



QS9000 & ISO14001 & TS16949 **CHILISIN ELECTRONICS CORP.**

Lead-Free & RoHs Compliance!!

SPECIFICATION FOR APPROVAL

CUSTOMER : _____

CUSTOMER P/N : _____

OUR DWG No : _____

QUANTITY : _____

Pcs.

DATE : _____

ITEM : _____

SCDS8D43T-6R8T-N

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

奇力新電子股份有限公司
CHILISIN ELECTRONICS CORP.
NO.29,LANE 301,TEHHSIN ROAD,HUKOU,
HSINCHU,TAIWAN,303,
REPUBLIC OF CHINA
TEL : (03) 599-2646
FAX : (03) 599-9176
E-mail : Sales@chilisin.com.tw
[http : //www.chilisin.com.tw](http://www.chilisin.com.tw)
台北營業處
TAIPEI OFFICE
3F,NO.233-1,PAO-CHIAO ROAD,
HSIN TIEN,TAIPEI,TAIWAN, R.O.C.
TEL : (02)29112073
FAX : (02)29147698
E-mail : Sales@chilisin.com.tw

東莞奇力新電子有限公司
DONG GUANG CHILISIN ELECTRONICS LTD.
YULIANGWEI ADMINISTRATION AREA,
QINGXI TOWN, DONGGUANG, GUANGDONG,
CHINA
TEL : 00286769-7730251~3
FAX : 00286769-7730232
E-mail : cect@chilisin.com.tw
奇力新電子(蘇州)有限公司
CHILISIN ELECTRONICS(SUZHOU)CO.,LTD
NO.10, Zhu Yuan Road, Suzhou New District,
Suzhou,P.R.C.
TEL : 00286512-8255568
FAX : 00286512-8255568
E-mail : suzhou@chilisin.com.tw

**DRAWN BY
ANNIE**

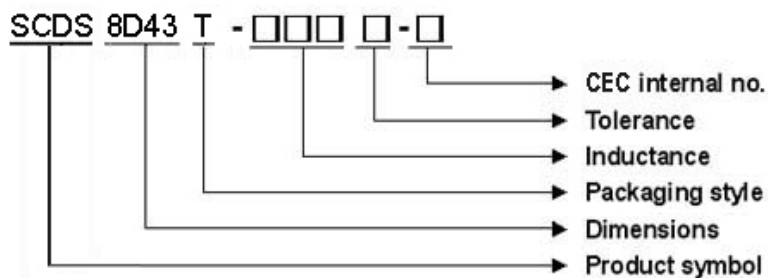
**CHECKED BY
萬芳平**

**APPROVED BY
唐威德**

SCDS8D43T Series Specification

1 Scope: This specification applies to SMD POWER CHOKE

2 Part Numbering: Product Identification

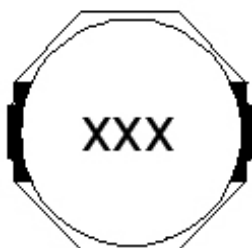


3 Rating:

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

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

4 Marking:



Ex : SCDS8D43T-470M-N

Marking : 470

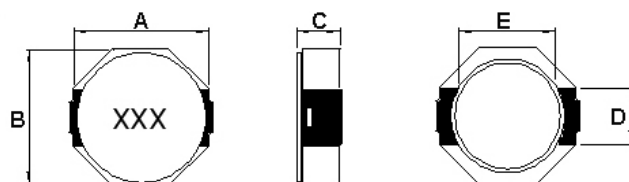
Marking color : Black

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 | Am/m | Bm/m | Cm/m | Dm/m | Em/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) |
|------------------|---------------------|-------------|----------------|-------------------------|
| SCDS8D43T-3R3□-N | 3.3 | 100 kHz,1 V | 0.019 | 5.7 |
| SCDS8D43T-4R7□-N | 4.7 | 100 kHz,1 V | 0.022 | 5.6 |
| SCDS8D43T-6R8□-N | 6.8 | 100 kHz,1 V | 0.025 | 4.4 |
| SCDS8D43T-100□-N | 10 | 100 kHz,1 V | 0.036 | 4.0 |
| SCDS8D43T-150□-N | 15 | 100 kHz,1 V | 0.053 | 2.9 |
| SCDS8D43T-220□-N | 22 | 100 kHz,1 V | 0.075 | 2.4 |
| SCDS8D43T-470□-N | 47 | 100 kHz,1 V | 0.15 | 1.8 |
| SCDS8D43T-680□-N | 68 | 100 kHz,1 V | 0.24 | 1.5 |

