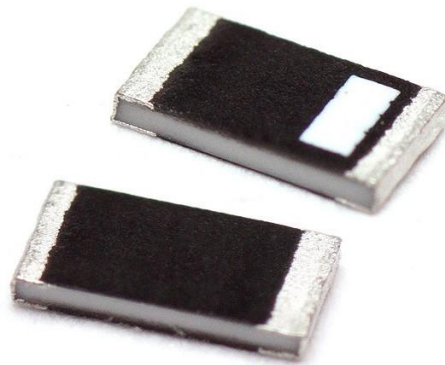


AMC-ANTE24CS01

Type 2.4GHz Ceramic Surface Mount Antenna

Features

- 2.4GHz ISM
 - 2410 – 2490MHz
- Surface mount
- Ground plane dependent
- Dimensions – 3.2 x 1.6 x 0.5mm



Certifications:



Alpha Micro UK: Tel: +44 1256 851770 | email: sales@alphamicro.net
www.alphamicro.net



1. Antenna and Electrical Specifications

Parameters	2.4GHz ISM Antenna
Standards	Wi-Fi, Bluetooth, ZigBee, ISM
Band (MHz)	2400
Frequency (MHz)	2410 - 2490
Return Loss (dB)	~-21.5
VSWR	~1.3:1
Efficiency (%)	~63.3
Peak Gain (dBi)	~1.1
Average Gain (dB)	~-2.0
Impedance (Ohms)	50
Polarisation	Linear
Radiation Pattern	Omni-directional
Max. Input Power (W)	25

Measurement Conditions:

- Mounted on 40mm x 80mm ground plane
- Measured in certified CTIA 3D anechoic chamber

2. Mechanical and Environmental Specifications

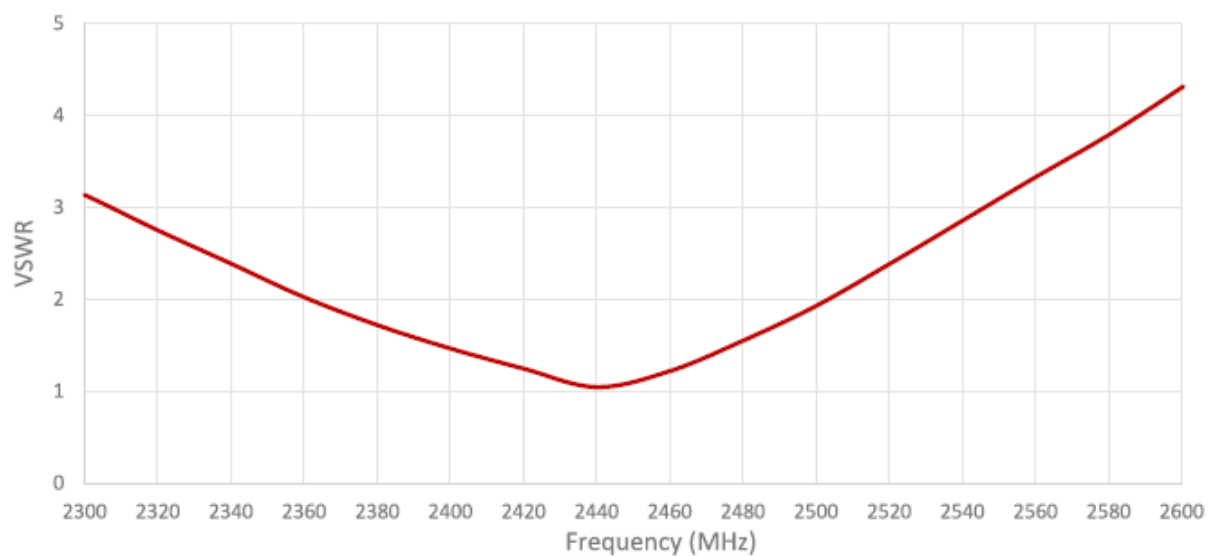
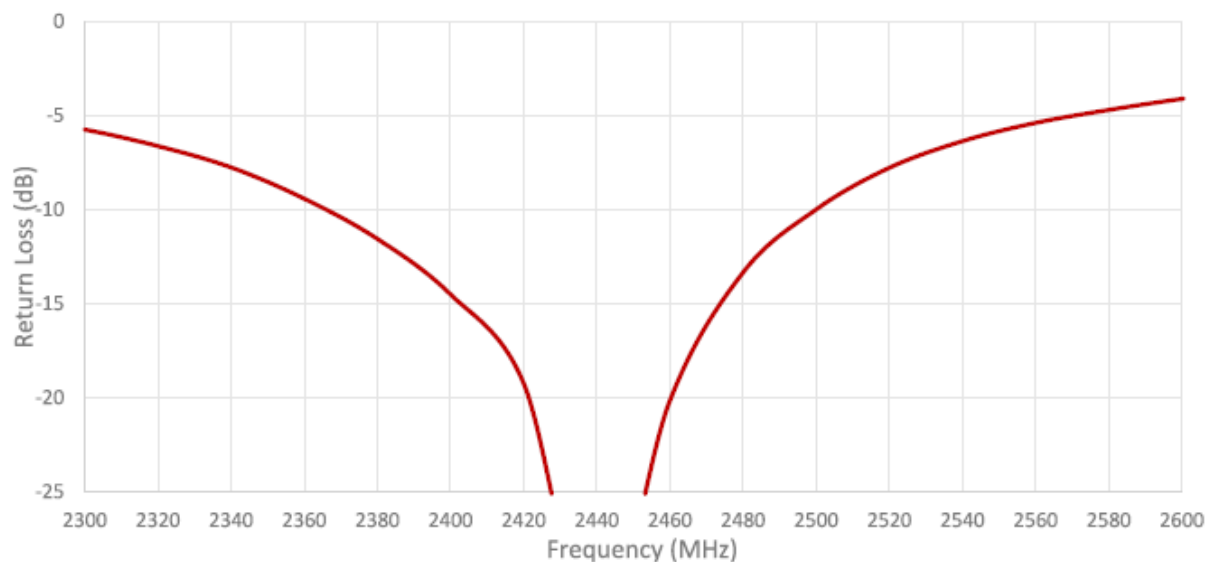
Mounting Type	Surface mount
Dimensions (mm)	3.2 x 1.6 x 0.5
Material	Ceramic
Operating Temperature (°C)	-40 to +85
Storage Temperature (°C)	-40 to +85
Substance Compliance	RoHS

