



Product Number: BGS-AN4IN1-8336B
Product Name: 4 in 1 Combo Antenna

1. Specification

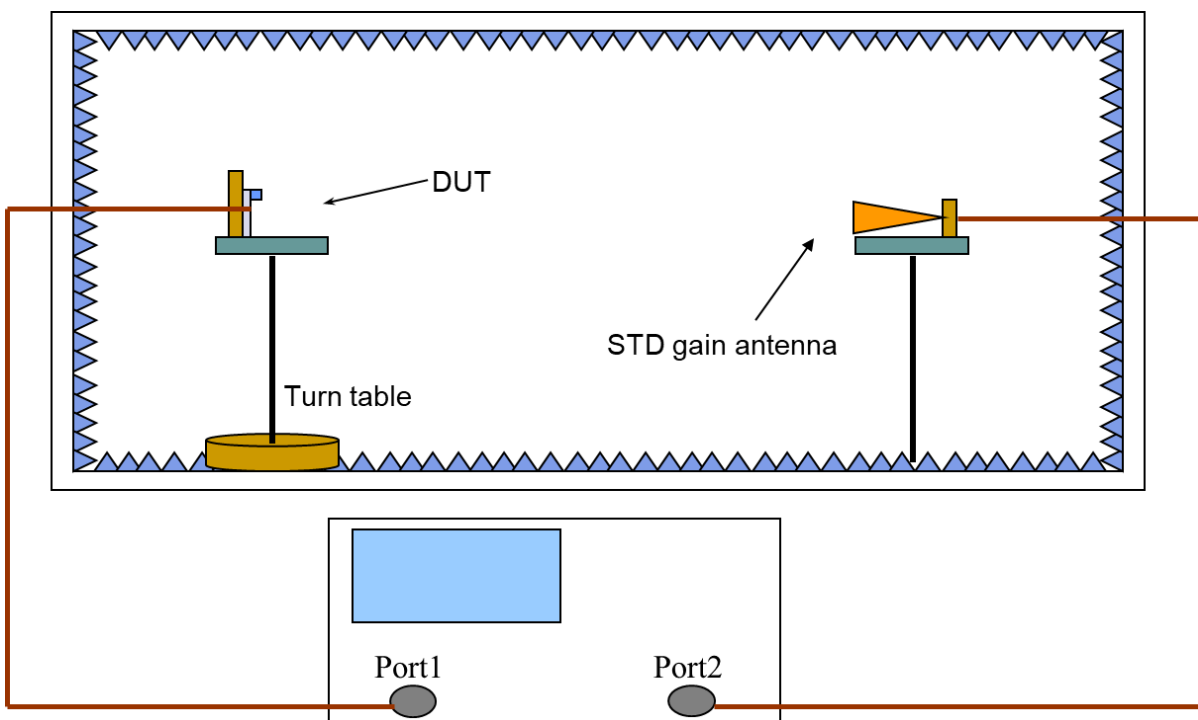
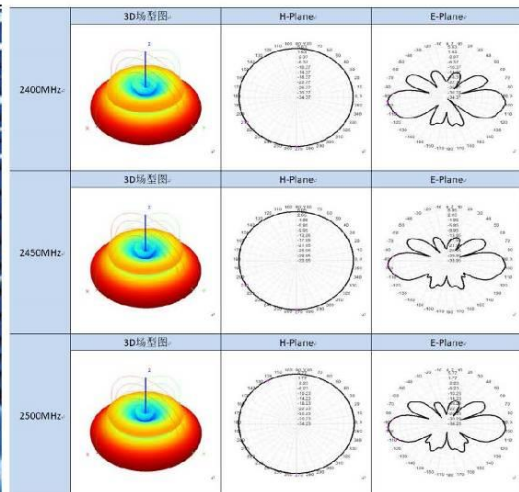
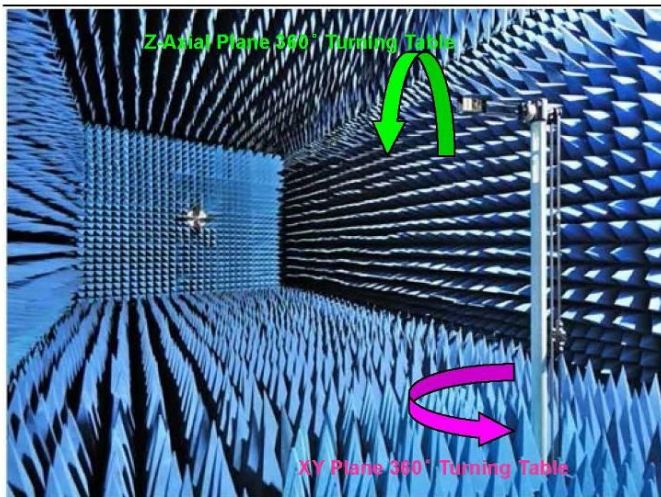
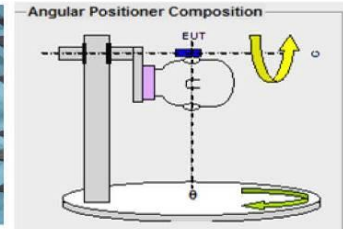
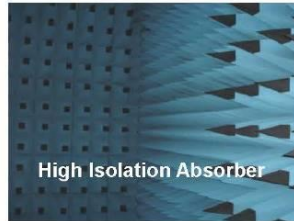
Sample Photo				
				
