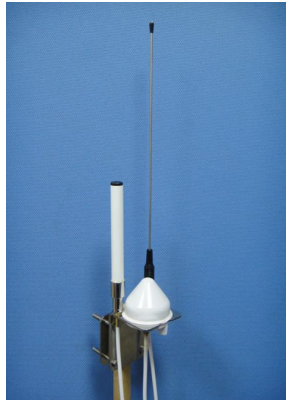


OUTSIDE GPS/VHF/GSM ANTENNA

MODEL: GVM-650

FOR Base Antenna or Car / Marine GPS/VHF/GSM AVL/AIS/Orbcomm System



GPS Antenna Specifications: GA65

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:	SMA(M)-10M RG58 -TNC(M) or Optional
Pulling strength:	6 Kg @ 5sec. molded plastic on connector end for strain relief.
Connector available:	SMA(F)
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
Output Impedance:	50 ohm
Low Noise Amplifier	
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
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Overall Performance: (antenna element, LNA & coax 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

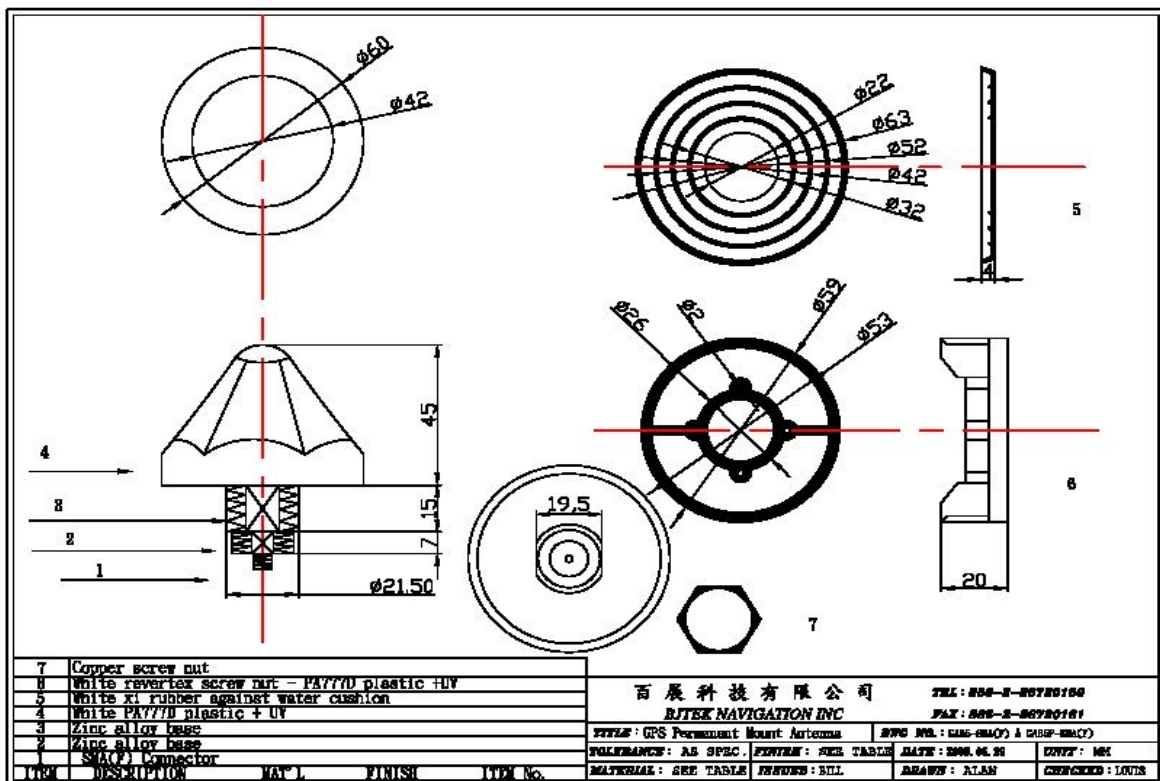
Environmental

Operating Temperature:	-40°C~ +100°C.
Storage Temperature:	-40°C~ +100°C.
Relative Humidity:	95% non-condensing.
Water Resistance:	100% waterproof. IPX6

