

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

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TEST REPORT

Report Number: 13121190HKG-001

Application
for

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

Intelligent Executive Business SIP Phone

FCC ID: MZVIPX-500

IC: 3921A-IPX500A

Prepared and Checked by:

A handwritten signature in black ink, appearing to read 'James', written over a horizontal line.

Yeung Yung Fai, James
Engineer

Approved by:

A handwritten signature in black ink, appearing to read 'Melvin', written over a horizontal line.

Nip Ming Fung, Melvin
Assistant Manager
March 17, 2014

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Intertek Testing Services Hong Kong Ltd.

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GENERAL INFORMATION

Applicant Name:	Telefield Ltd.
Applicant Address:	Flat D, 2/F., Valiant Industrial Centre, 2-12 Au Pui Wan Street, Fo Tan, New Territories, Hong Kong.
FCC Specification Standard:	FCC Part 15, October 1, 2012 Edition
FCC ID:	MZVIPX-500
Brand Name:	RCA, TELEFIELD
FCC Model(s):	IPX500, IPX500X, IPX500XX, IPX500XXX, IPX500XXX-X, IPX500TC, IPX500TCX, IPX500TCXX, IPX500TCXXX, IPX500TCXXX-X
IC Specification Standard:	RSS-210 Issue 8, December 2010 RSS-Gen Issue 3, December 2010
IC:	3921A-IPX500A
Brand Name:	RCA, TELEFIELD
IC Model(s):	IPX500TC
Type of EUT:	Transmitter
Description of EUT:	Intelligent Executive Business SIP Phone
Serial Number:	N/A
Sample Receipt Date:	December 31, 2013
Date of Test:	March 05-13, 2014
Report Date:	March 17, 2014
Environmental Conditions:	Temperature: +10 to 40°C Humidity: 10 to 90%

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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
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
Radiated Emission in Restricted Bands	15.205	2.2	Pass	4.2
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 IPX500 is a Intelligent Executive Business SIP Phone. It is Bluetooth V2.1 +EDR. It operates at frequency range of 2402MHz to 2480MHz. The EUT is powered by an adaptor 100-240VAC 50/60Hz 0.4A to 5.5VDC 2000mA.

The antenna used in EUT is integral, and the test sample is a prototype.

For FCC, The Model(s): IPX500X, IPX500XX, IPX500XXX, IPX500XXX-X, IPX500TC, IPX500TCX, IPX500TCXX, IPX500TCXXX and IPX500TCXXX-X are the same as the Model: IPX500 in electronics/electrical designs including software & firmware, PCB layout and construction design/physical design/enclosure. The only differences between these models are model number, cosmetic details and packing configuration to be sold for marketing purpose. 1st Suffix (X) indicates different brand and color, 2nd suffix (X) indicate different package type, 3rd suffix (X) indicate different number of corded handsets and 4th suffix (X) indicate different version of models.

For IC, The Model(s): IPX500TC is the same as the FCC Model: IPX500 in electronics/electrical designs including software & firmware, PCB layout and construction design/physical design/enclosure. The only differences between these models are model number, cosmetic details and packing configuration to be sold for marketing purpose.

The circuit description is 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 C63.4 (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.

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

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3.0 **System Test Configuration**

3.1 Justification

For radiated emissions testing, the equipment under test (EUT) was setup to transmit continuously / normal 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 EUT was powered by a 100-240VAC 50/60Hz 0.4A to 5.5VDC 2000mA adaptor. For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable.

If the EUT 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 EUT can be powered by Power adaptor and/or powered over Ethernet. Both cases have been checked, and the data in this report represented the worst-case.

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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 power cord connected to one LISN (Line impedance stabilization network), which provided 50ohm coupling impedance for measuring instrument. Meanwhile, the peripheral or support equipment power cords connected to a separate LISN. The ac power for all LISNs were obtained from the same power source. 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. Power cords of non-EUT equipment (peripherals) were not bundled. AC power cords of peripheral equipments draped over the rear edge of the table, and routed them down onto the floor of the ac powerline conducted emission test site to the second LISN.

