Gar VFP69383B22JN

5-Port Vehicular MIMO Antenna

698-960/1690-3800 MHz and 2400-2500/4900-6000 MHz

The Gar VFP69383B22JN 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/5G/ISM/CBRS bands and 2-port MIMO operation over the low//high frequency Wi-Fi bands. An additional 5th 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	VFP69383B22JN					
Number of Ports	5					
Port Configuration	2x- 3G/4G/5G/ISM/CBRS (LTE/CELL)				2x- Wi-Fi (WIFI)	
Operating Frequency (MHz)	698-806	824-894	880-960	1690-3800	2400-2500	4900-6000
Peak Gain* – Avg (dBi)	0.4	0.8	1.2	4.0	2.6	6.6
Peak Gain* – Max (dBi)	1.6	1.4	1.5	7.2	3.1	7.5
VSWR** – Avg	1.7	1.8	1.9	1.5	1.5	1.2
VSWR** – Max	2.5	2.1	2.2	2.1	2.0	
Isolation LTE1 to LTE2 (dB)	-11	-13	-14	-18	-24	-33
Isolation LTE1 to WIFI 1 (dB)	-36	-37	-39	-14	-14	-32
Isolation LTE1 to WIFI 2 (dB)	-39	-38	-38	-14	-14	-35
Isolation LTE2 to WFI 1 (dB)	-39	-42	-40	-14	-14	-32
Isolation LTE2 to WIFI 2 (dB)	-34	-36	-38	-14	-14	-33
Isolation WIFI 1 to WIFI 2 (dB)	-74	-75	-71	-30	-30	-38
Isolation GNSS to LTE 1 (dB)	-68	-69	-71	-52	-55	-52
Isolation GNSS to LTE 2 (dB)	-43	-41	-41	-46	-51	-54
Isolation GNSS to WIFI 1 (dB)	-65	-68	-71	-47	-47	-52
Isolation GNSS to WIFI 2 (dB)	-68	-69	-71	-52	-55	-52
Azimuth Plane 3 dB Beamwidth	360°, Omnidirectional					
Nominal Impedance (Ohms)	50					
Polarization	Linear Vertical					
Max Power - Ambient 25°C (W)	30 (LTE/CELL) /10 (WIFI)					

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.)	1.1 kg (2.42 lbs)
Cable Type	LMR 100- pigtails, LMR 195- jumper cables
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
Rail Compliance Standards	EN61373 (Shock & Vibration), EN50155 (Temperature)
Material Substance Compliance	RoHS

Notes: (*) – This parameter is based on a 30cm (1ft) cable length and 30cm (1ft) ground plane.

(**) – This parameter is based on a 518cm (17ft) cable length and 30cm (1ft) ground plane. Antenna specifications are subject to change according to the ground plane size.

