

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
А	09/21/2009	All	Antenna Specifications	Taiwan	Ruben F. Cuadras

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I. OVERVIEW

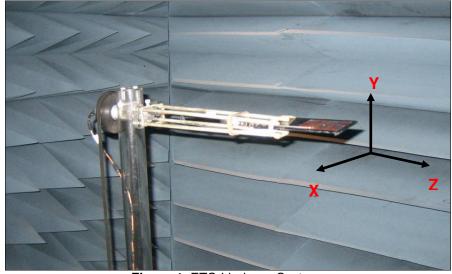
The Taoglas FXP270 784 MHz ISM Band Antenna covers from 779-787 MHz used in the 784 MHz ISM (Industrial Scientific Medical) Chinese Band. The antenna has been designed in a flexible material with a square form-factor and cable connection for an easy installation. The antenna works on different plastic 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



III. TEST SET UP



An ETS-Lindgren 3D Scan System with Anechoic Chamber

Figure 1. ETS-Lindgren System.

Rhode & Schwartz ZVL6 Vector Network Analyzer

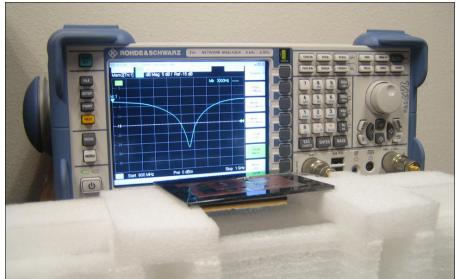


Figure 2. Network Analyzer.



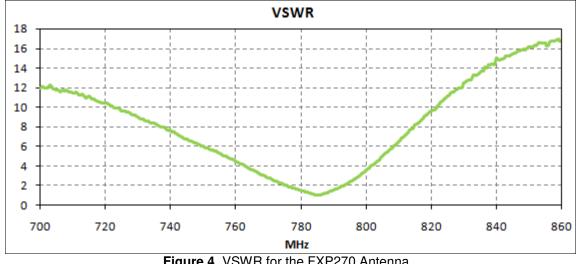
IV. ANTENNA PARAMETERS

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

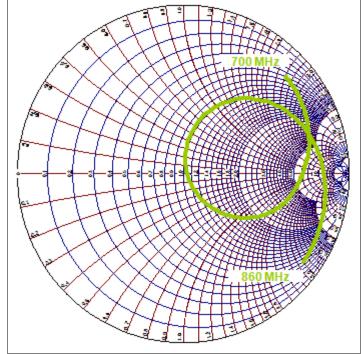


Figure 5. Smith Chart for the FXP270 Antenna.

D. Efficiency Data



Figure 6. Efficiency for the FXP270 Antenna.



Gain (dBi) 1.6 1.4 1.2 1 0.8 0.6 0.4 0.2 0 750 760 770 780 790 800 810 820 MHz Figure 7. Gain for the FXP270 Antenna.

E. Gain Data

F. Radiation Pattern Data.

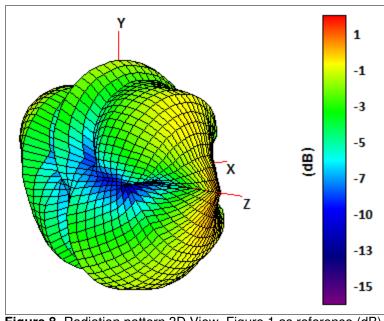
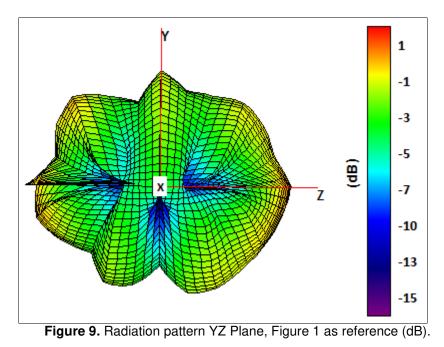
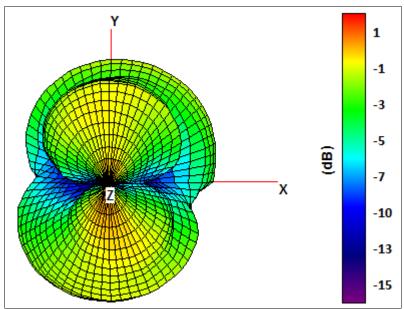


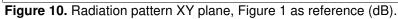
Figure 8. Radiation pattern 3D View, Figure 1 as reference (dB).

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