



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

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

**SPECIFICATION FOR APPROVAL**

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

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

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

**QUANTITY :** 0 Pcs. **DATE :** 2008/08/18

**ITEM :** SCDS6D28T-101T-S-N

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

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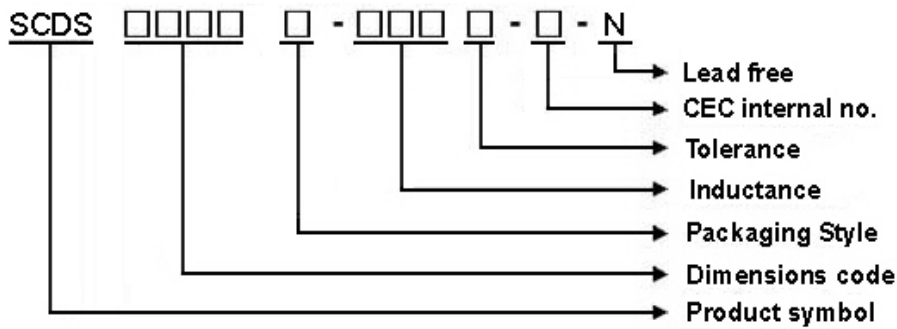
  

<b>DRAWN BY</b> 羅佳芳 sally1	<b>CHECKED BY</b> 溫美玲 ling	<b>APPROVED BY</b> 關喜俊 chiueh
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# SCDS6D28T Series Specification

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

**2** Part Numbering: Product Identification

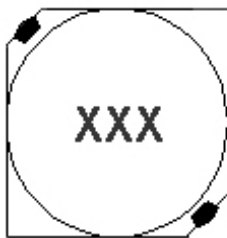


**3** Rating:

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 : SCDS6D28T-3R3T-S-N**

**Marking : 3R3**

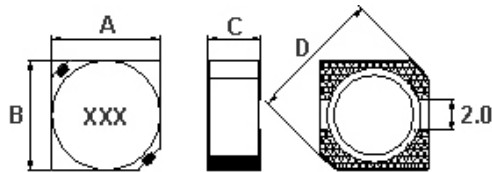
**Marking color : Black**

**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

# SCDS6D28T Series Specification

## 6 Configuration and Dimensions:



TYPE	A m/m	B m/m	C m/m	D m/m
SCDS6D28	6.7±0.3	6.7±0.3	3+0	9.5+0

## 7 ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)Max.	Rated Current (A)	Tolerance (±%)	Marking
SCDS6D28T-1R0□-S-N	1	10 kHz,1 V	0.024	3.5	30	1R0
SCDS6D28T-1R5□-S-N	1.5	10 kHz,1 V	0.0195	3.4	30	1R5
SCDS6D28T-3R0□-S-N	3	10 kHz,1 V	0.024	3	30	3R0
SCDS6D28T-3R3□-S-N	3.3	10 kHz,1 V	0.025	3	30	3R3
SCDS6D28T-3R9□-S-N	3.9	10 kHz,1 V	0.027	2.6	30	3R9
SCDS6D28T-4R7□-S-N	4.7	10 kHz,1 V	0.031	2.4	20,30	4R7
SCDS6D28T-5R0□-S-N	5	10 kHz,1 V	0.031	2.4	30	5R0
SCDS6D28T-6R0□-S-N	6	10 kHz,1 V	0.035	2.25	30	6R0
SCDS6D28T-6R2□-S-N	6.2	10 kHz,1 V	0.051	2.4	20,30	6R2
SCDS6D28T-6R8□-S-N	6.8	10 kHz,1 V	0.05	2.15	20,30	6R8
SCDS6D28T-7R3□-S-N	7.3	10 kHz,1 V	0.054	2.1	30	7R3
SCDS6D28T-8R6□-S-N	8.6	10 kHz,1 V	0.058	1.85	30	8R6
SCDS6D28T-100□-S-N	10	10 kHz,1 V	0.065	1.7	20,30	100
SCDS6D28T-120□-S-N	12	10 kHz,1 V	0.07	1.55	20,30	120
SCDS6D28T-150□-S-N	15	10 kHz,1 V	0.084	1.4	20,30	150
SCDS6D28T-180□-S-N	18	10 kHz,1 V	0.095	1.32	30	180
SCDS6D28T-220□-S-N	22	10 kHz,1 V	0.128	1.2	30	220
SCDS6D28T-270□-S-N	27	10 kHz,1 V	0.142	1.05	30	270
SCDS6D28T-330□-S-N	33	10 kHz,1 V	0.165	0.97	30	330
SCDS6D28T-390□-S-N	39	10 kHz,1 V	0.21	0.86	30	390
SCDS6D28T-470□-S-N	47	10 kHz,1 V	0.238	0.8	20,30	470
SCDS6D28T-560□-S-N	56	10 kHz,1 V	0.277	0.73	30	560
SCDS6D28T-680□-S-N	68	10 kHz,1 V	0.304	0.65	30	680
SCDS6D28T-820□-S-N	82	10 kHz,1 V	0.39	0.6	30	820
SCDS6D28T-101□-S-N	100	10 kHz,1 V	0.535	0.54	30	101

