

4G/5G Sharkfin MiMo Antenna SHKG[W]-6-60[-VAR]

- OEM style sharkfin with 2x2 MiMo for 4G/5G
- Optional GPS/GNSS with Advanced Filtering
- Up to 4x MiMo WiFi



The SHKG 'Sharkee' range has become a byword for industry leading technology in a discrete OEM sharkfin housing. The SHKG-6-60 brings 5G capability to the product family.

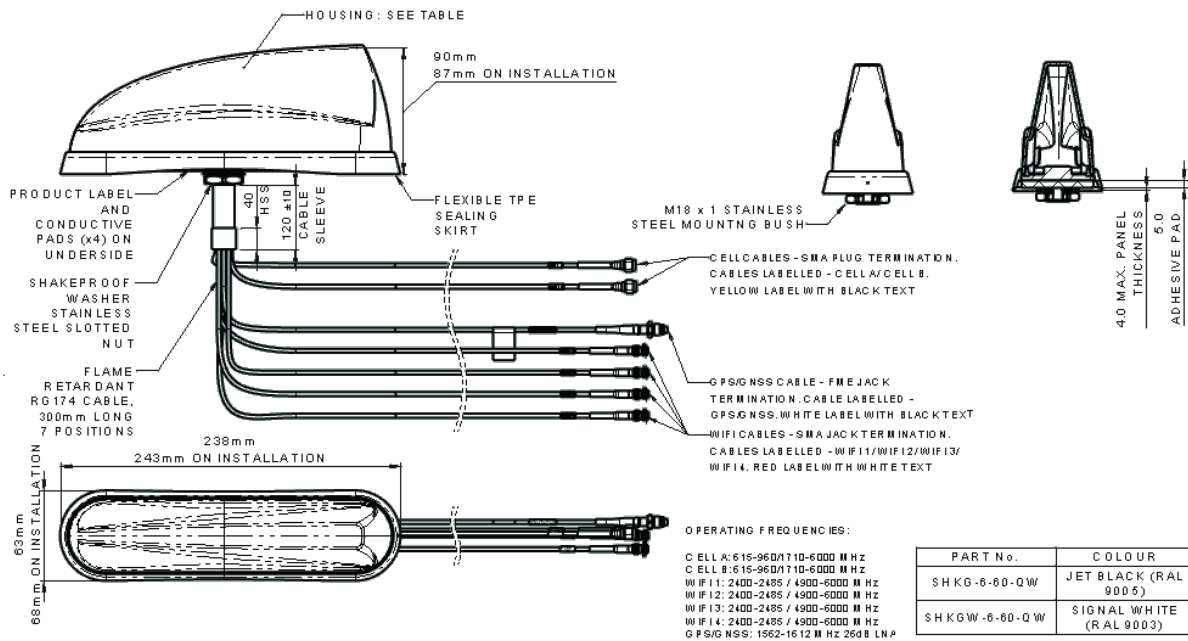
The antenna can be fitted on a metallic or non-metallic panel and still offer similar performance.

The OEM style shark fin housing contains a 2x2 MiMo antenna function for 4G/5G (617-960/1710-6000MHz) and option of 2x2, 3x3 or 4x4 MiMo dual band WiFi, which supports WiFi 6. An active antenna for GPS/GLONASS/Galileo/BeiDou is included, with 26dB gain LNA and advanced filtering for LTE Band 13/14 operation.

The SHKG shark fin style design provides multiple antenna functions while remaining discreet and is suitable for public safety (overt/covert), industrial and transport applications where a cost effective, efficient and robust antenna is essential. Requiring only a single hole mounting, the SHKG reduces vehicle damage, installation time & cost and visual impact whilst protecting a vehicle's resale value.

Technical Drawing

SHKG-6-60-QW Shown



4G/5G Sharkfin MiMo Antenna

SHKG[W]-6-60[-VAR]

