

863...924 MHz / 1559...1610 MHz / 2410...2485 MHz PCB Antenna (ISM, IoT, GNSS, Wi-Fi 2.4 GHz)



General information

The AN150201-03H is a compact multi-band PCB antenna designed for integration into the different electronic devices such as IoT terminals, GNSS trackers, routers, wireless sensors, and various telemetry equipment. It supports SRD860/ISM915, GNSS upper L-band (1559...1610 MHz), and the 2400 MHz ISM/Wi-Fi band, ensuring dependable operation across multiple modern wireless communication systems. The antenna is manufactured on an FR-4 substrate and features an I-PEX MHF1 / Hirose U.FL (UMCC) compatible connector for quick and reliable integration into RF modules, communication boards, and space-restricted electronic assemblies. Its broadband characteristics, linear polarization, and omnidirectional radiation pattern make it suitable for a wide range of applications, including ISM, RFID, LP-WAN, IoT (LoRa, Sigfox), GNSS positioning and tracking, industrial monitoring, smart meters, wireless sensors, and Wi-Fi 2.4 GHz connectivity.

Electrical data

Antenna type	Embedded / internal PCB antenna		
Frequency band	SRD860, ISM915, ISM2400, GNSS		
Frequency range [MHz]	863...924	1559...1610	2410...2485
Return loss [dB]	-10	-6	-12
Peak gain [dBi]	0...1	-3...-1	2.5...3.5
Radiation efficiency [%]	85	30...40	65...73
Nominal input impedance [Ohm]	50		
Polarization	linear		
Radiation pattern	omnidirectional		
Maximum input power [W]	5		

Mechanical data

Antenna PCB dimensions [mm]	43 x 20 x 1
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]	175 ³⁾
PCB material	FR4

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⁾ Recommended length. Cable is not included but can be customized and provided separately.

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

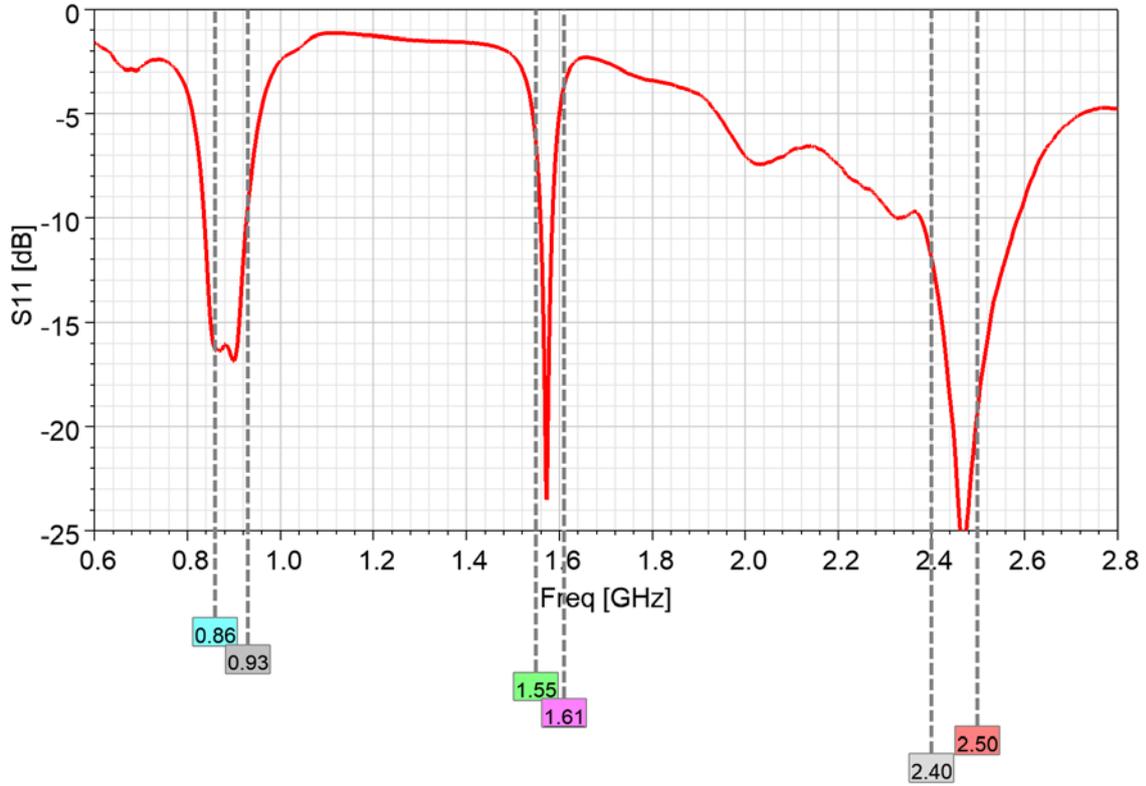
Further customization, electromagnetic simulations and measurements can be offered on request.

