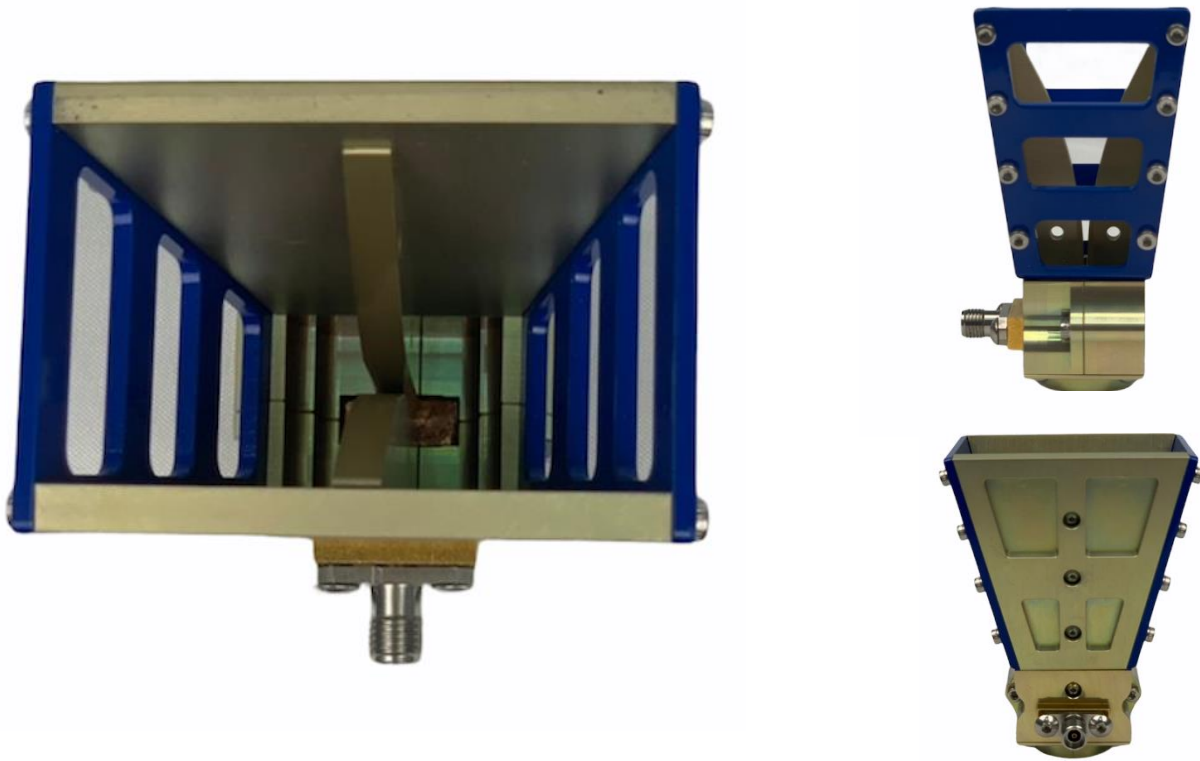


## 5 GHz to 40 GHz Double Ridged Broadband Waveguide Horn Antenna



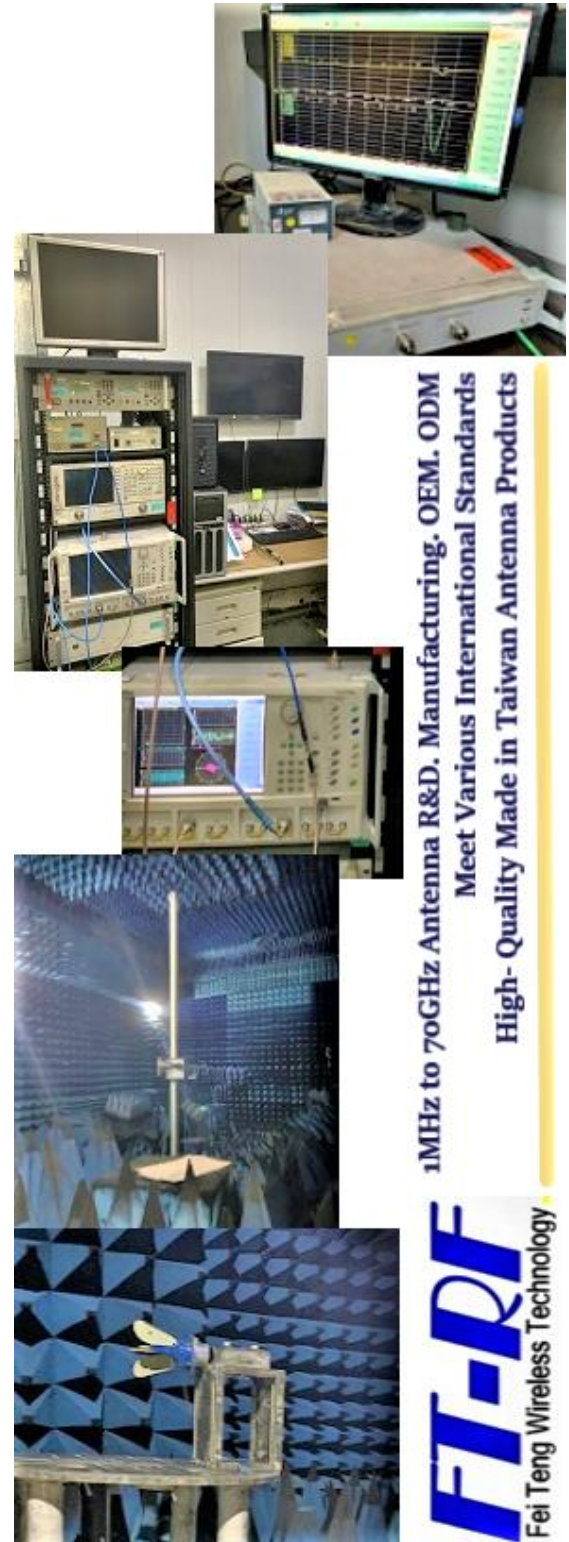
| Applications:  | Features:  |
|--|--|
| <ul style="list-style-type: none"> <li>● 5 GHz to 40 GHz</li> <li>● 6061 Aluminum metal alloy</li> <li>● Stainless Steel 2.92mm Female</li> <li>● Taiwan Design, Made in Taiwan</li> </ul> | <ul style="list-style-type: none"> <li>● DC Short lighting protection</li> <li>● Low VSWR</li> <li>● Uniform Gain</li> <li>● Consolidated performance data base</li> </ul> |
| <p>Model: HA-0540GB-KF</p> <p>LxWxH: 104x55x43 mm</p> <p>Connector: 2.92mm Female</p> <p>Styling: Double Ridged Horn</p> <p>Gain: 1dBi- 15 dBi</p>   | <p>-3db Beamwidth: Horz. 38 deg- Vert. 44 deg</p> <p>N.W.: 92.3 g</p> <p>Frequency: 5GHz to 40GHz</p> <p>Polarization: Vertical or Horizontal</p> <p>Max Power: 25W</p>    |

**Electrical Specifications**

|                             |                        |
|-----------------------------|------------------------|
| <b>Frequency Range</b>      | 5GHz - 40GHz           |
| <b>V.S.W. R</b>             | 2.5 :1 (Avg)           |
| <b>Antenna Type</b>         | Horn                   |
| <b>Radiation</b>            | Directional            |
| <b>Gain</b>                 | 1-15 dBi               |
| <b>Antenna Factor</b>       | 40- 51 dB/m            |
| <b>Polarization</b>         | Vertical or Horizontal |
| <b>Maximum Power</b>        | 25W                    |
| <b>Vertical Beamwidth</b>   | 44 Deg                 |
| <b>Horizontal Beamwidth</b> | 38 Deg                 |
| <b>Impedance</b>            | 50 Ohm                 |
| <b>FBR</b>                  | 24 db                  |
| <b>Antenna Design</b>       | Double-Ridged          |
| <b>Internal Material</b>    | Aluminum               |
| <b>Connector</b>            | 2.92mm- Female         |

