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

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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

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III. TEST SET UP

An ETS-Lindgren 3D Scan System with Anechoic Chamber

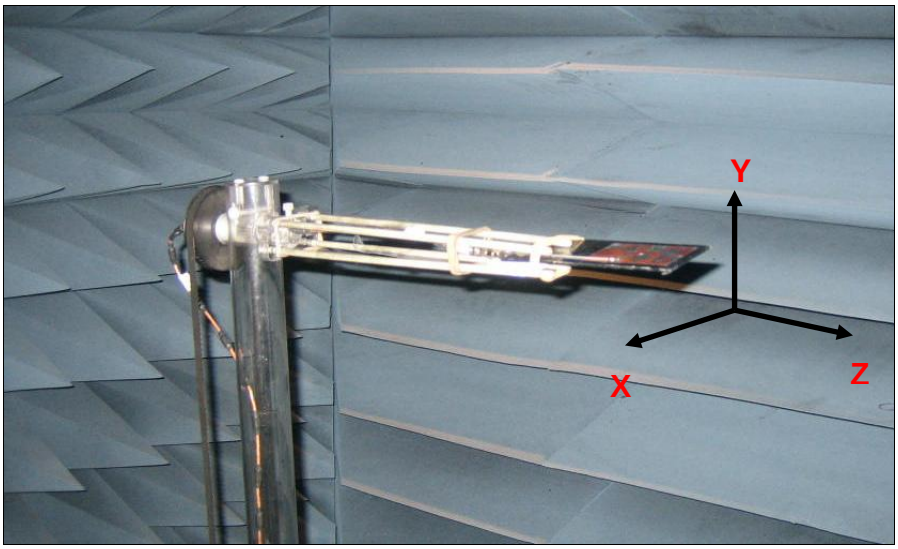


Figure 1. ETS-Lindgren System.

Rhode & Schwartz ZVL6 Vector Network Analyzer

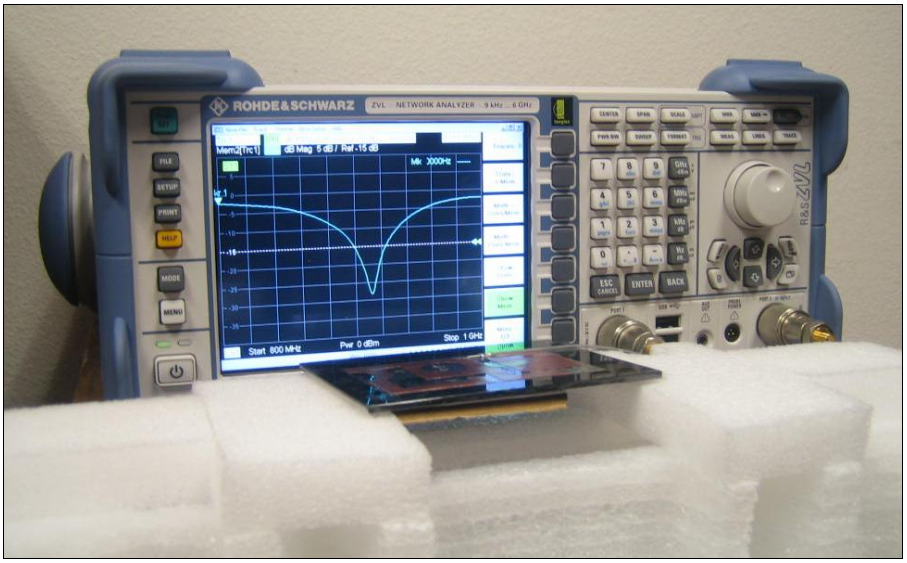


Figure 2. Network Analyzer.

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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

