

# SPECIFICATION

---

Pinnacle

## H500V Antenna

### Product approval sheet

|          |       |        |       |
|----------|-------|--------|-------|
| Customer |       | Band   | 5G    |
| Project  | H500V | Colour | Black |

Customer check:

Reach requirement of customer: ☒OK    ☐NG

Manufacturer: Shenzhen Sanhao wireless communication Co., LTD

Address: 501-508, Jinfulai Building, 49-1 Dabao Road, Baoan District, Shenzhen, China

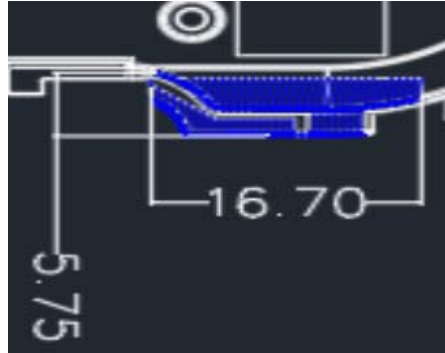
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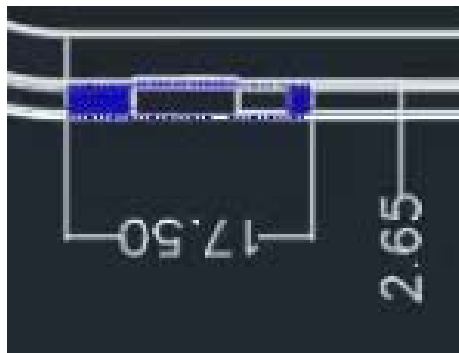
## 1 General description

### 1.1 Antenna appearing diagram

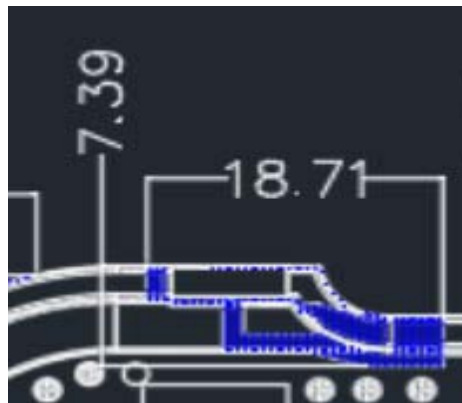
ANT0



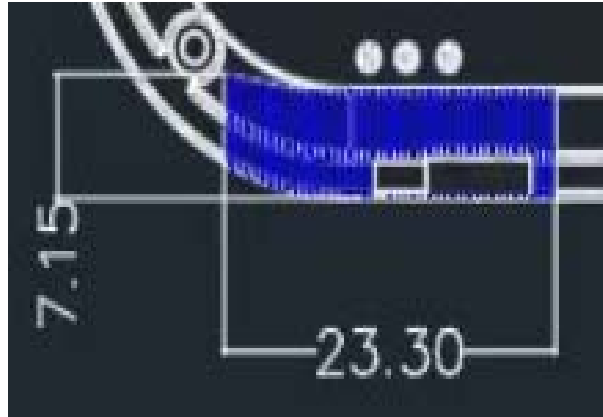
ANT1



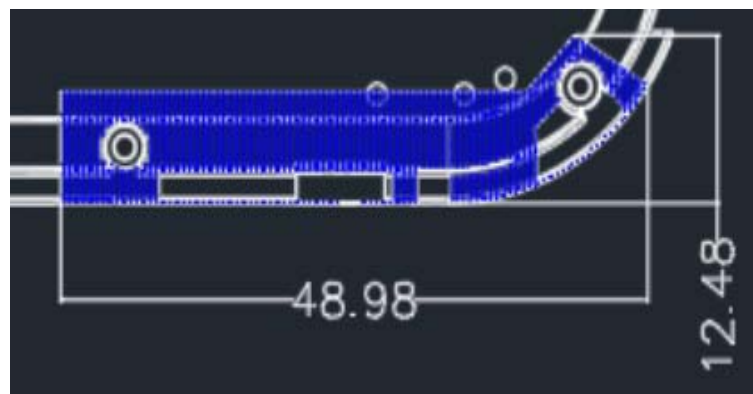
ANT2



ANT3



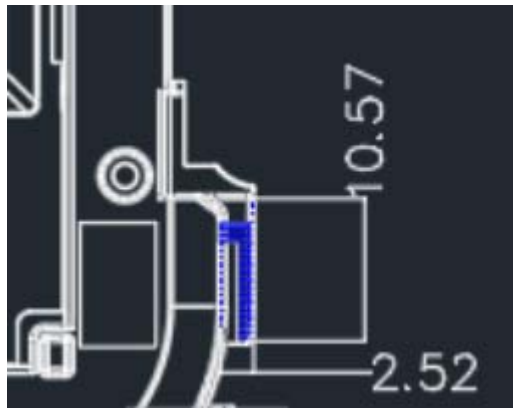
ANT4



WIFI-1



WIFI-2



GPS



## 1.2 Antenna Matching circuits

ANT0

NC

ANT2

NC

ANT4

| ANT4       |       |
|------------|-------|
| Element    | Value |
| R914       | 0欧姆   |
| L912       | 8.2NH |
| C922       | 4.7PF |
| L911       | NC    |
| C930       | 33PF  |
| ANT4线开关    |       |
| R901 (RF3) | 0欧姆   |
| R902 (RF2) | 0欧姆   |
| L901 (RF4) | 22NH  |
| L902 (RF1) | 12NH  |
| C913       | 33PF  |
| C914       | 12NH  |

