PulseLARSEN Antennas

TECHNICAL DATA SHEET

**Series: Low Profile Blade**

**Description**: 3G/Active GNSS Blade Antenna

**PART NUMBER: W4120GNSS5000**

## Features:

- 2-Feeds (3G, GNSS)
- GNSS Active Antenna
  - LNA gain 30dB
  - Pre and post LNA filtering
- Adhesive tape mount
- Size 136 x 37.7 x 13.8mm
- Connector SMA Male
- Cable 16.4 feet
- RoHS compliant

## Applications:

- 3G 806-2170MHz
- GNSS (Beidou, GPS, Galileo, Glonass)
- Vehicular mounting
- Asset Tracking, Navigation, Fleet Management
- Mobile and Fixed broadband
- Utility boxes

All dimensions are in mm / inches

Issue: 1709

RoHS COMPLIANT



For more information:

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## ELECTRICAL SPECIFICATIONS

| | | |
|---|---|---|
| Frequency(LTE Cable) | 806-960/1710-2170 | MHz |
| Frequency(GNSS cable) | 1561.098±2.046/ 1575.42±1.023/ 1602.5625±4 | MHz |
| Nominal Impedance | 50 | Ω |
| VSWR (LTE)* | 2.5:1 | Max |
| VSWR (GNSS)* | 2:1 | Max |
| Peak Gain (LTE,698-960MHz,Typical)** | 1.7 | dBi |
| Peak Gain (LTE,1710-2700MHz,Typical)** | 2.9 | dBi |
| Efficiency (LTE,698-960MHz,Typical)** | 55 | % |
| Efficiency (LTE,1710-2700MHz,Typical)** | 75 | % |
| HPBW / Horizontal Plane (LTE/WiFi)** | Omni | |
| HPBW / Vertical Plane (LTE, 698-960MHz, Typical)** | 32° | |
| HPBW / Vertical Plane (LTE,1710-2700MHz, Typical)** | 50° | |
| Polarization (LTE) | Vertical | |
| Polarization (GNSS) | RHCP | |
| RHCP Peak Gain (GNSS Radiating element, Typical)*** | 1 | dBic |
| Gain (LNA gain) | 30 | dB ± 2 dB |
| Out of Band Rejection | | |
| 698 MHz | >70 | dB |
| 960MHz | >65 | dB |
| 1710MHz | >60 | dB |
| 2170MHz | >65 | dB |
| 2400MHz | >65 | dB |
| 2700MHz | >65 | dB |





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## ELECTRICAL SPECIFICATIONS

| | | |
|---|---|---|
| Noise Figure | <2.4 | dB |
| Operating Voltage | 3.3-5 | Vdc±0.5V |
| Current Consumption | 9 | mA± 2 mA |

## MECHANICAL SPECIFICATIONS

| | |
|---|---|
| Overall size | 136 x 37.7 x 13.8mm |
| Weight | 194g |
| Antenna Color | black |
| Connector type | SMA male |
| Cable type (LTE) | RG174 |
| Cable type (GNSS) | RG174 |
| Cable length | 16.4’ (5 m) |

## ENVIRONMENTAL SPECIFICATIONS

| | |
|---|---|
| Operating Temperature | -40/+85 ° C |
| Storage Temperature | -40/+85 ° C |
| Ingress Protection | IP67 |
| Wind-loading | 100mph |
| RoHS Compliant | Yes |

## OTHER SPECIFICATIONS

| | |
|---|---|
| Mounting | Adhesive Tape |
| Radome Material | PC/PET, UV resistant |





