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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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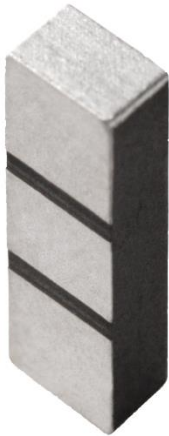


# Monarch Series: Satellite Navigation System

## 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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# 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

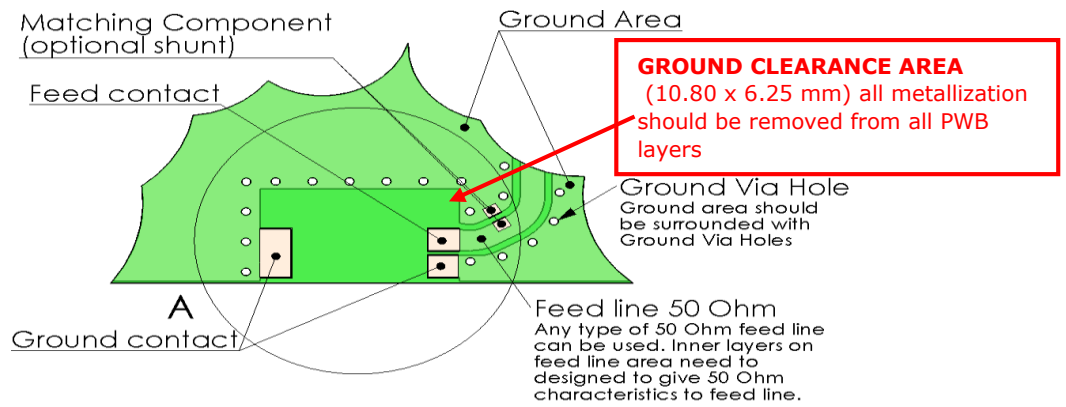
MECHANICAL SPECIFICATIONS	
SIZE	3.2 x 10.0 x 2.0 mm
WEIGHT	0.310g



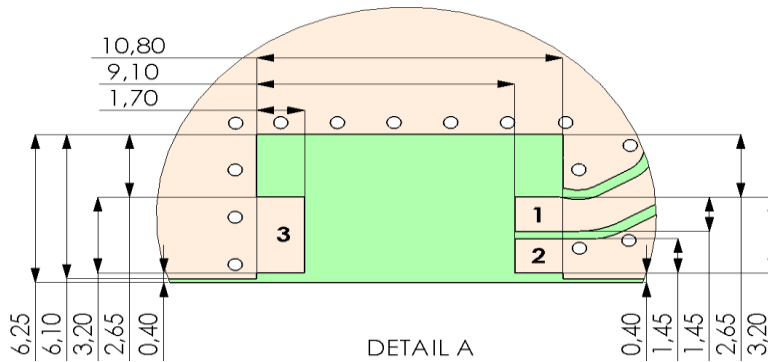
Ceramic Chip Antenna (Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

### Terminal Configuration

### Layout



Pad dimensions on PWB layout



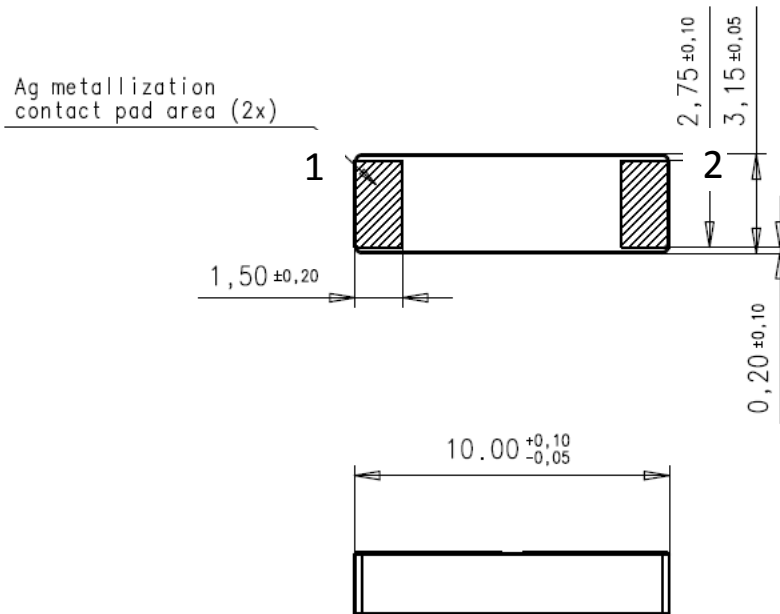
PWB features		
No.	Terminal Name	Terminal Dimensions
1	Feed	1,70 x 1,45 mm
2	GND	1,70 x 1,45 mm
3	GND	1,70 x 3,20 mm