A. Electrical Characteristics				
Port	GSM	Mineprox	WIFI	GNSS
Frequency	824-960MHz; 1710- 1990MHz	806-960MHz	2400- 2500MHz; 5150- 5850MHz	1561MHz; 1575.42MHz
S.W.R.	<3.0	<3.0	<2.0	<2.0
Antenna Gain	0.2 dBi@824- 960MHz 0.9 dBi@1710- 1990MHz	0.6dBi	-2.6 dBi@2.4- 2.5GHz -2.9 dBi@5.15- 5.85GHz	29.5 dBi
Polarization	Linear	Linear	Linear	RHCP
Impedance	50Ohm	50Ohm	50Ohm	50Ohm
B. Material & Mechanical Characteristics				
Connector Type	SMA connector			
Cable Type	302 Type Cable, Length: 5 meters.			
Dimension	83*36mm			
C. Environmental				
Operation Temperature	- 40 °C ~ + 85 °C			
Storage Temperature	- 40 °C ~ + 85 °C			
Operation Humidity	< 95%			

Test Equipment & Conditions

1. Network Analyzer: Keysight E5071C

2. 3D Chamber Test System

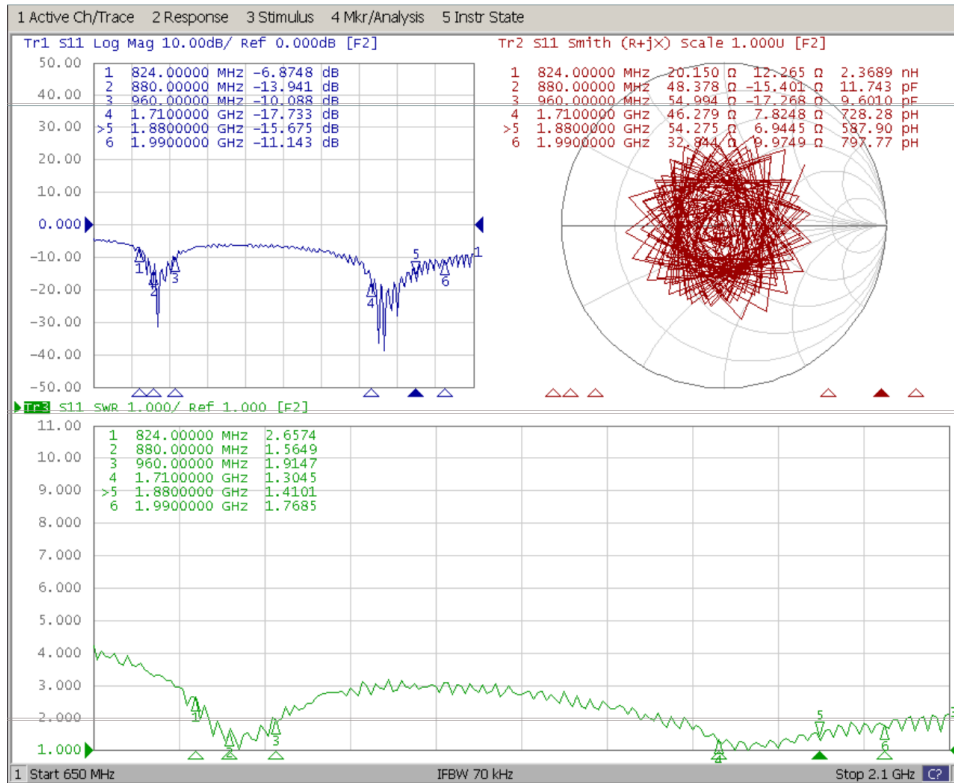
- .Chamber Size: 9 x 5 x 4 m³
- .Freq. Range: 0.4 ~ 18.0 GHz
- .Double Ridge Horn Antenna
- .VNA: Agilent E5071C
- .3D Turning Table and Positioner
- .ADT Solution 3D Testing Software



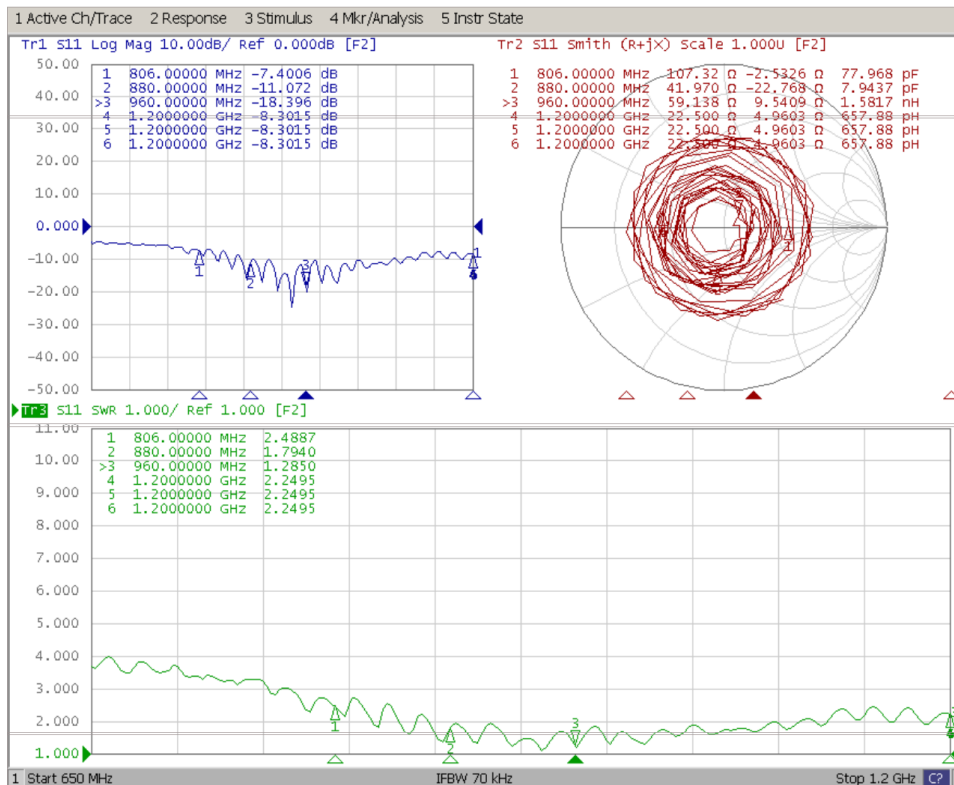


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2. Antenna - S Parameter Test Data
2.1 VSWR

GSM



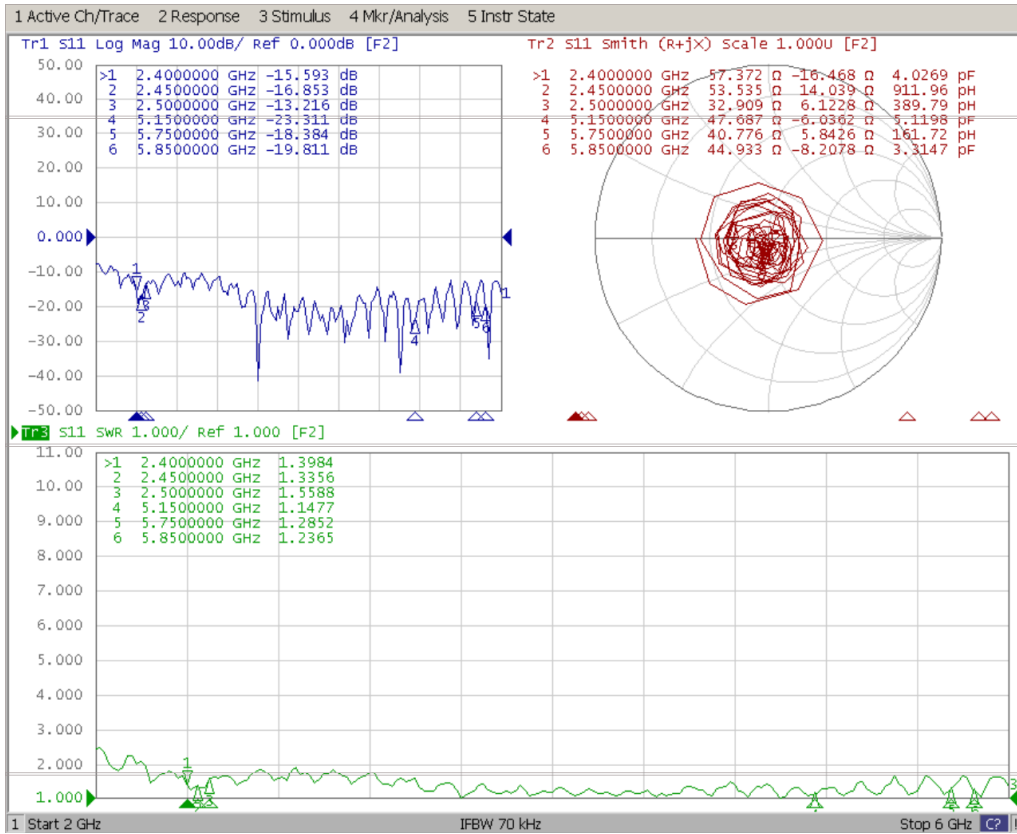
Mineprox



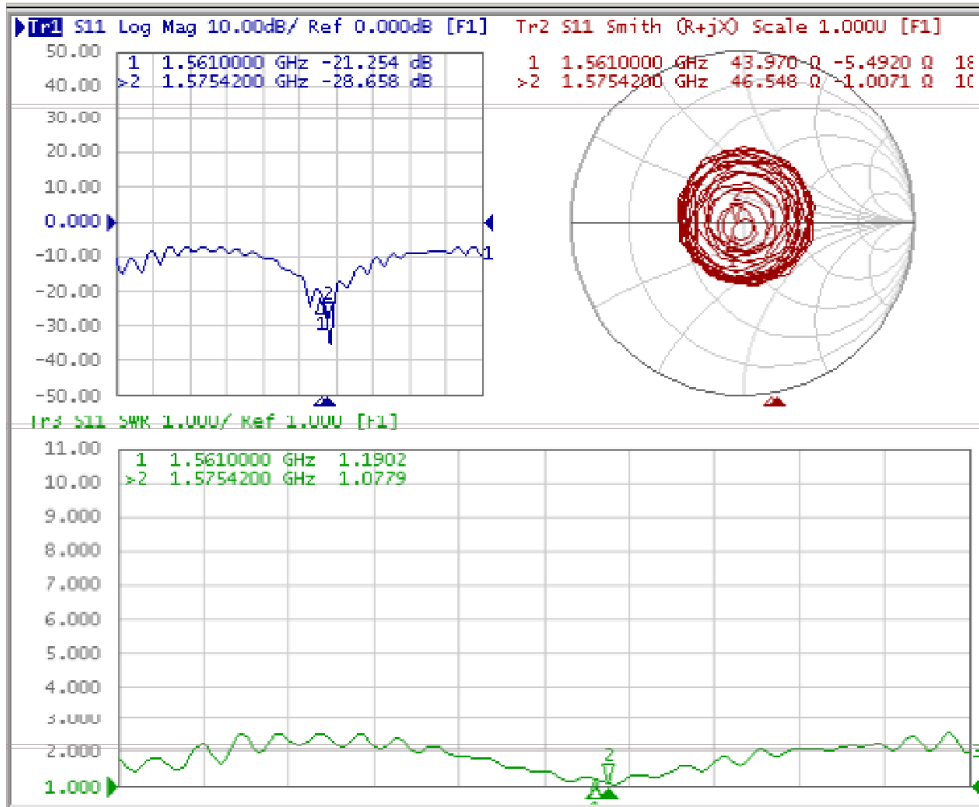


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WIFI



GNSS





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2.2 Gain:

Passive Test For GSM(850/900)			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
820	16.4	-7.9	-2.0
830	22.1	-6.6	-1.7
840	21.6	-6.7	-1.0
850	26.9	-5.7	0.2
860	17.7	-7.5	-2.5
870	21.5	-6.7	-2.0
880	17.6	-7.5	-3.3
890	26.3	-5.8	-0.3
900	20.1	-7.0	-1.8
910	24.8	-6.1	-0.3
920	21.5	-6.7	-2.2
930	18.4	-7.4	-2.7
940	20.8	-6.8	-2.2
950	18.9	-7.2	-1.4
960	19.0	-7.2	-0.8

Passive Test For GSM(1800/1900)			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1710	26.9	-5.7	-0.4
