

**Product Number: AN2400-37G59BX**

**Product Name: Antenna**

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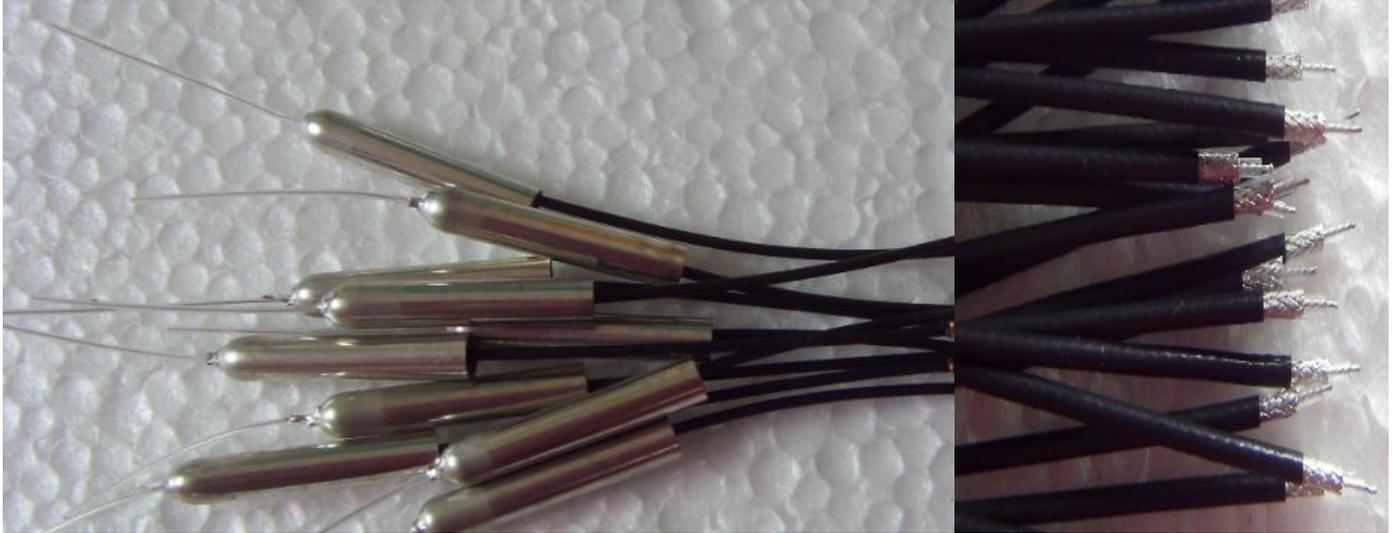
**Manufacture: Dongguan fanyu electronic technology co.,ltd**

Product Number: AN2400-37G59BX

Product Name: Antenna

## 1. Specification

### Sample Photo



### A. Electrical Characteristics

Frequency	2400 ~ 2500 MHz
S.W.R.	$\leq 2.0$
Antenna Gain	3.0dBi
Polarization	Linear
Impedance	50 Ohm

### B. Material & Mechanical Characteristics

Material of Radiator	Cu
Cable Type	O.D. 1.13 mm
Connector Type	/
Connector Pull Test	$\geq 1$ Kg
Connector Torque Test	/

