



TEST REPORT

Test Report No. : UL-RPT-RP10295122JD01G V3.0

Manufacturer : Sony Mobile Communications Inc.

FCC ID : PY7PM-0801

Technology : ANT+

Test Standard(s) : FCC Part 15.249 Subpart C

1. This test report shall not be reproduced in full or partial, without the written approval of UL VS LTD.
2. The results in this report apply only to the sample(s) tested.
3. 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 3.0 supersedes all previous versions.

Date of Issue: 31 July 2014

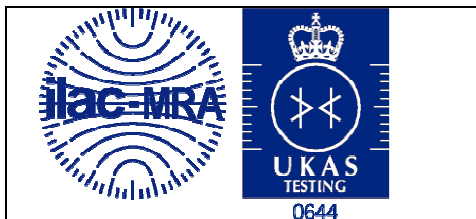
Checked by:

Sarah Williams
Engineer, Radio Laboratory

Issued by :

pp

John Newell
Group Quality Manager
Basingstoke,
UL VS LTD



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

UL VS LTD

Pavilion A, Ashwood Park, Ashwood Way, Basingstoke, Hampshire, RG23 8BG, UK
Telephone: +44 (0)1256 312000
Facsimile: +44 (0)1256 312001

This page has been left intentionally blank.

Table of Contents

1. Customer Information.....	4
2. Summary of Testing.....	5
2.1. General Information	5
2.2. Summary of Test Results	5
2.3. Methods and Procedures	5
2.4. Deviations from the Test Specification	5
3. Equipment Under Test (EUT)	6
3.1. Identification of Equipment Under Test (EUT)	6
3.2. Description of EUT	7
3.3. Modifications Incorporated in the EUT	7
3.4. Additional Information Related to Testing	7
3.5. Support Equipment	8
4. Operation and Monitoring of the EUT during Testing	9
4.1. Operating Modes	9
4.2. Configuration and Peripherals	9
5. Measurements, Examinations and Derived Results.....	10
5.1. General Comments	10
5.2. Test Results	11
5.2.1. Transmitter AC Conducted Spurious Emissions	11
5.2.2. Transmitter Fundamental Field Strength	14
5.2.3. Transmitter Duty Cycle	17
5.2.4. Transmitter 20 dB Bandwidth	19
5.2.5. Transmitter Radiated Emissions	22
5.2.6. Transmitter Band Edge Radiated Emissions	27
6. Measurement Uncertainty	29
7. Report Revision History	30

1. Customer Information

Company Name:	Sony Mobile Communications Inc.
Address:	Nya Vattentornet Mobilvägen 10 Lund 22188 Sweden

2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR15.249
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Section 15.249
Specification Reference:	47CFR15.207 and 47CFR15.209
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Sections 15.207 and 15.209
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:	27 May 2014 to 04 June 2014

2.2. Summary of Test Results

FCC Reference (47CFR)	Measurement	Result
Part 15.207	Transmitter AC Conducted Emissions	
Part 15.249(a)(e)	Transmitter Fundamental Field Strength	
Part 15.35(c)	Duty cycle	Note 1
Part 2.1049	Transmitter 20 dB Bandwidth	
Part 15.249(d)(e)/15.209(a)	Transmitter Radiated Emissions	
Part 15.249(d)/15.209(a)	Transmitter Band Edge Radiated Emissions	
Key to Results  = Complied  = Did not comply		

Note(s):

1. The measurements were performed to assist in the calculation of average Fundamental Field Strength and radiated emissions as the EUT was not constantly transmitting

2.3. Methods and Procedures

Reference:	ANSI C63.4 (2009)
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:	ANSI C63.10 (2009)
Title:	American National Standard for Testing Unlicensed Wireless Devices

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:	Sony
IMEI:	004402452750619 (<i>Radiated sample</i>)
Test Sample Serial Number:	CB5A1Z13WA
Hardware Version Number:	A
Software Version Number:	ATPV: 1283-9868, 0_25_3_16_A
FCC ID:	PY7PM-0801

Brand Name:	Sony
IMEI:	004402452751278 (<i>Conducted sample with RF port</i>)
Test Sample Serial Number:	CB5A1Z1RYT
Hardware Version Number:	A
Software Version Number:	ATPV: 1283-9868, 0_25_3_16_A
FCC ID:	PY7PM-0801

Brand Name:	Sony
Description:	AC Charger
Model Name or Number:	EP880

Brand Name:	Monoprice
Description:	MHL Cable
Model Name or Number:	Not marked

Brand Name:	Sony
Description:	MHL Adaptor
Model Name or Number:	IM750

Brand Name:	Sony
Description:	USB Cable
Model Name or Number:	EC803

Brand Name:	Sony
Description:	Deskstand
Model Name or Number:	DK43

Identification of Equipment Under Test (EUT) (continued)

Brand Name:	Sony
Description:	PHF
Model Name or Number:	MH410c

3.2. Description of EUT

The equipment under test (EUT) was a GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n/ac + NFC & ANT+.

