

Project:

2302AN

Antenna type:

metal antenna

ANT0:70mm\*1mm\*5mm

ANT1:48mm\*1mm\*5mm

ANT2:15mm\*1mm\*5mm

ANT3:25mm\*1mm\*5mm

ANT4:22mm\*1mm\*5mm

ANT5:8mm\*1mm\*5mm

ANT6:32mm\*1mm\*5mm

ANT7:25mm\*1mm\*5mm

ANT8:13mm\*1mm\*5mm

Antenna Size:

Test standard:

| Name                | Parameter            | Method                                     | Standard no.            |
|---------------------|----------------------|--|-------------------------|
| Antenna performance | Radiation efficiency | IEEE Standard Test Procedures for Antennas | ANSI/IEEE Std 149- 2021 |

Equipment list:

| Equipment         | Manufacturer  | model.NO | serial No. | last cal.  | Due Date   |
|-------------------|---------------|----------|------------|------------|------------|
| Network Analyzer  | Agilent       | E5071C   | QROE005    | 2023.10.17 | 2024.10.16 |
| Network Analyzer  | Agilent       | N5230A   | QROE009    | 2023.10.17 | 2024.10.16 |
| Integrated survey | ROHDE&SCHWARZ | CMW500   | QROE006    | 2023.10.17 | 2024.10.16 |

Test date:

2023.12.21

Tested by:

Shenzhen Maya Communication Equipment Co., Ltd.

Address:

Room 202, Floor 2, Building 1, Guanghui Science Park, Mingqing Road, Longhua Street, Longhua District, Shenzhen

Test Software:

GTS MaxSign-RayZone5000\_A

Engineer:

Guojun.Feng

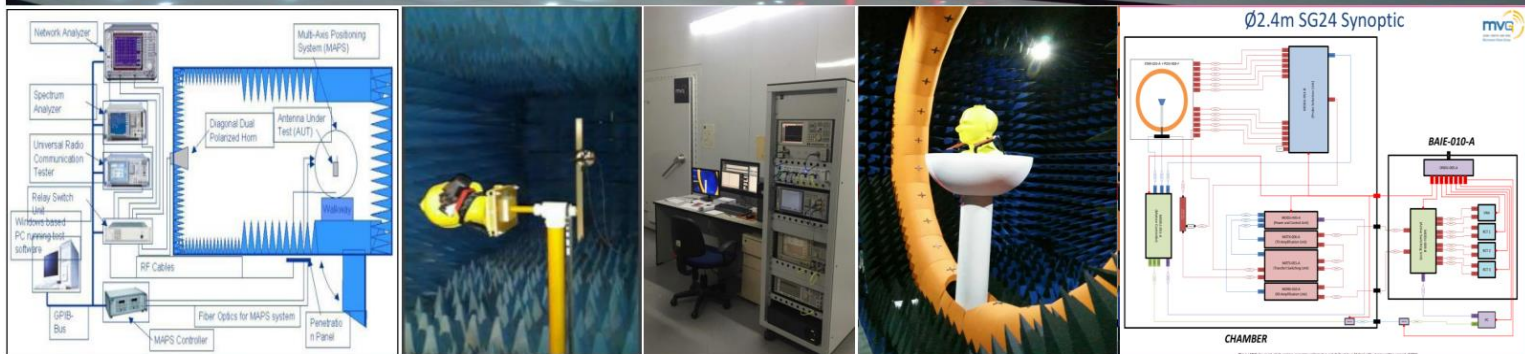
antenna gain and

2D/3D:

please refer to data.

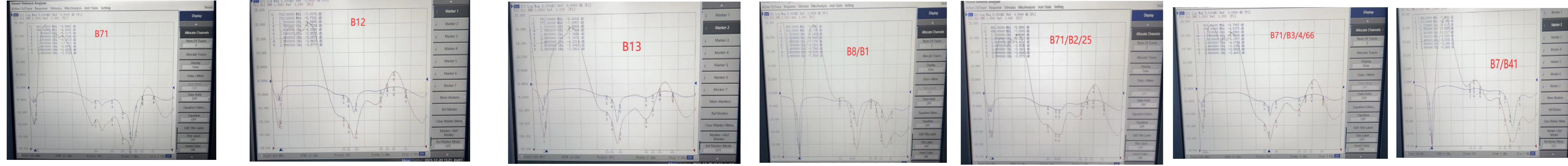


Test setup:

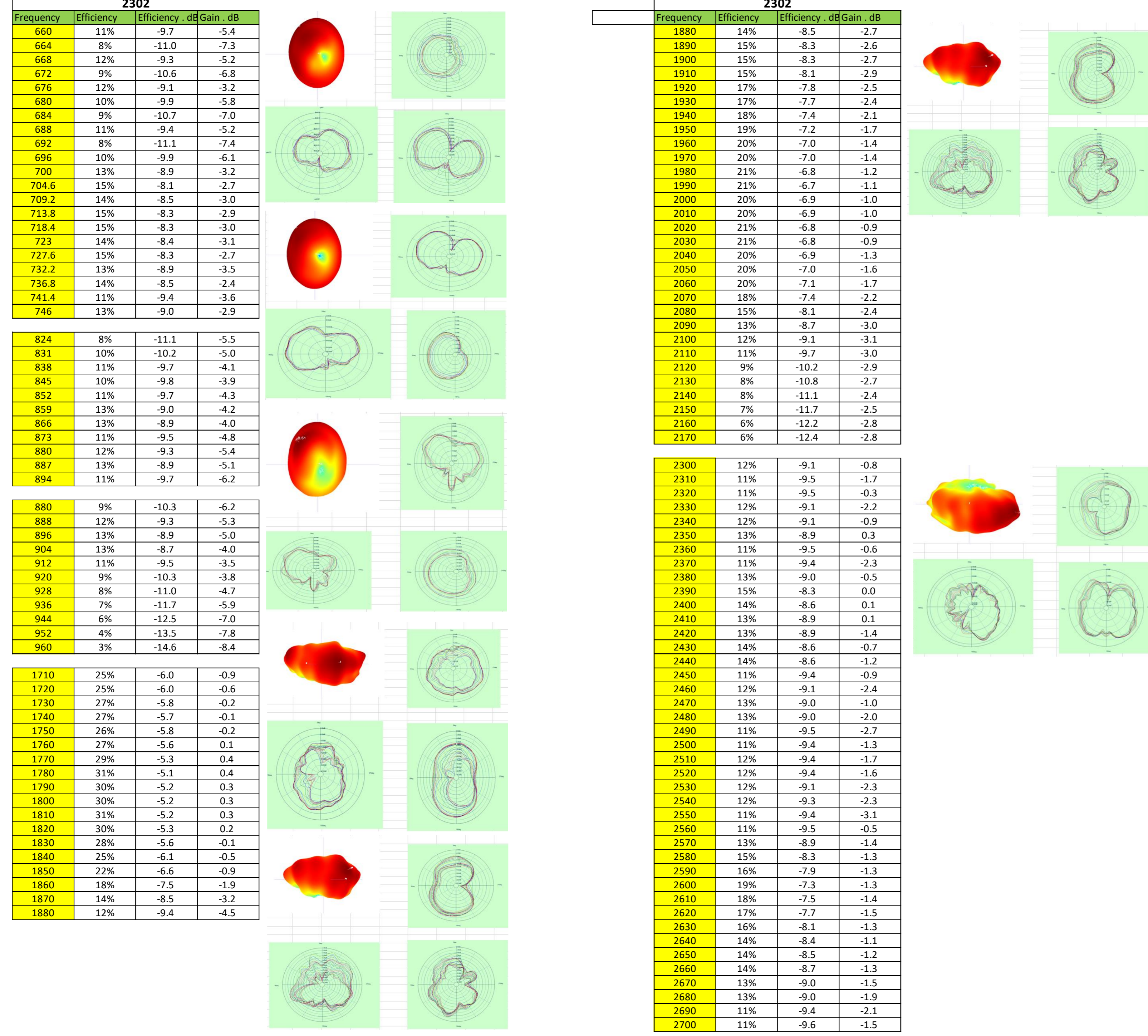


3座远场3D全电波微波暗室实验室系统, 1座MVG-SG24LT (Satmio) 近场3D微波暗室实验室系统 (与国家相关实验室同步)

