

# Marine GPS/GLONASS & 3G/LTE Antenna

## MODEL: GAF-700G

Outdoor and ruggedness, demand of vehicle locating and Marine navigation GPS/GLONASS antenna that will sustain harsh environment.



- Low noise figure
- Fully weather proof IPX8 .
- Ultra-high Sensitivity
- Compact construction
- Excellent temperature stability

The antenna system **GAF-700G** is the integration of the high performance GPS patch antenna and a low noise amplifier into state-of-the-art low a very low profile/extremely compact/fully waterproof antenna signal enclosure. When connected to a GPS receiver with +2.5~ 5.5V DC antenna powers it provides excellent signal amplification and out-band-rejection for that receiver.

### Features:

GPS antenna with double threaded bolts and through holes for cable routing with course & fine treaded pitch locking for wing-nut fastener and lock-nut to prevent vibrations and un-authorized removal.

### Specifications:

#### 1. GENERAL DESCRIPTION

Model No
GAF700G-1M-SMA(F)x2

#### 1.1 Electrical Properties

Parameter	Description	
Frequency Band	GPS/GLONASS	LTE
	1575.42Mhz 1602Mhz	698~960/1710~2700MHz
Nominal Impedance	50 ohm	50 ohm
VSWR	2.0:1	4.5:1
Antenna Peak Gain	28+/-4db	0db
Voltages	2.5~5.5v	X

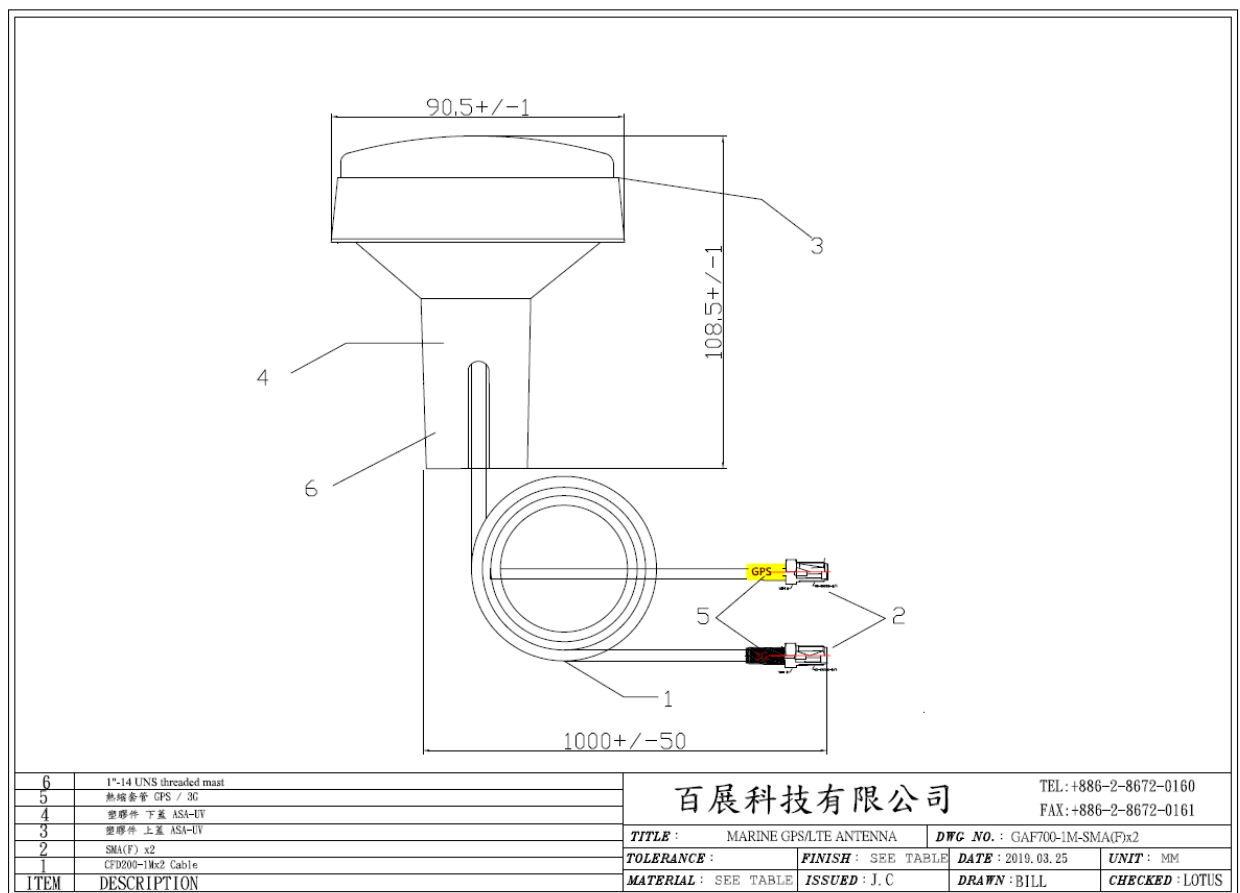
Polarization	R.H.C.P	Linear
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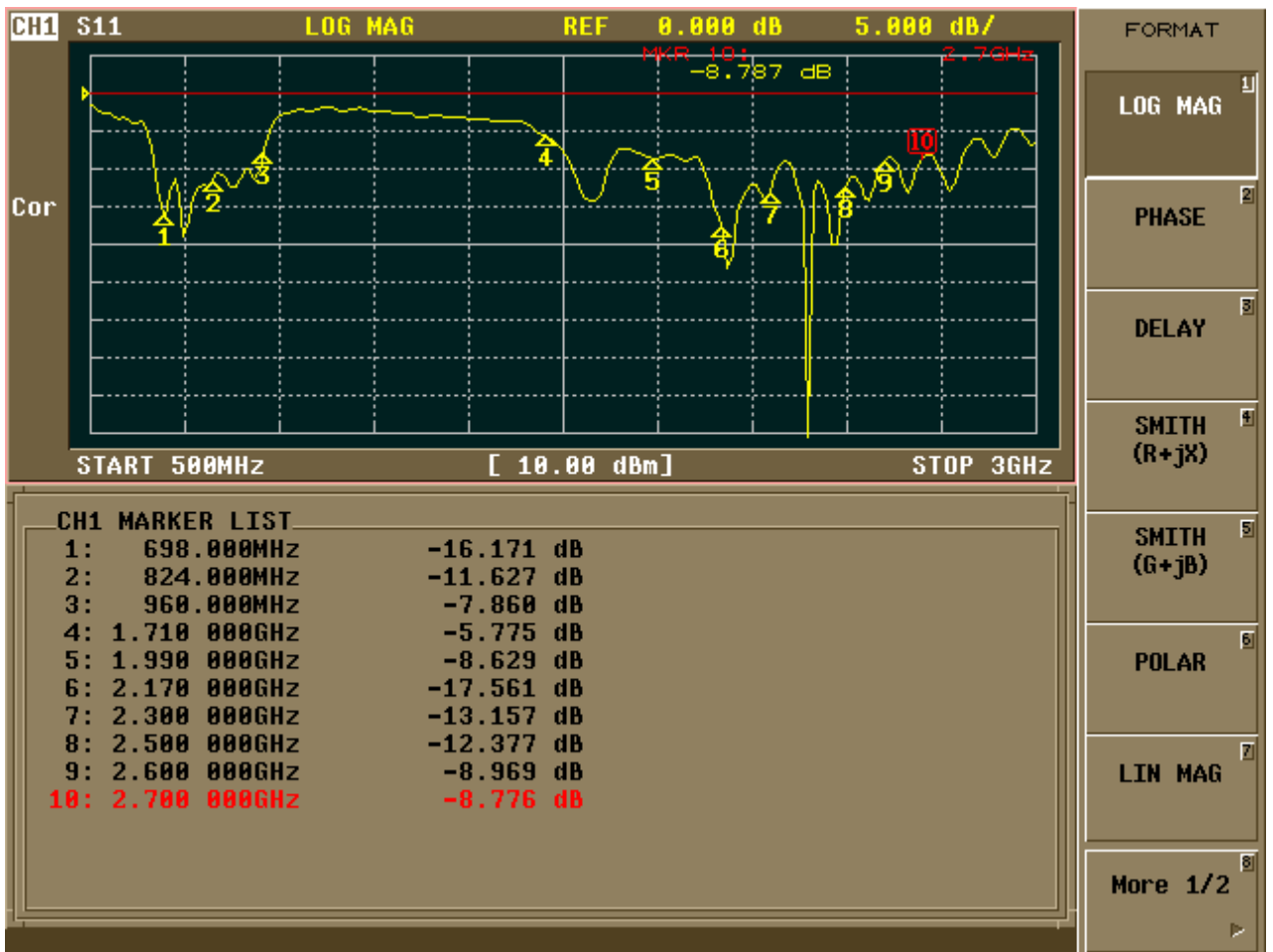
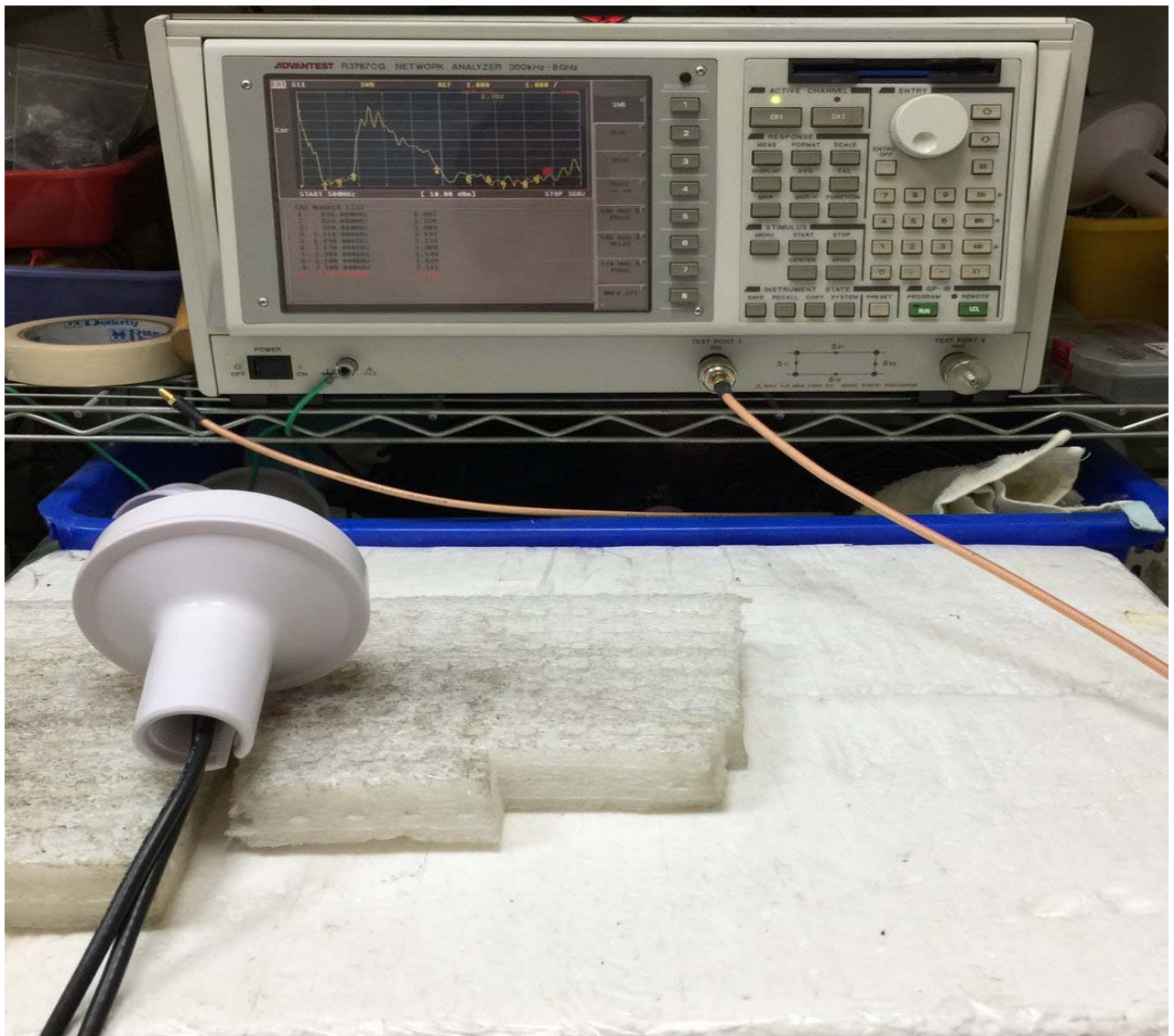
## 1.2 Mechanical Properties

