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SPECIFICATION FOR APPROVAL

CUSTOMER

CERTIFIED
MODEL/TYPE

SCK-154

PART NO.

SCK15154LFY502(RoHS+HF)

APPLICATION

CUSTOMER P/N

ISSUE DATE

Dec.09.2020

REV. NO.

REV. DATE

FOR CUSTOMER APPROVAL	CHECKED BY
	<i>Haili Gong</i>
	APPROVED BY
	<i>Huaifang Zhang</i>





REVISED RECORD SHEET

REV. NO	REV. DATE	REVISED CONTENT



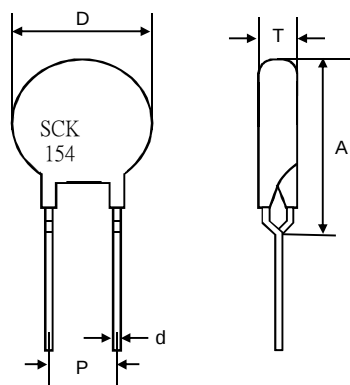
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Part Number Code

Example :

SCK **15** **15** **4** **L** **F** **Y502**
 (1) (2) (3) (4) (5) (6) (7)

No.	Item	Digit	Specification
(1)	Product Type	SCK	Thinking NTC thermistor SCK type
(2)	Body Size	15	φ 15 mm
(3)	Zero Power Resistance at 25°C (R ₂₅)	15	15Ω
(4)	Max. Current at 25°C	4	I _{max} =4A
(5)	Tolerance of R ₂₅	L	± 15%
(6)	Appearance	F	Y kink Lead
(7)	Optional Suffix	Y502	RoHS+HF compliance Taping15.0mm&Box

Structure and Dimensions

(unit : mm)

Body Size	D	P	d	A max.	T
φ 15mm	13~16.5	7.5±0.5	1±0.02	19	3~6

Electrical Characteristics

Part No.	Zero Power Resistance at 25°C	Tolerance of R ₂₅	Max.Current at 25°C	Residual Resistance at 25°C I _{max}	Max. Power Rating at 25°C
	R ₂₅ (Ω)	(± %)	I _{max} (A)	R _{I_{max}} (Ω)	P _{max} (W)
SCK15154LFY502	15	15	4	0.261	3.6

Part No.	Dissipation Factor	Thermal Time Constant	Capacitance at 240Vac	Operating Temperature Range
	δ (mW/°C)	τ (sec.)	(μF)	T _L ~T _U (°C)
SCK15154LFY502	Approx. 21	Approx. 75	820	-40 ~+200

Note: Due to the mechanical force, which is acted on the wire lead, the coating may have cracks worn white and chips. However, it does not affect the performance and reliability of the component.

