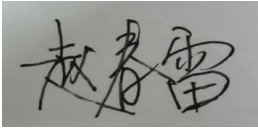
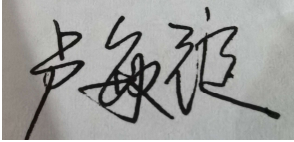
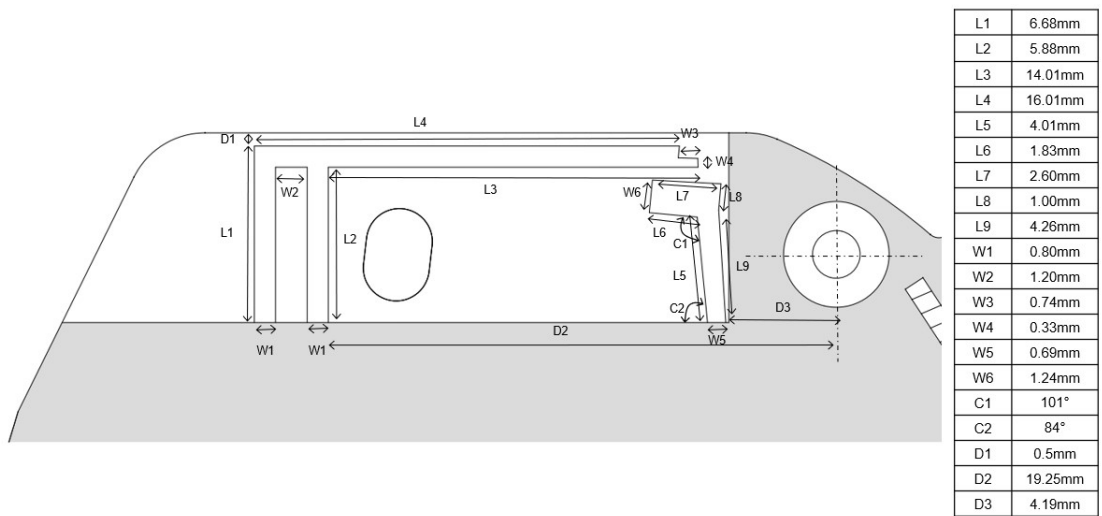
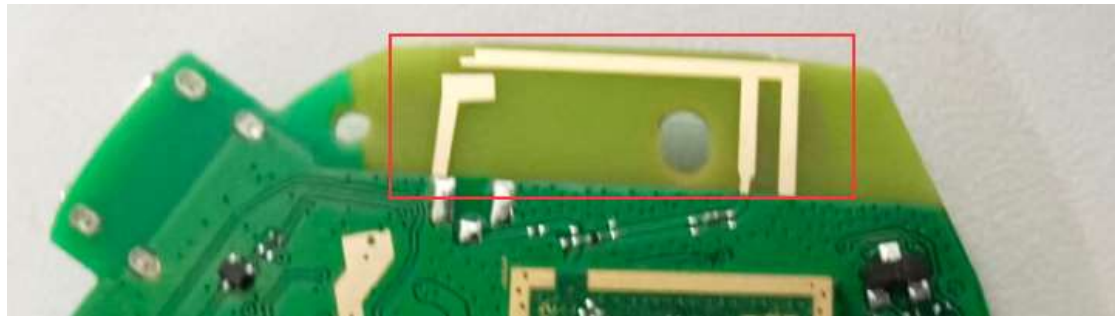


# JBL TUNE670NC Antenna report

Applicant	Tonly Technology Co., Ltd.
Address	Section 37, Zhongkai High-tech Development Zone, Huizhou City, Guangdong Province, 516006 China

Manufacturer or Supplier	Tonly Technology Co., Ltd.
Address	Section 37, Zhongkai High-tech Development Zone, Huizhou City, Guangdong Province, 516006 China
Product	Bluetooth Headset
Brand Name	JBL
Model	TUNE670NC
Max. Peak Gain	2.88dBi
Date of tests	2022-12-13
Tested by chunlei zhao	Approved by Minding Lu
	

