

SPECIFICATION

HUI ZHOU DXDRAGON ING

Orbic TAB8 4G Antenna

Product approval sheet

| | | | |
|----------|---------------|--------|--|
| Customer | Orbic | Band | 3G: W2/4/5 4G: B2/4/5/12/13/14/17/25/ 26/30/41(Hpue)/66/71 |
| Project | Orbic TAB8 4G | Colour | Black |
| FCC ID | 2ABGHRC8L1T | | |

Customer check:

Reach requirement of customer: OK NG

Contents

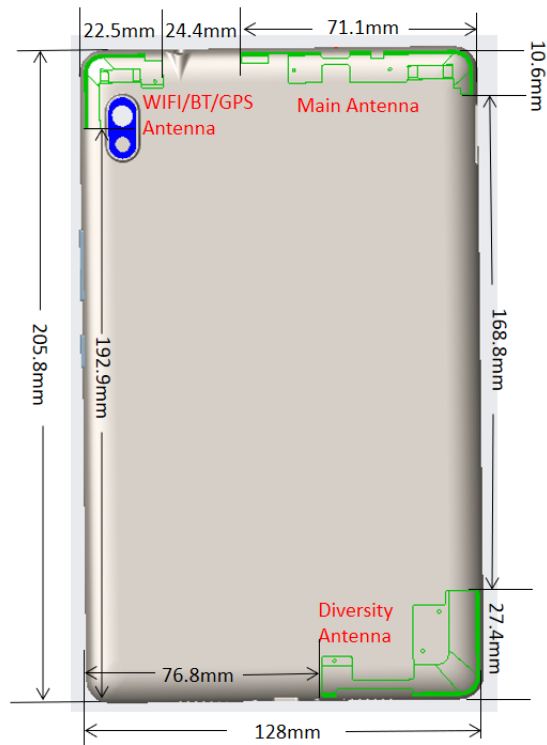
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1 General description

1.1 information of DUT

| | |
|------------------|---|
| Set Type | Tablet |
| Dimension | 205.8 * 128 * 9.25mm |
| Band | 3G: W2/4/5/8 4G: B2/4/5/12/13/14/17/25/26/30/41(Hpue)/66/71WIFI 2.4G&5G BT GPS |
| Antenna Material | FPC |

