

Barracuda UHF VFH-69383B22JU

6-Port Vehicular MIMO Antenna 380-520 MHz and 698-960/1690-3800 MHz and 2400-2500/4900-6000 MHz

The Barracuda UHF VFH69383B22JU multiport/multiband antenna provides an excellent solution for Public Safety, Transportation and Aftermarket Fleet applications. Configured for UHF band operation, two-port MIMO operation over the 3G/4G/ISM/CBRS bands and two-port MIMO operation over the low/high frequency Wi-Fi bands. An additional sixth port provides an active antenna for enabling GNSS global navigation services.

FEATURES AND BENEFITS

- One single-hole mount/fixing reduces vehicle damage and the cost of installation
- Attractive IP67 low profile aerodynamic housing
- Multiband/MIMO operation with GNSS navigation

APPLICATIONS

- FirstNet/Public Safety
- In-building wireless
- Neutral host providers
- Cellular and LTE
- Small cells

ELECTRICAL SPECIFICATIONS							
Antenna Model	VFH69383B22JU-518J						
Number of Ports	6						
Port Configuration	1x- UHF	2x- 3G/4G/ISM/CBRS				2x- Wi-Fi	
Operating Frequency (MHz)	380- 520	698-806	824-894	880-960	1690-3800	2400-2500	4900-6000
Peak Gain* - Avg (dBi)	1.1	-0.2	0.5	0.9	3.7	2.6	6.8
Peak Gain* - Max (dBi)	2.8	1.3	2.0	2.1	7.6	3.9	7.7
VSWR - Avg	1.6:1	2.0:1	1.9:1	2.0:1	1.5:1	1.2:1	1.2:1
VSWR - Max	2.5	2.4	2.5	2.5	2.0	2.0	2.0
Max Power - Ambient 25°C (W)	60	30				10	
Isolation LTE1 to LTE2 (dB)	-23	-11	-13	-15	-17	-23	-33
Isolation LTE1 to WIFI 1 (dB)	-38	-35	-37	-35	-14	-14	-32
Isolation LTE1 to WIFI 2 (dB)	-53	-46	-43	-43	-26	-27	-36
Isolation LTE1 to UHF (dB)	-25	-23	-26	-27	-22	-30	-38
Isolation LTE2 to WFI 1 (dB)	-50	-46	-44	-40	-28	-28	-36

Isolation LTE2 to WIFI 2 (dB)	-41	-36	-36	-34	-12	-12	-32
Isolation LTE2 to UHF (dB)	-18	-12	-15	-15	-17	-19	-37
Isolation WIFI 1 to WIFI 2 (dB)	-73	-71	-68	-65	-28	-29	-36
Isolation WIFI 1 to UHF (dB)	-50	-59	-59	-55	-32	-34	-40
Isolation WIFI 2 to UHF (dB)	-42	-44	-42	-41	-21	-21	-33
Isolation GNSS to LTE 1 (dB)	-41	-43	-53	-52	-37	-44	-48
Isolation GNSS to LTE 2 (dB)	-44	-49	-54	-48	-47	-51	-49
Isolation GNSS to WIFI 1 (dB)	-57	-55	-59	-58	-41	-41	-48
Isolation GNSS to WIFI 2 (dB)	-58	-57	-57	-57	-44	-44	-52
Isolation GNSS to UHF (dB)	-40	-55	-57	-56	-46	-54	-52
Azimuth Plane 3 dB Beamwidth	360°, Omnidirectional						
Nominal Impedance (Ohms)	50						
Polarization	Vertical						

MECHANICAL SPECIFICATIONS	
Dimensions - L x W x H - mm (inches)	179 x 63 x 48 (7.04 x 2.48 x 1.69)
Weight - kg (lbs.)	0.72 (1.6)
Cable Type and Length - cm (ft.)	LMR 100- Black pigtailed, LMR 195- Black jumper cables
Mounting	P-Mount
Radome Material	PC, UL94-V0, UV Stable
Baseplate Material	Aluminum

ENVIRONMENTAL SPECIFICATIONS	
Operating Environment	Outdoor Vehicle
Operating Temperature - °C (°F)	-30 to +70°C (-22 to +158°F)
Storage Temperature - °C (°F)	-40 to +85°C (-40 to +185°F)
Ingress Protection Rating	IP67
Material Substance Compliance	RoHS

