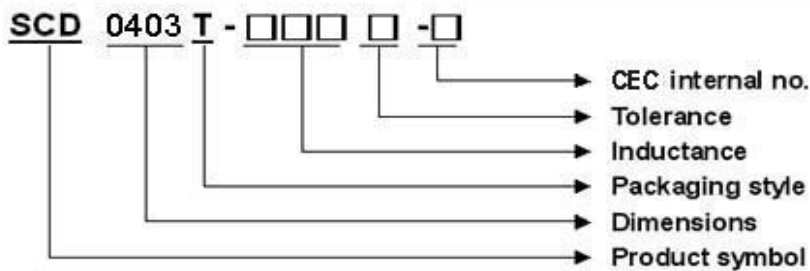


SCD0403T Series Specification

1 Scope: This specification applies to SMD POWER CHOKE

2 Part Numbering: Product Identification

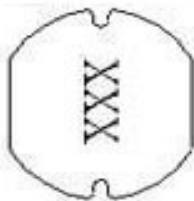


3 Rating:

Operating Temperature: $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$

Storage Temperature: Under 25°C , **Humidity** < 75% RH

4 Marking:



Ex : SCD□□□□T-100M-N

Marking : 100

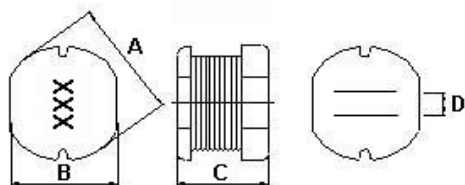
Marking color : Black

5 Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35°C)	20±2°C
Humidity	Ordinary Humidity(25 to 85% RH)	60 to 70 % RH

SCD0403T Series Specification

6 Configuration and Dimensions:



Dimensions in mm

TYPE	SCD0403
A	4.5±0.3
B	4.0±0.3
C	3.2±0.3
D	1.2

7 ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)Max.	IDC (A)	Tolerance (±%)
SCD0403T-1R0□-N	1	7.96 MHz,1 V	0.033	3.8	10,15,20
SCD0403T-1R2□-N	1.2	7.96 MHz,1 V	0.035	3.5	20
SCD0403T-1R4□-N	1.4	7.96 MHz,1 V	0.038	3.3	20
SCD0403T-1R8□-N	1.8	7.96 MHz,1 V	0.042	2.91	20
SCD0403T-2R2□-N	2.2	7.96 MHz,1 V	0.047	2.6	10,15,20
SCD0403T-2R7□-N	2.7	7.96 MHz,1 V	0.052	2.43	20
SCD0403T-3R3□-N	3.3	7.96 MHz,1 V	0.058	2.15	20
SCD0403T-3R9□-N	3.9	7.96 MHz,1 V	0.076	1.98	20
SCD0403T-4R7□-N	4.7	7.96 MHz,1 V	0.094	1.7	10,15,20
SCD0403T-5R6□-N	5.6	7.96 MHz,1 V	0.101	1.6	10,15,20
SCD0403T-6R2□-N	6.2	7.96 MHz,1 V	0.11	1.5	20
SCD0403T-6R8□-N	6.8	7.96 MHz,1 V	0.117	1.41	10,15,20
SCD0403T-8R2□-N	8.2	7.96 MHz,1 V	0.132	1.26	10,15,20
SCD0403T-100□-N	10	2.52 MHz,1 V	0.182	1.15	10,15,20
SCD0403T-120□-N	12	2.52 MHz,1 V	0.21	1.05	20
SCD0403T-150□-N	15	2.52 MHz,1 V	0.235	0.92	10,15,20
SCD0403T-180□-N	18	2.52 MHz,1 V	0.338	0.84	20
SCD0403T-220□-N	22	2.52 MHz,1 V	0.378	0.76	10,15,20
SCD0403T-270□-N	27	2.52 MHz,1 V	0.522	0.71	20
SCD0403T-330□-N	33	2.52 MHz,1 V	0.54	0.64	10,15,20
SCD0403T-390□-N	39	2.52 MHz,1 V	0.587	0.59	10,15,20
SCD0403T-470□-N	47	2.52 MHz,1 V	0.844	0.54	10,15,20
SCD0403T-560□-N	56	2.52 MHz,1 V	0.937	0.5	10,15,20
SCD0403T-680□-N	68	2.52 MHz,1 V	1.117	0.46	10,15,20
SCD0403T-101□-N	100	1KHz,1 V	2	0.4	10,15,20

NOTE: □-tolerance K=±10% / =±15% / M=±20%

1. Operating temperature range – 4 0 °C ~ 8 5 °C

2. This indicates the value of current when the inductance is 10% lower than its initial value at

D.C superposition of D.C current when at Δt=40°C whichever is lower.

