



TAOGLAS®



Datasheet

FXP14 Flexible PCB Cellular Antenna

Part No:
FXP14.07.0100A

Description:

3G/2G Cellular Flexible PCB with 100mm 1.13 & IPEX MHFI Connector

Features:

Flexible PCB Hexa-Band Antenna

Dimensions: 70x20x0.2mm

Connector: IPEX MHFI

Cable: 100mm of Ø1.13

Peel and Stick Mounting

3M 467 Adhesive

RoHS & REACH Compliant

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1. Introduction



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.

Typical Applications Include:

- Security
- Remote Monitoring
- Connected Health

The antenna has been designed using a super thin flexible polymer substrate with a rectangular form-factor and cable connection for ease of installation. The antenna radiates well on different plastic materials and thickness. We have selected ABS plastic mounting with 2 mm of thickness as a baseline for testing. Best in class efficiency on lower and upper bands (above 40%) make it an ideal antenna for devices where space for onboard SMT cellular antennas is not available. The antenna is mounted via automotive quality 3M 467MP adhesive and has excellent reliability. The FXP14 has its own ground-plane, therefore it does not need to connect to the ground-plane of the main-board of the device for improved radiation efficiency.

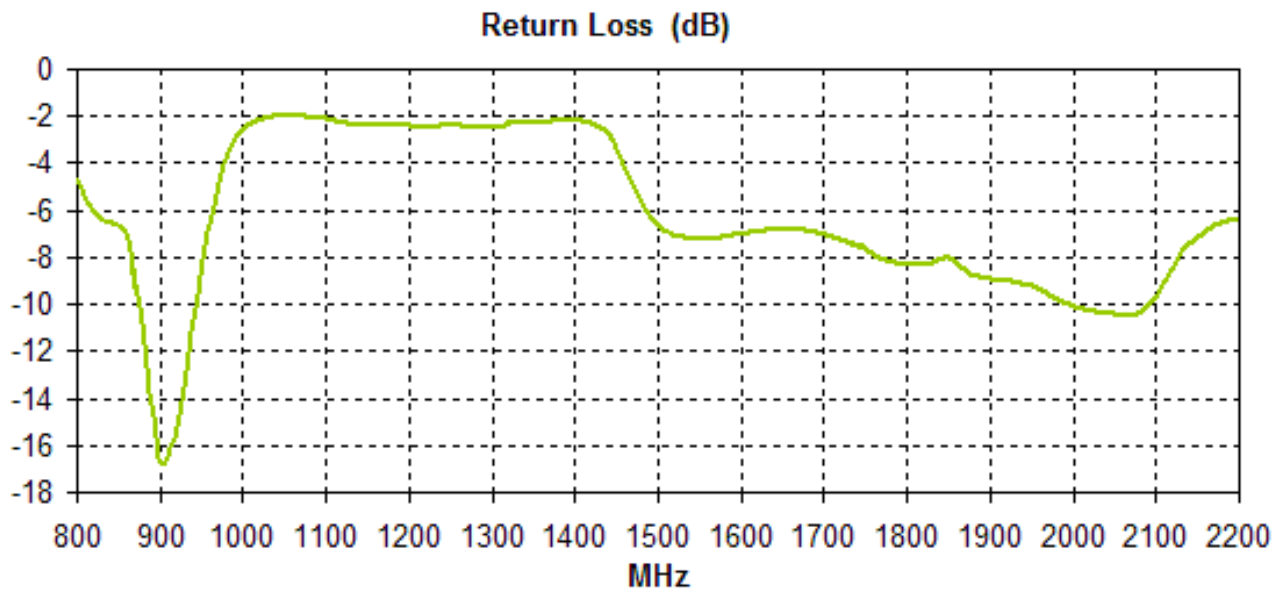
For more information or installation instructions, please contact your regional Taoglas customer support team.

