Engineering/Process Change Notice

ECN/PCN No.: R0509

For Manufacturer			
Product Description: TRI-BAND WI-FI 6E/7 PCB ANTENNA	**Abracon Part Number / Part Series:** AANI-FB-0083	☐ Documentation only ☒ ECN ☐ EOL	☐ Series ☐ Part Number
Affected Revision: C	**New Revision:** D	**Application**:	☐ Safety ☒ Non-Safety

Prior to Change:

TRI BAND WI-FI 6E/7 PCB ANTENNA

AANI-FB-0083 | Request Samples | Check Inventory | 41 x 9 x 0.7 mm | RoHS Compliant | MSL Level = N/A

Electrical Specification

Parameter	Specification			Unit
Operating Frequency	2400 – 2483.5	5150 - 5850	5925 - 7125	MHz
VSWR (Typ.)	< 2.5			
Peak gain	2.6	3.9	4.2	dBi
Efficiency (Avg.)	91.5	87.3	72.1	%
Impedance	50			Ω
Polarization	Linear			
Radiation Pattern	Omni-directional			

Mechanical Specification

Parameter	Specification
Antenna Dimensions	41 x 9 x 0.7 mm
Antenna Type	Flexible Printed Circuit
Mounting Type	Adhesive
RF Connector (1)	MHF1, MHF4
RF Cable Type (1)	Ø1.13 mm
Cable Length (1)	50 mm, 100 mm, 150 mm, 200 mm, 250 mm, 300 mm, 350mm

(1): Fully customizable RF Cable & Connector

Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
RoHS Complaint	Yes
PB Free	Yes

After Change:

TRI BAND WI-FI 6E/7 PCB ANTENNA

AANI-FB-0083 | Request Samples | Check Inventory | 41 x 9 x 0.7 mm | RoHS Compliant | MSL Level = N/A

Electrical Specification

Parameter	Specification			Unit
Operating Frequency	2400 – 2483.5	5150 - 5850	5925 - 7125	MHz
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Impedance	50			Ω
Polarization	Linear			
Radiation Pattern	Omni-directional			

Mechanical Specification

Parameter	Specification
Antenna Dimensions	41 x 9 x 0.7 mm
Antenna Type	Rigid PCB
Mounting Type	Adhesive
RF Connector (1)	MHF1, MHF4
RF Cable Type (1)	Ø1.13 mm
Cable Length (1)	50 mm, 100 mm, 150 mm, 200 mm, 250 mm, 300 mm, 350mm

(1): Fully customizable RF Cable & Connector

Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
RoHS Complaint	Yes
PB Free	Yes

Cause/Reason for Change: Updated PCB and sponge specification

ABRACON Ecliptek FOX ILSI MMD OSCILENT

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Engineering/Process Change Notice

Change Plan		
Effective Date: 06/09/2026	**Additional Remarks:**	
Change Declaration:		
Issued Date: 06/09/2026	**Issued By:** Allan	**Issued Department:** Engineering
Approval: *Saravanan Subramanian* Engineering Director	**Approval:** *Reuben Quintanilla* Quality Director	**Approval:** *Ying Huang* Purchasing Director

For Abracon EOL only		
Last Time Buy (if applicable):	**Alternate Part Number / Part Series:**	
Additional Approval:	**Additional Approval:**	**Additional Approval:**

Customer Approval (If Applicable)		
Qualification Status: ☐ Approved ☐ Not accepted *Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.*		
Customer Part Number:	**Customer Project:**	
Company Name:	**Company Representative:**	**Representative Signature:**
Customer Remarks:		

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Brand	Affected PN	Discontinued/EOL PN	Added PN	Series	ECO#	Datasheet Link	ECN Notification Link
Abracon	AANI-FB-0083-0050I			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
Abracon	AANI-FB-0083-0050W			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
Abracon	AANI-FB-0083-0100I			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
Abracon	AANI-FB-0083-0100W			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
Abracon	AANI-FB-0083-0150I			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
Abracon	AANI-FB-0083-0150W			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
Abracon	AANI-FB-0083-0200I			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
Abracon	AANI-FB-0083-0200W			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
Abracon	AANI-FB-0083-0250I			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
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Abracon	AANI-FB-0083-0300I			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
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Abracon	AANI-FB-0083-0350I			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf
Abracon	AANI-FB-0083-0350W			AANI-FB-0083	R0509	https://abracon.com/datasheets/AANI-FB-0083.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0509_AANI-FB-0083.pdf