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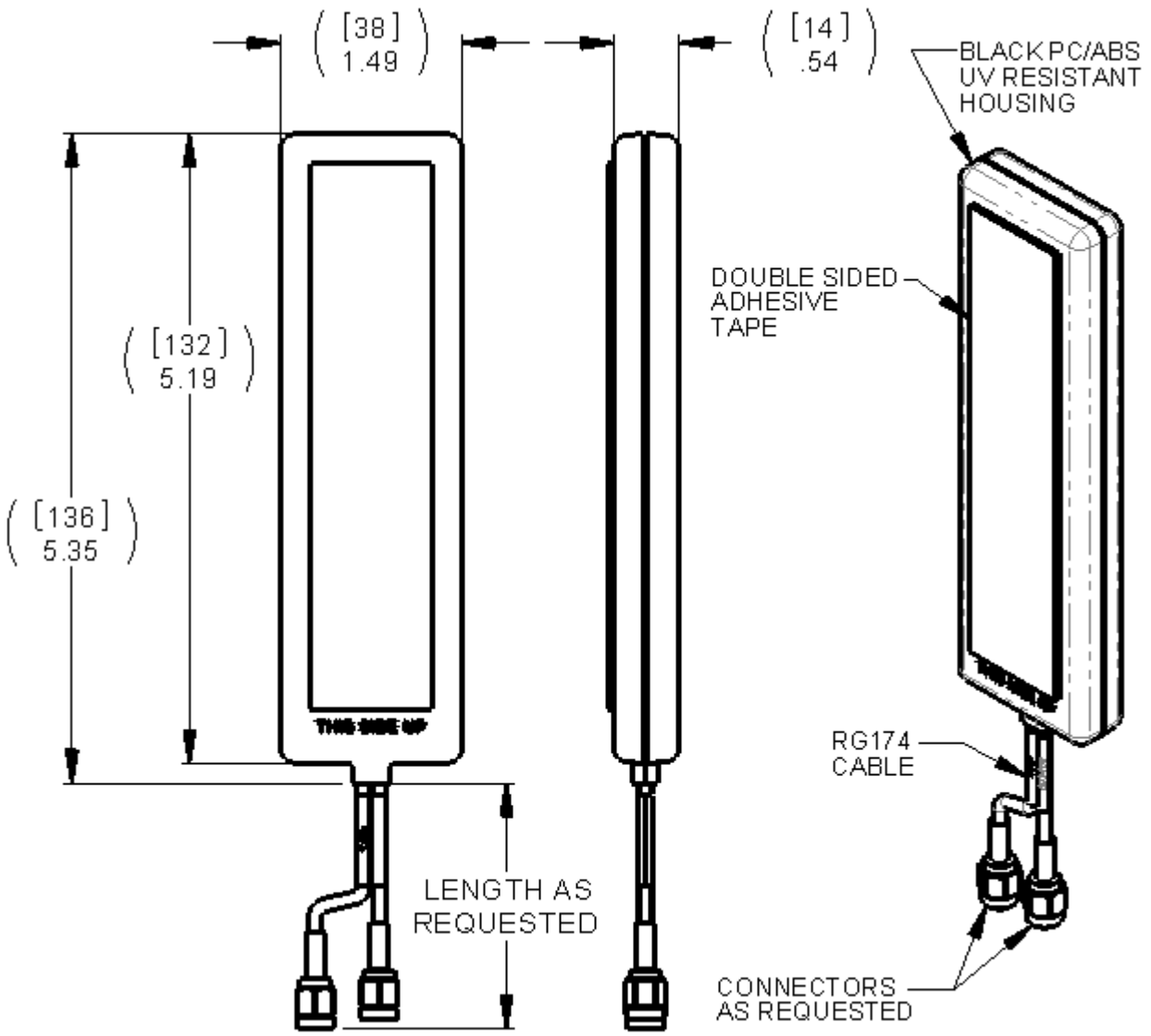
## MECHANICAL DRAWING





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## Test Setup

*VSWR is tested with 5m cable in free space
** Radiation Performance is tested with 200mm cable in free space
***GNSS module is tested on 70X70mm ground plane

