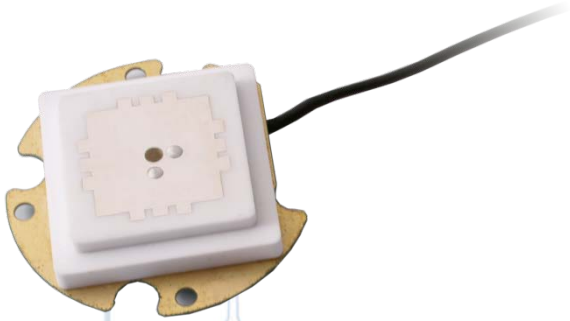
SANAV
San Jose Technology, Inc.



GNSS

RoHS Compliant

Product Name: AC-5 Series_ Stacked Antenna Module

Part Number: AC-5-A-A01

Features:

- 40*40*4mm/ 50*50*6mm Dual patch + Dual Feed Embedded
- GPS L1/ L2 /GLONASS Bands Supporting
- Excellent Out of Band Suppression up to 65dB
- Cables & Connectors Customizable
- RoHS & REACH Compliant

Applications:

- Car Navigation
- Portable GPS Tracking
- Security Surveillance

SANAV
2019.12.19
DCC

SANAV

Stacked Antenna Module

MODEL: AC-5-A-A01

WI-RD-D-270 V1.0

I. Specifications:

Category	Specifications							
Passive Antenna Performance								
Application Band	GPS L5	BeiDou B2I	GPS L2	BeiDou B3	Galileo E6	BeiDou L1	GPS L1	GLONASS1 L1
Frequency (MHz)	1176.45	1207.14	1227.60	1268.52	1278.75	1561.00	1575.42	1602.00
Efficiency (%)								
High Band	0.52	0.71	1.02	1.36	1.32	41.40	46.03	38.46
Low Band	17.38	47.53	34.28	10.14	7.52	0.87	0.93	1.30
Average Gain (dBi)								
High Band	-22.86	-21.48	-19.90	-18.67	-18.80	-3.83	-3.37	-4.15
Low Band	-7.60	-3.23	-4.65	-9.94	-11.24	-20.62	-20.31	-18.86
Peak Gain (dBi)								
High Band	-17.68	-15.14	-14.06	-11.50	-11.20	1.86	2.31	1.93
Low Band	-0.47	3.62	1.72	-3.09	-4.40	-14.75	-14.27	-12.52
V.S.W.R	< 2							
Return Loss (dB)	< -10							
Impedance (Ω)	50							
Polarization	R.H.C.P. (Right Handed Circular Polarization)							

SANAV
2019.12.19
DCC

SANAV San Jose Technology, Inc.
11F., No.2, Sec. 4, Jhongyang Rd., Tucheng Dist., New Taipei City 236, Taiwan (R.O.C.)
Tel: 886-2-22694456 | Fax: 886-2-22694451 | sanav@sanav.com

Active Antenna Performance			
Application Band	GPS L2	GPS L1	GLONASS
Frequency (MHz)	1227	1575.42 ± 1.023	1602 ± 5
Gain (dB)	34	38	34
Noise (dB)	2.3	2.22	2.74
Current Consumption (mA)	25.21 ± 2		
Output Impedance (Ω)	50		

GNSS _Out Of Band Rejection				
Application Band	GPS L1		GPS L2	
Frequency (MHz)	600 ~ 1520	1650 ~ 3000	600 ~ 1100	1350 ~ 3000
Gain (dB)	65	65	60	60

ESD Protection	
Contact (KV)	± 8
Air (KV)	± 15

Cable and Connector	
Cable / Length	1 meter H100
Connector	BNC (Male)

