

INDEX

TEST ITEMS :

(A) DESCRIPTION OF LIFE TEST :

25°C , 1000 HOURS WITH RATED CURRENT APPLIED .

(B) DESCRIPTION OF ENVIRONMENTAL TEST :

1. TENSILE STRENGTH OF TERMINALS TEST .

2. BENDING STRENGTH OF TERMINALS TEST .

3. SOLDERABILITY TEST .

4. SOLDER HEAT RESISTANCE TEST .

5. THERMAL SHOCK TEST .

6. HUMIDITY TEST .

7. ELECTRICAL CYCLING TEST .

SPECIFICATIONS :

TYPE NO : SCK-154

RESISTANCE : 15 Ω

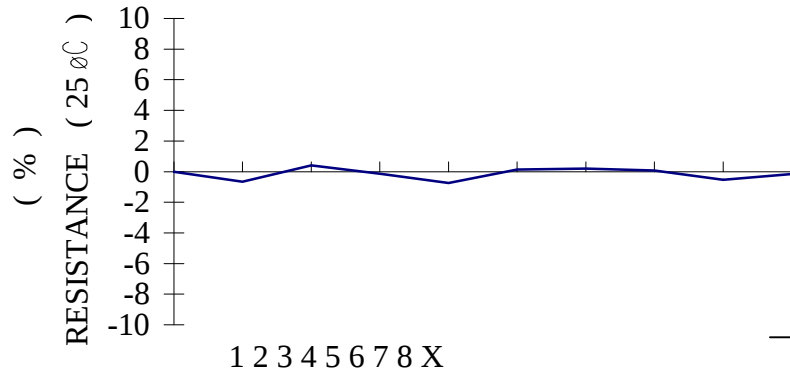
RATED CURRENT : 4 A

DISSIPATION CONSTANT : 19 mW/°C

RATED TEMPERATURE : -40 °C ~ +200 °C

(A).LIFE TEST DATA :

1. THE INITIAL CONSTANT :



NAME :

POWER THERMISTOR

TYPE :

SCK-154

CURRENT :

4A

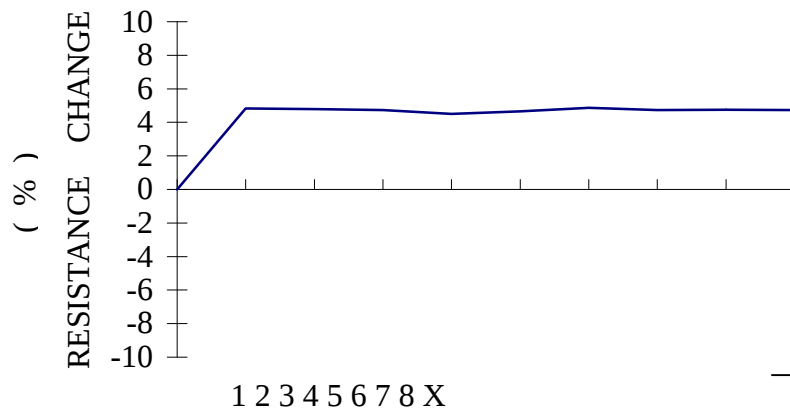
TERM :

10.03 - 11.17,2000

TIME :

1000 HRS

2. THE AFTER CONSTANT : (TIME : 1000 HRS)



INSTRUMENT :

PAD 35-30LP

LOT NO :

8-A374

SIZE :

8 PCS

TEMP :

25°C

TESTED BY :

CHECKED BY :

NO.	TIME		168HRS			500HRS		1000HRS	
	TEMP.		25°C			25°C		25°C	
			R _{25°C}	Rv	an%	Rv	an%	Rv	an%
1.			14.90	15.00	0.67	15.22	2.15	15.62	4.83
2.			15.06	15.18	0.80	15.43	2.46	15.78	4.78
3.			14.98	15.09	0.73	15.31	2.20	15.69	4.74
4.			14.89	14.94	0.34	15.25	2.42	15.56	4.50
5.			15.02	15.04	0.13	15.40	2.53	15.72	4.66
6.			15.03	15.14	0.73	15.47	2.93	15.76	4.86
7.			15.01	15.12	0.73	15.41	2.66	15.72	4.73
8.			14.92	14.97	0.34	15.26	2.28	15.63	4.76
X			14.98	15.06	0.56	15.34	2.45	15.69	4.73

