



Specification

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FXP73 Blue Diamond 2.4GHz Band Antenna

Part No.	: FXP73.07.0100A
Product Name	: FXP73 Blue Diamond 2.4GHz Multi Standard Antenna
Feature	: 2.5dBi Gain IPEX MHFII Connector (U.FL compatible) 100 mm Cable 47*7*0.1 mm RoHS Compliant



VERSION	DATE	PAGE	DESCRIPTION	CENTRE	APPROVED
A	03/26/2009	All	Antenna Specifications	Taiwan	Ruben F. Cuadras

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I. OVERVIEW

The FXP73 Blue Diamond 2.4GHz Antenna works on WiFi, ZigBee, Bluetooth and ISM band at 2.4 GHz. This antenna has been designed with a specific solution to cover the current market applications that require rectangular form-factor, with easy installation through a cable connection. The antenna has been designed to work on different plastics material and thickness. We have selected a piece of ABS plastic with 1.8 mm of thickness as a baseline for testing.

II. ANTENNA CHARACTERISTICS

Parameter	Multi-Standard			
Communication System	Bluetooth	WiFi	ZigBee	Ant
Frequency Range (MHz)		2400-2483.5		
Efficiency (%)		50		
Gain (dBi)		2.5		
Return Loss (dB)		20		
Impedance		50 Ohms		
VSWR		≤1.5:1		
Polarization		Linear		
Power Handled		5 W		
Operation Temperature		-40 °C ~ +85 °C		
Storage Temperature		-40 °C ~ +85 °C		
Dimensions		47 X 7 X 0.1 mm		
Weight		1.2 g		
Connector		MHFII (U.FL Compatible)		
Cable Standard		Mini-Coax 1.13 mm		
Cable Length and color		80 mm, White		
RoHS Compliant		Yes		
Adhesive		3M 467		



III. TEST SET UP

A Satimo SG24 3D Scan System with Anechoic Chamber.

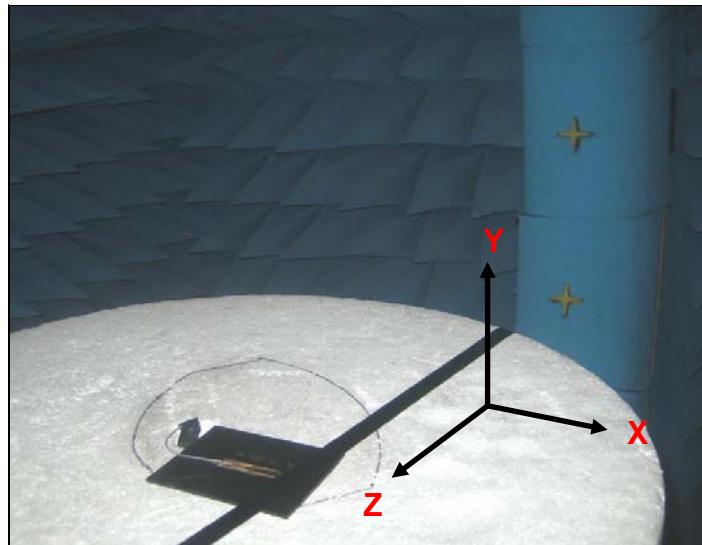


Figure 1. Satimo System.

Agilent 8753ES Vector Network Analyzer.



Figure 2. Network Analyzer.

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IV. ANTENNA PARAMETERS

The next antenna parameter graphs like Return Loss, Smith Chart and VSWR were measured in the Agilent 8753ES Vector Network Analyzer. The Gain, Efficiency and Radiation Patterns were measured in the reliable Satimo 3D Scan System.

A. Return Loss Data



Figure 3. Return Loss for the FXP73 Antenna.