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

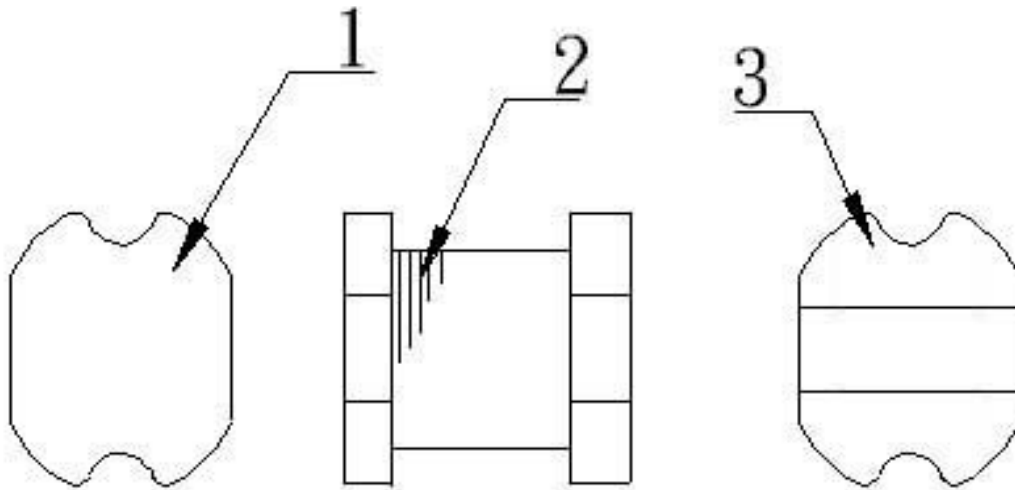
SCD0403T Series Specification

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)Max.	IDC (A)	Tolerance ($\pm\%$)
SCD0403T-121□-N	120	1KHz,1 V	1.8	0.38	10,15,20
SCD0403T-151□-N	150	1KHz,1 V	2.8	0.3	10,15,20
SCD0403T-181□-N	180	1KHz,1 V	3.2	0.25	10,15,20
SCD0403T-221□-N	220	1KHz,1 V	4	0.15	10,15,20
SCD0403T-331□-N	330	1 KHz,1 V	5.85	0.21	10,15,20

