Technical Specification of Temperature Sensor

Temperature Sensor	MJSTS-103-3950-1-600-3D	$R_{25℃}=10K\Omega \pm 1\%$
		$B_{25/50}=3950K \pm 1\%$

1、 GENERAL

This specification defines characteristics of a temperature sensor type: MJSTS-103-3950-1-600-3D

2、 ELECTRICAL CHARACTERISTICS

Item	Specified limits	Test Method and Conditions
2-1. Zero power Resistance:R25	$10k\Omega \pm 1\%$ 10kilo ohms$\pm 1\%$	
2-2. B-Value: B25/50	$3950k \pm 1\%$	
2-3. Thermal Dissipation Constant	6Mw/°C	at 25°Cin still air
2-4. Insulation Resistance	100MΩ 以上 100Megohms Min.	By DC 1000V megger
2-5. Operating Temperature Range	-30~105°C -30 to 105°C	
2-6. Storage Temperature Range	-30~105°C -30 to 105°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	△R25≤±1% △B25/50≤±1%	85℃, 1000hours
4-2. low temperature storage	△R25≤±1% △B25/50≤±1%	-40℃, 1000hours
4-3. high humidity storage	△R25≤±1% △B25/50≤±1%	60℃ and 95%RH, 1000hours
4-4. temperature cycle test	△R25≤±1% △B25/50≤±1%	-20℃, keep 20minutes then 25℃, keep 5 minutes and then 85℃, keep 20 minutes, circulate 1000 times like this

5、STRUCTURE AND DIMENSION
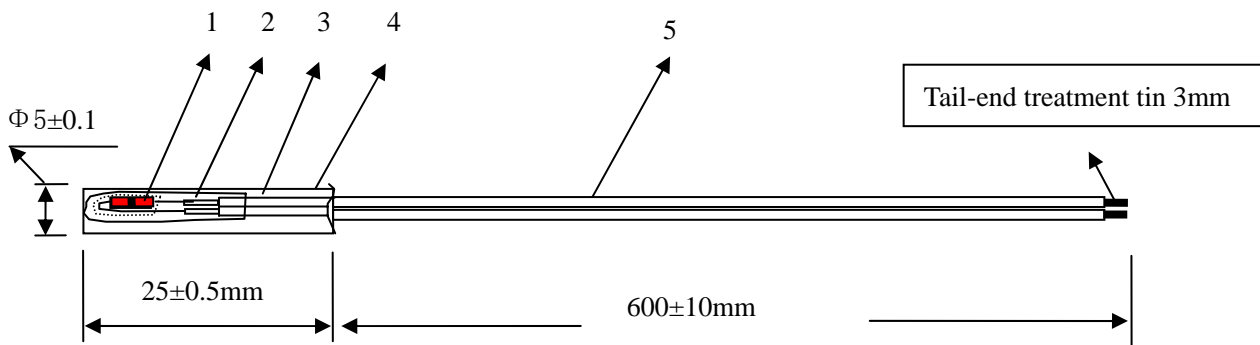
Sym	Name	Specified Limits Material
1	Thermistor	MJD-**103-3950-1**
2	Under Coating	Insulation material (elastical)
3	Filling Resin	Epoxy Resin
4	Case	Stainless steel shell
5	Lead Wire	UL AWM2651, 24AWG, VW-1SC, temperature 100℃, voltage 300V (Black)

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

T（℃）	R（KΩ）	T（℃）	R（KΩ）	T（℃）	R（KΩ）	T（℃）	R（KΩ）
−30	173.755	10	20.06896	50	3.583472	90	0.918
−29	163.6524	11	19.10835	51	3.454277	91	0.8907
−28	154.2126	12	18.20085	52	3.330492	92	0.8645
−27	145.3874	13	17.34234	53	3.211861	93	0.8391
−26	137.1326	14	16.52989	54	3.098143	94	0.8146
−25	129.4075	15	15.76075	55	2.989108	95	0.791
−24	122.1467	16	15.03975	56	2.880521	96	0.7678
−23	115.3531	17	14.35704	57	2.7766	97	0.7455
−22	108.987	18	13.7097	58	2.677022	98	0.7239
−21	103.0187	19	13.09568	59	2.581584	99	0.7031
−20	97.42046	20	12.51307	60	2.49009	100	0.683
−19	91.92406	21	11.95693	61	2.403077	101	0.6653
−18	86.7821	22	11.42955	62	2.31968	102	0.6482
−17	81.96458	23	10.92877	63	2.239648	103	0.6316
−16	77.4489	24	10.45307	64	2.162827	104	0.6155
−15	73.21413	25	10	65	2.089073	105	0.6
−14	69.28217	26	9.575267	66	2.015254		
−13	65.59286	27	9.17066	67	1.944523		
−12	62.12606	28	8.785669	68	1.876667		
−11	58.86686	29	8.41923	69	1.811555		
−10	55.80149	30	8.070342	70	1.749062		
−9	52.85146	31	7.73449	71	1.691133		
−8	50.0805	32	7.414993	72	1.6355		
−7	47.4741	33	7.110653	73	1.582003		
−6	45.0213	34	6.820665	74	1.530548		
−5	42.7122	35	6.544272	75	1.481049		
−4	40.531	36	6.275204	76	1.432916		
−3	38.47808	37	6.019077	77	1.386654		
−2	36.54315	38	5.77495	78	1.342137		
−1	34.71869	39	5.542195	79	1.299289		
0	32.99768	40	5.320219	80	1.258041		
1	31.32763	41	5.107972	81	1.21795		
2	29.75484	42	4.90566	82	1.179389		
3	28.27155	43	4.712565	83	1.142256		
4	26.87212	44	4.528218	84	1.10649		
5	25.55129	45	4.352173	85	1.072034		
6	24.3286	46	4.184117	86	1.038908		
7	23.17369	47	4.023698	87	1.007013		
8	22.08125	48	3.870373	88	0.9762		
9	21.04751	49	3.723787	89	0.9466		