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:	ANT+		
Power Supply Requirement:	Nominal	3.8 VDC	
Type of Unit:	Transceiver		
Modulation:	GFSK		
Transmit Frequency Range:	2400 to 2483.5 MHz		
Transmit Channels Tested:	Channel ID	Channel Number	Channel Frequency (MHz)
	Bottom	1	2403
	Middle	39	2441
	Top	78	2480

3.5. Support Equipment

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

Description:	2 GB Micro SD Card
Brand Name:	Generic
Model Name or Number:	Not marked

Description:	22" High Definition Television
Brand Name:	Logik
Model Name or Number:	L22FE12A
Serial Number:	1309020661

Description:	Laptop
Brand Name:	Dell
Model Name or Number:	E5410
Serial Number:	UL Number 00763

Description:	Test jig
Brand Name:	Not marked
Model Name or Number:	Not marked
Serial Number:	Not marked

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: transmitting with a GFSK modulated signal on the bottom, middle and top channels as required.

4.2. Configuration and Peripherals

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

- Transmit tests: The laptop PC with the customers' test application was used to place the EUT into ANT+ test mode. Operating channels were selected in the test mode.
- Transmitter radiated spurious emission tests were performed with the following configurations, employing all available accessories:
 - o Configuration 1 – Handset with the AC charger, USB Cable, MHL cable (terminated in to a television), MHL adaptor and PHF.
 - o Configuration 2 – Handset with the AC charger, USB Cable, Deskstand and PHF.

Pre-scans below 1 GHz were performed in both configurations 1 and 2, with final measurements limited to the configuration which provided worst case results. Pre-scans above 1 GHz were performed in the configuration that employed the most accessories (Configuration 1), with any final measurements being performed in both configurations.

- The conducted sample with IMEI 004402452751278 was used for the 20 dB bandwidth test.
- The radiated sample with IMEI 004402452750619 was used for all other 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 AC Conducted Spurious Emissions

Test Summary:

Test Engineer:	Georgios Vrezas	Test Date:	04 June 2014
Test Sample IMEI:	004402452750619		

FCC Reference:	Part 15.207
Test Method Used:	As detailed in ANSI C63.10 Section 6.2 referencing ANSI C63.4

Environmental Conditions:

Temperature (°C):	21
Relative Humidity (%):	57

Results: Live / Quasi Peak

Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.222	Live	29.5	62.7	33.2	Complied
0.438	Live	24.7	57.1	32.4	Complied
0.443	Live	25.4	57.0	31.6	Complied
4.659	Live	21.2	56.0	34.8	Complied
12.359	Live	21.1	60.0	38.9	Complied

Results: Live / Average

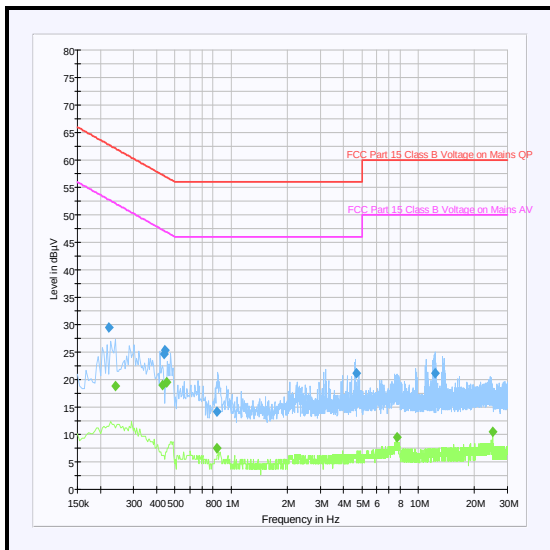
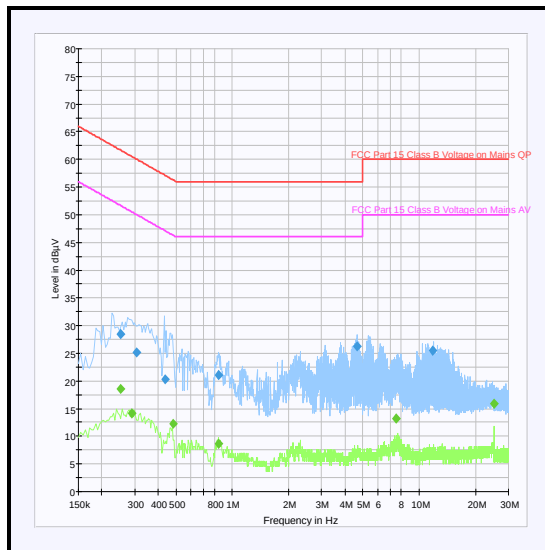
Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.240	Live	18.8	52.1	33.3	Complied
0.429	Live	18.9	47.3	28.4	Complied
0.452	Live	19.4	46.8	27.4	Complied
0.839	Live	7.6	46.0	38.4	Complied
25.058	Live	10.6	50.0	39.4	Complied

