



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

**Lead-Free & RoHs Compliance!!**

## SPECIFICATION FOR APPROVAL

**CUSTOMER :** \_\_\_\_\_

**CUSTOMER P/N :** \_\_\_\_\_

**OUR DWG No :** \_\_\_\_\_

**QUANTITY :** 0 Pcs. **DATE :** 2013/06/10

**ITEM :** SCDS8D43T`gYfJYg

SPECIFICATION ACCEPTED BY:	
<b>COMPONENT ENGINEER</b>	
<b>ELECTRICAL ENGINEER</b>	
<b>MECHANICAL ENGINEER</b>	
<b>APPROVED</b>	
<b>REJECTED</b>	

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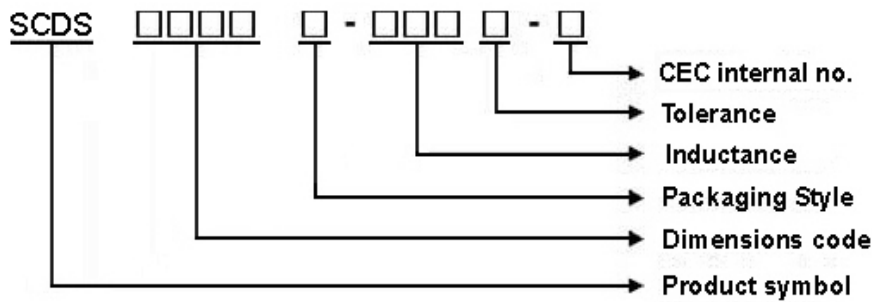
  

<b>DRAWN BY</b> <b>陳瑞揚 ryan.chen</b>	<b>CHECKED BY</b> <b>張麗玲 ll.chang</b>	<b>APPROVED BY</b> <b>陳瑞揚 ryan.chen</b>
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# SCDS8D43T Series Specification

**1** Scope: This specification applies to SMD POWER CHOKE

**2** Part Numbering: Product Identification

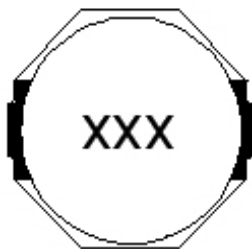


**3** Rating:

Operating Temperature:  $-30^{\circ}\text{C} \sim 100^{\circ}\text{C}$  (Including self - temperature rise)

Storage Temperature: Under  $25^{\circ}\text{C}$ , Humidity < 75% RH

**4** Marking:



**Ex : SCDS8D43T-470M-N**

**Marking : 470**

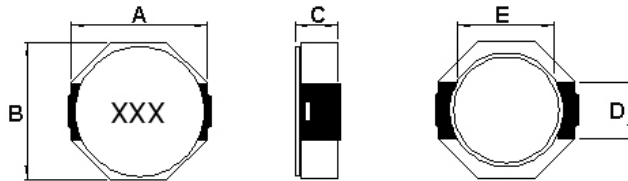
**Marking color : Black**

**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

## SCDS8D43T Series Specification

### 6 Configuration and Dimensions:



TYPE	A m/m	B m/m	C m/m	D m/m	E m/m
SCDS8D43	8.3Max.	8.3Max.	4.5Max.	2.5	6.3

### 7 ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)Max.	Rated Current (A)	Tolerance	Marking
SCDS8D43T-3R3□-N	3.3	100 kHz, 1 V	0.019	5.7	M	3R3
SCDS8D43T-100□-N	10	100 kHz, 1 V	0.036	4	M	100
SCDS8D43T-150□-N	15	100 kHz, 1 V	0.053	2.9	M	150
SCDS8D43T-220□-N	22	100 kHz, 1 V	0.075	2.4	M	220
SCDS8D43T-470□-N	47	100 kHz, 1 V	0.15	1.8	M	470
SCDS8D43T-680□-N	68	100 kHz, 1 V	0.24	1.5	M	680

