



TEST REPORT ISSUED FOR

NANYANG ZHICHUANGYUAN Technology Co.,LTD

**Building 1 Intersection of Pangu Avenue and Gongye Road,
Tongbai Industrial Cluster, Tongbai County, Nanyang City,
Henan Province**

MANUFACTURER	:	NANYANG ZHICHUANGYUAN Technology Co.,LTD
PRODUCT NAME	:	PCB Antenna
MODEL NAME	:	JR1839FCC
TRADE NAME	:	N/A
Test Standard	:	IEEE149-1979
TEST DATE	:	2023-09-08
ISSUE DATE	:	2023-09-13

Testing Engineer :



Authorized Signatory :

Jim he





DIRECTORY

1. Technical Information	3
1.1. Manufacturer and Factory Information	3
1.2. Equipment Under Test (EUT) Description	3
2. Test Results	4
2.1. Applied Reference Documents	4
2.2. Test Conditions	4
2.3. Test Results lists	4
Annex A Photographs	5
Annex B Figures	6
1. 2D Radiation Pattern	6
2. 3D Radiation Pattern	8
Annex C Photographs	10
Annex D General Information	13
1.1 Identification of the Responsible Testing Laboratory	13
1.2 Identification of the Responsible Testing Location	13
1.3 Test Equipments Utilized	13

Change History		
Issue	Date	Reason
1.0	2023-09-13	First edition





1. Technical Information

Note: Provide by manufacturer.

1.1. Manufacturer and Factory Information

Applicant:	NANYANG ZHICHUANGYUAN Technology Co.,LTD
Applicant Address:	Building 1 Intersection of Pangu Avenue and Gongye Road, Tongbai Industrial Cluster, Tongbai County, Nanyang City, Henan Province
Manufacturer:	NANYANG ZHICHUANGYUAN Technology Co.,LTD
Manufacturer Address:	Building 1 Intersection of Pangu Avenue and Gongye Road, Tongbai Industrial Cluster, Tongbai County, Nanyang City, Henan Province
Gain (Max):	-2.65 dBi

1.2. Equipment Under Test (EUT) Description

Wireless Type	Bluetooth
Frequency	2402MHz-2480MHz





2. Test Results

2.1. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	IEEE149-1979	IEEE Standard Test Procedures for Antennas

2.2. Test Conditions

Test Environment Conditions:

Relative Humidity:	15 ... 75 %
Temperature:	+10 °C to +30 °C

2.3. Test Results lists

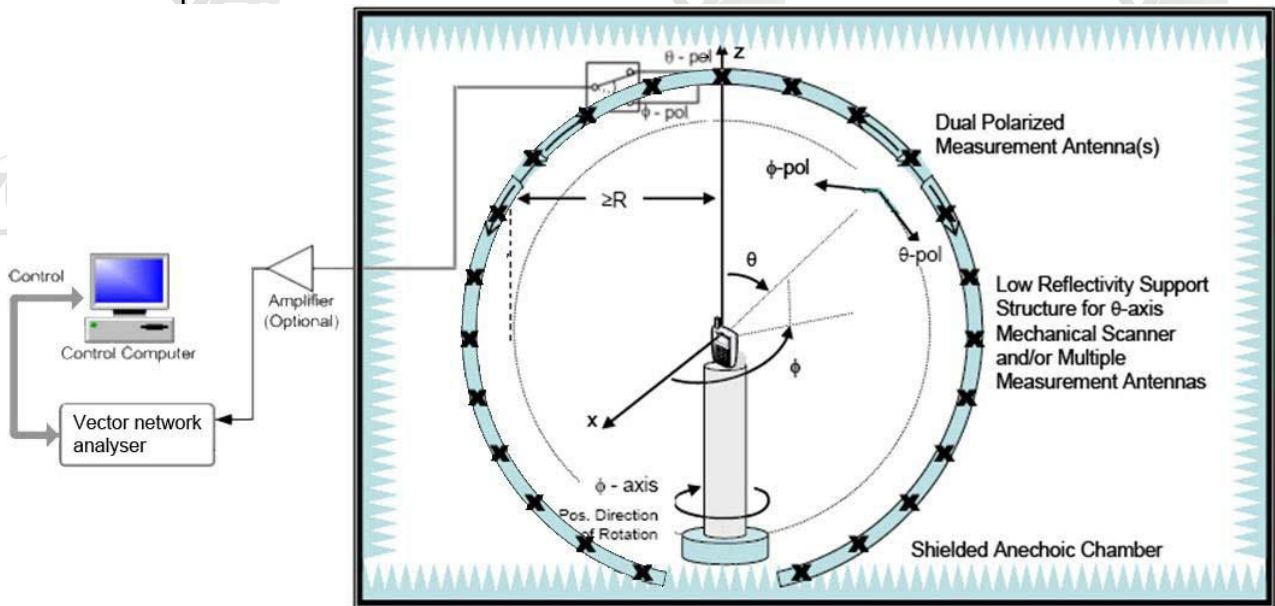
2.3.1. Gain

Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	10.5413	-5.4561
2410	10.4419	-5.2219
2420	11.5534	-5.1256
2430	11.7156	-4.5963
2440	13.2369	-4.2256
2450	15.1228	-3.5314
2460	16.3369	-3.1156
2470	17.2872	-3.0254
2480	17.6624	-2.9865
2490	18.4219	-3.9763
2500	19.2996	-2.6524



