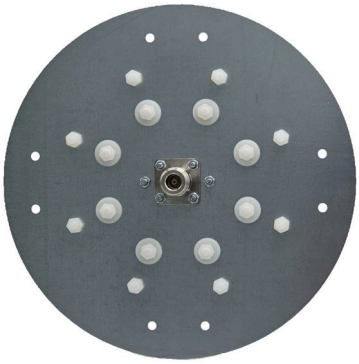
900 MHz circularly polarized helical antenna with a hemispherical radiation pattern



General information
Circularly polarized helical antenna for various applications including laboratory measurements, spectrum monitoring, drone control etc.

Typical applications
ISM, RFID, IoT (Sigfox, LoRa), LTE, Smart meters, drone control

Electrical data	
Antenna type	Helical antenna
Frequency bands	SRD860 (EU), ISM915 (US)
Frequency range [MHz]	800…1000
Return loss [dB]	-10
Peak gain [dBi]	7...9
Radiation efficiency [%]	95
Nominal input impedance [Ohm]	50
Polarization	Circular (RHCP)
Radiation pattern	directional (hemispherical)
Maximum input power [W]	100

Mechanical data	
Antenna dimensions [mm]	200 x 200 x 190
Connector type [1)]	N Female [1)]
Material	Steel, plastic, copper
Weight [g]	600

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.
Other designs, geometries or materials are possible on request.

