




Product Number: BGS-AN5000-13211B
Product Name: 4G/5G Antenna

1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	700-960Hz; 1710-2690MHz; 3300-3800MHz; 4200-4900M
S.W.R.	4.0 Max @700-960Hz; 3.0 Max @1710-2690MHz; 3.0 Max @3300-3800MHz; 4200-4900M
Antenna Gain	4G: 2.4dBi@700-960Hz 4.1dBi@1710-2690MHz 5G: 4.2dBi@3300-3800MHz 4.4dBi@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



Product Number: BGS-AN5000-13211B

Product Name: 4G/5G Antenna

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

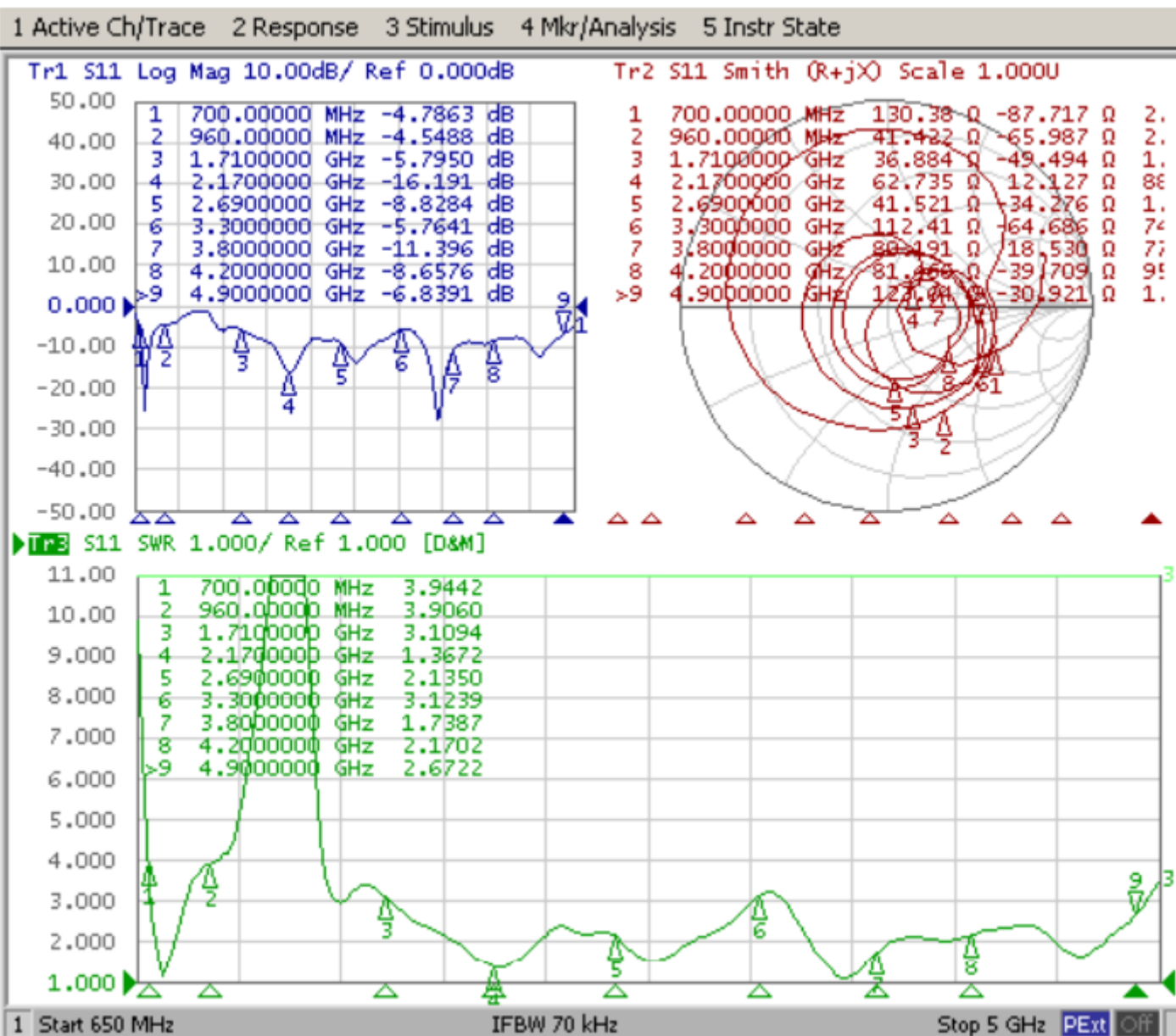
3. Antenna - S Parameter Test Data



Product Number: BGS-AN5000-13211B

Product Name: 4G/5G Antenna

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



Product Number: BGS-AN5000-13211B

Product Name: 4G/5G Antenna

Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	35.7	-4.5	-2.4
720	59.0	-2.3	-0.5
740	80.7	-0.9	0.6
760	85.1	-0.7	1.0
780	83.6	-0.8	1.5
800	66.7	-1.8	2.4
820	67.5	-1.7	1.6
840	62.2	-2.1	1.7
860	53.2	-2.7	1.4
880	51.8	-2.9	1.2
900	47.8	-3.2	1.1
920	56.8	-2.5	1.5
940	51.3	-2.9	1.8
960	45.3	-3.4	1.1

截图(Alt + A)



Product Number: BGS-AN5000-13211B

Product Name: 4G/5G Antenna

Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1700	45.7	-3.4	1.2
1780	42.8	-3.7	0.9
1860	46.1	-3.4	1.3
1940	48.0	-3.2	2.0
2020	51.4	-2.9	1.7
2100	62.2	-2.1	1.8
2180	69.3	-1.6	1.8
2260	69.3	-1.6	2.6
2340	58.9	-2.3	0.7
2420	67.3	-1.7	1.8
2500	58.1	-2.4	2.1
2580	63.8	-2.0	3.1
2660	62.7	-2.0	3.4
2740	72.3	-1.4	4.1



