

Technical Specification of Temperature Sensor

Temperature Sensor	MJSPYX-503-3950-1-600-3D	$R_{25^{\circ}\text{C}}=50\text{K}\ \Omega \pm 1\%$
		$B_{25/50}=3950\text{K} \pm 1\%$

1、 GENERAL

This specification defines characteristics of a temperature sensor type:
MJSPYX-503-3950-1-600-3D

2、 ELECTRICAL CHARACTERISTICS

Item	Specified limits	Test Method and Conditions
2-1. Zero power Resistance:R25	$50\text{k}\ \Omega \pm 1\%$ $50\text{kilo ohms} \pm 1\%$	
2-2. B-Value: B25/50	$3950\text{k} \pm 1\%$	
2-3. Thermal Dissipation Constant	$6\text{Mw}/^{\circ}\text{C}$	at 25°C in still air
2-4. Insulation Resistance	100Megohms Min.	By DC 1000V megger
2-5.Dielectric Strength	Must be normal	1500V AC/15 sec/2mA. Case to Lead
2-6. Operating Temperature Range	$-30\sim 105^{\circ}\text{C}$ $-30\text{ to }105^{\circ}\text{C}$	
2-7. Storage Temperature Range	$-30\sim 105^{\circ}\text{C}$ $-30\text{ to }105^{\circ}\text{C}$	

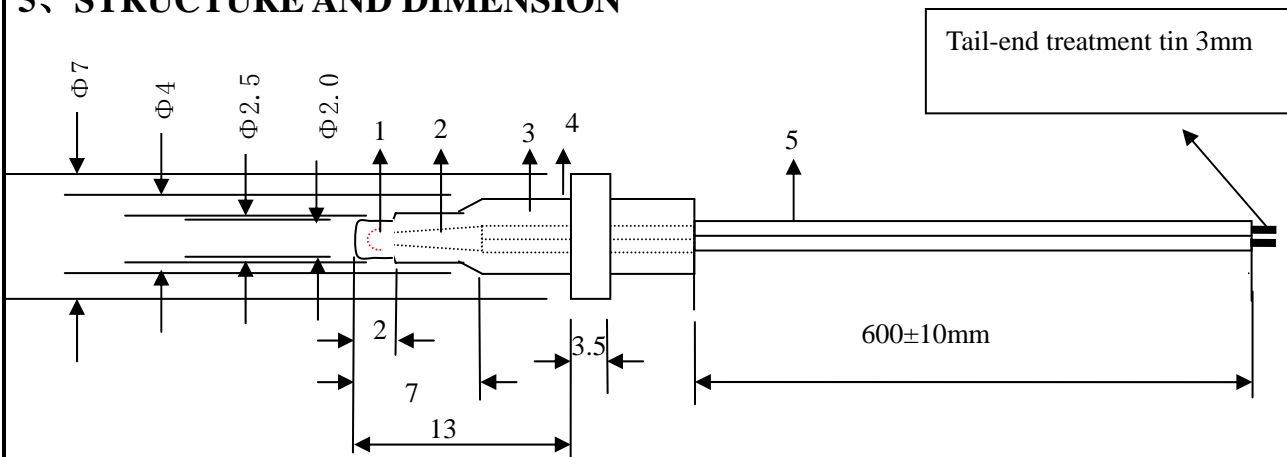
3、 MECHANICAL CHARACTERISTICS

Item	Specified limits	Test Method and Conditions
3-1.Pull Test	Must be No Damage	Between the shell and the wire gradually applied 20N (2 kg) tension, and for 10 seconds

4、RELIABILITY

Item	Specified limits	Test Method and Conditions
4-1 high temperature storage	$\Delta R_{25} \leq \pm 1\%$ $\Delta B_{25/50} \leq \pm 1\%$	85°C, 1000hours
4-2 low temperature storage	$\Delta R_{25} \leq \pm 1\%$ $\Delta B_{25/50} \leq \pm 1\%$	-40°C, 1000hours
4-3 high humidity storage	$\Delta R_{25} \leq \pm 1\%$ $\Delta B_{25/50} \leq \pm 1\%$	60°C and 95%RH, 1000hours
4-4 temperature cycle test	$\Delta R_{25} \leq \pm 1\%$ $\Delta B_{25/50} \leq \pm 1\%$	-20°C, keep 20minutes then 25°C, keep 5 minutes and then 85°C, keep 20 minutes, circulate 1000 times like this

5、STRUCTURE AND DIMENSION



Sym	Name	Specified Limits Material
1	Thermistor	MJB-503-3950-1
2	Under Coating	Insulation material (elastical)
3	Filling Resin	Epoxy Resin
4	Case	Stainless steel shell, copper ring
5	Lead Wire	UL 3122, 24AWG, VW-1, temperature 200 ° C, voltage 300V (White)

6、 Table of Resistance Related to Temperature (R-T Table)

T (°C)	R (KΩ)	T (°C)	R (KΩ)	T (°C)	R (KΩ)	T (°C)	R (KΩ)
-30	855.2500	10	99.4750	50	17.9380	90	4.3900
-29	804.9660	11	94.7640	51	17.2740	91	4.2500
-28	758.0140	12	90.3060	52	16.6390	92	4.1150
-27	714.1480	13	86.0880	53	16.0310	93	3.9850
-26	673.1460	14	82.0930	54	15.4480	94	3.8600
-25	634.8000	15	78.3100	55	14.8900	95	3.7390
-24	598.4350	16	74.7860	56	14.3410	96	3.6250
-23	564.4190	17	71.4440	57	13.8160	97	3.5160
-22	532.5850	18	68.2730	58	13.3130	98	3.4102
-21	502.7780	19	65.2620	59	12.8320	99	3.3080
-20	474.8550	20	62.4035	60	12.3700	100	3.2100
-19	448.3730	21	59.6620	61	11.9200	101	3.1180
-18	423.5580	22	57.0590	62	11.4890	102	3.0290
-17	400.2940	23	54.5850	63	11.0760	103	2.9430
-16	378.4750	24	52.2350	64	10.6800	104	2.8602
-15	358.0000	25	50.0000	65	10.3000	105	2.7800
-14	338.7730	26	47.8860	66	9.9310		
-13	320.7160	27	45.8740	67	9.5770		
-12	303.7480	28	43.9590	68	9.2380		
-11	287.7970	29	42.1360	69	8.9120		
-10	272.7950	30	40.4000	70	8.6000		
-9	258.6340	31	38.7290	71	8.3000		
-8	245.3060	32	37.1380	72	8.0110		
-7	232.7580	33	35.6220	73	7.7350		
-6	220.9380	34	34.1770	74	7.4690		
-5	209.8000	35	32.8000	75	7.2140		
-4	199.1520	36	31.4610	76	6.9730		
-3	189.1180	37	30.1840	77	6.7420		
-2	179.6570	38	28.9680	78	6.5200		
-1	170.7340	39	27.8070	79	6.3060		
0	162.3150	40	26.7000	80	6.1000		
1	154.3080	41	25.6350	81	5.8970		
2	146.7504	42	24.6190	82	5.7020		
3	139.6140	43	23.6500	83	5.5140		
4	132.8710	44	22.7240	84	5.3340		
5	126.5000	45	21.8400	85	5.1600		
6	120.4803	46	20.9870	86	4.9940		
7	114.7870	47	20.1720	87	4.8340		
8	109.4004	48	19.3930	88	4.6810		
9	104.3020	49	18.6490	89	4.5330		