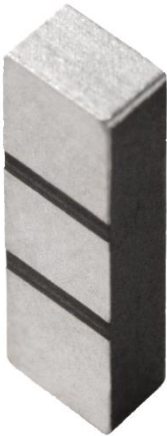


## Monarch Series: Satellite Navigation System

### Antenna GPS/GLONASS/Beidou/Galileo

Part# W3010

(Ground cleared under antenna, clearance area 10.80 x 6.25mm)



#### Features

- Omni directional radiation
- Low profile
- Compact size W x L x H (3.2 x 10.0 x 2.0 mm)
- Low weight (310 mg)
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packaging
- RoHS Compliant Product

#### Applications

- Systems: GPS/GLONASS/Beidou/Galileo
- 1560 - 1610 MHz
- Global Navigation
- Asset and Fleet Tracking
- Mobile Devices
- Industrial, Internet of Things

#### Electrical specifications @ +25 °C

*Note: Electrical characteristics depend on test board (GP) size and antenna positioning on GP and Ground Clearance area size.*

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#### For More Information

##### Pulse Worldwide Headquarters

12220 World Trade Drive  
San Diego, CA 92128  
USA

Tel: 1-858-674-8100  
Fax: 1-858-674-8262

##### PulseLarsen Antennas

3611 NE 112<sup>th</sup> Ave  
Vancouver, WA 98682  
USA

Tel: 1-360-944-7551  
Fax: 1-360-944-7556

##### Europe Headquarters

Pulse GmbH & Do, KG  
Zeppelinstrasse 15  
Herrenberg, Germany

Tel: 49 7032 7806 0  
Fax: 49 7032 7806 135

##### Pulse (Suzhou) Wireless Products Co, Inc.

99 Huo Ju Road(#29 Bldg, 4<sup>th</sup> Phase  
Suzhou New District  
Science & Tech Industrial Park  
Jiangsu Province, Suzhou 215009 PR China  
Tel: 86 512 6807 9998  
Fax: 86 512 6809 8023



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**Monarch Series: Satellite Navigation System**  
**Antenna GPS/GLONASS/Beidou/Galileo**  
**Part# W3010**



Covered positioning systems: GPS, GLONASS, Beidou, Galileo

Typical performance (test board size 80x37 mm, PWB ground clearance area 10.80 x 6.25 mm)

ELECTRICAL SPECIFICATIONS	
FREQUENCY (MHz)	1560-1610 MHz
NOMINAL IMPEDANCE ( $\Omega$ )	50
RETURN LOSS	<-12dB
VSWR min	1.6:1
EFFICIENCY	-1.2 dB
EFFICIENCY	75%
GAIN MAX	3 dBi $\pm$ 1 dBi
GAIN MAX RHCP	1 dBic $\pm$ 1 dBic
POWER WITHSTANDING	2 watts
CONNECTOR TYPE	SMD