GA65



FB6 SUS L- mounting :



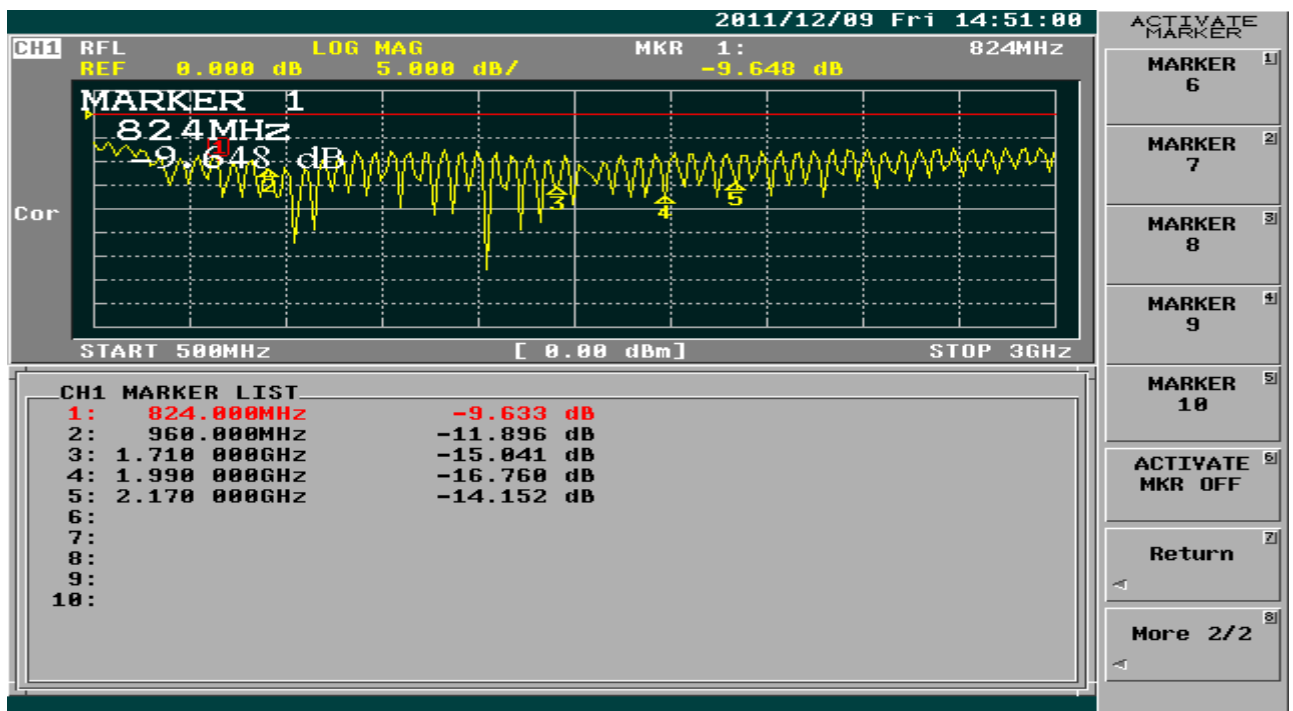


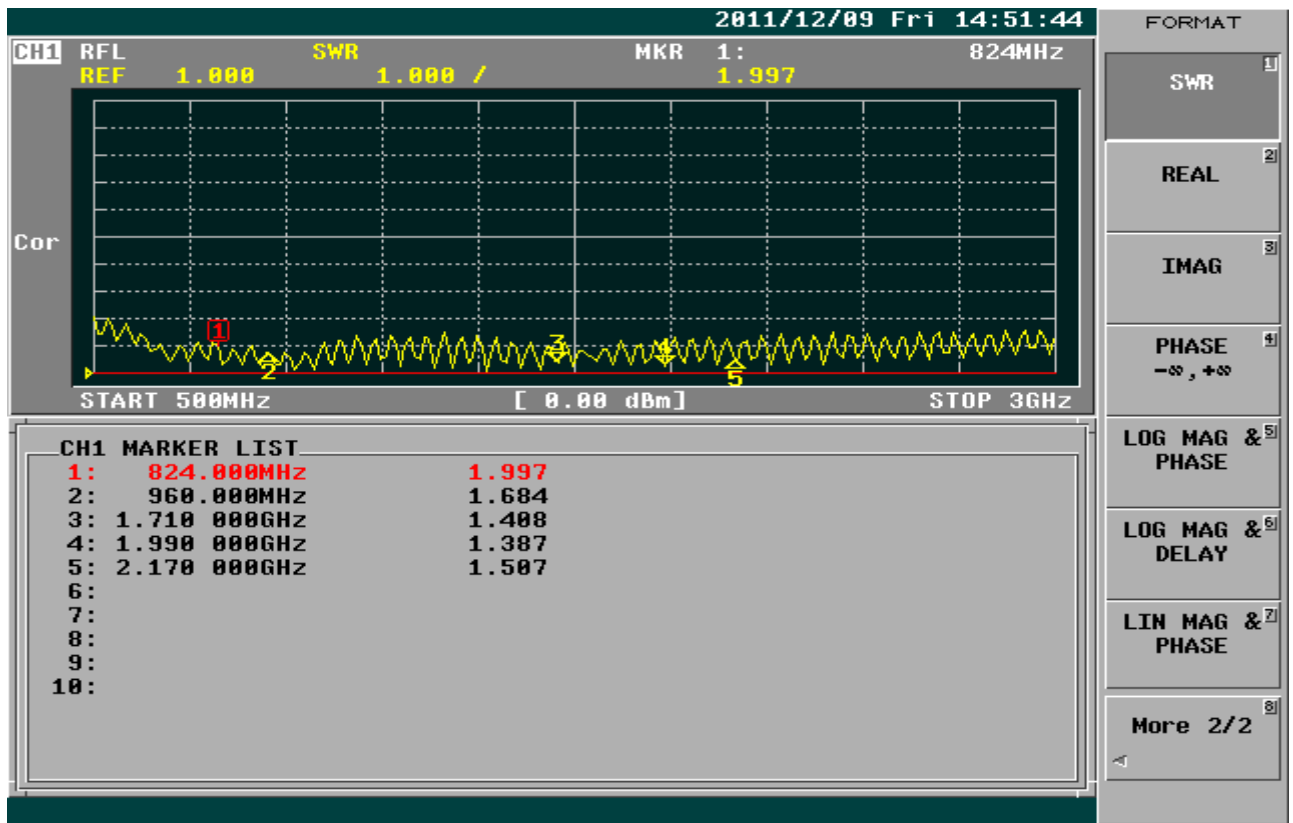
GSM Antenna Specifications: GSM-50A

Frequency range:	850/900/1800/1900/2170Mhz
Gain:	3dBi
V.S.W.R:	<2.0
Impedence:	50 ohm
Connector:	SMA male
Dimension:	164mm +/-10 x OD16.2mm
Weight:	64g
Polarization :	vertical
Power handling :	50W
Colour :	white
Rated wind velocity :	60m/s
Working Temperature :	-40~60°C
Lightning Protection :	Direct Ground

* This specification is subject to change without prior notice

Data Updated: Dec.07, 2011





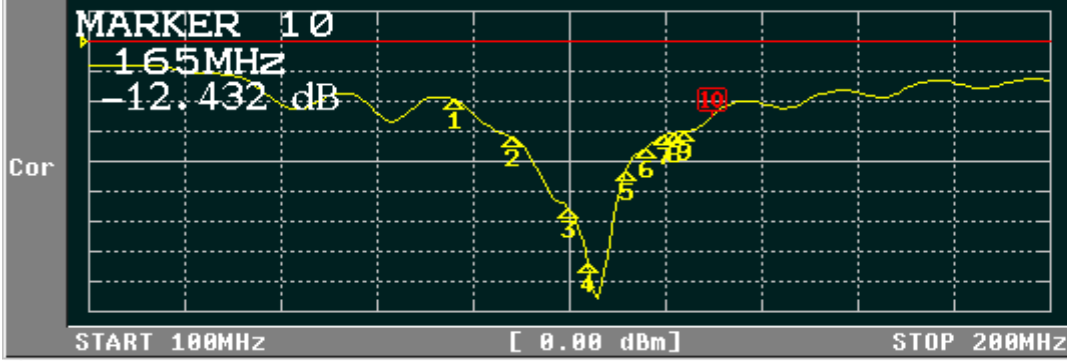
VHF Antenna Specifications: TH160B-SUS Whip Antenna

Frequency range:	138-165Mhz
Gain:	1dBi
V.S.W.R:	<2.0
Impedence:	50 ohm
Connector:	SMA male
Dimension:	355mm +/-10 x OD14.7mm(SUS Whip 3.0mm)
Weight:	45g
Polarization :	vertical
Power handling :	50W
Colour :	Black
Rated wind velocity :	60m/s
Working Temperature :	-40~60°C
Lightning Protection :	Direct Ground

* This specification is subject to change without prior notice

Data Updated: Dec.07, 2011

CH1 RFL LOG MAG MKR 10: 165MHz
 REF 0.000 dB 5.000 dB/ -12.432 dB



CH1 MARKER LIST

1:	138.000MHz	-9.641 dB
2:	144.000MHz	-15.907 dB
3:	150.000MHz	-27.773 dB
4:	152.000MHz	-36.742 dB
5:	156.000MHz	-21.487 dB
6:	158.000MHz	-17.735 dB
7:	160.000MHz	-15.588 dB
8:	161.000MHz	-15.159 dB
9:	162.000MHz	-15.001 dB
10:	165.000MHz	-12.432 dB

ACTIVATE MARKER

MARKER 6

MARKER 7

MARKER 8

MARKER 9

MARKER 10

ACTIVATE MKR OFF

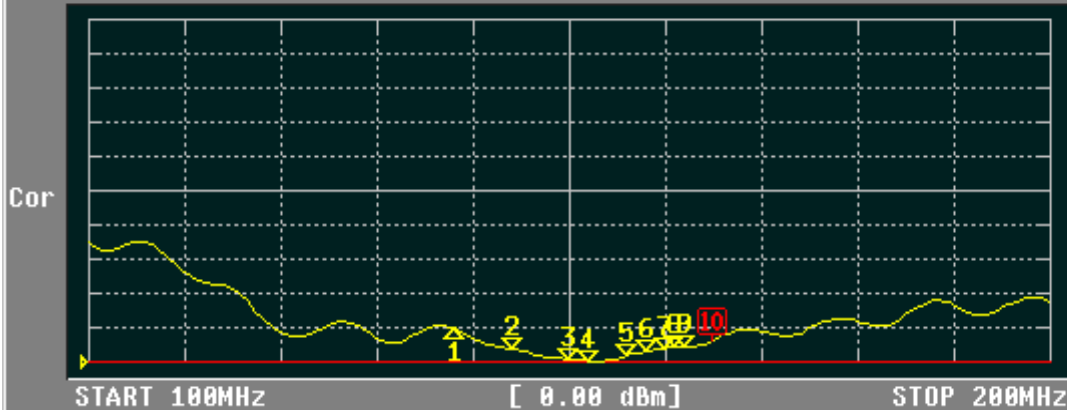
Return

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More 2/2

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CH1 RFL SWR MKR 10: 165MHz
 REF 1.000 1.000 / 1.628



CH1 MARKER LIST

1:	138.000MHz	1.981
2:	144.000MHz	1.381
3:	150.000MHz	1.085
4:	152.000MHz	1.030
5:	156.000MHz	1.184
6:	158.000MHz	1.298
7:	160.000MHz	1.397
8:	161.000MHz	1.423
9:	162.000MHz	1.433
10:	165.000MHz	1.627

FORMAT

SWR

REAL

IMAG

PHASE
-90, +90

LOG MAG & PHASE

LOG MAG & DELAY

LIN MAG & PHASE

More 2/2

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