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Datasheet of Ceramic Component

Product : Chip Antenna

Frequency : 2400-2500 MHz

P/N : LX.ANT2012-2450D01

DR Antenna 2012 Size

1. Features

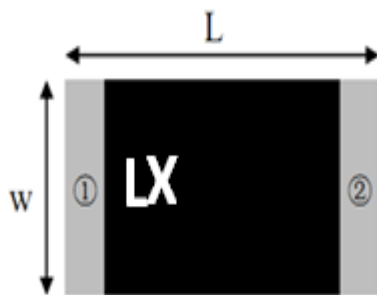
Antenna Frequency **for** 2400-2500 MHz

2. Applications

For Miniaturized Bluetooth System

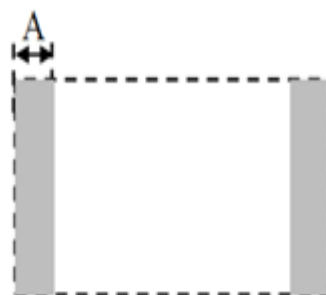
3. Shapes & Dimensions(mm)

1). Component :

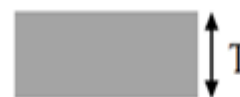


(Top View)

Number	Terminal Name
①	INPUT
②	NC



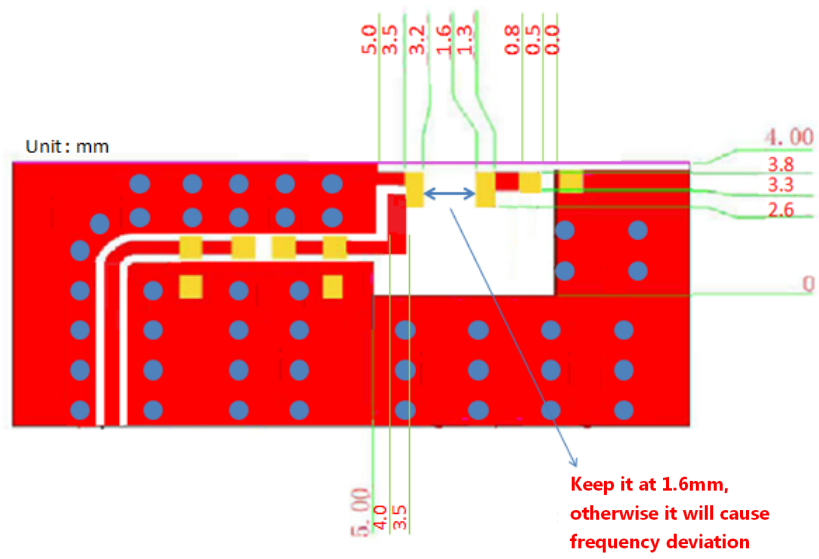
(Bottom View)



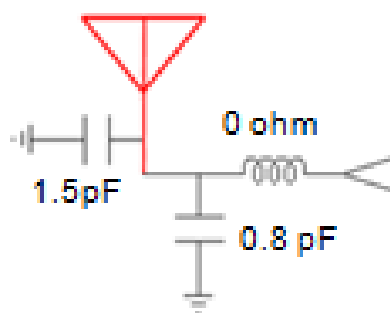
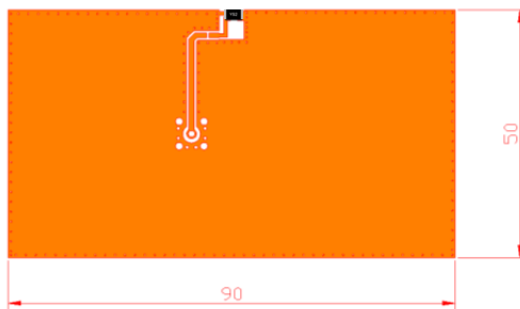
(Side View)

Symbols	L	W	T	A
Dimensions	2.0+/-0.2	1.2+/-0.2	0.5+/-0.1	0.3+/-0.2

2). PCB Cleanzon :



