



規 格 承 認 書
SPECIFICATION FOR
APPROVAL

Datasheet of Ceramic Component

Product : Chip Antenna

Frequency : 2.4G

P/N : SY5010-S25

Manufacturer Add: No. 26, Juxiang 1st Road, Xiruan
Industrial Park, Xiaotai Management Area, Dalong Town,
Dongguan City

*Contents in this sheet are subject to change without prior notice.

Antenna Size : 5010

1. Features

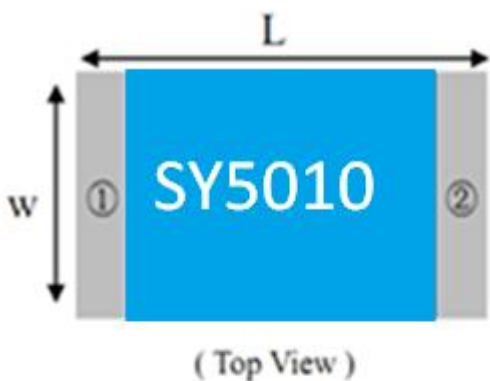
Antenna Frequency for 2400~2500 MHz 5150~5850MHz

2. Applications

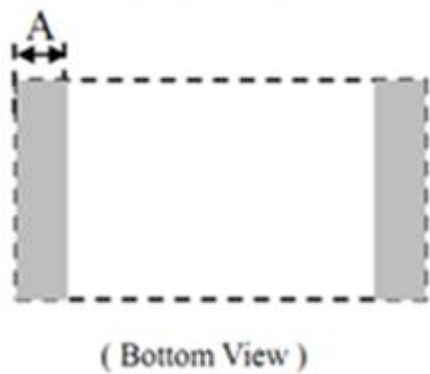
For Miniaturized Bluetooth System

3. Shapes & Dimensions(mm)

1). Component :

