
P-BT-1302-FP Antenna Application Note

Description

The exciting Auden antenna is one of the world's high-performance FPC antenna. It is very suitable for Bluetooth[®], Wi-Fi[®] (802.11b/g), Zigbee[®], 2.3 GHz WiMax[™] and 2.5 GHz WiMax[™] system application with assemble in a suitable clearance area. This standard antenna was design to speed the overall development process and decrease required development time then make your products fast to enter the market of the world. The dimension is 44.2 mm (L) x 14.05 mm (W) x 0.17 mm (T).

The patent number

Patent pending.

Features

- ⊙ Linear Polarization
- ⊙ FPC Process
- ⊙ Ultra-Thin, Light Weight
- ⊙ Flexible antenna
- ⊙ Wide Bandwidth
- ⊙ Cost-Effective
- ⊙ High efficiency



Applications

- ⊙ Tablet
- ⊙ Laptop
- ⊙ Information Appliance
- ⊙ Tracking device
- ⊙ Wireless device

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1. Antenna Form and Reference Data



Fig.1 The P-BT-1302-FP antenna form

Table.1 The antenna quick reference data

Antenna Type	Dipole Antenna
Frequency	2300 MHz~2700 MHz
Impedance	50 Ω
Polarization	Linear
VSWR	2.5 : 1
Pattern	Omni-Directional
3D avg. efficiency (typ.)	40~60 %

2. Pin Descriptions

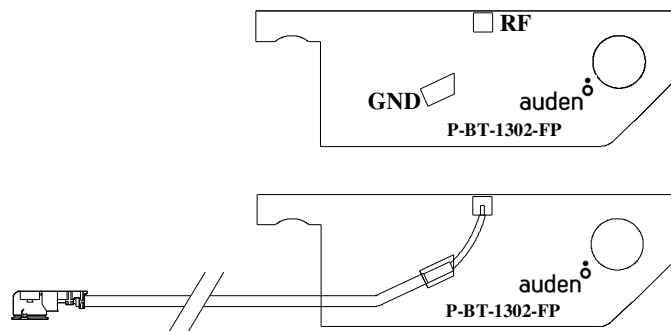


Fig.2 The P-BT-1302-FP antenna pin descriptions

3. Package and Form Information



Fig.3 The Antenna 3D Top View

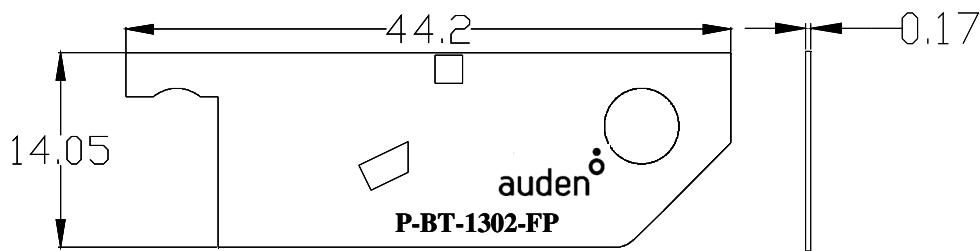


Fig.4 The P-BT-1302-FP antenna form information

Table.3 The antenna package information

Dimension (mm ³)	Weight (g)	Material	Packing	Connector
44.2 x 14.05 x 0.17	1.00	FPC	PE bag	I-PEX

Note:

1. All dimensions are shown in millimeters.
2. The antenna dimension tolerance is ± 0.2 mm.
3. The connected cable length based on requirement of consumer.

4. Antenna Performance

The antenna efficiency test was by ATL (A Test Lab Techno Corp.). It measurements were taken in the ETS-Lindgren AMS-8500 standards system anechoic chamber. The chamber size is 7 m x 4 m x 4 m and supports test frequencies from 700 MHz to 6 GHz.

The S11 and VSWR measurements were taken with use Agilent E5071B

network analyzer. The testing was performed in free space.

4.1 The antenna performance in digital photo frame

Antenna platform: Pad

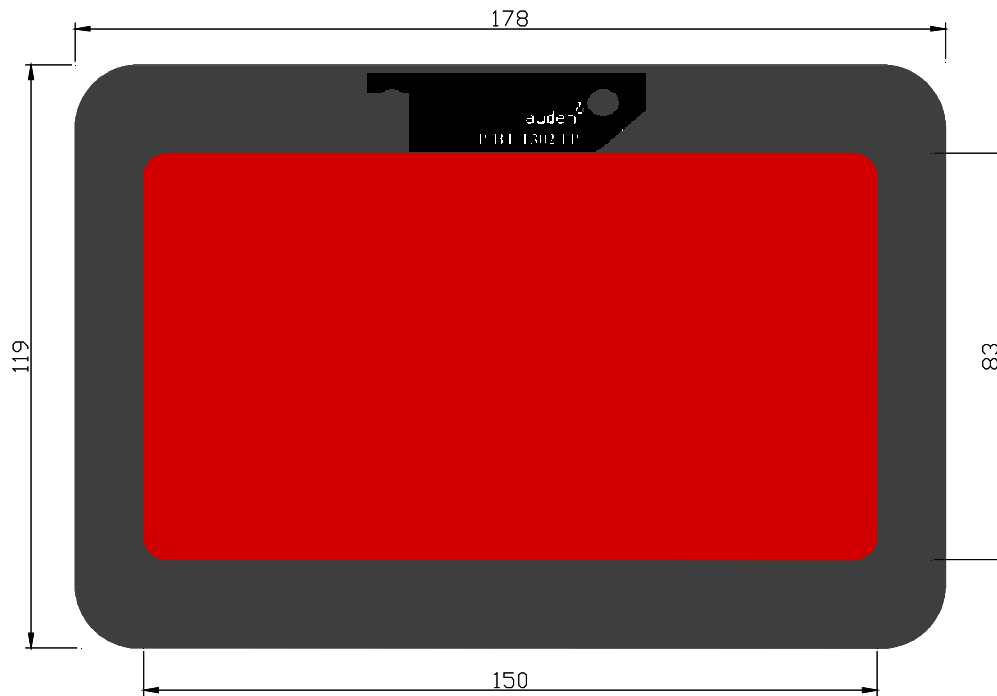


Fig.5 The drawing of P-BT-1302-FP antenna in reference device

Note:

1. All dimensions are shown in millimeters.
2. The antenna dimension tolerance is ± 0.2 mm
3. The P-BT-1302-FP antenna must be affixed to the non-metallic device

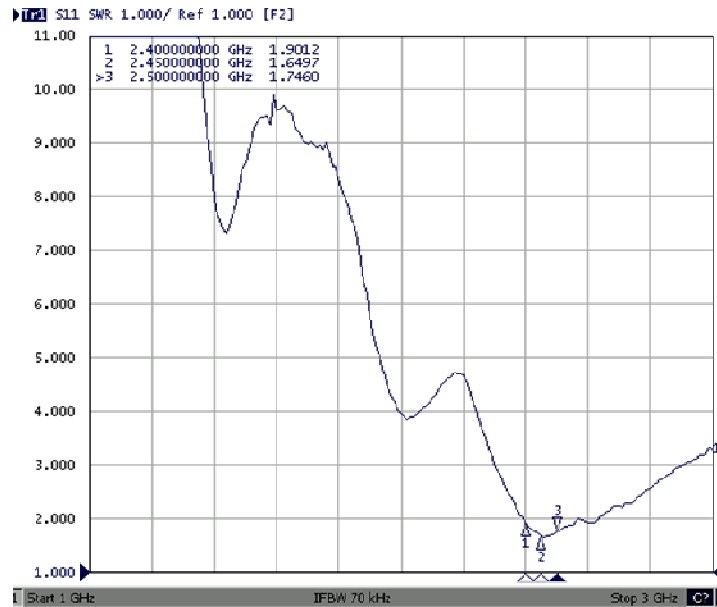


Fig.6 The measured VSWR result of the P-BT-1302-FP antenna

Note: Maker 1: 2400 MHz, Maker 2: 2450 MHz, Maker 3: 2500 MHz

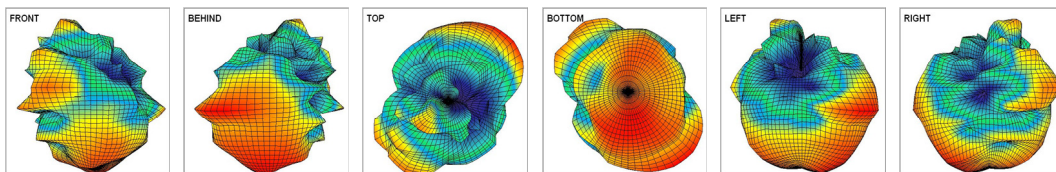
The passive 3D avg. efficiency:

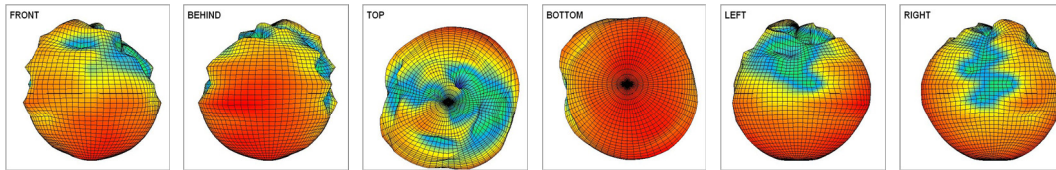
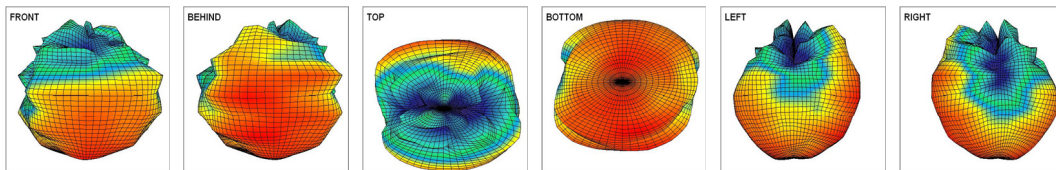
Table.4 The 3D passive efficiency test of the P-BT-1302-FP antenna

P-BT-1302-FP Antenna Performance									
Frequency	2300	2350	2400	2450	2500	2550	2600	2650	2700
3D Avg. Gain (dB)	-3.07	-2.68	-2.18	-1.49	-1.25	-1.20	-1.06	-1.45	-1.80
Peak Gain (dBi)	1.94	2.66	2.13	3.82	4.03	3.85	3.85	3.55	2.66
3D Avg. Eff. (%)	49.29%	53.99%	60.55%	70.93%	74.95%	75.91%	78.27%	71.61%	66.07%

The 3D radiation pattern on reference device

2300 MHz



2450 MHz**2700 MHz****Acknowledgement**


Thank you for purchasing the Auden P-BT-1302-FP Antenna. The antenna had been design to speed the overall development process and decrease required development time. We look forward to working with you and helping your products to enter the market of the world.

Contact Information

Please contact us by the below information if you need any solution of the antenna.

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