



Specification

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Spec No. : **FXP240**
Part No. : **FXP240.07.0100A**
Model : 433MHz 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 |



Specification

I. OVERVIEW

The Taoglas FXP240 433 MHz ISM Antenna covers from 433-435 MHz used in the 433 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 | 433MHz to 435MHz |
| Return Loss (dB) | -20 |
| Gain (dBi) | 0 |
| Impedance | 50 Ω |
| VSWR | ≤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 |



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III. TEST SET UP

Rhode & Schwartz ZVL6 Vector Network Analyzer

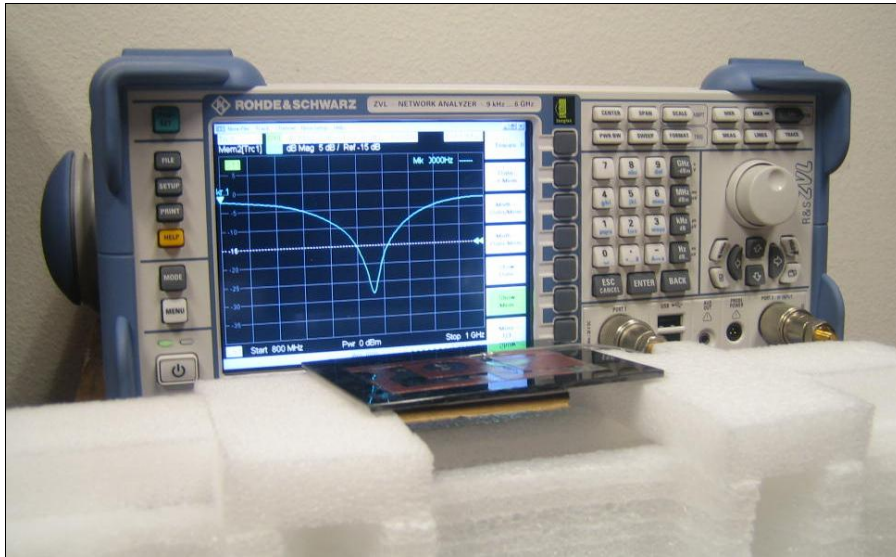


Figure 1. Network Analyzer.



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

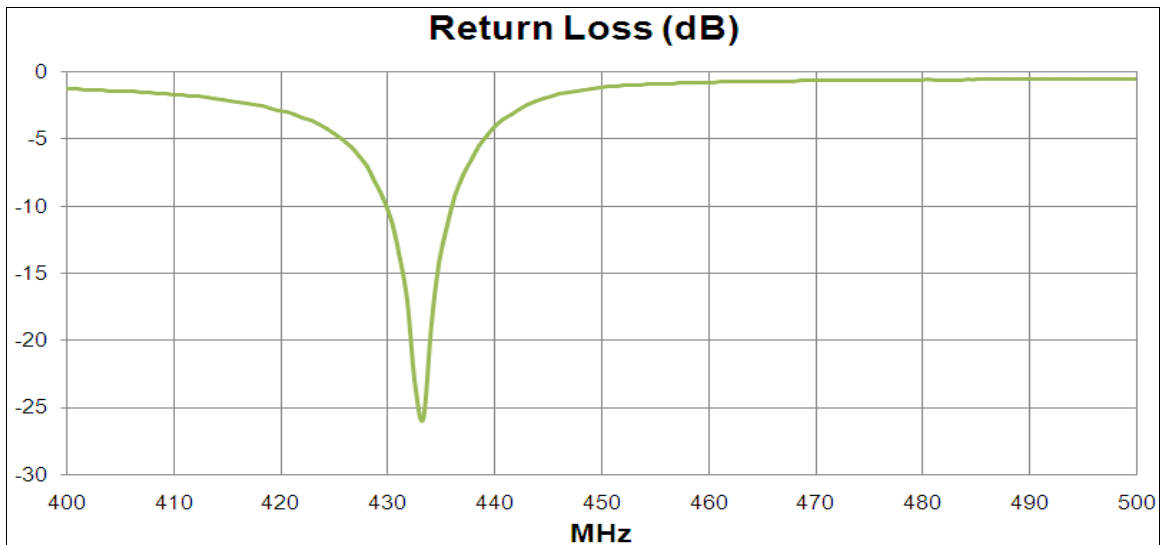


Figure 2. Return Loss for the FXP240 Antenna.

