TEST REPORT

Test Report No. : UL-RPT-RP12970370-116A V2.0

Manufacturer	:	Eseye Design Ltd
Model No. / PMN	:	HERA604
HVIN	:	EPCB251002
FCC ID:	:	2AASBH604V4. Contains N7NEM7455
ISED Canada No.	:	IC: 11329A-H604V4. Contains 2417C-EM7455
Technology	:	WLAN, UMTS 850, UMTS 2100 (AWS), LTE Bands 12, 13, 2 & 30
Test Standard(s)	:	FCC Parts 2.1053, 15.209(a), 15.407(b), 22.917, 24.238, 27.53(a)(4), 27.53(c)(2), 27.53(g) & 27.53(h); ISED Canada RSS Gen 6.13, RSS-247 6.2, RSS-132 5.5, RSS-133 6.5, RSS-139 6.6, RSS-195 5.6 & RSS-130 4.7

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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 2.0 supersedes all previous versions.

Date of Issue: 07 April 2020

Checked by:

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Senior Test Engineer, Radio Laboratory

Company Signatory:

Sarah Williams
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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1. Customer Information

Company Name:	Eseye Design Ltd
Address:	20 Nugent Road The Surrey Research Park Guildford GU2 7AF United Kingdom

2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR15.209
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Section 15.209
Specification Reference:	47CFR15.407
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart E (Unlicensed National Information Infrastructure Devices) – Sections 15.407
Specification Reference:	47CFR22
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 22 Subpart H (Public Mobile Services)
Specification Reference:	47CFR24
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 24 Subpart E (Personal Communication Services)
Specification Reference:	47CFR27
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 27 Subpart C (Miscellaneous Wireless Communication Services)
Specification Reference:	RSS-Gen Issue 5, March 2019
Specification Title:	General Requirements for Compliance of Radio Apparatus
Specification Reference:	RSS-247 Issue 2 February 2017
Specification Title:	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
Specification Reference:	RSS-130 Issue 2, February 2019
Specification Title:	Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz
Specification Reference:	RSS-132 Issue 3, January 2013
Specification Title:	Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz
Specification Reference:	RSS-133 Issue 6, Amendment 1, January 2018
Specification Title:	2 GHz Personal Communications Services
Specification Reference:	RSS-139 Issue 3, July 2015
Specification Title:	Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz
Site Registration:	FCC: 621311; ISED Canada: 3245B
Location of Testing:	UL VS LTD, Unit 3 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, United Kingdom
Test Dates:	21 August 2019 to 19 September 2019

2.2. Summary of Test Results

FCC Reference (47CFR)	ISED Canada Reference	Measurement	Result
Transmit Mode: UMTS Band 5 & 5 GHz WLAN			
15.209(a)/15.407(b)/ 2.1053/22.917	RSS-Gen 6.13/ RSS-247 6.2/ RSS-132 5.5	Transmitter Out of Band Radiated Emissions	✓
Transmit Mode: UMTS Band 4 & 5 GHz WLAN			
15.209(a)/15.407(b)/ 2.1053/27.53(h)	RSS-Gen 6.13/ RSS-247 6.2/ RSS-139 6.6	Transmitter Out of Band Radiated Emissions	✓
Transmit Mode: LTE Band 12 & 5 GHz WLAN			
15.209(a)/15.407(b)/ 2.1053/27.53(g)	RSS-Gen 6.13/ RSS-247 6.2/ RSS-130 4.7	Transmitter Out of Band Radiated Emissions	✓
Transmit Mode: LTE Band 13 & 5 GHz WLAN			
15.209(a)/15.407(b)/ 2.1053/27.53(c)(2)	RSS-Gen 6.13/ RSS-247 6.2/ RSS-130 4.7	Transmitter Out of Band Radiated Emissions	✓
Transmit Mode: LTE Band 25 & 5 GHz WLAN			
15.209(a)/15.407(b)/ 2.1053/24.238	RSS-Gen 6.13/ RSS-247 6.2/ RSS-133 6.5	Transmitter Out of Band Radiated Emissions	✓
Transmit Mode: LTE Band 30 & 5 GHz WLAN			
15.209(a)/15.407(b)/ 2.1053/27.53(a)(4)	RSS-Gen 6.13/ RSS-247 6.2/ RSS-195 5.6	Transmitter Out of Band Radiated Emissions	✓
Key to Results ✓ = Complied ✗ = Did not comply			

2.3. Methods and Procedures

Reference:	ANSI C63.10-2013
Title:	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
Reference:	ANSI C63.26-2015
Title:	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
Reference:	ANSI C63.4-2014
Title:	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
Reference:	FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01 December 14, 2017
Title:	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E
Reference:	FCC KDB 971168 D01 v03r01 April 9, 2018
Title:	Measurement Guidance for Certification of Licensed Digital Transmitters
Reference:	FCC KDB 442401 June 12 2017
Title:	Radiated emission measurements for licensed radio service equipment

2.4. 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.

3. Equipment Under Test (EUT)

3.1. Identification of Equipment Under Test (EUT)

Brand Name:	HERA600
Model No. / PMN:	HERA604
HVIN:	EPCB251002
Serial Number:	04425100019080000001
Hardware Version:	IM251 Rev2
Software Version:	1.1.3
FCC ID:	2AASBH604V4
ISED Canada Certification Number:	IC: 11329A-H604V4

3.2. Description of EUT

The Equipment Under Test was an M2M WLAN router. The EUT also has GSM/GPRS/EDGE/CDMA/UMTS HSPA/LTE cellular radio functionality.

3.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.4. Additional Information Related to Testing

Technology Tested:	UMTS Band 5		
Mode Tested:	HSUPA subtest 4 / QPSK		
Transmit Frequency Range:	824 MHz to 849 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Top	4233	846.6

Technology Tested:	UMTS Band 4		
Mode Tested:	HSDPA subtest 4		
Transmit Frequency Range:	1710 MHz to 1755 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Top	1512	1752.4

Technology Tested:	LTE Band 12		
Modulation Type:	QPSK		
Channel Bandwidth:	1.4 MHz		
Transmit Frequency Range:	699 MHz to 716 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	23017	699.7

Technology Tested:	LTE Band 13		
Modulation Type:	QPSK		
Channel Bandwidth:	10 MHz		
Transmit Frequency Range:	777 MHz to 787 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Middle	23230	782.0

Technology Tested:	LTE Band 25		
Modulation Type:	QPSK		
Channel Bandwidth:	5 MHz		
Transmit Frequency Range:	1850 MHz to 1915 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Middle	26365	1882.5

Technology Tested:	LTE Band 30		
Modulation Type:	QPSK		
Channel Bandwidth:	5 MHz		
Transmit Frequency Range:	2305 MHz to 2315 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Middle	27710	2310.0

Technology Tested:	WLAN (IEEE 802.11a) / U-NII / LE-LAN		
Modulation:	BPSK		
Channel Spacing:	20 MHz		
Data Rate:	9 Mbit/s (MIMO)		
Transmit Frequency Range:	5725 MHz to 5850 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Middle	157	5785

3.5. Support Equipment

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

Description:	Wideband Radio Communication Tester
Brand Name:	Rohde & Schwarz
Model Name or Number:	CMW500
UL Asset Number:	M1866

Description:	120 VAC to 12 VDC Power Adaptor
Brand Name:	Power Solve
Model Name or Number:	FJ-SW1201250N
Serial Number:	Not marked or stated

Description:	Ethernet cable. Quantity 4. Length 2 metres
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	Ethernet cable. Quantity 1. Length 10 metres
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	RJ45 cable. Quantity 2. Length 2 metres
Brand Name:	Not marked or stated
Model Name or Number:	Not marked or stated
Serial Number:	Not marked or stated

Description:	Serial to USB cable. Quantity 2. Length 1 metres
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

Support Equipment (continued)

Description:	Laptop PC
Brand Name:	Lenovo
Model Name or Number:	L480
Serial Number:	PF1EHZQ0

3.6 Description of Available Antennas

The table below lists the antennas that the manufacturer intends to use with this product when operating in the 5150 to 5250 MHz & 5725 to 5850 MHz bands. It additionally shows the cellular antennas utilised on their respective ports.

Type	Stated Gain (dBi)	Manufacturer	Antenna Name	Used for Testing	Note
AN2450-5505BRS	3.0	Cortec	WLAN Antennas	X	1
GA-GSM-06	3.5	G-Antetech	Primary cellular	X	2
GA-GSM-06	3.5	G-Antetech	RX diversity	X	3

X = This antenna was used for testing purposes

Note(s):

1. WLAN antennas used for radiated emission measurements
2. Cellular primary antenna
3. Cellular receiver diversity antenna

4. Operation and Monitoring of the EUT during Testing

4.1. Operating Modes

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

- Transmitting UMTS and 5 GHz WLAN simultaneously at maximum power.
- Transmitting LTE and 5 GHz WLAN simultaneously at maximum power.

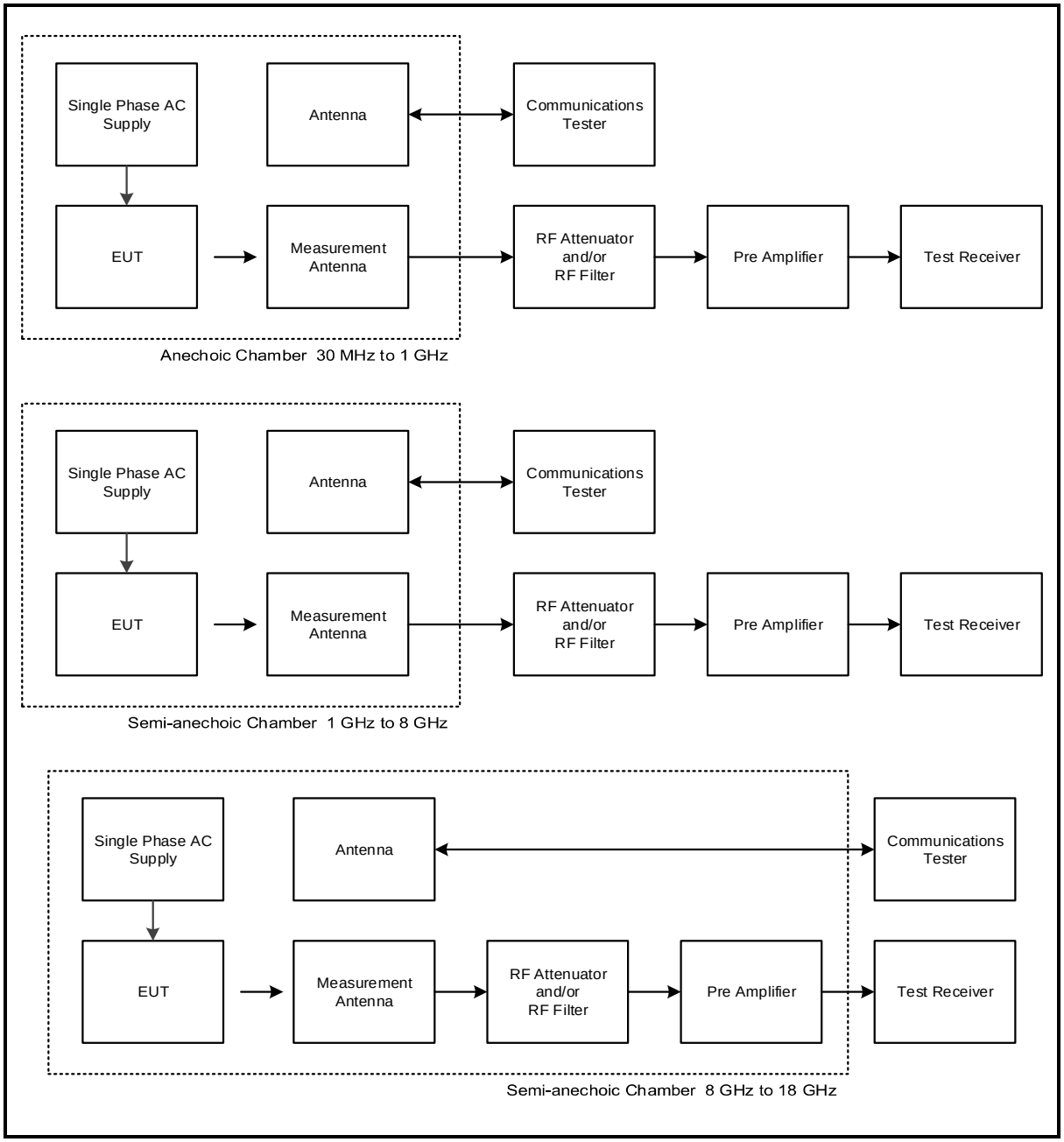
4.2. Configuration and Peripherals

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

- UMTS Band 5 and WLAN co-location, with the EUT configured to simultaneously transmit two signals at maximum output power (UMTS 850 HSUPA subtest 4 on channel 4233 / 846.6MHz and 5 GHz WLAN U-NII Band 3 802.11a 9 Mbit/s (MIMO) carrier on middle channel 157 / 5785 MHz).
- UMTS Band 4 and WLAN co-location, with the EUT configured to simultaneously transmit two signals at maximum output power (UMTS Band 4 HSDPA subtest 4 on channel 1512 / 1752.4 MHz and 5 GHz WLAN U-NII Band 3 802.11a 9 Mbit/s (MIMO) carrier on middle channel 157 / 5785 MHz).
- LTE Band 12 and WLAN co-location, with EUT configured to simultaneously transmit two signals at maximum output power (LTE Band 12 QPSK / 1.4 MHz Channel bandwidth / 1RB offset 5 on channel 23017 / 699.7 MHz and 5 GHz WLAN U-NII Band 3 802.11a 9 Mbit/s (MIMO) carrier on middle channel 157 / 5785 MHz).
- LTE Band 13 and WLAN co-location, with EUT configured to simultaneously transmit two signals at maximum output power (LTE Band 13 QPSK / 10 MHz Channel bandwidth / 1RB offset 49 on channel 23230 / 782 MHz and 5 GHz WLAN U-NII Band 3 802.11a 9 Mbit/s (MIMO) carrier on middle channel 157 / 5785 MHz).
- LTE Band 25 and WLAN co-location, with EUT configured to simultaneously transmit two signals at maximum output power (LTE Band 25 QPSK / 5 MHz Channel bandwidth / 1RB offset 13 on channel 26365 / 1882.5 MHz and 5 GHz WLAN U-NII Band 3 802.11a 9 Mbit/s (MIMO) carrier on middle channel 157 / 5785 MHz).
- LTE Band 30 and WLAN co-location, with EUT configured to simultaneously transmit two signals at maximum output power (LTE Band 30 QPSK / 5 MHz Channel bandwidth / 1RB offset 13 on channel 27710 / 2310 MHz and 5 GHz WLAN U-NII Band 3 802.11a 9 Mbit/s (MIMO) carrier on middle channel 157 / 5785 MHz).
- Worst case transmit modes used for WCDMA and LTE were selected from the highest conducted powers reported in test report B15W50341-FCC-RF_Rev1 for Sierra Wireless EM7455 module with FCC ID N7NEM7455 / ISED Canada IC:2417C-EM7455.
- The cellular link was controlled using a Rohde & Schwarz CMW500 GSM / UMTS / LTE system simulator.
- WLAN 802.11a was controlled using a bespoke application on the laptop PC supplied by the customer. The application was used to enable continuous transmission and receive modes and to select the test channels, data rates and modulation schemes as required. The instructions were called *'HERA600v4_Notes_for_configuring_test_modes.docx'* dated 28 June 2017.
- All active ports were terminated. A test USIM was used.

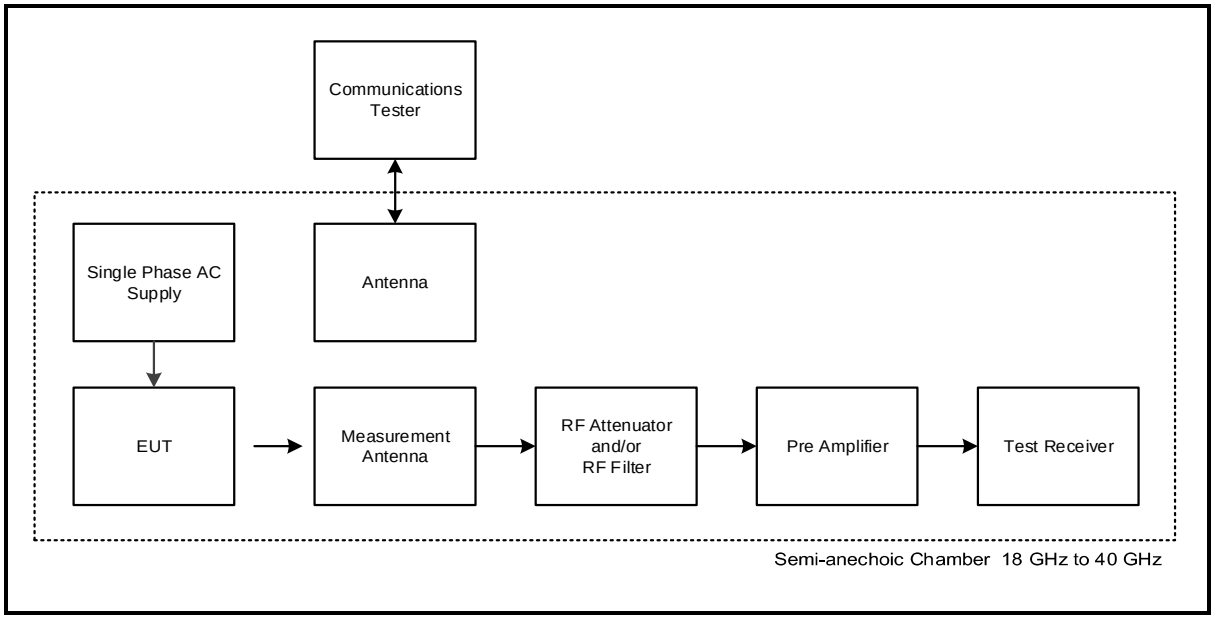
Test Setup Diagrams

Radiated Tests:



Test Setup Diagrams (continued)

Radiated Tests:



5. Measurements, Examinations and Derived Results

5.1. General Comments

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to *Section 6 Measurement Uncertainty* for details.

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.

5.2. Test Results

5.2.1. Transmitter Out of Band Radiated Emissions (UMTS Band 5 & 5 GHz WLAN)

Test Summary:

Test Engineer:	Andrew Harding	**Test Dates:**	12 September 2019 & 13 September 2019
Test Sample Serial Number:	04425100019080000001		

FCC Reference:	Parts 15.209(a), 15.407(b), 2.1053 & 22.917
ISED Canada Reference:	RSS-Gen 6.13, RSS-247 6.2 & RSS-132 5.5
Test Method Used:	ANSI C63.26 5.5, KDB 971168 Section 6.1 referencing ANSI C63.4, FCC Part 2.1053, KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.5
Frequency Range:	30 MHz to 40 GHz
Configuration:	UMTS Band 5 (Ch 4233) / 5 GHz WLAN 802.11a 9 Mbit/s (MIMO)

Environmental Conditions:

Temperature (°C):	25
Relative Humidity (%):	50

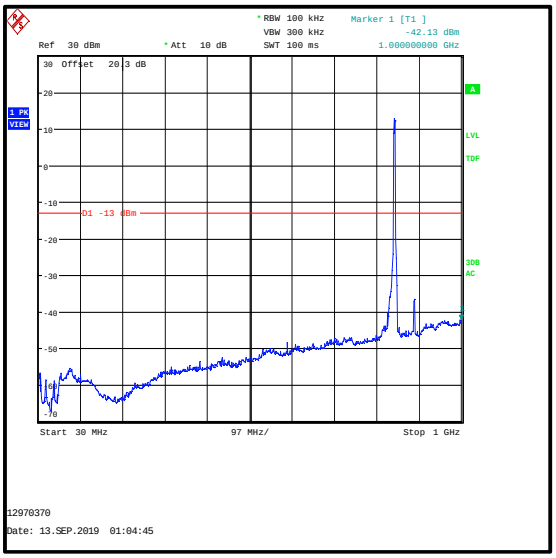
Note(s):

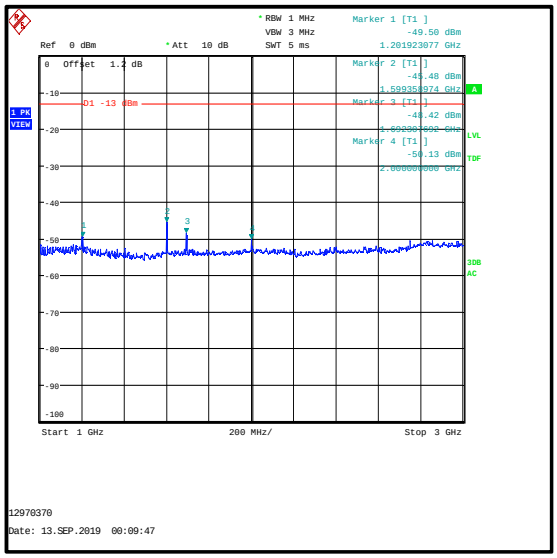
1. All intermodulation products were below the noise floor level or greater than 20 dB from the specification limit.
2. The uplink and downlink UMTS Band 5 traffic channel is shown on the 30 MHz to 1 GHz plot.
3. The 5 GHz WLAN carrier is shown on the 3 GHz to 6 GHz plot.
4. The emissions on the 1 GHz to 3 GHz plot were investigated and found not to be intermodulation products or harmonics.
5. Measurements were made using appropriate RF attenuators and filters where required.
6. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz, for measurements below 1 GHz. For measurements above 1 GHz resolution bandwidth was set 1 MHz and video bandwidth 3 MHz, with the sweep time set to auto. A peak detector and trace mode of Max Hold were used to perform pre-scans, with markers placed on the highest measured levels.
7. Measurements were performed in a semi-anechoic/anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm (measurements below 1 GHz) and 1.5 metres (measurements above 1 GHz) above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

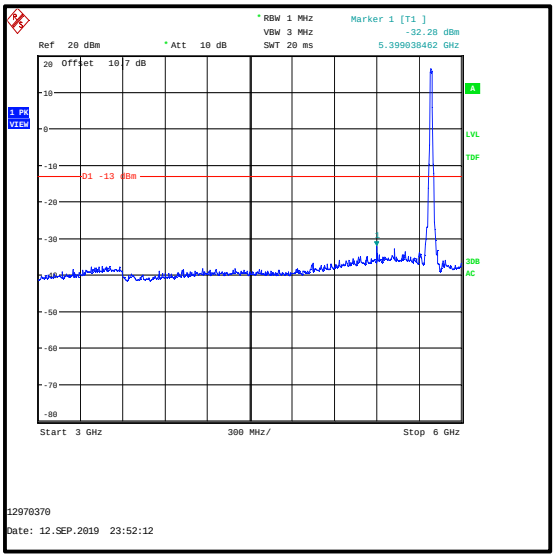
Results: UMTS Band 5 - Top Channel / 5 GHz WLAN – Middle Channel

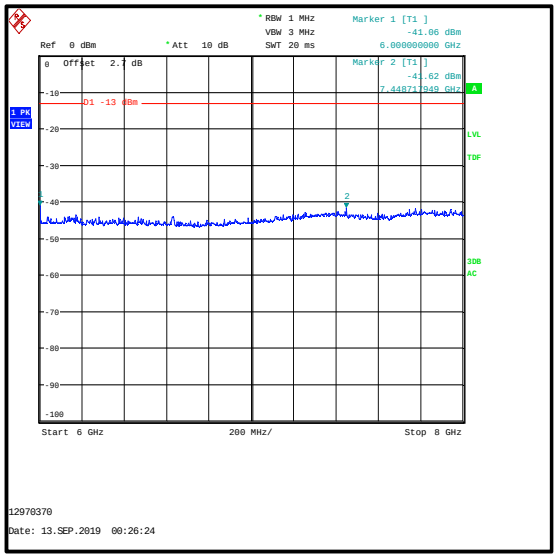
Emission Frequency (MHz)	Emission Level	Applicable Limit	Margin (dB)	Result
See Note 1				

Transmitter Out of Band Radiated Emissions (UMTS Band 5 & 5 GHz WLAN) (continued)

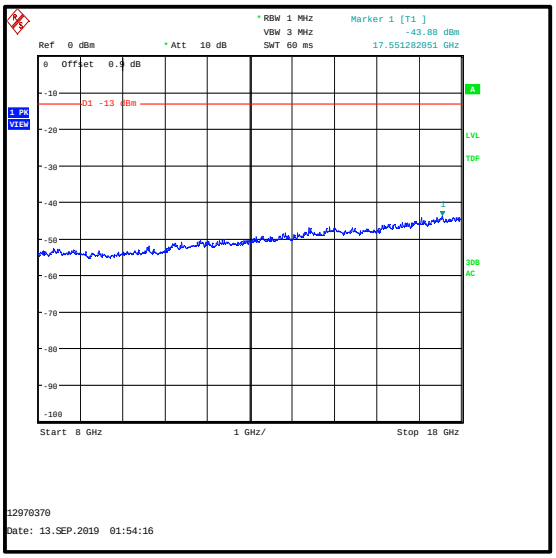


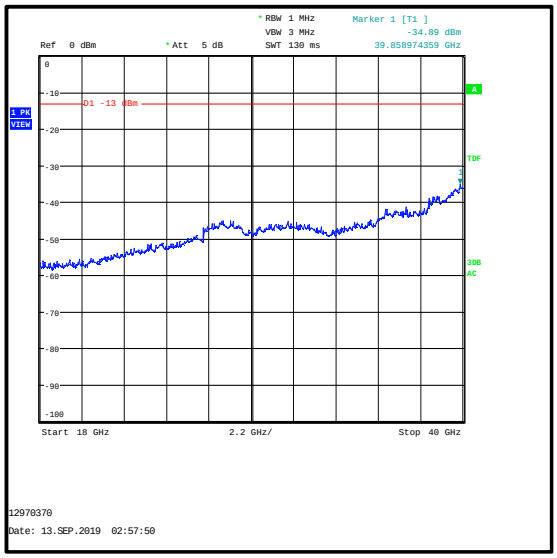






Transmitter out of Band Radiated Emissions (UMTS Band 5 & 5 GHz WLAN) (continued)





Transmitter out of Band Radiated Emissions (UMTS Band 5 & 5 GHz WLAN) (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2040	Thermohygrometer	Testo	608-H1	45124934	06 Jan 2020	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	04 Oct 2019	12
M2044	Test Receiver	Rohde & Schwarz	ESU 26	100122	01 Apr 2020	12
M1630	Test Receiver	Rohde & Schwarz	ESU 40	100233	20 Sep 2019	12
A3154	Pre-Amplifier	Com-Power	PAM-103	18020012	14 Oct 2019	12
A3179	Pre-Amplifier	Hewlett Packard	8449B	3008A00934	04 Apr 2020	12
A3141	Pre-Amplifier	Schwarzbeck	BBV 9718B	00021	21 Nov 2019	12
A2896	Pre-Amplifier	Schwarzbeck	BBV 9721	9721-023	08 Feb 2020	12
A553	Antenna	Chase	CBL6111A	1593	08 Oct 2019	12
A3138	Antenna	Schwarzbeck	BBHA 9120B	00702	03 Oct 2019	12
A3139	Antenna	Schwarzbeck	HWRD750	00027	04 Oct 2019	12
A2895	Antenna	Schwarzbeck	BBHA 9170	9170-728	08 Feb 2020	12
A2924	Attenuator	AtlanTecRF	AN18W5-20	832828#7	04 Mar 2020	12
A2523	Attenuator	AtlanTecRF	AN18W5-10	832827#1	04 Mar 2020	12
A3087	Low Pass Filter	AtlanTecRF	AFL-04000	18051600007	09 Apr 2020	12
A2467	High Pass Filter	Wainwright Instruments	WHJE5-920-1000-4000-60EE	2	18 Feb 2020	12
A3093	High Pass Filter	AtlanTecRF	AFH-03000	18051800077	09 Apr 2020	12
A2482	Band Reject Cavity Filter	Wainwright Instruments	WRCJV8-5665-5725-5850-5910-50SS	2	10 Apr 2020	12
A3095	High Pass Filter	AtlanTecRF	AFH-07000	18051600012	03 Apr 2020	12

5.2.2. Transmitter Out of Band Radiated Emissions (UMTS Band 4 & 5 GHz WLAN)

Test Summary:

Test Engineer:	Andrew Harding	**Test Dates:**	12 September 2019 & 13 September 2019
Test Sample Serial Number:	04425100019080000001		

FCC Reference:	Parts 15.209(a), 15.407(b), 2.1053 & 27.53(h)
ISED Canada Reference:	RSS-Gen 6.13, RSS-247 6.2 & RSS-139 6.6
Test Method Used:	ANSI C63.26 5.5, KDB 971168 Section 6.1 referencing ANSI C63.4, FCC Part 2.1053, KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.5
Frequency Range:	30 MHz to 40 GHz
Configuration:	UMTS Band 4 HSDPA subtest 4 (Ch 1512) / 5 GHz WLAN 802.11a 9 Mbit/s (MIMO)

Environmental Conditions:

Temperature (°C):	25
Relative Humidity (%):	50

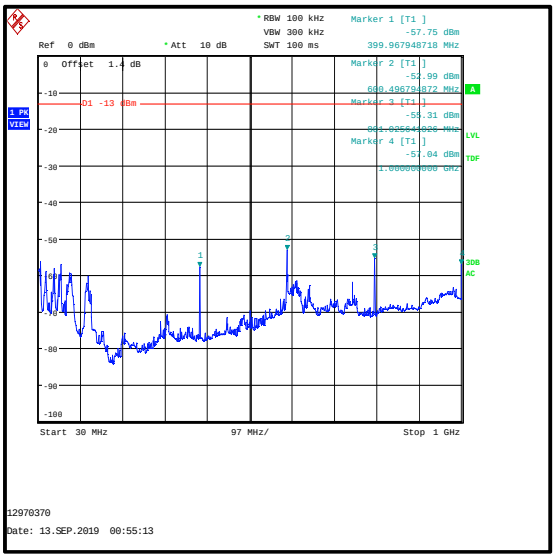
Note(s):

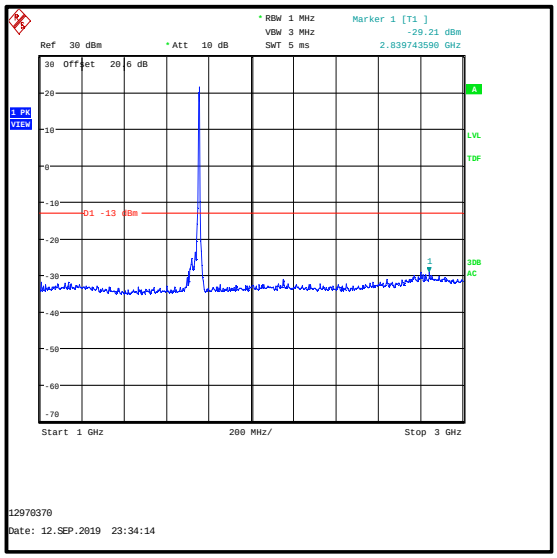
1. All intermodulation products were below the noise floor level or greater than 20 dB from the specification limit.
2. The uplink UMTS Band 4 traffic channel is shown on the 1 GHz to 3 GHz plot.
3. The 5 GHz WLAN carrier is shown on the 4 GHz to 6 GHz plot.
4. The emissions on the 30 MHz to 1 GHz plot were investigated and found not to be intermodulation products or harmonics.
5. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz, for measurements below 1 GHz. For measurements above 1 GHz resolution bandwidth was set 1 MHz and video bandwidth 3 MHz, with the sweep time set to auto. A peak detector and trace mode of Max Hold were used to perform pre-scans, with markers placed on the highest measured levels.
6. Measurements were performed in a semi-anechoic/anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm (measurements below 1 GHz) and 1.5 metres (measurements above 1 GHz) above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

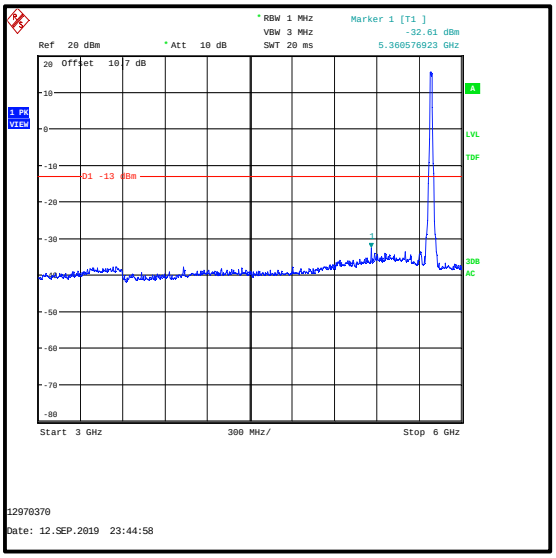
Results: UMTS Band 4 – Top Channel / 5 GHz WLAN - Middle Channel

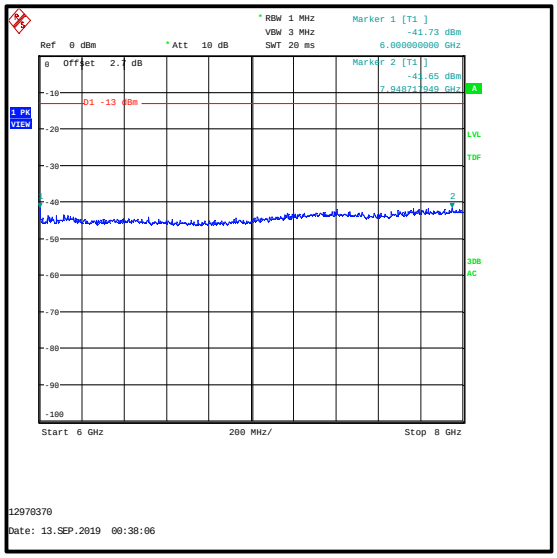
Emission Frequency (MHz)	Emission Level (dBm)	Applicable Limit (dBm)	Margin (dB)	Result
See Note 1				

Transmitter Out of Band Radiated Emissions (UMTS Band 4 & 5 GHz WLAN) (continued)

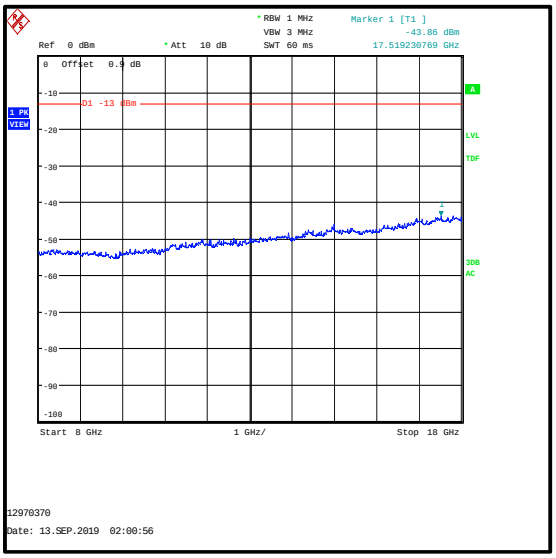


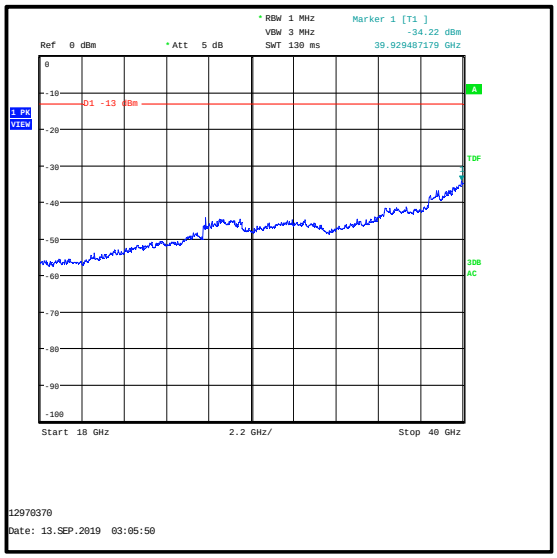






Transmitter Out of Band Radiated Emissions (UMTS Band 4 & 5 GHz WLAN) (continued)





Transmitter Out of Band Radiated Emissions (UMTS Band 4 & 5 GHz WLAN) (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2040	Thermohygrometer	Testo	608-H1	45124934	06 Jan 2020	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	04 Oct 2019	12
M2044	Test Receiver	Rohde & Schwarz	ESU 26	100122	01 Apr 2020	12
M1630	Test Receiver	Rohde & Schwarz	ESU 40	100233	20 Sep 2019	12
A3154	Pre-Amplifier	Com-Power	PAM-103	18020012	14 Oct 2019	12
A3179	Pre-Amplifier	Hewlett Packard	8449B	3008A00934	04 Apr 2020	12
A3141	Pre-Amplifier	Schwarzbeck	BBV 9718B	00021	21 Nov 2019	12
A2896	Pre-Amplifier	Schwarzbeck	BBV 9721	9721-023	08 Feb 2020	12
A553	Antenna	Chase	CBL6111A	1593	08 Oct 2019	12
A3138	Antenna	Schwarzbeck	BBHA 9120B	00702	03 Oct 2019	12
A3139	Antenna	Schwarzbeck	HWRD750	00027	04 Oct 2019	12
A2895	Antenna	Schwarzbeck	BBHA 9170	9170-728	08 Feb 2020	12
A2924	Attenuator	AtlanTecRF	AN18W5-20	832828#7	04 Mar 2020	12
A2523	Attenuator	AtlanTecRF	AN18W5-10	832827#1	04 Mar 2020	12
A3083	Low Pass Filter	AtlanTecRF	AFL-01000	18010900076	09 Apr 2020	12
A3087	Low Pass Filter	AtlanTecRF	AFL-04000	18051600007	09 Apr 2020	12
A2467	High Pass Filter	Wainwright Instruments	WHJE5-920-1000-4000-60EE	2	18 Feb 2020	12
A3093	High Pass Filter	AtlanTecRF	AFH-03000	18051800077	09 Apr 2020	12
A2482	Band Reject Cavity Filter	Wainwright Instruments	WRCJV8-5665-5725-5850-5910-50SS	2	10 Apr 2020	12
A3095	High Pass Filter	AtlanTecRF	AFH-07000	18051600012	03 Apr 2020	12

5.2.3. Transmitter Out of Band Radiated Emissions (LTE Band 12 & 5 GHz WLAN)

Test Summary:

Test Engineer:	Andrew Harding	**Test Dates:**	21 August 2019 to 22 August 2019
Test Sample Serial Number:	04425100019080000001		

FCC Reference:	Parts 15.209(a), 15.407(b), 2.1053 & 27.53(g)
ISED Canada Reference:	RSS-Gen 6.13, RSS-247 6.2 & RSS-130 4.7
Test Method Used:	ANSI C63.26 5.5, KDB 971168 Section 6.1 referencing ANSI C63.4, FCC Part 2.1053, KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.5
Frequency Range:	30 MHz to 40 GHz
Configuration:	LTE Band 12 (QPSK / 1.4 MHz Channel Bandwidth / 1RB 5 offset) / 5 GHz WLAN 802.11a 9 Mbit/s (MIMO)

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	45 to 47

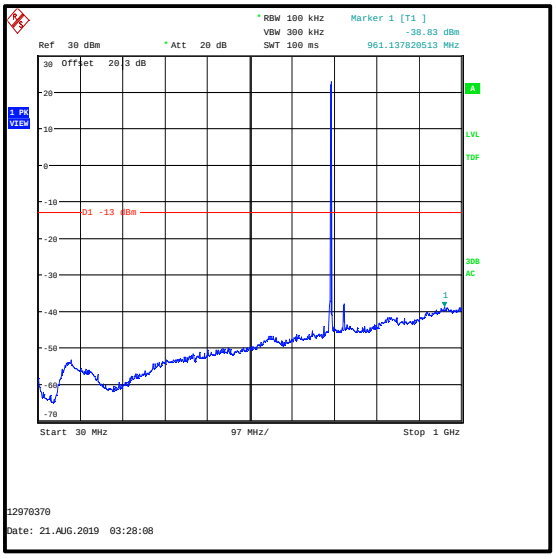
Note(s):

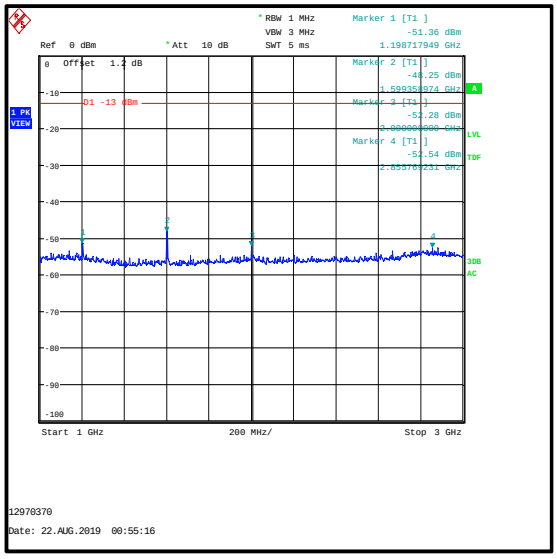
1. The uplink and downlink LTE Band 12 traffic channels are shown on the 30 MHz to 1 GHz plot.
2. The 5 GHz WLAN carrier is shown on the 3 GHz to 6 GHz plot.
3. The emission shown on the 3 GHz to 6 GHz pre-scan plot at 5081.731 MHz was investigated and found to be the intermodulation product of the WLAN carrier minus the LTE Band 12 uplink carrier. Final measurement was performed on this emission and the level recorded in the results section.
4. The emission shown on the 6 GHz to 8 GHz pre-scan plot at 6496.795 MHz was investigated and found to be the intermodulation product of the WLAN carrier plus the LTE Band 12 uplink carrier. The final measurement was greater than 20 dB from the limit therefore the result was not recorded.
5. The emissions on the 1 GHz to 3 GHz plot were investigated and found not to be intermodulation products or harmonics.
6. Final measurements were made using appropriate RF attenuators and filters where required.
7. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz, for measurements below 1 GHz. For measurements above 1 GHz resolution bandwidth was set 1 MHz and video bandwidth 3 MHz, with the sweep time set to auto. A peak detector and trace mode of Max Hold were used to perform pre-scans, with markers placed on the highest measured levels.
8. Measurements were performed in a semi-anechoic/anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm (measurements below 1 GHz) and 1.5 metres (measurements above 1 GHz) above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

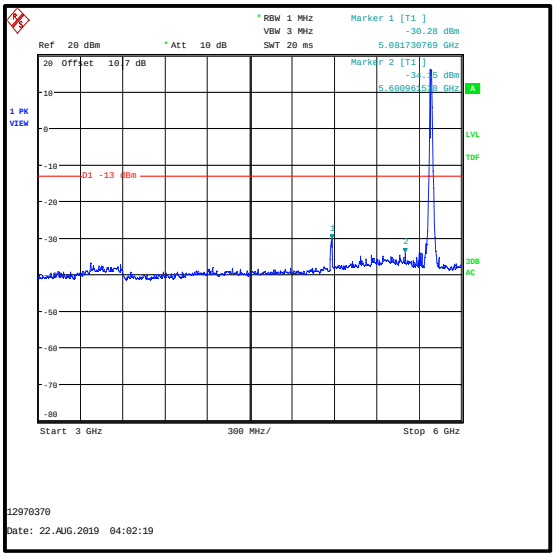
Results: LTE Band 12 Bottom Channel & 5 GHz WLAN – Middle Channel

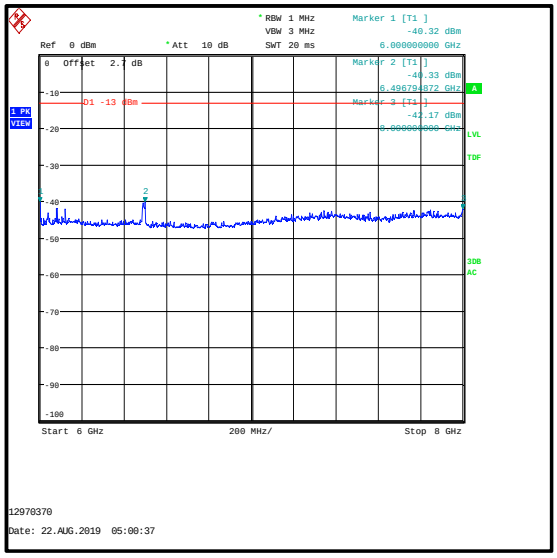
Emission Frequency (MHz)	Emission Level (dBm)	Applicable Limit (dBm)	Margin (dB)	Result
5079.407	-29.4	-13.0	16.4	Complied

Transmitter Out of Band Radiated Emissions (LTE Band 12 & 5 GHz WLAN) (continued)

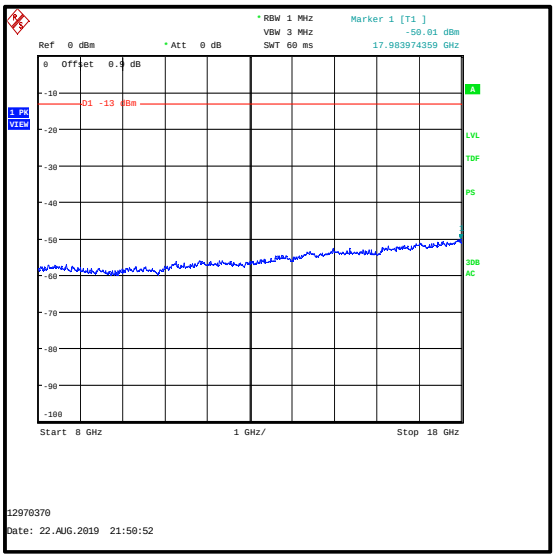


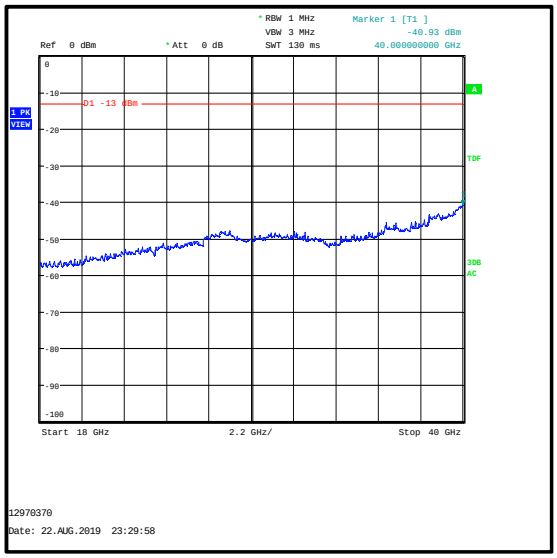






Transmitter Out of Band Radiated Emissions (LTE Band 12 & 5 GHz WLAN) (continued)





Transmitter Out of Band Radiated Emissions (LTE Band 12 & 5 GHz WLAN) (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2040	Thermohygrometer	Testo	608-H1	45124934	06 Jan 2020	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	04 Oct 2019	12
M2044	Test Receiver	Rohde & Schwarz	ESU 26	100122	01 Apr 2020	12
M1630	Test Receiver	Rohde & Schwarz	ESU 40	100233	20 Sep 2019	12
A3154	Pre-Amplifier	Com-Power	PAM-103	18020012	14 Oct 2019	12
A3155	Pre-Amplifier	Com-Power	PAM-118A	18040037	14 Oct 2019	12
A3179	Pre-Amplifier	Hewlett Packard	8449B	3008A00934	04 Apr 2020	12
A3141	Pre-Amplifier	Schwarzbeck	BBV 9718B	00021	21 Nov 2019	12
A2896	Pre-Amplifier	Schwarzbeck	BBV 9721	9721-023	08 Feb 2020	12
A553	Antenna	Chase	CBL6111A	1593	08 Oct 2019	12
A3138	Antenna	Schwarzbeck	BBHA 9120B	00702	03 Oct 2019	12
A3139	Antenna	Schwarzbeck	HWRD750	00027	04 Oct 2019	12
A2895	Antenna	Schwarzbeck	BBHA 9170	9170-728	08 Feb 2020	12
A2924	Attenuator	AtlanTecRF	AN18W5-20	832828#7	04 Mar 2020	12
A2523	Attenuator	AtlanTecRF	AN18W5-10	832827#1	04 Mar 2020	12
A3087	Low Pass Filter	AtlanTecRF	AFL-04000	18051600007	09 Apr 2020	12
A2467	High Pass Filter	Wainwright Instruments	WHJE5-920-1000-4000-60EE	2	18 Feb 2020	12
A3093	High Pass Filter	AtlanTecRF	AFH-03000	18051800077	09 Apr 2020	12
A2482	Band Reject Cavity Filter	Wainwright Instruments	WRCJV8-5665-5725-5850-5910-50SS	2	10 Apr 2020	12
A3095	High Pass Filter	AtlanTecRF	AFH-07000	18051600012	03 Apr 2020	12

5.2.4. Transmitter Out of Band Radiated Emissions (LTE Band 13 & 5 GHz WLAN)

Test Summary:

Test Engineer:	Andrew Harding	**Test Dates:**	21 August 2019 to 22 August 2019
Test Sample Serial Number:	04425100019080000001		

FCC Reference:	Parts 15.209(a), 15.407(b), 2.1053 & 27.53(c)(2)
ISED Canada Reference:	RSS-Gen 6.13, RSS-247 6.2 & RSS-130 4.7
Test Method Used:	ANSI C63.26 5.5, KDB 971168 Section 6.1 referencing ANSI C63.4, FCC Part 2.1053, KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.5
Frequency Range:	30 MHz to 40 GHz
Configuration:	LTE Band 13 (QPSK / 10 MHz Channel Bandwidth / 1RB 49 offset) / 5 GHz WLAN 802.11a 9 Mbit/s (MIMO)

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	45 to 47

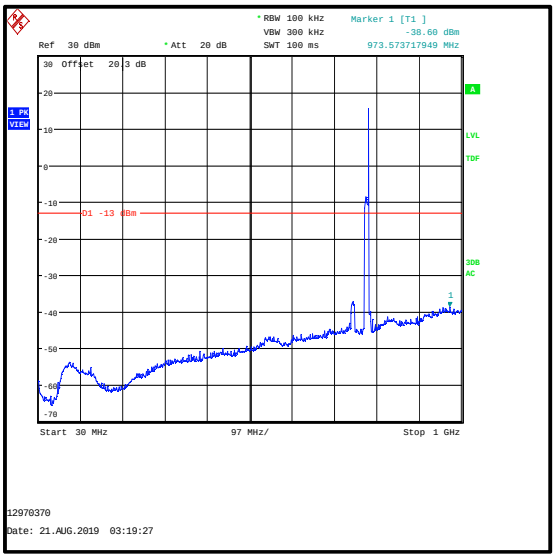
Note(s):

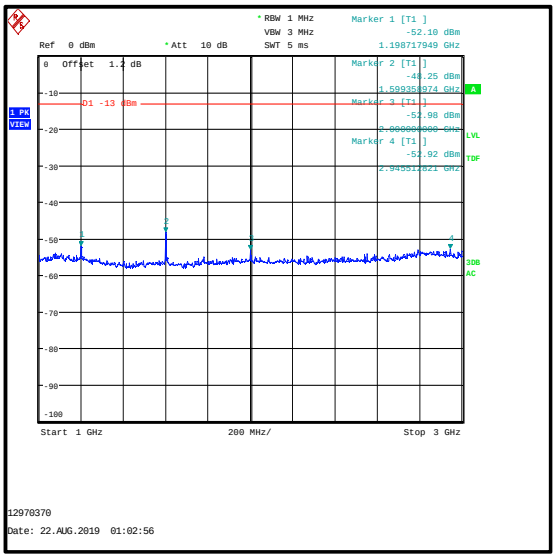
1. All intermodulation products were below the noise floor level or greater than 20 dB below the specification limit.
2. The uplink and downlink LTE Band 13 traffic channels are shown on the 30 MHz to 1 GHz plot.
3. The 5 GHz WLAN carrier is shown on the 3 GHz to 6 GHz plot.
4. The emissions on the 1 GHz to 3 GHz plot were investigated and found not to be intermodulation products or harmonics.
5. The emission shown on the 6 GHz to 8 GHz pre-scan plot at 6567.308 MHz was investigated and found to be the intermodulation product of the WLAN carrier plus the LTE Band 13 uplink carrier.
6. Pre-scans were made against the FCC Part 27 and RSS-130 general limits for radiated emissions. Further investigation was made on each emission noted during the pre-scans and the appropriate limit applied during the final measurements.
7. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz, for measurements below 1 GHz. For measurements above 1 GHz resolution bandwidth was set 1 MHz and video bandwidth 3 MHz, with the sweep time set to auto. A peak detector and trace mode of Max Hold were used to perform pre-scans, with markers placed on the highest measured levels.
8. Measurements were performed in a semi-anechoic/anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm (measurements below 1 GHz) and 1.5 metres (measurements above 1 GHz) above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

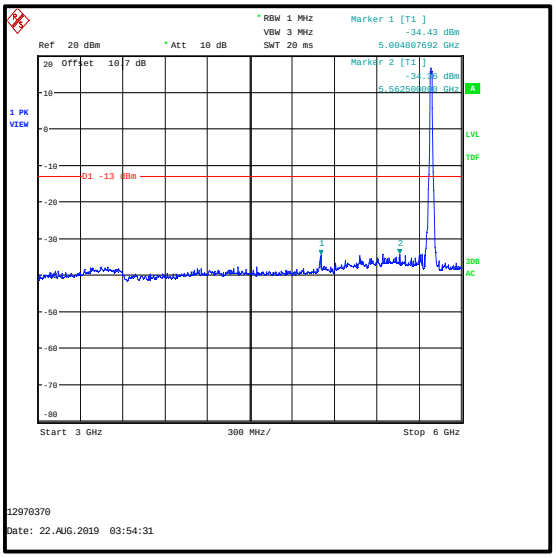
Results: LTE Band 13 Middle Channel & 5 GHz WLAN – Middle Channel

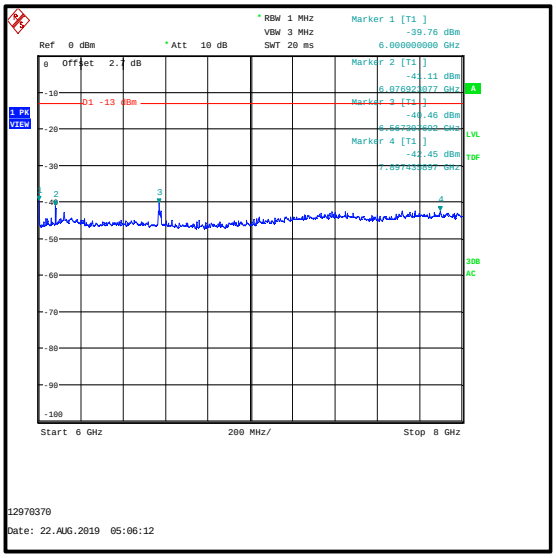
Emission Frequency (MHz)	Emission Level	Applicable Limit	Margin (dB)	Result
See Note 1				

Transmitter Out of Band Radiated Emissions (LTE Band 13 & 5 GHz WLAN) (continued)

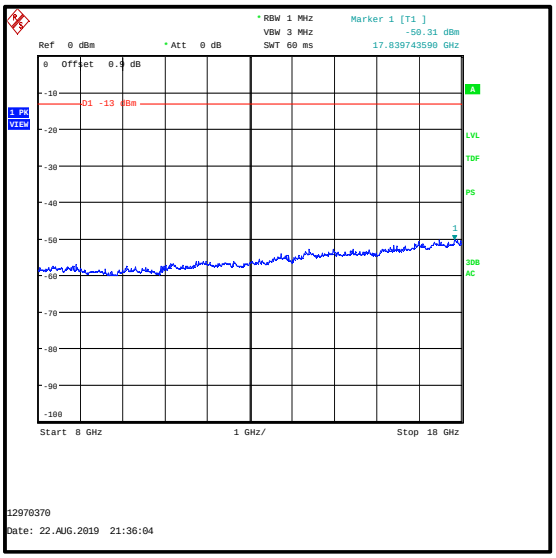


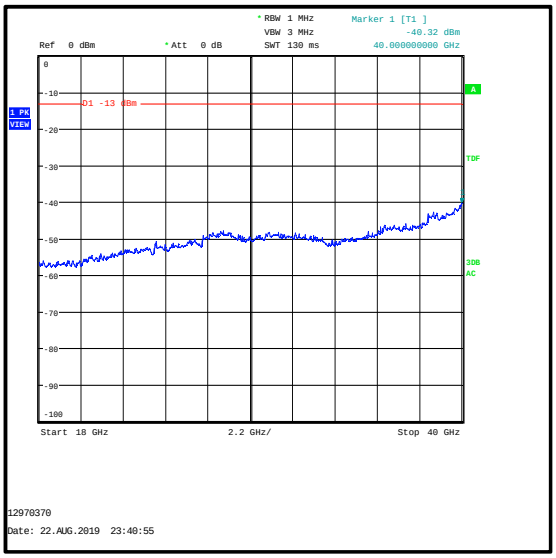






Transmitter Out of Band Radiated Emissions (LTE Band 13 & 5 GHz WLAN) (continued)





Transmitter Out of Band Radiated Emissions (LTE Band 13 & 5 GHz WLAN) (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2040	Thermohygrometer	Testo	608-H1	45124934	06 Jan 2020	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	04 Oct 2019	12
M2044	Test Receiver	Rohde & Schwarz	ESU 26	100122	01 Apr 2020	12
M1630	Test Receiver	Rohde & Schwarz	ESU 40	100233	20 Sep 2019	12
A3154	Pre-Amplifier	Com-Power	PAM-103	18020012	14 Oct 2019	12
A3155	Pre-Amplifier	Com-Power	PAM-118A	18040037	14 Oct 2019	12
A3179	Pre-Amplifier	Hewlett Packard	8449B	3008A00934	04 Apr 2020	12
A3141	Pre-Amplifier	Schwarzbeck	BBV 9718B	00021	21 Nov 2019	12
A2896	Pre-Amplifier	Schwarzbeck	BBV 9721	9721-023	08 Feb 2020	12
A553	Antenna	Chase	CBL6111A	1593	08 Oct 2019	12
A3138	Antenna	Schwarzbeck	BBHA 9120B	00702	03 Oct 2019	12
A3139	Antenna	Schwarzbeck	HWRD750	00027	04 Oct 2019	12
A2895	Antenna	Schwarzbeck	BBHA 9170	9170-728	08 Feb 2020	12
A2924	Attenuator	AtlanTecRF	AN18W5-20	832828#7	04 Mar 2020	12
A2523	Attenuator	AtlanTecRF	AN18W5-10	832827#1	04 Mar 2020	12
A3087	Low Pass Filter	AtlanTecRF	AFL-04000	18051600007	09 Apr 2020	12
A2467	High Pass Filter	Wainwright Instruments	WHJE5-920-1000-4000-60EE	2	18 Feb 2020	12
A3093	High Pass Filter	AtlanTecRF	AFH-03000	18051800077	09 Apr 2020	12
A2482	Band Reject Cavity Filter	Wainwright Instruments	WRCJV8-5665-5725-5850-5910-50SS	2	10 Apr 2020	12
A3095	High Pass Filter	AtlanTecRF	AFH-07000	18051600012	03 Apr 2020	12

5.2.5. Transmitter Out of Band Radiated Emissions (LTE Band 25 & 5 GHz WLAN)

Test Summary:

Test Engineer:	Andrew Harding	**Test Date:**	19 September 2019
Test Sample Serial Number:	04425100019080000001		

FCC Reference:	Parts 15.209(a), 15.407(b), 2.1053 & 24.238
ISED Canada Reference:	RSS-Gen 6.13, RSS-247 6.2 & RSS-130 4.7
Test Method Used:	ANSI C63.26 5.5, KDB 971168 Section 6.1 referencing ANSI C63.4, FCC Part 2.1053, KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.5
Frequency Range:	30 MHz to 40 GHz
Configuration:	LTE Band 25 (QPSK / 5 MHz Channel Bandwidth / 1RB 0 offset) / 5 GHz WLAN 802.11a 9 Mbit/s (MIMO)

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	38

Note(s):

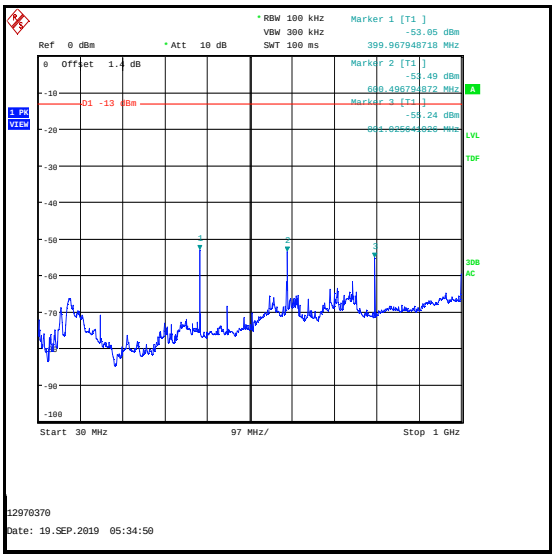
1. The uplink LTE Band 25 traffic channel is shown on the 1 GHz to 3 GHz plot.
2. The 5 GHz WLAN carrier is shown on the 3 GHz to 6 GHz plot.
3. The emission shown on the 3 GHz to 6 GHz pre-scan plot at 3894.231 MHz was investigated and found to be the intermodulation product of the WLAN carrier frequency minus the LTE Band 25 uplink carrier frequency. A final measurement was performed on this emission and the level recorded in the results section.
4. The emissions on the 30 MHz to 1 GHz plot were investigated and found not to be intermodulation products or harmonics.
5. The emission on the 6 GHz to 8 GHz plot were investigated and found not to be intermodulation products or harmonics.
6. Pre-scans were made against the FCC Part 24 and RSS-130 general limits for radiated emissions. Further investigation was made on each emission noted during the pre-scans and the appropriate limit applied during the final measurements.
7. Final measurements were made using appropriate RF attenuators and filters where required.
8. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz, for measurements below 1 GHz. For measurements above 1 GHz resolution bandwidth was set 1 MHz and video bandwidth 3 MHz, with the sweep time set to auto. A peak detector and trace mode of Max Hold were used to perform pre-scans, with markers placed on the highest measured levels.
9. Measurements were performed in a semi-anechoic/anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm (measurements below 1 GHz) and 1.5 metres (measurements above 1 GHz) above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

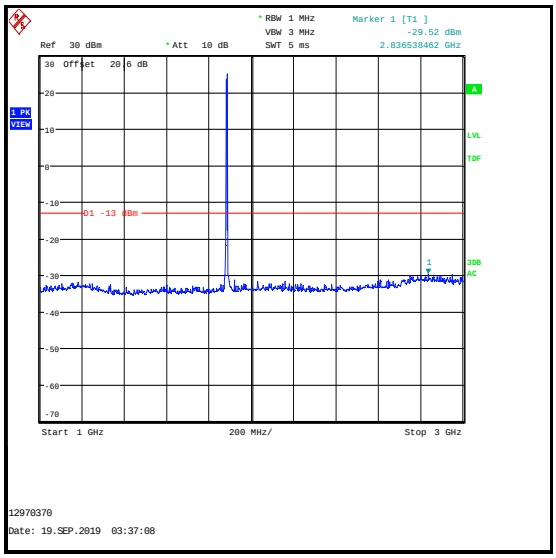
Transmitter Out of Band Radiated Emissions (LTE Band 25 & 5 GHz WLAN) (continued)

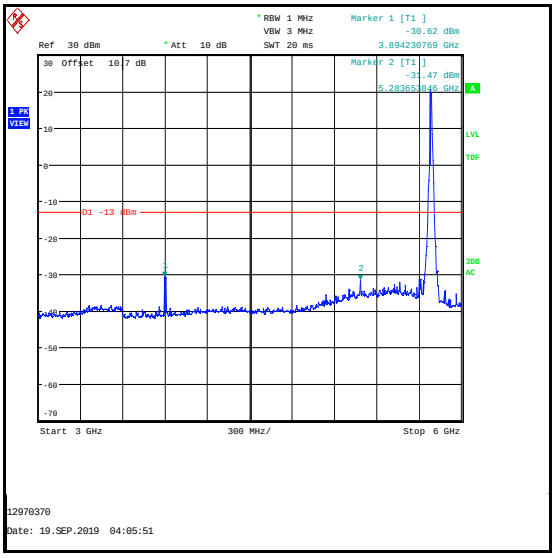
Results: LTE Band 25 – Middle Channel & 5 GHz WLAN – Middle Channel

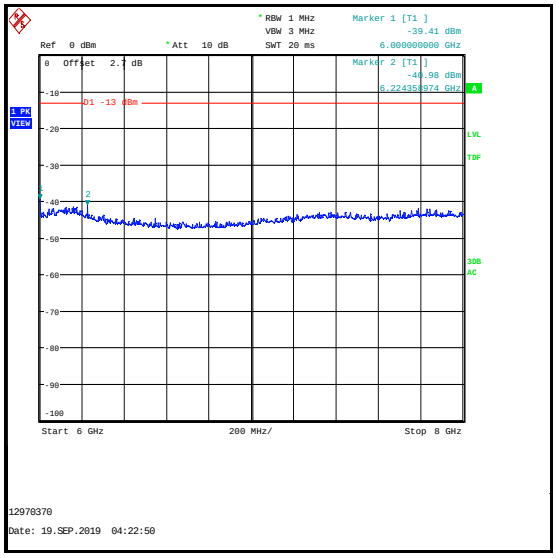
Emission Frequency (MHz)	Emission Level (dBm)	Applicable Limit (dBm)	Margin (dB)	Result
3900.881	-28.6	-13.0	15.6	Complied

Transmitter Out of Band Radiated Emissions (LTE Band 25 & 5 GHz WLAN) (continued)

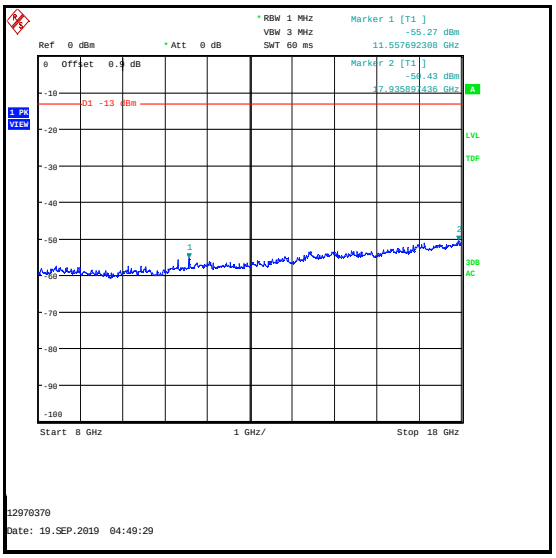


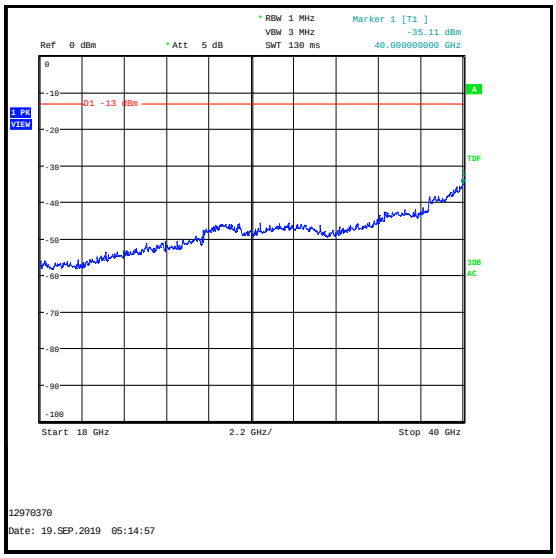






Transmitter Out of Band Radiated Emissions (LTE Band 25 & 5 GHz WLAN) (continued)





Transmitter Out of Band Radiated Emissions (LTE Band 25 & 5 GHz WLAN) (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2040	Thermohygrometer	Testo	608-H1	45124934	06 Jan 2020	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	04 Oct 2019	12
M2044	Test Receiver	Rohde & Schwarz	ESU 26	100122	01 Apr 2020	12
M1630	Test Receiver	Rohde & Schwarz	ESU 40	100233	20 Sep 2019	12
A3154	Pre-Amplifier	Com-Power	PAM-103	18020012	14 Oct 2019	12
A3179	Pre-Amplifier	Hewlett Packard	8449B	3008A00934	04 Apr 2020	12
A3141	Pre-Amplifier	Schwarzbeck	BBV 9718B	00021	21 Nov 2019	12
A2896	Pre-Amplifier	Schwarzbeck	BBV 9721	9721-023	08 Feb 2020	12
A553	Antenna	Chase	CBL6111A	1593	08 Oct 2019	12
A3138	Antenna	Schwarzbeck	BBHA 9120B	00702	03 Oct 2019	12
A3139	Antenna	Schwarzbeck	HWRD750	00027	04 Oct 2019	12
A2895	Antenna	Schwarzbeck	BBHA 9170	9170-728	08 Feb 2020	12
A2924	Attenuator	AtlanTecRF	AN18W5-20	832828#7	04 Mar 2020	12
A2523	Attenuator	AtlanTecRF	AN18W5-10	832827#1	04 Mar 2020	12
A3083	Low Pass Filter	AtlanTecRF	AFL-01000	18010900076	09 Apr 2020	12
A3087	Low Pass Filter	AtlanTecRF	AFL-04000	18051600007	09 Apr 2020	12
A3093	High Pass Filter	AtlanTecRF	AFH-03000	18051800077	09 Apr 2020	12
A2482	Band Reject Cavity Filter	Wainwright Instruments	WRCJV8-5665-5725-5850-5910-50SS	2	10 Apr 2020	12
A3095	High Pass Filter	AtlanTecRF	AFH-07000	18051600012	03 Apr 2020	12

5.2.6. Transmitter Out of Band Radiated Emissions (LTE Band 30 & 5 GHz WLAN)

Test Summary:

Test Engineer:	Andrew Harding	**Test Dates:**	21 August 2019 to 23 August 2019
Test Sample Serial Number:	04425100019080000001		

FCC Reference:	Parts 15.209(a), 15.407(b), 2.1053 & 27.53(a)(4)
ISED Canada Reference:	RSS-Gen 6.13, RSS-247 6.2 & RSS-195 5.6
Test Method Used:	ANSI C63.26 5.5, KDB 971168 Section 6.1 referencing ANSI C63.4, FCC Part 2.1053, KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.5
Frequency Range:	30 MHz to 40 GHz
Configuration:	LTE Band 30 (QPSK / 5 MHz Channel Bandwidth / 1RB 13 offset) / 5 GHz WLAN 802.11a 9 Mbit/s (MIMO)

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	45 to 47

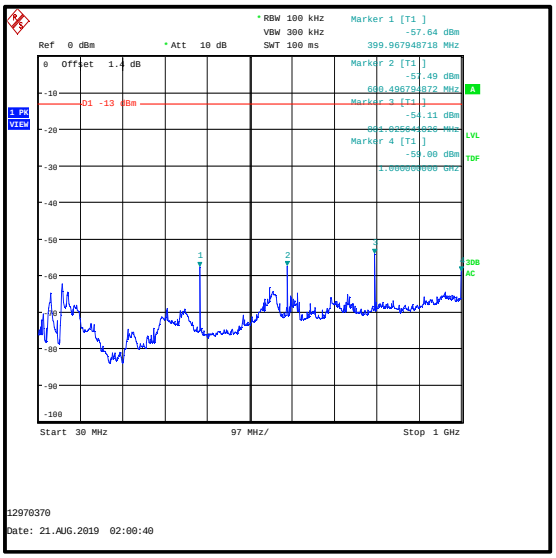
Note(s):

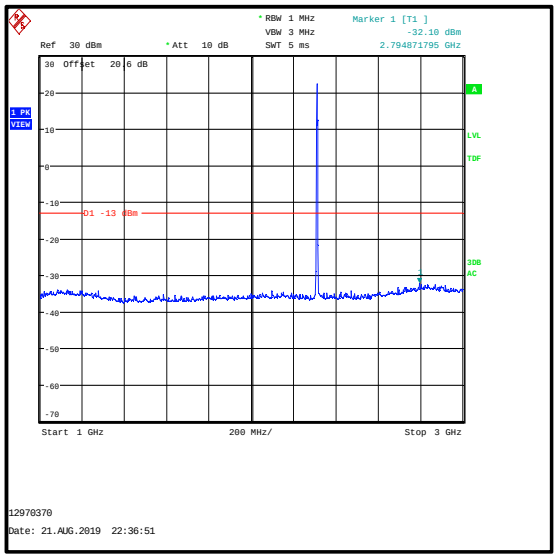
1. The uplink LTE Band 30 traffic channel is shown on the 1 GHz to 3 GHz plot.
2. The 5 GHz WLAN uplink is shown on the 3 GHz to 6 GHz plot.
3. The emission shown on the 3 GHz to 6 GHz pre-scan plot at 3475.962 MHz was investigated and found to be the intermodulation product of the WLAN carrier frequency minus the LTE Band 30 uplink carrier frequency. Final measurements were performed on this emissions and the level recorded in the results section.
4. The emissions on the 30 MHz to 1 GHz plot and 6 GHz to 8 GHz plot were investigated and found not to be intermodulation products or harmonics.
5. Pre-scans were made against the FCC Part 27 and RSS-195 general limits for radiated emissions. Further investigation was made on each emission noted during the pre-scans and the appropriate limit applied during the final measurements.
6. Final measurements were made using appropriate RF attenuators and filters where required.
7. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz, for measurements below 1 GHz. For measurements above 1 GHz resolution bandwidth was set 1 MHz and video bandwidth 3 MHz, with the sweep time set to auto. A peak detector and trace mode of Max Hold were used to perform pre-scans, with markers placed on the highest measured levels.
8. Measurements were performed in a semi-anechoic/anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm (measurements below 1 GHz) and 1.5 metres (measurements above 1 GHz) above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

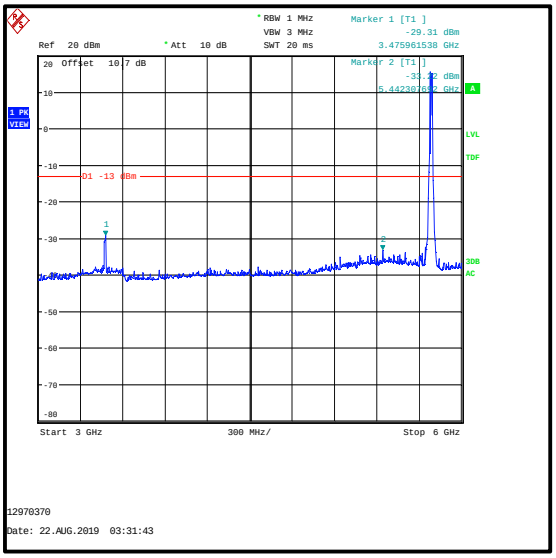
Results: LTE Band 30 Middle Channel & 5 GHz WLAN – Middle Channel

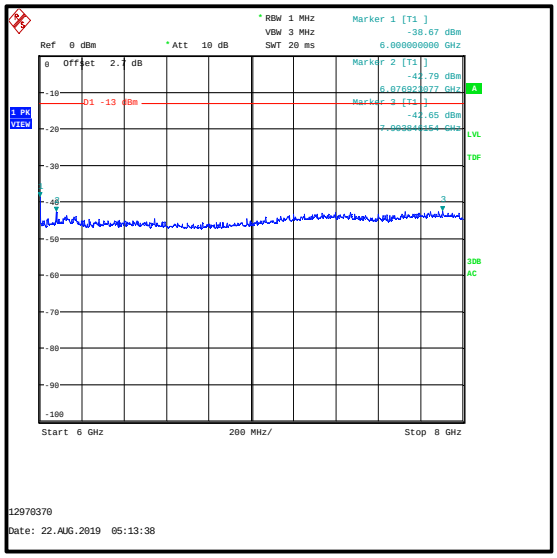
Emission Frequency (MHz)	Emission Level (dBm)	Applicable Limit (dBm)	Margin (dB)	Result
3467.228	-28.7	-13.0	15.7	Complied

Transmitter Out of Band Radiated Emissions (LTE Band 30 & 5 GHz WLAN) (continued)

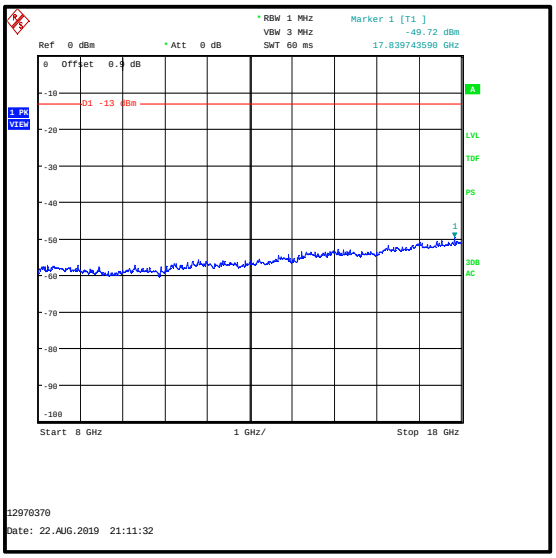


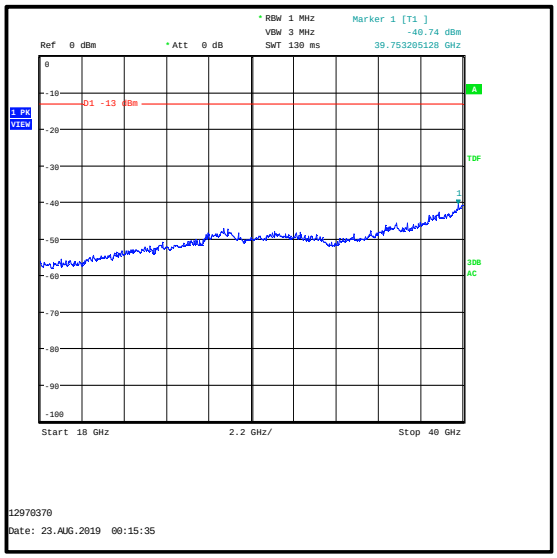






Transmitter Out of Band Radiated Emissions (LTE Band 30 & 5 GHz WLAN) (continued)





Transmitter Out of Band Radiated Emissions (LTE Band 30 & 5 GHz WLAN) (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2040	Thermohygrometer	Testo	608-H1	45124934	06 Jan 2020	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	04 Oct 2019	12
M2044	Test Receiver	Rohde & Schwarz	ESU 26	100122	01 Apr 2020	12
M1630	Test Receiver	Rohde & Schwarz	ESU 40	100233	20 Sep 2019	12
A3154	Pre-Amplifier	Com-Power	PAM-103	18020012	14 Oct 2019	12
A3155	Pre-Amplifier	Com-Power	PAM-118A	18040037	14 Oct 2019	12
A3179	Pre-Amplifier	Hewlett Packard	8449B	3008A00934	04 Apr 2020	12
A3141	Pre-Amplifier	Schwarzbeck	BBV 9718B	00021	21 Nov 2019	12
A2896	Pre-Amplifier	Schwarzbeck	BBV 9721	9721-023	08 Feb 2020	12
A553	Antenna	Chase	CBL6111A	1593	08 Oct 2019	12
A3138	Antenna	Schwarzbeck	BBHA 9120B	00702	03 Oct 2019	12
A3139	Antenna	Schwarzbeck	HWRD750	00027	04 Oct 2019	12
A2895	Antenna	Schwarzbeck	BBHA 9170	9170-728	08 Feb 2020	12
A2924	Attenuator	AtlanTecRF	AN18W5-20	832828#7	04 Mar 2020	12
A2523	Attenuator	AtlanTecRF	AN18W5-10	832827#1	04 Mar 2020	12
A3083	Low Pass Filter	AtlanTecRF	AFL-01000	18010900076	09 Apr 2020	12
A3087	Low Pass Filter	AtlanTecRF	AFL-04000	18051600007	09 Apr 2020	12
A2467	High Pass Filter	Wainwright Instruments	WHJE5-920-1000-4000-60EE	2	18 Feb 2020	12
A3093	High Pass Filter	AtlanTecRF	AFH-03000	18051800077	09 Apr 2020	12
A2482	Band Reject Cavity Filter	Wainwright Instruments	WRCJV8-5665-5725-5850-5910-50SS	2	10 Apr 2020	12
A3095	High Pass Filter	AtlanTecRF	AFH-07000	18051600012	03 Apr 2020	12

6. 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 of the measurand (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
Radiated Spurious Emissions	30 MHz to 1 GHz	95%	±3.30 dB
Radiated Spurious Emissions	1 GHz to 40 GHz	95%	±2.94 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.

7. Report Revision History

Version Number	Revision Details		
	Page No(s)	Clause	Details
1.0	-	-	Initial Version
2.0	1 & 8	-	Added HVIN at the request of the CB

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