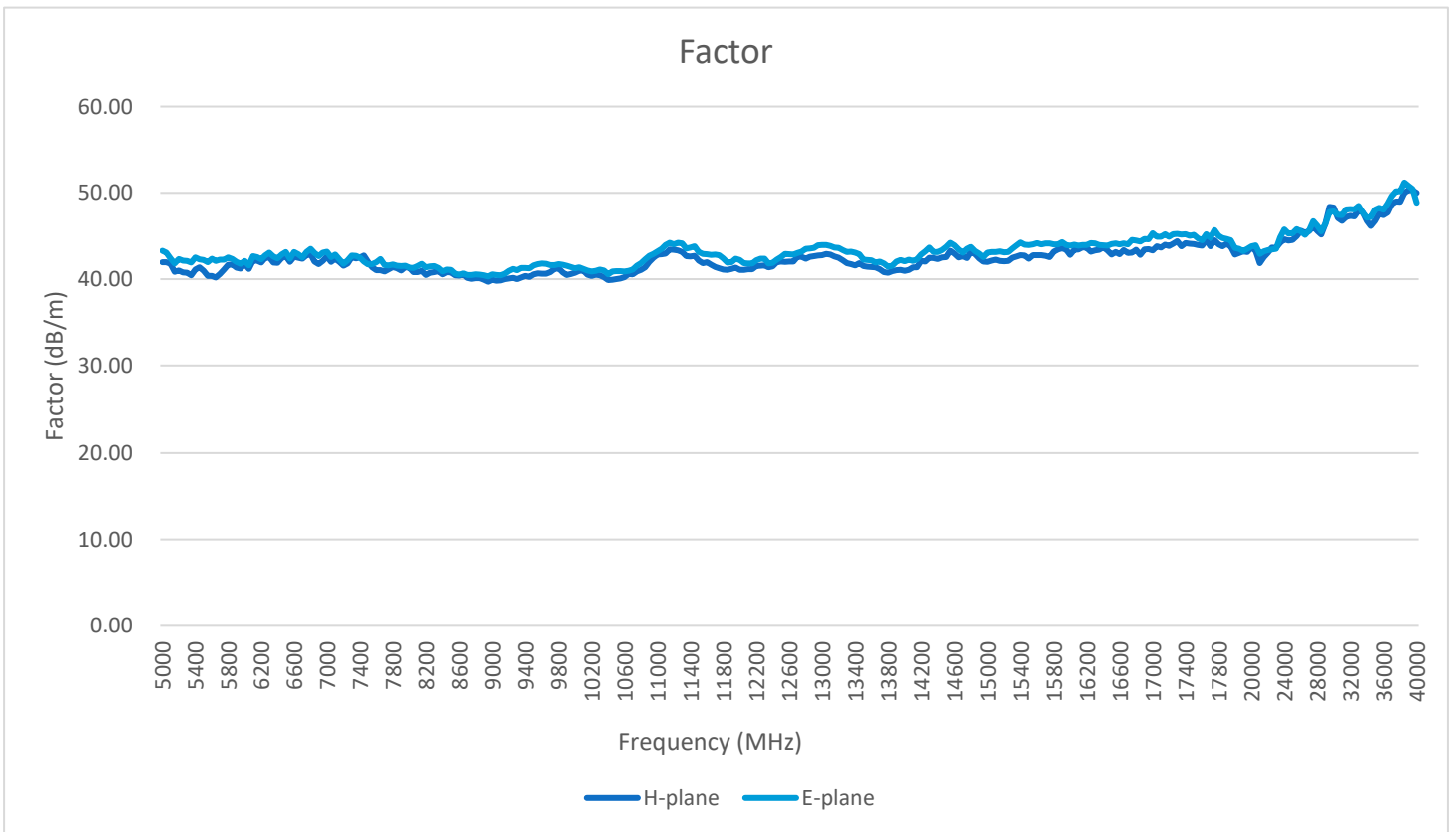
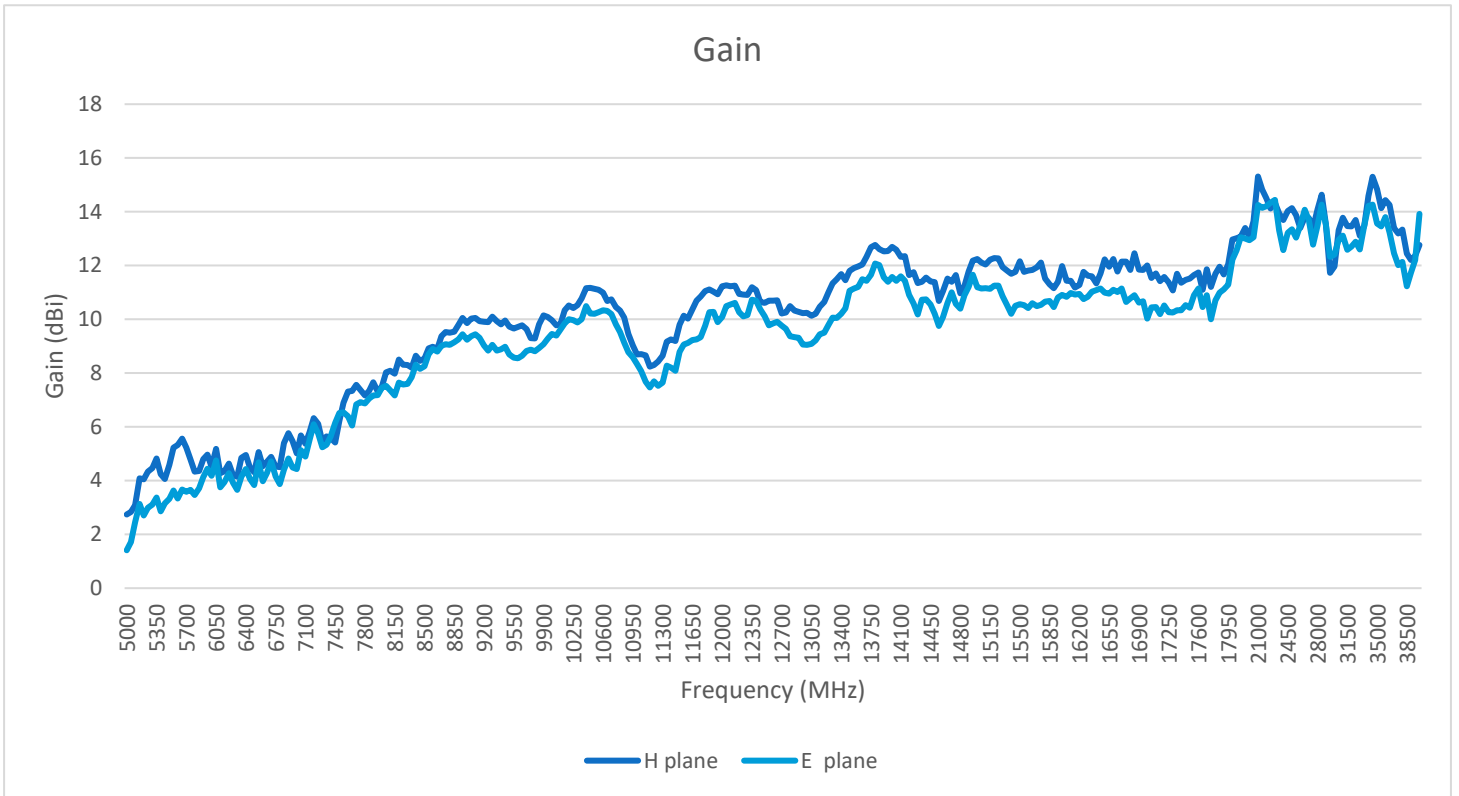
**Mechanical Specifications**

|                                   |                            |
|-----------------------------------|----------------------------|
| <b>Length x Width (MAX)</b>       | 104 x 55 mm                |
| <b>Height (MAX)</b>               | 43 mm                      |
| <b>Antenna Weight (G.W)</b>       | 93.1 g                     |
| <b>Accessories (G.W)</b>          | 50 g                       |
| <b>Application</b>                | Indoor                     |
| <b>Parts Material</b>             | Aluminum                   |
| <b>L Mount Style</b>              | M5 or 5mm                  |
| <b>Mounting</b>                   | L Type Aluminum            |
| <b>Mount Style</b>                | Antenna Mounting<br>M2.5mm |
| <b>Storage Temperature</b>        | -20 to +80                 |
| <b>Operating Temperature</b>      | -10 to +60                 |
| <b>Operating Humidity</b>         | 10%~70% non-condensing     |
| <b>Storage Humidity</b>           | 5%~50% non-condensing      |
| <b>Safety, Emission and other</b> | RoHS, WEE, CE, FCC         |



1MHz to 70GHz Antenna R&D. Manufacturing. OEM. ODM  
Meet Various International Standards  
High-Quality Made in Taiwan Antenna Products

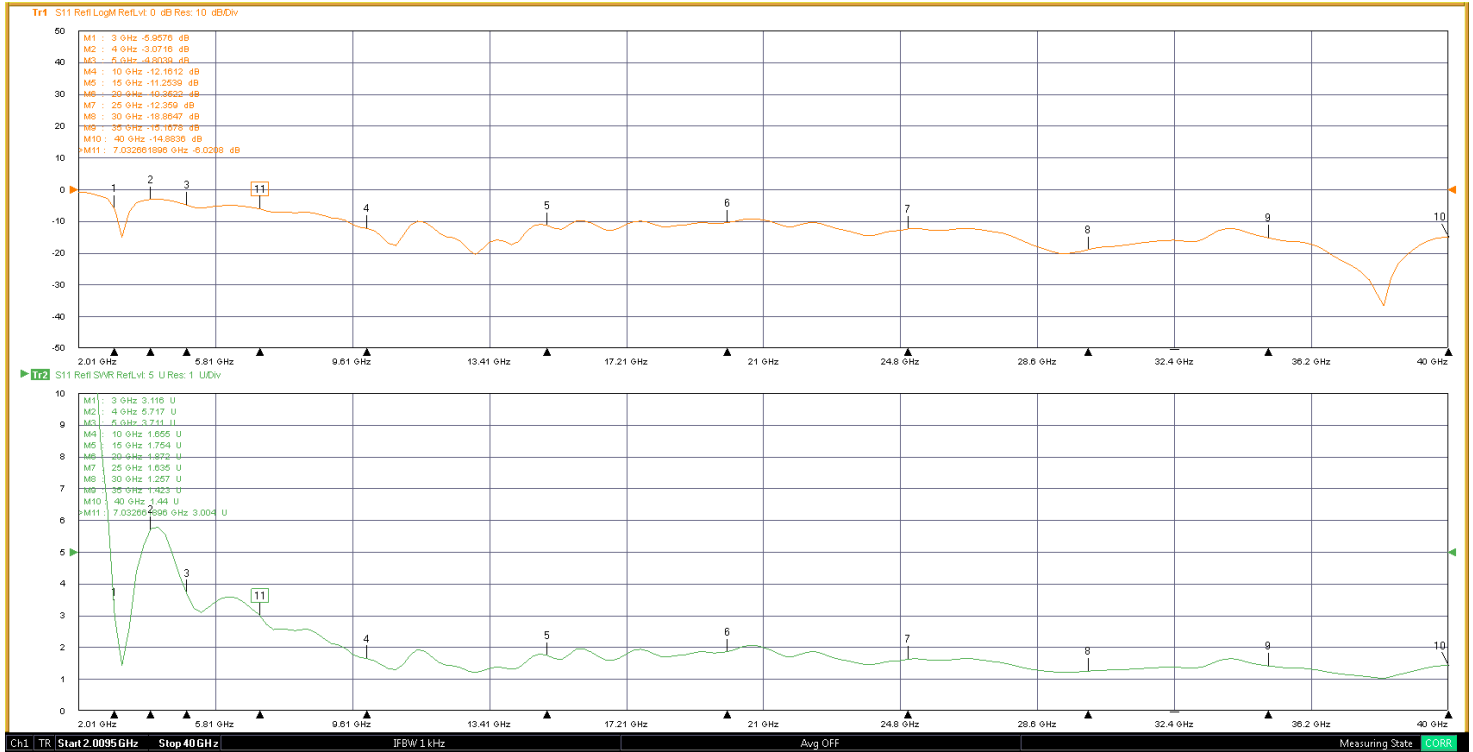
## Antenna Gain and Factor



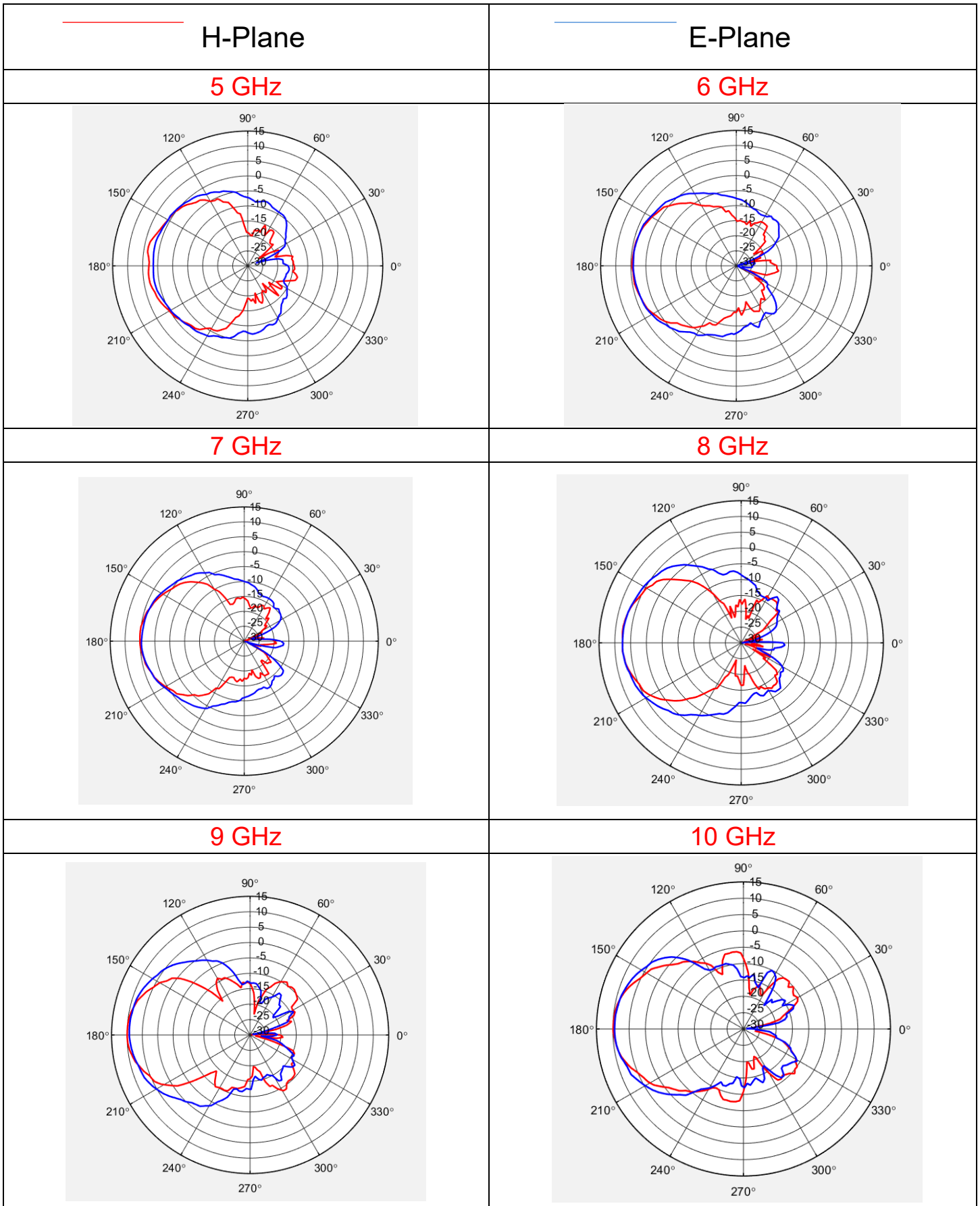
## Antenna VSWR and Return loss

|                      |                                |
|----------------------|--------------------------------|
| Test Equipment       | Anritsu MS4632A 10MHz-40Ghz    |
| Test Equipment Cable | 100cm 2.92 Male to 2.92 Female |
| RF connector Adapter | N/A                            |
| Correction           | 3652A-DC-40Ghz                 |
| Test Model           | HA-0540GB-KF                   |
| Test Port            | S11                            |