*Measures on a 30cm (1ft) cable length and 30cm (1ft) circular ground plane

**Measured on a 30cm (1ft) circular ground plane with 518cm (17ft) of coaxial cable

GNSS ANTENNA SPECIFICATIONS			
Frequency of Operation (MHz)	1559 - 1606		
Band	BEIDOU	GPS	GLONASS
Frequency Band (MHz)	1559.052 - 1563.144	1574.42 - 1576.42	1598.0625 - 1605.89
Absolute Gain (dBi)	3	3	3
LNA Gain, Typ. @ room temp. (dBi)	26	27	26
Noise Figure @ room temp., Max (dB)	3.0	2.5	2.8
Max VSWR @ room temp.	2:1	2:1	2:1

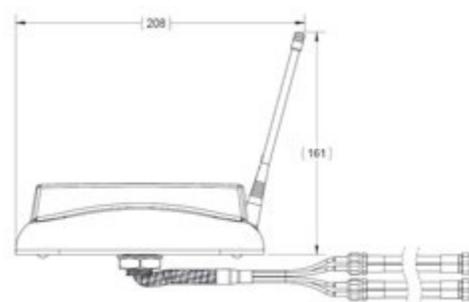
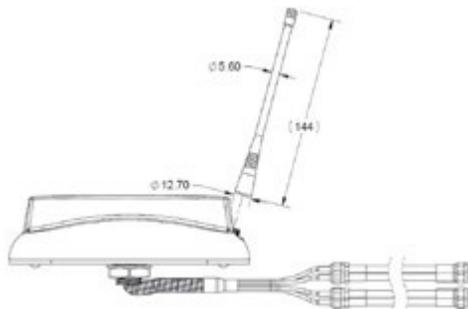
Polarization	RHCP		
Nominal Impedance (Ohms)	50		
DC Voltage (Vdc)	3.3		
Operating Supply Voltage (Vdc)	2.5 - 7.0		
Current Consumption, Max @ room temp mA)	8.5 ± 3 @ 3.0V		
Out-of-band Signal Rejection Min @ room temp (dBc)	80 (@1-1525 MHz)	80 (@1428-2700 MHz)	70 (@4900-5800 MHz)
Input Max Power (dBm)	-10		
Cable Type	RG174, Black		

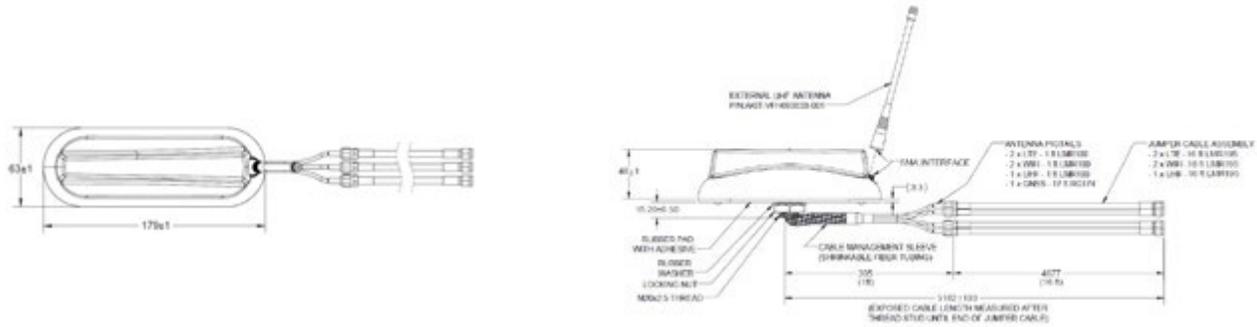
CONFIGURATION

PART NUMBER	CABLE LENGTH			CONNECTORS			COLOR
	PIGTAIL	JUMPER	LTE/CELL	WIFI	UHF	GNSS	
VFH69383B22JU-518J	0.3 m (1 ft.)	4.9 m (16 ft)	SMA- male	SMA- male	SMA- male	SMA- male	Black
VFH69383B22JU-518M	0.3 m (1 ft.)	4.9 m (16 ft)	SMA- male	SMA- male	QMA- male	SMA- male	Black

