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TEST REPORT

Report Number: 18081094HKG-001

Application For Class II Permissive Change of 47 CFR Part 15 Certification

Unlicensed Personal Communication Service Devices

(Base Unit)

FCC ID: EW780-0348-00

Prepared and Checked by:	**Approved by:**
Signed On File Leung Chiu Kuen, Stanley Engineer	Digitally signed by Jess Tang Location: Intertek Testing Services Hong Kong Limited Tang Kwan Mo, Jess Lead Engineer Date: October 11, 2018

TEST REPORT

GENERAL INFORMATION

Grantee:	VTech Telecommunications Ltd.
Grantee 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, 2016 Edition
FCC ID:	EW780-0348-00
FCC Model(s):	VH6220, VH6220 BS, VH6221, VH6221 BS
Type of EUT:	Unlicensed Personal Communications Service Devices
Description of EUT:	DECT 6.0 Cordless Headset - Base unit
Serial Number:	N/A
Sample Receipt Date:	August 20, 2018
Date of Test:	Augusr 24 to October 11, 2018
Report Date:	October 11, 2018
Environmental Conditions:	Temperature: +10 to 40°C Humidity: 10 to 90%
Conclusion:	Test was conducted by client submitted sample. The submitted sample as received complied with the 47 CFR Part 15 Certification.

TEST REPORT

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TEST REPORT

1.0 TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE

1.1 Summary of Test Results

General Technical Requirements				
Test Items	**FCC Part 15 Section**	**Test Procedure ANSI C63.17 / ANSI C63.4***	**Results**	**Details See Section**
Occupied/Emission Bandwidth	15.323(a)	6.1.3	Pass	4.1
Power Spectral Density	15.319(d)	6.1.5	Pass	4.2
AC Power Line Conducted Emissions from EUT	15.315	7 *	Pass	4.5

Specific Requirements for UPCS Device				
Test Items	**FCC Part 15 Section**	**Test Procedure ANSI C63.17**	**Results**	**Details See Section**
Unwanted Emission Inside the Sub-Band	15.323(d)	6.1.6.1	Pass	4.3
Emissions Outside the Sub-Band	15.323(d)	6.1.6.2	Pass	4.4

1.2 Statement of Compliance

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

FCC Part 15, October 1, 2017 Edition

TEST REPORT

2.0 GENERAL DESCRIPTION

2.1 Product Description

The VH6220 BS is a DECT 6.0 Cordless Headset - Base unit. 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). The Base Unit for VH6220 BS is powered by an AC adaptor 100-120VAC 50/60Hz 200mA.

The antennas used in base unit are integral, and the test sample is a prototype.

The Model(s): VH6221, VH6221 BS, VH6220 are the same as the Model: VH6220 BS in electrical designs including software & firmware, PCB layout and construction design/physical design/enclosure as declared by client. The only differences between these models are color and model number to be sold for marketing purpose as declared by client.

2.2 Purpose of Change

The purpose of change is saved with filename: product change.pdf

2.3 Test Methodology

The radiated emission measurements for unintentional radiator (if any) and AC power line-conducted emission measurements were performed according to the test procedures specified in ANSI C63.4 (2014). The radiated emission measurements for intentional radiator contained in UPCS device, conducted emission measurements, Listen Before Transmit (LBT) tests, Time Frame and Frequency Stability tests were performed according to the test procedures specified in ANSI C63.17 (2013). All radiated measurements were performed in radiated emission test site. Preliminary scans were performed in the radiated emission test site only to determine worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "Justification Section" of this Application. All other measurements were made in accordance with the procedures in 47 CFR Part 2.

2.4 Test Facility

The radiated emission test site, AC power line conducted measurement facility and antenna port conducted measurement facility used to collect the radiated data, AC Power Line conducted data, and conductive data are at Intertek Testing Services Hong Kong Ltd., which is located 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 FCC.

TEST REPORT

3.0 SYSTEM TEST CONFIGURATION

3.1 Justification

For emissions testing, the equipment under test (EUT) was set up to transmit continuously in burst mode with pseudo-random data 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 a 100-120VAC 50/60Hz 200mA to Output1: 6VDC 450mA or Output2: 6VDC 300mA adaptor.

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. If the EUT is attached to accessories, they were connected and operational (as typical as possible).

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. Detector function was in peak mode. Radiated emissions are 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 UPCS transmitter radiated measurement, the spectrum analyzer resolution bandwidth was approximately 1% of EUT emission bandwidth, unless otherwise specified.

Radiated emission measurements for UPCS transmitter were 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.

RF module for base unit of VH6220 BS is the same with original granted model VH6210 BS base unit. Therefore, conducted emission measurement for peak transmit power, jitter, frame repetition stability, carrier stability and listen before transmit requirements for VH6220 BS are skipped.

As the base unit has 2 antennas, both have been checked. While conducting the test on one of antennas, another one was being disable its transmission. The data in this report represented the worst-case. The base unit can support single slot and long slot, both have been checked. While conducting the test on one of slot, another one was being disable its transmission. The data in this report represented the worst-case.

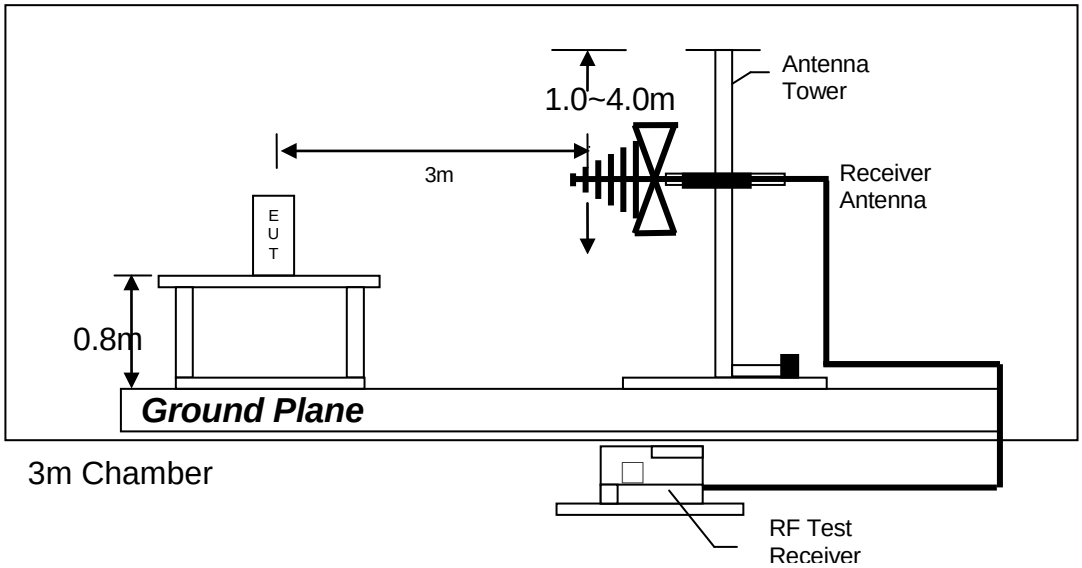
For AC line conducted emission test, the EUT along with its peripherals were placed on a 1.0m(W)x1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization 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 is included in this report.

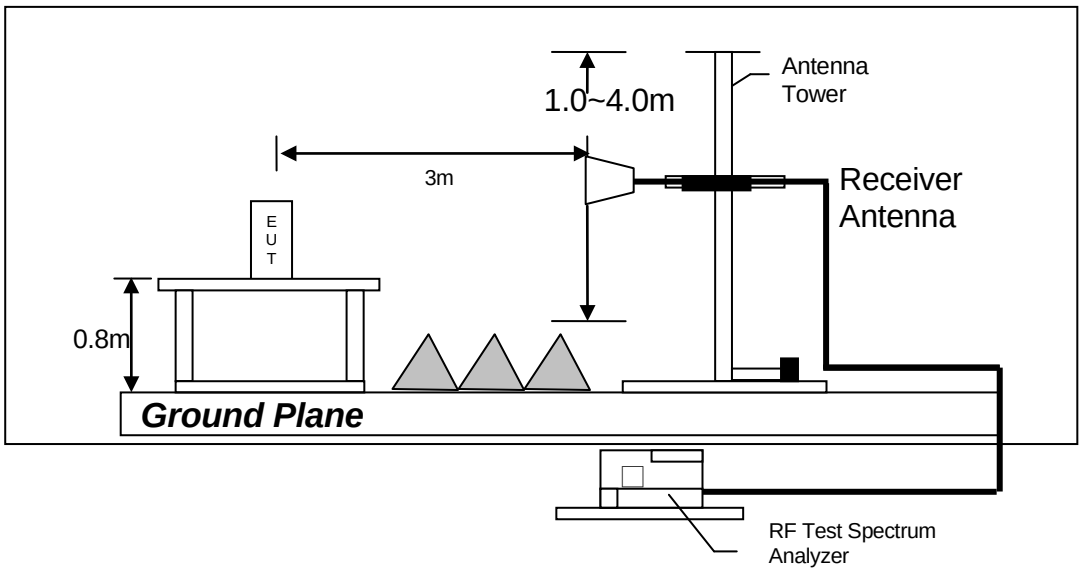
TEST REPORT

3.2 Radiated Emission Test Setup

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



Test setup of radiated emissions up to 1GHz



Test setup of radiated emissions above 1GHz

Figure 3.2.1

TEST REPORT

3.3 AC Line Conducted Emission Test Setup

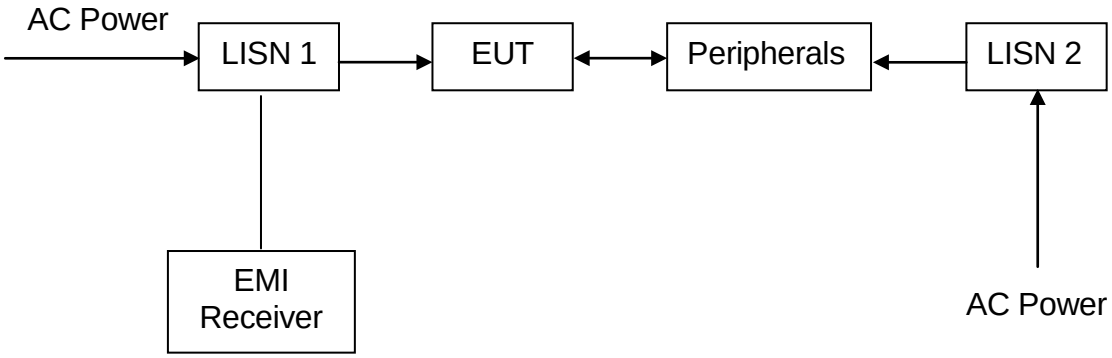


Figure 3.3.1

TEST REPORT

3.4 Conducted Emission Test Configuration

The setup and equipment setting were made in accordance with ANSI C63.17. The antenna of EUT transmitter was replaced by a coaxial cable. The impendence matching of connection, cable loss and external RF attenuator are taken into account. The EUT was arranged to communicate via a fixed carrier frequency between its transmitter and a companion device. The transmission was configured in burst mode with pseudo-random data as typical as normal operation.

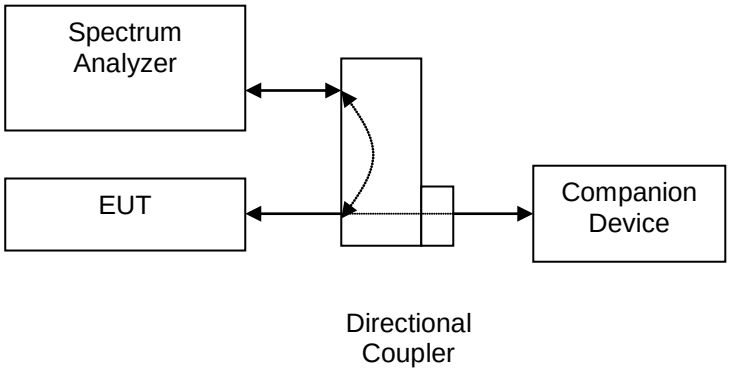


Figure 3.4.1

3.5 Conducted Monitoring and Operation Test Configuration

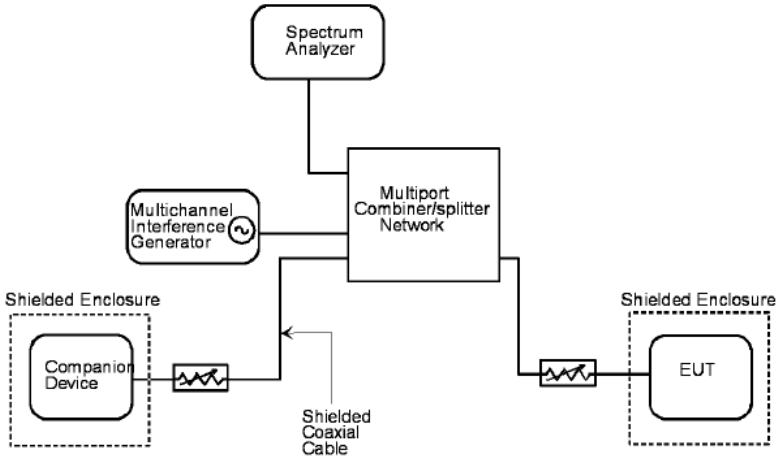


Figure 3.5.1

3.6 EUT Exercising Software

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

TEST REPORT

3.7 Details of EUT and Description of Accessories

Details of EUT:

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

(1) An AC adaptor (100-120VAC 50/60Hz 200mA to Output1: 6VDC 450mA or 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) Handset lifter, VH6211 LT (Supplied by client)
(4) Corded telephone cable with RJ10 connectors (1m, unshielded) (Supplied by Intertek)
(5) Headset, with Li-ion Polymer type rechargeable battery (3.8V 185mAh 0.7Wh), FCC ID: EW780-1360-00 (Supplied by Client)
(6) HP Notebook, Model: HP ProBook 430G1, S/N: 2CE4250H44, DoC Product (Supplied by Intertek)
(7) 2 x CAT5 LAN cable with 1.5m long (Supplied by Intertek)
(8) USB Flash, DoC Product (Supplied by Intertek)
(9) EHS cables (Supplied by Client)
(10) Corded phone connection cable (Supplied by Client)
(11) Headset audio cable (Supplied by Client)

3.8 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 and ±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.

TEST REPORT

4.0 MEASUREMENT RESULTS

4.1 Emission Bandwidth, FCC Rule 15.323(a):

Operation shall be contained within the 1920 – 1930 MHz band. The emission bandwidth (*B*) shall be less than 2.5 MHz and greater than 50 kHz.

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.3. Test setup is shown in section 3.4 Figure 3.4.1.

Test Results:

I. Base unit - Traffic Carrier

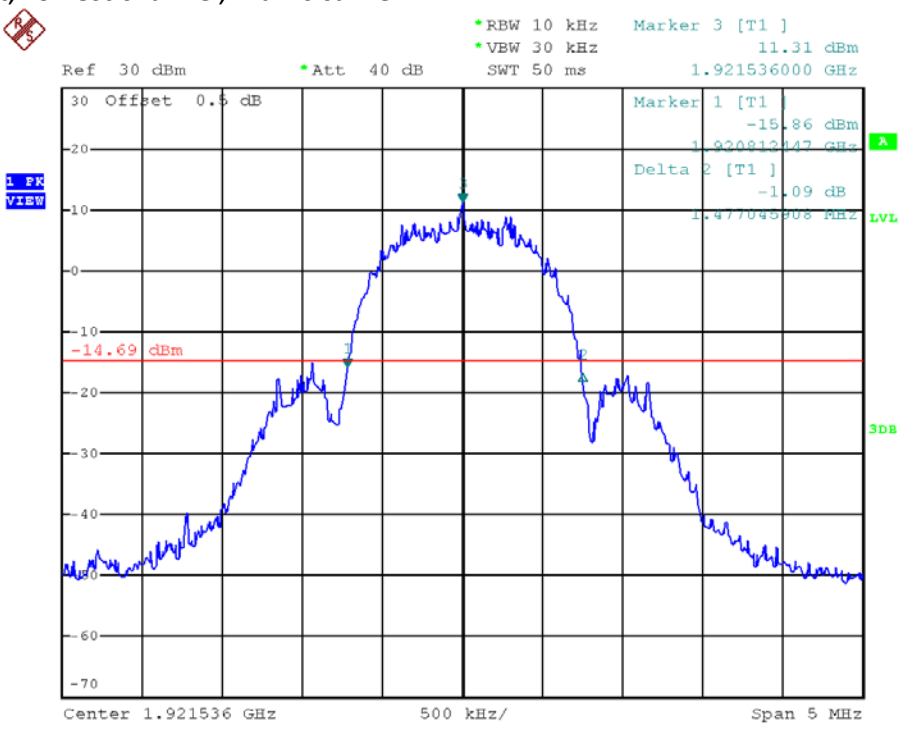
Channel	Channel Frequency (MHz)	Measuring Signal Level	Measured Emission Bandwidth (MHz)	Results
Lowest	1921.536	26 dB down	1.48	Pass
Highest	1928.448	26 dB down	1.48	Pass

The plots of emission bandwidth are saved as below.

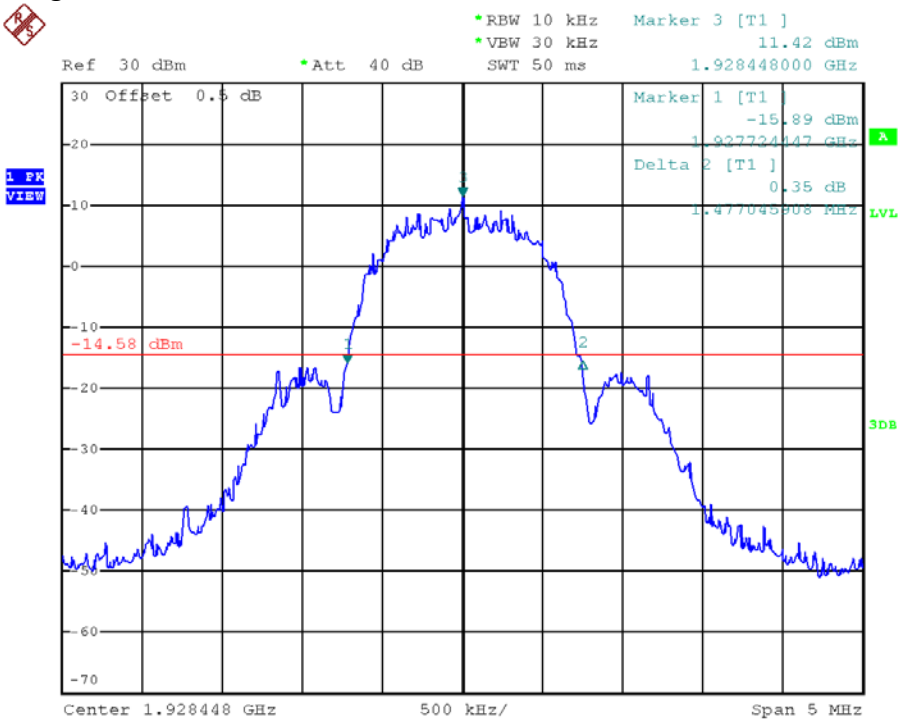
TEST REPORT

PLOTS OF EMISSION BANDWIDTH

Base unit, Lowest channel, Traffic carrier



Base unit, Highest channel, Traffic carrier



TEST REPORT

4.2 Power Spectral Density, FCC Rule 15.319(d):

Power spectral density shall not exceed 3 mW (4.8dBm) in any 3 kHz bandwidth as measured with a spectrum analyzer having a resolution bandwidth of 3 kHz.

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.5. Test setup is shown in section 3.4 Figure 3.4.1.

Test Results:

I. Base unit - Traffic Carrier

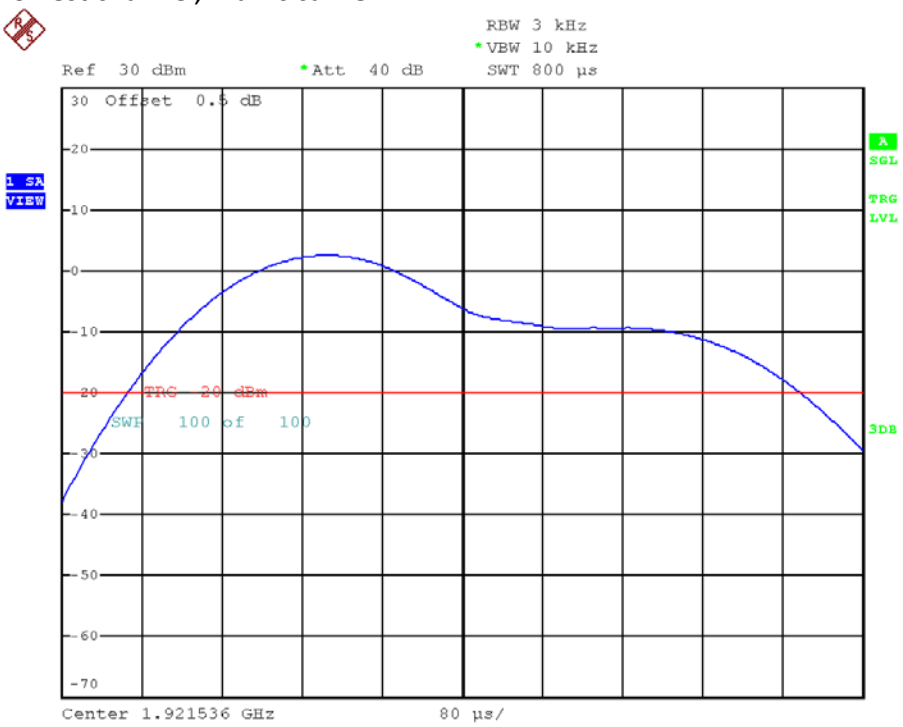
Channel	Channel Frequency (MHz)	Measured Power Spectral Density (dBm/3kHz)	Limit (dBm/3 kHz)	Results
Lowest	1921.536	-4.1	4.8	Pass
Highest	1928.448	-3.9	4.8	Pass

The plots of the power spectral density are as below.

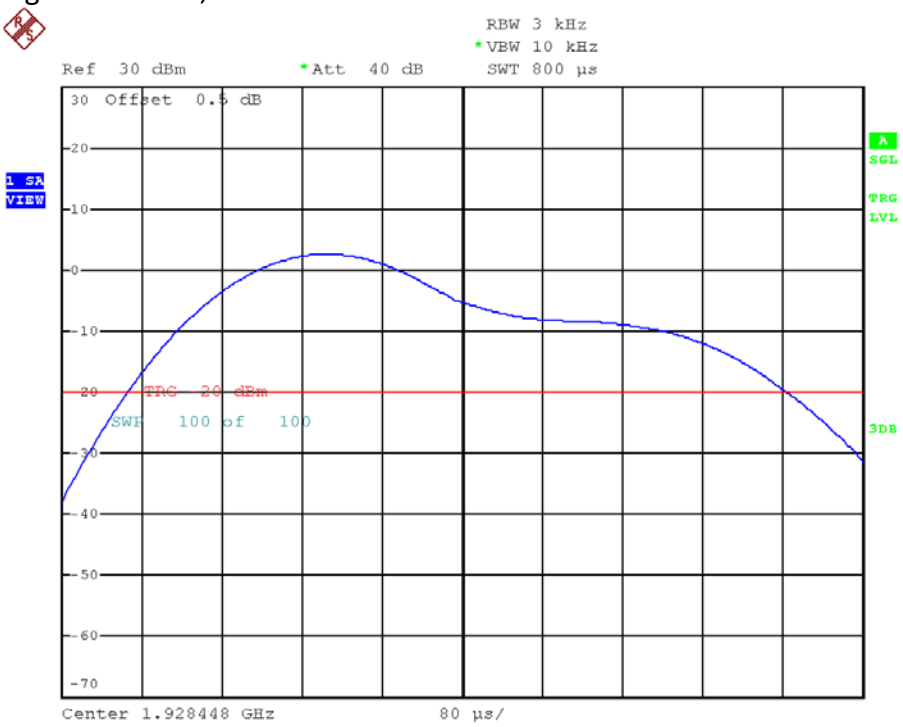
TEST REPORT

PLOTS OF THE POWER SPECTRAL DENSITY

Base unit, Lowest channel, Traffic carrier



Base unit, Highest channel, Traffic carrier



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4.3 Unwanted Emission Inside the Sub-Band, FCC Rule 15.323(d):

Emissions inside the sub-band must comply with the following emission mask:

1. In the bands between 1*B* and 2*B* measured from the center of the emission bandwidth, emission shall be at least 30 dB below the permitted peak transmit power.

2. In the bands between 2*B* and 3*B* measured from the center of the emission bandwidth, emission shall be at least 50 dB below the permitted peak transmit power.

3. In the bands between 3*B* and the band edge, emission shall be at least 60 dB below the permitted peak transmit power.

Where *B* = emission bandwidth in Hz

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.6.1. Test setup is shown in section 3.4 Figure 3.4.1

Test Results:

I. Base unit - Traffic Carrier

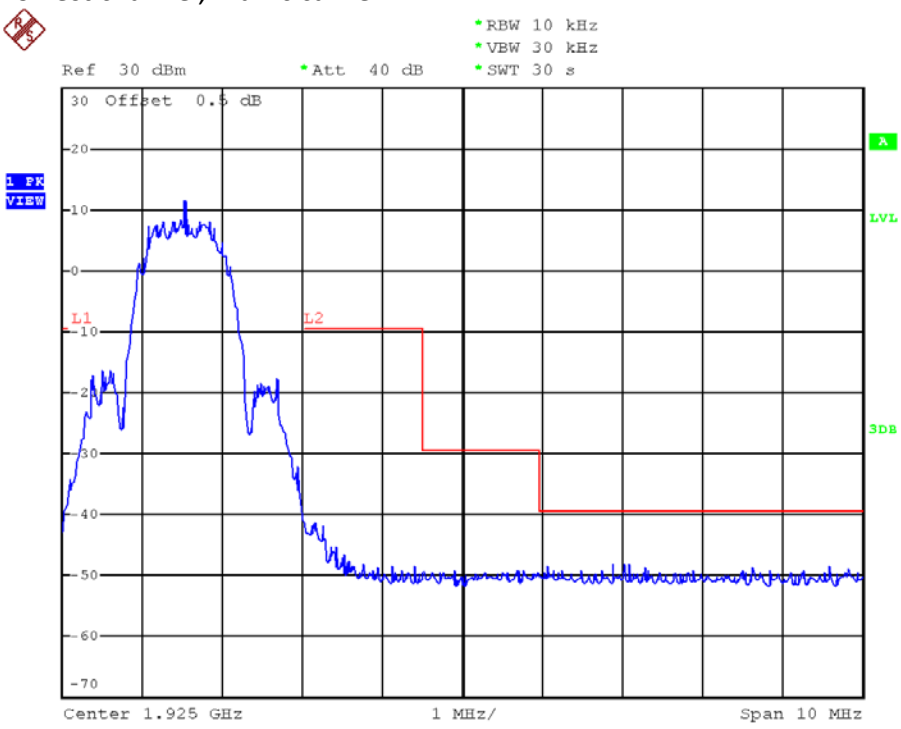
Channel	Channel Frequency (MHz)	Results
Lowest	1921.536	Pass
Middle	1924.992	Pass
Highest	1928.448	Pass

The plots of the unwanted emission inside the sub-band are as below.

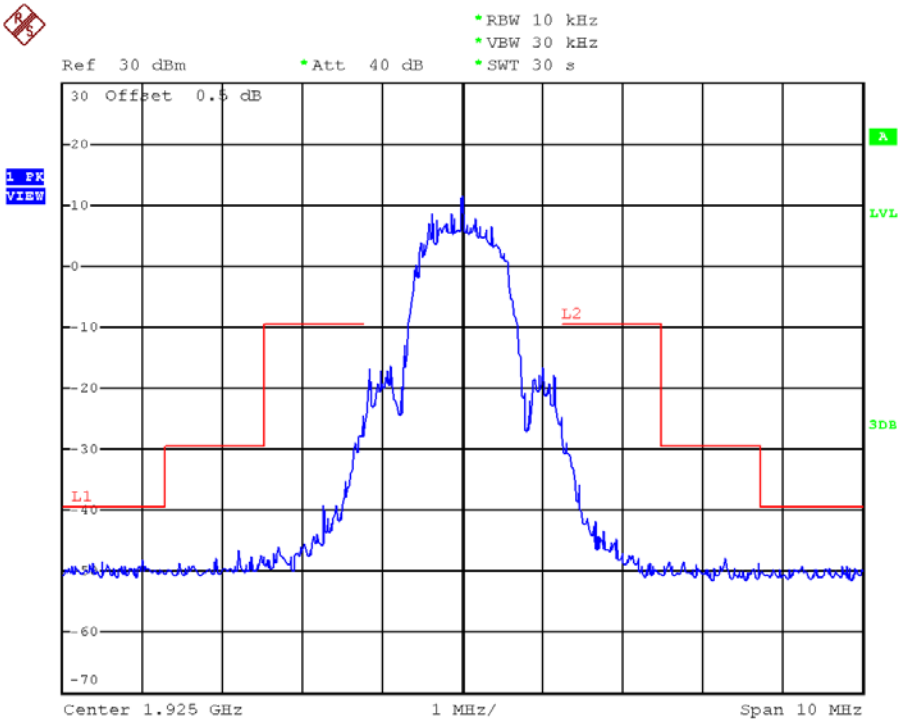
TEST REPORT

PLOTS OF THE UNWANTED EMISSION INSIDE THE SUB-BAND

Base unit, Lowest channel, Traffic carrier



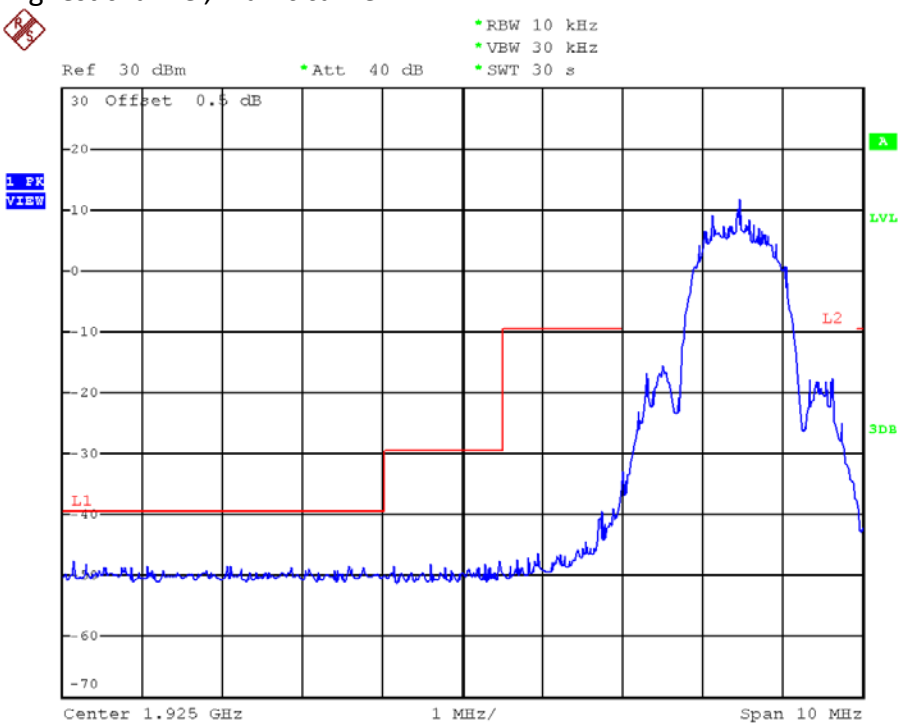
Base unit, Middle channel, Traffic carrier



TEST REPORT

PLOTS OF THE UNWANTED EMISSION INSIDE THE SUB-BAND

Base unit, Highest channel, Traffic carrier



TEST REPORT

4.4 Emissions Outside the Sub-Band, FCC Rule 15.323(d):

Emissions outside the sub-band shall be attenuated below a reference power of 112 mW (20.5 dBm) as follows:

1. 30 dB between the band edge and 1.25 MHz above or below the band;
2. 50 dB between 1.25 and 2.5 MHz above or below the band; and
3. 60 dB at 2.5 MHz or greater above or below the band, or shall meet the requirement of FCC Rule 15.319(g) which shall not exceed the limits of FCC Rule 15.209.

Example: Calculation of Limit for emissions between the band edge and 1.25 MHz (1920.000 – 1918.750 MHz)

The emissions shall not exceed the Limit: 20.5 dBm – 30 dB = -9.5 dBm

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.6.2. Radiated emissions test method is used. Emissions that are directly caused by digital circuits in the transmit path and transmitter portion are measured.

Test setup is shown in section 3.2 Figure 3.2.1

Test Results:

Channel	Carrier Frequency (MHz)	Measured Band (MHz)	Limit (dBm)	Results
Lowest	1921.536	1920.000 - 1918.750	-9.5	Pass
		1918.750 - 1917.500	-29.5	Pass
		0.009 - 1917.500 & 1932.500 - 19300.000	-39.5 / FCC Rule 15.209	Pass
Highest	1928.448	1930.000 - 1931.250	-9.5	Pass
		1931.250 - 1932.500	-29.5	Pass
		0.009 – 1917.500 & 1932.500 - 19300.000	-39.5 / FCC Rule 15.209	Pass

TEST REPORT

4.4.1 Radiated Emissions Configuration Photographs:

Worst Case Radiated Emission
at

Base Unit: 13391.30 MHz

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

4.4.2 Radiated Emissions Data:

Data are 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. All measurements were performed with peak detection unless otherwise specified.

The data in table 1-3 list the significant emission frequencies, the limit and the margin of compliance.

Judgement:

Base Unit - Passed by 16.8 dB margin

TEST REPORT

RADIATED EMISSIONS DATA

Mode: Transmission

Table 1, Base Unit

Pursuant to FCC Part 15 Section 15.323 (d) Emissions Requirements

Lowest Channel

Polarization	Frequency (MHz)	Measured Power (dBm)	Power Limit (dBm)	Margin (dB)
H	1917.184	-57.8	-39.5	-18.3
H	1918.703	-55.2	-29.5	-25.7
H	1919.942	-42.4	-9.5	-32.9
V	3843.072	-63.9	-39.5	-24.4
V	5764.608	-65.3	-39.5	-25.8
H	7686.144	-60.7	-39.5	-21.2
H	9607.680	-61.1	-39.5	-21.6
V	11529.216	-60.6	-39.5	-21.1
V	13391.300	-56.3	-39.5	-16.8
H	15452.833	-59.0	-39.5	-19.5

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.

TEST REPORT

Mode: Transmission

Table 2, Base Unit

Pursuant to FCC Part 15 Section 15.323 (d) Emissions Requirements

Highest Channel

Polarization	Frequency (MHz)	Measured Power (dBm)	Power Limit (dBm)	Margin (dB)
H	1930.023	-42.4	-9.5	-32.9
H	1931.463	-53.0	-29.5	-23.5
H	1932.900	-56.7	-39.5	-17.2
V	3856.896	-63.6	-39.5	-24.1
V	5785.344	-65.5	-39.5	-26.0
H	7713.792	-60.6	-39.5	-21.1
H	9642.240	-61.0	-39.5	-21.5
V	11570.688	-60.5	-39.5	-21.0
V	13499.136	-56.4	-39.5	-16.9
H	15451.622	-59.0	-39.5	-19.5

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.

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Mode: Talk mode with PC

Table 3, Base Unit

Pursuant to FCC Part 15 Section 15.323 (d) Emissions Requirements

Polarization	Frequency (MHz)	Measured Power (dBm)	Power Limit (dBm)	Margin (dB)
V	32.577	-64.9	-39.5	-25.4
V	36.063	-63.3	-39.5	-23.8
V	38.608	-62.4	-39.5	-22.9
V	39.427	-64.3	-39.5	-24.8
V	40.760	-67.1	-39.5	-27.6
V	60.161	-66.1	-39.5	-26.6
V	85.987	-67.3	-39.5	-27.8
V	108.782	-68.3	-39.5	-28.8
H	141.216	-64.4	-39.5	-24.9
H	229.093	-63.9	-39.5	-24.4
V	710.000	-61.4	-39.5	-21.9
V	923.613	-59.3	-39.5	-19.8

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.

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4.4.3 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 reflect 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 29.0 dB is subtracted. The pulse desensitization factor of the spectrum analyzer is 0.0 dB, and the resultant average factor is -10.0 dB. The net field strength for comparison to the appropriate emission limit is 32.0 dBμV/m. This value in dBμV/m is converted to its corresponding level in μV/m.

RA = 62.0 dBμV
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0.0 dB
AV = -10 dB

FS = 62.0 + 7.4 + 1.6 – 29.0 + 0.0 + (-10.0) = 32.0 dBμV/m

Level in μV/m = Common Antilogarithm [(32.0 dBμV/m)/20] = 39.8 μV/m

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4.4.4 Average Factor Calculation and Transmitter ON Time Measurements, FCC Rule 15.35(b, c)

[ ] The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SPAN function on the analyzer was set to ZERO. The transmitter ON time was determined from the resultant time-amplitude display:

Please refer to the attached plots for more details:

The plots of Transmitter ON Time Measurements are as below.

[ ] Please refer to the attached transmitter timing diagram that are provided by manufacturer

[×] Not applicable - No average factor is required.

[ ] Please refer to Technical Description (descri.pdf) for more details

TEST REPORT

4.5 AC Power Line Conducted Emissions, FCC Rule 15.315:

The AC power line conducted emission shall not exceed the limits of FCC Rule 15.207.

Measurements are made in accordance with ANSI C63.4 sub-clause 7. Emissions that are directly caused by digital circuits in the transmit path and transmitter portion are measured.

Test setup is shown in section 3.3 Figure 3.3.1.

[ ] 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 (indirectly) but has no transmission. Emission Data of Base Unit is listed in following pages.

[ ] Handset connects to AC power line (indirectly) only during charging. Emission Data is listed in following pages.

TEST REPORT

4.5.1 AC Power Line Conducted Emissions Configuration Photographs:

Worst Case AC Power Line Conducted Emission
at

Base Unit: 159kHz

The worst case AC power Line conducted emission configuration photographs are saved with filename: config photos.pdf

4.5.2 AC Power Line Conducted Emissions Data:

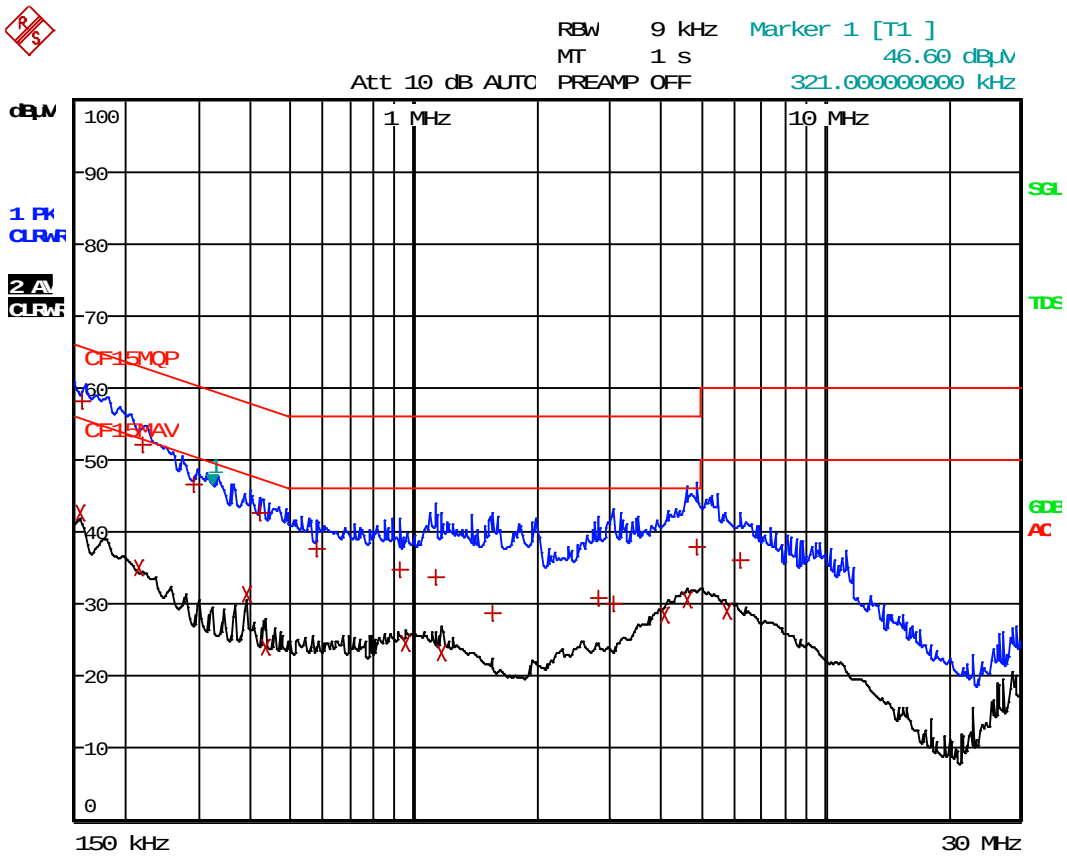
The plot(s) and data in the following pages list the significant emission frequencies, the limit and the worst case margin of compliance.

Judgment:

Base unit: Passed by 7.39 dB margin compared with quasi-peak limit

TEST REPORT

Worst Case: Talk mode



TEST REPORT

Worst Case: Talk mode

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
2 CISPR Average	154.5 kHz	42.76	L1	-12.99
1 Quasi Peak	159 kHz	58.11	L1	-7.39
2 CISPR Average	217.5 kHz	35.04	L1	-17.87
1 Quasi Peak	222 kHz	52.13	L1	-10.61
1 Quasi Peak	294 kHz	46.48	L1	-13.92
2 CISPR Average	388.5 kHz	31.27	N	-16.82
1 Quasi Peak	420 kHz	42.53	N	-14.91
2 CISPR Average	433.5 kHz	24.11	N	-23.07
1 Quasi Peak	577.5 kHz	37.56	N	-18.43
1 Quasi Peak	924 kHz	34.66	L1	-21.33
2 CISPR Average	955.5 kHz	24.57	L1	-21.42
1 Quasi Peak	1.1355 MHz	33.63	N	-22.36
2 CISPR Average	1.1715 MHz	23.16	L1	-22.83
1 Quasi Peak	1.563 MHz	28.83	N	-27.16
1 Quasi Peak	2.8185 MHz	30.78	L1	-25.21
1 Quasi Peak	3.084 MHz	29.92	N	-26.07
2 CISPR Average	4.101 MHz	28.54	N	-17.45
2 CISPR Average	4.6635 MHz	30.67	L1	-15.32
1 Quasi Peak	4.8705 MHz	37.93	N	-18.06
2 CISPR Average	5.7975 MHz	28.93	L1	-21.06

TEST REPORT

5.0 EQUIPMENT LIST

1) Radiated Emissions Test

Equipment	Biconical Antenna	EMI Test Receiver	Spectrum Analyzer
Registration No.	EW-0571	EW-3156	EW-3110
Manufacturer	EMCO	ROHDESCHWARZ	R&S
Model No.	3104C	ESR26	FSP30
Calibration Date	February 27, 2018	November 10, 2017	March 05, 2018
Calibration Due Date	August 27, 2019	November 10, 2018	March 05, 2019

Equipment	BiConiLog Antenna - 26MHz to 6000MHz	Log Periodic Antenna	Double Ridged Guide Antenna
Registration No.	EW-3061	EW-0447	EW-1133
Manufacturer	EMCO	EMCO	EMCO
Model No.	3142E	3146	3115
Calibration Date	November 02, 2017	January 17, 2018	May 24, 2017
Calibration Due Date	November 02, 2018	July 17, 2019	November 24, 2018

Equipment	Notch Filter (cutoff frequency 1.9GHz to 2.0GHz)	12m Double Shield RF Cable (20MHz to 6GHz)	High Frequency Coaxial Cable Assembly (4 pcs)
Registration No.	EW-2360	EW-1852	EW-3126c
Manufacturer	MICROWAVE	RADIALL	GREATBILLION
Model No.	N0319502	N(m)-RG142 - N(m)	SMAm st - SMA m ra 0.6m 18GHz
Calibration Date	January 17, 2018	January 19, 2018	May 11, 2018
Calibration Due Date	January 17, 2019	January 19, 2019	May 11, 2019

Equipment	Pyramidal Horn Antenna (18.0 - 26.5)GHz
Registration No.	EW-0905
Manufacturer	EMCO
Model No.	3160-09
Calibration Date	August 18, 2017
Calibration Due Date	February 18, 2019

2) Conducted Emissions Test

Equipment	EMI Test Receiver	RF Cable 9kHz to 1000MHz	LISN
Registration No.	EW-3156	EW-3170	EW-2874
Manufacturer	ROHDESCHWARZ	UNBRANDED	R&S
Model No.	ESR26	9kHz to 1000MHz	ENV-216
Calibration Date	November 10, 2017	May 11, 2018	March 29, 2018
Calibration Due Date	November 10, 2018	May 11, 2019	March 29, 2019

TEST REPORT

3) Conductive Measurement Test

Equipment	Coaxial Directional Coupler	Spectrum Analyzer	Digital Radiocommunication Tester for DECT
Registration No.	EW-2337	EW-3110	EW-2460
Manufacturer	MAGNA	R&S	ROHDESCHWARZ
Model No.	4222-16	FSP30	CMD60
Calibration Date	Nil*	March 05, 2018	June 20, 2018
Calibration Due Date	Nil*	March 05, 2019	June 20, 2019

Equipment	Signal Generator	Temperature & Humidity Chamber	DECT 01 02 03 (SMA - SMA) Cable x 3 pcs
Registration No.	EW-3250	EW-2134	EW-3102
Manufacturer	R&S	GIANT FORCE	N/A
Model No.	SMB100A	GTH-750-40-CP-SD	EMC2 SMA - SMA
Calibration Date	November 13, 2017	September 04, 2018	June 06, 2018
Calibration Due Date	November 13, 2018	September 04, 2019	June 06, 2019

Equipment	Power Combiner 10 to 2500 MHz	Digital Multimeter
Registration No.	EW-3067	EW-1810
Manufacturer	MINICIRCUITS	FLUKE
Model No.	15542 ZFSC-2-2500 0 0106	189
Calibration Date	April 13, 2018	November 29, 2017
Calibration Due Date	April 13, 2019	December 26, 2018

END OF TEST REPORT