

Antenna

YPCP003AA Datasheet

Antenna Services

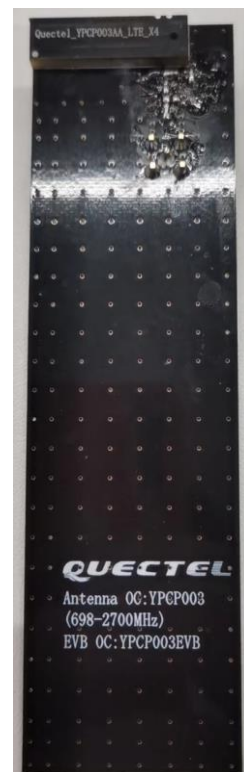
Version: 1.0

OC (Antenna Only): **YPCP003AA**

OC (Antenna + EVB): **YPCP003AA EVB**

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About the Document

Revision History

Version	Date	Author	Note
-	2023-01-04	Andy YAN Lance SUN	Creation of the document
1.0	2023-01-04	Andy YAN Lance SUN	First official release

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1 Product Description

This Quectel embedded 4G SMD antenna covers main 4G LTE bands and is compatible with 3G/2G/LPWA bands. Featuring high efficiency and gain, it is an ideal antenna for a smooth and stable connection with high-efficiency data transmission even under the influence of the device's internal structure. Ground plane dependent, it's designed to be mounted directly to the device host PCB using a conventional PCB reflow process. Supplied tape and reel for high volume pick and place assembly, this SMD antenna can be tuned specifically for the final device environment with a simple PI matching circuit.

2 Product Features

- 700-960MHz&1710-2690MHz 4G PCB Antenna
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	700–960 MHz & 1710-2690 MHz
Input Impedance	50 Ω
VSWR	≤ 8.5
Gain	≤ 3.5 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size (mm)	28 x 8 x 3
Material	FR4
Working Temperature	-40 °C to +85 °C
Mounting Type	Soldering
Color	BLACK

EVB Mechanical Specifications

EVB Size	130 x 36 x 0.8 mm
Material & Color	FR4 & BLACK
Connector Type	SMA Female
Weight	Typ: 12.6g
Working Temperature	-40 °C to +85 °C
Mounting Type	Screw

