


# TEST REPORT

For FCC Part15B

Report No.....: **CHTW24060002** Report Verification: 

Project No.....: **SHT2404077202W**

FCC ID.....: **2BGJ3-Q368**

Applicant's name.....: **Shenzhen Kuli Innovation Technology Co., LTD**

Address.....: 2201 Huichao Technology Building,jinhai Road,Yantian Community, Xixiang Street

Product Name .....: **walkie talkies**

Trade Mark .....: **QUOLIX**

Model No. ....: Q368

Listed Model(s) .....: Q368Plus


Standard .....: **FCC CFR Title 47 Part 15 Subpart B**


Date of receipt of test sample.....: May.06, 2024

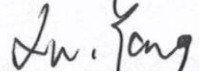
Date of testing.....: May.08, 2024- May.27, 2024

Date of issue.....: Jun.03, 2024

Result.....: **PASS**

Compiled by  
(position+printed name+signature)....: File administrators Caspar Chen 

Supervised by  
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Approved by  
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Testing Laboratory Name .....: **Shenzhen Huatongwei International Inspection Co., Ltd.**

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*The test report merely corresponds to the test sample.*

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# **1. TEST STANDARDS AND REPORT VERSION**

## **1.1. Test Standards**

The tests were performed according to following standards:

[FCC CFR Title 47 Part 15 Subpart B](#) - Unintentional Radiators

[ANSI C63.4: 2014](#) – American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz

## **1.2. Report version**

Revision No.	Date of issue	Description
N/A	2024-06-03	Original

## 2. TEST DESCRIPTION

Section	Test Item	Section in CFR 47	Result	Test Engineer
5.1	Conducted Emissions	15.107(a)	Pass	N/A
5.2	Radiated Emissions	15.109(a)	Pass	PASS
5.3	Antenna conducted power for receiver	15.111	Pass	PASS
5.4	Scanning receivers and frequency converters used with scanning receivers	15.121(b)	N/A #1	-

Note:

1. The measurement uncertainty is not included in the test result.
2. #1: The scanning receive frequency range of this EUT is from 462.5625MHz to 462.7125MHz, 467.5625MHz to 467.7125MHz, 462.5500MHz to 462.7250MHz, not in the cellular radiotelephone service frequency bands, so this item is not applicable.

### 3. SUMMARY

#### 3.1. Client Information

Applicant:	Shenzhen Kuli Innovation Technology Co., LTD
Address:	2201 Huichao Technology Building, jinhai Road, Yantian Community, Xixiang Street
Manufacturer:	Shenzhen Kuli Innovation Technology Co., LTD
Address:	2201 Huichao Technology Building, jinhai Road, Yantian Community, Xixiang Street

#### 3.2. Product Description

Main unit	
Product Name:	walkie talkies
Trade Mark:	<b>QUOLIX</b>
Model No.:	Q368
Listed Model(s):	Q368Plus
Power supply:	DC 3.7V from battery
Hardware version:	PCB_TD-368-01V02
Software version:	1.1
Ancillary unit	
Battery information:	Model: Q368 Rated capacity: 1020mAh(3.774Wh) Standard Voltage: 3.7V Charge limit Voltage: 4.2V Suitable model: Q368

#### 3.3. Radio Specification Description

Receive Frequency Range:	CH01~CH07: 462.5625MHz~ 462.7125MHz CH08~CH14: 467.5625MHz~ 467.7125MHz CH15~CH22: 462.5500MHz~ 462.7250MHz
Modulation Type:	FM

Note: only show the receive specification.

### 3.4. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	Building 7, Baiwang Idea Factory, No.1051, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong, China	
Contact information:	Tel: 86-755-26715499 E-mail: <a href="mailto:cs@szhtw.com.cn">cs@szhtw.com.cn</a> <a href="http://www.szhtw.com.cn">http://www.szhtw.com.cn</a>	
Qualifications	Type	Accreditation Number
	FCC Registration Number	762235
	FCC Designation Number	CN1181

## 4. TEST CONFIGURATION

### 4.1. EUT operation mode

Test mode	Describe
Scan receive mode	Scanning stopped, receiving signal at 462.6375MHz

Test item	Test mode
Conducted emissions	N/A
Radiated emissions	scan receive mode
Antenna conducted power for receiver	scan receive mode
Scanning receivers and frequency converters used with scanning receivers	N/A

Only show the test data for worst case mode on the test report.