Physical Condition	
Dimension (mm)	40 x 40 x 4 50 x 50 x 6

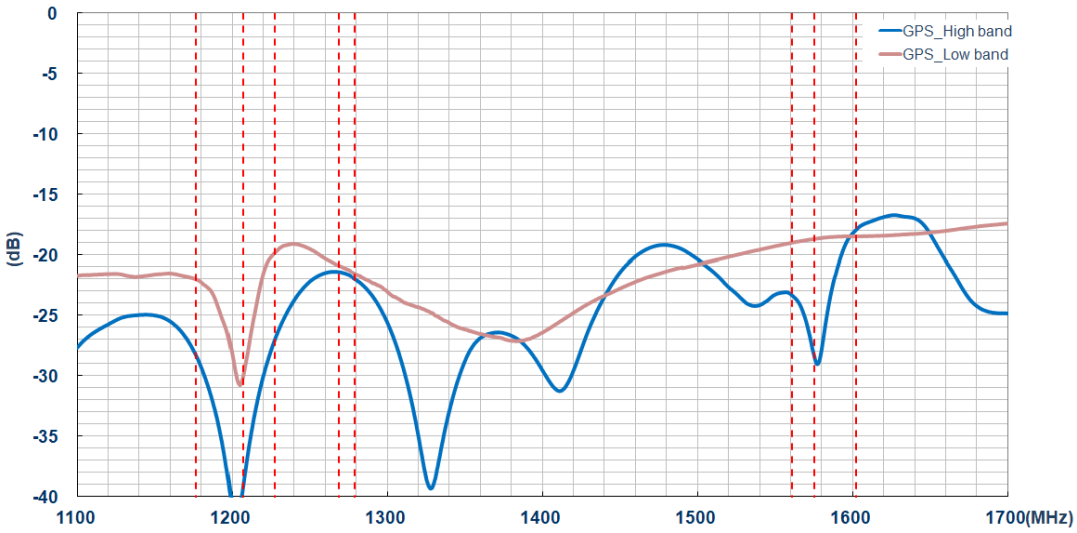
Environmental Conditions	
Operation Temperature	-40 ~ +85 °C
Storage Temperature	-40 ~ +85 °C
Relative Humidity	95% non-condensing

SANAV
2019.12.19
DCC

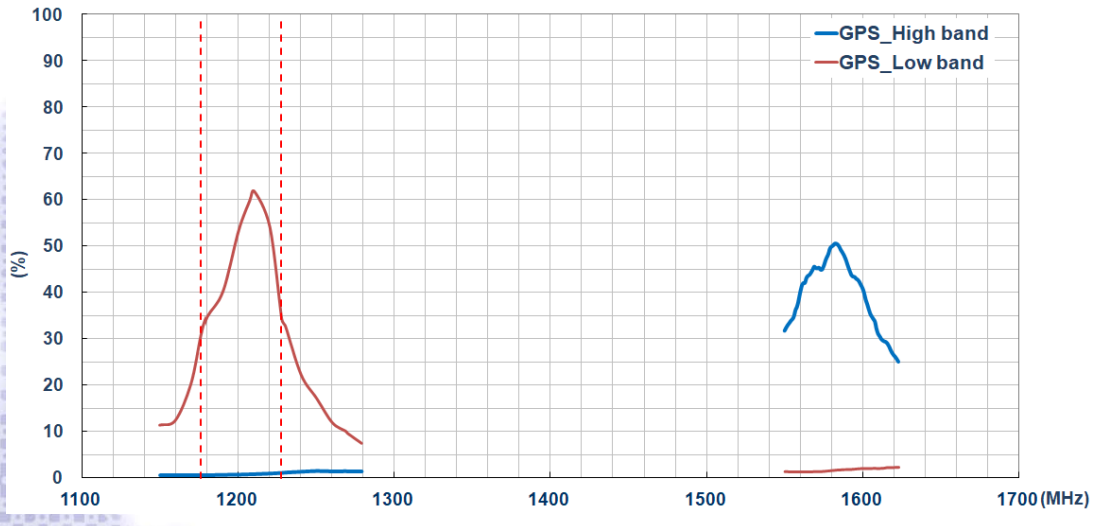
II. Antenna Technical Parameters:

● Passive Antenna Performance

S11 (dB)

