

Approval

Manufacturer:

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Customer:

Approved By:	Checked By:	Prepared By :

Approved By:	Examined By:	Tested By :

Approval No. : _____

Product : NTC THERMISTOR

Mayloon Part No. : MLDT 504F -4450

Customer's Part No. : _____

Specifications : R₂₅ 500,000 Ω ± 1 %

B₂₅₋₈₅ 4450°K ± 1 %

Date : _____



1) PART NO. : MLDT504F-4450

2) RATING

3-1) Rated zero-power resistance R_{25} : 500 k Ω \pm 1% (at 25 $^{\circ}$ C)

3-2) B value. $B_{25/85}$: 4450K \pm 1%

*The B value is calculated using the zero-power resistance values measured at 25 $^{\circ}$ C and 85 $^{\circ}$ C.

3-3) Insulation resistance :100M Ω Min at DC 500V
(Between glass area and terminal)

3-4) Dissipation constant (δ) :Min. 2.5 mW/ $^{\circ}$ C (25 $^{\circ}$ C \rightarrow 75 $^{\circ}$ C in air)

3-5) Time constant.(τ) :Max.15 sec(75 $^{\circ}$ C \rightarrow 25 $^{\circ}$ C in air)

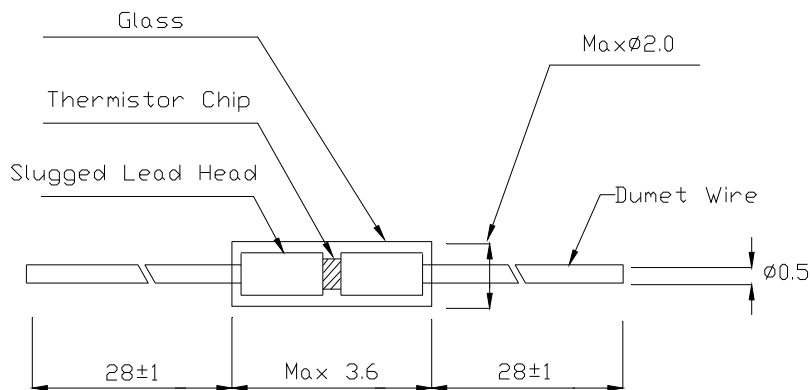
3-6) Maximum power rating. : 250 mW (at 25 $^{\circ}$ C)

3-7) Category temperature range : -40 to 200 $^{\circ}$ C
(=Operating temperature range)

3-7) Lead content : **RoHs Compliant.**

3-8) Cadmium content : **RoHs Compliant.**

3) DIMENSIONS UNIT:[mm]



