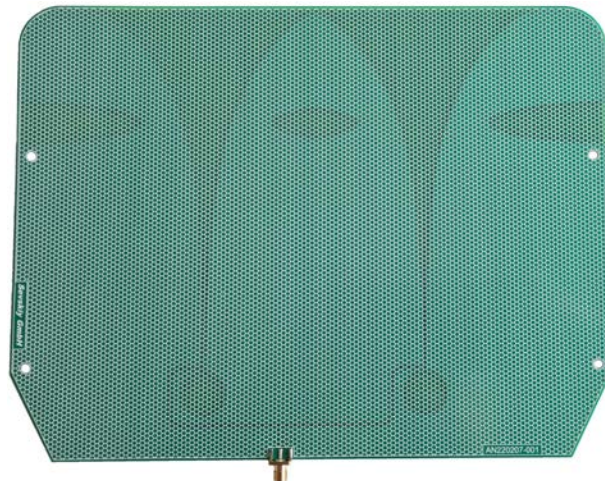


700...9000 MHz UWB E-plane Vivaldi antenna array (5G, LTE, ISM, IoT, UMTS, GSM, UWB)



General information

The AN220207-001 is an ultra-wideband E-plane Vivaldi antenna array designed for operation over a frequency range from 700 MHz to 9 GHz. The array configuration in the E-plane provides increased gain, improved directivity, and enhanced radiation stability compared to a single-element Vivaldi antenna, making it suitable for demanding wideband RF applications.

Covering both sub-GHz and microwave frequency bands, the antenna array supports a wide range of wireless standards and services, including LTE, GSM, UMTS, ISM-band systems, IoT connectivity, UWB communications, and sub-6 GHz 5G technologies. The wide operating bandwidth also enables use in broadband point-to-point links, experimental wideband communication systems, and advanced RF test environments.

With linear polarization and a directional radiation pattern, the E-plane Vivaldi array offers improved spatial selectivity, higher link reliability, and reduced sensitivity to interference. Typical applications include spectrum monitoring, laboratory and field measurements, EMC/EMI testing, remote sensing, radar and imaging systems, UAV communication and control links, as well as research and development platforms.

Electrical data

Antenna type	UWB E-plane Vivaldi antenna array	
Frequency range [MHz]	700...1500	1500...9000
Return loss [dB]	-8...-12	-9...-12
Peak gain [dBi]	4.5...8	8...11
Radiation efficiency [%]	80...90	40...80
Nominal input impedance [Ohm]	50	
Polarization	linear	
Radiation pattern	directional	
Maximum input power [W]	5	

Mechanical data

Antenna dimensions [mm]	272.5 x 210 x 1.6
Connector type	SMA (female)
PCB material	FR4
Weight [g]	200

