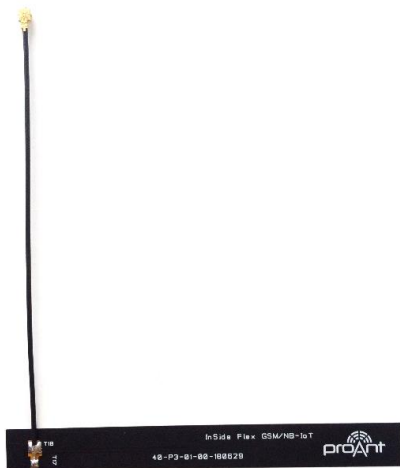


General information

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 is supplied with adhesive.

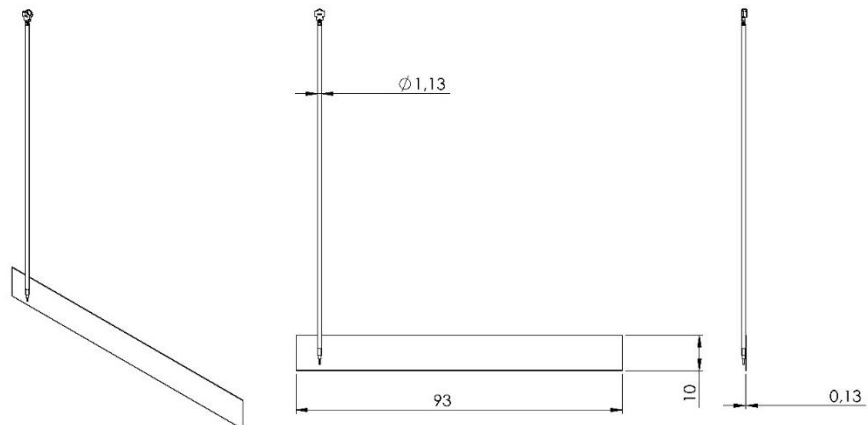


Technical data

| | |
|-------------|---------------------------------|
| Frequency | 791-960/1710-2170 MHz |
| Return loss | < -6 dB (on Proant fixture) |
| Gain | Max 5,5 dBi (on Proant fixture) |
| Dimensions | 10 x 93 mm, thickness 0,13 mm |
| Mounting | Adhesive tape |
| Temperature | -40 to +85° C |

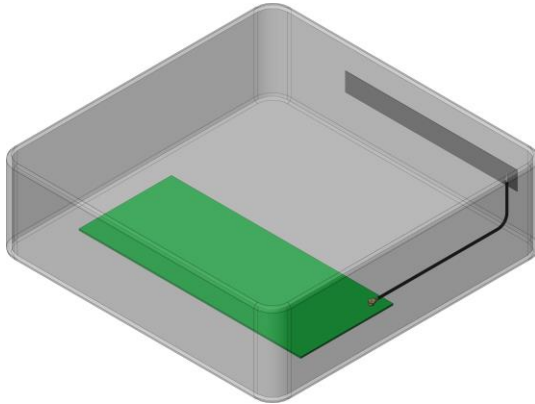
Applications

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



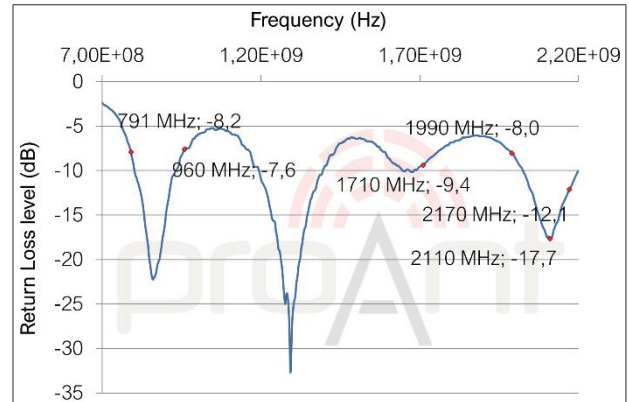
Electrical performance

Measurement setup

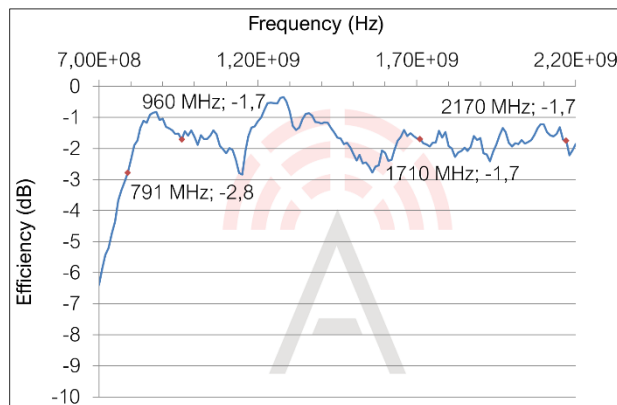


The antenna measurements were done on Proant's standard measurement fixture - the antenna mounted in an ABS plastic box, 150x150x45 mm, connected to a PCB, 120x50 mm, with the cable fully extended.

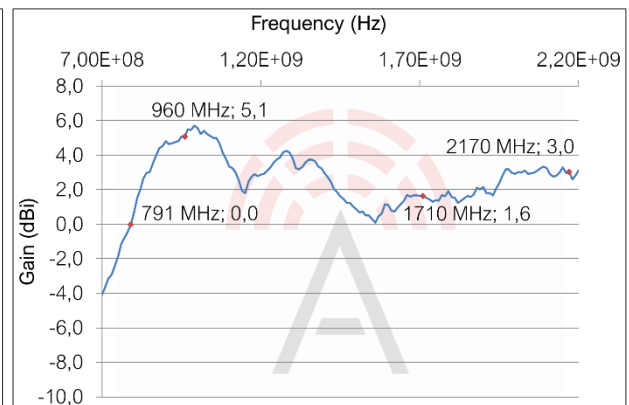
Return loss



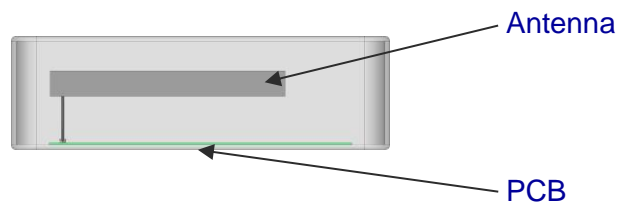
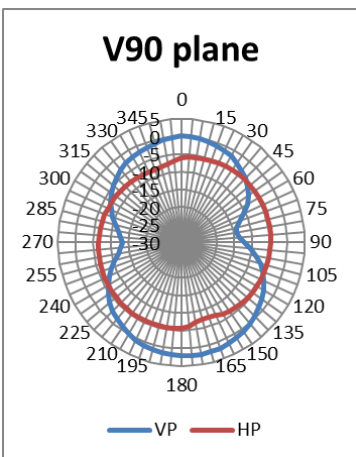
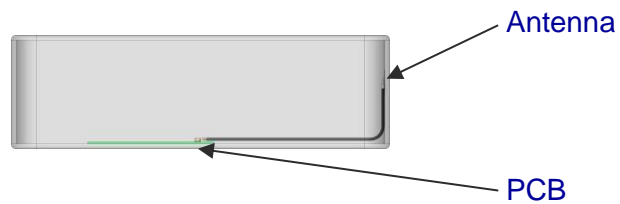
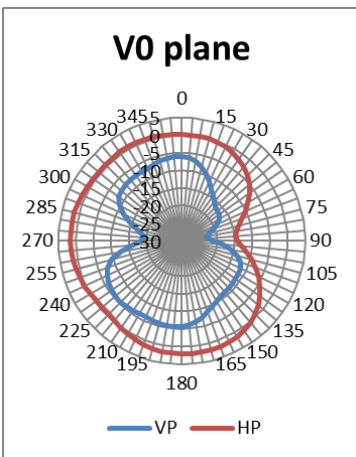
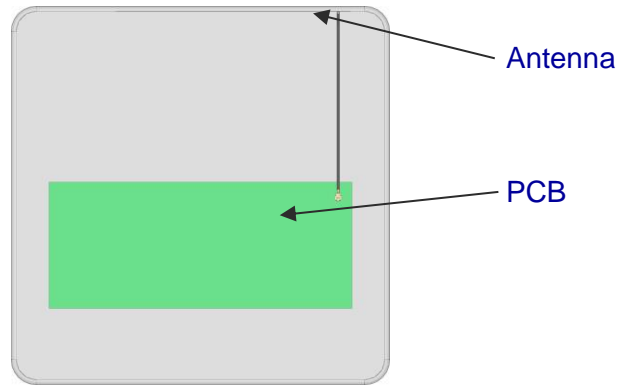
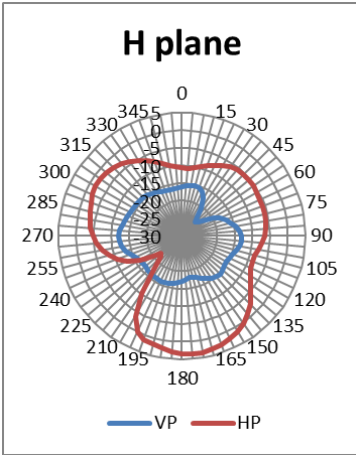
Total radiation efficiency



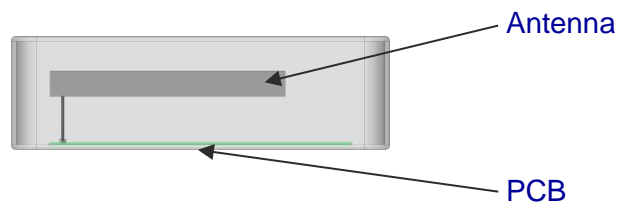
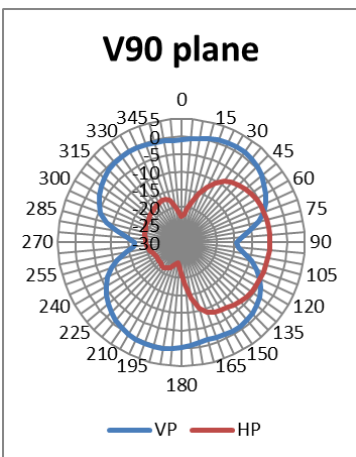
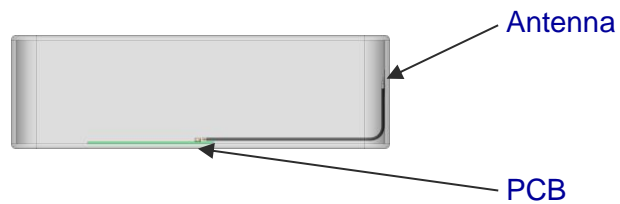
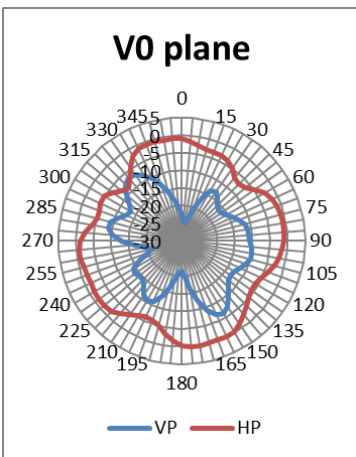
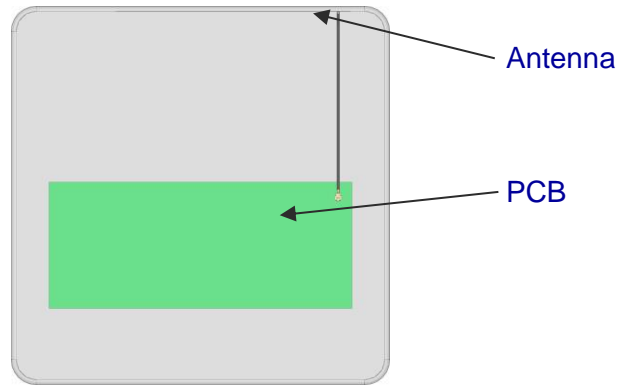
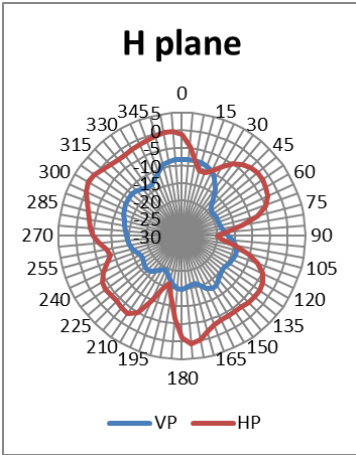
Maximum radiation gain



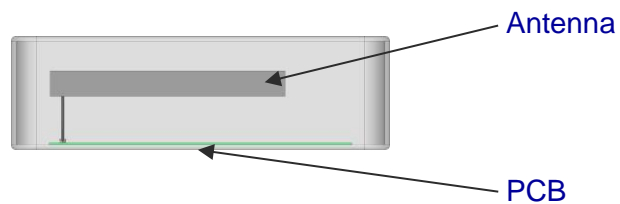
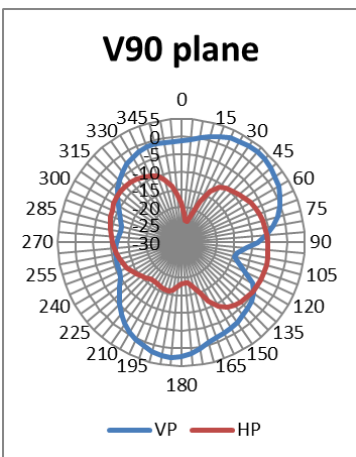
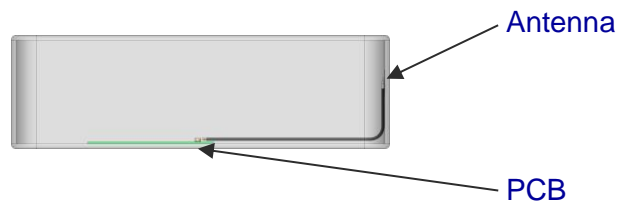
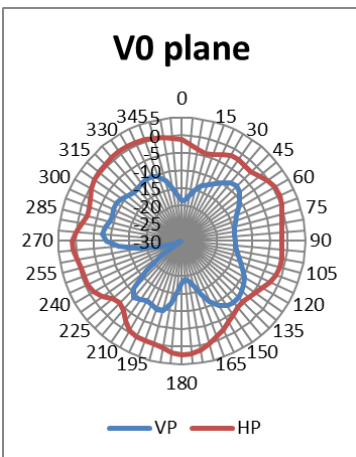
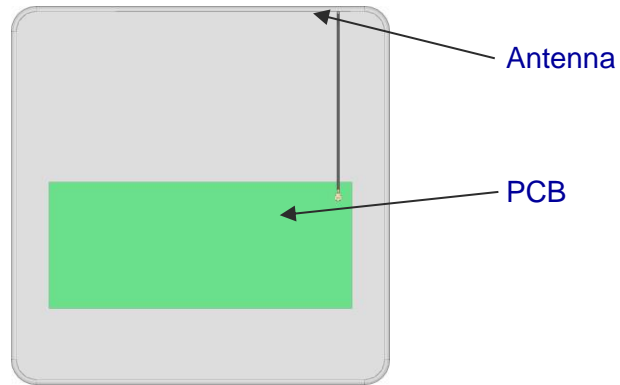
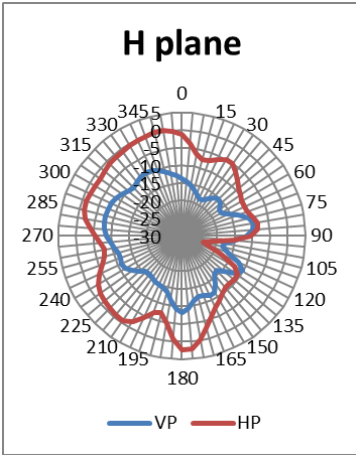
Radiation pattern, 800/850/900 MHz



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 8 (880 – 960 MHz) |
| | 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. |
| PRO-IS-590 | InSide GSM/NB-IoT Flex, 100 mm MHF4 | Antenna for NB-IoT and GSM. 100 mm cable with MHF4 connector. |

For information on sales, delivery terms and conditions and prices, please visit the Proant website (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.

Disclaimer

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