

**FXP14R.A.07.0100A**

Specification

<b>Part No.</b>	<b>FXP14R.A.07.0100A</b>
<b>Product Name</b>	FXP14 Hexa-Band Cellular Antenna 850/900/1700/1900/2100 MHz GSM/GPRS/CDMA/HSPA/UMTS
<b>Feature</b>	IPEX MHF Connector (U.FL compatible) 100 mm 1.37 Cable 70*20*.01 mm Flexible Peel and Stick Mounting AntD© Shunt 10k Ohm Chip Resistor Inside Cable and Connector Customizable RoHS compliant

## 1. Introduction

The Taoglas FXP14R Hexa Band Cellular Antenna with Integrated AntD© Resistor covers all world-wide 2G/3G bands (850 / 900 / 1700 / 1800 / 1900 / 2100 MHz). Common applications are in GSM / CDMA / DCS / PCS / WCDMA / UMTS/ HSPA / GPRS / EDGE.

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.

Taoglas unique AntD© technology allows connected radio products to perform

diagnostics on the antenna.

This includes detection that the proper antenna is connected and that the connection isn't shorted or broken.

Contact Taoglas engineering for examples on how to implement AntD© antenna diagnostics in your product.

Cable length and connector types are also customizable. Like all such antennas, care should be taken to mount the antenna at least 10mm from metal components or surfaces, and ideally 20mm for best radiation efficiency.

## 2. Specification

### Electrical

<b>Frequency (MHz)</b>	850	900	1700	1800	1900	2100
<b>Return Loss (dB)</b>	-7	-11	-12	-16	-12	-12
<b>Efficiency (%)</b>	42	42	70	75	78	70
<b>Gain (dBi)</b>	-1.5	-3.0	1.5	2.5	2.5	2.5
<b>Impedance</b>	50Ω					
	<b>Integrated AntD® Resistor</b>					
<b>Resistor</b>	Shunt 10K Ohm (+/- 5%) to Ground					
<b>Polarization</b>	Linear					
<b>Power Handled</b>	50 W					

### Mechanical

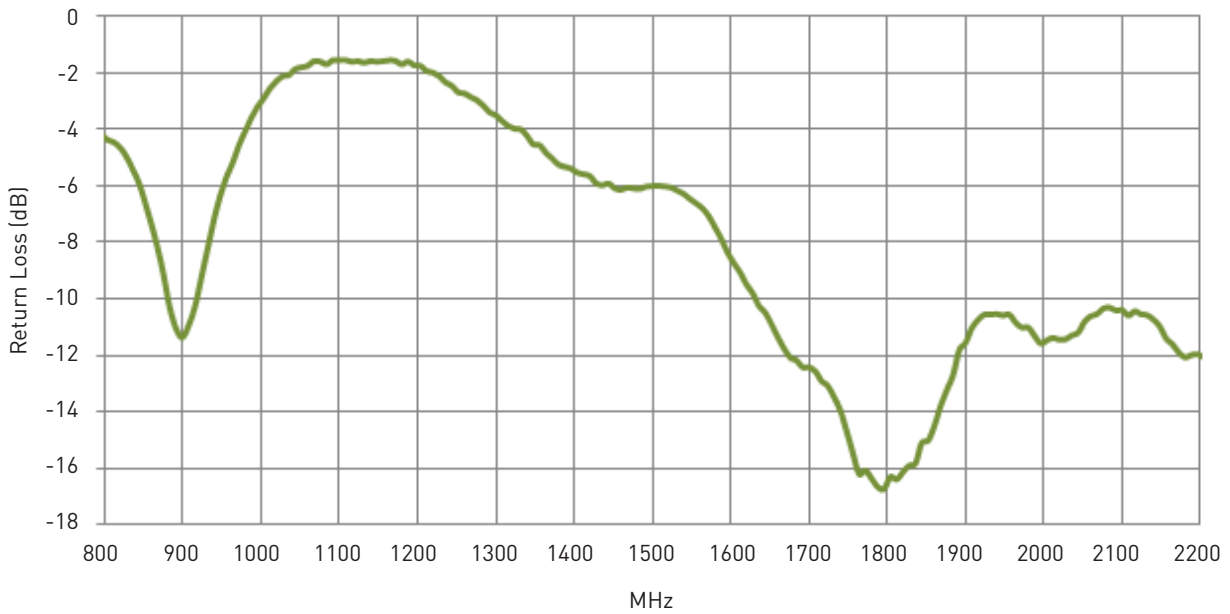
<b>Dimensions</b>	70*20*01mm
<b>Connector</b>	MHFII (U.FL Compatible)
<b>Cable Standard</b>	Mini-Coax 1.13mm
<b>Cable Length and color</b>	100 mm, Black

