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New Industrial-Grade, Surface-Mount NTC Thermistors in the 0402 Case Size

Vishay BCcomponents has introduced the new NTCSI0402E3....T series of industrial-grade, surface-mount NTC thermistors to complement its existing commercial and automotive devices in the 0402 case size. The components are qualified to MIL and JEDEC standards; however, as their production quality systems do not strictly follow automotive standards like IATF16949, Vishay does not recommend them for automotive applications.

NTCSI0402E3....T series thermistors are available in three resistance values at 25 °C (10 k Ω , 47 k Ω , and 100 k Ω) and tolerances of ± 0.5 % or ± 1 %. Offering nickel barriers and tin electrodeposition, the devices' multilayer technology and compact size make them ideal for industrial applications like temperature compensation for transistors, ICs, and crystal oscillators in mobile communications (TCXOs). Additional applications include temperature sensing for rechargeable batteries and current mitigation in LEDs, as well as VCSELs for optical applications like lidar in atmospheric research, meteorology, surveying, and mapping. The NTC thermistors can also be used for temperature compensation in electric circuits for general use. The devices will offer UL 1434 qualification in the short term.

Key Advantages

- Very small 0402 (1005 metric) case size
- R₂₅ range from 10 k Ω to 100 k Ω , with tolerances of ± 0.5 % and ± 1 %
- RoHS-compliant without exemptions and halogen-free
- UL 1434 approval by the end of 2025

Useful Links

- [NTCSI0402E3....T Product Page](#)
- [NTC curve computation web tool](#)
- SPICE models available

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