



# Datasheet



**Part No:**  
**PC1900.07.0100AQ**

**Description**

PCB ADSB Antenna Vertical feed with 100mm 1.37mm and I-PEX MHF I

**Features:**

PCB ADSB Antenna (Vertical Feed)  
Cable: 100mm of 1.37 Coaxial  
Connector: I-PEX MHF I  
Dims: 80.0 x 12.0 x 0.86 mm  
RoHS & Reach Compliant

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## 1. Introduction



The PC1900 is a lightweight, high-efficiency PCB ADS-B (Automatic Dependent Surveillance–Broadcast) antenna, designed specifically for reliable operation in the 978 MHz and 1090 MHz bands. Supporting ADS-B applications, the antenna enables robust aircraft tracking and surveillance performance with optimized linear polarization and omnidirectional radiation characteristics.

The antenna integrates a vertical-feed design with a 100mm 1.37mm coaxial cable terminated in an I-PEX MHF I connector, offering design flexibility and easy integration into compact systems. Despite its compact construction, the PC1900 delivers efficiency levels up to 63% and peak gain of 1.64 dBi, ensuring strong and consistent performance.

With dimensions of just  $80 \times 12 \times 0.86$ mm and a weight of only 2g, the antenna maintains a low-profile form factor suitable for embedding in space-constrained devices. The integrated 3M adhesive backing allows for quick, reliable mounting on enclosures or substrates, with performance optimized on a 3mm ABS ground plane.

### Typical applications include:

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

Built on a durable FR4 substrate, the PC1900 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.

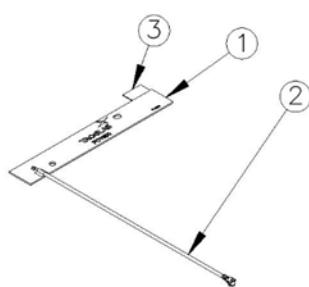
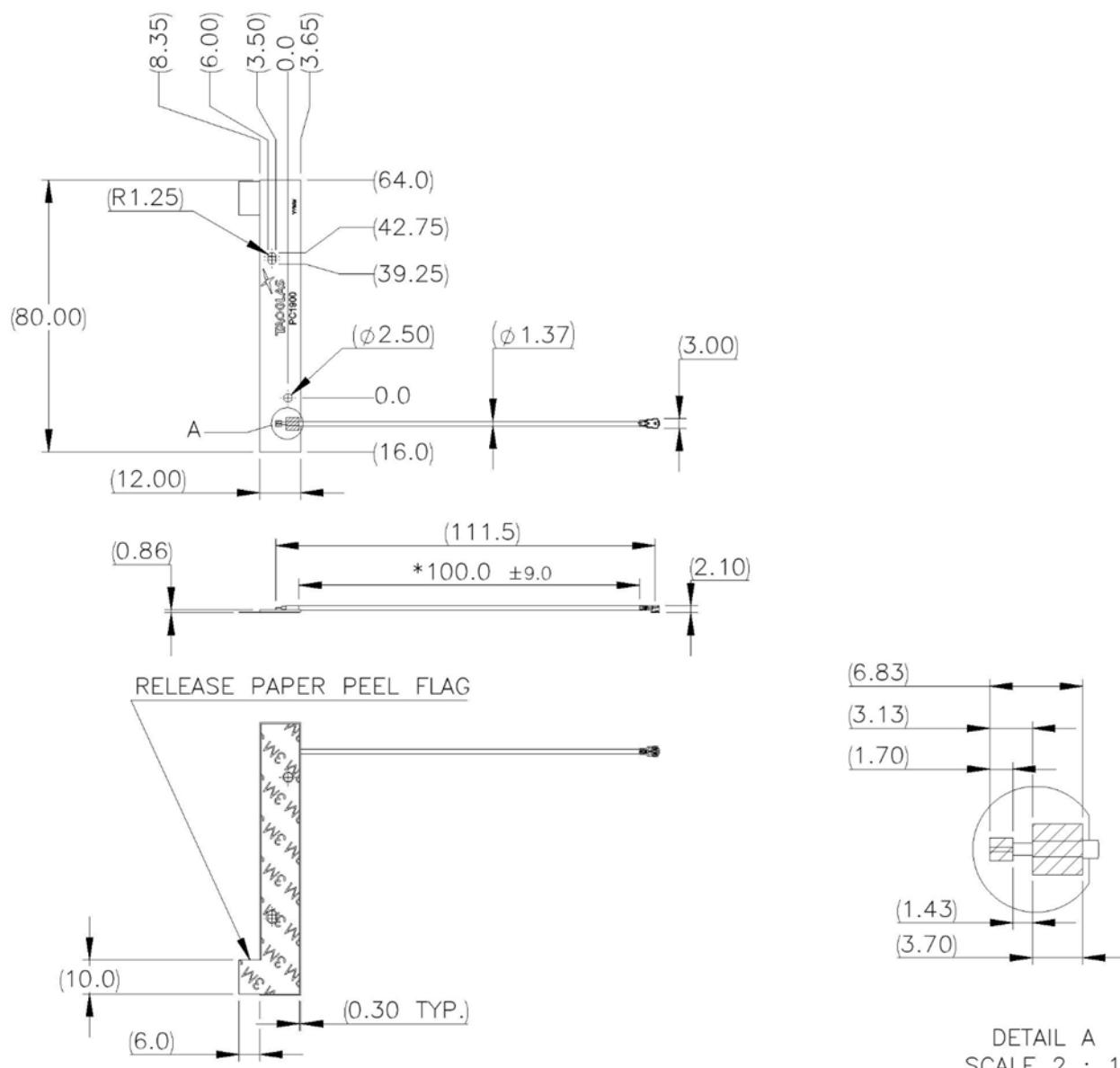
## 2. Specification