### Environmental

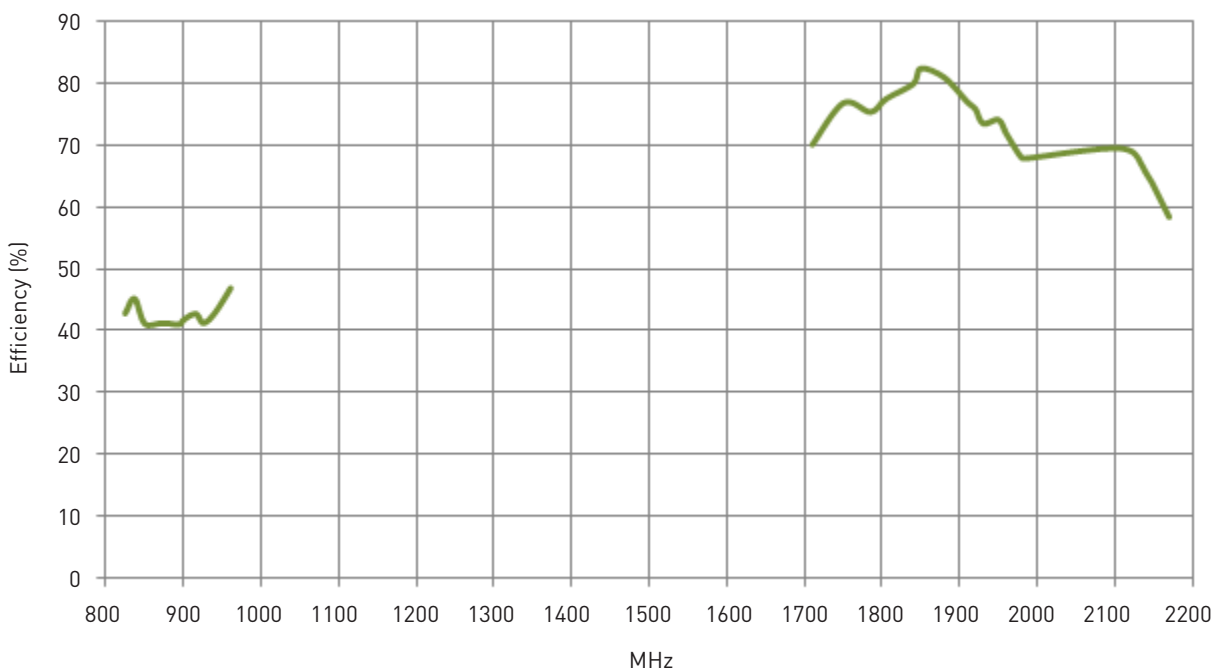
<b>Temperature Range</b>	-40°C to 85°C
<b>Storage Temperature</b>	-40°C to 85°C

