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MOBILE LIFESTYLE SOLUTIONS

MOBILITY 42G

7-in-1 Cellular & Wi-Fi Antenna System with GPS Receiver

Overview

- **Built for 5G**
  Omni-directional 4x4 MIMO mobile antenna for the best performance.
- **Ultra wide bandwidth**
  Wide frequency range (600-6000MHz) supporting LTE and 5G connectivity.
- **Wi-Fi**
  2x2 MIMO dual band (2.4GHz & 5GHz) high gain omnidirectional antennas for local coverage.
- **Robust design**
  IP68 rated, low profile and durable housing in Black or White color options.
- **Easy installation**
  Simple panel, wall or pole installation for various applications.

Applications

- Public Safety and mission critical connectivity
- Mobile Healthcare
- Transportation Connectivity

6.7 dBi | LTE | WiFi | GPS | IP 68 | B71 Support | Built for 5G

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Specification

Cellular

Antenna elements	4 elements
Cellular frequencies	2.7dBi: 617-960MHz 5.2dBi: 1710-2700MHz 4.9dBi: 3400-4200MHz 6.7dBi: 5000-6000MHz
Cellular bands	LTE bands B1 to B86 (except B31, B72, B73, B87, B88), 5G bands n1 to n99
VSWR	< 2.5 over 95% of the band
Feed power handling	10W
Input impedance	50 Ω
Polarisation	Linear
Ground plane	Not required #

Wi-Fi

Antenna elements	2 elements
Peak Gain & Frequencies	5.0dBi: 2400-2500MHz 7.5dBi: 5000-6000MHz
VSWR	< 2.5
Feed power handling	10W
Input impedance	50 Ω
Polarisation	Linear

GPS

Frequency range	1561-1602 MHz
Peak Gain & Frequencies	0.5dBi@1575MHz 1.6dBi@1602MHz
VSWR	< 2 dB
Output return loss	10dB max
LNA Gain	28 ±3dB
Noise figure	1.5dB max at 3.3V
Operating Voltage	3.3V
Power consumption	8.5 ±2.5mA at 3.3V

Cable (LTE / 5G, Wi-Fi)

Type	CFD-200
Loss	0.33 dB/m @ 900 MHz 0.49 dB/m @ 2000 MHz 0.55 dB/m @ 2500 MHz 0.87 dB/m @ 5800 MHz
Diameter	0.2" / 5.0mm
Jacket	Half matt PVC, UV resistant
Cellular Termination	QMA male, SMA male
Wi-Fi Termination	RP-SMA male

#All measurements stated in this document were obtained without a ground plane.

Cable (GPS)

Type	RG-174
Loss	3.4 dB/m @ 1000 MHz 4.9 dB/m @ 1800 MHz
Diameter	0.1" / 2.7mm
Jacket	Half matt PVC, UV resistant
Termination	QMA male, SMA male

Mounting

Supported types	Panel, wall, pole
Mounting hole	1 11/16" / 43mm
Max panel thickness	19/32" / 15mm

Mechanical

Product dimensions	(Height)	2.28" / 58mm (spigot not included)
	(Diameter)	8.19" / 208mm
Packaged dimensions	TBD	
Radome material	UV stable PC	

Package contents

Antenna	Mobility 42G
Accessories	Wall/pole mount Double sided 3M adhesive pad (Diameter: 8.19" / 208 mm Thickness: 0.08" / 2 mm)

Environmental, compliance

IP rating	IP68
Operating temperature	-40° - 176°F / -40° - 80°C
Storage temperature	-40° - 176°F / -40° - 80°C
Compliance	RoHS, REACH, WHEE
Wind Survivability	137mph, 220 km/h
Enclosure flammability	UL 94 HB
Cable flammability	UL 758 (VW-1)
UV resistance	UL 746C (F1 long-term UV exposure)
Salt Spray	MIL-STD 810F/ASTM B117