B. VSWR Data

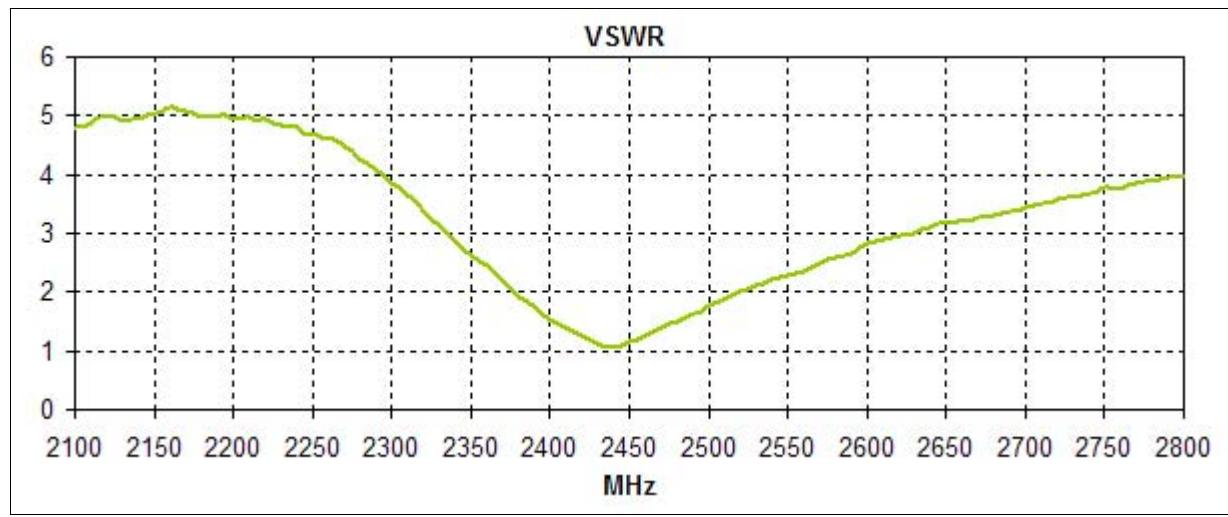


Figure 4. VSWR for the FXP73 Antenna.



D. Gain Data

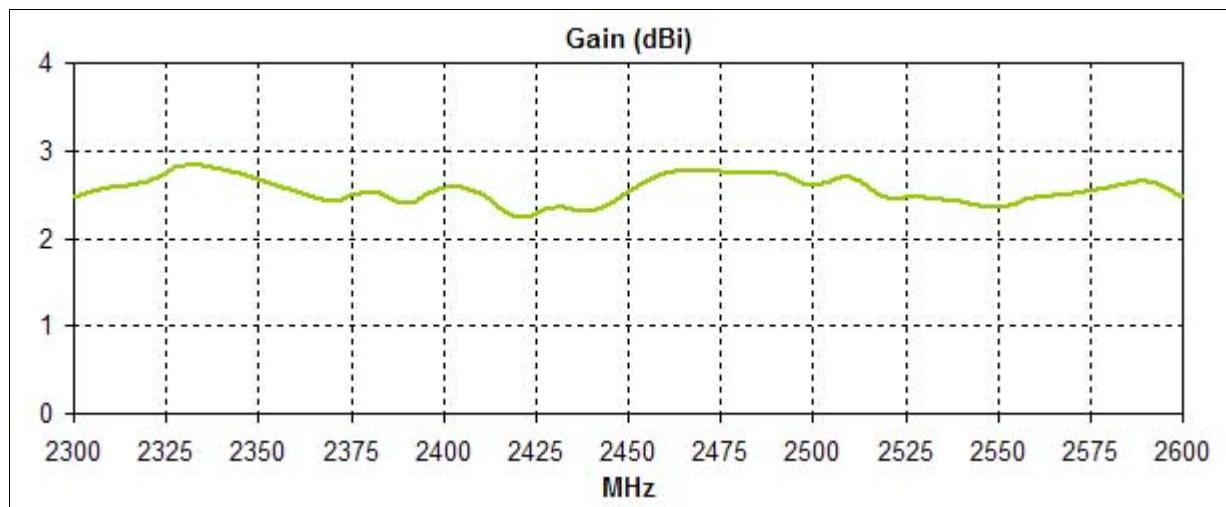


Figure 6. Gain for the FXP73 Antenna.