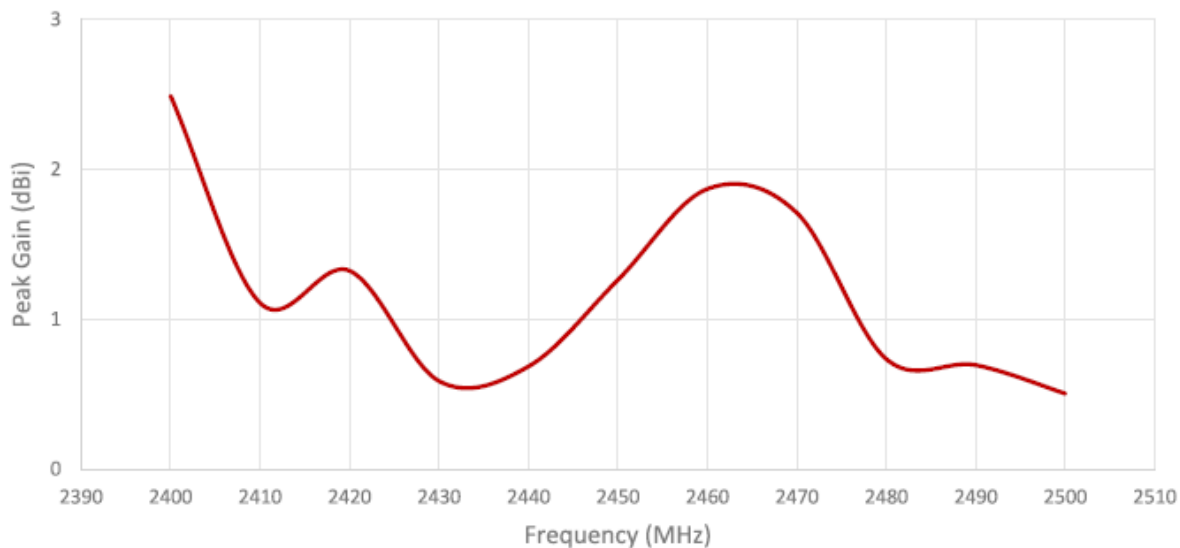
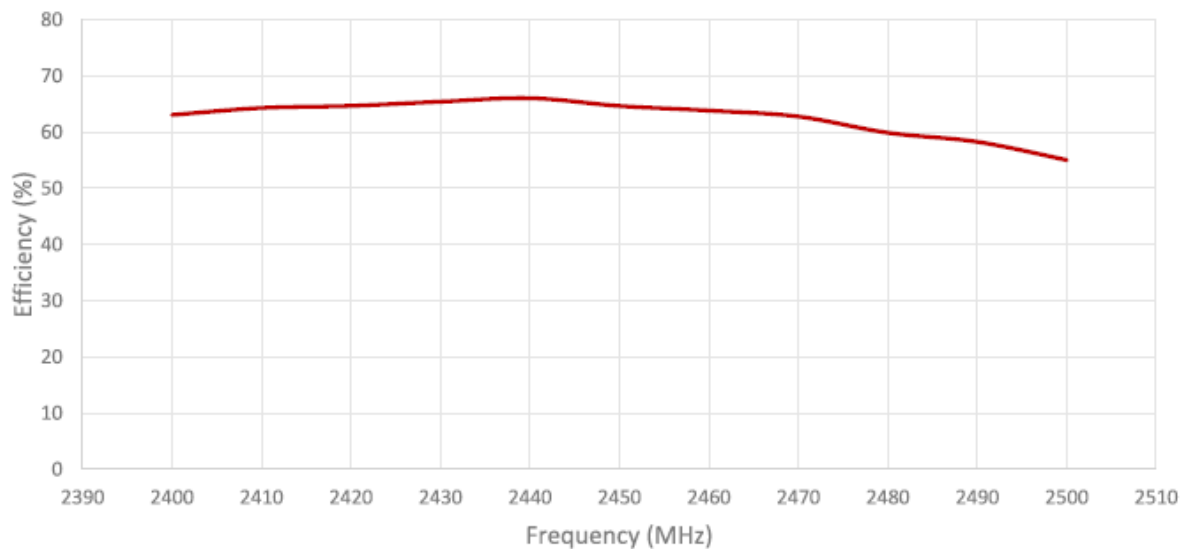