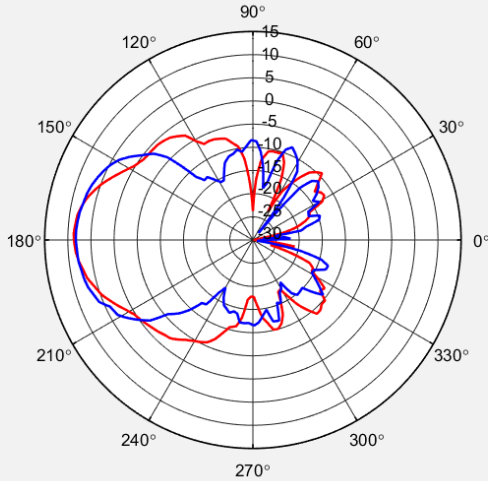
### Return Loss & VSWR



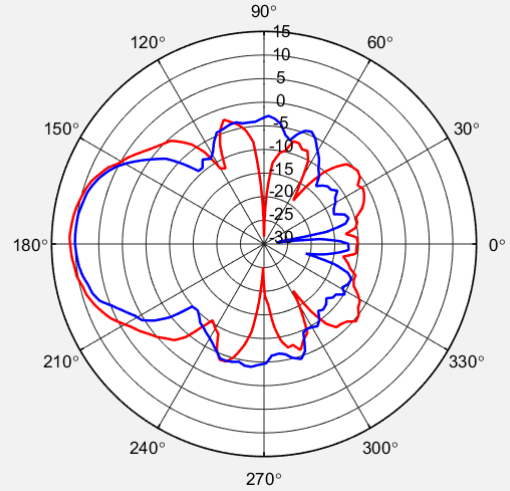
Antenna Pattern



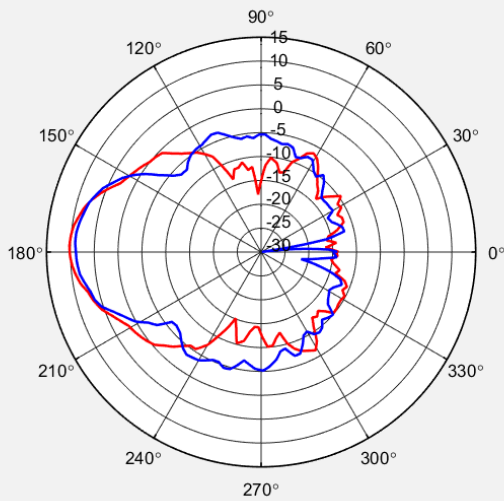
11 GHz



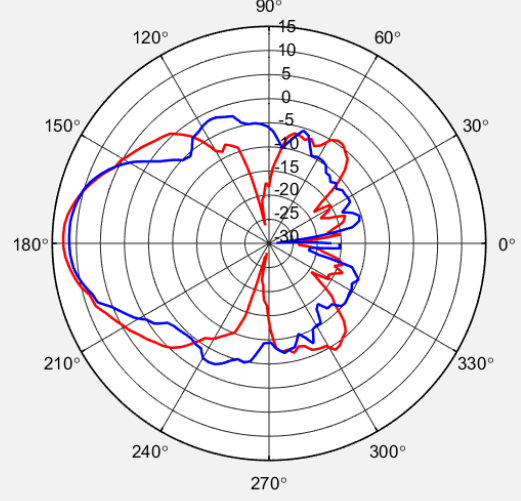
12 GHz



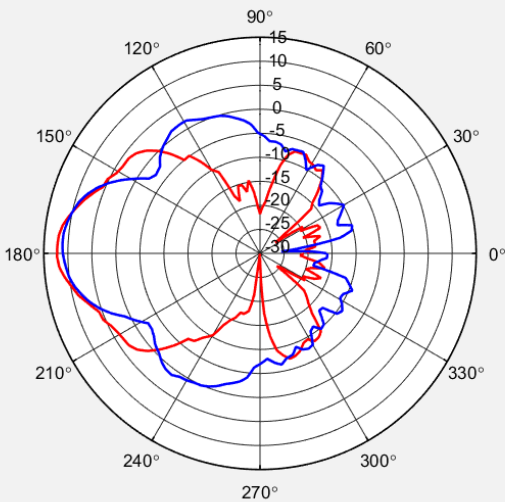
13 GHz



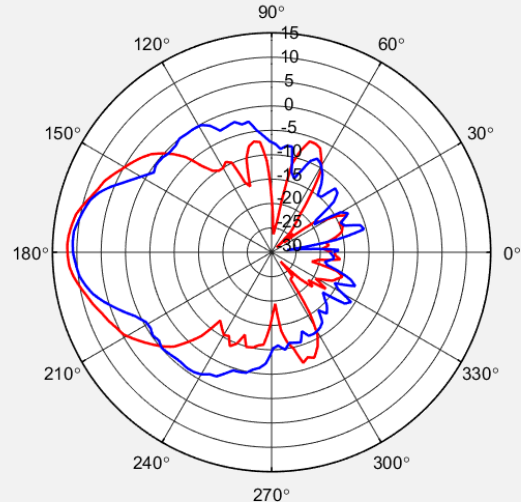
14 GHz



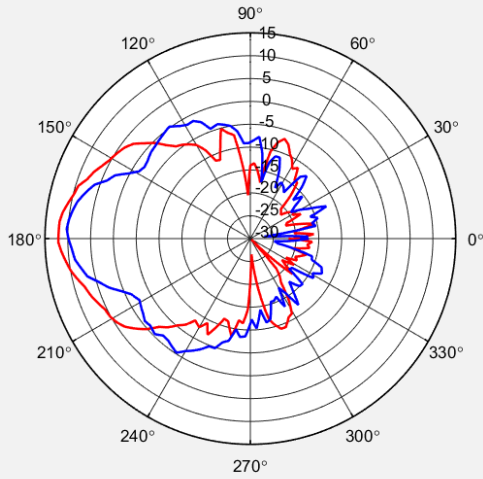
15 GHz



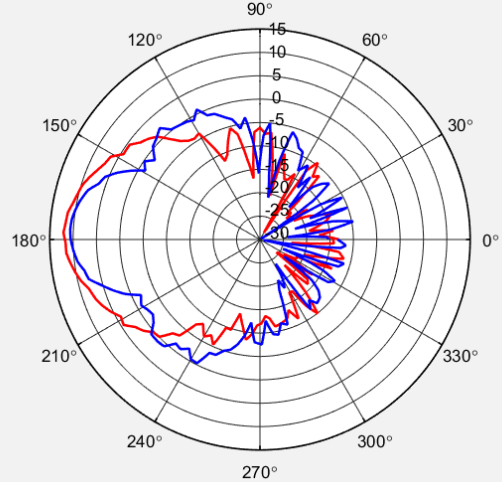
16 GHz



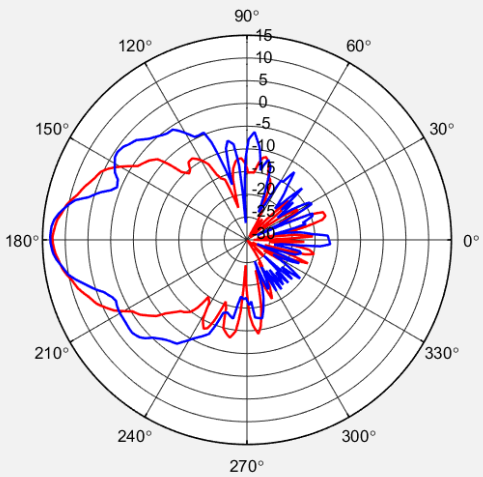
17 GHz



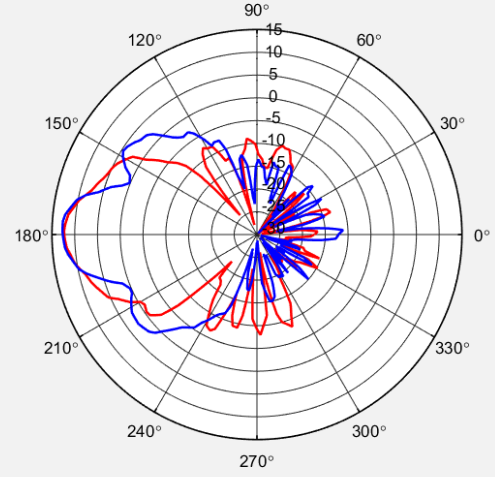
18 GHz



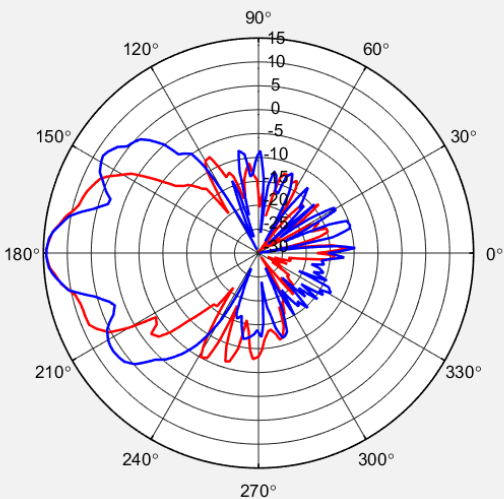
19 GHz



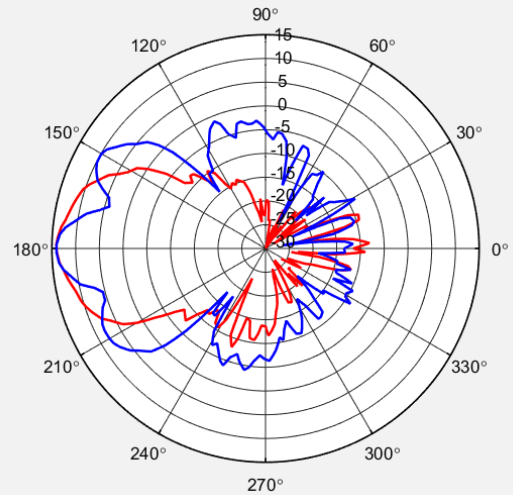
20 GHz



21 GHz

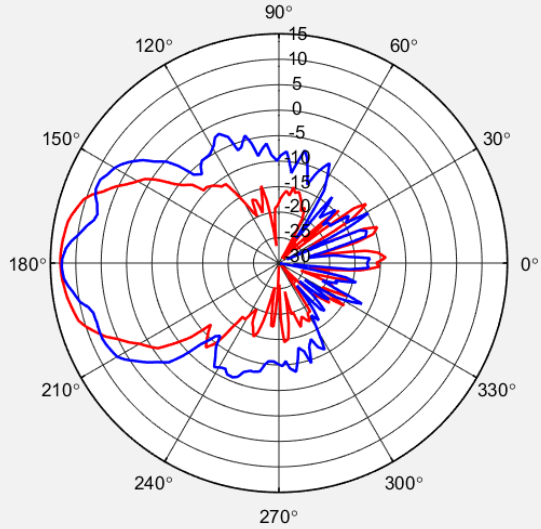
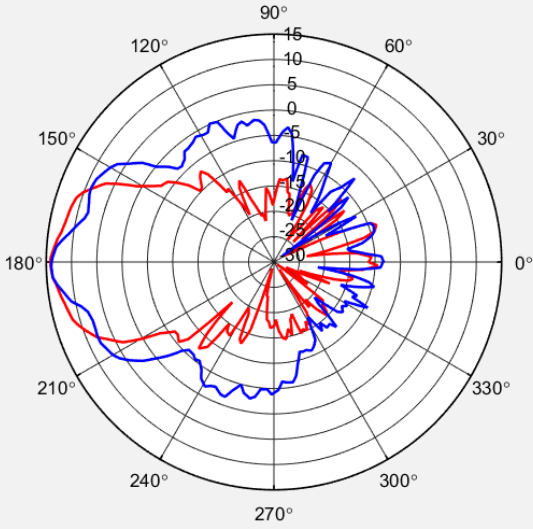


