

TEST REPORT

Test Report No.: UL-RPT-RP10295093JD01A V3.0

Manufacturer Sony Mobile Communications Inc.

FCC ID PY7PM-0802

Technology : RFID - 13.56 MHz

Test Standard(s) : FCC Parts 15.207, 15.209(a) & 15.225

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).
- The test results in this report are traceable to the national or international standards. 4.

Version 3.0 supersedes all previous versions. 5.

> Date of Issue: 23 June 2015

> > pp

Checked by: walkers.

> Sarah Williams Engineer, Radio Laboratory

Issued by:

John Newell Quality Manager,

Lever Olde

UL VS LTD



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

Telephone: +44 (0)1256 312000 Facsimile: +44 (0)1256 312001

This page has been left intentionally blank.

Page 2 of 25 UL VS LTD

Table of Contents

1. Customer Information	4
2. Summary of Testing	5 5 5 5 5
3.1. Identification of Equipment Under Test (EUT) 3.2. Description of EUT 3.3. Modifications Incorporated in the EUT 3.4. Additional Information Related to Testing 3.5. Support Equipment	6 6 7 7 7 8
4. Operation and Monitoring of the EUT during Testing 4.1. Operating Modes 4.2. Configuration and Peripherals	9 9 9
5. Measurements, Examinations and Derived Results 5.1. General Comments 5.2. Test Results 5.2.1. Transmitter AC Conducted Spurious Emissions 5.2.2. Transmitter Fundamental Field Strength 5.2.3. Transmitter Radiated Spurious Emissions 5.2.4. Transmitter Band Edge Radiated Emissions 5.2.5. Transmitter 20 dB Bandwidth 5.2.6. Transmitter Frequency Stability (Temperature & Voltage Variation)	10 10 11 11 14 16 19 21 22
6. Measurement Uncertainty	24
7. Report Revision History	25

UL VS LTD Page 3 of 25

1. Customer Information

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

Page 4 of 25 UL VS LTD

2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR15.225	
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Radio Frequency Devices) - Section 15.225	
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:	04 June 2014 to 19 June 2014	

2.2. Summary of Test Results

FCC Reference (47CFR)	Measurement	Result
Part 15.207	Transmitter AC Conducted Emissions	②
Part 15.225(a)(b)(c)(d)	Transmitter Fundamental Field Strength	
Part 15.209(a)/15.225(d)	Transmitter Radiated Emissions	
Part 15.209(a)/15.225(c)(d)	Transmitter Band Edge Radiated Emissions	②
Part 2.1049	Transmitter 20 dB Bandwidth	
Part 15.225(e) Transmitter Frequency Stability (Temperature & Voltage Variation)		②
Key to Results		
	comply	

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.

UL VS LTD Page 5 of 25

3. Equipment Under Test (EUT)

3.1. Identification of Equipment Under Test (EUT)

Brand Name:	Sony
IMEI:	004402541516583 (Radiated sample #1)
Test Sample Serial Number:	CB5A1Z4RR7
Hardware Version Number:	A
Software Version Number:	23.0.B.0.91
FCC ID:	PY7PM-0802

Brand Name:	Sony
IMEI:	004402541516187 (Radiated sample No. 2 modified with 50 Ohm load for AC conducted emission test only)
Test Sample Serial Number:	CB5A1Z4RQX
Hardware Version Number:	Α
Software Version Number:	23.0.B.0.130
FCC ID:	PY7PM-0802

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

Brand Name:	Monoprice
Description:	MHL Cable
Model Name or Number:	3871

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

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

Page 6 of 25

Identification of Equipment Under Test (EUT) (continued)

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

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

3.2. Description of EUT

The equipment under test (EUT) was a model of GSM/UMTS/LTE mobile phone, with integrated antenna and inbuilt battery. The EUT supported GSM 850/900/1800/1900MHz bands, WCDMA FDD bands 1/5/6/19, LTE FDD bands 1/3/19/21, GPRS and EGPRS services multi-slots class 33 and HSDPA/HSUPA. It's functionally also included camera, DTV, GPS receiver, NFC, ANT+, Mobile High-Definition Link (MHL3.0), Bluetooth (EDR and Bluetooth 4.0), WLAN (802.11 a/b/g/n/ac) and Wi-Fi hotspot functions.