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 (100-240VAC 50/60Hz 0.4A to 5.5VDC 2000mA, Model: SWB3-0171, Brand: Poly-Products) (Supplied by Client)

Description of Accessories:

- (1) Gateway, Model: OL801SP (Supplied by Client)
- (2) Smart-Drive External Hard Disk, Model: HD3-SU2FW, S/N: 0800261, DoC Product (Supplied by Intertek)
- (3) Buffalo Broad Band Router, Model: BBR-4HG, DoC Product (Supplied by Intertek)
- (4) Corded headset with 1 meter long cable (Supplied by Client)
- (5) Bluetooth Headset (Supplied by Intertek), FCC ID: QITBTG2
- (6) Lenovo Notebook, Model: T61, S/N: L3-CF468, DoC product (Supplied by Intertek)
- (7) HP Notebook, Model: 2540p, S/N: CND05104SY, DoC product (Supplied by Intertek)
- (8) 3 x CAT5 LAN unshielded cable with 2 meter long (Supplied by Intertek)
- (9) USB mouse (Supplied by Intertek)
- (10) USB cable with 1 meter long (Supplied by Intertek)

3.4 Measurement Uncertainty

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

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.

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EXHIBIT 4
TEST RESULTS

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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 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 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

216 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 2.3 dB margin

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Mode: Bluetooth TX-Channel 00

Table 1

Radiated Emission Data

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2402.000	103.8	33	29.4	24	76.2	94.0	-17.8
V	4804.000	63.2	33	34.9	24	41.1	54.0	-12.9
V	7206.000	42.5	33	37.9	24	23.4	54.0	-30.6
H	9608.000	43.0	33	40.4	24	26.4	54.0	-27.6
H	12010.000	43.3	33	40.5	24	26.8	54.0	-27.2
H	14412.000	25.8	33	40.0	24	8.8	54.0	-45.2

Polarization	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	103.8	33	29.4	100.2	114.0	-13.8
V	4804.000	63.2	33	34.9	65.1	74.0	-8.9
V	7206.000	42.5	33	37.9	47.4	74.0	-26.6
H	9608.000	43.0	33	40.4	50.4	74.0	-23.6
H	12010.000	43.3	33	40.5	50.8	74.0	-23.2
H	14412.000	25.8	33	40.0	32.8	74.0	-41.2

- 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. 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.

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Mode: Bluetooth TX-Channel 39

Table 2

Radiated Emission Data

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2441.000	107.5	33	29.4	24	79.9	94.0	-14.1
V	4882.000	69.7	33	34.9	24	47.6	54.0	-6.4
H	7323.000	44.9	33	37.9	24	25.8	54.0	-28.2
H	9764.000	45.5	33	40.4	24	28.9	54.0	-25.1
H	12205.000	45.1	33	40.5	24	28.6	54.0	-25.4
H	14646.000	29.2	33	38.4	24	10.6	54.0	-43.4

Polarization	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	107.5	33	29.4	103.9	114.0	-10.1
V	4882.000	69.7	33	34.9	71.6	74.0	-2.4
H	7323.000	44.9	33	37.9	49.8	74.0	-24.2
H	9764.000	45.5	33	40.4	52.9	74.0	-21.1
H	12205.000	45.1	33	40.5	52.6	74.0	-21.4
H	14646.000	29.2	33	38.4	34.6	74.0	-39.4

- 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.

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Mode: Bluetooth TX-Channel 78

Table 3

Radiated Emission Data

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2480.000	108.4	33	29.4	24	80.8	94.0	-13.2
H	2483.500	63.7	33	29.4	24	36.1	54.0	-17.9
V	4960.000	69.6	33	34.9	24	47.5	54.0	-6.5
H	7440.000	45.0	33	37.9	24	25.9	54.0	-28.1
H	9920.000	44.0	33	40.4	24	27.4	54.0	-26.6
H	12400.000	46.4	33	40.5	24	29.9	54.0	-24.1
H	14880.000	29.8	33	38.4	24	11.2	54.0	-42.8

Polarization	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	108.4	33	29.4	104.8	114.0	-9.2
H	2483.500	63.7	33	29.4	60.1	74.0	-13.9
V	4960.000	69.6	33	34.9	71.5	74.0	-2.5
H	7440.000	45.0	33	37.9	49.9	74.0	-24.1
H	9920.000	44.0	33	40.4	51.4	74.0	-22.6
H	12400.000	46.4	33	40.5	53.9	74.0	-20.1
H	14880.000	29.8	33	38.4	35.2	74.0	-62.8

- 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.

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Mode: Bluetooth Talk with data transfer

Table 4

Radiated Emission Data

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
H	30.883	42.2	16	10.0	36.2	40.0	-3.8
H	48.098	42.5	16	11.0	37.5	40.0	-2.5
H	144.000	35.8	16	14.0	33.8	43.5	-9.7
H	168.000	31.5	16	18.0	33.5	43.5	-10.0
H	192.000	34.3	16	16.0	34.3	43.5	-9.2
H	198.000	35.1	16	16.0	35.1	43.5	-8.4
H	216.000	40.2	16	17.0	41.2	43.5	-2.3
H	261.250	20.2	16	21.0	25.2	46.0	-20.8
H	264.000	25.7	16	21.0	30.7	46.0	-15.3
H	288.000	31.9	16	22.0	37.9	46.0	-8.1
H	312.000	26.8	16	23.0	33.8	46.0	-12.2
H	336.000	29.6	16	24.0	37.6	46.0	-8.4
H	360.000	28.4	16	24.0	36.4	46.0	-9.6
H	384.000	33.6	16	24.0	41.6	46.0	-4.4
H	408.000	24.5	16	24.0	32.5	46.0	-13.5
H	445.492	29.4	16	26.0	39.4	46.0	-6.6
H	497.150	26.3	16	26.0	36.3	46.0	-9.7
H	552.000	18.3	16	28.0	30.3	46.0	-15.7
H	630.000	18.4	16	29.0	31.4	46.0	-14.6
H	744.000	16.2	16	30.0	30.2	46.0	-15.8
H	912.000	17.7	16	33.0	34.7	46.0	-11.3

- 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.

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

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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 $(5+1) \times 625\mu s = 3.75ms$. For one period for a pseudo-random hopping through at least 20 RF channels in adaptive mode (worst case), it take: $20 \times 3.75ms = 75ms$. The dwell time for DH5 is $5 \times 625\mu s = 3.125ms$.

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

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

Average Factor (AF) of Bluetooth in dB = $20 \log_{10} (0.0625)$
= -24dB

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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.

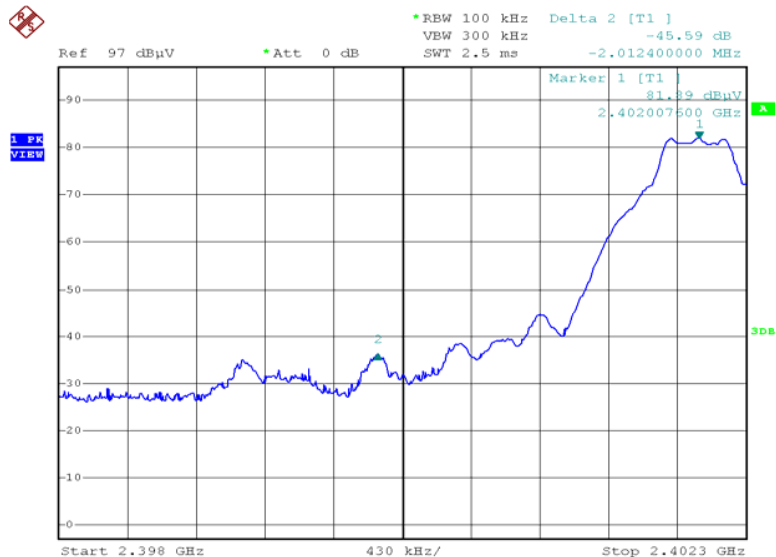
Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

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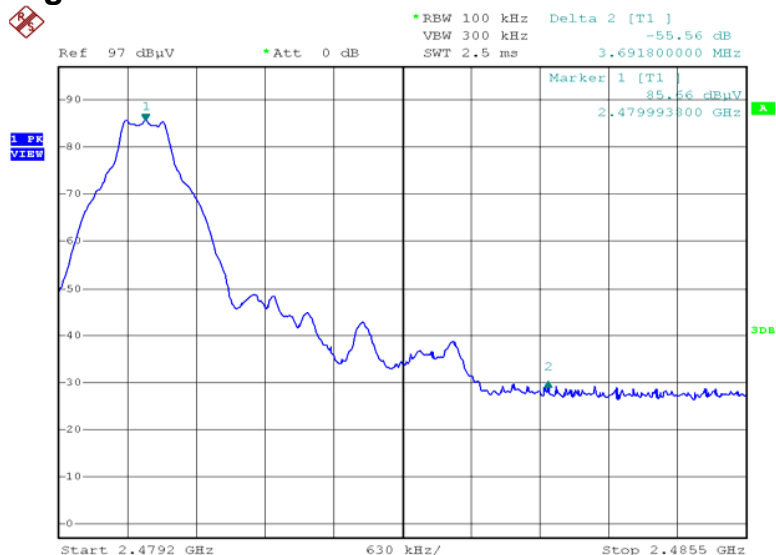


Plots of radiated emission on the bandedge

Lowest channel



Highest channel



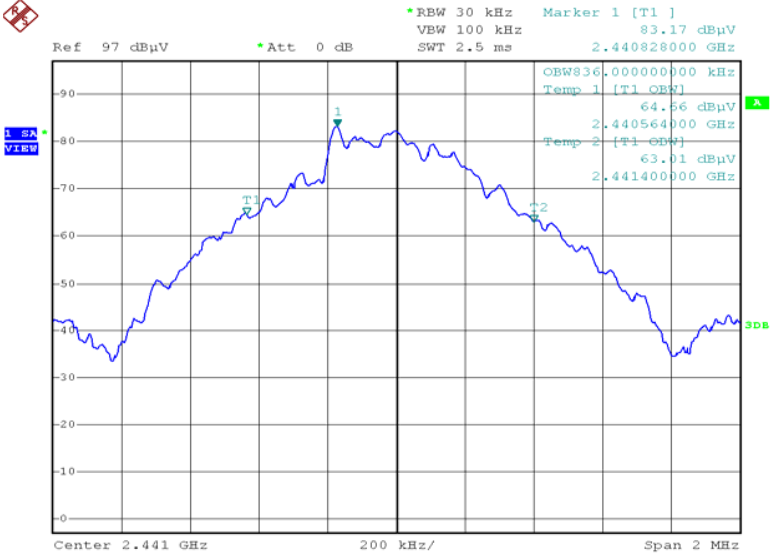
Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

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Plot of Occupied Bandwidth

Middle 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 (dBμV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBμV/m)	Average Limit (dBμV/m)	Margin (dB)
Base	Lowest	76.2	45.59	30.61	54	-23.39
	Highest	80.8	55.56	25.24	54	-28.76

	Channel	Fundamental Emission (dBμV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBμV/m)	Peak Limit (dBμV/m)	Margin (dB)
Base	Lowest	100.2	45.59	54.61	74	-19.39
	Highest	104.8	55.56	49.24	74	-24.76

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 74dBμV/m for peak limit and also 54dBμV/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

0.582 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.

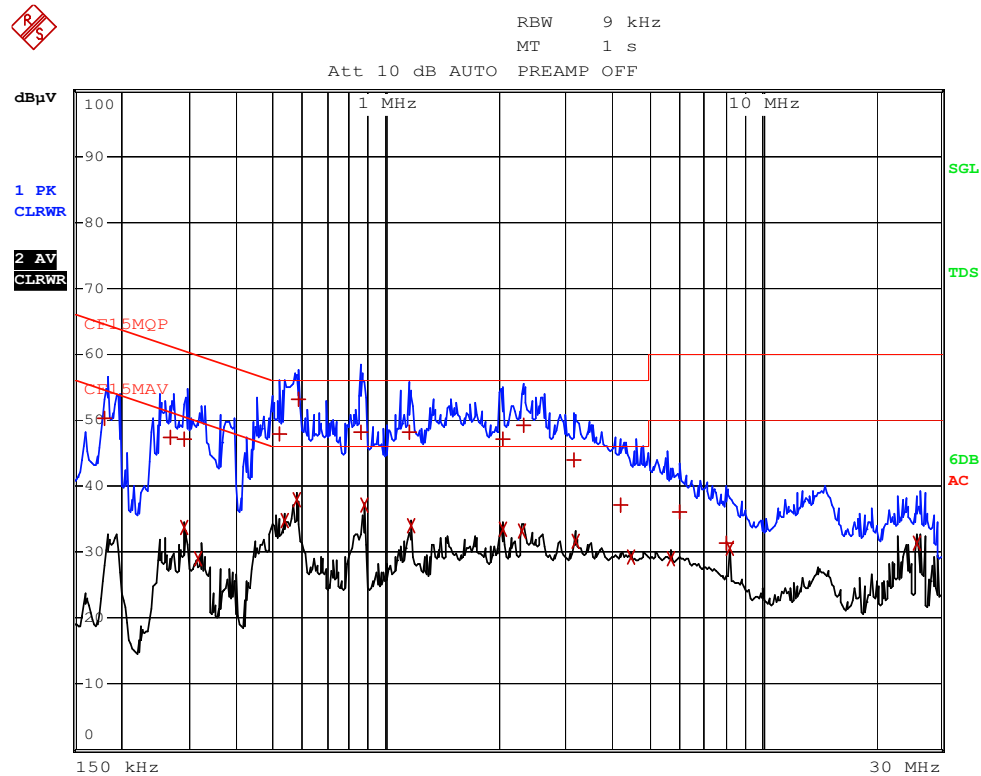
Passed by 2.78 dB margin compare with quasi-peak limit

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Worst Case: BT headset talk with data transfer



Issuing Laboratory:
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Worst Case: BT headset talk with data transfer

EDIT PEAK LIST (Final Measurement Results)					
Trace1:	CF15MQP				
Trace2:	CF15MAV				
Trace3:	---				
TRACE	FREQUENCY	LEVEL	dBμV	DELTA	LIMIT dB
1 Quasi Peak	181.5 kHz	50.36	N gnd	-14.04	
1 Quasi Peak	271.5 kHz	47.44	N gnd	-13.63	
2 CISPR Average	289.5 kHz	33.61	L1 gnd	-16.92	
1 Quasi Peak	294 kHz	47.00	L1 gnd	-13.40	
2 CISPR Average	321 kHz	29.01	N gnd	-20.66	
1 Quasi Peak	519 kHz	48.02	L1 gnd	-7.97	
2 CISPR Average	537 kHz	34.76	N gnd	-11.23	
2 CISPR Average	577.5 kHz	37.88	L1 gnd	-8.11	
1 Quasi Peak	582 kHz	53.21	L1 gnd	-2.78	
1 Quasi Peak	861 kHz	48.10	N gnd	-7.89	
2 CISPR Average	874.5 kHz	37.01	N gnd	-8.98	
1 Quasi Peak	1.158 MHz	48.20	L1 gnd	-7.79	
2 CISPR Average	1.1715 MHz	34.07	L1 gnd	-11.93	
2 CISPR Average	2.04 MHz	33.45	N gnd	-12.54	
1 Quasi Peak	2.0535 MHz	47.10	N gnd	-8.89	
2 CISPR Average	2.3145 MHz	33.12	L1 gnd	-12.88	
1 Quasi Peak	2.3325 MHz	49.27	N gnd	-6.72	
1 Quasi Peak	3.174 MHz	44.08	L1 gnd	-11.91	
2 CISPR Average	3.1875 MHz	31.54	N gnd	-14.45	
1 Quasi Peak	4.236 MHz	37.07	N gnd	-18.92	