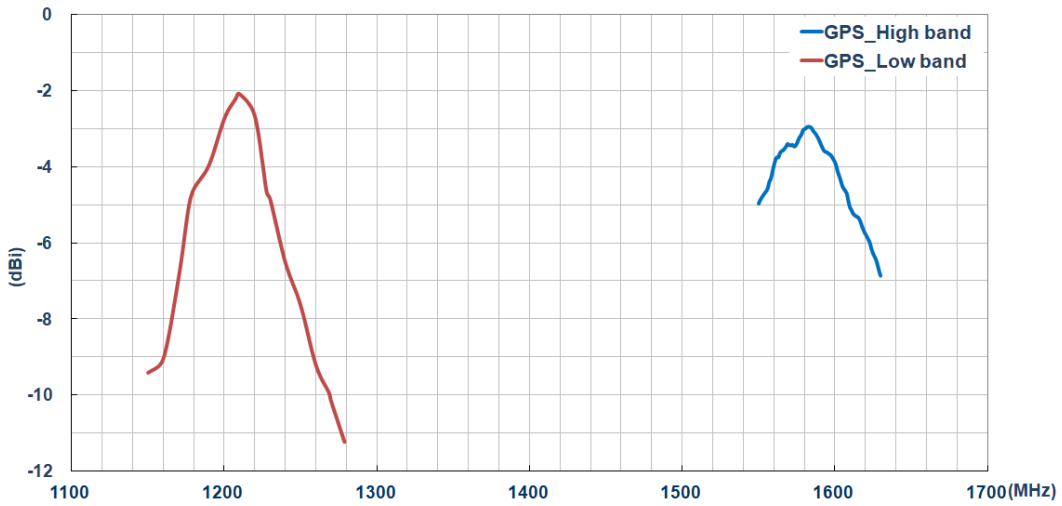


Efficiency (%)

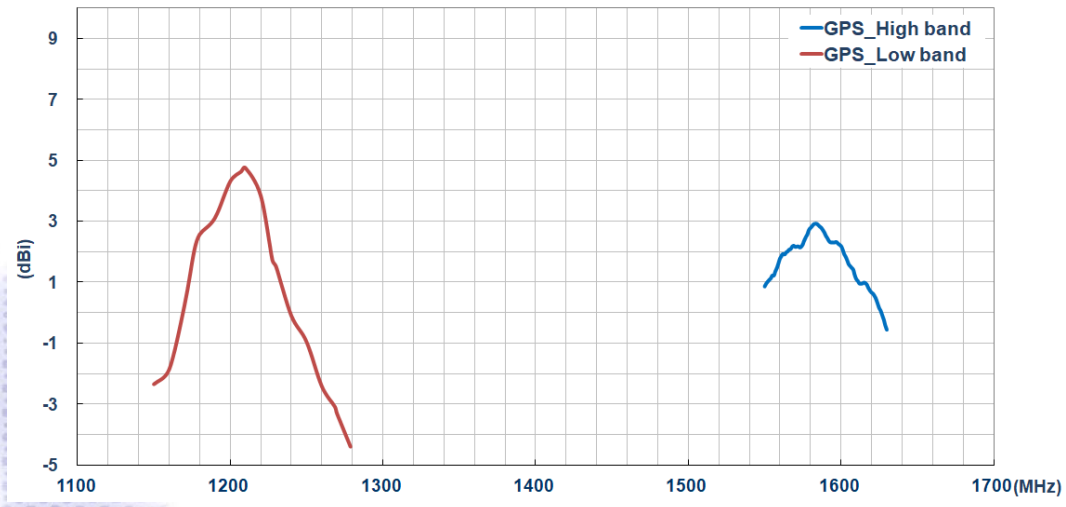


SANAV
2019.12.19
DCC

Average Gain (dBi)



Peak Gain (dBi)



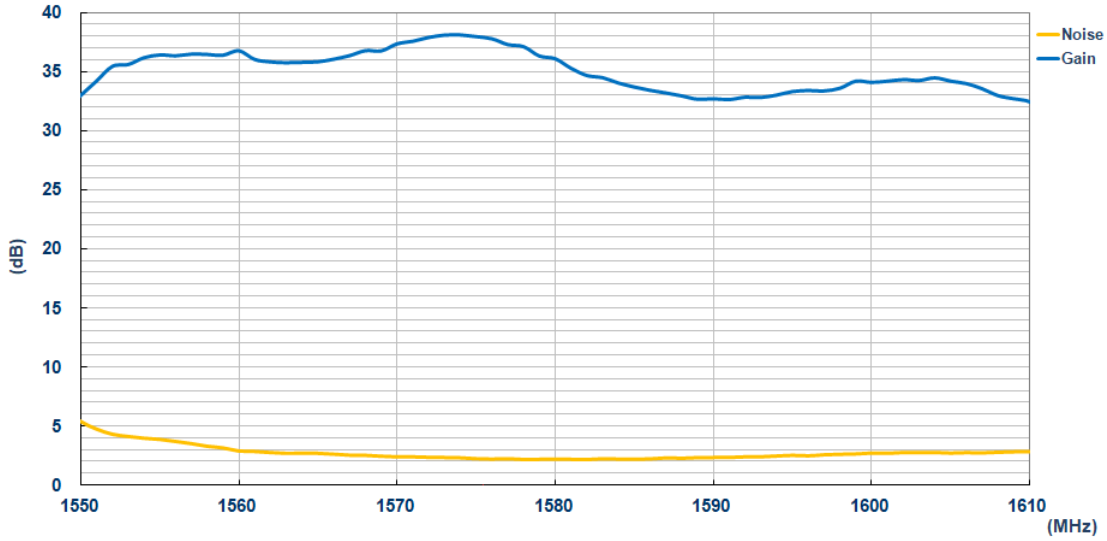
SANAV
2019.12.19
DCC

SANAV San Jose Technology, Inc.
11F., No.2, Sec. 4, Jhongyang Rd., Tucheng Dist., New Taipei City 236, Taiwan (R.O.C.)
Tel: 886-2-22694456 | Fax: 886-2-22694451 | sanav@sanav.com

