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**SPECIFICATION FOR APPROVAL**

CUSTOMER	Blume-Emporium-Siemens
CERTIFIED	TSM1D104
MODEL/TYPE	
PART NO.	TSM1D104F4251R (RoHS+HF)
APPLICATION	
CUSTOMER P/N	
ISSUE DATE	May. 21, 2024
REV. NO.	
REV. DATE	

FOR CUSTOMER APPROVAL	CHECKED BY
	<i>Yi Chun Chen</i>
	APPROVED BY
	<i>Kun Lin Lin</i>





REVISED RECORD SHEET

REV. NO	REV. DATE	REVISED CONTENT



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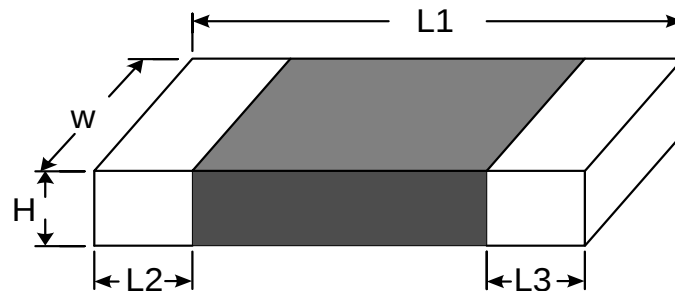
Part Number Code

Example :

TSM **1** **D** **104** **F** **425** **1** **R**
(1) (2) (3) (4) (5) (6) (7) (8)

No.	Item	Digit	Specification
(1)	Product Type	TSM	Thinking NTC thermistor TSM type
(2)	Size (EIA)	1	0603
(3)	Type Series &Definition of B Value	D	Automotive Series ; B _{25/50}
(4)	Zero Power Resistance at 25°C (R ₂₅)	104	10 x 10 ⁴ Ω = 100 KΩ
(5)	Tolerance of R ₂₅	F	± 1%
(6)	B Value	425	4250K
(7)	Tolerance of B Value	1	± 1%
(8)	Packaging	R	Reel

Structure and Dimensions



(unit : mm)

L1	W	H	L2 and L3
1.60±0.15	0.80±0.15	0.80±0.15	0.40±0.15

Electrical Characteristics

Part No.	Zero Power Resistance at 25℃	Tolerance of R ₂₅	B _{25/50} Value	Tolerance of B Value	Max. Power Dissipation at 25℃	Dissipation Factor	Thermal Time Constant	Operating Temperature Range
	R ₂₅ (KΩ)	(± %)	(K)	(± %)	P _{max} (mW)	δ (mW/℃)	τ (sec.)	T _L ~T _U (℃)
TSM1D104F4251R	100	1	4250	1	210	Approx. 2.1	Approx. 3.1	-50 ~ +150

Reliability

Tests of SMD NTC thermistors are based on AEC-Q200 Rev-D.

