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**SPECIFICATION FOR APPROVAL**

CUSTOMER	Blume-E.I.S.-BHTronik
CERTIFIED	
MODEL/TYPE	TSM1D103
PART NO.	TSM1D103D338ER05 (RoHS+HF)
APPLICATION	
CUSTOMER P/N	
ISSUE DATE	Jan. 29, 2024
REV. NO.	
REV. DATE	

FOR CUSTOMER APPROVAL	CHECKED BY
	<i>Shu Ling Fu</i>
	APPROVED BY
	<i>Chun Chu Tu</i>





REVISED RECORD SHEET

REV. NO	REV. DATE	REVISED CONTENT



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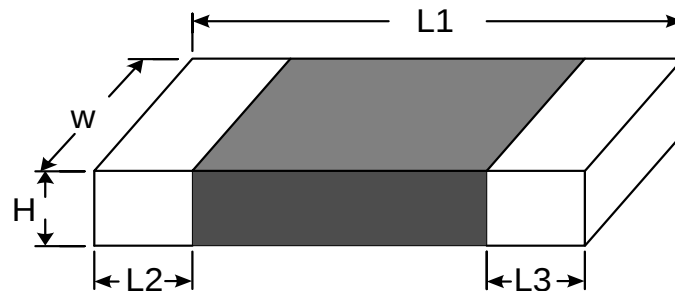
Part Number Code

Example :

TSM **1** **D** **103** **D** **338** **E** **R** **05**
 (1) (2) (3) (4) (5) (6) (7) (8) (9)

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)	103	10 x 10 ³ Ω = 10 KΩ
(5)	Tolerance of R ₂₅	D	± 0.5%
(6)	B Value	338	3380K
(7)	Tolerance of B Value	E	Refer to optional suffix
(8)	Packaging	R	Reel
(9)	Optional Suffix	05	B _{25/50} =3380K±0.7% RoHS+HF compliance

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 (℃)
TSM1D103D338ER05	10	0.5	3380	0.7	210	Approx. 2.1	Approx. 3.1	-50 ~ +150

Reliability

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

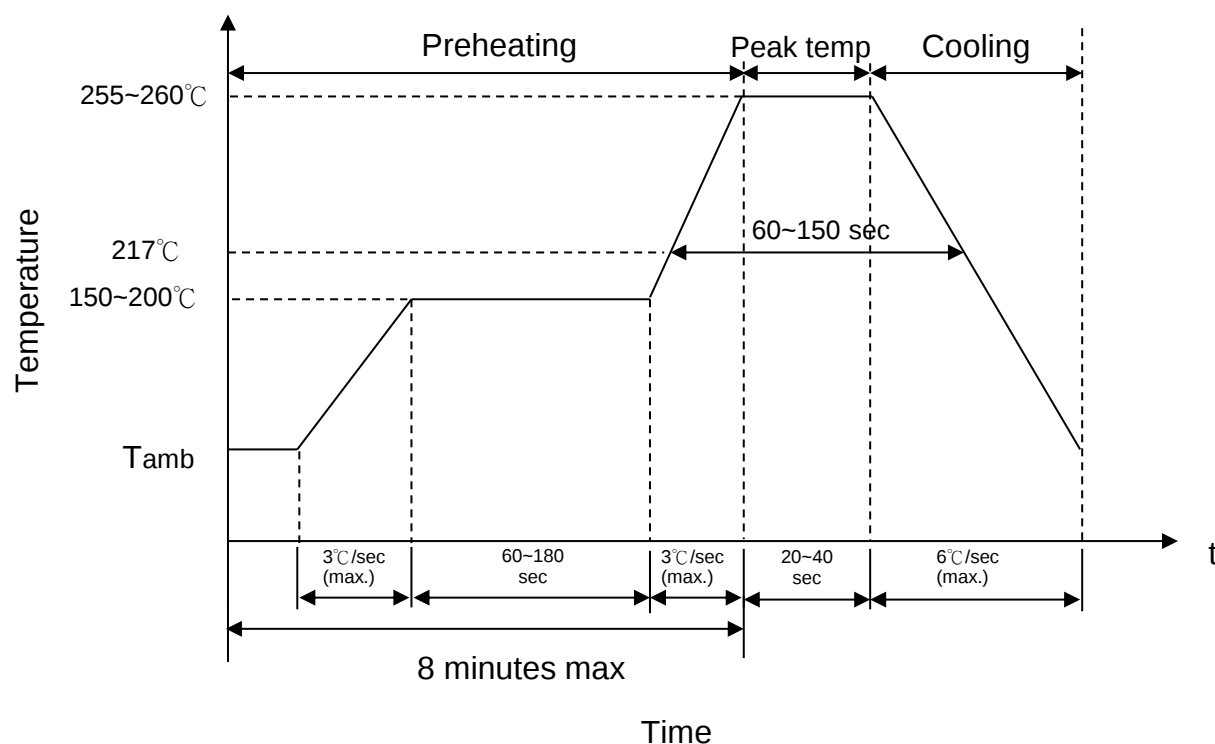
Item	Standard	Test conditions / Methods	Specifications
High Temperature Exposure (Storage)	MIL-STD-202 Method 108	Test temp. : 150 +3/-0°C Duration: 1000 h Unpowered Measurement at 24±2 hours after test conclusion.	No visible damage $ \Delta R_{25}/R_{25} \leq 5\%$
Temperature Cycling	JESD22 Method JA-104	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 @260±5°C 7±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

