东莞市辉益电子有限公司
DongGuan HuiYi Electronics Co., LTD

客户/Customer：_____

客户料号/Customer P/N：_____

规　格　书
Specification

编制/ Signed by：_____

编制日期/ Date：_____

广东省东莞市长安镇新岗路 23 号
No. 23, XinGang Road, Chang An, Dongguan City, Guangdong Province

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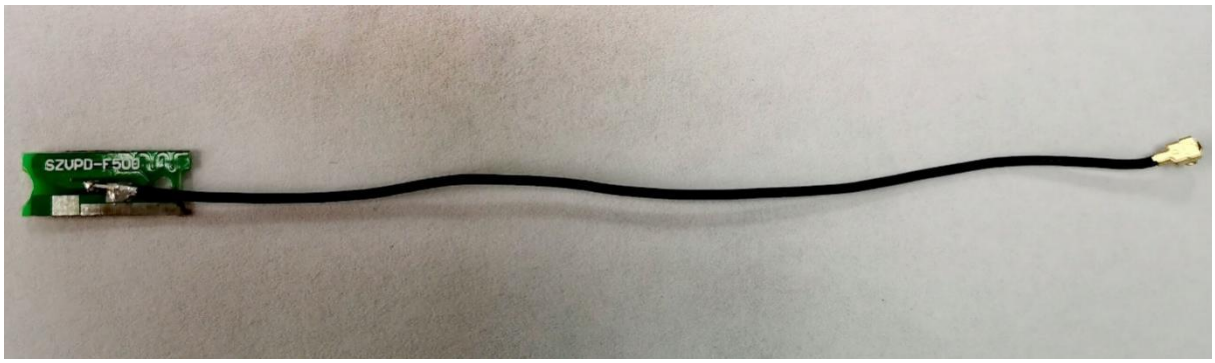
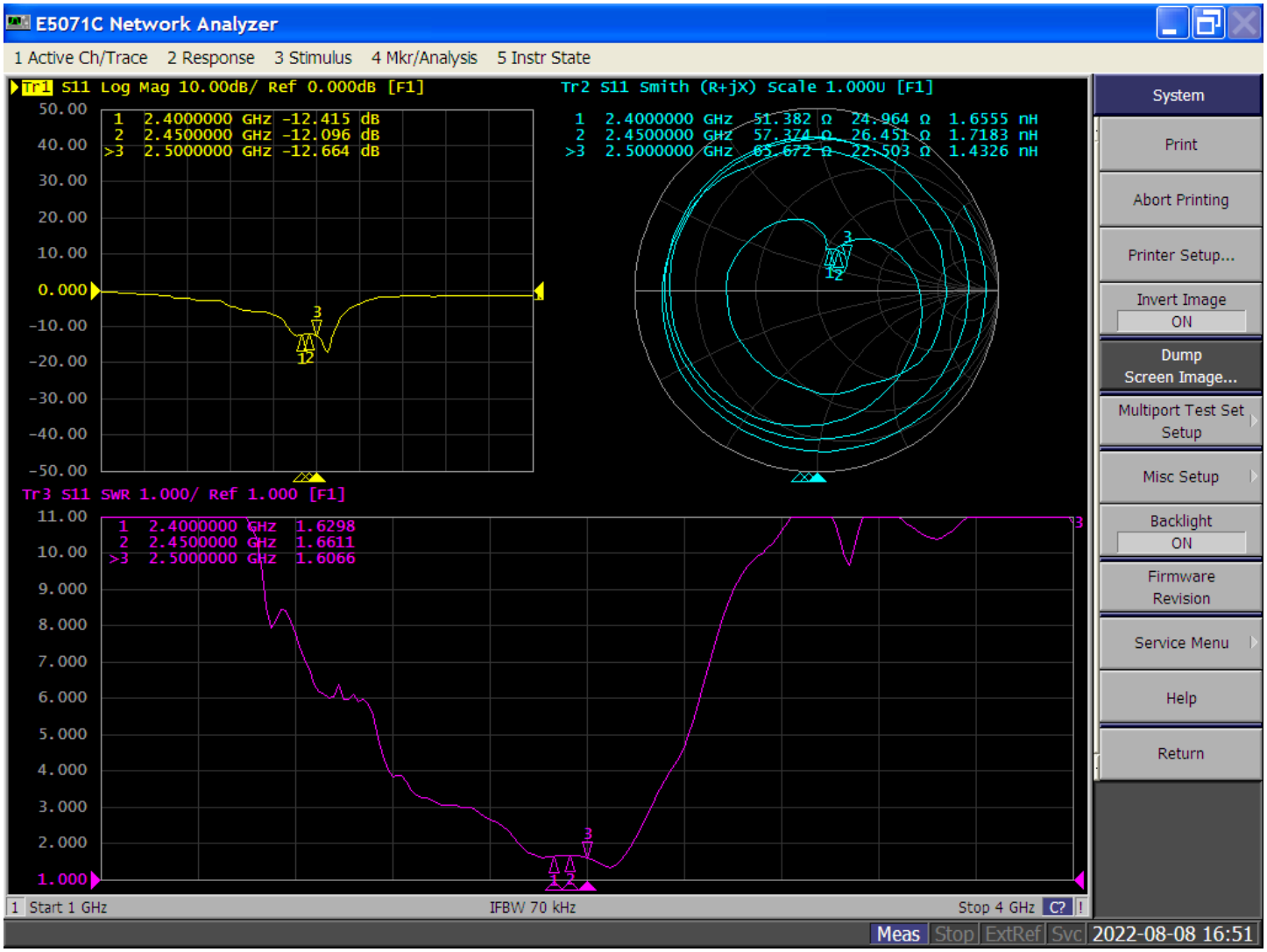
1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	**2400 ~ 2500 MHz**
S.W.R.	**<= 2.0**
Efficiency	**> 50%**
Polarization	**Linear**
Impedance	**50 Ohm**
Antenna Type	**PIFA**
B. Material & Mechanical Characteristics	
Material of Radiator	**PCB**
Cable Type	**O.D. 1.13 mm (Black) 95mm**
Connector Type	**Mini1 Connector for O.D. 1.13 mm Coaxial Cable**
Pull Test	**>= 1.0 Kg**
C. Environmental	
Operation Temperature	**- 40 ˚C ~ + 65 ˚C**
Storage Temperature	**- 40 ˚C ~ + 80 ˚C**
Model Number:	**NB1807-113G-095BX**
Product Name	**BT Antenna**
Gain	**2.7dBi(Max)**