Product Number: BGS-AN5000-13211B

Product Name: 4G/5G Antenna

Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2820	64.6	-1.9	4.0
2900	63.0	-2.0	4.1
2980	62.8	-2.0	3.6
3060	57.2	-2.4	3.1
3140	58.9	-2.3	3.2
3220	58.5	-2.3	3.1
3300	61.2	-2.1	4.0
3380	63.8	-2.0	4.2
3460	58.1	-2.4	3.1
3540	66.4	-1.8	2.5
3620	71.3	-1.5	2.4
3700	86.9	-0.6	3.2
3780	84.5	-0.7	2.7
3860	85.7	-0.7	2.0



Product Number: BGS-AN5000-13211B

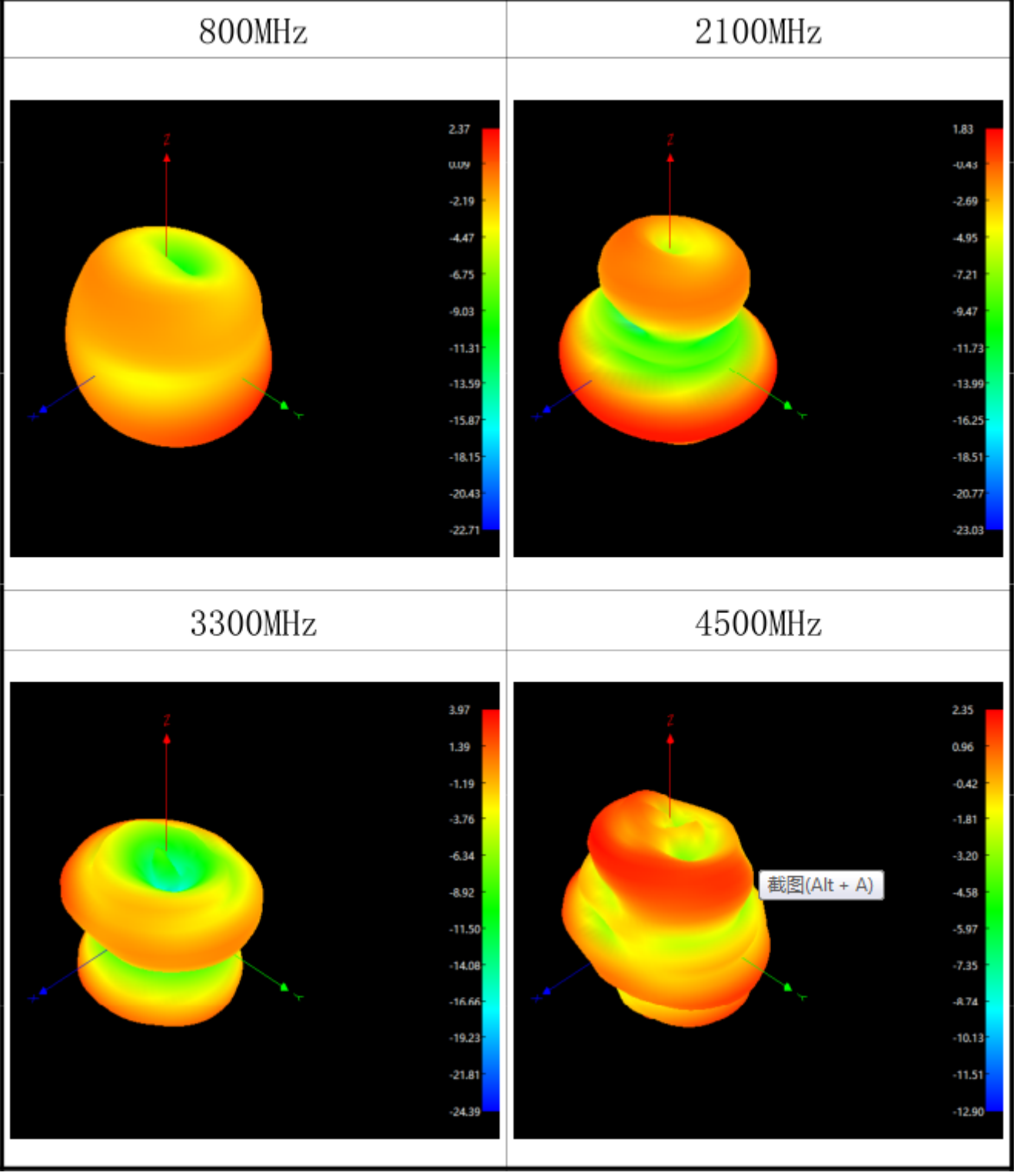
Product Name: 4G/5G Antenna

Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
3940	80.0	-1.0	1.4
4020	80.5	-0.9	1.7
4100	84.0	-0.8	2.1
4180	75.5	-1.2	2.4
4260	78.3	-1.1	3.6
4340	76.9	-1.1	3.1
4420	75.3	-1.2	2.7
4500	71.1	-1.5	2.4
4580	70.8	-1.5	2.9
4660	76.2	-1.2	3.7
4740	78.0	-1.1	4.2
4820	79.1	-1.0	4.4
4900	53.6	-2.7	3.1
4980	36.1	-4.4	1.4



Product Number: BGS-AN5000-13211B
Product Name: 4G/5G Antenna

5. 3D Pattern





Product Number: BGS-AN5000-13211B
Product Name: 4G/5G Antenna

6. Mechanical Drawing

