k	3950	±5	0.81	100	1	490-2421-1-ND	.11	.94	7.37	490-2421-2-ND	10,000	38.18/M	NCP15XW152J03RC
2.2k	3950	±5	0.67	100	1	490-2423-1-ND	.11	.94	7.37	490-2423-2-ND	10,000	38.18/M	NCP15XW222J03RC
3.3k	3950	±5	0.55	100	1	490-2425-1-ND	.11	.94	7.37	490-2425-2-ND	10,000	38.18/M	NCP15XM332J03RC
4.7k	3500	±5	0.46	100	1	490-2417-1-ND	.09	.84	6.59	490-2417-2-ND	10,000	34.13/M	NCP15XM472J03RC
6.8k	3950	±5	0.38	100	1	490-2426-1-ND	.11	.94	7.37	—	—	—	NCP15XW682J03RC
10k	3380	±1	—	100	1	490-4801-1-ND	.10	.91	7.21	490-4801-2-ND	10,000	37.03/M	NCP15XH103F03RC
10k	3380	±5	0.31	100	1	490-2414-1-ND	.09	.84	6.59	490-2414-2-ND	10,000	34.13/M	NCP15XH103J03RC
15k	3950	±5	0.25	100	1	490-2422-1-ND	.11	.94	7.37	490-2422-2-ND	10,000	38.18/M	NCP15XW153J03RC
22k	3950	±5	0.21	100	1	490-2424-1-ND	.11	.94	7.37	490-2424-2-ND	10,000	38.18/M	NCP15XW223J03RC
33k	4050	±5	0.17	100	1	490-2401-1-ND	.11	.94	7.37	490-2401-2-ND	10,000	38.48/M	NCP15WB333J03RC
47k	4050	±1	—	100	1	490-4802-1-ND	.16	1.37	10.78	490-4802-2-ND	10,000	55.91/M	NCP15WB473F03RC
47k	4050	±5	0.14	100	1	490-2402-1-ND	.09	.84	6.59	490-2402-2-ND	10,000	34.13/M	NCP15WB473J03RC
68k	4150	±5	0.12	100	1	490-2403-1-ND	.11	.94	7.37	490-2403-2-ND	10,000	38.18/M	NCP15WD683J03RC
100k	4250	±1	—	100	1	490-4803-1-ND	.09	.74	5.79	490-4803-2-ND	10,000	29.77/M	NCP15WF104F03RC
100k	4250	±5	0.10	100	1	490-2404-1-ND	.09	.84	6.59	490-2404-2-ND	10,000	34.13/M	NCP15WF104J03RC
150k	4500	±5	0.08	100	1	490-2405-1-ND	.11	.94	7.37	490-2405-2-ND	10,000	38.18/M	NCP15WM154J03RC
220k	4500	±5	0.06	100	1	490-2406-1-ND	.11	.94	7.37	490-2406-2-ND	10,000	38.18/M	NCP15WM224J03RC
470k	4500	±5	0.04	100	1	490-2407-1-ND	.11	.94	7.37	490-2407-2-ND	10,000	38.18/M	NCP15WM474J03RC
0603 Series													
100	3250	±5	3.10	100	1	490-2434-1-ND	.12	1.05	8.23	—	—	—	NCP18XF101J03RB
150	3250	±5	2.50	100	1	490-2435-1-ND	.12	1.05	8.23	490-2435-2-ND	4,000	44.87/M	NCP18XF151J03RB
220	3500	±5	2.10	100	1	490-2437-1-ND	.12	1.05	8.23	490-2437-2-ND	4,000	44.87/M	NCP18XM221J03RB
330	3500	±5	1.70	100	1	490-2438-1-ND	.12	1.05	8.23	490-2438-2-ND	4,000	44.87/M	NCP18XM331J03RB
470	3650	±5	1.40	100	1	490-2441-1-ND	.12	1.05	8.23	490-2441-2-ND	4,000	44.87/M	NCP18XQ471J03RB
1.0k	3650	±5	1.00	100	1	490-2440-1-ND	.12	1.05	8.23	490-2440-2-ND	4,000	44.87/M	NCP18XQ102J03RB
1.5k	3950	±5	0.81	100	1	490-2443-1-ND	.12	1.05	8.23	490-2443-2-ND	4,000	44.87/M	NCP18XW152J03RB
2.2k	3950	±5	0.67	100	1	490-2445-1-ND	.12	1.05	8.23	490-2445-2-ND	4,000	44.87/M	NCP18XW222J03RB
3.3k	3950	±5	0.55	100	1	490-2447-1-ND	.12	1.05	8.23	490-2447-2-ND	4,000	44.87/M	NCP18XW332J03RB
4.7k	3500	±5	0.46	100	1	490-2439-1-ND	.11	.94	7.41	490-2439-2-ND	4,000	40.66/M	NCP18XM472J03RB
6.8k	3950	±5	0.38	100	1	490-2448-1-ND	.12	1.05	8.23	490-2448-2-ND	4,000	44.87/M	NCP18XW682J03RB
10k	3380	±1	—	100	1	490-4800-1-ND	.12	1.01	7.93	490-4800-2-ND	4,000	43.56/M	NCP18XH103F03RB
10k	3380	±5	0.31	100	1	490-2436-1-ND	.11	.94	7.41	490-2436-2-ND	4,000	40.66/M	NCP18XH103J03RB
15k	3950	±5	0.25	100	1	490-2444-1-ND	.12	1.05	8.23	490-2444-2-ND	4,000	44.87/M	NCP18XW153J03RB
22k	3950	±5	0.21	100	1	490-2446-1-ND	.12	1.05	8.23	490-2446-2-ND	4,000	44.87/M	NCP18XW223J03RB
33k	4050	±5	0.17	100	1	490-2427-1-ND	.12	1.05	8.23	490-2427-2-ND	4,000	44.87/M	NCP18WB333J03RB
47k	4050	±5	0.14	100	1	490-2428-1-ND	.11	.94	7.41	490-2428-2-ND	4,000	40.66/M	NCP18WB473J03RB
68k	4150	±5	0.12	100	1	490-2429-1-ND	.12	1.05	8.23	490-2429-2-ND	4,000	44.87/M	NCP18WD683J03RB
100k	4250	±5	0.10	100	1	490-2430-1-ND	.11	.94	7.41	490-2430-2-ND	4,000	40.66/M	NCP18WF104J03RB
220k	4500	±5	0.06	100	1	490-2432-1-ND	.12	1.05	8.23	490-2432-2-ND	4,000	44.87/M	NCP18WM224J03RB
470k	4500	±5	0.04	100	1	490-2433-1-ND	.12	1.05	8.23	490-2433-2-ND	4,000	44.87/M	NCP18WM474J03RB
0805 Series													
220	3500	±5	3.00	200	2	490-2452-1-ND	.15	1.34	10.52	490-2452-2-ND	4,000	57.36/M	NCP21XM221J03RA
470	3650	±5	2.00	200	2	490-2455-1-ND	.15	1.34	10.52	490-2455-2-ND	4,000	57.36/M	NCP21XQ471J03RA
1.0k	3650	±5	1.40	200	2	490-2454-1-ND	.15	1.34	10.52	490-2454-2-ND	4,000	57.36/M	NCP21XQ102J03RA
2.2k	3950	±5	0.90	200	2	490-2458-1-ND	.15	1.34	10.52	490-2458-2-ND	4,000	57.36/M	NCP21XW222J03RA
4.7k	3500	±5	0.65	200	2	490-2453-1-ND	.15	1.34	10.52	490-2453-2-ND	4,000	57.36/M	NCP21XM472J03RA
10k	3900	±5	0.44	200	2	490-2456-1-ND	.15	1.34	10.52	490-2456-2-ND	4,000	57.36/M	NCP21XV103J03RA
15k	3950	±5	0.36	200	2	490-2457-1-ND	.15	1.34	10.52	490-2457-2-ND	4,000	57.36/M	NCP21XW153J03RA
22k	3950	±5	0.30	200	2	490-2459-1-ND	.15	1.34	10.52	490-2459-2-ND	4,		



CANTHERM NTC Thermistors



Dimensions in mm

CWF Precision NTC Thermistor Probes are designed to facilitate installation in a wide variety of applications. PVC leads are applied to a precision, high-reliability NTC thermistor, insulated with heat conductive water resistant materials and potted into probe bodies. **Features:** • Small size and fast response, temperature coefficient of resistance can reach - (2% - 5%/°C) • Long-term stability and reliability (yearly drift of $\leq 1\%$) • Excellent tolerance and interchangeability (the accuracy of R and B value can be $\pm 1\%$) • Double layer packaging provides excellent insulation and high strength and impact resistance • Time Constant of ≤ 15 - 70S

MF11 NTC Thermistor is designed for temperature measurement and the temperature compensation of measurement instruments and electronic circuits. **Features:** • Broad range of resistance • Standard tolerances: $\pm 5\%$ and $\pm 10\%$

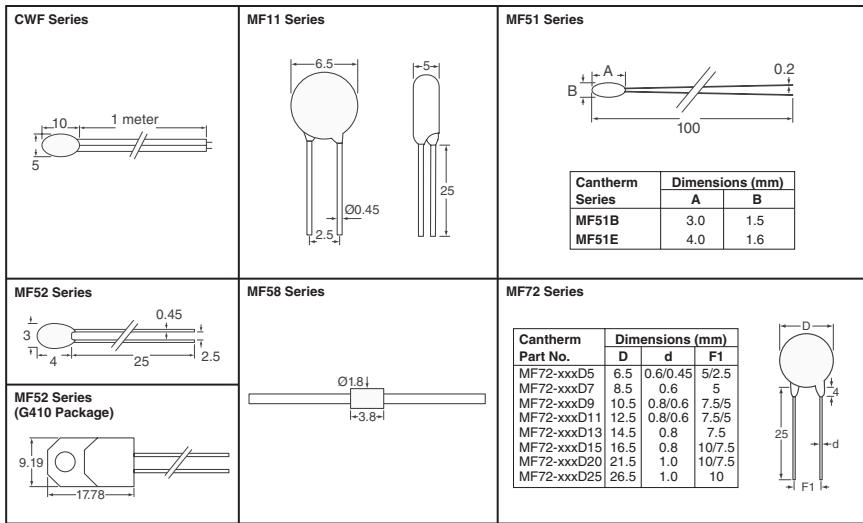
• Measuring power $\leq 0.5mW$ • Dissipation Constant $\leq 6.0mW/°C$ • Time Constant of ≤ 30 seconds • Rated Power: 0.5W • Good level of tolerance and interchangeability

MF51 Precision Glass Encapsulated NTC Thermistor is a small chip thermistor encased in glass with bare radial copper leads. **Benefits:** • High precision • Fast response • Reliable stability • No aging effect • Improved moisture resistance

MF52 NTC Thermistor is ethoxylated resin coated. The small size is made possible by new materials and manufacturing methods which provide the benefit of close tolerances and fast response. **Features:** • Small Size and fast response • Long-term Stability and Reliability • Excellent tolerance and interchangeability • Time Constant of ≤ 7 seconds in still air • UL Listed E240991

MF58 Glass Shell Precision NTC Thermistors are equipped with tinned axial leads and then wrapped with purified glass. **Features:** • Usable in high temperature and high moisture environments • Suitable for automatic insertion on thru-hole PCBs • Rapid response • High Sensitivity • Dissipation factor: $\leq 2mW/°C$ (in still air) • Operating temperature range: $-55°C - 200°C$ • Rated power: $\leq 50mW$

MF72 Power NTC Thermistors provide inrush current suppression for sensitive electronics. Connecting a MF72 in series with the power source will limit the current surges typically created at turn on. Once the circuit is energized the resistance of the MF72 will decrease rapidly to a very low value, power consumption can be ignored and there will be no effect on normal operating current. **Features:** • Small size and fast response • High power handling capability • Fast response to surge current • High material constant (B value) • Low residual resistance • Long-term Stability and Reliability • UL 1434 Listed E241319