TRI-BAND WI-FI 6E/7 PCB ANTENNA



AANI-FB-0083

Request Samples | Check Inventory

41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Features

- Compact Design with High Efficiency Up to 90%
- Easy Installation on Flat Surfaces
- Can be Installed on Plastic and Human Body
- Strong Adhesive in High-Temperature and Humid Environment
- Fully Customizable Cable Length and Connector Options
- RoHS Compliant

Applications

- Wi-Fi/WLAN coverage
  - Wi-Fi 7 (802.11be)
  - Wi-Fi 6/6E (802.11ax)
  - Wi-Fi 4/5 (802.11b/g/n/ac)
- Bluetooth®/ ZigBee® / Thread/ Matter
- Router and Networking
- Home Automation and Remote Sensing

Product Image



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TRI-BAND WI-FI 6E/7 PCB ANTENNA



AANI-FB-0083

Request Samples | Check Inventory

41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Ordering Information

Part Number	Description	Connector Option
AANI-FB-0083-0050I	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF1 connector and 50mm cable	MHF1
AANI-FB-0083-0050W	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF4 connector and 50mm cable	MHF4
AANI-FB-0083-0100I	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF1 connector and 100mm cable	MHF1
AANI-FB-0083-0100W	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF4 connector and 100mm cable	MHF4
AANI-FB-0083-0150I	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF1 connector and 150mm cable	MHF1
AANI-FB-0083-0150W	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF4 connector and 150mm cable	MHF4
AANI-FB-0083-0200I	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF1 connector and 200mm cable	MHF1
AANI-FB-0083-0200W	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF4 connector and 200mm cable	MHF4
AANI-FB-0083-0250I	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF1 connector and 250mm cable	MHF1
AANI-FB-0083-0250W	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF4 connector and 250mm cable	MHF4
AANI-FB-0083-0300I	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF1 connector and 300mm cable	MHF1
AANI-FB-0083-0300W	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF4 connector and 300mm cable	MHF4
AANI-FB-0083-0350I	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF1 connector and 350mm cable	MHF1
AANI-FB-0083-0350W	TRI-BAND WI-FI 6E/7 PCB ANTENNA with MHF4 connector and 350mm cable	MHF4

Note: Different cable and connector configurations that are not listed may be available upon request via Abracon online support

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41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Electrical Specification

Parameter	Specification			Unit
Operating Frequency	2400 – 2483.5	5150 - 5850	5925 - 7125	MHz
VSWR (Typ.)	< 2.0	< 2.0	< 2.5	:1
Peak Gain	2.6	3.9	4.2	dBi
Minimum Total Efficiency	95.1	94.6	81.1	%
Average Total Efficiency	91.5	87.3	72.1	%
Maximum Total Efficiency	84.5	83.1	63.3	%
Impedance	50			Ω
Polarization	Linear			-
Radiation Pattern	Omni-directional			-

Mechanical Specification

Parameter	Specification
Antenna Dimensions	41 x 9 x 0.7 mm
Antenna Type	Rigid PCB
Mounting Type	Adhesive
RF Connector (1)	MHF1, MHF4
RF Cable Type (1)	Ø1.13 mm
Cable Length (1)	50 mm, 100 mm, 150 mm, 200 mm, 250 mm, 300 mm, 350mm

(1): Fully customizable RF Cable & Connector

Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
RoHS Complaint	Yes
PB Free	Yes

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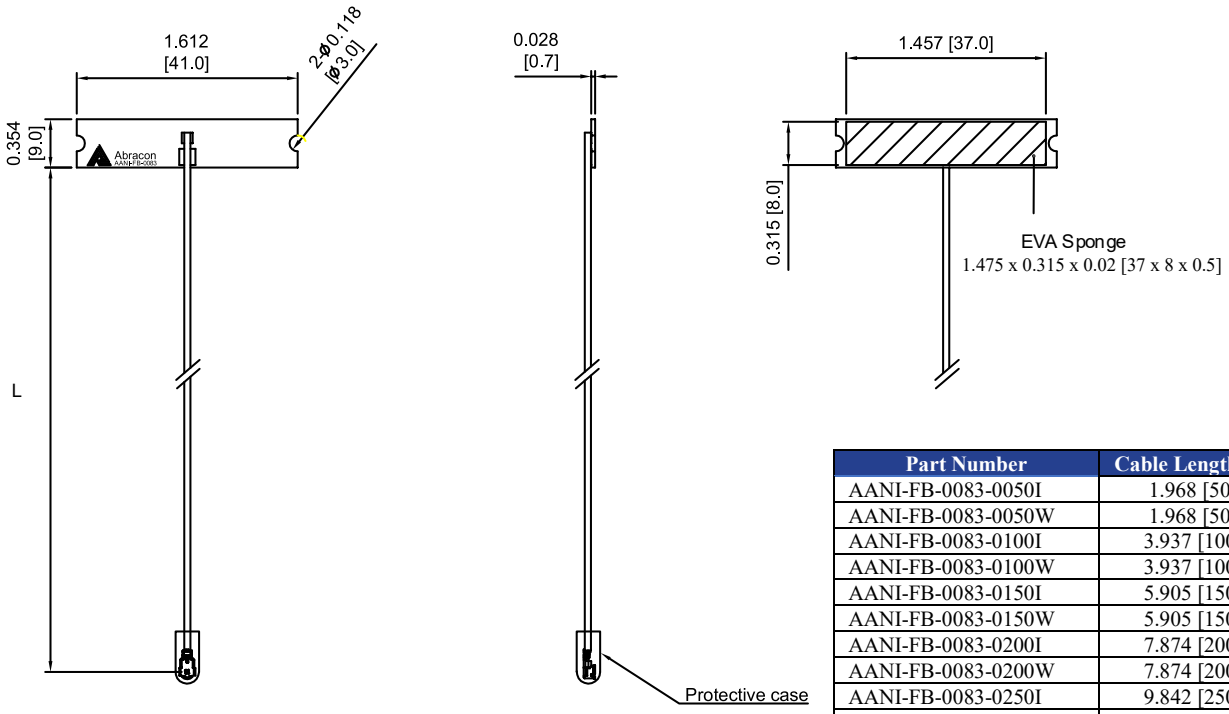


AANI-FB-0083

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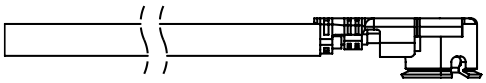
41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Product Dimensions

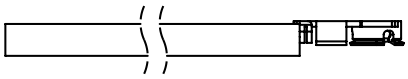


Part Number	Cable Length (L)	Connector
AANI-FB-0083-0050I	1.968 [50]	MHF1
AANI-FB-0083-0050W	1.968 [50]	MHF4
AANI-FB-0083-0100I	3.937 [100]	MHF1
AANI-FB-0083-0100W	3.937 [100]	MHF4
AANI-FB-0083-0150I	5.905 [150]	MHF1
AANI-FB-0083-0150W	5.905 [150]	MHF4
AANI-FB-0083-0200I	7.874 [200]	MHF1
AANI-FB-0083-0200W	7.874 [200]	MHF4
AANI-FB-0083-0250I	9.842 [250]	MHF1
AANI-FB-0083-0250W	9.842 [250]	MHF4
AANI-FB-0083-0300I	11.811 [300]	MHF1
AANI-FB-0083-0300W	11.811 [300]	MHF4
AANI-FB-0083-0350I	13.779 [350]	MHF1
AANI-FB-0083-0350W	13.779 [350]	MHF4

CONNECTOR



MHF1



MHF4

Unit : inches [mm]