Additional information

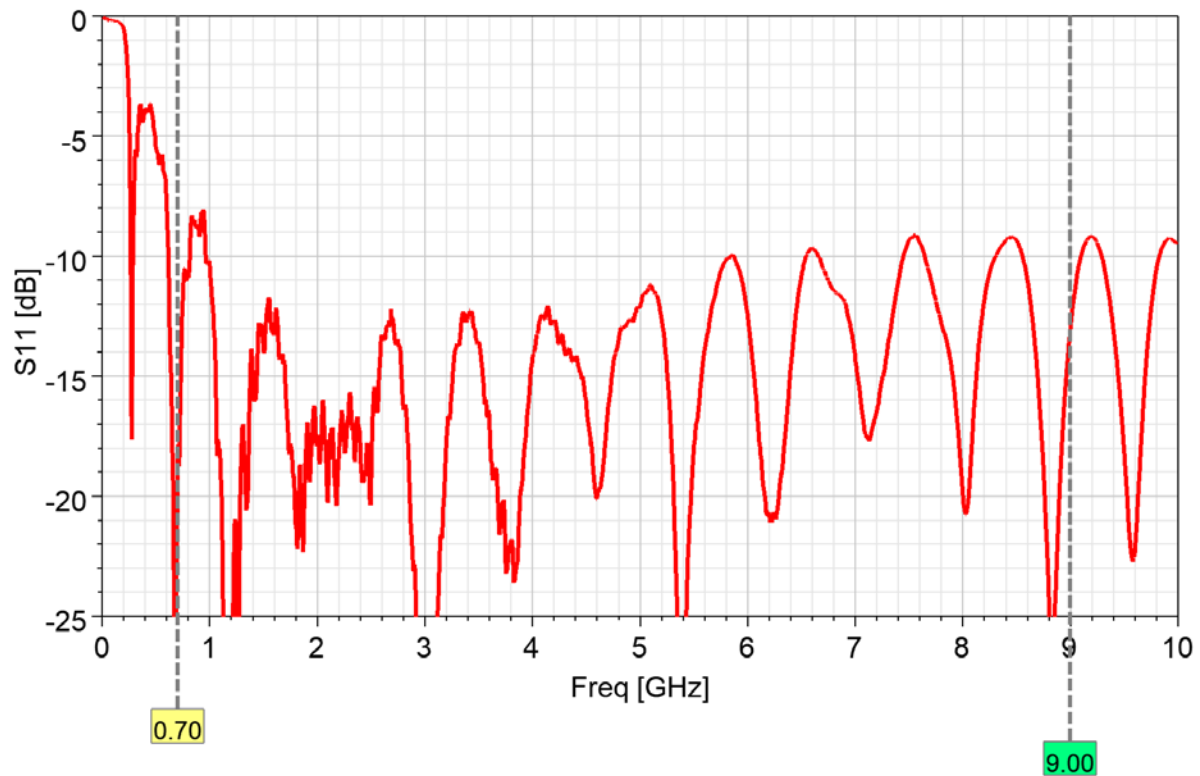
Other mechanical designs, materials or frequency bands are possible on request.

Further customization, electromagnetic