

## Oscar 1A

5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna



### Key Features

- Supports 5G NR / 4G LTE / 3G UMTS / Quad-band 2G GSM
- Supports LTE Cat M, LTE Cat NB, NR Cat NB bands
- Supports LoRa, Sigfox, IMT 868 MHz, ISM 915 MHz, IEEE 802.15.4
- Improved signal quality with low loss cable
- Housed in a robust ABS casing

### General Description

The Oscar 1A is a high-performance Omnidirectional wall/bracket mount antenna, operating on global 4G and 5G frequencies, with great performance on the ISM 868/915 MHz bands. Ruggedly constructed with black ABS plastic over the radiating element and with a lightweight yet durable aluminium mounting bracket.

The high quality monopole design improves communication reliability for applications like remote sensor monitoring, alarm & security systems and other IoT applications demanding an all weather antenna.

Cables are terminated with either an SMA male or FME female connector type. Alternative cable lengths or connector types may be specified for short run volume orders.

### Additional Considerations

- Bracket provides secure permanent fixing
- Does not require additional placement on metallic surface

|                  |                  |              |              |            |
|------------------|------------------|--------------|--------------|------------|
| O<br>Wall/Pole   | 5G<br>New Radio  | 4G<br>LTE    | 3G<br>UMTS   | 2G<br>GSM  |
| LTE<br>Cat M     | LTE<br>NB IoT    | NR<br>NB IoT | ISM<br>868   | ISM<br>915 |
| IEEE<br>802.15.4 | LoRa<br>Wireless | SF<br>Sigfox | ZB<br>Zigbee | Z<br>Wave  |
| HNT<br>Helium    | W<br>Weightless  |              |              |            |

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### Electrical Specifications

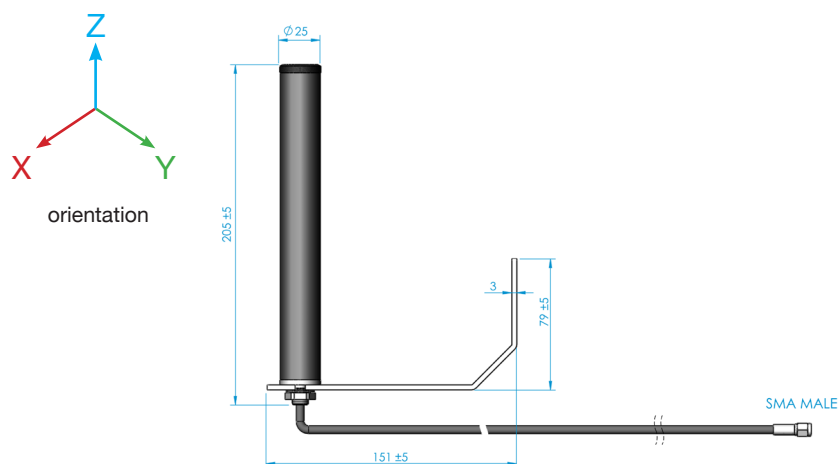
|                           |          |
|---------------------------|----------|
| Impedance:                | 50 Ohm   |
| Polarization:             | Vertical |
| Max Input Power:          | 50 W     |
| Ground plane independent: | Yes      |

### Environmental Specifications

|                              |               |
|------------------------------|---------------|
| Operating Temperature range: | -20 to +80 °C |
| Storage Temperature range:   | -20 to +80 °C |

### Mechanical Specifications

|                    |                                    |
|--------------------|------------------------------------|
| Dimensions:        | 205 mm height x 25 mm diameter     |
| Weight:            | 250 g                              |
| Connector:         | SMA Male                           |
| Cable:             | Low Loss CFD195 4.95 mm diameter   |
| Mounting method:   | L-type Mount                       |
| Housing materials: | ABS (casing), Aluminium (radiator) |

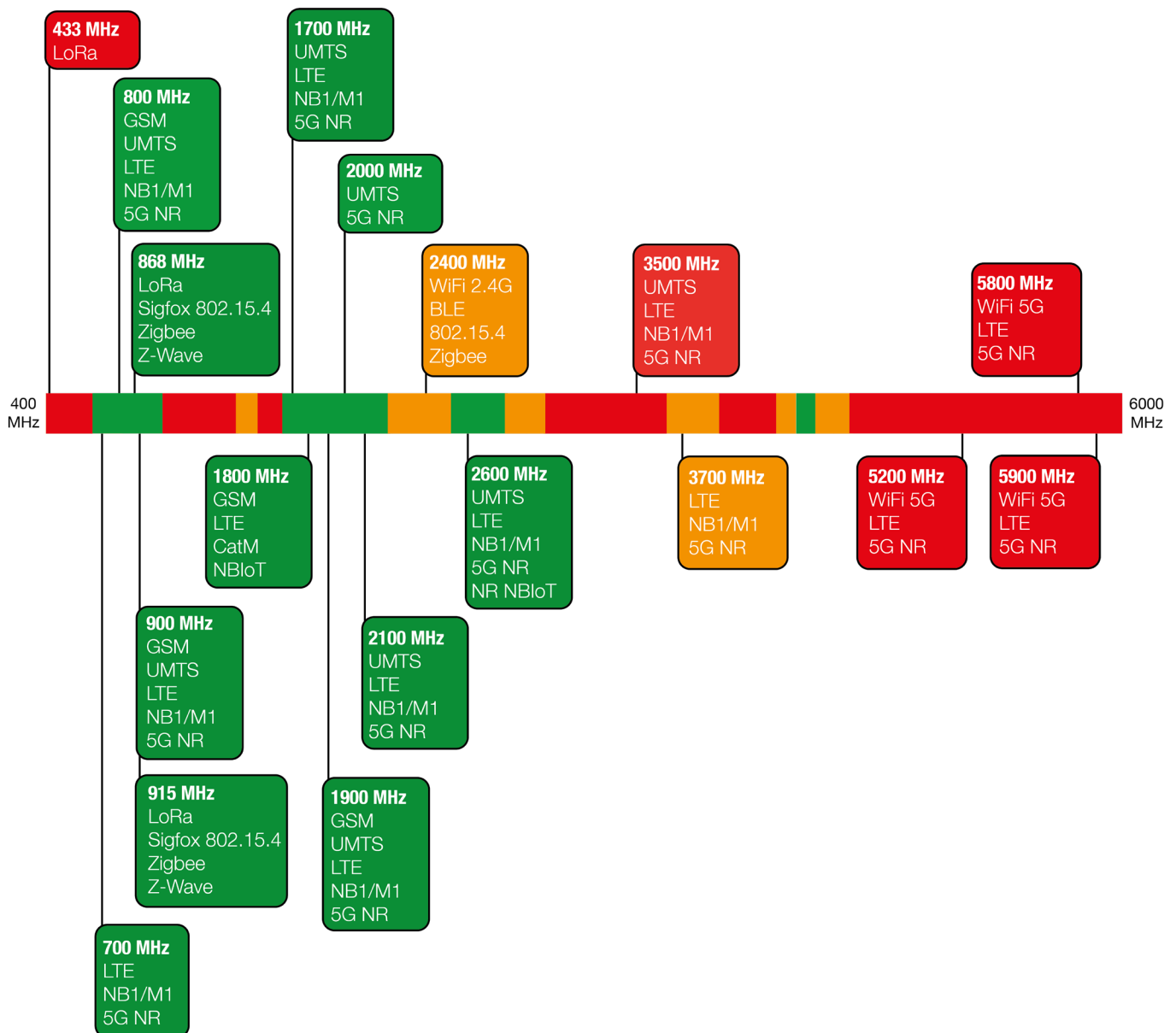




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### Spectrum Coverage



● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



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### Usable Cellular Frequency Support (410 MHz – 1900 MHz)

