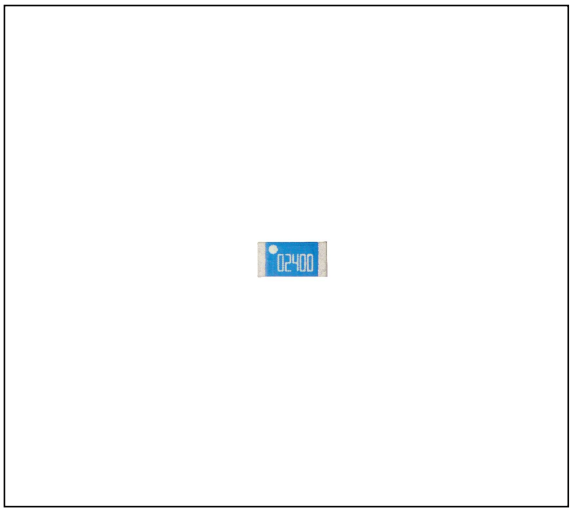
HONANT

WiFi/Bluetooth Ceramic Chip Antenna

HCA3216B2450C11S

Description

The HCA3216B2450C11S chip antenna is designed for WiFi/Bluetooth applications. This chip antenna has excellent stability consistently provide high signal reception efficiency.



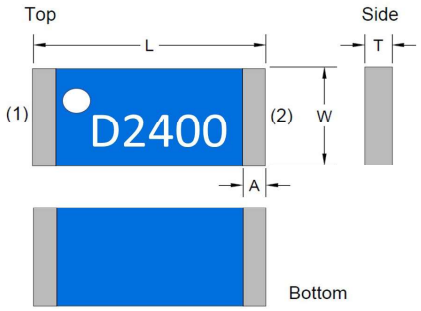
Features

- Dimensions 3.2 x 1.6 x 0.5 (mm)
- Stable and reliable in performances
- Low temperature coefficient of frequency
- Low profile , compact size
- RoHS compliance
- SMT processes compatible

Applications

- Bluetooth earphone systems
- Hand-held devices when WiFi /Bluetooth functions are needed, e.g., Smart phone.
- IEEE802.11 b/g/n
- ZigBee
- Wireless PCMCIA cards or USB dongle

Shape and Dimensions / Recommended Pattern



NO.	Terminal Name
[1]	Feeding point
[2]	GND

Dimensions in mm

TYPE	L	W	D	T
HCA3216B2450C11S	3..2±0.2	1.6±0.2	0.5±0.2	0.5±0.2

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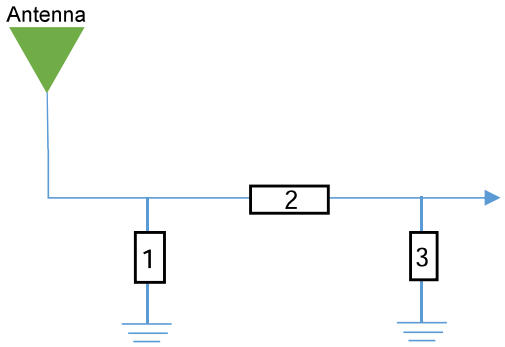
Electrical Specifications

Electrical Table

Characteristics		Specifications	Unit
Outline Dimensions		3.2x1.6x0.5	mm
Working Frequency		2400~2500	MHz
VSWR		2 Max.	
Impedance		50	Ω
Polarization		Linear Polarization	
Gain	Peak	3.43 (typical)	dBi
	Efficiency	77 (typical)	%