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Ordering Information

Mobility 42G

4x 4G/5G antenna elements number

2x Wi-Fi antenna elements number

G - 1x GPS antennas number

A N T - M B - 4 2 G - Q - W - 1

Antenna series name

RF cable length in ft
(2 options: 1 - 1 ft / 0.3 meter, 6 - 6.5 ft / 2 meter)

Color
(2 options: W - white, B - black)

RF connector type
(2 options: S - SMA male, Q - QMA male)

Product Code	Description
ANT-MB-42G-S-W-6	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, SMA, White, 6.5 ft / 2m
ANT-MB-42G-S-B-6	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, SMA, Black, 6.5 ft / 2m
ANT-MB-42G-Q-W-1	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, QMA, White, 1 ft / 0.3m
ANT-MB-42G-Q-W-6	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, QMA, White, 6.5 ft / 2m
ANT-MB-42G-Q-B-1	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, QMA, Black, 1 ft / 0.3m
ANT-MB-42G-Q-B-6	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, QMA, Black, 6.5 ft / 2m

Extension cable

Cable terminal 1
(4 options: S - SMA male, Q - QMA male, N-type male, R - RP-SMA male)

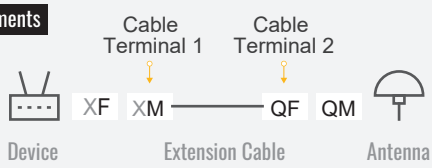
Cable terminal 2
(1 option: Q - QMA female)

Cable lenght in ft
(1 option: 15 ft / 4.5 meter)

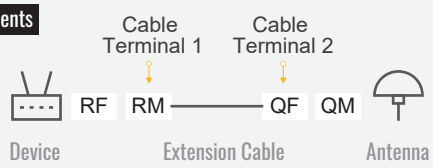
E X C - S Q - 1 5

EXtension Cable

LTE/GPS elements



Wi-Fi elements



Product Code	Element type	Description
EXC-SQ-15	LTE/GPS elements	Extension coax cable, SMA male to QMA female connector, 15ft / 4.5m
EXC-QQ-15	LTE/GPS elements	Extension coax cable, QMA male to QMA female connector, 15ft / 4.5m
EXC-NQ-15	LTE/GPS elements	Extension coax cable, N-type male to QMA female connector, 15ft / 4.5m
EXC-RQ-15	Wi-Fi elements	Extension coax cable, RP-SMA male to QMA female connector, 15 ft / 4.5m