Resistance Ω	Tolerance ±	Digi-Key Part No.	Pricing	Canttherm Part No.
			1 10 50	
CWF Series				
10K	1%	317-1310-ND	3.67 32.17 107.08	CWF1B103F3380
100K		317-1311-ND	3.67 32.17 107.08	CWF1B104F3950
10K	2%	317-1312-ND	3.22 28.15 93.71	CWF1B103G3380
100K		317-1313-ND	3.22 28.15 93.71	CWF1B104G3950
10K	3%	317-1314-ND	2.76 24.14 80.35	CWF1B103H3380
100K		317-1315-ND	2.76 24.14 80.35	CWF1B104H3950
10K	5%	317-1316-ND	1.84 16.11 53.62	CWF1B103J3380
100K		317-1317-ND	1.84 16.11 53.62	CWF1B104J3950
10K		317-1382-ND	4.81 42.08 140.06	CWF3AA103G3380
100K		317-1383-ND	4.81 42.08 140.06	CWF3AA104G4150
50K	2%	317-1384-ND	4.81 42.08 140.06	CWF3AA503G3950
10K		317-1385-ND	4.81 42.08 140.06	CWF4B103G3380
MF11 Series				
20		317-1267-ND	.46 4.01 13.37	MF11-0000205
40		317-1268-ND	.46 4.01 13.37	MF11-0000405
75	5%	317-1269-ND	.46 4.01 13.37	MF11-0000755
100		317-1270-ND	.46 4.01 13.37	MF11-0001005
170		317-1271-ND	.46 4.01 13.37	MF11-0001705
250		317-1272-ND	.46 4.01 13.37	MF11-0002505
300		317-1273-ND	.46 4.01 13.37	MF11-0003005
350	5%	317-1274-ND	.46 4.01 13.37	MF11-0003505
600		317-1275-ND	.46 4.01 13.37	MF11-0006005
800		317-1276-ND	.46 4.01 13.37	MF11-0008005
1000		317-1277-ND	.46 4.01 13.37	MF11-0010005
1400		317-1278-ND	.46 4.01 13.37	MF11-0014005
2000	5%	317-1279-ND	.46 4.01 13.37	MF11-0020005
3300		317-1280-ND	.46 4.01 13.37	MF11-0033005
4600		317-1281-ND	.46 4.01 13.37	MF11-0046005
8000		317-1282-ND	.46 4.01 13.37	MF11-0080005
100K	5%	317-1283-ND	.46 4.01 13.37	MF11-0100005
15K		317-1284-ND	.46 4.01 13.37	MF11-0150005
33K		317-1285-ND	.46 4.01 13.37	MF11-0330005
20		317-1286-ND	.23 2.01 6.68	MF11-0002010
40		317-1287-ND	.23 2.01 6.68	MF11-0004010
75	10%	317-1288-ND	.23 2.01 6.68	MF11-0007510
100		317-1289-ND	.23 2.01 6.68	MF11-0010010
170		317-1290-ND	.23 2.01 6.68	MF11-0017010
250		317-1291-ND	.23 2.01 6.68	MF11-0025010
300		317-1292-ND	.23 2.01 6.68	MF11-0030010
350	10%	317-1293-ND	.23 2.01 6.68	MF11-0035010
600		317-1294-ND	.23 2.01 6.68	MF11-0060010
800		317-1295-ND	.23 2.01 6.68	MF11-0080010
1000		317-1296-ND	.23 2.01 6.68	MF11-0100010
1400		317-1297-ND	.23 2.01 6.68	MF11-0140010
2000	10%	317-1298-ND	.23 2.01 6.68	MF11-0200010
3300		317-1299-ND	.23 2.01 6.68	MF11-0330010
4600		317-1300-ND	.23 2.01 6.68	MF11-0460010
8000		317-1301-ND	.23 2.01 6.68	MF11-0800010
10000		317-1302-ND	.23 2.01 6.68	MF11-1000010
15000	10%	317-1303-ND	.23 2.01 6.68	MF11-1500010
33000		317-1304-ND	.23 2.01 6.68	MF11-3300010
MF51B Series				
10K		317-1370-ND	3.21 28.05 93.38	MF51B103F3380
100K	1%	317-1371-ND	3.21 28.05 93.38	MF51B104F3950
50K		317-1372-ND	3.21 28.05 93.38	MF51B503F3950
MF51E Series				
10K	0.5%	317-1305-ND	1.44 12.55 41.78	MF51E103E3950
10K		317-1306-ND	1.44 12.55 41.78	MF51E103F3950
10K	1%	317-1309-ND	1.73 15.09 50.24	MF51E103F3950C
22.5K		317-1308-ND	1.73 15.09 50.24	MF51E225F3950C
10K	2%	317-1307-ND	1.44 12.55 41.78	MF51E103G3950
MF52A Series				
10K		317-1355-ND	1.15 10.04 33.41	MF52A103F3380
100K	1%	317-1356-ND	1.15 10.04 33.41	MF52A104F4150

Resistance Ω	Tolerance ±	Digi-Key Part No.	Pricing	Canttherm Part No.
			1 10 50	
10K		317-1357-ND	.69 6.05 20.13	MF52A103G3380
100K	2%	317-1358-ND	.69 6.05 20.13	MF52A104G4150
2.7K		317-1359-ND	.44 3.81 12.69	MF52A27H3470
4.7K		317-1360-ND	.44 3.81 12.69	MF52A27H3470
47K	3%	317-1361-ND	.44 3.81 12.69	MF52A47H3950
100K		317-1362-ND	.44 3.81 12.69	MF52A104H4150
1K		317-1251-ND	.23 1.95 6.70	MF52A102J3470
1.5K		317-1252-ND	.28 2.42 8.04	MF52A152J3470
2K	5%	317-1253-ND	.28 2.42 8.04	MF52A202J3470
2.2K		317-1254-ND	.28 2.42 8.04	MF52A222J3470
3.3K		317-1255-ND	.23 2.01 6.70	MF52A332J3470
4.7K		317-1256-ND	.28 2.42 8.04	MF52A472J3470
6.8K		317-1257-ND	.28 2.42 8.04	MF52A682J3470
10K	5%	317-1258-ND	.28 2.42 8.04	MF52A103J3470
15K		317-1259-ND	.28 2.42 8.04	MF52A153J3470
22K		317-1280-ND	.28 2.42 8.04	MF52A223J3470
33K		317-1363-ND	.28 2.42 8.04	MF52A333J950
47K		317-1364-ND	.28 2.42 8.04	MF52A473J950
68K	5%	317-1263-ND	.28 2.42 8.04	MF52A683J950
100K		317-1264-ND	.28 2.42 8.04	MF52A104J950
220K		317-1265-ND	.28 2.42 8.04	MF52A224J4150
MF52C Series				
10K		317-1376-ND	1.43 12.50 41.61	MF52C1103F3380
100K	1%	317-1377-ND	1.43 12.50 41.61	MF52C1104F4150
50K		317-1378-ND	1.43 12.50 41.61	MF52C1503F3950
10K		317-1406-ND	4.81 42.08 140.06	MF52C103F380-G410
100K	1%	317-1407-ND	4.81 42.08 140.06	MF52C104F4150-G410
50K		317-1408-ND	4.81 42.08 140.06	MF52C503F3950-G410
MF52F Series				
10K		317-1373-ND	1.39 12.20 40.60	MF52F103F3380
100K	1%	317-1374-ND	1.39 12.20 40.60	MF52F104F4150
50K		317-1375-ND	1.39 12.20 40.60	MF52F503F3950
MF58 Series				
10K		317-1379-ND	1.15 10.06 33.49	MF58103F3380
100K	1%	317-1380-ND	1.15 10.06 33.49	MF58104F3950
50K		317-1381-ND	1.15 10.06 33.49	MF58503F3950
MF72 Series				
5		317-1144-ND	.31 2.74 9.13	MF72-00505
10		317-1145-ND	.26 2.29 7.62	MF72-01005
60	20%	317-1146-ND	.31 2.74 9.13	MF72-06005
200		317-1147-ND	.31 2.74 9.13	MF72-20005
5		317-1148-ND	.31 2.74 9.13	MF72-00507
8		317-1149-ND	.31 2.74 9.13	MF72-00807
10		317-1150-ND	.26 2.29 7.62	MF72-01007
12		317-1151-ND	.31 2.74 9.13	MF72-01207
16		317-1152-ND	.31 2.74 9.13	MF72-01607
22		317-1153-ND	.31 2.74 9.13	MF72-02207
33		317-1154-ND	.31 2.74 9.13	MF72-03307
200		317-1155-ND	.31 2.74 9.13	MF72-20007
3	20%	317-1156-ND	.35 3.03 10.06	MF72-00309
4		317-1157-ND	.35 3.03 10.06	MF72-00409
5		317-1158-ND	.35 3.03 10.06	MF72-00509
6		317-1159-ND	.35 3.03 10.06	MF72-00609
8		317-1160-ND	.35 3.03 10.06	MF72-00809
10	20%	317-1161-ND	.29 2.52 8.37	MF72-01009
12		317-1162-ND	.35 3.03 10.06	MF72-01209
16		317-1163-ND	.35 3.03 10.06	MF72-01609
20		317-1164-ND	.35 3.03 10.06	MF72-02009
22		317-1165-ND	.35 3.03 10.06	MF72-02209
30	20%	317-1166-ND	.35 3.03 10.06	MF72-03009
33		317-1167-ND	.35 3.03 10.06	MF72-03309
50		317-1168-ND	.35 3.03 10.06	MF72-05009
60		317-1169-ND	.35 3.03 10.06	MF72-06009
80	20%	317-1170-ND	.35 3.03 10.06	MF72-08009
120		317-1171-ND	.35 3.03 10.06	MF72-12009
200		317-1172-ND	.35 3.03 10.06	MF72-20009

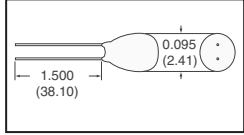
Resistance Ω	Tolerance ±	Digi-Key Part No.	Pricing	Canttherm Part No.
			1 10 50	
400		317-1173-ND	.35 3.03 10.06	MF72-400D9
2.5		317-1174-ND	.40 3.51 11.67	MF72-002.5D11
3	20%	317-1175-ND	.40 3.51 11.67	MF72-003D11
4		317-1176-ND	.40 3.51 11.67	MF72-004D11
5		317-1177-ND	.40 3.51 11.67	MF72-005D11
6		317-1178-ND	.40 3.51 11.67	MF72-006D11
8		317-1179-ND	.40 3.51 11.67	MF72-008D11
10	20%	317-1180-ND	.40 3.51 11.67	MF72-010D11
12		317-1181-ND	.33 2.93 9.74	MF72-012D11
16		317-1182-ND	.40 3.51 11.67	MF72-016D11
20		317-1183-ND	.40 3.51 11.67	MF72-020D11
22		317-1184-ND	.40 3.51 11.67	MF72-022D11
30	20%	317-1185-ND	.40 3.51 11.67	MF72-030D11
33		317-1186-ND	.40 3.51 11.67	MF72-033D11
50		317-1187-ND	.40 3.51 11.67	MF72-050D11
60		317-1188-ND	.40 3.51 11.67	MF72-060D11
80		317-1189-ND	.40 3.51 11.67	

U.S. SENSOR Thermistors



Precision Thermistor

U.S. Sensor's standard precision interchangeable thermistors are low cost, highly accurate, stable devices designed specifically for temperature sensing and control applications. They are particularly suited for uses where their precision interchangeability eliminates the necessity for costly individual circuit calibration.

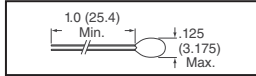


Res. @ 25°C (Ω)	Digi-Key Part No.	Price Each	U.S. Sensor Part No.
		1 10 25 100	
Bare Leads (±0.1°C from 0°C - 70°C)			
2252	615-1000-ND	6.46 3.42 2.23 1.25	PS222J2
3000	615-1001-ND	6.46 3.42 2.23 1.25	PS300J2
5000	615-1002-ND	6.46 3.42 2.23 1.25	PS500J2
10000	615-1003-ND	6.46 3.42 2.23 1.25	PS1003J2
30000	615-1004-ND	6.46 3.42 2.23 1.25	PS3003J2
50000	615-1005-ND	6.46 3.42 2.23 1.25	PS5003J2
100000	615-1006-ND	6.46 3.42 2.23 1.25	PS1004J2
Bare Leads (±0.2°C from 0°C - 70°C)			
2252	615-1007-ND	5.15 2.73 1.78 1.01	PT222J2
3000	615-1008-ND	5.15 2.73 1.78 1.01	PT300J2
5000	615-1009-ND	5.15 2.73 1.78 1.01	PT500J2
10000	615-1010-ND	5.15 2.73 1.78 1.01	PT1003J2
30000	615-1011-ND	5.15 2.73 1.78 1.01	PT3003J2
50000	615-1012-ND	5.15 2.73 1.78 1.01	PT5003J2
100000	615-1013-ND	5.15 2.73 1.78 1.01	PT1004J2

Standard Leaded Epoxy Coated Thermistors

Specifications:

- Thermal Time Constant: 2 seconds maximum in a well stirred oil bath, 15 seconds maximum in still air.
- Dissipation Constant: 3mW/°C



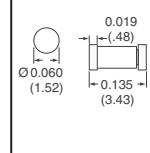
Resistance (Ω) @ 25°C	Tolerance @ 25°C	Digi-Key Part No.	Price Each	U.S. Sensor Part No.
			1 10 25 100	
10000	±2%	615-1054-ND	5.95 3.27 2.10 1.20	DC103G9G

Surface Mount NTC Thermistors

"MELF" style glass encapsulated surface mount.

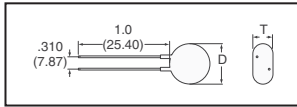
- Thermal Time Constant: 8 seconds maximum • Dissipation Constant: 2mW/°C • Maximum Operating Temperature: 220°C

Resistance (Ω) @ 25°C	Digi-Key Part No.	Price Each	U.S. Sensor Part No.
		1 10 25 100	
10000	615-1034-ND	8.95 3.58 2.15 1.08	SM103J1K
50000	615-1035-ND	8.95 3.58 2.15 1.08	SM503J1K
100000	615-1036-ND	8.95 3.58 2.15 1.08	SM104J1K



Power Thermistors

U.S. Sensor's inrush current limiting power thermistors are specially formulated and processed NTC thermistors suitable for suppressing high inrush currents in switching power supplies and other applications where the high initial starting currents are undesirable.

