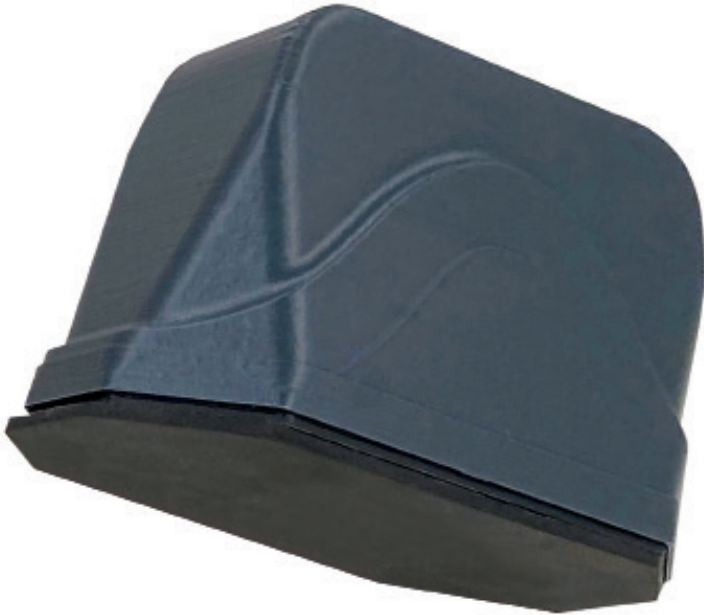


RM2D Style Multi-Band

Powerful 4G/5G Mobile Antenna



The RFMAX RM2D is a rugged fleet antenna designed for high performance mobile applications.

Optimized for Public Safety and Fleet vehicles assets that demand constant connectivity, the RM2D provides a flexible and modular design allowing for configurable frequency ranges that can accommodate the most popular mobile routers. The antenna system can be configured with up to two 4G/5G radiating elements, two dual band WiFi and a high rejection GNSS antenna.

- 2 x Wideband Cellular/4G/5G Elements (MIMO) - Band 71 - CBRS
- 2 x 2.4/4.9-6 Ghz Diversity Spaced Wi-Fi Elements
- 1 x High Rejection GPS/GNSS Antenna with LNA
- Rugged and smaller footprint - Fits Ford Explorer/Interceptor
- Built-in Ground Plane
- Available in black or white



WIFI



LTE



GPS / GNSS



FIRSTNET



5G



FRONTLINE

The RM2D was designed for mobile and fleet applications where reliability, durability and cost efficiencies are all met. The antenna is also perfect for kiosk and digital signage and other M2M applications. The customizable coaxial lengths and antenna elements make this solution perfect for many applications.

Example of Part Numbers:

RM2D-G55WW-18-SSSRR-B

Part Numbers Configurator:

RM2	D	G	5	W	18	SSSRR	B
Model	Direct Mount	GPS/GNSS	5G	WiFi	Coax Length (feet)	Connectors (SMA, RPSMA, TNC)	Color (Black)

ELECTRICAL DATA

Frequency Range	Antennas 1 & 2	617-960/1700-5850 MHz	
	Antennas 3 & 4	2.4/4.9-6.0 GHz	
	Antenna 5	1550~1610 MHz	
Operational Bands	Antennas 1 & 2	4G/5G/Cellular	
	Antennas 3 & 4	Wi-Fi	
	Antenna 5	GPS L1/GALILEO E1/ GLONASS G1/BeiDou B1/ QZSS L1	
Peak Gain: Isotropic	Antennas 1 & 2	617-960 MHz	3 dBi
		1710-5850 MHz	6.0 dBi
	Antennas 3 & 4	2.4 GHz, 5.5 GHz	6.5 dBi, 4.2 dBi
	Antenna 5	30.5 dBi	
Isolation	Antennas 1 & 2	> 10 dB	
	Antennas 3 & 4	> 30 dB	
Correlation Co-efficient	Antennas 1 & 2	< 0.1	
VSWR	2.0:1		

