



Product Number: BGS-GPS1575-15268W

Product Name: Four-star multi-Band Survey antenna 40dBi

1. Specification

Sample Photo	
A. Electrical Characteristics	
Frequency	1164-1290MHz, 1525-1615MHz
Supported Positioning signal bands	GPS: L1/L2/L5 BDS: B1/B2/B3 GLONASS: G1/G2/G3 Galileo: E1/E5a/E5b/E6 L-Band
Peak Gain	$\geq 5\text{dBi}@F_c$
Impedance	50Ohm
Polarization	RHCP
Axial Ratio	$\leq 1.5\text{dB}$
Azimuth Coverage	360°
Phase-center accuracy	$\leq 2.0\text{mm}$
Phase-center repeatability	$\leq 1.0\text{mm}$
B. LNA and Filter Electrical Properties	
LNA Gain	40±2dBi(Typ.@25°C)
Group Delay variation	$\leq 10\text{ns}$
Noise Figure	$\leq 2.0\text{dB}@25^\circ\text{C}$, Typ.(Pre-filtered)
Output VSWR	$\leq 1.8 : 1$ Typ. 2.0 : 1 Max
Operation Voltage	3-16 V DC
Operation Current	$\leq 45\text{mA}$



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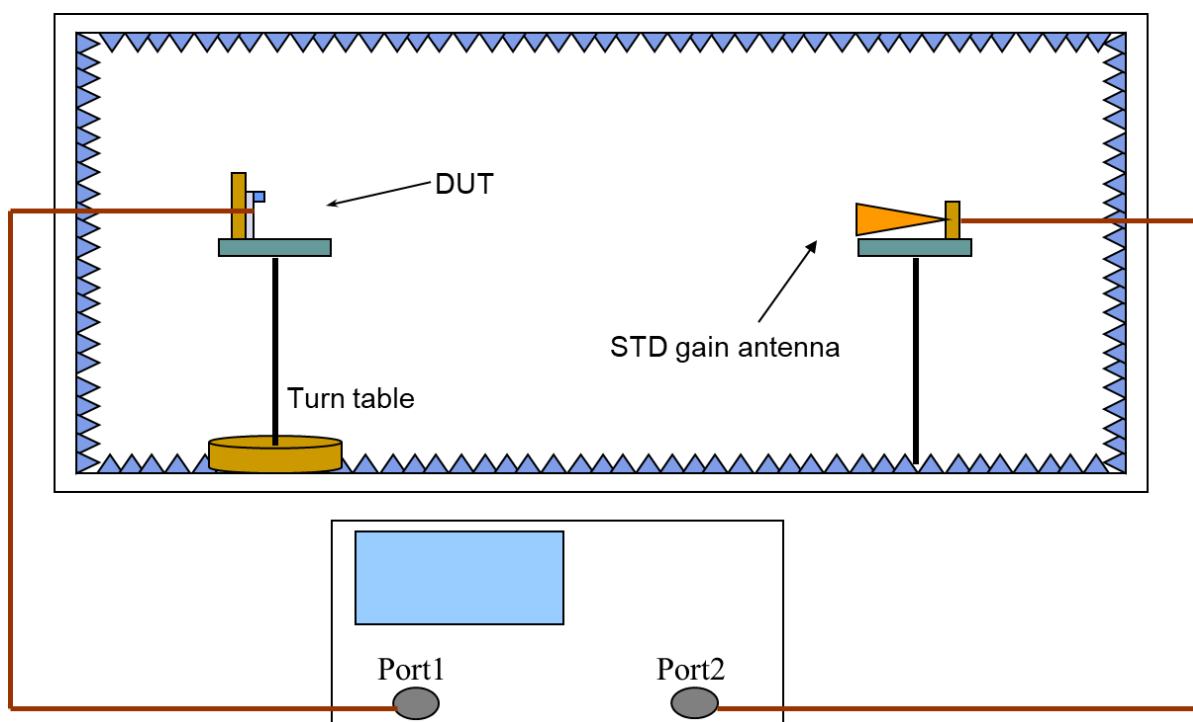
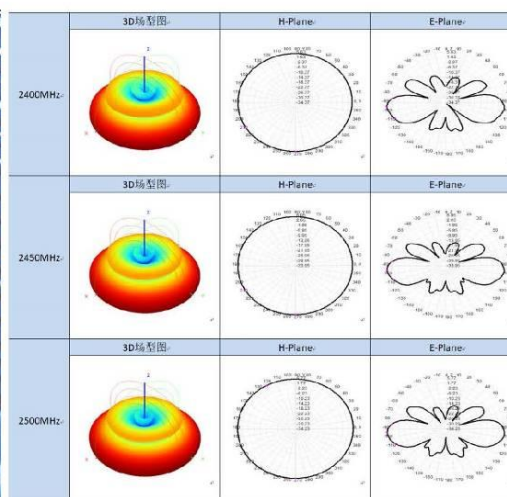
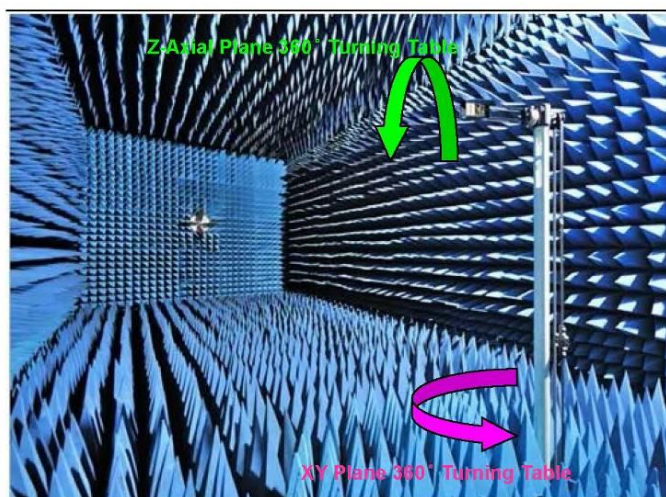
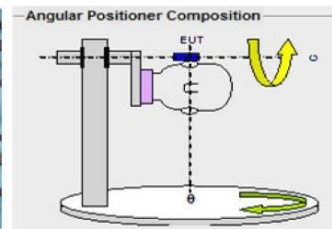
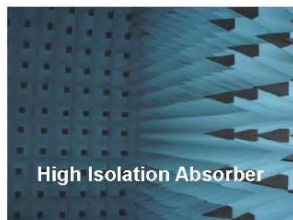
C. Material & Mechanical Characteristics	
Connector Type	TNC connector
Dimension	Φ 152x68mm
Radome material	PC+ABS
Waterproof	IP67
Weight	0.35Kg
C. Environmental	
Operation Temperature	- 40 °C ~ + 85 °C
Storage Temperature	- 40 °C ~ + 85 °C