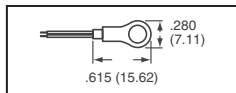


Res. (Ω) @ 25°C	Dimensions - Inch (mm)	Digi-Key Part No.	Price Each	U.S. Sensor Part No.	
	D T		1 10 25 100		
1.0	0.900 (22.86)	0.300 (7.62)	615-1046-ND	7.83 4.61 2.69 1.64	ST1R020B
1.0	1.250 (31.75)	0.250 (6.35)	615-1047-ND	9.94 5.85 3.42 2.08	ST1R030B
2.0	0.900 (22.86)	0.350 (8.89)	615-1048-ND	7.85 4.62 2.70 1.64	ST2R018B
2.5	0.900 (22.86)	0.300 (7.62)	615-1049-ND	7.85 4.62 2.70 1.64	ST2R515B
5.0	0.600 (15.24)	0.250 (6.35)	615-1053-ND	1.96 1.77 1.48 1.29	ST5R007B
10.0	0.450 (11.43)	0.300 (7.62)	615-1051-ND	1.63 1.52 1.24 1.12	ST10003B
10.0	0.600 (15.24)	0.350 (8.89)	615-1052-ND	1.63 1.52 1.24 1.12	ST10006B
10.0	1.250 (31.75)	0.300 (7.62)	615-1050-ND	9.71 5.71 3.34 2.03	ST10010B

Ring Lug Thermistors

Specifications:

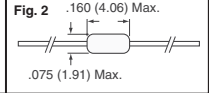
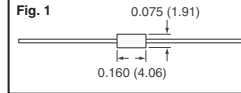
- Ring tongue mounting hole diameter: 0.145" nominal • Ring tongue mounting hole stud size: #6 • UL Recognized File Number E232830



Resistance (Ω) @ 25°C	Tolerance @ 25°C	Digi-Key Part No.	Price Each	U.S. Sensor Part No.
			1 10 25 100	
10000	±2%	615-1060-ND	28.90 19.08 13.36 7.77	USUR1000-103G
10000	±5%	615-1061-ND	21.92 14.45 10.60 6.18	USUR1000-103J
100000	±2%	615-1062-ND	28.90 19.08 13.36 7.77	USUR1000-104G
100000	±5%	615-1063-ND	21.92 14.45 10.60 6.18	USUR1000-104J

Glass Encapsulated Thermistors

- Specifications: DO-35 package • Thermal Time Constant: (Fig. 1) 5 seconds (still air); 0.5 seconds (stirred liquid)
- Dissipation Constant: 2mW/°C (still air) • Maximum Power Rating: (Fig. 2) 20mW

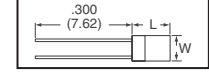


Resistance (Ω) @ 25°C	Tolerance @ 25°C	Digi-Key Part No.	Price Each	U.S. Sensor Part No.
			1 10 25 100	
Fig. 1 - Standard				
2500	±5%	615-1014-ND	2.40 2.10 1.26 .64	252FG1J
5000	±5%	615-1015-ND	2.40 2.10 1.26 .64	502FG1J
10000	±5%	615-1016-ND	.58 .53 .50 .46	103JG1J
20000	±5%	615-1017-ND	.58 .53 .50 .46	203JG1J
30000	±5%	615-1018-ND	.58 .53 .50 .46	303JG1J
50000	±5%	615-1019-ND	.58 .53 .50 .46	503JG1J
100000	±5%	615-1020-ND	.58 .53 .50 .46	104JG1J
250000	±5%	615-1021-ND	.58 .53 .50 .46	254JG1J
500000	±5%	615-1022-ND	3.22 2.81 1.86 .95	504RG1J
1000000	±5%	615-1023-ND	— — — .95	105RG1J
10000	±1%	615-1024-ND	7.59 3.04 1.82 .91	103JGF
20000	±1%	615-1025-ND	7.59 3.04 1.82 .91	203JGF
30000	±1%	615-1026-ND	7.59 3.04 1.82 .91	303JGF
50000	±1%	615-1027-ND	7.59 3.04 1.82 .91	503JGF
100000	±1%	615-1028-ND	7.59 3.04 1.82 .91	104JGF
Fig. 1 - Interchangeable				
10000	±0.5%	615-1029-ND	11.11 4.45 2.67 1.34	103JL1A
20000	±0.5%	615-1030-ND	— — — 1.41	203JL1A
25000	±0.5%	615-1031-ND	14.44 5.78 3.47 1.74	253JL1A
50000	±0.5%	615-1032-ND	14.44 5.78 3.47 1.74	503JL1A
100000	±0.5%	615-1033-ND	14.44 4.45 2.67 1.34	104JL1A
Fig. 2 - UL Recognized				
10000	±2%	615-1056-ND	5.31 2.98 1.68 1.14	USUG1000-103G
10000	±5%	615-1057-ND	1.98 1.30 .83 .67	USUG1000-103J
100000	±2%	615-1058-ND	5.31 2.98 1.68 1.14	USUG1000-104G
100000	±5%	615-1059-ND	1.98 1.30 .83 .67	USUG1000-104J

Platinum RTDs

Specifications:

- Thermal time constant: 15 seconds maximum (moving air) • Dissipation constant: 2mW/°C (moving air) • Maximum applied current: 1mA

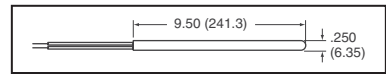


Res. (Ω) @ 0°C	Dimensions - Inch (mm)	Digi-Key Part No.	Price Each	U.S. Sensor Part No.
	W L		1 10 25 100	
100	0.067 (1.70) 0.095 (2.41)	615-1037-ND	13.43 9.94 8.06 2.96	PPG101A1
100	0.067 (1.70) 0.095 (2.41)	615-1038-ND	11.14 8.25 6.69 2.45	PPG101B1
100	0.067 (1.70) 0.095 (2.41)	615-1039-ND	10.03 7.43 6.02 2.23	PPG101C1
500	0.079 (2.01) 0.118 (3.00)	615-1040-ND	13.43 9.94 8.06 2.96	PPG501A1
500	0.079 (2.01) 0.118 (3.00)	615-1041-ND	11.14 8.25 6.69 2.45	PPG501B1
500	0.079 (2.01) 0.118 (3.00)	615-1042-ND	10.03 7.43 6.02 2.23	PPG501C1
1000	0.079 (2.01) 0.118 (3.00)	615-1043-ND	13.43 9.94 8.06 2.96	PPG102A1
1000	0.079 (2.01) 0.118 (3.00)	615-1044-ND	11.14 8.25 6.69 2.45	PPG102B1
1000	0.079 (2.01) 0.118 (3.00)	615-1045-ND	10.03 7.43 6.02 2.23	PPG102C1

Laboratory Grade Temperature Probes

Laboratory Grade NTC Thermistor Temperature Standards are manufactured with ultra high stability thermistor elements.

- Features: • NIST traceability • High accuracy ±0.01°C • Durable



Nominal Resistance Omega @ 25°C	Temperature Range (°C)	Digi-Key Part No.	Price Each	U.S. Sensor Part No.
10000	-20 - 70	615-1066-ND	363.00	USP3021
100000	0 - 105	615-1067-ND	363.00	USP3986

Thermistor Probes

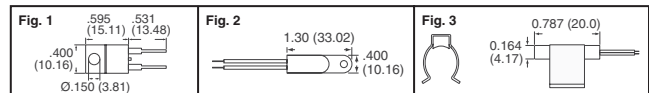


Fig.	Type	Resistance (Ω) @ 25°C	Tolerance @ 25°C	Digi-Key Part No.	Price Each	U.S. Sensor Part No.
					1 10 25 100	
1	TQ-220	10000	±10%	615-1055-ND	3.85 2.07 1.30 .72	TQ103J2K
2	Probe	10000	±1%	615-1064-ND	19.56 11.77 7.65 3.75	USP7765
3	Pipe Clamp	10000	±1%	615-1065-ND	27.01 13.65 8.30 4.01	USP7766

AMETHERM NTC Thermistors

Circuit Protection Thermistors

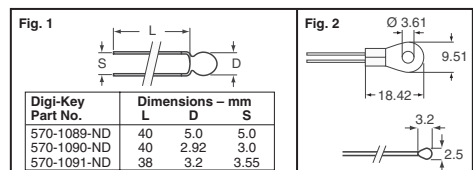


Ametherm's NT Series Thermistors are rugged and reliable over a wide temperature range, and are built using high temperature material for long life and durability. The PANE and PANR series Thermistor Probes are designed for use in environments that are not as harsh as those that require a housing.

Lead Specifications: • Wire AWG: 28AWG tinned copper (Cu)

Electrical Specifications: • Resistance @ 25°C: 10000Ω ± 10% • Beta: 3950°K ± 2% • Curve: L • Dissipation Constant: 3.0mW/°C • Time Constant: 6 seconds • Operating Temperature: -50°C - 150°C

Fig.	Description	Digi-Key Part No.	Price Each	Tape and Reel† Pricing \$5,000	Ametherm Part No.
			1 10 100		
1	NT Series NTC Thermistor, 1.5KΩ	570-1089-ND	.51 .32 .24	—	NT05 15291
	NT Series NTC Thermistor, 500Ω	570-1090-ND	.51 .32 .24	—	NT03 50169
	NT Series NTC Thermistor, 10Ω	570-1091-ND	.51 .32 .24	—	NT03 10052
2	PANE NTC Thermistor Bead Probe	570-1065-ND	1.86 1.66 .89	—	PANE 103395-410
	PANR NTC Thermistor Ring Probe	570-1066-ND	2.26 1.39 1.05	—	PANR 103395-408
	SM Series NTC Thermistor, 0805, 10KΩ	570-1092-1-ND	.59 .36 .28	223.61/M	SM08 103370
—	SM Series NTC Thermistor, 0603, 10KΩ	570-1093-1-ND	.59 .36 .28	223.61/M	SM06 103370



† For Tape and Reel part number, change 1-ND to 2-ND. § Cut Tape

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.

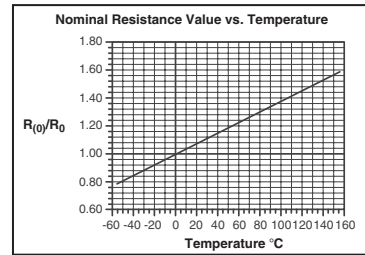
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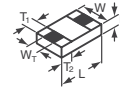


PTS Series Platinum SMD Flat Chip Temperature Sensors



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	T ₁	
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 R ₀ 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 Beyschlag Part No.
		to.5	to.9			1	10	100			
0603	100	≤1.0	≤2.0	0.1 - 0.25	PTS0603100CT-ND	1.61	1.41	1.11	PTS0603100TR-ND	603.31	PTS060301B100RP100
	100	≤1.5	≤3.0	0.1 - 1.0	PTS0805100CT-ND	2.02	1.77	1.39	PTS0805100TR-ND	757.22	PTS080501B100RP100
	500	≤1.5	≤3.0	0.1 - 0.25	PTS0805500CT-ND	2.02	1.77	1.39	PTS0805500TR-ND	757.22	PTS080501B500RP100
1206	100	≤2.0	≤5.0	0.1 - 1.0	PTS1206100CT-ND	2.66	2.33	1.83	PTS1206100TR-ND	996.80	PTS120601B100RP100
	500	≤2.0	≤5.0	0.1 - 0.25	PTS1206500CT-ND	2.66	2.33	1.83	PTS1206500TR-ND	996.80	PTS120601B500RP100
	1000	≤2.0	≤5.0	0.1 - 0.25	PTS12061.0KCT-ND	2.66	2.33	1.83	PTS12061.0KTR-ND	996.80	PTS120601B1K00P100

† 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	T (max.)
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

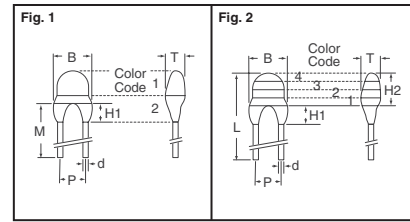


Fig.	Resistance @ 25°C (kΩ)	Tolerance @ 25°C	B Value/ B Tolerance @ B25/B5	Color Code				Digi-Key Part No.	Price Each			Vishay Part No.
				1	2	3	4		1	10	100	
1	10	±1%	3977K ±0.75%	Blue	Blue	—	—	BC2299-ND	1.31	1.19	.94	2381 640 55103
	100	±1%	4190K ±1.5%	Brown	Brown	—	—	BC2300-ND	1.39	1.25	.99	2381 640 55104
	10	±2%	3977K ±0.75%	Blue	Blue	—	—	BC2298-ND	.79	.72	.57	2381 640 54103
2	2.7	±3%	3977K ±0.75%	Red	Violet	Red	Orange	BC2312-ND	.62	.56	.44	2381 640 66272
	4.7	±3%	3977K ±0.75%	Yellow	Violet	Red	Orange	BC2313-ND	.49	.45	.35	2381 640 66472
	10	±3%	3977K ±0.75%	Brown	Black	Red	Orange	BC2311-ND	.49	.45	.35	2381 640 66103
	47	±3%	4090K ±1.5%	Yellow	Violet	Orange	Orange	BC2314-ND	.49	.45	.35	2381 640 66473
	2.2	±5%	3977K ±0.75%	Red	Red	Red	Gold	BC2304-ND	.41	.38	.30	2381 640 63222
	3.3	±5%	3977K ±0.75%	Orange	Orange	Red	Gold	BC2307-ND	.41	.38	.30	2381 640 63332
	6.8	±5%	3977K ±0.75%	Blue	Gray	Red	Gold	BC2310-ND	.41	.38	.30	2381 640 63682
	10	±5%	3977K ±0.75%	Brown	Black	Orange	Gold	BC2301-ND	.41	.38	.30	2381 640 63103
	15	±5%	3740K ±2%	Brown	Green	Orange	Gold	BC2303-ND	.41	.38	.30	2381 640 63153
	22	±5%	3740K ±2%	Red	Red	Orange	Gold	BC2305-ND	.41	.38	.30	2381 640 63223
	33	±5%	4090K ±1.5%	Orange	Orange	Orange	Gold	BC2308-ND	.41	.38	.30	2381 640 63333
	47	±5%	4090K ±1.5%	Yellow	Violet	Orange	Gold	BC2309-ND	.41	.38	.30	2381 640 63473
	100	±5%	4190K ±1.5%	Brown	Black	Yellow	Gold	BC2302-ND	.41	.38	.30	2381 640 63104
	220	±5%	4370K ±2.5%	Red	Red	Yellow	Gold	BC2306-ND	.41	.38	.30	2381 640 63224

Surface Mount NTC Chip Thermistors



Surface Mount NTC Chip Thermistors have a negative temperature coefficient. The device has no marking.