4) R-T characteristics

PART NO.: **MLDT504F-4450**

R : 500,000 Ohms ± 1%

B : 4450 °K ± 1%

Temperature (°C)	Resistance (Ω)			Temperture Coef. (%/°C)	Resist. Tolerance (%)		Temp. Tolerance (°C)	
	MIN.	CENTER	MAX.		MIN.	MAX.	MIN.	MAX.
-40.0	30454808	32069478	33766378	-8.19	-5.03	5.29	-0.65	0.62
-39.0	28093700	29559083	31097791	-8.12	-4.96	5.21	-0.64	0.61
-38.0	25933438	27264097	28660166	-8.05	-4.88	5.12	-0.64	0.61
-37.0	23955517	25164513	26431882	-7.98	-4.80	5.04	-0.63	0.60
-36.0	22143260	23242319	24393490	-7.91	-4.73	4.95	-0.63	0.60
-35.0	20481629	21481282	22527473	-7.85	-4.65	4.87	-0.62	0.59
-34.0	18957049	19866763	20818051	-7.78	-4.58	4.79	-0.62	0.59
-33.0	17557261	18385550	19250990	-7.72	-4.51	4.71	-0.61	0.58
-32.0	16271181	17025710	17813447	-7.65	-4.43	4.63	-0.60	0.58
-31.0	15088784	15776456	16493819	-7.59	-4.36	4.55	-0.60	0.57
-30.0	14000996	14628032	15281621	-7.53	-4.29	4.47	-0.59	0.57
-29.0	12999595	13571606	14167369	-7.47	-4.21	4.39	-0.59	0.56
-28.0	12077127	12599176	13142478	-7.40	-4.14	4.31	-0.58	0.56
-27.0	11226830	11703491	12199169	-7.34	-4.07	4.24	-0.58	0.55
-26.0	10442567	10877970	11330394	-7.29	-4.00	4.16	-0.57	0.55
-25.0	9718760	10116641	10529758	-7.23	-3.93	4.08	-0.57	0.54
-24.0	9050340	9414077	9791455	-7.17	-3.86	4.01	-0.56	0.54
-23.0	8432693	8765347	9110212	-7.11	-3.80	3.93	-0.55	0.53
-22.0	7861623	8165963	8481236	-7.05	-3.73	3.86	-0.55	0.53
-21.0	7333303	7611840	7900166	-7.00	-3.66	3.79	-0.54	0.52
-20.0	6844249	7099259	7363035	-6.94	-3.59	3.72	-0.54	0.52
-19.0	6391280	6624829	6866226	-6.89	-3.53	3.64	-0.53	0.51
-18.0	5971493	6185457	6406446	-6.84	-3.46	3.57	-0.52	0.51
-17.0	5582239	5778320	5980689	-6.78	-3.39	3.50	-0.52	0.50
-16.0	5221095	5400840	5586215	-6.73	-3.33	3.43	-0.51	0.49
-15.0	4885847	5050663	5220518	-6.68	-3.26	3.36	-0.50	0.49
-14.0	4574467	4725635	4881311	-6.63	-3.20	3.29	-0.50	0.48
-13.0	4285100	4423785	4566502	-6.58	-3.13	3.23	-0.49	0.48
-12.0	4016048	4143310	4274178	-6.52	-3.07	3.16	-0.48	0.47
-11.0	3765751	3882557	4002586	-6.48	-3.01	3.09	-0.48	0.46
-10.0	3532781	3640012	3750123	-6.43	-2.95	3.03	-0.47	0.46
-9.0	3315827	3414286	3515318	-6.38	-2.88	2.96	-0.46	0.45
-8.0	3113684	3204105	3296822	-6.33	-2.82	2.89	-0.46	0.45
-7.0	2925247	3008298	3093398	-6.28	-2.76	2.83	-0.45	0.44
-6.0	2749499	2825791	2903910	-6.24	-2.70	2.76	-0.44	0.43
-5.0	2585504	2655596	2727315	-6.19	-2.64	2.70	-0.44	0.43