simulations and measurements can be offered on request.

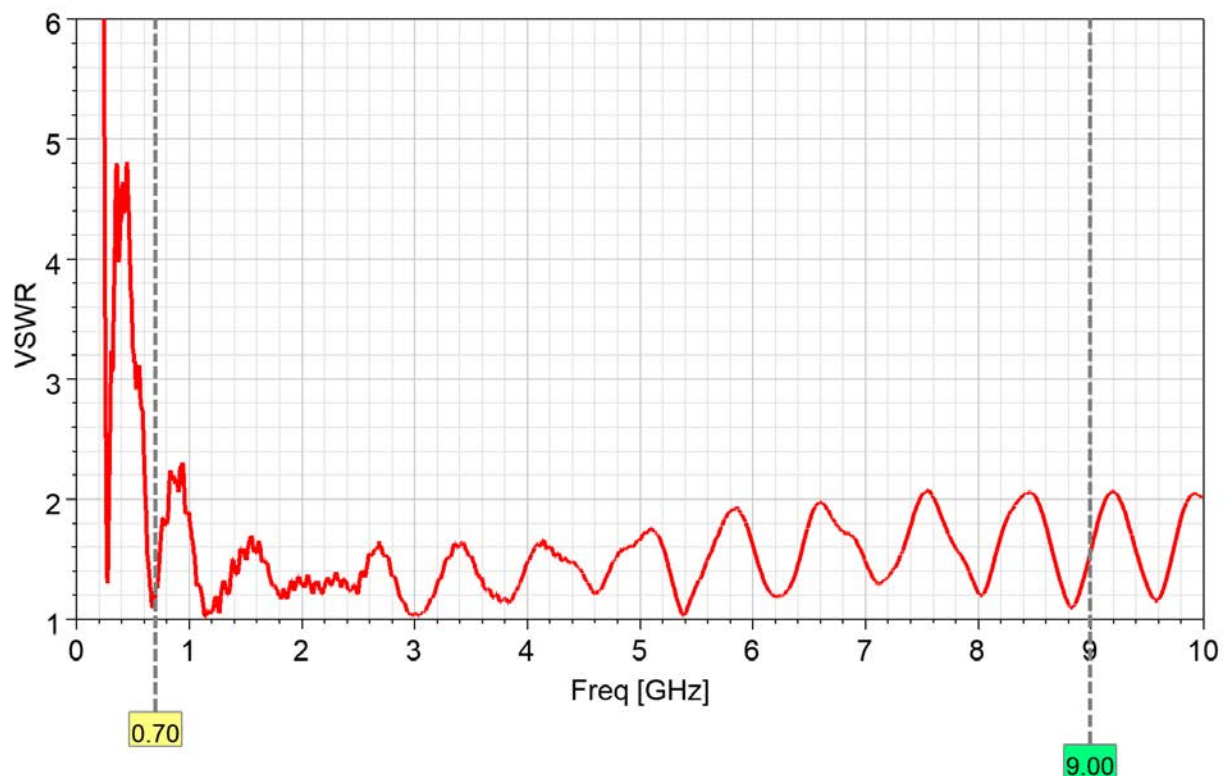
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Measured input impedance matching



