

# NTC Thermistors

## Temperature Sensor and Compensation 0402 (1005) Size

2

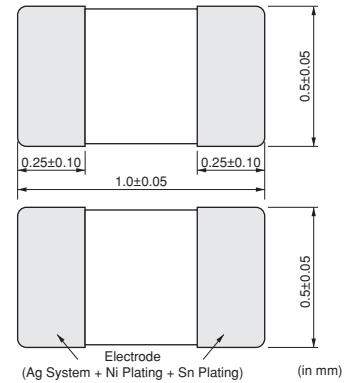
Chip NTC Thermistors' Ni barrier termination provides excellent solderability and their unique construction offers high stability in the application's environment.

### ■ Features

1. Excellent solderability and high stability in the application's environment
2. Excellent long-term stability
3. High accuracy in resistance and B-Constant
4. Reflow soldering possible
5. Same B-constant in the same resistance in the three sizes (0805 size / 0603 size / 0402 size)  
Downsize is easy for design.
6. NCP series are recognized by UL/cUL.  
(UL1434, File No.E137188)

### ■ Applications

1. Temperature compensation for transistors, ICs, and crystal oscillators 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)
NCP15XC220□03RC	22	3100 ±3%	3126	3128	3136	6.70	100	1
NCP15XC330□03RC	33	3100 ±3%	3126	3128	3136	5.50	100	1
NCP15XC470□03RC	47	3100 ±3%	3126	3128	3136	4.60	100	1
NCP15XC680□03RC	68	3100 ±3%	3126	3128	3136	3.80	100	1
NCP15XF101□03RC	100	3250 ±3%	3282	3284	3296	3.10	100	1
NCP15XF151□03RC	150	3250 ±3%	3282	3284	3296	2.50	100	1
NCP15XM221□03RC	220	3500 ±3%	3539	3545	3560	2.10	100	1
NCP15XM331□03RC	330	3500 ±3%	3539	3545	3560	1.70	100	1
NCP15XQ471□03RC	470	3650 ±2%	3688	3693	3706	1.40	100	1
NCP15XQ681□03RC	680	3650 ±3%	3688	3693	3706	1.20	100	1
NCP15XQ102□03RC	1.0k	3650 ±2%	3688	3693	3706	1.00	100	1
NCP15XW152□03RC	1.5k	3950 ±3%	3982	3987	3998	0.81	100	1
NCP15XW222□03RC	2.2k	3950 ±3%	3982	3987	3998	0.67	100	1
NCP15XW332□03RC	3.3k	3950 ±3%	3982	3987	3998	0.55	100	1
NCP15XM472□03RC	4.7k	3500 ±2%	3539	3545	3560	0.46	100	1
NCP15XW472□03RC	4.7k	3950 ±3%	3982	3987	3998	0.46	100	1
NCP15XW682□03RC	6.8k	3950 ±3%	3982	3987	3998	0.38	100	1
NCP15XH103D03RC	10k ±0.5%	3380 ±0.7%	3428	3434	3455	0.31	100	1
NCP15XH103F03RC	10k ±1%	3380 ±1%	3428	3434	3455	0.31	100	1
NCP15XH103□03RC	10k	3380 ±1%	3428	3434	3455	0.31	100	1
NCP15XV103□03RC	10k	3900 ±3%	3930	3934	3944	0.31	100	1
NCP15XW153□03RC	15k	3950 ±3%	3982	3987	3998	0.25	100	1
NCP15XW223□03RC	22k	3950 ±3%	3982	3987	3998	0.21	100	1
NCP15WL223□03RC	22k	4485 ±1%	4537	4543	4557	0.21	100	1
NCP15WB333□03RC	33k	4050 ±3%	4101	4108	4131	0.17	100	1
NCP15WL333□03RC	33k	4485 ±1%	4537	4543	4557	0.17	100	1

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⚠Note • Please read rating and ⚠CAUTION (for storage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.  
 • This catalog has only typical specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

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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)
<b>NCP15WB473D03RC</b>	47k ±0.5%	4050 ±0.5%	4101	4108	4131	0.14	100	1
<b>NCP15WB473F03RC</b>	47k ±1%	4050 ±1%	4101	4108	4131	0.14	100	1
<b>NCP15WB473□03RC</b>	47k	4050 ±1%	4101	4108	4131	0.14	100	1
<b>NCP15WL473□03RC</b>	47k	4485 ±1%	4537	4543	4557	0.14	100	1
<b>NCP15WD683□03RC</b>	68k	4150 ±3%	4201	4209	4232	0.12	100	1
<b>NCP15WL683□03RC</b>	68k	4485 ±1%	4537	4543	4557	0.12	100	1
<b>NCP15WF104D03RC</b>	100k ±0.5%	4250 ±0.5%	4303	4311	4334	0.10	100	1
<b>NCP15WF104F03RC</b>	100k ±1%	4250 ±1%	4303	4311	4334	0.10	100	1
<b>NCP15WF104□03RC</b>	100k	4250 ±1%	4303	4311	4334	0.10	100	1
<b>NCP15WL104□03RC</b>	100k	4485 ±1%	4537	4543	4557	0.10	100	1
<b>NCP15WL154□03RC</b>	150k	4485 ±1%	4537	4543	4557	0.08	100	1
<b>NCP15WM154□03RC</b>	150k	4500 ±3%	4571	4582	4614	0.08	100	1
<b>NCP15WM224□03RC</b>	220k	4500 ±3%	4571	4582	4614	0.06	100	1
<b>NCP15WM474□03RC</b>	470k	4500 ±3%	4571	4582	4614	0.04	100	1

□ is filled with resistance tolerance codes (E: ±3%, J: ±5%).

Rated Electric Power shows the required electric power that the thermistor's temperature rise to 125°C by self-heating, at ambient temperature of 25 °C.

Operating Temperature Range: -40°C to +125°C

2