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Report On

FCC Testing of the Sharp Quad-band LTE (B1/B3/B17/B26), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & WiMAX2+ (TDD41) multi mode Smart phone with Bluetooth, WLAN, and GPS in accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 (WCDMA FDD V)

COMMERCIAL-IN-CONFIDENCE

FCC ID: APYHRO00238

Document 75934711 Report 14 Issue 1 **June 2016**

Product Service

TÜV SÜD Product Service, Octagon House, Concorde Way, Segensworth North,
Fareham, Hampshire, United Kingdom, PO15 5RL
Tel: +44 (0) 1489 558100. Website: www.tuv-sud.co.uk

REPORT ON

FCC Testing of the Sharp Quad-band LTE (B1/B3/B17/B26), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & WiMAX2+ (TDD41) multi mode Smart phone with Bluetooth, WLAN, and GPS in accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 (WCDMA FDD V)

Document 75934711 Report 14 Issue 1

June 2016

PREPARED FOR

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PREPARED BY

Natalie Bennett
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APPROVED BY

Ryan Henley
Authorised Signatory

DATED 24 June 2016

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

M Russell G Lawler

UKAS TESTING 0141

Product Service

CONTENTS

Product Service

SECTION 1

REPORT SUMMARY

FCC Testing of the
Sharp Quad-band LTE (B1/B3/B17/B26), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & WiMAX2+ (TDD41) multi mode Smart phone with Bluetooth, WLAN, and GPS
In accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 (WCDMA FDD V)

1.1 INTRODUCTION

The information contained in this report is intended to show the verification of FCC Testing of the Sharp Quad-band LTE (B1/B3/B17/B26), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & WiMAX2+ (TDD41) multi mode Smart phone with Bluetooth, WLAN, and GPS to the requirements of FCC 47 CFR Part 22 and FCC 47 CFR Part 2.

Objective	To perform FCC Testing to determine the Equipment Under Test's (EUT's) compliance with the Test Specification, for the series of tests carried out.
Manufacturer	Sharp Corporation
Serial Number(s)	IMEI 004401115813251 IMEI 004401115813483 IMEI 004401115813228
Number of Samples Tested	3
Test Specification/Issue/Date	FCC 47 CFR Part 22 (2015) FCC 47 CFR Part 2 (2015)
Disposal Reference Number Date	Held Pending Disposal Not Applicable Not Applicable
Order Number Date	10829 31 May 2016
Start of Test	31 May 2016
Finish of Test	7 June 2016
Name of Engineer(s)	M Russell G Lawler
Related Document(s)	ANSI C63.4 (2014) ANSI TIA-603-C (2004) ANSI C63.26 (2015)

Product Service

1.2 BRIEF SUMMARY OF RESULTS

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 is shown below.

Section	Specification Clause		Test Description	Result	Comments/Base Standard
	Part 22	Part 2			
WCDMA FDD V					
2.1	22.355	2.1055	Frequency Tolerance	Pass	
2.2	22.905	2.1051	Spurious Emissions at Band Edge	Pass	
2.3	22.913 (a)	2.1046	Maximum Conducted Output Power	Pass	
2.4	22.917	-	Emission Limitations for Cellular Equipment	Pass	
2.5	22.917 (a)	2.1051	Spurious Emissions at Antenna Terminals	Pass	
2.6	22.917 (b)	2.1049 (h)	26 dB Bandwidth	Pass	
2.7	-	2.1047 (d)	Modulation Characteristics	-	Customer Declaration

1.3 PRODUCT TECHNICAL DESCRIPTION

Refer to Model Description APYHRO00238 Rev 4.0 document.

1.4 PRODUCT INFORMATION

1.4.1 Technical Description

The Equipment Under Test (EUT) was a Sharp Quad-band LTE (B1/B3/B17/B26), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & WiMAX2+ (TDD41) multi mode Smart phone with Bluetooth, WLAN, and GPS. A full technical description can be found in the manufacturer's documentation.

1.5 TEST CONDITIONS

For all tests the EUT was set up in accordance with the relevant test standard and to represent typical operating conditions. Tests were applied with the EUT situated in a shielded enclosure.

The EUT was powered from a 4.0 V DC supply.

FCC Measurement Facility Registration Number
90987 Octagon House, Fareham Test Laboratory

1.6 DEVIATIONS FROM THE STANDARD

No deviations from the applicable test standard were made during testing.

1.7 MODIFICATION RECORD

Modification 0 - No modifications were made to the test sample during testing.

Product Service

SECTION 2

TEST DETAILS

FCC Testing of the
Sharp Quad-band LTE (B1/B3/B17/B26), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & WiMAX2+ (TDD41) multi mode Smart phone with Bluetooth, WLAN, and GPS
In accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 (WCDMA FDD V)

2.1 FREQUENCY TOLERANCE

2.1.1 Specification Reference

FCC 47 CFR Part 22, Clause 22.355
FCC 47 CFR Part 2, Clause 2.1055

2.1.2 Equipment Under Test and Modification State

S/N: IMEI 004401115813251 - Modification State 0

2.1.3 Date of Test

7 June 2016

2.1.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.1.5 Test Procedure

The test was performed in accordance with FCC 47 CFR Part 2.1055.

Remarks

The frequency error was recorded using the measurement function of the communications test set. A 10 MHz external frequency reference was used to improve the accuracy of the measurement.

2.1.6 Environmental Conditions

Ambient Temperature	22.2°C
Relative Humidity	46.0 - 46.9%

Product Service

2.1.7 Test Results

4.0 V DC Supply

WCDMA FDD V, 836.40 MHz, Circuit-Switched, GMSK, Frequency Tolerance Under Temperature Variations Results

Temperature	Fundamental Frequency Deviation (ppm)
-30 ºC	0.007
-20 ºC	0.004
-10 ºC	-0.005
0 ºC	-0.006
+10 ºC	-0.004
+20 ºC	0.004
+30 ºC	0.004
+40 ºC	-0.006
+50 ºC	-0.006

WCDMA FDD V, 836.40 MHz, Circuit-Switched, GMSK, Frequency Tolerance Under Voltage Variations Results

Voltage	Fundamental Frequency Deviation (ppm)
4.0 V DC	0.004
3.7 V DC	0.004

FCC 47 CFR Part 22, Limit Clause 22.355

Frequency Range (MHz)	Base, Fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20	20	50
50 to 450	5	5	50
450 to 512	2.5	5	5
821 to 896	1.5	2.5	2.5
928 to 929	5.0	-	-
929 to 960	1.5	-	-
2110 to 2220	10	-	-

2.2 SPURIOUS EMISSIONS AT BAND EDGE

2.2.1 Specification Reference

FCC 47 CFR Part 22, Clause 22.905
FCC 47 CFR Part 2, Clause 2.1051

2.2.2 Equipment Under Test and Modification State

S/N: IMEI 004401115813251 - Modification State 0

2.2.3 Date of Test

31 May 2016

2.2.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.2.5 Test Procedure

The test was performed in accordance with KDB 971168 D01 v02 r02, clause 6.

2.2.6 Environmental Conditions

Ambient Temperature	23.6°C
Relative Humidity	47.5%

Product Service

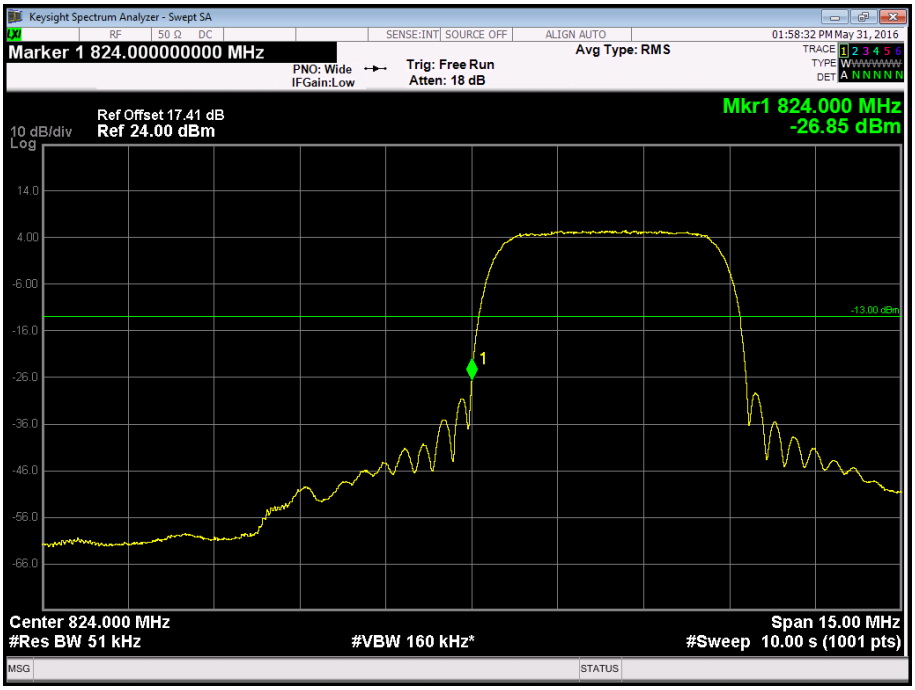
2.2.7 Test Results

4.0 V DC Supply

WCDMA FDD V, Circuit-Switched, GMSK, Spurious Emissions at Band Edge Results

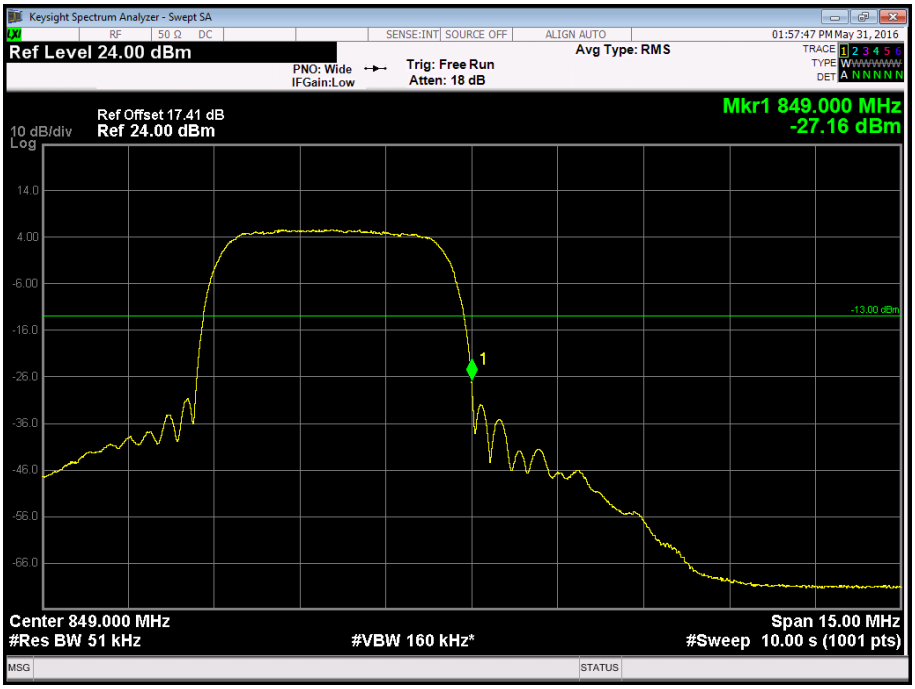
Block Edge	Frequency Block (MHz)	
	A :824.0 MHz – 835.0 MHz	B :846.5 MHz – 849.0 MHz
Lower	Channel: 4132 826.4 MHz	-
Upper	-	Channel: 4233 846.6 MHz

WCDMA FDD V, Circuit-Switched, GMSK, Frequency Block A, Spurious Emissions at Band Edge Plot



Product Service

WCDMA FDD V, Circuit-Switched, GMSK, Frequency Block B, Spurious Emissions at Band Edge Plot



FCC 47 CFR Part 22, Limit Clause 22.905 and 22.917

-13 dBm at block edge.

Product Service

2.3 MAXIMUM CONDUCTED OUTPUT POWER

2.3.1 Specification Reference

FCC 47 CFR Part 22, Clause 22.913 (a)
FCC 47 CFR Part 2, Clause 2.1046

2.3.2 Equipment Under Test and Modification State

S/N: IMEI 004401115813251 - Modification State 0

2.3.3 Date of Test

31 May 2016

2.3.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.3.5 Test Procedure

The test was performed in accordance with KDB 971168 D01 v02r02, clause 5.1.2.

Remarks

The antenna gain was declared by the manufacturer as 2.0 dBi. As per KDB 412172 D01 v01r01 results are recorded in ERP therefore reported results are calculated as per the following calculation:

ERP = Pout (dBm) + ANT Gain (dBi) - 2.15 (dB).

2.3.6 Environmental Conditions

Ambient Temperature	23.6°C
Relative Humidity	47.5%

2.3.7 Test Results

4.0 V DC Supply

WCDMA FDD V, Circuit-Switched, Maximum Conducted Output Power Results

Frequency	Conducted Power (dBm)	Antenna Gain	ERP (dBm)	ERP (W)
826.40 MHz	26.49	2.0 dBi	26.34	0.43
836.40 MHz	25.56	2.0 dBi	26.41	0.44
846.60 MHz	26.48	2.0 dBi	26.33	0.43

FCC 47 CFR Part 22, Limit Clause 22.913 (a)(2)

Mobile Transmitters: 7 W or 38.45 dBm

2.4 EMISSION LIMITATIONS FOR CELLULAR EQUIPMENT

2.4.1 Specification Reference

FCC 47 CFR Part 22, Clause 22.917

2.4.2 Equipment Under Test and Modification State

S/N: IMEI 004401115813483 - Modification State 0

2.4.3 Date of Test

5 June 2016

2.4.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.5 Test Procedure

Testing was performed in accordance with ANSI C63.26, clause 5.5.

2.4.6 Environmental Conditions

Ambient Temperature	16.9°C
Relative Humidity	1018.0%

Product Service

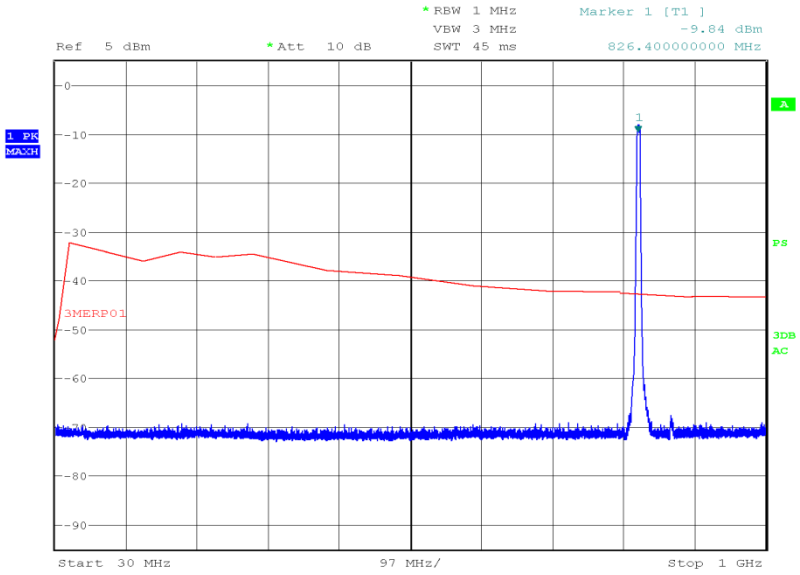
2.4.7 Test Results

WCDMA FDD V, 826.40 MHz, Emission Limitations for Cellular Equipment Results

Frequency (MHz)	Emission Results (dBm)
*	

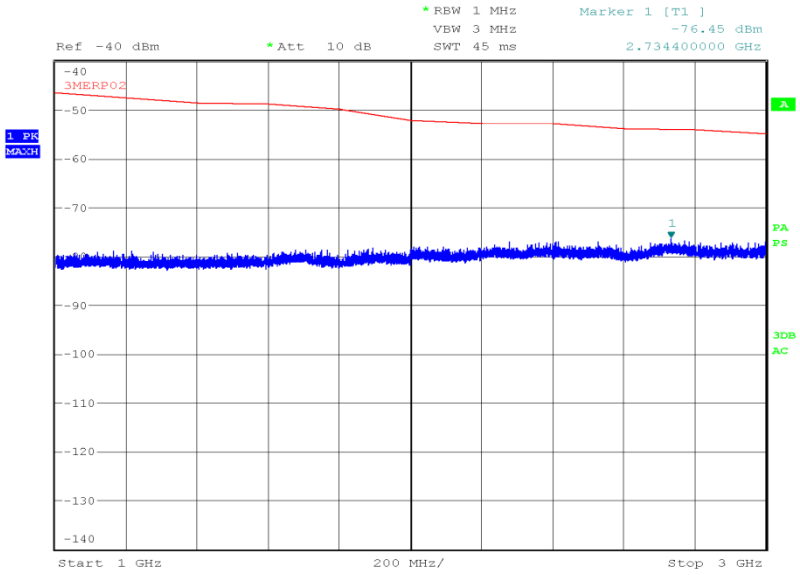
*No emissions were detected within 10 dB of the limit.

WCDMA FDD V, 826.40 MHz, 30 MHz to 1 GHz, Emission Limitations for Celluar Equipment Plot



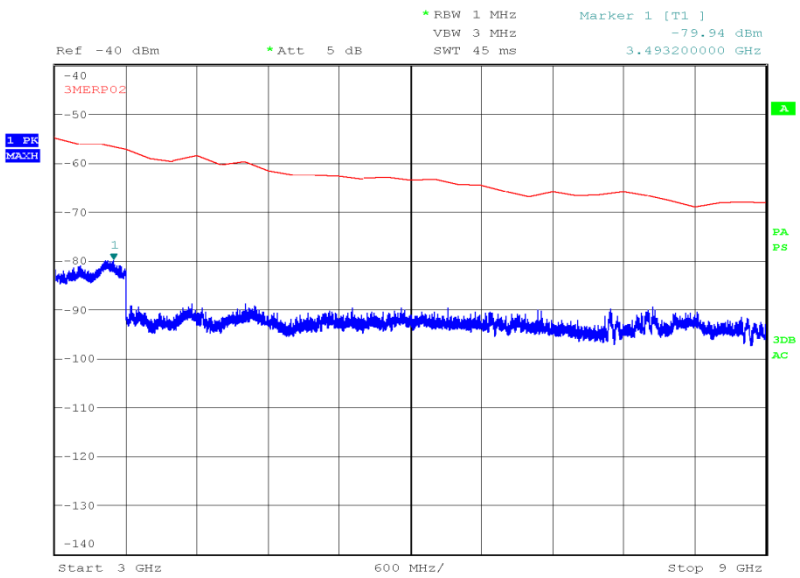
Product Service

WCDMA FDD V, 826.40 MHz, 1 GHz to 3 GHz, Emission Limitations for Celluar Equipment Plot



Date: 5.JUN.2016 15:10:41

WCDMA FDD V, 826.40 MHz, 3 GHz to 9 GHz, Emission Limitations for Celluar Equipment Plot



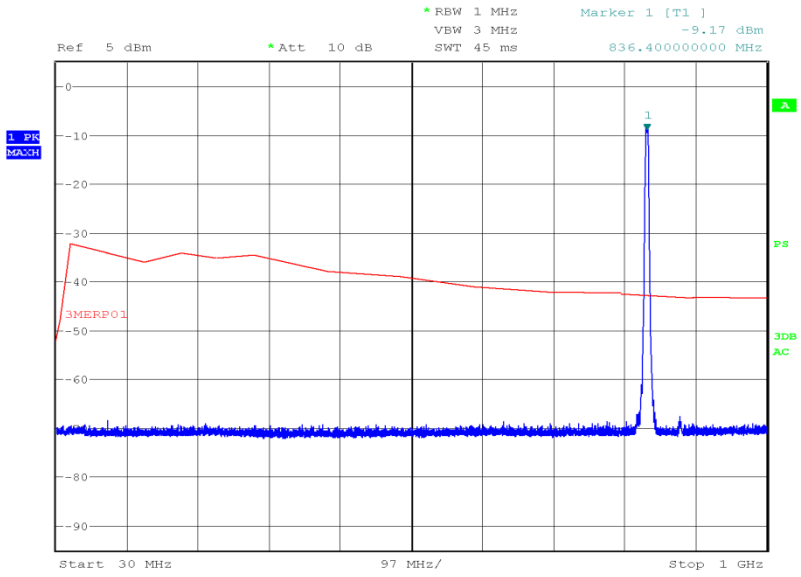
Date: 5.JUN.2016 15:12:19

WCDMA FDD V, 836.40 MHz, Emission Limitations for Cellular Equipment Results

Frequency (MHz)	Emission Results (dBm)
*	

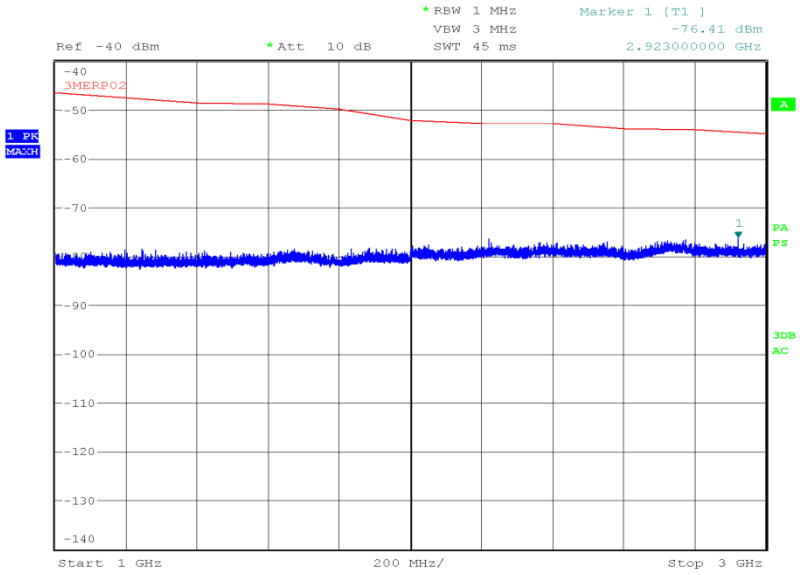
*No emissions were detected within 10 dB of the limit.

WCDMA FDD V, 836.40 MHz, 30 MHz to 1 GHz, Emission Limitations for Celluar Equipment Plot



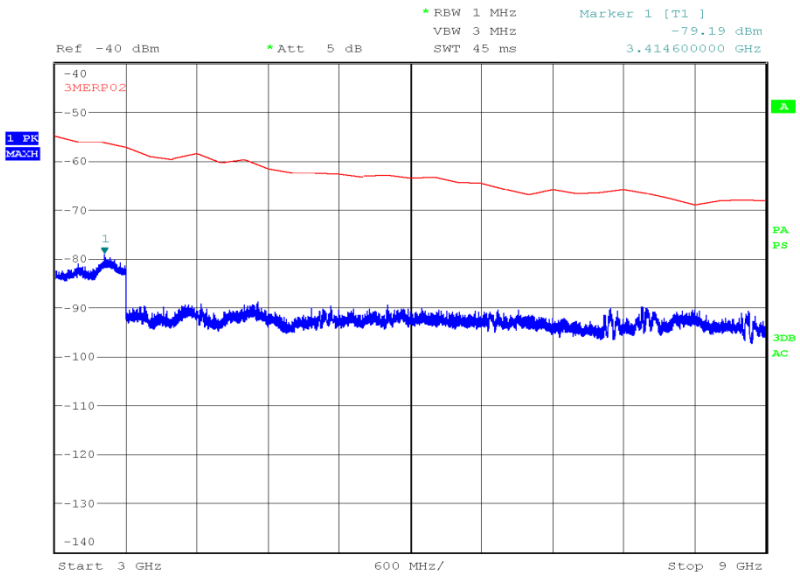
Product Service

WCDMA FDD V, 836.40 MHz, 1 GHz to 3 GHz, Emission Limitations for Celluar Equipment Plot



Date: 5.JUN.2016 15:09:41

WCDMA FDD V, 836.40 MHz, 3 GHz to 9 GHz, Emission Limitations for Celluar Equipment Plot



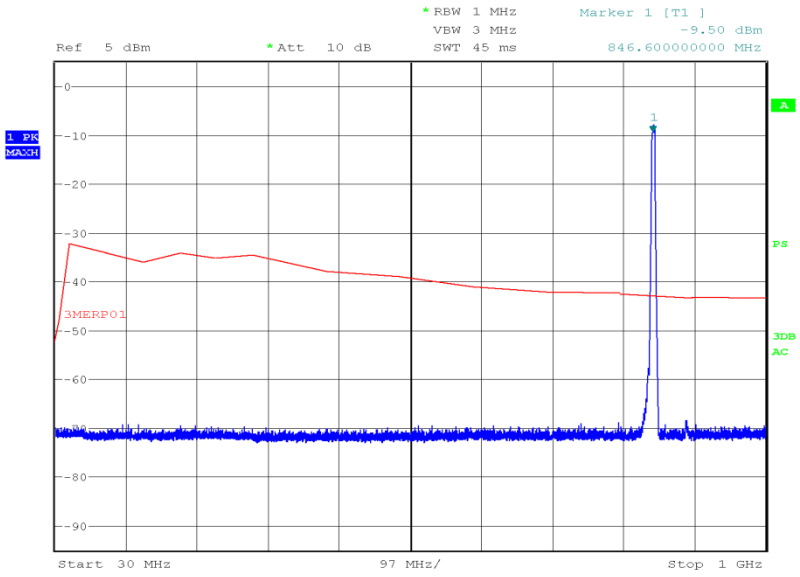
Date: 5.JUN.2016 15:08:19

WCDMA FDD V, 846.60 MHz, Emission Limitations for Cellular Equipment Results

Frequency (MHz)	Emission Results (dBm)
*	

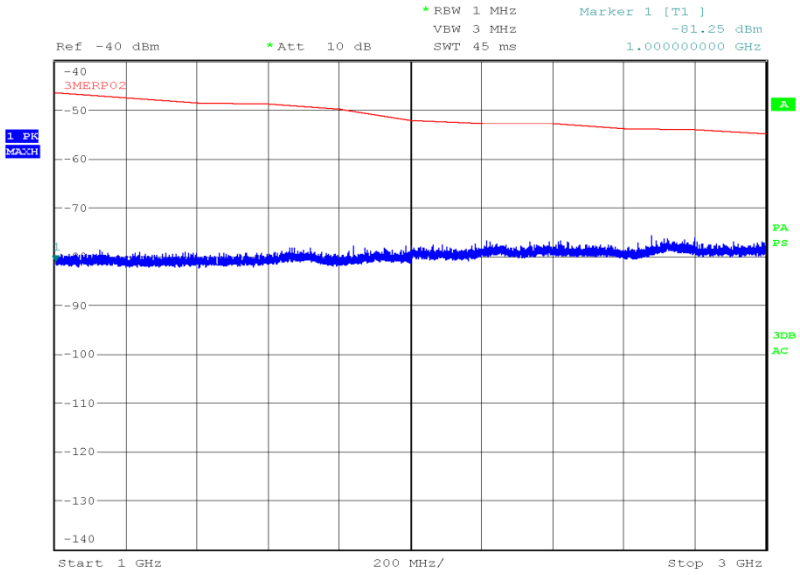
*No emissions were detected within 10 dB of the limit.

WCDMA FDD V, 846.60 MHz, 30 MHz to 1 GHz, Emission Limitations for Celluar Equipment Plot



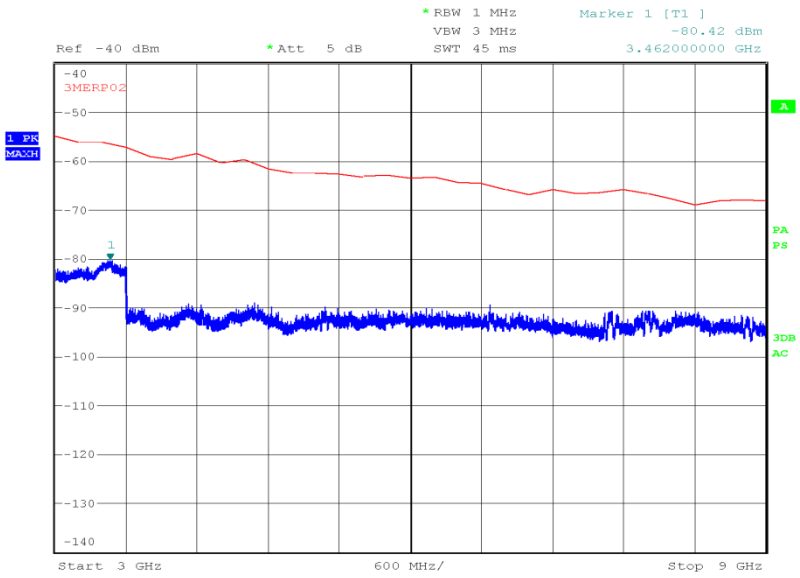
Product Service

WCDMA FDD V, 846.60 MHz, 1 GHz to 3 GHz, Emission Limitations for Celluar Equipment Plot



Date: 5.JUN.2016 15:04:43

WCDMA FDD V, 846.60 MHz, 3 GHz to 9 GHz, Emission Limitations for Celluar Equipment Plot



Date: 5.JUN.2016 15:05:55

FCC 47 CFR Part 22, Limit Clause 22.917 (a)

43+10log(P) or -13 dBm

2.5 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

2.5.1 Specification Reference

FCC 47 CFR Part, Clause 22.917 (a)
FCC 47 CFR Part 2, Clause 2.1051

2.5.2 Equipment Under Test and Modification State

S/N: IMEI 004401115813228 - Modification State 0

2.5.3 Date of Test

1 June 2016

2.5.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.5.5 Test Procedure

The test was performed in accordance with KDB 971168 D01 v02 r01, clause 6.

2.5.6 Environmental Conditions

Ambient Temperature	23.1°C
Relative Humidity	47.8%

Product Service

2.5.7 Test Results

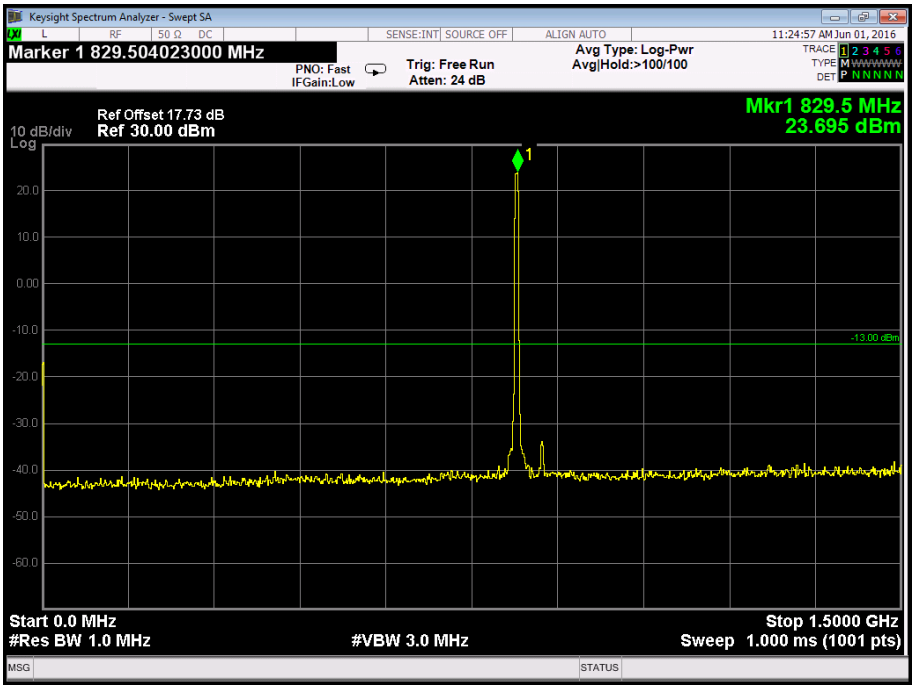
4.0 V DC Supply

WCDMA FDD V, 826.40 MHz, Spurious Emissions at Antenna Terminals Results

Frequency (MHz)	Emission Results (dBm)
*	

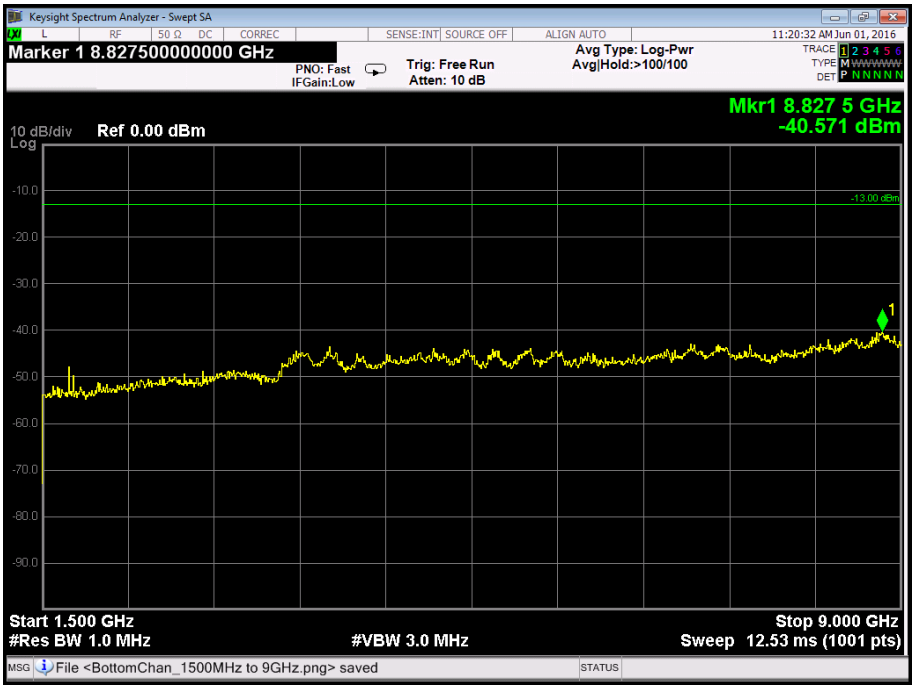
*No emissions were detected within 10 dB of the limit.

WCDMA FDD V, 826.40 MHz, 9 kHz to 1.5 GHz, Spurious Emissions at Antenna Terminals Plot



Product Service

WCDMA FDD V, 826.40 MHz, 1.5 GHz to 9 GHz, Spurious Emissions at Antenna Terminals Plot



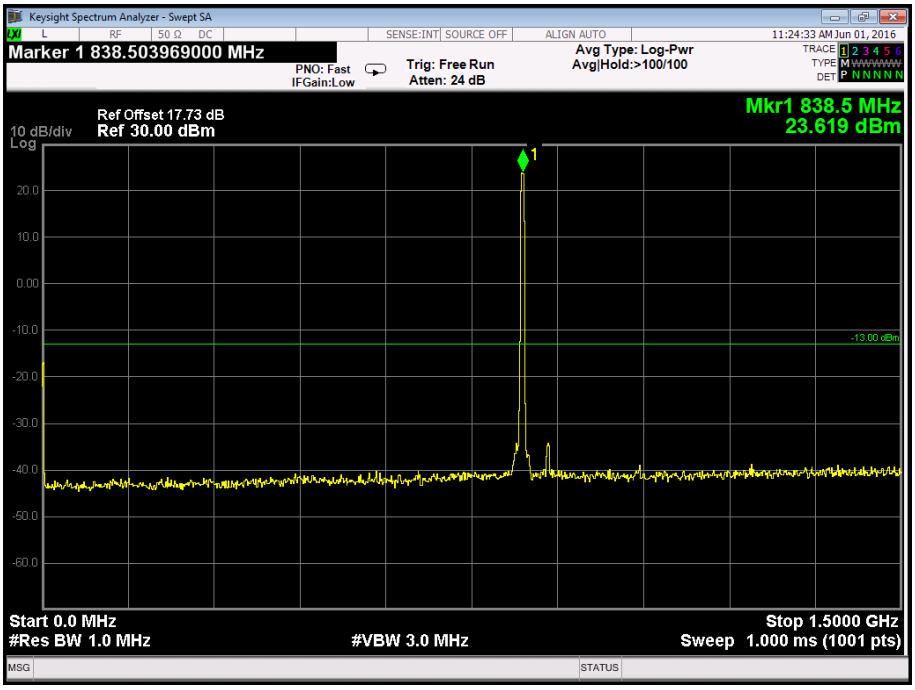
Product Service

WCDMA FDD V, 836.40 MHz, Spurious Emissions at Antenna Terminals Results

Frequency (MHz)	Emission Results (dBm)
*	

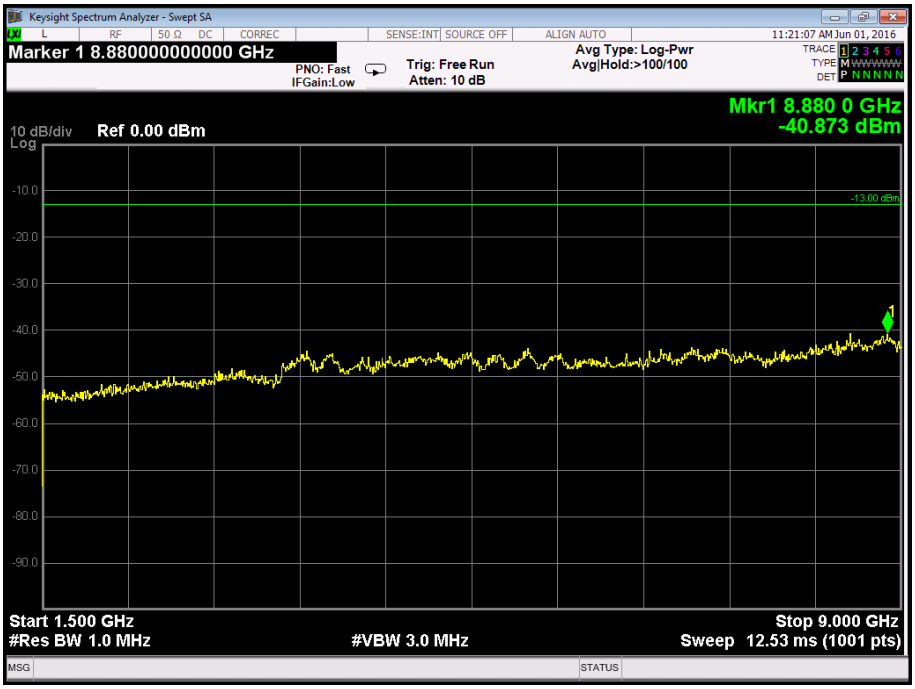
*No emissions were detected within 10 dB of the limit.

WCDMA FDD V, 836.40 MHz, 9 kHz to 1.5 GHz, Spurious Emissions at Antenna Terminals Plot



Product Service

WCDMA FDD V, 836.40 MHz, 1.5 GHz to 9 GHz, Spurious Emissions at Antenna Terminals Plot



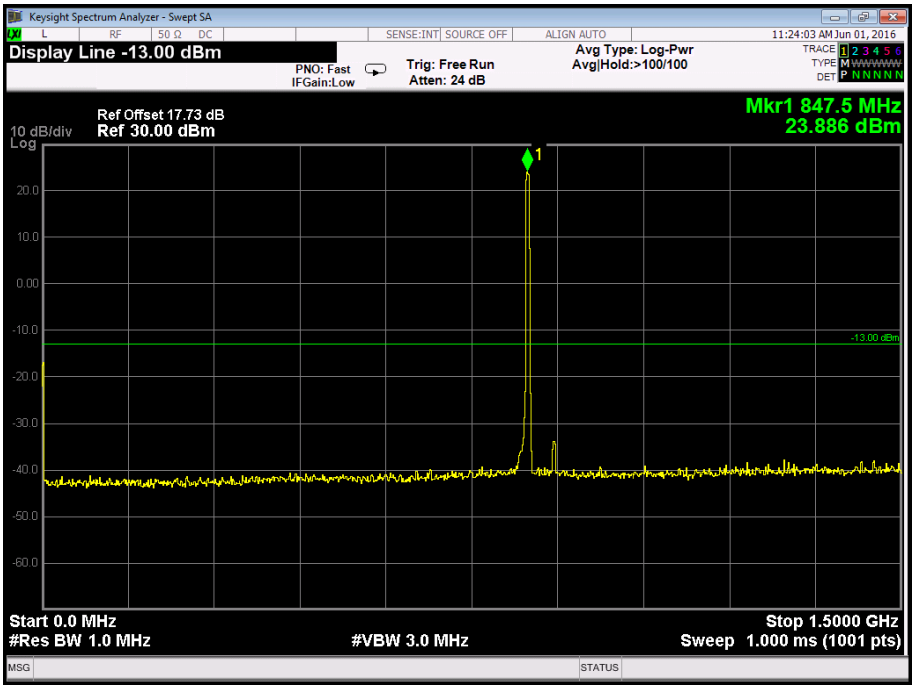
Product Service

WCDMA FDD V, 846.60 MHz, Spurious Emissions at Antenna Terminals Results

Frequency (MHz)	Emission Results (dBm)
*	

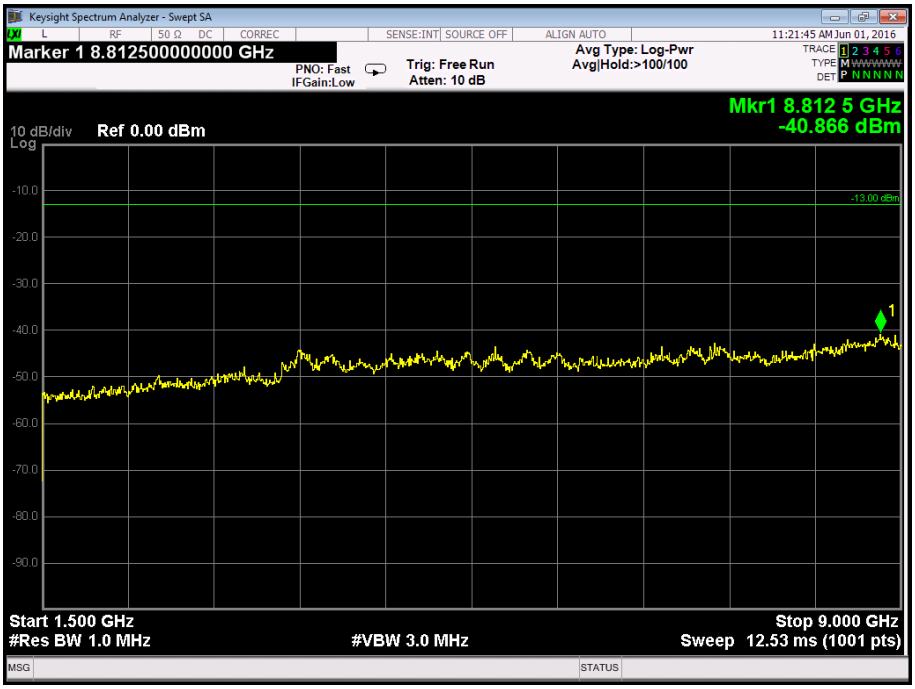
*No emissions were detected within 10 dB of the limit.

WCDMA FDD V, 846.60 MHz, 9 kHz to 1.5 GHz, Spurious Emissions at Antenna Terminals Plot



Product Service

WCDMA FDD V, 846.60 MHz, 1.5 GHz to 9 GHz, Spurious Emissions at Antenna Terminals Plot



FCC 47 CFR Part 22, Limit Clause 22.917 (a)

43+10log(P) or -13 dBm

2.6 26 dB BANDWIDTH

2.6.1 Specification Reference

FCC 47 CFR Part 22, Clause 22.917 (b)
FCC 47 CFR Part 2, Clause 2.1049 (h)

2.6.2 Equipment Under Test and Modification State

S/N: IMEI 004401115813251 - Modification State 0

2.6.3 Date of Test

31 May 2016

2.6.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.6.5 Test Procedure

The test was performed in accordance with KDB 971168 D01 v02 r02, clause 4.1.

2.6.6 Environmental Conditions

Ambient Temperature	23.6°C
Relative Humidity	47.5%

Product Service

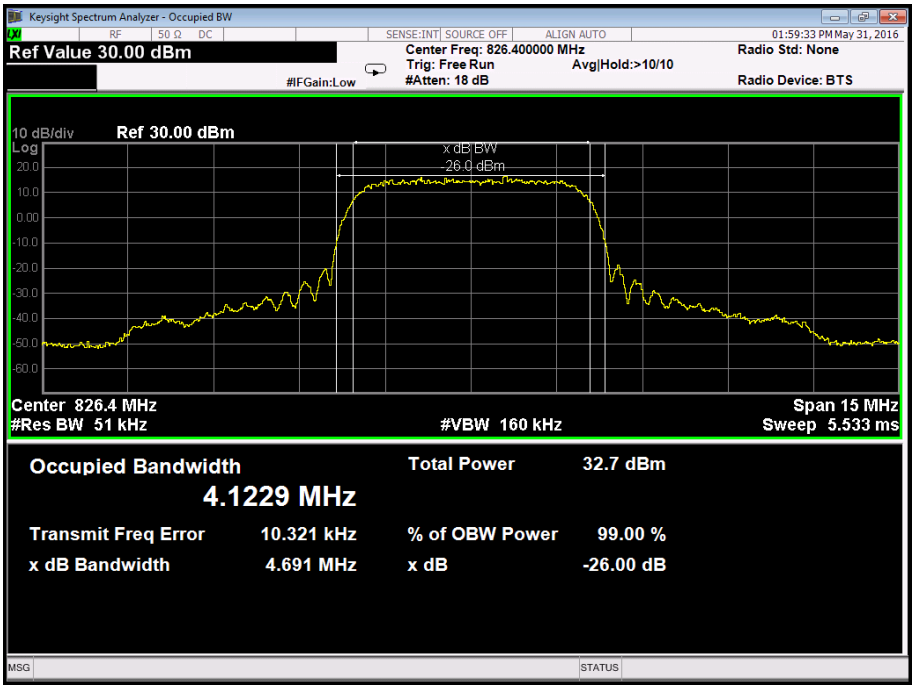
2.6.7 Test Results

4.0 V DC Supply

WCDMA FDD V, GMSK, 26 dB Bandwidth Results

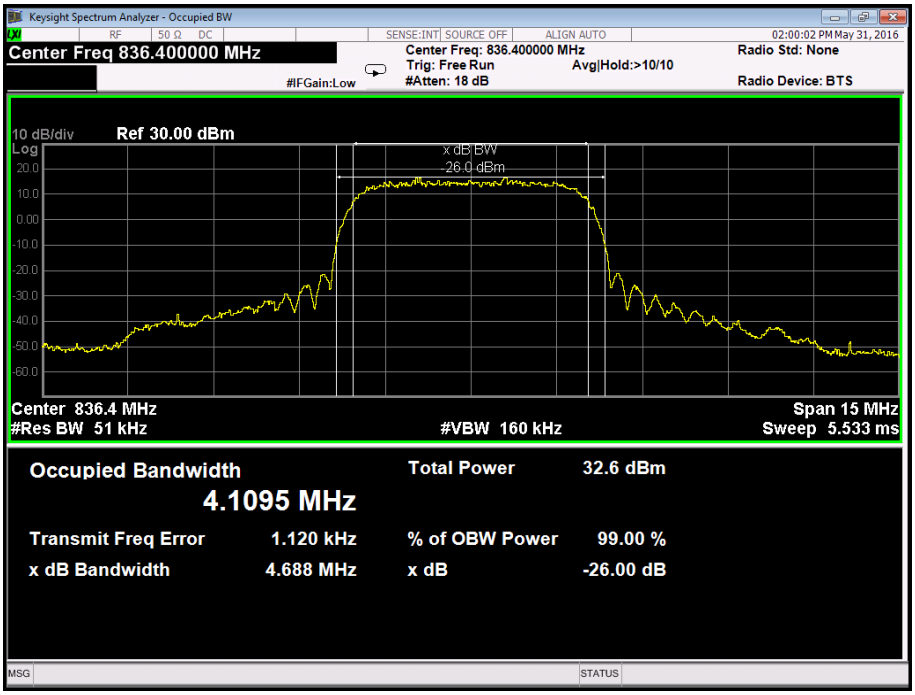
826.40 MHz	836.40 MHz	846.60 MHz
kHz	kHz	kHz
4691	4688	4687

WCDMA FDD V, 826.40 MHz, GMSK, 26 dB Bandwidth Plot

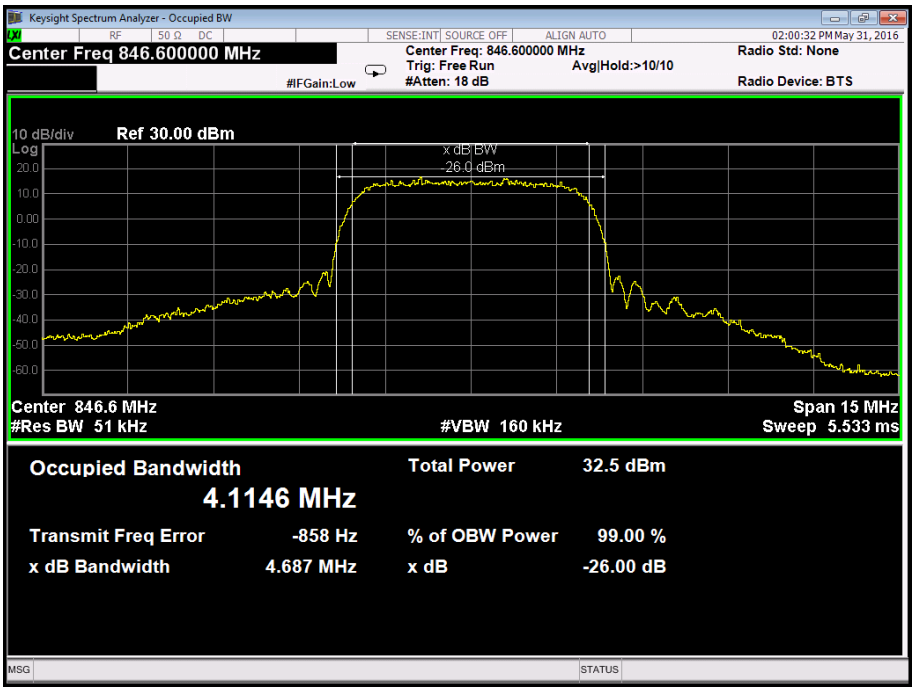


Product Service

WCDMA FDD V, 836.40 MHz,GMSK, 26 dB Bandwidth Plot



WCDMA FDD V, 846.60 MHz, GMSK, 26 dB Bandwidth Plot



FCC 47 CFR Part 22, Limit Clause

None specified.

Product Service

2.7 MODULATION CHARACTERISTICS

2.7.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1047 (d)

2.7.2 Test Results

WCDMA FDD V, Modulation Characteristics, Customer Description

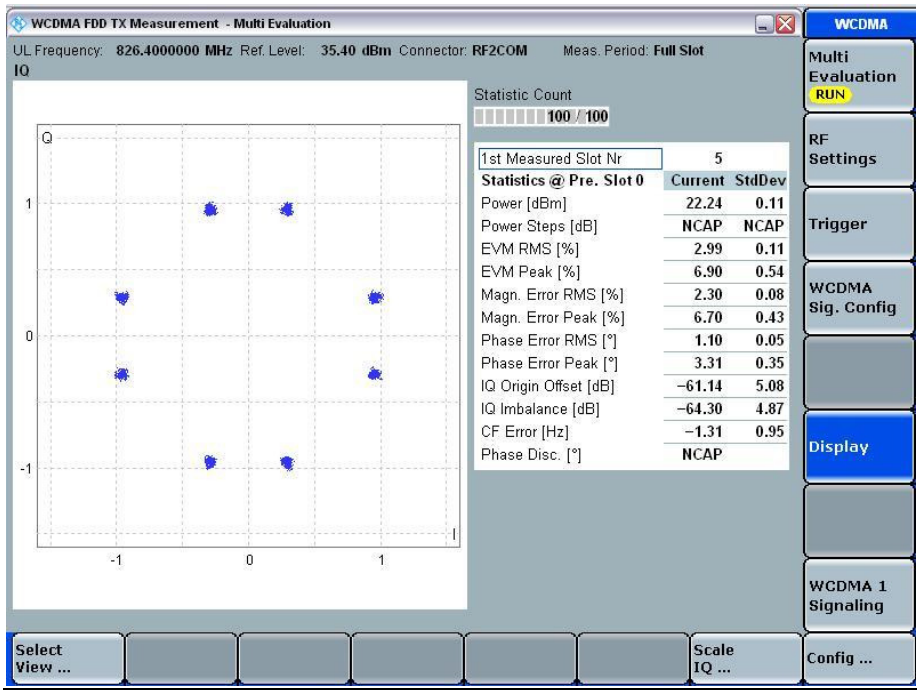
For the period of test the EUT met the requirements of FCC CFR 47 Part 2 for Modulation Characteristics.

The test results are shown below.

4.0 V DC Supply

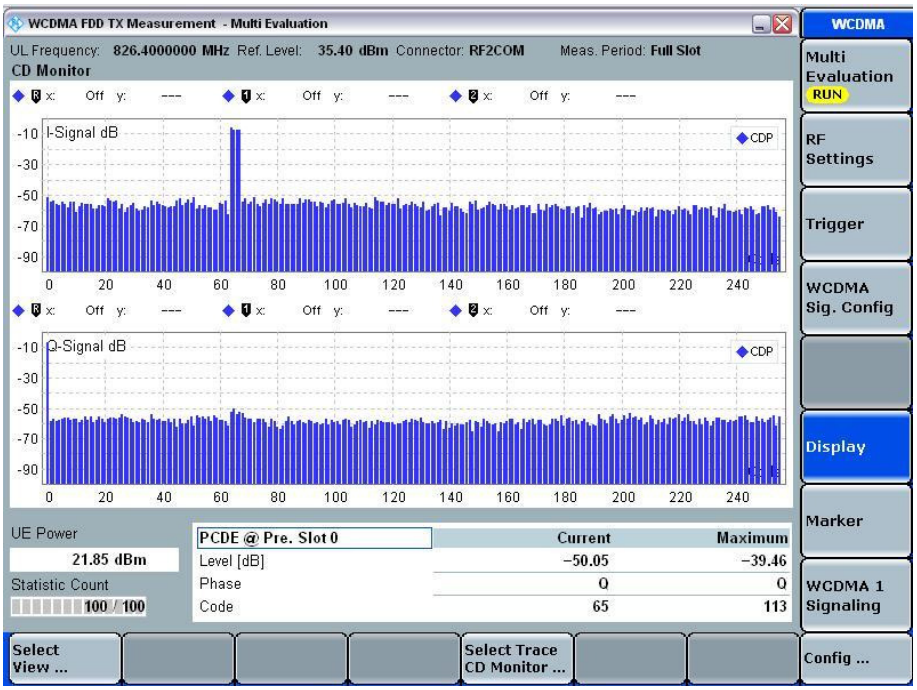
QPSK

Constellation Diagram

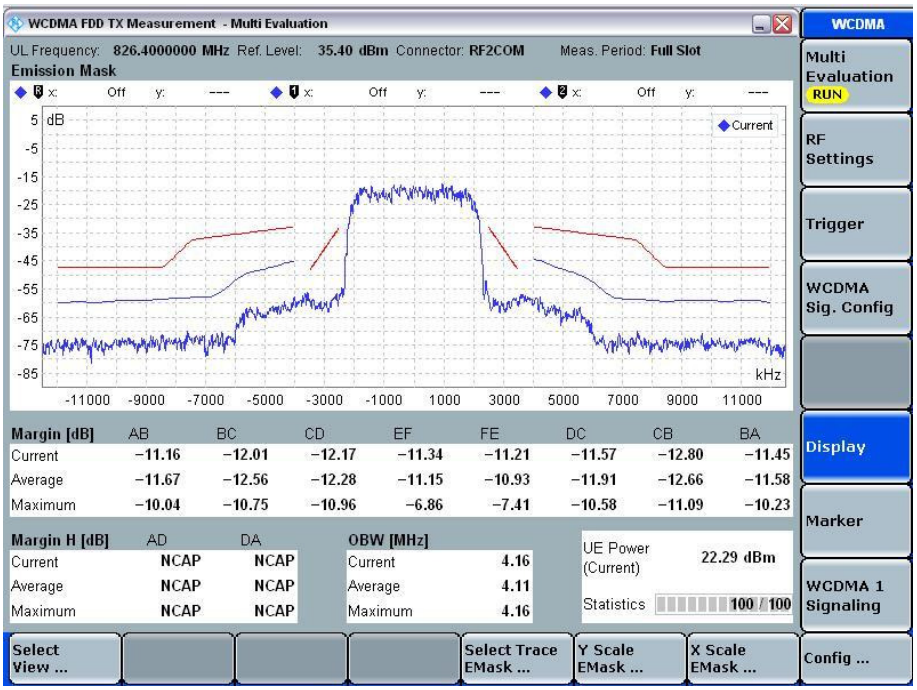


Product Service

I and Q Code Domain



Spectrum Emission Mask



FCC 47 CFR Part 2, Limit Clause 2.1047 (d)

A curve or equivalent data which shows that the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed.

Product Service

SECTION 3

TEST EQUIPMENT USED

Product Service

3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.1 - Frequency Tolerance					
Attenuator 10dB/25W	Weinschel	46-10-43	400	12	18-Jun-2016
Radio Communications Test Set	Rohde & Schwarz	CMU 200	442	12	18-Jan-2017
Temperature Chamber	Montford	2F3	467	-	O/P Mon
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	3-Sep-2016
Radio Communications Test Set	Rohde & Schwarz	CMU 200	2809	12	9-Jul-2016
Thermocouple Thermometer	Fluke	51	3174	12	9-Dec-2016
Hygrometer	Rotronic	I-1000	3220	12	19-Aug-2016
TRUE RMS MULTIMETER	Fluke	179	4006	0	9-Dec-2016
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	3-Sep-2016
Section 2.2 - Spurious Emissions at Band Edge					
Radio Communications Test Set	Rohde & Schwarz	CMU 200	442	12	18-Jan-2017
Power Splitter	Weinschel	1506A	606	12	24-Mar-2017
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	3-Sep-2016
Programmable Power Supply	Iso-tech	IPS 2010	2435	-	O/P Mon
Hygrometer	Rotronic	I-1000	3220	12	19-Aug-2016
Attenuator (10dB, 20W)	Lucas Weinschel	1	3225	12	16-Dec-2016
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	2-Sep-2016
TRUE RMS MULTIMETER	Fluke	179	4006	0	9-Dec-2016
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	7-Sep-2016
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	3-Sep-2016
Wideband Radio Test Set	Rohde & Schwarz	CMW500	4546	12	3-Feb-2017
PXA Signal Analyser	Keysight Technologies	N9030A	4654	12	8-Oct-2016
Section 2.3 - Maximum Conducted Output Power					
Radio Communications Test Set	Rohde & Schwarz	CMU 200	442	12	18-Jan-2017
Power Splitter	Weinschel	1506A	606	12	24-Mar-2017
Programmable Power Supply	Iso-tech	IPS 2010	2435	-	O/P Mon
Hygrometer	Rotronic	I-1000	3220	12	19-Aug-2016
Attenuator (10dB, 20W)	Lucas Weinschel	1	3225	12	16-Dec-2016
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	2-Sep-2016
P-Series Power Meter	Agilent Technologies	N1911A	3981	12	25-Sep-2016
50 MHz-18 GHz Wideband Power Sensor	Agilent Technologies	N1921A	3983	12	25-Sep-2016
TRUE RMS MULTIMETER	Fluke	179	4006	0	9-Dec-2016
Fan Heater	Master	B 3 EPB	4363	-	TU
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	7-Sep-2016
Wideband Radio Test Set	Rohde & Schwarz	CMW500	4546	12	3-Feb-2017
PXA Signal Analyser	Keysight Technologies	N9030A	4654	12	8-Oct-2016

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.4 - Emission Limitations for Cellular Equipment					
Radio Communications Test Set	Rohde & Schwarz	CMU 200	442	12	18-Jan-2017
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Antenna (Bilog)	Chase	CBL6143	2904	24	11-Jun-2017
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	2-Nov-2016
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Hygropalm Temperature and Humidity Meter	Rotronic	HP21	4410	12	27-Apr-2017
Wideband Radio Test Set	Rohde & Schwarz	CMW500	4546	12	3-Feb-2017
Double Ridged Waveguide Horn Antenna	ETS-Lindgren	3117	4722	12	29-Dec-2016
Section 2.5 - Spurious Emissions at Antenna Terminals					
Radio Communications Test Set	Rohde & Schwarz	CMU 200	442	12	18-Jan-2017
Power Splitter	Weinschel	1506A	606	12	24-Mar-2017
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	3-Sep-2016
Programmable Power Supply	Iso-tech	IPS 2010	2435	-	O/P Mon
Filter	Daden Anthony Ass	MH-1500-7SS	2778	12	5-Feb-2017
Hygrometer	Rotronic	I-1000	3220	12	19-Aug-2016
Attenuator (10dB, 20W)	Lucas Weinschel	1	3225	12	16-Dec-2016
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	2-Sep-2016
TRUE RMS MULTIMETER	Fluke	179	4006	0	9-Dec-2016
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	7-Sep-2016
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	3-Sep-2016
Suspended Substrate Highpass Filter	Advance Power Components	11SH10-3000/X18000-O/O	4412	12	23-Mar-2017
Wideband Radio Test Set	Rohde & Schwarz	CMW500	4546	12	3-Feb-2017
PXA Signal Analyser	Keysight Technologies	N9030A	4654	12	8-Oct-2016
Section 2.6 - 26 dB Bandwidth					
Radio Communications Test Set	Rohde & Schwarz	CMU 200	442	12	18-Jan-2017
Power Splitter	Weinschel	1506A	606	12	24-Mar-2017
Programmable Power Supply	Iso-tech	IPS 2010	2435	-	O/P Mon
Hygrometer	Rotronic	I-1000	3220	12	19-Aug-2016
Attenuator (10dB, 20W)	Lucas Weinschel	1	3225	12	16-Dec-2016
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	2-Sep-2016
TRUE RMS MULTIMETER	Fluke	179	4006	0	9-Dec-2016
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	7-Sep-2016
PXA Signal Analyser	Keysight Technologies	N9030A	4654	12	8-Oct-2016

TU – Traceability Unscheduled
O/P MON – Output Monitored with Calibrated Equipment

Product Service

3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:-

Test Discipline	MU
Frequency Tolerance	± 44.39 Hz
Modulation Characteristics	-
Maximum Conducted Output Power	± 0.70 dB
Spurious Emissions at Antenna Terminals	± 3.454 dB
Emission Limitations for Cellular Equipment	30 MHz to 1 GHz: ± 5.1 dB 1 GHz to 40 GHz: ± 6.3 dB
26 dB Bandwidth	± 136.57 kHz
Spurious Emissions at Band Edge	± 136.57 kHz

Product Service

SECTION 4

ACCREDITATION, DISCLAIMERS AND COPYRIGHT

4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT

This report relates only to the actual item/items tested.

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation.

Results of tests not covered by our UKAS Accreditation Schedule are marked NUA (Not UKAS Accredited).