### C. Environmental

Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C

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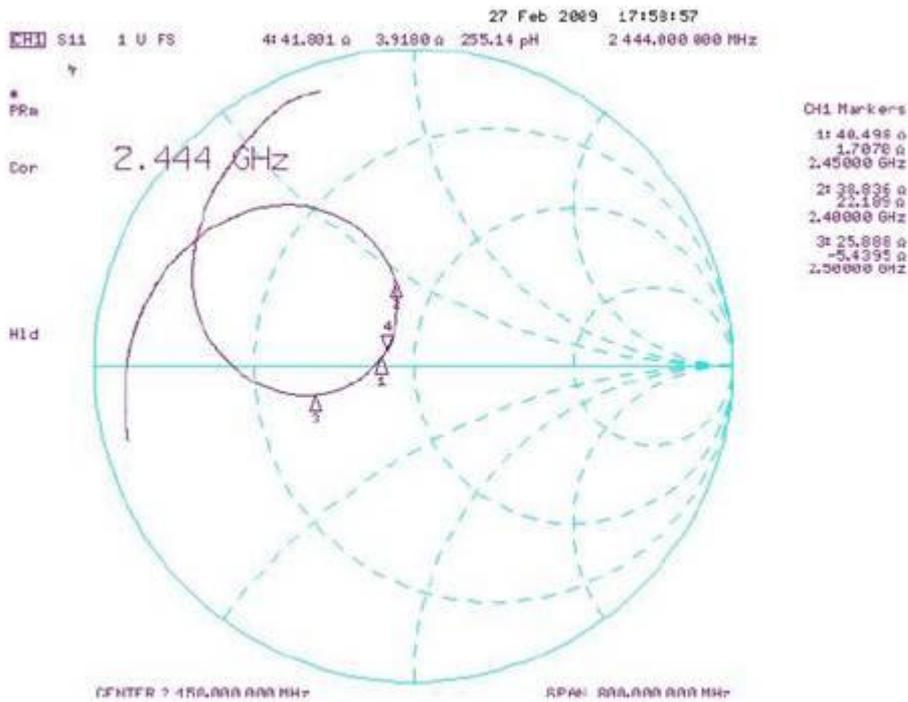
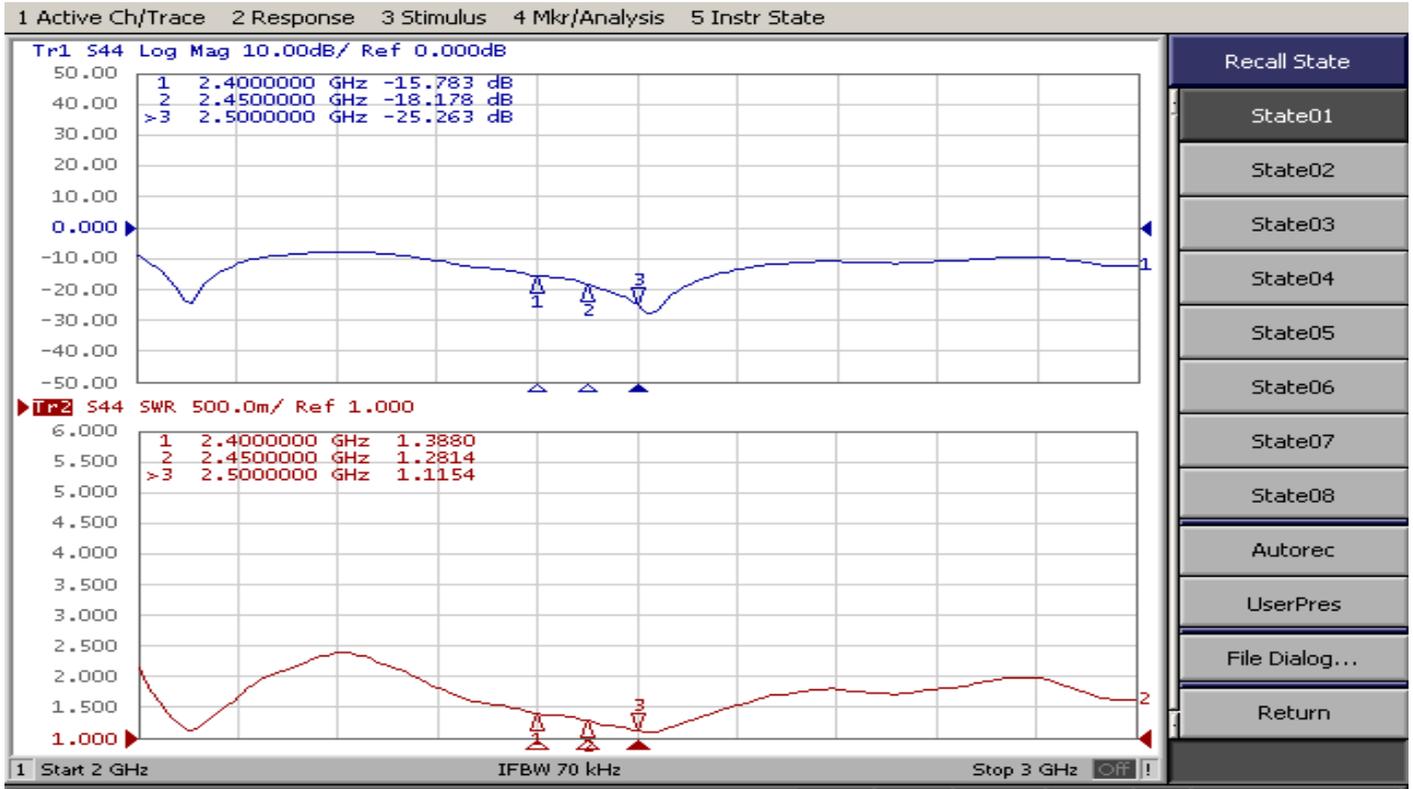
## 2. Characteristics and Reliability Test

