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www.intertek.com

TEST REPORT

Report No.: 22080932HKG-003

IPN Headsets

Application For Original Grant of 47 CFR Part 15 Certification

DECT 6.0 Headset System - Base (BT) Unit

FCC ID: 2ALB3LH670BS

Prepared and Checked by:	Approved by:
Signed on File Wong Cheuk Ho, Herbert Lead Engineer	Digitally signed by Kenneth Wong Location: Intertek Testing Services Hong Kong Limited Wong Kwok Yeung, Kenneth Assistant Supervisor Date: December 14, 2022

TEST REPORT

GENERAL INFORMATION

Grantee:	IPN Headsets
Grantee Address:	Bijsterhuizen 2414, 6604 LL Weijchen, The Netherlands.
FCC Specification Standard:	FCC Part 15, October 1, 2021 Edition
FCC ID:	2ALB3LH670BS
FCC Model(s):	LH675BS, LH670BS, LH67XBS
Type of EUT:	Transceiver
Description of EUT:	DECT 6.0 Headset System - Base (BT) Unit
Serial Number:	N/A
Sample Receipt Date:	August 23, 2022
Date of Test:	August 23, 2022 to October 11, 2022
Report Date:	December 14, 2022
Environmental Conditions:	Temperature: +10 to 40°C Relative 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

SUMMARY OF TEST RESULT

Test Items	FCC Part 15 Section	Results
Transmitter Power Line Conducted Emissions	15.207	Complied
Radiated Emission	15.249, 15.209	Complied
Radiated Emission on the Bandedge		Complied
Radiated Emission in Restricted Bands	15.205	Complied

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

FCC Part 15, October 1, 2021 Edition

Note:
1. The EUT uses a permanently attached antenna which, in accordance to section 15.203, is considered sufficient to comply with the pervisions of this section.
2. Pursuant to FCC part 15 Section 15.215(c), the 20 dB 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 excepted variations in temperature and supply voltage were considered.

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1.0 GENERAL DESCRIPTION

1.1 Product Description

The Equipment Under Test (EUT) is DECT 6.0 Headset System - Base (BT) Unit with 2.4GHz Bluetooth 3.0 Transceiver. The Base Unit is powered by by 100-240VAC 50/60Hz 0.35A to 8.5VDC 500mA adaptor.

Antenna Type: Inverted-F PCB Antenna
Peak Antenna Gain: -2.18dBi

Model(s): LH670BS and LH67XBS are the same as the Model: LH675BS in electronics/electrical designs including software & firmware, PCB layout and construction design/physical design/enclosure as declared by client. The only differences between these models are model number, color, cosmetic details, packed with different types of Headset (Binaural, Monaural) to be sold for marketing purpose as declared by client. Suffix ("X" in LH67XBS) is any alphanumeric character that is presented in different types of headset (0 – Monaural Headset, 5 – Binaural Headset) is sold with the Base unit, as declared by client.

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

1.2 Related Submittal(s) Grants

This is a single application for certification of a transceiver.

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). All radiated measurements were performed in an 3m Chamber. Preliminary scans were performed in the 3m Chamber 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.

1.4 Test Facility

The 3m Chamber and conducted measurement facility used to collect the radiated data 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 SAR, China. This test facility and site measurement data have been placed on file with the FCC.

TEST REPORT

2.0 SYSTEM TEST CONFIGURATION

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.10 (2013).

The device was powered by 120VAC.

For maximizing emissions below 30 MHz, the EUT was rotated through 360°, the centre of the loop antenna was placed 1 meter above the ground, and the antenna polarization was changed. For maximizing emission at and above 30 MHz, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data report in Exhibit 3.0.

The rear of unit shall be flushed with the rear of the table.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was mounted to a plastic stand if necessary and placed on the wooden turntable, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

2.2 EUT Exercising Software

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

2.3 Special Accessories

There are no special accessories necessary for compliance of this product.

2.4 Measurement Uncertainty

Decision Rule for compliance: For FCC/IC standard, the measured value must be within the limits of applicable standard without accounting for the measurement uncertainty. For EN/IEC/HKTA/HKTC standard, conformity rules will be used as per standard directly excepted EN/IEC 61000-3-2, EN/IEC 61000-3-3, HKTA1004, HKCA1008, HKTA1019, HKTA1020, HKTA1041 and HKTA1044. For these excepted or not mentioned standards, Cl 4.2.2 of ILAC-G8:09/2019 decision rules will be reference and guard band will be equal to our measurement uncertainty with 95% confidence level (k=2). In case, the measured value is within guard band region, undetermined decision will be used.

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

2.5 Support Equipment List and Description

Description	Remark
Headset, Model: LH675HS, FCC ID: 2ALB3LH575HS	Provided by Applicant
HP Notebook, Model: ProBook 430 G1, S/N: 2CE4250H44	Provided by Intertek
1 X USB cable (USB-A to USB-C) with length of 1.45 meter long	Provided by Applicant
Corded Phone, Panasonic Model: KX-TS500MX.	Provided by Intertek
1 X LEITNER Handset Lifter, Model: 2333, was installed on the Corded Phone	Provided by Applicant
Telecommunication cable with 4P4C RJ11 connectors (1m, unshielded).	Provided by Applicant
AC adaptor (Model: ZHT061U-0850500; 100-240VAC 50/60Hz 0.35A to 8.5VDC 500mA; Brand: Shenzhen Zhenghongtai Plastic Electron)	Provided by Applicant

TEST REPORT

3.0 EMISSION 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.

3.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any), Average Factor (optional) from the measured reading.

The basic equation with a sample calculation is as follows:

FS = RA + AF + CF - AG - AV

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

In the following table(s), the reading shown on the data table reflects the preamplifier gain.

An example for the calculations in the following table is as follows:

FS = RR + LF

where FS = Field Strength in dBµV/m
RR = RA - AG - AV in dBµV
LF = CF + AF in dB

Assume a receiver reading of 52.0 dBµV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB are added. The amplifier gain of 29.0 dB and average factor of 5.0 dB are subtracted, giving a field strength of 27.0 dBµV/m. This value in dBµV/m was converted to its corresponding level in µV/m.

RA = 52.0 dBµV/m
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
AV = 5.0 dB
FS = RR + LF
FS = 18.0 + 9.0 = 27.0 dBµV/m

RR = 18.0 dBµV
LF = 9.0 dB

Level in µV/m = Common Antilogarithm [(27.0 dBµV/m)/20] = 22.4 µV/m

TEST REPORT

3.2 Radiated Emission Configuration Photograph

The worst case in radiated emission was found at 30.485 MHz

For electronic filing, the worst case radiated emission configuration photographs are saved with filename: radiated photos.pdf.

3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgment: Passed by 3.6 dB

3.4 Conducted Emission Configuration Photograph

The worst case in line-conducted emission was found at 0.411 MHz

For electronic filing, the worst case line-conducted configuration photographs are saved with filename: conducted photo.pdf.

3.5 Conducted Emission Data

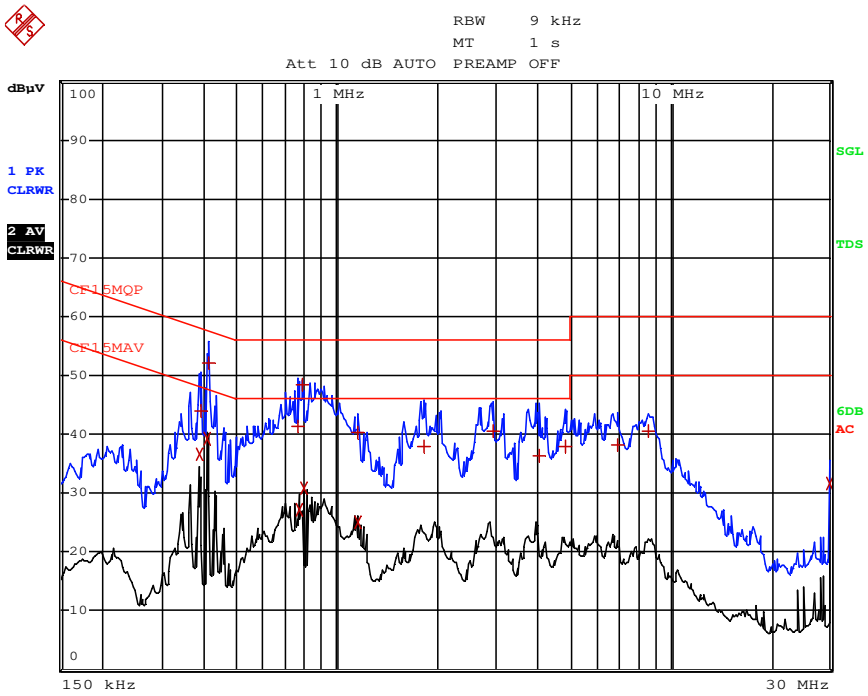
For electronic filing, the graph and data table of conducted emission is saved with filename: conducted.pdf.

Judgment: Pass by 5.4 dB

TEST REPORT

CONDUCTED EMISSION

Model: LH675BS
Date of Test: August 30, 2022
Worst-Case Operating Mode: Bluetooth Operating



EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

TRACE		FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
2	CISPR Average	384 kHz	36.54	N	-11.64
1	Quasi Peak	388.5 kHz	43.89	L1	-14.20
2	CISPR Average	406.5 kHz	39.35	L1	-8.36
1	Quasi Peak	411 kHz	52.18	N	-5.44
1	Quasi Peak	766.5 kHz	41.32	N	-14.67
2	CISPR Average	771 kHz	27.04	L1	-18.95
1	Quasi Peak	789 kHz	48.55	N	-7.44
2	CISPR Average	793.5 kHz	30.92	L1	-15.07
1	Quasi Peak	1.149 MHz	40.27	L1	-15.72
2	CISPR Average	1.158 MHz	24.97	L1	-21.02
1	Quasi Peak	1.833 MHz	38.04	N	-17.95
1	Quasi Peak	2.9355 MHz	40.47	N	-15.52
1	Quasi Peak	4.038 MHz	36.23	N	-19.76
1	Quasi Peak	4.857 MHz	38.03	N	-17.96
1	Quasi Peak	6.9495 MHz	38.28	N	-21.71
1	Quasi Peak	8.6055 MHz	40.61	N	-19.38
2	CISPR Average	29.9985 MHz	31.64	L1	-18.35

Note: Measurement Uncertainty is ±4.2dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: LH675BS
Date of Test: August 30, 2022
Worst-Case Operating Mode: Transmitting

Table 1

Pursuant to FCC Part 15 Section 15.249 Requirement

Lowest Channel

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2402.000	83.8	33	29.4	80.2	94.0	-13.8
V	4804.000	33.4	33	34.9	35.3	54.0	-18.7
H	7206.000	23.0	33	37.9	27.9	54.0	-26.1
V	9608.000	18.5	33	40.4	25.9	54.0	-28.1
V	12010.000	18.3	33	40.5	25.8	54.0	-28.2
V	14412.000	23.2	33	40.0	30.2	54.0	-23.8

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2402.000	97.8	33	29.4	94.2	114.0	-19.8
V	4804.000	46.4	33	34.9	48.3	74.0	-25.7
H	7206.000	37.7	33	37.9	42.6	74.0	-31.4
V	9608.000	31.8	33	40.4	39.2	74.0	-34.8
V	12010.000	31.5	33	40.5	39.0	74.0	-35.0
V	14412.000	36.5	33	40.0	43.5	74.0	-30.5

NOTES:
1. Peak Detector Data unless otherwise stated.
2. Average detector is applied according to ANSI C63.10.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meets the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: LH675BS
Date of Test: August 30, 2022
Worst-Case Operating Mode: Transmitting

Table 2

Pursuant to FCC Part 15 Section 15.249 Requirement

Middle Channel

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2440.000	83.4	33	29.4	79.8	94.0	-14.2
V	4880.000	35.4	33	34.9	37.3	54.0	-16.7
H	7320.000	30.1	33	37.9	35.0	54.0	-19.0
V	9760.000	26.2	33	40.4	33.6	54.0	-20.4
V	12200.000	25.2	33	40.5	32.7	54.0	-21.3
V	14640.000	31.2	33	38.4	36.6	54.0	-17.4

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2440.000	97.4	33	29.4	93.8	114.0	-20.2
V	4880.000	48.7	33	34.9	50.6	74.0	-23.4
H	7320.000	44.2	33	37.9	49.1	74.0	-24.9
V	9760.000	39.2	33	40.4	46.6	74.0	-27.4
V	12200.000	39.0	33	40.5	46.5	74.0	-27.5
V	14640.000	45.0	33	38.4	50.4	74.0	-23.6

NOTES:
1. Peak Detector Data unless otherwise stated.
2. Average detector is applied according to ANSI C63.10
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meets the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: LH675BS
Date of Test: August 30, 2022
Worst-Case Operating Mode: Transmitting

Table 3

Pursuant to FCC Part 15 Section 15.249 Requirement

Highest Channel

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2480.000	83.1	33	29.4	79.5	94.0	-14.5
V	4960.000	32.9	33	34.9	34.8	54.0	-19.2
H	7440.000	21.9	33	37.9	26.8	54.0	-27.2
V	9920.000	18.6	33	40.4	26.0	54.0	-28.0
V	12400.000	20.2	33	40.5	27.7	54.0	-26.3
V	14880.000	23.7	33	38.4	29.1	54.0	-24.9

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2480.000	97.2	33	29.4	93.6	114.0	-20.4
V	4960.000	45.2	33	34.9	47.1	74.0	-26.9
H	7440.000	36.2	33	37.9	41.1	74.0	-32.9
V	9920.000	31.7	33	40.4	39.1	74.0	-34.9
V	12400.000	33.6	33	40.5	41.1	74.0	-32.9
V	14880.000	36.9	33	38.4	42.3	74.0	-31.7

NOTES:
1. Peak Detector Data unless otherwise stated.
2. Average detector is applied according to ANSI C63.10.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meets the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: LH675BS
Date of Test: August 30, 2022
Worst-Case Operating Mode: Bluetooth Operating

Table 4

Pursuant to FCC Part 15 Section 15.209 Requirement

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	30.485	42.4	16	10.0	36.4	40.0	-3.6
V	556.468	19.4	16	28.0	31.4	46.0	-14.6
V	635.886	27.4	16	29.0	40.4	46.0	-5.6
V	715.426	20.5	16	30.0	34.5	46.0	-11.5
H	794.966	22.6	16	31.0	37.6	46.0	-8.4
H	874.385	21.6	16	32.0	37.6	46.0	-8.4

Notes:
1. Quasi-Peak Detector Data unless otherwise stated.
2. All measurements were made at 3 meters.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. Emissions within the restricted band meets the requirement of FCC Part 15 Section 15.205.
6. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.

TEST REPORT

4.0 EQUIPMENT PHOTOGRAPHS

For electronic filing, the photographs are saved with filename: external photos.pdf and internal photos.pdf.

5.0 PRODUCT LABELLING

For electronics filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

6.0 TECHNICAL SPECIFICATIONS

For electronic filing, the block diagram and schematic of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

7.0 INSTRUCTION MANUAL

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

TEST REPORT

8.0 MISCELLANEOUS INFORMATION

The miscellaneous information includes details of the test procedure and measured bandwidth calculation of factor such as pulse desensitization and averaging factor (calculation and timing diagram).

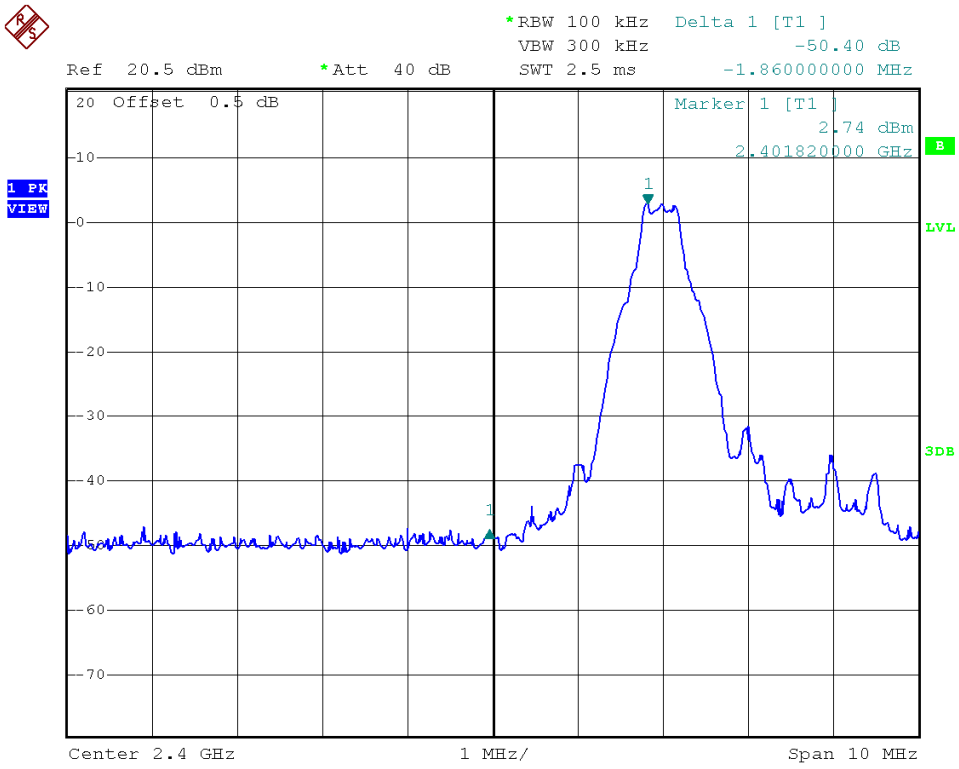
8.1 Measured Bandwidth

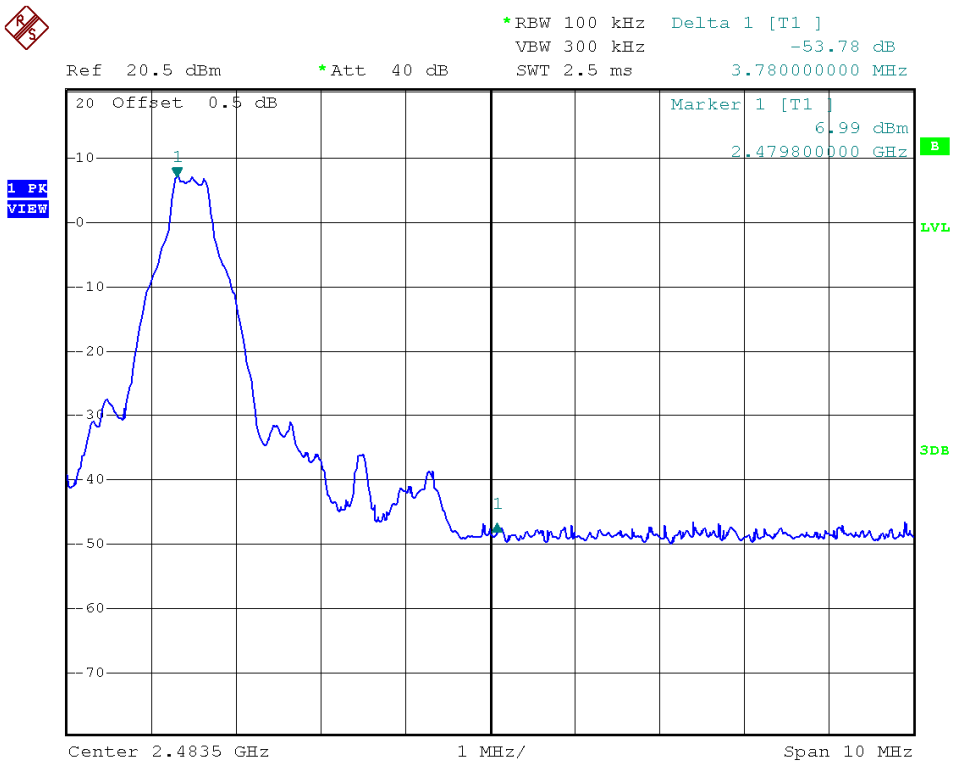
From the following plots, they show that the fundamental emissions are confined in the specified band (2400MHz to 2483.5MHz). In case of the fundamental emissions are within two standard bandwidths from the bandedge, the delta measurement technique is used for determining bandedge compliance. Standard bandwidth is the bandwidth specified by ANSI C63.10 (2013) for frequency being measured.

Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50dB below the level of the fundamental or to the general radiated emissions limits in Section 15.209, whichever is the lesser attenuation, which meet the requirement of Part 15.249(d).

TEST REPORT

PEAK MEASUREMENT (Bluetooth 3.0)





TEST REPORT

PEAK MEASUREMENT (Bluetooth 3.0)

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

Lower Bandedge

Peak Resultant Field Strength = Fundamental Emissions (Peak Value) – delta from the plot

= 94.2 dBµV/m - 50.4 dB
= 43.8 dBµV/m

Average Resultant Field Strength = Fundamental Emissions (Average Value) – delta from the plot

= 80.2 dBµV/m - 50.4 dB
= 29.8 dBµV/m

Upper Bandedge

Peak Resultant Field Strength = Fundamental Emissions (Peak Value) – delta from the plot

= 93.6 dBµV/m - 53.8 dB
= 39.8 dBµV/m

Average Resultant Field Strength = Fundamental Emissions (Average Value) – delta from the plot

= 79.5 dBµV/m - 53.8 dB
= 25.7 dBµV/m

The resultant field strength meets the general radiated emission limit in Section 15.209, which does not exceed 74 dBµV/m (Peak Limit) and 54 dBµV/m (Average Limit).

TEST REPORT

8.2 Discussion of Pulse Desensitization

Pulse desensitivity is not applicable for this device. The effective period (Teff) is approximately 380μs for a digital "1" bit which illustrated on technical specification, with a resolution bandwidth (3dB) of 3MHz, so the pulse desnesitivity factor is 0dB.

8.3 Calculation of Average Factor

Not Applicable

8.4 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services Hong Kong Ltd. in the measurements of transmitter operating under the Part 15, Subpart C rules.

The transmitting equipment under test (EUT) is placed on a 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. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjusted through all three orthogonal axis to obtain maximum emission levels. The antenna height and polarization are also varied during the testing to search for maximum signal levels. The height of the antenna is varied from one to four meters.

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 Exhibit 8.3.

The frequency range scanned is 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 40 GHz, whichever is lower.

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements were made as described in ANSI C63.10 (2013).

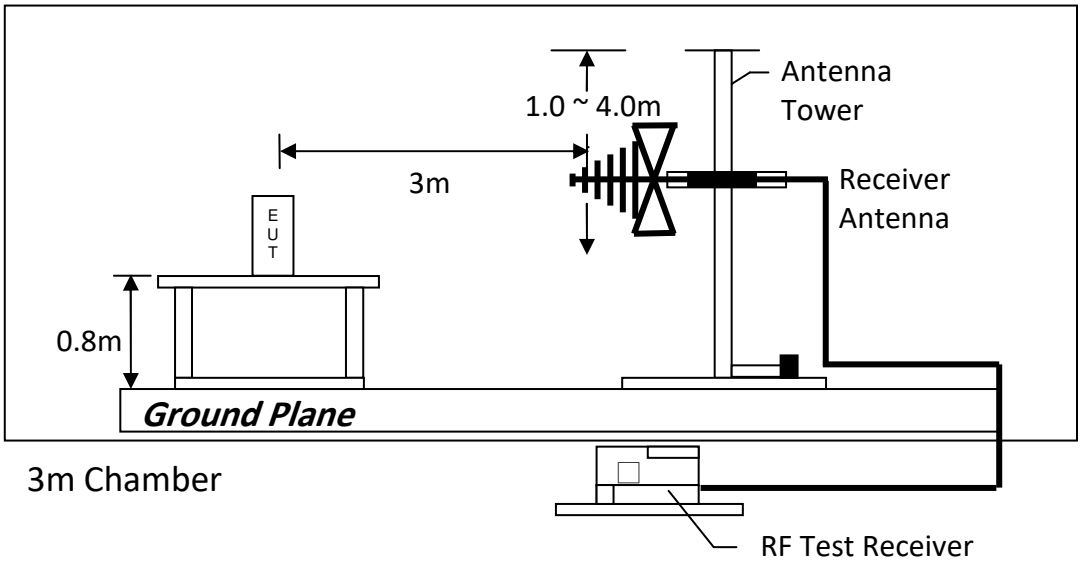
The IF bandwidth used for measurement of radiated signal strength was 100 kHz or greater when frequency is below 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. A discussion of whether pulse desensitivity is applicable to this unit is included in this report (See Exhibit 8.1). Above 1000 MHz, a resolution bandwidth of 3 MHz is used.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the forbidden bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, unless otherwise reported. Measurements taken at a closer distance are so marked.

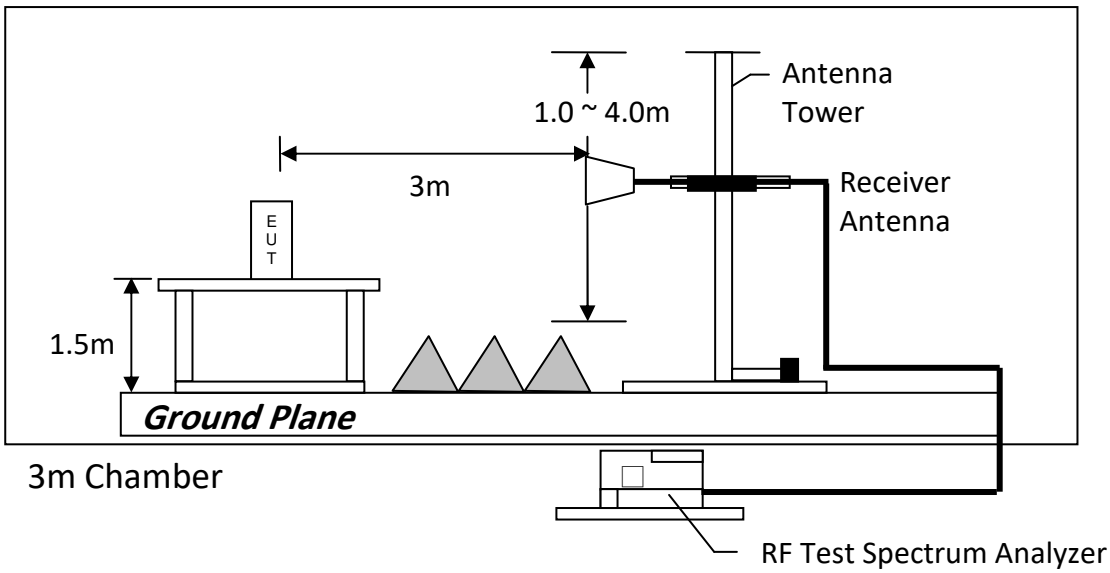
TEST REPORT

8.4.1 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

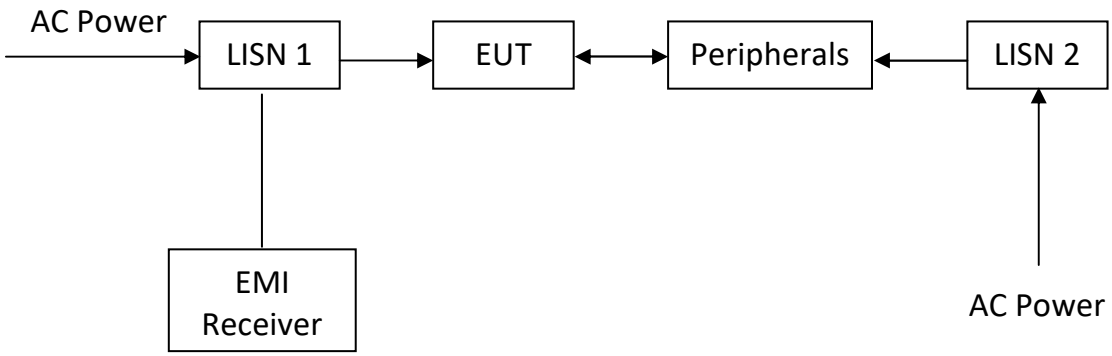
TEST REPORT

8.4.2 Conducted Emission Test Procedures

For tabletop equipment, the EUT along with its peripherals were placed on a 1.0m(W)×1.5m(L) and 0.8m in height wooden table. For floor-standing equipment, the EUT and all cables were insulated, if required, from the ground plane by up to 12 mm of insulating material. 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 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. The excess power cable between the EUT and the LISN was bundled.

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

8.4.3 Conducted Emission Test Setup



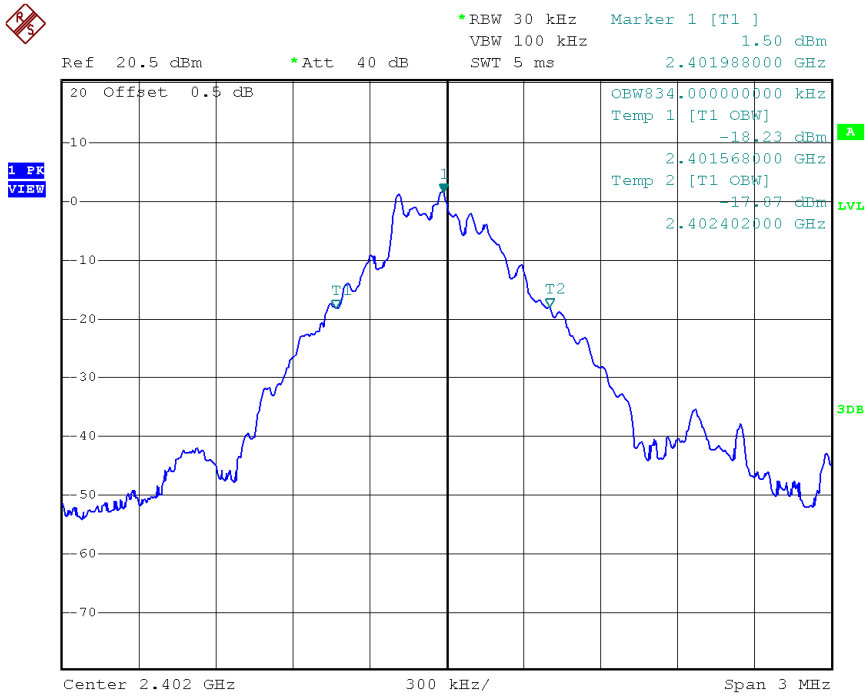
TEST REPORT

8.5 Occupied Bandwidth

Occupied Bandwidth Results: (Bluetooth 3.0)

Bluetooth (MHz)	Occupied Bandwidth (kHz)
Low Channel: 2402	834
Middle Channel: 2440	834
High Channel: 2480	834

The worst case is shown as below:



TEST REPORT

9.0 CONFIDENTIALITY REQUEST

For electronic filing, a preliminary copy of the confidentiality request is saved with filename: request.pdf.

10.0 EQUIPMENT LIST

1) Radiated Emissions Test

Equipment	Biconical Antenna (30MHz to 300MHz)	Spectrum Analyzer	EMI Test Receiver 7GHz
Registration No.	EW-3242	EW-2466	EW-3481
Manufacturer	EMCO	ROHDESCHWARZ	ROHDESCHWARZ
Model No.	3110C	FSP30	ESR7
Calibration Date	May 26, 2021	November 18, 2019	December 21, 2021
Calibration Due Date	May 26, 2023	February 18, 2023	March 21, 2023

Equipment	Log Periodic Antenna	Double Ridged Guide Antenna	Active Loop H-field (9kHz to 30MHz)
Registration No.	EW-3243	EW-1133	EW-3302
Manufacturer	EMCO	EMCO	EMCO
Model No.	3148B	3115	6502
Calibration Date	June 03, 2021	May 26, 2021	December 13, 2021
Calibration Due Date	March 30, 2023	January 26, 2023	June 13, 2023

Equipment	RF Preamplifier (9kHz to 6000MHz)	2.4GHz Notch Filter	14m Double Shield RF Cable (20MHz to 6GHz)
Registration No.	EW-3006b	EW-3435	EW-2074
Manufacturer	SCHWARZBECK	MICROWAVE	RADIALL
Model No.	BBV9718	N0324413	N(m)-RG142-BNC(m) L=14M
Calibration Date	February 15, 2022	November 16, 2019	December 10, 2021
Calibration Due Date	February 15, 2023	September 16, 2022	March 10, 2023

Equipment	Pyramidal Horn Antenna
Registration No.	EW-0905
Manufacturer	EMCO
Model No.	3160-09
Calibration Date	July 20, 2021
Calibration Due Date	January 20, 2023

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2) Conducted Emissions Test

Equipment	RF Cable 240cm (RG142) (9kHz to 30MHz)	Artificial Mains Network	EMI Test Receiver 7GHz
Registration No.	EW-2454	EW-2501	EW-3481
Manufacturer	RADIALL	ROHDESCHWARZ	ROHDESCHWARZ
Model No.	Bnc m st / 142 / bnc mra 240cm	ENV-216	ESR7
Calibration Date	January 26, 2022	November 09, 2021	December 21, 2021
Calibration Due Date	January 26, 2023	February 09, 2023	March 21, 2023

3) OBW Measurement

Equipment	EMI Test Receiver 7GHz	5m RF Cable (40GHz)
Registration No.	EW-3481	EW-2701
Manufacturer	ROHDESCHWARZ	RADIALL
Model No.	ESR7	Sma m-m 5m 40G
Calibration Date	December 21, 2021	November 24, 2021
Calibration Due Date	March 21, 2023	February 24, 2023

4) Control Software for Radiated Emission

Software Information	
Software Name	EMC32
Manufacturer	ROHDESCHWARZ
Software version	10.50.40

END OF TEST REPORT