AD-510AX

Antenna Approval Sheet

Part Number	R3410A10051
Product Number	AD-510AX
Description	Dipole Antenna,2.27dBi /2.88dBi / 3.52dBi /2.4G/5G/ 6GHz,RP-SMA (M) connector
DOC NO	AS-2208001

Ver. 0.92

Revised History

Version	Purpose	Date	Responsible
0.9	Preliminary DoC	2022/08/18	Christina
0.91	Revised Measurement 5150 data 2.7 to 2.88(Page 8)	2022/12/02	Christina
0.92	Add Antenna photo including antenna length/width with L type scale (Page 9)	2023/02/24	Christina

Preliminary

SparkLAN		Customer
Sales	**PM**	**Approval by**

AD-510AX

Wi-Fi /Wi-Fi 6E Triple Band Dipole antenna

SPECIFICATION

1. Description : WiFi+WiFi 6E Antenna with RP-SMA(M)(Black)
2. Part No. : AD-510AX
3. Antenna Profile : 139.5 mm length (see Drawing)
4. Color : Black
5. Electrical Characteristics

Operating Frequency	: 2.4~2.5 / 5.15~7.125 GHz
Antenna Type	: Dipole
Polarization Type	: Linear
Type of Radiation	: Toroidal
Peak Gain	: 3.52 dBi Typical
Impedance	: 50 Ohm nominal
V.S.W.R.	: 2.0:1 Max

6. Mechanical Characteristics

Swivel	: 90 degrees
Connector	: RP-SMA (M)

7. Raw Material

Coaxial Cable	: RG-178

8. Operating Temperature : -30 ~+80

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AD-510AX

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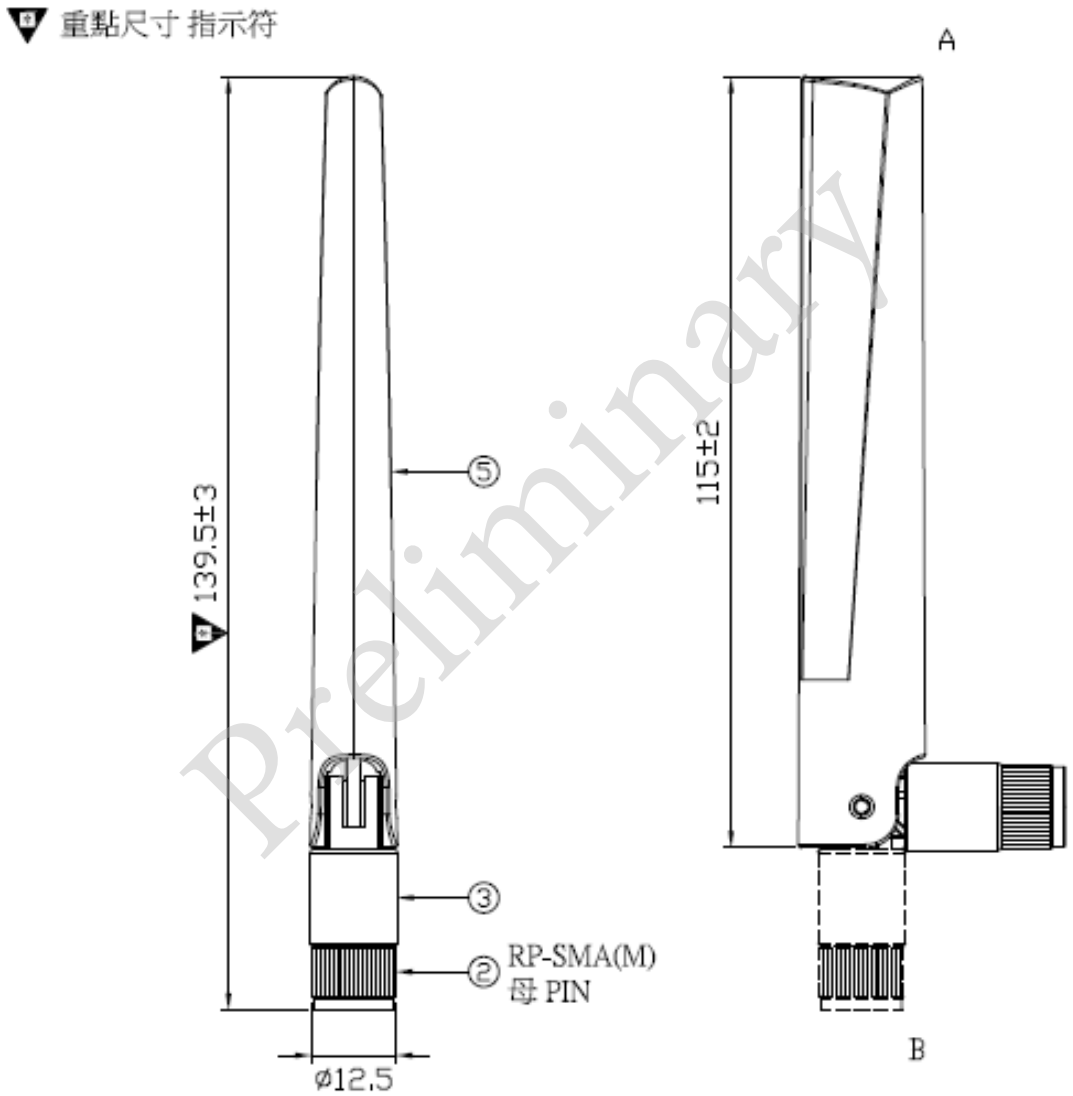
Mechanical Dimensions