|                   | 410 | 450 | 600 | 700 | 800 | 850 | 900 | 1500 | 1600 | 1700 | 1800 | 1900 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| GSM Bands:        |     |     |     |     |     | ●   | ●   |      |      |      | ●    | ●    |
| UMTS Bands:       |     |     |     | ●   | ●   | ●   | ●   |      |      | ●    | ●    | ●    |
| LTE Bands:        |     |     |     | ●   | ●   | ●   | ●   | ●    |      | ●    | ●    | ●    |
| LTE Cat M Bands:  |     |     |     | ●   | ●   | ●   | ●   |      |      | ●    | ●    | ●    |
| LTE Cat NB Bands: |     |     |     | ●   | ●   | ●   | ●   |      |      | ●    | ●    | ●    |
| 5G NR Bands:      |     |     |     | ●   | ●   | ●   | ●   | ●    |      | ●    | ●    | ●    |
| NR Cat NB Bands:  |     |     |     | ●   | ●   | ●   | ●   |      |      | ●    | ●    | ●    |

### Usable Cellular Frequency Support (2000 MHz – 5900 MHz)

|                   | 2000 | 2100 | 2300 | 2400 | 2500 | 2600 | 3300 | 3500 | 3700 | 4700 | 5200 | 5900 |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| GSM Bands:        |      |      |      |      |      |      |      |      |      |      |      |      |
| UMTS Bands:       |      | ●    |      |      |      | ●    |      |      |      |      |      |      |
| LTE Bands:        | ●    | ●    |      |      | ●    | ●    |      |      |      |      |      |      |
| LTE Cat M Bands:  |      | ●    |      |      | ●    | ●    |      |      |      |      |      |      |
| LTE Cat NB Bands: |      | ●    |      |      | ●    | ●    |      |      |      |      |      |      |
| 5G NR Bands:      | ●    | ●    |      |      | ●    | ●    |      |      |      |      |      |      |
| NR Cat NB Bands:  |      | ●    |      |      | ●    | ●    |      |      |      |      |      |      |

### Usable ISM Frequency Support (433 MHz - 5800 MHz)

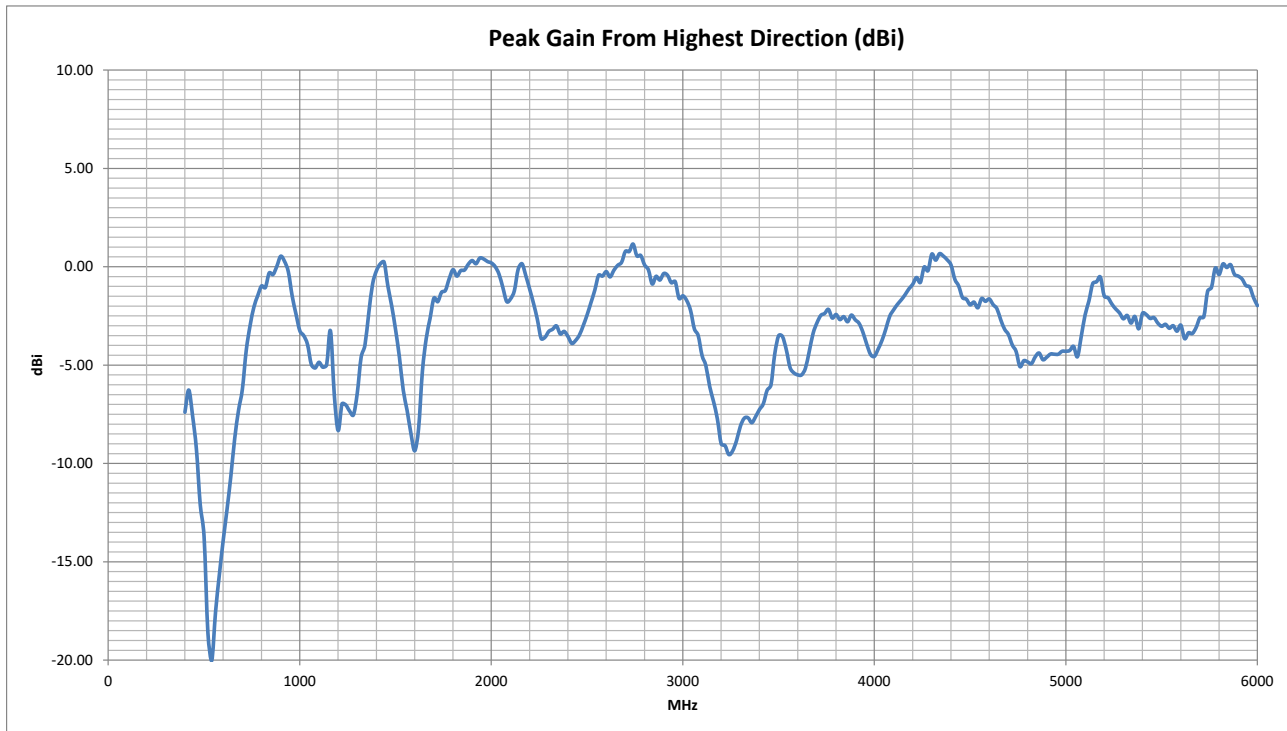
|               | 433 | 868 | 915 | 2450 | 5800 |
|---------------|-----|-----|-----|------|------|
| Bluetooth     |     |     |     |      |      |
| IEEE 802.15.4 |     | ●   | ●   |      |      |
| LoRa          |     | ●   | ●   |      |      |
| Sigfox        |     | ●   | ●   |      |      |
| WiFi 2.4G     |     |     |     |      |      |
| WiFi 5G       |     |     |     |      |      |
| Zigbee        |     | ●   | ●   |      |      |
| Z-Wave        |     | ●   | ●   |      |      |



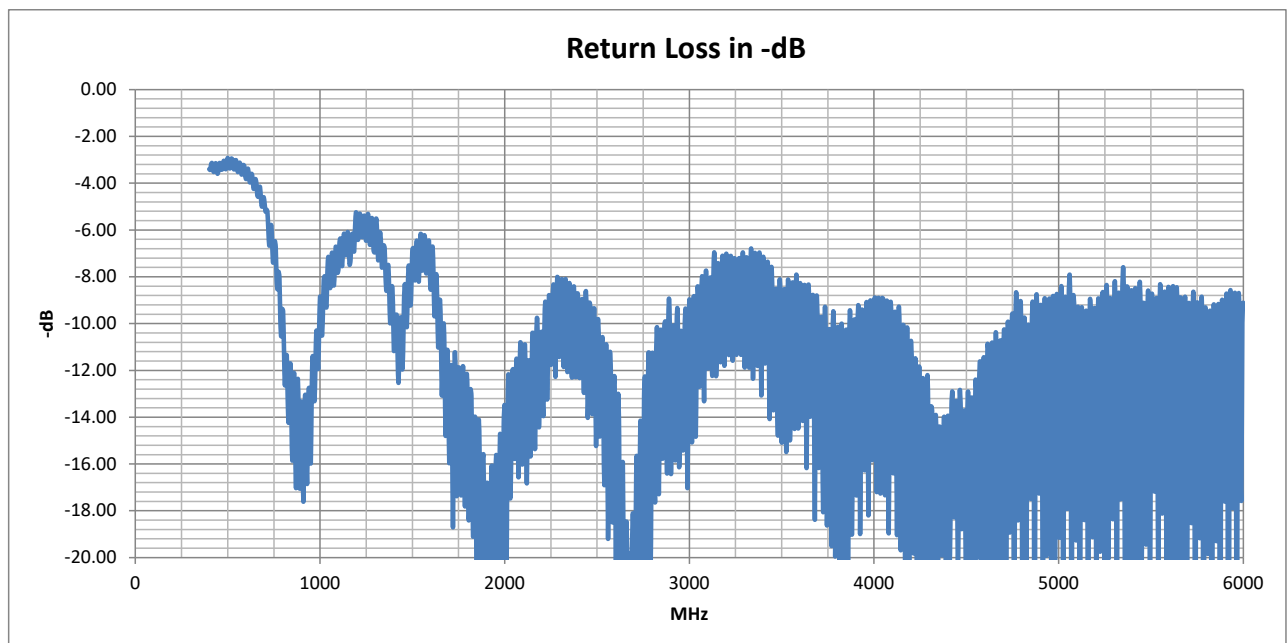
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### Peak Gain vs. Frequency