PACKAGING INFORMATION

PACKAGED DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	4	140	196
Height - mm (in.)	130 (5.12)	235 (9.25)	1335 (52.56)	1813 (71.38)
Length - mm (in.)	222 (8.74)	543 (21.4)	1200 (47.24)	1200 (47.24)
Width - mm (in.)	222 (8.74)	232 (9.13)	800 (31.5)	800 (31.5)
Shipping Weight - kg (lb.)	1.56 (3.44)	6.69 (14.7)	247 (544)	340 (750)



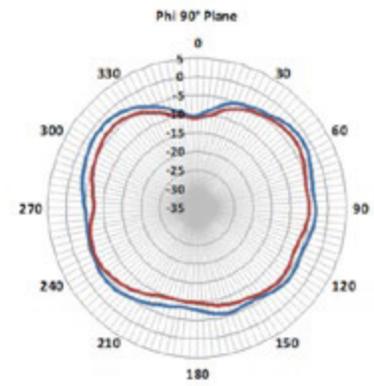
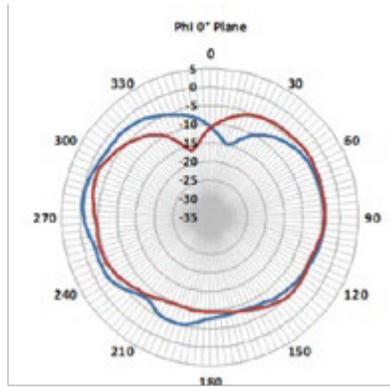
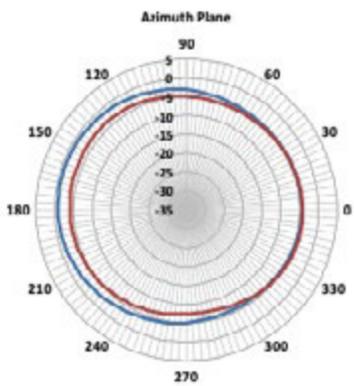


The Barracuda antenna can create an IP67 water-tight seal when installed on vehicles. Certain vehicles such as a Ford Explorer Interceptor have more narrow roof ridges that are tightly spaced together. For this type, vehicle special adapters are available.

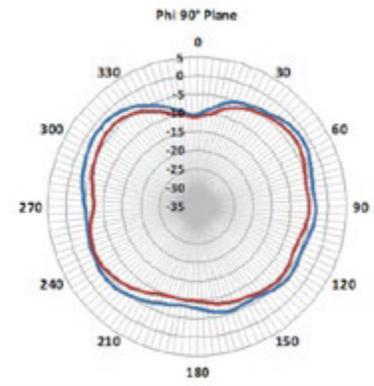
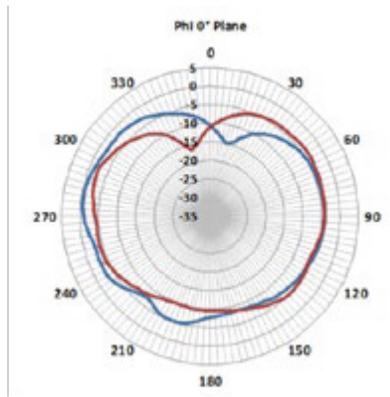
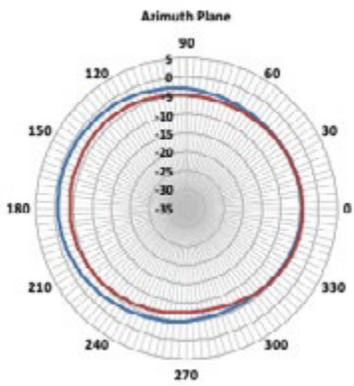
See parts [BKIT-VFX69383-001](#) (between ridges installation) and [BKIT-VFX69383-003](#) (atop ridge installation) for product details.

