

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

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TEST REPORT

Report Number: 14030327HKG-002

Application
for

Original Grant of 47 CFR Part 15 Certification
New Family of RSS-210 Issue 8 Equipment Certification

1.9GHz Digital Modulation Cordless Phone with Caller ID,
Speakerphone, Digital Answering Machine and Bluetooth - Base Unit
Bluetooth Portion

FCC ID: EW780-9618-00

IC: 1135B-80961800

Prepared and Checked by:

Handwritten signature of Yeung Yung Fai, James.

Yeung Yung Fai, James
Engineer

Approved by:

Handwritten signature of Nip Ming Fung, Melvin.

Nip Ming Fung, Melvin
Assistant Manager
April 28, 2014

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Intertek Testing Services Hong Kong Ltd.

2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

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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, 2012 Edition |
| FCC ID: | EW780-9618-00 |
| FCC Model(s): | DS6291-2, DS6291, DS6291-3, DS629Z-XY |
| IC Specification Standard: | RSS-210 Issue 8, December 2010 RSS-Gen Issue 3, December 2010 |
| IC: | 1135B-80961800 |
| IC Model(s): | DS6291-2, DS6291, DS6291-3 |
| Type of EUT: | Transmitter |
| Description of EUT: | 1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone, Digital Answering Machine and Bluetooth - Base Unit Bluetooth Portion |
| Serial Number: | N/A |
| Sample Receipt Date: | March 10, 2014 |
| Date of Test: | March 20-24, 2014 |
| Report Date: | April 28, 2014 |
| Environmental Conditions: | Temperature: +10 to 40°C Humidity: 10 to 90% |

Table of Contents

| | |
|---|----|
| 1.0 Test Results Summary & Statement of Compliance | 4 |
| 1.1 Summary of Test Results | 4 |
| 1.2 Statement of Compliance | 4 |
| 2.0 General Description | 6 |
| 2.1 Product Description | 6 |
| 2.2 Test Methodology | 6 |
| 2.3 Test Facility | 7 |
| 3.0 System Test Configuration | 9 |
| 3.1 Justification | 9 |
| 3.2 EUT Exercising Software | 10 |
| 3.3 Details of EUT and Description of Accessories | 11 |
| 3.4 Measurement Uncertainty | 11 |
| 4.0 Test Results | 13 |
| 4.1 Field Strength Calculation | 13 |
| 4.2 Radiated Emissions | 14 |
| 4.2.1 Radiated Emission Configuration Photograph | 14 |
| 4.2.2 Radiated Emission Data | 14 |
| 4.2.3 Transmitter Duty Cycle Calculation | 19 |
| 4.3 Radiated Emission on the Bandedge | 20 |
| 4.4 AC Power Line Conducted Emission | 23 |
| 4.4.1 AC Power Line Conducted Emission Configuration Photograph | 23 |
| 4.4.2 AC Power Line Conducted Emission Data | 23 |
| 5.0 Equipment List | 27 |

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EXHIBIT 1
TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE

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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 | 7.1.2 [#] | Pass | 2.1 |
| Security Code Information | 15.214(d) | 2.4 | Pass | 2.1 |
| Radiated Emission | 15.249(a), 209, & 109 | A2.9(a) | Pass | 4.2 |
| Radiated Emission on the Bandedge | 15.249(d) | A2.9(b) | Pass | 4.3 |
| AC Power Line Conducted Emission | 15.207 & 15.107 | 7.2.4 [#] | 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, 2012 Edition
RSS-210 Issue 8, December 2010
RSS-Gen Issue 3, December 2010

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EXHIBIT 2
GENERAL DESCRIPTION

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2.0 General Description

2.1 Product Description

The DS6291-2 is a 1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone, Digital Answering Machine and Bluetooth - Base Unit Bluetooth Portion. It operates at frequency range of 2402MHz to 2480MHz. The Base Unit is powered by an adaptor 100-120VAC to 6VDC 600mA and 5.1VDC 1000mA. The usage of USB is for charging only.