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AD-510AX

Measurement data

Wi-Fi /Wi-Fi 6E Triple Band Dipole antenna

S-parameter: Return loss

	DB1	SPEC.
2.400GHz	-29	-10
2.500GHz	-15	
4.400GHz	-16	
5.150GHz	-15	
5.925GHz	-13	
7.125GHz	-19	

Return Loss table

Unit: dB

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AD-510AX

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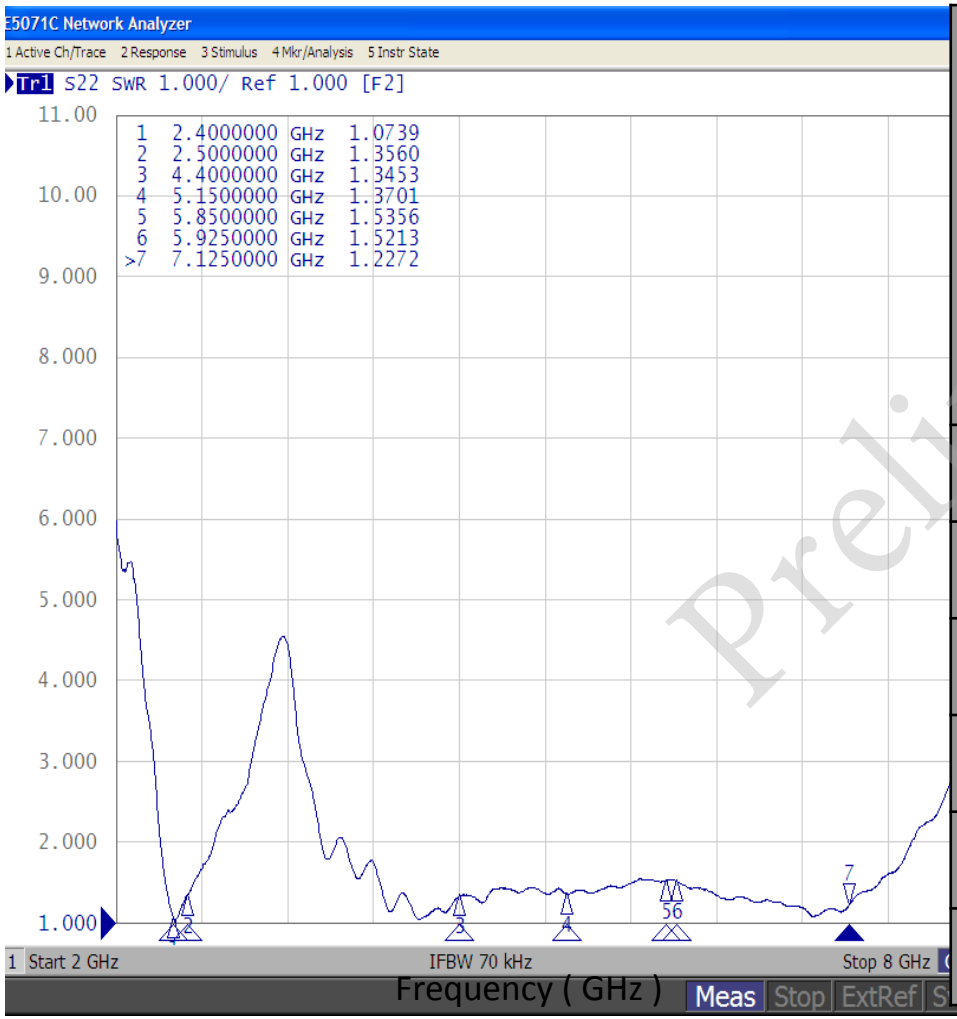
Measurement data

