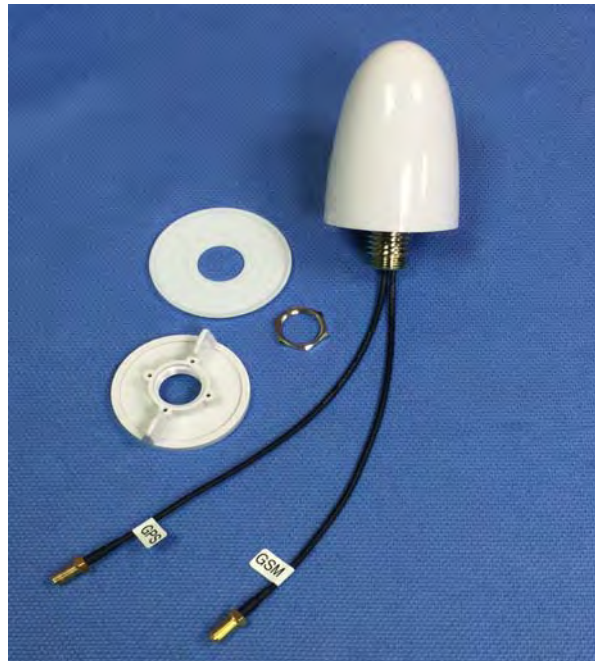


Vehicle Locating & Marine GPS & 3G,LTE MIMO Antenna

MODEL: GAF-68

Small size and ruggedness, demand of vehicle locating and Marine navigation GPS/3G/LTE antenna that will sustain harsh environment.



The antenna system **GAF-68** 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.

