Valued Quality. Delivered.

TEST REPORT

Report Number: 16101132HKG-002

Application
for
Original of 47 CFR Part 15 Certification
New Single of RSS-210 Issue 9 Equipment Certification

DECT 6.0 Cordless Headset - Base Unit Bluetooth Portion

FCC ID: EW780-0575-00

IC: 1135B-80057500

Prepared and Checked by:

Signed on File
Leung Chiu Kuen, Stanley
Engineer

Approved by:

Digitally signed by Jess Tang
Location: Intertek Testing Services Hong Kong Ltd.

Tang Kwan Mo, Jess
Lead Engineer
January 03, 2017

GENERAL INFORMATION

Applicant Name:	VTech Telecommunications Ltd.
Applicant Address:	23/F., Tai Ping Industrial Centre, Block 1, 57 Ting Kok Road, Tai Po, Hong Kong.
FCC Specification Standard:	FCC Part 15, October 1, 2015 Edition
FCC ID:	EW780-0575-00
FCC Model(s):	V300, V300.BS
IC Specification Standard:	RSS-210 Issue 9, August 2016 RSS-Gen Issue 4, November 2014
IC:	1135B-80057500
HVIN	V300.BS
PMN	V300.BS
Type of EUT:	Transceiver
Description of EUT:	DECT 6.0 Cordless Headset - Base Unit Bluetooth Portion
Serial Number:	N/A
Sample Receipt Date:	October 28, 2016
Date of Test:	November 03 - December 21, 2016
Report Date:	January 03, 2017
Environmental Conditions:	Temperature: +10 to 40°C Humidity: 10 to 90%

Table of Contents

EXHIBIT 1
TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE

1.0 Test Results Summary & Statement of Compliance

1.1 Summary of Test Results

Test Items	FCC Part 15 Section	RSS-210/ RSS-Gen#/ RSS-310^ Section	Results	Details see section
Antenna Requirement	15.203	8.3#	Pass	2.1
Security Code Information	15.214(d)	2.4	Pass	2.1
Radiated Emission Radiated Emission on the Bandedge	15.249(a), 209, & 109 15.249(d)	A2.9(a) A2.9(b)	Pass Pass	4.2 4.3
Radiated Emission in Restricted Bands	15.205	2.2	Pass	4.2
AC Power Line Conducted Emission	15.207 & 15.107	8.8#	Pass	4.4

Note: Pursuant to FCC Part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over expected variations in temperature and supply voltage were considered.

1.2 Statement of Compliance

The equipment under test is found to be complying with the following standards:

FCC Part 15, October 1, 2015 Edition
RSS-210 Issue 9, August 2016
RSS-Gen Issue 4, November 2014

EXHIBIT 2
GENERAL DESCRIPTION

2.0 General Description

2.1 Product Description

The V300 is a DECT 6.0 Cordless Headset - Base Unit Bluetooth portion. It operates at frequency range of 1921.536MHz to 1928.448MHz with 5 channels (1921.536MHz, 1923.264MHz, 1924.992MHz, 1926.720MHz and 1928.448MHz) and Bluetooth Transmitter operates with 79 channels (2402MHz - 2480MHz). The Base Unit is powered by an adaptor 100-120VAC 50/60Hz 200mA. It also has a Bluetooth transceiver that manages Bluetooth connections to a Bluetooth-equipped mobile device. With Bluetooth and 1.9GHz wireless communications enabled, the Base Unit allows user uses the cordless handset to make or receive cellular phone calls via the cellular network.

The Bluetooth antenna used in base unit is integral, and the test sample is a prototype.

The Model(s): V300.BS is the same as the Model: V300 in electrical designs including software & firmware, PCB layout and construction design/physical design/enclosure. The only differences between these models are color and model number to be sold for marketing purpose.

Connection between the device and the telephone network is accomplished through the use of USOC RJ11C in the 2-wire loop calling central office line.

The circuit description and digital modulation techniques description are saved with filename: descri.pdf.

2.2 Test Methodology

Both AC power line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). Preliminary radiated scans and all radiated measurements were performed in Radiated Emission Test Sites. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

2.3 Test Facility

The radiated emission test sites and conducted measurement facility used to collect the radiated data and conducted data are at Workshop No. 3, G/F., World-Wide Industrial Centre, 43-47 Shan Mei Street, Fo Tan, Sha Tin, N.T., Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC and IC No. 2042V.