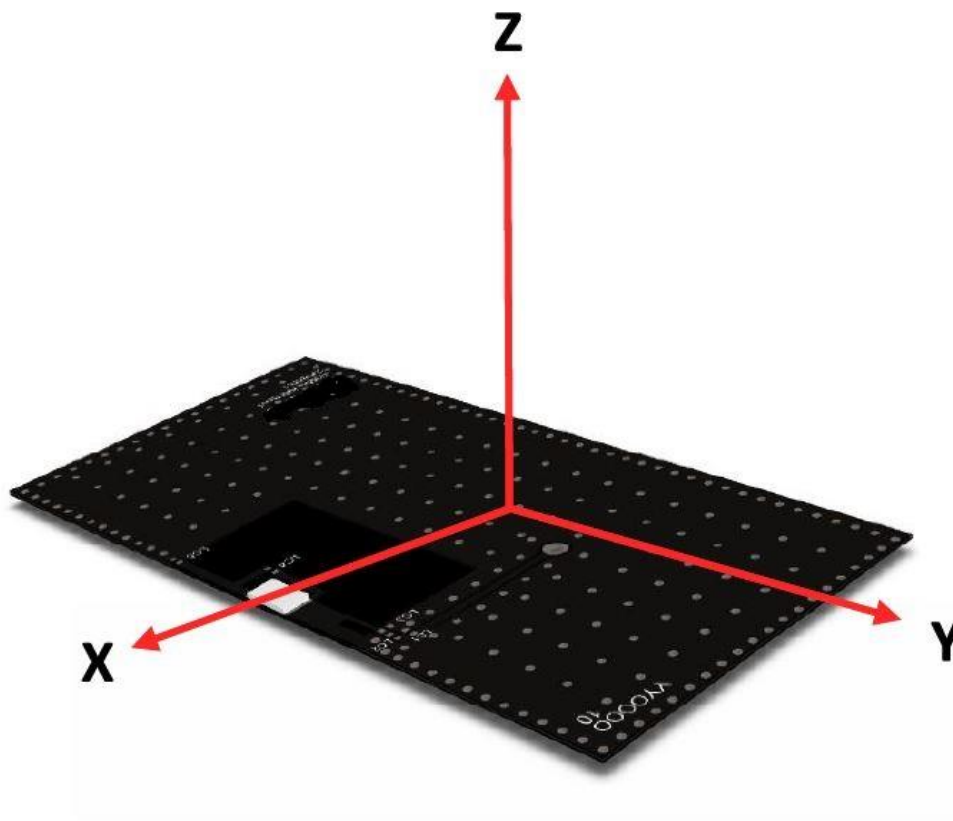
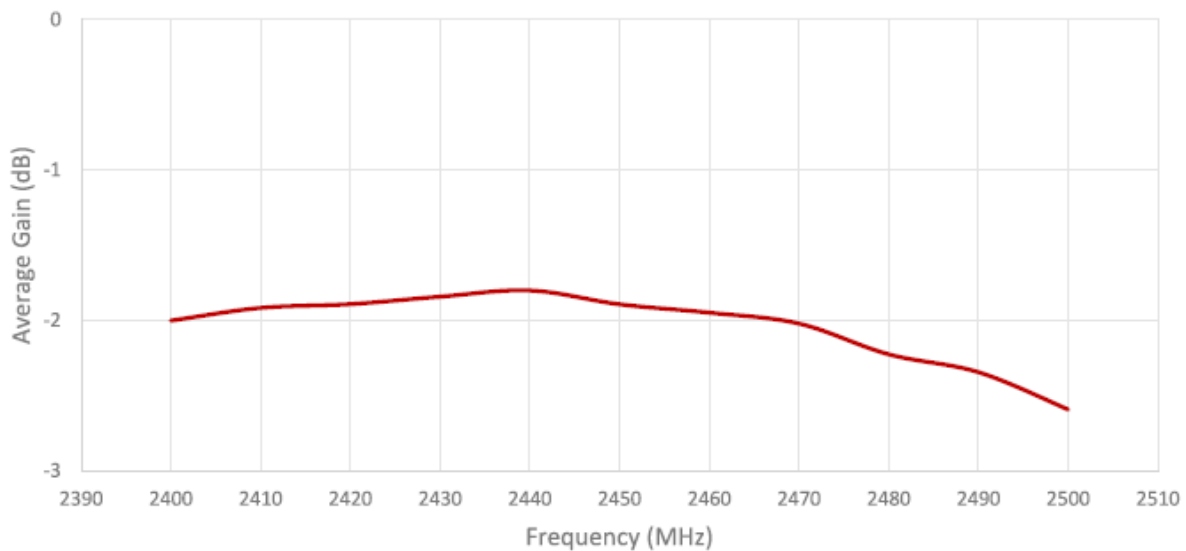
Dimensions for ceramic antenna 3.2 x 1.6 x 0.5 mm