WIFI-1

NC

WIFI-2

NC

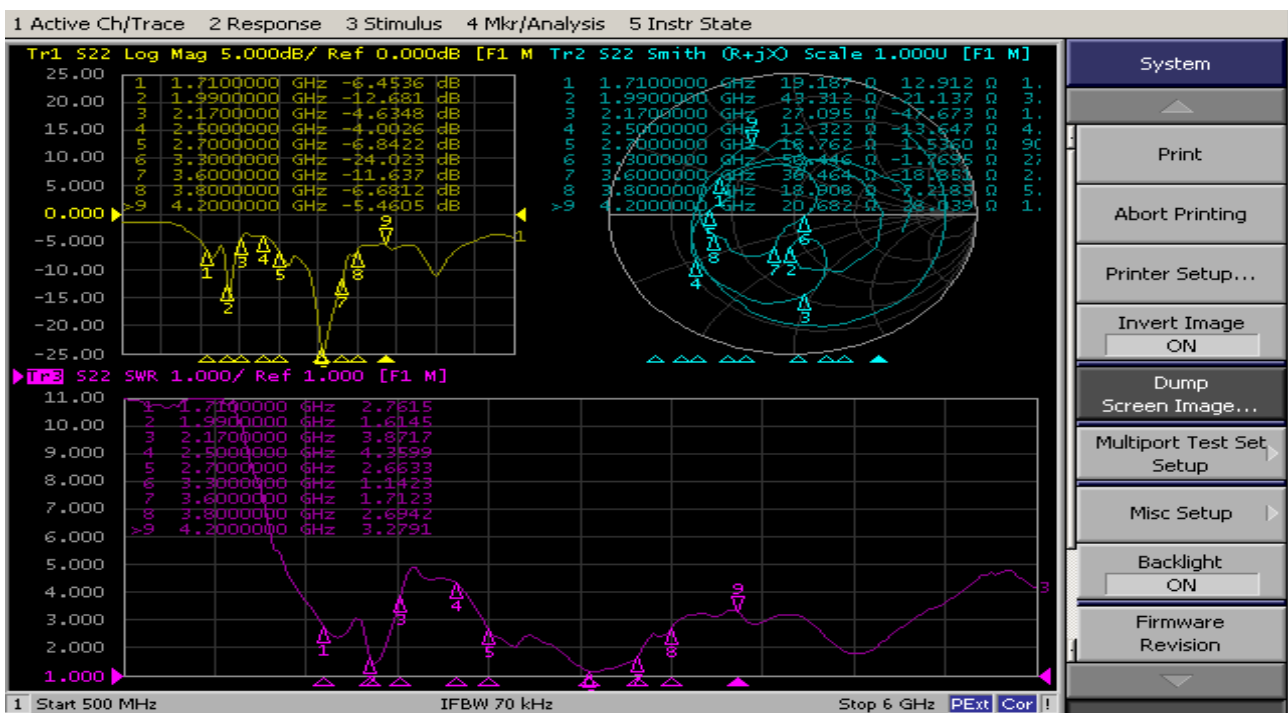
## 1.3 Antenna PORT

## 1.4 Antenna location

## 1.5 RF port

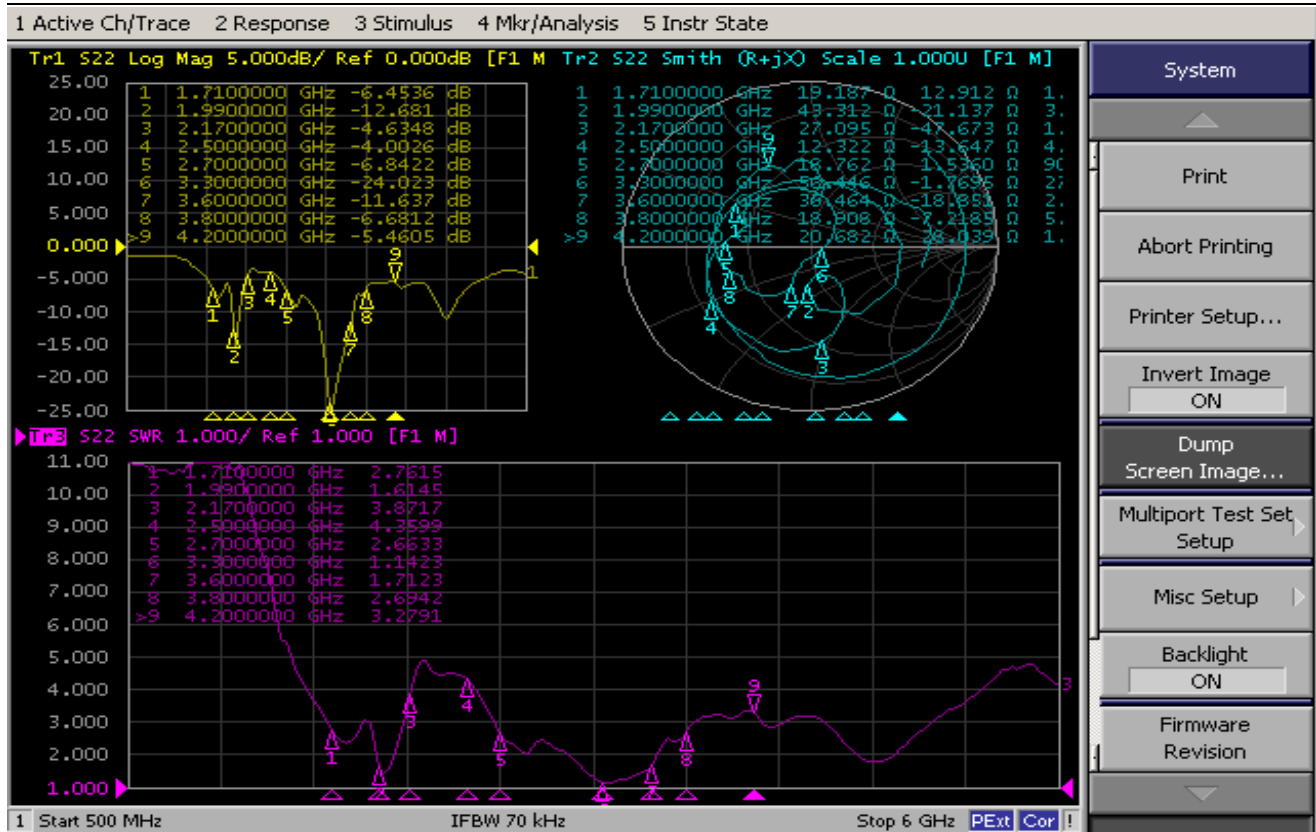
# 2 Electrical performance

## 2.1 VSWR

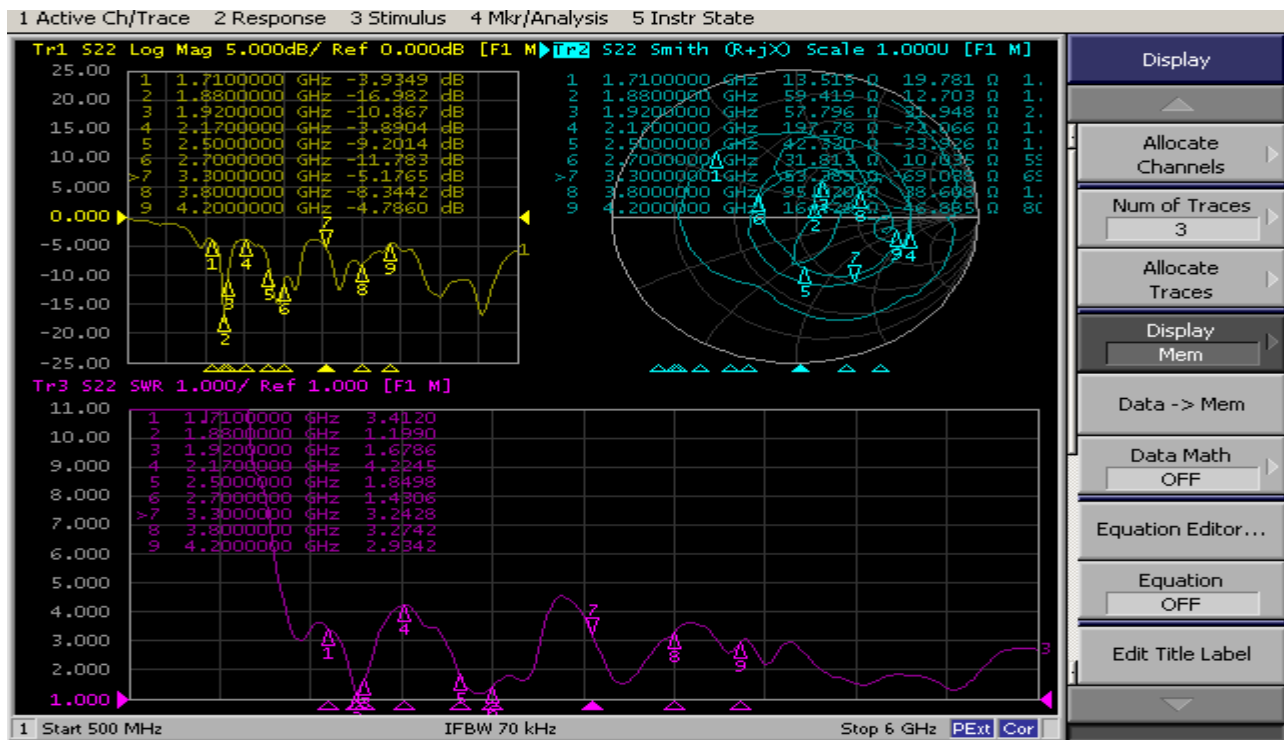


ANTO

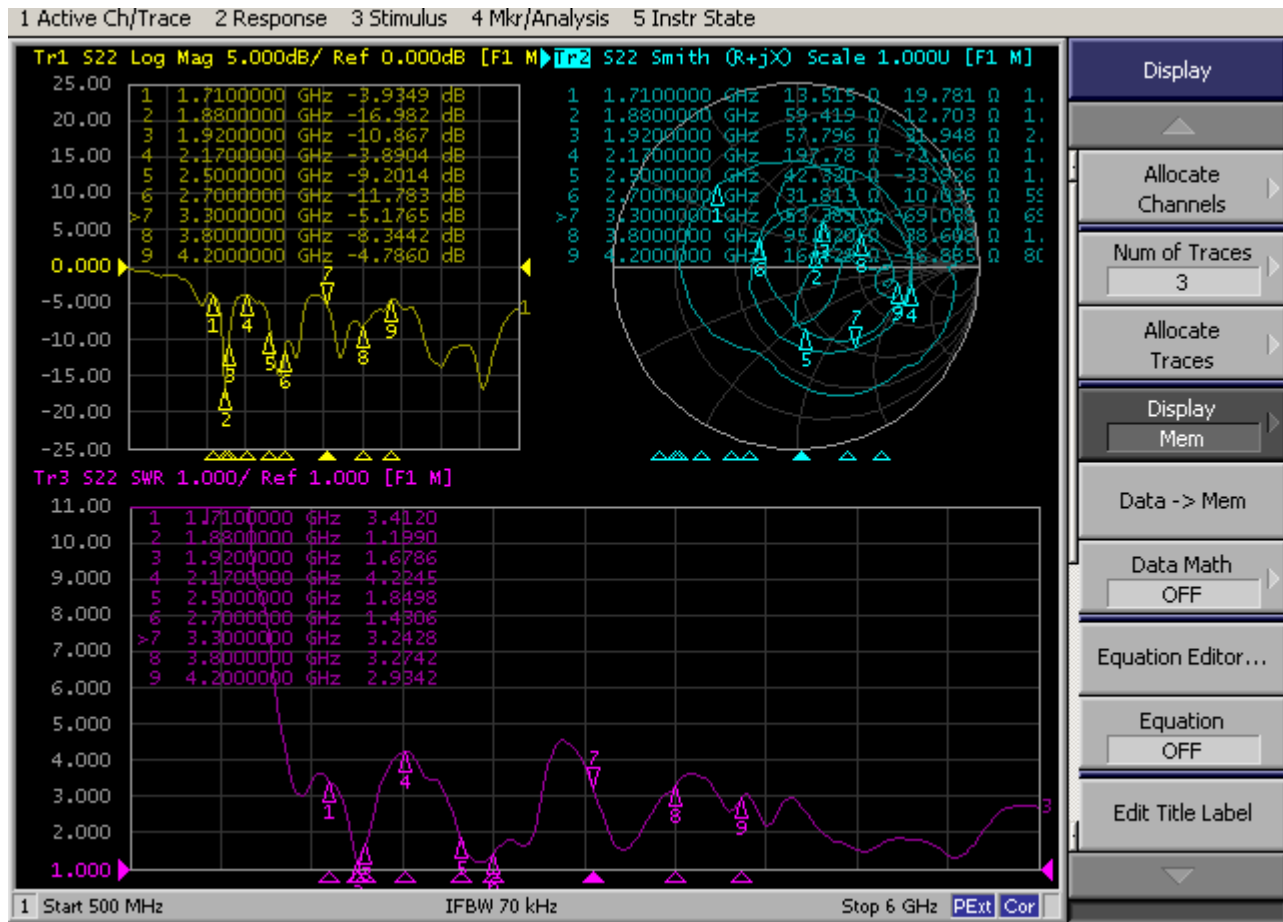
# Confidential Information



ANT1

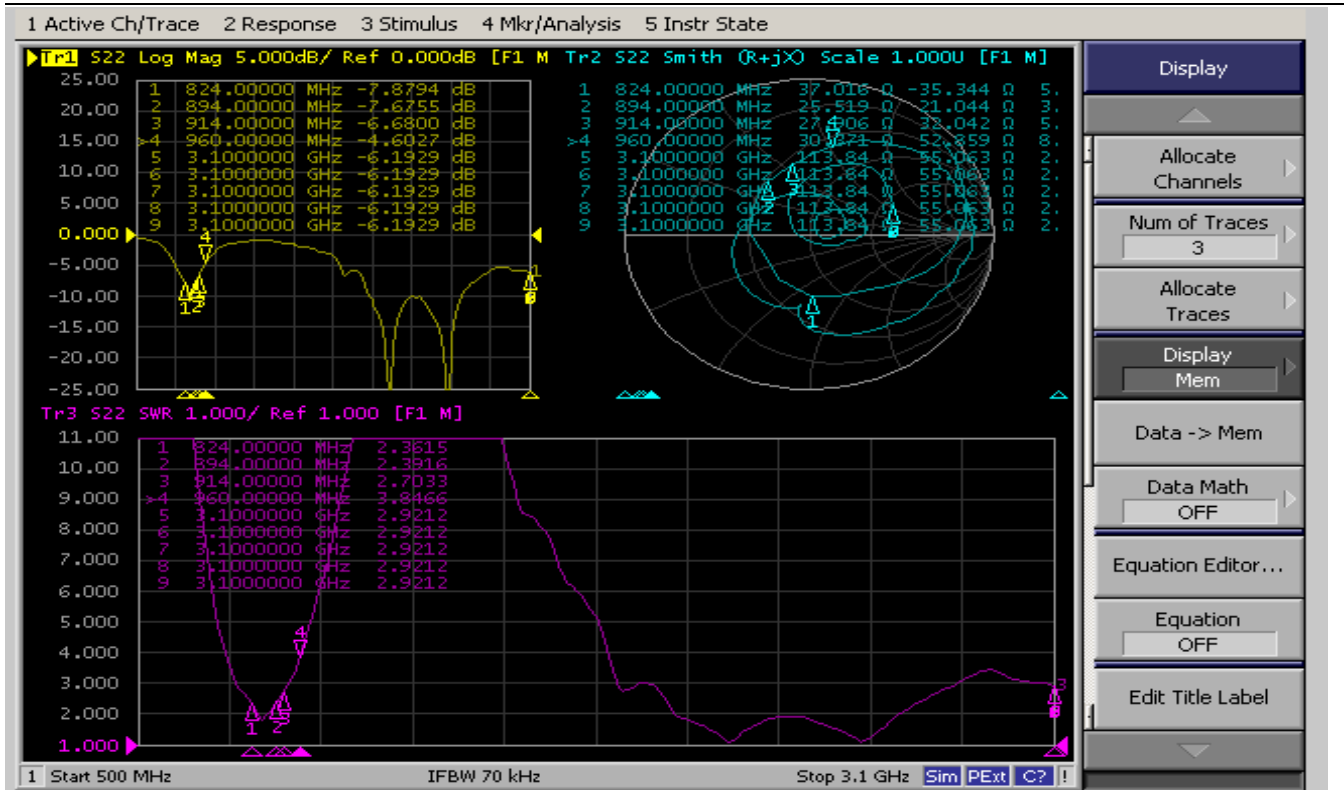


ANT2

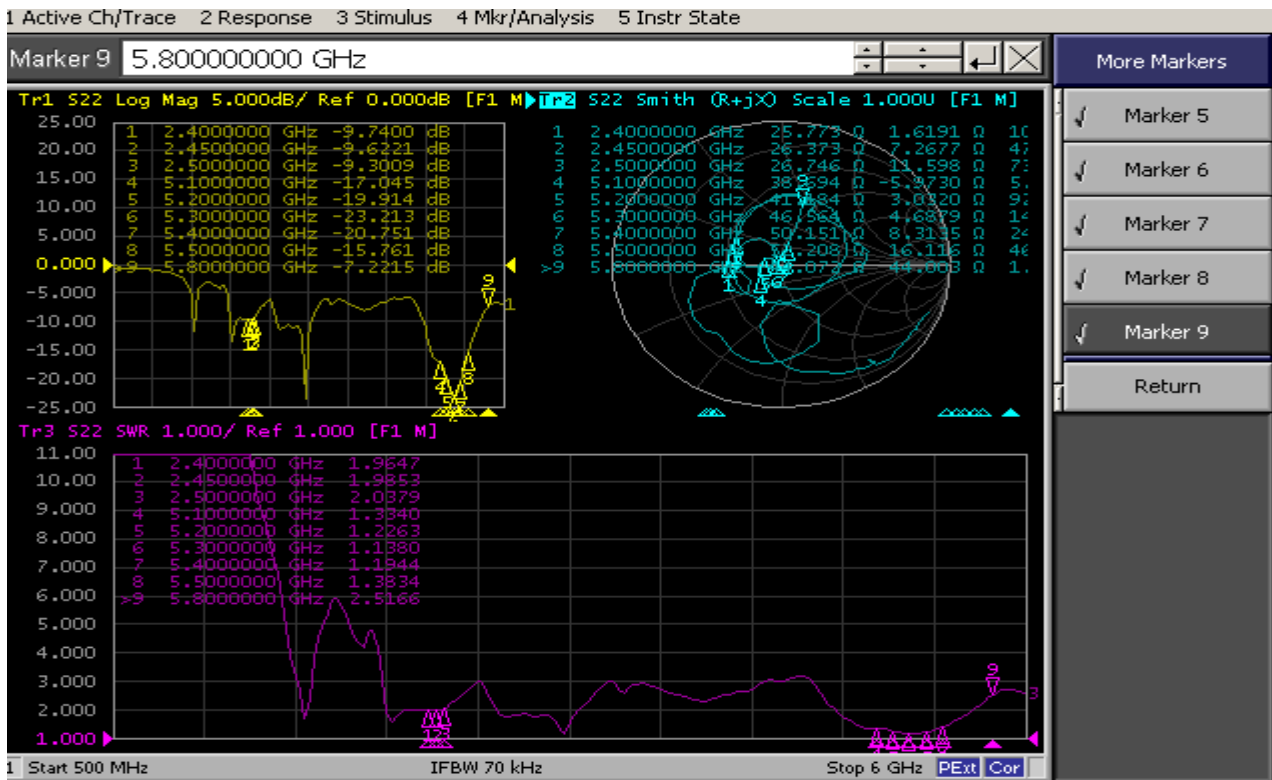


ANT3

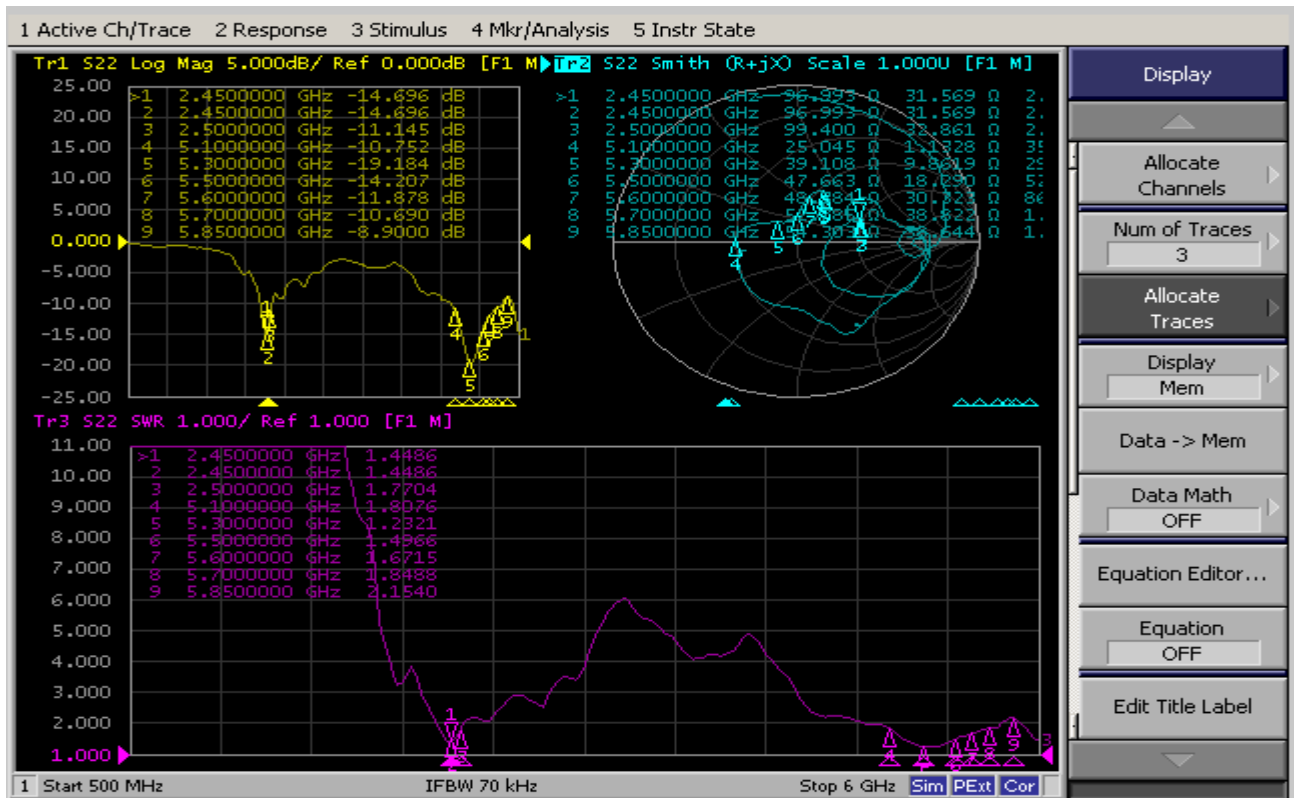
## Confidential Information



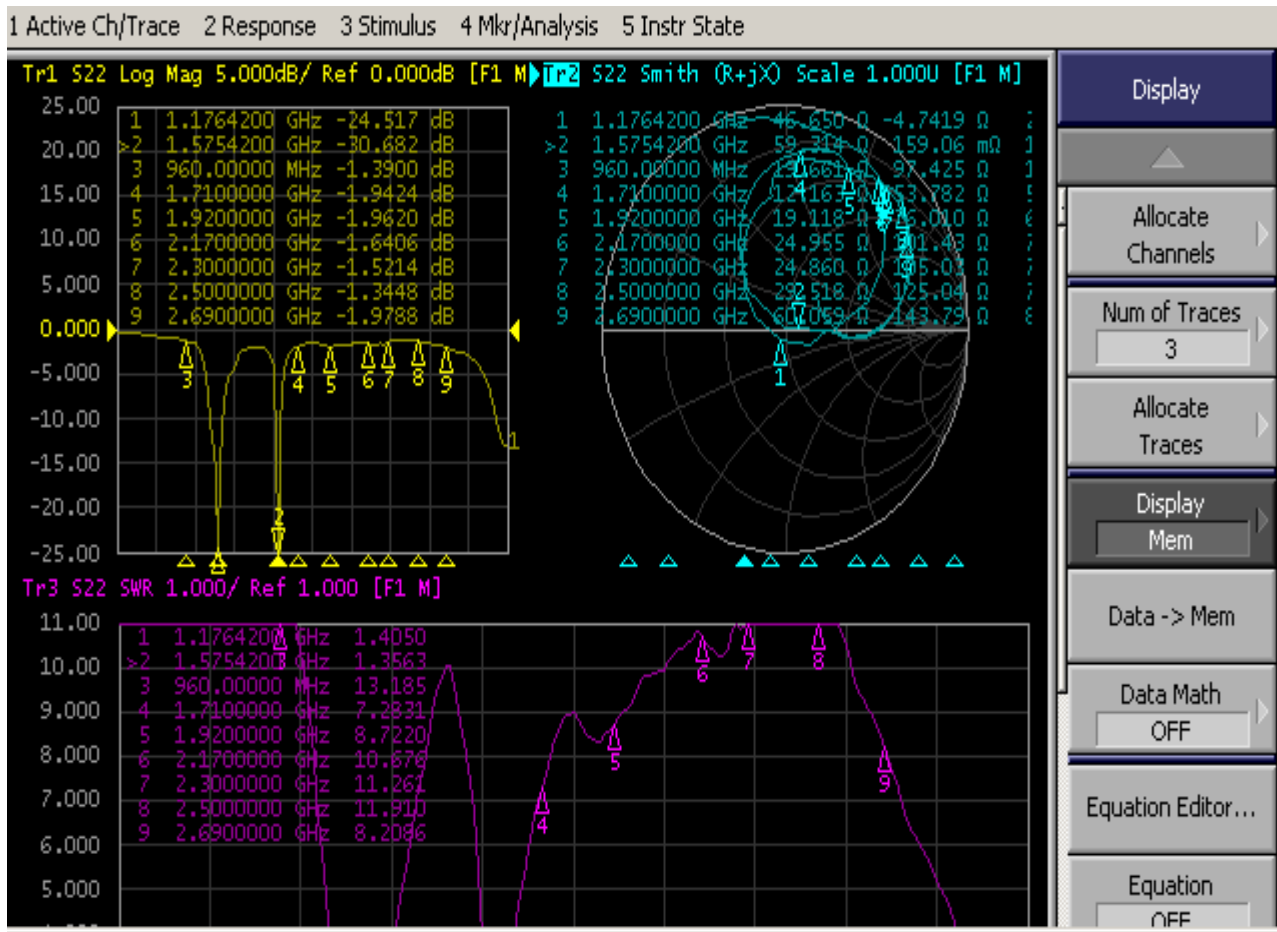
## ANT4



## WIFI-1



WIFI-2



## GPS

## 2.2 Efficiency &amp; Gain

## ANTO

| Freq (MHz) | Effi (%) | Effi (dB) | Gain (dBi) |
|------------|----------|-----------|------------|
| 1700       | 39.92    | -3.99     | 1.47       |
| 1710       | 39.28    | -4.06     | 1.29       |
| 1720       | 37.89    | -4.22     | 0.96       |
| 1730       | 37.76    | -4.23     | 0.8        |
| 1740       | 36.77    | -4.35     | 0.37       |
| 1750       | 35.9     | -4.45     | 0.21       |
| 1760       | 36.81    | -4.34     | 0.23       |
| 1770       | 35.17    | -4.54     | -0.11      |
| 1780       | 36.64    | -4.36     | -0.08      |
| 1790       | 35.73    | -4.47     | 0.29       |

Confidential Information

|      |       |       |      |
|------|-------|-------|------|
| 1800 | 34.54 | -4.62 | 0.59 |
| 1810 | 34.04 | -4.68 | 1.05 |
| 1820 | 35.46 | -4.5  | 1.42 |
| 1830 | 37.94 | -4.21 | 1.85 |
| 1840 | 42.93 | -3.67 | 2.16 |
| 1850 | 48.86 | -3.11 | 2.4  |
| 1860 | 51.75 | -2.86 | 1.85 |
| 1870 | 52.06 | -2.84 | 1.59 |
| 1880 | 50.87 | -2.94 | 1.62 |
| 1890 | 49.75 | -3.03 | 1.73 |
| 1900 | 49.71 | -3.04 | 1.8  |
| 1910 | 45.82 | -3.39 | 1.46 |
| 1920 | 41.96 | -3.77 | 1.03 |
| 1930 | 40.98 | -3.87 | 1.05 |
| 1940 | 38.05 | -4.2  | 0.81 |
| 1950 | 39.57 | -4.03 | 1.06 |
| 1960 | 38.79 | -4.11 | 1.11 |
| 1970 | 38.25 | -4.17 | 1.05 |
| 1980 | 39.95 | -3.98 | 1.33 |
| 1990 | 42.08 | -3.76 | 1.48 |
| 2000 | 43.61 | -3.6  | 1.62 |
| 2010 | 43.99 | -3.57 | 1.61 |
| 2020 | 40.17 | -3.96 | 1.18 |
| 2030 | 37.9  | -4.21 | 0.85 |
| 2040 | 35.22 | -4.53 | 0.46 |
| 2050 | 34.15 | -4.67 | 0.17 |
| 2060 | 37.04 | -4.31 | 0.53 |
| 2070 | 39.96 | -3.98 | 0.74 |
| 2080 | 39.95 | -3.98 | 0.75 |
| 2090 | 41.38 | -3.83 | 0.65 |
| 2100 | 43.04 | -3.66 | 1.08 |
| 2110 | 36.89 | -4.33 | 0.94 |
| 2120 | 35.47 | -4.5  | 1.16 |
| 2130 | 34.9  | -4.57 | 1.5  |
| 2140 | 35.03 | -4.56 | 1.63 |
| 2150 | 34.49 | -4.62 | 1.51 |
| 2160 | 34    | -4.69 | 1.2  |
| 2170 | 33.65 | -4.73 | 0.68 |

**Confidential Information**

|      |       |       |       |
|------|-------|-------|-------|
| 2180 | 34.18 | -4.66 | 0.1   |
| 2190 | 33.51 | -4.75 | -0.51 |
| 2200 | 33.26 | -4.78 | -1.03 |
| 2300 | 20.97 | -6.79 | -2.11 |
| 2310 | 22.51 | -6.48 | -2.08 |
| 2320 | 25.26 | -5.98 | -1.6  |
| 2330 | 27.78 | -5.56 | -1.39 |
| 2340 | 31.18 | -5.06 | -0.96 |
| 2350 | 31.46 | -5.02 | -0.79 |
| 2360 | 32.83 | -4.84 | -0.39 |
| 2370 | 32.41 | -4.89 | -0.32 |
| 2380 | 33.45 | -4.76 | -0.12 |
| 2390 | 33.3  | -4.78 | -0.17 |
| 2400 | 34.32 | -4.64 | -0.18 |
| 2500 | 30.98 | -5.09 | -1.2  |
| 2510 | 31.5  | -5.02 | -1.15 |
| 2520 | 30.57 | -5.15 | -1.1  |
| 2530 | 32.15 | -4.93 | -0.66 |
| 2540 | 31.7  | -4.99 | -0.34 |
| 2550 | 32.25 | -4.92 | -0.1  |
| 2560 | 31.52 | -5.01 | 0.02  |
| 2570 | 32.16 | -4.93 | 0.35  |
| 2580 | 29.46 | -5.31 | 0.09  |
| 2590 | 28.14 | -5.51 | 0.16  |
| 2600 | 29.17 | -5.35 | 0.42  |
| 2610 | 27.96 | -5.54 | 0.36  |
| 2620 | 26.01 | -5.85 | 0.03  |
| 2630 | 25.58 | -5.92 | -0.03 |
| 2640 | 27.02 | -5.68 | 0.25  |
| 2650 | 27.25 | -5.65 | 0.26  |
| 2660 | 28.62 | -5.43 | 0.53  |
| 2670 | 29.26 | -5.34 | 0.57  |
| 2680 | 29.87 | -5.25 | 0.74  |
| 2690 | 29.69 | -5.27 | 0.71  |
| 2700 | 29.87 | -5.25 | 0.63  |

**ANT1**

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 1700          | 25.59       | -5.92        | 1.18          |
| 1710          | 27.2        | -5.65        | 1.56          |
| 1720          | 30.47       | -5.16        | 1.93          |

# Confidential Information

|      |       |       |       |
|------|-------|-------|-------|
| 1730 | 30.45 | -5.16 | 1.8   |
| 1740 | 30.18 | -5.2  | 1.38  |
| 1750 | 31.71 | -4.99 | 1.28  |
| 1760 | 33.3  | -4.78 | 1.44  |
| 1770 | 35.74 | -4.47 | 1.56  |
| 1780 | 36.88 | -4.33 | 1.52  |