Annex A Photographs

1. Test Setup



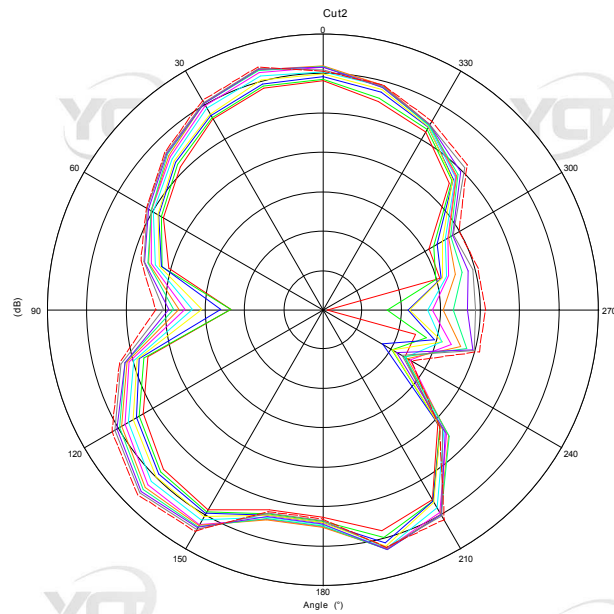


Annex B Figures

1. 2D Radiation Pattern

Phi=0°

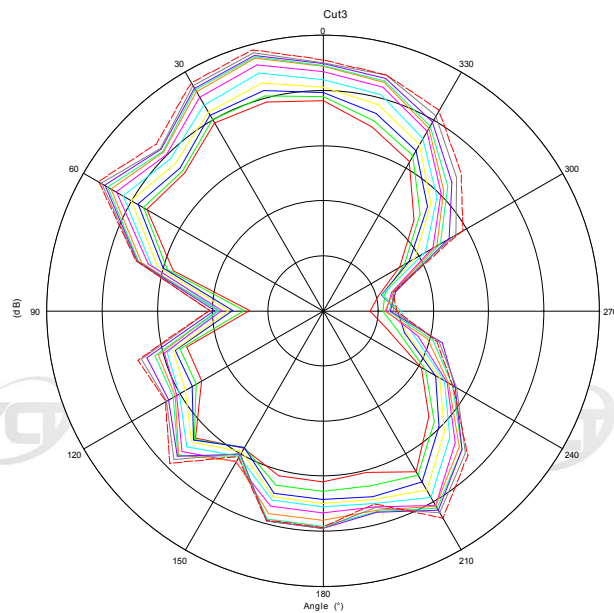
Max: -5
Min: -40
Scale: 5div



2400 MHz
2410 MHz
2420 MHz
2430 MHz
2440 MHz
2450 MHz
2460 MHz
2470 MHz
2480 MHz
2490 MHz
2500 MHz

Phi=90°

Max: -5
Min: -30
Scale: 5div