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Technical Drawing

Mobility 42G

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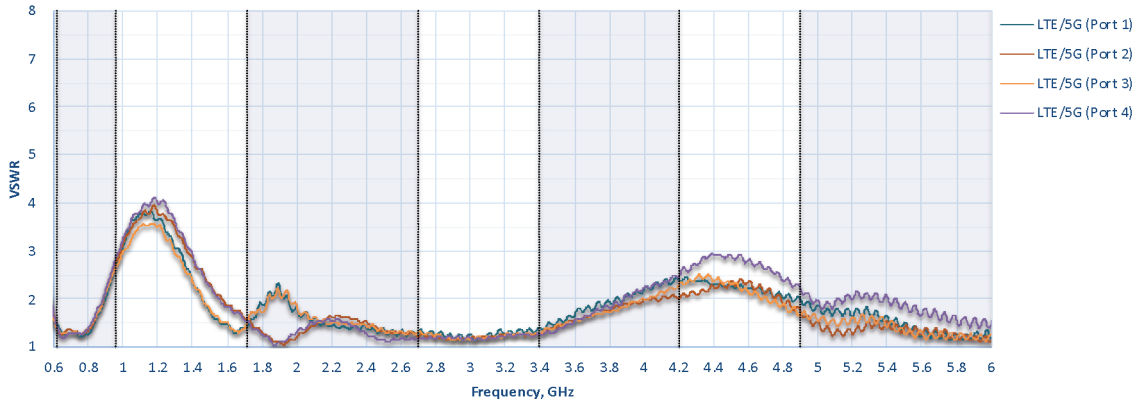
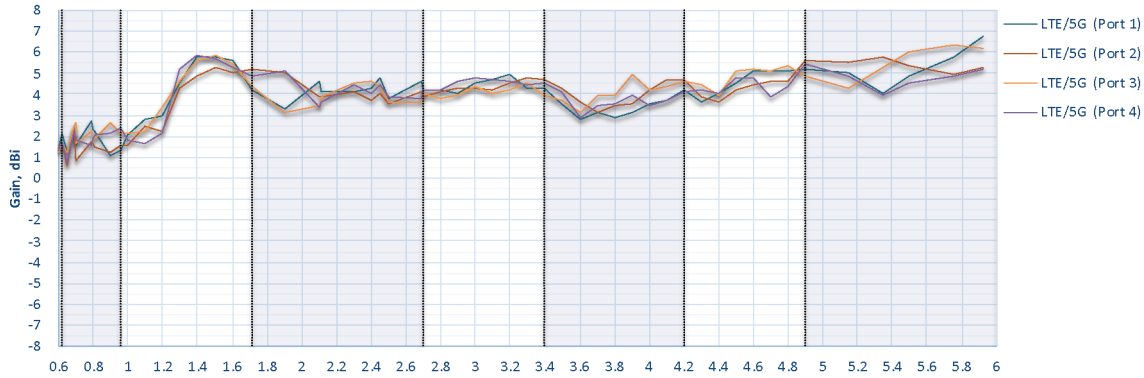
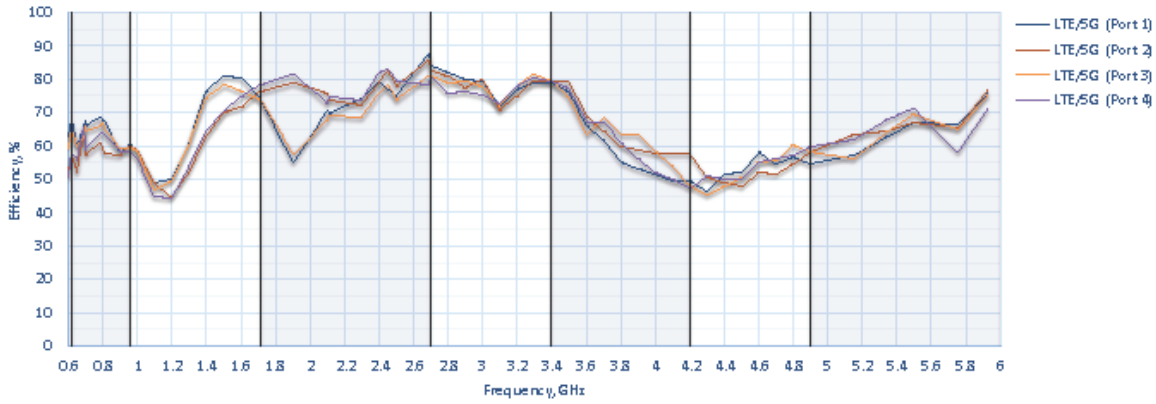
Cellular Antenna VSWR