Electrical								
Band	Frequency (MHz)	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
978 MHz	973-983	59.3	-2.27	1.39	50 Ω	Linear	Omni directional	10W
1090 MHz	1085-1095	63.7	-1.96	1.64				

Mechanical	
Dimensions	80mm x 12mm x 0.86mm
Weight	2g
Material	FR4 (Composite)
Connector	IPEX MHF I (U.FL COMP)
Cable	100mm of 1.37 (Black)
Mount	Adhesive, 3M 9448 HK

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.	PART NUMBER	DESCRIPTION	Material	Color	QTY.
1	PCB.000557	PC1900.07.0100AQ L80mm W12mm	Composite	Black	1
2	ASY.002893	100MM, 1.37MM Black, IPEX MHF I (U.FL Comp.) 1.7-1.43-3.7	N/A	N/A	1
3	PCB.000557	Double-Sided Adhesive	3M 9448HK	White Paper with 3M Logo	1

## 4. Packaging



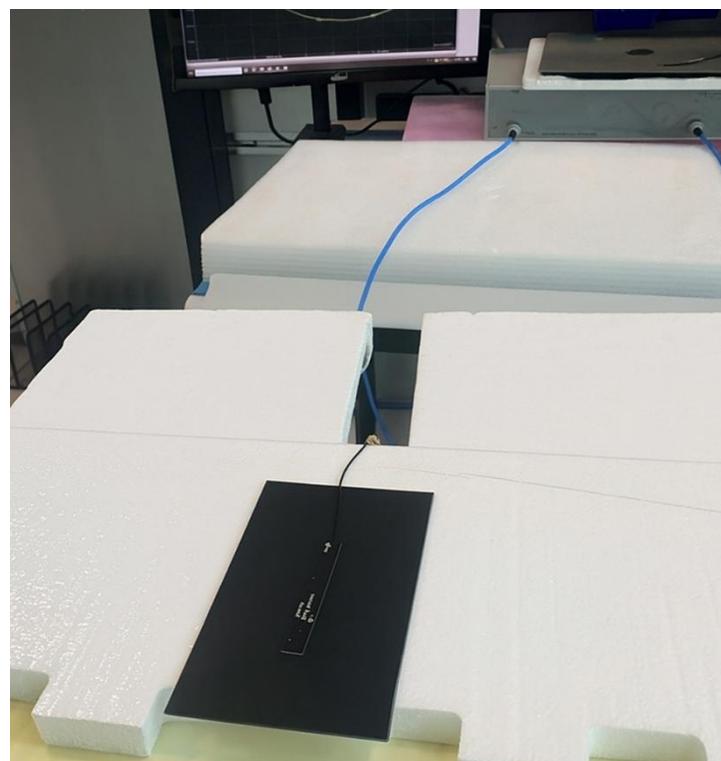
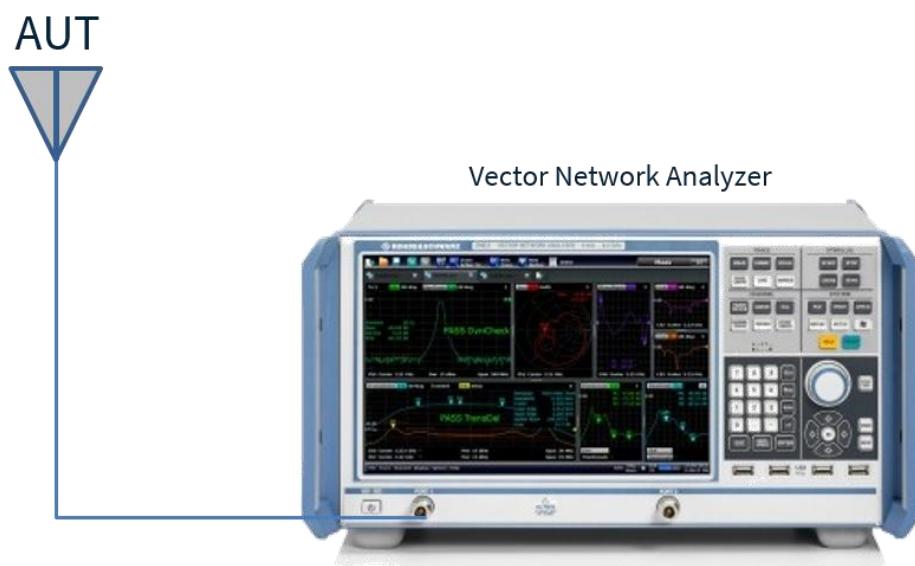
- 50 PCS / PE bag
- PE bag(mm): 200x320 (Ref)
- Weight (g): 110 ±3%
- SPQ Label



