

The Art of Thermistors

NTC - SMD NTCS....E3...SMT Monolithic with Ni and Sn Enhanced stability -40 °C to +125 °C One R_{25} -value per case 0402, 0603, and 0805	NTC - SMD NTCS....E3....T Monolithic with Ni and Sn Glass protected -40 °C to +150 °C Tolerance on R_{25} down to 1 % Full range in 0402, 0603, and 0805 AEC-Q200 qualified	NTC - SMD NTCC200E4..., NTCC300E4..., NTCC200E4C90008 Flat chip metallized (Ag or Au) Suitable for wire bonding -55 °C to +175 °C Resistant to thermal shocks and to leaching AEC-Q200 qualified	NTC - SMD NTCSMELFE3... SOD-80 glass encapsulated Diameter down to 1.7 mm Response time down to 0.9 s For corrosive atmospheres and harsh environments	NTC - SMD NTHS... Wide resistance range Monolithic with Ni and Sn Design flexibility for temperature sensing and compensation 0402, 0603, 0805, and 1206	NTC - LEADED NTCLE100E3... Wide resistance range Color band coded High conductivity copper wires	NTC - LEADED NTCLE201E3C90028 Long and flexible leads for special mounting Fast response time of less than 0.5 s Small head diameter	NTC - LEADED NTCLE203E3... High accuracy Tolerance down to 1 % Stability over a long lifetime Low heat conductivity Thin nickel wires	NTC - LEADED NTCLE203E3...SB0 2-point accurate sensor Tolerance down to 0.5 K -55 °C to +150 °C Stable, thermal shock- withstanding AEC-Q200 qualified	NTC - LEADED NTCLE301E4C90059 Long and flexible leads Small diameter Accuracy of ± 0.4 °C at 0 °C Designed for cold temperature applications	NTC - LEADED NTCLE305E4...SB Miniature epoxy-ETFE insulated leads Fast reacting and accurate Exceptional withstanding to thermal shocks AEC-Q200 qualified	NTC - LEADED NTCLE213E3... Advanced mini sensor -55 °C to +150 °C Thermal shock resistant Fast response time High sensitivity AEC-Q200 qualified
NTC - LEADED NTCLE400... Special long lead sensors Accuracy over wide temperature range High stability and excellent price / performance ratio	NTC - LEADED NTCLE413..., NTCLE428... Mini PVC insulated leads Battery sensor Accurate down to ± 0.3 °C Small body of max. 3 mm for easy installation	NTC - LEADED NTCLG100E2... SOD-27 glass encapsulated Temperature up to 200 °C Diameter down to 1.8 mm Response time down to 0.9 s For corrosive atmospheres and harsh environments	NTC - LEADED T, M, C Small size Wide resistance range Available in different curves Tolerance on R_{25} down to 1 % Precision down to ± 0.2 °C	NTC - ASSEMBLIES NTCLP100... Special long lead sensors Accuracy over wide temperature range High stability and excellent price / performance ratio	NTC - ASSEMBLIES NTCLP450E3... Pipe type with fast time response and high stability High resistance to humidity Accurate over wide temperature range	NTC - ASSEMBLIES NTCALUG01T Robust surface sensor 150 °C long term stability Easy mounting M3 with 2.7 kV _{ac} insulation voltage ETFE insulated 600 V _{ac} rated AWG26 cable AEC-Q200 qualified	NTC - ASSEMBLIES NTCALUG01A... Robust surface sensor -40 °C to +150 °C Easy mounting M3 and M3.5 Rugged construction PTFE insulated cable AEC-Q200 qualified	NTC - ASSEMBLIES NTCALUG02A... Low thermal gradient surface sensor Tolerance on R_{25} down to 1 % PEEK AWG30 nickel wires AEC-Q200 qualified	NTC - ASSEMBLIES NTCALUG03A/39A Miniature surface sensor Fast response time Low thermal mass Stud screw mounted M2/M3 AEC-Q200 qualified	NTC - ASSEMBLIES NTCALUG54A... Robust surface sensor -40 °C to +150 °C Easy mounting M5 Rugged construction PTFE insulated cable AEC-Q200 qualified	NTC - ASSEMBLIES NTCALUG91A... Robust surface sensor -40 °C to +150 °C Easy mounting M4 Rugged construction PTFE insulated cable AEC-Q200 qualified