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

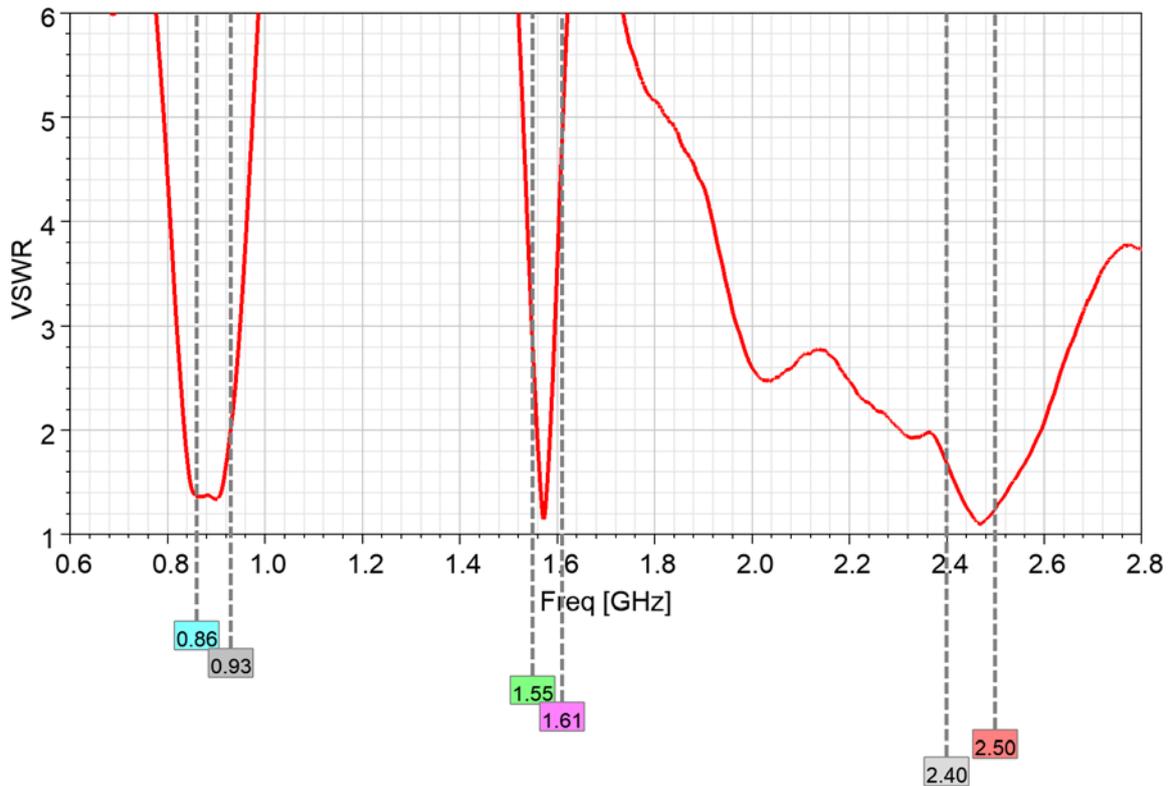
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Measured input impedance matching

