



THOR92

## **Thunder Series**

Integrated 5G/LTE Omnidirectional Antenna  
for Ericsson R920

- Integrated Multi-band 5G Omnidirectional Antenna
- Omni Wi-Fi Antenna
- Bluetooth Antenna
- GNSS Antenna
- Cavity to install Ericsson R920 Router
- Robust, IP67 Rated Enclosure

## Contents

| Page: | Section:                  |
|-------|---------------------------|
| 3     | Introduction              |
| 4     | Specifications            |
| 5     | Mechanical Specifications |
| 6     | Plots                     |
| 15    | Dimensions                |



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## Thunder Series THOR92

### Integrated Omnidirectional Antennas for Ericsson R920

#### INTEGRATED MULTI-BAND 5G OMNI ANTENNA + WI-FI OMNI ANTENNA + BLUETOOTH ANTENNA + GNSS ANTENNA + PLACE TO INSTALL ERICSSON R920 (ALL-IN-ONE)

The Taoglas THOR92 all-in-one antenna for Ericsson (Cradlepoint) R920 routers is a perfect outdoor device for mobile and fixed installations like industrial, public, CCTV, hotspots, yachts, boats, campers, and RVs. It has embedded omnidirectional 5G, Wi-Fi®, Bluetooth®, and GNSS antennas. If you use the Ericsson (Cradlepoint) R920 with the THOR92 Thunder Omnidirectional antenna, you get an integrated complete solution with embedded router and multi-band antennas in one enclosure.



OUTDOOR ANTENNA WORKS IN ANY WEATHER CONDITIONS, IP67



ANTENNA PERFECTLY MATCHED WITH THE ERICSSON R920



ALL ANTENNAS AND CRADLEPOINT ROUTER INTEGRATED IN ONE ENCLOSURE



MADE IN EUROPE



## 5G / LTE SPECIFICATION

|                     |                                                                                                                                                                                                                              |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FREQUENCY           | 617 - 960 MHz<br>1.7 - 2.7 GHz<br>3.3 - 4.7 GHz<br>5.2 - 6.0 GHz                                                                                                                                                             |
| GAIN                | 617 - 960 MHz : 3 dBi<br>1.7 - 2.7 GHz : 4 dBi<br>3.3 - 4.7 GHz : 4.5 dBi<br>5.2 - 6.0 : 2.5dBi                                                                                                                              |
| SUPPORTED LTE BANDS | 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 17, 18, 19, 20, 22, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 47, 48, 49, 52, 53, 65, 66, 67, 68, 69, 71, 85, 103, 106                                 |
| SUPPORTED 5G BANDS  | n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n34, n38, n39, n40, n41, n47, n48, n53, n65, n66, n67, n71, n77, n78, n80, n81, n82, n83, n84, n85, n86, n89, n90, n95, n97, n98, n100, n101, n256 |
| VSWR                | <1.80, max <2.00                                                                                                                                                                                                             |
| BEAMWIDTH           | 360°/35° +/- 5°                                                                                                                                                                                                              |
| POLARIZATION        | Vertical                                                                                                                                                                                                                     |
| IMPEDANCE           | 50 $\Omega$                                                                                                                                                                                                                  |
| CONNECTOR           | 2x SMA                                                                                                                                                                                                                       |
| CABLE TYPE          | RG316                                                                                                                                                                                                                        |



# WI-FI SPECIFICATION

|              |                                                |
|--------------|------------------------------------------------|
| FREQUENCY    | 2.4 - 2.5 GHz<br>5.0 - 7.2 GHz                 |
| GAIN         | 2.4 - 2.5 GHz: 6 dBi<br>5.0 - 6.0 GHz: 7.5 dBi |
| VSWR         | <1.70, max <2.00                               |
| BEAMWIDTH    | 360°/25° +/- 5°                                |
| POLARIZATION | Vertical                                       |
| IMPEDANCE    | 50 Ω                                           |
| CONNECTOR    | 2x RPSMA                                       |
| CABLE TYPE   | RG316                                          |

