



MODEL 44903

GSFC Space Qualified Thermistor

- Fully Qualified to GSFC S311-P18-04S7R6 Specification for Flight Use
- 3000 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

FEATURES

- Flight Qualified
- 3000 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

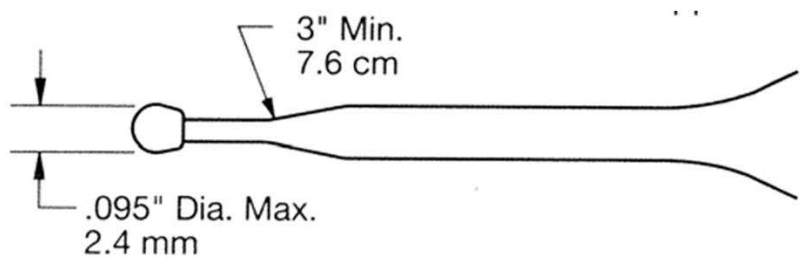
- Extended Space Applications
- Low and Mid Range Temperature Applications
- Tight Tolerance Instrumentation
- Applications Requiring Sensing Small Changes in Temperature
- Applications with Outgassing Requirements

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

PERFORMANCE SPECS

Parameter	Units	Value
Resistance @ 25°C	Ohms	3000
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	289.2	-15	21.89	25	3.000	65	0.6247
-54	268.6	-14	20.70	26	2.872	66	0.6033
-53	249.7	-13	19.58	27	2.750	67	0.5826
-52	232.2	-12	18.52	28	2.633	68	0.5628
-51	216.0	-11	17.53	29	2.523	69	0.5437
-50	201.1	-10	16.60	30	2.417	70	0.5254
-49	187.3	-9	15.72	31	2.317	71	0.5078
-48	174.5	-8	14.90	32	2.221	72	0.4909
-47	162.7	-7	14.12	33	2.130	73	0.4747
-46	151.7	-6	13.39	34	2.042	74	0.4590
-45	141.6	-5	12.70	35	1.959	75	0.4440
-44	132.2	-4	12.05	36	1.880	76	0.4295
-43	123.5	-3	11.44	37	1.805	77	0.4156
-42	115.4	-2	10.86	38	1.733	78	0.4022
-41	107.9	-1	10.31	39	1.664	79	0.3893
-40	101.0	0	9.796	40	1.598	80	0.3769
-39	94.48	1	9.310	41	1.535	81	0.3649
-38	88.46	2	8.851	42	1.475	82	0.3534
-37	82.87	3	8.417	43	1.418	83	0.3422
-36	77.66	4	8.006	44	1.363	84	0.3315
-35	72.81	5	7.618	45	1.310	85	0.3212
-34	68.30	6	7.252	46	1.260	86	0.3113
-33	64.09	7	6.905	47	1.212	87	0.3017
-32	60.17	8	6.576	48	1.167	88	0.2924
-31	56.51	9	6.265	49	1.123	89	0.2835
-30	53.10	10	5.971	50	1.081	90	0.2749
-29	49.91	11	5.692	51	1.040		
-28	46.94	12	5.427	52	1.002		
-27	44.16	13	5.177	53	0.9650		
-26	41.56	14	4.939	54	0.9296		
-25	39.13	15	4.714	55	0.8958		
-24	36.86	16	4.500	56	0.8633		
-23	34.73	17	4.297	57	0.8322		
-22	32.74	18	4.105	58	0.8023		
-21	30.87	19	3.922	59	0.7737		
-20	29.13	20	3.748	60	0.7463		
-19	27.49	21	3.583	61	0.7199		
-18	25.95	22	3.426	62	0.6947		
-17	24.51	23	3.277	63	0.6704		
-16	23.16	24	3.135	64	0.6471		

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ORDERING INFORMATION

Part Number	Description	Ω @25°C
095802	44903 THERM GSFC 311P18-03S7R6	3000
SP44903X-xx	44903X GSFC 311P18-03, Various Lead lengths and Types	3000

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