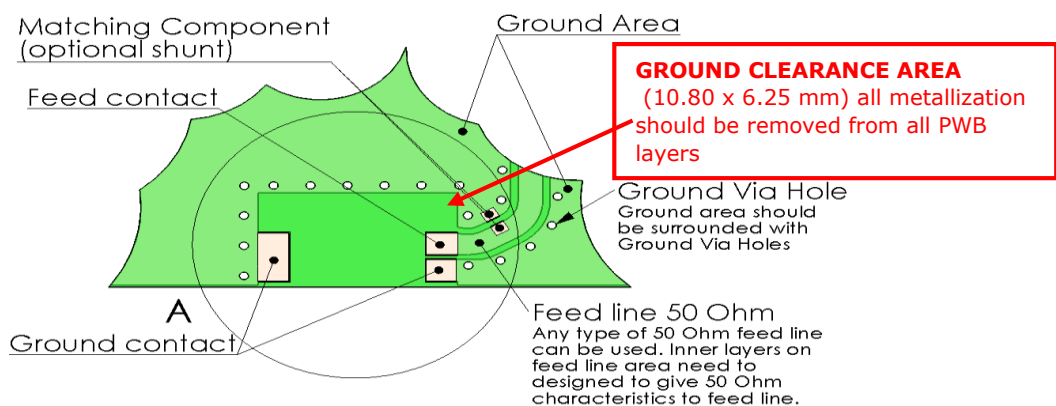
ENVIRONMENTAL SPECIFICATIONS	
OPERATING TEMPERATURE	-40 to +85 °C

MECHANICAL SPECIFICATIONS	
SIZE	3.2 x 10.0 x 2.0 mm
WEIGHT	0.310g

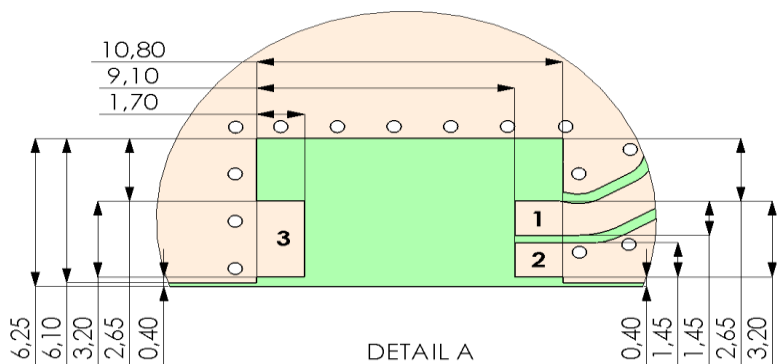
Ceramic Chip Antenna (Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

Terminal Configuration

Layout



Pad dimensions on PWB layout



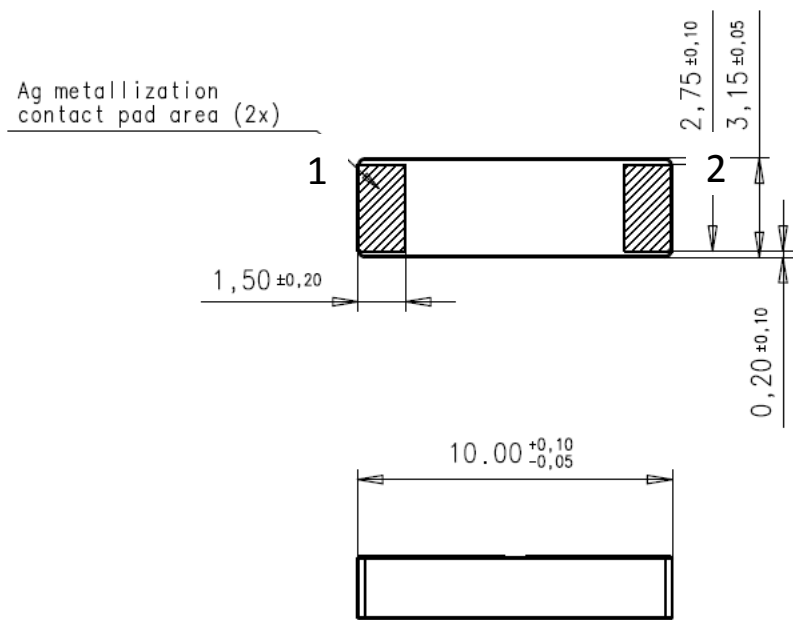
PWB features		
No.	Terminal Name	Terminal Dimensions
1	Feed	1,70 x 1,45 mm
2	GND	1,70 x 1,45 mm
3	GND	1,70 x 3,20 mm

Ceramic Chip Antenna

Ceramic Chip Antenna (Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

Terminal Configuration

Antenna



No.	Terminal Name	Terminal Dimensions
1	Feed / GND	1.50 x 2.75 mm
2	Feed / GND	1.50 x 2.75 mm
Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / GND		