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:	RFID		
Category of Equipment:	Transceiver		
Channel Spacing:	Single channel device		
Transmit Frequency Range:	13.56 MHz		
Power Supply Requirement:	Nominal	3.8 V	
	Minimum	3.42 V	
	Maximum	4.18 V	
Tested Temperature Range:	Minimum	-20°C	
	Maximum	50°C	

UL VS LTD Page 7 of 25

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

Brand Name:	Sony
Description:	RFID Tag
Model Name or Number:	AI-1400

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

Page 8 of 25

4. Operation and Monitoring of the EUT during Testing

4.1. Operating Modes

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

Constantly transmitting at full power with a modulated carrier in RFID test mode.

4.2. Configuration and Peripherals

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

- The RFID transmitter test mode was enabled by means of running the customer bespoke application
 on the handset. An RFID tag was placed near the handset to enable a continuously modulated RFID
 transmitter.
- Transmitter radiated spurious emission tests were performed with the following configurations, employing all available accessories:
 - 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.

- Testing at voltage extremes was performed with a dummy battery fitted to the EUT, which was supplied by the customer.
- AC conducted emissions tests were performed with the EUT connected to all accessories; AC charger, USB Cable, MHL cable (terminated in to a television), MHL adaptor and PHF. The AC charger was connected to a 120 VAC 60 Hz single phase supply via a LISN
- Radiated sample with IMEI 004402541516187 was used for AC conducted emission tests.
- Radiated sample with IMEI 004402541516583 was used for fundamental field strength, radiated spurious emissions, band edge radiated emissions, 20 dB bandwidth and Transmitter Frequency Stability tests.

UL VS LTD Page 9 of 25

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 Uncertainties 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.

Page 10 of 25

5.2. Test Results

5.2.1. Transmitter AC Conducted Spurious Emissions

Test Summary:

Test Engineer:	eer: Georgios Vrezas		17 June 2014
Test Sample IMEI: 004402541516187			

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 (%):	50

Note(s):

1. The EUT was initially tested with the standard antenna connected. The carrier at 13.56 MHz was found to be non-compliant as it exceeded the test limit. The customer modified the EUT by disconnecting the standard antenna and fitting a load with the same electrical properties in accordance with ANSI C63.10 Section 6.2.5 and FCC KDB 174176. The test was then repeated and the EUT was found to be compliant.

UL VS LTD Page 11 of 25

Transmitter AC Conducted Spurious Emissions (continued)

Results: Live / Quasi Peak

Frequency (MHz)	Line	Level (dB _µ V)	Limit (dBµV)	Margin (dB)	Result
0.182	Live	46.8	64.4	17.6	Complied
0.231	Live	43.7	62.4	18.7	Complied
0.384	Live	34.5	58.2	23.7	Complied
0.456	Live	32.2	56.8	24.6	Complied
0.591	Live	28.2	56.0	27.8	Complied
16.026	Live	45.3	60.0	14.7	Complied

Results: Live / Average

Frequency (MHz)	Line	Level (dB _µ V)	Limit (dBµV)	Margin (dB)	Result
0.254	Live	26.0	51.6	25.6	Complied
0.411	Live	24.6	47.6	23.0	Complied
0.492	Live	28.5	46.1	17.6	Complied
0.956	Live	22.8	46.0	23.2	Complied
2.054	Live	18.4	46.0	27.6	Complied
16.098	Live	30.5	50.0	19.5	Complied

Results: Neutral / Quasi Peak

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.155	Neutral	48.8	65.8	17.0	Complied
0.159	Neutral	48.4	65.5	17.1	Complied
0.240	Neutral	41.7	62.1	20.4	Complied
0.267	Neutral	40.0	61.2	21.2	Complied
1.226	Neutral	36.1	56.0	19.9	Complied
15.995	Neutral	44.1	60.0	15.9	Complied

Results: Neutral / Average

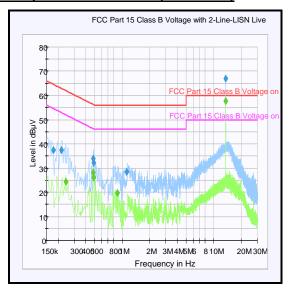
Frequency (MHz)	Line	Level (dB _µ V)	Limit (dBµV)	Margin (dB)	Result
0.218	Neutral	29.0	52.9	23.9	Complied
0.488	Neutral	28.0	46.2	18.2	Complied
0.924	Neutral	29.2	46.0	16.8	Complied
1.203	Neutral	25.8	46.0	20.2	Complied
3.075	Neutral	25.1	46.0	20.9	Complied
16.368	Neutral	32.2	50.0	17.8	Complied