Matching Circuit

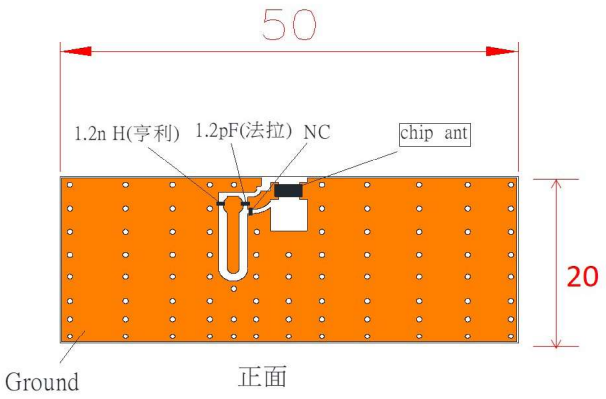
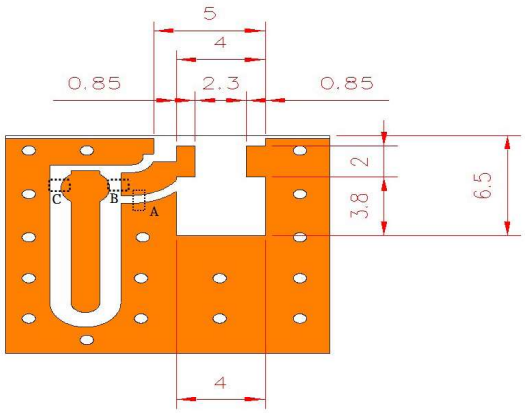
With the following recommended values of matching and tuning components, the center frequencies will be about 2450 MHZ at our standard 50x20 mm2 evaluation board . However, these are reference values, may need to be changed when the circuit boards or part vendors are different.



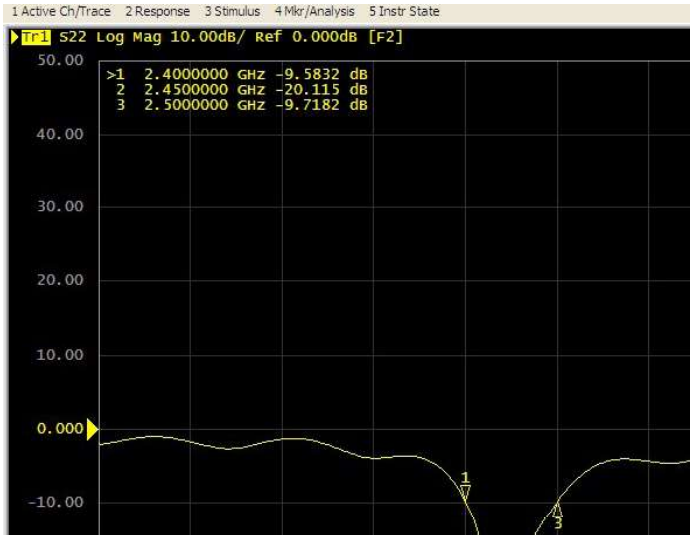
System Matching Circuit Component

Location	Description	Vendor
1	N/A*	-
2	1.2pF, (0402)	MURATA
3	1.2nH, (0402)	DARFON

Dimensions and Recommended PC Board pattern

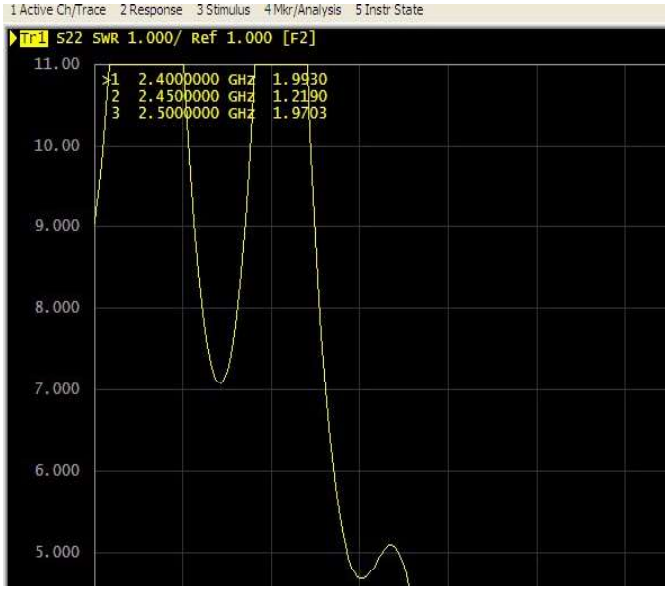
PCB Dimension	Antenna Layout Reference
 Unit:mm	 Unit:mm

