Antenna Assessment Report

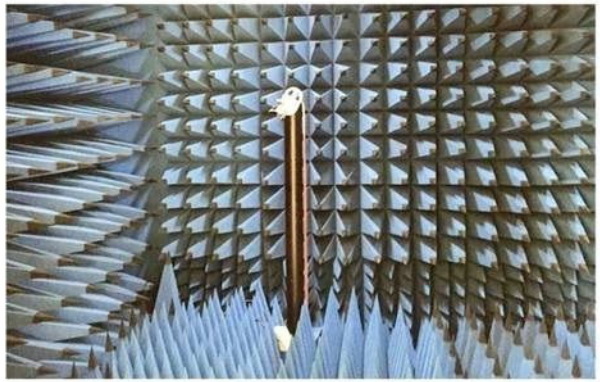
HD2156

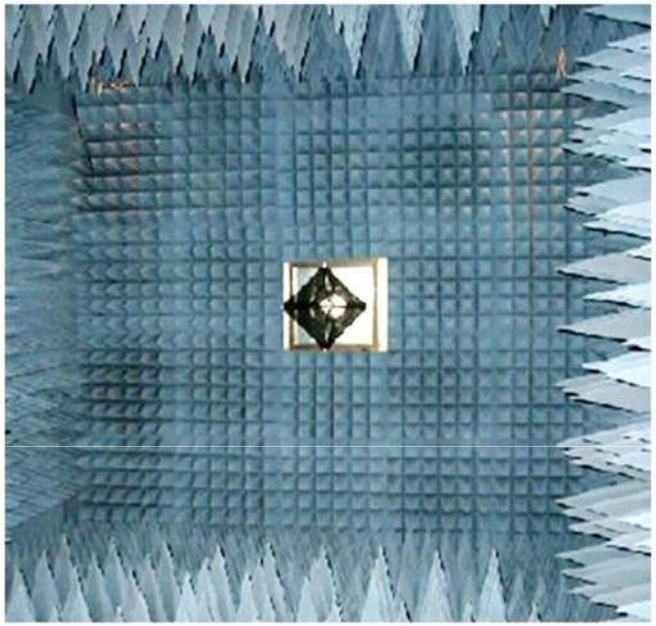
Report Date: 2022.02.18
Report Version: 1.0
Prepared by: Tower
Approved by:

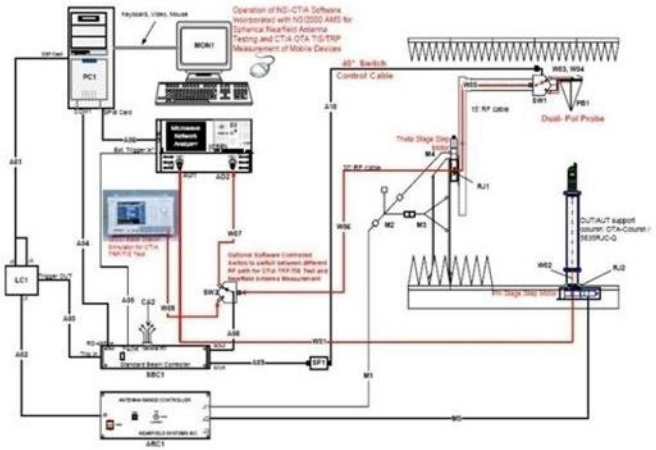
Contents

1. Test Equipment
2. DUT Picture
3. Performance
   3.1. S11 Parameter
   3.2. Gain & Efficiency
   3.3. 2.4GHz Antenna Pattern
   3.4. 5.8GHz Antenna Pattern
4. Mainboard Modification Suggestion