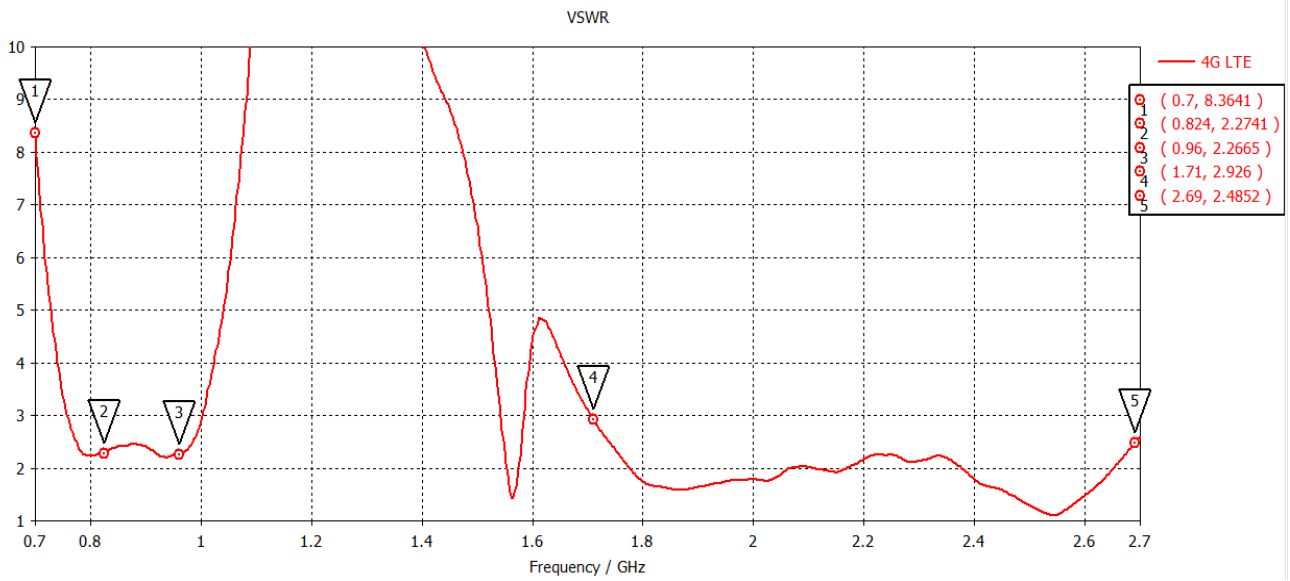
4 Overall Performance

4.1. Test Environment

- KEYSIGHT ENA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 600 MHz – 8.5 GHz

