



深圳市德仕勤科技有限公司

天线测试报告

DOSKING Antenna Test Report



深圳市德仕勤科技有限公司

1. Project overview:

| | | | | |
|--|--|---------------------|---------------------|------------------------|
| Customer name | Jiashixin | Project name | JS01A-4G | |
| Type of complete machine | mobile phone | | | |
| Antenna type and frequency band information | | | Antenna form | Matching change |
| Main antenna | 2G:900/1800, 850/1900 3G:B2/5 4G:B2/4/5/7/12/17/28 | | PIFA | Y |
| Secondary antenna | | | | |
| Diversity antenna | | | | |
| Antenna material | Main antenna : FPC | | | |

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2. Main test equipment

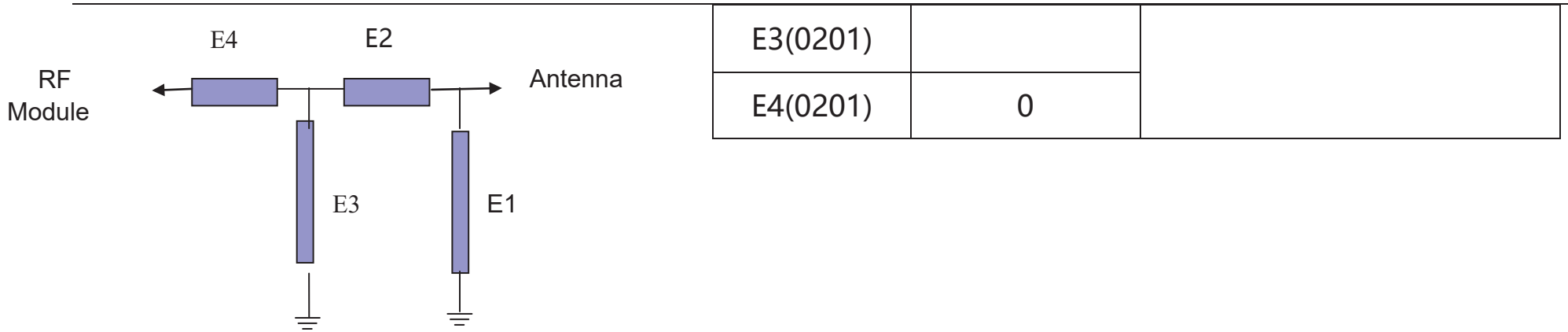
1. ETS Chamber 5×3×3(m)(3D) / 3×3×3(m)(3D)/1800(3D), Vector network analyzer (passive tester)
2. Network analyzer-8960/LTE CMW500/8820/CMW500 support 2G、3G、4G、5GMP8000 Comprehensive measuring instrument, It also supports 2.4/5.8WIFI6 and so on.

3. Matching Circuit Main antenna

| Element | Matching value | |
|----------|----------------|--|
| E1(0201) | | |
| E2(0201) | 0 | |



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4. OTA test of antenna: 2G/3G

| Model: | | | | Antenna implementation mode : PIFA | | | | | | unit : dBm | | |
|---------|--------|-------|-------|------------------------------------|-------|-------|---------|-------|-------|------------|-------|-------|
| channel | GSM850 | | | GSM900 | | | DCS1800 | | | PCS1900 | | |
| | CH128 | CH192 | CH251 | CH1 | CH62 | CH124 | CH512 | CH698 | CH885 | CH512 | CH661 | CH810 |
| TRP | 29.59 | 29.51 | 30.49 | 29.66 | 29.27 | 29.1 | 25.57 | 26.24 | 26.47 | 26.61 | 26.84 | 26.76 |

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| | | | | | | | | | | | | |
|---------|-----------|--------|---------|-----------|--------|---------|------------|--------|---------|------------|---------|---------|
| TIS | | | -102.49 | | | -103.59 | | | -103.41 | | | -104.14 |
| channel | WCDMA-850 | | | WCDMA-900 | | | WCDMA-1900 | | | WCDMA-2100 | | |
| | CH4357 | CH4408 | CH4458 | CH2937 | CH3013 | CH3088 | CH9662 | CH9800 | CH9938 | CH10562 | CH10700 | CH10838 |
| TRP | 18.56 | 18.75 | 19.05 | | | | 18.59 | 18.67 | 18.86 | | | |
| TIS | | | -103.0 | | | | | | -104.3 | | | |

4.4G:FDD/TDD #1

| | | | | | | | | | | | | |
|---------|-------------|---------|---------|-------------|---------|---------|-------------|---------|---------|---------|---------|---------|
| | LTE-FDD-B28 | | | LTE-FDD-B12 | | | LTE-FDD-B17 | | | | | |
| channel | | | | | | | | | | | | |
| | CH18650 | CH18900 | CH19150 | CH20000 | CH20175 | CH20350 | CH20450 | CH20525 | CH20600 | CH20800 | CH21100 | CH21400 |
| TRP | 19.95 | 20.33 | 19.69 | 21.84 | 21.17 | 19.73 | 19.76 | 21.43 | 21.76 | 19.32 | 18.66 | 17.87 |
| TIS | | | -87.19 | | | -93.88 | | | -87.71 | | | -89.19 |



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| | CH27260 | CH27435 | CH27610 | CH23060 | CH23095 | CH23130 | CH2780 | CH23790 | CH23800 | | | |
|-----|---------|---------|---------|---------|---------|---------|--------|---------|---------|--|--|--|
| TRP | 16.95 | 17.5 | 18.1 | 19.86 | 17.79 | 21.59 | 16.44 | 19.27 | 22.16 | | | |
| TIS | | | -87.42 | | | -88.86 | | | -88.89 | | | |



