Specification

Spec No. : **FXP270**

Part No. : **FXP270.07.0100A**

Model : 784MHz 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 FXP270 784 MHz ISM Band Antenna covers from 779-787 MHz used in the 784 MHz ISM (Industrial Scientific Medical) Chinese 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	779MHz to 787MHz
Return Loss (dB)	-20
Efficiency (%)	40
Gain (dBi)	1.4
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

III. TEST SET UP

An ETS-Lindgren 3D Scan System with Anechoic Chamber
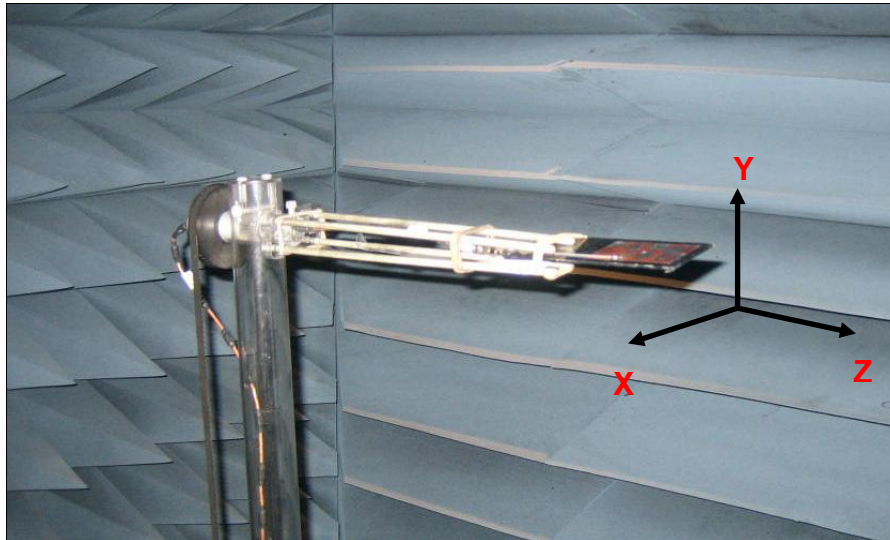

Figure 1. ETS-Lindgren System.
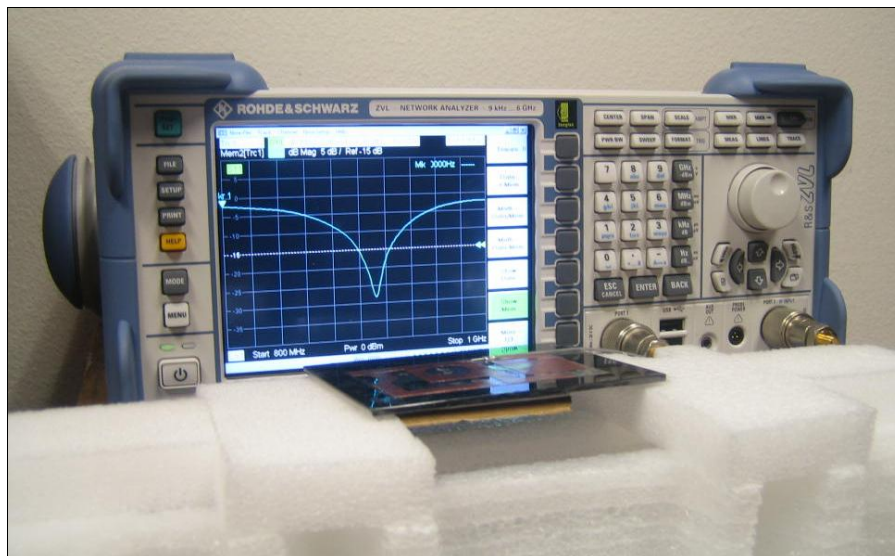
Rhode & Schwartz ZVL6 Vector Network Analyzer

