



MEASUREMENT REPORT

FCC PART 15 Subpart D/ ISED RSS 213

FCC ID: T2C-W53H
IC: 10741A-W53H
APPLICANT: YEALINK(XIAMEN) NETWORK TECHNOLOGY CO.,LTD

Application Type: C2PC Certification
Product: DECT IP Phone
Model No.: W53H
Brand Name: YEALINK
FCC Classification: Unlicensed PCS Portable Tx Held to Ear (PUE)
FCC Rule Part(s): FCC Part 15, Subpart D
ISED Rule(s): RSS-213 Issue 3, RSS-Gen Issue 5
Test Procedure(s): ANSI C63.17:2013
Test Date: January 21~February 18, 2020

Reviewed By:

Oscar Shi

(Oscar Shi)

Approved By:

Robin Wu

(Robin Wu)



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.17-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
1912RSU059-U1	Rev. 01	Initial Report	03-03-2020	Valid

CONTENTS

Description	Page
General Information.....	5
1. INTRODUCTION.....	6
1.1. Scope.....	6
1.2. MRT Test Location.....	6
2. PRODUCT INFORMATION.....	7
2.1. Feature of Equipment under Test.....	7
2.2. Working Frequencies for this report.....	7
2.3. Test Mode.....	8
2.4. Test Software.....	8
2.5. EMI Suppression Device(s)/Modifications.....	8
2.6. Labeling Requirements.....	8
3. DESCRIPTION of TEST.....	9
3.1. Evaluation Procedure.....	9
3.2. AC Line Conducted Emissions.....	9
3.3. EMI Suppression Device(s)/Modifications.....	10
4. ANTENNA REQUIREMENTS.....	11
5. TEST EQUIPMENT CALIBRATION DATE.....	12
6. MEASUREMENT UNCERTAINTY.....	14
7. TEST RESULT.....	15
7.1. Summary.....	15
7.2. Emission Bandwidth Measurement.....	16
7.2.1. Test Limit.....	16
7.2.2. Test Procedure used.....	16
7.2.3. Test Setup.....	16
7.2.4. Test Result.....	17
7.3. Peak Power Output.....	19
7.3.1. Test Limit.....	19
7.3.2. Test Procedure Used.....	19
7.3.3. Test Setup.....	19
7.3.4. Test Result.....	20
7.4. In-Band Unwanted Emissions.....	21
7.4.1. Test Limit.....	21
7.4.2. Test Procedure Used.....	21

7.4.3.	Test Setup	21
7.4.4.	Test Result.....	22
7.5.	Out-of-Band Emissions(TX) , Conducted	23
7.5.1.	Test Limit	23
7.5.2.	Test Procedure Used	23
7.5.3.	Test Setup	23
7.5.4.	Test Result.....	24
7.6.	Receiver Radiated Emissions.....	27
7.6.1.	Test Limit	27
7.6.2.	Test Setup	27
7.6.3.	Test Result of Radiated Emissions	29
7.7.	Radiated Emissions.....	33
7.7.1.	Test Limit	33
7.7.2.	Test Setup	33
7.7.3.	Test Result of Radiated Emissions	35
8.	CONCLUSION	39
	Appendix A - Test Setup Photograph	40
	Appendix B - EUT Photograph.....	41

General Information

Applicant:	YEALINK(XIAMEN) NETWORK TECHNOLOGY CO.,LTD
Applicant Address:	309,3rd Floor, No.16, Yun Ding North Road, Huli District, Xiamen City, Fujian, P.R. China
Manufacturer:	YEALINK(XIAMEN) NETWORK TECHNOLOGY CO.,LTD
Manufacturer Address:	309, 3rd Floor, No.16, Yun Ding North Road, Huli District, Xiamen City, Fujian, P.R. China
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
Test Device Serial No.:	N/A <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Designation No. CN1166) test facility with the site description report on file and has met all the requirements specified in ANSI C63.4-2014.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications, Radio and SAR testing.



1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada and Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The measurement facility compliant with the test site requirements specified in ANSI C63.4-2014.



2. PRODUCT INFORMATION

2.1. Feature of Equipment under Test

Product Name:	DECT IP Phone
Model No.:	W53H
Brand Name:	YEALINK
Hardware:	W53H MV
Handset Firmware:	61.0.0.0
DECT Version:	v6.0
AC adaptor:	Input: 100~240 V~50/60Hz Output: 5V~0.6A

Note: Change Contents:

1. change the type of antenna, and antenna gain is still 0dBi
2. The circuit parameters are adjusted a litter, which has no effect on RF circuit.
3. Update the hardware version to "61.0.0.0".

After review, the changes has no affect on RF parameters, and the radiated Emission, the emission bandwidth, peak power output, In-band unwanted emission and out of band emission need to be re-evaluated.

Product Specification Subjective to this Report

Frequency Range:	1921.536 ~ 1928.448MHz
Number of Channels:	5
Maximum Output Power:	17.51dBm
Type of Modulation:	Digital (Gaussian Frequency Shift Keying)
Antenna Gain:	0dBi
Antenna Type:	Plug-in Sheet Iron Antenna

2.2. Working Frequencies for this report

UPCS CHANNEL	FREQUENCY (MHz)
Upper Band Edge	1930.000
0 (Highest)	1928.448
1	1926.720
2	1924.992
3	1923.264
4 (Lowest)	1921.536
Lowest Band Edge	1920.000

Requirement: FCC 15.303

Within 1920 -1930 MHz band for isochronous devices

2.3. Test Mode

Test Mode	Mode 1: Portable Part Mode
Test Mode	Mode 2: DECT Receiver mode
Test Mode	Mode 3: Communicate with IP Phone by PP mode by speaker

2.4. Test Software

The test utility software used during testing was "W53H RF TOOL".

2.5. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.6. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase.

However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

RSP-100 Issue 12 Section 5

In addition to complying with the applicable RSSs and RSP-100, each unit of a product model (i.e. of a radio apparatus) shall meet the labelling requirements set out in this section prior to being marketed in Canada or imported into Canada.

If the dimensions of the product are extremely small or it is not practical to place the label or marking on the product, and if electronic labelling cannot be implemented, the label shall be placed in a prominent location in the user manual supplied with the product, as agreed upon with ISED prior to the certification application. The user manual may be in an electronic format; if it is not supplied to the user, the user manual must be readily available.

3. DESCRIPTION of TEST

3.1. Evaluation Procedure

All measurements are traceable to national standards.

The tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC CFR47 Part 15D for Isochronous UPCS Devices and Industry Canada RSS-213 Issue 3 / RSS-GEN Issue 5 / RSP-100 Issue 12.

All tests were conducted in accordance with ANSI C63.4-2014 and ANSI C63.17-2013. Antenna Gain tests were made in a 3m fully-anechoic chamber.

Deviation from measurement procedure.....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.17-2013.

3.3. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

4. ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203 & 15.317.

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2020/04/15
Two-Line V-Network	R&S	ENV 216	MRTSUE06002	1 year	2020/06/13
Two-Line V-Network	R&S	ENV 216	MRTSUE06003	1 year	2020/06/13
Thermohygrometer	Testo	608-H1	MRTSUE06404	1 year	2020/08/08
Shielding Room	MIX-BEP	Chamber-SR2	MRTSUE06215	N/A	N/A

Conducted Test Equipment - TR3

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2020/04/15
RF Test Platform for DECT/DECT 6.0/CAT-iq	RTX Products A/S	RTX2012	MRTSUE06408	1 year	2020/02/29
Temperature/Humidity Meter	testo	608-H1	MRTSUE06401	1 year	2020/08/08

Radiated Disturbance - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cal. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2020/08/01
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2020/09/03
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2020/03/31
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2020/10/13
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2020/12/16
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2020/11/15
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2020/06/11
Thermohygrometer	Testo	608-H1	MRTSUE06403	1 year	2020/08/08
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2020/04/30

Radiated Emission - AC2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cal. Due Date
Spectrum Analyzer	Keysight	N9038A	MRTSUE06125	1 year	2020/08/01
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2020/10/13
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06171	1 year	2020/10/27
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2020/12/16
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2020/11/15
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2020/06/11
Temperature/Humidity Meter	Minggao	ETH529	MRTSUE06170	1 year	2020/12/11
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2020/04/30

Software	Version	Function
EMI Software	V3	EMI Test Software

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Conducted Emission Measurement - SR2
<p>The maximum measurement uncertainty is evaluated as:</p> <p>9kHz~150kHz: 3.84dB</p> <p>150kHz~30MHz: 3.46dB</p>
Emission Bandwidth - TR3
<p>Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$):</p> <p>3.8%</p>
Output Power - TR3
<p>Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$):</p> <p>0.52dB</p>
Out of Band Emissions - TR3
<p>Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$):</p> <p>0.75dB</p>

7. TEST RESULT

7.1. Summary

Test Item	FCC Section(s)	ISED Section(s)	Verdict
Emission Bandwidth	15.323(a)	RSS-213 [5.5]	Complies
In-band emissions	15.323(d)	RSS-213 [5.8.2]	Complies
Out-of-band emissions(TX)	15.323(d)	RSS-213 [5.8.1]	Complies
Peak Transmit Power and Antenna Gain	15.319(c)(e)	RSS-213 [5.6]	Complies
Receiver Radiated Emissions		RSS-GEN[7.3]	Complies
Radiated Emissions	15.109	ICES-003 Issue6 - 6.2	Complies

7.2. Emission Bandwidth Measurement

7.2.1. Test Limit

Requirement: FCC 15.323(a)

The 26 dB Bandwidth B shall be larger than 50 kHz and less than 2.5MHz.