-4.0	2432402	2496803	2562653	-6.14	-2.58	2.64	-0.43	0.42
-3.0	2289400	2348578	2409043	-6.10	-2.52	2.57	-0.42	0.41
-2.0	2155769	2210149	2265674	-6.05	-2.46	2.51	-0.42	0.41
-1.0	2030835	2080809	2131798	-6.01	-2.40	2.45	-0.41	0.40
0.0	1913978	1959902	2006728	-5.96	-2.34	2.39	-0.40	0.39
1.0	1804625	1846828	1889828	-5.92	-2.29	2.33	-0.39	0.39
2.0	1702248	1741029	1780515	-5.88	-2.23	2.27	-0.39	0.38
3.0	1606358	1641992	1678249	-5.84	-2.17	2.21	-0.38	0.37
4.0	1516504	1549244	1582532	-5.79	-2.11	2.15	-0.37	0.36
5.0	1432268	1462345	1492905	-5.75	-2.06	2.09	-0.36	0.36
6.0	1353266	1380892	1408942	-5.71	-2.00	2.03	-0.36	0.35
7.0	1279139	1304510	1330251	-5.67	-1.94	1.97	-0.35	0.34
8.0	1209557	1232851	1256468	-5.63	-1.89	1.92	-0.34	0.34
9.0	1144214	1165596	1187258	-5.59	-1.83	1.86	-0.33	0.33
10.0	1082826	1102446	1122309	-5.55	-1.78	1.80	-0.32	0.32
11.0	1025129	1043126	1061334	-5.51	-1.73	1.75	-0.32	0.31
12.0	970879	987381	1004064	-5.47	-1.67	1.69	-0.31	0.31
13.0	919849	934974	950253	-5.43	-1.62	1.63	-0.30	0.30
14.0	871830	885685	899672	-5.40	-1.56	1.58	-0.29	0.29
15.0	826624	839310	852106	-5.36	-1.51	1.52	-0.28	0.28
16.0	784052	795659	807358	-5.32	-1.46	1.47	-0.28	0.27
17.0	743943	754556	765244	-5.29	-1.41	1.42	-0.27	0.27
18.0	706140	715837	725595	-5.25	-1.35	1.36	-0.26	0.26
19.0	670498	679350	688250	-5.21	-1.30	1.31	-0.25	0.25
20.0	636880	644953	653063	-5.18	-1.25	1.26	-0.24	0.24
21.0	605159	612513	619895	-5.14	-1.20	1.21	-0.23	0.23
22.0	575217	581909	588621	-5.11	-1.15	1.15	-0.23	0.23
23.0	546944	553026	559119	-5.07	-1.10	1.10	-0.22	0.22
24.0	520237	525756	531280	-5.04	-1.05	1.05	-0.21	0.21
25.0	495000	500000	505000	-5.01	-1.00	1.00	-0.20	0.20
26.0	470674	475666	480662	-4.97	-1.05	1.05	-0.21	0.21
27.0	447694	452666	457648	-4.94	-1.10	1.10	-0.22	0.22
28.0	425978	430921	435878	-4.91	-1.15	1.15	-0.23	0.23
29.0	405448	410354	415277	-4.87	-1.20	1.20	-0.25	0.25
30.0	386034	390894	395776	-4.84	-1.24	1.25	-0.26	0.26
31.0	367667	372476	377310	-4.81	-1.29	1.30	-0.27	0.27
32.0	350287	355039	359819	-4.78	-1.34	1.35	-0.28	0.28
33.0	333834	338523	343245	-4.75	-1.39	1.39	-0.29	0.29
34.0	318253	322877	327535	-4.72	-1.43	1.44	-0.31	0.30
35.0	303493	308047	312639	-4.69	-1.48	1.49	-0.32	0.32
36.0	289507	293989	298510	-4.66	-1.52	1.54	-0.33	0.33
37.0	276250	280656	285105	-4.63	-1.57	1.58	-0.34	0.34
38.0	263679	268008	272382	-4.60	-1.62	1.63	-0.36	0.35
39.0	251755	256006	260303	-4.57	-1.66	1.68	-0.37	0.36

