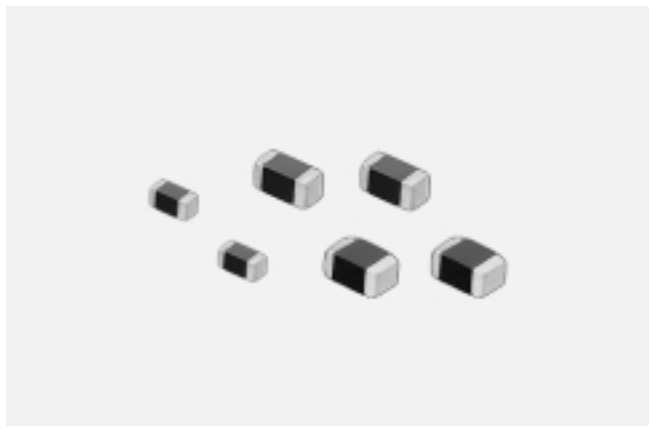


# THERMISTOR PRODUCTS

## NTC THERMISTOR

### FOR TEMPERATURE SENSING AND COMPENSATING

## NTH5G Series



NTH5G, reflow soldering available type chip NTC Thermistor, offers high stability in environment and wide resistance range in a constant size by unique inner construction.

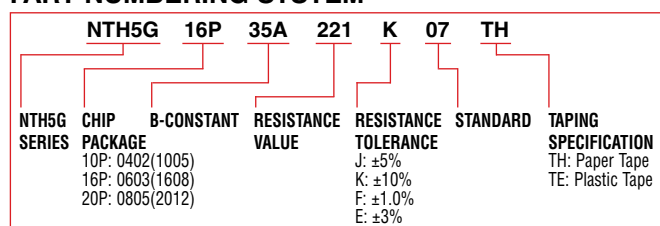
### FEATURES

- 0402, 0603, 0805 package available
- High humidity resistant due to unique inner construction
- Excellent long time aging stability
- High accuracy: ±1% in both resistance and B-constant available
- Good soldering strength by five faces electrode
- Dimensions conform to JIS c 0806

### APPLICATIONS

- Temperature compensation of transistor, IC, crystal oscillator
- Temperature compensation of measuring equipment and several kinds of circuits
- Temperature sensor of printer, LCD

### PART NUMBERING SYSTEM



### DIMENSIONS: mm

Series	L	W	T	e
<b>NTH5G10P (0402 Size)</b>	1.0 ± 0.05	0.5 ± 0.05	0.5 ± 0.05	0.15 ~ 0.35
<b>NTH5G16P (0603 Size)</b>	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.2 ~ 0.6
<b>NTH5G20P (0805 Size)</b>	2.0 ± 0.2	1.25 ± 0.2	0.85 ± 0.15	0.2 ~ 0.7

Electrode (Ni Barrieted + Sn Plated)