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

For FCC, the Model(s): DS6291, DS6291-3 and DS629Z-XY are the same as the Model: DS6291-2 in electrical designs including software & firmware, PCB layout and construction design/physical design/enclosure. The only differences between these models are color, model number, no. of handset and extra charger and package material to be sold for marketing purpose. Suffix (X) indicates any alphanumeric character or blank is presenting no. of Handset and extra charger. Suffix (Y) indicates any alphanumeric character or blank is presenting different color of enclosure. Suffix (Z) indicates any alphanumeric is presenting different package material.

For IC, the Model(s): DS6291 and DS6291-3 are the same as the Model: DS6291-2 in electrical designs including software & firmware, PCB layout and construction design/physical design/enclosure. The only differences between these models are color, model number, number of handset and extra charger and package material to be sold for marketing purpose.

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 Test Methodology

Both AC power line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2009). Preliminary radiated scans and all radiated measurements were performed in Open Area 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.

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2.3 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data and conducted data are at Roof Top and 2nd Floor respectively of Intertek Testing Services Hong Kong Ltd., which is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC and the Industry Canada.

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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 a 100-120VAC to 6VDC 600mA and 5.1VDC 1000mA adaptor.

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. 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.

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 625 μ s. 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 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 to 6VDC 600mA and 5.1VDC 1000mA, Model: SSA-9W2 US 051100/060060, Brand: Sunstrong) (Supplied by Client)

Description of Accessories:

- (1) Iphone 5, Model: MD297, FCC ID: BCG-E2599A (Supplied by Intertek)
- (2) Telecommunication cable with RJ11C connectors (1m, unshielded), terminated (Supplied by Intertek)
- (3) 3m Telephone Line (Supplied by Intertek)
- (4) USB cable with 1 meter long (Supplied by Intertek)
- (5) Telephone Line Simulator, Model: TLS-5D-01, S/N: 151101 (Supplied by Intertek)
- (6) Nokia Mobile Phone: Model: 5300, FCC ID: PPIRM-146 (Supplied by Intertek)
- (7) The handset of DS6291-2, FCC ID: EW780-9618-00 (Supplied by Client)

3.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

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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 dB μ V/m
- RA = Receiver Amplitude (including preamplifier) in dB μ V
- 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 dB μ V 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 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

$$\begin{aligned} RA &= 62.0 \text{ dB}\mu\text{V} \\ AF &= 7.4 \text{ dB} \\ CF &= 1.6 \text{ dB} \\ AG &= 29 \text{ dB} \\ PD &= 0 \text{ dB} \\ AV &= -10 \text{ dB} \\ FS &= 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 \text{ dB}\mu\text{V/m} \end{aligned}$$

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm} [(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$

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4.2 Radiated Emissions

4.2.1 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
at

55.3 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.

Judgement -

Passed by 6.1 dB margin

Mode: TX-Channel 00

Table 1

Radiated Emission Data

| Polarization | Frequency (MHz) | Reading (dB μ V) | Pre-Amp Gain (dB) | Antenna Factor (dB) | Average Factor (dB) | Calculated at 3m (dB μ V/m) | Average Limit at 3m (dB μ V/m) | Margin (dB) |
|--------------|------------------|----------------------|-------------------|---------------------|---------------------|---------------------------------|------------------------------------|--------------|
| H | 2402.000 | 100.2 | 33 | 29.4 | 24 | 72.6 | 94.0 | -21.4 |
| H | 4804.000 | 62.0 | 33 | 34.9 | 24 | 39.9 | 54.0 | -14.1 |
| H | 7206.000 | 45.7 | 33 | 37.9 | 24 | 26.6 | 54.0 | -27.4 |
| H | 9608.000 | 42.8 | 33 | 40.4 | 24 | 26.2 | 54.0 | -27.8 |
| H | 12010.000 | 42.0 | 33 | 40.5 | 24 | 25.5 | 54.0 | -28.5 |
| H | 14412.000 | 42.3 | 33 | 40.0 | 24 | 25.3 | 54.0 | -28.7 |