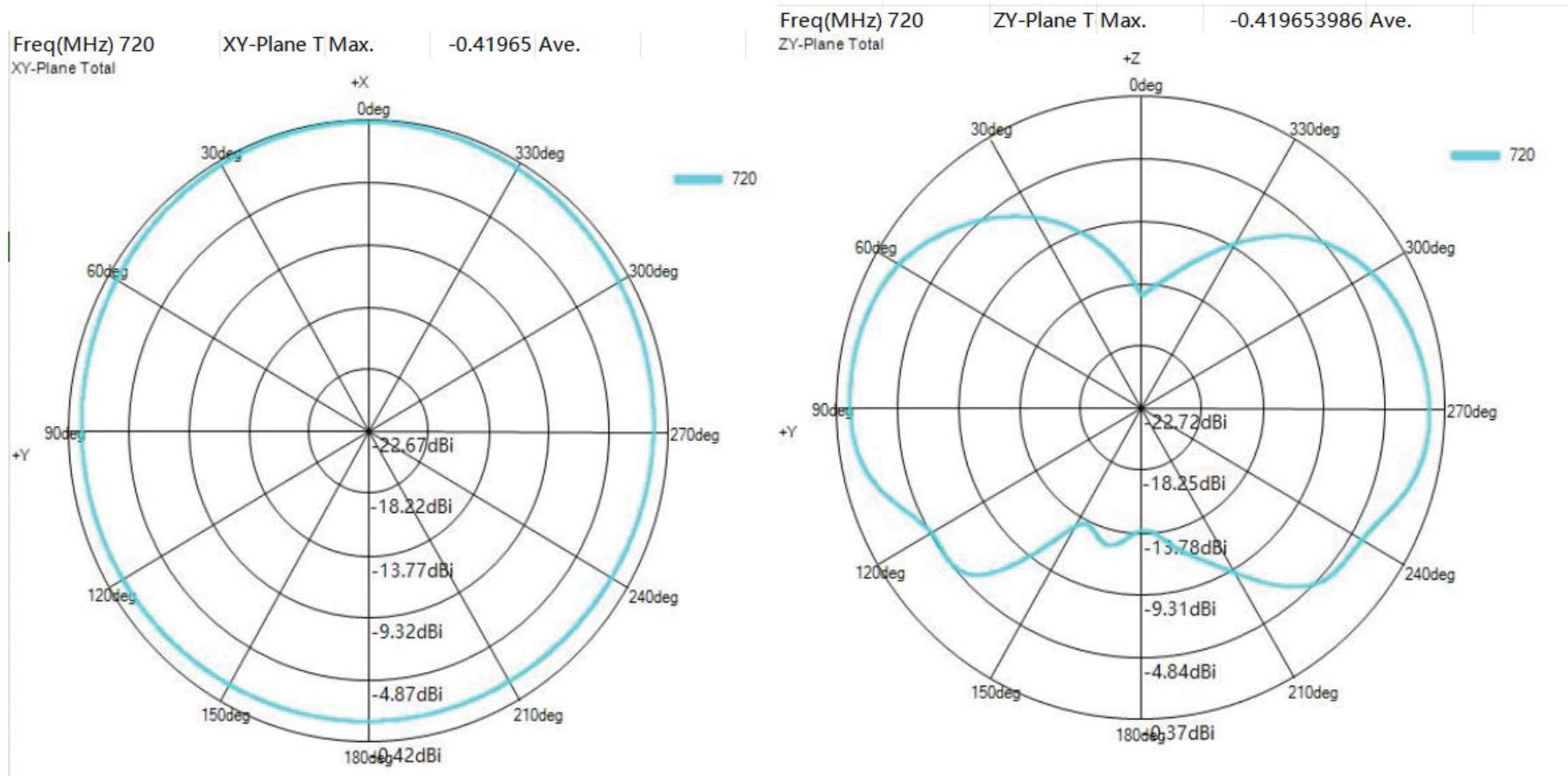
Antenna gain:

| Freq(MHz) | Gain(dBi) |
|-----------|--------------|
| 700 | -1.069396184 |
| 710 | -1.12950951 |
| 720 | -0.419653986 |
| 730 | 0.136732712 |
| 740 | 0.474566811 |
| 750 | 0.783469299 |
| 760 | 0.985303129 |
| 770 | 1.053838615 |
| 780 | 1.151072979 |
| 790 | 1.075810453 |
| 800 | 0.861399873 |
| 810 | 0.374850909 |
| 820 | 0.171349328 |
| 830 | -0.281577968 |
| 840 | -0.522510934 |
| 850 | -0.909928019 |
| 860 | -1.290871568 |
| 870 | -0.600141004 |
| 880 | -0.865950539 |
| 890 | -1.031915625 |
| 900 | -1.116998276 |
| 910 | -1.234699768 |
| 920 | -1.098199342 |
| 930 | -0.948619404 |
| 940 | -0.803195274 |
| 950 | -0.758661008 |
| 960 | -0.749672632 |

| Freq(MHz) | Gain(dBi) |
|-----------|-------------|
| 1700 | 0.191087185 |
| 1720 | 0.823094226 |
| 1740 | 0.270199436 |
| 1760 | 0.055387682 |
| 1780 | 0.409098038 |
| 1800 | 0.672002925 |
| 1820 | 0.87943597 |
| 1840 | 0.966084093 |
| 1860 | 1.035143851 |
| 1880 | 1.017006788 |
| 1900 | 1.331975224 |
| 1920 | 1.57471215 |
| 1940 | 1.511950684 |
| 1960 | 1.506178148 |
| 1980 | 1.352618684 |
| 2000 | 1.318167542 |
| 2020 | 1.333960562 |
| 2040 | 1.189570094 |
| 2060 | 1.111698795 |
| 2080 | 0.833991721 |
| 2100 | 0.66214875 |
| 2120 | 0.920547079 |
| 2140 | 0.940781953 |
| 2160 | 1.086086323 |
| 2180 | 1.368375497 |
| 2200 | 1.800503176 |

| Freq(MHz) | Gain(dBi) |
|-----------|-------------|
| 2220 | 1.91975445 |
| 2240 | 1.963965763 |
| 2260 | 1.659298118 |
| 2280 | 1.246325119 |
| 2300 | 0.967685908 |
| 2320 | 0.725483268 |
| 2340 | 0.600284572 |
| 2360 | 0.934446008 |
| 2380 | 1.216440977 |
| 2400 | 1.847557786 |
| 2420 | 2.374352929 |
| 2440 | 2.58303492 |
| 2460 | 2.608283455 |
| 2480 | 2.35468425 |
| 2500 | 2.278850712 |
| 2520 | 2.151372827 |
| 2540 | 1.936956664 |
| 2560 | 1.678550857 |
| 2580 | 1.418239046 |
| 2600 | 1.247335495 |
| 2620 | 1.296910348 |
| 2640 | 1.083071127 |
| 2660 | 0.784714938 |
| 2680 | 0.62871175 |
| 2700 | 0.540378086 |

