

SMD Antenna Specifications

**OverAir[®] SMD Antenna
series are RoHS compliant**

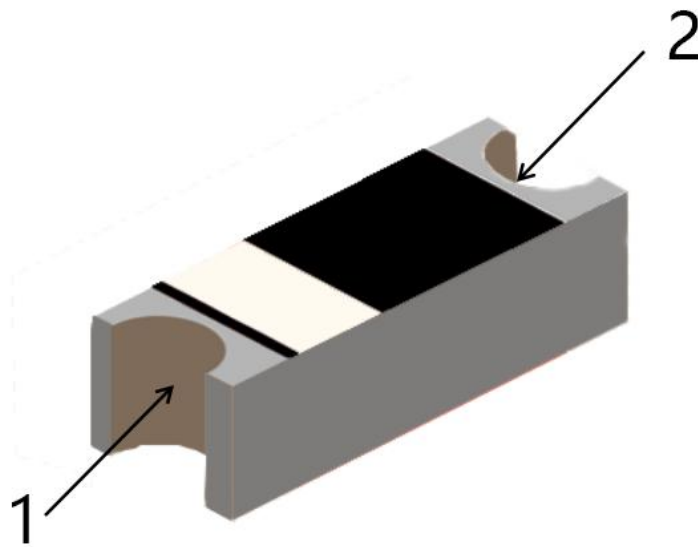
PN: OA-C09

2.4 GHz ISM Band Antenna

Features

1. Small size SMD patch antenna with size only 5.5 X 1.2 X 1.2 mm.
2. Low energy loss, high antenna efficiency.
3. High stability under temperature and humidity changes.

Structure



1: Antenna fixing pad, do not connect any signal

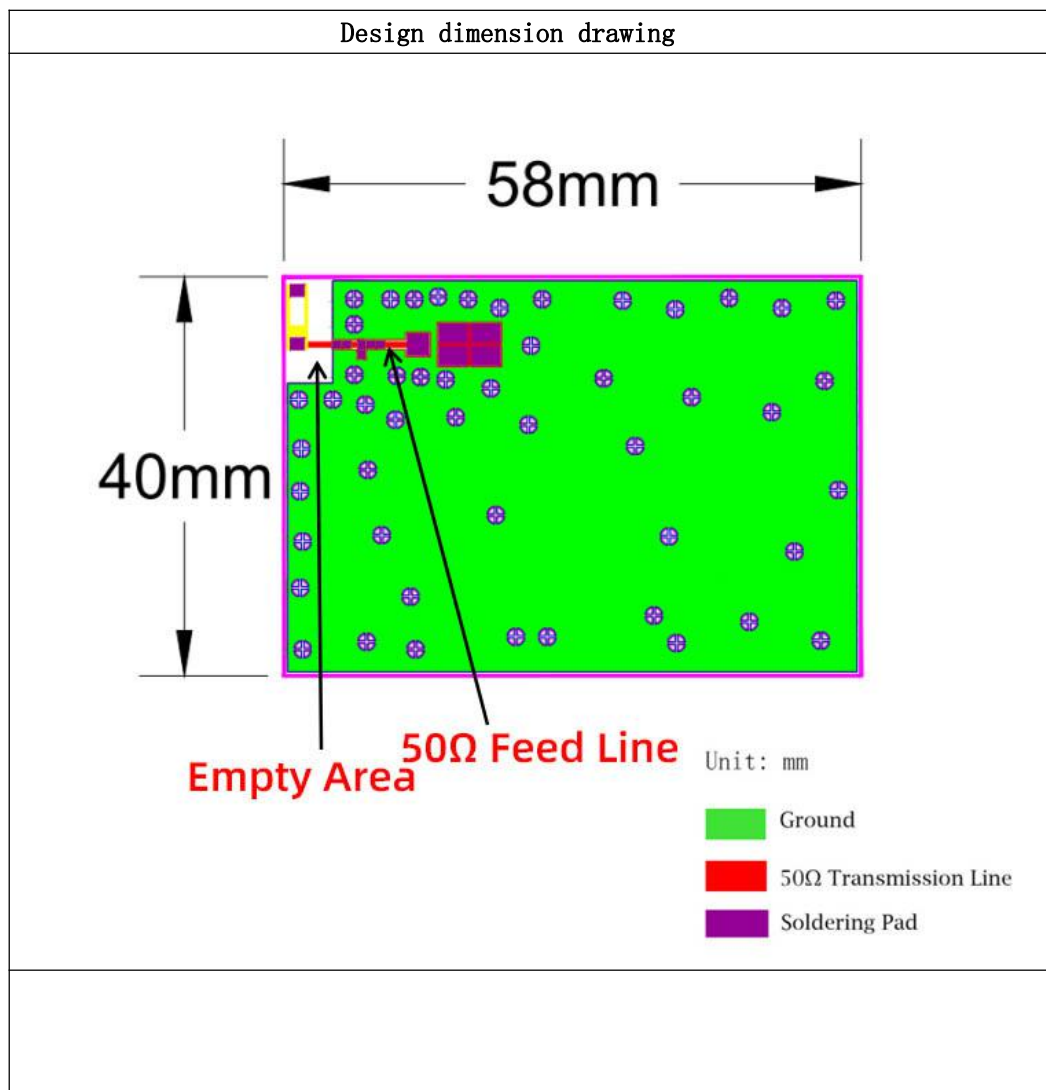
2: Antenna feed pad, connect RF signal pin