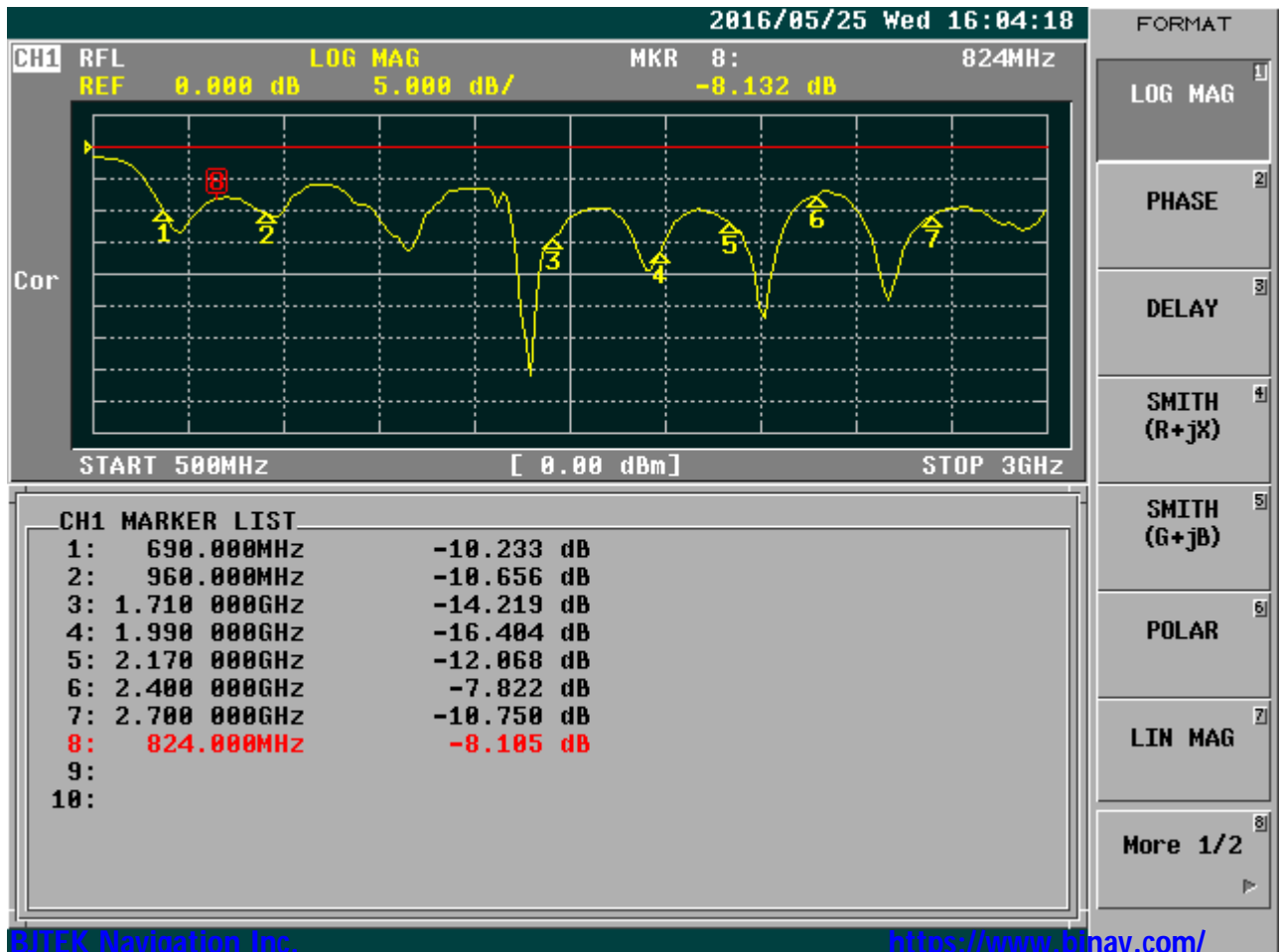
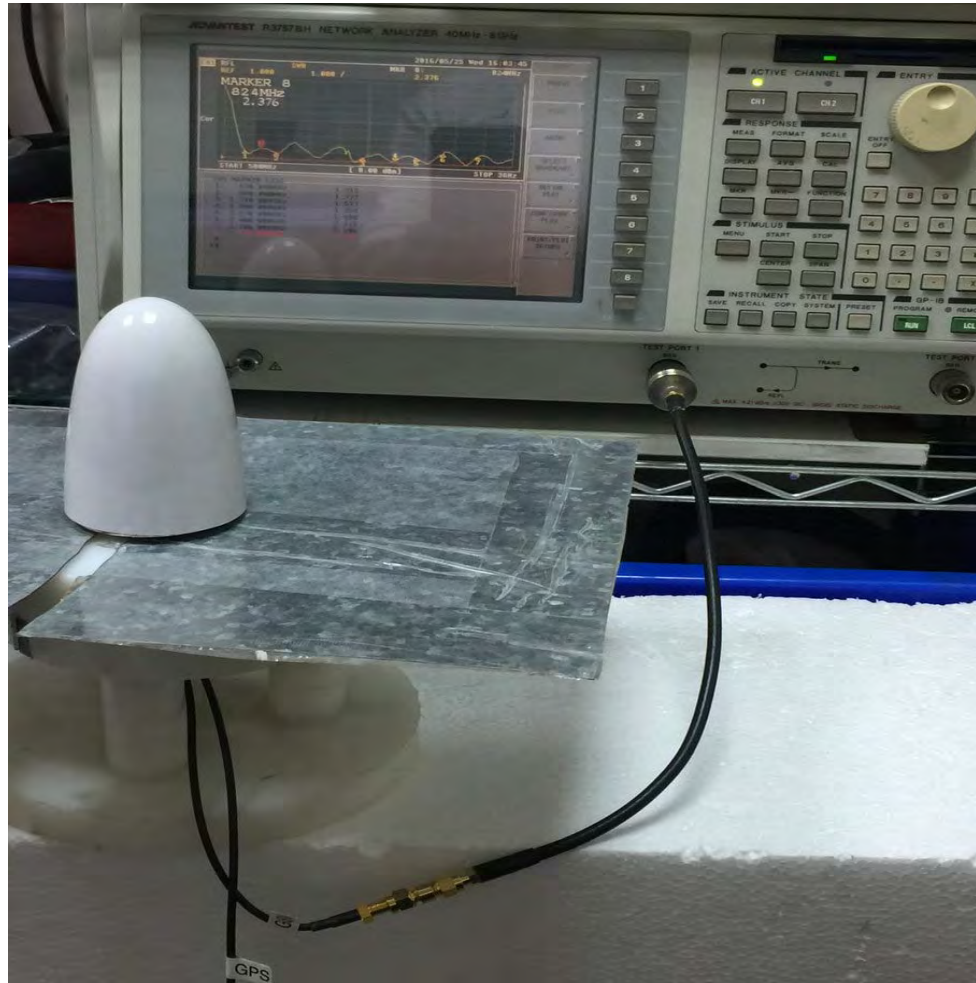
Specifications:

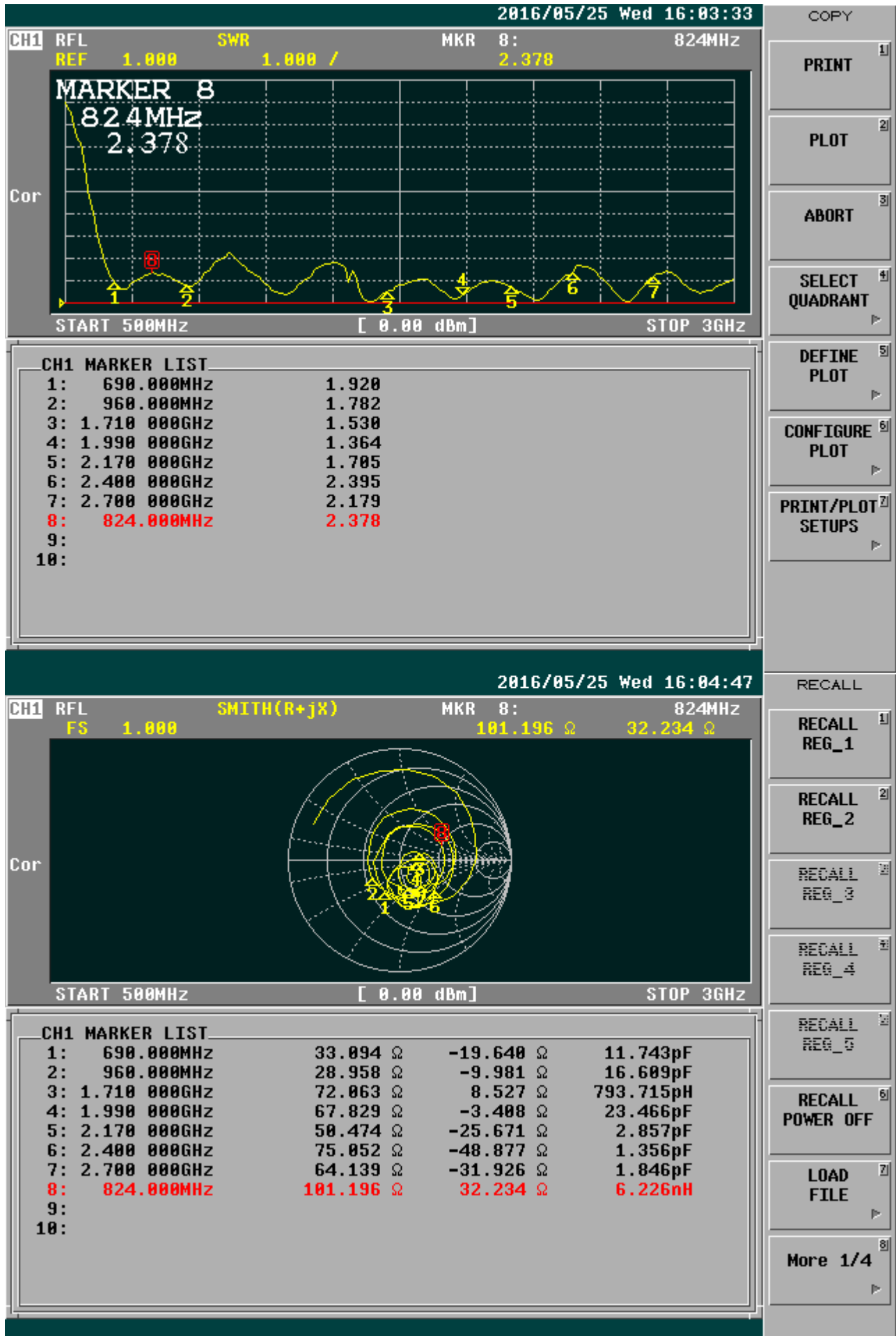
| PHYSICAL CONDITION | |
|----------------------|--|
| Constructions: | Polycarbonate radome,detachable cable/connector for easy mount, rubber-O-ring between top radome and screw base for waterproof |
| Dimensions: | 60mm(Dia.) x 90mm(H) |
| Weight: | 65grams (w/o cable & connector). |
| Color: | White or Black (Optional) |
| Mounting: | Bulkhead mount with 0.8 inch threaded wing nut (standard accessory). FB6 2.5mm SUS L-Mounting |
| Cable & Connector | |
| RF cable: | RG174-20CM-SMA(F) or ---- |
| Pulling strength: | 6 Kg @ 5sec. molded plastic on connector end for strain relief. |
| Connector available: | SMA ,SMB, Fakra , BNC,TNC,MMCX,MCX---- |
| Antenna Element | |
| Center Frequency: | 1575.42 MHz +/-1.023 MHz |

