



Product Number: BGS-AN5000-13185B
Product Name: 4G/5G Antenna

1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	700-960Hz; 1710-2690MHz; 3300-3800MHz; 4200-4900M
S.W.R.	5.0 Max @700-960Hz; 2.0 Max @1710-2690MHz; 3.5 Max @3300-3800MHz; 4200-4900M
Antenna Gain	4G: 2.3dBi@700-960Hz 3.9dBi@1710-2690MHz 5G: 4.3dBi@3300-3800MHz 4.6dBi@4200-4900MHz
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	PCB
Material of Plastic	PC+ABS
Cable Type	RG-178 Cable
Connector Type	SMA Male Connector
Connector Pull Test	>=3.0Kg
Connector Torque Test	300~1000 g.cm
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C



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2. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	MIL-STD-202G, 201A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
M2	Random Drop	Height: 1.5Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M3	Solderability	MIL-STD-202G, 210F, cond. A Solder iron: 350±10°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	MIL-STD-202G, 101E, cond. B Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	MIL-STD-202G, 103B, cond. B Temp: 40°C; RH: >= 95%; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	1 Cycle: - 40°C(30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E4	Life(High Temp.)	MIL-STD-202G, 108A, cond. A Temp: 85°C; Time: 96 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2002/95/EC
R2	PFOS	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC
R3	PFOA	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC

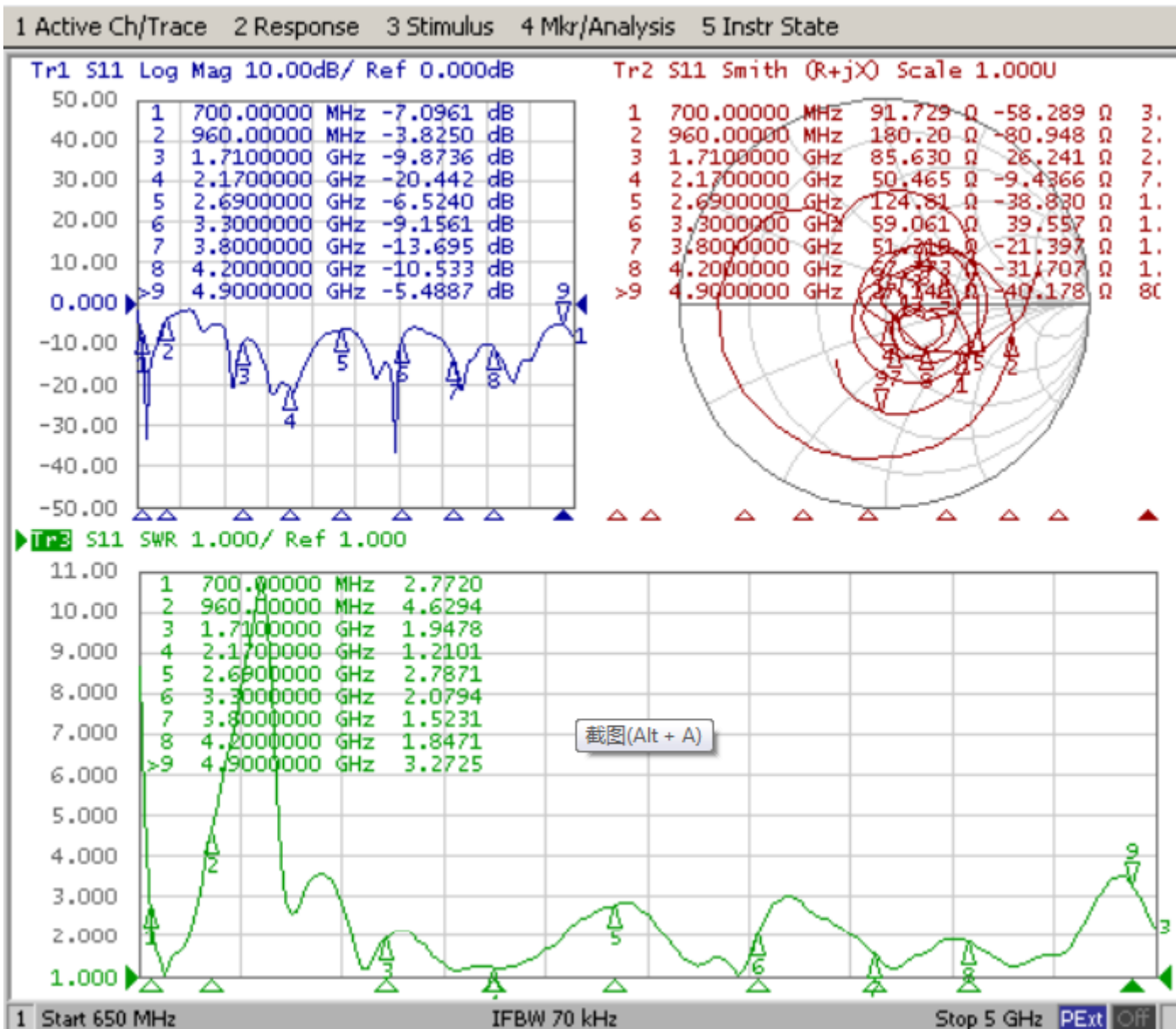


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3. Antenna - S Parameter Test Data

Test Items		Requirements	No.1	No.2	No.3	No.4	No.5
C1	S.W.R	TBD	ok	ok	ok	ok	ok
C2	Insertion Loss	TBD	ok	ok	ok	ok	ok
C3	Voltage Breakdown	> 500V	> 500	> 500	> 500	> 500	> 500
C4	Insulation Resistance	> 500 Mohm	> 500	> 500	> 500	> 500	> 500
M4	Pull Force	Spec	ok	ok	ok	ok	ok
M6	Dimension	drawing	ok	ok	ok	ok	ok



4. Antenna Passive Test



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Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	69.8	-1.6	0.6
720	82.6	-0.8	1.1
740	85.5	-0.7	2.3
760	83.8	-0.8	1.3
780	84.3	-0.7	1.8
800	70.5	-1.5	1.9
820	69.5	-1.6	2.1
840	67.5	-1.7	2.2
860	59.7	-2.2	1.9
880	57.9	-2.4	1.5
900	51.9	-2.9	1.3
920	57.7	-2.4	1.4
940	53.3	-2.7	1.9
960	48.0	-3.2	1.1

2.2
截图(Alt + A)



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Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1700	61.5	-2.1	1.6
1780	55.3	-2.6	1.3
1860	69.2	-1.6	2.4
1940	76.4	-1.2	3.9
2020	78.2	-1.1	3.6
2100	79.3	-1.0	3.6
2180	79.4	-1.0	2.8
2260	87.1	-0.6	3.8
2340	67.9	-1.7	0.4
2420	66.8	-1.8	0.8
2500	59.0	-2.3	1.1
2580	53.2	-2.7	0.7
2660	63.0	-2.0	1.9
2740	65.9	-1.8	2.7



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Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2820	78.5	-1.1	3.8
2900	75.7	-1.2	4.0
2980	78.0	-1.1	4.3
3060	77.8	-1.1	4.2
3140	74.3	-1.3	4.1
3220	78.7	-1.0	3.9
3300	67.0	-1.7	3.0
3380	78.7	-1.0	3.4
3460	68.1	-1.7	2.9
3540	77.5	-1.1	3.3
3620	72.1	-1.4	2.9
3700	79.3	-1.0	2.6
3780	76.6	-1.2	1.8
3860	84.3	-0.7	1.9