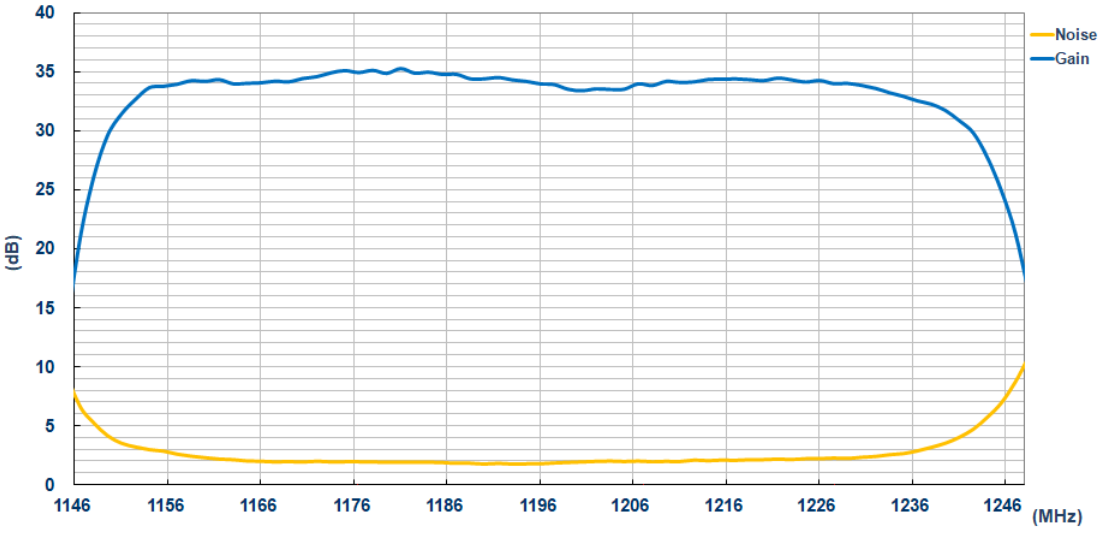
Active Antenna Performance

Noise & Gain (dB)

