

FEATURES

- NEGATIVE TEMPERATURE COEFFICIENT
- FAST RESPONSE TO TEMPERATURE VARIATIONS MAKE THEM IDEALLY FOR TEMPERATURE SENSORS AND COMPENSATORS
- STANDARD EIA 0402, 0603 AND 0805 SIZES
- NICKEL BARRIER SOLDER PLATE TERMINATIONS
- TAPE AND REEL FOR AUTOMATIC MOUNTING

RoHS

Compliant

includes all homogeneous materials

*See Part Number System for Details



CHARACTERISTICS AND PERFORMANCE

Series	NCT02	NCT04	NCT06	NCT08
EIA Size	0201	0402	0603	0805
Resistance Range (+25°C)	470 ohm ~ 1Megohm	470 ohm ~ 2Megohm	100 ohm ~ 2Megohm	100 ohm ~ 2Megohm
Resistance Tolerance (+25°C)	1% (F), ±2% (G), ±3% (H), 5% (J), 10% (K)			
Operating Temperature Range	-40°C ~ +125°C			
Storage Temperature Range	-40°C ~ +125°C			
Maximum Power Rating (JIS-C2570)*	110mW	110mW	120mW	130mW
Dissipation Factor	≤1.5mW/°C (power to heat thermistor 1°C, measured at 25°C)			
Thermal Time Constant	Within 5 seconds (time to change 63.2% from initial to stable)			
Functional Beta Temperature Range	D = +25°C ~ +50°C			
	A = +25°C ~ +85°C			
	E = +25°C ~ +100°C			
Beta Value Range	2610K ~ 4800K			
Beta Value Tolerance	±1% (F), ±2% (G), ±3% (H), ±5% (J)			
Resistance to Soldering Heat	+260°C ± 5°C for 10 ± 1 seconds			
High Temperature Stability	+125°C ± 3°C for 1,000 hours, ΔR ±3%, ΔBeta ±2%			
Low Temperature Stability	-40°C ± 3°C for 1,000 hours, ΔR ±3%, ΔBeta ±2%			
Humidity	+85°C ± 2°C, 85% ± 5% RH for 1,000 hours, ΔR ±3%, ΔBeta ±2%			
Temperature Cycling	100 cycles of -40°C ± 3°C 30 min., +20°C 3 min., +125°C ± 3°C 30 min., +20°C 30 min. ΔR ±3%, ΔBeta ±2%			

*JIS-C2570: Maximum power for continuous load at 25°C.

DIMENSIONS (mm)

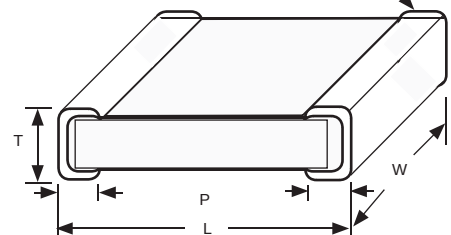
Series	EIA Size	L	W	T max.	P
NCT02	0201	0.60 ± 0.03	0.30 ± 0.03	0.23 ± 0.03	0.15 ± 0.05
NCT04	0402	1.0 ± 0.05	0.50 ± 0.05	0.40	0.25 ^{+0.05/-0.10}
NCT06	0603	1.6 ± 0.15	0.80 ± 0.15	0.60	0.30 ± 0.20
NCT08	0805	2.0 ± 0.20	1.25 ± 0.20	0.65	0.40 ± 0.20