### 3. Antenna Parameters

#### 3.1 Return Loss

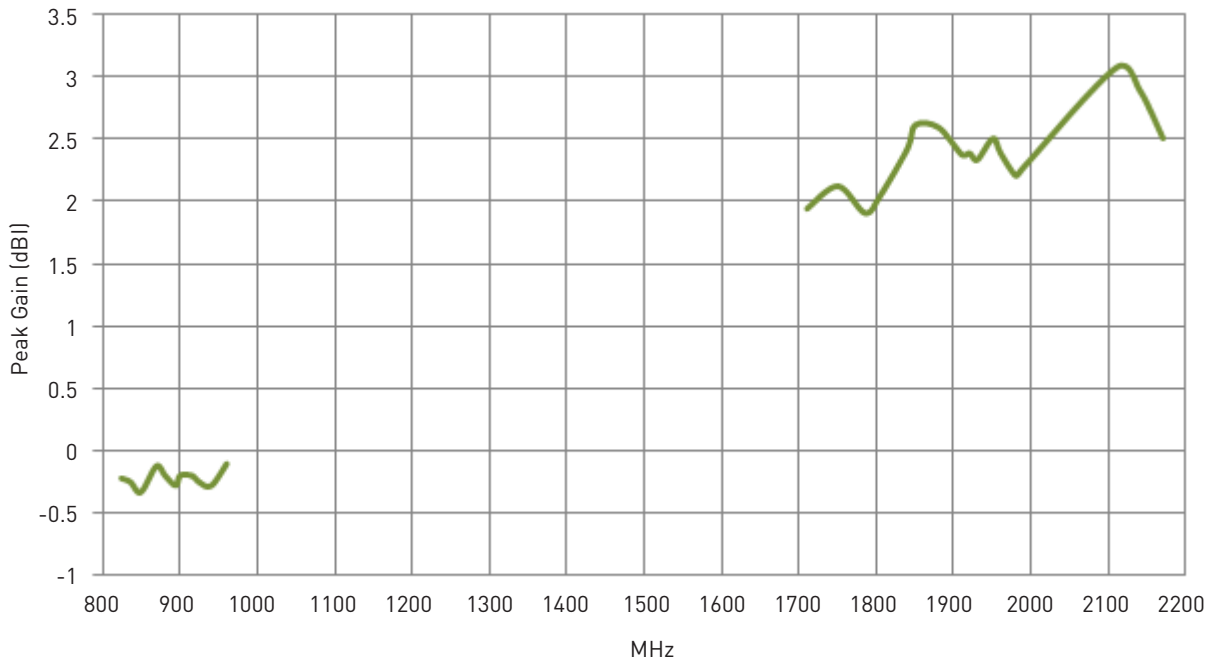


#### 3.2 Antenna Efficiency



### 3. Antenna Parameters

#### 3.3 Peak Gain



## 4. Radiation