Transmitter AC Conducted Spurious Emissions (continued)**Results: Neutral / Quasi Peak**

Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.254	Neutral	28.5	61.6	33.1	Complied
0.308	Neutral	25.1	60.0	34.9	Complied
0.438	Neutral	20.3	57.1	36.8	Complied
0.848	Neutral	21.0	56.0	35.0	Complied
4.659	Neutral	26.3	56.0	29.7	Complied
11.846	Neutral	25.4	60.0	34.6	Complied

Results: Neutral / Average

Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.254	Neutral	18.6	51.6	33.0	Complied
0.290	Neutral	14.2	50.5	36.3	Complied
0.483	Neutral	12.2	46.3	34.1	Complied
0.848	Neutral	8.7	46.0	37.3	Complied
7.544	Neutral	13.2	50.0	36.8	Complied
25.058	Neutral	15.9	50.0	34.1	Complied

Transmitter AC Conducted Spurious Emissions (continued)**Live****Neutral**

Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying tables.

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1625	Thermohygrometer	JM Handelspunkt	30.5015.06	None stated	31 Dec 2014	12
A004	LISN	Rohde & Schwarz	ESH3-Z5	890604/027	18 Nov 2014	12
A1830	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100668	27 Feb 2015	12
M1263	Test Receiver	Rohde & Schwarz	ESIB 7	100265	14 Oct 2014	12

5.2.2. Transmitter Fundamental Field Strength**Test Summary:**

Test Engineer:	Andrew Edwards	Test Date:	28 May 2014
Test Sample IMEI:	004402452750619		

FCC Reference:	Part 15.249(a)(e)
Test Method Used:	As detailed in ANSI C63.10 Section 6.6

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	44

Note(s):

1. The final measured value in the tables below incorporates the calibrated antenna factor and cable loss.
2. The average level was obtained by subtracting the duty cycle correction (33.6 dB) from the peak level measured as the EUT was not constantly transmitting.
3. All plots have an incorrect date. All plots were taken on 28th May 2014.

Results: Bottom Channel / Peak

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2403	Horizontal	87.5	114.0	26.5	Complied

Results: Bottom Channel / Average

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2403	Horizontal	53.9	94.0	40.1	Complied

Results: Middle Channel / Peak

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2441	Horizontal	89.0	114.0	25.0	Complied

Results: Middle Channel / Average

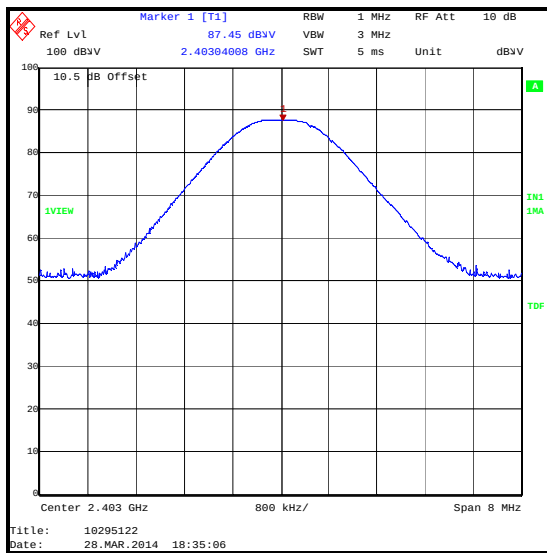
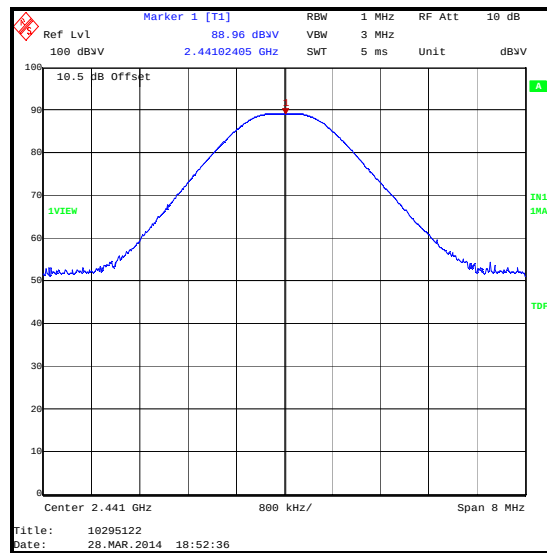
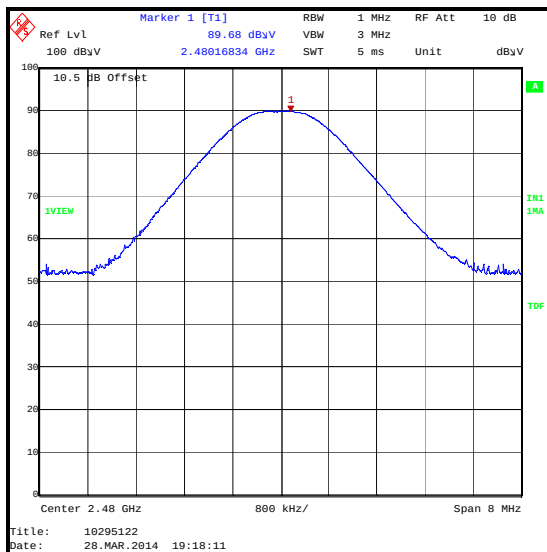
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2441	Horizontal	55.4	94.0	38.6	Complied

