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

Lead-Free & RoHs Compliance!!

SPECIFICATION FOR APPROVAL

CUSTOMER：

CUSTOMER P/N：

OUR DWG No：

QUANTITY： **Pcs.** **DATE：** **2018/9/21**

ITEM： **BTCA00702011000G8A**

SPECIFICATION
ACCEPTED BY:

COMPONENT ENGINEER	
ELECTRICAL ENGINEER	
MECHANICAL ENGINEER	
APPROVED	
REJECTED	

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Chip Series Specification

1 Scope: This specification applies to Chip series antenna

2 Part Numbering: Product Identification

B	TCA	□□	7020	□□□□	□□□	A
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1)Grade
(2)Product Series
(3)Control Code
(4)Dimensions
(5)Internal Code
(6)Frequency
(7)Version Code

3 Rating:

Operating Temperature: −25 ℃ ~ 125 ℃

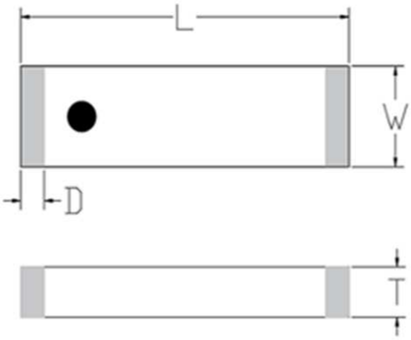
Storage Temperature: ２０℃～２５℃ **R.H.**６５％ **(For Referance)**

4 Marking:

5 Standard Testing Condition:

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

6 Configuration and Dimensions:

Figure	Dimensions(mm)	
	L	7.0±0.2
	W	2.0±0.2
	D	0.5±0.2
	T	1.1±0.2

TERMINAL CONFIGURATION

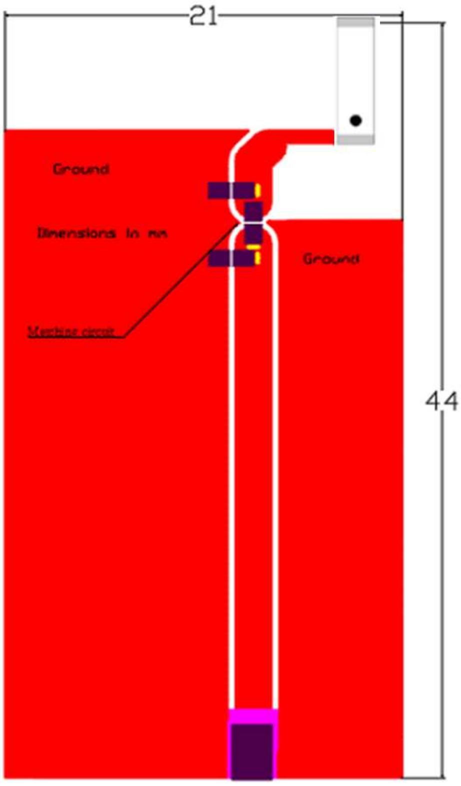
(1) Feed Termination
(2) Solder Termination