Patterns

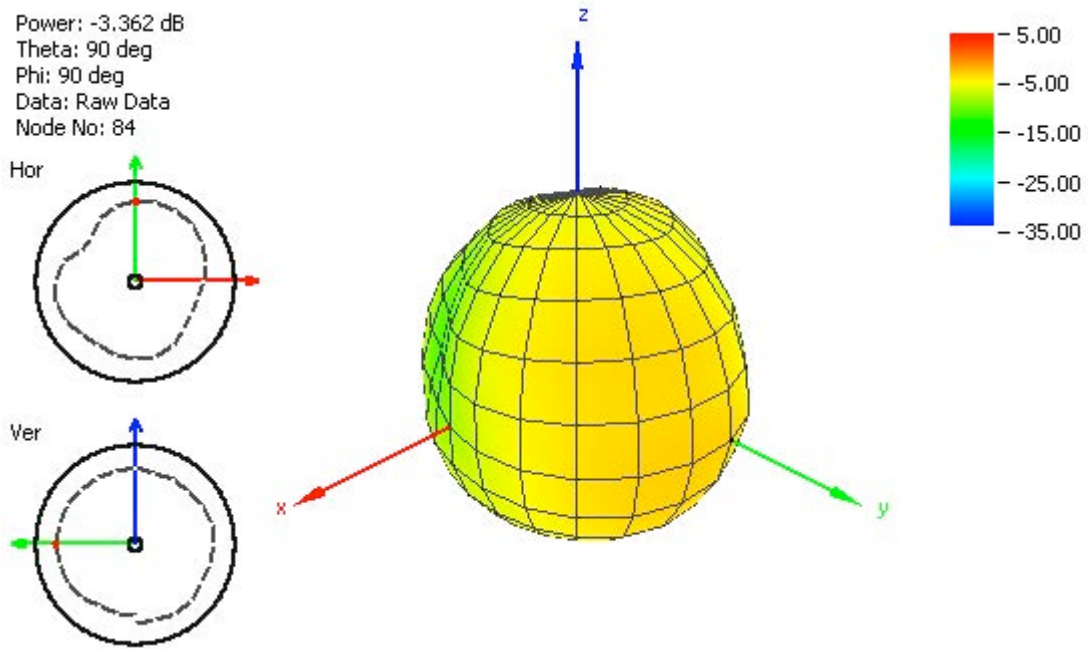


Figure 4. Radiation Pattern at 849 MHz.

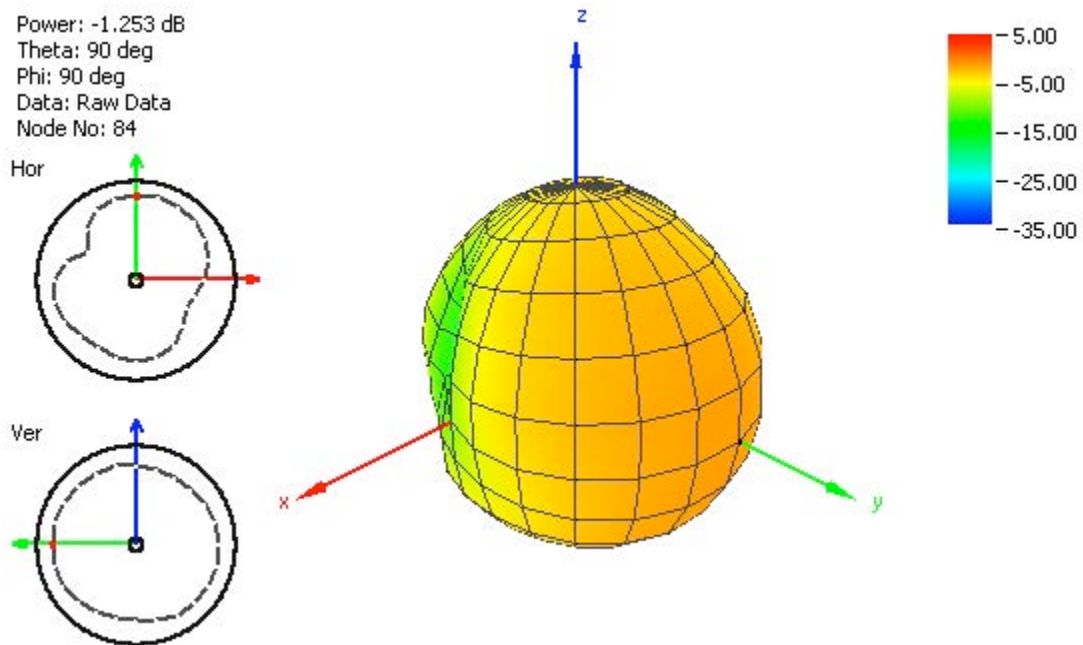


Figure 5. Radiation Pattern at 925 MHz.

