



## MODEL 44907

### GSFC Space Qualified Thermistor

- Fully Qualified to GSFC S311-P18-07S7R6 Specification for Flight Use
- 10,000 ohm Resistance @ 25°C
- Interchangeable  $\pm 0.2^{\circ}\text{C}$ ,  $0^{\circ}\text{C}$  to  $70^{\circ}\text{C}$
- 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

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 07) available in other lead and resistance configurations per S311-P18.

#### FEATURES

- Flight Qualified
- 10,000 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

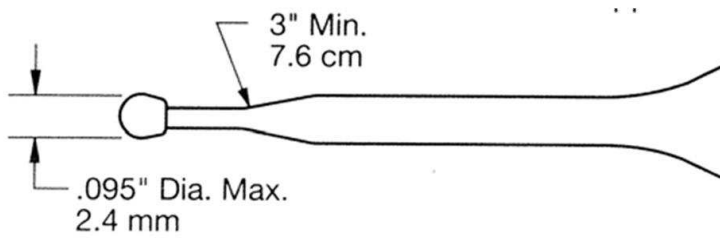
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### PERFORMANCE SPECS

Parameter	Units	Value
Resistance @ 25°C	Ohms	10,000
Tolerance 0°C to 70°C	°C	± 0.2
Beta Value 25/85	K	3694
Tolerance on Beta Value	%	0.8
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	607.8
-54	569.6
-53	534.1
-52	501.0
-51	470.1
-50	441.3
-49	414.5
-48	389.4
-47	366.0
-46	344.1
-45	323.7
-44	304.6
-43	286.7
-42	270.0
-41	254.4
-40	239.8
-39	226.0
-38	213.2
-37	201.1
-36	189.8
-35	179.2
-34	169.3
-33	160.0
-32	151.2
-31	143.00
-30	135.20
-29	127.90
-28	121.10
-27	114.60
-26	108.60
-25	102.90
-24	97.49
-23	92.43
-22	87.66
-21	83.16
-20	78.91
-19	74.91
-18	71.13
-17	67.57
-16	64.20

Temp °C	K-Ohms
-15	61.02
-14	58.01
-13	55.17
-12	52.48
-11	49.94
-10	47.54
-9	45.27
-8	43.11
-7	41.07
-6	39.14
-5	37.31
-4	35.57
-3	33.93
-2	32.37
-1	30.89
0	29.49
1	28.15
2	26.89
3	25.69
4	24.55
5	23.46
6	22.43
7	21.45
8	20.52
9	19.63
10	18.790
11	17.980
12	17.220
13	16.490
14	15.790
15	15.130
16	14.500
17	13.900
18	13.330
19	12.790
20	12.260
21	11.770
22	11.290
23	10.840
24	10.410

Temp °C	K-Ohms
25	10.00
26	9.605
27	9.227
28	8.867
29	8.523
30	8.194
31	7.880
32	7.579
33	7.291
34	7.016
35	6.752
36	6.500
37	6.258
38	6.026
39	5.805
40	5.592
41	5.389
42	5.193
43	5.006
44	4.827
45	4.655
46	4.489
47	4.331
48	4.179
49	4.033
50	3.893
51	3.758
52	3.629
53	3.504
54	3.385
55	3.270
56	3.160
57	3.054
58	2.952
59	2.854
60	2.760
61	2.669
62	2.582
63	2.497
64	2.417

Temp °C	K-Ohms
65	2.339
66	2.264
67	2.191
68	2.122
69	2.055
70	1.990
71	1.928
72	1.868
73	1.810
74	1.754
75	1.700
76	1.648
77	1.598
78	1.549
79	1.503
80	1.458
81	1.414
82	1.372
83	1.332
84	1.293
85	1.255
86	1.218
87	1.183
88	1.149
89	1.116
90	1.084

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### ORDERING INFORMATION

Part Number	Description	$\Omega$ @25°C
095806	44907 THERM GSFC 311P18-07S7R6	10,000
SP44907X-xx	44907X GSFC 311P18-07, Various Lead lengths and Types	10,000

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