### Return Loss

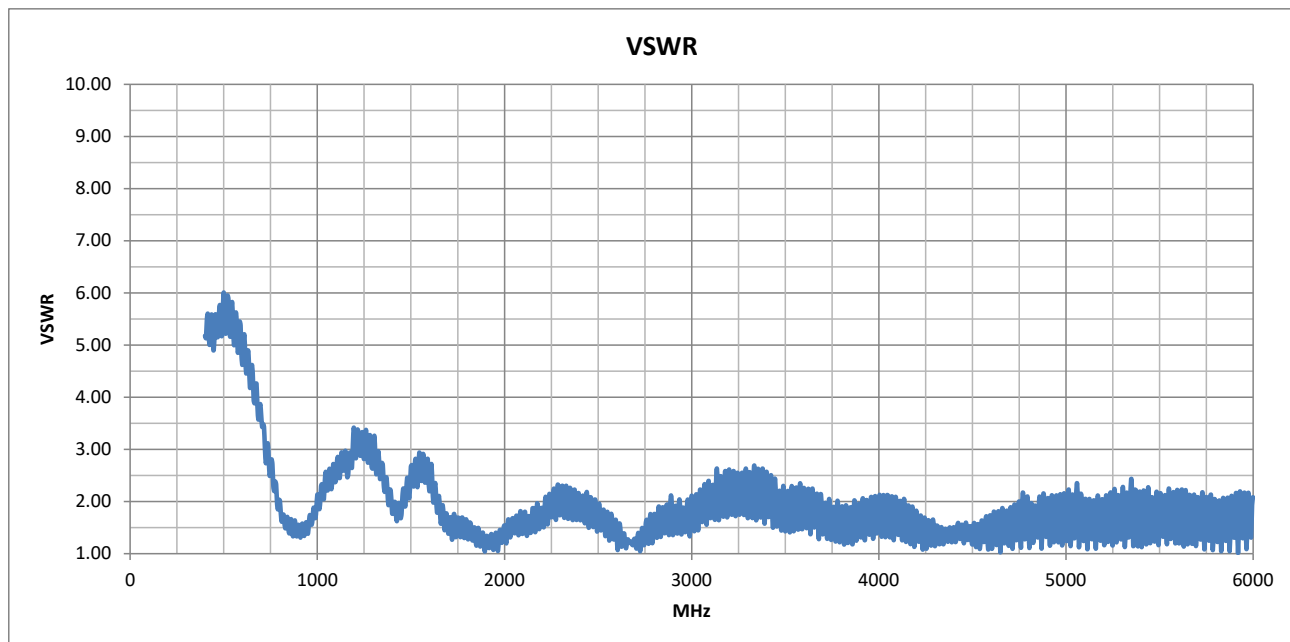




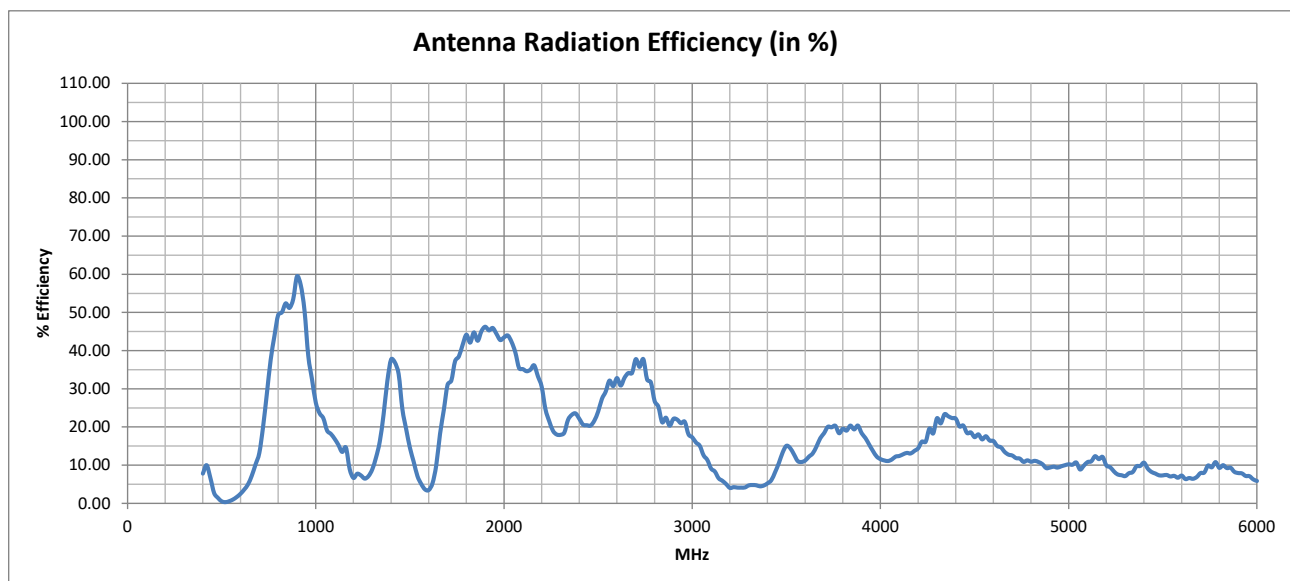
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### VSWR



### Radiation Efficiency





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### Cellular Standards Band Support