ENVIRONMENTAL DATA

Hazardous Substances	RoHS Compliant
Temperature	-40°C to 65°C (-40°F to + 149°F) Operating and Storage conformance to IEC 60068
Humidity (Non-Condensing)	5% to 96% Operating and Storage conformance to IEC 60068
Water Ingress	IP67
Military Spec	MIL-STD 810 conformance to vibration

MOUNTING DATA

Dimensions	Height	2.19" (55.5mm)
	Width	2.56" (65mm)
	Length	4.84" (122.9mm)
Mounting Stud	Diameter: 7/8" / 22mm Length: 1.25" / 32mm	

CABLE DATA – CELL/LTE

Type	PT195 Low Loss
Diameter	0.195" (4.953 mm)
Length	1 feet (0.3 m)
Termination	SMA Male

CABLE DATA – Wi-Fi

Type	PT195 Low Loss
Diameter	0.195" (4.953 mm)
Length	1 feet (0.3 m)
Termination	RP-SMA Male

CABLE DATA – GNSS

Type	RG-174U
Diameter	0.100" (2.54 mm)
Length	1 feet (0.3 m)
Termination	SMA Male

*1 ft length used for gain test

*18 ft length used for VSWR

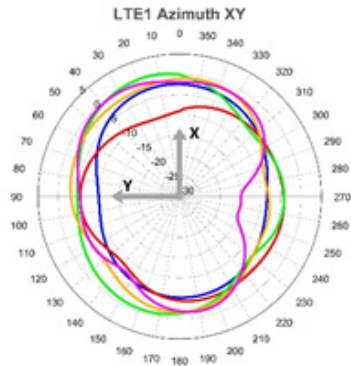
GNSS DATA – CERAMIC PATCH ANTENNA SPEC.

Bandwidth	1561 – 1602 MHz
Gain@Zenith	2.5 dBi
Polarization	R.H.C.P.
Axial Ratio	3.0 dB Typ.

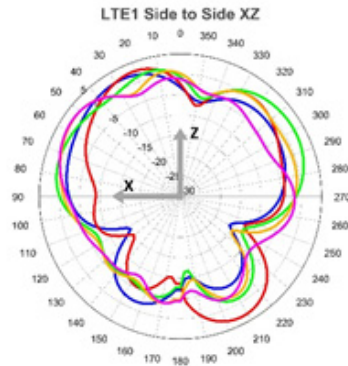
GNSS DATA – LNA SPECIFICATION

Noise Figure	1.2 dB
Gain	28 dBi
Voltage	3.3V~5.6V
Current	9.6±1mA@3.3V

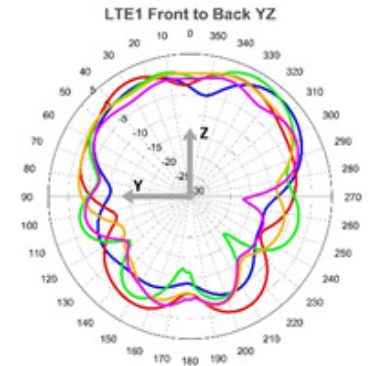
RADIATION PATTERNS



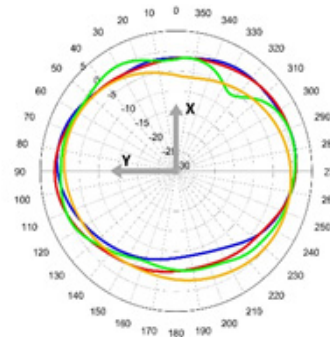
617 MHz:	Max = -2.4	Avg = -5.5
700 MHz:	Max = -4.1	Avg = -6.1
800 MHz:	Max = 0.5	Avg = -2.9
900 MHz:	Max = -0.9	Avg = -3.6
960 MHz:	Max = -0.3	Avg = -4.2



