

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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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 (Ω)	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

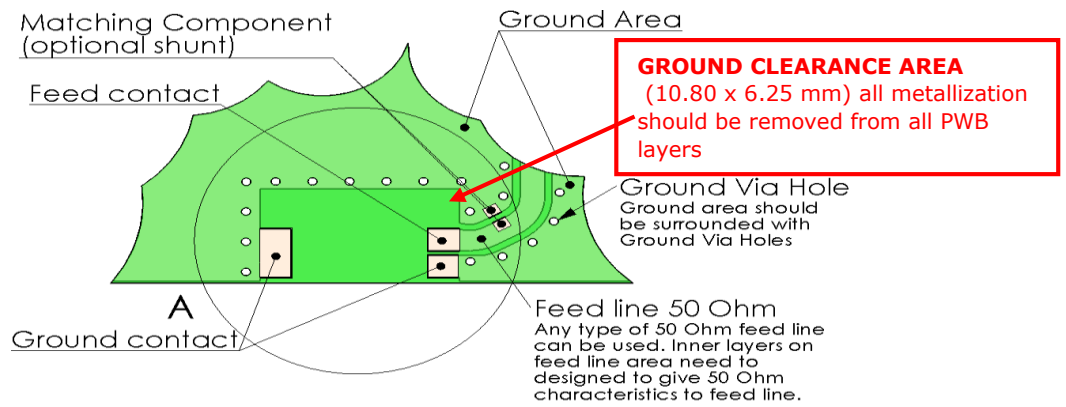
ENVIRONMENTAL SPECIFICATIONS	
OPERATING TEMPERATURE	-40 to +85 °C

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

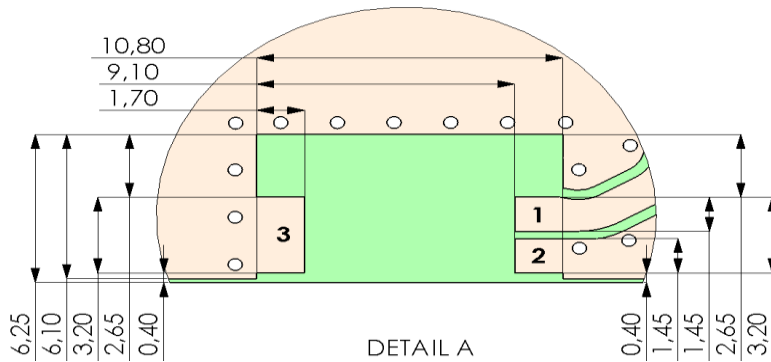
Ceramic Chip Antenna (Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

Terminal Configuration

Layout



Pad dimensions on PWB layout



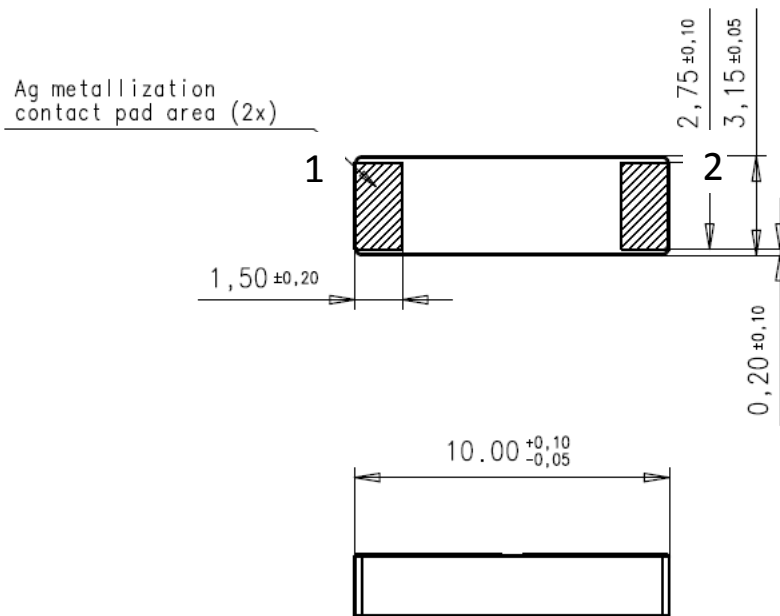
PWB features		
No.	Terminal Name	Terminal Dimensions
1	Feed	1,70 x 1,45 mm
2	GND	1,70 x 1,45 mm
3	GND	1,70 x 3,20 mm