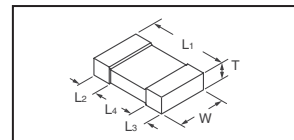
Terminations: • 0402 and 0603: NiSn • 0805: Ni

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				
	L ₁	W	T	L ₂ and L ₃ Minimum	L ₄ 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 ±0.2	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	100	Qty.	Pricing	
0402	4.7	±3%	3595K ±3%	BC2326CT-ND	.30	.26	.21	10,000	111.08/M	2381 615 46472
	10	±3%	3490K ±3%	BC2328CT-ND	.30	.26	.21	10,000	111.08/M	2381 615 46103
	15	±3%	3600K ±3%	BC2330CT-ND	.30	.26	.21	10,000	111.08/M	2381 615 46153
	22	±3%	3590K ±3%	BC2332CT-ND	.30	.26	.21	10,000	111.08/M	2381 615 46223
	33	±3%	3670K ±3%	BC2334CT-ND	.30	.26	.21	10,000	111.08/M	2381 615 46333
	47	±3%	4075K ±3%	BC2336CT-ND	.30	.26	.21	10,000	111.08/M	2381 615 46473
	68	±3%	3910K ±3%	BC2338CT-ND	.30	.26	.21	10,000	111.08/M	2381 615 46683
	100	±3%	3950K ±3%	BC2340CT-ND	.30	.26	.21	10,000	111.08/M	2381 615 46104
	4.7	±5%	3595K ±3%	BC2327CT-ND	.25	.22	.17	10,000	92.93/M	2381 615 43472
	10	±5%	3490K ±3%	BC2329CT-ND	.25	.22	.17	10,000	92.93/M	2381 615 43103
	15	±5%	3600K ±3%	BC2331CT-ND	.25	.22	.17	10,000	92.93/M	2381 615 43153
	22	±5%	3590K ±3%	BC2333CT-ND	.25	.22	.17	10,000	92.93/M	2381 615 43223
	33	±5%	3670K ±3%	BC2335CT-ND	.25	.22	.17	10,000	92.93/M	2381 615 43333
	47	±5%	4075K ±3%	BC2337CT-ND	.25	.22	.17	10,000	92.93/M	2381 615 43473
	68	±5%	3910K ±3%	BC2339CT-ND	.25	.22	.17	10,000	92.93/M	2381 615 43683
100	±5%	3950K ±3%	BC2341CT-ND	.25	.22	.17	10,000	92.93/M	2381 615 43104	
0603	10	±3%	3610K ±1%	BC2290CT-ND	.28	.25	.19	4,000	154.64/M	2381 615 36103
	68	±3%	3985K ±1%	BC1547CT-ND	.45	.40	.31	4,000	168.58/M	2322 615 36683
	100	±3%	4100K ±1%	BC2291CT-ND	.41	.37	.29	4,000	154.64/M	2381 615 36104
	4.7	±5%	3830K ±1%	BC1538CT-ND	.32	.28	.22	4,000	111.08/M	2322 615 33472
	10	±5%	3610K ±1%	BC2289CT-ND	.32	.28	.22	4,000	119.79/M	2381 615 33103
0805	15	±5%	3600K ±1%	BC1540CT-ND	.43	.38	.30	4,000	160.09/M	2322 615 33153
	100	±5%	4100K ±1%	BC1542CT-ND	.43	.38	.30	4,000	160.09/M	2322 615 33104
	2.2	±5%	3600K ±1%	BC2294CT-ND	.30	.26	.21	4,000	111.08/M	2381 615 53222
	4.7	±5%	3500K ±1%	BC2296CT-ND	.30	.26	.21	4,000	111.08/M	2381 615 53472
	10	±5%	3570K ±3%	BC2292CT-ND	.30	.26	.21	4,000	111.08/M	2381 615 53103
0805	15	±5%	3700K ±1%	BC2293CT-ND	.30	.26	.21	4,000	111.08/M	2381 615 53153
	22	±5%	3800K ±1%	BC1520CT-ND	.30	.26	.21	—	—	2322 615 53223
	22	±5%	3800K ±1%	BC2295CT-ND	.30	.26	.21	4,000	111.08/M	2381 615 53223
	47	±5%	3960K ±1%	BC2297CT-ND	.30	.26	.21	4,000	111.08/M	2381 615 53473

† 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.

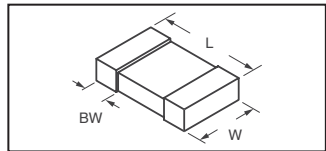
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NTHS Series Surface Mount NTC Chip Thermistors

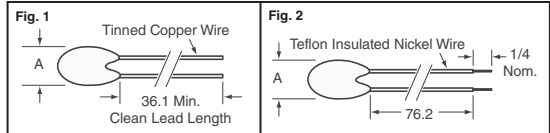


Size Code	Dimensions - mm		
	L	W	BW
0402	1.016 ±0.102	0.5 ±0.051	0.25 ±0.102
0603	1.6 ±0.2	0.8 ±0.2	0.25 ±0.15
0805	2.0 ±0.2	1.25 ±0.2	0.3 ±0.15
1206	3.2 ±0.2	1.6 ±0.2	0.46 ±0.2

- Features:**
- Solderable terminations
 - Wraparound terminations
 - Allows design flexibility for use with hybrid circuitry
 - High density monolithic construction

Size Code	Resistance (KΩ)	Resistance Tolerance	R-T Curve	Beta +25°C/+75°C	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape and Reel Pricing 2,000	Vishay Part No.
						10 100			
0402	10	±5%	2	3477	541-1096-1-ND	.73 .64 .50	541-1096-2-ND	263.54/M	NTHS0402N02N1002JE
	12	±5%	2	3477	541-1097-1-ND	.73 .64 .50	541-1097-2-ND	263.54/M	NTHS0402N02N1202JE
	47	±5%	5	3890	541-1099-1-ND	.73 .64 .50	541-1099-2-ND	263.54/M	NTHS0402N05N4702JE
	50	±3%	5	3890	541-1100-1-ND	.78 .69 .54	541-1100-2-ND	284.59/M	NTHS0402N05N5002HE
	50	±5%	5	3890	541-1101-1-ND	.73 .64 .50	541-1101-2-ND	263.54/M	NTHS0402N05N5002JE
	68	±5%	1	3964	541-1095-1-ND	.73 .64 .50	541-1095-2-ND	263.54/M	NTHS0402N01N6802JE
	100	±5%	1	3964	541-1094-1-ND	.73 .64 .50	541-1094-2-ND	263.54/M	NTHS0402N01N1003JE
	250	±5%	17	4064	541-1102-1-ND	.73 .64 .50	541-1102-2-ND	263.54/M	NTHS0402N17N2503JE
	350	±5%	4	4247	541-1098-1-ND	.73 .64 .50	541-1098-2-ND	263.54/M	NTHS0402N04N3503JE
	350	±5%	4	4247	541-1099-1-ND	.73 .64 .50	541-1099-2-ND	263.54/M	NTHS0603N03N1001JE
0603	1.5	±5%	3	3181	541-1110-1-ND	.73 .64 .50	541-1110-2-ND	263.54/M	NTHS0603N03N1501JE
	2	±5%	3	3181	541-1111-1-ND	.73 .64 .50	541-1111-2-ND	263.54/M	NTHS0603N03N2001JE
	10	±5%	2	3477	541-1107-1-ND	.73 .64 .50	541-1107-2-ND	263.54/M	NTHS0603N02N1002JE
	10	±10%	2	3477	541-1108-1-ND	.70 .61 .48	541-1108-2-ND	252.65/M	NTHS0603N02N1002KE
	15	±5%	10	3500	541-1114-1-ND	.73 .64 .50	541-1114-2-ND	263.54/M	NTHS0603N01N1502JE
	15.8	±5%	10	3500	541-1115-1-ND	.73 .64 .50	541-1115-2-ND	263.54/M	NTHS0603N10N1582JE
	20	±5%	10	3500	541-1116-1-ND	.73 .64 .50	541-1116-2-ND	263.54/M	NTHS0603N01N2002JE
	22	±5%	11	3700	541-1117-1-ND	.73 .64 .50	541-1117-2-ND	263.54/M	NTHS0603N11N2202JE
	30	±5%	11	3700	541-1118-1-ND	.73 .64 .50	541-1118-2-ND	263.54/M	NTHS0603N11N3002JE
	68	±5%	1	3964	541-1104-1-ND	.73 .64 .50	541-1104-2-ND	263.54/M	NTHS0603N01N6802JE
0805	70	±5%	1	3964	541-1105-1-ND	.73 .64 .50	541-1105-2-ND	263.54/M	NTHS0603N01N7002JE
	80	±5%	1	3964	541-1106-1-ND	.73 .64 .50	541-1106-2-ND	263.54/M	NTHS0603N01N8002JE
	100	±5%	1	3964	541-1103-1-ND	.73 .64 .50	541-1103-2-ND	263.54/M	NTHS0603N01N1003JE
	150	±5%	17	4064	541-1119-1-ND	.73 .64 .50	541-1119-2-ND	263.54/M	NTHS0603N17N1503JE
	200	±5%	17	4064	541-1120-1-ND	.73 .64 .50	541-1120-2-ND	263.54/M	NTHS0603N17N2003JE
	330	±5%	4	4247	541-1112-1-ND	.73 .64 .50	541-1112-2-ND	263.54/M	NTHS0603N04N3303JE
	350	±5%	4	4247	541-1113-1-ND	.73 .64 .50	541-1113-2-ND	263.54/M	NTHS0603N04N3503JE
	1	±5%	3	3181	541-1132-1-ND	.73 .64 .50	541-1132-2-ND	263.54/M	NTHS0805N03N1001JE
	1.5	±5%	3	3181	541-1133-1-ND	.73 .64 .50	541-1133-2-ND	263.54/M	NTHS0805N03N1501JE
	2.8	±5%	6	3254	541-1138-1-ND	.73 .64 .50	541-1138-2-ND	263.54/M	NTHS0805N06N2801JE
1206	5	±5%	2	3477	541-1128-1-ND	.73 .64 .50	541-1128-2-ND	263.54/M	NTHS0805N02N5001JE
	6.8	±3%	2	3477	541-1129-1-ND	.73 .64 .50	541-1129-2-ND	263.54/M	NTHS0805N02N6801HE
	6.8	±5%	2	3477	541-1130-1-ND	.73 .64 .50	541-1130-2-ND	263.54/M	NTHS0805N02N6801JE
	8	±5%	2	3477	541-1131-1-ND	.73 .64 .50	541-1131-2-ND	263.54/M	NTHS0805N02N8001JE
	10	±5%	2	3477	541-1127-1-ND	.73 .64 .50	541-1127-2-ND	263.54/M	NTHS0805N02N1002JE
	22	±5%	11	3700	541-1139-1-ND	.73 .64 .50	541-1139-2-ND	263.54/M	NTHS0805N11N2202JE
	33	±5%	1	3964	541-1121-1-ND	.73 .64 .50	541-1121-2-ND	263.54/M	NTHS0805N01N3302JE
	35	±5%	5	3890	541-1136-1-ND	.73 .64 .50	541-1136-2-ND	263.54/M	NTHS0805N05N3502JE
	47	±5%	1	3964	541-1122-1-ND	.73 .64 .50	541-1122-2-ND	263.54/M	NTHS0805N01N4702JE
	50	±5%	1	3964	541-1123-1-ND	.73 .64 .50	541-1123-2-ND	263.54/M	NTHS0805N01N5002JE
1206	50	±5%	5	3890	541-1137-1-ND	.73 .64 .50	541-1137-2-ND	263.54/M	NTHS0805N05N5002JE
	50	±10%	1	3964	541-1124-1-ND	.70 .61 .48	541-1124-2-ND	252.65/M	NTHS0805N01N5002KE
	56	±5%	1	3964	541-1125-1-ND	.73 .64 .50	541-1125-2-ND	263.54/M	NTHS0805N01N5602JE
	68	±5%	1	3964	541-1126-1-ND	.73 .64 .50	541-1126-2-ND	263.54/M	NTHS0805N01N6802JE
	100	±5%	17	4064	541-1140-1-ND	.73 .64 .50	541-1140-2-ND	263.54/M	NTHS0805N17N1003JE
	100	±5%	17	4064	541-1141-1-ND	.73 .64 .50	541-1141-2-ND	263.54/M	NTHS0805N17N1503JE
	200	±5%	17	4064	541-1142-1-ND	.73 .64 .50	541-1142-2-ND	263.54/M	NTHS0805N17N2003JE
	200	±5%	4	4247	541-1134-1-ND	.73 .64 .50	541-1134-2-ND	263.54/M	NTHS0805N04N2003JE
	220	±5%	4	4247	541-1135-1-ND	.73 .64 .50	541-1135-2-ND	263.54/M	NTHS0805N04N2203JE
	10	±5%	2	3477	541-1150-1-ND	.81 .72 .56	541-1150-2-ND	294.76/M	NTHS1206N02N1002JE
1206	10	±10%	2	3477	541-1151-1-ND	.78 .69 .54	541-1151-2-ND	284.59/M	NTHS1206N02N1002KE
	15	±5%	10	3500	541-1156-1-ND	.81 .72 .56	541-1156-2-ND	294.76/M	NTHS1206N10N1502JE
	20	±5%	10	3500	541-1157-1-ND	.81 .72 .56	541-1157-2-ND	294.76/M	NTHS1206N10N2002JE
	22	±5%	11	3700	541-1158-1-ND	.81 .72 .56	541-1158-2-ND	294.76/M	NTHS1206N11N2202JE
	30	±5%	5	3890	541-1155-1-ND	.81 .72 .56	541-1155-2-ND	294.76/M	NTHS1206N05N3002JE
	47	±5%	1	3964	541-1146-1-ND	.81 .72 .56	541-1146-2-ND	294.76/M	NTHS1206N01N4702JE
	50	±5%	1	3964	541-1147-1-ND	.81 .72 .56	541-1147-2-ND	294.76/M	NTHS1206N01N5002JE
	68	±5%	1	3964	541-1148-1-ND	.81 .72 .56	541-1148-2-ND	294.76/M	NTHS1206N01N6802JE
	80	±5%	1	3964	541-1149-1-ND	.81 .72 .56	541-1149-2-ND	294.76/M	NTHS1206N01N8002JE
	100	±1%	1	3964	541-1143-1-ND	.93 .82 .64	541-1143-2-ND	336.87/M	NTHS1206N01N1003FE
100	±5%	1	3964	541-1144-1-ND	.81 .72 .56	541-1144-2-ND	294.76/M	NTHS1206N01N1003JE	
100	±5%	17	4064	541-1159-1-ND	.81 .72 .56	541-1159-2-ND	294.76/M	NTHS1206N17N1003JE	
100	±10%	1	3964	541-1145-1-ND	.78 .69 .54	541-1145-2-ND	284.59/M	NTHS1206N01N1003KE	
100	±10%	17	4064	541-1160-1-ND	.78 .69 .54	541-1160-2-ND	284.59/M	NTHS1206N17N1003KE	
150	±5%	17	4064	541-1161-1-ND	.81 .72 .56	541-1161-2-ND	294.76/M	NTHS1206N17N1503JE	
200	±5%	17	4064	541-1162-1-ND	.81 .72 .56	541-1162-2-ND	294.76/M	NTHS1206N17N2003JE	
200	±5%	4	4247	541-1152-1-ND	.81 .72 .56	541-1152-2-ND	294.76/M	NTHS1206N04N2003JE	
220	±5%	17	4064	541-1163-1-ND	.81 .72 .56	541-1163-2-ND	294.76/M	NTHS1206N17N2203JE	
220	±5%	4	4247	541-1153-1-ND	.81 .72 .56	541-1153-2-ND	294.76/M	NTHS1206N04N2203JE	
330	±5%	4	4247	541-1154-1-ND	.81 .72 .56	541-1154-2-ND	294.76/M	NTHS1206N04N3303JE	