Product Data

| Part No. | | SHKG[W]-6-60-QW | SHKG[W]-6-60-TW | SHKG[W]-6-60-DW | SHKG[W]-6-60 |
|------------------------------------|--|--|---------------------|--------------------|--------------|
| Electrical Data | | | | | |
| Frequency Range (MHz) | Element 1 | 1562-1612 | | | |
| | Elements 2 & 3 | 2x 617-960, 1710-6000 | | | |
| | Elements 4, 5 6 & 7 | 4 x 2.4/5.0/7.1GHz | 3 x 2.4/5.0/7.1GHz | 2 x 2.4/5.0/7.1GHz | - |
| Peak gain: Isotropic* | Elements 2 & 3 | | 5dBi (617-960MHz) | | |
| | Elements 2 & 3 | | 8dBi (1710-3800MHz) | | |
| | Elements 2 & 3 | | 9dBi (4900-6000MHz) | | |
| Isolation** | 4G/5G | >12dB | | | |
| | WiFi | > 15dB | > 15dB | > 15dB | - |
| Typical Efficiency* w/o Cable Loss | Elements 2 & 3 | > 40% (617-698MHz) >60% (698-960/1710-6000MHz) | | | |
| Correlation Co-efficient | Elements 2 & 3 | <0.2 | | | |
| Polarisation | Vertical | | | | |
| Pattern | Omni-directional | | | | |
| Impedance | 50Ω | | | | |
| Max Input Power (W) | 10 | | | | |
| GPS/GNSS Data | | | | | |
| Frequency Range (MHz) | 1562-1612 | | | | |
| VSWR | <2:1 | | | | |
| Gain: LNA | 26dB | | | | |
| Polarisation | Right Hand Circular | | | | |
| Out of Band Rejection | >40dB (+/- 100MHz f) Notch Filter @787MHz - 23dB | | | | |
| Operating Voltage | 3-5V DC (fed via coax) | | | | |
| Current | <20mA | | | | |
| Mechanical Data | | | | | |
| Dimensions (mm) - Installed | Total Height | 90 (3.54") | | | |
| | Length | 243 (9.56") | | | |
| | Width | 63 (2.48") | | | |
| Operating Temp (°C) | -40° / +80°C (-40° / 176°F) | | | | |
| Material | ASA, Silicone Rubber, Aluminium Alloy | | | | |
| Colour | Black or White (SHKGW part numbers) | | | | |
| Ingress Protection | IP69K | | | | |
| Mounting Info | | | | | |
| Fixing | Panel Mount | | | | |
| Hole Size (mm) | 19 (3/4") | | | | |
| Cable Data | | | | | |
| Cable Type - All Feeds | FR RG174 (UN ECE R 118 Compliant) | | | | |
| Dimensions (mm) | Diameter | 2.8 (0.11") | | | |
| | Length | 300 mm (12") | | | |
| | GPS/GNSS | FME (f) | | | |
| 4G/5G | 2 x SMA plug | | | | |
| | WiFi | 4x SMA (f) | 3x SMA (f) | 2x SMA (f) | - |

*Peak gain and efficiency simulated in CST Microwave Studio on 600x600mm (2'x2') ground plane and exclude cable loss.

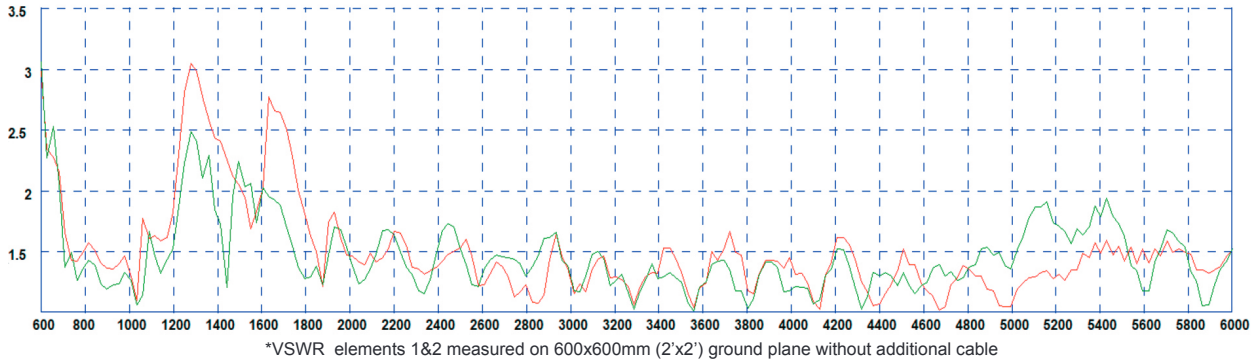
** Isolation measured on a 600x600mm (2'x2') ground plane with 5m (16') of CS32 cable and excludes cable loss.

4G/5G Sharkfin MiMo Antenna

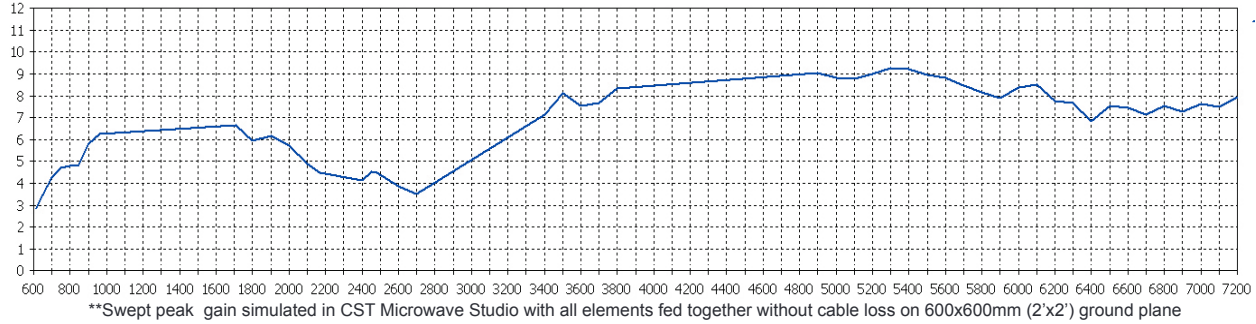
SHKG[W]-6-60[-VAR]