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		

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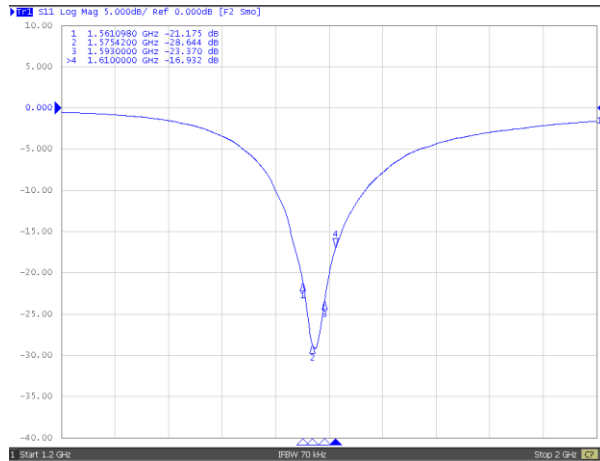


(Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

Typical Electrical Characteristics (T=25 °C)

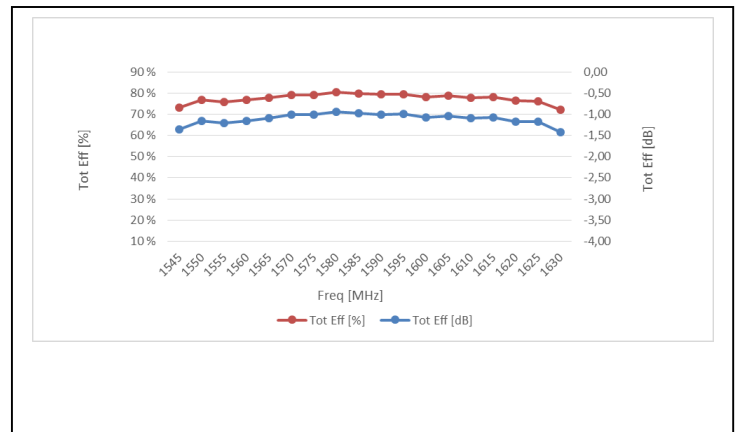
Measured on the 80 x 37 mm test board without matching circuit

