



S21WFI0072A

S21WFI0073A

**CH8674-033(G20) ANTENNASPEC FOR
CERTIFICATION**

Date: Nov.-30-2023

Outline

- 1. Antenna Vendor \ Part Number**
- 2. Measurement Description**
- 3. Antenna Peak Gain**
- 4. Antenna 2D Radiation Pattern**
- 5. Vendor Profile**



Antenna Vendor \ Part Number

	Vendor	Part Number
ANT 1	Wanshih	S21WFI0072A
ANT 0	Wanshih	S21WFI0073A



Test Method Reference Basis (Measurement setup info. & Test method , Test Procedure)

- 1、 Measured according to the method defined by CTIA ◦

Test site information(like Chamber) 、 Measuring instrument 、 Instrument Calibration Data

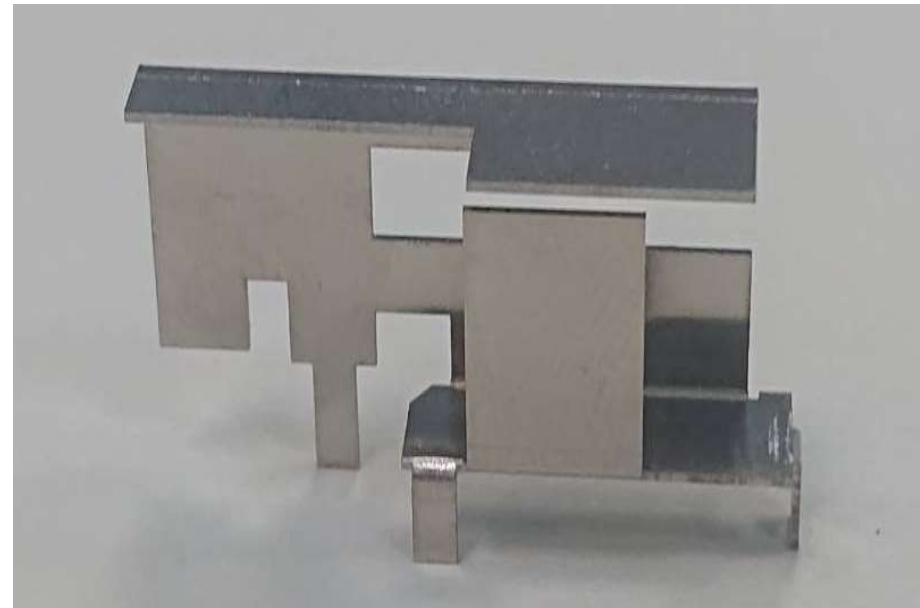
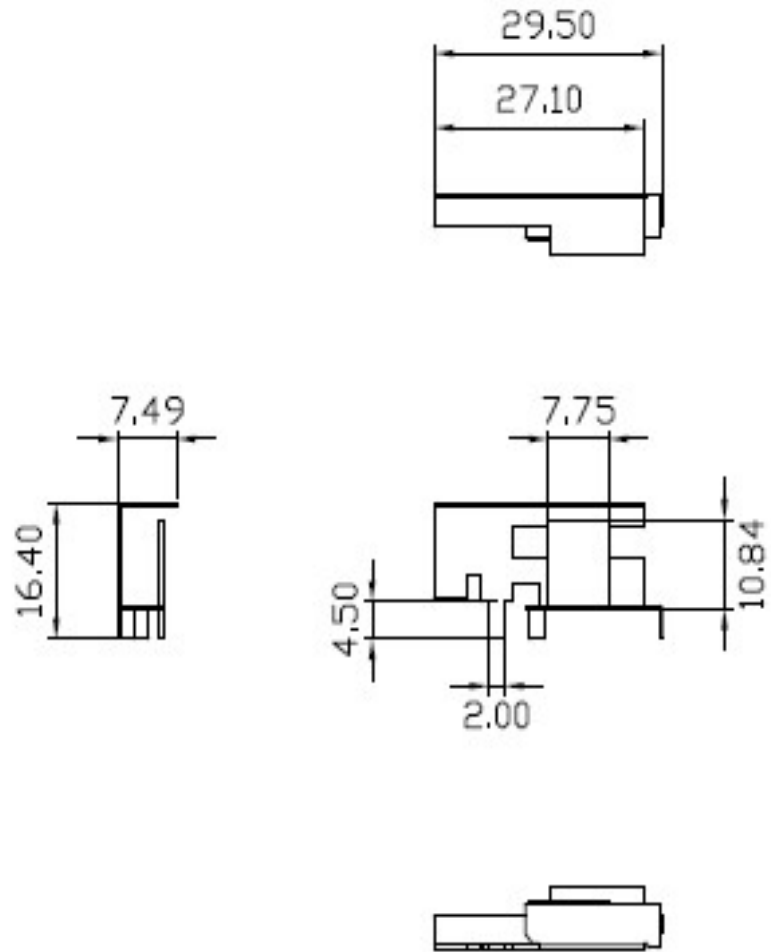
- 1、 OTA Chamber: OTA 800;8m(L)x4m(W)x4m(H) ◦
- 2、 Network Analyzer : Agilent E5071C , Network instrument calibration report as attachment J-033 ◦