## 4. Radiation Patterns

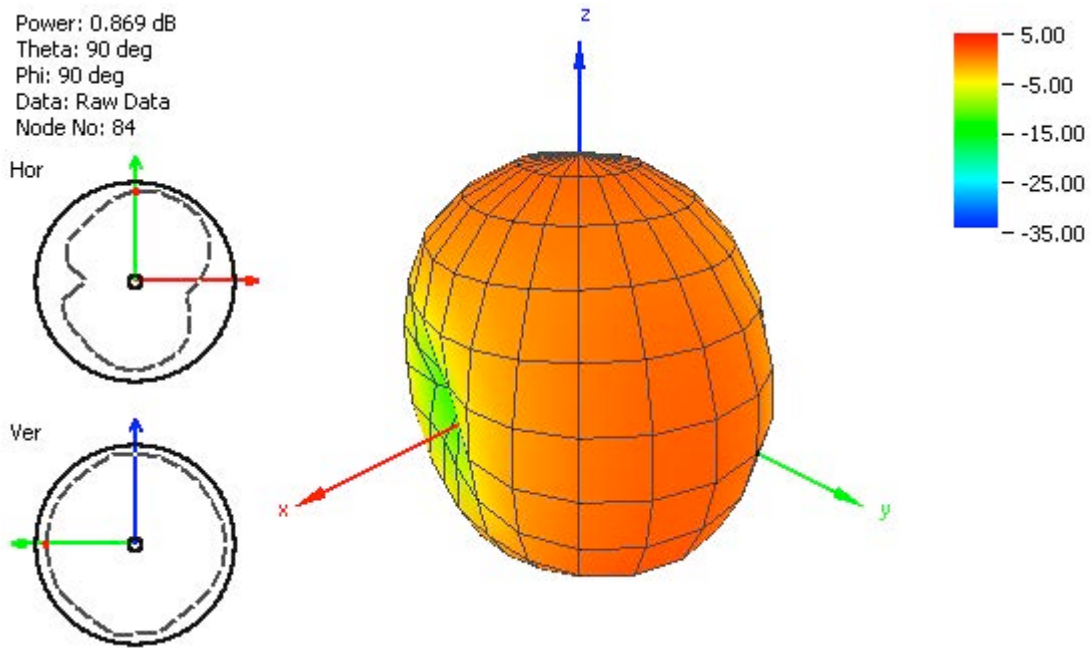


Figure 6. Radiation Pattern at 1750 MHz.

