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

Lead-Free & RoHs Compliance!!

SPECIFICATION FOR APPROVAL

CUSTOMER：

CUSTOMER P/N：

OUR DWG No：

QUANTITY： **0** **Pcs.** **DATE：** **2011/04/20**

ITEM： **SCDS6D38T-SERIES**

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

台北營業處
Taipei Office
1F., No.2, Aly. 1, Ln. 235, Baoqiao Rd.,
Xindian Dist., New Taipei City 231, Taiwan
TEL：+886-2-6629-5588~9
FAX：+886-2-6629-0088
E-mail：Sales@chilisin.com.tw

東莞奇力新電子有限公司
Chilisin Electronics (Dongguan) Co., Ltd.
No. 78, Puxing Rd., Yuliangwei Administration Area,
Qingxi Town, Dongguan City, Guangdong,China
TEL：+86-769-8773-0251~3
FAX： +86-769-8773-0232
E-mail：cect@chilisin.com.tw

奇力新電子(蘇州)有限公司
Chilisin Electronics (Suzhou) Co., Ltd.
No.143,Song Shan Rd., Suzhou New District,
Suzhou,China
Postal Code:215129
TEL:+86-512-6841-2350
FAX:+86-512-6841-2356
E-mail：suzhou@chilisin.com.tw

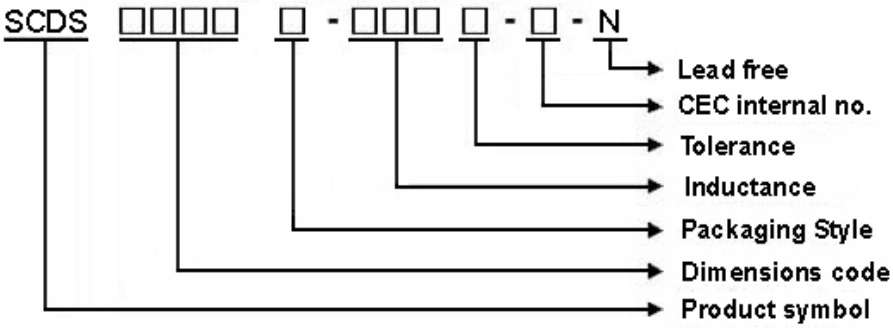
DRAWN BY	CHECKED BY	APPROVED BY
林英選 **eileen.lin**	溫美玲 ling	陳瑞揚 ryan.chen

ISO9001 & ISO14001 & TS16949 CHILISIN ELECTRONICS CORP.