Gar VFP69383B22JN

5-Port Vehicular MIMO Antenna

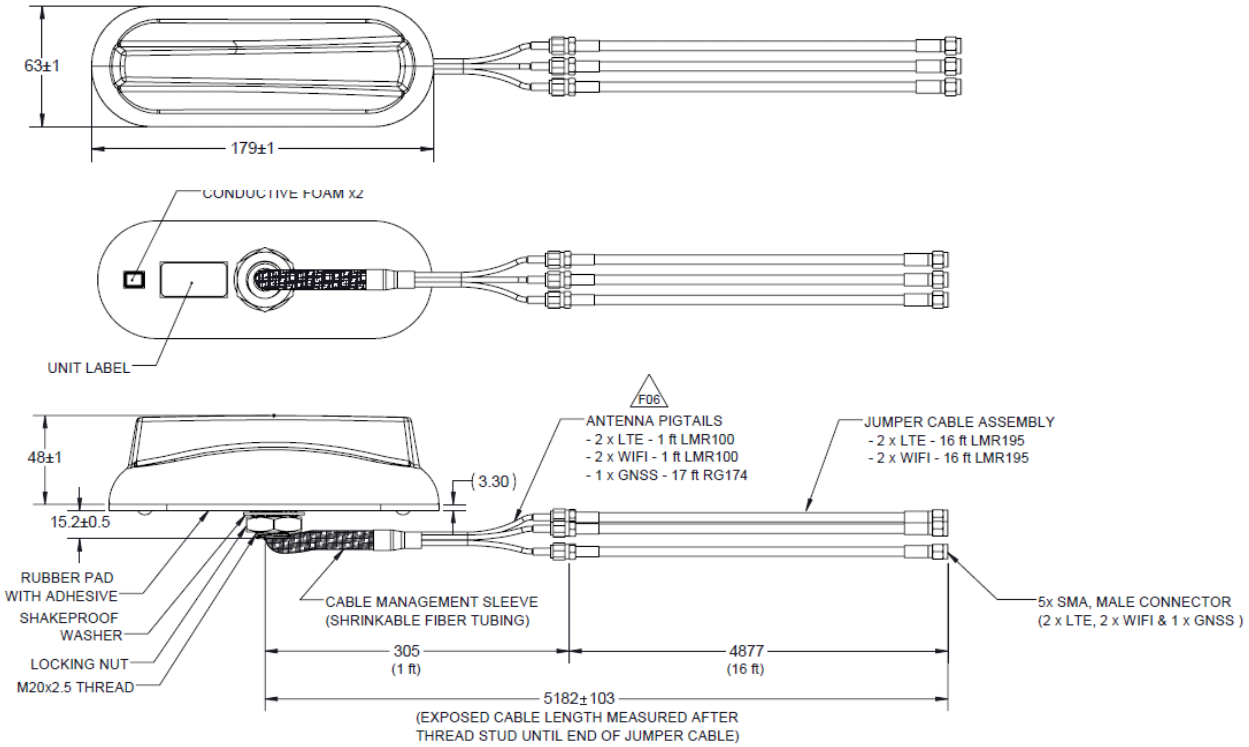
GNSS ANTENNA SPECIFICATIONS			
Frequency of Operation (MHz)	1559 - 1606		
Band	BEIDOU	GPS	GLONASS
Frequency Band (MHz)	1559.052 - 1563.144	1574.42 - 1576.42	1598.0625 - 1605.89
Absolute Gain (dBi)	2	2	2
LNA Gain, Typ. @ room temp. (dBi)	28 ± 3		
Noise Figure @ room temp., Max (dB)	≤ 2.5 @ 1575 MHz		
Max VSWR @ room temp.	2.0		
Polarization	RHCP		
Nominal Impedance (Ohms)	50		
DC 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 (@698-960MHz)	80 (@1428-2700 MHz)	70 (@4900-5800 MHz)
Input Max Power (dBm)	-10		
Cable Type	RG174		

CONFIGURATION

PART NUMBER	CABLE LENGTH		CONNECTORS			COLOR
	PIGTAIL	JUMPER	LTE/CELL	WIFI	GNSS	
VFP69383B22JN-518J	0.3 m (1 ft)	4.9 m (16 ft)	SMA-male	SMA-male	SMA-male	Black
VFP69383B22JN-91L	0.91 m (1 ft)	-	SMA-male	RPSMA-male	SMA-male	Black

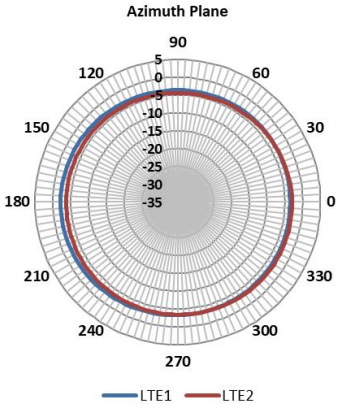
PACKAGING INFORMATION

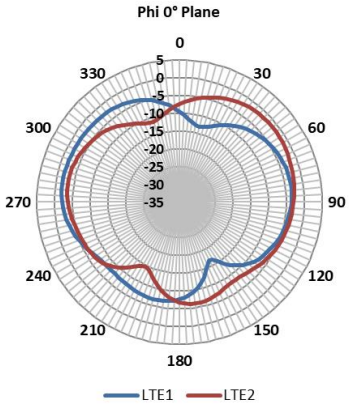
PACKAGED DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	4	140	196
Height – mm (in.)	130 (5.12)	235 (9.25)	1335 (52.56)	1813 (71.38)
Length – mm (in.)	222 (8.74)	543 (21.38)	1200 (47.24)	1200 (47.24)
Width – mm (in.)	222 (8.74)	232 (9.13)	800 (31.5)	800 (31.5)
Shipping Weight – kg (lb.)	1.35 (2.98)	5.85 (12.89)	217 (478.4)	299 (659.18)