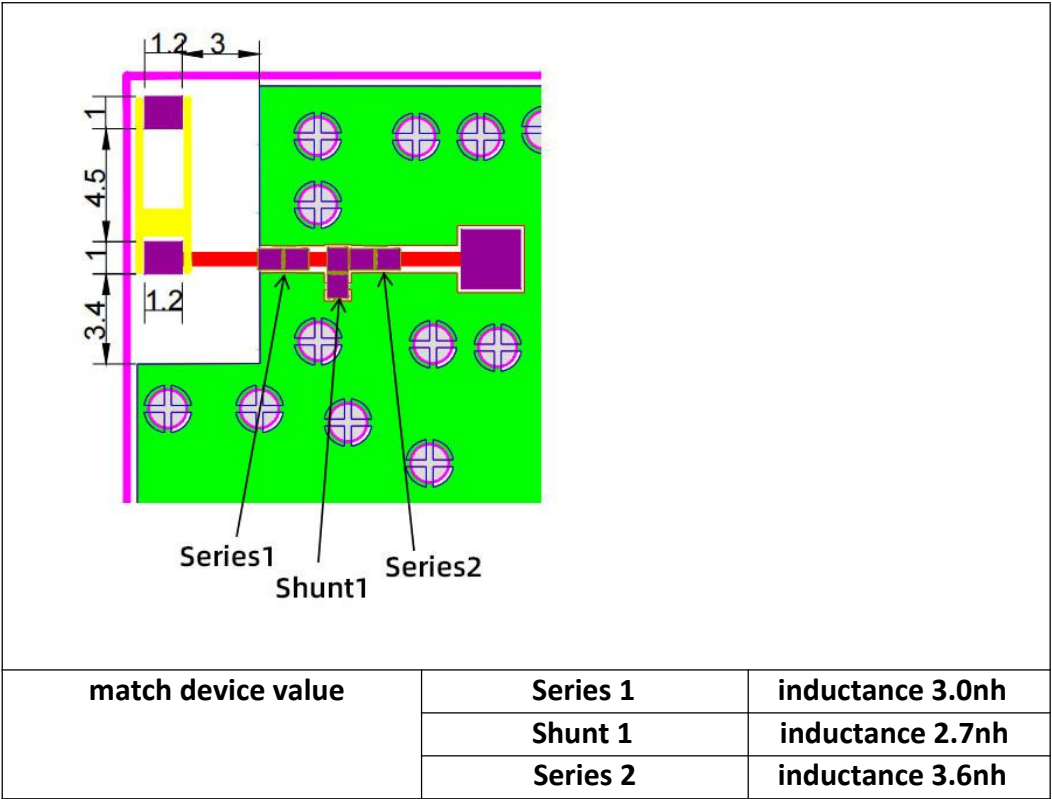
Size

Three View	Symbol	(mm)
	L	5.5 ± 0.2
	w	1.2 ± 0.1
	T	1.2 ± 0.1
	a	0.4 ± 0.1

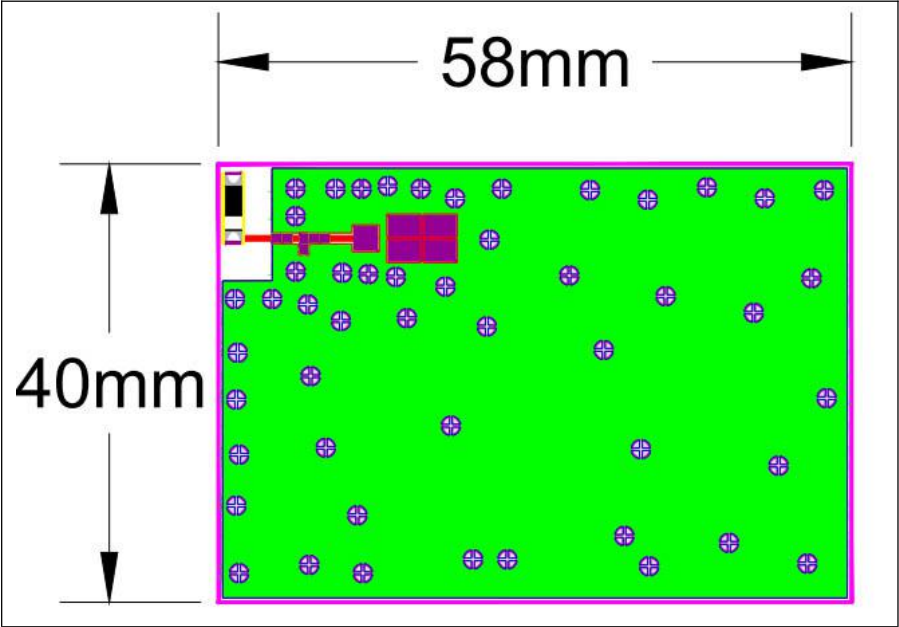
Electrical Characteristics

OA-C09	Specification
Working Frequency	$2450 \pm 50\text{MHz}$
Initial frequency band(GHz)	3.0GHz
Band Width	$>100\text{MHz}$
Impedance	$50\ \Omega$
Gain(dBi)	4 (peak)
VSWR	<2
Operation Temperature	$-40^{\circ}\text{C} \sim +95^{\circ}\text{C}$
Power Capacity	3W

