PART SHEET FORAPPROVAL

Manufacturer:	All things connected Communications Xiangyang Limited
Supplier::	All things connected Communications Xiangyang Limited
Part Description:	Patch ceramic antenna
Model No:	WWXL-U 2400/2500-660
Cust P/N:	360100239
Issued Date:	2021.04.24

Supplier confirmation

Made By	Engineer	Approver
DAIHONGBO		TONGXIAOYAN

SDMC confirmation

Approval Reason:	☐ New Part☐Substitute Part			
Made By	Engineer			Approver
	Quality	R&D	Sales	

Note: Signature indicates that the submittedsample is approved and thedrawing/specification is now the controlling document.

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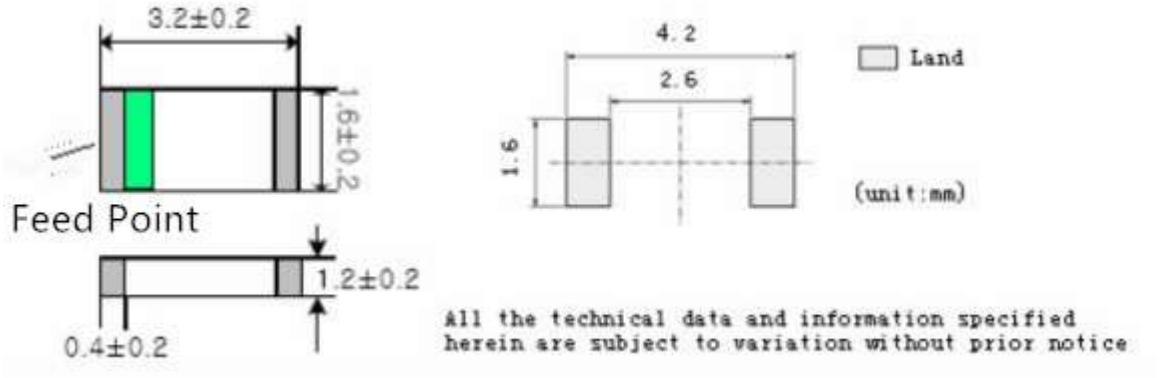
Specification for Antenna

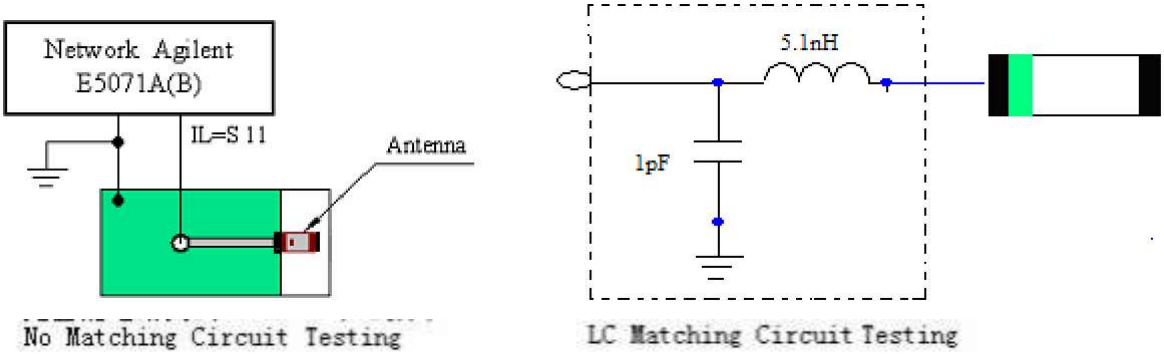
1、 Scope

Antenna series are designed to be used in WLAN、Home RF、
Bluetooth、Module、etc.，small size SMD chip design.