Requirement: RSS-213 Issue 3, clause 5.5

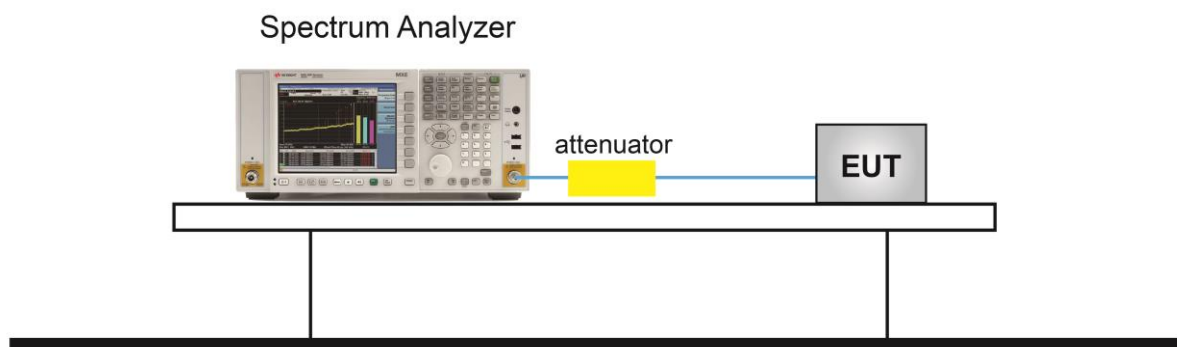
The emission Bandwidth B shall be larger than 50 kHz and less than 2.5MHz.

No requirement for 6 dB and 12 dB Bandwidth. These values are only used for testing Monitoring Bandwidth if the Simple Compliance test fails (ANSI C63.17, clause 7.4).

7.2.2. Test Procedure used

ANSI C63.17, Clause 6.1.3

7.2.3. Test Setup



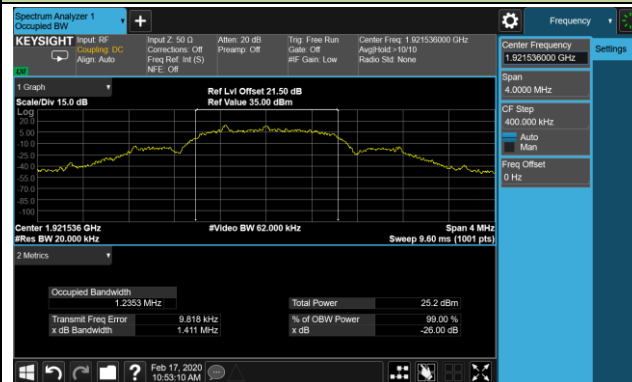
7.2.4. Test Result

Product	DECT IP Phone	Temperature	24°C
Test Engineer	Dandy Li	Relative Humidity	51%
Test Site	TR3	Test Date	2020/02/17
Test Mode	Mode 1		

Channel No.	Frequency (MHz)	Emission Bandwidth (MHz)	Limit	Result
26dB Bandwidth				
4	1921.536	1.4110	$\geq 50\text{Khz}$ $\leq 2.5\text{MHz}$	Pass
2	1924.992	1.4310	$\geq 50\text{Khz}$ $\leq 2.5\text{MHz}$	Pass
0	1928.448	1.4120	$\geq 50\text{Khz}$ $\leq 2.5\text{MHz}$	Pass
99% Bandwidth				
4	1921.536	1.2353	$\geq 50\text{Khz}$ $\leq 2.5\text{MHz}$	Pass
2	1924.992	1.2365	$\geq 50\text{Khz}$ $\leq 2.5\text{MHz}$	Pass
0	1928.448	1.2405	$\geq 50\text{Khz}$ $\leq 2.5\text{MHz}$	Pass

26dB and 99% Emission Bandwidth

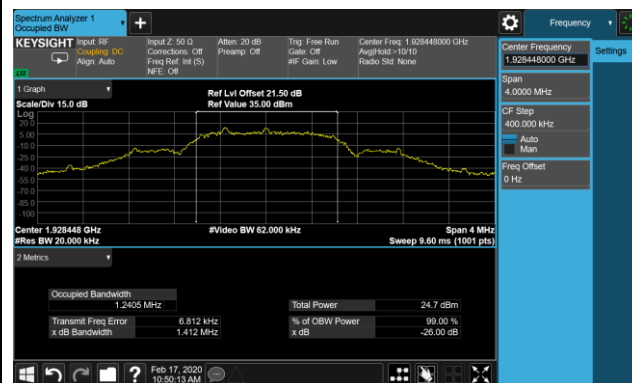
Lowest Channel



Middle Channel



Upper Channel



7.3. Peak Power Output

7.3.1. Test Limit

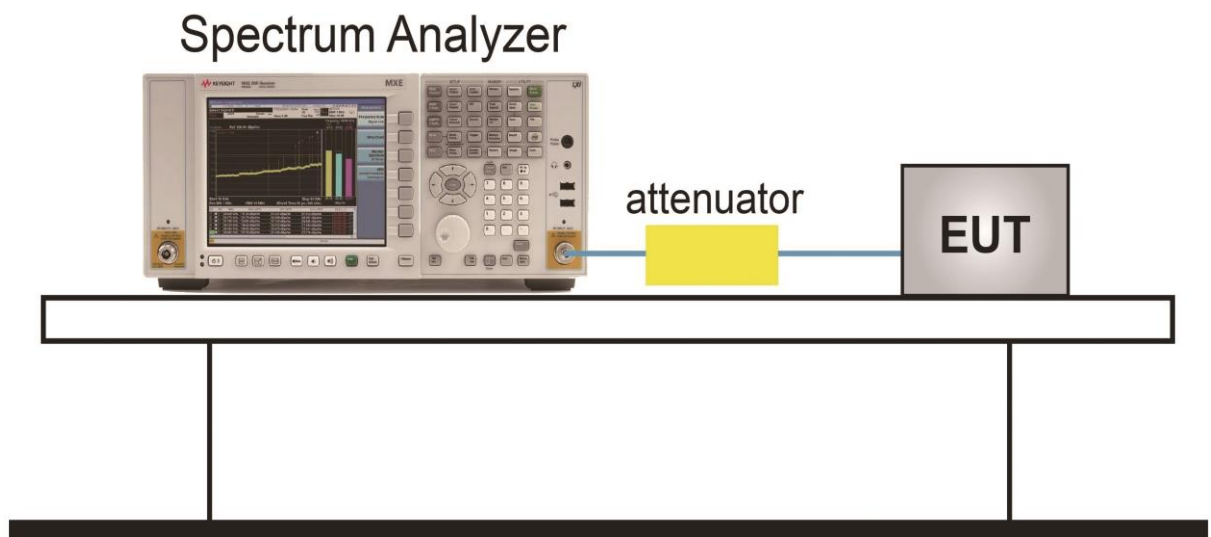
Peak transmit power shall not exceed 100 microwatts multiplied by the square root of the emission bandwidth in Hertz.

The peak transmit power shall be reduced by the amount in decibels that the maximum directional gain of the antenna exceeds 3dBi.

