



Thermistor Options

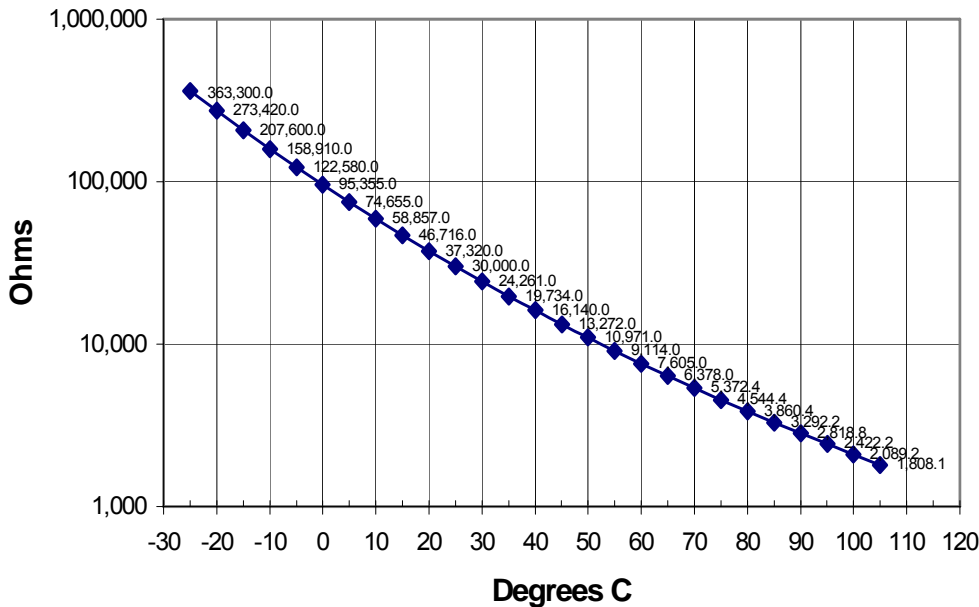
In order to make a radiometric measurement with thermopile detectors, you will need to approximate the thermopile's cold junction temperature. Dexter offers optional externally mounted thermistors for all models as well as internally mounted thermistors on several of our models. Chip Thermistors (DC-4005) can be mounted internally in our models: "ST", 2M Quad, TM34, T34, 10-Channel, and SLA32 Array to monitor ambient temperature of the thermopile. Chip-in-Glass (DC-4007) or Bead Thermistors can be mounted externally on all detector packages between detector pins using epoxy. Customers may supply thermistors or choose from Dexter's standard thermistors. The on detector die poly-silicon resistor / thermistor (ST60R) is also shown below. Please contact Dexter Research Center for pricing.

Chip Thermistor DC-4005

Dexter part number: DC-4005 (formerly MT04)
 Thermometrics P/N: HM25NH3030J
 Description: 30k Ω 5% H-curve chip thermistor
 Resistance @ 25°C: 30,000 Ω
 Tolerance on resistance @ 25°C: +/-5%
 Resistance ratio ($R_{0^\circ\text{C}}/R_{70^\circ\text{C}}$): 17.75
 Dimensions (width, length, thick) inches: .025 x .025 x .010

DC-4005	
Degree C	Ohms
-25	363,300.0
-20	273,420.0
-15	207,600.0
-10	158,910.0
-5	122,580.0
0	95,355.0
5	74,655.0
10	58,857.0
15	46,716.0
20	37,320.0
25	30,000.0
30	24,261.0
35	19,734.0
40	16,140.0
45	13,272.0
50	10,971.0
55	9,114.0
60	7,605.0
65	6,378.0
70	5,372.4
75	4,544.4
80	3,860.4
85	3,292.2
90	2,818.8
95	2,422.2
100	2,089.2
105	1,808.1

