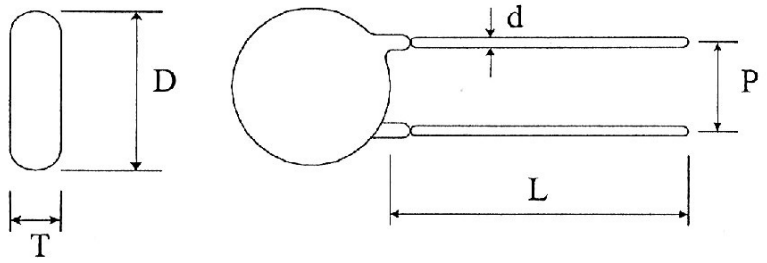
NTC Disc Thermistors

Description

A range of miniature disc thermistors for general purpose applications such as temperature compensation circuitry. The thermistors are clearly coded and have a wide working temperature range of –30 to +125ºC and a electrical tolerance of 10%.

Dimensions

Item	Dimension (mm)
Disc	5
D (max)	6.5
L (min)	31
d	0.5 ± 1
p	3.5 ± 1
T (max)	5



General Information

Body Material	:	Epoxy Resin Coated
Lead Material	:	Tinned Copper Wires
Coating Colour	:	Green
Marking Colour	:	Black

Electrical Characteristics

Parameter	Symbol	Test Conditions	Unit	TTC301A	TTC102A	TTC502A	TTC203A	TTC104A
Typical Resistance @ 25ºC	R_{25}	Ta=25ºC ± 0.1ºC I<0.5mA	Ω	300	1K	5K	20K	100K
Resistance @ 50ºC	R_{50}	Ta=50ºC ± 0.1ºC I<0.5mA	Ω	121	0.373K	1.794K	6.64K	31.936K
R_{25}/R_{50}	K	-	-	2.479	2.679	2.786	3.011	3.131
B Constant	B	(8876 Log K)	K	3500	3800	3950	4250	4400
Thermal Dissipation Constant	C	Ta=25ºC ± 0.1ºC	mW/ºC	9	9	9	9	8
Thermal Time Constant	-	Ta=25ºC ± 0.1ºC	Sec	22	22	21	23	24
Insulation Test	-	1000VDC / 1 min	Ω	500M	500M	500M	500M	500M

Absolute Maximum Ratings

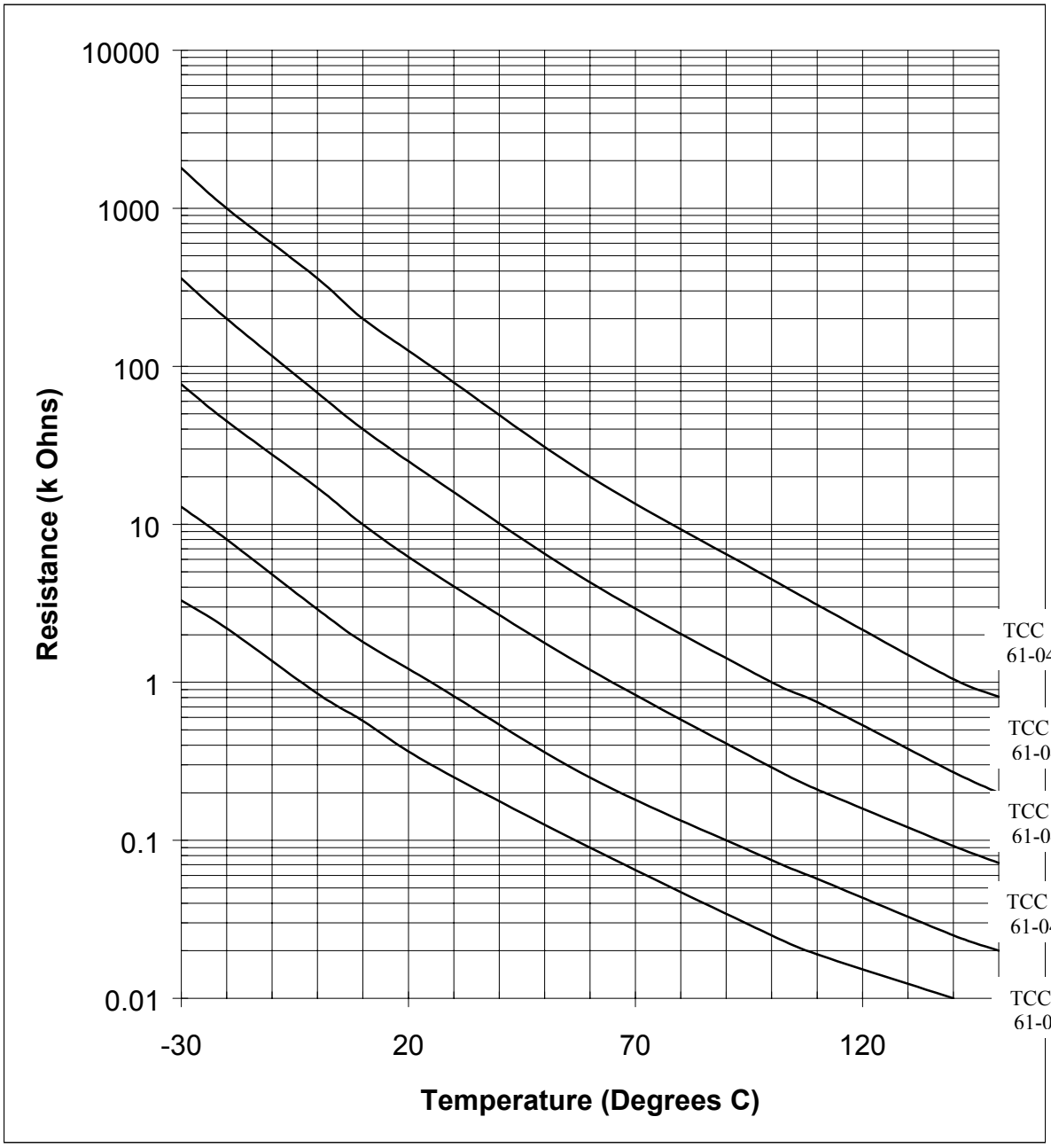
Operation Temperature Range	ºC	-30 to +125				
Max Permissible Current	mA	115	70	30	20	10
Max Operating Current	mA	10	7	3	2	1

Mechanical Characteristics

Leads Terminal Tensile Strength		
Conditions	**Test Result**	
Fasten body with a load applied to each lead 1 kg for 5 sec's	No break out or damage	OK

Leads Terminal Bend Strength		
Conditions	**Test Result**	
Fix body and hang 0.3kg on one terminal bend to 90º and then back, repeat in opposite direction	No break out or damage	OK

Resistance Temperature Characteristic



Item	Test Conditions	Variable
Temp. Cycle Test	-30°C x30→ +25°C x5 -125°C x30→ +25°C x5 } x10	Within ± 10%
Humidity Test	45°C 95% RHx1000 Hrs	Within ± 10%
Life Test	10mA x 1000 Hrs	Within ± 10%
Insulation Test	DC 1000V	>= 500MΩ

Approval Information

CSA : File No. LR97495
UL : File No. E138827*

*- only applicable to TCC102 and TCC502