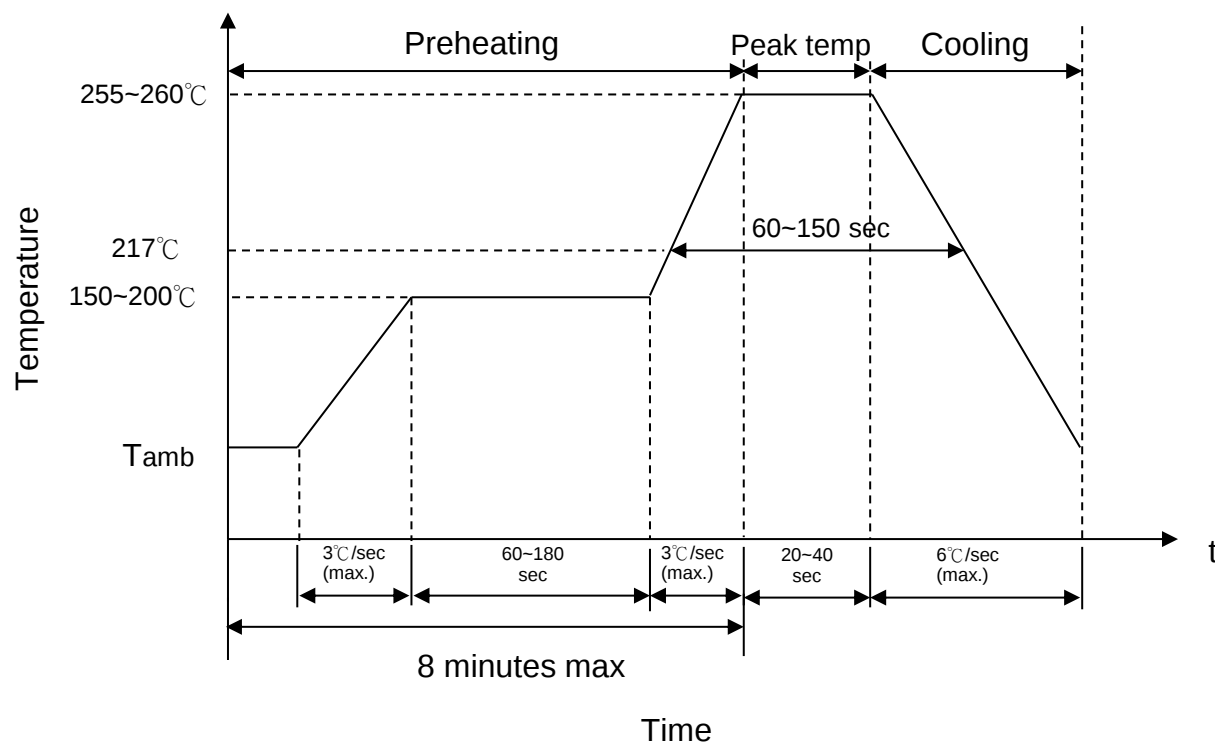
Item	Standard	Test conditions / Methods	Specifications
High Temperature Exposure (Storage)	MIL-STD-202 Method 108	Test temp. : 150 +3/-0°C Duration: 1000 h Unpowered Measurement at 24±2 hours after test conclusion.	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$
Temperature Cycling	JESD22 Method JA-104	Lower test temp. : -50 +0/-3°C Upper test temp. : 150 +3/-0°C Dwell time at Lower or Upper Temp. : 30 min Maximum transition time : 1 min. Number of cycles : 1000 Measurement at 24±4 hours after test conclusion.	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$
Biased Humidity	MIL-STD-202 Method 103	Test temp. : 85°C Rel. humidity of air : 85% +5/-0% Duration: 1000 h 10% Rated Power. Measurement at 24±4 hours after test conclusion.	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$
Operational Life	MIL-STD-202 Method 108	Test temp.: 150 +3/-0°C Duration: 1000 h Test Power : 1mW Measurement at 24±4 hours after test conclusion.	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$
External Visual	MIL-STD-883 Method 2009	Inspect device construction, marking and workmanship.	No visible damage
Physical Dimension	JESD22 Method JB-100	Verify physical dimensions to the applicable device specification.	Within the specified values
Resistance to Solvents	MIL-STD-202 Method 215	Per MIL-STD-202 Method 215 Solvent 1: 1 part (by volume) of isopropyl alcohol 3 part (by volume) of mineral spirits.	No visible damage
Mechanical Shock	MIL-STD-202 Method 213	Test Condition F Peak value : 1500g's Half sine Waveform Normal duration (D) : 0.5ms In 3 directions perpendicularly intersecting each other (total 18 times).	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$
Vibration	MIL-STD-202 Method 204	Acceleration : 5 g's Sweep time: 20 min. Frequency range: 10 to 2000 Hz 3×12 cycles	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$

Reliability

Item	Standard	Test conditions / Methods	Specifications
Resistance to Soldering Heat	MIL-STD-202 Method 210	Condition B No pre-heat of samples. Temperature : 260±5°C, Time : 10±1s Immersion and emersion rate : 25±6 mm/s Number of heat cycles : 1	No visible damage $ \Delta R_{25}/R_{25} \leq 3\%$
ESD	AEC-Q200 -002	Discharge capacitance : 150 pF Test from 6KV DC to 25KV AD 1 pulse in each polarity (DC=Direct Contact Discharge, AD=Air Discharge)	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$
Solderability	IEC 60068-2-58 J-STD-002	a) 4 h @ 155°C dry heat Dip @245±5°C 3±0.3sec b) Steam aging 8h±15min @93±3°C Dip @245±5°C 5+0/-0.5sec	95% of termination wetted
Electrical Characterization	Specifications	R(-50°C) 、 R(25°C) 、 R(150°C) B(R25°C/R50°C) or B(R25°C/R85°C)	Within the specified values
Board Flex	AEC-Q200 -005	Bend the board : 2mm (min.) Duration : 60 (+5) Sec	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$
Terminal Strength	AEC-Q200 -006	Apply force : 0201=0.15kg (1.5 N) 0402=0.5kg (5 N) 0603=1.0kg (10 N) ≥ 0805=1.8kg (17.7 N) Duration : 60 (+1) Sec	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$