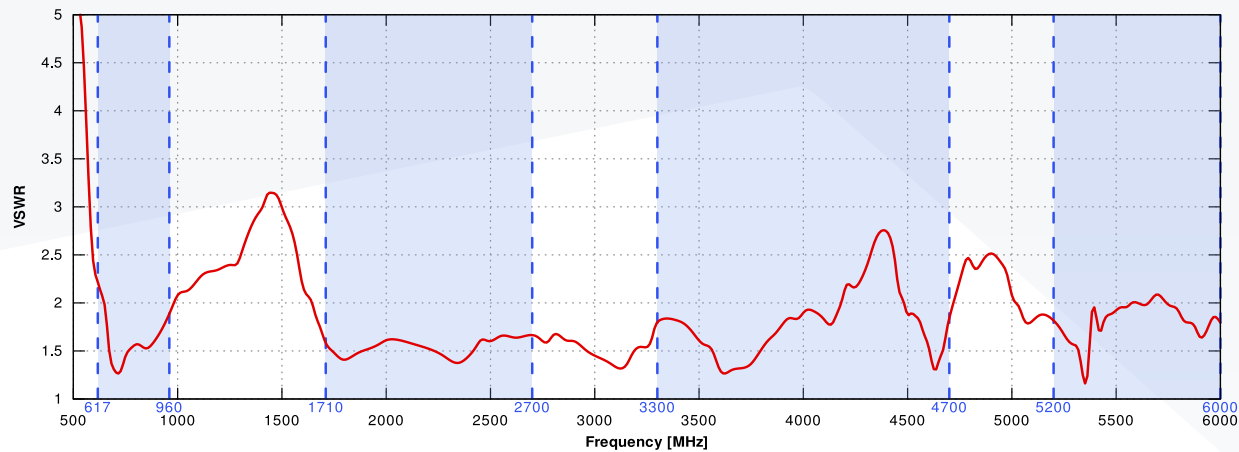
# MECHANICAL SPECIFICATION

|                       |                                               |
|-----------------------|-----------------------------------------------|
| MATERIAL              | ABS, aluminum, PTFE, Fiberglass               |
| INGRESS PROTECTION    | IP67                                          |
| CONNECTOR TYPE        | RJ45                                          |
| DIMENSIONS            | 272 x 276 x 100 mm<br>10.7 x 10.9 x 3.93 inch |
| WEIGHT                | 1.8 kg<br>3.97lbs                             |
| OPERATING TEMPERATURE | From -40°C to 75°C<br>From -40°F to 167°F     |

