



NTC Thermistor

PRODUCT DATA

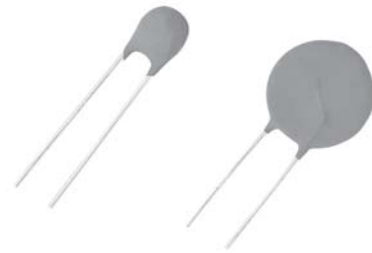
■ Power Thermistor SCK Series

- **Features**

1. Body size $\phi 5\text{mm} \sim \phi 30\text{mm}$
2. Radial lead resin coated
3. $-40 \sim +200\text{ }^{\circ}\text{C}$ operating temperature range
4. High power rating
5. Wide resistance range
6. Cost effective

- **Recommended applications**

1. Switch mode power supply
2. Electric motor
3. Transformer
4. Adapter
5. Projector
6. Halogen lamp



- **Approvals**



* UL 1434 Recognized (File#E138827)



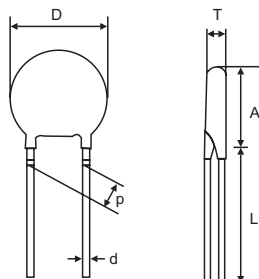
* CSA Recognized (File#97495)

- **Dimensions**

S type (straight lead)

F Y Kink Lead

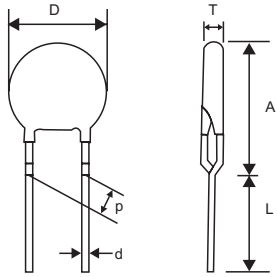
(Unit: mm)



Disc size	Dmax.	Pnor.	dnor.	Amax.	Lmin.	Tmax.
$\phi 05$	6.5	4 ± 0.6	0.8 ± 0.02	6.5	31	5
$\phi 08$	9.5	5 ± 0.8	0.8 ± 0.02	9.5	31	5
$\phi 10$	11.5	5 ± 0.8	0.8 ± 0.02	11.5	31	5
$\phi 13$	14.5	7.5 ± 1	0.8 ± 0.02	14.5	30	6
$\phi 15$	16.5	7.5 ± 1	1 ± 0.02	16.5	29	6
$\phi 20$	21.5	7.5 ± 1	1 ± 0.02	21.5	26	6
$\phi 25$	29	7.5 ± 1	1 ± 0.02	29	25	7
$\phi 30$	36	7.5 ± 1	1 ± 0.02	36	23	8



F type (Y kink lead)



(Unit: mm)

Disc size	Dmax.	Pnor.	dnor.	Amax.	Lmin.	Tmax.
φ08	9.5	5±0.8	0.8±0.02	13	29	5
φ10	11.5	5±0.8	0.8±0.02	15	29	5
φ13	14.5	7.5±1	0.8±0.02	17	27	6
φ15	16.5	7.5±1	1±0.02	20	26	6

I type (inner kink lead)

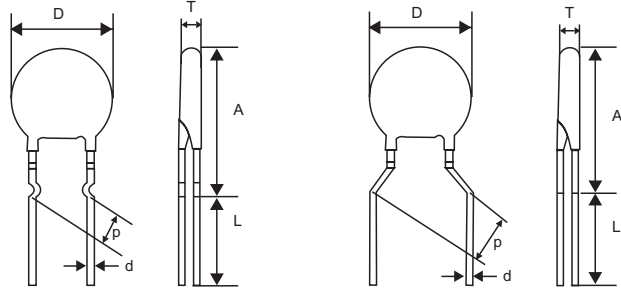


Figure A

Figure B

(Unit: mm)

Disc size	Dmax.	Pnor.	dnor.	Amax.	Lmin.	Tmax.	Figure
φ05	6.5	5±0.8	0.8±0.02	10	29	5	B
φ08	9.5	5±0.8	0.8±0.02	16	25	5	A
φ10	11.5	5±0.8	0.8±0.02	17	25	5	A
φ13	14.5	7.5±1	0.8±0.02	19	25	6	A
φ15	16.5	7.5±1	1±0.02	23	25	6	A
φ20	21.5	7.5±1	1±0.02	28	24	6	A