- 2000 PCS/ Carton
- Carton(mm):320x250x290
- Weight (kg): 4.93 ±3%
- Carton Label

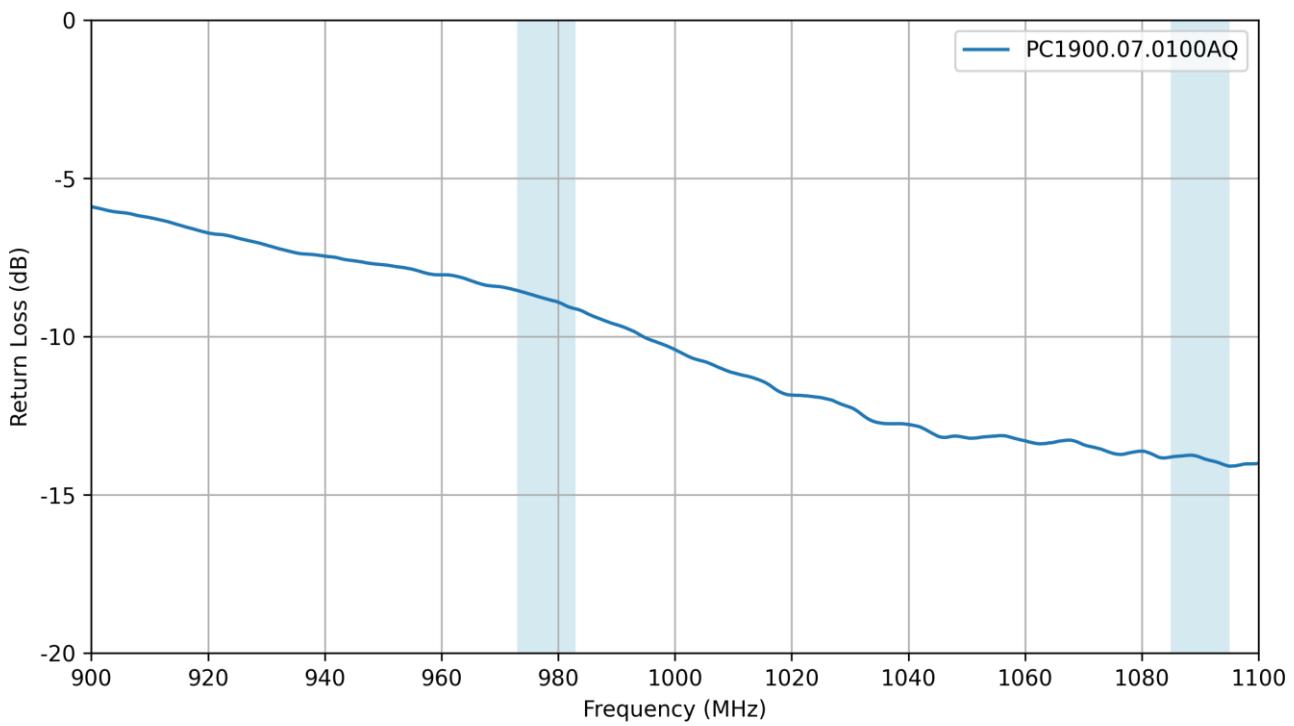