### 4.2. Support unit used in test configuration

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?			
✓ No			
Item	Equipment	Trade Name	Model No.
1			
2			

### 4.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

### 4.4. Statement of the measurement uncertainty

No.	Test Items	Measurement Uncertainty
1	AC Conducted Emission	3.21dB
2	Radiated Emission	4.54dB for 30MHz-1GHz 5.10dB for above 1GHz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

#### 4.5. Equipments Used during the Test

● Radiated Emission - 30MHz~1GHz							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0127	SAC-3m-02	C11121	2023/04/06	2026/04/05
●	EMI Test Receiver	R&S	HTWE0099	ESCI 7	100900	2023/8/30	2024/8/29
●	Ultra-Broadband Antenna	SCHWARZBEC K	HTWE0119	VULB9163	546	2023/2/22	2026/2/21
●	Pre-Amplifier	SCHWARZBEC K	HTWE0295	BBV 9742	/	2024/5/24	2025/5/23
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

● Radiated emission-Above 1GHz							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0122	SAC-3m-01	C11121	2023/04/17	2026/04/16
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2023/08/22	2024/08/21
●	Horn Antenna	SCHWARZBECK	HTWE0126	BBHA 9120D	1011	2023/02/14	2026/02/13
●	Horn Antenna	SCHWARZBECK	HTWE0103	BBHA9170	BBHA9170472	2023/02/20	2026/02/19
●	Broadband Pre-amplifier	SCHWARZBECK	HTWE0551	SCU18F	100855	2023/6/6	2024/6/5
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A



## 5. TEST CONDITIONS AND RESULTS

### 5.1. Conducted Emissions

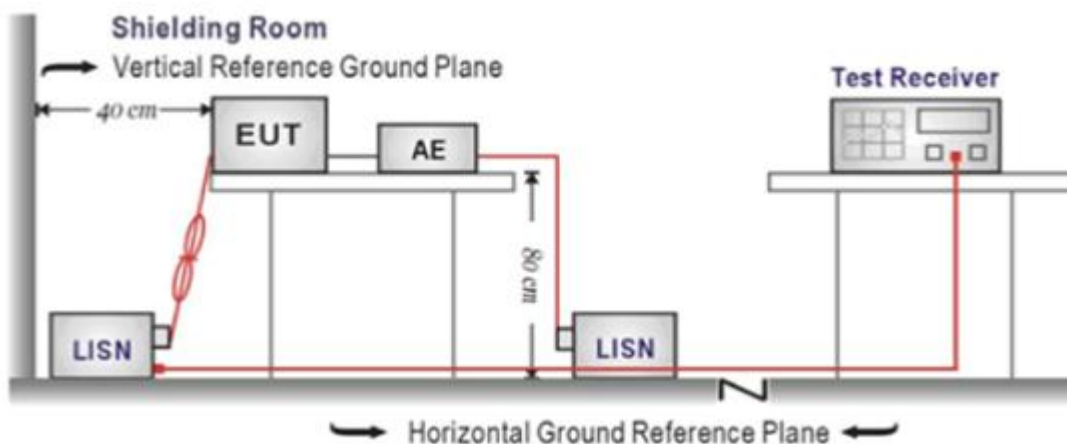
#### LIMIT

FCC CFR Title 47 Part 15 Subpart B Section 15.107:

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\* Decreases with the logarithm of the frequency.

#### TEST CONFIGURATION



#### TEST PROCEDURE

1. The EUT was setup according to ANSI C63.4:2014
2. The EUT was placed on a plat form of nominal size, 1 m by 1.5 m, raised 10 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 10 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50ohm / 50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