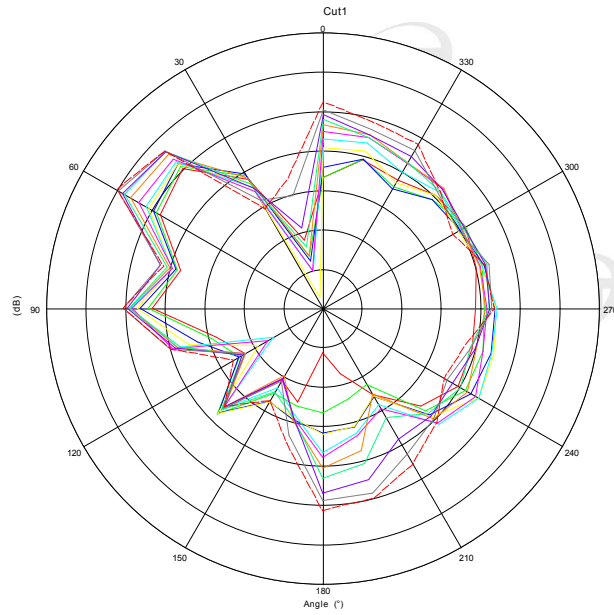


2400 MHz
2410 MHz
2420 MHz
2430 MHz
2440 MHz
2450 MHz
2460 MHz
2470 MHz
2480 MHz
2490 MHz
2500 MHz

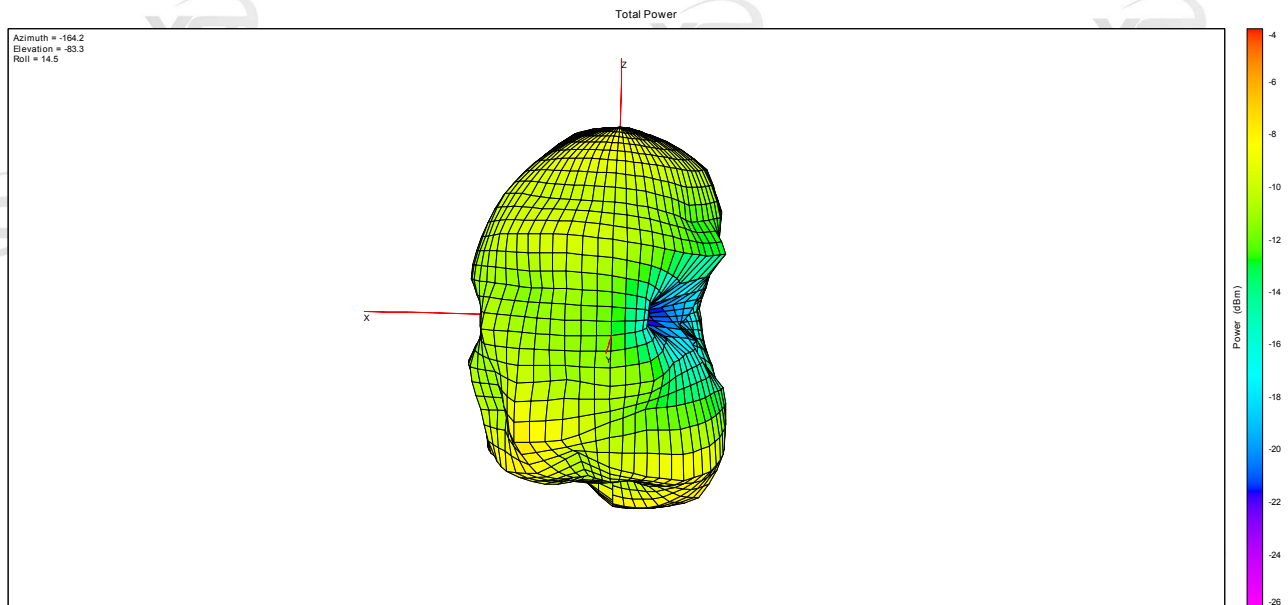




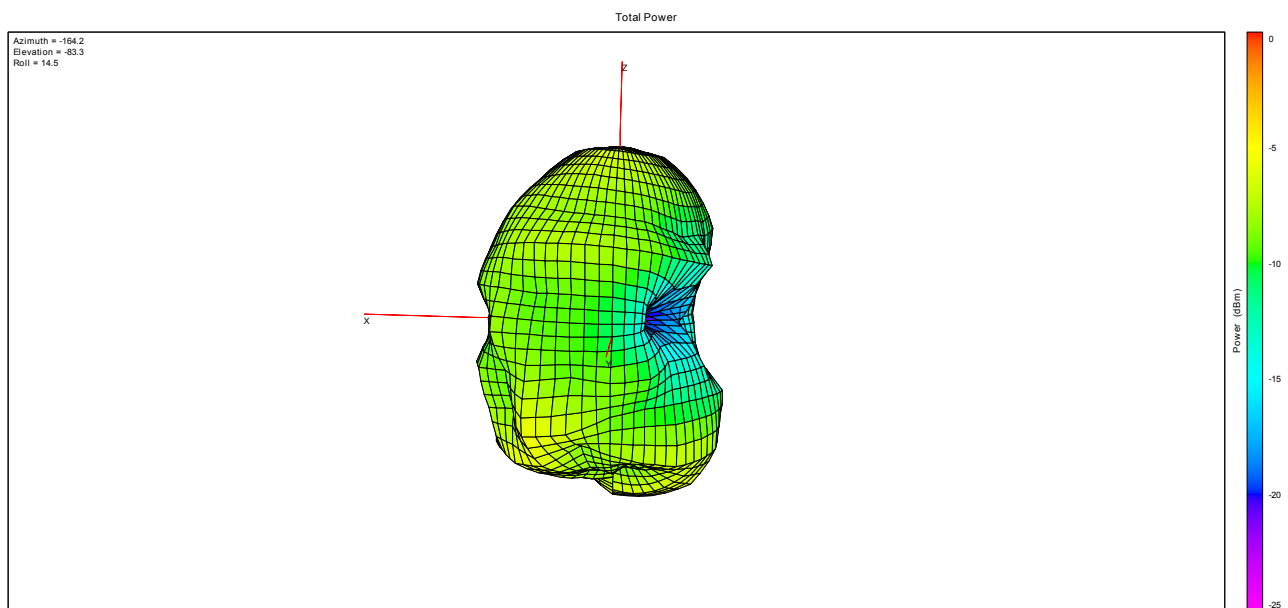
Theta=90°



2. 3D Radiation Pattern



2400MHz

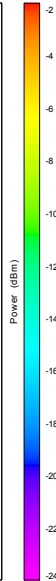
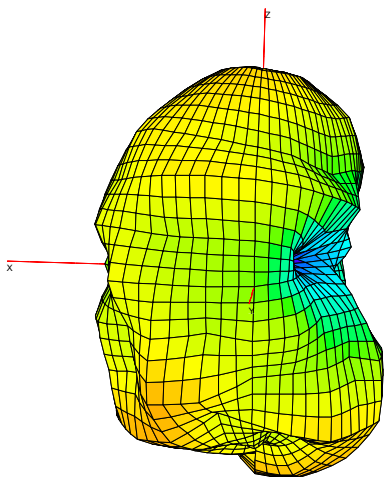