## 5. Antenna Characteristics

### 5.1 Test Setup

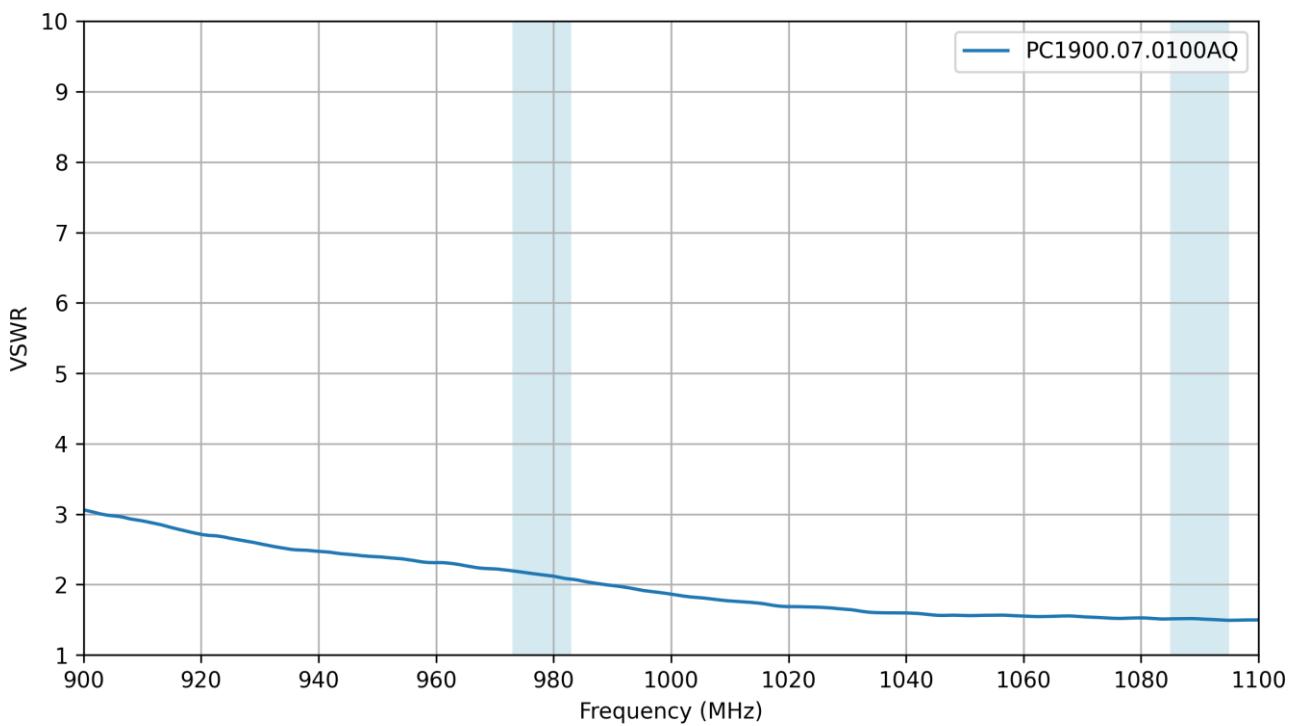


VNA Test Setup on 3mm ABS