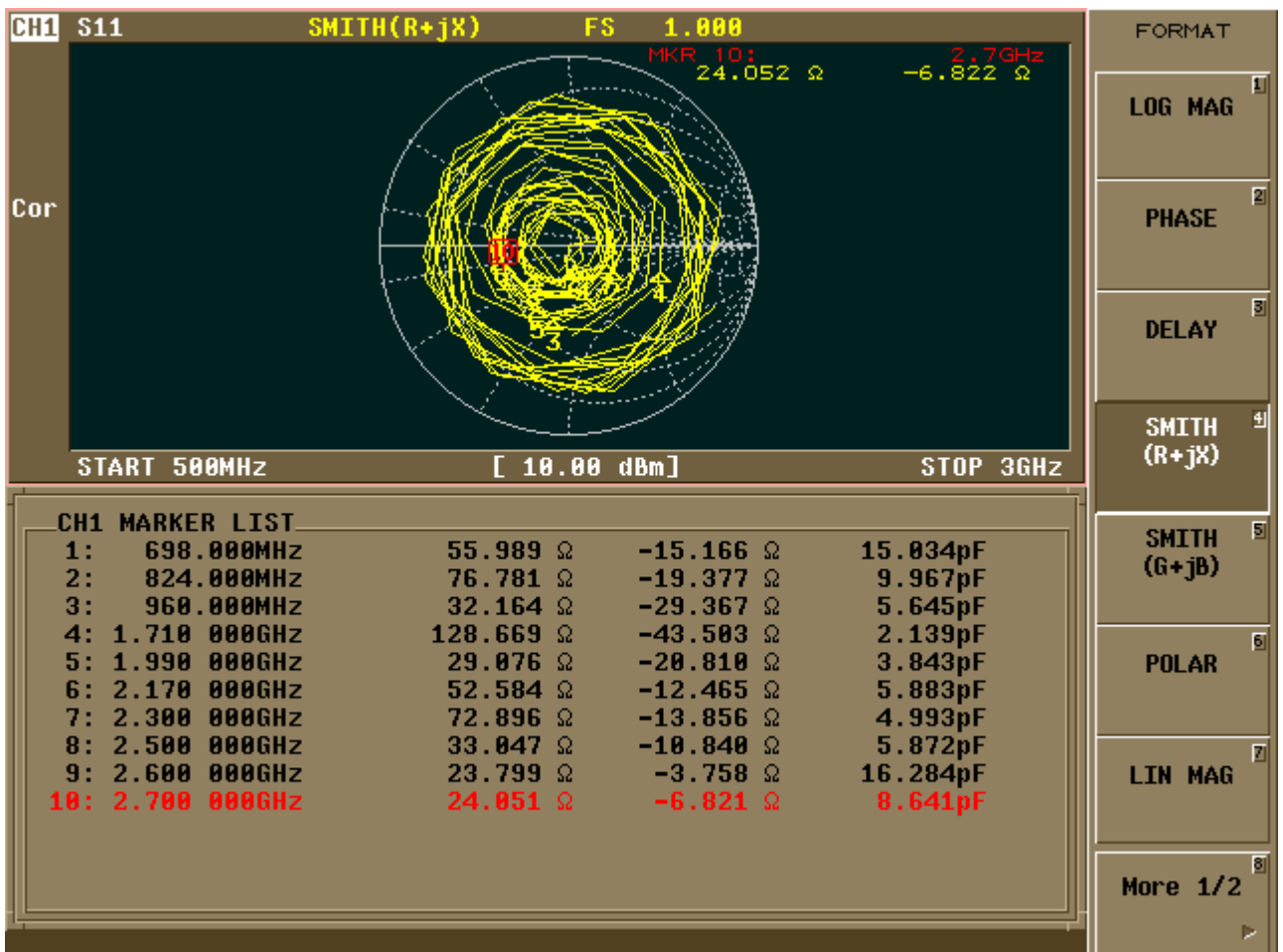
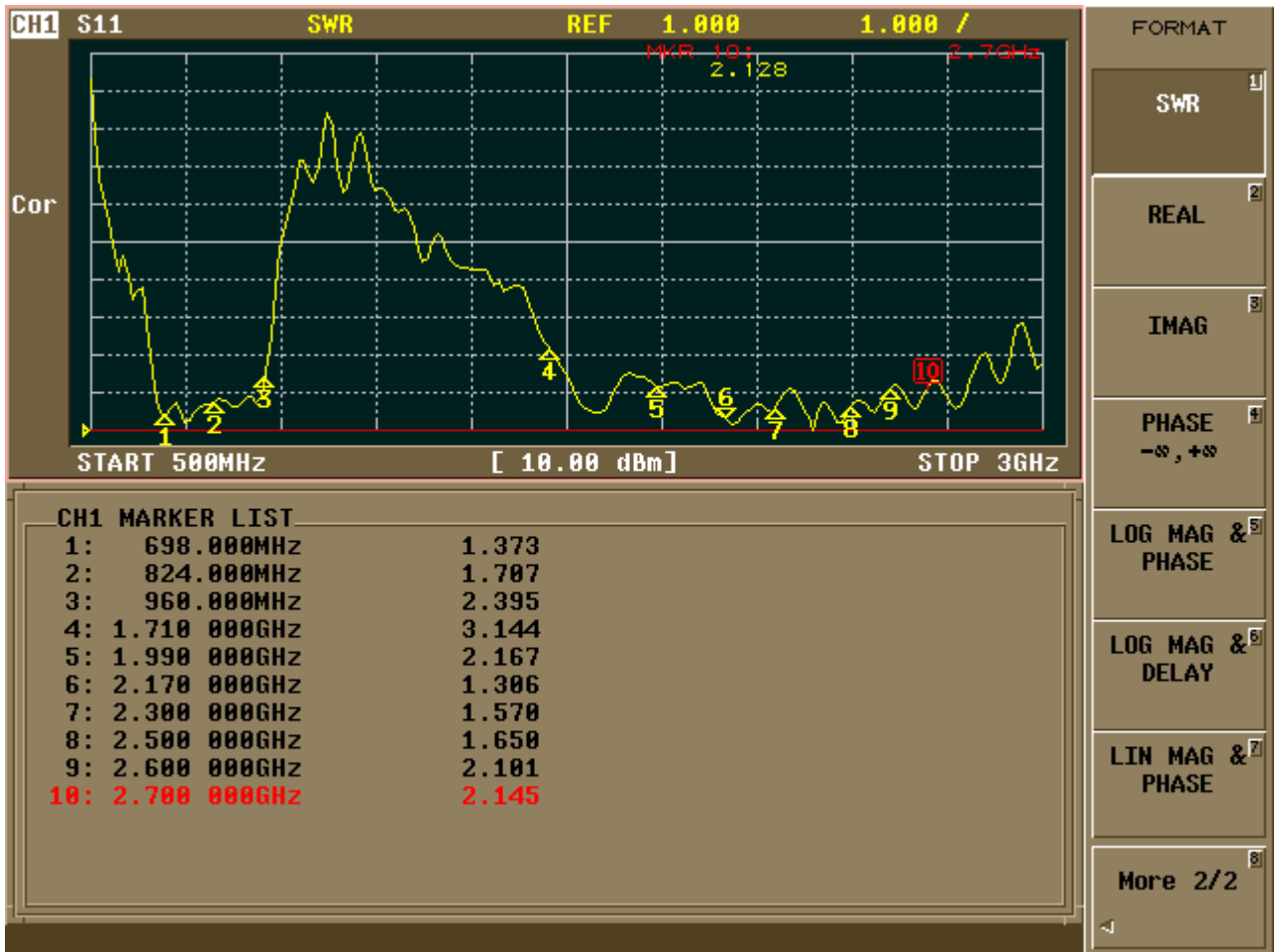
Parameter	Description
Connector Type	SMA180 ° (Fe-male) x 2
Antenna Dimensions	90.5mm(Dia.) × 108.5mm(H)
Antenna Cable Total Length	CFD200 -1000mm ± 50 x 2
Antenna Material & Color	ASA-UV / White ( UL94-HB )
Operating Temperature Range	-40°C~+80°C
Storage Temperature Range	-40°C~+80°C
Waterproof	IPX8
Fixed way	1"-14 UNS threaded mast