Electrical Data on
Ground Plane - Cell

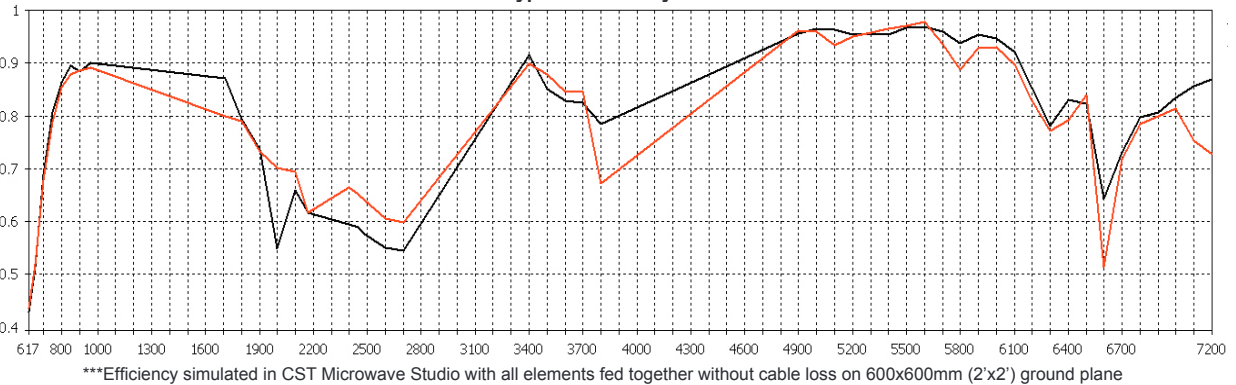
Typical VSWR*



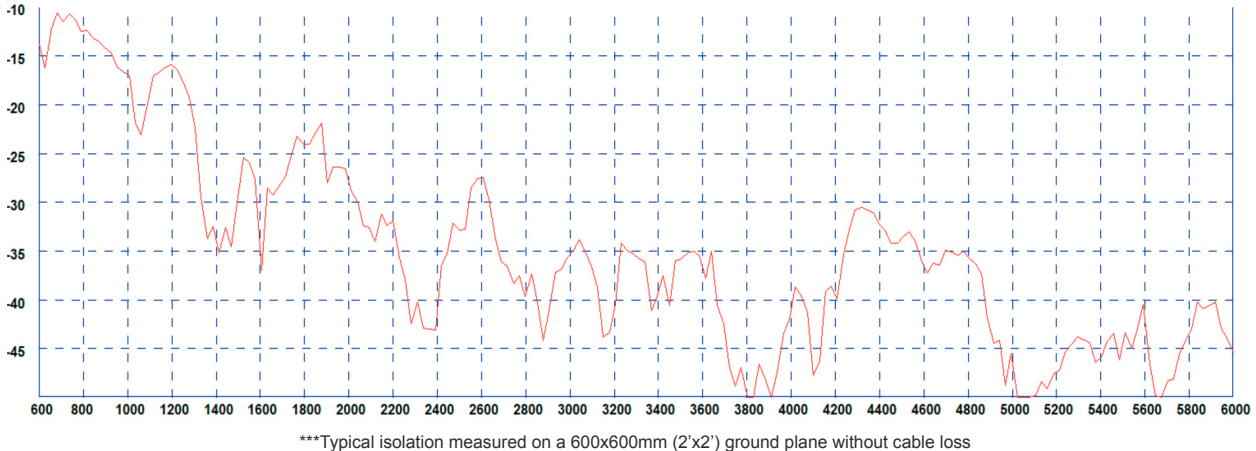
Typical Swept Peak Gain **



Typical Efficiency ***

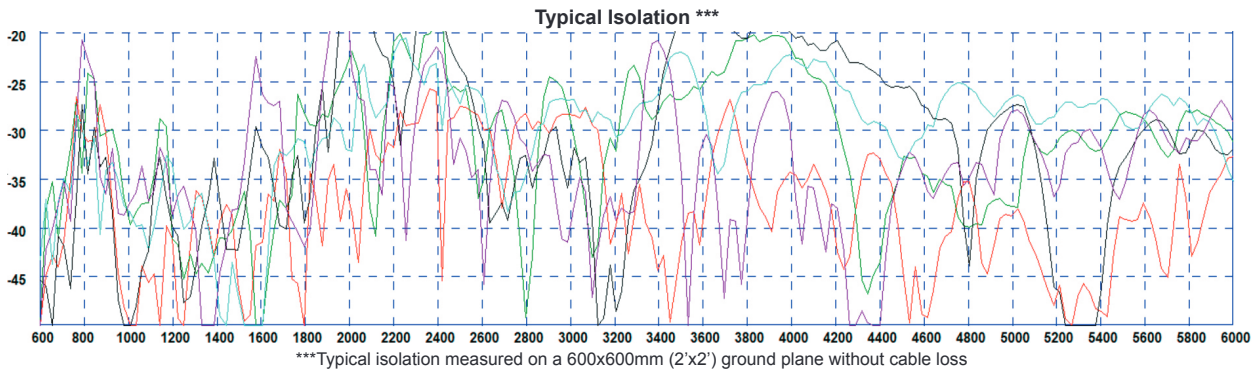
