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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
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COMMERCIAL-IN-CONFIDENCE

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

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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





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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)



Product Service

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 | Held Pending Disposal |
| Reference Number | Not Applicable |
| Date | Not Applicable |
| Order Number | 10829 |
| Date | 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.



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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)



Product Service

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 °C | 0.007 |
| -20 °C | 0.004 |
| -10 °C | -0.005 |
| 0 °C | -0.006 |
| +10 °C | -0.004 |
| +20 °C | 0.004 |
| +30 °C | 0.004 |
| +40 °C | -0.006 |
| +50 °C | -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 | - | - |



Product Service

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% |



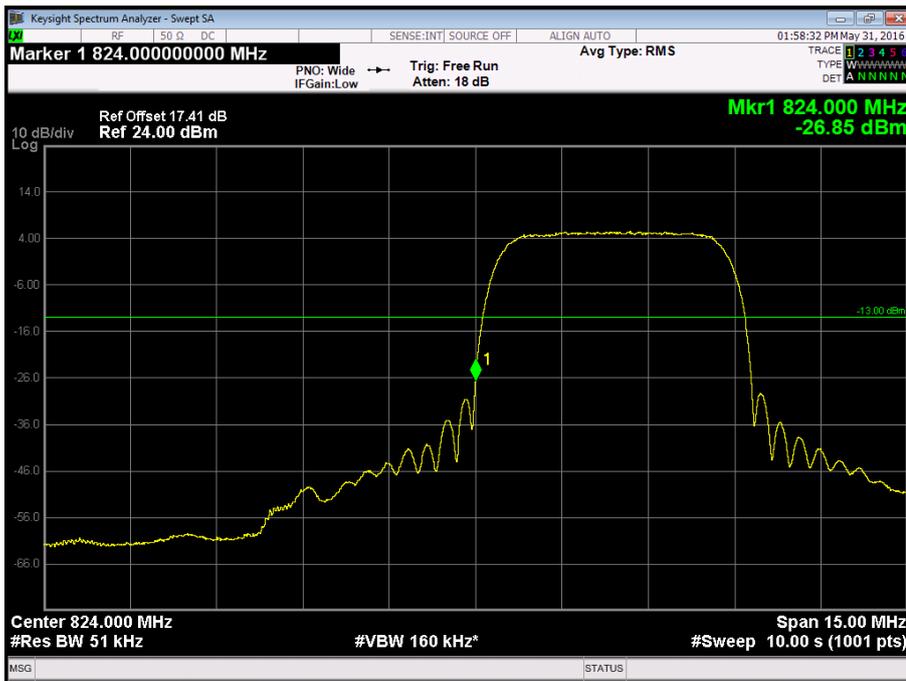
2.2.7 Test Results

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 |

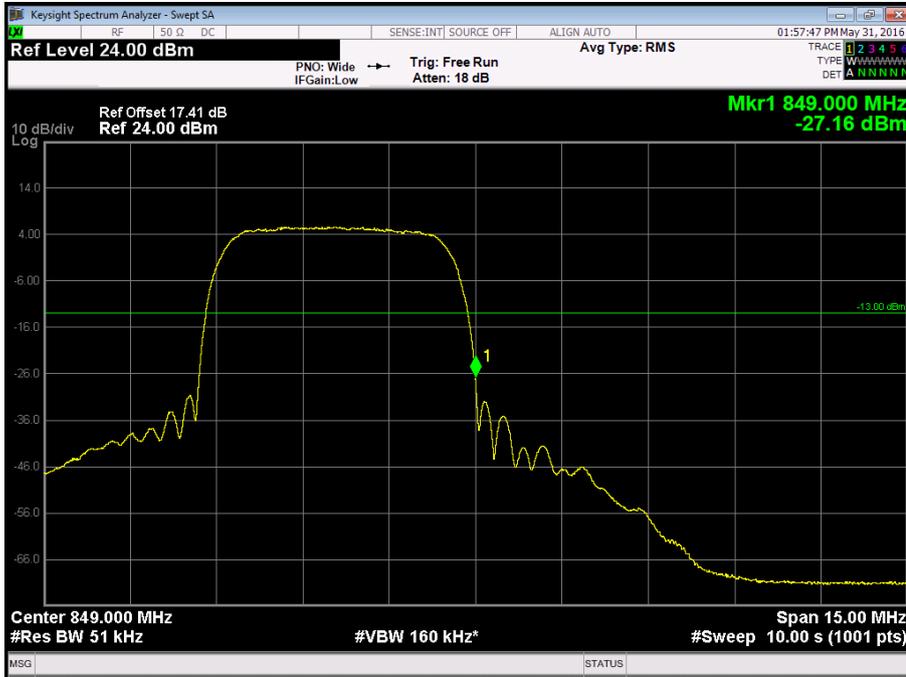
WCDMA FDD V, Circuit-Switched, GMSK, Frequency Block A, Spurious Emissions at Band Edge Plot





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:

$ERP = P_{out} \text{ (dBm)} + \text{ANT Gain (dBi)} - 2.15 \text{ (dB)}$.

