

FEATURES

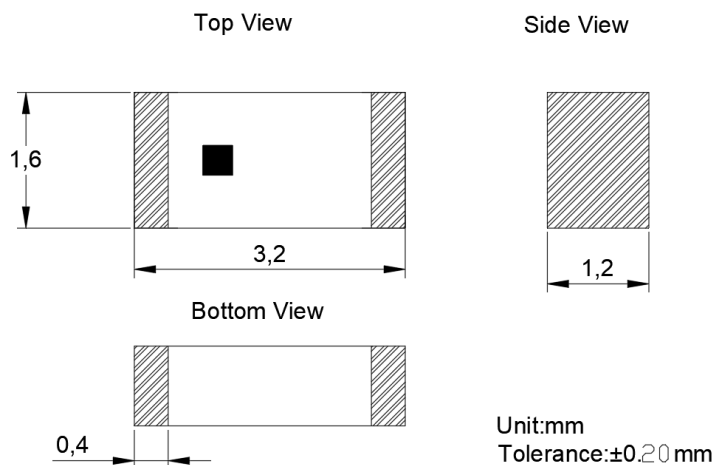
- Compact size
- Omni-directional Radiation
- Tape & reel automatic mounting
- Reflow process compatible
- RoHS compliant

Manufacturer : Suzhou Ceramic Electronic Technology Co.,Ltd
Address : Company address : No.155-2 Lijiang Road, Suzhou
New District, 215009, Jiangsu, PRC

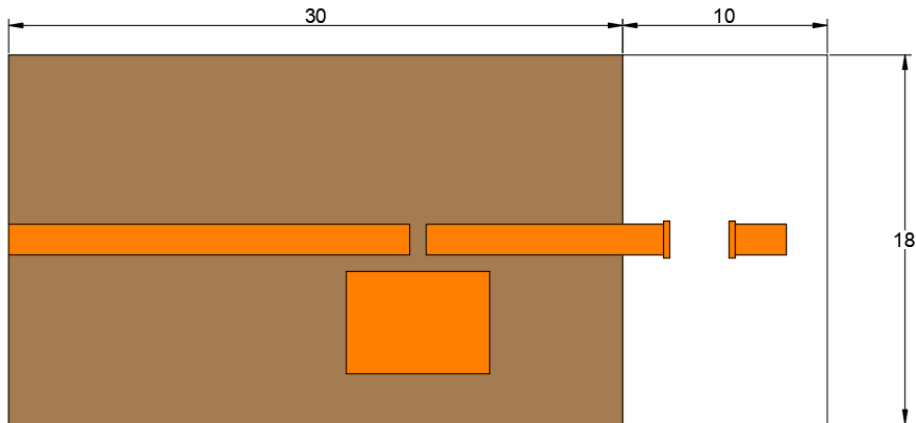
SPECIFICATIONS

NO.	Parameter	SPC
1	Centre Frequency	2.45G
2	Bandwidth	100MHz (TYP)
	Return Loss	10dB min
3	Polarization	Linear
4	Azimuth Beamwidth	Omni-directional
5	Peak Gain	5.05 dBi (Typ)
6	Input Impedance	50Ω
7	Operating Temperature	-40°C~105°C
8	Maximum Power	1W
9	Storage Temperature Range	+5 ~ +35 °C, Humidity 45~75%RH
10	Storage Period	12 months max