**NOTE:** □-tolerance M=±20% / T=±30%

1. Operating temperature range – 3 0℃ ~ 1 0 0℃ (Including self - temperature rise)
  2. Rate current: The rate current indicates the current when the inductance decreases to 65% over of its nominal value or D.C. current when the temperature rising ΔT=40℃ lower, whichever is lower.
  3. RDC test method: place testing device to the 2 solder ends of winding and test the value.
- "-N" FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)



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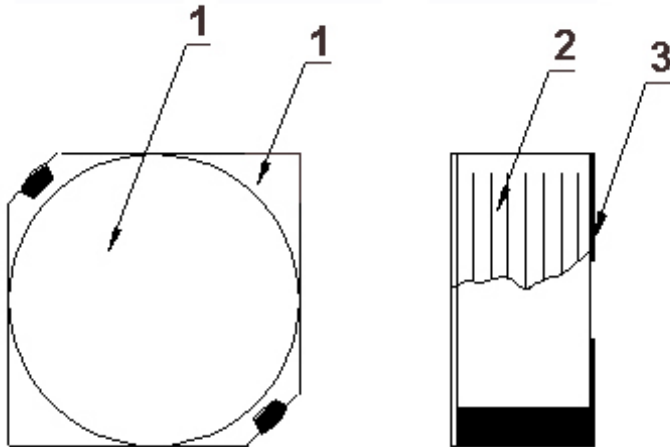
## SCDS6D28T Series Specification

Part No.	Inductance ( $\mu$ H)	Test Freq.	RDC ( $\Omega$ )Max.	Rated Current (A)	Tolerance ( $\pm$ %)	Marking
SCDS6D28T-121□-S-N	120	10 kHz,1 V	0.6	0.4	20,30	121
SCDS6D28T-221□-S-N	220	10 kHz,1 V	1.3	0.3	20,30	221

# SCDS6D28T Series Specification

## 8 SCDS6D28T 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



# SCDS6D28T Series Specification

## 9 Reliability Of Ferrite Wire Wound Power Inductor

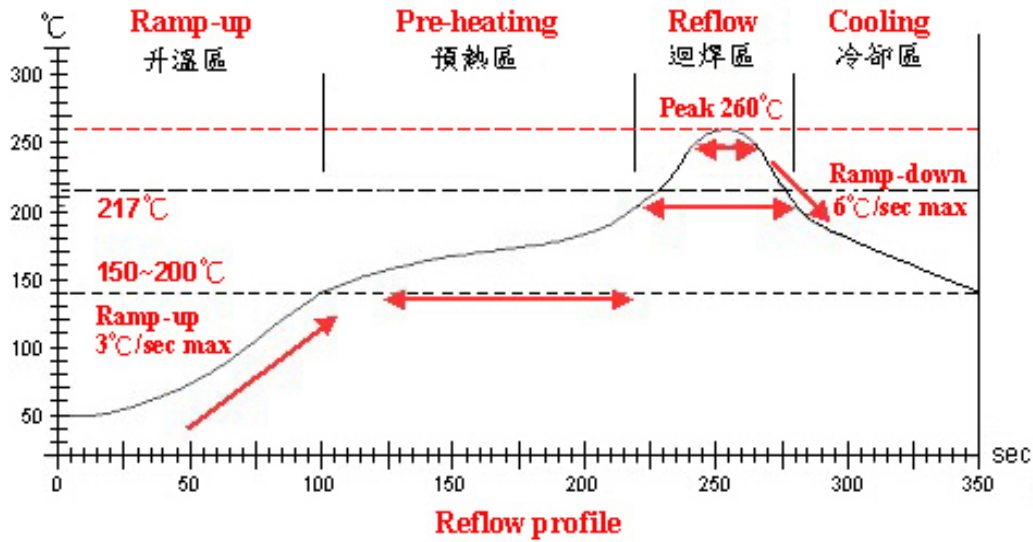
### 1-1.Mechanical Performance

No	Item	Specification	Test Method
1-1-1	Vibration	Appearance: No damage L change: within±10%	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±5°C Immersion Time: 10±1sec
1-1-3	Solderability	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±5°C 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 L change: within±10%	10 cycles (Air to Air) 1 cycles shall consist of: 30 minutes exposure to -55 °C 30 minutes exposure to 130 °C 15 seconds maximum transition between temperatures Measured after exposure in the room condition for 24hrs															
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>-30±3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25±2</td> <td>3</td> </tr> <tr> <td>3</td> <td>100±3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25±2</td> <td>3</td> </tr> </tbody> </table> Total: 10cycles Measured after exposure in the room condition for 24hrs	Step	Temperature (°C)	Time (min)	1	-30±3	30	2	25±2	3	3	100±3	30	4	25±2	3
Step	Temperature (°C)	Time (min)																
1	-30±3	30																
2	25±2	3																
3	100±3	30																
4	25±2	3																
1-2-3	Humidity Resistance		Temperature: 40±2°C Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs															
1-2-4	High Temperature Resistance		Temperature: 85±3°C Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs															
1-2-5	Low Temperature Resistance		Temperature: -30±3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs															

