

# PTC Military Grade Thermistors

Military Grade  
PTC THERMISTORS

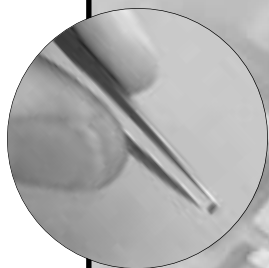
## Military Grade Chip Thermistors

The High-Rel Positive Temperature Coefficient chip thermistor is designed for wire bonding applications found in hybrid circuitry. The devices exhibit a linear Resistance vs. Temperature curve approximating 0.7%/C which make them the ideal solution for temperature compensation applications.

DSCC (Defense Supply Center, Columbus) issued specification MIL-PRF-32192 dictating the performance and inspection requirements for these devices which includes a test for wire bonding integrity. Many leading Aerospace companies around the world have selected these components for their mission critical space flight applications.

Quality Thermistor has summarized the requirements of the MIL-PRF-32192 specification on this catalog page. The complete detailed MIL-PRF-32192 specification can be obtained by contacting the DSCC.

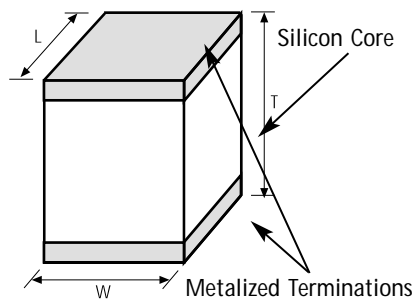
Quality Thermistor, Inc. is  
AS9100 certified



### Engineering Information

Thermal time constant: 30 seconds max in still air  
 Power rating: .125 W at 25 c, derate to 0 at 125  
 Dissipation constant: 1.25mW/°C min in still air  
 Resistance at 25C: 10 ohms to 10Kohms (see table)

### Standard Configuration



Dimension +/- .010 (0.254)	10-12 OHMS	15-1800 OHMS	2200-4700 OHMS	5600 OHMS	10000 OHMS
L	0.032(0.812)	0.032(0.812)	0.038(0.965)	0.030(0.762)	0.022(0.558)
W	0.032(0.812)	0.032(0.812)	0.038(0.965)	0.030(0.762)	0.022(0.558)
T	0.028(0.711)	0.050(1.27)	0.072(1.828)	0.072(1.828)	0.072(1.828)

### Ordering Information

**M32192 E 1 W 500 1 J M**

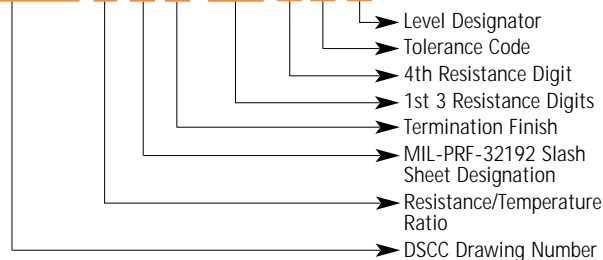


TABLE 1 Derating Curve for High Ambient Temperatures

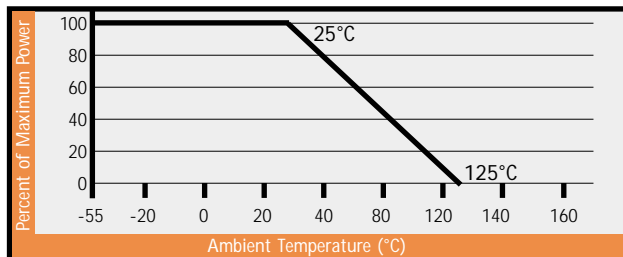


TABLE 2 Factors for determining resistance at various temperatures.

TEMPERATURE °C	10-27 OHMS	33-68 OHMS	82-330 OHMS	390-2.7k OHMS	3.3k-10k OHMS
-55°C	0.552	0.519	0.493	0.481	0.493
-15°C	0.739	0.728	0.716	0.709	0.717
0°C	0.830	0.822	0.813	0.810	0.816
25°C	1.000	1.000	1.000	1.000	1.000
50°C	1.190	1.201	1.208	1.211	1.205
75°C	1.408	1.411	1.441	1.446	1.430
100°C	1.651	1.669	1.706	1.709	1.660
125°C	1.908	1.940	1.993	1.983	1.862

TABLE 4 Termination Materials

TYPE	MATERIAL	CODE
Epoxy Bondable	Gold	G
Epoxy Bondable	Platinum Gold	U
Epoxy Bondable	Platinum Gold	T
Epoxy Bondable	Palladium Silver or Platinum Silver	C
Epoxy Bondable	Palladium Silver or Platinum Silver	D
Wire Bondable	Silver	S
Wire Bondable	Gold	W

TABLE 3 Resistance tolerance at temperatures other than 25°C.

TEMPERATURE °C	F PERCENT (±)	G PERCENT (±)	J PERCENT (±)	K PERCENT (±)
-55°C	15	17	20	25
-15°C	9	10	13	18
0°C	3	4	7	12
25°C	1	2	5	10
50°C	3	4	7	12
75°C	5	6	9	14
100°C	7	9	12	17
125°C	10	12	15	20