STANDARD RESISTANCE VALUES (@25°C) AND BETA RANGE*

Beta Value	NCT02 (0201)	NCT04 (0402)	NCT06 (0603)	NCT08 (0805)	E-24 Standard Values		
4610 ~ 4800K	100K ~ 1M	100K ~ 2M	68K ~ 2M	47K ~ 2M	1.0 1.3 1.8 2.4 3.3 4.3 5.6 7.5	1.1 1.5 2.0 2.7 3.6 4.7 6.2 8.2	1.2 1.6 2.2 3.0 3.9 5.1 6.8 9.1
4410 ~ 4600K	30K ~ 150K	10K ~ 2M	10K ~ 2M	10K ~ 2M			
4210 ~ 4400K	20K ~ 120K	10K ~ 2M	10K ~ 2M	6.8K ~ 2M			
4010 ~ 4200K	10K ~ 100K	10K ~ 220K	1K ~ 220K	1K ~ 220K			
3810 ~ 4000K	10K ~ 50K	2K ~ 150K	1K ~ 150K	1K ~ 150K			
3610 ~ 3800K	6.8K ~ 30K	2K ~ 150K	1K ~ 150K	1K ~ 150K			
3410 ~ 3600K	2K ~ 20K	2K ~ 150K	1K ~ 150K	1K ~ 150K			
3210 ~ 3400K	2K ~ 20K	2K ~ 150K	1K ~ 150K	680 ~ 150K			
3010 ~ 3200K	1K ~ 5K	680 ~ 68K	470 ~ 150K	220 ~ 150K			
2810 ~ 3000K	1K ~ 3K	500 ~ 47K	150 ~ 100K	100 ~ 100K			
2610 ~ 2800K	470 ~ 1.5K	100 ~ 10K	100 ~ 1K	100 ~ 1K			

*Beta can be ordered in increments of 10 (ex. 2610, 2620, 2630, etc.)

Termination Material
Ag Base Termination
Ni Barrier
100% Sn Finish



PART NUMBER SYSTEM

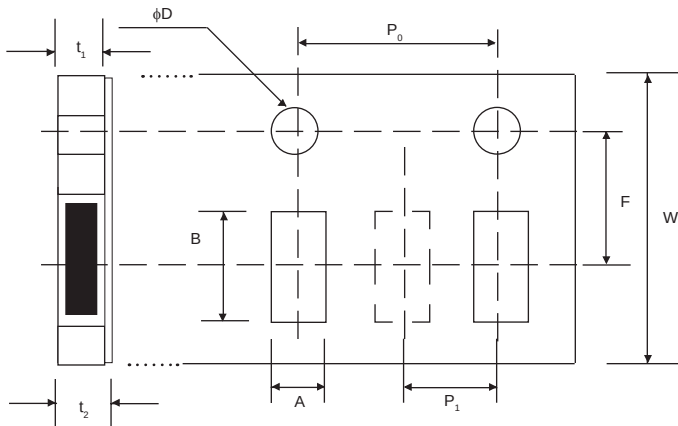
NCT06 D J 154 H 410 TR F

Series: NCT06
Temperature Characteristic: D = +25°C ~ +50°C, A = +25°C ~ +85°C, E = +25°C ~ +100°C
Resistance Value Tolerance: J = ±5%, H = ±3%, G = ±2%, F = ±1%
Resistance Value Code (E-24 Standard Values): 154
Beta Value Tolerance: J = ±5%, H = ±3%, G = ±2%, F = ±1%
Beta Code (1st Three Characters of Beta Value): H 410
Packaging, TR: Tape and Reel
RoHS compliant



CARRIER TAPE DIMENSIONS (mm)

Type	A	B	W	F	E	P ₁	P ₀	φD	T ₁	T ₂		
NCT02	0.68 ±0.20	0.38 ±0.02	8.00 ±0.20	3.50 ±0.05	1.75 ±0.10	2.00 ±0.05	4.00 ±0.10	1.55 ±0.05	0.42 ±0.02	0.50 max.		
NCT04	0.65 ±0.10	1.15 ±0.10				4.00 ±0.05			0.50 max.	1.00 max.		
NCT06	1.10 ±0.20	1.90 ±0.20							1.00 max.	1.40 max.		
NCT08	1.65 ±0.20	2.40 ±0.20										



REEL DIMENSIONS (mm) AND QUANTITY

Type	A +0/-3	B +1/-0	C ±0.20	W ±0.3	Quantity
NCT02	180	60	13	9.0	
NCT04					10,000
NCT06					5,000
NCT08					