RADIATION PATTERNS - LTE ANTENNAS

698 MHz

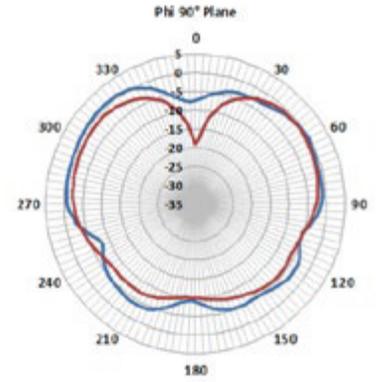
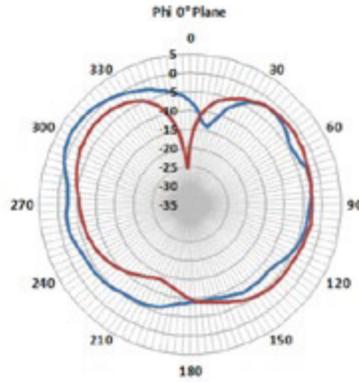
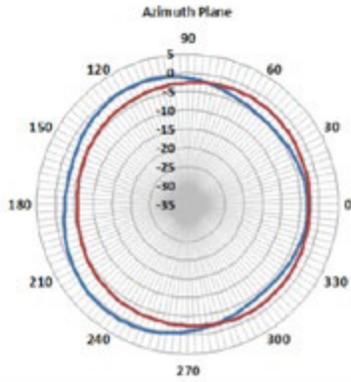


880 MHz

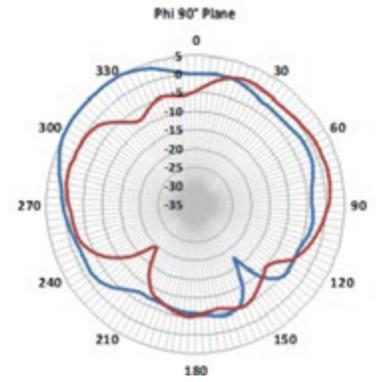
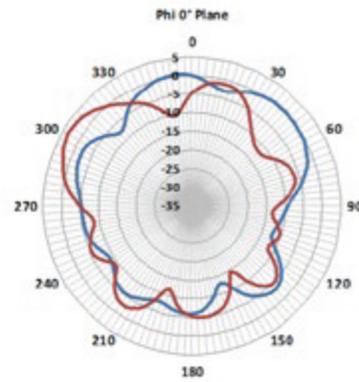
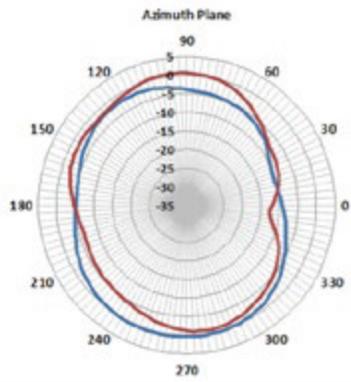


— LTE 1 — LTE 2

960 MHz



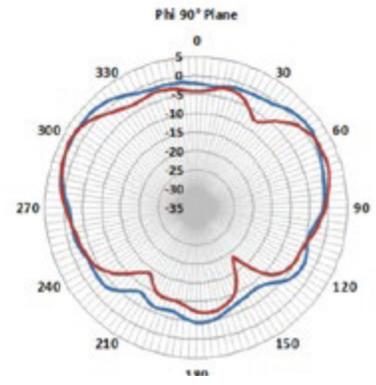
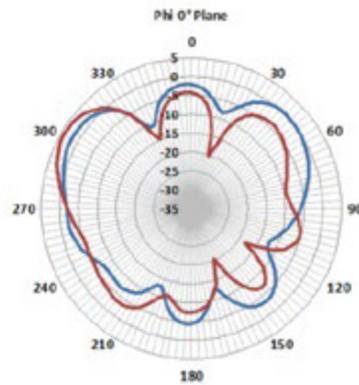
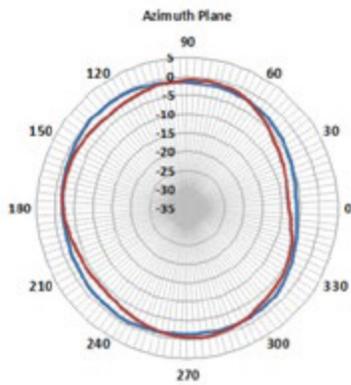
1690 MHz



