



Product Name: GNSS Antenna

Part Number: EG-88W-AC-A01

Features:

- Support GPS L1 / GLONASS L1/ BeiDou L1/ GPS L2/ GPS L5 Bands
- Connector : TNC (SBJ)
- Excellent Out of Band Suppression, Up to 65 dB
- 36 dB Active Peak Gain
- Robust Enclosure, IP67 Waterproof Resistant
- Customizable Cables and Connectors
- RoHS & REACH Compliant

Applications:

- Automotive Navigation
- For all GNSS applications with networking such as sensor, sonar multi-function gauge, etc.

GNSS Antenna

MODEL: EG-88W-AC-A01

Rev.A

I. Specifications:

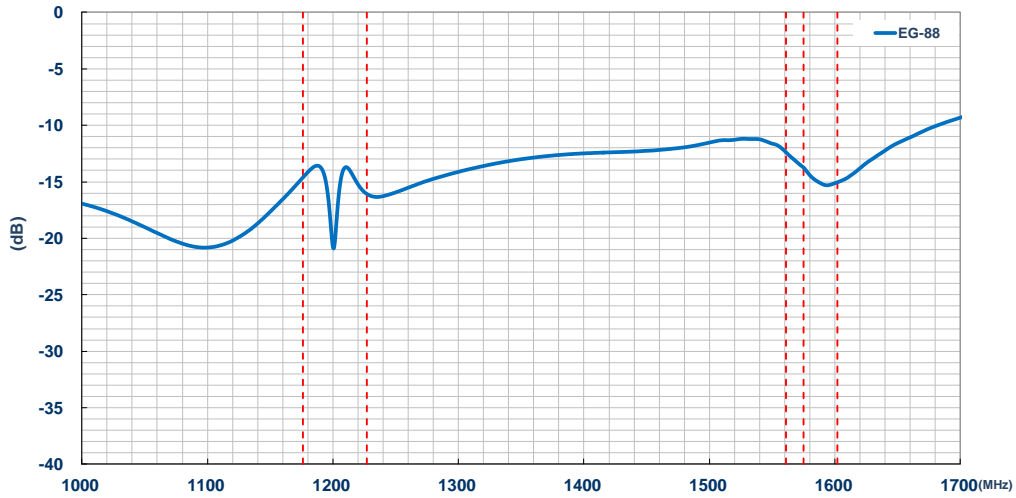
Items	Specifications				
Passive Antenna Performance					
Application Bands	GPS_L5	GPS_L2	BeiDou_L1	GPS_L1	GLONASS_L1
Frequencies (MHz)	1176	1227	1561	1575.42	1602
Efficiency (%)	7.48	6.78	54.58	43.95	29.04
Average Gain (dBi)	-11.26	-11.69	-2.63	-3.57	-5.37
Peak Gain (dBi)	-6.14	-11.69	3.24	2.48	0.69
Axial Ratio	1.34	1.29	2.24	2.16	2.38
V.S.W.R	< 2				
Return loss (dB)	< -10				
Test Condition	Free Space				
Impedance (Ω)	50				
Polarization	R.H.C.P. (Right Handed Circular Polarization)				
Active Antenna Performance					
Application bands	GPS_L5	GPS_L2	BeiDou_L1	GPS_L1	GLONASS_L1
Frequencies (MHz)	1176 \pm 5	1227 \pm 5	1561 \pm 5	1575.42 \pm 1.023	1602 \pm 5
Gain (dB)	37	38	37	39	36
Noise Figure (dB)	1.4	1.3	1.5	1.5	1.6
Operation Voltage (V)	3.3 ~ 5.0				
Current Consumption (mA)	20 \pm 3				
Output Impedance (Ω)	50				