## 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**

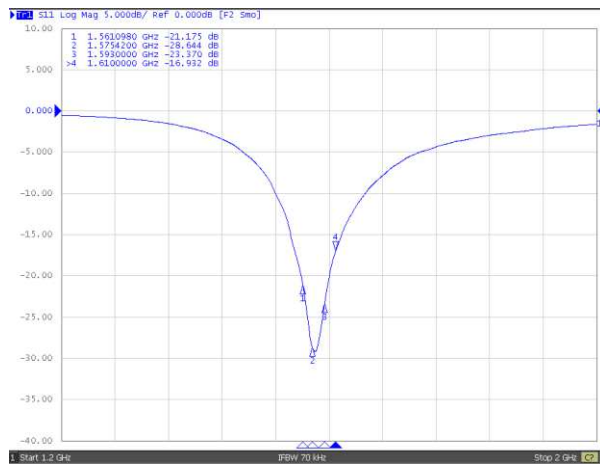


(Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

**Typical Electrical Characteristics (T=25 °C)**

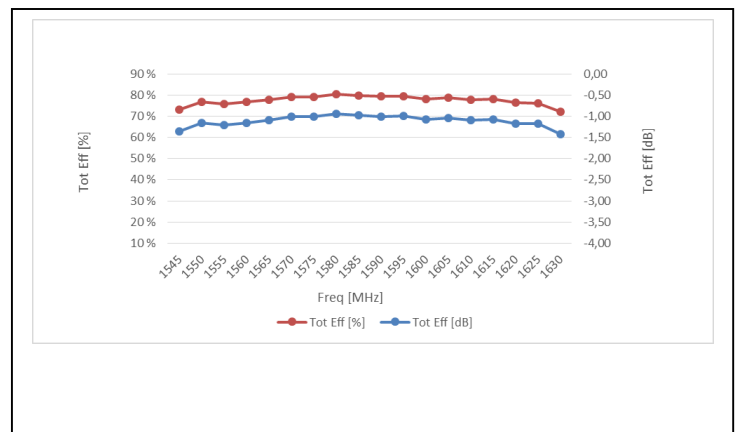
Measured on the 80 x 37 mm test board without matching circuit