Antenna size

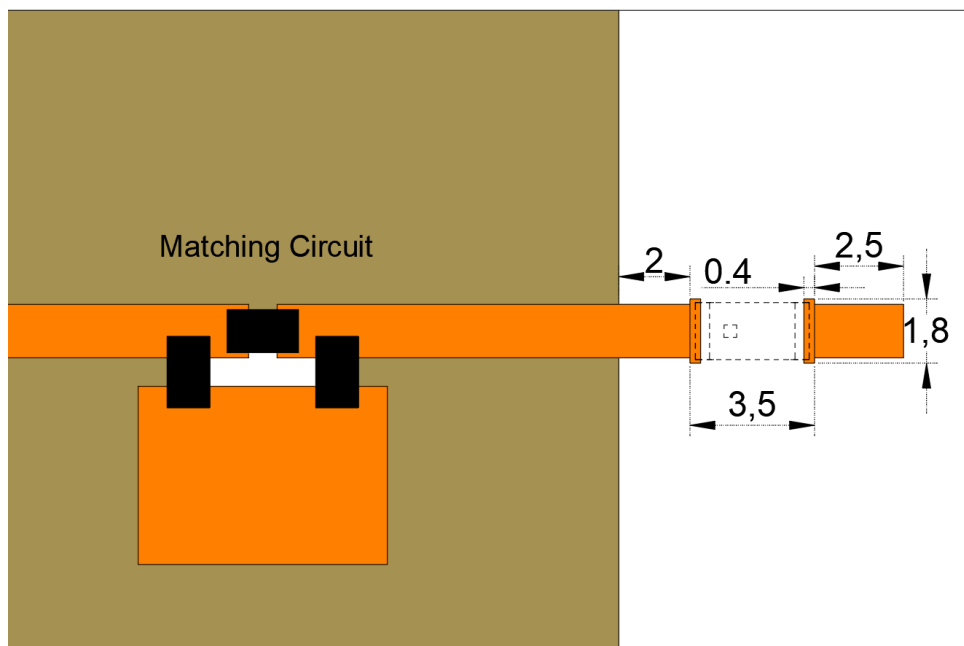


Reference design of evaluation board



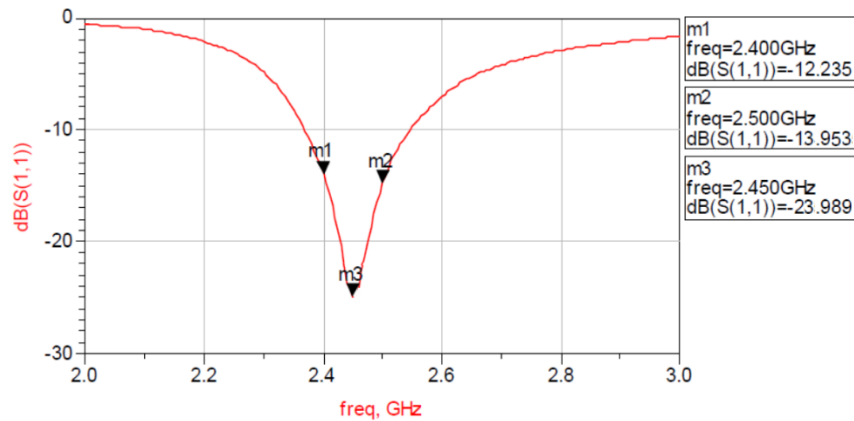
Unit:mm
Tolerance:±0.10 mm

PCB Design Guide

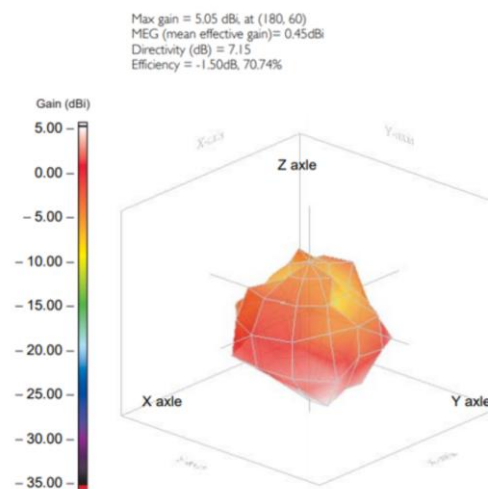


Typical Electrical Characteristics (T=25°C)