Cellular Antenna Gain



Cellular Antenna Efficiency



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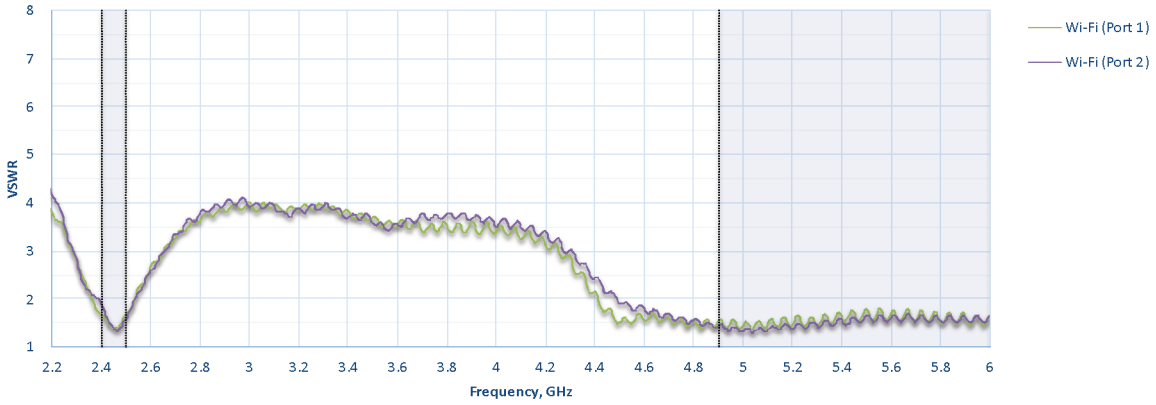
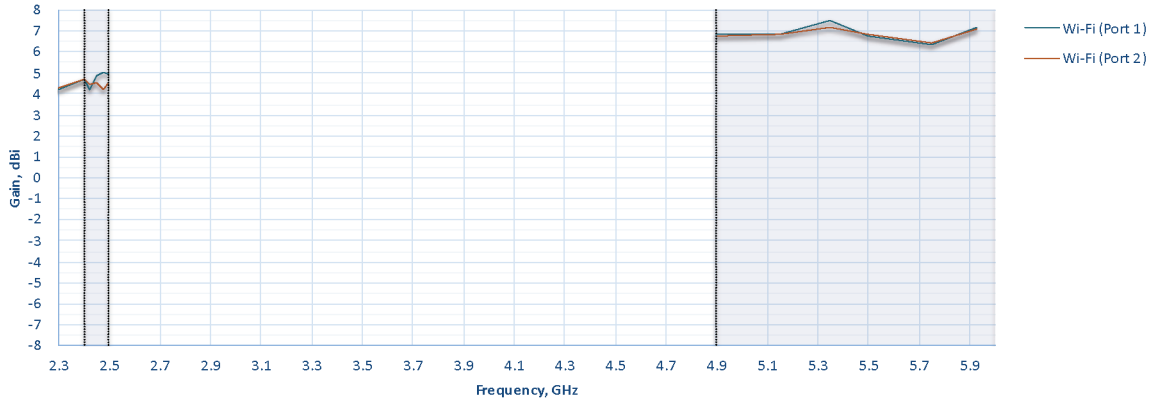
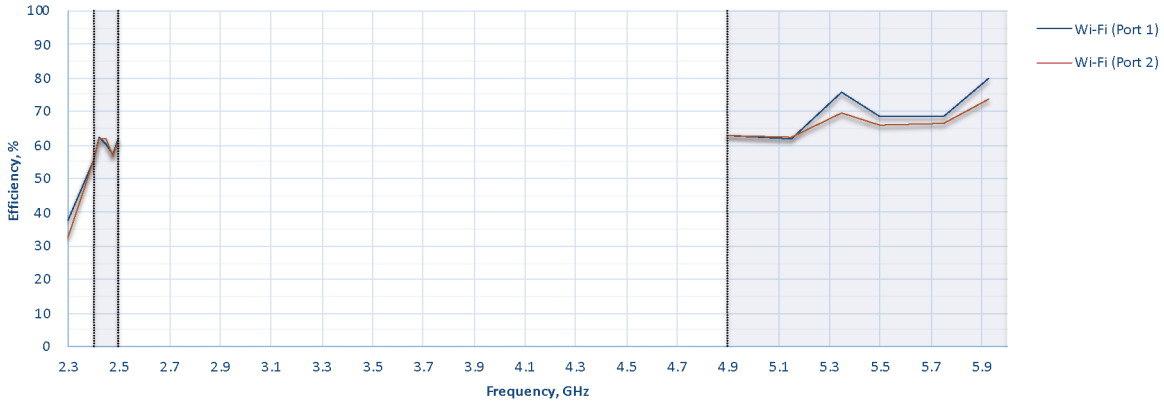
Wi-Fi Antenna VSWR