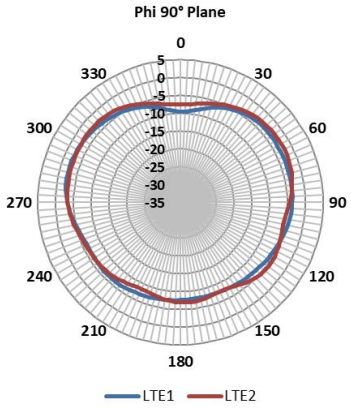


RADIATION PATTERNS – LTE ANTENNAS

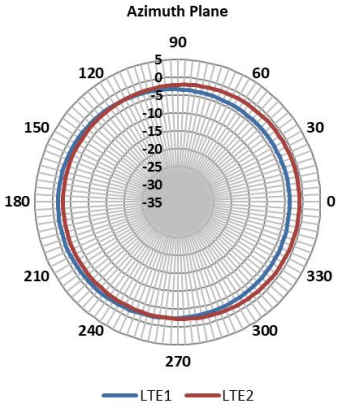
698 MHz

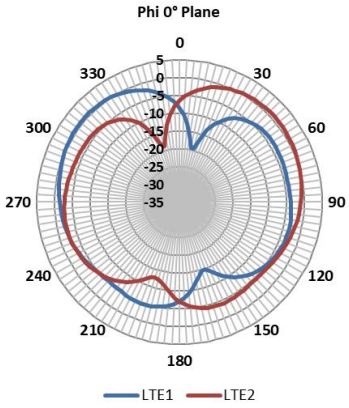


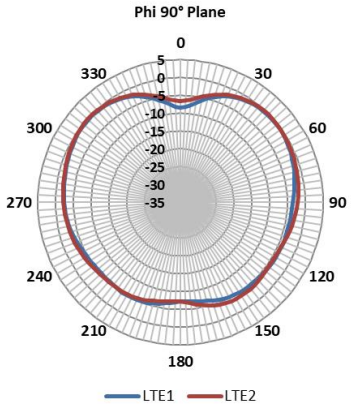




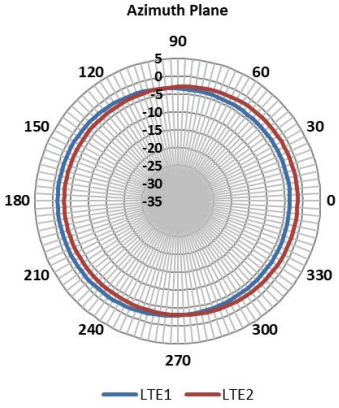
880 MHz

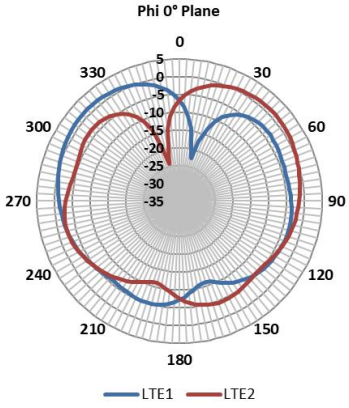


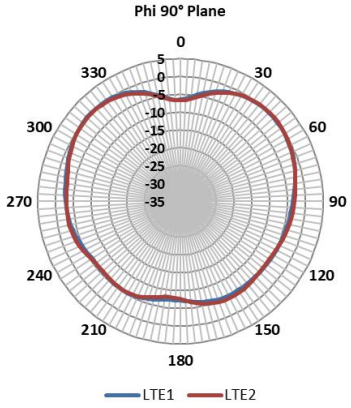




960 MHz

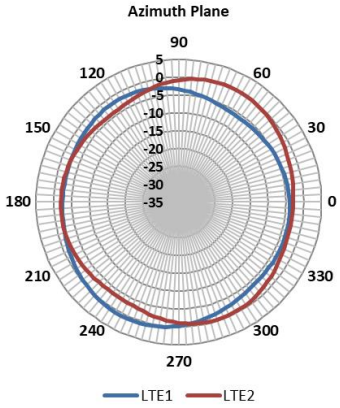


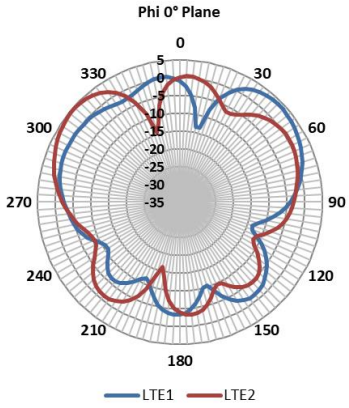