ANTO LMB PRX  
S11&Smith



ANTO LMB PRX

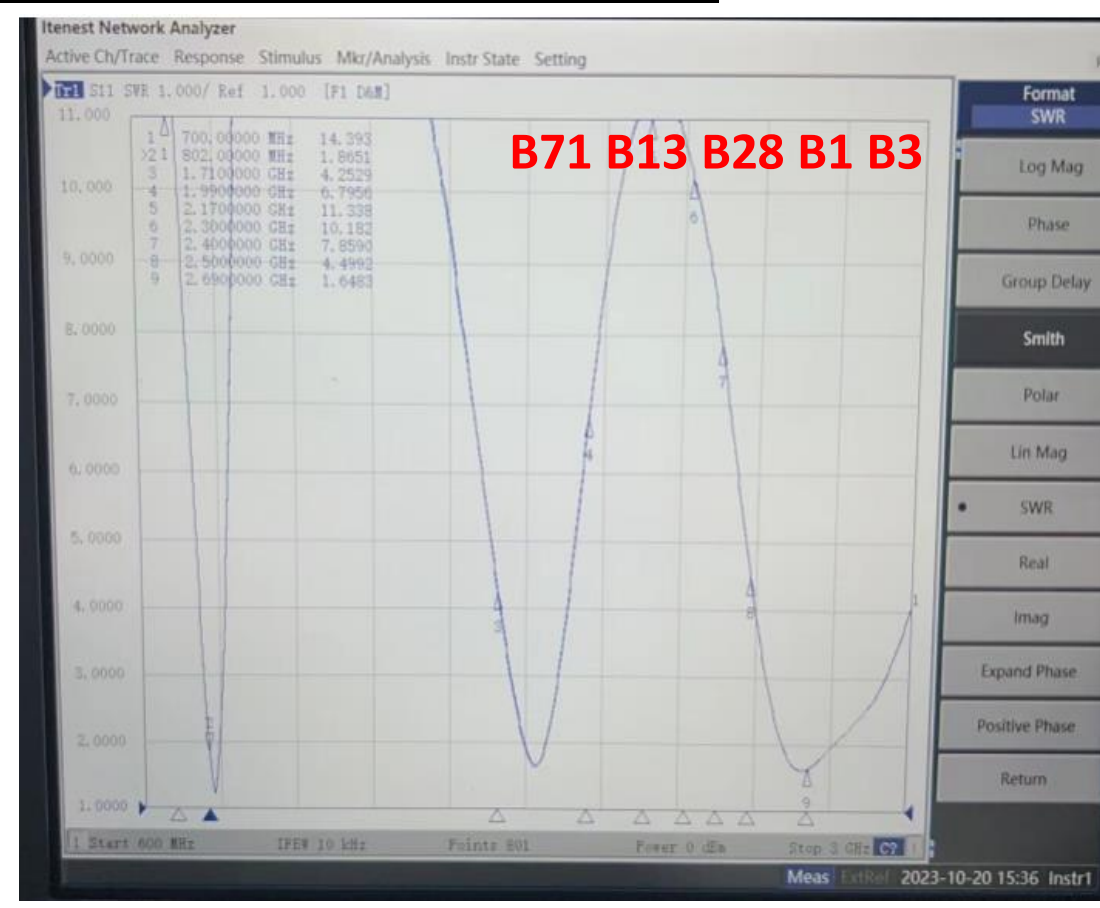
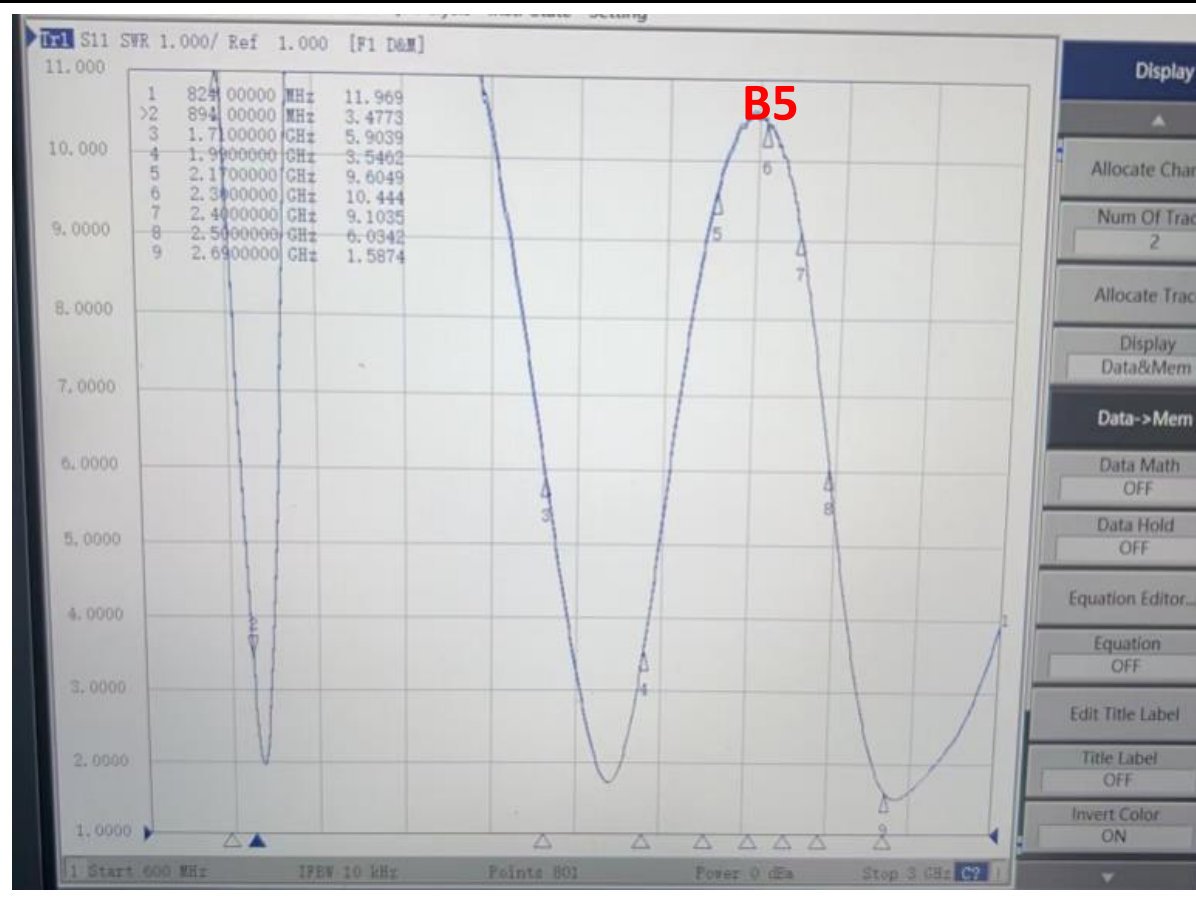
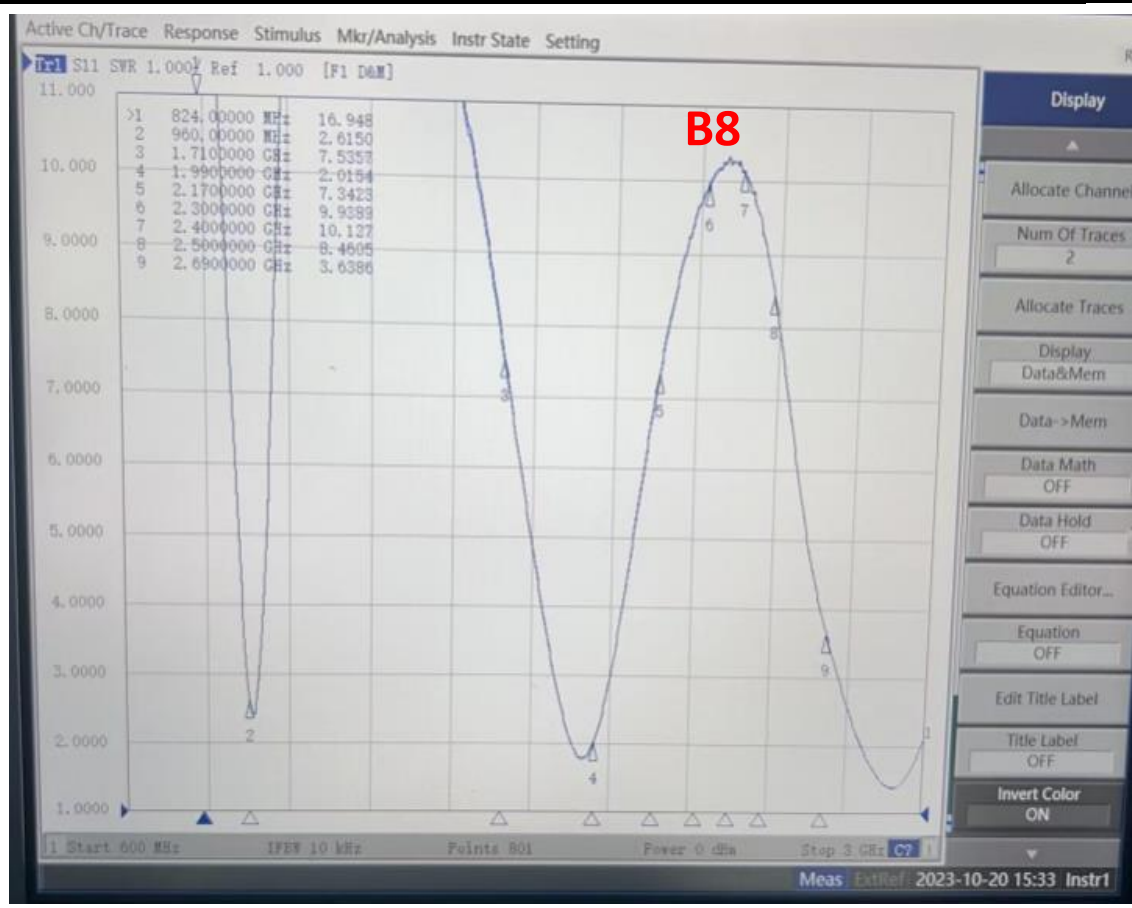


| Frequency | Intensity | Intensity | Gain | dB |
|-----------|-----------|-----------|------|----|
| 660       | 11%       | -9.7      | -5.4 |    |
| 664       | 8%        | -11.0     | -7.3 |    |
| 668       | 12%       | -9.3      | -5.2 |    |
| 672       | 9%        | -10.6     | -6.8 |    |
| 676       | 12%       | -9.1      | -5.2 |    |
| 680       | 10%       | -9.9      | -5.8 |    |
| 684       | 9%        | -10.7     | -7.0 |    |
| 688       | 11%       | -9.4      | -5.2 |    |
| 692       | 8%        | -11.1     | -7.4 |    |
| 696       | 10%       | -9.9      | -6.1 |    |
| 700       | 11%       | -8.9      | -5.2 |    |
| 704.6     | 15%       | -8.1      | -2.7 |    |
| 709.2     | 14%       | -8.5      | -3.0 |    |
| 713.8     | 15%       | -8.3      | -2.9 |    |
| 718.4     | 15%       | -8.3      | -3.0 |    |
| 723       | 14%       | -8.4      | -3.1 |    |
| 727.6     | 15%       | -8.3      | -3.2 |    |
| 732.2     | 15%       | -8.9      | -3.5 |    |
| 736.8     | 14%       | -8.5      | -2.4 |    |
| 741.4     | 11%       | -9.4      | -3.6 |    |
| 746       | 13%       | -9.0      | -2.9 |    |
| 824       | 8%        | -11.1     | -5.5 |    |
| 831       | 10%       | -10.2     | -5.0 |    |
| 838       | 11%       | -9.7      | -4.1 |    |
| 845       | 10%       | -9.8      | -3.9 |    |
| 852       | 11%       | -9.7      | -4.3 |    |
| 859       | 13%       | -9.0      | -4.2 |    |
| 866       | 13%       | -8.9      | -4.0 |    |
| 873       | 11%       | -9.5      | -4.8 |    |
| 880       | 12%       | -9.3      | -5.4 |    |
| 887       | 11%       | -9.9      | -6.1 |    |
| 894       | 11%       | -9.7      | -6.2 |    |
| 898       | 9%        | -10.3     | -6.2 |    |
| 898       | 17%       | -9.3      | -5.3 |    |
| 896       | 13%       | -8.9      | -6.0 |    |
| 904       | 11%       | -8.7      | -4.0 |    |
| 912       | 11%       | -9.5      | -3.5 |    |
| 920       | 9%        | -10.3     | -3.8 |    |
| 928       | 8%        | -11.0     | -4.7 |    |
| 936       | 7%        | -11.7     | -5.8 |    |
| 944       | 6%        | -12.5     | -7.0 |    |
| 952       | 4%        | -13.5     | -7.8 |    |
| 960       | 3%        | -14.6     | -8.4 |    |
| 1720      | 25%       | -6.0      | -0.9 |    |
| 1720      | 25%       | -6.0      | -0.6 |    |
| 1730      | 27%       | -5.8      | -0.2 |    |
| 1740      | 27%       | -5.7      | -0.1 |    |
| 1750      | 26%       | -5.8      | -0.2 |    |
| 1760      | 27%       | -5.6      | -0.1 |    |
| 1770      | 29%       | -5.3      | 0.4  |    |
| 1780      | 31%       | -5.1      | 0.4  |    |
| 1790      | 30%       | -5.2      | 0.3  |    |
| 1800      | 30%       | -5.2      | 0.3  |    |
| 1810      | 31%       | -5.2      | 0.3  |    |
| 1820      | 30%       | -5.3      | 0.2  |    |
| 1830      | 29%       | -5.6      | -0.1 |    |
| 1840      | 25%       | -6.1      | -0.5 |    |
| 1850      | 22%       | -6.6      | -0.9 |    |
| 1860      | 18%       | -7.5      | -1.9 |    |
| 1870      | 14%       | -8.5      | -3.2 |    |
| 1880      | 12%       | -9.4      | -4.5 |    |