Transmitter Fundamental Field Strength (continued)**Results: Top Channel / Peak**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2480	Horizontal	89.7	114.0	24.3	Complied

Results: Top Channel / Average

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2480	Horizontal	56.1	94.0	37.9	Complied

**Bottom Channel****Middle Channel****Top Channel**

Transmitter Fundamental Field Strength (continued)**Test Equipment Used:**

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A1396	Attenuator	Huber & Suhner	6810.17.B	757987	02 May 2015	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	18 May 2015	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
M1124	Test Receiver	Rohde & Schwarz	ESIB 26	100046K	01 Oct 2014	12
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	12

5.2.3. Transmitter Duty Cycle**Test Summary:**

Test Engineer:	Andrew Edwards	Test Date:	28 May 2014
Test Sample IMEI:	004402452750619		

FCC Reference:	Part 15.35(c)
Test Method Used:	As detailed in ANSI C63.10 Section 7.5

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	39

Note(s):

1. In order to assist with the determination of the average level of fundamental and spurious emissions field strength, measurements were made of duty cycle to determine the transmission duration and the silent period time of the transmitter. The transmitter duty cycle was measured using a spectrum analyser in the time domain and calculated by $20 \log(\text{On Time} / [\text{Period or } 100 \text{ ms whichever is the lesser}])$

$$\text{Duty cycle} = 20 \log ((209.109 \mu\text{s}) / (10.038 \text{ ms}))$$

$$\text{Duty cycle} = 20 \log (0.0208)$$

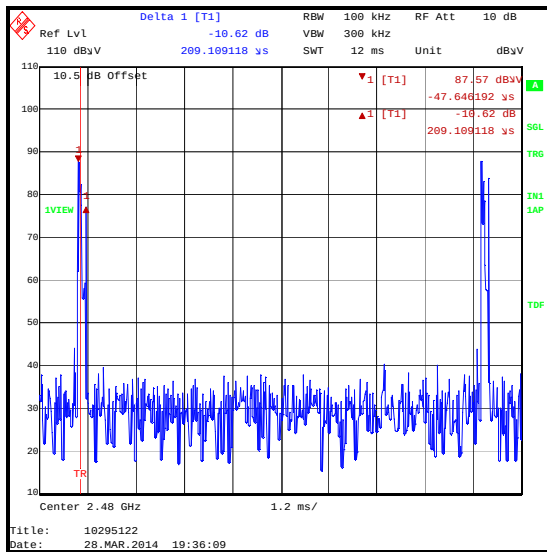
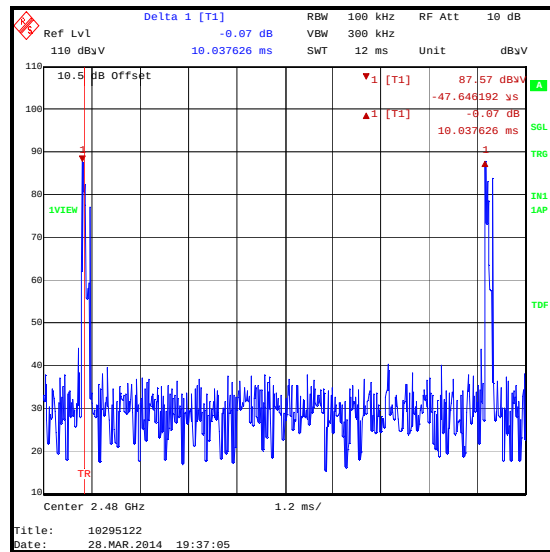
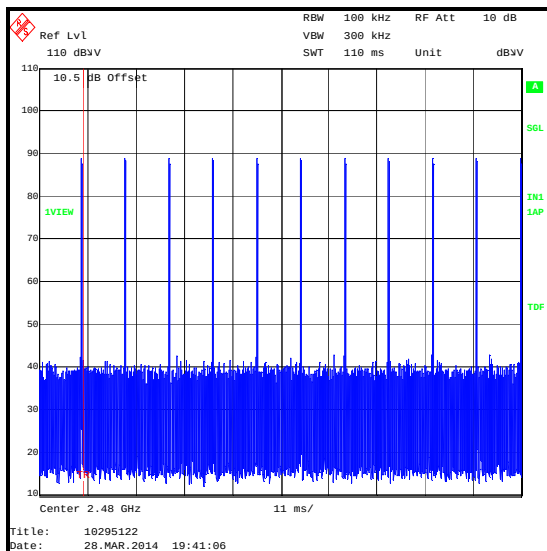
$$\text{Duty cycle} = 33.6 \text{ dB}$$

2. The measurement was performed using a radiated sample in a fully anechoic chamber (Asset Number K0002) at a distance of 3 metres.
3. All plots have an incorrect date. All plots were taken on 28th May 2014.

