

General information

Antenna covering 868 MHz, GSM 900 (880 - 960 MHz) and GSM 1800, 1900 (1710 - 1990 MHz) for inside mounting on non-conductive surfaces such as plastic.

InSide GSM/DCS is a ground plane independent antenna including coaxial cable with MHF, MHF4 or MMCX connector, supplied with adhesive.

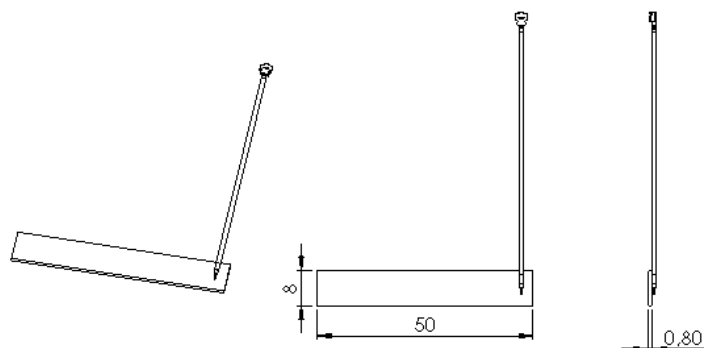


Technical data

Frequency	868 - 960, 1710 - 1990 MHz
Return loss*	< -3.5 dB, 868 - 960 MHz < -3.6 dB, 1710 - 1990 MHz
Efficiency*	> -4.3 dB (37%), 868 - 960 MHz > -2.9 dB (51%), 1710 - 1990 MHz
Gain*	Max 2.9 dBi, 868 - 960 MHz Max 1.9 dBi, 1710 - 1990 MHz
Dimensions	8.00 x 50.00 mm, thickness 0.80 mm
RoHS status	Compliant with EU directive 2011/65/EU and 2015/863
Mounting	Adhesive tape
Temperature	-40 to +85° C

Applications

IoT devices
M2M-communications
Telemetry
Automated meter reading
Alarms

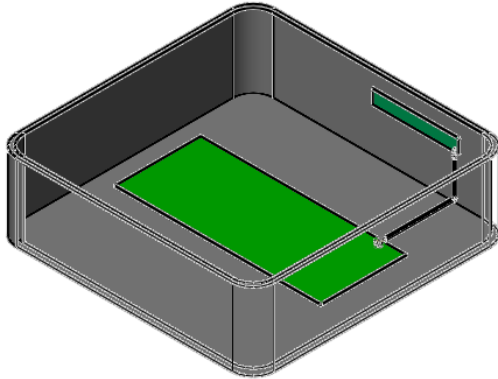


Antenna drawing. Above dimensions are given in millimeter.

**Measured on Proant standard measurement fixture, see next page for more information.*

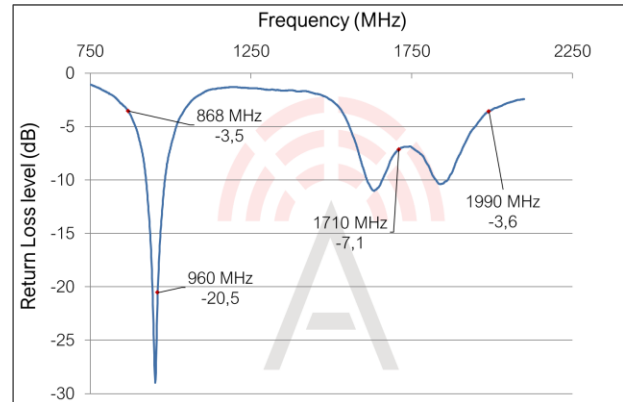
Electrical performance

Measurement setup

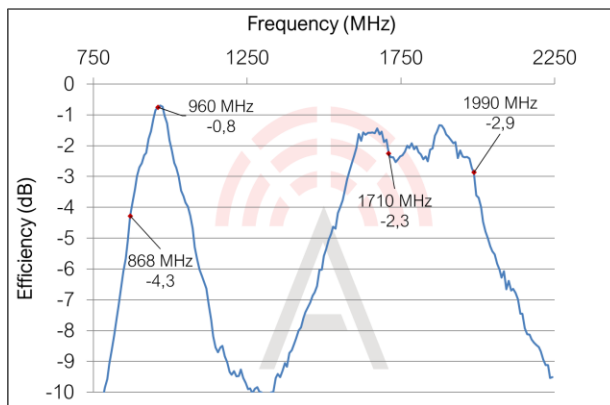


The antenna measurements were done on Proant's standard measurement fixture - the antenna mounted in an ABS plastic box, 150x150x45 mm, connected to a PCB, 120x50 mm, with the cable fully extended.

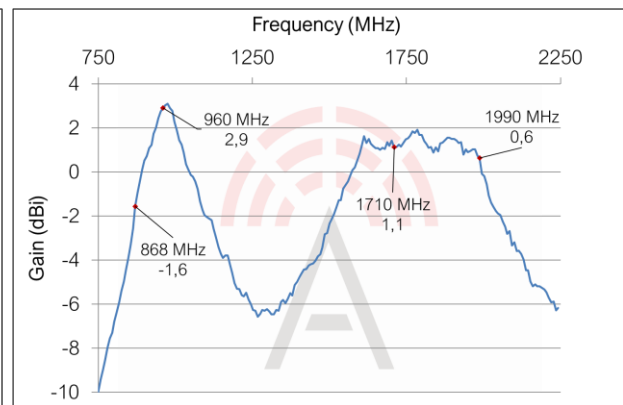
Return loss



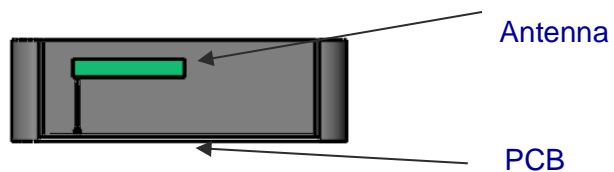
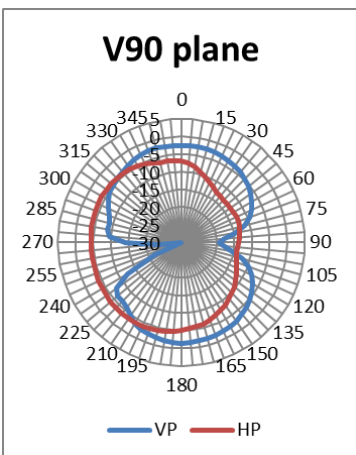
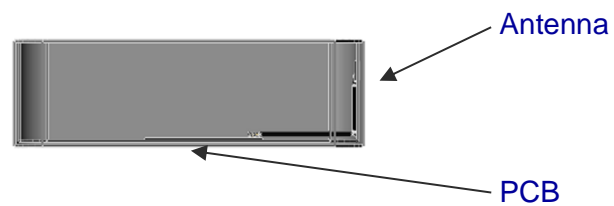
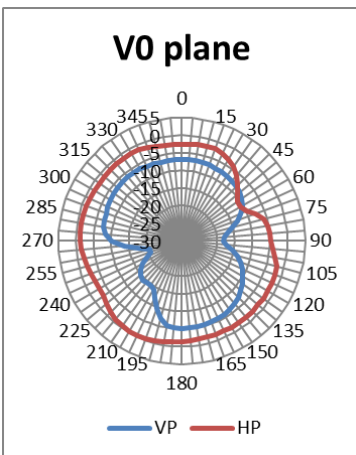
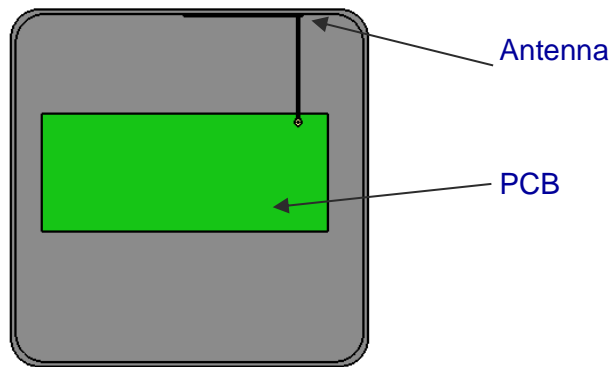
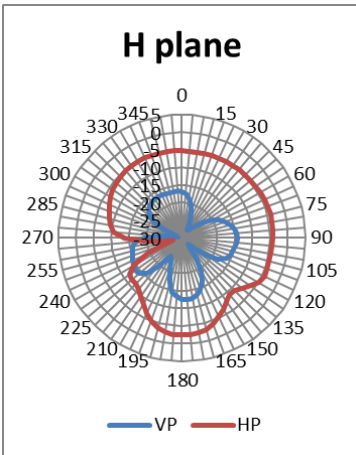
Total radiation efficiency



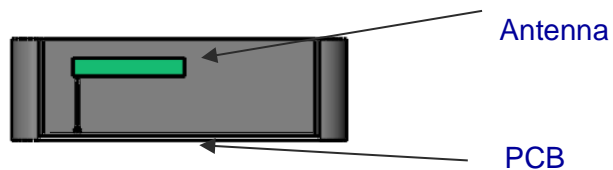
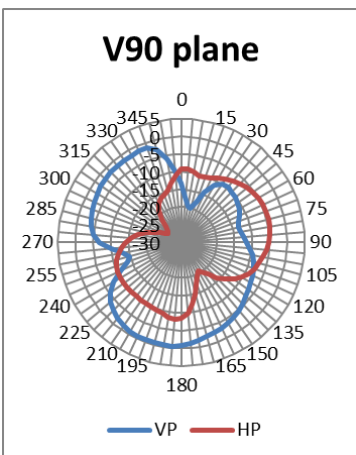
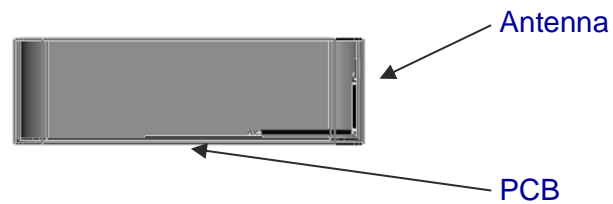
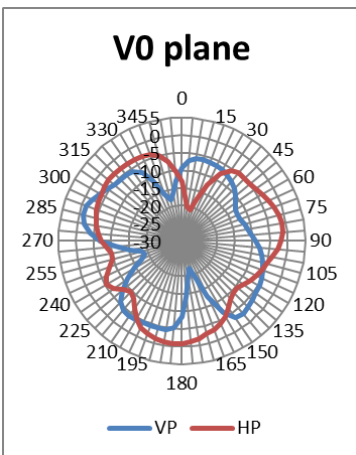
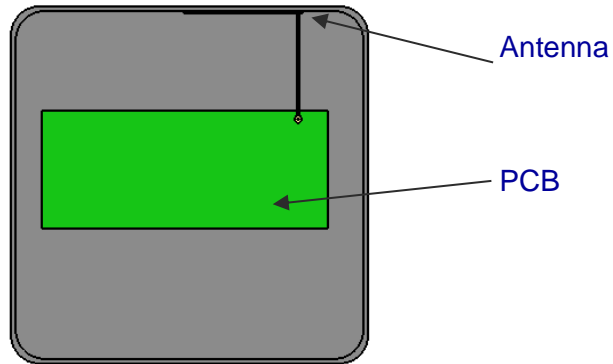
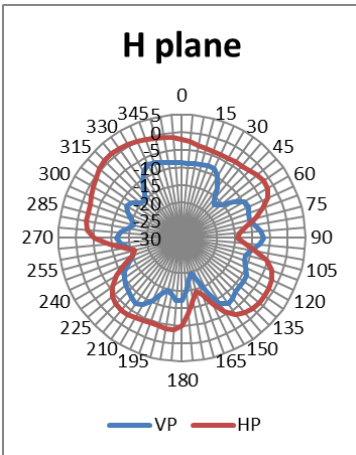
Maximum radiation gain



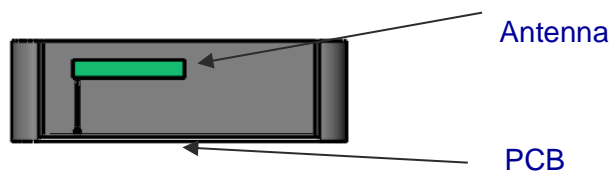
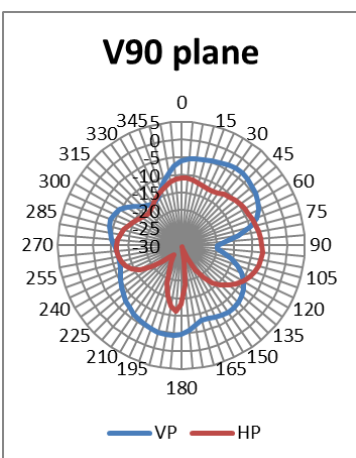
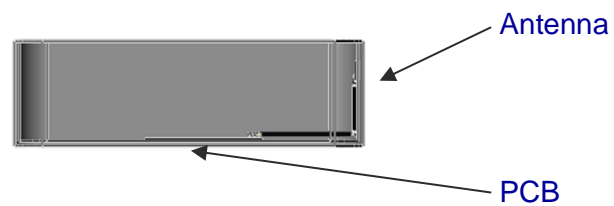
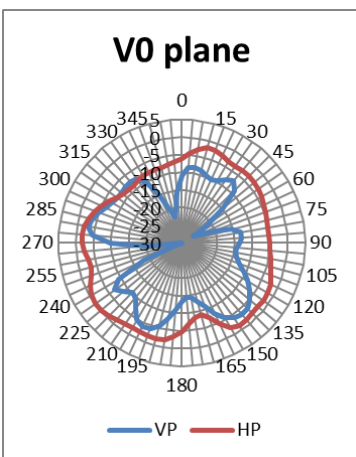
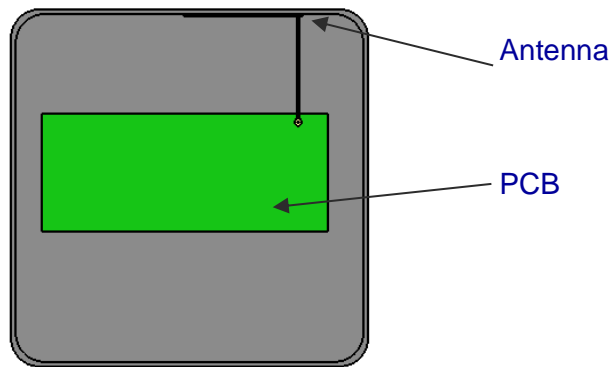
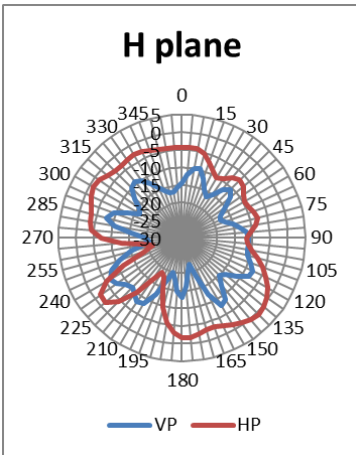
Radiation pattern, 900 MHz



Radiation pattern, 1710 MHz



Radiation pattern, 1990 MHz



Intended applications

The antenna is optimized for operation in the GSM 900, 1800 and 1900 bands. Some of the supported bands are:

GSM/GPRS/EDGE	GSM 900 (880 – 960 MHz)
	GSM 1800 (1710 – 1880 MHz)
	GSM 1900 (1850 – 1990 MHz)
UMTS/LTE	Band 2 (1850 – 1990 MHz)
	Band 3 (1710 – 1880 MHz)
	Band 8 (880 – 960 MHz)
NB-IoT	Band 8 (880 – 960 MHz)
Sigfox	868 MHz
LoRa	EU 863 - 870 MHz
	US 902 - 928 MHz
	AU 915 - 928 MHz

Ordering information

Part number	Part name	Details
PRO-IS-212	InSide GSM/DCS (MHF)	Antenna for GSM and DCS. 100 mm coaxial with MHF connector.
PRO-IS-583	InSide GSM/DCS (MHF4)	Antenna for GSM and DCS. 100 mm coaxial with MHF4 connector.
PRO-IS-211	InSide GSM/DCS (MMCX)	Antenna for GSM and DCS. 100 mm coaxial with MMCX 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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