M, C, T Series Leaded Conformally Coated NTC Thermistors



M, C and T series are conformally coated, leaded thermistors for standard PC board mounting or assembly in probes. The coating is baked-on phenolic for durability and long-term stability. M and C series have tinned solid copper leads. The T series has solid nickel wires with Teflon® insulation to provide isolation when assembled in metal probes or housings. **Features:** • Small size, conformally coated • Wide resistance range • Available in multiple R-T curves **Specifications:** • Dissipation Constant: 2-3mWatts/°C • Thermal Time Constant: 6-14 seconds

Fig.	Resistance (Ω)	Resistance Tolerance	R-T Curve	Dimension A (mm)	Wire Diameter AWG	Wire Diameter mm	Digi-Key Part No.	1	100	Vishay Part No.	
1	50	±5%	2	6.93	28	0.32	541-1209-ND	1.36	1.22	02C0500JF	
	10K	±5%	1	2.4	30	0.254	541-1076-ND	1.36	1.22	01M5001JF	
	10K	±1%	1	2.4	28	0.32	541-1206-ND	1.49	1.34	01C1002FF	
	10K	±1%	9	2.4	30	0.254	541-1080-ND	1.49	1.34	09M1002FF	
	10K	±5%	1	2.4	28	0.32	541-1207-ND	1.36	1.22	01C1002JF	
	10K	±5%	1	2.4	30	0.254	541-1074-ND	1.36	1.22	01M1002JF	
	10K	±5%	9	2.8	30	0.254	541-1081-ND	1.36	1.22	09M1002JF	
	30K	±5%	1	2.4	30	0.254	541-1075-ND	1.36	1.22	01M3002JF	
	33K	±5%	1	2.4	30	0.254	541-1077-ND	1.36	1.22	04M3302JF	
	47K	±5%	4	2.4	30	0.254	541-1078-ND	1.36	1.22	04M4702JF	
	50K	±5%	7	2.8	28	0.32	541-1208-ND	1.49	1.34	07C5002JF	
	150K	±5%	7	2.4	30	0.254	541-1079-ND	1.36	1.22	07M1503JF	
	2	10K	±1%	1	2.4	30	0.254	541-1203-ND	2.58	2.33	01T1002FF
		10K	±5%	1	2.4	30	0.254	541-1204-ND	2.36	2.12	01T1002JF
33K		±5%	4	2.4	30	0.254	541-1205-ND	1.36	1.22	04T3302JF	
33K		±5%	4	2.4	30	0.254	541-1205-ND	1.36	1.22	04T3302JF	

N

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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(UK091) 2275



NTC Thermistors for Surface and Pipe Measurement

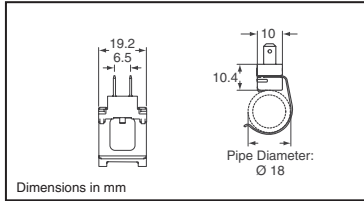


Features:

- Short response time through glass encapsulated NTC thermistor
- Fast and easy mounting

Specifications:

- Maximum power: 18mW
- Thermal time constant: <5s
- Insulation resistance: >10MΩ



Resistance @ 25°C (kΩ)	B25/100 (K)	Digi-Key Part No.	Price Each			Epcos Part No.
			1	10	100	
10	4006±2%	495-2627-ND	5.39	4.72	3.71	B58100A0406A000

NTC Thermistors with Wire Leads

Dimensions in mm

Features:

- Fast response
- High measuring accuracy
- Epoxy resin encapsulation
- PTFE-insulated leads
- UL approval (E69802)

Applications:

- Heating systems
- Industrial electronics
- Automotive electronics

Specifications:

- Climatic category: 55/155/56
- Maximum power: 60mW

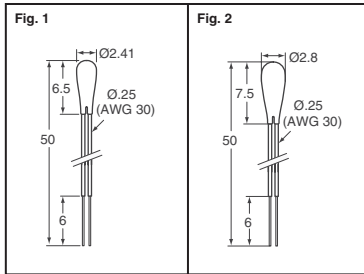


Fig.	Res. @ 25°C (kΩ)	Resistance Tolerance	B25/100 (K)	Digi-Key Part No.	Price Each			Epcos Part No.
					1	10	100	
1	2	±1%	3560	495-2144-ND	2.05	1.79	1.41	B57861S0202F040
	3	±1%	3988	495-2145-ND	2.05	1.79	1.41	B57861S0302F040
	3	±1%	3988	495-2150-ND	2.56	2.24	1.76	B57863S0302F040
	5	±1%	3988	495-2147-ND	2.05	1.79	1.41	B57861S0502F040
	5	±1%	3988	495-2152-ND	2.56	2.24	1.76	B57863S0502F040
	10	±1%	3988	495-2142-ND	2.05	1.79	1.41	B57861S0103F040
	10	±1%	3988	495-2149-ND	2.56	2.24	1.76	B57863S0103F040
	30	±1%	3964	495-2146-ND	2.05	1.79	1.41	B57861S0303F040
	30	±1%	3964	495-2151-ND	2.56	2.24	1.76	B57863S0303F040
	50	±1%	3760	495-2148-ND	2.05	1.79	1.41	B57861S0503F040
100	±1%	4540	495-2143-ND	2.05	1.79	1.41	B57861S0104F040	
2	2.8	±1%	3988	495-2167-ND	2.95	2.59	2.04	B57862S0282F040
	5	±1%	3988	495-2168-ND	2.95	2.59	2.04	B57862S0502F040
	10	±1%	3988	495-2166-ND	2.95	2.59	2.04	B57862S0103F040

† Uni-Curve Sensor

NTC Thermistors for Temperature Measurement Insulated

Dimensions in mm

Features:

- Glass encapsulated
- Highly Stable
- Heat resistant
- Coating of glass body and leads for electrical insulation
- Fast response
- Dumet wires for leads (copper clad FeNi)

Applications:

- Automotive electronics
- Industrial electronics
- Home appliances

Specifications:

- Maximum power: 18mW (B57541); 32mW (B57551); 50mW (B57561)
- Climatic category: 55/250/56

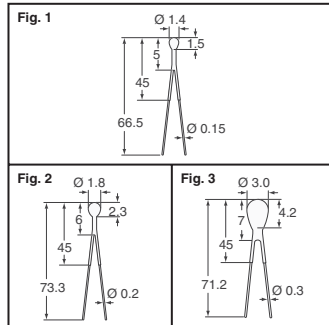


Fig.	Res. @ 25°C (kΩ)	Resistance Tolerance	B25/85 (K)	Digi-Key Part No.	Price Each			Epcos Part No.
					1	10	100	
1	10	±1%	3480	495-2623-ND	3.74	3.28	2.58	B57541G0103F000
2	10	±1%	3480	495-2624-ND	3.46	3.04	2.39	B57551G0103F000
3	10	±1%	3480	495-2625-ND	3.48	3.05	2.40	B57561G0103F000

Leaded NTC Thermistors Glass Encapsulated for Temperature Measurement

Dimensions in mm

Features:

- Heat resistant
- Highly stable
- Measures temperatures up to 300°C
- Fast response
- Small dimensions
- Leads are dumet wires (copper clad FeNi)

Applications:

- Automotive electronics
- Industrial electronics
- Home appliances

Specifications:

- Climatic category: 55/250/56 (B57540 series); 55/300/56 (B57550 and B57560 series)
- Maximum power: 18mW (B57540 series); 32mW (B57550 series); 50mW (B57560 series)

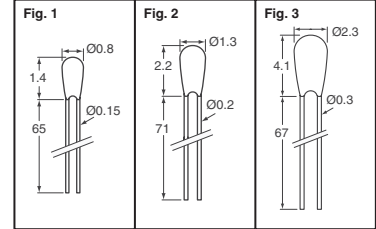


Fig.	Res. @ 25°C (kΩ)	Resistance Tolerance	B25/85 (K)	Digi-Key Part No.	Price Each			Epcos Part No.
					1	10	100	
1	5	±1%	3480	495-2128-ND	2.98	2.61	2.05	B57540G0502F000
	10	±1%	3480	495-2124-ND	2.98	2.61	2.05	B57540G0103F000
	30	±1%	3992	495-2127-ND	2.98	2.61	2.05	B57540G0303F000
	50	±1%	3992	495-2129-ND	2.98	2.61	2.05	B57540G0503F000
	100	±1%	4066	495-2125-ND	3.91	3.43	2.70	B57540G0104F000
2	5	±1%	3480	495-2133-ND	2.61	2.29	1.80	B57550G0502F000
	10	±1%	3480	495-2130-ND	2.90	2.55	2.00	B57550G0103F000
	30	±1%	3992	495-2132-ND	2.61	2.29	1.80	B57550G0303F000
	50	±1%	3992	495-2134-ND	2.61	2.29	1.80	B57550G0503F000
	100	±1%	4066	495-2131-ND	2.61	2.29	1.80	B57550G0104F000
3	5	±1%	3480	495-2137-ND	2.69	2.36	1.85	B57560G0502F000
	10	±1%	3480	495-2135-ND	2.69	2.36	1.85	B57560G0103F000
	50	±1%	3992	495-2622-ND	2.69	2.36	1.85	B57560G0503F000
100	±1%	4066	495-2136-ND	2.69	2.36	1.85	B57560G0104F000	

