

868 MHz / 960 MHz / 1.427 GHz / 1.695 GHz / 2.69 GHz / 3.3 GHz / 10 GHz PCB Antenna (5G NR, LTE)



#### General information

Planar ultra-wideband Vivaldi antenna for various applications including laboratory measurements, spectrum monitoring etc.

#### Typical applications

5G NR, LTE, ISM, RFID, IoT (Sigfox, LoRa, NB-IoT), LP-WAN, Smart meters, Bluetooth, Wi-Fi 2.4/5/6 GHz

#### Electrical data

Antenna type	External / internal PCB antenna				
5G bands	1, 2, 3, 5, 7, 8, 18, 25, 30, 34, 38, 39, 40, 41, 46 - 48, 50, 53, 65, 66, 70, 77 - 79, 80 - 82, 84, 86, 90, 95, 97, 98				
4G bands	1 - 11, 18, 19, 21 - 25, 30, 32 - 43, 46 - 53, 65, 66, 69, 70, 74 - 76				
Other frequency bands	SRD860 (EU), ISM915 (US), GNSS, ISM2400, Wi-Fi 6 GHz, ISM5800				
Frequency range [MHz]	860...960	1427...1517	1695...2690	3300...7125	10000
Return loss [dB]	-6	-9	-14	-13	-10
Peak gain [dBi]	0.8	1.3	2.6	5.1	4.7
Radiation efficiency [%]	85	70	61	52	45
Nominal input impedance [Ohm]	50				
Polarization	linear				
Radiation pattern	directional				
Maximum input power [W]	10				

#### Mechanical data

Antenna PCB dimensions [mm]	100 x 59.9 x 0.8
Connector type <sup>1)</sup>	IPEX MHF1 / Hirose U.FL (UMCC) compatible <sup>1)</sup>
Cable type and thickness <sup>2)</sup> [mm]	micro coax 1.13 <sup>2)</sup>
Cable length <sup>3)</sup> [mm]	180 <sup>3)</sup>
PCB material	FR4

#### Environmental data

Operating temperature [°C]	-40...+85
Storage temperature [°C]	-40...+85
Ambient relative humidity [%]	0...95
RoHS / REACH compliant	yes / yes

#### Additional information

<sup>1)</sup> Other connector types can be offered on request.

<sup>2)</sup> Following cable thicknesses can be used with MHF1 connector: 0.81 mm, 1.13 mm, 1.32 mm, 1.37 mm.

<sup>3)</sup> Other cable lengths can be provided.

Antenna performance was measured using the specified cable length in free space.

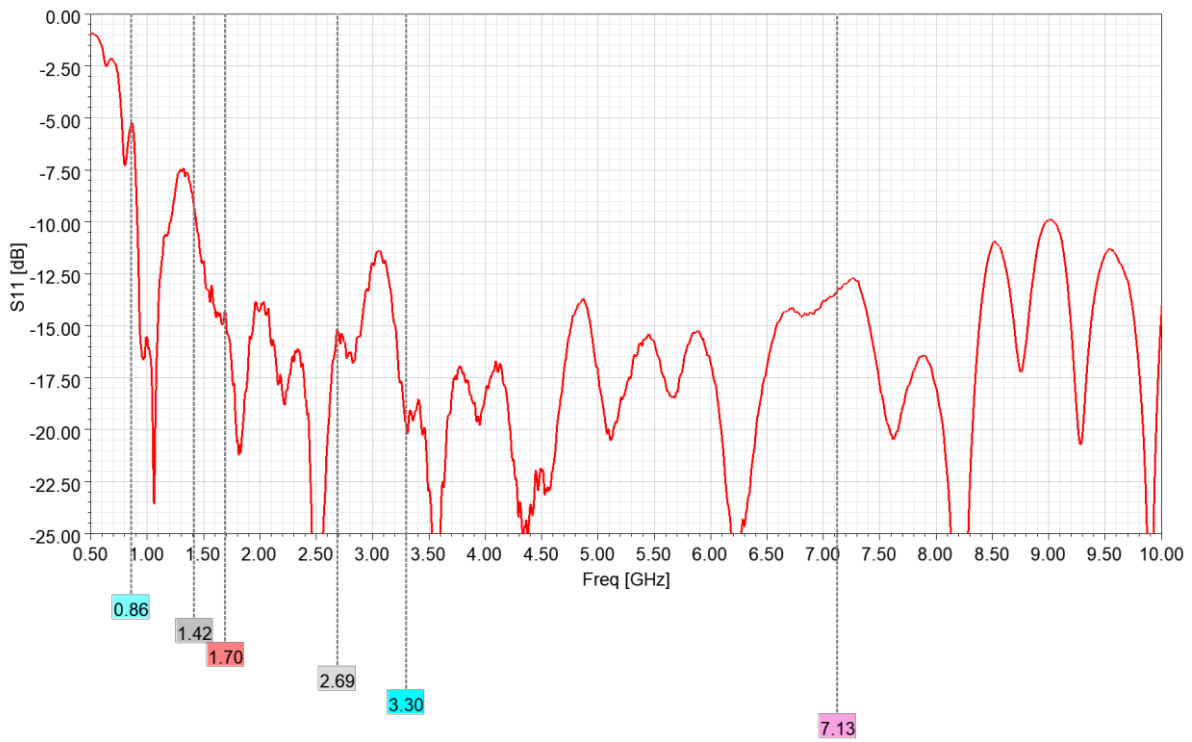
Further customization, electromagnetic simulations and measurements can be offered on request.