— LTE 1 — LTE 2

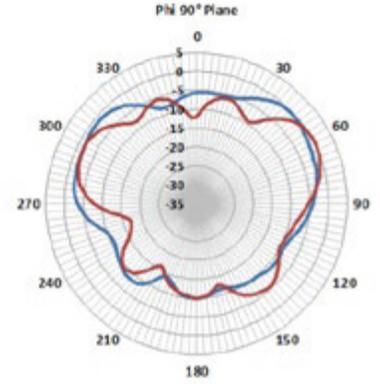
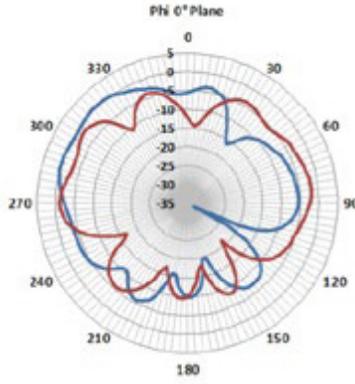
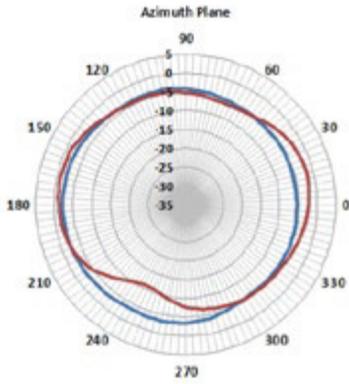
RADIATION PATTERNS - LTE ANTENNAS

1850 MHz

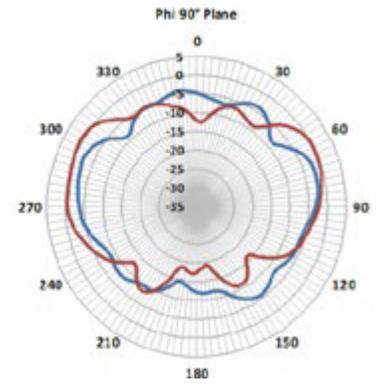
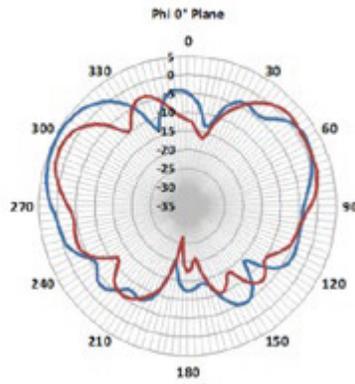
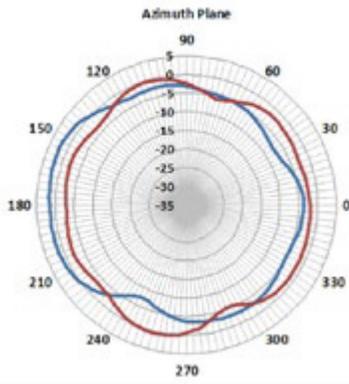


— LTE 1 — LTE 2

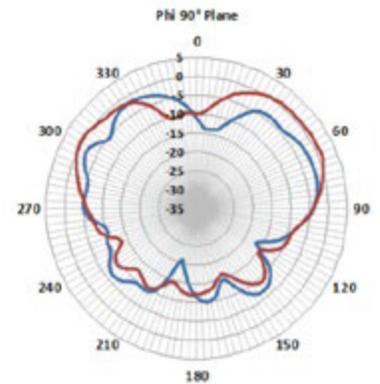
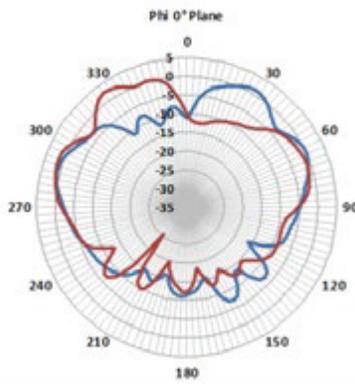
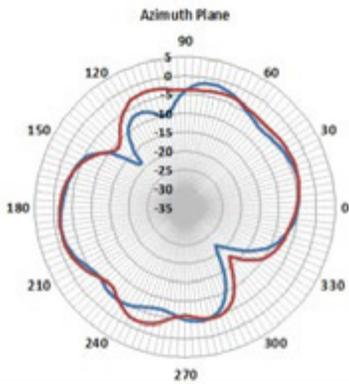
2170 MHz