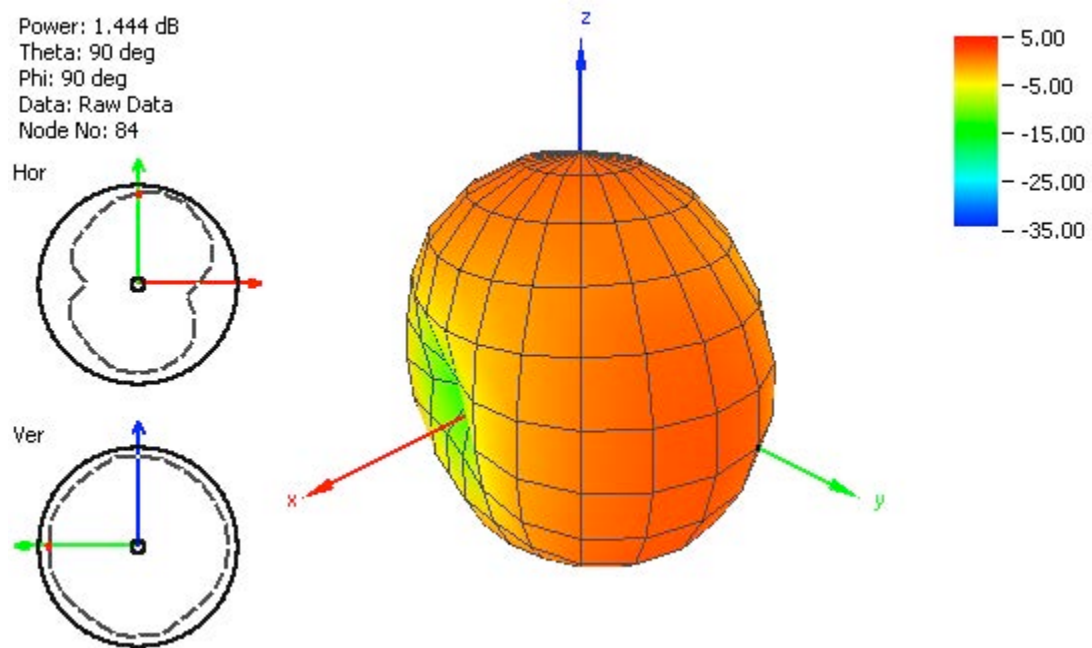
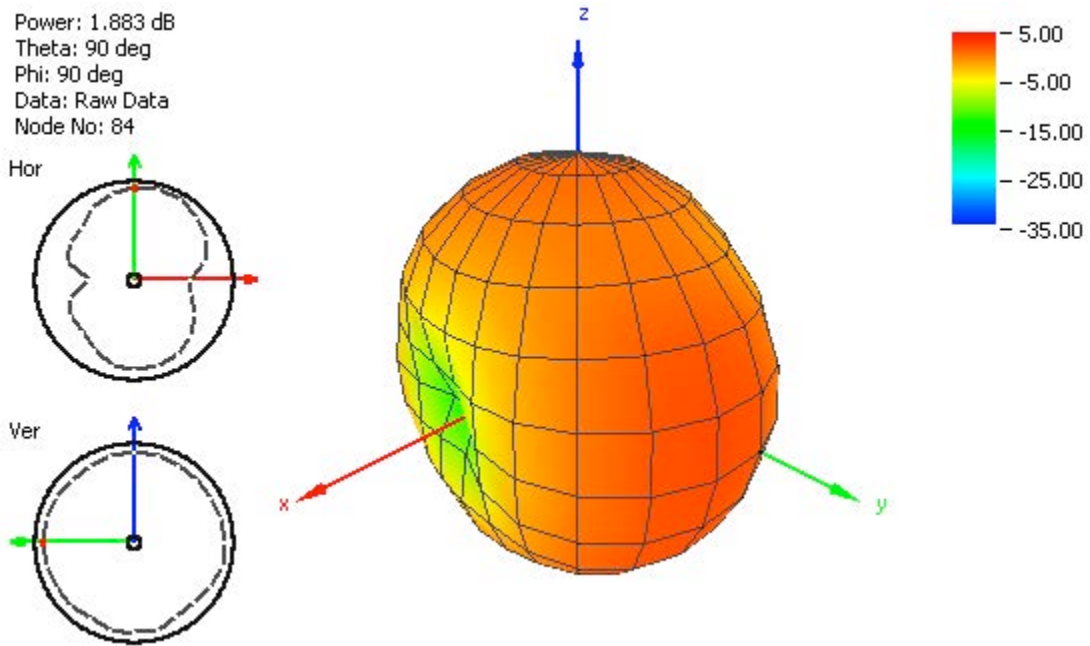