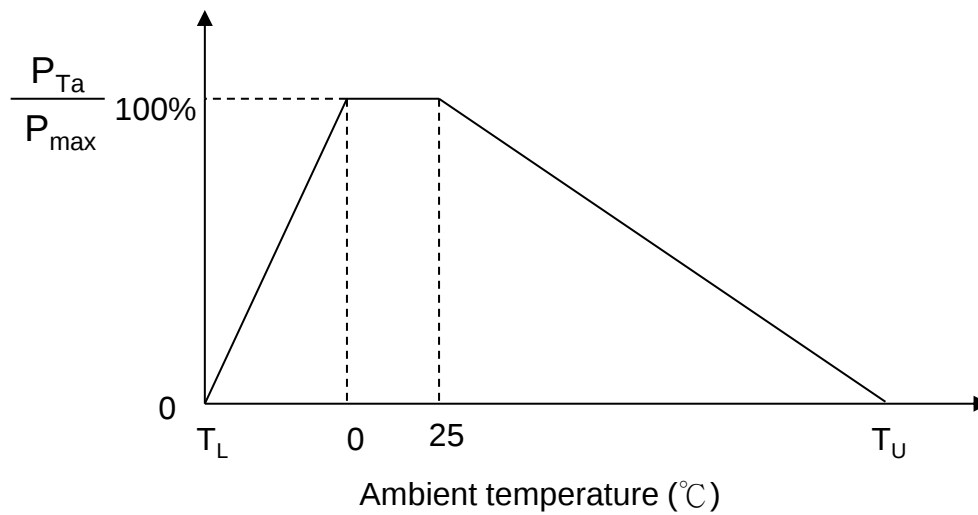
■ IR-Reflow Soldering Profile



■ 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 ($^{\circ}\text{C}$)

T_U = Maximum operating temperature ($^{\circ}\text{C}$)

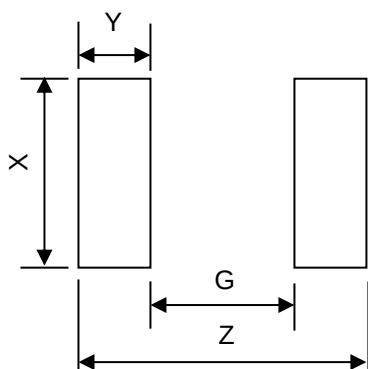
For example :