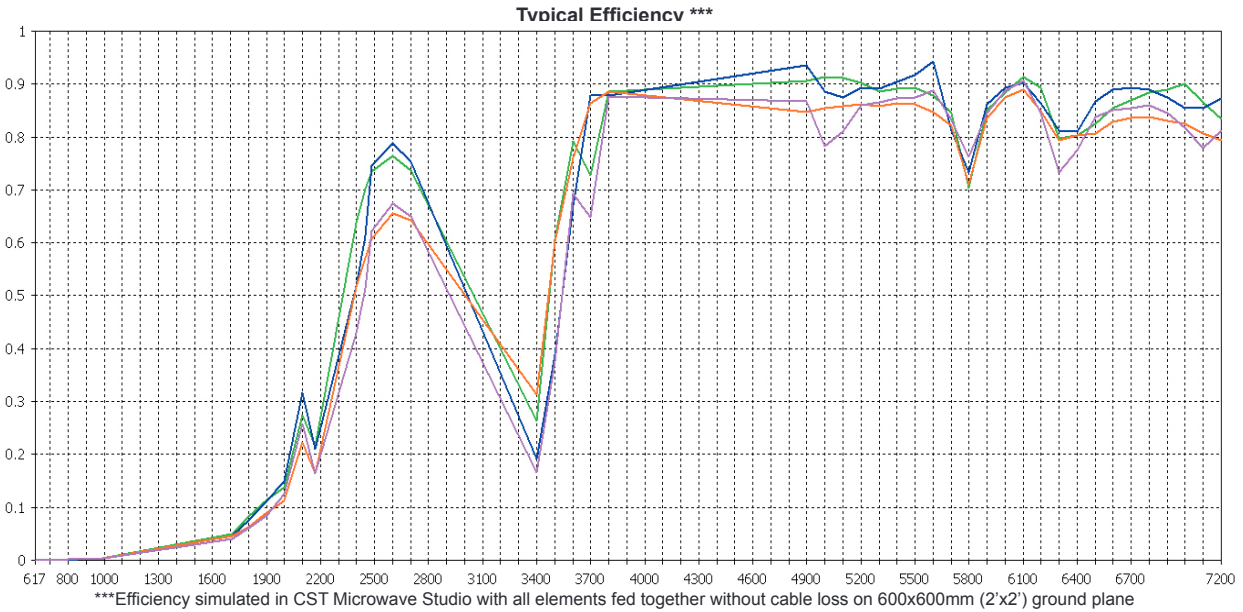
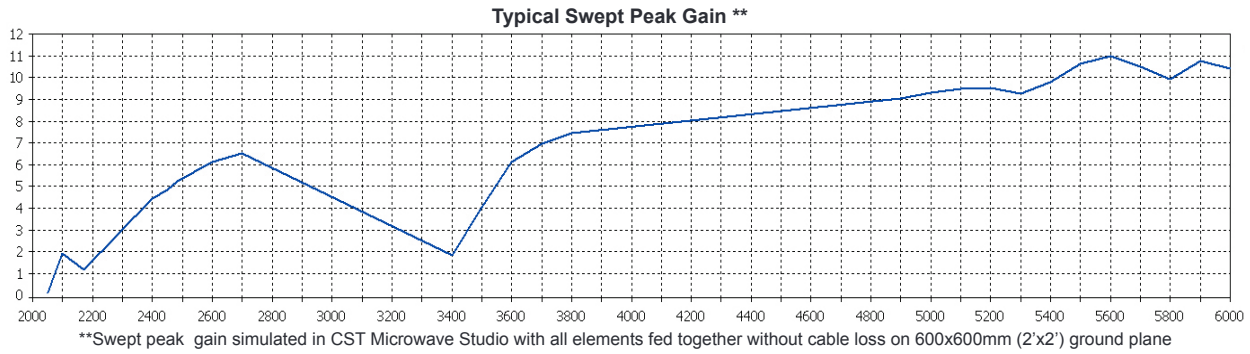
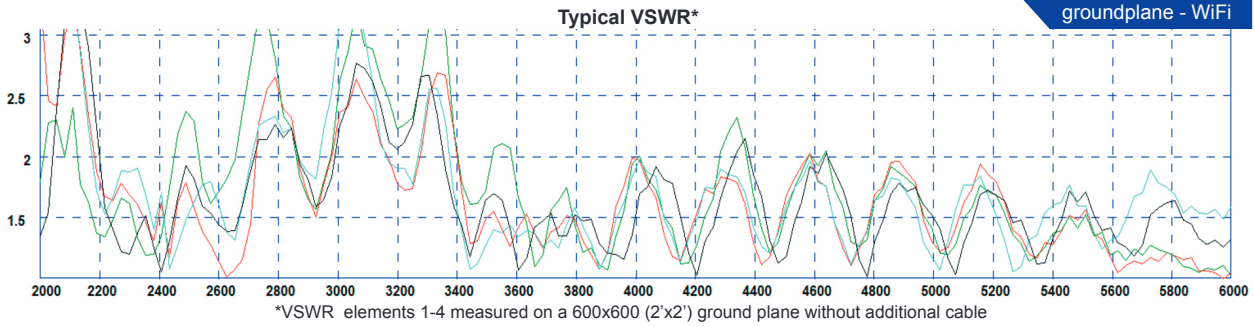


Typical Isolation ***



4G/5G Sharkfin MiMo Antenna SHKG[W]-6-60[-VAR]

