

# 4-axis Helix BDS/GNSS Active Antenna

## MODEL: GA-85D

Compact & Sensitive BDS/GNSS antenna with Excellent Signal Amplification for Mobile Applications



- High performance
- Out-band filtering & rejection
- Voltage: 1.4~3.6 V DC
- Provides excellent signal amplification
- OD12.5 x 101mm+/-3mm

**GA-85D** is the integration of a high performance BDS/GNSS antenna and a state-of-the-art low noise amplifier into a very low profile/ extremely compact/ fully waterproof enclosure which, when connected to a BDS/GNSS receiver with 1.4~3.6V DC antenna power, provides excellent signal amplification and out-band filtering & rejection, provide 1.4~3.6V input Voltage is available.

### FEATURES:

- Compact Construction/ Low Profile/
- Omni-Directional Antenna Patterns
- Excellent Temperature Stability
- Low Noise Figure
- High Sensitivity

### APPLICATIONS:

- Automobile BDS/GNSS
- Car Tracking Navigation System
- AVL / Fleet Management Systems
- External Antenna for Handheld BDS/GNSS
- External Antenna for PDA Navigator

### SPECIFICATIONS:

Physical Condition	
Construction	ASA-UV
Dimension	OD12.5 x 101 mm ±3
Weight	20 grams
Environmental Conditions	
Operation temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C
Relative Humidity	95% non-condensing
Connector	
Connector Available	SMA (M) Straight