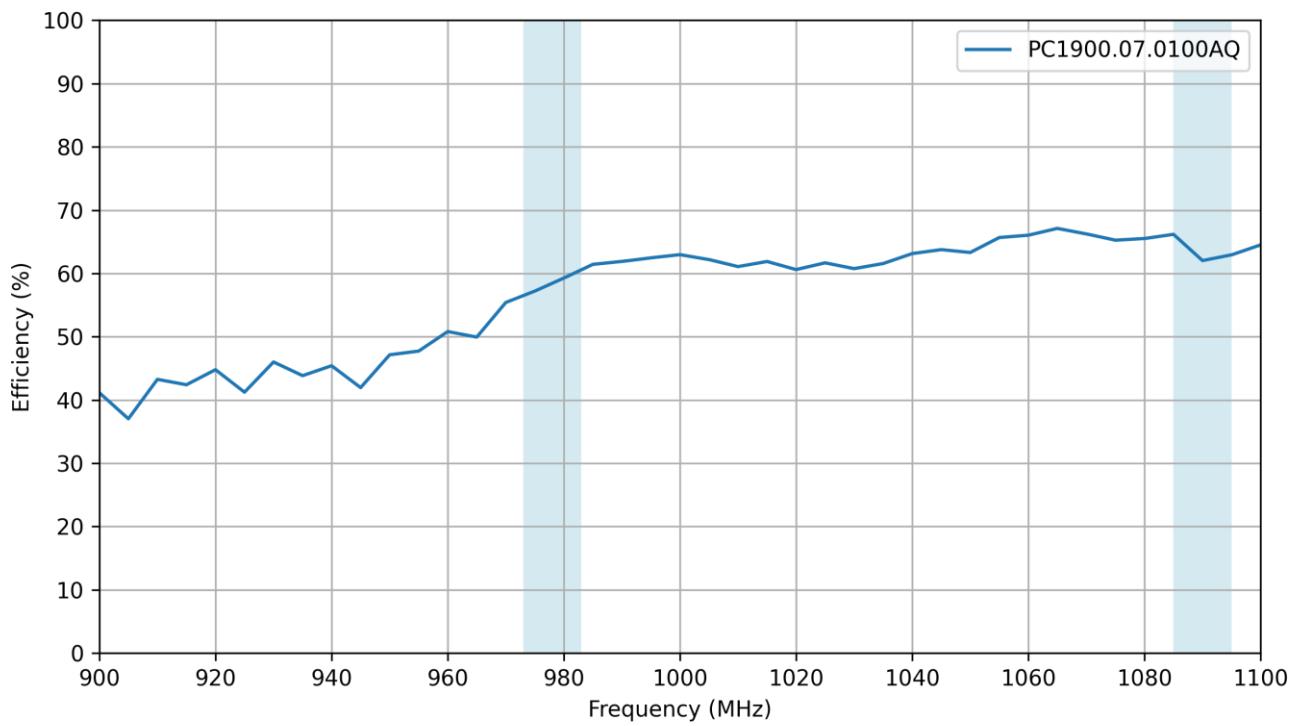
## 5.2 Return Loss



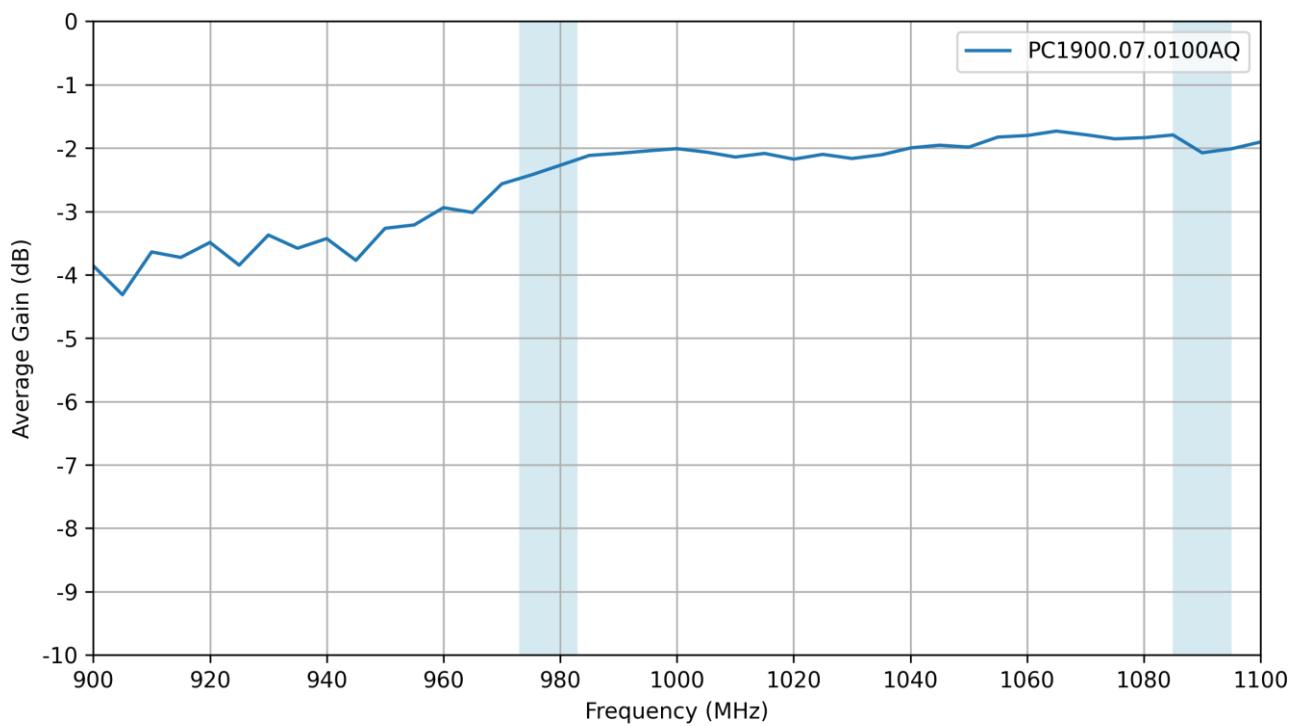
## 5.3 VSWR



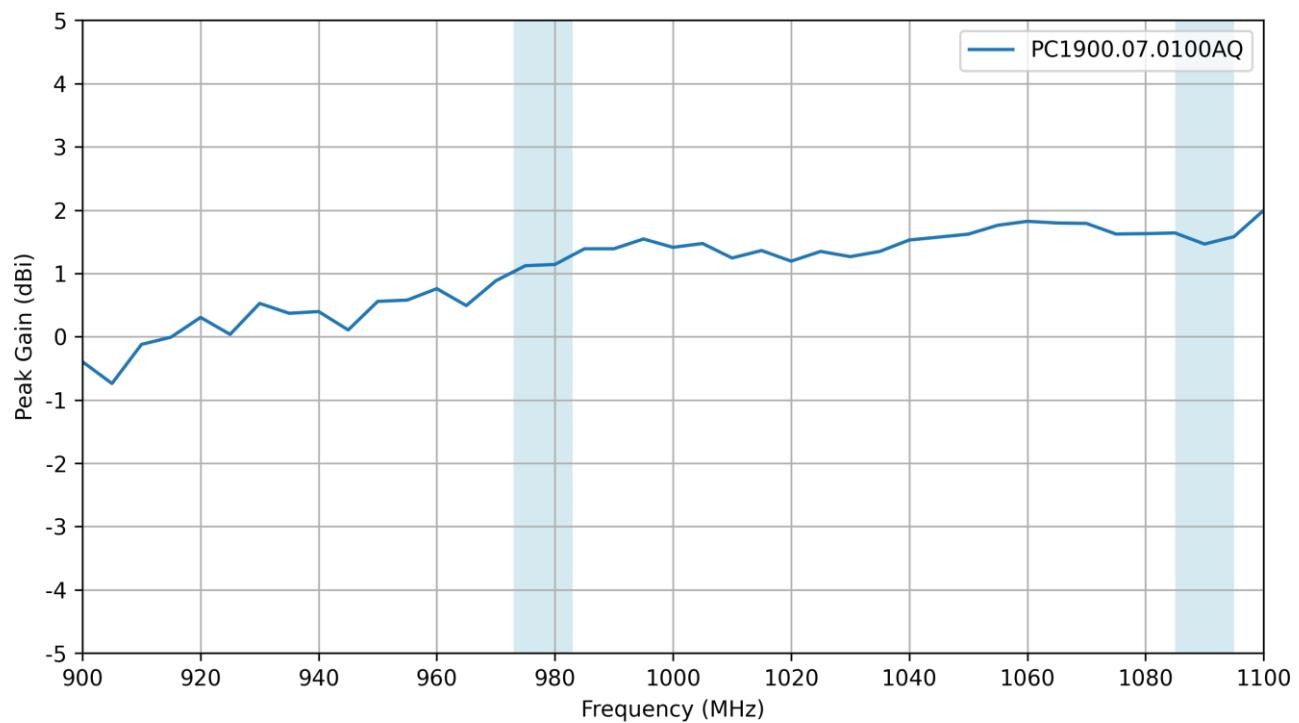
