SPECIFICATION

FXP14 Hexa Band Cellular Antenna

Part No.	:	**FXP14.24.0100B**
Product Name	:	FXP14 Hexa-Band Cellular Antenna 850/900/1700/1800/1900/2100MHz
Feature	:	IPEX MHFIV Connector 100 mm 0.81 Coaxial Cable 70*20*0.1 mm RoHS Compliant



1. OVERVIEW

The Taoglas FXP14 Hexa Band Cellular Antenna covers all world-wide bands (850 / 900 / 1700 / 1800 / 1900 / 2100 MHz). These cellular bands are used for different technologies in different countries such as GSM / CDMA / DCS / PCS / WCDMA / UMTS/ HSPA / GPRS / EDGE / 3G. The antenna has been designed in a flexible material with a rectangular 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.

2. ANTENNA CHARACTERISTICS

Parameter	Hexa Band Cellular Antenna					
Cellular Band (MHz)	850	900	1700	1800	1900	2100
Return Loss (dB)	-7	-12	-8	-9	-9	-8
Efficiency (%)	52	55	60	60	62	65
Gain (dBi)	2	1.5	3	2.5	2	2.5
Impedance	50 Ohms					
VSWR	≤2.5:1					
Polarization	Linear					
Power Handled	5 W					
Operation Temperature	-40 ºC ~ +85 ºC					
Storage Temperature	-40 ºC ~ +85 ºC					
Dimensions	70 X 20 X 0.1 mm					
Weight	1.5 g					
Connector	IPEX MHFIV					
Cable Standard	Mini-Coax 0.81 mm					
Cable Length and color	100 mm, Black					
RoHS Compliant	Yes					
Adhesive	3M 467					

3. TEST SET UP

A Satimo SG24 3D Scan System with Anechoic Chamber.

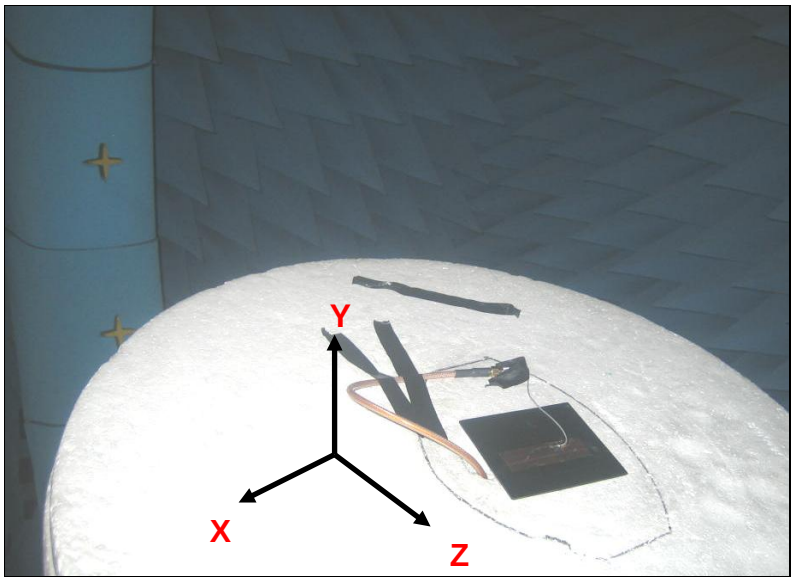


Figure 1. Satimo System.

Agilent 5071C Vector Network Analyzer.



Figure 2. Network Analyzer.

4. ANTENNA PARAMETERS

The next antenna parameter graphs like Return Loss were measured in the Agilent 5071C Vector Network Analyzer. The Gain, Efficiency and Radiation Patterns were measured in the reliable Satimo 3D Scan System.