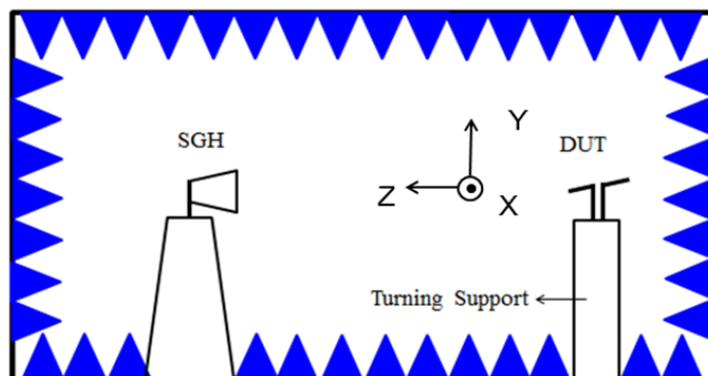
Return loss



Radiation pattern



Chamber Coordinate System



RELIABILITY TEST

Temperature range: 25±5℃

Relative Humidity range: 55~75%RH

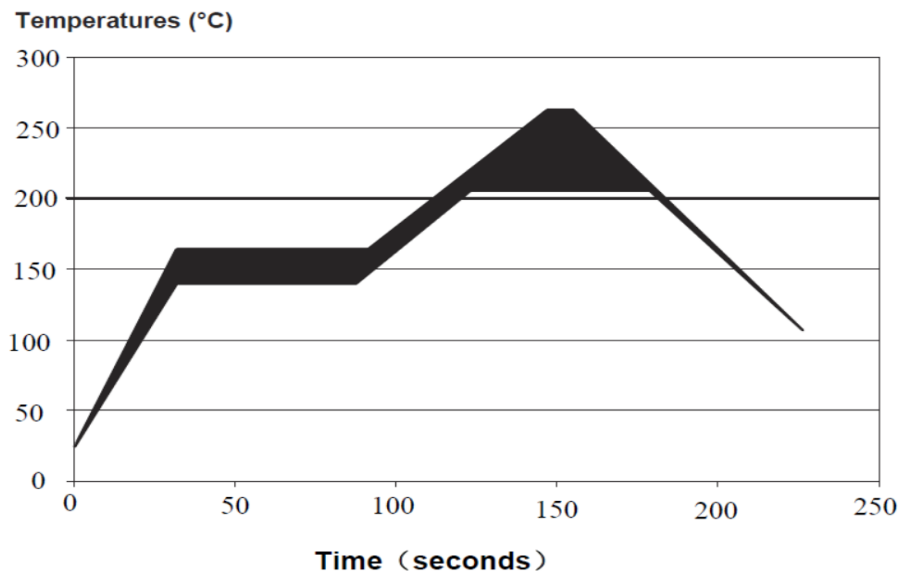
Operating Temperature range: -40℃~+85℃

Storage Temperature range: -40℃~+85℃

Test item	Test condition / Test method	Specification
Solderability	Solder bath temperature: 235 ± 5℃ Immersion time: 2 ± 0.5 sec Solder: Sn3Ag0.5Cu 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)	Solder bath temperature: 260±5℃ Leaching immersion time: 30 ± 0.5 sec Solder: SN63A	Loss of metallization on the edges of each electrode shall not exceed 25%.
Resistance to soldering heat	Preheating temperature : 120~150 °C ,1 minute. Solder temperature: 270±5℃,10±1 sec Solder: Sn3Ag0.5Cu 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 under the operational temperature range within -40 ~ 85℃. Loss of metallization on the edges of each electrode shall not exceed 25%.
Drop Test	Height: 75 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 under the operational temperature range within -40 ~ 85℃.
Vibration	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 under the operational temperature range within -40 ~ 85℃.
Adhesive Strength of Termination	Pressurizing force: 5N(≤0603); 10N(>0603) Test time: 10±1 sec	No remarkable damage or removal of the termination.

Bending test	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 1mm/s and then pressure shall be maintained for 5±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 under the operational temperature range within -40 ~ 85°C.
Temperature cycle	1. 30±3 minutes at -40°C±3°C, 2. 10~15 minutes at room temperature, 3. 30±3 minutes at +85°C±3°C, 4. 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 under the operational temperature range within -40 ~ 85°C.
High temperature	Temperature: 85°C±2°C Test duration: 1000+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 under the operational temperature range within -40 ~ 85°C.
Humidity	Humidity: 90% to 95% R.H. Temperature: 40±2°C Time: 1000+24/-0 hrs. 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 under the operational temperature range within -40 ~ 85°C.
Low temperature	Temperature: -40°C±2°C Test duration: 1000+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 under the operational temperature range within -40 ~ 85°C.

Solder Reflow Standard Conditioning



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Storage Conditions

Temperature : +5 to +30 °C

Humidity : 20 to 70% RH

Term of storage : Within 12 months (After the delivery) *

Baking : Unnecessary

* After peeling off cover tape, do not keep exposing the products to the open air. For the products stored longer than 12 months, confirm their terminals and solderability before use.