Figure 2. 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. The Gain, Efficiency and Radiation Patterns were measured in the ETS-Lindgren 3D Scan System.
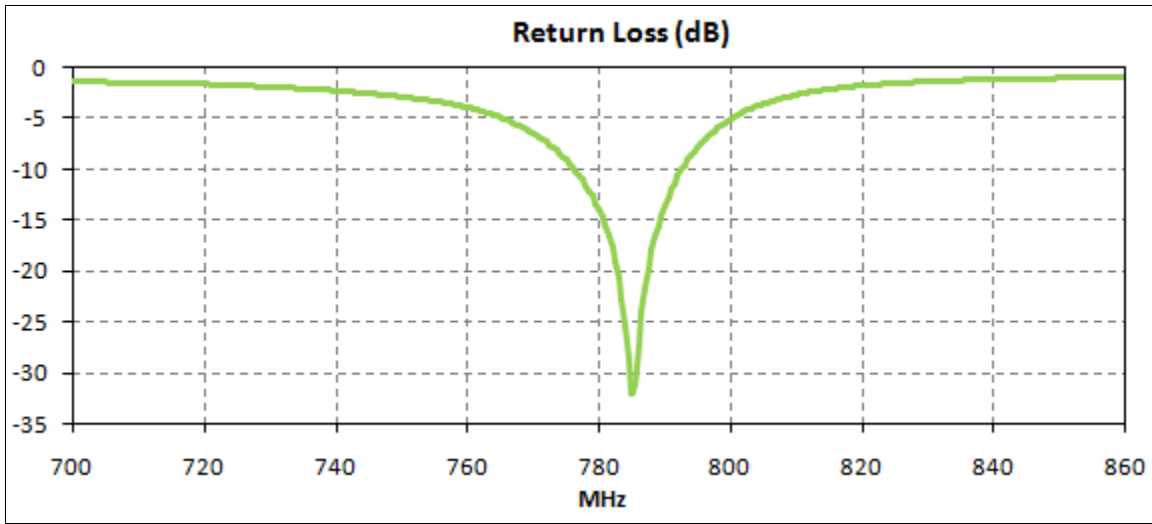
A. Return Loss Data

Figure 3. Return Loss for the FXP270 Antenna.

B. VSWR Data
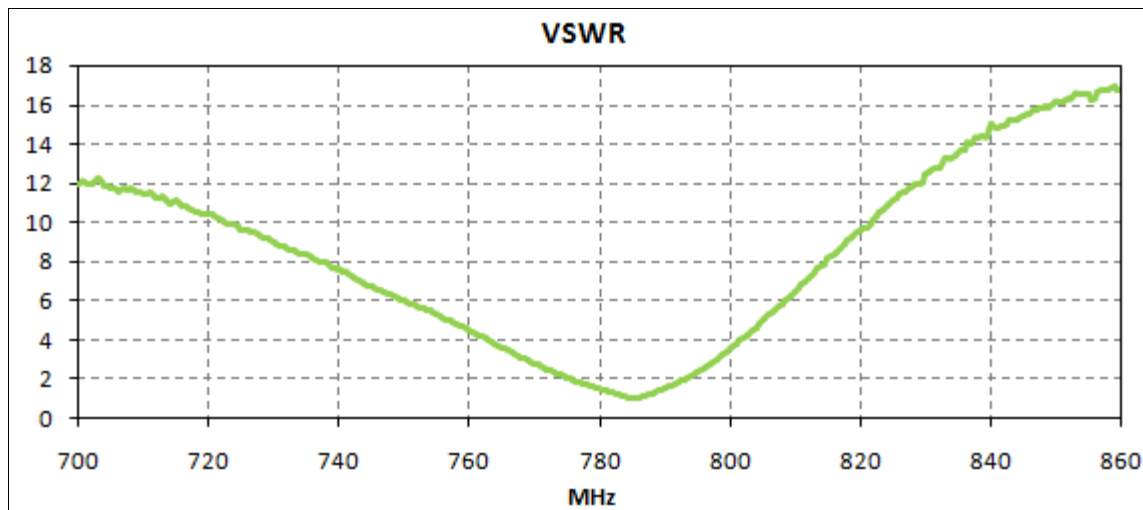
Figure 4. VSWR for the FXP270 Antenna.
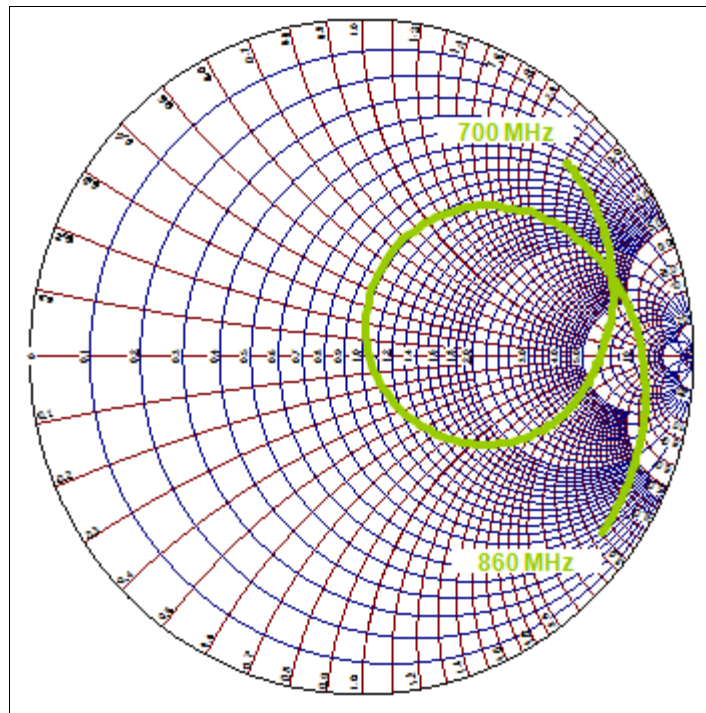
C. Smith Chart Data

