



## MODEL 44909

### GSFC Space Qualified Thermistor

- Fully Qualified to GSFC S311-P18-09S7R6 Specification for Flight Use
- 30,000 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

### FEATURES

- Flight Qualified
- 30,000 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

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

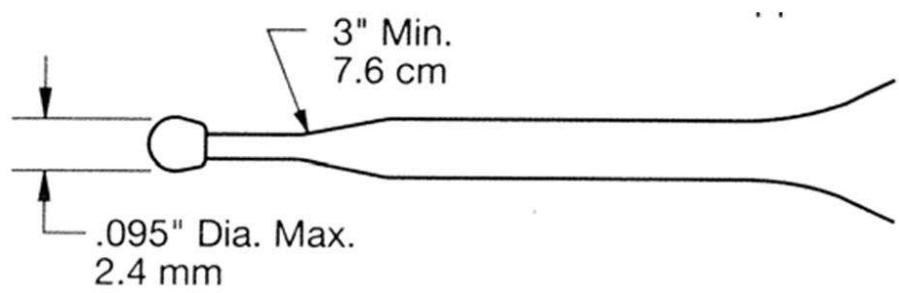
### APPLICATIONS

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

PERFORMANCE SPECS

Parameter	Units	Value
Resistance @ 25°C	Ohms	30,000
Tolerance 0°C to 70°C	°C	± 0.2
Beta Value 25/85	K	3943
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
-40	884.6	0	94.98	40	16.15	80	3.843
-39	830.9	1	90.41	41	15.52	81	3.720
-38	780.8	2	86.09	42	14.92	82	3.602
-37	733.9	3	81.99	43	14.35	83	3.489
-36	690.2	4	78.11	44	13.80	84	3.379
-35	649.3	5	74.44	45	13.28	85	3.273
-34	611.0	6	70.96	46	12.77	86	3.172
-33	575.2	7	67.66	47	12.29	87	3.073
-32	541.7	8	64.53	48	11.83	88	2.979
-31	510.4	9	61.56	49	11.39	89	2.887
-30	481.0	10	58.75	50	10.97	90	2.799
-29	453.5	11	56.07	51	10.57		
-28	427.7	12	53.54	52	10.18		
-27	403.5	13	51.13	53	9.807		
-26	380.9	14	48.84	54	9.450		
-25	359.6	15	46.67	55	9.109		
-24	339.6	16	44.60	56	8.781		
-23	320.9	17	42.64	57	8.467		
-22	303.3	18	40.77	58	8.166		
-21	286.7	19	38.99	59	7.876		
-20	271.2	20	37.30	60	7.599		
-19	256.5	21	35.70	61	7.332		
-18	242.8	22	34.17	62	7.076		
-17	229.8	23	32.71	63	6.830		
-16	217.6	24	31.32	64	6.594		
-15	206.2	25	30.00	65	6.367		
-14	195.4	26	28.74	66	6.149		
-13	185.2	27	27.54	67	5.940		
-12	175.6	28	26.40	68	5.738		
-11	166.6	29	25.31	69	5.545		
-10	158.0	30	24.27	70	5.359		
-9	150.0	31	23.28	71	5.180		
-8	142.4	32	22.33	72	5.007		
-7	135.2	33	21.43	73	4.842		
-6	128.5	34	20.57	74	4.682		
-5	122.1	35	19.74	75	4.529		
-4	116.0	36	18.96	76	4.381		
-3	110.3	37	18.21	77	4.239		
-2	104.9	38	17.49	78	4.102		
-1	99.80	39	16.80	79	3.970		

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### ORDERING INFORMATION

Part Number	Description	$\Omega$ @25°C
095808	44909 THERM GSFC 311P18-09S7R6	30,000
SP44908X-xx	44909X GSFC 311P18-09, Various Lead lengths and Types	30,000

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