## 5.4 Efficiency



## 5.5 Average Gain

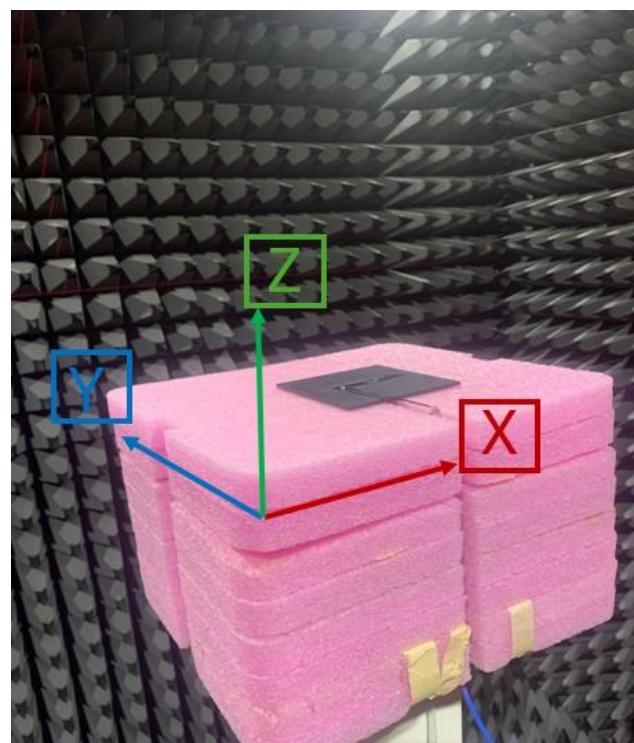
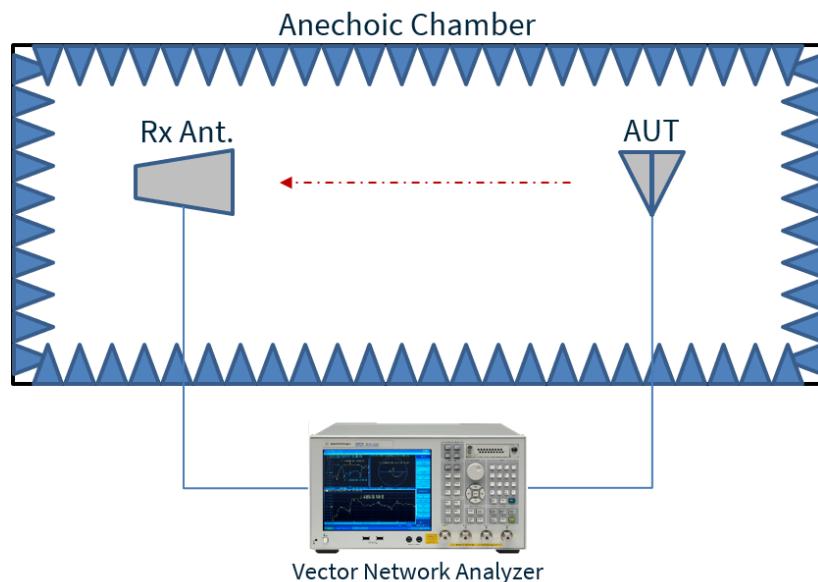


## 5.6 Peak Gain



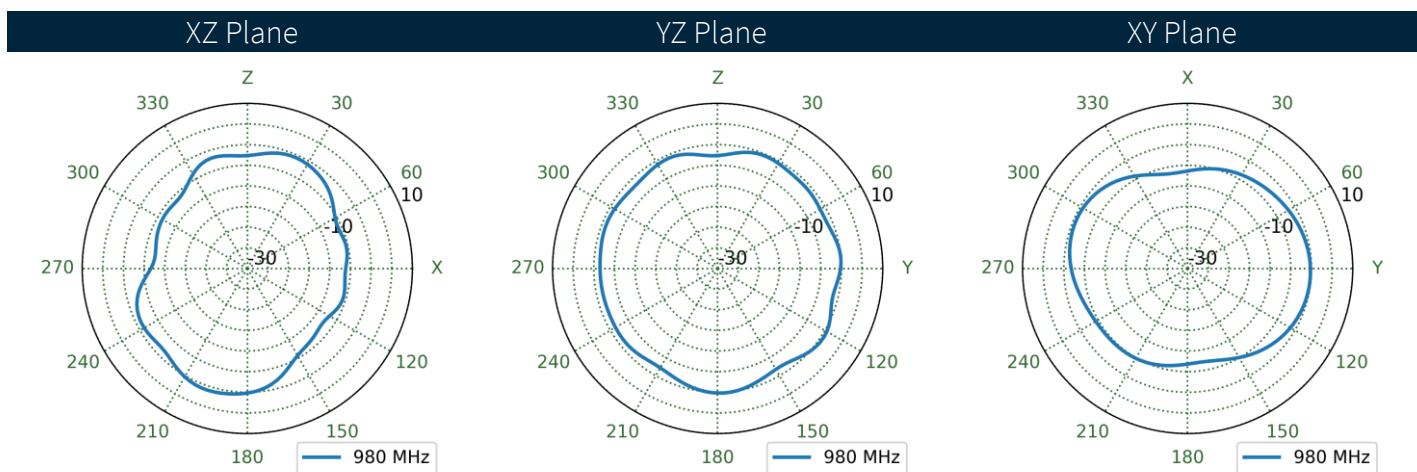
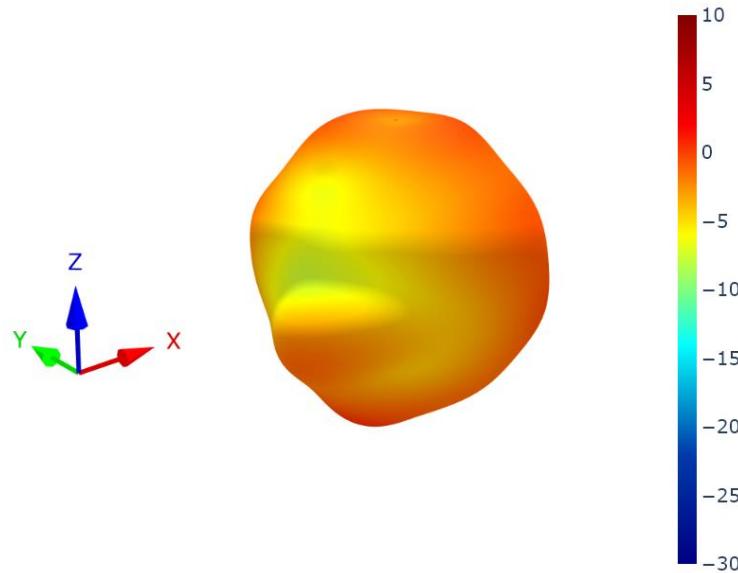
## 6. Radiation Patterns