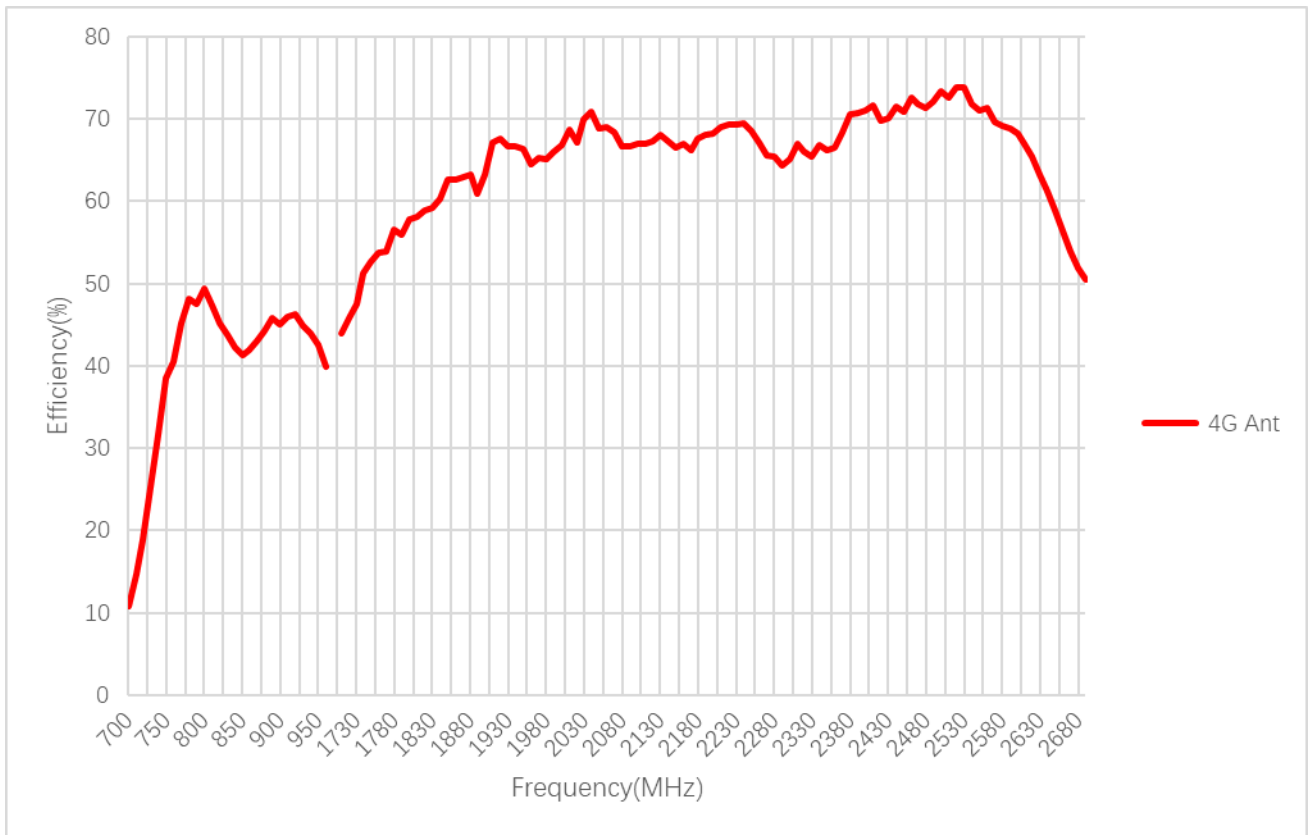


4.2. VSWR



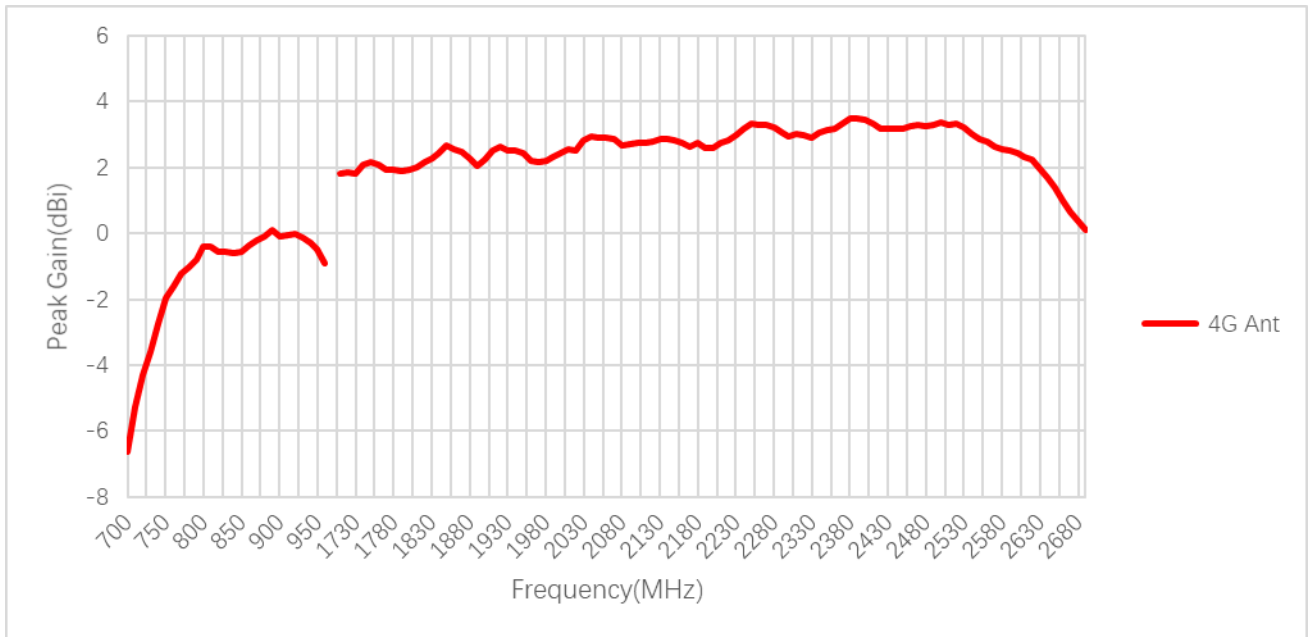
Frequency (MHz)	700	824	960	1710	2690
VSWR	8.36	2.27	2.26	2.92	2.48

