868 MHz / 915 MHz / 1575 MHz / 5800 MHz PCB Antenna (ISM, IoT, Sigfox, LoRa, GNSS)

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

ISM, RFID, IoT (Sigfox, LoRa), GNSS, LP-WAN, Smart meters

Electrical data

Antenna type	Embedded / internal PCB antenna						
Frequency band	SRD860 (EU), ISM915 (US), GNSS, ISM5800						
Frequency range [MHz]	863... 870	870… 915	915… 928	1559... 1591	1591… 1610	5725… 5855	5855... 5925
Return loss [dB]	-10	-7	-6	-8	-5	-7	-9
Peak gain [dBi]	1.2	1.2	1.2	1.8	1.8	7	7
Radiation efficiency [%]	80	78	76	62	66	85	87
Nominal input impedance [Ohm]	50						
Polarization	linear						
Radiation pattern	omnidirectional						
Maximum input power [W]	10						

Mechanical data

Antenna PCB dimensions [mm]	45.2 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]	180 [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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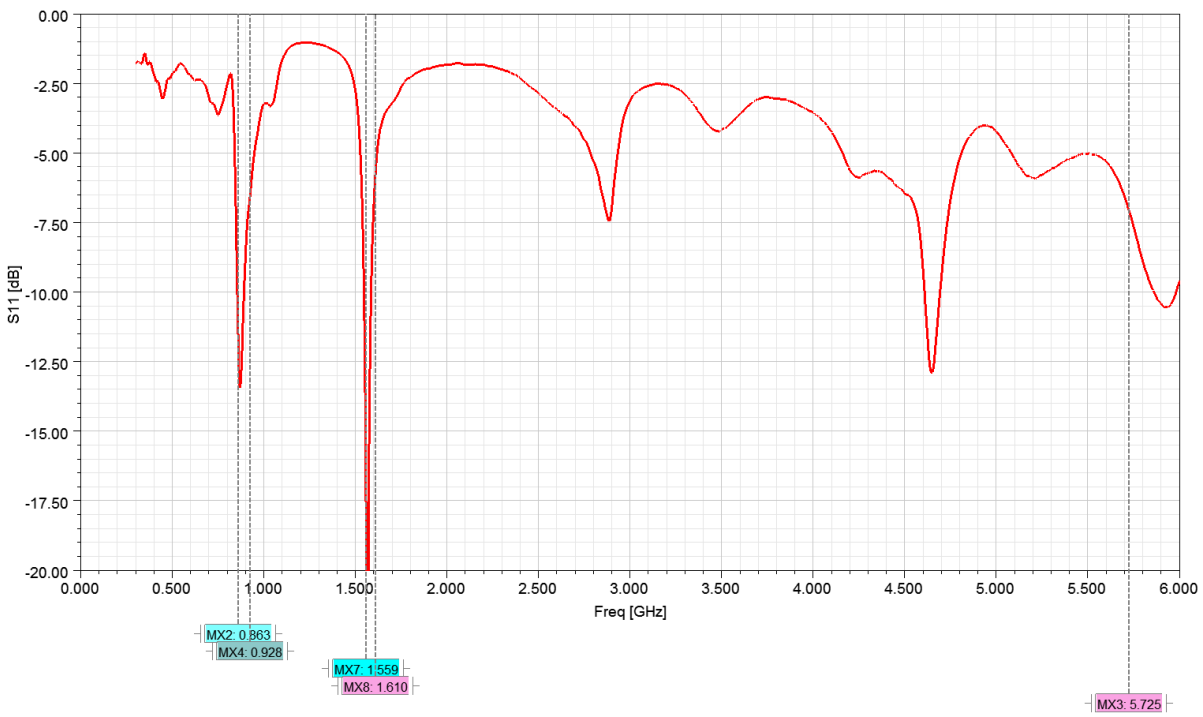
Measured input impedance matching



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