\* This specification is subject to change without prior notice

Data Updated: Mar.25, 2019



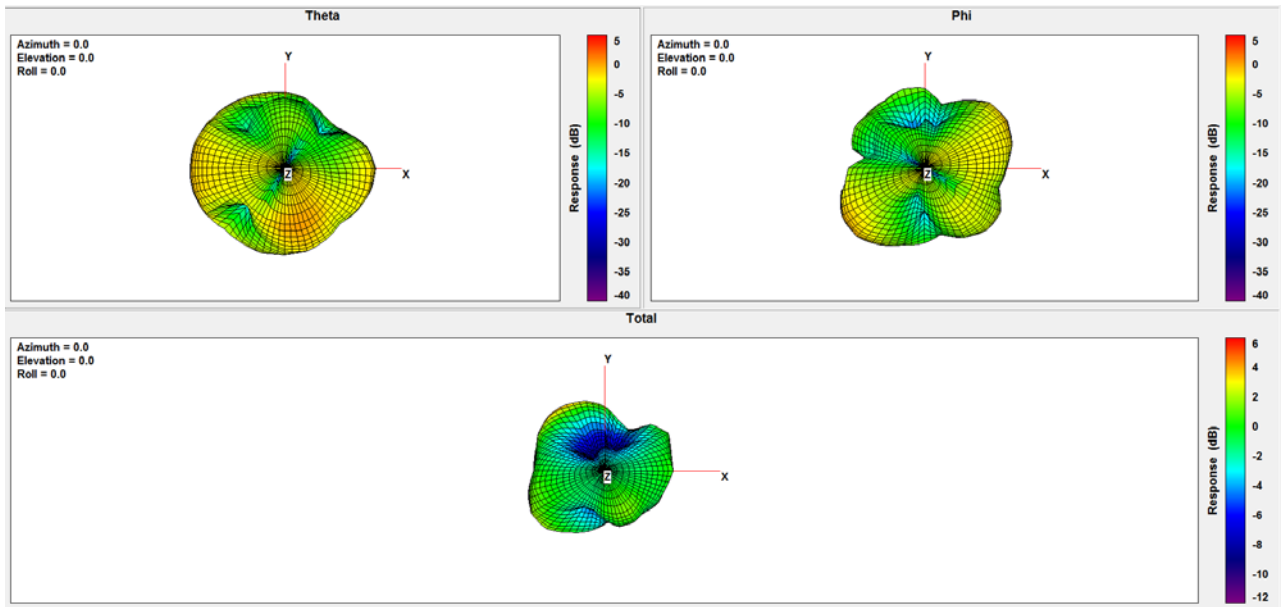




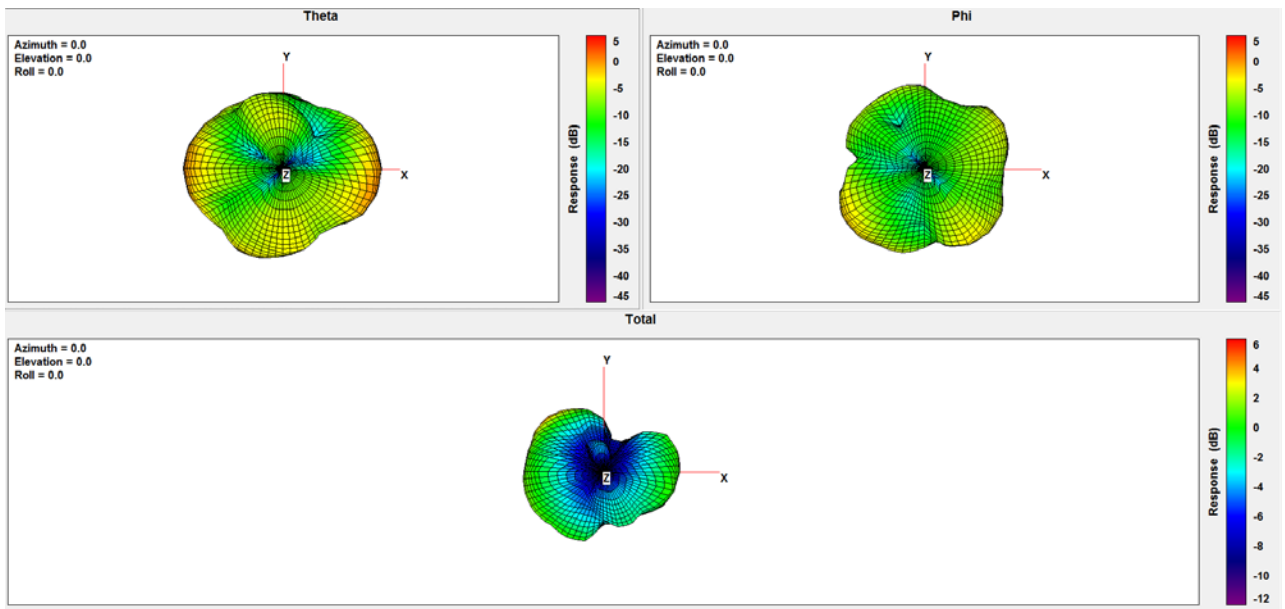
**Test result:**

<b>Frequency (MHz)</b>	<b>698</b>	<b>704</b>	<b>710</b>	<b>716</b>	<b>720</b>	<b>725</b>	<b>730</b>	<b>734</b>	<b>740</b>	<b>746</b>	<b>756</b>	<b>765</b>	<b>772</b>	<b>777</b>
Peak Gain (dBi)	<b>3.88</b>	<b>3.81</b>	<b>3.57</b>	<b>3.44</b>	<b>3.33</b>	<b>3.24</b>	<b>3.19</b>	<b>3.21</b>	<b>3.37</b>	<b>3.61</b>	<b>3.97</b>	<b>3.19</b>	<b>3.22</b>	<b>4.19</b>
Efficiency (%)	<b>71.32</b>	<b>78.23</b>	<b>72.42</b>	<b>78.84</b>	<b>76.18</b>	<b>73.76</b>	<b>72.12</b>	<b>72.33</b>	<b>74.14</b>	<b>76.21</b>	<b>79.02</b>	<b>80.45</b>	<b>79.48</b>	<b>78.06</b>
<b>Frequency (MHz)</b>	<b>782</b>	<b>787</b>	<b>791</b>	<b>806</b>	<b>821</b>	<b>824</b>	<b>836</b>	<b>849</b>	<b>862</b>	<b>869</b>	<b>880</b>	<b>894</b>	<b>900</b>	<b>915</b>
Peak Gain (dBi)	<b>4.03</b>	<b>4.90</b>	<b>4.79</b>	<b>4.55</b>	<b>4.39</b>	<b>4.29</b>	<b>3.92</b>	<b>3.66</b>	<b>4.43</b>	<b>4.25</b>	<b>3.67</b>	<b>2.86</b>	<b>2.68</b>	<b>2.51</b>
Efficiency (%)	<b>75.34</b>	<b>73.20</b>	<b>71.57</b>	<b>79.94</b>	<b>84.55</b>	<b>84.07</b>	<b>81.84</b>	<b>84.04</b>	<b>72.36</b>	<b>66.94</b>	<b>57.21</b>	<b>47.44</b>	<b>45.47</b>	<b>43.47</b>
<b>Frequency (MHz)</b>	<b>925</b>	<b>940</b>	<b>960</b>	<b>1710</b>	<b>1730</b>	<b>1750</b>	<b>1770</b>	<b>1785</b>	<b>1805</b>	<b>1840</b>	<b>1850</b>	<b>1880</b>	<b>1910</b>	<b>1920</b>