| Polarization | Frequency (MHz) | Reading (dB μ V) | Pre-Amp Gain (dB) | Antenna Factor (dB) | Net at 3m - Peak (dB μ V/m) | Peak Limit at 3m (dB μ V/m) | Margin (dB) |
|--------------|------------------|----------------------|-------------------|---------------------|---------------------------------|---------------------------------|--------------|
| H | 2402.000 | 100.2 | 33 | 29.4 | 96.6 | 114.0 | -17.4 |
| H | 4804.000 | 62.0 | 33 | 34.9 | 63.9 | 74.0 | -10.1 |
| H | 7206.000 | 45.7 | 33 | 37.9 | 50.6 | 74.0 | -23.4 |
| H | 9608.000 | 42.8 | 33 | 40.4 | 50.2 | 74.0 | -23.8 |
| H | 12010.000 | 42.0 | 33 | 40.5 | 49.5 | 74.0 | -24.5 |
| H | 14412.000 | 42.3 | 33 | 40.0 | 49.3 | 74.0 | -24.7 |

- 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 (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

Radiated Emission Data

| Polarization | Frequency (MHz) | Reading (dB μ V) | Pre-Amp Gain (dB) | Antenna Factor (dB) | Average Factor (dB) | Calculated at 3m (dB μ V/m) | Average Limit at 3m (dB μ V/m) | Margin (dB) |
|--------------|------------------|----------------------|-------------------|---------------------|---------------------|---------------------------------|------------------------------------|--------------|
| H | 2441.000 | 99.0 | 33 | 29.4 | 24 | 71.4 | 94.0 | -22.6 |
| H | 4882.000 | 61.3 | 33 | 34.9 | 24 | 39.2 | 54.0 | -14.8 |
| H | 7323.000 | 45.5 | 33 | 37.9 | 24 | 26.4 | 54.0 | -27.6 |
| H | 9764.000 | 42.8 | 33 | 40.4 | 24 | 26.2 | 54.0 | -27.8 |
| H | 12205.000 | 42.0 | 33 | 40.5 | 24 | 25.5 | 54.0 | -28.5 |
| H | 14646.000 | 43.9 | 33 | 38.4 | 24 | 25.3 | 54.0 | -28.7 |

| Polarization | Frequency (MHz) | Reading (dB μ V) | Pre-Amp Gain (dB) | Antenna Factor (dB) | Net at 3m - Peak (dB μ V/m) | Peak Limit at 3m (dB μ V/m) | Margin (dB) |
|--------------|------------------|----------------------|-------------------|---------------------|---------------------------------|---------------------------------|--------------|
| H | 2441.000 | 99.0 | 33 | 29.4 | 95.4 | 114.0 | -18.6 |
| H | 4882.000 | 61.3 | 33 | 34.9 | 63.2 | 74.0 | -10.8 |
| H | 7323.000 | 45.5 | 33 | 37.9 | 50.4 | 74.0 | -23.6 |
| H | 9764.000 | 42.8 | 33 | 40.4 | 50.2 | 74.0 | -23.8 |
| H | 12205.000 | 42.0 | 33 | 40.5 | 49.5 | 74.0 | -24.5 |
| H | 14646.000 | 43.9 | 33 | 38.4 | 49.3 | 74.0 | -24.7 |

- 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 (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

Radiated Emission Data

| Polarization | Frequency (MHz) | Reading (dB μ V) | Pre-Amp Gain (dB) | Antenna Factor (dB) | Average Factor (dB) | Calculated at 3m (dB μ V/m) | Average Limit at 3m (dB μ V/m) | Margin (dB) |
|--------------|------------------|----------------------|-------------------|---------------------|---------------------|---------------------------------|------------------------------------|--------------|
| H | 2480.000 | 97.9 | 33 | 29.4 | 24 | 70.3 | 94.0 | -23.7 |
| H | 4960.000 | 61.1 | 33 | 34.9 | 24 | 39.0 | 54.0 | -15.0 |
| H | 7440.000 | 45.4 | 33 | 37.9 | 24 | 26.3 | 54.0 | -27.7 |
| H | 9920.000 | 42.1 | 33 | 40.4 | 24 | 25.5 | 54.0 | -28.5 |
| H | 12400.000 | 41.9 | 33 | 40.5 | 24 | 25.4 | 54.0 | -28.6 |
| H | 14880.000 | 43.9 | 33 | 38.4 | 24 | 25.3 | 54.0 | -28.7 |