Results:

Pulse Duration (µs)	Duty Cycle (dB)
209.109	33.6

Period (ms)
10.038

Transmitter Duty Cycle (continued)**Tx on****Tx on+off****Tx on 100 ms****Test Equipment Used:**

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A1396	Attenuator	Huber & Suhner	6810.17.B	757987	02 May 2015	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	18 May 2015	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
M1124	Test Receiver	Rohde & Schwarz	ESIB 26	100046K	01 Oct 2014	12
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	12

5.2.4. Transmitter 20 dB Bandwidth**Test Summary:**

Test Engineer:	Nick Steele	Test Date:	27 May 2014
Test Sample IMEI:	004402452751278		

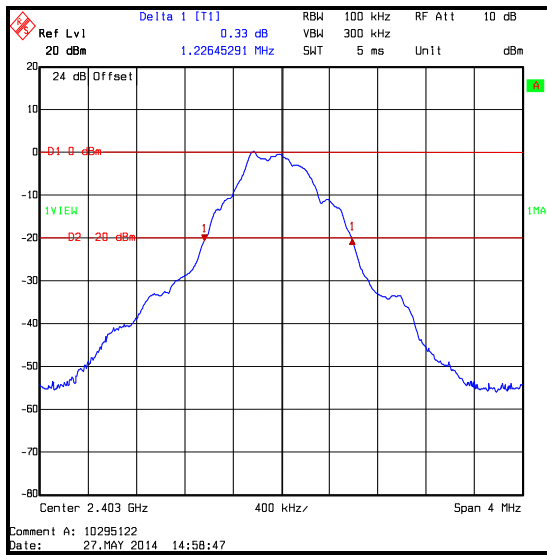
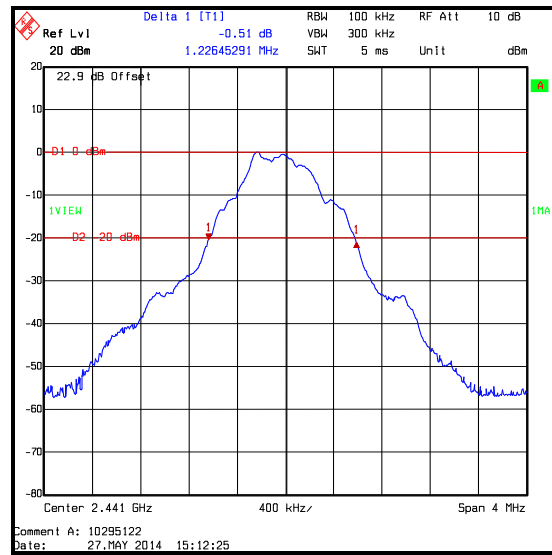
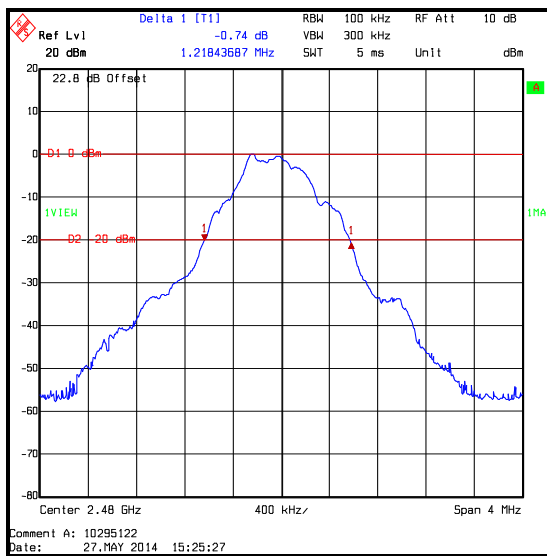
FCC Reference:	Part 2.1049
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.1

Environmental Conditions:

Temperature (°C):	24
Relative Humidity (%):	49

Results:

Channel	20 dB Bandwidth (kHz)
Bottom	1226.453
Middle	1226.453
Top	1218.437

Transmitter 20 dB Bandwidth (continued)**Bottom Channel****Middle Channel****Top Channel**

Transmitter 20 dB Bandwidth (continued)**Test Equipment Used:**

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1657	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	12
M127	Spectrum Analyser	Rohde & Schwarz	FSEB 30	842 659/016	19 Aug 2014	12
A1998	Attenuator	Huber & Suhner	6820.17.B	07101	Calibrated before use	-
G0608	Signal Generator	Rohde & Schwarz	SMIQ 06B	838341/033	14 Feb 2015	12
M199	Power Meter	Rohde & Schwarz	NRVS	827023/075	08 Apr 2016	24
M1267	Power Sensor	Rohde & Schwarz	NRV-Z52	100155	23 Apr 2016	24
A1256	Power Supply Unit	Farnell	11E30/1B	000378	Calibrated before use	-
M1229	Multimeter	Fluke	179	87640015	24 Apr 2015	12