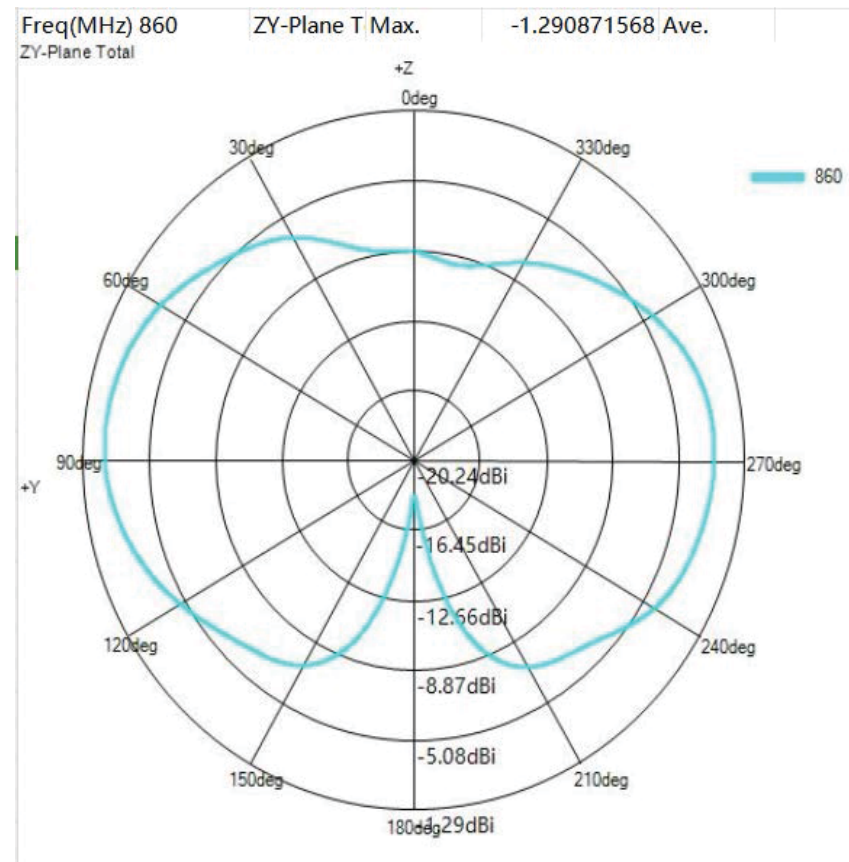
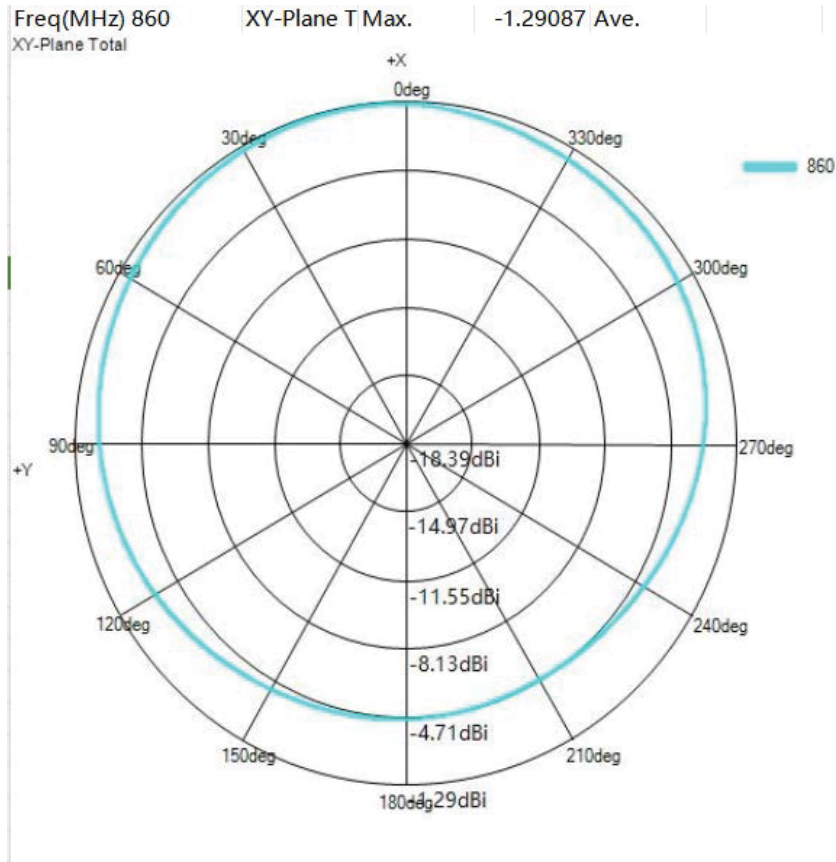
Antenna pattern 1 : 720MHZ