| Polarization | Frequency (MHz) | Reading (dB μ V) | Pre-Amp Gain (dB) | Antenna Factor (dB) | Net at 3m - Peak (dB μ V/m) | Peak Limit at 3m (dB μ V/m) | Margin (dB) |
|--------------|------------------|----------------------|-------------------|---------------------|---------------------------------|---------------------------------|--------------|
| H | 2480.000 | 97.9 | 33 | 29.4 | 94.3 | 114.0 | -19.7 |
| H | 4960.000 | 61.1 | 33 | 34.9 | 63.0 | 74.0 | -11.0 |
| H | 7440.000 | 45.4 | 33 | 37.9 | 50.3 | 74.0 | -23.7 |
| H | 9920.000 | 42.1 | 33 | 40.4 | 49.5 | 74.0 | -24.5 |
| H | 12400.000 | 41.9 | 33 | 40.5 | 49.4 | 74.0 | -24.6 |
| H | 14880.000 | 43.9 | 33 | 38.4 | 49.3 | 74.0 | -24.7 |

- 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 (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: Talk

Table 4

Radiated Emission Data

| Polarization | Frequency (MHz) | Reading (dB μ V) | Pre-amp (dB) | Antenna Factor (dB) | Net at 3m (dB μ V/m) | Limit at 3m (dB μ V/m) | Margin (dB) |
|--------------|-----------------|----------------------|--------------|---------------------|--------------------------|----------------------------|-------------|
| V | 55.300 | 38.9 | 16 | 11.0 | 33.9 | 40.0 | -6.1 |
| V | 110.600 | 35.8 | 16 | 14.0 | 33.8 | 43.5 | -9.7 |
| H | 165.900 | 33.5 | 16 | 17.0 | 34.5 | 43.5 | -9.0 |
| H | 206.524 | 33.8 | 16 | 17.0 | 34.8 | 43.5 | -8.7 |
| H | 354.126 | 26.2 | 16 | 24.0 | 34.2 | 46.0 | -11.8 |
| H | 411.800 | 24.8 | 16 | 25.0 | 33.8 | 46.0 | -12.2 |

- 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. 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.

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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 $625\mu\text{s}$. DH5 has the maximum duty cycle, which consists of 5 continuous Tx slots and 1 Rx slot. Therefore one hopset take $(5+1) \times 625\mu\text{s} = 3.75\text{ms}$. For one period for a pseudo-random hopping through at least 20 RF channels in adaptive mode(worst case), it take: $20 \times 3.75\text{ms} = 75\text{ms}$.

The dwell time for DH5 is $5 \times 625\mu\text{s} = 3.125\text{ms}$

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

Therefore,

$$\begin{aligned}\text{Duty Cycle (DC)} &= \text{Maximum On time in } 100\text{ms}/100\text{ms} \\ &= 3.125\text{ms} \times 2 / 100\text{ms} \\ &= 0.0625\end{aligned}$$