2. Specifications

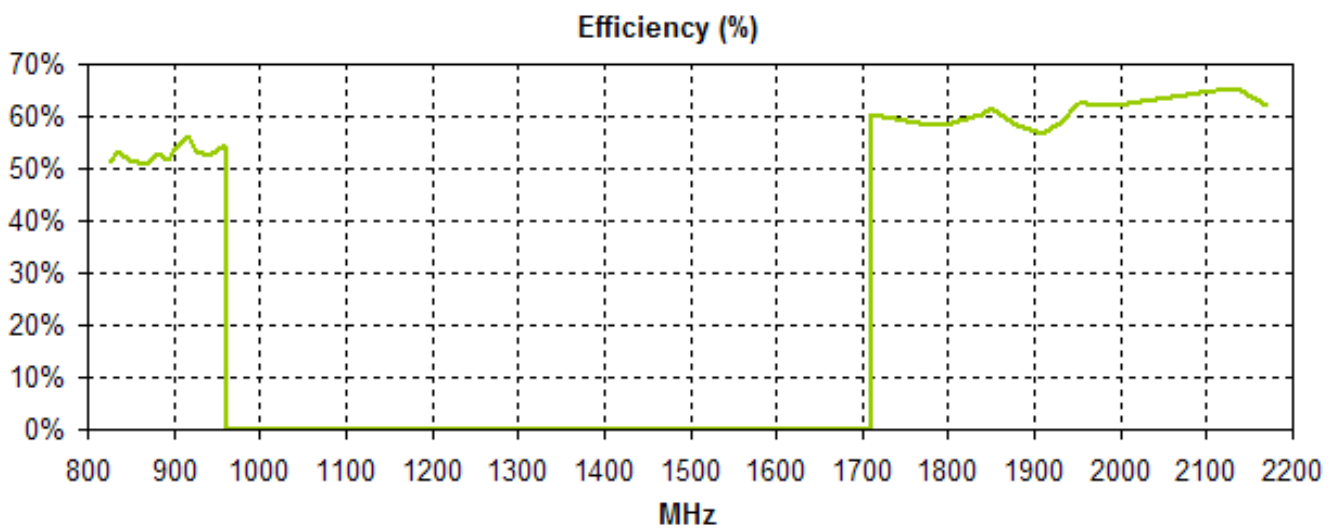
Electrical						
Frequency (MHz)	850	900	1700	1800	1900	2100
Peak Gain (dBi)						
On 2mm ABS	2	1.5	3	2.5	2	2.5
Return Loss (dB)						
On 2mm ABS	-7	-12	-8	-9	-9	-8
Efficiency (%)						
On 2mm ABS	52	55	60	60	62	65
Impedance	50Ω					
VSWR	<2.5:1					
Polarization	Linear					
Radiation Pattern	Omni					
Input Power	5W					
Mechanical						
Dimensions	70 x 20 x 0.2mm					
Weight	1.5g					
Cable	100mm 1.13 Black					
Connector	IPEX MHFI					
Adhesive	3M 467					
Environmental						
Temperature Range	-40°C to 85°C					
Humidity	Non-condensing 65°C 95% RH					

