

SMD Antenna Data Sheet

**CrossAir™ SMD Antenna
Series RoHS Compliant**

PN: CA-C03

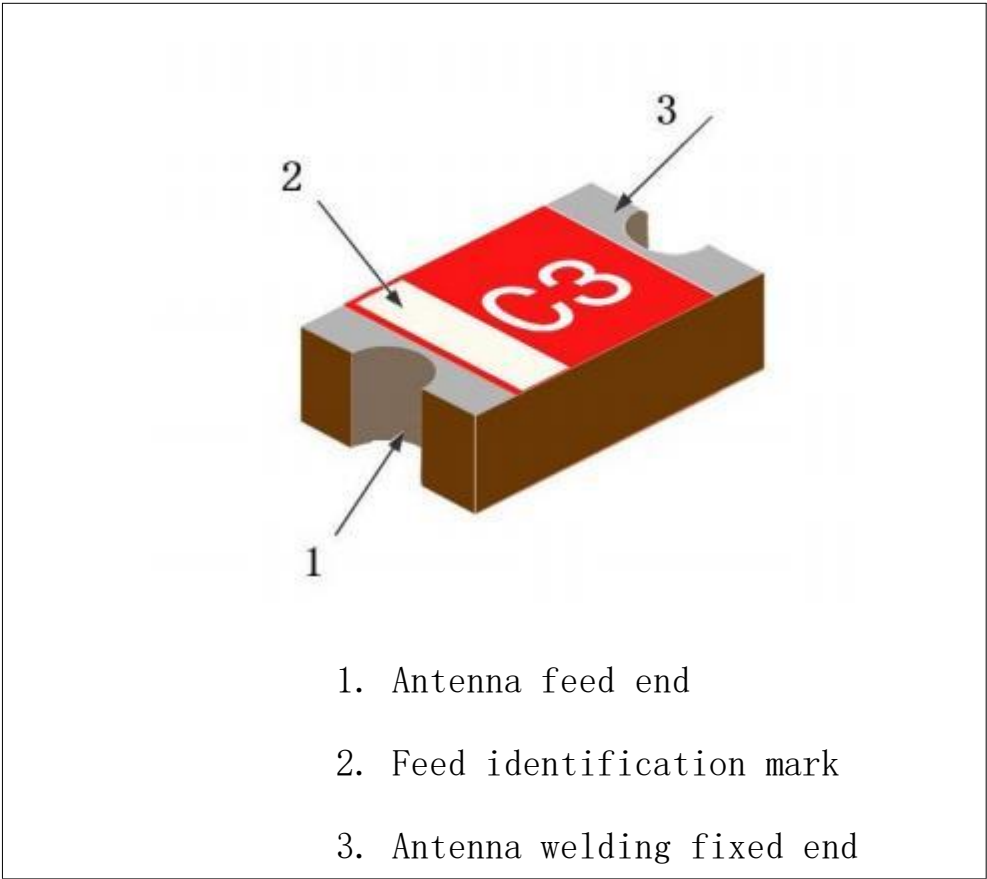
Features

- 1. Small size SMD patch antenna with the size of only 5.5 X 2.0 X 1.0 mm³.
- 2. Low energy loss, high antenna efficiency.
- 3. High stability under temperature and humidity changes.

Applications

- 1. 2.4GHz ISM band antenna applications
- 2. Bluetooth, ZigBee, wireless applications, smart home applications, etc.
- 3. WIFI (2.4G only)