S-parameter: VSWR



	DB1	SPEC.
2.400GHz	1.07	2以下
2.500GHz	1.3	
4.400GHz	1.34	
5.150GHz	1.37	
5.925GHz	1.52	
7.125GHz	1.22	

VSWR table

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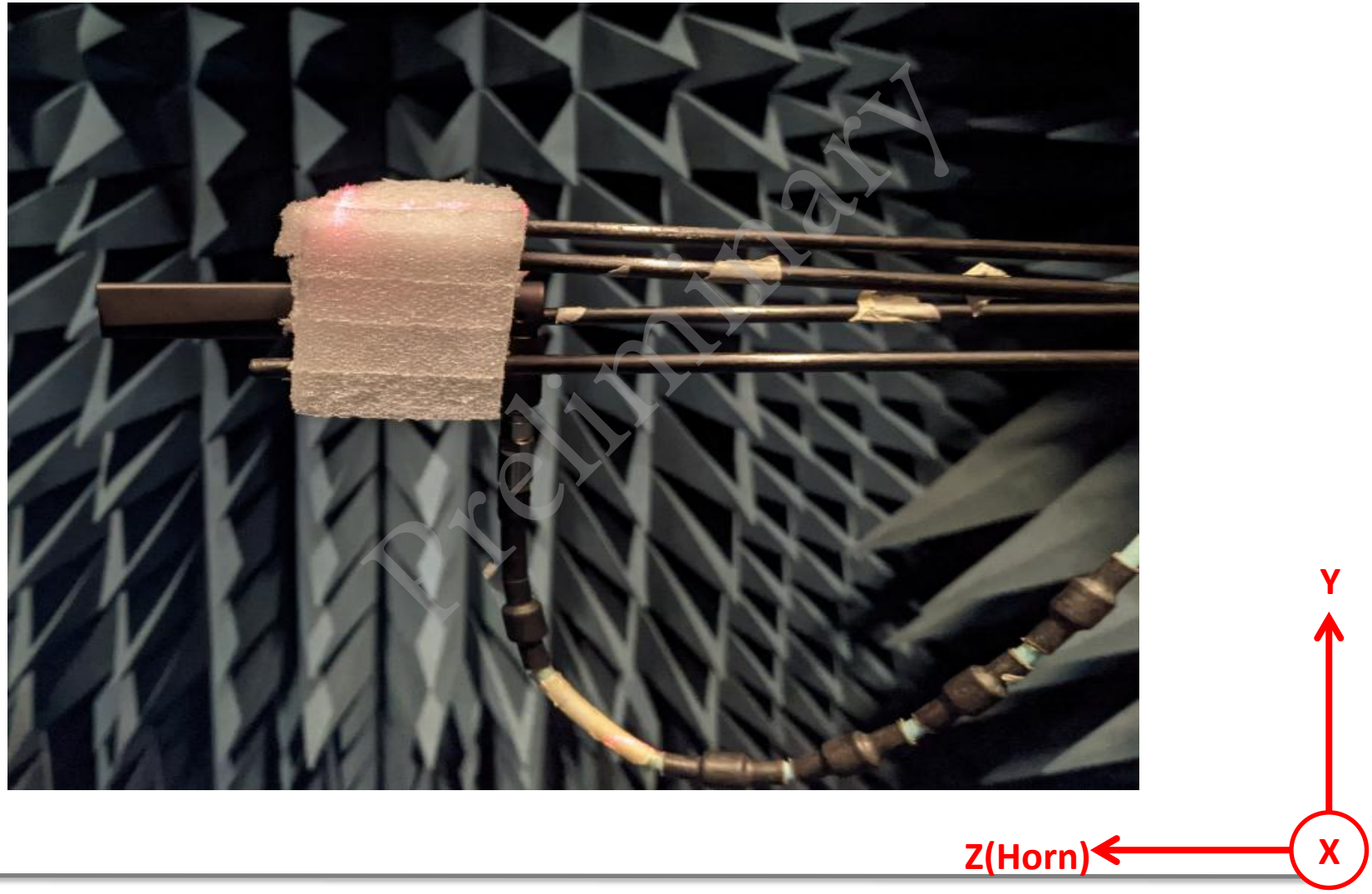
AD-510AX