# SCDS6D28T Series Specification



**Lead-Free(LF) 標準溫度分析範圍**

Refer to J-STD-020C

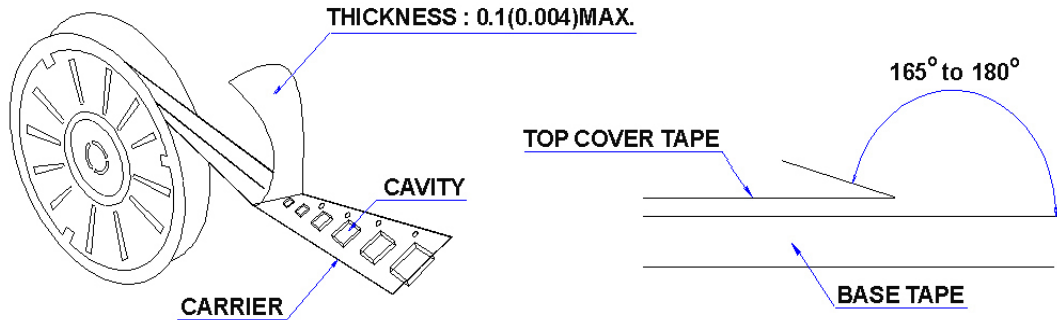
管制項目 Item.	升温區 Ramp-up	預熱區 Pre-heating	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp.scope	R.T. ~ 150°C	150°C ~ 200°C	217°C	260±5°C	Peak Temp. ~ 150°C
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150sec	20 ~ 40 sec	—
實際時間 Time result	—	75 ~ 100 sec	90 ~ 120sec	20 ~ 35 sec	—

# SCDS6D28T Series Specification

## 11 PACKAGING

### 11.1 Packaging -Cover tape

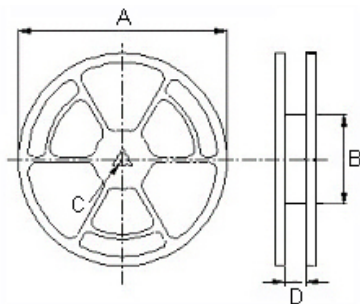
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



### 11.2 Packaging Quantity

TYPE	BULK	PCS/REEL
SCDS3D16	✓	1000
SCDS4D18	✓	2000
SCDS4D28	✓	2000
SCDS5D18	✓	1500
SCDS5D28	✓	1500
SCDS6D28	✓	1500
SCDS6D38	✓	1000

### 11.3 Reel Dimensions



Reel Dimension: m/m

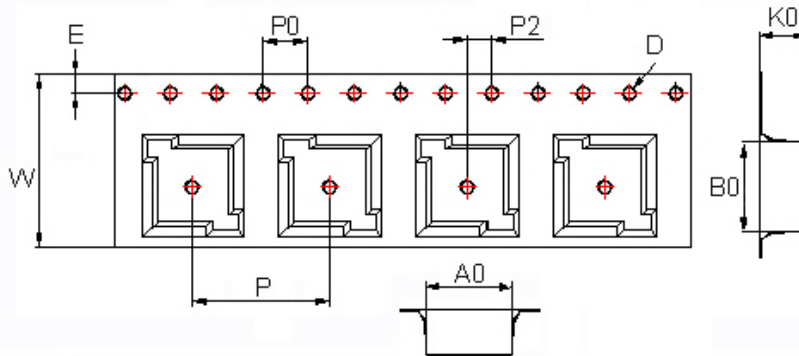
TYPE	A	B	C	D
SCDS3D16	178	60	13	13.2
SCDS4D18	330	100	13	13.4
SCDS4D28	330	100	13	13.4
SCDS5D18	330	100	13	13.4
SCDS5D28	330	100	13	17.4
SCDS6D28	330	100	13	17.4
SCDS6D38	330	100	13	17.4



# SCDS6D28T Series Specification

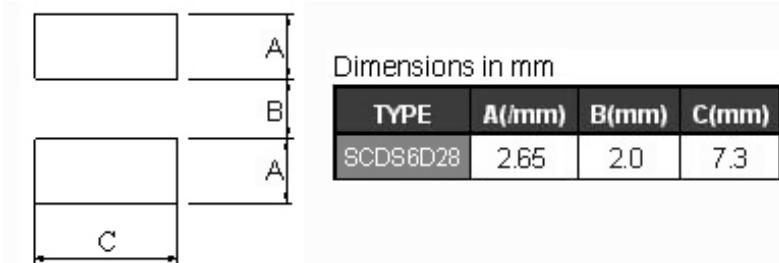
## 11 PACKAGING

### 11.4 Tape Dimensions in mm



TYPE	A0	B0	K0	D	E	W	P	P0	P2
SCDS6D28	7.25	7.25	3.35	1.55	1.75	16	12	4	2

## 12 Recommended Pattern



Dimensions in mm

TYPE	A(mm)	B(mm)	C(mm)
SCDS6D28	2.65	2.0	7.3

## 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)