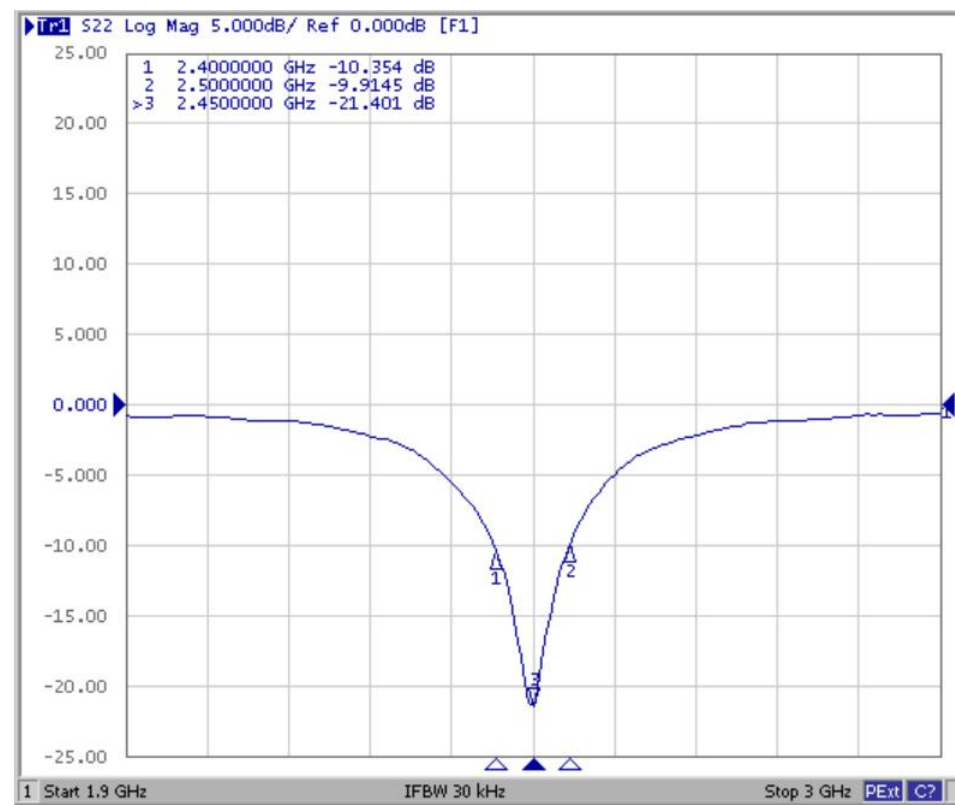




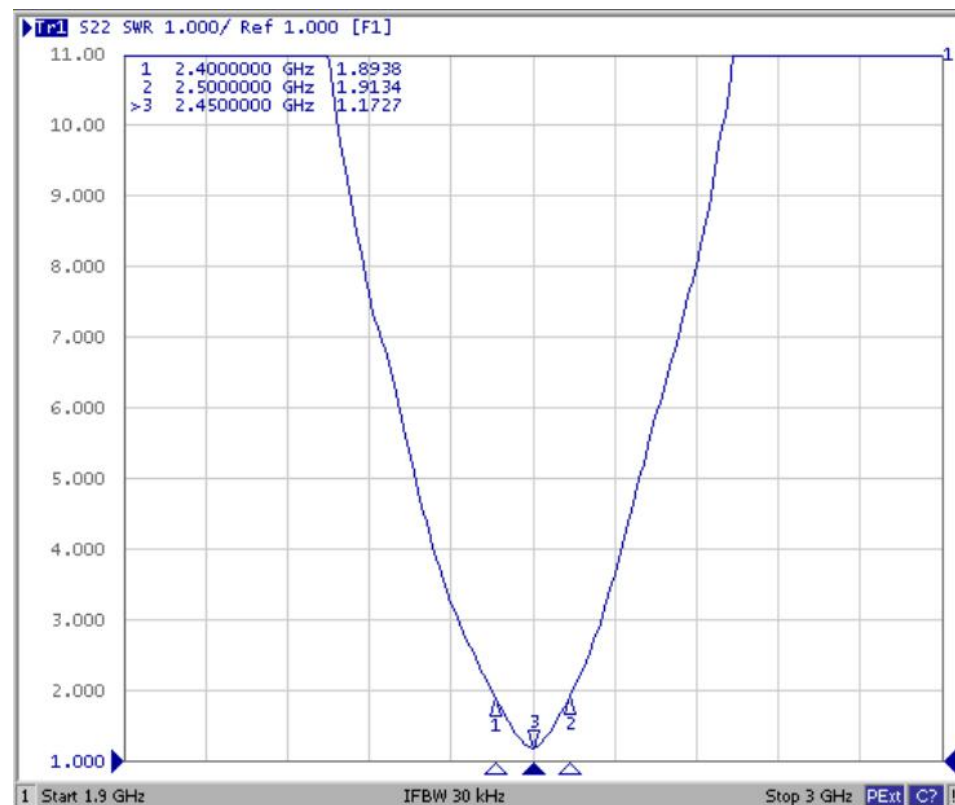
Antenna test on test board (board thickness 1.0mm)



Antenna S11 Characteristics

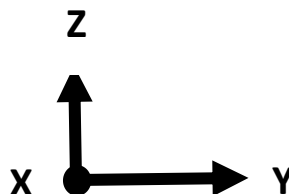
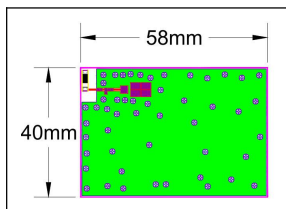


Antenna VSWR Characteristics



Efficiency and Radiation Patterns

Performance, radiation pattern, gain, etc. are based on the test board design. The specification characteristic test data of OA-C09 antenna is obtained based on the test PCB board size and the test direction shown in the figure below.



Gain and Efficiency	Bandwidth 2.4G-2.5GHz
Peak Gain	4dBi
Average Gain across the band	4.0dBi
Gain Range across the band	3.59dBi~4dBi
Peak Efficiency	62.5%
Average Efficiency across the band	57.5%
Efficiency Range across the band	51.3%~62.5%

