

# Datasheet



**TAOGLAS®**

**Part No:**  
**FXUB1910.07.0100AQ**

**Description**

Flex PCB ADSB Antenna Horizontal with 100mm 1.37mm and I-PEX MHF I

**Features:**

Flex PCB ADSB Antenna (Horizontal Feed)  
Cable: 100mm of 1.37 Coaxial  
Connector: I-PEX MHF I  
Dims: 80.0 x 12.0 x 0.24 mm  
RoHS & Reach Compliant

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## 1. Introduction



The FXUB1910 is an ultra-thin, flexible PCB antenna designed for ADS-B (Automatic Dependent Surveillance-Broadcast) systems, the global aviation surveillance technology enabling safe and efficient air traffic management. Covering both 1090 ES (Extended Squitter,  $1090 \pm 5$  MHz) and 978 UAT (Universal Access Transceiver,  $978 \pm 5$  MHz) bands, the antenna provides robust and reliable aircraft tracking performance across worldwide deployments.

Built with a flexible polymer substrate, the FXUB1910 offers a unique combination of lightweight design and mechanical adaptability, allowing integration into housings or surfaces where rigid PCB antennas cannot be used. The antenna features a horizontal-feed configuration with a 100mm 1.37 mm coaxial cable and I-PEX MHF I connector, simplifying integration into compact systems. With efficiencies up to 57% and a peak gain of 1.3 dBi, it delivers stable omnidirectional coverage with linear polarization.

At just  $80 \times 12 \times 0.24$ mm and weighing only 0.9g, the antenna's ultra-slim profile makes it ideal for discreet mounting. A 3M 467 adhesive backing ensures secure installation on enclosures or substrates, with performance optimized on a 3 mm ABS ground plane.

### Typical applications include:

- ADS-B (Automatic Dependent Surveillance-Broadcast) Ground Stations
- Unmanned Aerial Vehicles (UAVs)
- Avionics and Air Traffic Management Systems
- IoT Tracking and Monitoring Devices
- Transportation and Logistics Infrastructure

Built on a flexible polymer substrate, the FXUB1910 is engineered for long-term reliability in harsh environments. Cables and Connectors can be fully customized based on customer requirements, please contact your regional Taoglas customer support team.

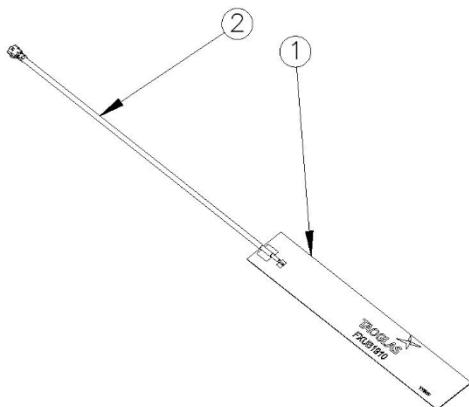
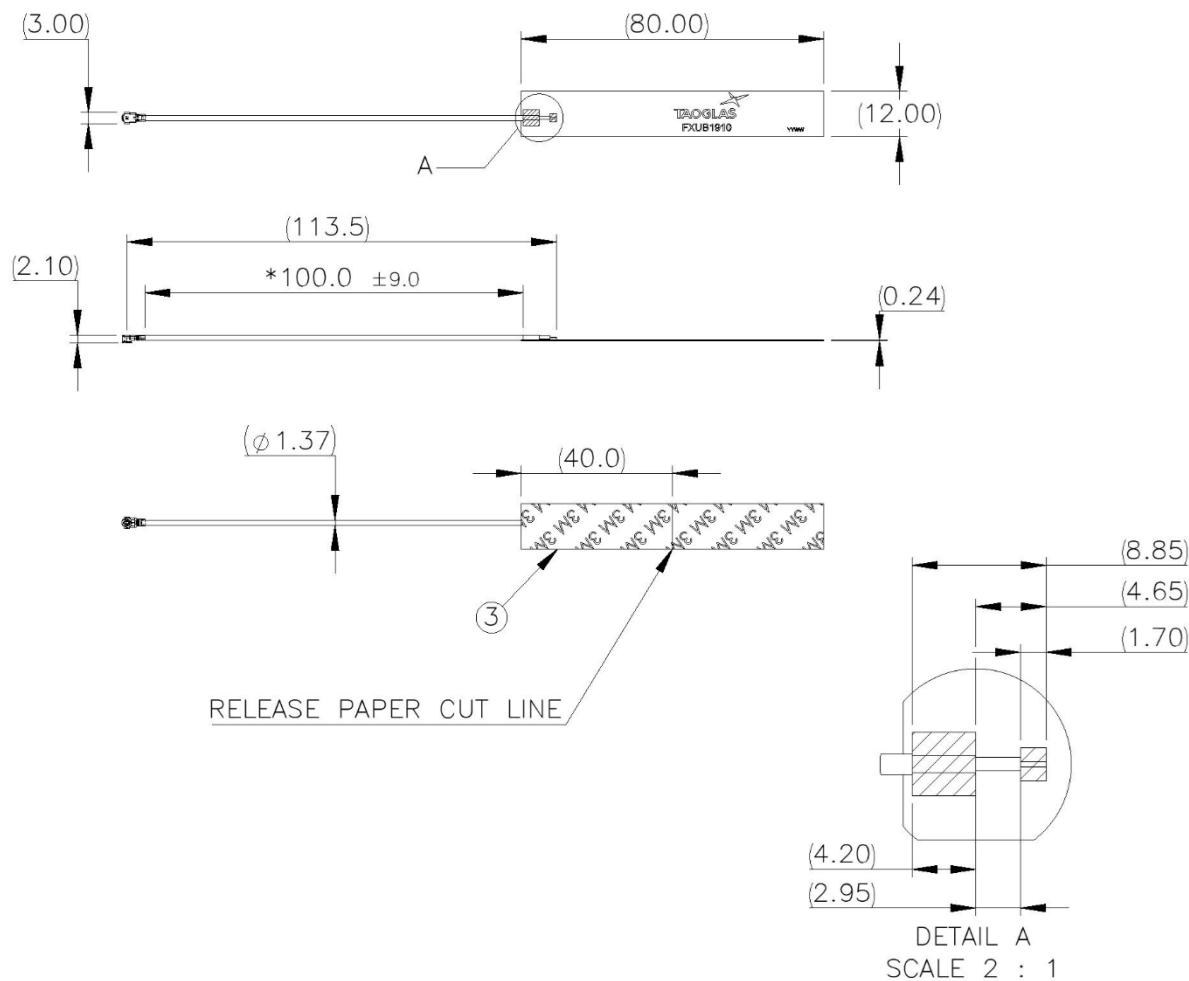
## 2. Specification