7.3.2. Test Procedure Used

ANSI C63.17, Clause 6.1.2

7.3.3. Test Setup



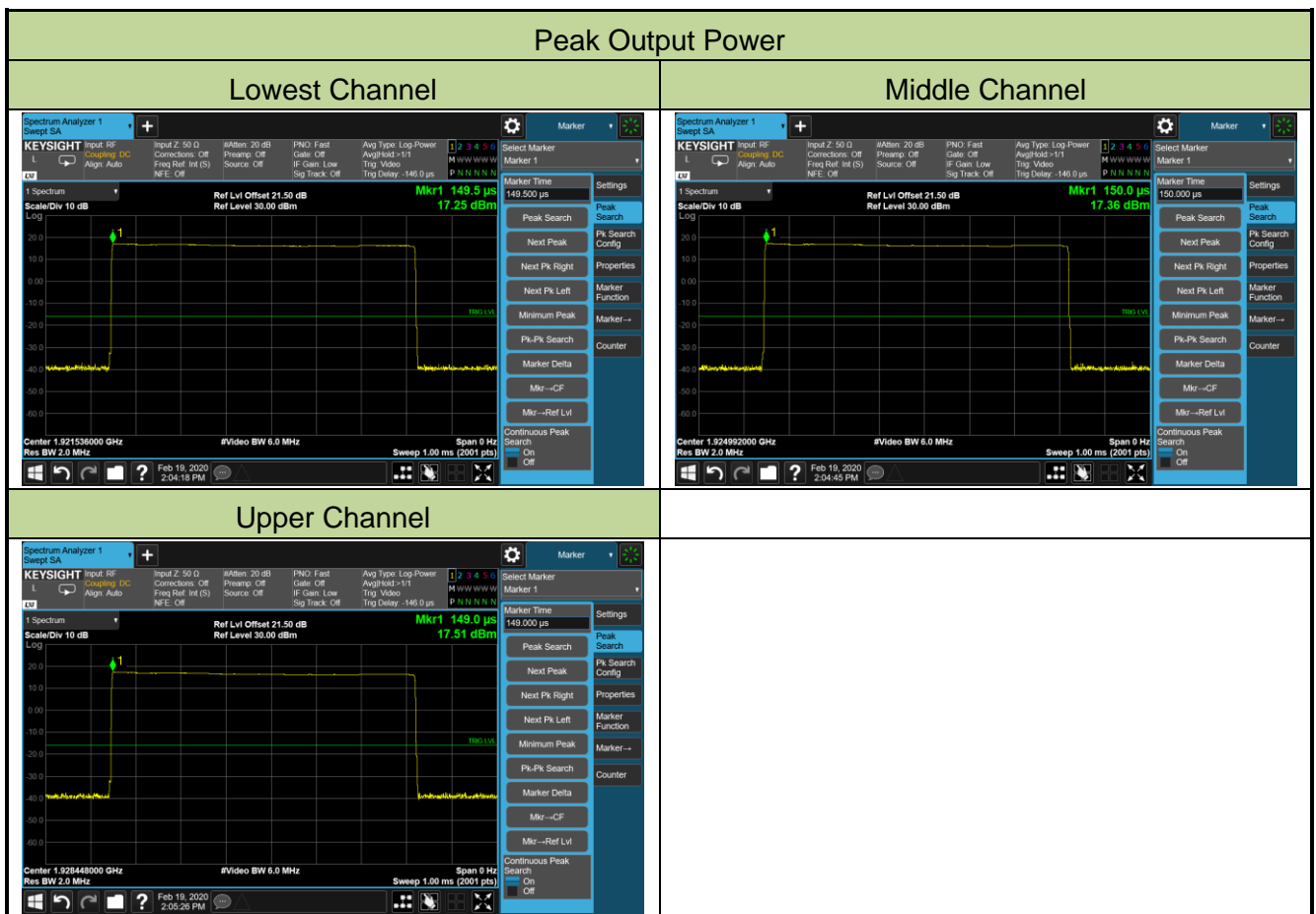
7.3.4. Test Result

Product	DECT IP Phone	Temperature	24°C
Test Engineer	Dandy Li	Relative Humidity	51%
Test Site	TR3	Test Date	2020/02/17
Test Mode	Mode 1		

Channel No.	Frequency (MHz)	Maximum Conducted Output Power (dBm)	Maximum Antenna Gain (dBi)	Maximum Radiated Output Power (dBm)	Limit (dBm)
4	1921.536	17.25	0	17.34	≤ 20.75
2	1924.992	17.36	0	17.23	≤ 20.75
0	1928.448	17.51	0	17.08	≤ 20.75

Note: The min EBW = 1411000Hz

Peak Transmit Power Limit = $10 \cdot \log(100\mu\text{W} \times (\text{EBW})^{1/2} \div 1000) = 20.75\text{dBm}$



7.4. In-Band Unwanted Emissions

7.4.1. Test Limit

B < f2 _2B: less than or equal to 30 dB below maximum permitted peak power level

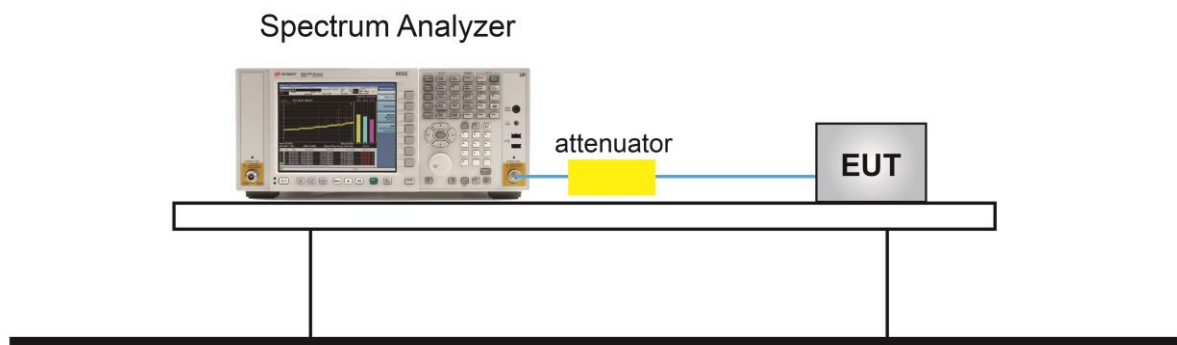
2B < f2 _3B: less than or equal to 50 dB below maximum permitted peak power level

3B < f2 _UPCS Band Edge: less than or equal to 60 dB below maximum permitted peak power level.

7.4.2. Test Procedure Used

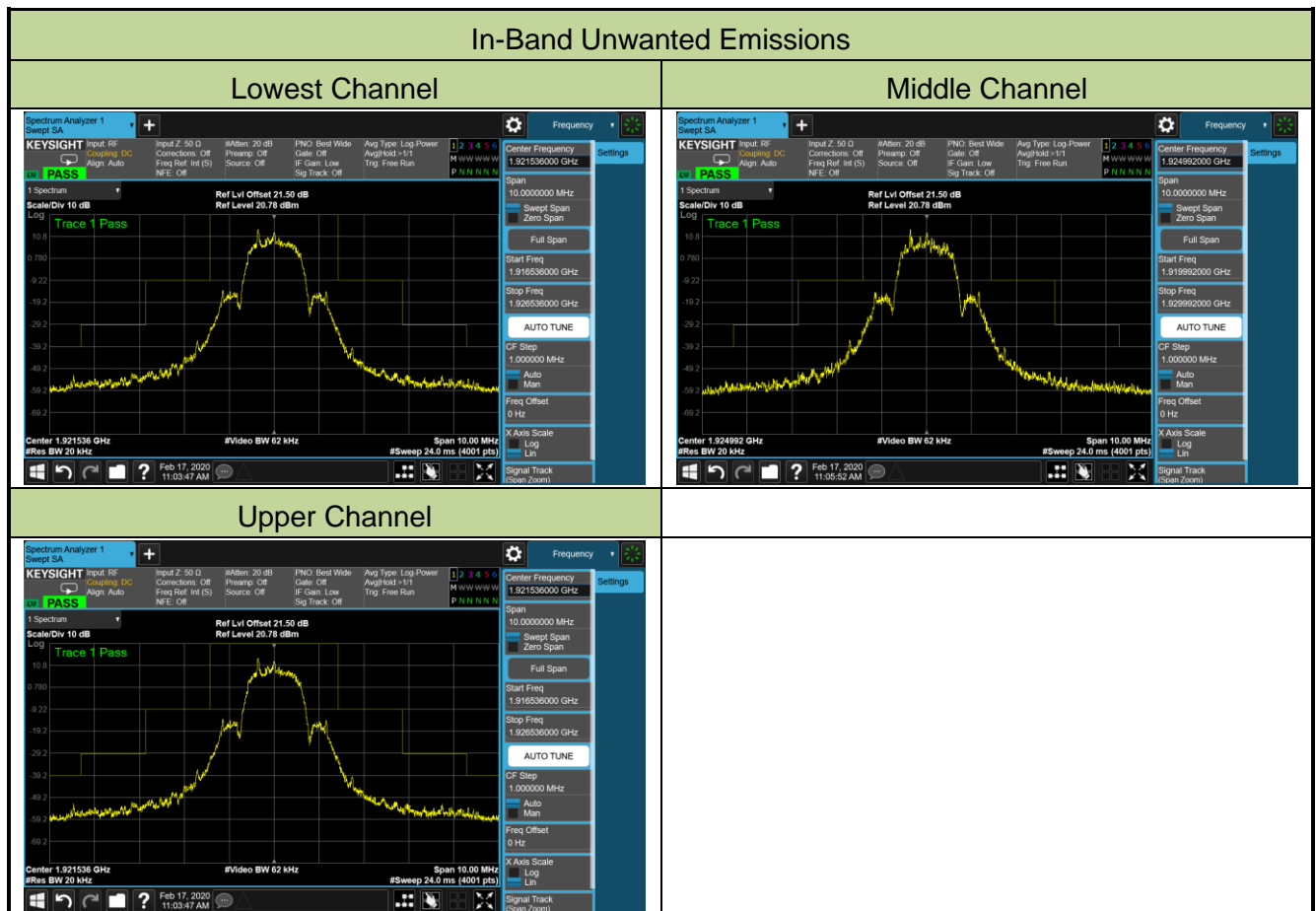
ANSI C63.17, Clause 6.1.6.1

7.4.3. Test Setup



7.4.4. Test Result

Product	DECT IP Phone	Temperature	24°C
Test Engineer	Dandy Li	Relative Humidity	51%
Test Site	TR3	Test Date	2020/02/17
Test Mode	Mode 1		