2700 MHz



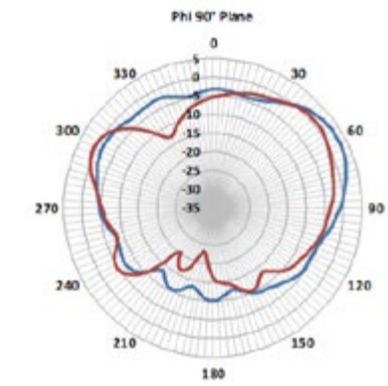
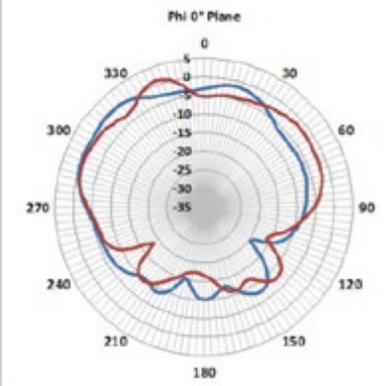
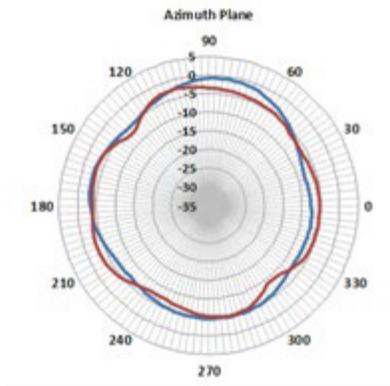
3800 MHz



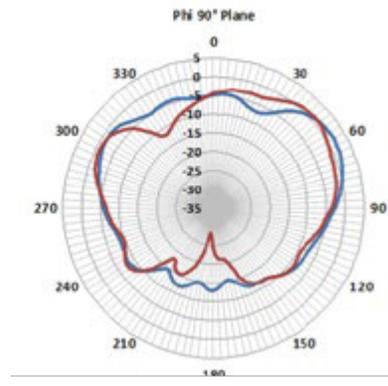
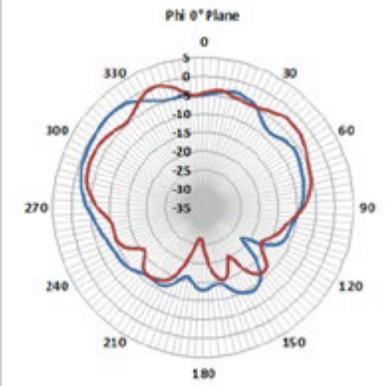
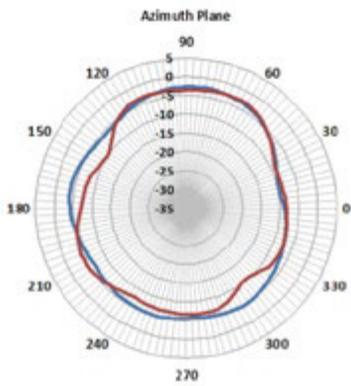
— LTE 1 — LTE 2

RADIATION PATTERNS - WI-FI ANTENNAS

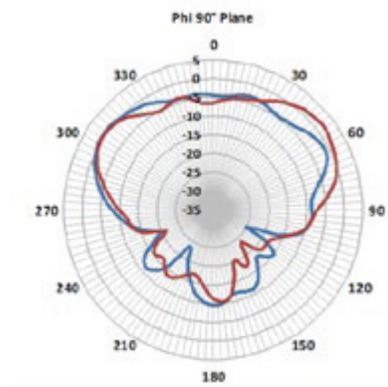
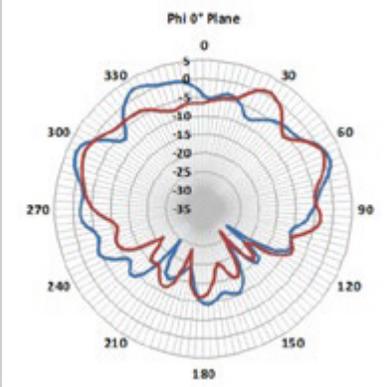
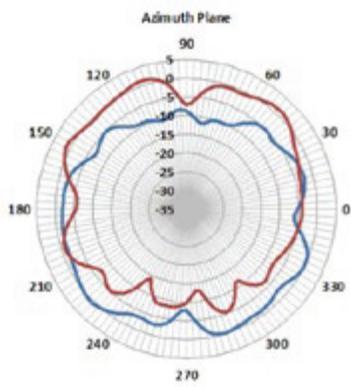
2400 MHz