Sevskiy GmbH, CEO: Dr. Sergey Sevskiy
Office: Schatzbogen 43, Munich, Germany

Tel.: +49 89 38-90-7229
Fax: +49 89 38-90-7230

E-Mail: sergey@sevskiy.de
Internet: www.sevskiy.com

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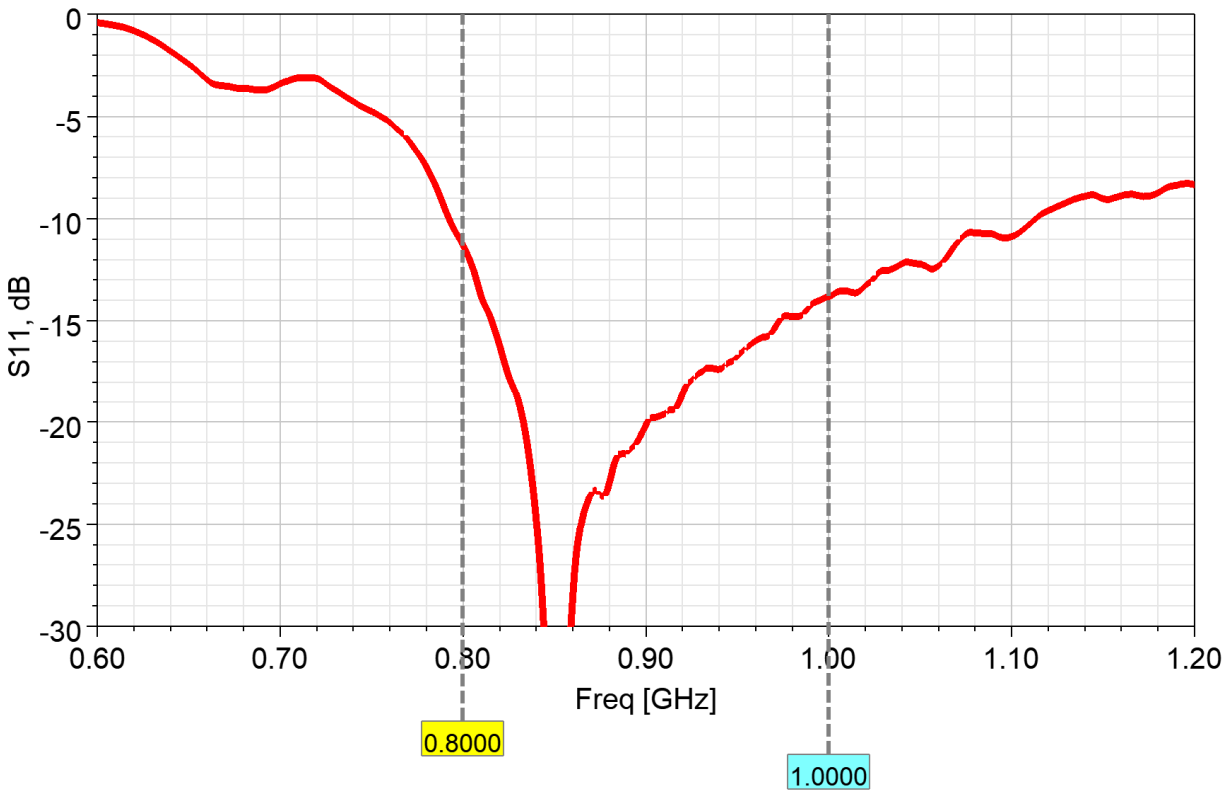
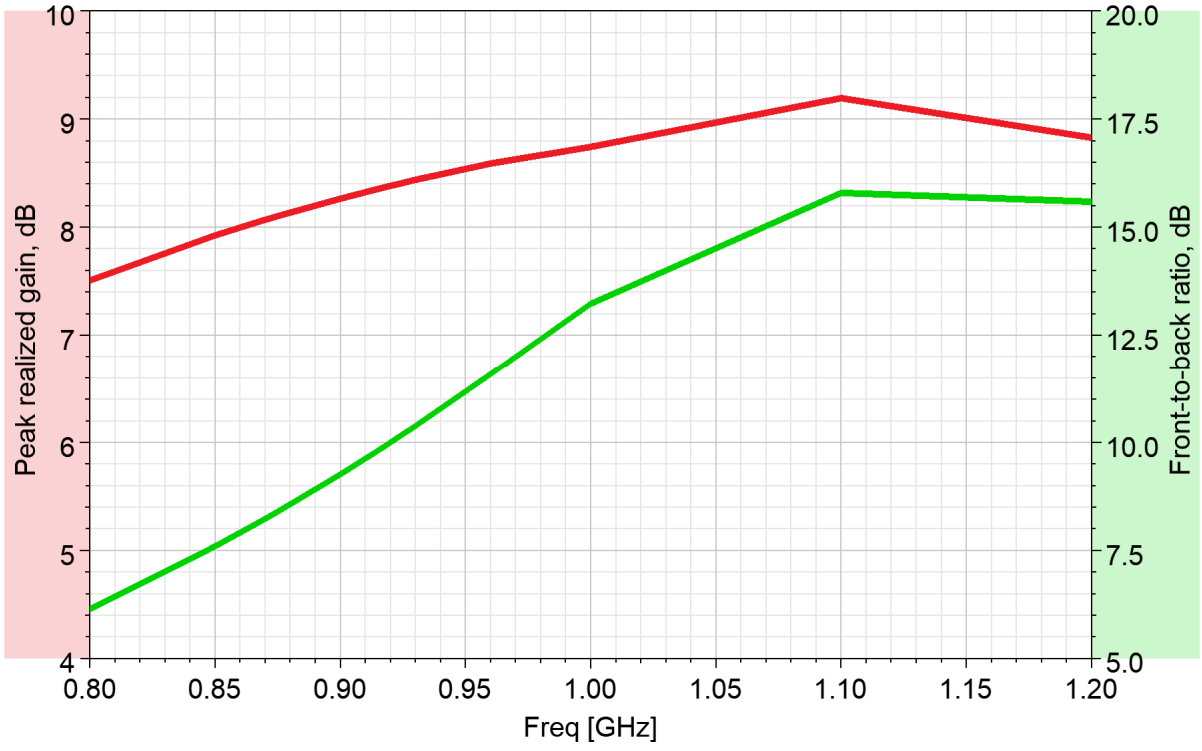
Measured input impedance matching



