TEST REPORT

Test Report No. : UL-RPT-RP85949JD01D V5.0

Manufacturer	:	General Dynamics Broadband UK Ltd
Model No.	:	AMW
FCC ID	:	PKTPEMAMW1
Technology.	:	LTE Band 4, 10 MHz Channel Bandwidth
Test Standard(s)	:	FCC Part 2.1046, 2.1049, 2.1051, 2.1053, 2.1055, 27.50(d)(4), 27.50(d)(5), 27.53(g) & 27.54

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2. The results in this report apply only to the sample(s) tested.
3. The 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 5.0 supersedes all previous versions.

Date of Issue: 21 March 2014

Checked by:

Sarah Williams
Engineer, Radio Laboratory

Issued by :

pp
John Newell
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Basingstoke,
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:	General Dynamics Broadband UK Ltd
Address:	Unit 7 Greenways Business Park Bellinger Close Chippenham Wilts SN15 1BN United Kingdom

2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR27
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 27 Subpart C (Miscellaneous Wireless Communication Services)
Site Registration:	209735
Location of Testing:	UL VS LTD, Unit 3 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, United Kingdom
Test Dates:	13 July 2012 to 04 March 2014

2.2. Summary of Test Results

FCC Reference (47CFR)	Measurement	Result
27.50(d)(4) / 2.1046	Transmitter Carrier Output Power and EIRP	✓
27.50(d)(5)	Transmitter Peak-To-Average Ratio	✓
2.1049	Transmitter Occupied Bandwidth	✓
27.53(g) / 2.1053	Transmitter Conducted Spurious Emissions	✓
27.53(g) / 2.1053	Transmitter Conducted Emissions at Band Edges	✓
27.53(g) / 2.1053	Transmitter Radiated Spurious Emissions	✓
27.53(g) / 2.1053	Transmitter Radiated Emissions at Band Edges	✓
27.54 / 2.1055	Transmitter Frequency Stability (Temperature and Voltage Variation)	✓

Key to Results

✓ **= Complied** ✗ **= Did not comply**

2.3. Methods and Procedures

Reference:	ANSI/TIA-603-C-2004
Title:	Land Mobile Communications Equipment, Measurements and performance Standards
Reference:	FCC KDB 971168 D01 v02r01, 7 June 2013
Title:	Measurement Guidance for Certification of Licensed Digital Transmitters

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:	General Dynamics Broadband
Model Name or Number:	AMW
Serial Number:	AMWGB84001G12
Hardware Version Number:	Pass 1
Software Version Number:	Release 4
FCC ID:	PKTPEMAMW1

Brand Name:	General Dynamics Broadband
Model Name or Number:	AMW
Serial Number:	AMWGB84001F12
Hardware Version Number:	Pass 1
Software Version Number:	Release 4
FCC ID:	PKTPEMAMW1

3.2. Description of EUT

The equipment under test was a LTE PCI Express Mini Modem.

3.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.4. Additional Information Related to Testing

Tested Technology:	LTE Band 4		
Type of Equipment	PCI Express mini module		
Channel Bandwidth(s):	10 MHz		
Modulation Type:	QPSK & 16QAM		
Duty Cycle:	100%		
Antenna Gain:	5.0 dBi		
Power Supply Requirement:	Nominal	3.0 V	
	Minimum	3.0 V	
	Maximum	3.6 V	
Transmit Frequency Range:	1710 MHz to 1755 MHz		
Channels Tested:	**Channel**	**N_{ul}**	**Frequency of Uplink (MHz)**
	Bottom	20000	1715.0
	Middle	20175	1732.5
	Top	20350	1750.0

3.5. Support Equipment

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

Description:	UE PEM V1 NG Adaptor Board
Brand Name:	IPWireless
Model Name or Number:	AAF Pass3
Serial Number:	AAFK838000V32

Description:	UE PEM V1 NG Adaptor Board – Voltage Variation
Brand Name:	IPWireless
Model Name or Number:	AAF Pass2
Serial Number:	EEMS 022530 0004

Description:	Laptop PC
Brand Name:	Toshiba
Model Name or Number:	PSAAPE-00H00KEN
Serial Number:	67071048Q

Description:	Antenna
Brand Name:	None
Model Name or Number:	OA-LTE-06-03-IPW
Serial Number:	Not stated

4. Operation and Monitoring of the EUT during Testing

4.1. Operating Modes

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

- Transmit Mode – the EUT was set to transmit with maximum output power using a 10 MHz channel bandwidth. QPSK and 16QAM modulations were both tested, along with the Resource Blocks set to 1 and 50. For Resource Block setting of 1, testing was carried out on starting block number of 1 and 50.

4.2. Configuration and Peripherals

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

- The EUT was connected to the UE PEM V1 NG Adaptor Board, for all tests.
- The EUT was controlled from a laptop PC, using bespoke software supplied by the customer.
- The EUT was connected to a test laptop by using a USB extension cable and the laptop was connected to 120 VAC 60 Hz AC supply.
- The EUT has two U.FL connector ports, the customer supplied two short U.FL to SMA cables, to allow conducted measurements to be performed where necessary.
- The EUT was connected to a Rohde & Schwarz CMW500 LTE system simulator for output power and occupied bandwidth tests. All other tests were performed using an Anristu LTE system simulator, both operating in a transceiver mode.
- For Resource Block setting of 1, testing was carried out on starting block number of 1 and 50.
- The EUT has a main RF port and a Receiver Diversity port. Transmitter testing was performed on the main RF port which is a transmit and receive port. The diversity port was terminated for all bench testing.
- For radiated emissions testing, the customer supplied two OA-LTE-06-03-IPW antenna’s, which were connected to the main and diversity ports. The antenna gain was declared as 2.5 dBi.
- The customer supplied a modified UE PEM V1NG Adaptor Board, which allowed voltage variation directly to the PEM, this was used for Transmitter Frequency Stability Voltage Variation testing only.

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* for Measurement Uncertainty 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 Carrier Output Power and EIRP

Test Summary:

Test Engineer:	Nick Steele	**Test Date:**	13 February 2014
Test Sample Serial Number:	AMWGB84001F12		

FCC Reference:	Parts 2.1046 & 27.50(d)(4)
Test Method Used:	As detailed in FCC KDB 971168 Section 5.2.1

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	39

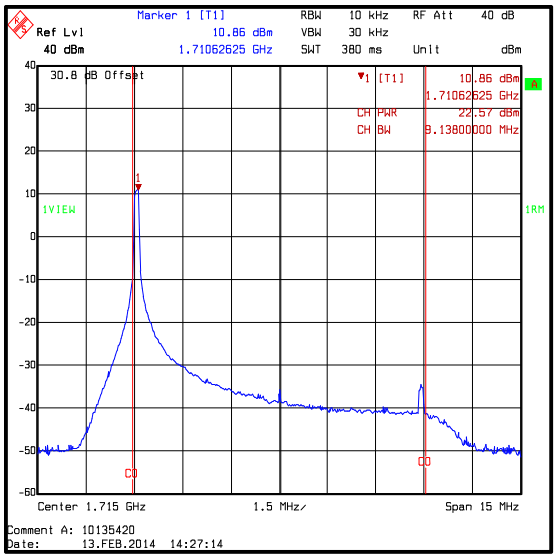
Note(s):

1. Measurements were performed with the EUT transmitting with QPSK and 16QAM modulation schemes, with Resource Blocks of 1 and 50. For single Resource Blocks, measurements were performed with the starting of blocks 1 and 50.
2. The customer stated a maximum antenna gain of 5.0 dBi.
3. The plots have an incorrect job number.

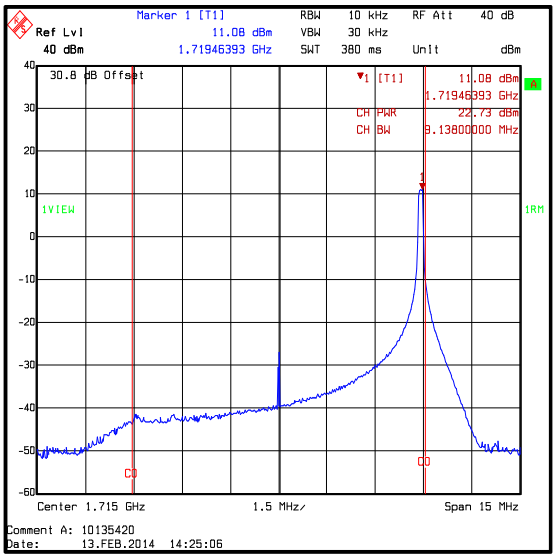
Transmitter Carrier Output Power and EIRP (continued)

Results: 10 MHz Channel Bandwidth / Bottom Channel / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Conducted RF Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Margin (dB)	Result
1715	1	0	22.6	5.0	27.6	30.0	2.4	Complied
1715	1	50	22.7	5.0	27.7	30.0	2.3	Complied
1715	50	0	22.2	5.0	27.2	30.0	2.8	Complied



QPSK / 1 Resource Block (0 offset)



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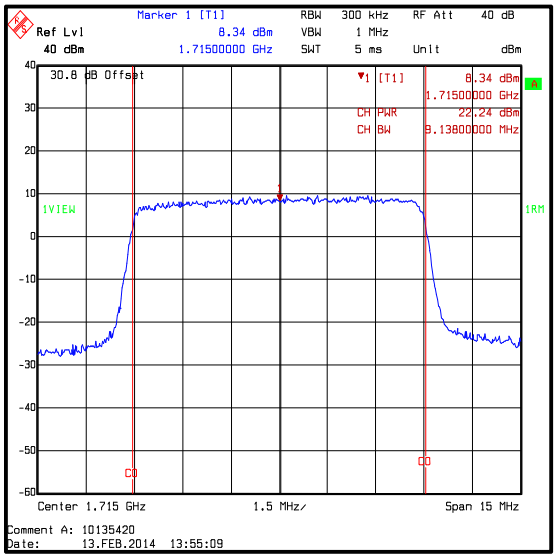
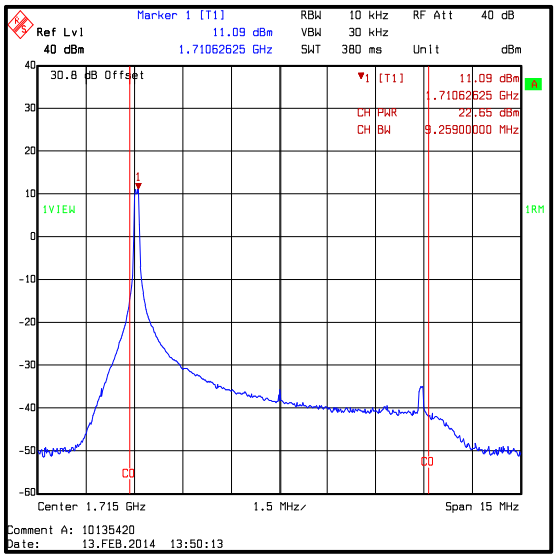


QPSK / 50 Resource Blocks

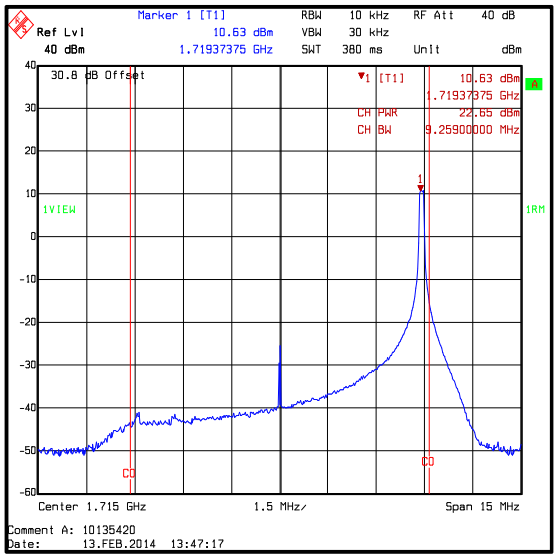
Transmitter Carrier Output Power and EIRP (continued)

Results: 10 MHz Channel Bandwidth / Bottom Channel / 16QAM

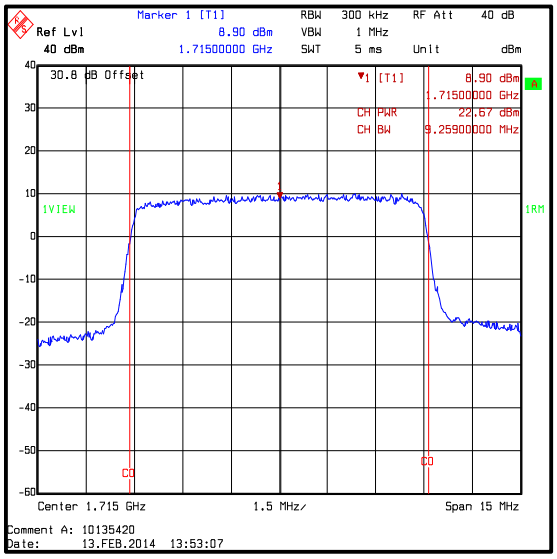
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Conducted RF Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Margin (dB)	Result
1715	1	0	22.7	5.0	27.7	30.0	2.3	Complied
1715	1	50	22.7	5.0	27.7	30.0	2.3	Complied
1715	50	0	22.7	5.0	27.7	30.0	2.3	Complied



16QAM / 1 Resource Block (0 offset)



16QAM / 1 Resource Block (50 offset)

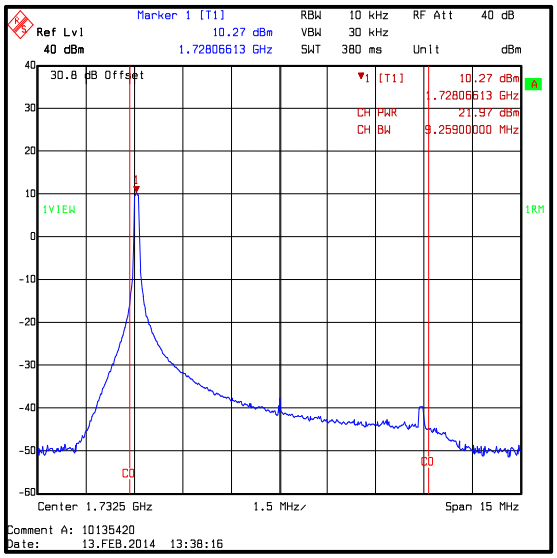


16QAM / 50 Resource Blocks

Transmitter Carrier Output Power and EIRP (continued)

Results: 10 MHz Channel Bandwidth / Middle Channel / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Conducted RF Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Margin (dB)	Result
1732.5	1	0	22.0	5.0	27.0	30.0	3.0	Complied
1732.5	1	50	20.8	5.0	25.8	30.0	4.2	Complied
1732.5	50	0	21.1	5.0	26.1	30.0	3.9	Complied