2500 MHz

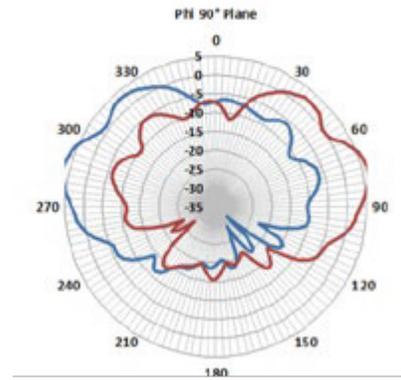
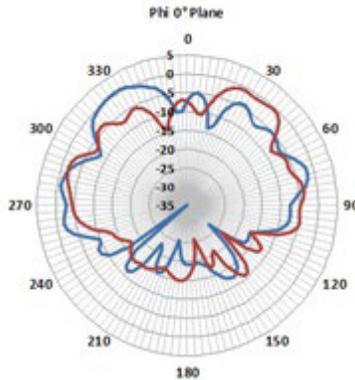
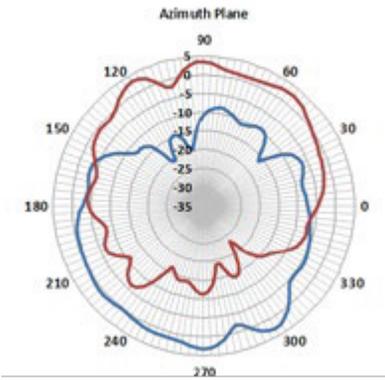


4900 MHz



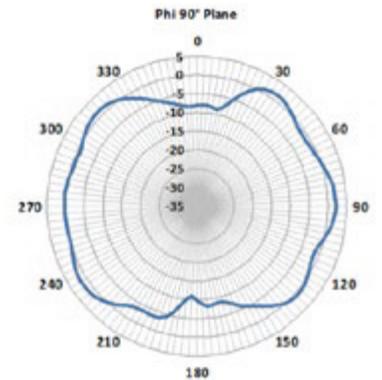
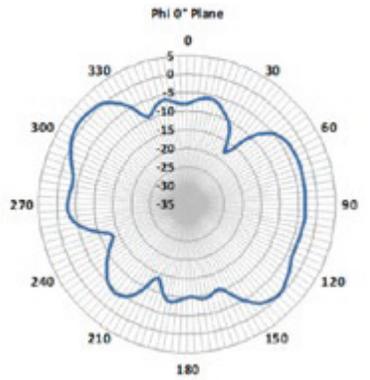
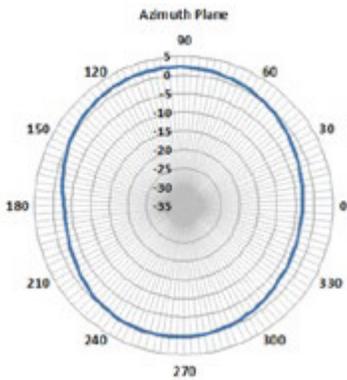
— WiFi 1 — WiFi 2

6000 MHz

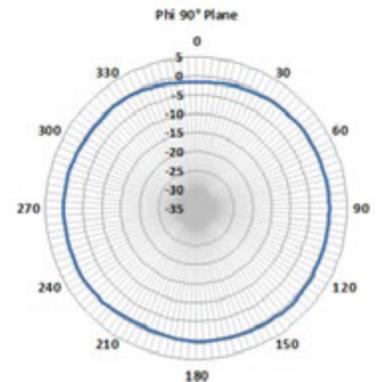
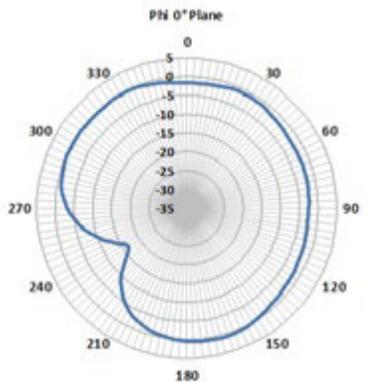
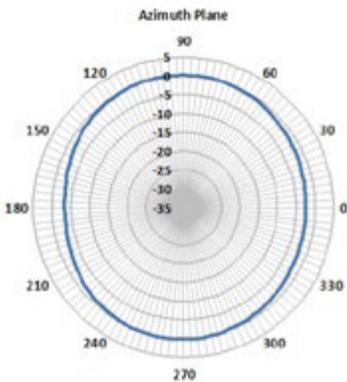