Ambient temperature(T_a)=55 $^{\circ}\text{C}$

Maximum operating temperature(T_u)=150 $^{\circ}\text{C}$

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

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

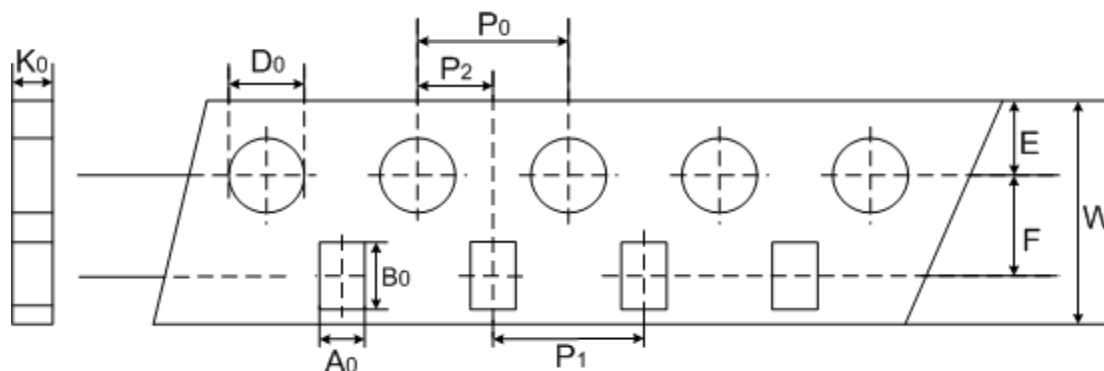
(I) Storage Conditions :

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

(II) Period of Storage : 1 year

Packaging

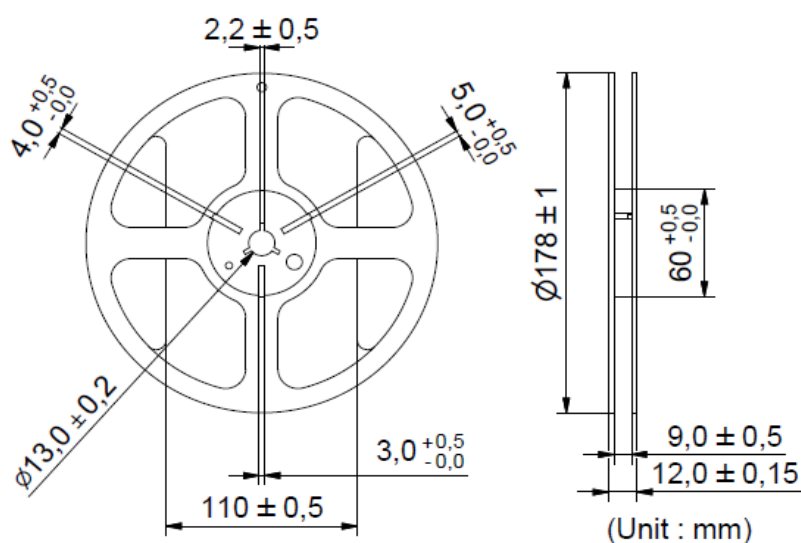
■ Taping Specification (0603 Series)



(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)



(Unit : mm)

Safety Approvals (Certified Model/Type : TSM1D103)