Page 12 of 25 UL VS LTD

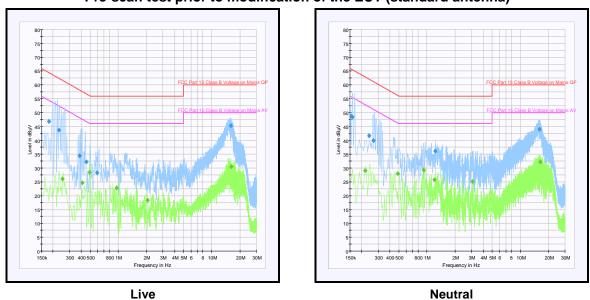
TEST REPORT

ISSUE DATE: 23 JUNE 2015

Transmitter AC Conducted Spurious Emissions (continued)



Pre-scan test prior to modification of the EUT (standard antenna)



Test results with modified sample (transmitter terminated into 50 Ohm load)

Note: These plots are pre-scans 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

UL VS LTD Page 13 of 25

5.2.2. Transmitter Fundamental Field Strength

Test Summary:

Test Engineer:	lan Watch	Test Date:	18 June 2014
Test Sample IMEI:	004402541516583		

FCC Reference:	Part 15.225(a)(b)(c)(d)	
Test Method Used:	As detailed in ANSI C63.10 Section 6.4	

Environmental Conditions:

Temperature (°C):	25
Relative Humidity (%):	31

Note(s):

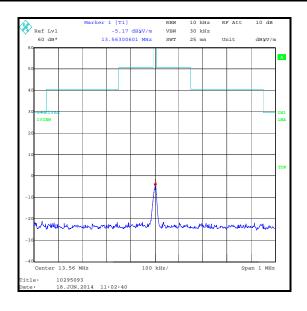
- 1. The limit is specified at a test distance of 30 metres. However, as specified by FCC Section 15.31 (f)(2), measurements may be performed at a closer distance and the measured level corrected to the specified measurement distance by using the square of an inverse linear distance extrapolation factor (40dB/decade).
- 2. A transducer factor on the measuring instrument was used to extrapolate the results at 3 metres to a distance of 30 metres. A distance extrapolation factor of 40 dB was used.
- Pre-scans were performed with a peak detector. Final measurements were performed with a quasi-peak detector.

Note: An additional 20 dB has been added to attain the final value shown in the table; this is to account for a transducer factor that was not included during the original measurement.

i.e.:
$$-4.9 \text{ dB}\mu\text{V/m} + 20 \text{ dB} = 15.1 \text{ dB}\mu\text{V/m}$$

Results: Quasi Peak

Frequency	Antenna	Level	Limit at 30 m	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
13.56	Tip facing EUT	15.1	84.0	68.9	Complied



Page 14 of 25

<u>Transmitter Fundamental Field Strength (continued)</u> <u>Test Equipment Used:</u>

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1622	Thermohygrometer	JM Handelspunkt	30.5015.06	None stated	31 Dec 2014	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	26 Nov 2014	12
M1568	Magnetic Loop Antenna	Rohde & Schwarz	HFH2-Z2	879284/2	26 Feb 2015	12
M1273	Test Receiver	Rohde & Schwarz	ESIB 26	100275	15 Feb 2015	12

UL VS LTD Page 15 of 25

5.2.3. Transmitter Radiated Spurious Emissions

Test Summary:

Test Engineers:	lan Watch & Andrew Edwards	Test Dates:	18 June 2014 & 19 June 2014
Test Sample IMEI:	004402541516583		

FCC Reference:	Parts 15.225(d) & 15.209(a)
Test Method Used:	As detailed in ANSI C63.10 Sections 6.3, 6.4 and 6.5 referencing ANSI C63.4
Frequency Range:	9 kHz to 1000 MHz

Environmental Conditions:

Temperature (°C):	25 to 26
Relative Humidity (%):	30 to 35

Note(s):