1730	31.9	-5.0	0.9
1750	32.7	-4.9	0.3
1770	32.7	-4.9	0.5
1790	33.0	-4.8	0.5
1810	32.9	-4.8	0.7
1830	31.5	-5.0	0.6
1850	30.0	-5.2	0.0
1870	28.4	-5.5	-0.4
1890	25.2	-6.0	-0.5
1910	24.3	-6.1	-0.3
1930	21.7	-6.6	-1.2
1950	19.1	-7.2	-2.2
1970	18.8	-7.3	-2.2
1990	17.7	-7.5	-1.8



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Passive Test For Mineprox			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
800	15.8	-8.0	-2.7
810	16.1	-7.9	-2.4
820	20.1	-7.0	-1.9
830	22.1	-6.6	-0.8
840	18.0	-7.4	-2.3
850	16.7	-7.8	-2.8
860	20.8	-6.8	-1.5
870	25.0	-6.0	-1.0
880	20.5	-6.9	-1.8
890	19.2	-7.2	-2.0
900	20.1	-7.0	-1.2
910	23.4	-6.3	-0.6
920	23.3	-6.3	-0.3
930	19.7	-7.1	-0.5
940	19.2	-7.2	-1.4
950	20.9	-6.8	-0.5
960	24.3	-6.2	0.6