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Antenna pattern 2 : 860MHZ

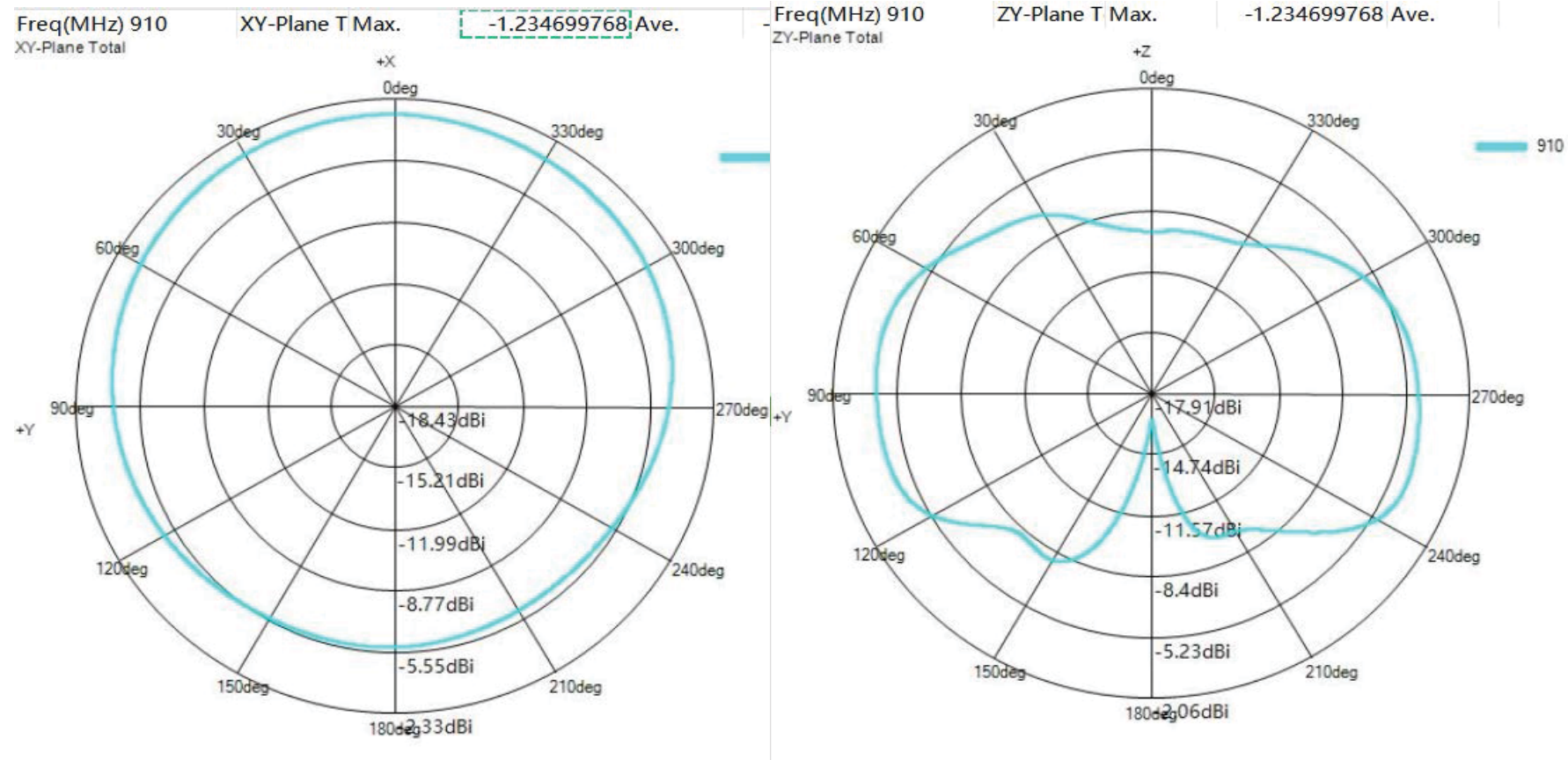


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Antenna pattern 3 : 910MHZ

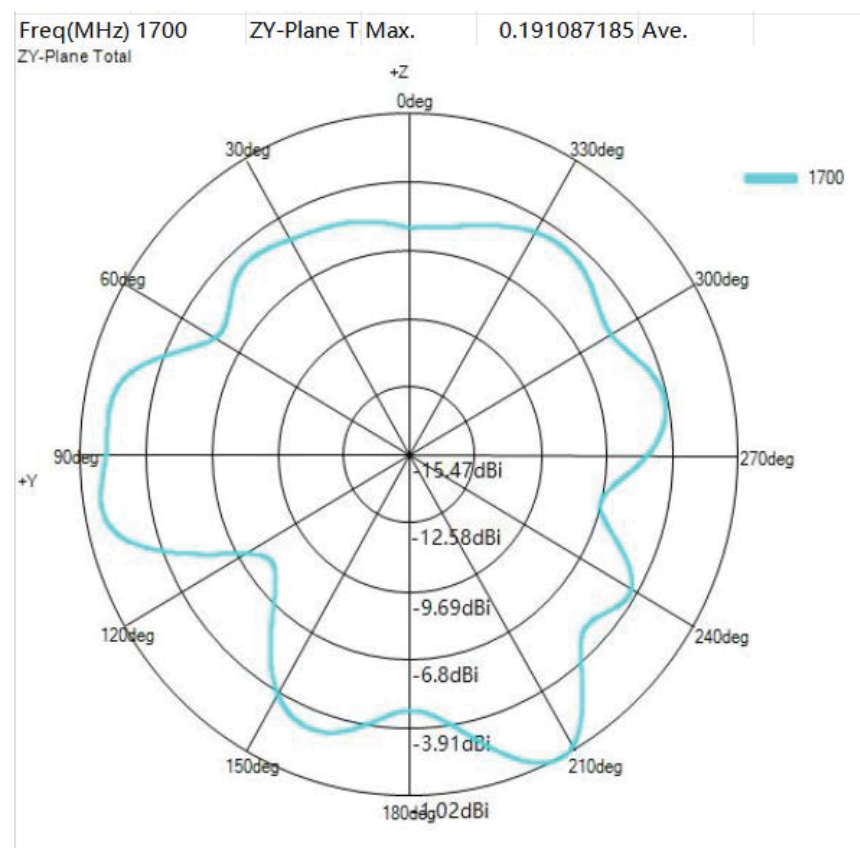
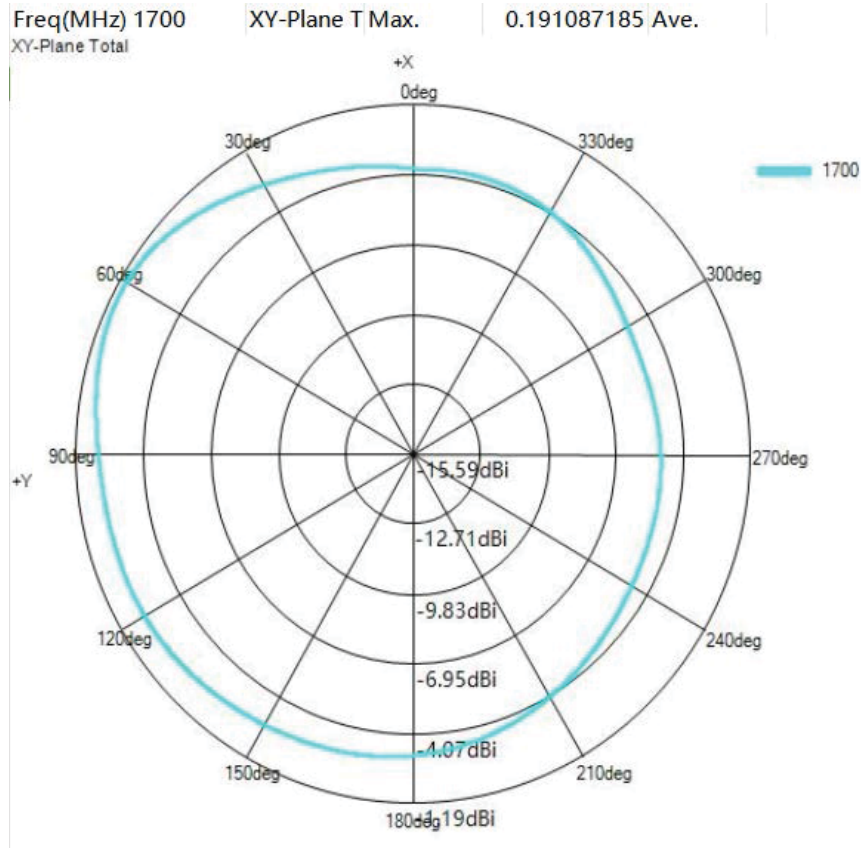