Wi-Fi Antenna Gain



Wi-Fi Antenna Efficiency



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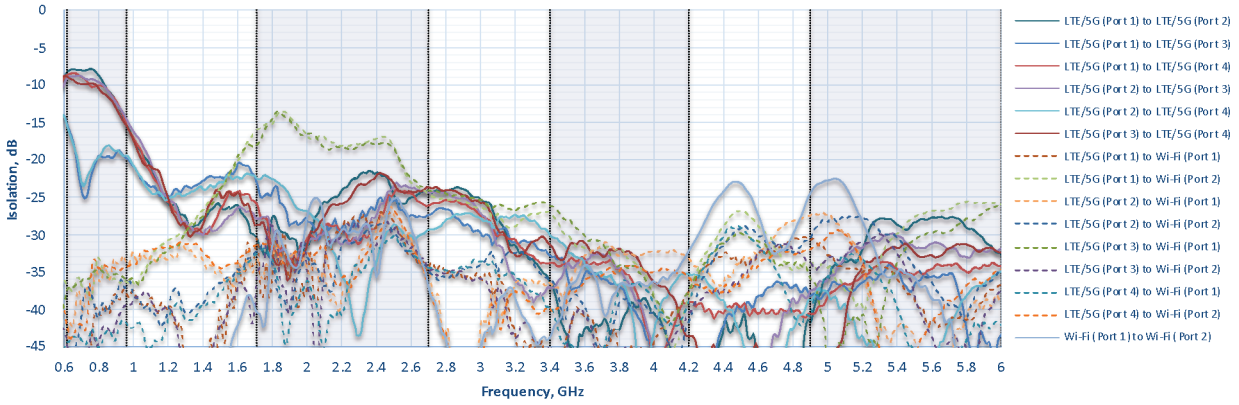
Antenna Isolation



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LTE Radiation Patterns (Azimuth)

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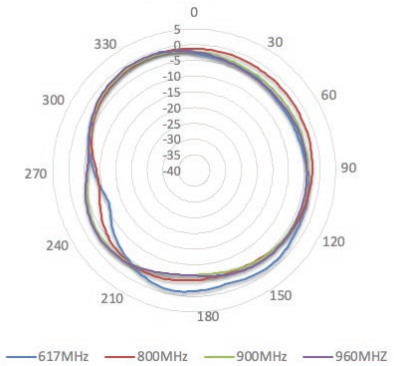
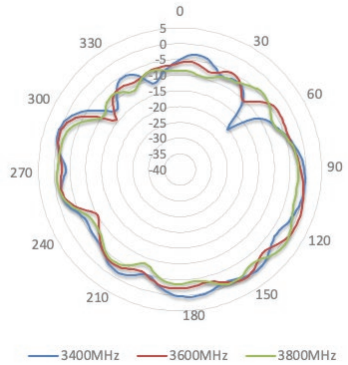
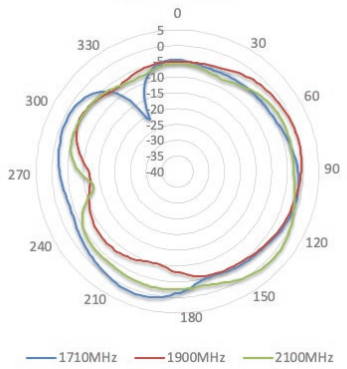
617-960 MHz