Peak Calculation formula & Process

- 1、 peak Gain The value is actually measured in the OTA chamber , non-calculated ◦

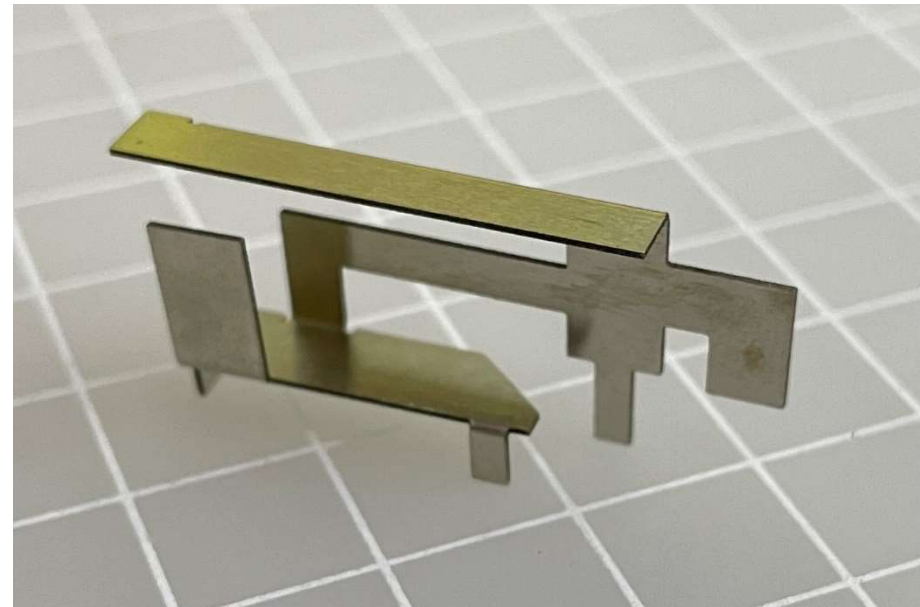
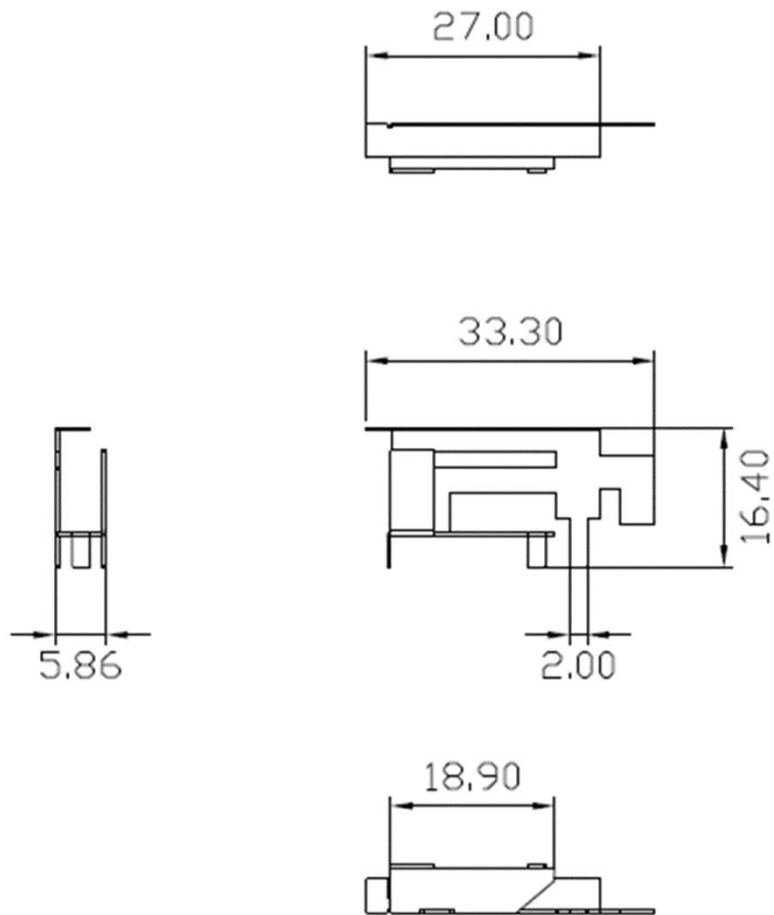
ANT 1