7.5. Out-of-Band Emissions(TX) , Conducted

7.5.1. Test Limit

$f \leq 1.25$ MHz outside UPCS band: ≤ -9.5 dBm

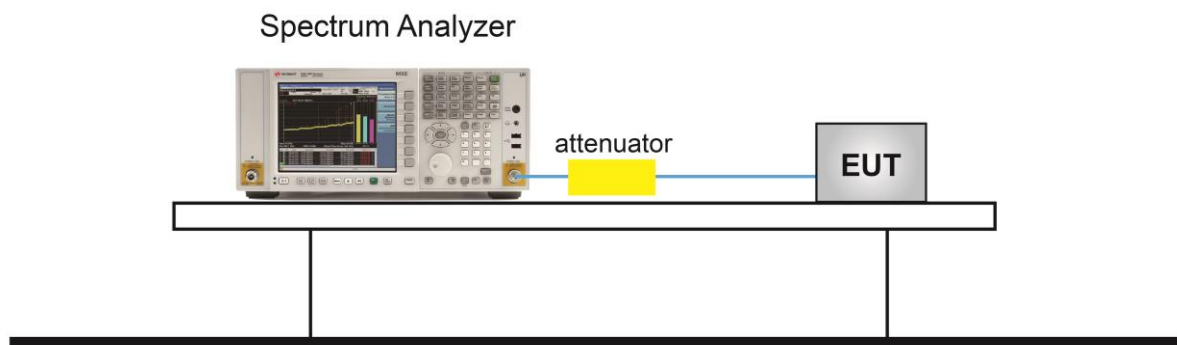
1.25 MHz $\leq f \leq 2.5$ MHz outside UPCS band: ≤ -29.5 dBm

$f \leq 2.5$ MHz outside UPCS band: ≤ -39.5 dBm

7.5.2. Test Procedure Used

ANSI C63.17, Clause 6.1.6.2

7.5.3. Test Setup

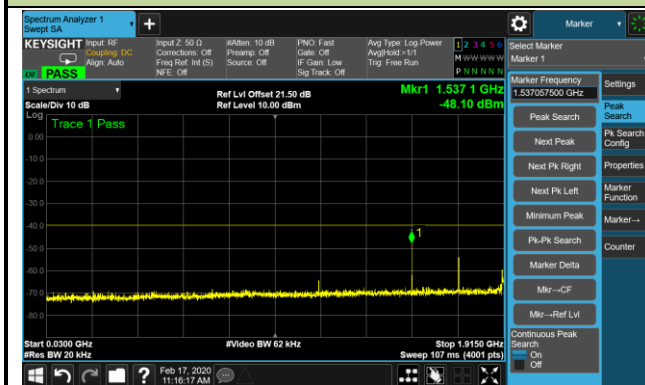


7.5.4. Test Result

Product	DECT IP Phone	Temperature	24°C
Test Engineer	Dandy Li	Relative Humidity	51%
Test Site	TR3	Test Date	2020/02/17
Test Mode	Mode 1		

Out-Band Unwanted Emissions – Low Channel

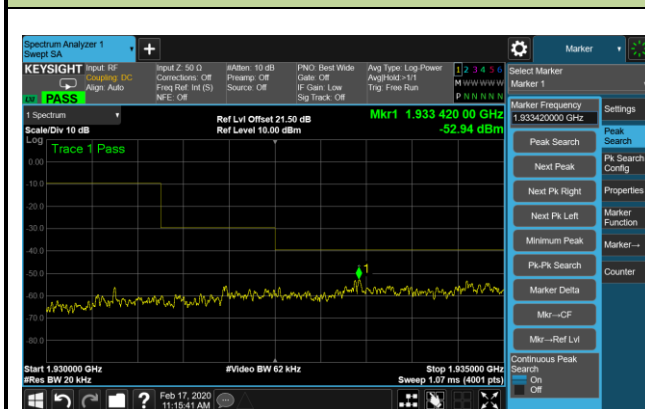
30MHz ~ 1.915GHz



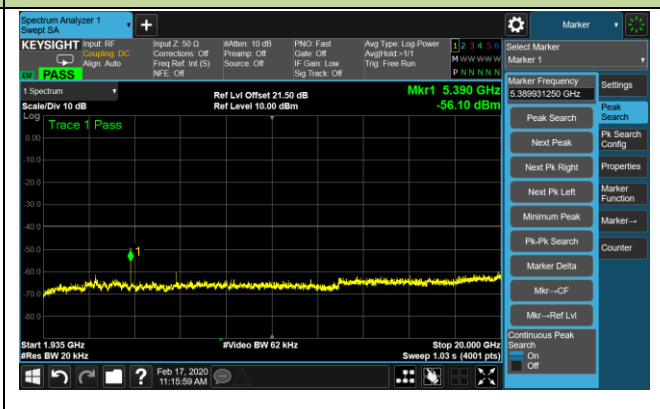
1.915GHz ~ 1.92GHz



1.93GHz ~ 1.935GHz



1.935GHz ~ 20GHz

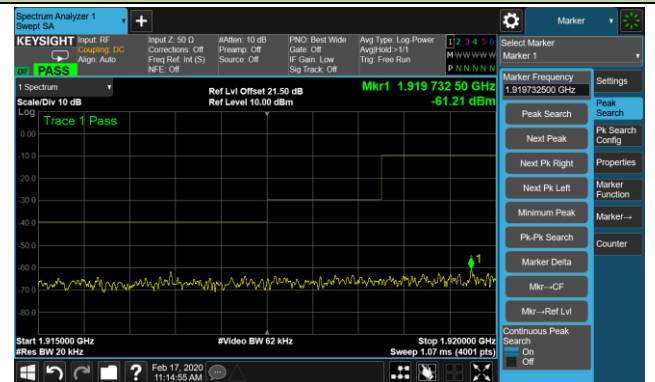


Out-Band Unwanted Emissions –Middle Channel

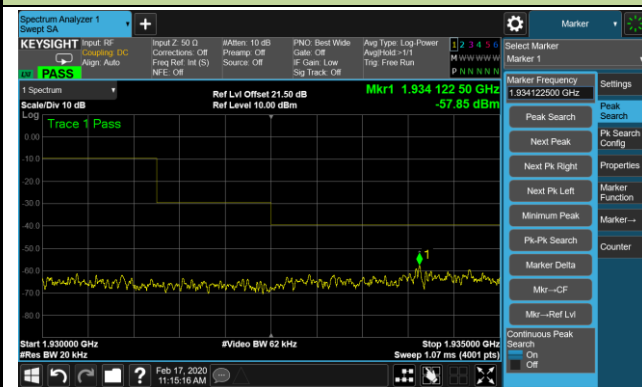
30MHz ~ 1.915GHz



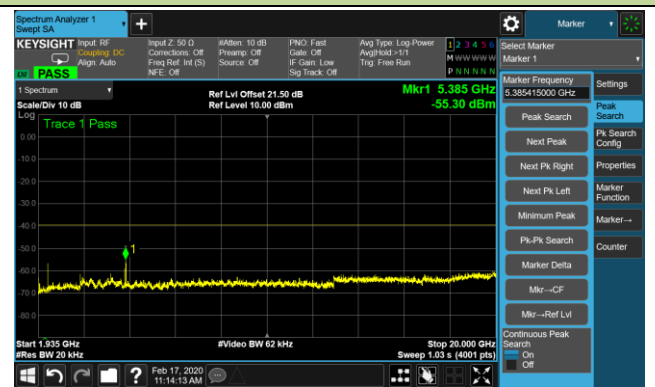
1.915GHz ~ 1.92GHz

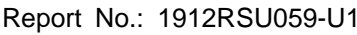


1.93GHz ~ 1.935GHz

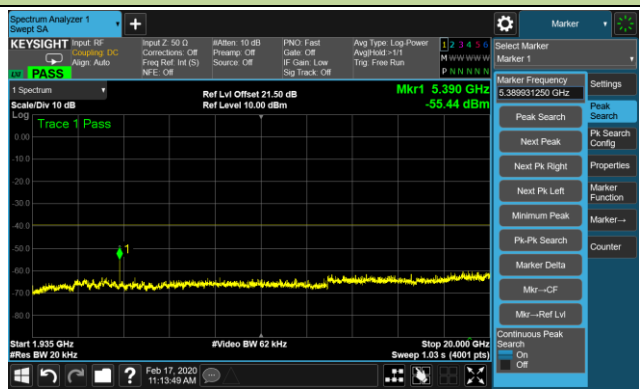
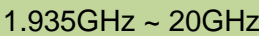
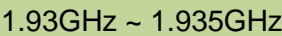
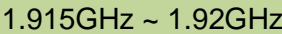