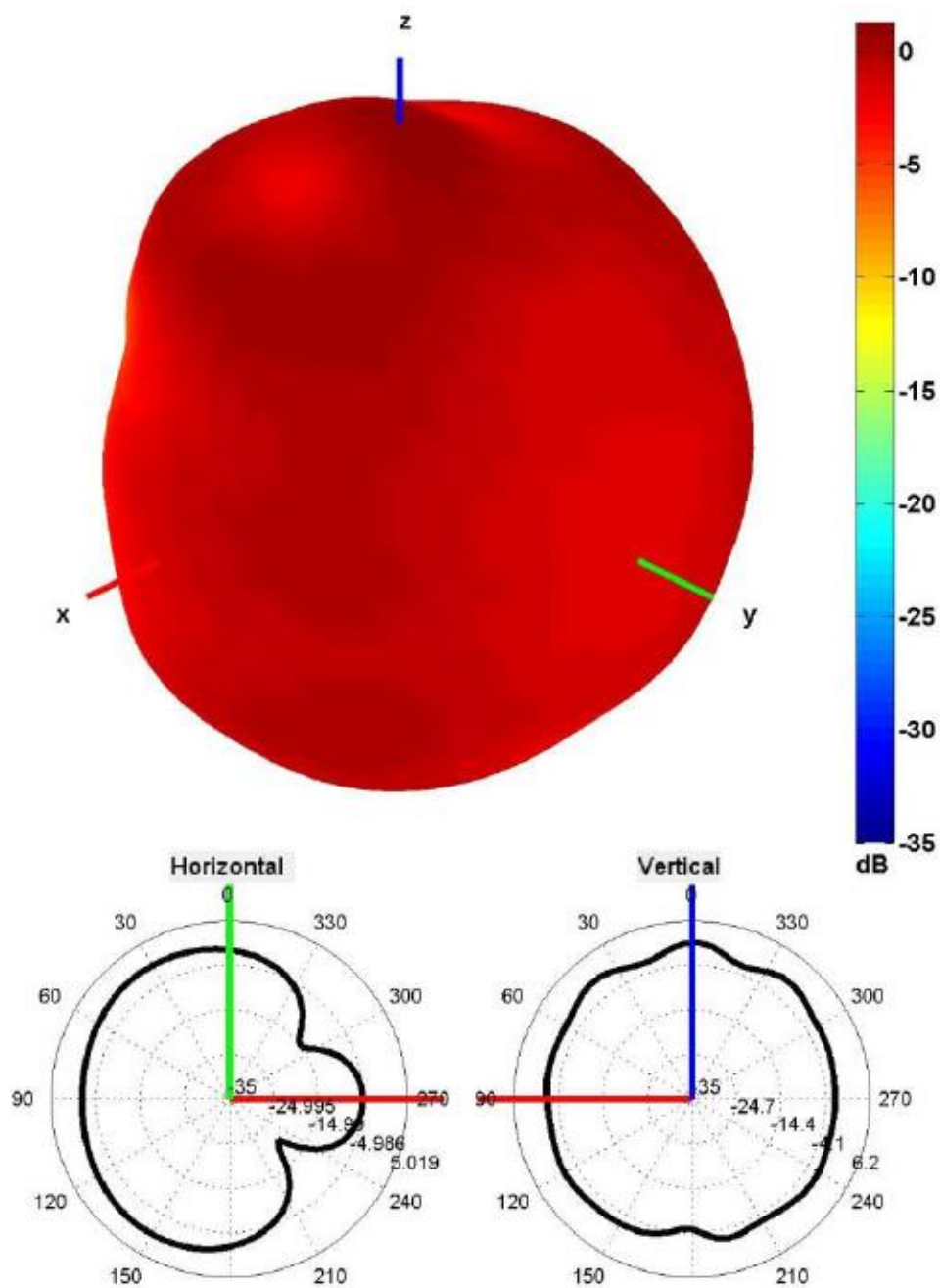
3. Antenna Parameters





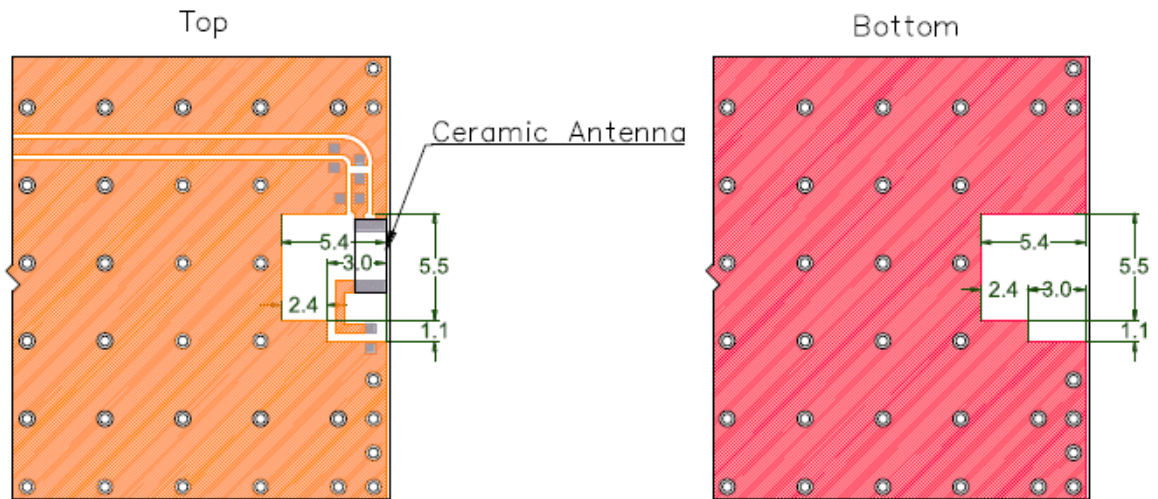


Radiation pattern reference

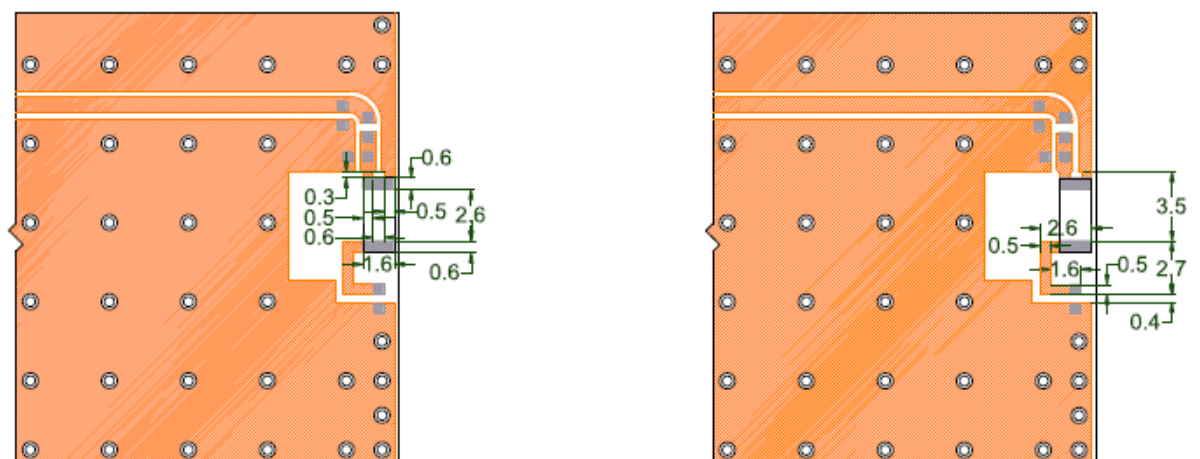


2450 MHz Radiation pattern

4. PCB Layout

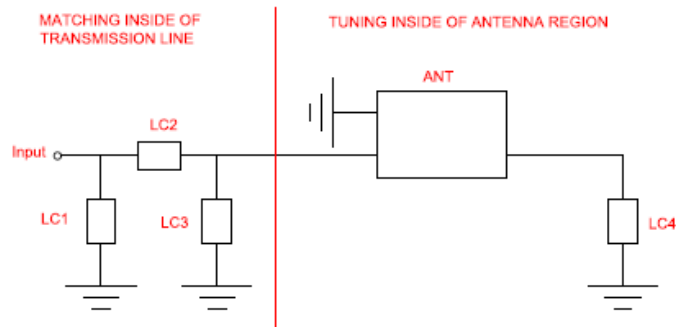


- Solder Region
 - Top Copper Region
 - Bottom Copper Region
 - Copper-Free Region
- Minimum area required for antenna integration (10mm × 10mm)