EXHIBIT 3
SYSTEM TEST CONFIGURATION

3.0 System Test Configuration

3.1 Justification

For radiated emissions testing, the equipment under test (EUT) was setup to transmit continuously mode to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables (if any) were manipulated to produce worst case emissions.

The Base Unit was powered by 100-120AC 50/60MHz 200mA to Output1: 6VDC 450mAh & Output2: 6VDC 300mAh adaptor.

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable which is four feet in diameter and approximately 0.8m in height above the ground plane for emission measurement at or below 1GHz and 1.5m in height above the ground plane for emission measurement above 1GHz. If the base unit attached to peripherals, they were connected and operational to simulate typical use.

The signal was maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization were varied during the search for maximum signal level. The antenna height was varied from 1 to 4 meters. Radiated emissions were taken at three meters unless the signal level was too low for measurement at that distance. If necessary, a pre-amplifier was used and/or the test was conducted at a closer distance.

For any intentional radiator powered by AC power line, measurements of the radiated signal level of the fundamental frequency component of the emission was performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

For transmitter radiated measurement, the spectrum analyzer resolution bandwidth was 100 kHz for frequencies below 1000 MHz. The resolution bandwidth was 1 MHz for frequencies above 1000 MHz.

Radiated emission measurement for transmitter was performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

Emission that are directly caused by digital circuits in the transmit path and transmitter portion were measured, and the limit are according to FCC Part 15 Section 15.209. Digital circuitry used to control additional functions other than the operation of the transmitter are subject to FCC Part 15 Section 15.109 Limits.

The DECT module was put into transmission mode when taking radiated emission data for determining worst-case spurious emission.

3.1 Justification - Cont'd

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in section 4.2.3.

Determination of pulse desensitization was made according to *Hewlett Packard Application Note 150-2, Spectrum Analysis... Pulsed RF.* The effective period (Teff) was 625µs. With the resolution bandwidth 1MHz and spectrum analyzer IF bandwidth 3dB, the pulse desensitization factor was 0dB.

For AC line conducted emission test, the EUT along with its peripherals were placed on a 1.0m(W)x1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50ohm coupling impedance for measuring instrument. The LISN housing, measuring instrument case, reference ground plane, and vertical ground plane were bounded together. The excess power cable between the EUT and the LISN was bundled.

All connecting cables of EUT and peripherals were manipulated to find the maximum emission.

All relevant operation modes have been tested, and the worst case data was included in this report.

3.2 EUT Exercising Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

3.3 Radiated Emission Test Setup

The figure below shows the test setup, which is utilized to make these measurements.

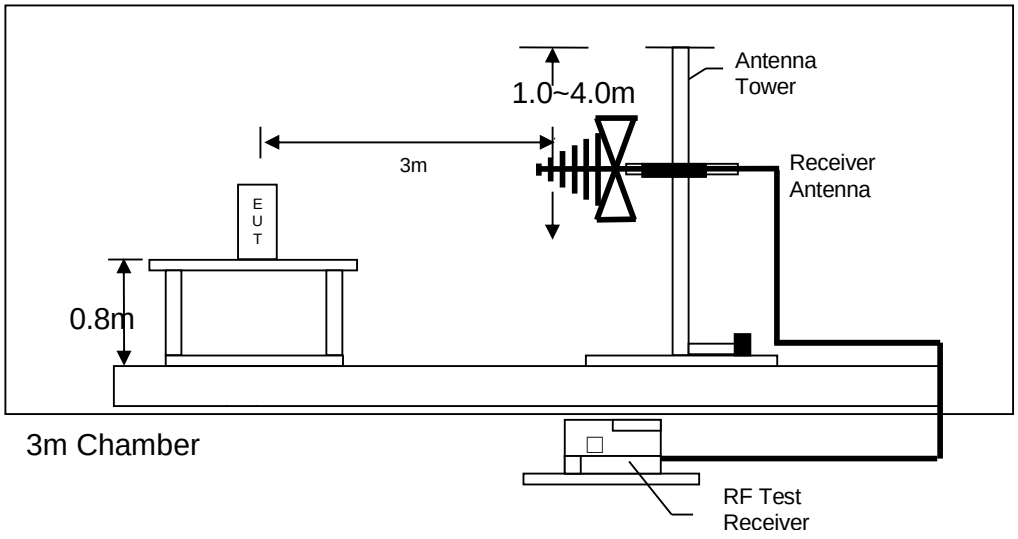


Figure 3.3.1 Test setup of radiated emissions up to 1GHz

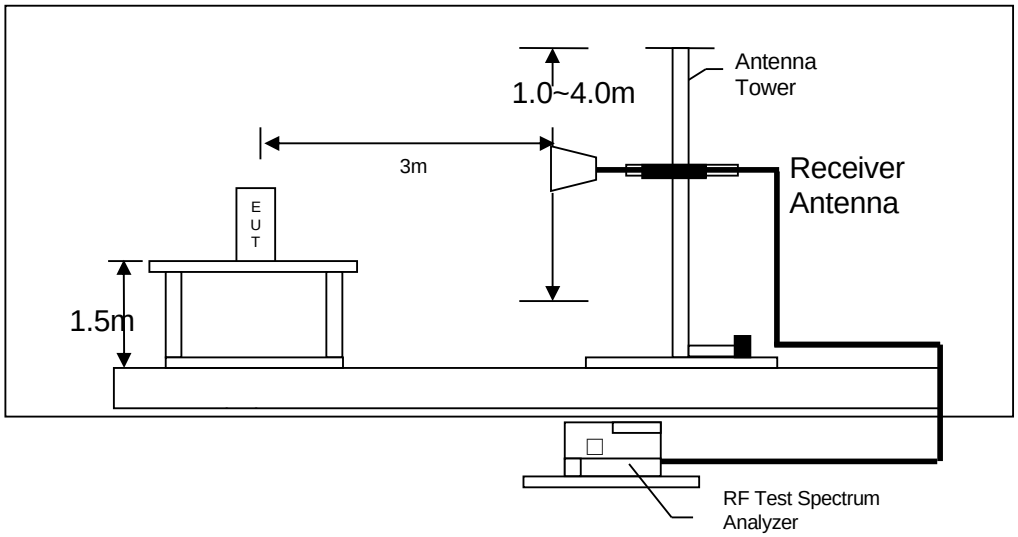


Figure 3.3.2 Test setup of radiated emissions above 1GHz

3.4 Conducted Emission Test Setup

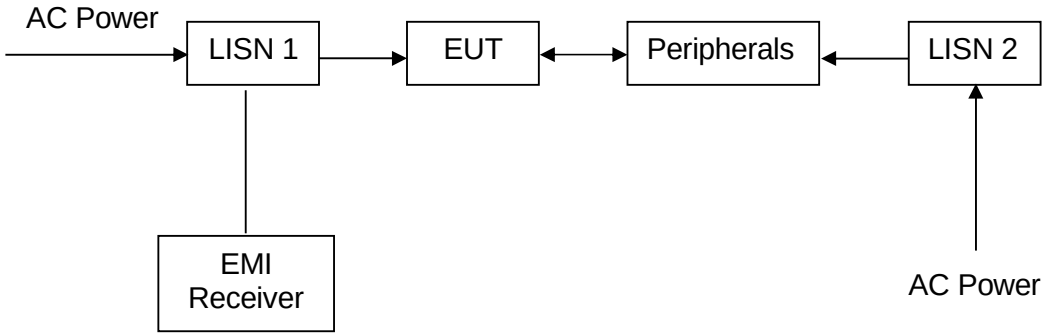


Figure 3.4.1

3.5 Details of EUT and Description of Accessories

Details of EUT:

An AC adaptor (provided with the unit) was used to power the device. Their description are listed below.

(1) Base Unit: An AC adaptor (100-120AC 50/60Hz 200mA to Output1: 6VDC 450mA & Output2: 6VDC 300mA, Model: SSC-6W2 US 6045/6030) (Supplied by Client)

Description of Accessories:

(1) Telecommunication cable with RJ11C connectors (1m, unshielded), terminated (Supplied by Intertek)
(2) Corded phone (Panasonic, Model: KX TS500MX), (Supplied by Intertek)
(3) AT&T corporation Handset lifter set (Supplied by client)
(4) Corded telephone cable with RJ10 connectors (1m, unshielded), (Supplied by Intertek)
(5) Notebook (HP Probook 430) (Provided by Intertek)
(6) USB cable (1m, with ferried), (Supplied by client)
(7) 1 X LAN cable of 1m in length (Supplied by Intertek)
(8) 1 X microphone for lifter of 0.5m in length (Suppled by client)

3.6 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered. The values of the Measurement uncertainty for radiated emission test, AC line conducted emission test and RF conducted test are ± 5.3dB, ± 4.2dB, ±1dB respectively.

Uncertainty and Compliance - Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value.

EXHIBIT 4
TEST RESULTS

4.0 **Test Results**

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

4.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflects the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD +AV

Example
Assume a receiver reading of 62.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 62.0 dBμV
AF = 7.4 dB
CF = 1.6 dB
AG = 29 dB
PD = 0 dB
AV = -10 dB
FS = 62 + 7.4 +1.6 -29 +0 + (-10) = 32 dBμV/m

Level in μV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m

4.2 Radiated Emissions

4.2.1 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
at

45.109 MHz

The worst case radiated emission configuration photographs are saved with filename: config photos.pdf

4.2.2 Radiated Emission Data

The data in tables 1-4 list the significant emission frequencies, the limit and the margin of compliance. Test setup is shown in section 3.3 Figure 3.3.1 and 3.3.2.

Judgement -

Passed by 6.6 dB margin

Mode: TX-Channel 00

Table 1, Base Unit

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2402.000	97.3	33	29.4	93.7	24	69.7	94.0	-24.3
V	***4804.000***	***46.2***	***33***	***34.9***	***48.1***	***24***	***24.1***	***54.0***	***-29.9***
V	7206.000	44.5	33	37.9	49.4	24	25.4	54.0	-28.6
V	9608.000	42.8	33	40.4	50.2	24	26.2	54.0	-27.8
V	***12010.000***	***44.0***	***33***	***40.5***	***51.5***	***24***	***27.5***	***54.0***	***-26.5***
H	14412.000	46.4	33	40.0	53.4	24	29.4	54.0	-24.6

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2402.000	97.3	33	29.4	93.7	114.0	-20.3
V	***4804.000***	***46.2***	***33***	***34.9***	***48.1***	***74.0***	***-25.9***
V	7206.000	44.5	33	37.9	49.4	74.0	-24.6
V	9608.000	42.8	33	40.4	50.2	74.0	-23.8
V	***12010.000***	***44.0***	***33***	***40.5***	***51.5***	***74.0***	***-22.5***
H	14412.000	46.4	33	40.0	53.4	74.0	-20.6

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Horn antenna is used for the emission over 1000MHz.

5. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Mode: TX-Channel 39

Table 2, Base Unit

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2441.000	99.1	33	29.4	95.5	24	71.5	94.0	-22.5
V	***4882.000***	***46.5***	***33***	***34.9***	***48.4***	***24***	***24.4***	***54.0***	***-29.6***
V	***7323.000***	***44.4***	***33***	***37.9***	***49.3***	***24***	***25.3***	***54.0***	***-28.7***
V	9764.000	43.1	33	40.4	50.5	24	26.5	54.0	-27.5
V	***12205.000***	***43.8***	***33***	***40.5***	***51.3***	***24***	***27.3***	***54.0***	***-26.7***
H	14646.000	47.8	33	38.4	53.2	24	29.2	54.0	-24.8

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2441.000	99.1	33	29.4	95.5	114.0	-18.5
V	***4882.000***	***46.5***	***33***	***34.9***	***48.4***	***74.0***	***-25.6***
V	***7323.000***	***44.4***	***33***	***37.9***	***49.3***	***74.0***	***-24.7***
V	9764.000	43.1	33	40.4	50.5	74.0	-23.5
V	***12205.000***	***43.8***	***33***	***40.5***	***51.3***	***74.0***	***-22.7***
H	14646.000	47.8	33	38.4	53.2	74.0	-20.8

NOTES:
1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Mode: TX-Channel 78

Table 3, Base Unit

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2480.000	96.2	33	29.4	92.6	24	68.6	94.0	-25.4
V	***4960.000***	***46.4***	***33***	***34.9***	***48.3***	***24***	***24.3***	***54.0***	***-29.7***
V	***7440.000***	***44.3***	***33***	***37.9***	***49.2***	***24***	***25.2***	***54.0***	***-28.8***
V	9920.000	43.0	33	40.4	50.4	24	26.4	54.0	-27.6
V	***12400.000***	***44.1***	***33***	***40.5***	***51.6***	***24***	***27.6***	***54.0***	***-26.4***
H	14880.000	47.7	33	38.4	53.1	24	29.1	54.0	-24.9

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2480.000	96.2	33	29.4	92.6	114.0	-21.4
V	***4960.000***	***46.4***	***33***	***34.9***	***48.3***	***74.0***	***-25.7***
V	***7440.000***	***44.3***	***33***	***37.9***	***49.2***	***74.0***	***-24.8***
V	9920.000	43.0	33	40.4	50.4	74.0	-23.6
V	***12400.000***	***44.1***	***33***	***40.5***	***51.6***	***74.0***	***-22.4***
H	14880.000	47.7	33	38.4	53.1	74.0	-20.9

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Horn antenna is used for the emission over 1000MHz.

5. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Mode: Bluetooth Talk

Table 4, Base Unit

Radiated Emissions Data
Pursuant to FCC Part 15 Section 15.209 Requirement

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	43.281	39.2	16	10.0	33.2	40.0	-6.8
V	45.109	39.4	16	10.0	33.4	40.0	-6.6
H	191.115	32.1	16	16.0	32.1	43.5	-11.4
V	195.015	33.2	16	16.0	33.2	43.5	-10.3
V	199.037	32.1	16	16.0	32.1	43.5	-11.4
H	229.018	33.1	16	18.0	35.1	46.0	-10.9
H	278.621	26.5	16	22.0	32.5	46.0	-13.5
H	350.406	24.8	16	24.0	32.8	46.0	-13.2
H	414.025	30.2	16	25.0	39.2	46.0	-6.8
H	730.900	25.3	16	30.0	39.3	46.0	-6.7
V	960.728	28.3	16	33.0	45.3	54.0	-8.7

NOTES:

1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters.

3. Negative value in the margin column shows emission below limit.

4.2.3 Transmitter Duty Cycle Calculation

Based on the Bluetooth Specification Version 4.2, the transmitter ON time for each timeslot of Bluetooth is 625µs. DH5 has the maximum duty cycle, which consists of 5 continuous Tx slots and 1 Rx slot. Therefore one hopset take (5+1) x 625µs = 3.75ms. For one period for a pseudo-random hopping through at least 20 RF channels in adaptive mode (worst case), it take: 20 x 3.75ms = 75ms.

The dwell time for DH5 is 5 x 625us = 3.125ms

For the worst case calculation, there are two transmissions might occur in 100ms.

Therefore,

Duty Cycle (DC) = Maximum On time in 100ms/100ms
= 3.125ms x 2 /100ms
= 0.0625

Average Factor (AF) of Bluetooth in dB = $20 \log_{10} (0.0625)$
= -24.0dB

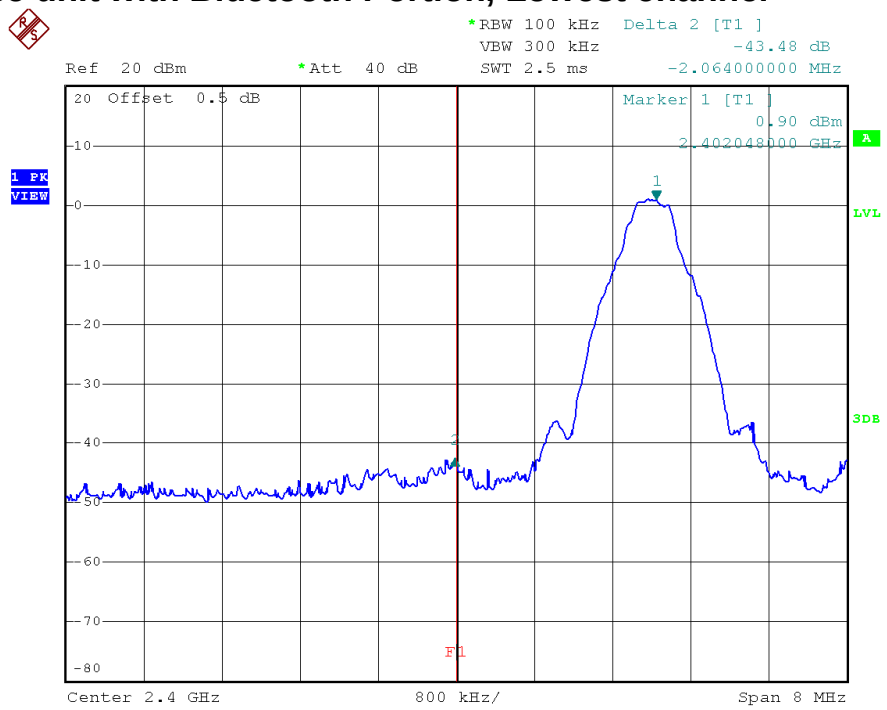
4.3 Radiated Emission on the Bandedge

From the following plots, they show that the fundamental emissions are confined in the specified band (2400MHz and 2483.5MHz). In case of emissions up to two standard bandwidths away from the bandedge, the delta measurement technique is used for determining bandedge compliance. Standard bandwidth is the bandwidth specified by ANSI C63.4 (2014) for frequency being measured.

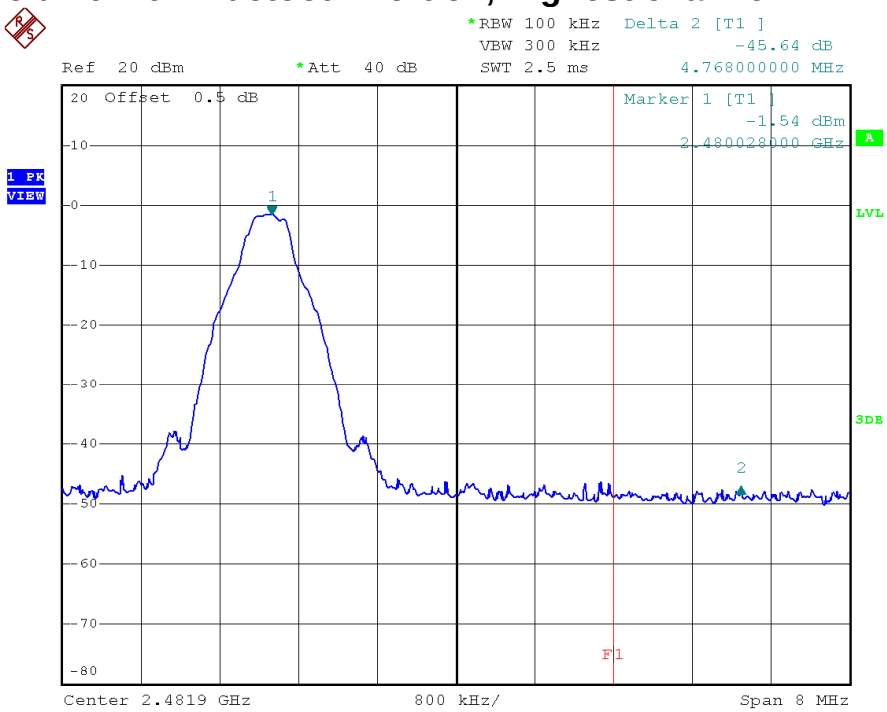
Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50 dB below the level of the fundamental or to the general radiated emission limits in FCC Part 15 Section 15.209 / Table 4 of RSS-Gen, whichever is the lesser attenuation, which meet the requirement of FCC Part 15 Section 15.249(d) / RSS-210 A2.9(b).

The plots of radiated emission on the bandedge are saved as below.

Base unit with Bluetooth Portion, Lowest channel



Base unit with Bluetooth Portion, Highest channel



Bandedge compliance is determined by applying marker-delta method, i.e.

Resultant Field Strength = Fundamental Emissions - Delta from the plot

Resultant field strength for the lowest and/or highest channel(s), with corresponding average values are calculated as follows:

Channel	Fundamental Emission (dBµV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)
Lowest	69.7	43.48	26.22	54	-27.78
Highest	68.6	45.64	22.96	54	-31.04

Channel	Fundamental Emission (dBµV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)
Lowest	93.7	43.48	50.22	74	-23.78
Highest	92.6	45.64	46.96	74	-27.04

The resultant field strength meets the general radiated emission limit in FCC Part 15 Section 15.209 / Table 4 of RSS-Gen, which does not exceed 74dBµV/m for peak limit and also 54dBµV/m for average limit.

4.4 AC Power Line Conducted Emission

[ ] Not applicable – EUT is only powered by battery for operation.

[×] EUT connects to AC power line. Emission Data is listed in following pages.

[ ] Base Unit connects to AC power line and has transmission. Handset connects to AC power line but has no transmission. Emission Data of Base Unit is listed in following pages.

Test setup is shown in section 3.4 Figure 3.4.1.

4.4.1 AC Power Line Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration
at

4.983 MHz

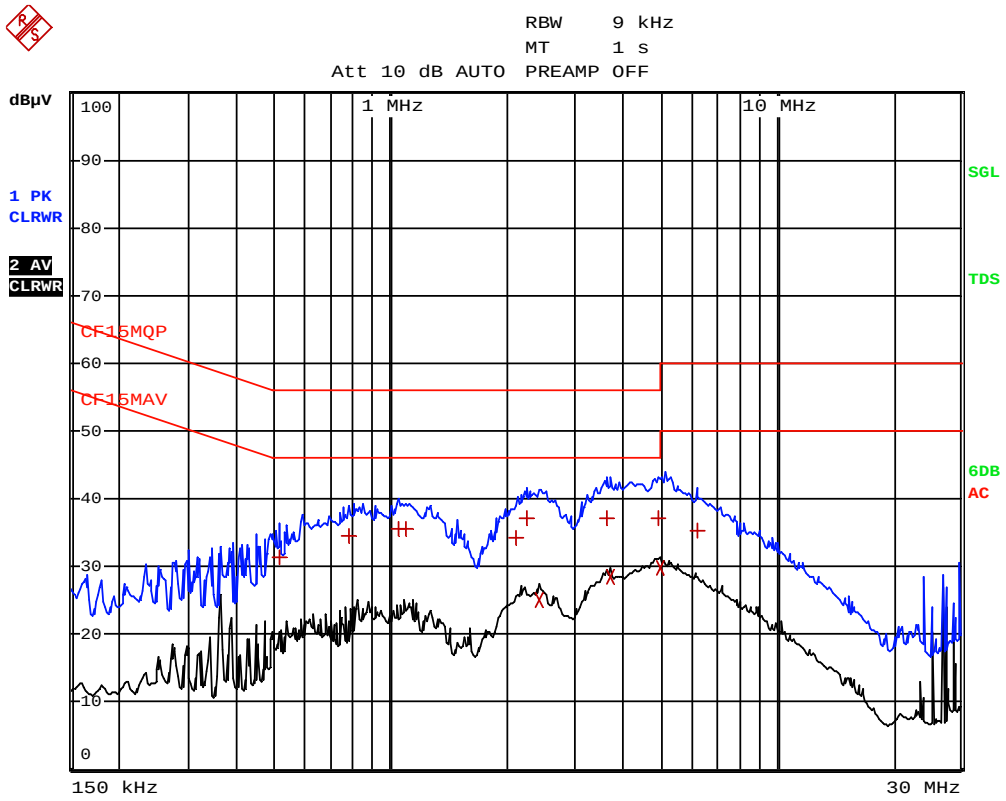
The worst case line conducted configuration photographs are saved with filename: config photos.pdf.

4.4.2 AC Power Line Conducted Emission Data

The plot(s) and data in the following pages list the significant emission frequencies, the limit and the margin of compliance.

Passed by 16.08 dB margin compared with CISPR-average limit

Worst Case: Bluethooth Talk



Worst Case: Bluethooth Talk

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

	TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1	Quasi Peak	514.5 kHz	31.47	L1	-24.52
1	Quasi Peak	780 kHz	34.38	L1	-21.61
1	Quasi Peak	1.0545 MHz	35.65	L1	-20.34
1	Quasi Peak	1.0995 MHz	35.49	N	-20.50
1	Quasi Peak	2.1165 MHz	34.18	L1	-21.81
1	Quasi Peak	2.2605 MHz	37.18	L1	-18.81
2	CISPR Average	2.427 MHz	25.00	L1	-20.99
1	Quasi Peak	3.633 MHz	37.25	L1	-18.74
2	CISPR Average	3.732 MHz	28.40	N	-17.60
1	Quasi Peak	4.947 MHz	37.24	L1	-18.75
2	CISPR Average	4.983 MHz	29.91	L1	-16.08
1	Quasi Peak	6.2295 MHz	35.20	N	-24.79

4.5 Occupied Bandwidth

Occupied Bandwidth Results:

Bluetooth	Occupied Bandwidth (MHz)
Low Channel: 2402	0.928
Middle Channel: 2441	0.928
High Channel: 2480	0.928

The worst case is shown as below

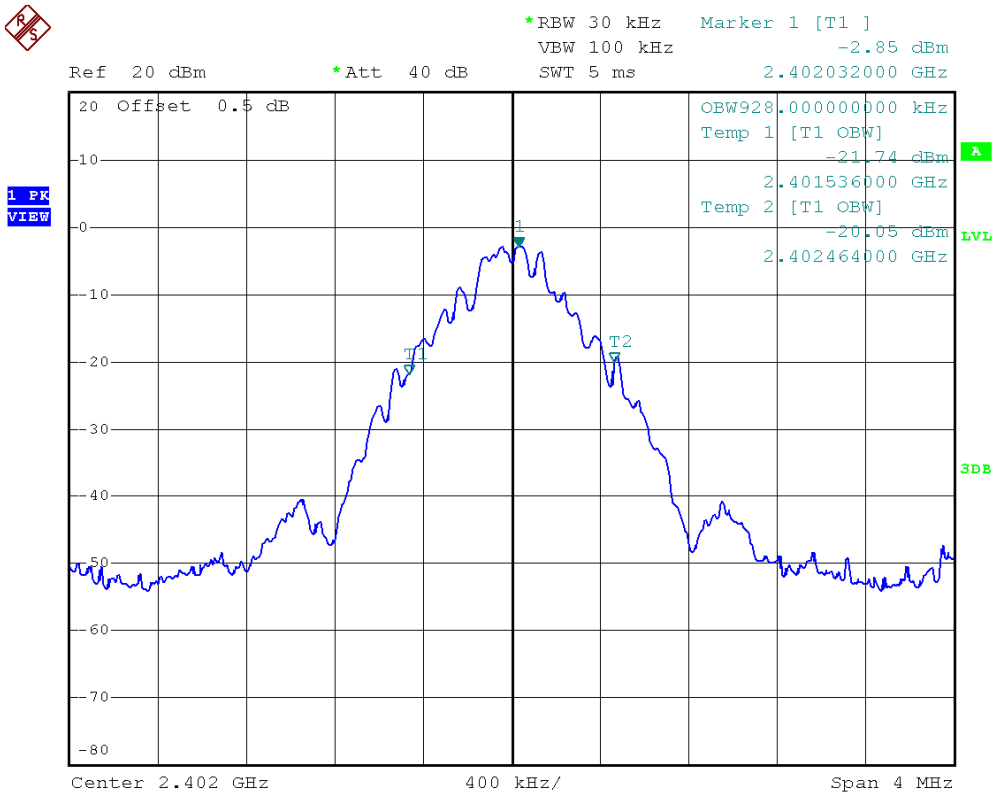


EXHIBIT 5
EQUIPMENT LIST

5.0 **Equipment List**

1) Radiated Emissions Test

Equipment	BiConiLog Antenna	Double Ridged Guide Antenna	Broad-Band Horn Antenna
Registration No.	EW-3061	EW-1133	EW-1679
Manufacturer	EMCO	EMCO	SCHWARZBECK
Model No.	3412E	3115	BBHA9170
Calibration Date	Sep. 23, 2016	Nov. 05, 2015	Jun. 28, 2016
Calibration Due Date	Sep. 23, 2017	May 05, 2017	Jun. 28, 2017

Equipment	EMI Test Receiver	Spectrum Analyzer
Registration No.	EW-3095	EW-2253
Manufacturer	R&S	R&S
Model No.	ESCI	FSP40
Calibration Date	Oct. 25, 2016	Jun. 15, 2016
Calibration Due Date	Oct. 25, 2017	Jun. 15, 2017

2) Conducted Emissions Test

Equipment	EMI Test Receiver	LISN
Registration No.	EW-3095	EW-2501
Manufacturer	R&S	R&S
Model No.	ESCI	ENV-216
Calibration Date	Oct. 25, 2016	Jan 28, 2016
Calibration Due Date	Oct. 25, 2017	Jan 28, 2017

3) Bandedge Measurement Test

Equipment	Spectrum Analyzer
Registration No.	EW-2253
Manufacturer	R&S
Model No.	FSP40
Calibration Date	Jun. 15, 2016
Calibration Due Date	Jun. 15, 2017

END OF TEST REPORT