



## MODEL 44905

### GSFC Space Qualified Thermistor

- Fully Qualified to GSFC S311-P18-05S7R6 Specification for Flight Use
- 5000 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

#### FEATURES

- Flight Qualified
- 5000 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

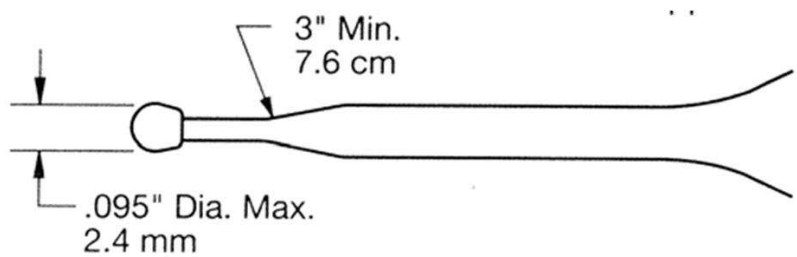
- Extended Space Applications
- Low and Mid Range Temperature Applications
- Tight Tolerance Instrumentation
- Applications Requiring Sensing Small Changes in Temperature
- Applications with Outgassing Requirements

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

**PERFORMANCE SPECS**

Parameter	Units	Value
Resistance @ 25°C	Ohms	5000
Tolerance 0°C to 70°C	°C	± 0.2
Beta Value 25/85	K	3987
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	Temp °C	K-Ohms	Temp °C	K-Ohms	Temp °C	K-Ohms
-55	482.2	-15	36.49	25	5.000	65	1.041
-54	447.9	-14	34.50	26	4.787	66	1.006
-53	416.3	-13	32.63	27	4.583	67	0.9711
-52	387.1	-12	30.88	28	4.389	68	0.9380
-51	360.2	-11	29.23	29	4.204	69	0.9063
-50	335.3	-10	27.67	30	4.029	70	0.8757
-49	312.3	-9	26.21	31	3.861	71	0.8464
-48	291.0	-8	24.83	32	3.702	72	0.8183
-47	271.3	-7	23.54	33	3.549	73	0.7912
-46	253.0	-6	22.32	34	3.404	74	0.7651
-45	236.2	-5	21.17	35	3.266	75	0.7400
-44	220.5	-4	20.08	36	3.134	76	0.7159
-43	205.9	-3	19.06	37	3.008	77	0.6927
-42	192.5	-2	18.10	38	2.888	78	0.6703
-41	180.0	-1	17.19	39	2.773	79	0.6488
-40	168.3	0	16.33	40	2.663	80	0.6281
-39	157.5	1	15.52	41	2.559	81	0.6082
-38	147.5	2	14.75	42	2.459	82	0.5889
-37	138.2	3	14.03	43	2.363	83	0.5704
-36	129.5	4	13.34	44	2.272	84	0.5526
-35	121.4	5	12.70	45	2.184	85	0.5354
-34	113.9	6	12.09	46	2.101	86	0.5188
-33	106.9	7	11.51	47	2.021	87	0.5028
-32	100.3	8	10.96	48	1.944	88	0.4874
-31	94.22	9	10.44	49	1.871	89	0.4726
-30	88.53	10	9.951	50	1.801	90	0.4582
-29	83.22	11	9.486	51	1.734		
-28	78.26	12	9.046	52	1.670		
-27	73.62	13	8.628	53	1.608		
-26	69.29	14	8.232	54	1.549		
-25	65.24	15	7.857	55	1.493		
-24	61.45	16	7.500	56	1.439		
-23	57.90	17	7.162	57	1.387		
-22	54.58	18	6.841	58	1.337		
-21	51.47	19	6.536	59	1.290		
-20	48.56	20	6.247	60	1.244		
-19	45.83	21	5.972	61	1.200		
-18	43.27	22	5.710	62	1.158		
-17	40.86	23	5.462	63	1.117		
-16	38.61	24	5.225	64	1.079		

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### ORDERING INFORMATION

Part Number	Description	$\Omega$ @25°C
095804	44905 THERM GSFC 311P18-05S7R6	5,000
SP44905X-xx	44905X GSFC 311P18-05, Various Lead lengths and Types	5,000

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