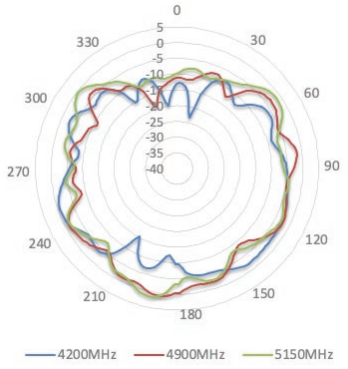
3400-3800 MHz



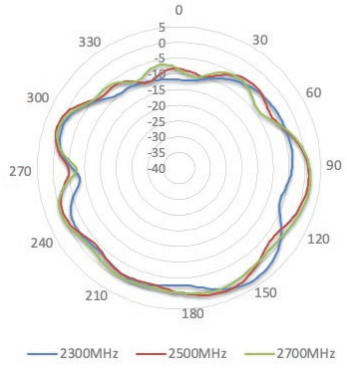
1710-2100MHz



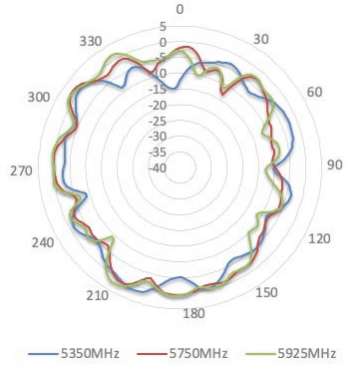
4200-5150 MHz



2300-2700 MHz



5350-5925 MHz



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LTE Radiation Patterns (Elevation 1)

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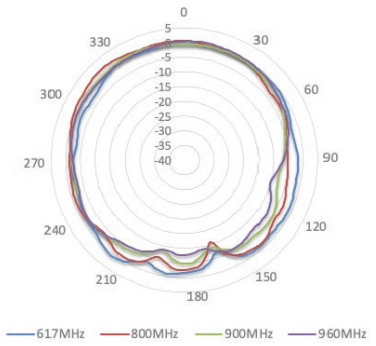
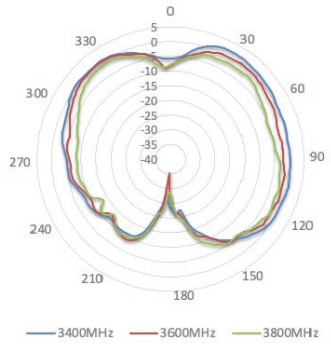
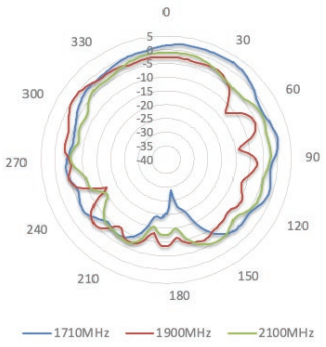
617-960 MHz



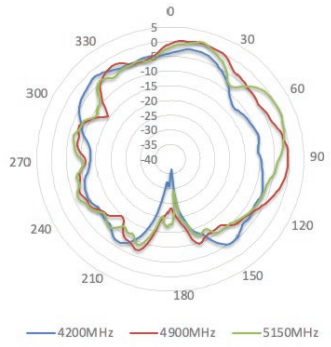
3400-3800 MHz



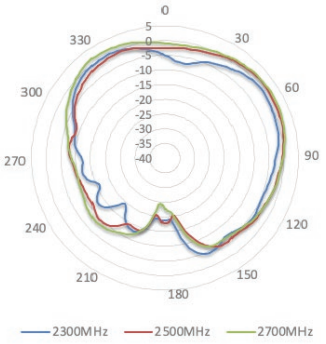
1710-2100MHz



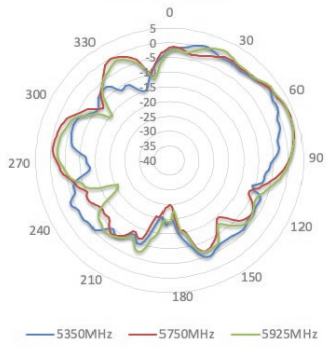
4200-5150 MHz



2300-2700 MHz



5350-5925 MHz



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LTE Radiation Patterns (Elevation 2)