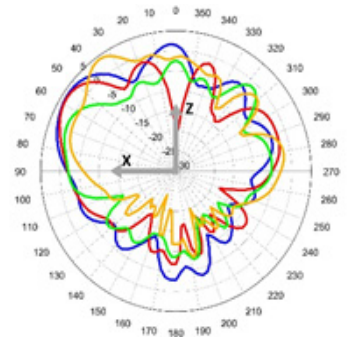
617 MHz:	Max = 2.2	Avg = -3.5
700 MHz:	Max = 3.3	Avg = -2.9
800 MHz:	Max = 2.6	Avg = -1.9
900 MHz:	Max = 2.6	Avg = -2.3
960 MHz:	Max = 2.7	Avg = -3



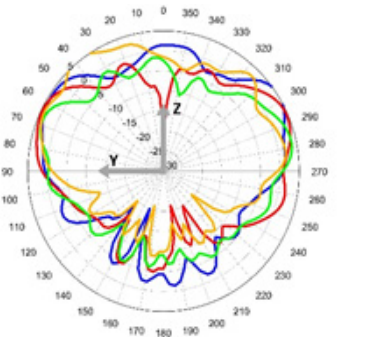
617 MHz:	Max = 2.7	Avg = -3.7
700 MHz:	Max = 2	Avg = -2.1
800 MHz:	Max = 3.5	Avg = -2.6
900 MHz:	Max = 1.3	Avg = -3.2
960 MHz:	Max = 0.1	Avg = -4.1



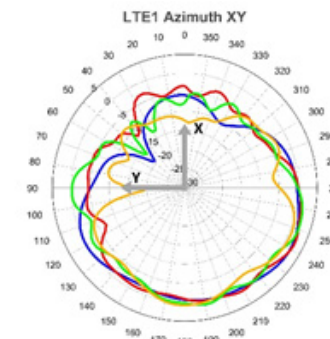
1700 MHz:	Max = 1.2	Avg = -2
2000 MHz:	Max = 1.3	Avg = -1.4
2400 MHz:	Max = 1.1	Avg = -1.7
2700 MHz:	Max = 0.1	Avg = -2.3



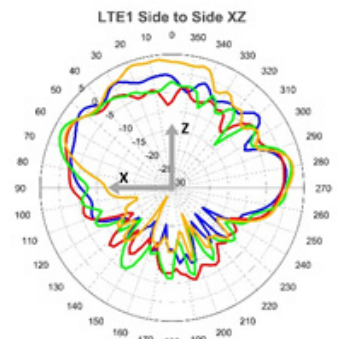
1700 MHz:	Max = 3.9	Avg = -3.7
2000 MHz:	Max = 3.6	Avg = -5.3
2400 MHz:	Max = 0.4	Avg = -6.6
2700 MHz:	Max = 4.2	Avg = -5.4



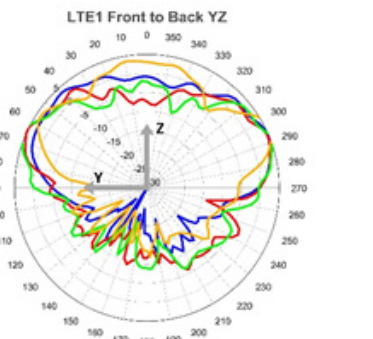
1700 MHz:	Max = 5.3	Avg = -1
2000 MHz:	Max = 4.7	Avg = -2.2
2400 MHz:	Max = 3.7	Avg = -2.9
2700 MHz:	Max = 6	Avg = -2.3



3300 MHz:	Max = 2.2	Avg = -2.9
3600 MHz:	Max = 2.5	Avg = -2.5
3900 MHz:	Max = 2	Avg = -2.8
4200 MHz:	Max = 0.6	Avg = -4.6



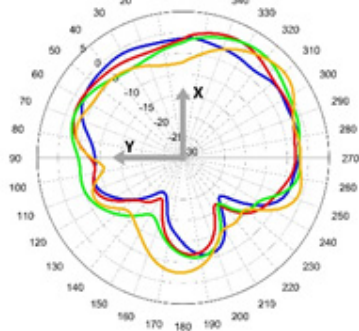
3300 MHz:	Max = 1.4	Avg = -5
3600 MHz:	Max = 1.4	Avg = -5
3900 MHz:	Max = 2.9	Avg = -4.8
4200 MHz:	Max = 3.5	Avg = -3.9



3300 MHz:	Max = 4.9	Avg = -3
3600 MHz:	Max = 5	Avg = -3
3900 MHz:	Max = 5.6	Avg = -2.8
4200 MHz:	Max = 6	Avg = -3.3

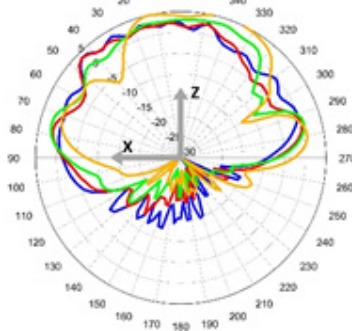
RADIATION PATTERNS

LTE1 Azimuth XY



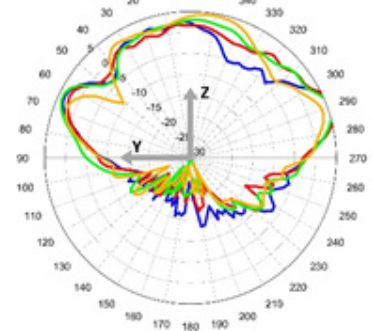
5150 MHz:	Max = -1.1	Avg = -5.2
5350 MHz:	Max = 1.1	Avg = -4.7
5550 MHz:	Max = 1.4	Avg = -4.2
5850 MHz:	Max = 1.7	Avg = -4.4

LTE1 Side to Side XZ



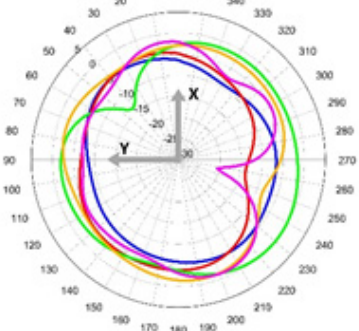
5150 MHz:	Max = 3.7	Avg = -4
5350 MHz:	Max = 3.7	Avg = -4.5
5550 MHz:	Max = 3.5	Avg = -4.3
5850 MHz:	Max = 5.4	Avg = -4.1

LTE1 Front to Back YZ



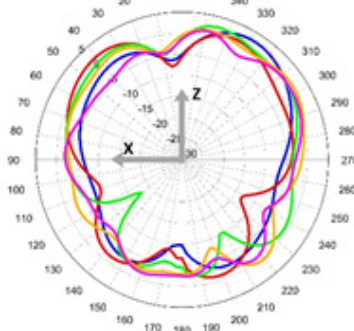
5150 MHz:	Max = 6.2	Avg = -3.8
5350 MHz:	Max = 6.4	Avg = -3.6
5550 MHz:	Max = 5.8	Avg = -3
5850 MHz:	Max = 4.5	Avg = -3.7

LTE2 Azimuth XY



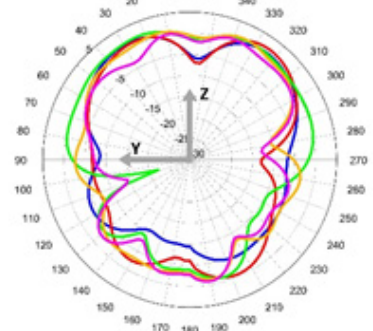
617 MHz:	Max = -4.9	Avg = -6.7
700 MHz:	Max = -3.8	Avg = -6.3
800 MHz:	Max = 0.1	Avg = -2.8
900 MHz:	Max = -1.2	Avg = -3.5
960 MHz:	Max = -1.2	Avg = -5.4

LTE2 Side to Side XZ



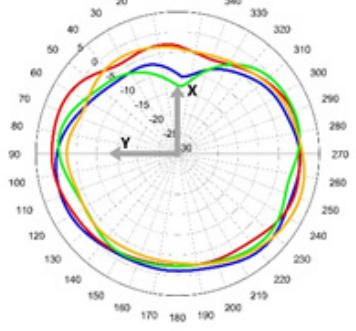
617 MHz:	Max = 2.9	Avg = -3.3
700 MHz:	Max = 1.9	Avg = -2.8
800 MHz:	Max = 2.5	Avg = -2
900 MHz:	Max = 1.7	Avg = -1.6
960 MHz:	Max = 1.1	Avg = -2.6

LTE2 Front to Back YZ



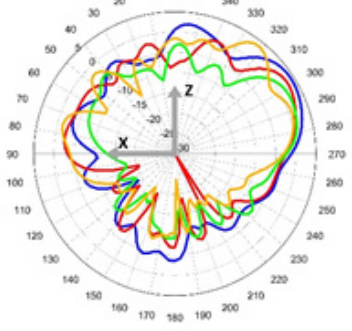
617 MHz:	Max = 1.3	Avg = -3.6
700 MHz:	Max = 2.3	Avg = -3.1
800 MHz:	Max = 1.8	Avg = -2
900 MHz:	Max = 1.5	Avg = -2.4
960 MHz:	Max = 0.5	Avg = -3.7

LTE2 Azimuth XY



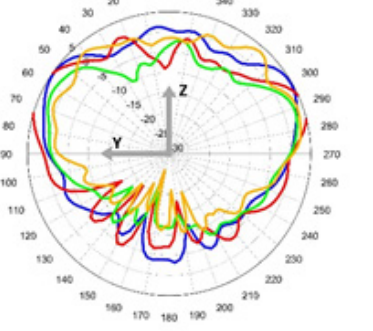
1700 MHz:	Max = 1.4	Avg = -2
2000 MHz:	Max = 1.1	Avg = -1.2
2400 MHz:	Max = 0.7	Avg = -2.6
2700 MHz:	Max = 2.2	Avg = -1.9

LTE2 Side to Side XZ



1700 MHz:	Max = 4.3	Avg = -3.4
2000 MHz:	Max = 2.9	Avg = -5
2400 MHz:	Max = 1.8	Avg = -7
2700 MHz:	Max = 3.7	Avg = -5.3

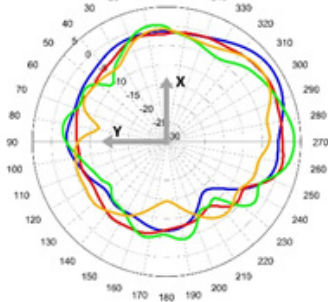
LTE2 Front to Back YZ



1700 MHz:	Max = 4.7	Avg = -1.1
2000 MHz:	Max = 5.6	Avg = -1.6
2400 MHz:	Max = 2.6	Avg = -4.1
2700 MHz:	Max = 3.6	Avg = -3

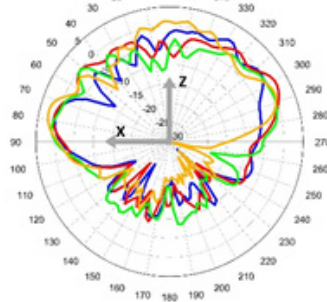
RADIATION PATTERNS

LTE2 Azimuth XY



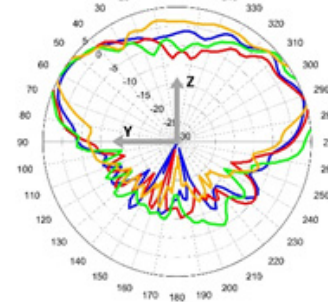
3300 MHz:	Max = 3.3	Avg = -3.3
3600 MHz:	Max = 1	Avg = -3.6
3900 MHz:	Max = 3.3	Avg = -3.4
4200 MHz:	Max = 0.9	Avg = -4.9

LTE2 Side to Side XZ



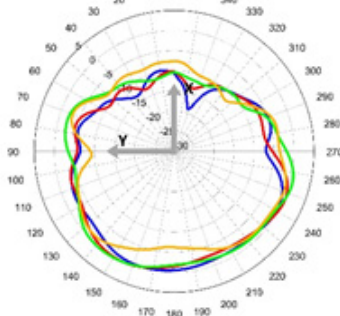
3300 MHz:	Max = 0.7	Avg = -6.1
3600 MHz:	Max = 1.5	Avg = -5.3
3900 MHz:	Max = 1.1	Avg = -5.7
4200 MHz:	Max = 2.6	Avg = -5.6

LTE2 Front to Back YZ



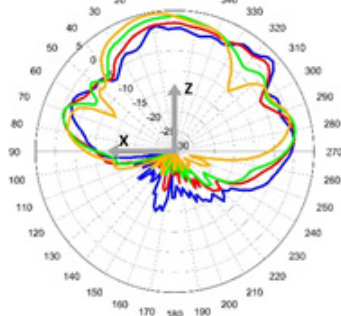
3300 MHz:	Max = 4.7	Avg = -2.7
3600 MHz:	Max = 5.5	Avg = -3.3
3900 MHz:	Max = 6.5	Avg = -2
4200 MHz:	Max = 6.5	Avg = -2.4

LTE2 Azimuth XY



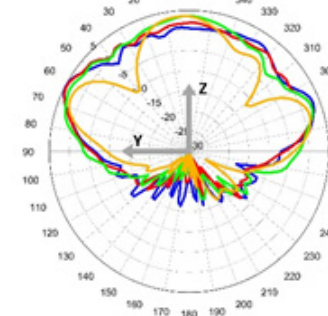
5150 MHz:	Max = -0.2	Avg = -4.7
5350 MHz:	Max = 0.3	Avg = -4.6
5550 MHz:	Max = 0.7	Avg = -3.7
5850 MHz:	Max = -0.6	Avg = -4.9

LTE2 Side to Side XZ



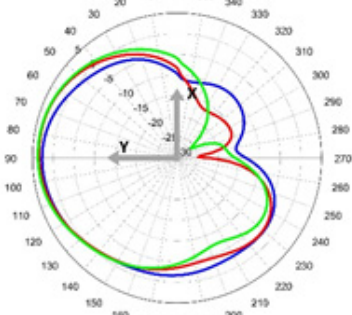
5150 MHz:	Max = 3.3	Avg = -4.4
5350 MHz:	Max = 1.9	Avg = -5.4
5550 MHz:	Max = 3.6	Avg = -5.2
5850 MHz:	Max = 4.6	Avg = -5.9

LTE2 Front to Back YZ



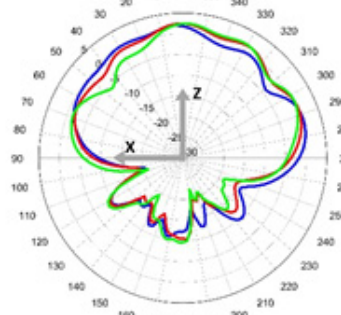
5150 MHz:	Max = 4.9	Avg = -3.8
5350 MHz:	Max = 4.7	Avg = -3.7
5550 MHz:	Max = 3.6	Avg = -3.3
5850 MHz:	Max = 3.6	Avg = -5.6

WiFi1 Azimuth XY



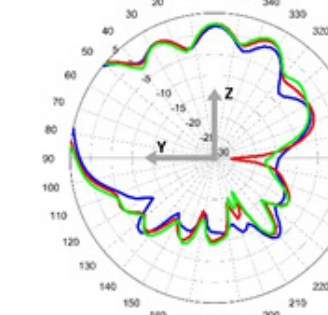
2400 MHz:	Max = 2.7	Avg = -3
2440 MHz:	Max = 3.5	Avg = -3.1
2490 MHz:	Max = 3.6	Avg = -3.1