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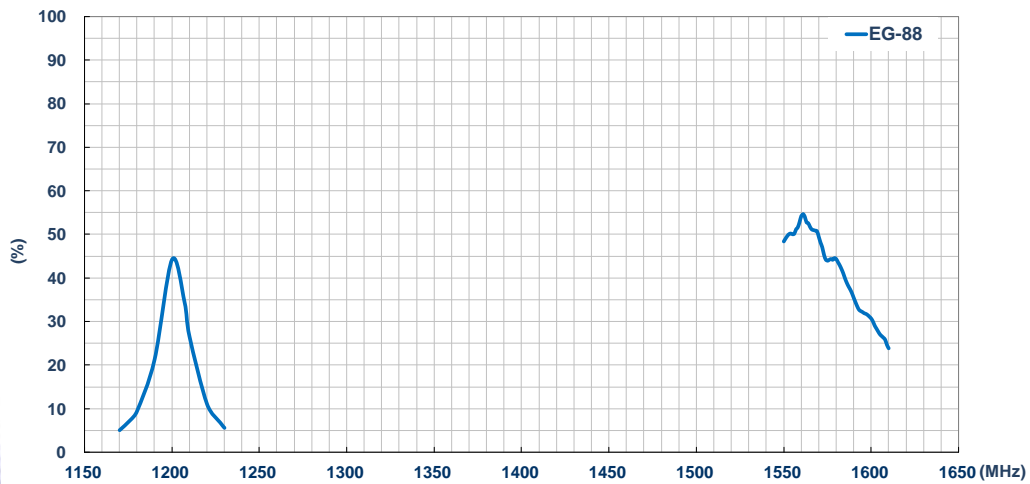
Out of Band Rejection										
Application bands	GPS_L5		GPS_L2		BeiDou_L1		GPS_L1		GLONASS_L1	
Frequencies (MHz)	600	1650	600	1650	600	1650	600	1650	600	1650
	~	~	~	~	~	~	~	~	~	~
	1100	3000	1100	3000	1100	3000	1100	3000	1100	3000
Out of Band Rejection (dB)	56	65	57	66	56	65	58	67	55	64
ESD Protection	+/- 8 KV (direct discharge) +/- 15KV (air discharge)									
Mechanical										
Dimension (mm)	φ 80(D) x 71.2(H)									
Waterproof Resistant	IP67									
Cable / Length	RG58 / 2 meters									
Connector	TNC (SBJ)									
Cable Connector	TNC (SP) / N (SP)									
Environmental Conditions										
Operation Temperature (°C)	-40 ~ +85									
Storage Temperature (°C)	-40 ~ +85									
Relative Humidity	95% non-condensing									

II. Antenna Technical Parameters:

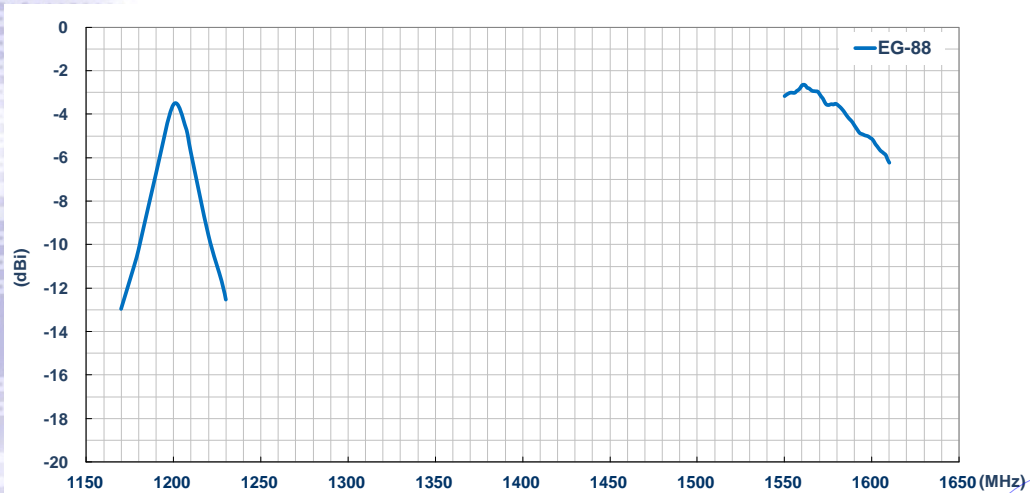
S11 (dB)