Soldering Recommendation

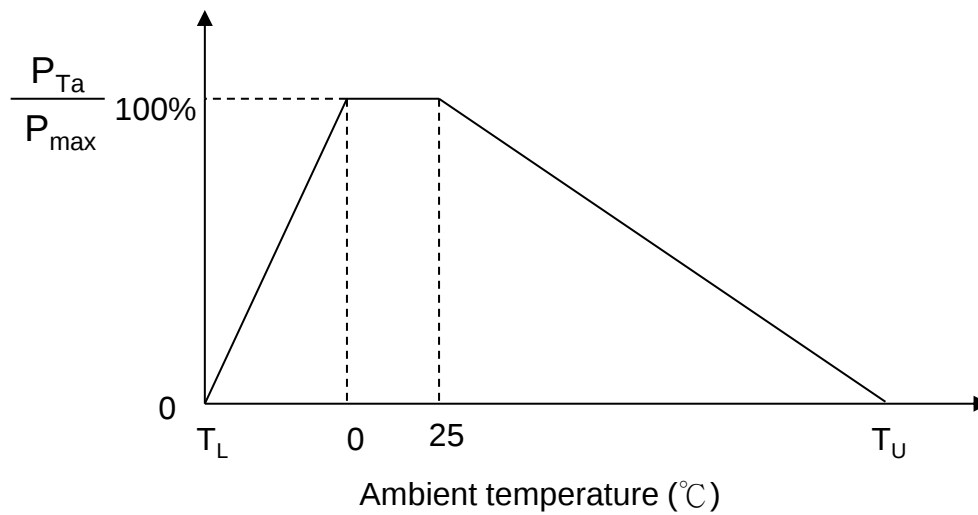
■ IR-Reflow Soldering Profile



■ Recommended Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	360°C (max.)
Soldering Time	3 sec (max.)
Diameter of Soldering Iron-tip	φ 3mm (max.)
Caution: Not to touch the component surface with soldering iron directly to prevent component damage.	

Max. Power Dissipation Derating Curve



Note: T_L = Minimum operating temperature (°C)

T_U = Maximum operating temperature (°C)

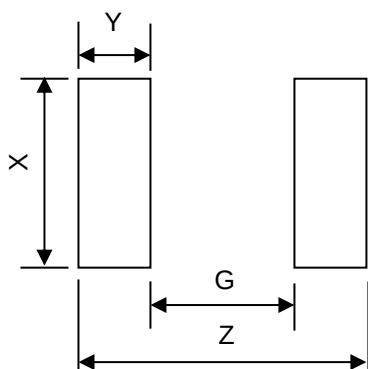
For example :

Ambient temperature(T_a)=55°C

Maximum operating temperature(T_u)=150°C

$P_{Ta} = (T_u - T_a) / (T_u - 25) \times P_{max} = 76\% P_{max}$

Recommended Soldering Pad Dimensions



Size (EIA)	0603
Z	2.8 mm
G	0.8 mm
X	1.0 mm
Y	1.0 mm

RoHS Compliant Declaration

We hereby declare that the components delivered to your company are compliant with RoHS directive 2015/863/EU.

Restriction of Weapon and Military End-Use

Thinking has established and implemented the fundamental policy on none of our product should be used or sold, through any channels, for use in the design, development, production, utilization, maintenance or operation of, or otherwise contribution to any weapons (Weapons of Mass Destruction [nuclear, chemical or biological weapons or missiles] or conventional weapons) or goods or systems specially designed or intended for military end-use or utilization by military end-users.

Warehouse Storage Conditions of Products

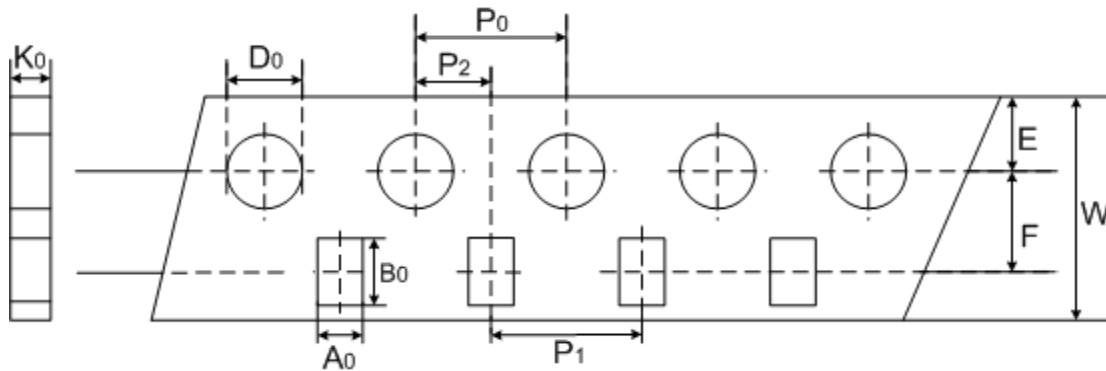
(I) Storage Conditions :

- 1.Storage Temperature : -10℃~+40℃
- 2.Relative Humidity : $\leq 75\%RH$
- 3.Keep away from corrosive atmosphere and sunlight.

