



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

Halogen Free & RoHs Compliance

SPECIFICATION FOR APPROVAL

Customer : ELTECH

Customer P/N: _____

Drawing No : _____

Quantity : 0 **Pcs.** **Date :** 2014/10/13

Chilisin P/N : SQV453226T-222J-N

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

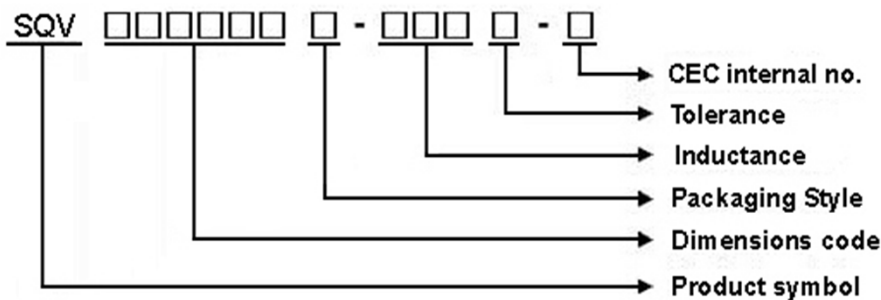
<p>奇力新電子股份有限公司 Chilisin Electronic sCorp No. 29, Alley 301, Tehhsin Rd., Hukou,Hsinchu 303, Taiwan TEL : +886-3- 599-2646 FAX : +886-3- 599-9176 E-mail : sales@chilisin.com.tw http : //www.chilisin.com.tw</p>	<p>東莞奇力新電子有限公司 Chilisin Electronics (Dongguan) Co., Ltd. No. 78, Puxing Rd., Yuliangwei Administration Area, Qingxi Town, Dongguan City, Guangdong,China TEL : +86-769-8773-0251~3 FAX : +86-769-8773-0232 E-mail : cect@chilisin.com.tw</p>
<p>奇力新電子(河南)有限公司 Chilisin Electronics (Henan) Co., Ltd. XiuWu Xian, industry gathering area JiaoZuo, Henan China Postal Code:454350 TEL:+86-391-717-0682 FAX:+86-391-717-0666</p>	<p>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</p>

Drawn by 周芳如 helen.chou	Checked by 趙燕玲 annie	Approved by 唐威德 daniel.tang
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SQV453226T Series Specification

1 Scope: This specification applies to CHIP COIL

2 Part Numbering:



3 Rating:

Operating Temperature: $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (Including self - temperature rise)

Storage Temperature: $20^{\circ}\text{C} \sim 25^{\circ}\text{C}$ R.H. 65% (In Tape & Reel Condition)

4 Marking:



Ex : SQV453226T-221J-N

Marking : 221

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

SQV453226T Series Specification

6 Configuration and Dimensions:

TYPE	SQV453226
A	4.5±0.3 m/m
B	3.6±0.2 m/m
C	2.6±0.2 m/m
D	3.2±0.2 m/m
E	3.2±0.2 m/m
F	3.2±0.2 m/m