Efficiency (%)

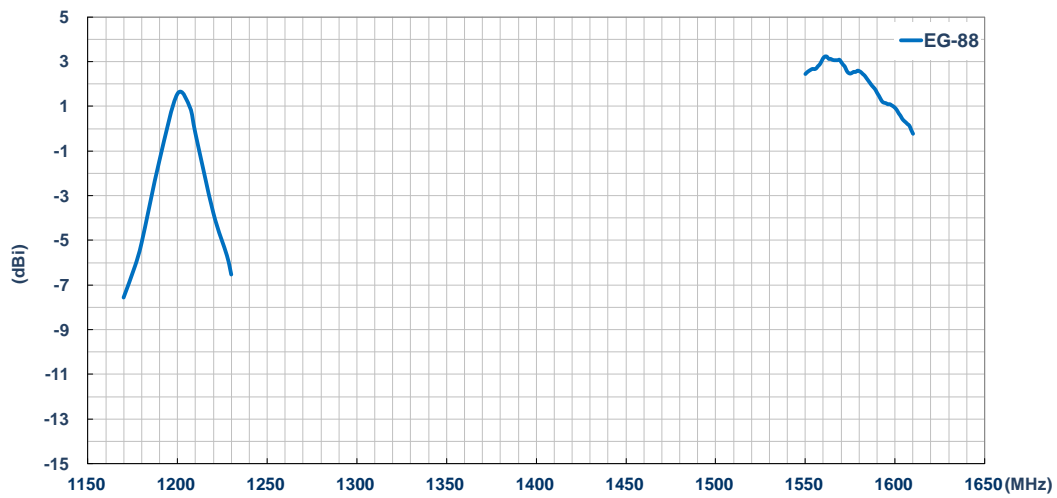


Average Gain (dBi)



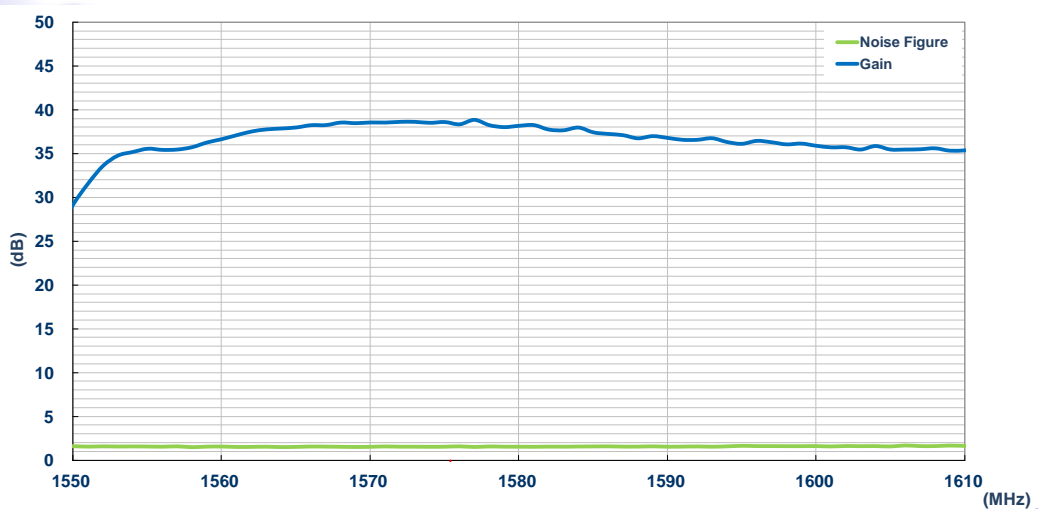
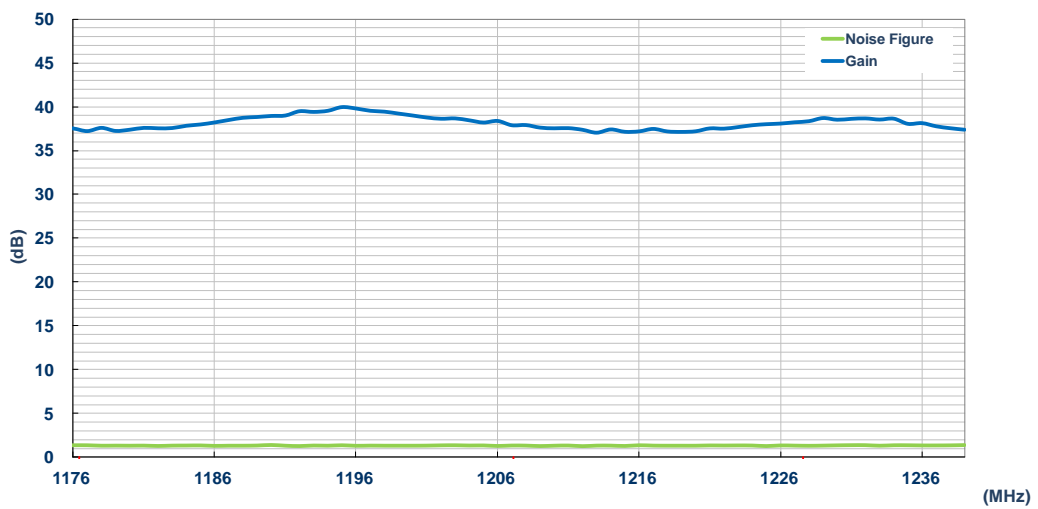
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Peak Gain (dBi)