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Antenna pattern 4 : 1700MHZ

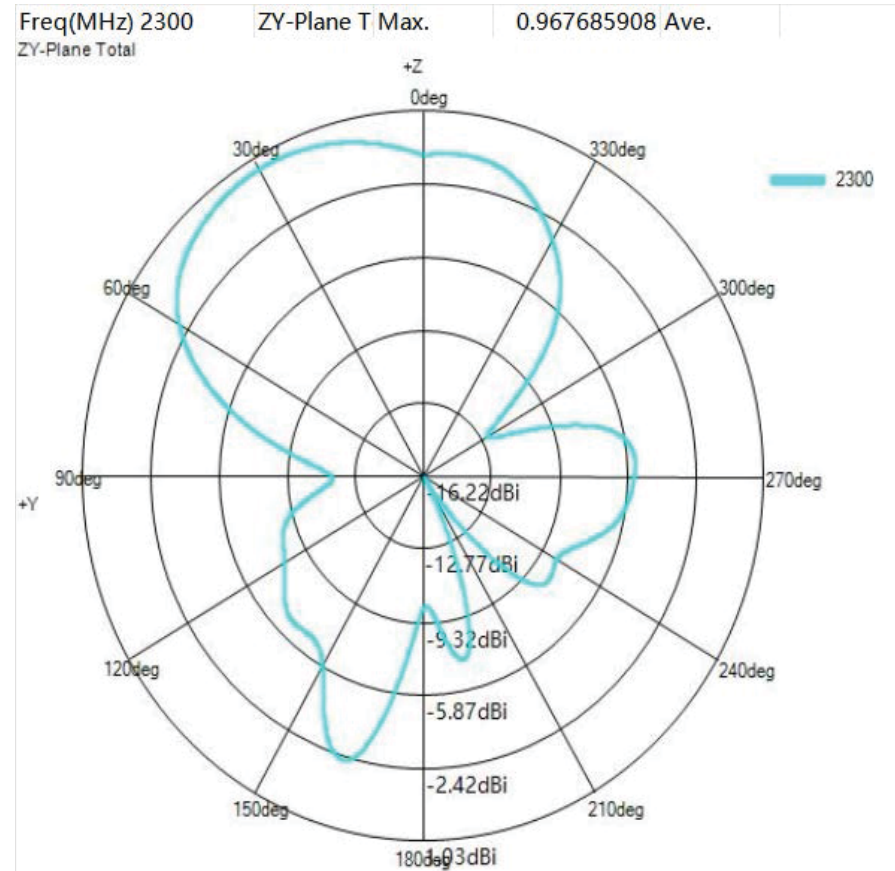
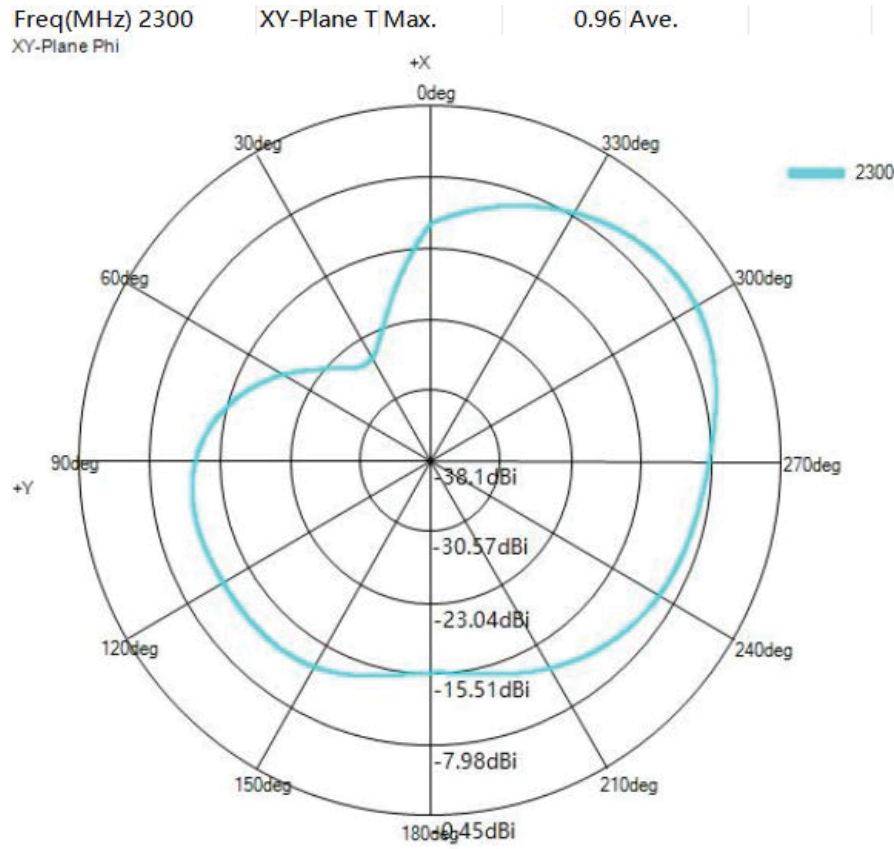