### RATINGS

Part Number	Resistance (Ohms) at 25°C	B-Constant (25/50°C) (K)	Current max. (mA) at 25°C	Operating Current max. (mA) at 25°C	Part Number	Resistance (Ohms) at 25°C	B-Constant (25/50°C) (K)	Current max. (mA) at 25°C	Operating Current max. (mA) at 25°C
NTH5G10P35A221□08TH	220	3500 ± 3%	2.10	8.10	NTH5G16P39B152□07TH	1.5k	3950 ± 3%	3.2	0.81
NTH5G10P35A331□08TH	330	3500 ± 3%	1.70	6.60	NTH5G16P39B222□07TH	2.2k	3950 ± 3%	2.6	0.67
NTH5G10P36B471□08TH	470	3650 ± 3%	1.40	5.60	NTH5G16P39B332□07TH	3.3k	3950 ± 3%	2.1	0.55
NTH5G10P36B681□08TH	680	3650 ± 3%	1.20	4.60	NTH5G16P39B472□07TH	4.7k	3950 ± 3%	1.8	0.46
NTH5G10P36B102□08TH	1.0k	3650 ± 3%	1.00	3.80	NTH5G16P39B682□07TH	6.8k	3950 ± 3%	1.5	0.38
NTH5G10P39B152□08TH	1.5k	3950 ± 3%	0.81	3.10	NTH5G16P33B103□07TH	10.0k	3380 ± 1%	1.2	0.31
NTH5G10P39B222□08TH	2.2k	3950 ± 3%	0.67	2.60	NTH5G16P39A103□07TH	10.0k	3900 ± 3%	1.2	0.31
NTH5G10P39B332□08TH	3.3k	3950 ± 3%	0.55	2.10	NTH5G16P39B153□07TH	15k	3950 ± 3%	1	0.25
NTH5G10P39B472□08TH	4.7k	3950 ± 3%	0.46	1.80	NTH5G16P39B223□07TH	22.0k	3950 ± 3%	0.83	0.21
NTH5G10P39B682□08TH	6.8k	3950 ± 3%	0.38	1.50	NTH5G16P40B333□07TH	33.0k	4050 ± 3%	0.68	0.17
NTH5G10P33B103□08TH	10k	3380 ± 3%	0.31	1.20	NTH5G16P40B473□07TH	47.0k	4050 ± 3%	0.57	0.14
NTH5G10P39A103□08TH	10k	3900 ± 3%	0.31	1.20	NTH5G16P41B683□07TH	68.0k	4150 ± 3%	0.48	0.12
NTH5G10P39B153□08TH	15k	3950 ± 3%	0.25	1.00	NTH5G16P42B104□07TH	100.0k	4250 ± 3%	0.39	0.1
NTH5G10P39B223□08TH	22k	3950 ± 3%	0.21	0.83	NTH5G16P45A224□07TH	220.0k	4500 ± 3%	0.28	0.07
NTH5G10P40B333□08TH	33k	4050 ± 3%	0.17	0.68	NTH5G16P45A474□07TH	470.0k	4500 ± 3%	0.16	0.04
NTH5G10P40B473□08TH	47k	4050 ± 3%	0.14	0.57	NTH5G20P35A221□07TE	220	3500 ± 3%	11.1	3
NTH5G10P41B683□08TH	68k	4150 ± 3%	0.12	0.48	NTH5G20P36B471□07TE	470	3650 ± 3%	7.60	2
NTH5G10P42B104□08TH	100k	4250 ± 3%	0.10	0.39	NTH5G20P36B102□07TE	1.0k	3650 ± 3%	5.30	1.4
NTH5G10P45A224□08TH	220k	4500 ± 3%	0.06	0.27	NTH5G20P39B222□07TE	2.2k	3950 ± 3%	3.7	0.90
NTH5G10P45A474□08TH	470k	4500 ± 3%	0.04	0.18	NTH5G20P39B472□07TE	4.7k	3950 ± 3%	2.4	0.65
NTH5G16P35A221□07TH	220	3500 ± 3%	8.1	2.1	NTH5G20P39A103□07TE	10.0k	3900 ± 3%	1.7	0.44
NTH5G16P35A331□07TH	330	3500 ± 3%	6.6	1.7	NTH5G20P39B153□07TE	15k	3950 ± 3%	1.4	0.36
NTH5G16P36B471□07TH	470	3650 ± 3%	5.6	1.4	NTH5G20P39B223□07TE	22.0k	3950 ± 3%	1.1	0.30
NTH5G16P36B681□07TH	680	3650 ± 3%	4.6	1.2	NTH5G20P40B473□07TE	47.0k	4050 ± 3%	0.81	0.20
NTH5G16P36B102□07TH	1.0k	3650 ± 3%	3.8	1	NTH5G20P42B104□07TE	100.0k	4250 ± 3%	0.56	0.14

Both flow and reflow soldering methods can be employed.

• Thermal Dissipation Constant: NTH5G10P and NTH5G16P Series – around 1.0mW/°C (25°C, in still air); NTH5G20P Series – around 2.0mW/°C (25°C, in still air)

• Rated Electric Power: NTH5G10P and NTH5G16P Series – 10mW/°C (25°C, in still air); NTH5G20P Series – 20mW/°C (25°C, in still air)

• B-Constant Tolerance: ±3%

$$B\text{-Constant} = \frac{\ln(R_{50^\circ}/R_{25^\circ})}{\frac{1}{273+50} - \frac{1}{273+25}}$$

• Operating Temperature range: -40°C ~ +125°C

\* Use Thermistor in current less than 1/10 of Maximum Operating Current;

† Thermistor heats about 10°C in 25°C still air by applying the rated electric power.