| GSM (2G) Band | UMTS (3G) Band | E-UTRA (4G) Band | Cat M E-UTRA Band | Cat NB E-UTRA Band | NR (5G) Band | Cat NB NR (5G) Band | Uplink              | Downlink            | Average Upload Efficiency (%) | Average Download Efficiency (%) | Maximum Upload VSWR | Maximum Download VSWR | Use Indicator |
|---------------|----------------|------------------|-------------------|--------------------|--------------|---------------------|---------------------|---------------------|-------------------------------|---------------------------------|---------------------|-----------------------|---------------|
|               | 1              | 1                | 1                 | 1                  | n1           | n1                  | 1920 - 1980 MHz     | 2110 - 2170 MHz     | 44.77                         | 35.15                           | 1.45                | 1.86                  | ●             |
| PCS-1900      | 2              | 2                | 2                 | 2                  | n2           | n2                  | 1850 - 1910 MHz     | 1930 - 1990 MHz     | 44.68                         | 44.35                           | 1.49                | 1.45                  | ●             |
| DCS-1800      | 3              | 3                | 3                 | 3                  | n3           | n3                  | 1710 - 1785 MHz     | 1805 - 1880 MHz     | 37.04                         | 43.48                           | 1.76                | 1.59                  | ●             |
|               | 4              | 4                | 4                 | 4                  |              |                     | 1710 - 1755 MHz     | 2110 - 2155 MHz     | 35.06                         | 34.99                           | 1.76                | 1.86                  | ●             |
| GSM-850       | 5              | 5                | 5                 | 5                  | n5           | n5                  | 824 - 849 MHz       | 869 - 894 MHz       | 51.66                         | 54.35                           | 1.70                | 1.63                  | ●             |
|               | 6              |                  |                   |                    |              |                     | 830 - 840 MHz       | 875 - 885 MHz       | 51.77                         | 53.69                           | 1.70                | 1.63                  | ●             |
|               | 7              | 7                | 7                 | 7                  | n7           | n7                  | 2500 - 2570 MHz     | 2620 - 2690 MHz     | 28.73                         | 33.43                           | 1.96                | 1.44                  | ●             |
| E-GSM-900     | 8              | 8                | 8                 | 8                  | n8           | n8                  | 880 - 915 MHz       | 925 - 960 MHz       | 57.35                         | 48.16                           | 1.63                | 1.74                  | ●             |
|               | 9              | 9                |                   |                    |              |                     | 1749.9 - 1784.9 MHz | 1844.9 - 1879.9 MHz | 39.71                         | 43.64                           | 1.69                | 1.49                  | ●             |
|               | 10             | 10               |                   |                    |              |                     | 1710 - 1770 MHz     | 2110 - 2170 MHz     | 36.03                         | 35.15                           | 1.76                | 1.86                  | ●             |
|               | 11             | 11               | 11                | 11                 |              |                     | 1427.9 - 1447.9 MHz | 1475.9 - 1495.9 MHz | 33.71                         | 18.01                           | 1.97                | 2.45                  | ●             |
|               | 12             | 12               | 12                | 12                 | n12          | n12                 | 699 - 716 MHz       | 729 - 746 MHz       | 15.80                         | 27.64                           | 3.69                | 3.11                  | ●             |
|               | 13             | 13               | 13                | 13                 | n13          | n13                 | 777 - 787 MHz       | 746 - 756 MHz       | 44.29                         | 33.54                           | 2.36                | 2.81                  | ●             |
|               | 14             | 14               | 14                | 14                 | n14          |                     | 788 - 798 MHz       | 758 - 768 MHz       | 47.37                         | 38.41                           | 2.03                | 2.75                  | ●             |
|               |                | 17               |                   | 17                 |              |                     | 704 - 716 MHz       | 734 - 746 MHz       | 16.65                         | 28.72                           | 3.48                | 3.11                  | ●             |
|               |                | 18               | 18                | 18                 | n18          | n18                 | 815 - 830 MHz       | 860 - 875 MHz       | 50.37                         | 52.03                           | 1.74                | 1.66                  | ●             |
|               | 19             | 19               | 19                | 19                 |              |                     | 830 - 845 MHz       | 875 - 890 MHz       | 51.92                         | 54.36                           | 1.70                | 1.63                  | ●             |
|               | 20             | 20               | 20                | 20                 | n20          | n20                 | 832 - 862 MHz       | 791 - 821 MHz       | 51.76                         | 49.19                           | 1.70                | 2.03                  | ●             |
|               | 21             | 21               | 21                | 21                 |              |                     | 1447.9 - 1462.9 MHz | 1495.9 - 1510.9 MHz | 26.84                         | 13.97                           | 2.25                | 2.69                  | ●             |
|               | 22             | 22               |                   |                    |              |                     | 3410 - 3490 MHz     | 3510 - 3590 MHz     | 9.55                          | 12.35                           | 2.49                | 2.35                  | ●             |
|               |                | 24               | 24                | 24                 | n24          |                     | 1626.5 - 1660.5 MHz | 1525 - 1559 MHz     | 11.91                         | 7.22                            | 2.35                | 2.94                  | ●             |
|               | 25             | 25               | 25                | 25                 | n25          | n25                 | 1850 - 1915 MHz     | 1930 - 1995 MHz     | 44.75                         | 44.26                           | 1.49                | 1.48                  | ●             |
|               | 26             | 26               | 26                | 26                 | n26          |                     | 814 - 849 MHz       | 859 - 894 MHz       | 51.20                         | 53.58                           | 1.74                | 1.66                  | ●             |
|               |                | 27               | 27                |                    |              |                     | 807 - 824 MHz       | 852 - 869 MHz       | 49.89                         | 51.56                           | 1.74                | 1.66                  | ●             |
|               |                | 28               | 28                | 28                 | n28          | n28                 | 703 - 748 MHz       | 758 - 803 MHz       | 22.75                         | 43.67                           | 3.52                | 2.75                  | ●             |

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



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### Cellular Standards Band Support

| GSM (2G) Band | UMTS (3G) Band | E-UTRA (4G) Band | Cat M E-UTRA Band | Cat NB E-UTRA Band | NR (5G) Band | Cat NB NR (5G) Band | Uplink            | Downlink          | Average Upload Efficiency (%) | Average Download Efficiency (%) | Maximum Upload VSWR | Maximum Download VSWR | Use Indicator |
|---------------|----------------|------------------|-------------------|--------------------|--------------|---------------------|-------------------|-------------------|-------------------------------|---------------------------------|---------------------|-----------------------|---------------|
|               |                | 28A              |                   |                    |              |                     | 703 - 733 MHz     | 758 - 788 MHz     | 19.65                         | 41.52                           | 3.52                | 2.75                  | ●             |
|               |                | 29               |                   |                    | n29          |                     | N/A               | 717 - 728 MHz     | N/A                           | 21.20                           | N/A                 | 3.27                  | ●             |
|               |                | 30               |                   |                    | n30          |                     | 2305 - 2315 MHz   | 2350 - 2360 MHz   | 18.22                         | 22.85                           | 2.29                | 2.25                  | ●             |
|               |                | 31               | 31                | 31                 |              |                     | 452.5 - 457.5 MHz | 462.5 - 467.5 MHz | 3.67                          | 2.37                            | 5.58                | 5.36                  | ●             |
|               | 32             | 32               |                   |                    |              |                     | N/A               | 1452 - 1496 MHz   | N/A                           | 21.21                           | N/A                 | 2.45                  | ●             |
|               |                | 33               |                   |                    |              |                     | 1900 - 1920 MHz   | 1900 - 1920 MHz   | 45.76                         | 45.76                           | 1.34                | 1.34                  | ●             |
|               |                | 34               |                   |                    | n34          |                     | 2010 - 2025 MHz   | 2010 - 2025 MHz   | 43.80                         | 43.80                           | 1.65                | 1.65                  | ●             |
|               |                | 35               |                   |                    |              |                     | 1850 - 1910 MHz   | 1850 - 1910 MHz   | 44.68                         | 44.68                           | 1.49                | 1.49                  | ●             |
|               |                | 36               |                   |                    |              |                     | 1930 - 1990 MHz   | 1930 - 1990 MHz   | 44.35                         | 44.35                           | 1.45                | 1.45                  | ●             |
|               |                | 37               |                   |                    |              |                     | 1910 - 1930 MHz   | 1910 - 1930 MHz   | 45.49                         | 45.49                           | 1.37                | 1.37                  | ●             |
|               |                | 38               |                   |                    | n38          |                     | 2570 - 2620 MHz   | 2570 - 2620 MHz   | 31.64                         | 31.64                           | 1.76                | 1.76                  | ●             |
|               |                | 39               | 39                |                    | n39          |                     | 1880 - 1920 MHz   | 1880 - 1920 MHz   | 45.71                         | 45.71                           | 1.40                | 1.40                  | ●             |
|               |                | 40               | 40                |                    | n40          |                     | 2300 - 2400 MHz   | 2300 - 2400 MHz   | 21.43                         | 21.43                           | 2.30                | 2.30                  | ●             |
|               |                | 41               | 41                | 41                 | n41          | n41                 | 2496 - 2690 MHz   | 2496 - 2690 MHz   | 31.07                         | 31.07                           | 1.96                | 1.96                  | ●             |
|               |                | 42               | 42                | 42                 |              |                     | 3400 - 3600 MHz   | 3400 - 3600 MHz   | 11.06                         | 11.06                           | 2.56                | 2.56                  | ●             |
|               |                | 43               | 43                | 43                 |              |                     | 3600 - 3800 MHz   | 3600 - 3800 MHz   | 16.97                         | 16.97                           | 2.25                | 2.25                  | ●             |
|               |                | 44               |                   |                    |              |                     | 703 - 803 MHz     | 703 - 803 MHz     | 33.33                         | 33.33                           | 3.52                | 3.52                  | ●             |
|               |                | 45               |                   |                    |              |                     | 1447 - 1467 MHz   | 1447 - 1467 MHz   | 26.29                         | 26.29                           | 2.25                | 2.25                  | ●             |
|               |                | 46               |                   |                    | n46          |                     | 5150 - 5925 MHz   | 5150 - 5925 MHz   | 8.46                          | 8.46                            | 2.43                | 2.43                  | ●             |
|               |                | 47               |                   |                    | n47          |                     | 5855 - 5925 MHz   | 5855 - 5925 MHz   | 8.31                          | 8.31                            | 2.16                | 2.16                  | ●             |
|               |                | 48               |                   |                    | n48          |                     | 3550 - 3700 MHz   | 3550 - 3700 MHz   | 13.31                         | 13.31                           | 2.35                | 2.35                  | ●             |
|               |                | 49               |                   |                    |              |                     | 3550 - 3700 MHz   | 3550 - 3700 MHz   | 13.31                         | 13.31                           | 2.35                | 2.35                  | ●             |
|               |                | 50               |                   |                    | n50          |                     | 1432 - 1517 MHz   | 1432 - 1517 MHz   | 21.93                         | 21.93                           | 2.69                | 2.69                  | ●             |
|               |                | 51               |                   |                    | n51          |                     | 1427 - 1432 MHz   | 1427 - 1432 MHz   | 35.47                         | 35.47                           | 1.86                | 1.86                  | ●             |
|               |                | 52               |                   |                    |              |                     | 3300 - 3400 MHz   | 3300 - 3400 MHz   | 4.74                          | 4.74                            | 2.69                | 2.69                  | ●             |