22 GHz



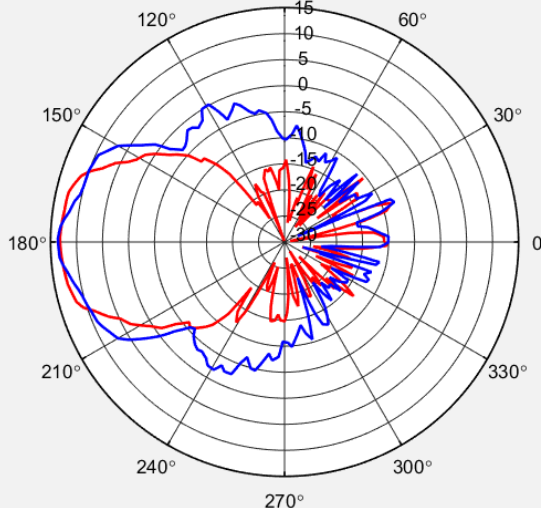
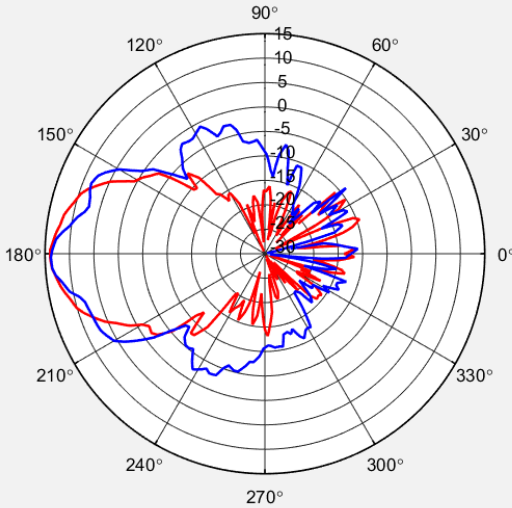
23 GHz

24 GHz



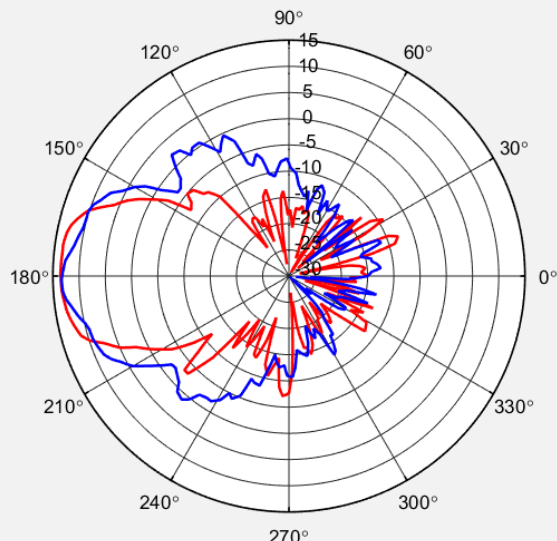
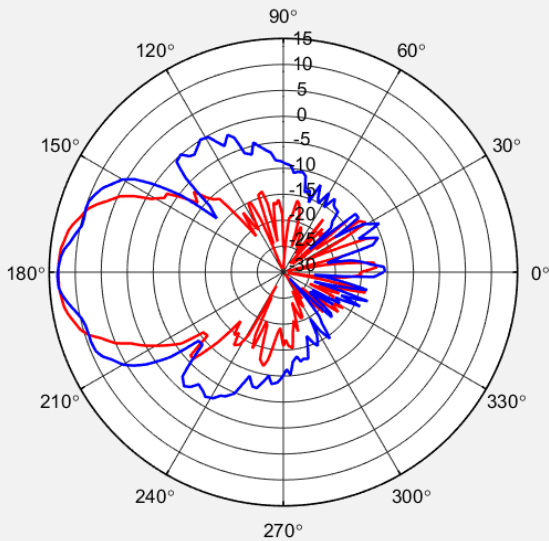
25 GHz