**NOTE:** □-tolerance M=±20%

1. Operating temperature range – 3 0 °C ~ 1 0 0 °C (Including self - temperature rise)

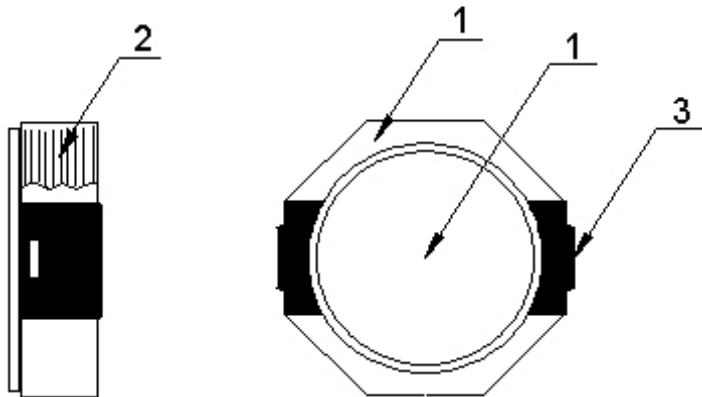
2. Rated Current: Inductance drop = 35% typ.

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

# SCDS8D43T Series Specification

## 8 SCDS8D43T Series

### 8.1 Construction:



### 8.2 Material List:

ITEM	PART	DESCRIPTION	SUPPLIES
1	CORE	FERRITE	CHILISIN
2	WIRE	MAGNET WIRE	
3	TERMINAL	TERMINAL COPPER	CHILISIN



# SCDS8D43T Series Specification

## 9 Reliability Of Ferrite Wire Wound Power Inductor

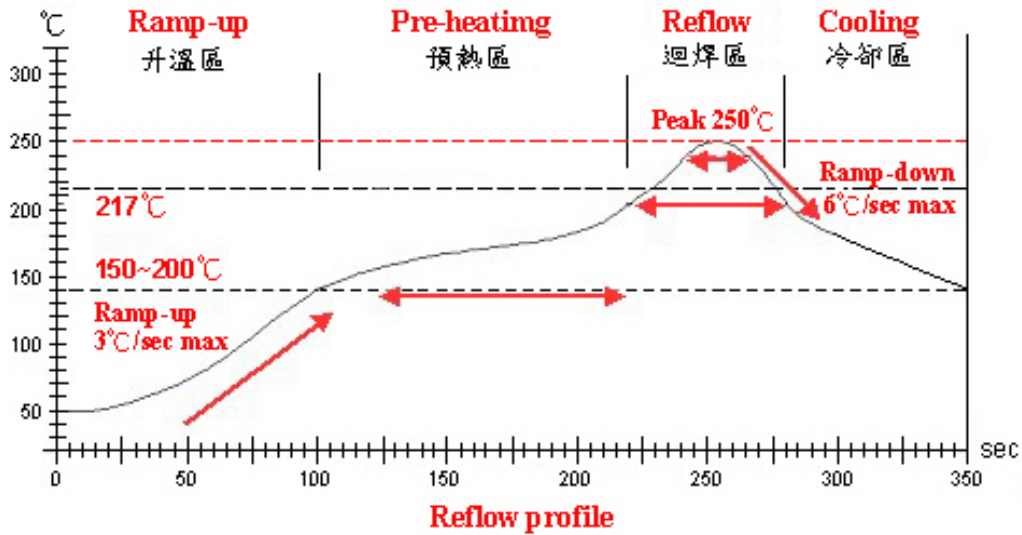
### 1-1.Mechanical Performance

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 95% 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" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40<math>\pm</math>3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25<math>\pm</math>2</td> <td>3</td> </tr> <tr> <td>3</td> <td>105<math>\pm</math>3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25<math>\pm</math>2</td> <td>3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Time (min)	1	-40 $\pm$ 3	30	2	25 $\pm$ 2	3	3	105 $\pm$ 3	30	4	25 $\pm$ 2	3
Step	Temperature (°C)		Time (min)															
1	-40 $\pm$ 3		30															
2	25 $\pm$ 2		3															
3	105 $\pm$ 3	30																
4	25 $\pm$ 2	3																
1-2-3	Humidity Resistance	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: -40 $\pm$ 3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs																