1.935GHz ~ 20GHz





30MHz ~ 1.915GHz



7.6. Receiver Radiated Emissions

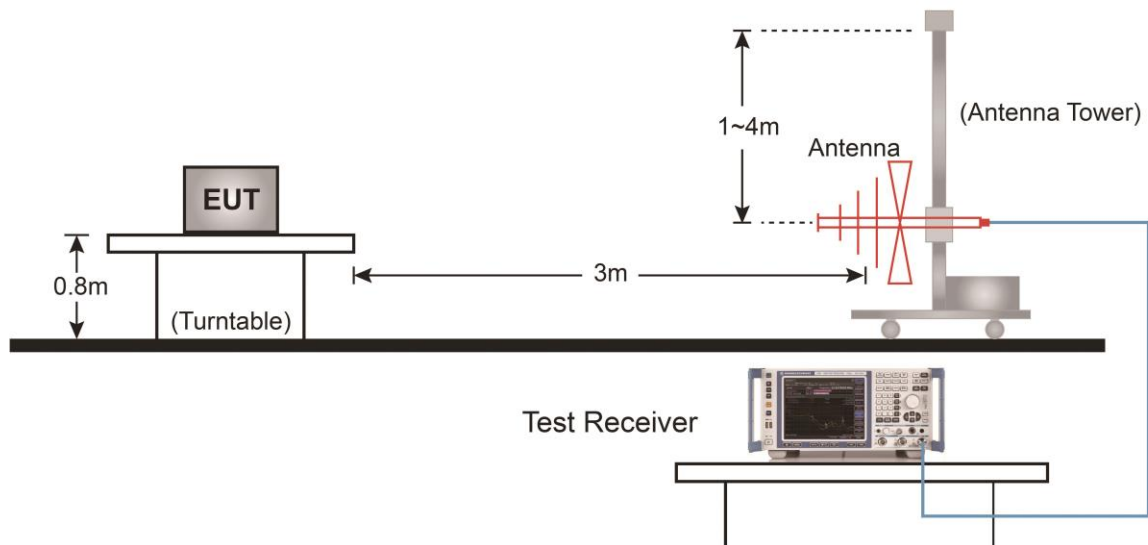
7.6.1. Test Limit

All receivers that do not fall under sections 5.1 and 5.2 are exempt from any ISED certification, labelling and reporting requirements, but shall comply with the emission limits set forth in section 7 of this standard

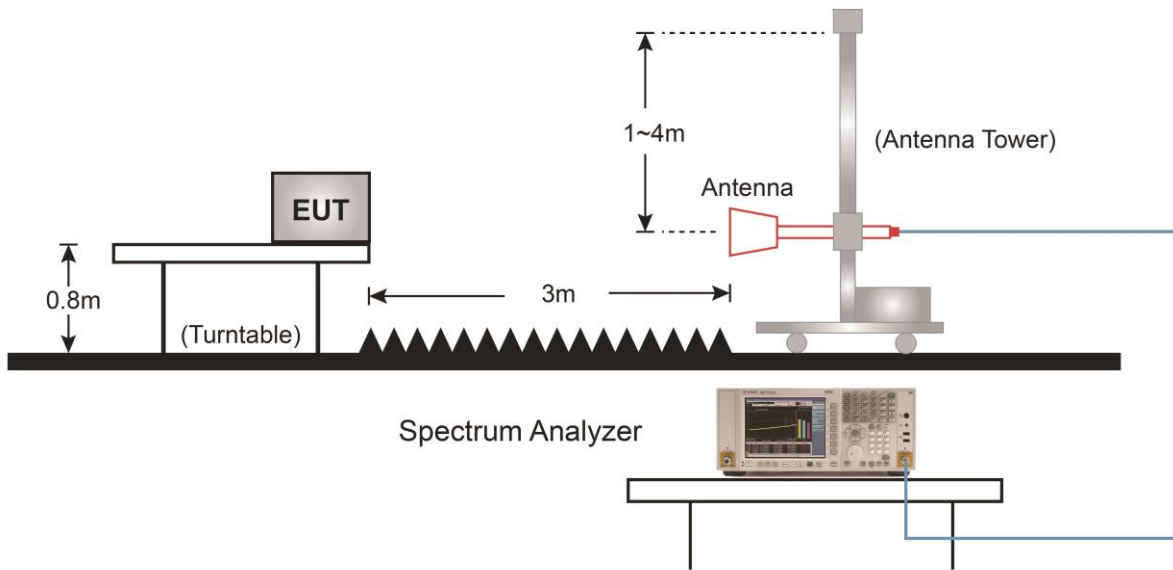
Frequency (MHz)	Field strength ($\mu\text{V/m}$ at 3 metres) ^{Note 1}
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	500

7.6.2. Test Setup

30MHz ~ 1GHz Test Setup:

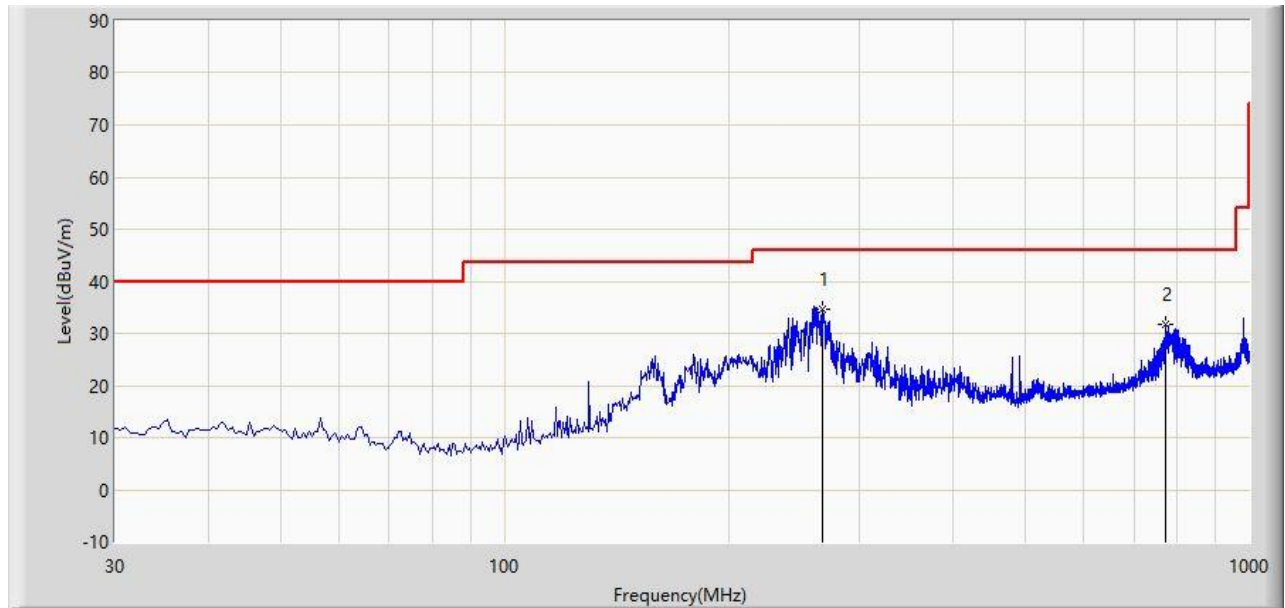


1GHz ~18GHz Test Setup:



7.6.3. Test Result of Radiated Emissions

Site: AC1	Time: 2020/02/18 - 09:53
Limit: RSS GEN _5.3_Receiver_RE(3m)_ClassB	Engineer: Tyler Yuan
Probe: AC1_VULB 9168 _20-2000MHz-yuanqu	Polarity: Horizontal
EUT: DECT IP phone	Power: By Battery
Note: mode 2	