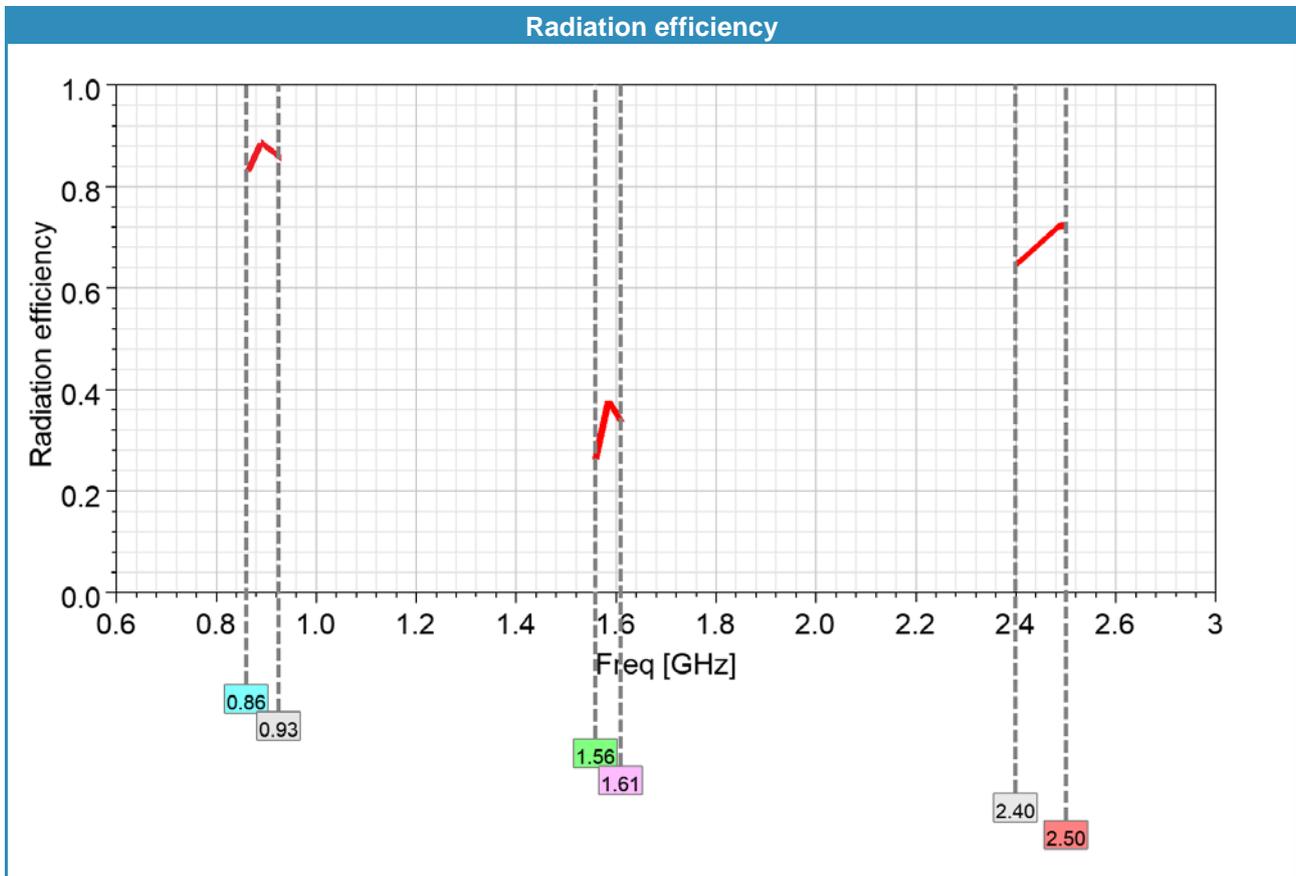
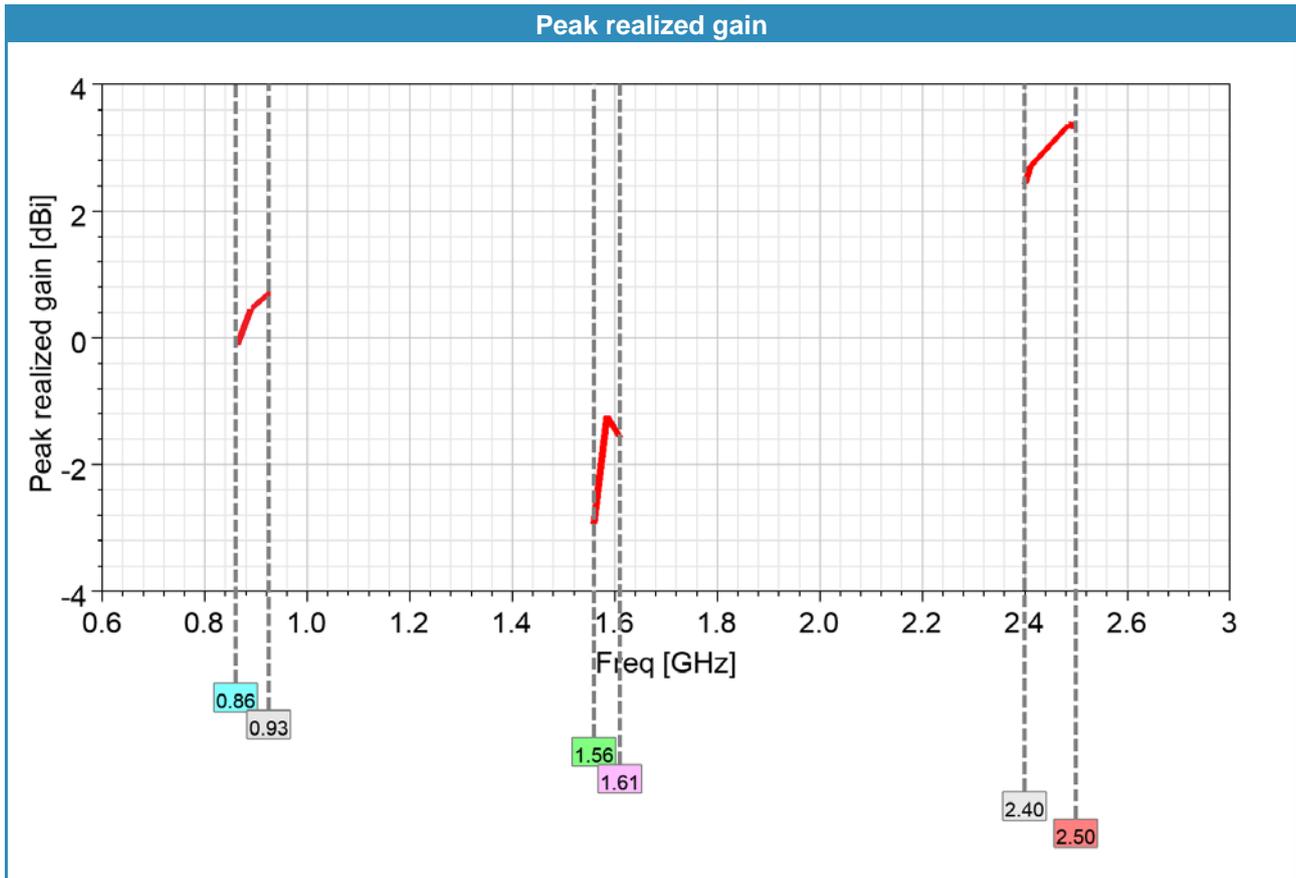