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: 1.5 Meter; 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%

3. Antenna - S Parameter Test Data



Remark：

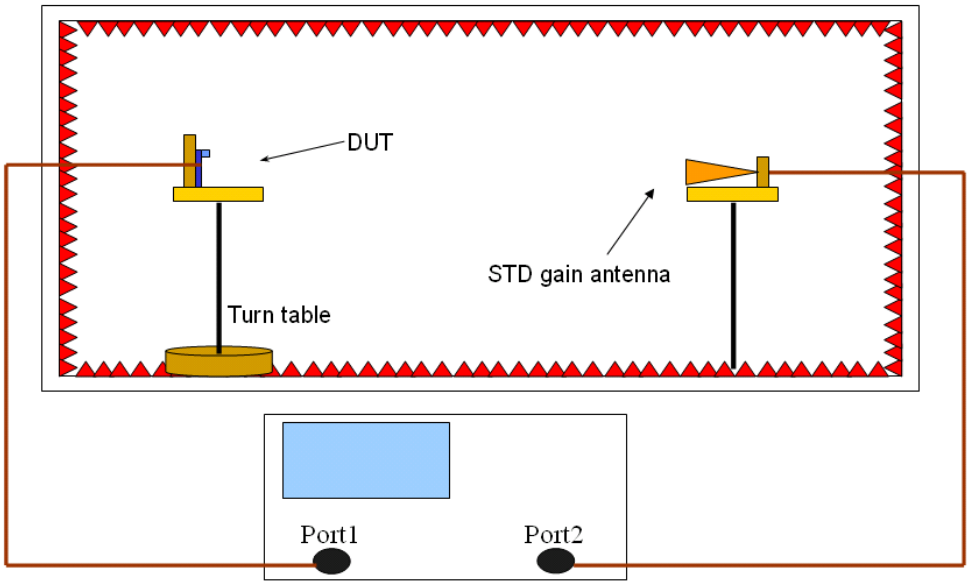
Test data is based on casing matching test, it’s different from the single product test data.

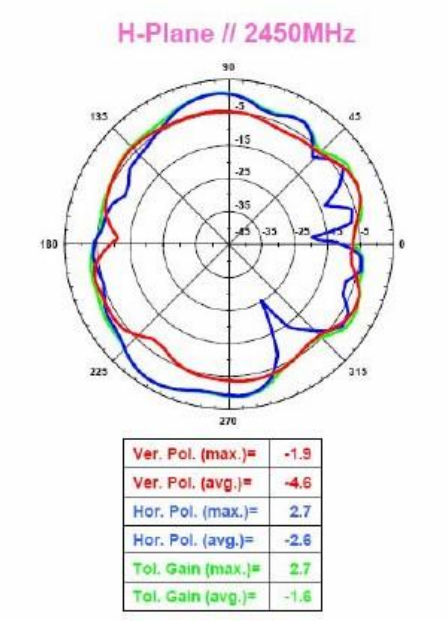
4. Antenna - Radiation Pattern Test Data

