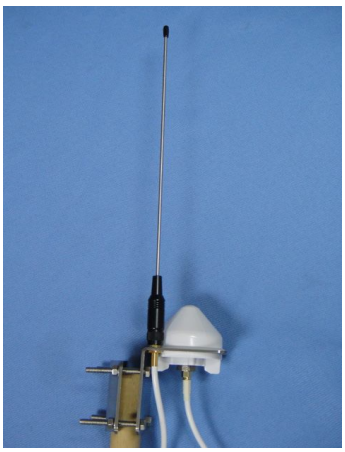
Marine GPS/GLONASS/VHF Antenna

MODEL: GVA-650GL

FOR Marine VHF Radio & AIS SYSTEM & Orbcomm



GPS /GLONASS Antenna Specifications: GA65G

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:	Standard in ivory white, other colours available upon request.
Mounting:	Bulkhead mount with 0.8 inch threaded wing nut (standard accessory).
Cable & Connector	
RF cable:	TNC(M) +10 meter RG58 +BNC(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:	1575Mhz & 1596-1610 MHz
Polarization:	R.H.C.P. (Right Handed Circular Polarization).
Bandwidth	10 MHz min. @S11≤-10 dB, 24MHz typ. @S11<-8dB
Gain @ 10° Elevation:	2 dBi typical.
Axial Ratio:	3 dB max.
Output VSWR:	1.5 max
Output Impedance:	50 ohm
Low Noise Amplifier	
Power Gain:	1570 Mhz : 29db typ 1610 Mhz : 29db typ
Bandwidth:	50 MHz min.
Noise Figure:	1.5 typ
Outer Band Attenuation:	20 dB min. @ Fo +/-50 Mhz.
Supply Voltages:	2.3~5.5V DC.
Current Consumption:	2.5V : 6.6mA Typ. 3V: 10.6mA Typ. 4V: 14.6mA Typ.

	5V: 20.6mA Typ.
Output Impedance:	50W ohm
Overall Performance: (antenna element, LNA & coax cable)	
Center Frequency:	1570 ~1610 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:	2.0 max.
Axial Ratio:	3 dB max.
Bandwidth:	10MHz min.
VSWR:	2.0 max.
Output Impedance:	50W ohm
Environmental	
Operating Temperature:	-40°C~ +85°C.
Storage Temperature:	-40°C~ +90°C.
Relative Humidity:	95% non-condensing.
Water Resistance:	100% waterproof.

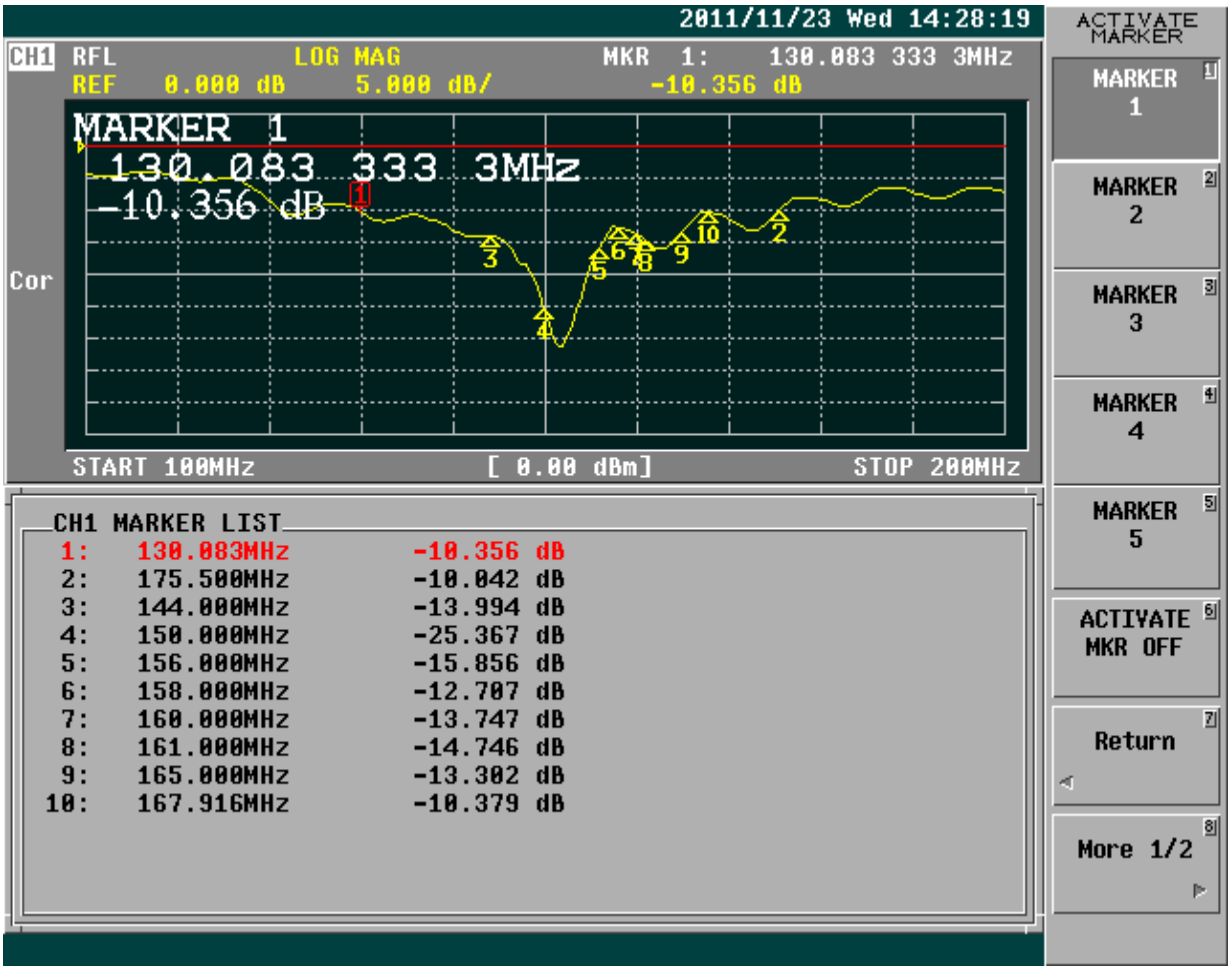
＊This specification is subject to change without prior notice **Data Updated:** Sep.10, 2009

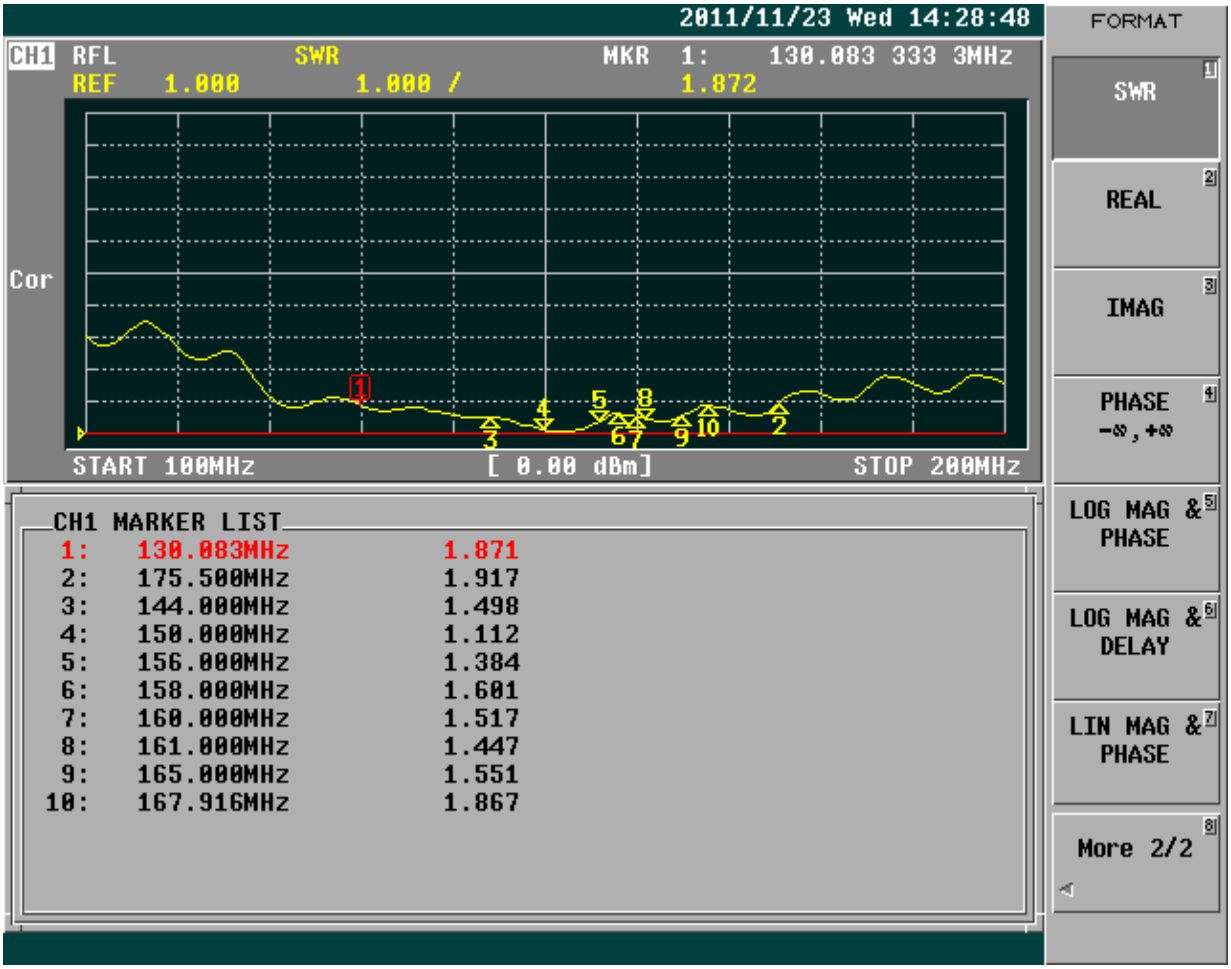
Marine VHF Antenna Specifications:

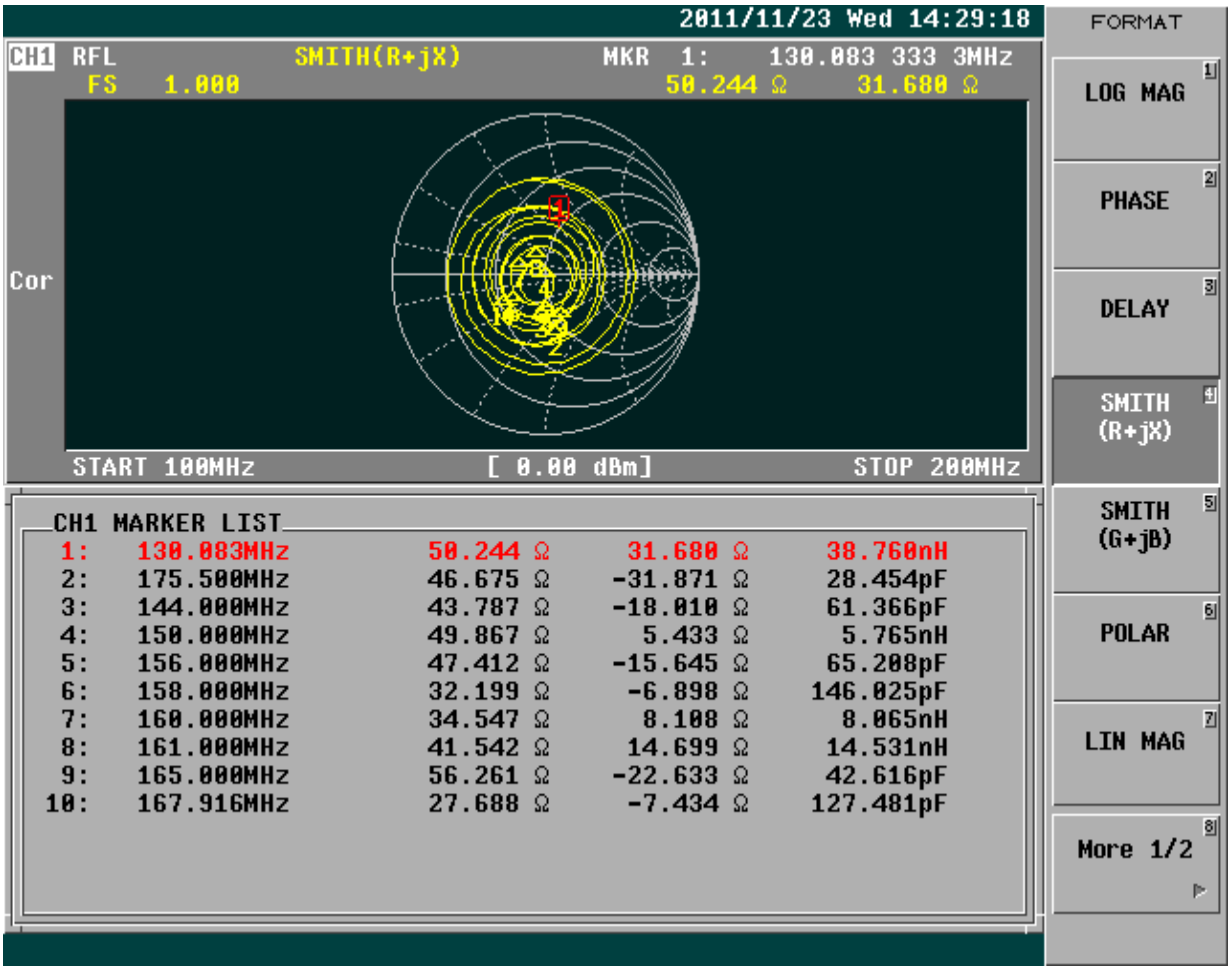
	SUS Whip VHF ANTENNA
Fr :	**156 ~ 165 Mhz**
Gain:	**0dB**
VSWR	**2.0:1**
Impedence:	**50 ohm**
Connector:	**SMA(M)**
Ground	**With FB6 Base mounting**
Dimension:	**35.2mm**
Weight:	**46g**
Cable :	**SMA(SBJ)-10M-TNC(M) or other**

＊ This specification is subject to change without prior notice **Data Updated:** OCT.21, 2011

FB6 SUS L- mounting :


2011/11/23 Wed 14:28:19
CH1 RFL
LOG MAG
MKR 1: 130.083 333 3MHz
REF 0.000 dB
5.000 dB/
-10.356 dB
MARKER 1
130.083 333 3MHz
-10.356 dB
Cor
START 100MHz
[0.00 dBm]
STOP 200MHz
CH1 MARKER LIST
1: 130.083MHz -10.356 dB
2: 175.500MHz -10.042 dB
3: 144.000MHz -13.994 dB
4: 150.000MHz -25.367 dB
5: 156.000MHz -15.856 dB
6: 158.000MHz -12.707 dB
7: 160.000MHz -13.747 dB
8: 161.000MHz -14.746 dB
9: 165.000MHz -13.302 dB
10: 167.916MHz -10.379 dB
ACTIVATE MARKER
MARKER 1
MARKER 2
MARKER 3
MARKER 4
MARKER 5
ACTIVATE MKR OFF
Return
More 1/2


2011/11/23 Wed 14:28:48
CH1 RFL SWR MKR 1: 130.083 333 3MHz
REF 1.000 1.000 / 1.872
Cor
START 100MHz [0.00 dBm] STOP 200MHz
CH1 MARKER LIST
1: 130.083MHz 1.871
2: 175.500MHz 1.917
3: 144.000MHz 1.498
4: 150.000MHz 1.112
5: 156.000MHz 1.384
6: 158.000MHz 1.601
7: 160.000MHz 1.517
8: 161.000MHz 1.447
9: 165.000MHz 1.551
10: 167.916MHz 1.867
FORMAT
SWR
REAL
IMAG
PHASE -∞,+∞
LOG MAG & PHASE
LOG MAG & DELAY
LIN MAG & PHASE
More 2/2


2011/11/23 Wed 14:29:18
CH1 RFL SMITH(R+jX) MKR 1: 130.083 333 3MHz
FS 1.000 50.244 Ω 31.680 Ω
Cor
START 100MHz [0.00 dBm] STOP 200MHz
CH1 MARKER LIST
1: 130.083MHz 50.244 Ω 31.680 Ω 38.760nH
2: 175.500MHz 46.675 Ω -31.871 Ω 28.454pF
3: 144.000MHz 43.787 Ω -18.010 Ω 61.366pF
4: 150.000MHz 49.867 Ω 5.433 Ω 5.765nH
5: 156.000MHz 47.412 Ω -15.645 Ω 65.208pF
6: 158.000MHz 32.199 Ω -6.898 Ω 146.025pF
7: 160.000MHz 34.547 Ω 8.108 Ω 8.065nH
8: 161.000MHz 41.542 Ω 14.699 Ω 14.531nH
9: 165.000MHz 56.261 Ω -22.633 Ω 42.616pF
10: 167.916MHz 27.688 Ω -7.434 Ω 127.481pF
FORMAT
LOG MAG
PHASE
DELAY
SMITH (R+jX)
SMITH (G+jB)
POLAR
LIN MAG
More 1/2