7 Electrical Characteristics:

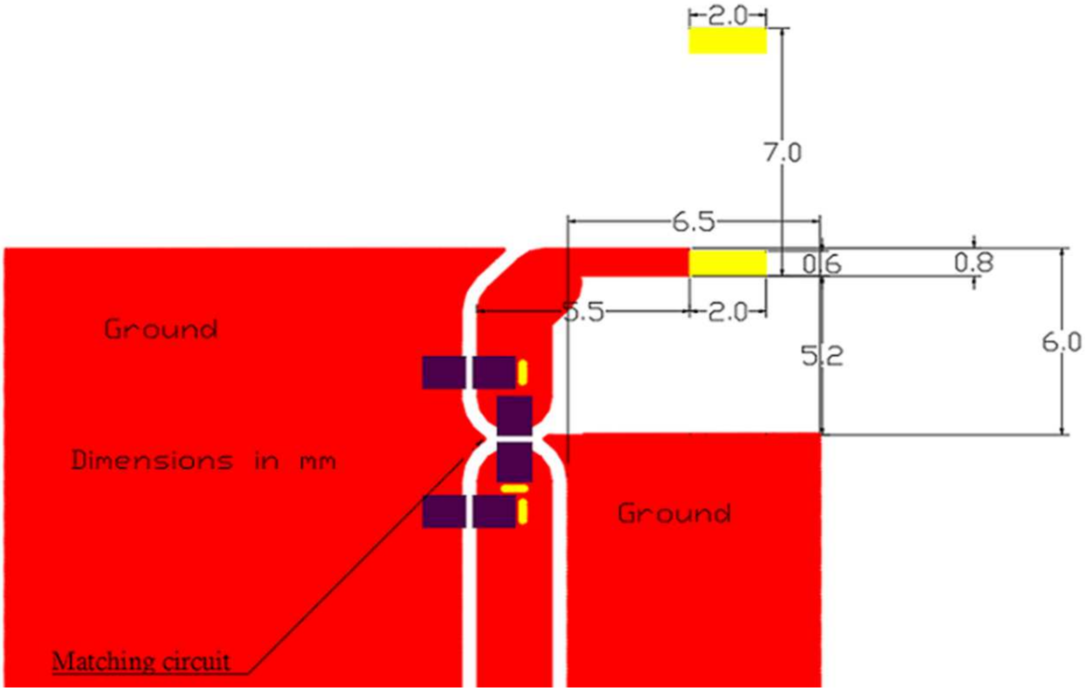
Part No.	Impedance (Ω)	Test Freq. (MHz)	Bandwidth* (MHz)	Peak Gain* (dBi)	VSWR (max)	Polarization (Linear)
BTCA00702011000G8A	50	866	20	-9.17	2	Linear

NOTE: *Depend on PCB layout.

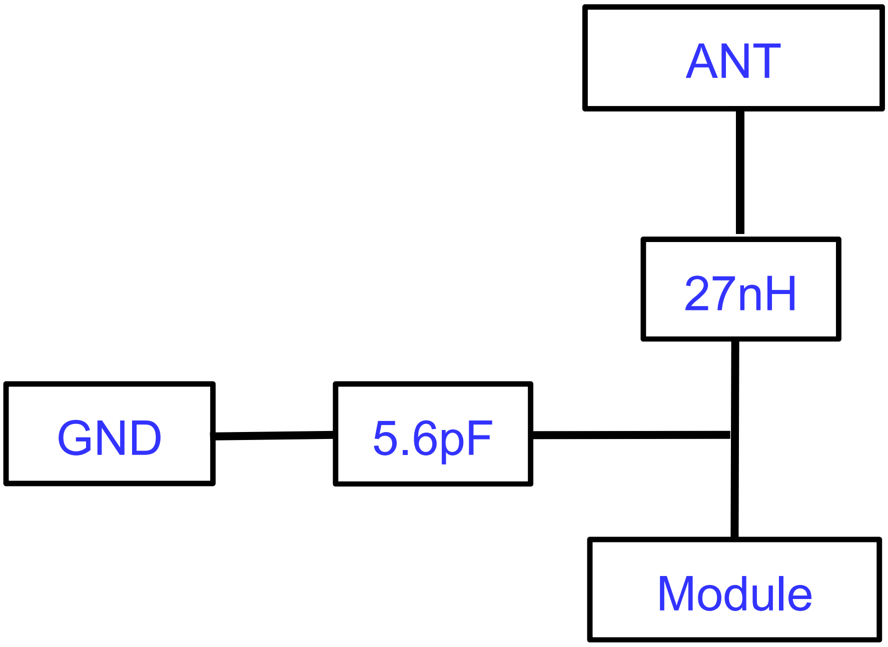
8 Dimensions and Recommended PC Board Pattern:



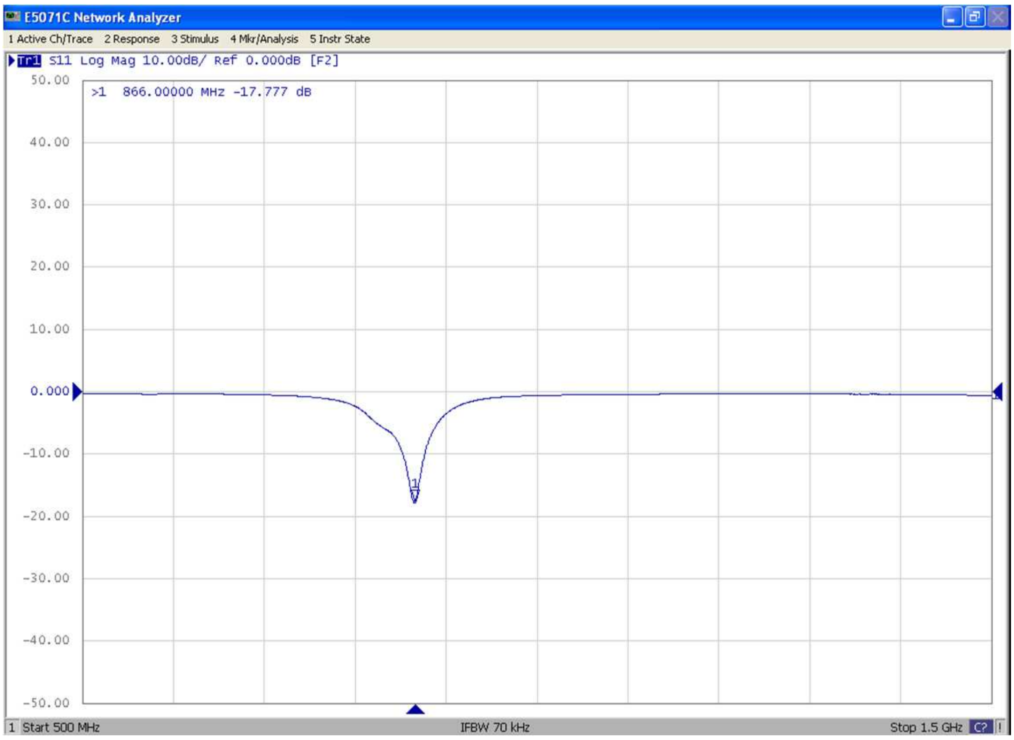
NOTE：Dimensions in mm



9 Matching Circuit:



Return Loss



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Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F2]
>1  866.00000 MHz -17.777 dB
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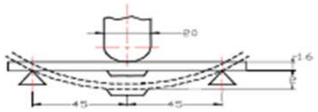
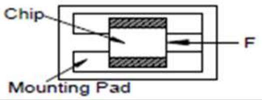
10 Reliability Of Ferrite Multilayer Chip Bead