26 GHz



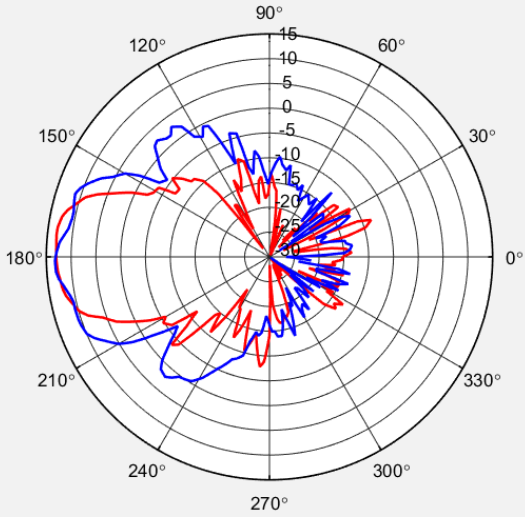
27 GHz

28 GHz

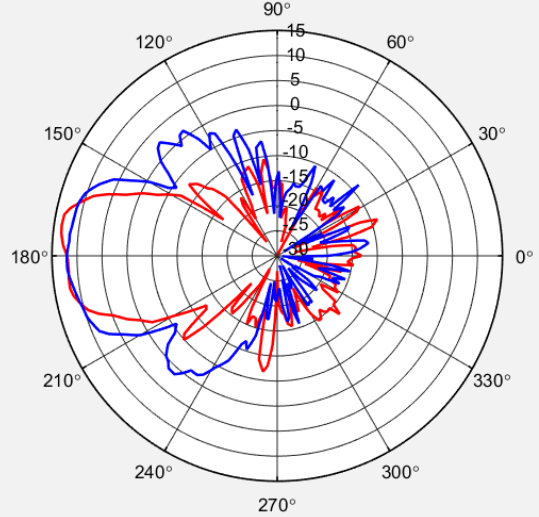




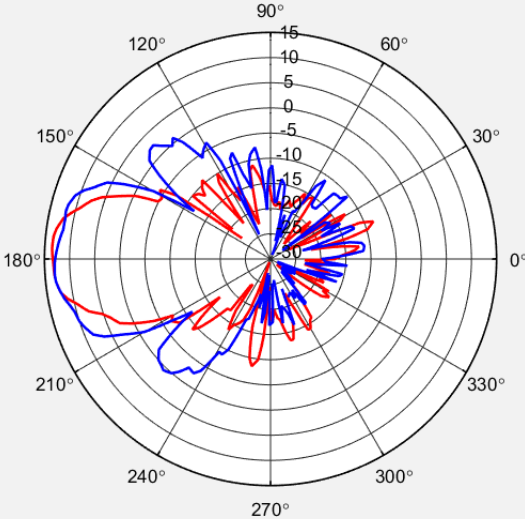
29 GHz



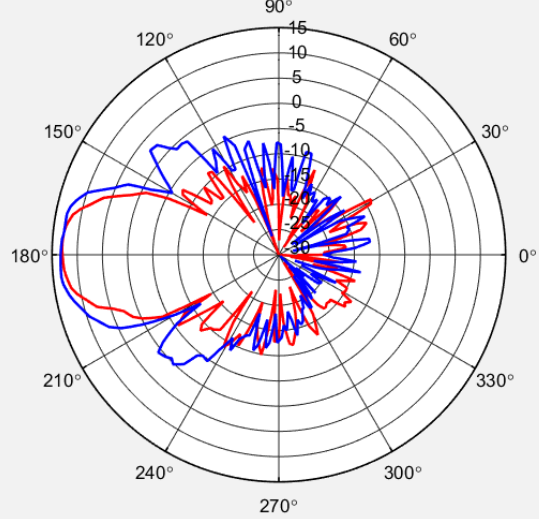
30 GHz



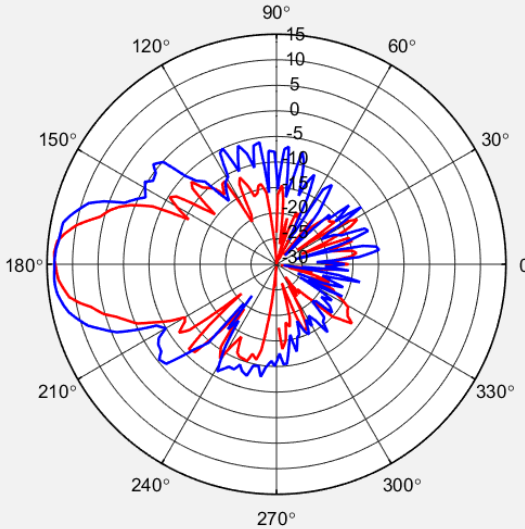
31 GHz



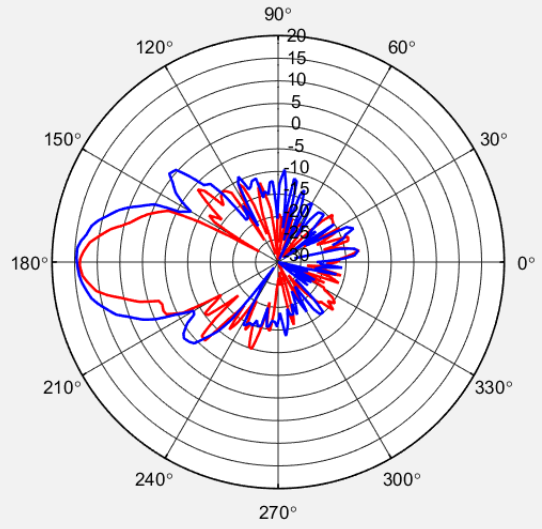
32 GHz



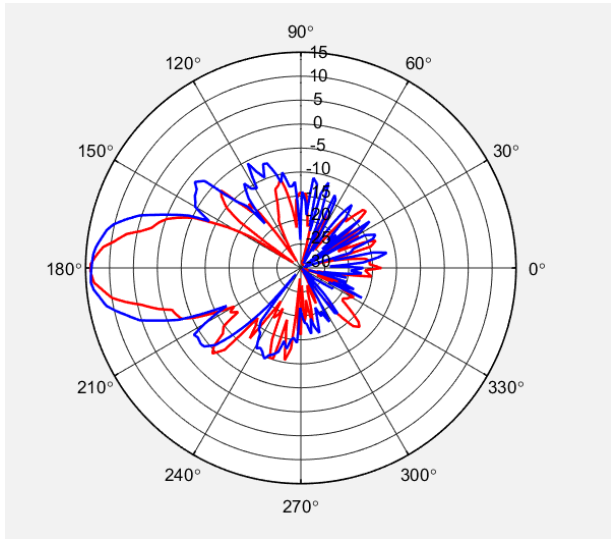
33 GHz



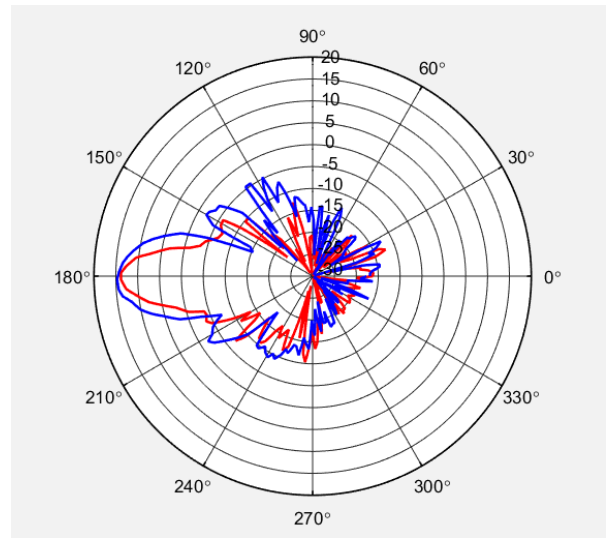
34 GHz



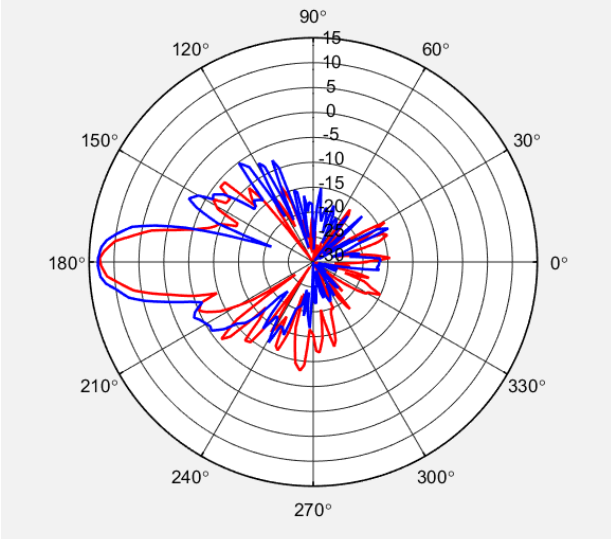
35 GHz



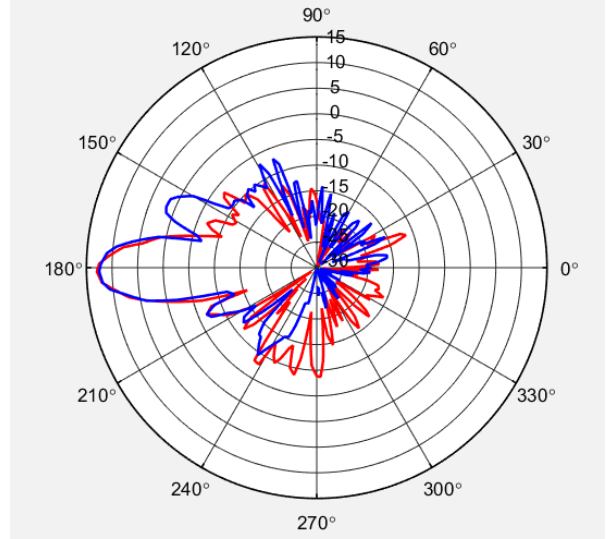
36 GHz



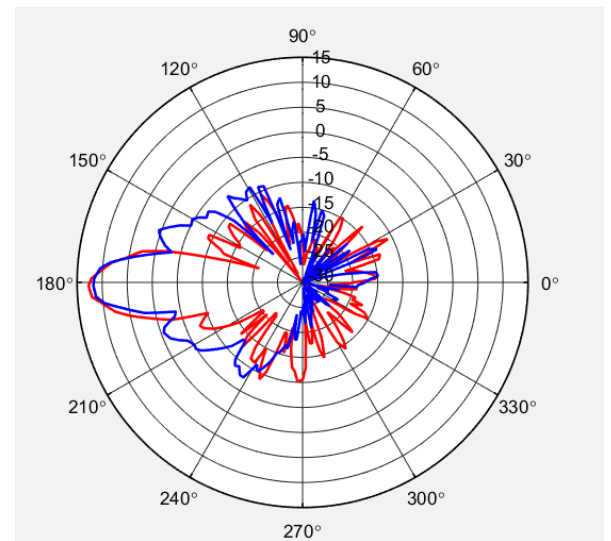
37 GHz



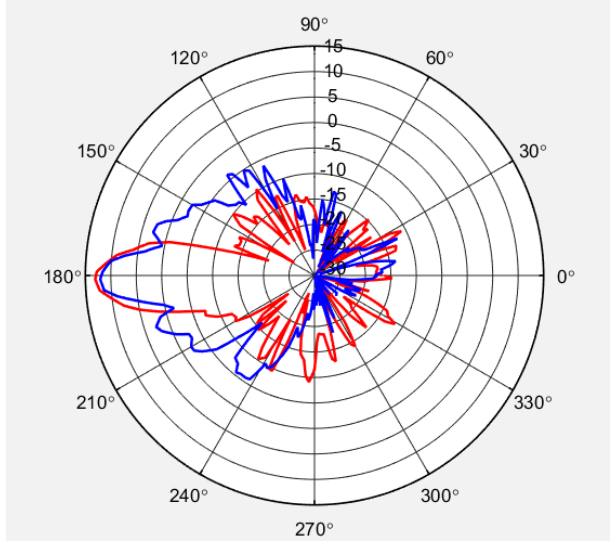
38 GHz



39 GHz



40 GHz



## Antenna Gain

|            | H plane   | E plane   | H plane     | E plane     |
|------------|-----------|-----------|-------------|-------------|
| Freq (MHz) | Gain (1M) | Gain (1M) | Factor (1M) | Factor (1M) |
| 5000       | 2.74      | 1.41      | 41.96       | 43.29       |
| 5050       | 2.83      | 1.72      | 41.96       | 43.07       |
| 5100       | 3.08      | 2.45      | 41.79       | 42.42       |
| 5150       | 4.09      | 3.13      | 40.87       | 41.83       |
| 5200       | 4.05      | 2.7       | 40.99       | 42.34       |
| 5250       | 4.33      | 2.99      | 40.80       | 42.14       |
| 5300       | 4.46      | 3.11      | 40.75       | 42.10       |
| 5350       | 4.82      | 3.37      | 40.47       | 41.92       |
| 5400       | 4.24      | 2.86      | 41.13       | 42.51       |
| 5450       | 4.06      | 3.15      | 41.39       | 42.30       |
| 5500       | 4.58      | 3.32      | 40.95       | 42.21       |
| 5550       | 5.23      | 3.63      | 40.38       | 41.98       |
| 5600       | 5.32      | 3.33      | 40.37       | 42.36       |
| 5650       | 5.56      | 3.67      | 40.20       | 42.09       |
| 5700       | 5.23      | 3.58      | 40.61       | 42.26       |
| 5750       | 4.79      | 3.66      | 41.13       | 42.26       |
| 5800       | 4.34      | 3.46      | 41.65       | 42.53       |
| 5850       | 4.36      | 3.72      | 41.71       | 42.35       |
| 5900       | 4.8       | 4.13      | 41.34       | 42.01       |
| 5950       | 4.97      | 4.44      | 41.24       | 41.77       |
| 6000       | 4.51      | 4.18      | 41.78       | 42.11       |
| 6050       | 5.18      | 4.75      | 41.18       | 41.61       |
| 6100       | 4.27      | 3.75      | 42.16       | 42.68       |
| 6150       | 4.35      | 3.94      | 42.15       | 42.56       |
| 6200       | 4.63      | 4.27      | 41.94       | 42.30       |
| 6250       | 4.2       | 3.92      | 42.44       | 42.72       |
| 6300       | 4.15      | 3.65      | 42.56       | 43.06       |
| 6350       | 4.85      | 4.15      | 41.93       | 42.63       |
| 6400       | 4.95      | 4.43      | 41.90       | 42.42       |
| 6450       | 4.48      | 4.06      | 42.43       | 42.85       |
| 6500       | 4.31      | 3.83      | 42.67       | 43.15       |
| 6550       | 5.06      | 4.68      | 41.99       | 42.37       |
| 6600       | 4.54      | 3.98      | 42.57       | 43.13       |
| 6650       | 4.7       | 4.29      | 42.48       | 42.89       |

|      |      |      |       |       |
|------|------|------|-------|-------|
| 6700 | 4.88 | 4.71 | 42.36 | 42.53 |
| 6750 | 4.53 | 4.16 | 42.78 | 43.15 |
| 6800 | 4.5  | 3.87 | 42.87 | 43.50 |
| 6850 | 5.39 | 4.41 | 42.05 | 43.03 |
| 6900 | 5.76 | 4.82 | 41.74 | 42.68 |
| 6950 | 5.46 | 4.49 | 42.10 | 43.07 |
| 7000 | 5.01 | 4.43 | 42.62 | 43.20 |
| 7050 | 5.68 | 5.13 | 42.01 | 42.56 |
| 7100 | 5.37 | 4.89 | 42.38 | 42.86 |
| 7150 | 5.8  | 5.51 | 42.01 | 42.30 |
| 7200 | 6.32 | 6.1  | 41.55 | 41.77 |
| 7250 | 6.11 | 5.75 | 41.82 | 42.18 |
| 7300 | 5.43 | 5.24 | 42.56 | 42.75 |
| 7350 | 5.65 | 5.33 | 42.40 | 42.72 |
| 7400 | 5.59 | 5.64 | 42.52 | 42.47 |
| 7450 | 5.42 | 6.14 | 42.75 | 42.03 |
| 7500 | 6.21 | 6.51 | 42.01 | 41.71 |
| 7550 | 6.9  | 6.54 | 41.38 | 41.74 |
| 7600 | 7.31 | 6.39 | 41.03 | 41.95 |
| 7650 | 7.34 | 6.05 | 41.06 | 42.35 |
| 7700 | 7.56 | 6.83 | 40.89 | 41.62 |
| 7750 | 7.37 | 6.92 | 41.14 | 41.59 |
| 7800 | 7.17 | 6.87 | 41.40 | 41.70 |
| 7850 | 7.34 | 7.05 | 41.28 | 41.57 |
| 7900 | 7.66 | 7.17 | 41.02 | 41.51 |
| 7950 | 7.31 | 7.18 | 41.42 | 41.55 |
| 8000 | 7.5  | 7.45 | 41.29 | 41.34 |
| 8050 | 8.03 | 7.52 | 40.81 | 41.32 |
| 8100 | 8.09 | 7.36 | 40.80 | 41.53 |
| 8150 | 7.98 | 7.17 | 40.97 | 41.78 |
| 8200 | 8.5  | 7.64 | 40.50 | 41.36 |
| 8250 | 8.31 | 7.57 | 40.74 | 41.48 |
| 8300 | 8.3  | 7.6  | 40.80 | 41.50 |
| 8350 | 8.21 | 7.85 | 40.95 | 41.31 |
| 8400 | 8.64 | 8.31 | 40.57 | 40.90 |
| 8450 | 8.45 | 8.16 | 40.81 | 41.10 |
| 8500 | 8.54 | 8.25 | 40.77 | 41.06 |
| 8550 | 8.92 | 8.71 | 40.44 | 40.65 |