| Frequency | Intensity | Intensity | Gain | dB |
|-----------|-----------|-----------|------|----|
| 1890      | 14%       | -8.5      | -2.7 |    |
| 1890      | 15%       | -8.3      | -2.6 |    |
| 1900      | 15%       | -8.1      | -2.7 |    |
| 1910      | 15%       | -8.1      | -2.9 |    |
| 1920      | 17%       | -7.8      | -2.5 |    |
| 1930      | 17%       | -7.7      | -2.4 |    |
| 1940      | 18%       | -7.4      | -2.1 |    |
| 1950      | 19%       | -7.2      | -1.7 |    |
| 1960      | 20%       | -7.0      | -1.4 |    |
| 1970      | 20%       | -6.9      | -1.4 |    |
| 1980      | 21%       | -6.8      | -1.2 |    |
| 1990      | 21%       | -6.7      | -1.1 |    |
| 2000      | 20%       | -6.9      | -1.0 |    |
| 2010      | 20%       | -6.9      | -1.0 |    |
| 2020      | 21%       | -6.8      | -0.9 |    |
| 2030      | 21%       | -6.8      | -0.9 |    |
| 2040      | 20%       | -6.9      | -1.1 |    |
| 2050      | 20%       | -7.0      | -1.6 |    |
| 2060      | 20%       | -7.1      | -1.7 |    |
| 2070      | 18%       | -7.4      | -2.3 |    |
| 2080      | 15%       | -8.1      | -2.4 |    |
| 2090      | 13%       | -8.7      | -3.0 |    |
| 2100      | 12%       | -9.1      | -3.1 |    |
| 2110      | 11%       | -9.7      | -3.0 |    |
| 2120      | 9%        | -10.2     | -2.9 |    |
| 2130      | 8%        | -10.8     | -2.7 |    |
| 2140      | 8%        | -11.1     | -2.4 |    |
| 2150      | 7%        | -11.2     | -2.5 |    |
| 2160      | 6%        | -12.2     | -2.8 |    |
| 2170      | 6%        | -12.4     | -2.8 |    |
| 2180      | 17%       | -9.1      | -0.8 |    |
| 2190      | 11%       | -9.5      | -1.7 |    |
| 2200      | 11%       | -9.5      | -0.3 |    |
| 2210      | 12%       | -9.1      | -0.2 |    |
| 2240      | 17%       | -9.1      | -0.9 |    |
| 2250      | 18%       | -8.9      | 0.3  |    |
| 2260      | 11%       | -9.5      | -0.6 |    |
| 2270      | 11%       | -9.4      | -2.3 |    |
| 2280      | 11%       | -9.0      | -0.5 |    |
| 2290      | 15%       | -8.3      | 0.0  |    |
| 2300      | 14%       | -8.6      | 0.1  |    |
| 2310      | 13%       | -8.9      | -1.4 |    |
| 2320      | 14%       | -8.6      | -0.7 |    |
| 2340      | 14%       | -8.6      | -1.2 |    |
| 2350      | 11%       | -9.4      | -0.8 |    |
| 2360      | 12%       | -9.1      | -2.4 |    |
| 2370      | 13%       | -9.0      | -1.0 |    |
| 2380      | 13%       | -9.0      | -2.0 |    |
| 2390      | 11%       | -9.5      | -2.7 |    |
| 2400      | 11%       | -9.4      | -1.3 |    |
| 2410      | 12%       | -9.4      | -1.7 |    |
| 2420      | 12%       | -9.4      | -1.6 |    |
| 2430      | 12%       | -9.1      | -2.3 |    |
| 2440      | 13%       | -9.3      | -2.3 |    |
| 2450      | 15%       | -9.4      | -1.1 |    |
| 2460      | 11%       | -9.5      | -0.5 |    |
| 2470      | 13%       | -8.9      | -1.4 |    |
| 2480      | 15%       | -8.3      | -1.3 |    |
| 2490      | 16%       | -7.9      | -1.3 |    |
| 2500      | 15%       | -7.3      | -1.3 |    |
| 2510      | 18%       | -7.5      | -1.4 |    |
| 2520      | 17%       | -7.7      | -1.5 |    |
| 2530      | 16%       | -8.1      | -1.1 |    |
| 2540      | 14%       | -8.4      | -1.1 |    |
| 2550      | 14%       | -8.3      | -1.2 |    |
| 2560      | 14%       | -8.7      | -1.3 |    |
| 2570      | 15%       | -9.0      | -1.5 |    |
| 2580      | 15%       | -9.0      | -1.9 |    |
| 2590      | 11%       | -9.4      | -2.1 |    |
| 2600      | 11%       | -9.6      | -1.5 |    |

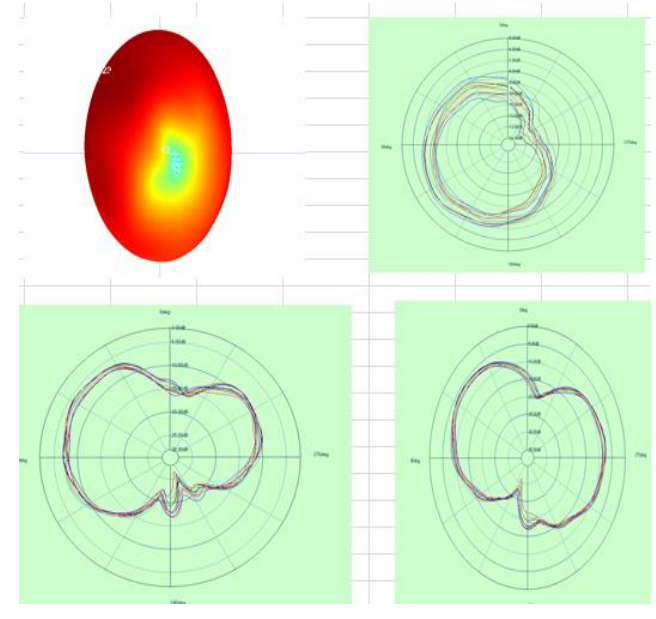
ANT1 LMHB DRX

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ANT1 LMHB DRX

| Frequency | Efficiency | Efficiency_dB | Gain_dB |
|-----------|------------|---------------|---------|
| 750       | 3.2%       | -14.9         | -11.7   |
| 760       | 4.0%       | -13.9         | -10.7   |
| 770       | 4.8%       | -13.2         | -9.7    |
| 780       | 5.0%       | -13.0         | -9.1    |
| 790       | 5.0%       | -13.0         | -8.8    |
| 800       | 3.9%       | -14.1         | -9.4    |

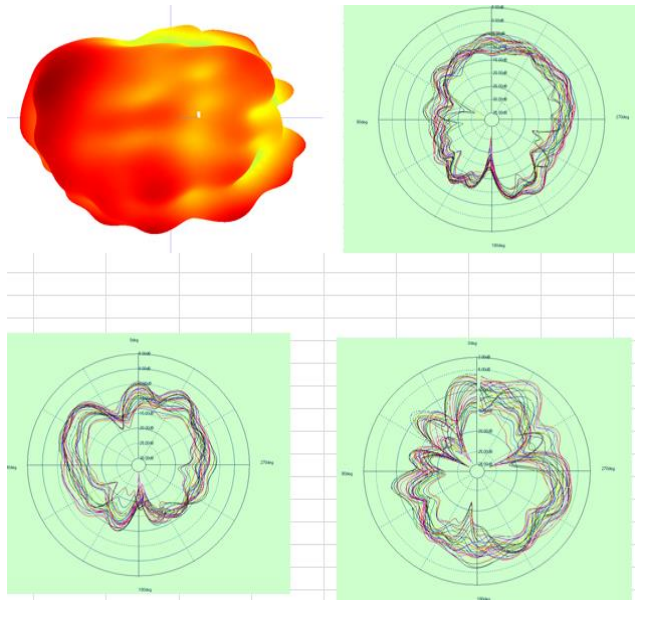


|     |      |       |       |
|-----|------|-------|-------|
| 824 | 2.3% | -16.3 | -18.3 |
| 834 | 2.4% | -16.2 | -17.1 |
| 844 | 2.5% | -16.0 | -15.9 |
| 854 | 3.7% | -14.4 | -14.6 |
| 864 | 3.9% | -14.1 | -13.5 |
| 874 | 4.1% | -13.9 | -12.5 |
| 884 | 5.4% | -12.7 | -11.2 |
| 894 | 4.7% | -13.3 | -10.6 |

|     |      |       |       |
|-----|------|-------|-------|
| 900 | 4.5% | -13.5 | -16.4 |
| 910 | 4.6% | -13.3 | -15.4 |
| 920 | 4.8% | -13.2 | -14.6 |
| 930 | 5.0% | -13.0 | -13.7 |
| 940 | 5.3% | -12.8 | -12.7 |
| 950 | 4.5% | -13.5 | -11.9 |
| 960 | 4.2% | -13.8 | -11.2 |
| 970 | 3.8% | -14.2 | -10.9 |
| 980 | 3.3% | -14.8 | -10.9 |