4.3. Efficiency



Frequency (MHz)	700	824	960	1710	2690
Efficiency (%)	10.7	45.2	39.9	43.9	50.5

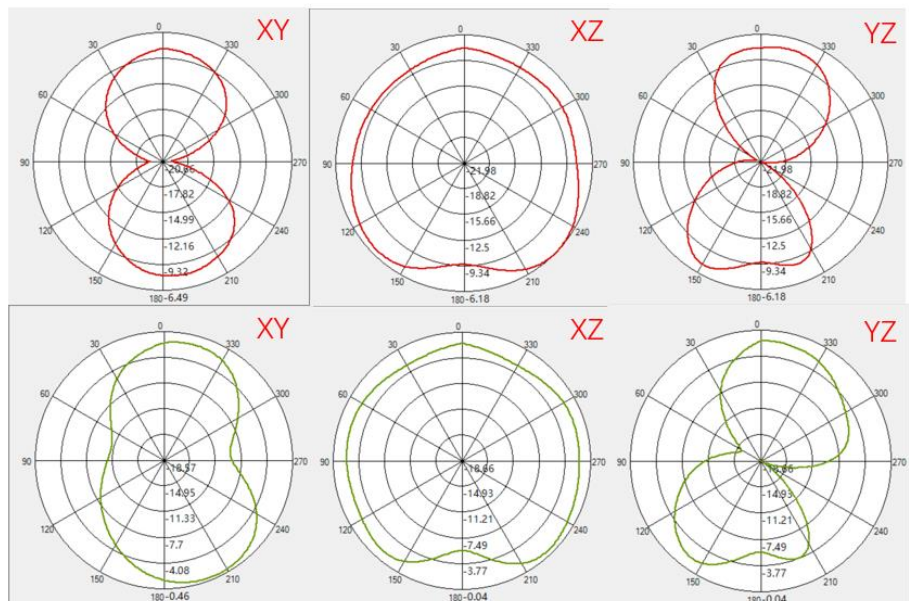
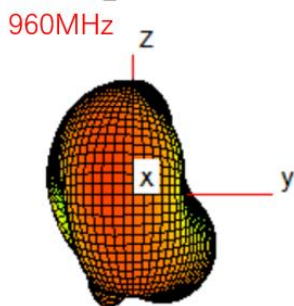
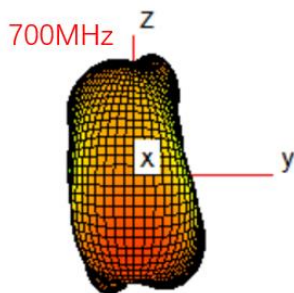
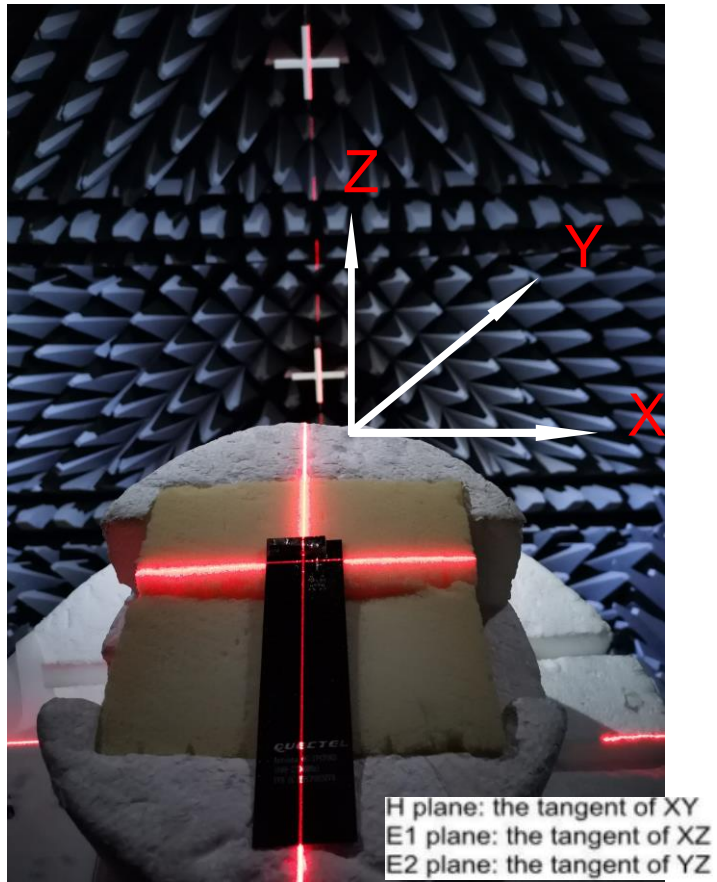
4.4. Gain