5.2.5. Transmitter Radiated Emissions**Test Summary:**

Test Engineer:	Andrew Edwards	Test Date:	29 May 2014
Test Sample IMEI:	004402452750619		

FCC Reference:	Parts 15.249(d)(e) & 15.209(a)
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.5 referencing ANSI C63.4
Frequency Range	9 kHz to 1000 MHz

Environmental Conditions:

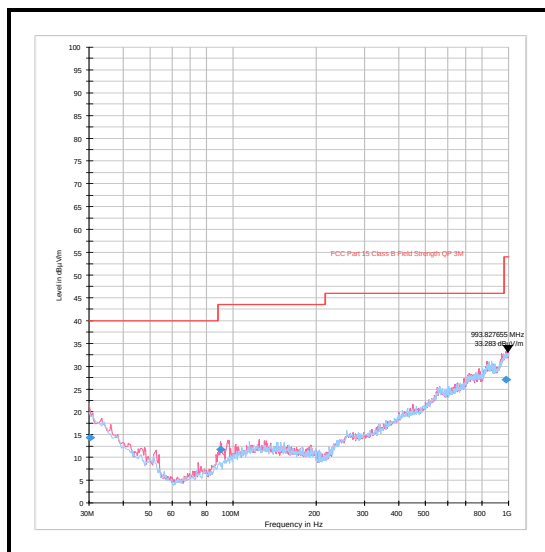
Temperature (°C):	24
Relative Humidity (%):	35

Note(s):

1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
2. The preliminary scans showed similar emission levels below 1 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to the top channel only.
3. In accordance with FCC part 15.33, pre-scans were performed from 9 kHz to 30 MHz. As there were no emissions observed within 20 dB of the limit, in accordance with 15.31(o), no pre-scans are included in this test report. The pre-scans are kept on file and available upon request.
4. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak noise floor reading of the measuring receiver was recorded as shown 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.

Results: Quasi-Peak

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
993.828	Vertical	33.3	54.0	20.7	Complied

Transmitter Radiated Emissions (continued)**Test Equipment Used:**

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A490	Antenna	Chase	CBL6111A	1590	29 Apr 2015	12
A1834	Attenuator	Hewlett Packard	8491B	10444	15 Nov 2014	12
G0543	Amplifier	Sonoma	310N	230801	19 Aug 2014	3
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	26 Nov 2014	12
M1273	Test Receiver	Rohde & Schwarz	ESIB 26	100275	15 Feb 2015	12
M1622	Thermohygrometer	JM Handelspunkt	30.5015.06	Not stated	31 Dec 2014	12

Transmitter Radiated Emissions (continued)**Test Summary:**

Test Engineer:	Andrew Edwards	Test Date:	28 May 2014
Test Sample IMEI:	004402452750619		

FCC Reference:	Parts 15.249(d)(e) & 15.209(a)
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3 and 6.6 referencing ANSI C63.4
Frequency Range	1 GHz to 25 GHz

Environmental Conditions:

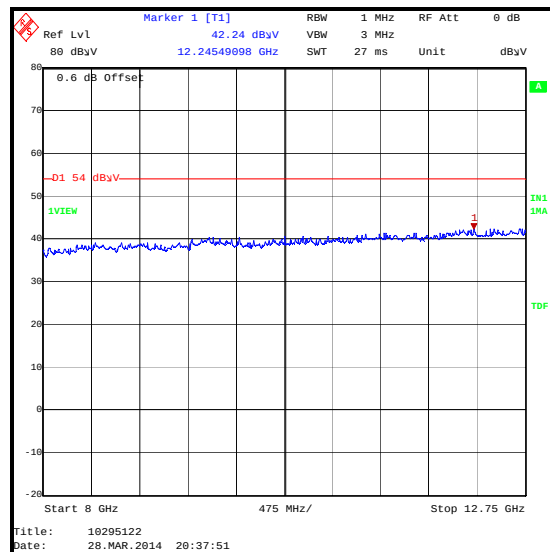
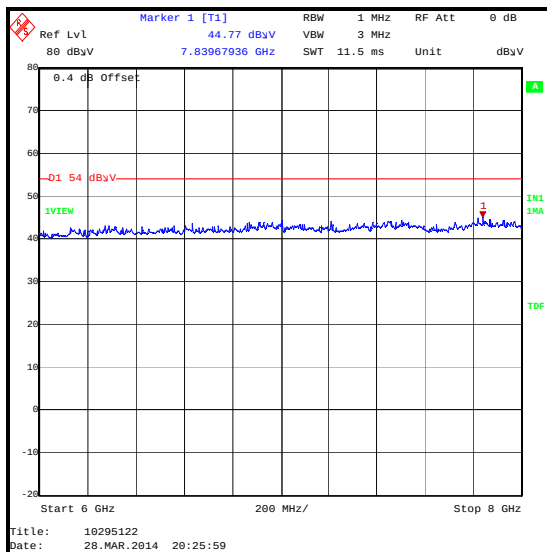
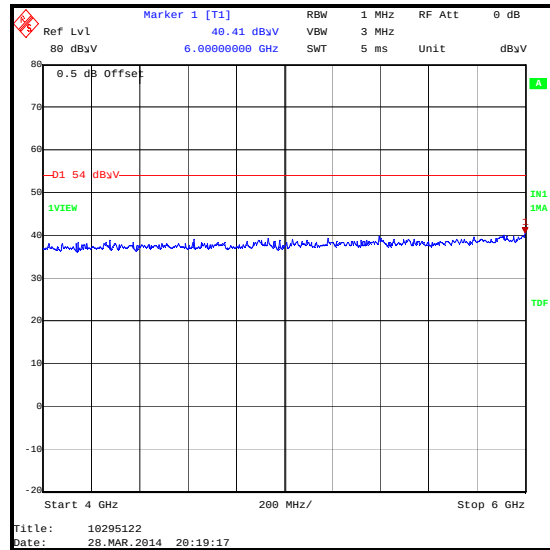
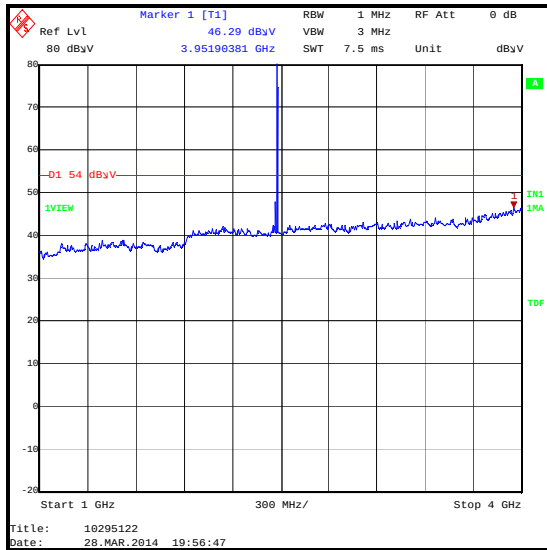
Temperature (°C):	26
Relative Humidity (%):	39

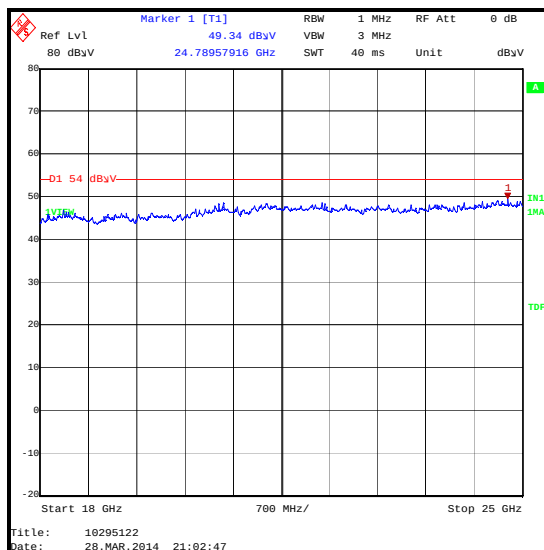
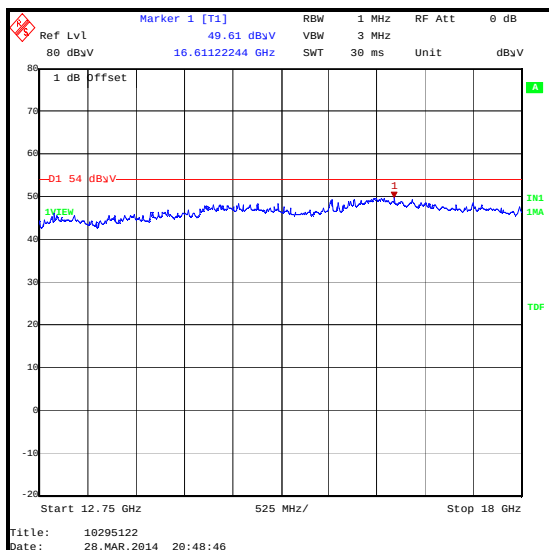
Note(s):

1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
2. The emission shown on the 1 GHz to 4 GHz plot is the EUT fundamental at 2480 MHz.
3. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak noise floor reading of the measuring receiver was recorded as shown in the table below. The peak level was compared to the average limit as opposed to being compared to the peak limit because this is the more onerous limit.
4. 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.
5. All plots have an incorrect date. All plots were taken on 28th May 2014.