Test Equipment & Conditions

1. Network Analyzer: Keysight E5071C

2. 3D Chamber Test System

- .Chamber Size: 9 x 5 x 4 m³
- .Freq. Range: 0.4 ~ 18.0 GHz
- .Double Ridge Horn Antenna
- .VNA: Agilent E5071C
- .3D Turning Table and Positioner
- .ADT Solution 3D Testing Software



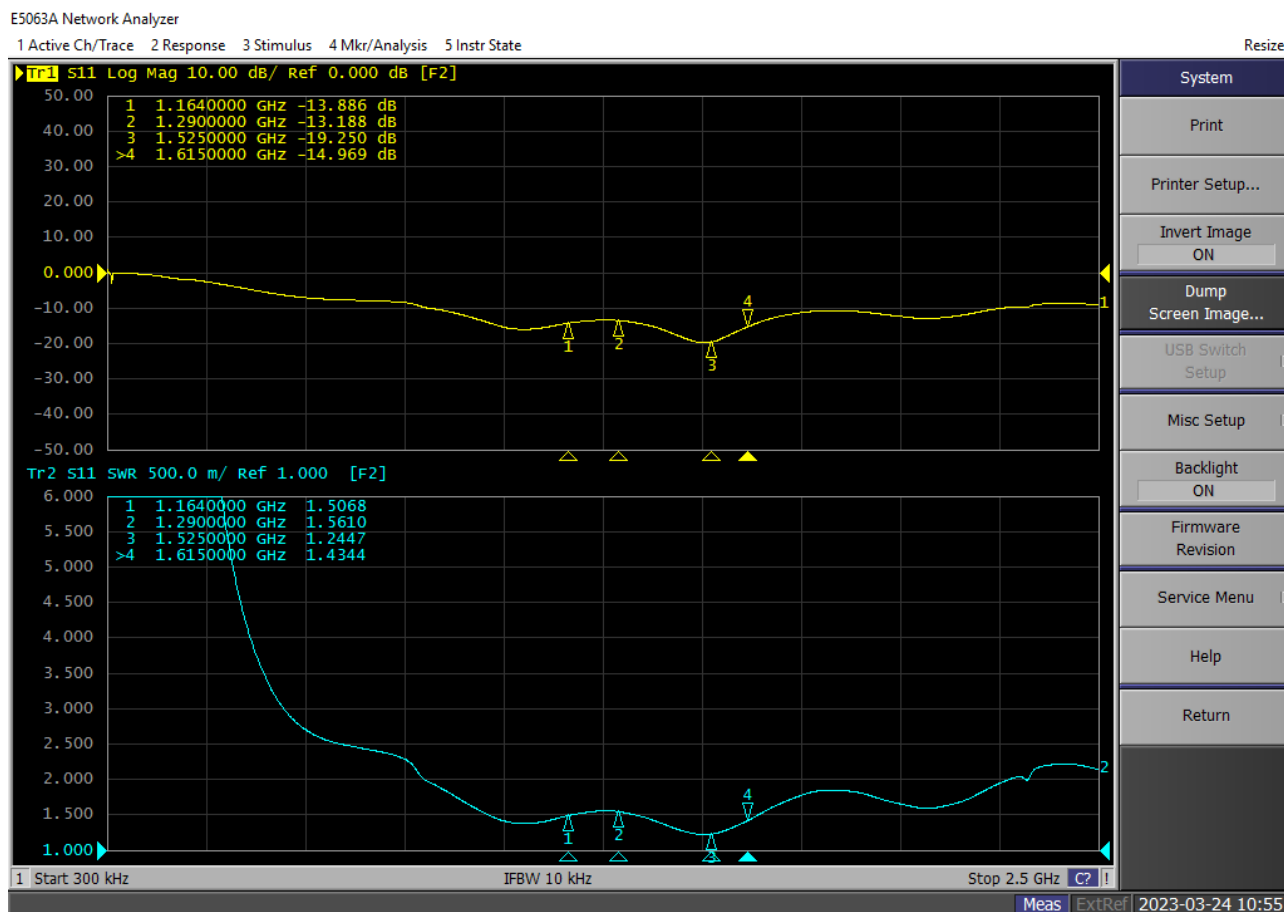


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2. Antenna - S Parameter Test Data

2.1 VSWR





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2.2 LNA Gain:

Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
1160.0	29.60	1525.0	34.00
1165.0	31.85	1530.0	34.83
1170.0	33.50	1535.0	35.80
1175.0	34.67	1540.0	36.93
1180.0	35.67	1545.0	37.57
1185.0	36.57	1550.0	37.82
1190.0	37.53	1555.0	38.35
1195.0	38.16	1560.0	38.73
1200.0	38.52	1565.0	38.65
1205.0	38.90	1570.0	38.07
1210.0	39.35	1575.0	37.78
1215.0	39.81	1580.0	37.65
1220.0	40.11	1585.0	37.40
1225.0	40.23	1590.0	36.95
1230.0	40.09	1595.0	36.66
1235.0	39.62	1600.0	36.43
1240.0	39.00	1605.0	35.95
1245.0	38.18	1610.0	35.33
1250.0	37.34	1615.0	34.80
1255.0	36.31		
1260.0	35.35		
1265.0	34.22		
1270.0	33.20		
1275.0	32.14		
1280.0	31.14		
1285.0	30.01		
1290.0	28.58		