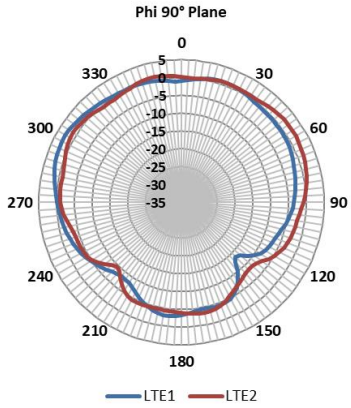


RADIATION PATTERNS – LTE ANTENNAS

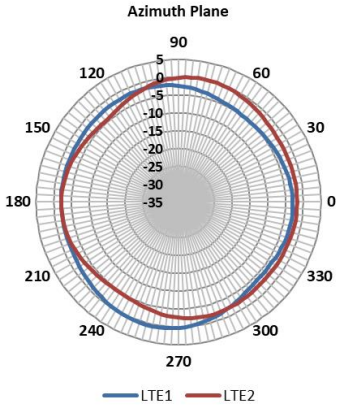
1690 MHz

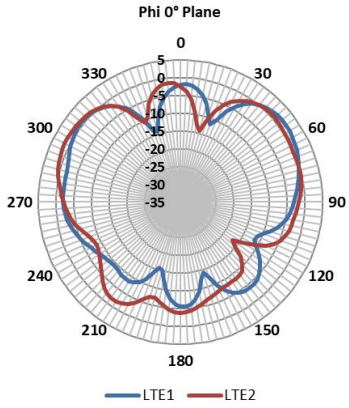


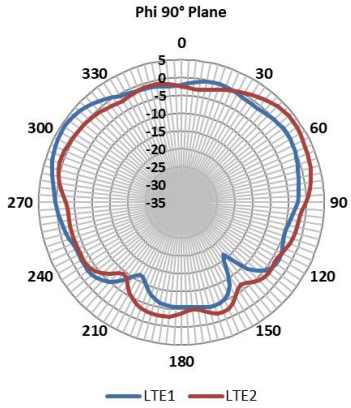




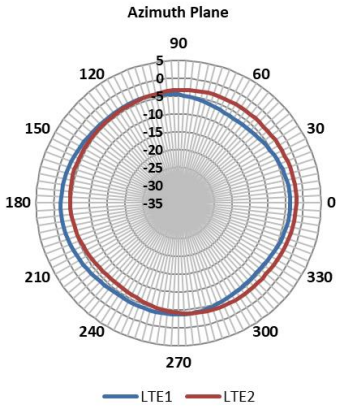
1850 MHz

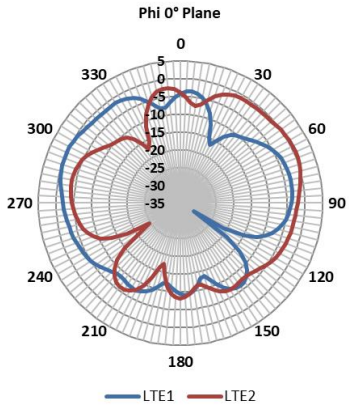


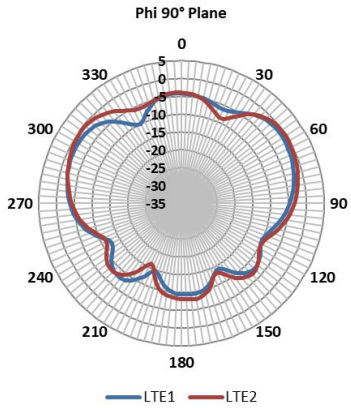




2170 MHz

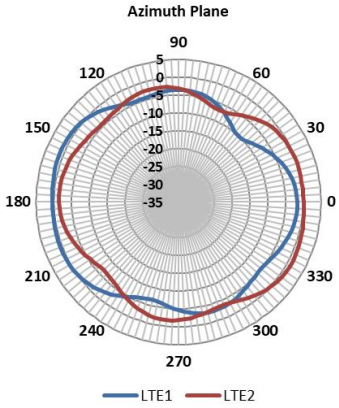


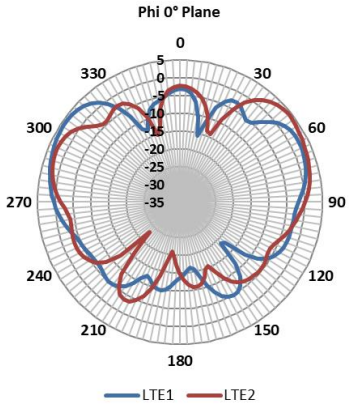


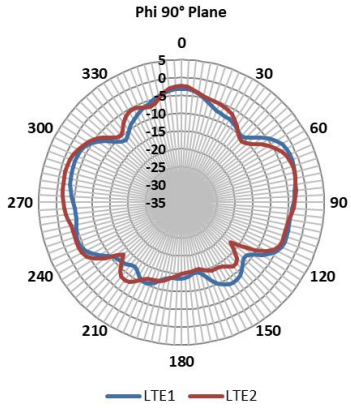


RADIATION PATTERNS – LTE ANTENNAS

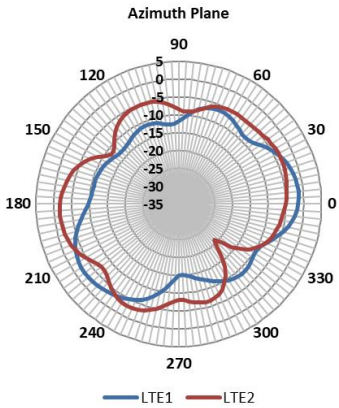
2700 MHz

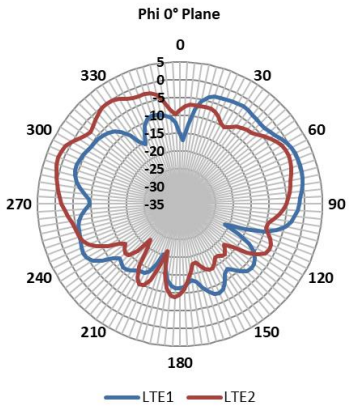


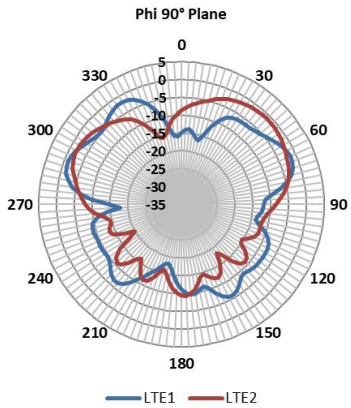




3800 MHz

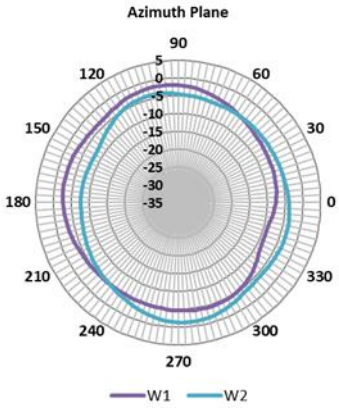


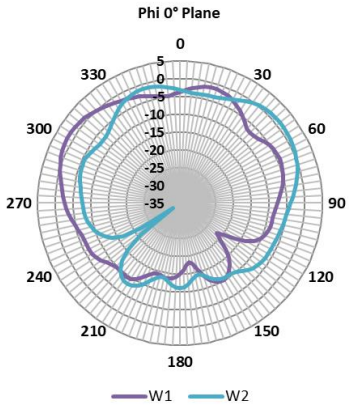


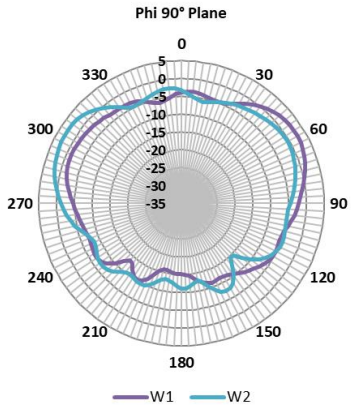


RADIATION PATTERNS – WI-FI ANTENNAS

2400 MHz

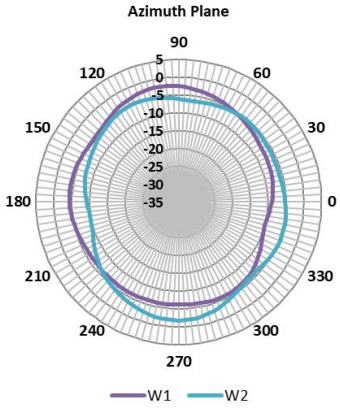


