



### Features:

- 3-Feeds (4G, WiFi, GNSS)
- GNSS Active Antenna
  - LNA gain 30dB
  - Pre and post LNA filtering
- Direct mount
- Connector SMA Male
- Cable 17 feet
- RoHS compliant

### Applications:

- 4G LTE 698-2700MHz
- WiFi dualband 2.4/5GHz
- DSRC 5850-5925GHz
- GNSS (Beidou, GPS, Galileo, Glonass)
- Vehicular mounting
- Asset Tracking, Navigation, Fleet Management
- Mobile and Fixed broadband

All dimensions are in mm / inches

Issue: 1709

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For more information:

Pulse Worldwide Headquarters  
15255 Innovation Drive #100  
San Diego, CA 92128  
USA  
Tel: 1-858-674-8100

Pulse/Larsen Antennas  
18110 SE 34<sup>th</sup> St Bldg 2 Suite 250  
Vancouver, WA 98683  
USA  
Tel: 1-360-944-7551

Europe Headquarters  
Pulse GmbH & Co, KG  
Zeppelinstrasse 15  
Herrenberg, Germany  
Tel: 49 7032 7806 0

Pulse (Suzhou) Wireless Products Co, Inc.  
99 Huo Ju Road(#29 Bldg, 4<sup>th</sup> Phase  
Suzhou New District  
Jiangsu Province, Suzhou 215009 PR China  
Tel: 86 512 6807 9998



**Series: SharkFin**
**Description: 4G/WiFi/Active GNSS Direct Mount Antenna**
**PART NUMBER: GNSSDM700/5800SSS**
**ELECTRICAL SPECIFICATIONS**

Frequency(LTE Cable)	698-960/1710-2170/2300-2700	MHz
Frequency(WiFi cable)	2400-2485/5150-5925	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 (WiFi/GNSS)*	2:1	Max
Peak Gain (LTE,698-960MHz,Typical)**	3.0	dBi
Peak Gain (LTE,1710-2700MHz,Typical)**	4.5	dBi
Peak Gain (WiFi, 2400-2500MHz,Typical)**	4.1	dBi
Peak Gain (WiFi, 5150-5925MHz,Typical)**	5.9	dBi
Efficiency (LTE,698-960MHz,Typical)**	83	%
Efficiency (LTE,1710-2700MHz,Typical)**	82	%
Efficiency (WiFi,2400-2500MHz,Typical)**	82	%
Efficiency (WiFi,5150-5925MHz,Typical)**	54	%
HPBW / Horizontal Plane (LTE/WiFi)**	Omni	
HPBW / Vertical Plane (LTE, 698-960MHz, Typical)**	52°	
HPBW / Vertical Plane (LTE,1710-2700MHz, Typical)**	35°	
HPBW / Vertical Plane (WiFi, 2400-2485MHz, Typical)**	32°	
HPBW / Vertical Plane (WiFi,5150-5925MHz, Typical)**	25°	
Polarization (LTE/WiFi)	Vertical	
Polarization (GNSS)	RHCP	
Power Withstanding (LTE, 698-960MHz)	100	W
Power Withstanding (LTE, 1710-2700MHz)	20	W
Power Withstanding (WiFi, 2400-5925MHz)	20	W

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**Series: SharkFin**

**Description:** 4G/WiFi/Active GNSS Direct  
Mount Antenna

**PART NUMBER: GNSSDM700/5800SSS**

RHCP Peak Gain (Radiating element, Typical)***	1 dBic
Gain (LNA gain)	30 dB $\pm$ 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
Noise Figure	<2.4 dB
Operating Voltage	3.3-5 Vdc $\pm$ 0.5V
Current Consumption	9 mA $\pm$ 2 mA

\* Tested with 5.18m cable and with 500mm ground plane

\*\*Tested with 200mm cable and with 500mm ground plane

\*\*\*Tested with 70X70mm ground plane

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Series: SharkFin

**Description:** 4G/WiFi/Active GNSS Direct  
Mount Antenna**PART NUMBER:** GNSSDM700/5800SSS**MECHANICAL SPECIFICATIONS**

Overall Length	3.5 H x Ø4.26 /88.3 x Ø108[in/mm]
Weight	470g
Antenna Color	BLACK or WHITE
Connector type	SMA MALE
Cable type	RG58/RG174[GNSS/ LTE&WLAN]
Cable length	17' / 5.18m