Peak Gain (dBi)	<b>2.44</b>	<b>2.70</b>	<b>3.83</b>	<b>2.51</b>	<b>3.14</b>	<b>3.70</b>	<b>3.94</b>	<b>3.95</b>	<b>4.06</b>	<b>4.44</b>	<b>4.51</b>	<b>4.64</b>	<b>4.48</b>	<b>4.45</b>
Efficiency (%)	<b>43.86</b>	<b>49.55</b>	<b>55.67</b>	<b>40.83</b>	<b>47.99</b>	<b>53.22</b>	<b>54.78</b>	<b>53.96</b>	<b>53.65</b>	<b>52.55</b>	<b>51.58</b>	<b>48.82</b>	<b>44.14</b>	<b>42.44</b>
<b>Frequency (MHz)</b>	<b>1930</b>	<b>1950</b>	<b>1960</b>	<b>1980</b>	<b>1995</b>	<b>2110</b>	<b>2140</b>	<b>2170</b>	<b>2300</b>	<b>2325</b>	<b>2350</b>	<b>2375</b>	<b>2400</b>	<b>2500</b>
Peak Gain (dBi)	<b>4.48</b>	<b>4.66</b>	<b>4.79</b>	<b>4.88</b>	<b>4.76</b>	<b>3.33</b>	<b>3.47</b>	<b>3.97</b>	<b>3.71</b>	<b>3.00</b>	<b>3.01</b>	<b>3.00</b>	<b>2.72</b>	<b>2.70</b>
Efficiency (%)	<b>42.02</b>	<b>42.52</b>	<b>43.76</b>	<b>45.24</b>	<b>44.80</b>	<b>49.85</b>	<b>46.80</b>	<b>48.66</b>	<b>46.11</b>	<b>38.96</b>	<b>38.36</b>	<b>38.19</b>	<b>37.27</b>	<b>38.00</b>
<b>Frequency (MHz)</b>	<b>2515</b>	<b>2535</b>	<b>2555</b>	<b>2570</b>	<b>2595</b>	<b>2620</b>	<b>2630</b>	<b>2655</b>	<b>2680</b>	<b>2690</b>	<b>2700</b>			
Peak Gain (dBi)	<b>2.37</b>	<b>2.95</b>	<b>2.69</b>	<b>2.60</b>	<b>2.11</b>	<b>2.76</b>	<b>2.85</b>	<b>2.86</b>	<b>2.29</b>	<b>2.21</b>	<b>2.13</b>			
Efficiency (%)	<b>35.86</b>	<b>33.53</b>	<b>32.33</b>	<b>32.45</b>	<b>31.36</b>	<b>37.94</b>	<b>36.93</b>	<b>35.43</b>	<b>36.76</b>	<b>36.80</b>	<b>36.69</b>			