B. VSWR Data

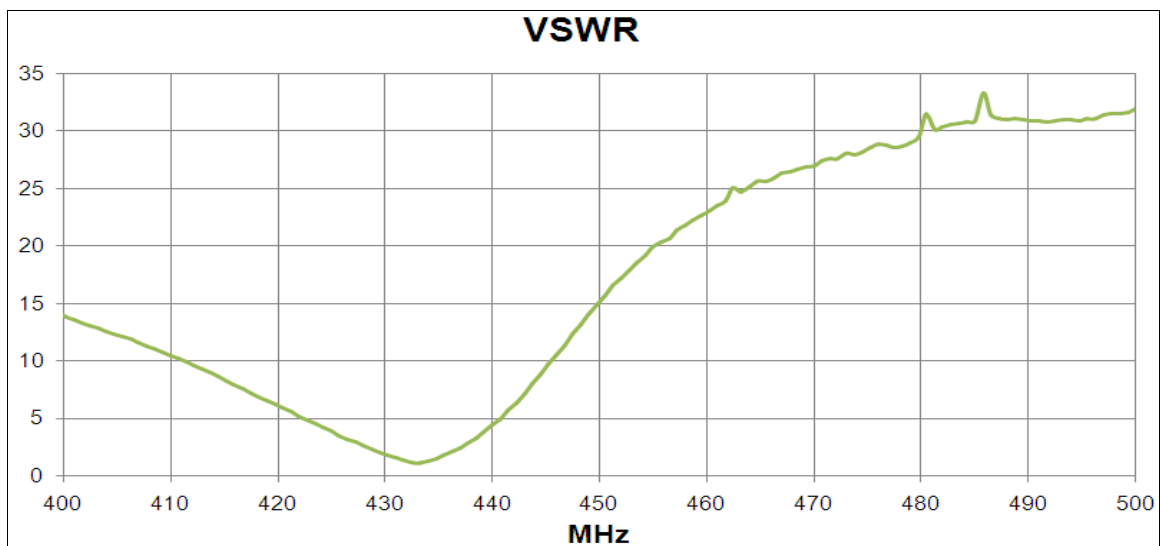


Figure 3. VSWR for the FXP240 Antenna.

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C. Smith Chart Data

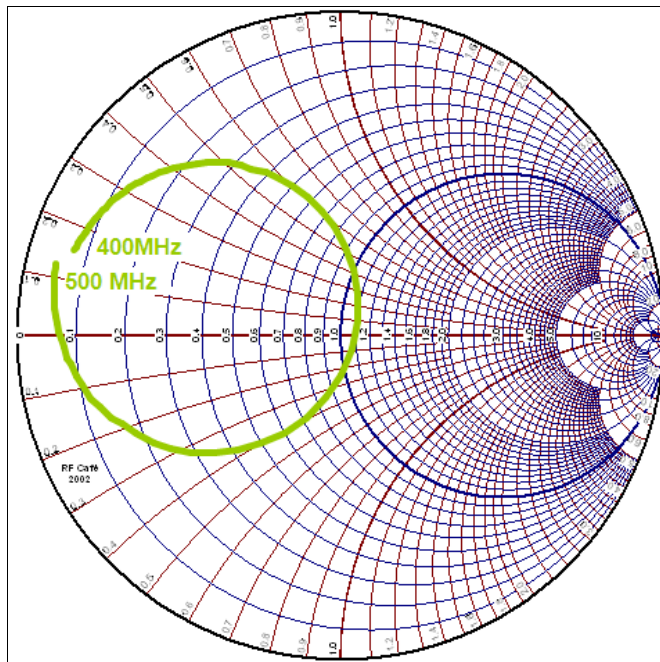
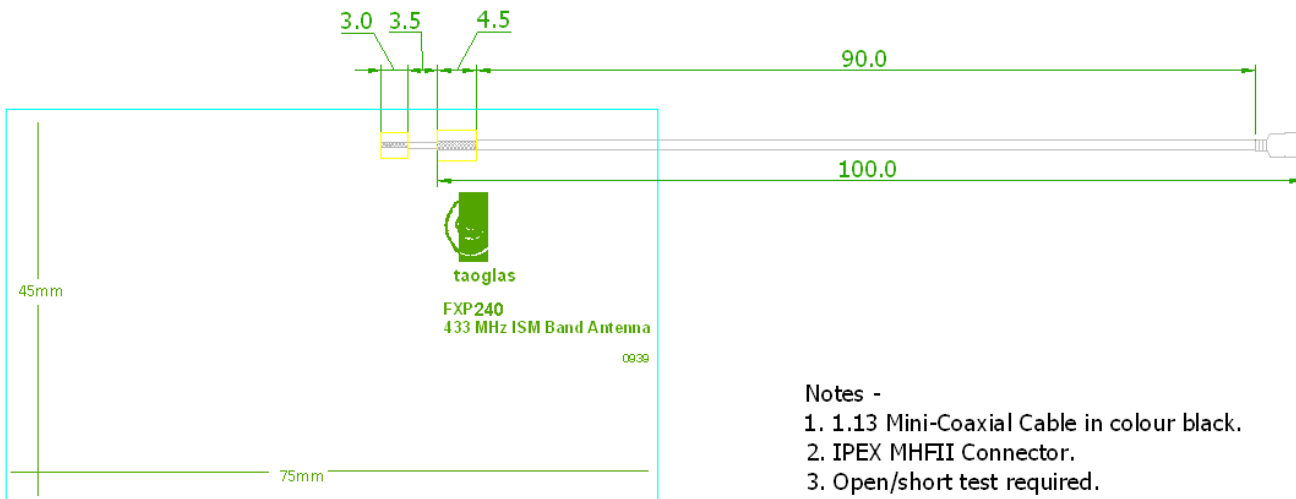



Figure 4. Smith Chart for the FXP240 Antenna.

V. MECHANICAL DRAWING



| | | | | | | | |
|------|-------|---------|------|---------------------------------|------|--------|----------|
| XXX. | ±2.0 | PART NO | | PRODUCT NAME | | | |
| XX. | ±1.0 | FXP240 | | FXP240 433 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 |



SD Design Centre

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Figure 5. Mechanical Drawing for the FXP240 Antenna.