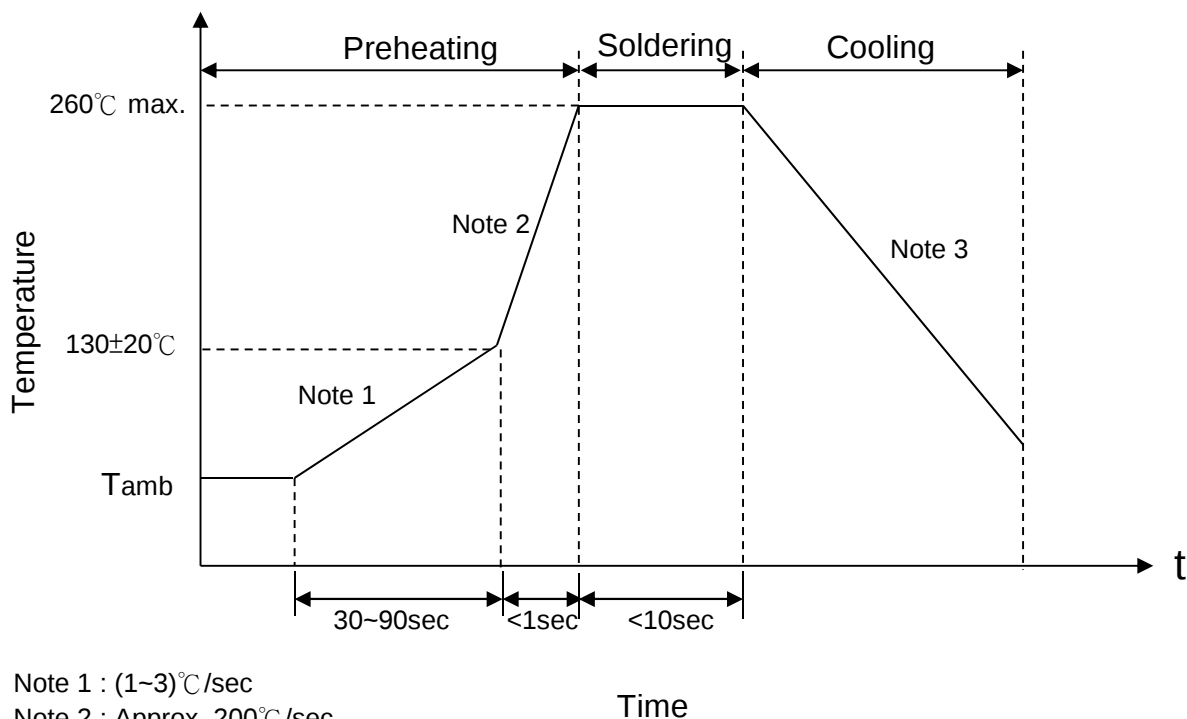
Reliability

Item	Standard	Test conditions / Methods		Specifications															
Tensile Strength of Terminals	IEC60068-2-21	Gradually applying the force specified and keeping the unit fixed for 10±1 sec. <table><tr><td>Terminal diameter (mm)</td><td>Force (Kg)</td></tr><tr><td>0.5<d≤0.8</td><td>1.0</td></tr><tr><td>0.8<d≤1.25</td><td>2.0</td></tr></table>		Terminal diameter (mm)	Force (Kg)	0.5<d≤0.8	1.0	0.8<d≤1.25	2.0	△R ₂₅ /R ₂₅ ≤ 10%									
Terminal diameter (mm)	Force (Kg)																		
0.5<d≤0.8	1.0																		
0.8<d≤1.25	2.0																		
Solderability	IEC60068-2-20	245 ± 3 °C , 3 ± 0.3 sec		Inspection shall be carried out with the assistance of a magnifier capable of giving a magnification of 4 x to 10 x . At least 95% of terminal electrode is covered by new solder. The dipped surface shall be covered with a smooth and bright solder coating with no more than small amounts of scattered imperfections such as pin-holes or un-wetted or de-wetted areas. These imperfections shall not be concentrated in one area.															
Resistance to Soldering Heat	IEC60068-2-20	260 ± 3 °C ,10 ± 1 sec		No visible damage △R ₂₅ /R ₂₅ ≤ 10%															
High Temperature Storage	IEC60068-2-2	Tu ± 5 °C , 1000 ± 24 hrs		No visible damage △R ₂₅ /R ₂₅ ≤ 20%															
Damp Heat, Steady State	IEC 60068-2-78	40 ± 2°C , 9 0 ~ 95 % RH , 1000 ± 24 hrs		No visible damage △R ₂₅ /R ₂₅ ≤ 20%															
Rapid Change of Temperature	IEC60068-2-14	The conditions shown below shall be repeated 5 cycles <table><tr><td>Step</td><td>Temperature (°C)</td><td>Period (minutes)</td></tr><tr><td>1</td><td>T_L ± 5</td><td>30 ± 3</td></tr><tr><td>2</td><td>Room temperature</td><td>5 ± 3</td></tr><tr><td>3</td><td>Tu ± 5</td><td>30 ± 3</td></tr><tr><td>4</td><td>Room temperature</td><td>5 ± 3</td></tr></table>		Step	Temperature (°C)	Period (minutes)	1	T _L ± 5	30 ± 3	2	Room temperature	5 ± 3	3	Tu ± 5	30 ± 3	4	Room temperature	5 ± 3	No visible damage △R ₂₅ /R ₂₅ ≤ 20%
Step	Temperature (°C)	Period (minutes)																	
1	T _L ± 5	30 ± 3																	
2	Room temperature	5 ± 3																	
3	Tu ± 5	30 ± 3																	
4	Room temperature	5 ± 3																	
Max. Current	IEC60539-1 4.26.1	25 ± 5 °C , I _{max.} , 1000 ± 24 hrs		No visible damage △R ₂₅ /R ₂₅ ≤ 20%															
Endurance	Specification Standard	25±5°C,I _{max.} , C _T , 1min ON / 5 min OFF x1000 cycles C _T =Capacitance at 240Vac		No visible damage △R ₂₅ /R ₂₅ ≤ 20%															
Insulation	MIL-STD-202F-Method 302	1000 V _{DC} 1 min		No visible damage ≥500 MΩ															

Products have been tested at Thinking Electronic Industrial Co., Ltd. Laboratory recognized by UL (Underwriters Laboratories Inc.) under CTDTP (Client Test Data Program).

