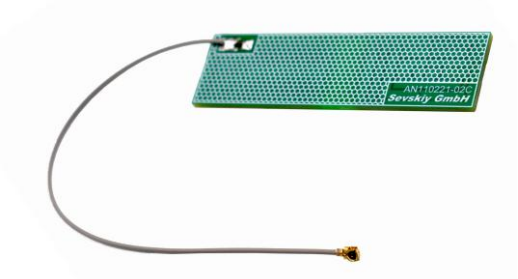
698 MHz / 960 MHz / 1695 MHz / 2700 MHz PCB Antenna (5G, LTE, Wi-Fi, IoT, WCDMA, UMTS)



General information

This small antenna is intended to be used within a plastic housing of a mobile device, a terminal or a router. On request, the antenna geometry can be optimized for customer's housing design or other requirements.

Typical applications

5G NR, LTE, GSM, CDMA, DCS, PCS, WCDMA, UMTS, HSPDA, EDGE, IMT, IoT

Electrical data

Antenna type	Embedded / internal PCB antenna	
5G bands	1 - 3, 5, 7, 8, 12 -14,18, 20, 25, 26, 28 - 30, 34, 38 - 41, 53, 65, 66, 70, 80 - 84, 86, 89, 90, 95, 97, 98	
4G bands	1 - 10, 12 -14, 17 - 20, 23, 25 - 30, 33 - 41, 44, 53, 65 - 70, 85	
Frequency range [MHz]	698...960	1695…2700
Return loss [dB]	-7	-10
Peak gain [dBi]	0.6	2.4
Radiation efficiency [%]	65	60
Nominal input impedance [Ohm]	50	
Polarization	linear	
Radiation pattern	omnidirectional	
Maximum input power [W]	5	

Mechanical data

Antenna PCB dimensions [mm]	70 x 20 x 1.6
Connector type [1)]	IPEX MHF1 / Hirose U.FL (UMCC) compatible [1)]
Cable type and thickness [2)] [mm]	micro coax 1.13 [2)]
Cable length [3)] [mm]	160 [3)]
PCB material	FR4

Environmental data

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

Additional information

[1)] Other connector types can be offered on request.

[2)] Following cable thicknesses can be used with MHF1 connector: 0.81 mm, 1.13 mm, 1.32 mm, 1.37 mm.

[3)] 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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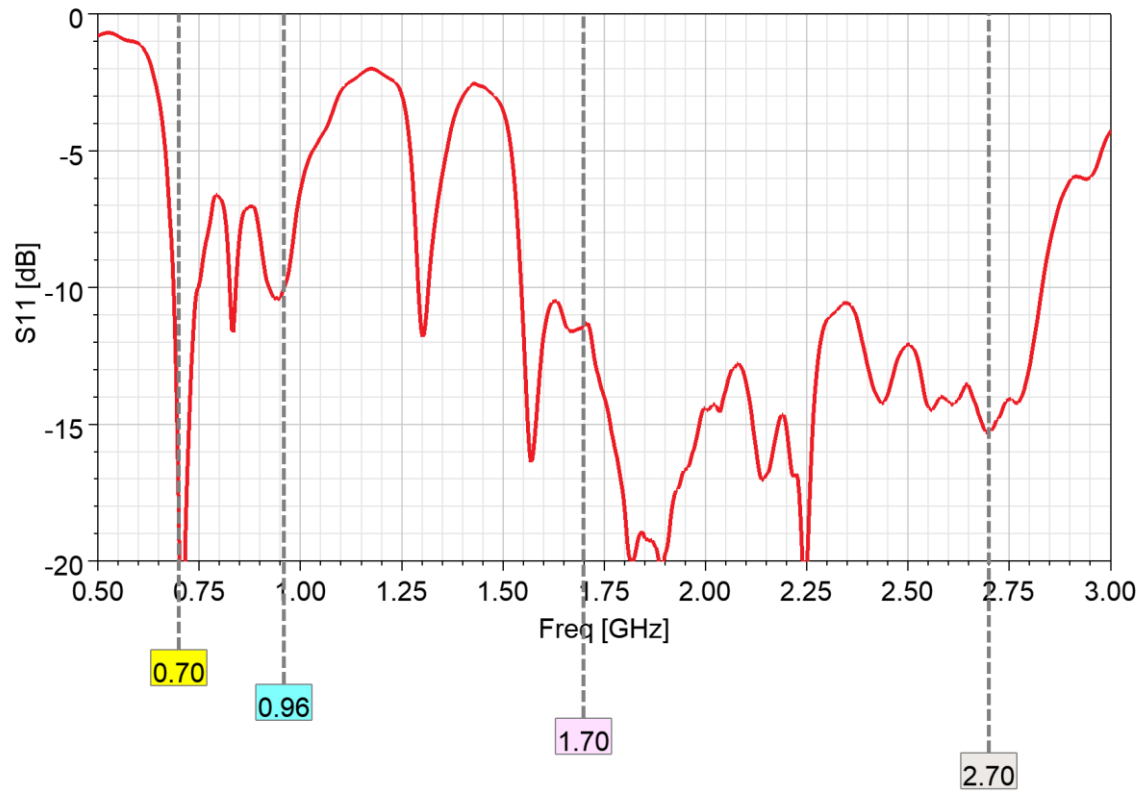
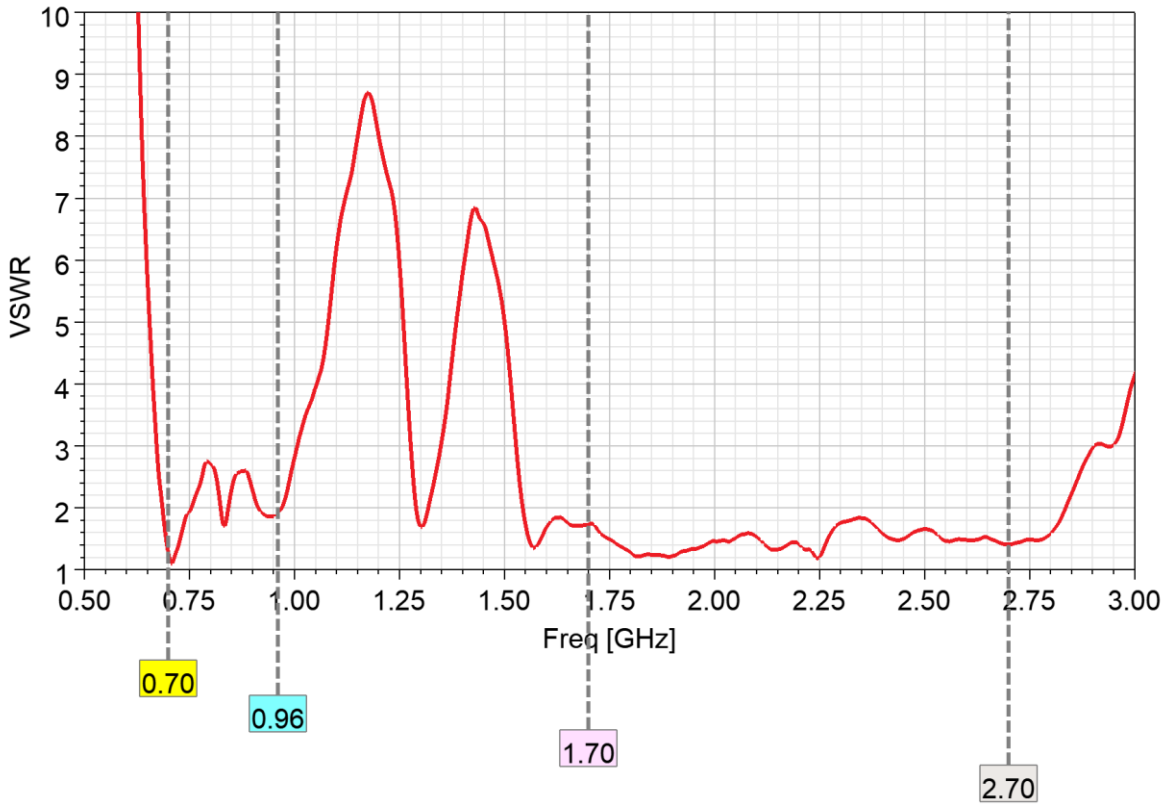
Measured input impedance matching



VSWR



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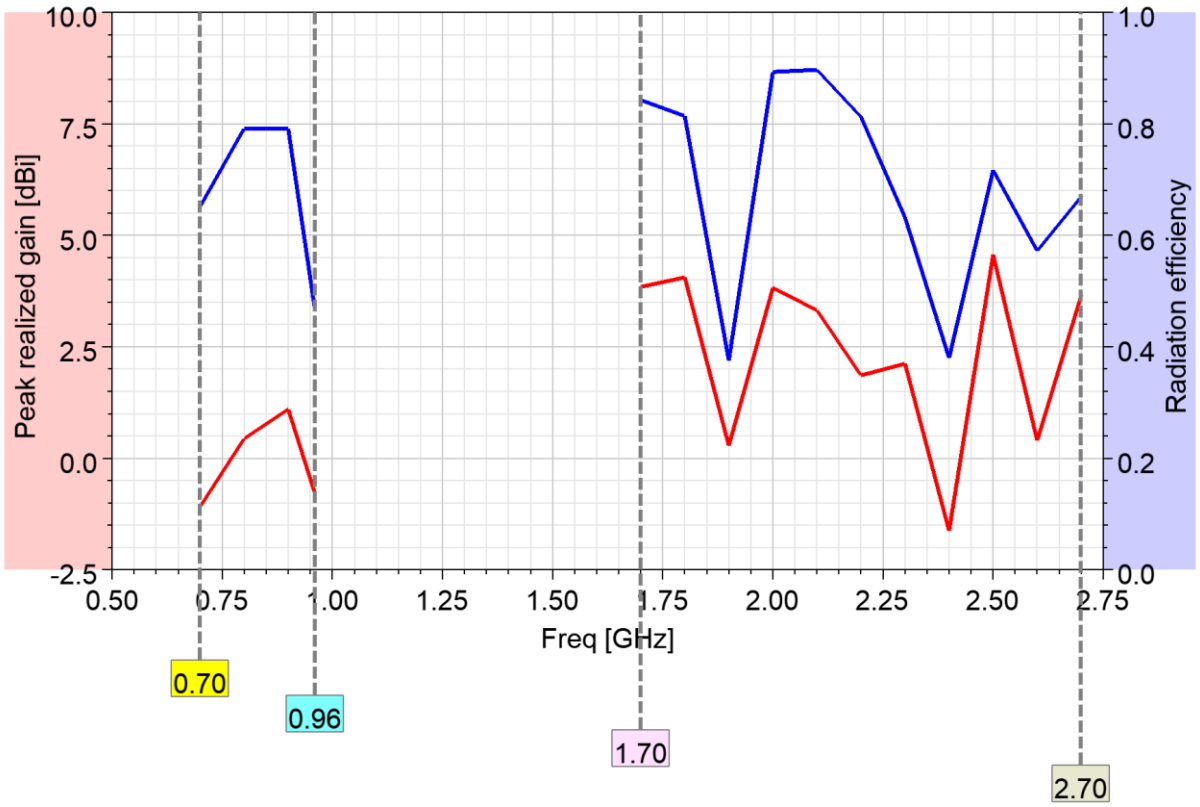
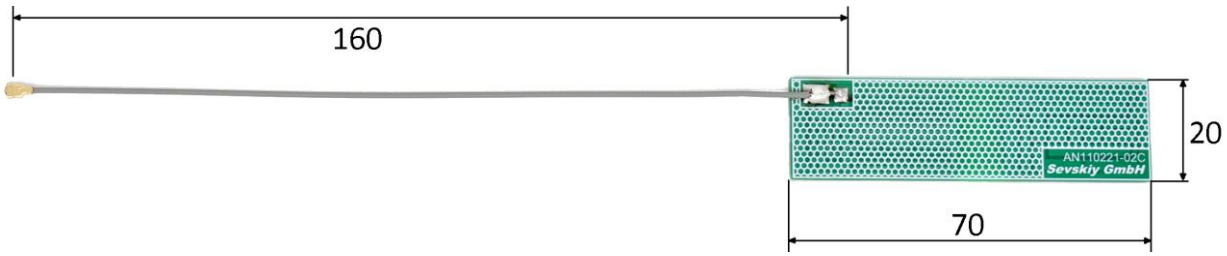
Peak realized gain and radiation efficiency



Product dimensions



Units: mm

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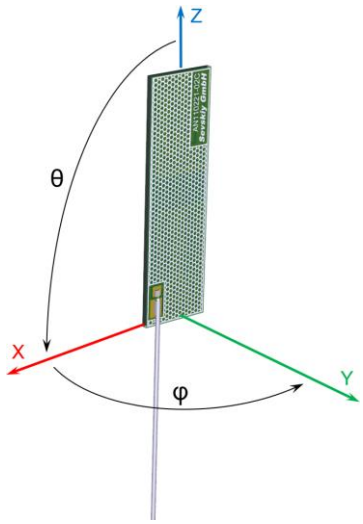
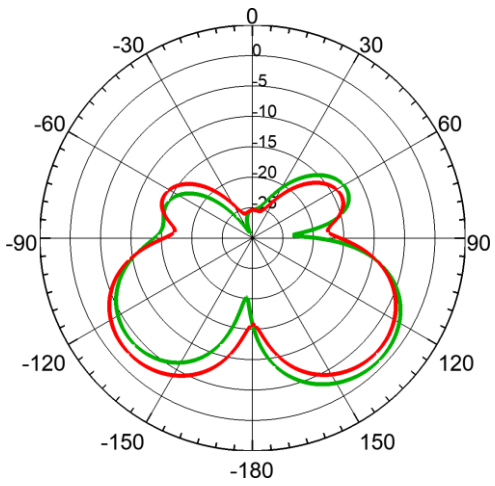
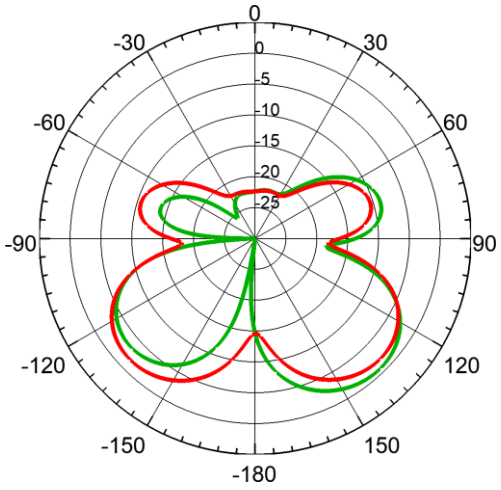
Radiation pattern (total realized gain)



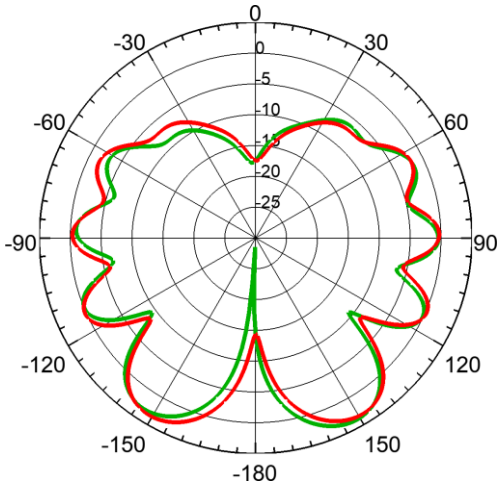
Phi=0°, plane XZ, green curve
Phi=90°, plane YZ, red curve



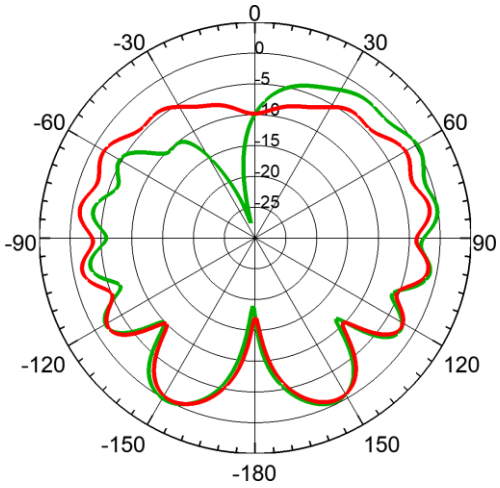
f = 700 MHz



f = 960 MHz



f = 2000 MHz



f = 2600 MHz

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