2.3.6 Environmental Conditions

| | |
|---------------------|--------|
| Ambient Temperature | 23.6°C |
| Relative Humidity | 47.5% |



Product Service

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



Product Service

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

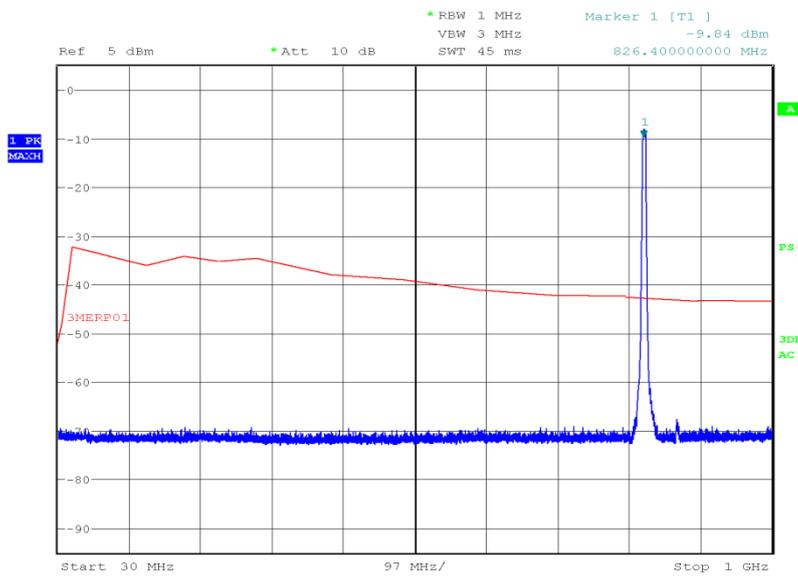
2.4.7 Test Results

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.

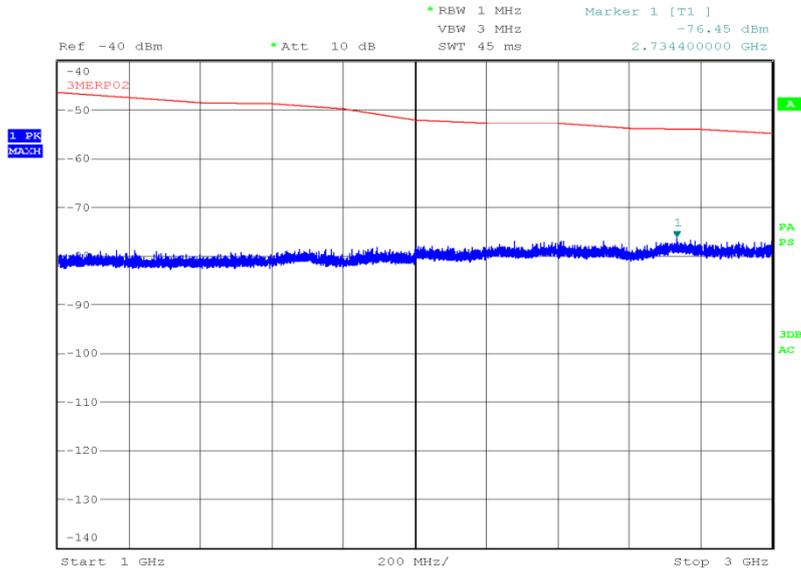
WCDMA FDD V, 826.40 MHz, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Plot



Date: 5.JUN.2016 14:58:15

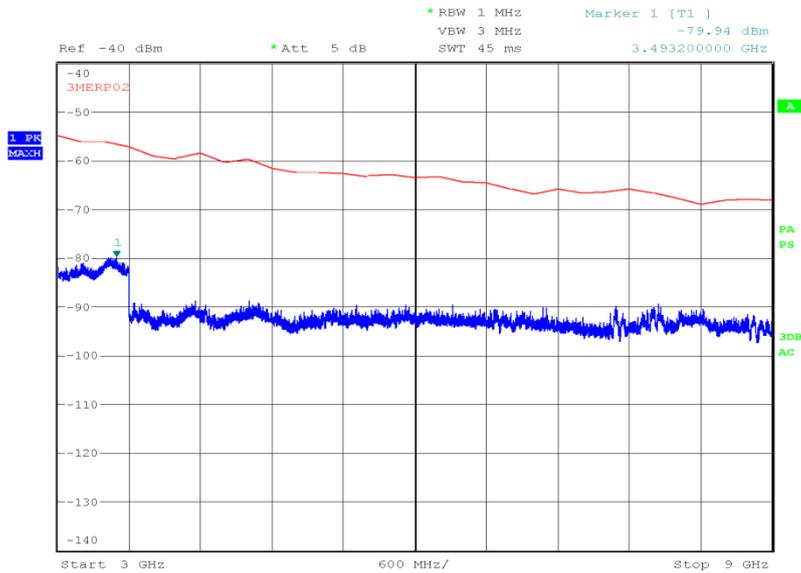


WCDMA FDD V, 826.40 MHz, 1 GHz to 3 GHz, Emission Limitations for Cellular Equipment Plot



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

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



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



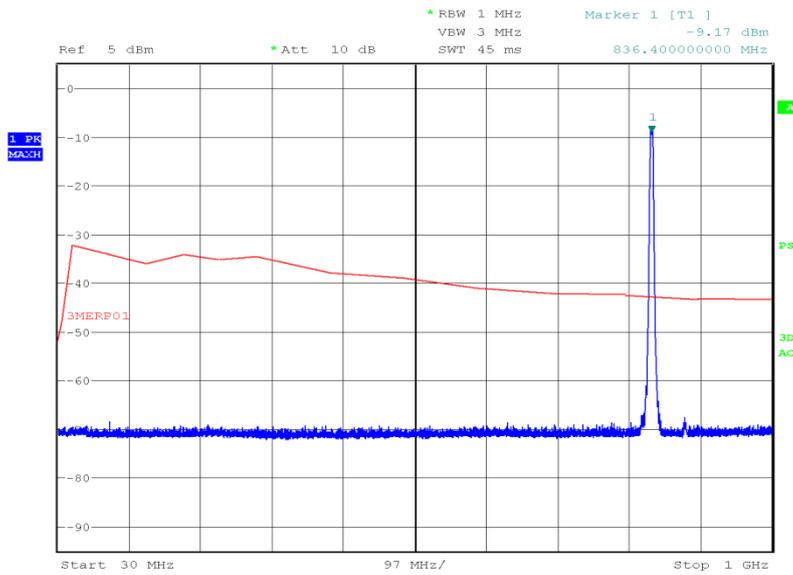
Product Service

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.