(B) DESCRIPTION OF ENVIRONMENTAL TEST :

1. TENSILE STRENGTH OF TERMINALS TEST :

SPEC NO.	INITIAL	AFTER			RESULT
	DATE : 10.03,2000	DATE : 10.03,2000			
	RESISTANCE (25°C)	RESISTANCE (25°C)	CHANGE (%)	MECHANICAL DAMAGE	
1.	14.95	14.95	0	NONE	OK
2.	15.03	15.03	0	NONE	OK
3.	14.93	14.93	0	NONE	OK
4.	15.06	15.06	0	NONE	OK
5.	14.99	14.99	0	NONE	OK
$\overline{X}$	14.99	14.99	0	NONE	OK
LOAD : 3.0 Kg					
HOLDING TIME : 1 SEC					

2. BENDING STRENGTH OF TERMINALS TEST :

SPEC NO.	INITIAL	AFTER			RESULT
	DATE : 10.03,2000	DATE : 10.03,2000			
	RESISTANCE (25°C)	RESISTANCE (25°C)	CHANGE (%)	MECHANICAL DAMAGE	
1.	15.03	15.03	0	NONE	OK
2.	14.96	14.96	0	NONE	OK
3.	15.00	15.00	0	NONE	OK
4.	14.90	14.90	0	NONE	OK
5.	15.01	15.01	0	NONE	OK
$\overline{X}$	14.98	14.98	0	NONE	OK
LOAD : 1.0 Kg 90° 1 Times					

3. SOLDERABILITY :

NO.	DATE : 10.03,2000	RESULT
	THE SURFACE COVERED AT LEAST 95%	
1.	"	OK
2.	"	OK
3.	"	OK
4.	"	OK
5.	"	OK
TEMPERATURE : 235±5°C		
DIPPING TIME : 3±0.5 SEC		

4. SOLDERING HEAT RESISTANCE TEST :

SPEC	INITIAL	AFTER			RESULT
	DATE : 10.03,2000	DATE : 10.03,2000			
NO.	RESISTANCE (25°C)	RESISTANCE (25°C)	CHANGE (%)	MECHANICAL DAMAGE	
1.	14.93	14.98	0.33	NONE	OK
2.	15.09	15.14	0.33	NONE	OK
3.	15.00	15.02	0.13	NONE	OK
4.	14.95	15.01	0.40	NONE	OK
5.	14.93	14.98	0.33	NONE	OK
6.	14.97	15.06	0.60	NONE	OK
$\overline{X}$	14.98	15.03	0.36	NONE	OK
TEMPERATURE : 350±5 °C					
DIPPING TIME : 3±0.5 SEC					

5. THERMAL SHOCK TEST :

SPEC NO.	INITIAL	AFTER		
	DATE : 10.04,2000	DATE : 10.05,2000		
	RESISTANCE (25°C)	RESISTANCE (25°C)	CHANGE (%)	RESULT
1.	14.90	14.91	0.07	OK
2.	14.98	15.00	0.13	OK
3.	14.95	15.02	0.47	OK
4.	14.96	14.96	0.00	OK
5.	14.94	14.98	0.27	OK
6.	14.91	14.93	0.13	OK
7.	14.96	14.99	0.20	OK
<u>X</u>	14.94	14.97	0.18	OK
-40 _ × 30 MIN _ 160 _ × 30 MIN × 10 CYCLE				
TS - 72D CYCLE CHAMBER				

