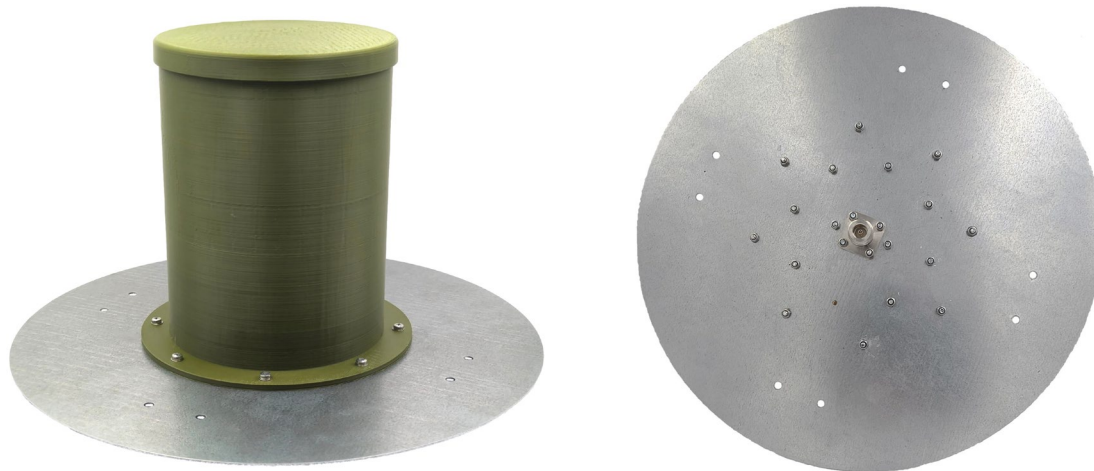


680...1150 MHz Circularly polarized helical antenna (ISM, RFID, IoT, LoRa, Smart meters)



General information

The AN220212-02N is a right-hand circularly polarized (RHCP) helical antenna designed for wideband operation in the 680...1150 MHz frequency range. The broadband helical structure provides stable circular polarization and a directional radiation pattern with moderate gain across the entire operating band, ensuring reliable communication in multipath environments and reducing sensitivity to polarization mismatch and antenna orientation.

It is suitable for ISM, RFID, LPWAN, and IoT systems operating in the UHF band and is particularly effective for drone command, control, and telemetry links, where circular polarization improves link stability during flight maneuvers. Typical applications include UAV ground stations, spectrum monitoring systems, wireless sensor networks, smart metering, industrial telemetry, and remote monitoring systems. Additional use cases cover experimental radio platforms and laboratory test setups.

The robust mechanical design and standard RF connector enable easy integration into both fixed and mobile installations.

Electrical data

Antenna type	Helical antenna
Frequency bands	SRD860, ISM915, RFID, IoT, UAV
Frequency range [MHz]	680...1150
Return loss [dB]	-10
Peak gain [dBi]	7.5...10
Radiation efficiency [%]	70...97
Nominal input impedance [Ohm]	50
Polarization	Circular (RHCP)
Radiation pattern	directional
Maximum input power [W]	100

Mechanical data

Antenna dimensions [mm]	300 x 300 x 188
Connector type ¹⁾	N Female panel ¹⁾
Material	Steel, plastic, copper
Weight [g]	925