**ENVIRONMENTAL SPECIFICATIONS**

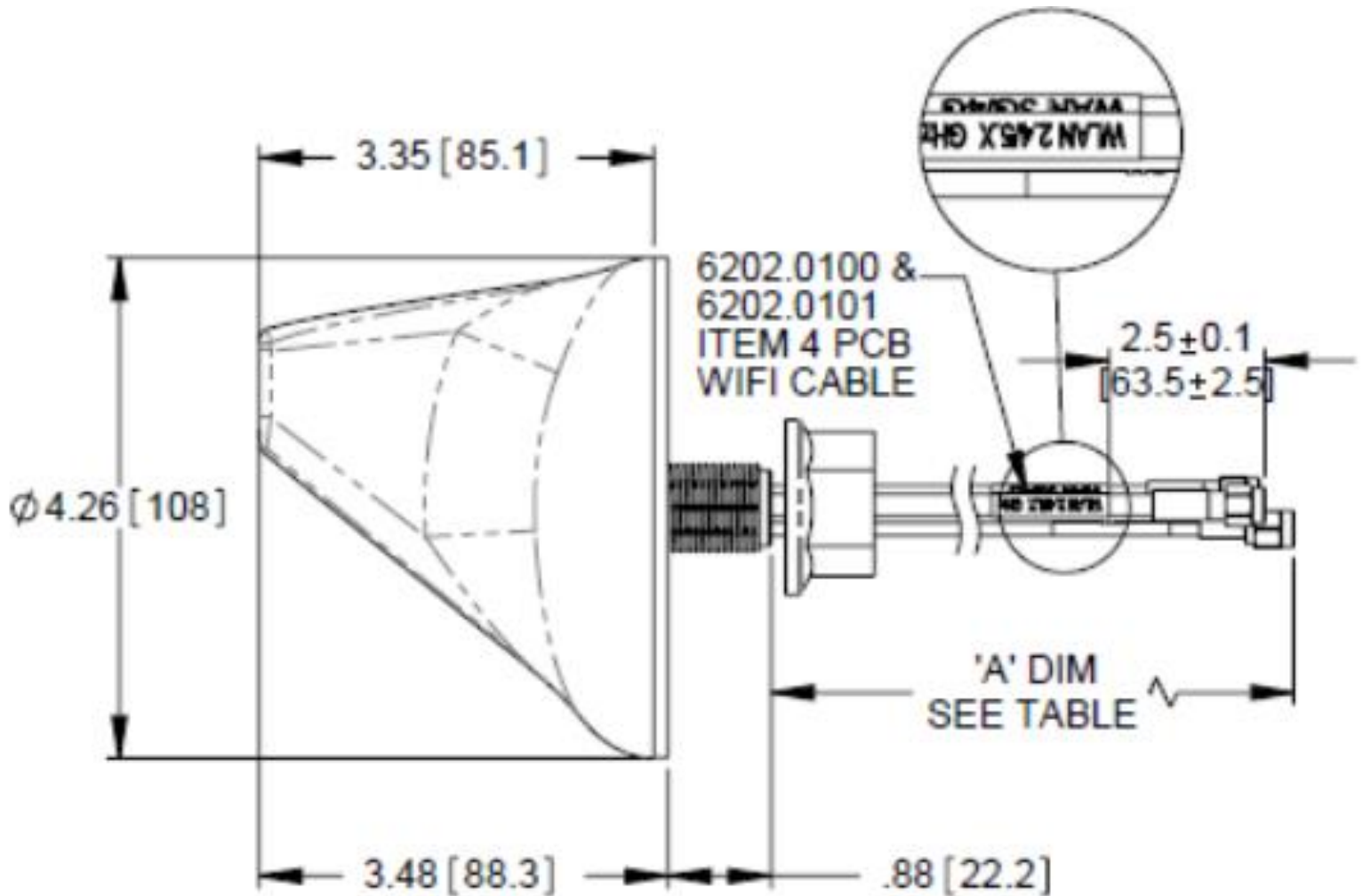
Operating Temperature	-40/+85 ° C
Storage Temperature	-40/+85 ° C
Ingress Protection	IP65
Wind-loading	120km/h
RoHS Compliant	Yes

Series: SharkFin

**Description:** 4G/WiFi/Active GNSS Direct Mount Antenna

**PART NUMBER:** GNSSDM700/5800SSS

MECHANICAL DRAWING



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**Description:** 4G/WiFi/Active GNSS Direct  
Mount Antenna

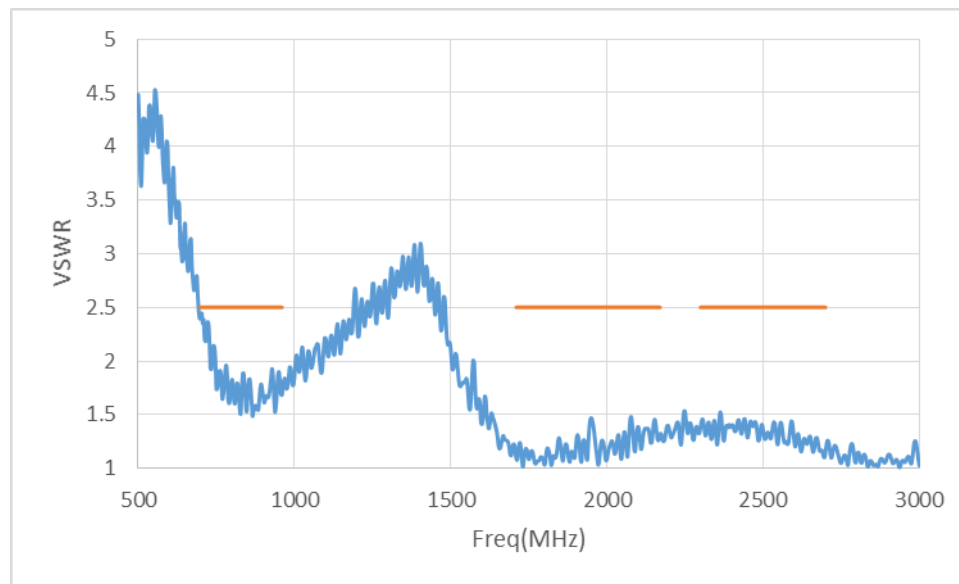
**PART NUMBER: GNSSDM700/5800SSS**

### Test Setup

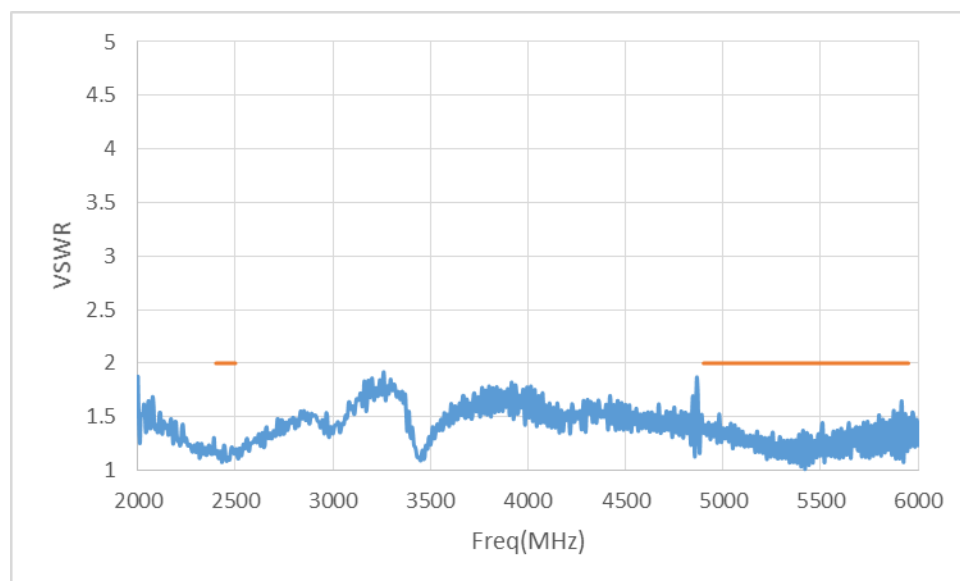
- \* VSWR is tested with 5.18m cable and with 500mm ground plane
- \*\* Radiation performance is tested with 200mm cable and with 500mm ground plane
- \*\*\* GNSS module is tested with 70X70mm ground plane

