



MODEL 44902

GSFC Space Qualified Thermistor

- Fully Qualified to GSFC S311-P18-02S7R6 Specification for Flight Use
- 2252 ohm Resistance @ 25°C
- Interchangeable $\pm 0.1^\circ\text{C}$, 0°C to 70°C
- Pressed Disk Ceramic Sensor
- High sensitivity
- Thermally conductive epoxy coating that meet Outgassing Requirements
- 32 AWG, 3" (7.6 cm) long Solder plated copper leads
- Serialized and Color Coded for Identification

FEATURES

- Flight Qualified
- 2252 ohm Resistance @ 25°C
- Interchangeability
- High Sensitivity
- Thermally Conductive Epoxy Coating
Exhibits <0.66% TML, <0.01% CVCM, 0.10% WVR when tested per ASTM E-595-90

APPLICATIONS

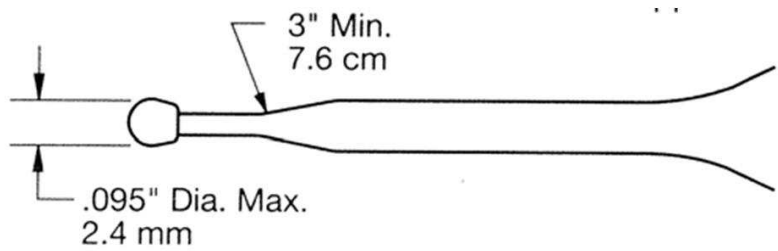
- Extended Space Applications
- Low and Mid Range Temperature Applications
- Tight Tolerance Instrumentation
- Applications Requiring Sensing Small Changes in Temperature
- Applications with Outgassing Requirements

NASA Qualified epoxy encapsulated precision interchangeable NTC thermistors for use in extended space flight applications. All parts are fully flight tested and characterized. Line re-qualified yearly per MIL-PRF-23648 requirements as specified in S311-P18 document. Resistance (Type 02) available in other lead and resistance configurations per S311-P18.

PERFORMANCE SPECS

Parameter	Units	Value
Resistance @ 25°C	Ohms	2252
Tolerance 0°C to 70°C	°C	± 0.1
Beta Value 25/85	K	3987
Tolerance on Beta Value	%	0.4
Time response in air	Seconds	< 10
Dissipation Constant in air	mW/°C	1
Insulation Resistance (Min. of 100 Mohms for 1 sec.)	Volts	500

MECHANICAL DETAILS



TYPICAL PERFORMANCE CURVES (RESISTANCE OF INDIVIDUAL THERMISTORS)

Temp °C	K-Ohms
-55	217.100
-54	201.700
-53	187.400
-52	174.300
-51	162.200
-50	151.000
-49	140.600
-48	131.000
-47	122.100
-46	113.900
-45	106.300
-44	99.260
-43	92.720
-42	86.650
-41	81.020
-40	75.790
-39	70.930
-38	66.410
-37	62.210
-36	58.300
-35	54.660
-34	51.270
-33	48.110
-32	45.170
-31	42.420
-30	39.860
-29	37.470
-28	35.240
-27	33.150
-26	31.200
-25	29.380
-24	27.670
-23	26.070
-22	24.580
-21	23.180
-20	21.870
-19	20.640
-18	19.480
-17	18.400
-16	17.390

Temp °C	K-Ohms
-15	16.430
-14	15.540
-13	14.700
-12	13.910
-11	13.160
-10	12.460
-9	11.810
-8	11.190
-7	10.600
-6	10.050
-5	9.534
-4	9.046
-3	8.586
-2	8.151
-1	7.741
0	7.355
1	6.989
2	6.644
3	6.319
4	6.011
5	5.719
6	5.444
7	5.183
8	4.937
9	4.703
10	4.482
11	4.273
12	4.074
13	3.886
14	3.708
15	3.539
16	3.378
17	3.226
18	3.081
19	2.944
20	2.814
21	2.690
22	2.572
23	2.460
24	2.354

Temp °C	K-Ohms
25	2.252
26	2.156
27	2.064
28	1.977
29	1.894
30	1.815
31	1.739
32	1.667
33	1.599
34	1.533
35	1.471
36	1.412
37	1.355
38	1.301
39	1.249
40	1.200
41	1.152
42	1.107
43	1.064
44	1.023
45	0.9838
46	0.9462
47	0.9102
48	0.8758
49	0.8428
50	0.8113
51	0.7811
52	0.7522
53	0.7245
54	0.6979
55	0.6725
56	0.6481
57	0.6248
58	0.6024
59	0.5809
60	0.5603
61	0.5405
62	0.5215
63	0.5033
64	0.4858

Temp °C	K-Ohms
65	0.4690
66	0.4529
67	0.4374
68	0.4225
69	0.4082
70	0.3945

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ORDERING INFORMATION

Part Number	Description	Ω @25°C
095801	44902 THERM GSFC 311P18-02S7R6	2252
SP44902X-xx	44902X GSFC 311P18-02, Various Lead lengths and Types	2252

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