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 8600  | 8.98  | 8.89  | 40.43 | 40.52 |
| 8650  | 8.9   | 8.8   | 40.56 | 40.66 |
| 8700  | 9.37  | 9.01  | 40.14 | 40.50 |
| 8750  | 9.53  | 9.07  | 40.03 | 40.49 |
| 8800  | 9.5   | 9.05  | 40.11 | 40.56 |
| 8850  | 9.54  | 9.15  | 40.12 | 40.51 |
| 8900  | 9.79  | 9.25  | 39.92 | 40.46 |
| 8950  | 10.05 | 9.44  | 39.71 | 40.32 |
| 9000  | 9.86  | 9.24  | 39.95 | 40.57 |
| 9050  | 10.02 | 9.37  | 39.84 | 40.49 |
| 9100  | 10.05 | 9.44  | 39.85 | 40.46 |
| 9150  | 9.93  | 9.31  | 40.02 | 40.64 |
| 9200  | 9.91  | 9.03  | 40.09 | 40.97 |
| 9250  | 9.89  | 8.84  | 40.16 | 41.21 |
| 9300  | 10.1  | 9.05  | 39.99 | 41.04 |
| 9350  | 9.93  | 8.84  | 40.21 | 41.30 |
| 9400  | 9.81  | 8.88  | 40.38 | 41.31 |
| 9450  | 9.95  | 8.98  | 40.28 | 41.25 |
| 9500  | 9.73  | 8.69  | 40.55 | 41.59 |
| 9550  | 9.66  | 8.57  | 40.66 | 41.75 |
| 9600  | 9.72  | 8.55  | 40.65 | 41.82 |
| 9650  | 9.77  | 8.64  | 40.64 | 41.77 |
| 9700  | 9.63  | 8.82  | 40.83 | 41.64 |
| 9750  | 9.3   | 8.87  | 41.20 | 41.63 |
| 9800  | 9.29  | 8.81  | 41.26 | 41.74 |
| 9850  | 9.81  | 8.93  | 40.78 | 41.66 |
| 9900  | 10.14 | 9.07  | 40.50 | 41.57 |
| 9950  | 10.09 | 9.27  | 40.59 | 41.41 |
| 10000 | 9.97  | 9.46  | 40.75 | 41.26 |
| 10050 | 9.78  | 9.39  | 40.99 | 41.38 |
| 10100 | 9.82  | 9.62  | 40.99 | 41.19 |
| 10150 | 10.33 | 9.85  | 40.52 | 41.00 |
| 10200 | 10.51 | 10    | 40.39 | 40.90 |
| 10250 | 10.42 | 9.97  | 40.52 | 40.97 |
| 10300 | 10.52 | 9.88  | 40.46 | 41.10 |
| 10350 | 10.78 | 10    | 40.24 | 41.02 |
| 10400 | 11.16 | 10.49 | 39.90 | 40.57 |
| 10450 | 11.17 | 10.22 | 39.94 | 40.89 |

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 10500 | 11.13 | 10.21 | 40.02 | 40.94 |
| 10550 | 11.1  | 10.26 | 40.09 | 40.93 |
| 10600 | 10.99 | 10.33 | 40.24 | 40.90 |
| 10650 | 10.68 | 10.31 | 40.59 | 40.96 |
| 10700 | 10.74 | 10.19 | 40.57 | 41.12 |
| 10750 | 10.46 | 9.81  | 40.89 | 41.54 |
| 10800 | 10.32 | 9.53  | 41.07 | 41.86 |
| 10850 | 10.06 | 9.13  | 41.37 | 42.30 |
| 10900 | 9.46  | 8.78  | 42.01 | 42.69 |
| 10950 | 9.03  | 8.59  | 42.48 | 42.92 |
| 11000 | 8.69  | 8.33  | 42.86 | 43.22 |
| 11050 | 8.71  | 8.07  | 42.88 | 43.52 |
| 11100 | 8.66  | 7.68  | 42.97 | 43.95 |
| 11150 | 8.24  | 7.46  | 43.43 | 44.21 |
| 11200 | 8.3   | 7.69  | 43.41 | 44.02 |
| 11250 | 8.43  | 7.53  | 43.32 | 44.22 |
| 11300 | 8.65  | 7.65  | 43.13 | 44.13 |
| 11350 | 9.17  | 8.27  | 42.65 | 43.55 |
| 11400 | 9.25  | 8.2   | 42.61 | 43.66 |
| 11450 | 9.19  | 8.09  | 42.71 | 43.81 |
| 11500 | 9.8   | 8.79  | 42.14 | 43.15 |
| 11550 | 10.13 | 9.06  | 41.84 | 42.91 |
| 11600 | 10.03 | 9.12  | 41.98 | 42.89 |
| 11650 | 10.37 | 9.23  | 41.68 | 42.82 |
| 11700 | 10.69 | 9.25  | 41.40 | 42.84 |
| 11750 | 10.85 | 9.34  | 41.27 | 42.78 |
| 11800 | 11.05 | 9.76  | 41.11 | 42.40 |
| 11850 | 11.11 | 10.26 | 41.09 | 41.94 |
| 11900 | 11.03 | 10.27 | 41.20 | 41.96 |
| 11950 | 10.93 | 9.9   | 41.34 | 42.37 |
| 12000 | 11.23 | 10.08 | 41.08 | 42.23 |
| 12050 | 11.26 | 10.49 | 41.08 | 41.85 |
| 12100 | 11.23 | 10.55 | 41.15 | 41.83 |
| 12150 | 11.25 | 10.61 | 41.16 | 41.80 |
| 12200 | 10.94 | 10.26 | 41.51 | 42.19 |
| 12250 | 10.92 | 10.11 | 41.57 | 42.38 |
| 12300 | 10.91 | 10.16 | 41.61 | 42.36 |
| 12350 | 11.19 | 10.73 | 41.37 | 41.83 |

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 12400 | 11.09 | 10.69 | 41.50 | 41.90 |
| 12450 | 10.65 | 10.37 | 41.98 | 42.26 |
| 12500 | 10.61 | 10.11 | 42.05 | 42.55 |
| 12550 | 10.69 | 9.77  | 42.01 | 42.93 |
| 12600 | 10.69 | 9.85  | 42.04 | 42.88 |
| 12650 | 10.71 | 9.91  | 42.06 | 42.86 |
| 12700 | 10.22 | 9.76  | 42.58 | 43.04 |
| 12750 | 10.25 | 9.64  | 42.58 | 43.19 |
| 12800 | 10.49 | 9.37  | 42.38 | 43.50 |
| 12850 | 10.32 | 9.34  | 42.58 | 43.56 |
| 12900 | 10.28 | 9.31  | 42.66 | 43.63 |
| 12950 | 10.23 | 9.06  | 42.74 | 43.91 |
| 13000 | 10.24 | 9.05  | 42.76 | 43.95 |
| 13050 | 10.13 | 9.08  | 42.91 | 43.96 |
| 13100 | 10.21 | 9.22  | 42.86 | 43.85 |
| 13150 | 10.47 | 9.44  | 42.63 | 43.66 |
| 13200 | 10.64 | 9.5   | 42.49 | 43.63 |
| 13250 | 11    | 9.79  | 42.17 | 43.38 |
| 13300 | 11.33 | 10.06 | 41.87 | 43.14 |
| 13350 | 11.49 | 10.05 | 41.74 | 43.18 |
| 13400 | 11.68 | 10.2  | 41.59 | 43.07 |
| 13450 | 11.46 | 10.41 | 41.84 | 42.89 |
| 13500 | 11.8  | 11.06 | 41.53 | 42.27 |
| 13550 | 11.91 | 11.14 | 41.45 | 42.22 |
| 13600 | 11.97 | 11.21 | 41.42 | 42.18 |
| 13650 | 12.04 | 11.49 | 41.39 | 41.94 |
| 13700 | 12.32 | 11.43 | 41.14 | 42.03 |
| 13750 | 12.68 | 11.66 | 40.81 | 41.83 |
| 13800 | 12.76 | 12.07 | 40.76 | 41.45 |
| 13850 | 12.61 | 12.01 | 40.94 | 41.54 |
| 13900 | 12.53 | 11.56 | 41.05 | 42.02 |
| 13950 | 12.54 | 11.39 | 41.07 | 42.22 |
| 14000 | 12.69 | 11.57 | 40.96 | 42.08 |
| 14050 | 12.59 | 11.43 | 41.09 | 42.25 |
| 14100 | 12.32 | 11.6  | 41.39 | 42.11 |
| 14150 | 12.35 | 11.43 | 41.39 | 42.31 |
| 14200 | 11.65 | 10.91 | 42.12 | 42.86 |
| 14250 | 11.75 | 10.59 | 42.05 | 43.21 |

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 14300 | 11.35 | 10.18 | 42.48 | 43.65 |
| 14350 | 11.4  | 10.73 | 42.46 | 43.13 |
| 14400 | 11.55 | 10.74 | 42.34 | 43.15 |
| 14450 | 11.41 | 10.55 | 42.51 | 43.37 |
| 14500 | 11.38 | 10.2  | 42.57 | 43.75 |
| 14550 | 10.68 | 9.75  | 43.30 | 44.23 |
| 14600 | 11.05 | 10.09 | 42.96 | 43.92 |
| 14650 | 11.52 | 10.61 | 42.52 | 43.43 |
| 14700 | 11.39 | 11    | 42.68 | 43.07 |
| 14750 | 11.64 | 10.57 | 42.46 | 43.53 |
| 14800 | 10.97 | 10.4  | 43.16 | 43.73 |
| 14850 | 11.24 | 10.89 | 42.92 | 43.27 |
| 14900 | 11.78 | 11.21 | 42.41 | 42.98 |
| 14950 | 12.18 | 11.66 | 42.04 | 42.56 |
| 15000 | 12.24 | 11.19 | 42.01 | 43.06 |
| 15050 | 12.11 | 11.14 | 42.16 | 43.13 |
| 15100 | 12.04 | 11.16 | 42.26 | 43.14 |
| 15150 | 12.22 | 11.13 | 42.11 | 43.20 |
| 15200 | 12.28 | 11.25 | 42.08 | 43.11 |
| 15250 | 12.26 | 11.25 | 42.13 | 43.14 |
| 15300 | 11.94 | 10.86 | 42.48 | 43.56 |
| 15350 | 11.81 | 10.52 | 42.64 | 43.93 |
| 15400 | 11.69 | 10.21 | 42.78 | 44.26 |
| 15450 | 11.76 | 10.5  | 42.74 | 44.00 |
| 15500 | 12.16 | 10.56 | 42.37 | 43.97 |
| 15550 | 11.77 | 10.52 | 42.79 | 44.04 |
| 15600 | 11.81 | 10.42 | 42.78 | 44.17 |
| 15650 | 11.84 | 10.6  | 42.77 | 44.01 |
| 15700 | 11.93 | 10.49 | 42.71 | 44.15 |
| 15750 | 12.11 | 10.54 | 42.56 | 44.13 |
| 15800 | 11.51 | 10.66 | 43.19 | 44.04 |
| 15850 | 11.3  | 10.68 | 43.42 | 44.04 |
| 15900 | 11.16 | 10.45 | 43.59 | 44.30 |
| 15950 | 11.39 | 10.81 | 43.39 | 43.97 |
| 16000 | 11.98 | 10.91 | 42.83 | 43.90 |
| 16050 | 11.43 | 10.84 | 43.40 | 43.99 |
| 16100 | 11.43 | 10.98 | 43.43 | 43.88 |
| 16150 | 11.18 | 10.92 | 43.71 | 43.97 |