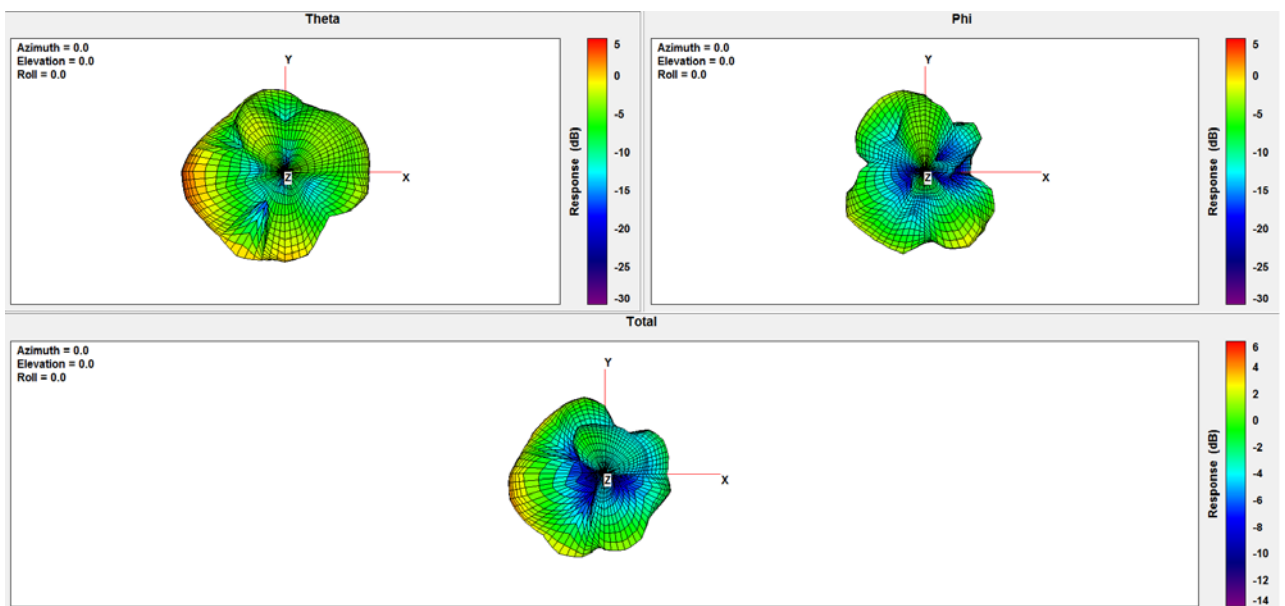
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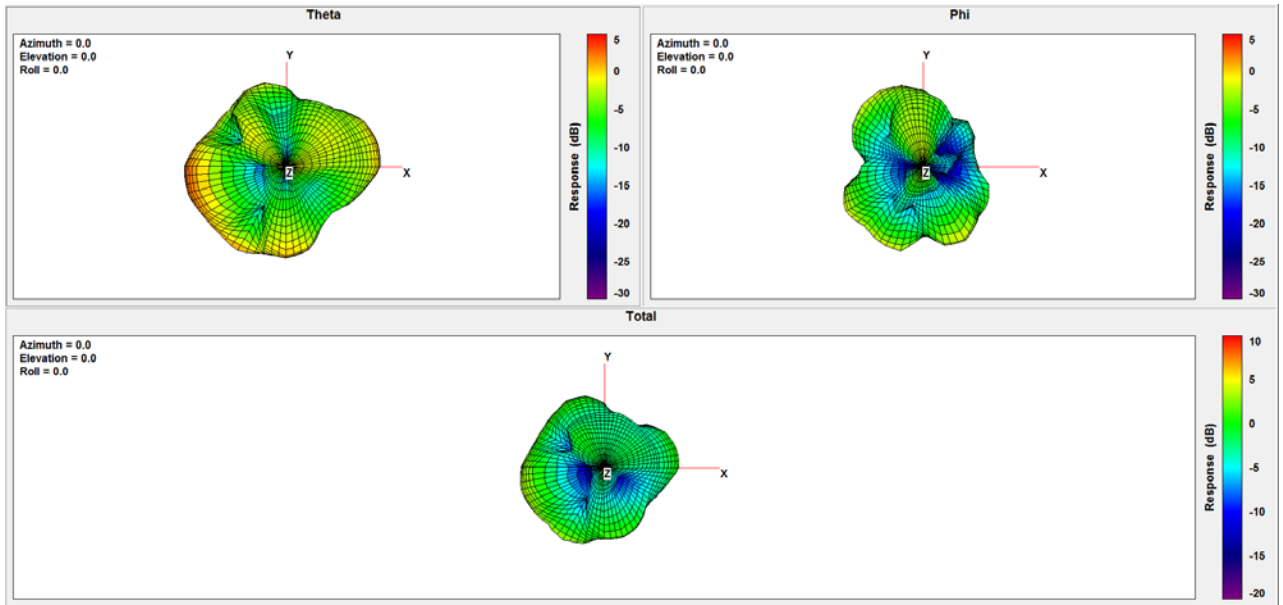
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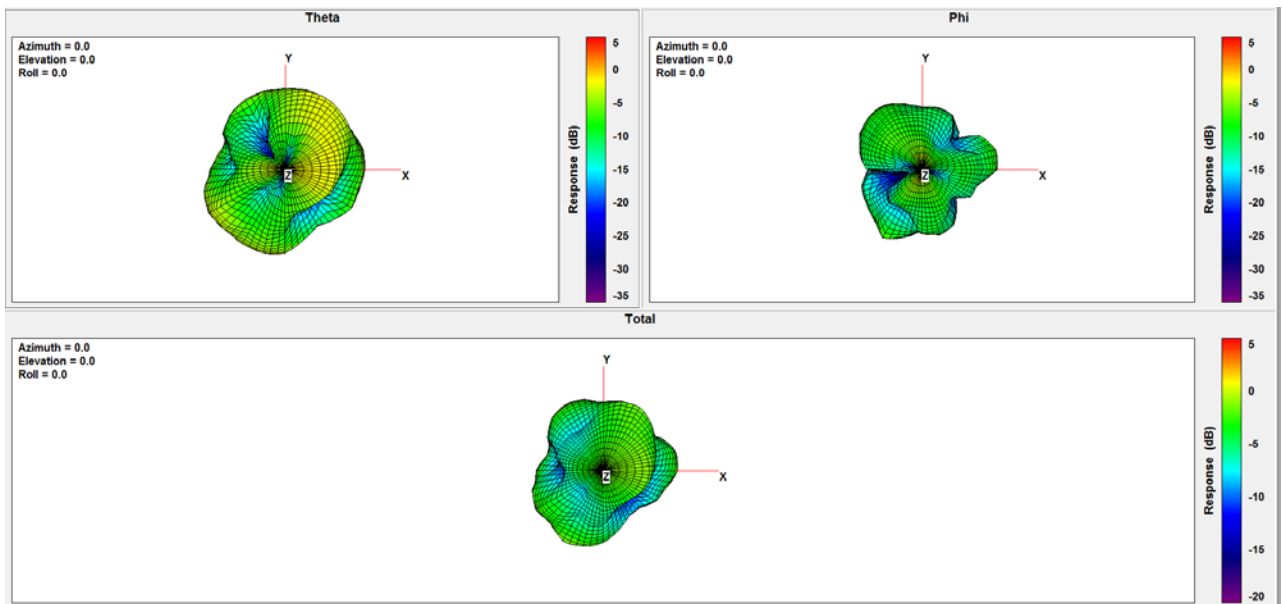
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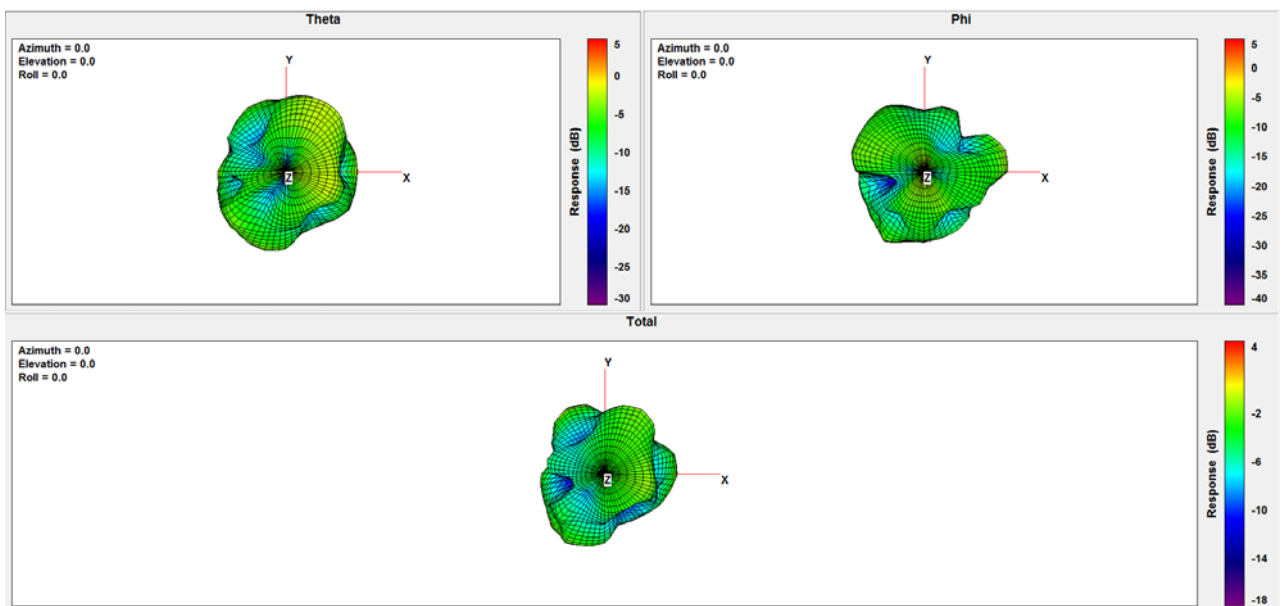