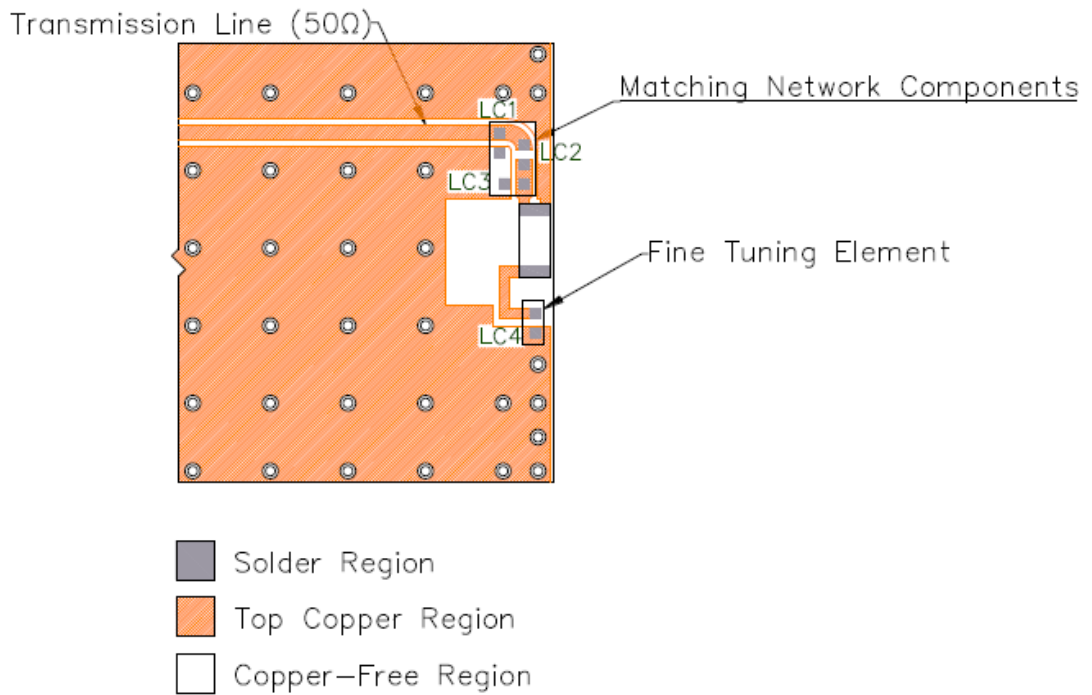


- Solder Region
 - Top Copper Region
 - Copper-Free Region
- Layout dimensions for antenna integration (mm)

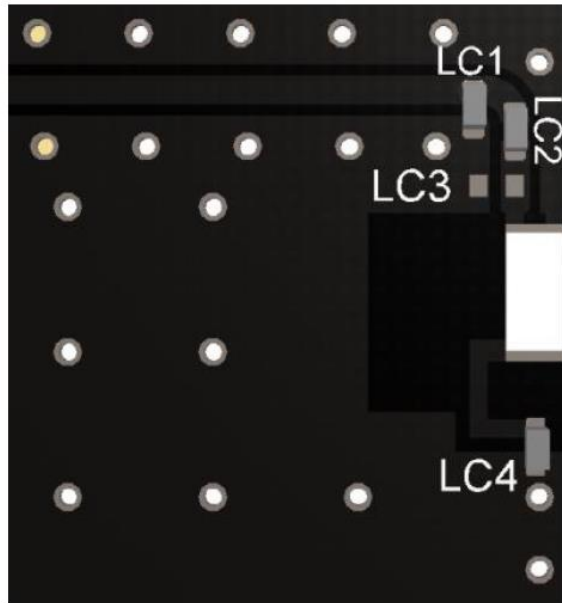
5. Matching Components



Matching Network Schematic



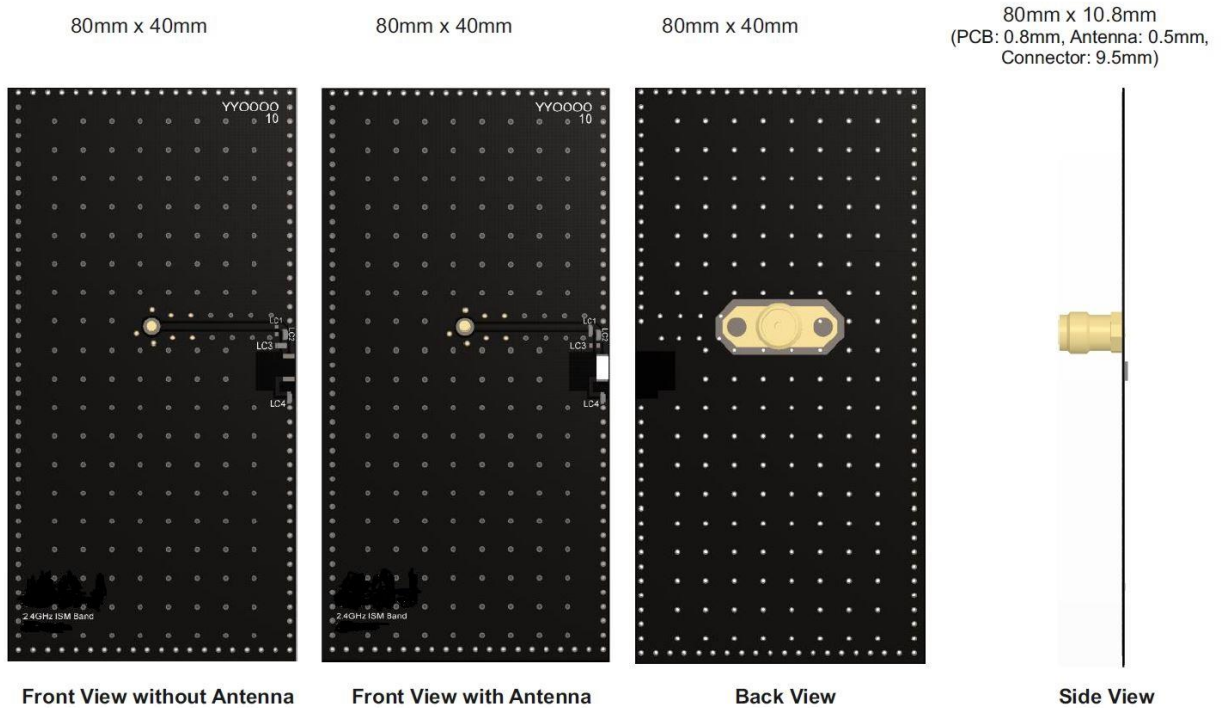
Matching network drawing (LC1=0.2pF±0.05pF, LC2=5.6nH±0.1nH, LC3=OPEN, LC4=0.8pF±0.05pF)