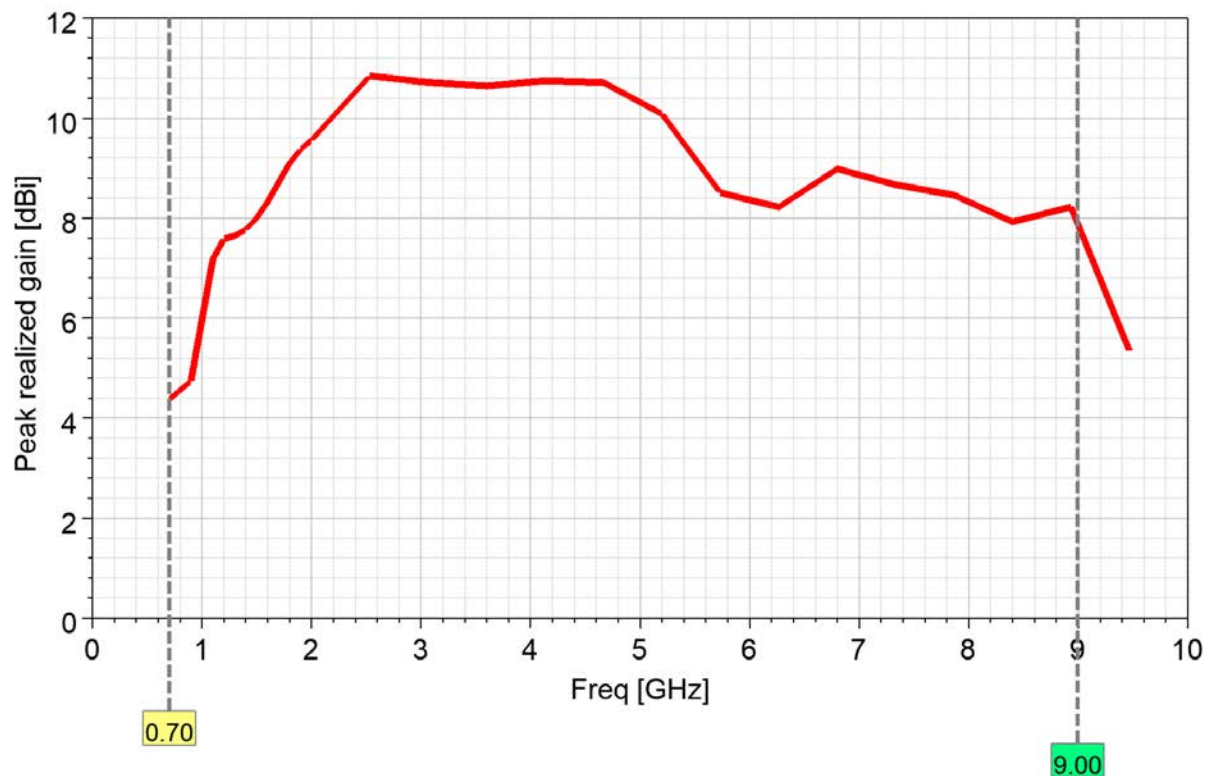
VSWR



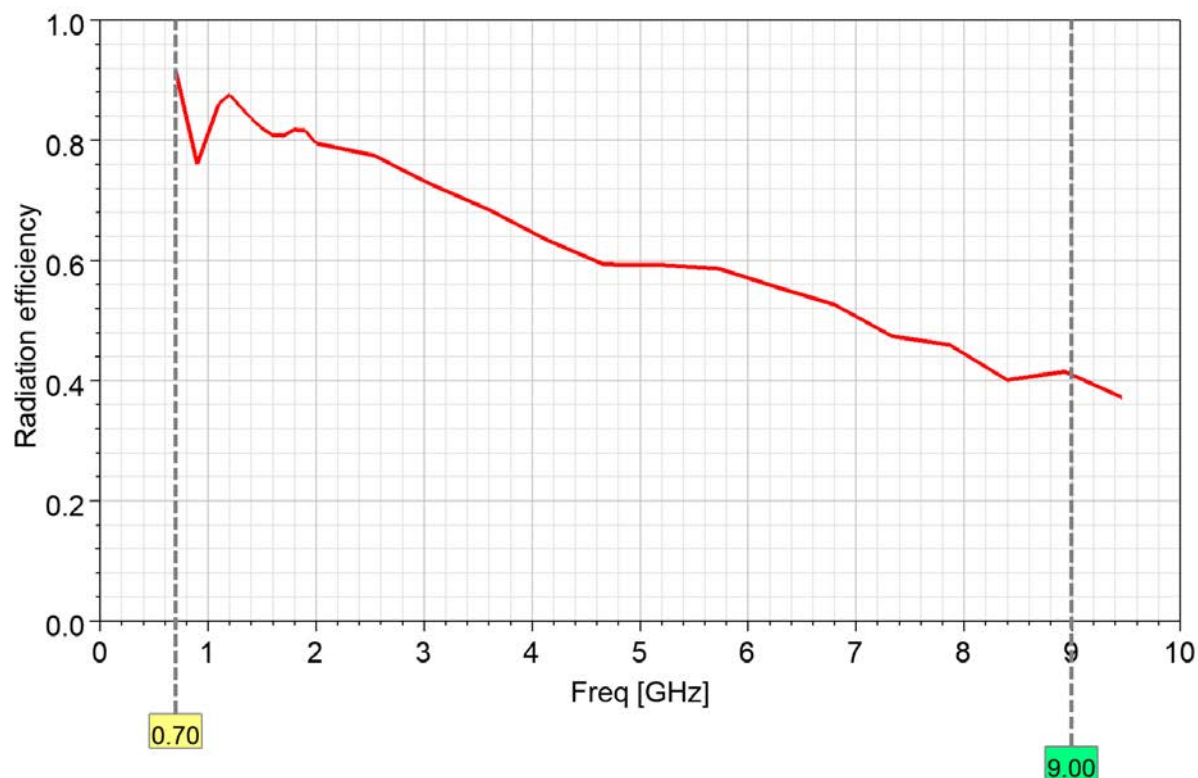
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Peak realized gain