NOTE: □-tolerance M=±20% / T=±30%

1.Operating temperature range — 3 0℃ ~ 1 0 0℃ (Including self - temperature rise)

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

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



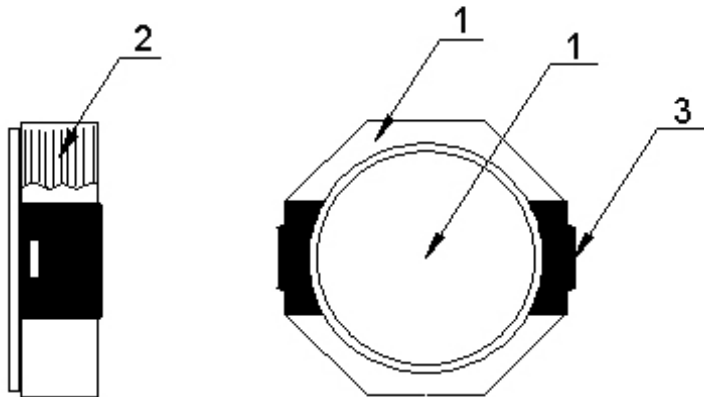
QS9000 & ISO14001 & TS16949 **HILISIN ELECTRONICS CORP.**

SCDS8D43T Series Specification

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 $\pm 5^\circ\text{C}$ Immersion Time: 10 ± 1 sec |
| 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 $\pm 5^\circ\text{C}$ Immersion Time: 4 ± 1 sec |
| 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. |

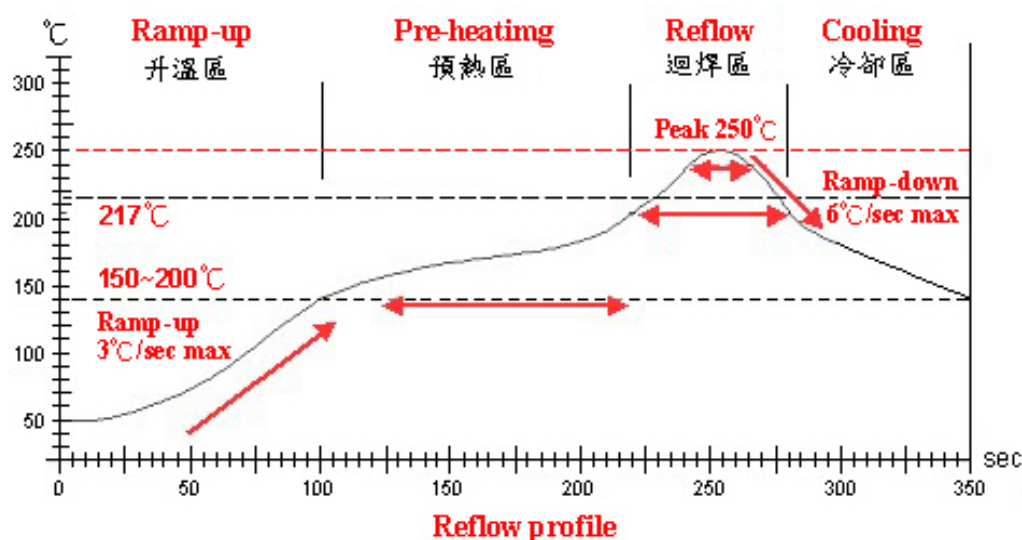
1-2.Environmental Performance

| 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: <table><tr><th>Step</th><th>Temperature (℃)</th><th>Time (min)</th></tr><tr><td>1</td><td>−40±3</td><td>30</td></tr><tr><td>2</td><td>25±2</td><td>3</td></tr><tr><td>3</td><td>105±3</td><td>30</td></tr><tr><td>4</td><td>25±2</td><td>3</td></tr></table> | Step | Temperature (℃) | Time (min) | 1 | −40±3 | 30 | 2 | 25±2 | 3 | 3 | 105±3 | 30 | 4 | 25±2 | 3 |
| Step | Temperature (℃) | | Time (min) | | | | | | | | | | | | | | | |
| 1 | −40±3 | | 30 | | | | | | | | | | | | | | | |
| 2 | 25±2 | | 3 | | | | | | | | | | | | | | | |
| 3 | 105±3 | 30 | | | | | | | | | | | | | | | | |
| 4 | 25±2 | 3 | | | | | | | | | | | | | | | | |
| 1-2-3 | Humidity Resistance | Total: 100cycles Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | | |
| 1-2-4 | Heat Life | Temperature: 40±2℃ Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | | |
| 1-2-5 | Cold Resistance | Temperature: 85±3℃ Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | | |
| | | | Temperature: −40±3℃ Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | |



QS9000 & ISO14001 & TS16949 CHILISIN ELECTRONICS CORP.