SCDS6D38T Series Specification

1 Scope: This specification applies to SMD POWER CHOKE

2 Part Numbering: Product Identification

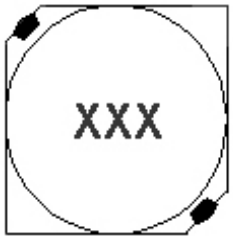


3 Rating:

Operating Temperature: －３０℃～１００℃**(Including self - temperature rise)**

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

4 Marking:



Ex : SCDS6D38T-3R3T-S-N

Marking : 3R3

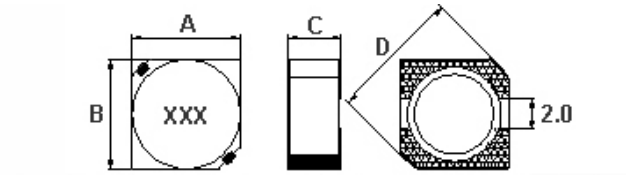
Marking color : Black

5 Standard Testing Condition

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

SCDS6D38T Series Specification

6 Configuration and Dimensions:



TYPE	Am/m	Bm/m	Cm/m	Dm/m
SCDS6D38	7 +0	7 +0	4 +0	9.5 +0

7 ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)Max.	Rated Current (A)	Tolerance (±%)	Marking
SCDS6D38T-2R2□-S-N	2.2	10 kHz,0.1 V	0.018	3.8	30	2R2
SCDS6D38T-2R7□-S-N	2.7	10 kHz,0.1 V	0.02	3.6	30	2R7
SCDS6D38T-3R3□-S-N	3.3	10 kHz,0.1 V	0.02	3.5	20,30	3R3
SCDS6D38T-4R7□-S-N	4.7	10 kHz,0.1 V	0.022	3.1	20,30	4R7
SCDS6D38T-5R0□-S-N	5	10 kHz,0.1 V	0.024	2.9	20,30	5R0
SCDS6D38T-5R6□-S-N	5.6	10 kHz,0.1 V	0.027	2.5	30	5R6
SCDS6D38T-6R2□-S-N	6.2	10 kHz,0.1 V	0.027	2.5	20,30	6R2
SCDS6D38T-6R8□-S-N	6.8	10 kHz,0.1 V	0.031	2.3	30	6R8
SCDS6D38T-7R4□-S-N	7.4	10 kHz,0.1 V	0.031	2.3	30	7R4
SCDS6D38T-8R7□-S-N	8.7	10 kHz,0.1 V	0.034	2.2	30	8R7
SCDS6D38T-100□-S-N	10	10 kHz,0.1 V	0.038	2	20,30	100
SCDS6D38T-120□-S-N	12	10 kHz,0.1 V	0.053	1.7	30	120
SCDS6D38T-150□-S-N	15	10 kHz,0.1 V	0.057	1.6	20,30	150
SCDS6D38T-180□-S-N	18	10 kHz,0.1 V	0.092	1.5	30	180
SCDS6D38T-220□-S-N	22	10 kHz,0.1 V	0.096	1.3	20,30	220
SCDS6D38T-270□-S-N	27	10 kHz,0.1 V	0.109	1.2	30	270
SCDS6D38T-330□-S-N	33	10 kHz,0.1 V	0.124	1.1	20,30	330
SCDS6D38T-390□-S-N	39	10 kHz,0.1 V	0.138	1	20,30	390
SCDS6D38T-470□-S-N	47	10 kHz,0.1 V	0.15	0.95	20,30	470
SCDS6D38T-560□-S-N	56	10 kHz,0.1 V	0.202	0.85	30	560
SCDS6D38T-680□-S-N	68	10 kHz,0.1 V	0.234	0.75	30	680
SCDS6D38T-820□-S-N	82	10 kHz,0.1 V	0.324	0.7	30	820
SCDS6D38T-101□-S-N	100	10 kHz,0.1 V	0.358	0.65	20,30	101
SCDS6D38T-561□-S-N	560	10 kHz,0.1 V	1.8	0.22	30	561

NOTE: □-tolerance M=±20% / T=±30%

1.Operating temperature range －３０℃～１００℃(Including self - temperature rise)

2.Rate current: The rate current indicates the current when the inductance decreases to 65% over of it's nominal value or D.C.current when the temperature rising △T=40℃ lower, whichever is lower.

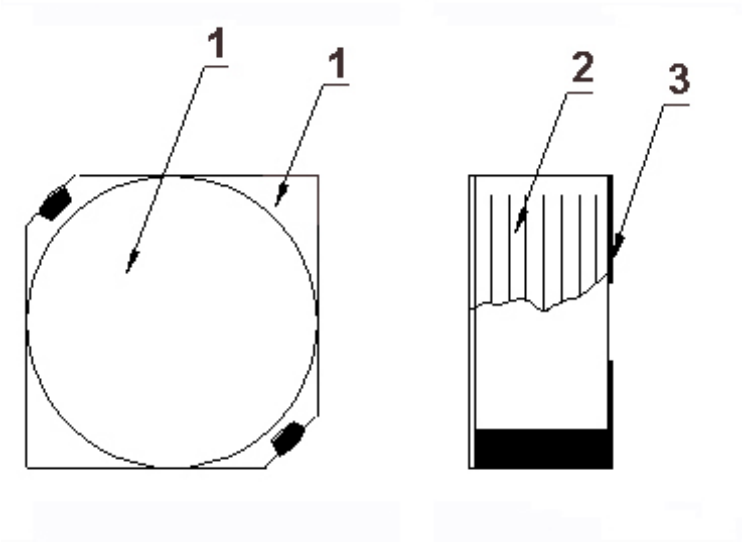
3.RDC test method: place testing device to the 2 solder ends of wounding and test the value.

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

SCDS6D38T Series Specification

8 SCDS6D38T 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

SCDS6D38T 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℃, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 260±5℃ Immersion Time: 10±1sec
1-1-3	Solderability	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 L change: within±10%	10 cycles (Air to Air) 1 cycles shall consist of: 30 minutes exposure to –55 ℃ 30 minutes exposure to 130 ℃ 15 seconds maximum transition between temperatures Measured after exposure in the room condition for 24hrs
1-2-2	Temperature Cycle		One cycle:

Step	Temperature (℃)	Time (min)
1	-30±3	30
2	25±2	3
3	100±3	30
4	25±2	3

	Total: 10cycles 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 High Temperature Resistance	Temperature: 85±3℃ 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℃ Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs

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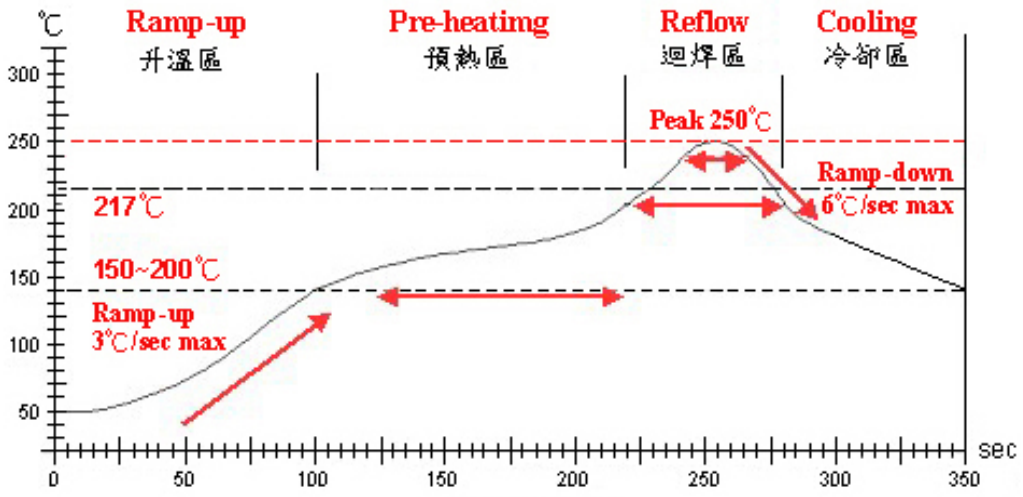
SCDS6D38T Series Specification



Reflow profile

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

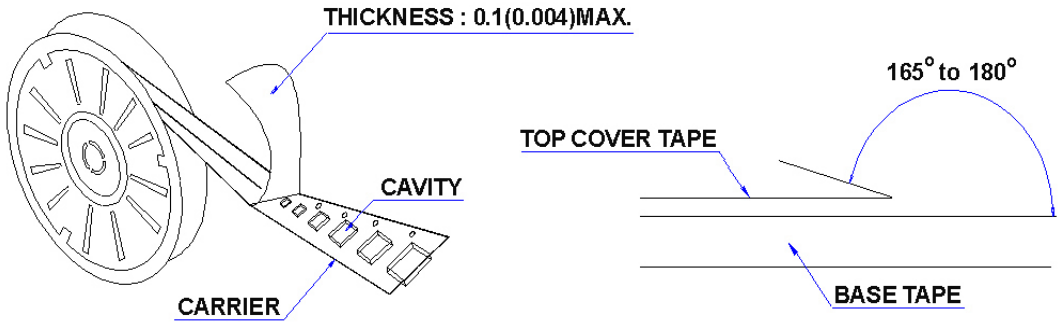
管制項目 Item.	升溫區 Ramp-up	預熱區 Pre-heating	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp.scope	R.T.~150℃	150℃~200℃	217℃	250±5℃	Peak Temp.~150℃
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150 sec	20 ~ 40 sec	—
實際時間 Time result	—	60 ~ 95 sec	75 ~ 95 sec	20 ~ 35 sec	—

SCDS6D38T Series Specification

11 PACKAGING

11.1 Packaging -Cover tape

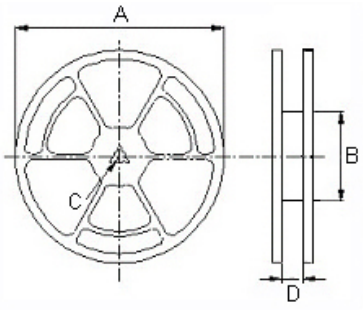
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



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



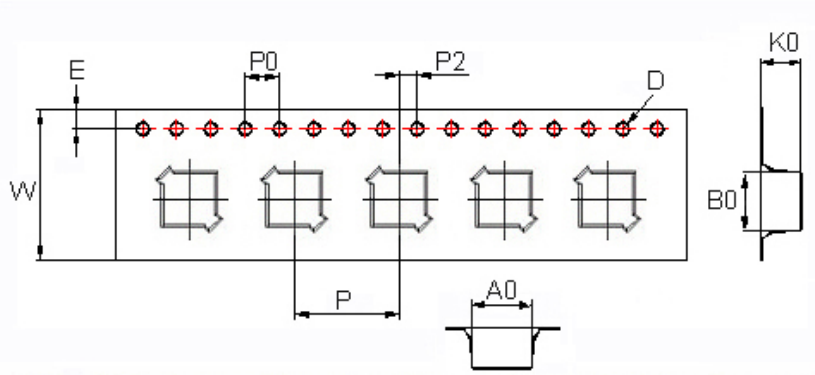
Reel Dimesion : m/m

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

SCDS6D38T Series Specification

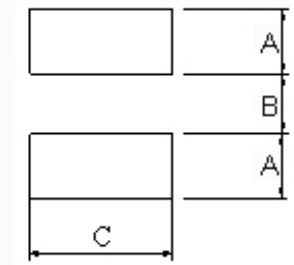
11 PACKAGING

11.4 Tape Dimensions in mm



TYPE	A0	B0	K0	D	E	W	P	P0	P2
SCDS6D38	7.1	7.1	4.1	1.55	1.75	16	12	4	2

12 Recommended Pattern



Dimensions in mm

TYPE	A(/mm)	B(mm)	C(mm)
SCDS6D38	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)