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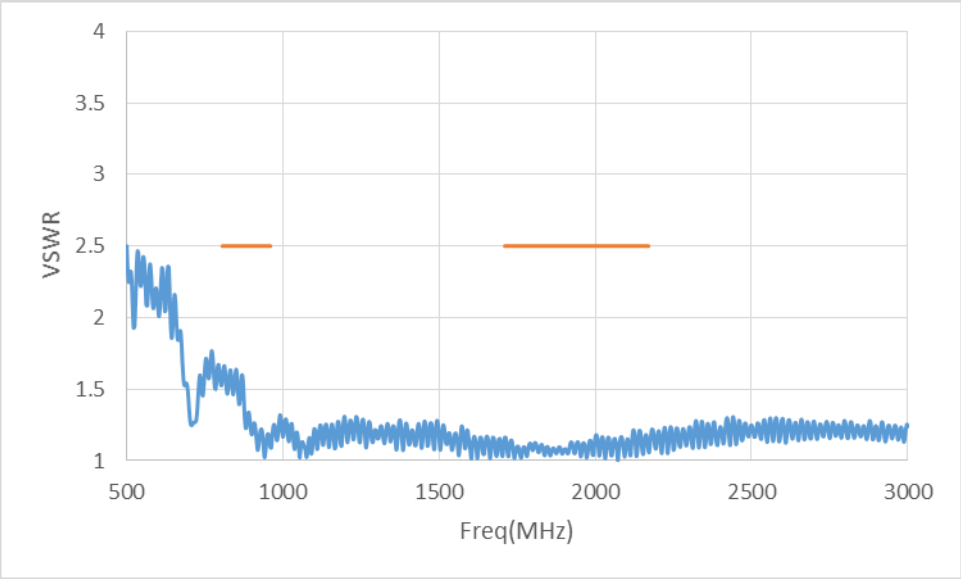
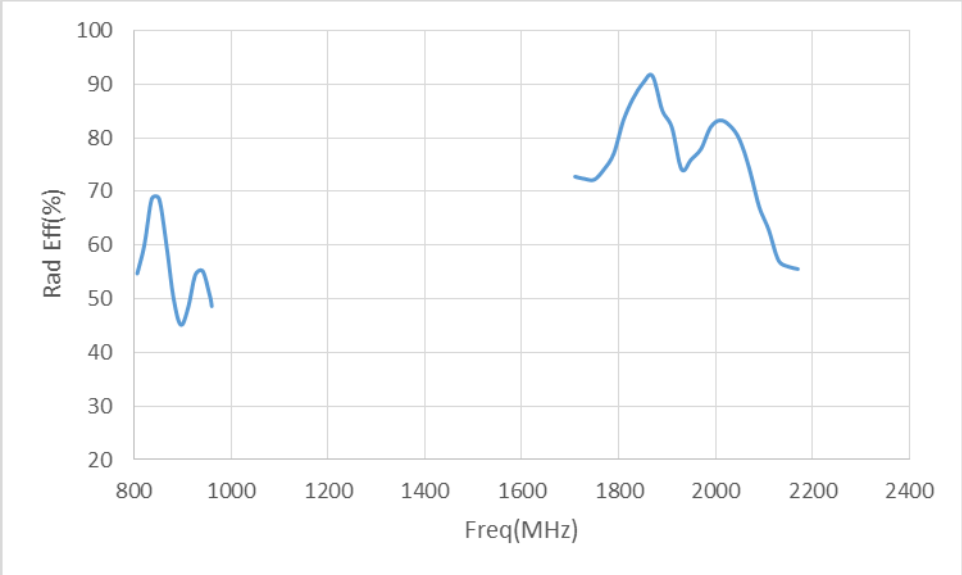
## CHARTS

### VSWR of 3G antenna




### Radiation efficiency of 3G antenna





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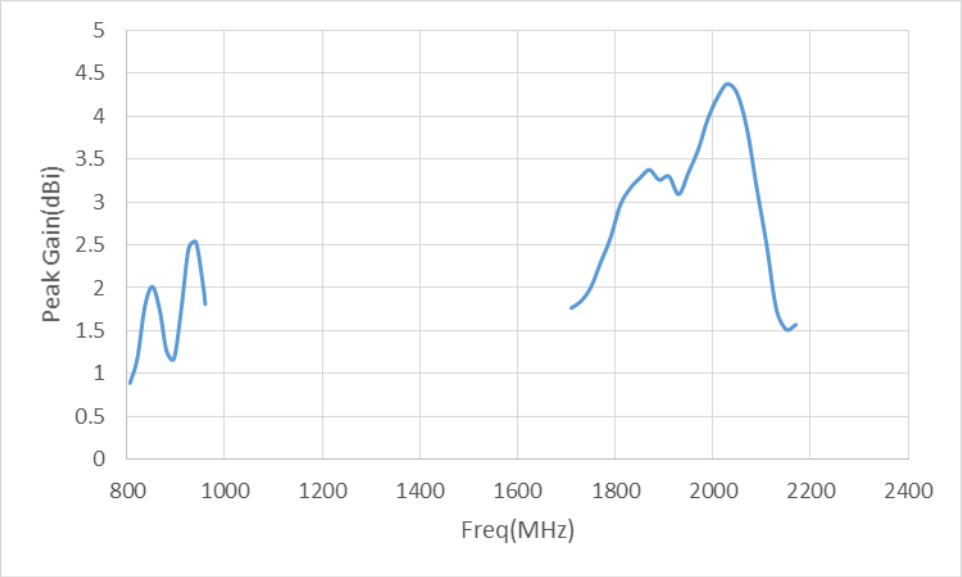
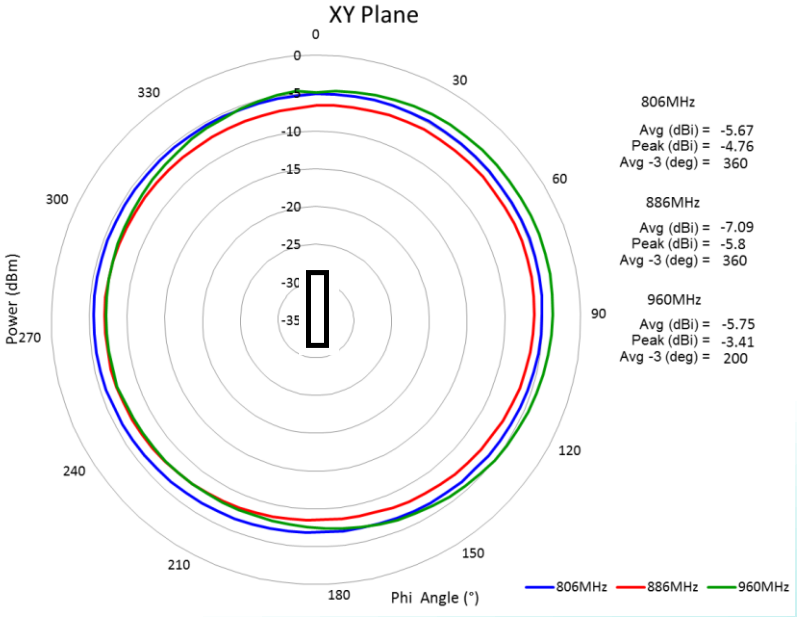
## CHARTS

### Peak Gain of 3G antenna




### 3G antenna X-Y plane radiation pattern at 3G low band






In the effort to improve our products, we reserve the right to make changes judged to be necessary.

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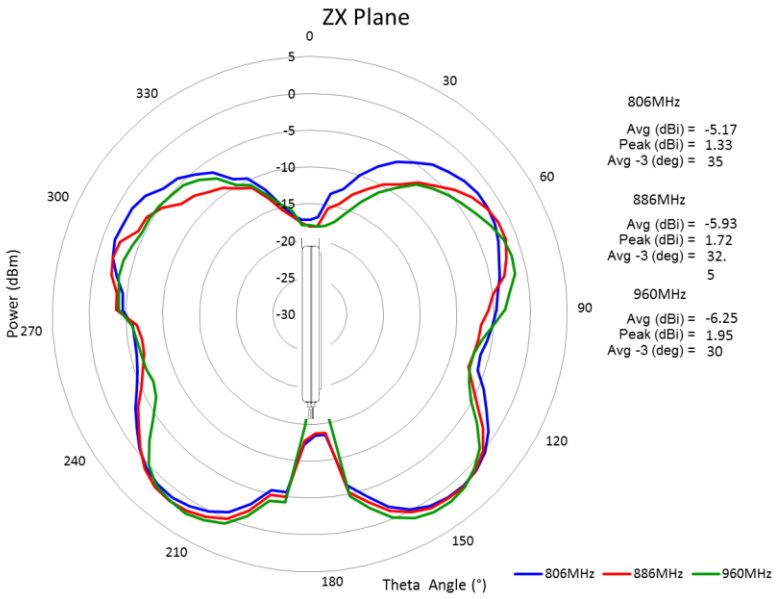
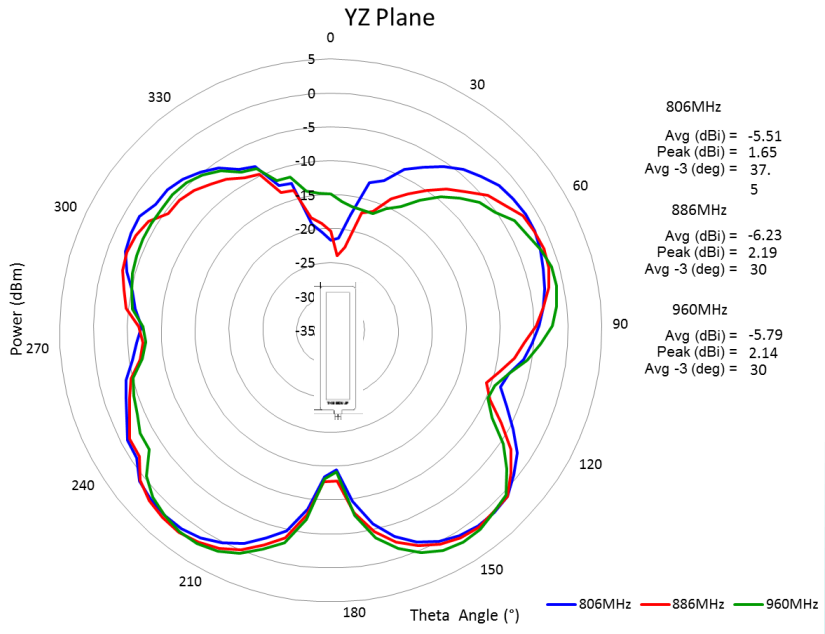
## CHARTS

### 3G antenna Z-X plane radiation pattern at 3G low band




### 3G antenna Y-Z plane radiation pattern at 3G low band





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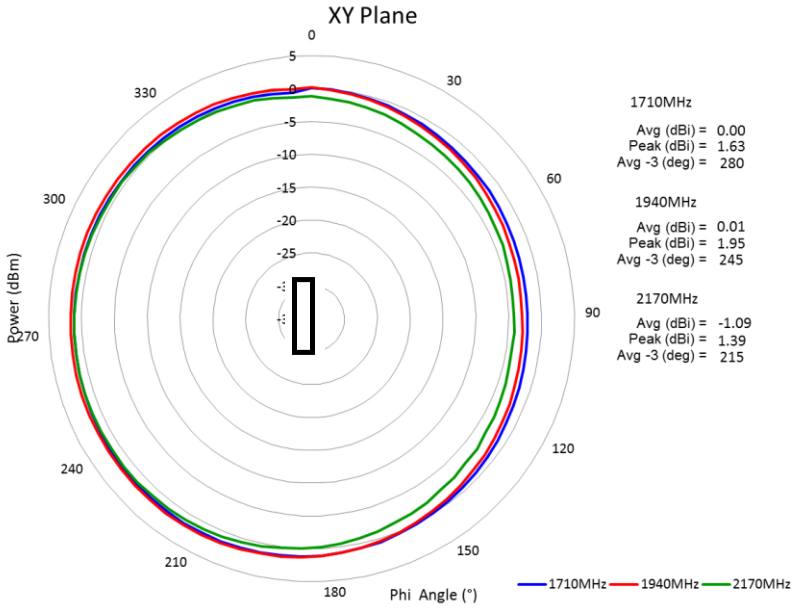
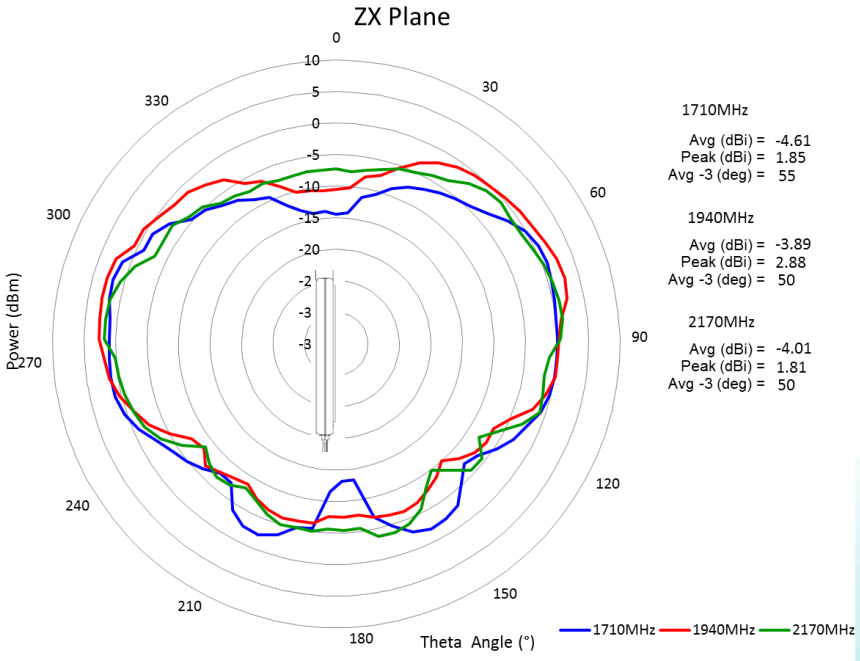
## CHARTS

### 3G antenna X-Y plane radiation pattern at 3G high band




### 3G antenna Z-X plane radiation pattern at 3G high band



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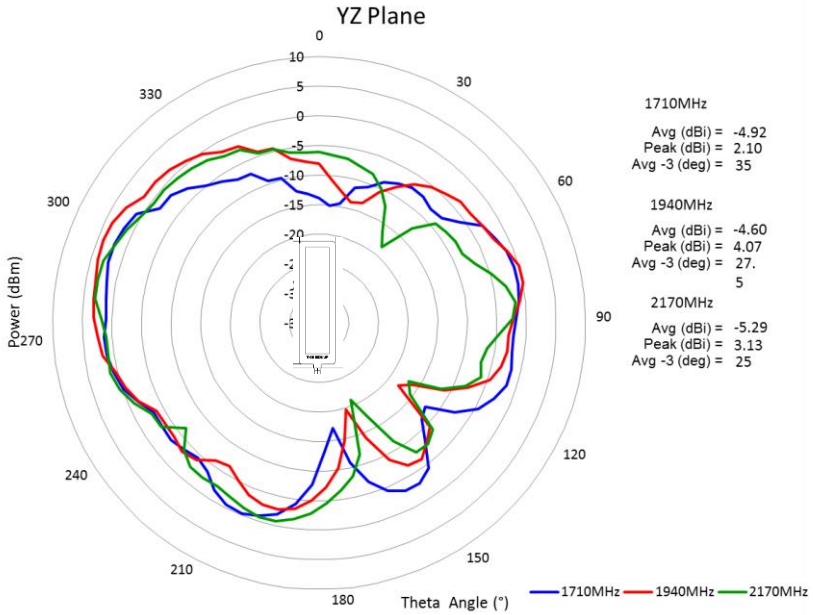
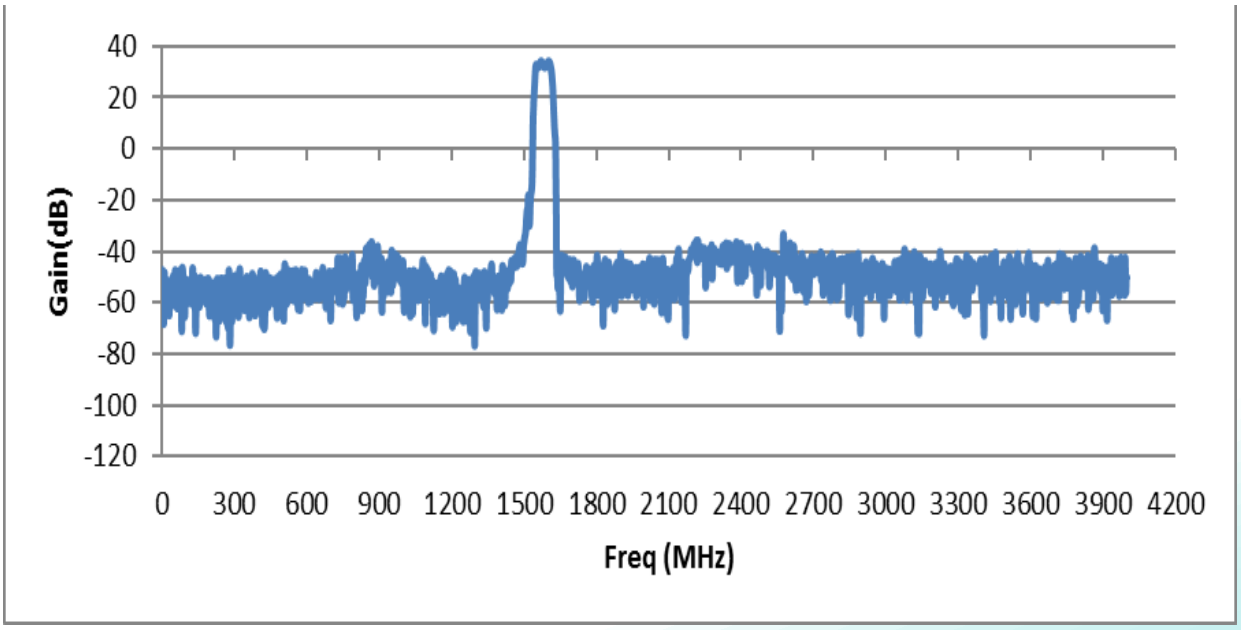
## CHARTS

### 3G antenna Y-Z plane radiation pattern at 3G high band




### LNA Gain and out-of-band rejection





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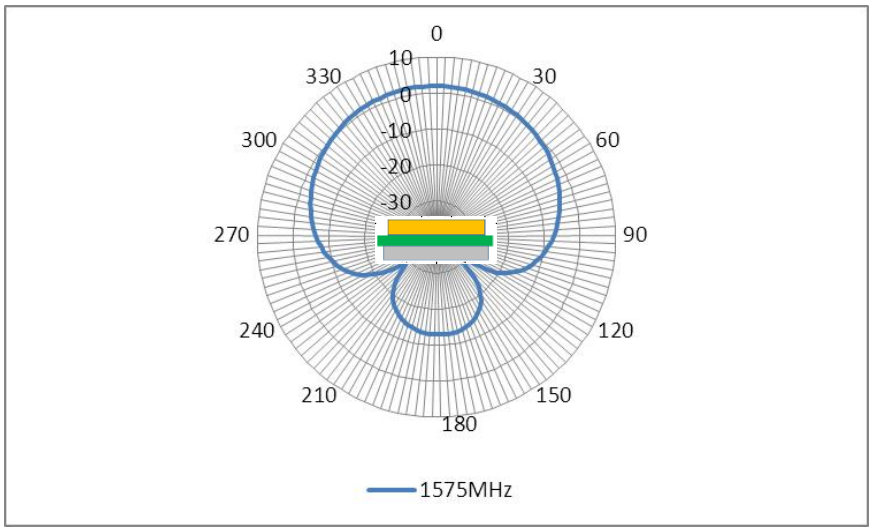
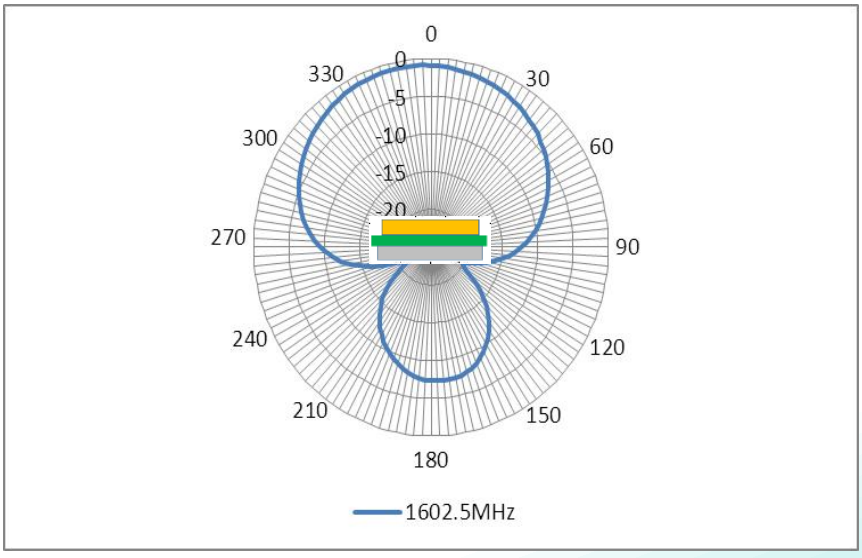
## CHARTS

### Radiation Pattern (70mm x 70mm ground plane ) GPS & Galileo




### Radiation Pattern (70mm x 70mm ground plane ) GLONASS





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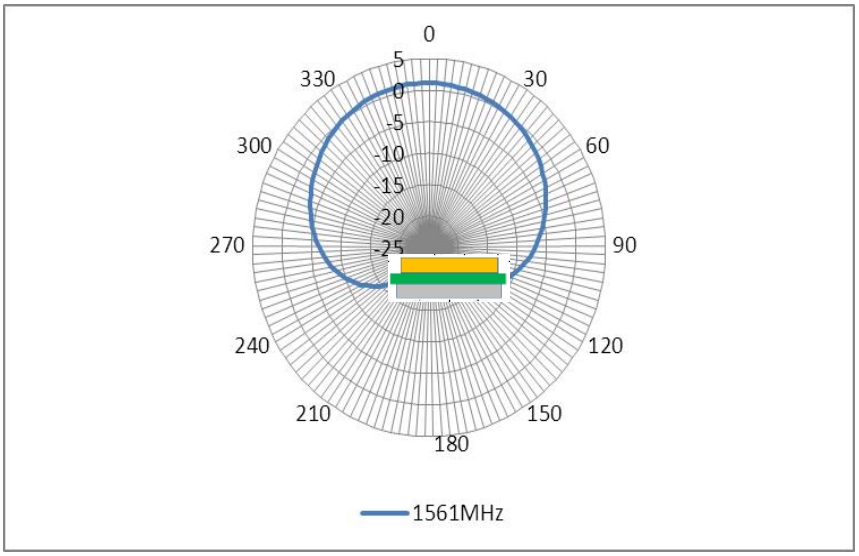
## CHARTS

Radiation Pattern (70mm x 70mm ground plane ) BD2



## PACKAGING

56pcs antennas per package box

56pcs PE bags per package box

1pcs antenna per PE bag

Package box: 440mm*292mm*310mm

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
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**Данный компонент на территории Российской Федерации**

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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