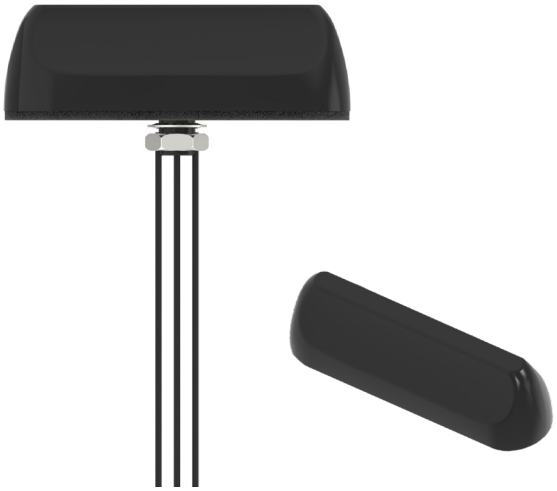


VersAnte L000322-XX

Ground Plane Independent 2 or 3-Port IoT Antenna - 4G/5G Cellular / GNSS

The VersAnte L000322-XX antenna family has two variants offering two 4G/5G cellular ports with an optional GNSS port in a compact form factor.

As a ground plane independent antenna, this antenna can operate on both metallic and non-metallic surfaces. This feature combined with an IP69K rating makes this antenna an ideal solution for a broad range of IoT applications in both indoor and outdoor environments.

FEATURES AND BENEFITS

- MIMO 4G/5G & optional GNSS from a single antenna
- Supports CAT-M, CAT-1 to CAT-4, and NB-IoT
- Suitable for mounting on a variety of surfaces
- Radome is paintable using commonly available spray paints (must not contain metal)
- Versatile for a number of applications
- Ground plane independent
- IP67 and IP69K rated for water ingress, dust, high pressure and high temperature water protection
- Low profile
- Ruggedized and less prone to vandalization

APPLICATIONS

- IoT endpoints
- Digital display and signage
- EV charging
- Smart lockers and storage
- Ticketing systems
- Smart terminals
- Data monitoring

ELECTRICAL SPECIFICATION

	4G/5G Cellular			
Operating Frequency (MHz)	698-760	760-960	1690-2690	3300-3800
Free Space Performance				
VSWR - Typical	<2.0:1	<1.75:1	<2.0:1	<2.0:1
Efficiency (%) Average	>40	>40	>55	>40
Peak Gain (dBi)	2.0	2.8	3.0	3.0
On Metallic Ground Plane Performance				
VSWR - Typical	<3.5:1	<2.5:1	<2.0:1	<2.0:1
Efficiency (%) Average	>40	>40	>50	>35
Peak Gain (dBi)	2.0	2.9	4.8	6.0
Isolation Between Cellular Elements (dB)	>-10			
Input Max Power (W)	20			
Polarization	Linear			
Azimuth Beamwidth	360 °, Omnidirectional			

Measured with a 3.3 ft (1 m) cable, with and without a 2 ft (0.6m) diameter ground plane

ELECTRICAL SPECIFICATION - GNSS	
Frequency (MHz)	1559-1606
Passive Antenna Gain (dBi)	3.0
LNA Gain @ Room Temperature (dB)	26 ± 3
Noise Figure @ Room Temperature (dB)	< 2.8
Max VSWR @ Room Temperature	< 2.0:1
Polarization	RHCP
Nominal Impedance (ohm)	50
Operating Supply Voltage (Vdc)	2.5-7.0
Current Consumption, Max @ room temp. (mA)	11.5 @ 3.0V
Out-of-band Signal Rejection, Min @ room temp. (dBc)	80 @ 1 – 1525 MHz 80 @ 1428 – 2700 MHz 70 @ 4900 – 5800 MHz

MECHANICAL SPECIFICATION	
Dimensions – L x W x H – mm (in.)	150 x 45 x 50 (5.90 x 1.77 x 1.97)
Weight – g (oz.)	2 Port - 173 (6.10) 3 Port - 199 (7.02)
Mounting	M16 Stud
Radome	ASA (Black)
Cable	RG174 (3.3 feet / 1m)
Connector	Cellular - SMA, GNSS - SMA