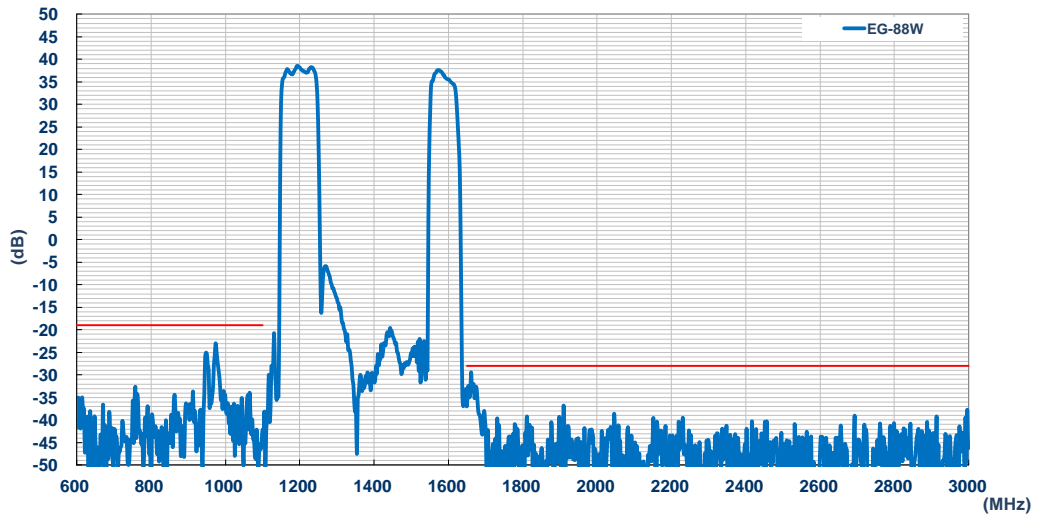


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Noise Figure & Gain (dB)