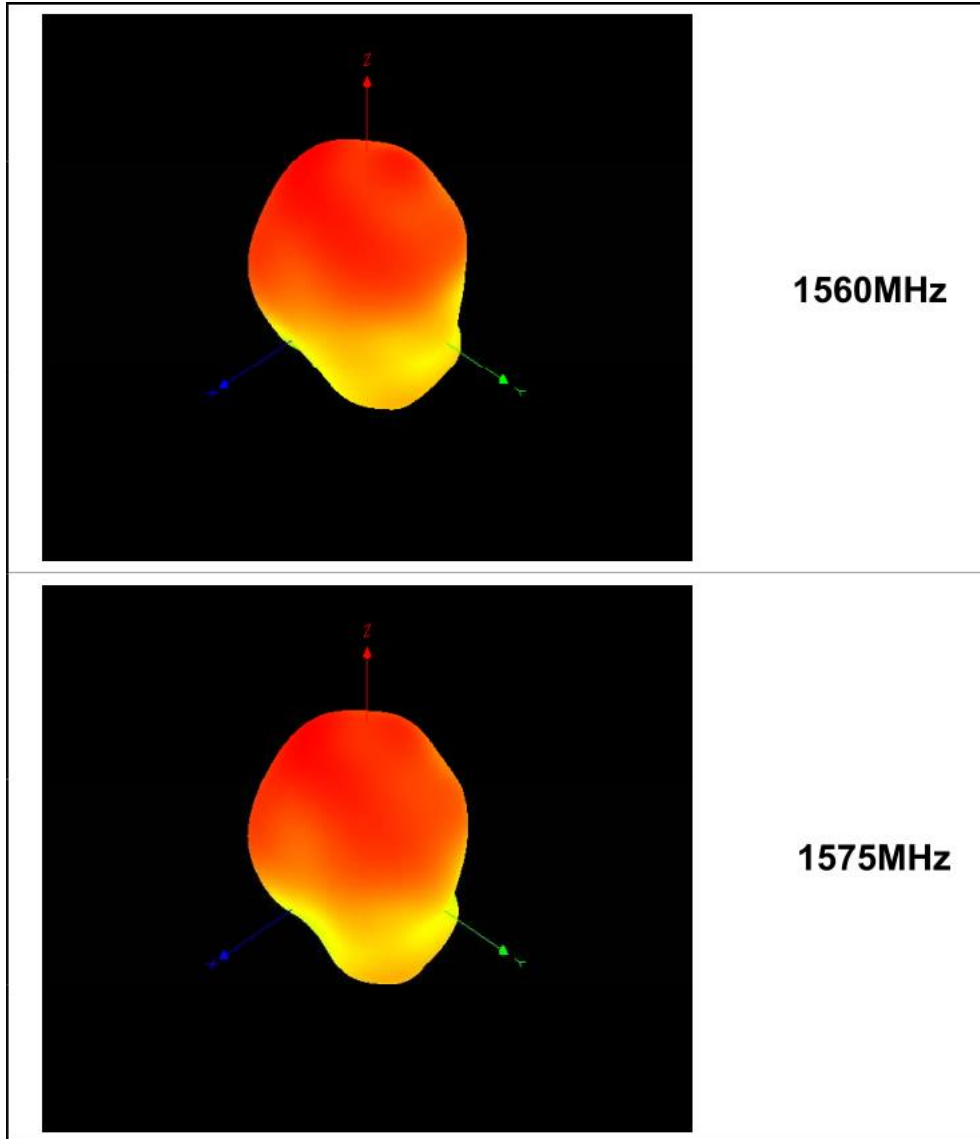


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Passive Test For WIFI2.4G				Passive Test For WIFI5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	16.8	-7.7	-2.7	5150	16.4	-7.9	-3.1
2410	17.3	-7.6	-2.8	5200	16.5	-7.8	-2.9
2420	16.8	-7.7	-3.2	5250	16.1	-7.9	-3.1
2430	16.1	-7.9	-3.3	5300	15.7	-8.0	-3.4
2440	16.8	-7.8	-2.9	5350	15.1	-8.2	-3.6
2450	18.0	-7.5	-2.6	5400	16.4	-7.9	-3.4
2460	16.8	-7.7	-2.6	5450	15.3	-8.2	-4.1
2470	16.7	-7.8	-2.6	5500	13.2	-8.8	-4.9
2480	16.3	-7.9	-2.7	5550	16.4	-7.8	-3.5
2490	15.7	-8.0	-3.2	5600	16.6	-7.8	-3.8
2500	14.7	-8.3	-3.2	5650	15.0	-8.3	-3.8
				5700	15.5	-8.1	-3.7
				5750	16.3	-7.9	-3.4
				5800	15.1	-8.2	-4.0

Passive Test For GNSS	
Freq (MHz)	Gain (dBi)
1560	26.4
1565	26.9
1570	27.5
1575	29.5
1580	28.8
1585	28.7
1590	27.6
1595	26.5
1600	26.4
1605	26.6

