

AD-510AX

Antenna Approval Sheet

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|-----------------------|--|
| 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. 0.91

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 |
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| SparkLAN | | Customer |
| Sales | PM | Approval by |
| | | |

AD-510AX

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

SPECIFICATION

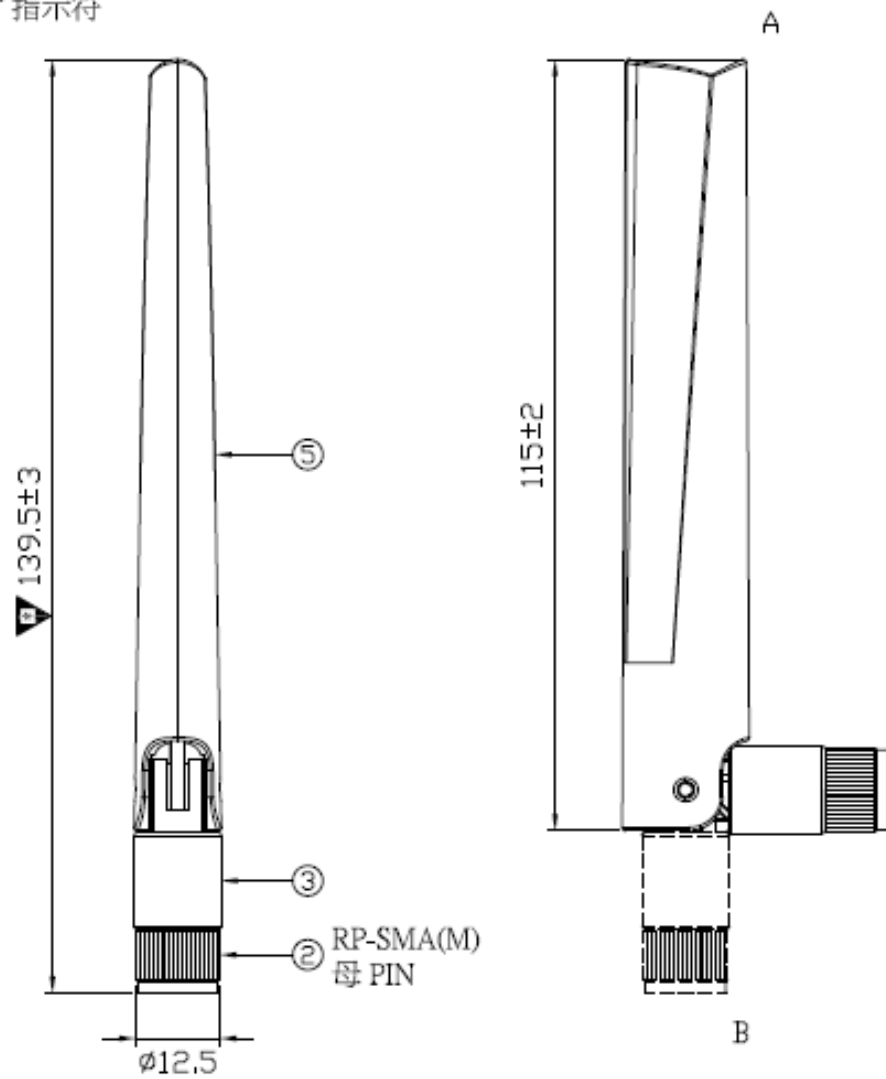
1. Description : WiFi+WiFi 6E Antenna with
RP-SMA(M)(Black)
2. Part No. : AD-510AX
3. Antenna Profile : 139.5 mm length (see Drawing)
4. Color : Black
5. Electrical Characteristics
 - Operating Frequency : 2.4~2.5 / 5.15~7.125 GHz
 - Antenna Type : Dipole
 - Polarization Type : Linear
 - Type of Radiation : 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

AD-510AX

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Mechanical Dimensions

重点尺寸 指示符



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

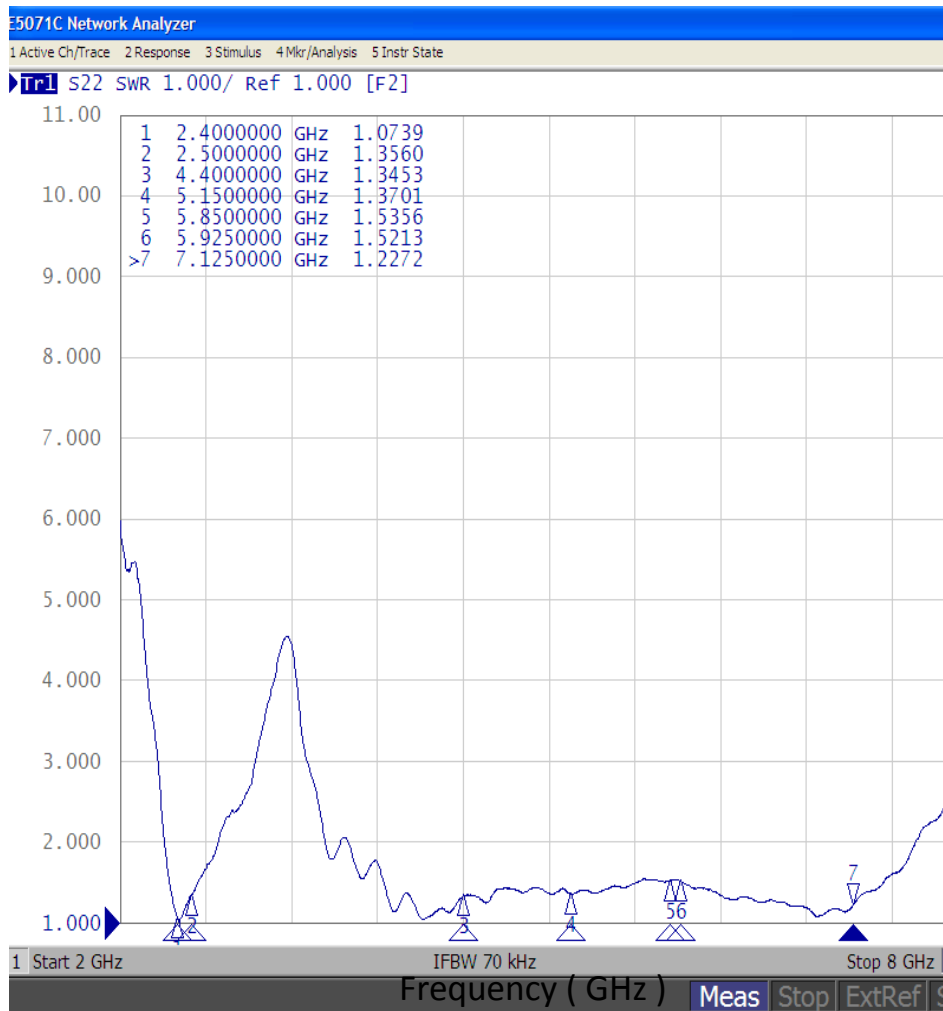
Unit: dB

AD-510AX

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

Measurement data

S-parameter: VSWR



| Frequency (GHz) | 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 | |
| 5.925GHz | 1.52 | |
| 7.125GHz | 1.22 | |