40.0	240442	244613	248832	-4.54	-1.71	1.72	-0.38	0.38
41.0	229704	233795	237934	-4.51	-1.75	1.77	-0.39	0.39
42.0	219509	223519	227579	-4.48	-1.79	1.82	-0.41	0.40
43.0	209827	213755	217735	-4.45	-1.84	1.86	-0.42	0.41
44.0	200629	204476	208376	-4.42	-1.88	1.91	-0.43	0.43
45.0	191889	195654	199473	-4.40	-1.92	1.95	-0.44	0.44
46.0	183580	187264	191004	-4.37	-1.97	2.00	-0.46	0.45
47.0	175680	179284	182943	-4.34	-2.01	2.04	-0.47	0.46
48.0	168166	171690	175270	-4.31	-2.05	2.09	-0.48	0.48
49.0	161016	164461	167963	-4.29	-2.09	2.13	-0.50	0.49
50.0	154213	157579	161004	-4.26	-2.14	2.17	-0.51	0.50
51.0	147736	151025	154373	-4.24	-2.18	2.22	-0.52	0.51
52.0	141568	144782	148053	-4.21	-2.22	2.26	-0.54	0.53
53.0	135694	138832	142028	-4.18	-2.26	2.30	-0.55	0.54
54.0	130097	133161	136284	-4.16	-2.30	2.35	-0.56	0.55
55.0	124762	127754	130804	-4.13	-2.34	2.39	-0.58	0.57
56.0	119677	122598	125576	-4.11	-2.38	2.43	-0.59	0.58
57.0	114829	117679	120587	-4.08	-2.42	2.47	-0.61	0.59
58.0	110204	112985	115825	-4.06	-2.46	2.51	-0.62	0.61
59.0	105791	108505	111277	-4.03	-2.50	2.55	-0.63	0.62
60.0	101580	104228	106934	-4.01	-2.54	2.60	-0.65	0.63
61.0	97561	100144	102785	-3.99	-2.58	2.64	-0.66	0.65
62.0	93723	96243	98820	-3.96	-2.62	2.68	-0.68	0.66
63.0	90058	92515	95030	-3.94	-2.66	2.72	-0.69	0.67
64.0	86556	88953	91407	-3.91	-2.69	2.76	-0.70	0.69
65.0	83210	85548	87942	-3.89	-2.73	2.80	-0.72	0.70
66.0	80012	82292	84628	-3.87	-2.77	2.84	-0.73	0.72
67.0	76955	79178	81457	-3.85	-2.81	2.88	-0.75	0.73
68.0	74031	76199	78423	-3.82	-2.85	2.92	-0.76	0.74
69.0	71235	73349	75518	-3.80	-2.88	2.96	-0.78	0.76
70.0	68559	70621	72737	-3.78	-2.92	3.00	-0.79	0.77
71.0	65999	68009	70073	-3.76	-2.96	3.04	-0.81	0.79
72.0	63549	65509	67522	-3.74	-2.99	3.07	-0.82	0.80
73.0	61202	63113	65078	-3.71	-3.03	3.11	-0.84	0.82
74.0	58956	60819	62735	-3.69	-3.06	3.15	-0.85	0.83
75.0	56803	58620	60489	-3.67	-3.10	3.19	-0.87	0.84
76.0	54741	56513	58336	-3.65	-3.13	3.23	-0.88	0.86
77.0	52766	54493	56272	-3.63	-3.17	3.26	-0.90	0.87
78.0	50872	52556	54291	-3.61	-3.21	3.30	-0.91	0.89
79.0	49056	50698	52391	-3.59	-3.24	3.34	-0.93	0.90
80.0	47315	48916	50567	-3.57	-3.27	3.38	-0.95	0.92
81.0	45644	47207	48817	-3.55	-3.31	3.41	-0.96	0.93
82.0	44042	45566	47137	-3.53	-3.34	3.45	-0.98	0.95
83.0	42505	43990	45523	-3.51	-3.38	3.49	-0.99	0.96

84.0	41029	42478	43974	-3.49	-3.41	3.52	-1.01	0.98
85.0	39612	41026	42485	-3.47	-3.44	3.56	-1.03	0.99
86.0	38252	39631	41055	-3.45	-3.48	3.59	-1.04	1.01
87.0	36946	38290	39680	-3.43	-3.51	3.63	-1.06	1.02
88.0	35691	37002	38358	-3.41	-3.54	3.66	-1.07	1.04
89.0	34485	35765	37088	-3.39	-3.58	3.70	-1.09	1.05
90.0	33327	34575	35866	-3.37	-3.61	3.73	-1.11	1.07
91.0	32213	33431	34691	-3.36	-3.64	3.77	-1.12	1.09
92.0	31142	32330	33560	-3.34	-3.67	3.80	-1.14	1.10
93.0	30113	31272	32472	-3.32	-3.71	3.84	-1.16	1.12
94.0	29123	30254	31426	-3.30	-3.74	3.87	-1.17	1.13
95.0	28170	29274	30418	-3.28	-3.77	3.91	-1.19	1.15
96.0	27254	28331	29448	-3.27	-3.80	3.94	-1.21	1.16
97.0	26372	27423	28513	-3.25	-3.83	3.98	-1.22	1.18
98.0	25523	26549	27613	-3.23	-3.86	4.01	-1.24	1.20
99.0	24706	25707	26747	-3.21	-3.89	4.04	-1.26	1.21
100.0	23919	24897	25911	-3.20	-3.93	4.08	-1.28	1.23
101.0	23162	24116	25107	-3.18	-3.96	4.11	-1.29	1.24
102.0	22432	23363	24331	-3.16	-3.99	4.14	-1.31	1.26
103.0	21728	22638	23583	-3.15	-4.02	4.17	-1.33	1.28
104.0	21051	21939	22862	-3.13	-4.05	4.21	-1.34	1.29
105.0	20398	21265	22166	-3.11	-4.08	4.24	-1.36	1.31
106.0	19768	20615	21496	-3.10	-4.11	4.27	-1.38	1.33
107.0	19161	19988	20849	-3.08	-4.14	4.30	-1.40	1.34
108.0	18576	19384	20224	-3.06	-4.17	4.34	-1.42	1.36
109.0	18012	18800	19622	-3.05	-4.20	4.37	-1.43	1.38
110.0	17467	18238	19040	-3.03	-4.22	4.40	-1.45	1.39
111.0	16942	17694	18479	-3.02	-4.25	4.43	-1.47	1.41
112.0	16435	17170	17937	-3.00	-4.28	4.46	-1.49	1.43
113.0	15946	16664	17413	-2.98	-4.31	4.49	-1.51	1.44
114.0	15473	16175	16907	-2.97	-4.34	4.53	-1.52	1.46
115.0	15018	15703	16419	-2.95	-4.37	4.56	-1.54	1.48
116.0	14577	15247	15947	-2.94	-4.40	4.59	-1.56	1.50
117.0	14152	14807	15491	-2.92	-4.42	4.62	-1.58	1.51
118.0	13741	14382	15050	-2.91	-4.45	4.65	-1.60	1.53
119.0	13345	13970	14624	-2.89	-4.48	4.68	-1.62	1.55
120.0	12961	13573	14212	-2.88	-4.51	4.71	-1.64	1.57
121.0	12591	13189	13814	-2.86	-4.53	4.74	-1.65	1.58
122.0	12232	12817	13428	-2.85	-4.56	4.77	-1.67	1.60
123.0	11886	12458	13056	-2.84	-4.59	4.80	-1.69	1.62
124.0	11551	12110	12695	-2.82	-4.62	4.83	-1.71	1.64
125.0	11228	11774	12346	-2.81	-4.64	4.86	-1.73	1.65
126.0	10915	11449	12009	-2.79	-4.67	4.89	-1.75	1.67
127.0	10612	11135	11682	-2.78	-4.70	4.92	-1.77	1.69

