



**PRO-EB-594**  
**2.4/5GHZ : WLAN/WI-FI/BT**  
**PROANT NICHE ANTENNA**

Date of Issue: 3/7/2022

12.0 x 6.0 mm

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Abracon Drawing # 800226

Revision #: Initial Release

## Source Control Drawing

<b>Part Description</b>	<b>2.4/5GHz : WLAN/Wi-Fi/BT ProAnt Niche Antenna</b>
<b>Customer Part Number</b>	
<b>Abracon Part Number</b>	<b>PRO-EB-594</b>

### Customer Approval

(Please return this copy as a certification of your approval)

<b>Approved by</b>	
<b>Approval Date</b>	

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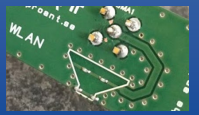
### Abracon LLC Headquarters:

5101 Hidden Creek Lane  
Spicewood, TX 78669  
Ph: (512) 371-6159  
Fax: (512) 351-8858

### Revision History

Revision	ECO	Description	Date	Prep'd By	Ck'd By	Ck'd By	Appr'd By
		Initial Release	9/29/2021	NE	SY	YH	RQ

# 2.4/5GHz : WLAN/Wi-Fi/BT ProAnt Niche Antenna



**PRO-EB-594**

Request Samples



Check Inventory



12.0 x 6.0 mm

MSL Level = N/A

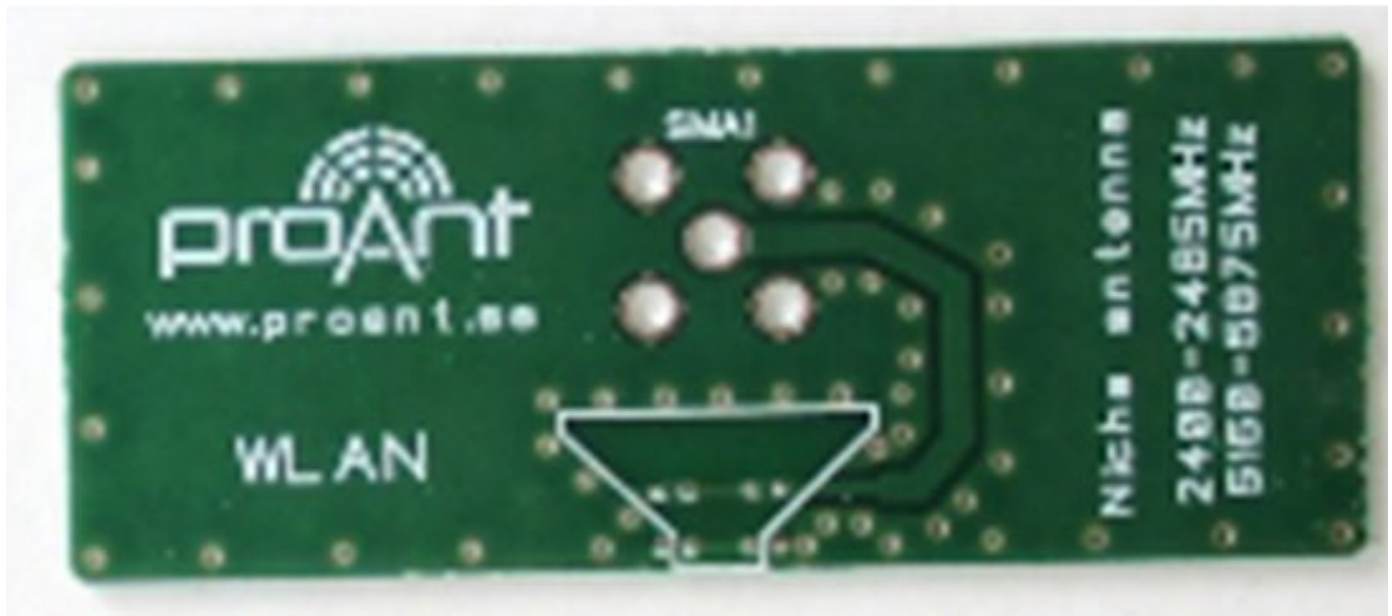
## Features

- Very low cost, Patented Technology
- Business Model : License Agreement
- Compact
- Highly efficient ( $\eta > 87\%$  @ 2.4GHz,  $\eta > 44\%$  @ 5GHz)
- Low Return Loss (RL < -3.2 dB)
- Integration : Along PCB Edge

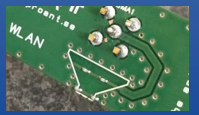
## Applications

- WLAN/Wi-Fi/BT/ISM Applications
- IoT, M2M
- Wearables
- Remote monitoring
- Personal Area Networks (PAN)
- Industrial equipments/Automation

## Product Image



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## Electrical Specification

Parameter	Specification			Unit
	Min	Typ	Max	
Operating Frequency	2400		2500	MHz
	5150		5825	
Return Loss			-3.2	dB
Polarization	Linear			
Peak Gain			4.7	dBi
Efficiency	87			%
Impedance		50		$\Omega$

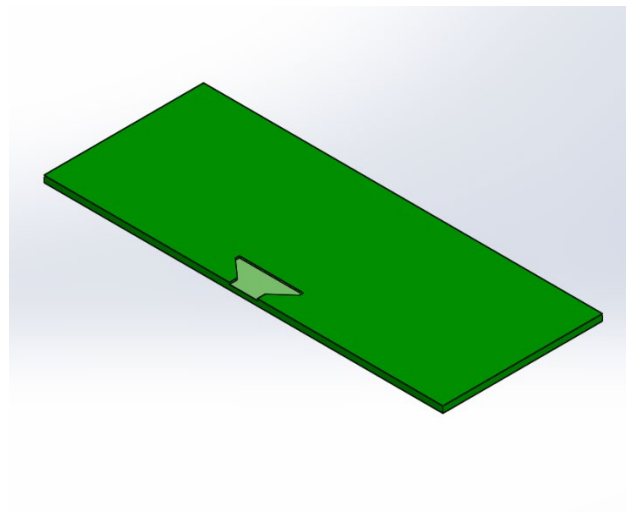
Note: All test measurements were conducted with the antenna on a 50 x 20 mm Evaluation board. Please note that the performance is dependent on the ground plane dimensions, tuning components and application environment.

## Mechanical Specification

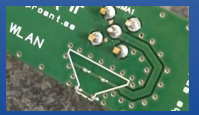
Parameter	Specification
Antenna Dimension	12 x 6 mm
Evaluation board Dimension	50 x 20 mm
Mounting Type	Directly engraved on PCB

## Measurement Setup

The antenna measurements were done in free space, with the antenna implemented on a 20 x 50 mm PCB.



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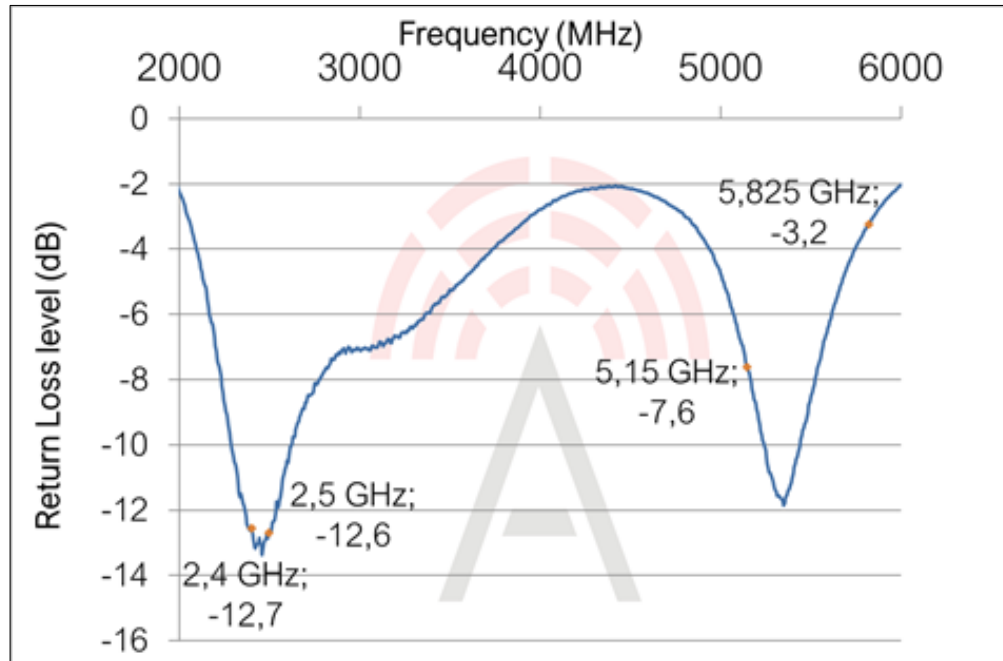
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12.0 x 6.0 mm

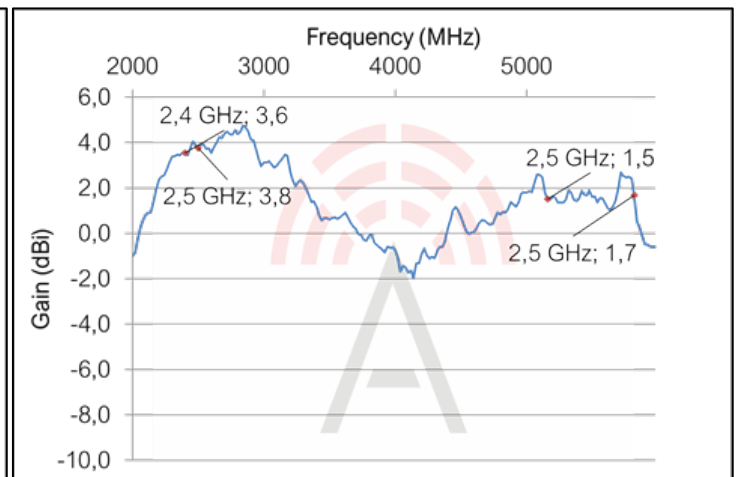
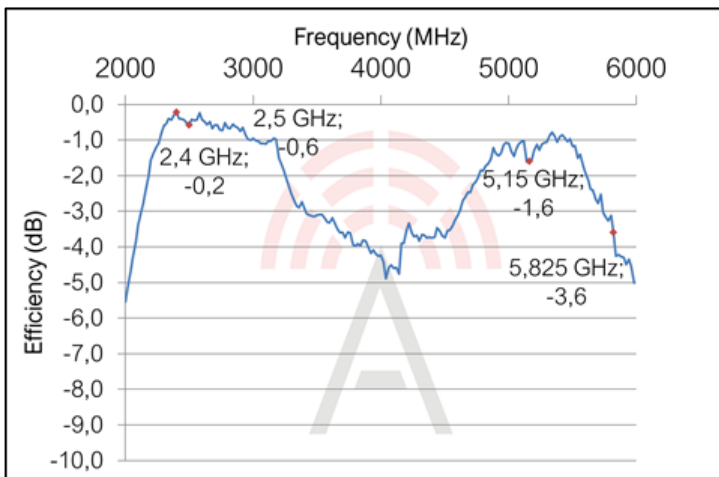
MSL Level = N/A

## Reflection Characteristics - Return Loss



## Total Radiation Efficiency

## Maximum Radiation Gain

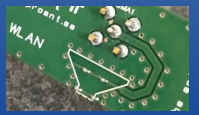


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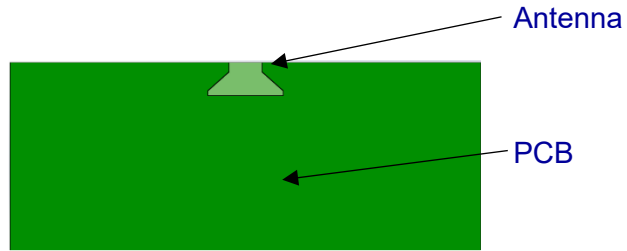
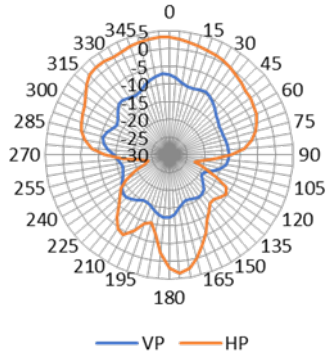


12.0 x 6.0 mm

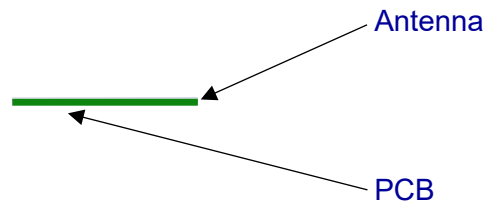
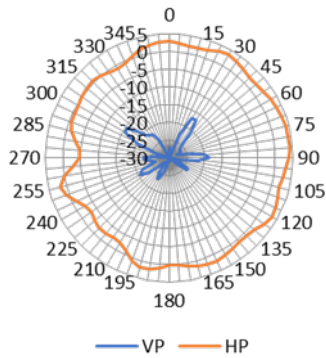
MSL Level = N/A

## Radiation Characteristics - 2D Pattern (2.45 GHz)

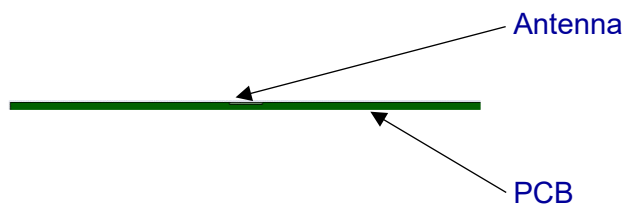
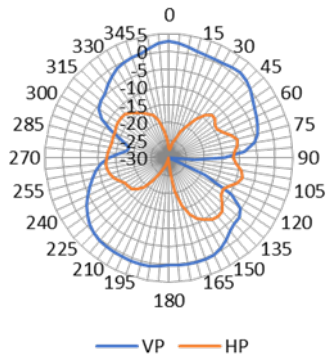
### H plane



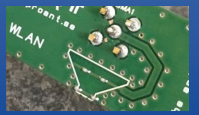
### V0 plane



### V90 plane



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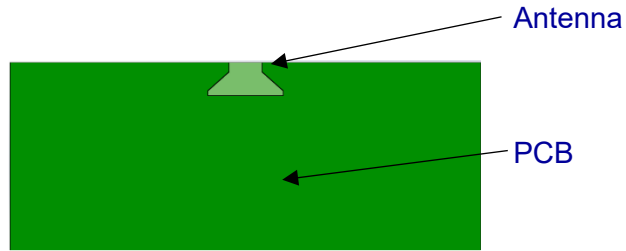
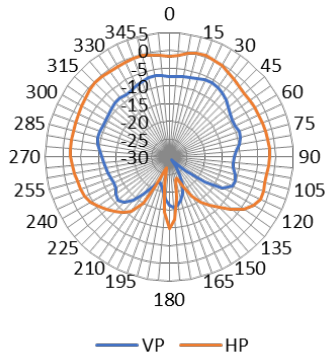


12.0 x 6.0 mm

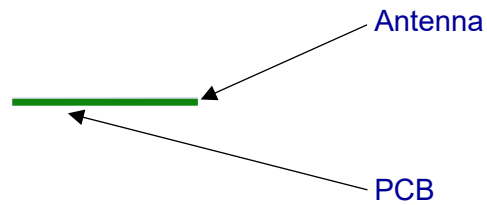
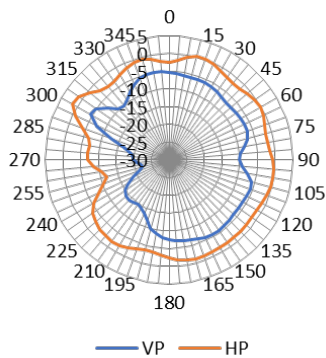
MSL Level = N/A

## Radiation Characteristics - 2D Pattern (5.5 GHz)

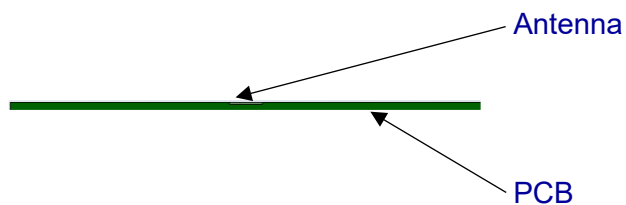
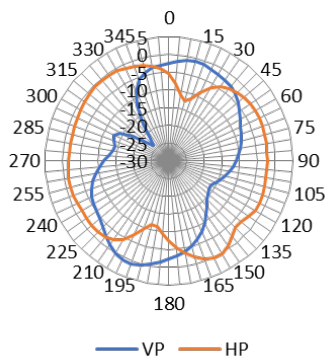
### H plane



### V0 plane



### V90 plane



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### Licensing Information

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License agreement information, terms and conditions, and design advice are provided upon request. Please send all requests to [info@proant.se](mailto:info@proant.se)

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- ii) ABRACON will supply the parts in accordance with this specification unless we receive a written request to modify prior to an order placement.
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- iv) When changing your production process, please notify ABRACON immediately.
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- vi) All specifications and marking are subject to change without notice.

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