structure



size

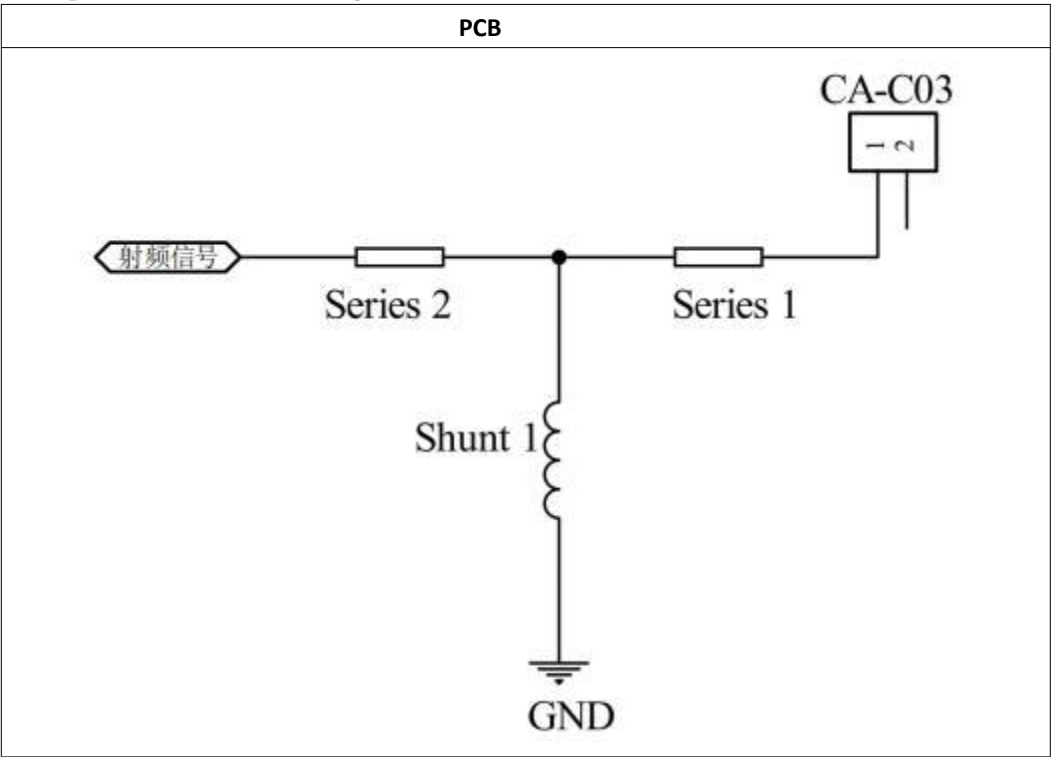
Three views	symbol	Dimensions (mm)
The image shows three views of the SMD patch antenna. The top view is a red rectangle with a white feed end on the left, a white identification mark 'C3' in the center, and a grey welding fixed end on the right. The dimensions are: a=0.5 (mm) for the feed end width, w=2.0 (mm) for the total width, L=5.5 (mm) for the total length, and T=1.0 (mm) for the thickness. The side view shows the grey bottom surface and the thickness T. The front view shows the red top surface and the thickness T.	L	5.5±0.2
	w	2.0±0.1
	T	1.0±0.1
	a	0.5±0.1