See attached files

Testing Equipment Specification:

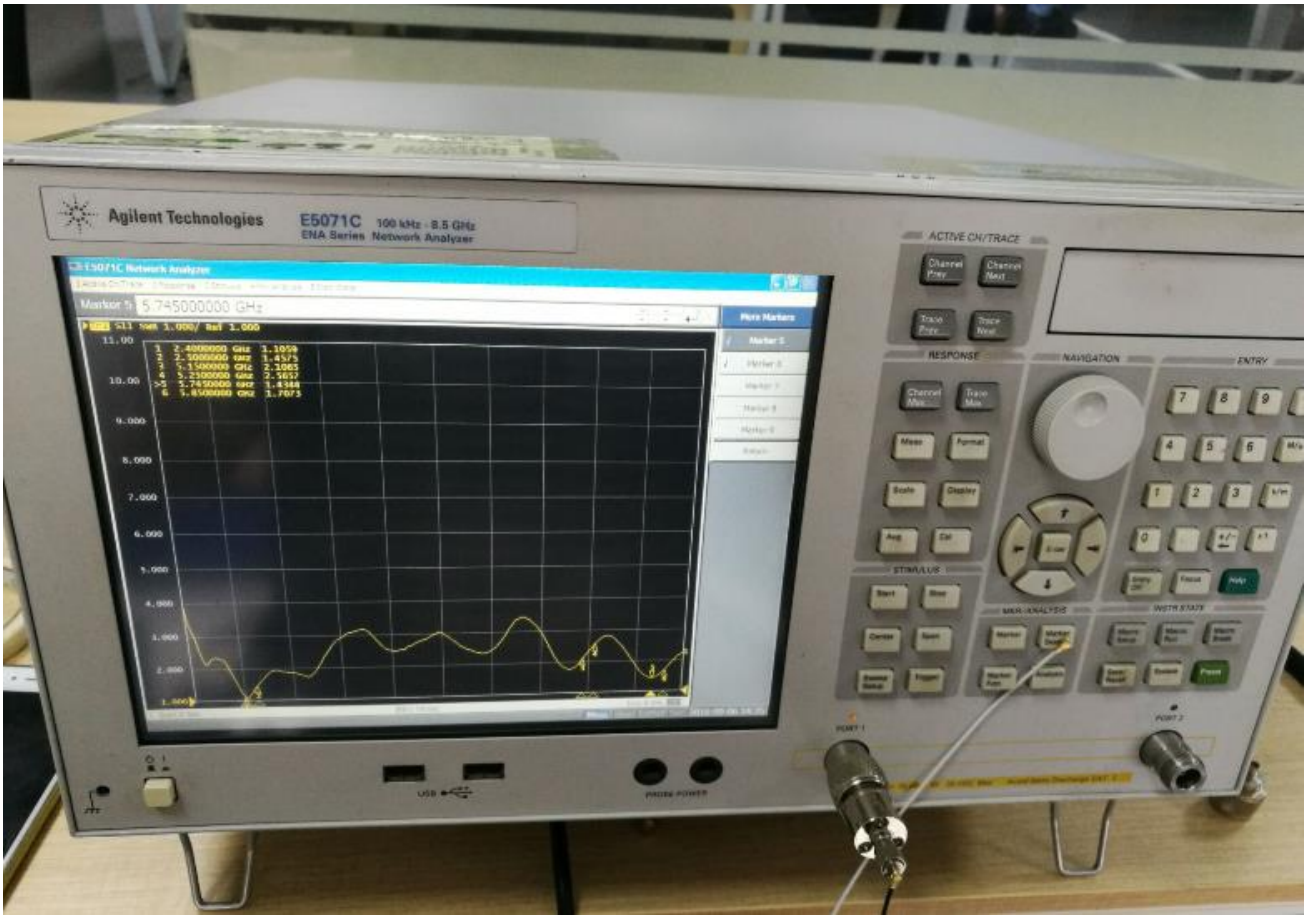
Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m
Quite Zone: 600mm @1 GHz
Isolation: >100dB @ 1 MHz ~ 10 GHz
Testing Equipment: Agilent 5071B
Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration
Double Ridged Horn Antenna





Ver. Pol. (max.)=	-1.9
Ver. Pol. (avg.)=	-4.6
Hor. Pol. (max.)=	2.7
Hor. Pol. (avg.)=	-2.6
Tol. Gain (max.)=	2.7
Tol. Gain (avg.)=	-1.6

5. Antenna Test method



Technical parameters reference range：

Frequency	驻波比（V.S.W.R）范围
2.4GHz	**<2.0**
2.45GHz	**<2.0**
2.5GHz	**<2.5**