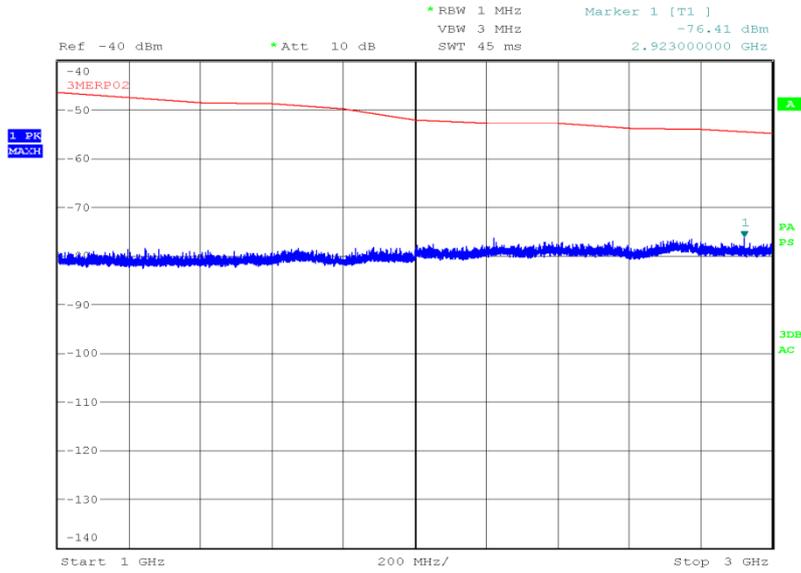
WCDMA FDD V, 836.40 MHz, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Plot



Date: 5.JUN.2016 14:56:33

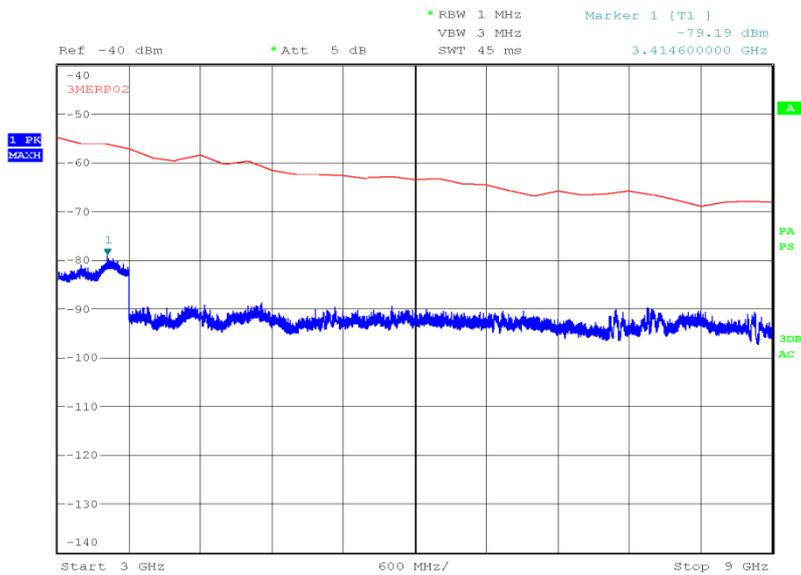


WCDMA FDD V, 836.40 MHz, 1 GHz to 3 GHz, Emission Limitations for Cellular Equipment Plot



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

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



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



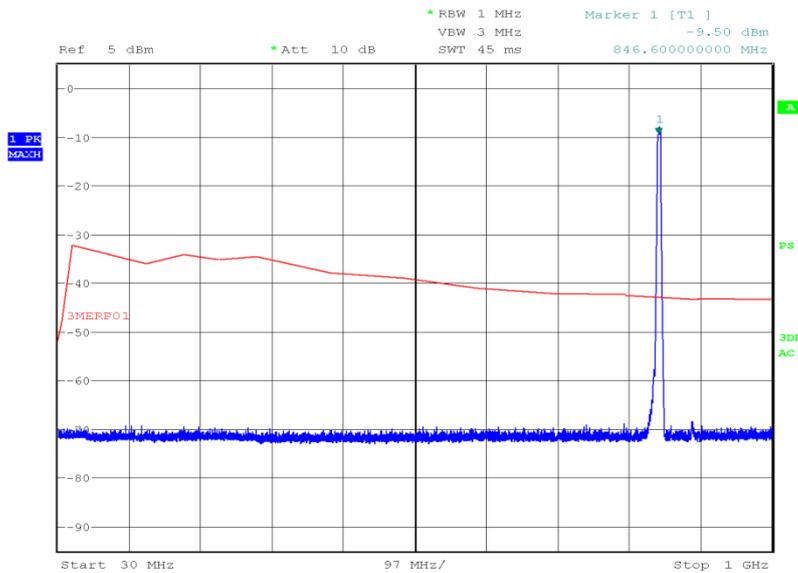
Product Service

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.