Monarch Series: Satellite Navigation System

Antenna GPS/GLONASS/Beidou/Galileo

Part# W3010

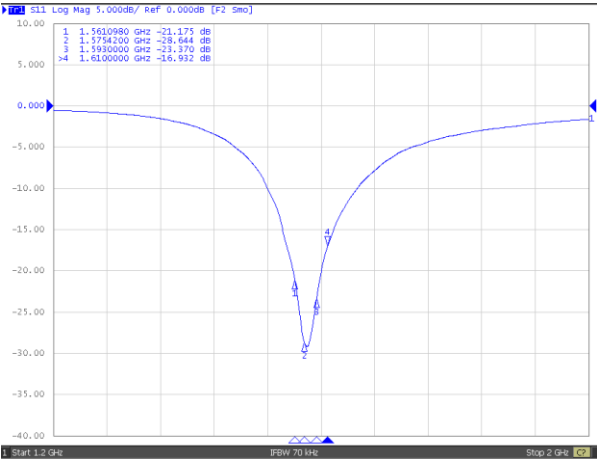


(Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

Typical Electrical Characteristics (T=25 °C)

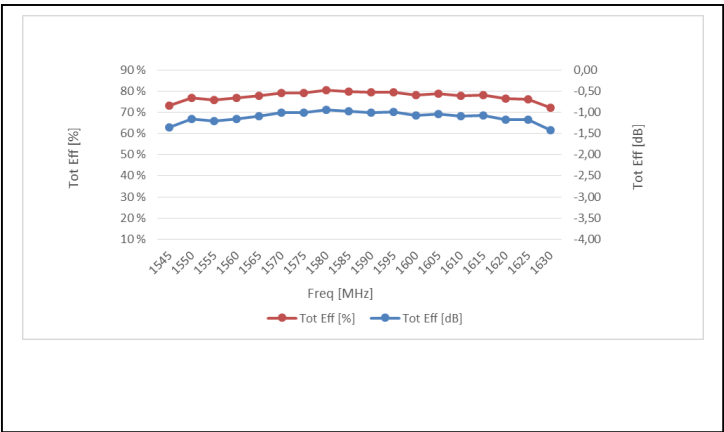
Measured on the 80 x 37 mm test board without matching circuit