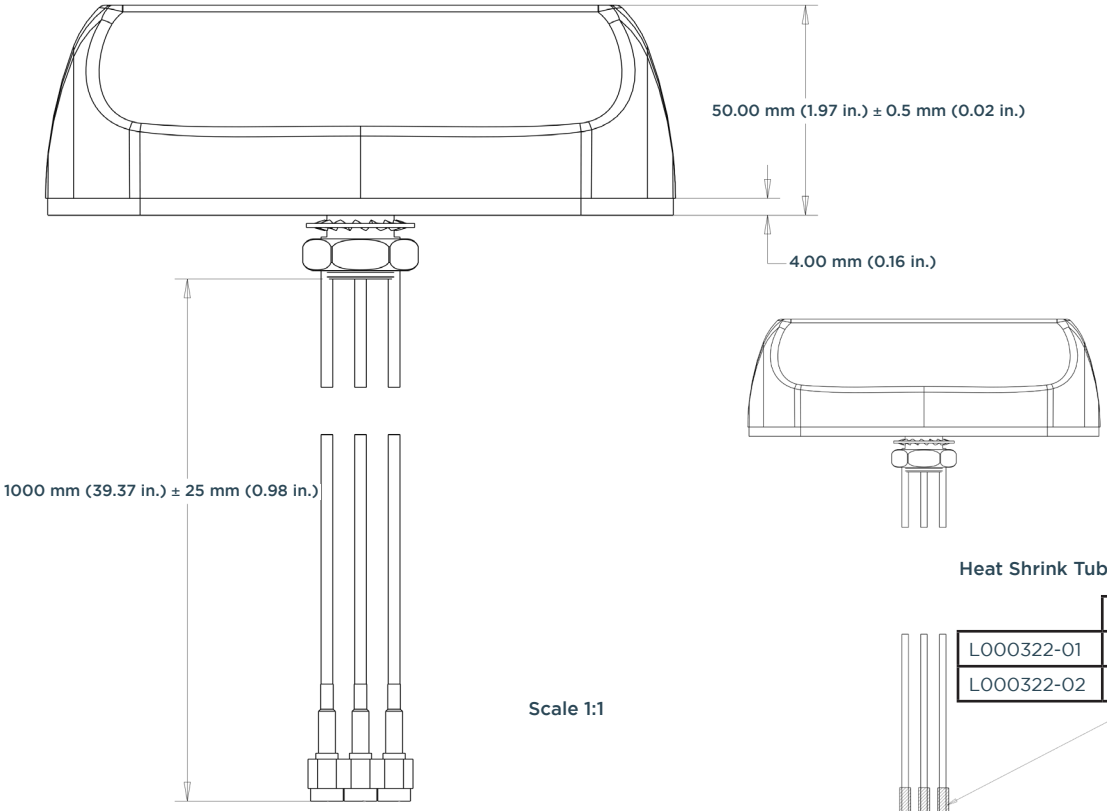
ENVIRONMENTAL SPECIFICATION	
Operating Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)
Storage Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)
Ingress Protection (IP Rating)	IP67, IP69K
Material Substance Compliance	RoHS Compliant CE & UKCA Compliant

PART NUMBER	PORT COUNT	FREQUENCY COVERAGE	CONNECTOR
L000322-01	2	4G/5G Cellular x 2 - 698 - 3800 MHz	SMA Female x 2
L000322-02	3	4G/5G Cellular x 2 - 698 - 3800 MHz GNSS x 1 - 1559-1606 MHz	SMA Female x 2 SMA Female x 1

GLOBAL 4G/5G CELLULAR COVERAGE

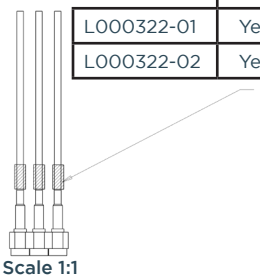
FREQUENCY	RF BANDS
698-806 MHz	12, 13, 14, 17, 28, 29, 44, 67, 68, 85 N12, N14, N28, N29, N83
807-960 MHz	5, 6, 8, 18, 19, 20, 26, 27 N5, N8, N18, N20, N81, N82, N89, N91, N92, N93, N94
1690-2200 MHz	1, 2, 3, 4, 9, 10, 15, 16, 23, 25, 33, 34, 35, 36, 37, 39, 65, 66, 70 N34, N39, N65, N66, N70, N80, N84, N86, N95
2200-2700 MHz	7, 30, 38, 40, 41,69 N30, N38, N40, N41, N90
3300-3800 MHz	22, 42, 43, 48 N48, N78

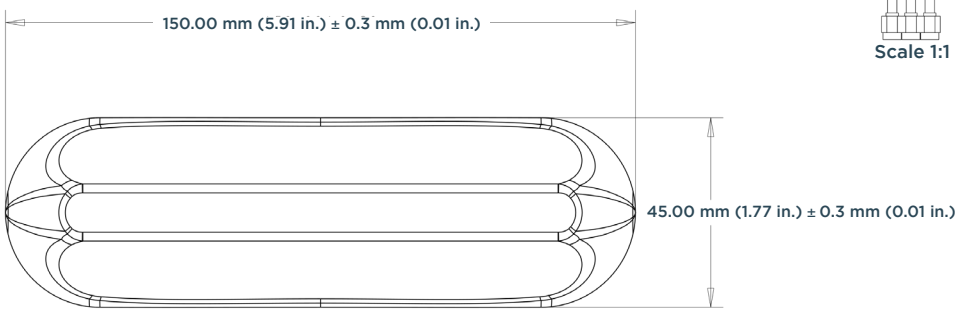
MECHANICAL DRAWINGS



Heat Shrink Tube Indentification

	Cellular 1	Cellular 2	GNSS
L000322-01	Yellow	Yellow	-
L000322-02	Yellow	Yellow	White