Electrical								
Band	Frequency (MHz)	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
978 MHz	973-983	53.4	-2.72	1.07	50 Ω	Linear	Omni directional	5W
1090 MHz	1085-1095	57.3	-2.42	1.31				

Mechanical	
Dimensions	80mm x 12mm x 0.24mm
Weight	0.9g
Material	Flexible Polymer
Connector	IPEX MHF I (U.FL COMP)
Cable	100mm of 1.37 (Black)
Mount	Adhesive, 3M 467

Environmental	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C
Relative Humidity	Non-condensing 65°C 95% RH

### 3. Mechanical Drawing



ITEM NO.	DESCRIPTION	Material	Color	QTY.
1	FXUB1910.07.0100AQ L80mm W12mm	Polyimide	Black	1
2	100MM, 1.37MM Black, IPEX MHF I (U.FI Comp.) 1.7-2.95-4.2	N/A	N/A	1
3	Double-Sided Adhesive	3M 467	Brown Paper with 3M Logo	1

## 4. Packaging



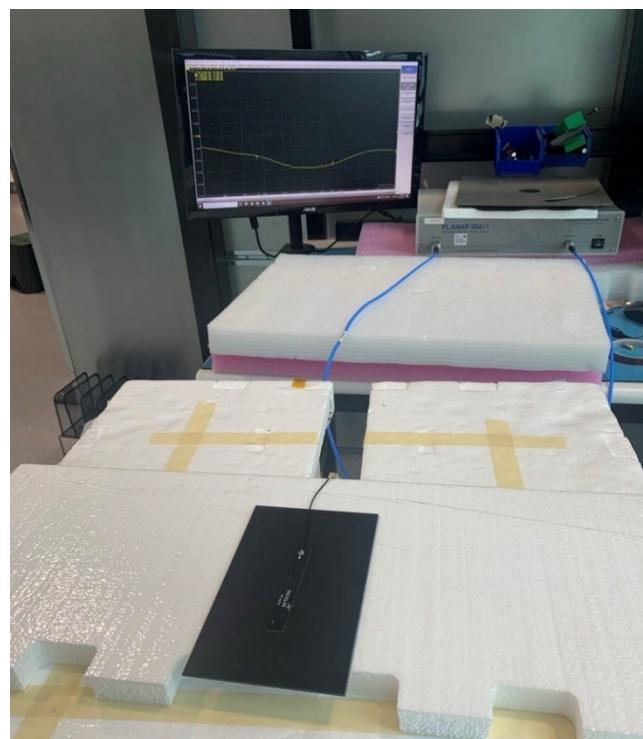
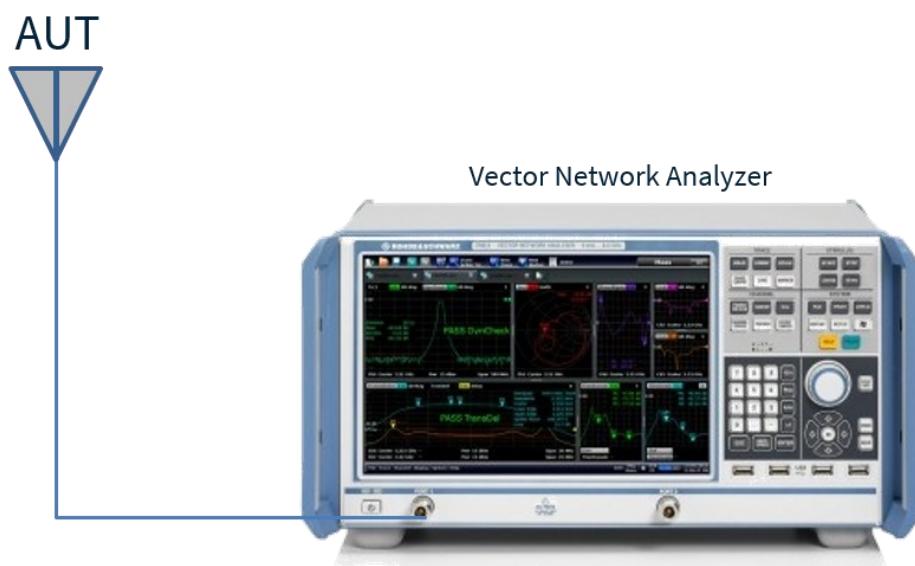
- 100 PCS / PE bag
- PE bag(mm): 180x280 (Ref)
- Weight (g): 103 ±3%
- SPQ Label