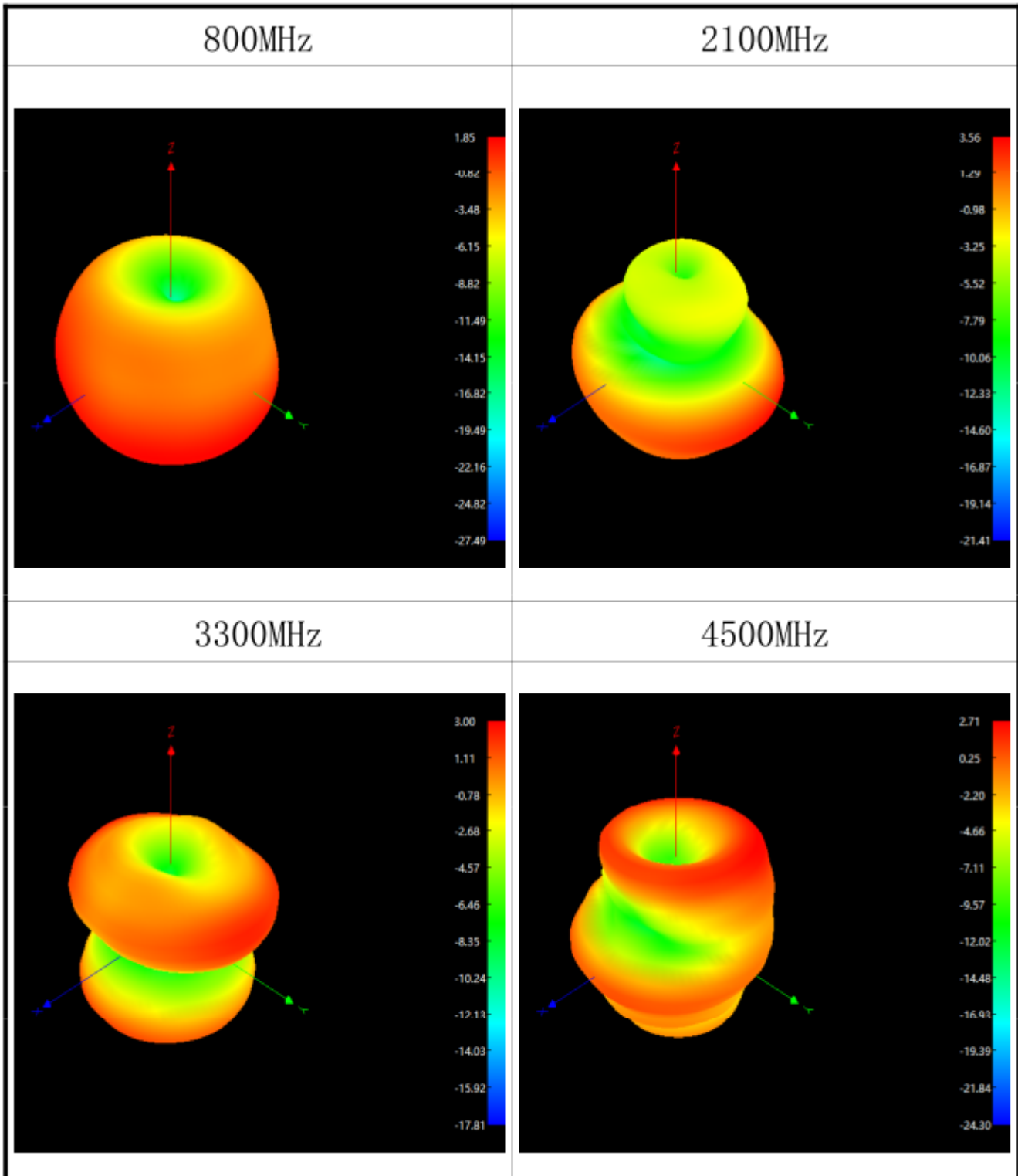


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Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
3940	86.1	-0.7	2.3
4020	83.2	-0.8	2.4
4100	83.4	-0.8	2.5
4180	75.2	-1.2	2.4
4260	83.8	-0.8	2.9
4340	85.7	-0.7	3.4
4420	88.5	-0.5	4.2
4500	87.9	-0.6	4.6
4580	81.1	-0.9	4.2
4660	75.0	-1.3	3.7
4740	55.9	-2.5	2.4
4820	67.9	-1.7	3.6
4900	43.6	-3.6	2.2
4980	48.2	-3.2	3.2

5. 3D Pattern





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6. Mechanical Drawing