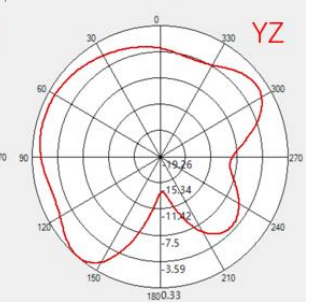
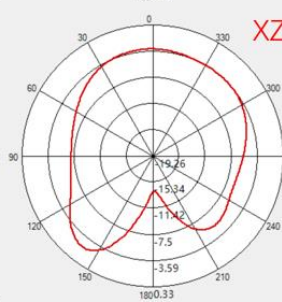
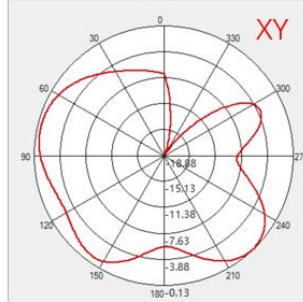
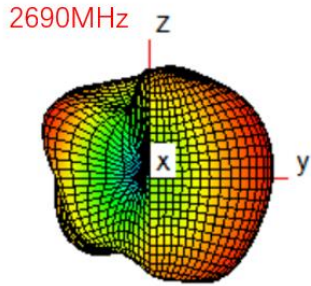
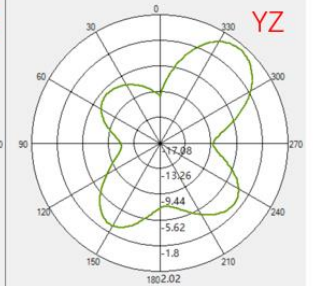
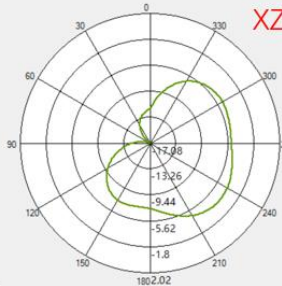
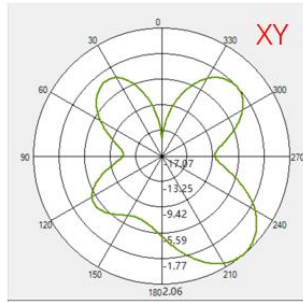
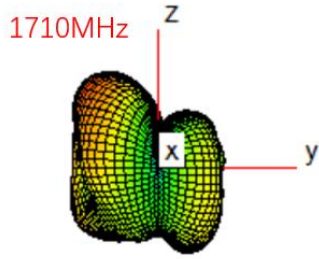