1.2 Photo of DUT



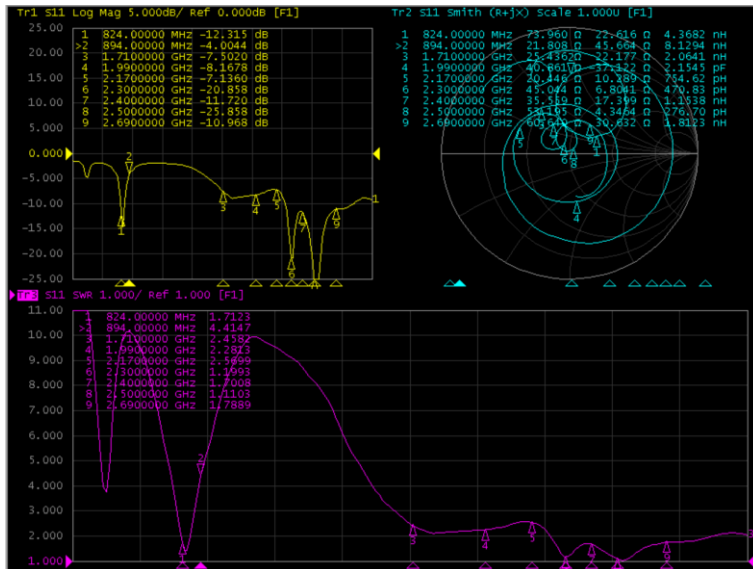
Antenna location

2 Electrical performance

2.1 Passive result

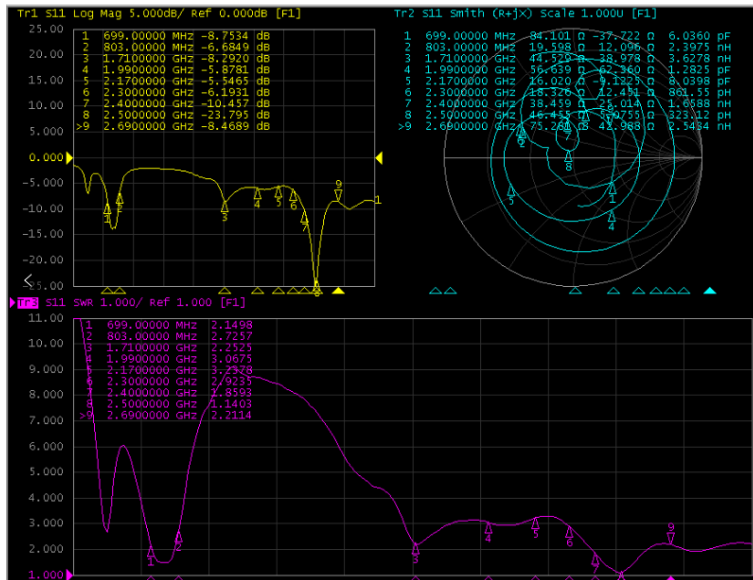
2.1.1 VSWR & Return Loss-Main antenna

VSWR & Return Loss test connector: R&S ZVL network analyzer → Cable → JIG



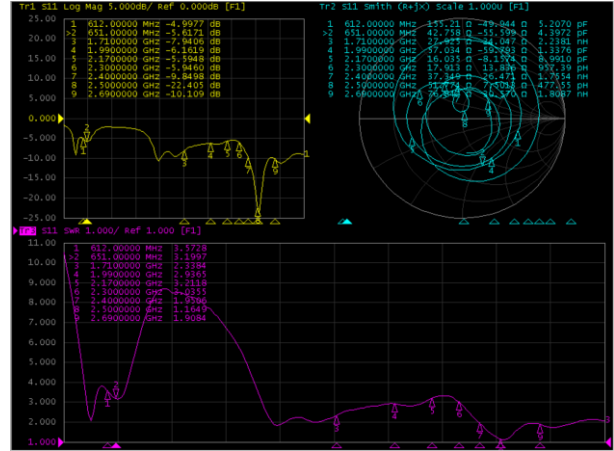
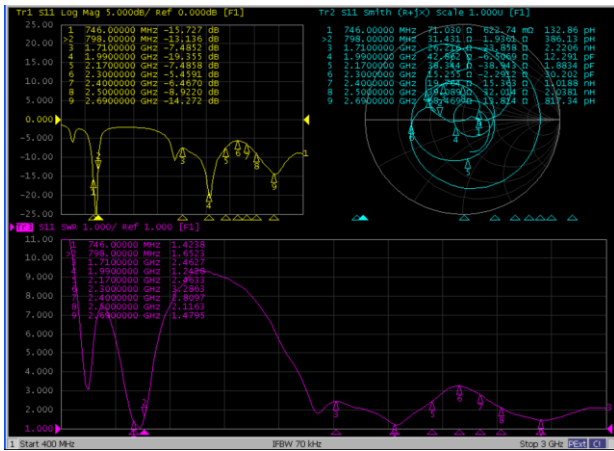
VSWR & Return

Loss(LTE B5)



VSWR & Return Loss

(B12/B17/B28)

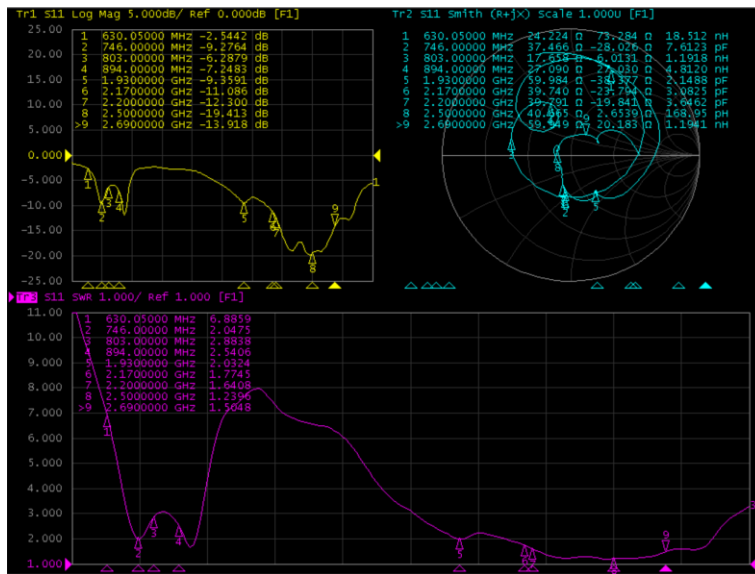


VSWR & Return Loss(B13/B14)

VSWR & Return Loss(B71)

| Freq.(MHz) | 612 | 650 | 700 | 803 | 746 | 798 | 824 | 894 | 1710 | 1990 | 2200 | 2500 | 2700 |
|------------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|--------|--------|--------|
| VSWR | 3.57 | 3.19 | 2.14 | 2.72 | 1.42 | 1.65 | 1.71 | 4.41 | 2.45 | 2.28 | 1.19 | 1.11 | 1.78 |
| R.L. | -4.99 | -5.61 | -8.78 | -6.68 | -7.48 | -13.13 | -12.31 | -4.00 | -7.50 | -8.16 | -20.82 | -25.85 | -10.96 |