Figure 5. Smith Chart for the FXP270 Antenna.
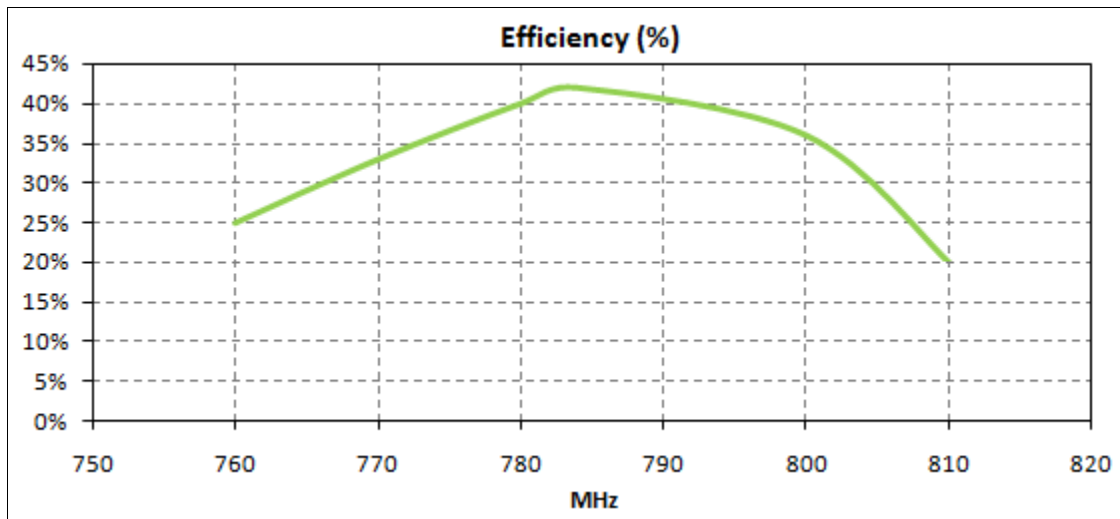
D. Efficiency Data