(II) Period of Storage : 1 year

Packaging

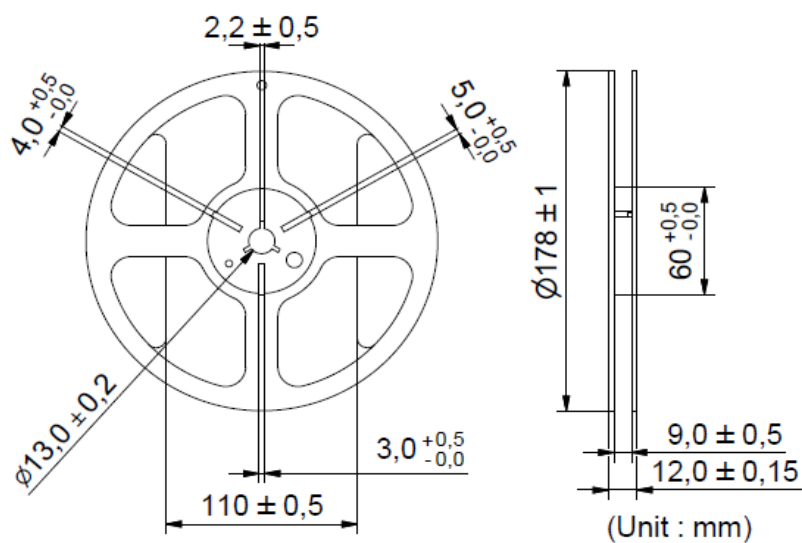
■ Taping Specification (0603 Series)



(Unit : mm)

Index	A ₀	B ₀	W	E	F	P ₁	P ₂	P ₀	D ₀	K ₀
Size	±0.2	±0.2	±0.2	±0.1	±0.05	±0.1	±0.05	±0.1	±0.1	±0.1
0603	1.1	1.9	8	1.75	3.5	4	2	4	1.55	0.95

■ Quantity (4000 pcs / reel)



Safety Approvals (Certified Model/Type : TSM1D104)



* UL 1434 / cUL recognized (File # E138827)

(UL rating is 125 Degree C)



* TÜV recognized (File # R 50167657)

(TÜV rating is 125 Degree C)

Certificates

- (1) IATF 16949 certificate
- (2) ISO 9001 certificate
- (3) QC 080000 certificate