DC-4005 Resistance as a function of temperature



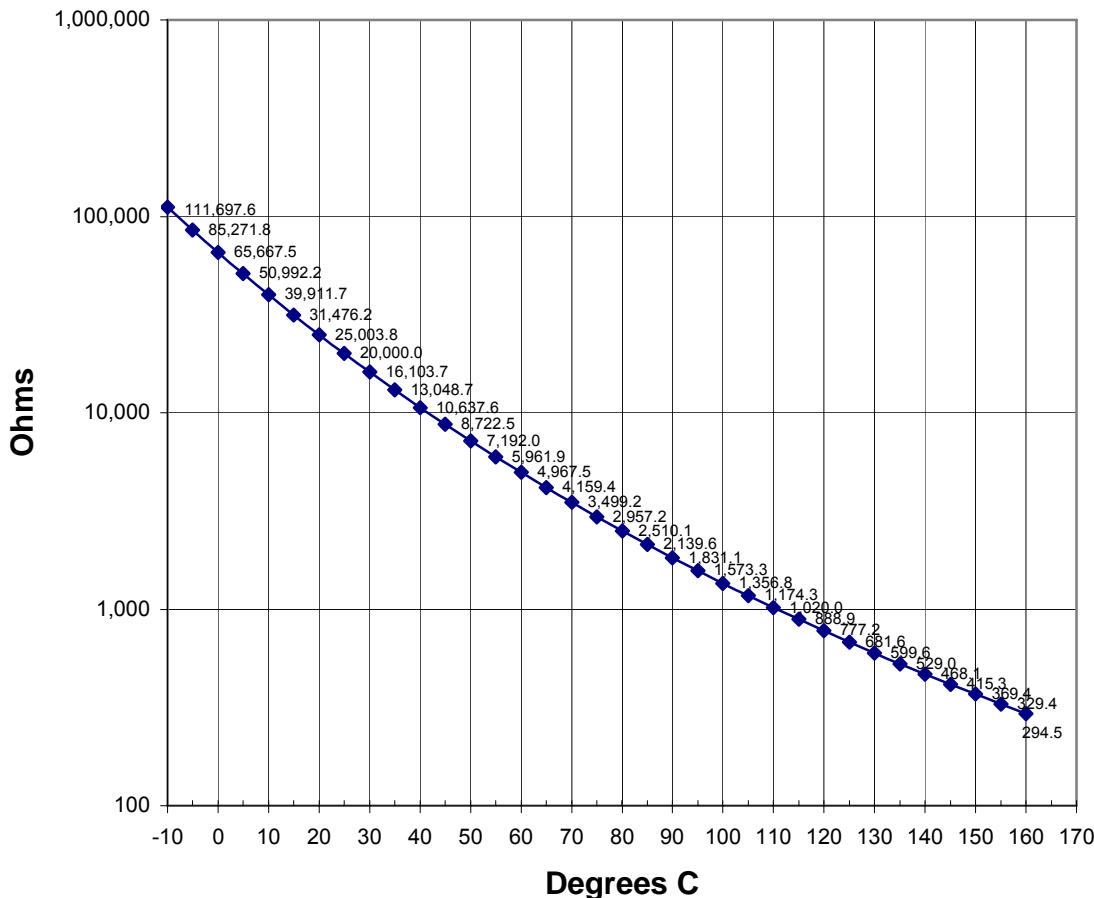


Chip-in-Glass Thermistor DC-4007

Dexter part number: DC-4007 (formerly MT06)
 Thermometrics P/N: GC32KB203
 Description: 20k Ω 5% B-curve Chip-in-Glass thermistor
 Resistance @ 25°C: 20,000 Ω
 Tolerance on resistance @ 25°C: +/-5%
 Resistance ratio ($R_{0^\circ\text{C}}/R_{70^\circ\text{C}}$): 18.77
 Dimensions (diameter, length) inches: \varnothing .033 x .084