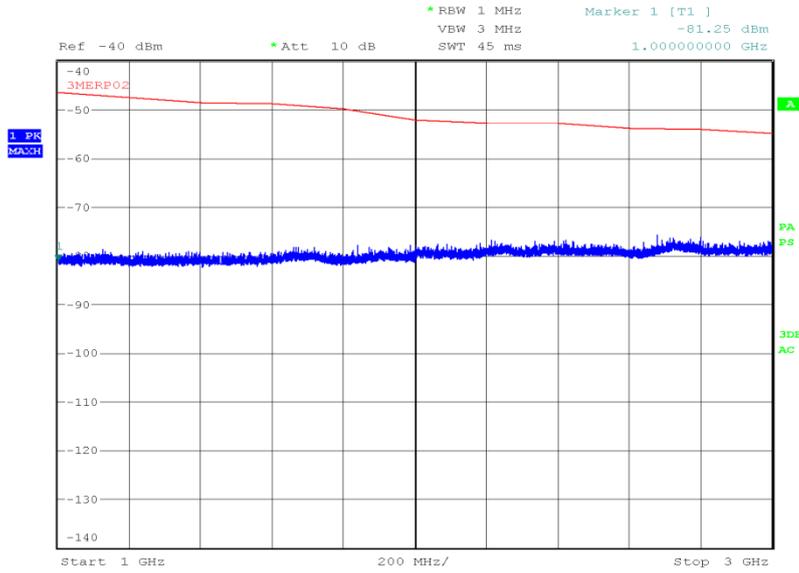
WCDMA FDD V, 846.60 MHz, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Plot



Date: 5.JUN.2016 14:59:51

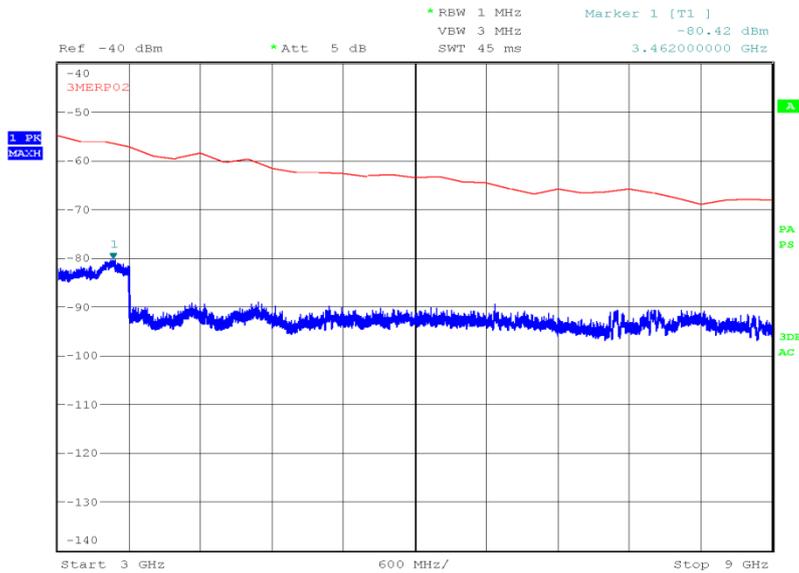


WCDMA FDD V, 846.60 MHz, 1 GHz to 3 GHz, Emission Limitations for Cellular Equipment Plot



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

WCDMA FDD V, 846.60 MHz, 3 GHz to 9 GHz, Emission Limitations for Cellular 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



Product Service

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

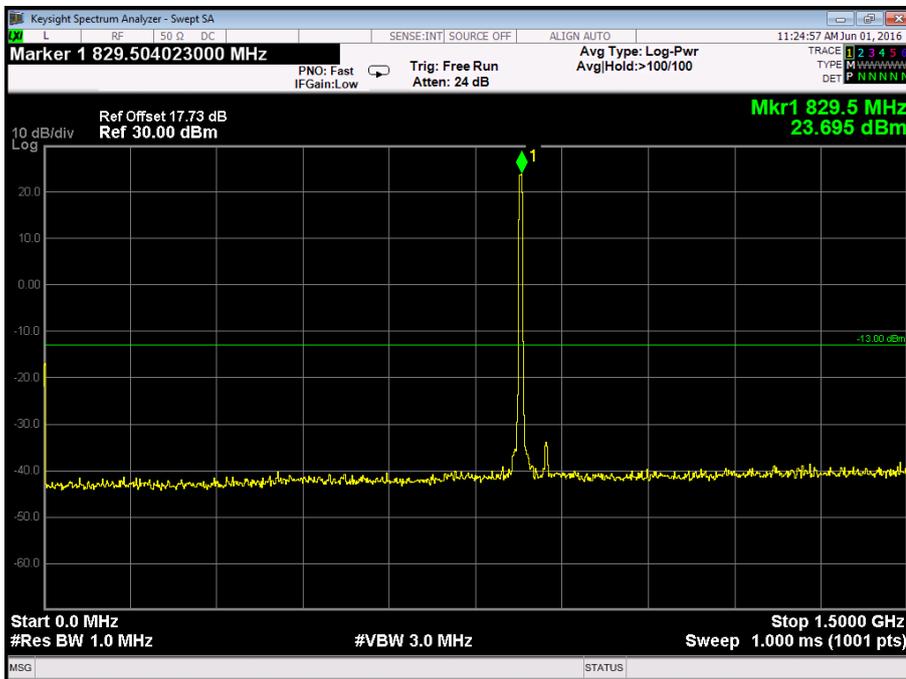
4.0 V DC Supply

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.