Soldering Recommendation

■ Wave Soldering Profile



Note 1 : $(1 \sim 3)^{\circ}\text{C/sec}$

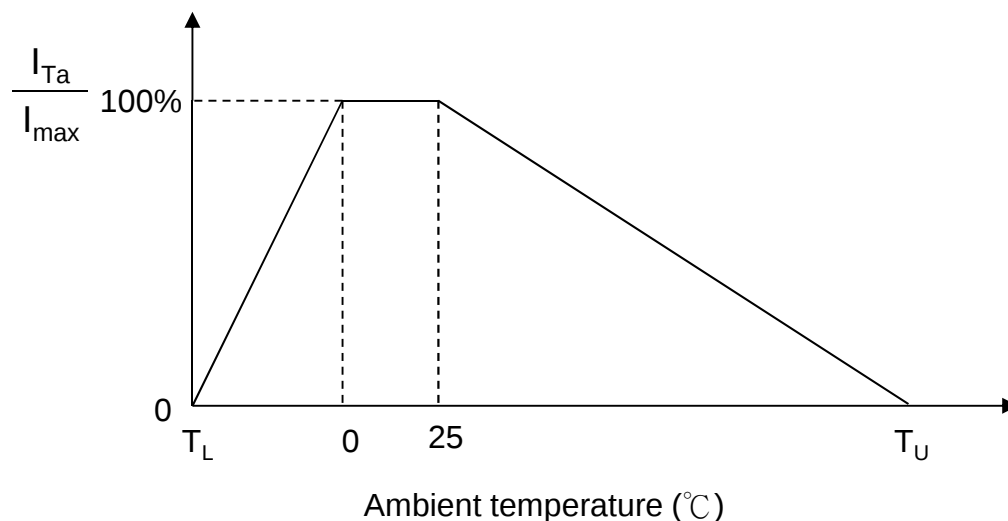
Note 2 : Approx. 200°C/sec

Note 3 : $5^{\circ}\text{C/sec max}$

■ Recommended Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	$360^{\circ}\text{C (max.)}$
Soldering Time	3 sec (max.)
Distance From Thermistor	2 mm (min.)

Max. Current Derating Curve



Note: T_L = Minimum operating temperature (°C)

T_U = Maximum operating temperature (°C)

For example :

Ambient temperature(T_a)=60°C

Maximum operating temperature(T_u)=200°C

$I_{Ta}=[1-(T_a-25)/(T_u-25)] \times I_{max}=80\%I_{max}$.

RoHS Compliant Declaration

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

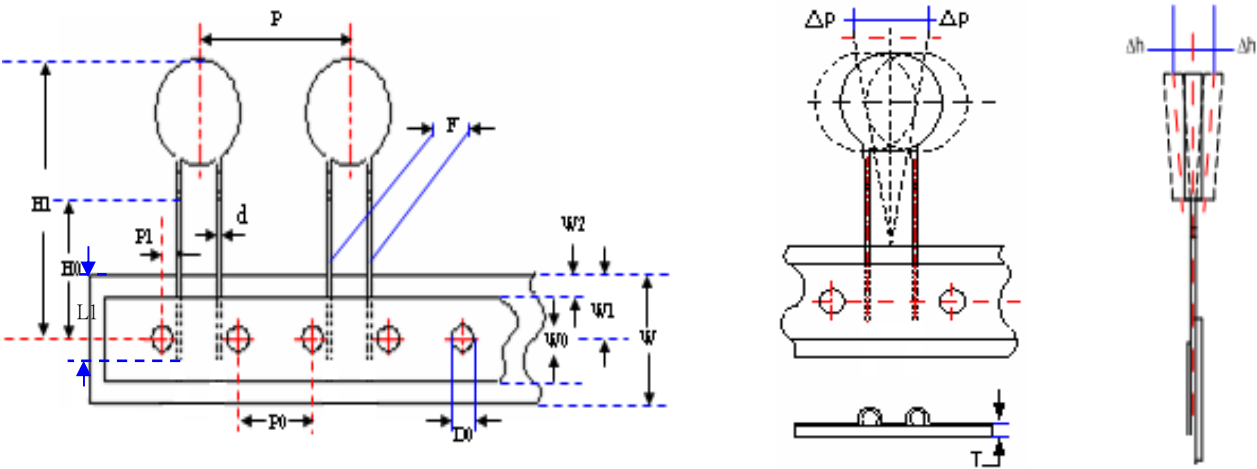
Warehouse Storage Conditions of Products

(I) Storage Conditions :

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

(II) Period of Storage : 1 year

Taping and Dimensions

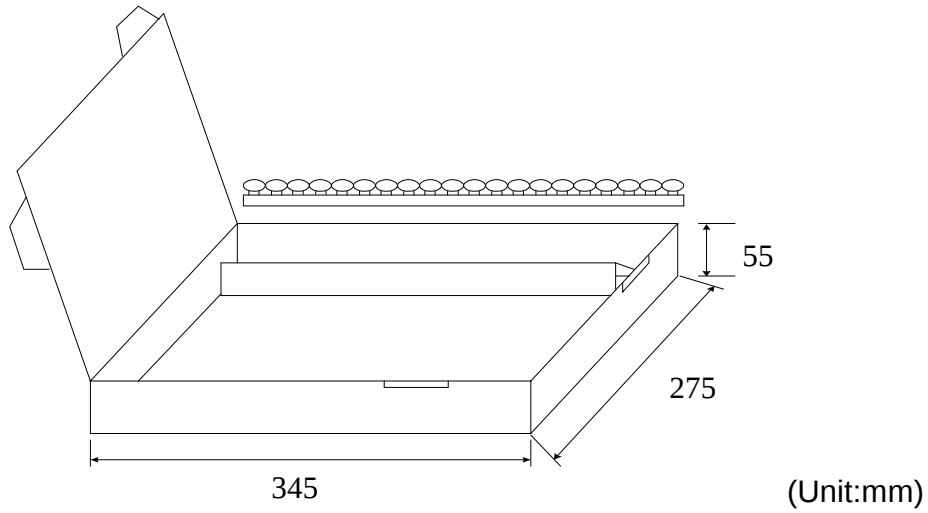


(Unit : mm)

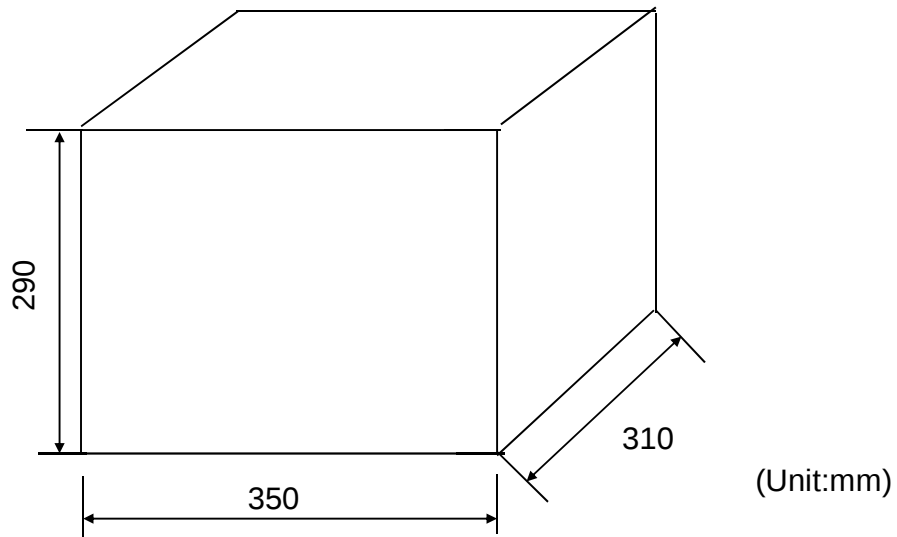
Item	P0	F	P	P1	H0	H1	d	W0	W1	W2	W	ΔP	Δh	L1	D0	T
	±0.3	±0.5	±1	±0.7	±0.5	Max.	±0.02	±1.5	+0.75 /-0.5	Max.	+1/-0.5	Max.	Max.	Min.	±0.2	±0.2
	15	7.5	30	3.75	16	37	1	12	9	3	18	1	2	9	4	0.6

Standard Packing

(1) Quantity (500pcs / box)



(2) : Quantity (5 boxes /Carton)



Safety Approvals (Certified Model/Type : SCK-154)

* UL 1434 / cUL recognized (File # E138827)