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Antenna pattern 5 : 2300MHZ

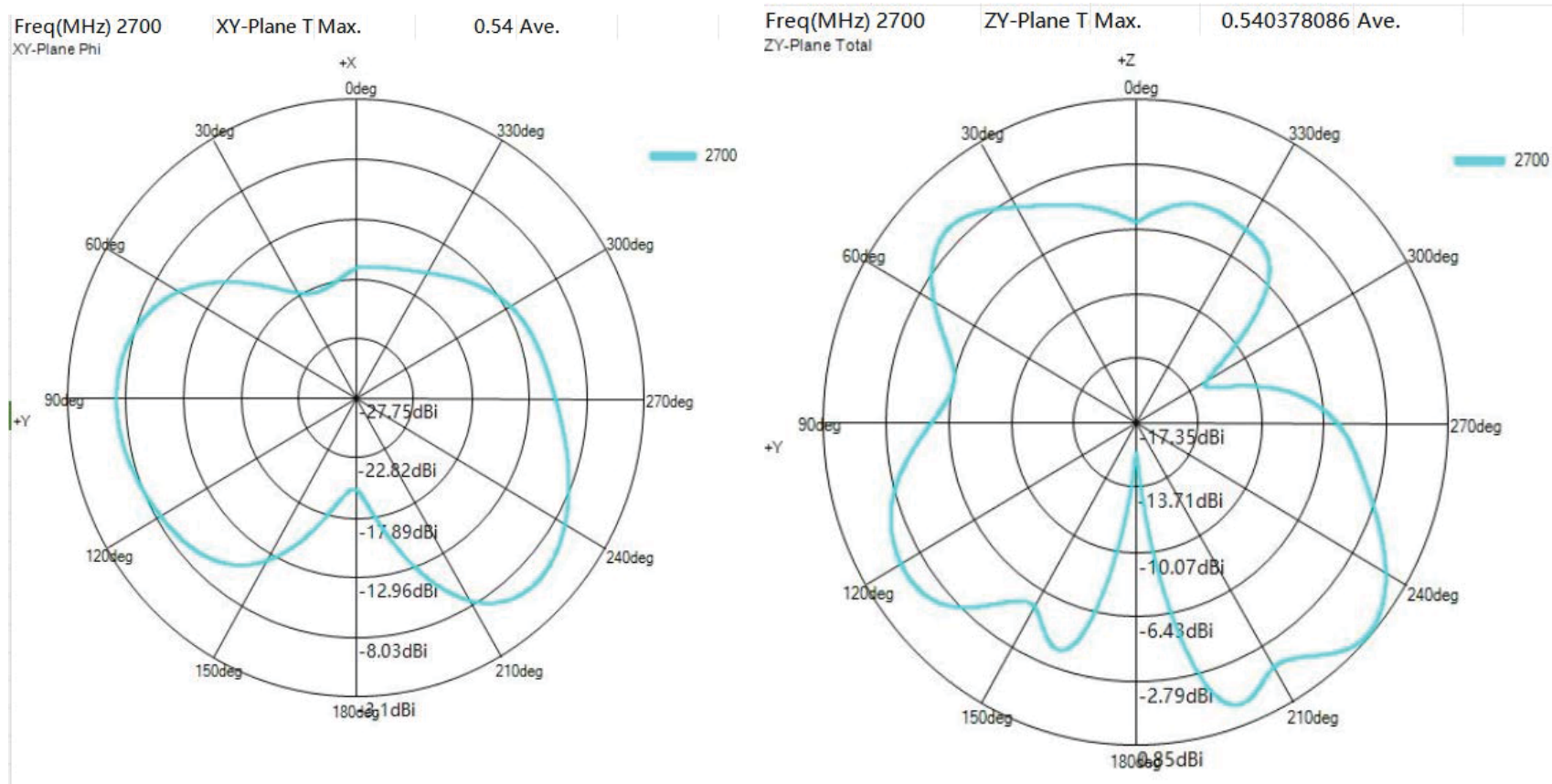


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Antenna pattern 6 : 2700MHZ



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6: Bluetooth antenna

antenna gain:

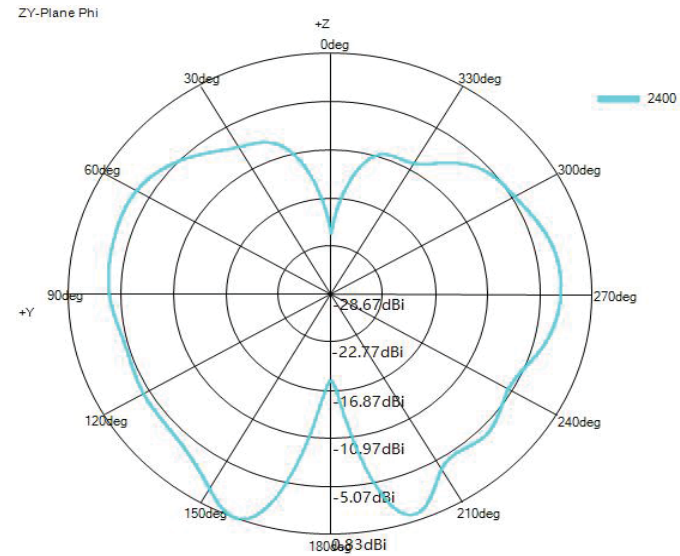
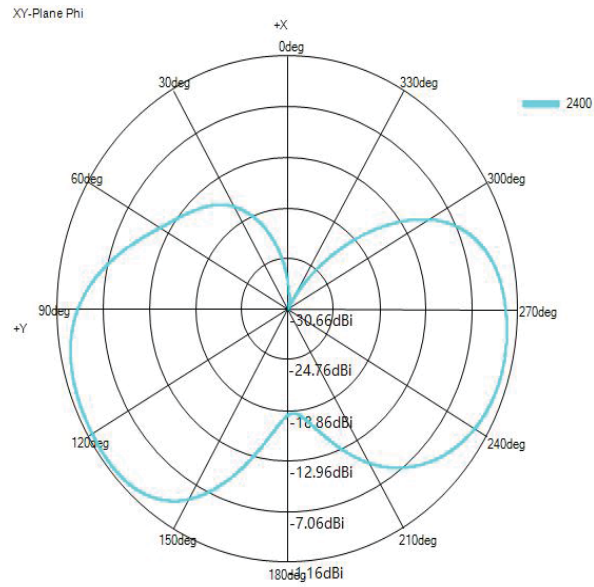
| Freq(MHz) | Gain(dBi) | Efficiency(dB) | Efficiency(%) |
|-----------|-----------|----------------|---------------|
| 2400 | -0.63 | -4.61 | 34.63 |
| 2410 | -0.55 | -4.51 | 35.42 |
| 2420 | -0.63 | -4.43 | 36.04 |
| 2430 | -0.74 | -4.53 | 35.20 |
| 2440 | -0.77 | -4.56 | 35.02 |
| 2450 | -0.79 | -4.65 | 34.25 |
| 2460 | -0.90 | -4.86 | 32.64 |
| 2470 | -1.14 | -5.15 | 30.52 |
| 2480 | -1.28 | -5.44 | 28.58 |
| 2490 | -1.41 | -5.68 | 27.04 |
| 2500 | -1.60 | -5.94 | 25.44 |
| | | | |



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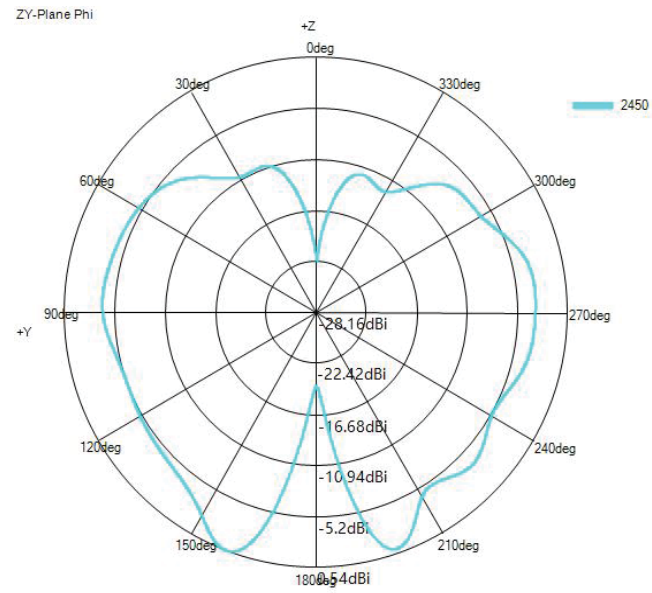
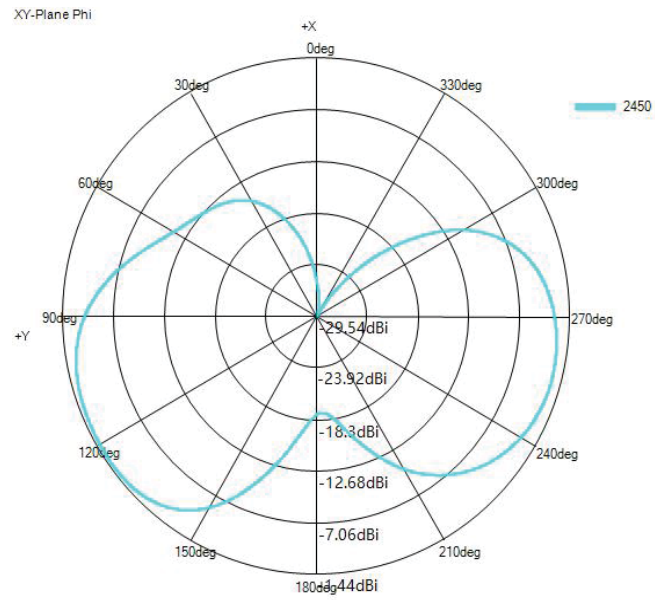
Antenna pattern 1 : 2400MHZ

1) 2400 T90/P90



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1) 2450 T90/P90

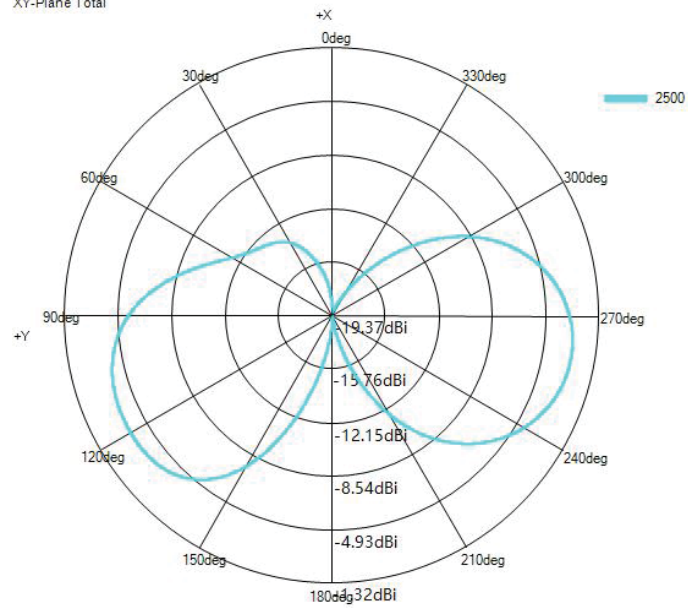




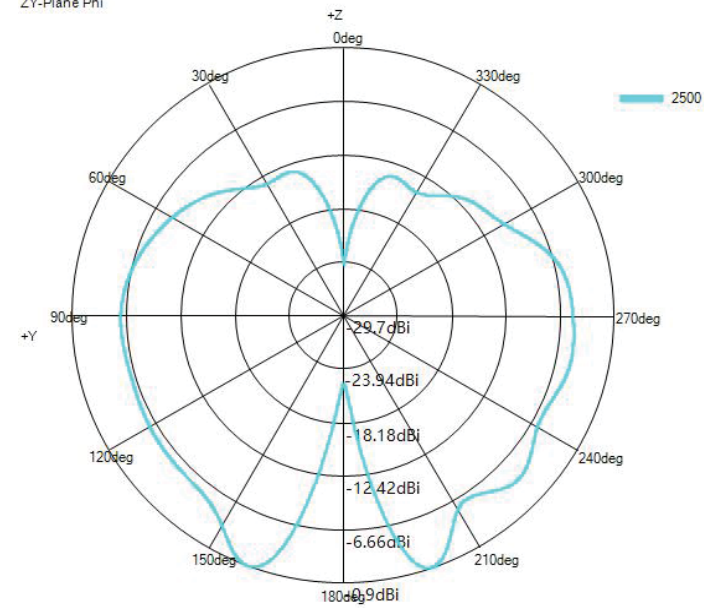
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3) 1) 2500 T90/P90/P0