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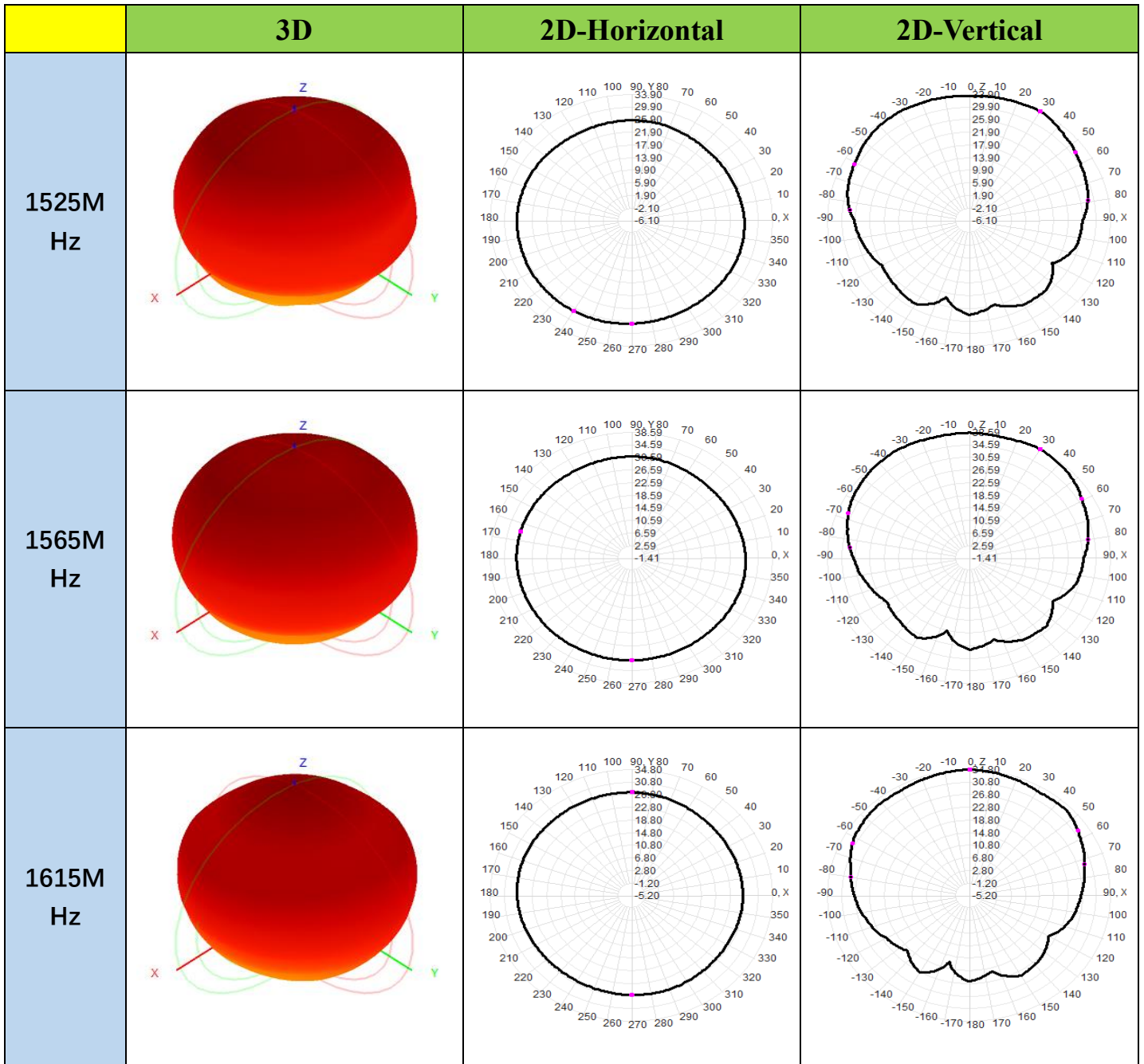
2.3 Radiation Pattern

	3D	2D-Horizontal	2D-Vertical
1160M Hz			
1220M Hz			
1290M Hz			



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3. Mechanical Drawing