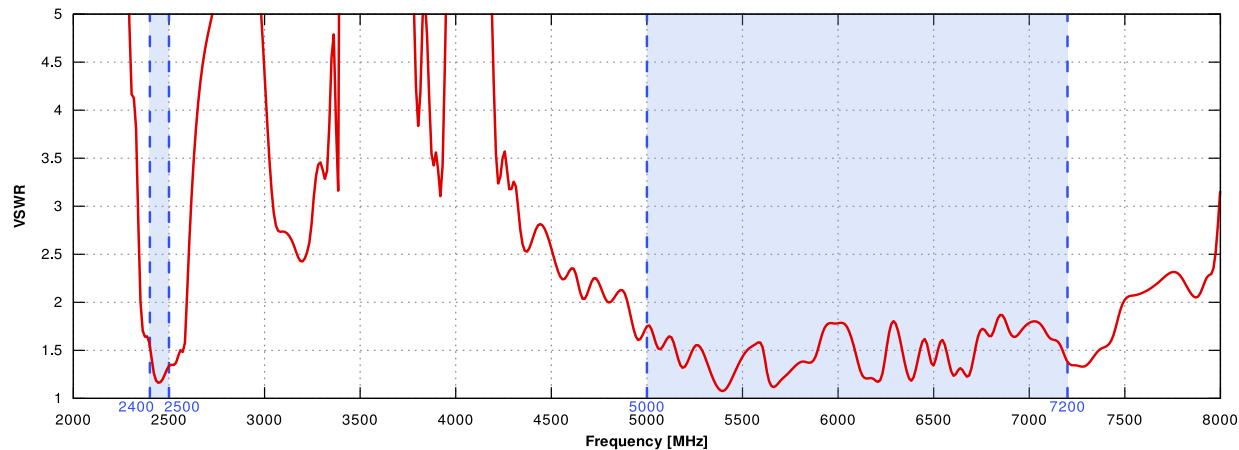


PLOTS

5G/LTE VSWR

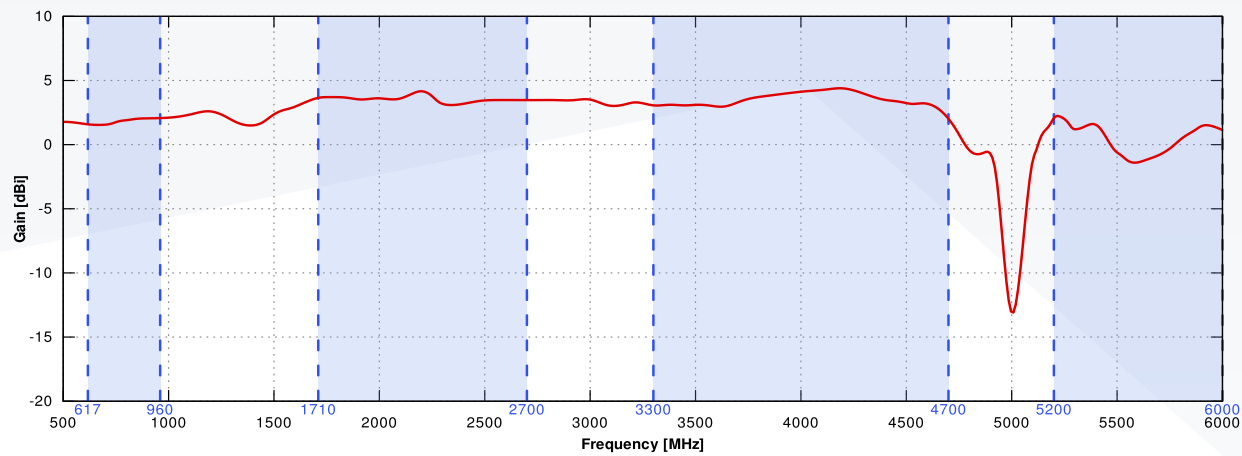


WI-FI VSWR

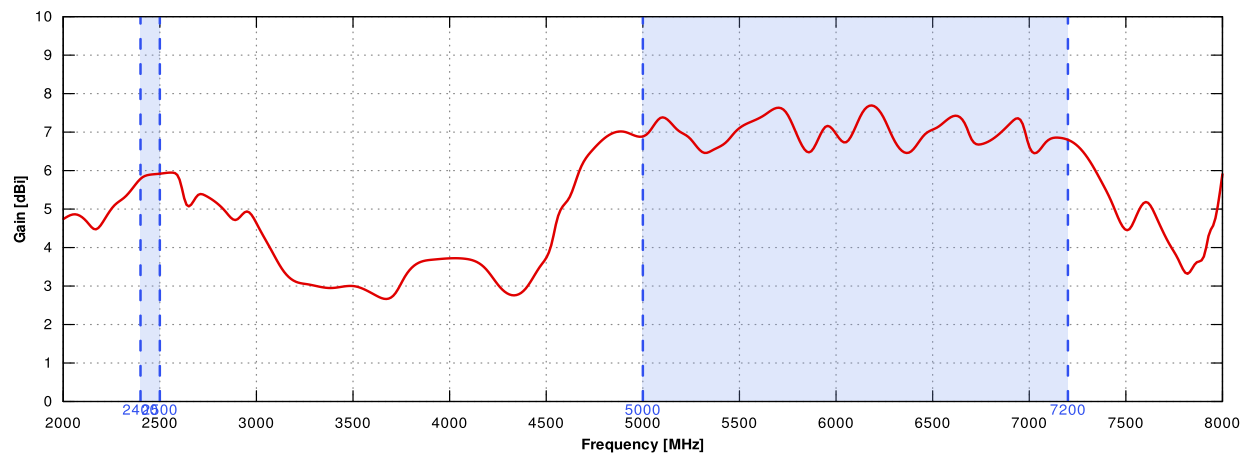




5G/LTE Gain

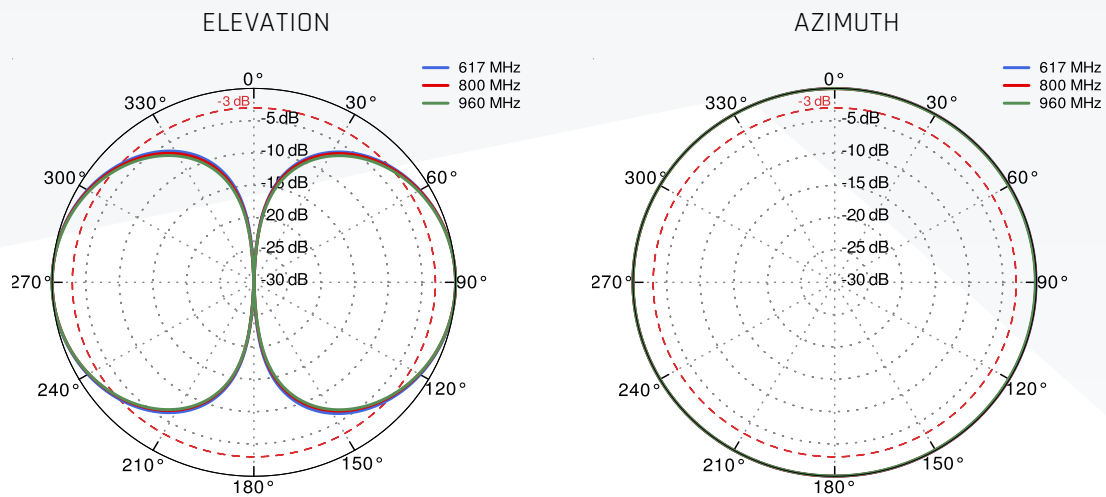


Wi-Fi Gain

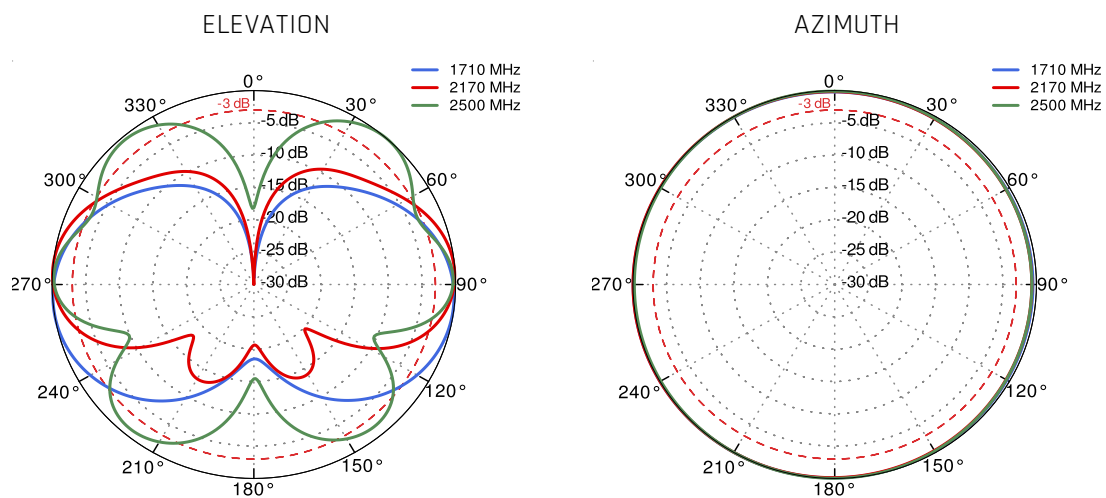




## 5G/LTE from 617MHz to 950MHz



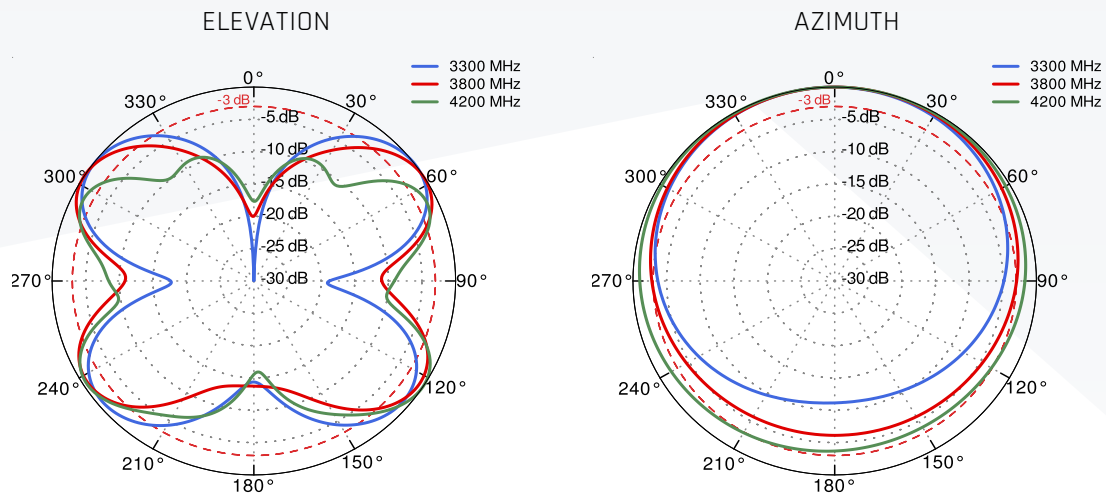
## 5G/LTE from 1.71GHz to 2.5GHz



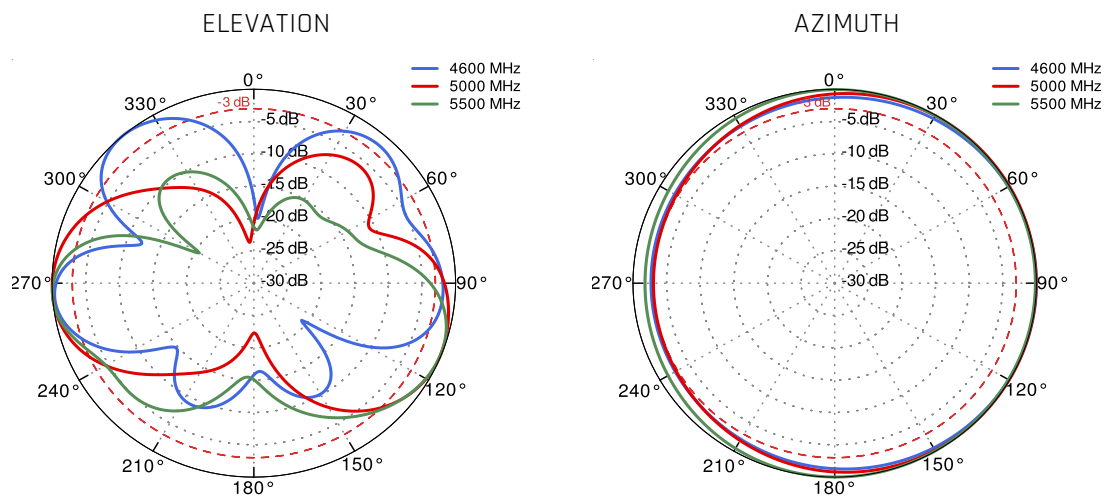




## 5G/LTE from 3.3GHz to 4.2GHz

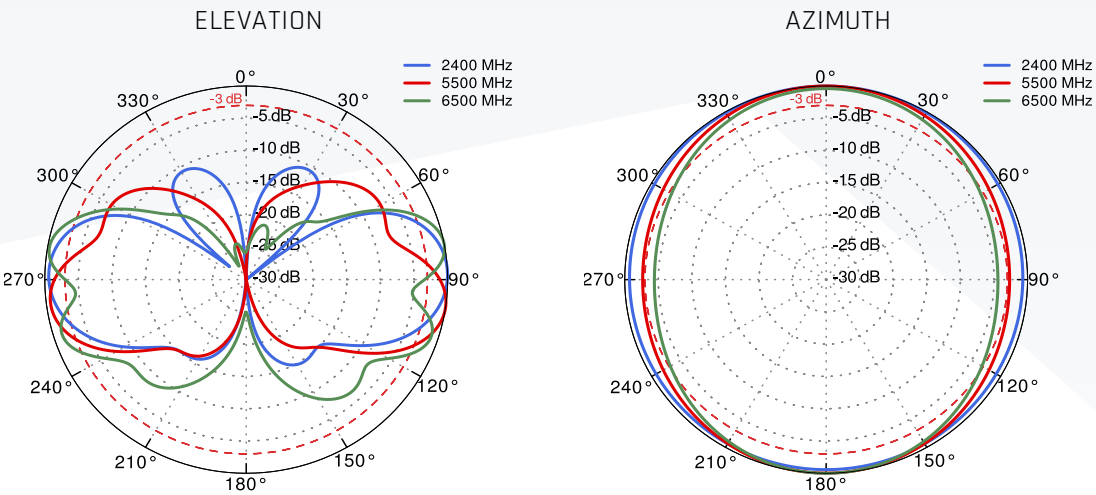


## 5G/LTE from 4.6GHz to 5.5GHz





Wi-Fi 2.4GHz and 5GHz and 6GHz





# GNSS Specifications

| GNSS Frequency Band |                                     |                                     |                          |                                     |                                     |                          |                                     |
|---------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| GPS/QZSS            | L1<br>1575.42MHz                    | L2<br>1227.6MHz                     | L5<br>1176.45MHz         | L6<br>1278.75MHz                    |                                     |                          |                                     |
|                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            |                                     |                          |                                     |
| GLONASS             | L5R<br>1176.45MHz                   | L3PT<br>1201.5MHz                   | L2PT<br>1246MHz          | L1CR<br>1575.42MHz                  | L1PT<br>1602MHz                     |                          |                                     |
|                     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                          |                                     |
| Galileo             | E5a<br>1176.45MHz                   | E5b<br>1201.5MHz                    | E4<br>1215MHz            | E3<br>1256MHz                       | E6<br>1278.75MHz                    | E2<br>1561MHz            | E1<br>1575.42MHz                    |
|                     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| BeiDou              | B1<br>1561MHz                       | B2<br>1207.14MHz                    | B3<br>1268.52MHz         |                                     |                                     |                          |                                     |
|                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |                                     |                                     |                          |                                     |
| Compass             | E5B(B2)/ E6(B3)<br>1268.56MHz       | E2(B1)<br>1561MHz                   |                          |                                     |                                     |                          |                                     |
|                     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                          |                                     |                                     |                          |                                     |
| SBAS                | Omnistar<br>1542.5MHz               | WAAS/EGN OS<br>1575.42MHz           |                          |                                     |                                     |                          |                                     |
|                     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                          |                                     |                                     |                          |                                     |