Additional information

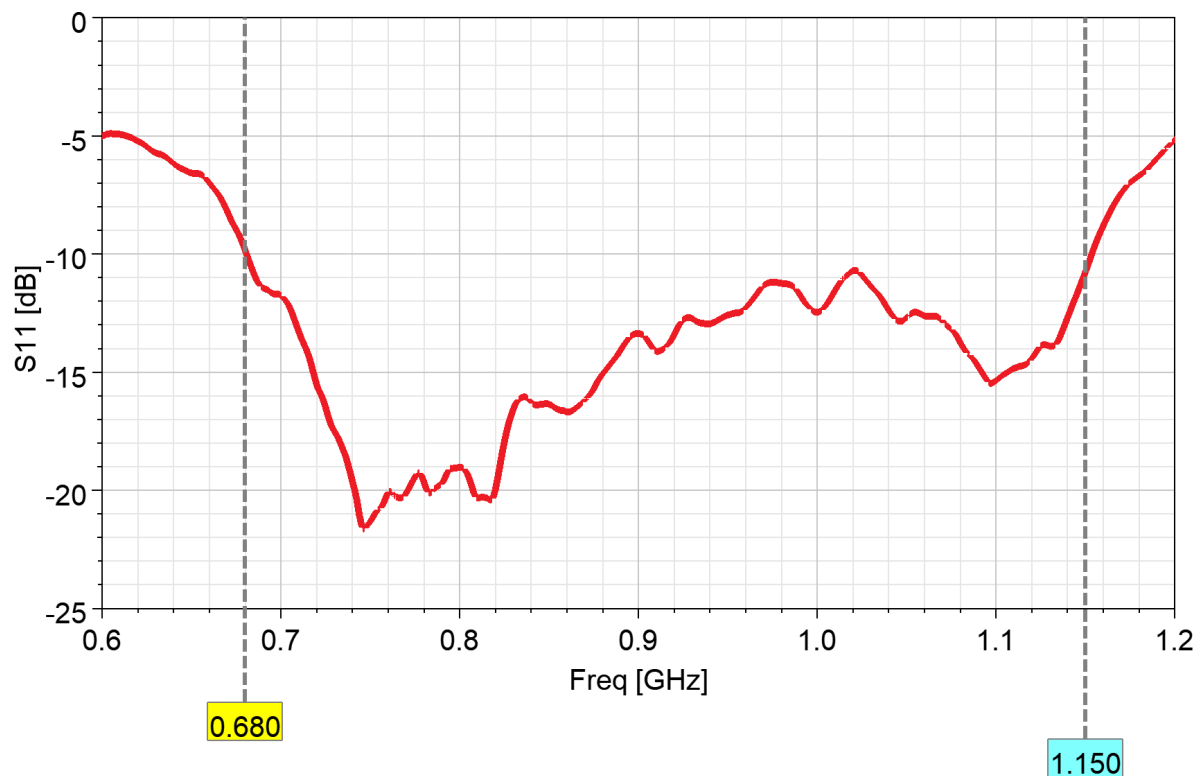
¹⁾ Other connector types can be offered on request.

Other designs, geometries or materials are possible on request.

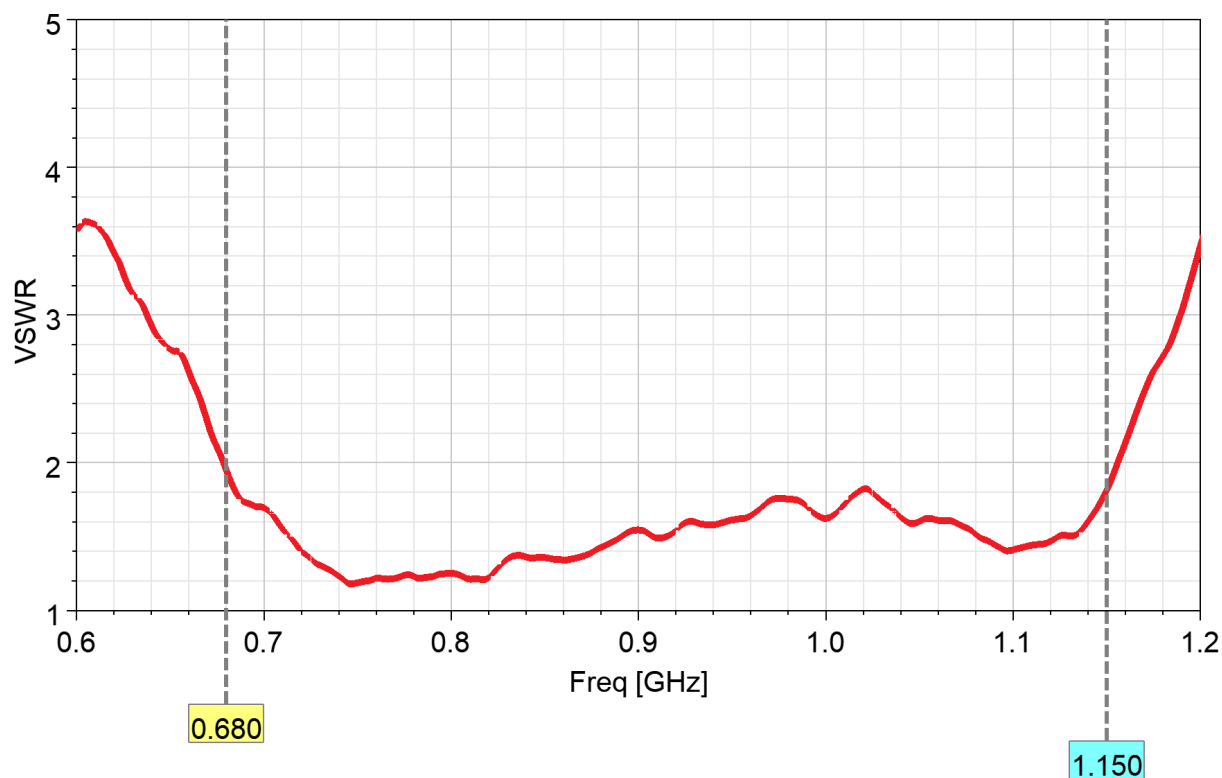
All information (including technical data and pictures) presented in this document is typical and subject to change without notice. Sevskiy is a registered trade mark of Sevskiy GmbH. Copyright © 2009 – 2026 Sevskiy GmbH. All rights reserved. No warranties.

680...1150 MHz Circularly polarized helical antenna (ISM, RFID, IoT, LoRa, Smart meters)

Measured input impedance matching



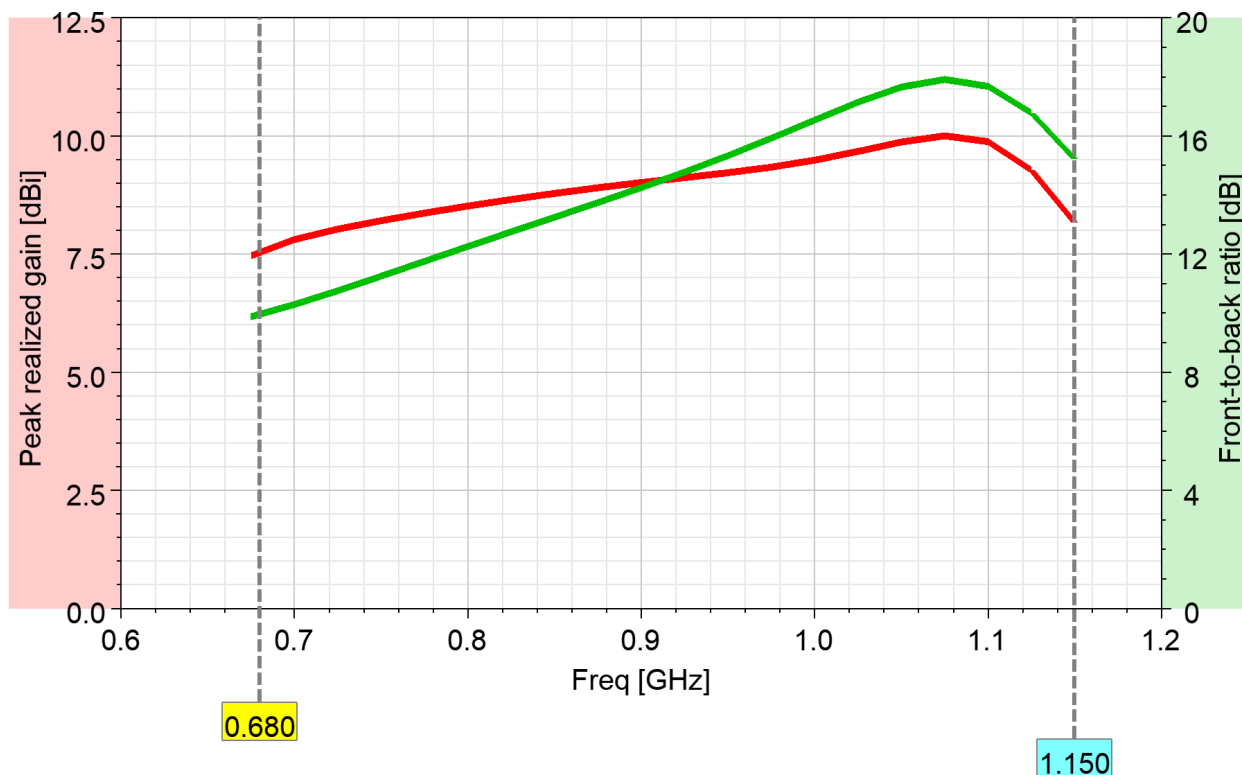
VSWR



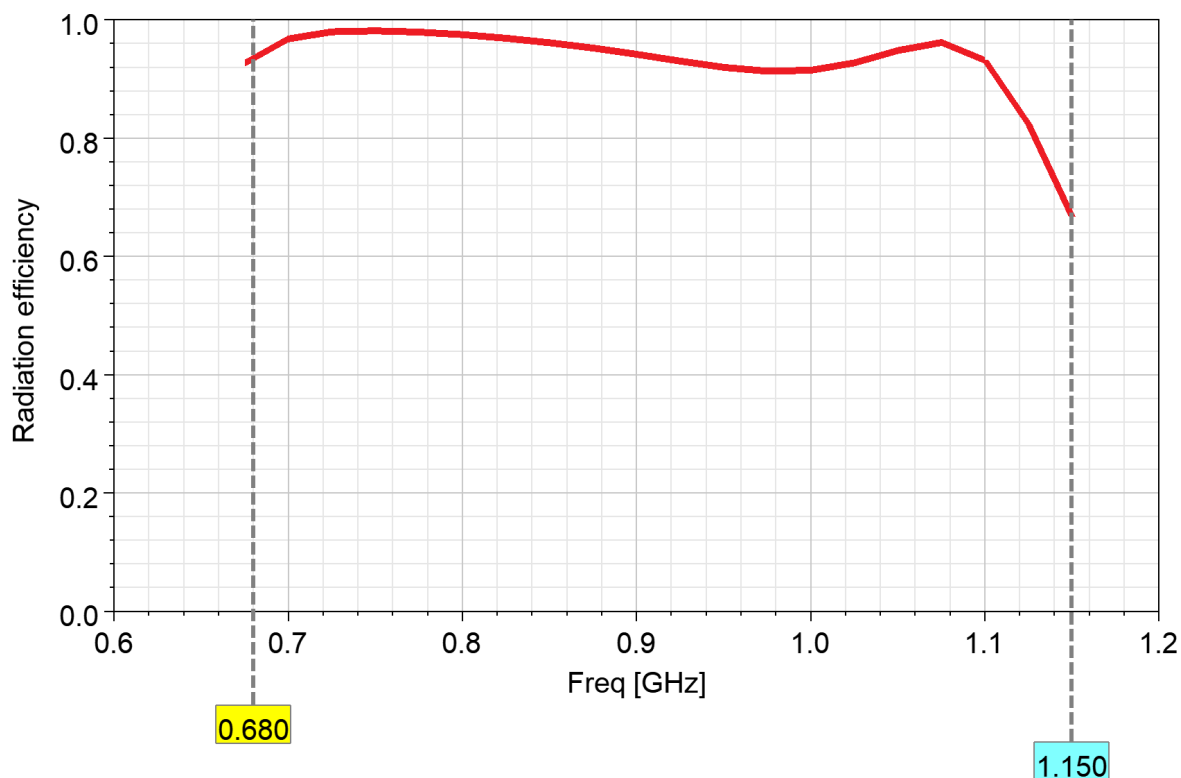
All information (including technical data and pictures) presented in this document is typical and subject to change without notice. Sevskiy is a registered trade mark of Sevskiy GmbH. Copyright © 2009 – 2026 Sevskiy GmbH. All rights reserved. No warranties.

680...1150 MHz Circularly polarized helical antenna (ISM, RFID, IoT, LoRa, Smart meters)

Peak realized gain and front-to-back ratio



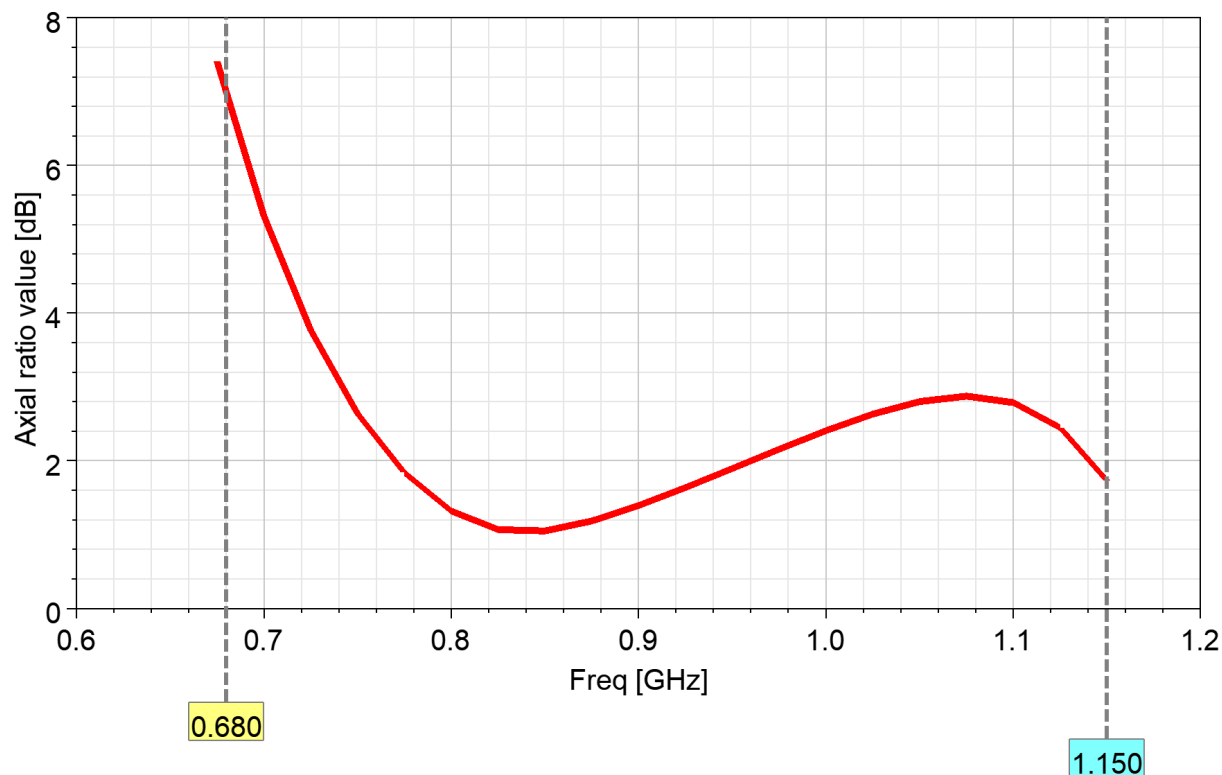
Radiation efficiency



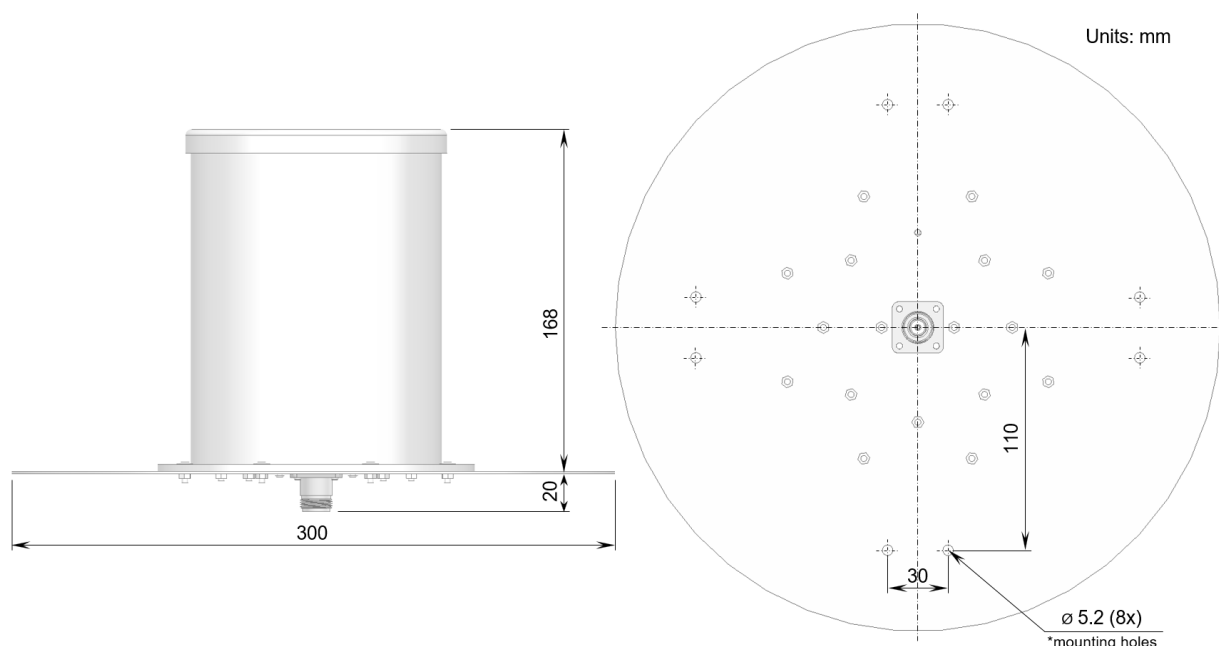
All information (including technical data and pictures) presented in this document is typical and subject to change without notice. Sevskiy is a registered trade mark of Sevskiy GmbH. Copyright © 2009 – 2026 Sevskiy GmbH. All rights reserved. No warranties.

680...1150 MHz Circularly polarized helical antenna (ISM, RFID, IoT, LoRa, Smart meters)

Axial ratio value



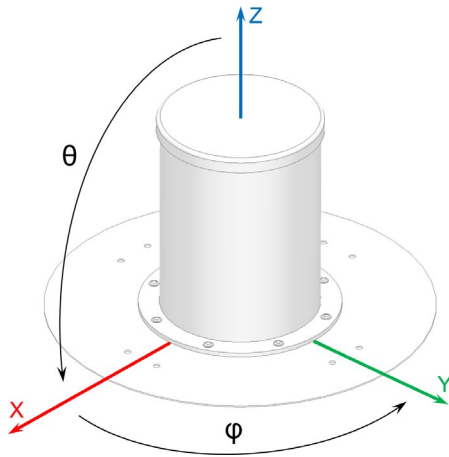
Product dimensions



All information (including technical data and pictures) presented in this document is typical and subject to change without notice. Sevskiy is a registered trade mark of Sevskiy GmbH. Copyright © 2009 – 2026 Sevskiy GmbH. All rights reserved. No warranties.

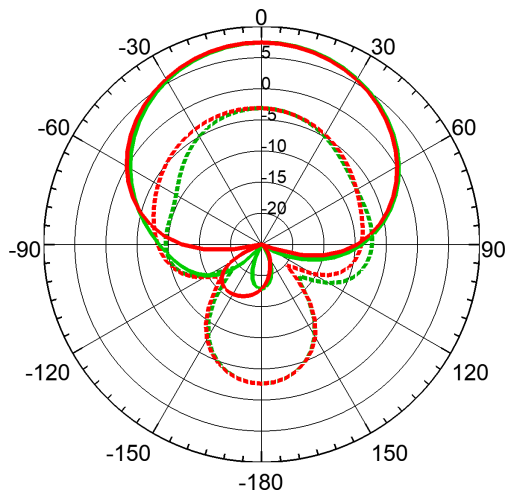
680...1150 MHz Circularly polarized helical antenna (ISM, RFID, IoT, LoRa, Smart meters)

Radiation pattern

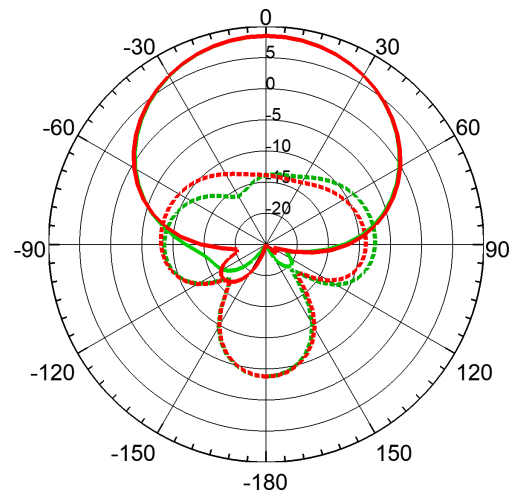


Total realized gain [dBi]
Phi=0°, plane XZ, green curve
Phi=90°, plane YZ, red curve

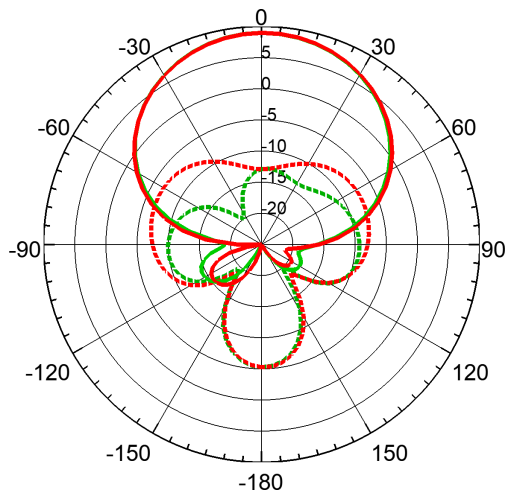
Solid curves – co-polarization RHCP
Dash curves – cross-polarization LHCP



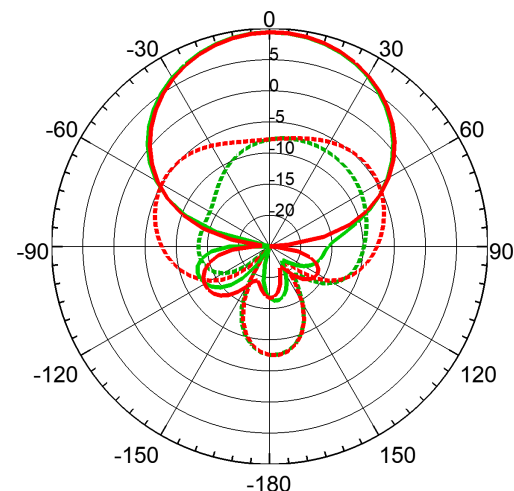
700 MHz



800 MHz



900 MHz



1000 MHz

All information (including technical data and pictures) presented in this document is typical and subject to change without notice. Sevskiy is a registered trade mark of Sevskiy GmbH. Copyright © 2009 – 2026 Sevskiy GmbH. All rights reserved. No warranties.