4.1 Return Loss Data

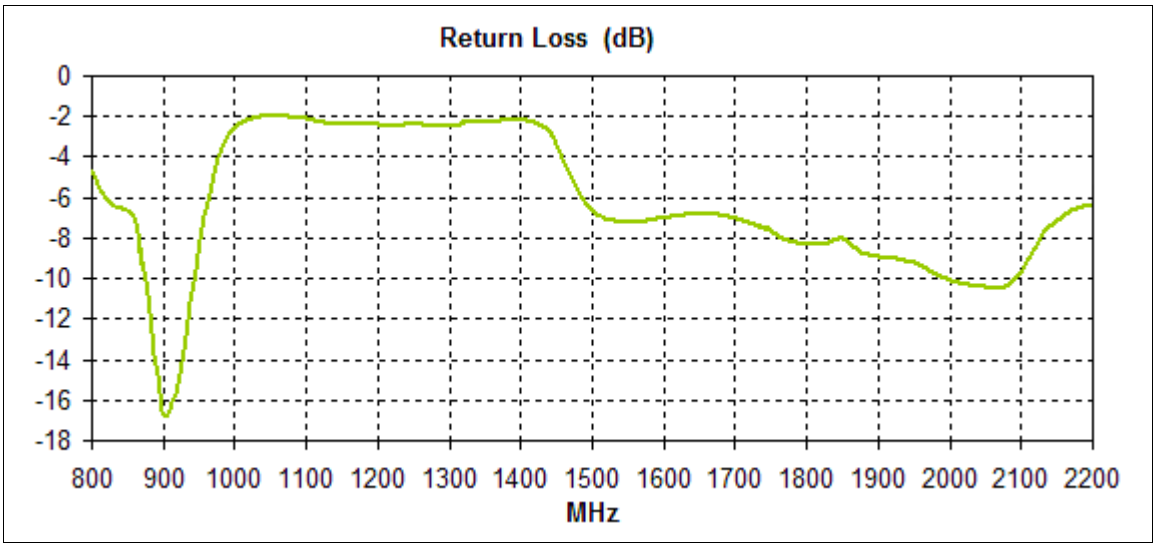


Figure 3. Return Loss for the FXP14 Antenna.

4.2 Gain Data

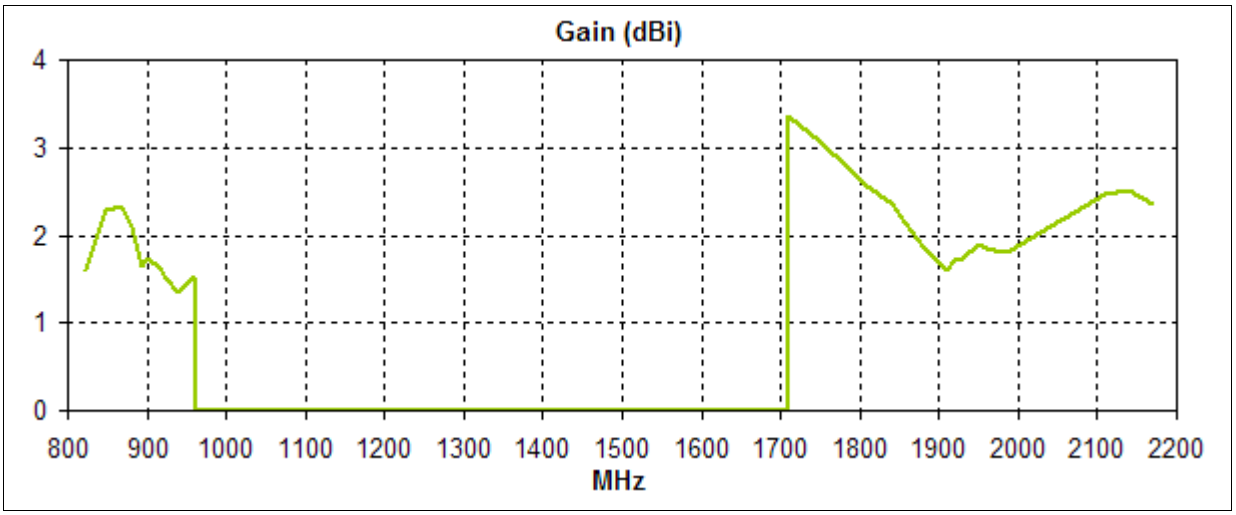


Figure 4. Gain for the FXP14 Antenna.