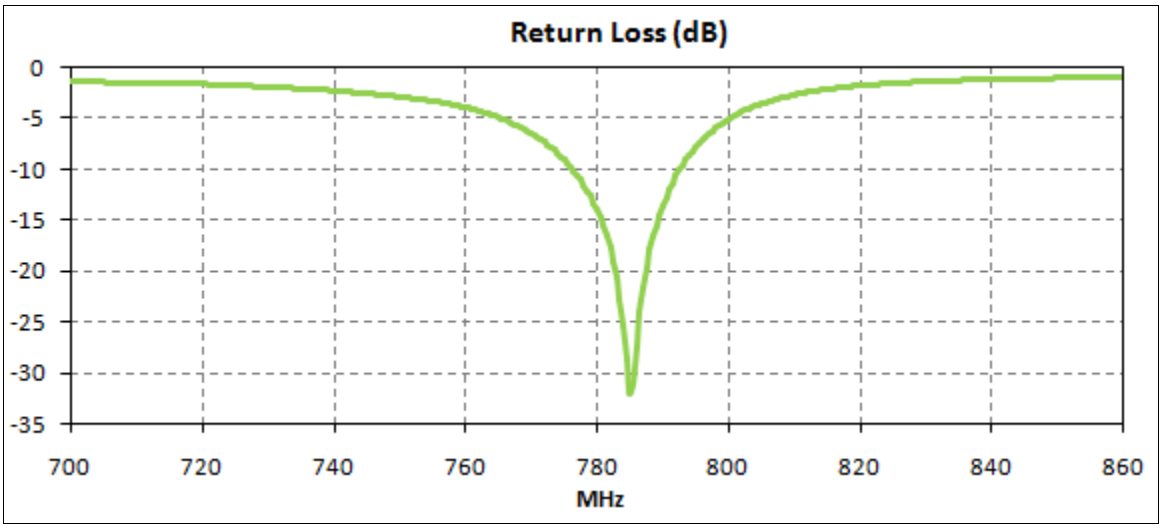


Figure 3. Return Loss for the FXP270 Antenna.

B. VSWR Data

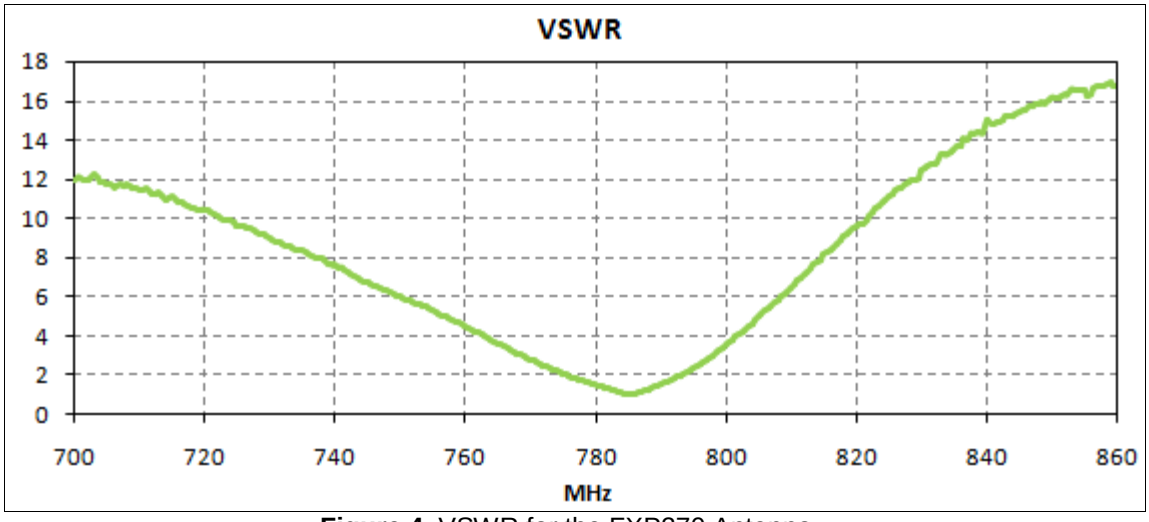


Figure 4. VSWR for the FXP270 Antenna.

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C. Smith Chart Data

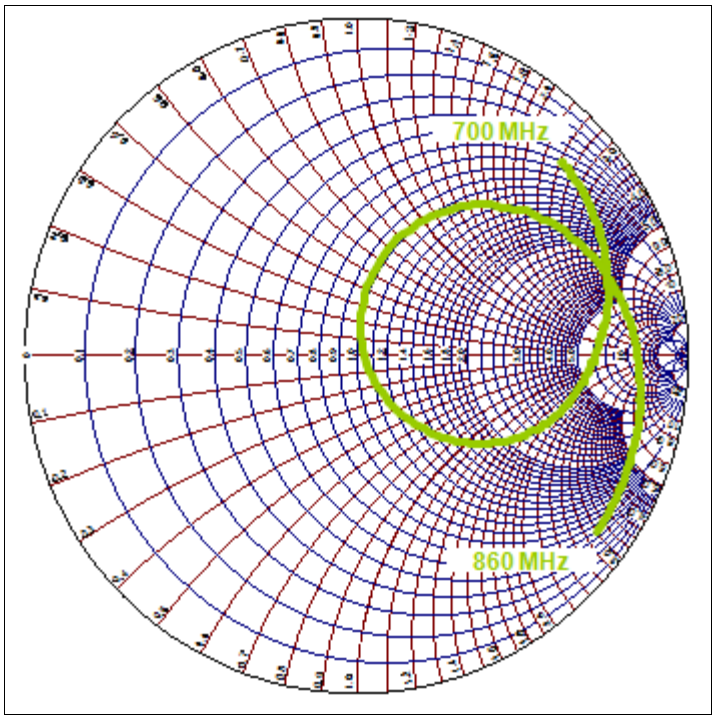


Figure 5. Smith Chart for the FXP270 Antenna.