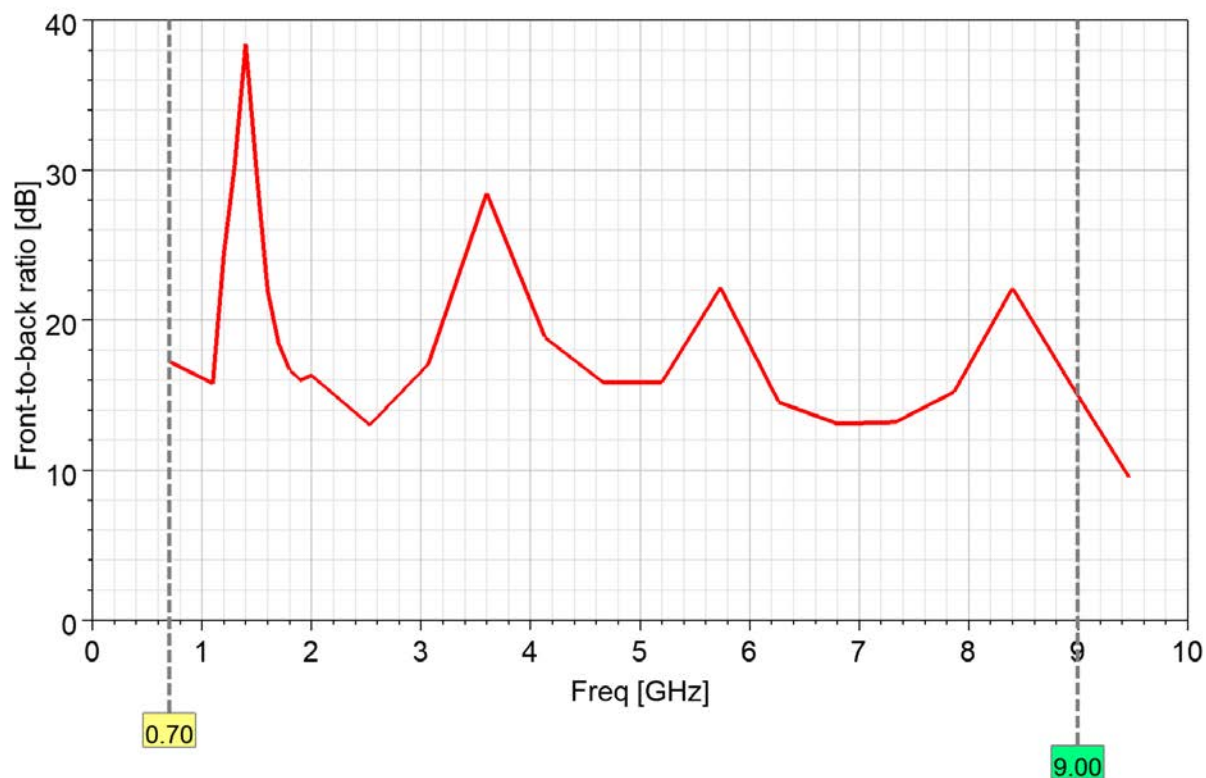
Radiation efficiency



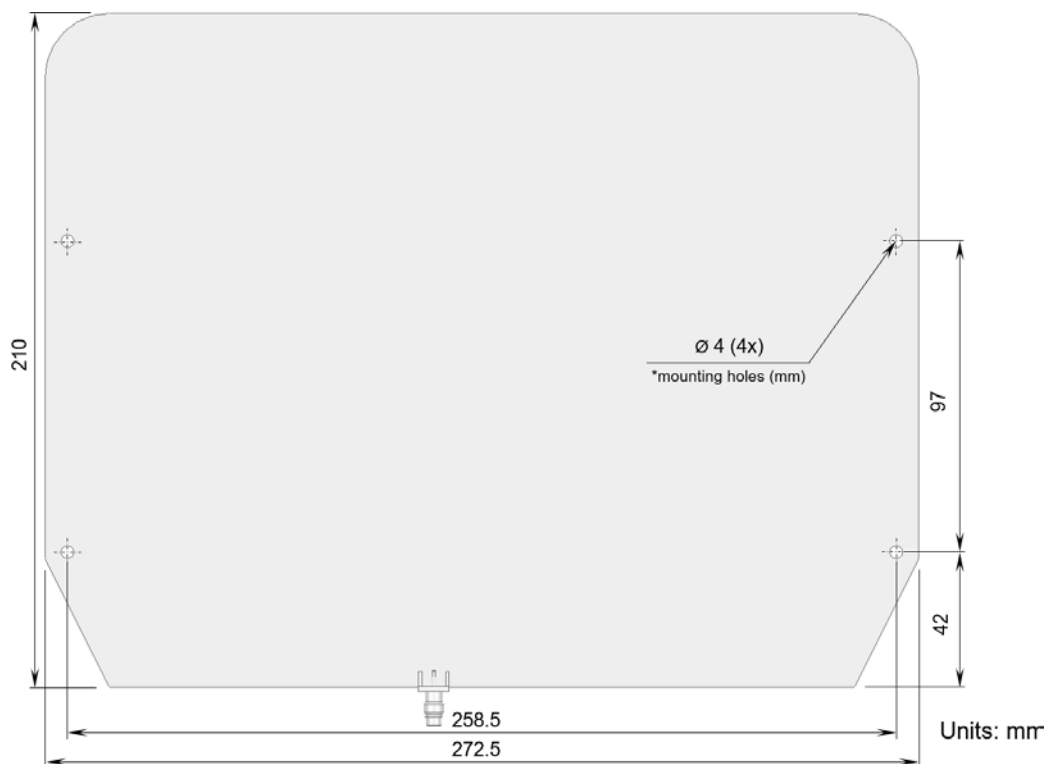
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Front-to-back ratio