- 5000 PCS/ Carton
- Carton(mm):320x250x290
- Weight (kg): 5.68 ±3%
- Carton Label

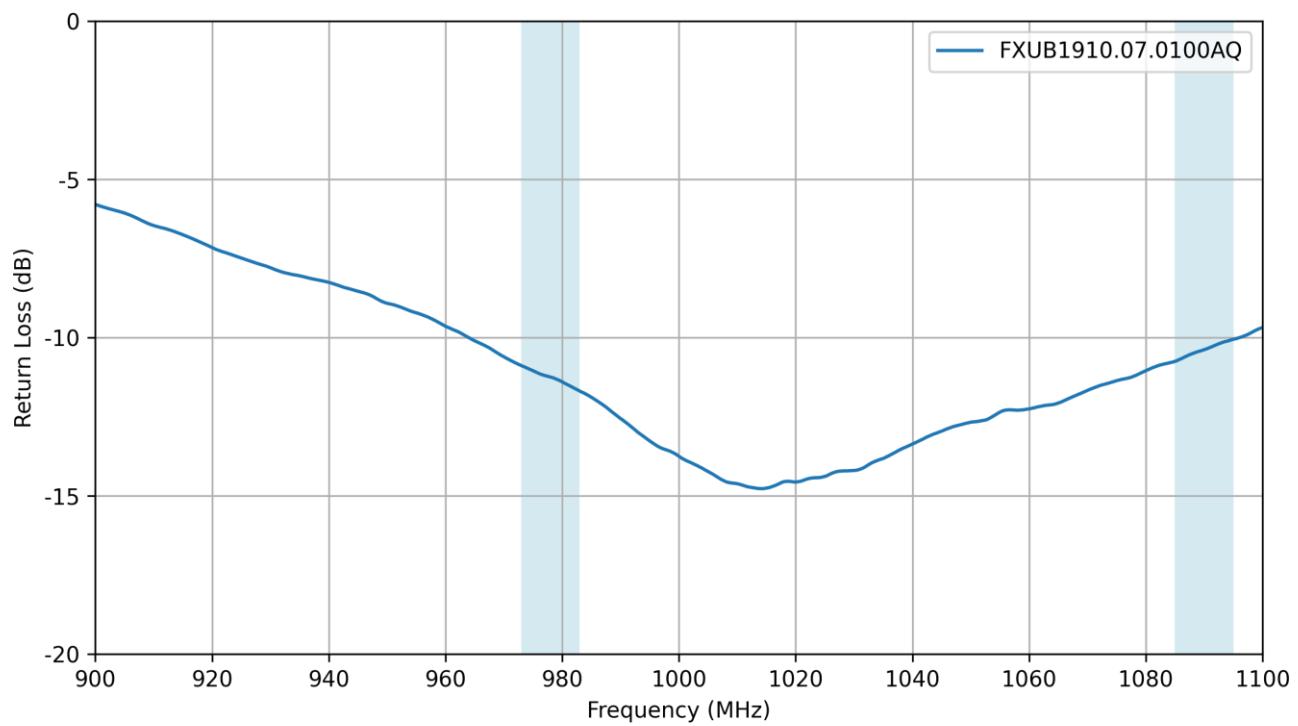