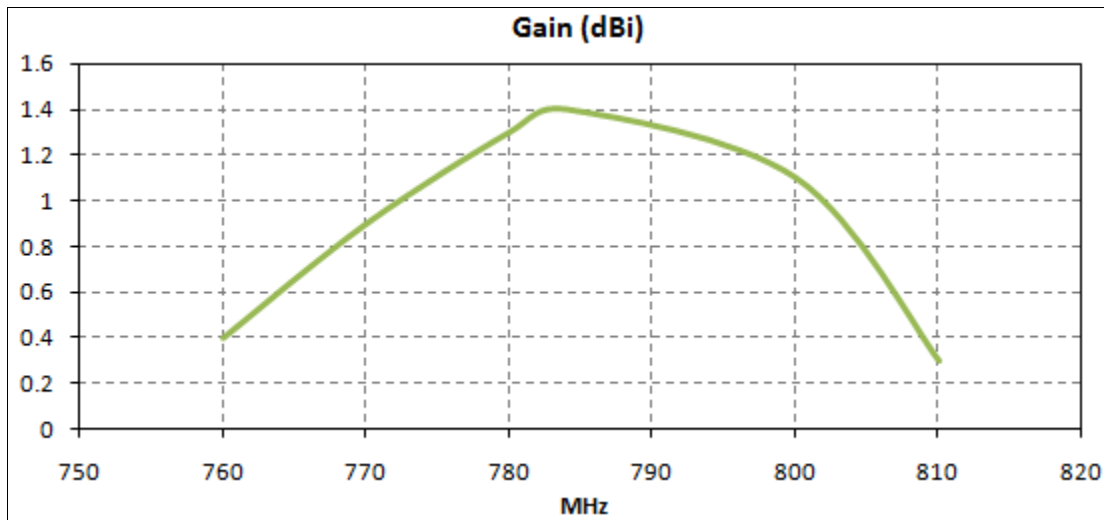**Figure 6.** Efficiency for the FXP270 Antenna.