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	GB / T2423 . 48-1997 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
M2	Random Drop	GB / T2423.8-1995 Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M3	Solderability	GB 2423 . 28- 82 Solder iron: 260±5°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal-Torque Test	Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M6	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	GB / T 2423 . 17- 93 Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	GB / T 2423 . 4 - 93 Temp: 80°C / 12 H; -40°C / 12H RH: >= 90%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	GB / T 2423 . 22 - 87 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.)	GB /T 2423 . 2 - 89 Temp: 80°C; Time: 24 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



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**WIFI 2.4G (Efficiency and Gain Test Data)**

Passive Test For WIFI2400										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	45.43	-3.43	2.4	0.25	17.056	28.372	2.4	-11.53	48.5	49.05
2410	44.85	-3.48	2.28	0.13	16.694	28.156	2.28	-13.17	48.56	49.2
2420	44.57	-3.51	2.24	0.09	16.595	27.975	2.24	-14.56	48.71	49.26
2430	41.99	-3.77	1.96	-0.19	15.76	26.234	1.96	-16.39	48.7	49.24
2440	39.62	-4.02	2.28	0.13	15.099	24.518	2.28	-18.1	48.77	49.27
2450	38.55	-4.14	2.36	0.21	15.046	23.503	2.36	-19.15	48.81	49.22
2460	37	-4.32	1.89	-0.26	14.904	22.093	1.89	-18.76	48.6	49.13
2470	36.89	-4.33	1.92	-0.23	15.367	21.521	1.92	-20.92	48.68	49.03
2480	39.63	-4.02	2.14	0.19	16.925	22.707	2.14	-17.83	48.8	49.18
2490	44.17	-3.55	2.68	0.77	18.944	25.224	2.68	-14.84	49.09	49.47
2500	46.51	-3.32	3.00	0.96	19.826	26.684	3.11	-12.52	49.11	49.59

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## 2.4 GHz Antenna for IEEE 802.11 WLAN System or Bluetooth



### Model No.

AN2400-0643BX

### Application

- IEEE 802.11 WLAN System
- Wireless Communication System
- Wi-Fi / WLAN / MIMO / Bluetooth System

### Features

- RoHS Compliant
- Low V.S.W.R. / Low Loss Design / High Gain
- High Efficiency and Sensitivity
- Low Loss RF Coaxial Connector Cable Feed
- Matching Free Design