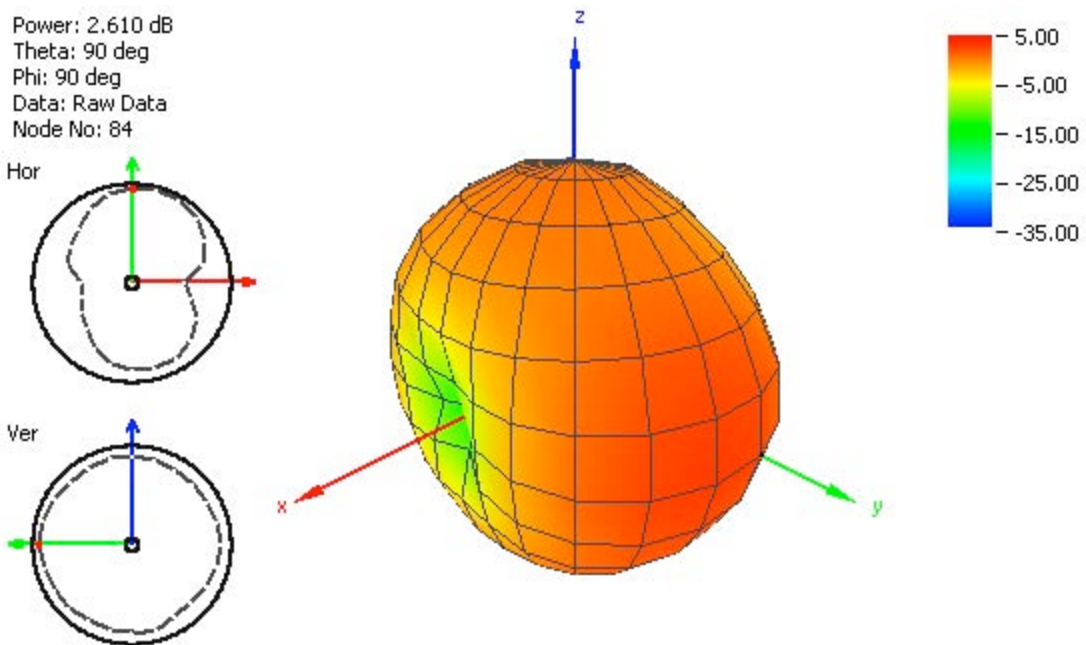