2.12 VSWR & Return Loss - Diversity antenna

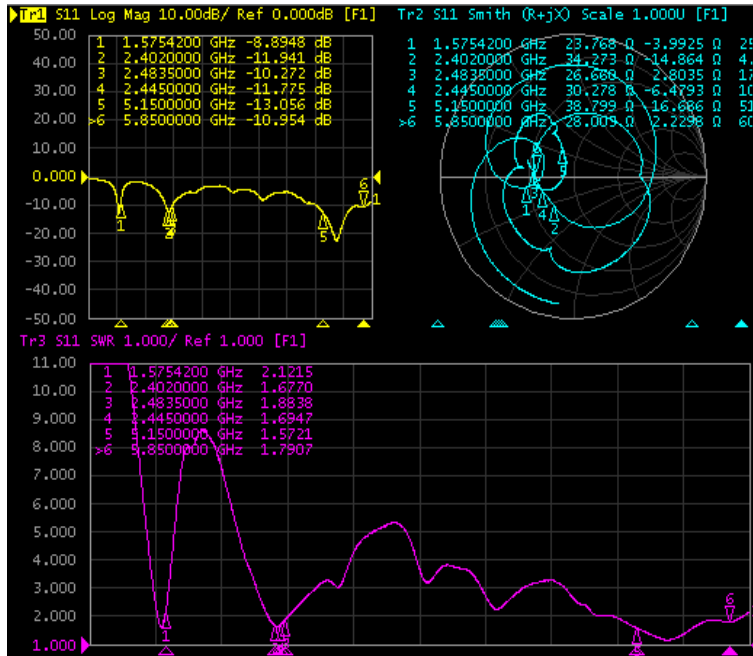


| Freq.(MHz) | 630 | 750 | 803 | 849 | 1930 | 2170 | 2200 | 2500 | 2700 |
|------------|------|------|------|------|------|------|------|------|------|
| VSWR | 6.88 | 2.04 | 2.88 | 2.54 | 2.03 | 1.77 | 1.64 | 1.23 | 1.50 |

Confidential Information

| | | | | | | | | | |
|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| R.L. | -2.54 | -9.27 | -6.28 | -7.24 | -9.35 | -11.08 | -12.30 | -19.41 | -13.91 |
|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|

2.13 VSWR & Return Loss -3 in 1 (WIFI&BT&GPS) antenna



| Freq.(MHz) | 1575 | 2400 | 2450 | 2500 | 5100 | 5800 |
|------------|-------|--------|--------|--------|--------|--------|
| VSWR | 2.12 | 1.67 | 1.69 | 1.72 | 1.57 | 1.79 |
| R.L. | -8.89 | -11.94 | -11.77 | -11.89 | -13.05 | -10.95 |

2.14 Gain test

| | Band | Gain | TYPE |
|---------------------|---|-----------|--------------------|
| UMTS Band(s) | FDD4 (1710-1755MHz) | 0.17dBi | Fixed Internal/IFA |
| | GSM850 / FDD V (824-849 MHz) | -0.11dBi | Fixed Internal/IFA |
| | GSM1900 / FDD II (1850-1910 MHz) | -0.13 dBi | Fixed Internal/IFA |
| LTE | FDD 1: Japan, Korea, Europe(1920-1980MHz) | 0.23 dBi | Fixed Internal/IFA |
| | FDD 2: Europe, Asia(1850-1910MHz) | -0.13 dBi | Fixed Internal/IFA |
| | FDD 4: US(1710-1755) | 0.17 dBi | Fixed Internal/IFA |
| | FDD 5: Europe(824-849MHz) | 0.11 dBi | Fixed Internal/IFA |
| | FDD 12: Europe(699-716MHz) | -3.51 dBi | Fixed Internal/IFA |
| | FDD 13: Japan(777-787MHz) | -2.22 dBi | Fixed Internal/IFA |
| | FDD 14: Japan(788-798MHz) | -1.72 dBi | Fixed Internal/IFA |
| | FDD 17: Europe(704-716MHz) | 0.79 dBi | Fixed Internal/IFA |
| | FDD 25: US(1850-1915MHz) | -0.16 dBi | Fixed Internal/IFA |
| | FDD 26: Japan, NCC (814-849) | -0.42 dBi | Fixed Internal/IFA |