## CHARTS

### VSWR of LTE

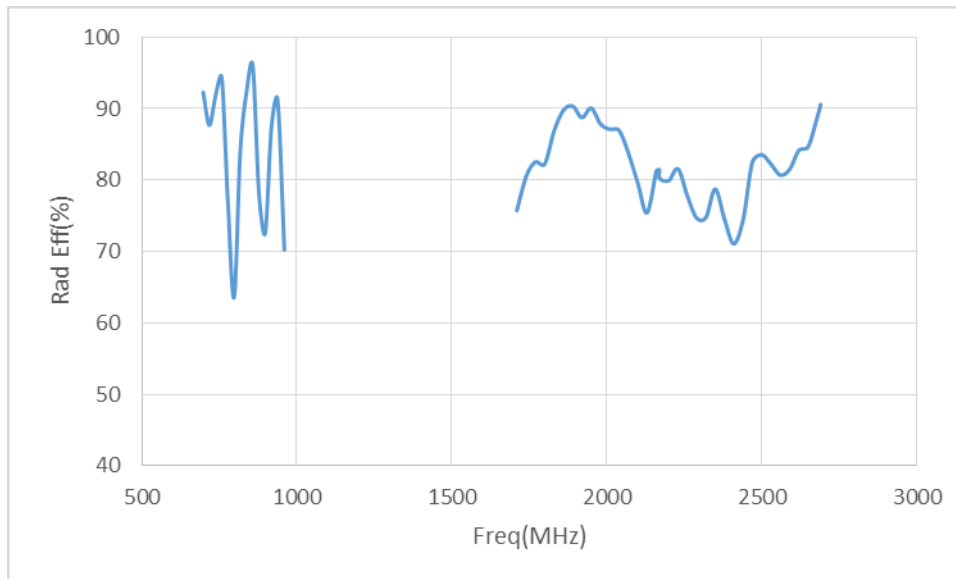


### VSWR of WiFi

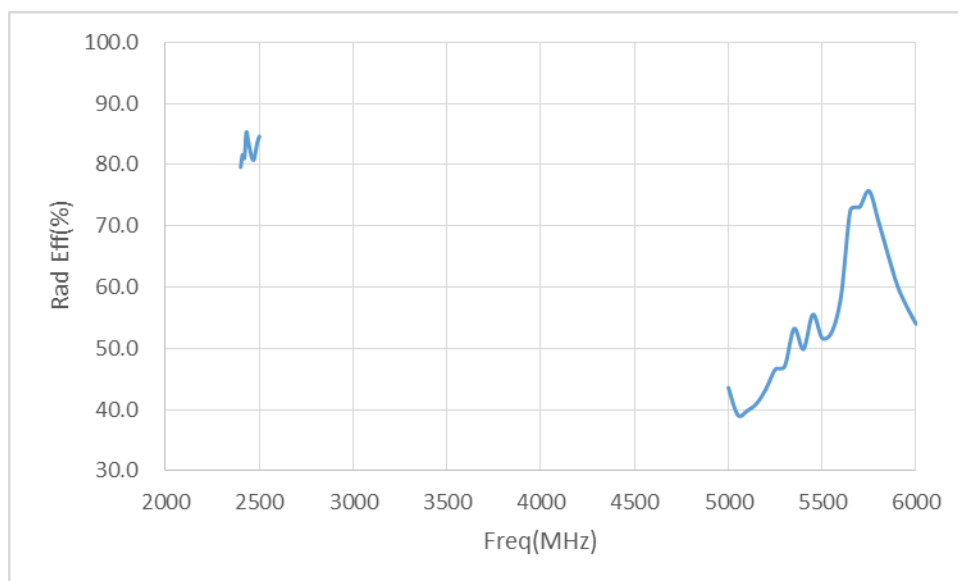


## CHARTS

### Radiation Efficiency of LTE



### Radiation Efficiency of WiFi





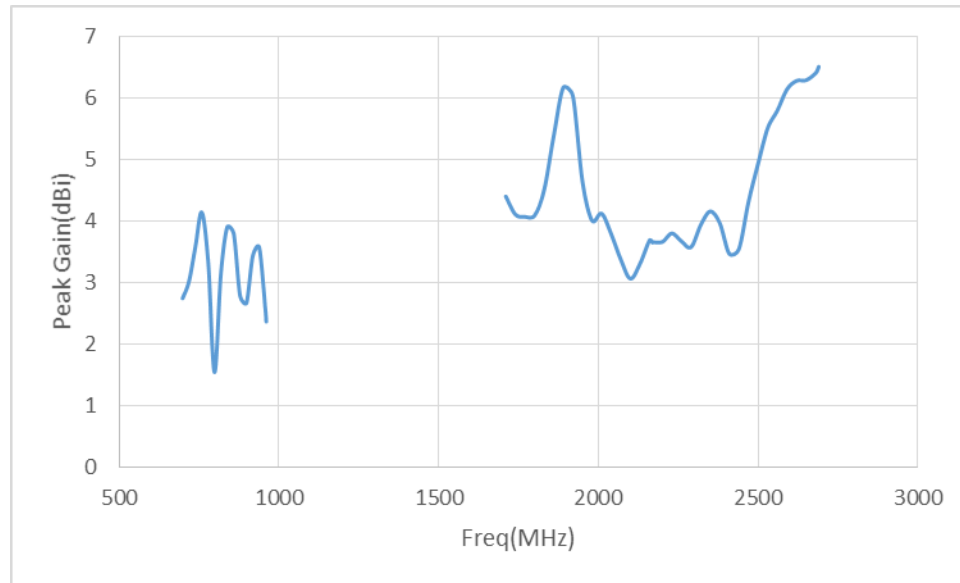
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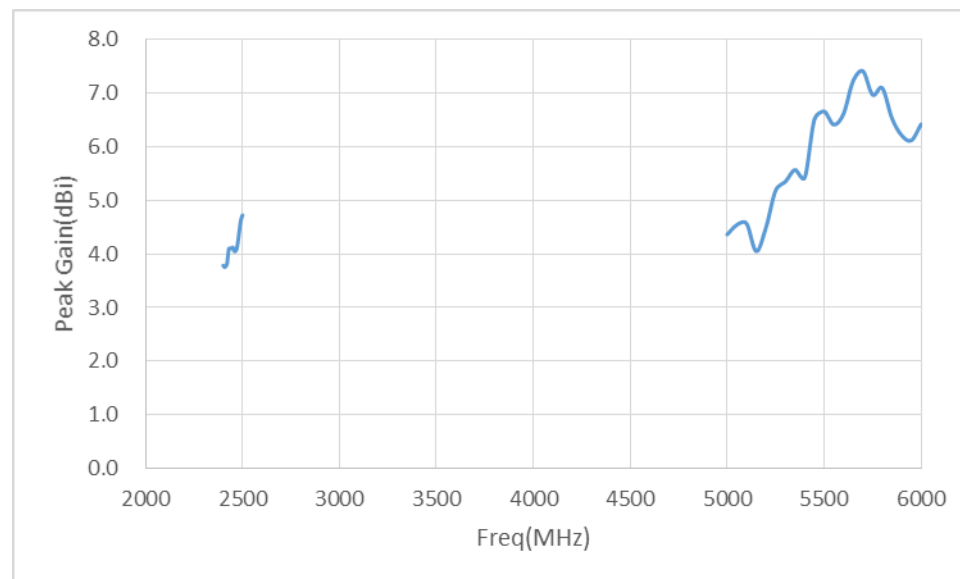