* 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. : TSM1D103D338ER05

R25 =10 KOhm $\pm$ 0.5%B25/50 = 3380 K $\pm$ 0.7%

Temperature (°C)	Rmax. (KΩ)	Rnor. (KΩ)	Rmin. (KΩ)	Temperature Tol. (°C)		Resistance Tol. (%)	
-50	379.67	368.36	357.39	-0.65	0.62	3.1%	-3.0%
-49	361.28	350.64	340.31	-0.60	0.57	3.0%	-2.9%
-48	342.46	332.50	322.83	-0.55	0.53	3.0%	-2.9%
-47	323.47	314.18	305.16	-0.51	0.50	3.0%	-2.9%
-46	304.65	296.03	287.65	-0.47	0.48	2.9%	-2.8%
-45	286.37	278.39	270.62	-0.45	0.46	2.9%	-2.8%
-44	268.91	261.53	254.34	-0.44	0.45	2.8%	-2.7%
-43	252.45	245.62	238.98	-0.43	0.45	2.8%	-2.7%
-42	237.07	230.76	224.62	-0.42	0.45	2.7%	-2.7%
-41	222.80	216.97	211.28	-0.42	0.45	2.7%	-2.6%
-40	209.62	204.21	198.95	-0.42	0.45	2.6%	-2.6%
-39	197.44	192.44	187.55	-0.43	0.45	2.6%	-2.5%
-38	186.21	181.56	177.02	-0.43	0.45	2.6%	-2.5%
-37	175.82	171.50	167.28	-0.43	0.45	2.5%	-2.5%
-36	166.19	162.17	158.24	-0.43	0.45	2.5%	-2.4%
-35	157.24	153.49	149.83	-0.43	0.45	2.4%	-2.4%
-34	148.88	145.39	141.98	-0.43	0.45	2.4%	-2.3%
-33	141.07	137.81	134.63	-0.43	0.45	2.4%	-2.3%
-32	133.73	130.69	127.72	-0.43	0.44	2.3%	-2.3%
-31	126.82	123.99	121.21	-0.42	0.44	2.3%	-2.2%
-30	120.31	117.66	115.07	-0.42	0.43	2.2%	-2.2%
-29	114.16	111.69	109.27	-0.41	0.43	2.2%	-2.2%
-28	108.34	106.03	103.77	-0.41	0.42	2.2%	-2.1%
-27	102.83	100.67	98.564	-0.40	0.42	2.1%	-2.1%
-26	97.608	95.600	93.630	-0.40	0.41	2.1%	-2.1%
-25	92.667	90.793	88.955	-0.39	0.40	2.1%	-2.0%
-24	87.987	86.239	84.523	-0.38	0.40	2.0%	-2.0%
-23	83.557	81.926	80.325	-0.38	0.39	2.0%	-2.0%
-22	79.365	77.844	76.350	-0.37	0.39	2.0%	-1.9%
-21	75.399	73.981	72.587	-0.37	0.38	1.9%	-1.9%
-20	71.650	70.327	69.026	-0.36	0.38	1.9%	-1.8%
-19	68.107	66.873	65.659	-0.36	0.37	1.8%	-1.8%
-18	64.760	63.609	62.476	-0.35	0.37	1.8%	-1.8%
-17	61.599	60.525	59.468	-0.35	0.36	1.8%	-1.7%
-16	58.614	57.612	56.626	-0.34	0.36	1.7%	-1.7%
-15	55.796	54.861	53.940	-0.34	0.35	1.7%	-1.7%
-14	53.135	52.262	51.403	-0.34	0.35	1.7%	-1.6%
-13	50.623	49.808	49.005	-0.33	0.35	1.6%	-1.6%
-12	48.250	47.489	46.739	-0.33	0.34	1.6%	-1.6%
-11	46.007	45.297	44.596	-0.32	0.34	1.6%	-1.5%

