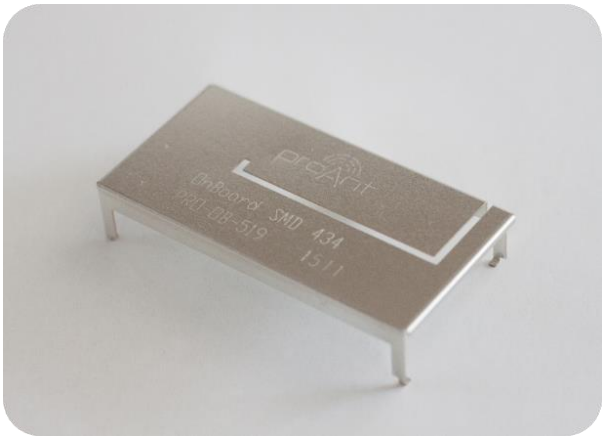
OnBoard™ SMD 434
Datasheet

Rev 1.2
2019-09-25

General information

The OnBoard SMD 434 antenna is a combination of small size, low cost and high performance, suitable for applications within the 434 MHz ISM band (ISO/IEC 18000).



Technical data	
Frequency	434 MHz
Impedance	50 Ω
Return loss*	< -9.1 dB
Total efficiency*	> -5.2 dB (30%)
Gain*	Max -2.8 dBi
Dimensions (LxWxH)	49.93 x 24.97 x 10.00 mm (1.966 x 0.983 x 0.394 in)
RoHS status	Compliant with EU directive 2011/65/EU and 2015/863
Shelf life	10 years
MSL	Level 1, unlimited

Applications

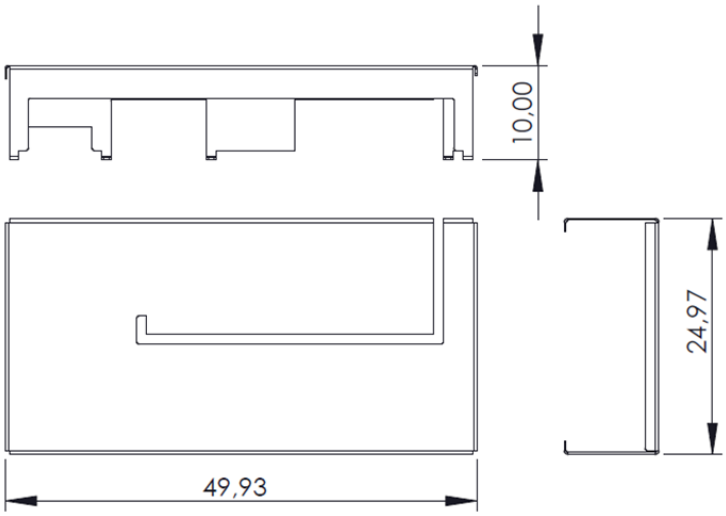
IoT-devices

M2M-commmunications

Telemetry

Automated meter reading

Alarms

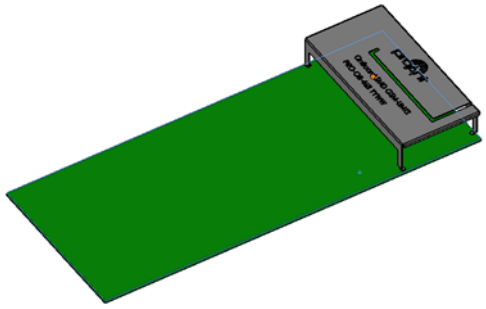


Antenna drawing. Above dimensions are given in millimeter.

**Measured on Proant evaluation board, PRO-EB-533*

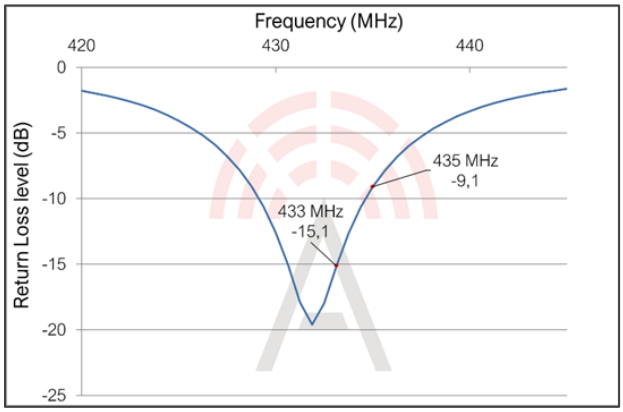
Electrical performance

Measurement setup

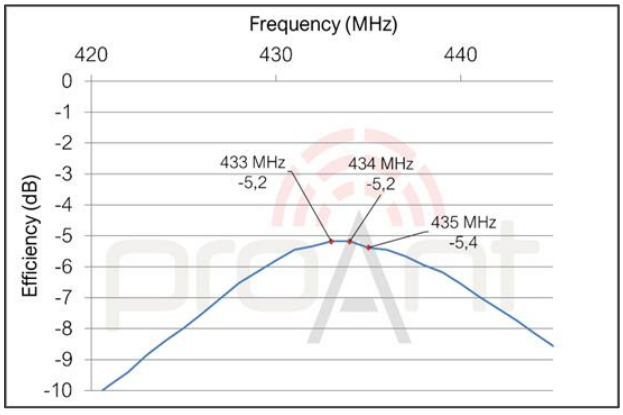


The antenna measurements were done with the OnBoard SMD 434 evaluation board (PRO-EB-533, 120 x 52 mm) - measured in free space.

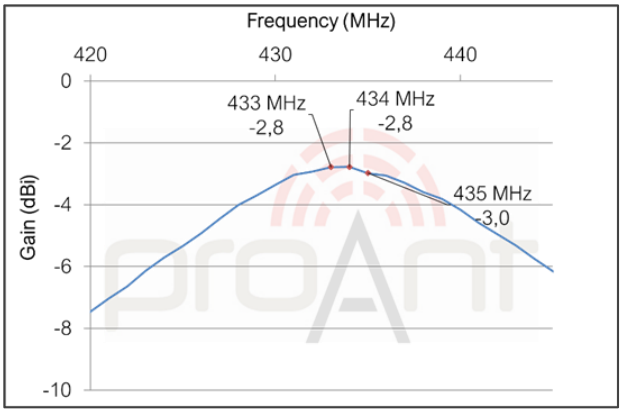
Return loss



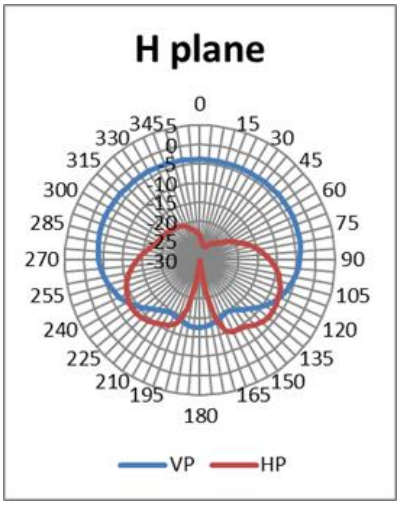
Total radiation efficiency

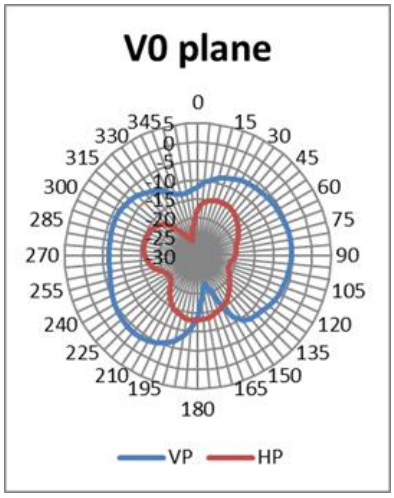


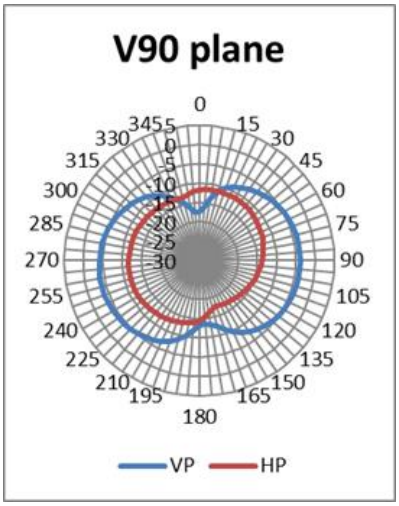
Maximum radiation gain



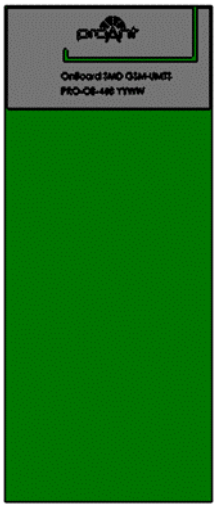
Radiation pattern, 434 MHz

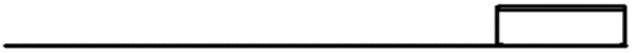






Board rotation





Intended applications

The antenna is optimized for the 434 MHz band, which is utilized by several protocols. Some of the applications are:

LoRa		434 MHz
RFID	ISO/IEC 18000	433 MHz
Wireless M-Bus	EN 13757-4:2013 mode F	433.05-434.79 MHz

Ordering information

Part number	Part name	Details
PRO-OB-519	OnBoard SMD 434	Antenna for 434 MHz ISM band.
PRO-EB-533	Evaluation board, Onboard SMD 434	Evaluation board with PRO-OB-533 for LoRa and RFID applications.

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 OnBoard SMD antennas. Proant have all necessary capabilities for antenna design including anechoic chamber and prototype workshop. Please send your requests to info@proant.se.

Disclaimer

The information given in this application note shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Proant AB hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.