2、 Appearance and Dimensions



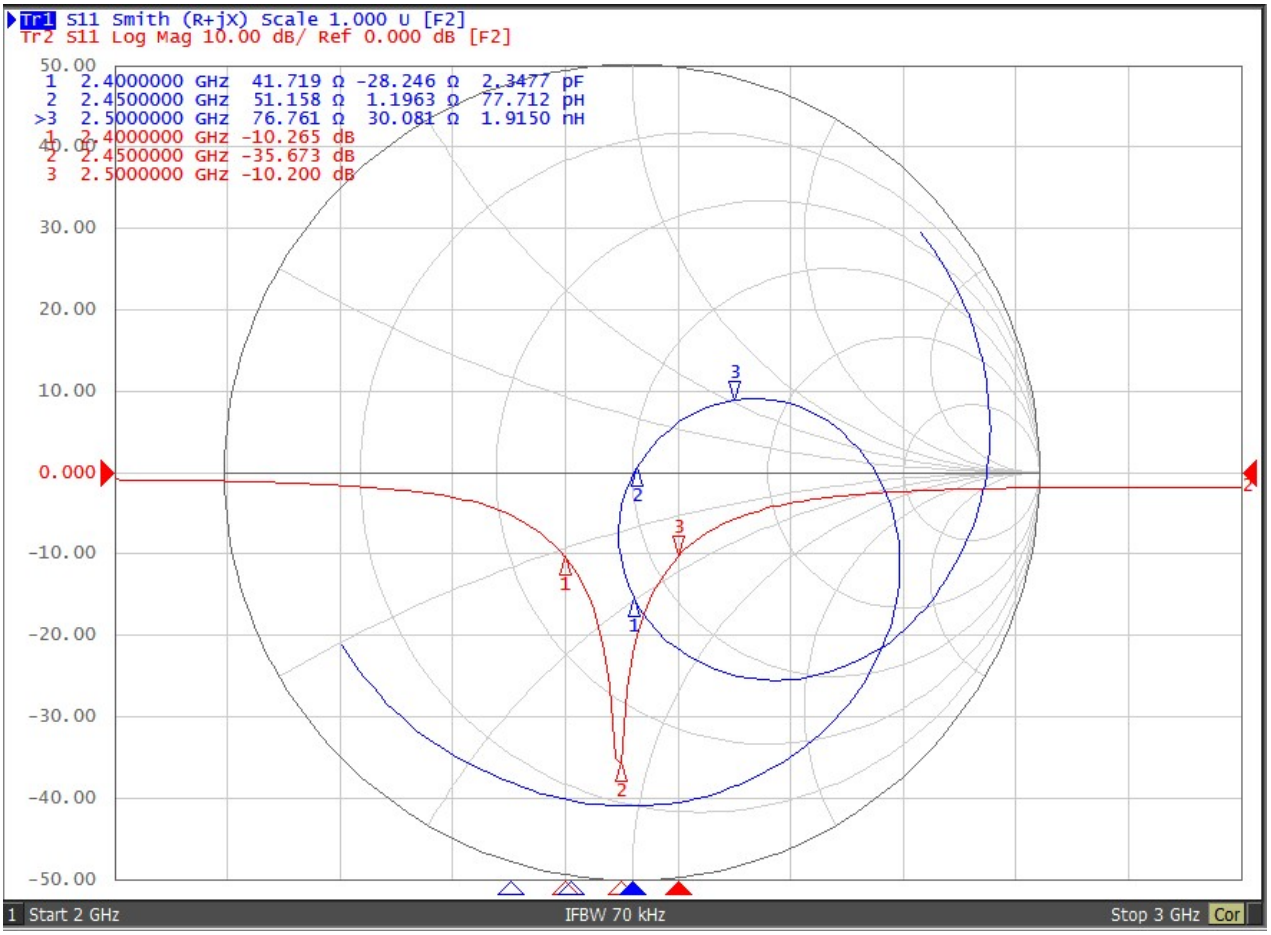
3、Test Circuit and Testing Conditions



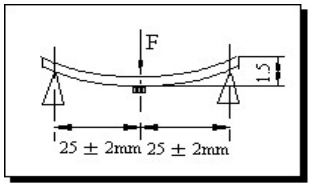
4、Electrical Characteristics

Name Patch ceramic antenna （WWXL2001001）		ModelType	
ELECTRICAL SPECTFICATIONS		MECHANICAL SPECTFICATIONS	
Central Frequency	2450MHz	Dimensions	3.2*1.6*1.2MM
After Matching	100 MHz (2400～2500MHz)	V.S.W.R (in BW)	≤2.0
Gain	0～2 dBi	Polarization	Linear
Impedance	50 Ω	Azimuth Beam width	Omni-directional
Power Capacity	2W max	Limit Temperature	-40℃-+85℃
WorkingTemperature	-40℃ - +85℃		

