



Barracuda VFH69383B23JW

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

The Barracuda VFH69383B23JW multiport/multiband antenna provides an excellent solution for Public Safety, Transportation and Aftermarket Fleet applications. Configured for 2-port MIMO operation over the 3G/4G/ISM/CBRS bands and 3-port MIMO operation over the low//high frequency Wi-Fi bands. An additional 6th 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
- Transportation
- Aftermarket fleet
- 5G ready
- Rugged LTE Gateways
- Others

ELECTRICAL SPECIFICATIONS

Antenna Model	VFH69383B23JW-518J					
Number of Ports	6					
Port Configuration	2x- 3G/4G/ISM/CBRS				3x- Wi-Fi	
Operating Frequency (MHz)	698-806	824-894	880-960	1690-3800	2400-2500	4900-6000
Peak Gain - Avg (dBi)	1.0	-0.1	0.2	3.6	2.7	5.1
Peak Gain* - Max (dBi)	2.5	2.5	2.5	7.4	4.0	6.4
VSWR - Avg	<1.5:1	<1.5:1	<1.5:1	<1.3:1	<1.3:1	<1.2:1
VSWR - Max	<2.5:1			<2.0:1		
Isolation LTE1 to LTE2 (dB)	-17	-17	-17	-22	-30	-42
Isolation LTE1 to WIFI 1 (dB)	-36	-36	-38	-21	-21	-42
Isolation LTE1 to WIFI 2 (dB)	-40	-44	-45	-22	-22	-42
Isolation LTE1 to WIFI 3 (dB)	-19	-21	-24	-30	-36	-47
Isolation LTE2 to WIFI 1 (dB)	-37	-42	-43	-21	-21	-42
Isolation LTE2 to WIFI 2 (dB)	-35	-35	-37	-21	-21	-41
Isolation LTE2 to WIFI 3 (dB)	-16	-18	-19	-26	-36	-47

ELECTRICAL SPECIFICATIONS

Isolation WIFI 1 to WIFI 2 (dB)	-58	-59	-58	-37	-38	-46
Isolation WIFI 1 to WIFI 3 (dB)	-41	-44	-47	-38	-38	-46
Isolation WIFI 2 to WIFI 3 (dB)	-40	-42	-42	-35	-36	-45
Isolation GNSS to LTE 1 (dB)	-41	-50	-51	-41	-52	-52
Isolation GNSS to LTE 2 (dB)	-42	-42	-41	-49	-53	-54
Isolation GNSS to WIFI 1 (dB)	-69	-71	-66	-52	-54	-49
Isolation GNSS to WIFI 2 (dB)	-67	-69	-69	-51	-52	-54
Isolation GNSS to WIFI 3 (dB)	-40	-45	-44	-48	-56	-61
Azimuth Plane 3 dB Beamwidth	360°, Omnidirectional					
Nominal Impedance (Ohms)	50					
Polarization	Linear Vertical					
Max Power - Ambient 25°C (W)	10					

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	LMR 100, Black
Mounting	P-Mount
Radome Material	PC, UL94-V0
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

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		

GNSS ANTENNA SPECIFICATIONS

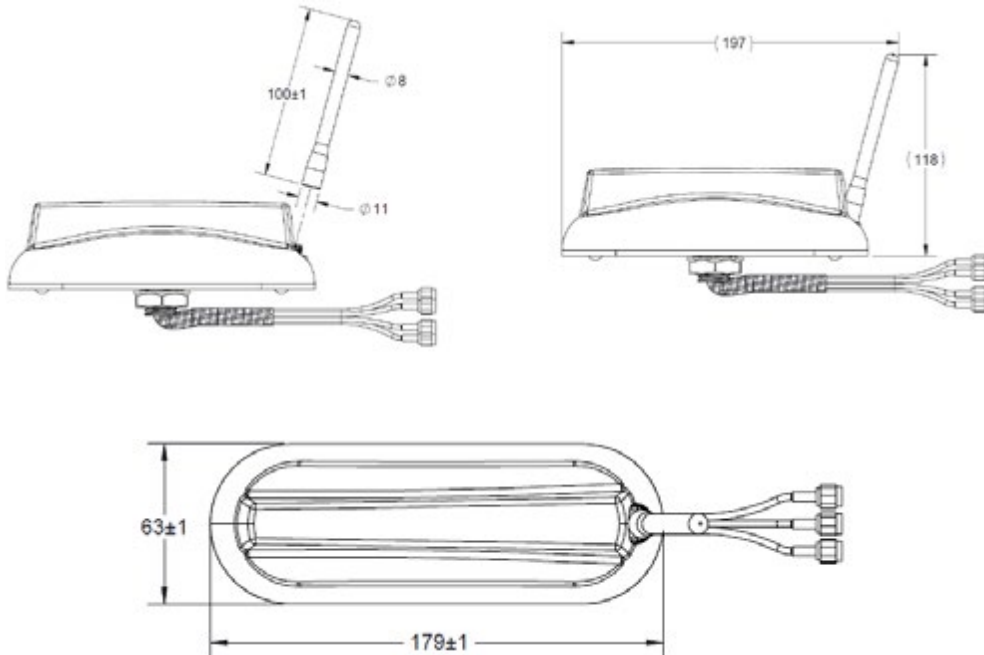
Operating Supply Voltage (Vdc)	2.5 - 7.0		
Current Consumption, Max @ room temp mA)	20		
Out-of-band Signal Rejection Min @ room temp (dBc)	60 (@1-1525 MHz)	60 (@1675-2000 MHz)	50 (@2000-3000 MHz)
Input Max Power (dBm)	-30		
Cable Type	RG174		

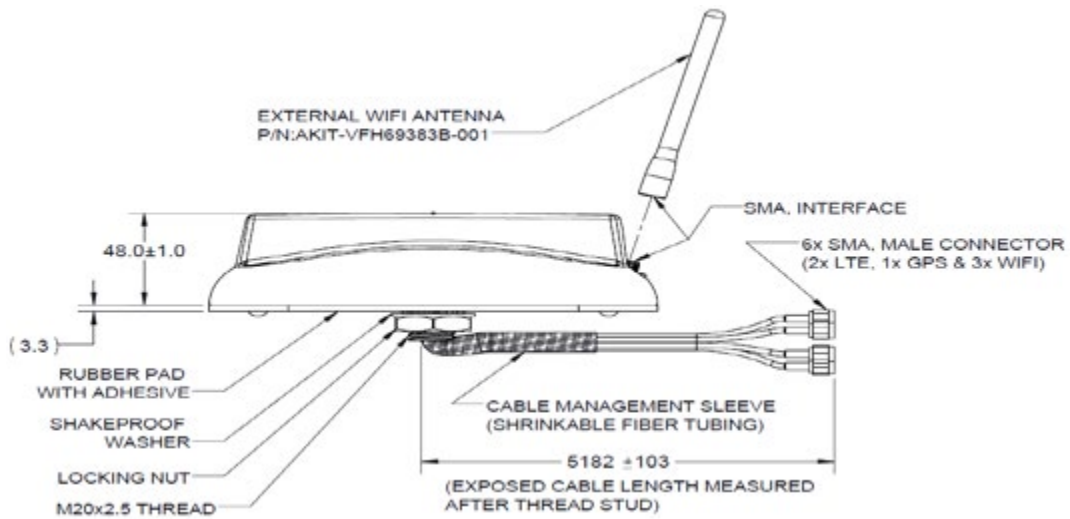
CONFIGURATION

PART NUMBER	CABLE LENGTH	CONNECTOR - LTE PORTS	CONNECTOR - WI-FI PORTS	CONNECTOR - GNSS PORT
VFH69383B23JW-518J	5.18 m (17.0 ft.)	SMA- male	SMA- male	SMA- male

PACKAGING INFORMATION

PACKAGED DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	8	192	240
Height - mm (in.)	135 (5.31)	295 (11.6)	1350 (53.15)	1650 (64.96)
Length - mm (in.)	245 (9.65)	520 (20.5)	1200 (47.24)	1200 (47.24)
Width - mm (in.)	120 (4.72)	260 (10.2)	800 (31.5)	800 (31.5)
Shipping Weight - kg (lb.)	0.85 (1.9)	7.5 (16)	198 (436)	245 (540)



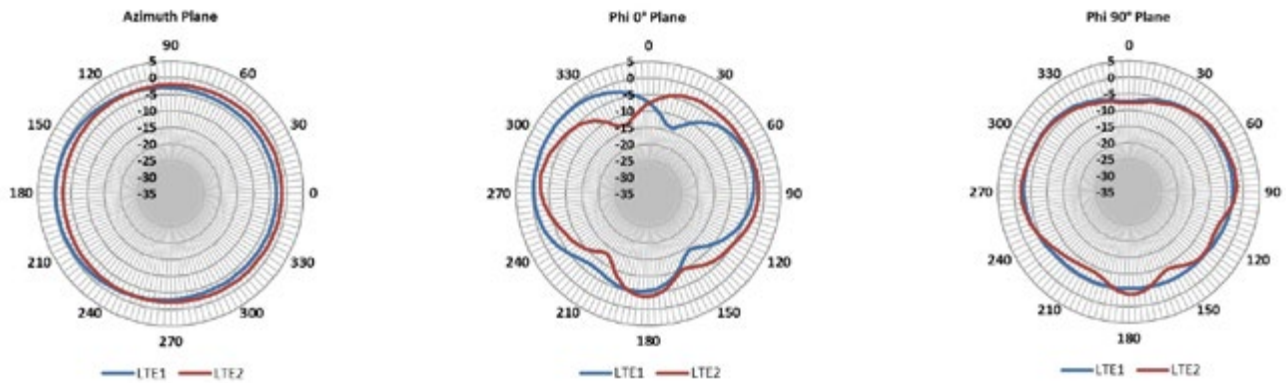


The Barracuda antenna can create an IP67 water-tight seal when installed on vehicles. Certain vehicles such as a Ford Explorer Interceptor have more narrow roof ridges that are tightly spaced together. For this type, vehicle special adapters are available.

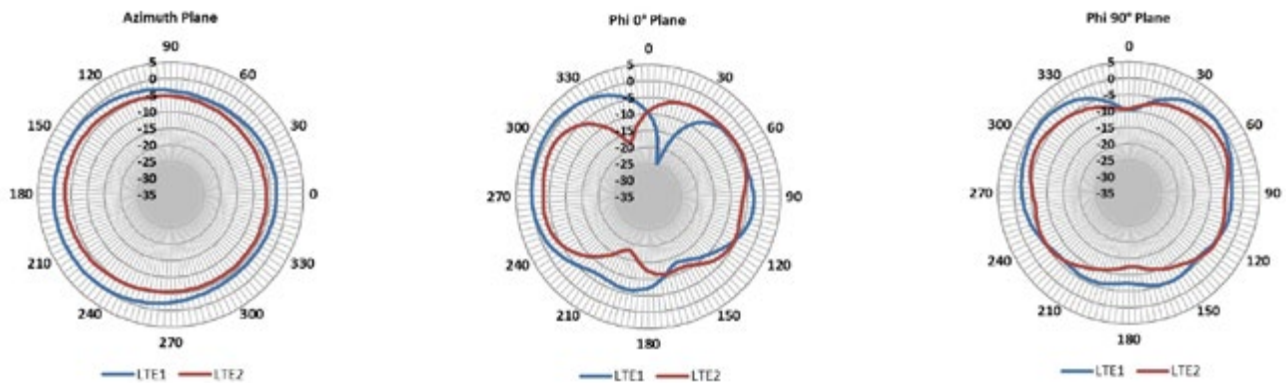
See parts [BKIT-VFX69383-001](#) (between ridges installation) and [BKIT-VFX69383-003](#) (atop ridge installation) for product details.

RADIATION PATTERNS - LTE ANTENNAS

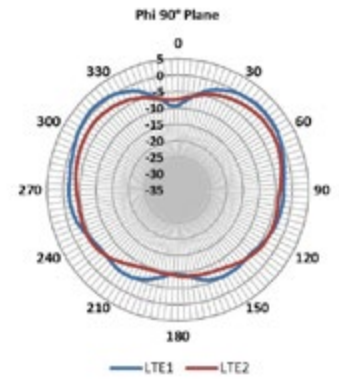
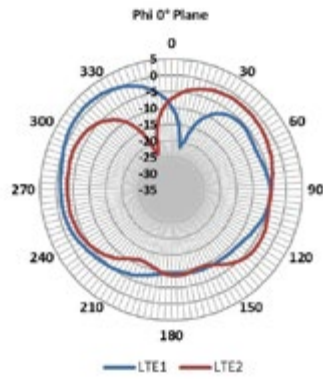
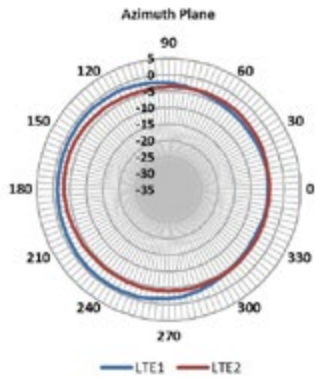
698 MHz



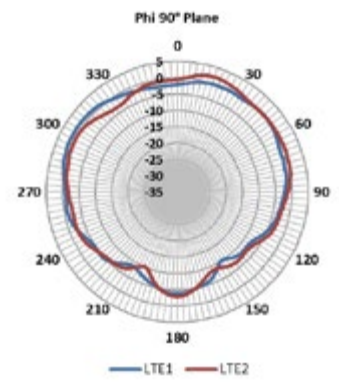
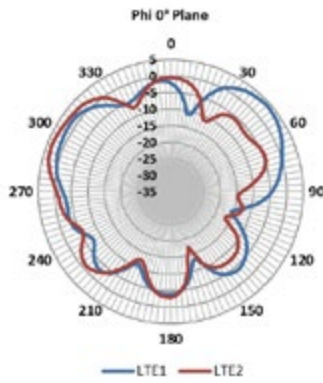
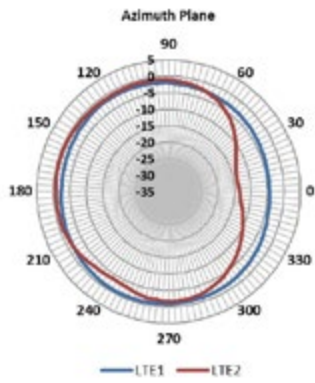
880 MHz



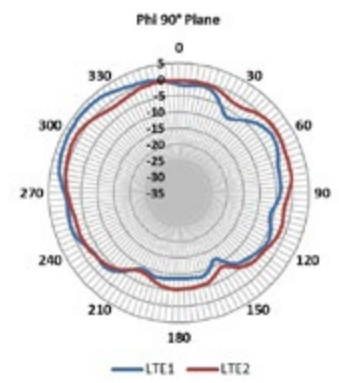
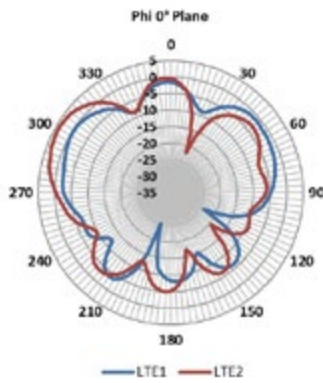
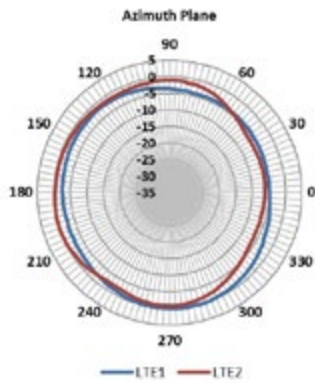
960 MHz



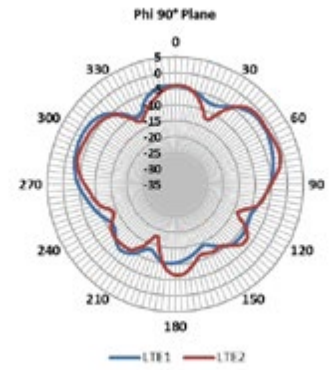
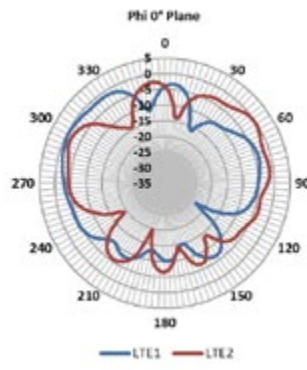
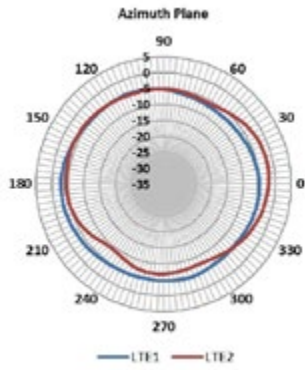
1690 MHz



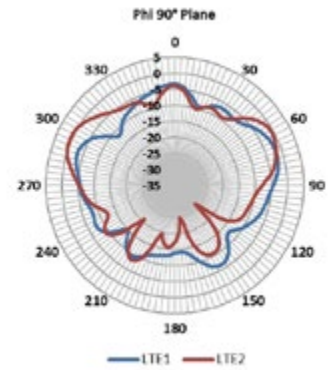
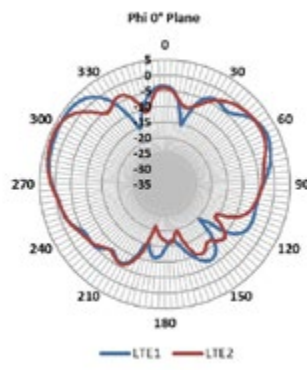
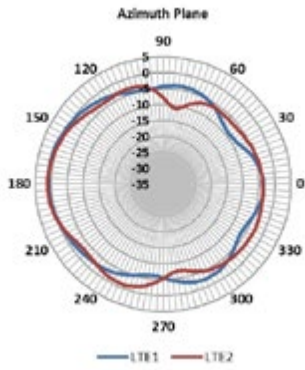
1850 MHz



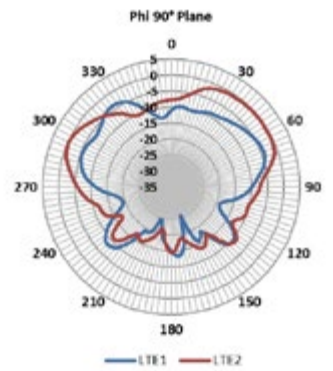
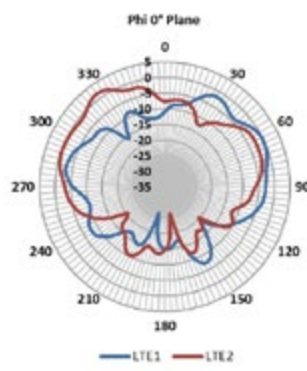
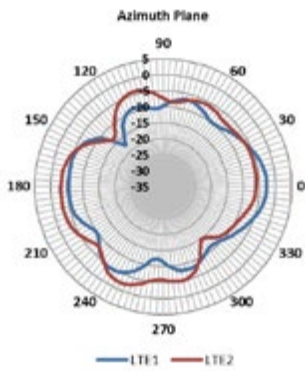
2170 MHz



2700 MHz

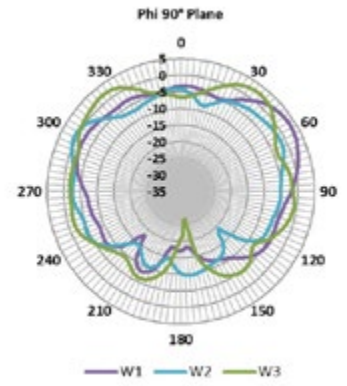
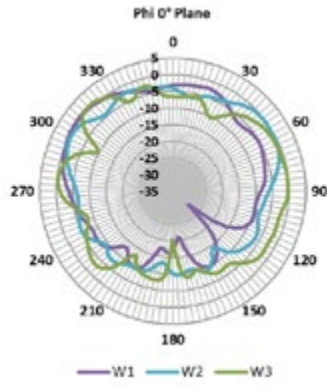
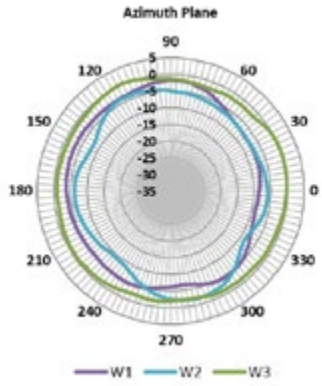


3800 MHz

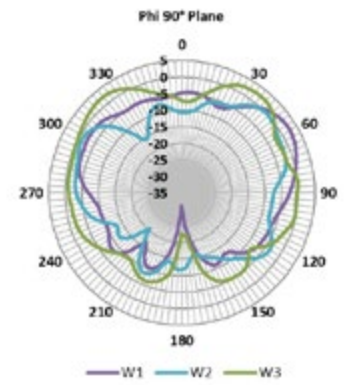
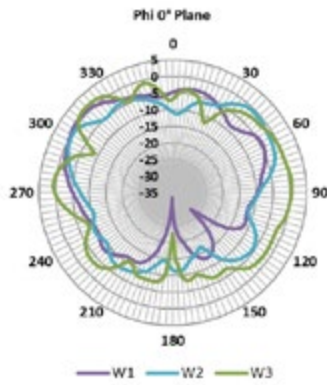
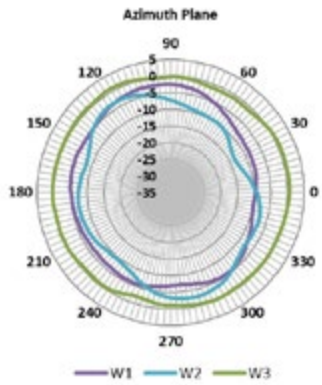


RADIATION PATTERNS - WI-FI ANTENNAS

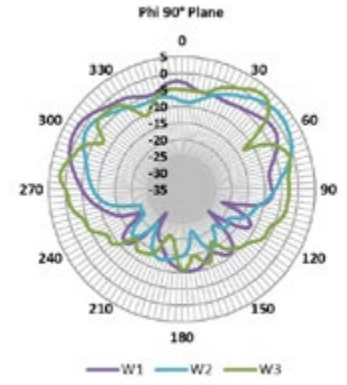
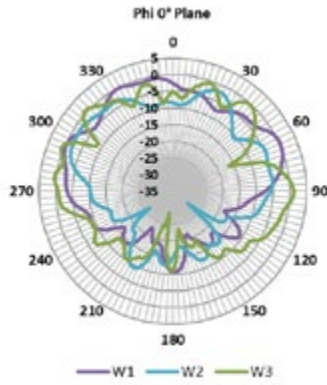
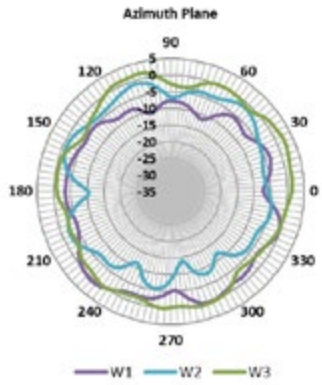
2400 MHz



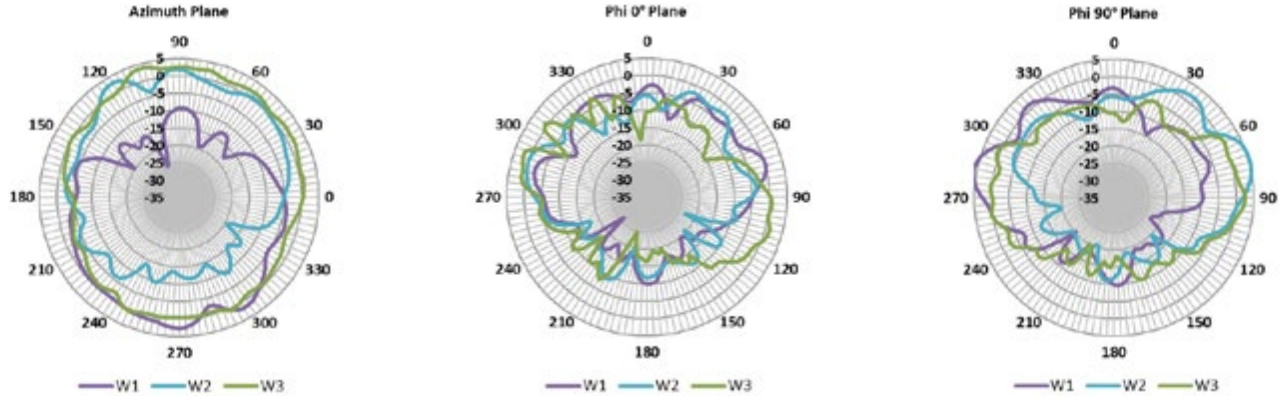
2500 MHz



4900 MHz



5900 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 Connectivity, TE Connectivity (logo) and Every Connection Counts are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

TE warrants to the original end user customer of its products that its products are free from defects in material and workmanship. Subject to conditions and limitations TE will, at its option, either repair or replace any part of its products that prove defective because of improper workmanship or materials. This limited warranty is in force for the useful lifetime of the original end product into which the TE product is installed. Useful lifetime of the original end product may vary but is not to exceed five (5) years from the original date of the end product purchase.

©2021 TE Connectivity. All Rights Reserved.

11/21 Original