Test Report

- (1) RoHS test report
- (2) Halogen-free test report

R - T Table

Part No. : TSM1D104F4251R

R25 =100 KOhm $\pm$ 1%B25/50 = 4250 K $\pm$ 1%

Temperature (°C)	Rmax. (KΩ)	Rnor. (KΩ)	Rmin. (KΩ)	Temperature Tol. (°C)		Resistance Tol. (%)	
-50	8,183.8	7,757.7	7,353.1	-0.83	0.83	5.5%	-5.2%
-49	7,664.8	7,270.5	6,895.7	-0.81	0.80	5.4%	-5.2%
-48	7,167.0	6,802.8	6,456.5	-0.78	0.77	5.4%	-5.1%
-47	6,690.7	6,355.0	6,035.6	-0.75	0.75	5.3%	-5.0%
-46	6,237.9	5,929.1	5,635.0	-0.73	0.73	5.2%	-5.0%
-45	5,810.8	5,527.0	5,256.5	-0.71	0.72	5.1%	-4.9%
-44	5,410.8	5,150.2	4,901.6	-0.69	0.71	5.1%	-4.8%
-43	5,038.5	4,799.2	4,570.8	-0.68	0.70	5.0%	-4.8%
-42	4,693.6	4,473.8	4,263.9	-0.68	0.70	4.9%	-4.7%
-41	4,375.1	4,173.2	3,980.1	-0.67	0.70	4.8%	-4.6%
-40	4,081.6	3,895.9	3,718.2	-0.67	0.70	4.8%	-4.6%
-39	3,811.4	3,640.4	3,476.7	-0.67	0.69	4.7%	-4.5%
-38	3,562.4	3,404.9	3,254.0	-0.67	0.69	4.6%	-4.4%
-37	3,332.9	3,187.6	3,048.4	-0.67	0.69	4.6%	-4.4%
-36	3,120.9	2,986.8	2,858.2	-0.67	0.69	4.5%	-4.3%
-35	2,924.8	2,800.9	2,682.0	-0.67	0.69	4.4%	-4.2%
-34	2,742.9	2,628.4	2,518.5	-0.66	0.69	4.4%	-4.2%
-33	2,574.0	2,468.1	2,366.3	-0.66	0.68	4.3%	-4.1%
-32	2,416.6	2,318.6	2,224.4	-0.66	0.68	4.2%	-4.1%
-31	2,269.8	2,179.2	2,091.9	-0.65	0.67	4.2%	-4.0%
-30	2,132.6	2,048.7	1,967.9	-0.64	0.66	4.1%	-3.9%
-29	2,004.2	1,926.6	1,851.7	-0.64	0.65	4.0%	-3.9%
-28	1,883.9	1,812.0	1,742.7	-0.63	0.65	4.0%	-3.8%
-27	1,771.1	1,704.5	1,640.3	-0.62	0.64	3.9%	-3.8%
-26	1,665.2	1,603.6	1,544.1	-0.61	0.63	3.8%	-3.7%
-25	1,565.7	1,508.7	1,453.7	-0.60	0.62	3.8%	-3.7%
-24	1,472.4	1,419.6	1,368.6	-0.59	0.61	3.7%	-3.6%
-23	1,384.6	1,335.8	1,288.6	-0.58	0.60	3.7%	-3.5%
-22	1,302.3	1,257.1	1,213.4	-0.57	0.59	3.6%	-3.5%
-21	1,224.9	1,183.2	1,142.7	-0.56	0.58	3.5%	-3.4%
-20	1,152.2	1,113.7	1,076.3	-0.56	0.57	3.5%	-3.4%
-19	1,084.1	1,048.4	1,013.8	-0.55	0.56	3.4%	-3.3%
-18	1,020.1	987.14	955.14	-0.54	0.56	3.3%	-3.2%
-17	960.09	929.62	900.03	-0.53	0.55	3.3%	-3.2%
-16	903.80	875.65	848.28	-0.52	0.54	3.2%	-3.1%
-15	851.03	825.01	799.71	-0.51	0.53	3.2%	-3.1%
-14	801.56	777.51	754.11	-0.51	0.53	3.1%	-3.0%
-13	755.19	732.96	711.32	-0.50	0.52	3.0%	-3.0%
-12	711.72	691.18	671.17	-0.49	0.51	3.0%	-2.9%
-11	670.99	652.00	633.49	-0.48	0.50	2.9%	-2.8%