Peak realized gain and front-to-back ratio



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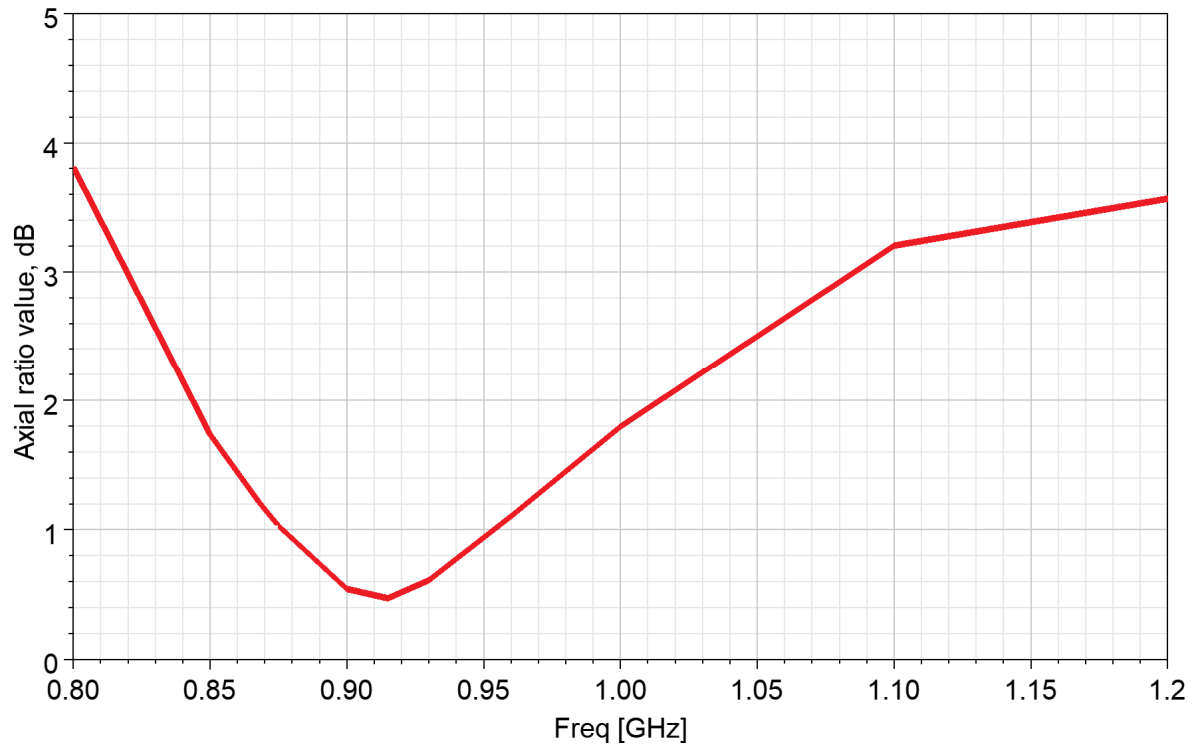
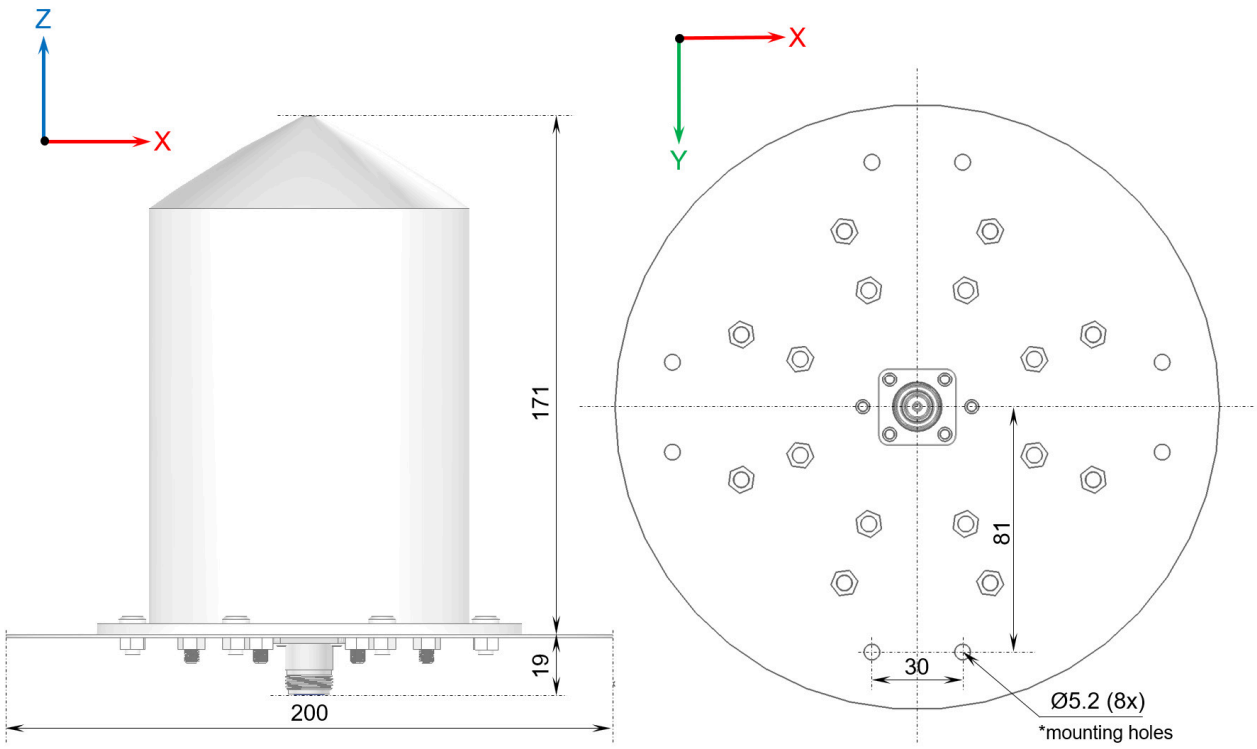
Axial ratio value