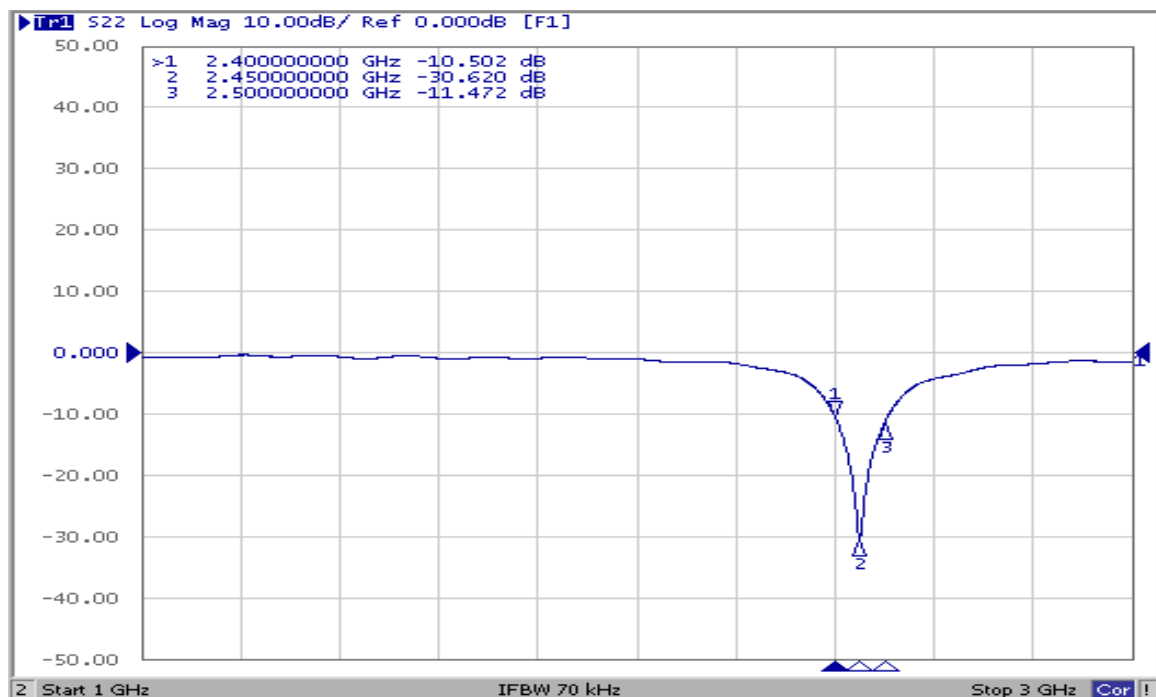
4. Evaluation Board and Matching Circuits



