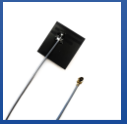


Tri Band Wi-Fi Flexible Printed Antenna 2.4/5/6 GHz



AFAG2220-SW2

Request Samples



Check Inventory



22 x 20 mm

RoHS/RoHS II Compliant

MSL Level = N/A

Features

- Compact 2.4/5/6 GHz square antenna
- Low Profile
- Linear Polarization
- High Gain of 5.1 dBi
- Highly efficient: > -3.5 dB (45%)
- Low Return Loss: < -6.1 dB
- Easy integration using cable and connector

Applications

- Wi-Fi/BT/BLE/ZigBee/ISM applications
- IoT/ M2M
- Wearables
- Automation/ Smart Home
- Healthcare Devices
- Hand-free/ PC Peripherals
- Video and surveillance

Product Image



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22 x 20 mm

RoHS/RoHS II Compliant

MSL Level = N/A

Electrical Specification – Antenna

Parameter	Specification			Unit
Operating Frequency	2400 - 2500	5150 - 5850	5930 - 7125	MHz
Return Loss	< -6.5	< -9.9	< -6.1	dB
Polarization	Linear (Mixed)			-
Peak Gain	3.0	2.4	5.1	dBi
Efficiency	> -3.3 (47)	> -2.6 (55)	> -3.5 (45)	dB (%)
Impedance	50			Ω
Radiation Pattern	Omni-directional			-
Power Capacity	3			W

Note: Performance will vary depending on the ground plane, application, and environment. The antenna is not suitable for mounting on metal surfaces.

Mechanical Specification

Parameter	Specification
Antenna Dimension	22 x 20 mm
Mounting Type	Adhesive Mount
Material	FPC
Cable Type	ø1.13 mm coaxial
Cable Length	220±5 mm
Connector Type	MHF1 / I-PEX
Adhesive Tape	3M 467MP

Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C



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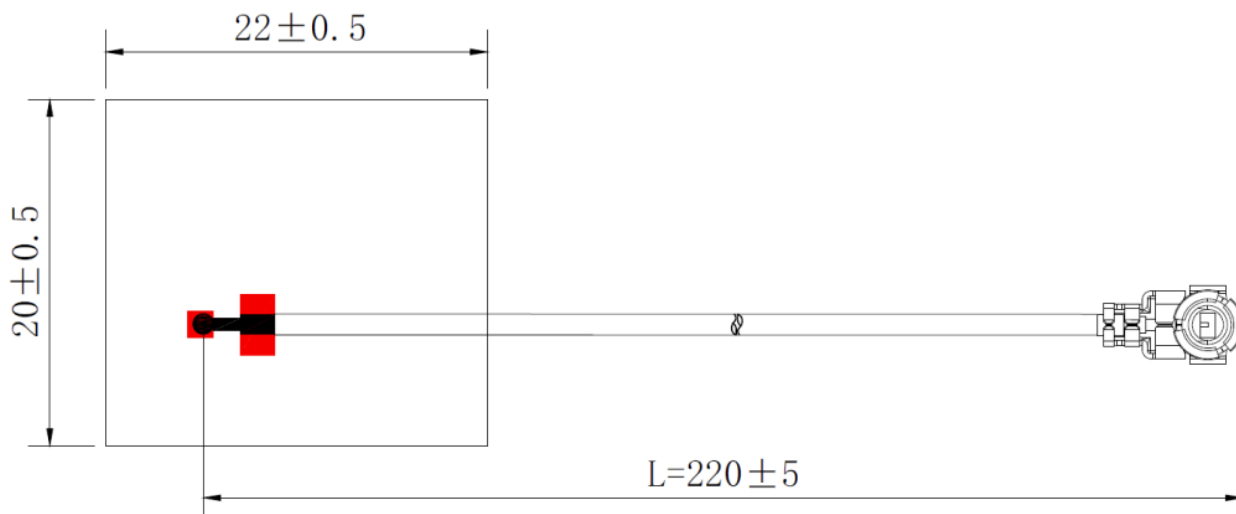


22 x 20 mm

RoHS/RoHS II Compliant

MSL Level = N/A

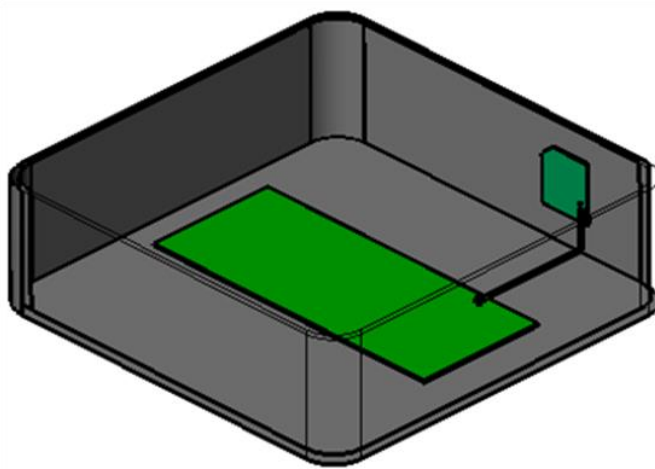
Product Dimensions



Unit: mm

Measurement Setup

The antenna measurements were done on a standard measurement fixture. The antenna was mounted according to picture below in the ABS plastic fixture (150x150x45 mm). The antenna was also connected to a PCB (120x50 mm) with the cable fully extended.



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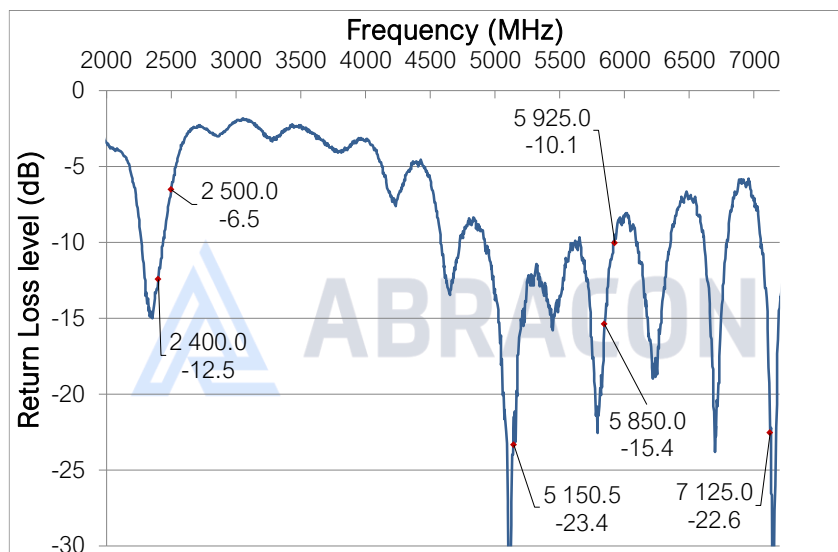


22 x 20 mm

RoHS/RoHS II Compliant

MSL Level = N/A

Reflection Characteristics – Return Loss



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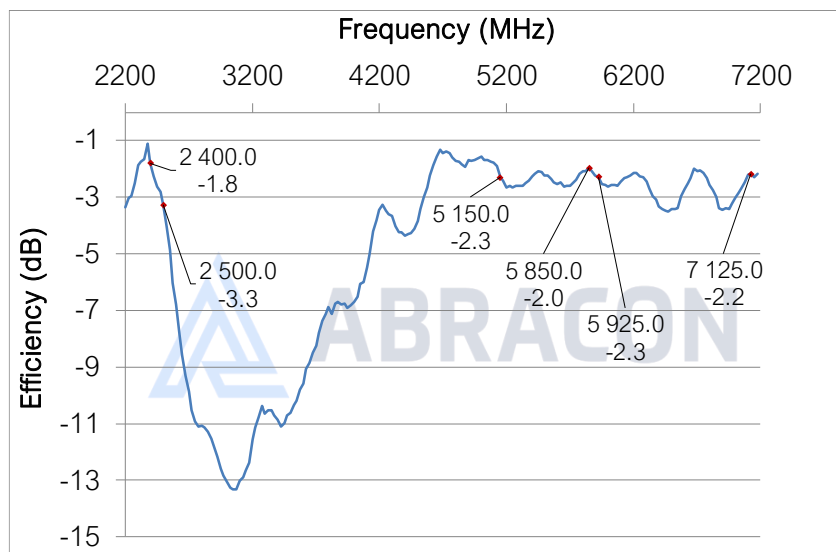


22 x 20 mm

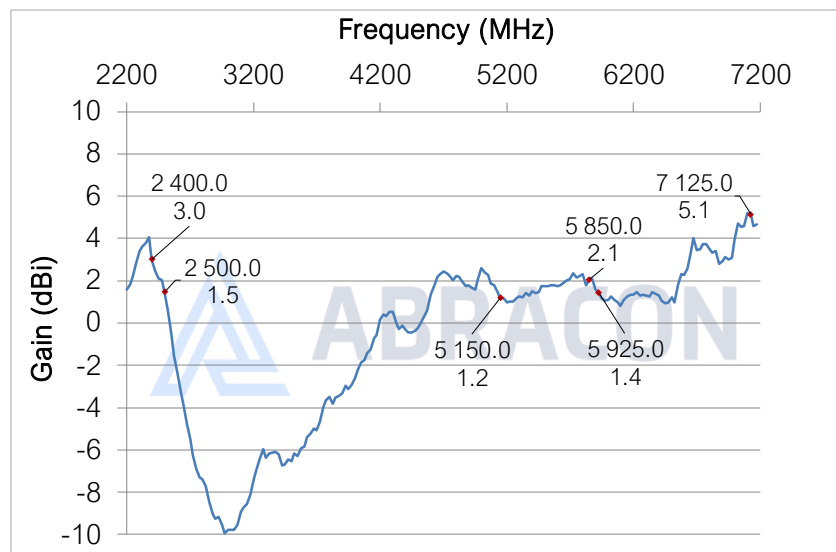
RoHS/RoHS II Compliant

MSL Level = N/A

Radiation Characteristics – Total Efficiency (dB)



Radiation Characteristics – Maximum Gain



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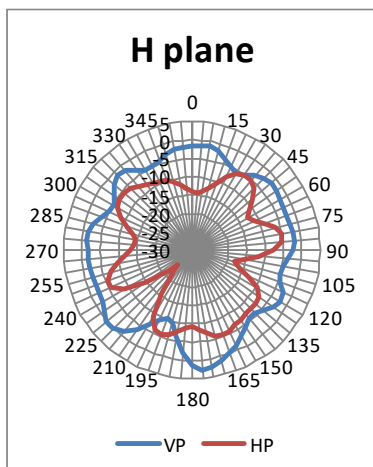
22 x 20 mm

RoHS/RoHS II Compliant

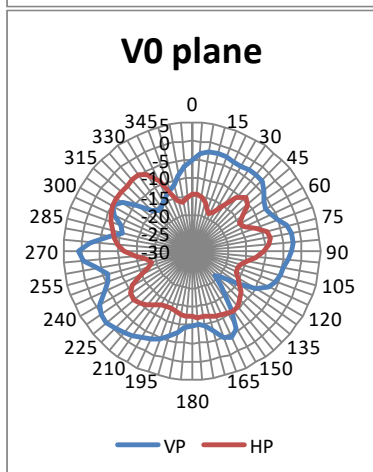
MSL Level = N/A

Radiation Characteristics – 2D Pattern @ 2450 MHz

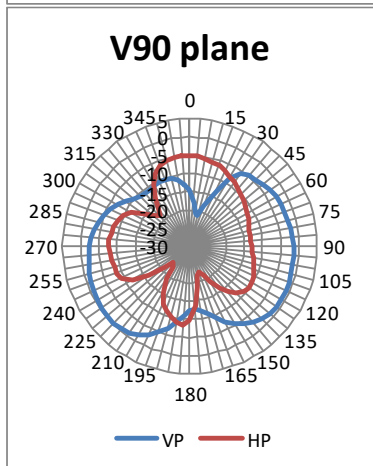
XY-plane:



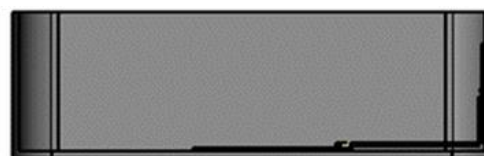
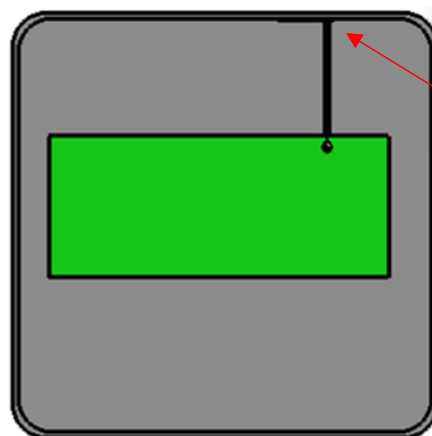
YZ-plane:



XZ-plane:



VP: Vertical Polarization
HP: Horizontal Polarization



Unit: dBi



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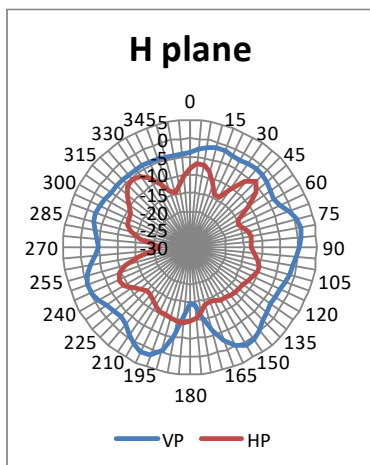
22 x 20 mm

RoHS/RoHS II Compliant

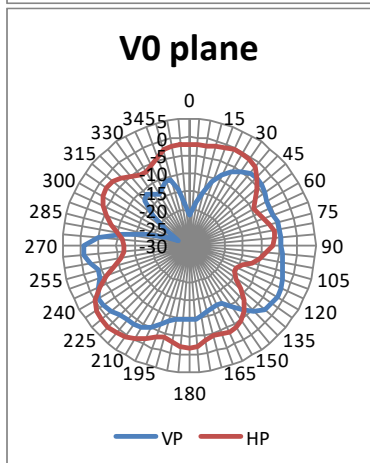
MSL Level = N/A

Radiation Characteristics – 2D Pattern @ 5500 MHz

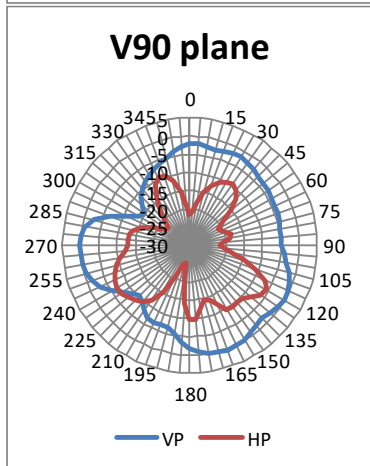
XY-plane:



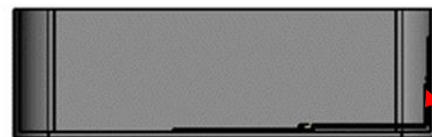
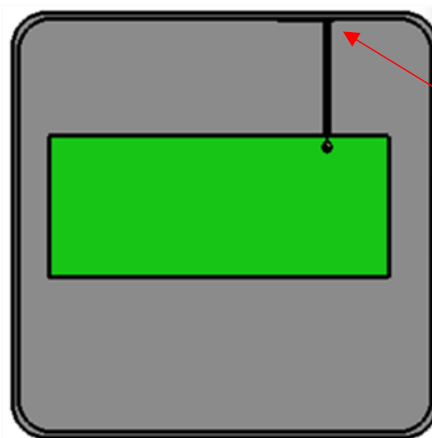
YZ-plane:



XZ-plane:



VP: Vertical Polarization
HP: Horizontal Polarization



Unit: dBi



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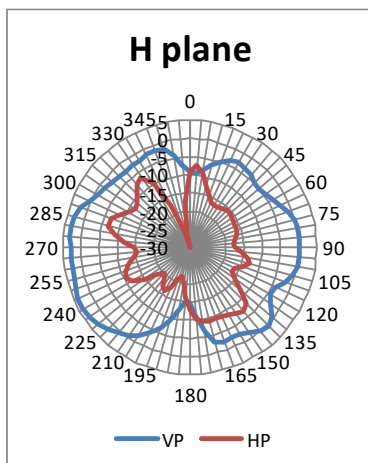
22 x 20 mm

RoHS/RoHS II Compliant

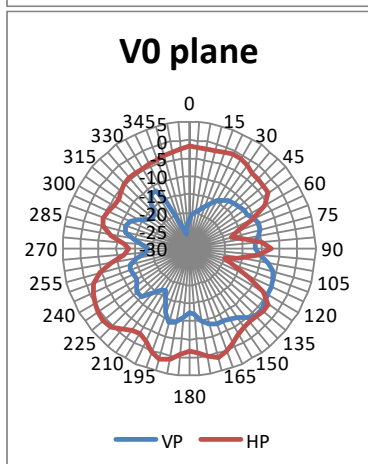
MSL Level = N/A

Radiation Characteristics – 2D Pattern @ 6675 MHz

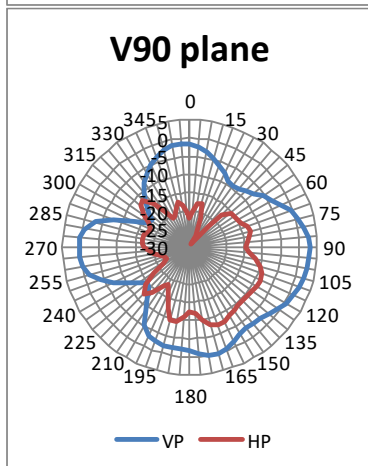
XY-plane:



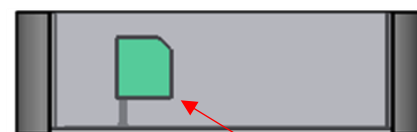
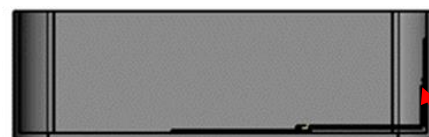
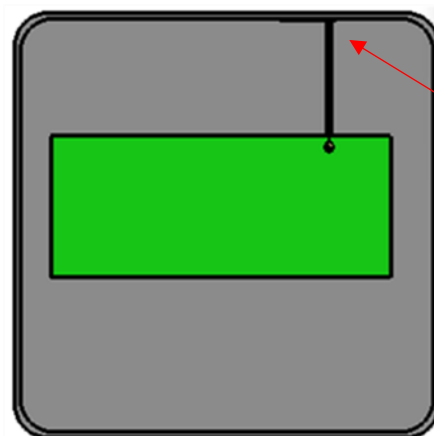
YZ-plane:



XZ-plane:



VP: Vertical Polarization
HP: Horizontal Polarization



Unit: dBi

Tri Band Wi-Fi Flexible Printed Antenna 2.4/5/6 GHz



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22 x 20 mm

RoHS/RoHS II Compliant

MSL Level = N/A

Packaging

The antennas are delivered in plastic bags in quantities of 5.

Parameter	Specification
Antennas per bag (inner box)	5 pcs
Antennas per carton (outer box)	500 pcs
Bag size	180 x 122 mm
Carton size	500 x 260 x 250 mm
Carton weight (NW)	1.5 kgs
Carton weight (GW)	3.5 kgs

Caution

- 1) Do not apply excess mechanical stress to the component body or terminations. Do not attempt to re-form or bend the components as this will cause damage to the component.
- 2) Do not expose the component to open flame.
- 3) This specification applies to the functionality of the component as a single unit. Please ensure the component is thoroughly evaluated in the application circuit.

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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