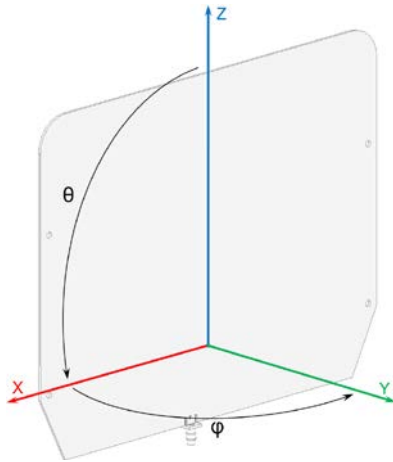
Product dimensions



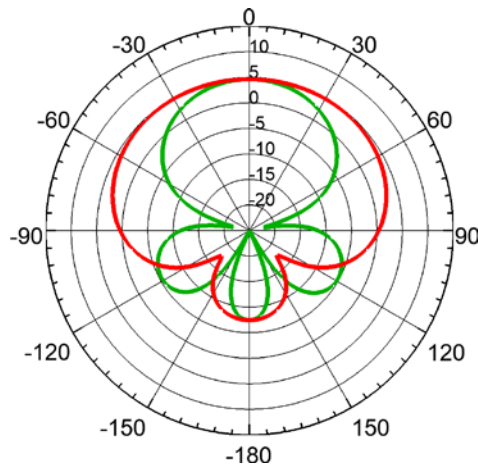
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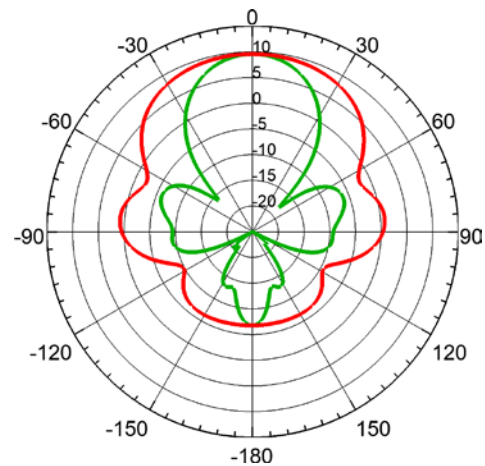
Radiation pattern



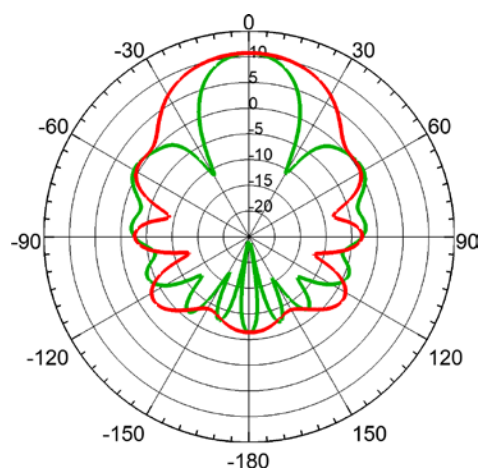
Total realized gain [dBi]
Phi=0°, plane XZ, green curve
Phi=90°, plane YZ, red curve