R - T Table

Part No. : TSM1D104F4251R

R25 =100 KOhm $\pm$ 1%B25/50 = 4250 K $\pm$ 1%

Temperature (°C)	Rmax. (KΩ)	Rnor. (KΩ)	Rmin. (KΩ)	Temperature Tol. (°C)		Resistance Tol. (%)	
-10	632.80	615.26	598.14	-0.48	0.50	2.9%	-2.8%
-9	597.01	580.79	564.96	-0.47	0.49	2.8%	-2.7%
-8	563.46	548.46	533.82	-0.46	0.48	2.7%	-2.7%
-7	531.99	518.13	504.58	-0.46	0.48	2.7%	-2.6%
-6	502.48	489.66	477.13	-0.45	0.47	2.6%	-2.6%
-5	474.79	462.94	451.34	-0.44	0.46	2.6%	-2.5%
-4	448.80	437.84	427.11	-0.44	0.46	2.5%	-2.5%
-3	424.40	414.27	404.34	-0.43	0.45	2.4%	-2.4%
-2	401.48	392.11	382.92	-0.42	0.44	2.4%	-2.3%
-1	379.94	371.28	362.77	-0.42	0.43	2.3%	-2.3%
0	359.69	351.68	343.81	-0.41	0.43	2.3%	-2.2%
1	340.65	333.24	325.96	-0.40	0.42	2.2%	-2.2%
2	322.73	315.88	309.15	-0.39	0.41	2.2%	-2.1%
3	305.86	299.53	293.30	-0.39	0.40	2.1%	-2.1%
4	289.97	284.12	278.36	-0.38	0.40	2.1%	-2.0%
5	275.00	269.59	264.26	-0.37	0.39	2.0%	-2.0%
6	260.89	255.89	250.96	-0.36	0.38	2.0%	-1.9%
7	247.58	242.96	238.40	-0.36	0.37	1.9%	-1.9%
8	235.02	230.75	226.54	-0.35	0.37	1.8%	-1.8%
9	223.16	219.22	215.33	-0.34	0.36	1.8%	-1.8%
10	211.96	208.33	204.74	-0.33	0.35	1.7%	-1.7%
11	201.38	198.03	194.71	-0.33	0.34	1.7%	-1.7%
12	191.38	188.29	185.23	-0.32	0.33	1.6%	-1.6%
13	181.93	179.08	176.26	-0.31	0.32	1.6%	-1.6%
14	172.99	170.36	167.76	-0.30	0.32	1.5%	-1.5%
15	164.53	162.11	159.72	-0.29	0.31	1.5%	-1.5%
16	156.52	154.30	152.10	-0.28	0.30	1.4%	-1.4%
17	148.94	146.90	144.87	-0.28	0.29	1.4%	-1.4%
18	141.76	139.89	138.03	-0.27	0.28	1.3%	-1.3%
19	134.96	133.24	131.53	-0.26	0.27	1.3%	-1.3%
20	128.52	126.95	125.38	-0.25	0.26	1.2%	-1.2%
21	122.42	120.97	119.54	-0.24	0.25	1.2%	-1.2%
22	116.63	115.31	113.99	-0.23	0.24	1.1%	-1.1%
23	111.14	109.94	108.73	-0.22	0.24	1.1%	-1.1%
24	105.94	104.84	103.74	-0.22	0.23	1.0%	-1.0%
25	101.00	100.00	99.000	-0.21	0.22	1.0%	-1.0%
26	96.407	95.408	94.409	-0.22	0.23	1.0%	-1.0%
27	92.044	91.047	90.052	-0.23	0.24	1.1%	-1.1%
28	87.899	86.907	85.917	-0.24	0.25	1.1%	-1.1%
29	83.961	82.975	81.992	-0.25	0.26	1.2%	-1.2%

R - T Table

Part No. : TSM1D104F4251R

R25 =100 KOhm $\pm$ 1%B25/50 = 4250 K $\pm$ 1%

Temperature (°C)	Rmax. (KΩ)	Rnor. (KΩ)	Rmin. (KΩ)	Temperature Tol. (°C)		Resistance Tol. (%)	
30	80.218	79.239	78.264	-0.26	0.27	1.2%	-1.2%
31	76.660	75.690	74.724	-0.27	0.29	1.3%	-1.3%
32	73.277	72.317	71.362	-0.28	0.30	1.3%	-1.3%
33	70.060	69.111	68.167	-0.30	0.31	1.4%	-1.4%
34	67.001	66.063	65.132	-0.31	0.32	1.4%	-1.4%
35	64.090	63.165	62.246	-0.32	0.33	1.5%	-1.5%
36	61.321	60.409	59.504	-0.33	0.35	1.5%	-1.5%
37	58.686	57.787	56.896	-0.34	0.36	1.6%	-1.5%
38	56.177	55.292	54.416	-0.35	0.37	1.6%	-1.6%
39	53.789	52.919	52.057	-0.37	0.38	1.6%	-1.6%
40	51.515	50.660	49.813	-0.38	0.39	1.7%	-1.7%
41	49.350	48.509	47.678	-0.39	0.41	1.7%	-1.7%
42	47.286	46.461	45.645	-0.40	0.42	1.8%	-1.8%
43	45.321	44.510	43.710	-0.42	0.43	1.8%	-1.8%
44	43.447	42.652	41.867	-0.43	0.44	1.9%	-1.8%
45	41.662	40.882	40.113	-0.44	0.46	1.9%	-1.9%
46	39.959	39.194	38.441	-0.45	0.47	2.0%	-1.9%
47	38.335	37.586	36.848	-0.47	0.48	2.0%	-2.0%
48	36.786	36.052	35.330	-0.48	0.49	2.0%	-2.0%
49	35.309	34.590	33.882	-0.49	0.51	2.1%	-2.0%
50	33.898	33.195	32.502	-0.50	0.52	2.1%	-2.1%
51	32.552	31.863	31.186	-0.52	0.53	2.2%	-2.1%
52	31.267	30.593	29.930	-0.53	0.55	2.2%	-2.2%
53	30.039	29.380	28.732	-0.54	0.56	2.2%	-2.2%
54	28.867	28.222	27.588	-0.56	0.57	2.3%	-2.2%
55	27.747	27.116	26.496	-0.57	0.59	2.3%	-2.3%
56	26.676	26.059	25.454	-0.58	0.60	2.4%	-2.3%
57	25.652	25.049	24.458	-0.60	0.61	2.4%	-2.4%
58	24.674	24.084	23.506	-0.61	0.63	2.4%	-2.4%
59	23.737	23.161	22.597	-0.62	0.64	2.5%	-2.4%
60	22.842	22.279	21.727	-0.64	0.65	2.5%	-2.5%
61	21.985	21.435	20.896	-0.65	0.67	2.6%	-2.5%
62	21.165	20.627	20.101	-0.67	0.68	2.6%	-2.6%
63	20.380	19.854	19.341	-0.68	0.69	2.6%	-2.6%
64	19.628	19.115	18.613	-0.69	0.71	2.7%	-2.6%
65	18.908	18.406	17.916	-0.71	0.72	2.7%	-2.7%
66	18.218	17.728	17.250	-0.72	0.74	2.8%	-2.7%
67	17.556	17.078	16.611	-0.74	0.75	2.8%	-2.7%
68	16.923	16.455	15.999	-0.75	0.76	2.8%	-2.8%
69	16.315	15.859	15.414	-0.76	0.78	2.9%	-2.8%