Leaded NTC Thermistors for Temperature Measurement

B57871S Series:

- High measuring accuracy
- Cost effective
- Rugged design
- Epoxy resin encapsulation
- Tinned copper leads
- Applications: • Temperature measurement
- Specifications: • Climatic category: 55/155/56 • Maximum power: 60mW • Resistance Tolerance: ±1%

B57891M Series:

- Wide resistance range
- Cost effective
- Lacquer coated thermistor disk
- Leads are tinned copper-clad Fe wire
- Applications: • Temperature compensation • Temperature measurement • Temperature control
- Specifications: • Climatic category: 40/125/56 • Maximum power: 200mW

B57891S Series:

- Wide resistance range
- Cost effective
- Lacquer coated thermistor disk
- Leads are tinned copper-clad Fe wire
- Applications: • Temperature compensation • Temperature measurement • Temperature control
- Specifications: • Climatic category: 55/155/56 • Maximum power: 200mW

Dimensions in mm

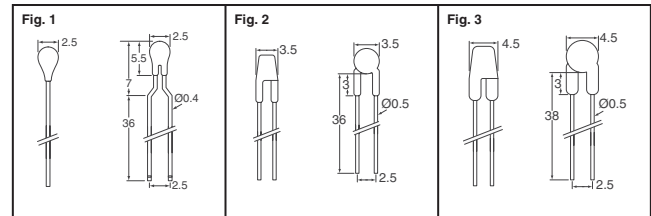


Fig.	Res. @ 25°C (kΩ)	Resistance Tolerance	B25/100 (K)	Digi-Key Part No.	Price Each			Epcos Part No.
					1	10	100	
B57871S Series								
1	2.1	±1%	3560	495-3035-ND	1.71	1.50	1.18	B57871S0212F000
	10	±1%	3460	495-3036-ND	1.71	1.50	1.18	B57871S0103F002
	10	±1%	3988	495-2153-ND	1.71	1.50	1.18	B57871S0103F001
	12	±1%	3760	495-3037-ND	1.71	1.50	1.18	B57871S0123F000
B57891M Series								
2	1.0	±5%	3930	495-2156-ND	.56	.49	.39	B57891M0102J000
	1.5	±5%	3560	495-3064-ND	.56	.49	.39	B57891M0152J000
	2.2	±5%	3900	495-3067-ND	.56	.49	.39	B57891M0222J000
	3.3	±5%	3980	495-3070-ND	.56	.49	.39	B57891M0332J000
	4.7	±5%	3980	495-2161-ND	.56	.49	.39	B57891M0472J000
	6.8	±5%	3980	495-3071-ND	.56	.49	.39	B57891M0682J000
	10	±5%	3950	495-2157-ND	.56	.49	.39	B57891M0103J000
	15	±5%	4100	495-3065-ND	.56	.49	.39	B57891M0153J000
	22	±5%	4300	495-3068-ND	.56	.49	.39	B57891M0223J000
	33	±5%	4300	495-2159-ND	.56	.49	.39	B57891M0333J000
	100	±5%	4450	495-2158-ND	.56	.49	.39	B57891M0104J000
	150	±5%	4600	495-3066-ND	.56	.49	.39	B57891M0154J000
	220	±5%	4600	495-3069-ND	.56	.49	.39	B57891M0224J000
	330	±5%	4830	495-2160-ND	.56	.49	.39	B57891M0334J000
470	±5%	5000	495-2162-ND	.56	.49	.39	B57891M0474J000	
B57891S Series								
3	5	±1%	3980	495-2165-ND	1.27	1.12	.88	B57891S0502F008
	10	±1%	3950	495-2163-ND	1.27	1.12	.88	B57891S0103F008
	100	±1%	4450	495-2164-ND	1.27	1.12	.88	B57891S0104F008

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Surface Mount NTC Thermistors for Temperature Measurement

Features:

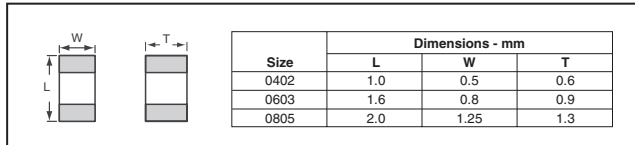
- Inner electrodes • Excellent long-term aging stability in high-temperature and high humidity environments
- Super resistance stability during soldering (change $\leq 1\%$)

Applications:

- Temperature measurement and compensation in mobile phone applications (battery pack, TCXO, LCD)
- Data systems • Automotive electronics

Specifications:

- Climatic category: 55/125/56 • Maximum power: 150mW (0402); 180mW (0603); 210mW (0805)
- Resistance Tolerance: $\pm 5\%$



Size Code	Res. @ 25°C (Ω)	B25/85 (K)	Digi-Key Part No.	Cut Tape Pricing			Tape and Reel		Epcos Part No.
				1	10	100	Qty.	Pricing	
0402	10k	3980	495-2086-1-ND	.36	2.52	14.82	10,000	88.43/M	B57221V22103J60
	22k	4548	495-3041-1-ND	.20	1.39	8.17	10,000	60.99/M	B57261V2223J60
0603	220	3540	495-3072-1-ND	.32	2.28	13.39	4,000	85.67/M	B57311V2221J60
	220	3540	495-3073-1-ND†	.27	1.89	11.13	4,000	71.15/M	B57311V2221K60
	10k	3980	495-2104-1-ND	.32	2.28	13.39	4,000	85.67/M	B57321V22103J60
0805	220	3540	495-3074-1-ND	.43	3.05	17.93	3,000	114.71/M	B57411V2221J62
	330	3540	495-3075-1-ND	.43	3.05	17.93	3,000	114.71/M	B57411V2331J62
	10k	3980	495-2116-1-ND	.43	3.05	17.93	4,000	114.71/M	B57421V22103J62

† For Tape and Reel part number, change 1-ND to 2-ND. ‡ Tolerance $\pm 10\%$

NTC Thermistor Probes

B57020

Features:

- Thermistor in molded plastic case • PVC insulated white connecting cable, UL approval (E252167)

Applications:

- Cabinet and evaporator in refrigerators and deep freezers

Specifications:

- Climatic category: 40/80/56 • Maximum power: 350mW

B57500

Features:

- Epoxy resin encapsulation • PVC insulated black wire with tinned ends 26AWG

Applications:

- Air sensor for air conditioning (NOT FOR USE IN EVAPORATOR)

Specifications:

- Climatic category: 30/100/56 • Maximum power: 60mW • Test voltage: 1.25kVAC for 1 seconds

B57703

Features:

- High accuracy • Easy mounting • Good thermal coupling through metal tag • Encapsulated in metal tag case • PTFE insulated leads of silver-plated nickel wire, 30AWG • UL Approval (E69802)

Applications:

- Surface temperature measurement (housing and pipes)

Specifications:

- Climatic category: 55/125/56 • Maximum power: 150mW • Test voltage: 1kVAC

Dimensions in mm

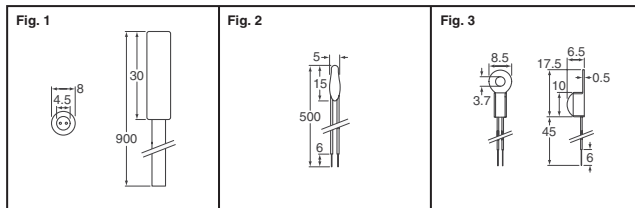


Fig.	Res. @ 25°C (kΩ)	B25/100 (K)	Resistance Tolerance	Digi-Key Part No.	Price Each			Epcos Part No.
					1	10	100	
1	5	3980	$\pm 2\%$	495-2075-ND	3.63	3.18	2.50	B57020M2502A017
2	10	3988	$\pm 3\%$	495-2172-ND	5.37	4.71	3.70	B57500M0103A005
3	5	3988	$\pm 2\%$	495-2170-ND	4.44	3.89	3.06	B57703M0502G040
	10	3988	$\pm 2\%$	495-2169-ND	4.44	3.89	3.06	B57703M0103G040

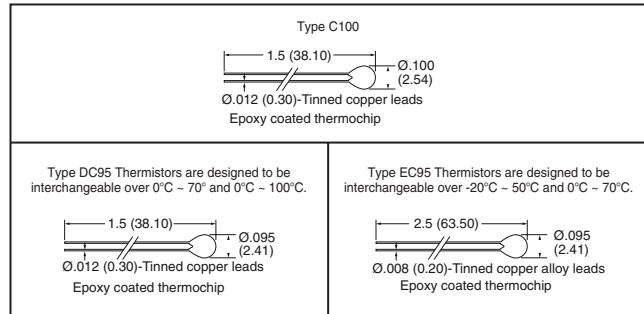


NTC Bead Thermistors

THERMAL AND ELECTRICAL PROPERTIES: • Dissipation Constant: (Still Air) 1 mW/°C, (Stirred Oil) 8 mW/°C • Thermal Time Constant: (Still Air) 10 Seconds, (Stirred Oil) 1 Second • Maximum Power Rating: .075 Watts (Derated from 100% at 25°C - 0% at 100°C)

Thermometrics Type C100 Thermochips are low cost, epoxy coated chip thermistors which represent the highest level of thermistor technology. Thermometrics exclusive "state of the art" materials processing techniques have been proven through extensive field use and long term testing to provide stable, rugged, easy handling thermistors suitable for applications in the temperature range of -80°C - 150°C. Best stability is achieved at temperatures not exceeding 105°C.

Type EC95 and Type DC95 Thermistors may be used at temperatures as low as -80°C and as high as 150°C, however, best overall stability is achieved with exposure or storage temperatures lower than 105°C.



Res. @ 25°C (Ω)	Res. Ratio§	Digi Key Part No.	Price Each				GE Sensing Part No.
			1	10	100	250	
10k	9.06	235-1001-ND	4.68	3.69	2.93	2.17	C100F103G
10k	9.06	235-1002-ND	3.24	2.55	2.03	1.50	C100F103J
10k	7.60	235-1003-ND	3.24	2.55	2.03	1.50	C100Y103J
10k	9.06	235-1004-ND	5.20	4.10	3.25	2.41	DC95F103W
2k	9.06	235-1005-ND	5.20	4.10	3.25	2.41	DC95F202W
2252	9.06	235-1006-ND	5.20	4.10	3.25	2.41	DC95F232W
5k	9.06	235-1007-ND	5.20	4.10	3.25	2.41	DC95F502W
100k	10.45	235-1008-ND	5.20	4.10	3.25	2.41	DC95G104W
50k	10.45	235-1009-ND	5.20	4.10	3.25	2.41	DC95G503W
10k	9.06	235-1010-ND	5.20	4.10	3.25	2.41	EC95F103W
3k	9.06	235-1012-ND	5.20	4.10	3.25	2.41	EC95F302W
100k	10.45	235-1013-ND	4.83	3.81	3.02	2.24	EC95G104W
50k	10.45	235-1014-ND	5.20	4.10	3.25	2.41	EC95G503W
30k	8.69	235-1015-ND	4.95	3.90	3.10	2.29	EC95H303W

§ 0°C/50°C Ratio

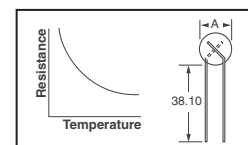
NTC Disc Thermistors

NTC (Negative Temperature Coefficient) Disc Thermistors decrease in resistance as temperature increases.