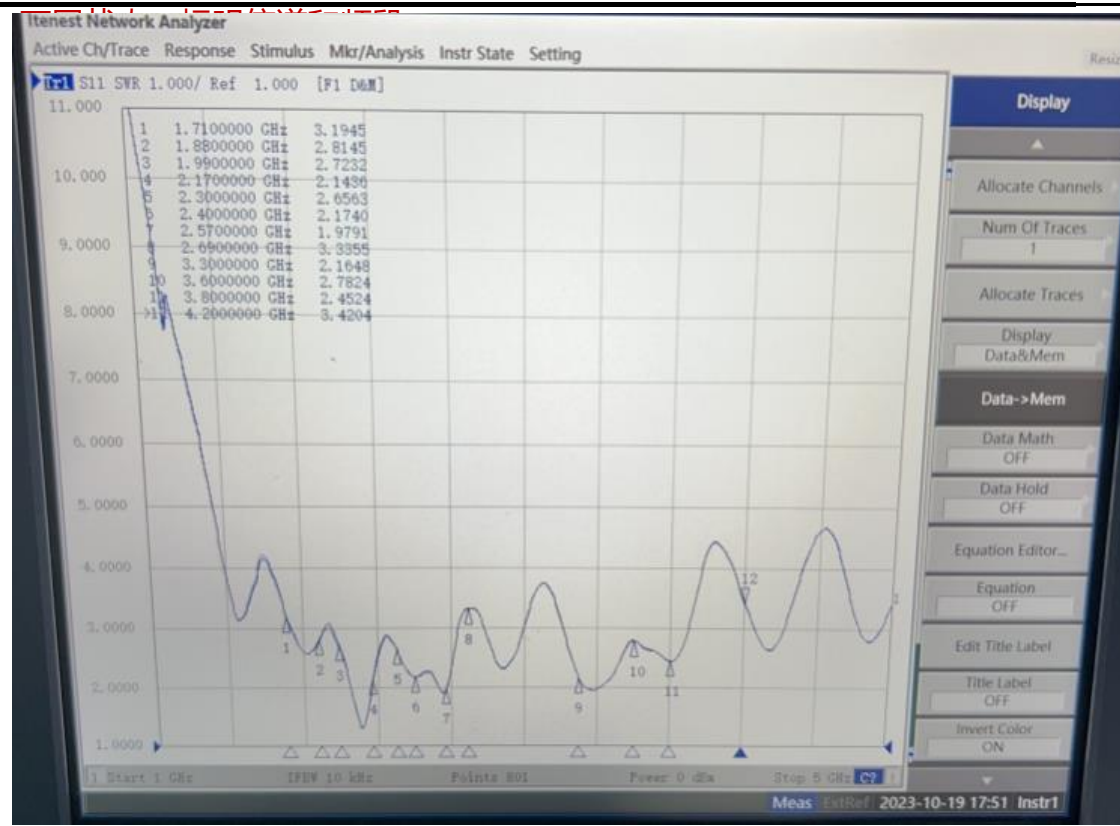
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| Frequency | Efficiency | Efficiency_dB | Gain_dB |
|-----------|------------|---------------|---------|
| 1710      | 9.1%       | -10.4         | -4.1    |
| 1720      | 9.6%       | -10.2         | -3.7    |
| 1730      | 10.2%      | -9.9          | -3.3    |
| 1740      | 10.5%      | -9.8          | -3.4    |
| 1750      | 10.2%      | -9.9          | -3.8    |
| 1760      | 10.5%      | -9.8          | -3.4    |
| 1770      | 10.8%      | -9.7          | -2.9    |
| 1780      | 11.0%      | -9.6          | -2.7    |
| 1790      | 10.5%      | -9.8          | -3.0    |
| 1800      | 10.4%      | -9.8          | -3.0    |
| 1810      | 10.4%      | -9.8          | -3.2    |
| 1820      | 10.2%      | -9.9          | -3.6    |
| 1830      | 9.5%       | -10.2         | -4.1    |
| 1840      | 8.9%       | -10.5         | -4.4    |
| 1850      | 8.7%       | -10.6         | -4.7    |
| 1860      | 8.0%       | -11.0         | -5.3    |
| 1870      | 7.6%       | -11.2         | -6.1    |
| 1880      | 7.0%       | -11.6         | -6.7    |
| 1890      | 6.7%       | -11.7         | -6.9    |
| 1900      | 6.3%       | -12.0         | -7.3    |
| 1910      | 6.0%       | -12.2         | -7.5    |
| 1920      | 5.6%       | -12.5         | -7.9    |
| 1930      | 5.6%       | -12.5         | -6.5    |
| 1940      | 5.2%       | -12.9         | -8.5    |
| 1950      | 4.9%       | -13.1         | -8.9    |
| 1960      | 4.5%       | -13.5         | -9.3    |
| 1970      | 4.2%       | -13.7         | -9.7    |
| 1980      | 3.9%       | -14.1         | -10.2   |
| 1990      | 3.8%       | -14.3         | -10.3   |
| 2000      | 3.5%       | -14.5         | -10.6   |
| 2010      | 3.4%       | -14.7         | -10.9   |
| 2020      | 3.2%       | -15.0         | -11.3   |
| 2030      | 3.0%       | -15.3         | -11.6   |
| 2040      | 2.8%       | -15.5         | -11.9   |
| 2050      | 2.8%       | -15.6         | -11.8   |
| 2060      | 2.7%       | -15.6         | -11.7   |
| 2070      | 2.7%       | -15.7         | -11.9   |
| 2080      | 2.5%       | -16.0         | -12.3   |
| 2090      | 2.4%       | -16.2         | -12.4   |
| 2100      | 2.4%       | -16.2         | -12.4   |
| 2110      | 2.4%       | -16.2         | -12.3   |
| 2120      | 2.3%       | -16.4         | -12.6   |
| 2130      | 2.2%       | -16.5         | -12.4   |
| 2140      | 2.2%       | -16.5         | -12.5   |
| 2150      | 2.2%       | -16.6         | -12.7   |
| 2160      | 2.1%       | -16.8         | -13.2   |
| 2170      | 2.0%       | -16.9         | -13.3   |
| 2180      | 2.0%       | -16.9         | -13.4   |
| 2190      | 2.0%       | -16.9         | -13.5   |
| 2200      | 2.0%       | -16.9         | -13.4   |
| 2210      | 2.0%       | -17.0         | -13.6   |
| 2220      | 2.0%       | -17.0         | -13.7   |
| 2230      | 2.0%       | -17.1         | -14.0   |
| 2240      | 1.9%       | -17.1         | -14.2   |
| 2250      | 2.0%       | -17.1         | -14.3   |
| 2260      | 1.9%       | -17.1         | -14.6   |
| 2270      | 1.9%       | -17.2         | -14.7   |
| 2280      | 1.9%       | -17.1         | -14.6   |
| 2290      | 1.9%       | -17.1         | -14.0   |
| 2300      | 2.0%       | -17.1         | -13.4   |
| 2310      | 2.0%       | -17.0         | -12.8   |
| 2320      | 2.0%       | -16.9         | -12.2   |
| 2330      | 2.1%       | -16.8         | -11.6   |
| 2340      | 2.2%       | -16.6         | -10.6   |
| 2350      | 2.3%       | -16.4         | -9.6    |
| 2360      | 2.4%       | -16.2         | -9.1    |
| 2370      | 2.5%       | -16.1         | -8.6    |
| 2380      | 2.6%       | -15.9         | -8.0    |
| 2390      | 2.8%       | -15.5         | -7.4    |
| 2400      | 3.0%       | -15.2         | -7.0    |
| 2410      | 3.2%       | -14.9         | -6.4    |
| 2420      | 3.4%       | -14.7         | -5.8    |
| 2430      | 3.7%       | -14.3         | -5.4    |
| 2440      | 3.9%       | -14.1         | -5.3    |
| 2450      | 4.1%       | -13.8         | -4.9    |
| 2460      | 4.4%       | -13.6         | -4.7    |
| 2470      | 4.7%       | -13.3         | -4.8    |
| 2480      | 4.9%       | -13.1         | -4.7    |
| 2490      | 5.3%       | -12.8         | -4.2    |
| 2500      | 5.8%       | -12.4         | -3.7    |
| 2510      | 6.0%       | -12.2         | -3.6    |
| 2520      | 6.2%       | -12.0         | -3.2    |
| 2530      | 6.6%       | -11.8         | -3.0    |
| 2540      | 7.2%       | -11.4         | -2.8    |
| 2550      | 7.4%       | -11.3         | -2.8    |
| 2560      | 7.6%       | -11.2         | -2.5    |
| 2570      | 7.9%       | -11.0         | -2.2    |
| 2580      | 8.4%       | -10.8         | -1.8    |
| 2590      | 8.6%       | -10.6         | -1.4    |
| 2600      | 8.9%       | -10.5         | -1.0    |
| 2610      | 9.1%       | -10.4         | -0.8    |
| 2620      | 9.3%       | -10.3         | -0.5    |
| 2630      | 9.4%       | -10.3         | -0.2    |
| 2640      | 9.5%       | -10.2         | 0.0     |
| 2650      | 9.6%       | -10.2         | 0.1     |
| 2660      | 9.8%       | -10.1         | 0.2     |
| 2670      | 10.3%      | -9.9          | 0.3     |
| 2680      | 10.5%      | -9.8          | 0.1     |
| 2690      | 10.7%      | -9.7          | 0.0     |
| 2700      | 10.3%      | -9.9          | -0.1    |



ANT2 MHB+N77 PRX MIMO

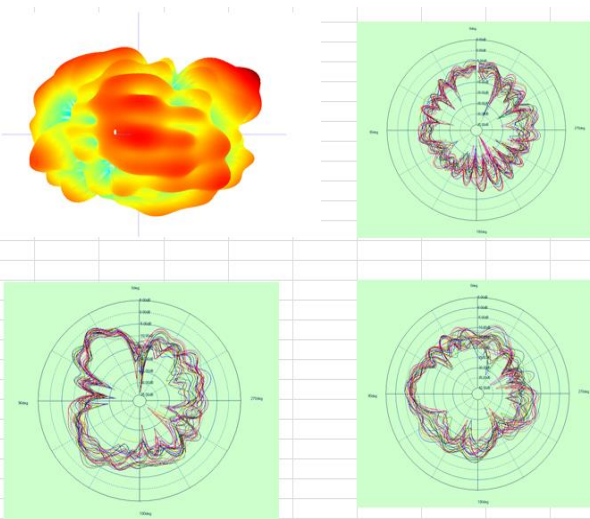
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MHB+N77 PRX MIMO

2302

| Frequency | Efficiency | Efficiency .d | Gain .dB |
|-----------|------------|---------------|----------|
| 1710      | 18%        | -7.3          | -1.8     |
| 1720      | 19%        | -7.2          | -1.3     |
| 1730      | 20%        | -7.0          | -0.9     |
| 1740      | 20%        | -7.0          | -1.0     |
| 1750      | 19%        | -7.3          | -1.4     |
| 1760      | 19%        | -7.1          | -1.0     |
| 1770      | 20%        | -6.9          | 0.0      |
| 1780      | 21%        | -6.7          | 0.6      |
| 1790      | 21%        | -6.8          | 0.7      |
| 1800      | 22%        | -6.6          | 0.9      |
| 1810      | 23%        | -6.4          | 1.2      |
| 1820      | 25%        | -6.0          | 1.2      |
| 1830      | 26%        | -5.9          | 1.3      |
| 1840      | 27%        | -5.7          | 1.6      |
| 1850      | 29%        | -5.4          | 2.0      |
| 1860      | 29%        | -5.4          | 2.1      |
| 1870      | 30%        | -5.3          | 2.1      |
| 1880      | 31%        | -5.1          | 2.3      |
| 1890      | 32%        | -5.0          | 2.3      |
| 1900      | 32%        | -4.9          | 2.3      |
| 1910      | 33%        | -4.8          | 2.3      |
| 1920      | 33%        | -4.8          | 2.3      |
| 1930      | 33%        | -4.8          | 2.3      |
| 1940      | 32%        | -4.9          | 2.2      |
| 1950      | 32%        | -5.0          | 2.2      |
| 1960      | 30%        | -5.2          | 1.9      |
| 1970      | 29%        | -5.4          | 1.8      |
| 1980      | 28%        | -5.6          | 1.8      |
| 1990      | 27%        | -5.8          | 1.9      |
| 2000      | 24%        | -6.1          | 1.4      |
| 2010      | 23%        | -6.4          | 1.2      |
| 2020      | 22%        | -6.6          | 1.1      |
| 2030      | 21%        | -6.8          | 0.9      |
| 2040      | 19%        | -7.2          | 0.6      |
| 2050      | 18%        | -7.5          | 0.7      |
| 2060      | 18%        | -7.5          | 0.9      |
| 2070      | 17%        | -7.6          | 0.6      |
| 2080      | 16%        | -8.0          | 0.2      |
| 2090      | 15%        | -8.3          | -0.2     |
| 2100      | 15%        | -8.3          | -0.3     |
| 2110      | 14%        | -8.6          | -0.7     |
| 2120      | 14%        | -8.6          | -0.6     |
| 2130      | 13%        | -8.8          | -0.6     |
| 2140      | 14%        | -8.7          | -0.6     |
| 2150      | 13%        | -8.9          | -1.0     |
| 2160      | 13%        | -8.9          | -1.3     |
| 2170      | 13%        | -9.0          | -1.3     |
| 2180      | 13%        | -8.9          | -1.4     |
| 2190      | 13%        | -8.9          | -1.6     |
| 2200      | 13%        | -8.8          | -1.8     |
| 2210      | 14%        | -8.7          | -1.7     |
| 2220      | 14%        | -8.7          | -1.9     |
| 2230      | 14%        | -8.7          | -2.1     |
| 2240      | 13%        | -8.7          | -2.2     |
| 2250      | 14%        | -8.6          | -2.2     |
| 2260      | 14%        | -8.6          | -2.3     |
| 2270      | 14%        | -8.7          | -2.3     |
| 2280      | 14%        | -8.7          | -2.3     |
| 2290      | 14%        | -8.7          | -2.4     |
| 2300      | 13%        | -8.7          | -2.3     |
| 2310      | 14%        | -8.7          | -2.2     |
| 2320      | 14%        | -8.6          | -2.0     |
| 2330      | 14%        | -8.7          | -2.1     |
| 2340      | 14%        | -8.5          | -1.8     |
| 2350      | 15%        | -8.3          | -1.6     |
| 2360      | 15%        | -8.2          | -1.5     |
| 2370      | 15%        | -8.2          | -1.2     |