## 5. Antenna Characteristics

### 5.1 Test Setup

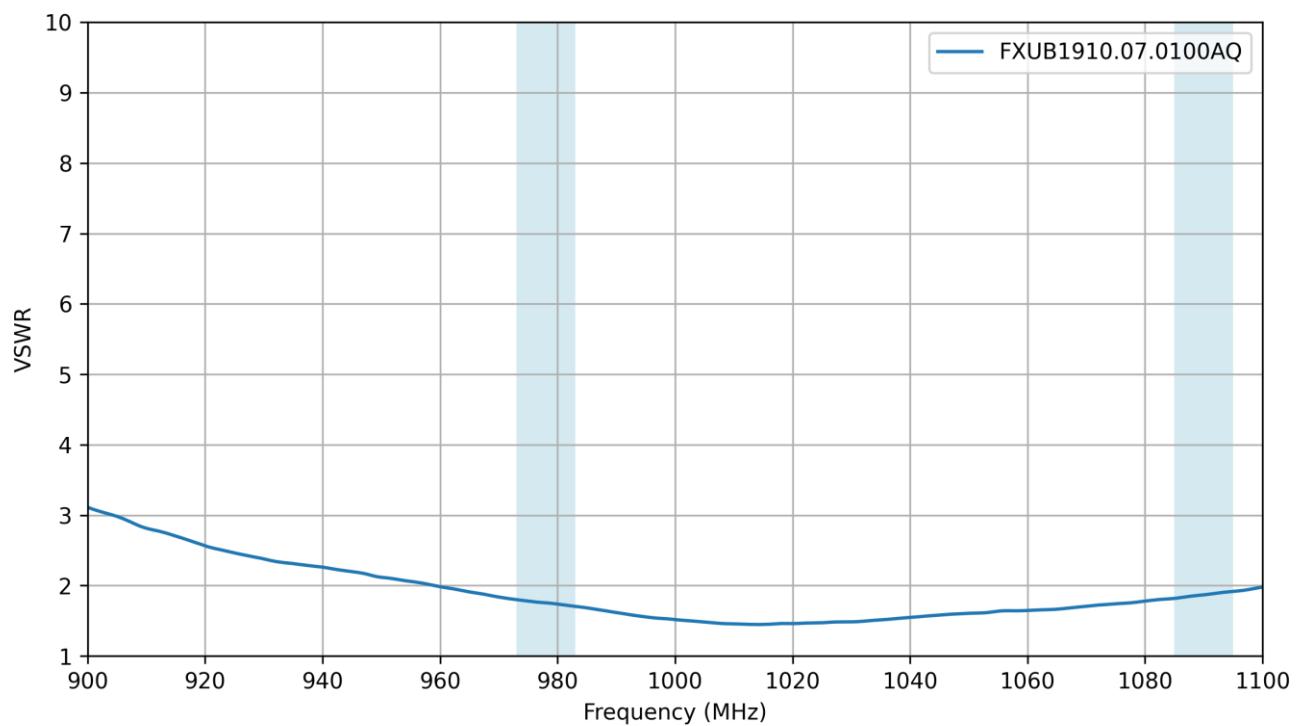


VNA Test Setup on 3mm ABS