Confidential Information

| | | | |
|------------------|---------------------------------|-----------|--------------------|
| | FDD 28: China(703-748MHz) | -3.97 dBi | Fixed Internal/IFA |
| | FDD 30: US, Japan(2305-2315MHz) | -0.56 dBi | Fixed Internal/IFA |
| | TDD 41: US, Japan(2496-2690MHz) | 2.81 dBi | Fixed Internal/IFA |
| | FDD 66: US, Japan(1710-1780MHz) | 0.08 dBi | Fixed Internal/IFA |
| | FDD 71: US, Japan(630-651MHz) | -3.86 dBi | Fixed Internal/IFA |
| 2.4G BT | 2.4~2.4835GHz | 2.09 dBi | Fixed Internal/IFA |
| 2.4G WLAN | 2.4~2.4835GHz | 2.09 dBi | Fixed Internal/IFA |
| 5G WLAN | 5.15~5.25GHz | 0.08 dBi | Fixed Internal/IFA |
| | 5.25~5.35GHz | 0.41 dBi | Fixed Internal/IFA |
| | 5.47~5.725GHz | -1.35 dBi | Fixed Internal/IFA |
| | 5.725~5.825GHz | -0.33 dBi | Fixed Internal/IFA |
| | 5.725~5.850GHz | -0.45 dBi | Fixed Internal/IFA |

2.2 Active result

2.21 Test equipment

Equipment information:

GTS 2800 3D Chamber test system

Base Station Emulator CMW-500

Quad-Ridge Horn Antenna

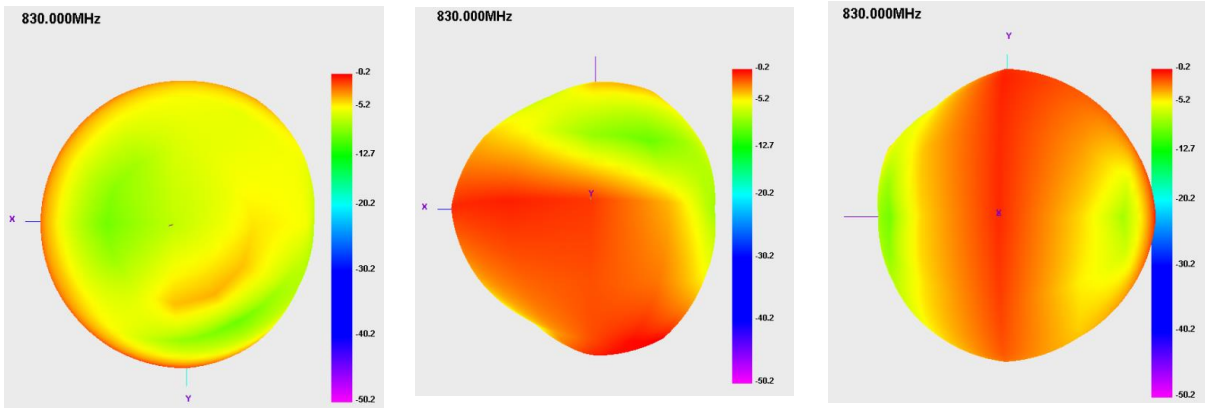
Agilent8960 E5515C

2.22 OTA test data

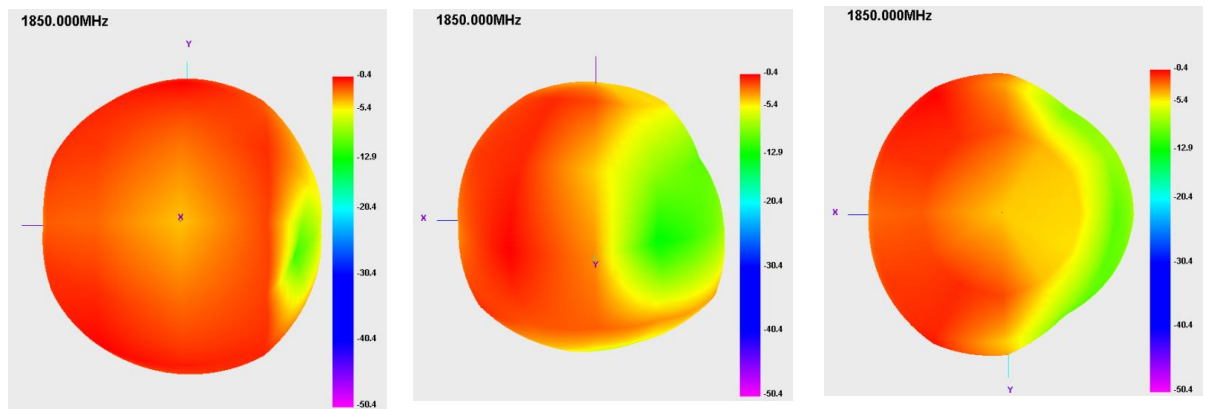
| Band | Channel | TRP(dBm) | TIS(dBm) | Band | Channel | TRP(dBm) | TIS(dBm) |
|----------|---------|----------|----------|----------|---------|----------|----------|
| WCDMA B2 | 9262 | 20.05 | -107.19 | WCDMA B5 | 4132 | 19.13 | -107.83 |
| | 9400 | 20.11 | -107.31 | | 4183 | 19.59 | -107.26 |
| | 9538 | 20.41 | -107.13 | | 4233 | 19.61 | -107.06 |
| WCDMA B4 | 1312 | 19.37 | -107.52 | | | | |
| | 1413 | 19.69 | -107.22 | | | | |
| | 1513 | 19.68 | -107.38 | | | | |
| Band | Channel | TRP(dBm) | TIS(dBm) | Band | Channel | TRP(dBm) | TIS(dBm) |
| LTE B1 | 18050 | 20.06 | -96.21 | LTE B14 | 23305 | 18.66 | -93.14 |
| | 18300 | 20.35 | -96.49 | | 23330 | 18.42 | -93.26 |
| | 18550 | 20.15 | -96.43 | | 23355 | 18.21 | -93.11 |
| LTE B2 | 18600 | 20.29 | -96.32 | LTE B17 | 23780 | 17.54 | -92.18 |
| | 18900 | 20.18 | -96.18 | | 23790 | 17.26 | -92.28 |
| | 19200 | 20.13 | -96.57 | | 23800 | 17.32 | -92.13 |
| LTE B4 | 19950 | 19.25 | -97.02 | LTE B25 | 26065 | 19.66 | -96.35 |
| | 20175 | 19.36 | -97.15 | | 26365 | 19.82 | -96.47 |
| | 20399 | 19.84 | -97.17 | | 26665 | 20.01 | -96.52 |
| LTE B5 | 20450 | 19.3 | -94.57 | LTE B26 | 26715 | 19.18 | -95.67 |
| | 20525 | 20.54 | -94.32 | | 26865 | 19.37 | -95.46 |
| | 20600 | 20.94 | -94.24 | | 27015 | 19.52 | -95.16 |
| LTE B12 | 23010 | 17.71 | -95.09 | LTE B28 | 27235 | 17.47 | -92.63 |
| | 23095 | 17.16 | -95.23 | | 27435 | 17.22 | -92.45 |
| | 23179 | 17.26 | -94.81 | | 27635 | 17.15 | -92.29 |
| LTE B13 | 23205 | 18.37 | -92.95 | LTE B30 | 27685 | 19.14 | -96.18 |
| | 23230 | 18.61 | -92.31 | | 27710 | 19.36 | -96.25 |
| | 23255 | 18.06 | -92.25 | | 27735 | 19.56 | -96.43 |
| | | | | LTE 66 | 132022 | 19.41 | -97.12 |
| | | | | | 132322 | 19.62 | -97.05 |
| | | | | | 132622 | 19.25 | -96.87 |
| | | | | LTE 71 | 133172 | 17.14 | -91.73 |
| | | | | | 133297 | 17.33 | -91.65 |
| | | | | | 133422 | 17.62 | -91.59 |
| | | | | LTE 41 | 39750 | 22.71 | -92.76 |
| | | | | | 40620 | 22.99 | -92.57 |
| | | | | | 41490 | 22.85 | -92.38 |

2.3 Passive field pattern diagram

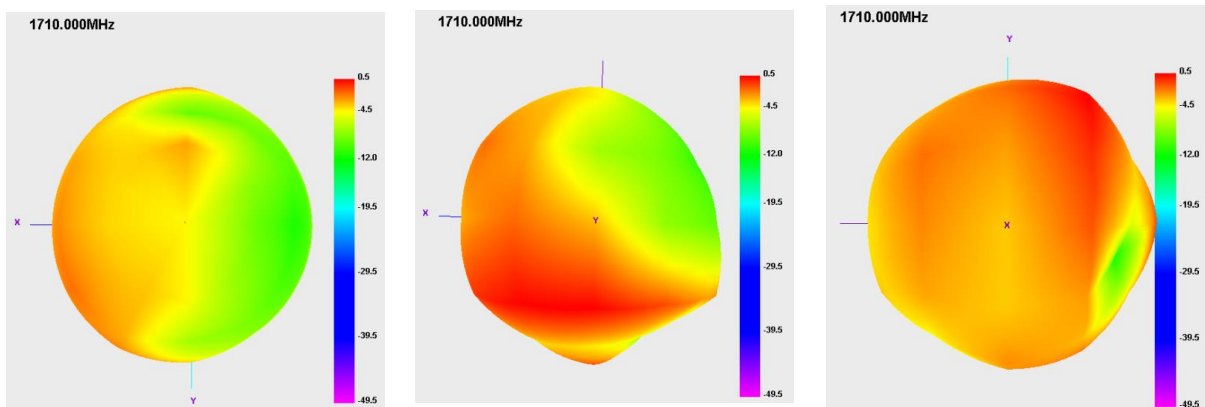
B5



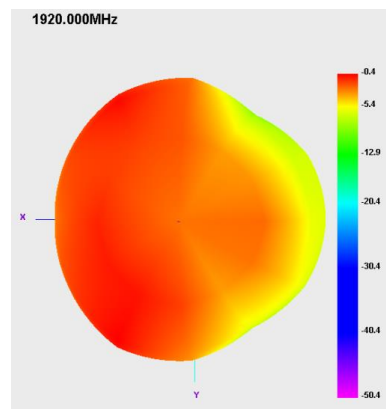
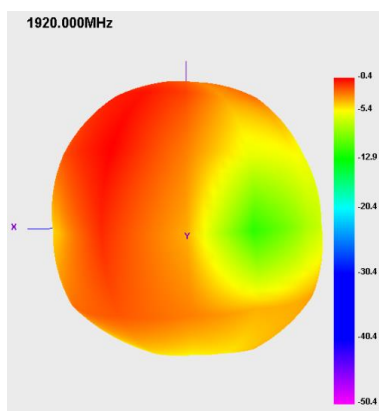
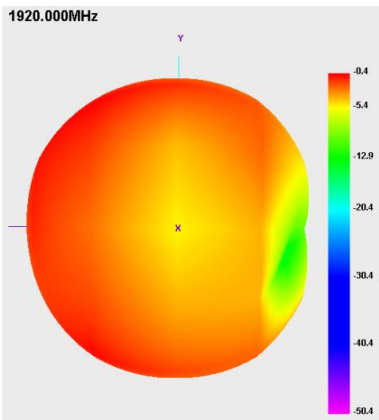
B2