6. HUMIDITY TEST :

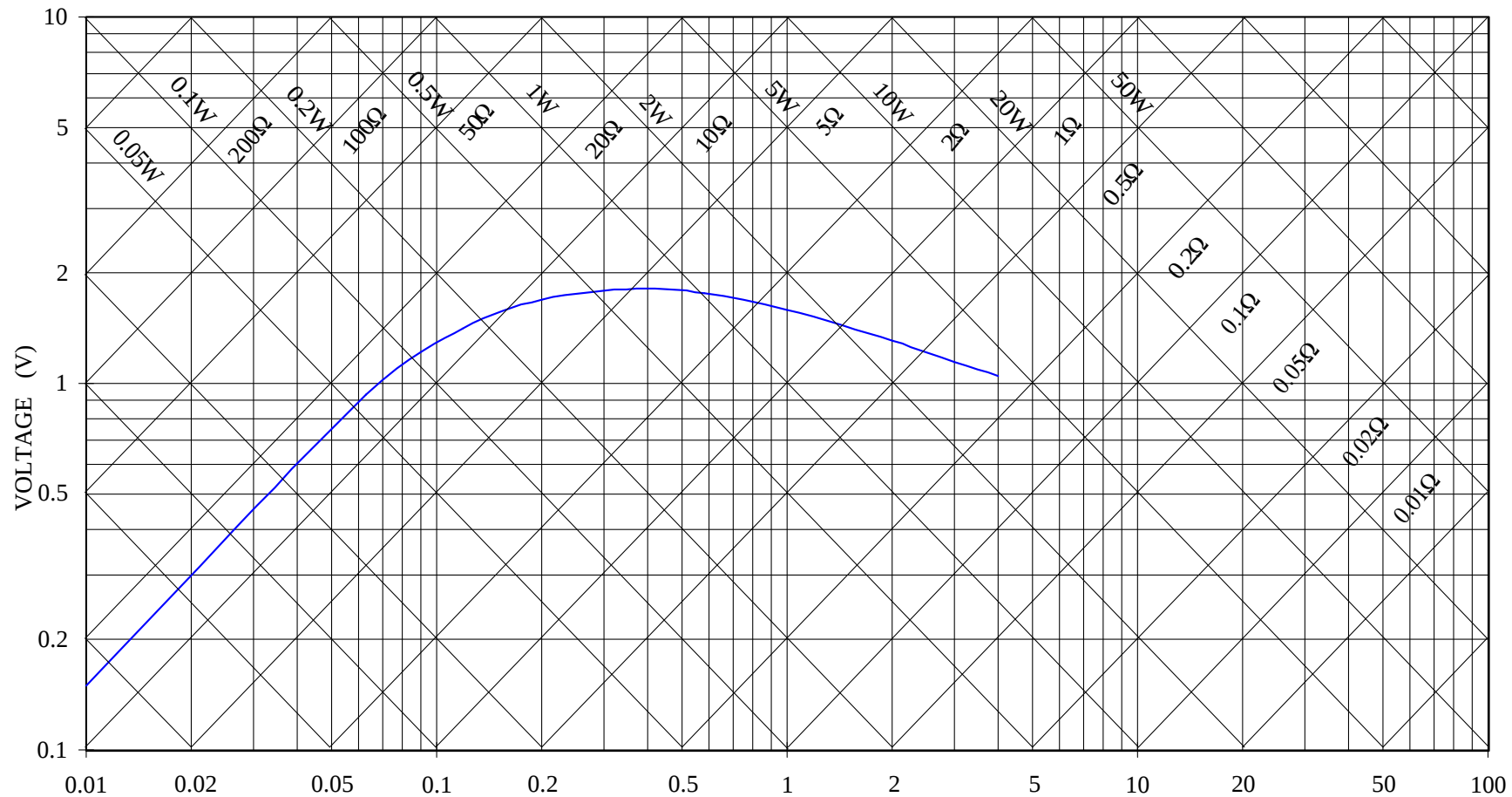
SPEC NO.	INITIAL	AFTER		
	DATE : 10.03,2000	DATE : 11.17,2000		
	RESISTANCE (25°C)	RESISTANCE (25°C)	CHANGE (%)	RESULT
1.	14.93	15.12	1.27	OK
2.	14.96	15.24	1.87	OK
3.	14.93	15.11	1.21	OK
4.	14.96	15.11	1.00	OK
5.	14.89	15.07	1.21	OK
6.	14.96	15.24	1.87	OK
7.	14.94	15.14	1.34	OK
<u>X</u>	14.94	15.15	1.40	OK
45 _ × 95 - 98 % RH × 1000 HRS				
HCD - 3M HUMIDITY CHAMBER				

7. ELECTRICAL CYCLING TEST :

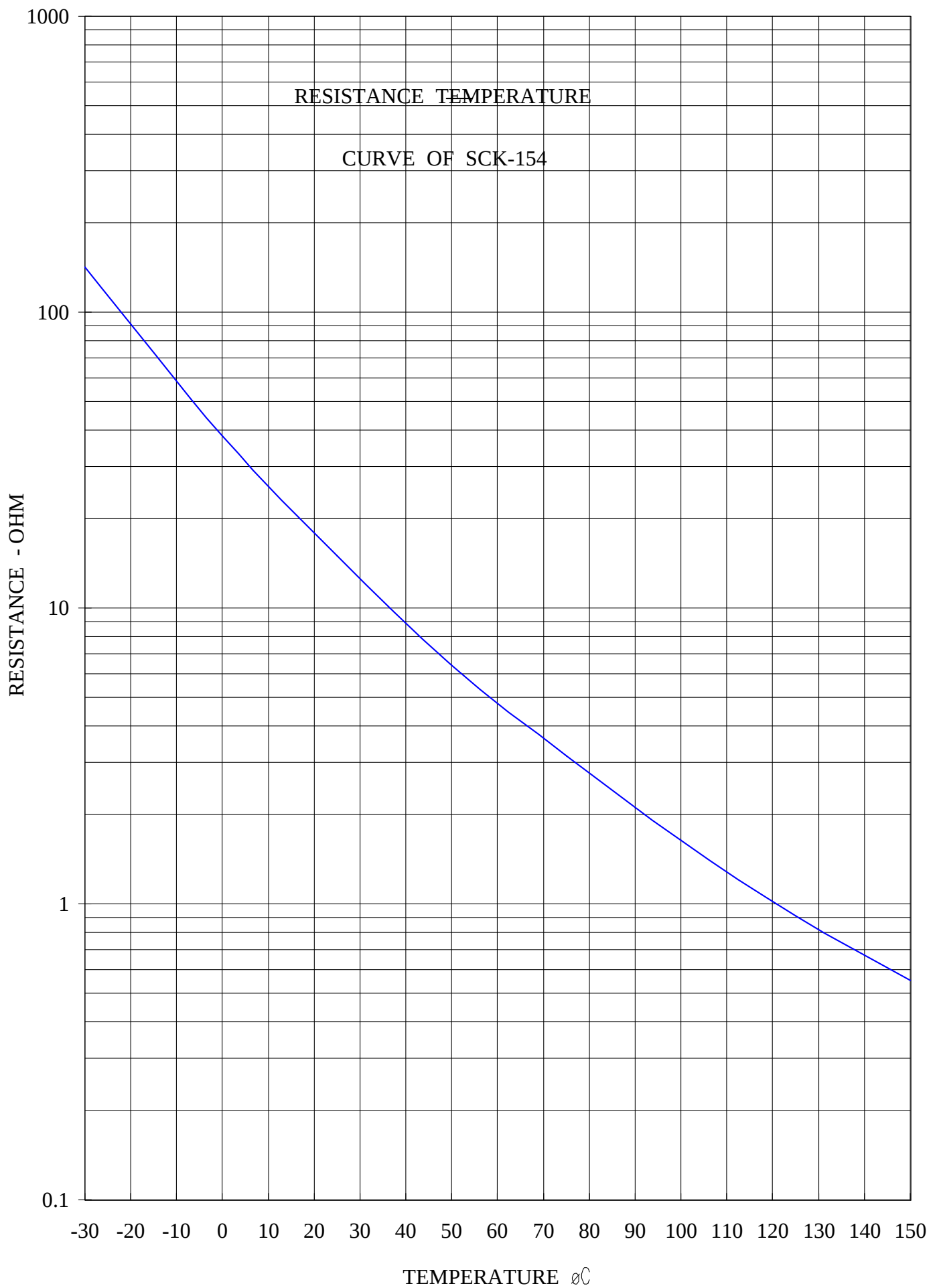
SPEC NO.	INITIAL	AFTER		
	DATE : 10.03,2000	DATE : 10.07,2000		
	RESISTANCE (25°C)	RESISTANCE (25°C)	CHANGE (%)	RESULT
1.	14.91	14.47	-2.95	OK
2.	14.95	14.62	-2.21	OK
3.	15.12	14.73	-2.58	OK
4.	15.14	14.75	-2.58	OK
5.	14.93	14.54	-2.61	OK
6.	15.11	14.72	-2.58	OK
<u>X</u>	15.03	14.64	-2.58	OK
4 AMP. 1 MIN ON 5 MIN OFF x 1000 CYCLE				
LI-780N CYCLE MACHINE				