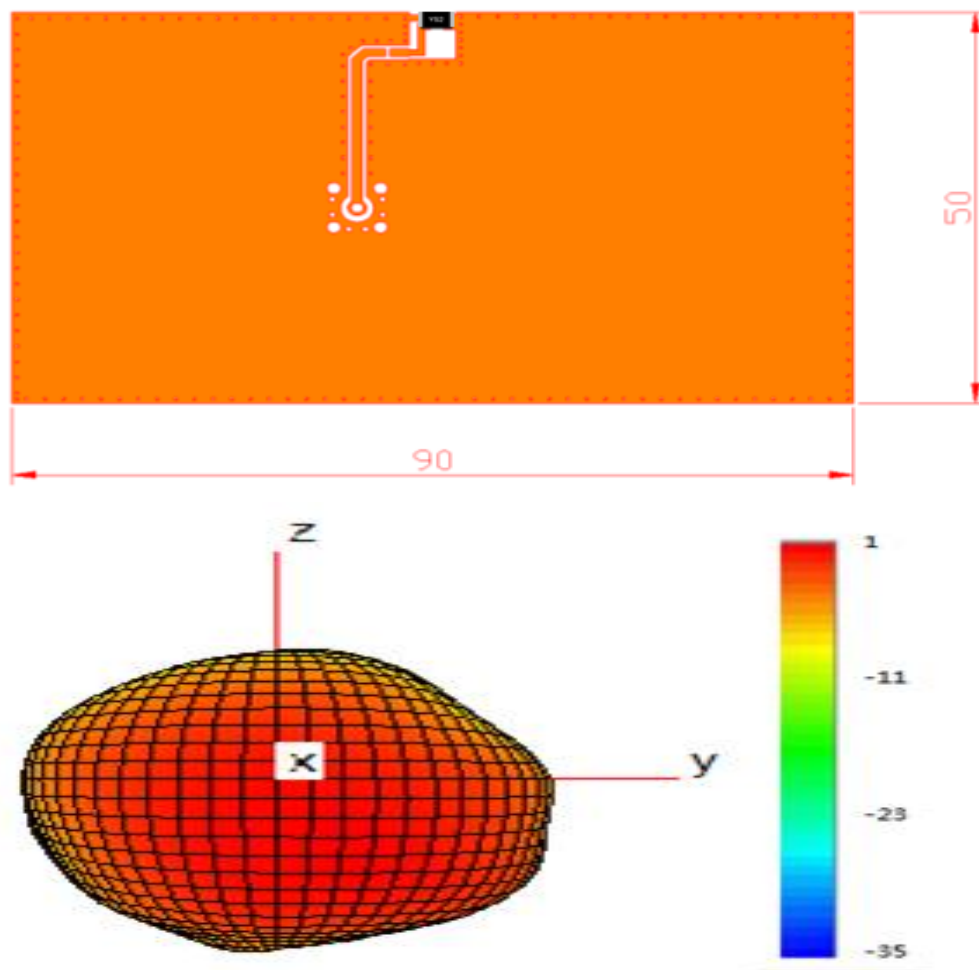
5. Electrical Characteristics

Part Number	LX.ANT2012-2450D01
Central Frequency	2450 MHz
Bandwidth	110(typ.) MHz
V.S.W.R	≤ 2.0
Peak Gain	3.32 dBi
Impedance	50 Ohm
Polarization	Linear
Azimuth Beamwidth	Omni-directional