| 1790 | 35.64 | -4.48 | 1.28  |
| 1800 | 35.54 | -4.49 | 1.28  |
| 1810 | 35.47 | -4.5  | 1.16  |
| 1820 | 34.07 | -4.68 | 0.89  |
| 1830 | 32.65 | -4.86 | 1.08  |
| 1840 | 31.4  | -5.03 | 1.58  |
| 1850 | 30.81 | -5.11 | 1.92  |
| 1860 | 32.12 | -4.93 | 2.17  |
| 1870 | 31.15 | -5.07 | 1.99  |
| 1880 | 30.06 | -5.22 | 1.72  |
| 1890 | 30.55 | -5.15 | 1.62  |
| 1900 | 34.26 | -4.65 | 0.86  |
| 1910 | 39.62 | -4.02 | 1.29  |
| 1920 | 45.13 | -3.46 | 2.4   |
| 1930 | 46.27 | -3.35 | 2.95  |
| 1940 | 42.92 | -3.67 | 2.93  |
| 1950 | 40.53 | -3.92 | 3.04  |
| 1960 | 36.29 | -4.4  | 2.79  |
| 1970 | 32.63 | -4.86 | 2.45  |
| 1980 | 30.89 | -5.1  | 2.23  |
| 1990 | 28.54 | -5.45 | 1.83  |
| 2000 | 28    | -5.53 | 1.54  |
| 2010 | 27.62 | -5.59 | 1.17  |
| 2020 | 26.51 | -5.77 | 0.58  |
| 2030 | 27.55 | -5.6  | 0.41  |
| 2040 | 29.03 | -5.37 | 0.13  |
| 2050 | 31.35 | -5.04 | -0.13 |
| 2060 | 34.14 | -4.67 | 0.48  |
| 2070 | 35.49 | -4.5  | 1.11  |
| 2080 | 34.84 | -4.58 | 1.35  |
| 2090 | 35.61 | -4.48 | 1.89  |
| 2100 | 36.2  | -4.41 | 1.85  |
| 2110 | 33.06 | -4.81 | 1.3   |
| 2120 | 32.67 | -4.86 | 1     |
| 2130 | 33.48 | -4.75 | 1.17  |
| 2140 | 34.12 | -4.67 | 1.18  |
| 2150 | 33.21 | -4.79 | 1.01  |
| 2160 | 32.33 | -4.9  | 0.77  |

Confidential Information

|      |       |       |       |
|------|-------|-------|-------|
| 2170 | 32.58 | -4.87 | 0.94  |
| 2180 | 32.08 | -4.94 | 1.08  |
| 2190 | 32.51 | -4.88 | 1.31  |
| 2200 | 32.63 | -4.86 | 1.56  |
| 2300 | 30.76 | -5.12 | 0.1   |
| 2310 | 30.19 | -5.2  | 0.13  |
| 2320 | 30.5  | -5.16 | 0.44  |
| 2330 | 32.06 | -4.94 | 1.03  |
| 2340 | 33.55 | -4.74 | 1.48  |
| 2350 | 32.8  | -4.84 | 1.63  |
| 2360 | 33.82 | -4.71 | 1.67  |
| 2370 | 32.97 | -4.82 | 1.6   |
| 2380 | 35.13 | -4.54 | 1.65  |
| 2390 | 36.87 | -4.33 | 1.88  |
| 2400 | 37.7  | -4.24 | 1.87  |
| 2410 | 37.27 | -4.29 | 1.88  |
| 2420 | 38.28 | -4.17 | 2.01  |
| 2430 | 37.73 | -4.23 | 2.01  |
| 2440 | 39.61 | -4.02 | 2.24  |
| 2450 | 40.36 | -3.94 | 2.36  |
| 2460 | 38.68 | -4.13 | 2.21  |
| 2470 | 36.99 | -4.32 | 1.97  |
| 2480 | 36.22 | -4.41 | 1.86  |
| 2490 | 35.97 | -4.44 | 1.78  |
| 2500 | 36.49 | -4.38 | 1.76  |
| 2510 | 34.86 | -4.58 | 1.41  |
| 2520 | 33.79 | -4.71 | 0.95  |
| 2530 | 33.92 | -4.7  | 0.76  |
| 2540 | 32.1  | -4.94 | 0.29  |
| 2550 | 32.67 | -4.86 | 0.56  |
| 2560 | 32.99 | -4.82 | 0.76  |
| 2570 | 33.48 | -4.75 | 0.92  |
| 2580 | 33.37 | -4.77 | 0.94  |
| 2590 | 33.15 | -4.79 | 0.73  |
| 2600 | 32.9  | -4.83 | 0.62  |
| 2610 | 32.62 | -4.87 | 0.43  |
| 2620 | 30.24 | -5.19 | 0.09  |
| 2630 | 29.89 | -5.24 | -0.04 |
| 2640 | 31.24 | -5.05 | 0.21  |
| 2650 | 31.66 | -4.99 | 0.32  |
| 2660 | 32.34 | -4.9  | 0.37  |
| 2670 | 32.67 | -4.86 | 0.46  |
| 2680 | 31.48 | -5.02 | 0.26  |
| 2690 | 30.96 | -5.09 | 0.14  |

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|      |       |       |      |
|------|-------|-------|------|
| 2700 | 30.51 | -5.16 | 0.24 |
| 3300 | 47.44 | -3.24 | 2.86 |
| 3310 | 51.42 | -2.89 | 3.08 |
| 3320 | 53.37 | -2.73 | 3.16 |
| 3330 | 52.35 | -2.81 | 3.03 |
| 3340 | 50.41 | -2.97 | 2.71 |
| 3350 | 53    | -2.76 | 2.79 |
| 3360 | 54.06 | -2.67 | 2.68 |
| 3370 | 50.5  | -2.97 | 2.32 |
| 3380 | 50.39 | -2.98 | 2.29 |
| 3390 | 54.04 | -2.67 | 2.62 |
| 3400 | 55.92 | -2.52 | 2.89 |
| 3410 | 47.7  | -3.21 | 2.48 |
| 3420 | 48.58 | -3.13 | 2.61 |
| 3430 | 52.5  | -2.8  | 2.93 |
| 3440 | 51.97 | -2.84 | 2.7  |
| 3450 | 47.58 | -3.23 | 2.19 |
| 3460 | 44.62 | -3.5  | 1.83 |
| 3470 | 45.77 | -3.39 | 2.06 |
| 3480 | 48.82 | -3.11 | 2.42 |
| 3490 | 46.66 | -3.31 | 2.19 |
| 3500 | 45.58 | -3.41 | 2.09 |
| 3510 | 48.73 | -3.12 | 2.42 |
| 3520 | 50.2  | -2.99 | 2.69 |
| 3530 | 48.77 | -3.12 | 2.58 |
| 3540 | 48.86 | -3.11 | 2.67 |
| 3550 | 54.43 | -2.64 | 3.16 |
| 3560 | 53.96 | -2.68 | 3.1  |
| 3570 | 52.14 | -2.83 | 2.91 |
| 3580 | 47.66 | -3.22 | 2.5  |
| 3590 | 50.12 | -3    | 2.67 |
| 3600 | 50.38 | -2.98 | 2.65 |
| 3610 | 48.18 | -3.17 | 2.33 |
| 3620 | 43.44 | -3.62 | 1.99 |
| 3630 | 44.47 | -3.52 | 2.15 |
| 3640 | 45.54 | -3.42 | 2.36 |
| 3650 | 45.04 | -3.46 | 2.37 |
| 3660 | 42.02 | -3.77 | 2.23 |
| 3670 | 38.72 | -4.12 | 1.75 |
| 3680 | 37.61 | -4.25 | 1.64 |
| 3690 | 35.57 | -4.49 | 1.17 |
| 3700 | 36.37 | -4.39 | 1.19 |
| 3710 | 39.33 | -4.05 | 1.32 |
| 3720 | 40.92 | -3.88 | 1.47 |