5、Characteristic curve



6、Reliable Performance

NO.	Item	Specifications	Test Methods	
6-1	Solder-Ability	More than 90% of termination should be covered with new solder.	Solder: Sn: Pb=	100:0
			Temperature:	255℃+5℃/-0℃
			Flux: rosin	
			Duration:	5±0.5s
6-2	Leaching Resistance	More than 75% of termination Should be covered with new solder.	Solder: Sn: Pb=	100:0
			Temperature:	270℃+2℃/-0℃
			Flux: rosin	
			Duration:	10±0.5s
6-3	Terminal Strength	The terminal and body should be no damage	The device should not be broken after tensile force of 1.0kg is slowly applied to pull a lead pin of the fixed device in the lead axis direction for 10±1 seconds.	
6-4	Bending Strength	No mechanical damage should be noticed	Weld the product to the center part of the PCB with the thickness 1.6±0.2mm as the illustration shows, and keep exerting force arrow-ward on it at speed of: 1mm/S, and hold for 5±1S at the position of 1.5mm bending distance, so far, any peeling off of the product metal coating should not be detected. 	
6-5	Drop	Post Environmental Tolerance 1 Center Frequency: ±25	Drop 10 times on a concrete floor from a height of 1m.	

6-6	Vibration	MHz; 2 Band Width: ±20 MHz; 3 Gain: ±0.2 dBi 4 V.S.W.R (in BW): ±0.5 dB;	Frequency: 10 to 55Hz Amplitude: 1.5mm Direction and time: X, Y and Z directions for 2 hours each.
6-7	Humidity resistance		a. Test condition Temp.: 60±2℃Humidity: 90%~95% Test time: 96±2 h b. Measurement method: The component should be stabilized at normal condition for (24±2) hours before test.
6-8	High temperature resistance		a. Test condition Temp.: + 85±2℃Test time: 96±2 h b. Measurement method: The component should be stabilized at normal condition for (24±2) hours before test.
6-9	Low temperature resistance		a. Test condition Temp.: -40±2℃Test time: 96±2 h b. Measurement method: The component should be stabilized at normal condition for (24±2) hours before test.
6-10	Thermal shock (Temperature cycle)		a. Test condition 1) Temp.: -40℃, time: 30±3min 2) Temp.: +85℃, time: 30±3min 5 cycles b. Measurement method: The component should be stabilized at normal condition for (24±2) hours before test.

7、Recommended Soldering Conditions

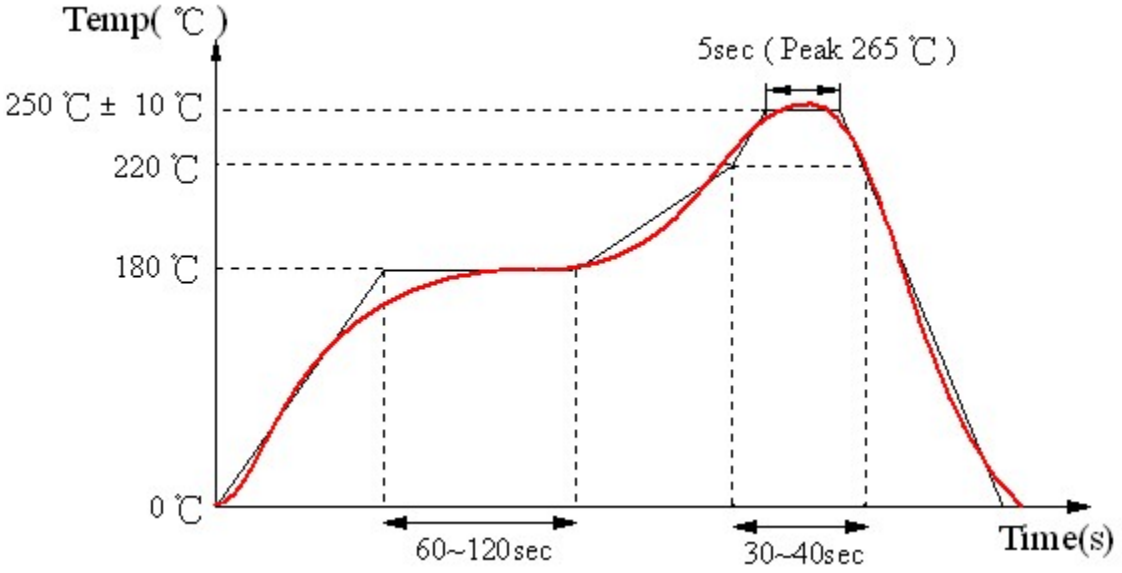
a、Flux, Solder

① Use rosin-based flux. Don’t use highly acidic flux with halide content exceeding 0.2wt% (chlorine conversion value).