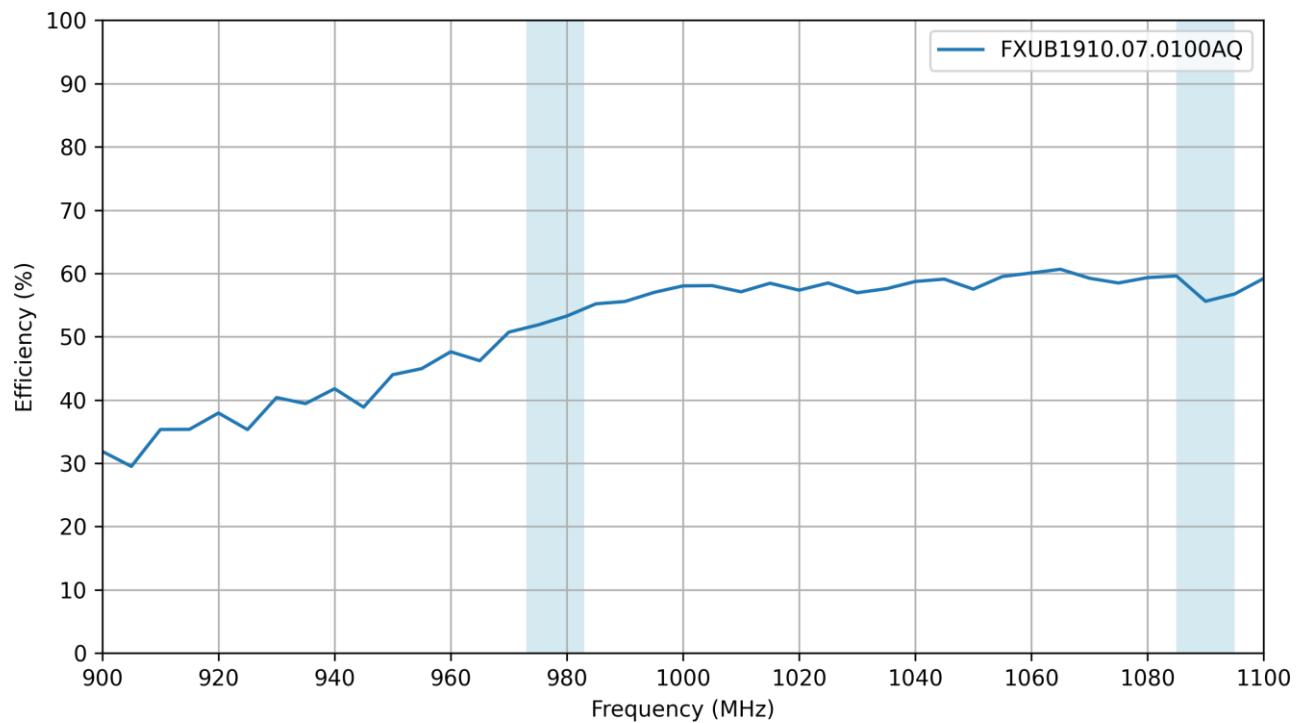
## 5.2 Return Loss



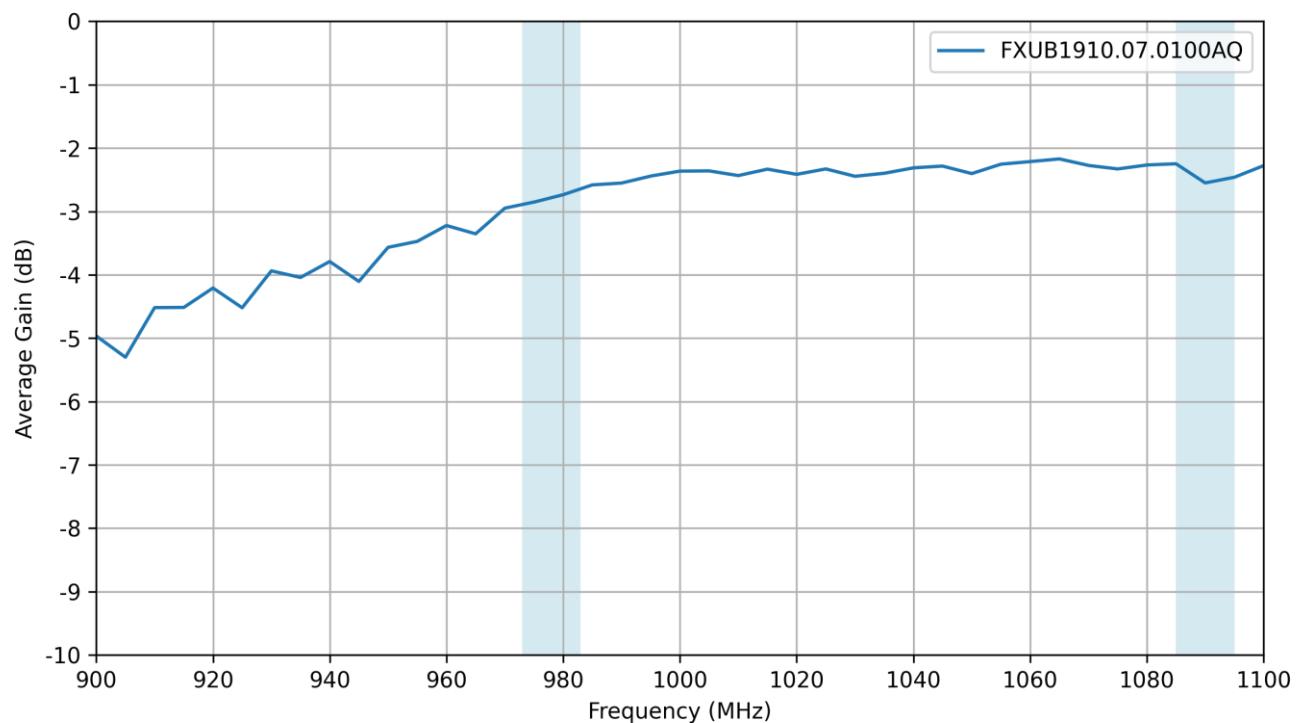
## 5.3 VSWR



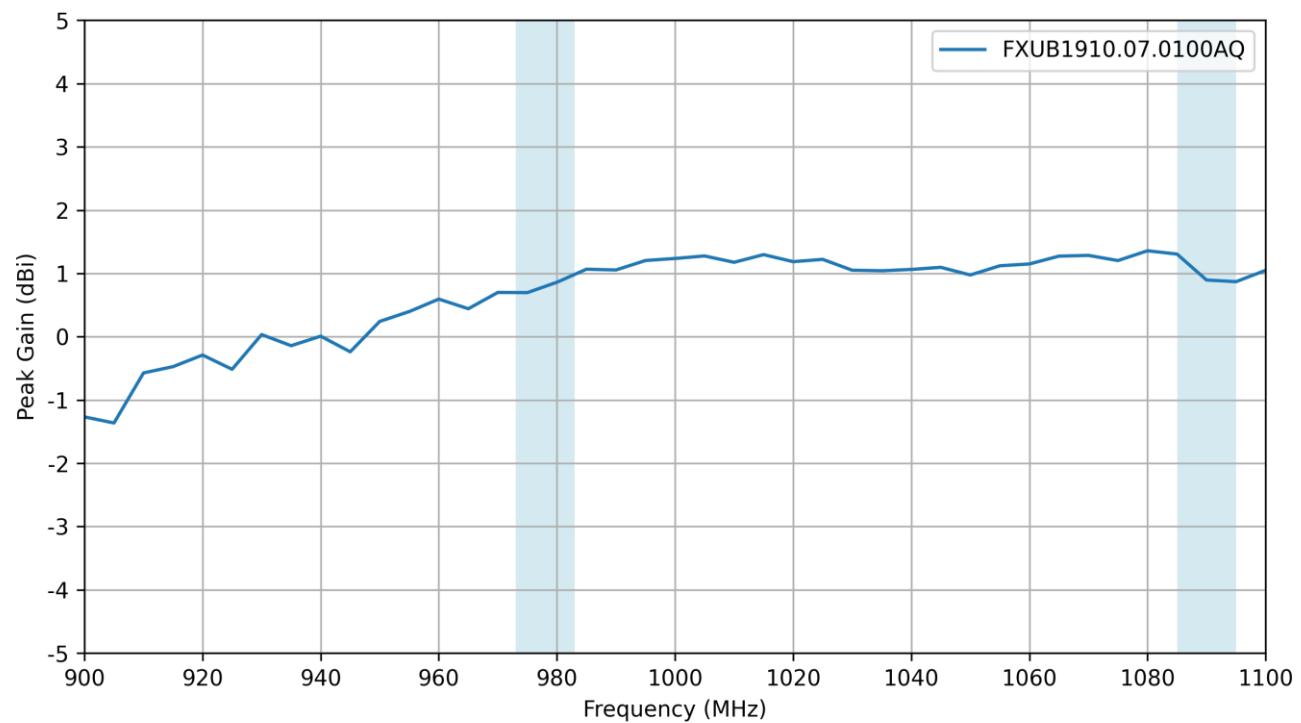