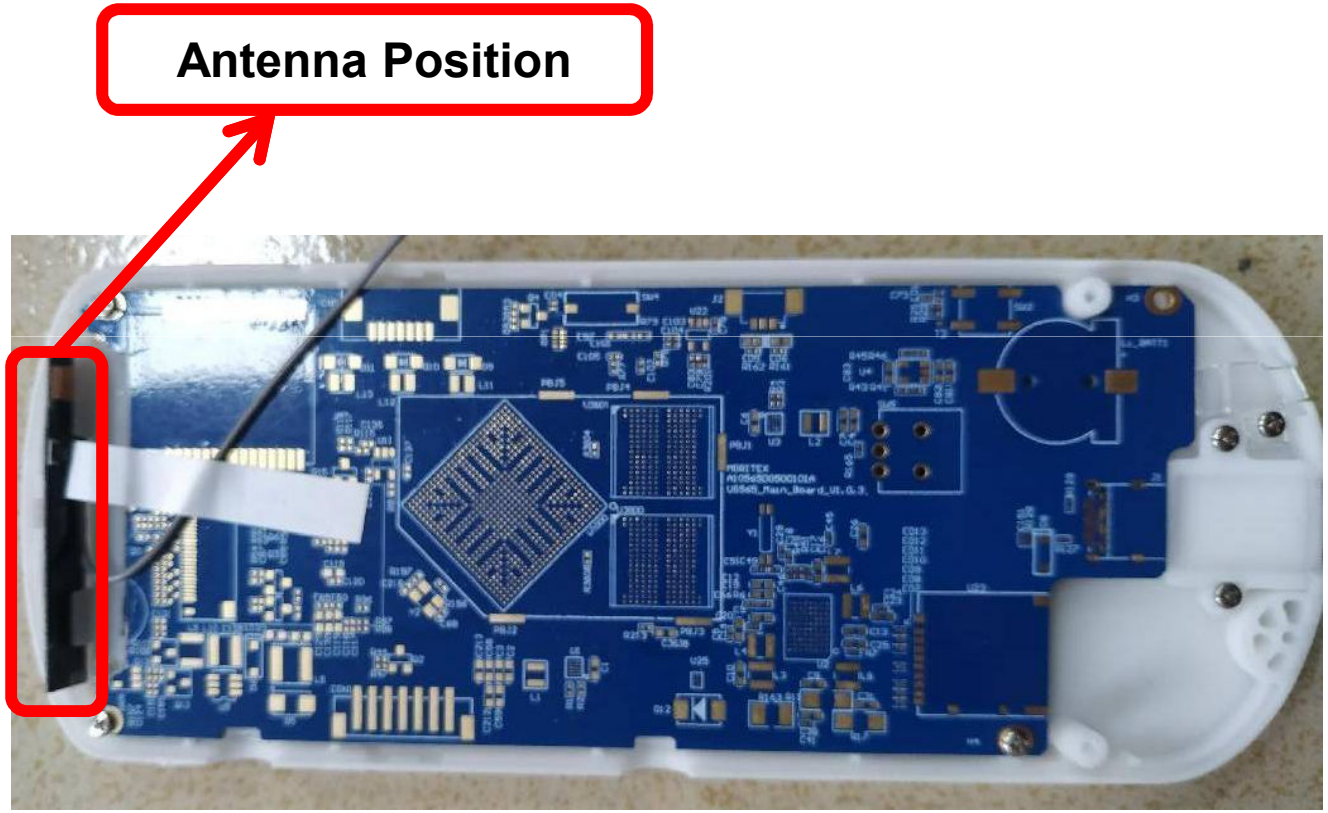
1. Test Equipment





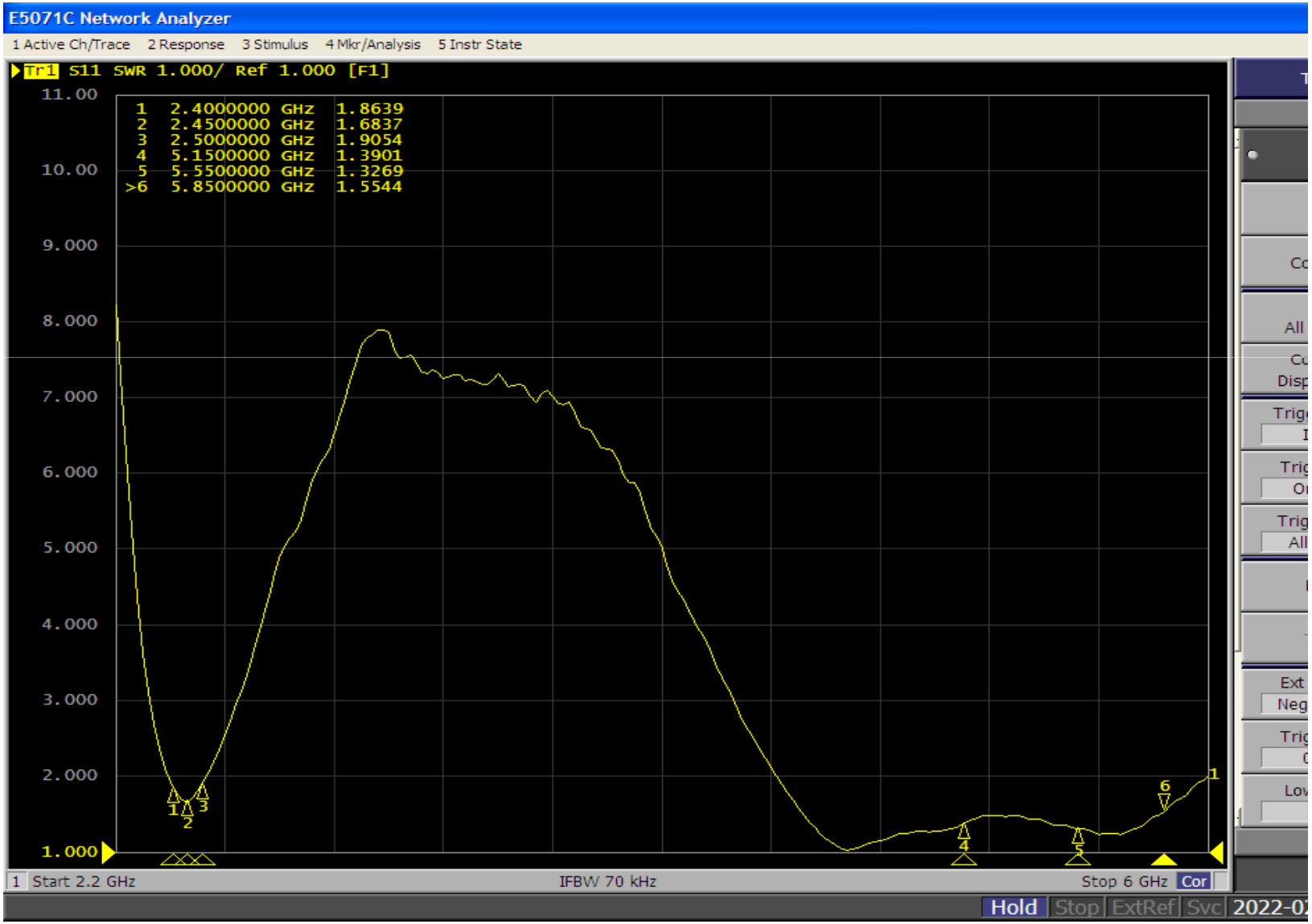


2. DUT Picture



3. Performance

3.1. S11 Parameter



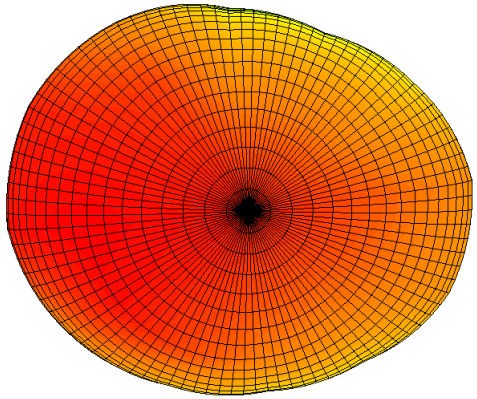
3.2. Gain & Efficiency

Frequency (MHz)	2400	2450	2500
Peak Gain (dBi)	2.69	2.85	2.42
Efficiency (%)	60.3	67.92	61.24

Frequency (MHz)	5150	5550	5850
Peak Gain (dBi)	3.64	4.08	3.3
Efficiency (%)	72.95	73.86	68.35