DC-4007	
Degree C	Ohms
-10	111,697.6
-5	85,271.8
0	65,667.5
5	50,992.2
10	39,911.7
15	31,476.2
20	25,003.8
25	20,000.0
30	16,103.7
35	13,048.7
40	10,637.6
45	8,722.5
50	7,192.0
55	5,961.9
60	4,967.5
65	4,159.4
70	3,499.2
75	2,957.2
80	2,510.1
85	2,139.6
90	1,831.1
95	1,573.3
100	1,356.8
105	1,174.3
110	1,020.0
115	888.9
120	777.2
125	681.6
130	599.6
135	529.0
140	468.1
145	415.3
150	369.4
155	329.4
160	294.5

DC-4007 Resistance as a function of temperature





Thermistor ST60R

Dexter part number: ST60R

Description: 30kΩ 20% on detector die thermistor, poly-silicon curve
.07%±.003%/°C [$\Delta R / (R \cdot \Delta T)$]

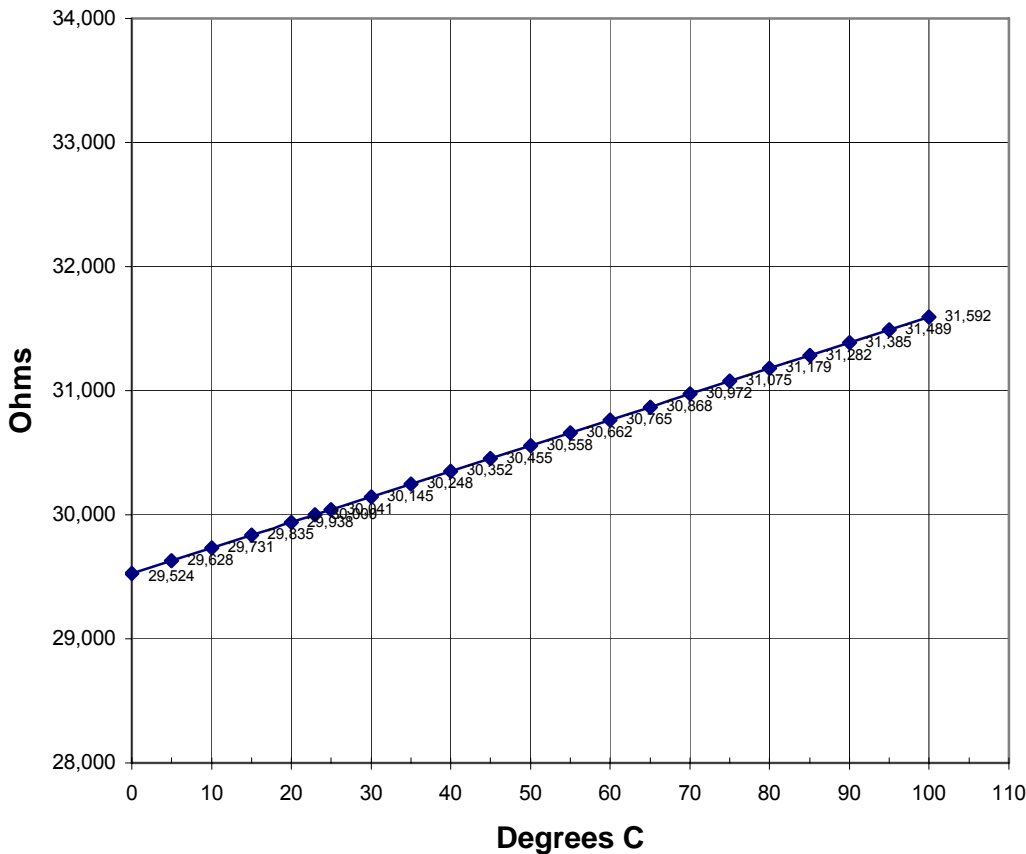
Resistance @ 23°C: 30,000Ω

Tolerance on resistance @ 23°C: +/-20%

Resistance ratio ($R_{0^\circ C} / R_{70^\circ C}$): .953

Dimensions inches: NA`

ST60R Resistance as a function of temperature



ST60R	
Degree C	Ohms
0	29,524
5	29,628
10	29,731
15	29,835
20	29,938
23	30,000
25	30,041
30	30,145
35	30,248
40	30,352
45	30,455
50	30,558
55	30,662
60	30,765
65	30,868
70	30,972
75	31,075
80	31,179
85	31,282
90	31,385
95	31,489
100	31,592