- Temperature Coefficients Range: -3.4%/°C - -5%/°C @ 25°C

- Maximum Operating Temperature: 150°C

- Tolerance: $\pm 20\%$ 100-5Ω; $\pm 10\%$ 1K - 100KΩ



Res. @ 25°C (Ω)	Res. Ratio ▲	Dim. A (mm)	Digi-Key Part No.	Price Each				GE Sensing Part No.	
				1	10	100	250		
100	5.53	2.5	2.79	KC001N-ND◆	1.93	1.74	1.37	1.09	RL1004-65.6-59-D1
50	5.53	6.5	5.59	KC012N-ND	1.41	1.27	1.00	.80	RL2007-32.8-59-D1
25	5.53	6.5	5.59	KC011N-ND◆	1.41	1.27	1.00	.80	RL2004-16.4-59-D1
5	5.53	10.0	12.19	KC024N-ND◆	1.60	1.45	1.14	.91	RL4504-3.28-59-D1
1k	6.85	2.8	2.79	KC003N-ND◆	1.89	1.70	1.34	1.06	RL1007-624-73-D1
500	6.85	2.5	2.79	KC002N-ND◆	1.89	1.70	1.34	1.06	RL1003-312-73-D1
300	6.85	6.5	5.59	KC015N-ND◆	1.37	1.24	.97	.77	RL2008-187-73-D1
200	6.85	6.5	5.59	KC014N-ND◆	1.37	1.24	.97	.77	RL2006-125-73-D1
100	6.85	6.5	5.59	KC013N-ND◆	1.37	1.24	.97	.77	RL2003-62.4-73-D1
50	6.85	7.5	9.40	KC022N-ND	1.42	1.28	1.01	.80	RL3504-31.2-73-D1
10k	9.60	2.5	2.79	KC025N-ND◆	1.89	1.70	1.34	1.06	RL1005-5744-103-D1
5k	9.10	2.5	2.79	KC005N-ND◆	1.89	1.70	1.34	1.06	RL1004-2910-97-D1
3k	9.10	2.5	2.79	KC004N-ND◆	1.89	1.70	1.34	1.06	RL1003-1746-97-D1
2k	9.10	6.5	5.59	KC017N-ND◆	1.38	1.24	.98	.78	RL2007-1164-97-D1
1k	9.10	6.5	5.59	KC016N-ND	1.38	1.24	.98	.78	RL2004-582-97-D1
10k	11.41	7.2	5.59	KC018N-ND◆	3.40	3.06	2.41	1.92	RL2012-5506-120-D1
100k	12.90	2.7	2.79	KC009N-ND	2.04	1.84	1.45	1.15	RL1006-53.4K-140-D1
50k	12.90	2.5	2.79	KC008N-ND◆	2.04	1.84	1.45	1.15	RL1003-26.7K-140-D1
25k	12.90	6.5	5.59	KC019N-ND	1.57	1.41	1.11	.89	RL2006-13.3K-140-D1
200k	13.82	2.5	2.79	KC010N-ND	2.04	1.84	1.45	1.15	RL1004-104.7K-155-D1
100k	13.82	6.5	5.59	KC020N-ND◆	1.57	1.41	1.11	.89	RL2008-52.3K-155-D1

◆ RoHS Compliant ▲ Resistance Ratio - ratio of zero power resistance @ 0°C to zero power resistance @ 50°C; AWG ◆ D.C. - Dissipation Constant (MW/°C)

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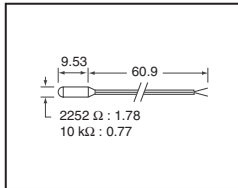
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(UK091) 2277

MA100 Series

These biomedical thermistor chips and subassemblies are designed to be interchangeable over a 0°C - 50°C range (see table). Best overall stability is maintained when exposure and storage temperatures remain below 70°C.

Temperature Range	Tolerance Code (±°C)		
	235-1060/235-1064-ND	235-1061/235-1065-ND	235-1062/235-1063-ND
0°C - 20°C	±.15	±.2	±.25
20°C - 35°C	±.1	±.15	±.2
35°C - 39°C	±.05	±.1	±.15
39°C - 42°C	±.075	±.15	±.2
42°C - 45°C	±.1	±.15	±.2
45°C - 50°C	±.15	±.2	±.25



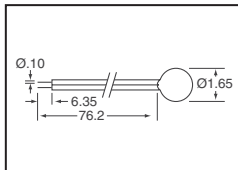
Resistance @ 25°C (Ω)	Digi-Key Part No.	Price Each			GE Sensing Part No.
		1	10	100	
10k	235-1060-ND	7.15	5.63	4.47	MA100GG103A
10k	235-1064-ND	8.41	6.62	5.26	MA100BF103A
10k	235-1061-ND	6.01	4.74	3.76	MA100GG103B
10k	235-1065-ND	6.01	4.74	3.76	MA100BF103B
10k	235-1062-ND	5.42	4.28	3.40	MA100GG103C
2252	235-1063-ND	4.61	3.64	2.89	MA100GG232C

RoHS Compliant

MC65 Series

These thermistors are epoxy-coated for stability and have a maximum diameter of .065" (1.65mm). Standard leads are 3" (76.20mm) of 38 gauge, nickel alloy, bifilar, heavy isomil insulated wire. Each unit tracks a specified curve over the temperature range of 0°C - 50°C (see table).

Temperature Range	Tolerance Code (±°C)		
	235-1057-ND	235-1058-ND	235-1059-ND
0°C - 20°C	±.15	±.2	±.25
20°C - 35°C	±.1	±.15	±.2
35°C - 39°C	±.05	±.1	±.15
39°C - 42°C	±.075	±.15	±.2
42°C - 45°C	±.1	±.15	±.2
45°C - 50°C	±.15	±.2	±.25

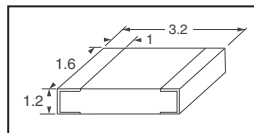


Resistance @ 25°C (kΩ)	Digi-Key Part No.	Price Each			GE Sensing Part No.
		1	10	100	
10	235-1057-ND	6.96	5.48	4.35	MC65F103A
10	235-1058-ND	4.95	3.91	3.10	MC65F103B
10	235-1059-ND	5.23	4.12	3.27	MC65F103C

NHQ Series SMT Chip 1206



These devices are ceramic chip thermistors with a negative temperature coefficient of resistance intended for surface mount applications. The electrode material is palladium silver, nickel-plated with a solder-plated covering. The ceramic between the electrodes is glass covered.



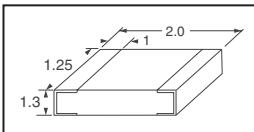
Resistance @ 25°C (kΩ)	Digi-Key Part No.	Cut Tape Price Each			Tape & Reel† Pricing 3,000	GE Sensing Part No.
		1	10	100		
3	235-1108-1-ND	1.92	1.68	1.32	718.74/M	NHQ302B410T10
10	235-1109-1-ND	2.08	1.82	1.43	777.55/M	NHQ103B375T10
15	235-1110-1-ND	1.92	1.68	1.32	718.74/M	NHQ153B400T10
50	235-1111-1-ND	1.92	1.68	1.32	718.74/M	NHQ503B400T10
100	235-1112-1-ND	1.92	1.68	1.32	—	NHQ104B425T10
150	235-1113-1-ND	1.92	1.68	1.32	718.74/M	NHQ154B425T10
500	235-1114-1-ND	2.40	2.11	1.66	901.04/M	NHQ504B435T10

RoHS Compliant † For Tape and Reel part number, change 1-ND to 2-ND.

NHQM Series SMT Chip 0805



These devices are ceramic chip thermistors with a negative temperature coefficient of resistance intended for surface mount applications. The electrode material is palladium silver, nickel-plated with solder-plated covering. The ceramic between the electrodes is glass covered.



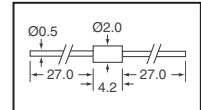
Resistance @ 25°C (kΩ)	Digi-Key Part No.	Cut Tape Price Each			Tape & Reel† Pricing 3,000	GE Sensing Part No.
		1	10	100		
3	235-1115-1-ND	1.79	1.57	1.24	671.92/M	NHQM302B410T10
10	235-1116-1-ND	1.79	1.57	1.24	671.92/M	NHQM103B375T10
15	235-1117-1-ND	1.79	1.57	1.24	671.92/M	NHQM153B400T10
50	235-1118-1-ND	1.79	1.57	1.24	671.92/M	NHQM503B415T10
100	235-1119-1-ND	1.79	1.57	1.24	671.92/M	NHQM104B425T10

RoHS Compliant † For Tape and Reel part number, change 1-ND to 2-ND.

DK Series



The DK range of DO-35 packaged NTC thermistors is designed for temperature measurement and control in applications which demand cost effective reliability. The hermetically-sealed construction combines the advantages of high temperature operation and high reliability of glass bead types with the closer tolerances associated with chip devices. The glass encapsulation offers the additional benefit of high voltage insulation.

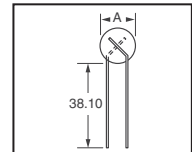


APPLICATIONS:

- Domestic Appliances • Automotive Systems • Data Processing Equipment • Heating/Ventilating/Air Conditioning Control

Resistance @ 25°C (kΩ)	Digi-Key Part No.	Price Each			GE Sensing Part No.
		1	10	100	
5	235-1103-ND	3.22	2.77	1.91	DKA502N5
10	235-1104-ND	3.22	2.77	1.91	DKF103N5
20	235-1105-ND	3.22	2.77	1.91	DKF203N5
30	235-1106-ND	3.22	2.77	1.91	DKF303N5
50	235-1107-ND	3.22	2.77	1.91	DKF503N5

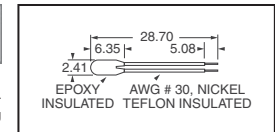
Standard Thermistors for Temperature Measurement Accuracy ±1°C (0°C ~ 120°C)



- Operating Range: -50°C ~ 150°C
- D.C.: Dissipation Constant (mW/°C)
- T.C.: Time Constant (Seconds)

Res. @ 25°C (Ω)	A Max. (mm)	D.C. mW/°C	T.C. Sec.	Digi-Key Part No.	Price Each			GE Sensing Part No.
					1	10	100	
1000	8.13	3.5	30	KC001E-ND	1.94	1.75	1.38	RL3005-574-0-103-SA
2000	5.59	2.5	20	KC002E-ND	1.87	1.68	1.33	RL2005-1148-103-SA
2786	5.59	2.5	20	KC003E-ND	1.87	1.68	1.33	RL2006-1600-103-SA
3000	5.59	2.5	20	KC004E-ND	1.87	1.68	1.33	RL2007-1723-103-SA
5000	2.79	1.0	10	KC005E-ND	2.41	2.17	1.71	RL1003-2871-103-SA
10000	2.79	1.0	10	KC006E-ND	2.41	2.17	1.71	RL1005-5744-103-SA

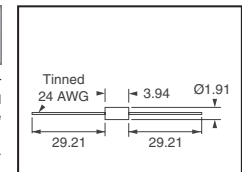
Miniature Sensors 1°C Accuracy



SPECIFICATIONS:
 • Temperature Accuracy: ±1°C @ 25°C • Dissipation Constant: 1.4 mW/°C • Time Constant: 15 seconds • Operating Range: -50°C ~ 150°C

Res. @ 25°C (kΩ)	Temperature Coef. %/°C @ 25°C	Material	Digi-Key Part No.	Price Each			GE Sensing Part No.	
				1	10	250		
2K	-3.83	MS73	KC001T-ND	2.26	2.03	1.60	1.27	RL0503-1248-73-MS
5K	-4.43	MS95	KC002T-ND	2.26	2.03	1.60	1.27	RL0503-2890-95-MS
10K	-4.40	MS97	KC003T-ND	2.26	2.03	1.60	1.27	RL0503-5820-97-MS
30K	-4.32	MS96	KC004T-ND	2.26	2.03	1.60	1.27	RL0503-17.56K-96-MS
50K	-4.84	MS120	KC005T-ND	2.26	2.03	1.60	1.27	RL0503-27.53K-120-MS
100K	-4.78	MS122	KC006T-ND	2.26	2.03	1.60	1.27	RL0503-55.36K-122-MS

Glass Encapsulated NTC Thermistors



Glass encapsulated NTC thermistors are tiny pellets of thermistor material hermetically sealed in glass bodies with a controlled amount of selected atmosphere. The thermic seal makes these parts extremely stable in applications up to 204°C (400°F)

SPECIFICATIONS: • Temperature Range: -50°C ~ 204°C • Dissipation Constant: 3.0mW/°C • Time Constant: 7 seconds

Ro @ 25°C	Temp. Coef. %/°C @ 25°C	Material	Digi-Key Part No.	Price Each				GE Sensing Part No.
				1	10	100	250	
250	-3.34	GE55†	KC001G-ND	1.91	1.72	1.36	1.08	AL03006-165.9-55-G1
500	-3.34	GE55†	KC002G-ND	1.91	1.72	1.36	1.08	AL03006-331.8-55-G1
1K	-3.83	GE73	KC003G-ND	1.91	1.72	1.36	1.08	AL03006-624-73-G1
2K	-3.83	GE73	KC004G-ND	1.91	1.72	1.36	1.08	AL03006-1248-73-G1
2786	-4.68	GE101	KC005G-ND	1.91	1.72	1.36	1.08	AL03006-1576-101-G1
3K	-3.85	GE76	KC006G-ND	1.91	1.72	1.36	1.08	AL03006-1847-76-G1
4K	-3.85	GE76	KC007G-ND	1.91	1.72	1.36	1.08	AL03006-2463-76-G1
5K	-3.85	GE76	KC008G-ND	1.91	1.72	1.36	1.08	AL03006-3079-76-G1
10K	-4.41	GE97A	KC009G-ND	1.91	1.72	1.36	1.08	AL03006-5818-97-G1
20K	-4.34	GE98	KC010G-ND	1.91	1.72	1.36	1.08	AL03006-11.7K-98-G1
30K	-4.34	GE98	KC011G-ND	1.91	1.72	1.36	1.08	AL03006-17.53K-98-G1
50K	-4.32	GE97B	KC012G-ND	1.91	1.72	1.36	1.08	AL03006-29.1K-97-G1
100K	-4.32	GE97B	KC013G-ND	1.91	1.72	1.36	1.08	AL03006-58.2K-97-G1
200K	-4.71	GE123	KC014G-ND	1.91	1.72	1.36	1.08	AL03006-111.3K-123-G1
500K	-4.99	GE138	KC015G-ND	1.91	1.72	1.36	1.08	AL03006-269.8K-138-G1
1M	-5.07	GE145	KC016G-ND	1.91	1.72	1.36	1.08	AL03006-535K-145-G1

† Maximum Operating Temperature: 150°C

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.