6. Return Loss

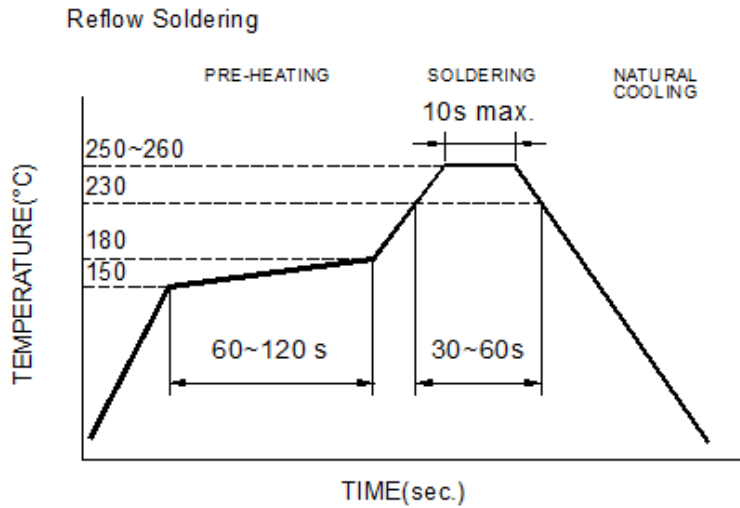


7. Radiation Pattern & Efficiency



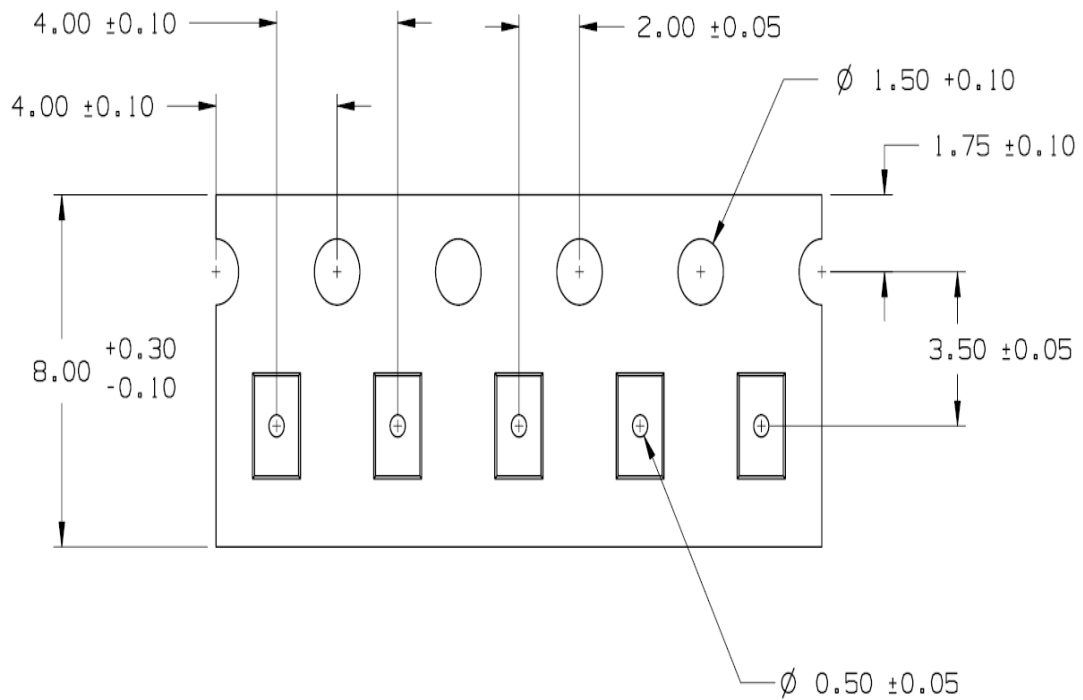
Frequency (MHz)	2400	2450	2500
Efficiency (dB)	-2.22	-1.87	-2.08
Efficiency (%)	60	65	62
Gain (dBi)	3.01	3.32	2.93

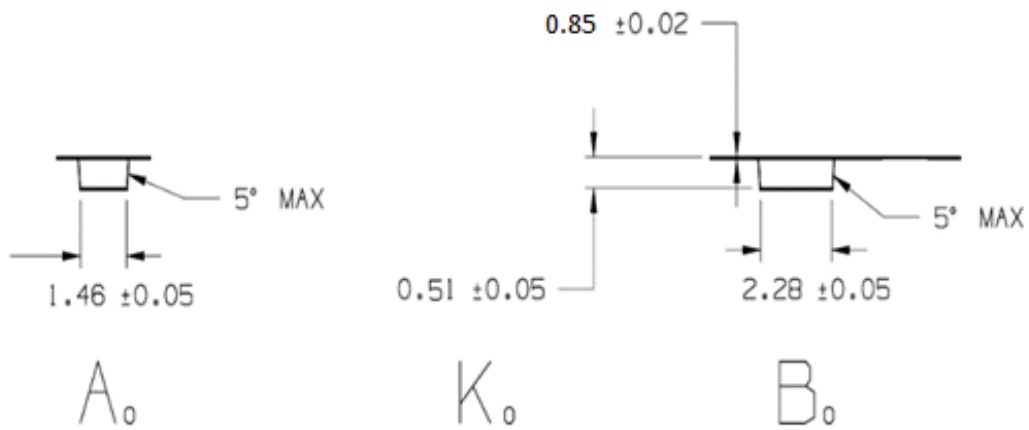
8. Reflow Soldering Standard Condition



9. Packaging and Dimensions 2.0*1.2mm

◆ Plastic Tape

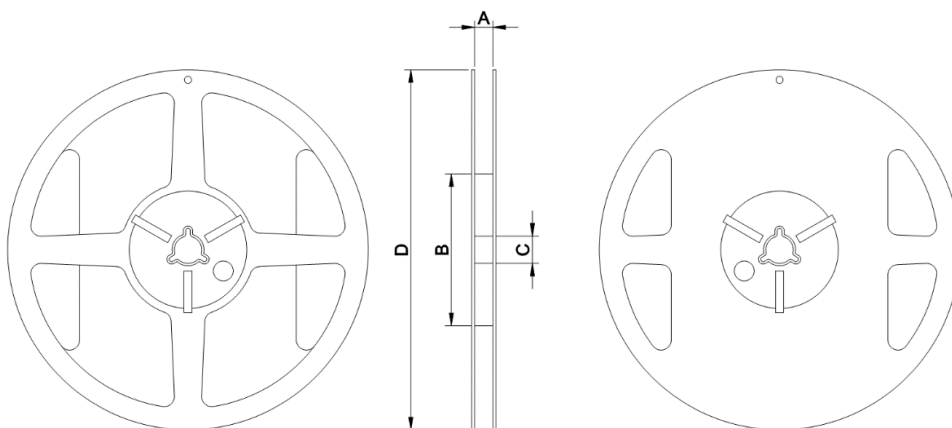




◆ **Remarks for Package**

Reserve a length of 150~200mm for the trailer of the carrier and 250~300 mm for the leader of the carrier and further 250mm of cover tape at the leading part of the carrier.