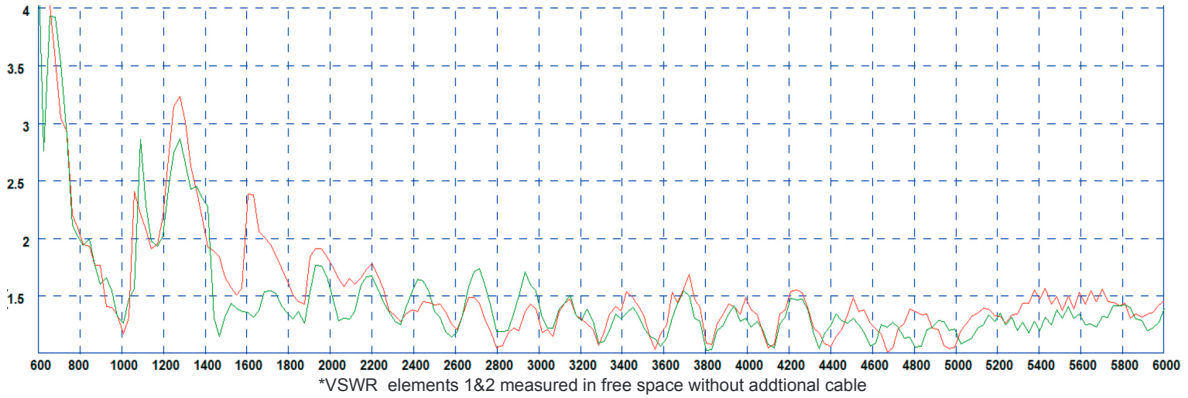
Electrical Data -on
groundplane - WiFi



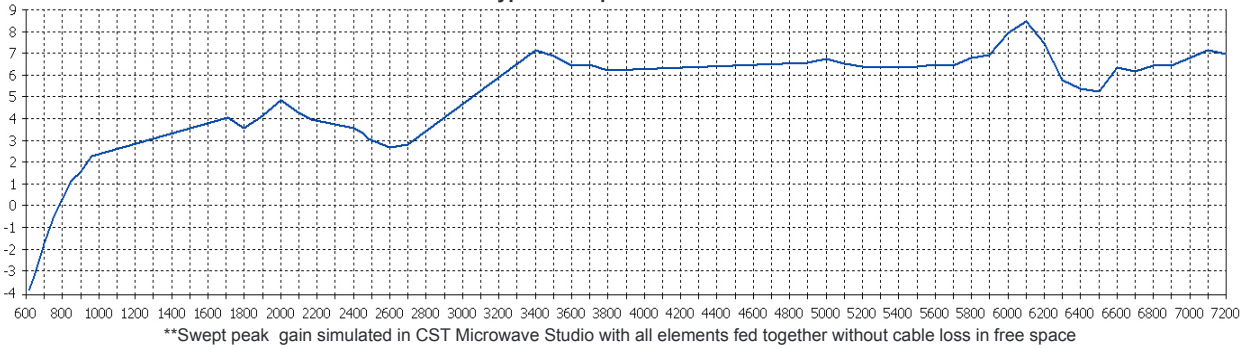
4G/5G Sharkfin MiMo Antenna SHKG[W]-6-60[-VAR]

