TEST REPORT

Test Report No. : UL-RPT-RP12761350-316A

Customer	:	Remote Diagnostic Technology Ltd
Model No. / HVIN	:	00-1026-R
PMN	:	Tempus Pro
FCC ID	:	Contains FCC ID: NCMOMO6012 & PV7-WIBEAR11N-DF2
ISED Certification No.	:	Contains IC: 2734A-M06012 & 7738A-WB11NDF2
Test Standard(s)	:	FCC Part 15.207 & ISED Canada RSS-Gen Issue 5 April 2018 Section 8.8

1. This test report shall not be reproduced in full or partial, without the written approval of UL VS LTD.
2. The results in this report apply only to the sample(s) tested.
3. This sample tested is in compliance with the above standard(s).
4. The test results in this report are traceable to the national or international standards.
5. Version 1.0.

Date of Issue: 02 May 2019

Checked by:

Ian Watch
Senior Test Engineer, Radio Laboratory

Company Signatory:

Ben Mercer
Senior Test Engineer, Radio Laboratory
UL VS LTD

0644

This laboratory is accredited by UKAS. The tests reported herein have been performed in accordance with its' terms of accreditation.

UL VS LTD

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Customer Information

Company Name:	Remote Diagnostic Technology Ltd
Address:	Pavilion C2 Ashwood Park Ashwood way Basingstoke RG23 8BG United Kingdom

Report Revision History

Version Number	Issue Date	Revision Details	Revised By
1.0	02/05/2019	Initial Version	Ben Mercer

Table of Contents

1. Attestation of Test Results

1.1. Description of EUT

The equipment under test was a medical vital signs monitor that contains FCC / ISED Canada certified GSM/UMTS, *Bluetooth* and 2.4 GHz WLAN radio modules (FCC ID: NCMOMO6012 & PV7-WIBEAR11N-DF2, ISED Certification No. IC: 2734A-M06012 & 7738A-WB11NDF2).

1.2. General Information

Specification Reference:	47CFR15.207
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Section 15.207
Specification Reference:	RSS-Gen Issue 5 April 2018
Specification Title:	General Requirements for Compliance of Radio Apparatus
FCC Test Firm Registration No.:	621311
ISED#:	20903
CAB Identifier:	UK0001
Location of Testing:	UL VS Ltd, Unit 3 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, United Kingdom
Test Dates:	11 March 2019 & 12 March 2019

1.3. Summary of Test Results

FCC Reference (47CFR)	ISED Canada Reference	Measurement	Result
Part 15.207	RSS-Gen 8.8	Transmitter AC Conducted Emissions - GSM 850 & *Bluetooth* BR	✓
Part 15.207	RSS-Gen 8.8	Transmitter AC Conducted Emissions - GSM 1900 & *Bluetooth* BR	✓
Part 15.207	RSS-Gen 8.8	Transmitter AC Conducted Emissions - UMTS II & *Bluetooth* BR	✓
Part 15.207	RSS-Gen 8.8	Transmitter AC Conducted Emissions - UMTS V & *Bluetooth* BR	✓
Part 15.207	RSS-Gen 8.8	Transmitter AC Conducted Emissions - 802.11b WLAN	✓

Key to Results

✓ = Complied ✗ = Did not comply

1.4. Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above.

2. Summary of Testing

2.1. Facilities and Accreditation

The test site and measurement facilities used to collect data are located at Unit 3 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire. RG24 8AH, United Kingdom.

UL VS LTD is accredited by UKAS. The tests reported herein have been performed in accordance with its terms of accreditation.

2.2. Methods and Procedures

Reference:	ANSI C63.10-2013
Title:	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
Reference:	KDB 174176 D01 Line Conducted FAQ v01r01 June 3, 2015
Title:	AC Power-Line Conducted Emissions Frequently Asked Questions

2.3. Calibration and Uncertainty

Measuring Instrument Calibration

In accordance with UKAS requirements all the measurement equipment is on a calibration schedule. All equipment was within the calibration period on the date of testing.

Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value measured (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	±2.40 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

2.4. Test and Measurement Equipment

Test Equipment Used for Transmitter AC Conducted Emissions

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2037	Thermohygrometer	Testo	608-H1	45124925	06 Jan 2020	12
A649	LISN	Rohde & Schwarz	ESH3-Z5	825562/008	23 Aug 2019	12
A1830	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100668	06 Apr 2019	12
M1273	Test Receiver	Rohde & Schwarz	ESIB 26	100275	18 Dec 2019	12
M1818	Multimeter	Fluke	79 Series III	71811580	19 Apr 2019	12

Test Measurement Software/Firmware Used:

Name	Version	Release Date
Rohde & Schwarz EMC32	6.30.0	2008

3. Equipment Under Test (EUT)

3.1. Identification of Equipment Under Test (EUT)

Brand Name:	Remote Diagnostic Technology Ltd
Model No. / HVIN:	00-1026-R
PMN:	Tempus Pro
Serial Number:	602429
IMEI:	001010123456789
Hardware Version Number:	Trizeps VII
Software Version Number:	V7.01
FCC ID:	Contains FCC ID: NCMOMO6012 & PV7-WIBEAR11N-DF2
ISED Certification Number:	Contains IC: 2734A-M06012 & 7738A-WB11NDF2

3.2. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.3. Additional Information Related to Testing

Additional Information Related to Testing

Tested Technology:	*Bluetooth* Basic Rate (BR)		
Type of Unit:	Transceiver		
Channel Spacing:	1 MHz		
Mode:	Basic Rate		
Modulation:	GFSK		
Packet Type: (Maximum Payload)	DH5		
Data Rate (Mbit/s):	1		
Power Supply Requirement(s):	Nominal	12.0 VDC via 120/240 VAC 60 Hz adaptor	
Transmit Frequency Range:	2402 MHz to 2480 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Middle	39	2441

Technology Tested:	WLAN (IEEE 802.11b) / Digital Transmission System	
Type of Unit:	Transceiver	
Modulation Type:	QPSK	
Data Rates:	802.11b	11 Mbit/s
Power Supply Requirement(s):	Nominal	12.0 VDC via 120/240 VAC 60 Hz adaptor
Channel Spacing:	20 MHz	
Transmit Frequency Range:	2412 MHz to 2462 MHz	
Transmit Channels Tested:	**Channel Number**	**Channel Frequency (MHz)**
	11	2462

Technology Tested:	GSM 850		
Type of Radio Device:	Transceiver		
Modes:	GSM / GPRS / EGPRS		
Modulation Types:	GMSK / 8PSK		
Channel Spacing:	200 kHz		
Power Supply Requirement(s):	Nominal	12.0 VDC via 120/240 VAC 60 Hz adaptor	
Transmit Frequency Range:	824 to 849 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Middle	190	836.6

Additional Information Related to Testing (continued)

Technology Tested:	GSM 1900		
Type of Radio Device:	Transceiver		
Modes:	GSM / GPRS / EGPRS		
Modulation Types:	GMSK / 8PSK		
Channel Spacing:	200 kHz		
Power Supply Requirement(s):	Nominal	12.0 VDC via 120/240 VAC 60 Hz adaptor	
Transmit Frequency Range:	1850 to 1910 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Middle	660	1879.8

Technology Tested:	UMTS 1900		
Type of Radio Device:	Transceiver		
Mode:	UMTS FDD II		
Modulation Types:	QPSK / 8PSK		
Channel Spacing:	5 MHz		
Power Supply Requirement(s):	Nominal	12.0 VDC via 120/240 VAC 60 Hz adaptor	
Transmit Frequency Range:	1850 to 1910 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Middle	9400	1880.0

Technology Tested:	UMTS 850		
Type of Radio Device:	Transceiver		
Mode:	UMTS FDD V		
Modulation Types:	QPSK / 8PSK		
Channel Spacing:	5 MHz		
Power Supply Requirement(s):	Nominal	12.0 VDC via 120/240 VAC 60 Hz adaptor	
Transmit Frequency Range:	824 to 849 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Middle	4183	836.6

3.4. Description of Test Setup

EUT Accessories

The following accessories were used to exercise the EUT during testing:

Description:	Power Supply
Brand Name:	ASTEC
Model Name or Number:	DPS53-M / RDT Tempus PSU 01-2049
Serial Number:	Not marked or stated

Description:	Earpiece. Quantity 1
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	Pulse Oximeter (Masimo rainbow finger sensor). Quantity 1
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	End Tidal C02 Monitor (plastic hose). Quantity 1
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	ECG (RDT 12-lead cable 01-2073). Quantity 1
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	Non-invasive blood pressure monitor (plastic hose). Quantity 1
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	Contact temperature thermocouple. Quantity 2
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

EUT Accessories (continued)

Description:	USB Cable (RDT data transfer cable 01-2243). Quantity 1
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	Invasive blood pressure; internal (RDT 2-channel cable 01-2108 & 01-2113 with transducers)
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	Wideband Radio Comms Tester
Brand Name:	Rohde & Schwarz
Model Name or Number:	CMW 500
Serial Number:	145923

Description:	Laptop PC
Brand Name:	Lenovo
Model Name or Number:	L430
Serial Number:	R9-Z2L03 13/06

Description:	USB cable. Length 2 metres. Quantity 1
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	Ethernet cable. Length 2 metres. Quantity 1
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	USB Hub
Brand Name:	HAMA
Model Name or Number:	00078498
Serial Number:	Not marked or stated

Operating Modes

The EUT was tested in the following operating mode(s):

- The EUT was transmitting at full power whilst charging.

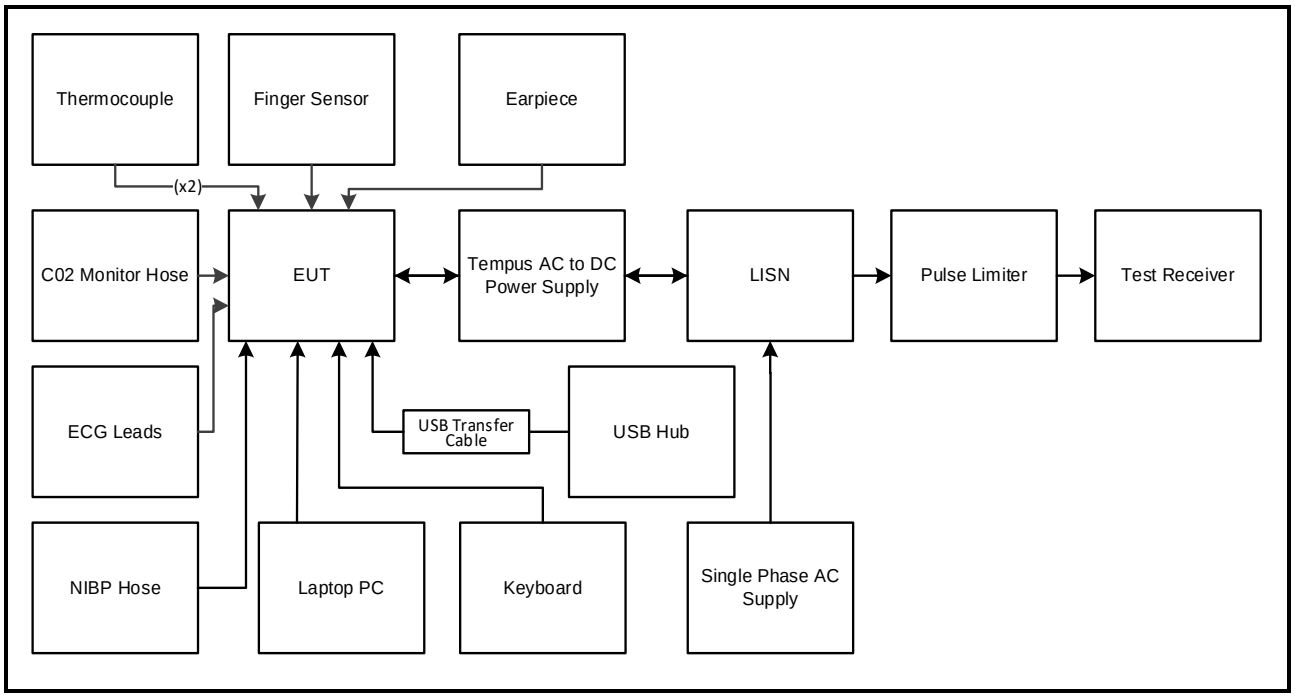
Configuration and Peripherals

The EUT was tested in the following configuration(s):

- *Bluetooth* was configured using a command prompt application installed on the laptop PC supplied by the customer. The application was used to enable continuous transmission and to select the test channels as required.
- Cellular was configured using a CMW500 radio tester, transmitting at maximum power in test mode.
- The EUT was connected to a LISN via the ASTEC AC to DC power supply. The input of the LISN was connected to a 120/240 VAC 60 Hz single phase supply via a LISN.
- All active ports were terminated using the support equipment mentioned in the previous section.

3.5. Test Setup Diagram

Test Setup for Transmitter AC Conducted Emissions



4. Test Results

4.1. Transmitter AC Conducted Spurious Emissions – GSM 850 & Bluetooth BR

Test Summary:

Test Engineer:	Stefan Ho	**Test Dates:**	11 March 2019 & 12 March 2019
Test Sample Serial Number:	602429		

FCC Reference:	Part 15.207
Test Method Used:	ANSI C63.10 Section 6.2, FCC KDB 174176 and notes below
ISED Canada Reference	RSS-Gen 8.8
Test Method Used:	ANSI C63.10 Section 6.2 and notes below

Environmental Conditions:

Temperature (°C):	17 to 18
Relative Humidity (%):	36 to 46

Note(s):

1. The EUT was connected to a LISN via the ASTEC AC to DC power supply. The input of the LISN was connected to a 120 VAC 60 Hz single phase supply via a LISN.
2. In accordance with FCC KDB 174176 Q4, tests were performed with a 240 VAC 60 Hz single phase supply as this was within the voltage range marked on the EUT power supply.
3. A pulse limiter was fitted between the LISN and the test receiver.
4. Pre-scans were performed and markers placed on the highest live and neutral measured levels. Final measurements were performed on the marker frequencies with the results shown in the tables below.
5. Tests were performed with the EUT transmitting on the middle channels of GSM 850 and *Bluetooth* BR simultaneously.

Transmitter AC Conducted Spurious Emissions – GSM 850 & *Bluetooth* BR (continued)

Results: Live / Quasi Peak / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.159000	Live	36.3	65.5	29.2	Complied
0.474000	Live	30.1	56.4	26.3	Complied
1.527000	Live	23.0	56.0	33.0	Complied
2.886000	Live	27.2	56.0	28.8	Complied
10.617000	Live	35.7	60.0	24.3	Complied
27.159000	Live	30.6	60.0	29.4	Complied

Results: Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.163500	Live	24.0	55.3	31.3	Complied
0.451500	Live	21.5	46.8	25.3	Complied
1.522500	Live	14.7	46.0	31.3	Complied
2.877000	Live	15.8	46.0	30.2	Complied
10.959000	Live	30.4	50.0	19.6	Complied
27.222000	Live	25.9	50.0	24.1	Complied

Results: Neutral / Quasi Peak / 120 VAC 60 Hz

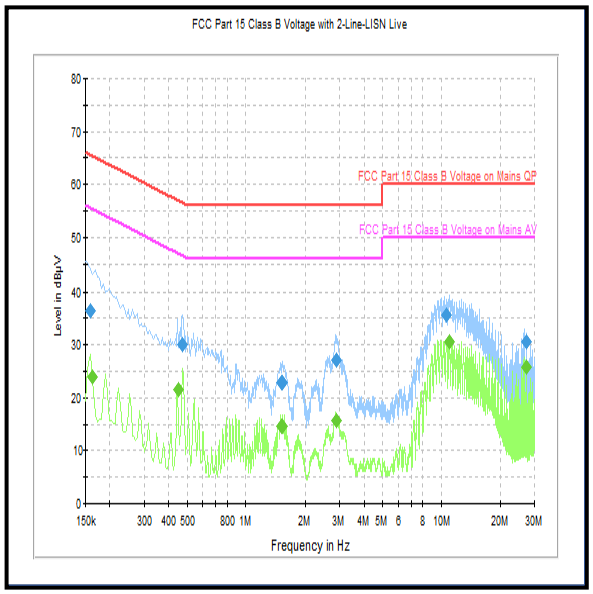
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.150000	Neutral	35.9	66.0	30.1	Complied
0.910500	Neutral	23.7	56.0	32.3	Complied
2.899500	Neutral	30.8	56.0	25.2	Complied
10.374000	Neutral	34.1	60.0	25.9	Complied
15.580500	Neutral	32.0	60.0	28.0	Complied
26.610000	Neutral	30.4	60.0	29.6	Complied

Results: Neutral / Average / 120 VAC 60 Hz

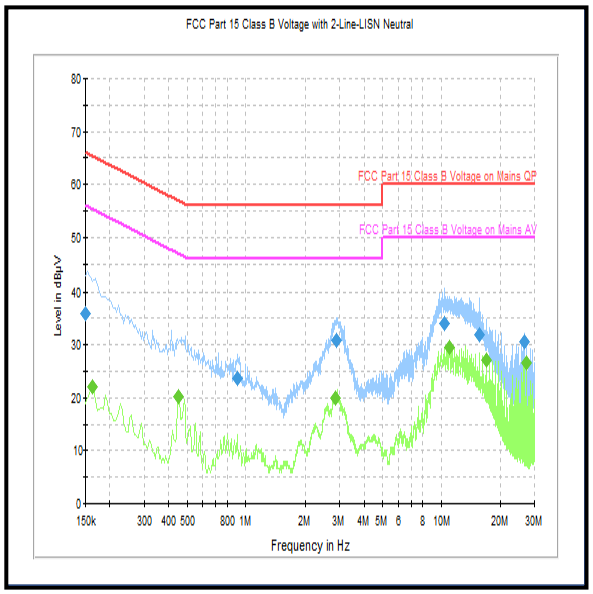
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.163500	Neutral	22.0	55.3	33.3	Complied
0.451500	Neutral	20.1	46.8	26.7	Complied
2.859000	Neutral	20.0	46.0	26.0	Complied
10.941000	Neutral	29.4	50.0	20.6	Complied
16.908000	Neutral	27.2	50.0	22.8	Complied
27.159000	Neutral	26.7	50.0	23.3	Complied

Transmitter AC Conducted Spurious Emissions – GSM 850 & *Bluetooth* BR (continued)

Results: 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions – GSM 850 & *Bluetooth* BR (continued)

Results: Live / Quasi Peak / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.150000	Live	32.7	66.0	33.3	Complied
0.478500	Live	28.1	56.4	28.3	Complied
1.374000	Live	24.1	56.0	31.9	Complied
2.967000	Live	28.7	56.0	27.3	Complied
11.049000	Live	34.1	60.0	25.9	Complied
26.610000	Live	31.6	60.0	28.4	Complied

Results: Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.159000	Live	24.0	55.5	31.5	Complied
0.487500	Live	23.3	46.2	22.9	Complied
1.396500	Live	17.8	46.0	28.2	Complied
2.994000	Live	18.2	46.0	27.8	Complied
11.157000	Live	28.9	50.0	21.1	Complied
26.182500	Live	20.1	50.0	29.9	Complied

Results: Neutral / Quasi Peak / 240 VAC 60 Hz

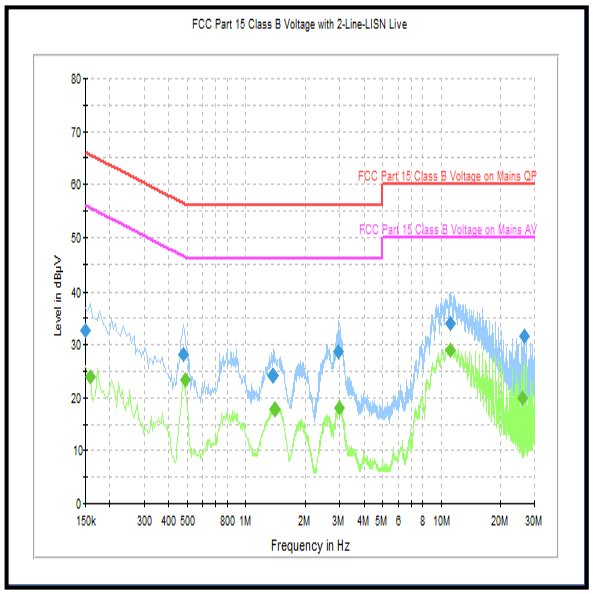
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.159000	Neutral	31.9	65.5	33.6	Complied
0.487500	Neutral	26.2	56.2	30.0	Complied
0.879000	Neutral	24.9	56.0	31.1	Complied
2.953500	Neutral	31.9	56.0	24.1	Complied
11.580000	Neutral	34.0	60.0	26.0	Complied
25.876500	Neutral	27.9	60.0	32.1	Complied

Results: Neutral / Average / 240 VAC 60 Hz

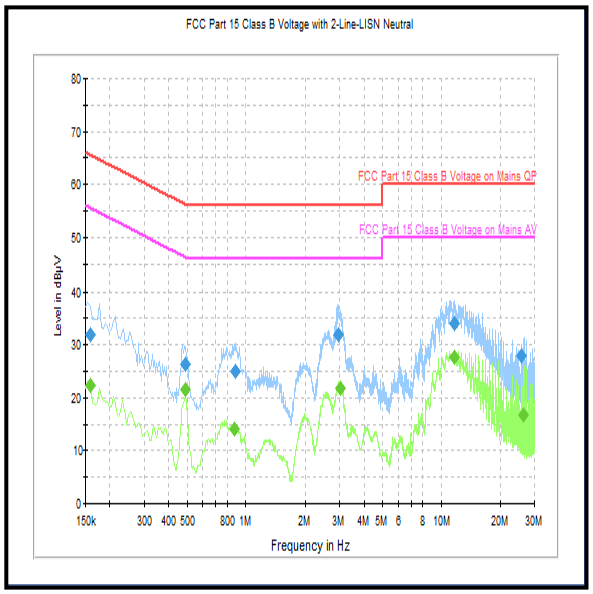
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.159000	Neutral	22.3	55.5	33.2	Complied
0.492000	Neutral	21.7	46.1	24.4	Complied
0.874500	Neutral	14.2	46.0	31.8	Complied
3.030000	Neutral	21.9	46.0	24.1	Complied
11.697000	Neutral	27.6	50.0	22.4	Complied
26.304000	Neutral	16.7	50.0	33.3	Complied

Transmitter AC Conducted Spurious Emissions – GSM 850 & *Bluetooth* BR (continued)

Results: 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

4.2. Transmitter AC Conducted Spurious Emissions – GSM 1900 & *Bluetooth* BR

Test Summary:

Test Engineer:	Stefan Ho	**Test Dates:**	11 March 2019 & 12 March 2019
Test Sample Serial Number:	602429		

FCC Reference:	Part 15.207
Test Method Used:	ANSI C63.10 Section 6.2, FCC KDB 174176 and notes below
ISED Canada Reference	RSS-Gen 8.8
Test Method Used:	ANSI C63.10 Section 6.2 and notes below

Environmental Conditions:

Temperature (°C):	17 to 18
Relative Humidity (%):	36 to 46

Note(s):

6. The EUT was connected to a LISN via the ASTEC AC to DC power supply. The input of the LISN was connected to a 120 VAC 60 Hz single phase supply via a LISN.
7. In accordance with FCC KDB 174176 Q4, tests were performed with a 240 VAC 60 Hz single phase supply as this was within the voltage range marked on the EUT power supply.
8. A pulse limiter was fitted between the LISN and the test receiver.
9. Pre-scans were performed and markers placed on the highest live and neutral measured levels. Final measurements were performed on the marker frequencies with the results shown in the tables below.
10. Tests were performed with the EUT transmitting on the middle channels of GSM 1900 and *Bluetooth* BR simultaneously.

Transmitter AC Conducted Spurious Emissions – GSM 1900 & *Bluetooth* BR (continued)

Results: Live / Quasi Peak / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Live	35.0	65.8	30.8	Complied
0.460500	Live	31.0	56.7	25.7	Complied
2.868000	Live	27.0	56.0	29.0	Complied
9.717000	Live	34.5	60.0	25.5	Complied
14.649000	Live	30.6	60.0	29.4	Complied
26.488500	Live	30.4	60.0	29.6	Complied

Results: Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.163500	Live	24.7	55.3	30.6	Complied
0.456000	Live	23.9	46.8	22.9	Complied
2.895000	Live	20.7	46.0	25.3	Complied
10.284000	Live	29.8	50.0	20.2	Complied
15.585000	Live	27.1	50.0	22.9	Complied
26.394000	Live	19.9	50.0	30.1	Complied

Results: Neutral / Quasi Peak / 120 VAC 60 Hz

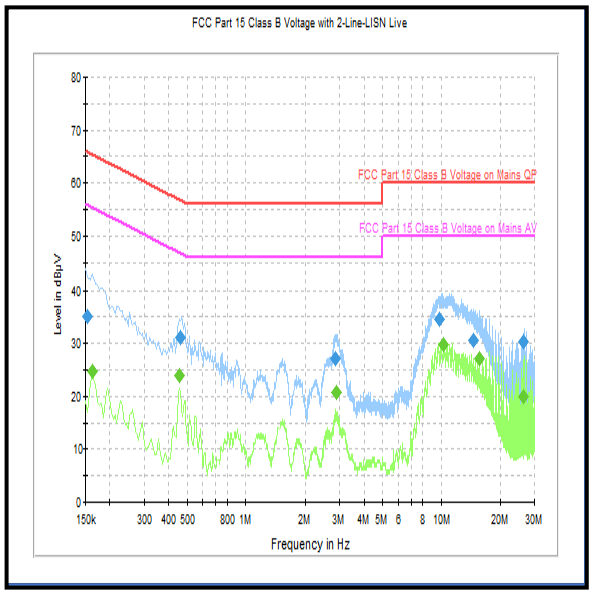
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.150000	Neutral	35.2	66.0	30.8	Complied
0.456000	Neutral	28.4	56.8	28.4	Complied
2.850000	Neutral	30.7	56.0	25.3	Complied
11.071500	Neutral	34.2	60.0	25.8	Complied
15.252000	Neutral	31.0	60.0	29.0	Complied
26.610000	Neutral	30.4	60.0	29.6	Complied

Results: Neutral / Average / 120 VAC 60 Hz

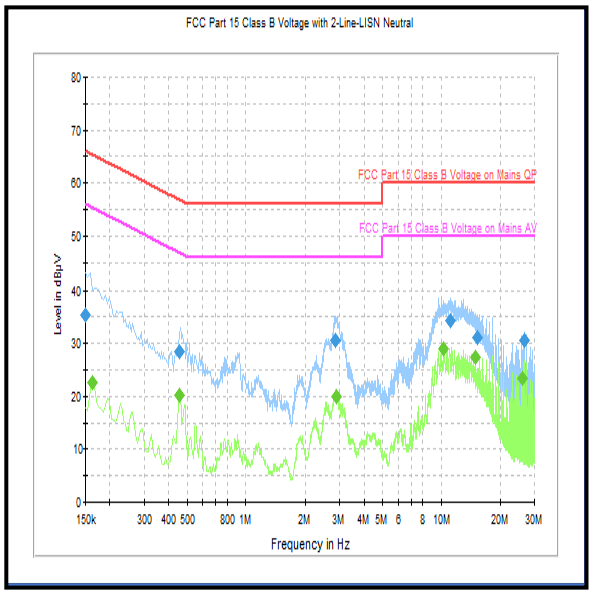
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.163500	Neutral	22.5	55.3	32.8	Complied
0.456000	Neutral	20.2	46.8	26.6	Complied
2.886000	Neutral	19.8	46.0	26.2	Complied
10.279500	Neutral	28.9	50.0	21.1	Complied
14.923500	Neutral	27.5	50.0	22.5	Complied
25.998000	Neutral	23.3	50.0	26.7	Complied

Transmitter AC Conducted Spurious Emissions – GSM 1900 & *Bluetooth* BR (continued)

Results: 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions – GSM 1900 & *Bluetooth* BR (continued)

Results: Live / Quasi Peak / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.159000	Live	32.9	65.5	32.6	Complied
0.483000	Live	27.9	56.3	28.4	Complied
2.602500	Live	25.3	56.0	30.7	Complied
2.940000	Live	28.3	56.0	27.7	Complied
11.580000	Live	34.2	60.0	25.8	Complied
26.488500	Live	29.7	60.0	30.3	Complied

Results: Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.159000	Live	24.2	55.5	31.3	Complied
0.492000	Live	21.5	46.1	24.6	Complied
2.584500	Live	15.8	46.0	30.2	Complied
2.976000	Live	18.4	46.0	27.6	Complied
11.575500	Live	28.9	50.0	21.1	Complied
26.488500	Live	25.9	50.0	24.1	Complied

Results: Neutral / Quasi Peak / 240 VAC 60 Hz

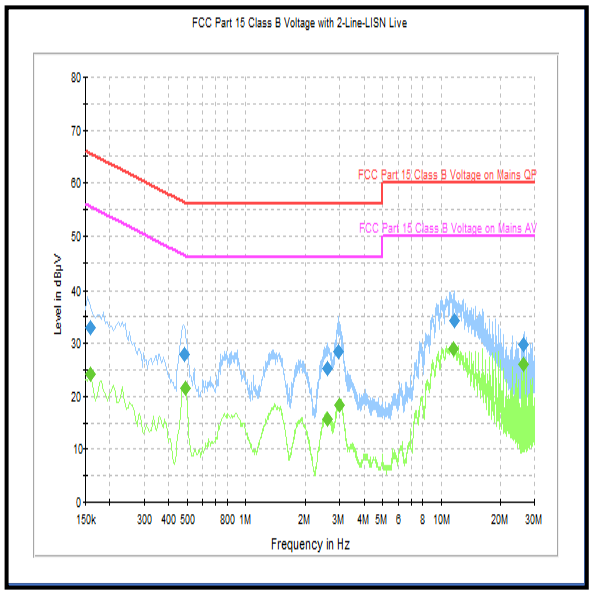
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.159000	Neutral	31.9	65.5	33.6	Complied
0.478500	Neutral	25.3	56.4	31.1	Complied
0.892500	Neutral	24.7	56.0	31.3	Complied
2.598000	Neutral	28.4	56.0	27.6	Complied
2.913000	Neutral	31.1	56.0	24.9	Complied
11.053500	Neutral	33.1	60.0	26.9	Complied

Results: Neutral / Average / 240 VAC 60 Hz

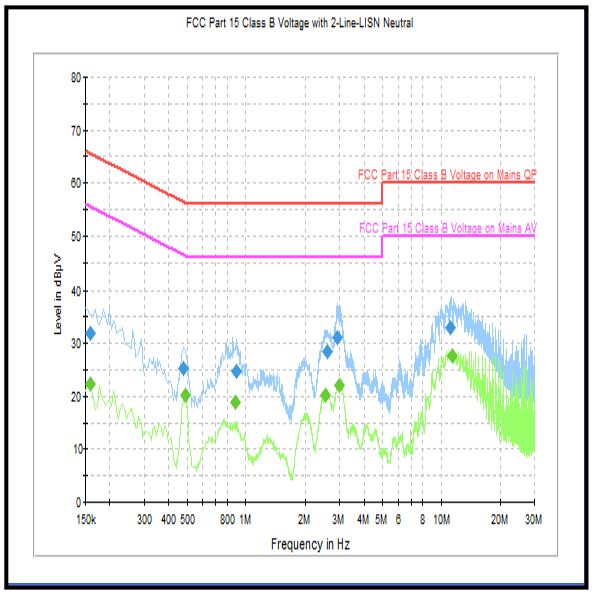
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.159000	Neutral	22.4	55.5	33.1	Complied
0.492000	Neutral	20.3	46.1	25.8	Complied
0.879000	Neutral	18.8	46.0	27.2	Complied
2.544000	Neutral	20.3	46.0	25.7	Complied
2.998500	Neutral	22.1	46.0	23.9	Complied
11.346000	Neutral	27.8	50.0	22.2	Complied

Transmitter AC Conducted Spurious Emissions – GSM 1900 & *Bluetooth* BR (continued)

Results: 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

4.3. Transmitter AC Conducted Spurious Emissions – UMTS II & *Bluetooth* BR

Test Summary:

Test Engineer:	Stefan Ho	**Test Dates:**	11 March 2019 & 12 March 2019
Test Sample Serial Number:	602429		

FCC Reference:	Part 15.207
Test Method Used:	ANSI C63.10 Section 6.2, FCC KDB 174176 and notes below
ISED Canada Reference	RSS-Gen 8.8
Test Method Used:	ANSI C63.10 Section 6.2 and notes below

Environmental Conditions:

Temperature (°C):	17 to 18
Relative Humidity (%):	36 to 46

Note(s):

11. The EUT was connected to a LISN via the ASTEC AC to DC power supply. The input of the LISN was connected to a 120 VAC 60 Hz single phase supply via a LISN.
12. In accordance with FCC KDB 174176 Q4, tests were performed with a 240 VAC 60 Hz single phase supply as this was within the voltage range marked on the EUT power supply.
13. A pulse limiter was fitted between the LISN and the test receiver.
14. Pre-scans were performed and markers placed on the highest live and neutral measured levels. Final measurements were performed on the marker frequencies with the results shown in the tables below.
15. Tests were performed with the EUT transmitting on the middle channels of UMTS II and *Bluetooth* BR simultaneously.

Transmitter AC Conducted Spurious Emissions – UMTS II & *Bluetooth* BR (continued)

Results: Live / Quasi Peak / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.150000	Live	37.0	66.0	29.0	Complied
0.469500	Live	30.2	56.5	26.3	Complied
2.832000	Live	27.9	56.0	28.1	Complied
10.243500	Live	36.5	60.0	23.5	Complied
11.517000	Live	34.0	60.0	26.0	Complied
26.610000	Live	31.3	60.0	28.7	Complied

Results: Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.150000	Live	27.6	56.0	28.4	Complied
0.474000	Live	26.7	46.4	19.7	Complied
2.868000	Live	16.2	46.0	29.8	Complied
10.086000	Live	27.4	50.0	22.6	Complied
18.060000	Live	20.5	50.0	29.5	Complied
26.547000	Live	26.0	50.0	24.0	Complied

Results: Neutral / Quasi Peak / 120 VAC 60 Hz

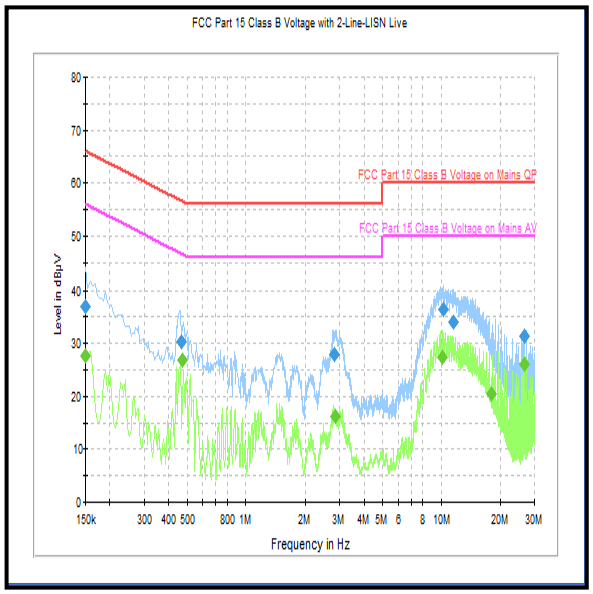
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.168000	Neutral	35.1	65.1	30.0	Complied
0.474000	Neutral	29.7	56.4	26.7	Complied
0.919500	Neutral	26.9	56.0	29.1	Complied
2.836500	Neutral	31.0	56.0	25.0	Complied
10.486500	Neutral	35.0	60.0	25.0	Complied
27.159000	Neutral	30.2	60.0	29.8	Complied

Results: Neutral / Average / 120 VAC 60 Hz

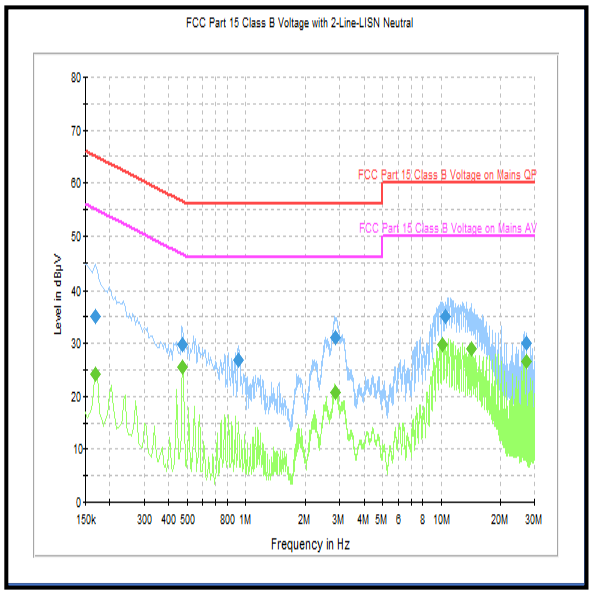
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.168000	Neutral	24.1	55.1	31.0	Complied
0.474000	Neutral	25.5	46.4	20.9	Complied
2.854500	Neutral	20.7	46.0	25.3	Complied
10.108500	Neutral	29.7	50.0	20.3	Complied
14.302500	Neutral	29.0	50.0	21.0	Complied
27.159000	Neutral	26.5	50.0	23.5	Complied

Transmitter AC Conducted Spurious Emissions – UMTS II & *Bluetooth* BR (continued)

Results: 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions – UMTS II & *Bluetooth* BR (continued)

Results: Live / Quasi Peak / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.159000	Live	30.2	65.5	35.3	Complied
0.483000	Live	29.2	56.3	27.1	Complied
0.775500	Live	24.2	56.0	31.8	Complied
2.985000	Live	28.3	56.0	27.7	Complied
10.963500	Live	35.2	60.0	24.8	Complied
18.933000	Live	31.9	60.0	28.1	Complied

Results: Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Live	26.0	55.8	29.8	Complied
0.474000	Live	22.6	46.4	23.8	Complied
1.432500	Live	18.0	46.0	28.0	Complied
2.989500	Live	18.0	46.0	28.0	Complied
11.098500	Live	29.4	50.0	20.6	Complied
27.343500	Live	22.8	50.0	27.2	Complied

Results: Neutral / Quasi Peak / 240 VAC 60 Hz

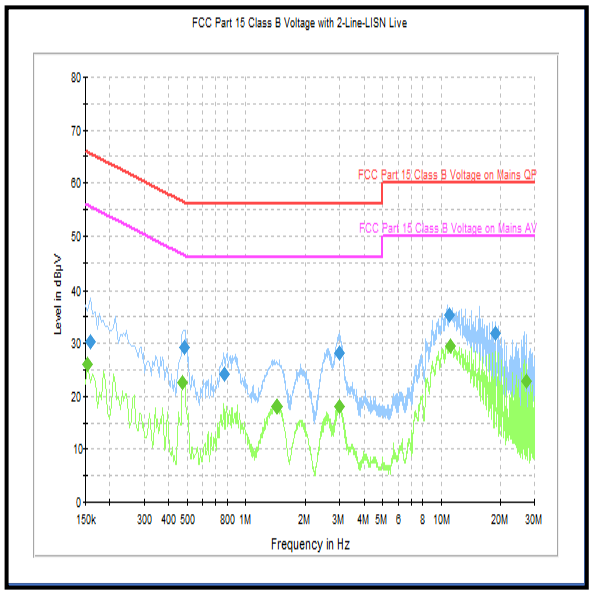
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Neutral	32.3	65.8	33.5	Complied
0.483000	Neutral	26.6	56.3	29.7	Complied
0.883500	Neutral	25.3	56.0	30.7	Complied
2.994000	Neutral	31.5	56.0	24.5	Complied
10.950000	Neutral	33.9	60.0	26.1	Complied
26.610000	Neutral	29.7	60.0	30.3	Complied

Results: Neutral / Average / 240 VAC 60 Hz

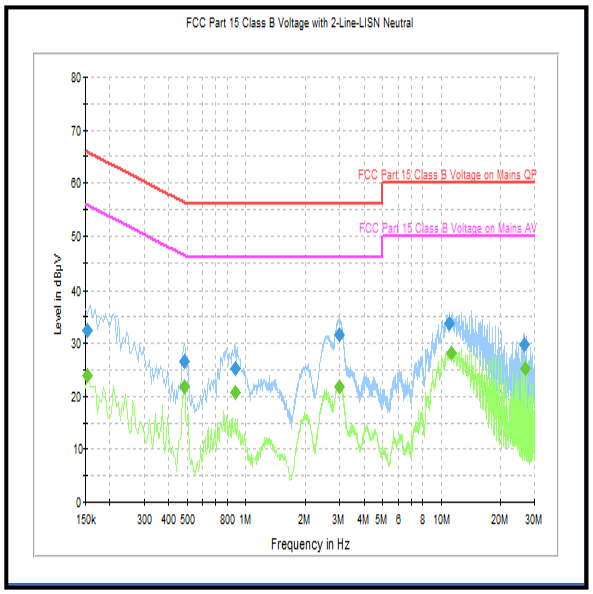
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Neutral	24.0	55.8	31.8	Complied
0.483000	Neutral	21.9	46.3	24.4	Complied
0.879000	Neutral	20.7	46.0	25.3	Complied
2.998500	Neutral	21.9	46.0	24.1	Complied
11.283000	Neutral	28.3	50.0	21.7	Complied
26.853000	Neutral	25.2	50.0	24.8	Complied

Transmitter AC Conducted Spurious Emissions – UMTS II & *Bluetooth* BR (continued)

Results: 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

4.4. Transmitter AC Conducted Spurious Emissions – UMTS V & *Bluetooth* BR

Test Summary:

Test Engineer:	Stefan Ho	**Test Dates:**	11 March 2019 & 12 March 2019
Test Sample Serial Number:	602429		

FCC Reference:	Part 15.207
Test Method Used:	ANSI C63.10 Section 6.2, FCC KDB 174176 and notes below
ISED Canada Reference	RSS-Gen 8.8
Test Method Used:	ANSI C63.10 Section 6.2 and notes below

Environmental Conditions:

Temperature (°C):	17 to 18
Relative Humidity (%):	36 to 46

Note(s):

16. The EUT was connected to a LISN via the ASTEC AC to DC power supply. The input of the LISN was connected to a 120 VAC 60 Hz single phase supply via a LISN.
17. In accordance with FCC KDB 174176 Q4, tests were performed with a 240 VAC 60 Hz single phase supply as this was within the voltage range marked on the EUT power supply.
18. A pulse limiter was fitted between the LISN and the test receiver.
19. Pre-scans were performed and markers placed on the highest live and neutral measured levels. Final measurements were performed on the marker frequencies with the results shown in the tables below.
20. Tests were performed with the EUT transmitting on the middle channels UMTS V and *Bluetooth* BR simultaneously.

Transmitter AC Conducted Spurious Emissions – UMTS V & *Bluetooth* BR (continued)

Results: Live / Quasi Peak / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Live	38.5	65.8	27.3	Complied
0.465000	Live	34.1	56.6	22.5	Complied
2.827500	Live	28.4	56.0	27.6	Complied
10.018500	Live	37.3	60.0	22.7	Complied
14.194500	Live	35.0	60.0	25.0	Complied
27.159000	Live	28.9	60.0	31.1	Complied

Results: Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Live	29.1	55.8	26.7	Complied
0.465000	Live	28.7	46.6	17.9	Complied
1.437000	Live	23.2	46.0	22.8	Complied
10.041000	Live	31.7	50.0	18.3	Complied
11.350500	Live	31.0	50.0	19.0	Complied
24.594000	Live	16.6	50.0	33.4	Complied

Results: Neutral / Quasi Peak / 120 VAC 60 Hz

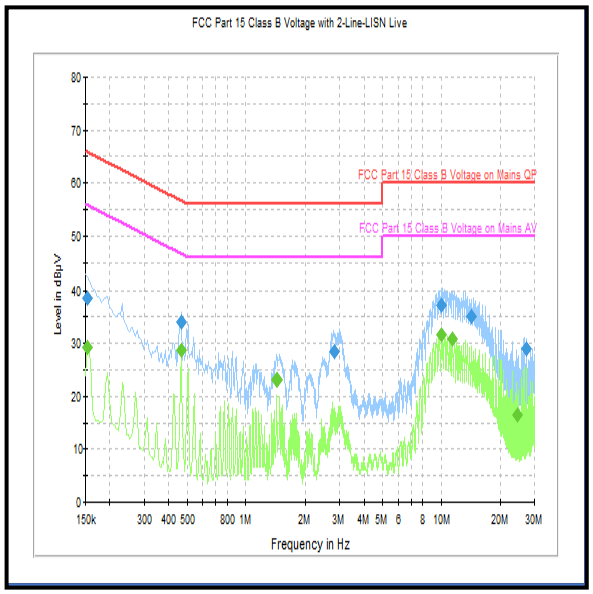
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.150000	Neutral	39.3	66.0	26.7	Complied
0.172500	Neutral	38.8	64.8	26.0	Complied
2.944500	Neutral	33.8	56.0	22.2	Complied
10.374000	Neutral	37.2	60.0	22.8	Complied
11.274000	Neutral	34.0	60.0	26.0	Complied
27.159000	Neutral	30.1	60.0	29.9	Complied

Results: Neutral / Average / 120 VAC 60 Hz

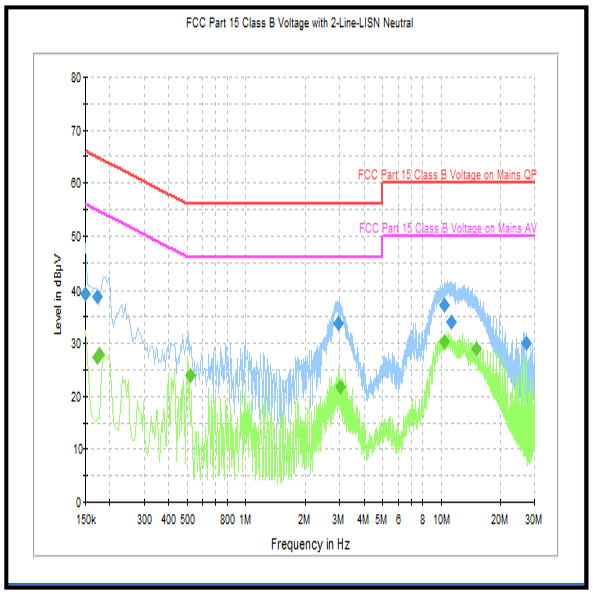
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.172500	Neutral	27.3	54.8	27.5	Complied
0.177000	Neutral	27.8	54.6	26.8	Complied
0.519000	Neutral	24.0	46.0	22.0	Complied
3.016500	Neutral	21.9	46.0	24.1	Complied
10.378500	Neutral	30.2	50.0	19.8	Complied
15.135000	Neutral	29.0	50.0	21.0	Complied

Transmitter AC Conducted Spurious Emissions – UMTS V & *Bluetooth* BR (continued)

Results: 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions – UMTS V & *Bluetooth* BR (continued)

Results: Live / Quasi Peak / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.163500	Live	31.9	65.3	33.4	Complied
0.483000	Live	30.5	56.3	25.8	Complied
1.482000	Live	23.2	56.0	32.8	Complied
2.998500	Live	27.9	56.0	28.1	Complied
10.945500	Live	35.1	60.0	24.9	Complied
26.610000	Live	30.0	60.0	30.0	Complied

Results: Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.186000	Live	24.8	54.2	29.4	Complied
0.483000	Live	24.2	46.3	22.1	Complied
1.405500	Live	18.2	46.0	27.8	Complied
2.976000	Live	18.0	46.0	28.0	Complied
11.364000	Live	29.5	50.0	20.5	Complied
26.668500	Live	18.9	50.0	31.1	Complied

Results: Neutral / Quasi Peak / 240 VAC 60 Hz

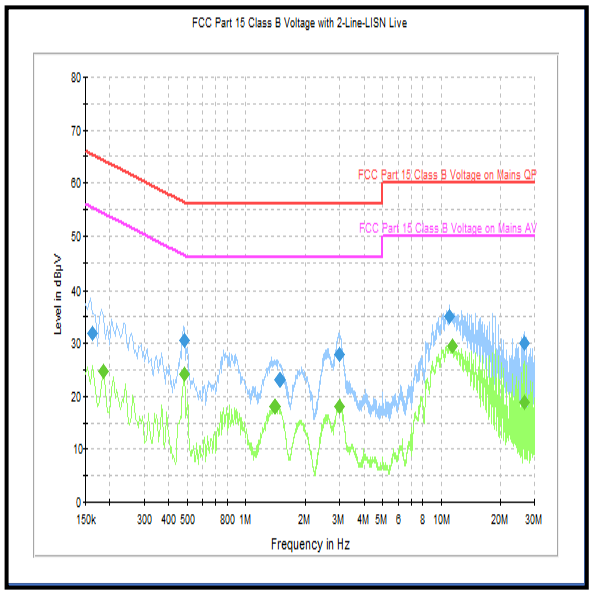
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.163500	Neutral	31.0	65.3	34.3	Complied
0.483000	Neutral	27.5	56.3	28.8	Complied
0.883500	Neutral	24.1	56.0	31.9	Complied
2.985000	Neutral	31.6	56.0	24.4	Complied
10.936500	Neutral	33.3	60.0	26.7	Complied
27.159000	Neutral	28.9	60.0	31.1	Complied

Results: Neutral / Average / 240 VAC 60 Hz

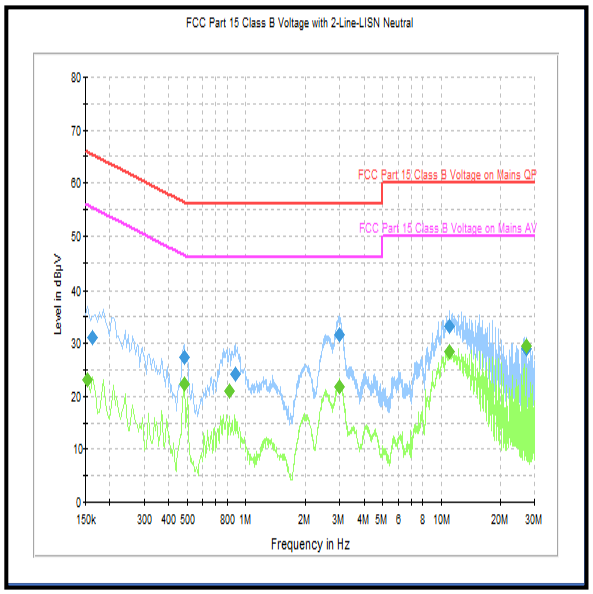
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Neutral	23.1	55.8	32.7	Complied
0.483000	Neutral	22.3	46.3	24.0	Complied
0.820500	Neutral	21.0	46.0	25.0	Complied
2.994000	Neutral	21.9	46.0	24.1	Complied
10.936500	Neutral	28.3	50.0	21.7	Complied
27.159000	Neutral	29.5	50.0	20.5	Complied

Transmitter AC Conducted Spurious Emissions – UMTS V & *Bluetooth* BR (continued)

Results: 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

4.5. Transmitter AC Conducted Spurious Emissions – 802.11b WLAN

Test Summary:

Test Engineer:	Stefan Ho	**Test Dates:**	11 March 2019 & 12 March 2019
Test Sample Serial Number:	602429		

FCC Reference:	Part 15.207
Test Method Used:	ANSI C63.10 Section 6.2, FCC KDB 174176 and notes below
ISED Canada Reference	RSS-Gen 8.8
Test Method Used:	ANSI C63.10 Section 6.2 and notes below

Environmental Conditions:

Temperature (°C):	17 to 18
Relative Humidity (%):	36 to 46

Note(s):

21. The EUT was connected to a LISN via the ASTEC AC to DC power supply. The input of the LISN was connected to a 120 VAC 60 Hz single phase supply via a LISN.
22. In accordance with FCC KDB 174176 Q4, tests were performed with a 240 VAC 60 Hz single phase supply as this was within the voltage range marked on the EUT power supply.
23. A pulse limiter was fitted between the LISN and the test receiver.
24. Pre-scans were performed and markers placed on the highest live and neutral measured levels. Final measurements were performed on the marker frequencies with the results shown in the tables below.
25. The test were performed with the EUT transmitting on 802.11b at 11Mbit/s on channel 11.

Transmitter AC Conducted Spurious Emissions – 802.11b WLAN (continued)

Results: Live / Quasi Peak / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Live	31.5	65.8	34.3	Complied
0.465000	Live	30.4	56.6	26.2	Complied
1.522500	Live	24.7	56.0	31.3	Complied
2.895000	Live	27.9	56.0	28.1	Complied
10.158000	Live	35.9	60.0	24.1	Complied
16.228500	Live	36.1	60.0	23.9	Complied

Results: Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.172500	Live	25.4	54.8	29.4	Complied
0.460500	Live	26.4	46.7	20.3	Complied
1.527000	Live	16.0	46.0	30.0	Complied
9.780000	Live	31.1	50.0	18.9	Complied
10.810500	Live	31.2	50.0	18.8	Complied
16.228500	Live	30.6	50.0	19.4	Complied

Results: Neutral / Quasi Peak / 120 VAC 60 Hz

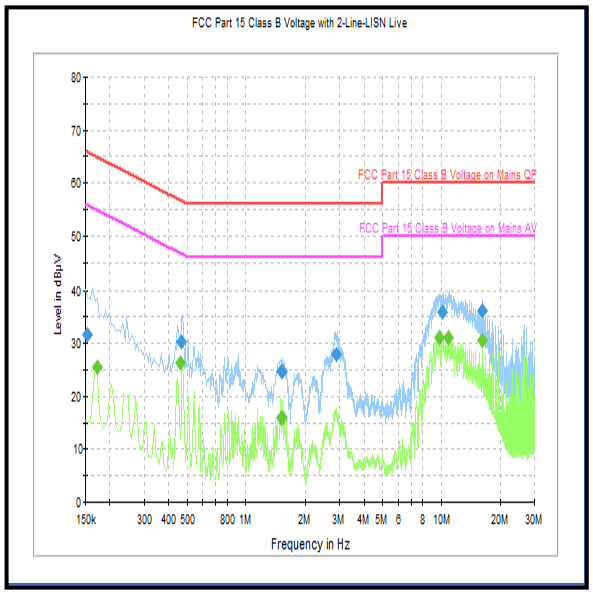
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.150000	Neutral	34.3	66.0	31.7	Complied
0.474000	Neutral	29.1	56.4	27.3	Complied
2.841000	Neutral	31.1	56.0	24.9	Complied
10.923000	Neutral	34.7	60.0	25.3	Complied
16.228500	Neutral	35.6	60.0	24.4	Complied
26.610000	Neutral	30.7	60.0	29.3	Complied

Results: Neutral / Average / 120 VAC 60 Hz

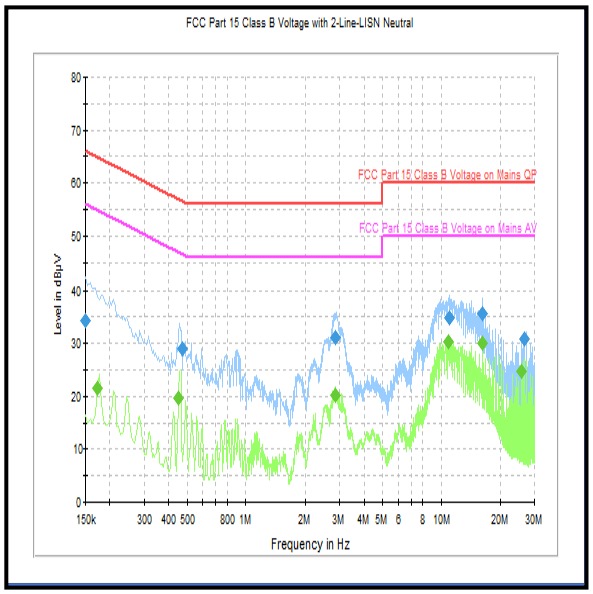
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.172500	Neutral	21.6	54.8	33.2	Complied
0.451500	Neutral	19.6	46.8	27.2	Complied
2.854500	Neutral	20.1	46.0	25.9	Complied
10.810500	Neutral	30.3	50.0	19.7	Complied
16.228500	Neutral	29.9	50.0	20.1	Complied
25.876500	Neutral	24.8	50.0	25.2	Complied

Transmitter AC Conducted Spurious Emissions – 802.11b WLAN (continued)

Results: 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions – 802.11b WLAN (continued)

Results: Live / Quasi Peak / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.150000	Live	28.7	66.0	37.3	Complied
0.483000	Live	30.1	56.3	26.2	Complied
2.607000	Live	25.9	56.0	30.1	Complied
3.007500	Live	28.4	56.0	27.6	Complied
10.797000	Live	32.6	60.0	27.4	Complied
25.876500	Live	28.7	60.0	31.3	Complied

Results: Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Live	24.9	55.8	30.9	Complied
0.483000	Live	24.6	46.3	21.7	Complied
2.562000	Live	21.0	46.0	25.0	Complied
3.025500	Live	18.2	46.0	27.8	Complied
10.756500	Live	30.7	50.0	19.3	Complied
25.998000	Live	23.9	50.0	26.1	Complied

Results: Neutral / Quasi Peak / 240 VAC 60 Hz

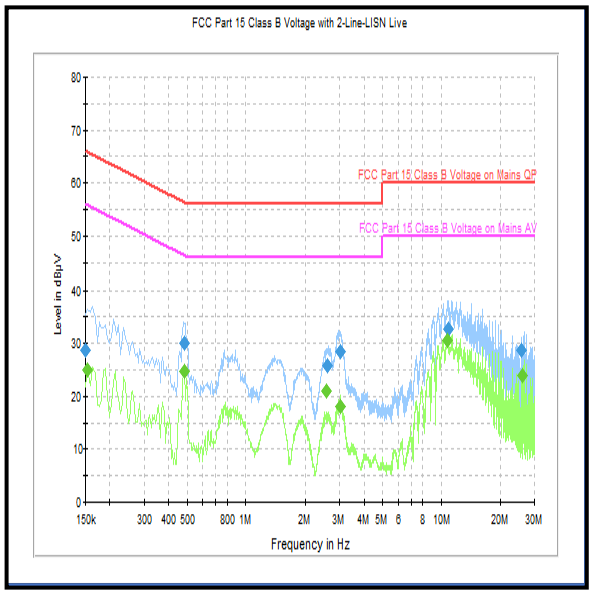
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Neutral	29.5	65.8	36.3	Complied
0.483000	Neutral	27.1	56.3	29.2	Complied
0.879000	Neutral	25.5	56.0	30.5	Complied
2.994000	Neutral	32.1	56.0	23.9	Complied
10.770000	Neutral	32.4	60.0	27.6	Complied
26.488500	Neutral	29.4	60.0	30.6	Complied

Results: Neutral / Average / 240 VAC 60 Hz

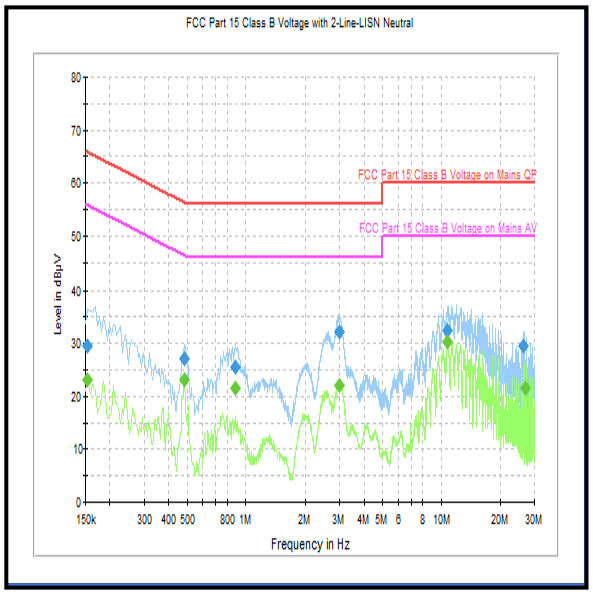
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.154500	Neutral	23.1	55.8	32.7	Complied
0.483000	Neutral	23.1	46.3	23.2	Complied
0.883500	Neutral	21.6	46.0	24.4	Complied
2.994000	Neutral	22.0	46.0	24.0	Complied
10.761000	Neutral	30.2	50.0	19.8	Complied
26.853000	Neutral	21.4	50.0	28.6	Complied

Transmitter AC Conducted Spurious Emissions – 802.11b WLAN (continued)

Results: 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

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