| | |
|---|---|
| Polarization: | R.H.C.P. (Right Handed Circular Polarization). |
| Absolute Gain @ Zenith: | +5 dBi typical. |
| Gain @ 10° Elevation: | -1 dBi typical. |
| Axial Ratio: | 3 dB max. |
| Output VSWR: | 2.0 |
| Output Impedance: | 50 ohm |
| Low Noise Amplifier | |
| Center Frequency: | 1575.42 +/- 1.023 MHz |
| Power Gain: | 28 db +/-3db |
| Bandwidth: | 10 MHz min. @S11≤-10 dB |
| Noise Figure: | 1.5 |
| Outer Band Attenuation: | 3 dB max. |
| Supply Voltages: | 2.5~5.5V DC. |
| Current Consumption: | at 2.5V 6.6mA Typ. at 3.0V 8.6mA Typ. at 4.0V 12.6mA Typ. at 5.0V 16.6mA Typ. |
| Filter | 20dB 25dB @ fo+/- 50MHz 30dB 35dB @ fo+/- 100MHz * fo=1575.42MHz |
| Overall Performance: (antenna element, LNA & coax cable) | |
| Center Frequency: | 1575.42 +/- 1.023 MHz |
| Gain: | At 90° vertical to sky 30 ± 4.5dBi (cable loss) Note:1 Mounted on the 60mm x 60mm square ground plane |
| Noise Figure: | 1.5 typ. |
| Axial Ratio: | 3 dB max. |
| Bandwidth: | 10 MHz min. @S11≤-10 dB |
| VSWR: | 2.0 max. |
| Output Impedance: | 50 ohm |
| Environmental | |
| Operating Temperature: | -40°C~ +80°C. |
| Storage Temperature: | -40°C~ +80°C. |
| Relative Humidity: | 95% non-condensing. |
| Water Resistance: | 100% waterproof. |
| GSM / ADS-B/ 3G / LTE / WIFI | |
| Frequency | 690~960/1090/1616~1636/1710~2170/2400~2700Mhz |
| VSWR | 3.5 |
| Impedence | 50Ω |
| Cable type | RG174 |
| Cable length | 20CM-SMA(F) or |
| Connector | SMA Coding or Others |

* This specification is subject to change without prior notice

Data Updated: May.25, 2016





| Frequency (MHz) | 690 | 698 | 704 | 710 | 716 | 734 | 740 | 746 | 751 | 756 | 777 | 782 | 787 | 791 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Efficiency (%) | 94.14 | 96.65 | 96.97 | 96.25 | 92.84 | 82.29 | 80.30 | 78.95 | 78.85 | 78.86 | 76.41 | 74.70 | 72.98 | 72.27 |
| Peak Gain (dBi) | 3.07 | 3.21 | 3.28 | 3.28 | 3.13 | 2.80 | 2.81 | 2.86 | 2.95 | 3.04 | 3.23 | 3.18 | 3.10 | 3.1 |