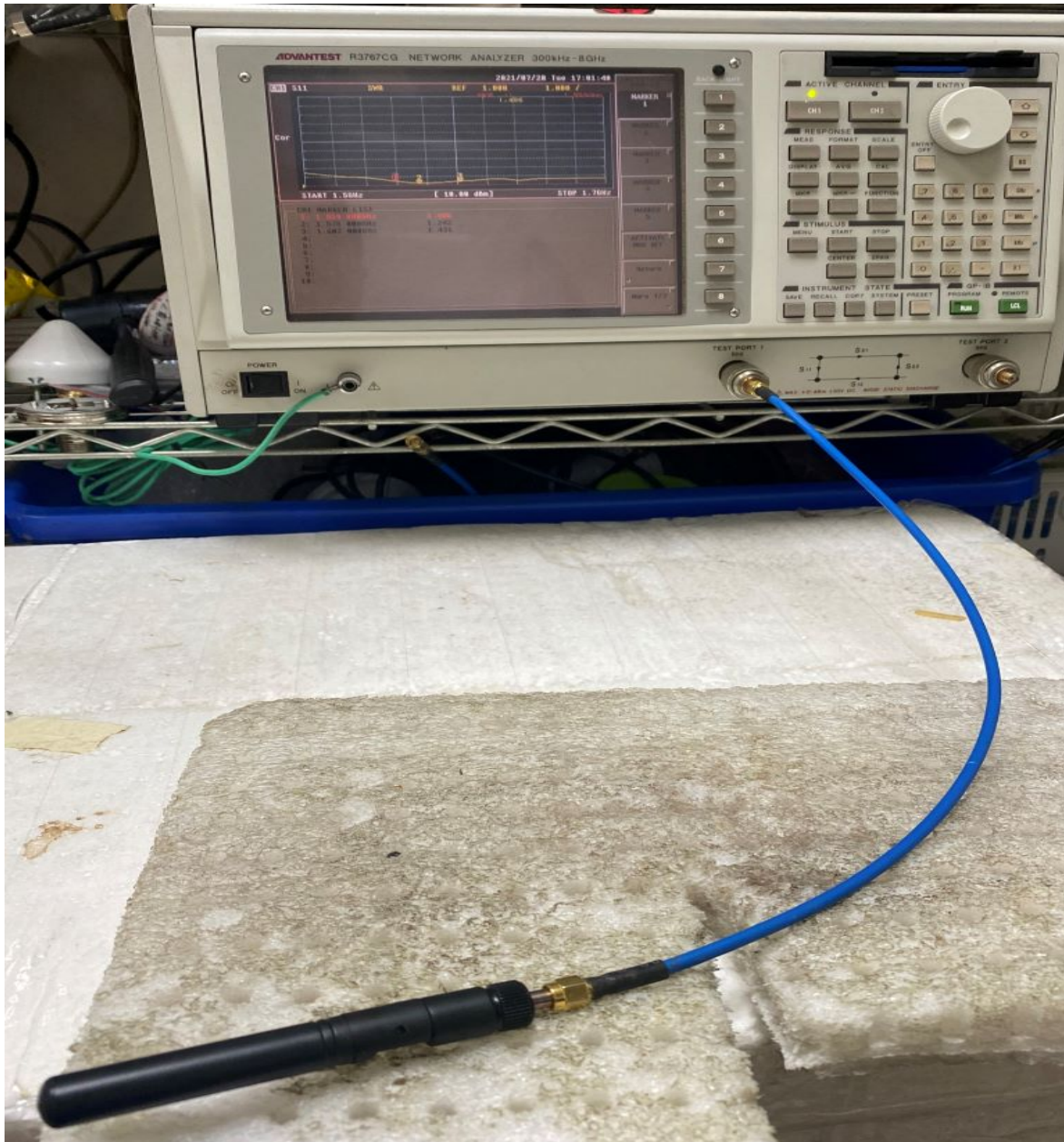
## Low Noise Amplifier

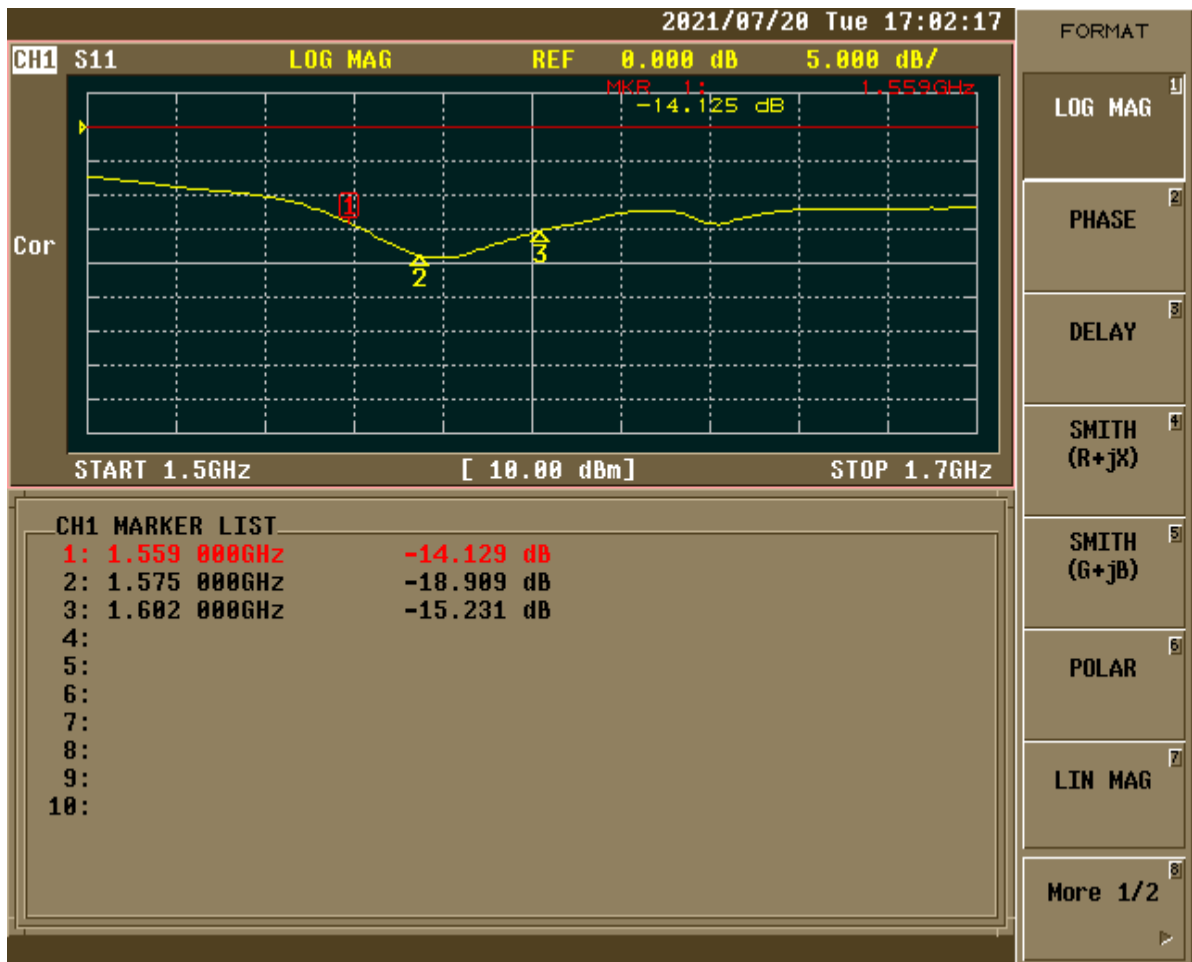
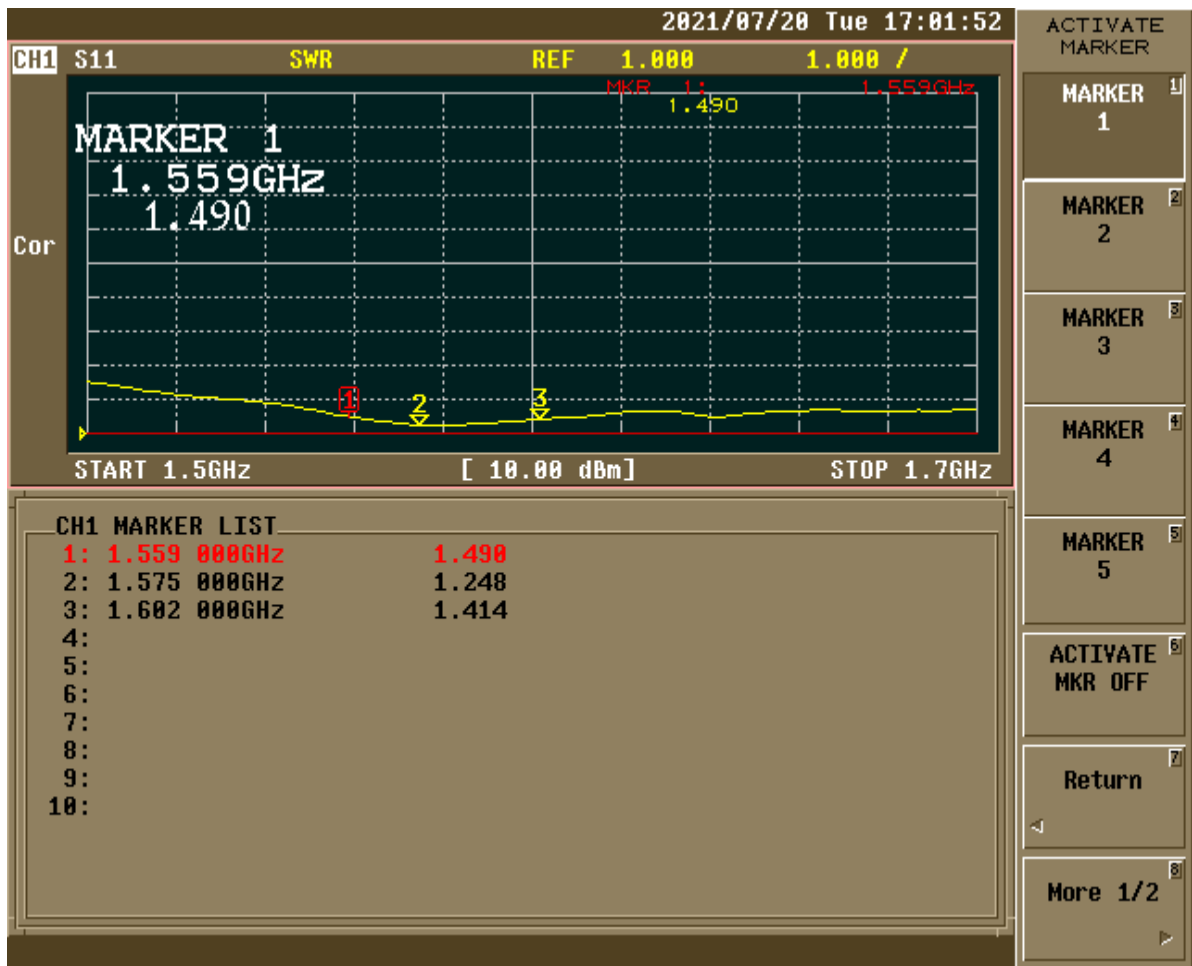
Center Frequency	1550MHz~1615MHz
Gain	18db +/-3db
Bandwidth	10 MHz min. @S11≤-10 dB
Noise Figure	1.0dB
ESD	2.5KV HBM
Supply Voltages	1.4~3.6V DC
Current Consumption	4mA
Output Impedance	50 ohm
Output VSWR	2.0 max.

## Antenna Element

Center Frequency	1500~1700Mhz
Polarization	R.H.C.P. 4-axis Ceramic helix antenna
Gain	2.5 dBi typ
VSWR	2.0

## Passive antenna test :

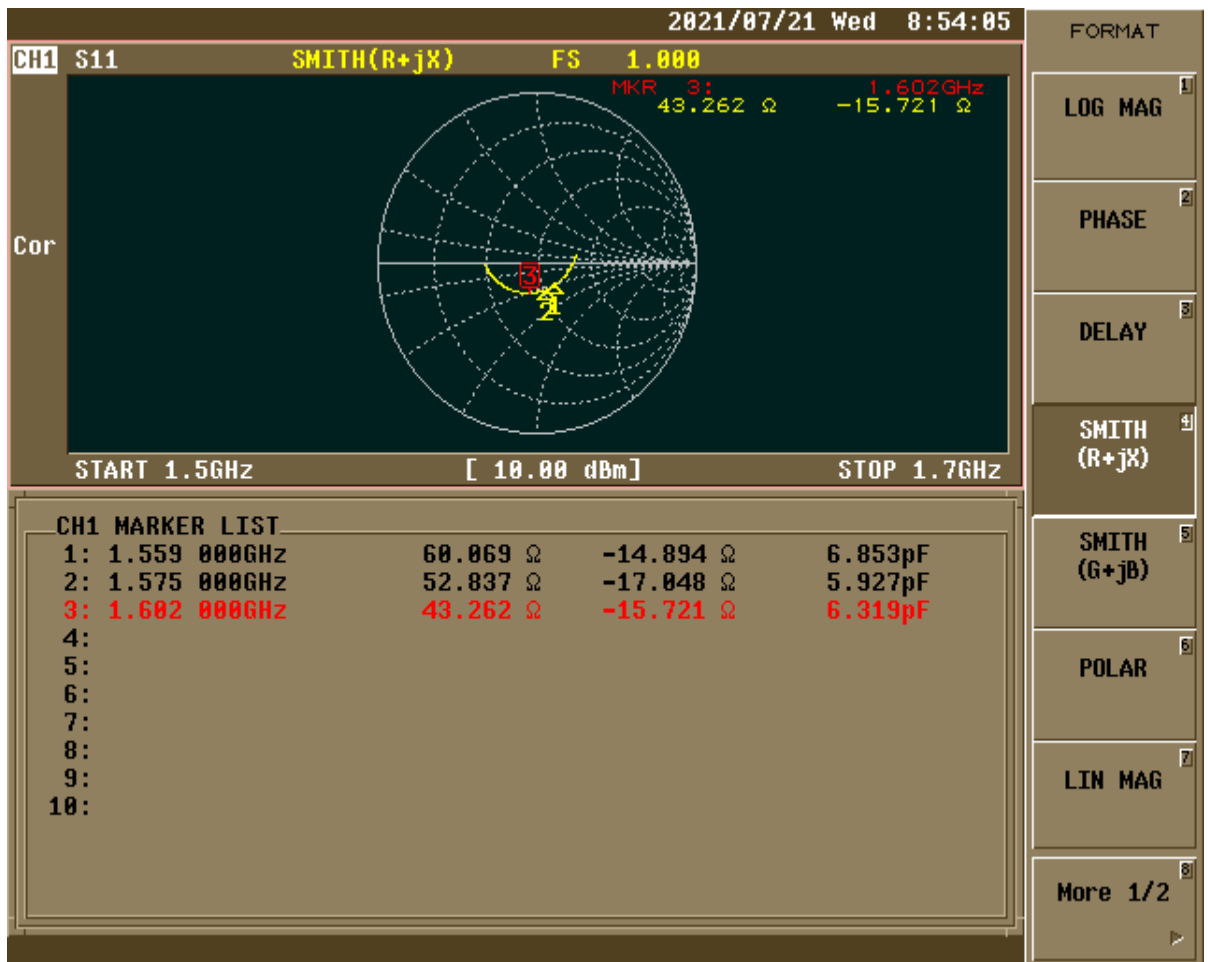






Active antenna test :







3D Total						
Frequency (MHz)	Upper Hem. PRP (dBm)	Lower Hem. PRP (dBm)	Efficiency (dB)	Efficiency (%)	Gain (dBi)	Tot. Rad.Pwr. (dBm)
1400 MHz	-6.02	-5.85	-2.92	51.02	0.68	-2.92
1450 MHz	-5.71	-5.58	-2.63	54.53	1.01	-2.63
1500 MHz	-5.49	-5.45	-2.46	56.78	1.26	-2.46
1542 MHz	-4.24	-3.96	-1.09	77.84	2.64	-1.09
1559 MHz	-4.56	-4.22	-1.38	72.77	2.55	-1.38
1561 MHz	-4.53	-4.18	-1.34	73.38	2.59	-1.34
1575 MHz	-4.66	-4.23	-1.43	71.96	2.72	-1.43
1602 MHz	-4.76	-4.10	-1.40	72.38	3.05	-1.40
1616 MHz	-5.65	-4.84	-2.22	60.03	2.33	-2.22
1620 MHz	-5.75	-4.91	-2.30	58.85	2.27	-2.30
1626 MHz	-5.90	-5.02	-2.43	57.20	2.19	-2.43
1630 MHz	-5.79	-4.87	-2.30	58.95	2.35	-2.30
1642 MHz	-6.42	-5.52	-2.94	50.80	1.77	-2.94
1650 MHz	-6.36	-5.50	-2.90	51.29	1.84	-2.90