# SCDS8D43T Series Specification



**Lead-Free(LF) 標準溫度分析範圍**

Refer to J-STD-020C

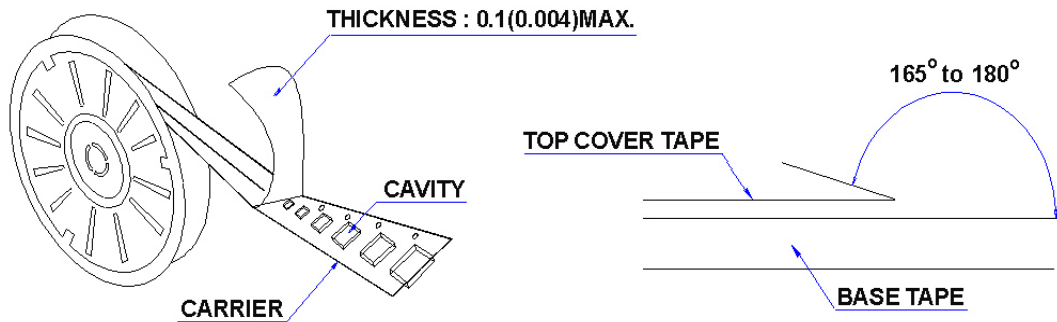
管制項目 Item.	升溫區 Ramp-up	預熱區 Pre-heating	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp.scope	R.T. ~ 150°C	150°C ~ 200°C	217°C	250±5°C	Peak Temp. ~ 150°C
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150 sec	20 ~ 40 sec	—
實際時間 Time result	—	60 ~ 95 sec	75 ~ 95 sec	20 ~ 35 sec	—

# SCDS8D43T Series Specification

## 11 PACKAGING

### 11.1 Packaging -Cover tape

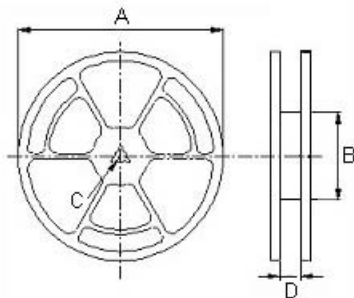
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



### 11.2 Packaging Quantity

TYPE	BULK	PCS/REEL
SCDS8D43	✓	1000

### 11.3 Reel Dimensions



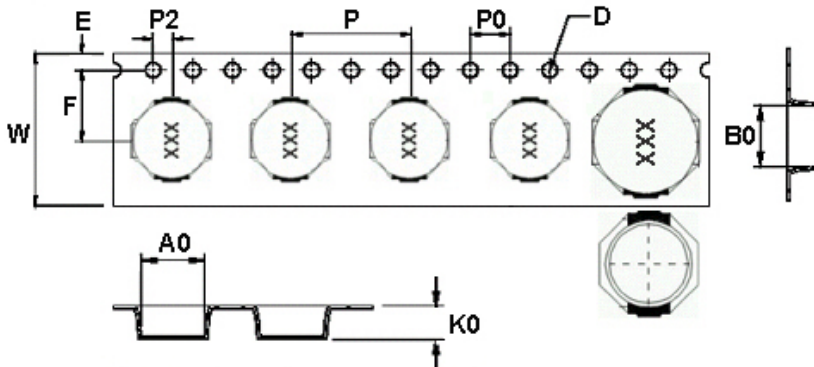
Reel Dimesions : m/m

TYPE	A	B	C	D
SCDS8D43	330	100	13	24.4

# SCDS8D43T Series Specification

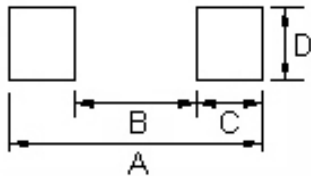
## 11 PACKAGING

### 11.4 Tape Dimensions in mm



TYPE	A0	B0	K0	D	E	F	W	P	P0	P2
SCDS8D43	8.4	9.9	4.8	1.55	1.75	7.5	24	12	4	2

## 12 Recommended Pattern



Dimensions in mm

TYPE	A(mm)	B(mm)	C(mm)	D(mm)
SCDS8D43	10.1	6.1	2.0	2.8

## 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)