2450



Azimuth = -164.2
Elevation = -83.3
Roll = 14.5

Total Power



2500



Annex C Photographs

EUT

Photo 1

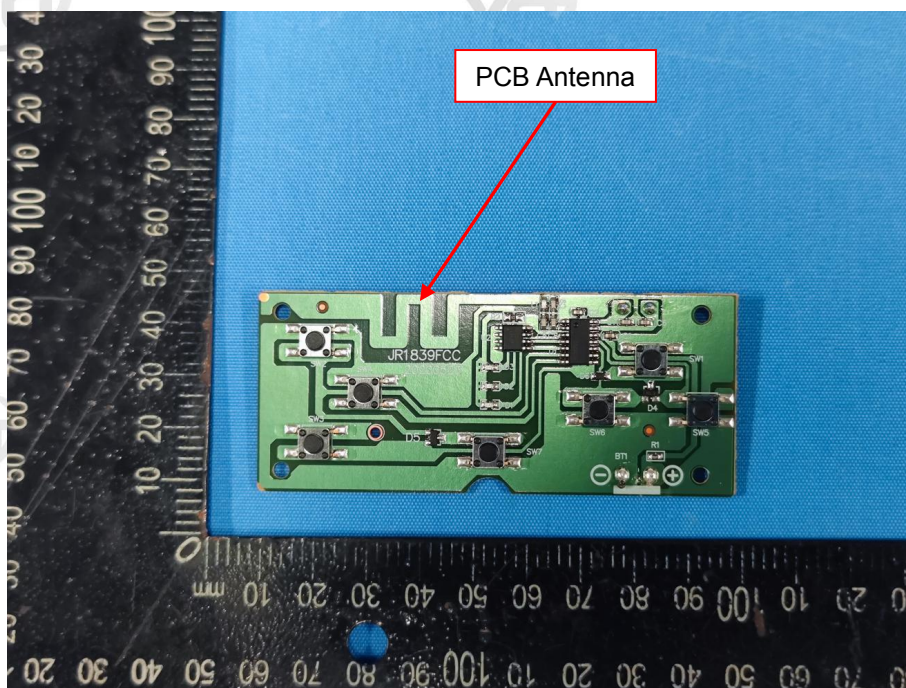
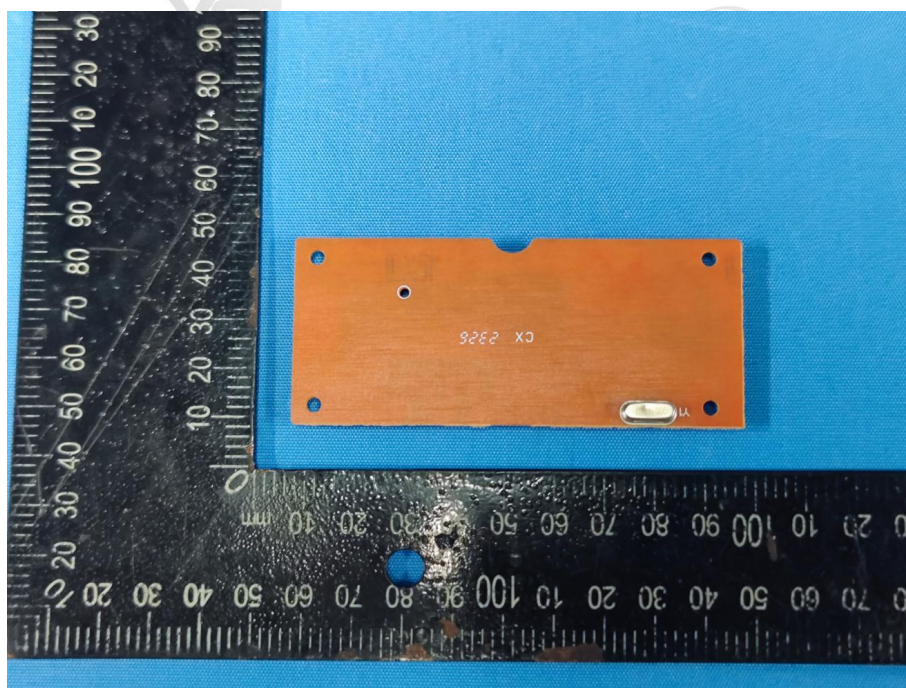


Photo 2



--The end of report--