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|      |       |       |      |
|------|-------|-------|------|
| 3730 | 38.33 | -4.16 | 1.19 |
| 3740 | 34.16 | -4.66 | 0.61 |
| 3750 | 35.57 | -4.49 | 0.81 |
| 3760 | 39.6  | -4.02 | 1.31 |
| 3770 | 39.34 | -4.05 | 1.27 |
| 3780 | 35.3  | -4.52 | 0.97 |
| 3790 | 34.75 | -4.59 | 1.01 |
| 3800 | 36.67 | -4.36 | 1.4  |
| 3810 | 42.04 | -3.76 | 1.95 |
| 3820 | 40.53 | -3.92 | 1.76 |
| 3830 | 37.63 | -4.24 | 1.33 |
| 3840 | 37.32 | -4.28 | 1.36 |
| 3850 | 38.96 | -4.09 | 1.6  |
| 3860 | 39.05 | -4.08 | 1.53 |
| 3870 | 41.62 | -3.81 | 1.73 |
| 3880 | 45.7  | -3.4  | 2.2  |
| 3890 | 47.22 | -3.26 | 2.64 |
| 3900 | 49.91 | -3.02 | 3.21 |
| 3910 | 50.72 | -2.95 | 3.46 |
| 3920 | 55.8  | -2.53 | 4.06 |
| 3930 | 60.38 | -2.19 | 4.6  |
| 3940 | 62.88 | -2.02 | 4.85 |
| 3950 | 58.07 | -2.36 | 4.51 |
| 3960 | 60.4  | -2.19 | 4.72 |
| 3970 | 67.23 | -1.72 | 5.29 |
| 3980 | 68.92 | -1.62 | 5.43 |
| 3990 | 65.54 | -1.83 | 5.15 |
| 4000 | 58.95 | -2.3  | 4.73 |
| 4010 | 57.38 | -2.41 | 4.66 |
| 4020 | 58.9  | -2.3  | 4.85 |
| 4030 | 60.64 | -2.17 | 5.07 |
| 4040 | 59.68 | -2.24 | 5.05 |
| 4050 | 61.5  | -2.11 | 5.2  |
| 4060 | 56.79 | -2.46 | 4.95 |
| 4070 | 53.74 | -2.7  | 4.7  |
| 4080 | 56.46 | -2.48 | 4.95 |
| 4090 | 61.11 | -2.14 | 5.29 |
| 4100 | 59.03 | -2.29 | 5.1  |
| 4110 | 53.06 | -2.75 | 4.55 |
| 4120 | 49    | -3.1  | 4.25 |
| 4130 | 52.45 | -2.8  | 4.4  |
| 4140 | 53.38 | -2.73 | 4.36 |
| 4150 | 55.3  | -2.57 | 4.44 |
| 4160 | 48.94 | -3.1  | 3.79 |

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|      |       |       |      |
|------|-------|-------|------|
| 4170 | 46.67 | -3.31 | 3.4  |
| 4180 | 44.38 | -3.53 | 3.08 |
| 4190 | 45.98 | -3.37 | 2.96 |
| 4200 | 45.79 | -3.39 | 2.7  |

## ANT2

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 3300          | 23.18       | -6.35        | -0.64         |
| 3310          | 23.13       | -6.36        | -0.54         |
| 3320          | 22.37       | -6.5         | -0.74         |
| 3330          | 23.22       | -6.34        | -0.39         |
| 3340          | 22.21       | -6.53        | -0.63         |
| 3350          | 22.89       | -6.4         | -0.59         |
| 3360          | 22.66       | -6.45        | -0.65         |
| 3370          | 22.2        | -6.54        | -0.77         |
| 3380          | 21.1        | -6.76        | -0.79         |
| 3390          | 20.73       | -6.83        | -1.11         |
| 3400          | 22.17       | -6.54        | -0.72         |
| 3410          | 21.97       | -6.58        | -0.7          |
| 3420          | 22.27       | -6.52        | -0.57         |
| 3430          | 20.54       | -6.87        | -1.06         |
| 3440          | 24.61       | -6.09        | -0.65         |
| 3450          | 23.89       | -6.22        | -0.85         |
| 3460          | 23.99       | -6.2         | -0.87         |
| 3470          | 23.89       | -6.22        | -0.85         |
| 3480          | 23.99       | -6.2         | -0.87         |
| 3490          | 24.55       | -6.1         | -0.57         |
| 3500          | 25.15       | -6           | -0.37         |
| 3510          | 24.85       | -6.05        | -0.47         |
| 3520          | 24.78       | -6.06        | -0.27         |
| 3530          | 24.44       | -6.12        | -0.25         |
| 3540          | 24.45       | -6.12        | -0.36         |
| 3550          | 24.61       | -6.09        | -0.65         |
| 3560          | 29.11       | -5.36        | -0.65         |
| 3570          | 30.24       | -5.19        | -0.62         |
| 3580          | 31.06       | -5.08        | -0.25         |
| 3590          | 33.74       | -4.72        | -0.14         |
| 3600          | 33.63       | -5.59        | -1.36         |
| 3610          | 33.64       | -5.58        | -0.88         |

Confidential Information

|      |       |       |       |
|------|-------|-------|-------|
| 3620 | 33.87 | -5.55 | -0.73 |
| 3630 | 32.29 | -5.8  | -0.51 |
| 3640 | 31    | -6.02 | -0.66 |
| 3650 | 30.55 | -6.1  | -0.38 |
| 3660 | 29.86 | -6.22 | -0.54 |
| 3670 | 30.22 | -6.16 | -0.26 |
| 3680 | 33.06 | -4.81 | -0.29 |
| 3690 | 32.65 | -4.86 | -0.38 |
| 3700 | 31.39 | -5.03 | -0.77 |
| 3710 | 31.22 | -5.06 | -0.71 |
| 3720 | 33.06 | -4.81 | -0.29 |
| 3730 | 32.65 | -4.86 | -0.38 |
| 3740 | 31.39 | -5.03 | -0.77 |
| 3750 | 31.22 | -5.06 | -0.71 |
| 3760 | 34.99 | -4.56 | -0.67 |
| 3770 | 34.88 | -4.57 | -0.75 |
| 3780 | 34.77 | -4.59 | -0.29 |
| 3790 | 33.44 | -4.76 | -0.07 |
| 3800 | 31.73 | -4.99 | -0.36 |
| 3810 | 39.72 | -4.01 | 1.53  |
| 3820 | 40.57 | -3.92 | 1.57  |
| 3830 | 40.63 | -3.91 | 1.68  |
| 3840 | 41.08 | -3.86 | 1.69  |
| 3850 | 43.55 | -3.61 | 2.11  |
| 3860 | 42.9  | -3.68 | 2.06  |
| 3870 | 43.71 | -3.59 | 2.01  |
| 3880 | 46.65 | -3.31 | 2.13  |
| 3890 | 47.48 | -3.23 | 2.18  |
| 3900 | 47.82 | -3.2  | 2.26  |
| 3910 | 46.3  | -3.34 | 2.05  |
| 3920 | 49.3  | -3.07 | 2.4   |
| 3930 | 51.7  | -2.87 | 2.53  |
| 3940 | 52.99 | -2.76 | 2.65  |
| 3950 | 46.78 | -3.3  | 2.13  |
| 3960 | 46.84 | -3.29 | 2.05  |
| 3970 | 51.2  | -2.91 | 2.34  |
| 3980 | 53.42 | -2.72 | 2.52  |
| 3990 | 51.43 | -2.89 | 2.4   |
| 4000 | 46.07 | -3.37 | 1.7   |
| 4010 | 44.97 | -3.47 | 1.6   |
| 4020 | 46.12 | -3.36 | 1.68  |
| 4030 | 46.8  | -3.3  | 1.77  |

## Confidential Information

|      |       |       |      |
|------|-------|-------|------|
| 4040 | 46.99 | -3.28 | 2.01 |
| 4050 | 49.2  | -3.08 | 2.08 |
| 4060 | 45.04 | -3.46 | 1.63 |
| 4070 | 43.83 | -3.58 | 1.47 |
| 4080 | 45.36 | -3.43 | 1.63 |
| 4090 | 49.22 | -3.08 | 1.77 |
| 4100 | 47.91 | -3.2  | 1.63 |
| 4110 | 44.12 | -3.55 | 1.03 |
| 4120 | 41.4  | -3.83 | 1.54 |
| 4130 | 45.68 | -3.4  | 1.91 |
| 4140 | 46.86 | -3.29 | 1.85 |
| 4150 | 49.51 | -3.05 | 1.93 |
| 4160 | 46.79 | -3.3  | 1.51 |
| 4170 | 47.73 | -3.21 | 1.4  |
| 4180 | 47.37 | -3.24 | 1.22 |
| 4190 | 47.87 | -3.2  | 0.97 |
| 4200 | 48.6  | -3.13 | 1.13 |

## ANT3

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 1700          | 25.77       | -5.89        | -1.31         |
| 1710          | 25.12       | -6           | -1.56         |
| 1720          | 23.96       | -6.21        | -1.84         |
| 1730          | 23.57       | -6.28        | -2.11         |
| 1740          | 23.25       | -6.33        | -1.95         |
| 1750          | 23.74       | -6.25        | -1.44         |
| 1760          | 25.12       | -6           | -0.92         |
| 1770          | 24.89       | -6.04        | -0.69         |
| 1780          | 27.05       | -5.68        | -0.1          |
| 1790          | 27.6        | -5.59        | 0.04          |
| 1800          | 27.08       | -5.67        | 0.01          |
| 1810          | 25.7        | -5.9         | -0.52         |
| 1820          | 27.51       | -5.6         | -0.69         |
| 1830          | 31.01       | -5.09        | -0.82         |
| 1840          | 36.99       | -4.32        | -0.7          |
| 1850          | 42.95       | -3.67        | -0.59         |
| 1860          | 46.58       | -3.32        | -0.15         |
| 1870          | 49.95       | -3.01        | 0.17          |
| 1880          | 53.82       | -2.69        | 0.54          |
| 1890          | 56.31       | -2.49        | 0.98          |
| 1900          | 58.77       | -2.31        | 1.45          |

Confidential Information

|      |       |       |       |
|------|-------|-------|-------|
| 1910 | 57.56 | -2.4  | 1.62  |
| 1920 | 55.07 | -2.59 | 1.68  |
| 1930 | 51.1  | -2.92 | 1.4   |
| 1940 | 44.83 | -3.48 | 0.95  |
| 1950 | 42.94 | -3.67 | 0.65  |
| 1960 | 38.4  | -4.16 | 0.06  |
| 1970 | 34.07 | -4.68 | -0.38 |
| 1980 | 32.25 | -4.91 | -0.84 |
| 1990 | 30.38 | -5.17 | -1.29 |
| 2000 | 29.07 | -5.37 | -1.77 |
| 2010 | 28.27 | -5.49 | -1.71 |
| 2020 | 24.83 | -6.05 | -1.97 |
| 2030 | 24.37 | -6.13 | -1.8  |
| 2040 | 25.58 | -5.92 | -1.42 |
| 2050 | 27.84 | -5.55 | -1.06 |
| 2060 | 32.09 | -4.94 | -0.65 |
| 2070 | 34.26 | -4.65 | -0.58 |
| 2080 | 32.53 | -4.88 | -1.14 |
| 2090 | 33.6  | -4.74 | -1.21 |
| 2100 | 35.81 | -4.46 | -0.58 |
| 2110 | 30.66 | -5.13 | -1    |
| 2120 | 30.43 | -5.17 | -0.89 |
| 2130 | 30.26 | -5.19 | -0.81 |
| 2140 | 30.79 | -5.12 | -0.71 |
| 2150 | 30.56 | -5.15 | -0.85 |
| 2160 | 30.19 | -5.2  | -1.09 |
| 2170 | 29.56 | -5.29 | -1.31 |
| 2180 | 30.28 | -5.19 | -1.46 |
| 2190 | 28.92 | -5.39 | -1.77 |
| 2200 | 29.56 | -5.29 | -2.13 |
| 2300 | 33.92 | -4.7  | -1.38 |
| 2310 | 35.22 | -4.53 | -1.19 |
| 2320 | 38    | -4.2  | -0.85 |
| 2330 | 39.73 | -4.01 | -0.41 |
| 2340 | 42.78 | -3.69 | -0.03 |
| 2350 | 43.21 | -3.64 | 0.09  |
| 2360 | 43.42 | -3.62 | 0.04  |
| 2370 | 41.97 | -3.77 | -0.11 |
| 2380 | 41.52 | -3.82 | -0.18 |
| 2390 | 39.89 | -3.99 | -0.36 |
| 2400 | 40.25 | -3.95 | -0.23 |
| 2410 | 39    | -4.09 | -0.2  |
| 2420 | 39.73 | -4.01 | 0.05  |
| 2430 | 39.7  | -4.01 | 0.13  |