Typical Return Loss S11/ impedance

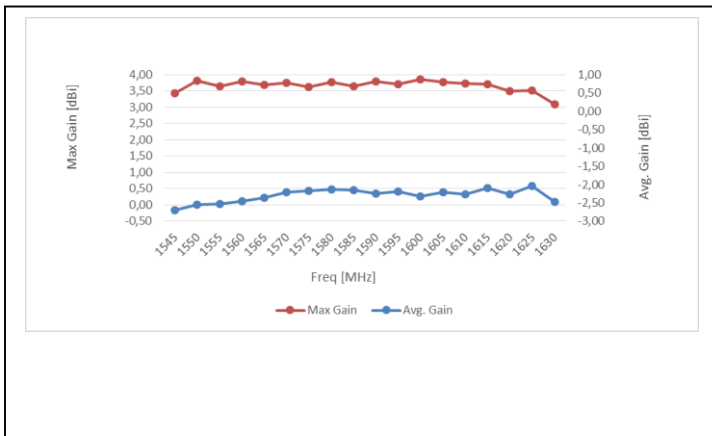


Free space efficiency and maximum gain

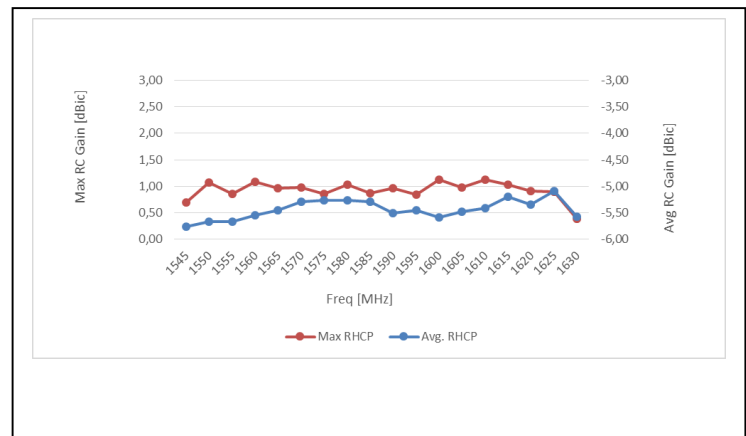
Total Efficiency



Gain

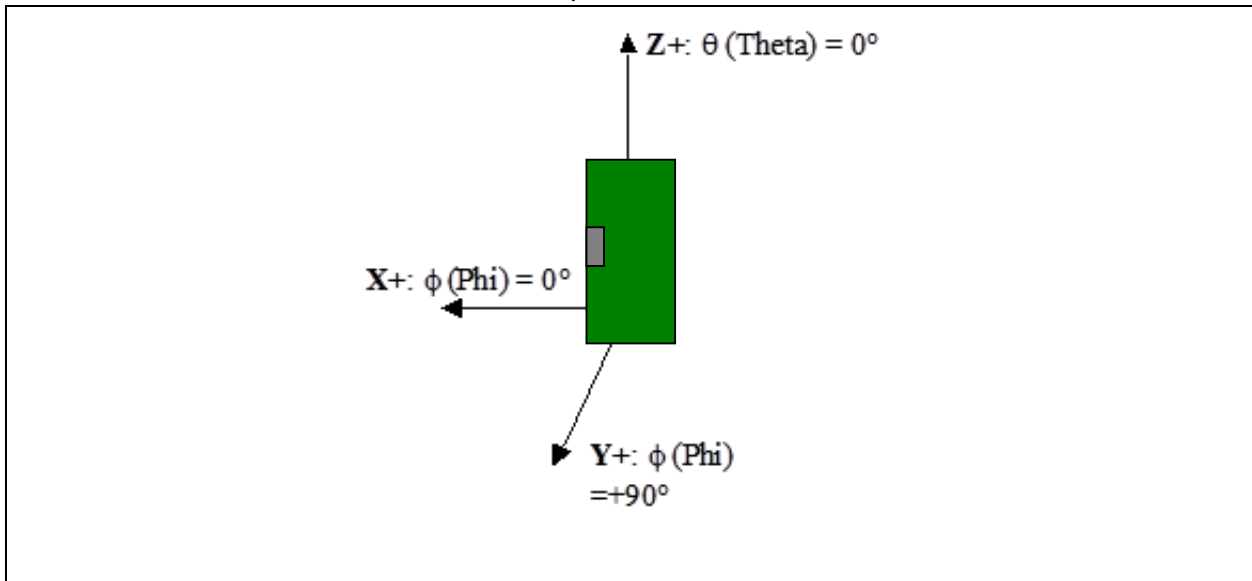


RHCP Gain

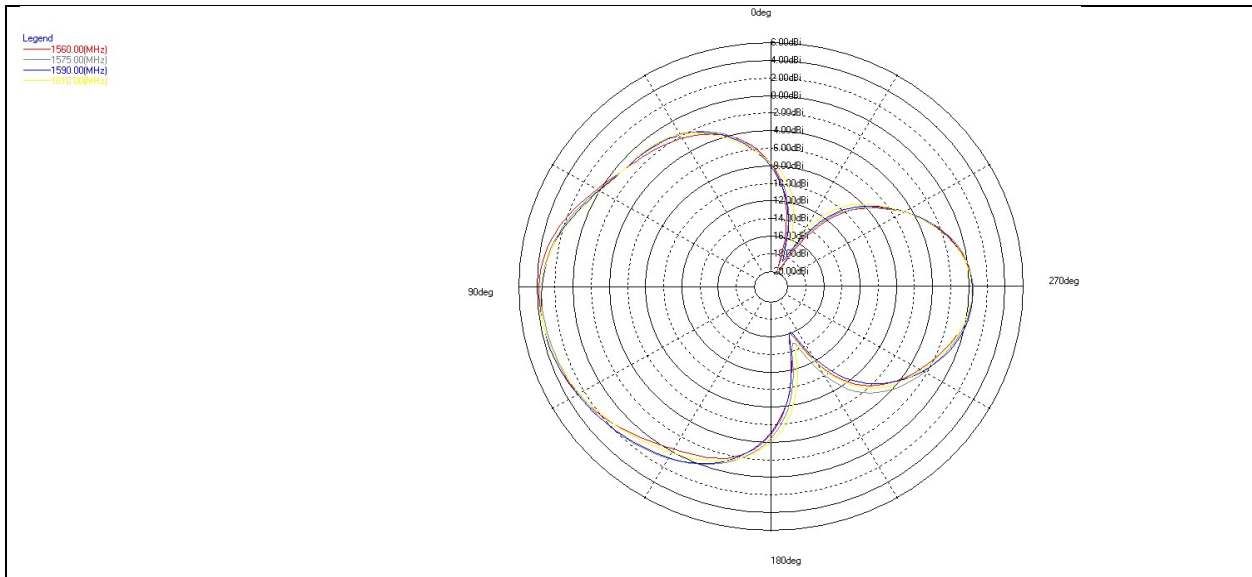