R - T Table

Part No. : TSM1D104F4251R

R25 =100 KOhm $\pm$ 1%B25/50 = 4250 K $\pm$ 1%

Temperature (°C)	Rmax. (KΩ)	Rnor. (KΩ)	Rmin. (KΩ)	Temperature Tol. (°C)		Resistance Tol. (%)	
70	15.732	15.287	14.852	-0.78	0.79	2.9%	-2.8%
71	15.173	14.738	14.314	-0.79	0.81	3.0%	-2.9%
72	14.637	14.212	13.798	-0.81	0.82	3.0%	-2.9%
73	14.122	13.707	13.303	-0.82	0.83	3.0%	-2.9%
74	13.628	13.223	12.829	-0.84	0.85	3.1%	-3.0%
75	13.154	12.759	12.374	-0.85	0.86	3.1%	-3.0%
76	12.699	12.312	11.937	-0.87	0.88	3.1%	-3.1%
77	12.261	11.884	11.517	-0.88	0.89	3.2%	-3.1%
78	11.841	11.473	11.115	-0.90	0.91	3.2%	-3.1%
79	11.438	11.078	10.728	-0.91	0.92	3.2%	-3.2%
80	11.050	10.698	10.357	-0.93	0.94	3.3%	-3.2%
81	10.677	10.334	10.001	-0.94	0.95	3.3%	-3.2%
82	10.318	9.9832	9.6583	-0.96	0.96	3.4%	-3.3%
83	9.9733	9.6463	9.3291	-0.97	0.98	3.4%	-3.3%
84	9.6417	9.3224	9.0128	-0.99	0.99	3.4%	-3.3%
85	9.3227	9.0109	8.7086	-1.00	1.01	3.5%	-3.4%
86	9.0158	8.7113	8.4162	-1.02	1.02	3.5%	-3.4%
87	8.7204	8.4230	8.1350	-1.03	1.04	3.5%	-3.4%
88	8.4361	8.1457	7.8645	-1.05	1.05	3.6%	-3.5%
89	8.1624	7.8788	7.6043	-1.06	1.07	3.6%	-3.5%
90	7.8989	7.6219	7.3540	-1.08	1.08	3.6%	-3.5%
91	7.6451	7.3746	7.1130	-1.09	1.10	3.7%	-3.5%
92	7.4007	7.1365	6.8811	-1.11	1.11	3.7%	-3.6%
93	7.1653	6.9072	6.6578	-1.13	1.13	3.7%	-3.6%
94	6.9384	6.6864	6.4429	-1.14	1.14	3.8%	-3.6%
95	6.7198	6.4736	6.2359	-1.16	1.16	3.8%	-3.7%
96	6.5092	6.2687	6.0365	-1.17	1.18	3.8%	-3.7%
97	6.3061	6.0712	5.8444	-1.19	1.19	3.9%	-3.7%
98	6.1103	5.8808	5.6593	-1.21	1.21	3.9%	-3.8%
99	5.9215	5.6973	5.4810	-1.22	1.22	3.9%	-3.8%
100	5.7395	5.5204	5.3092	-1.24	1.24	4.0%	-3.8%
101	5.5639	5.3498	5.1435	-1.25	1.25	4.0%	-3.9%
102	5.3945	5.1853	4.9838	-1.27	1.27	4.0%	-3.9%
103	5.2311	5.0267	4.8298	-1.29	1.29	4.1%	-3.9%
104	5.0734	4.8737	4.6813	-1.31	1.30	4.1%	-3.9%
105	4.9212	4.7260	4.5381	-1.32	1.32	4.1%	-4.0%
106	4.7743	4.5835	4.4000	-1.34	1.34	4.2%	-4.0%
107	4.6325	4.4460	4.2667	-1.36	1.35	4.2%	-4.0%
108	4.4956	4.3133	4.1381	-1.37	1.37	4.2%	-4.1%
109	4.3634	4.1852	4.0139	-1.39	1.38	4.3%	-4.1%