Confidential Information

|      |       |       |       |
|------|-------|-------|-------|
| 2440 | 38.42 | -4.15 | -0.06 |
| 2450 | 39.13 | -4.07 | -0.01 |
| 2460 | 38.88 | -4.1  | -0.12 |
| 2470 | 38.38 | -4.16 | -0.12 |
| 2480 | 39.84 | -4    | -0.03 |
| 2490 | 43.43 | -3.62 | 0.47  |
| 2500 | 43.87 | -3.58 | 0.33  |
| 2510 | 45.25 | -3.44 | 0.37  |
| 2520 | 45.37 | -3.43 | 0.1   |
| 2530 | 47.93 | -3.19 | 0.34  |
| 2540 | 48.42 | -3.15 | 0.43  |
| 2550 | 50.45 | -2.97 | 0.68  |
| 2560 | 51.34 | -2.9  | 0.86  |
| 2570 | 52.98 | -2.76 | 1.06  |
| 2580 | 50.35 | -2.98 | 0.91  |
| 2590 | 48.86 | -3.11 | 0.81  |
| 2600 | 50.73 | -2.95 | 1.02  |
| 2610 | 49.45 | -3.06 | 0.87  |
| 2620 | 46.26 | -3.35 | 0.66  |
| 2630 | 45.75 | -3.4  | 0.73  |
| 2640 | 48.27 | -3.16 | 1.03  |
| 2650 | 49.11 | -3.09 | 1.24  |
| 2660 | 50.24 | -2.99 | 1.39  |
| 2670 | 50.84 | -2.94 | 1.47  |
| 2680 | 51.51 | -2.88 | 1.49  |
| 2690 | 50.19 | -2.99 | 1.35  |
| 2700 | 49.65 | -3.04 | 1.31  |
| 3300 | 28.73 | -5.42 | -1.95 |
| 3310 | 24.20 | -6.16 | -1.65 |
| 3320 | 26.57 | -5.76 | -1.23 |
| 3330 | 26.48 | -5.77 | -1.23 |
| 3340 | 24.31 | -6.14 | -1.75 |
| 3350 | 27.96 | -5.53 | -1.52 |
| 3360 | 31.14 | -5.07 | -1.25 |
| 3370 | 32.06 | -4.94 | -1.23 |
| 3380 | 33.39 | -4.76 | -1.09 |
| 3390 | 31.42 | -5.03 | -1.22 |
| 3400 | 32.13 | -4.93 | -1.43 |
| 3410 | 31.88 | -4.96 | -1.29 |
| 3420 | 31.38 | -5.03 | -1.49 |
| 3430 | 32.84 | -4.84 | -1.87 |
| 3440 | 26.92 | -5.70 | -1.74 |
| 3450 | 28.22 | -5.49 | -1.26 |
| 3460 | 31.00 | -5.09 | -1.05 |

Confidential Information

|      |       |       |       |
|------|-------|-------|-------|
| 3470 | 39.44 | -4.04 | -1.10 |
| 3480 | 38.94 | -4.10 | -1.09 |
| 3490 | 34.88 | -4.57 | -1.30 |
| 3500 | 33.69 | -4.72 | -1.15 |
| 3510 | 36.13 | -4.42 | -1.31 |
| 3520 | 38.03 | -4.20 | -1.74 |
| 3530 | 36.10 | -4.42 | -1.41 |
| 3540 | 34.60 | -4.61 | -1.18 |
| 3550 | 39.17 | -4.07 | -1.45 |
| 3560 | 40.91 | -3.88 | -1.30 |
| 3570 | 39.85 | -4.00 | -1.12 |
| 3580 | 35.76 | -4.47 | -1.17 |
| 3590 | 36.59 | -4.37 | -1.09 |
| 3600 | 37.09 | -4.31 | -1.30 |
| 3610 | 35.93 | -4.45 | -1.31 |
| 3620 | 32.59 | -4.87 | -1.03 |
| 3630 | 33.47 | -4.75 | -1.33 |
| 3640 | 34.76 | -4.59 | -1.59 |
| 3650 | 34.70 | -4.60 | -1.80 |
| 3660 | 32.27 | -4.91 | -1.72 |
| 3670 | 29.34 | -5.33 | -1.48 |
| 3680 | 28.55 | -5.44 | -1.58 |
| 3690 | 26.46 | -5.77 | -1.30 |
| 3700 | 27.65 | -5.58 | -1.48 |
| 3710 | 30.50 | -5.16 | -1.72 |
| 3720 | 32.03 | -4.94 | -1.85 |
| 3730 | 29.23 | -5.34 | -1.54 |
| 3740 | 24.94 | -6.03 | -1.14 |
| 3750 | 26.39 | -5.79 | -1.05 |
| 3760 | 30.74 | -5.12 | -1.27 |
| 3770 | 30.94 | -5.09 | -1.30 |
| 3780 | 27.13 | -5.67 | -1.15 |
| 3790 | 26.77 | -5.72 | -1.28 |
| 3800 | 28.10 | -5.51 | -1.32 |
| 3810 | 40.03 | -3.98 | -0.31 |
| 3820 | 39.09 | -4.08 | -0.25 |
| 3830 | 36.36 | -4.39 | 0     |
| 3840 | 34.77 | -4.59 | -0.14 |
| 3850 | 34.65 | -4.6  | 0.13  |
| 3860 | 33.58 | -4.74 | 0.11  |
| 3870 | 34.64 | -4.6  | 0.18  |
| 3880 | 36.32 | -4.4  | 0.52  |
| 3890 | 35.56 | -4.49 | 0.42  |
| 3900 | 34.03 | -4.68 | 0.23  |

## Confidential Information

|      |       |       |       |
|------|-------|-------|-------|
| 3910 | 33.08 | -4.8  | 0.13  |
| 3920 | 36    | -4.44 | 0.58  |
| 3930 | 37.83 | -4.22 | 0.6   |
| 3940 | 36.18 | -4.42 | 0.42  |
| 3950 | 32.04 | -4.94 | -0.02 |
| 3960 | 32.55 | -4.88 | -0.06 |
| 3970 | 38.15 | -4.19 | 0.62  |
| 3980 | 40.81 | -3.89 | 0.85  |
| 3990 | 38.45 | -4.15 | 0.67  |
| 4000 | 35.09 | -4.55 | 0.16  |
| 4010 | 35.69 | -4.47 | 0.34  |
| 4020 | 38.96 | -4.09 | 0.83  |
| 4030 | 43.24 | -3.64 | 1.3   |
| 4040 | 44.85 | -3.48 | 1.27  |
| 4050 | 45.49 | -3.42 | 1.38  |
| 4060 | 42.88 | -3.68 | 1.35  |
| 4070 | 43.47 | -3.62 | 1.4   |
| 4080 | 48.53 | -3.14 | 1.8   |
| 4090 | 53.11 | -2.75 | 2.31  |
| 4100 | 49.23 | -3.08 | 2.02  |
| 4110 | 43.01 | -3.66 | 1.56  |
| 4120 | 40.79 | -3.89 | 1.52  |
| 4130 | 45.2  | -3.45 | 1.91  |
| 4140 | 46.06 | -3.37 | 2.04  |
| 4150 | 44.31 | -3.54 | 1.95  |
| 4160 | 38.7  | -4.12 | 1.35  |
| 4170 | 37.84 | -4.22 | 1.45  |
| 4180 | 37.54 | -4.25 | 1.45  |
| 4190 | 38.11 | -4.19 | 1.5   |
| 4200 | 36.64 | -4.36 | 1.35  |

## ANT4

| (MHz) | (%)   | (dB)   | (dBi)  |
|-------|-------|--------|--------|
| 620   | 2.02  | -16.94 | -11.89 |
| 630   | 2.23  | -16.52 | -11.64 |
| 640   | 6.35  | -11.97 | -7.38  |
| 650   | 6.03  | -12.2  | -7.81  |
| 660   | 5.43  | -12.65 | -8.67  |
| 670   | 10.78 | -9.67  | -5.36  |
| 680   | 11.75 | -9.3   | -4.93  |
| 690   | 13.95 | -8.56  | -3.73  |

Confidential Information

|      |       |       |       |
|------|-------|-------|-------|
| 700  | 16.45 | -7.84 | -2.76 |
| 710  | 17.09 | -7.67 | -2.61 |
| 720  | 20.35 | -6.91 | -1.4  |
| 730  | 21.94 | -6.59 | -1.37 |
| 740  | 22.67 | -6.45 | -1.27 |
| 750  | 23.71 | -6.25 | -2.88 |
| 760  | 28.71 | -5.42 | -2.06 |
| 770  | 27.1  | -5.67 | -2.47 |
| 780  | 27.82 | -5.56 | -2.58 |
| 790  | 34.14 | -4.67 | -1.8  |
| 800  | 45.42 | -3.43 | -0.73 |
| 810  | 45.66 | -3.4  | -0.7  |
| 820  | 38.31 | -4.17 | -1.14 |
| 830  | 24.88 | -6.04 | -2.91 |
| 840  | 29.65 | -5.28 | -2.39 |
| 850  | 25.82 | -5.88 | -2.55 |
| 860  | 31.42 | -5.03 | -1.34 |
| 870  | 35.37 | -4.51 | -1.09 |
| 880  | 41.23 | -3.85 | -0.55 |
| 890  | 43.5  | -3.61 | -0.65 |
| 900  | 47.28 | -3.25 | 0.84  |
| 910  | 47.76 | -3.21 | 1.14  |
| 920  | 45.02 | -3.47 | 0.92  |
| 930  | 38.89 | -4.1  | 0.69  |
| 940  | 32.62 | -4.87 | 0.28  |
| 950  | 29.52 | -5.3  | 0.22  |
| 960  | 23.95 | -6.21 | -0.61 |
| 970  | 21.36 | -6.7  | -1.12 |
| 980  | 16.96 | -7.7  | -2.16 |
| 990  | 12.51 | -9.03 | -3.71 |
| 1000 | 11.66 | -9.33 | -4.14 |

**WIFI-1**

| (MHz) | (%)   | (dB)  | (dBi) |
|-------|-------|-------|-------|
| 2400  | 38.25 | -4.17 | 0.7   |
| 2410  | 38.42 | -4.15 | 0.85  |
| 2420  | 38.68 | -4.13 | 0.71  |
| 2430  | 39.5  | -4.03 | 0.72  |
| 2440  | 38.56 | -4.14 | 0.47  |
| 2450  | 39.23 | -4.06 | 0.58  |

Confidential Information

|      |       |       |      |
|------|-------|-------|------|
| 2460 | 39.03 | -4.09 | 0.62 |
| 2470 | 37.87 | -4.22 | 0.41 |
| 2480 | 38.76 | -4.12 | 0.5  |
| 2490 | 41.15 | -3.86 | 0.63 |
| 2500 | 40.29 | -3.95 | 0.64 |
| 5150 | 34.27 | -4.65 | 1.27 |
| 5160 | 33.74 | -4.72 | 1.16 |
| 5170 | 32.74 | -4.85 | 1.11 |
| 5180 | 31.76 | -4.98 | 0.97 |
| 5190 | 31.48 | -5.02 | 0.82 |
| 5200 | 31.26 | -5.05 | 0.87 |
| 5210 | 31.76 | -4.98 | 0.92 |
| 5220 | 30.71 | -5.13 | 0.83 |
| 5230 | 31.16 | -5.06 | 0.82 |
| 5240 | 29.75 | -5.27 | 0.64 |
| 5250 | 29.02 | -5.37 | 0.62 |
| 5260 | 29.13 | -5.36 | 0.6  |
| 5270 | 28.01 | -5.53 | 0.53 |
| 5280 | 28.38 | -5.47 | 0.51 |
| 5290 | 29.28 | -5.33 | 0.68 |
| 5300 | 28.07 | -5.52 | 0.48 |
| 5310 | 28.68 | -5.42 | 0.68 |
| 5320 | 29.55 | -5.3  | 0.75 |
| 5330 | 29.02 | -5.37 | 0.68 |
| 5340 | 29.86 | -5.25 | 0.78 |
| 5350 | 31.66 | -4.99 | 1.01 |
| 5360 | 32.13 | -4.93 | 1.02 |
| 5370 | 33.42 | -4.76 | 1.14 |
| 5380 | 33.68 | -4.73 | 1.03 |
| 5390 | 31.75 | -4.98 | 0.69 |
| 5400 | 38.19 | -4.18 | 1.39 |
| 5410 | 40.47 | -3.93 | 1.59 |
| 5420 | 40.82 | -3.89 | 1.67 |
| 5430 | 41.03 | -3.87 | 1.52 |
| 5440 | 40.89 | -3.88 | 1.44 |
| 5450 | 40.59 | -3.92 | 1.37 |
| 5460 | 42.54 | -3.71 | 1.58 |
| 5470 | 42.02 | -3.77 | 1.35 |
| 5480 | 41.8  | -3.79 | 1.35 |
| 5490 | 40.96 | -3.88 | 1.12 |
| 5500 | 40.21 | -3.96 | 1.04 |
| 5510 | 39.59 | -4.02 | 0.92 |

**Confidential Information**

|      |       |       |      |
|------|-------|-------|------|
| 5520 | 40.63 | -3.91 | 1.02 |
| 5530 | 41.3  | -3.84 | 1.11 |
| 5540 | 40.76 | -3.9  | 0.9  |
| 5550 | 39.49 | -4.03 | 0.82 |
| 5560 | 38.65 | -4.13 | 0.68 |
| 5570 | 39.69 | -4.01 | 0.82 |
| 5580 | 40.31 | -3.95 | 0.81 |
| 5590 | 39.7  | -4.01 | 0.72 |
| 5600 | 39.81 | -4    | 0.74 |
| 5610 | 40.27 | -3.95 | 0.78 |
| 5620 | 40.53 | -3.92 | 0.61 |
| 5630 | 41.61 | -3.81 | 0.68 |
| 5640 | 41.13 | -3.86 | 0.44 |
| 5650 | 42.6  | -3.71 | 0.68 |
| 5660 | 43.82 | -3.58 | 0.74 |
| 5670 | 42.44 | -3.72 | 0.42 |
| 5680 | 43.6  | -3.61 | 0.43 |
| 5690 | 44.57 | -3.51 | 0.58 |
| 5700 | 45.35 | -3.43 | 0.42 |
| 5710 | 44.66 | -3.5  | 0.55 |
| 5720 | 43.81 | -3.58 | 0.18 |
| 5730 | 43.89 | -3.58 | 0.25 |
| 5740 | 45.64 | -3.41 | 0.39 |
| 5750 | 46.24 | -3.35 | 0.33 |
| 5760 | 44.93 | -3.47 | 0.28 |
| 5770 | 44.13 | -3.55 | 0.25 |
| 5780 | 42.48 | -3.72 | 0.25 |
| 5790 | 42.4  | -3.73 | 0.18 |
| 5800 | 41.74 | -3.79 | 0.39 |
| 5810 | 41.67 | -3.8  | 0.44 |
| 5820 | 42.08 | -3.76 | 0.47 |
| 5830 | 41.88 | -3.78 | 0.42 |
| 5840 | 42.64 | -3.7  | 0.68 |
| 5850 | 44.95 | -3.47 | 1    |

**WIFI-2**

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 2400          | 39.78       | -4           | 0.56          |
| 2405          | 39.33       | -4.05        | 0.58          |