L1



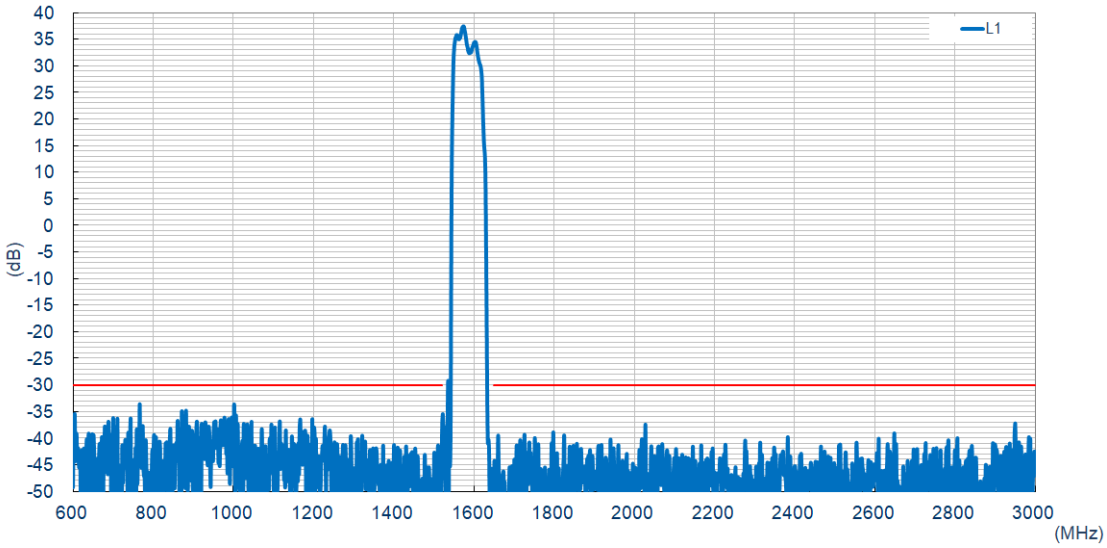
L2



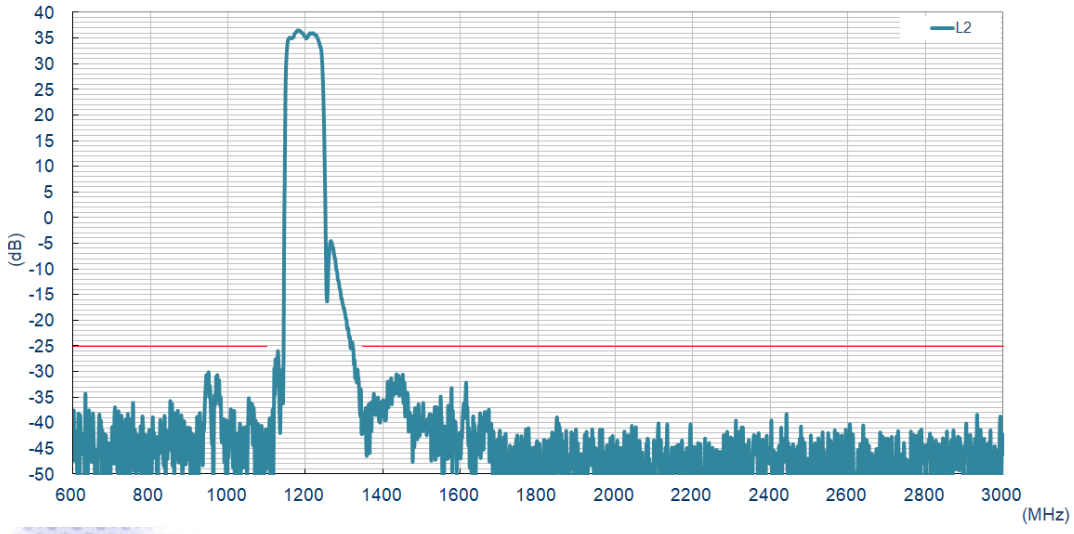
SANAV
2019.12.19
DCC

Out Of Band Rejection (dB)