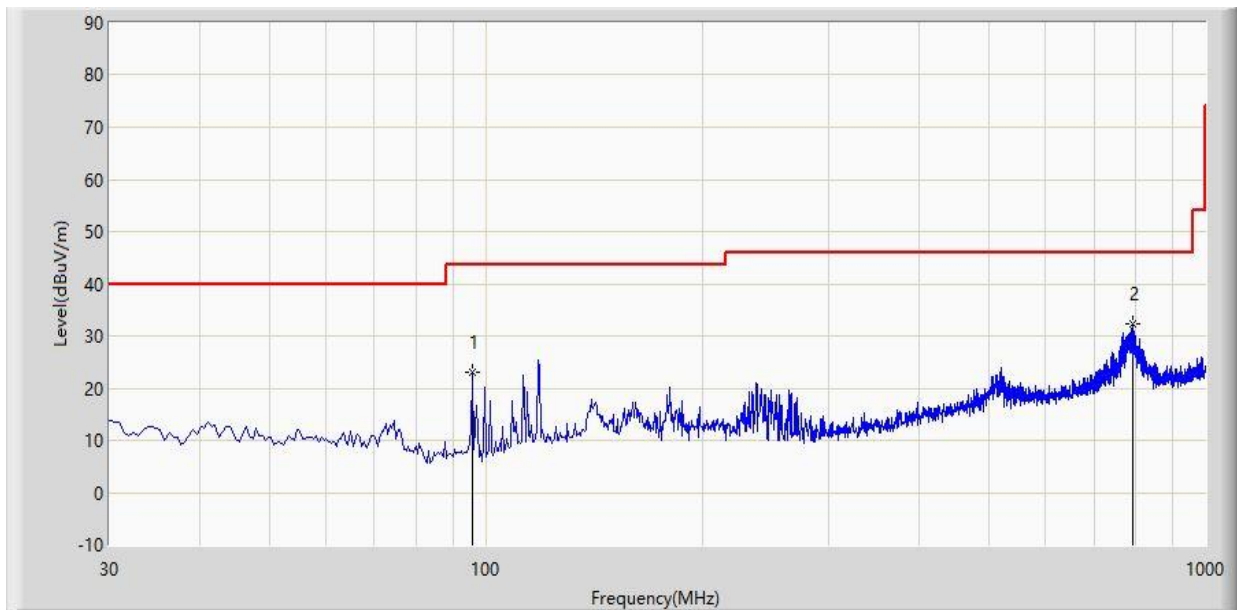


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	267.650	34.569	21.819	-11.431	46.000	12.750	PK
2			773.505	31.608	9.820	-14.392	46.000	21.788	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2020/02/18 - 09:53
Limit: RSS GEN _5.3_Receiver_RE(3m)_ClassB	Engineer: Tyler Yuan
Probe: AC1_VULB 9168 _20-2000MHz-yuanqu	Polarity: Horizontal
EUT: DECT IP phone	Power: By Battery
Note: mode 2	

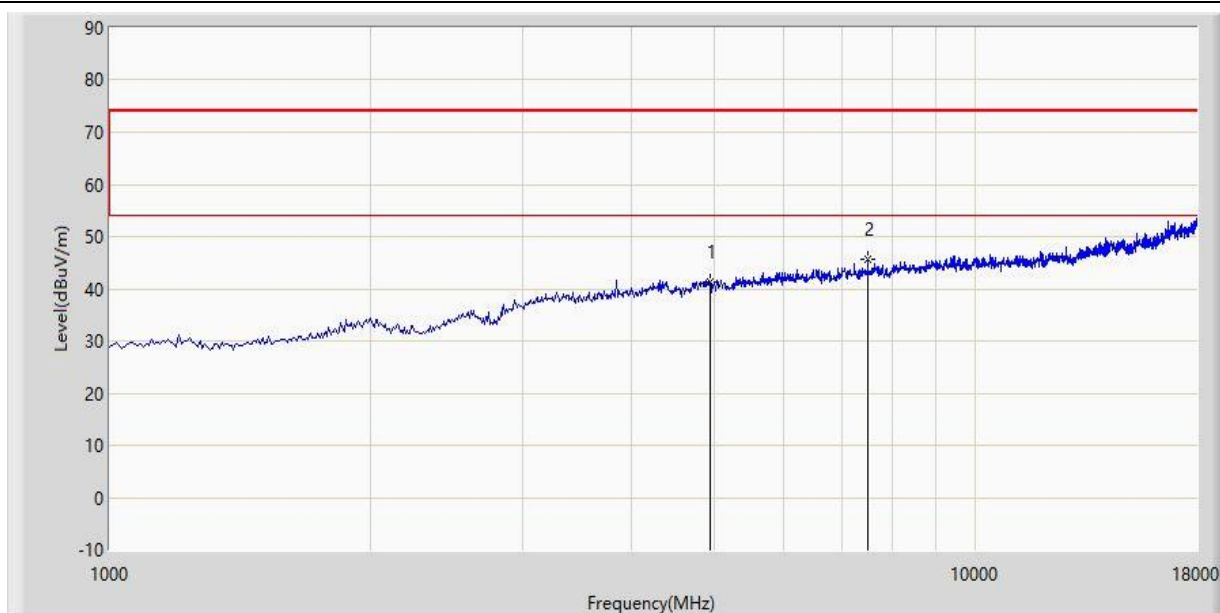


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			95.960	23.069	12.765	-20.431	43.500	10.304	PK
2		*	791.450	32.285	10.358	-13.715	46.000	21.927	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2020/02/18 - 09:53
Limit: RSS GEN_5.3_Receiver_RE(3m)_ClassB	Engineer: Tyler Yuan
Probe: AC1_VULB 9168 _20-2000MHz-yuanqu	Polarity: Horizontal
EUT: DECT IP phone	Power: By Battery
Note: mode 2	



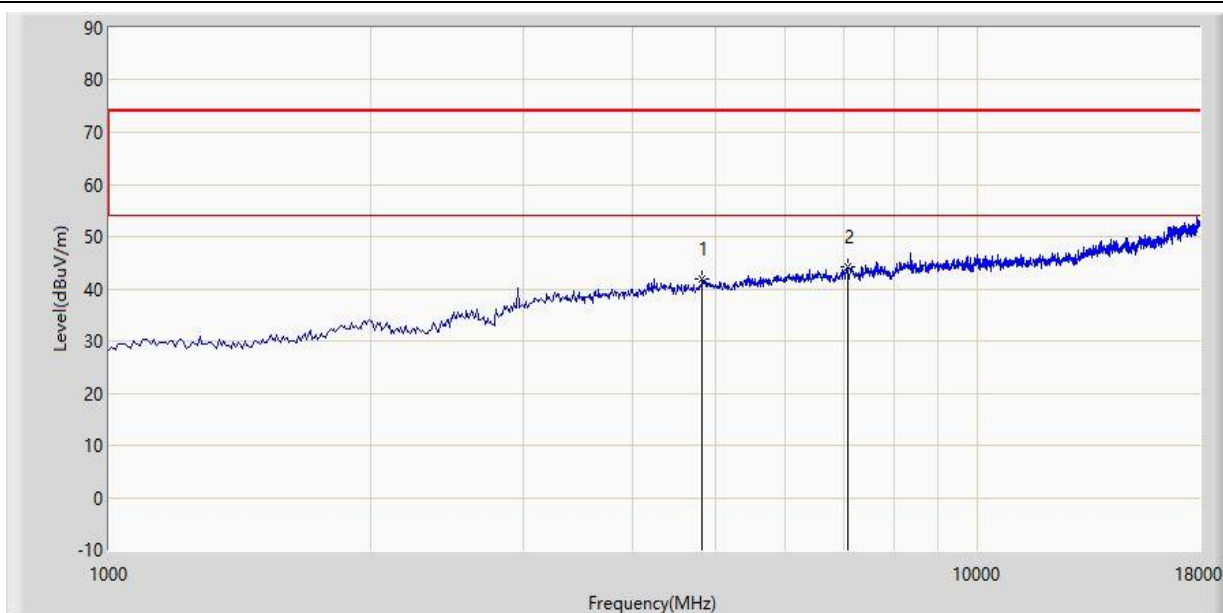
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			4944.000	41.437	51.975	-32.563	74.000	-10.538	PK
2		*	7511.000	45.677	53.654	-28.323	74.000	-7.977	PK

Note:

Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2020/02/18 - 09:54
Limit: RSS GEN _5.3_Receiver_RE(3m)_ClassB	Engineer: Tyler Yuan
Probe: AC1_VULB 9168 _20-2000MHz-yuanqu	Polarity: Horizontal
EUT: DECT IP phone	Power: By Battery
Note: mode 2	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			4816.500	41.836	52.577	-32.164	74.000	-10.741	PK
2		*	7086.000	44.107	52.136	-29.893	74.000	-8.029	PK

