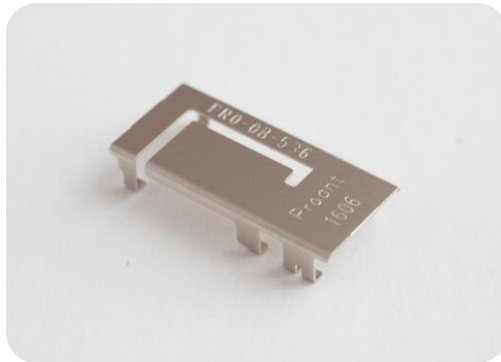


General information

The OnBoard SMD WLAN antenna is a combination of small size, low cost and high performance. The antenna is optimized for embedded products that cover the ISM band 2400 - 2500 MHz and 5180 - 5850 MHz used for WLAN.

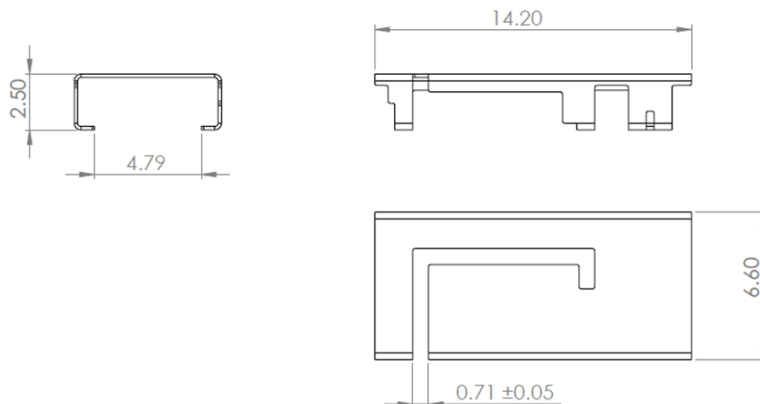


Technical data

Frequency	2400 - 2500, 5150 - 5850 MHz
Impedance	50 Ω
Return loss*	< -6.2 dB, 2400 - 2500 MHz < -3.2 dB, 5150 - 5850 MHz
Total efficiency*	> -2.9 dB (51%), 2400 - 2500 MHz > -3.6 dB (44%), 5150 - 5850 MHz
Gain*	Max 1.7 dBi, 2400 - 2500 MHz Max 2.7 dBi, 5150 - 5850 MHz
Dimensions (LxWxH)	14.20 x 6.60 x 2.50 mm (0.559 x 0.260 x 0.098 in)
RoHS status	Compliant with EU directive 2011/65/EU and 2015/863
Shelf life	10 years
MSL	Level 1, unlimited
Mechanical resistance	Immunity to vibrations IEC/EN 60068-2-6, Fc test Immunity to shock IEC/EN 60068-2-27, Ea test

Applications

IoT-devices
M2M-communications
Telemetry
Automated meter reading
Alarms

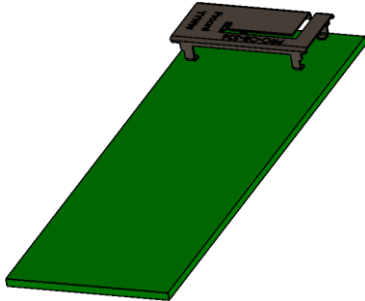


Antenna drawing. Above dimensions are given in millimeter.

*Measured on Proant evaluation board, PRO-EB-550.

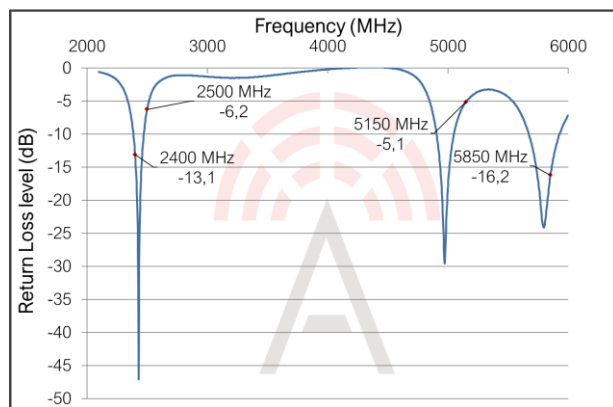
Electrical performance

Measurement setup

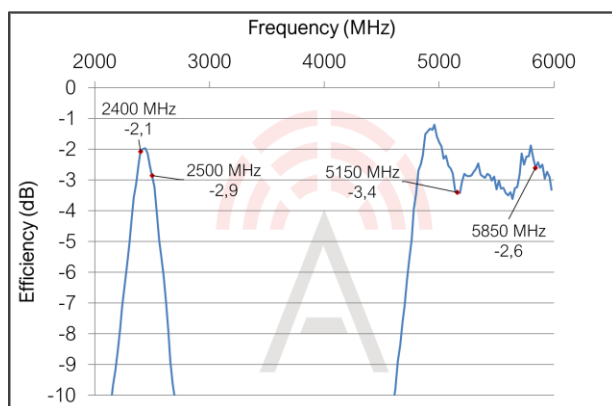


The antenna measurements were done with the OnBoard SMD WLAN evaluation board (PRO-EB-550, 47 x 17 mm) - measured in free space.

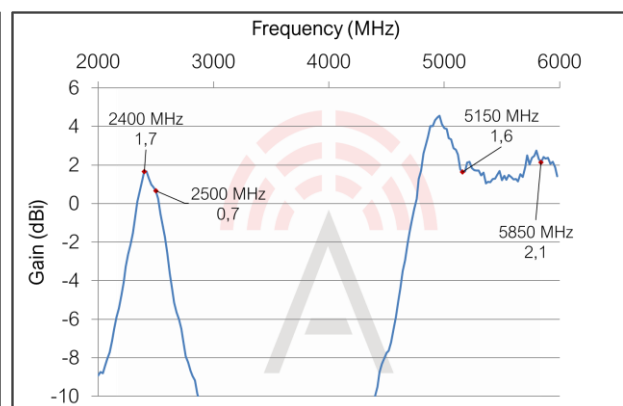
Return loss



Total radiation efficiency

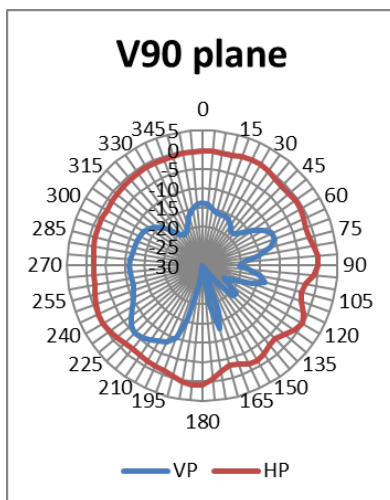
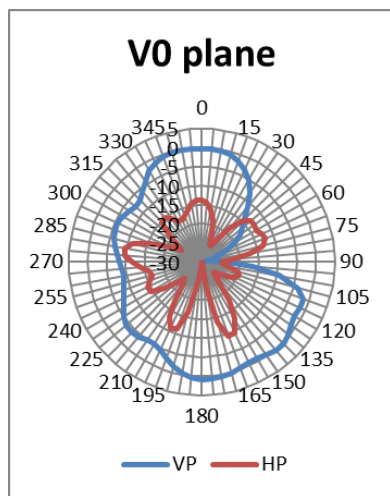
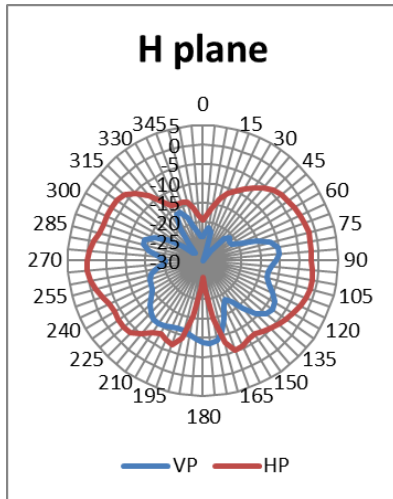


Maximum radiation gain



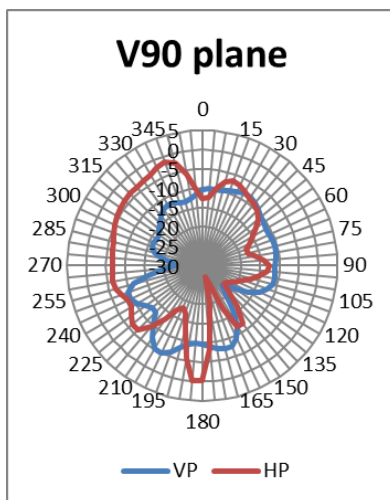
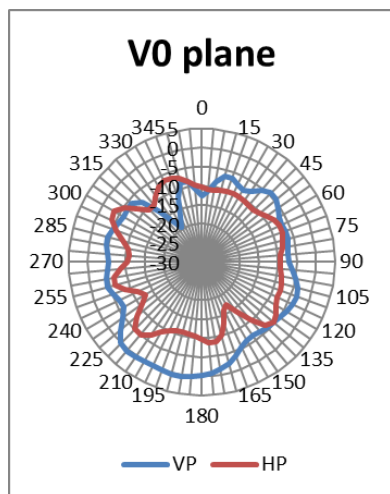
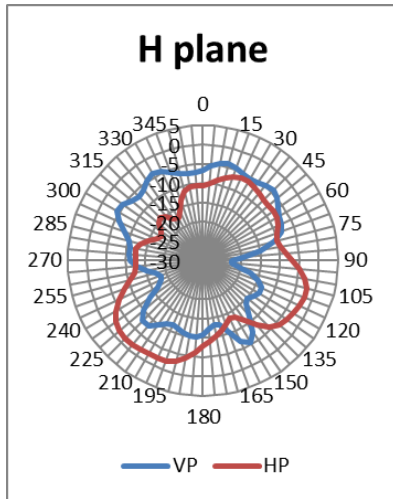
Radiation pattern, 2450 MHz

Board rotation



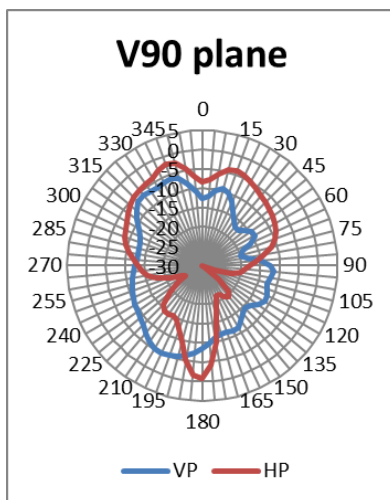
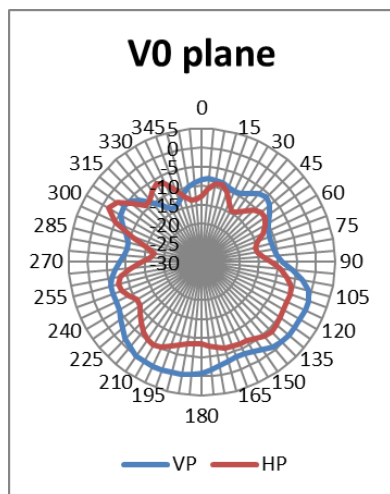
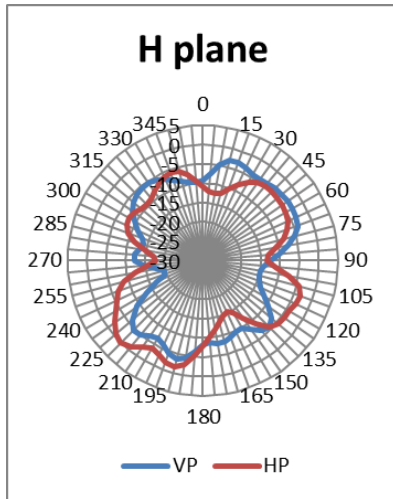
Radiation pattern, 5150 MHz

Board rotation



Radiation pattern, 5850 MHz

Board rotation



Intended applications

The antenna is optimized for the ISM band 2400 - 2500 MHz and 5180 - 5850 MHz used for WLAN and is also suitable for applications in Bluetooth and ZigBee etc. Some of the applications are:

WLAN/Wifi	IEEE 802.11 (b, g, n) IEEE 802.11 (a/n/ac)	2400 - 2497 MHz 5150 - 5835 MHz
Bluetooth	IEEE 802.15.1	2400 - 2483.5 MHz
ZigBee	IEEE 802.15.4	2400 - 2483.5 MHz
RFID	ISO/IEC 18000	2450, 5800 MHz
WirelessHART	IEEE 802.15.4	2400 - 2483.5 MHz

Ordering information

Part number	Part name	Details
PRO-OB-536	OnBoard SMD WLAN	Antenna for WLAN/Wifi.
PRO-EB-550	Evaluation board, Onboard SMD WLAN	Evaluation board with PRO-EB-550 for WLAN/Wifi, Bluetooth, ZigBee, RFID and WirelessHART 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

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