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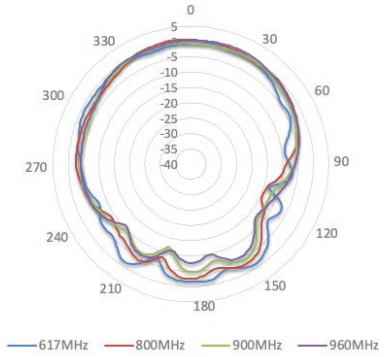
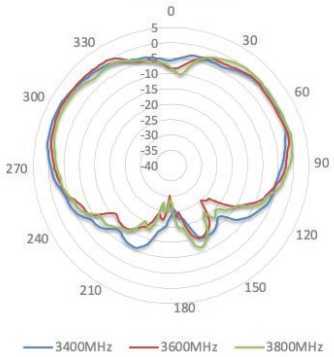
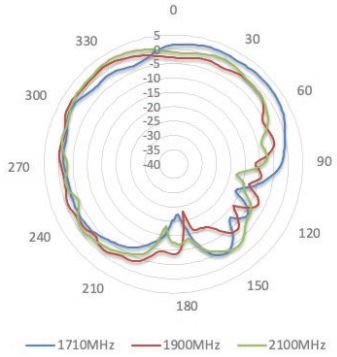
617-960 MHz



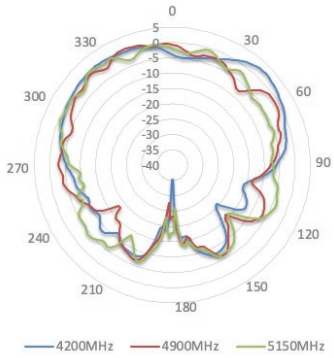
3400-3800 MHz



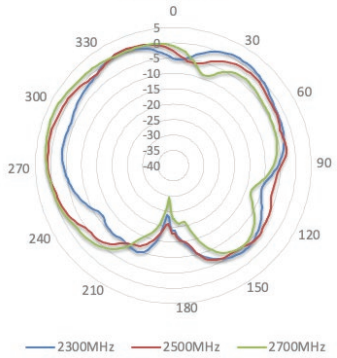
1710-2100MHz



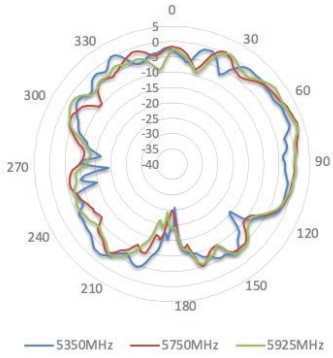
4200-5150 MHz



2300-2700 MHz



5350-5925 MHz



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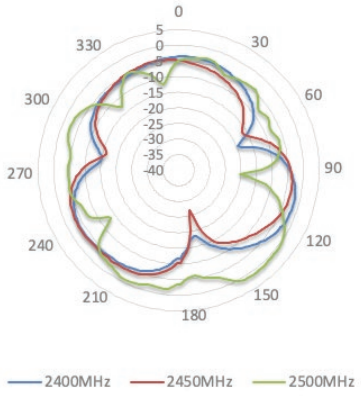
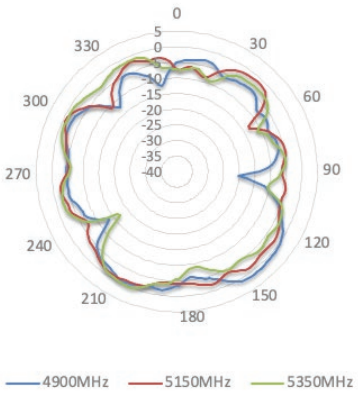
Wi-Fi Radiation Patterns (Azimuth)