Product dimensions



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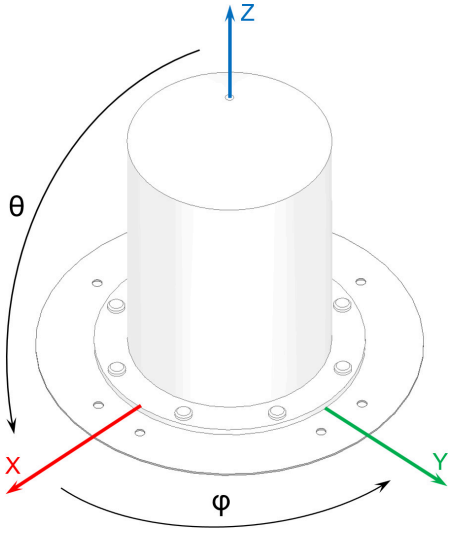
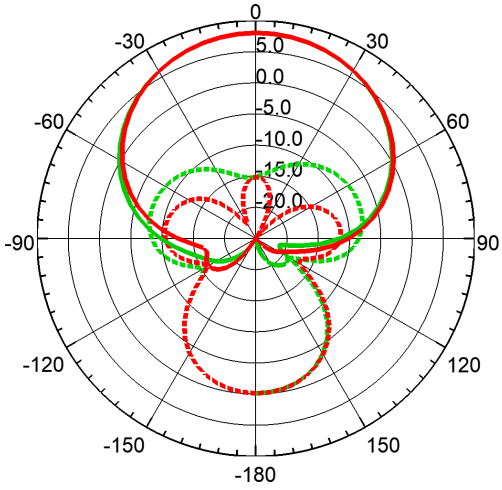
Radiation pattern (total realized gain)

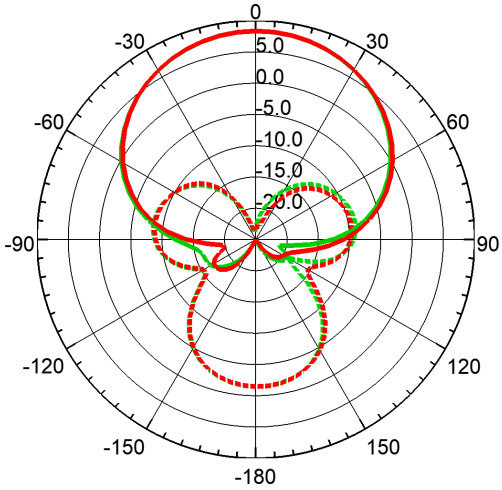


Phi=0°, plane XZ, green curve
Phi=90°, plane YZ, red curve

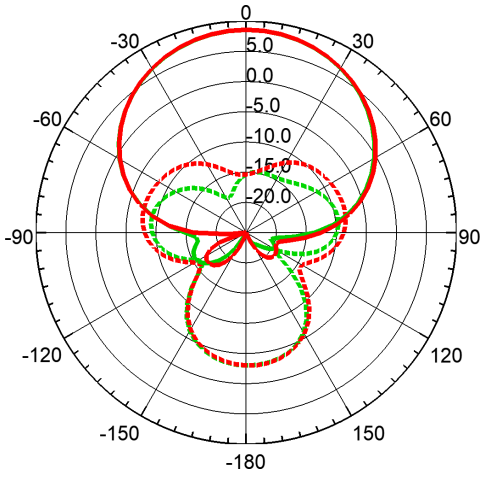
Solid curves – co-polarization RHCP
Dash curves – cross-polarization LHCP



f = 868 MHz



f = 915 MHz



f = 960 MHz

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