

Pentaband SMD Antenna

Part No. GA377032PP03

Product Specification



Dimension: 37mmx7mmx3.2mm

➤ Applications

- Smart phone
- Tablets
- Laptops
- Wireless modules
- Tracking devices
- Remote monitoring

➤ Features

- Designed for GSM + UMTS/WCDMA(800/900/1800/1900/2100)
- High efficiency
- Linear Polarization
- Omni- Directional (*PCB dimension dependent*)
- Minimum PCB clearance
- SMD mounting
- Low Profile, miniature and light weight
- Tape and reel packaging
- RoHS Compliance

➤ Customer Services (Optional)

- EM Antenna Simulation for optimum placement of antenna on PCB.
- Lump Elements Matching for optimum antenna performance.
- Anechoic Chamber Measurement for antenna performance validation.

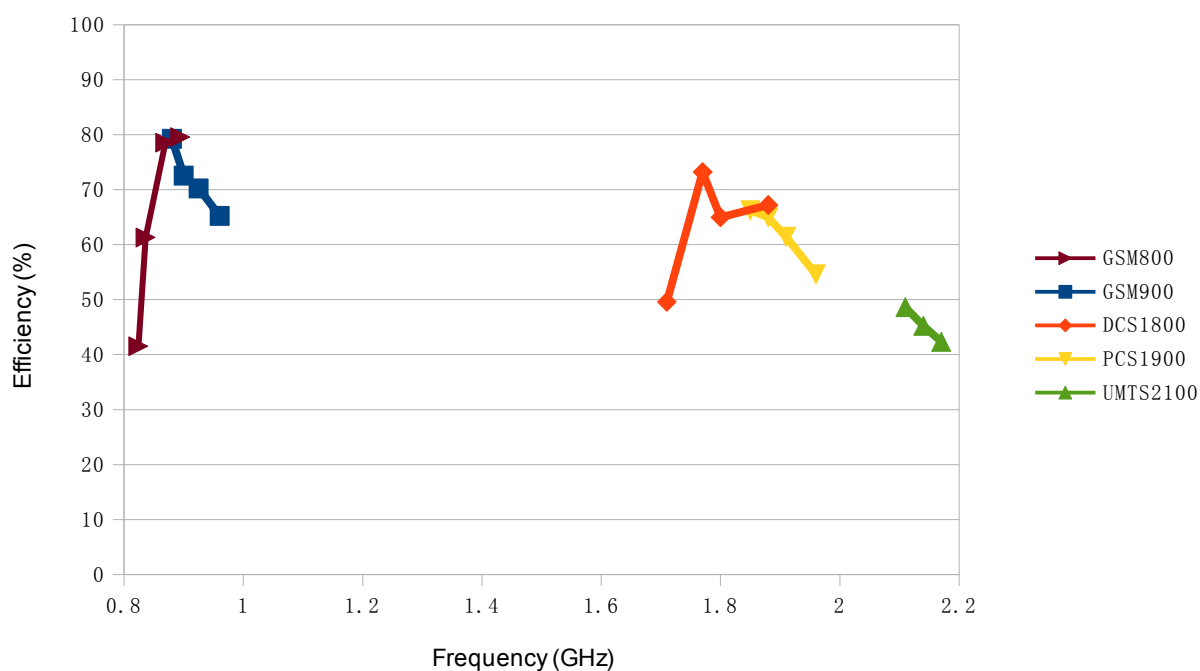
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ELECTRICAL					
Band	800	900	1800	1900	2100
S11	< -6dB	< -6dB	< -5dB	< -6dB	< -3dB
VSWR	< 3:1	< 3:1	< 3.5:1	< 3:1	< 6:1
Peak Gain (dBi)	0.97	2.52	1.84	1.78	0.65
Average Efficiency (%)	60	70	65	60	45
Impedance (Ohms)	50				
Polarization	Linear				
Radiation Pattern	Omni				
MECHANICAL					
Dimension	37mm x 7mm x 3.2 mm				
Weight	2.0 g				
ENVIROMENTAL					
Temperature Range	-25°C to +80°C				
Humidity	65°C 95% RH				

Efficiency with Reference Board



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● Performance with reference board

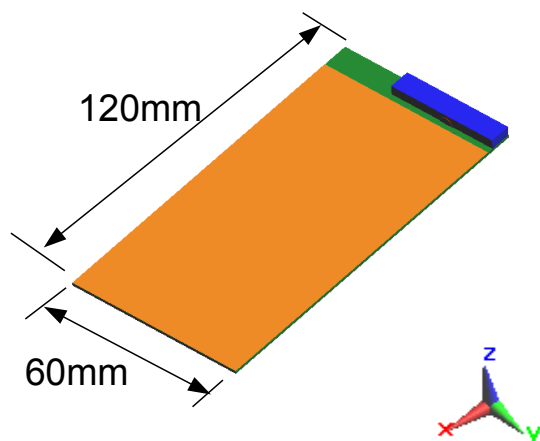
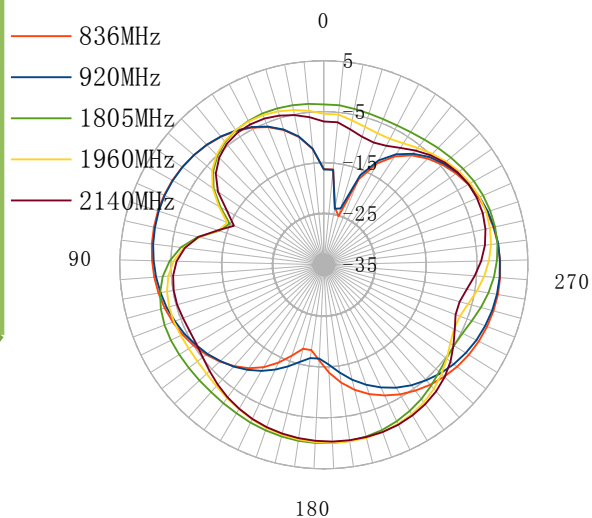


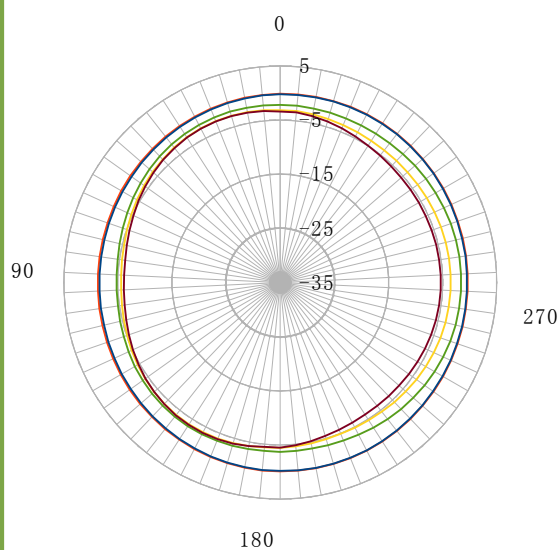
Figure 1, Antenna on reference board
Antenna Placement: Top

2D PLOT

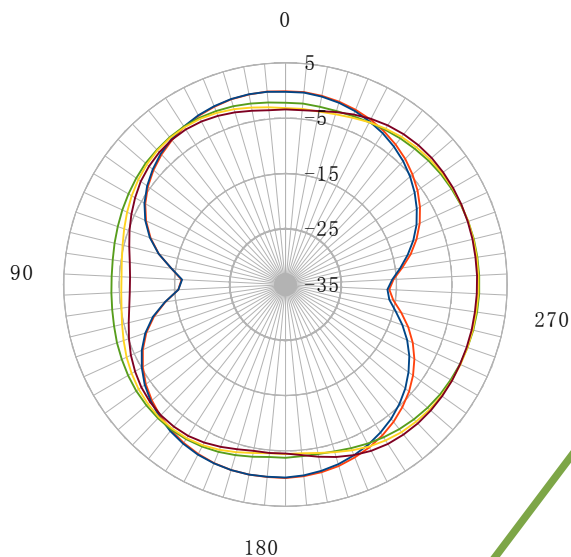
XY Plane



YZ Plane



XZ Plane



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● Performance with reference board

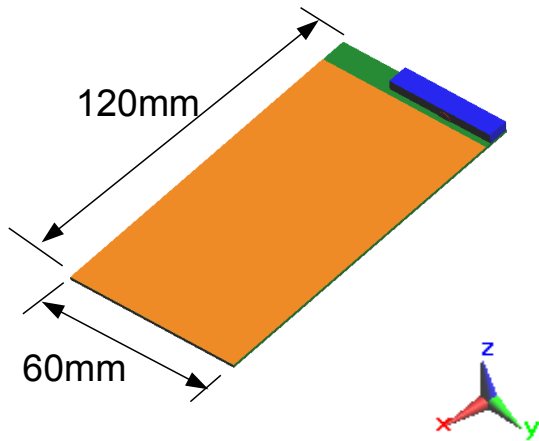
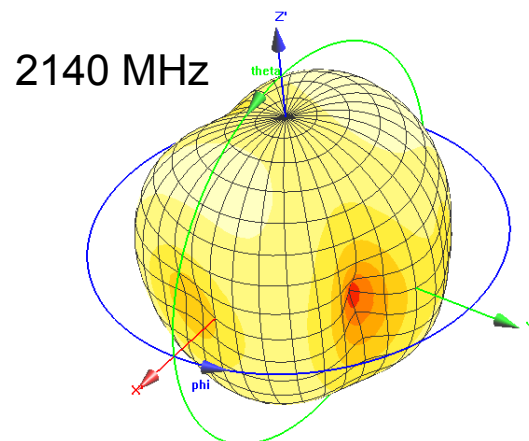
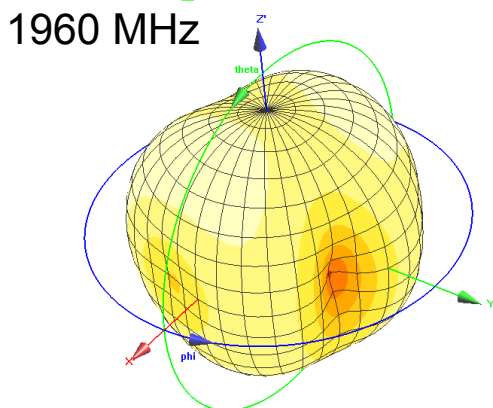
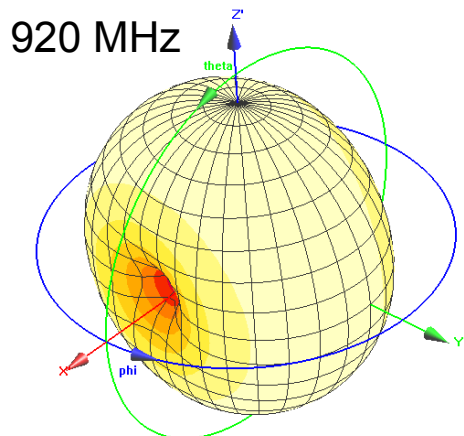
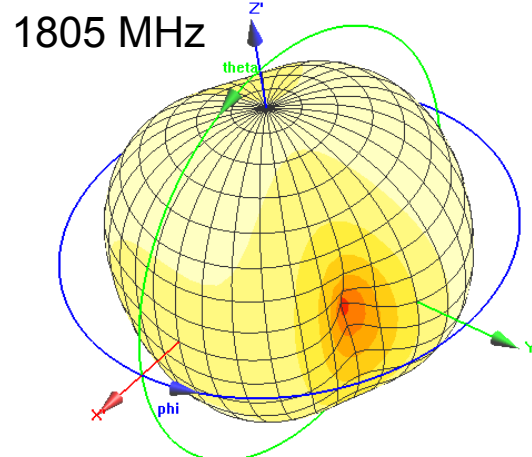
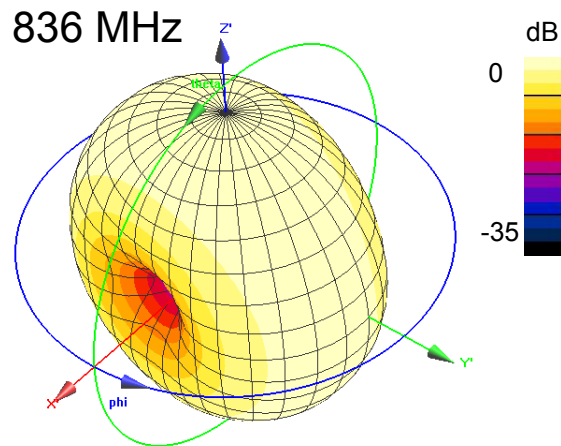