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 ~ 150 sec | 20 ~ 40 sec | — |
| 實際時間 Time result | — | 60 ~ 95 sec | 75 ~ 95 sec | 20 ~ 35 sec | — |



QS9000 & ISO14001 & TS16949 CHILISIN ELECTRONICS CORP.

SCDS8D43T Series Specification

10 TEST DATA FOR PREPRODUCTION SAMPLES

QF-1419

DESCRIPTION: SCDS8D43T-6R8T-N

| MEAS. Item | L (uH) | RDC (Ω) | Rated Current (A) | A m/m | B m/m | C m/m | | | | | |
|------------|-----------|---------|-------------------|-------|-------|-------|-------|--|--|--|--|
| Spec | Customer | 6.8±30% | | | | | | | | | |
| | Suggest | | 0.025+0 | 4.4 | 8.3+0 | 8.3+0 | 4.5+0 | | | | |
| Test Freq. | 100kHz 1V | | | | | | | | | | |
| 1 | 5.69 | 0.021 | OK | 8.04 | 8.00 | 4.43 | | | | | |
| 2 | 5.68 | 0.023 | OK | 8.02 | 8.02 | 4.45 | | | | | |
| 3 | 6.20 | 0.022 | OK | 8.01 | 8.04 | 4.46 | | | | | |
| 4 | 5.89 | 0.023 | OK | 8.03 | 8.02 | 4.42 | | | | | |
| 5 | 5.44 | 0.022 | OK | 8.01 | 8.03 | 4.44 | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| X | 5.78 | 0.0222 | | 8.022 | 8.022 | 4.44 | | | | | |
| R | 0.76 | 0.002 | | 0.03 | 0.04 | 0.04 | | | | | |
| CUSTOMER | | | | | | | | | | | |
| SAMPLE | | | | | | | | | | | |

TEST INSTRUMENT:

L:HP4284A.

RDC:CHEN HWA 502

Rated Current:HP4284A+HP42841A

APPEARANCE AND DIMENSIONS :

SPEC : MEET ITEM 6.

TEST METHOD : VISUAL INSPECTION AND MEASURED WITH SILDE CALIPERS.

TESTING CONDITIONS :

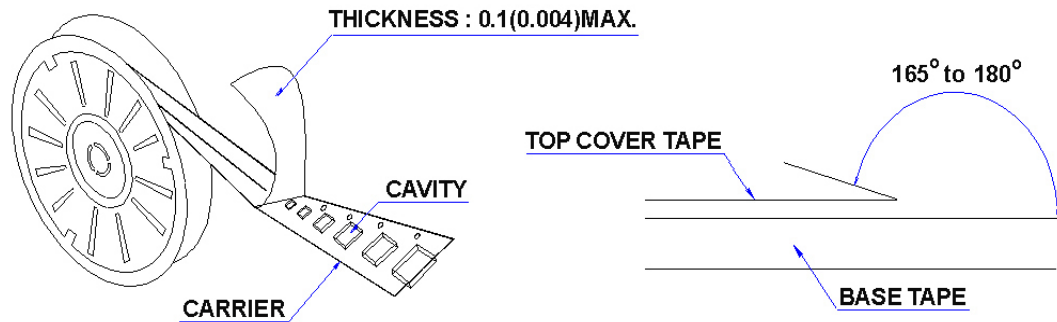
| | Unless otherwise specified | In case of doubt |
|-------------|----------------------------------|------------------|
| Temperature | Ordinary Temperature (15 to 35℃) | 20 ± 2 °C |
| Humidity | Ordinary Humidity (25 to 85 %RH) | 60 to 70 %RH |

SCDS8D43T Series Specification

11 PACKAGING

11.1 Packaging -Cover tape

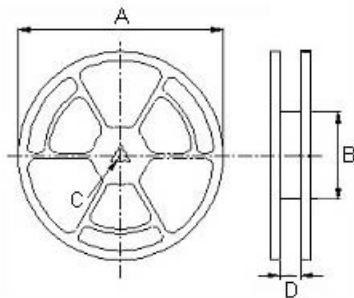
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



