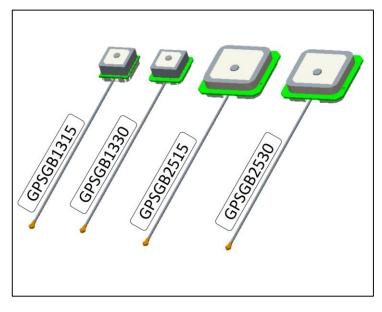


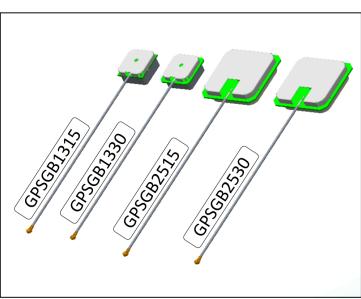
## **Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX







## Features:

- Satellite navigation active antenna
- · Ultra low noise amplifiers
- High Gain (30dB) and Low Gain (15dB) LNA variants available
- High rejection filters to suppress out of band interference

## **Applications:**

- GPS, GLONASS, BeiDou, Compass, Galileo satellite navigation system
- Asset tracking, Fleet management, IoT, M2M

All dimensions are in mm / inches

Issue: 1626

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

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Pulse Worldwide Headquarters 12220 World Trade Drive San Diego, CA 92128 USA Tel:1-858-674-8100 Pulse/Larsen Antennas 3611 NE 112<sup>th</sup> Ave Vancouver, WA 98682 USA Tel: 1-360-944-7551 Europe Headquarters Pulse GmbH & Do, 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



**Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX

# **Series: Internal Active GPS**

## This document covers all product variants of the following product family:

Projects	Ceramic Size(mm)	PCB Size (mm)	Thickness (mm)	Cable	Connector
GPSGB1315	13 X 13 X 5	14 X 15 X 0.8	8.15	Φ: 1.13mm	I-PEX MHF 20278-112R-13 compatible with U.FL connector
GPSGB1330		16 X 17 X 0.8	8.15		
GPSGB2515	25 V 25 V 4	20 V 20 V 0 0	0	L:100mm	
GPSGB2530	25 X 25 X 4	30 X 30 X 0.8	8		



**Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

**PART NUMBER: GPSGBXXXX** 

# **Series: Internal Active GPS**

## **ELECTRICAL SPECIFICATIONS**

#### **GPSGB1315**

Frequency	1561.098±2.046/ 1575.42±1.023/ 1602.5625±4	MHz
Nominal Impedance	50	O
VSWR	2:1	
Gain (Radiating element)		dBic ± 1 dB
Gain (LNA gain)		$dB \pm 2 dB$
Polarization	RHCP	
Out of Band Rejection		
698 MHz	>60	dB
960MHz	>50	dB
1710MHz	>55	dB
2170MHz	>55	dB
2400MHz	>55	dB
2700MHz	>55	dB



**Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

**PART NUMBER: GPSGBXXXX** 

# **Series: Internal Active GPS**

### **ELECTRICAL SPECIFICATIONS**

#### **GPSGP1330**

Frequency	1561.098±2.046/	MHz
•	$1575.42 \pm 1.023$	
	$1602.5625 \pm 4$	
Nominal Impedance	50	Ω
VSWR	2:1	
Gain (Radiating element)	-1	$dBic \pm 1 \ dB$
Gain (LNA gain)	30	$dB\pm 2\;dB$
Polarization	RHCP	
Out of Band Rejection		
698 MHz	>70	dB
960MHz	>65	dB
1710MHz	>60	dB
2170MHz	>65	dB
2400MHz	>65	dB
2700MHz	>65	dB



**Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

**PART NUMBER: GPSGBXXXX** 

# **Series: Internal Active GPS**

### **ELECTRICAL SPECIFICATIONS**

### **GPSGP2515**

OI					
Frequency	1561.098±2.046/ 1575.42±1.023/	MHz			
	$1602.5625 \pm 4$				
Nominal Impedance	50	Ω			
VSWR	2:1				
Gain (Radiating element)	1	$dBic \pm 1 \ dB$			
Gain (LNA gain)	15	$dB\pm 2\;dB$			
Polarization	RHCP				
Out of Band Rejection					
698 MHz	>60	dB			
960MHz	>50	dB			
1710MHz	>55	dB			
2170MHz	>55	dB			
2400MHz	>55	dB			
2700MHz	>55	dB			



**Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

**PART NUMBER: GPSGBXXXX** 

# **Series: Internal Active GPS**

### **ELECTRICAL SPECIFICATIONS**

### **GPSGB2530**

Frequency	1561.098±2.046/	MHz
Trequency	$1575.42 \pm 1.023$	IVII IZ
	$1602.5625 \pm 4$	
Nominal Impedance	50	Ω
VSWR	2:1	
Gain (Radiating element)	1	$dBic \pm 1 \; dB$
Gain (LNA gain)	30	$dB\pm 2\;dB$
Polarization	RHCP	
Out of Band Rejection		
698 MHz	>70	dB
960MHz	>65	dB
1710MHz	>60	dB
2170MHz	>65	dB
2400MHz	>65	dB
2700MHz	>65	dB



**Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX

# **Series: Internal Active GPS**

### **ELECTRICAL SPECIFICATIONS**

### **ALL GPSGBXXXX**

Noise Figure <2.4 dB

Operating Voltage 3.3-5 Vdc±0.5V

Current Consumption <6 mA



**Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX

**Series: Internal Active GPS** 

### **MECHANICAL SPECIFICATIONS**

Fixing system Adhesive Tape

### **ENVIRONMENTAL SPECIFICATIONS**

Operating temperature

-40 ~ +85° C



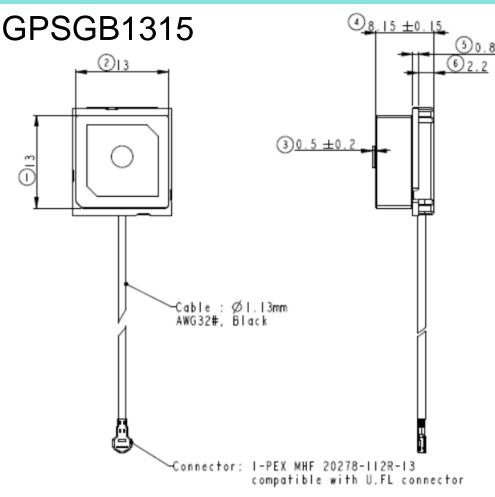
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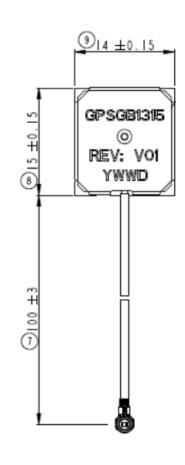
GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX

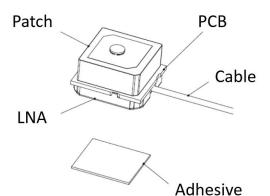
## **Series: Internal Active GPS**

### **MECHANICAL DRAWING**





Suggested Receptacle: I-PEX 20279-001E-++ or I-PEX 2044I-001E-01



P.S.:

Adhesive tape material: 3M R16, T=0.4mm It's not assembled, but included in the sales package

Issue: 1626





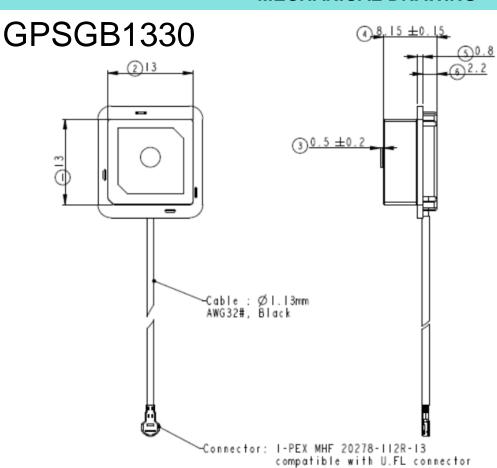
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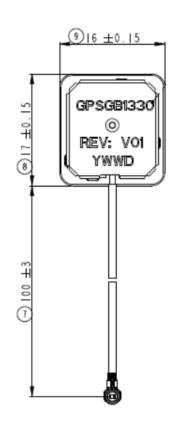
GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX

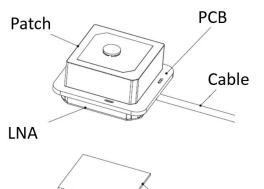
## **Series: Internal Active GPS**

### **MECHANICAL DRAWING**





Suggested Receptacle: I-PEX 20279-001E-++ or I-PEX 20441-001E-01



P.S.:

Adhesive tape material: 3M R16, T=0.4mm It's not assembled, but included in the sales package