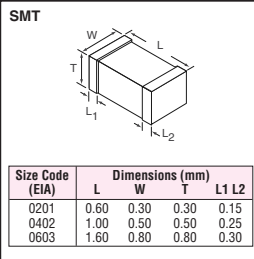
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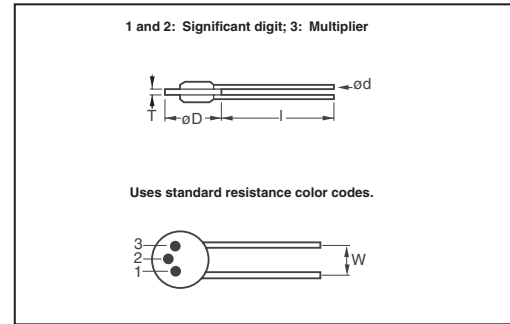
Panasonic® Multilayer Chip NTC Thermistors (ERTJ)



The Multilayer Chip NTC Thermistors are especially designed for surface mountings featuring the miniature sizes of "0201", "0402" and "0603" type (EIA) with highly reliable multilayer and monolithic structure. **FEATURES:** • Highly reliable multilayer/monolithic structure • Superior heat resistance to reflow soldering and excellent solderability thanks to the unique external electrodes of three metallic layers • Operating Temperature Range: -40°C ~ 125°C • Resistance to Soldering Heat: 270°C-3s, 260°C-10s • Heat Dissipation Constant (mounted on a glass epoxy,1.6t): **0201 Series:** approximately 1mw/°C, **0402 Series:** approximately 2mw/°C and **0603 Series:** approximately 3mw/°C • Rated Maximum Power Dissipation: **0201 Series:** 33 mW, **0402 Series:** 66 mW and **0603 Series:** 100 mW



Panasonic® NTC Thermistors



- FEATURES:**
- Resistance temperature coefficient is negative and extremely large
 - Wide selection of temperature coefficient (constant B)
 - Excellent electrical and thermal stability
 - Color coded to indicate resistance value @ 25°C

SPECIFICATIONS:
Maximum Watt Rating: (W): PNT100-123 – 0.4; PNT124-138 – 0.6. Nominal Time Constant (second): PNT100-123 – 20; PNT124-138 – 27.

- APPLICATIONS:**
- For measuring equipment: thermometer, wind gauge, liquid level gauge, temperature controller
 - For temperature compensation: transistor circuit, measuring equipment
 - For driving: Delay setting in relay operation, inrush current surge protection, communication equipment, AGC, time lag

	oD	T	l	W	oD
PNT100 – PNT123 (D2)	5.0 ± 0.5	1.3 ± 0.5	30 min.	2.5 ± 1	0.4
PNT124 – PNT138 (D3)	7.5 ± 0.5	1.4 ± 0.5	30 min.	5 ± 1	0.5

Res. at 25°C (Ω)	Temp. Coef. (%/°C)	Res. Ratio R25/R50	Digi-Key Part No.	Price Each	Panasonic Part No.				
				1	10	100	1,000		
40	-3.9	2.48	PNT101-ND♦	.77	.66	.44	.28	ERT-D2FFL400S	
100	-3.9	2.48	PNT104-ND♦	—	—	—	.28	ERT-D2FFL101S	
250	-3.9	2.48	PNT107-ND♦	.77	.66	.44	.28	ERT-D2FFL251S	
250	-4.2	2.62	PNT108-ND♦	.77	.66	.44	.28	ERT-D2FGL251S	
300	-4.2	2.62	PNT109-ND	.77	.66	.44	.28	ERT-D2FGL301S	
350	-3.9	2.48	PNT110-ND	.77	.66	.44	.28	ERT-D2FFL351S	
800	-4.4	2.76	PNT112-ND♦	.77	.66	.44	.28	ERT-D2FGL801S	
1,400	-4.4	2.76	PNT114-ND♦	.77	.66	.44	.28	ERT-D2FGL142S	
2,000	-4.5	2.83	PNT115-ND♦	—	—	—	.28	ERT-D2FGL202S	
3,300	-4.5	2.83	PNT116-ND♦	.77	.66	.44	.28	ERT-D2FGL332S	
8,000	-4.6	2.90	PNT118-ND♦	—	—	—	.28	ERT-D2FHL802S	
10,000	-4.6	2.90	PNT119-ND♦	.77	.66	.44	.28	ERT-D2FHL103S	
15,000	-4.7	2.98	PNT120-ND♦	—	—	—	.28	ERT-D2FHL153S	
33,000	-5.1	3.22	PNT121-ND♦	.77	.66	.44	.28	ERT-D2FHL333S	
150,000	-5.4	3.48	PNT123-ND♦	—	—	—	.27	ERT-D2FL154S	
13	-3.6	2.30	PNT125-ND	1.18	1.02	.68	.43	ERT-D3FFL130S	
16	-3.6	2.30	PNT126-ND♦	1.18	1.02	.68	.43	ERT-D3FFL160S	
20	-3.6	2.30	PNT127-ND	1.18	1.02	.68	.43	ERT-D3FFL200S	
30	-3.7	2.30	PNT128-ND	1.18	1.02	.68	.43	ERT-D3FFL300S	
40	-3.2	2.30	PNT130-ND	1.18	1.02	.68	.43	ERT-D3FFL400S	
75	-4.2	2.62	PNT131-ND	1.18	1.02	.68	.43	ERT-D3FGL750S	
80	-4.2	2.62	PNT132-ND	1.18	1.02	.68	.43	ERT-D3FGL800S	
130	-4.5	2.62	PNT134-ND	1.18	1.02	.68	.43	ERT-D3FGL131S	
500	-4.6	2.83	PNT135-ND	1.18	1.02	.68	.43	ERT-D3FGL501S	
4,000	-4.6	2.90	PNT136-ND	1.18	1.02	.68	.43	ERT-D3FHL402S	
20,000	-5.1	3.22	PNT137-ND	1.18	1.02	.68	.43	ERT-D3FHL203S	
80,000	-5.6	3.70	PNT138-ND♦	1.18	1.02	.68	.43	ERT-D3FHL803S	



Zero-Power Resist. (at 25°C)	Resistance Tol.	B Value	Digi-Key Part No.	Cut Tape Pricing	Tape & Reel Qty.	Pricing	Panasonic Part No.			
		B25/50	B25/85	1	100					
0201										
2KΩ	±5%	4500K ±2%	(4450K)	P12020CT-ND	23	1.71	12.79	15,000	71.15M	ERT-JZET202J
3KΩ	±5%	4500K ±2%	(4450K)	P12021CT-ND	23	1.71	12.79	15,000	71.15M	ERT-JZET302J
4.7KΩ	±5%	4500K ±2%	—	P12805CT-ND	.09	.71	5.34	15,000	29.77M	ERT-JZET472J
10KΩ	±5%	—	3435K ±2%	P12358CT-ND	.09	.78	6.09	15,000	29.77M	ERT-JZEG103JA
47KΩ	±5%	4050K ±3%	—	P12359CT-ND	.09	.78	6.09	15,000	29.77M	ERT-JZEP473J
100KΩ	±3%	4500K ±3%	(4750K)	P13700CT-ND	.29	1.92	12.44	15,000	48.65M	ERT-JZEV104H
100KΩ	±5%	4700K ±2%	—	P12360CT-ND	.09	.78	6.09	15,000	29.77M	ERT-JZEV104J
0402										
22Ω	±5%	2750K ±3%	(2700K)	P10557CT-ND	26	1.76	11.38	10,000	44.29M	ERT-JOEA220J
33Ω	±5%	2750K ±3%	(2700K)	P10558CT-ND	26	1.76	11.38	10,000	44.29M	ERT-JOEA330J
40Ω	±5%	2750K ±3%	(2700K)	P10559CT-ND	26	1.76	11.38	10,000	44.29M	ERT-JOEA400J
47Ω	±5%	2750K ±3%	(2700K)	P10560CT-ND	26	1.76	11.38	10,000	44.29M	ERT-JOEA470J
68Ω	±5%	2800K ±3%	(2700K)	P10561CT-ND	26	1.76	11.38	10,000	44.29M	ERT-JOEA680J
100Ω	±5%	2800K ±3%	(2750K)	P10562CT-ND	26	1.76	11.38	10,000	44.29M	ERT-JOEA101J
150Ω	±5%	2800K ±3%	(2750K)	P10563CT-ND	26	1.76	11.38	10,000	44.29M	ERT-JOEA151J
1.0KΩ	±5%	4500K ±3%	(4450K)	P10564CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOET102J
1.5KΩ	±5%	4500K ±3%	(4450K)	P10565CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOET152J
2.0KΩ	±5%	4500K ±3%	(4450K)	P10566CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOET202J
2.2KΩ	±5%	4500K ±3%	(4450K)	P10567CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOET222J
3.0KΩ	±5%	4500K ±3%	(4450K)	P10568CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOET302J
3.3KΩ	±5%	4500K ±3%	(4450K)	P10569CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOET332J
4.7KΩ	±5%	4500K ±3%	(4450K)	P10570CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOET472J
3.3KΩ	±5%	4250K ±3%	(4300K)	P10571CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOER332J
4.7KΩ	±5%	4250K ±3%	(4300K)	P10572CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOER472J
6.8KΩ	±5%	4250K ±3%	(4300K)	P10573CT-ND	23	1.54	9.95	10,000	39.21M	ERT-JOER682J
10KΩ	±5%	4250K ±3%	(4300K)	P10574CT-ND	25	1.65	10.66	10,000	41.39M	ERT-JOER103J
10KΩ	±1%	(3375K)	3435K ±1%	P12007CT-ND	.45	3.09	20.71	10,000	98.01M	ERT-JOEG103FA
10KΩ	±2%	(3375K)	3435K ±1%	P12008CT-ND	.38	2.57	17.25	10,000	81.32M	ERT-JOEG103GA
10KΩ	±3%	3900K ±2%	(3970K)	P13701CT-ND	.33	2.19	14.22	10,000	55.91M	ERT-JOEM103H
10KΩ	±3%	4250K ±2%	(4300K)	P13702CT-ND	.33	2.19	14.22	10,000	55.91M	ERT-JOEM103H
10KΩ	±3%	(3375K)	3435K ±1%	P12009CT-ND	.31	2.14	14.37	10,000	68.25M	ERT-JOEG103HA
10KΩ	±5%	(3375K)	3435K ±1%	P12010CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOEG103JA
10KΩ	±5%	3900K ±2%	(3970K)	P12985CT-ND	.09	.81	6.33	10,000	31.22M	ERT-JOEM103J
15KΩ	±5%	4250K ±3%	(4300K)	P10575CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOER153J
22KΩ	±5%	4250K ±3%	(4300K)	P10576CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOER223J
33KΩ	±5%	4050K ±2%	—	P13579CT-ND	.30	2.66	20.89	10,000	102.37M	ERT-JOEP333J
33KΩ	±5%	4250K ±3%	(4300K)	P10577CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOER333J
47KΩ	±5%	4700K ±3%	(4750K)	P10578CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOEV473J
68KΩ	±5%	4700K ±3%	(4750K)	P10579CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOEV683J
47KΩ	±5%	4050K ±2%	(4100K)	P11441CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOEP473J
100KΩ	±2%	4700K ±2%	(4750K)	P13705CT-ND	.35	2.36	15.81	10,000	74.78M	ERT-JOEV104G
100KΩ	±3%	4500K ±2%	(4580K)	P13704CT-ND	.33	2.19	14.22	10,000	55.91M	ERT-JOET104H
100KΩ	±3%	4700K ±2%	(4750K)	P13706CT-ND	.33	2.19	14.22	10,000	55.91M	ERT-JOEV104H
100KΩ	±5%	4250K ±2%	(4300K)	P13707CT-ND	.31	2.13	14.32	10,000	68.97M	ERT-JOET104J
100KΩ	±5%	4300K ±2%	—	P13580CT-ND	.30	2.66	20.89	10,000	102.37M	ERT-JOES104J
100KΩ	±5%	4500K ±2%	—	P12986CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOET104J
100KΩ	±5%	4700K ±2%	(4750K)	P11442CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOEV104J
150KΩ	±5%	4500K ±2%	(4750K)	P13581CT-ND	.30	2.66	20.89	10,000	102.37M	ERT-JOET154J
150KΩ	±5%	4700K ±2%	(4750K)	P11443CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOEV154J
220KΩ	±5%	4700K ±2%	(4750K)	P11444CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOEV224J
330KΩ	±5%	4700K ±2%	(4750K)	P11445CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOEV334J
470KΩ	±5%	4700K ±2%	(4750K)	P11446CT-ND	.25	1.65	10.66	10,000	41.39M	ERT-JOEV474J
0603										
22Ω	±5%	2750K ±3%	(2700K)	P10531CT-ND	.37	2.47	15.99	4,000	68.25M	ERT-J1VA220J
33Ω	±5%	2750K ±3%	(2700K)	P10532CT-ND	.37	2.47	15.99	4,000	68.25M	ERT-J1VA330J
40Ω	±5%	2800K ±3%	(2750K)	P10533CT-ND	.37	2.47	15.99	4,000	68.25M	ERT-J1VA400J
47Ω	±5%	2800K ±3%	(2750K)	P10534CT-ND	.37	2.47	15.99	4,000	68.25M	ERT-J1VA470J
68Ω	±5%	2800K ±3%	(2750K)	P10535CT-ND	.37	2.47	15.99	4,000	68.25M	ERT-J1VA680J
100Ω	±5%	2800K ±3%	(2750K)	P10536CT-ND						