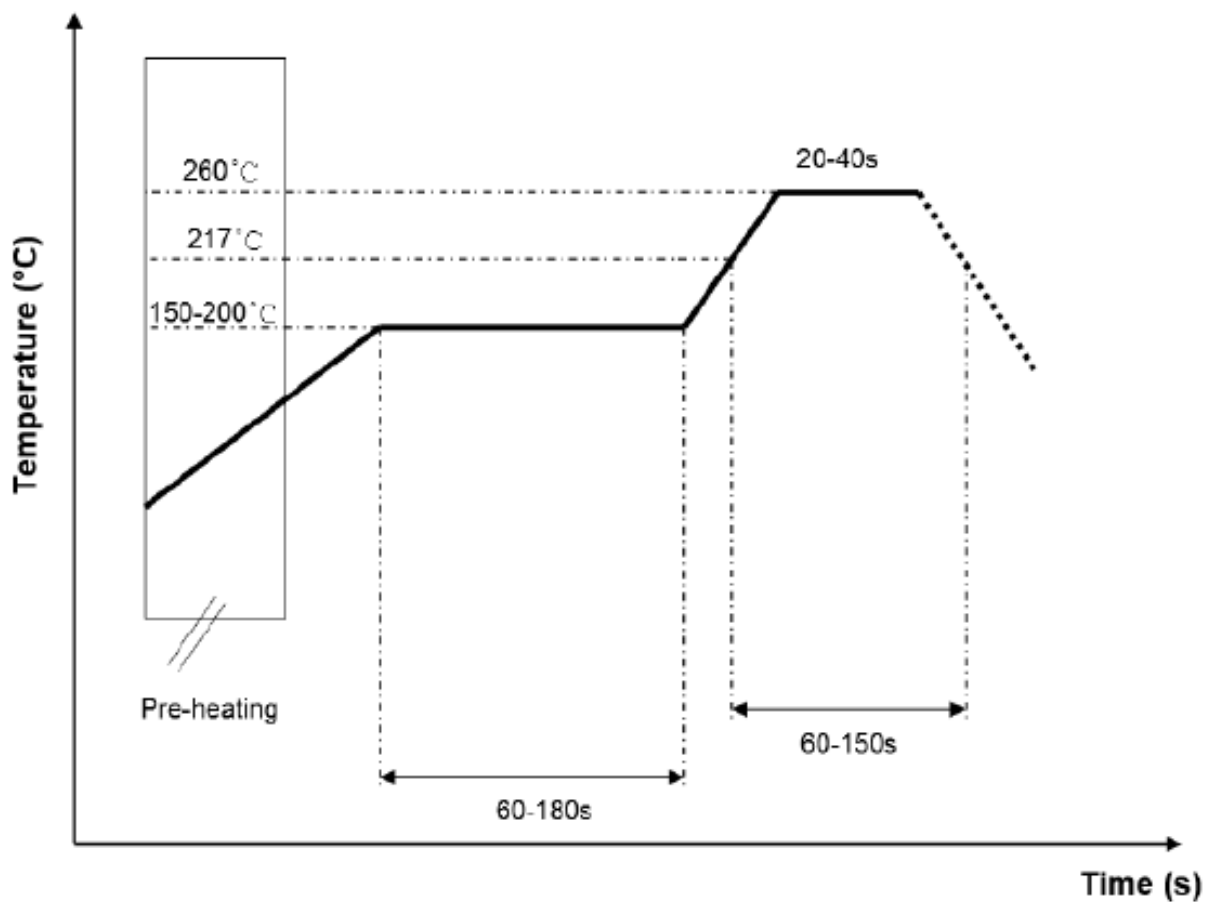
3D View of matching components and recommended values