ANT. Type

PIFA

ANT 0



ANT. Type

PIFA


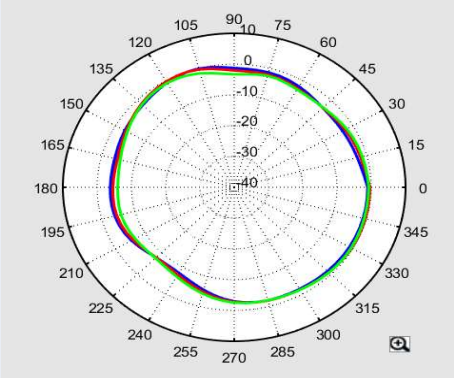
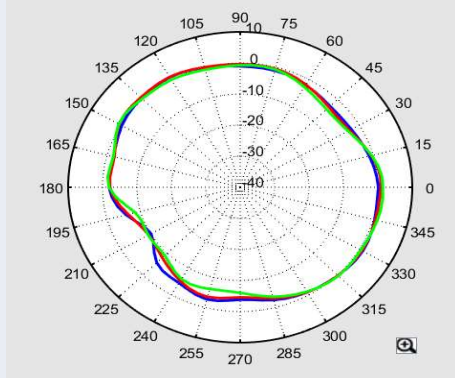
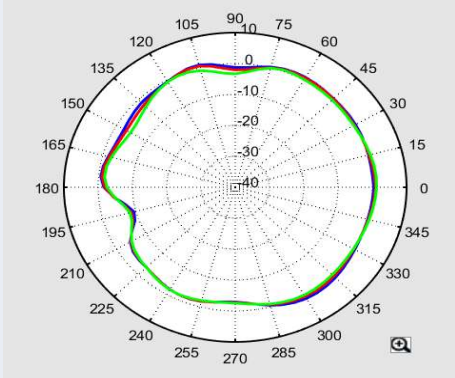
Antenna Peak Gain

	2400 - 2500 MHz		5150 - 5850 MHz	
	Value	Angle	Value	Angle
ANT 1	2.00 dBi	Theta : 0 Phi : 15	2.45 dBi	Theta : 135 Phi : 45
ANT 0	2.03 dBi	Theta : 15 Phi : 285	3.13 dBi	Theta : 0 Phi : 0




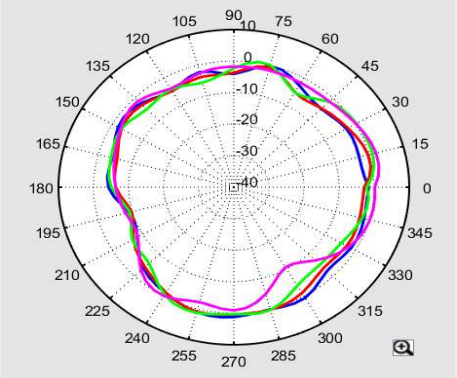
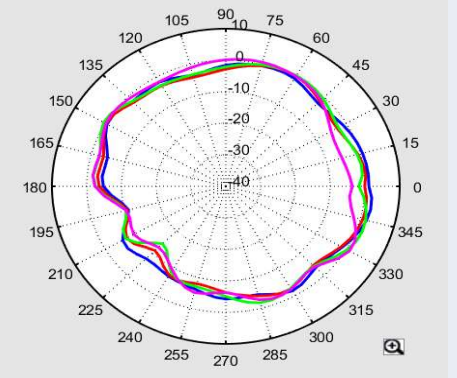
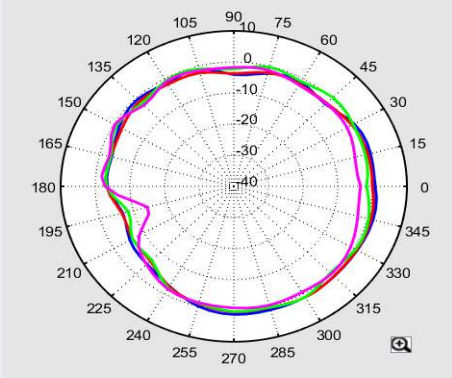
ANT 1