7 Electrical Characteristics:

Part No.	Inductance (uH)	L/Q Test Freq.	Q Min.	SRF (MHz)Min.	RDC (Ω)Max.	Rated Current (A)	Tolerance	Marking
SQV453226T-1R0□-N	1	1MHz/1MHz	20	120	0.2	0.5	M	1R0
SQV453226T-1R2□-N	1.2	1MHz/1MHz	20	100	0.2	0.5	M	1R2
SQV453226T-1R5□-N	1.5	1MHz/1MHz	20	85	0.3	0.5	M	1R5
SQV453226T-1R8□-N	1.8	1MHz/1MHz	20	75	0.3	0.5	M	1R8
SQV453226T-2R2□-N	2.2	1MHz/1MHz	20	62	0.3	0.5	M	2R2
SQV453226T-2R7□-N	2.7	1MHz/1MHz	20	53	0.32	0.5	M	2R7
SQV453226T-3R3□-N	3.3	1MHz/1MHz	20	47	0.35	0.5	M	3R3
SQV453226T-3R9□-N	3.9	1MHz/1MHz	20	41	0.38	0.5	M	3R9
SQV453226T-4R7□-N	4.7	1MHz/1MHz	30	38	0.4	0.5	K,M	4R7
SQV453226T-5R6□-N	5.6	1MHz/1MHz	30	33	0.47	0.5	K,M	5R6
SQV453226T-6R8□-N	6.8	1MHz/1MHz	30	31	0.5	0.45	K,M	6R8
SQV453226T-8R2□-N	8.2	1MHz/1MHz	30	27	0.56	0.45	K,M	8R2
SQV453226T-100□-N	10	1MHz/1MHz	35	23	0.56	0.4	K,M	100
SQV453226T-120□-N	12	1MHz/1MHz	35	21	0.62	0.38	K,M	120
SQV453226T-150□-N	15	1MHz/1MHz	35	19	0.73	0.36	J,K,M	150
SQV453226T-180□-N	18	1MHz/1MHz	35	17	0.82	0.34	K,M	180
SQV453226T-220□-N	22	1MHz/1MHz	35	15	0.94	0.32	J,K,M	220
SQV453226T-270□-N	27	1MHz/1MHz	35	14	1.1	0.3	J,K,M	270
SQV453226T-330□-N	33	1MHz/1MHz	35	12	1.2	0.27	K,M	330
SQV453226T-390□-N	39	1MHz/1MHz	35	11	1.4	0.24	J,K,M	390
SQV453226T-470□-N	47	1MHz/1MHz	35	10	1.5	0.22	J,K,M	470
SQV453226T-560□-N	56	1MHz/1MHz	35	9.3	1.7	0.2	K,M	560
SQV453226T-680□-N	68	1MHz/1MHz	35	8.4	1.9	0.18	J,K,M	680
SQV453226T-820□-N	82	1MHz/1MHz	35	7.5	2.2	0.17	K,M	820
SQV453226T-101□-N	100	1MHz/0.796MHz	40	6.8	2.5	0.16	J,K,M	101

NOTE: □-tolerance J=±5% / K=±10% / M=±20%

- Operating temperature range - 40 °C ~ 125 °C (Including self - temperature rise)
- Rated Current: Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- L/Q Test OSC @1V

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



ISO9001 & ISO14001 & TS16949 CHILISIN ELECTRONICS CORP.

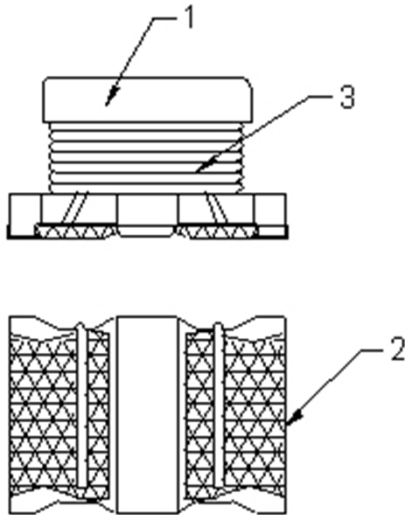
SQV453226T Series Specification

Part No.	Inductance (uH)	L/Q Test Freq.	Q Min.	SRF (MHz)Min.	RDC (Ω)Max.	Rated Current (A)	Tolerance	Marking
SQV453226T-121□-N	120	1MHz/0.796MHz	40	6.2	3	0.15	K,M	121
SQV453226T-151□-N	150	1MHz/0.796MHz	40	5.5	3.7	0.13	K,M	151
SQV453226T-181□-N	180	1MHz/0.796MHz	40	5	4.5	0.12	K,M	181
SQV453226T-221□-N	220	1MHz/0.796MHz	40	4.5	5.4	0.11	J,K,M	221
SQV453226T-271□-N	270	1MHz/0.796MHz	40	4	6.8	0.1	K,M	271
SQV453226T-331□-N	330	1MHz/0.796MHz	40	3.6	8.2	0.095	K,M	331
SQV453226T-391□-N	390	1MHz/0.796MHz	40	3.3	9.7	0.09	J,K,M	391
SQV453226T-471□-N	470	1kHz/0.796MHz	40	3	11.8	0.08	J,K,M	471
SQV453226T-561□-N	560	1kHz/0.796MHz	40	2.7	14.5	0.07	J,K,M	561
SQV453226T-681□-N	680	1kHz/0.796MHz	40	2.5	17.5	0.065	K,M	681
SQV453226T-821□-N	820	1kHz/0.796MHz	40	2.2	20.5	0.06	K,M	821
SQV453226T-102□-N	1000	1kHz/0.252MHz	40	2	25	0.05	J,K,M	102
SQV453226T-122□-N	1200	1kHz/0.252MHz	40	1.8	30	0.045	K,M	122
SQV453226T-152□-N	1500	1kHz/0.252MHz	40	1.6	37	0.04	K,M	152
SQV453226T-182□-N	1800	1kHz/0.252MHz	40	1.5	45	0.035	K,M	182
SQV453226T-222□-N	2200	1kHz/0.252MHz	40	1.3	50	0.03	J,K,M	222