D. Efficiency Data



Figure 6. Efficiency for the FXP270 Antenna.

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E. Gain Data

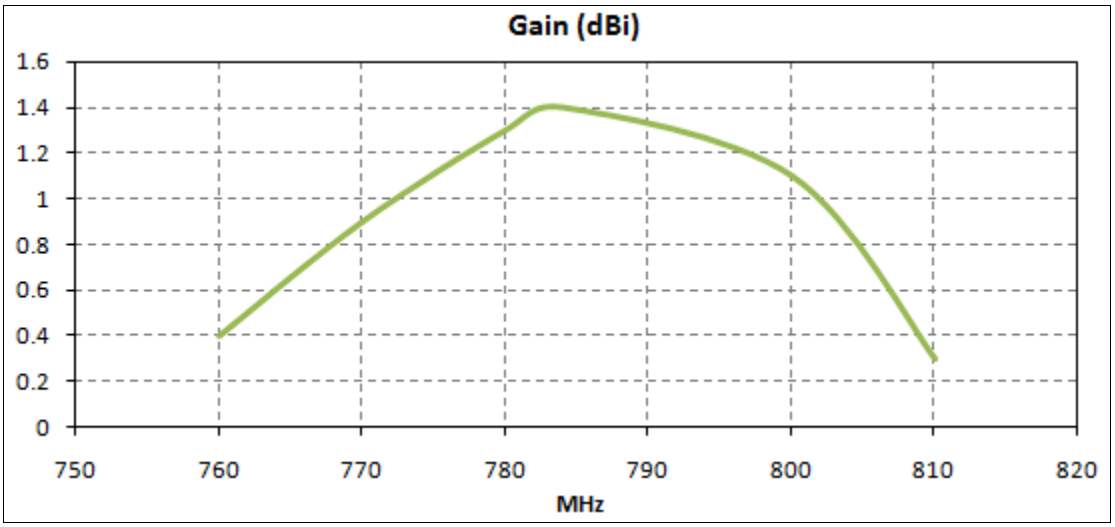


Figure 7. Gain for the FXP270 Antenna.

F. Radiation Pattern Data.

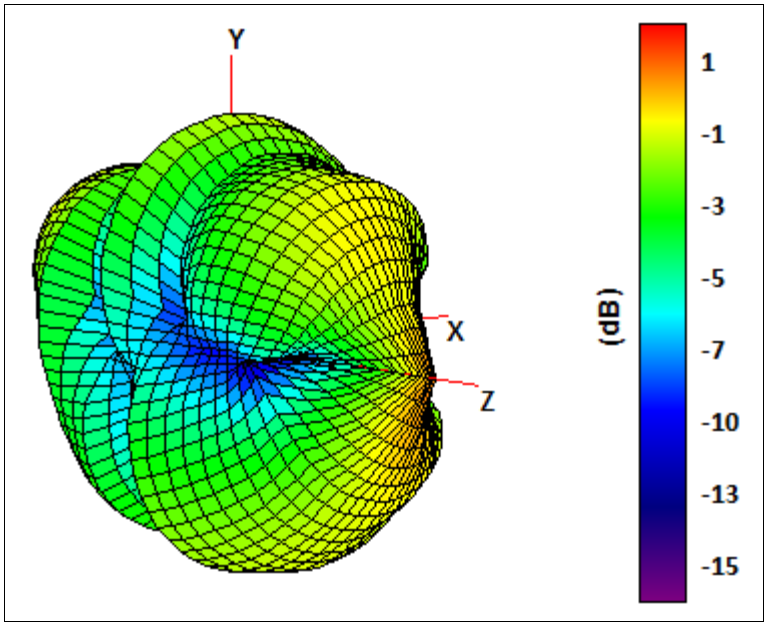


Figure 8. Radiation pattern 3D View, Figure 1 as reference (dB).

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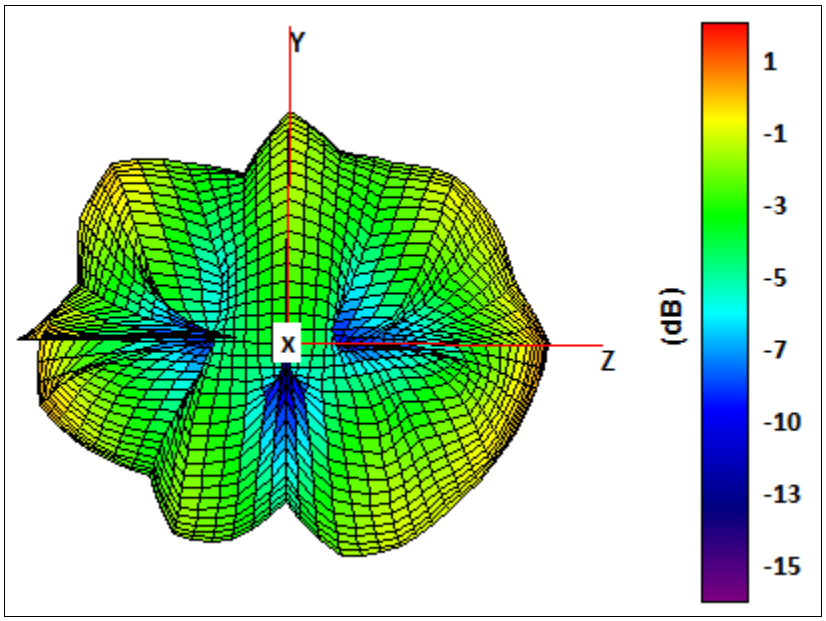


Figure 9. Radiation pattern YZ Plane, Figure 1 as reference (dB).

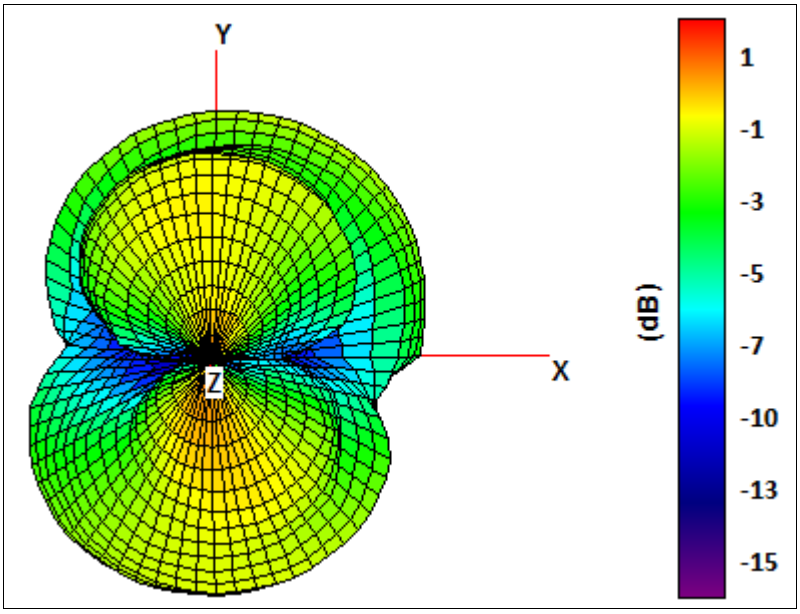


Figure 10. Radiation pattern XY plane, Figure 1 as reference (dB).

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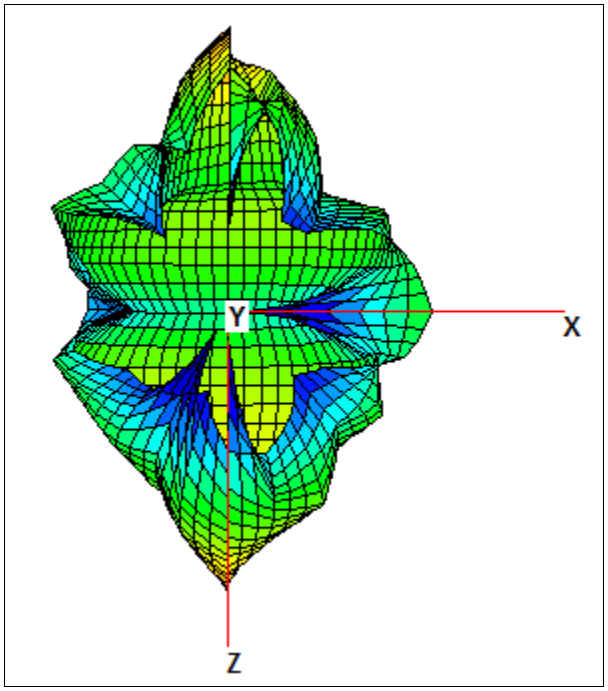


Figure 11. Radiation pattern XY plane, Figure 1 as reference (dB).

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