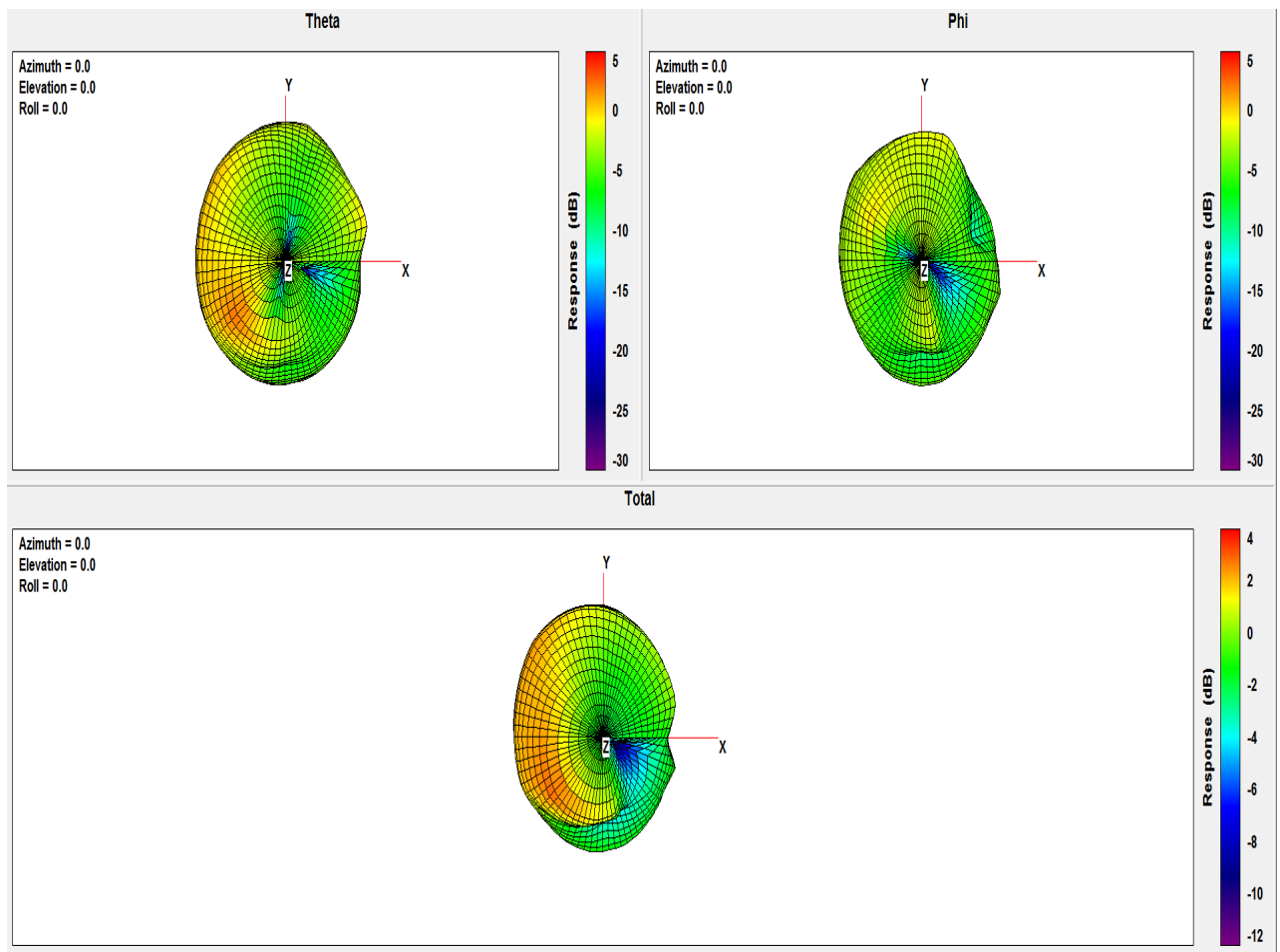
| Frequency (MHz) | 806 | 815 | 821 | 824 | 830 | 832 | 836 | 845 | 847 | 849 | 860 | 862 | 869 | 875 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Efficiency (%) | 78.29 | 76.81 | 76.34 | 76.62 | 77.15 | 77.74 | 77.80 | 77.48 | 77.01 | 76.56 | 73.46 | 73.12 | 70.95 | 69.82 |
| Peak Gain (dBi) | 3.36 | 3.22 | 3.13 | 3.17 | 3.15 | 3.15 | 3.08 | 2.99 | 2.94 | 2.90 | 2.64 | 2.58 | 2.39 | 2.23 |