128.0	10319	10830	11366	-2.77	-4.72	4.95	-1.79	1.71
129.0	10035	10536	11060	-2.75	-4.75	4.97	-1.81	1.73
130.0	9761	10250	10763	-2.74	-4.77	5.00	-1.83	1.74
131.0	9495	9974	10476	-2.72	-4.80	5.03	-1.85	1.76
132.0	9238	9707	10198	-2.71	-4.83	5.06	-1.87	1.78
133.0	8989	9448	9929	-2.70	-4.85	5.09	-1.89	1.80
134.0	8748	9197	9668	-2.68	-4.88	5.12	-1.91	1.82
135.0	8515	8954	9415	-2.67	-4.90	5.15	-1.93	1.84
136.0	8289	8718	9170	-2.66	-4.93	5.17	-1.95	1.85
137.0	8070	8490	8932	-2.65	-4.95	5.20	-1.97	1.87
138.0	7857	8269	8702	-2.63	-4.98	5.23	-1.99	1.89
139.0	7652	8055	8478	-2.62	-5.00	5.26	-2.01	1.91
140.0	7452	7847	8262	-2.61	-5.03	5.28	-2.03	1.93
141.0	7259	7646	8052	-2.59	-5.05	5.31	-2.05	1.95
142.0	7072	7450	7848	-2.58	-5.08	5.34	-2.07	1.97
143.0	6890	7261	7650	-2.57	-5.10	5.37	-2.09	1.99
144.0	6714	7077	7459	-2.56	-5.13	5.39	-2.11	2.00
145.0	6543	6899	7273	-2.55	-5.15	5.42	-2.13	2.02
146.0	6378	6726	7092	-2.53	-5.17	5.45	-2.15	2.04
147.0	6217	6558	6917	-2.52	-5.20	5.47	-2.17	2.06
148.0	6061	6395	6747	-2.51	-5.22	5.50	-2.19	2.08
149.0	5910	6237	6582	-2.50	-5.25	5.53	-2.21	2.10
150.0	5763	6084	6421	-2.49	-5.27	5.55	-2.23	2.12
151.0	5620	5935	6266	-2.47	-5.29	5.58	-2.26	2.14
152.0	5482	5790	6115	-2.46	-5.32	5.60	-2.28	2.16
153.0	5348	5650	5968	-2.45	-5.34	5.63	-2.30	2.18
154.0	5217	5513	5825	-2.44	-5.36	5.66	-2.32	2.20
155.0	5091	5381	5686	-2.43	-5.39	5.68	-2.34	2.22
156.0	4968	5252	5552	-2.42	-5.41	5.71	-2.36	2.24
157.0	4848	5127	5421	-2.41	-5.43	5.73	-2.38	2.26
158.0	4732	5005	5293	-2.39	-5.45	5.76	-2.41	2.28
159.0	4619	4887	5170	-2.38	-5.48	5.78	-2.43	2.30
160.0	4510	4772	5049	-2.37	-5.50	5.81	-2.45	2.32
161.0	4403	4661	4933	-2.36	-5.52	5.83	-2.47	2.34
162.0	4300	4552	4819	-2.35	-5.54	5.86	-2.49	2.36
163.0	4199	4447	4708	-2.34	-5.57	5.88	-2.52	2.38
164.0	4101	4344	4601	-2.33	-5.59	5.91	-2.54	2.40
165.0	4006	4244	4496	-2.32	-5.61	5.93	-2.56	2.42
166.0	3914	4147	4394	-2.31	-5.63	5.96	-2.58	2.44
167.0	3824	4053	4295	-2.30	-5.65	5.98	-2.60	2.46
168.0	3736	3961	4199	-2.29	-5.68	6.01	-2.63	2.48
169.0	3651	3872	4105	-2.28	-5.70	6.03	-2.65	2.50
170.0	3568	3785	4014	-2.27	-5.72	6.05	-2.67	2.52