## 5.4 Efficiency



## 5.5 Average Gain

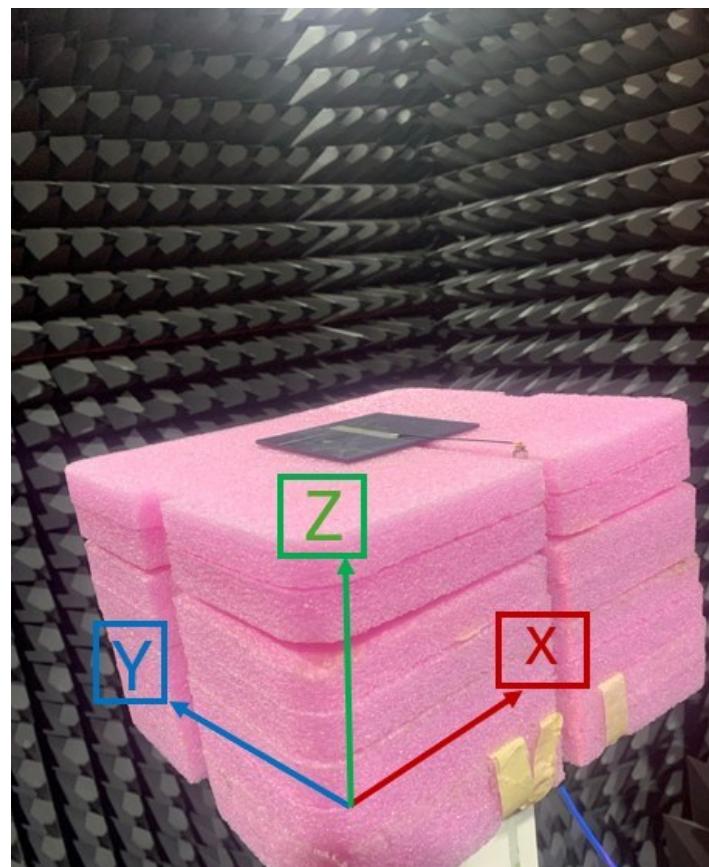
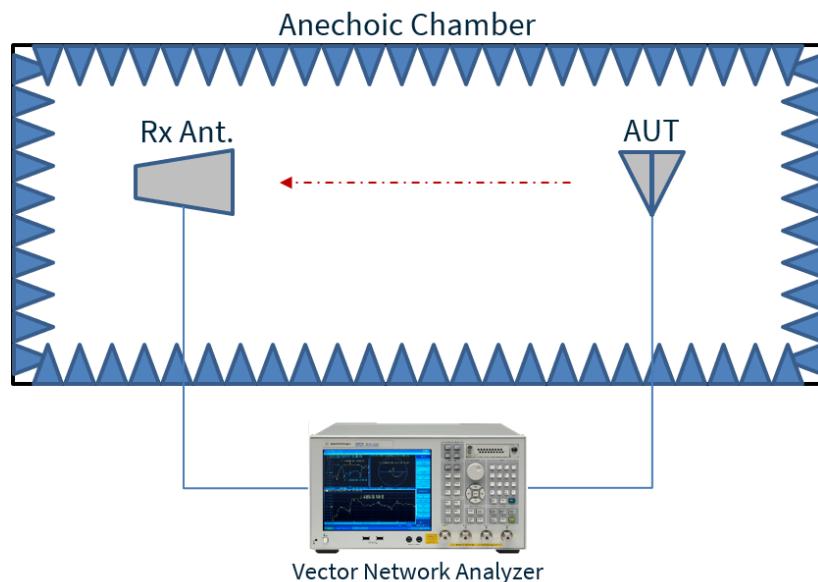