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## CHARTS

### Peak Gain of LTE



### Peak Gain of WiFi



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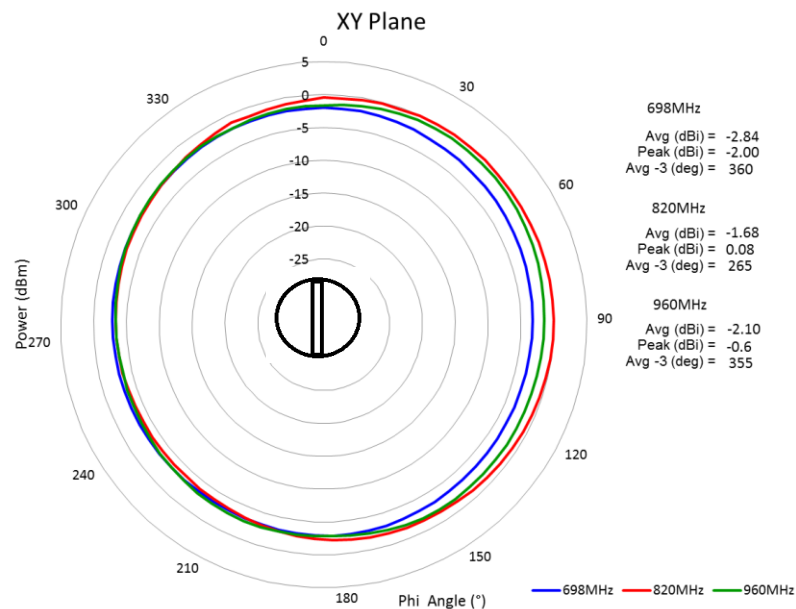
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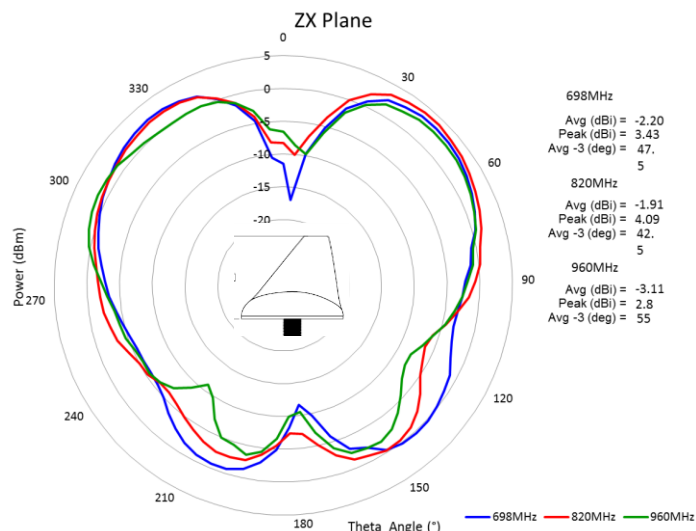
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## CHARTS