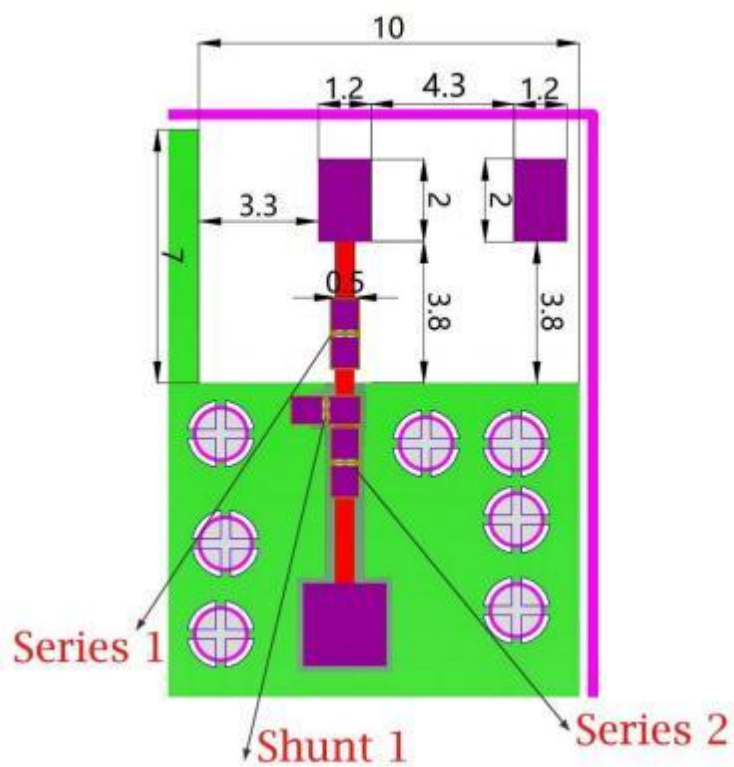
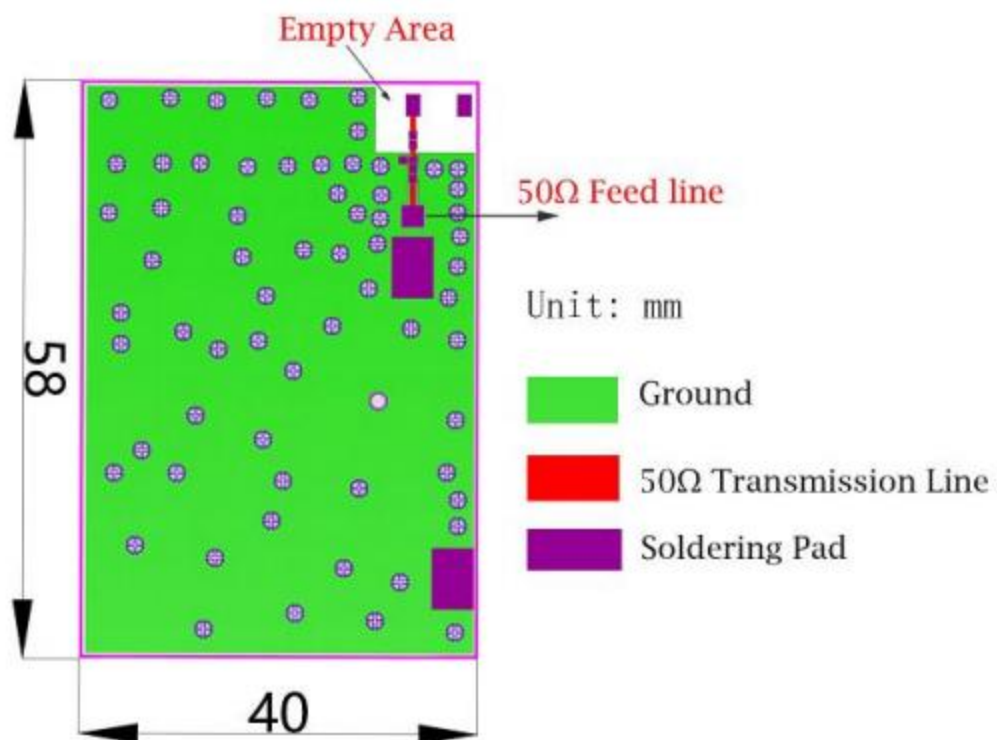
Electrical Characteristics

