

Aerospace & Defense

RTH42 MIL-PRF-23648/19

Engineering Information:

- PTC thermistor
- Positive temperature coefficient: 0.7%/ °C
- Operating temperature range: -55°C to 125°C
- Standard resistance range at 25°C: 10 to 10k ohms
- Power rating: 0.500 W at 25°C, derate to 0 W at 125°C
- Thermal time constant: 60 seconds max in still air
- Dissipation constant: 5 mW/°C min in still air
- Curves: E
- Tolerances: 1%, 2%, 5%, 10%
- Commercial option available
- RoHS options available



Applications:

- Temperature measurement and control
- Amplifier stabilization
- Power control
- Microprocessor interfacing

Series Information:

QTI's RTH42 MIL-PRF-23648/19 specified precision PTC Thermistor meets or exceeds all of the requirements of MIL-PRF-23648. It is certified by the Defense Logistics Agency, Qualified Products List QPL-23648. These high-reliability, military grade PTC precision thermistor are suitable for critical applications where temperature control/compensation is required. A commercial version is available and conforms to the standard D035 package size.

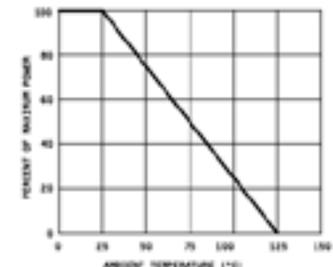
Aerospace and Defense Overview:

QTI maintains an extensive test laboratory, designed with defense and aerospace customers in mind. This test lab is ISO 9001:2008 and AS9100 Revision B certified. We are qualified to perform all tests dictated by the Department of Defense, Defense Logistics Agency MIL-PRF-23648, and MIL-PRF-32192 specifications. In addition we have the facilities to perform many of the tests specified in MIL-STD-202, MIL-STD-883, NASA Goddard S-311-P-18 and S-311-P-827, EEE-INST-002, TOR-2006, ESA 4006, and MIL-PRF-38534 Class K and H Element Evaluation tests.

PTC Table: Standard for RTH22 MIL-R-23648/19

Temperature	10 to 68 OHMS	82 to 150 OHMS	180 to 470 OHMS	560 to 1.2K OHMS	1.5K to 5.6K OHMS	6.8K to 10K OHMS
(-55 °C)	0.615	0.582	0.560	0.550	0.515	0.510
-15 °C	0.790	0.770	0.755	0.740	0.730	0.730
0 °C	0.863	0.847	0.838	0.835	0.825	0.825
25 °C	1.000	1.000	1.000	1.000	1.000	1.000
50 °C	1.160	1.170	1.180	1.200	1.230	1.190
75 °C	1.350	1.370	1.400	1.420	1.450	1.400
*(100 °C)	1.545	1.584	1.623	1.623	1.670	1.610
*(125 °C)	1.750	1.800	1.860	1.920	1.960	1.830

PTC Figure: Derating Curve



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RTH42 MIL-PRF-23648/19 Specifications



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QTI is the unparalleled leader in world-class temperature sensing technology with over for 40 years of proven expertise for the most demanding customers in the world. We custom-engineer the industry's most reliable temperature sensors for mission-critical applications. As a true business partner, we deliver beyond the products we make as we relentlessly pursue excellence in everything we do.

Contact us to discuss your temperature sensing needs today.