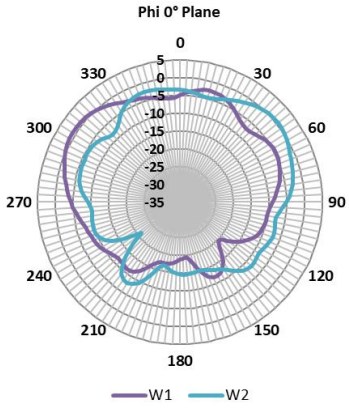


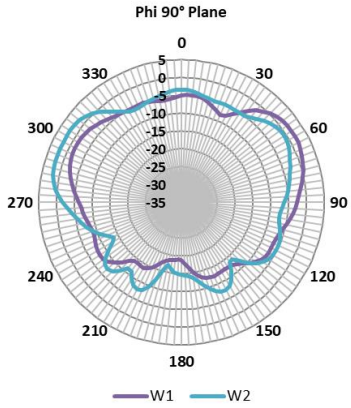


RADIATION PATTERNS – WI-FI ANTENNAS

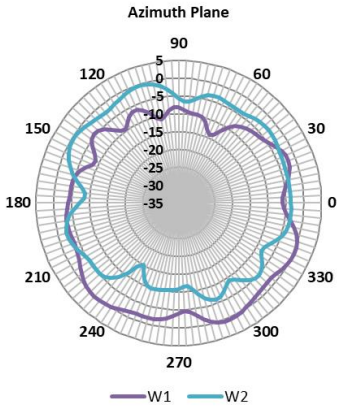
2500 MHz

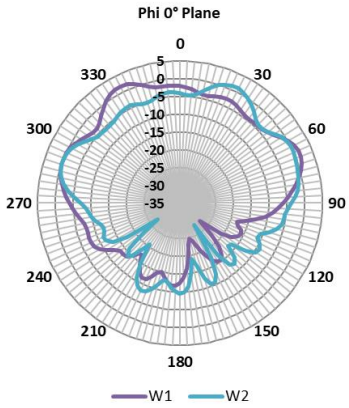


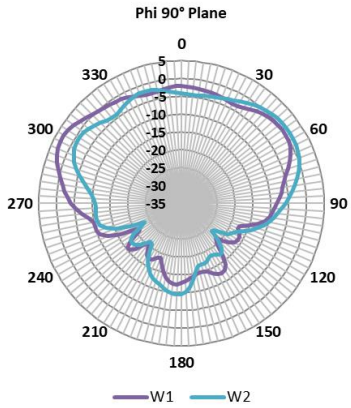




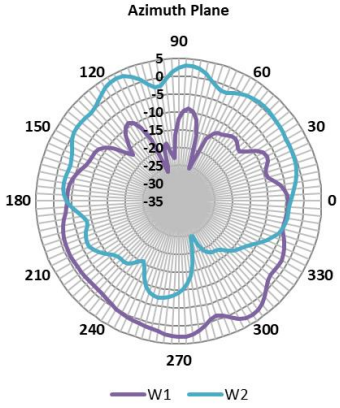
4900 MHz

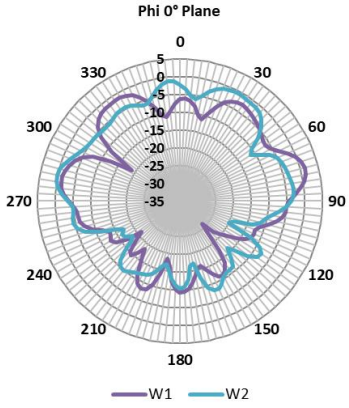


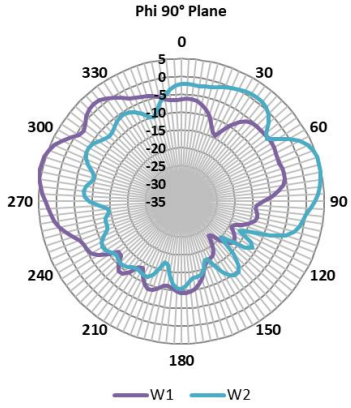




5900 MHz







RoHS

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