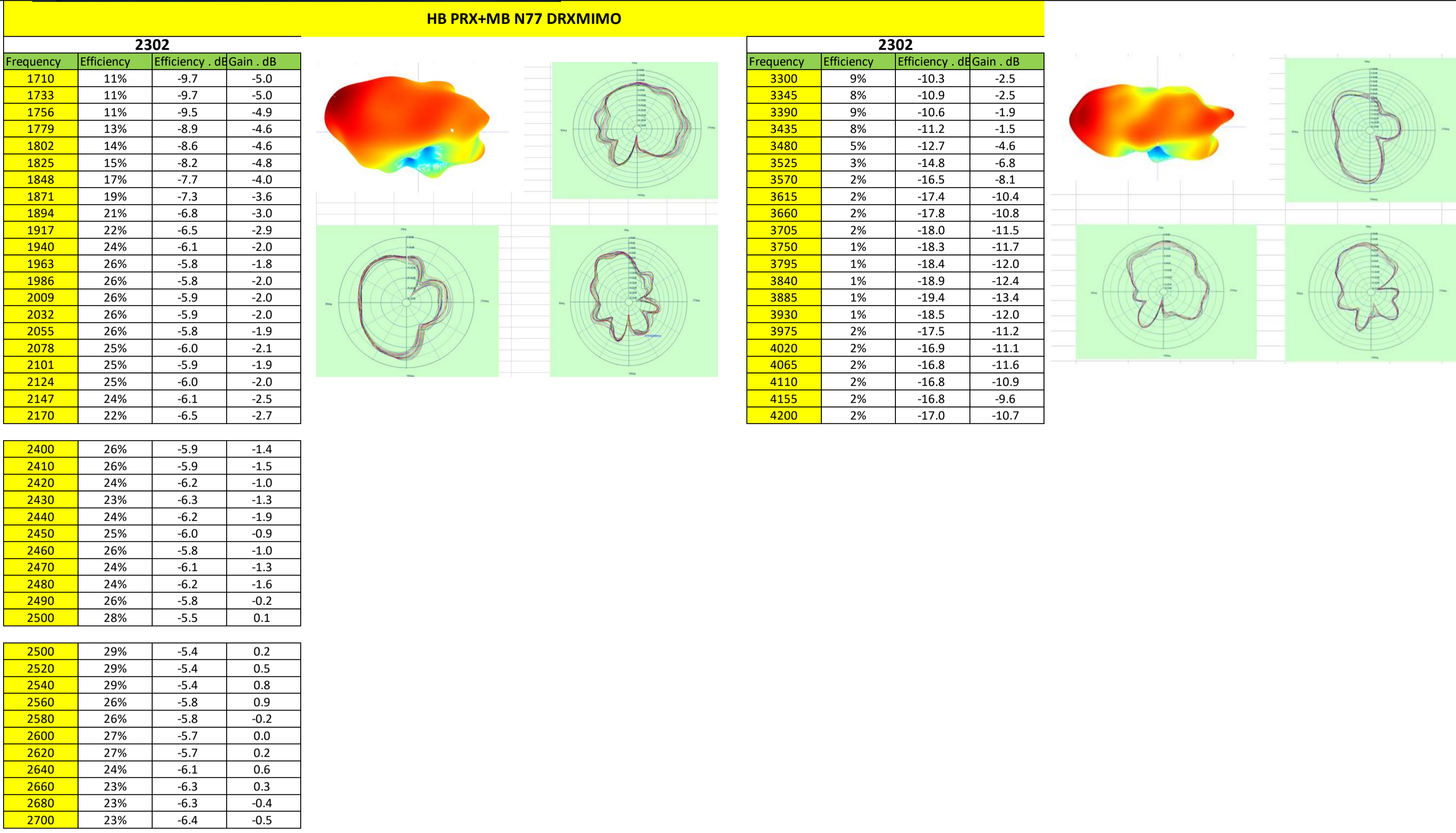


2302

| Frequency | Efficiency | Efficiency .d | Gain .dB |
|-----------|------------|---------------|----------|
| 3300      | 12%        | -9.1          | -1.0     |
| 3310      | 12%        | -9.1          | -1.0     |
| 3320      | 13%        | -9.0          | -0.7     |
| 3330      | 14%        | -8.7          | -0.3     |
| 3340      | 15%        | -8.3          | -0.2     |
| 3350      | 15%        | -8.3          | -0.6     |
| 3360      | 15%        | -8.1          | -0.8     |
| 3370      | 17%        | -7.7          | -0.5     |
| 3380      | 18%        | -7.5          | -0.2     |
| 3390      | 18%        | -7.5          | -0.3     |
| 3400      | 18%        | -7.5          | -0.4     |
| 3410      | 19%        | -7.2          | 0.0      |
| 3420      | 19%        | -7.1          | 0.2      |
| 3430      | 20%        | -7.1          | 0.2      |
| 3440      | 20%        | -6.9          | 0.4      |
| 3450      | 22%        | -6.6          | 0.9      |
| 3460      | 21%        | -6.7          | 1.0      |
| 3470      | 21%        | -6.8          | 0.9      |
| 3480      | 21%        | -6.8          | 0.6      |
| 3490      | 21%        | -6.8          | 0.8      |
| 3500      | 21%        | -6.8          | 1.2      |
| 3510      | 20%        | -7.0          | 1.3      |
| 3520      | 20%        | -6.9          | 1.4      |
| 3530      | 20%        | -7.0          | 1.6      |
| 3540      | 19%        | -7.1          | 1.7      |
| 3550      | 19%        | -7.3          | 1.6      |
| 3560      | 18%        | -7.5          | 1.3      |
| 3570      | 17%        | -7.6          | 1.5      |
| 3580      | 17%        | -7.7          | 1.7      |
| 3590      | 17%        | -7.8          | 1.7      |
| 3600      | 16%        | -8.0          | 1.3      |
| 3610      | 16%        | -8.0          | 1.4      |
| 3620      | 16%        | -8.1          | 1.5      |
| 3630      | 16%        | -7.9          | 1.5      |
| 3640      | 16%        | -8.1          | 1.1      |
| 3650      | 15%        | -8.2          | 0.8      |
| 3660      | 15%        | -8.1          | 0.9      |
| 3670      | 16%        | -8.0          | 0.9      |
| 3680      | 15%        | -8.1          | 0.6      |
| 3690      | 15%        | -8.1          | 0.4      |
| 3700      | 16%        | -8.1          | 0.4      |
| 3710      | 15%        | -8.2          | 0.2      |
| 3720      | 15%        | -8.4          | -0.1     |
| 3730      | 14%        | -8.6          | -0.5     |
| 3740      | 14%        | -8.7          | -0.5     |
| 3750      | 13%        | -9.0          | -0.8     |
| 3760      | 12%        | -9.3          | -1.4     |
| 3770      | 11%        | -9.7          | -2.0     |
| 3780      | 10%        | -10.1         | -2.4     |
| 3790      | 9%         | -10.6         | -2.9     |
| 3800      | 8%         | -11.1         | -3.6     |
| 3810      | 7%         | -11.7         | -4.6     |
| 3820      | 6%         | -12.1         | -5.0     |
| 3830      | 6%         | -12.6         | -5.2     |
| 3840      | 5%         | -13.0         | -5.6     |
| 3850      | 4%         | -13.5         | -6.1     |
| 3860      | 4%         | -13.7         | -5.9     |
| 3870      | 4%         | -13.8         | -5.8     |
| 3880      | 4%         | -13.7         | -5.6     |
| 3890      | 4%         | -13.8         | -5.9     |
| 3900      | 4%         | -13.7         | -5.6     |
| 3910      | 5%         | -13.4         | -5.1     |
| 3920      | 5%         | -13.0         | -4.7     |
| 3930      | 5%         | -12.9         | -4.7     |
| 3940      | 6%         | -12.5         | -4.1     |
| 3950      | 6%         | -12.1         | -3.4     |
| 3960      | 7%         | -11.6         | -3.0     |

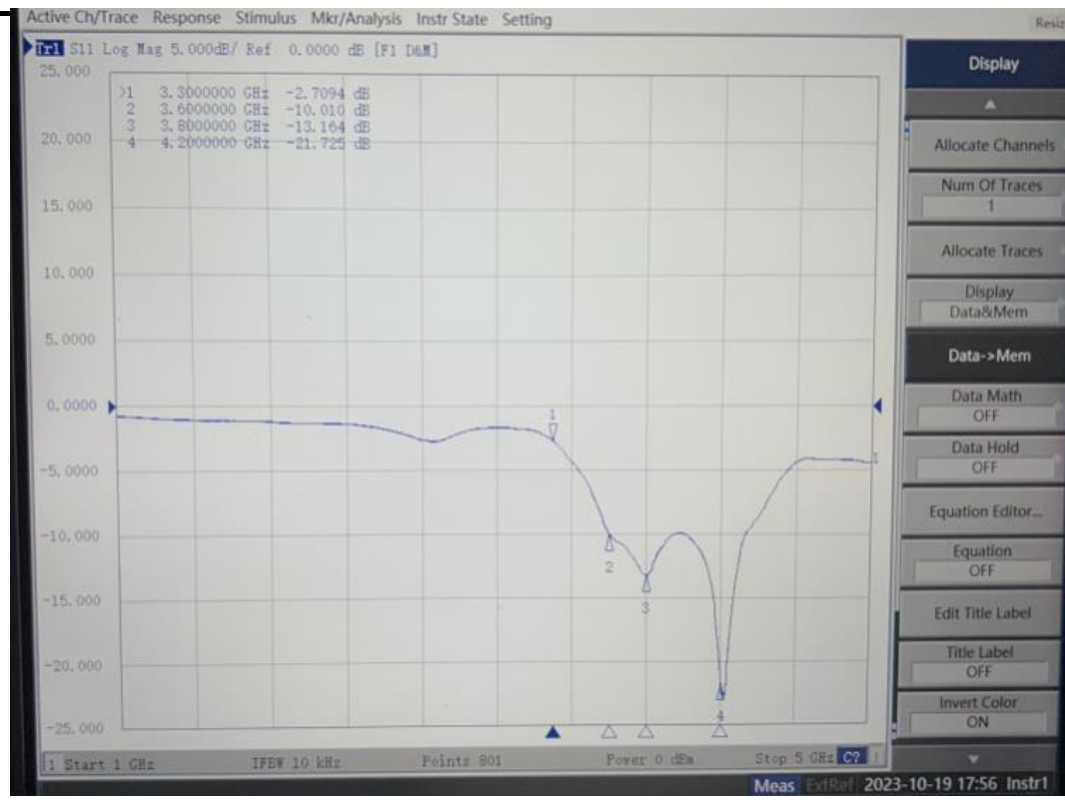
|      |     |       |      |
|------|-----|-------|------|
| 2380 | 16% | -8.0  | -0.8 |
| 2390 | 18% | -7.5  | -0.5 |
| 2400 | 19% | -7.3  | -0.6 |
| 2410 | 19% | -7.1  | -0.3 |
| 2420 | 20% | -7.0  | 0.2  |
| 2430 | 22% | -6.6  | 0.6  |
| 2440 | 23% | -6.3  | 0.6  |
| 2450 | 24% | -6.1  | 0.8  |
| 2460 | 26% | -5.8  | 1.0  |
| 2470 | 28% | -5.5  | 0.9  |
| 2480 | 29% | -5.4  | 0.9  |
| 2490 | 30% | -5.2  | 1.4  |
| 2500 | 32% | -5.0  | 1.7  |
| 2510 | 31% | -5.0  | 1.6  |
| 2520 | 30% | -5.2  | 1.6  |
| 2530 | 29% | -5.4  | 1.5  |
| 2540 | 28% | -5.5  | 1.3  |
| 2550 | 26% | -5.9  | 0.9  |
| 2560 | 23% | -6.3  | 0.7  |
| 2570 | 21% | -6.8  | 0.3  |
| 2580 | 19% | -7.1  | 0.2  |
| 2590 | 18% | -7.5  | -0.1 |
| 2600 | 16% | -7.8  | -0.4 |
| 2610 | 15% | -8.2  | -0.9 |
| 2620 | 14% | -8.6  | -1.3 |
| 2630 | 13% | -8.8  | -1.5 |
| 2640 | 12% | -9.1  | -2.0 |
| 2650 | 11% | -9.5  | -2.3 |
| 2660 | 11% | -9.8  | -2.4 |
| 2670 | 10% | -9.9  | -2.2 |
| 2680 | 10% | -9.9  | -2.1 |
| 2690 | 10% | -10.1 | -2.2 |
| 2700 | 9%  | -10.3 | -2.5 |

|      |    |       |      |
|------|----|-------|------|
| 3970 | 7% | -11.5 | -3.1 |
| 3980 | 7% | -11.5 | -3.2 |
| 3990 | 8% | -11.1 | -2.9 |
| 4000 | 8% | -10.9 | -2.9 |
| 4010 | 8% | -10.8 | -3.1 |
| 4020 | 9% | -10.7 | -3.2 |
| 4030 | 9% | -10.5 | -3.0 |
| 4040 | 9% | -10.5 | -3.0 |
| 4050 | 9% | -10.6 | -3.3 |
| 4060 | 8% | -10.9 | -3.8 |
| 4070 | 8% | -11.0 | -4.1 |
| 4080 | 8% | -11.1 | -4.5 |
| 4090 | 7% | -11.3 | -4.6 |
| 4100 | 7% | -11.6 | -4.8 |
| 4110 | 7% | -11.8 | -4.8 |
| 4120 | 6% | -11.9 | -4.8 |
| 4130 | 6% | -12.1 | -4.8 |
| 4140 | 6% | -12.5 | -5.1 |
| 4150 | 6% | -12.5 | -5.0 |
| 4160 | 5% | -12.7 | -5.1 |
| 4170 | 5% | -13.1 | -5.5 |
| 4180 | 5% | -13.3 | -5.8 |
| 4190 | 5% | -13.0 | -5.4 |
| 4200 | 5% | -13.0 | -5.3 |