Typical Return Loss S11/ impedance

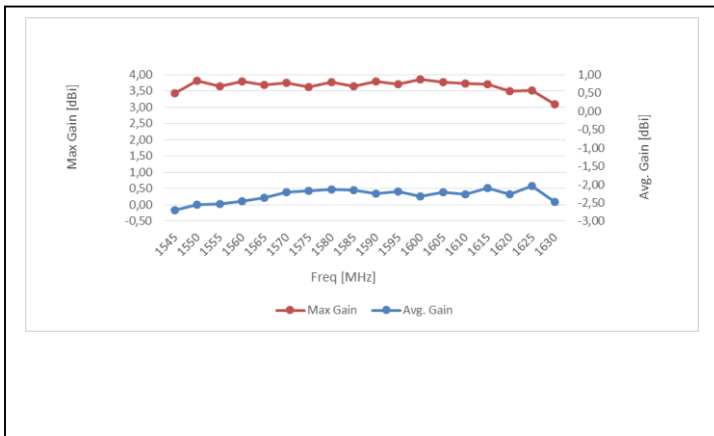


Free space efficiency and maximum gain

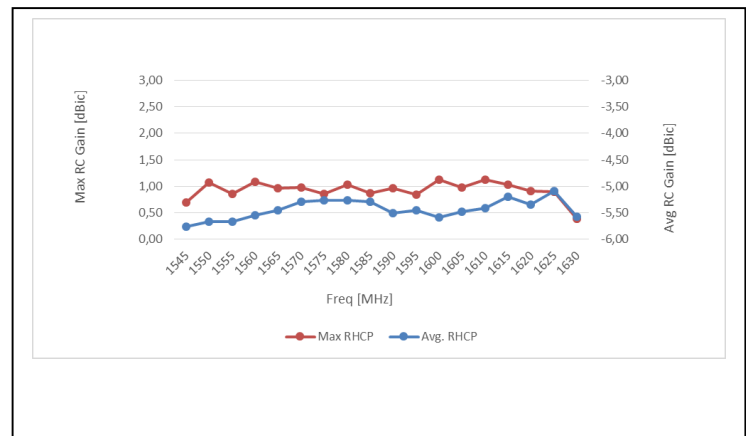
**Total Efficiency**



**Gain**

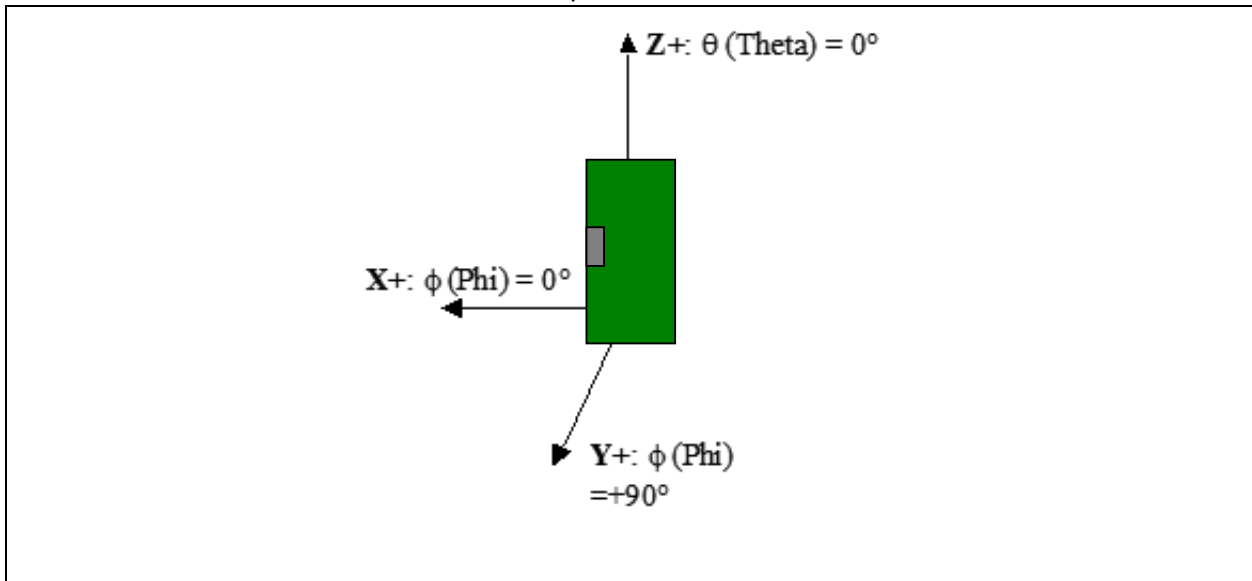


**RHCP Gain**

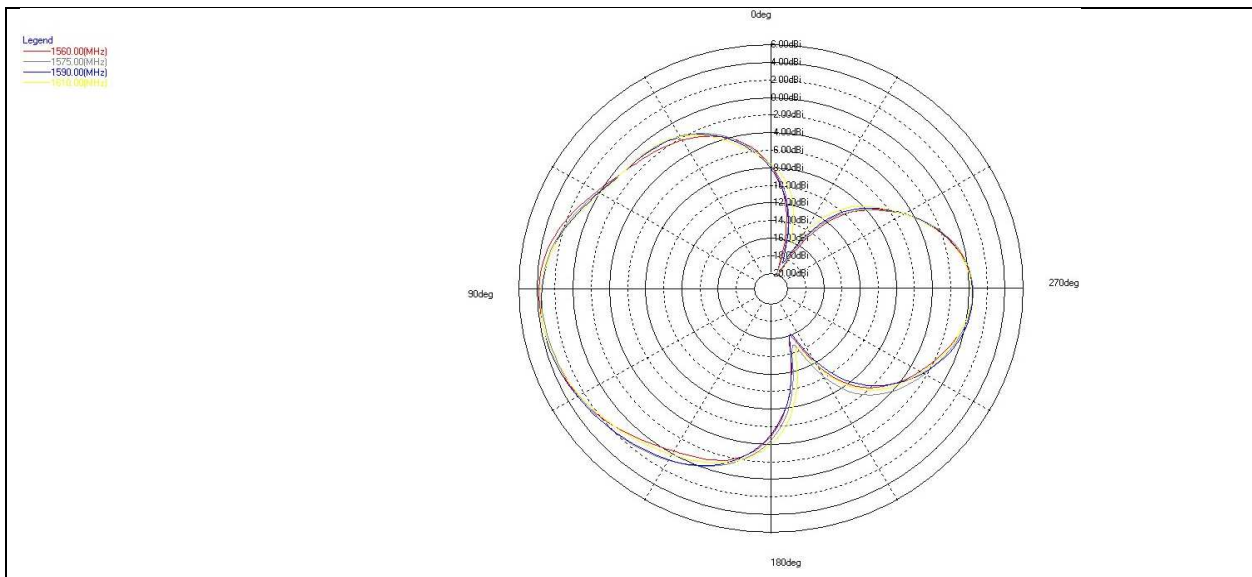