R - T Table

Part No. : TSM1D103D338ER05

R25 =10 KOhm $\pm$ 0.5%B25/50 = 3380 K $\pm$ 0.7%

Temperature (°C)	Rmax. (KΩ)	Rnor. (KΩ)	Rmin. (KΩ)	Temperature Tol. (°C)		Resistance Tol. (%)	
-10	43.888	43.225	42.570	-0.32	0.33	1.5%	-1.5%
-9	41.884	41.264	40.652	-0.32	0.33	1.5%	-1.5%
-8	39.988	39.409	38.837	-0.31	0.33	1.5%	-1.5%
-7	38.192	37.651	37.117	-0.31	0.32	1.4%	-1.4%
-6	36.491	35.986	35.486	-0.30	0.32	1.4%	-1.4%
-5	34.879	34.406	33.940	-0.30	0.31	1.4%	-1.4%
-4	33.349	32.908	32.471	-0.29	0.31	1.3%	-1.3%
-3	31.897	31.485	31.077	-0.29	0.30	1.3%	-1.3%
-2	30.518	30.132	29.751	-0.28	0.30	1.3%	-1.3%
-1	29.206	28.846	28.490	-0.28	0.29	1.2%	-1.2%
0	27.959	27.623	27.290	-0.27	0.29	1.2%	-1.2%
1	26.772	26.458	26.147	-0.27	0.28	1.2%	-1.2%
2	25.642	25.349	25.059	-0.26	0.27	1.2%	-1.1%
3	24.565	24.292	24.021	-0.26	0.27	1.1%	-1.1%
4	23.539	23.284	23.031	-0.25	0.26	1.1%	-1.1%
5	22.560	22.322	22.086	-0.25	0.26	1.1%	-1.1%
6	21.626	21.404	21.184	-0.24	0.25	1.0%	-1.0%
7	20.735	20.529	20.323	-0.24	0.25	1.0%	-1.0%
8	19.885	19.692	19.501	-0.23	0.24	1.0%	-1.0%
9	19.073	18.893	18.715	-0.22	0.23	0.9%	-0.9%
10	18.297	18.130	17.965	-0.22	0.23	0.9%	-0.9%
11	17.556	17.401	17.247	-0.21	0.22	0.9%	-0.9%
12	16.848	16.705	16.561	-0.21	0.21	0.9%	-0.9%
13	16.172	16.039	15.906	-0.20	0.21	0.8%	-0.8%
14	15.526	15.402	15.279	-0.19	0.20	0.8%	-0.8%
15	14.909	14.794	14.680	-0.19	0.20	0.8%	-0.8%
16	14.318	14.212	14.106	-0.18	0.19	0.7%	-0.7%
17	13.754	13.656	13.558	-0.18	0.18	0.7%	-0.7%
18	13.215	13.124	13.034	-0.17	0.18	0.7%	-0.7%
19	12.700	12.616	12.533	-0.16	0.17	0.7%	-0.7%
20	12.207	12.130	12.053	-0.16	0.17	0.6%	-0.6%
21	11.736	11.665	11.594	-0.15	0.16	0.6%	-0.6%
22	11.286	11.221	11.156	-0.15	0.15	0.6%	-0.6%
23	10.855	10.796	10.736	-0.14	0.15	0.6%	-0.6%
24	10.444	10.389	10.334	-0.13	0.14	0.5%	-0.5%
25	10.050	10.000	9.9500	-0.13	0.13	0.5%	-0.5%
26	9.6786	9.6279	9.5772	-0.14	0.14	0.5%	-0.5%
27	9.3232	9.2719	9.2206	-0.14	0.15	0.6%	-0.6%
28	8.9829	8.9312	8.8795	-0.15	0.16	0.6%	-0.6%
29	8.6573	8.6051	8.5531	-0.16	0.17	0.6%	-0.6%