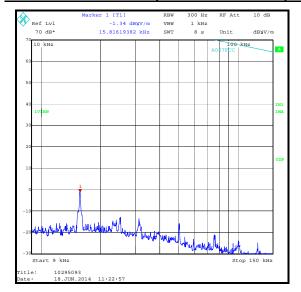
- Limits below 30 MHz are specified at a test distance of 30 metres, whilst below 0.49 MHz they are specified at a test distance of 300 metres. However, as specified by FCC Section 15.31 (f)(2), measurements may be performed at a closer distance and the measured level corrected to the specified measurement distance by using the square of an inverse linear distance extrapolation factor (40dB/decade).
- 2. A transducer factor on the measuring instrument was used to extrapolate the results at 3 metres to a distance of 30 metres where required. A distance extrapolation factor of 40 dB was used.
- 3. Final measurement values include corrections for antenna factor and cable losses.
- 4. The emission shown at approximately 13.56 MHz is the fundamental.
- 5. All emissions on the 9 kHz to 150 kHz plot were investigated and found to be radiating from the test site turntable.
- 6. All other emissions shown on the pre-scan plots were investigated and found to be >20 dB below the applicable limit or below the measurement system noise floor.
- 7. Measurements in the range 30 MHz to 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.

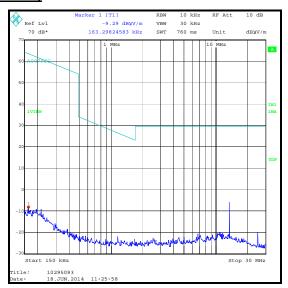
Results: Quasi Peak

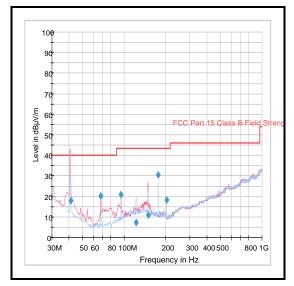
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
40.669	Vertical	38.9	40.0	1.1	Complied
67.784	Vertical	20.1	40.0	19.9	Complied
94.906	Vertical	20.8	43.5	22.7	Complied
149.155	Vertical	29.0	43.5	14.5	Complied
176.278	Vertical	30.4	43.5	13.1	Complied
203.386	Horizontal	18.2	43.5	25.3	Complied

Page 16 of 25 UL VS LTD

Transmitter Radiated Spurious Emissions (continued)







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

UL VS LTD Page 17 of 25

<u>Transmitter Radiated Spurious Emissions (continued)</u> <u>Test Equipment Used:</u>

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1622	Thermohygrometer	JM Handelspunkt	30.5015.06	None stated	31 Dec 2014	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	26 Nov 2014	12
M1568	Magnetic Loop Antenna	Rohde & Schwarz	HFH2-Z2	879284/2	26 Feb 2015	12
M1273	Test Receiver	Rohde & Schwarz	ESIB 26	100275	15 Feb 2015	12
G0543	Amplifier	Sonoma	310N	230801	19 Aug 2014	3
A1834	Attenuator	Hewlett Packard	8491B	10444	15 Nov 2014	12
A490	Antenna	Chase	CBL6111A	1590	25 Apr 2014	12
A055	High Pass Filter	Aerial Facilities Ltd	HP-30-5N	4264B	17 May 2015	24

Page 18 of 25 UL VS LTD

5.2.4. Transmitter Band Edge Radiated Emissions

Test Summary:

Test Engineer:	Ian Watch	Test Date:	18 June 2014
Test Sample IMEI:	004402541516583		

FCC Reference:	Parts 15.225(c)(d) & 15.209(a)
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.2

Environmental Conditions:

Temperature (°C):	25
Relative Humidity (%):	31

Note(s):

- 1. A transducer factor on the measuring instrument was used to extrapolate the results at 3 metres to a distance of 30 metres where required. A distance extrapolation factor of 40 dB was used.
- 2. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- 3. The band edge emission plot shown below is low by a factor of 20 dB, due to the absence of a transducer factor at the time of measurement. An additional 20 dB was subsequently added to any band edge measurements, for comparisons with the limit, when determining compliance.

Results: Quasi Peak Lower Band Edge

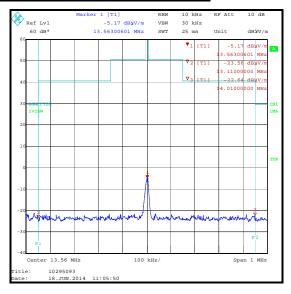
Frequency	Level	Limit	Margin	Result
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	
13.11	-3.5	29.5	33.0	Complied

Results: Quasi Peak Upper Band Edge

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
14.01	-2.6	29.5	32.1	Complied

UL VS LTD Page 19 of 25

Transmitter Band Edge Radiated Emissions (continued)



Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Month s)
M1622	Thermohygrometer	JM Handelspunkt	30.5015.06	None stated	31 Dec 2014	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	26 Nov 2014	12
M1568	Magnetic Loop Antenna	Rohde & Schwarz	HFH2-Z2	879284/2	26 Feb 2015	12
M1273	Test Receiver	Rohde & Schwarz	ESIB 26	100275	15 Feb 2015	12