### 6.1 Test Setup

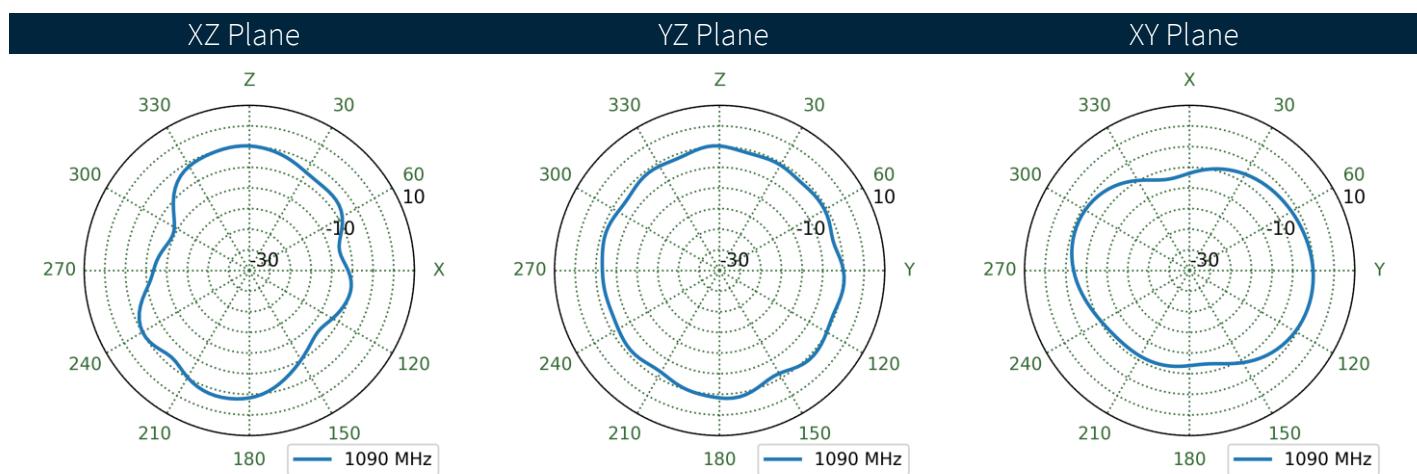
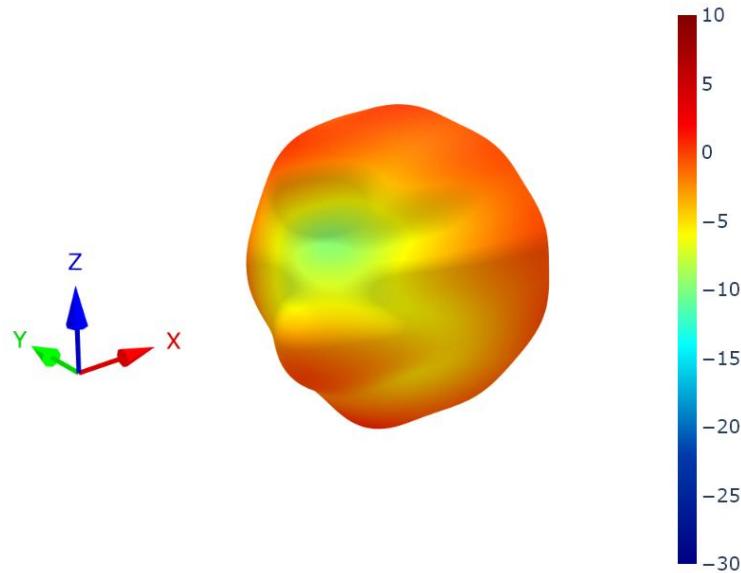


Chamber Test Setup on 3mm ABS

## 6.2 Patterns at 980 MHz



## 6.3 Patterns at 1090 MHz



## Changelog for the datasheet

**SPE-25-8-255 - PC1900.07.0100AQ****Revision: A (Original First Release)**

Date:	2025-09-17
Notes:	Initial Release
Author:	Gary West

**Previous Revisions**




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