Issue: 1626

ROHS

Adhesive



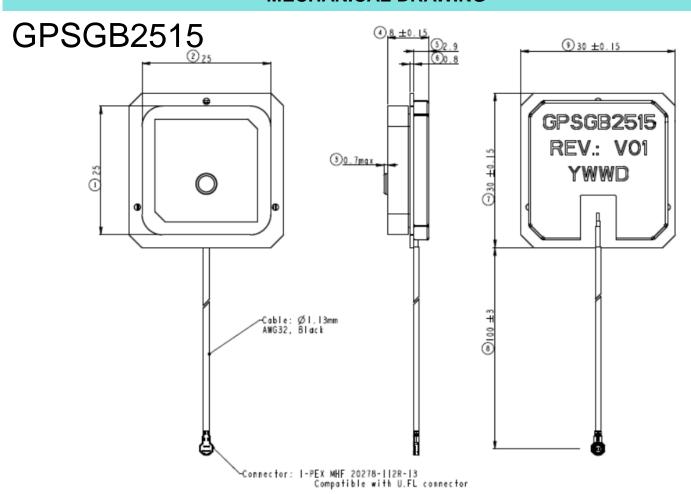
**Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

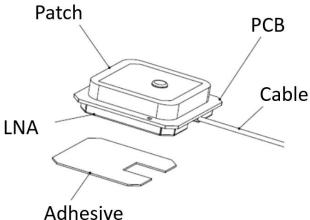
PART NUMBER: GPSGBXXXX

## **Series: Internal Active GPS**

### **MECHANICAL DRAWING**



Suggested Receptacle: I-PEX 20279-001E-++
ir I-PEX 20441-001E-01



P.S.:

Adhesive tape material: 3M R16, T=0.4mm It's not assembled, but included in the sales package

Issue: 1626



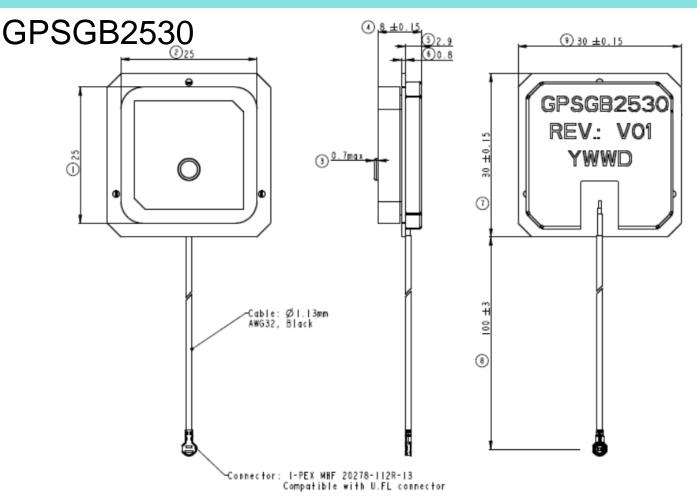
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GPS/GLONASS/BEIDOU/COMPASS/Galileo

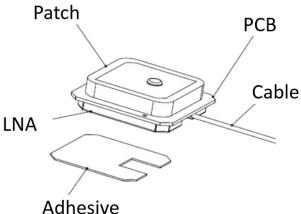
PART NUMBER: GPSGBXXXX

## **Series: Internal Active GPS**

### **MECHANICAL DRAWING**



Suggested Receptacle: I-PEX 20279-001E-\*\* or I-PEX 20441-001E-01



P.S.:

Adhesive tape material: 3M R16, T=0.4mm It's not assembled, but included in the sales package

Issue: 1626

ROHS

12





**Series: Internal Active GPS** 

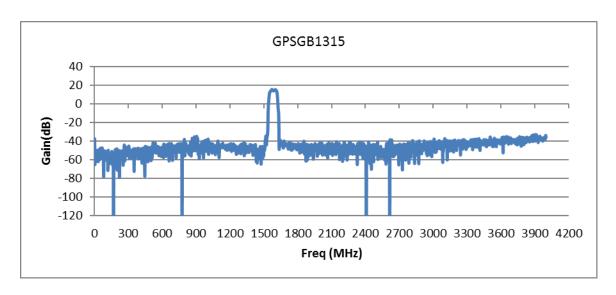
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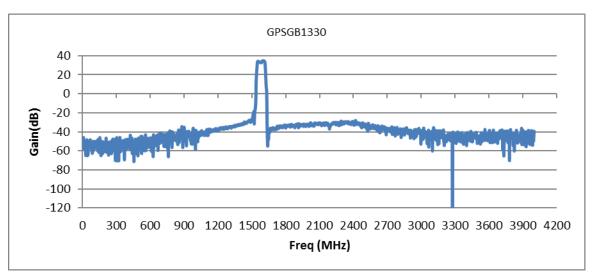
GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX

#### **CHARTS**

# LNA Gain and out-of-band rejection











**Series: Internal Active GPS** 

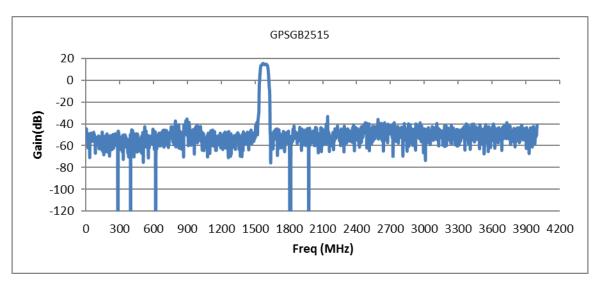
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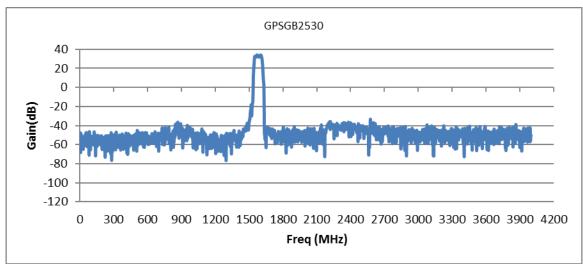
GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX

#### **CHARTS**

# LNA Gain and out-of-band rejection







**Description**:

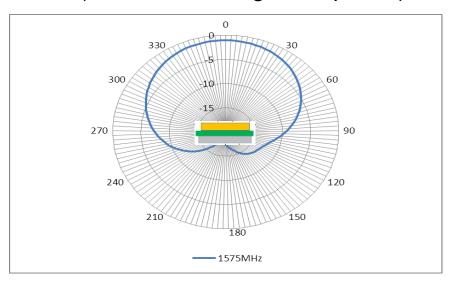
GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX

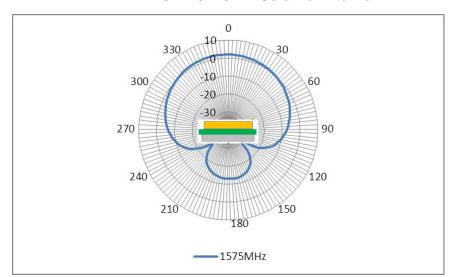
# **Series: Internal Active GPS**

#### **CHARTS**

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



13 X 13 X 5mm Ceramic Antenna



25 X 25 X 4mm Ceramic Antenna







**Series: Internal Active GPS** 

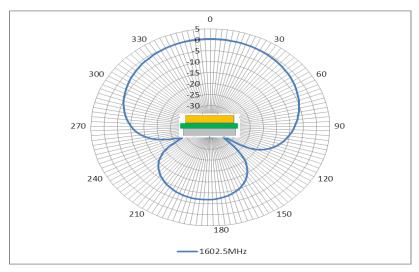
## **Description**:

GPS/GLONASS/BEIDOU/COMPASS/Galileo

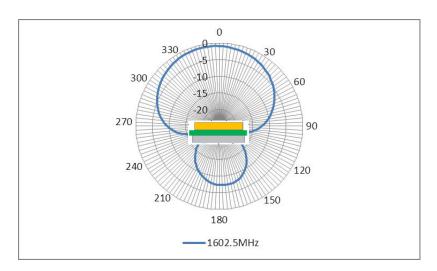
PART NUMBER: GPSGBXXXX

#### **CHARTS**

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



13 X 13 X 5mm Ceramic Antenna



25 X 25 X 4mm Ceramic Antenna



**Description**:

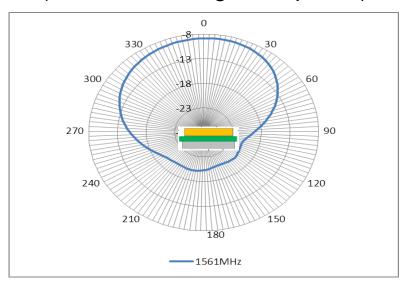
GPS/GLONASS/BEIDOU/COMPASS/Galileo

PART NUMBER: GPSGBXXXX

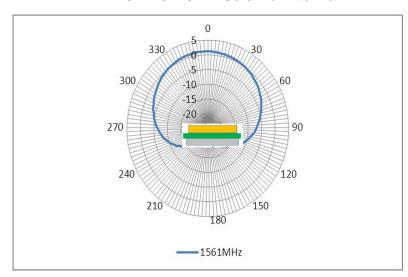
## **Series: Internal Active GPS**

#### **CHARTS**

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



13 X 13 X 5mm Ceramic Antenna



25 X 25 X 4mm Ceramic Antenna