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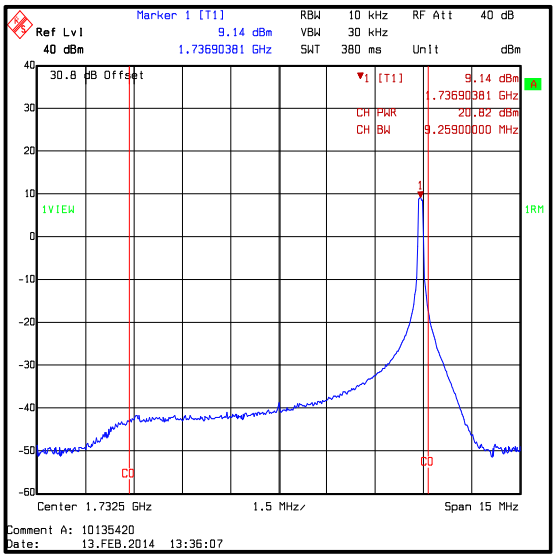

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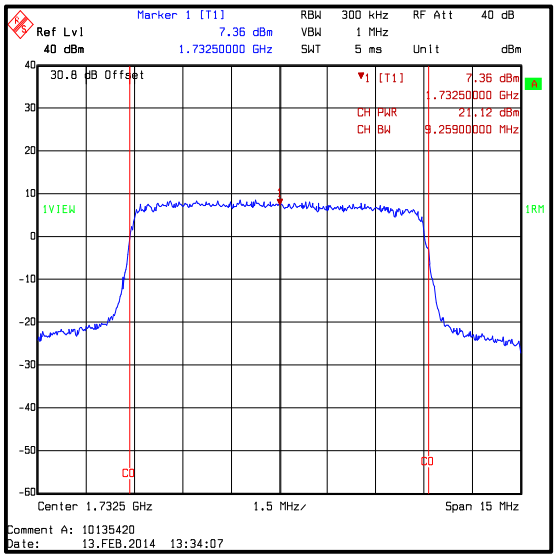
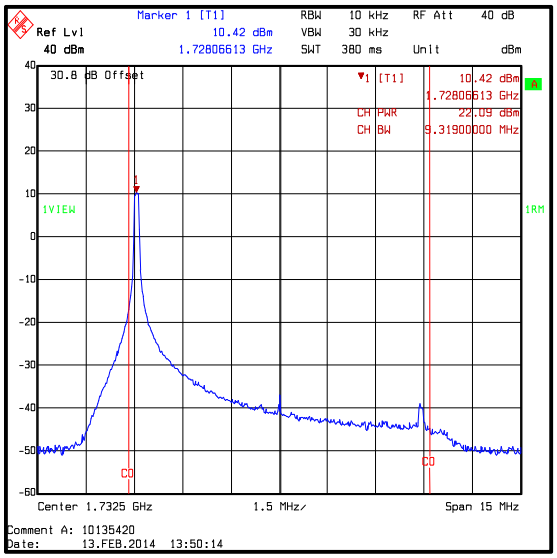


QPSK / 50 Resource Blocks

Transmitter Carrier Output Power and EIRP (continued)

Results: 10 MHz Channel Bandwidth / Middle Channel / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Conducted RF Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Margin (dB)	Result
1732.5	1	0	22.1	5.0	27.1	30.0	2.9	Complied
1732.5	1	50	20.7	5.0	25.7	30.0	4.3	Complied
1732.5	50	0	21.5	5.0	26.5	30.0	3.5	Complied



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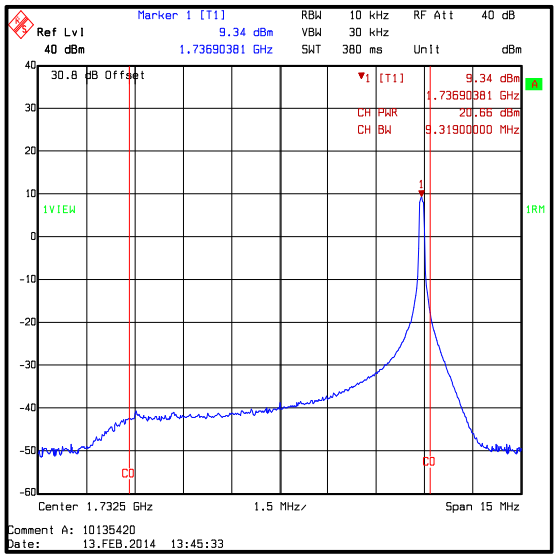
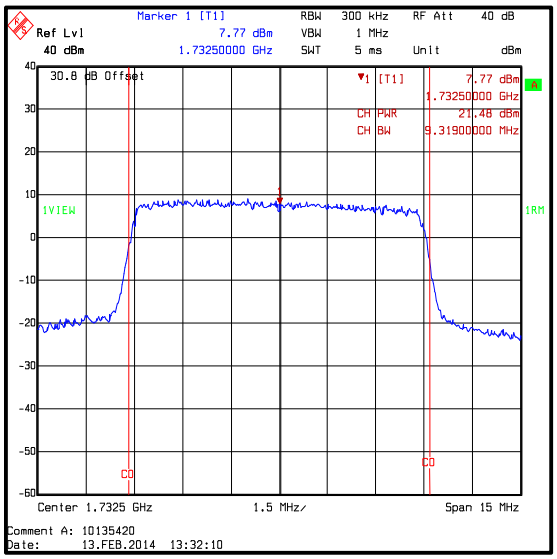


16QAM / 1 Resource Block (50 offset)

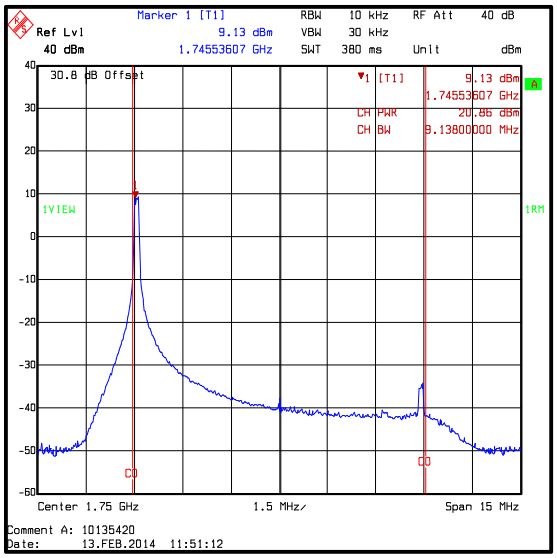


16QAM / 50 Resource Blocks

Transmitter Carrier Output Power and EIRP (continued)

Results: 10 MHz Channel Bandwidth / Top Channel / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Conducted RF Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Margin (dB)	Result
1750	1	0	20.9	5.0	25.9	30.0	4.1	Complied
1750	1	50	22.5	5.0	27.5	30.0	2.5	Complied
1750	50	0	22.1	5.0	27.1	30.0	2.9	Complied



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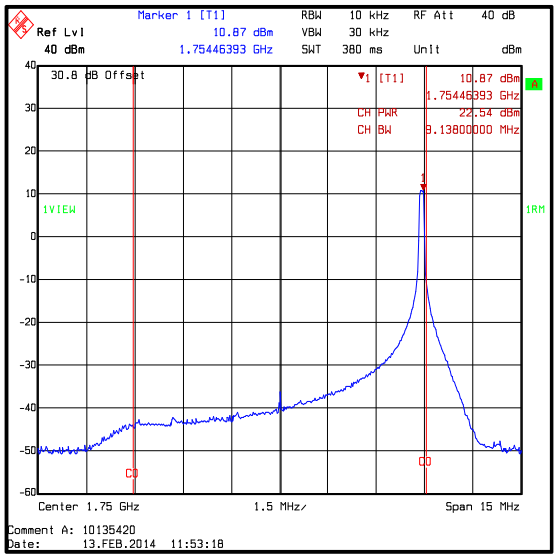

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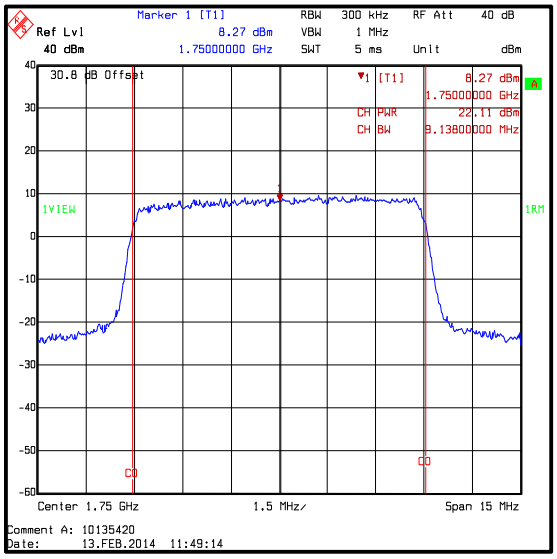
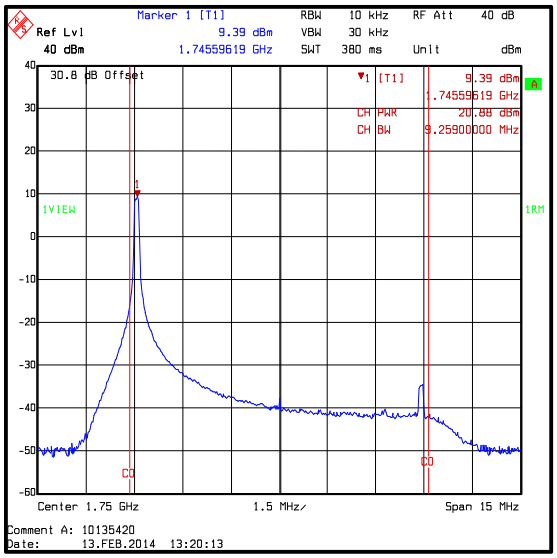


QPSK / 50 Resource Blocks

Transmitter Carrier Output Power and EIRP (continued)

Results: 10 MHz Channel Bandwidth / Top Channel / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Conducted RF Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Margin (dB)	Result
1750	1	0	20.9	5.0	25.9	30.0	4.1	Complied
1750	1	50	22.8	5.0	27.8	30.0	2.2	Complied
1750	50	0	22.1	5.0	27.1	30.0	2.9	Complied



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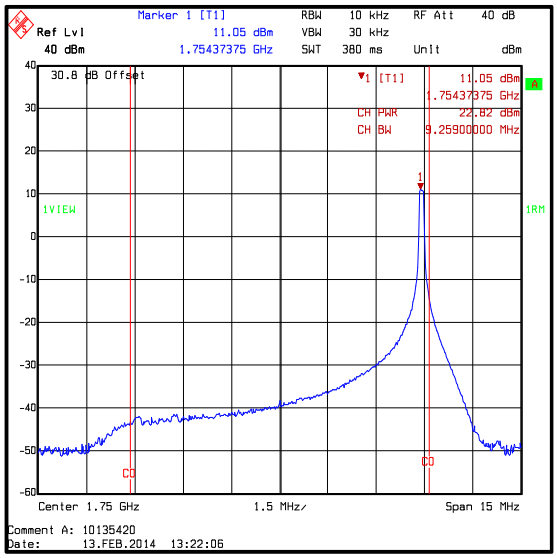

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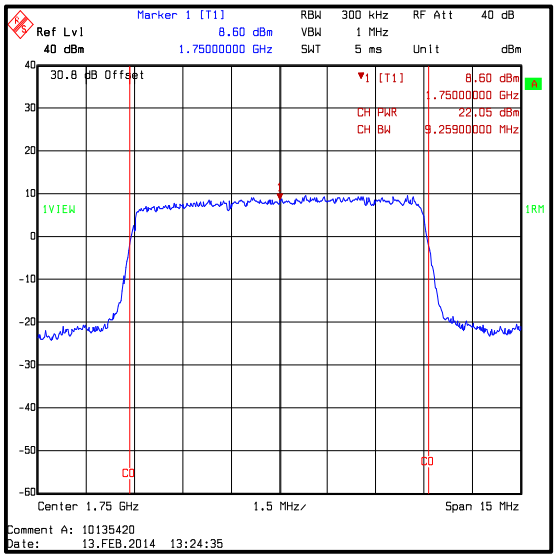


16QAM / 50 Resource Blocks

Transmitter Carrier Output Power and EIRP (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1659	Thermohygrometer	JM Handelspunkt	30.5015.13	None stated	24 May 2014	12
M127	Spectrum Analyser	Rohde & Schwarz	FSEB 30	842659/016	19 Aug 2014	12
A1999	Attenuator	Huber + Suhner	6820.17.B	07101	05 Apr 2014	12
A1368	Directional Coupler	Pasternack Enterprises	PE2214-10	None stated	Calibrated before use	-
M199	Power Meter	Rohde & Schwarz	NRVS	827023/075	15 May 2014	12
M1267	Power Sensor	Rohde & Schwarz	NRV-Z52	100155	14 May 2014	12
M260	Signal Generator	Rohde & Schwarz	SMP02	829076/008	25 Jun 2014	12

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.

5.2.2. Transmitter Peak to Average Power Ratio

Test Summary:

Test Engineer:	David Doyle	**Test Date:**	19 February 2014
Test Sample Serial Number:	AMWGB84001F12		

FCC Reference:	Part 27.50(d)(5)
Test Method Used:	As detailed in FCC KDB 971168 Section 5.7.1

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	37

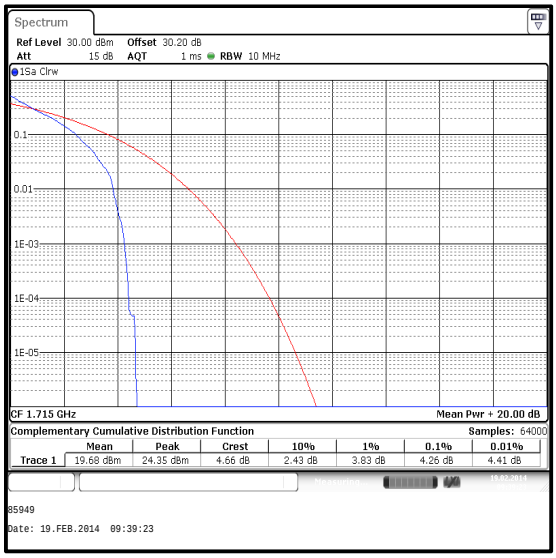
Note(s):

1. Measurements were performed using the CCDF function of a calibrated Rohde & Schwarz ESU test receiver.

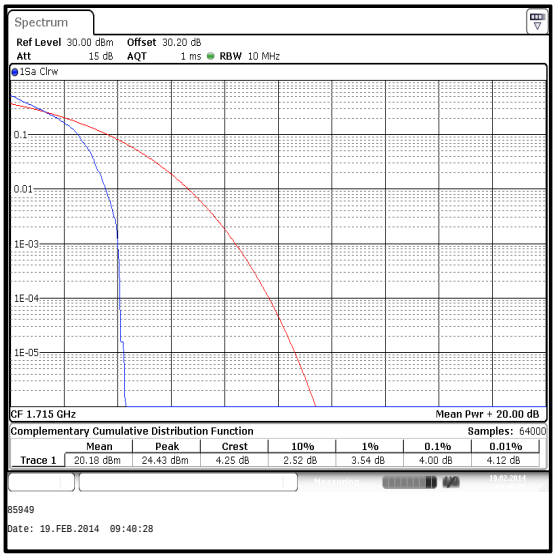
Transmitter Peak to Average Power Ratio (continued)

Results: Bottom Channel

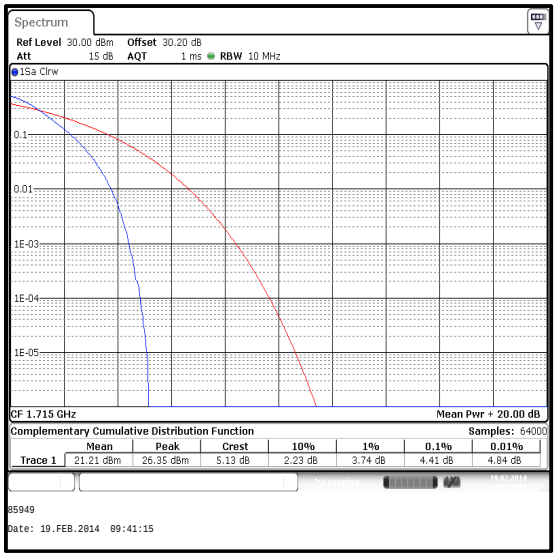
Modulation	Resource Block(s)	Resource Block Offset	0.1% PAPR (dB)	PAPR Limit (dB)	Margin (dB)	Result
QPSK	1	0	4.3	13.0	8.7	Complied
QPSK	1	50	4.0	13.0	9.0	Complied
QPSK	50	0	4.4	13.0	8.6	Complied



QPSK / 1 Resource Block (Offset 0)



QPSK / 1 Resource Block (Offset 50)

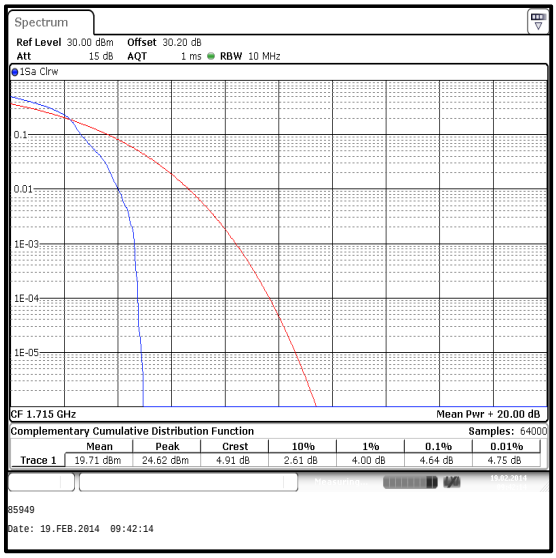


QPSK / 50 Resource Blocks

Transmitter Peak to Average Power Ratio (continued)

Results: Bottom Channel

Modulation	Resource Block(s)	Resource Block Offset	0.1% PAPR (dB)	PAPR Limit (dB)	Margin (dB)	Result
16QAM	1	0	4.6	13.0	8.4	Complied
16QAM	1	50	4.4	13.0	8.6	Complied
16QAM	50	0	4.8	13.0	8.2	Complied



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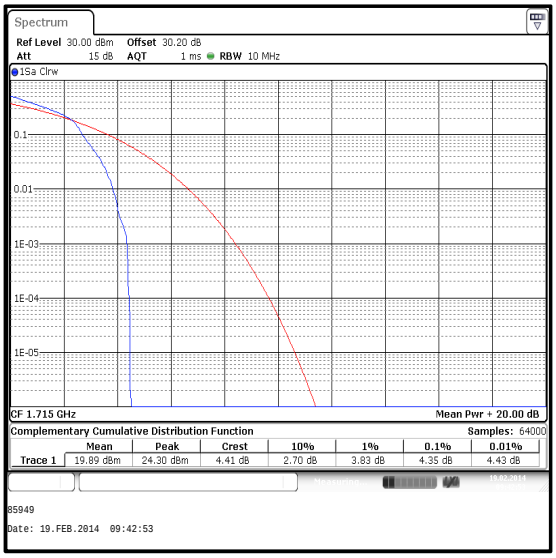

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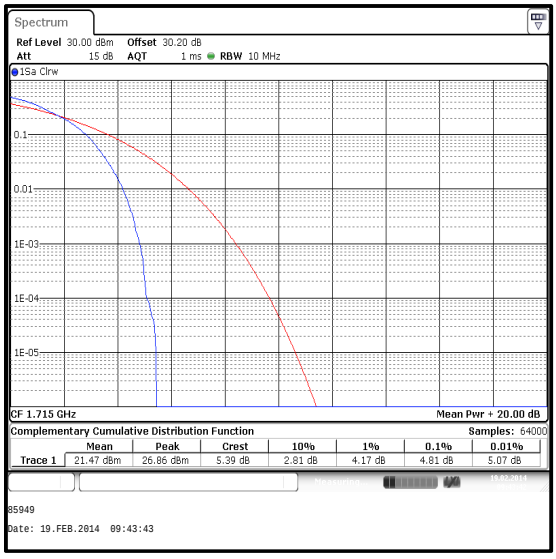
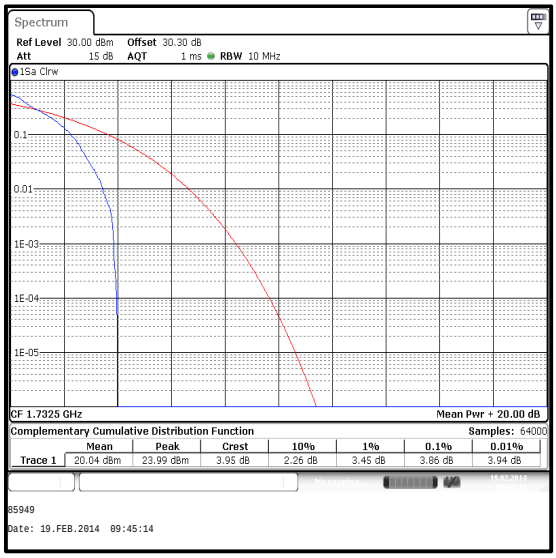


16QAM / 50 Resource Blocks

Transmitter Peak to Average Power Ratio (continued)

Results: Middle Channel

Modulation	Resource Block(s)	Resource Block Offset	0.1% PAPR (dB)	PAPR Limit (dB)	Margin (dB)	Result
QPSK	1	0	3.9	13.0	9.1	Complied
QPSK	1	50	3.9	13.0	9.1	Complied
QPSK	50	0	4.5	13.0	8.5	Complied



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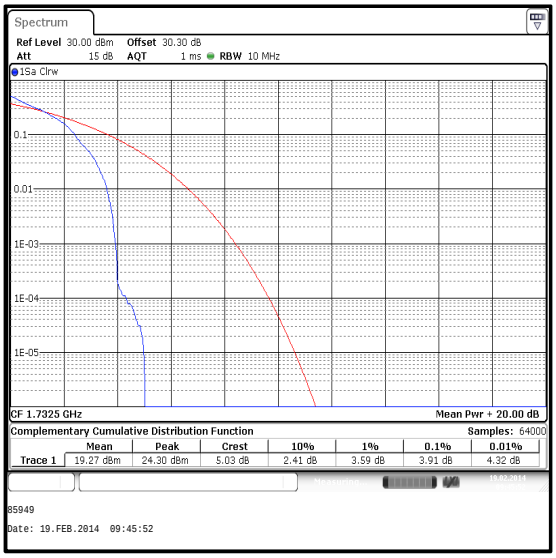
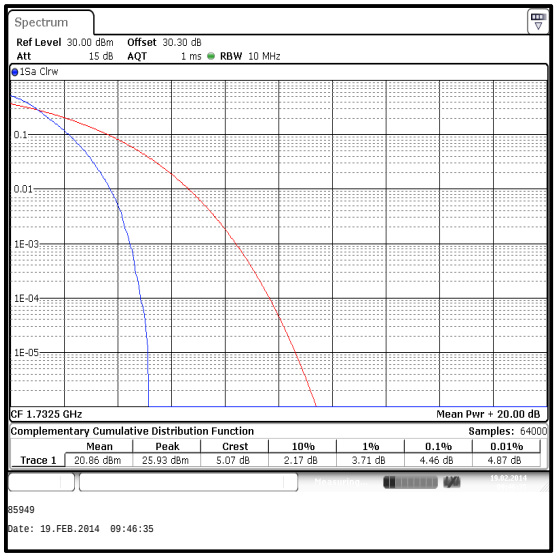


QPSK / 1 Resource Block (Offset 50)

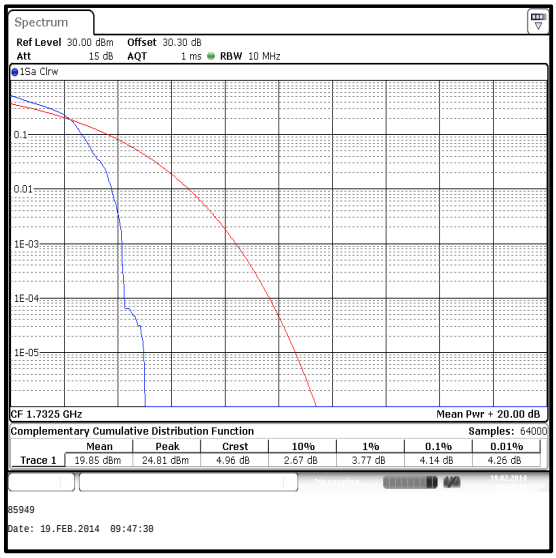


QPSK / 50 Resource Blocks

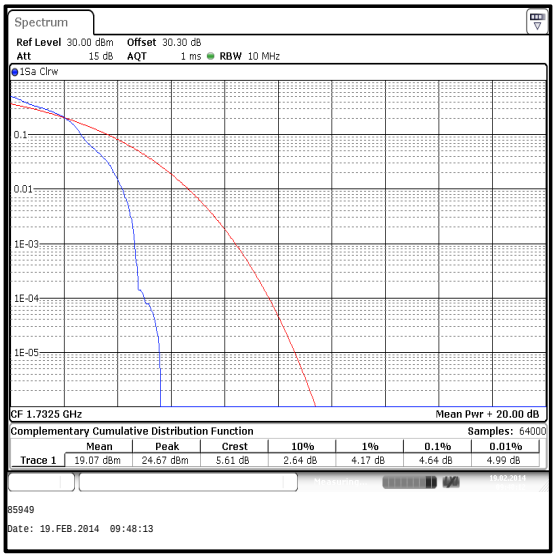
Transmitter Peak to Average Power Ratio (continued)

Results: Middle Channel

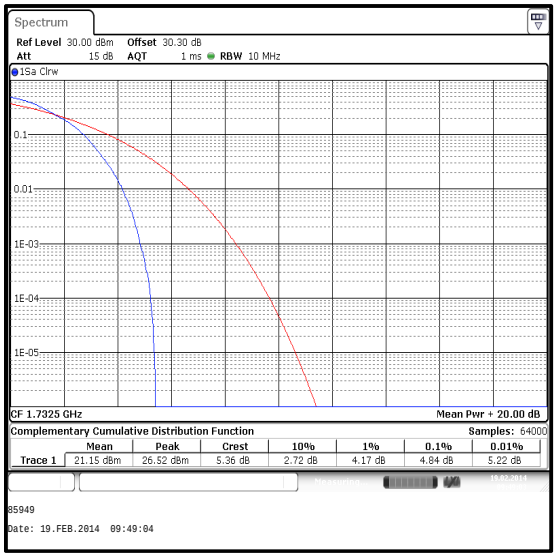
Modulation	Resource Block(s)	Resource Block Offset	0.1% PAPR (dB)	PAPR Limit (dB)	Margin (dB)	Result
16QAM	1	0	4.1	13.0	8.9	Complied
16QAM	1	50	4.6	13.0	8.4	Complied
16QAM	50	0	4.8	13.0	8.2	Complied



16QAM / 1 Resource Block (Offset 0)



16QAM / 1 Resource Block (Offset 50)

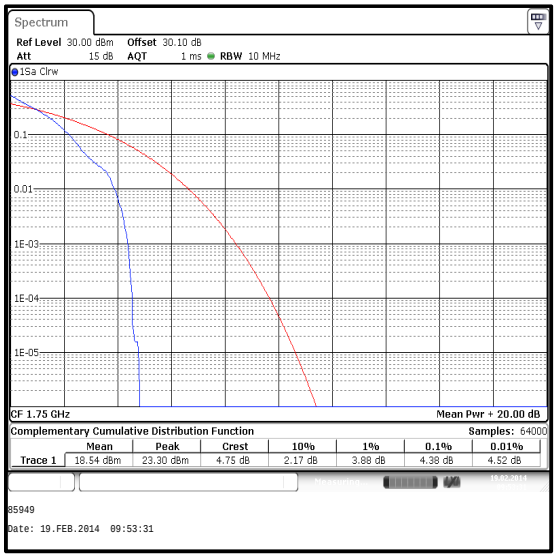


16QAM / 50 Resource Blocks

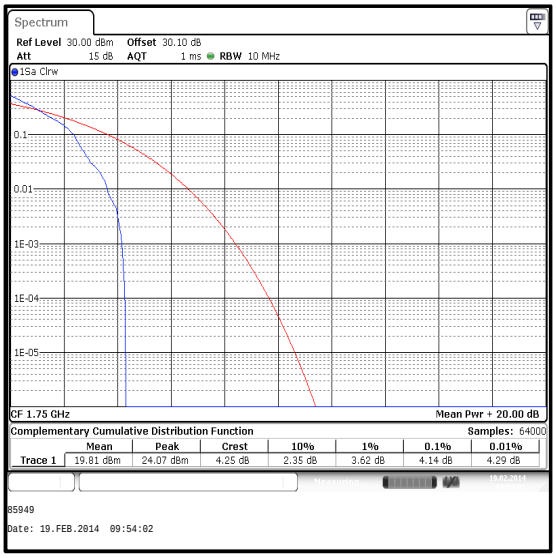
Transmitter Peak to Average Power Ratio (continued)

Results: Top Channel

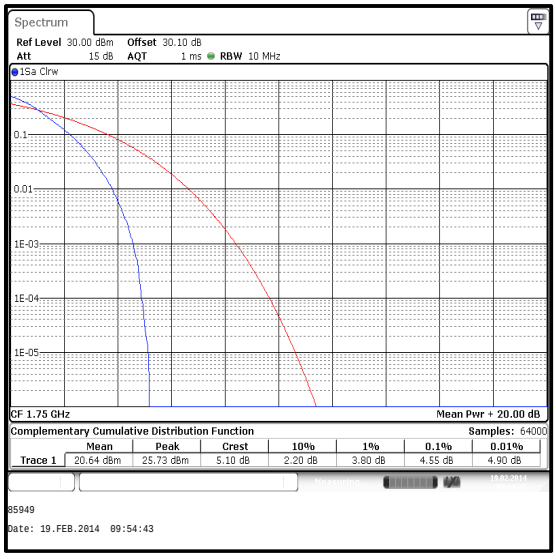
Modulation	Resource Block(s)	Resource Block Offset	0.1% PAPR (dB)	PAPR Limit (dB)	Margin (dB)	Result
QPSK	1	0	4.4	13.0	8.6	Complied
QPSK	1	50	4.1	13.0	8.9	Complied
QPSK	50	0	4.6	13.0	8.4	Complied