Typical Return Loss S11/ impedance

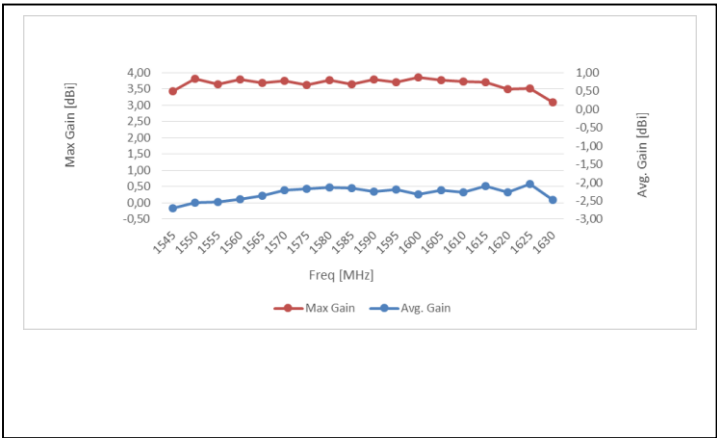


Free space efficiency and maximum gain

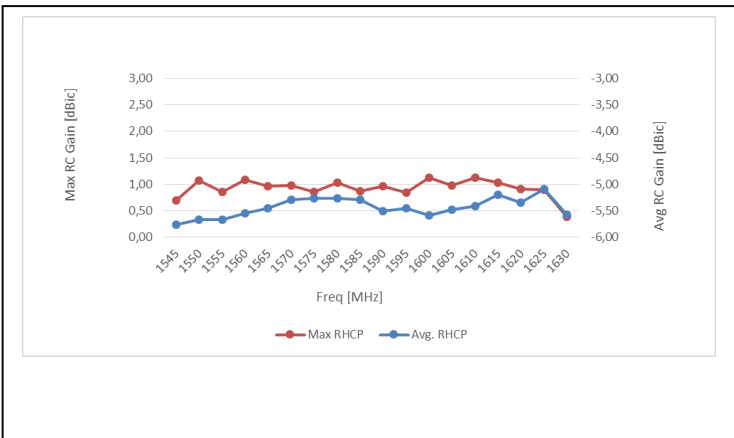
Total Efficiency



Gain

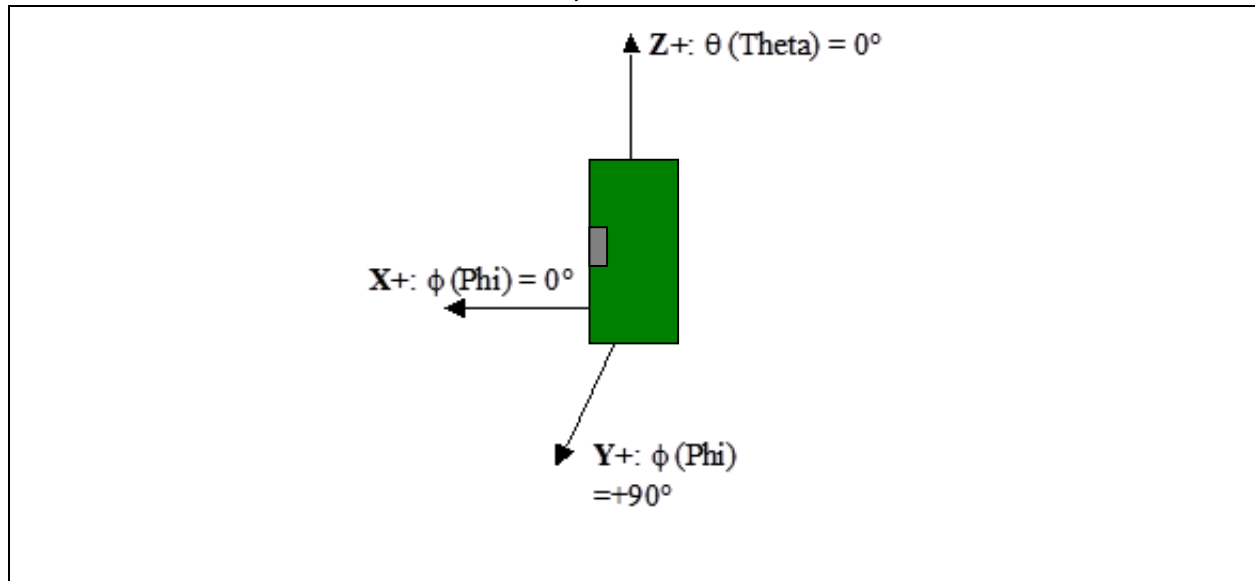