◆ **Reel (6000 pcs/Reel)**



Tape Width(mm)	A(mm)	B(mm)	C(mm)	D(mm)	Chip/Reel(pcs)
8	9.0±0.5	60±2	13.5±0.5	178±2	6000

◆ **Storage Period**

Oxidizable Material, 12 months in vacuum sealed bag, please repack within 168 hours by re-seal the package treatment after using.

Storage Temperature Range : <30 degree C, Humidity : <60%RH

10. Dependability Test

Test item	Test condition / Test method	Specification
Solderability IEC 60068-2-58 GB/T2423.28	*Solder bath temperature: 240±5°C *Immersion time: 2±0.5 sec Solder: Sn96.5Ag3.0Gu0.5 for lead-free.	At least 95% of a surface of each terminal electrode must be covered by fresh solder.
Leaching (Resistance to dissolution of metallization) JIS C5101	*Solder bath temperature: 260±5°C *Leaching immersion time: 10±1 sec Solder : Sn96.5 Ag3.0 Gu0.5 for lead-free.	Loss of metallization on the edges of each electrode shall not exceed 25%.
Resistance to soldering heat IEC 60068-2-58 GB/T2423.28	*Preheating temperature: 120~150°C, 1 minute. *Solder temperature: 260±5°C *Immersion time: 10±1 sec Solder: Sn96.5Ag3.0Gu0.5 for lead-free Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature. Loss of metallization on the edges of each electrode shall not exceed 25%.

<p>Drop Test IEC 60068-2-32 GB/T2423.8 Customer's specification.</p>	<p>*Height : 50 cm *Test Surface: Rigid surface of concrete or steel. *Times : 6 surfaces for each units ; 2 times for each side.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>Vibration IEC 60068-2-6 GB/T 2423.10</p>	<p>*Frequency : 10Hz~55Hz~10Hz(1min) *Total amplitude : 1.5mm *Test times: 6hrs.(Two hrs each in three mutually perpendicular directions)</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>Adhesive Strength of Termination IEC60068-2-21 GB/T 2423.6</p>	<p>*Pressurizing force : 5N(\leq0603) ; 10N(>0603) *Test time:10\pm1 sec</p>	<p>No remarkable damage or removal of the termination.</p>
<p>Bending test IEC 60068-2-21 GB/T 2423.29</p>	<p>The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1 mm/s per second until the deflection becomes 2mm and then pressure shall be maintained for 10\pm1 sec. Measurement to be made after keeping at room temperature for 24\pm2 hours.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>Temperature cycle IEC60068-2-14 GB/T 2423.22</p>	<p>30 minutes at-40$^{\circ}$C\pm2$^{\circ}$C. 10~15 minutes at room temperature. 30minutes at +85$^{\circ}$C\pm2$^{\circ}$C. 10~15 minutes at room temperature. Total 100 continuous cycles Measurement to be made after keeping at room temperature for 24\pm2 hrs.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>

<p>High temperature IEC 60068-2-2 GB/T2423.2</p>	<p>*Temperature: $85\pm 2^{\circ}\text{C}$. *Test duration: $500+24/-0$ hours. Measurement to be made after keeping at room temperature for 24 ± 2 hrs.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics.</p>
<p>Humidity (steady conditions) IEC60068-2-3 GB/T 2423.3</p>	<p>*Humidity : $85\pm 5\%$R.H. *Temperature: $85\pm 2^{\circ}\text{C}$. *Time : $500+24/-0$ hrs. Measurement to be made after keeping at room temperature for 24 ± 2 hrs ※ 200hrs measuring the first data then 300hrs data.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>
<p>Low temperature IEC 60068-2-1 GB/T2423.1</p>	<p>*Temperature: $-40\pm 2^{\circ}\text{C}$. *Test duration: $500+24/-0$ hours Measurement to be made after keeping at room temperature for 24 ± 2 hrs.</p>	<p>No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.</p>