



SUNNYWAY

SWG007

PN: SW19055EB93



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1. Electrical Specifications

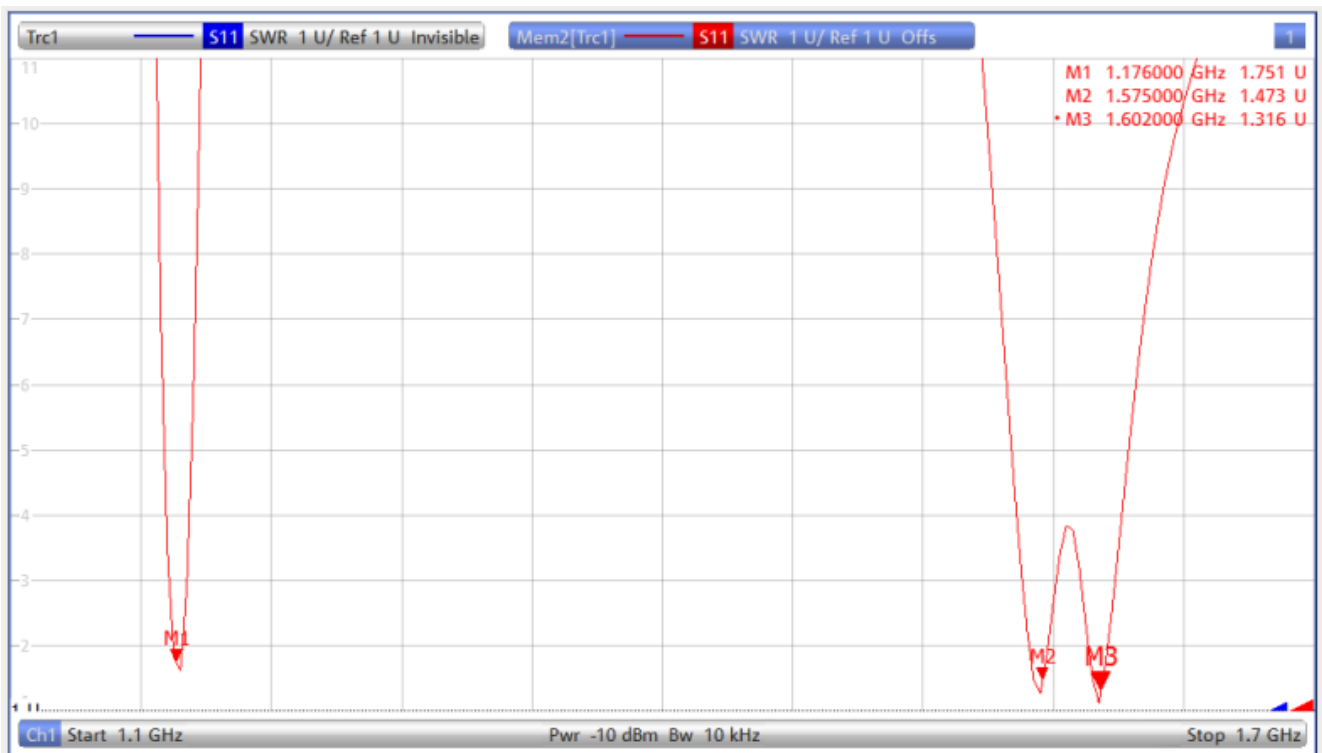
Standards	GPS/Glonass/Galileo L1+L5		
Frequency range (MHz)	1176MHz	1575MHz	1602MHz
Peak Gain (dBi)	2.13dBi	-0.23dBi	0.21dBi
Average Gain (dB)	-4.96dB	-5.57dB	-4.77dB
VSWR	1.75	1.47	1.31
Return Loss	-11.34	-15.68	-20.88
Efficiency (%)	31.9%	27.7%	33.3%
Polarization mode	Circular polarization	Circular polarization	Circular polarization
Radiation pattern	Hemispherical	Hemispherical	Hemispherical
Voltage Range (V)	3.0 - 5.0	3.0 - 5.0	3.0 - 5.0
Active Gain (dB)	25 @ 5.0 V	25 @ 5.0 V	25 @ 5.0 V
Noise Figure (dB)	2.5 @ 5.0 V	2.5 @ 5.0 V	2.5 @ 5.0 V
Current Consumption (mA)	20 @ 5.0 V	20 @ 5.0 V	20 @ 5.0 V
Power Consumption (mW)	100 @ 5.0 V	100 @ 5.0 V	100 @ 5.0 V