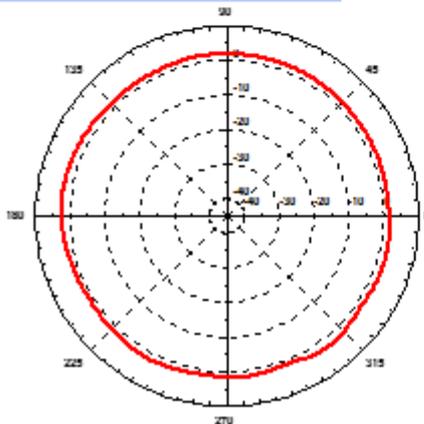
### Specification

- Freq. : 2.4 - 2.5 GHz
- S.W.R. :  $\leq 2.0$
- Gain : 2 dBi (\* Typical \*)
- Radiation Pattern : Omni-Directional
- Cable : RG-178
- Connector : IPEX

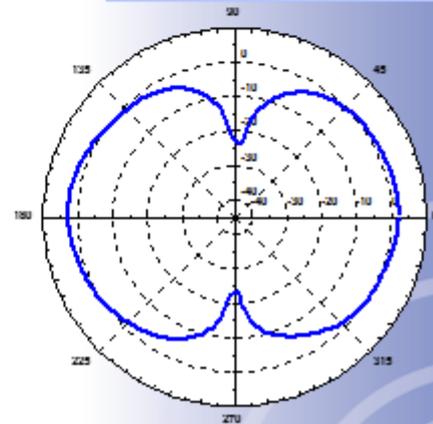
### Dimension



### H-Plane Radiation Pattern



### E-Plane Radiation Pattern



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#### **4. Antenna - Radiation Pattern Test Data**

##### **Testing Equipment Specification:**

**Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m**

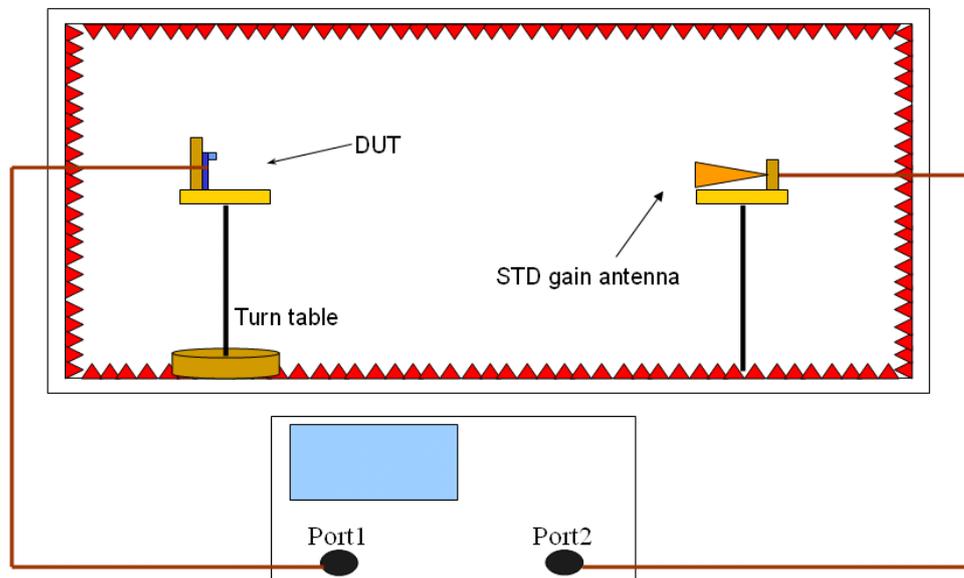
**Quiet Zone: 600mm @ 1 GHz**

**Isolation: >100dB @ 1 MHz ~ 10 GHz**

**Testing Equipment: Agilent 5071B**

**Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration**

**Double Ridged Horn Antenna**



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*Antenna  
Radiation  
Pattern  
VS  
Gain*