11.2 Packaging Quantity

| TYPE | BULK | PCS/REEL |
|----------|------|----------|
| SCDS8D43 | ✓ | 1000 |

11.3 Reel Dimensions



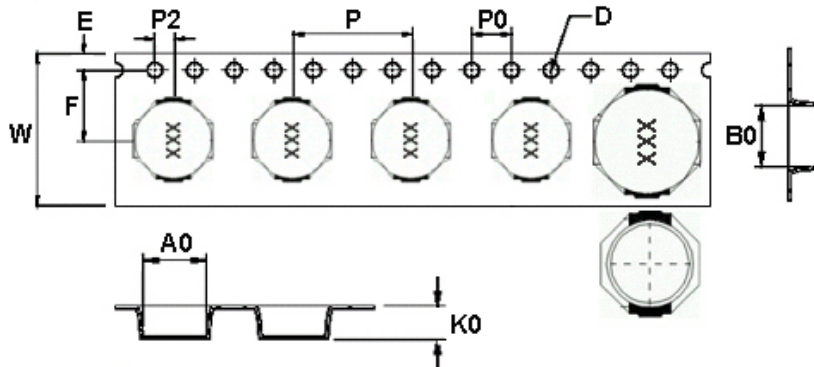
Reel Dimesions : m/m

| TYPE | A | B | C | D |
|----------|-----|-----|----|------|
| SCDS8D43 | 330 | 100 | 13 | 24.4 |

SCDS8D43T Series Specification

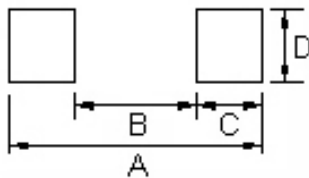
11 PACKAGING

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)

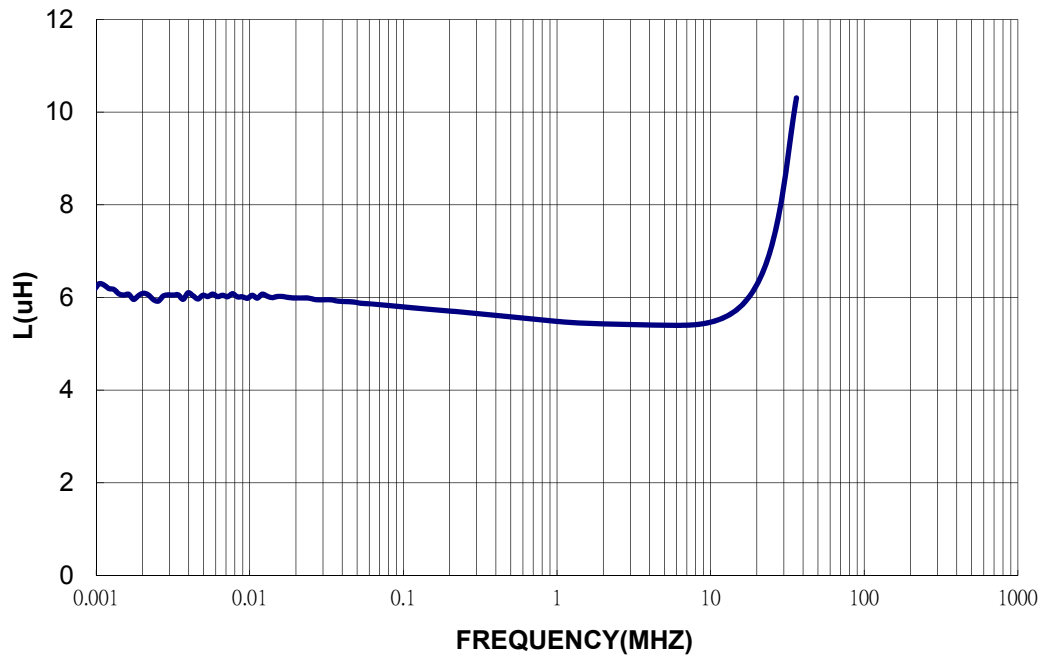


QS9000 & ISO14001 & TS16949 **CHILISIN ELECTRONICS CORP.**

SCDS8D43T Series Specification

14 Curve:

SCDS8D43T-6R8T-N



SCDS8D43T-6R8T-N