2. Mechanical and Environmental Specification

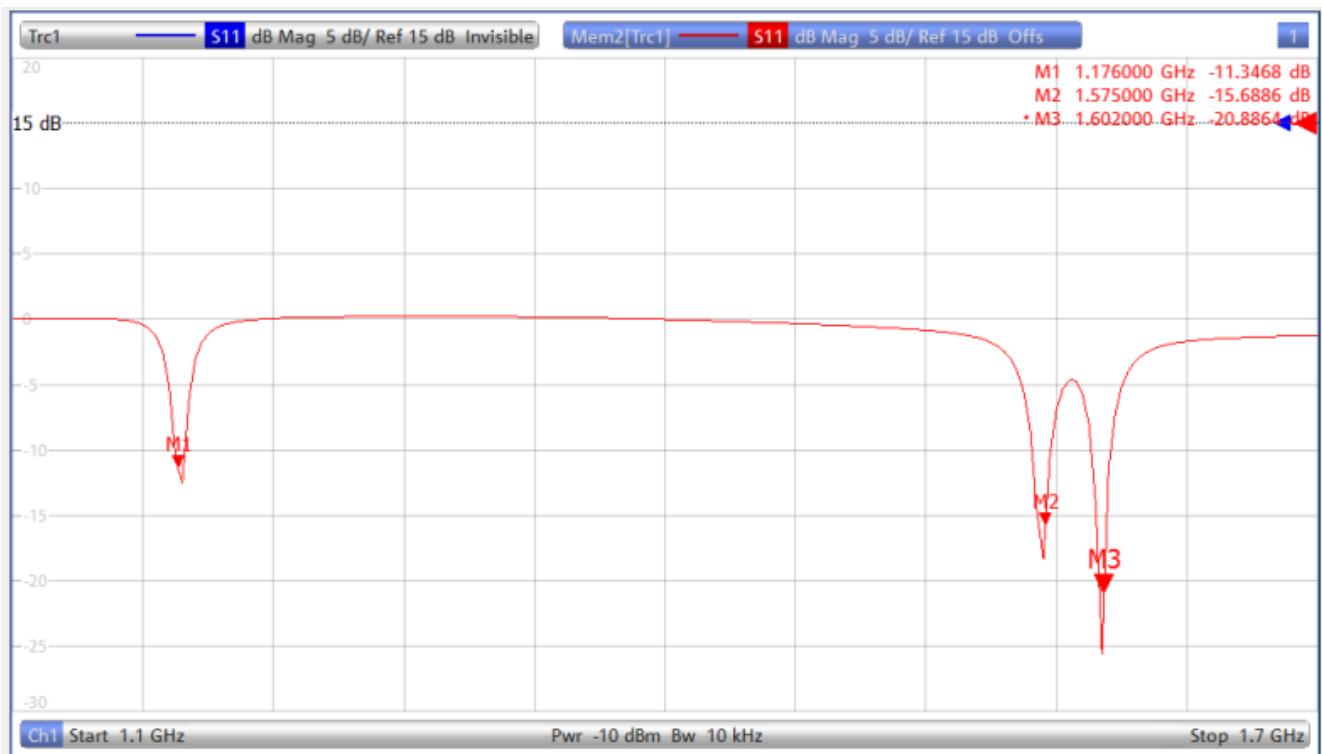
Mounting Type	Magnet
Connector Type	SMA
Antenna size(mm)	38.3mm (L) x45.54 mm (W) x 13.0mm (H)
Material	Ceramic
RG174(mm)	3000mm
Operating Temperature (°C)	-40 °C ~ +85 °C
Storage Temperature(°C)	-40 °C ~ +85 °C