Frequency (MHz)	700	824	960	1710	2690
Gain (dBi)	-6.6	-0.5	-0.9	1.8	0.1

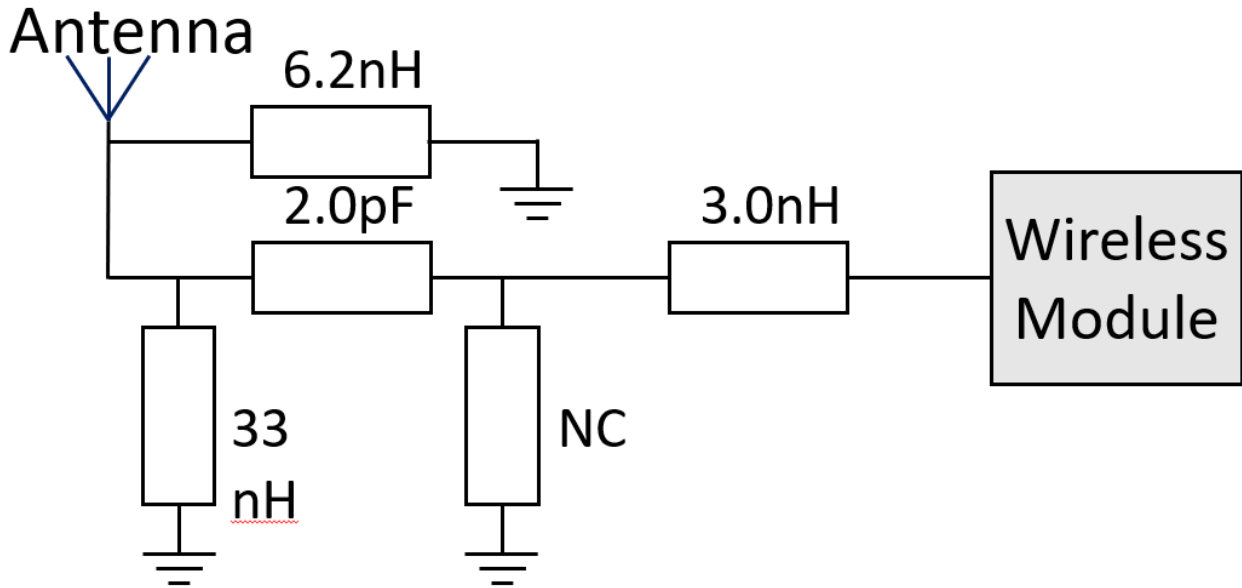
4.5. Radiation Pattern

- Test condition: assembled on EVB