4.3 Efficiency Data

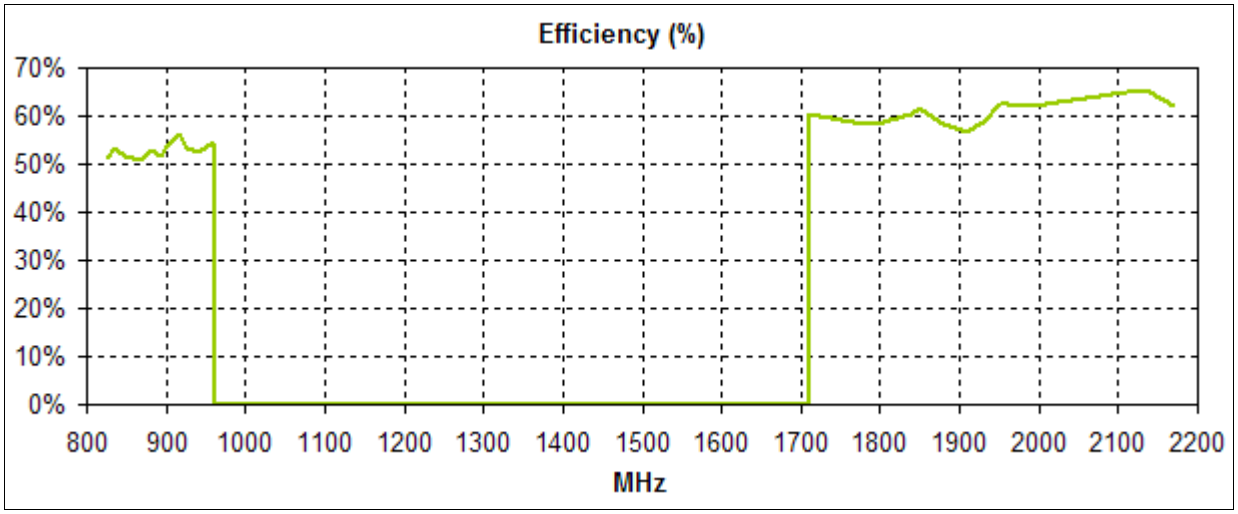


Figure 5. Efficiency for the FXP14 Antenna.

4.4 Radiation Pattern Data.

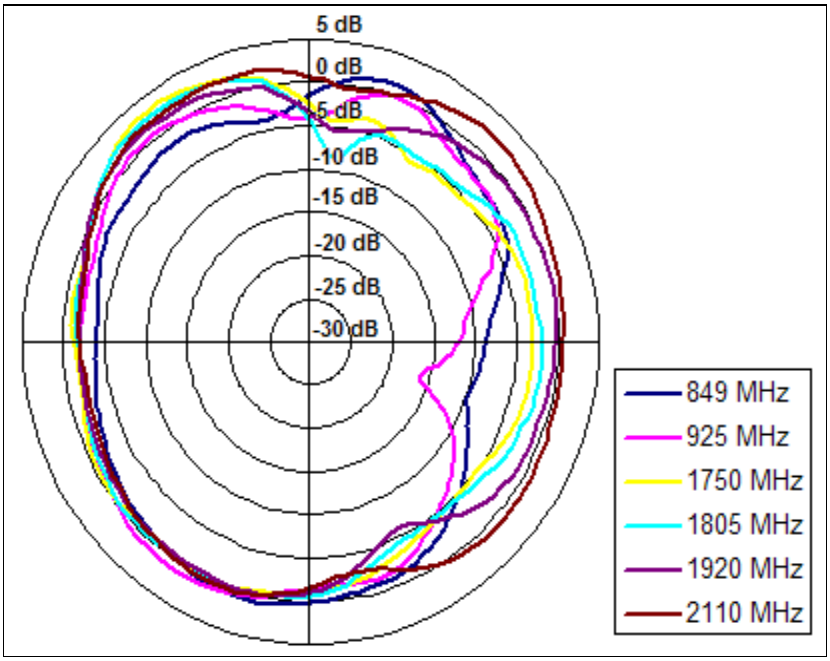


Figure 6. Radiation pattern XZ Plane, Figure 1 as reference (dB).