SQV453226T Series Specification

8 SQV453226T Series

8.1 Construction:



8.2 Material List:

ITEM	PART	DESCRIPTION	SUPPLIES
1	CORE	FERRITE	CHILISIN
2	TERMINAL	Sn/Ag3.0/Cu0.5	Dyfenco
3	WIRE	Copper wire	

SQV453226T Series Specification

9 Reliability Of Ferrite Wire Wound Chip Coil

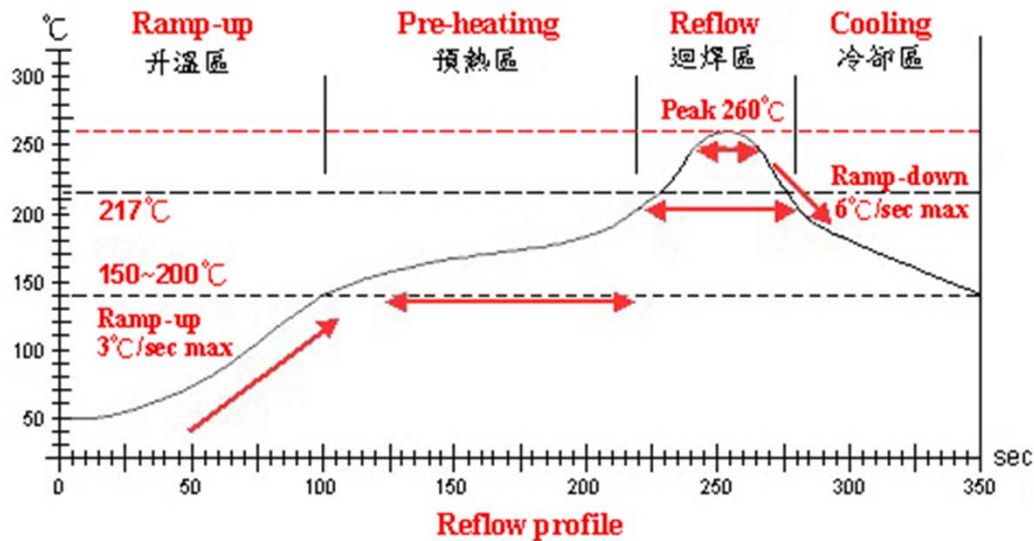
1-1.Mechanical Performance

No	Item	Specification	Test Method
1-1-1	Shear Test	Chip coil shall not be damaged after tested as test method	Substrate: Glass-epoxy substrate Solder:Sn/Ag3.0/Cu0.5 Applied Direction: Force : 10N Hold Duration:5s±1s
1-1-2	Bending Test		Substrate:Glass-epoxy substrate(100mm*40mm*1.6mm) speed of Applying Force:1mm/s Deflection:2mm Hold Duration:30s
1-1-3	Vibration		Oscillation Frequency:10Hz to 55 Hz to 10 hZ for 1 min Total Amplitude:1.5mm Testing Time:A period of 2 hours in each of 3 mutually perpendicular directions(Total 6 hours)
1-1-4	Solderability	The wetting area of the electrode shall be at least 95% covered with new solder coating	Solder:Sn/Ag3.0/Cu0.5 per-Heating:150°C±10°C/1min to 2min solder Temperature:245°C±5°C Immersion Time:4s±1s
1-1-5	Resistance to Soldering Heat	Appearance:No damage	Solder:Sn/Ag3.0/Cu0.5 per-Heating:150°C±10°C/1min to 2min solder Temperature:260°C±5°C Immersion Time:10s±1s
1-1-6	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	Heat Resistance	Appearance: No damage Inductance Change:within±10% Q change : within±30%	Temperature:85°C±3°C Time:1000h Then measured after exposure in the room Condition for 24h±2h															
1-2-2	Cold Resistance		Temperature: -40°C±3°C Time:1000h Then measured after exposure in the room Condition for 24h±2h															
1-2-3	Humidity		Temperature: 40°C±2°C Humidity:90%(RH) to 95%(RH) Time:1000h Then measures after exposure in the room Condition for 24h±2h															
1-2-4	Temperature Cycle		One cycle: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min)</th> </tr> </thead> <tbody> <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>125±3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25±2</td> <td>3</td> </tr> </tbody> </table> Total: 100cycles Measured after exposure in the room condition for 24hrs	Step	Temperature (°C)	Time (min)	1	-40±3	30	2	25±2	3	3	125±3	30	4	25±2	3
Step	Temperature (°C)	Time (min)																
1	-40±3	30																
2	25±2	3																
3	125±3	30																
4	25±2	3																

SQV453226T 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	5 ~ 10 sec	—



SQV453226T Series Specification

10 Test Data for Pre-production Samples

Chilisin P/N: SQV453226T-222J-N

Measured Item	L (uH)	Q	SRF (MHz)	RDC (Ω)	Rated Current (A)	A m/m	B m/m	C m/m	D m/m	E m/m	
Spec	Customer	2200±5%									
	Suggest		40-0	1.30-0	50+0	0.03	4.5±0.3	3.6±0.2	2.6±0.2	3.2±0.2	3.2±0.2
Test Freq.	1V 1kHz	1V 252kHz									
1	2260	56	2.1	35.4	OK	4.47	3.62	2.66	3.18	3.18	
2	2250	62	2	36.2	OK	4.48	3.61	2.62	3.21	3.19	
3	2110	60	2.1	36.8	OK	4.44	3.62	2.65	3.19	3.21	
4	2290	58	2.1	35.9	OK	4.46	3.58	2.66	3.19	3.19	
5	2270	59	2	36.9	OK	4.45	3.61	2.59	3.17	3.18	
6											
7											
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9											
10											
11											
12											
13											
14											
15											
<u>X</u>	2236	59	2.06	36.24		4.46	3.608	2.636	3.188	3.19	
R	180	6	0.1	1.5		0.04	0.04	0.07	0.04	0.03	
Customer											
Sample											

Test Instrument

- L: HP 4192A
- Q: HP4285A
- RDC: CHEN HWA 502
- Rate Current: HP4284A+HP42841A
- SRF: HP4287A

Appearance and Dimensions:

- SPEC : Refer to Item 6
- Test Method : Visual Inspection and Measured with Slide Calipers.

Test Conditions:

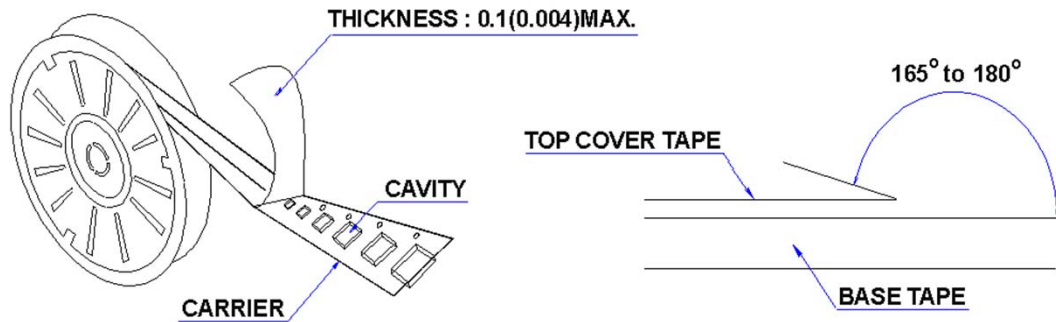
	Unless Otherwise Specified	In Case of Doubt
Temperature	Ordinary Temperature (15 to 35°C)	20 ± 2 °C
Humidity	Ordinary Humidity (25 to 85 %RH)	60 to 70 %RH

SQV453226T Series Specification

11 Packaging:

11.1 Packaging -Cover Tape

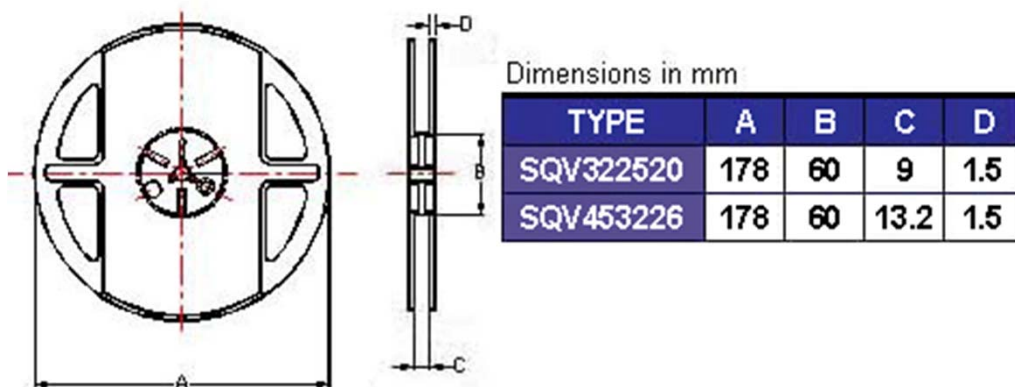
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



11.2 Packaging Quantity

TYPE	BULK	PCS/REEL
SQV322520	✓	2000
SQV453226	✓	500

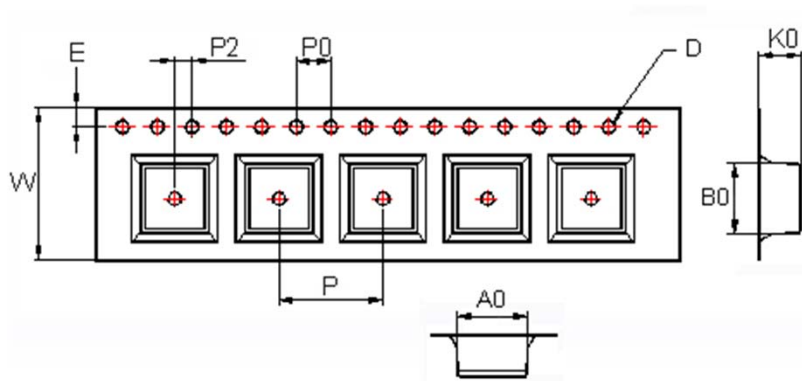
11.3 Reel Dimensions



SQV453226T Series Specification

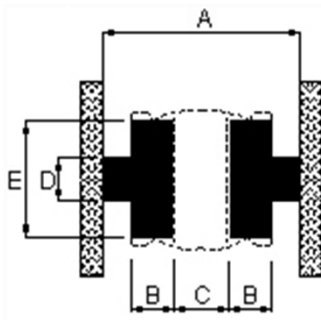
11 Packaging:

11.4 Tape Dimensions in mm



TYPE	A0	B0	K0	D	E	W	P	P0	P2
SQV453226	3.6	4.9	3	1.5	1.75	12	8	4	2

12 Recommended Land Pattern:



Dimensions in mm

TYPE	A(in/mm)	B(in/mm)	C(in/mm)	D(in/mm)	E(in/mm)
SQV322520	0.217/5.5	0.039/1.0	0.051/1.3	0.039/1.0	0.079/2.0
SQV453226	0.295/7.5	0.059/1.5	0.059/1.5	0.059/1.5	0.118/3.0

13 Note:

1. Please make sure that your product 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)



SQV453226T Series Specification

14 Graph:

