

SPECIFICATION

Part No. : **FXP831.09.0100C**

Product Name : FXP.831 Freedom 2.4/5 GHz Ground Coupled

Antenna

Feature : Flexible Ultra Low Profile 45mm*7mm*0.1mm

Adheres directly to inside of product plastic or

glass housing

Form factor and cable routing convenient for

integration High Efficiency

MMCX(M)RA Connector

100m 1.37mm co-axial cable

RoHS Compliant





1. Introduction

The FXP831 is a high efficiency, small, dual-band, dipole antenna for 2.4/4.9-6GHz band including Bluetooth and Wi-Fi. The FXP.831 has a peak gain of 2.5dBi at 2.4GHz and efficiencies of 56%, and 4.5dBi and 55% along bands 4.9GHz to 6GHz.

This Taoglas patent pending antenna is unique in the market because it is made from poly-flexible material, has a tiny form factor (45*7*.01mm) and has double-sided 3M tape for easy "peel and stick" mounting.

The cable routes conveniently directly out of the bottom of the antenna, reducing the volume the antenna takes up in the device to an absolute minimum compared to other designs. The FXP.831 is the ideal all-round antenna solution for squeezing into narrow spaces and still maintaining high performance, for example on the inside top or adjacent side applied directly to the plastic housing of LCD devices.



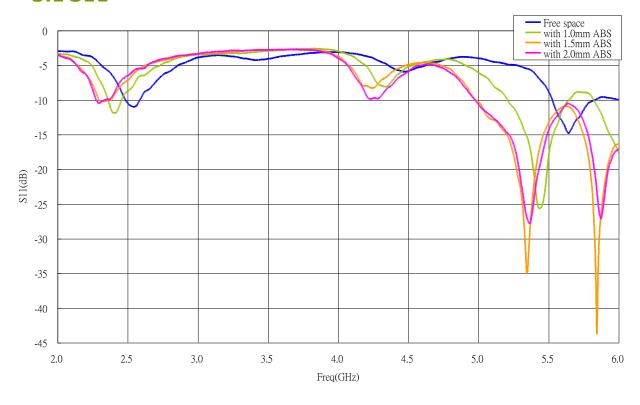
2. Specification

ELECTRICAL						
Frequency	2.4 ~ 2.5GHz,	4.9 ~ 5.8GHz				
Peak Gain (free space)	2.5dBi	4.5dBi				
Peak Gain (on plastic*)	3.0dBi	5.5dBi				
Average Gain (free space)	-2.6dBi	-2.6dBi				
Average Gain (on plastic)	-2.6dBi	-1.8dBI				
Efficiency (free space)	56%	55%				
Efficiency (on plastic)	56%	75%				
VSWR	≦2.5 : 1					
Impedance	50 Ohms					
Polarization	Linear					
Radiation Pattern	Omni					
Input Power	2W max.					
MECHANICAL						
Dimensions	45mm x 7mm					
Antenna Body Material	Polymer					
Cable	Gray 100mm 1.37 co-axial					
Connector	MMCX(M)RA					
ENVIRONMENTAL						
Temperature Range	-40°C to 85°C					
Humidity	Non-condensing 65°C 95% RH					



3. Electrical Characteristic

3.1 S11

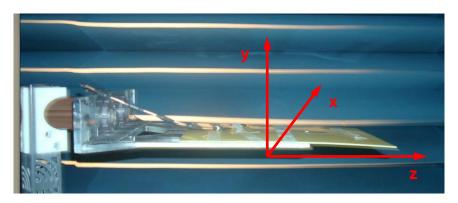




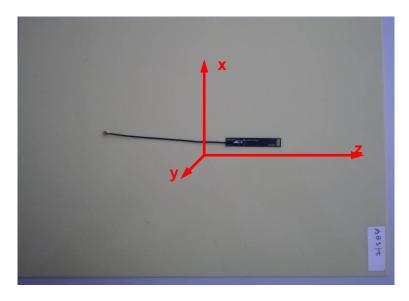
3.2 Test Setup

A ETS AMS-8500 test chamber is used for the free space radiation testing for FXP831.07.0100A. The measurement is taken with the antenna properly mounted in the designated device

Device tested in AMS-8500 Rectangular test chamber.



FXP831 on Baxter device to indicate the testing coordinate

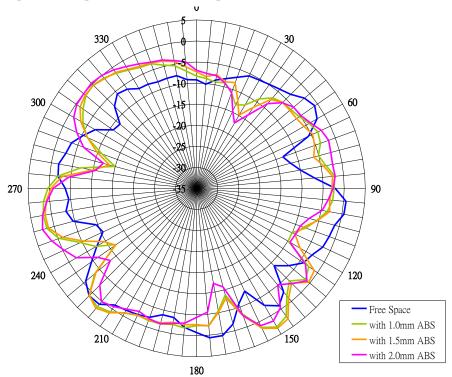


FXP831 on Baxter device to indicate the testing coordinate



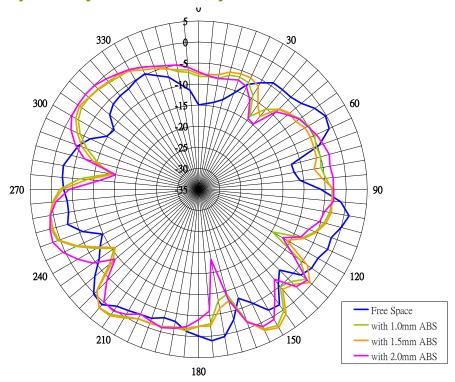
3.3 Radiation Pattern

3.3.1 XZ plane (at 2400MHz)

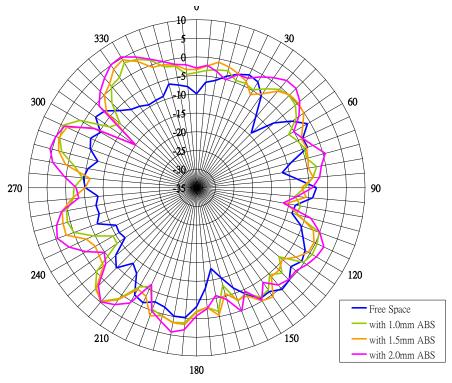




3.3.2 XZ plane (at 2500MHz)

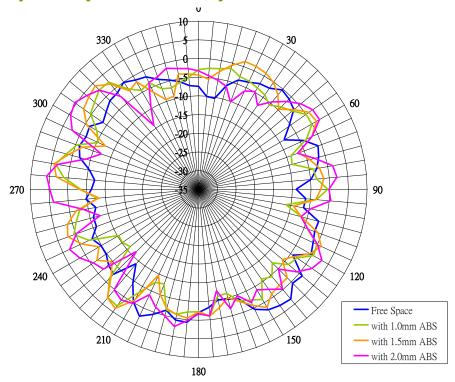


3.3.3 XZ plane (at 5000MHz)

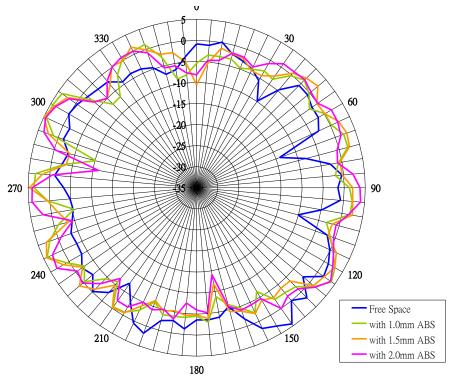




3.3.4 XZ plane (at 5500MHz)

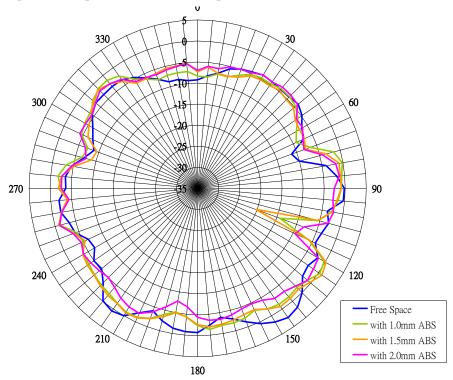


3.3.5 XZ plane (at 6000MHz)

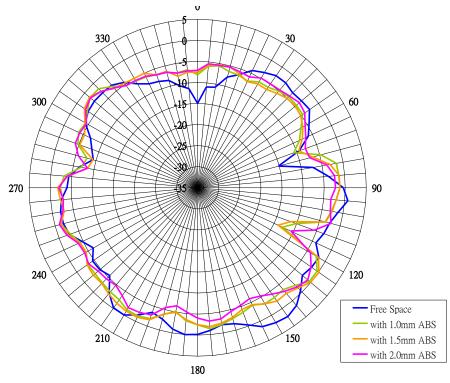




3.3.6 YZ plane (at 2400MHz)

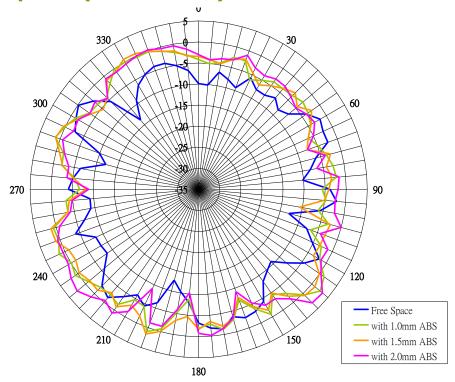


3.3.7 YZ plane (at 2500MHz)

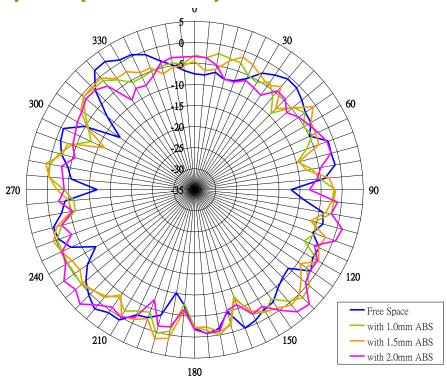




3.3.8 YZ plane (at 5000MHz)

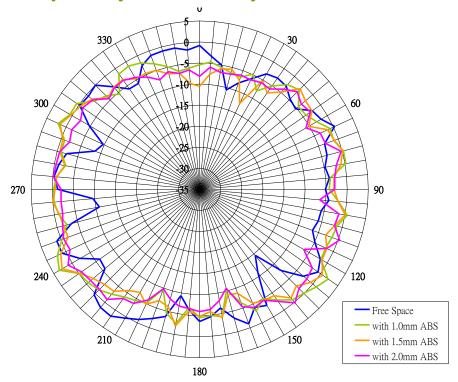


3.3.9 YZ plane (at 5500MHz)

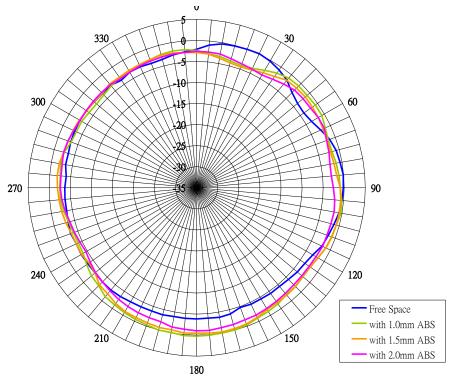




3.3.10 YZ plane (at 6000MHz)

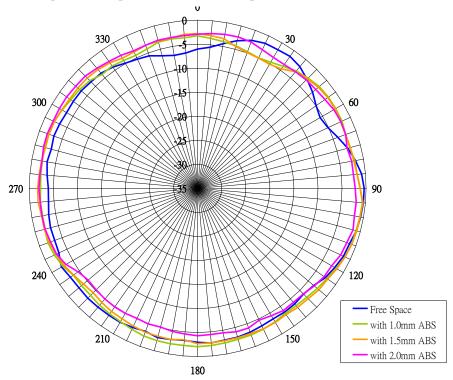


3.3.11 XY plane (at 2400MHz)

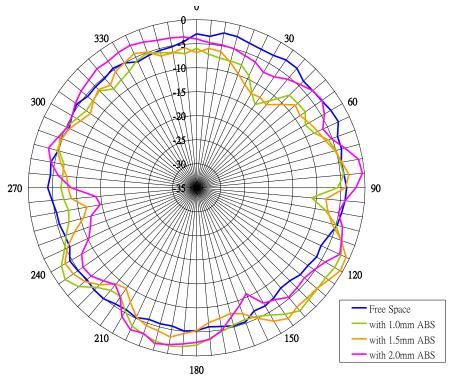




3.3.12 XY plane (at 2500MHz)

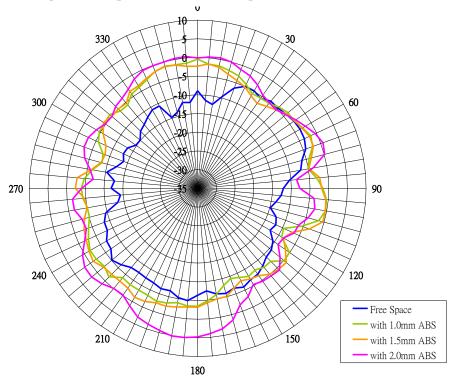


3.3.13 XY plane (at 5000MHz)

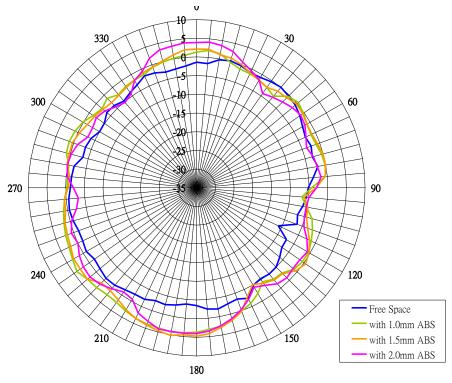




3.3.14 XY plane (at 5500MHz)

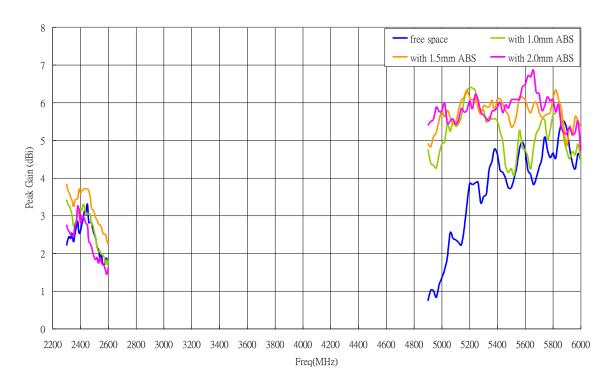


3.3.15 XY plane (at 6000MHz)

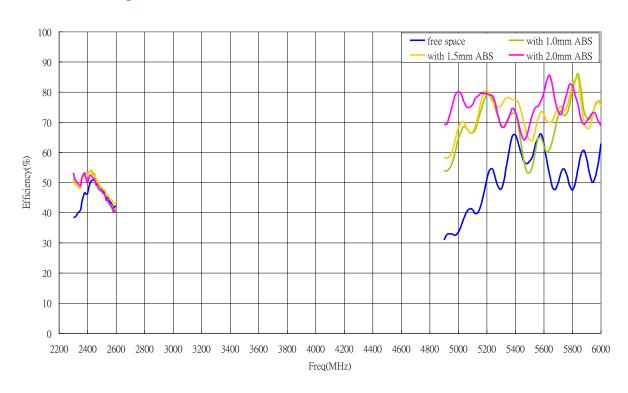




3.4 Peak Gain



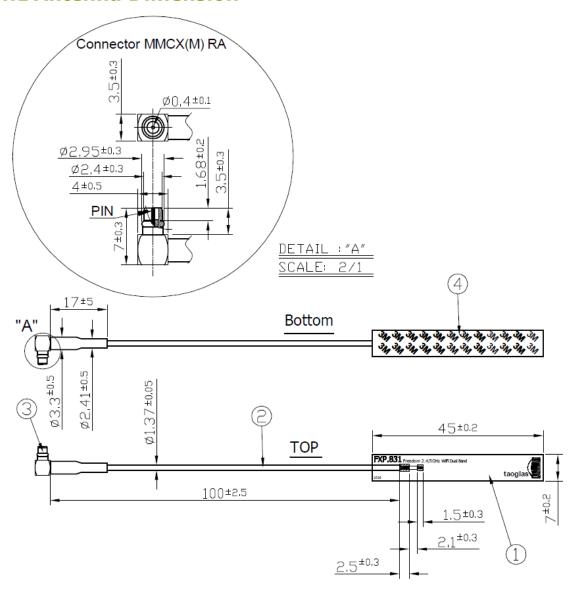
3.5 Efficiency





4. Mechanical

4.1 Antenna Dimension

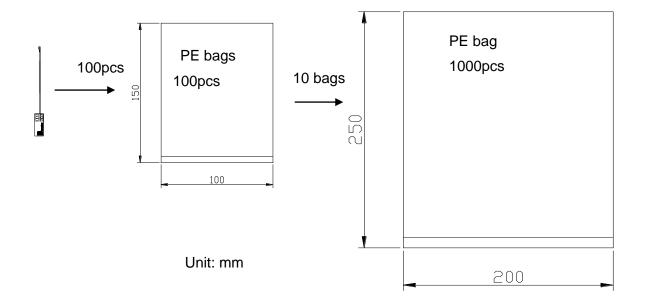


	Name	Part No.	Material	Finish	QTY
1	FXP831 PCB		FPCB 0.1t	Black	1
2	1.37 Coaxial Cable		FEP	Gray	1
3	MMCX(M) RA		Brass	Gold	1
4	Double-Sided Adhesive		3M 467	Brown Liner	1



5. Package

5.1 Package



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