

Specification

Spec No. : FXP280

Part No. : **FXP280.07.0100A**

Model : 868MHz 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 FXP280 868 MHz ISM Antenna covers from 863-870 MHz used in the 868 MHz ISM (Industrial Scientific Medical) European 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	863MHz to 870MHz			
Return Loss (dB)	-20			
Efficiency (%)	40			
Gain (dBi)	1.5			
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

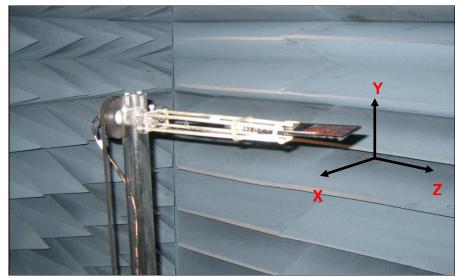


Figure 1. ETS-Lindgren System.

Rhode & Schwartz ZVL6 Vector Network Analyzer

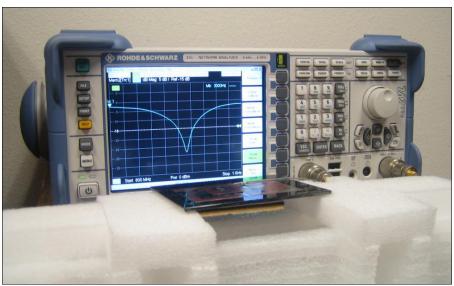


Figure 2. Network Analyzer.



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

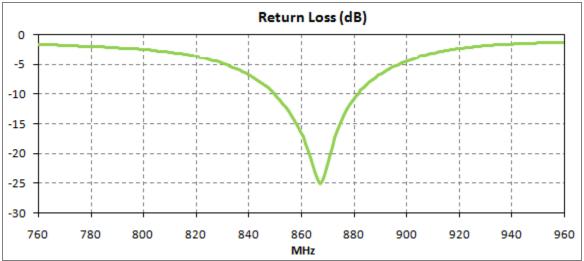


Figure 3. Return Loss for the FXP280 Antenna.

B. VSWR Data

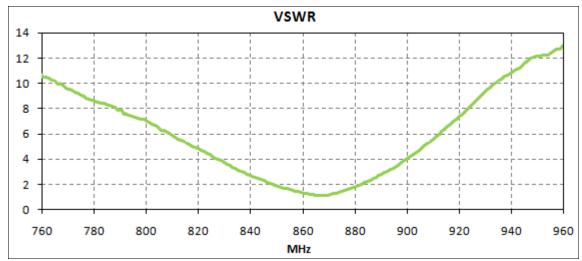


Figure 4. VSWR for the FXP280 Antenna.



C. Smith Chart Data

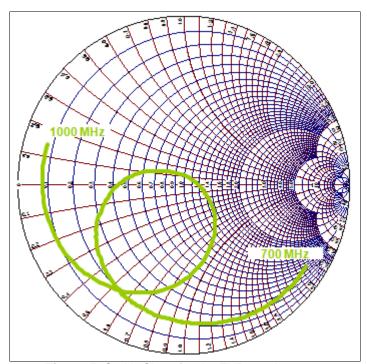


Figure 5. Smith Chart for the FXP280 Antenna.

D. Efficiency Data

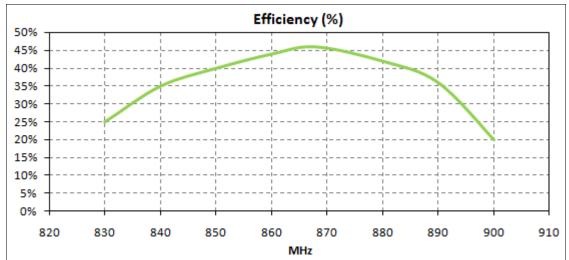


Figure 6. Efficiency for the FXP280 Antenna.



E. Gain Data

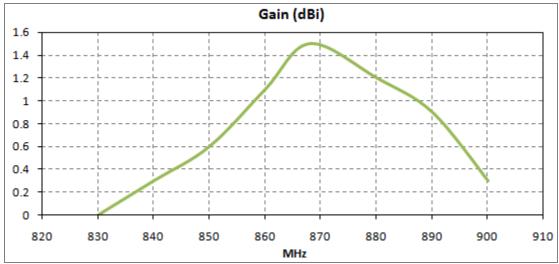


Figure 7. Gain for the FXP280 Antenna.

F. Radiation Pattern Data

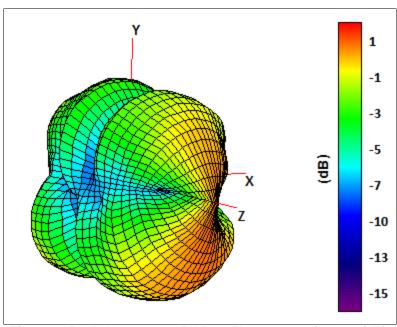


Figure 8. Radiation pattern 3D View, Figure 1 as reference (dB).

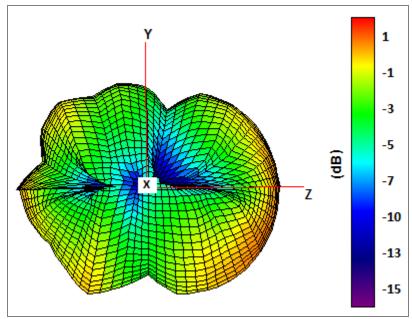


Figure 9. Radiation pattern YZ Plane, Figure 1 as reference (dB).

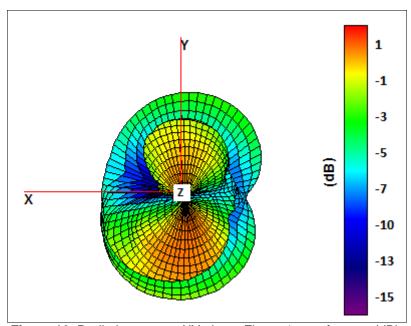


Figure 10. Radiation pattern XY plane, Figure 1 as reference (dB).

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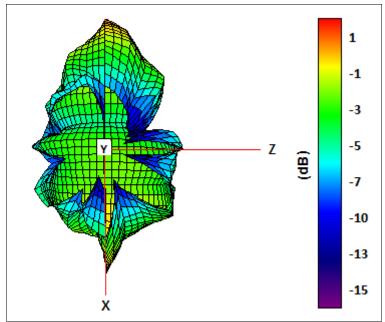


Figure 11. Radiation pattern XY plane, Figure 1 as reference (dB).

V. MECHANICAL DRAWING

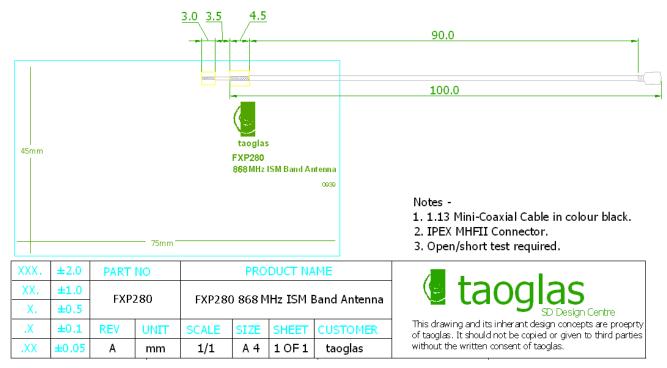


Figure 12. Mechanical Drawing for the FXP280 Antenna.