② Use Sn solder.

b、Reflow soldering conditions

Pre-heating should be in such a way that the temperature difference between solder and product surface is limited to 150℃ max. Cooling into solvent after soldering also should be in such a way that temperature difference is limited to 100℃ max. Unwrought pre-heating may cause cracks on the product, resulting in the deterioration of products quality.



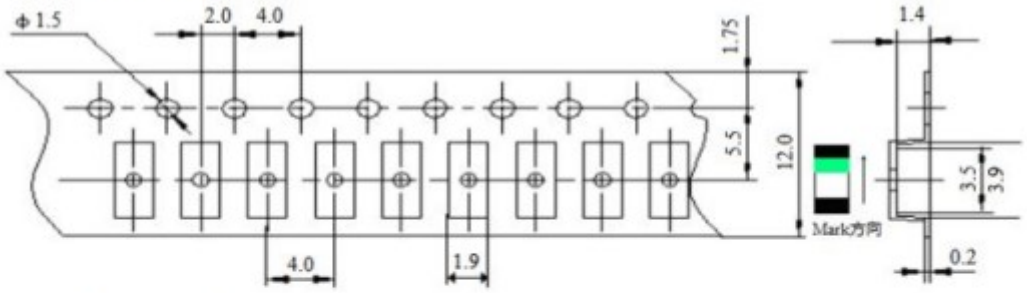
c、Reworking with soldering iron

The following conditions must be strictly followed when using a soldering iron.

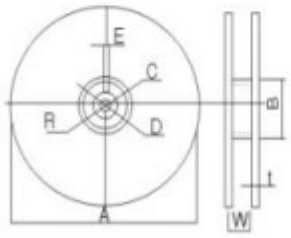
Pre-heating	150℃, 1 minute
Tip temperature	350℃ max
Soldering iron output	80w max
End of soldering iron	φ3mm max
Soldering time	3 seconds max

8、Packaging：

① Dimensions of Tape:



② Dimensions of Reel



Reel material: PS (Polystyrene)

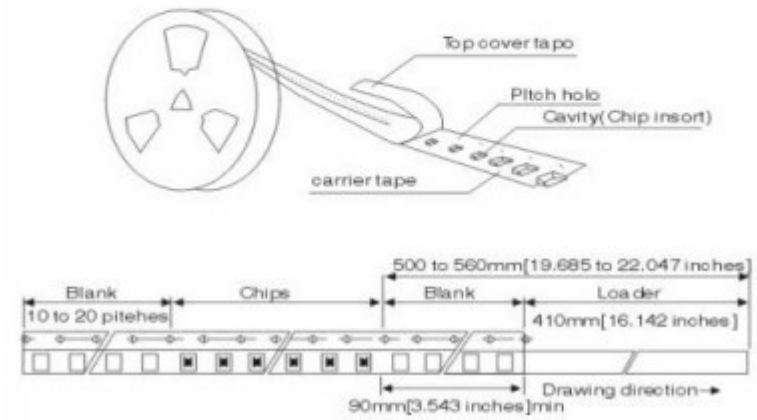
Unit: mm

A	178±2
B	60±2
C	13.0±0.5
D	21.0±0.8
E	2.0±0.5
W	12.5±1.5
t	1.2±0.2
R	1.0±0.25

③ Pulling strength of tapes:

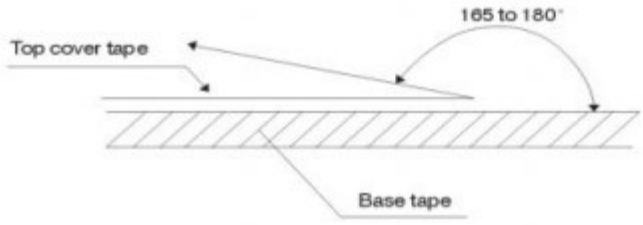
Carrier tape	10N or more (1kgf or more)
Cover tape	5N or more (1kgf or more)

④ Taping figure and drawing direction:



⑤ Peeling strength of cover tape:

Cover tape	0.2~0.6N (20gf~60gf)



Test condition:

1) peel angle: 165°~180° vs. carrier tape.
2) peel speed: 300mm/min±10%.

⑥ Packaging quantities: 3000 PCS / Reel