Confidential Information

|      |       |       |       |
|------|-------|-------|-------|
| 2410 | 39.05 | -4.08 | 0.58  |
| 2415 | 39.79 | -4    | 0.71  |
| 2420 | 40.22 | -3.96 | 0.78  |
| 2425 | 40.2  | -3.96 | 0.83  |
| 2430 | 40.62 | -3.91 | 0.94  |
| 2435 | 41.56 | -3.81 | 1.17  |
| 2440 | 41.94 | -3.77 | 1.22  |
| 2445 | 41.36 | -3.83 | 1.12  |
| 2450 | 39.07 | -4.08 | 0.93  |
| 2455 | 39.08 | -4.08 | 1.15  |
| 2460 | 39.43 | -4.04 | 1.37  |
| 2465 | 39.72 | -4.01 | 1.39  |
| 2470 | 38.93 | -4.1  | 1.34  |
| 2475 | 39.15 | -4.07 | 1.47  |
| 2480 | 39.67 | -4.02 | 1.62  |
| 2485 | 40.46 | -3.93 | 1.62  |
| 2490 | 40.17 | -3.96 | 1.54  |
| 2495 | 39.8  | -4    | 1.45  |
| 2500 | 39.49 | -4.04 | 1.36  |
| 5150 | 31.25 | -5.05 | 0.92  |
| 5178 | 28.96 | -5.38 | 0.43  |
| 5206 | 30.73 | -5.12 | 0.32  |
| 5234 | 32.04 | -4.94 | -0.13 |
| 5262 | 32.56 | -4.87 | -0.2  |
| 5290 | 35.21 | -4.53 | 0.28  |
| 5318 | 36.92 | -4.33 | 0.67  |
| 5346 | 40.6  | -3.92 | 1.02  |
| 5374 | 42.09 | -3.76 | 1.27  |
| 5402 | 45.68 | -3.4  | 1.6   |
| 5430 | 43.19 | -3.65 | 1.14  |
| 5458 | 45.07 | -3.46 | 1.47  |
| 5486 | 42.53 | -3.71 | 1.18  |
| 5514 | 43.28 | -3.64 | 1.14  |
| 5542 | 42.76 | -3.69 | 1.16  |
| 5570 | 46.28 | -3.35 | 1.58  |
| 5598 | 48.85 | -3.11 | 1.69  |
| 5626 | 51.89 | -2.85 | 1.91  |
| 5654 | 48.78 | -3.12 | 1.72  |
| 5682 | 48.53 | -3.14 | 1.61  |
| 5710 | 48.42 | -3.15 | 1.72  |
| 5738 | 48.82 | -3.11 | 1.69  |
| 5766 | 47.85 | -3.2  | 1.55  |

## Confidential Information

|      |       |       |      |
|------|-------|-------|------|
| 5794 | 46.78 | -3.3  | 1.7  |
| 5822 | 47.64 | -3.22 | 1.98 |
| 5850 | 47.19 | -3.26 | 1.9  |

### GPS

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 1151          | 46.71       | -3.31        | -0.56         |
| 1156          | 50.04       | -3.01        | -0.36         |
| 1161          | 52.35       | -2.81        | 0             |
| 1166          | 51.85       | -2.85        | 0.06          |
| 1171          | 52.77       | -2.78        | 0.12          |
| 1176          | 51.14       | -2.91        | -0.05         |
| 1181          | 49.39       | -3.06        | -0.1          |
| 1186          | 48.88       | -3.11        | 0.04          |
| 1191          | 48.3        | -3.16        | 0.1           |
| 1196          | 49.39       | -3.06        | 0.28          |
| 1201          | 48.28       | -3.16        | 0.22          |
| 1206          | 49.07       | -3.09        | 0.43          |
| 1550          | 37.17       | -4.3         | 0.34          |
| 1555          | 37.38       | -4.27        | 0.23          |
| 1560          | 37.78       | -4.23        | 0.13          |
| 1565          | 37.46       | -4.26        | -0.05         |
| 1570          | 40.99       | -3.87        | 0.2           |
| 1575          | 42.13       | -3.75        | 0.2           |
| 1580          | 38.39       | -4.16        | -0.44         |
| 1585          | 36.79       | -4.34        | -0.57         |
| 1590          | 33.88       | -4.7         | -0.17         |
| 1595          | 33.76       | -4.72        | -0.03         |
| 1600          | 32.75       | -4.85        | -0.15         |

## 2.3 3D Pattern

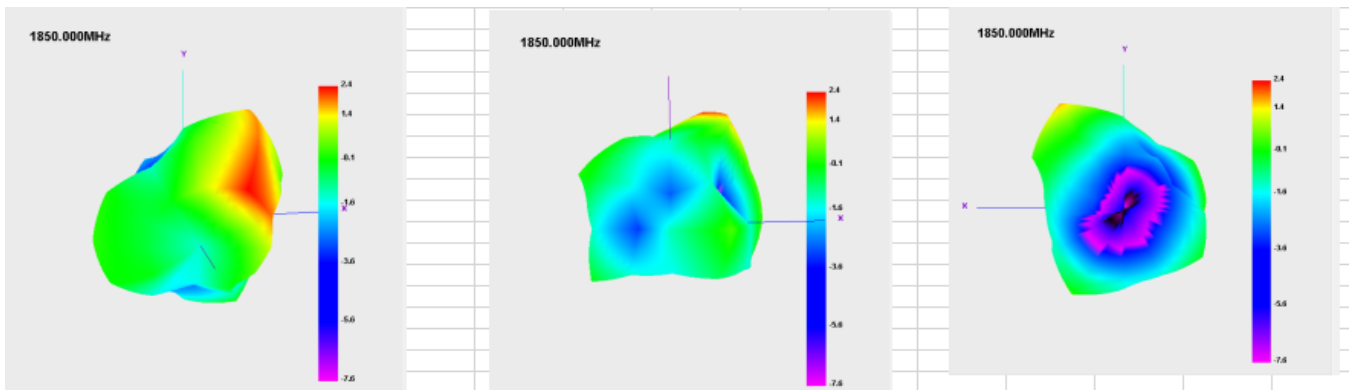
**ANT0**

**WCDMA B2**

**H plane**

**E1 plane**

**E2 plane**

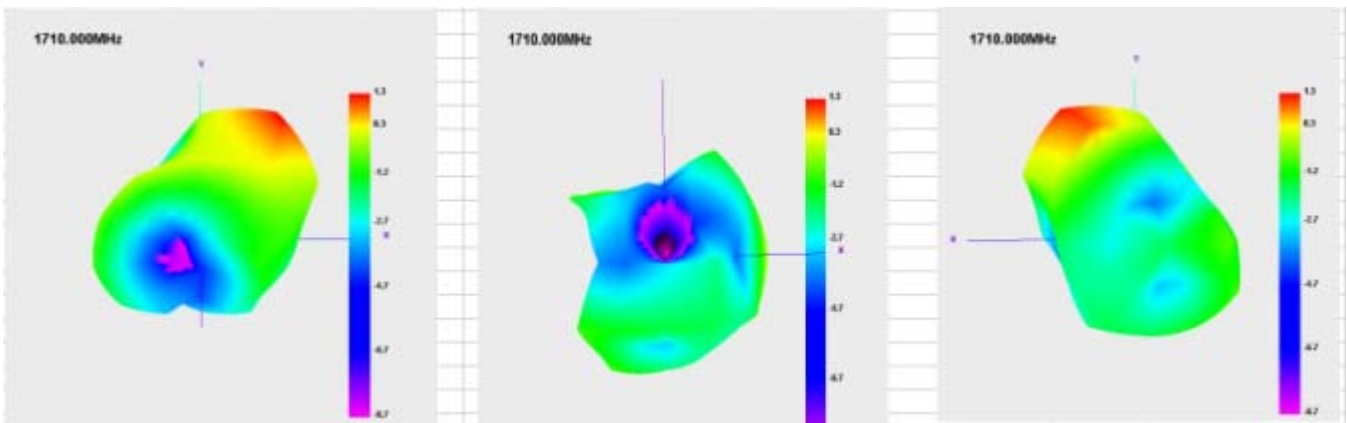


## WCDMA B4

H plane

E1 plane

E2 plane

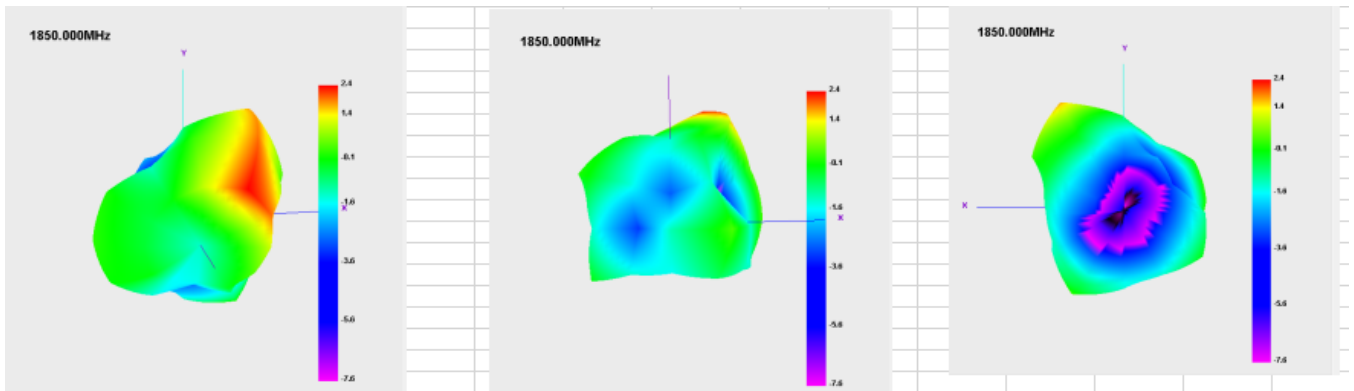


## LTE B2

H plane

E1 plane

E2 plane

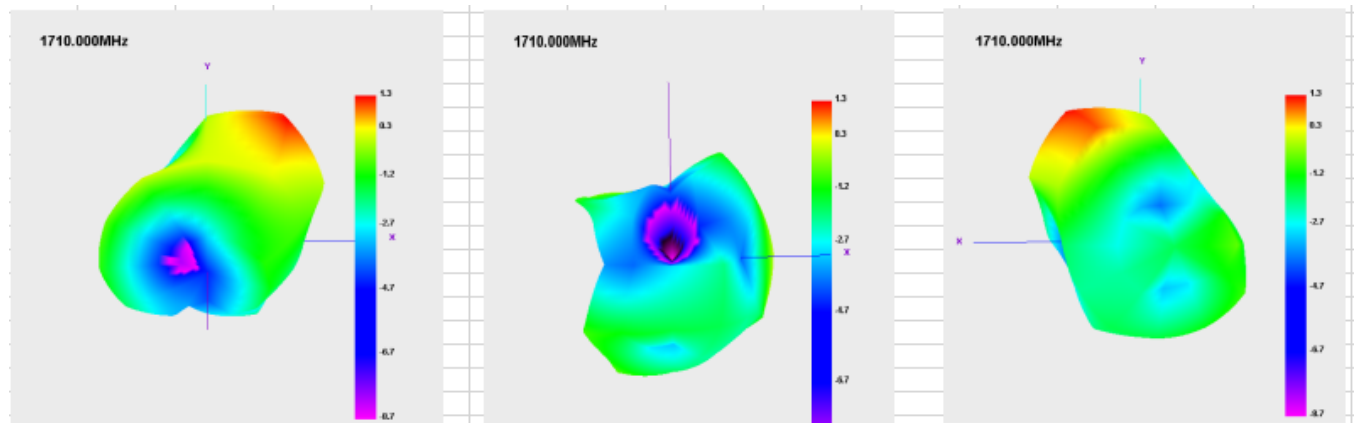


### LTE B4

H plane

E1 plane

E2 plane

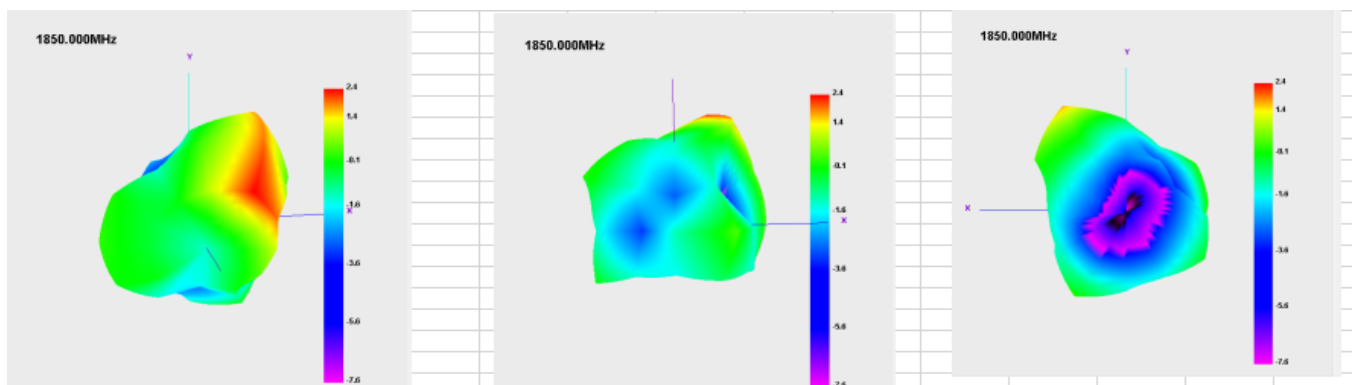


### LTE B25

H plane

E1 plane

E2 plane

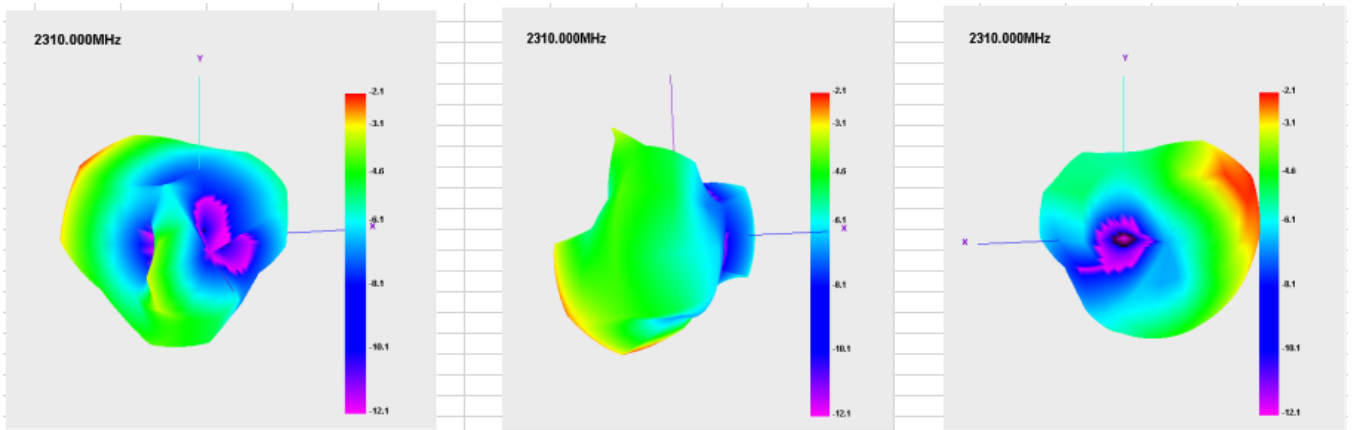


### LTE B30

H plane

E1 plane

E2 plane

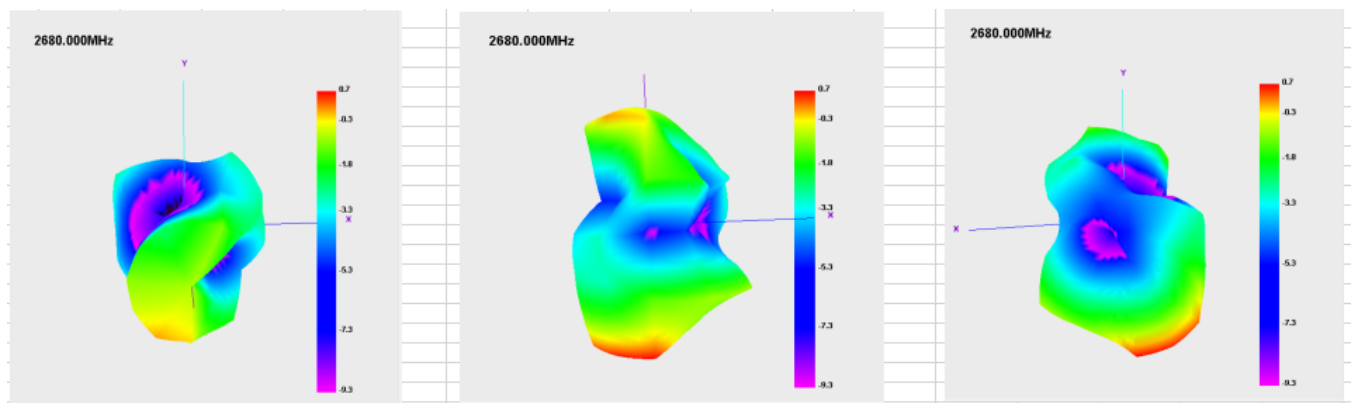


**TE B41**

**H plane**

**E1 plane**

**E2 plane**

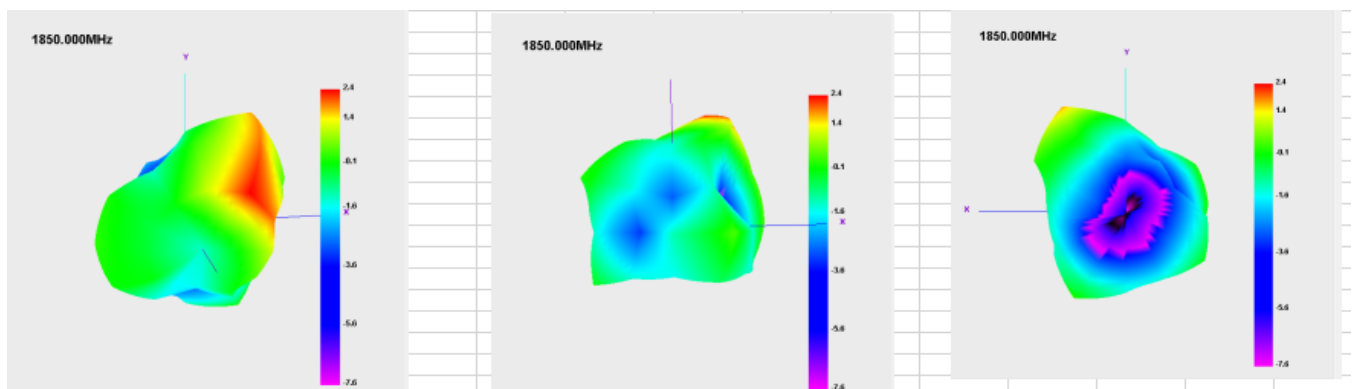


**NR N2**

**H plane**

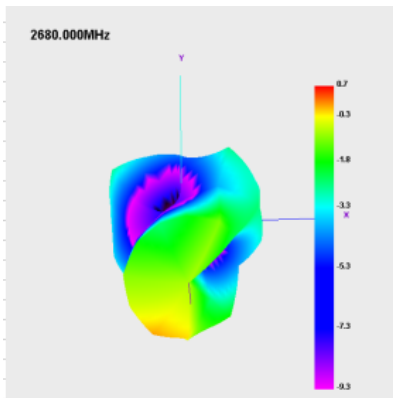
**E1 plane**

**E2 plane**

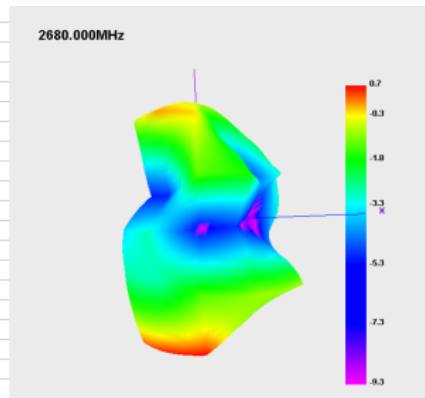


**NR N41**

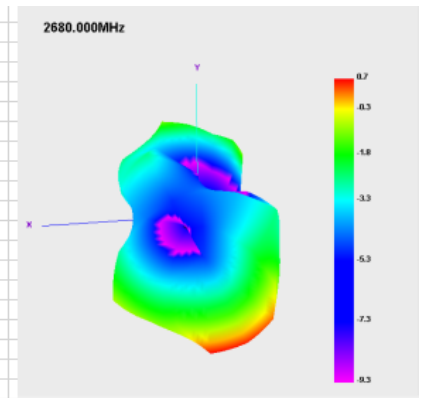
H plane



E1 plane

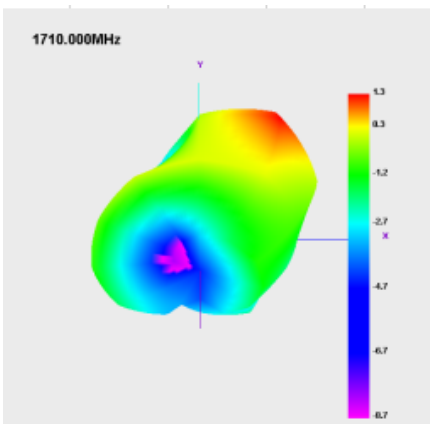


E2 plane

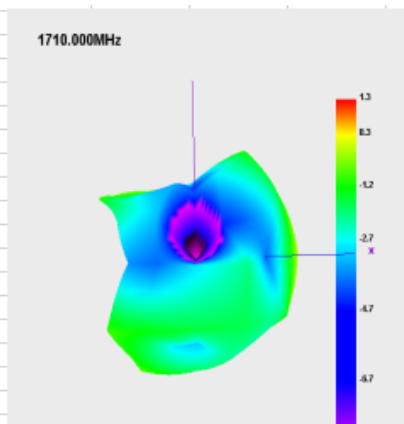


**NR N66**

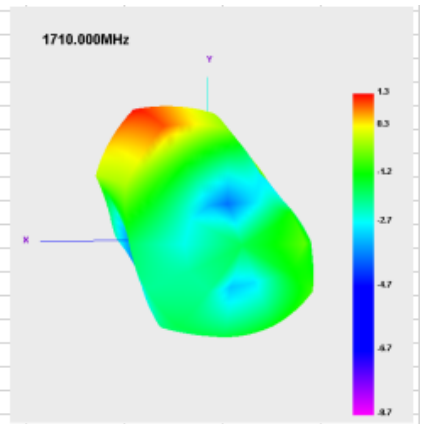
H plane



E1 plane



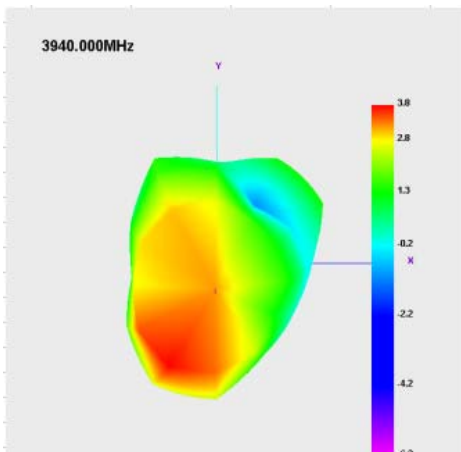
E2 plane



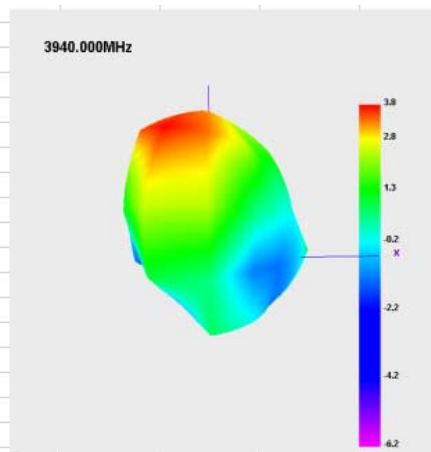
**ANT2**

**NR N77**

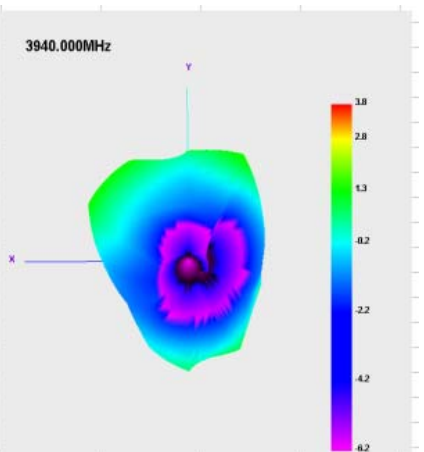
H plane



E1 plane



E2 plane



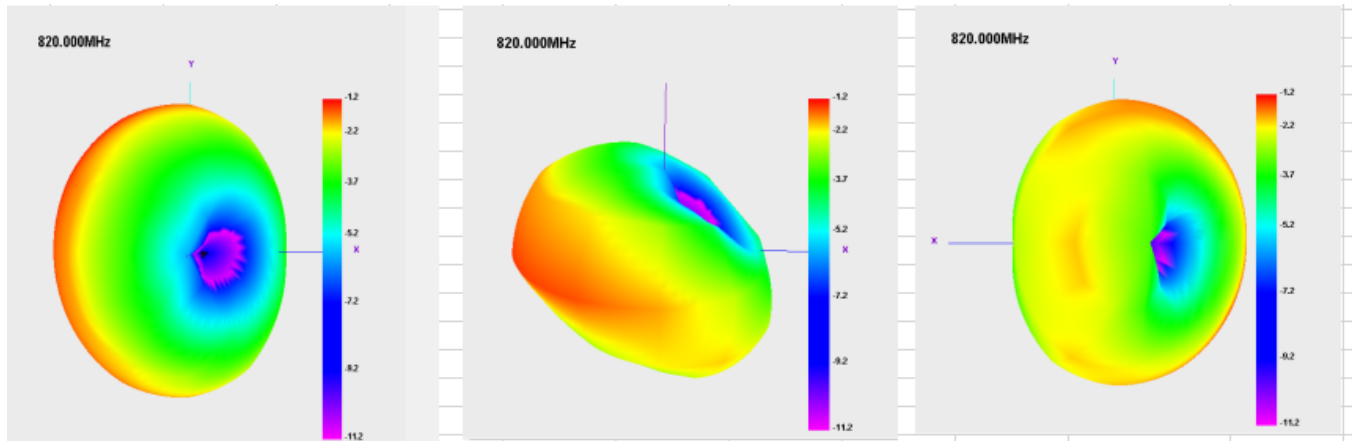
## ANT4

### LTE B5

H plane

E1 plane

E2 plane

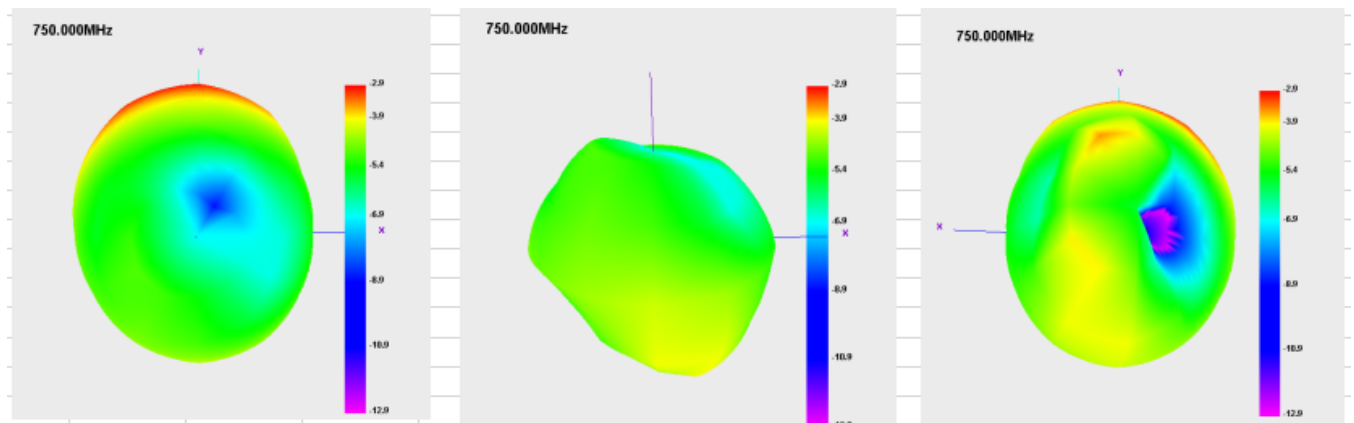


### LTE B12

H plane

E1 plane

E2 plane

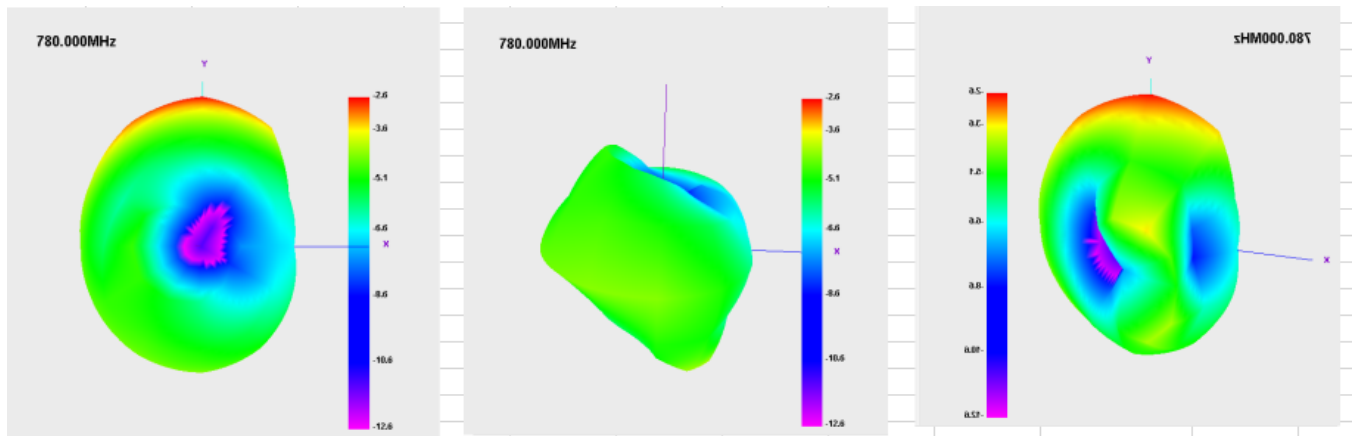


### LTE B13

H plane

E1 plane

E2 plane

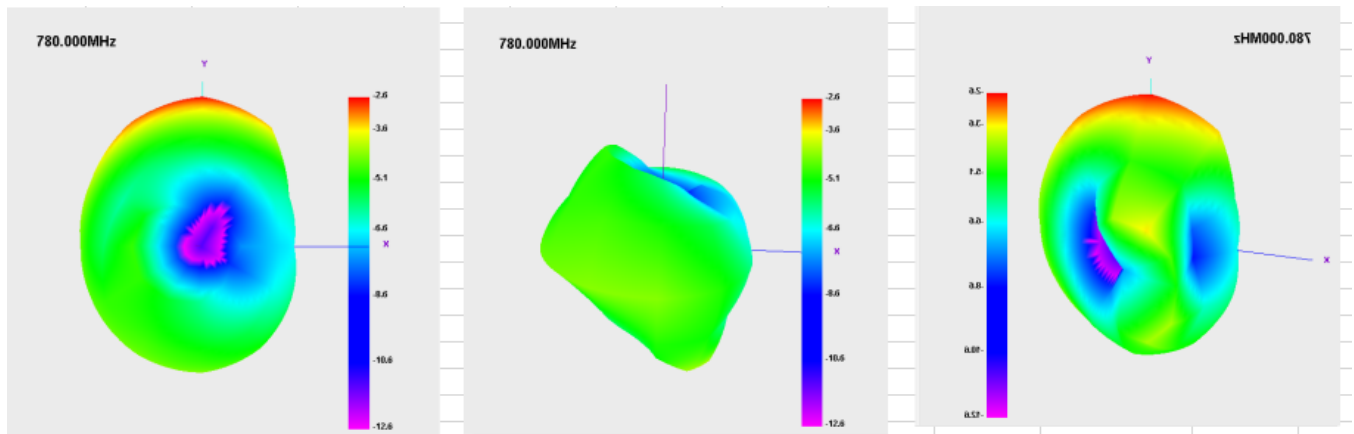


**LTE B14**

H plane

E1 plane

E2 plane

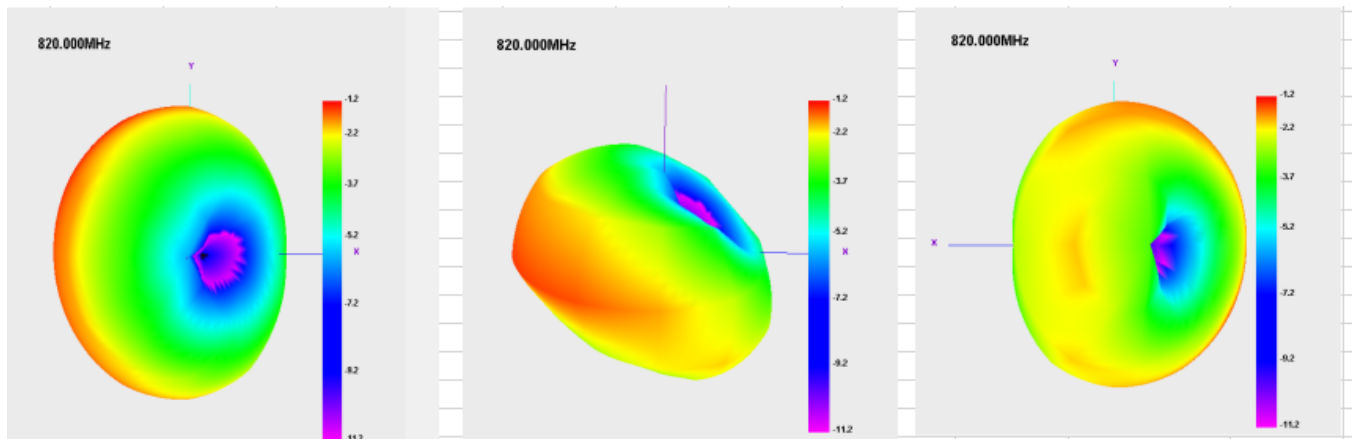


**LTE B26**

H plane

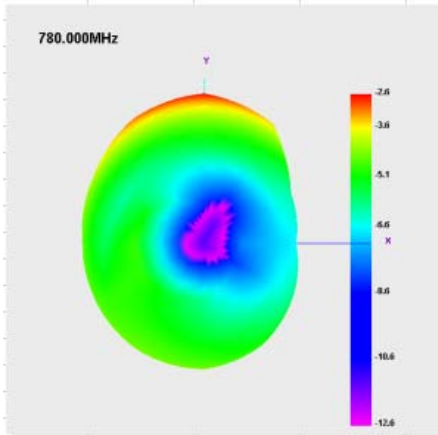
E1 plane

E2 plane

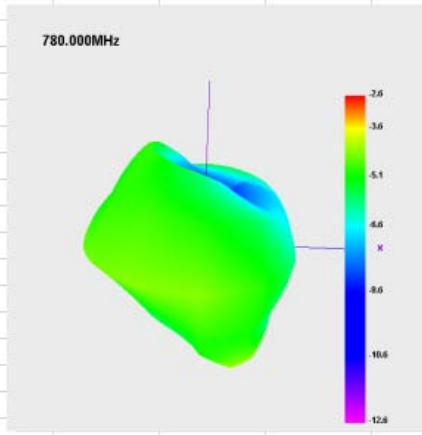


## LTE B28

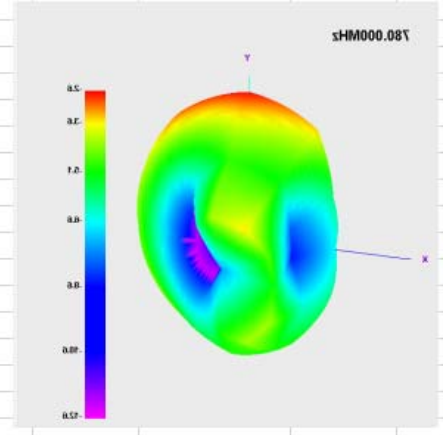
H plane



E1 plane

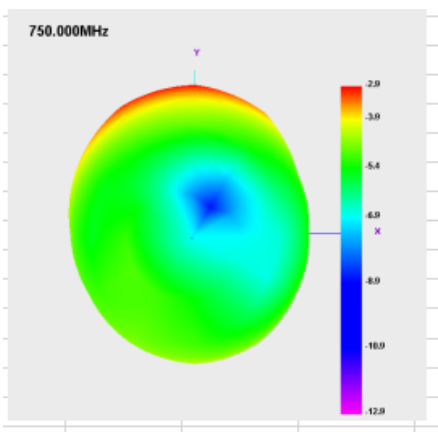


E2 plane

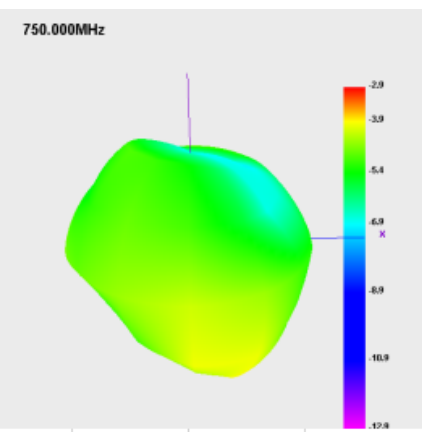


## LTE B29

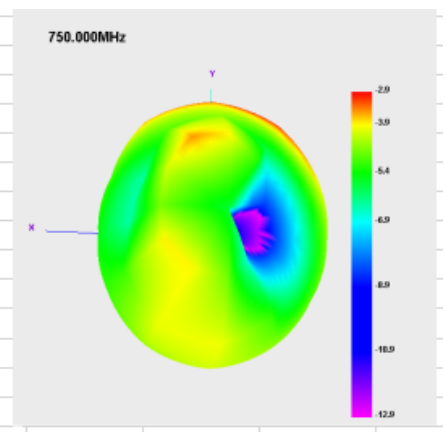
H plane



E1 plane



E2 plane

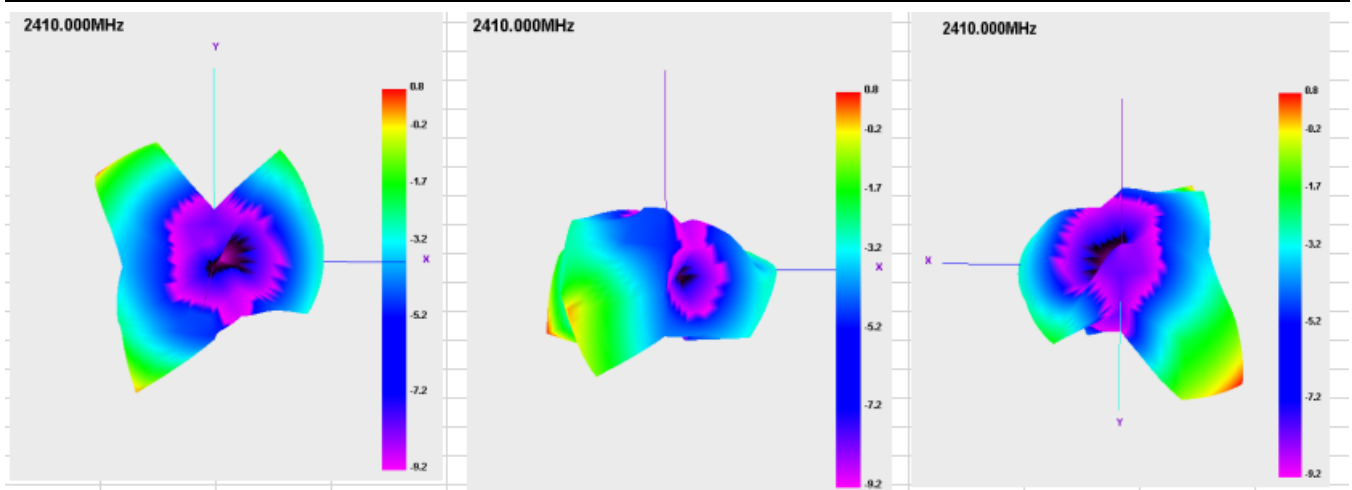


## WIFI-1

2.4G H plane

E1 plane

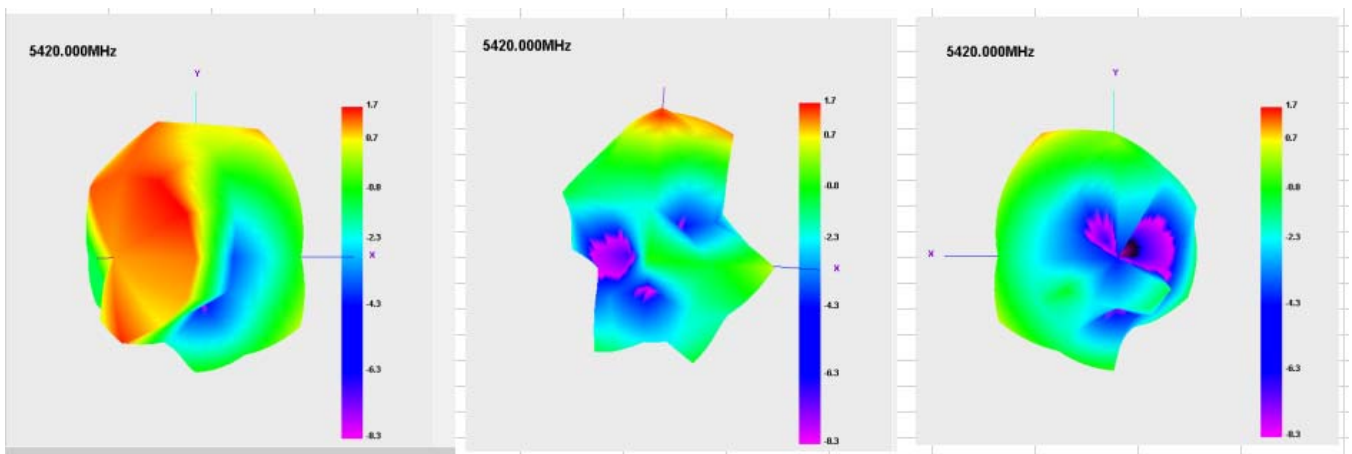
E2 plane



5G H plane

E1 plane

E2 plane

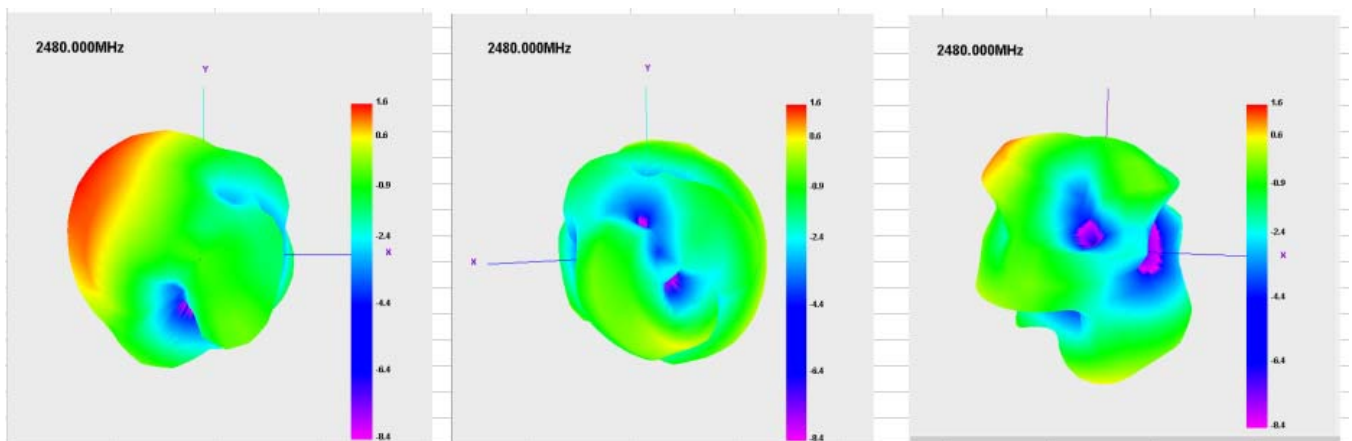


WIFI-2

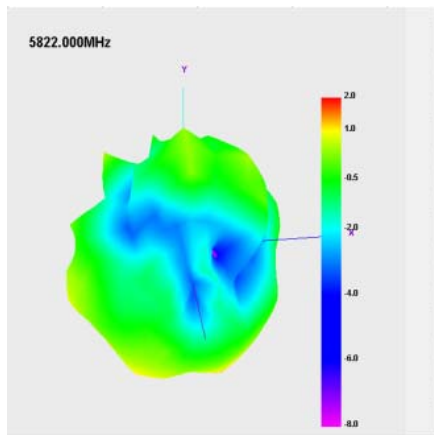
2.4G H plane

E1 plane

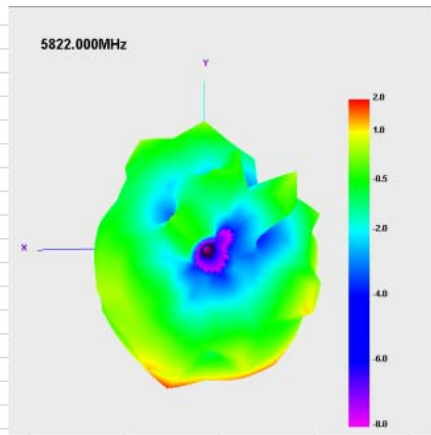
E2 plane



5 G H plane



E1 plane



E2 plane

