# BJTEK Navigation Inc. https://www.bjnav.com/ Vehicle Locating Small GPS/GSM/FM Antenna MODEL: GFA-650L

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



- Low noise figure
- Fully weather proof IPX7.
- Ultra-high Sensitivity
- Compact construction
- Excellent temperature stability

The antenna system **GFA-65L** is the integration of the high performance GPS patch antenna and a low noise amplifier into state-of-the-art low a very low profile/extremely compact/fully waterproof antenna signal enclosure. When connected to a GPS receiver with +2.5~ 5.5V DC antenna powers it provides excellent signal amplification and out-band-rejection for that receiver.

### **Features:**

GPS antenna with double threaded bolts and through holes for cable routing with course & fine treaded pitch locking for wing-nut fastener and lock-nut to prevent vibrations and un-authorize removal.

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PHYSICAL CONDITION		
Constructions:	Polycarbonate radome, detachable cable/connector for easy mount,	
	rubber-O-ring between top radome and screw base for waterproof	
Dimensions:	60mm(Dia.) x 45mm(H)	
Weight:	65grams (w/o cable & connector).	
Color:	White or Black (Optional)	
Mounting:	Bulkhead mount with 0.8 inch threaded wing nut (standard accessory).	
Cable & Connector		
RF cable:	RG174 -5M,	
Pulling strength:	6 Kg @ 5sec. molded plastic on connector end for strain relief.	
Connector available:	SMA ,SMB,Fakra ,BNC,TNC,MMCX,MCX	
Antenna Element		
Center Frequency:	1575.42 MHz +/-1.023 MHz	
Polarization:	R.H.C.P. (Right Handed Circular Polarization).	
Absolute Gain @ Zenith:	+5 dBi typical.	
Gain @ 10° Elevation:	-1 dBi typical.	
Axial Ratio:	3 dB max.	
Output VSWR:	2.0	
BITEK Navigation Inc. Output Impedance:	50 ohm https://www.bjnav.com	

# Specifications:

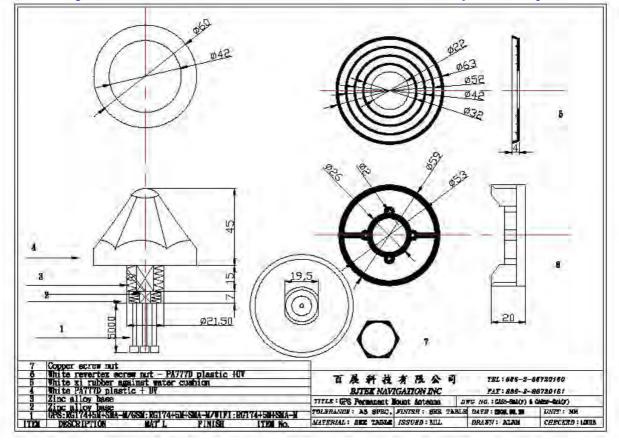
DITEK Navigation Inc. Low Noise Amplifier		https://www.bjnav.com	
Center Frequency:	1575.42 +/- 1.023 MHz		
Power Gain:	28 db +/-3db		
Bandwidth:	10 MHz min. @S11≤-10 dB		
Noise Figure:	1.5		
Outer Band Attenuation:	3 dB max.		
Supply Voltages:	2.5~5.5V DC.		
Current Consumption:	at 2.5V 6.6mA Typ. at 3.0V 8.6mA Typ. at 4.0V 12.6mA Typ. at 5.0V 16.6mA Typ.		
Filter	20dB 25dB @ fo+/- 50MHz 30dB 35dB @ fo+/- 100MHz * fo=1575.42MHz		
Overall Performance: (an	tenna element, LNA & coa	ax cable)	
Center Frequency:	1575.42 +/- 1.023 MHz		
Gain:	At 90° vertical to sky 30 ± 4.5dBi (cable loss) Note:1 Mounted on the 60mm x 60mm square ground plane		
Noise Figure:	1.5 max.		
Axial Ratio:	3 dB max.		
Bandwidth:	10 MHz min. @S11≤-10 dB		
VSWR:	2.0 max.		
Output Impedance:	50 ohm		
Environmental			
Operating Temperature:	-40°C~ +100°C.		
Storage Temperature:	-40°C~ +100°C.		
Relative Humidity:	95% non-condensing.		
Water Resistance:	100% waterproof.		
GSM / CDMA / 3G /		FM	
Frequency 850/900/1800/1900/2170		88-108Mhz	
VSWR 2.0		3.5	
Impedence 50Ω			
Cable type RG174		RG174	
Cable length 5M		5M	
Connector SMA Coding or Others		SMA Coding or Others Data Updated: JUL.26. 2011	

 $\ast\,\mbox{This specification}$  is subject to change without prior notice

Data Updated: JUL.26, 2011

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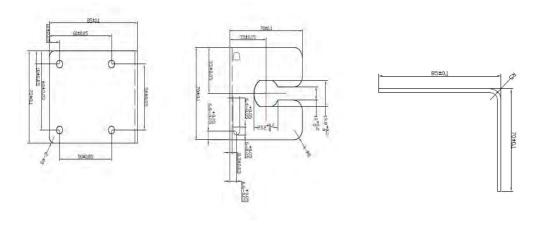


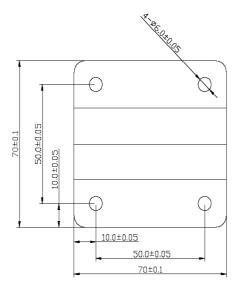
# **SUS L-Mounting**

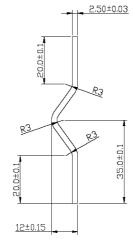
Madel : FB-6

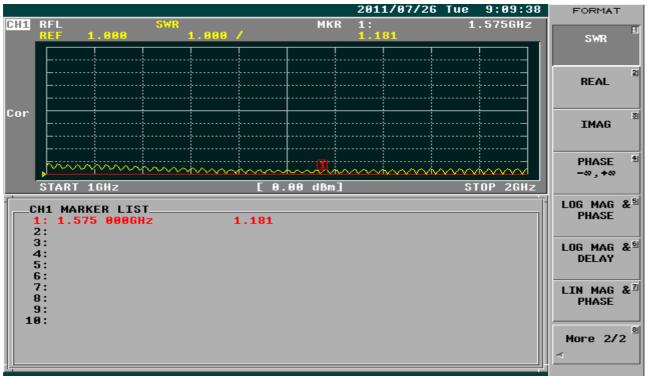


BJTEK Navigation Inc. Size :









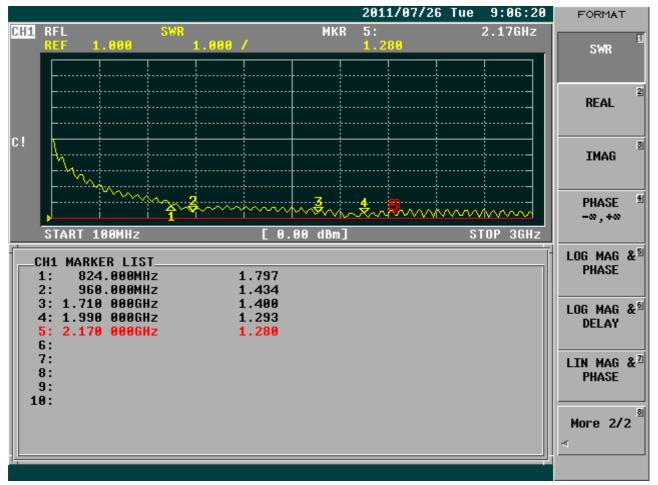
### **GPS TEST :**

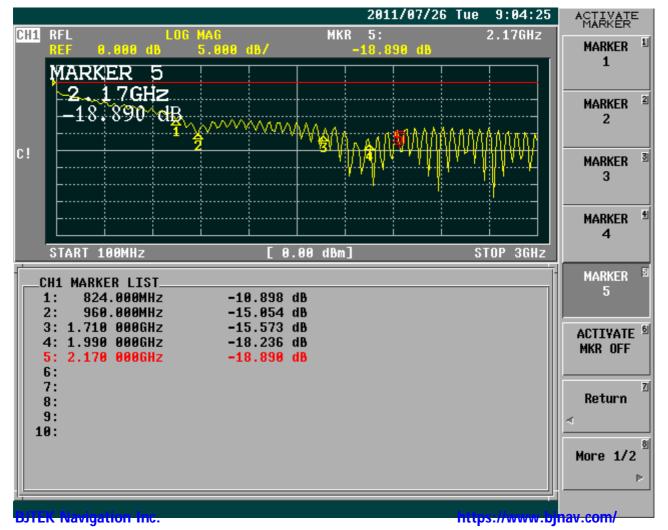
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#### **GSM TEST :**





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#### FM TEST :