	0				0
1	-0.67			1	4.83
2	0.40			2	4.78
3	-0.13			3	4.74
4	-0.73			4	4.50
5	0.13			5	4.66
6	0.20			6	4.86
7	0.07			7	4.73
8	-0.53			8	4.76
X	-0.16			X	4.73

A	V	Ω	T	R
	0.01	0.15	-30	142
1	0.063	0.932	0	38
2	0.119	1.41	25	15
3	0.200	1.689	50	6.42
4	0.372	1.810	75	3.16
5	0.580	1.764	100	1.64
6	1.000	1.591	125	0.91
7	2.000	1.309	150	0.55
8	3.000	1.145		
9	4.000	1.045		
10				
11				
12				



V-I CHARACTERISTIC CURVE
FOR SCK-154

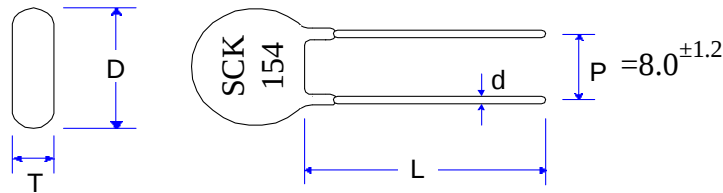


Specification of NTC Thermistor for Surge Current Suppression

PART NO . _ SCK-154 (MS)

CUSTOMER P/N . _____

1. Dimensions



ITEM	D	L	d	P	T
MAX.	16.5		1.02	9.2	6
MIN.		29	0.98	6.8	

(Unit : mm)

1-1 Material of coating : Silicone

1-2 Material of Leads : Tinned copper wires

1-3 Color of coating : Green

1-4 Color of Marking : Black

2. Electrical characteristics

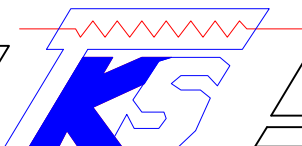
2-1

	Item	Symbol	Conditions	Max. Rated Value
a.	Operation Temp.	Ta	in still air	- 40 °C ~ + 200 °C
b.	Capacitance Rating	820 uf at 240 Vac		
c.	Max. Permissible Working Current	Iw25	Ta = 25 °C	4 Amp.
d.	Thermal Time Constant			79 Sec.
e.	Thermal Dissipation Constant			19 Mw/°C

2-2 (V-I) TEST (Max. Under Load Current)

No Load Resistance at 25 °C	Steady State Current (Amps)	Resistance (Approx.) Under Load (mOhms)	Test Conditions
15 °C ± 20 %	1.0	1590	Thermistor must be tested by current power supply , the stable value of each Amp. shall be recorded .
(Test Conditions : Thermistor to be put in constant temp. oil bath)	2.0	654	
	3.0	381	
	4.0	261	

* Surge current spec. : Please kindly design your products according to our standard surge current spec.. If your design spec. is over it, please kindly inform us. Thanks a lot !



3. Mechanical Characteristics

3-1 Leads Terminal Tensile Strength

Conditions	Test Result	
Fasten body with a Load Applied to each lead 3.0 kg for 1 sec.	No break out and damage	OK

3-2 Leads Terminal Bend Strength

Conditions	Test Result	
Fixed body and hang 1.0 kg on one terminal bend 90 ° then back , again in opposite .	No break out and damage	OK

4. Reliability Test

Item	Test Conditions	Variable
Temp. cycle test	-40 . x 30 +25 x 5 +160 . x 30 +25 x 5 x 10	Within ± 20 %
Humidity test	45 . 95 % RH x 1000 HRS	Within ± 20 %
Life test	4 Amp. x 1000 HRS	Within ± 20 %
Solderability test	235 .±5 . 3 ± 0.5 sec	the surface covered at least 95%
Soldering heat resistance test	350 .±5 . 3 ± 0.5 sec	Within ± 10 %
Electrical cycling test	4 Amp. 1min on 5min off x 1000 Cycle	Within ± 20 %
Insulation test	DC 1000 V	ABOVE : 500 MOHM

5. Internation Approvals

UL:File NO. E138827

CSA:File NO. LR97495