XY-Plane Total



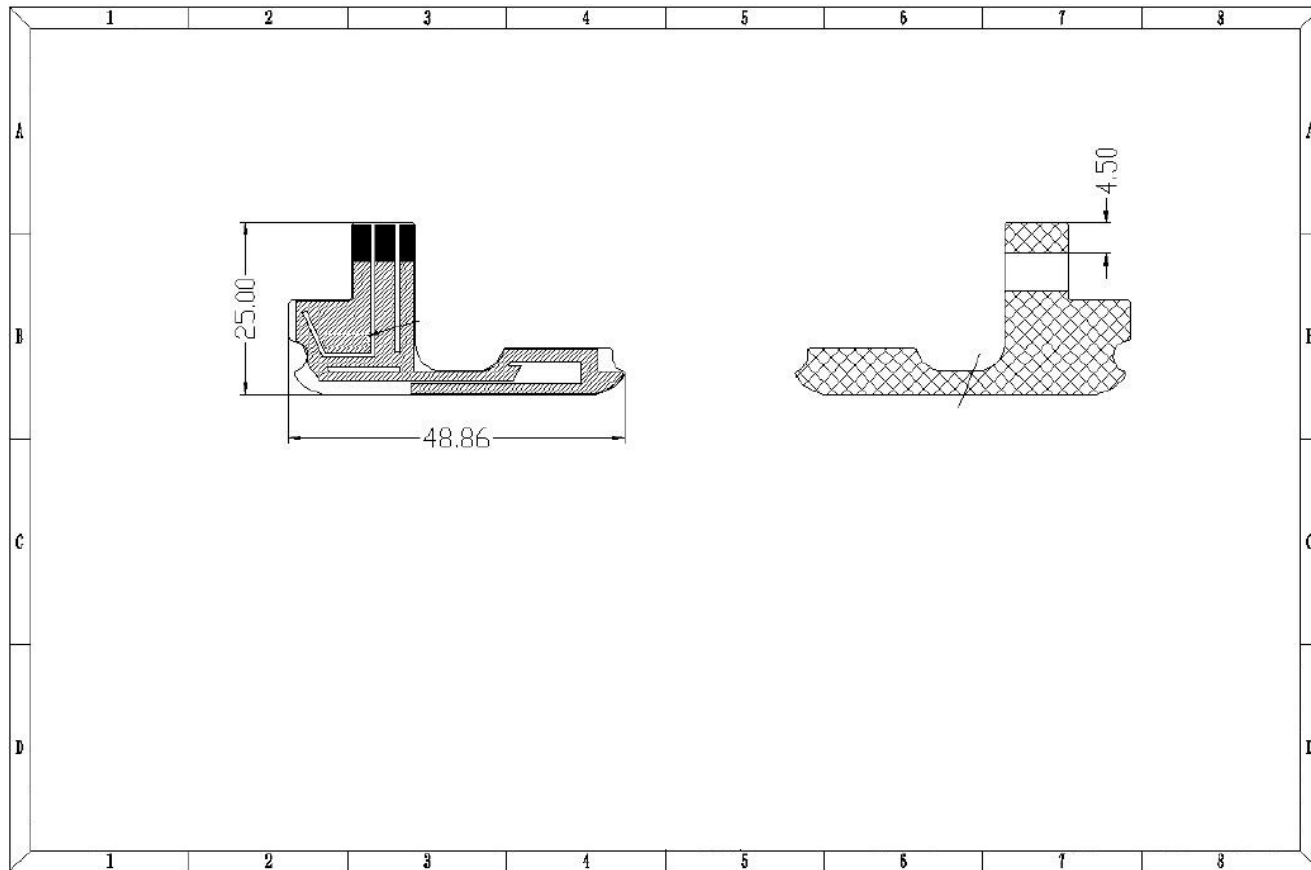
ZY-Plane Phi





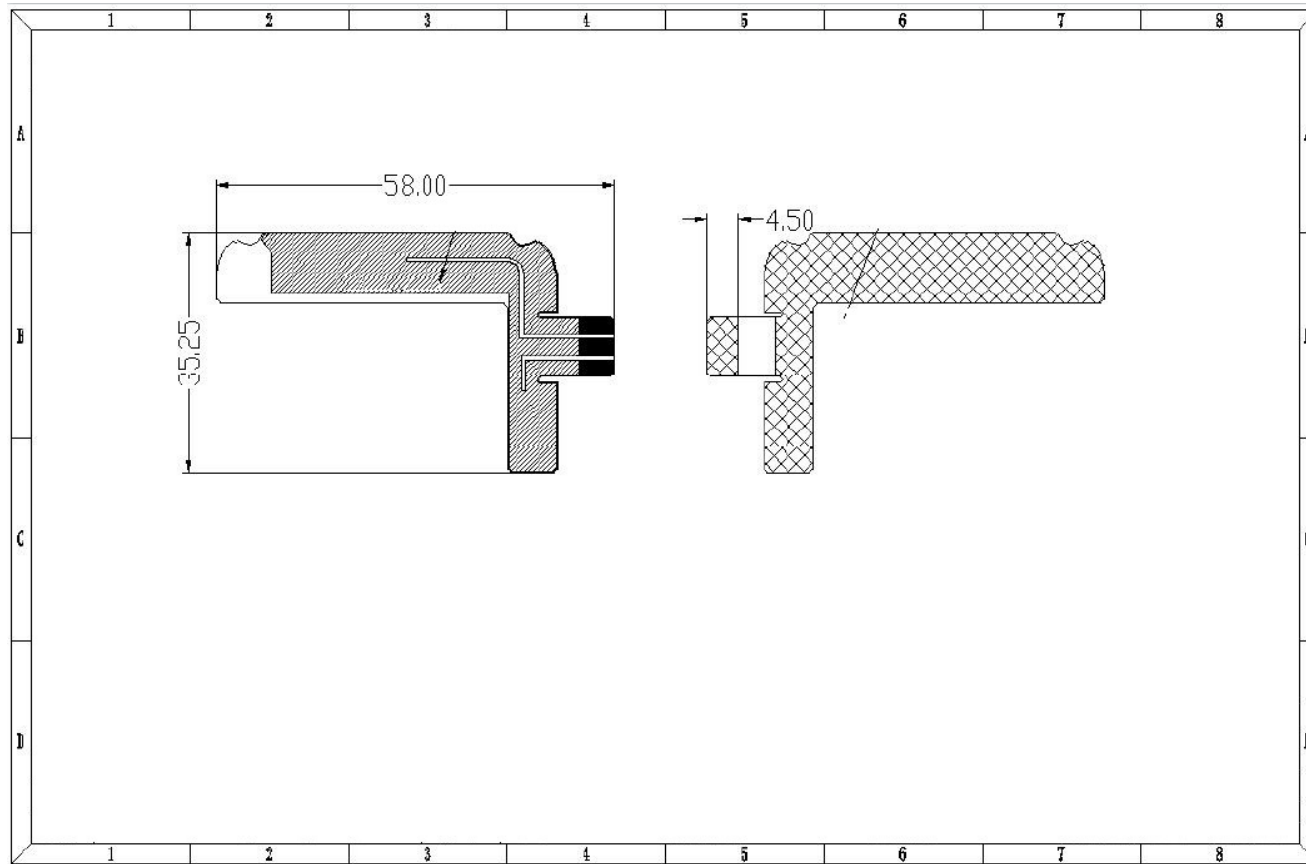
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Antenna drawing 1: MAIN Antenna 48.86mm*25mm



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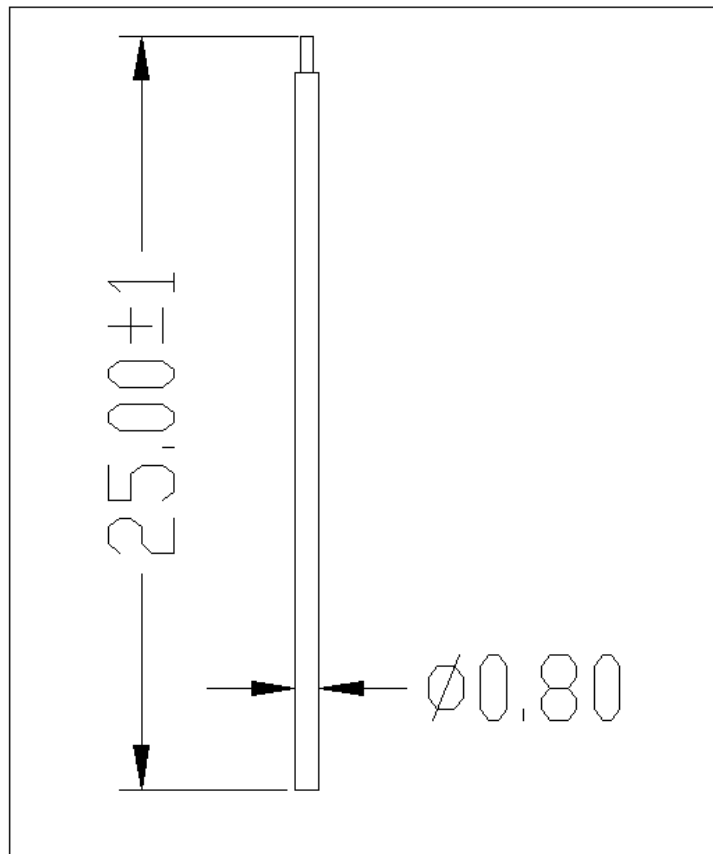
Antenna drawing 2: DIV Antenna 35.25mm*58mm





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Antenna drawing 3: BT Antenna 25mm* Φ 0.8mm



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