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TEST REPORT

Report No.: 19010391HKG-002

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

DECT 6.0 Cordless Telephone - Base Unit Bluetooth Portion

FCC ID: EW780-0835-00

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: March 01, 2019

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, 2017 Edition
FCC ID:	EW780-0835-00
FCC Model(s):	DL72219, DL72119, DL72319, DL72419, DL72XY9
Type of EUT:	Transceiver
Description of EUT:	DECT 6.0 Cordless Telephone - Base Unit Bluetooth Portion
Serial Number:	N/A
Sample Receipt Date:	January 11, 2019
Date of Test:	January 15, 2019 to February 15,2019
Report Date:	March 01, 2019
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

Test Items	FCC Part 15 Section	Results	Details See Section
Radiated Emission	15.249(a), 209	Pass	4.2
AC Power Line Conducted Emission	15.207 & 15.107	Pass	4.3

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, 2017 Edition

TEST REPORT

2.0 GENERAL DESCRIPTION

2.1 Product Description

The DL72219 is a Cordless Phone with Bluetooth Device - 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 at frequency range of 2402MHz to 2480MHz with 79 channels. The Bluetooth transceiver 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 Base Unit is powered by 100-120VAC 60Hz 150mA AC adaptor.

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

The Model(s): DL72119, DL72319, DL72419 and DL72XY9 are the same as the Model: DL72219 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, model number, package type, number of Handset and Charger to be sold for marketing purpose as declared by client. Suffix ("X,Y" in DL72XY9) indicates different number of handset and extra charger, and different package type or different color of enclosure.

The circuit description is saved with filename: descri.pdf.

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.

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.

2.4 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.

TEST REPORT

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 100-120VAC 60Hz 150mA to 6.0VDC 400mA 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 handset was remotely located as far from the antenna and the base as possible to ensure full power transmission from the base. Else, the base was wired to transmit full power.

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. As base unit has two adaptors, both have been tested. The data for measuring above 1GHz in this report represented the worst-case.

RF module for base unit of DL72219 is the same with original granted model RT802. Therefore bandedge test for DL72219 are skipped.

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.

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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.

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3.3 Radiated Emission Test Setup