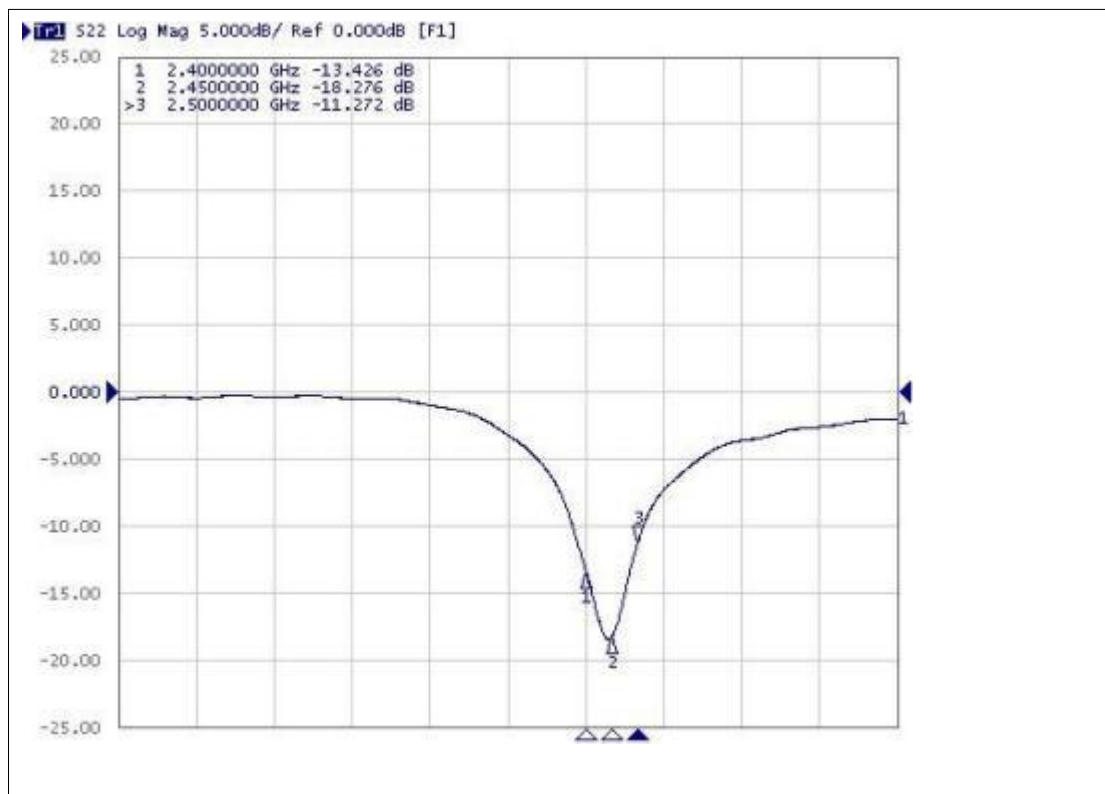
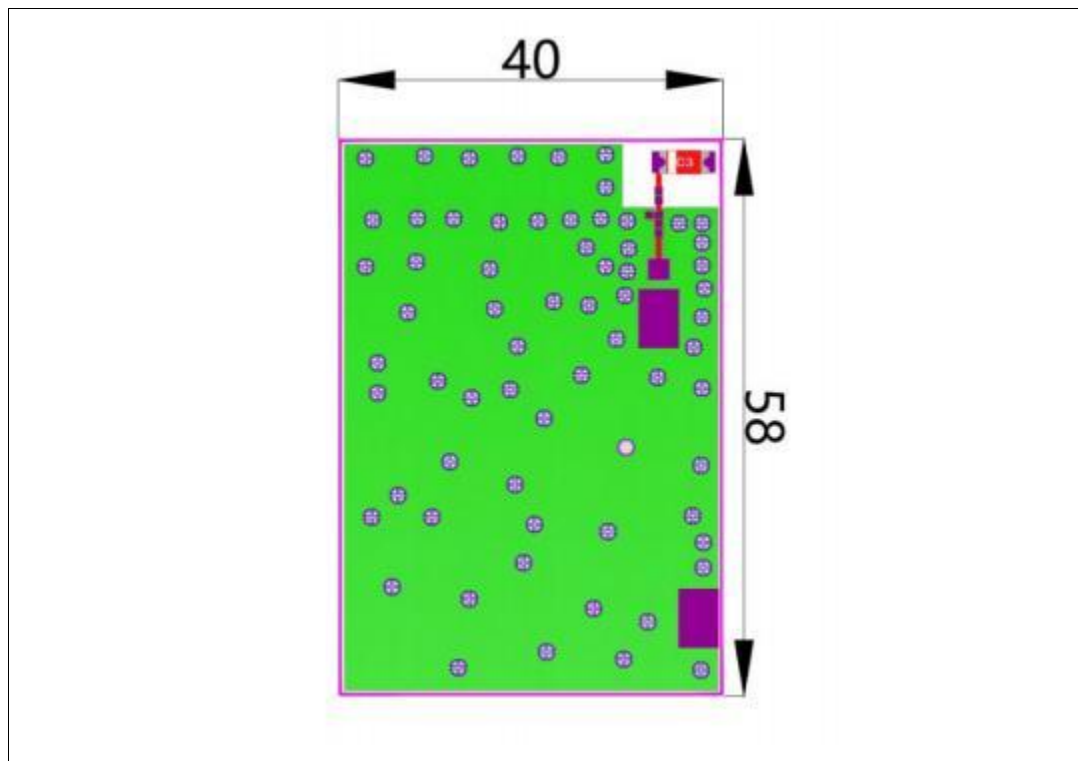
CA-C03	Specification
Working Frequency	2402-2483.5Mhz
Band Width	>100MHz
Impedance	50 Ω
Gain(dBi)	4.3 (peak)
VSWR	<2
Operation Temperature	-40℃~+95℃
Power Capacity	3W
Manufacturer	Guangzhou Cambrian Electronic Technology Co., Ltd.