Typical Free space Radiation Patterns

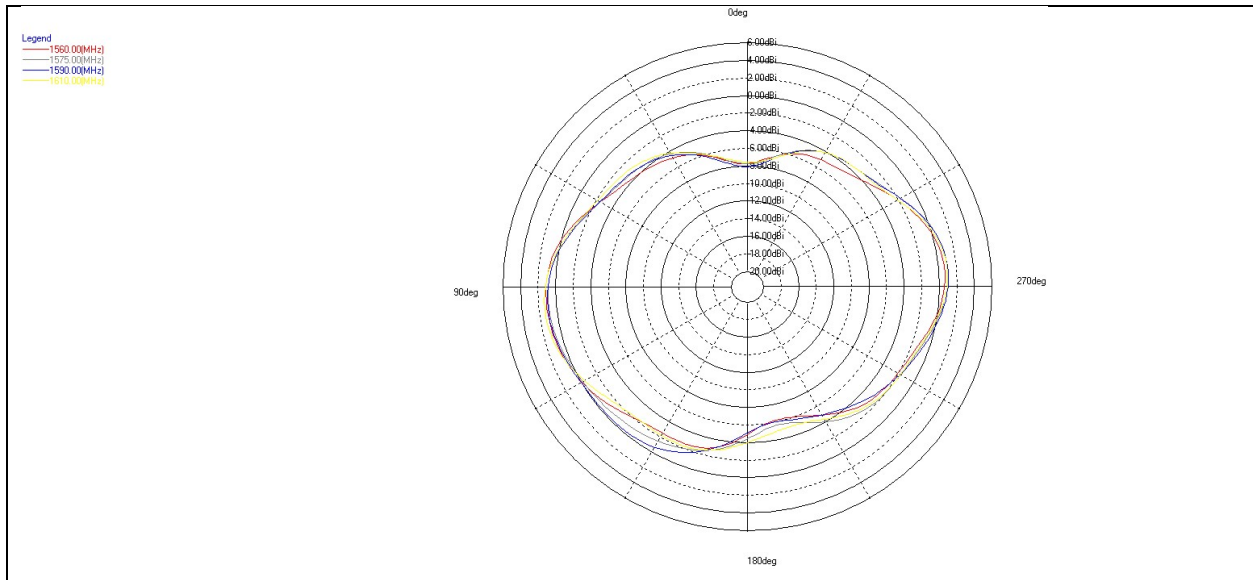
Radiation pattern coordinates



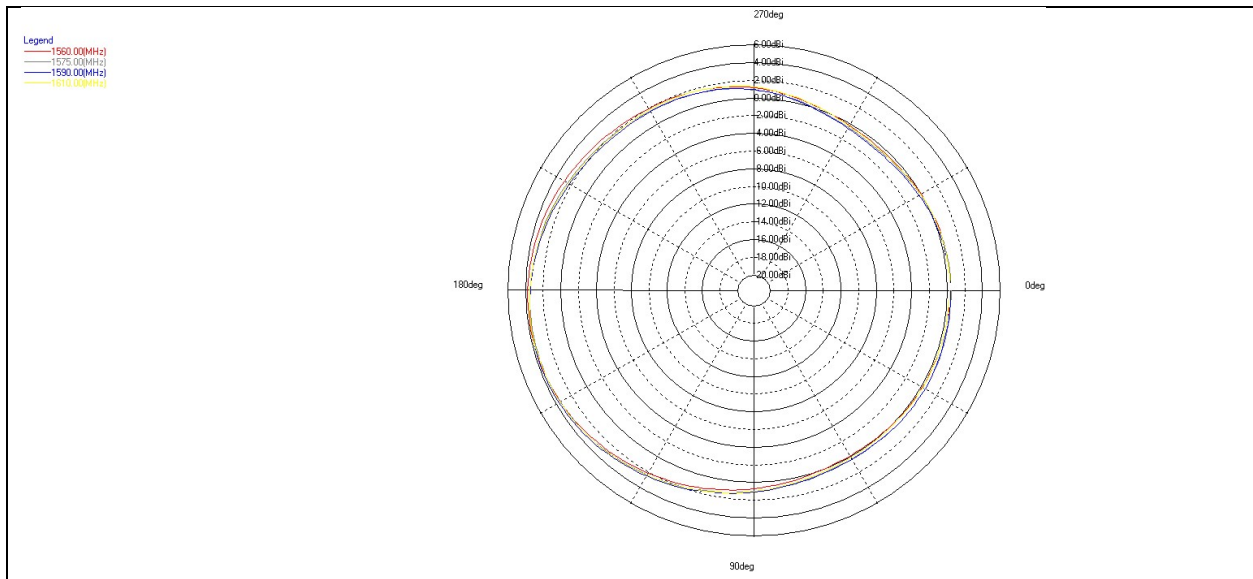
XZ-Plane



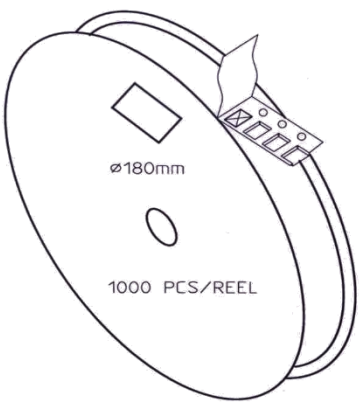
YZ-Plane



XY-Plane



Antenna Packing
Packing form

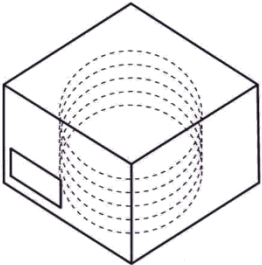


CARRIER TAPE H85-00188
 width=24,00 depth=2.20
 COVER TAPE H85-00159
 width=21.20


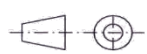
LENGTH OF TAPE:

- 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
		VERSION	MOD/DATE/NAME
			A