R - T Table

Part No. : TSM1D103D338ER05

R25 =10 KOhm $\pm$ 0.5%B25/50 = 3380 K $\pm$ 0.7%

Temperature (°C)	Rmax. (KΩ)	Rnor. (KΩ)	Rmin. (KΩ)	Temperature Tol. (°C)		Resistance Tol. (%)	
30	8.3454	8.2930	8.2408	-0.17	0.17	0.6%	-0.6%
31	8.0468	7.9942	7.9418	-0.18	0.18	0.7%	-0.7%
32	7.7607	7.7081	7.6556	-0.18	0.19	0.7%	-0.7%
33	7.4867	7.4340	7.3815	-0.19	0.20	0.7%	-0.7%
34	7.2241	7.1715	7.1190	-0.20	0.21	0.7%	-0.7%
35	6.9724	6.9199	6.8675	-0.21	0.22	0.8%	-0.8%
36	6.7311	6.6787	6.6265	-0.22	0.23	0.8%	-0.8%
37	6.4997	6.4475	6.3956	-0.23	0.23	0.8%	-0.8%
38	6.2777	6.2257	6.1741	-0.23	0.24	0.8%	-0.8%
39	6.0646	6.0130	5.9617	-0.24	0.25	0.9%	-0.9%
40	5.8602	5.8089	5.7579	-0.25	0.26	0.9%	-0.9%
41	5.6639	5.6130	5.5624	-0.26	0.27	0.9%	-0.9%
42	5.4753	5.4248	5.3746	-0.27	0.28	0.9%	-0.9%
43	5.2942	5.2441	5.1944	-0.28	0.29	1.0%	-0.9%
44	5.1201	5.0705	5.0212	-0.29	0.30	1.0%	-1.0%
45	4.9528	4.9036	4.8548	-0.29	0.30	1.0%	-1.0%
46	4.7919	4.7432	4.6949	-0.30	0.31	1.0%	-1.0%
47	4.6371	4.5889	4.5411	-0.31	0.32	1.0%	-1.0%
48	4.4881	4.4405	4.3932	-0.32	0.33	1.1%	-1.1%
49	4.3447	4.2976	4.2509	-0.33	0.34	1.1%	-1.1%
50	4.2067	4.1601	4.1140	-0.34	0.35	1.1%	-1.1%
51	4.0737	4.0277	3.9822	-0.35	0.36	1.1%	-1.1%
52	3.9456	3.9002	3.8552	-0.36	0.37	1.2%	-1.2%
53	3.8222	3.7773	3.7329	-0.36	0.38	1.2%	-1.2%
54	3.7032	3.6589	3.6151	-0.37	0.38	1.2%	-1.2%
55	3.5885	3.5448	3.5016	-0.38	0.39	1.2%	-1.2%
56	3.4778	3.4347	3.3921	-0.39	0.40	1.3%	-1.2%
57	3.3711	3.3286	3.2865	-0.40	0.41	1.3%	-1.3%
58	3.2681	3.2262	3.1847	-0.41	0.42	1.3%	-1.3%
59	3.1687	3.1273	3.0865	-0.42	0.43	1.3%	-1.3%
60	3.0727	3.0320	2.9917	-0.43	0.44	1.3%	-1.3%
61	2.9800	2.9399	2.9002	-0.44	0.45	1.4%	-1.3%
62	2.8906	2.8510	2.8120	-0.44	0.46	1.4%	-1.4%
63	2.8041	2.7652	2.7267	-0.45	0.46	1.4%	-1.4%
64	2.7206	2.6823	2.6444	-0.46	0.47	1.4%	-1.4%
65	2.6400	2.6022	2.5649	-0.47	0.48	1.5%	-1.4%
66	2.5620	2.5248	2.4881	-0.48	0.49	1.5%	-1.5%
67	2.4867	2.4501	2.4139	-0.49	0.50	1.5%	-1.5%
68	2.4138	2.3778	2.3422	-0.50	0.51	1.5%	-1.5%
69	2.3434	2.3080	2.2730	-0.51	0.52	1.5%	-1.5%