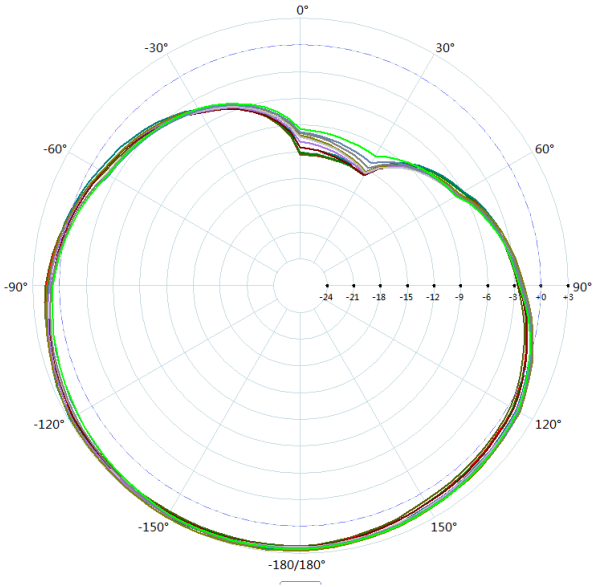
3.2. 2.4GHz Antenna Pattern

3D

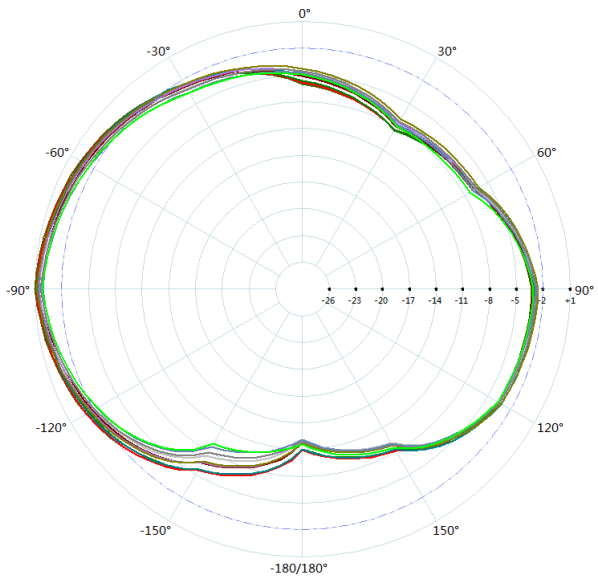


2D

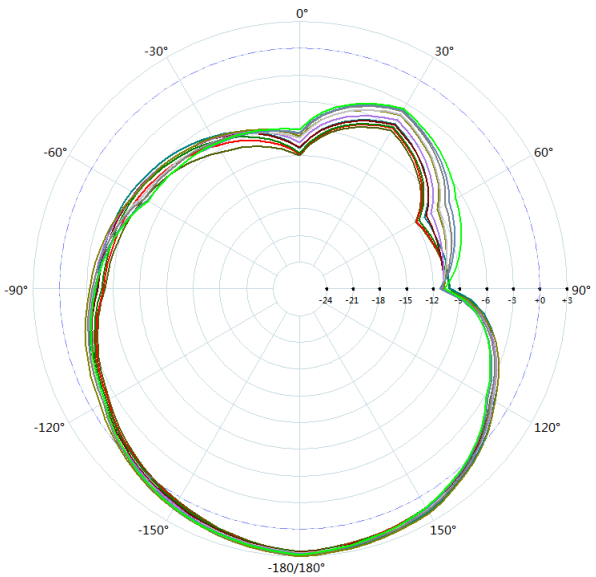
XY



XZ

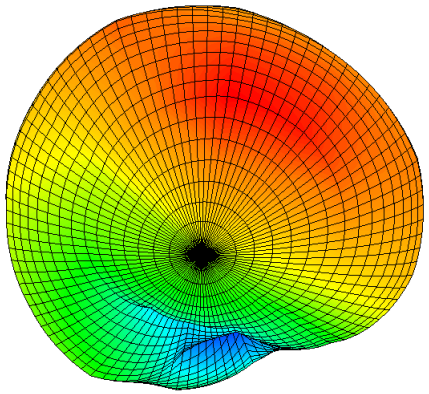


YZ



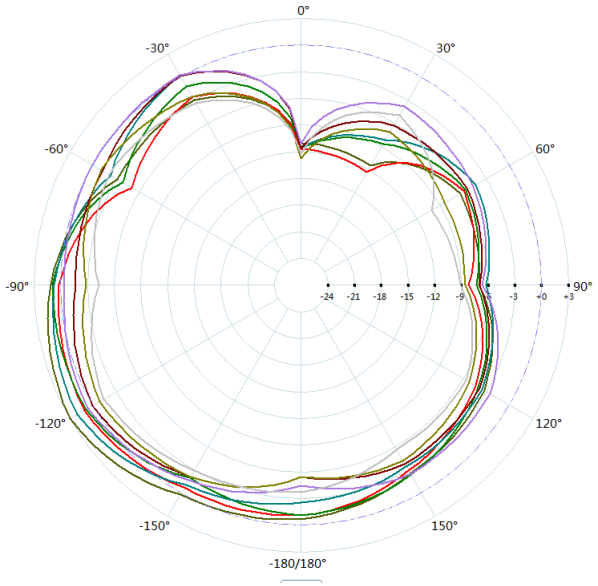
3.2. 5.8GHz Antenna Pattern

3D

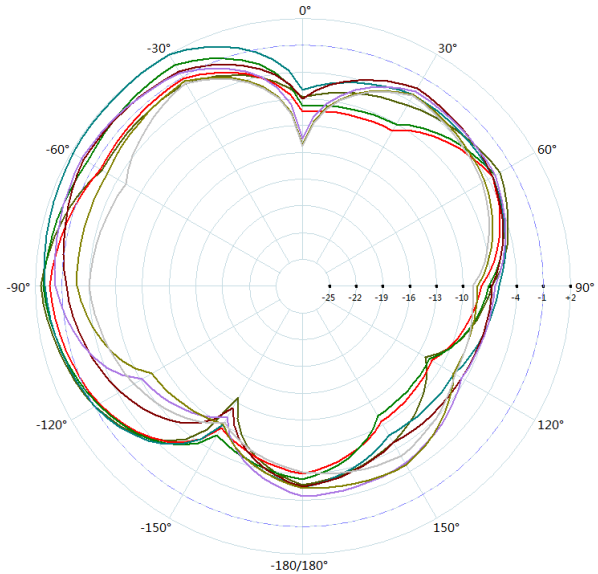


2D