## 5.6 Peak Gain



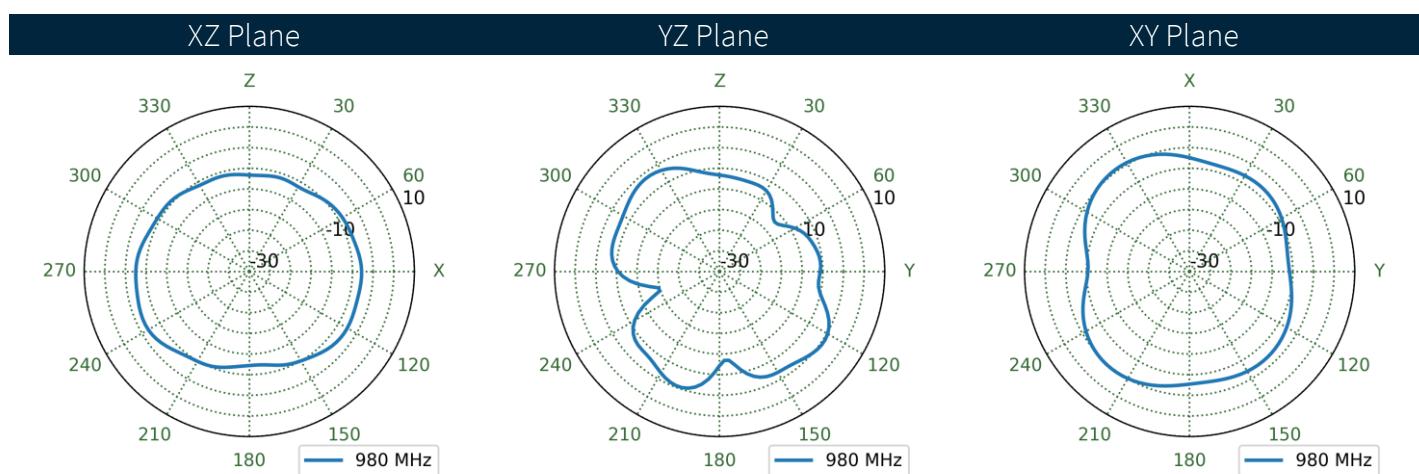
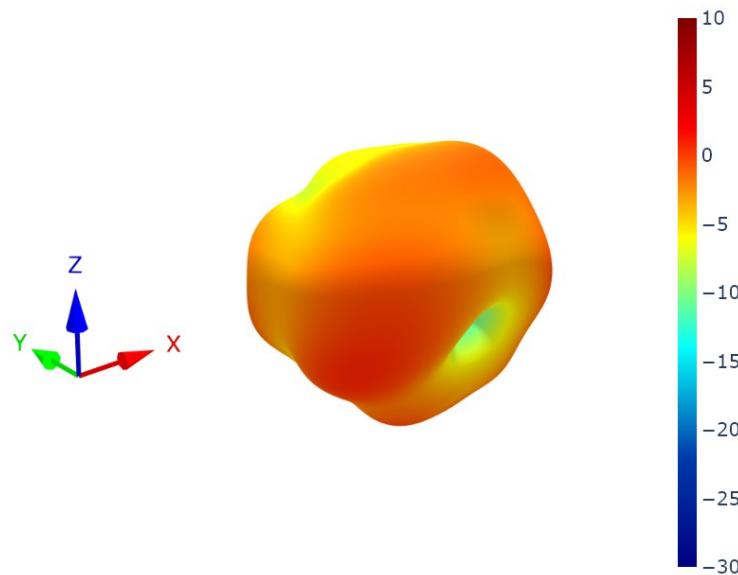
## 6. Radiation Patterns