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable



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### Cellular Standards Band Support

| GSM (2G) Band | UMTS (3G) Band | E-UTRA (4G) Band | Cat M E-UTRA Band | Cat NB E-UTRA Band | NR (5G) Band | Cat NB NR (5G) Band | Uplink            | Downlink          | Average Upload Efficiency (%) | Average Download Efficiency (%) | Maximum Upload VSWR | Maximum Download VSWR | Use Indicator |
|---------------|----------------|------------------|-------------------|--------------------|--------------|---------------------|-------------------|-------------------|-------------------------------|---------------------------------|---------------------|-----------------------|---------------|
|               |                | 53               |                   |                    | n53          |                     | 2483.5 - 2495 MHz | 2483.5 - 2495 MHz | 22.77                         | 22.77                           | 2.03                | 2.03                  | ●             |
|               |                | 65               |                   | 65                 | n65          | n65                 | 1920 - 2010 MHz   | 2110 - 2200 MHz   | 44.27                         | 34.30                           | 1.54                | 1.96                  | ●             |
|               |                | 66               | 66                | 66                 | n66          | n66                 | 1710 - 1780 MHz   | 2110 - 2200 MHz   | 36.70                         | 34.30                           | 1.76                | 1.96                  | ●             |
|               |                | 67               |                   |                    | n67          |                     | N/A               | 738 - 758 MHz     | N/A                           | 32.22                           | N/A                 | 2.96                  | ●             |
|               |                | 68               |                   |                    |              |                     | 698 - 728 MHz     | 753 - 783 MHz     | 17.79                         | 39.89                           | 3.74                | 2.81                  | ●             |
|               |                | 69               |                   |                    |              |                     | N/A               | 2570 - 2620 MHz   | N/A                           | 31.64                           | N/A                 | 1.76                  | ●             |
|               |                | 70               |                   | 70                 | n70          | n70                 | 1695 - 1710 MHz   | 1995 - 2020 MHz   | 30.95                         | 43.63                           | 1.70                | 1.65                  | ●             |
|               |                | 71               | 71                | 71                 | n71          |                     | 663 - 698 MHz     | 617 - 652 MHz     | 10.30                         | 4.72                            | 4.26                | 4.90                  | ●             |
|               |                | 72               | 72                | 72                 |              |                     | 451 - 456 MHz     | 461 - 466 MHz     | 3.97                          | 2.46                            | 5.58                | 5.48                  | ●             |
|               |                | 73               | 73                | 73                 |              |                     | 450 - 455 MHz     | 460 - 465 MHz     | 4.17                          | 2.52                            | 5.58                | 5.56                  | ●             |
|               |                | 74               | 74                | 74                 | n74          |                     | 1427 - 1470 MHz   | 1475 - 1518 MHz   | 29.59                         | 15.65                           | 2.25                | 2.69                  | ●             |
|               |                | 75               |                   |                    | n75          |                     | N/A               | 1432 - 1517 MHz   | N/A                           | 21.93                           | N/A                 | 2.69                  | ●             |
|               |                | 76               |                   |                    | n76          |                     | N/A               | 1427 - 1432 MHz   | N/A                           | 35.47                           | N/A                 | 1.86                  | ●             |
|               |                |                  |                   |                    | n77          |                     | 3300 - 4200 MHz   | 3300 - 4200 MHz   | 13.33                         | 13.33                           | 2.69                | 2.69                  | ●             |
|               |                |                  |                   |                    | n78          |                     | 3300 - 3800 MHz   | 3300 - 3800 MHz   | 12.16                         | 12.16                           | 2.69                | 2.69                  | ●             |
|               |                |                  |                   |                    | n79          |                     | 4400 - 5000 MHz   | 4400 - 5000 MHz   | 13.70                         | 13.70                           | 2.17                | 2.17                  | ●             |
|               |                |                  |                   |                    | n80          |                     | 1710 - 1785 MHz   | N/A               | 37.04                         | N/A                             | 1.76                | N/A                   | ●             |
|               |                |                  |                   |                    | n81          |                     | 880 - 915 MHz     | N/A               | 57.35                         | N/A                             | 1.63                | N/A                   | ●             |
|               |                |                  |                   |                    | n82          |                     | 832 - 862 MHz     | N/A               | 51.76                         | N/A                             | 1.70                | N/A                   | ●             |
|               |                |                  |                   |                    | n83          |                     | 703 - 748 MHz     | N/A               | 22.75                         | N/A                             | 3.52                | N/A                   | ●             |
|               |                |                  |                   |                    | n84          |                     | 1920 - 1980 MHz   | N/A               | 44.77                         | N/A                             | 1.45                | N/A                   | ●             |
|               |                | 85               | 85                | 85                 | n85          |                     | 698 - 716 MHz     | 728 - 746 MHz     | 15.64                         | 27.42                           | 3.74                | 3.11                  | ●             |
|               |                |                  |                   |                    | n86          |                     | 1710 - 1780 MHz   | N/A               | 36.70                         | N/A                             | 1.76                | N/A                   | ●             |
|               |                | 87               | 87                | 87                 |              |                     | 410 - 415 MHz     | 420 - 425 MHz     | 9.17                          | 9.58                            | 5.59                | 5.15                  | ●             |
|               |                | 88               | 88                | 88                 |              |                     | 412 - 417 MHz     | 422 - 427 MHz     | 9.39                          | 9.25                            | 5.59                | 5.13                  | ●             |