RHCP Gain

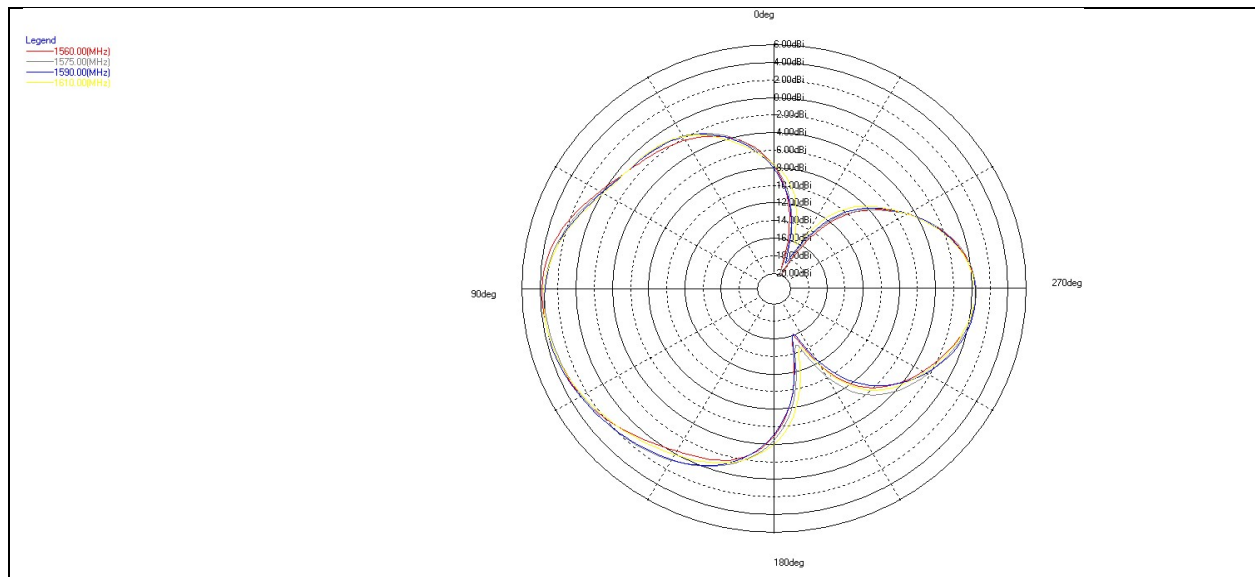


## Typical Free space Radiation Patterns

Radiation pattern coordinates



XZ-Plane



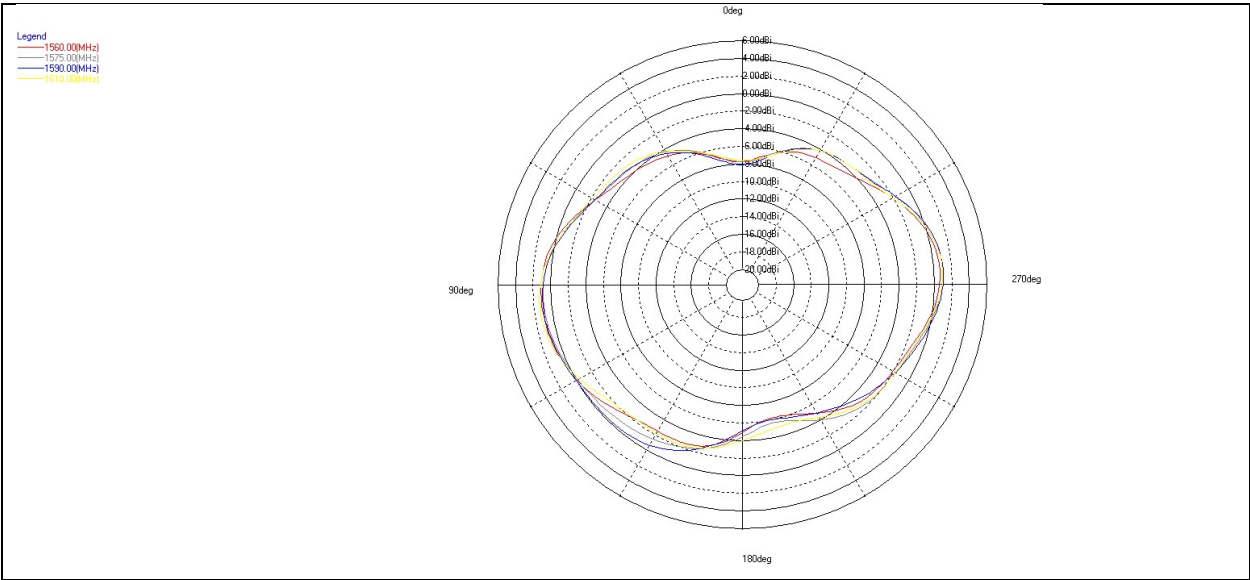
Monarch Series: Satellite Navigation System

