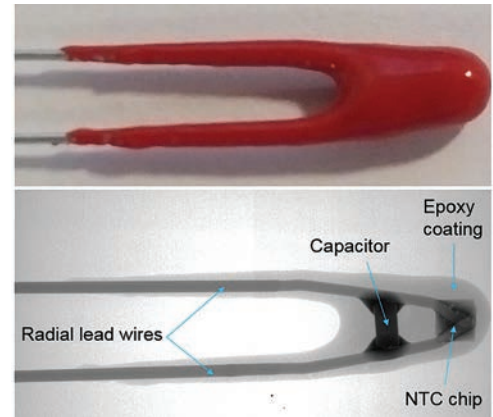


T H E R M O M E T R I C S
A COMMITMENT TO EXCELLENCE

NTC Type NKI

Epoxy-Coated Noise Immune Thermistors



With increasing complexity of electric systems and density of electronic components in modern vehicles, conventional NTC thermistor sensors are vulnerable to stray electromagnetic interference causing self-heating.

Thermometrics has developed a noise immune NTC thermistor with an integrated radio frequency (RF) decoupling function, providing protection from electromagnetic interference (EMI) at the component level over a wide frequency range.

Applications

- EV/HEV/PHEV Markets
- Battery Temperature Sensing
- Existing Automotive - Upgrade
- Drive Systems
- HVAC
- Air Intake / Coolant

Features

- NTC element-level EMI protection
- Fast time response
- Drop-in upgrade for existing applications
- Reduced system cost:
 - Retrofit to use existing housing designs
 - Eliminate shielded cables
- EMC-tested to GMW3097 / ISO11452
- Range of conformal coatings available

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Advanced Sensors

Noise Immune Thermistor (NKI) Specifications

NKI Resistance Values

R25 Ω	Material System	B Value 25/85°C K	Code R25°C ± 1%	Code R25°C ± 2%	Code R25°C ± 3%	Code R25°C ± 5%	Code R25°C ± 10%
500	2	3540 ± 1%	NKI#501C2*1^	NKI#501C2*2^	NKI#501C2*3^	NKI#501C2*5^	NKI#501C2*10^
500	2A	3627 ± 1%	NKI#501C2A*1^	NKI#501C2A*2^	NKI#501C2A*3^	NKI#501C2A*5^	NKI#501C2A*10^
500	7	3977 ± 1%	NKI#501C7*1^	NKI#501C7*2^	NKI#501C7*3^	NKI#501C7*5^	NKI#501C7*10^
1000	2	3540 ± 1%	NKI#102C2*1^	NKI#102C2*2^	NKI#102C2*3^	NKI#102C2*5^	NKI#102C2*10^
1000	2A	3627 ± 1%	NKI#102C2A*1^	NKI#102C2A*2^	NKI#102C2A*3^	NKI#102C2A*5^	NKI#102C2A*10^
1000	7	3977 ± 1%	NKI#102C7*1^	NKI#102C7*2^	NKI#102C7*3^	NKI#102C7*5^	NKI#102C7*10^
2000	2	3540 ± 1%	NKI#202C2*1^	NKI#202C2*2^	NKI#202C2*3^	NKI#202C2*5^	NKI#202C2*10^
2000	2A	3627 ± 1%	NKI#202C2A*1^	NKI#202C2A*2^	NKI#202C2A*3^	NKI#202C2A*5^	NKI#202C2A*10^
2000	7	3977 ± 1%	NKI#202C7*1^	NKI#202C7*2^	NKI#202C7*3^	NKI#202C7*5^	NKI#202C7*10^
2700	1	3977 ± 0.75%	NKI#272C1*1^	NKI#272C1*2^	NKI#272C1*3^	NKI#272C1*5^	NKI#272C1*10^
5000	4A	3435 ± 1%	NKI#502C4A*1^	NKI#502C4A*2^	NKI#502C4A*3^	NKI#502C4A*5^	NKI#502C4A*10^
5000	1	3977 ± 0.75%	NKI#502C1*1^	NKI#502C1*2^	NKI#502C1*3^	NKI#502C1*5^	NKI#502C1*10^
10000	4A	3435 ± 1%	NKI#103C4A*1^	NKI#103C4A*2^	NKI#103C4A*3^	NKI#103C4A*5^	NKI#103C4A*10^
10000	5	3740 ± 1%	NKI#103C5*1^	NKI#103C5*2^	NKI#103C5*3^	NKI#103C5*5^	NKI#103C5*10^
10000	1	3977 ± 0.75%	NKI#103C1*1^	NKI#103C1*2^	NKI#103C1*3^	NKI#103C1*5^	NKI#103C1*10^
12000	5	3740 ± 1%	NKI#123C5*1^	NKI#123C5*2^	NKI#123C5*3^	NKI#123C5*5^	NKI#123C5*10^
30000	8	3977 ± 1%	NKI#303C8*1^	NKI#303C8*2^	NKI#303C8*3^	NKI#303C8*5^	NKI#303C8*10^
50000	8	3977 ± 1%	NKI#503C8*1^	NKI#503C8*2^	NKI#503C8*3^	NKI#503C8*5^	NKI#503C8*10^

Other values available upon request.

Operating Temperature: Epoxy 155°C, HTF1 170°C, CR1 190°C

For resistance-temperature data, according to appropriate material system, please refer to [Reference Guide AAS-913-318](#) - [temperature data](#).

Ordering Information

Replace # in the table codes above as follows:

10nF capacitor 10NF

100nF capacitor 100NF

Replace * in the table codes shown above as follows:

Loose-packed R

Bandoliered B

Replace ^ in the table codes shown above as follows:

Epoxy coating E

CR1 harsh environment coating C

HTF1 flexible silicone coating H

Example Coding:

NKI10NF202C2B2H: 10nF capacitor, 2k resistance, Material System 2, Bandolier, 2% tolerance, HTF1 coating.

NKI100NF502C1R5E: 100nF capacitor, 5k resistance, Material System 1, Loose-packed, 5% tolerance, Epoxy coating.

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