RADIATION PATTERNS - 4G/5G CELLULAR

Key

4G/5G Cellular Port 1 Measured in Free Space

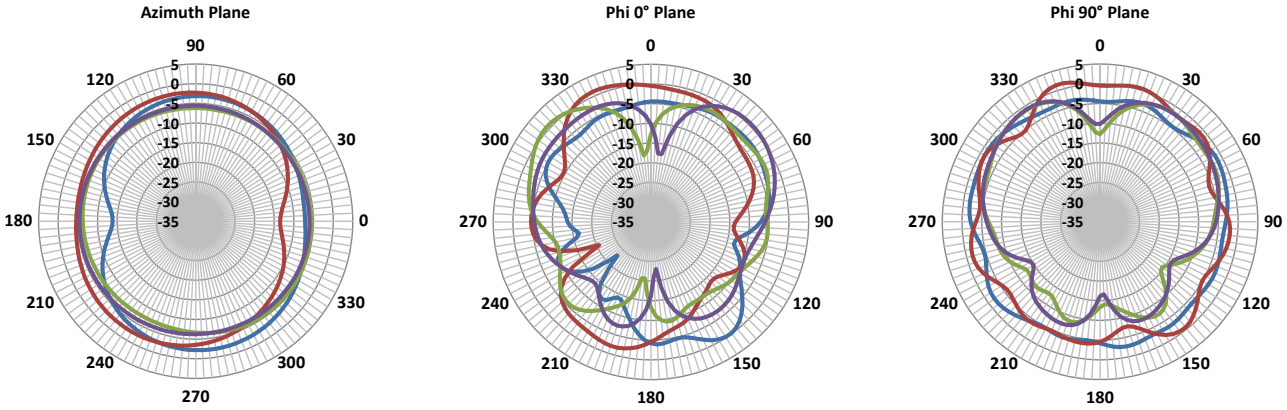
4G/5G Cellular Port 2 Measured in Free Space

4G/5G Cellular Port 1 Measured with Ground Plane

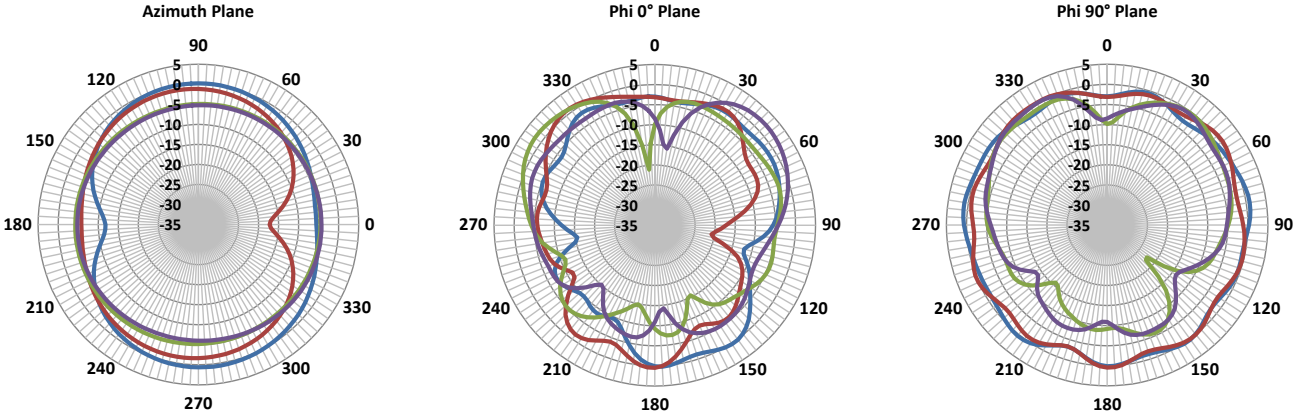
4G/5G Cellular Port 2 Measured with Ground Plane

Note - A label on the antenna base indicates the direction of 0° for ease of orientation and placement.

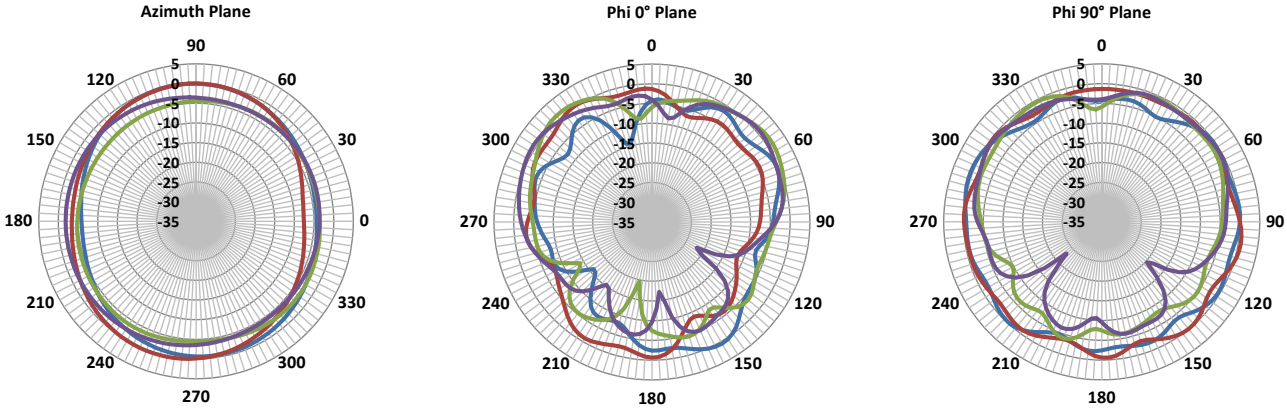
Radiation Patterns at 698 MHz



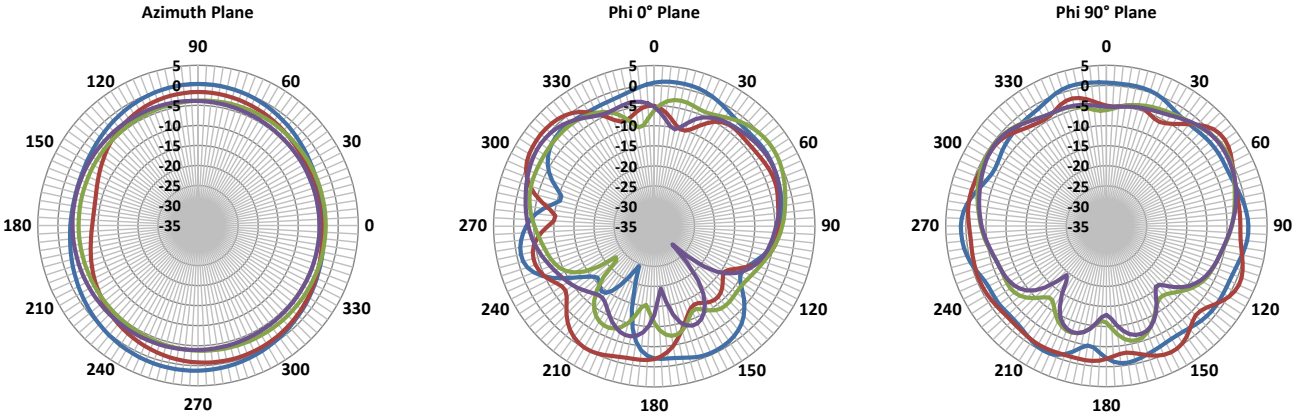
Radiation Patterns at 750 MHz



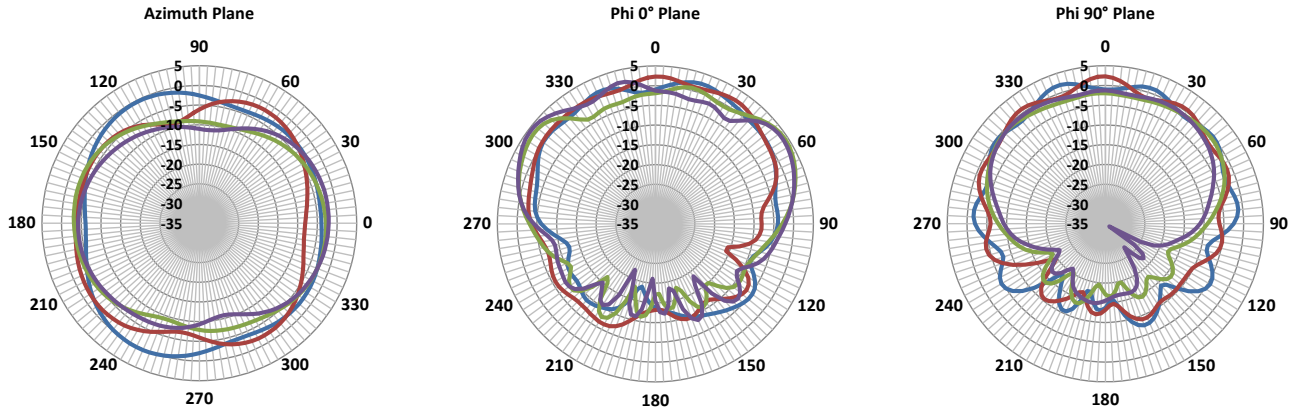
Radiation Pattern at 850 MHz



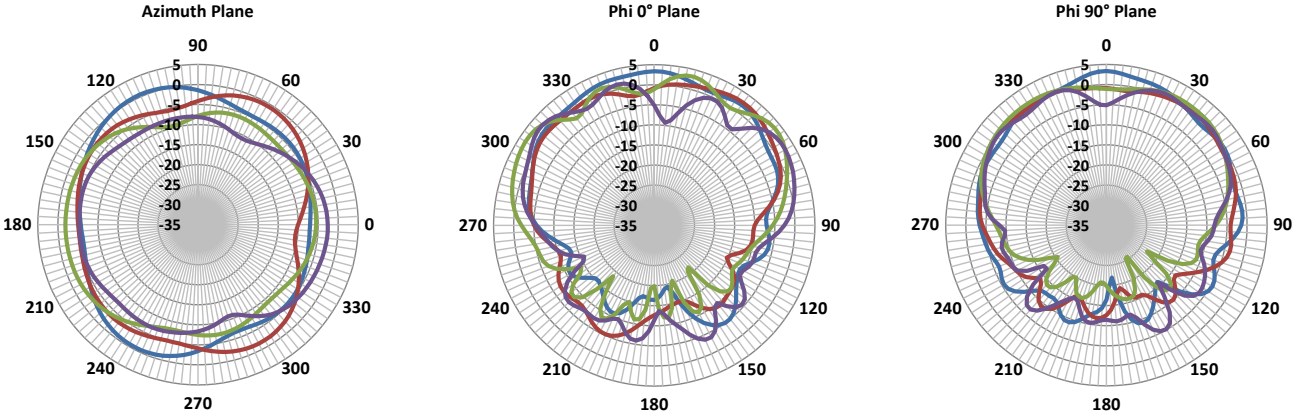
Radiation Pattern at 960 MHz



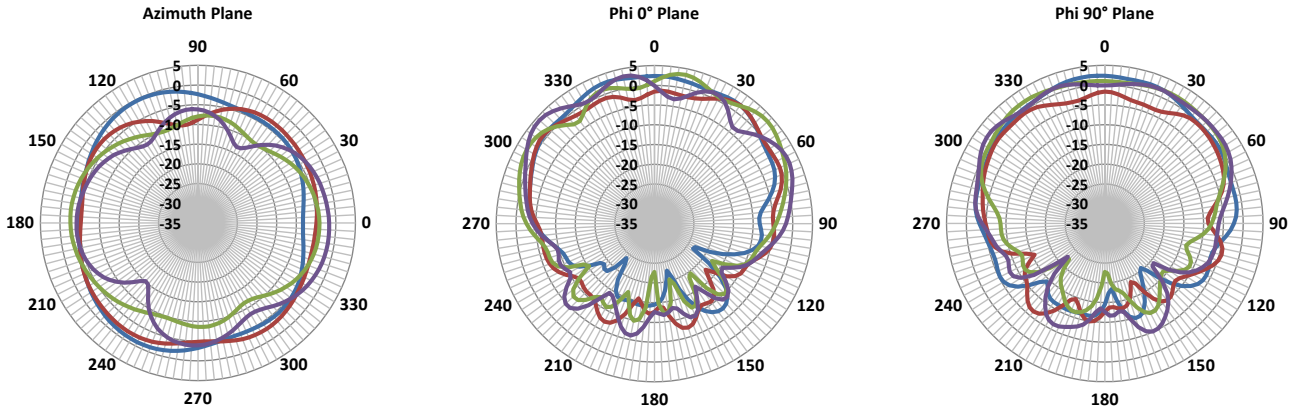
Radiation Pattern at 1690 MHz



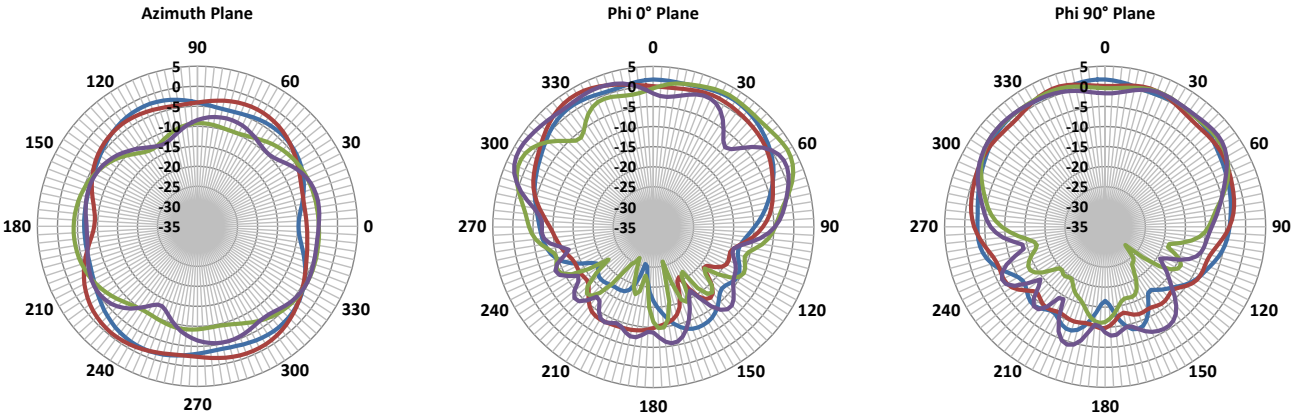
Radiation Pattern at 1800 MHz



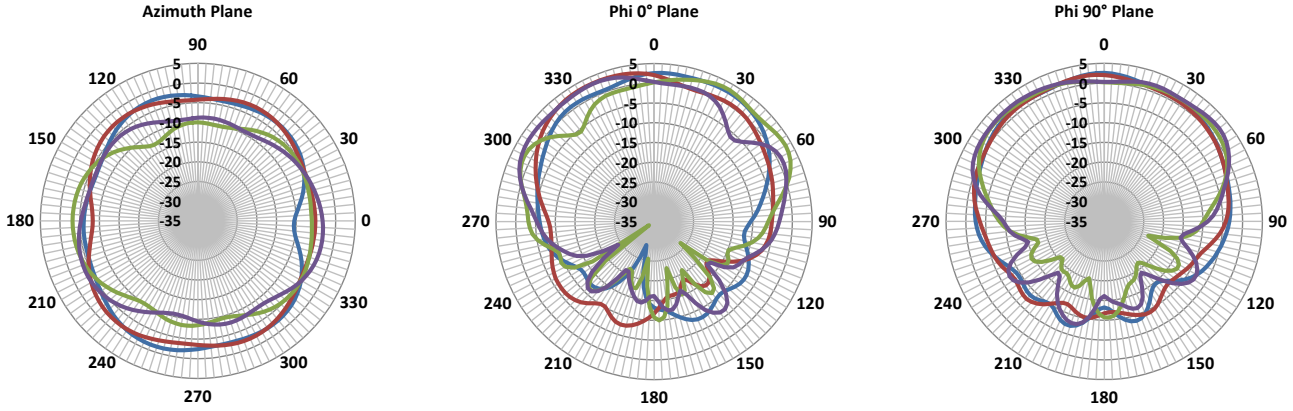
Radiation Pattern at 1900 MHz



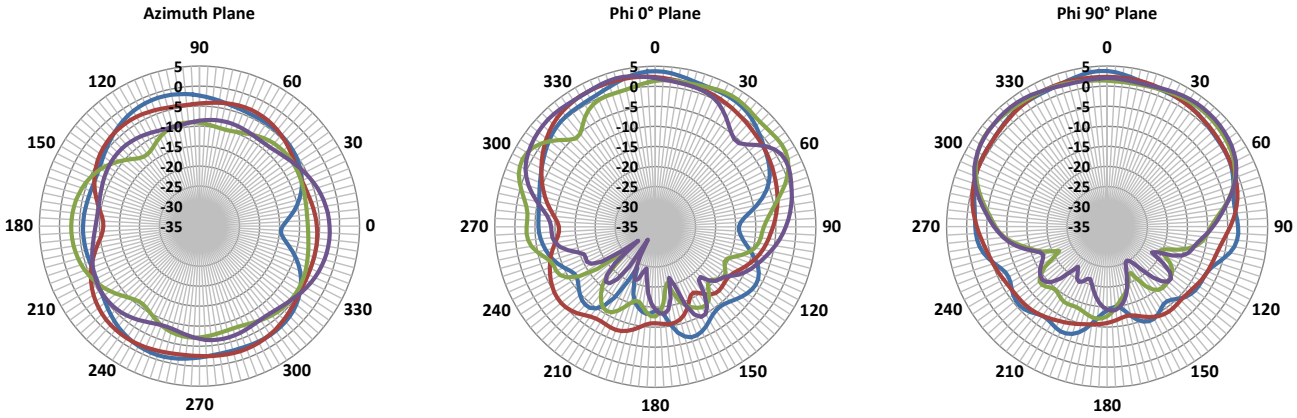
Radiation Pattern at 2100 MHz



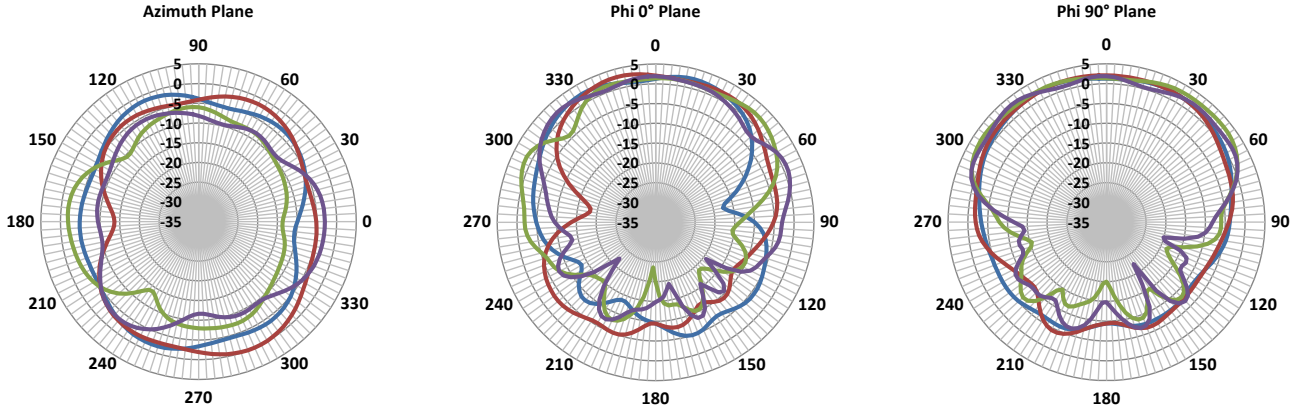
Radiation Pattern at 2200 MHz



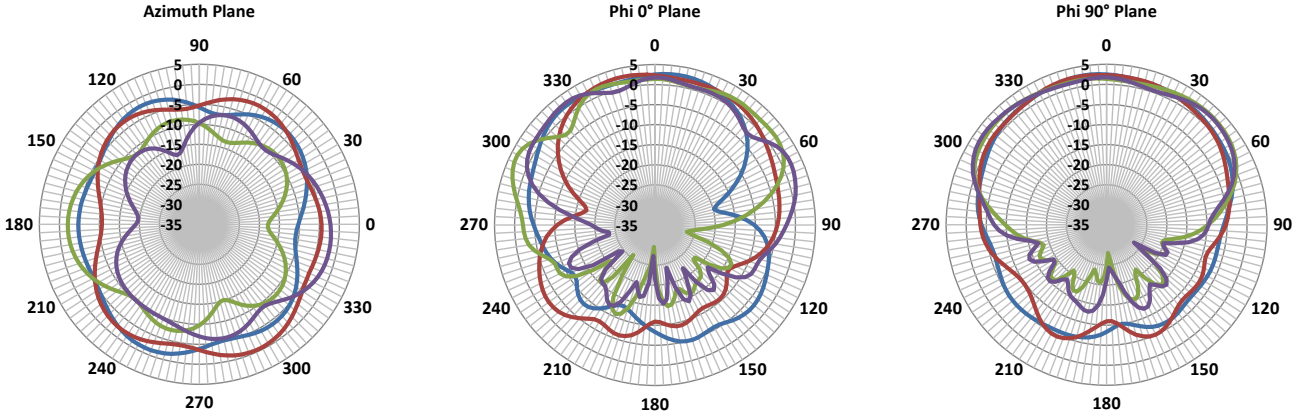
Radiation Pattern at 2300 MHz



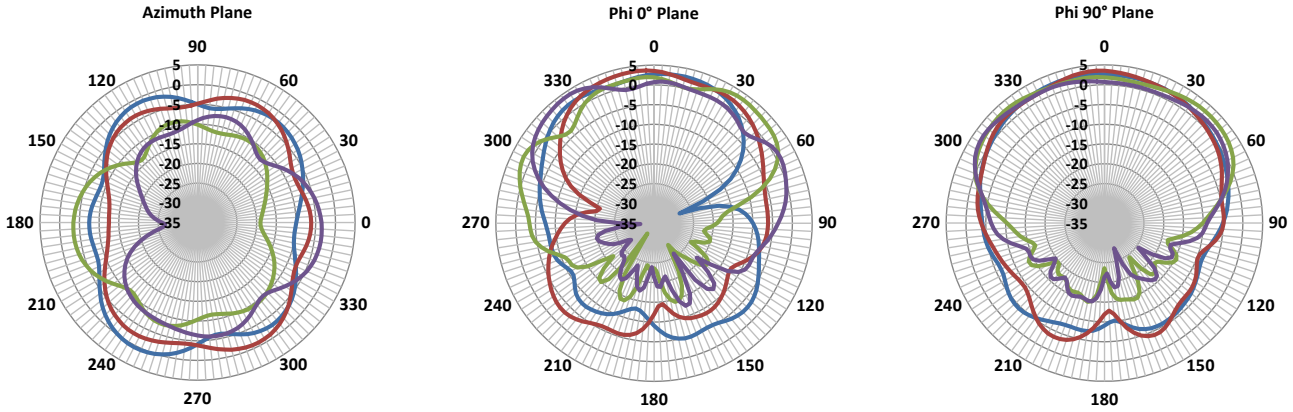
Radiation Pattern at 2500 MHz



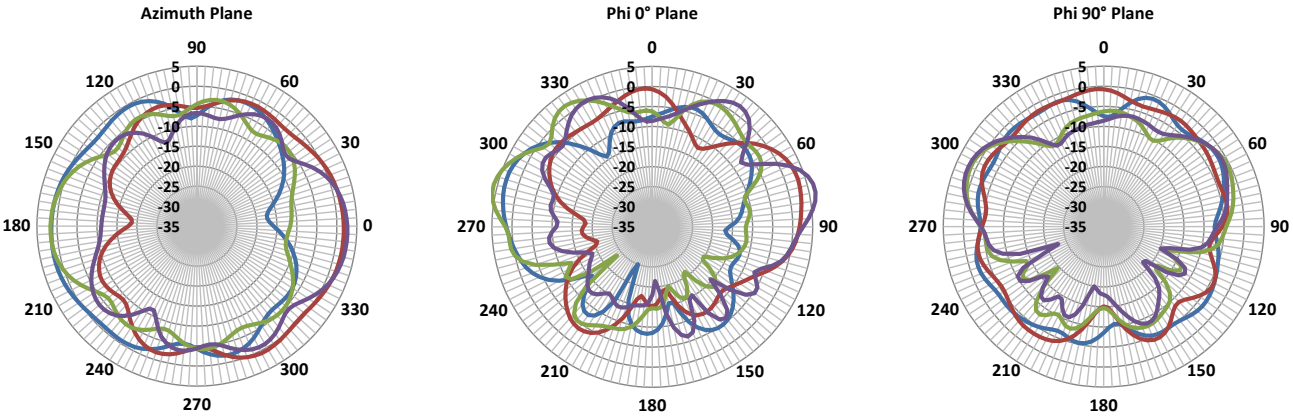
Radiation Pattern at 2600 MHz



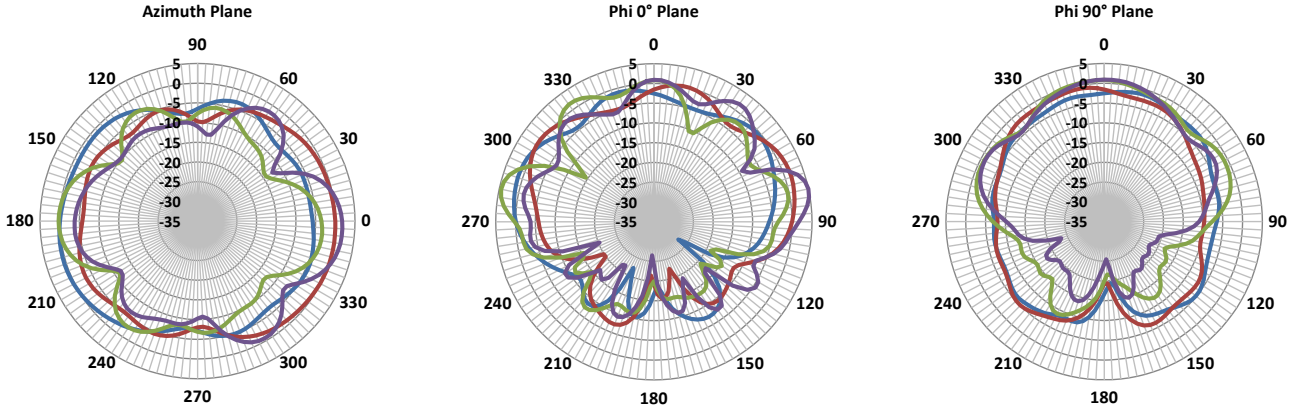
Radiation Pattern at 2690 MHz



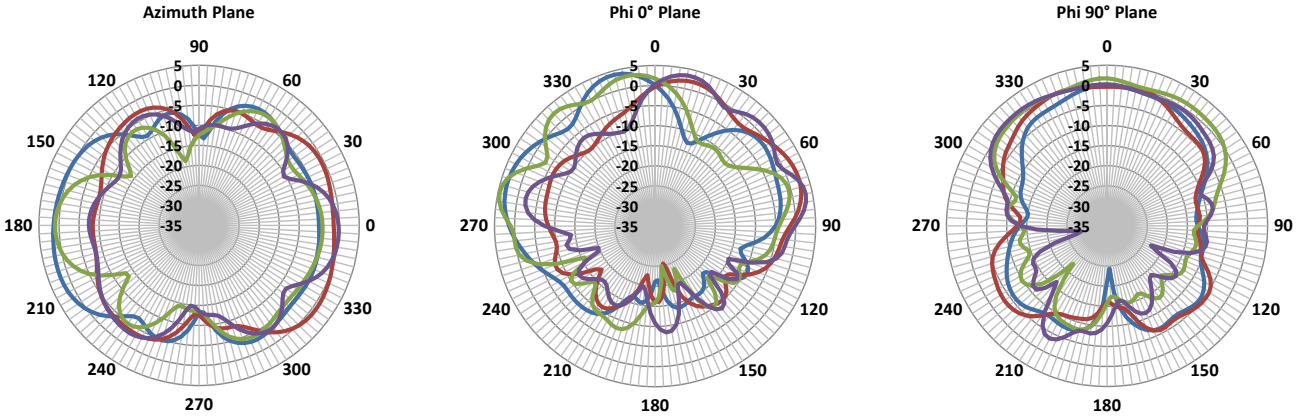
Radiation Pattern at 3300 MHz



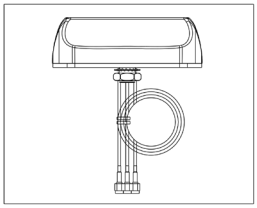
Radiation Pattern at 3500 MHz



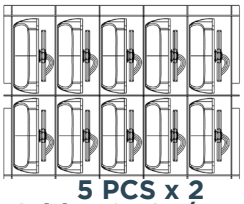
Radiation Pattern at 3800 MHz



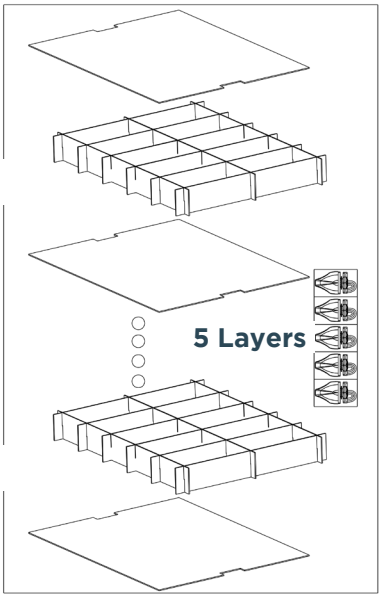
PACKING INFORMATION



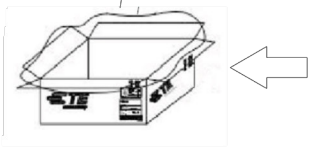
1 PCS/Bubble Pack



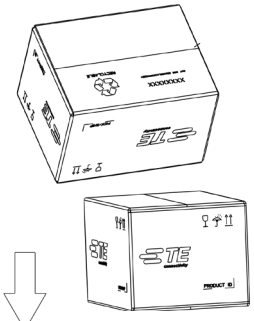
5 PCS x 2
Grid - 10PCS/Layer



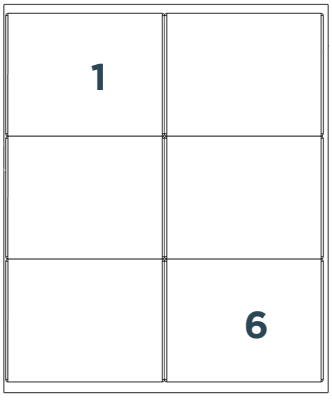
Waterproof Bag



10 PCS/Layer x 5
=50 PCS/Carton



Carton = 50 PCS



Pallet - 1200x1000mm
Carton x 6 PCS - 4 Layers
Total - 1200 PCS Antenna

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