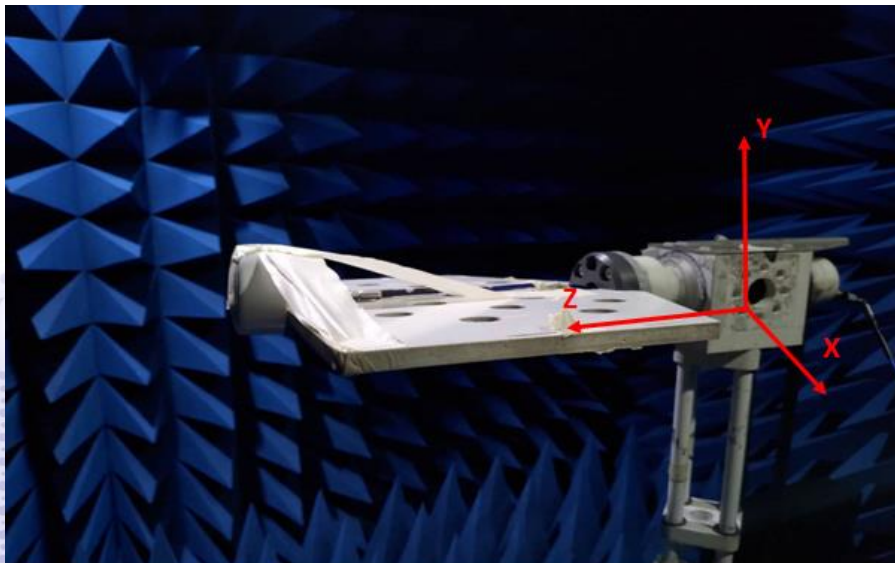
Out of Band Rejection (dB)



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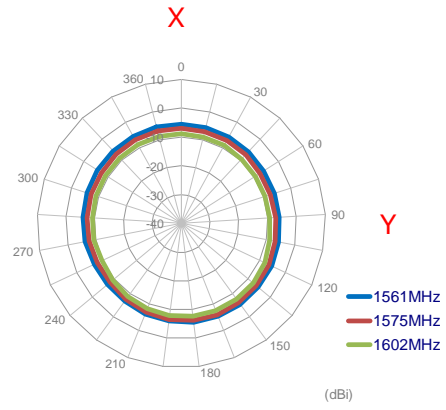
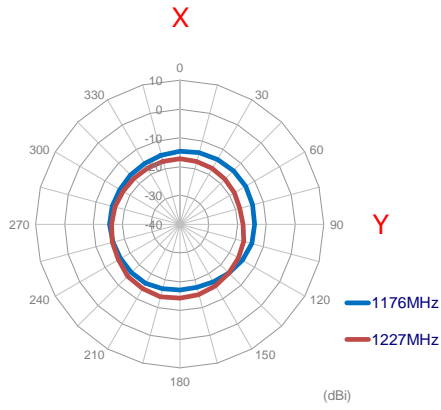
III. Antenna Radiation Pattern Measurement:

The antenna radiation patterns were measured in ETS Anechoic Chamber. The measurement setup as below,

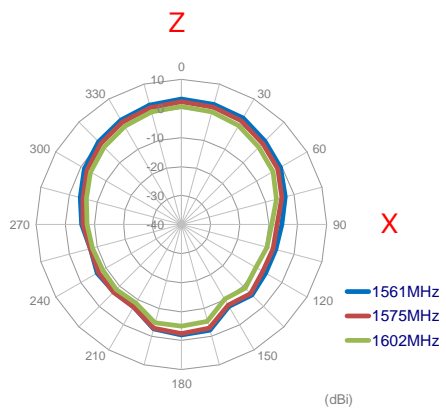
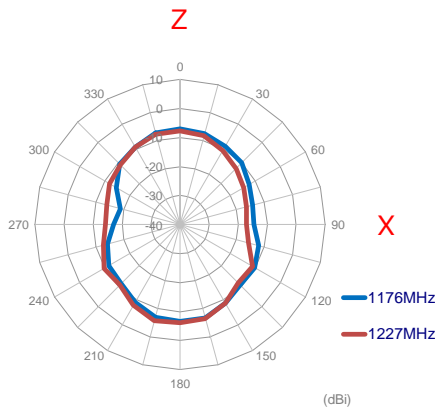