#### TEST MODE:

Please refer to the clause 4.1

#### TEST RESULTS

Passed  Not Applicable

## 5.2. Radiated Emissions

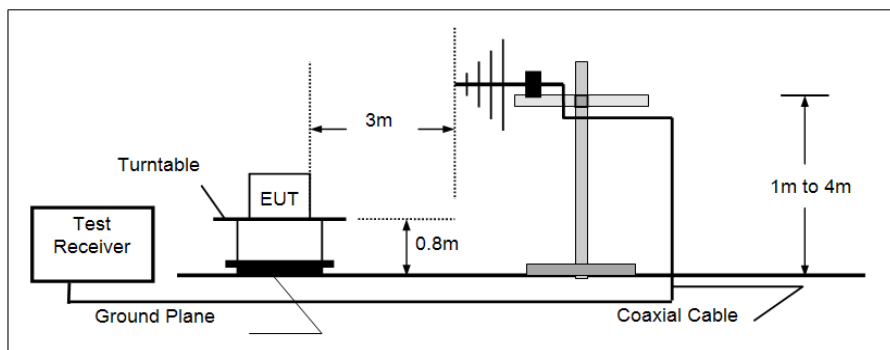
### LIMIT

#### FCC CFR Title 47 Part 15 Subpart B Section 15.109

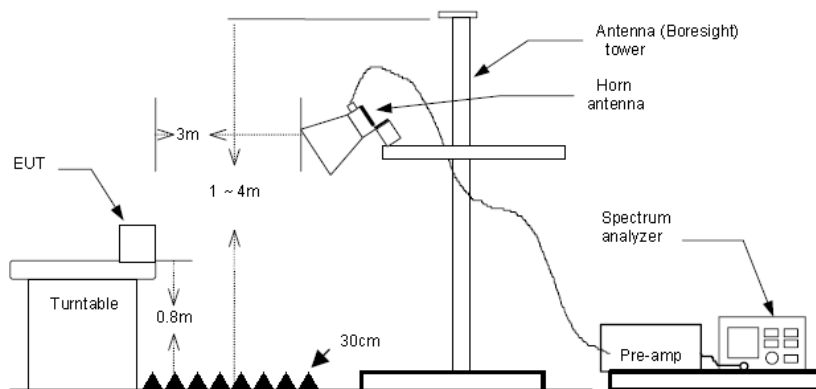
Frequency	Limit (dBuV/m @3m)	Value
30MHz-88MHz	40.00	Quasi-peak
88MHz-216MHz	43.50	Quasi-peak
216MHz-960MHz	46.00	Quasi-peak
960MHz-1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

### TEST CONFIGURATION

#### ➤ 30MHz ~ 1GHz



#### ➤ Above 1GHz



### TEST PROCEDURE

- The EUT was tested according to ANSI C63.4:2014.
- The EUT is placed on a turn table which is 0.8 meter above ground.
- The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
- The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna.
- Use the following spectrum analyzer settings
  - Span shall wide enough to fully capture the emission being measured;
  - Below 1GHz,
    - RBW=120KHz, VBW=300KHz, Sweep=auto, Detector function=peak, Trace=max hold;
    - If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
  - From 1GHz to 5th harmonic, RBW=1MHz, VBW=3MHz

**TEST MODE:**

Please refer to the clause 4.1

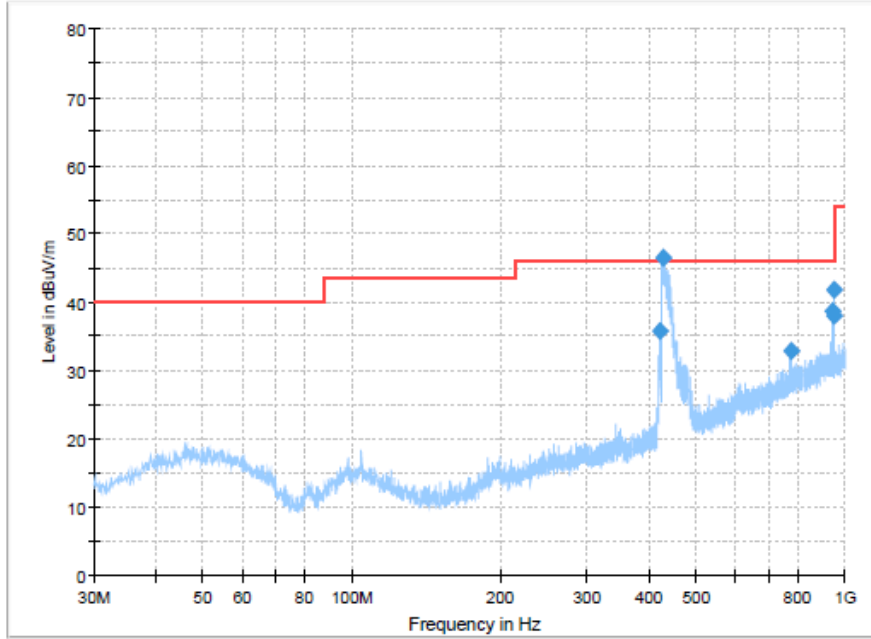
**TEST RESULTS**

**Passed**       **Not Applicable**

Note: Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor  
The emission levels of frequency above 6GHz are very lower than limit and not show in test report.