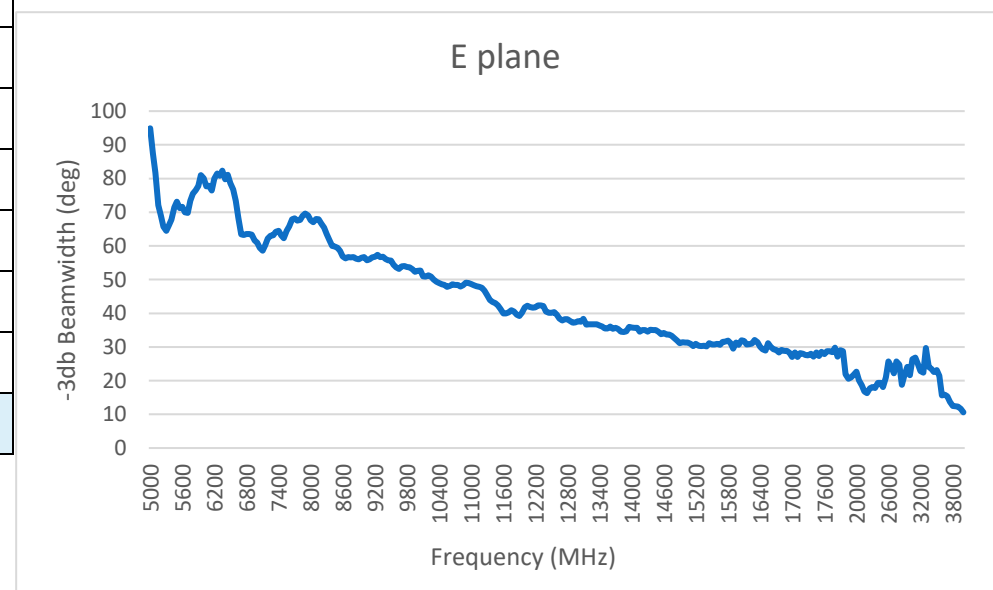
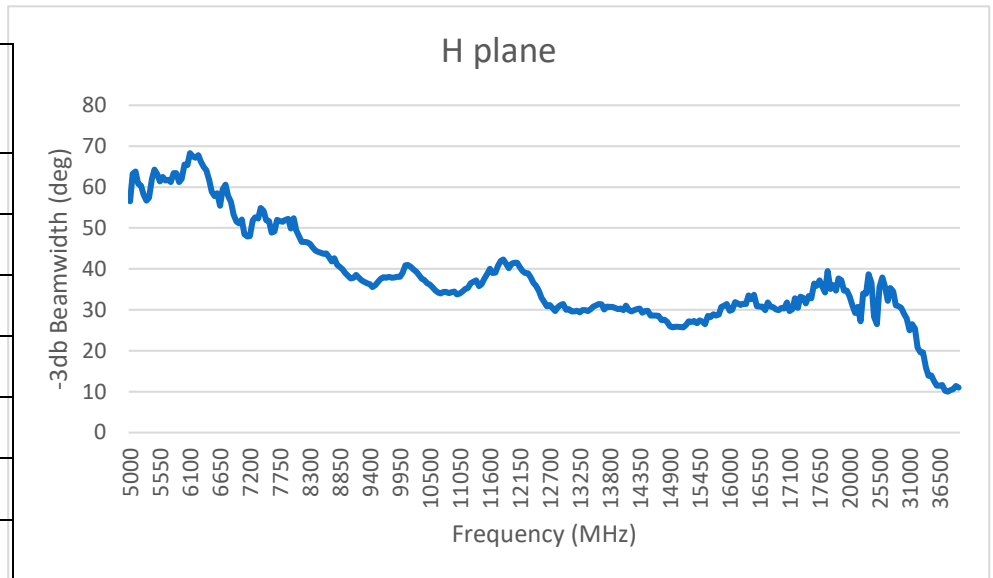
|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 16200 | 11.28 | 10.94 | 43.63 | 43.97 |
| 16250 | 11.77 | 10.75 | 43.17 | 44.19 |
| 16300 | 11.62 | 10.83 | 43.35 | 44.14 |
| 16350 | 11.6  | 11.02 | 43.39 | 43.97 |
| 16400 | 11.34 | 11.09 | 43.68 | 43.93 |
| 16450 | 11.71 | 11.15 | 43.34 | 43.90 |
| 16500 | 12.23 | 10.99 | 42.84 | 44.08 |
| 16550 | 11.95 | 10.96 | 43.15 | 44.14 |
| 16600 | 12.24 | 11.1  | 42.89 | 44.03 |
| 16650 | 11.78 | 11.01 | 43.37 | 44.14 |
| 16700 | 12.15 | 11.15 | 43.03 | 44.03 |
| 16750 | 12.15 | 10.65 | 43.05 | 44.55 |
| 16800 | 11.84 | 10.77 | 43.39 | 44.46 |
| 16850 | 12.45 | 10.89 | 42.81 | 44.37 |
| 16900 | 11.85 | 10.62 | 43.43 | 44.66 |
| 16950 | 11.83 | 10.67 | 43.48 | 44.64 |
| 17000 | 12    | 10.02 | 43.33 | 45.31 |
| 17050 | 11.54 | 10.44 | 43.82 | 44.92 |
| 17100 | 11.71 | 10.46 | 43.67 | 44.92 |
| 17150 | 11.42 | 10.19 | 43.99 | 45.22 |
| 17200 | 11.57 | 10.51 | 43.86 | 44.92 |
| 17250 | 11.37 | 10.26 | 44.09 | 45.20 |
| 17300 | 11.07 | 10.25 | 44.41 | 45.23 |
| 17350 | 11.69 | 10.34 | 43.82 | 45.17 |
| 17400 | 11.36 | 10.33 | 44.17 | 45.20 |
| 17450 | 11.47 | 10.52 | 44.09 | 45.04 |
| 17500 | 11.52 | 10.43 | 44.06 | 45.15 |
| 17550 | 11.64 | 10.89 | 43.97 | 44.72 |
| 17600 | 11.74 | 11.14 | 43.89 | 44.49 |
| 17650 | 11.1  | 10.46 | 44.56 | 45.20 |
| 17700 | 11.86 | 10.89 | 43.82 | 44.79 |
| 17750 | 11.21 | 10    | 44.50 | 45.71 |
| 17800 | 11.69 | 10.71 | 44.04 | 45.02 |
| 17850 | 11.95 | 10.99 | 43.81 | 44.77 |
| 17900 | 11.67 | 11.11 | 44.11 | 44.67 |
| 17950 | 12.05 | 11.29 | 43.75 | 44.51 |
| 18000 | 12.97 | 12.22 | 42.86 | 43.61 |
| 18500 | 13.02 | 12.56 | 43.05 | 43.51 |

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 19000 | 13.07 | 13.05 | 43.23 | 43.25 |
| 19500 | 13.39 | 13    | 43.13 | 43.52 |
| 20000 | 13.06 | 12.94 | 43.68 | 43.80 |
| 20500 | 13.65 | 13.05 | 43.31 | 43.91 |
| 21000 | 15.31 | 14.25 | 41.86 | 42.92 |
| 21500 | 14.82 | 14.15 | 42.55 | 43.22 |
| 22000 | 14.5  | 14.2  | 43.07 | 43.37 |
| 22500 | 14.12 | 14.34 | 43.65 | 43.43 |
| 23000 | 14.32 | 14.44 | 43.64 | 43.52 |
| 23500 | 13.94 | 13.31 | 44.20 | 44.83 |
| 24000 | 13.69 | 12.57 | 44.64 | 45.76 |
| 24500 | 14.03 | 13.22 | 44.48 | 45.29 |
| 25000 | 14.13 | 13.35 | 44.55 | 45.33 |
| 25500 | 13.87 | 13.04 | 44.98 | 45.81 |
| 26000 | 13.4  | 13.49 | 45.62 | 45.53 |
| 26500 | 13.79 | 14.07 | 45.40 | 45.12 |
| 27000 | 13.77 | 13.68 | 45.58 | 45.67 |
| 27500 | 13.41 | 12.78 | 46.10 | 46.73 |
| 28000 | 14.09 | 13.49 | 45.58 | 46.18 |
| 28500 | 14.63 | 14.26 | 45.19 | 45.56 |
| 29000 | 13.54 | 13.53 | 46.43 | 46.44 |
| 29500 | 11.73 | 12.32 | 48.39 | 47.80 |
| 30000 | 11.97 | 12.41 | 48.30 | 47.86 |
| 30500 | 13.31 | 12.95 | 47.10 | 47.46 |
| 31000 | 13.78 | 13.11 | 46.77 | 47.44 |
| 31500 | 13.47 | 12.59 | 47.22 | 48.10 |
| 32000 | 13.46 | 12.71 | 47.37 | 48.12 |
| 32500 | 13.69 | 12.88 | 47.27 | 48.08 |
| 33000 | 13.11 | 12.6  | 47.98 | 48.49 |
| 33500 | 13.48 | 13.49 | 47.74 | 47.73 |
| 34000 | 14.59 | 14.22 | 46.76 | 47.13 |
| 34500 | 15.3  | 14.27 | 46.18 | 47.21 |
| 35000 | 14.84 | 13.56 | 46.76 | 48.04 |
| 35500 | 14.13 | 13.46 | 47.60 | 48.27 |
| 36000 | 14.43 | 13.8  | 47.42 | 48.05 |
| 36500 | 14.25 | 13.23 | 47.72 | 48.74 |
| 37000 | 13.39 | 12.45 | 48.70 | 49.64 |
| 37500 | 13.19 | 12.01 | 49.01 | 50.19 |

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 38000 | 13.33 | 12.13 | 48.99 | 50.19 |
| 38500 | 12.44 | 11.23 | 49.99 | 51.20 |
| 39000 | 12.2  | 11.74 | 50.34 | 50.80 |
| 39500 | 12.36 | 12.21 | 50.30 | 50.45 |
| 40000 | 12.76 | 13.92 | 50.00 | 48.84 |

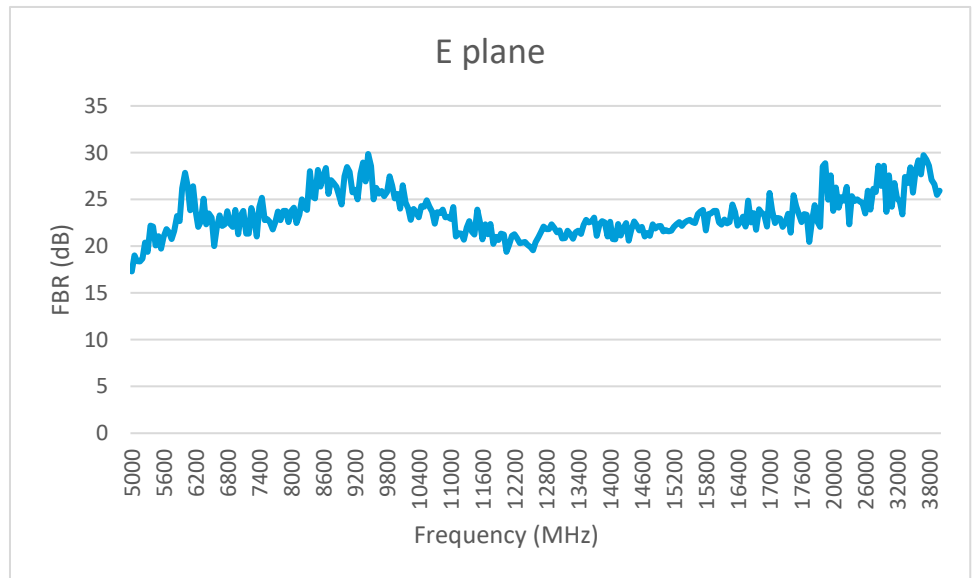
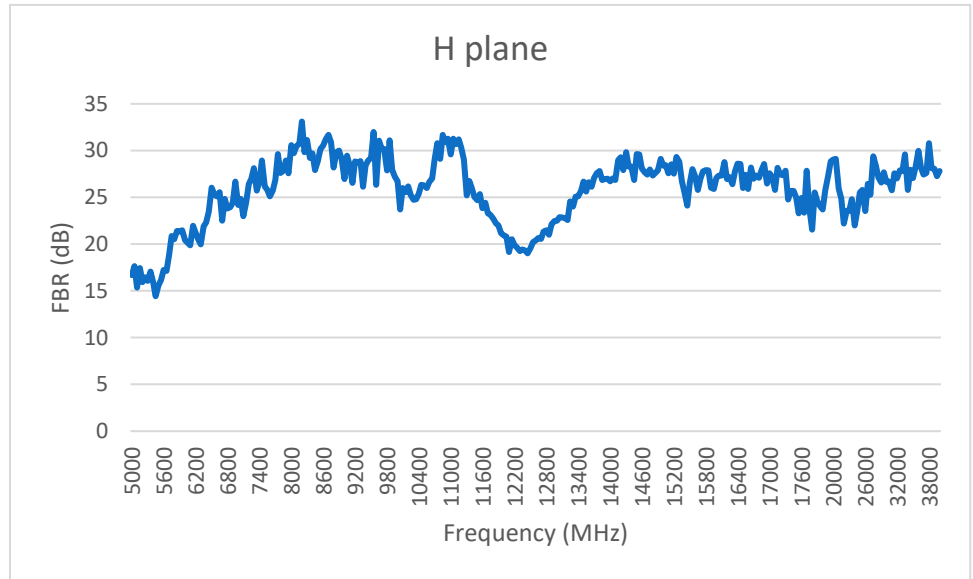
## Antenna -3db Beamwidth Curve