IV. 2D Radiation Pattern:

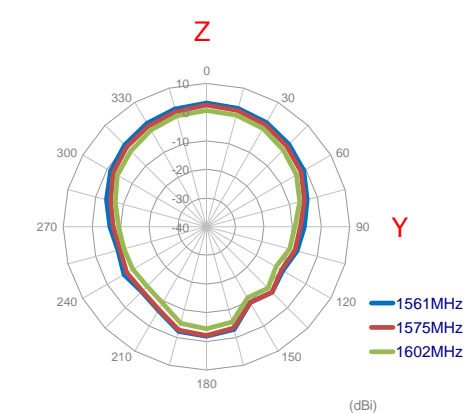
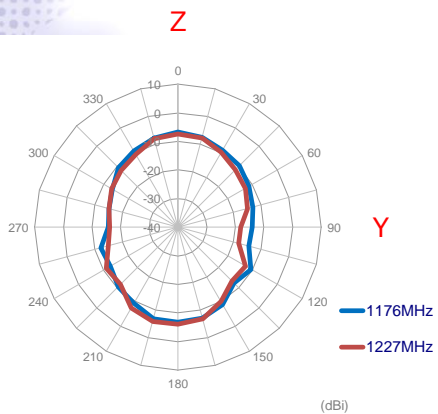
X-Y Plane



X-Z Plane

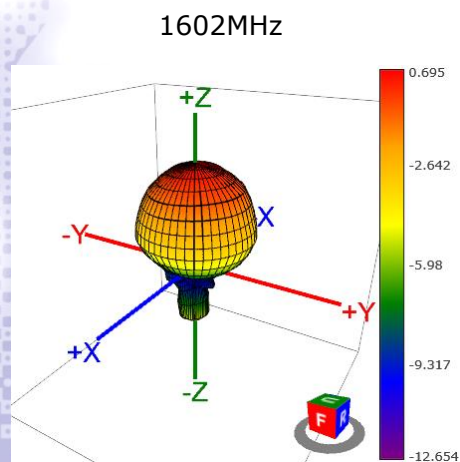
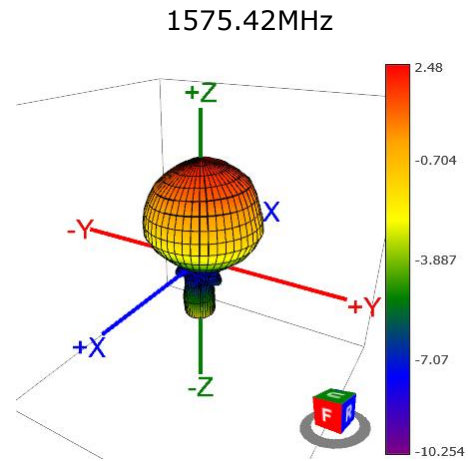
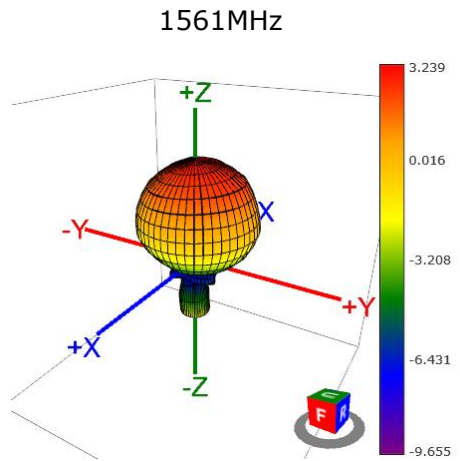
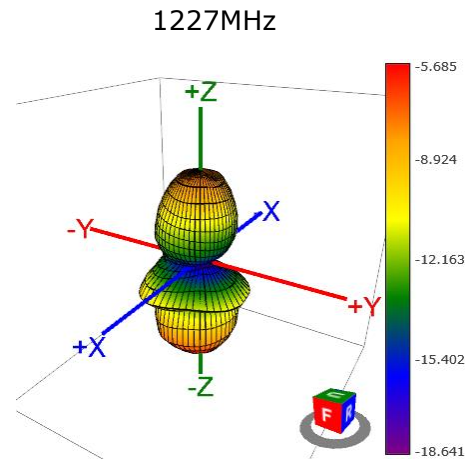
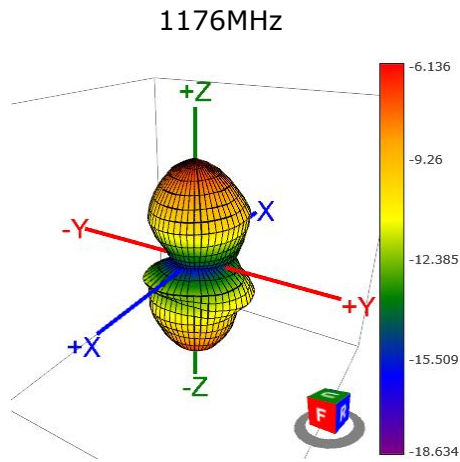