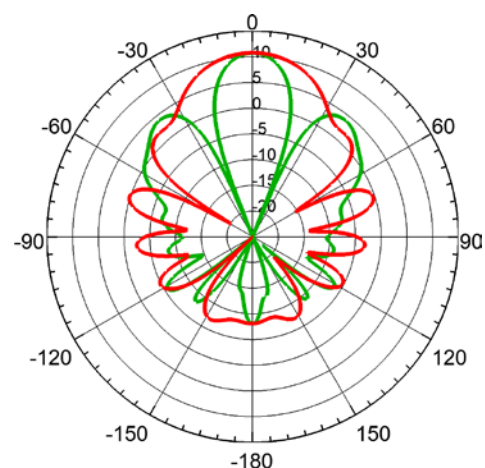
900 MHz



2000 MHz



3000 MHz

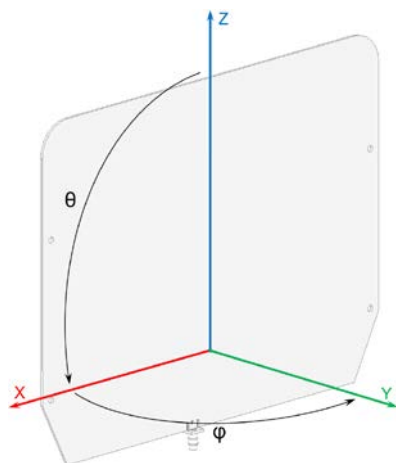


4000 MHz

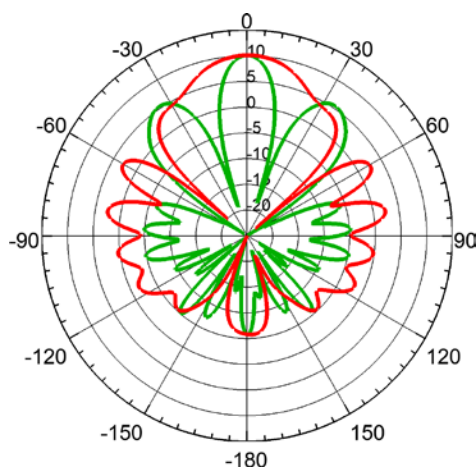
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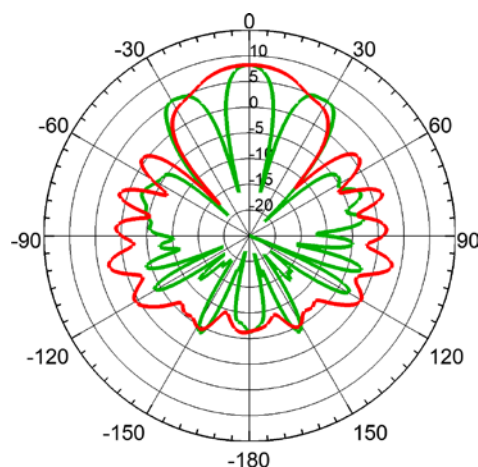
Radiation pattern



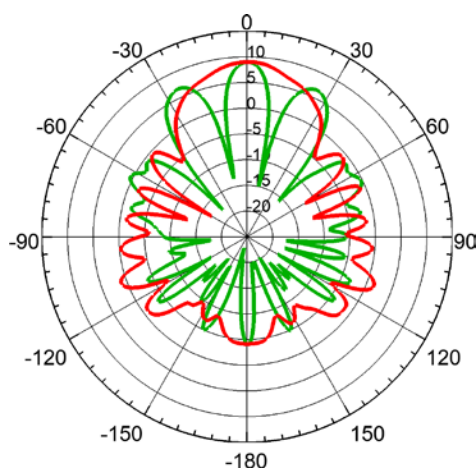
Total realized gain [dBi]
Phi=0°, plane XZ, green curve
Phi=90°, plane YZ, red curve



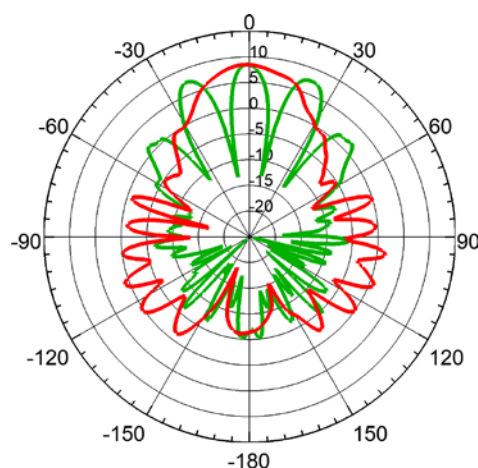
5000 MHz



6000 MHz



7000 MHz



8000 MHz

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