3. Antenna parameters

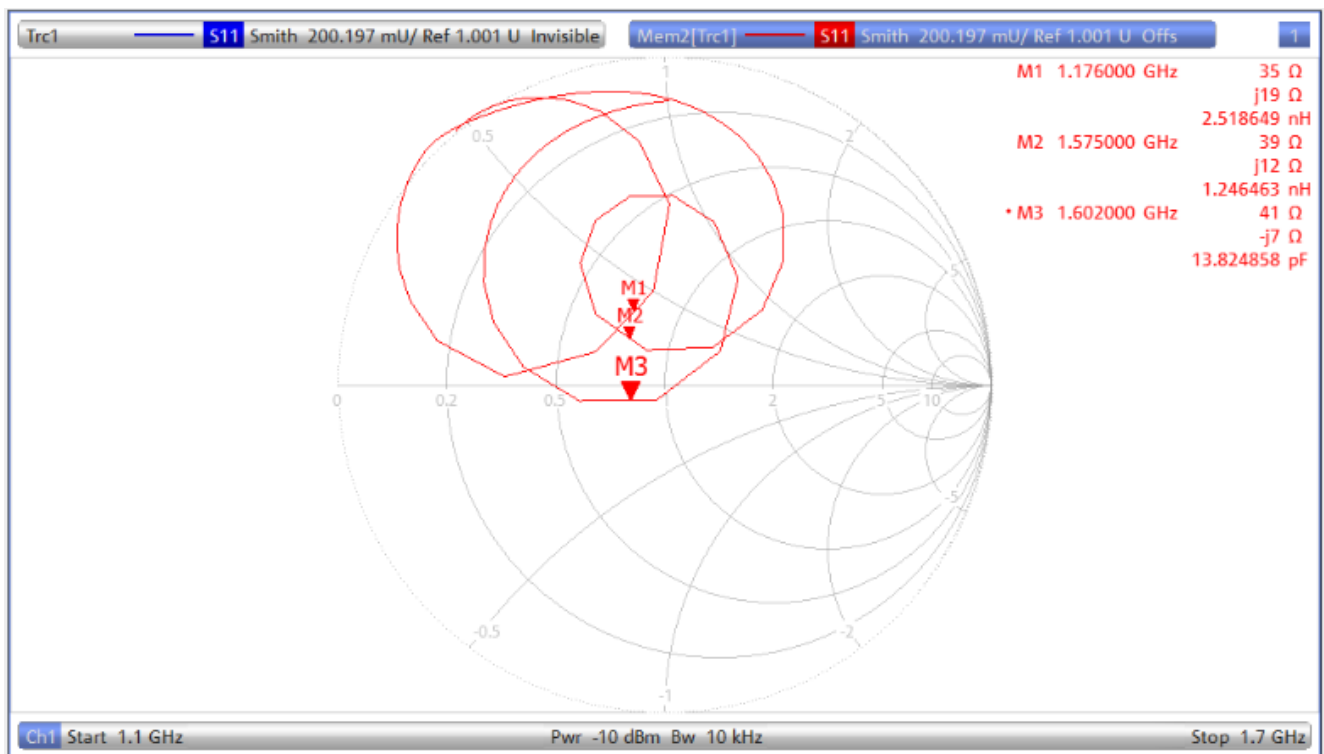
FRE (MHz)	1176	1575	1602
VSWR	1.75	1.47	1.31
Return Loss	-11.34	-15.68	-20.88
Eff (%)	31.9	27.7	33.3
PEAK Gain (dBi)	2.13	-0.23	0.21



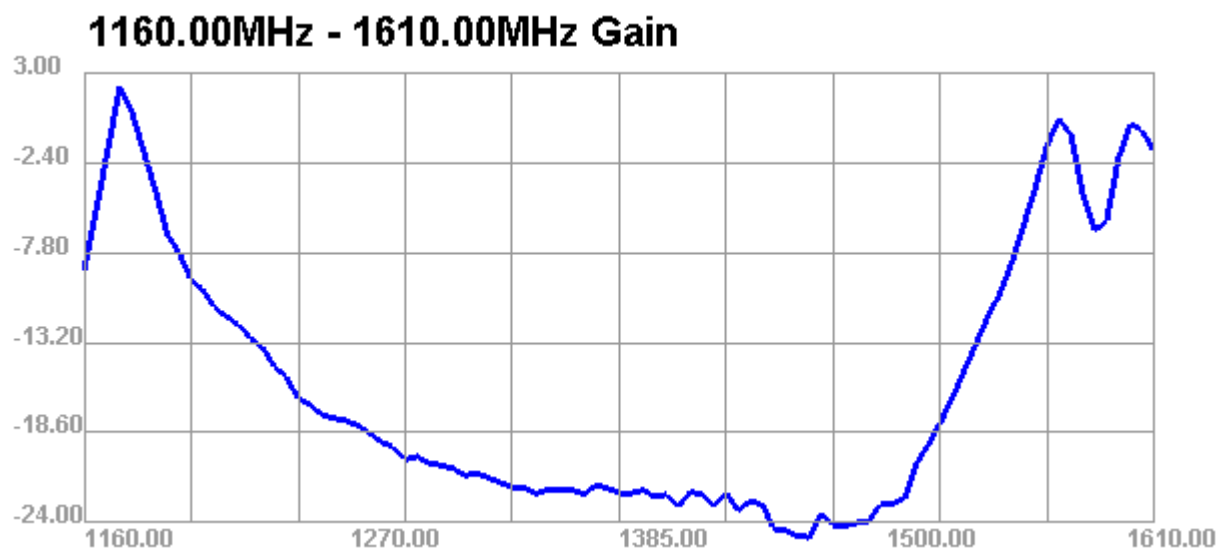
VSWR

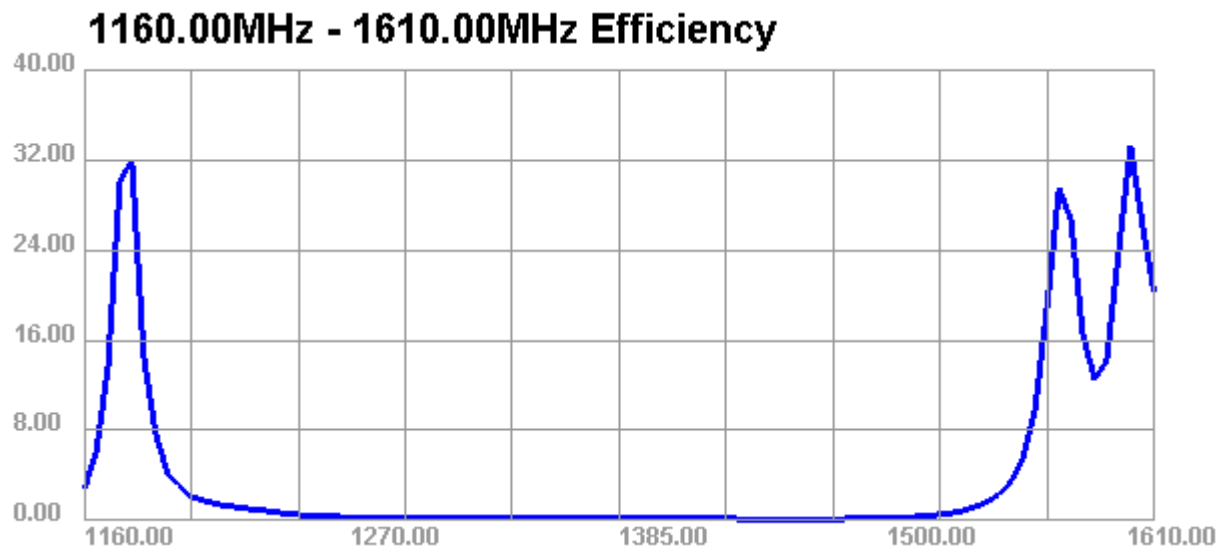


Return Loss

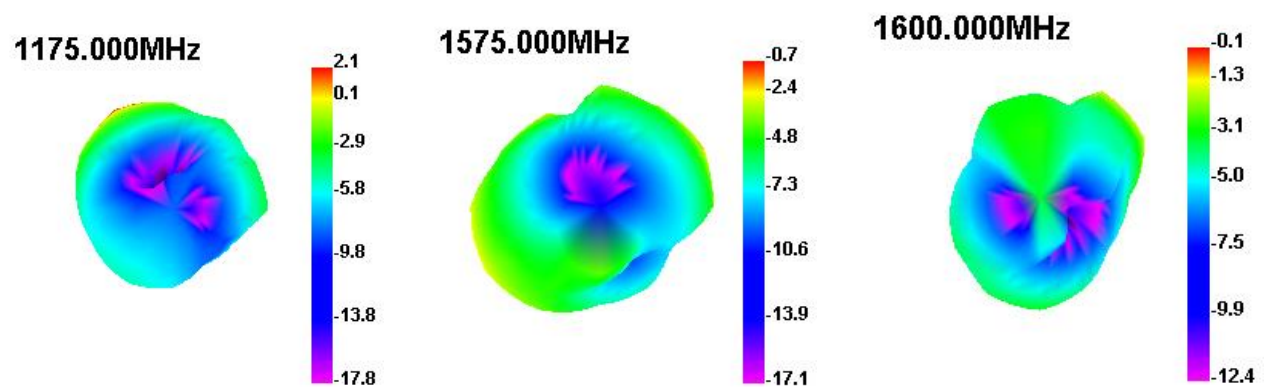


Smith



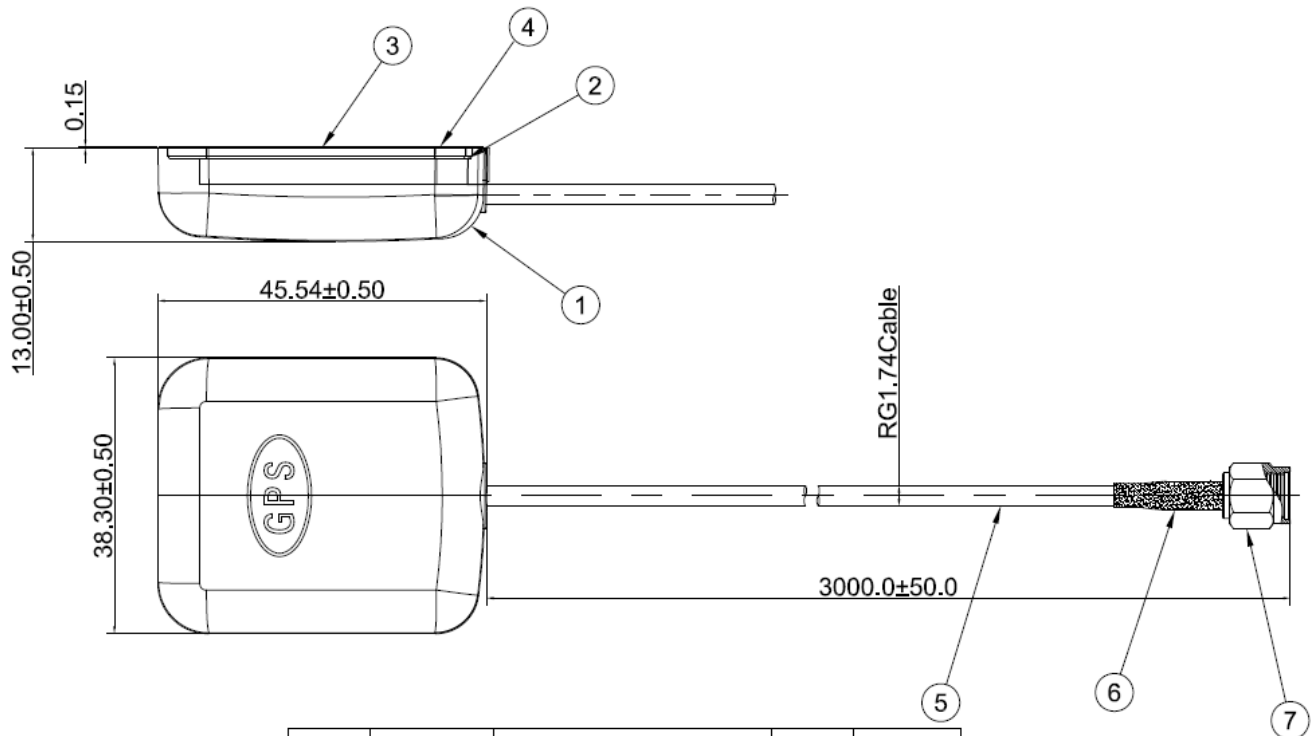


Directional Pattern



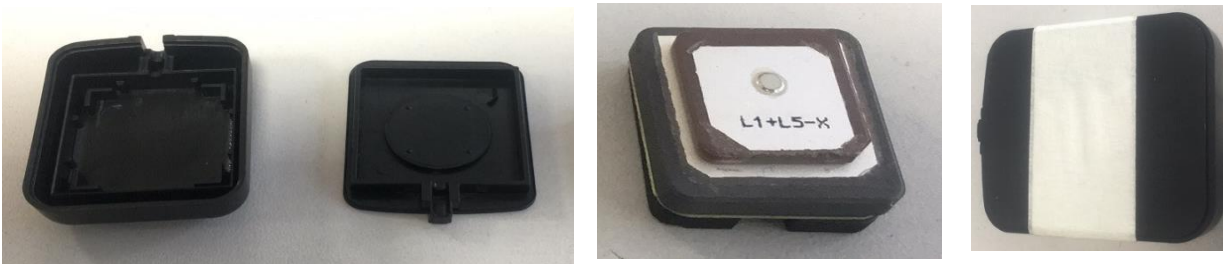


4. Antenna Drawings



7	SMA head	SMA-J	gold	1
6	heat shrink tubing		black	1
5	RG174cable	RG174 cable, 3000mm	black	1
4	label		silvery	1
3	magnet	Ø15x2	black	1
2	Lower shell	ABS	black	1
1	Upper shell	ABS	black	1
Series	Component name	Specification	Color	Quantity

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	