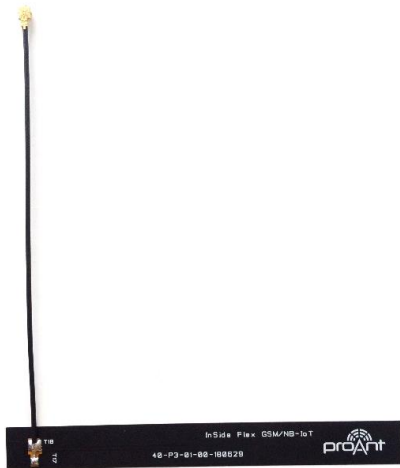


## General information

Antenna covering NB-IoT Band 8 and 20 (791 - 960 MHz), GSM 900 (880-960 MHz), GSM 1800 (1710-1880 MHz), GSM 1900 (1850-1990 MHz) and UMTS-2100 (2110-2170 MHz) for inside mounting on non-conductive surfaces, such as plastic.

InSide GSM/NB-IoT Flex is a ground plane independent antenna including coaxial cable with connector and are supplied with adhesive.

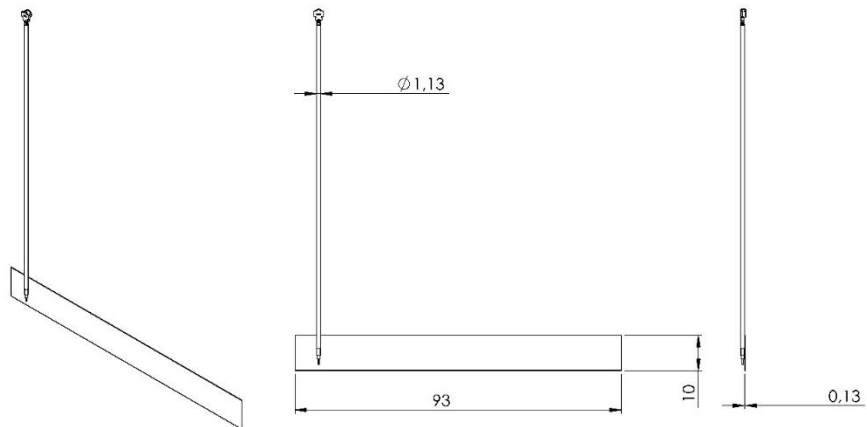


### Technical data

Frequency	791-960/1710-2170 MHz
Return loss	< -6 dB (on Proant fixture)
Gain	Max 5.5 dBi (on Proant fixture)
Dimension	10 x 93 mm, thickness 0.13 mm
Mounting	Adhesive tape
Temperature	-40 to +85° C

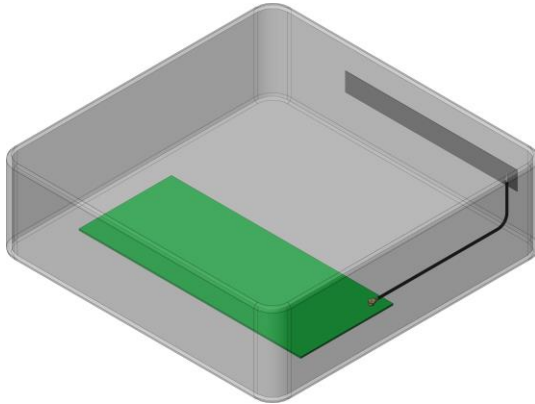
### Applications

- IoT devices
- M2M-communications
- Telemetric
- Automated meter reading
- Alarms



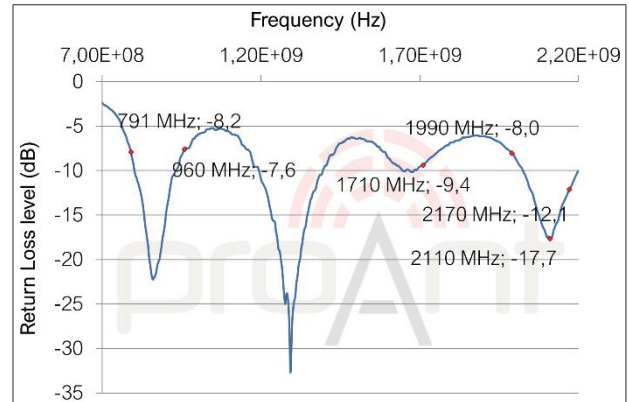
## Electrical performance

### Measurement setup

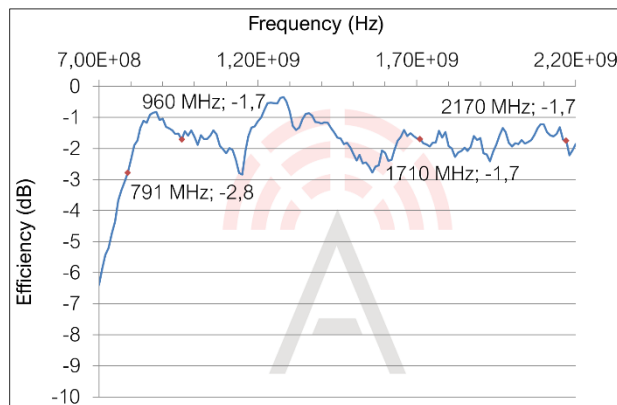


The antenna measurements were done on Proant's standard measurement fixture - the antenna mounted in an ABS plastic box, 150x150x45 mm, connected to a PCB, 120x50 mm, with the cable fully extended.

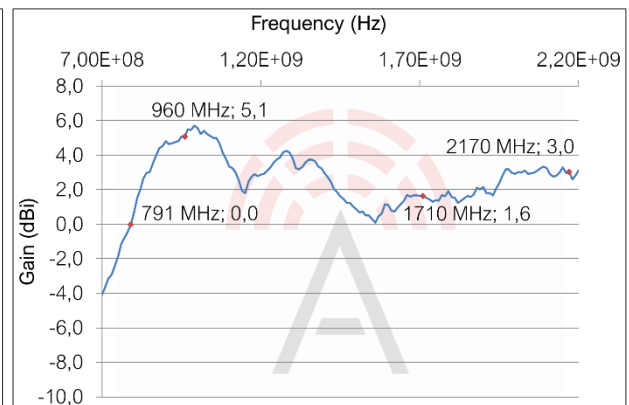
### Return loss



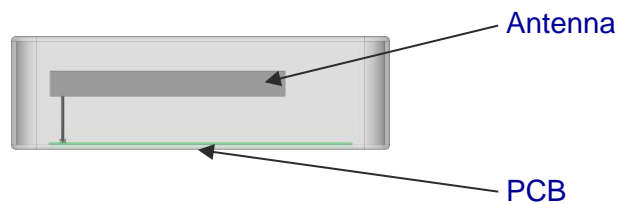
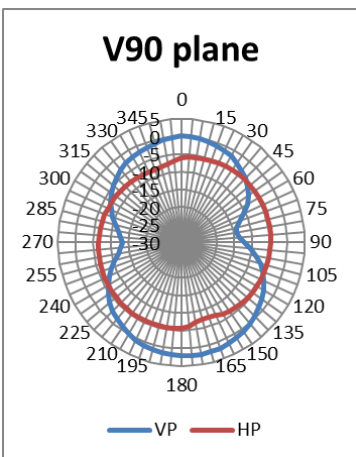
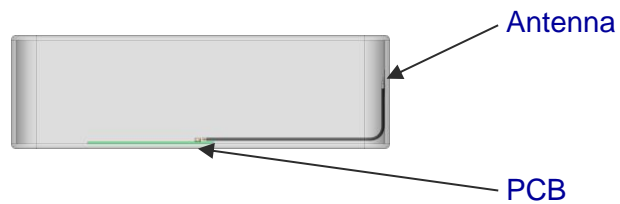
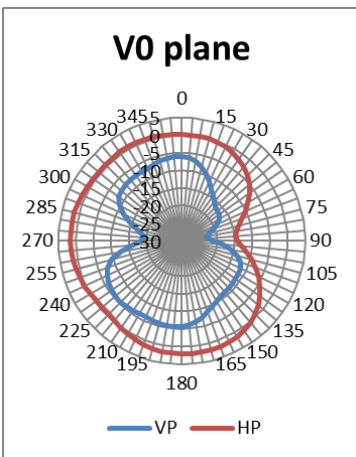
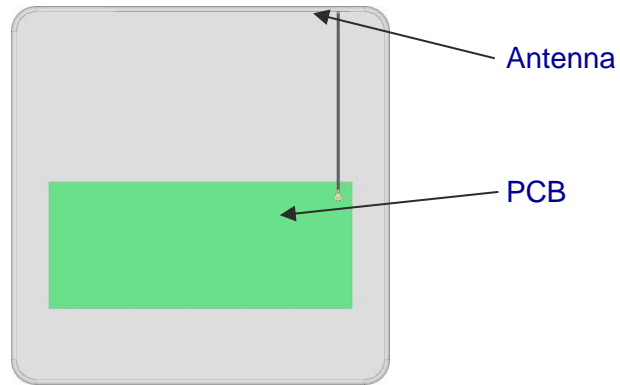
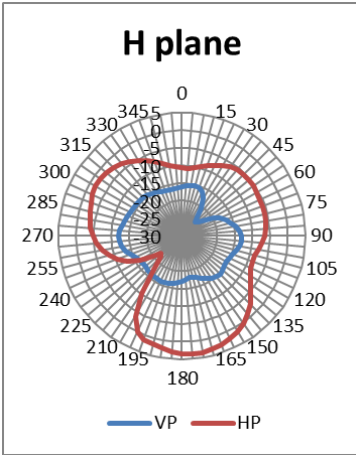
### Total radiation efficiency



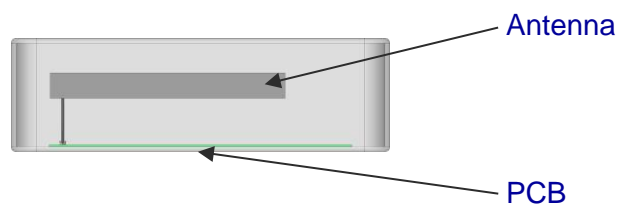
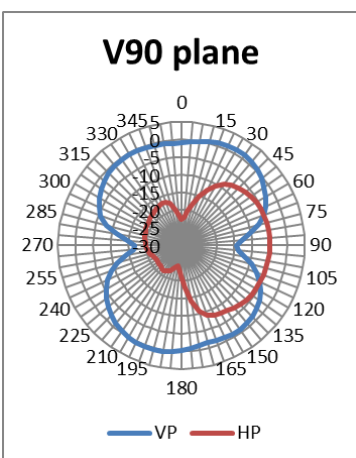
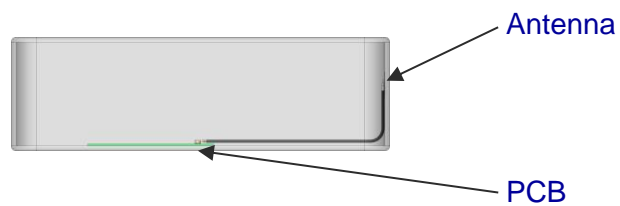
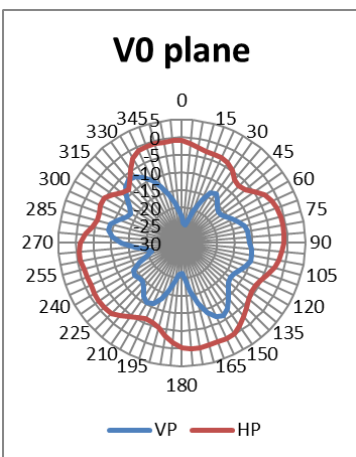
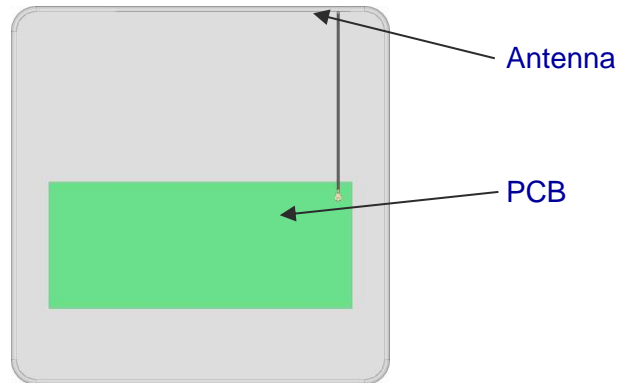
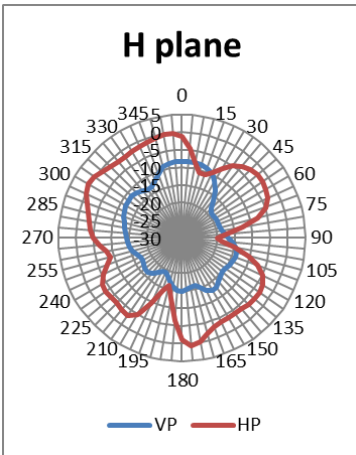
### Maximum radiation gain



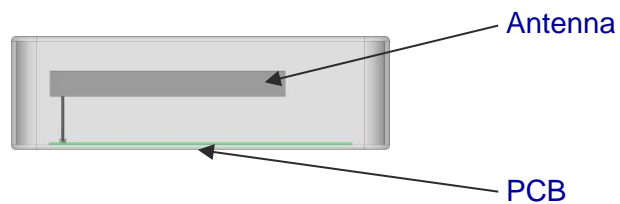
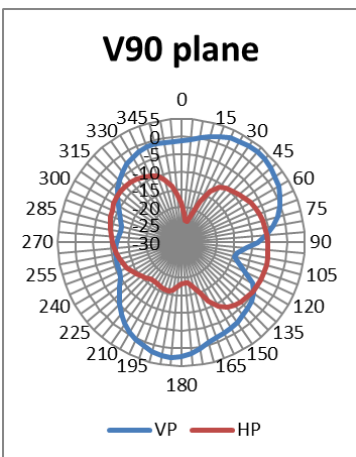
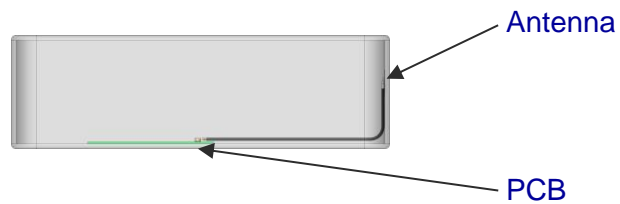
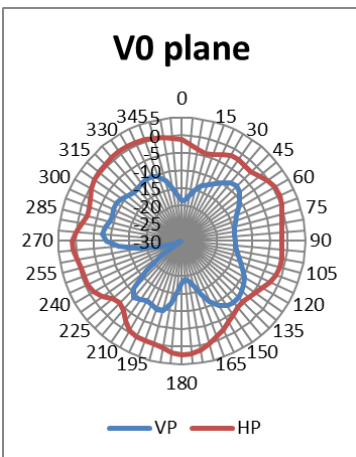
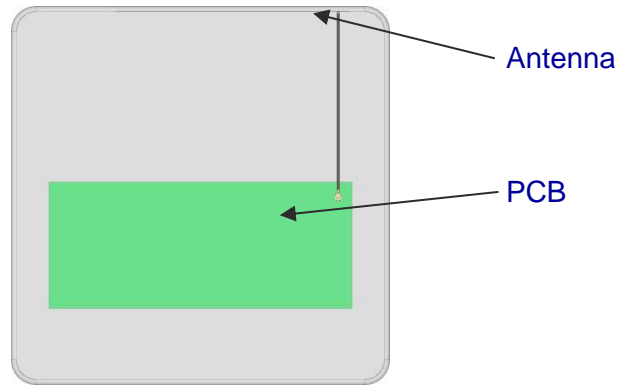
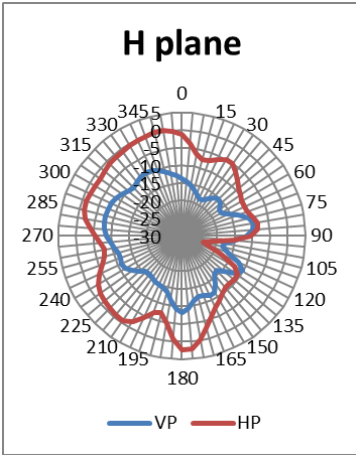
### Radiation pattern, 800/850/900 MHz



## Radiation pattern, 1800/1900 MHz



## Radiation pattern, 2100 MHz



## Intended applications

The antenna is optimized for pentaband operation in the GSM, UMTS and NB-IoT systems, which is defined by several frequency bands. Some of the supported bands are:

GSM/GPRS/EDGE	GSM 850 (824 – 894 MHz)
	GSM 900 (880 – 960 MHz)
	GSM 1800 (1710 – 1880 MHz)
	GSM 1900 (1850 – 1990 MHz)
UMTS/LTE	Band 1 (1920 – 2170 MHz)
	Band 2 (1850 – 1990 MHz)
	Band 3 (1710 – 1880 MHz)
	Band 4 (1710 – 2155 MHz)
	Band 5 (824 – 894 MHz)
	Band 6 (830 – 883 MHz)
	Band 8 (880 – 960 MHz)
	NB-IoT
Band 20 (791 – 862 MHz)	

## Ordering information

Part number	Part name	Details
PRO-IS-577	InSide GSM/NB-IoT Flex, 100 mm MHF	Antenna for NB-IoT and GSM. 100 mm cable with MHF (U.FL) connector.

For information on sales, delivery terms and conditions and prices, please visit the Proant website ([www.proant.se](http://www.proant.se)) for a complete list of distributors.

Proant offers consultation with design-in of the InSide antennas. Proant have all necessary capabilities for antenna design including anechoic chamber and prototype workshop. Please send your requests to [info@proant.se](mailto:info@proant.se).

## Disclaimer

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