Measurement data

Wi-Fi /Wi-Fi 6E Triple Band Dipole antenna

Radiation pattern - DUT orientation setting



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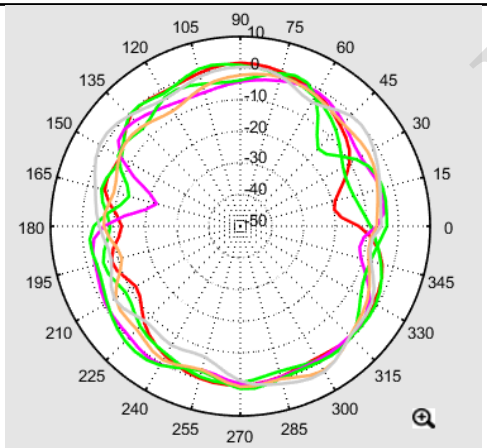
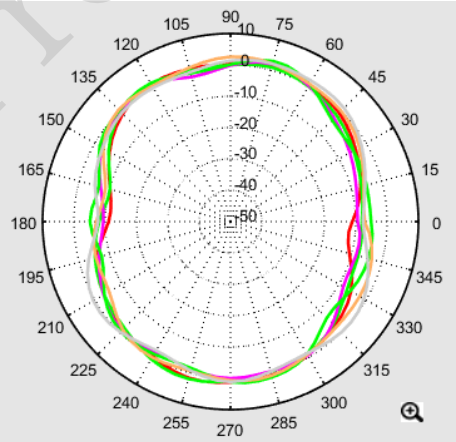
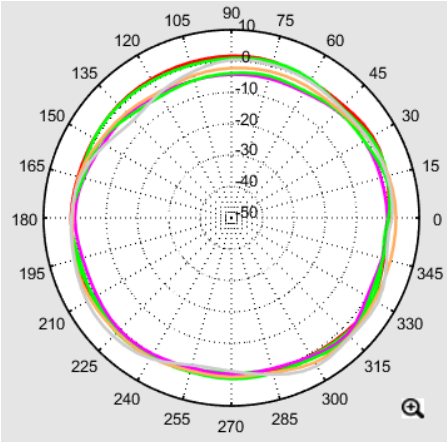
Wi-Fi /Wi-Fi 6E Triple Band Dipole antenna

Measurement data

Radiation pattern

X-Z plane (Phi=0°)	Y-Z plane (Phi=90°)	X-Y plane (Theta=90°)
		

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Measurement data

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Frequency (MHz)	2400	2485	5150	5250	5350	5470	5725	5850	5895	5925	6425	6525	6875	7125
Peak Gain (dBi)	2.06	2.27	2.88	2.69	2.51	2.58	2.4	2.6	2.29	2.52	3.23	3.34	3.52	3
Avg. Gain (dBi)	-1.13	-1.01	-1.32	-1.39	-1.41	-1.57	-1.35	-1.54	-1.7	-1.52	-1.46	-1.37	-1.21	-1.27
Efficiency (%)	77.09	79.25	73.79	72.61	72.28	69.66	73.28	70.15	67.61	70.47	71.45	72.95	75.68	74.64

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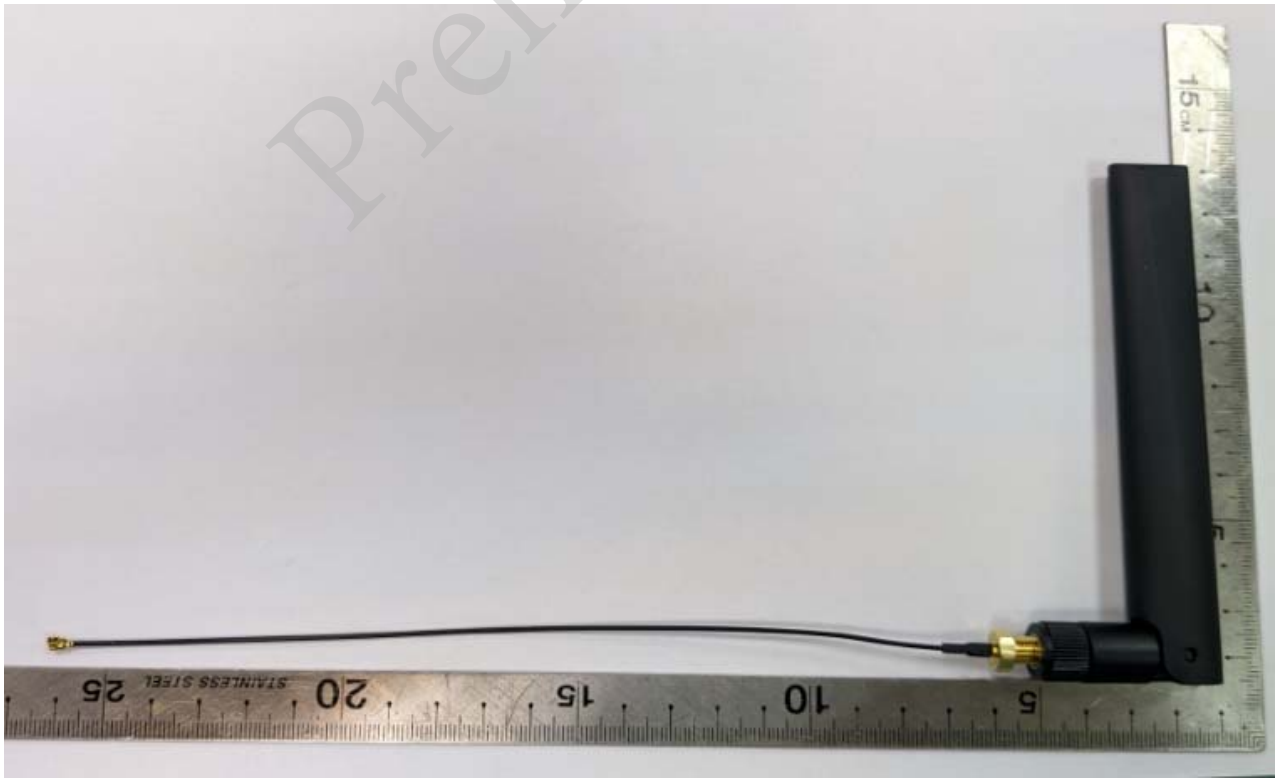

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