3. Antenna Characteristics

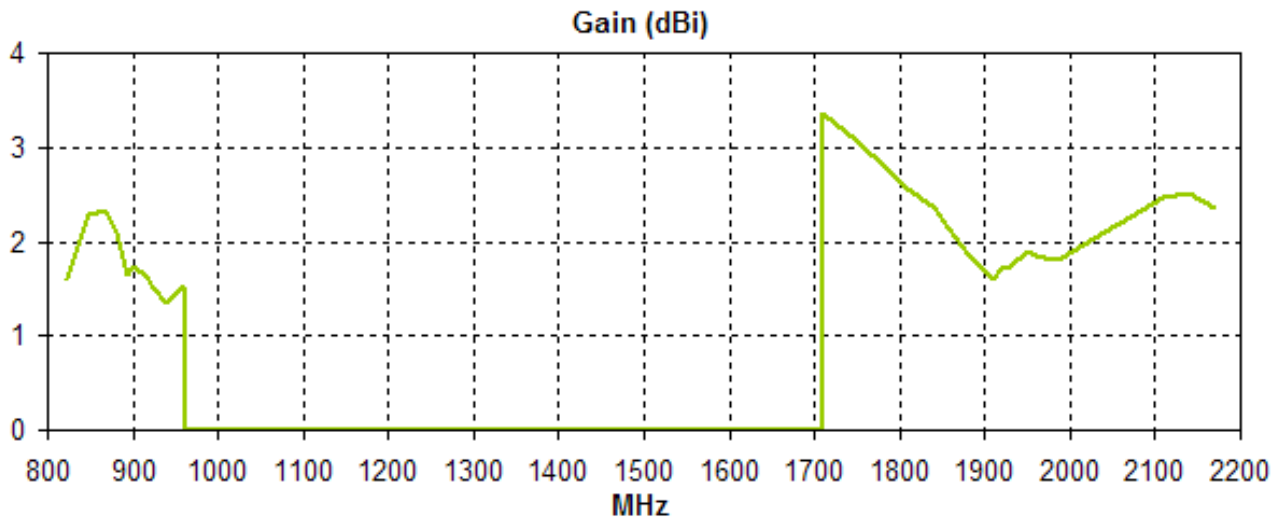
3.1 Return Loss



3.2 Efficiency



3.3 Gain



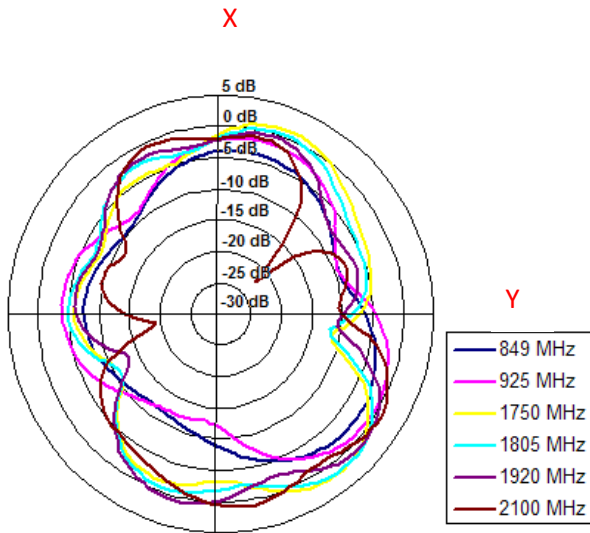
4. 2D Radiation Patterns

4.1 Test Setup

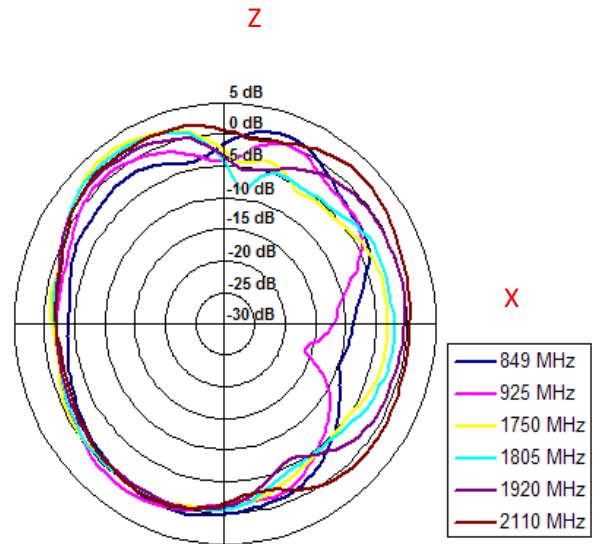


2mm ABS

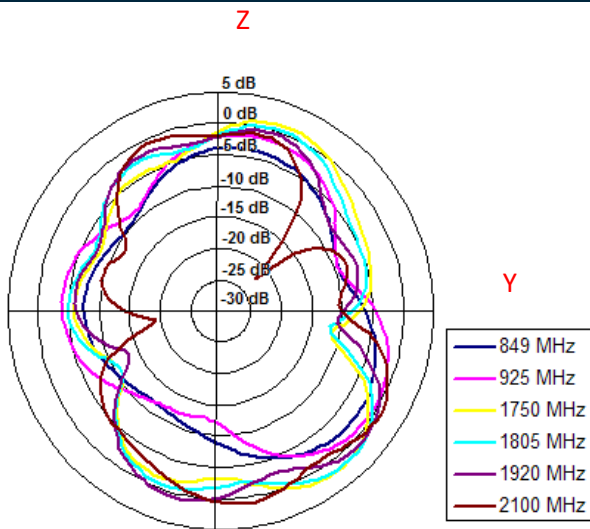
XY Plane



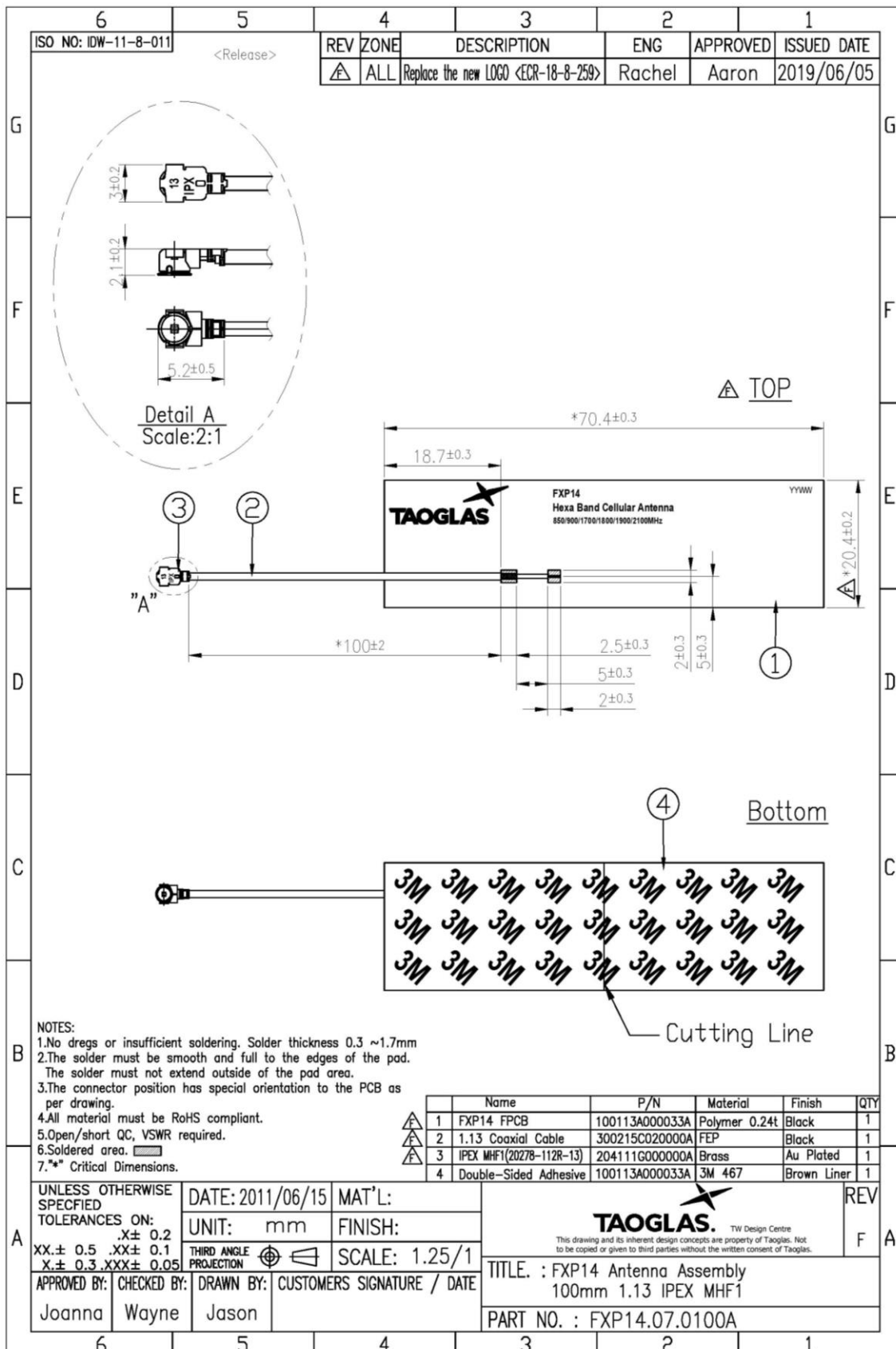
XZ Plane



YZ Plane

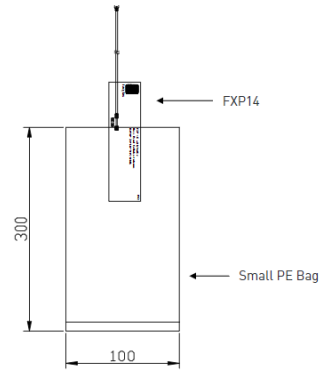


5. Mechanical Drawing (Units: mm)



6. Packaging

100pcs FXP14.07.0100A per PE Bag
 Dimensions - 300*100mm
 Weight - 150g



Changelog for the datasheet

SPE-12-8-050 – FXP14.07.0100A

Revision: D (Current Version)

Date:	2019-07-12
Changes:	Updated EDW
Changes Made by:	Jack Conroy

Previous Revisions

Revision: C

Date:	2014-08-12
Changes:	Amended IPEX
Changes Made by:	Aine Doyle

Revision: B

Date:	2013-09-17
Changes:	Updated EDW
Changes Made by:	Aine Doyle

Revision: A (Original First Release)

Date:	2012-04-30
Notes:	
Author:	Aine Doyle



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