L1



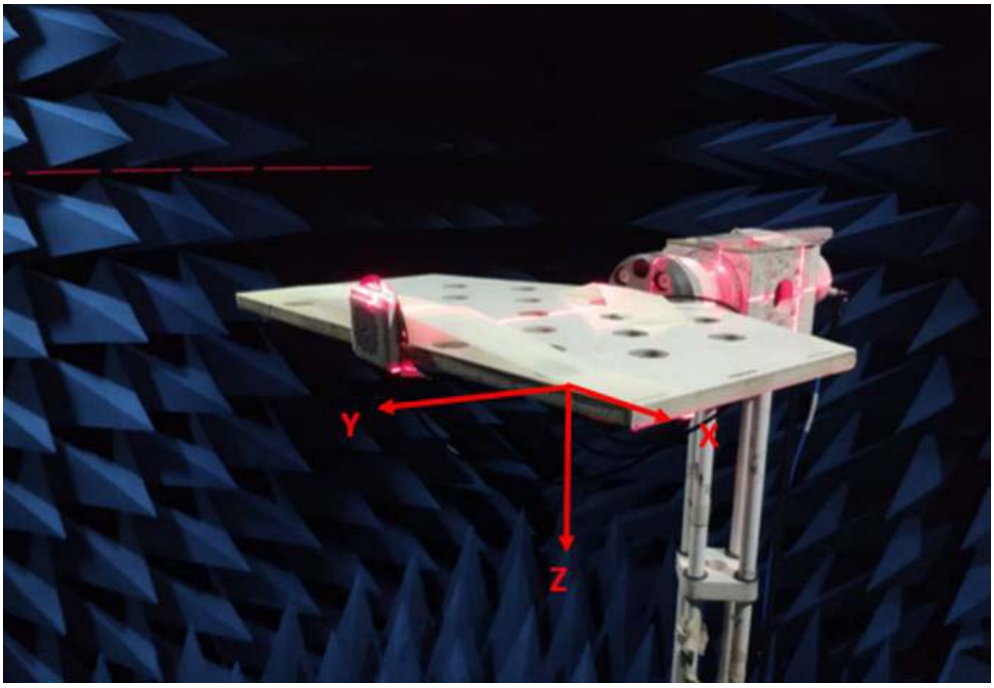
L2



SANAV
2019.12.19
DCC

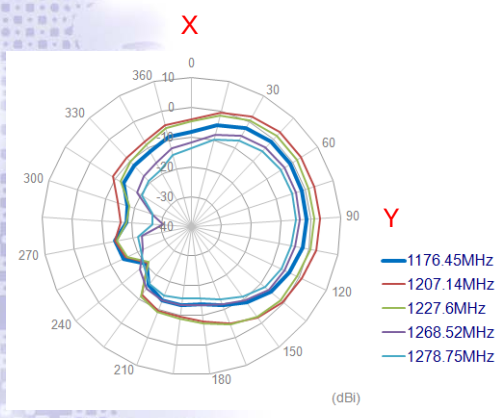
III. Antenna Radiation Pattern Measurement:

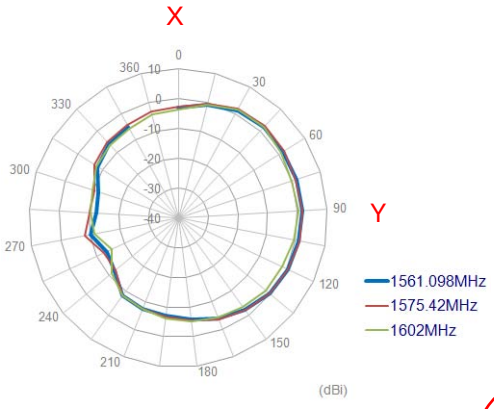
The antenna radiation patterns were measured in Anechoic Chamber.
The measurement setup as below,