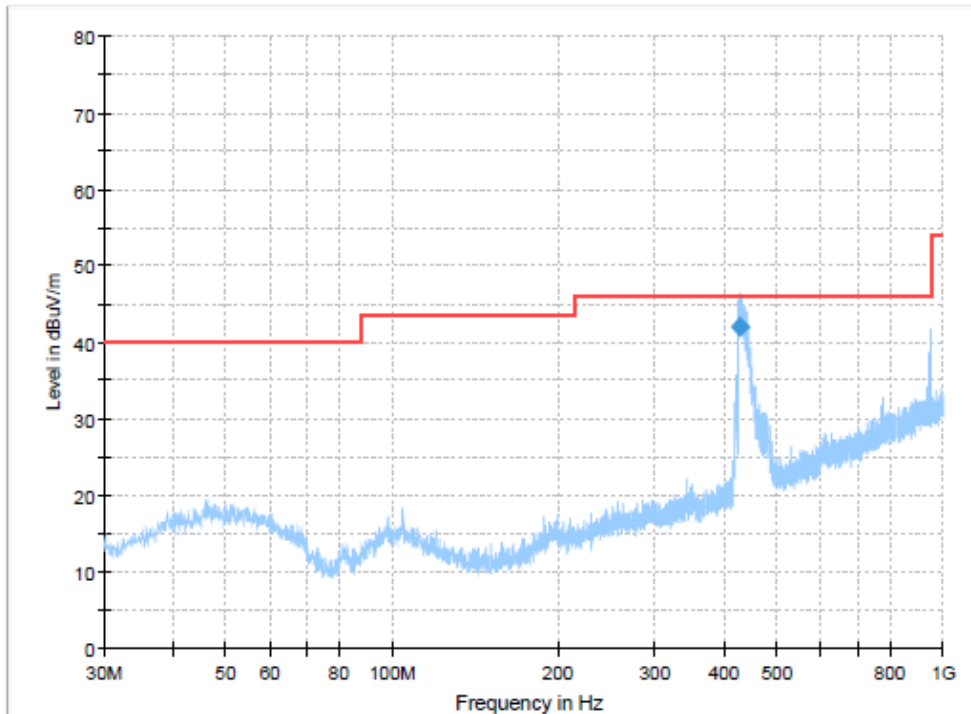
Scan receive mode

Polarization: Horizontal



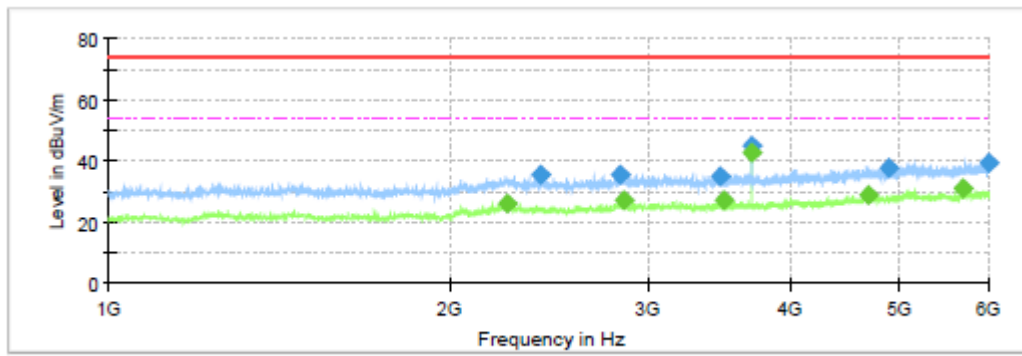
**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
422.7288	35.73	46.00	10.27	100.0	H	294.0	-3.8
426.8513	46.44	46.00	-0.44	100.0	H	294.0	-3.6
777.6275	32.79	46.00	13.21	300.0	H	359.0	4.1
945.3163	38.57	46.00	7.43	300.0	H	42.0	7.1
946.6500	37.98	46.00	8.02	300.0	H	42.0	7.1
948.4688	41.83	46.00	4.17	300.0	H	261.0	7.1



**Final Result**

Frequency (MHz)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
426.9913	41.95	46.00	4.05	231.0	H	268.0	-3.6

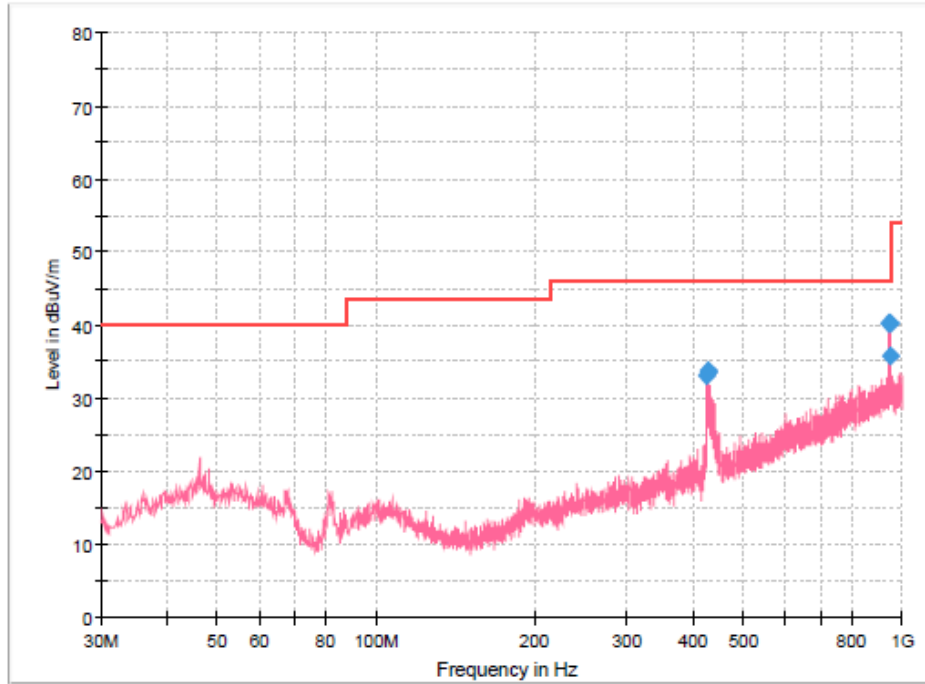


**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2250.0000	---	25.99	54.00	28.01	150.0	H	127.0	-9.7
2409.3750	35.44	---	74.00	38.56	150.0	H	252.0	-10.1
2828.7500	35.44	---	74.00	38.56	150.0	H	225.0	-8.9
2858.1250	---	27.01	54.00	26.99	150.0	H	44.0	-8.8
3476.2500	35.26	---	74.00	38.74	150.0	H	162.0	-7.8
3500.6250	---	27.36	54.00	26.64	150.0	H	180.0	-7.6
3700.0000	44.83	---	74.00	29.17	150.0	H	8.0	-7.2
3700.6250	---	42.67	54.00	11.33	150.0	H	8.0	-7.2
4698.1250	---	29.16	54.00	24.84	150.0	H	0.0	-4.3
4891.2500	37.90	---	74.00	36.10	150.0	H	44.0	-3.8
5697.5000	---	31.11	54.00	22.89	150.0	H	279.0	-2.3
5990.0000	39.49	---	74.00	34.51	150.0	H	180.0	-1.4

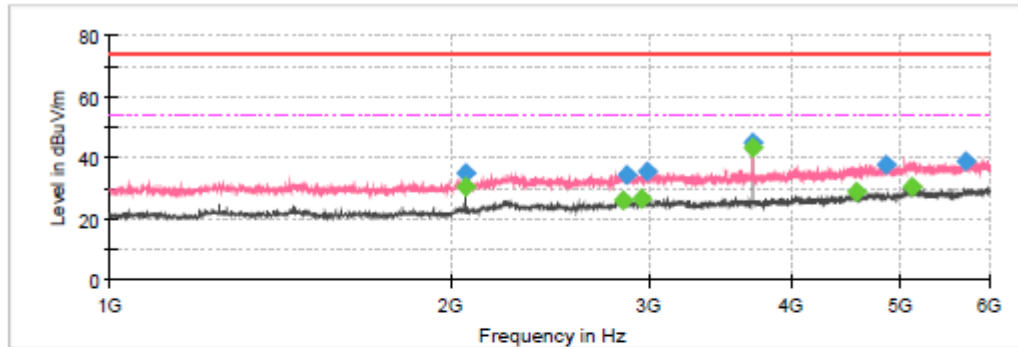
Scan receive mode

Polarization: Vertical



**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
426.0025	33.01	46.00	12.99	100.0	V	58.0	-3.6
428.0638	33.58	46.00	12.42	100.0	V	58.0	-3.6
429.1550	33.78	46.00	12.22	100.0	V	58.0	-3.5
945.1950	40.33	46.00	5.67	100.0	V	164.0	7.1
946.7713	35.85	46.00	10.15	100.0	V	113.0	7.1
948.3475	40.32	46.00	5.68	100.0	V	0.0	7.1



**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2062.5000	---	30.47	54.00	23.53	150.0	V	245.0	-11.4
2062.5000	35.05	---	74.00	38.95	150.0	V	245.0	-11.4
2841.8750	---	26.21	54.00	27.79	150.0	V	190.0	-8.9
2866.8750	34.68	---	74.00	39.32	150.0	V	307.0	-8.7
2947.5000	---	26.70	54.00	27.30	150.0	V	108.0	-8.5
2986.8750	35.34	---	74.00	38.66	150.0	V	280.0	-8.4
3700.0000	45.11	---	74.00	28.89	150.0	V	135.0	-7.2
3700.6250	---	43.32	54.00	10.68	150.0	V	135.0	-7.2
4571.8750	---	28.82	54.00	25.18	150.0	V	117.0	-4.3
4859.3750	37.98	---	74.00	36.02	150.0	V	343.0	-3.6
5126.8750	---	30.32	54.00	23.68	150.0	V	199.0	-2.9
5721.8750	39.02	---	74.00	34.98	150.0	V	272.0	-2.2

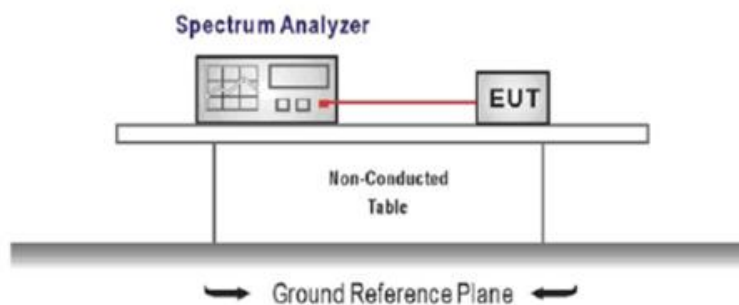
### 5.3. Antenna conducted power for receiver

#### LIMIT

FCC CFR Title 47 Part 15 Subpart B Section 15.111:

Frequency range	Limit
9KHz to 3GHz	2.0 nW (-57dBm)