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Worst Case: BT headset talk with data transfer

EDIT PEAK LIST (Final Measurement Results)					
Trace1:	CF15MQP				
Trace2:	CF15MAV				
Trace3:	---				
TRACE	FREQUENCY	LEVEL		dB μ V	DELTA LIMIT dB
2 CISPR Average	4.5195 MHz	29.22	N	gnd	-16.77
2 CISPR Average	5.7345 MHz	29.06	L1	gnd	-20.93
1 Quasi Peak	6.0495 MHz	35.98	N	gnd	-24.02
1 Quasi Peak	8.034 MHz	31.34	N	gnd	-28.65
2 CISPR Average	8.1915 MHz	30.67	L1	gnd	-19.32
2 CISPR Average	25.8765 MHz	31.37	L1	gnd	-18.63

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EXHIBIT 5
EQUIPMENT LIST

Issuing Laboratory:
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5.0 Equipment List

1) Radiated Emissions Test

Equipment	Biconical Antenna	Log Periodic Antenna	EMI Test Receiver
Registration No.	EW-0954	EW-0446	EW-2666
Manufacturer	EMCO	EMCO	R&S
Model No.	3104C	3146	ESCI7
Calibration Date	Apr. 30, 2013	Apr. 30, 2013	Jun. 20, 2013
Calibration Due Date	Oct. 30, 2014	Oct. 30, 2014	Jun. 20, 2014

Equipment	Biconical Antenna 20MHz to 200MHz	Spectrum Analyzer	Double Ridged Guide Antenna
Registration No.	EW-2512	EW-2253	EW-1015
Manufacturer	EMCO	ROHDESCHWARZ	EMCO
Model No.	3104C	FSP40	3115
Calibration Date	Jun. 25, 2013	Apr. 24, 2013	Mar. 05, 2013
Calibration Due Date	Dec. 25, 2014	Apr. 24, 2014	Sep. 05, 2014

Equipment	Broad-Band Horn Antenna with frequency range 14G - 40GHz
Registration No.	EW-1679
Manufacturer	SCHWARZBECK
Model No.	BBHA9170
Calibration Date	Apr. 1, 2013
Calibration Due Date	Apr. 1, 2014

2) Conducted Emissions Test

Equipment	Artificial Mains	EMI Test Receiver	Pulse Limiter
Registration No.	EW-0192	EW-2666	EW-700
Manufacturer	R&S	R&S	R&S
Model No.	ESH3-Z5	ESCI7	ESH3-Z2
Calibration Date	May 15, 2013	Jun. 20, 2013	Jan. 15, 2014
Calibration Due Date	Apr. 15, 2014	Jun. 20, 2014	July. 15, 2015

Equipment	Artificial Mains
Registration No.	EW-2501
Manufacturer	R&S
Model No.	ENV-216
Calibration Date	Dec 25, 2013
Calibration Due Date	Nov. 30, 2014

END OF TEST REPORT

Test Report Number: 13121190HKG-001
FCC ID: MZVIPX-500
IC: 3921A-IPX500A

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