IV. 2D Radiation Pattern:

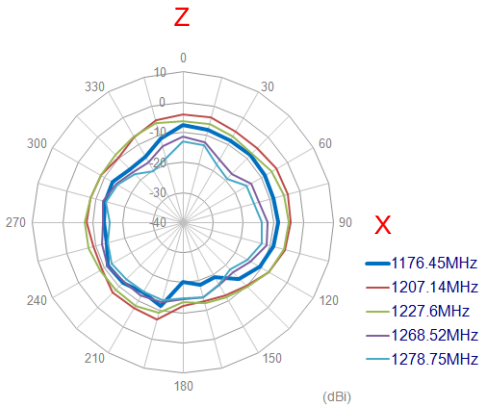
X-Y Plane

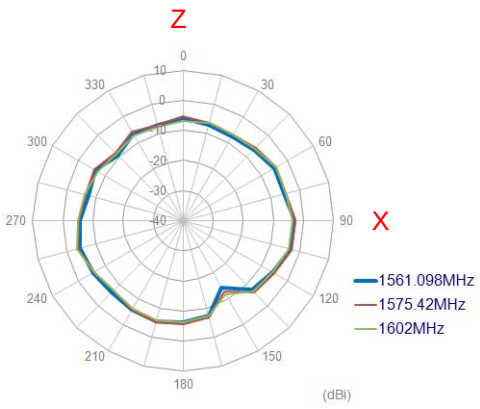




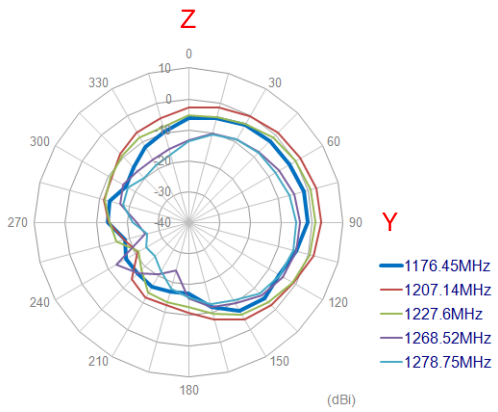
SANAV
2019.12.19
DCC

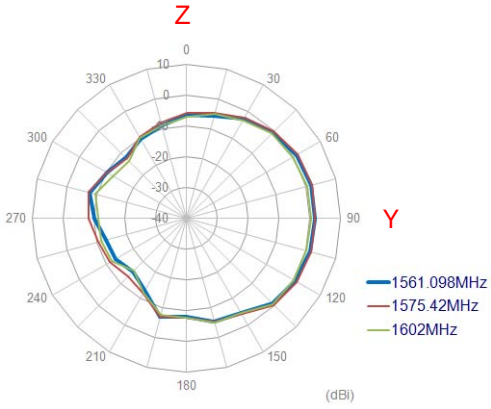
X-Z Plane





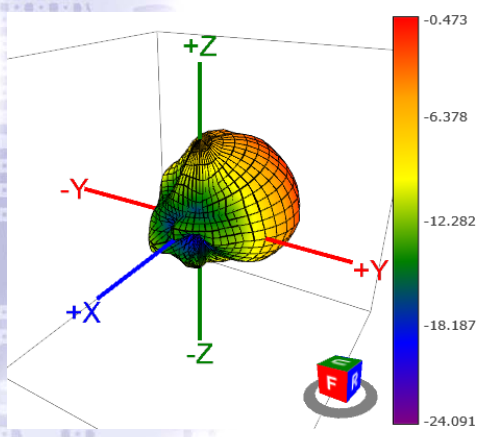
Y-Z Plane



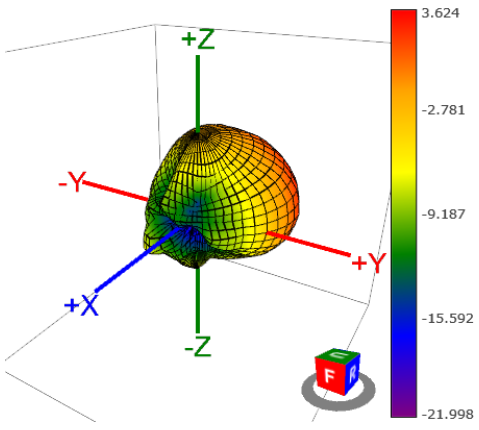


V. 3D Radiation Pattern:

1176.45MHz (dBi)

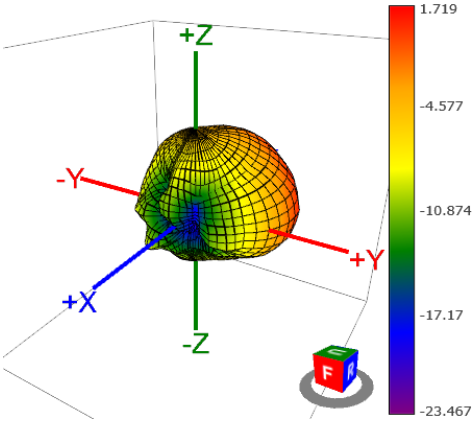


1207.14MHz (dBi)

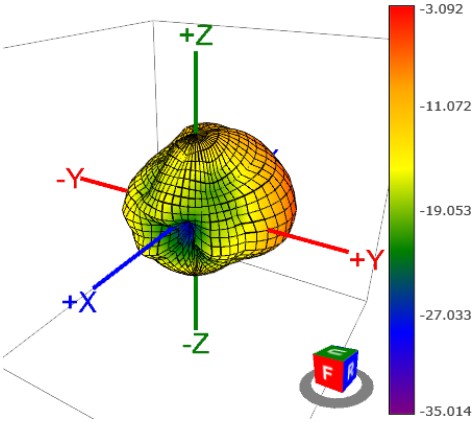


SANAV
2019.12.19
DCC

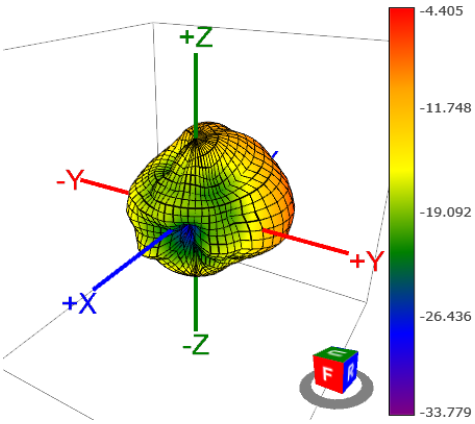
1227.6MHz (dBi)



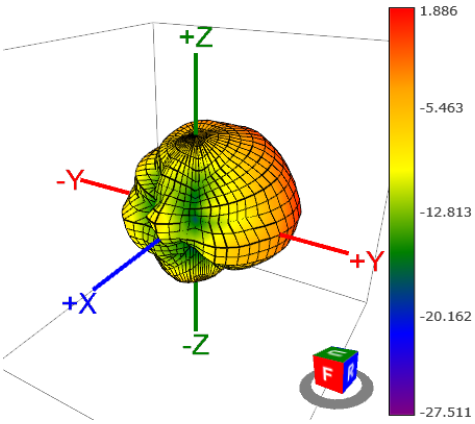
1268.52MHz (dBi)