#### TEST CONFIGURATION



#### TEST PROCEDURE

1. The receiver antenna terminal connected to a spectrum analyzer.
2. Receiver set as follow:

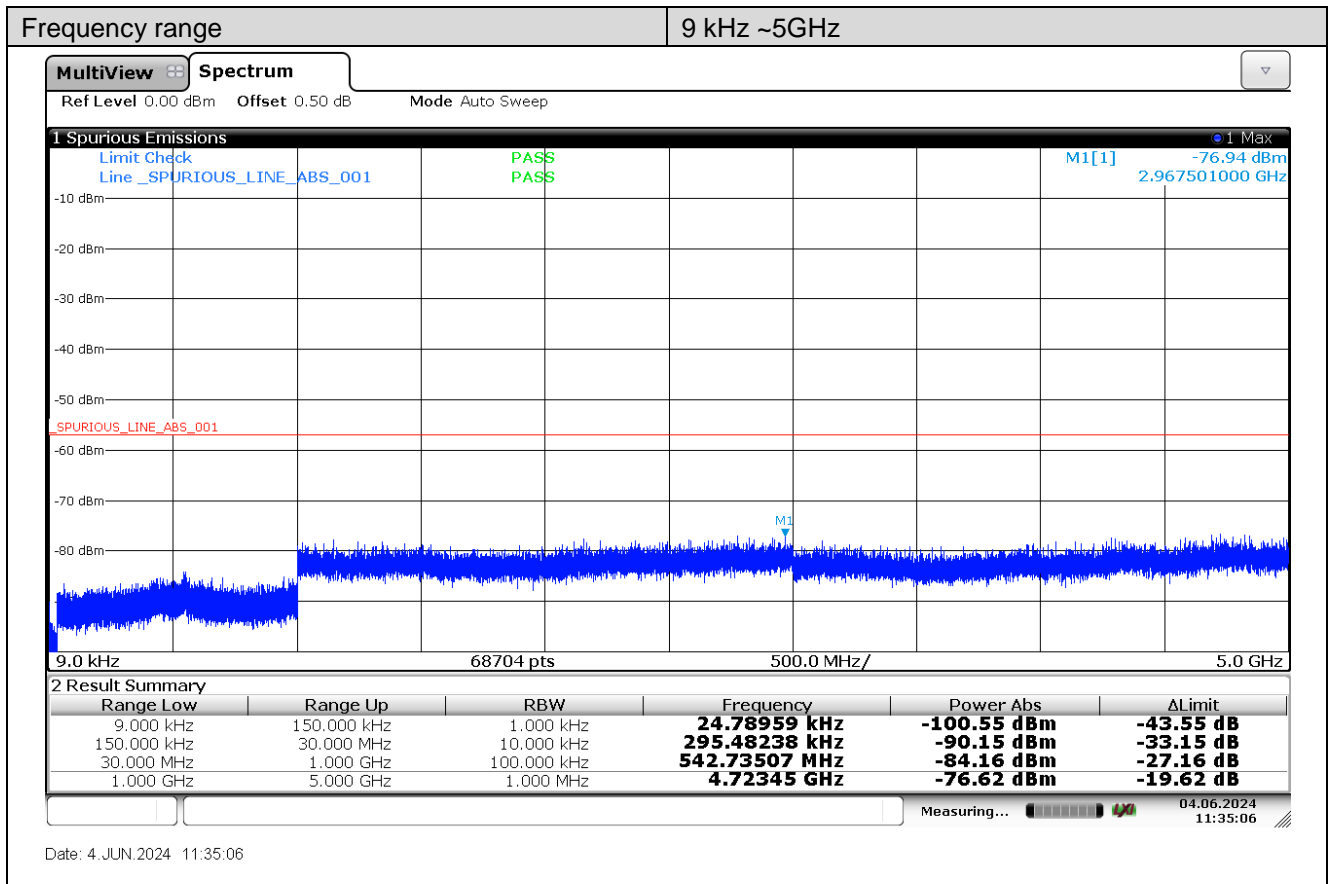
Frequency range	RBW (kHz)	VBW (kHz)
9 kHz ~ 150 kHz	1	3
150 kHz ~ 30 MHz	10	30
30 MHz ~ 1000 MHz	100	300
1000 MHz ~ 3000 MHz	1000	3000

#### TEST MODE:

Please refer to the clause 4.1

#### TEST RESULTS

Passed       Not Applicable



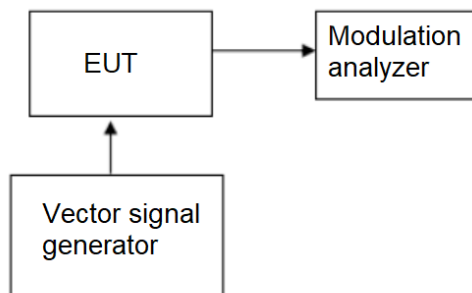


## 5.4. Scanning receivers and frequency converters used with scanning receivers

### LIMIT

scanning receivers shall reject any signals from the Cellular Radiotelephone Service frequency bands that are 38 dB or lower based upon a 12 dB SINAD measurement, which is considered the threshold where a signal can be clearly discerned from any interference that may be present

### TEST CONFIGURATION



### TEST PROCEDURE

The RF level of vector signal generator will be adjusted to produce GSM signals at the receiver antenna port of the EUT.

### TEST MODE:

Please refer to clause 4.1

### TEST RESULTS

Passed       Not Applicable

The scanning receive frequency range of this EUT is from 462.5625MHz to 462.7125MHz, 467.5625MHz to 467.7125MHz, 462.5500MHz to 462.7250MHz, not in the cellular radiotelephone service frequency bands, so this item is not applicable.

## 6. TEST SETUP PHOTOS OF THE EUT

Radiated Emissions (30MHz-1GHz)



Radiated Emissions (Above 1GHz)



## **7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT**

Reference to the test report No.: CHTW24060001

-----End of Report-----