### LTE antenna X-Y plane radiation pattern at LTE low band



### LTE antenna Z-X plane radiation pattern at LTE low band



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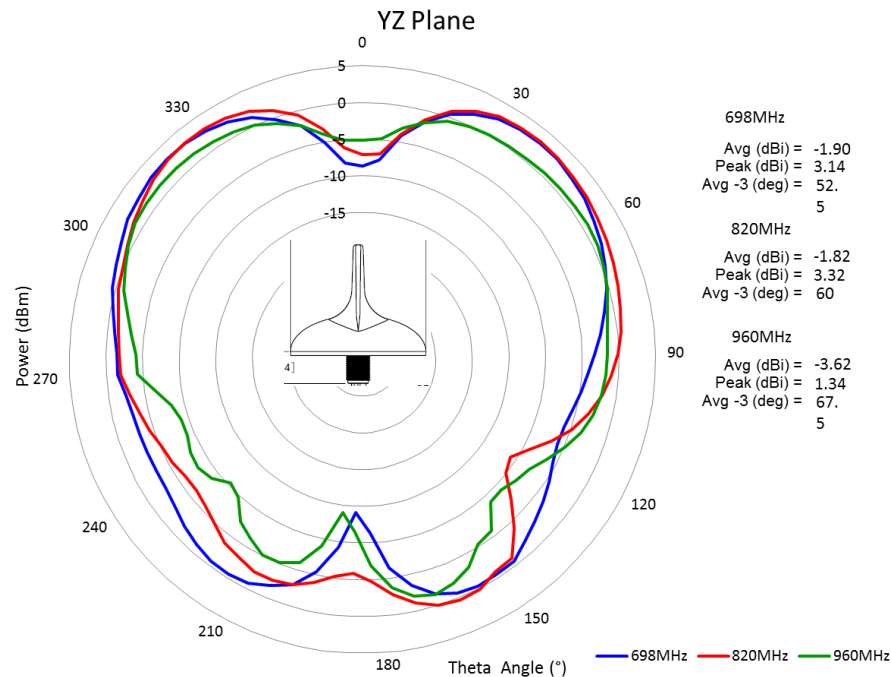
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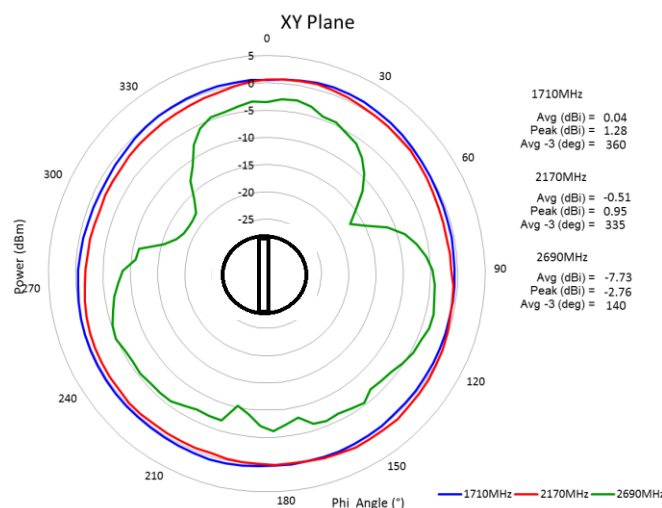
PART NUMBER: GNSSDM700/5800SSS

## CHARTS

### LTE antenna Y-Z plane radiation pattern at LTE low band



### LTE antenna X-Y plane radiation pattern at LTE high band



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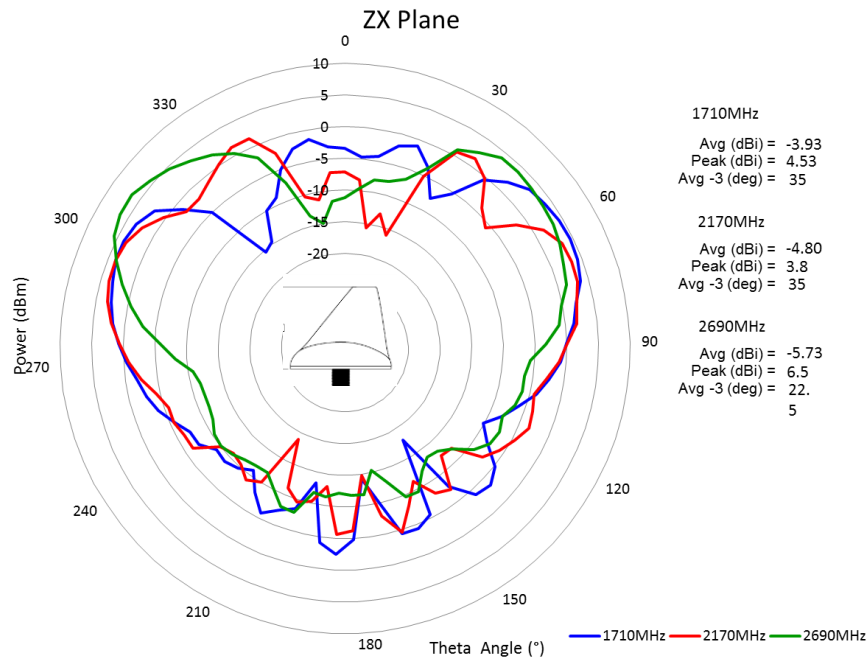
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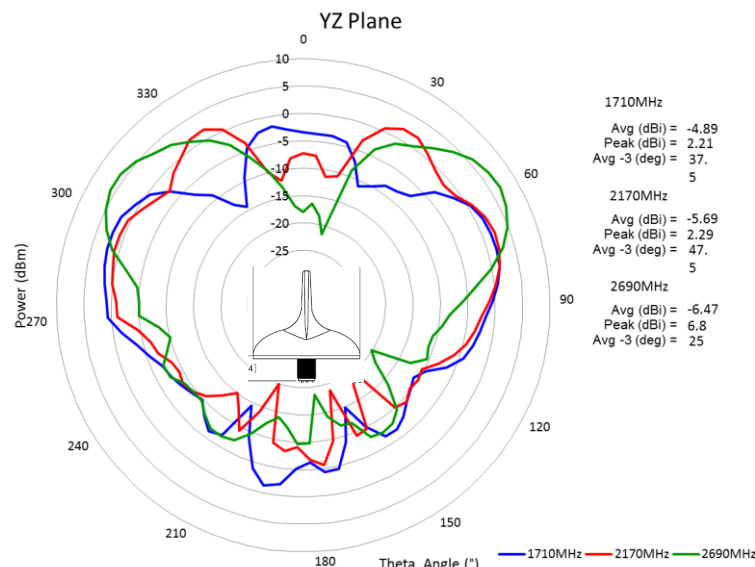
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## CHARTS