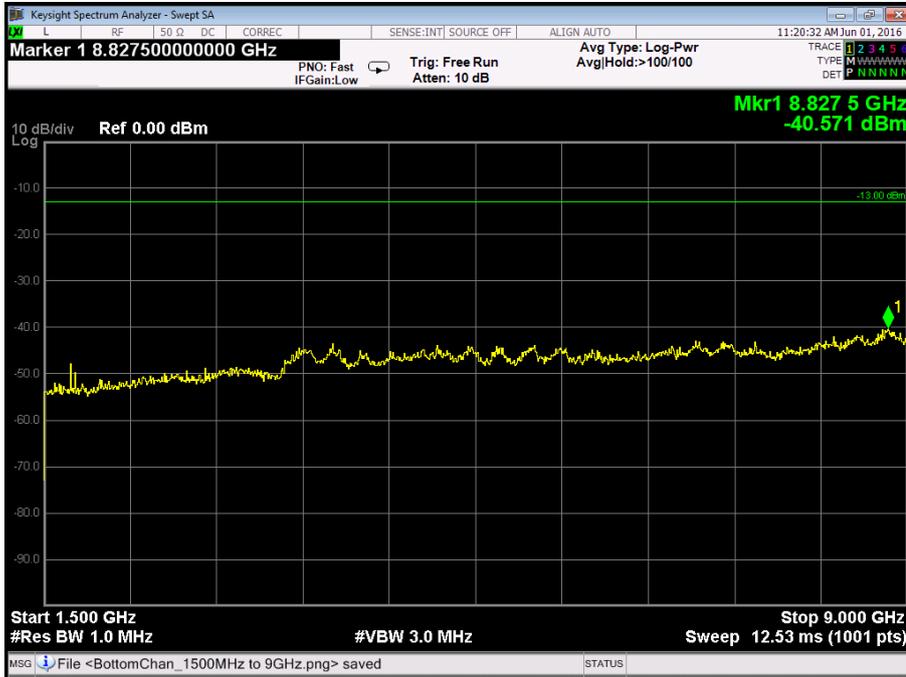
WCDMA FDD V, 826.40 MHz, 9 kHz to 1.5 GHz, Spurious Emissions at Antenna Terminals Plot





Product Service

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





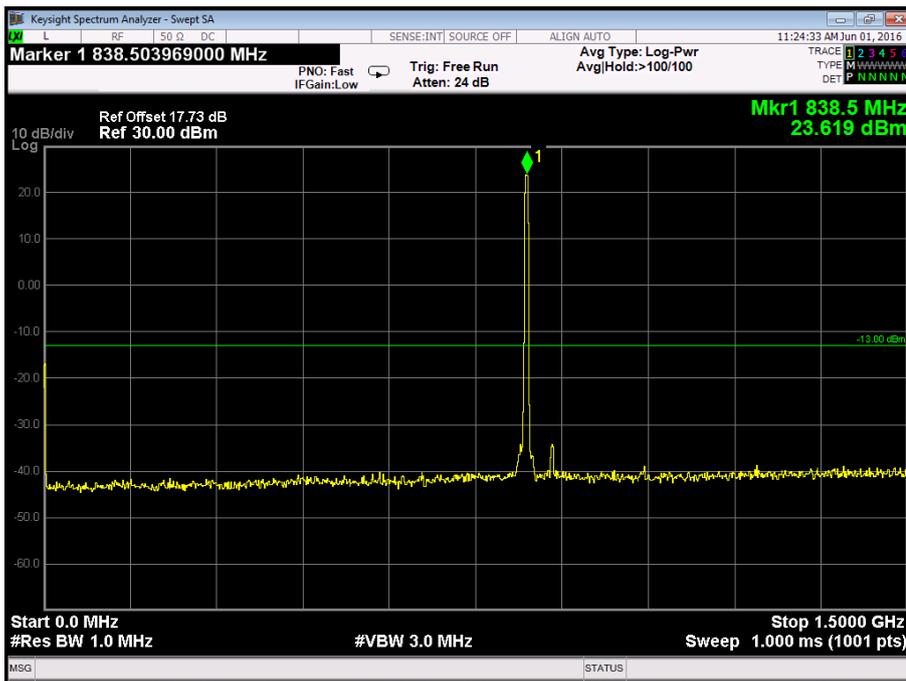
Product Service

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.

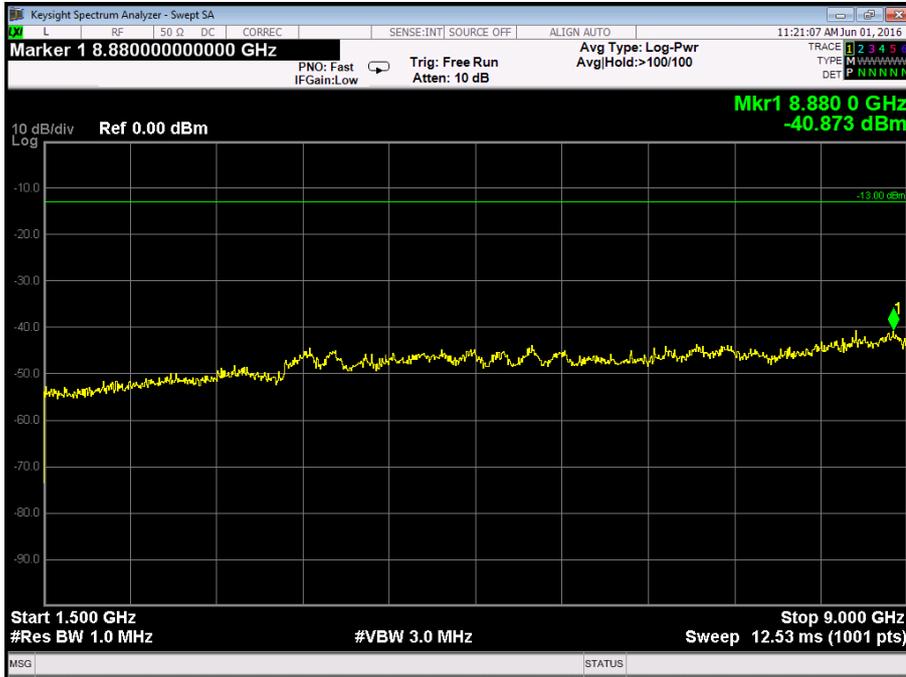
WCDMA FDD V, 836.40 MHz, 9 kHz to 1.5 GHz, Spurious Emissions at Antenna Terminals Plot