E. Efficiency Data

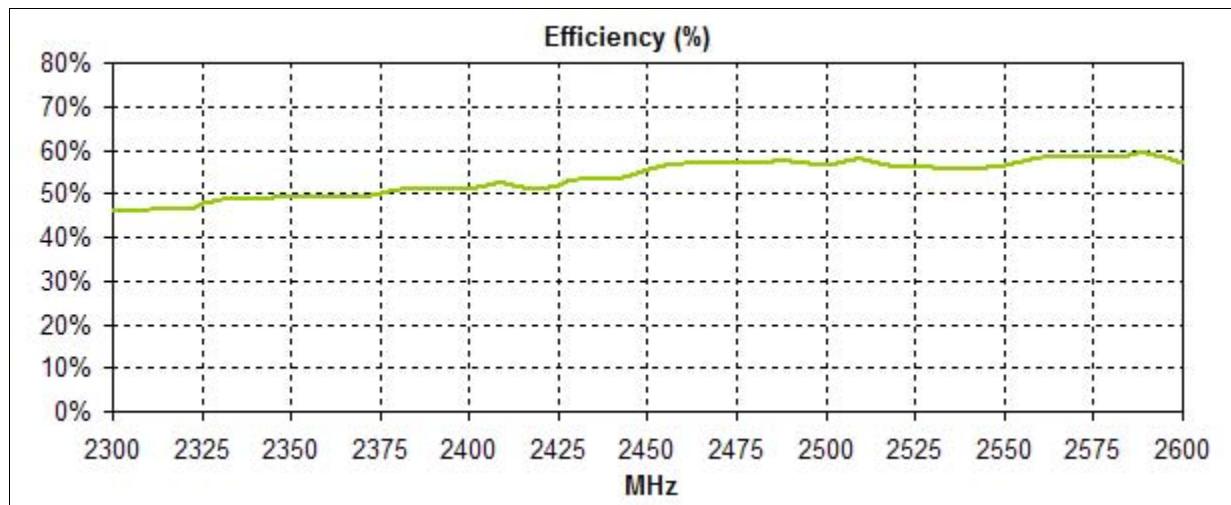


Figure 7. Efficiency for the FXP73 Antenna.



F. Radiation Pattern Data

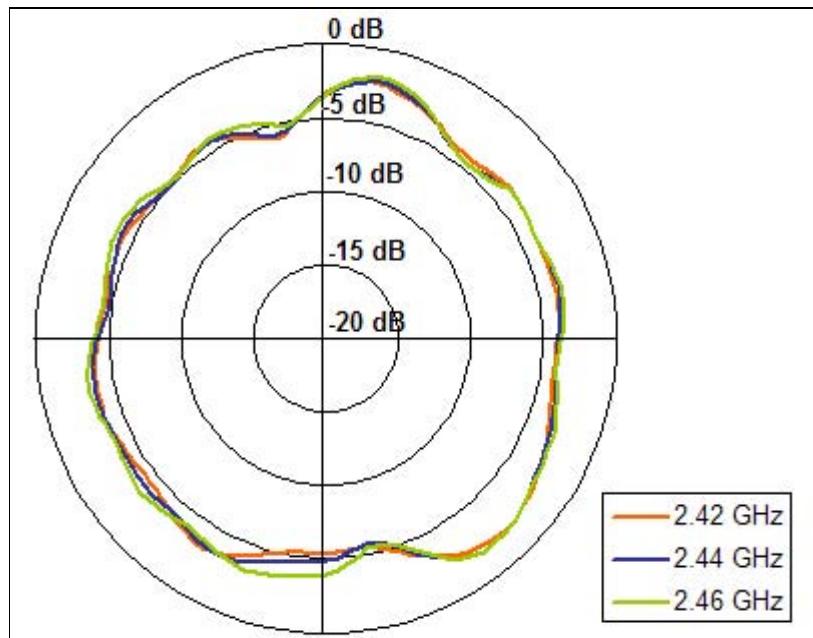


Figure 8. Radiation pattern XZ Plane, Figure 1 as reference (dB).

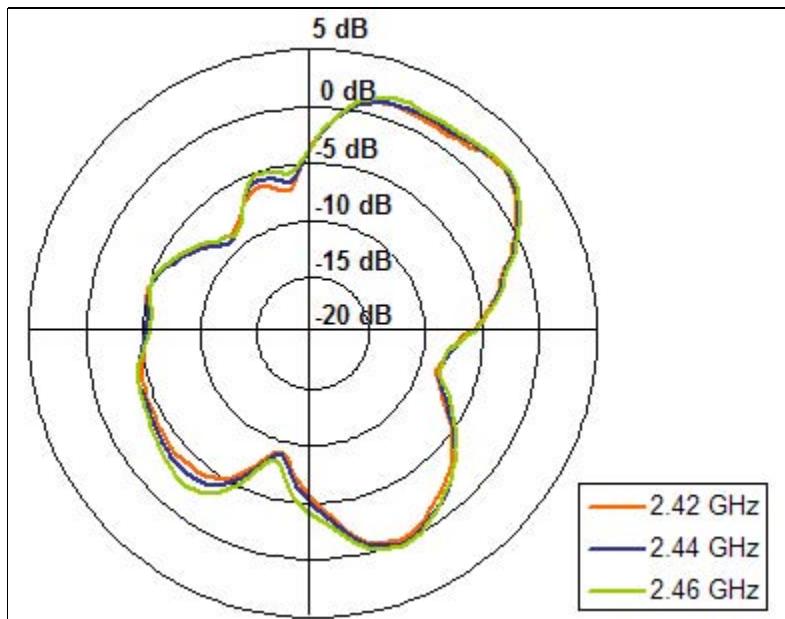


Figure 9. Radiation pattern YZ Plane, Figure 1 as reference (dB).