WiFi1 Side to Side XZ



2400 MHz:	Max = 2	Avg = -4.4
2440 MHz:	Max = 2.4	Avg = -4.5
2490 MHz:	Max = 2.5	Avg = -4.9

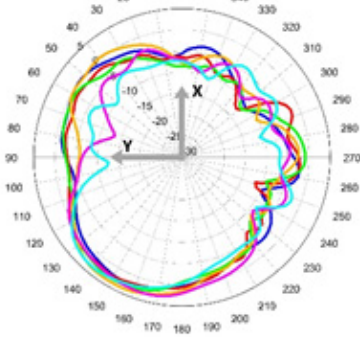
WiFi1 Front to Back YZ



2400 MHz:	Max = 7.1	Avg = -3
2440 MHz:	Max = 8.1	Avg = -2.3
2490 MHz:	Max = 8.2	Avg = -2.2

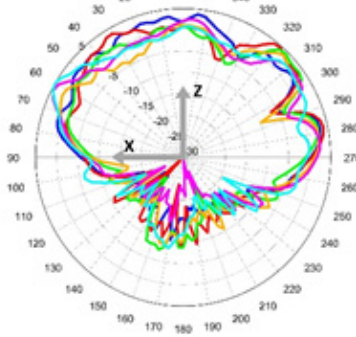
RADIATION PATTERNS

WiFi1 Azimuth XY



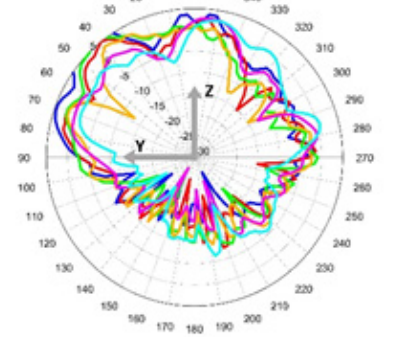
5150 MHz:	Max = 2.3	Avg = -2.6
5500 MHz:	Max = 2.4	Avg = -2.8
5900 MHz:	Max = 3	Avg = -2.9
6300 MHz:	Max = 3.8	Avg = -2.3
6700 MHz:	Max = 3.2	Avg = -3.3
7125 MHz:	Max = 3.4	Avg = -4

WiFi1 Side to Side XZ



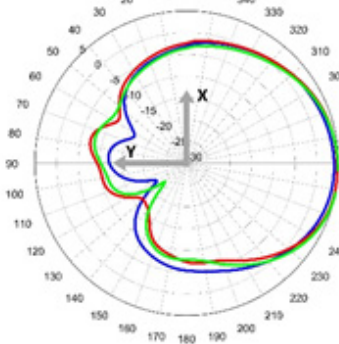
5150 MHz:	Max = 3.8	Avg = -3.2
5500 MHz:	Max = 4.6	Avg = -3.3
5900 MHz:	Max = 4.4	Avg = -3.9
6300 MHz:	Max = 3.9	Avg = -4.1
6700 MHz:	Max = 4.6	Avg = -3.9
7125 MHz:	Max = 5	Avg = -3.5

WiFi1 Front to Back YZ



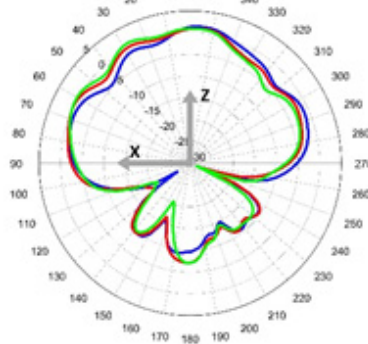
5150 MHz:	Max = 6.8	Avg = -3.3
5500 MHz:	Max = 5.1	Avg = -4.7
5900 MHz:	Max = 5.7	Avg = -4.4
6300 MHz:	Max = 3.6	Avg = -5.3
6700 MHz:	Max = 2.8	Avg = -5.4
7125 MHz:	Max = 2.5	Avg = -5.2