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

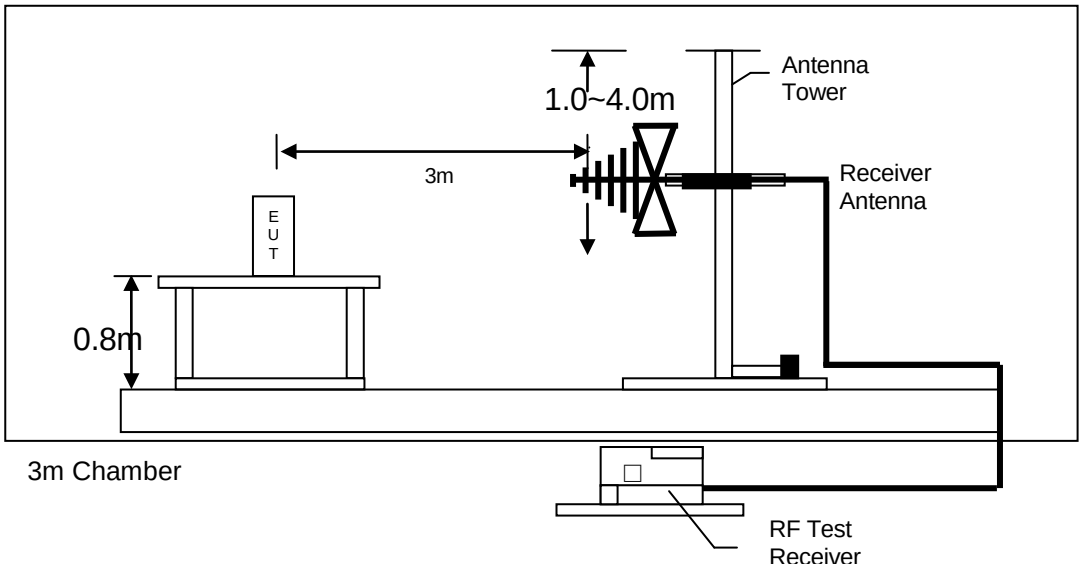

Figure 3.3.1 Test setup of radiated emissions up to 1GHz

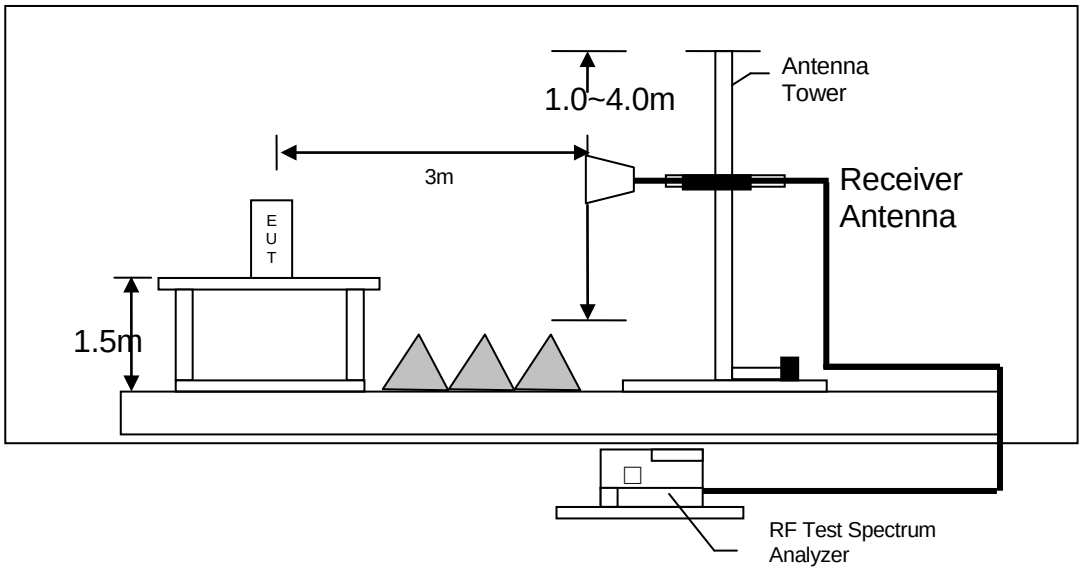

Figure 3.3.2 Test setup of radiated emissions above 1GHz

TEST REPORT

3.4 Conducted Emission Test Setup

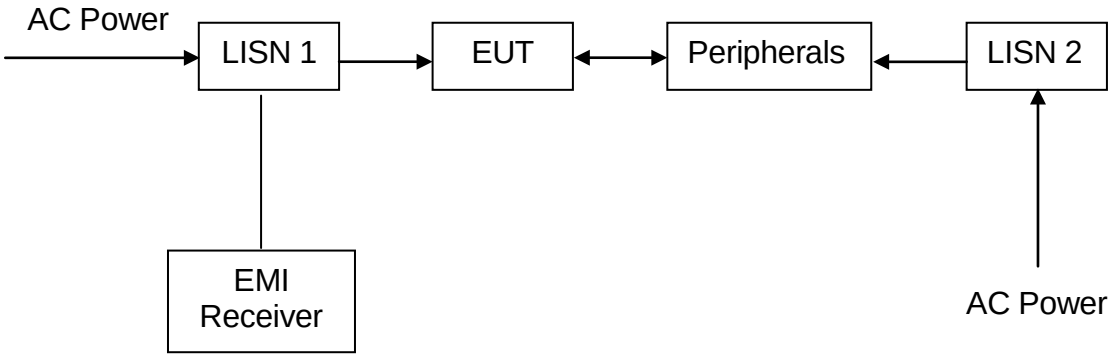

Figure 3.4.1

TEST REPORT

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) An AC adaptor (100-120VAC 60Hz 150mA to 6.0VDC 400mA, Model: VT05UUS06040, Brand Name: VTPL) (Supplied by Client)
(2) An AC adaptor (100-120VAC 60Hz 150mA to 6.0VDC 400mA, Model: S003AKU0600040, Brand Name: Ten Pao) (Supplied by Client)