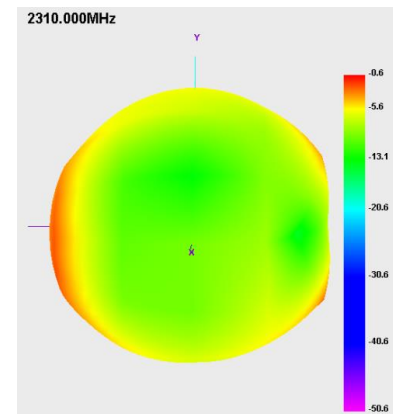
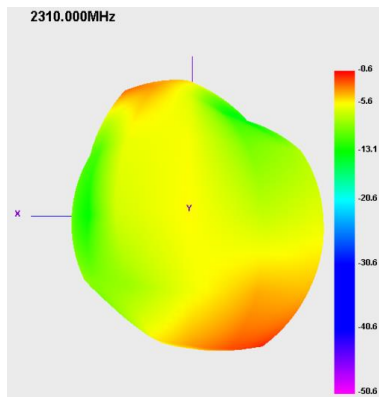
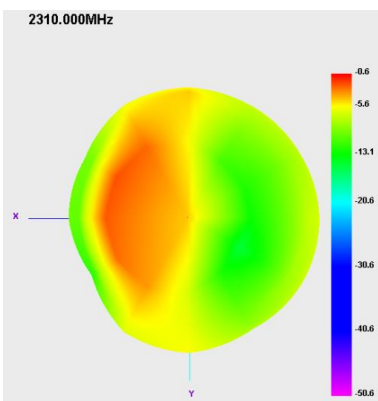
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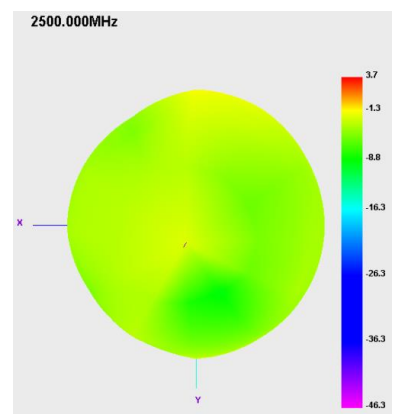
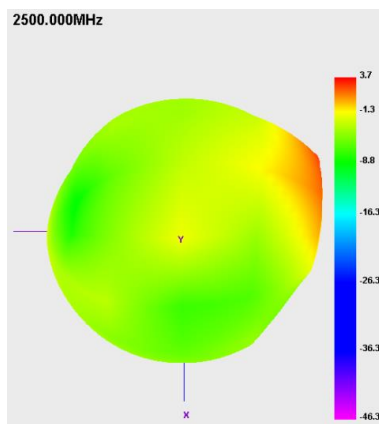
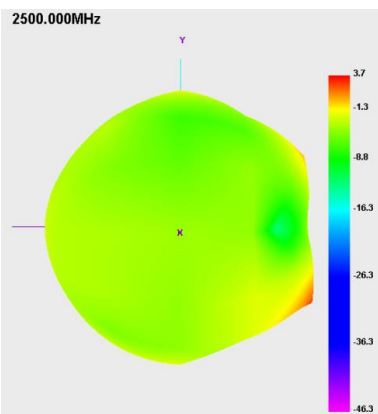
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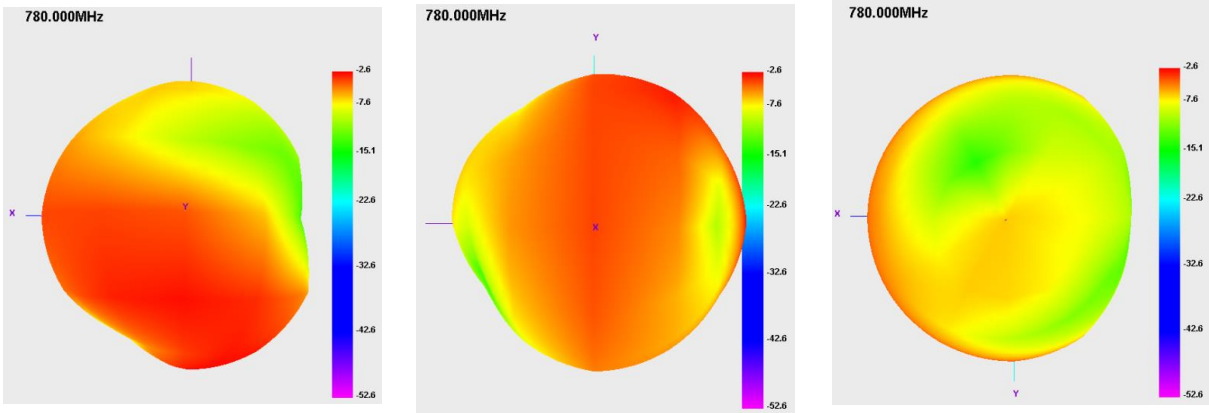
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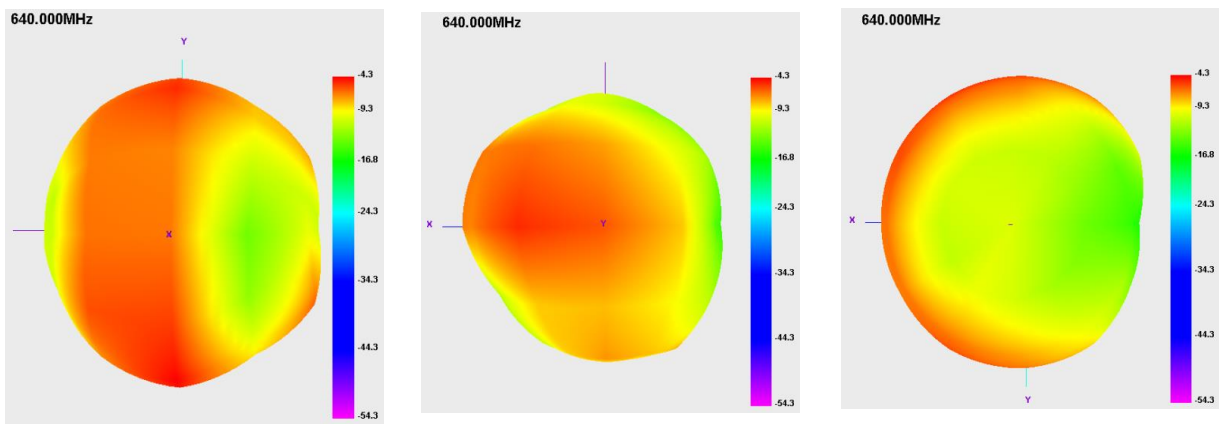
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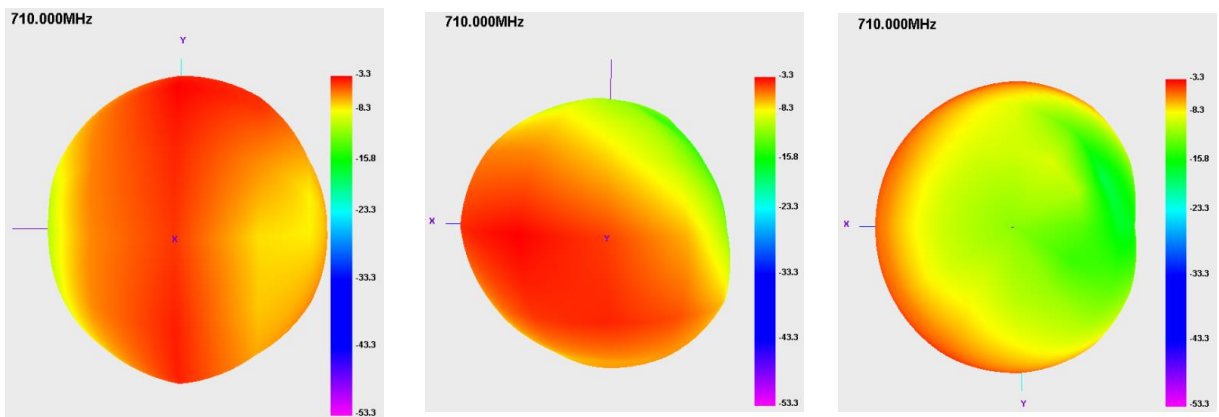
B13/B14