Product Service

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





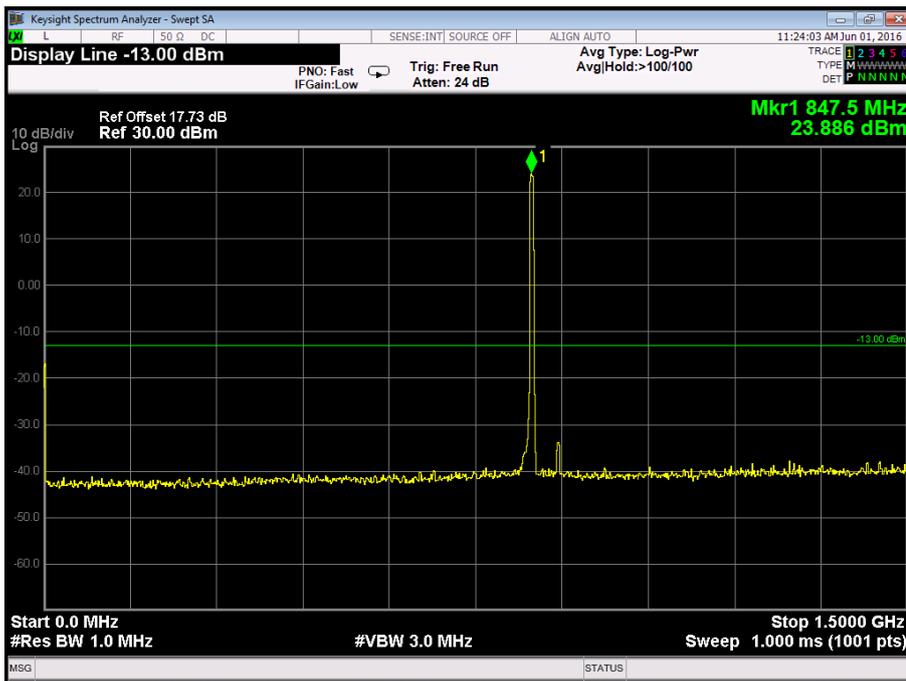
Product Service

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.

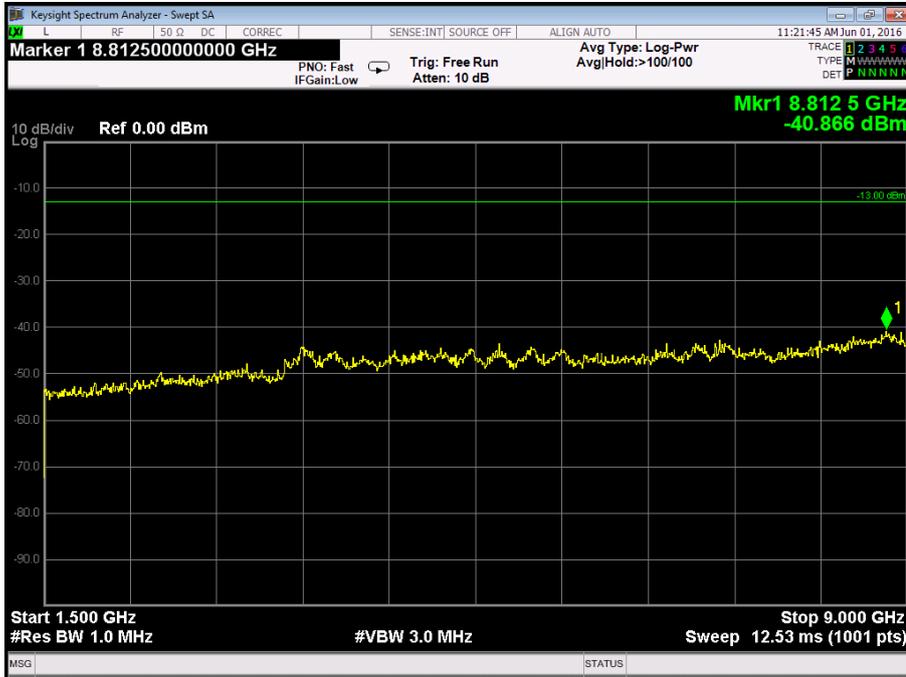
WCDMA FDD V, 846.60 MHz, 9 kHz to 1.5 GHz, Spurious Emissions at Antenna Terminals Plot





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



Product Service

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

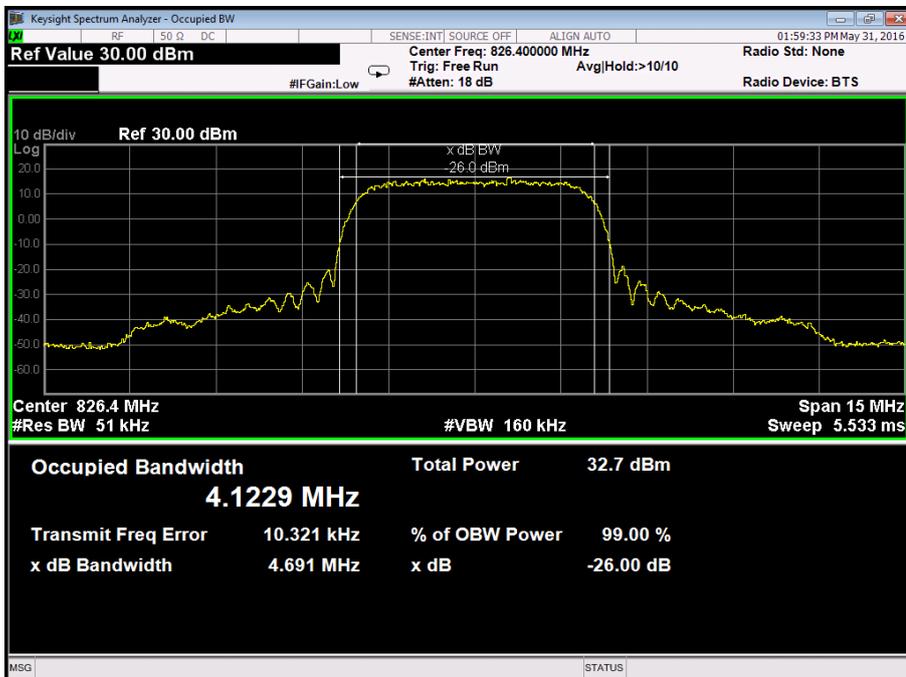
2.6.7 Test Results

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 |

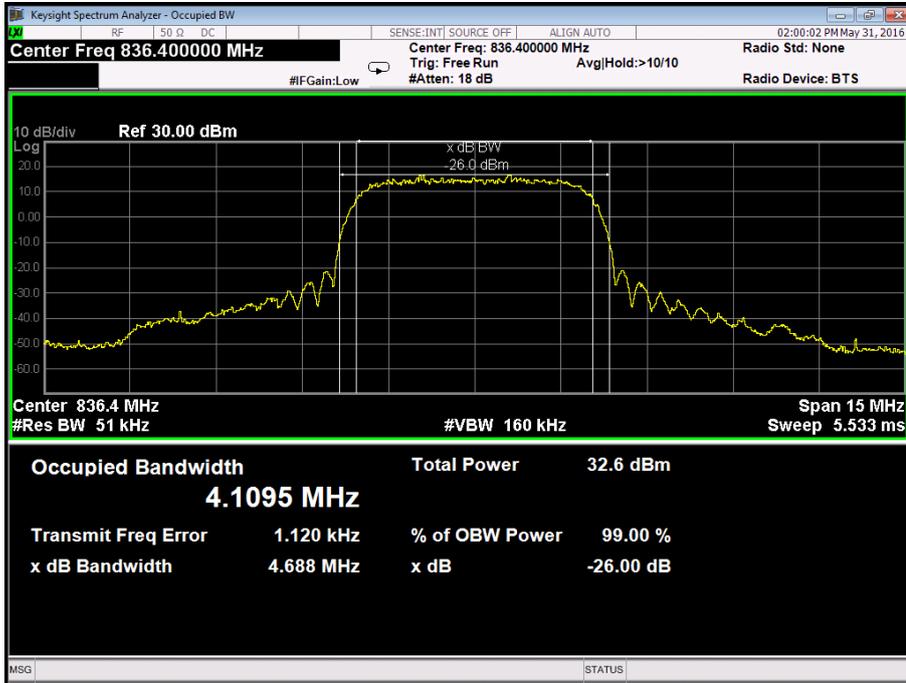
WCDMA FDD V, 826.40 MHz, GMSK, 26 dB Bandwidth Plot



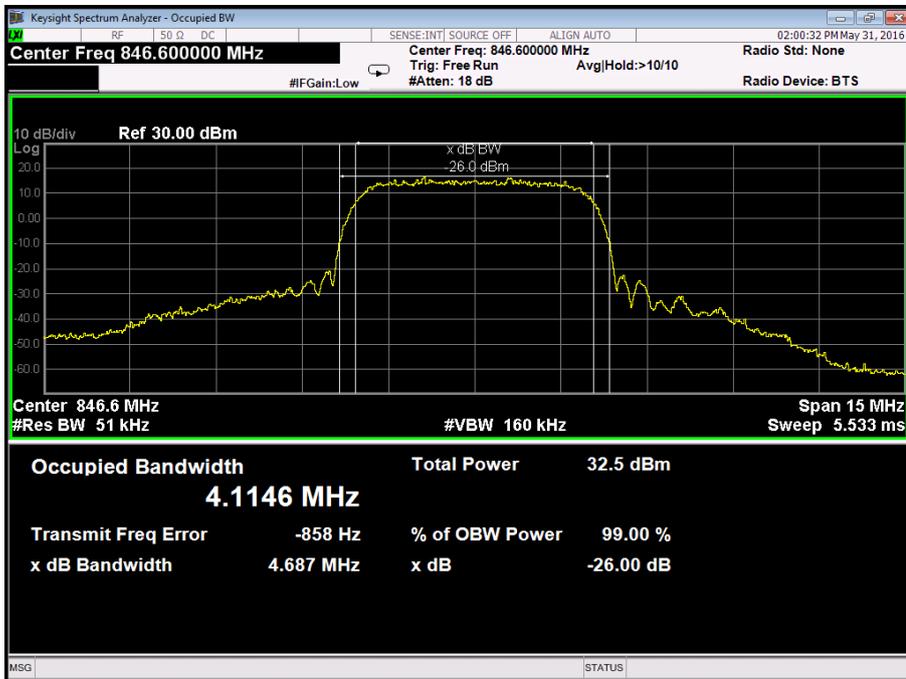


Product Service

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.



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

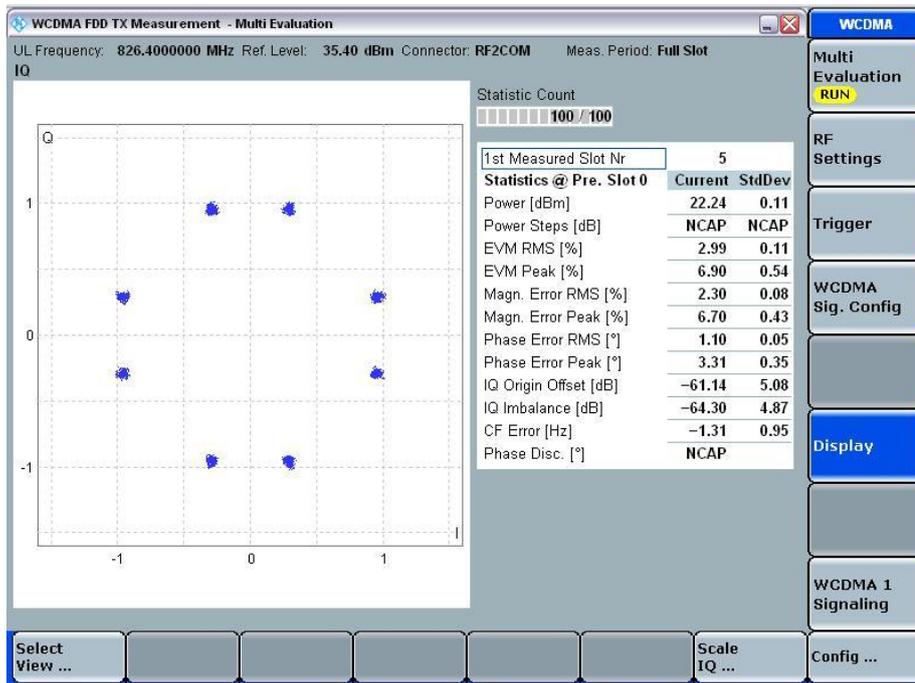
For the period of test the EUT met the requirements of FCC CFR 47 Part 2 for Modulation Characteristics.

The test results are shown below.

4.0 V DC Supply

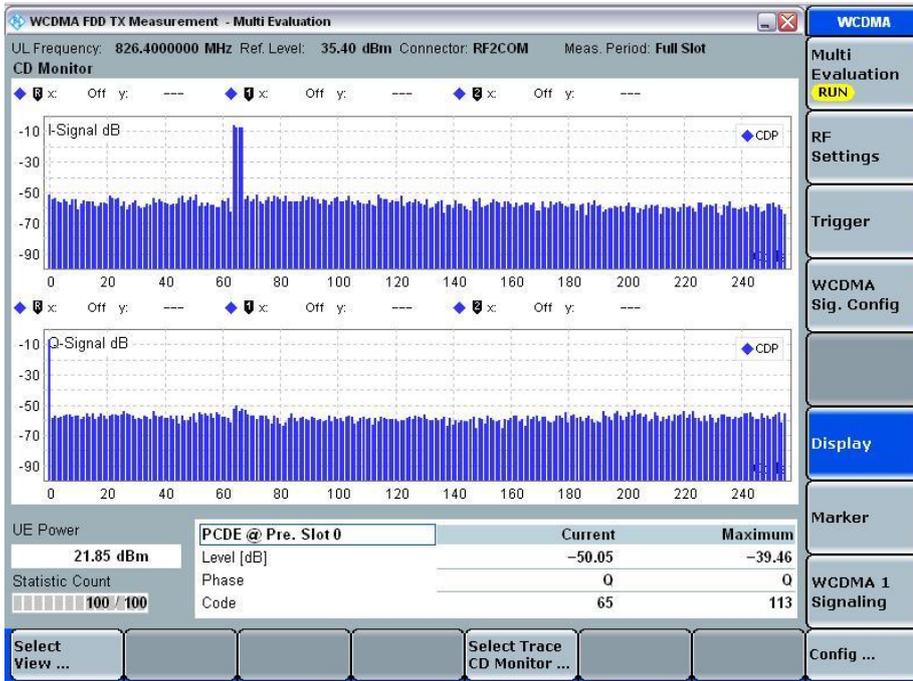
QPSK

Constellation Diagram

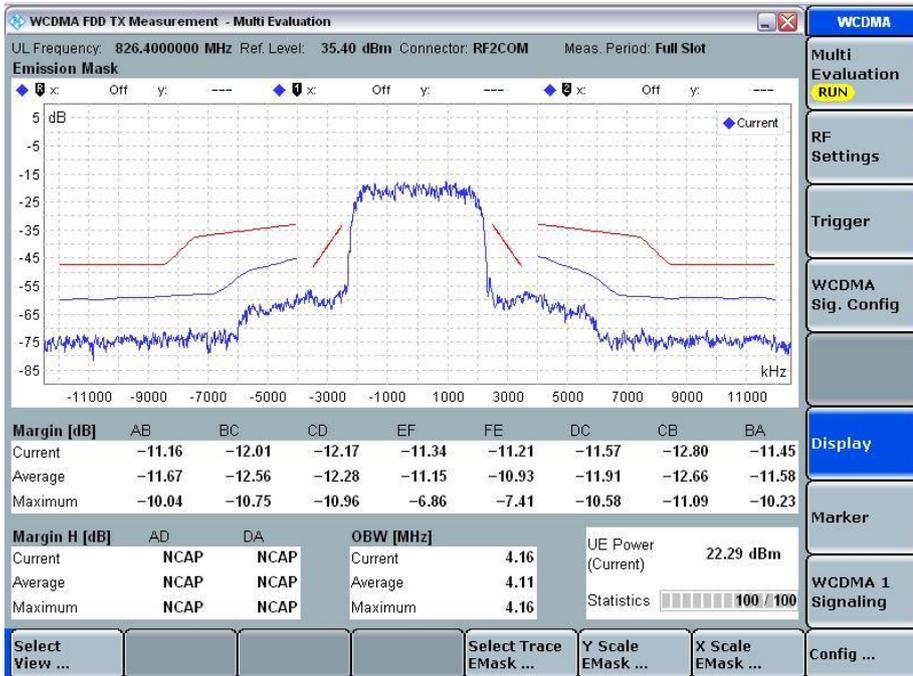




I and Q Code Domain



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



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 | matur GmbH | TAM 4.0-P | 3916 | - | TU |
| Mast Controller | matur 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



Product Service

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).

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