




Product Number: BGS-AN5000-13193B
 Product Name: 4G/5G Antenna

1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	700-960Hz; 1710-2690MHz; 3300-3800MHz; 4200-4900M
S.W.R.	6.0 Max@700-960Hz; 2.0 Max@1710-2690MHz; 3.0 Max@3300-3800MHz; 4200-4900M
Antenna Gain	4G: 1.9dBi@700-960Hz 3.5dBi@1710-2690MHz 5G: 3.5dBi@3300-3800MHz 4.1dBi@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-AN5000-13193B

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

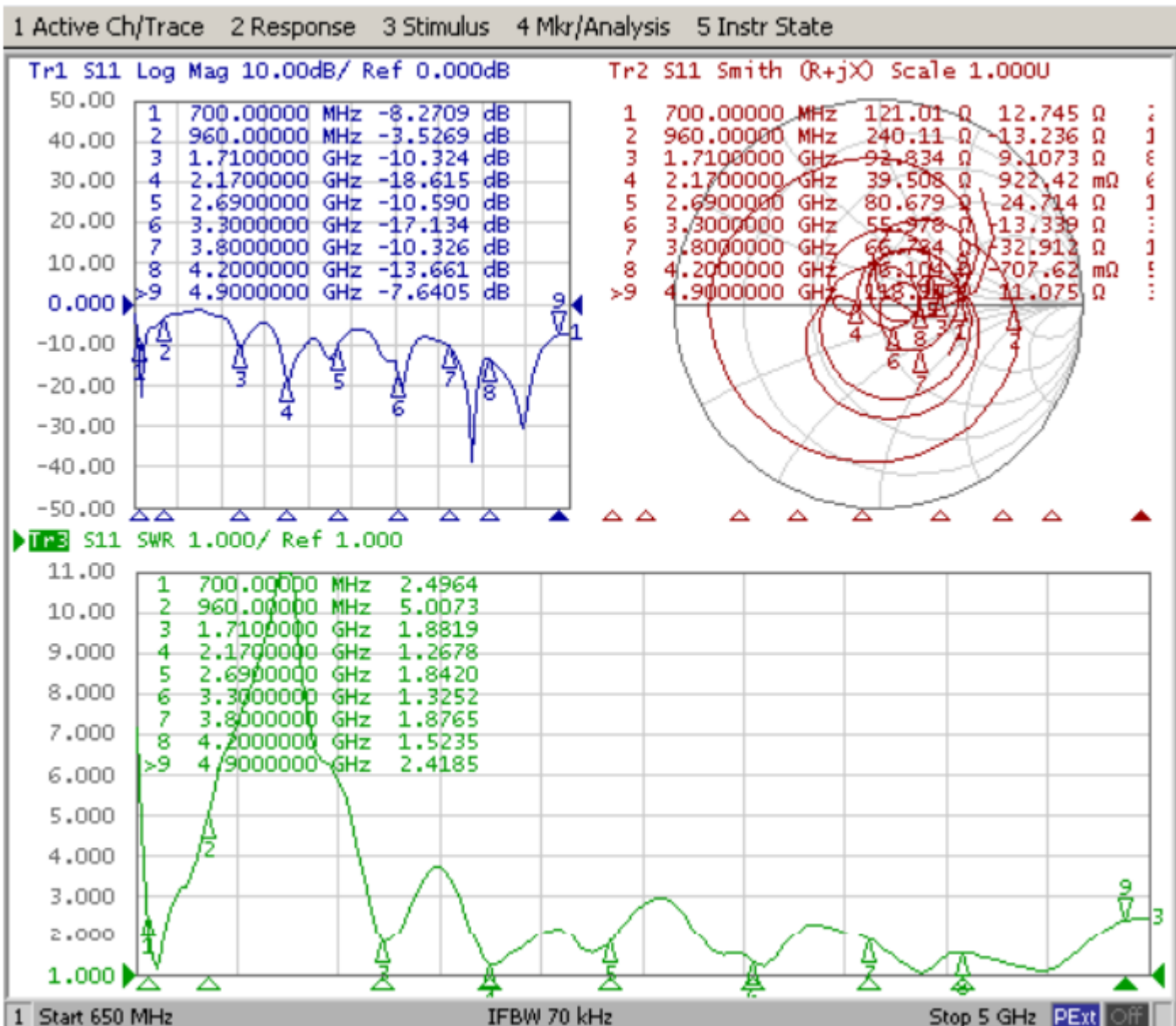


Product Number: BGS-AN5000-13193B

Product Name: 4G/5G Antenna

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



Product Number: BGS-AN5000-13193B

Product Name: 4G/5G Antenna

Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	40.1	-4.0	-1.9
720	66.8	-1.8	-0.1
740	83.4	-0.8	1.3
760	77.8	-1.1	1.6
780	77.8	-1.1	1.4
800	61.2	-2.1	1.3
820	57.9	-2.4	1.4
840	54.5	-2.6	1.5
860	46.3	-3.3	1.0
880	45.8	-3.4	0.9
900	41.6	-3.8	0.8
920	48.4	-3.2	1.2
940	46.2	-3.4	1.9
960	41.5	-3.8	1.3



Product Number: BGS-AN5000-13193B

Product Name: 4G/5G Antenna

Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1700	47.1	-3.3	2.5
1780	36.0	-4.4	1.0
1860	40.8	-3.9	1.7
1940	42.0	-3.8	1.7
2020	49.8	-3.0	2.7
2100	64.3	-1.9	3.5
2180	75.5	-1.2	3.1
2260	82.0	-0.9	3.4
2340	67.6	-1.7	0.4
2420	60.5	-2.2	1.2
2500	55.9	-2.5	1.9
2580	49.3	-3.1	1.3
2660	55.7	-2.5	1.8
2740	55.9	-2.5	2.2