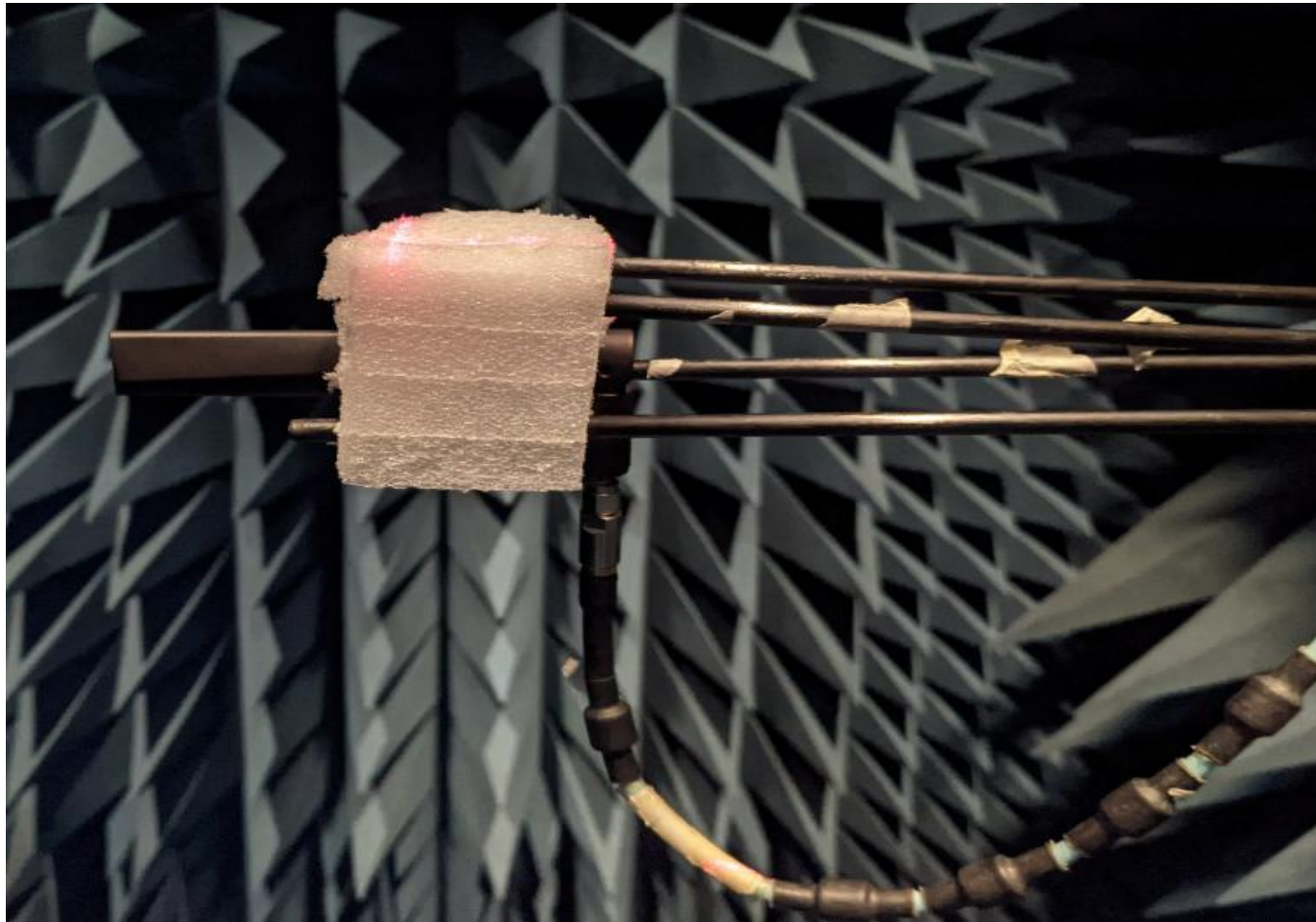
VSWR table

AD-510AX

Measurement data

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

Radiation pattern - DUT orientation setting

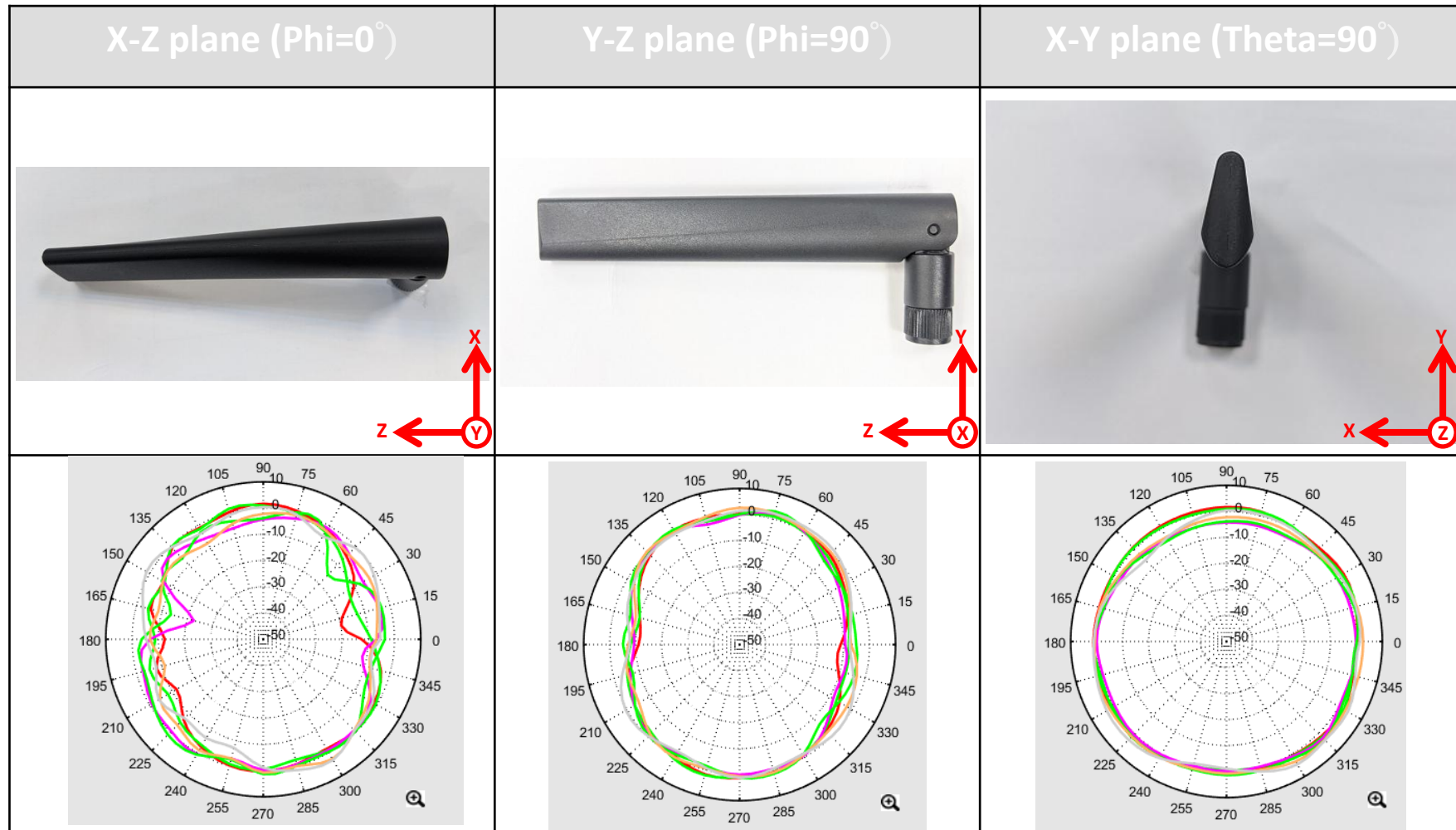


AD-510AX

Measurement data

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

Radiation pattern



AD-510AX

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

Measurement data

| 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 |