● Characteristics

Part no.	Zero power resistance at 25 °C (Ω)	Max. steady state current at 25 °C (A)	Max. power rating at 25 °C (W)	Thermal dissipation constant (mW/°C)	Thermal time constant (Sec.)	Operating temperature range (°C)
SCK05052□	5	2	1.8	15	17	-40 ~ +150
SCK05081□	8	1				
SCK05101□	10	1				
SCK05121□	12	1				
SCK0520X3□	20	0.3				
SCK08042□	4	2	2.3	16	38	-40 ~ +170
SCK084R72□	4.7	2				
SCK08053□	5	3				
SCK08063□	6	3				
SCK08073□	7	3				
SCK08082□	8	2				
SCK08102□	10	2				
SCK08152□	15	2				
SCK08201□	20	1				
SCK0830X□	30	0.5				



Part no.	Zero power resistance at 25 °C (Ω)	Max. steady state current at 25 °C (A)	Max. power rating at 25 °C (W)	Thermal dissipation constant (mW/ °C)	Thermal time constant (Sec.)	Operating temperature range (°C)
SCK10015□	1	5	2.4	17	43	-40 ~ +170
SCK101R35□	1.3	5				
SCK101R55□	1.5	5				
SCK102R55A□	2.5	5				
SCK10035□	3	5				
SCK10044□	4	4				
SCK10054□	5	4				
SCK106R83□	6.8	3				
SCK10083□	8	3				
SCK10103□	10	3				
SCK10123□	12	3				
SCK10133□	13	3				
SCK10152X□	15	2.5				
SCK10162X□	16	2.5				
SCK10202□	20	2				
SCK10222□	22	2				
SCK10252□	25	2				
SCK10302□	30	2				
SCK10472□	47	2				
SCK10502□	50	2				
SCK10801□	80	1				
SCK101001□	100	1				
SCK101201□	120	1				
SCK13013□	1	3	3.1	18	66	-40 ~ +200
SCK131R37□	1.3	7				
SCK132R56□	2.5	6				
SCK13045□	4	5				
SCK134R74□	4.7	4				
SCK13055□	5	5				
SCK13074□	7	4				
SCK13084□	8	4				
SCK13104□	10	4				
SCK13124□	12	4				
SCK13153□	15	3				
SCK13163□	16	3				
SCK13183□	18	3				
SCK13203□	20	3				
SCK150R78A□	0.7	8	3.6	21	75	-40 ~ +200
SCK15016□	1	6				
SCK151R38□	1.3	8				
SCK151R58□	1.5	8				
SCK15028□	2	8				
SCK152R58□	2.5	8				
SCK15037□	3	7				
SCK15046□	4	6				
SCK15056□	5	6				
SCK15065□	6	5				
SCK15075□	7	5				
SCK15085□	8	5				
SCK15105□	10	5				
SCK15125□	12	5				
SCK15154□	15	4				
SCK15164□	16	4				
SCK15184□	18	4				
SCK15204□	20	4				
SCK15224□	22	4				
SCK15253□	25	3				



Part no.	Zero power resistance at 25°C (Ω)	Max. steady state current at 25°C (A)	Max. power rating at 25°C (W)	Thermal dissipation constant (mW/°C)	Thermal time constant (Sec.)	Operating temperature range (°C)
SCK15303□	30	3	3.6	21	75	-40 ~ +200
SCK15403□	40	3				
SCK15473□	47	3				
SCK15802X□	80	2.5				
SCK151202□	120	2				
SCK200R7□	0.7	15	4.9	28	113	-40~+200
SCK201R0□	1	13				
SCK201R5□	1.5	10.5				
SCK202R0□	2	10				
SCK202R5□	2.5	9				
SCK203R0□	3	8.5				
SCK204R0□	4	8				
SCK204R7□	4.7	7.5				
SCK205R0□	5	7.5				
SCK206R0□	6	7				
SCK206R8□	6.8	6.5				
SCK207R0□	7	6.5				
SCK208R0□	8	6				
SCK20100□	10	5.5				
SCK20120□	12	5				
SCK20130□	13	5				
SCK20150□	15	4.5				
SCK20160□	16	4.5				
SCK20180□	18	4				
SCK20200□	20	4				
SCK251R0□	1	20	5.2	30	150	-40 ~ +200
SCK251R5□	1.5	18.5				
SCK252R0□	2	18				
SCK252R5□	2.5	15				
SCK253R0□	3	14.5				
SCK254R0□	4	14				
SCK254R7□	4.7	13				
SCK255R0□	5	12				
SCK256R8□	6.8	10.5				
SCK257R0□	7	10				
SCK258R0□	8	9				
SCK25100□	10	8				
SCK25120□	12	7.5				
SCK25150□	15	6.5				
SCK25180□	18	5.5				
SCK25200□	20	5				
SCK25121□	120	3				
SCK301R0□	1	30	7.0	40	190	-40 ~ +200
SCK301R5□	1.5	25				
SCK302R0□	2	23				
SCK302R5□	2.5	18				
SCK303R0□	3	17				
SCK304R0□	4	16				
SCK304R7□	4.7	15				
SCK305R0□	5	14				
SCK306R8□	6.8	12				
SCK307R0□	7	11.5				
SCK308R0□	8	10.5				
SCK30100□	10	10				
SCK30120□	12	9				
SCK30150□	15	8				
SCK30180□	18	7				
SCK30200□	20	6				