Results: Top Channel

Frequency (MHz)	Antenna Polarity	Peak Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
16611.222	Horizontal	49.6	54.0	4.4	Complied

Transmitter Radiated Emissions (continued)

Transmitter Radiated Emissions (continued)**Test Equipment Used:**

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A253	Antenna	Flann Microwave	12240-20	128	14 Nov 2014	12
A254	Antenna	Flann Microwave	14240-20	139	14 Nov 2014	12
A255	Antenna	Flann Microwave	16240-20	519	14 Nov 2014	12
A256	Antenna	Flann Microwave	18240-20	400	14 Nov 2014	12
A436	Antenna	Flann Microwave	20240-20	330	14 Nov 2014	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	18 May 2015	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
A1975	High Pass Filter	AtlanTecRF	AFH-03000	090424010	12 Apr 2015	12
A2176	High Pass Filter	AtlanTecRF	AFH-07000	800980	12 Apr 2015	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
M1124	Test Receiver	Rohde & Schwarz	ESIB 26	100046K	01 Oct 2014	12
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	12

5.2.6. Transmitter Band Edge Radiated Emissions**Test Summary:**

Test Engineer:	Andrew Edwards	Test Date:	28 May 2014
Test Sample IMEI:	004402452750619		

FCC Reference:	Parts 15.249(d) & 15.209
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.2

Environmental Conditions:

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

Note(s):

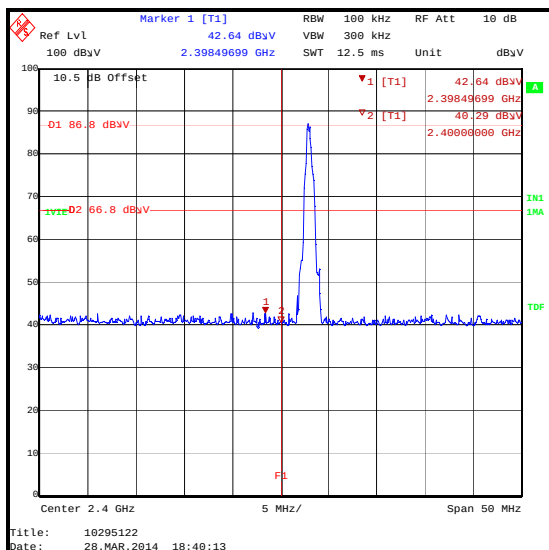
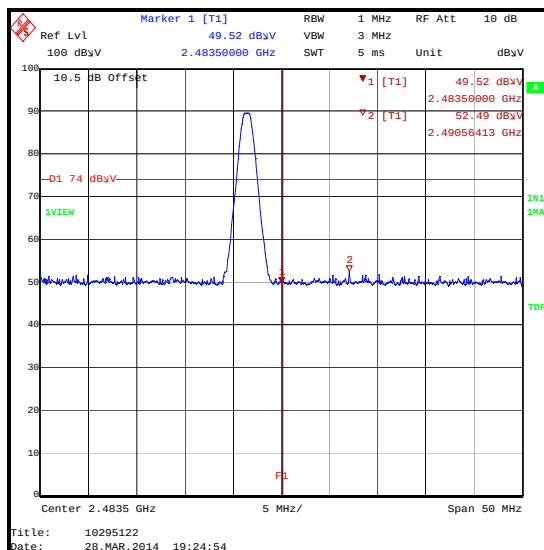
1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
2. The average level was obtained by subtracting the duty cycle correction (33.6 dB) from the peak level measured.
3. *-20 dBc.
4. All plots have an incorrect date. All plots were taken on 28th May 2014.

Results: Peak

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2398.497	Horizontal	42.6	66.8*	24.2	Complied
2400	Horizontal	40.3	66.8*	26.5	Complied
2483.5	Horizontal	49.5	74.0	24.5	Complied
2490.564	Horizontal	52.5	74.0	21.5	Complied

Results: Average

Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Horizontal	15.9	54.0	38.1	Complied

Transmitter Band Edge Radiated Emissions (continued)**Lower Band Edge Measurement****Upper Band Edge Measurement****Test Equipment Used:**

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A1396	Attenuator	Huber & Suhner	6810.17.B	757987	02 May 2015	12
A1534	Pre-Amplifier	Hewlett Packard	8449B	3008A00405	18 May 2015	12
A1818	Antenna	EMCO	3115	00075692	14 Nov 2014	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	14 Nov 2014	12
M1124	Test Receiver	Rohde & Schwarz	ESIB 26	100046K	01 Oct 2014	12
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	14 Mar 2015	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
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	±4.69 dB
Fundamental Field Strength	2.4 GHz to 2.4835 GHz	95%	±2.94 dB
Occupied Bandwidth	2.4 GHz to 2.4835 GHz	95%	±3.92 %
Radiated Spurious Emissions	30 MHz to 1 GHz	95%	±5.65 dB
Radiated Spurious Emissions	1 GHz to 25 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	-	-	Admin update
3.0	-	-	EUT Description update

--- END OF REPORT ---