Figure 1, Antenna on reference board

Antenna Placement: Top

3D PLOT



GA STANDARD ANTENNA

Pentaband SMD Antenna

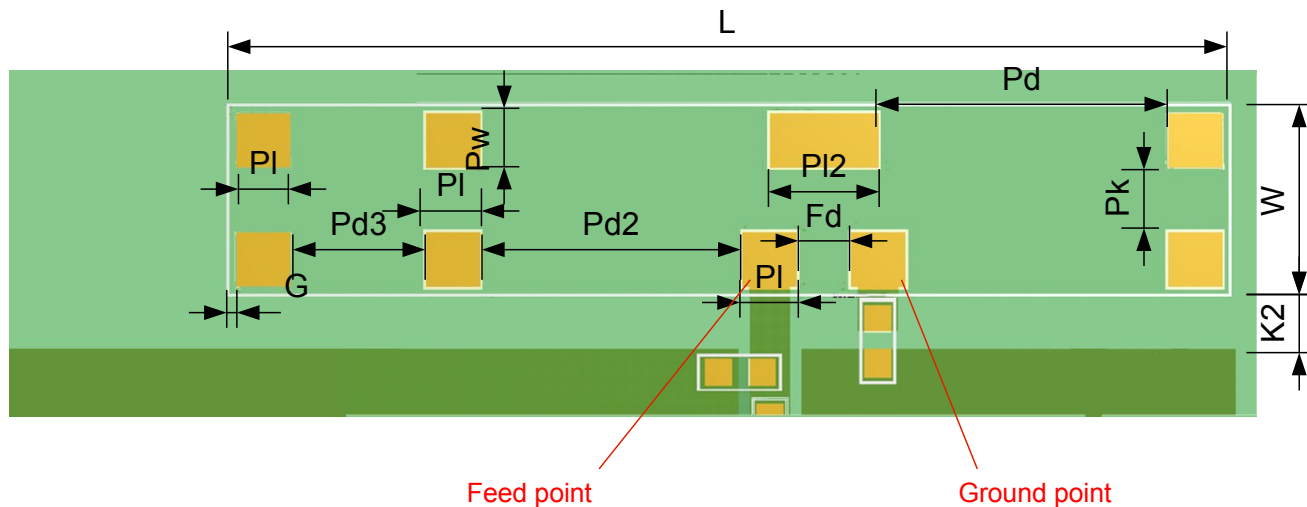
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Antenna Dimension

Overview



Layout with side feeding



L	W	G	K1	K2	Pd	Pd2	Pd3	PI	PI2	Pw	Pk	Fd
37	7	0.3	1	2 to 4	10.7	9.7	5	2	4	2	2.4	2

Unit : mm
Tolerance: +/- 0.1mm

■ : PCB copper
■ : PCB dielectric
■ : Pads

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➤ Antenna Implementation Guidelines

● Transmission Line

- a) Design the transmission line with characteristic impedance of 50 Ohm to feed the antenna.
- b) Minimize the length of transmission line to reduce insertion loss.

● Lump Elements Matching Circuit

Placement of antenna, PCB dimension and components within the vicinity of antenna will affect the antenna performance. Therefore, at least **six** lump elements matching circuit **MUST** be reserved for antenna optimization purpose during PCB layout process.

Green Antenna provides optional matching and anechoic chamber measurement services on request. Please contact ga@green-antenna.com for further information.

● Antenna PCB Placement

To achieve optimum antenna performance, the antenna is recommended to place on the edge of PCB.

Green Antenna provides optional EM simulation service to locate the optimum placement of antenna on customer device or bare PCB board. Please contact ga@green-antenna.com for further information.