

433 MHz / 868 MHz / 5800 MHz PCB Antenna (ISM, IoT, Sigfox, LoRa, Wi-Fi 5 GHz)



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), LP-WAN, Smart meters, Wi-Fi 5 GHz

Electrical data

Antenna type	Embedded / internal PCB antenna			
Bands	ISM433 (EU), SRD860 (EU), Wi-Fi 5 GHz, ISM5800			
Frequency range [MHz]	433...434.8	863...870	5150...5725	5725...5925
Return loss [dB]	-10	-7	-5	-8
Peak gain [dBi]	-1	0.6	3.8	4.5
Radiation efficiency [%]	43	40	68	65
Nominal input impedance [Ohm]	50			
Polarization	linear			
Radiation pattern	omnidirectional			
Maximum input power [W]	10			

Mechanical data

Antenna PCB dimensions [mm]	45 x 25 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 [°C]	-40...+85
Storage temperature [°C]	-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⁾ 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.

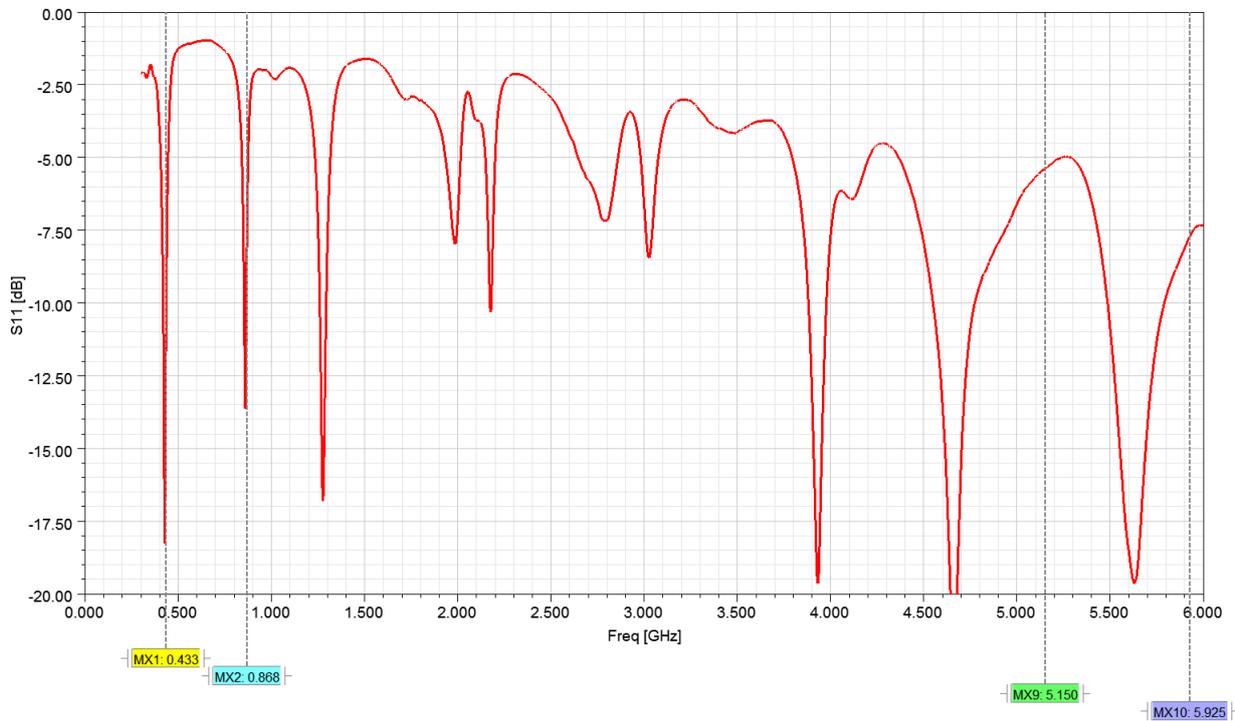
Further customization, electromagnetic simulations and measurements can be offered on request.

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

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Measured input impedance matching



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