### LTE antenna Z-X plane radiation pattern at LTE high band



### LTE antenna Y-Z plane radiation pattern at LTE high band



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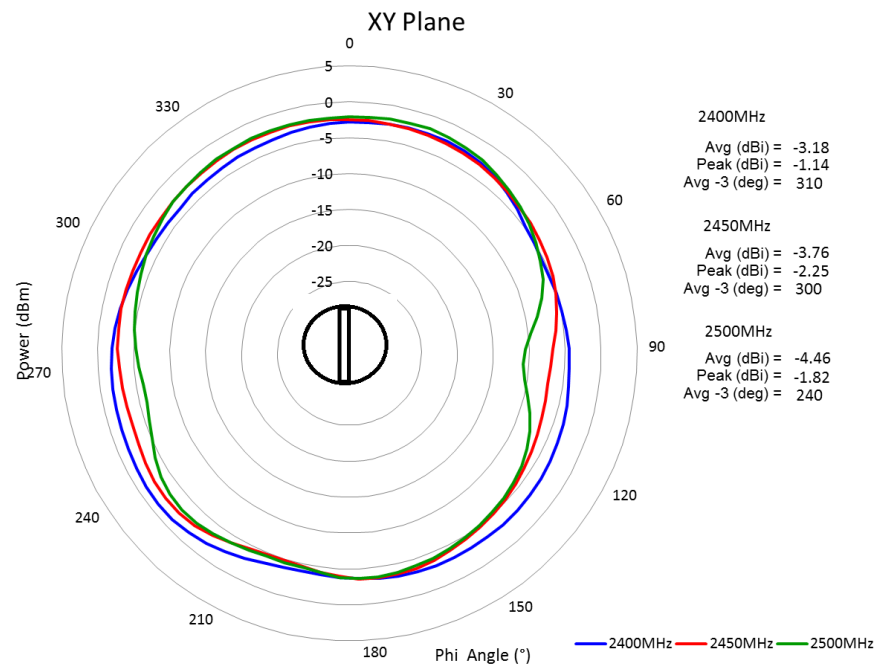
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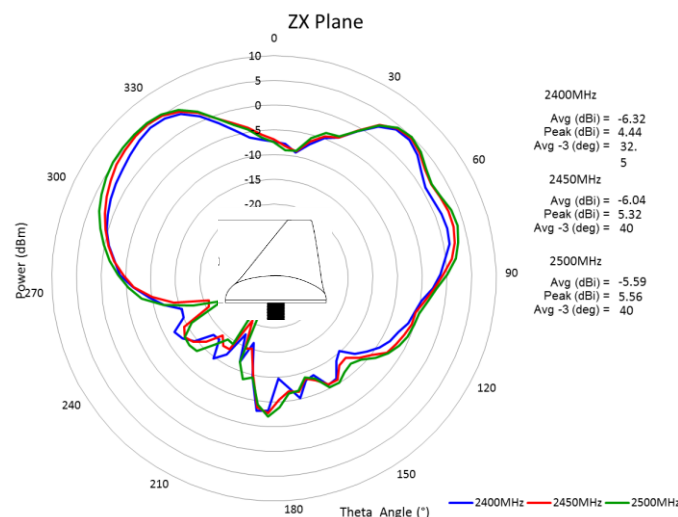
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## CHARTS

### WiFi antenna X-Y plane radiation pattern at WiFi low band



### WiFi antenna Z-X plane radiation pattern at WiFi low band



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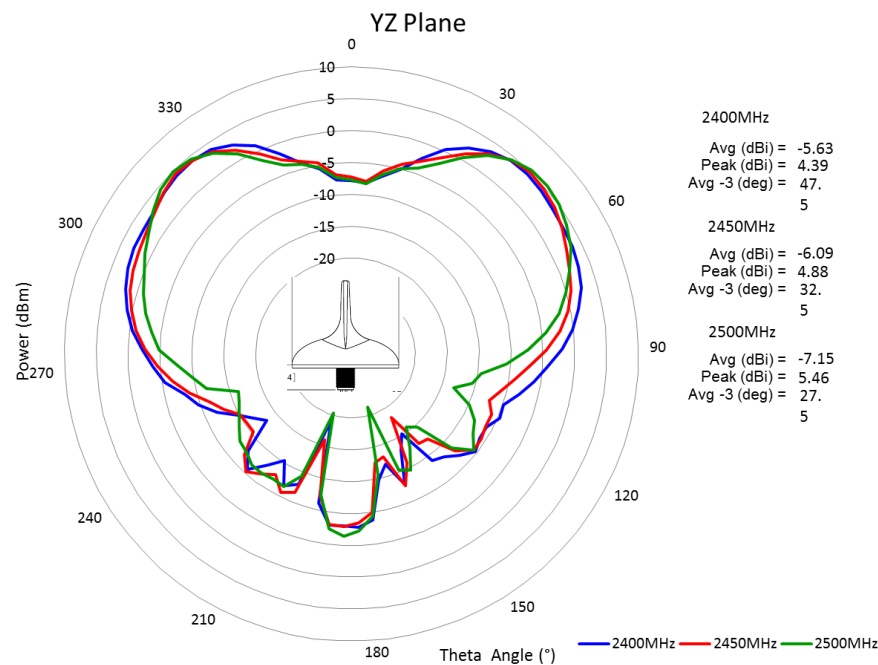
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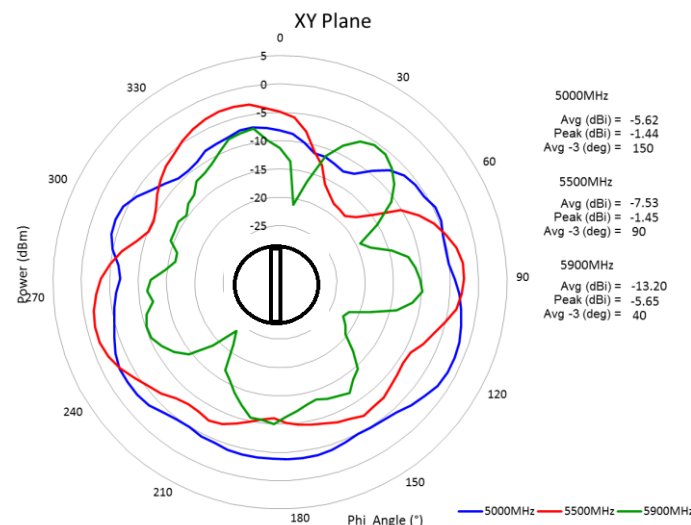
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## CHARTS

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### WiFi antenna X-Y plane radiation pattern at WiFi high band



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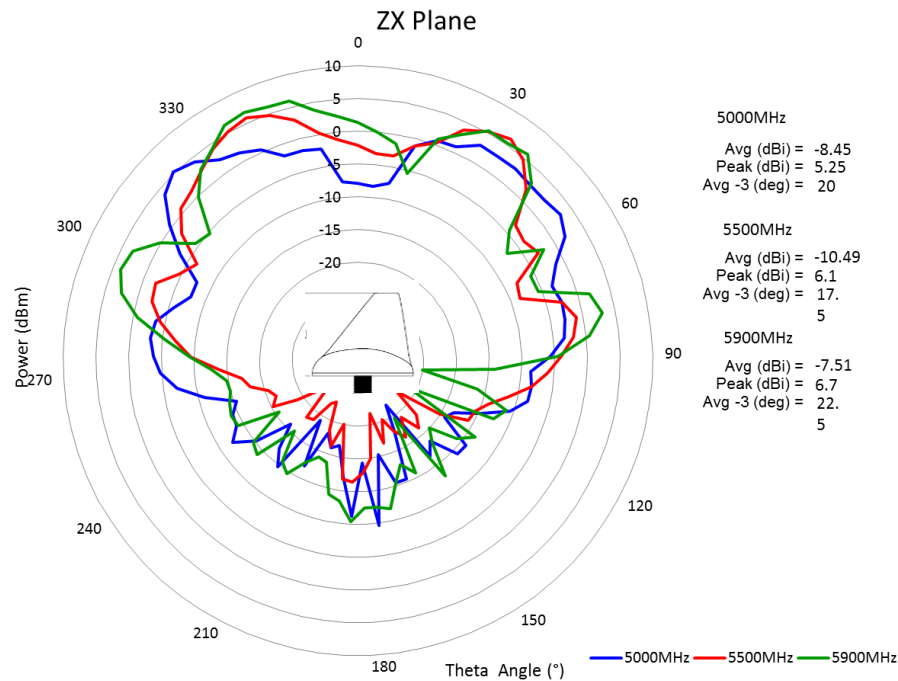
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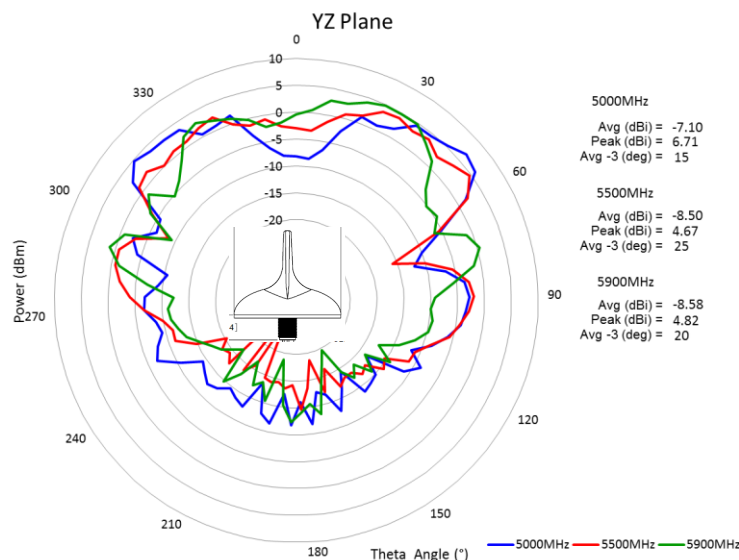
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### WiFi antenna Y-Z plane radiation pattern at WiFi high band



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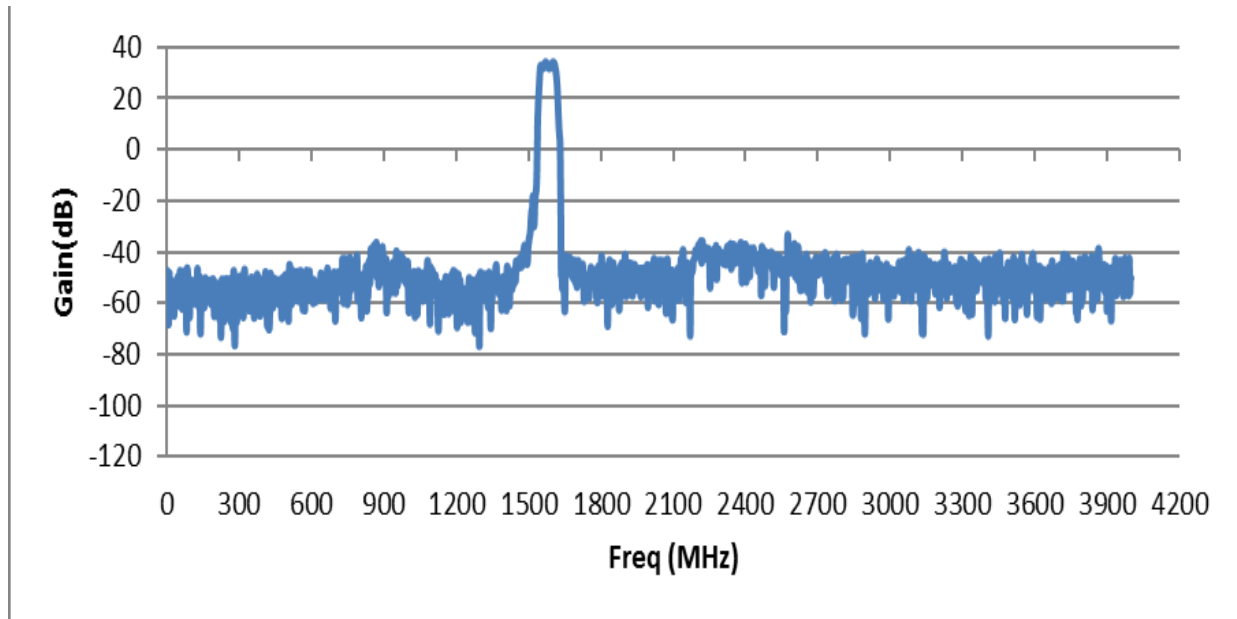
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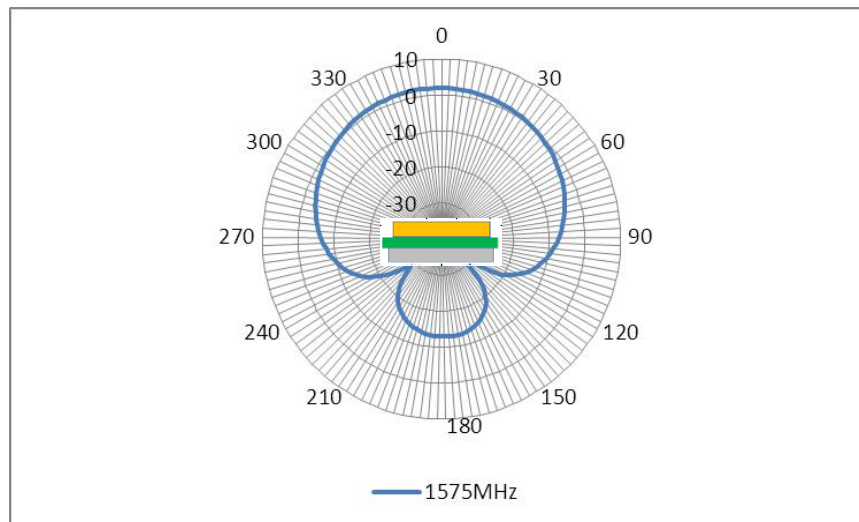
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## CHARTS

LNA Gain and out-of-band rejection



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



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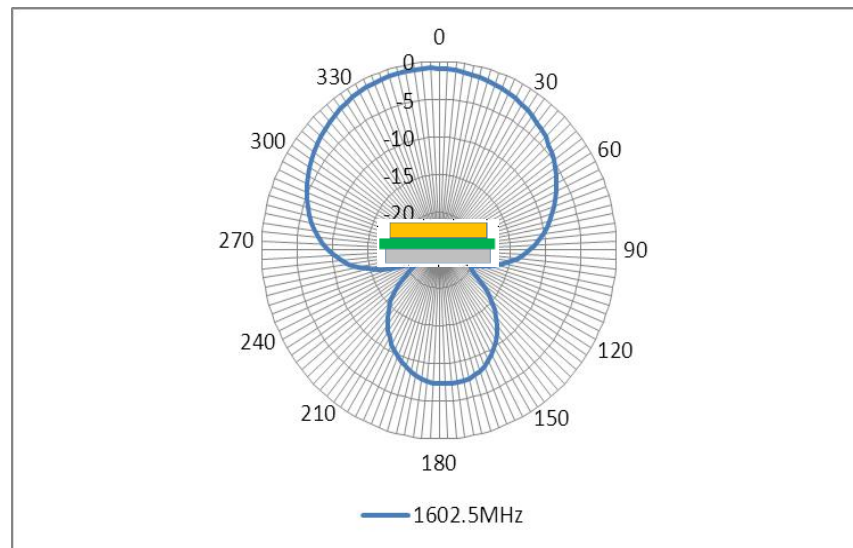
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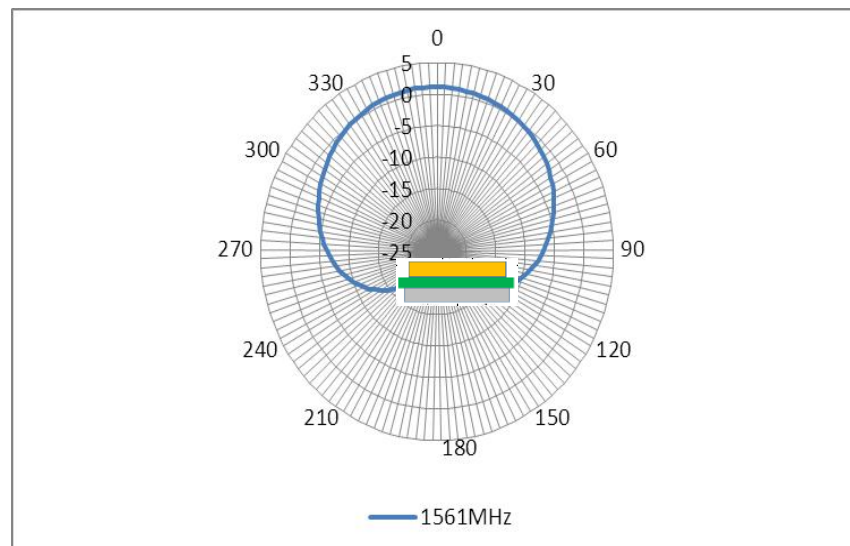


## CHARTS

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



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



**Series: SharkFin**

**Description:** 4G/WiFi/Active GNSS Direct  
Mount Antenna

**PART NUMBER: GNSSDM700/5800SSS**

## PACKAGING

1pcs antennas per PE bag

12pcs antenna per package box

Package box: 400mm\*300mm\*30mm

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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## JONHON

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«FORSTAR» (основан в 1998 г.)

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кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А