Description of Accessories:

(1) Telecommunication cable with RJ11C connectors (1m, unshielded), terminated (Supplied by Intertek)
(2) Handset, Model: DL72XY9 (FCC ID: EW780-9854-00) (Supplied 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, frequency stability and timing jitter are ± 5.3dB, ± 4.2dB, ±1dB, ±23Hz, 0.1μs 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 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

TEST REPORT

4.2 Radiated Emissions

4.2.1 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
At

With adaptor VTPL - 415.265 MHz

With adaptor Ten Pao - 415.284 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 1-5 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 –

With adaptor VTPL - Passed by 2.9 dB margin

With adaptor Ten Pao - Passed by 2.8 dB margin

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 00

Table 1, Base Unit

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	4804.000	28.8	33	34.9	30.7	24	6.7	54.0	-47.3
H	7206.000	27.8	33	37.9	32.7	24	8.7	54.0	-45.3
H	9608.000	27.1	33	40.4	34.5	24	10.5	54.0	-43.5
H	12010.000	29.7	33	40.5	37.2	24	13.2	54.0	-40.8
H	14412.000	31.4	33	40.0	38.4	24	14.4	54.0	-39.6

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)
H	4804.000	28.8	33	34.9	30.7	74.0	-43.3
H	7206.000	27.8	33	37.9	32.7	74.0	-41.3
H	9608.000	27.1	33	40.4	34.5	74.0	-39.5
H	12010.000	29.7	33	40.5	37.2	74.0	-36.8
H	14412.000	31.4	33	40.0	38.4	74.0	-35.6

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 within the restricted band meets the requirement of FCC Part 15 Section 15.205.

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Mode: TX-Channel 39

Table 2, Base Unit

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	4880.000	28.9	33	34.9	30.8	24	6.8	54.0	-47.2
H	7320.000	27.7	33	37.9	32.6	24	8.6	54.0	-45.4
H	9760.000	27.5	33	40.4	34.9	24	10.9	54.0	-43.1
H	12200.000	29.6	33	40.5	37.1	24	13.1	54.0	-40.9
H	14640.000	33.0	33	38.4	38.4	24	14.4	54.0	-39.6

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)
H	4880.000	28.9	33	34.9	30.8	74.0	-43.2
H	7320.000	27.7	33	37.9	32.6	74.0	-41.4
H	9760.000	27.5	33	40.4	34.9	74.0	-39.1
H	12200.000	29.6	33	40.5	37.1	74.0	-36.9
H	14640.000	33.0	33	38.4	38.4	74.0	-35.6

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 within the restricted band meets the requirement of FCC Part 15 Section 15.205.

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Mode: TX-Channel 78

Table 3, Base Unit

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	4960.000	29.1	33	34.9	31.0	24	7.0	54.0	-47.0
H	7440.000	28.2	33	37.9	33.1	24	9.1	54.0	-44.9
H	9920.000	27.2	33	40.4	34.6	24	10.6	54.0	-43.4
H	12400.000	29.4	33	40.5	36.9	24	12.9	54.0	-41.1
H	14880.000	32.8	33	38.4	38.2	24	14.2	54.0	-39.8

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)
H	4960.000	29.1	33	34.9	31.0	74.0	-43.0
H	7440.000	28.2	33	37.9	33.1	74.0	-40.9
H	9920.000	27.2	33	40.4	34.6	74.0	-39.4
H	12400.000	29.4	33	40.5	36.9	74.0	-37.1
H	14880.000	32.8	33	38.4	38.2	74.0	-35.8

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 within the restricted band meets the requirement of FCC Part 15 Section 15.205.

TEST REPORT

Mode: Talk with Ten Pao adaptor

Table 4, Base Unit

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	32.800	31.7	16	10.0	25.7	40.0	-14.3
V	64.265	32.5	16	9.0	25.5	40.0	-14.5
H	290.332	24.7	16	22.0	30.7	46.0	-15.3
H	310.940	27.2	16	23.0	34.2	46.0	-11.8
V	415.265	34.1	16	25.0	43.1	46.0	-2.9
V	518.172	28.2	16	27.0	39.2	46.0	-6.8
H	622.054	25.7	16	29.0	38.7	46.0	-7.3
V	961.664	30.3	16	33.0	47.3	54.0	-6.7

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 within the restricted band meets the requirement of FCC Part 15 Section 15.205.

TEST REPORT

Mode: Talk with VTPL adaptor

Table 5, Base Unit

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	47.975	29.3	16	11.0	24.3	40.0	-15.7
V	121.063	28.0	16	14.0	26.0	43.5	-17.5
H	289.896	24.5	16	22.0	30.5	46.0	-15.5
H	310.929	26.9	16	23.0	33.9	46.0	-12.1
V	415.284	34.2	16	25.0	43.2	46.0	-2.8
V	518.175	28.4	16	27.0	39.4	46.0	-6.6
H	622.055	25.4	16	29.0	38.4	46.0	-7.6
V	961.658	30.5	16	33.0	47.5	54.0	-6.5

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 within the restricted band meets the requirement of FCC Part 15 Section 15.205.

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4.2.3 Transmitter Duty Cycle Calculation

Based on the Bluetooth Specification Version 2.0 / 2.1 + EDR, 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

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4.3 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.

4.3.1 AC Power Line Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration
at

With adaptor Ten Pao - 29.9985 MHz

With adaptor VTPL - 402 MHz

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

4.3.2 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 15.79 dB margin compared with CISPR average limit

Passed by 11.51 dB margin compared with CISPR average limit

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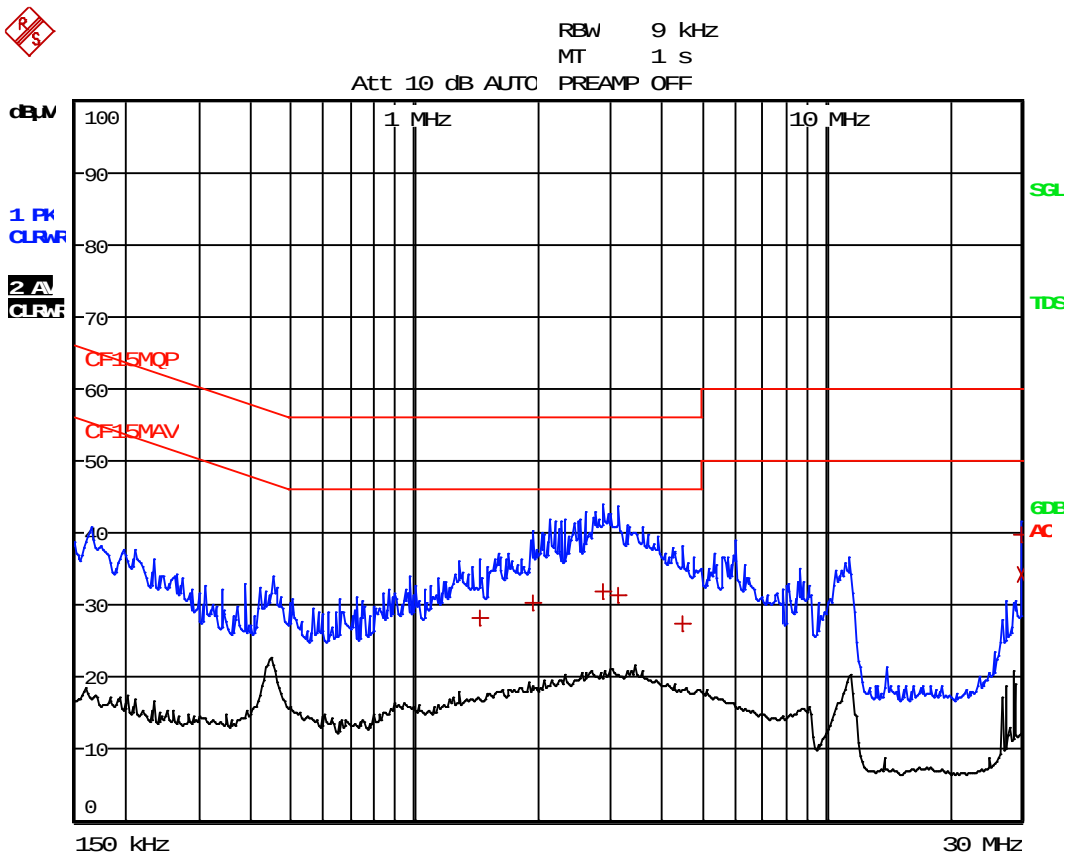
CONDUCTED EMISSION DATA

Worst Case: Talk with Ten Pao adaptor



TEST REPORT

Worst Case: Talk with Ten Pao adaptor

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1 Quasi Peak	1.4505 MHz	28.23	L1	-27.76
1 Quasi Peak	1.9455 MHz	30.28	L1	-25.71
1 Quasi Peak	2.868 MHz	31.96	L1	-24.03
1 Quasi Peak	3.147 MHz	31.30	N	-24.69
1 Quasi Peak	4.479 MHz	27.40	L1	-28.59
1 Quasi Peak	29.9985 MHz	39.86	N	-20.13
2 CISPR Averag	29.9985 MHz	34.20	L1	-15.79

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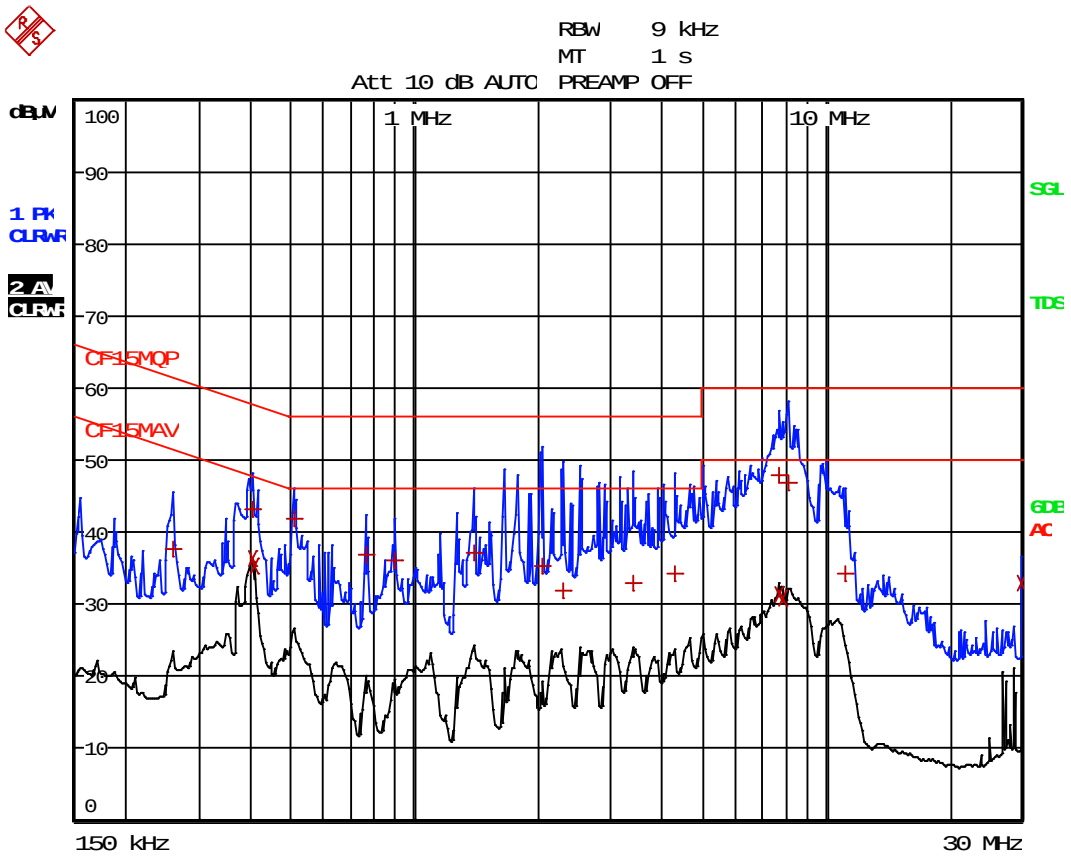
Worst Case: Talk with VTPL adaptor



TEST REPORT

Worst Case: Talk with VTPL adaptor

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1 Quasi Peak	258 kHz	37.58	L1	-23.90
1 Quasi Peak	402 kHz	43.08	L1	-14.73
2 CISPR Average	402 kHz	36.29	L1	-11.51
2 CISPR Average	406.5 kHz	35.31	N	-12.40
1 Quasi Peak	510 kHz	41.99	L1	-14.01
1 Quasi Peak	762 kHz	36.84	L1	-19.15
1 Quasi Peak	892.5 kHz	36.18	N	-19.81
1 Quasi Peak	1.392 MHz	37.16	N	-18.83
1 Quasi Peak	2.04 MHz	35.34	N	-20.65
1 Quasi Peak	2.301 MHz	31.96	L1	-24.03
1 Quasi Peak	3.417 MHz	33.01	L1	-22.98
1 Quasi Peak	4.3125 MHz	34.20	N	-21.80
1 Quasi Peak	7.7505 MHz	47.87	L1	-12.12
2 CISPR Average	7.7505 MHz	31.30	N	-18.69
2 CISPR Average	7.98 MHz	30.78	N	-19.21
1 Quasi Peak	8.133 MHz	46.97	N	-13.02
1 Quasi Peak	11.1795 MHz	34.20	L1	-25.79
2 CISPR Average	29.9985 MHz	32.81	L1	-17.18

TEST REPORT

5.0 EQUIPMENT LIST

1) Radiated Emissions Test

Equipment	EMI Test Receiver	Spectrum Analyzer	Biconical Antenna
Registration No.	EW-3156	EW-2466	EW-0571
Manufacturer	ROHDESCHWARZ	ROHDESCHWARZ	EMCO
Model No.	ESR26	FSP30	3104C
Calibration Date	November 19, 2018	January 06, 2019	February 27, 2018
Calibration Due Date	November 19, 2019	January 06, 2020	August 27, 2019

Equipment	Log Periodic Antenna	BiConiLog Antenna	Double Ridged Guide Antenna (1GHz - 18GHz)
Registration No.	EW-0447	EW-3061	EW-1133
Manufacturer	EMCO	EMCO	EMCO
Model No.	3146	3142E	3115
Calibration Date	January 17, 2018	November 02, 2017	November 29, 2018
Calibration Due Date	July 17, 2019	May 02, 2019	May 29, 2020

Equipment	Notch Filter (cutoff frequency 2.4GHz to 2.5GHz) 2 pieces	12m Double Shield RF Cable (20MHz to 6GHz)	High Frequency Coaxial Cable Assembly (4 pcs)
Registration No.	EW-2213	EW-1852	EW-3126c
Manufacturer	MICROWAVE	RADIALL	GREATBILLION
Model No.	BRM50701-02	N(m)-RG142 - N(m)	SMAm st - SMA m ra 0.6m 18GHz
Calibration Date	May 24, 2018	January 19, 2018	May 11, 2018
Calibration Due Date	May 24, 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-3095	EW-3170	EW-2874
Manufacturer	R&S	N/A	R&S
Model No.	ESCI	9kHz to 1000MHz	ENV-216
Calibration Date	February 15, 2018	May 11, 2018	March 29, 2018
Calibration Due Date	February 15, 2019	May 11, 2019	March 29, 2019

END OF TEST REPORT