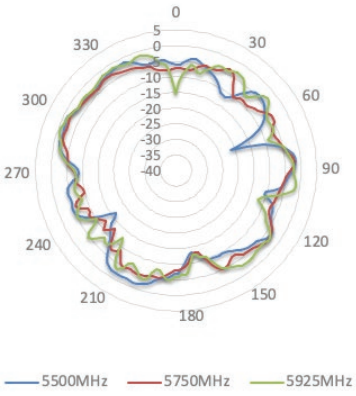
2400-2500 MHz



4900-5350 MHz

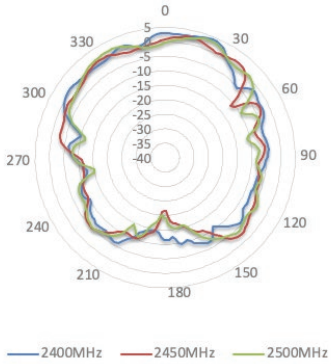


5550-5950 MHz

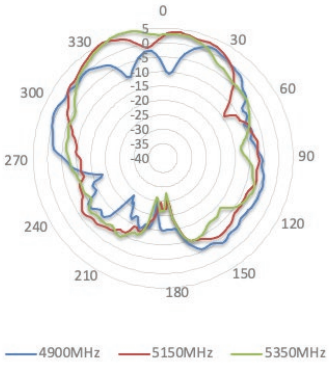


Wi-Fi Radiation Patterns (Elevation 1)

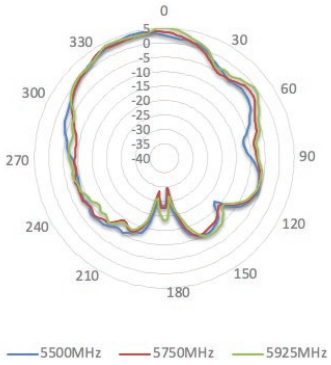
2400-2500 MHz



4900-5350MHz



5550-5950 MHz



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Wi-Fi Radiation Patterns (Elevation 2)

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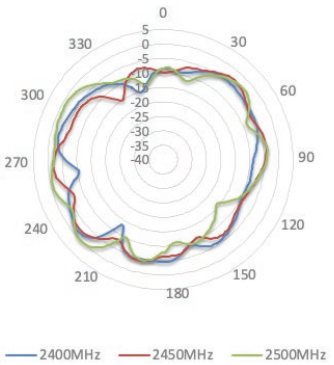
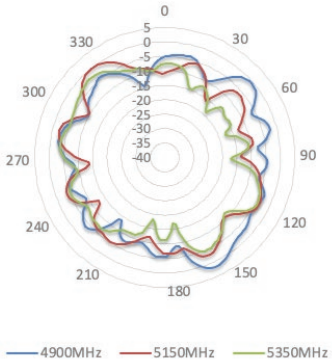
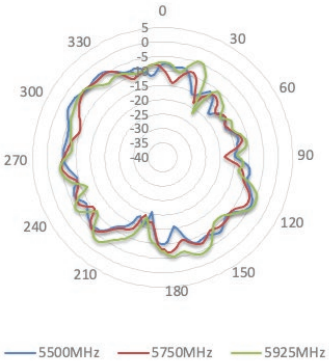
2400-2500 MHz



4900-5350 MHz



5550-5950 MHz



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Installation Recommendation

Panel Mount

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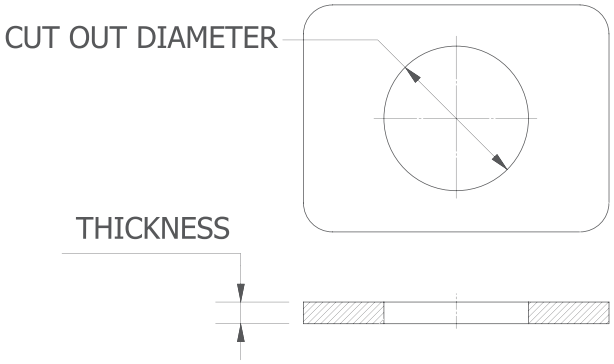

Notes

- Cover panel surface to protect the paint work. When drilling a hole, start with a small one, then increase it.
- Cut out diameter should be 1 11/16" / 43mm. Maximum allowed panel thickness - 19/ 32" / 15mm.
- After drilling, clean up the surface and apply some paint around the hole to prevent corrosion. Attach the antenna.

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Installation Recommendation

Pole Mount

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Installation Recommendation

Horizontal Pole Mount

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Installation Recommendation

Wall Mount

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