Antenna 2D Radiation Pattern

Frequency	2400 - 2500 MHz		
Plane	XY	XZ	YZ
 <p data-bbox="349 759 741 801">Radiation Pattern</p>	 <p>The XY plane radiation pattern shows a circular main lobe with a peak gain of 40 dB. The radiation is relatively uniform in the horizontal plane, with minor variations in gain across the 360-degree range.</p>	 <p>The XZ plane radiation pattern shows a main lobe with a peak gain of 40 dB. The radiation is concentrated in the horizontal plane (around 180 degrees) and shows a slight dip in gain at the top and bottom (0 and 360 degrees).</p>	 <p>The YZ plane radiation pattern shows a main lobe with a peak gain of 40 dB. The radiation is concentrated in the horizontal plane (around 180 degrees) and shows a slight dip in gain at the top and bottom (0 and 360 degrees).</p>


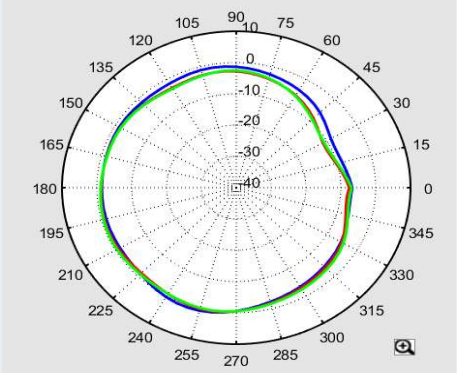
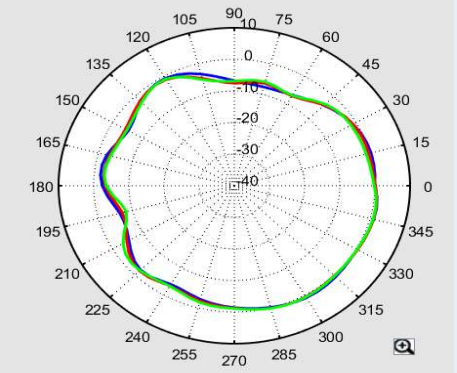
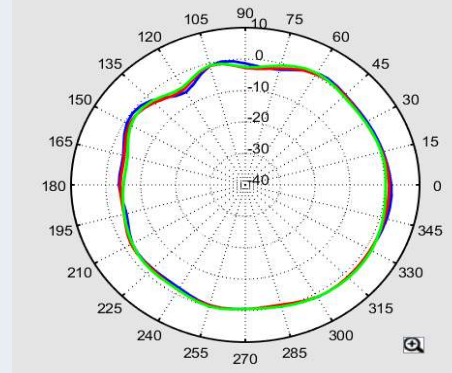
ANT 1

Antenna 2D Radiation Pattern

Frequency	5150 - 5850 MHz		
Plane	XY	XZ	YZ
 <p data-bbox="349 759 741 801">Radiation Pattern</p>	 <p data-bbox="779 612 1234 991">A polar plot showing the radiation pattern in the XY plane. The plot features a circular grid with radial lines representing gain in dB (0, -10, -20, -30, -40) and concentric circles representing angles in degrees (0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150, 165, 180, 195, 210, 225, 240, 255, 270, 285, 300, 315, 330, 345). Multiple colored lines (red, green, blue, magenta) represent the radiation pattern at different frequencies, showing a broad, roughly circular main lobe with a slight dip at 180 degrees.</p>	 <p data-bbox="1272 612 1727 991">A polar plot showing the radiation pattern in the XZ plane. The grid and axes are identical to the XY plot. The radiation pattern lines show a main lobe that is more directional than in the XY plane, with a significant null or deep dip at 180 degrees.</p>	 <p data-bbox="1749 612 2204 991">A polar plot showing the radiation pattern in the YZ plane. The grid and axes are identical to the other plots. The radiation pattern lines show a main lobe with a very deep and sharp null at 180 degrees, indicating high directivity in that plane.</p>