QPSK / 1 Resource Block (Offset 0)



QPSK / 1 Resource Block (Offset 50)

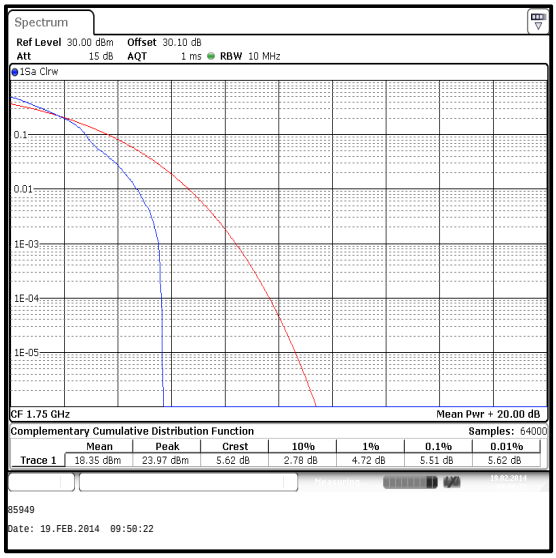


QPSK / 50 Resource Blocks

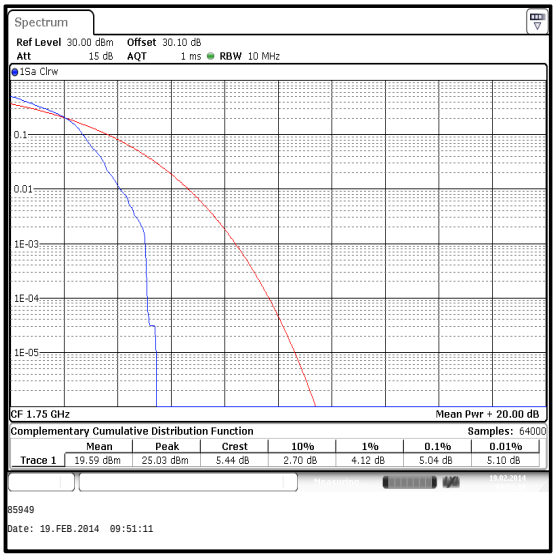
Transmitter Peak to Average Power Ratio (continued)

Results: Top Channel

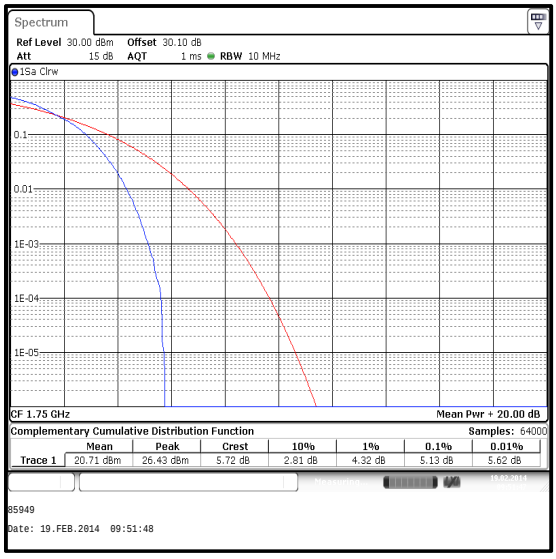
Modulation	Resource Block(s)	Resource Block Offset	0.1% PAPR (dB)	PAPR Limit (dB)	Margin (dB)	Result
16QAM	1	0	5.5	13.0	7.5	Complied
16QAM	1	50	5.0	13.0	8.0	Complied
16QAM	50	0	5.1	13.0	7.9	Complied



16QAM / 1 Resource Block (Offset 0)



16QAM / 1 Resource Block (Offset 50)



16QAM / 50 Resource Blocks

Transmitter Peak to Average Power Ratio (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	None stated	24 May 2014	12
L1028	Spectrum Analyser	Rohde & Schwarz	FSV 30	100854	02 May 2014	12
A1999	Attenuator	Huber + Suhner	6820.17.B	07101	05 Apr 2014	12
A1368	Directional Coupler	Pasternack Enterprises	PE2214-10	None stated	Calibrated before use	-
M199	Power Meter	Rohde & Schwarz	NRVS	827023/075	15 May 2014	12
M1267	Power Sensor	Rohde & Schwarz	NRV-Z52	100155	14 May 2014	12
M260	Signal Generator	Rohde & Schwarz	SMP02	829076/008	25 Jun 2014	12

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.

5.2.3. Transmitter Occupied Bandwidth

Test Summary:

Test Engineer:	Nick Steele	**Test Dates:**	13 February 2014 & 03 March 2014
Test Sample Serial Number:	AMWGB84001F12		

FCC Reference:	Part 2.1049
Test Method Used:	As detailed in KDB 971168 Section 4.2

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	39

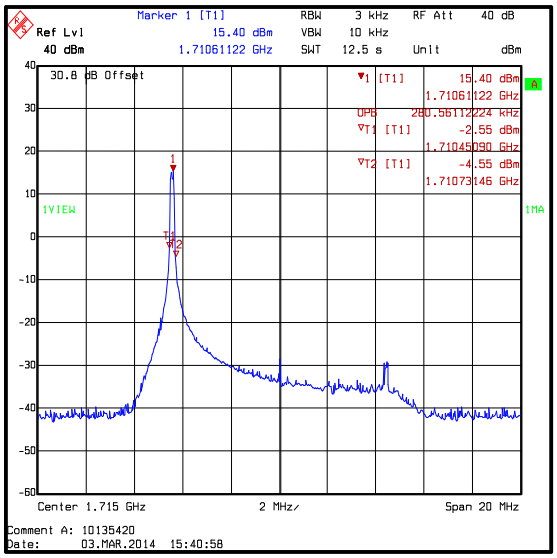
Note(s):

1. Occupied bandwidth (99% bandwidth) was measured using a test receiver occupied bandwidth function.
2. Measurements were performed with the EUT transmitting with QPSK and 16QAM modulation schemes, with resource blocks of 1 and 50. For single resource blocks, measurements were performed with the block starting of blocks 1 and 50.
3. The plots have an incorrect job number.

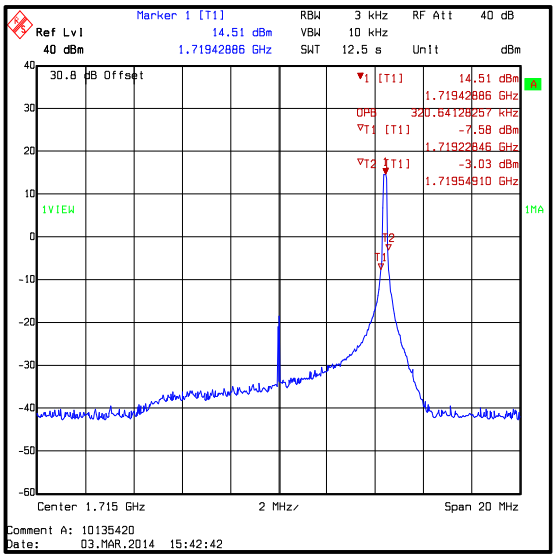
Transmitter Occupied Bandwidth (continued)

Results: 10 MHz Channel Bandwidth / Bottom Channel / QPSK

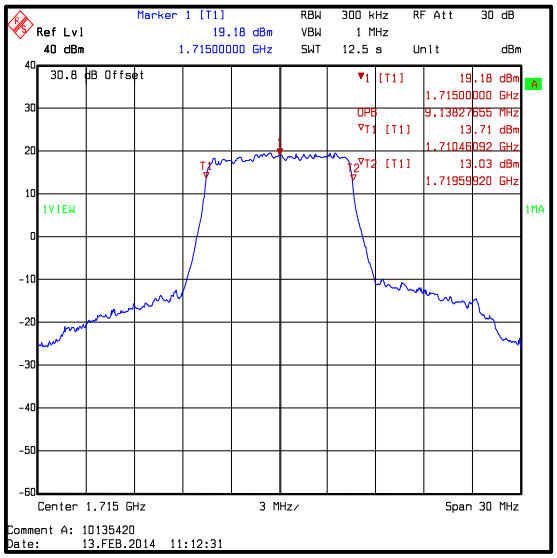
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
1715	1	0	3	10	0.281
1715	1	50	3	10	0.321
1715	50	0	300	1000	9.138



QPSK / 1 Resource Blocks (0 offset)



QPSK / 1 Resource Blocks (50 offset)

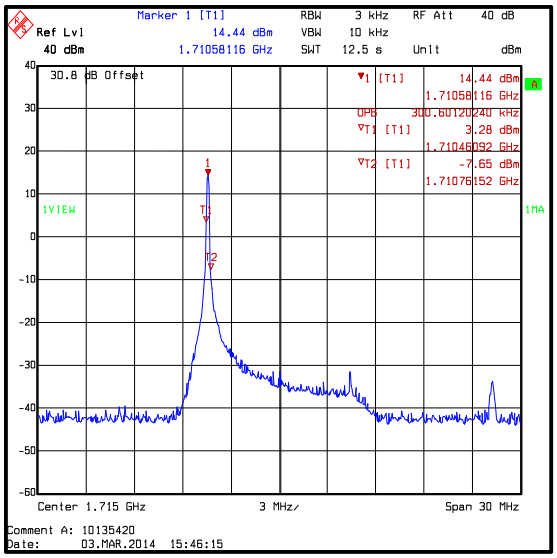


QPSK / 50 Resource Blocks

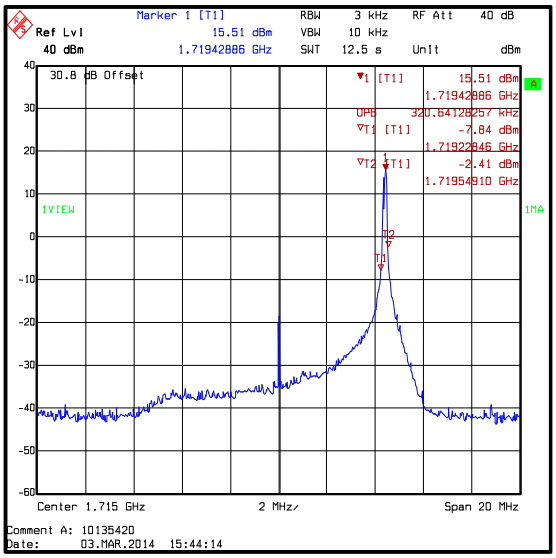
Transmitter Occupied Bandwidth (continued)

Results: 10 MHz Channel Bandwidth / Bottom Channel / 16QAM

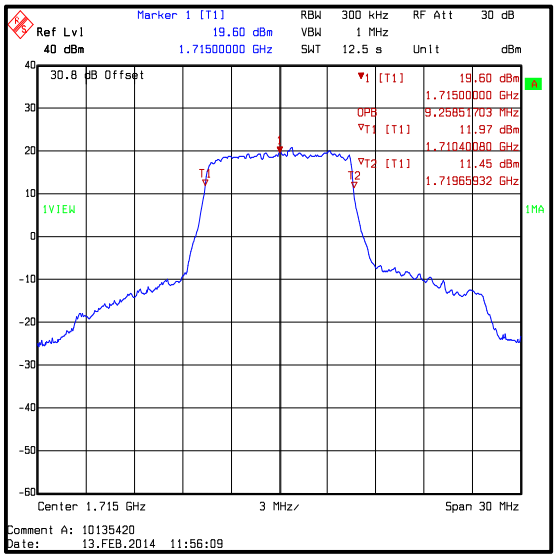
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
1715	1	0	3	10	0.301
1715	1	50	3	10	0.321
1715	50	0	300	1000	9.259



16QAM / 1 Resource Blocks (0 offset)



16QAM / 1 Resource Blocks (50 offset)

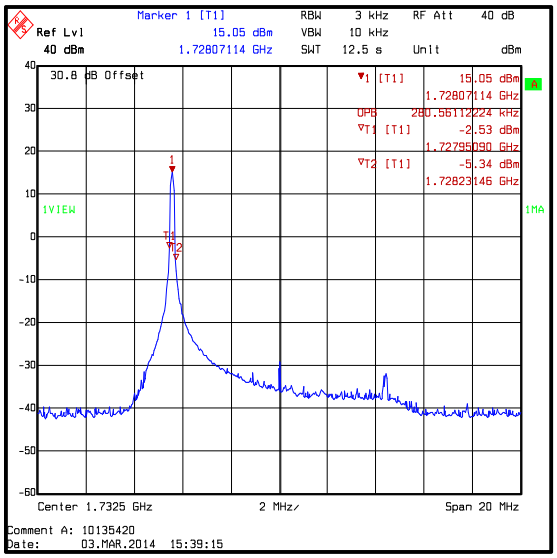


16QAM / 50 Resource Blocks

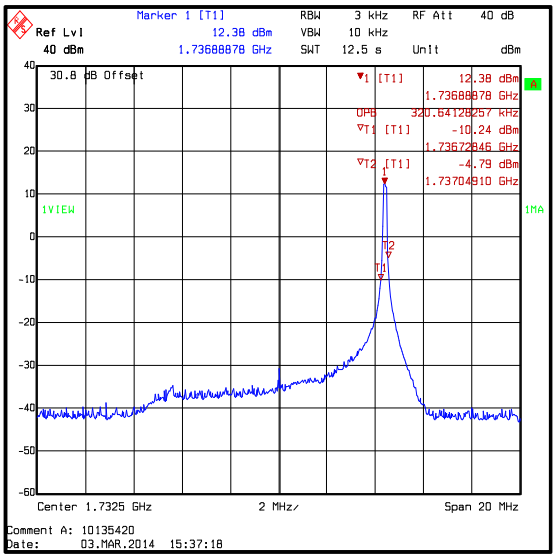
Transmitter Occupied Bandwidth (continued)

Results: 10 MHz Channel Bandwidth / Middle Channel / QPSK

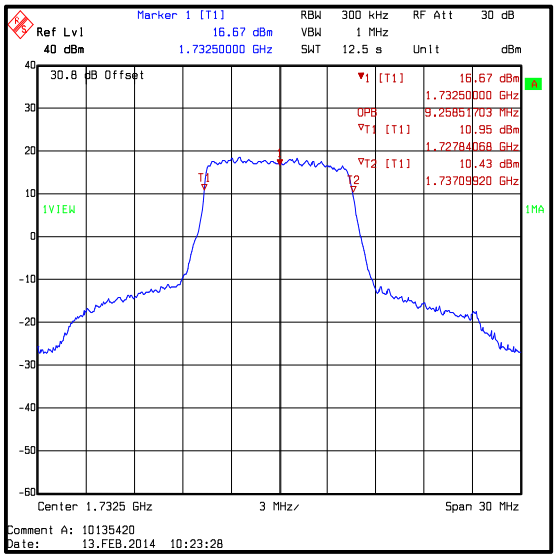
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
1732.5	1	0	3	10	0.281
1732.5	1	50	3	10	0.321
1732.5	50	0	300	1000	9.259



QPSK / 1 Resource Blocks (0 offset)



QPSK / 1 Resource Blocks (50 offset)

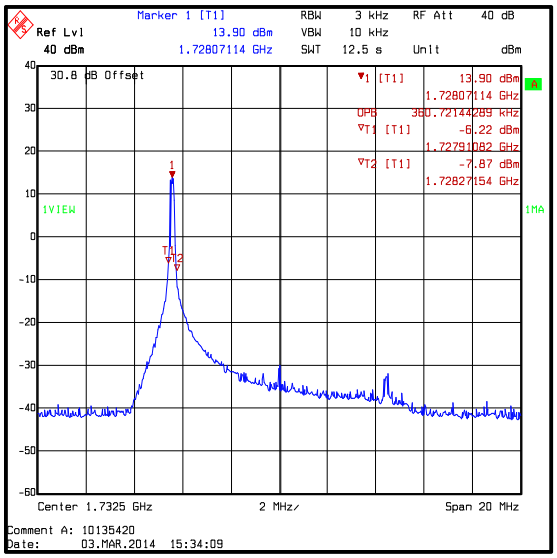


QPSK / 50 Resource Blocks

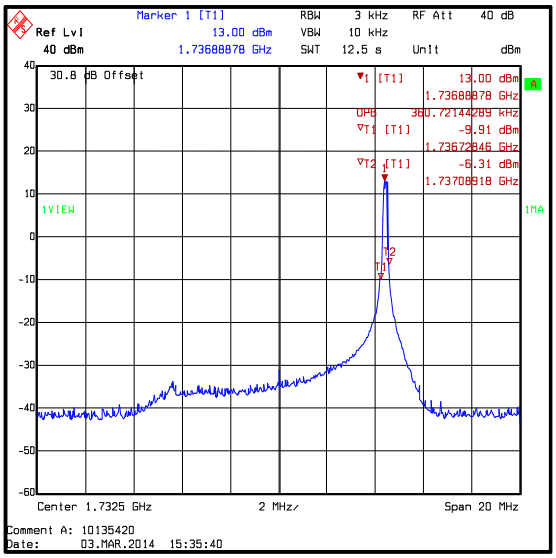
Transmitter Occupied Bandwidth (continued)

Results: 10 MHz Channel Bandwidth / Middle Channel / 16QAM

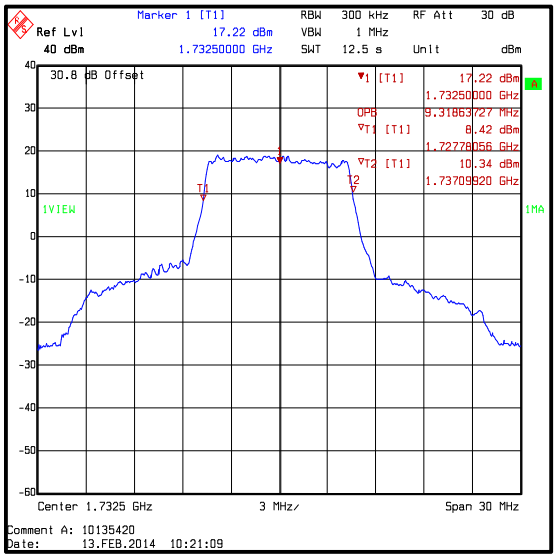
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
1732.5	1	0	3	10	0.361
1732.5	1	50	3	10	0.361
1732.5	50	0	300	1000	9.319



16QAM / 1 Resource Blocks (0 offset)



16QAM / 1 Resource Blocks (50 offset)

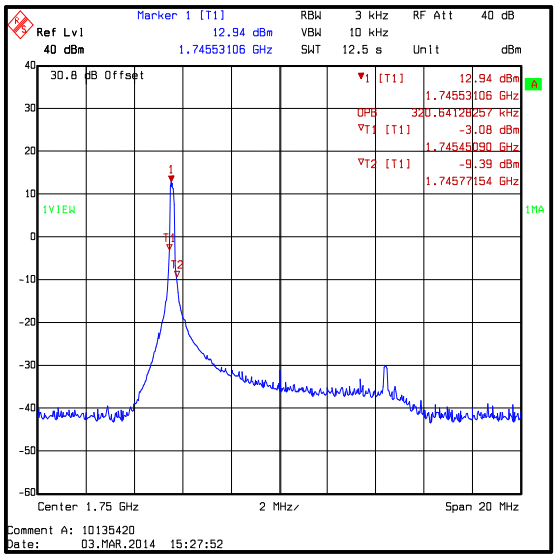


16QAM / 50 Resource Blocks

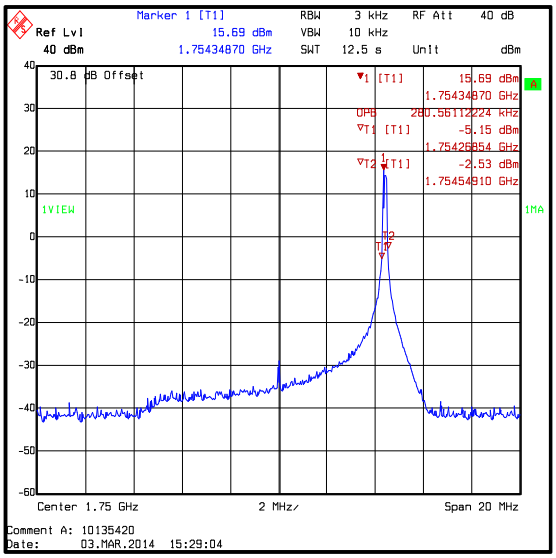
Transmitter Occupied Bandwidth (continued)

Results: 10 MHz Channel Bandwidth / Top Channel / QPSK

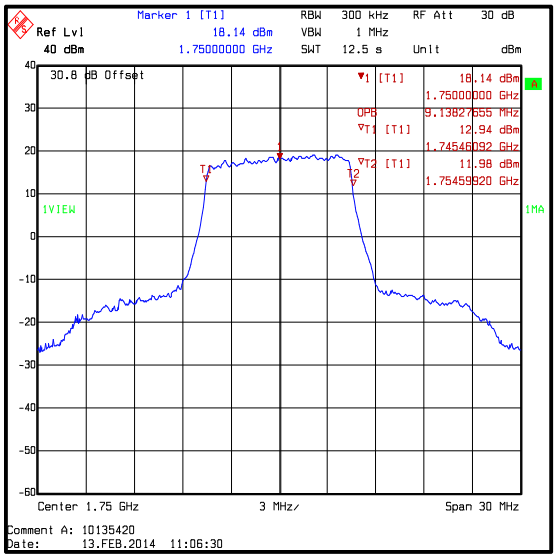
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
1750	1	0	3	10	0.321
1750	1	50	3	10	0.281
1750	50	0	300	1000	9.138



QPSK / 1 Resource Blocks (0 offset)



QPSK / 1 Resource Blocks (50 offset)

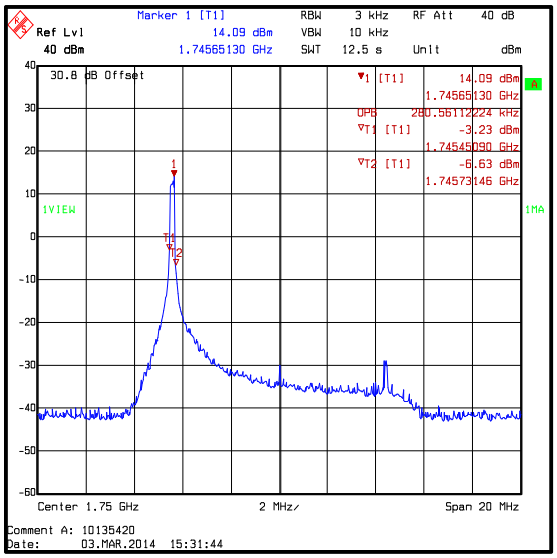


QPSK / 50 Resource Blocks

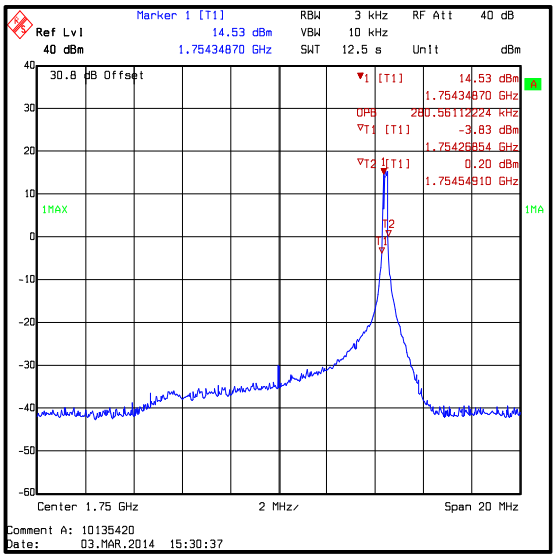
Transmitter Occupied Bandwidth (continued)

Results: 10 MHz Channel Bandwidth / Top Channel / 16QAM

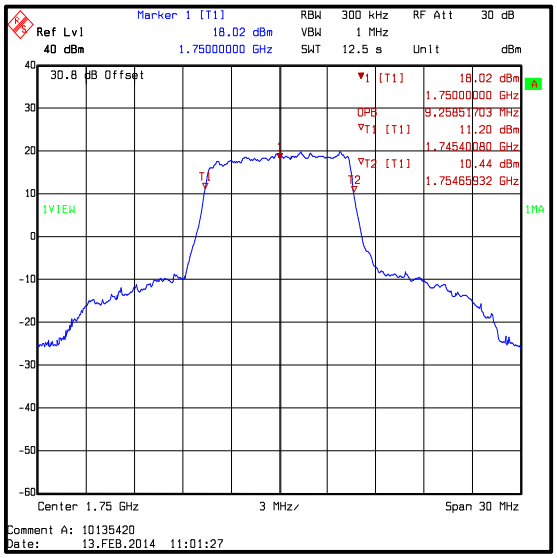
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
1750	1	0	3	10	0.281
1750	1	50	3	10	0.281
1750	50	0	300	1000	9.259



16QAM / 1 Resource Blocks (0 offset)



16QAM / 1 Resource Blocks (50 offset)



16QAM / 50 Resource Blocks

Transmitter Occupied Bandwidth (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1659	Thermohygrometer	JM Handelspunkt	30.5015.13	None stated	24 May 2014	12
M127	Spectrum Analyser	Rohde & Schwarz	FSEB 30	842659/016	19 Aug 2014	12
A1999	Attenuator	Huber + Suhner	6820.17.B	07101	05 Apr 2014	12
A1368	Directional Coupler	Pasternack Enterprises	PE2214-10	None stated	Calibrated before use	-

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.

5.2.4. Transmitter Conducted Spurious Emissions

Test Summary:

Test Engineer:	Nick Steele	**Test Date:**	30 July 2012
Test Sample Serial Number:	AMWGB84001G12		

FCC Reference:	Parts 2.1051 and 27.53(g)
Test Method Used:	As detailed in ANSI TIA-603.C-2004 Section 2.2.13 referencing FCC Part 2.1051
Frequency Range:	9 kHz to 18 GHz

Environmental Conditions:

Temperature (°C):	26
Relative Humidity (%):	32

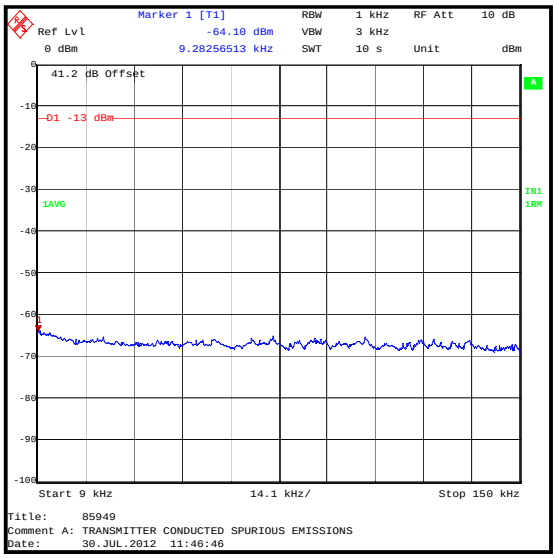
Note(s):

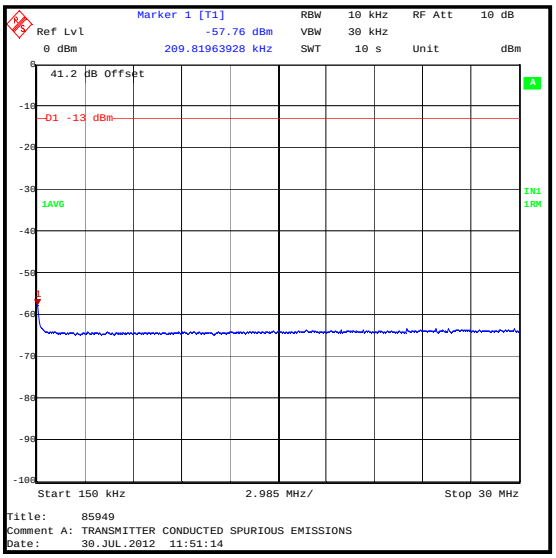
1. The EUT was set to transmit with with 16QAM modulation applied and 1 resource block with 50 offset, as this produced the highest power level and was therefore deemed worst case.
2. Pre scans were performed with the EUT transmitting at maximum power on the top channel.
3. The emission seen on the 1 GHz to 5 GHz plot at approximately 1750 MHz is the EUT carrier.
4. All emissions were >20 dB below the applicable limit or below the level of the noise floor of the measuring receiver, therefore the highest level of noise floor is recorded in the table below.

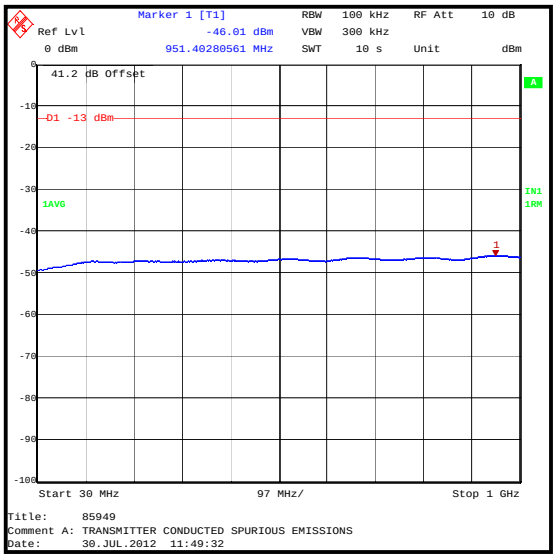
Results: 10 MHz Channel Bandwidth / Top Channel

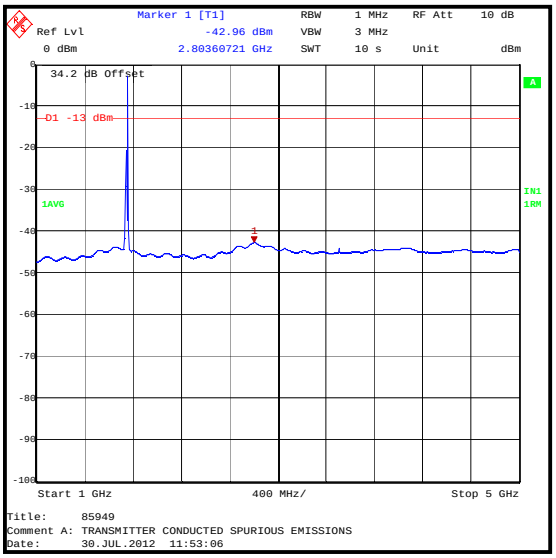
Frequency (MHz)	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
6973.948	-38.0	-13.0	25.0	Complied

Transmitter Conducted Spurious Emissions (continued)

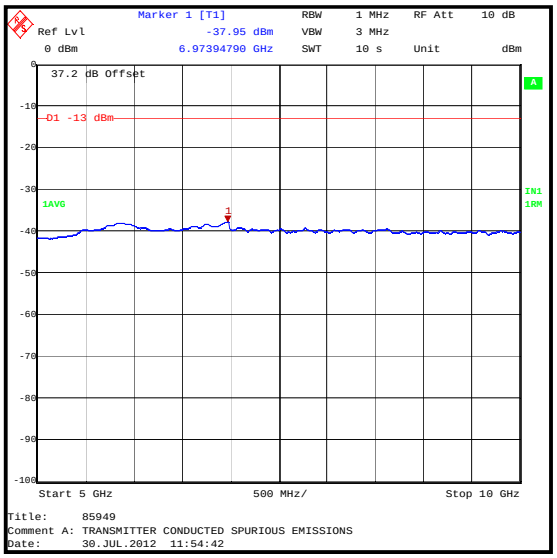


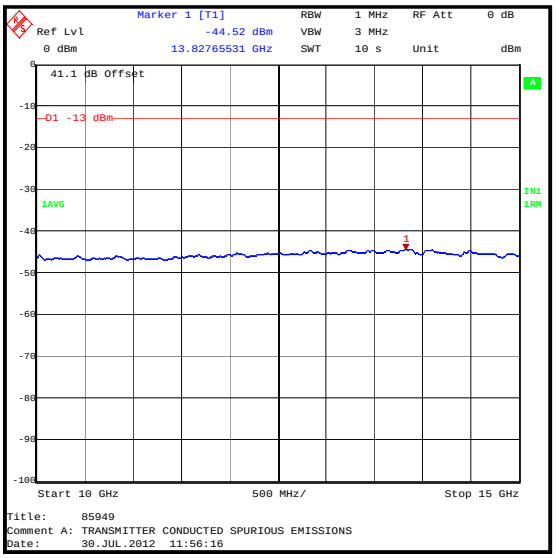


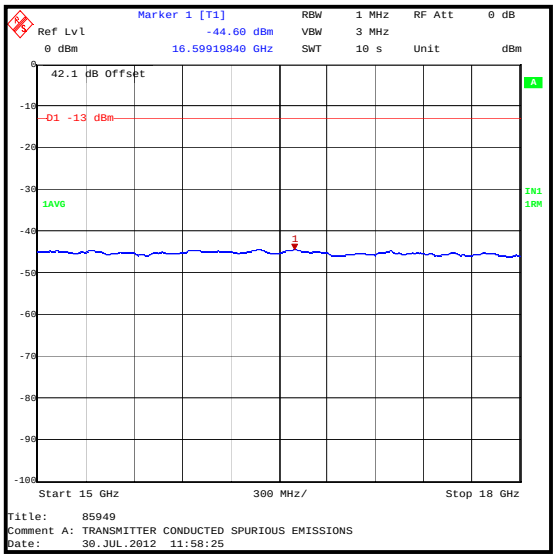




Transmitter Conducted Spurious Emissions (continued)







Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
L1017	Test Receiver	Rohde & Schwarz	ESIB 40	100109	09 Nov 2012	12
A1999	Attenuator	Huber + Suhner	6820.17.B	07101	04 Apr 2013	12
A1368	Directional Coupler	Pasternack Enterprises	PE2214-10	None stated	Calibrated before use	-
M199	Power Meter	Rohde & Schwarz	NRVS	827023/075	07 Jun 2013	12
M1267	Power Sensor	Rohde & Schwarz	NRV-Z52	100155	07 Jun 2013	12
M1021	Signal Generator	Rohde & Schwarz	SMP02	833286/004	09 Jan 2013	12

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.

5.2.5. Transmitter Conducted Emissions at Band Edges

Test Summary:

Test Engineer:	Nick Steele	**Test Date:**	03 March 2014
Test Sample Serial Number:	AMWGB84001F12		

FCC Reference:	Parts 2.1051 and 27.53(g)
Test Method Used:	As detailed in KDB 971168 D01 Section 6.0 referencing FCC Part 2.1051

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	40

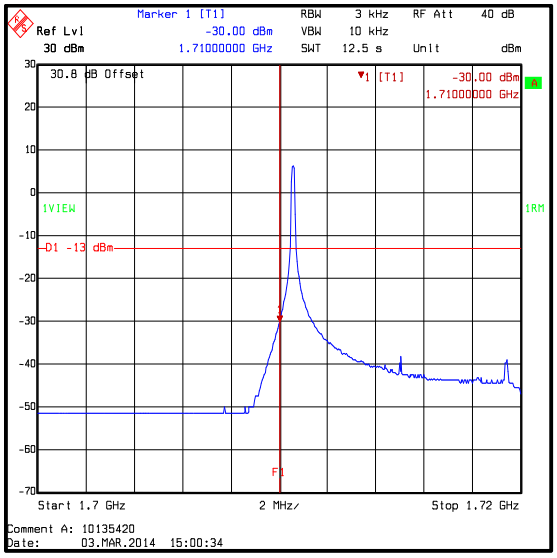
Note(s):

1. Measurements were performed with the EUT transmitting with QPSK and 16QAM modulation schemes, with Resource Blocks of 1 and 50. For single Resource Blocks, measurements were performed with the block starting blocks of 1 for the lower band edge and 50 for the upper band edge.
2. Where a single Resource Block of 1 for the lower Band edge and Resource Block of 50 for the upper band edge was applied, the Resolution Bandwidth was adjusted to be between 1% and 5% of the measured occupied bandwidth. The Video Bandwidth was set to three times the Resolution Bandwidth
3. The plots have an incorrect job number.

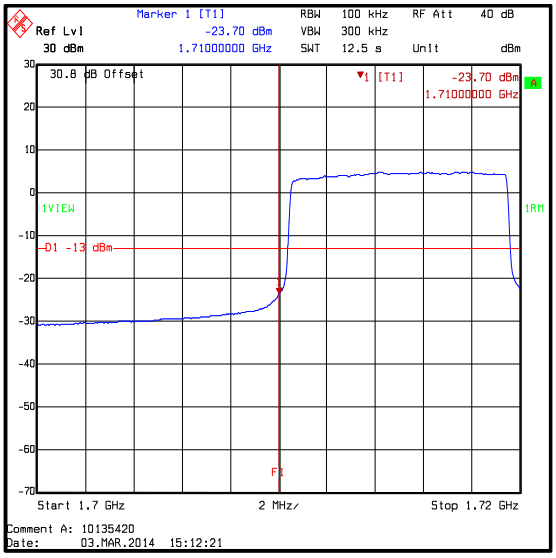
Transmitter Conducted Emissions at Band Edges (continued)

Results: 10 MHz Channel Bandwidth / Bottom Channel / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1710	1	0	-30.0	-13.0	17.0	Complied
1710	50	0	-23.7	-13.0	10.7	Complied



QPSK / 1 Resource Block (0 Offset)

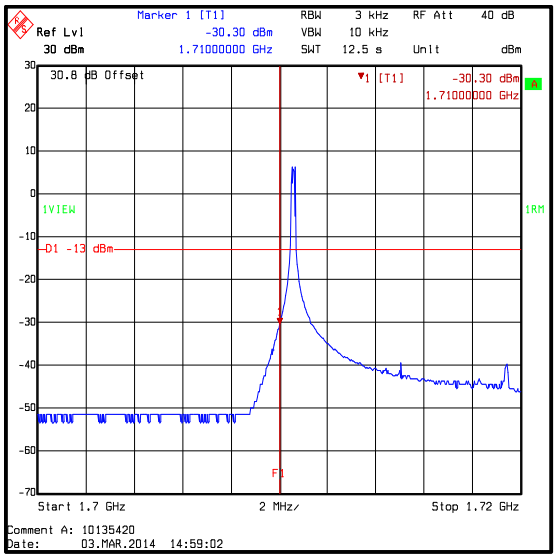


QPSK / 50 Resource Blocks

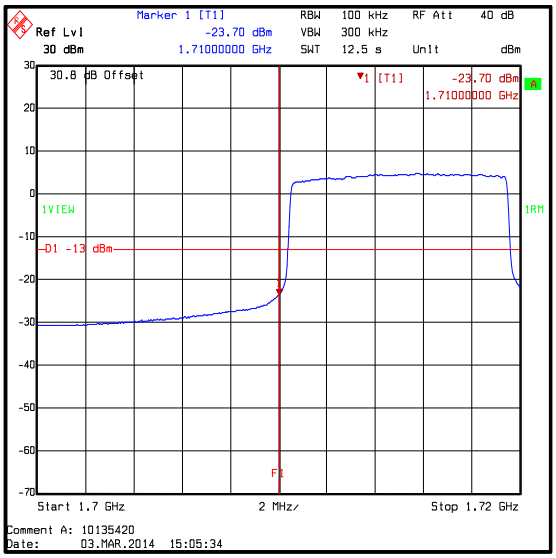
Transmitter Conducted Emissions at Band Edges (continued)

Results: 10 MHz Channel Bandwidth / Bottom Channel / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1710	1	0	-30.3	-13.0	17.3	Complied
1710	50	0	-23.7	-13.0	10.7	Complied



16QAM / 1 Resource Block (0 Offset)

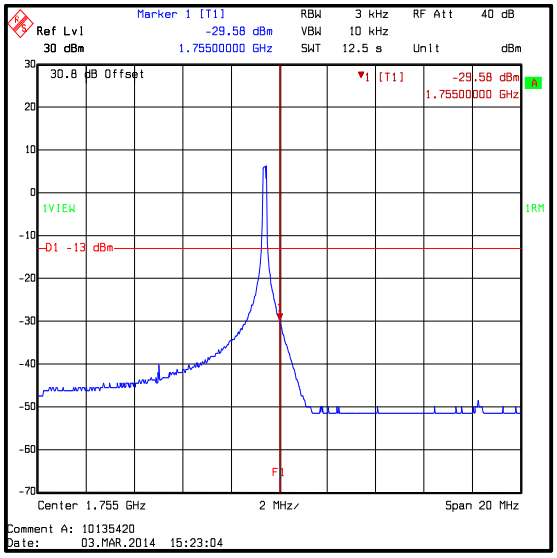


16QAM / 50 Resource Blocks

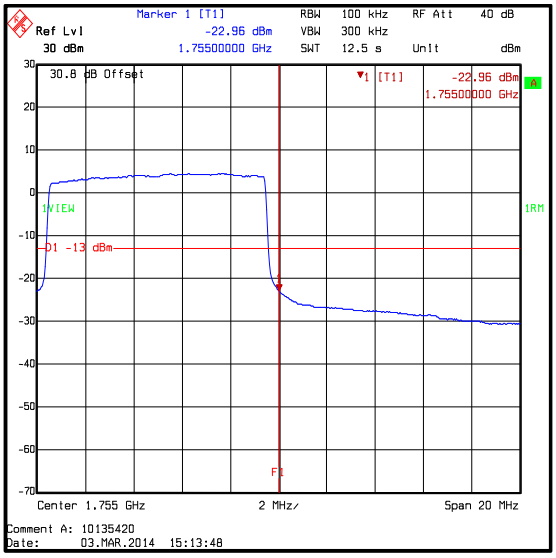
Transmitter Conducted Emissions at Band Edges (continued)

Results: 10 MHz Channel Bandwidth / Top Channel / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1755	1	50	-29.6	-13.0	16.6	Complied
1755	50	0	-23.0	-13.0	10.0	Complied



QPSK / 1 Resource Block (50 Offset)

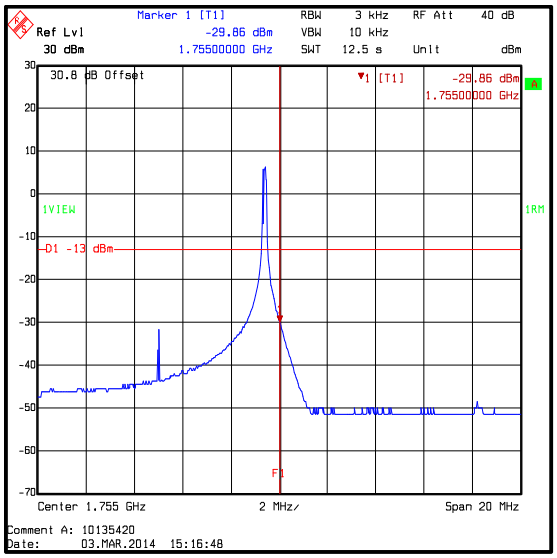


QPSK / 50 Resource Blocks

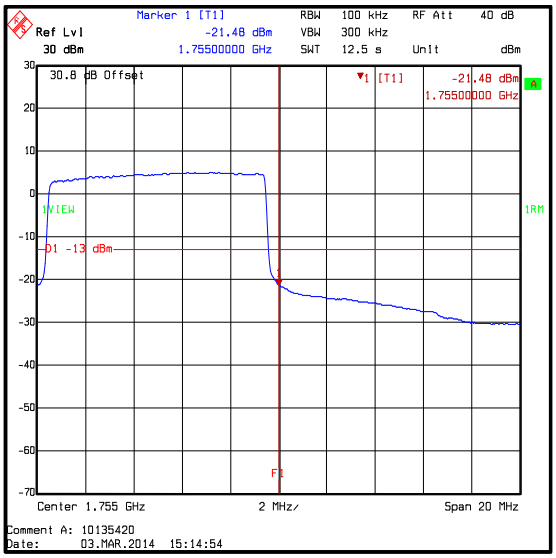
Transmitter Conducted Emissions at Band Edges (continued)

Results: 10 MHz Channel Bandwidth / Top Channel / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1755	1	50	-29.9	-13.0	16.9	Complied
1755	50	0	-21.5	-13.0	8.5	Complied



16QAM / 1 Resource Block (50 Offset)



16QAM / 50 Resource Blocks

Transmitter Conducted Emissions at Band Edges (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1658	Thermohygrometer	JM Handelspunkt	30.5015.13	None stated	24 May 2014	12
M127	Spectrum Analyser	Rohde & Schwarz	FSEB 30	842 659/016	19 Aug 2014	12
A1999	Attenuator	Huber + Suhner	6820.17.B	07101	05 Apr 2014	12
A1368	Directional Coupler	Pasternack Enterprises	PE2214-10	None stated	Calibrated before use	-
M260	Signal Generator	Rohde & Schwarz	SMP02	829076/008	25 Jun 2014	12
M199	Power Meter	Rohde & Schwarz	NRVS	827023/075	15 May 2014	12
M1267	Power Sensor	Rohde & Schwarz	NRV-Z52	100155	14 May 2014	12

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.

5.2.6. Transmitter Radiated Spurious Emissions

Test Summary:

Test Engineers:	David Doyle & Nick Steele	**Test Dates:**	03 March 2014 & 12 March 2014
Test Sample Serial Number:	AMWGB84001F12		

FCC Reference:	Parts 2.1053 & 27.53(g)
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.12. referencing FCC CFR Part 2.1053
Frequency Range:	30 MHz to 18 GHz

Environmental Conditions:

Temperature (°C):	21 to 24
Relative Humidity (%):	34 to 39

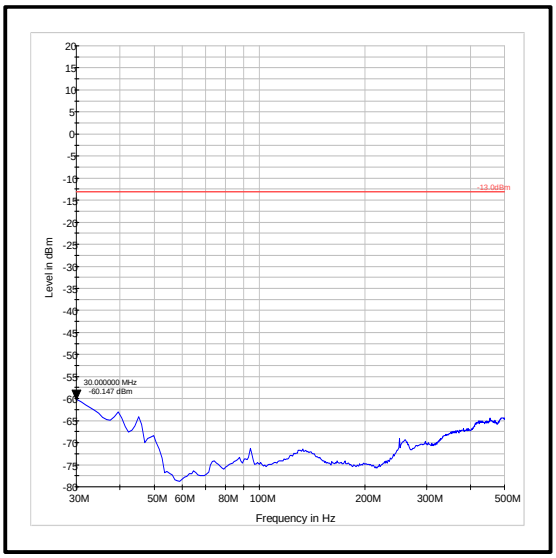
Note(s):

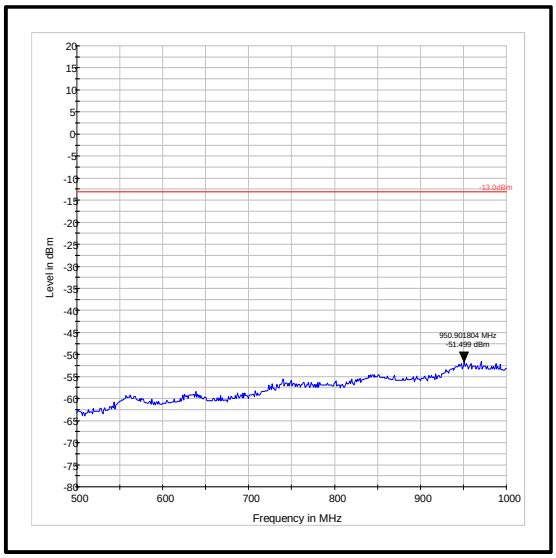
1. The EUT was set to transmit with 16QAM modulation applied and 1 resource block with 50 offset, as this was found to be the worst case modulation scheme with regards to emissions after preliminary investigations and, as this mode emits the highest transmit output power level, it was deemed to be the worst case.
2. For radiated emissions testing, the customer supplied two OA-LTE-06-01-IPW antennas', which were connected to the main and diversity ports. The antenna gain was declared as 2.5 dBi.
3. The emission seen on the 1 GHz to 3 GHz plot at approximately 1750 MHz is the EUT carrier.
4. No spurious emissions were detected above the measurement system noise floor therefore the highest peak noise floor reading of the measuring receiver was recorded in the table below.
5. Measurements below 1 GHz were performed in a semi-anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm 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.
6. Pre-scans above 1 GHz were performed in a fully anechoic chamber (Asset Number K0002) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres above the test chamber floor in the centre of the chamber turntable. All measurement antennas were placed at a fixed height of 1.5 metres above the test chamber floor, in line with the EUT. Final measurements above 1 GHz were performed in a semi-anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm 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.
7. The plots have an incorrect job number.

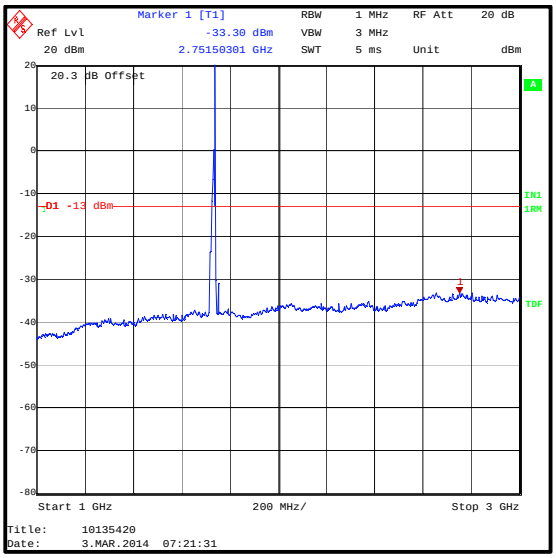
Results:

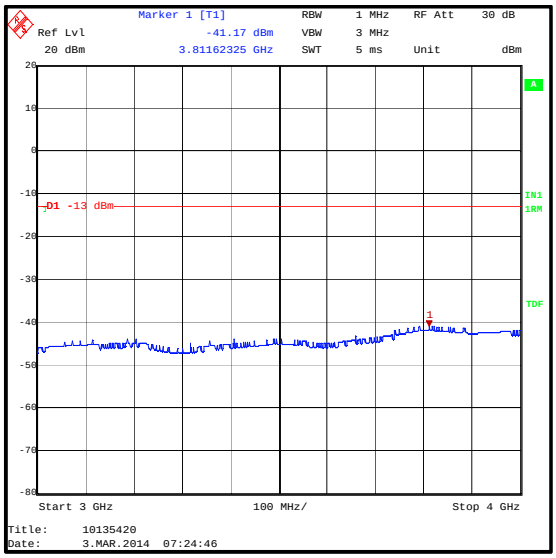
Frequency (MHz)	Antenna Polarisation	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2751.503	Vertical	-33.3	-13.0	20.3	Complied

Transmitter Out of Band Radiated Emissions (continued)

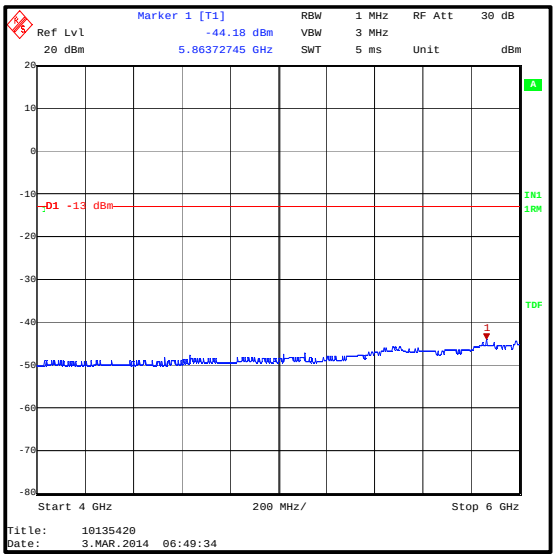


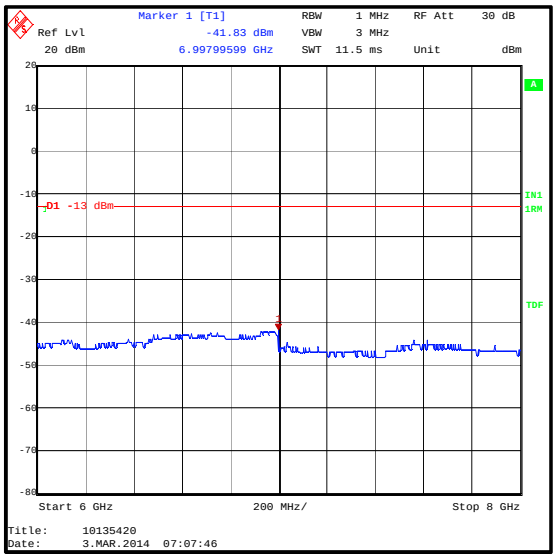


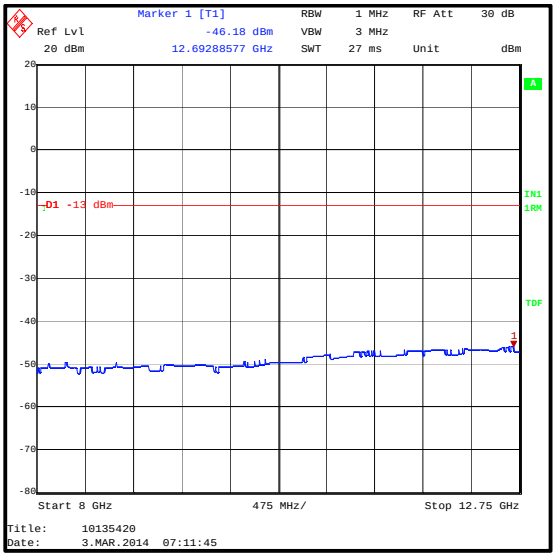


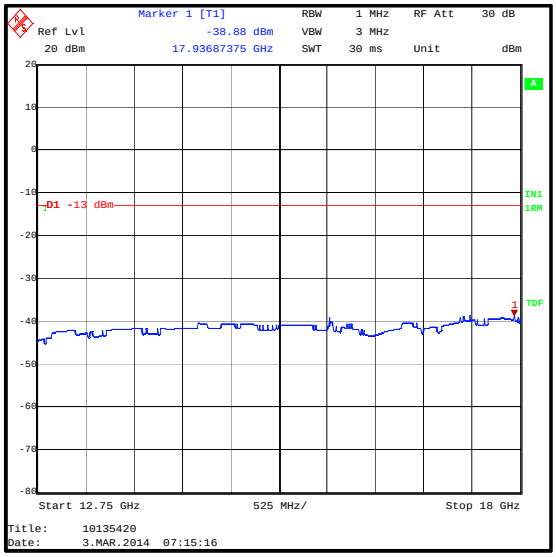


Transmitter Out of Band Radiated Emissions (continued)









Transmitter Radiated Spurious Emissions (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	26 Nov 2014	12
M1622	Thermohygrometer	JM Handelspunkt	30.5015.06	None stated	31 Dec 2014	12
G0543	Amplifier	Sonoma	310N	230801	18 May 2014	3
A1834	Attenuator	Hewlett Packard	8491B	10444	15 Nov 2014	12
A490	Antenna	Chase	CBL6111A	1590	18 Apr 2014	12
M1273	Test Receiver	Rohde & Schwarz	ESIB 26	100275	11 Feb 2015	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	24 May 2014	12
M1124	Test Receiver	Rohde & Schwarz	ESIB 26	100046K	01 Oct 2014	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	14 Nov 2014	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
A253	Antenna	Flann Microwave	12240-20	128	14 Nov 2014	12
A254	Antenna	Flann Microwave	14240-20	139	14 Nov 2014	12
A1393	Attenuator	Huber & Suhner	6820.17.B	757456	10 May 2014	12
A1975	High Pass Filter	AtlanTecRF	AFH-03000	090424010	19 Apr 2014	12

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.

5.2.7. Transmitter Radiated Emissions at Band Edges

Test Summary:

Test Engineer:	David Doyle	**Test Date:**	04 March 2014
Test Sample Serial Number:	AMWGB84001F12		

FCC Reference:	Parts 2.1053 & 27.53(g)
Test Method Used:	As detailed in KDB 971168 Section 6.0 referencing FCC Part 2.1053

Environmental Conditions:

Temperature (°C):	22
Relative Humidity (%):	33

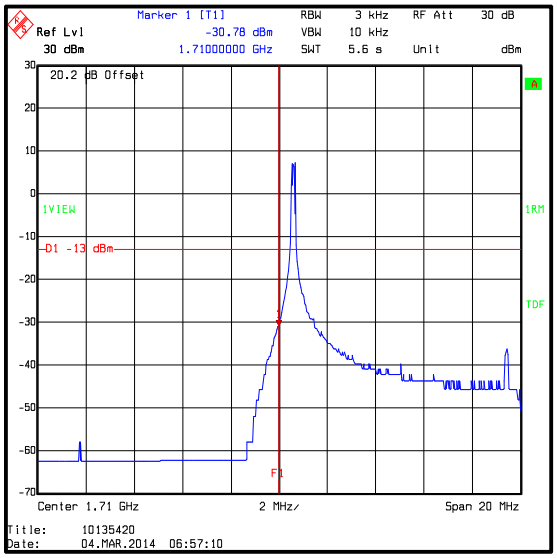
Note(s):

1. For radiated emissions testing, the customer supplied two OA-LTE-06-01-IPW antennas', which were connected to the main and diversity ports. The antenna gain was declared as 2.5 dBi.
2. Measurements were performed with the EUT transmitting with QPSK and 16QAM modulation schemes, with Resource Blocks of 1 and 50. For single Resource Blocks, measurements were performed with the block starting blocks of 1 for the lower band edge and 50 for the upper band edge.
3. In accordance with KDB 971168 Section 6.0, a relaxation of the reference bandwidth has been applied at the edge of the authorised frequency band. The test receivers channel power function was used to integrate over the first 100 kHz outside of the frequency band.
4. Resolution bandwidths were set between 1% and 5% of the measured occupied bandwidth.
5. The plots have an incorrect job number.

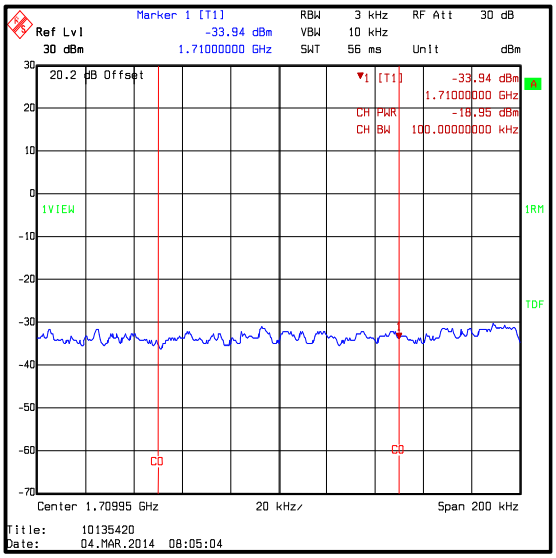
Transmitter Radiated Emissions at Band Edges (continued)

Results: 10 MHz Channel Bandwidth / Bottom Channel / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1710	1	0	-30.8	-13.0	17.8	Complied
1710	50	0	-19.0	-13.0	6.0	Complied



QPSK / 1 Resource Block (0 Offset)

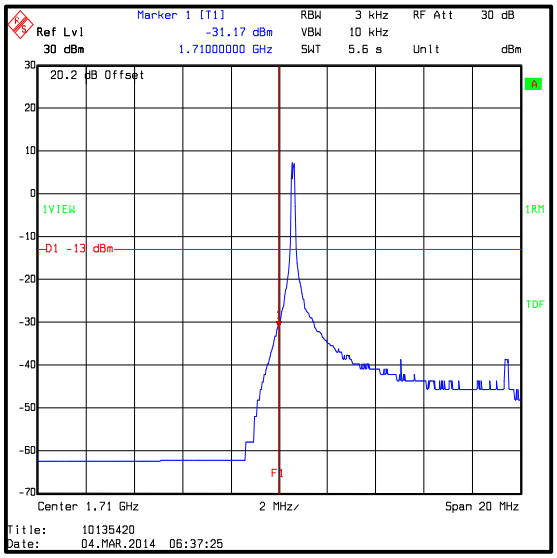


QPSK / 50 Resource Blocks

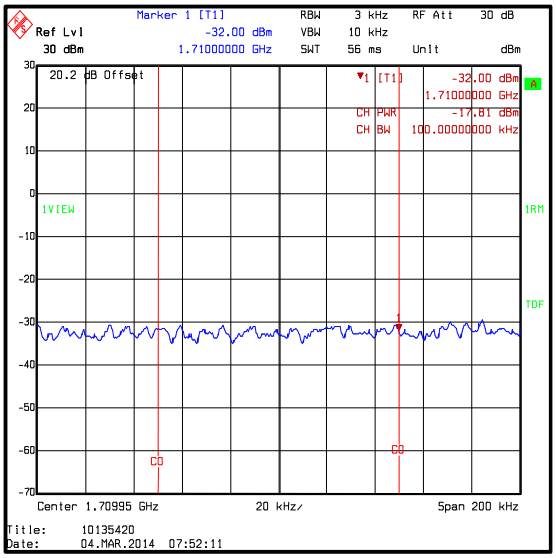
Transmitter Radiated Emissions at Band Edges (continued)

Results: 10 MHz Channel Bandwidth / Bottom Channel / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1710	1	0	-31.2	-13.0	18.2	Complied
1710	50	0	-17.8	-13.0	4.8	Complied



16QAM / 1 Resource Block (0 Offset)

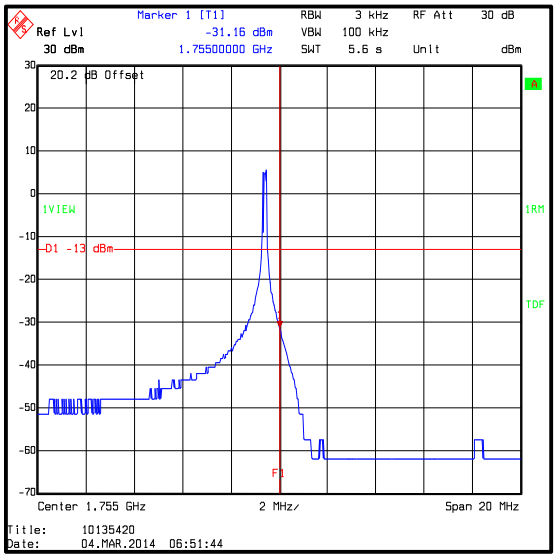


16QAM / 50 Resource Blocks

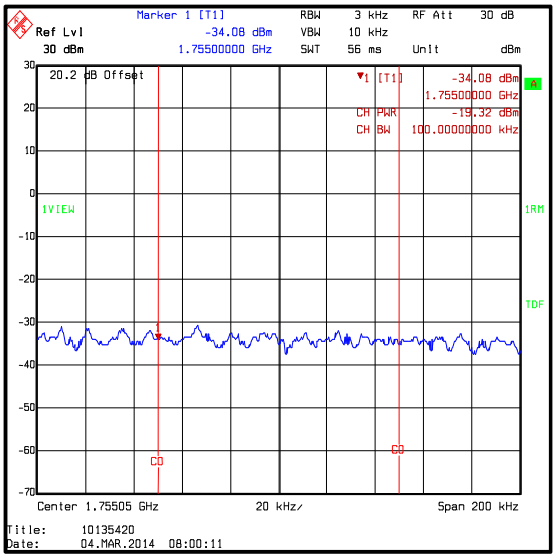
Transmitter Radiated Emissions at Band Edges (continued)

Results: 10 MHz Channel Bandwidth / Top Channel / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1755	1	50	-31.2	-13.0	18.2	Complied
1755	50	0	-19.3	-13.0	6.3	Complied



QPSK / 1 Resource Block (0 Offset)

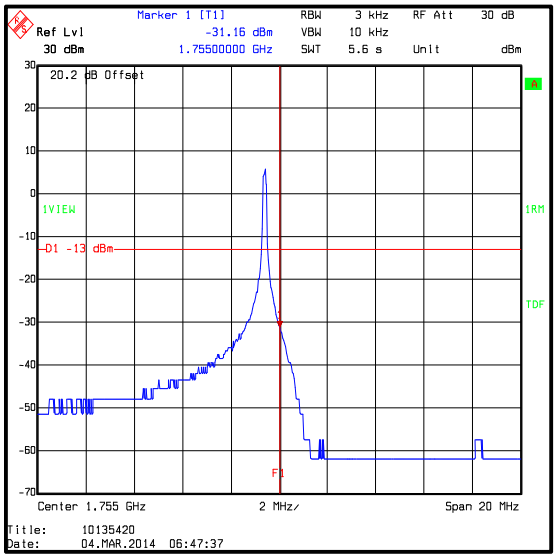


QPSK / 50 Resource Blocks

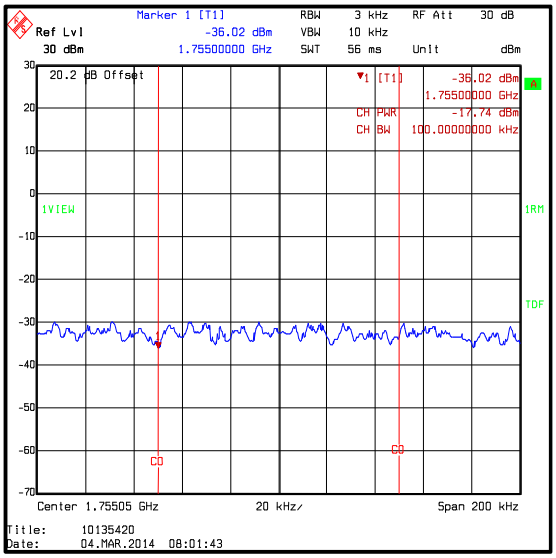
Transmitter Radiated Emissions at Band Edges (continued)

Results: 10 MHz Channel Bandwidth / Top Channel / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1755	1	50	-31.2	-13.0	18.2	Complied
1755	50	0	-17.7	-13.0	4.7	Complied



16QAM / 1 Resource Block (0 Offset)



16QAM / 50 Resource Blocks

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	24 May 2014	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	14 Nov 2014	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
M127	Test Receiver	Rohde & Schwarz	FSEB 30	842 659/016	19 Aug 2014	12
A1393	Attenuator	Huber & Suhner	6820.17.B	757456	10 May 2014	12

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.

5.2.8. Transmitter Frequency Stability (Temperature Variation)

Test Summary:

Test Engineer:	Nick Steele	**Test Date:**	26 July 2012
Test Sample Serial Number:	AMWGB84001G12		

FCC Reference:	Parts 2.1055 & 27.54
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.2 referencing FCC CFR Part 2.1055

Environmental Conditions:

Temperature (°C):	25
Relative Humidity (%):	33

Note(s):

1. Temperature was monitored throughout the test with a calibrated digital thermometer.
2. Frequency error was measured using a calibrated Anristu MT8820C Radio Communications Analyser. The EUT was connected by suitable RF cables to the MT8820C. A bi-directional communications link was established between the EUT and MT8820C. The frequency meter value was recorded.
3. The transmit frequency was monitored and stayed within the frequency limits for LTE Band 4 – 1710 MHz to 1755 MHz

Transmitter Frequency Stability (Temperature Variation) (continued)

Results: Bottom Channel

Temperature (°C)	Time after Start-up					
	0 minutes (MHz)	1 minute (MHz)	2 minutes (MHz)	3 minutes (MHz)	4 minutes (MHz)	5 minutes (MHz)
-30	1715.000015	1715.000011	1715.000008	1715.000006	1715.000005	1715.000006
-20	1714.999998	1715.000018	1715.000014	1715.000015	1715.000008	1715.000010
-10	1714.999994	1715.000016	1715.000017	1715.000021	1715.000013	1715.000006
0	1715.000020	1715.000014	1715.000012	1715.000006	1715.000001	1714.999994
10	1714.999997	1714.999999	1715.000006	1715.000009	1715.000010	1715.000007
20	1714.999998	1715.000011	1715.000010	1715.000008	1715.000008	1715.000011
30	1714.999990	1715.000001	1715.000007	1715.000012	1715.000005	1714.999998
40	1714.999991	1715.000001	1715.000007	1715.000015	1715.000012	1715.000009
50	1714.999989	1715.000018	1715.000014	1715.000013	1715.000009	1715.000006

Temperature (°C)	Time after Start-up				
	6 minutes (MHz)	7 minutes (MHz)	8 minutes (MHz)	9 minutes (MHz)	10 minutes (MHz)
-30	1715.000003	1715.000003	1715.000002	1715.000000	1715.000001
-20	1714.999998	1714.999999	1714.999997	1715.000000	1714.999999
-10	1715.000013	1715.000007	1715.000004	1715.000006	1715.000003
0	1714.999998	1715.000002	1715.000000	1714.999999	1715.000000
10	1715.000006	1715.000004	1715.000002	1715.000001	1715.000001
20	1715.000000	1714.999997	1714.999998	1715.000002	1715.000001
30	1715.000003	1714.999998	1715.000001	1715.000000	1715.000000
40	1715.000003	1714.999999	1715.000000	1715.000001	1715.000000
50	1715.000008	1715.000004	1715.000000	1715.000002	1715.000000

Frequency closest to Lower Band Edge (MHz)	Lower Band Edge Limit (MHz)	Margin (MHz)	Result
1714.999989	1710.0	4.999989	Complied

Transmitter Frequency Stability (Temperature Variation) (continued)

Results: Top Channel

Temperature (°C)	Time after Start-up					
	0 minutes (MHz)	1 minute (MHz)	2 minutes (MHz)	3 minutes (MHz)	4 minutes (MHz)	5 minutes (MHz)
-30	1749.999995	1749.999987	1749.999991	1749.999997	1749.999998	1750.500005
-20	1749.999989	1749.999996	1750.000000	1750.500007	1750.500009	1750.500006
-10	1749.999983	1749.999989	1750.500012	1750.500011	1750.500015	1750.500016
0	1749.999998	1750.500013	1750.500010	1750.500008	1750.500012	1750.500006
10	1750.500014	1750.500016	1750.500016	1750.500012	1750.500007	1750.500009
20	1750.500010	1750.500014	1750.500011	1750.500007	1750.500005	1749.999998
30	1749.999989	1749.999993	1750.500005	1750.500008	1750.500015	1750.500010
40	1749.999995	1749.999998	1750.500007	1750.500012	1750.500010	1750.500007
50	1749.999987	1749.999998	1749.999994	1750.000006	1750.000009	1750.000009

Temperature (°C)	Time after Start-up				
	6 minutes (MHz)	7 minutes (MHz)	8 minutes (MHz)	9 minutes (MHz)	10 minutes (MHz)
-30	1750.500003	1750.500002	1750.999999	1750.500001	1750.500000
-20	1750.500002	1750.500000	1750.500001	1750.500000	1749.999998
-10	1750.500005	1750.500005	1750.500003	1749.999997	1749.999999
0	1750.500002	1749.999998	1749.999999	1750.500000	1750.500000
10	1750.500007	1750.500005	1750.500002	1750.500000	1750.499998
20	1749.999994	1749.999987	1749.999994	1749.999998	1749.999999
30	1750.500008	1749.999996	1749.999999	1750.500001	1750.000000
40	1750.500004	1750.500001	1750.500000	1750.500001	1750.000001
50	1750.000005	1750.000004	1750.000002	1750.000002	1750.000001

Frequency closest to Upper Band Edge(MHz)	Upper Band Edge Limit (MHz)	Margin (MHz)	Result
1750.500016	1755.0	4.499984	Complied

Transmitter Frequency Stability (Temperature Variation) (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
E013	Environmental Chamber	Sanyo	MTH-4200PR	None Stated	Calibrated before use	-
L1068	LTE Test Set	Anritsu	MT8820A	6201127386	15 May 2013	12
M1068	Thermometer	Iso-Tech	RS55	93102884	08 Mar 2013	12
M1229	Digital Multimeter	Fluke	179	87640015	18 Jun 2013	12
S0537	DC Power Supply	TTI	EL302D	249928	Calibrated before use	12

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.

5.2.9. Transmitter Frequency Stability (Voltage Variation)

Test Summary:

Test Engineer:	Nick Steele	**Test Date:**	26 July 2012
Test Sample Serial Number:	AMWGB84001G12		

FCC Reference:	Parts 2.1055 & 27.54
Test Method Used:	As detailed in ANSI TIA-603-C-2004 Section 2.2.2 referencing FCC CFR Part 2.1055

Environmental Conditions:

Temperature (°C):	25
Relative Humidity (%):	33

Note(s):

1. Voltage was monitored throughout the test with a calibrated digital voltmeter.
2. Frequency error was measured using a calibrated Anristu MT8820C Radio Communications Analyser. The EUT was connected by suitable RF cables to the MT8820C. A bi-directional communications link was established between the EUT and MT8820C. The frequency meter value was recorded.
3. The transmit frequency was monitored and stayed within the frequency limits for LTE Band 4 – 1710 MHz to 1755 MHz.

Results: Bottom Channel

Supply Voltage (VDC)	Measured Frequency (MHz)	Lower Band Edge Limit (MHz)	Margin (MHz)	Result
3.0	1715.000006	1710.0	5.000006	Complied
3.6	1715.000005	1710.0	5.000005	Complied

Results: Top Channel

Supply Voltage (VDC)	Measured Frequency (MHz)	Upper Band Edge Limit (MHz)	Margin (MHz)	Result
3.0	1750.500009	1755.0	4.499991	Complied
3.6	1750.500006	1755.0	4.499994	Complied

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
L1068	LTE Test Set	Anritsu	MT8820A	6201127386	15 May 2013	12
M1229	Digital Multimeter	Fluke	179	87640015	18 Jun 2013	12
S0537	DC Power Supply	TTI	EL302D	249928	Calibrated before use	12

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.

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
Conducted Output Power	1710 to 1755 MHz	95%	±1.13 dB
Occupied Bandwidth	1710 to 1755 MHz	95%	±3.92 %
Conducted Spurious Emissions	9 kHz to 18 GHz	95%	±2.64 dB
Radiated Spurious Emissions	30 MHz to 1 GHz	95%	±5.65 dB
Radiated Spurious Emissions	1 GHz to 18 GHz	95%	±2.94 dB
Frequency Stability	1710 to 1755 MHz	95%	±0.92 ppm

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	8	3.4	Remove Antenna Type
2.0	8 & 10	3.4 & 4.2	Update Antenna Gain from 0 dBi to 6.6 dBi
2.0	26 to 32	5.2.5	Update Antenna Gain from 0 dBi to 6.6 dBi and recalculate EIRP – change EIRP limit from 44.8 dBm to 30 dBm
3.0	76	-	Corrected calibration date of L1067 in test equipment list
4.0	8, 10, 26 to 32	3.4, 4.2 & 5.2.5	Update Antenna Gain detail and recalculate EIRP
5.0	-	-	Updated to UL VS LTD format Receiver tests removed as now covered in UL-RPT-RP10135420JD02A Output power, PAPR and Occupied bandwidth tests repeated using KDB 971168 Conducted Band edge repeated Radiated Spurious Emissions repeated Radiated Emissions at Band edge repeated MUs for output power and radiated spurious emissions updated Part 27.53 references updated