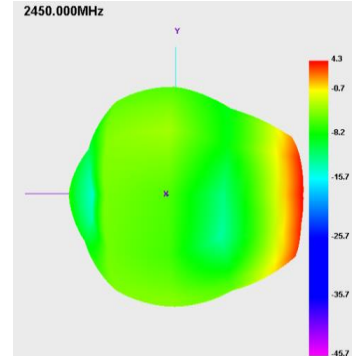
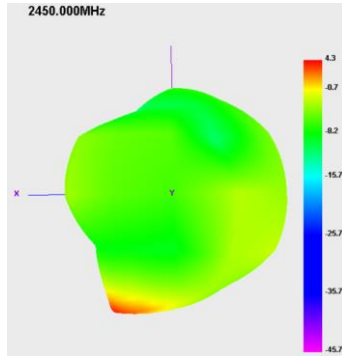
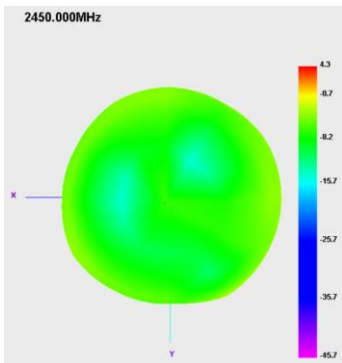
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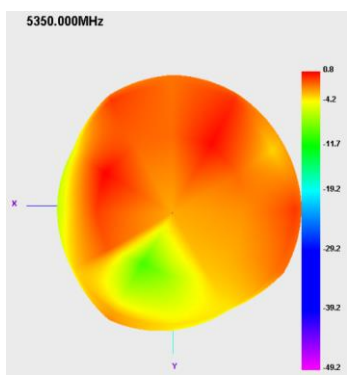
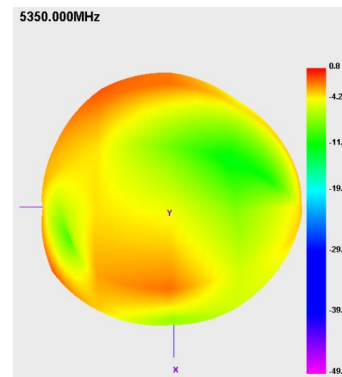
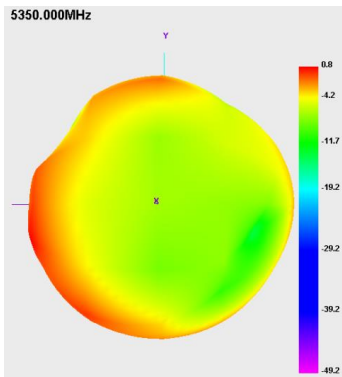
B12/17/28



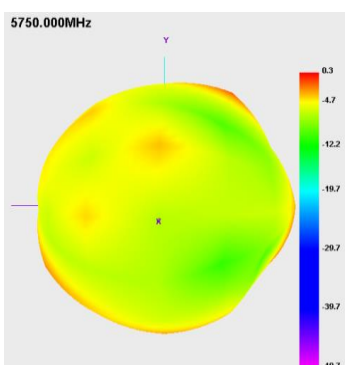
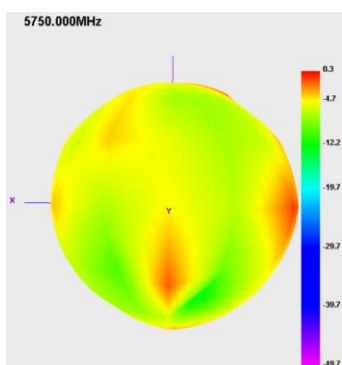
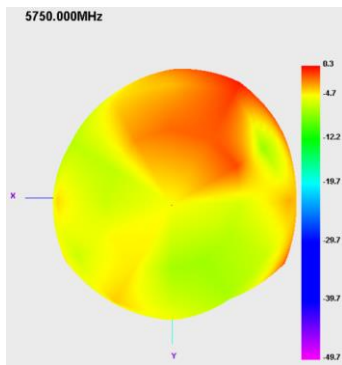
WiFi2.4G



WiFi5.3G



WiFi5.8G



GPS