R - T Table

Part No. : TSM1D103D338ER05

R25 =10 KOhm $\pm$ 0.5%B25/50 = 3380 K $\pm$ 0.7%

Temperature (°C)	Rmax. (KΩ)	Rnor. (KΩ)	Rmin. (KΩ)	Temperature Tol. (°C)		Resistance Tol. (%)	
70	2.2754	2.2405	2.2060	-0.52	0.53	1.6%	-1.5%
71	2.2096	2.1752	2.1413	-0.53	0.54	1.6%	-1.6%
72	2.1459	2.1121	2.0788	-0.54	0.55	1.6%	-1.6%
73	2.0844	2.0511	2.0184	-0.54	0.56	1.6%	-1.6%
74	2.0248	1.9921	1.9599	-0.55	0.56	1.6%	-1.6%
75	1.9672	1.9351	1.9034	-0.56	0.57	1.7%	-1.6%
76	1.9115	1.8799	1.8488	-0.57	0.58	1.7%	-1.7%
77	1.8577	1.8266	1.7959	-0.58	0.59	1.7%	-1.7%
78	1.8055	1.7749	1.7448	-0.59	0.60	1.7%	-1.7%
79	1.7551	1.7250	1.6954	-0.60	0.61	1.7%	-1.7%
80	1.7063	1.6767	1.6476	-0.61	0.62	1.8%	-1.7%
81	1.6591	1.6300	1.6014	-0.62	0.63	1.8%	-1.8%
82	1.6134	1.5848	1.5567	-0.63	0.64	1.8%	-1.8%
83	1.5691	1.5410	1.5134	-0.64	0.65	1.8%	-1.8%
84	1.5263	1.4987	1.4715	-0.65	0.66	1.8%	-1.8%
85	1.4849	1.4577	1.4310	-0.66	0.67	1.9%	-1.8%
86	1.4448	1.4181	1.3918	-0.67	0.68	1.9%	-1.9%
87	1.4060	1.3797	1.3539	-0.68	0.69	1.9%	-1.9%
88	1.3684	1.3426	1.3172	-0.70	0.71	1.9%	-1.9%
89	1.3320	1.3067	1.2817	-0.71	0.72	1.9%	-1.9%
90	1.2968	1.2719	1.2474	-0.72	0.73	2.0%	-1.9%
91	1.2627	1.2382	1.2141	-0.73	0.74	2.0%	-1.9%
92	1.2296	1.2055	1.1819	-0.74	0.75	2.0%	-2.0%
93	1.1976	1.1739	1.1507	-0.75	0.76	2.0%	-2.0%
94	1.1667	1.1434	1.1205	-0.76	0.77	2.0%	-2.0%
95	1.1366	1.1137	1.0913	-0.77	0.78	2.1%	-2.0%
96	1.1075	1.0850	1.0629	-0.78	0.79	2.1%	-2.0%
97	1.0794	1.0572	1.0355	-0.80	0.81	2.1%	-2.1%
98	1.0520	1.0303	1.0090	-0.81	0.82	2.1%	-2.1%
99	1.0256	1.0042	0.98321	-0.82	0.83	2.1%	-2.1%
100	0.99991	0.97888	0.95827	-0.83	0.84	2.1%	-2.1%
101	0.97504	0.95436	0.93410	-0.84	0.85	2.2%	-2.1%
102	0.95092	0.93059	0.91068	-0.86	0.86	2.2%	-2.1%
103	0.92753	0.90754	0.88797	-0.87	0.88	2.2%	-2.2%
104	0.90485	0.88519	0.86595	-0.88	0.89	2.2%	-2.2%
105	0.88284	0.86352	0.84459	-0.89	0.90	2.2%	-2.2%
106	0.86149	0.84249	0.82388	-0.90	0.91	2.3%	-2.2%
107	0.84077	0.82209	0.80379	-0.92	0.92	2.3%	-2.2%
108	0.82067	0.80229	0.78430	-0.93	0.94	2.3%	-2.2%
109	0.80115	0.78307	0.76539	-0.94	0.95	2.3%	-2.3%