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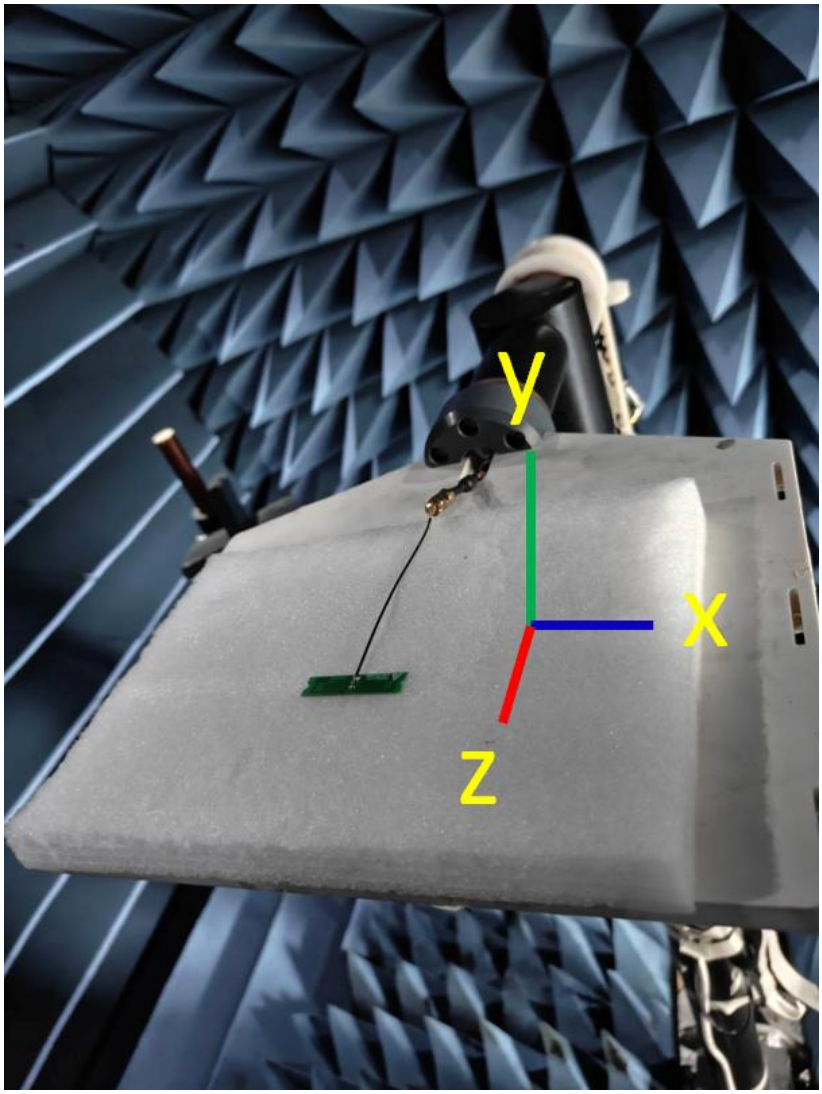


AANI-FB-0083

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41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Measurement Setup Photo



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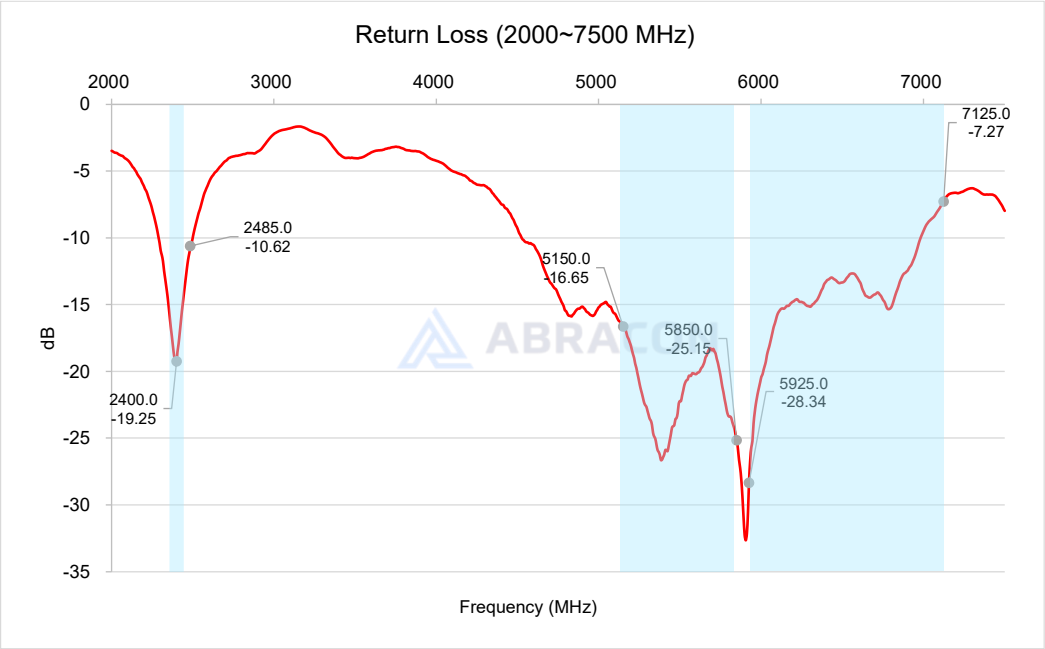


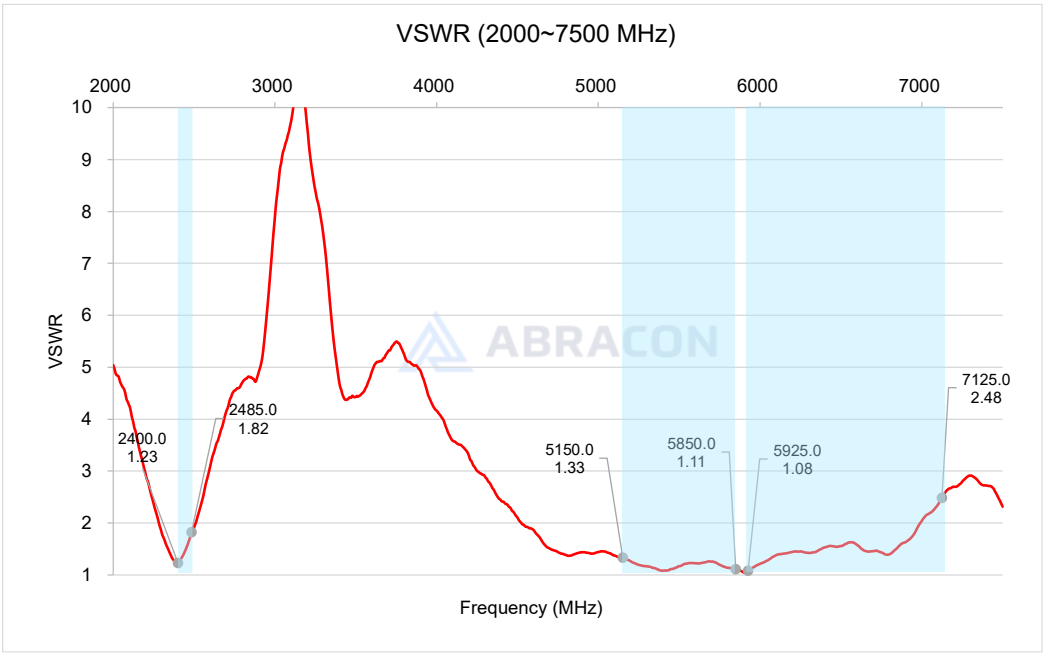
AANI-FB-0083

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41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Reflection Characteristics – Return Loss & VSWR





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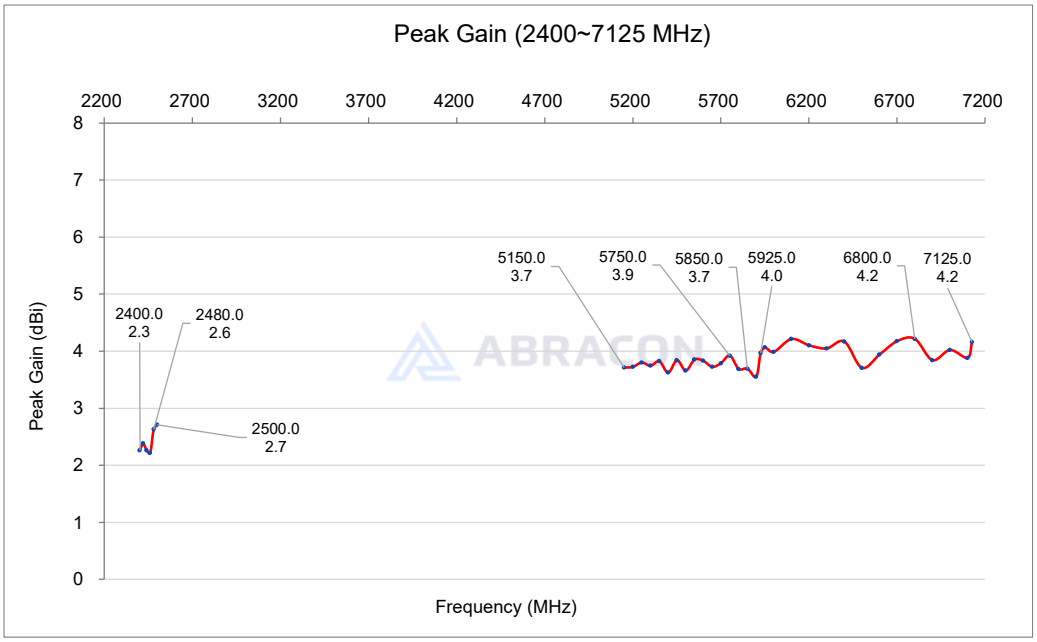


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41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Radiation Characteristics – Peak Gain



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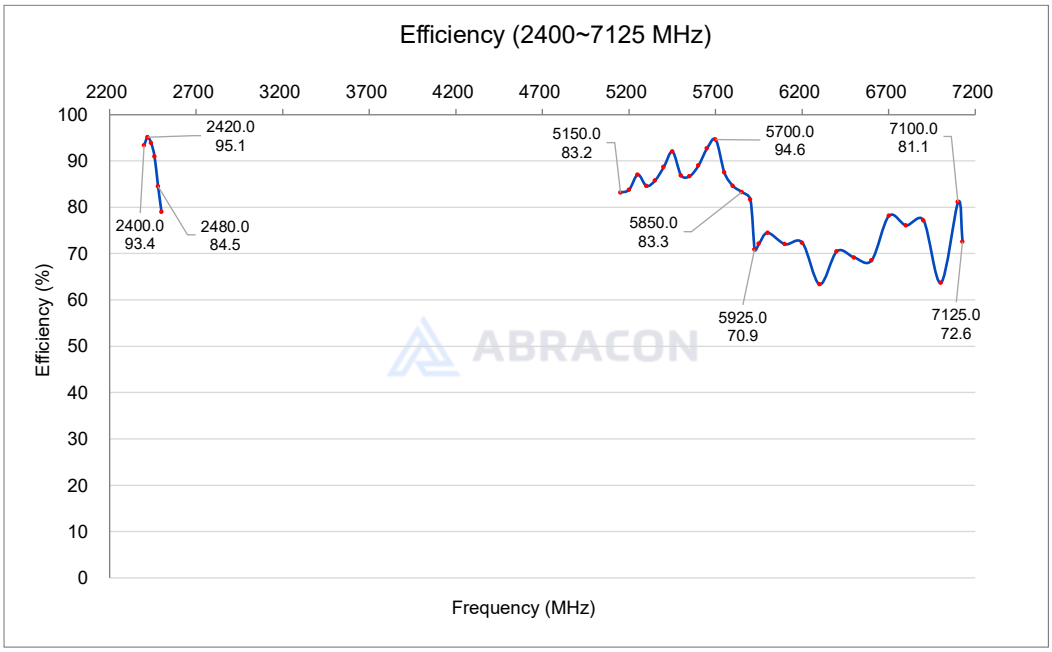


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41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Radiation Characteristics – Total Efficiency (%)



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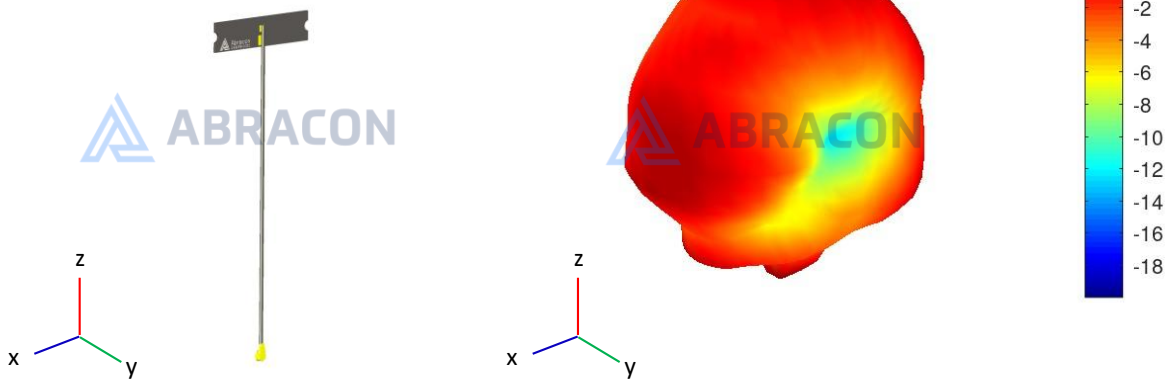
AANI-FB-0083

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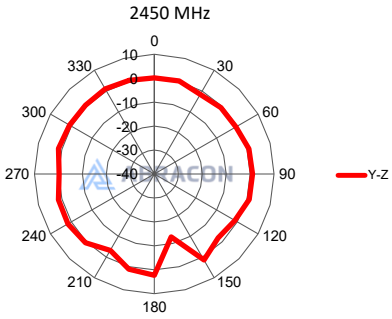
41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Radiation Characteristics – 3D & 2D pattern

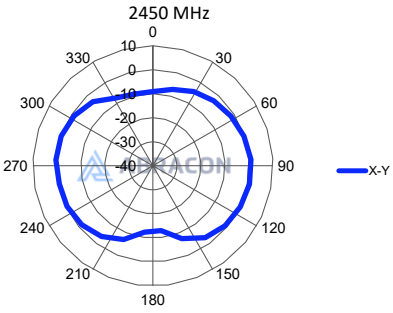
2450MHz



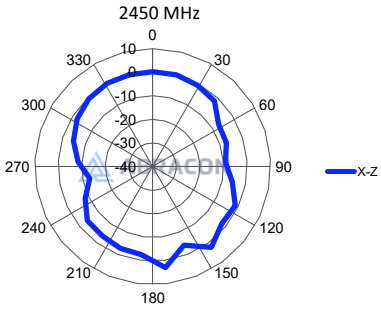
YZ plane



XY plane



XZ plane



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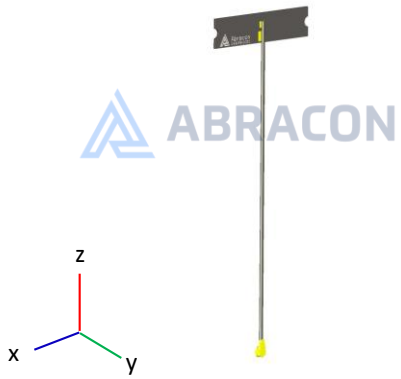


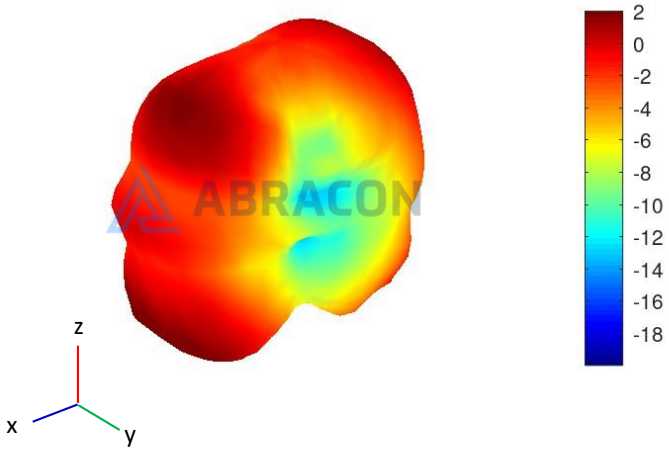
AANI-FB-0083

Request Samples | Check Inventory

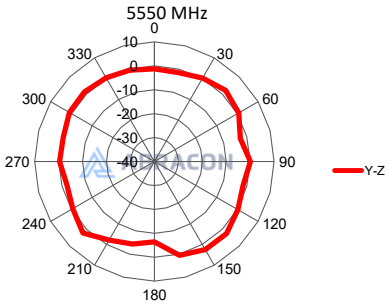
41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

5550MHz

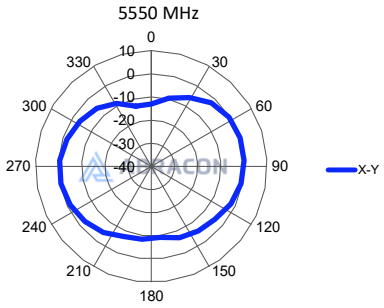




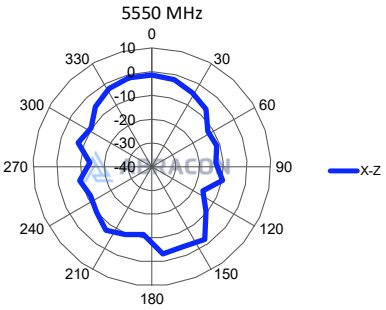
YZ plane



XY plane



XZ plane



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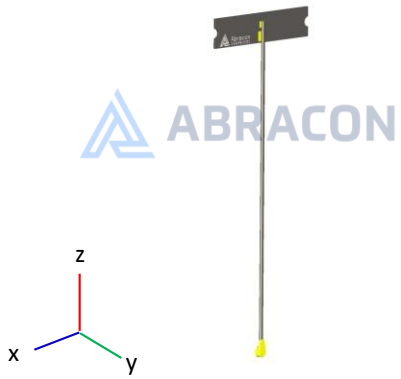


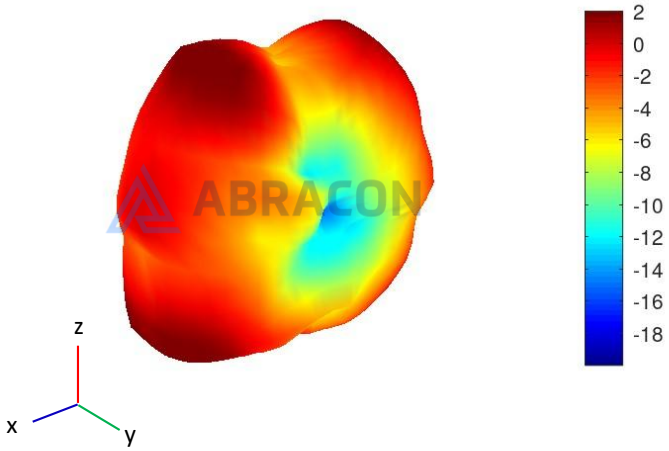
AANI-FB-0083

Request Samples | Check Inventory

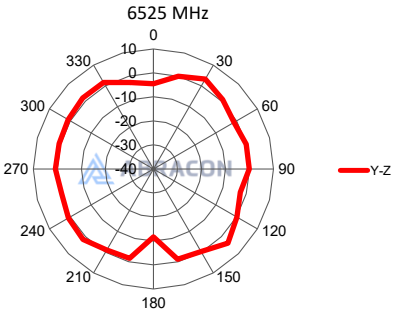
41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

6525MHz

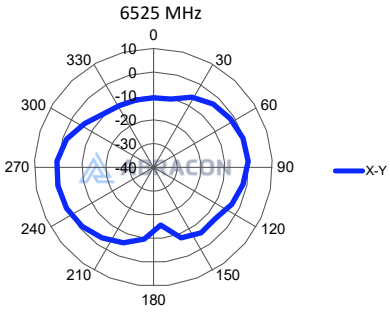




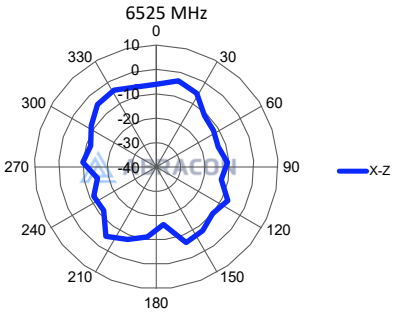
YZ plane



XY plane



XZ plane



ABRACON

12117 Bee Caves Rd, Bldg-3, Suite 200 Bee Cave, TX 78738
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
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REVISED: 06-09-26

ABRACON IS ISO9001-2015 CERTIFIED

TRI-BAND WI-FI 6E/7 PCB ANTENNA



AANI-FB-0083

Request Samples | Check Inventory

41 x 9 x 0.7 mm
RoHS Compliant
MSL Level = 1

Packaging

Number of Antenna/ bags: 50 pcs

Total Pcs / package: 1000 pcs

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf ('COTS'), which are designed, intended, and validated for use in commercial, industrial, and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.

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