RADIATION PATTERNS - UHF ANTENNAS

380 MHz

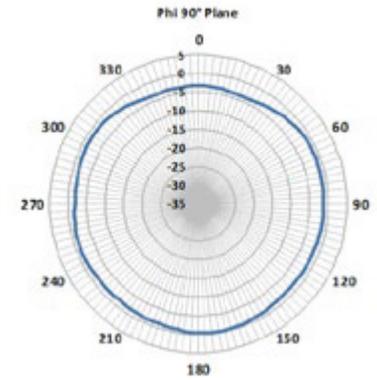
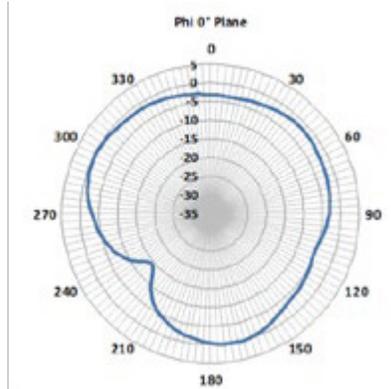
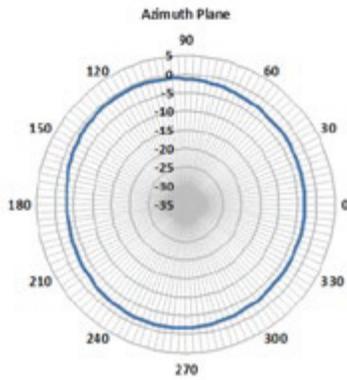


420 MHz

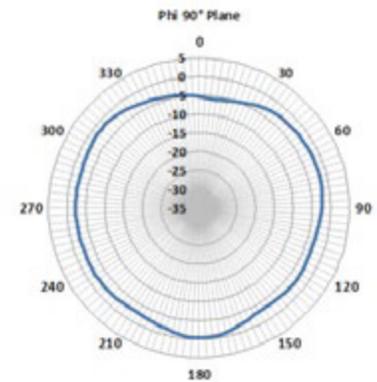
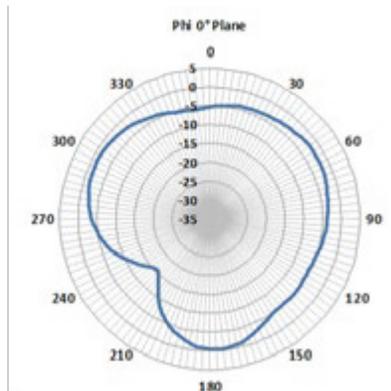
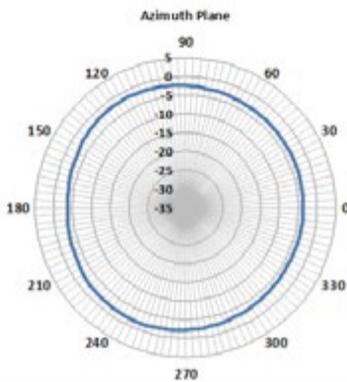


— WIFI 1 — WIFI 2

480 MHz



520 MHz



TE TECHNICAL SUPPORT CENTER

USA:	+1 (800) 522-6752
Canada:	+1 (905) 475-6222
Mexico:	+52 (0) 55-1106-0800
Latin/S. America:	+54 (0) 11-4733-2200
Germany:	+49 (0) 6251-133-1999
UK:	+44 (0) 800-267666
France:	+33 (0) 1-3420-8686
Netherlands:	+31 (0) 73-6246-999
China:	+86 (0) 400-820-6015

te.com

TE, TE Connectivity, TE connectivity (logo), and EVERY CONNECTION COUNTS are trademarks owned or licensed by the TE Connectivity plc family of companies. Other product names, logos, and company names mentioned herein may be trademarks of their respective owners.

While TE has made every reasonable effort to ensure the accuracy of the information in this document, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, complete, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event will TE be liable for any direct, indirect, incidental, special or consequential damages arising from or related to recipient's use of the information. It is the sole responsibility of recipient of this information to verify the results of this information using their engineering and product environment. Recipient assumes any and all risks associated with the use of the information. Antenna performance may vary. TE is a component manufacturer, and customer and/or end-user is responsible for all end-use compliance and regulatory requirements.

©2025 TE Connectivity. All Rights Reserved.

05/25 Original