Antenna GPS/GLONASS/Beidou/Galileo

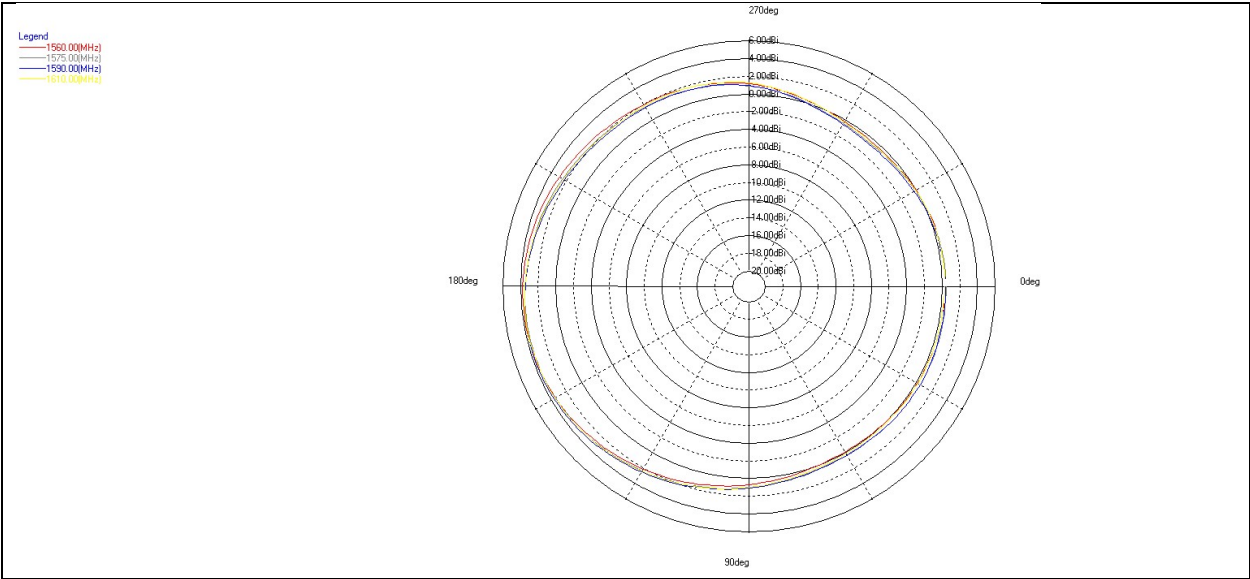
Part# W3010



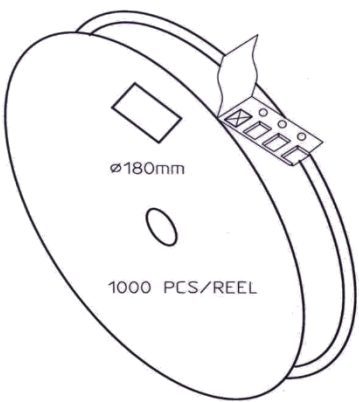
YZ-Plane



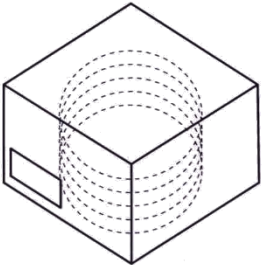
XY-Plane




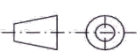
Antenna Packing  
 Packing form



CARRIER TAPE H85-00188  
 width=24,00 depth=2.20  
 COVER TAPE H85-00159  
 width=21.20  
 LENGTH OF TAPE:  
 - Leader section: min 350 mm before component section  
 - Trailer section: min 40 mm after component section.  
 Empty part cavities at leader and trailer section of the tape must be sealed with top cover tape.



BOX H85-00128 1 pcs  
 (182x182x125)  
 - LABEL 1 pcs/BOX  
 REEL H85-00160 4 pcs  
 (D180, W28)  
 - REEL LABEL 1 pcs/REEL

MATERIAL									
HANDLINGS									
		RATIO	DRWN	160107	PeHa	H			
			DGNER			G			
			CHKD			F			
			APPRD			E			
			APPRD BY			D			
PRODUCT			H90-OY113-F01P01				C		
DENOMINATION			PACKING FORM				B		
							A		
			VERSION			MOD/DATE/NAME			