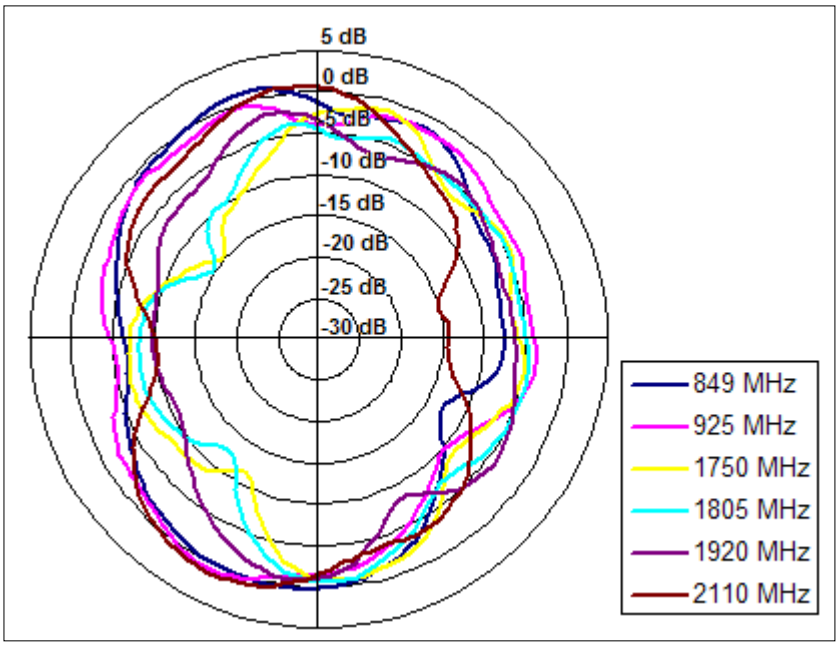


Figure 7. Radiation pattern YZ Plane, Figure 1 as reference (dB).

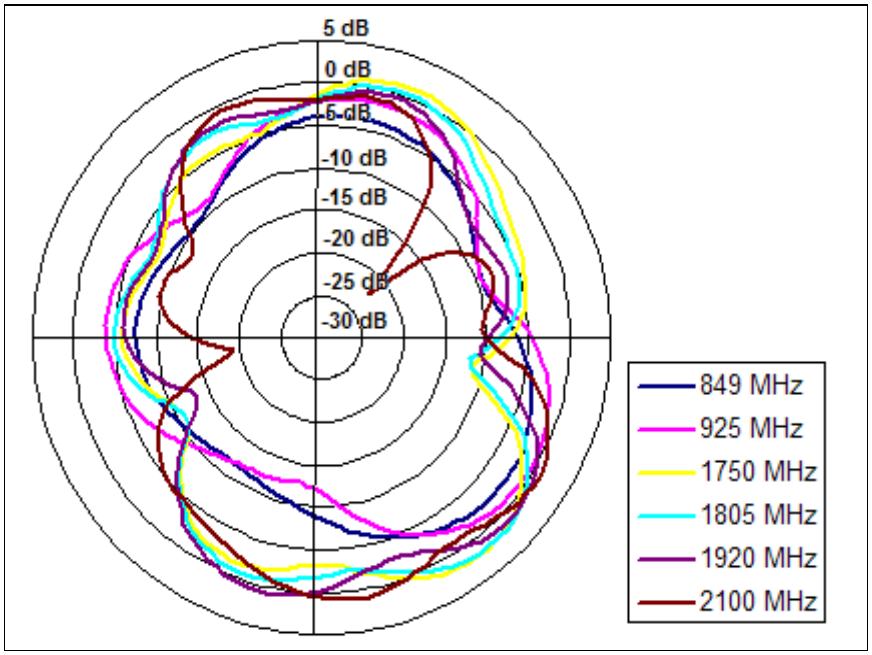


Figure 8. Radiation pattern XY plane, Figure 1 as reference (dB).

