



MODEL 44902

GSFC Space Qualified Thermistor

- Fully Qualified to GSFC S311-P18-02S7R6 Specification for Flight Use
- 2252 ohm Resistance @ 25°C
- Interchangeable $\pm 0.1^\circ\text{C}$, 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
- 2252 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

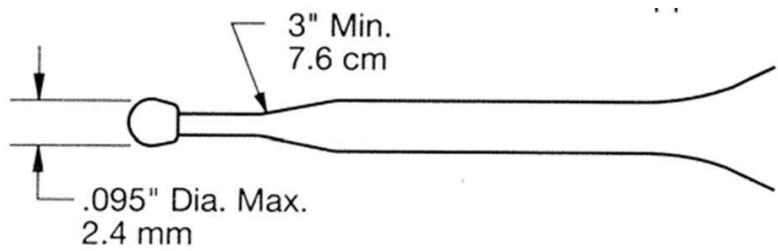
- Extended Space Applications
- Low and Mid Range Temperature Applications
- Tight Tolerance Instrumentation
- Applications Requiring Sensing Small Changes in Temperature
- Applications with Outgassing Requirements

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

PERFORMANCE SPECS

Parameter	Units	Value
Resistance @ 25°C	Ohms	2252
Tolerance 0°C to 70°C	°C	± 0.1
Beta Value 25/85	K	3987
Tolerance on Beta Value	%	0.4
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	217.100	-15	16.430	25	2.252	65	0.4690
-54	201.700	-14	15.540	26	2.156	66	0.4529
-53	187.400	-13	14.700	27	2.064	67	0.4374
-52	174.300	-12	13.910	28	1.977	68	0.4225
-51	162.200	-11	13.160	29	1.894	69	0.4082
-50	151.000	-10	12.460	30	1.815	70	0.3945
-49	140.600	-9	11.810	31	1.739		
-48	131.000	-8	11.190	32	1.667		
-47	122.100	-7	10.600	33	1.599		
-46	113.900	-6	10.050	34	1.533		
-45	106.300	-5	9.534	35	1.471		
-44	99.260	-4	9.046	36	1.412		
-43	92.720	-3	8.586	37	1.355		
-42	86.650	-2	8.151	38	1.301		
-41	81.020	-1	7.741	39	1.249		
-40	75.790	0	7.355	40	1.200		
-39	70.930	1	6.989	41	1.152		
-38	66.410	2	6.644	42	1.107		
-37	62.210	3	6.319	43	1.064		
-36	58.300	4	6.011	44	1.023		
-35	54.660	5	5.719	45	0.9838		
-34	51.270	6	5.444	46	0.9462		
-33	48.110	7	5.183	47	0.9102		
-32	45.170	8	4.937	48	0.8758		
-31	42.420	9	4.703	49	0.8428		
-30	39.860	10	4.482	50	0.8113		
-29	37.470	11	4.273	51	0.7811		
-28	35.240	12	4.074	52	0.7522		
-27	33.150	13	3.886	53	0.7245		
-26	31.200	14	3.708	54	0.6979		
-25	29.380	15	3.539	55	0.6725		
-24	27.670	16	3.378	56	0.6481		
-23	26.070	17	3.226	57	0.6248		
-22	24.580	18	3.081	58	0.6024		
-21	23.180	19	2.944	59	0.5809		
-20	21.870	20	2.814	60	0.5603		
-19	20.640	21	2.690	61	0.5405		
-18	19.480	22	2.572	62	0.5215		
-17	18.400	23	2.460	63	0.5033		
-16	17.390	24	2.354	64	0.4858		

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ORDERING INFORMATION

Part Number	Description	Ω @25°C
095801	44902 THERM GSFC 311P18-02S7R6	2252
SP44902X-xx	44902X GSFC 311P18-02, Various Lead lengths and Types	2252

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