### 6.1 Test Setup

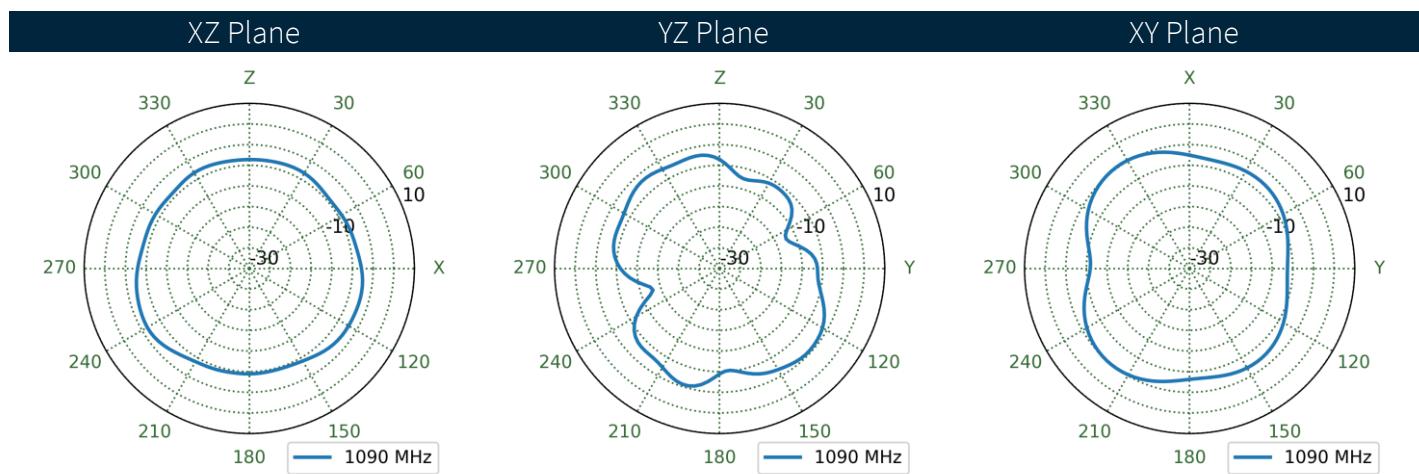
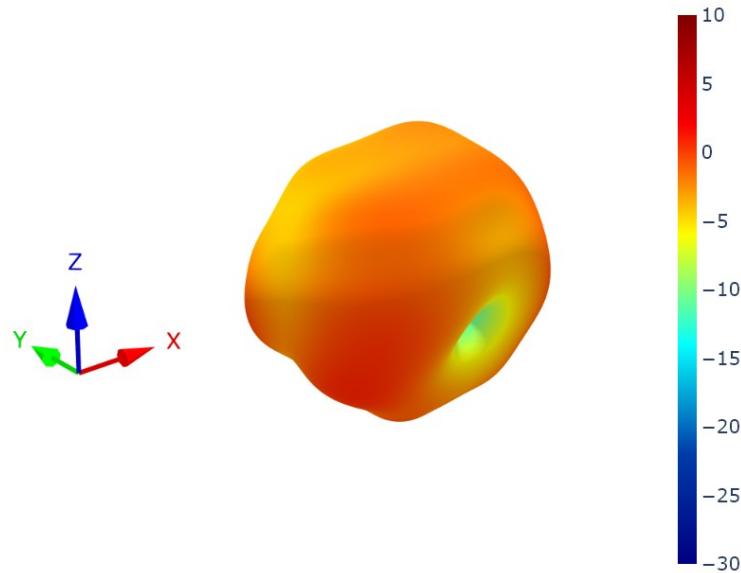


Chamber Test Setup on 3mm ABS

## 6.2 Patterns at 980 MHz



## 6.3 Patterns at 1090 MHz



## Changelog for the datasheet

**SPE-25-8-256 - FXUB1910.07.0100AQ****Revision: A (Original First Release)**

Date: 2025-09-17

Notes: Initial Release

Author: Gary West

**Previous Revisions**




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