Figure 6. Radiation Pattern at 1805 MHz.

## 4. Radiation Patterns



**Figure 7.** Radiation Pattern at 1920 MHz.



**Figure 8.** Radiation Pattern at 2110 MHz.



## 5. Drawing

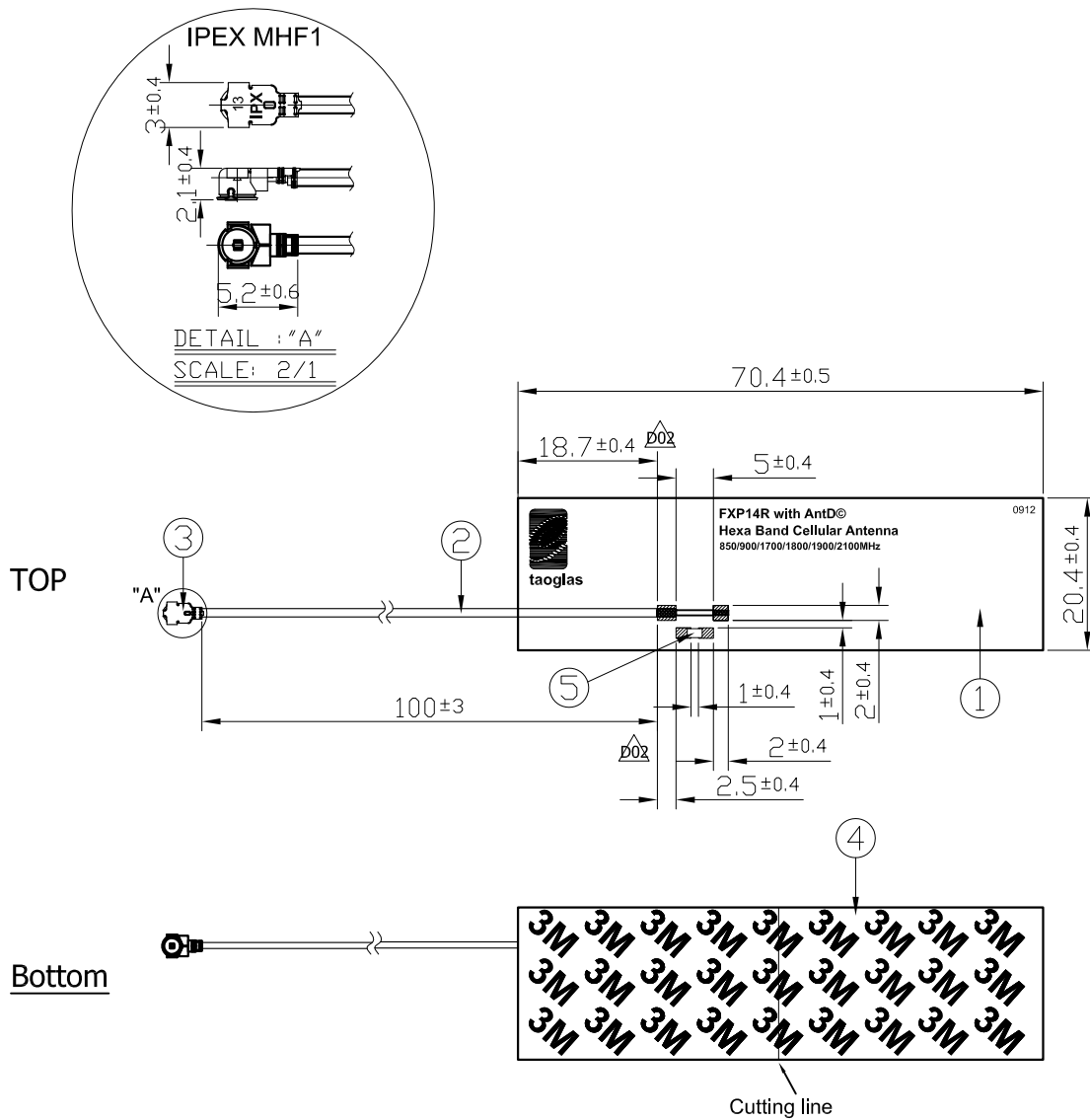
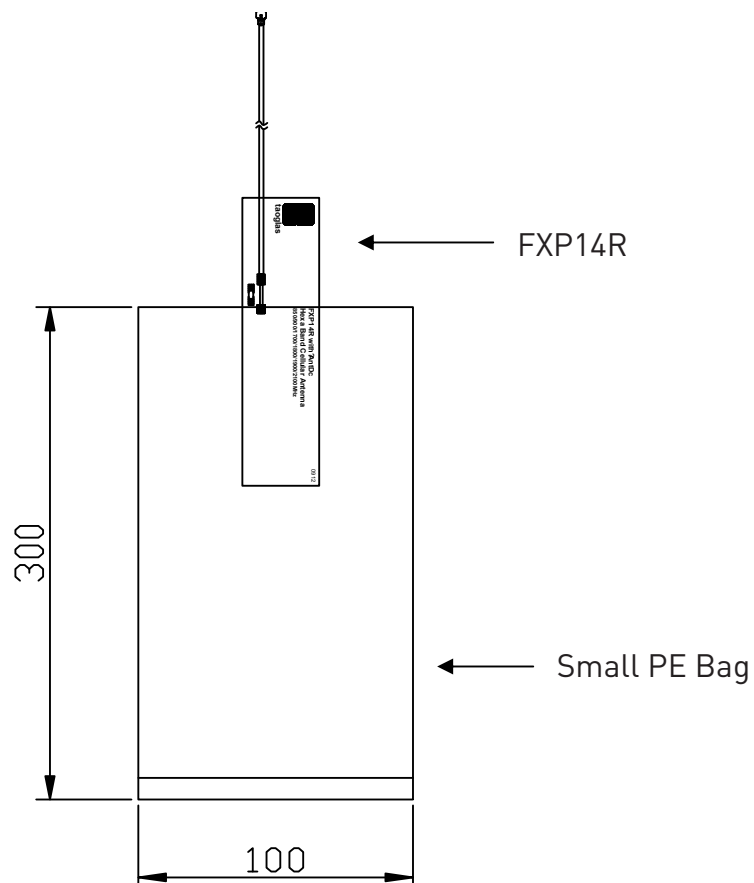


Figure 9. Mechanical Drawing for the FXP14R Antenna

	Name	Material	Finish	QTY
1	FXP14R FPCB	FPCB 0.1t	Black	1
2	1.13 Coaxial Cable	FEP	Black	1
3	IPEX MHF1	Brass	Gold	1
4	Double-Sided Adhesive	3M 467	Brown Liner	1
5	Resistor (R=10k Ohm)	Ceramic	N/A	1

## 6. Packaging

100pcs antenna per small PE bag



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