Y-Z Plane



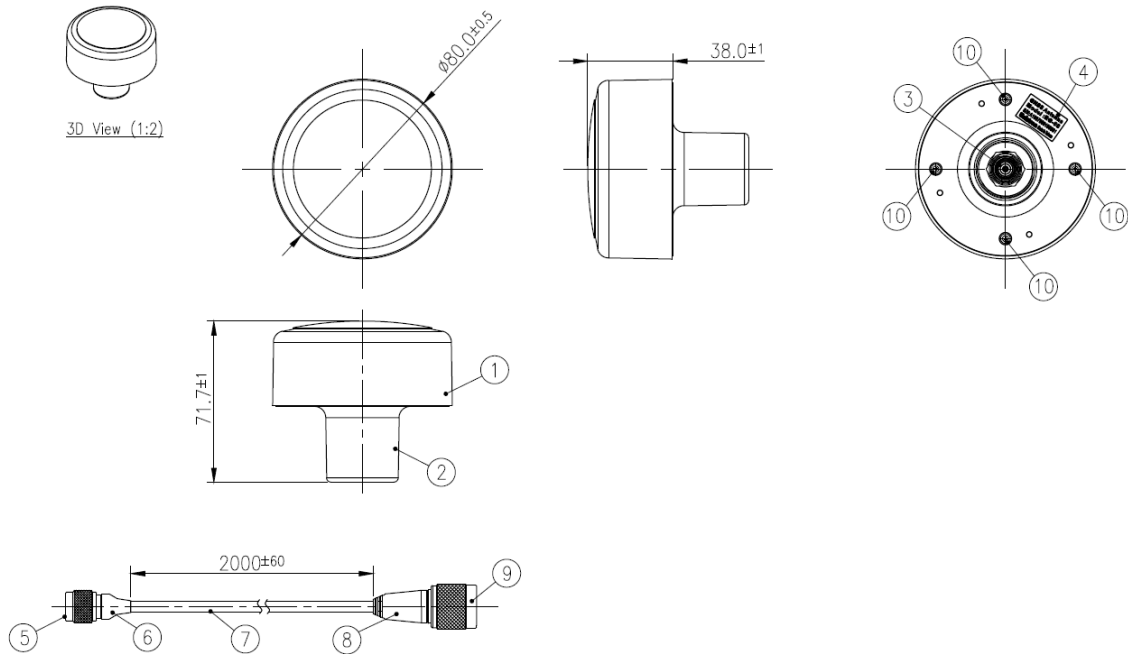
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V. 3D Radiation Pattern:



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VI. Mechanical Drawing (Unit:mm):



- Notes:
 1. All material must be RoHS compliant.
 2. IP Code : IP67.

10	Screw TP3*10	SUS	Passivation	4
9	N(SP) Connector	Brass	Ni plating	1
8	Molding - 2	PVC	Black	1
7	Cable RG58	PVC	Black	1
6	Molding - 1	PVC	Black	1
5	TNC(SP) Connector	Brass	Ni plating	1
4	Label	Polyester	Silver	1
3	TNC(SBJ) Connector	Brass	Ni plating	1
2	Bottom Base	PBT+PC	White	1
1	Top Housing	PBT+PC	White	1
No	NAME	MATERIAL	FINISH	Q'TY

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