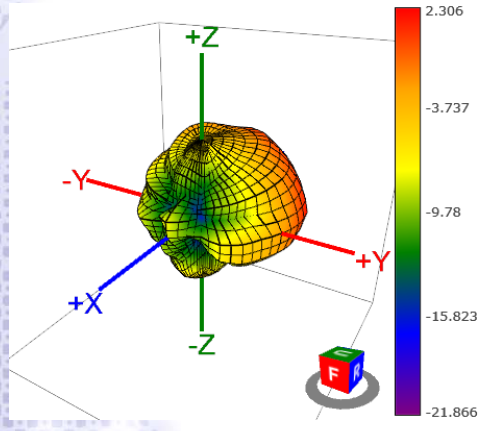
1278.75MHz (dBi)



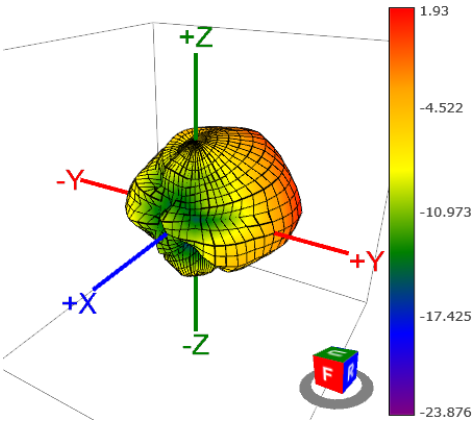
1561.098MHz (dBi)



1575.42MHz (dBi)



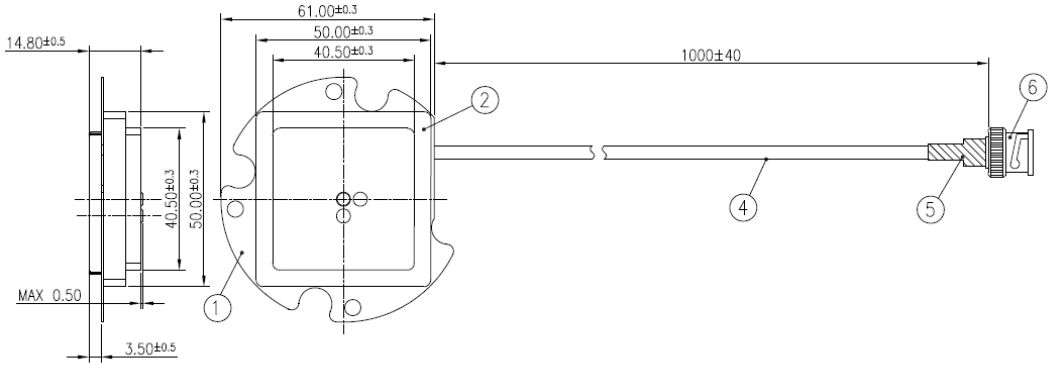
1602MHz (dBi)

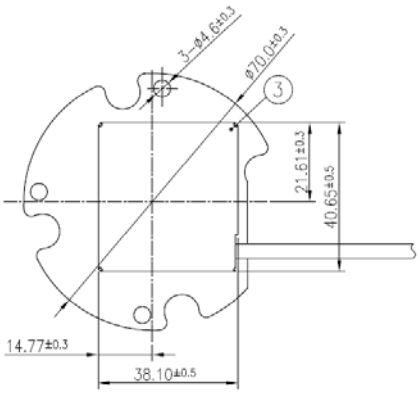


SANAV
2019.12.19
DCC

SANAV San Jose Technology, Inc.
11F., No.2, Sec. 4, Jhongyang Rd., Tucheng Dist., New Taipei City 236, Taiwan (R.O.C.)
Tel: 886-2-22694456 | Fax: 886-2-22694451 | sanav@sanav.com

VI. Mechanical Drawing (Unit:mm):





No	NAME	MATERIAL	FINISH	Q'TY
6	BNC Connector	Brass	Ni Plated	1
5	Heat Shrink Tube	EVA	Black	1
4	Cable H-100	PVC	Black	1
3	Shielding Case	SPTE	Natural	1
2	Patch Antenna	Ceramic	Clear	1
1	PCB	Polymer 0.8t	Green	1

SANAV
2019.12.19
DCC

SANAV San Jose Technology, Inc.
11F., No.2, Sec. 4, Jhongyang Rd., Tucheng Dist., New Taipei City 236, Taiwan (R.O.C.)
Tel: 886-2-22694456 | Fax: 886-2-22694451 | sanav@sanav.com