NTC - ASSEMBLIES NTCASCWE3... Screw threaded sensors Easy mounting M4 Rugged construction For surface temperature applications	NTC - ASSEMBLIES NTCACAP... Refrigerator sensors Enabling class A+++ Very good water, moisture, and ice resistance Thermal cycle resistant	NTC - ASSEMBLIES NTCASRFE3C90406 Ice cube sensor FDA-grade housing Enabling class A+++ Very good water, moisture, and ice resistance Thermal cycle resistant	NTC - ASSEMBLIES NTCAFLEX05... Flex foil sensor for narrow space applications Response time down to 2 s Insulated and humidity resistant AEC-Q200 qualified	NTC - ASSEMBLIES NTCAIMME3... Stainless steel immersion sensor Fast response time Reduced thermal gradient For permanent contact with liquids	NTC - ASSEMBLIES NTCASRFE4C90132 Surface temperature sensor with triangular shape housing Fast response time Mounted in a gauge or with a spring	PTC - SMD PTCTZ..R....TT Overload protection 30 V _{RMS} to 300 V _{RMS} operating Fast response time to overload Low heat transfer	PTC - LEADED PTCSL03... Over-temperature protection Fast response time Tolerance of ± 5 °C Excellent long term behavior	<h2>The Varistor Gallery</h2>			
PTC - LEADED PTCCL...D/E.. For overload protection 30 V to 60 V Small trip-hold ratio of 1.5 High maximum overload current	PTC - LEADED PTCCL...F.. For overload protection 145 V Small trip-hold ratio of 1.5 High maximum overload current	PTC - LEADED PTCCL...H/S/T/V.. For overload protection 265 V to 600 V Small trip-hold ratio of 1.5 High maximum overload current	PTC - LEADED PTCEL... Inrush current limiting 350 V _{RMS} to 700 V _{RMS} (1000 V _{DC}) High energy absorption 150 J to 240 J	RTD - SMD PTS...0... (PTS) Platinum thin film chip High accuracy and stability Extended temperature range of -50 °C to +175 °C Short reaction times High accuracy and stability	RTD - SMD PTS...M... (PTS AT) Platinum thin film chip High accuracy and stability Extended temperature range of -50 °C to +175 °C Short reaction times High thermal cycling capability AEC-Q200 qualified	RTD - SMD TFPT... Nickel thin film chip Wide resistance range Size 0603, 0805, and 1206 Tolerance on R_{25} down to 0.5 % -55 °C to +150 °C High stability AEC-Q200 qualified	RTD - LEADED TFPTL... Thin film linear thermistors Tolerance on R_{25} down to 1 % -55 °C to +150 °C High stability	SMD MLV... Multilayer surge suppressor Inherent bidirectional clamping 4 V _{RMS} to 95 V _{RMS} Excellent energy / volume ratio Sizes 0402 up to 2220	LEADED VDRS... Standard surge 14 V _{RMS} to 680 V _{RMS} I _{surge} up to 6500 A (8/20 μ s) Lead (Pb)-free and halogen-free	LEADED VDRH... High surge 11 V _{RMS} to 680 V _{RMS} I _{surge} up to 10 kA (8/20 μ s) Lead (Pb)-free and halogen-free	LEADED VDRUS Ultra high surge 115 V _{RMS} to 680 V _{RMS} I _{surge} up to 13 kA (8/20 μ s) Lead (Pb)-free and halogen-free

LEGEND

Negative Temperature Coefficient (NTC):

- NTC - SMD (Surface-Mount Device)
- NTC - Leaded (Through-Hole)
- NTC - Assemblies

Positive Temperature Coefficient (PTC):

- PTC - SMD (Surface-Mount Device)
- PTC - Leaded (Through-Hole)

Thin Film - Resistance Temperature Detectors (RTD):

- RTD - SMD (Surface-Mount Device)
- RTD - Leaded (Through-Hole)

Voltage Dependent Resistors:

- Varistors - SMD (Surface-Mount Device)
- Varistors - Leaded (Through-Hole)