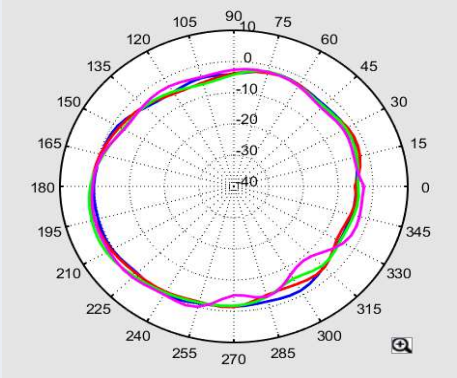
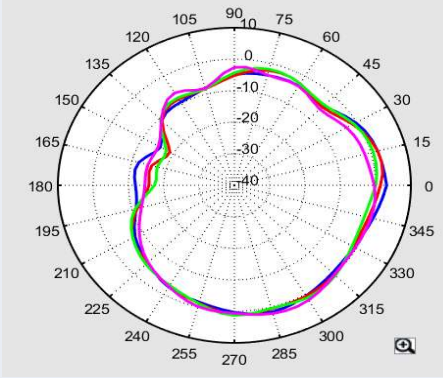
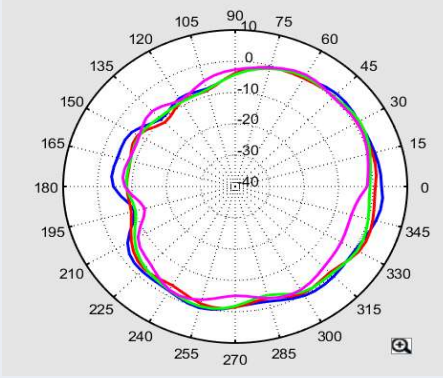
ANT 0

Antenna 2D Radiation Pattern

Frequency	2400 - 2500 MHz		
Plane	XY	XZ	YZ
 <p data-bbox="349 759 741 801">Radiation Pattern</p>			

ANT 0

Antenna 2D Radiation Pattern

Frequency	5150 - 5850 MHz		
Plane	XY	XZ	YZ
 <p data-bbox="349 759 741 801">Radiation Pattern</p>	 <p data-bbox="779 612 1234 991">A polar plot showing the radiation pattern in the XY plane. The plot features concentric circles representing gain levels from 0 to -40 dB. The angular scale ranges from 0 to 315 degrees in 15-degree increments. Multiple colored lines (red, green, blue, magenta) represent the radiation pattern at different frequencies, showing a main lobe centered at 0 degrees and side lobes.</p>	 <p data-bbox="1279 612 1720 991">A polar plot showing the radiation pattern in the XZ plane. The plot features concentric circles representing gain levels from 0 to -40 dB. The angular scale ranges from 0 to 315 degrees in 15-degree increments. Multiple colored lines (red, green, blue, magenta) represent the radiation pattern at different frequencies, showing a main lobe centered at 0 degrees and side lobes.</p>	 <p data-bbox="1749 612 2190 991">A polar plot showing the radiation pattern in the YZ plane. The plot features concentric circles representing gain levels from 0 to -40 dB. The angular scale ranges from 0 to 315 degrees in 15-degree increments. Multiple colored lines (red, green, blue, magenta) represent the radiation pattern at different frequencies, showing a main lobe centered at 0 degrees and side lobes.</p>

Antenna Vendor Profile

Vendor Name	Adress
WANSHIH ELECTRONIC CO.,LTD.	3-5F 72 Wu Kong 6th Rd., WUGU DIST., NEW TAIPEI INDUSTRIAL PARK, NEW TAIPEI CITY 24891, TAIWAN (R.O.C.)