Return Loss & Radiation



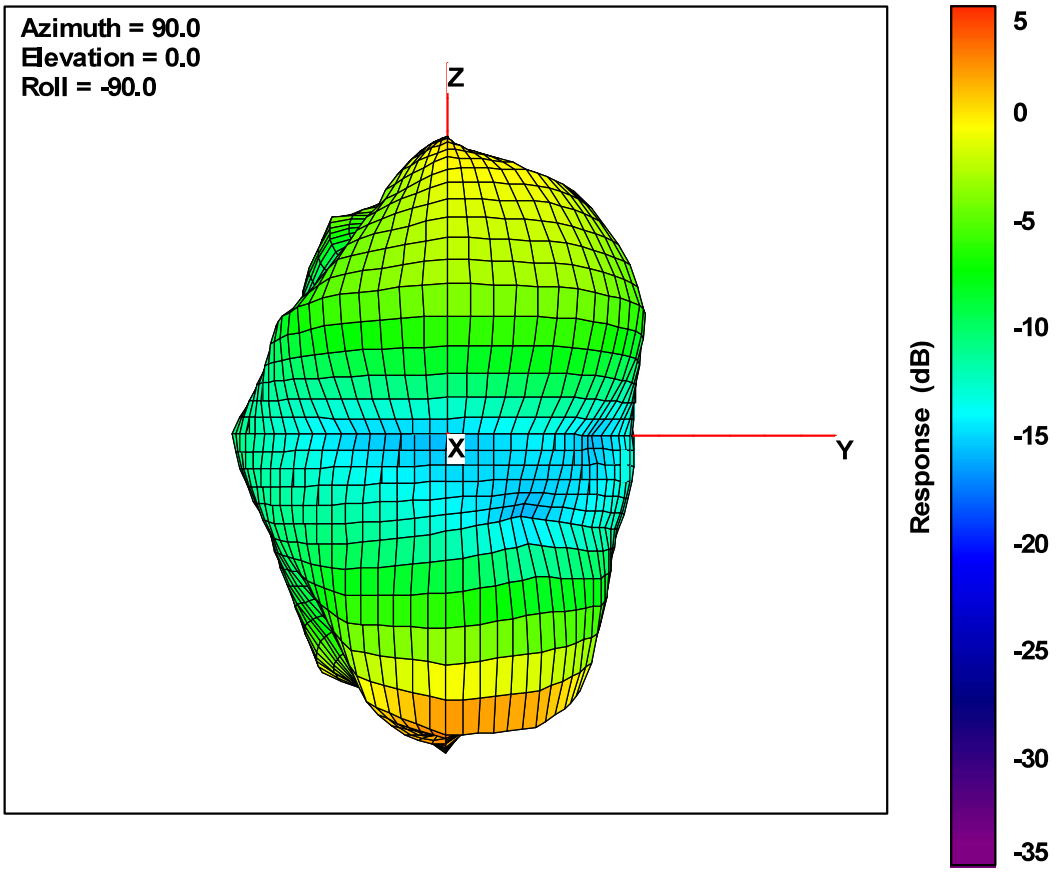
Frequency (MHz)	Return Loss (dB)
2400	9.5
2450	20.1
2500	9.7

Voltage Standing Wave Ratio (VSWR)



Frequency (MHz)	VSWR
2400	1.99
2450	1.21
2500	1.97

3D Radiation



Frequency (MHz)	Average Gain (dBi)	Peak Gain (dBi)	Efficiency (%)
2400	-2.2	3.09	60
2450	-1.16	3.43	77
2500	-1.74	3.66	66