Electrical Data in
Free Space - Cell

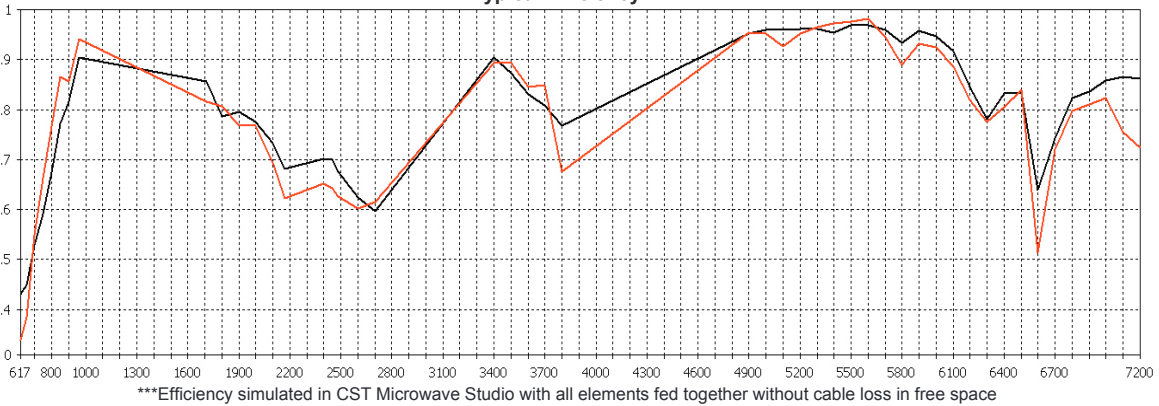
Typical VSWR*



Typical Swept Peak Gain **



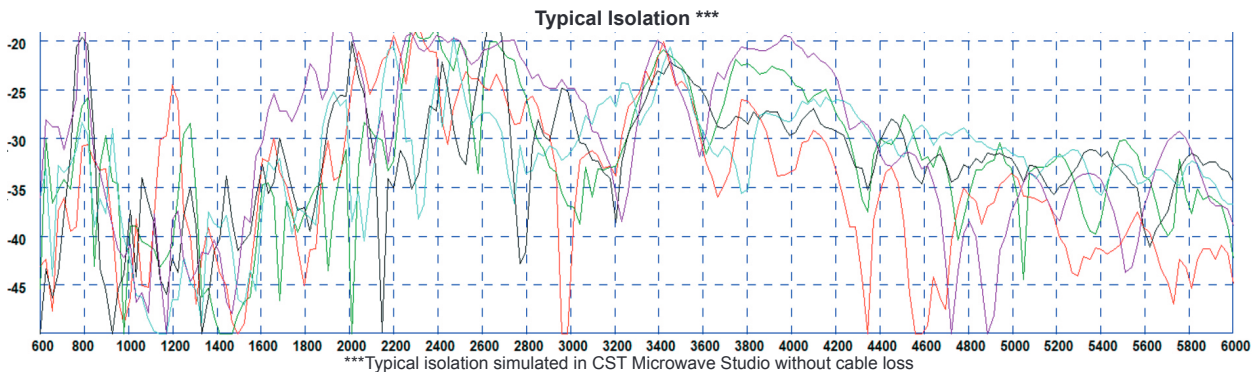
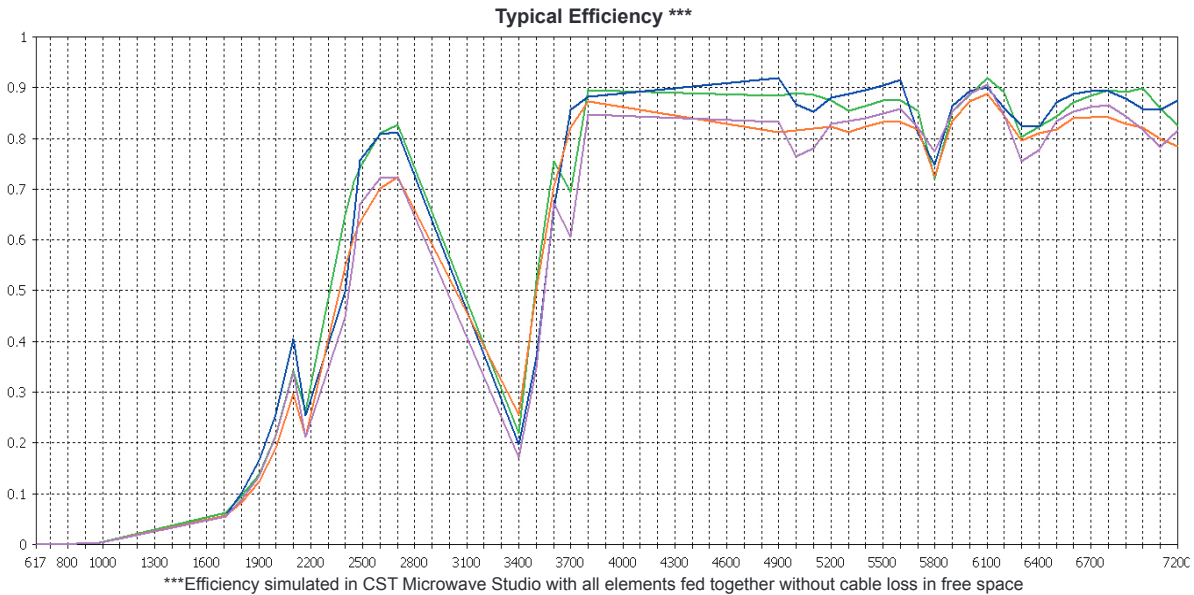
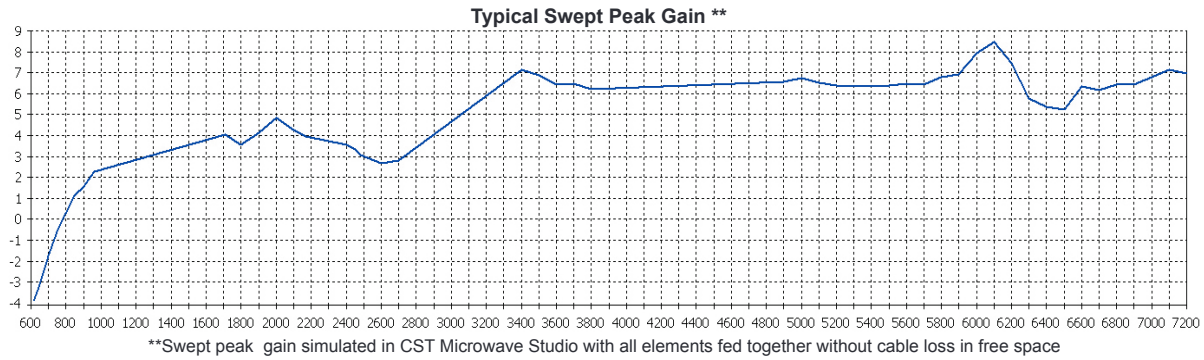
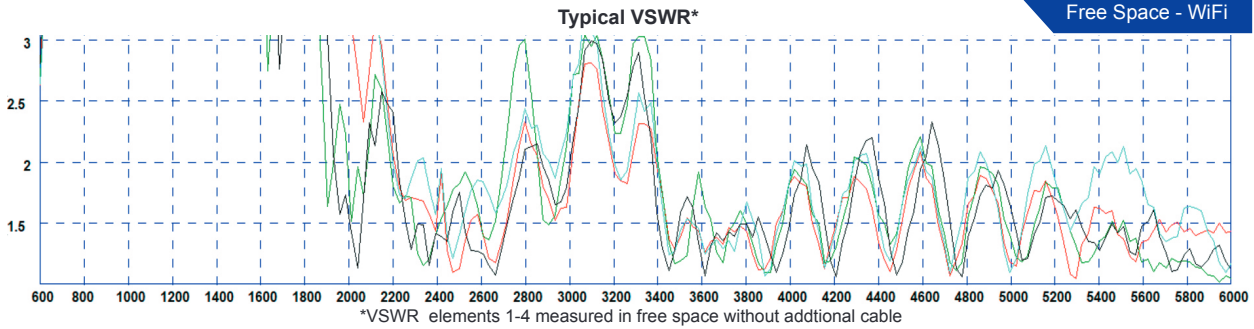
Typical Efficiency ***