### 一、 Antenna Size



### 二、 Antenna photo



### 三、 Test setup photo



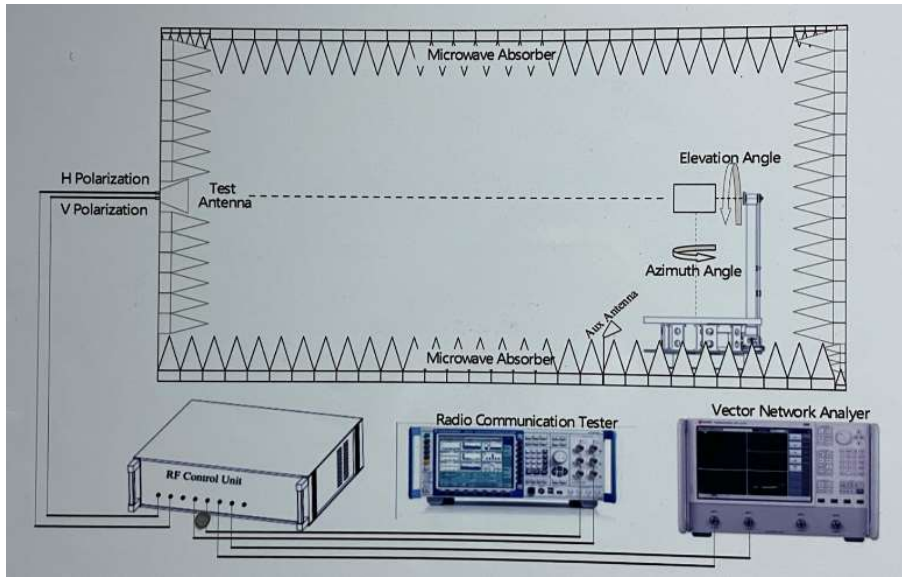
#### 四、 Test standard

Name	Parameter	Method	Standard no.
Antenna performance	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-1979

#### 五、 Equipment list

Equipment	Manufacturer	Model No	Serial No.	Last Cal.	Due Date
Network Analyzer	Agilent	E5071C	MY46630767	2022. 4. 28	2023. 4. 27
Microwave chamber	GTS	GTS Maxsign-Dart7000		2022. 4. 28	2023. 4. 27
Turn table	GTS	Dart-700 turn table		2022. 4. 28	2023. 4. 27
turn table controller	GTS	Dart-700 turn table controller		2022. 4. 28	2023. 4. 27
Broad-Band Horn Antenna	GTS	AT-6000	MA-D0460	2022. 4. 28	2023. 4. 27
Test Software	GTS	Libra Version-3.0.3.1		2022. 4. 28	2023. 4. 27

#### 六、 Test configuration diagram



Test step flow:

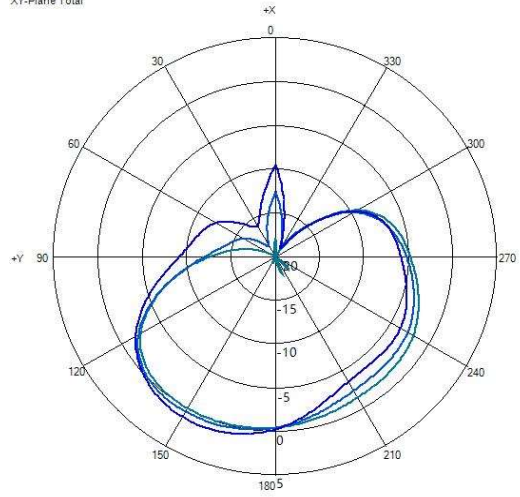
- 1) Maintain the test ambient temperature of  $23 \pm 2$  C, the instrument is powered on and preheated for more than 30 minutes;
- 2) Turn on the darkroom power supply, connect the test cable, and set up the sample according to the standard;
- 3) Outline sets the test content objectives and conducts calibration tests;
- 4) Run the software, when the test is completed, export the corresponding test diagram and test data, and save to the corresponding directory.

## 七、 Antenna gain

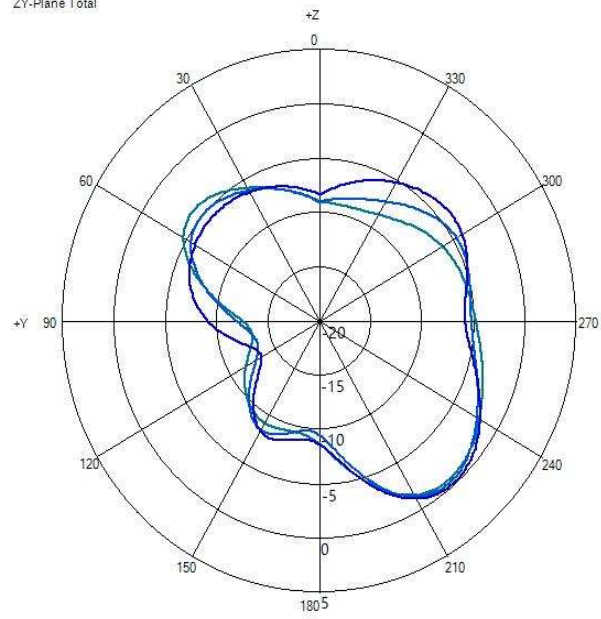
Freq(MHz)	Gain(dB)	Efficiency(dB)	Efficiency(%)
2400	1.62122437	-4.306055483	37.10175487
2410	1.655203652	-4.302965223	37.12816434
2420	1.772781939	-4.241181771	37.6601307
2430	1.871232437	-4.248002199	37.60103333
2440	2.045947527	-4.172961838	38.25637502
2450	2.260484161	-4.114909574	38.77118212
2460	2.442556099	-4.093697643	38.9610126
2470	2.786001063	-3.875734948	40.96627775
2480	2.876955471	-3.858913389	41.12526042
2490	2.751558478	-3.930006036	40.45753294
2500	2.576461954	-3.967340499	40.11122726

## 八、 Antenna test data

XY-Plane Total



ZY-Plane Total



ZX-Plane Total