| Frequency (MHz) | H-Plane (deg) | E-plane (deg) |
|-----------------|---------------|---------------|
| 5000            | 56.5          | 94.9          |
| 7500            | 51.9          | 62.3          |
| 10000           | 39            | 52.6          |
| 12500           | 34.6          | 40.1          |
| 15000           | 25.9          | 31.3          |
| 17500           | 32.8          | 27.3          |
| 20000           | 33.2          | 22.7          |
| 22500           | 34            | 17.7          |
| 25000           | 26.5          | 18.1          |
| 27500           | 35.3          | 25.7          |
| 30000           | 29            | 21.6          |
| 32500           | 20.8          | 22.4          |
| 35000           | 14            | 23.1          |
| 37500           | 10.2          | 13.7          |
| 40000           | 11            | 10.6          |
| AVG             | 37.69         | 43.65         |

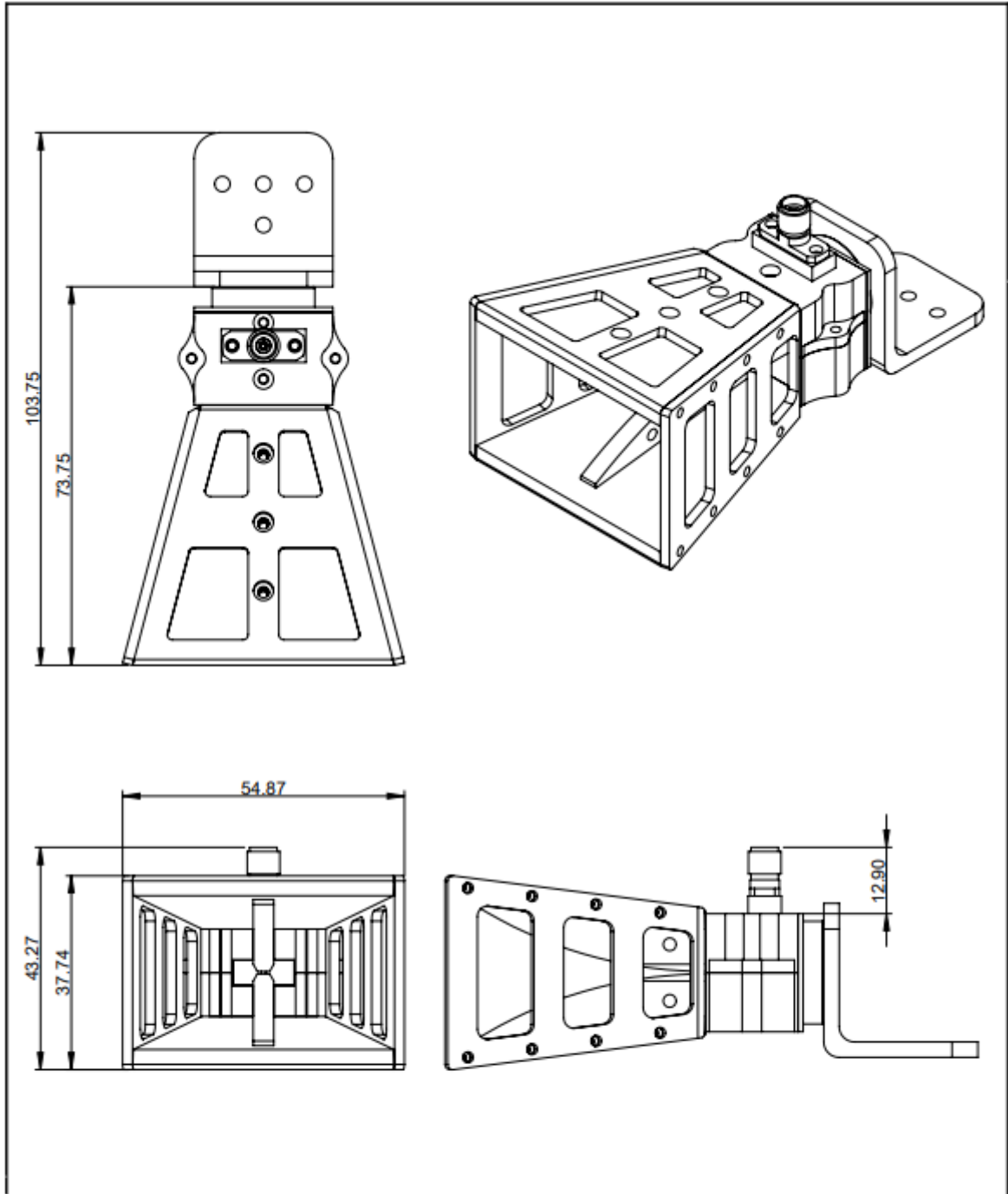



## Antenna FBR Curve

| Frequency (MHz) | H-Plane (db) | E-plane (db) |
|-----------------|--------------|--------------|
| 5000            | 16.69        | 17.3         |
| 7500            | 26.16        | 22.78        |
| 10000           | 26.73        | 25.58        |
| 12500           | 19.58        | 19.92        |
| 15000           | 28.41        | 21.58        |
| 17500           | 25.02        | 24.3         |
| 20000           | 29.03        | 23.76        |
| 22500           | 23.57        | 26.34        |
| 25000           | 25.52        | 24.78        |
| 27500           | 29.4         | 26.15        |
| 30000           | 26.64        | 23.66        |
| 32500           | 27.88        | 24.76        |
| 35000           | 27.07        | 25.74        |
| 37500           | 27.61        | 29.24        |
| 40000           | 27.82        | 25.94        |
| AVG             | 25.79        | 23.43        |



Antenna Dimension



|  |          |                |           |                     |       |                |          |                                 |   |
|--|----------|----------------|-----------|---------------------|-------|----------------|----------|---------------------------------|---|
| DRAWER   |          | NAME           | DATE      | MATERIAL            | 92.31 |                | EDGE     | C0.1                            |  <b>飛騰無線科技有限公司</b><br><b>Fei Teng Wireless Technology CO.,LTD</b> |
| CONFIRM  |          | TSAI           | 2021/6/29 | WEIGHT (g)          |       |                | EDITION  | V1                              |   |
| APPROVED   |          | Jockie         | 2021/6/29 | MATERIAL SUPPLIER   |       |                |          |                                 |   |
| PROCESS  |          | XinYing        | 2021/6/29 | PRODUCTION METHODS  |       |                |          |                                 |   |
| QA   |          |                | 2021/6/29 | SUPPLIER            |       |                | TITLE    |                                 | 5 GHz to 40 GHz Double Ridged Broadband Waveguide Horn Antenn   |
| PACKAGE DELIVERY NOTE  |          |                |           | FINISH MANUFACTURER |       |                | PART NO. |                                 | <b>HA-0540GB-KF</b>   |
| EDITION  | DATE     | MODIFY CONTENT |           | EDITION             | DATE  | MODIFY CONTENT |          | DEPARTMENT                      | SHIPPING NOTE   |
| V1   | 20201117 | 研發設計           |           |                     |       |                |          | TEL                             | 03-5882899  |
| V2   |          |                |           |                     |       |                |          | FAX                             | 03-5882879  |
| File No. S:\[Pro]Microwave Antenna Product\HA-Series\Double Ridge Broadband Horn Antenna\HA-0540GB-KF\ |          |                |           |                     |       |                |          | DATE                            | 2021/6/29   |
|  |          |                |           |                     |       |                |          | Make in Taiwan For FT-RF Design |   |
|  |          |                |           |                     |       |                |          | SHEET 2 OF 3                    | SCALE : 1:1   |
|  |          |                |           |                     |       |                |          | A4                              |   |

## Packing List & Label List

|  |  |                     |
|--|--|---------------------|
|  | 1 Set Packing                          |                     |
|  | Antenna<br>L-plate<br>M2.5 screw *8pcs |                     |
|  | ITEM NO.                               | HA-0540GB-KF 10 pcs |
|  | Q'TY                                   | 10 PCS              |
|  | G. W.                                  | 1 KG                |
|  | N. W.                                  | 9.3 KG              |
|  | CARTON                                 |                     |

| 1 set carton Label |                            | Antenna Label   |                  |
|--------------------|----------------------------|---|------------------|
| Size               | 50 x 80 mm(white)          | Size  | 30 x 50 mm(blue) |
| Customer:          | Manufacture Data: yy/mm/dd | HA-0540GB-KF<br>5GHz to 40GHz Double Ridged Broadband<br>Waveguide Horn Antenna |                  |
| Customer Mode:     |                            |   |                  |
| Order Number:      |                            |   |                  |
| Weight:            | kg                         |   |                  |
| Carton:            | Box                        |   |                  |
| Amount:            | Pcs                        |   |                  |
| Paste Position     |                            | Paste Position  |                  |
|                    |                            |   |                  |

## RoHs and WEEE Status (RoHs and WEEE Compliant)

Certificate of Compliance

Date:

To: Whom It May Concern

FT-RF hereby certifies that product:

| Model        | Product  |
|--------------|--|
| HA-0540GB-KF | 5GHz to 40GHz Double Ridged Broadband Waveguide Horn Antenna |

Is in conformance with the requirements of the European RoHS Directive 2011/65/EU and the European WEEE Directive 2012/19/EU, all materials referenced therein are in concentrations below the maximum allowable levels specified.

Products manufactured by FT-RF bear the CE marking and have FCC certificate. FT-RF has been assessed and found to be in accordance with the requirements of ISO 14001:2015 and ISO 9001:2015 standards, scope of Design and Manufacture of Antenna.

Our statements in this letter regarding RoHS and WEEE compliance do not extend to, or apply to any product subjected to unintended contamination, misuse, neglect, accident, improper installation, or to use in violation of instructions furnished by FT-RF.  
Sincerely,

FT-RF (Fei Teng Wireless Technology CO., LTD)

The information contained in this letter is being provided for informational purposes only and to clarify certain information concerning FT-RF products. Nothing provided in this letter is:

- (1) a representation, warranty, or agreement to indemnification by FT-RF.
- (2) a statement which may form the basis of reliance by FT-RF,
- (3) a modification of any of the terms and conditions of sale agreed to in writing between FT-RF and its customers with respect to any FT-RF products, whether previously sold or to be sold in the future.