Typical Isolation ***

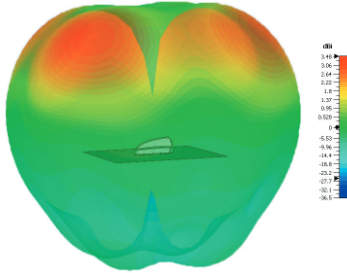


Electrical Data -in
Free Space - WiFi

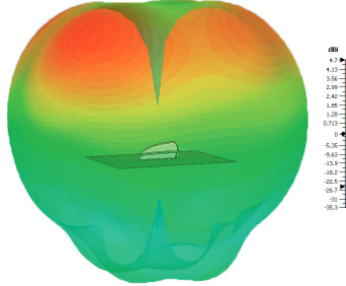


3D Patterns on Ground Plane -Cell

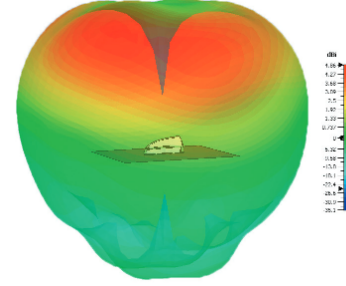
3D Pattern All Elements (650MHz)



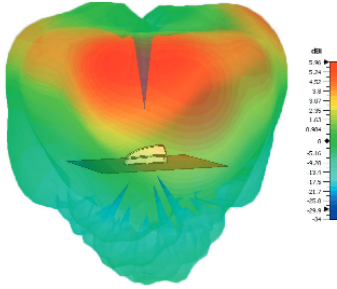
3D Pattern All Elements (750MHz)



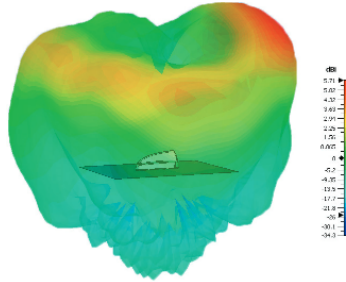
3D Pattern All Elements (850MHz)



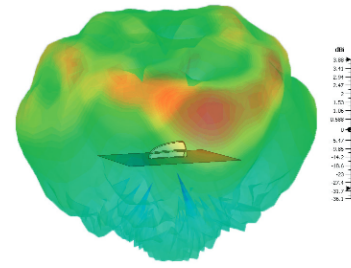
3D Pattern All Elements (1800MHz)



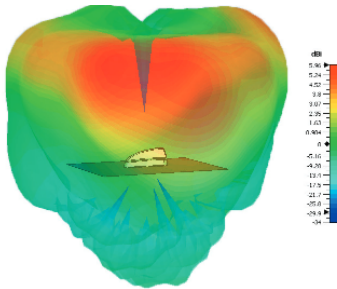
3D Pattern All Elements (2000MHz)



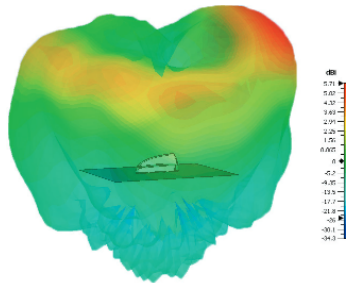
3D Pattern All Elements (2600MHz)



3D Pattern All Elements (3600MHz)

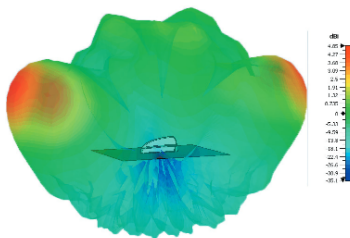


3D Pattern All Elements (5400MHz)