SCD0403T Series Specification

8 SCD0403T Series

8.1 Construction:



8.2 Material List:

ITEM	PART	DESCRIPTION	SUPPLIES
1	CORE	FERRITE	CHILISIN
2	WIRE	MAGNET WIRE	
3	TERMINAL	Sn/Ag3.0/Cu0.5	Dyfenco

SCD0403T Series Specification

9 Reliability Of Ferrite Wire Wound Power Inductor

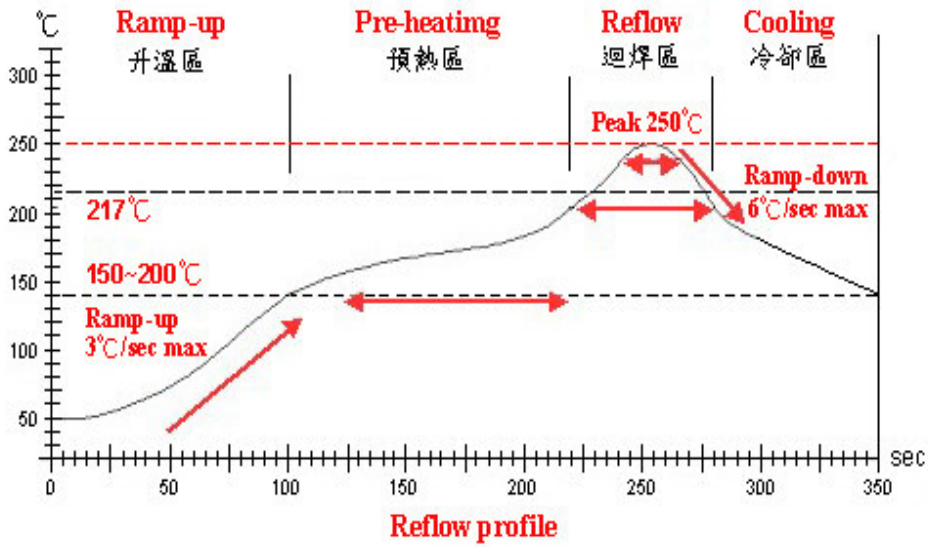
1-1.Mechanical Performance

No	Item	Specification	Test Method
1-1-1	Vibration	Appearance: No damage Inductance: within $\pm 10\%$ of initial value	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y & Z), total 6hrs
1-1-2	Resistance to Soldering Heat	Appearance: No damage	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 260 \pm 5°C Immersion Time: 10 \pm 1sec
1-1-3	Solder ability	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 245 \pm 5°C Immersion Time: 4 \pm 1sec
1-1-4	Resistance to solvent	There must be no change in appearance or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.

1-2.Environmental Performance

No	Item	Specification	Test Method															
1-2-1	Temperature Shock	Appearance: No damage Inductance: within $\pm 10\%$ of initial value	10 cycles (Air to Air) 1 cycles shall consist of: 30 minutes exposure to -55 °C 30 minutes exposure to 125 °C 15 seconds maximum transition between temperatures															
1-2-2	Temperature Cycle		One cycle: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25\pm3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25\pm2</td> <td>3</td> </tr> <tr> <td>3</td> <td>85\pm3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25\pm2</td> <td>3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Time (min)	1	-25 \pm 3	30	2	25 \pm 2	3	3	85 \pm 3	30	4	25 \pm 2	3
Step	Temperature (°C)	Time (min)																
1	-25 \pm 3	30																
2	25 \pm 2	3																
3	85 \pm 3	30																
4	25 \pm 2	3																
1-2-3	Humidity Resistance		Total: 100cycles Measured after exposure in the room condition for 24hrs Temperature: 40 \pm 2°C Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs															
1-2-4	Heat Life		Temperature: 85 \pm 3°C Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs															
1-2-5	Cold Resistance		Temperature: -25 \pm 3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs															

SCD0403T Series Specification



Lead-Free(LF) 標準溫度分析範圍

Refer to J-STD-020C

管制項目 Item.	升温區 Ramp-up	預熱區 Pre-heating	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp.scope	R.T. ~ 150°C	150°C ~ 200°C	217°C	250±5°C	Peak Temp. ~ 150°C
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150sec	20 ~ 40 sec	—
實際時間 Time result	—	60 ~ 95sec	75 ~ 95 sec	20 ~ 35 sec	—

SCD0403T Series Specification

10 TEST DATA FOR PREPRODUCTION SAMPLES

QF-1419

DESCRIPTION: SCD0403T-220M-N

MEAS. Item	L (uH)	RDC (Ω)	IDC (A)	A m/m	B m/m	C m/m					
Spec	Customer	22±20%									
	Suggest		0.378+0	0.76	4.5±0.3	4±0.3	3.2±0.3				
Test Freq.	2.52MHz 1V										
1	22.2	0.288	OK	4.39	4.18	3.27					
2	22.7	0.296	OK	4.42	4.15	3.23					
3	22.8	0.286	OK	4.39	4.12	3.35					
4	22.3	0.291	OK	4.5	4.18	3.28					
5	22.4	0.295	OK	4.56	4.08	3.22					
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
X	22.48	0.2912		4.452	4.142	3.27					
R	0.6	0.01		0.17	0.1	0.13					
CUSTOMER											
SAMPLE											

TEST INSTRUMENT:

L:HP4192A / HP4285A
RDC:CHEN HWA 502
IDC: HP4284A+HP42841A

APPEARANCE AND DIMENSIONS :

SPEC : MEET ITEM 6.
TEST METHOD : VISUAL INSPECTION AND MEASURED WITH SILDE CALIPERS.