E. Gain Data

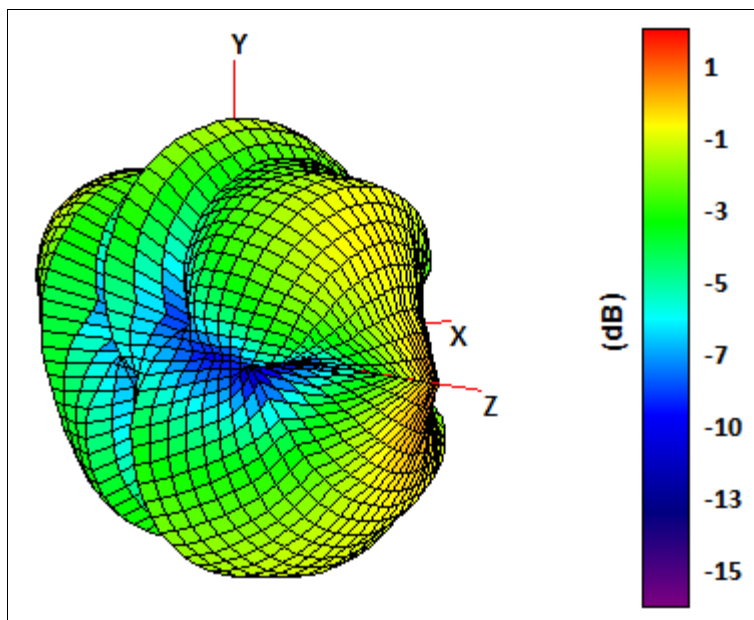**Figure 7.** Gain for the FXP270 Antenna.
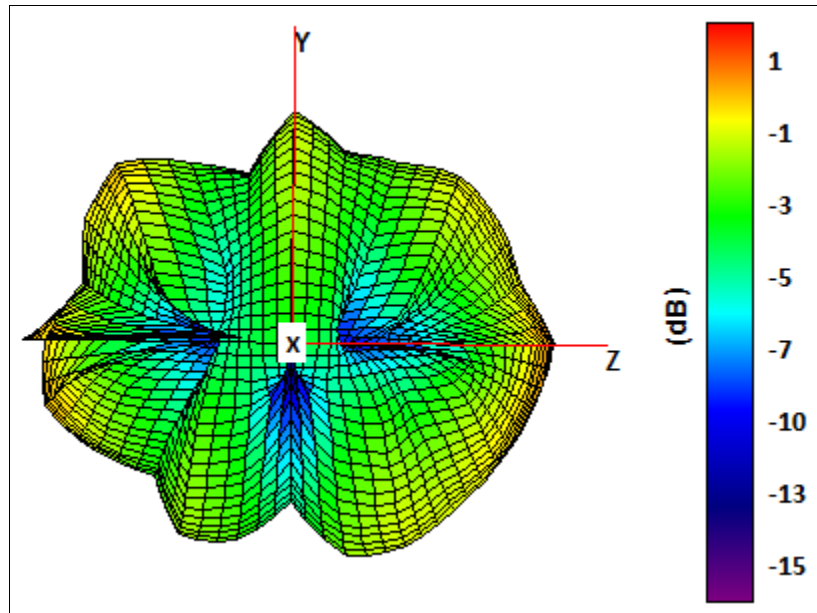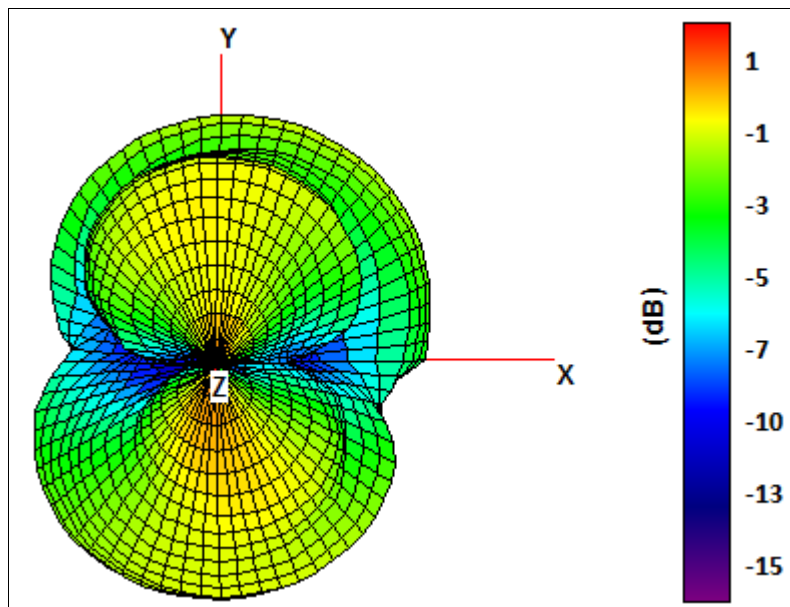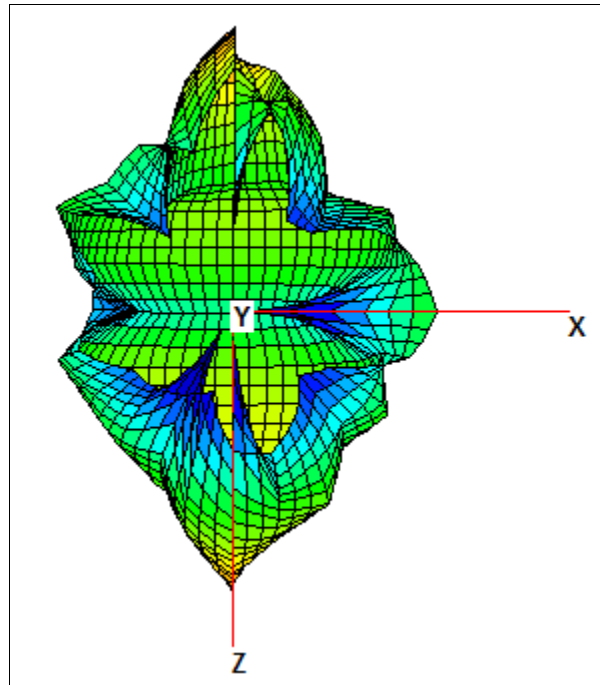
F. Radiation Pattern Data.

Figure 8. Radiation pattern 3D View, Figure 1 as reference (dB).

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

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

Figure 11. Radiation pattern XY plane, Figure 1 as reference (dB).