

# GNSS Vehicle Locating & Marine Small L1 / L5 Antenna

## MODEL: GA-62R

Small size and ruggedness, demand of vehicle locating and marine navigation GNSS antenna that will sustain harsh environment.



- Low noise figure
- Fully weather proof.
- Ultra-high Sensitivity
- Compact construction
- Excellent temperature stability

### Specifications:

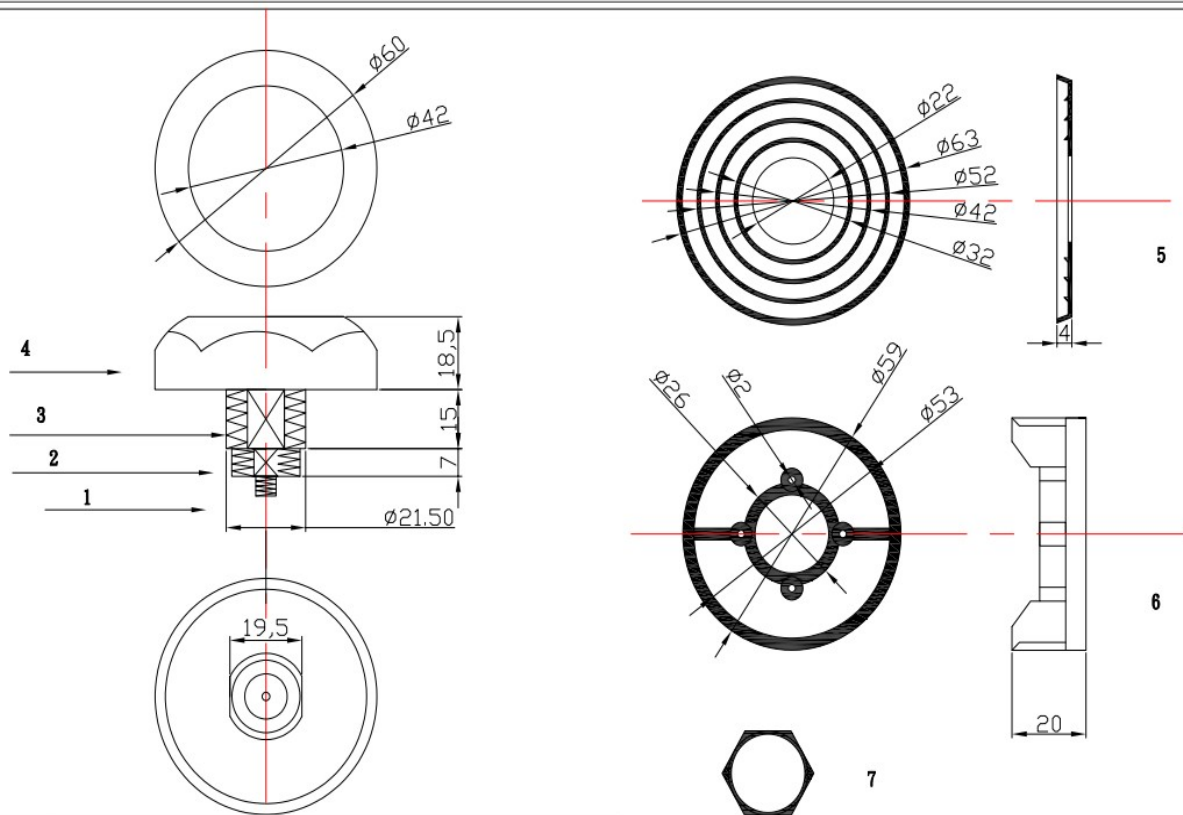
PHYSICAL CONDITION	
Constructions:	ASA + Zinc Alloy
Dimensions:	60mm(Dia.) x 18.5mm(H)
Weight:	65grams (w/o cable & connector).
Color:	white
Mounting:	Bulkhead mount with 0.8 inch threaded wing nut (standard accessory).
Cable & Connector	
RF cable:	SMA(M) +10 meter +TNC(M) (standard) other length (optional)
Pulling strength:	6 Kg @ 5sec. molded plastic on connector end for strain relief.
Connector	TNC(F) or SMA(F)
Antenna Element	
Center Frequency:	1582.5±23.5MHz(L1)and1176±12MHz(L5)
Polarization:	R.H.C.P. (Right Handed Circular Polarization).
Bandwidth	±23.5MHz(L1),±12MHz(L5)
Gain @ 10° Elevation:	-4dBic typical @ L1; -0.5dBic typical @ L5

Gain at Zenith	0 dBic typical @ L1 ; 1.5 dBic typical @ L5
Output VSWR:	1.5 max
Output Impedance:	50 $\Omega$
<b>Low Noise Amplifier</b>	
Power Gain:	30 $\pm$ 2 dB typical at 3V (L1and L5) 30 $\pm$ 2 dB typical at 5V (L1and L5)
ESD (TVS)	$\pm$ 8kv (contact)
Noise Figure:	1.5 dB typical at 3V (L1 and L5)
Filter	Saw filter 30dB typical fo $\pm$ 50MHz 40dB typical fo $\pm$ 100MHz ( fo=L1 and L5 band )
Supply Voltages:	DC = 3~5V
Current Consumption:	DC = 10 $\pm$ 2.5mA at 3V / 27 $\pm$ 2.5mA at 5V
Output Impedance:	50 $\Omega$
<b>Overall Performance: (antenna element, LNA &amp; coax cable)</b>	
Center Frequency:	1582.5 $\pm$ 23.5MHz(L1),and 1176 $\pm$ 12MHz(L5)
Gain:	30 $\pm$ 2 dB typical at 3V (L1and L5) 30 $\pm$ 2 dB typical at 5V (L1 and L5)
Noise Figure:	2.0 max.
Bandwidth:	$\pm$ 23.5MHz(L1), $\pm$ 12MHz(L5)
VSWR:	2.0
Output Impedance:	50 $\Omega$
<b>Environmental</b>	
Operating Temperature:	-40°C~ +85°C.
Storage Temperature:	-40°C~ +85°C.
Relative Humidity:	95% non-condensing.
Water Resistance:	100% waterproof.

\* This specification is subject to change without prior notice

Data Updated: AUG.06, 2025

**GA62R-TNC(F)**



7	Copper screw nut			
6	White revertex screw nut - ASA			
5	White xi rubber against water cushion			
4	White ASA			
3	Zinc alloy base			
2	Zinc alloy base			
1	SMA(F) Connector			
ITEM	DESCRIPTION	MAT'L	FINISH	ITEM No.

百展科技有限公司

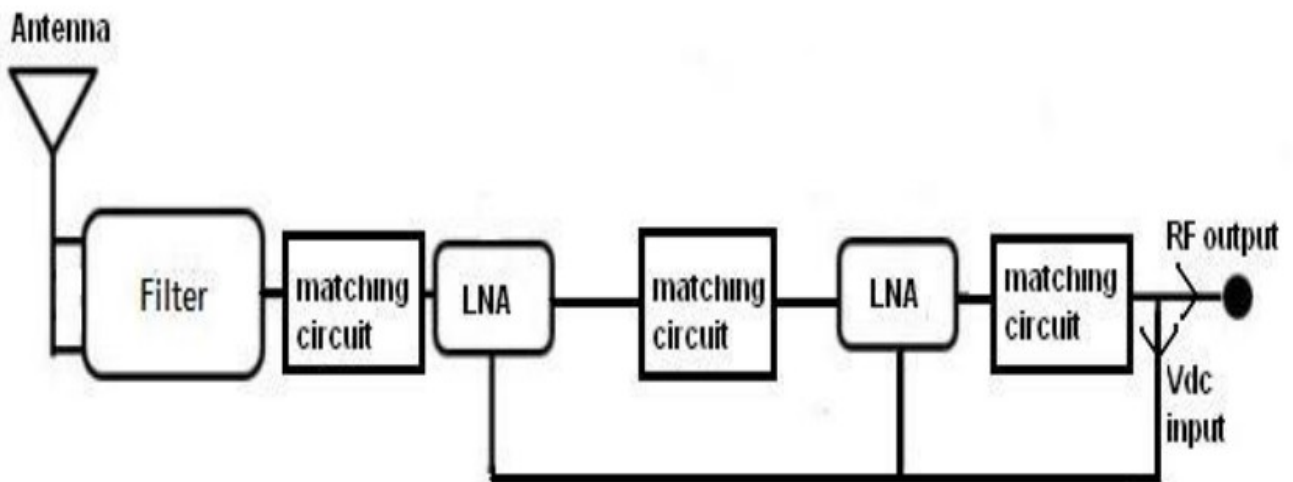
TEL: 886-2-86720160

BJTEK NAVIGATION INC

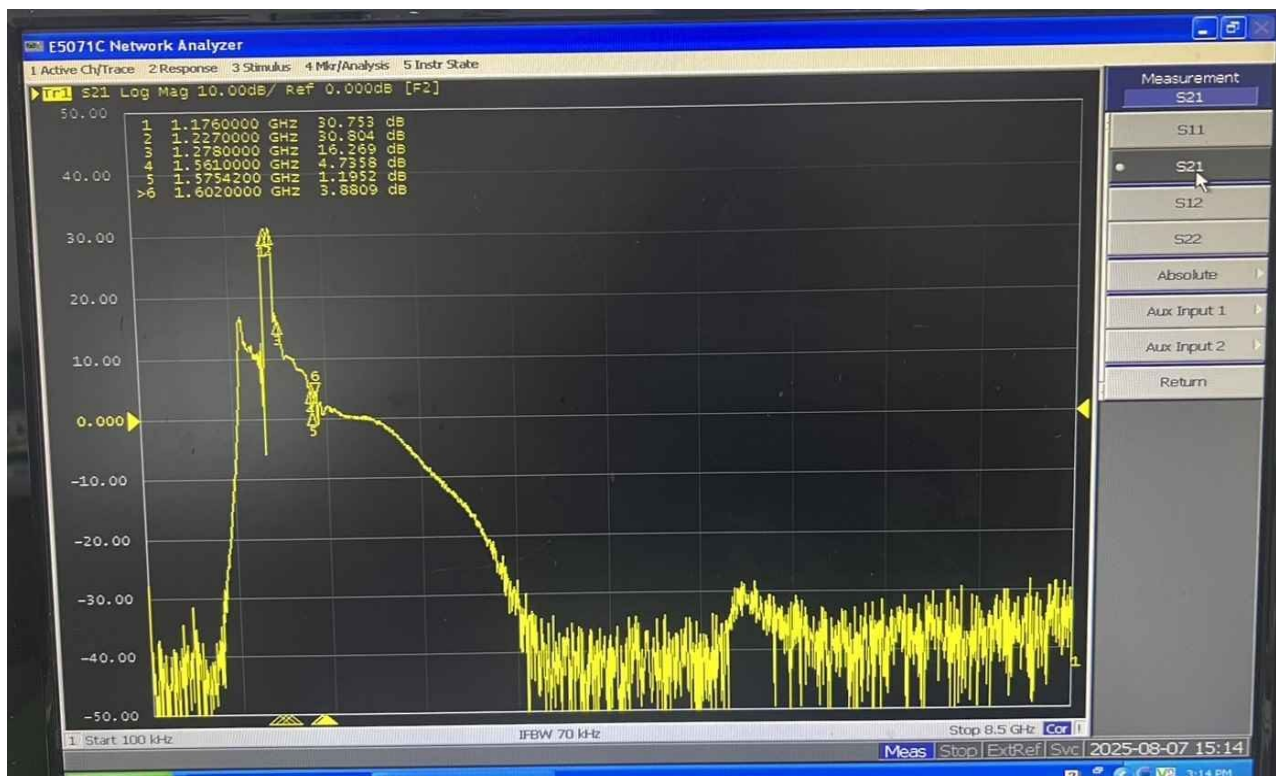
FAX: 886-2-86720161

TITLE: GNSS Permanent Mount Antenna		DWG NO.: GA62R-SMA(F)	
TOLERANCE: AS SPEC.	FINISH: SEE TABLE	DATE: 2025.05.21	UNIT: MM
MATERIAL: SEE TABLE	ISSUED: BILL	DRAWN: ALAN	CHECKED: LOUIS

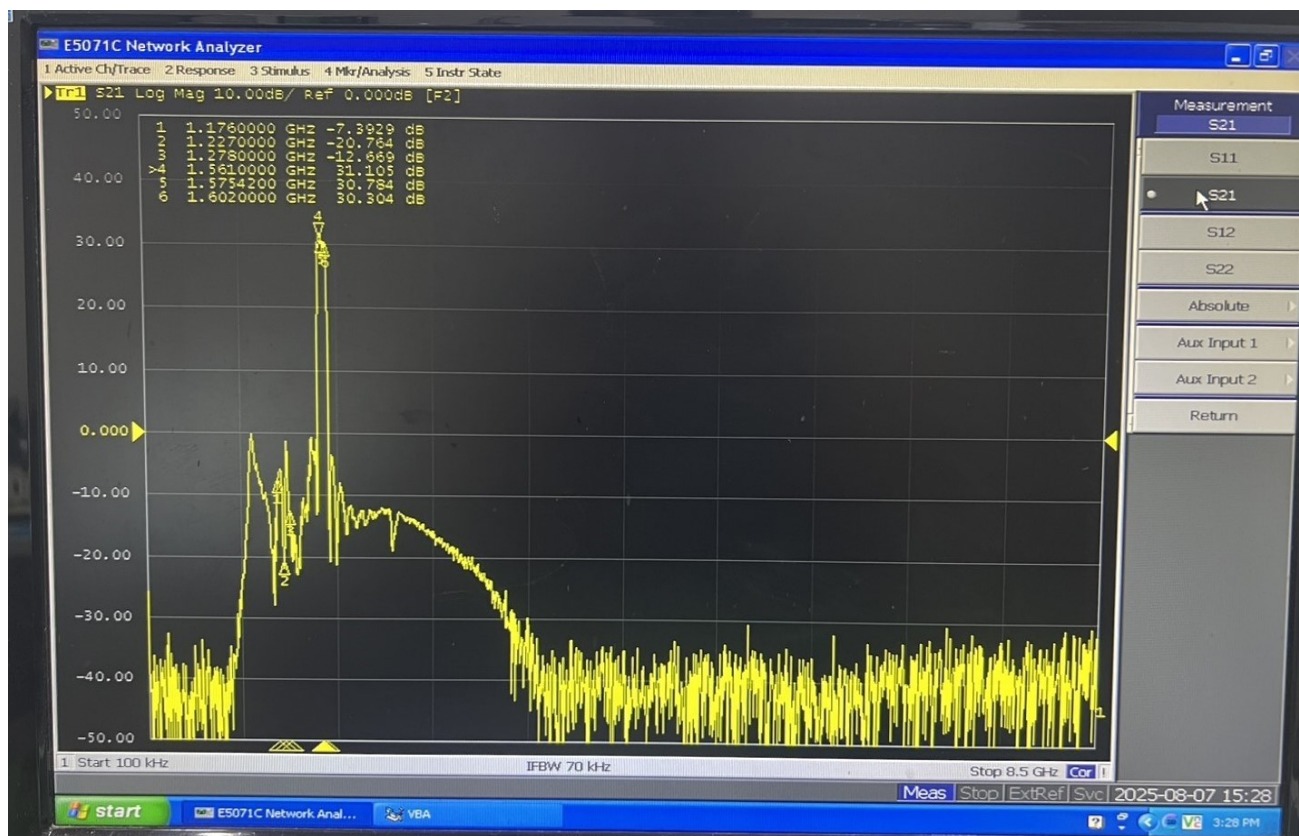
## Block diagram:



## L5 S21:

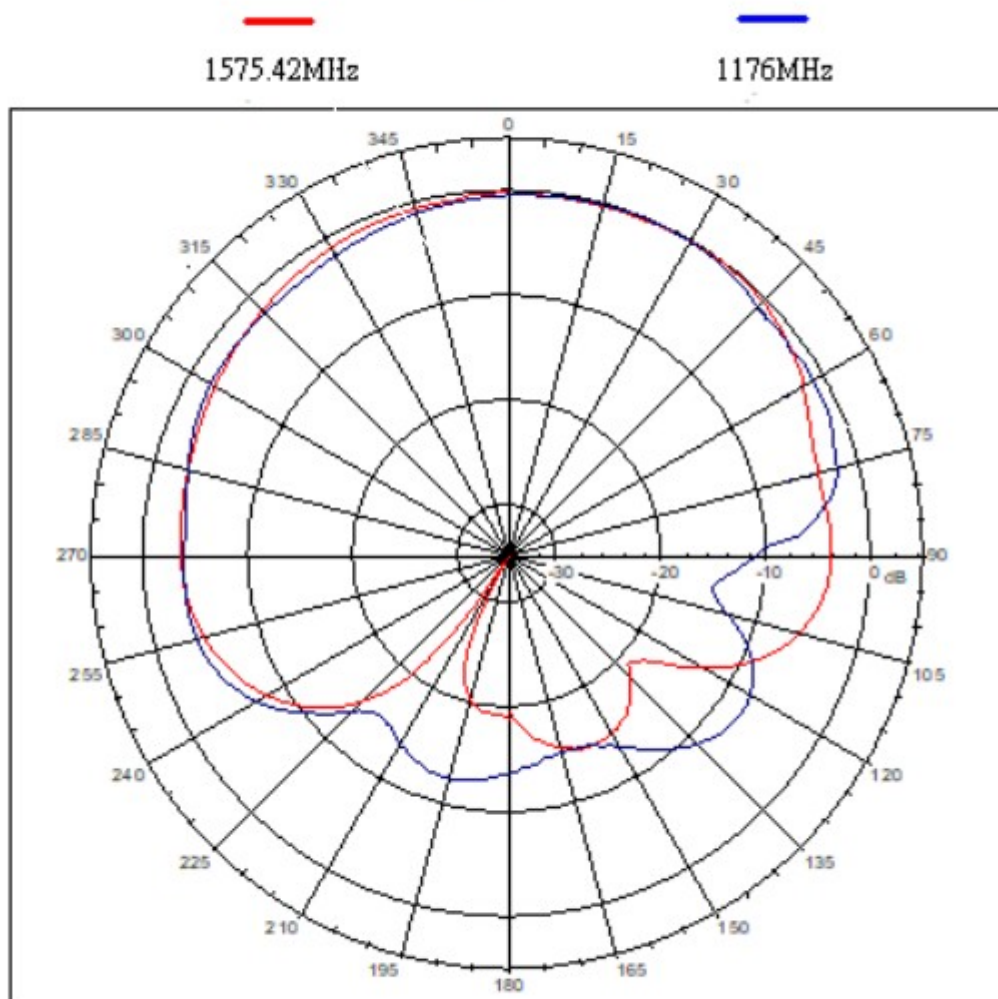


## L1 S21:





### Far-field amplitude of IA002.nsi



**PS:** Total Gain = Passive Pattern Gain + LNA Gain - cable loss (1.1dB/m)