R - T Table

Part No. : TSM1D103D338ER05

R25 =10 KOhm $\pm$ 0.5%B25/50 = 3380 K $\pm$ 0.7%

Temperature (°C)	Rmax. (KΩ)	Rnor. (KΩ)	Rmin. (KΩ)	Temperature Tol. (°C)		Resistance Tol. (%)	
110	0.78219	0.76442	0.74703	-0.95	0.96	2.3%	-2.3%
111	0.76379	0.74631	0.72921	-0.97	0.97	2.3%	-2.3%
112	0.74591	0.72872	0.71190	-0.98	0.98	2.4%	-2.3%
113	0.72855	0.71164	0.69510	-0.99	1.00	2.4%	-2.3%
114	0.71167	0.69504	0.67877	-1.00	1.01	2.4%	-2.3%
115	0.69527	0.67891	0.66292	-1.01	1.02	2.4%	-2.4%
116	0.67933	0.66324	0.64750	-1.03	1.03	2.4%	-2.4%
117	0.66383	0.64800	0.63252	-1.04	1.04	2.4%	-2.4%
118	0.64876	0.63318	0.61796	-1.05	1.06	2.5%	-2.4%
119	0.63410	0.61877	0.60380	-1.06	1.07	2.5%	-2.4%
120	0.61984	0.60476	0.59004	-1.08	1.08	2.5%	-2.4%
121	0.60596	0.59113	0.57664	-1.09	1.09	2.5%	-2.5%
122	0.59246	0.57786	0.56361	-1.10	1.10	2.5%	-2.5%
123	0.57931	0.56495	0.55093	-1.11	1.12	2.5%	-2.5%
124	0.56651	0.55238	0.53859	-1.12	1.13	2.6%	-2.5%
125	0.55405	0.54015	0.52658	-1.14	1.14	2.6%	-2.5%
126	0.54192	0.52823	0.51488	-1.15	1.15	2.6%	-2.5%
127	0.53010	0.51663	0.50350	-1.16	1.16	2.6%	-2.5%
128	0.51858	0.50533	0.49240	-1.17	1.17	2.6%	-2.6%
129	0.50736	0.49432	0.48160	-1.18	1.19	2.6%	-2.6%
130	0.49643	0.48359	0.47108	-1.20	1.20	2.7%	-2.6%
131	0.48577	0.47314	0.46083	-1.21	1.21	2.7%	-2.6%
132	0.47538	0.46295	0.45084	-1.22	1.22	2.7%	-2.6%
133	0.46526	0.45302	0.44110	-1.23	1.23	2.7%	-2.6%
134	0.45539	0.44335	0.43161	-1.24	1.24	2.7%	-2.6%
135	0.44576	0.43391	0.42236	-1.26	1.26	2.7%	-2.7%
136	0.43638	0.42471	0.41335	-1.27	1.27	2.7%	-2.7%
137	0.42723	0.41575	0.40456	-1.28	1.28	2.8%	-2.7%
138	0.41831	0.40701	0.39600	-1.29	1.29	2.8%	-2.7%
139	0.40961	0.39848	0.38765	-1.31	1.30	2.8%	-2.7%
140	0.40113	0.39017	0.37951	-1.32	1.32	2.8%	-2.7%
141	0.39286	0.38207	0.37157	-1.33	1.33	2.8%	-2.7%
142	0.38480	0.37418	0.36384	-1.34	1.34	2.8%	-2.8%
143	0.37693	0.36648	0.35630	-1.36	1.36	2.9%	-2.8%
144	0.36927	0.35897	0.34895	-1.37	1.37	2.9%	-2.8%
145	0.36179	0.35166	0.34179	-1.39	1.38	2.9%	-2.8%
146	0.35451	0.34453	0.33482	-1.40	1.40	2.9%	-2.8%
147	0.34741	0.33758	0.32802	-1.42	1.41	2.9%	-2.8%
148	0.34049	0.33081	0.32140	-1.43	1.43	2.9%	-2.8%
149	0.33375	0.32422	0.31495	-1.45	1.44	2.9%	-2.9%

R - T Table

Part No. : TSM1D103D338ER05

R25 =10 KOhm $\pm$ 0.5%

$$B_{25/50} = 3380 \text{ K} \pm 0.7\%$$
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