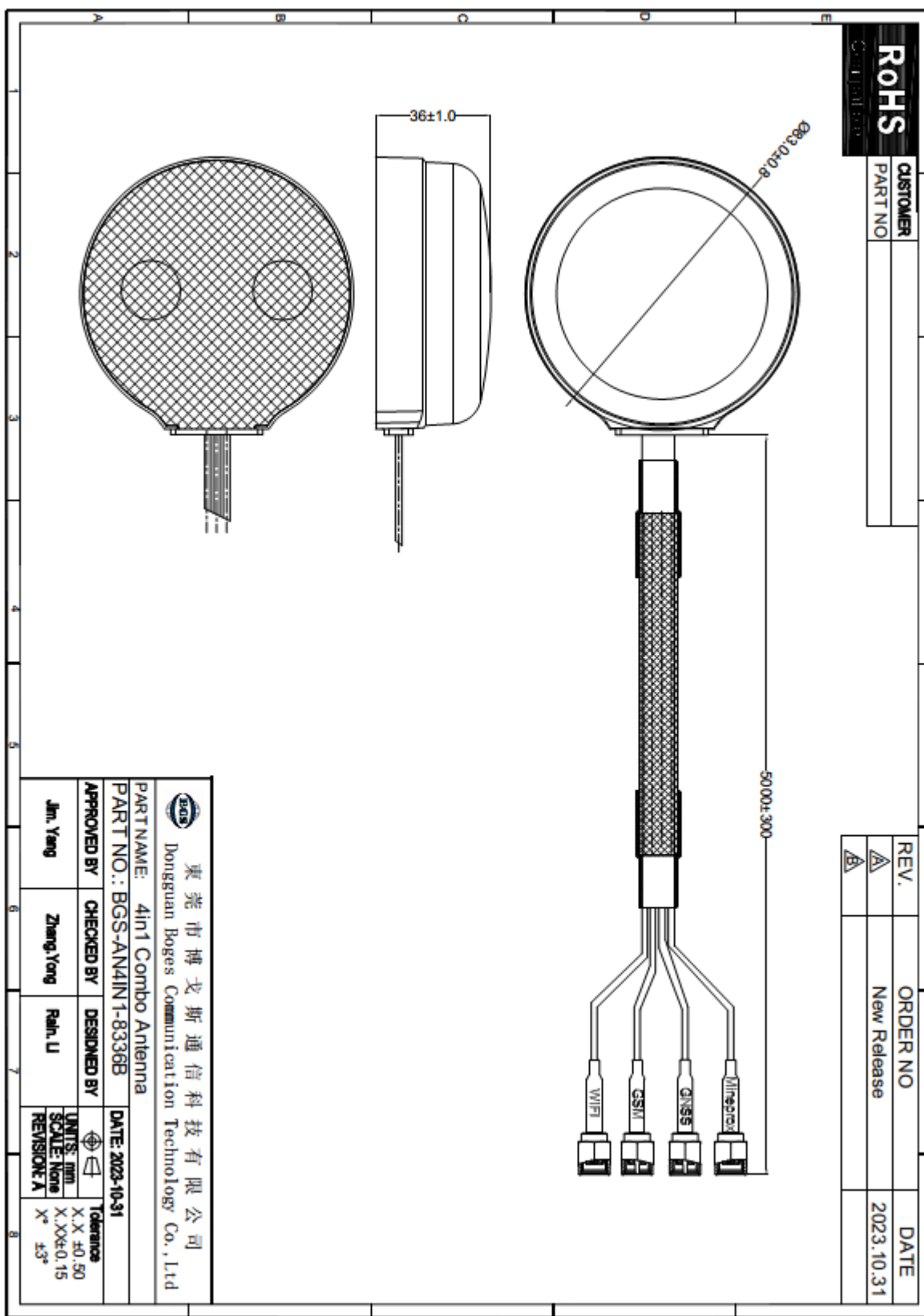
2.3 GNSS 3D Radiation Pattern





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3. Mechanical Drawing



RoHS		CUSTOMER	REV.	ORDER NO	DATE
PART NO			△	New Release	2023.10.31
			△		

东莞市博戈斯通信科技有限公司 Dongguan Boges Communication Technology Co., Ltd			
PARTNAME: 4in1 Combo Antenna			
PART NO.: BGS-AN4IN1-8336B			
APPROVED BY	CHECKED BY	DESIGNED BY	DATE: 2023-10-31
Jin Yang	Zhang Yong	Ran Li	
UNITS: mm SCALE: None REVISION: A			Tolerance X.X ±0.50 X.XX ±0.15 X° ±3°