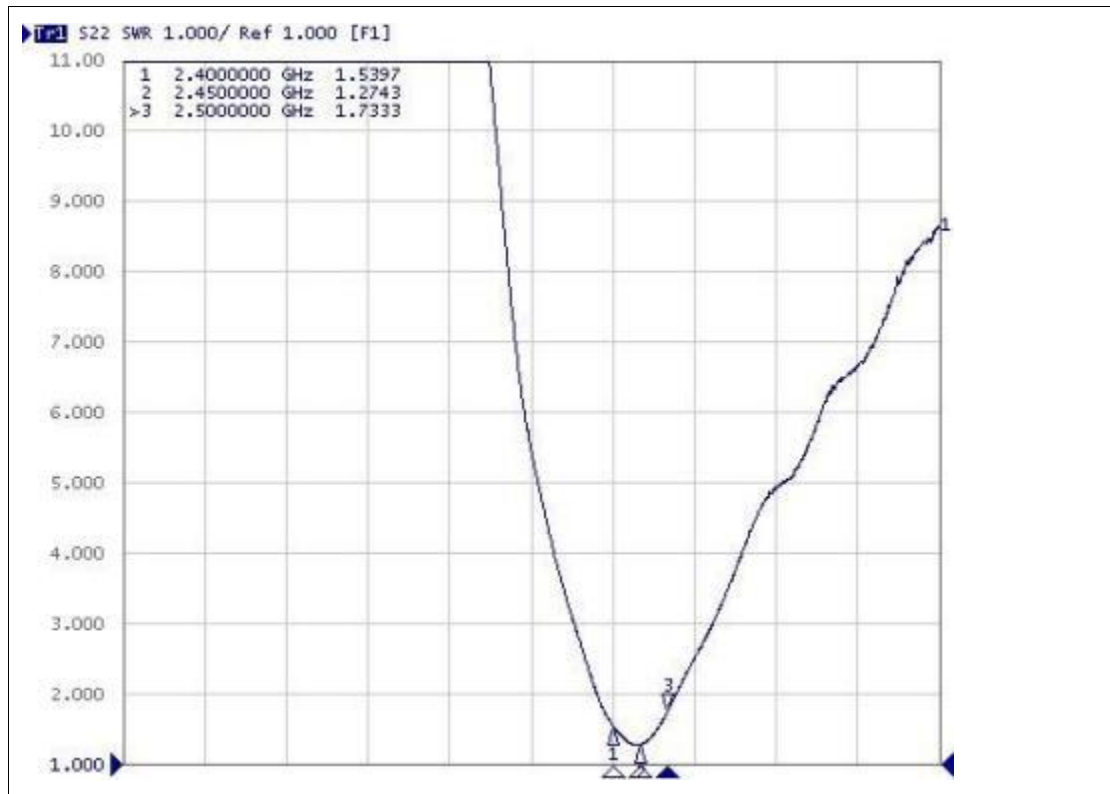
The antenna 2.4G operating frequency needs to be achieved through impedance matching device debugging.

Antenna pad and trace design



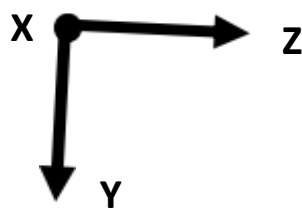
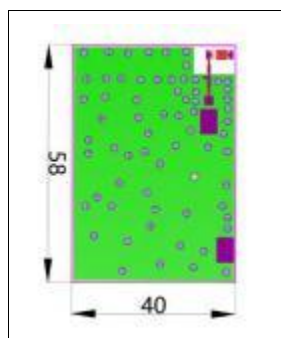






Efficiency and radiation pattern

The performance of efficiency, radiation pattern, gain, etc. is based on the test board design. The specification and characteristic test data of the CA-C03 antenna are based on the test PCB board size and the test direction shown in the figure below. The following data is completed in the ETS 3D microwave anechoic chamber test.



Gain and efficiency	2.4G~2.5GHz
Peak Gain	4.3dBi
Average Gain across the band	4.1dBi
Gain Range across the band	3.9dBi~4.3dBi
Peak Efficiency	81.7%
Average Efficiency across the band	80.2%
Efficiency Range across the band	78.6%~81.7%

