



SWG007

PN: SW19055EB93

Features

- Antenna for 1176MHz,1575.42MHz,1602MHz.
- High gain.
- Impedance 50 Ohm.

Applications:

- Solution for global public constellations:
GPS L1+L5/GLONASS/GALILEO.

1. Electrical Specification

Standards	GPS L1+L5/GLONASS/GALILEO		
Frequency range (MHz)	1176	1575	1602
Peak Gain (dBi)	2.13	-0.23	0.21
Average Gain (dB)	-4.96	-5.57	-4.77
VSWR	1.75	1.47	1.31
Return Loss	-11.34	-15.68	-20.88
Efficiency (%)	31.9%	27.7%	33.3%
Polarization mode	Circular polarization		
Radiation pattern	Hemispherical		
Voltage Range (V)	1.8~3.6		
Active Gain (dB)	25		
Noise Figure (dB)	2.5		
Current Consumption (mA)	20		
Power Consumption (mW)	100		

2. Mechanical and Environmental Specification

Mounting Type	Magnet
Connector Type	SMA-M
Antenna size(mm)	38.3mm (L) x45.54 mm (W) x 15.20mm (H)
Material	Ceramic
RG174(mm)	3000mm
Operating Temperature (°C)	-40 °C ~ +85 °C
Storage Temperature(°C)	-40 °C ~ +85 °C

3. Antenna parameters

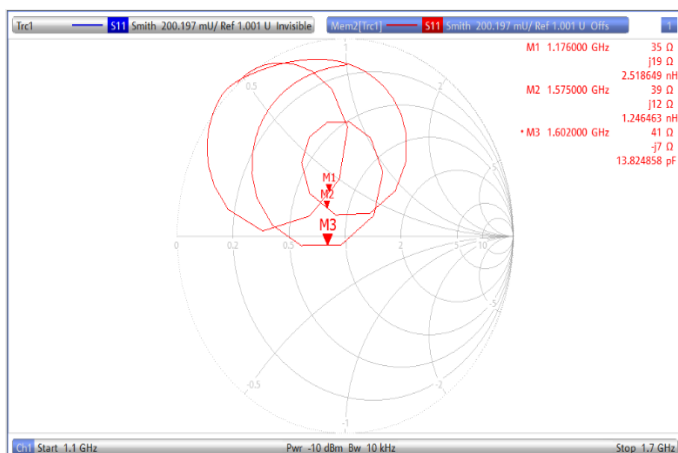
3.1 General Specification

FRE (MHz)	1176	1575	1602
VSWR	1.75	1.47	1.31
Return Loss	-11.34	-15.68	-20.88
Eff (%)	31.9	27.7	33.3
PEAK Gain (dBi)	2.13	-0.23	0.21

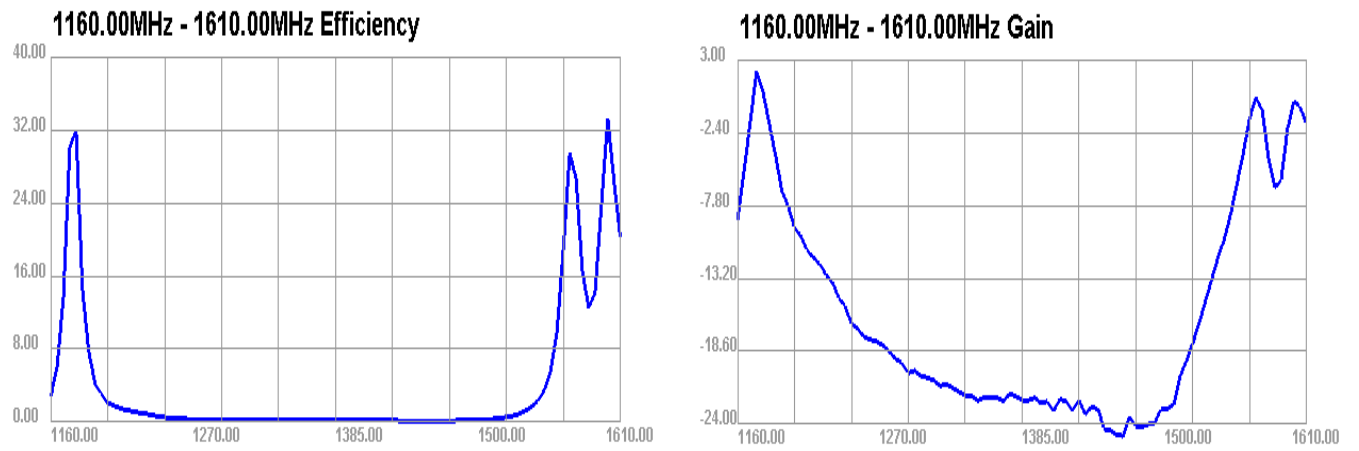
3.2 VSWR and Return Loss



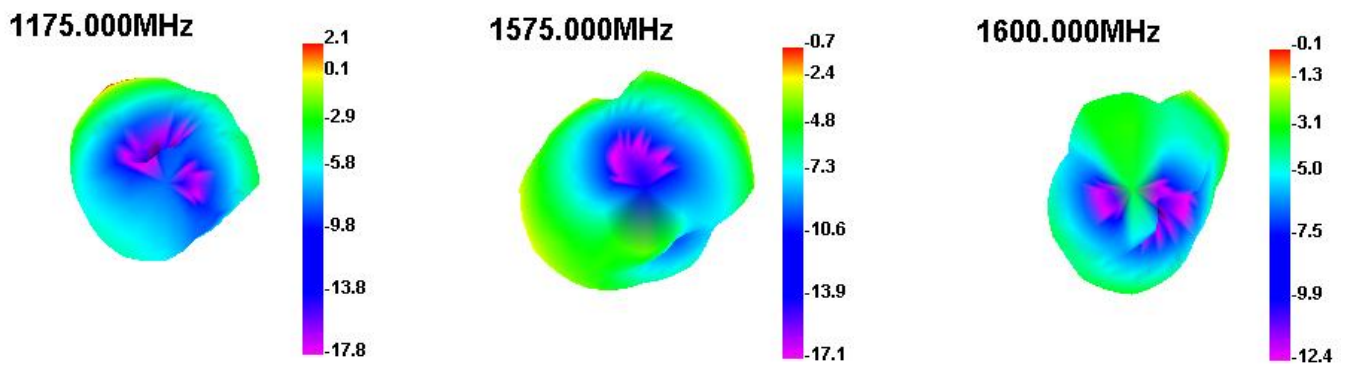
3.3 SMITH



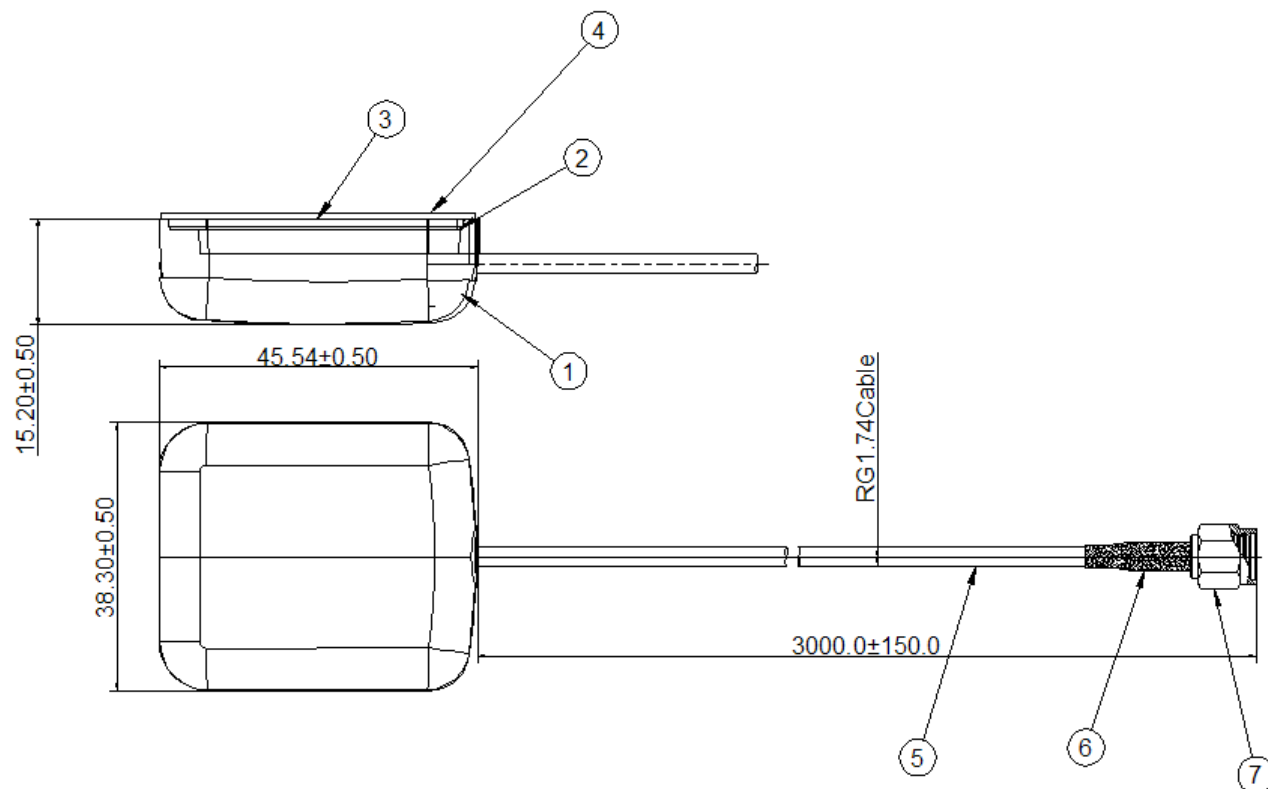
3.4 Efficiency and Gain



3.5 Directional Pattern

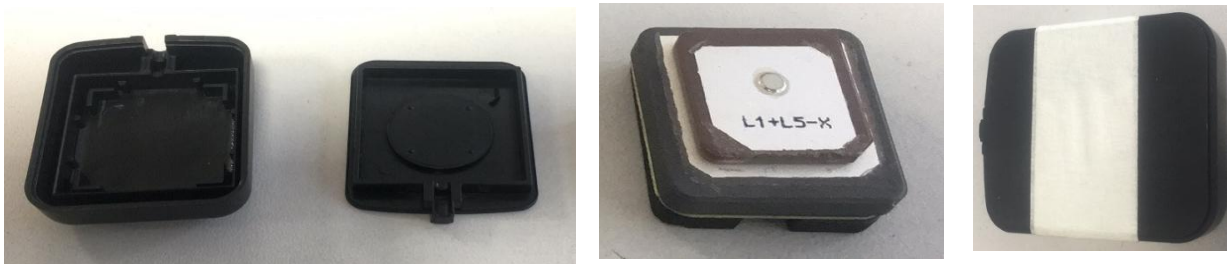


4. Antenna Drawing(Unit:mm)



Series	Component name	Specification	Color	Quantity
1	Upper shell	ABS	black	1
2	Lower shell	ABS	black	1
3	magnet	Ø18x2	black	1
4	VHB		Natural color	1
5	RG174cable	RG174 cable, 3000mm	black	1
6	heat shrink tubing		black	1
7	SMA head	SMA-M	gold	1

5. Drop Test

Department	Antenna Name	Test Quantity	Test Standard	Test Date
MD	SWG007	1pc	N/A	2019/10/31
Test Purpose: Verify the upper and lower ceramics do not fall off in the event of Falling at a certain height.				
Test process: According to the ceramic external antenna assembly requirements: Soldered to the PCB, assembled into the outer casing, at a height of 1.5 meters, free fall on the concrete floor, fell 3 times with optional corner and/or 3 sides.				
				
Pass Criteria: 1、 There is no falling off at the ceramic thimble soldering PCB board; 2、 There is no looseness between the upper and lower ceramic sheets.				
Test Result: After the drop test, the outer casing is opened, and the inner ceramic antenna thimble is not welded off at the PCB board, and there is no looseness between the upper and lower ceramic sheets. PASS ☒ FAIL ☐				
Test Engineer/Date: Yu Jiang/2019-10-31			Approved by/Date: Chen Xiaoping/2019-10-31	