R - T Table

Part No. : TSM1D104F4251R

R25 =100 KOhm $\pm$ 1%B25/50 = 4250 K $\pm$ 1%

Temperature (°C)	Rmax. (K Ω)	Rnor. (K Ω)	Rmin. (K Ω)	Temperature Tol. (°C)		Resistance Tol. (%)	
110	4.2357	4.0615	3.8941	-1.41	1.40	4.3%	-4.1%
111	4.1124	3.9421	3.7785	-1.43	1.42	4.3%	-4.1%
112	3.9932	3.8267	3.6668	-1.44	1.44	4.4%	-4.2%
113	3.8781	3.7153	3.5590	-1.46	1.45	4.4%	-4.2%
114	3.7669	3.6077	3.4549	-1.48	1.47	4.4%	-4.2%
115	3.6593	3.5037	3.3543	-1.50	1.49	4.4%	-4.3%
116	3.5554	3.4032	3.2572	-1.51	1.50	4.5%	-4.3%
117	3.4550	3.3061	3.1633	-1.53	1.52	4.5%	-4.3%
118	3.3578	3.2122	3.0726	-1.55	1.54	4.5%	-4.3%
119	3.2639	3.1215	2.9850	-1.57	1.56	4.6%	-4.4%
120	3.1731	3.0337	2.9002	-1.59	1.57	4.6%	-4.4%
121	3.0852	2.9489	2.8183	-1.61	1.59	4.6%	-4.4%
122	3.0002	2.8668	2.7391	-1.63	1.61	4.7%	-4.5%
123	2.9179	2.7875	2.6625	-1.64	1.63	4.7%	-4.5%
124	2.8384	2.7107	2.5885	-1.66	1.64	4.7%	-4.5%
125	2.7613	2.6364	2.5168	-1.68	1.66	4.7%	-4.5%
126	2.6868	2.5645	2.4475	-1.70	1.68	4.8%	-4.6%
127	2.6146	2.4949	2.3804	-1.72	1.70	4.8%	-4.6%
128	2.5447	2.4275	2.3155	-1.74	1.72	4.8%	-4.6%
129	2.4770	2.3623	2.2527	-1.76	1.74	4.9%	-4.6%
130	2.4114	2.2992	2.1919	-1.78	1.75	4.9%	-4.7%
131	2.3479	2.2380	2.1330	-1.80	1.77	4.9%	-4.7%
132	2.2864	2.1788	2.0760	-1.82	1.79	4.9%	-4.7%
133	2.2268	2.1214	2.0208	-1.84	1.81	5.0%	-4.7%
134	2.1690	2.0658	1.9673	-1.86	1.83	5.0%	-4.8%
135	2.1130	2.0120	1.9155	-1.88	1.85	5.0%	-4.8%
136	2.0587	1.9598	1.8653	-1.90	1.87	5.1%	-4.8%
137	2.0061	1.9092	1.8167	-1.92	1.88	5.1%	-4.8%
138	1.9551	1.8601	1.7696	-1.94	1.90	5.1%	-4.9%
139	1.9056	1.8125	1.7239	-1.96	1.92	5.1%	-4.9%
140	1.8576	1.7664	1.6796	-1.98	1.94	5.2%	-4.9%
141	1.8110	1.7217	1.6366	-2.00	1.96	5.2%	-4.9%
142	1.7658	1.6783	1.5950	-2.02	1.98	5.2%	-5.0%
143	1.7219	1.6362	1.5546	-2.04	2.00	5.2%	-5.0%
144	1.6794	1.5953	1.5154	-2.06	2.02	5.3%	-5.0%
145	1.6381	1.5557	1.4773	-2.08	2.04	5.3%	-5.0%
146	1.5979	1.5172	1.4404	-2.10	2.06	5.3%	-5.1%
147	1.5590	1.4799	1.4046	-2.12	2.07	5.3%	-5.1%
148	1.5212	1.4436	1.3699	-2.14	2.09	5.4%	-5.1%
149	1.4844	1.4084	1.3361	-2.16	2.11	5.4%	-5.1%

R - T Table

Part No. : TSM1D104F4251R

R25 =100 KOhm $\pm$ 1%

$$B_{25/50} = 4250 \text{ K} \pm 1\%$$
[illegible]