Product Number: BGS-AN5000-13193B

Product Name: 4G/5G Antenna

Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2820	63.8	-2.0	2.7
2900	63.0	-2.0	2.7
2980	63.7	-2.0	3.3
3060	64.0	-1.9	3.3
3140	61.4	-2.1	3.5
3220	65.9	-1.8	3.5
3300	60.7	-2.2	2.6
3380	69.8	-1.6	3.0
3460	66.7	-1.8	2.9
3540	73.5	-1.3	2.5
3620	80.5	-0.9	2.5
3700	88.1	-0.6	2.3
3780	80.4	-1.0	1.2
3860	83.2	-0.8	1.7



Product Number: BGS-AN5000-13193B

Product Name: 4G/5G Antenna

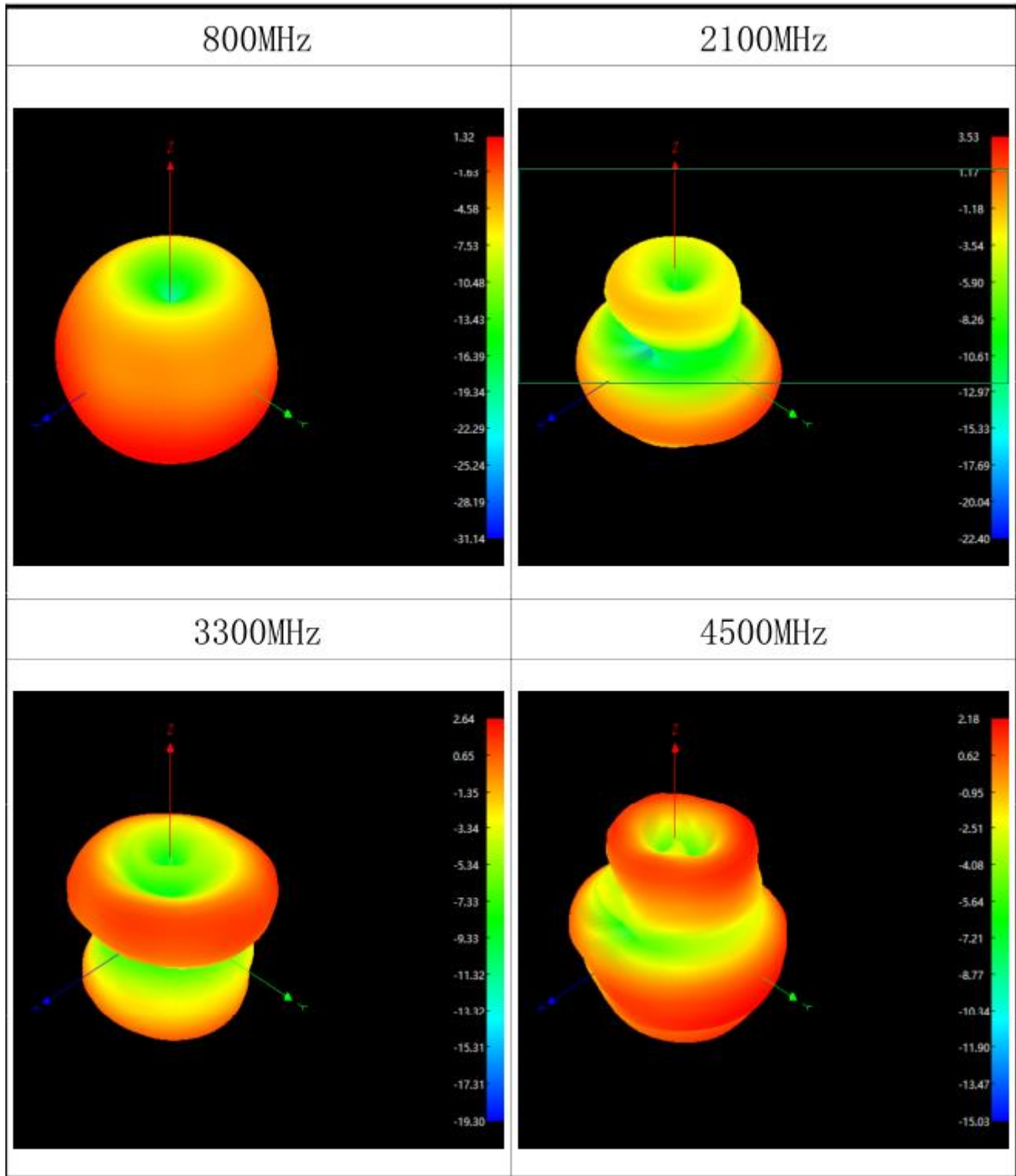
Passive Test For 4/5G			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
3940	80.4	-1.0	2.0
4020	85.1	-0.7	1.9
4100	84.9	-0.7	2.1
4180	84.5	-0.7	2.3
4260	87.3	-0.6	2.8
4340	83.8	-0.8	2.9
4420	83.0	-0.8	2.6
4500	80.5	-0.9	2.2
4580	80.0	-1.0	2.9
4660	83.4	-0.8	3.6
4740	87.9	-0.6	4.0
4820	84.1	-0.8	4.1
4900	56.8	-2.5	2.6
4980	40.8	-3.9	1.1



Product Number: BGS-AN5000-13193B

Product Name: 4G/5G Antenna

5. 3D Pattern





Product Number: BGS-AN5000-13193B

Product Name: 4G/5G Antenna

6. Mechanical Drawing