ANT4 n77PRX

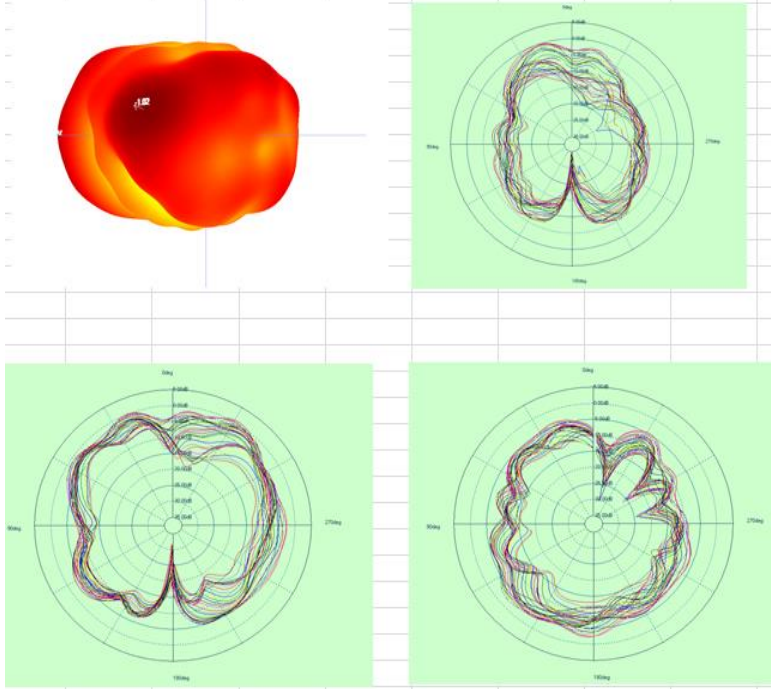
S11&Smith



n77PRX

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| Frequency | Efficiency | Efficiency, d | Gain, dB |
|-----------|------------|---------------|----------|
| 3300      | 10%        | -9.9          | -4.1     |
| 3310      | 11%        | -9.8          | -4.1     |
| 3320      | 11%        | -9.5          | -4.1     |
| 3330      | 12%        | -9.2          | -4.0     |
| 3340      | 13%        | -8.9          | -4.0     |
| 3350      | 13%        | -8.7          | -4.3     |
| 3360      | 14%        | -8.5          | -4.3     |
| 3370      | 16%        | -8.1          | -4.1     |
| 3380      | 17%        | -7.8          | -4.1     |
| 3390      | 16%        | -7.9          | -4.2     |
| 3400      | 17%        | -7.7          | -4.0     |
| 3410      | 19%        | -7.3          | -3.6     |
| 3420      | 19%        | -7.2          | -3.5     |
| 3430      | 19%        | -7.2          | -3.4     |
| 3440      | 20%        | -7.1          | -3.1     |
| 3450      | 21%        | -6.8          | -2.7     |
| 3460      | 20%        | -6.9          | -2.7     |
| 3470      | 20%        | -7.0          | -2.7     |
| 3480      | 20%        | -7.1          | -2.6     |
| 3490      | 19%        | -7.2          | -2.4     |
| 3500      | 18%        | -7.4          | -2.5     |
| 3510      | 18%        | -7.5          | -2.6     |
| 3520      | 18%        | -7.5          | -2.5     |
| 3530      | 17%        | -7.8          | -2.5     |
| 3540      | 16%        | -8.0          | -2.3     |
| 3550      | 15%        | -8.3          | -2.3     |
| 3560      | 14%        | -8.5          | -2.2     |
| 3570      | 14%        | -8.7          | -2.3     |
| 3580      | 13%        | -8.9          | -2.4     |
| 3590      | 13%        | -8.9          | -2.3     |
| 3600      | 13%        | -8.9          | -2.3     |
| 3610      | 13%        | -8.9          | -2.2     |
| 3620      | 13%        | -8.8          | -2.2     |
| 3630      | 14%        | -8.5          | -2.1     |
| 3640      | 14%        | -8.5          | -2.2     |
| 3650      | 14%        | -8.6          | -2.3     |
| 3660      | 15%        | -8.4          | -2.2     |
| 3670      | 16%        | -8.0          | -1.9     |
| 3680      | 16%        | -7.9          | -1.8     |
| 3690      | 16%        | -7.8          | -1.7     |
| 3700      | 17%        | -7.6          | -1.6     |
| 3710      | 18%        | -7.5          | -1.6     |
| 3720      | 18%        | -7.5          | -1.5     |
| 3730      | 18%        | -7.5          | -1.6     |
| 3740      | 18%        | -7.4          | -1.7     |
| 3750      | 18%        | -7.5          | -1.9     |
| 3760      | 18%        | -7.5          | -1.7     |
| 3770      | 18%        | -7.5          | -1.6     |
| 3780      | 18%        | -7.6          | -1.5     |
| 3790      | 17%        | -7.7          | -1.5     |
| 3800      | 17%        | -7.7          | -1.5     |
| 3810      | 16%        | -7.8          | -1.7     |
| 3820      | 16%        | -7.9          | -1.7     |
| 3830      | 16%        | -7.9          | -1.7     |
| 3840      | 16%        | -8.0          | -1.7     |
| 3850      | 15%        | -8.1          | -1.9     |
| 3860      | 15%        | -8.1          | -1.9     |
| 3870      | 15%        | -8.2          | -2.0     |
| 3880      | 16%        | -8.0          | -1.9     |
| 3890      | 16%        | -7.9          | -1.9     |
| 3900      | 17%        | -7.8          | -1.8     |
| 3910      | 18%        | -7.6          | -1.9     |
| 3920      | 19%        | -7.3          | -1.9     |
| 3930      | 20%        | -7.1          | -1.9     |
| 3940      | 21%        | -6.7          | -1.7     |

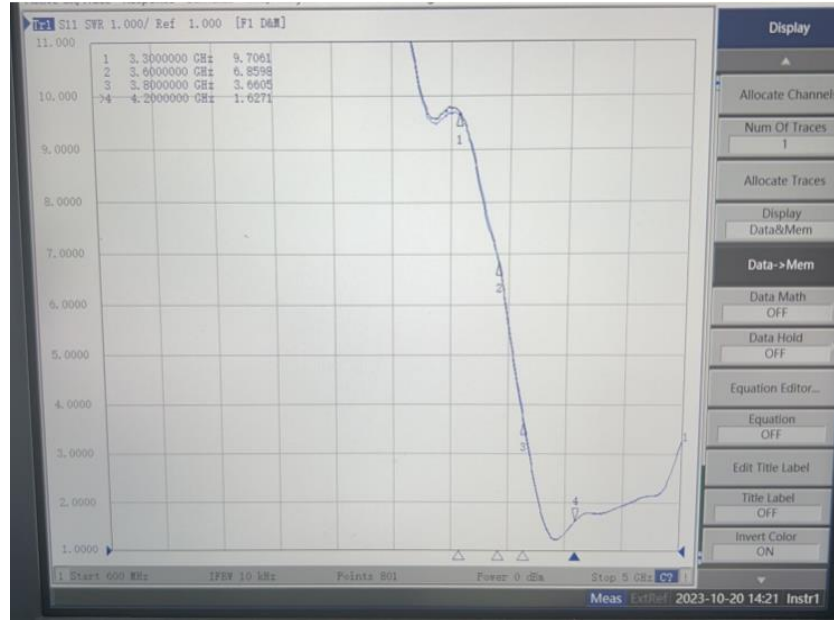


|      |     |      |      |
|------|-----|------|------|
| 3950 | 23% | -6.4 | -1.4 |
| 3960 | 25% | -6.0 | -1.1 |
| 3970 | 26% | -5.8 | -1.0 |
| 3980 | 28% | -5.6 | -0.9 |
| 3990 | 29% | -5.4 | -0.7 |
| 4000 | 31% | -5.1 | -0.4 |
| 4010 | 31% | -5.1 | 0.0  |
| 4020 | 32% | -4.9 | 0.4  |
| 4030 | 33% | -4.8 | 0.6  |
| 4040 | 35% | -4.6 | 0.6  |
| 4050 | 34% | -4.7 | 0.5  |
| 4060 | 34% | -4.7 | 0.4  |
| 4070 | 33% | -4.8 | 0.3  |
| 4080 | 34% | -4.7 | 0.5  |
| 4090 | 33% | -4.9 | 0.6  |
| 4100 | 31% | -5.0 | 0.5  |
| 4110 | 31% | -5.1 | 0.5  |
| 4120 | 32% | -5.0 | 0.6  |
| 4130 | 32% | -5.0 | 0.5  |
| 4140 | 30% | -5.2 | 0.3  |
| 4150 | 30% | -5.2 | 0.2  |
| 4160 | 30% | -5.2 | 0.0  |
| 4170 | 29% | -5.3 | -0.5 |
| 4180 | 28% | -5.5 | -0.5 |
| 4190 | 29% | -5.3 | -0.3 |
| 4200 | 30% | -5.3 | -0.6 |



ANT5 N77 DRX

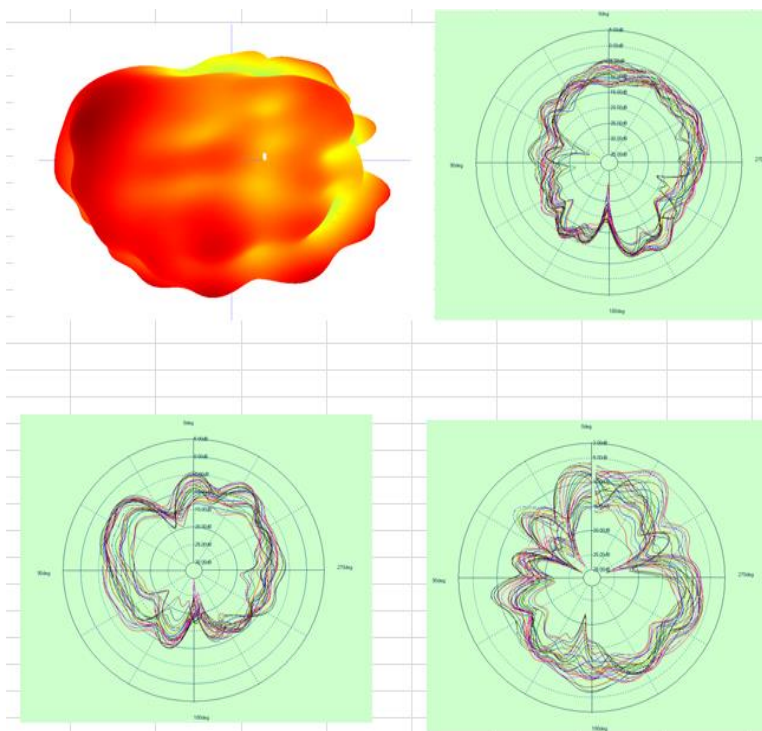
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N77 DRX