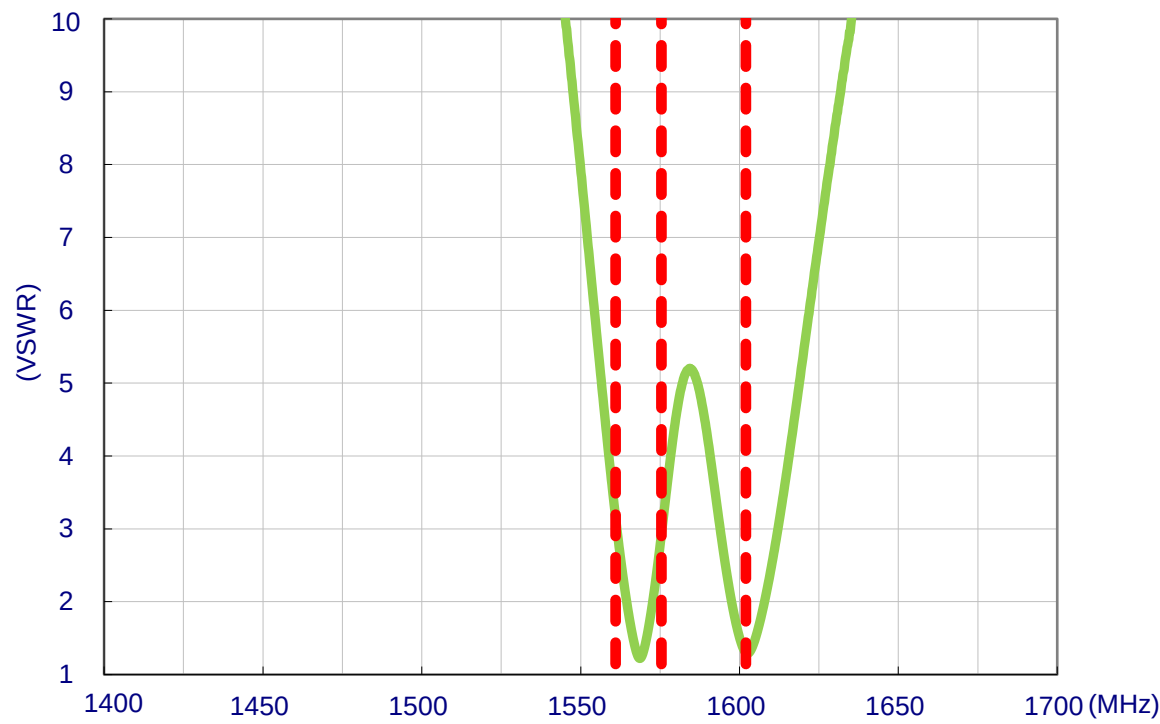
| Electrical         |         |             |         |
|--------------------|---------|-------------|---------|
| Frequency          | BeiDou  | GPS/GALILEO | GLONASS |
|                    | 1561MHz | 1575.42MHz  | 1602MHz |
| Efficiency (%)     | 49.8    | 46.5        | 60.1    |
| Average Gain (dBi) | -3.03   | -3.33       | -2.21   |
| Peak Gain (dBi)    | 2.44    | 1.72        | 1.67    |
| Impedance          | 50Ω     |             |         |
| Polarization       | RHCP    |             |         |



| LNA Specification            |                     |           |           |
|------------------------------|---------------------|-----------|-----------|
| Gain (dB)                    | 14.8 ± 1            | 15.0 ± 1  | 15.0 ± 1  |
| NF (dB)                      | 2.4 ± 0.2           | 1.9 ± 0.2 | 2.2 ± 0.2 |
| Input Voltage                | +1.8 to +5 VDC      |           |           |
| Power Consumption            | 3 to 24.5mA typical |           |           |
| Out-Of-Band Attenuation (dB) | 10-500MHz           | > 60      |           |
|                              | 500-850MHz          | > 40      |           |
|                              | 850-1000MHz         | > 35      |           |
|                              | 1000-1500MHz        | > 25      |           |
|                              | 1700-2300MHz        | > 19      |           |
|                              | 2300-5000MHz        | > 30      |           |
|                              | 5000-6000MHz        | > 25      |           |

