



## MODEL 44903

### GSFC Space Qualified Thermistor

- Fully Qualified to GSFC S311-P18-04S7R6 Specification for Flight Use
- 3000 ohm Resistance @ 25°C
- Interchangeable  $\pm 0.2^\circ\text{C}$ ,  $0^\circ\text{C}$  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 03) available in other lead and resistance configurations per S311-P18.

#### 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

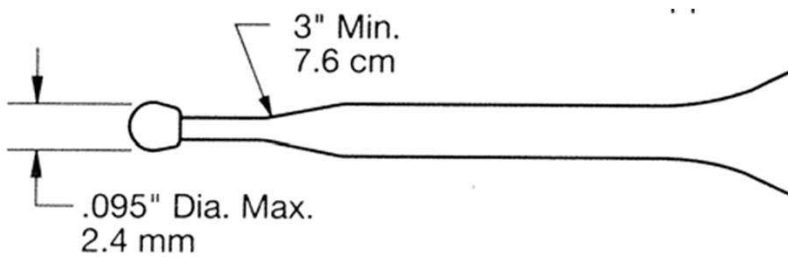
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### PERFORMANCE SPECS

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	$\Omega$ @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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