5. MECHANICAL DRAWING

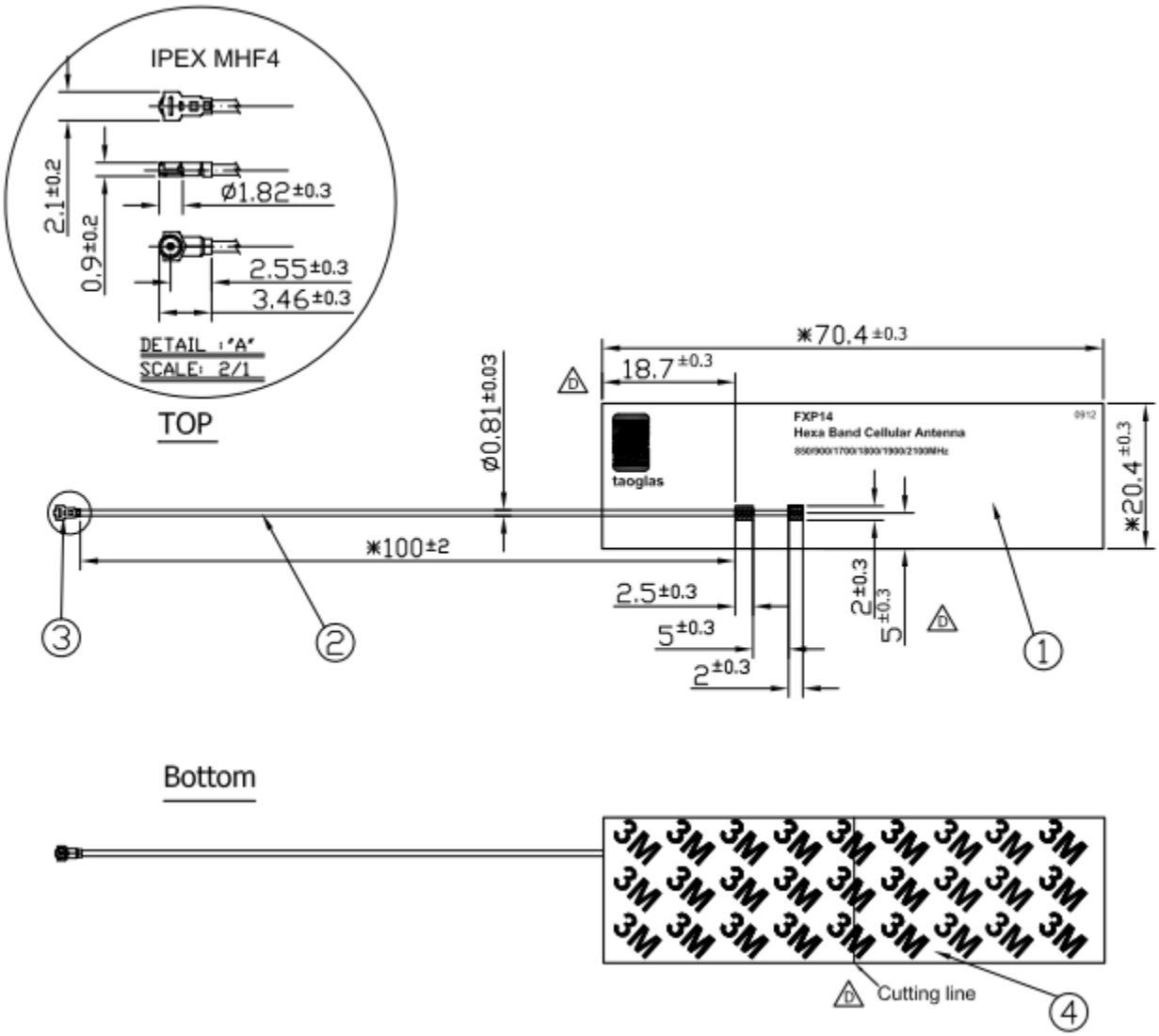


Figure 9. Mechanical Drawing for the FXP14 Antenna.