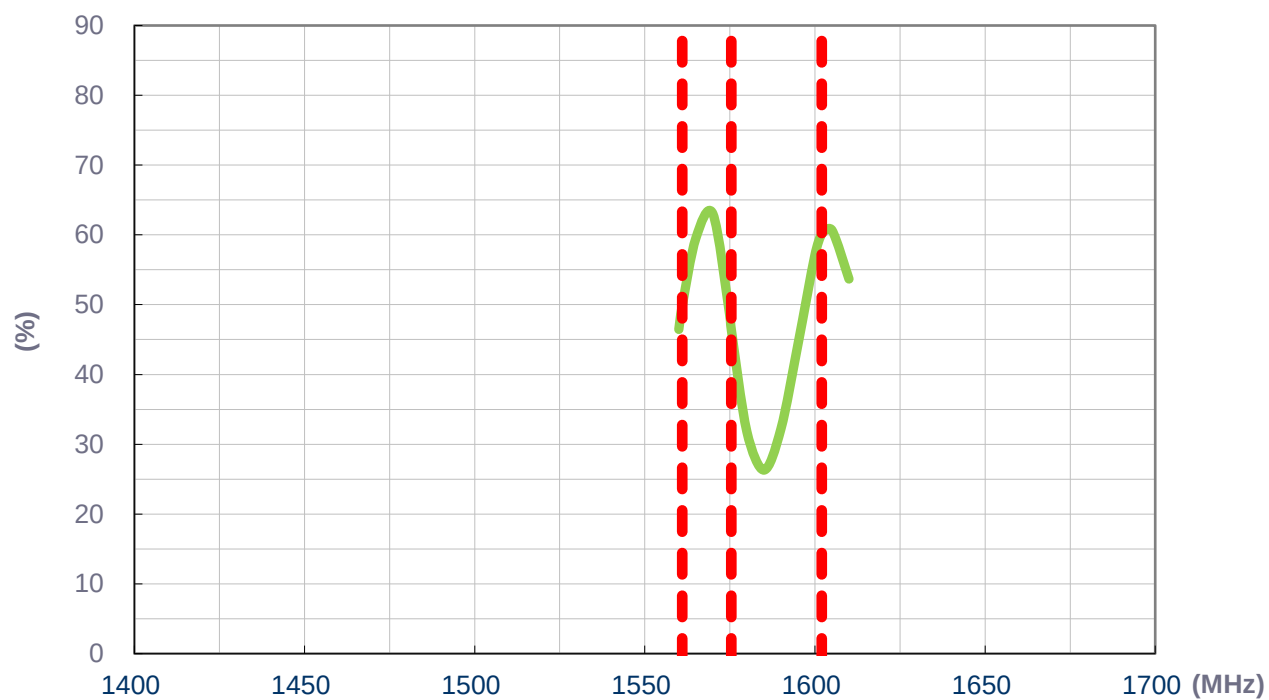
PLOTS

VSWR



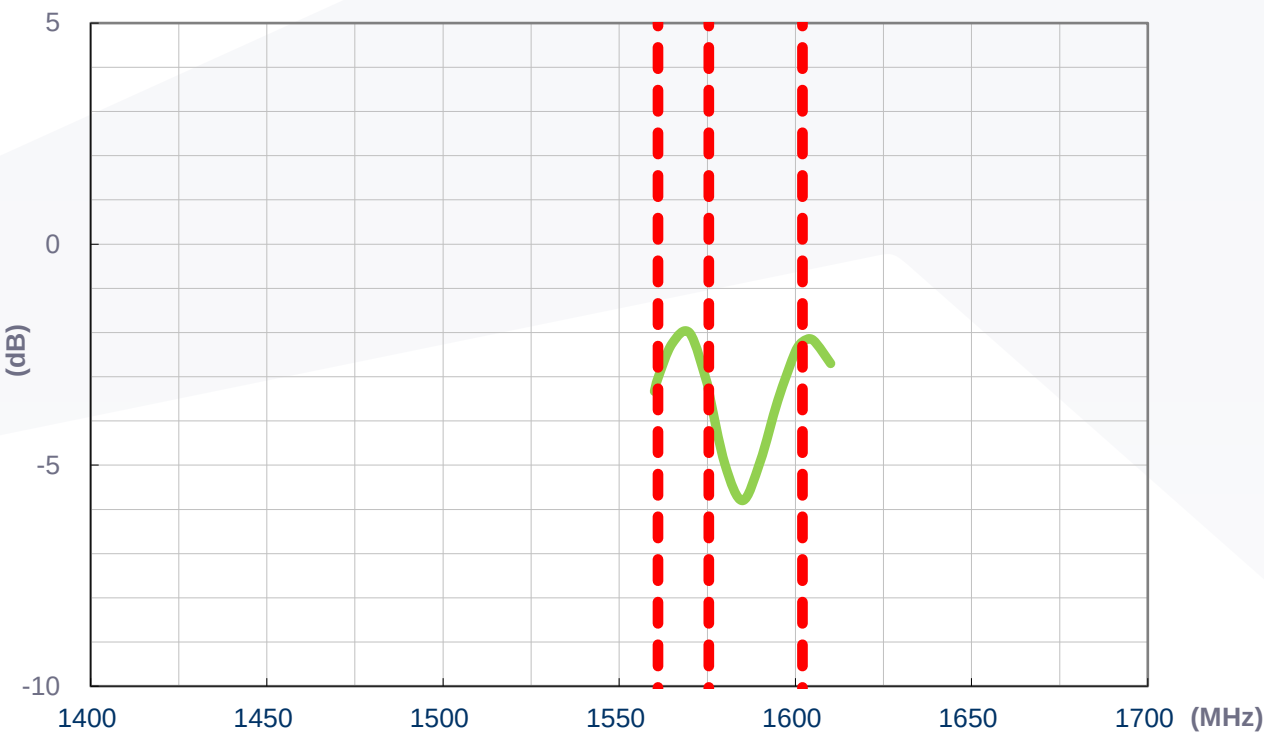


## Efficiency

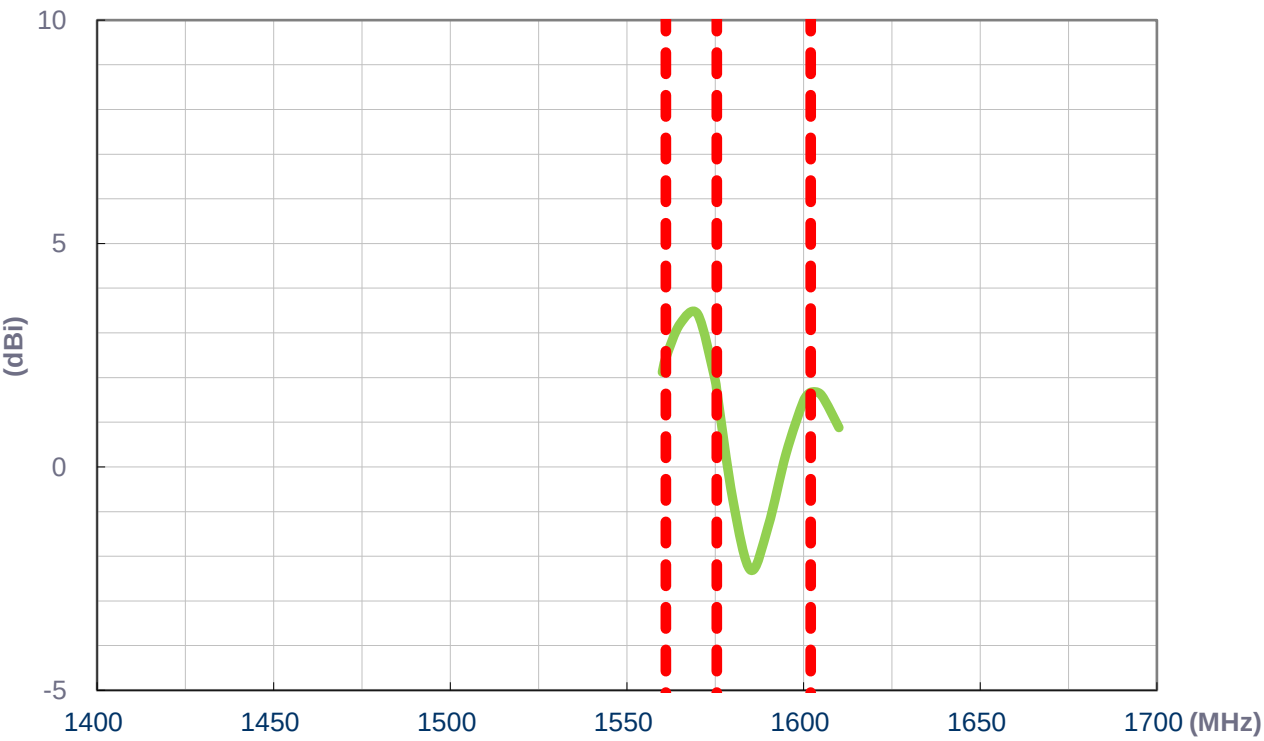




Average Gain



Peak Gain





DIMENSIONS