Thermistor ST150R

Dexter part number: ST150R

Description: 75kΩ 20% on detector die thermistor, poly-silicon curve
.06%±.003%/°C [$\Delta R / (R \cdot \Delta T)$]

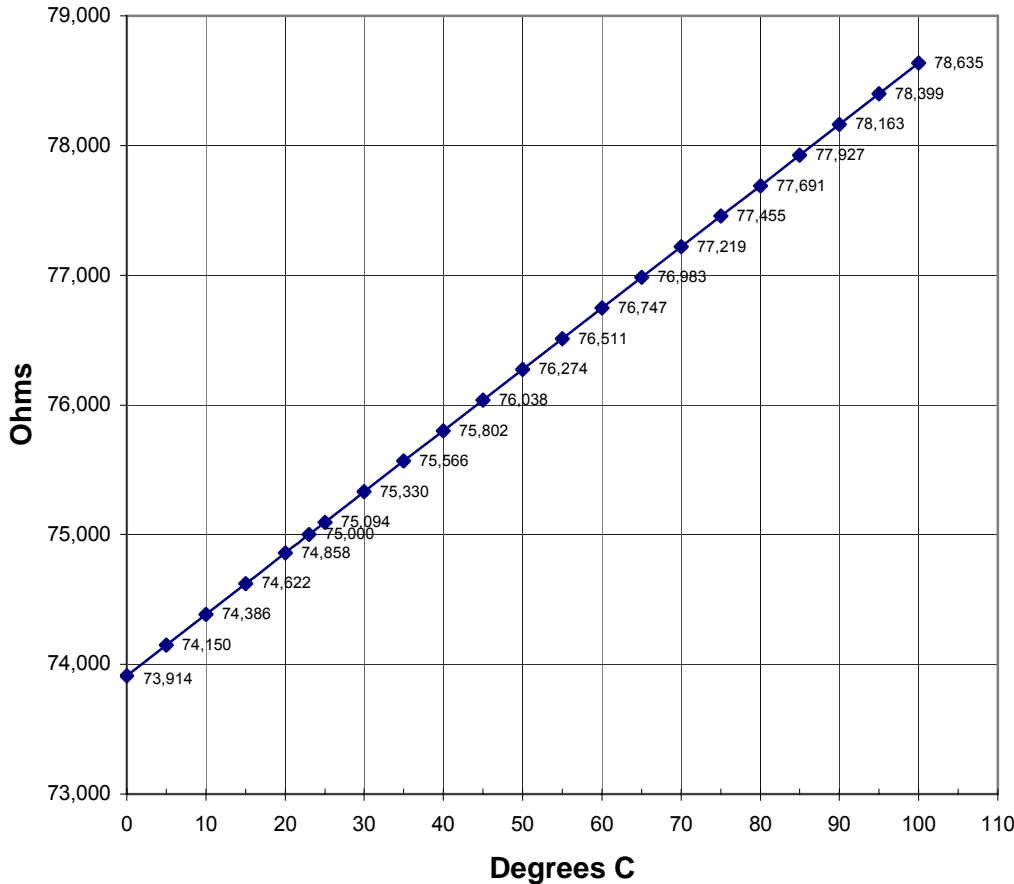
Resistance @ 23°C: 75,000Ω

Tolerance on resistance @ 23°C: +/-20%

Resistance ratio ($R_{0^\circ\text{C}} / R_{70^\circ\text{C}}$): .957

Dimensions inches: NA

ST150R Resistance as a function of temperature



ST150R	
Degree C	Ohms
0	73,914
5	74,150
10	74,386
15	74,622
20	74,858
23	75,000
25	75,094
30	75,330
35	75,566
40	75,802
45	76,038
50	76,274
55	76,511
60	76,747
65	76,983
70	77,219
75	77,455
80	77,691
85	77,927
90	78,163
95	78,399
100	78,635