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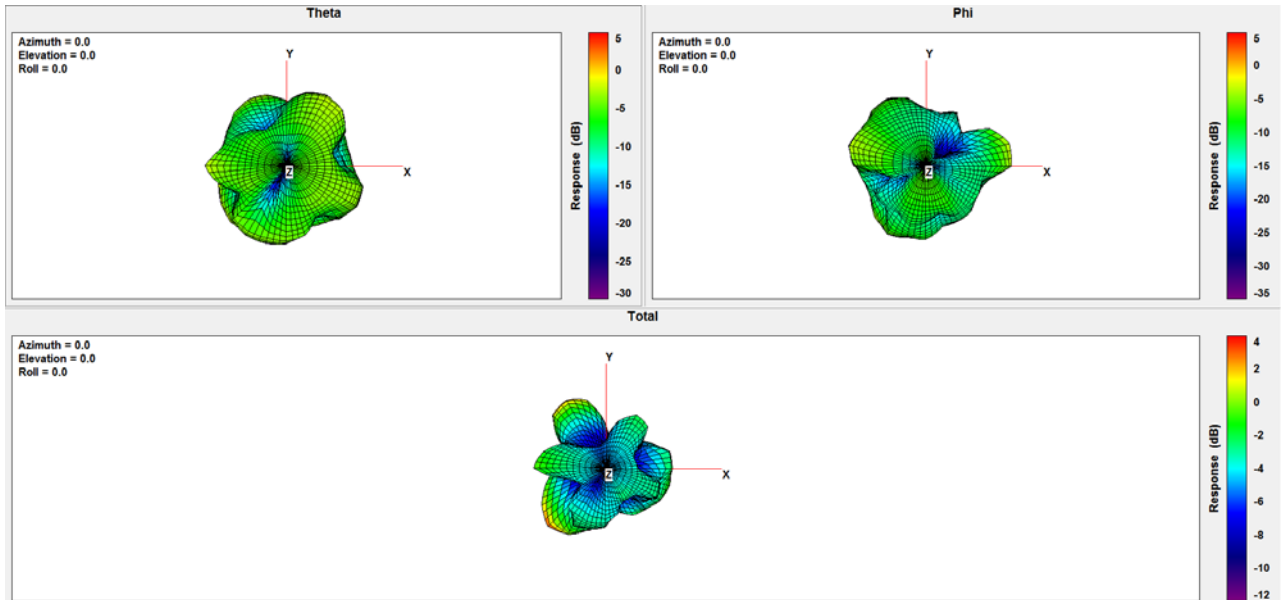
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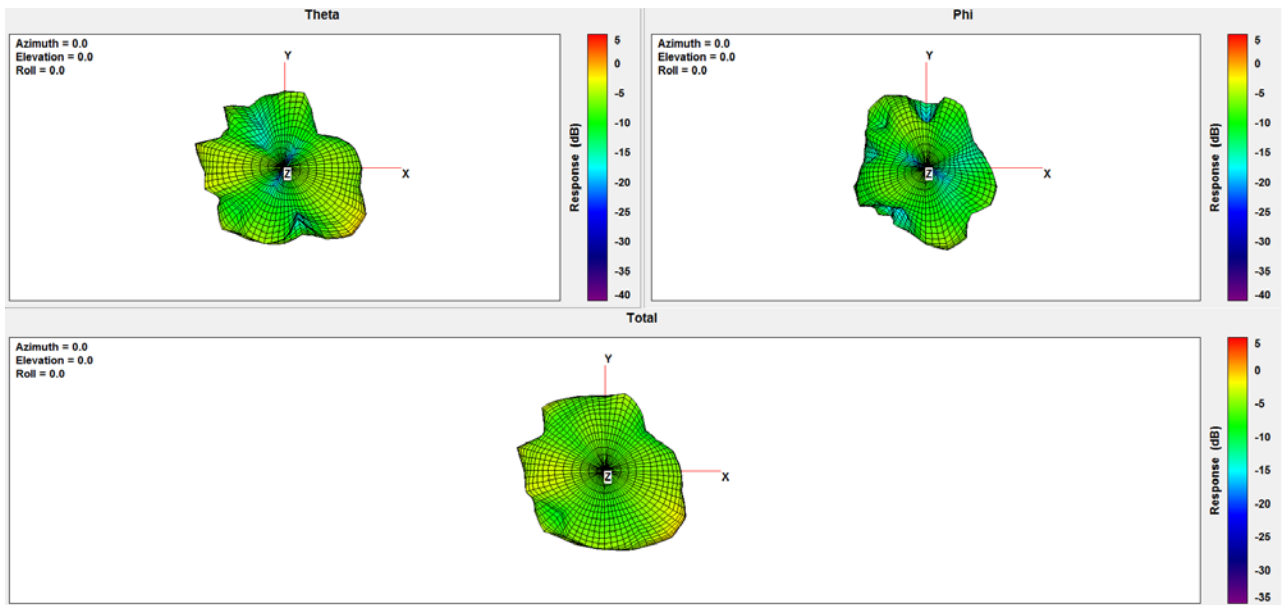
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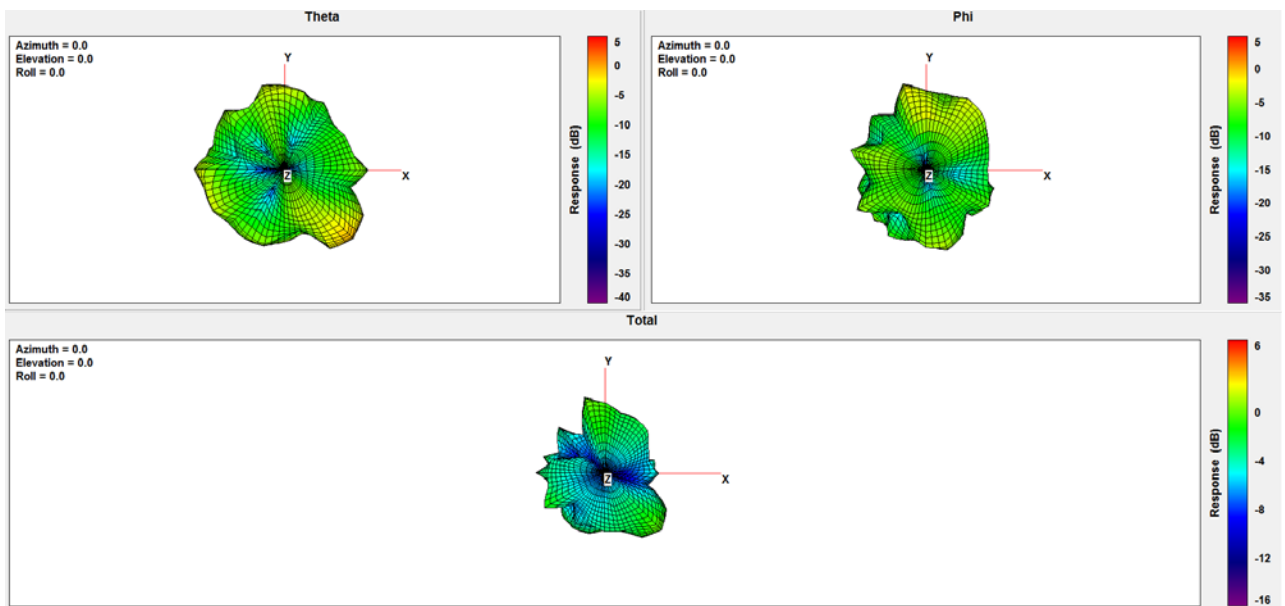
### 960Mhz:



### 1710Mhz:

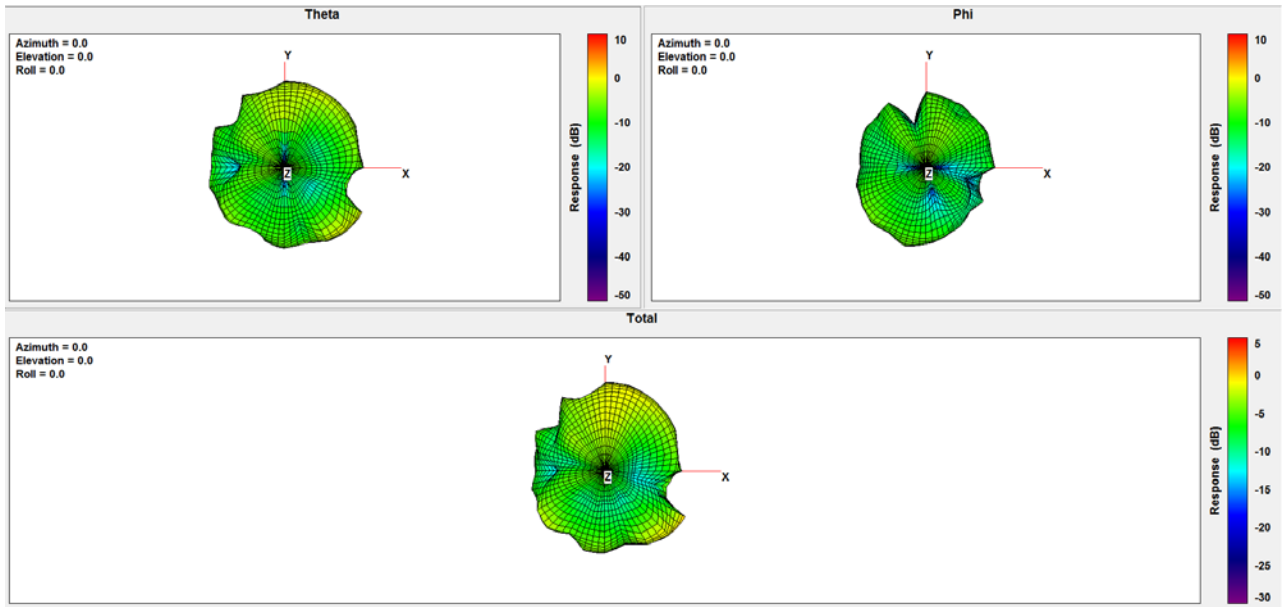


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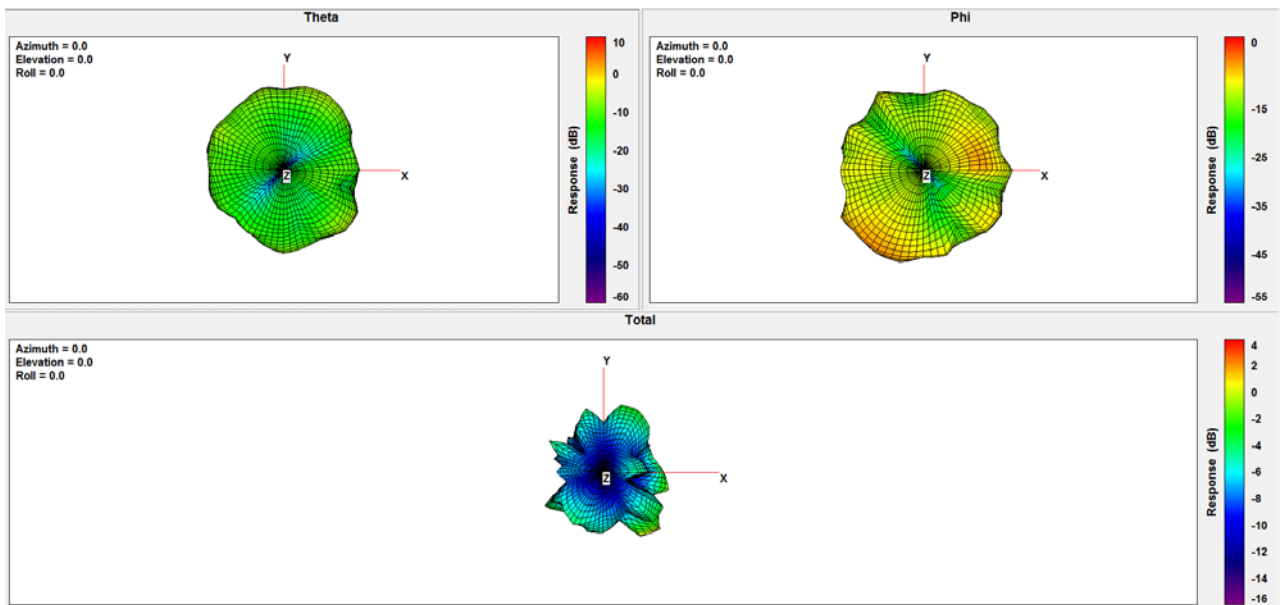




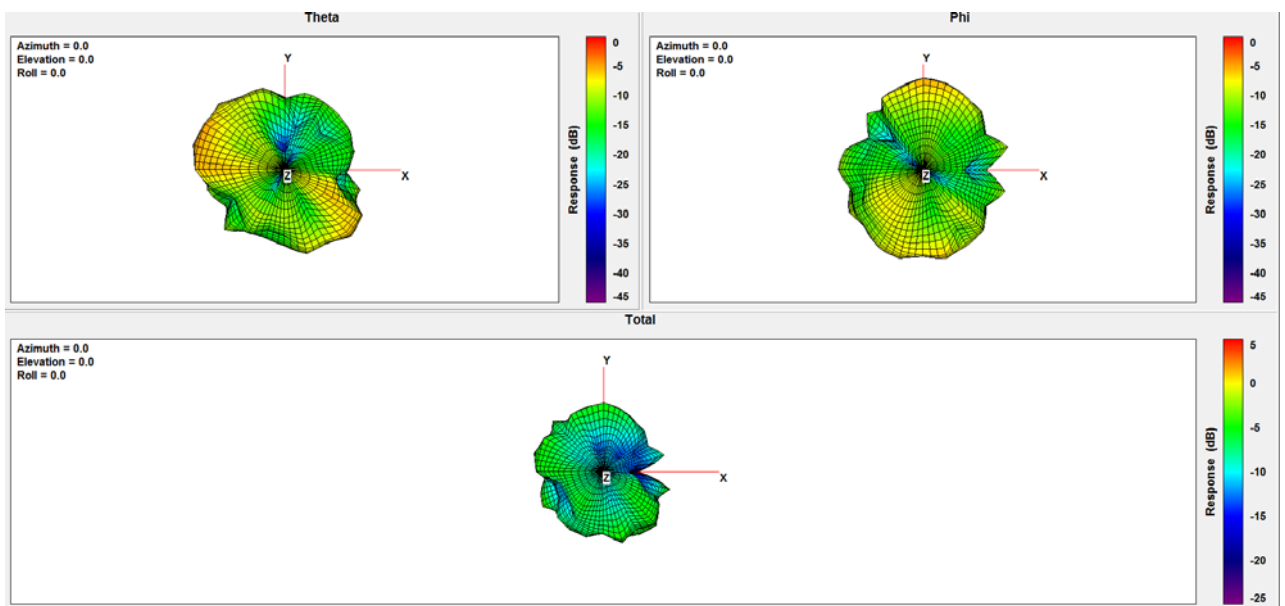
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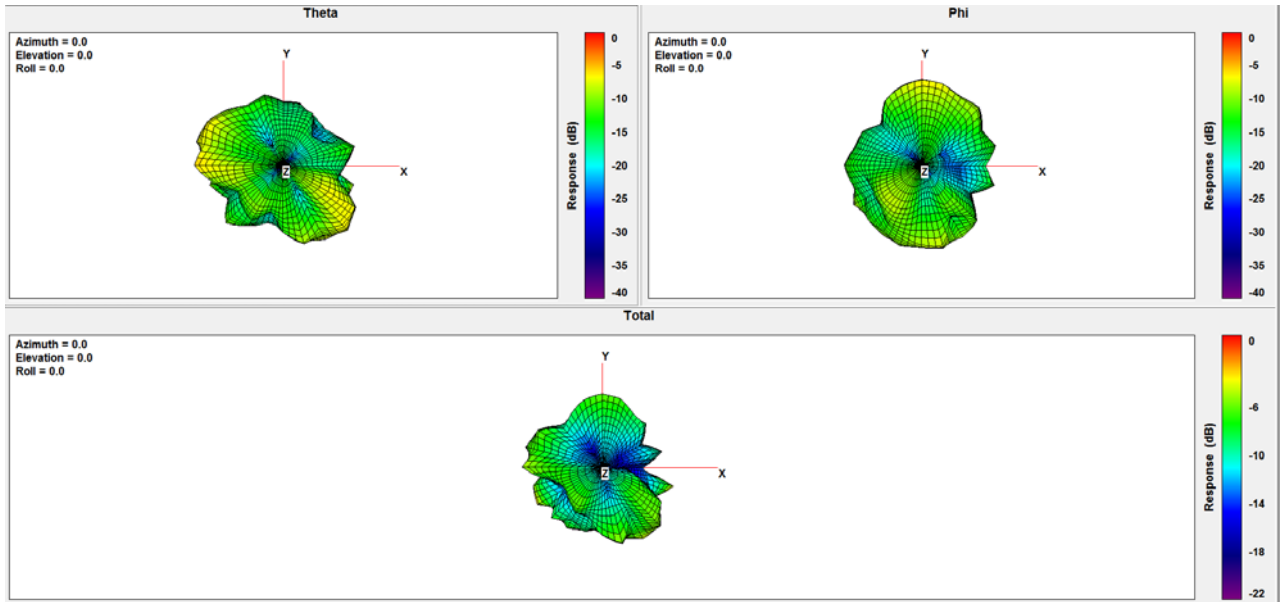
## 2350Mhz:



## 2595Mhz:



## 2665Mhz:



## 2690Mhz:

