

## Specification

Spec No. : **FXP245**  
 Part No. : **FXP245.07.0100A**  
 Model : 450MHz ISM Band Flex Circuit Antenna  
 Features : 75\*45\*0.1mm  
 100mm Ø1.13 Cable  
**RoHS ✓**



VERSION	DATE	PAGE	DESCRIPTION	CENTRE	APPROVED
A	09/21/2009	All	Antenna Specifications	Taiwan	Ruben F. Cuadras

## I. OVERVIEW

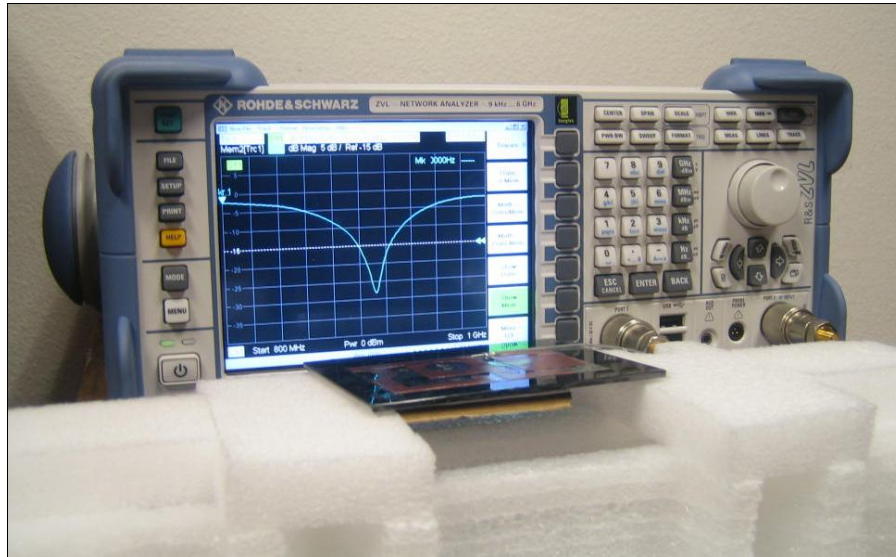
The Taoglas FXP245 450 MHz ISM Antenna covers from 450-457 MHz used in the 450 MHz ISM (Industrial Scientific Medical) Band. The antenna has been designed in a flexible material with a square form-factor and cable connection for an easy installation. The antenna works on different plastic materials and thickness. We have selected a piece of ABS with 2 mm of thickness as a baseline for testing.

## II. ANTENNA CHARACTERISTICS

Parameter	Specification
Frequency Range	450MHz to 457MHz
Return Loss (dB)	-20
Gain (dBi)	0
Impedance	50 $\Omega$
VSWR	$\leq 2:1$
Polarization	Linear
Power Handled	5W
Operation Temperature	-40°C ~ +85°C
Storage Temperature	-40°C ~ +85°C
Dimensions	75*45*0.1mm
Weight	1.5g
Connector	MHFII (U.FL Compatible)
Cable Standard	Mini-Coax 1.13 mm
Cable Length and color	100mm, Black
RoHS Compliant	Yes
Adhesive	3M 467

### III. TEST SET UP

Rhode & Schwartz ZVL6 Vector Network Analyzer



**Figure 1.** Network Analyzer.

## IV. ANTENNA PARAMETERS

The next antenna parameter graphs like Return Loss, VSWR and smith chart were measured in the Agilent Rhode & Schwartz ZVL6 Vector Network Analyzer.

### A. Return Loss Data

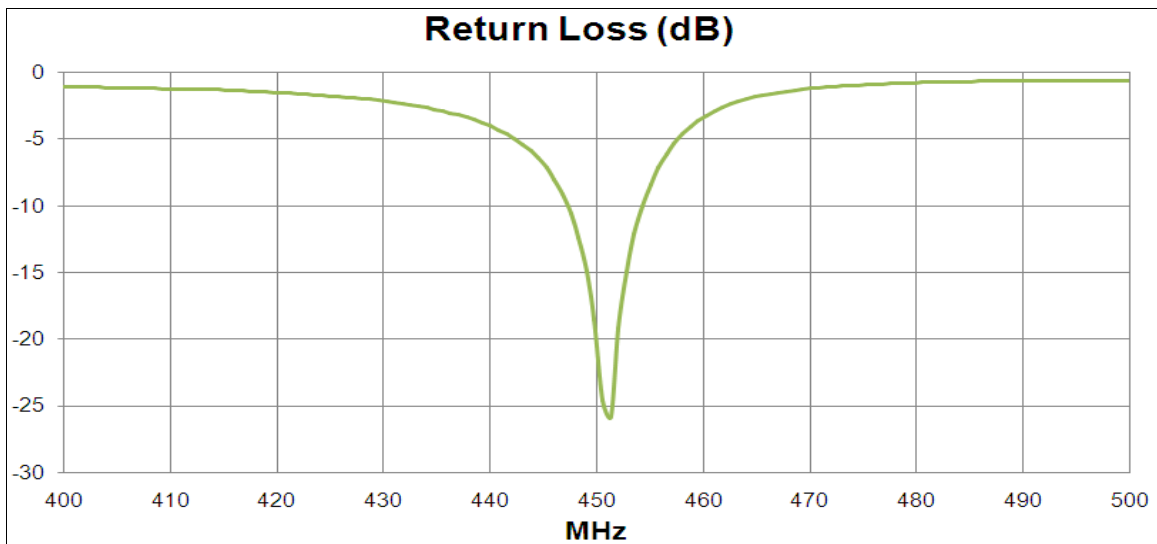


Figure 2. Return Loss for the FXP245 Antenna.

### B. VSWR Data

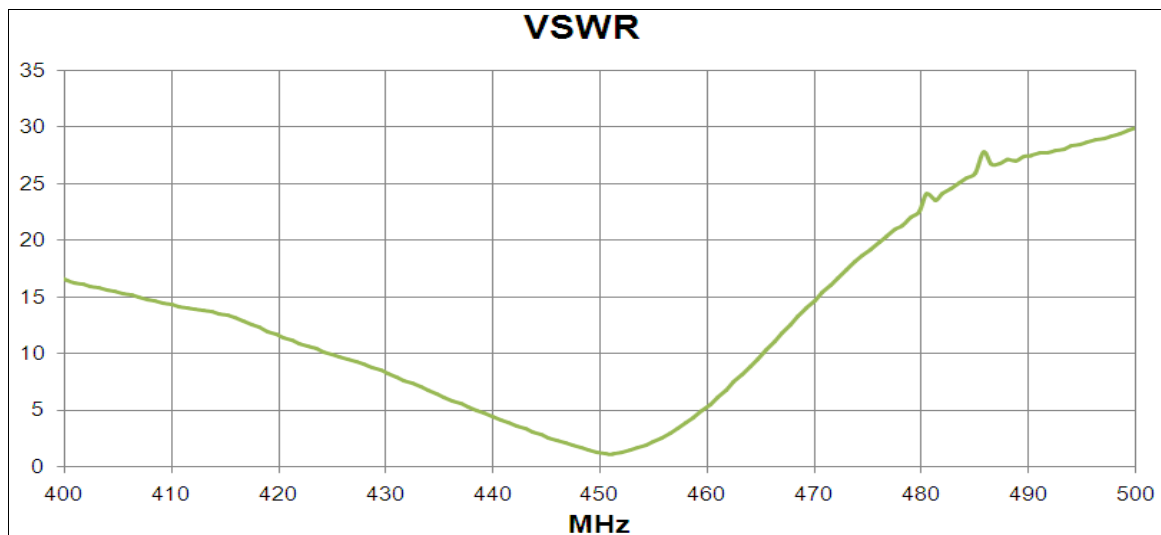


Figure 3. VSWR for the FXP245 Antenna.