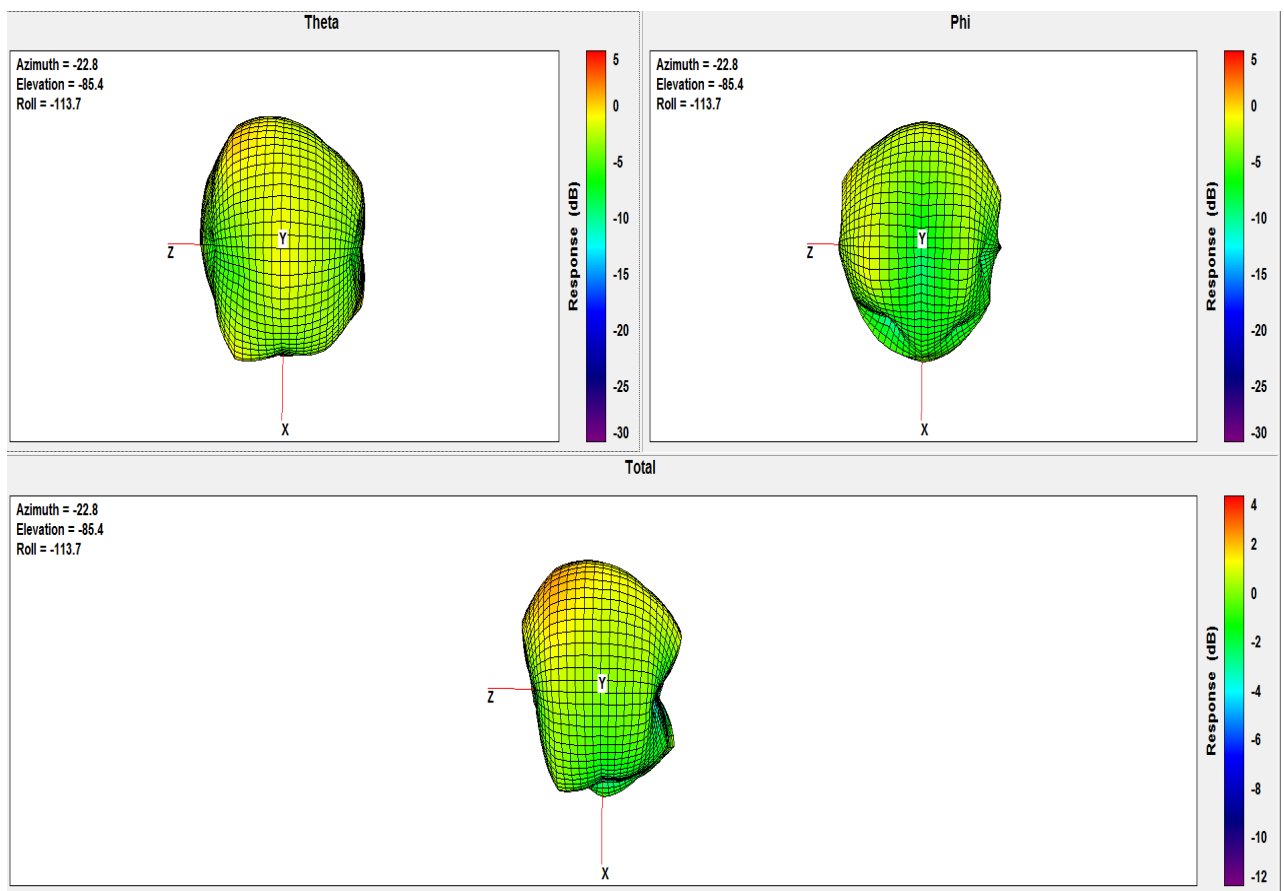
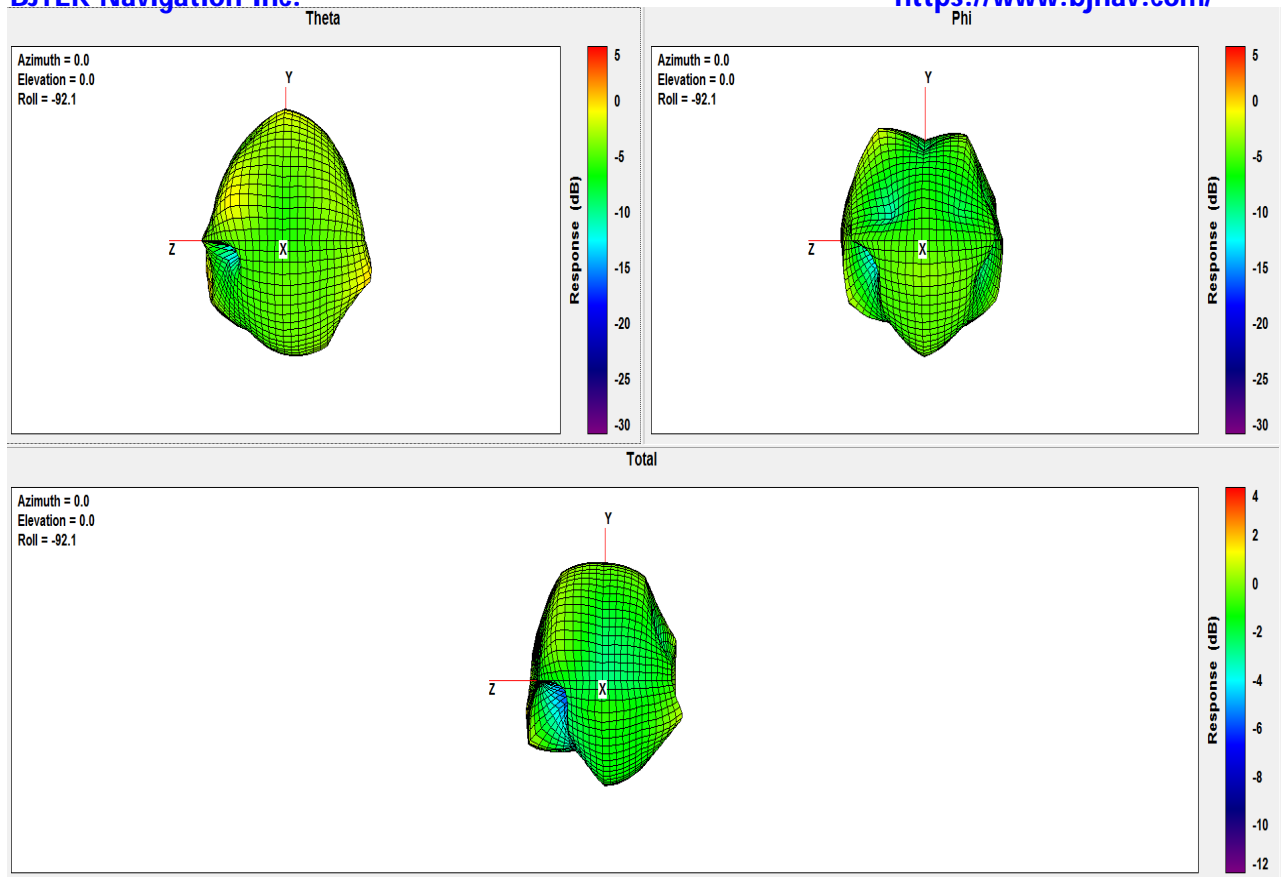
| Frequency (MHz) | 880 | 881 | 890 | 894 | 900 | 915 | 925 | 940 | 960 | 1427.9 | 1447.9 | 1462.9 | 1475.9 | 1495.9 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| Efficiency (%) | 68.89 | 68.78 | 68.30 | 68.88 | 69.31 | 71.30 | 72.56 | 73.74 | 74.35 | 72.22 | 71.95 | 71.71 | 70.98 | 68.98 |
| Peak Gain (dBi) | 2.09 | 2.06 | 1.83 | 1.76 | 1.64 | 1.51 | 1.75 | 2.16 | 2.71 | 2.68 | 2.59 | 2.56 | 2.48 | 2.29 |