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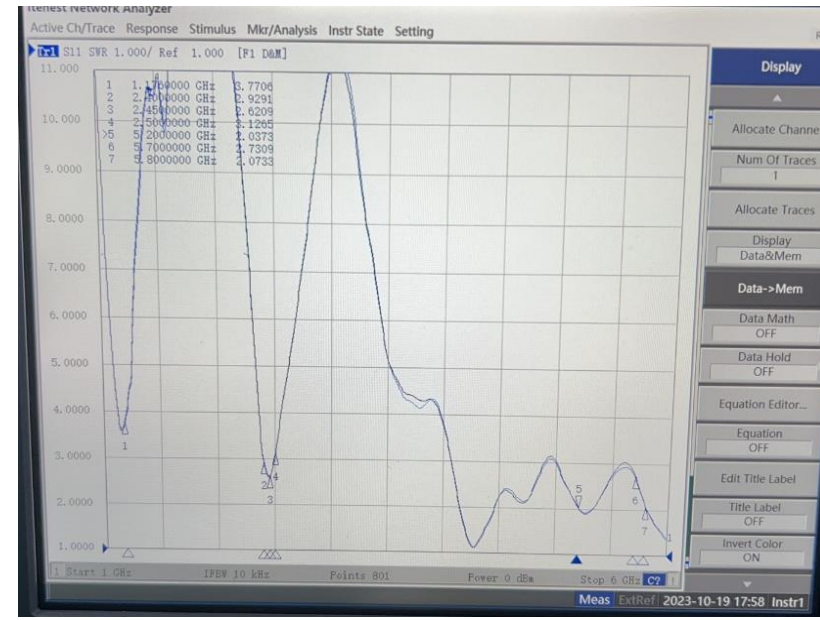
| Frequency | Efficiency | Efficiency . d | Gain . dB |
|-----------|------------|----------------|-----------|
| 3300      | 3%         | -15.3          | -10.9     |
| 3310      | 3%         | -15.2          | -11.0     |
| 3320      | 3%         | -15.1          | -10.7     |
| 3330      | 3%         | -14.7          | -10.2     |
| 3340      | 4%         | -14.4          | -10.0     |
| 3350      | 4%         | -14.3          | -10.0     |
| 3360      | 4%         | -14.2          | -10.0     |
| 3370      | 4%         | -13.8          | -9.6      |
| 3380      | 4%         | -13.5          | -9.3      |
| 3390      | 5%         | -13.5          | -9.3      |
| 3400      | 5%         | -13.3          | -9.2      |
| 3410      | 5%         | -12.9          | -8.8      |
| 3420      | 5%         | -12.7          | -8.4      |
| 3430      | 6%         | -12.5          | -8.2      |
| 3440      | 6%         | -12.2          | -8.1      |
| 3450      | 6%         | -11.9          | -7.8      |
| 3460      | 6%         | -12.0          | -7.9      |
| 3470      | 6%         | -12.0          | -8.1      |
| 3480      | 6%         | -11.9          | -8.0      |
| 3490      | 7%         | -11.8          | -7.7      |
| 3500      | 6%         | -11.9          | -7.3      |
| 3510      | 6%         | -12.0          | -7.4      |
| 3520      | 6%         | -12.0          | -7.6      |
| 3530      | 6%         | -12.0          | -7.6      |
| 3540      | 6%         | -12.2          | -7.7      |
| 3550      | 6%         | -12.3          | -7.8      |
| 3560      | 6%         | -12.5          | -7.8      |
| 3570      | 6%         | -12.4          | -7.4      |
| 3580      | 6%         | -12.5          | -7.0      |
| 3590      | 6%         | -12.4          | -6.8      |
| 3600      | 6%         | -12.5          | -6.8      |
| 3610      | 6%         | -12.4          | -6.7      |
| 3620      | 6%         | -12.4          | -6.3      |
| 3630      | 7%         | -11.9          | -5.7      |
| 3640      | 7%         | -11.8          | -5.6      |
| 3650      | 7%         | -11.7          | -5.5      |
| 3660      | 7%         | -11.5          | -5.1      |
| 3670      | 8%         | -11.0          | -4.6      |
| 3680      | 8%         | -10.9          | -4.5      |
| 3690      | 9%         | -10.5          | -4.2      |
| 3700      | 9%         | -10.2          | -4.0      |
| 3710      | 10%        | -9.9           | -3.7      |
| 3720      | 11%        | -9.8           | -3.6      |
| 3730      | 11%        | -9.5           | -3.5      |
| 3740      | 12%        | -9.3           | -3.3      |
| 3750      | 12%        | -9.2           | -3.2      |
| 3760      | 12%        | -9.2           | -3.4      |
| 3770      | 13%        | -9.0           | -3.4      |
| 3780      | 13%        | -8.9           | -3.1      |
| 3790      | 13%        | -8.7           | -2.5      |
| 3800      | 13%        | -8.7           | -2.3      |
| 3810      | 13%        | -8.8           | -2.5      |
| 3820      | 13%        | -8.9           | -2.4      |
| 3830      | 13%        | -8.8           | -2.1      |
| 3840      | 13%        | -8.9           | -2.1      |
| 3850      | 13%        | -9.0           | -2.0      |
| 3860      | 13%        | -9.0           | -1.2      |
| 3870      | 13%        | -8.9           | -0.5      |
| 3880      | 13%        | -8.8           | -0.3      |
| 3890      | 13%        | -8.8           | -0.4      |
| 3900      | 14%        | -8.6           | 0.0       |
| 3910      | 15%        | -8.4           | 0.5       |
| 3920      | 15%        | -8.2           | 0.7       |
| 3930      | 16%        | -8.0           | 0.9       |
| 3940      | 17%        | -7.7           | 1.6       |
| 3950      | 18%        | -7.3           | 2.2       |



|      |     |      |      |
|------|-----|------|------|
| 3960 | 20% | -7.0 | 2.5  |
| 3970 | 20% | -7.0 | 2.3  |
| 3980 | 21% | -6.9 | 2.4  |
| 3990 | 22% | -6.6 | 2.6  |
| 4000 | 23% | -6.4 | 2.5  |
| 4010 | 23% | -6.4 | 2.4  |
| 4020 | 24% | -6.2 | 2.6  |
| 4030 | 25% | -6.1 | 2.9  |
| 4040 | 25% | -6.0 | 2.9  |
| 4050 | 24% | -6.2 | 2.6  |
| 4060 | 23% | -6.3 | 2.2  |
| 4070 | 23% | -6.4 | 1.9  |
| 4080 | 23% | -6.4 | 1.7  |
| 4090 | 22% | -6.6 | 1.2  |
| 4100 | 21% | -6.8 | 0.9  |
| 4110 | 21% | -6.8 | 0.8  |
| 4120 | 21% | -6.9 | 0.8  |
| 4130 | 20% | -7.0 | 0.3  |
| 4140 | 18% | -7.3 | -0.2 |
| 4150 | 18% | -7.4 | -0.1 |
| 4160 | 18% | -7.5 | -0.1 |
| 4170 | 17% | -7.8 | -0.5 |
| 4180 | 15% | -8.1 | -1.0 |
| 4190 | 16% | -8.0 | -0.7 |
| 4200 | 16% | -8.0 | -0.5 |

ANT6 L5+WIFI MIMO

S11&Smith

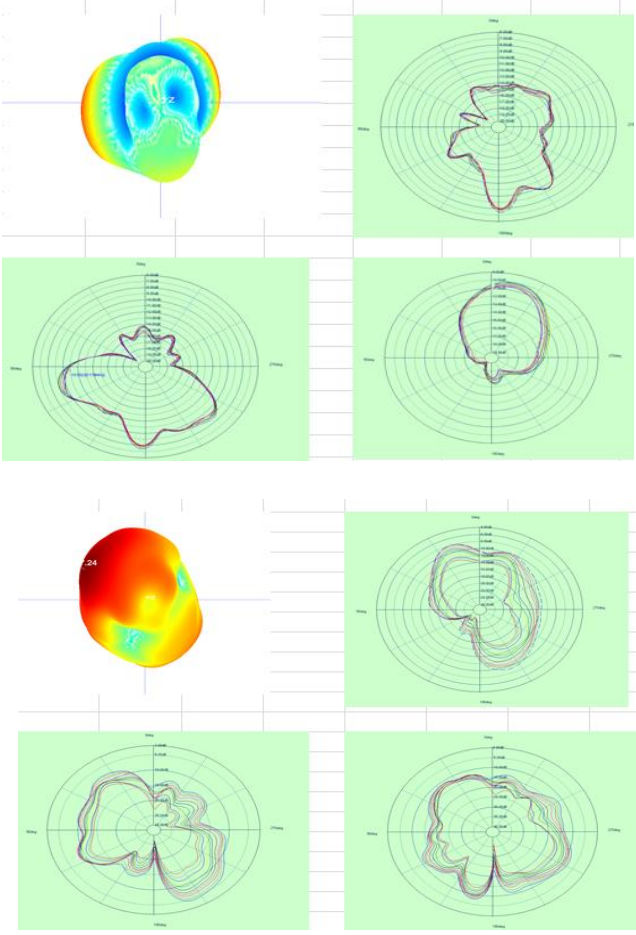


**WIFI MIMO**

**2302**

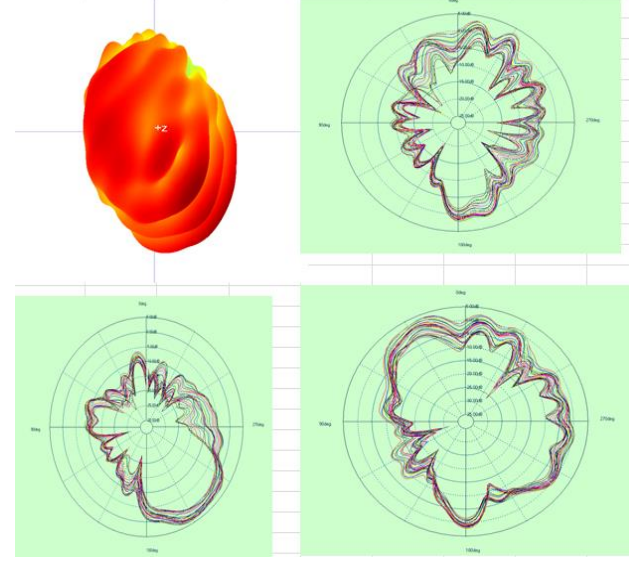
| Frequency | Efficiency | Efficiency . dB | Gain . dB |
|-----------|------------|-----------------|-----------|
| 1170      | 4%         | -14.0           | -9.0      |
| 1171      | 4%         | -13.8           | -8.9      |
| 1172      | 4%         | -13.6           | -8.8      |
| 1173      | 4%         | -13.5           | -8.8      |
| 1174      | 5%         | -13.4           | -8.9      |
| 1175      | 5%         | -13.4           | -9.0      |
| 1176      | 5%         | -13.4           | -8.9      |
| 1177      | 4%         | -13.5           | -8.8      |
| 1178      | 4%         | -13.5           | -8.7      |
| 1179      | 4%         | -13.5           | -8.6      |
| 1180      | 5%         | -13.4           | -8.6      |