Matching network drawing (LC1=0.2pF±0.05pF, LC2=5.6nH±0.1nH, LC3=OPEN, LC4=0.8pF±0.05pF)

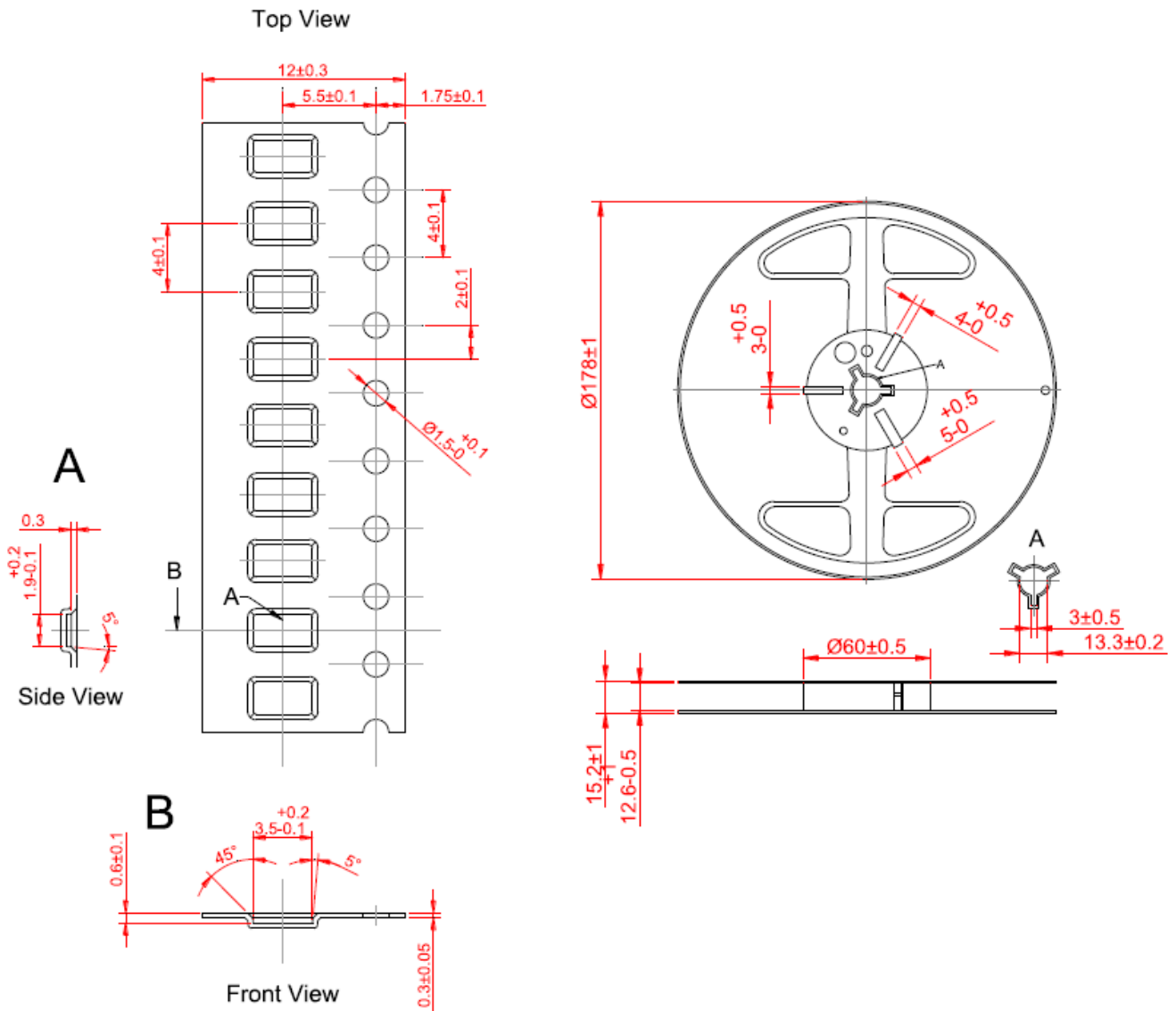
6. Evaluation Board



7. Reflow Temperature Profile



8. Tape and Reel Information



Tape and Reel Specifications

9. Packaging

Packaging Specification	
Reel	
Quantity per reel	6,000
Reel Box	
Reels per Box	2
Reel Box Dimensions (cm)	18 x 18 x 3.6
Reel Box Weight (Kg)	0.7
Carton	
Reels per Carton	10
Max Quantity per Carton	60,000
Carton Dimensions (cm)	40.5 x 24.7 x 22.5
Carton Weight (Kg)	7

Storage Conditions

- Storage temperature range: -40°C to +85°C
- Oxidizable material: Store for 12 months in vacuum sealed bag
- Re-pack material after use by re-sealing package