* CSA recognized (File # 97495)



* TUV recognized (File # R 50050155)



* CQC GB/T 6663.1-2007 recognized (File # CQC18001199475)

* CQC GB/T 6663.1-2007 recognized (File # CQC18001199472)

Certificates

- (1) IATF 16949 certificate
- (2) ISO 9001 certificate

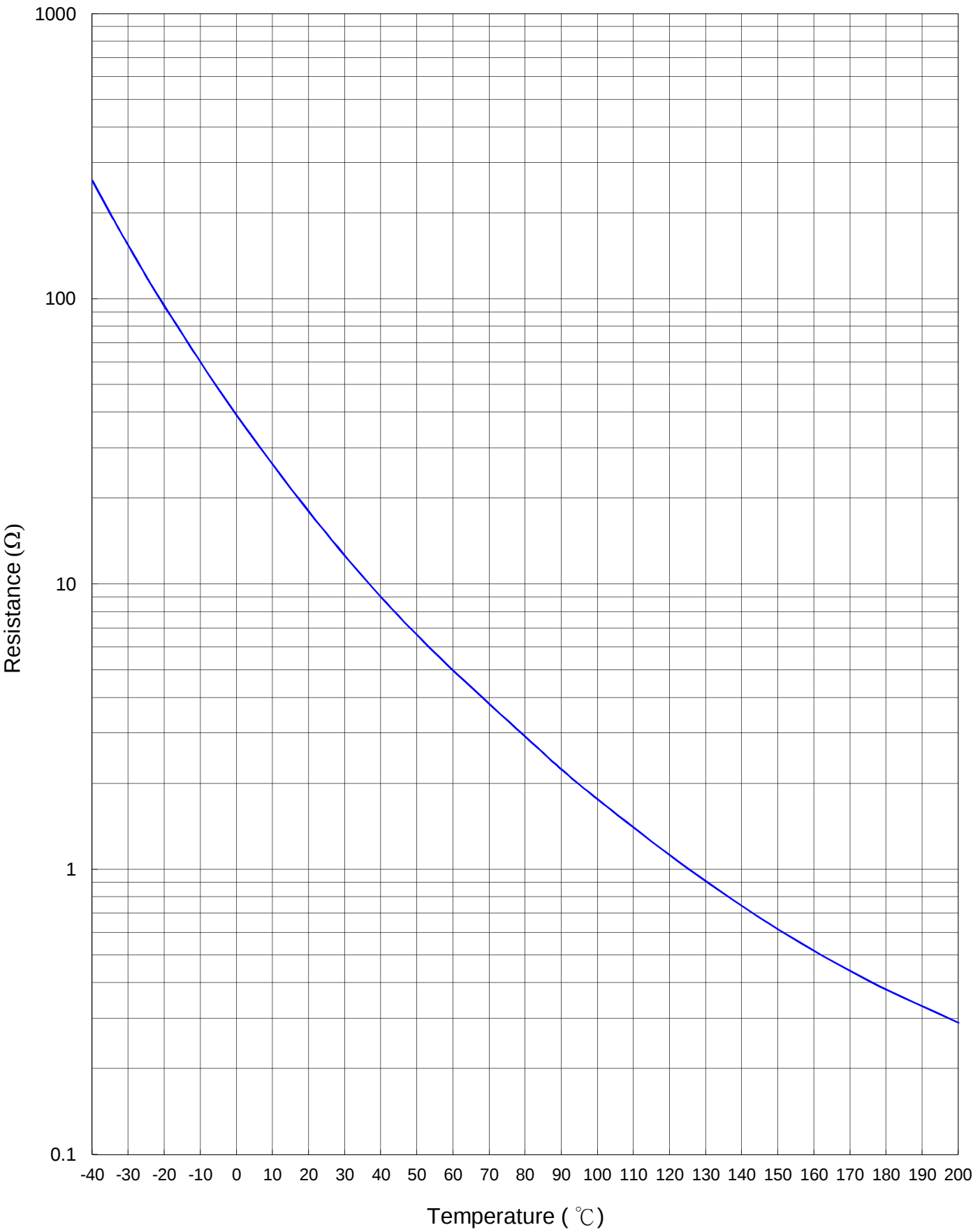
Test Report

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



R-T Characteristic Curve

SCK15154LFY502





V-I Characteristic Curve (Ambient $T_a=25\text{ }^{\circ}\text{C}$)

SCK15154LFY502