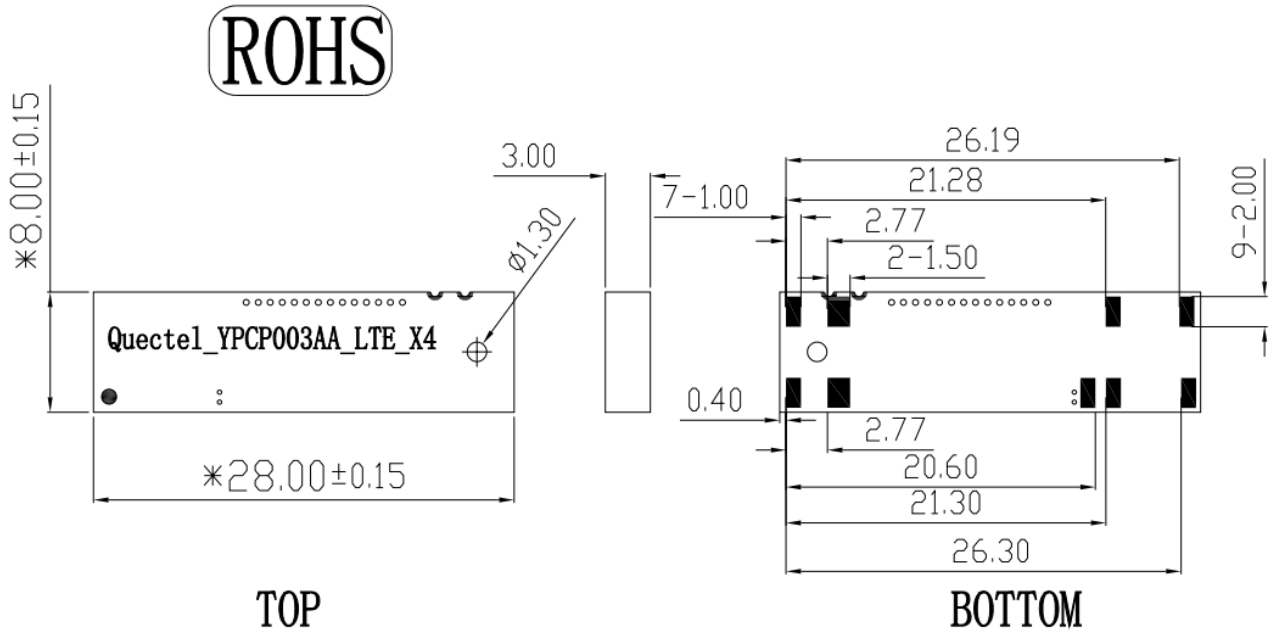




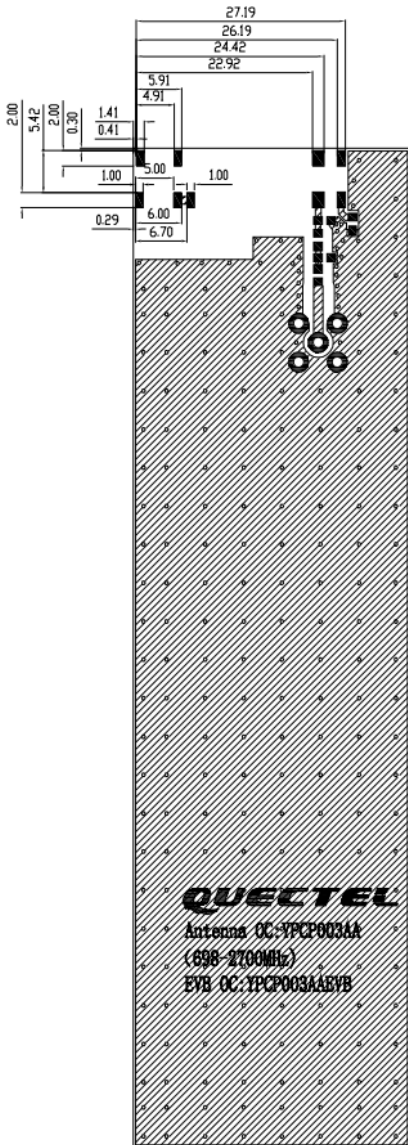
4.6. Matching Circuit (A π -type matching circuit)