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|---------------|----------------|------------------|-------------------|--------------------|--------------|---------------------|---------------------|-----------------|-------------------------------|---------------------------------|---------------------|-----------------------|---------------|
|               |                |                  |                   |                    | n89          |                     | 824 - 849 MHz       | N/A             | 51.66                         | N/A                             | 1.70                | N/A                   | ●             |
|               |                |                  |                   |                    | n90          | n90                 | 2496 - 2690 MHz     | 2496 - 2690 MHz | 31.07                         | 31.07                           | 1.96                | 1.96                  | ●             |
|               |                |                  |                   |                    | n91          |                     | 832 - 862 MHz       | 1427 - 1432 MHz | 51.76                         | 35.47                           | 1.70                | 1.86                  | ●             |
|               |                |                  |                   |                    | n92          |                     | 832 - 862 MHz       | 1432 - 1517 MHz | 51.76                         | 21.93                           | 1.70                | 2.69                  | ●             |
|               |                |                  |                   |                    | n93          |                     | 880 - 915 MHz       | 1427 - 1432 MHz | 57.35                         | 35.47                           | 1.63                | 1.86                  | ●             |
|               |                |                  |                   |                    | n94          |                     | 880 - 915 MHz       | 1432 - 1517 MHz | 57.35                         | 21.93                           | 1.63                | 2.69                  | ●             |
|               |                |                  |                   |                    | n95          |                     | 2010 - 2025 MHz     | N/A             | 43.80                         | N/A                             | 1.65                | N/A                   | ●             |
|               |                |                  |                   |                    | n97          |                     | 2300 - 2400 MHz     | N/A             | 21.43                         | N/A                             | 2.30                | N/A                   | ●             |
|               |                |                  |                   |                    | n98          |                     | 1880 - 1920 MHz     | N/A             | 45.71                         | N/A                             | 1.40                | N/A                   | ●             |
|               |                |                  |                   |                    | n99          |                     | 1626.5 - 1660.5 MHz | N/A             | 11.91                         | N/A                             | 2.35                | N/A                   | ●             |
|               |                |                  |                   |                    | n101         |                     | 1900 - 1910 MHz     | 1900 - 1910 MHz | 46.00                         | 46.00                           | 1.34                | 1.34                  | ●             |
|               |                |                  |                   | 103                |              |                     | 787 - 788 MHz       | 757 - 758 MHz   | 45.84                         | 36.40                           | 1.91                | 2.77                  | ●             |

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable

**NOTE:** For each frequency band, Siretta provides a traffic light indication to show the suitability of the antenna for use at that frequency band. Determination of exactly what makes an antenna good or bad at any frequency is subjective.

The view presented is that of Siretta's engineering team having taken into account the efficiency and VSWR measurements. The end user is advised to use their own criteria and/or testing to confirm suitability.



## Oscar 1A

5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna

### ISM Standards Frequency Support

| Application             | Frequency Range     | Efficiency (%) | Maximum VSWR | Peak Gain from highest direction (dBi) | Use Indicator |
|-------------------------|---------------------|----------------|--------------|----------------------------------------|---------------|
| ISM 433 MHz             | 433.05 - 434.79 MHz | 7.67           | 5.57         | -7.1215                                | ●             |
| IMT 868 MHz             | 863 - 870 MHz       | 51.91          | 1.55         | -0.19                                  | ●             |
| ISM 915 MHz             | 902 - 928 MHz       | 57.45          | 1.57         | 0.504                                  | ●             |
| ISM 2.4 GHz             | 2400 - 2500 MHz     | 21.24          | 2.18         | -2.45                                  | ●             |
| Wi-Fi 2.4G              | 2401 - 2483 MHz     | 20.86          | 2.18         | -2.909                                 | ●             |
| Wi-Fi 2.4G (USA)        | 2401 - 2473 MHz     | 20.76          | 2.18         | -3.158                                 | ●             |
| Wi-Fi 2.4G (Japan)      | 2401 - 2495 MHz     | 21.10          | 2.18         | -2.585                                 | ●             |
| Wi-Fi 5G (all channels) | 5150 - 5990 MHz     | 8.35           | 2.43         | 0.14                                   | ●             |
| Wi-Fi 5G (Ch 32-48)     | 5150 - 5250 MHz     | 10.31          | 2.17         | -0.53                                  | ●             |
| Wi-Fi 5G (Ch 32-64)     | 5150 - 5330 MHz     | 9.08           | 2.28         | -0.53                                  | ●             |
| Wi-Fi 5G (Ch 32-161)    | 5150 - 5815 MHz     | 8.42           | 2.43         | 0.005                                  | ●             |
| Wi-Fi 5G (Ch 32-173)    | 5150 - 5875 MHz     | 8.50           | 2.43         | 0.14                                   | ●             |
| ISM 5.8 GHz             | 5725 - 5875 MHz     | 9.60           | 2.17         | 0.14                                   | ●             |

● Suitable band

● Adequate band in good signal conditions

● Likely to be unsuitable

**NOTE:** For each frequency band, Siretta provides a traffic light indication to show the suitability of the antenna for use at that frequency band. Determination of exactly what makes an antenna good or bad at any frequency is subjective.

The view presented is that of Siretta's engineering team having taken into account the efficiency and VSWR measurements. The end user is advised to use their own criteria and/or testing to confirm suitability.



## 5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna



## 5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna

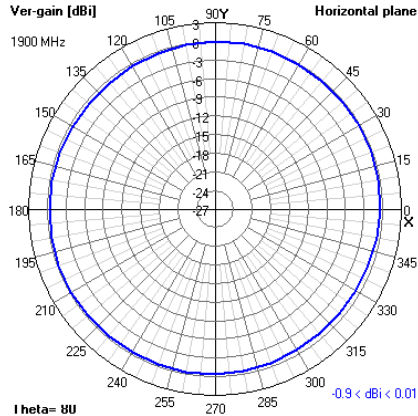


## Oscar 1A

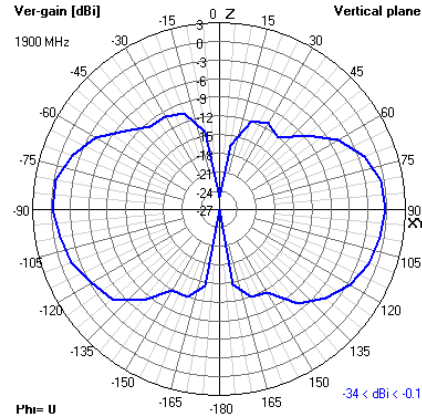
5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna

### 2D Radiation Plots

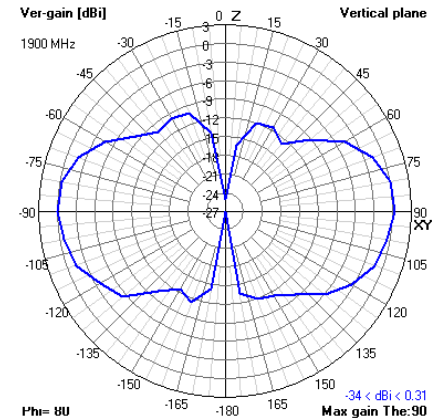
#### 1900 MHz XY



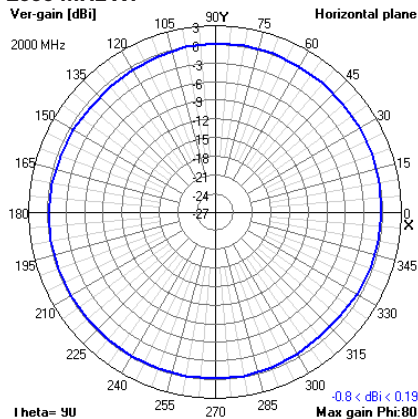
#### XZ



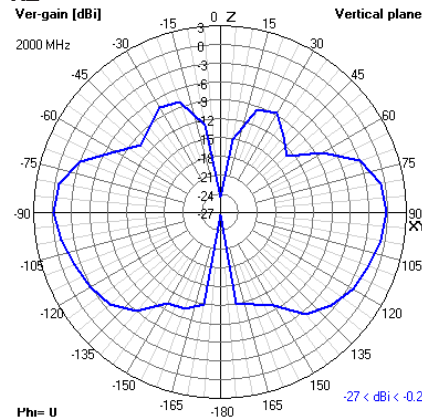
#### YZ



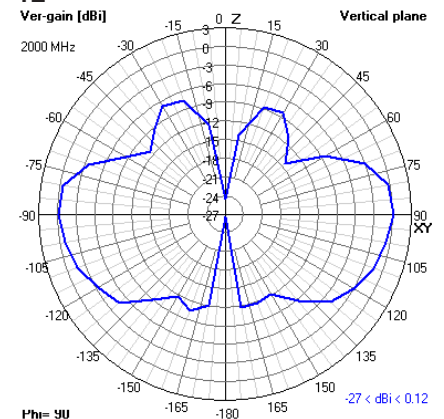
#### 2000 MHz XY



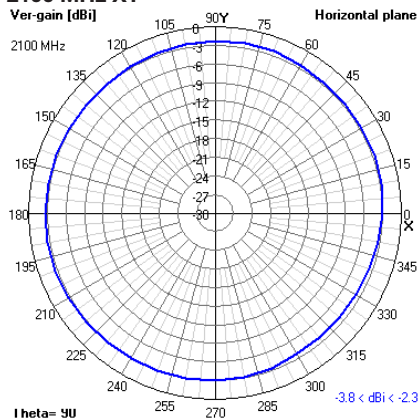
#### XZ



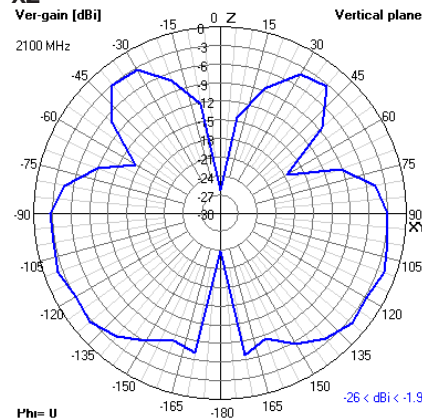
#### YZ



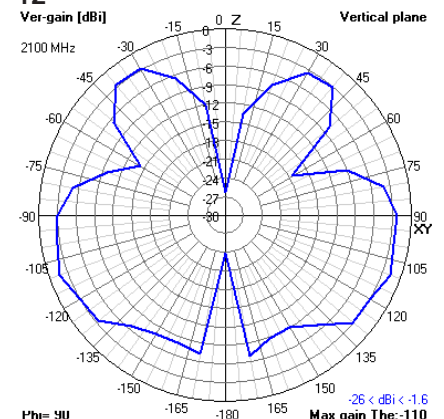
#### 2100 MHz XY



#### XZ



#### YZ



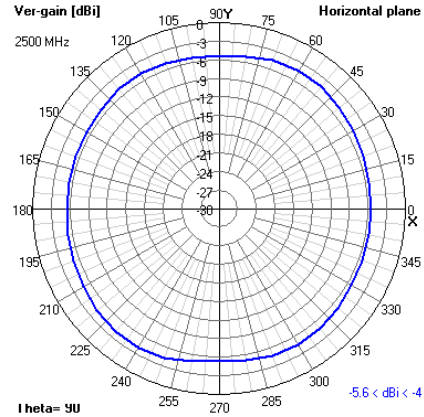


## Oscar 1A

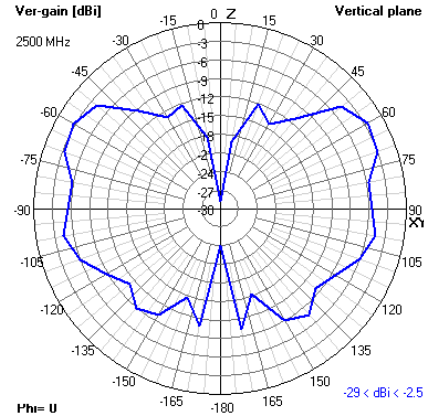
5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna

### 2D Radiation Plots

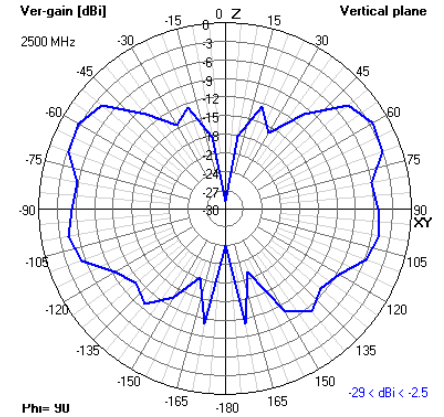
#### 2500 MHz XY



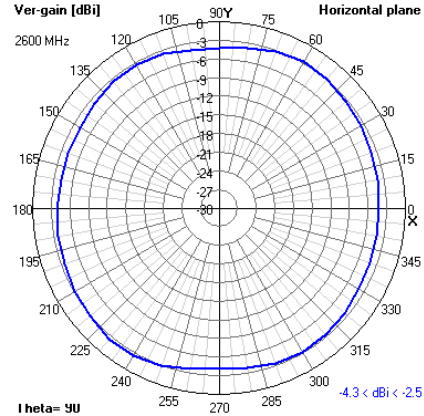
#### XZ



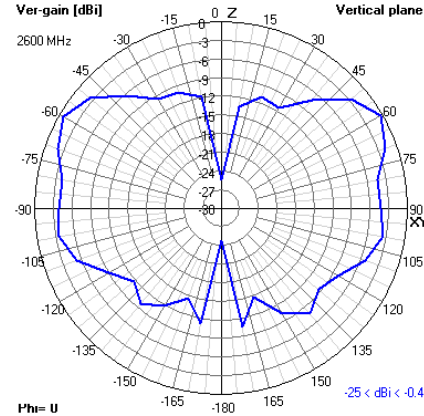
#### YZ



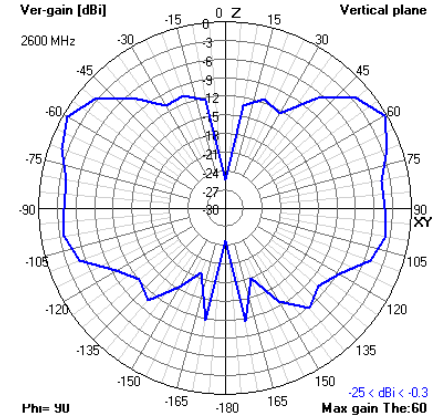
#### 2600 MHz XY



#### XZ



#### YZ



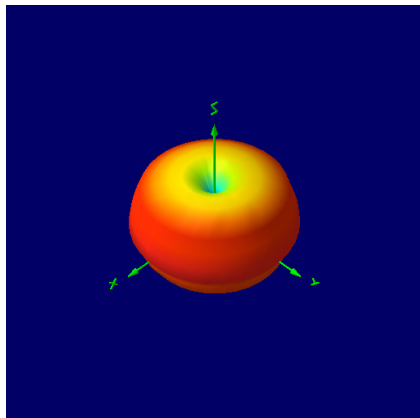


## Oscar 1A

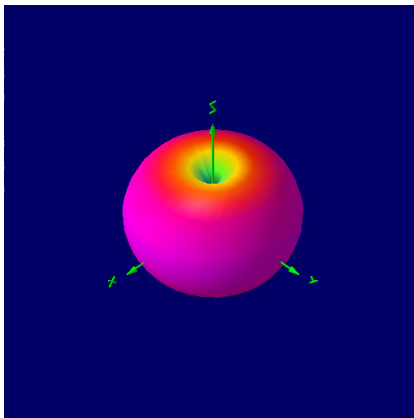
5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna

### 3D Radiation Plots

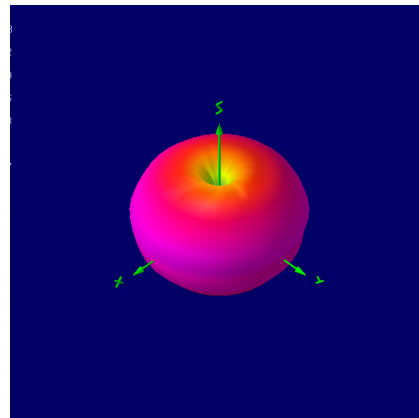
700 MHz



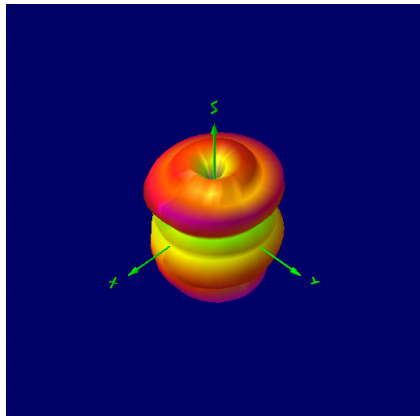
800 MHz



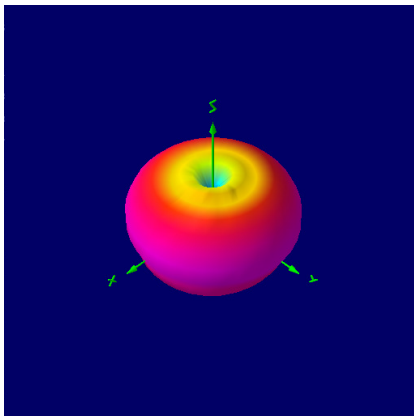
900 MHz



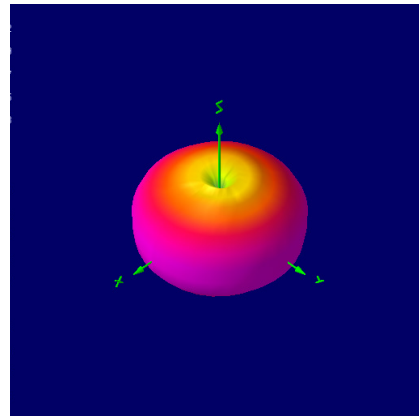
1500 MHz



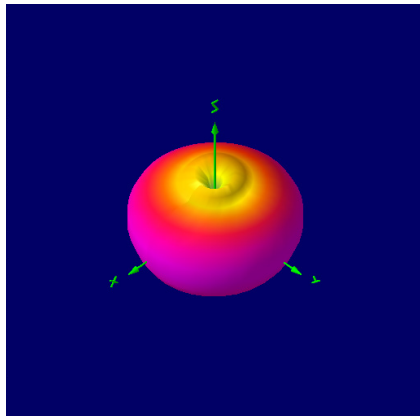
1700 MHz



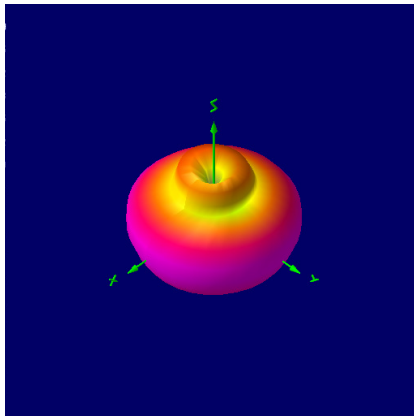
1800 MHz



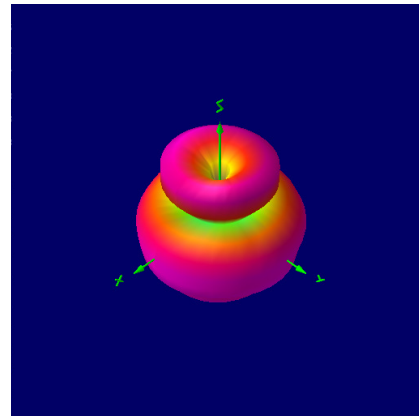
1900 MHz



2000 MHz



2100 MHz

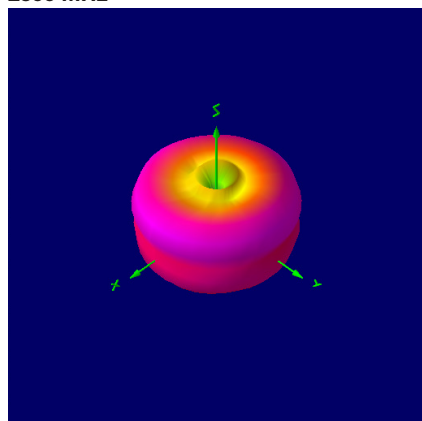


## Oscar 1A

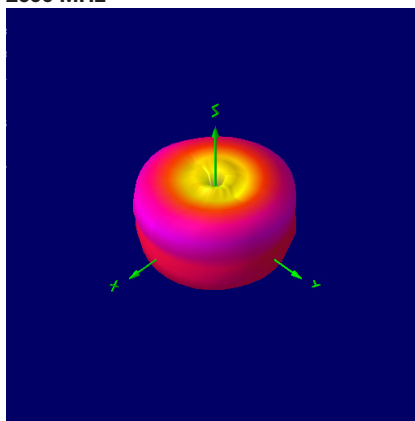
5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna

### 3D Radiation Plots

2500 MHz



2600 MHz



**NOTE:** All 3D radiation plots are shown with Theta = 45 and Phi = 45.

### Ordering Details:

| Part Number              | Description                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------------------|
| OSCAR1A/0.2M/FMEF/S/S/31 | 5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna<br>FME Female Connector 0.2M Cable |
| OSCAR1A/5M/FMEF/S/S/31   | 5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna<br>FME Female Connector 5M Cable   |
| OSCAR1A/10M/FMEF/S/S/31  | 5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna<br>FME Female Connector 10M Cable  |
| OSCAR1A/5M/SMAM/S/S/31   | 5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna<br>SMA Male Connector 5M Cable     |
| OSCAR1A/10M/SMAM/S/S/31  | 5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna<br>SMA Male Connector 10M Cable    |
| OSCAR1A/20M/SMAM/S/S/31  | 5G/4G, LoRa, SigFox ISM Omnidirectional Wall Mount Antenna<br>SMA Male Connector 20M Cable    |

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