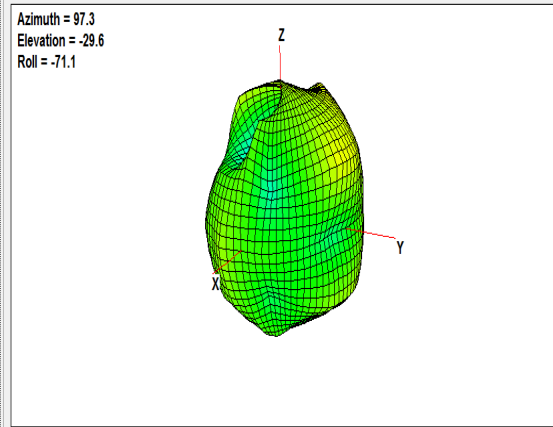
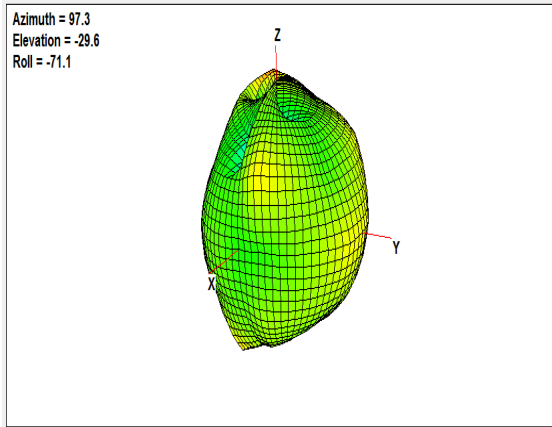
| Frequency (MHz) | 1510.9 | 1574.7 | 1575.4 | 1576.4 | 1602 | 1710 | 1750 | 1755 | 1785 | 1805 | 1840 | 1850 | 1880 | 1882 |
|-----------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Efficiency (%) | 68.17 | 74.85 | 74.81 | 74.97 | 78.06 | 98.03 | 93.06 | 91.75 | 85.41 | 84.88 | 82.58 | 81.53 | 81.45 | 81.62 |
| Peak Gain (dBi) | 2.26 | 3.93 | 3.95 | 3.97 | 5.30 | 4.15 | 3.83 | 3.78 | 3.61 | 3.88 | 3.97 | 3.89 | 3.69 | 3.71 |

| Frequency (MHz) | 1910 | 1920 | 1930 | 1950 | 1962 | 1980 | 1990 | 2110 | 2132 | 2140 | 2155 | 2170 | 2400 | 2450 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Efficiency (%) | 86.45 | 88.31 | 90.60 | 93.93 | 97.53 | 98.16 | 98.01 | 75.28 | 76.28 | 76.20 | 77.90 | 79.80 | 75.11 | 75.13 |
| Peak Gain (dBi) | 4.25 | 4.44 | 4.68 | 4.96 | 5.17 | 5.39 | 5.43 | 3.72 | 4.05 | 4.07 | 4.16 | 4.23 | 4.48 | 3.15 |

| Frequency (MHz) | 2500 | 2535 | 2570 | 2620 | 2655 | 2690 | 2700 | | | | | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|--|--|--|--|--|--|--|
| Efficiency (%) | 81.65 | 88.12 | 89.31 | 84.28 | 80.03 | 74.18 | 72.51 | | | | | | | |
| Peak Gain (dBi) | 3.56 | 4.06 | 4.17 | 3.92 | 3.84 | 3.68 | 3.57 | | | | | | | |







Total