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

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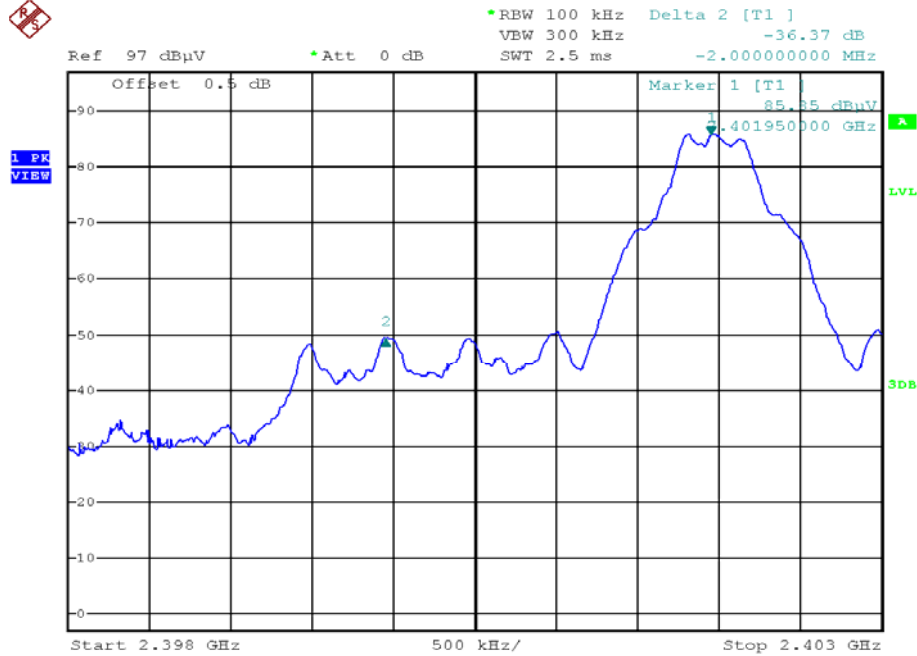
4.3 Radiated Emission on the Bandedge

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 (2009) for frequency being measured.

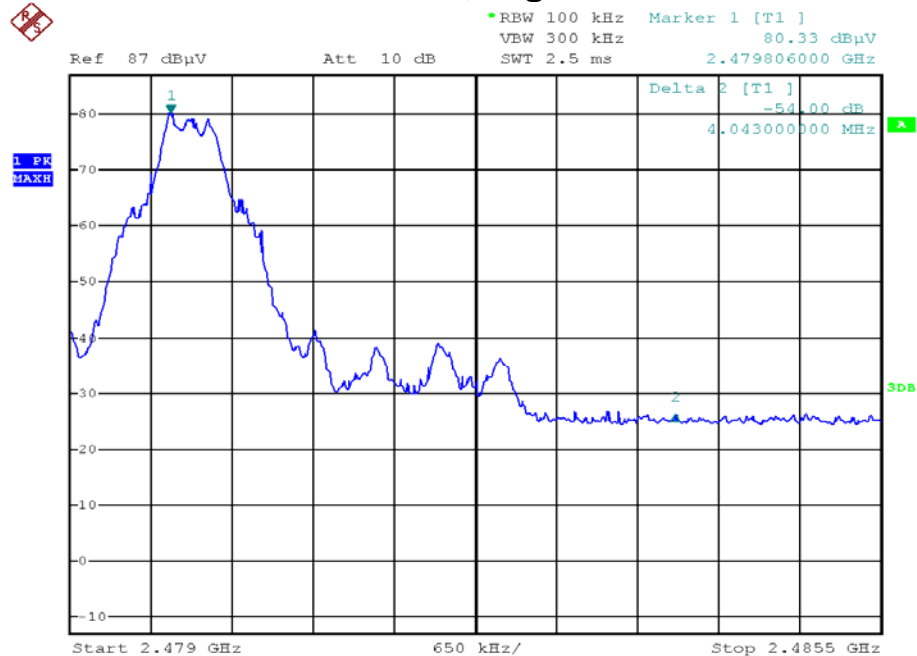
Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50 dB below the level of the fundamental or to the general radiated emission limits in FCC Part 15 Section 15.209 / Table 5 of RSS-Gen, whichever is the lesser attenuation, which meet the requirement of FCC 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 Bluetooth Portion, Lowest channel



Base unit Bluetooth Portion, Highest channel



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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 (dB μ V/m) | Delta from the Plot (dB) | Resultant Field Strength (dB μ V/m) | Average Limit (dB μ V/m) | Margin (dB) |
|---------|-------------------------------------|--------------------------|---|------------------------------|-------------|
| Lowest | 72.6 | 36.37 | 36.23 | 54 | -17.77 |
| Highest | 70.3 | 54 | 16.3 | 54 | -37.70 |

| Channel | Fundamental Emission (dB μ V/m) | Delta from the Plot (dB) | Resultant Field Strength (dB μ V/m) | Peak Limit (dB μ V/m) | Margin (dB) |
|---------|-------------------------------------|--------------------------|---|---------------------------|-------------|
| Lowest | 96.6 | 36.37 | 60.23 | 74 | -13.77 |
| Highest | 94.3 | 54 | 40.3 | 74 | -33.70 |

The resultant field strength meets the general radiated emission limit in FCC Part 15 Section 15.209 / Table 5 of RSS-Gen, which does not exceed 74dB μ V/m for peak limit and also 54dB μ V/m for average limit.

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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.

4.4.1 AC Power Line Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration
at

0.366 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.

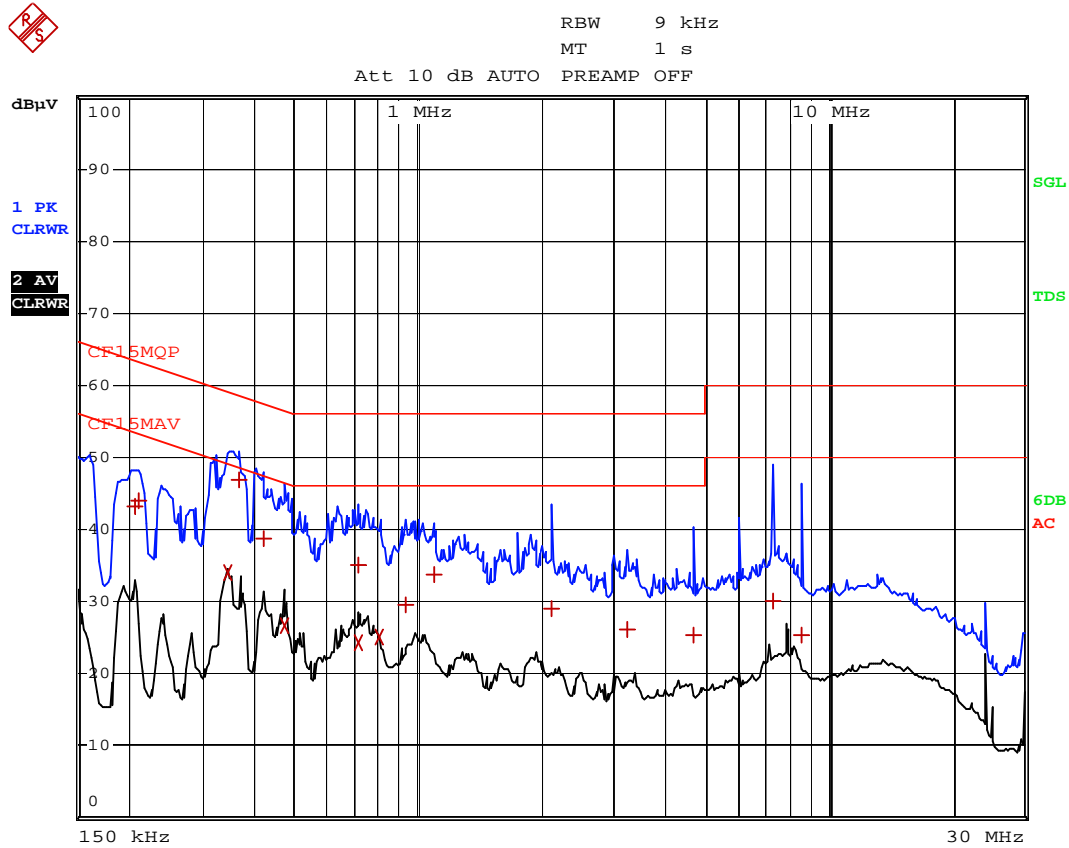
Passed by 11.76 dB margin compared with quasi peak limit