Note:

Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

7.7. Radiated Emissions

7.7.1. Test Limit

FCC Part 15.109 Limits / ICES-003 Issue 6 - 6.2 Limit		
Frequency (MHz)	Distance (m)	Level (dB μ V/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

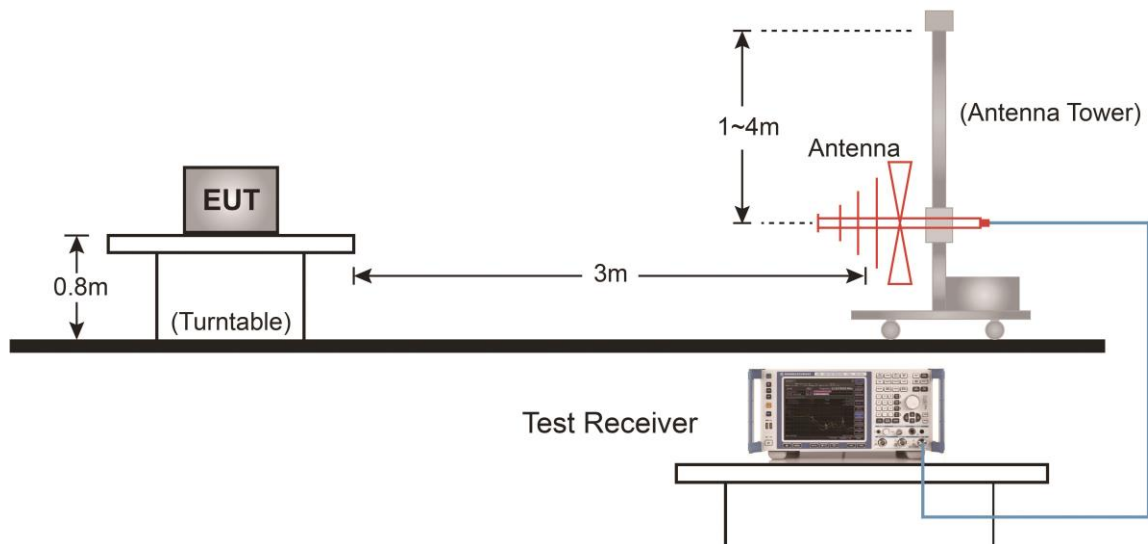
Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

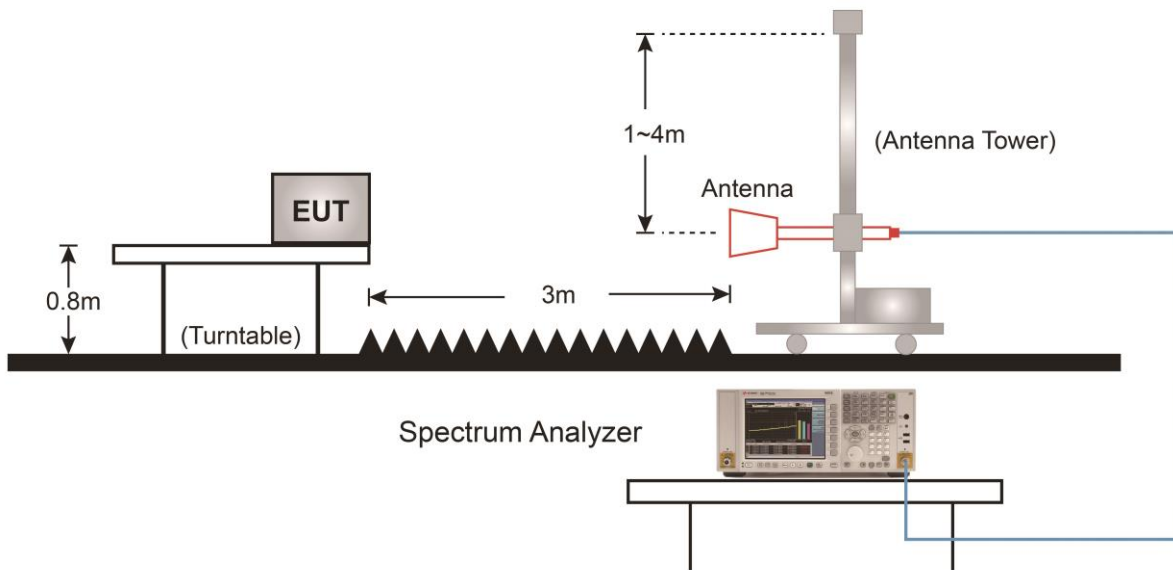
Note 3: E field strength (dB μ V/m) = 20 log E field strength (uV/m)

7.7.2. Test Setup

30MHz ~ 1GHz Test Setup:

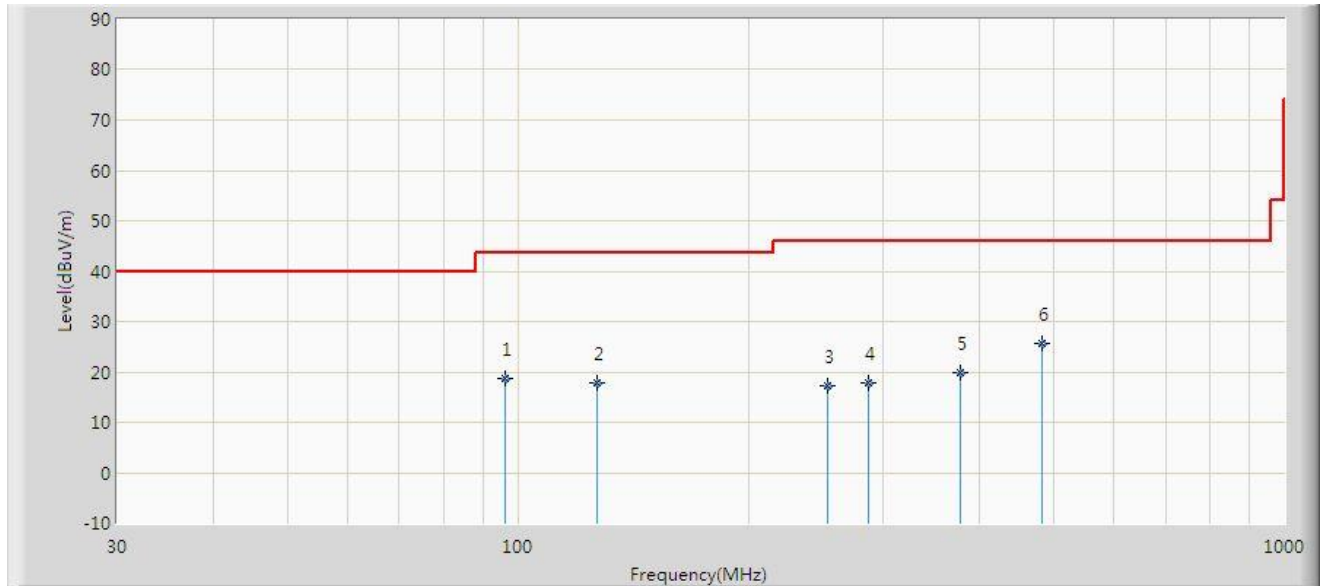


1GHz ~18GHz Test Setup:



7.7.3. Test Result of Radiated Emissions

Site: AC1	Time: 2020/01/21 - 11:52
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Jason Gao
Probe: AC1_VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: DECT IP Phone	Power: AC 120V/60Hz
Test Mode: mode 3	

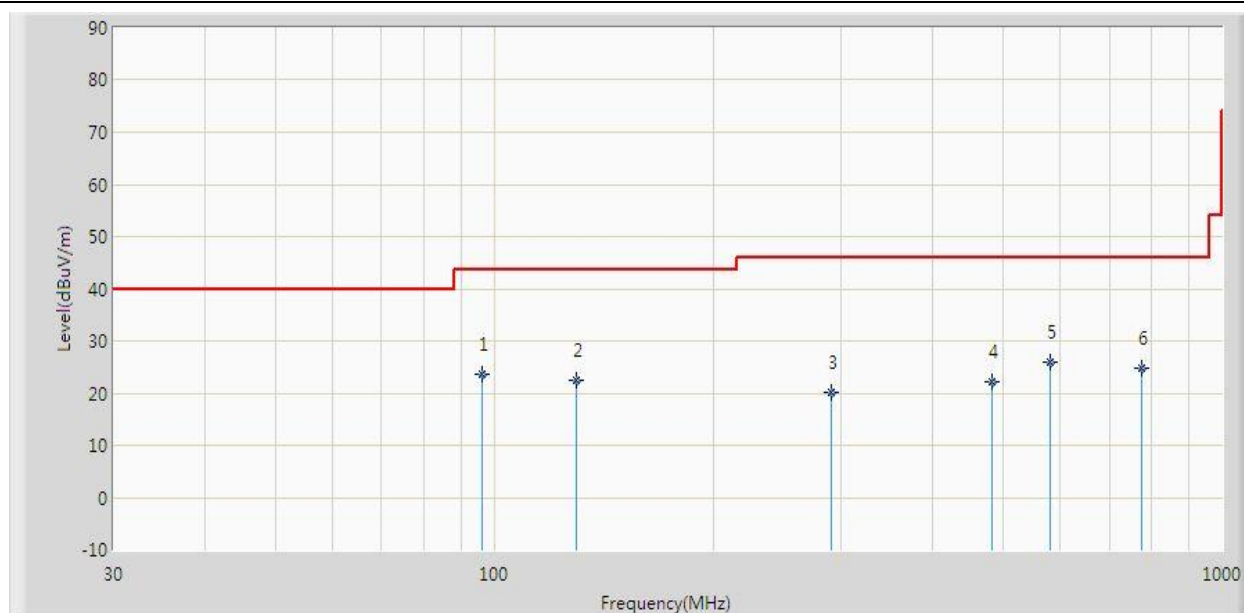


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			96.445	18.576	7.820	-24.924	43.500	10.756	QP
2			127.000	17.784	4.170	-25.716	43.500	13.614	QP
3			253.100	17.103	4.070	-28.897	46.000	13.033	QP
4			286.960	17.868	3.840	-28.132	46.000	14.028	QP
5			378.230	19.843	3.740	-26.157	46.000	16.103	QP
6		*	483.960	25.521	7.250	-20.479	46.000	18.271	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2020/01/21 - 11:52
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Jason Gao
Probe: AC1_VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: DECT IP Phone	Power: AC 120V/60Hz
Test Mode: mode 3	

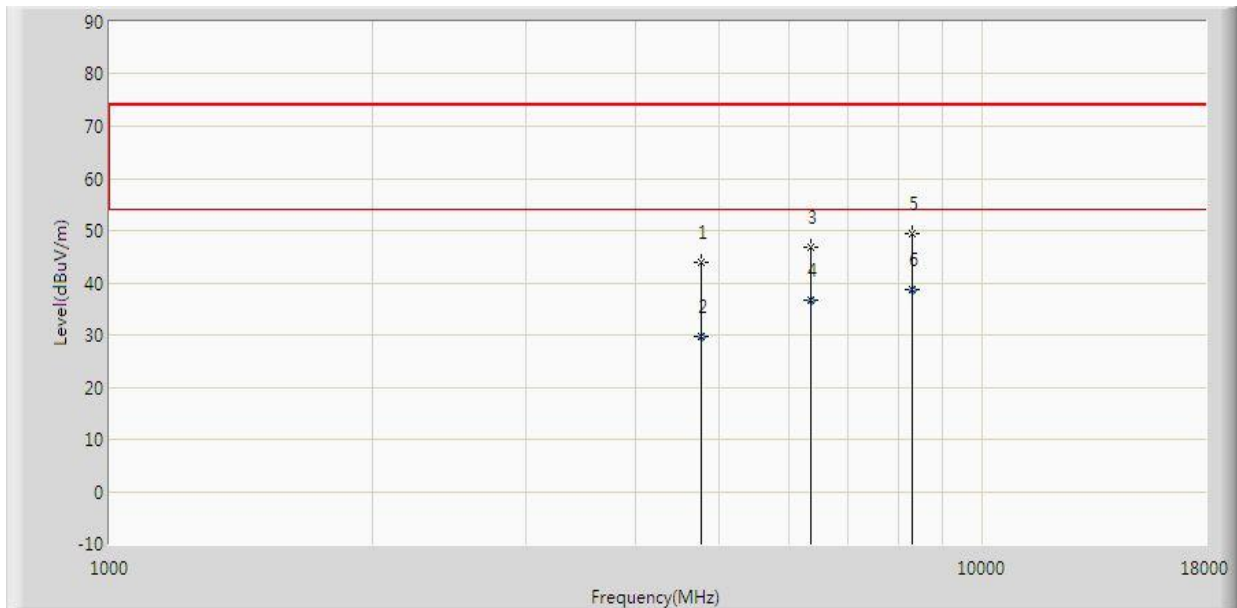


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			96.445	23.496	12.740	-20.004	43.500	10.756	QP
2			129.910	22.546	8.750	-20.954	43.500	13.796	QP
3			290.445	20.282	6.180	-25.718	46.000	14.101	QP
4			483.960	22.081	3.810	-23.919	46.000	18.271	QP
5		*	580.475	26.056	5.910	-19.944	46.000	20.146	QP
6			774.475	24.658	1.580	-21.342	46.000	23.078	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2020/01/21 - 11:52
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Jason Gao
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DECT IP Phone	Power: AC 120V/60Hz
Test Mode: mode 3	

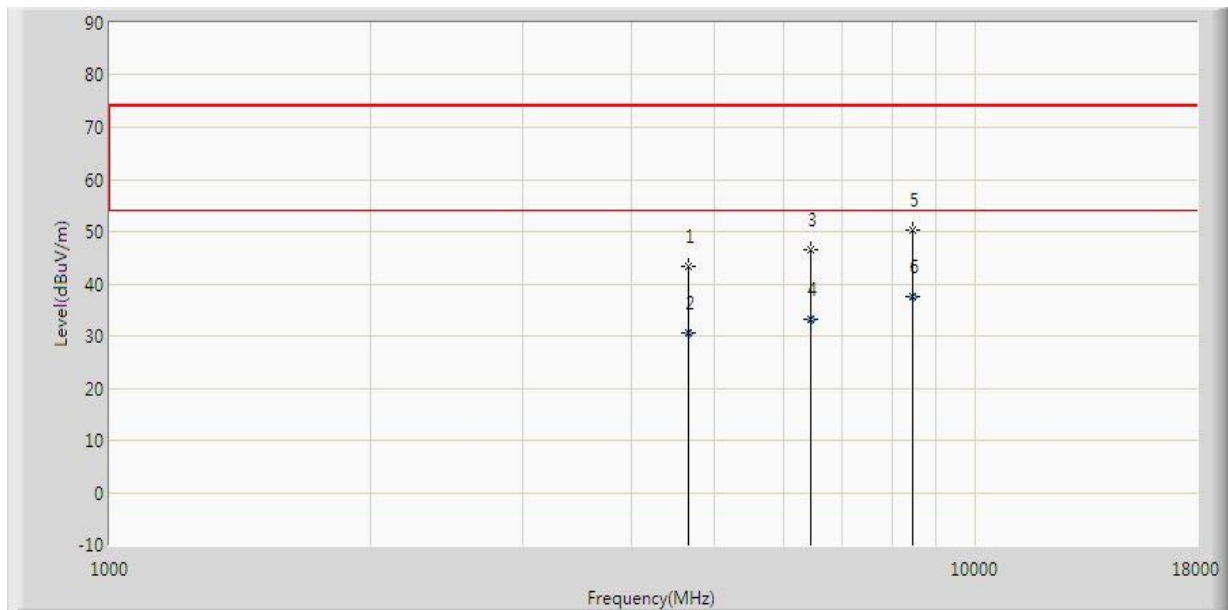


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			4765.500	44.053	38.375	-29.947	74.000	5.678	PK
2			4765.500	29.618	23.940	-24.382	54.000	5.678	AV
3			6363.500	46.876	38.050	-27.124	74.000	8.826	PK
4			6363.500	36.666	27.840	-17.334	54.000	8.826	AV
5			8310.000	49.480	37.286	-24.520	74.000	12.193	PK
6		*	8310.000	38.684	26.490	-15.316	54.000	12.193	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2020/01/21 - 11:52
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Jason Gao
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DECT IP Phone	Power: AC 120V/60Hz
Test Mode: mode 3	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			4655.000	43.342	37.926	-30.658	74.000	5.417	PK
2			4655.000	30.606	25.190	-23.394	54.000	5.417	AV
3			6457.000	46.408	37.181	-27.592	74.000	9.227	PK
4			6457.000	33.167	23.940	-20.833	54.000	9.227	AV
5			8446.000	50.408	37.722	-23.592	74.000	12.686	PK
6		*	8446.000	37.446	24.760	-16.554	54.000	12.686	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

8. CONCLUSION

The data collected relate only the item(s) tested and show that the device is in compliance with Part 15D of the FCC Rules and ISED RSS 213 Rules.

The End

Appendix A - Test Setup Photograph

Refer to “1912RSU059-UT” file.

Appendix B - EUT Photograph

Refer to “ 1912RSU059-UE” file.