The antenna can be additionally equipped with adhesive tape and mounting holes.

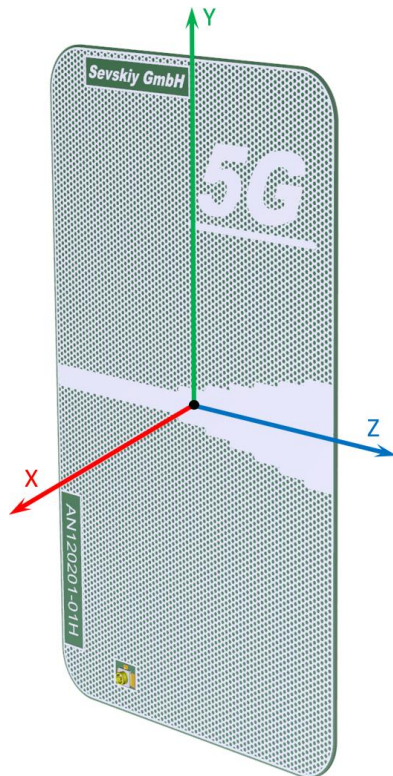
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**Measured input impedance matching**



**Coordinate system**

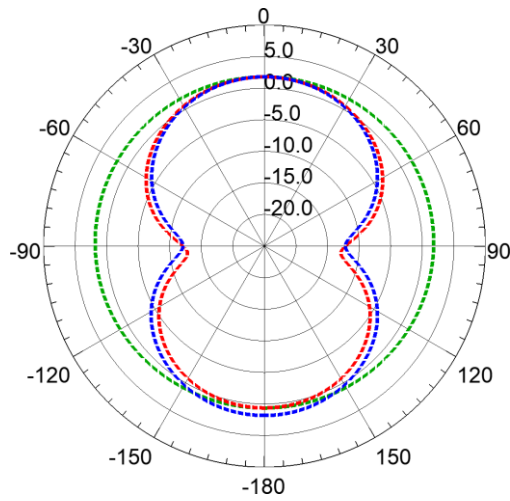


Phi=0°, plane XZ, green curve  
Phi=90°, plane YZ, red curve  
Theta=90°, plane XY, blue curve

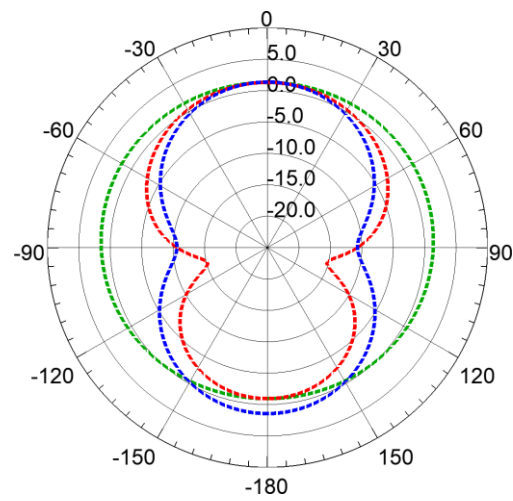
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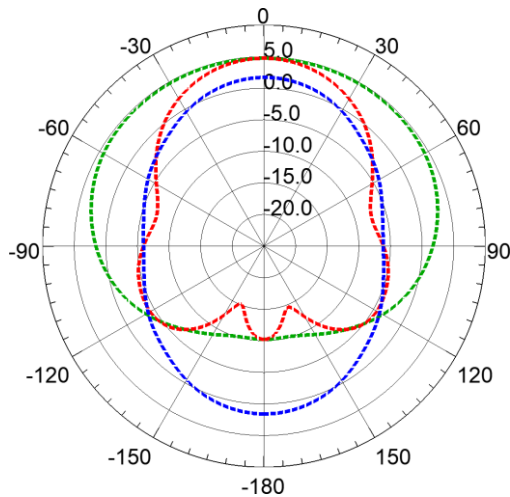
**Radiation pattern (total realized gain, dBi)**



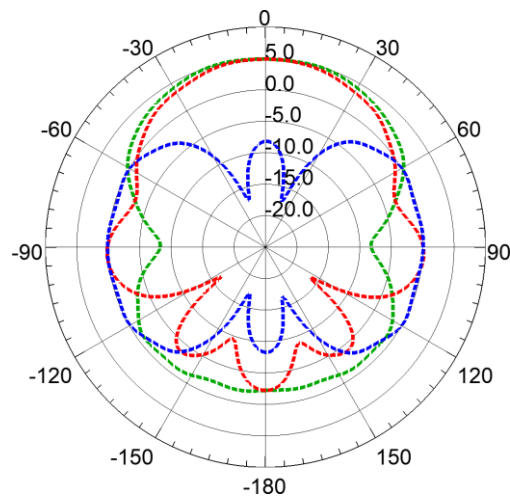
960 MHz



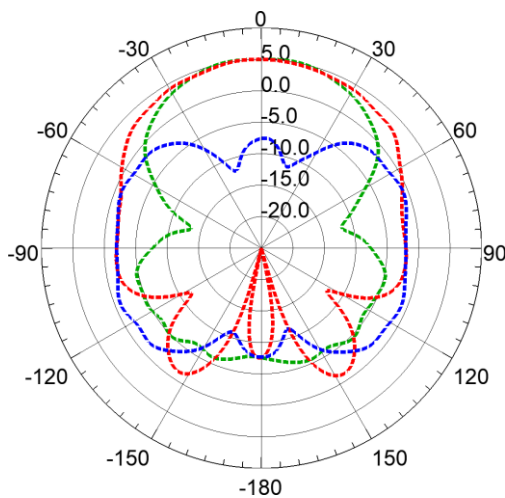
1450 MHz



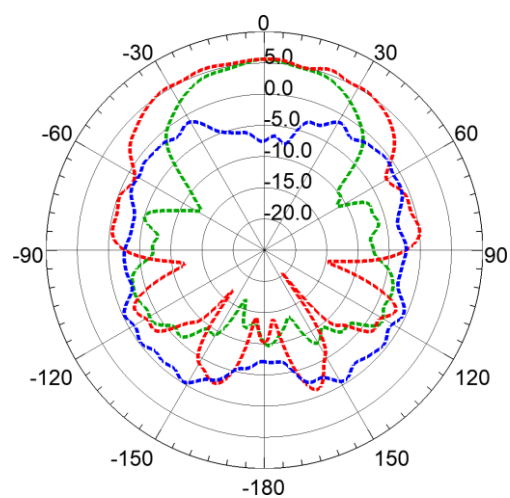
2700 MHz



4400 MHz



5500 MHz



7000 MHz

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