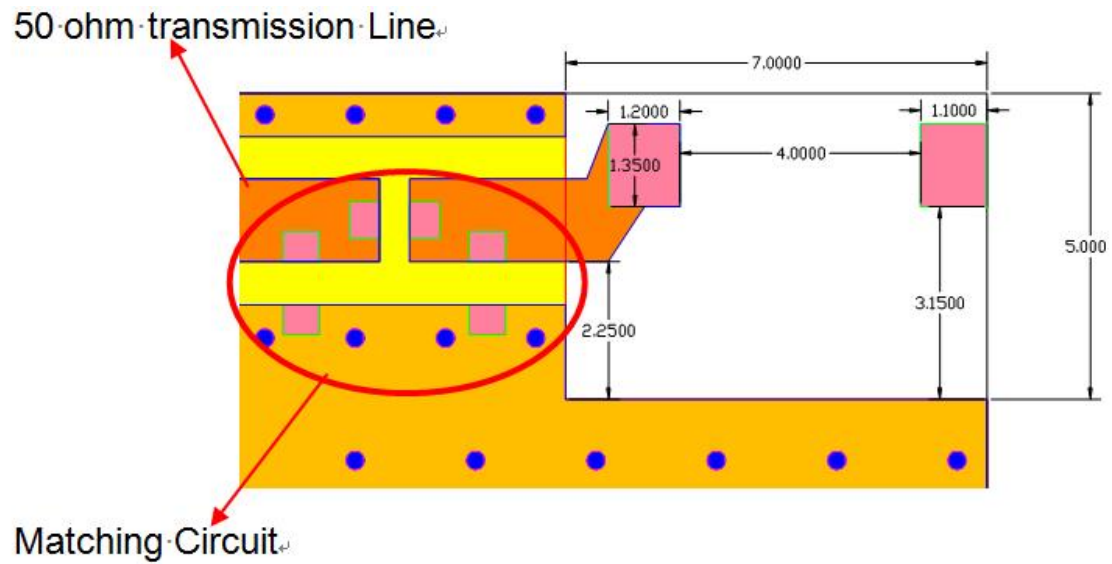


Number	Terminal Name
①	INPUT
②	NC

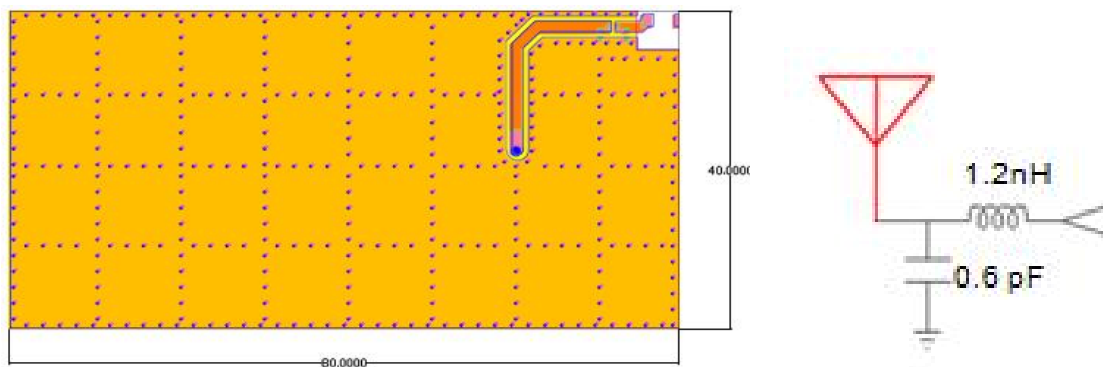


Symbols	L	W	T
Dimensions	5.0+/-0.2	1.0+/-0.2	1.0+/-0.2

2). PCB Layout (Unit : mm) :



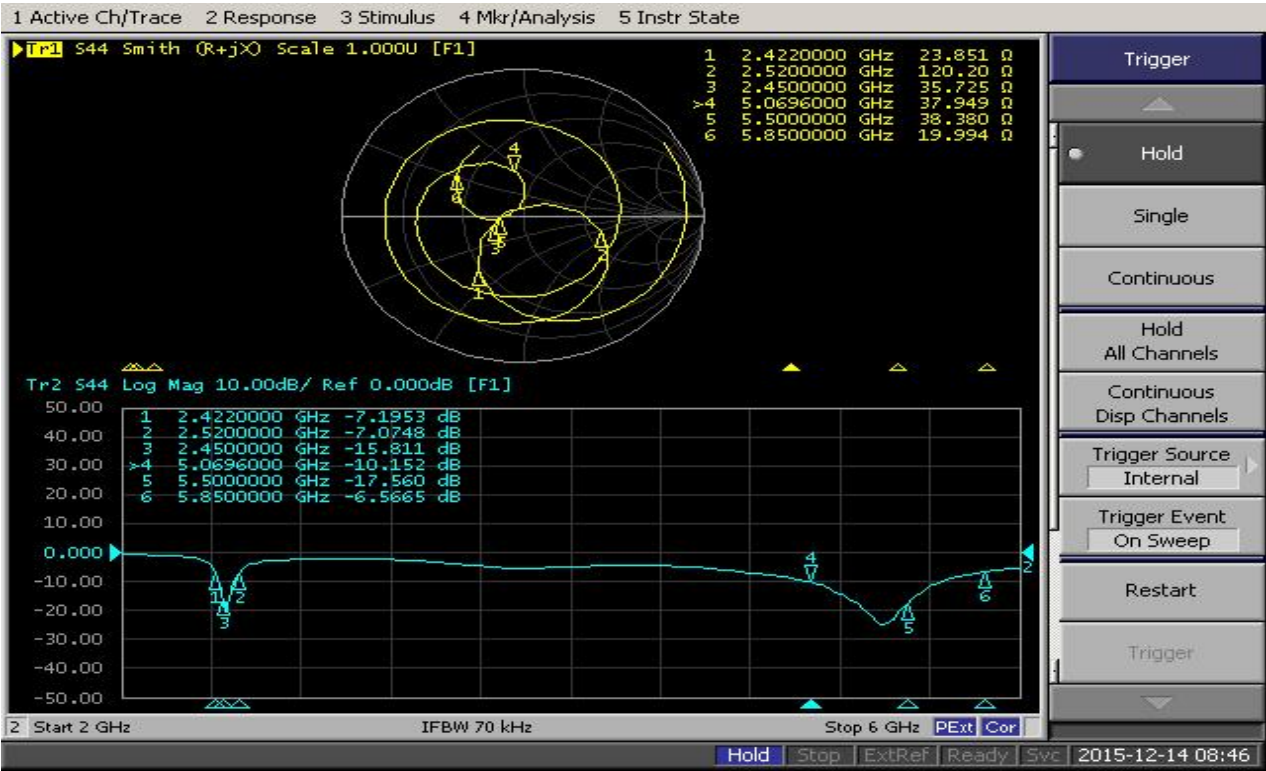
4. Evaluation Board Size and Matching Circuits