WiFi2 Azimuth XY



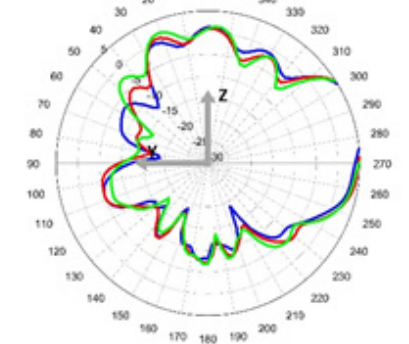
2400 MHz:	Max = 4	Avg = -2.9
2440 MHz:	Max = 4.9	Avg = -2.5
2490 MHz:	Max = 5.1	Avg = -2.7

WiFi2 Side to Side XZ



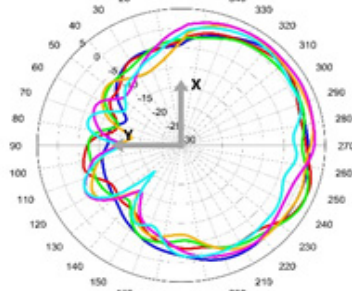
2400 MHz:	Max = 1.5	Avg = -5
2440 MHz:	Max = 1	Avg = -4.9
2490 MHz:	Max = 1.2	Avg = -5.1

WiFi2 Front to Back YZ



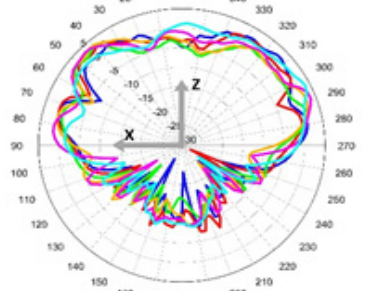
2400 MHz:	Max = 6.7	Avg = -3.1
2440 MHz:	Max = 7.7	Avg = -2.6
2490 MHz:	Max = 8	Avg = -2.5

WiFi2 Azimuth XY



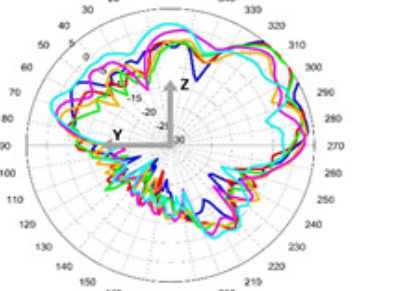
5150 MHz:	Max = 2.5	Avg = -2.3
5500 MHz:	Max = 3.1	Avg = -2.7
5900 MHz:	Max = 3.2	Avg = -2.7
6300 MHz:	Max = 3	Avg = -2.5
6700 MHz:	Max = 3.2	Avg = -1.9
7125 MHz:	Max = 2.3	Avg = -3.3

WiFi2 Side to Side XZ



5150 MHz:	Max = 2.9	Avg = -4.1
5500 MHz:	Max = 2.8	Avg = -4
5900 MHz:	Max = 2.9	Avg = -4.8
6300 MHz:	Max = 3.5	Avg = -4.2
6700 MHz:	Max = 3.7	Avg = -3.6
7125 MHz:	Max = 3.8	Avg = -3.6

WiFi2 Front to Back YZ



5150 MHz:	Max = 6.8	Avg = -4.9
5500 MHz:	Max = 5.2	Avg = -5.3
5900 MHz:	Max = 5.2	Avg = -5.6
6300 MHz:	Max = 3.2	Avg = -5.6
6700 MHz:	Max = 3.4	Avg = -4.9
7125 MHz:	Max = 1.6	Avg = -5

Stud Mount:

Diameter - 7/8 inch (22mm)

Length - 1.25 Inch (32mm)