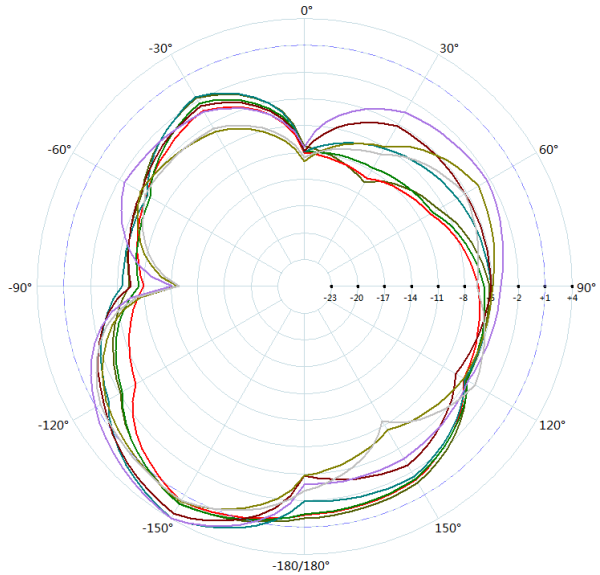
XY



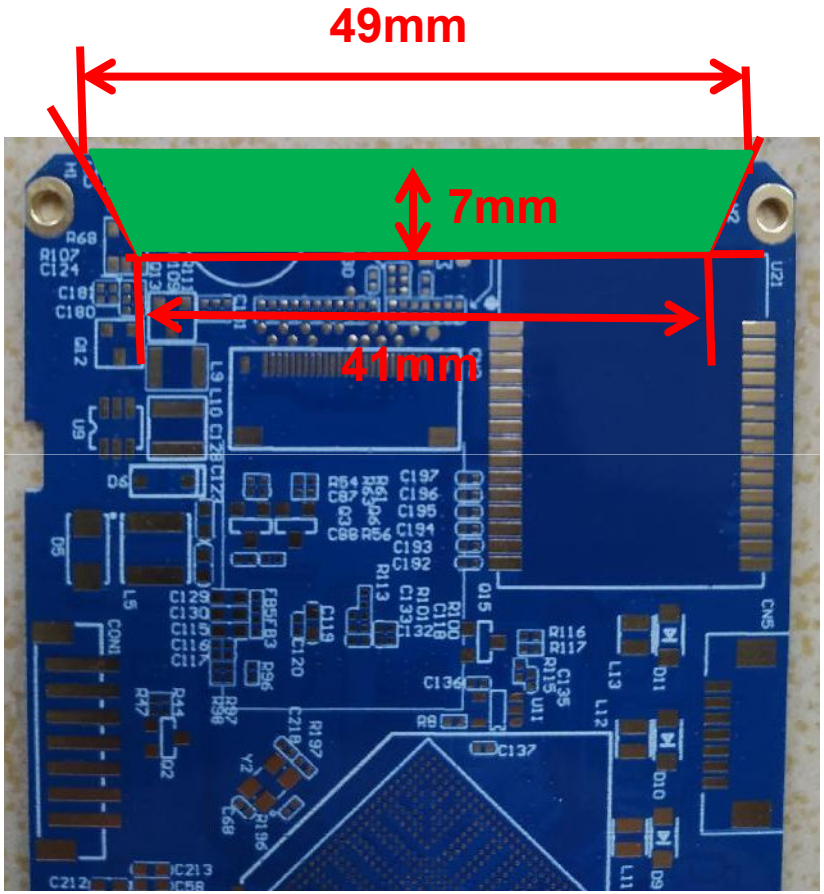
XZ



YZ



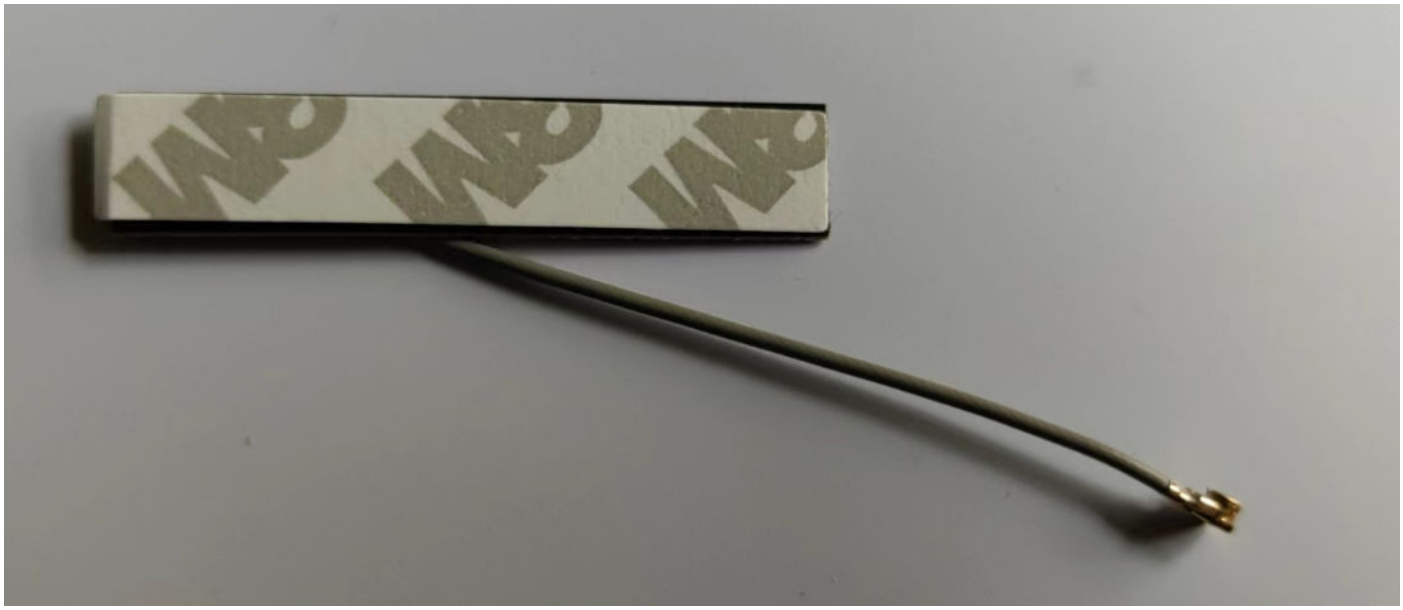
4. Mainboard Modification Suggestion



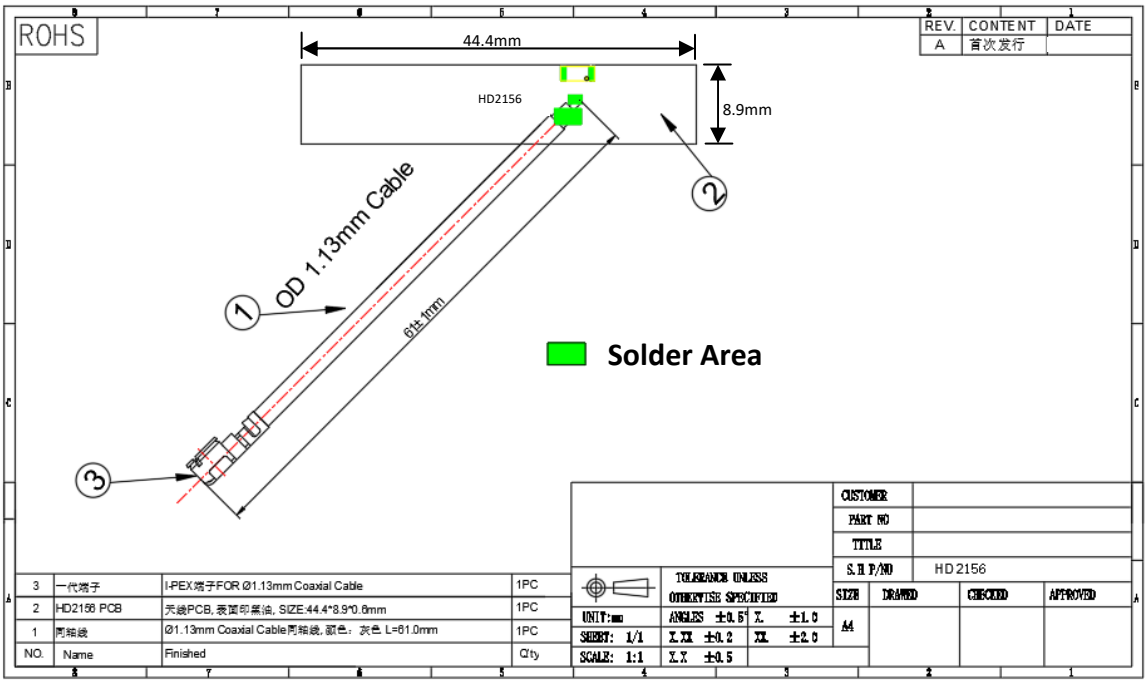
1. Pictures

Top View

Bottom View



2. Dimension


ROHS
REV. CONTENT DATE
A 首次发行
44.4mm
8.9mm
HD2156
OD 1.13mm Cable
61±1mm
Solder Area
CUSTOMER
PART NO
TITLE
S.H P/NO HD2156
SIZE DRAWED CHECKED APPROVED
A4
TOLERANCE UNLESS OTHERWISE SPECIFIED
UNIT: mm
ANGLES ±0.5°
X ±1.0
SHEET: 1/1
X.XX ±0.2
XX ±2.0
SCALE: 1:1
X.X ±0.5
3 一代端子 I-PEX端子FOR Ø1.13mm Coaxial Cable 1PC
2 HD2156 PCB 天线PCB, 表面印黑油, SIZE:44.4*8.9*0.8mm 1PC
1 同轴线 Ø1.13mm Coaxial Cable同轴线, 颜色：灰色 L=61.0mm 1PC
NO. Name Finished Q'ty

3. Specification Description

Electrical Properties	
Frequency	2.400～2.500 GHz 5.150～5.850 GHz
Impedance	50 ohm
Return Loss	< -10 dB
VSWR	< 2.0
GAIN	< 3 dBi @ 2.4G band < 4.5 dBi @ 5G band
Physical Properties	
Antenna Material	Antenna ingredient: PCB+Ceramic
Cable Type	Φ1.13 cable
Working Temp.	-40˚C ~ +80 ˚C
Cable Color	Gray