VSWR



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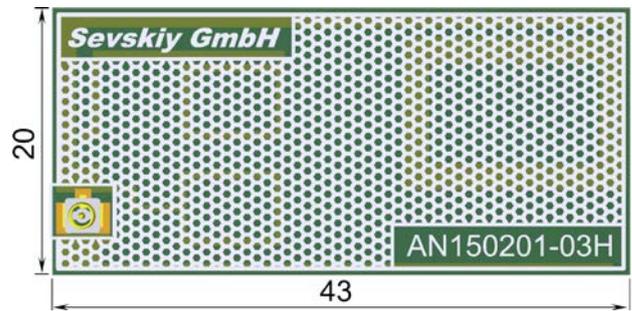
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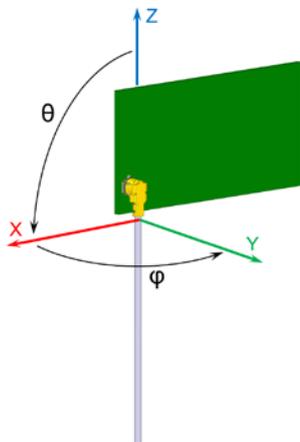
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Product dimensions

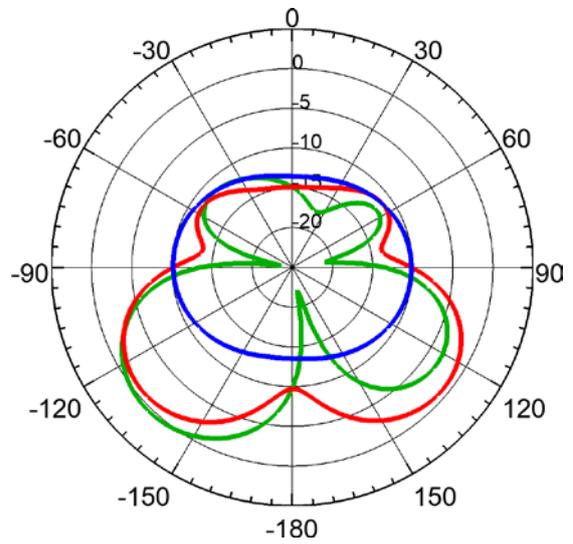


Units: mm

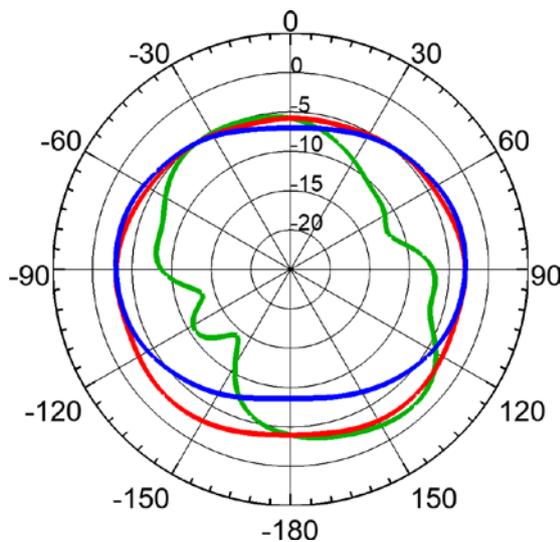
Radiation pattern



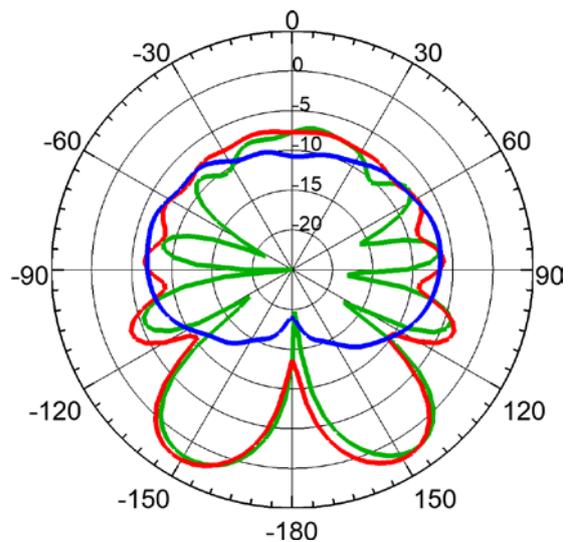
Total realized gain [dBi]
 Phi=0°, plane XZ, green curve
 Phi=90°, plane YZ, red curve
 Theta=90°, plane XY, blue curve



890 MHz



1610 MHz



2410 MHz

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