ISO9001 & ISO14001 & TS16949 **CHILISIN ELECTRONICS CORP.**

Lead-Free & RoHs Compliance!!

SPECIFICATION FOR APPROVAL

CUSTOMER：	**ELTECH**		
CUSTOMER P/N：			
OUR DWG No：	**CE1-3B0019**		
QUANTITY：	**0 Pcs.**	**DATE：**	**2013/11/14**
ITEM：	**SCD0504T-221M-N0.44A**		

SPECIFICATION ACCEPTED BY:	
COMPONENT ENGINEER	
ELECTRICAL ENGINEER	
MECHANICAL ENGINEER	
APPROVED	
REJECTED	

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ISO9001 & ISO14001 & TS16949 **CHILISIN ELECTRONICS CORP.**

SCD0504T Series Specification

1 Scope: This specification applies to SMD POWER CHOKE

2 Part Numbering: Product Identification

SCD □□□□ □ - □□□ □ - □

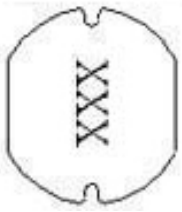
- CEC internal no.
- Tolerance
- Inductance
- Packaging Style
- Dimensions code
- Product symbol

3 Rating:

Operating Temperature: －40℃～105℃**(Including self - temperature rise)**

Storage Temperature: Under 25℃ ,Humidity < 75% RH

4 Marking:



Ex : SCD0504T-221M-N0.44A

Marking : 221

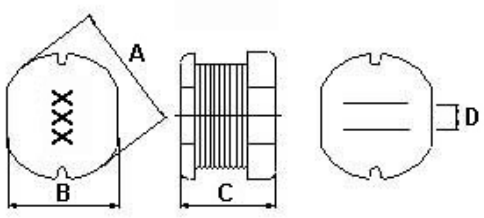
Marking color : Black

5 Standard Testing Condition

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

SCD0504T Series Specification

6 Configuration and Dimensions:



Dimensions in mm

TYPE	SCD0504
A	5.8±0.3
B	5.2±0.3
C	4.5±0.4
D	1.3

7 ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)Max.	Isat (A)Typ.	Irms (A)Max.	Tolerance (±%)	Marking
SCD0504T-221□-N0.44A	220	1 kHz,1 V	1.57	0.44	0.35	10,20	221

NOTE: □-tolerance K=±10% / M=±20%

1.Operating temperature range －４０℃～１０５℃(Including self - temperature rise)

2.Isat:Inductance drop =10% typ.

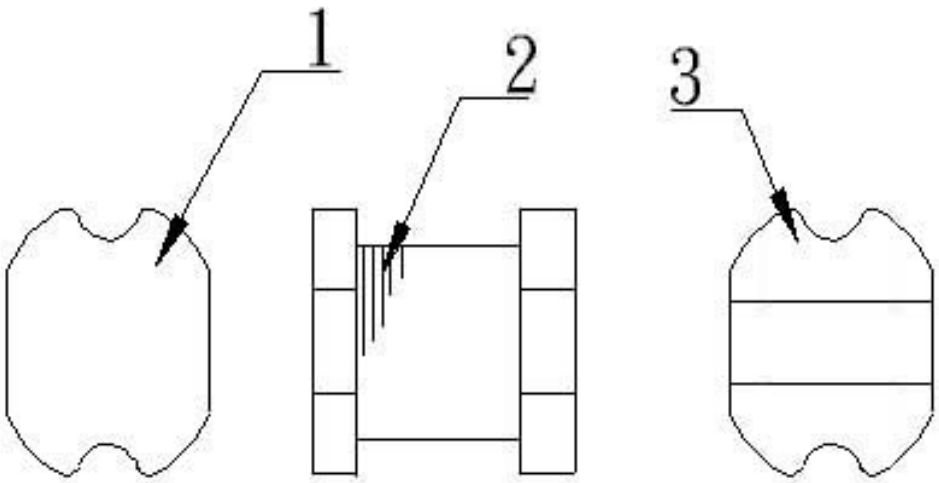
3.Irms: ΔT≦40℃

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

SCD0504T Series Specification

8 SCD0504T 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

SCD0504T 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±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℃, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 260±5℃ Immersion Time: 10±1sec
1-1-3	Solder ability	The electrodes shall be at least 95% covered with new solder coating	Pre-heating: 150℃, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 245±5℃ Immersion Time: 4±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

