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

Halogen Free & RoHs Compliance

SPECIFICATION FOR APPROVAL

CUSTOMER： Eltech

CUSTOMER P/N：

OUR DWG No：

QUANTITY： 0 Pcs. **DATE：** 2014/06/04

ITEM： CMF11T-SERIES

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

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

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(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

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

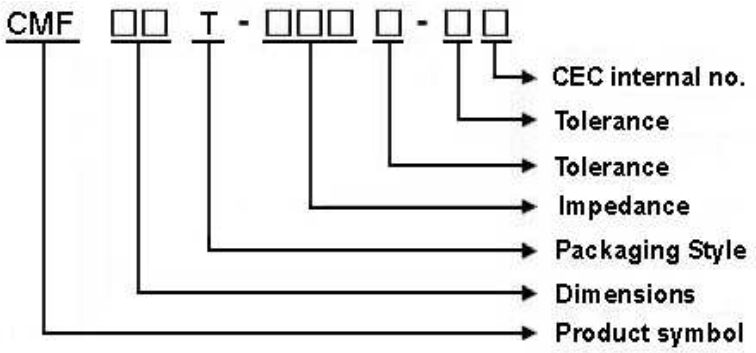
DRAWN BY	CHECKED BY	APPROVED BY
張瑞滿 rammi	林青宏 ch.lin	詹嘉皓 allen.chan

ISO9001 & ISO14001 & TS16949 CHILISIN ELECTRONICS CORP.

CMF11T Series Specification

1 Scope:
This specification applies to SMD Multilayer common mode filter

2 Part Numbering: Product Identification



3 Rating:

Operating Temperature: －４０℃～１０５℃**(Including self - temperature rise)**

Storage Temperature: ２０℃～２５℃ **R.H.**６５％ **(For Reference)**

4 Marking:

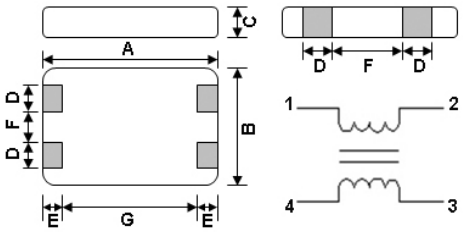
No Marking

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

CMF11T Series Specification

6 Configuration and Dimensions:



Dimensions in mm

TYPE	CMF11
A	1.00±0.15
B	1.25±0.15
C	0.60±0.15
D	0.30±0.15
E	0.20±0.15
F	0.55±0.15
G	0.85±0.15

7 ELECTRICAL CHARACTERISTICS :

Part No.	Z (Ω)	RDC (Ω)Max.	Rated Current (mA)Max.	Rated Voltage (Vdc)Max.	Insulation Resistance (MΩ)(min)	Tolerance (±%)	Test Freq. (MHz)
CMF11T-670M-N2	67	1.35	100	10	200	20	100
CMF11T-900M-N2	90	1.45	100	10	200	20	100

NOTE: □-tolerance M=±20%

1.Operating temperature range －４０℃～１０５℃(Including self - temperature rise)

2.RDC: SINGLE WIRE TEST VALUE

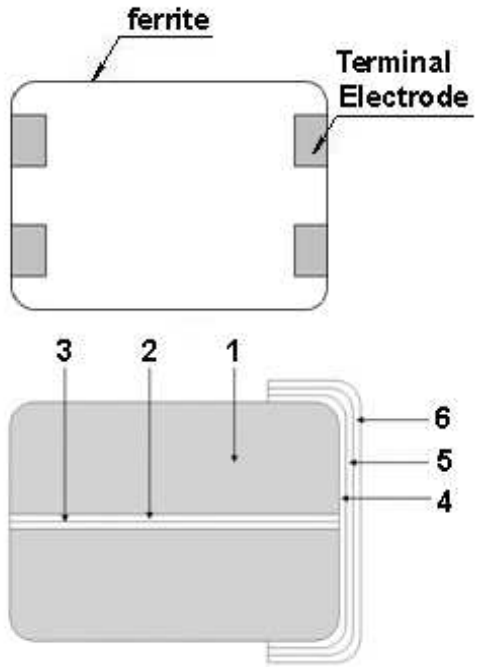
3.Rated current:ΔT=30℃

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

CMF11T Series Specification

8 CMF11T Series

8.1 Construction:



8.2 Material List:

NO	PART	MATERIAL
1	Ferrite substance	NiO-CuO-ZnO-Ferrite
2	Ceramic substance	Al2O3-SiO2-Ceramic
3	Silver electrode	Ag
4	Silver electrode	Ag
5	Ni plating	Ni
6	Sn plating	Sn

CMF11T Series Specification

9 Common Mode Choke / RELIABILITY TEST

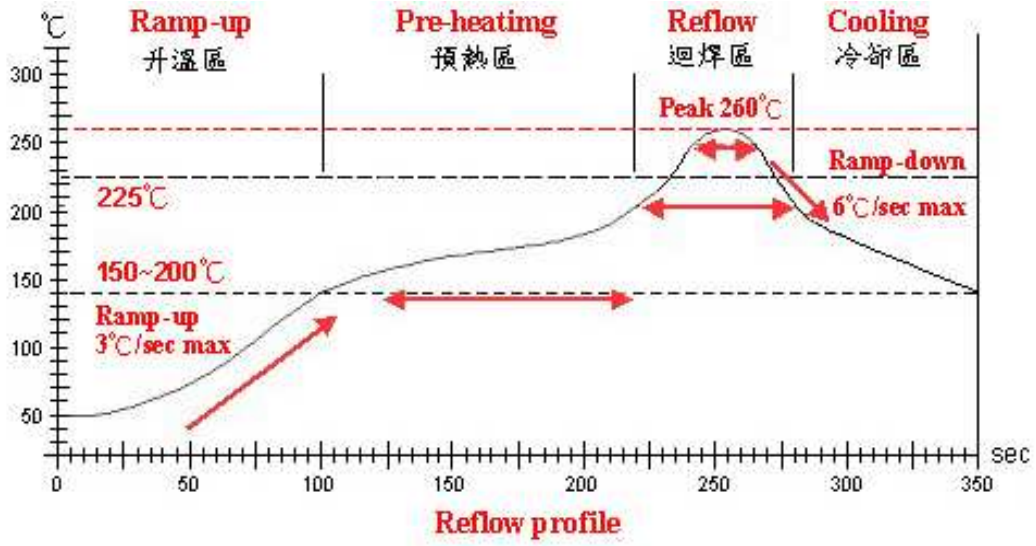
1-1.Environmental Performance

No	Item	Specification	Test Method
1-1-1	Temperature Cycle	Appearance: No Damage Impedance: within±20% of initial value	One cycle: Step / Temperature (℃) / Time (min) 1 / -40±3 / 30 2 / 25±2 / 3 3 / 105±3 / 30 4 / 25±2 / 3 Total: 5 cycles Measured After Exposure in The Room Condition For 1hrs
1-1-2	Humidity Resistance		Temperature: 40±2℃ Relative Humidity: 90 ~ 95% Time: 100hrs Measured After Exposure In The Room Condition For 1hrs
1-1-3	High Temperature Resistance		Temperature: 85±3℃ Time: 50Hrs Measured After Exposure In The Room Condition For 1Hrs
1-1-4	Low Temperature Resistance		Temperature: -40±3℃ Time: 50Hrs Measured After Exposure In The Room Condition For 1Hrs
1-1-5	High Temperature Load Life	There should be no evidence of short or open circle	Temperature: 85±3℃ Load: Allowed DC Current Time: 500Hrs
1-1-6	Humidity Load Life		Temperature: 40±2℃ Relative Humidity: 90~95% Load: Allowed DC Current Time: 500Hrs

1-2.Mechanical Performance

No	Item	Specification	Test Method
1-2-1	Resistance To Soldering Heat	Appearance: No Damage	1. The device should be reflow soldered on PCB (peak 260℃±5℃ for 10 seconds) 2. Solder Composition: Sn/Ag3.0/Cu0.5 3. Test time: 6 minutes
1-2-2	Solder ability	The electrodes shall be at least 95% covered with new solder coating	1. Pre-Heating: 150℃,1min. 2. Solder Composition: Sn/Ag3.0/Cu0.5 3. Solder Temperature: 245±5℃. 4. Immersion Time: 4±1 sec.
1-2-3	Commponent Adhesion (Push Test)	1 Lbs. For CMM11/CMF11 2 Lbs. For other	The device should be reflow soldered (245±5℃ For 10 seconds) to a tinned copper substrate. A force guauge should be applied to the side of the component. The device must withstand a minimum force of 2 pounds without a failure of the termination attached to component

CMF11T 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-heatimg	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp.scope	R.T.~150℃	150℃~200℃	225℃	260±5℃	Peak Temp.~150℃
實際時間 Time result	—	60~180 sec	20~60 sec	5~10 sec	—

NOTE :

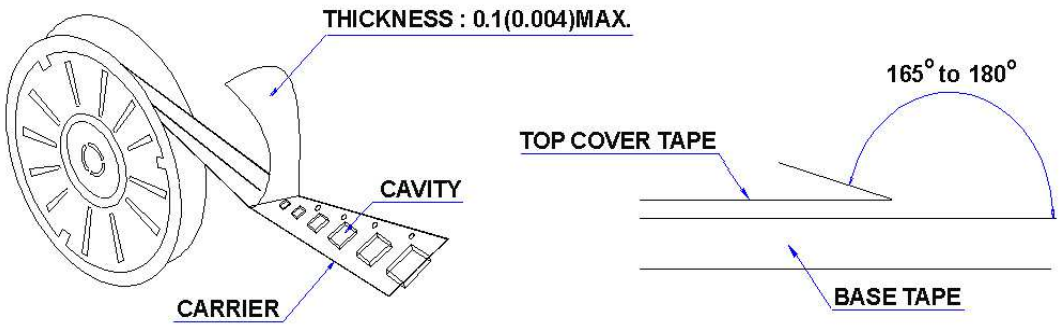
1. Re-flow possible times : within 2 times
2. Nitrogen adopted is recommended while in re-flow

CMF11T Series Specification

11 PACKAGING

11.1 Packaging -Cover tape

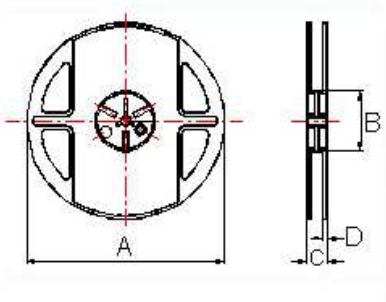
The force for tearing off cover tape is 10 to 100 grams in the arrow direction.



11.2 Packaging Quantity

TYPE	BULK	PCS/REEL
CMF11	X	4000

11.3 Reel Dimensions



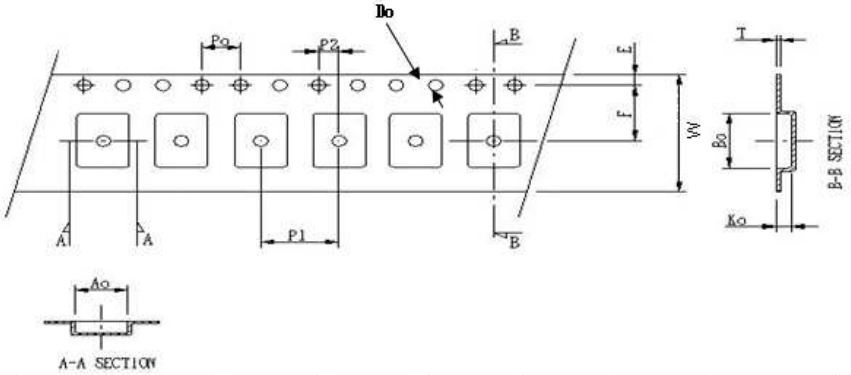
Dimensions in mm

TYPE	A	B	C	D
CMF11	178	60	12	1.5

CMF11T Series Specification

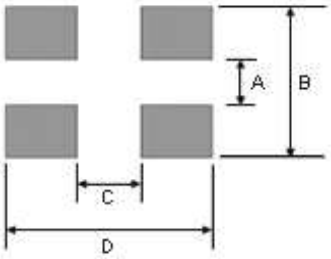
11 PACKAGING

11.4 Tape Dimensions in mm



TYPE	A_0	B_0	W	E	F	P_0	P_1	P_2	D_0	T	K_0
CMF11	1.15±0.05	1.5±0.05	8.0±0.2	1.75±0.05	3.5±0.05	4.0±0.1	4.0±0.1	2.0±0.05	Φ1.5+0.1/-0	0.25±0.02	0.72±0.05

12 Recommended Pattern



Dimensions in mm

TYPE	A(m/m)	B(m/m)	C(m/m)	D(m/m)
CMF11	0.2~0.3	0.7~1.0	0.7~0.8	1.6~1.9

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)