171.0	3488	3700	3925	-2.26	-5.74	6.08	-2.69	2.54
172.0	3409	3618	3839	-2.25	-5.76	6.10	-2.72	2.57
173.0	3333	3538	3754	-2.24	-5.78	6.13	-2.74	2.59
174.0	3259	3460	3672	-2.23	-5.80	6.15	-2.76	2.61
175.0	3187	3384	3593	-2.22	-5.82	6.17	-2.79	2.63
176.0	3116	3310	3515	-2.21	-5.85	6.20	-2.81	2.65
177.0	3048	3238	3439	-2.20	-5.87	6.22	-2.83	2.67
178.0	2981	3167	3365	-2.19	-5.89	6.24	-2.86	2.69
179.0	2916	3099	3293	-2.18	-5.91	6.27	-2.88	2.71
180.0	2853	3032	3223	-2.17	-5.93	6.29	-2.90	2.74
181.0	2791	2968	3155	-2.16	-5.95	6.31	-2.93	2.76
182.0	2731	2904	3088	-2.15	-5.97	6.34	-2.95	2.78
183.0	2673	2843	3024	-2.14	-5.99	6.36	-2.97	2.80
184.0	2616	2783	2960	-2.13	-6.01	6.38	-3.00	2.82
185.0	2560	2724	2899	-2.12	-6.03	6.40	-3.02	2.84
186.0	2506	2667	2839	-2.11	-6.05	6.43	-3.04	2.87
187.0	2453	2612	2780	-2.10	-6.07	6.45	-3.07	2.89
188.0	2402	2557	2723	-2.09	-6.09	6.47	-3.09	2.91
189.0	2352	2505	2667	-2.08	-6.11	6.49	-3.12	2.93
190.0	2303	2453	2613	-2.07	-6.13	6.52	-3.14	2.95
191.0	2255	2403	2560	-2.07	-6.15	6.54	-3.17	2.98
192.0	2209	2354	2508	-2.06	-6.17	6.56	-3.19	3.00
193.0	2163	2306	2458	-2.05	-6.18	6.58	-3.21	3.02
194.0	2119	2259	2409	-2.04	-6.20	6.60	-3.24	3.04
195.0	2076	2214	2361	-2.03	-6.22	6.63	-3.26	3.06
196.0	2034	2169	2314	-2.02	-6.24	6.65	-3.29	3.09
197.0	1993	2126	2268	-2.01	-6.26	6.67	-3.31	3.11
198.0	1953	2084	2223	-2.00	-6.28	6.69	-3.34	3.13
199.0	1914	2043	2180	-2.00	-6.30	6.71	-3.36	3.16
200.0	1876	2002	2137	-1.99	-6.32	6.73	-3.39	3.18