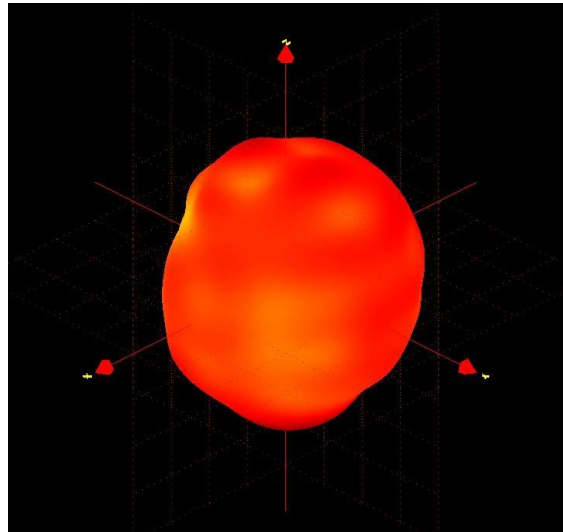
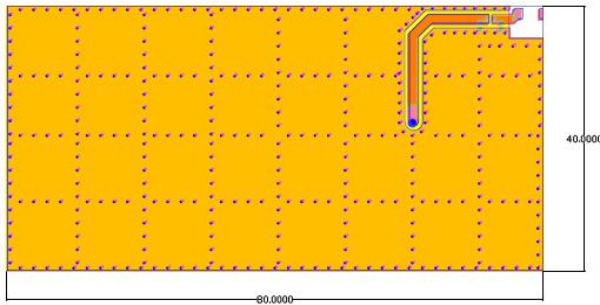


5. Electrical Characteristics

No.	Item (项目)	Specifications (特性)
5.1	Central Frequency 中心频率(No matching)	2400 ~ 2500 MHz / 5150 ~ 5850 MHz
	(带匹配电路测试)After Matching	2450 MHz/5500MHz
5.2	Band Width 通带宽度	100MHz (typ.) / 800 MHz (typ.)
5.3	Peak Gain 峰值增益	2.23dBi / 4.05dBi
5.4	Return Loss 回波损耗	-7 dB (max.) / -7 dB (max.)
5.5	Polarization 极化方式	Linear 线性
5.6	Azimuth Beam width 方位角	Omni-directional 全向
5.7	Impedance 阻抗	50 Ω

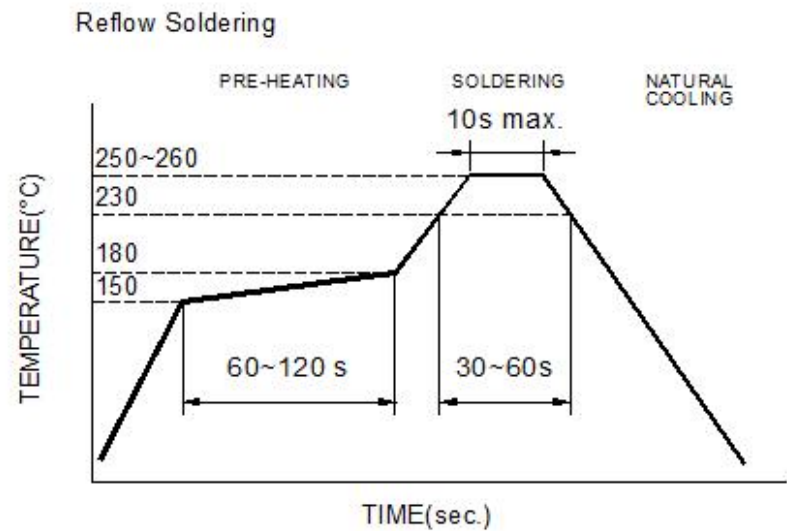
6. Return Loss



Radiation Pattern & Efficiency-2.4G

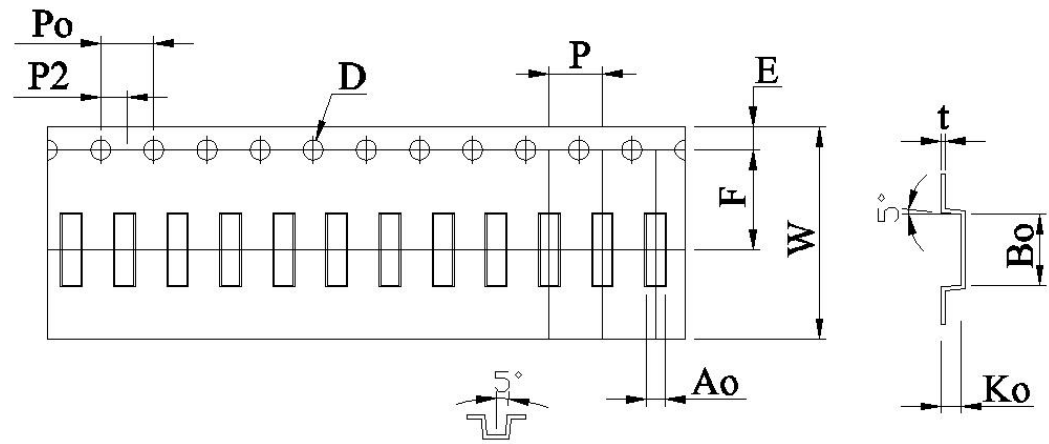
Frequency (MHz)	2400	2450	2500
Avg. Gain (dBi)	-4.75	-1.61	-1.36
Peck Gain (dBi)	1.95	2.23	2.07
Efficiency (%)	42	66.5	50

7. Reflow Soldering Standard Condition



8. Packaging and Dimensions

◆ Plastic Tape

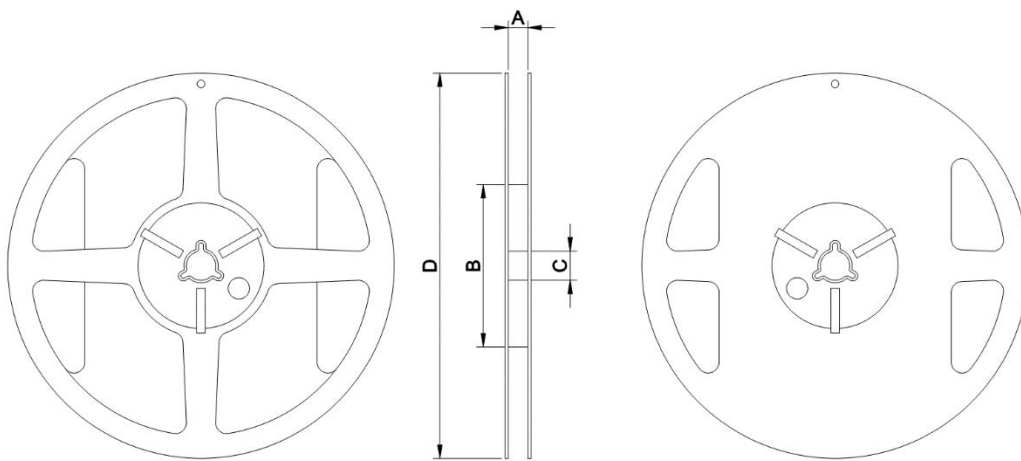


W	Ao	Bo	Ko	P	F	E	D	D1	Po	P2	t
12.0	1.30	5.30	1.50	4.00	7.50	1.75	1.50	0.00	4.00	2.00	0.30
±0.30	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.05

◆ **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 (3000 pcs/Reel)**



Tape Width(mm)	A(mm)	B(mm)	C(mm)	D(mm)	Chip/Reel(pcs)
12	13.0±0.5	60±2	13.5±0.5	178±2	3000

◆ **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

9. Dependability Test

Test item	Test condition / Test method	Specification
Solderability IEC 60068-2-58 GB/T2423.28	*Solder bath temperature: 240±5℃ *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℃ *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℃, 1 minute. *Solder temperature: 260±5℃ *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%.
Drop Test IEC 60068-2-32 GB/T2423.8 Customer's specification.	*Height: 50 cm *Test Surface: Rigid surface of concrete or steel. *Times: 6 surfaces for each units; 2 times for each side.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Vibration IEC 60068-2-6 GB/T 2423.10	*Frequency: 10Hz~55Hz~10Hz(1min) *Total amplitude: 1.5mm *Test times: 6hrs.(Two hrs each in three mutually perpendicular directions)	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Adhesive Strength of Termination IEC60068-2-21 GB/T 2423.6	*Pressurizing force: 5N(≤0603); 10N(>0603) *Test time:10±1 sec	No remarkable damage or removal of the termination.

Bending test IEC 60068-2-21 GB/T 2423.29	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±1 sec. Measurement to be made after keeping at room temperature for 24±2 hours.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Temperature cycle IEC60068-2-14 GB/T 2423.22	30 minutes at -40°C±2°C. 10~15 minutes at room temperature. 30 minutes at +85°C±2°C. 10~15 minutes at room temperature. Total 100 continuous cycles 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.
High temperature IEC 60068-2-2 GB/T2423.2	*Temperature: 85±2°C. *Test duration: 500+24/-0 hours. 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.
Humidity (steady conditions) IEC60068-2-3 GB/T 2423.3	*Humidity: 85±5%R.H. *Temperature: 85±2°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.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Low temperature IEC 60068-2-1 GB/T2423.1	*Temperature: -40±2°C. *Test duration: 500+24/-0 hours 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.