Page 20 of 25

5.2.5. Transmitter 20 dB Bandwidth

Test Summary:

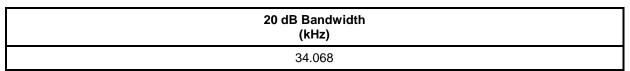
Test Engineer:	Ian Watch	Test Date:	18 June 2014
Test Sample IMEI:	004402541516583		

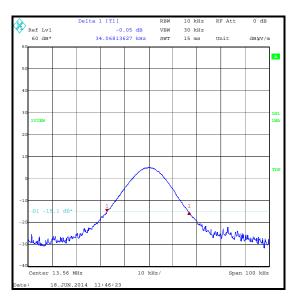
FCC Reference:	Part 2.1049
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.1

Environmental Conditions:

Temperature (°C):	25
Relative Humidity (%):	31

Results:





Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Month s)
M1622	Thermohygrometer	JM Handelspunkt	30.5015.06	None stated	31 Dec 2014	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	26 Nov 2014	12
M1568	Magnetic Loop Antenna	Rohde & Schwarz	HFH2-Z2	879284/2	26 Feb 2015	12
M1273	Test Receiver	Rohde & Schwarz	ESIB 26	100275	15 Feb 2015	12

UL VS LTD Page 21 of 25

5.2.6. Transmitter Frequency Stability (Temperature & Voltage Variation)

Test Summary:

Test Engineer:	Keith Tucker	Test Date:	19 June 2014
Test Sample IMEI:	004402541516583		

FCC Reference:	Part 15.225(e)
Test Method Used:	As detailed in ANSI C63.10 Section 6.8.1 and 6.8.2

Environmental Conditions:

Ambient Temperature (°C):	26
Ambient Relative Humidity (%):	37

Results: Maximum frequency error of the EUT with variations in ambient temperature

T(00)	Time after Start-up					
Temperature (°C)	0 minutes 2 minutes 5 minutes 10 minu					
-20	13.559803 MHz	13.559810 MHz	13.559781 MHz	13.559772 MHz		
20	13.559879 MHz	13.559883 MHz	13.559885 MHz	13.559885 MHz		
50	13.559802 MHz	13.559800 MHz	13.559798 MHz	13.559796 MHz		

Frequency with Worst Case Deviation (MHz)	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Margin (%)	Result
13.559772	228	0.001681	0.01	0.008319	Complied

Results: Maximum frequency error of the EUT with variations in nominal operating voltage at an ambient temperature of 20°C

Supply Voltage (V)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Margin (%)	Result
3.42	13.56	13.559886	114	0.000841	0.01	0.009159	Complied
3.8	13.56	13.559879	121	0.000892	0.01	0.009108	Complied
4.18	13.56	13.559881	119	0.000878	0.01	0.009122	Complied

Page 22 of 25 UL VS LTD

<u>Transmitter Frequency Stability (Temperature & Voltage Variation) (continued)</u> <u>Test Equipment Used:</u>

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1659	Thermohygrometer	JM Handelspunkt	30.5015.13	None stated	14 Mar 2015	12
M1124	Signal Analyser	Rohde & Schwarz	ESIB 26	100046K	01 Oct 2014	12
E0513	Environmental Chamber	TAS	LT600 Series 3	23900506	Calibrated before use	-
M1249	Thermometer	Fluke	5211	88800049	02 May 2015	12
S021	Dual DC power supply	Thurlby Thandar	CPX200	061034	Calibrated before use	-
M1251	Multimeter	Fluke	175	89170179	19 May 2015	12

UL VS LTD Page 23 of 25

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
20 dB Bandwidth	13 MHz to 14 MHz	95%	±3.92 %
Frequency Stability	13 MHz to 14 MHz	95%	±0.92 ppm
Radiated Spurious Emissions	9 kHz to 30 MHz	95%	±3.73 dB
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	±5.65 dB
Transmitter Fundamental Field Strength	13 MHz to 14 MHz	95%	±3.73 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.

Page 24 of 25

7. Report Revision History

Version	Revision Det				
Number	Page No(s)	Clause Details			
1.0	-	-	Initial Version		
2.0	-	-	EUT Description update		
3.0	14 & 19	-	Corrected previously reported emissions levels by +20 dB		

--- END OF REPORT ---

UL VS LTD Page 25 of 25