TESTING CONDITIONS :

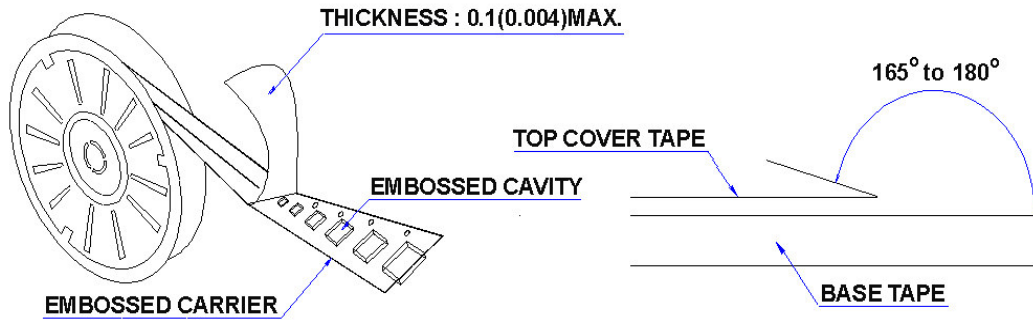
	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature (15 to 35°C)	20 ± 2 °C
Humidity	Ordinary Humidity (25 to 85 %RH)	60 to 70 %RH

SCD0403T Series Specification

11 PACKAGING

11.1 Packaging -Cover tape

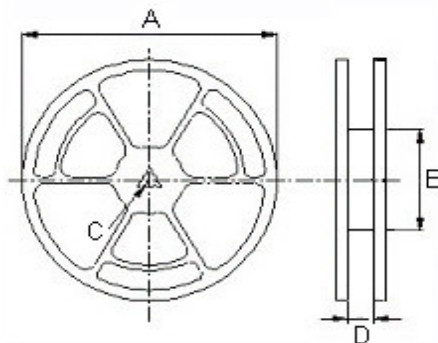
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



11.2 Packaging Quantity

TYPE	BULK	PCS/REEL
SCD0403	✓	2000
SCD0504	✓	1500
SCD0703	✓	1000
SCD0705	✓	700
SCD1004	✓	700
SCD1005	✓	700

11.3 Reel Dimensions



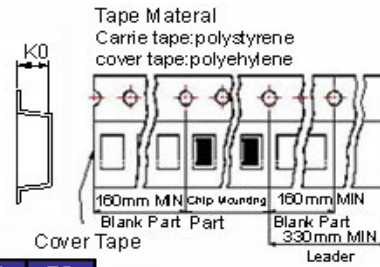
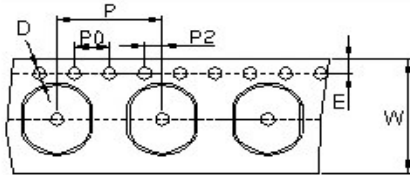
Reel Dimension : m/m

TYPE	A	B	C	D
SCD0403	330	100	13	13.4
SCD0504	330	100	13	17.4
SCD0703	330	100	13	17.4
SCD0705	330	100	13	17.4
SCD1004	330	100	13	24.4
SCD1005	330	100	13	24.4

SCD0403T Series Specification

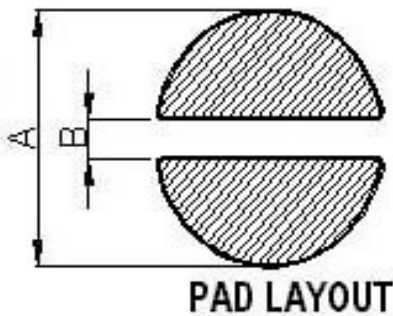
11 PACKAGING

11.4 Tape Dimensions in mm



TYPE	K0	D	E	W	P	P0	P2
SCD0403	3.10	1.55	1.75	12	8	4	2
SCD0504	4.80	1.55	1.75	16	8	4	2
SCD0703	3.80	1.55	1.75	16	12	4	2
SCD0705	5.20	1.55	1.75	16	12	4	2
SCD1004	5.80	1.55	1.75	24	12	4	2
SCD1005	5.80	1.55	1.75	24	12	4	2

12 Recommended Pattern



Dimensions in mm

TYPE	A(in/mm)	B(in/mm)
SCD0403	0.22/5.5	0.047/1.2
SCD0504	0.268/6.8	0.051/1.3
SCD0703	0.346/8.8	0.083/2.1
SCD0705	0.346/8.8	0.083/2.1
SCD1004	0.433/11	0.083/2.1
SCD1005	0.433/11	0.083/2.1

13 Note:

1. Please make sure that your product is has been evaluated and confirmed against your specifications when our product is mounted to your product.
2. Do not knock nor drop.
3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)

SCD0403T Series Specification

14 Curve:

