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 WFI 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		

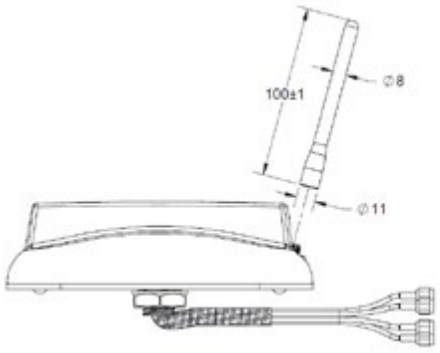
GNSS ANTENNA SPECIFICATIONS			
Operating Supply Voltage (Vdc)	2.5 - 7.0		
Current Consumption, Max @ room temp mA)	20		
Out-of-band Signal Rejection Min @ room temp (dBc)	60 (@1-1525 MHz)	60 (@1675-2000 MHz)	50 (@2000-3000 MHz)
Input Max Power (dBm)	-30		
Cable Type	RG174		

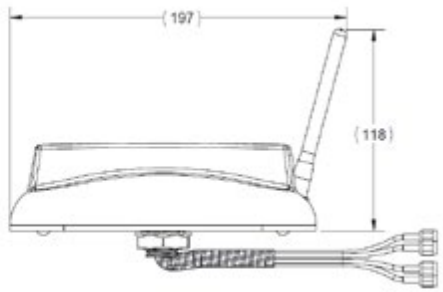
CONFIGURATION

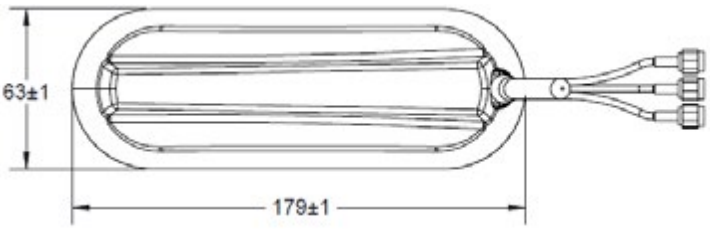
PART NUMBER	CABLE LENGTH	CONNECTOR – LTE PORTS	CONNECTOR – WI-FI PORTS	CONNECTOR – GNSS PORT
VFH69383B23JW-518J	5.18 m (17.0 ft.)	SMA- male	SMA- male	SMA- male

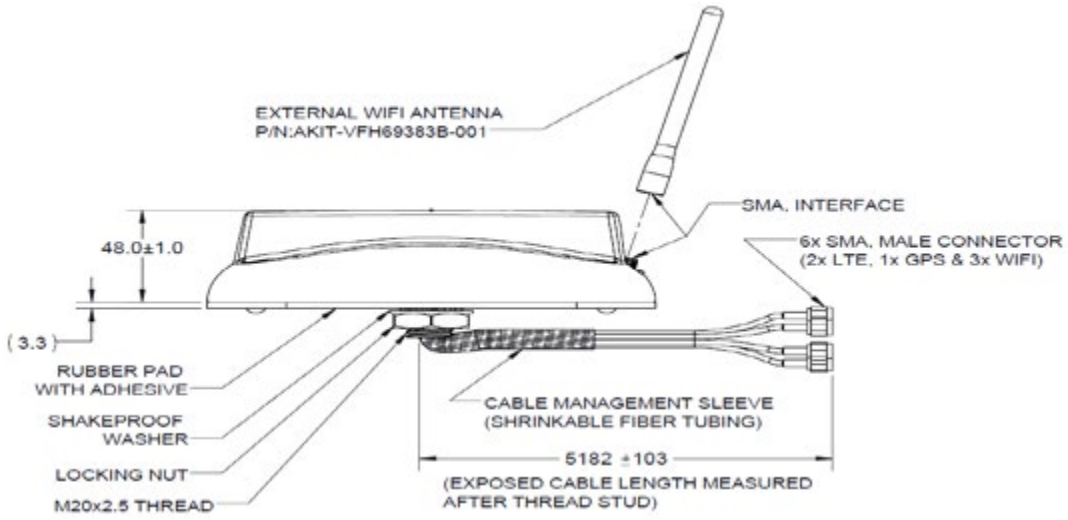
PACKAGING INFORMATION

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 (47.2)	260 (10.2)	800 (31.5)	800 (31.5)
Shipping Weight – kg (lb.)	0.85 (1.9)	7.5 (16)	198 (436)	245 (540)







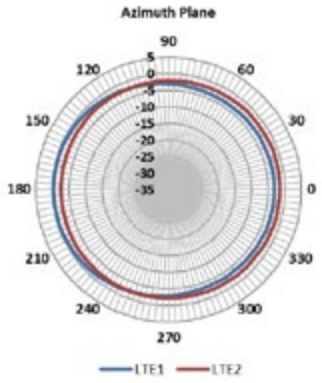


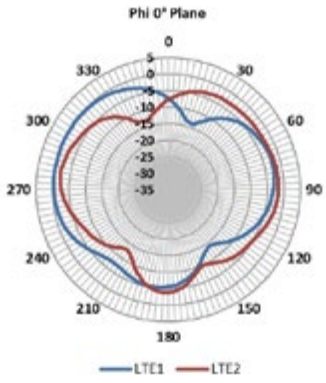
The Barracuda antenna can create an IP67 water-tight seal when installed on vehicles. Certain vehicles such as a Ford Explorer Interceptor have more narrow roof ridges that are tightly spaced together. For this type, vehicle special adapters are available.

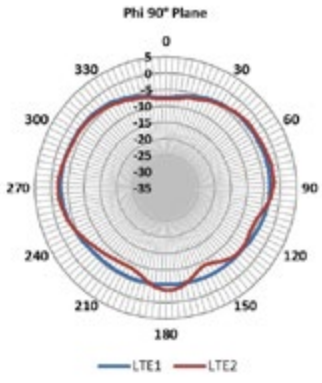
See parts **BKIT-VFX69383-001** (between ridges installation) and **BKIT-VFX69383-003** (atop ridge installation) for product details.

RADIATION PATTERNS – LTE ANTENNAS

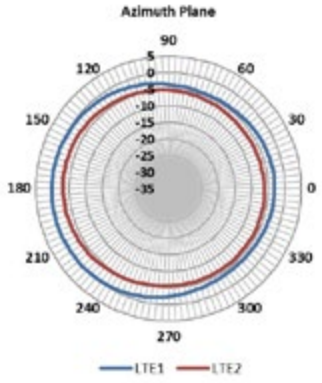
698 MHz

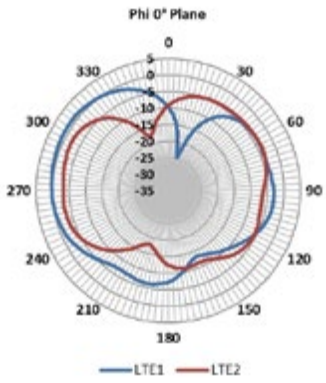


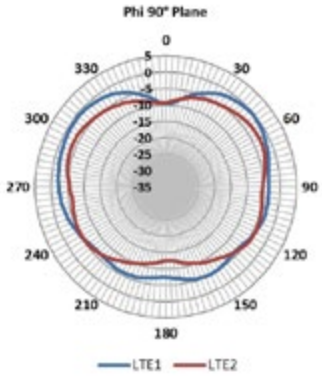




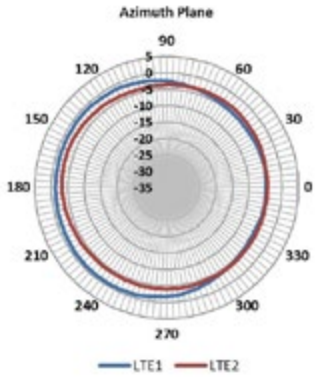
880 MHz

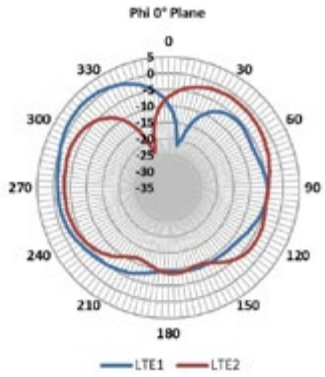


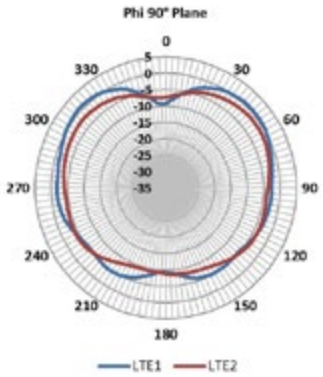




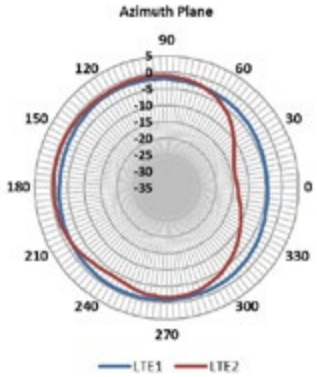
960 MHz

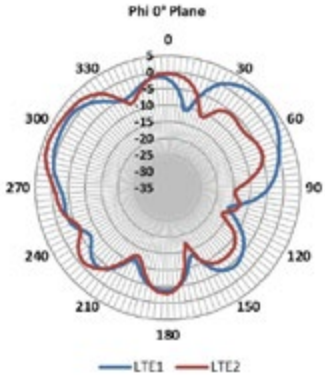


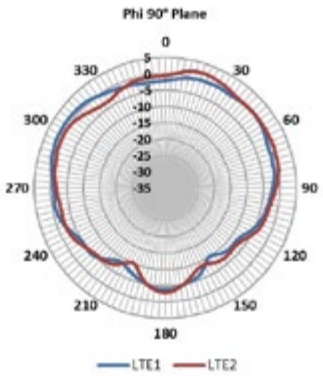




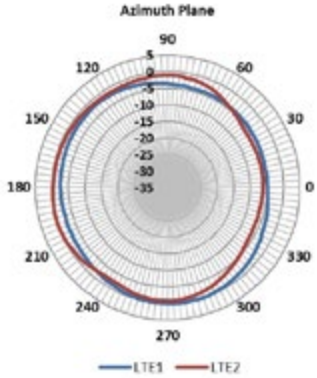
1690 MHz

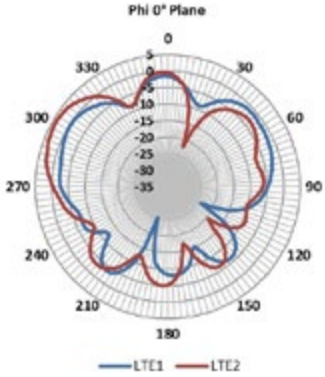


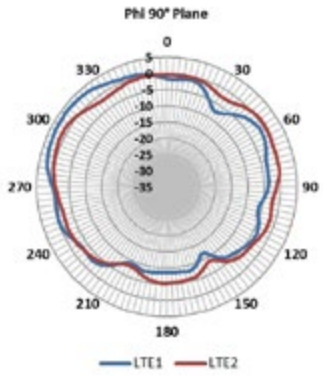




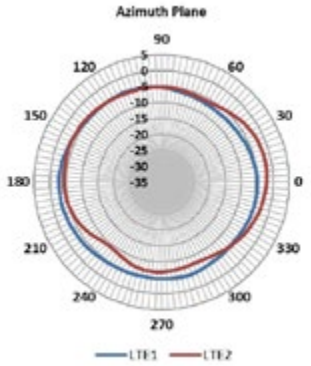
1850 MHz

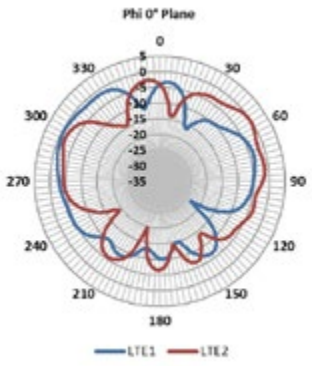


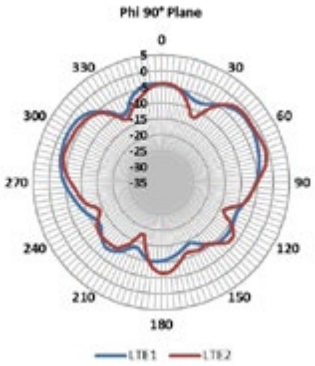




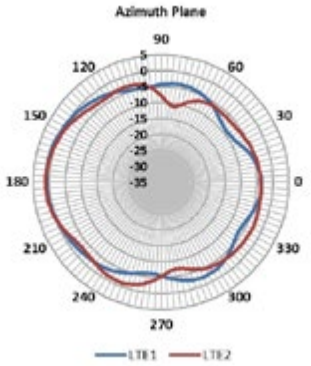
2170 MHz

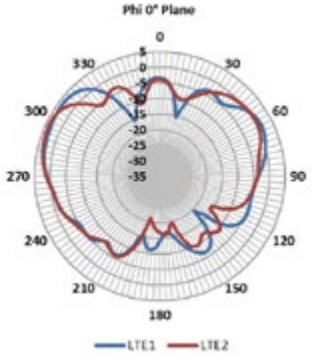


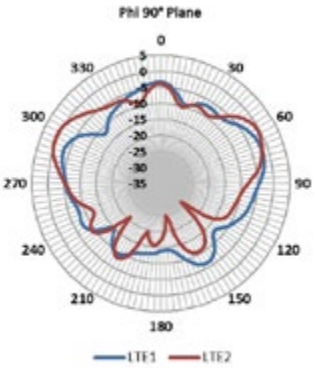




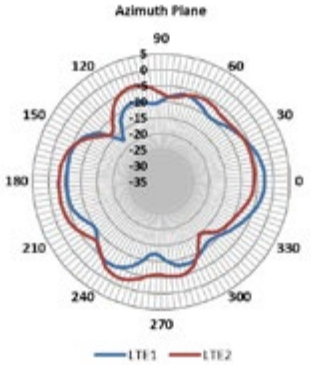
2700 MHz

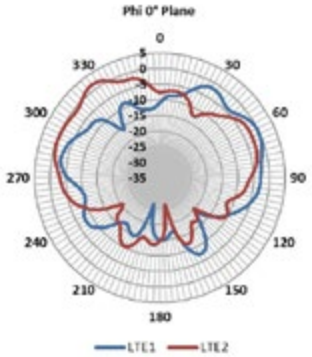


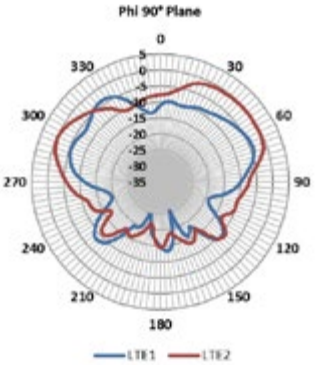




3800 MHz

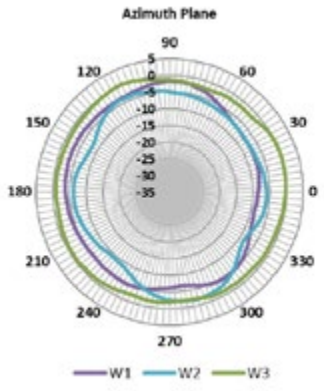


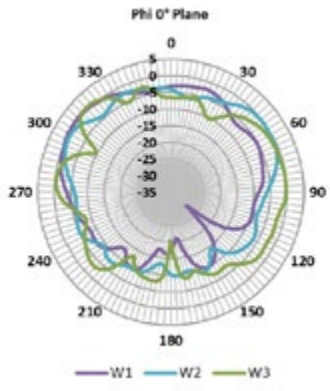


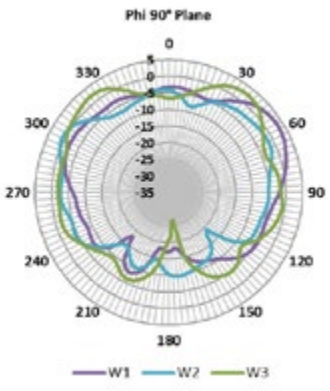


RADIATION PATTERNS – WI-FI ANTENNAS

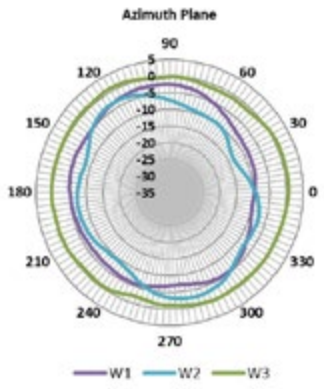
2400 MHz

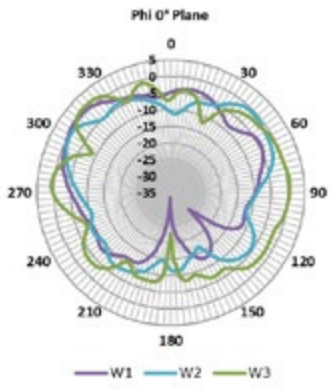


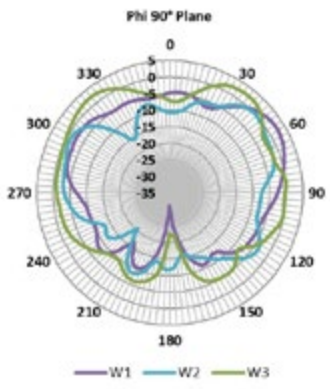




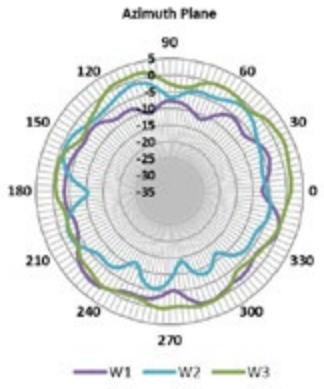
2500 MHz

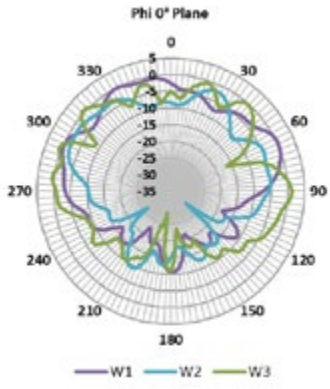


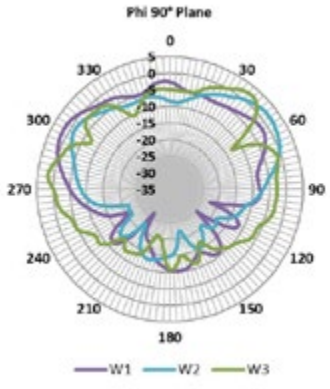




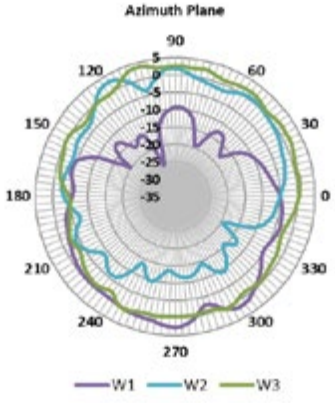
4900 MHz

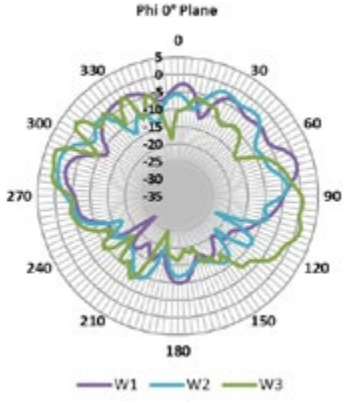


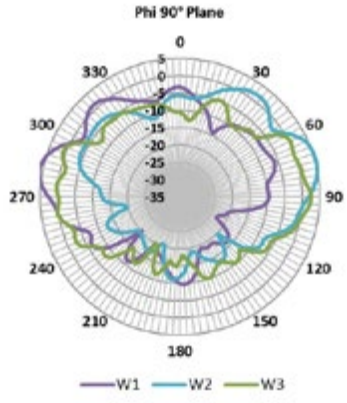




5900 MHz







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

11/21 Original