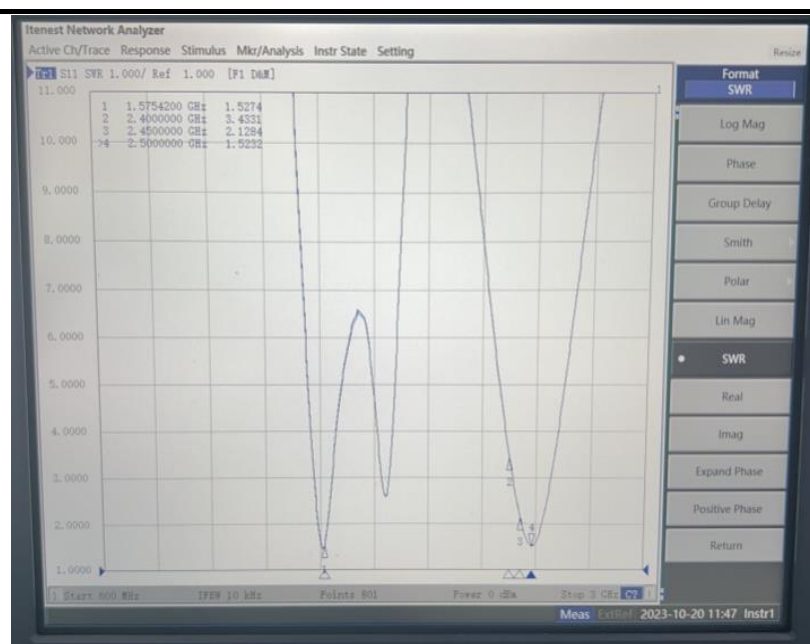
|      |     |       |      |
|------|-----|-------|------|
| 2400 | 11% | -13.3 | -6.6 |
| 2410 | 13% | -13.7 | -7.2 |
| 2420 | 12% | -14.0 | -8.2 |
| 2430 | 15% | -13.8 | -8.8 |
| 2440 | 13% | -13.8 | -8.9 |
| 2450 | 12% | -13.7 | -9.0 |
| 2460 | 13% | -13.5 | -8.9 |
| 2470 | 13% | -13.1 | -8.4 |
| 2480 | 13% | -13.0 | -8.5 |
| 2490 | 12% | -13.0 | -8.5 |
| 2500 | 12% | -12.8 | -8.1 |



**2302**

| Frequency | Efficiency | Efficiency . dB | Gain . dB |
|-----------|------------|-----------------|-----------|
| 5200      | 29%        | -5.3            | 3.6       |
| 5220      | 30%        | -5.3            | 4.0       |
| 5240      | 29%        | -5.3            | 3.7       |
| 5260      | 28%        | -5.5            | 3.6       |
| 5280      | 28%        | -5.5            | 3.1       |
| 5300      | 27%        | -5.7            | 3.1       |
| 5320      | 26%        | -5.8            | 2.7       |
| 5340      | 24%        | -6.2            | 2.3       |
| 5360      | 25%        | -5.9            | 2.2       |
| 5380      | 27%        | -5.7            | 2.3       |
| 5400      | 28%        | -5.5            | 2.3       |
| 5420      | 31%        | -5.1            | 2.9       |
| 5440      | 31%        | -5.0            | 2.9       |
| 5460      | 33%        | -4.8            | 3.5       |
| 5480      | 30%        | -5.3            | 2.9       |
| 5500      | 32%        | -5.0            | 3.5       |
| 5520      | 31%        | -5.1            | 3.6       |
| 5540      | 30%        | -5.2            | 3.9       |
| 5560      | 31%        | -5.1            | 3.7       |
| 5580      | 28%        | -5.6            | 3.4       |
| 5600      | 27%        | -5.6            | 3.0       |
| 5620      | 23%        | -6.3            | 2.5       |
| 5640      | 24%        | -6.2            | 2.3       |
| 5660      | 21%        | -6.8            | 1.7       |
| 5680      | 22%        | -6.6            | 1.6       |
| 5700      | 19%        | -7.2            | 0.9       |
| 5720      | 20%        | -7.0            | 1.1       |
| 5740      | 20%        | -7.0            | 1.0       |
| 5760      | 22%        | -6.7            | 1.5       |
| 5780      | 21%        | -6.8            | 1.4       |
| 5800      | 22%        | -6.7            | 1.9       |

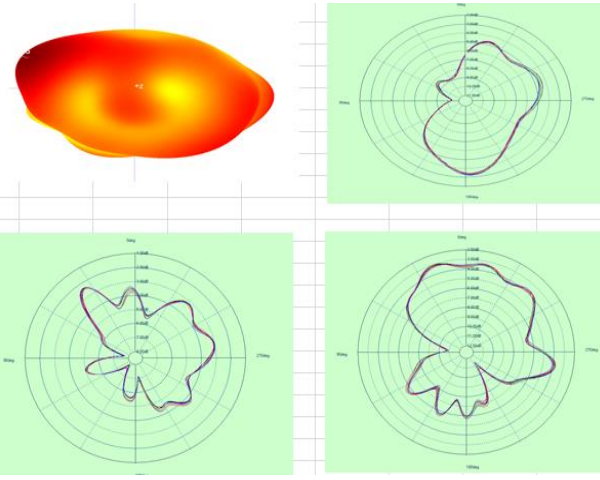




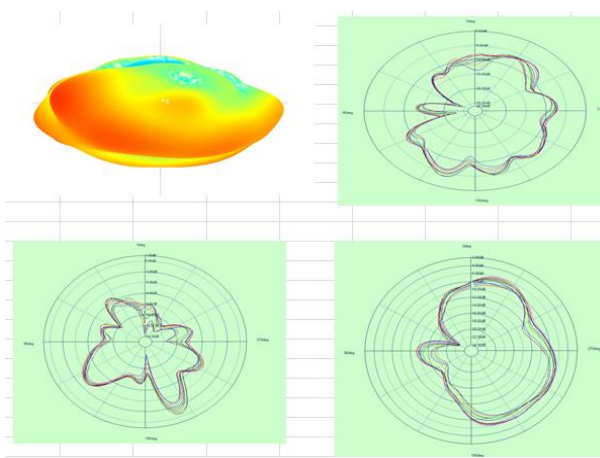
**WBG**

**2302**

| Frequency | Efficiency | Efficiency . d | Gain . dB |
|-----------|------------|----------------|-----------|
| 1570      | 31%        | -5.1           | -0.1      |
| 1571      | 30%        | -5.2           | -0.1      |
| 1572      | 30%        | -5.2           | -0.1      |
| 1573      | 30%        | -5.2           | -0.2      |
| 1574      | 30%        | -5.3           | -0.2      |
| 1575      | 29%        | -5.3           | -0.2      |
| 1576      | 29%        | -5.4           | -0.2      |
| 1577      | 29%        | -5.4           | -0.2      |
| 1578      | 29%        | -5.4           | -0.3      |
| 1579      | 29%        | -5.4           | -0.3      |
| 1580      | 29%        | -5.5           | -0.3      |

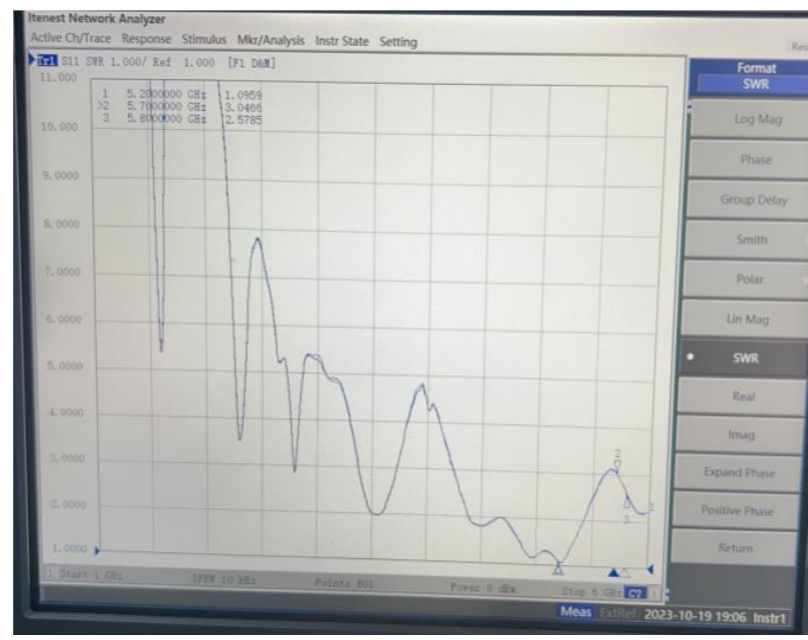


| Frequency | Efficiency | Efficiency . d | Gain . dB |
|-----------|------------|----------------|-----------|
| 2400      | 20%        | -7.6           | -2.6      |
| 2410      | 21%        | -7.5           | -2.3      |
| 2420      | 21%        | -7.3           | -1.9      |
| 2430      | 22%        | -7.2           | -2.0      |
| 2440      | 23%        | -7.0           | -2.1      |
| 2450      | 23%        | -6.9           | -2.0      |
| 2460      | 25%        | -6.6           | -1.5      |
| 2470      | 25%        | -6.5           | -1.3      |
| 2480      | 25%        | -6.5           | -1.4      |
| 2490      | 25%        | -6.5           | -1.5      |
| 2500      | 26%        | -6.4           | -1.5      |



AN8 WIFI5G

S11&Smith



| wifi 5G   |            |                |           |
|-----------|------------|----------------|-----------|
| 2302      |            |                |           |
| Frequency | Efficiency | Efficiency . d | Gain . dB |
| 5200      | 47%        | -3.2           | 5.6       |
| 5220      | 44%        | -3.5           | 5.5       |
| 5240      | 44%        | -3.6           | 5.7       |
| 5260      | 41%        | -3.9           | 5.4       |
| 5280      | 41%        | -3.9           | 5.4       |
| 5300      | 38%        | -4.2           | 4.7       |
| 5320      | 36%        | -4.4           | 4.3       |
| 5340      | 33%        | -4.8           | 3.9       |
| 5360      | 34%        | -4.6           | 4.0       |
| 5380      | 34%        | -4.6           | 3.9       |
| 5400      | 36%        | -4.5           | 3.9       |
| 5420      | 37%        | -4.3           | 3.9       |
| 5440      | 37%        | -4.3           | 4.4       |
| 5460      | 37%        | -4.3           | 4.6       |
| 5480      | 32%        | -4.9           | 4.3       |
| 5500      | 33%        | -4.8           | 4.6       |
| 5520      | 32%        | -4.9           | 4.7       |
| 5540      | 30%        | -5.2           | 4.4       |
| 5560      | 30%        | -5.3           | 4.5       |
| 5580      | 26%        | -5.8           | 3.9       |
| 5600      | 25%        | -5.9           | 3.8       |
| 5620      | 21%        | -6.7           | 2.8       |
| 5640      | 22%        | -6.5           | 2.9       |
| 5660      | 19%        | -7.3           | 1.8       |
| 5680      | 20%        | -7.0           | 2.1       |
| 5700      | 18%        | -7.4           | 1.7       |
| 5720      | 19%        | -7.2           | 1.9       |
| 5740      | 19%        | -7.1           | 2.1       |
| 5760      | 21%        | -6.8           | 2.6       |
| 5780      | 21%        | -6.8           | 2.7       |
| 5800      | 22%        | -6.6           | 2.8       |