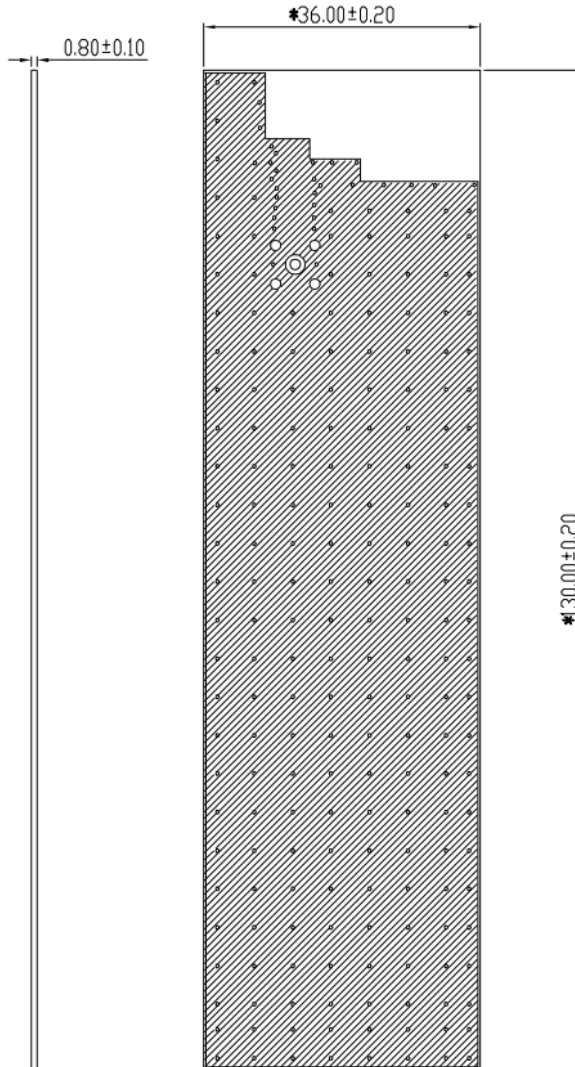
5 Product Size



ROHS

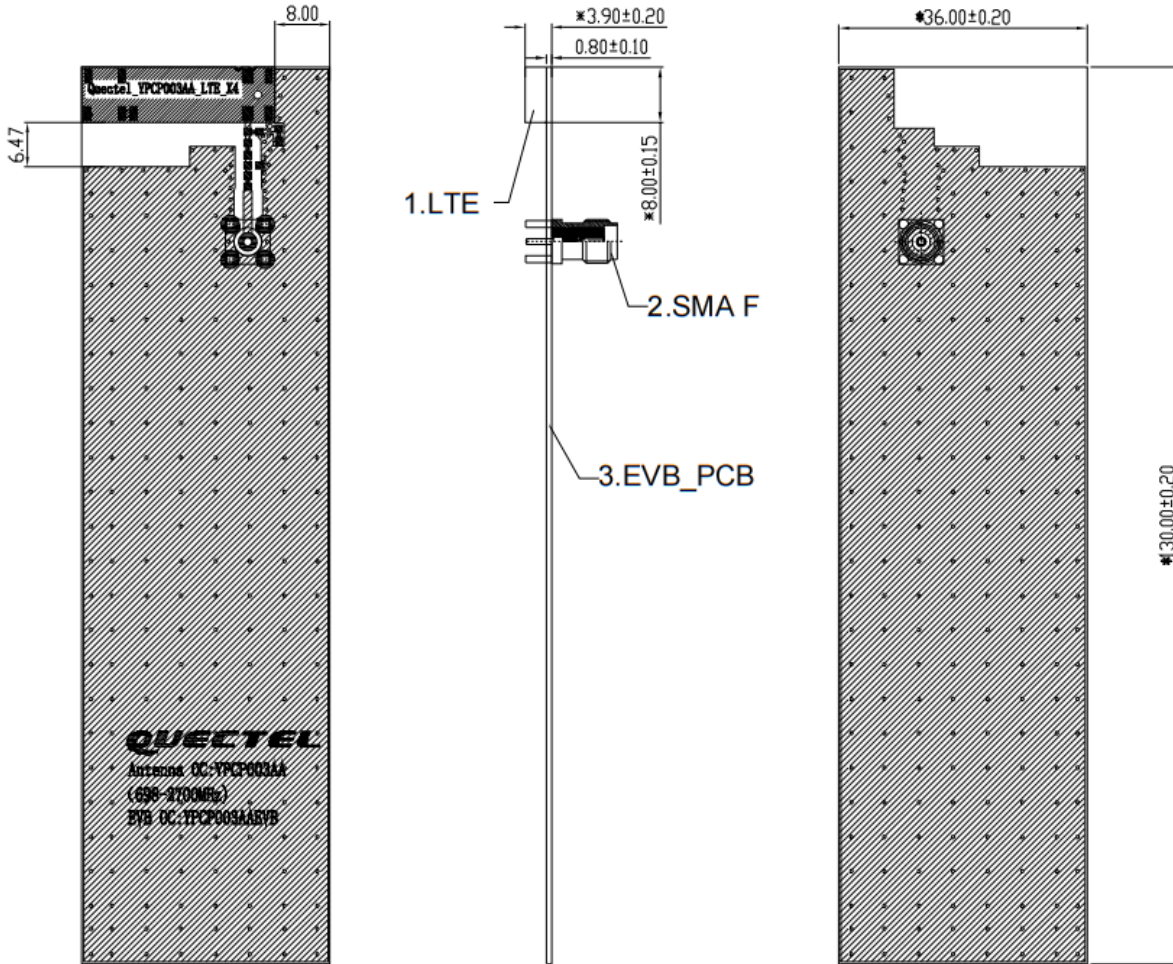


TOP



BOTTOM

ROHS



TOP

BOTTOM