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Worst Case: Bluetooth Talk



Date: 20.MAR.2014 17:43:45

Issuing Laboratory:
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Worst Case: Bluetooth Talk

| EDIT PEAK LIST (Final Measurement Results) | | | | | |
|--|------------|------------------|--------|--------|----------|
| Trace1: | CF15MQP | | | | |
| Trace2: | CF15MAV | | | | |
| Trace3: | --- | | | | |
| TRACE | FREQUENCY | LEVEL dB μ V | | DELTA | LIMIT dB |
| 1 Quasi Peak | 208.5 kHz | 43.23 | L1 gnd | -20.03 | |
| 1 Quasi Peak | 213 kHz | 43.84 | N gnd | -19.24 | |
| 2 CISPR Average | 343.5 kHz | 33.87 | N gnd | -15.24 | |
| 1 Quasi Peak | 366 kHz | 46.82 | L1 gnd | -11.76 | |
| 1 Quasi Peak | 420 kHz | 38.62 | N gnd | -18.82 | |
| 2 CISPR Average | 474 kHz | 26.73 | L1 gnd | -19.70 | |
| 1 Quasi Peak | 712.5 kHz | 34.96 | L1 gnd | -21.03 | |
| 2 CISPR Average | 712.5 kHz | 24.40 | N gnd | -21.59 | |
| 2 CISPR Average | 802.5 kHz | 25.13 | N gnd | -20.86 | |
| 1 Quasi Peak | 937.5 kHz | 29.56 | L1 gnd | -26.44 | |
| 1 Quasi Peak | 1.0995 MHz | 33.77 | N gnd | -22.22 | |
| 1 Quasi Peak | 2.121 MHz | 28.99 | N gnd | -27.00 | |
| 1 Quasi Peak | 3.2235 MHz | 25.98 | L1 gnd | -30.01 | |
| 1 Quasi Peak | 4.713 MHz | 25.41 | L1 gnd | -30.59 | |
| 1 Quasi Peak | 7.3185 MHz | 29.93 | L1 gnd | -30.06 | |
| 1 Quasi Peak | 8.619 MHz | 25.39 | L1 gnd | -34.61 | |

Date: 20.MAR.2014 17:44:15

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**EXHIBIT 5
EQUIPMENT LIST**

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5.0 Equipment List

1) Radiated Emissions Test

| Equipment | EMI Test Receiver | Horn Antenna | Spectrum Analyzer |
|----------------------|-------------------|--------------|-------------------|
| Registration No. | EW-2666 | EW-1679 | EW-2249 |
| Manufacturer | R&S | SCHWARZBECK | R&S |
| Model No. | ESCI7 | BBHA9170 | FSP30 |
| Calibration Date | Jun. 20, 2013 | Apr. 1, 2013 | Oct. 28, 2013 |
| Calibration Due Date | Jun. 20, 2014 | Apr. 1, 2014 | Oct. 28, 2014 |

| Equipment | Log Periodic Antenna | Double Ridged Guide Antenna (1GHz - 18GHz) | Biconical Antenna 20MHz to 200MHz |
|----------------------|----------------------|--|-----------------------------------|
| Registration No. | EW-0447 | EW-1015 | EW-2512 |
| Manufacturer | EMCO | EMCO | EMCO |
| Model No. | 3146 | 3115 | 3104C |
| Calibration Date | Aug. 19, 2013 | Mar. 05, 2013 | Jun. 25, 2013 |
| Calibration Due Date | Feb. 19, 2015 | Sep. 05, 2014 | Dec. 25, 2014 |

2) Conducted Emissions Test

| Equipment | EMI Test Receiver | LISN |
|----------------------|-------------------|---------------|
| Registration No. | EW-2251 | EW-2874 |
| Manufacturer | R&S | R&S |
| Model No. | ESCI | ENV-216 |
| Calibration Date | Nov. 20, 2013 | Oct. 17, 2013 |
| Calibration Due Date | Nov. 20, 2014 | Aug. 17, 2014 |

END OF TEST REPORT