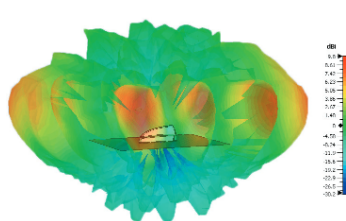


3D Patterns on Ground Plane -WiFi

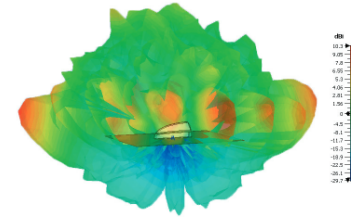
3D Pattern All WiFi Elements (2450MHz)



3D Pattern All WiFi Elements (5400MHz)



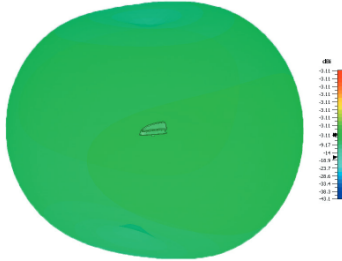
3D Pattern All WiFi Elements (7100MHz)



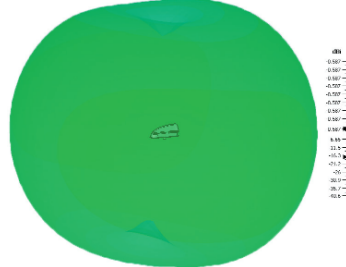
3D patterns all simulated in CST Microwave Studio with all elements of same type fed together excluding cable loss

Electrical Data -in
Free Space - Cell

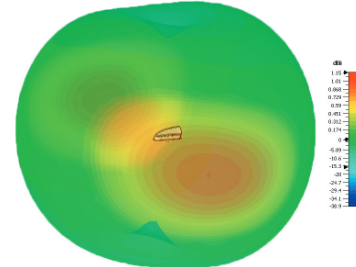
3D Pattern All Elements (650MHz)



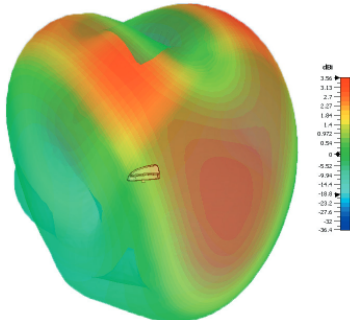
3D Pattern All Elements (750MHz)



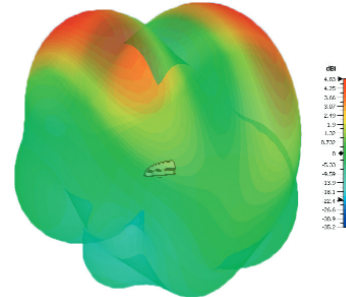
3D Pattern All Elements (850MHz)



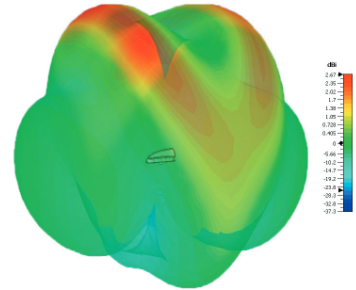
3D Pattern All Elements (1800MHz)



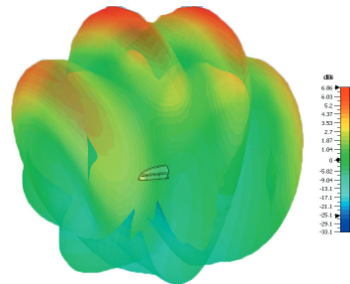
3D Pattern All Elements (2000MHz)



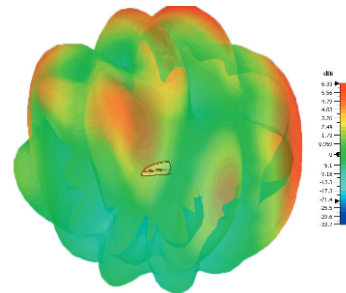
3D Pattern All Elements (2600MHz)



3D Pattern All Elements (3600MHz)

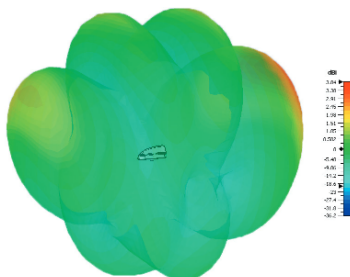


3D Pattern All Elements (5400MHz)

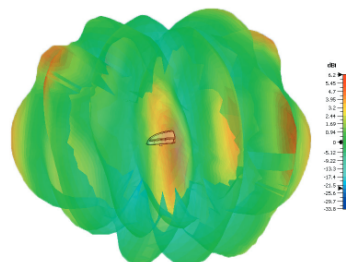


Electrical Data -in
Free Space - WiFi

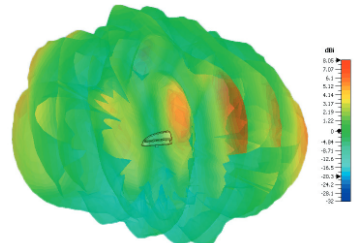
3D Pattern All WiFi Elements (2450MHz)



3D Pattern All WiFi Elements (5400MHz)



3D Pattern All WiFi Elements (7100MHz)



3D patterns all simulated in CST Microwave Studio with all elements of same type fed together excluding cable loss