### Typical Free space Radiation Patterns

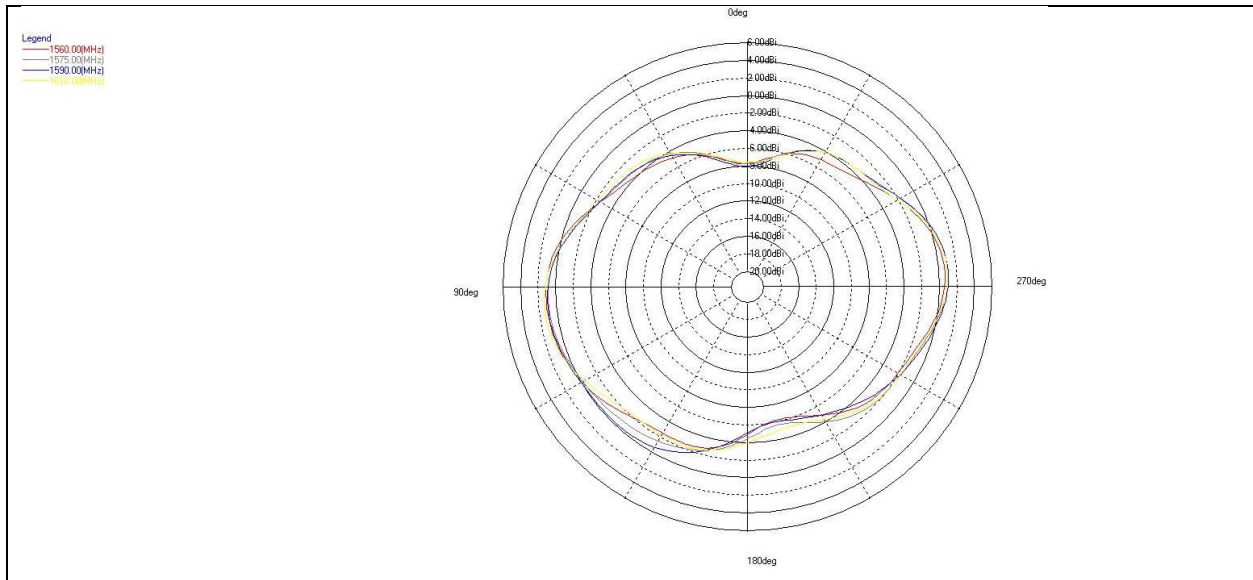
Radiation pattern coordinates



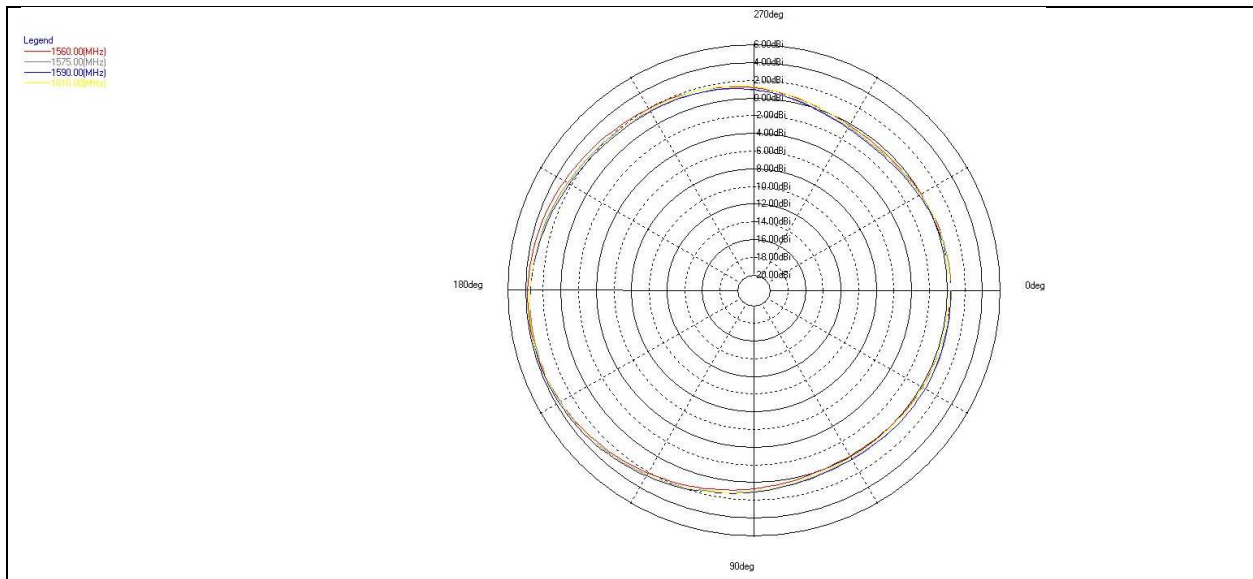
XZ-Plane



YZ-Plane

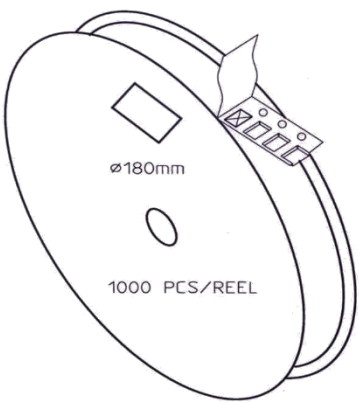
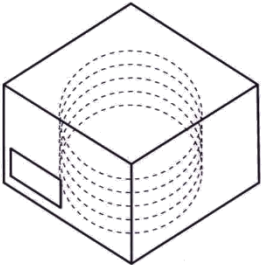


XY-Plane





**Antenna Packing**  
**Packing form**


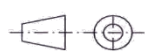
CARRIER TAPE H85-00188  
width=24,00 depth=2.20  
COVER TAPE H85-00159  
width=21.20

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

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