



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°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

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.

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

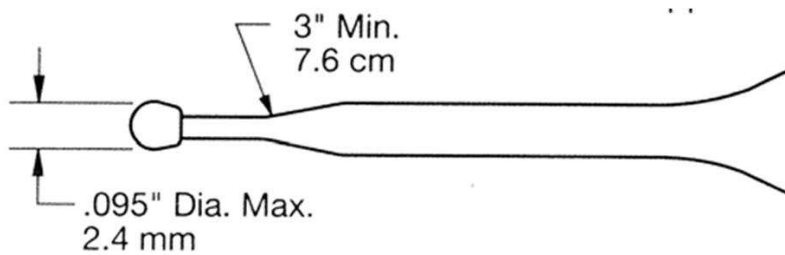
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PERFORMANCE SPECS

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	Ω @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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