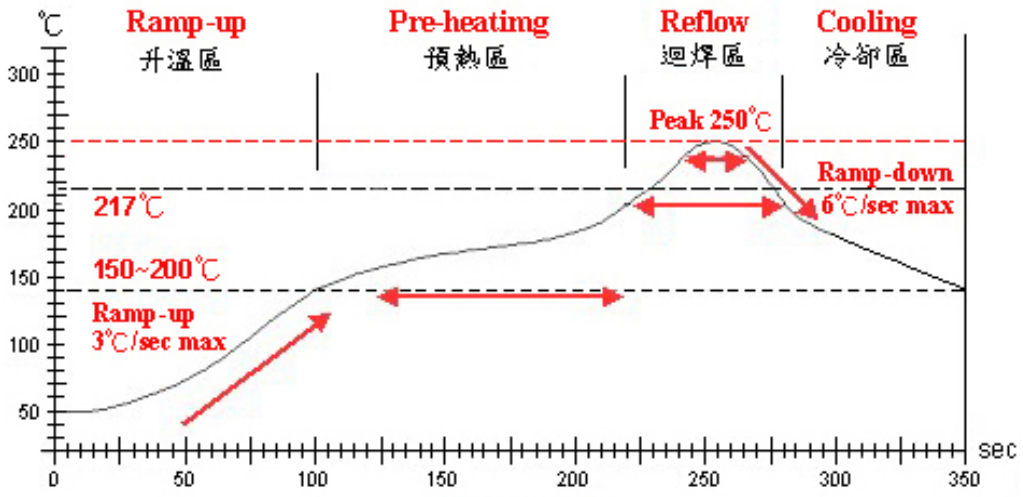
No	Item	Specification	Test Method
1-2-1	Temperature Shock	Appearance: No damage Inductance:within±10% of initial value	10 cycles (Air to Air) 1 cycles shall consist of: 30 minutes exposure to –55 ℃ 30 minutes exposure to 125 ℃ 15 seconds maximum transition between temperatures
1-2-2	Temperature Cycle		One cycle:

Step	Temperature (℃)	Time (min)
1	-40±3	30
2	25±2	3
3	105±3	30
4	25±2	3

Total: 100cycles
Measured after exposure in the room condition for 24hrs

1-2-3	Humidity Resistance		Temperature: 40±2℃ Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-4	Heat Life		Temperature: 85±3℃ Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-5	Cold Resistance		Temperature: -40±3℃ Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs

SCD0504T Series Specification



Reflow profile

Lead-Free(LF) 標準溫度分析範圍 Refer to J-STD-020C

管制項目 Item.	升溫區 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℃	150℃~200℃	217℃	250±5℃	Peak Temp.~150℃
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150 sec	20 ~ 40 sec	—
實際時間 Time result	—	60 ~ 95 sec	75 ~ 95 sec	20 ~ 35 sec	—

SCD0504T Series Specification

10 TEST DATA FOR PREPRODUCTION SAMPLES

QF-1419

DESCRIPTION: SCD0504T-221M-N0.44A

MEAS. Item		L (uH)	RDC (Ω)	Isat (A)	A m/m	B m/m	C m/m					
Spec	Customer	220±20%		0.44 TYP								
	Suggest		1.57+0		5.8±0.3	5.2±0.3	4.5±0.4					
Test Freq.		1kHz 1V										
1		219	1.19	0.45	5.88	5.24	4.68					
2		225	1.17	0.44	5.82	5.28	4.62					
3		217	1.18	0.46	5.85	5.21	4.63					
4		216	1.21	0.45	5.81	5.24	4.67					
5		223	1.19	0.47	5.84	5.25	4.64					
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
$\bar{X}$		220	1.188	0.454	5.84	5.244	4.648					
R		9	0.04	0.03	0.07	0.07	0.06					
CUSTOMER												
SAMPLE												

TEST INSTRUMENT:

L:E4980 or HP4284A (under 1MHz)

L:HP4285A (over 1MHz)

RDC:CHEN HWA 502

Isat:HP4284A+HP42841A or WK3260B+WK3265B

APPEARANCE AND DIMENSIONS :

SPEC : MEET ITEM 6.