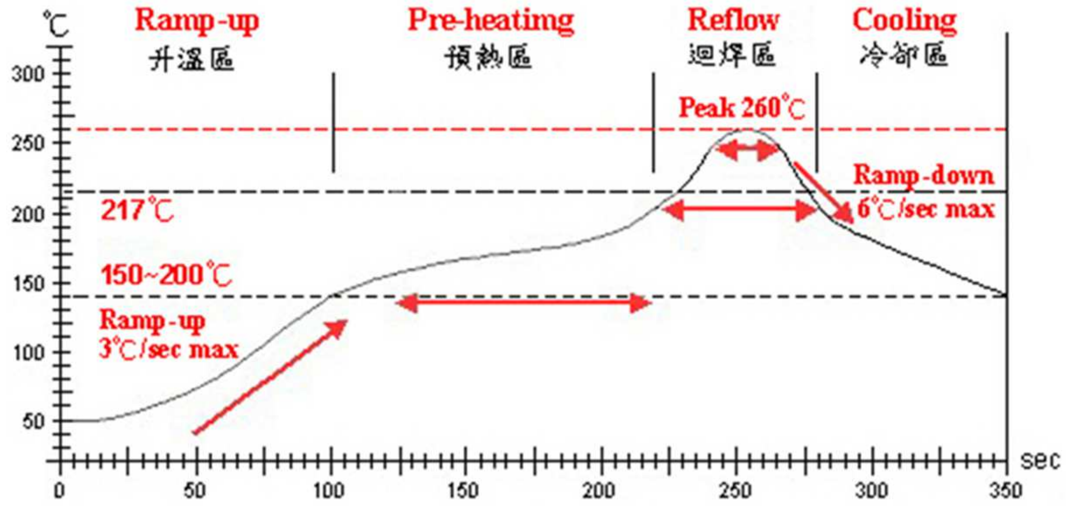
1-1.Mechanical Performance

No	Item	Specification	Test Method
1-1-1	Board Flex	The forces applied on the right conditions must not damage the terminal electrode and the ferrite	Test device shall be soldered on the substrate Substrate Dimension: 100x40x1.6mm Deflection: 2.0mm Keeping Time: 60 sec 
1-1-2	Resistance to Soldering Heat	Meet the electrical Specification after test	Refer to MIL-STD-202 Method 210 Pre-heating: 150-200℃, 60-100 sec Above 217℃ , 60-150 secs Peak Temperature: 260±5℃ , 20-40 sec Cycles : 2 times
1-1-3	Solder ability	The electrodes shall be at least 95% covered with new solder coating	Refer to J-STD-002 Pre-heating: 150℃, 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: 245±5℃(Pb-Free) Immersion Time: 4±1sec
1-1-4	Terminal Strength Test	The chip must not damage the terminal electrode and the ferrite	Test device shall be soldered on the substrate Force 2N for 60±1 seconds for 0603 series Force 5N for 60±1 seconds for 1005 series Force 10N for 60±1 seconds for 1608 series Force 1.8Kg for 60±1 seconds for the other series. 
1-1-5	Vibration Test	Meet the electrical Specification after test	Refer to MIL-STD-202 Method 204 Vbration waveform: Sine waveform Vibration frequency: 10Hz~2000Hz Vibration acceleration: 5g 10Hz~20KHz and back to 10Hz should be down in 20 minutes Duration of test: 12 cycles each of 3 orientations, 20 minutes for each cycle, 12 hr total Vibration axes: X, Y & Z
1-1-6	Resistance to Solvent	There must be no change in appearance or obliteration of marking	Refer to MIL-STD-202 Method 215 Inductors must withstand 6 mimutes of alcohol or water.

10 Reliability Of Ferrite Multilayer Chip Bead

1-2.Environmental Performance

No	Item	Specification	Test Method
1-2-1	Temperature Cycle	Meet the electrical Specification afer test	Refer to JESD Method JA-104 Total cycles: 1000 cycles 30 minutes exposure to -40℃ 30 minutes exposure to 125℃ 1 min. maximum transition between temperatures Measured after exposure in the room condition for 24hrs
1-2-2	Biased Humidity Resistance		Refer to MIL-STD-202 Method 103 Temperature: 85±2℃ Relative Humidity:85% / Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-3	High Temperature Exposure (Storage)		Refer to MIL-STD-202 Method 108 Temperature: 125±3℃ / Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-4	Low Temperature Exposure (Storage)	Meet the electrical Specification after test	Refer to MIL-STD-202 Method 108 Temperature: -40±3℃ / Relative Humidity : 0% Applied Current: Rated Current/ Time: 1000hrs Measured after exposure in the room condition for 24 hrs



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℃	217℃	260±5℃	Peak Temp.~ 150℃
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	—

NOTE :

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