

# NTC Thermistors



## for Temperature Sensor and Compensation 0805 (2012) Size

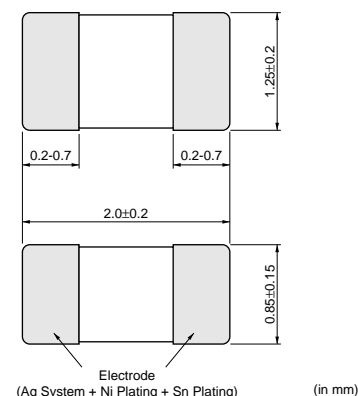
0201/0402/0603/0805 sized Chip NTC Thermistors have Ni barrier termination and provide excellent solderability and offer high stability in environment by unique inner construction.

### ■ Features

1. Excellent solderability and high stability in environment
2. Excellent long time aging stability
3. High accuracy in resistance and B-constant
4. Flow / Reflow soldering possible
5. Same B-Constant in the same resistance in the three sizes (0805 size / 0603 size / 0402 size)  
Easy to use smaller size in the circuits
6. NCP series are recognized by UL/cUL.  
(UL1434, File No.E137188)

### ■ Applications

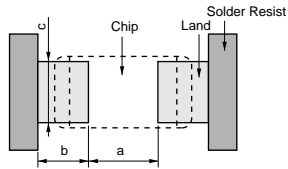
1. Temperature compensation for transistor, IC and crystal oscillator in mobile communications
2. Temperature sensor for rechargeable batteries
3. Temperature compensation of LCD
4. Temperature compensation in general use of electric circuits



Part Number	Resistance (25°C) (ohm)	B-Constant (25-50°C) (K)	B-Constant (25-80°C) (Reference Value) (K)	B-Constant (25-85°C) (Reference Value) (K)	B-Constant (25-100°C) (Reference Value) (K)	Permissible Operating Current (25°C) (mA)	Rated Electric Power (25°C) (mW)	Typical Dissipation Constant (25°C) (mW/°C)
NCP21XM221J03RA	220 ±5%	3500 ±3%	3539	3545	3560	3.00	200	2
NCP21XQ471J03RA	470 ±5%	3650 ±3%	3688	3693	3706	2.00	200	2
NCP21XQ102J03RA	1.0k ±5%	3650 ±3%	3688	3693	3706	1.40	200	2
NCP21XW222J03RA	2.2k ±5%	3950 ±3%	3982	3987	3998	0.90	200	2
NCP21XM472J03RA	4.7k ±5%	3500 ±3%	3539	3545	3560	0.65	200	2
NCP21XV103J03RA	10k ±5%	3900 ±3%	3930	3934	3944	0.44	200	2
NCP21XW153J03RA	15k ±5%	3950 ±3%	3982	3987	3998	0.36	200	2
NCP21XW223J03RA	22k ±5%	3950 ±3%	3982	3987	3998	0.30	200	2
NCP21WB333J03RA	33k ±5%	4050 ±3%	4101	4108	4131	0.24	200	2
NCP21WB473J03RA	47k ±5%	4050 ±3%	4101	4108	4131	0.20	200	2
NCP21WF104J03RA	100k ±5%	4250 ±3%	4303	4311	4334	0.14	200	2

Rated Electric Power is necessary electric power that Thermistor's temperature rises 100°C by self heating at 25°C in still air.  
 Operating Temperature Range: -40°C to +125°C

### for Temp. Sensor and Compensation Chip Type Standard Land Pattern Dimensions



Part Number	Soldering Methods	Dimensions (mm)			
		Chip (LxW)	a	b	c
<b>NCP03</b>	Reflow Soldering	0.6x0.3	0.25	0.25	0.3
<b>NCP15</b>	Reflow Soldering	1.0x0.5	0.4	0.4-0.5	0.5
<b>NCP18</b>	Flow Soldering	1.6x0.8	0.6-1.0	0.8-0.9	0.6-0.8
	Reflow Soldering		0.6-0.8	0.6-0.7	0.6-0.8
<b>NCP21</b>	Flow Soldering	2.0x1.25	1.0-1.1	0.9-1.0	1.0-1.2
	Reflow Soldering		1.0-1.1	0.6-0.7	1.0-1.2