TEST METHOD : VISUAL INSPECTION AND MEASURED WITH SILDE CALIPERS.

TESTING CONDITIONS :

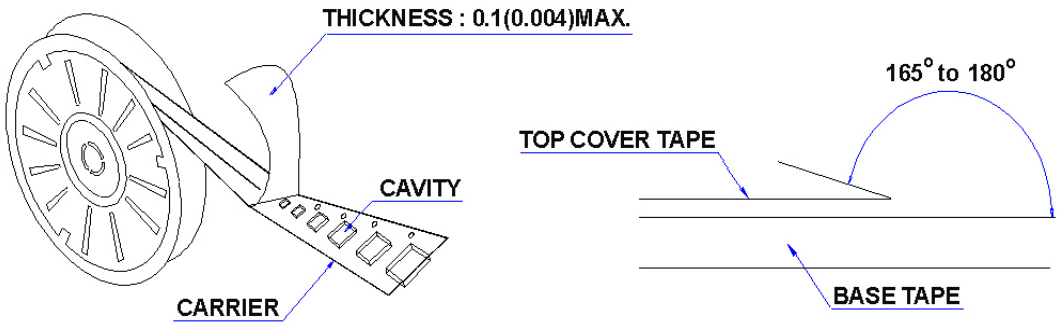
	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature (15 to 35℃)	20 ± 2 ℃
Humidity	Ordinary Humidity (25 to 85 %RH)	60 to 70 %RH

SCD0504T Series Specification

11 PACKAGING

11.1 Packaging -Cover tape

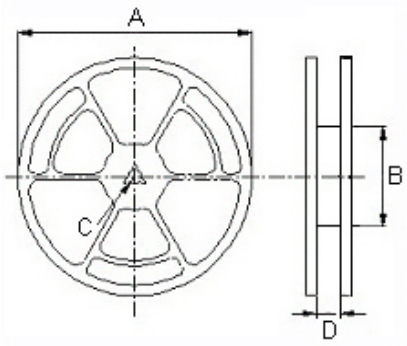
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



11.2 Packaging Quantity

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

11.3 Reel Dimensions



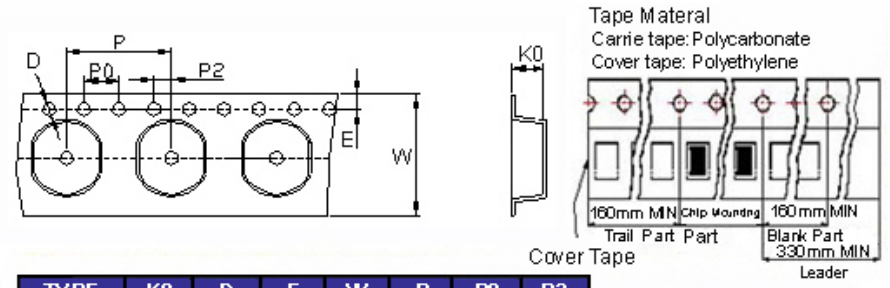
Reel Dimension : m/m

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

SCD0504T Series Specification

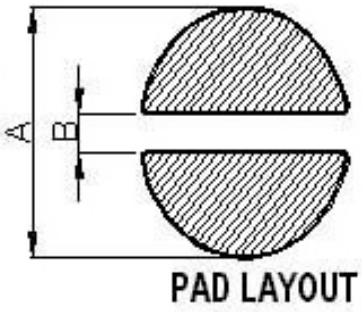
11 PACKAGING

11.4 Tape Dimensions in mm



TYPE	K0	D	E	W	P	P0	P2
SCD0403	3.55	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	4.50	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)

SCD0504T Series Specification

14 Curve: