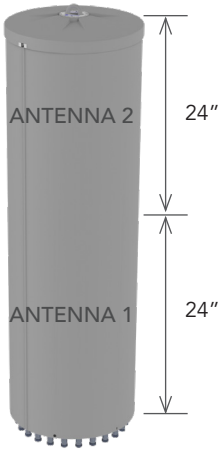
Amphenol ANTENNA SOLUTIONS

28-Port Canister Antenna

(6x) 1695-2700 | (2x) 3300-4200 | (2x) 5150-5925 MHz

SECTOR / OMNI COMBINATION | 47.4 IN | FIXED TILT

6U4MTSP1X12Fxys4



Features

- Sector & omni configuration with 28 connectors
- Dual antennas integrated under a single radome
- Ideal for multi-carrier or 4x4 MIMO deployments
- Broadband networks 1695-2700 and 3300-4200 MHz
- Easily removable lifting ring
- Improvements in gain, port isolation and VSWR
- Can be ordered with an integrated GPS unit
- This antenna meets the requirements of the U-NII

PRODUCT OVERVIEW						
	Frequency Range (MHz)	(6x) 1695-2700		(2x) 3300-4200	(2x) 5150-5925	Optional GPS BAND 1575.42 ± 10
	Array	Y1 Y2 Y3 Y4 Y5 Y6	Y7 Y8 Y9 Y10	P1 P2	O1 O2	---
	Connector	12 PORTS	8 PORTS	4 PORTS	4 PORTS	1 PORT
	Polarization	XPOL	XPOL	XPOL	XPOL	RIGHT HAND CIRCULAR
	Azimuth Beamwidth (avg)	SECTORIZED	OMNI	OMNI	OMNI	---
	Electrical Downtilt	2°, 4°, 6°		0°	0°	---
	Configuration	SECTOR & OMNI COMBINATION				---
	Maximum Continuous Power Per Port @ 50° C (122° F)	300 WATTS	300 WATTS	100 WATTS	50 WATTS	---
	Maximum Total Continuous Power at 50° C (122° F)	6600 WATTS				---
	Connector Type	(28x) 4.3-10 FEMALE CONNECTORS				(1x) N-TYPE FEMALE
	Dimensions	1205 x Ø371 mm (47.4 x Ø14.6 in)				---
	Radome Color Options	GREY, BROWN or BLACK				---

ELECTRICAL SPECIFICATIONS Sectorized — Y1 Y2 Y3 Y4 Y5 Y6

Frequency Range		MHz	(4x) 1695-2700			
Frequency Sub-Range		MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization		---	(4x) ±45°			
Gain	BASTA	dBi	12.9 ± 0.6	13.4 ± 0.3	13.6 ± 0.4	14.1 ± 0.7
	MAX	dBi	13.4	13.3	13.7	14.7
Azimuth Beamwidth (3 dB)		degrees	84.0° ± 8.2°	79.2° ± 5.5°	75.6° ± 6.4°	66.7° ± 6.5°
Elevation Beamwidth (3 dB)		degrees	23.1° ± 1.7°	21.6° ± 0.9°	20.4° ± 1.9°	16.9° ± 1.2°
Electrical Downtilt		degrees	(x) 2°, 4°, 6°			
Impedance		Ohms	50Ω			
VSWR		---	≤ 1.5:1			
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153			
Front-to-Back Ratio		dB	> 21	> 22	> 24	> 24
Upper Sidelobe Suppression		dB	> 14	> 14	> 14	> 14
Isolation	Intraband	dB	> 25			
	Interband	dB	> 28			

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

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ELECTRICAL SPECIFICATIONS Omni

■ Y7 ■ Y8 ■ Y9 ■ Y10

Frequency Range		MHz	(2x) 1695-2700			
Frequency Sub-Range		MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization		---	(2x) ±45°			
Gain	BASTA	dBi	8.3 ± 0.8	9.0 ± 0.5	9.1 ± 0.5	9.0 ± 0.9
	MAX	dBi	9.1	9.5	9.6	9.9
Azimuth Beamwidth (3 dB)		degrees	360°	360°	360°	360°
Elevation Beamwidth (3 dB)		degrees	23.1° ± 1.7°	21.6° ± 0.9°	20.4° ± 1.9°	16.9° ± 1.2°
Electrical Downtilt		degrees	(x) 2°, 4°, 6°			
Impedance		Ohms	50Ω			
VSWR		---	≤ 1.5:1			
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153			
Upper Sidelobe Suppression		dB	> 14	> 14	> 14	> 14
Isolation	Intraband	dB	> 25			
	Interband	dB	> 28			

ELECTRICAL SPECIFICATIONS

■ P1 ■ P2

Frequency Range		MHz	(2x) 3300-4200
Polarization		---	(2x) ±45°
Gain	BASTA	dBi	5.5 ± 0.6
	MAX	dBi	6.1
Azimuth Beamwidth (3 dB)		degrees	360°
Elevation Beamwidth (3 dB)		degrees	32.6 ± 4.1°
Electrical Downtilt		degrees	(y) 0°
Impedance		Ohms	50Ω
VSWR		---	≤ 1.5:1
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153
Upper Sidelobe Suppression		dB	N/A
Isolation	Intraband	dB	> 25
	Interband	dB	> 28

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ELECTRICAL SPECIFICATIONS

			■ O1 ■ O2
Frequency Range		MHz	(2x) 5150-5925
Polarization		---	(2x) ±45°
Gain	BASTA	dBi	5.1 ± 0.7
	MAX	dBi	5.8
Azimuth Beamwidth (3 dB)		degrees	360°
Elevation Beamwidth (3 dB)		degrees	22.0° ± 1.6°
Electrical Downtilt		degrees	(y) 0°
Impedance		Ohms	50Ω
VSWR		---	≤ 1.5:1
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	N/A
Upper Sidelobe Suppression		dB	> 20
Isolation	Intraband	dB	> 25
	Interband	dB	> 28
U-NII Compliant		---	Yes

INTEGRATED GPS UNIT OPTIONAL

Frequency Range	1575.42 MHz ± 10 MHz
Polarization	Right Hand Circular
Nominal Gain	3 dBic at 90°; -2 dBic at 20°
Current Draw	22 mA @ 5V
Out-of-Band Rejection	> 55 dB at 1559 MHz; > 60 dB at 1625 MHz
Amplifier Gain	28 dB ± 3 dB
Nominal Impedance	50 ohm
Noise Figure	3.9 dB
DC Voltage	2.7-5.5 VDC
VSWR	< 2.0:1
Connector	N-Type Female

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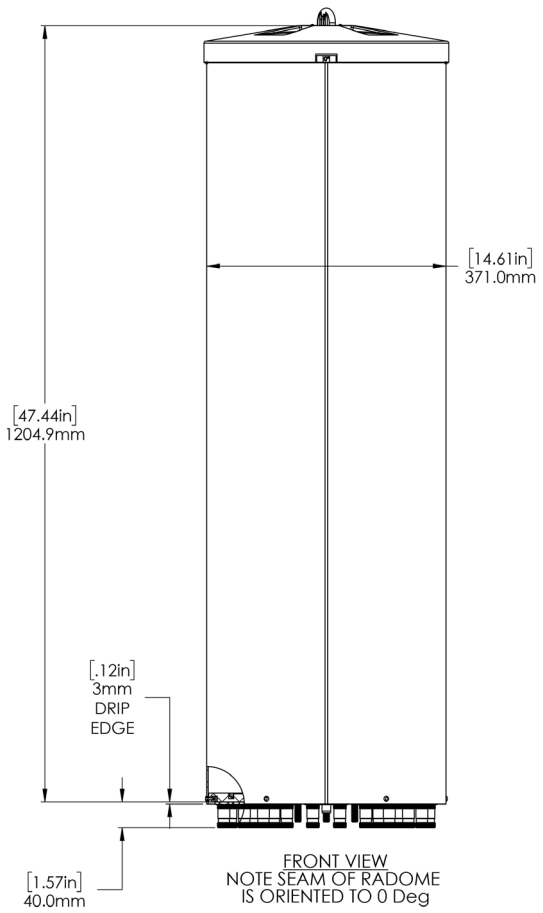
MECHANICAL SPECIFICATIONS

Height		mm (in)	1205 (47.4)
Diameter		mm (in)	371 (14.6)
Net Weight - Antenna Only		kg (lbs)	20 (44)
Windload	Calculation	km/h (mph)	160 (100)
	Frontal	N (lbf)	391 (88)
Survival Wind Speed		km/h (mph)	241 (150)
Wind Area		m^2 (ft^2)	0.47 (5.0)
Volume	Total	m^3 (ft^3)	0.13 (4.7)
	Each Antenna	m^3 (ft^3)	0.065 (2.33)
Connector	Type & Quantity	---	(28x) 4.3-10 Female; (1x) N-Type Female for optional GPS unit
	Position	---	Bottom
Radome Color		---	Grey (Pantone 420 C) Brown (Pantone 476 C) Black (RAL 9011)
Lightning Protection (Grounding Type)		---	Direct Ground



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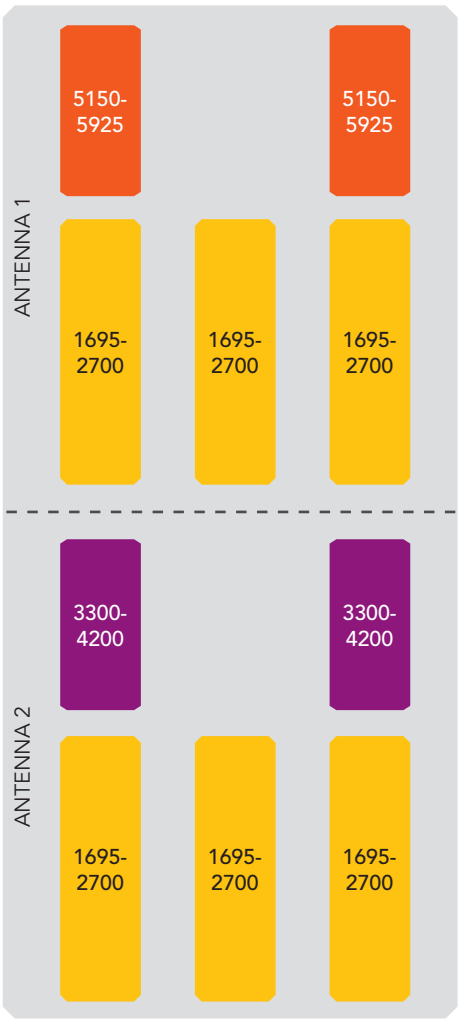
ARRAY LAYOUT Topology

FREQUENCY	ARRAY	CONNECTOR	CONNECTOR TYPE
1695-2700 MHz	Y1	1-2	(2x) 4.3-10 Female
1695-2700 MHz	Y2	3-4	(2x) 4.3-10 Female
1695-2700 MHz	Y3	5-6	(2x) 4.3-10 Female
1695-2700 MHz	Y4	7-8	(2x) 4.3-10 Female
1695-2700 MHz	Y5	9-10	(2x) 4.3-10 Female
1695-2700 MHz	Y6	11-12	(2x) 4.3-10 Female
1695-2700 MHz	Y7	17-18	(2x) 4.3-10 Female
1695-2700 MHz	Y8	19-20	(2x) 4.3-10 Female
1695-2700 MHz	Y9	21-22	(2x) 4.3-10 Female
1695-2700 MHz	Y10	23-24	(2x) 4.3-10 Female
3550-3700 MHz	P1	13-14	(2x) 4.3-10 Female
3550-3700 MHz	P2	25-26	(2x) 4.3-10 Female
5150-5925 MHz	O1	15-16	(2x) 4.3-10 Female
5150-5925 MHz	O2	27-28	(2x) 4.3-10 Female
Optional GPS BAND 1575.42 MHz	---		(1x) N-Type Female



The illustration is not shown to scale.

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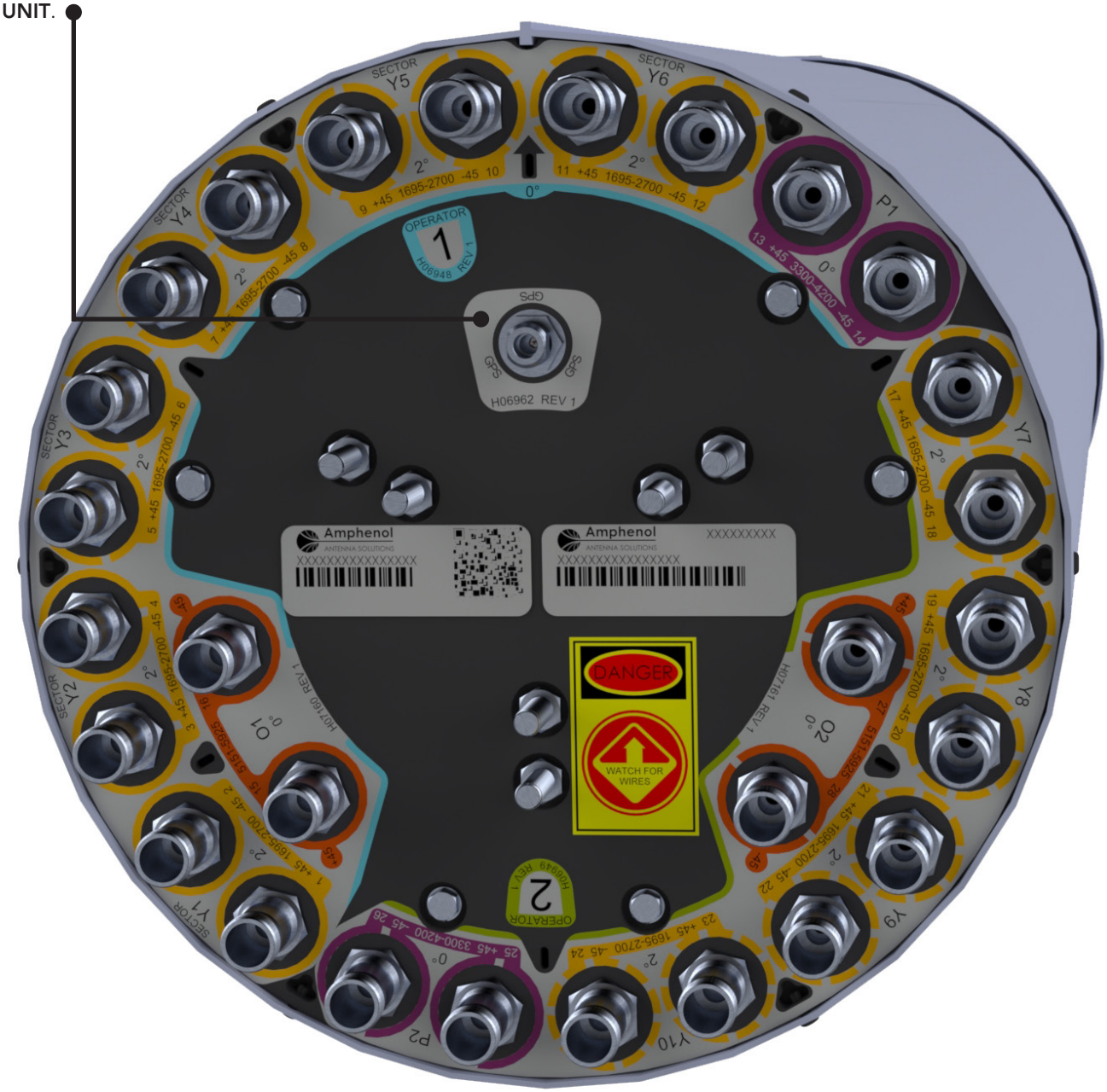
BOTTOM VIEW - LABELING

Image shows the N-Type Connector for the optional **INTEGRATED GPS UNIT**.



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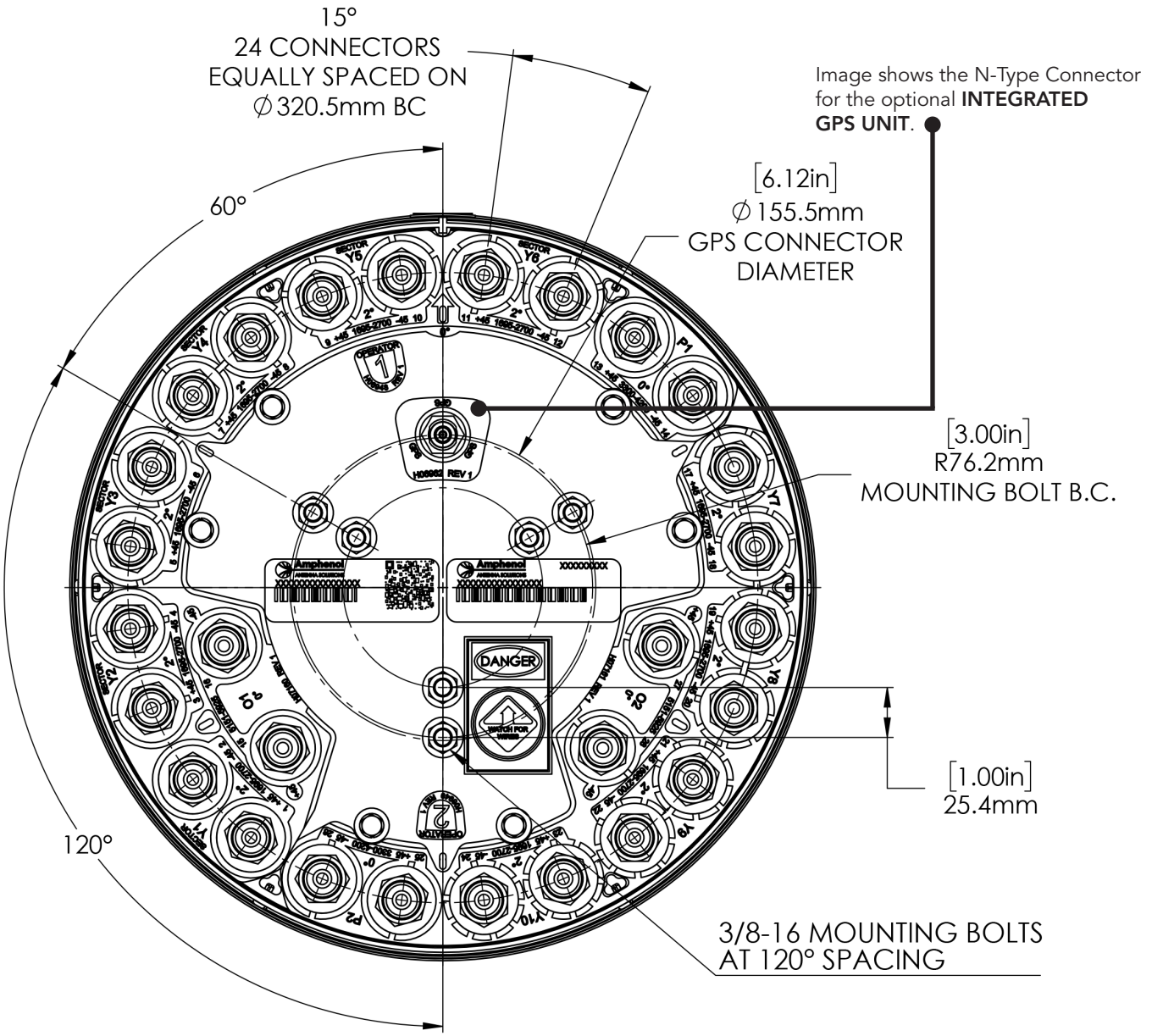
BOTTOM VIEW - CONNECTOR DIAGRAM



INSTALLATION Please read all installation notes before installing this product.

⚠	Always attach the antenna using all mounting points.
	Do not install the antenna with the connectors facing upwards.

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MOUNTING KITS Select from the following mounting options when ordering. Mounting kits for canister antennas are ordered as a separate line item.

MODEL NUMBER		DESCRIPTION
CWT-MKS-SIDE		SIDE MOUNTING BRACKET KIT FOR CANISTER ANTENNA
CWT-MKS-TOP		TOP MOUNTING BRACKET KIT FOR CANISTER ANTENNA
WB3X-MKS-01		UTILITY POLE MOUNTING BRACKET KIT FOR CANISTER ANTENNA
CWT-MKS-BASE-xx		WIDE DIAMETER POLE TOP MOUNTING BRACKET KIT FOR CANISTER ANTENNA. AVAILABLE IN BROWN, BLACK AND GREY TO MATCH ANTENNA RADOME AND/OR MOUNTING STRUCTURE.

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HOW TO READ THE MODEL NUMBER Each letter and number has meaning.

NUMBER OF BANDS & OPERATING FREQUENCY			PATTERN TYPE	AZIMUTH BMWDTH	POLARIZATION	LENGTH	TILT TYPE	TILT OPTIONS	CONNECTOR TYPE	VARIATION	RADOME COLOR OPTIONS	GPS
6U	4M		T	SP1	X	12	F	xy	s	4	BK BR	-GPS
(6x) 1695-2700	(2x) 3300-4200	(2x) 5150-5925	Tri-Sector	Sector and Pseudo Omni Combination	XPOL	1.2 meters	Fixed Tilt	These letters are placeholders for fixed tilt options. Refer to Electrical Specifications for available tilt options.	4.3-10 Connector	4th generation enhanced mechanical package	BK indicates a Black radome. BR indicates a Brown radome. The default radome color is Grey. No letters are required for a Grey radome.	Indicates an integrated GPS unit

ORDERING OPTIONS Select from the following ordering options

SELECT RADOME COLOR	SELECT DEGREE OF ELECTRICAL DOWNTILT FOR EACH BAND			SELECT ANTENNA TYPE	
	1695-2700 MHz	3300-4200 MHz	5150-5925 MHz	WITHOUT GPS UNIT	WITH GPS UNIT
Grey Pantone 420 C	2°	0°	0°	6U4MTSP1X12F20s4	6U4MTSP1X12F20s4-GPS
	4°	0°	0°	6U4MTSP1X12F40s4	6U4MTSP1X12F40s4-GPS
	6°	0°	0°	6U4MTSP1X12F60s4	6U4MTSP1X12F60s4-GPS
	Y1-Y6=6°; Y7-Y10=2°	0°	0°	6U4MTSP1X12FAAs4	6U4MTSP1X12FAAs4-GPS
	Y1-Y6=4°; Y7-Y10=2°	0°	0°	6U4MTSP1X12FBBs4	6U4MTSP1X12FBBs4-GPS
	Y1-Y6=6°; Y7-Y10=4°	0°	0°	6U4MTSP1X12FCCs4	6U4MTSP1X12FCCs4-GPS
Brown Pantone 476 C	2°	0°	0°	6U4MTSP1X12F20s4BR	6U4MTSP1X12F20s4BR-GPS
	4°	0°	0°	6U4MTSP1X12F40s4BR	6U4MTSP1X12F40s4BR-GPS
	6°	0°	0°	6U4MTSP1X12F60s4BR	6U4MTSP1X12F60s4BR-GPS
	Y1-Y6=6°; Y7-Y10=2°	0°	0°	6U4MTSP1X12FAAs4BR	6U4MTSP1X12FAAs4BR-GPS
	Y1-Y6=4°; Y7-Y10=2°	0°	0°	6U4MTSP1X12FBBs4BR	6U4MTSP1X12FBBs4BR-GPS
	Y1-Y6=6°; Y7-Y10=4°	0°	0°	6U4MTSP1X12FCCs4BR	6U4MTSP1X12FCCs4BR-GPS
Black RAL 9011	2°	0°	0°	6U4MTSP1X12F20s4BK	6U4MTSP1X12F20s4BK-GPS
	4°	0°	0°	6U4MTSP1X12F40s4BK	6U4MTSP1X12F40s4BK-GPS
	6°	0°	0°	6U4MTSP1X12F60s4BK	6U4MTSP1X12F60s4BK-GPS
	Y1-Y6=6°; Y7-Y10=2°	0°	0°	6U4MTSP1X12FAAs4BK	6U4MTSP1X12FAAs4BK-GPS
	Y1-Y6=4°; Y7-Y10=2°	0°	0°	6U4MTSP1X12FBBs4BK	6U4MTSP1X12FBBs4BK-GPS
	Y1-Y6=6°; Y7-Y10=4°	0°	0°	6U4MTSP1X12FCCs4BK	6U4MTSP1X12FCCs4BK-GPS

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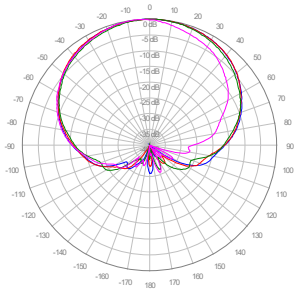
6U4MTSP1X12Fxys4

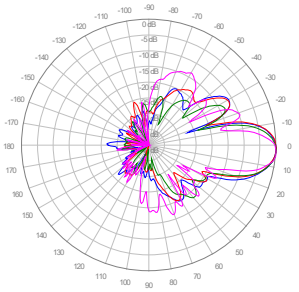
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y1, 2° TILT

+45°

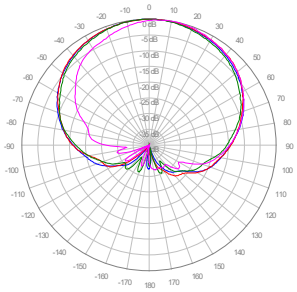


Azimuth



Elevation

-45°



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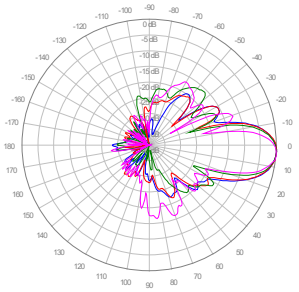
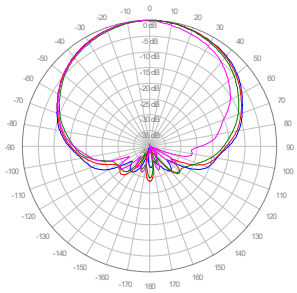


Elevation

Y2, 2° TILT

+45°



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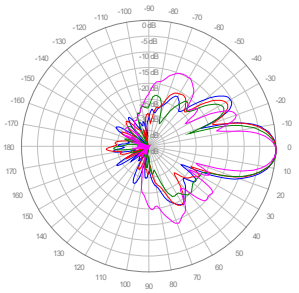
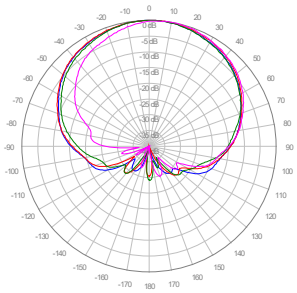


Elevation

-45°



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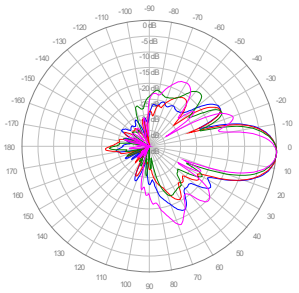
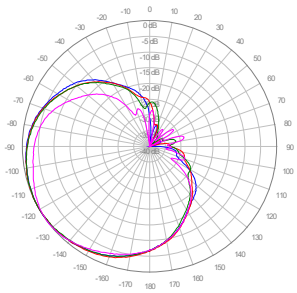


Elevation

Y3, 2° TILT

+45°



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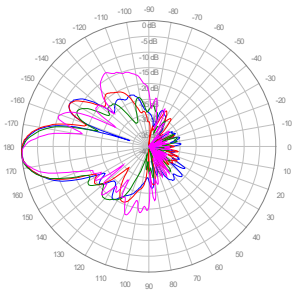
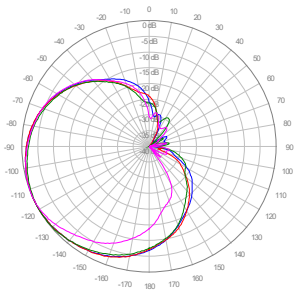


Elevation

-45°



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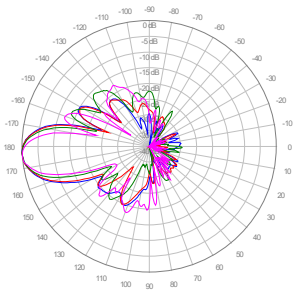
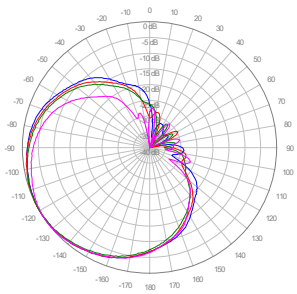


Elevation

Y4, 2° TILT

+45°



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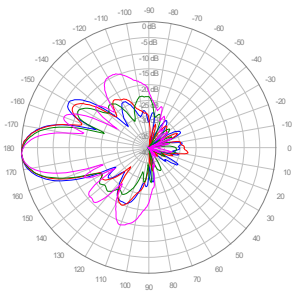
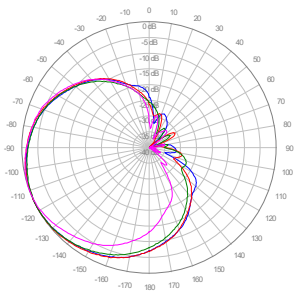


Elevation

-45°



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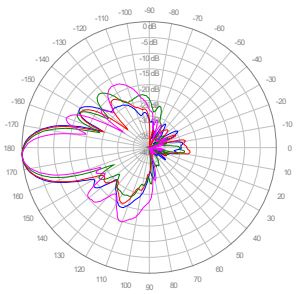


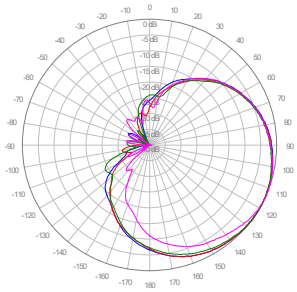
Elevation

6U4MTSP1X12Fxys4

1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y5, 2° TILT

+45°



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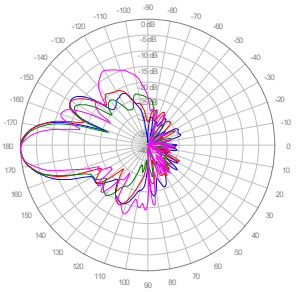
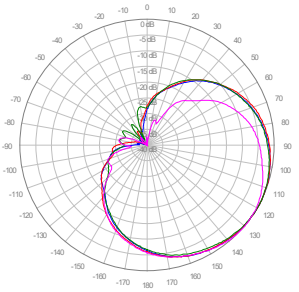


Elevation

-45°



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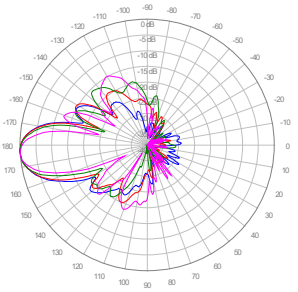
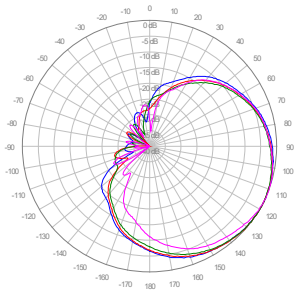


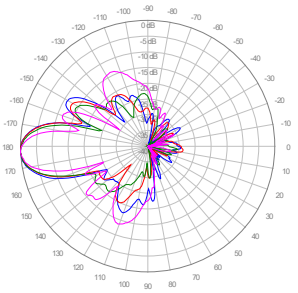
Elevation

Y6, 2° TILT

+45°

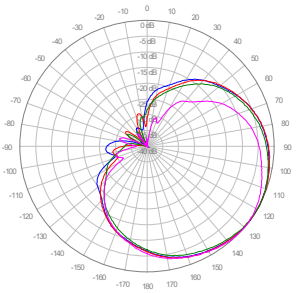


Azimuth

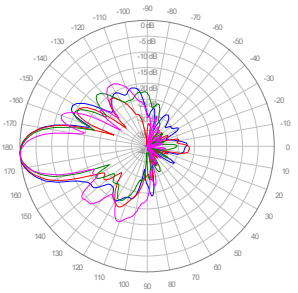


Elevation

-45°



Azimuth



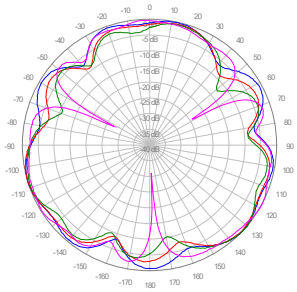
Elevation

6U4MTSP1X12Fxys4

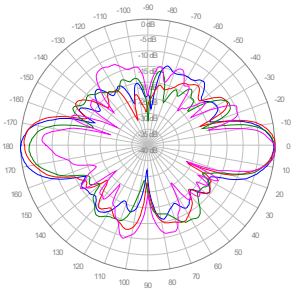
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y7, 2° TILT

+45°

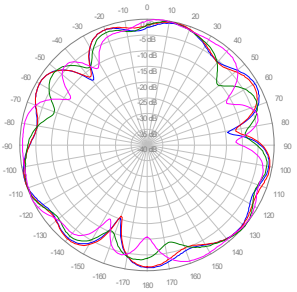


Azimuth

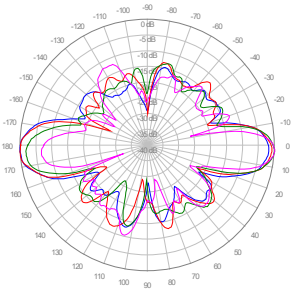


Elevation

-45°



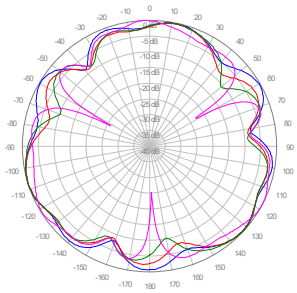
Azimuth



Elevation

Y8, 2° TILT

+45°



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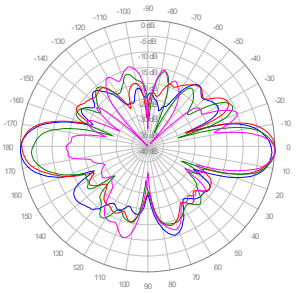
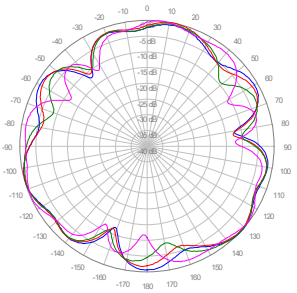
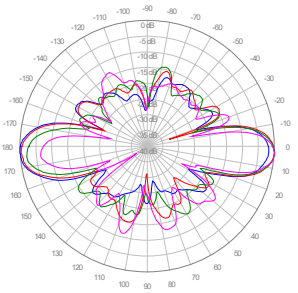


Elevation

-45°



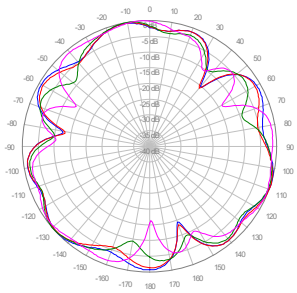
Azimuth



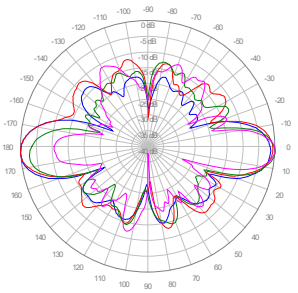
Elevation

Y9, 2° TILT

+45°

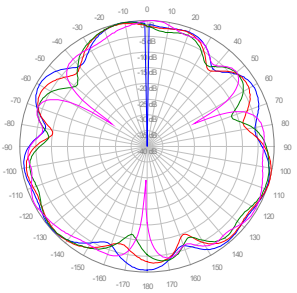


Azimuth

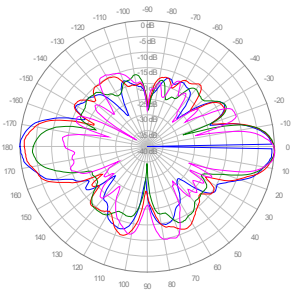


Elevation

-45°



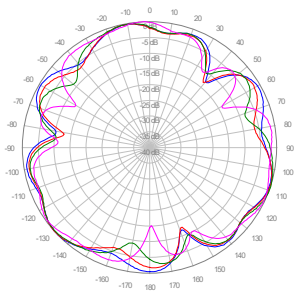
Azimuth



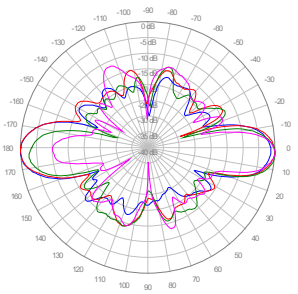
Elevation

Y10, 2° TILT

+45°

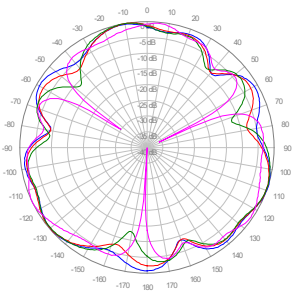


Azimuth

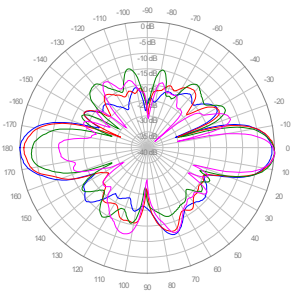


Elevation

-45°



Azimuth



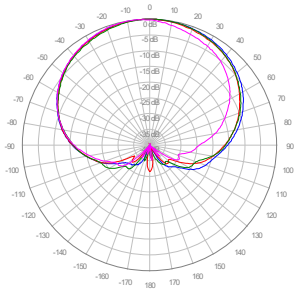
Elevation

6U4MTSP1X12Fxys4

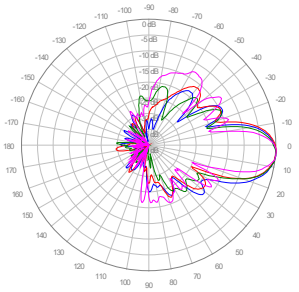
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y1, 4° TILT

+45°

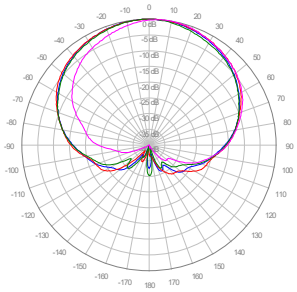


Azimuth

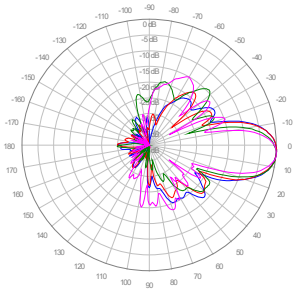


Elevation

-45°



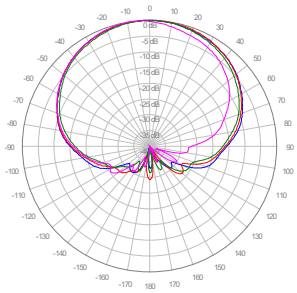
Azimuth



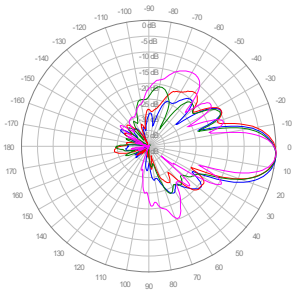
Elevation

Y2, 4° TILT

+45°

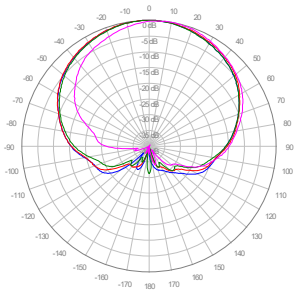


Azimuth

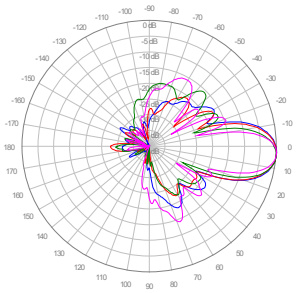


Elevation

-45°



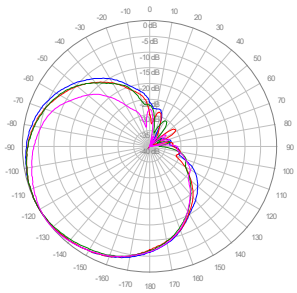
Azimuth



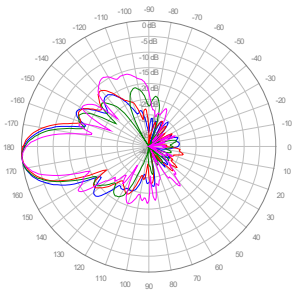
Elevation

Y3, 4° TILT

+45°

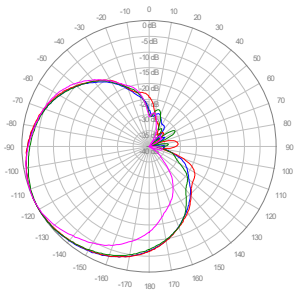


Azimuth

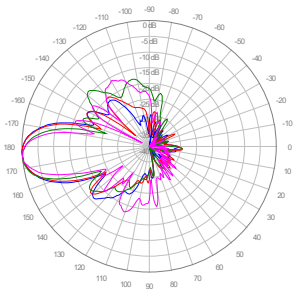


Elevation

-45°



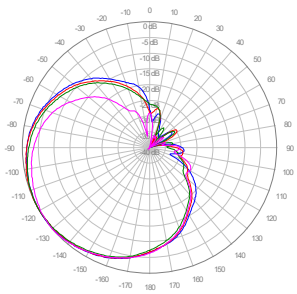
Azimuth



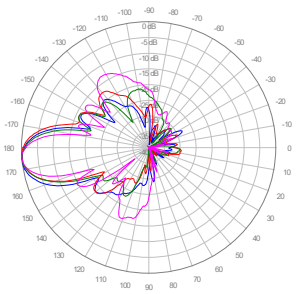
Elevation

Y4, 4° TILT

+45°

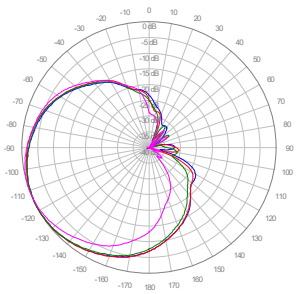


Azimuth

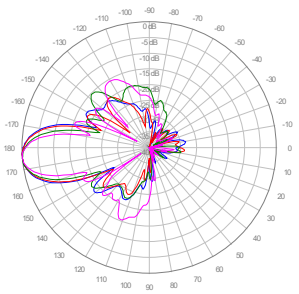


Elevation

-45°



Azimuth



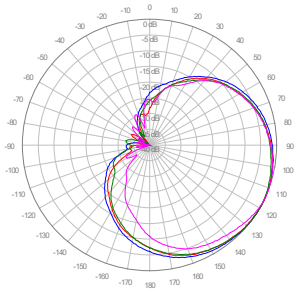
Elevation

6U4MTSP1X12Fxys4

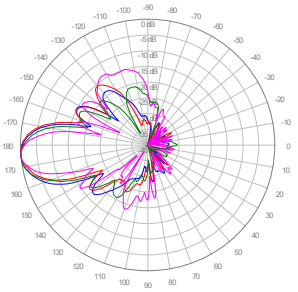
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y5, 4° TILT

+45°

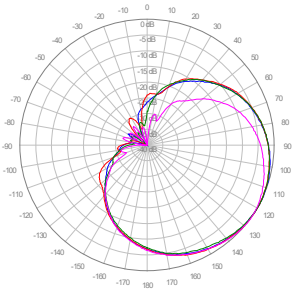


Azimuth

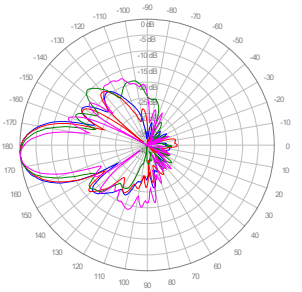


Elevation

-45°



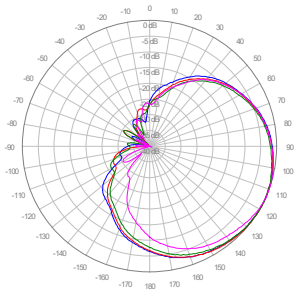
Azimuth



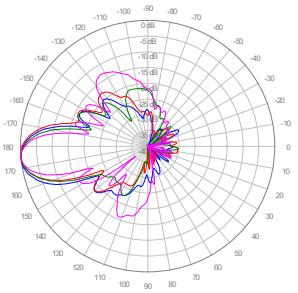
Elevation

Y6, 4° TILT

+45°

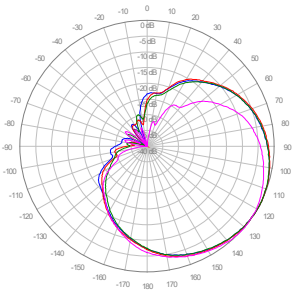


Azimuth

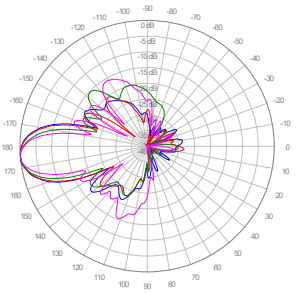


Elevation

-45°



Azimuth



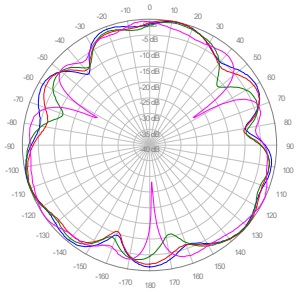
Elevation

6U4MTSP1X12Fxys4

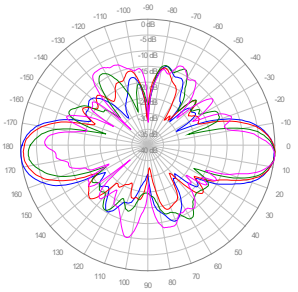
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y7, 4° TILT

+45°

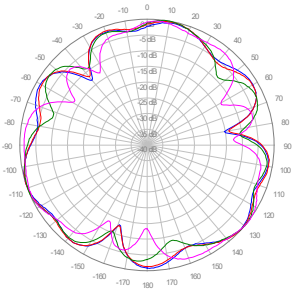


Azimuth

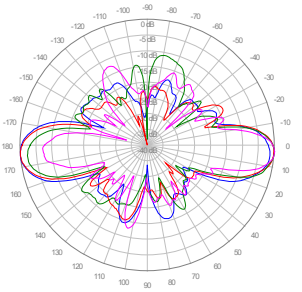


Elevation

-45°



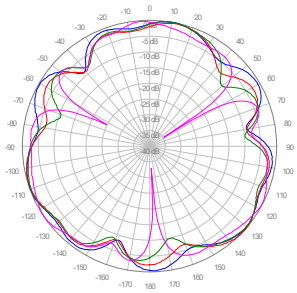
Azimuth



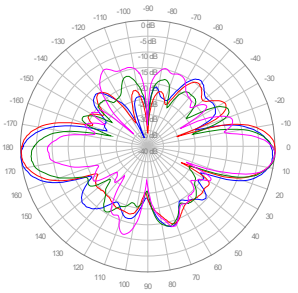
Elevation

Y8, 4° TILT

+45°

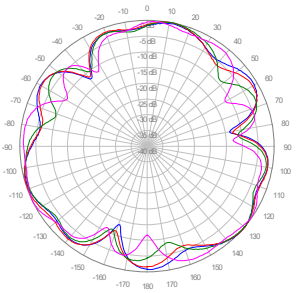


Azimuth

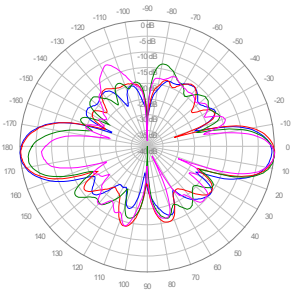


Elevation

-45°



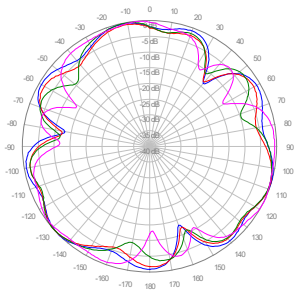
Azimuth



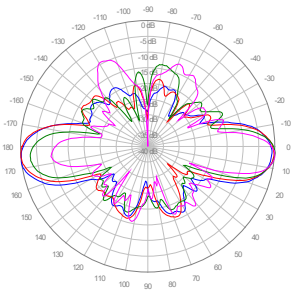
Elevation

Y9, 4° TILT

+45°

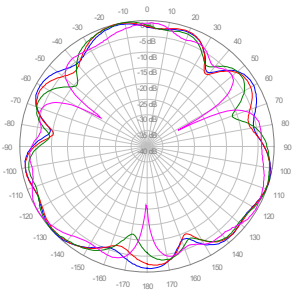


Azimuth

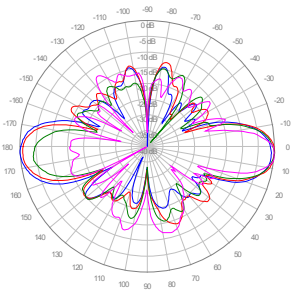


Elevation

-45°



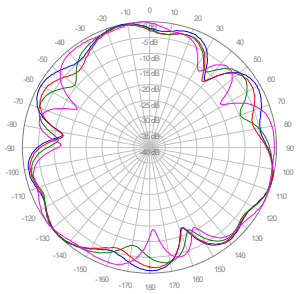
Azimuth



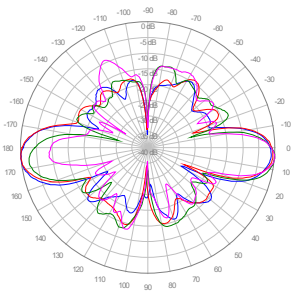
Elevation

Y10, 4° TILT

+45°

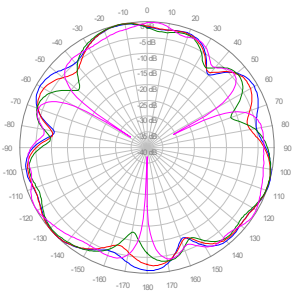


Azimuth

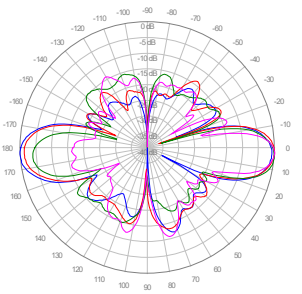


Elevation

-45°



Azimuth



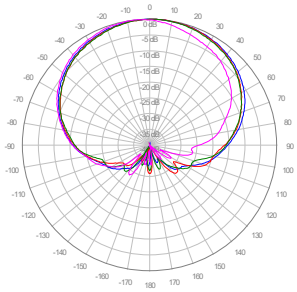
Elevation

6U4MTSP1X12Fxys4

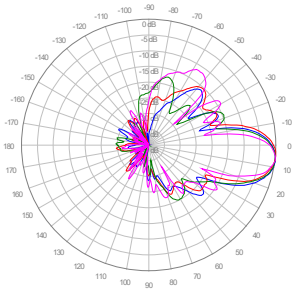
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y1, 6° TILT

+45°

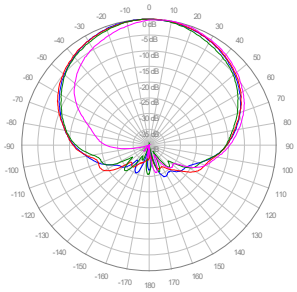


Azimuth

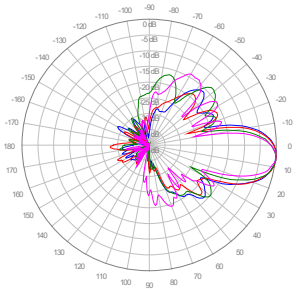


Elevation

-45°



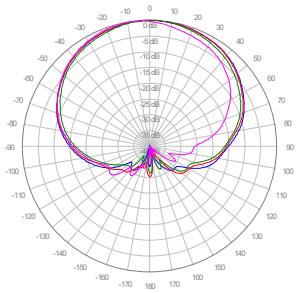
Azimuth



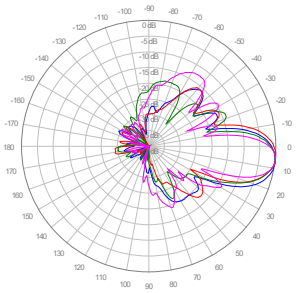
Elevation

Y2, 6° TILT

+45°

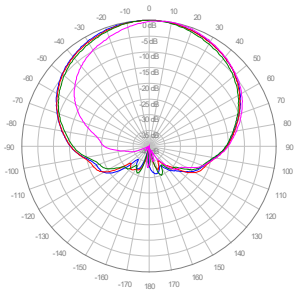


Azimuth

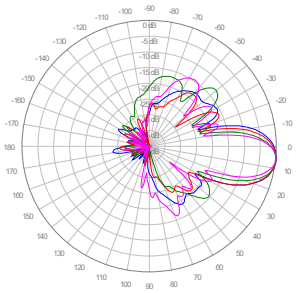


Elevation

-45°



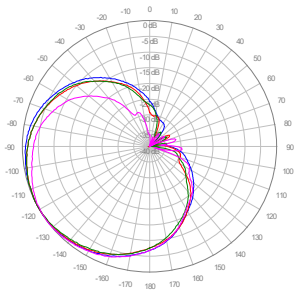
Azimuth



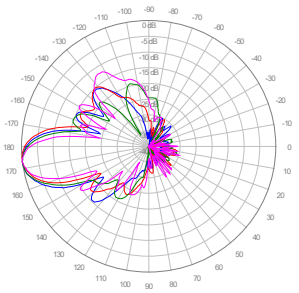
Elevation

Y3, 6° TILT

+45°

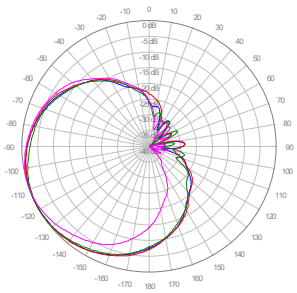


Azimuth

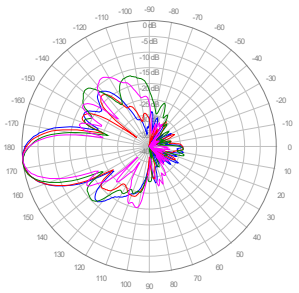


Elevation

-45°



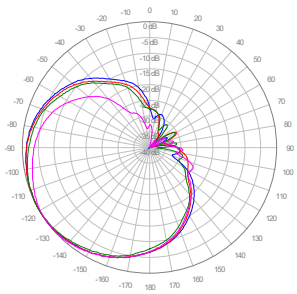
Azimuth



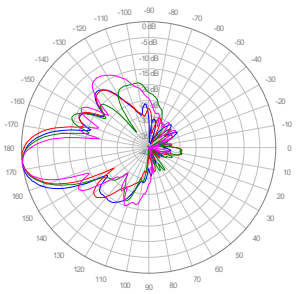
Elevation

Y4, 6° TILT

+45°

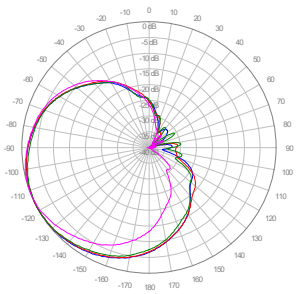


Azimuth

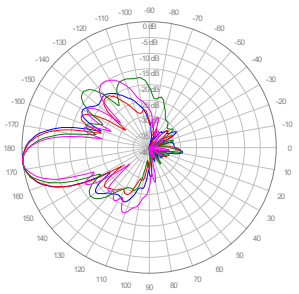


Elevation

-45°



Azimuth



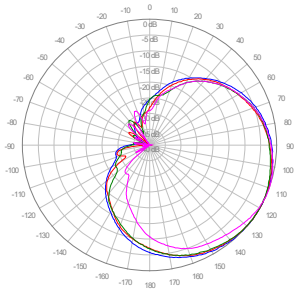
Elevation

6U4MTSP1X12Fxys4

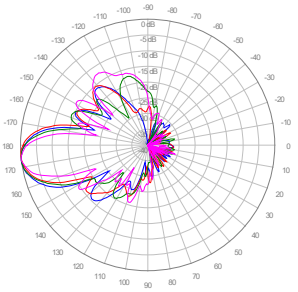
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y5, 6° TILT

+45°

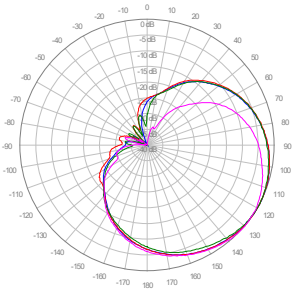


Azimuth

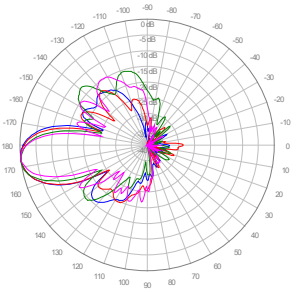


Elevation

-45°



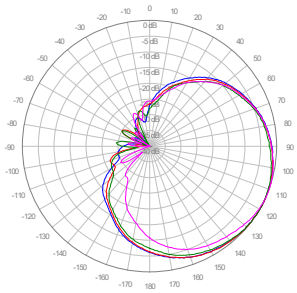
Azimuth



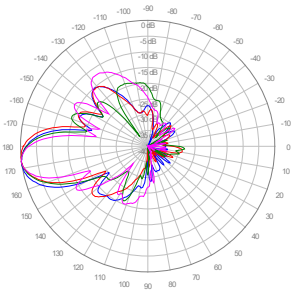
Elevation

Y6, 6° TILT

+45°

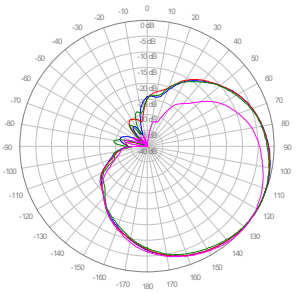


Azimuth

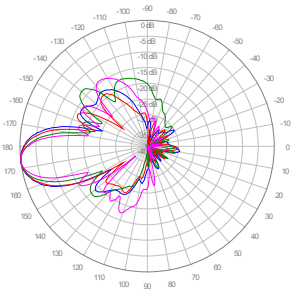


Elevation

-45°



Azimuth



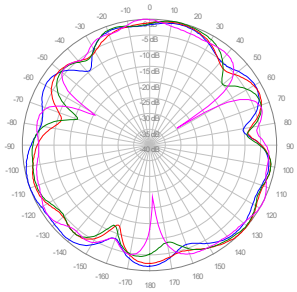
Elevation

6U4MTSP1X12Fxys4

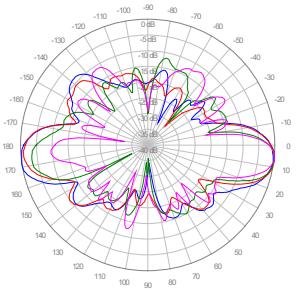
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y7, 6° TILT

+45°

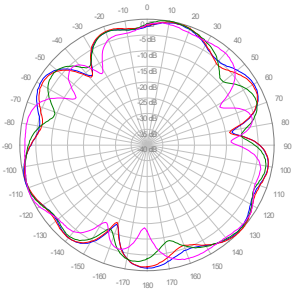


Azimuth

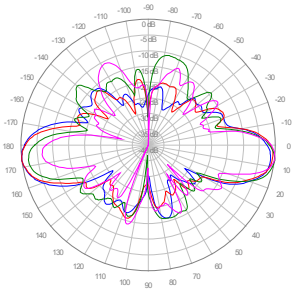


Elevation

-45°



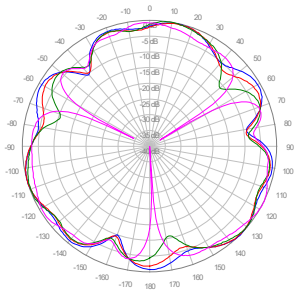
Azimuth



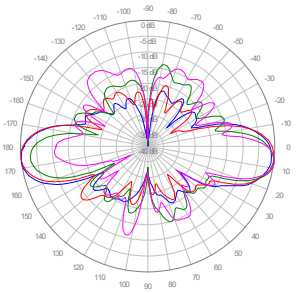
Elevation

Y8, 6° TILT

+45°

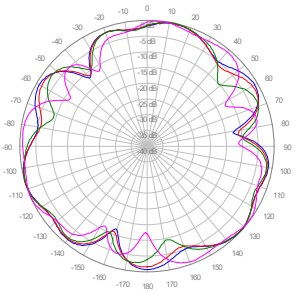


Azimuth

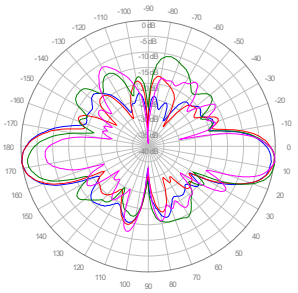


Elevation

-45°



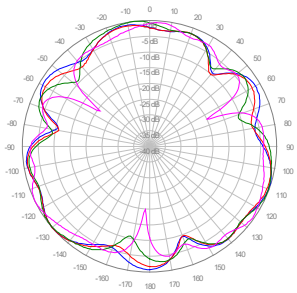
Azimuth



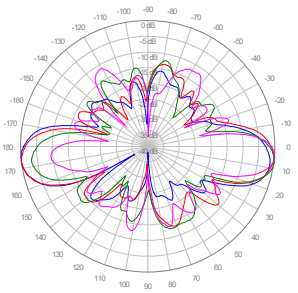
Elevation

Y9, 6° TILT

+45°

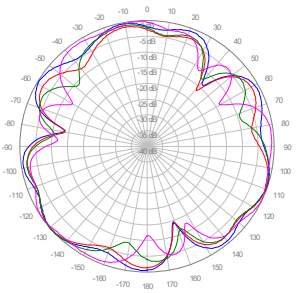


Azimuth

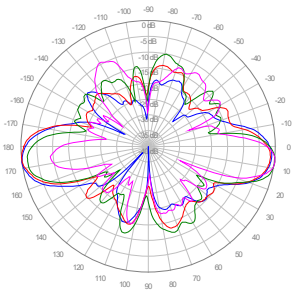


Elevation

-45°



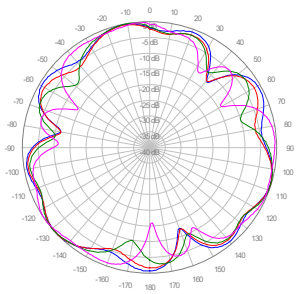
Azimuth



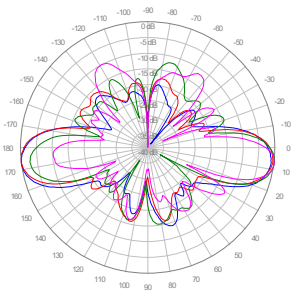
Elevation

Y10, 6° TILT

+45°

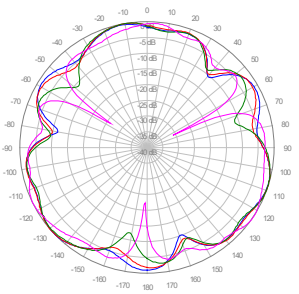


Azimuth

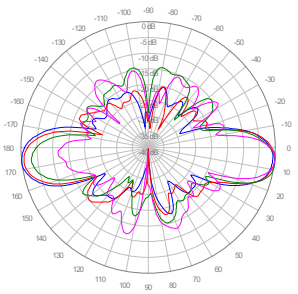


Elevation

-45°



Azimuth

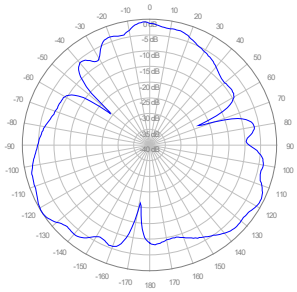


Elevation

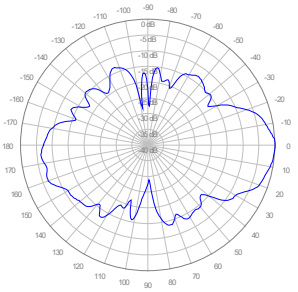
6U4MTSP1X12Fxys4

P1, 0° TILT

+45°

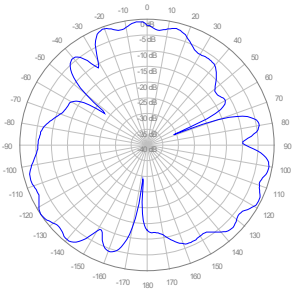


Azimuth (3600 MHz)

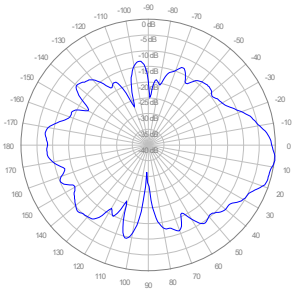


Elevation (3600 MHz)

-45°



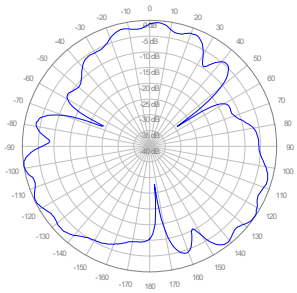
Azimuth (3600 MHz)



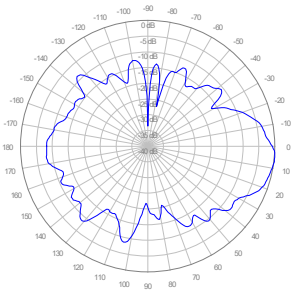
Elevation (3600 MHz)

P2, 0° TILT

+45°

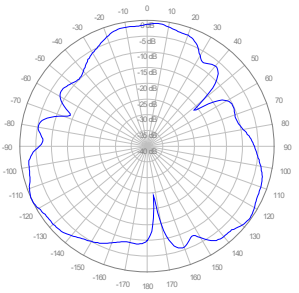


Azimuth (3600 MHz)

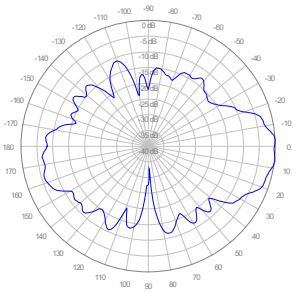


Elevation (3600 MHz)

-45°



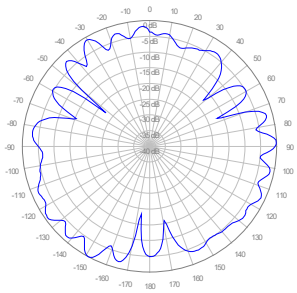
Azimuth (3600 MHz)



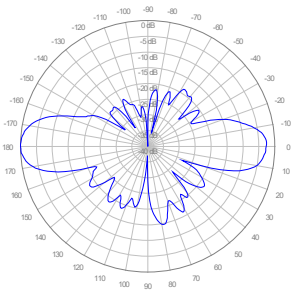
Elevation (3600 MHz)

O1, 0° TILT

+45°

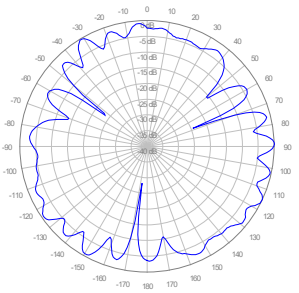


Azimuth (5600 MHz)

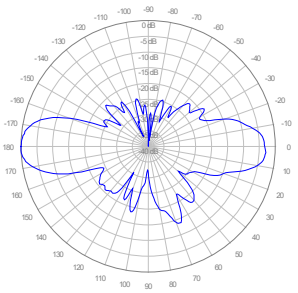


Elevation (5600 MHz)

-45°



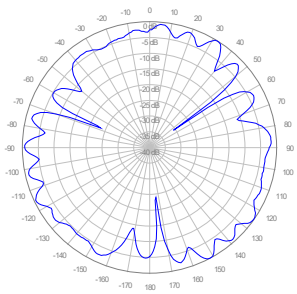
Azimuth (5600 MHz)



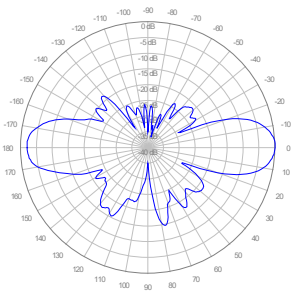
Elevation (5600 MHz)

O2, 0° TILT

+45°

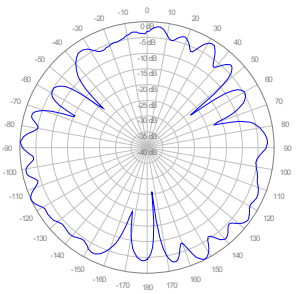


Azimuth (5600 MHz)

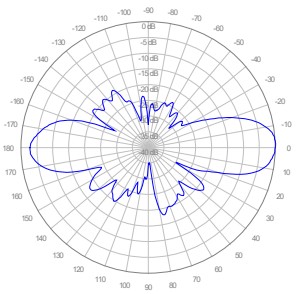


Elevation (5600 MHz)

-45°



Azimuth (5600 MHz)



Elevation (5600 MHz)