Note : □ = Tolerance of resistance



● Reliability test

φ 5mm~φ 30mm

Item	Standard	Test conditions / Methods	Specifications															
Tensile Strength of Terminals	IEC68-2-21	Gradually applying the force specified below to each terminal and keeping the unit fixed for 10 ± 1 sec. <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border-bottom: 1px solid black;">Terminal diameter (mm)</th> <th style="text-align: center; border-bottom: 1px solid black;">Force (kg)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.5<d≤0.80</td> <td style="text-align: center;">1.0</td> </tr> <tr> <td style="text-align: center;">0.8<d≤1.25</td> <td style="text-align: center;">2.0</td> </tr> </tbody> </table>	Terminal diameter (mm)	Force (kg)	0.5<d≤0.80	1.0	0.8<d≤1.25	2.0	No visible damage									
Terminal diameter (mm)	Force (kg)																	
0.5<d≤0.80	1.0																	
0.8<d≤1.25	2.0																	
Bending Strength of Terminals	IEC68-2-21	Hanging the force specified below to each terminal and gradually bending each terminal by 90° in one direction, then 90° in the opposite direction, and again back to the origin. <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border-bottom: 1px solid black;">Terminal diameter (mm)</th> <th style="text-align: center; border-bottom: 1px solid black;">Force (kg)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.5<d≤0.80</td> <td style="text-align: center;">0.5</td> </tr> <tr> <td style="text-align: center;">0.8<d≤1.25</td> <td style="text-align: center;">1.0</td> </tr> </tbody> </table>	Terminal diameter (mm)	Force (kg)	0.5<d≤0.80	0.5	0.8<d≤1.25	1.0	No visible damage									
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0.5<d≤0.80	0.5																	
0.8<d≤1.25	1.0																	
Solderability	IEC68-2-20	235 ± 5°C , 2 ± 0.5 sec	At least 95% of terminal electrode is covered by new solder															
Resistance to Soldering Heat	IEC68-2-20	350 ± 5°C , 3.5 ± 0.5 sec	No visible damage ΔR/R ≤ 10 %															
High Temperature Storage	IEC68-2-2 UL1434	Tmax ± 5°C X 1000 HRS	No visible damage ΔR/R ≤ 20 %															
Damp Heat	IEC68-2-3 UL1434	40 ± 2°C , 90 ~ 95 % RH , 1000 ± 24 HRS	No visible damage ΔR/R ≤ 20 %															
Thermal Shock	IEC68-2-14 UL1434	The thermal shock conditions shown below shall be repeated 5 cycles <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Period (minutes)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Tmin ± 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>Tmax ± 5</td> <td>30 ± 3</td> </tr> <tr> <td>4</td> <td>Room temperature</td> <td>5 ± 3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Period (minutes)	1	Tmin ± 5	30 ± 3	2	Room temperature	5 ± 3	3	Tmax ± 5	30 ± 3	4	Room temperature	5 ± 3	No visible damage ΔR/R ≤ 20 %
Step	Temperature (°C)	Period (minutes)																
1	Tmin ± 5	30 ± 3																
2	Room temperature	5 ± 3																
3	Tmax ± 5	30 ± 3																
4	Room temperature	5 ± 3																
Life Test	CNS5550	25 ± 5°C, Imax. X 1000 HRS	No visible damage ΔR/R ≤ 20 %															
Endurance	UL1434	25 ± 5°C, Imax. , CT, 1min ON / 5 min OFF x 1000 cycles CT=Capacitance at 240Vac	No visible damage ΔR/R ≤ 20 %															
Insulation test	MIL-STD-202F -Method 302	1000 VDC 1 min	No visible damage ≥ 500 MΩ															