### C. Smith Chart Data

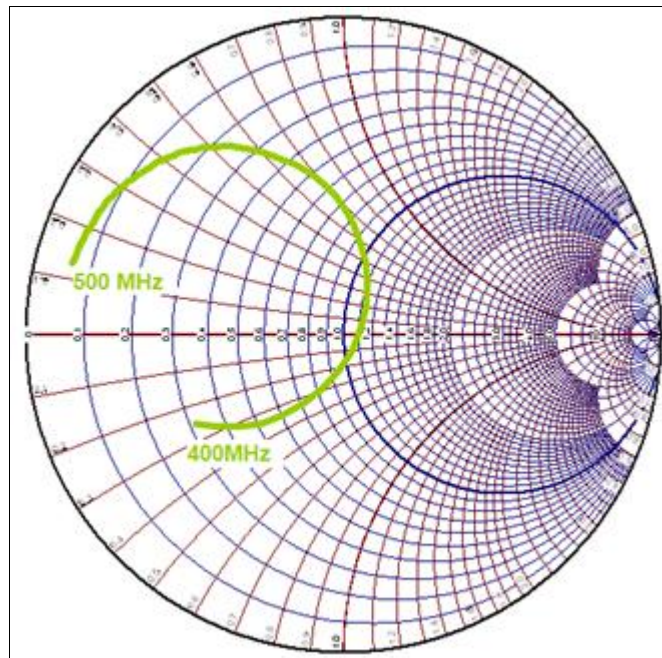
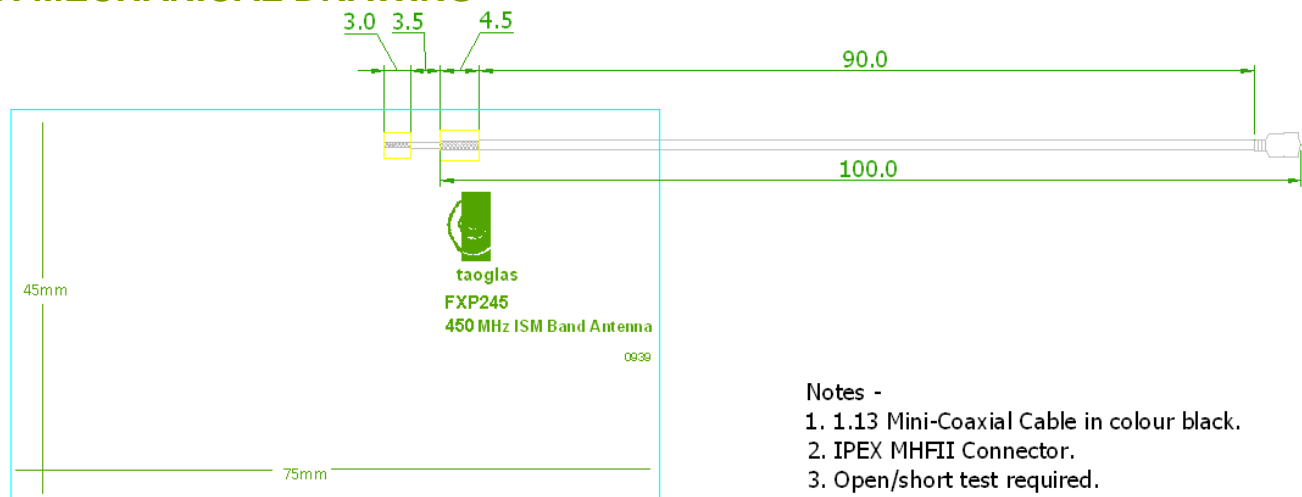


Figure 4. Smith Chart for the FXP245 Antenna.


### V. MECHANICAL DRAWING



Notes -

1. 1.13 Mini-Coaxial Cable in colour black.
2. IPEX MHFII Connector.
3. Open/short test required.

XXX.	±2.0	PART NO		PRODUCT NAME			
XX.	±1.0	FXP245		FXP245 450 MHz ISM Band Antenna			
X.	±0.5						
.X	±0.1	REV	UNIT	SCALE	SIZE	SHEET	CUSTOMER
.XX	±0.05	A	mm	1/1	A 4	1 OF 1	taoglas



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Figure 5. Mechanical Drawing for the FXP245 Antenna.