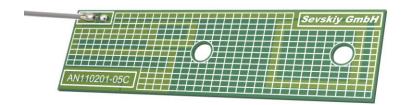
AN110201-05C-160-MHF1

Rev. 001



824 MHz / 960 MHz / 1.71 GHz / 2.17 GHz PCB Antenna (GSM, UMTS, ISM, IoT, RFID, 5G NR, LTE)



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

GSM, UMTS, ISM, RFID, IoT (Sigfox, LoRa, NB-IoT), LP-WAN, Smart meters, 5G NR, LTE

Electrical data			
Antenna type	Embedded / internal PCB antenna		
5G bands	1, 2, 3, 5, 8, 18, 25, 26, 34, 39, 65, 66, 70, 80 - 82, 84, 86, 89, 95, 98		
4G bands	1 - 6, 8 -10, 18 - 20, 23, 25 - 27, 33 - 37, 39, 65, 66, 70		
Other frequency bands	SRD860 (EU), ISM915 (US), GSM, UMTS		
Frequency range [MHz]	824960	17102170	
Return loss [dB]	-9	-13	
Peak gain [dBi]	0.8	1.7	
Radiation efficiency [%]	63	72	
Nominal input impedance [Ohm]	50		
Polarization	linear		
Radiation pattern	omnidirectional		
Maximum input power [W]	10		

Mechanical data		
Antenna PCB dimensions [mm]	70 x 19 x 0.8	
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]	160 ³⁾	
PCB material	FR4	

Environmental data		
Operating temperature [°C]	-40+85	
Storage temperature [°C]	-40+85	
Ambient relative humidity [%]	095	
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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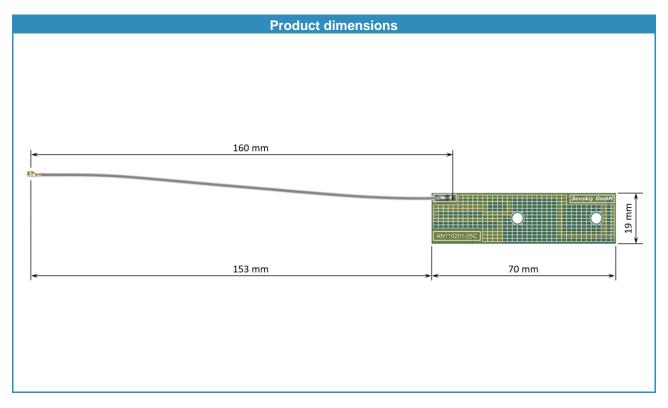
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