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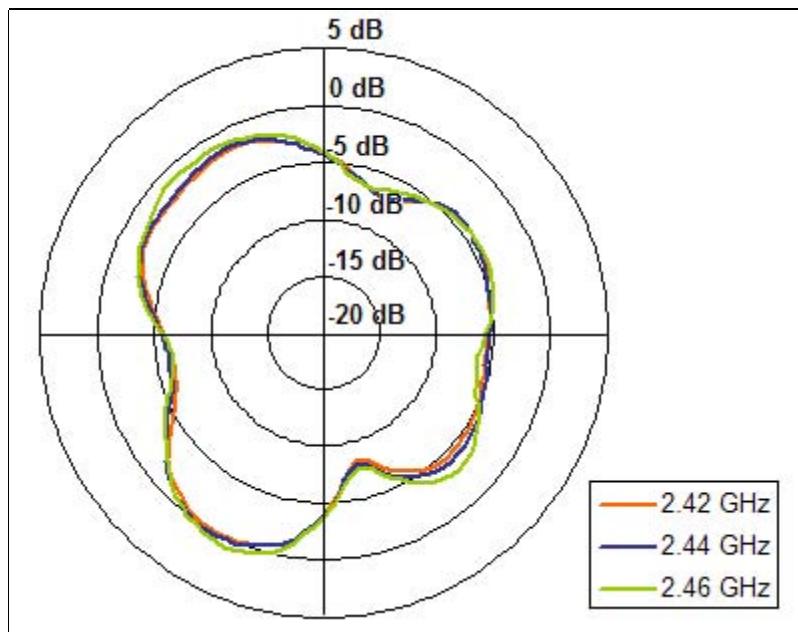


Figure 10. Radiation pattern XY plane, Figure 1 as reference (dB).

V. MECHANICAL DRAWING

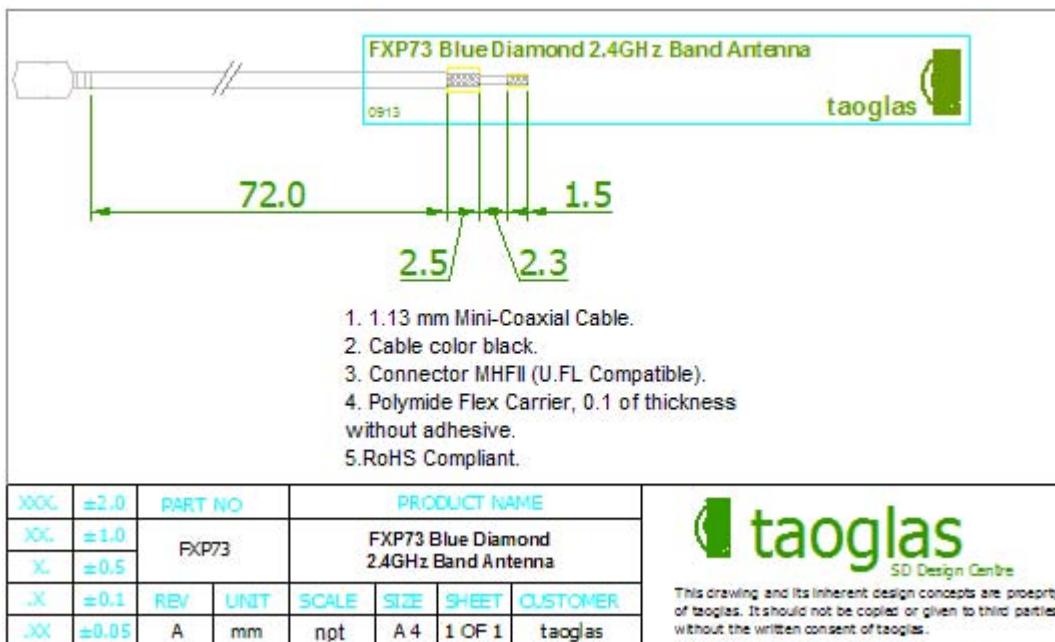


Figure 11. Mechanical Drawing for the FXP73 Antenna.

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