



731 Enterprise Drive
Lexington, KY 40510

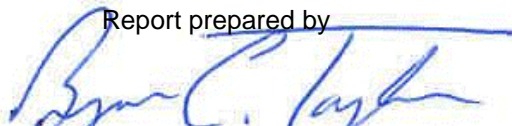
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TEST REPORT

Report Number: 102048164LEX-002
Project Number: G102048164
Report Issue Date: 4/6/2015
Product Name: XT6360
Standards: Title 47 CFR Part 22 and 24,
RSS-132 Issue 3, RSS-133
Issue 6
Radio Under Test: GSM

Tested by:
Intertek Testing Services NA, Inc.
731 Enterprise Drive
Lexington, KY 40510

Client:
Xirgo Technologies
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1 Introduction and Conclusion

The tests indicated in section 2 were performed on the product constructed as described in section 3. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test method, a list of the actual test equipment used, documentation photos, results and raw data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested complied with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested.

The INTERTEK-Lexington is located at 731 Enterprise Drive, Lexington Kentucky, 40510. The radiated emission test site is a 10-meter semi-anechoic chamber. The chamber meets the characteristics of CISPR 16-1 and ANSI C63.4. For measurements, a remotely controlled flush-mount metal-top turntable is used to rotate the EUT a full 360 degrees. A remote controlled non-conductive antenna mast is used to scan the antenna height from one to four meters. The test site is listed with the FCC under registration number 485103. The test site is listed with Industry Canada under site number IC 2042M-1.

2 Test Summary

| Page | Test full name | FCC Reference | IC Reference | Result |
|------|---|---|----------------------------------|-------------------|
| 6 | Radiated Output Power | § 22.913(a) and § 24.232(c) | RSS-132 (5.4) RSS-133 (6.4) | Pass |
| 7 | Radiated Spurious Emissions (Transmitter) | §2.1053, §22.917(a)(b), and §24.238(a)(b) | RSS-132 (5.5), RSS-133 (6.5) | Pass |
| - | Conducted Output Power | §2.1046 §24.232(d) | RSS-132 (5.4) RSS-133 (6.4) | Note ¹ |
| - | Occupied Bandwidth | §2.1049, §22.917(b)(d), and §24.238(a) | RSS-GEN (4.6.1) RSS-133 (2.3) | Note ¹ |
| - | Conducted Spurious Emissions at Antenna Terminals | §2.1049, §2.1051, §22.917(a)(b), and § 24.238(a)(b) | RSS-132 (5.5), RSS-133 (6.5) | Note ¹ |
| - | Frequency Stability | §2.1055, §22.355, and §24.235 | RSS-132 (5.3), RSS-133 (6.3) | Note ¹ |
| - | Receiver Spurious Emissions | § 15.109 | RSS-Gen (7.2.3.2) | Note ¹ |
| - | AC Powerline Conducted Emissions | § 15.107 | RSS-Gen (7.2.2) | Note ¹ |

¹ See module test report exhibit.

3 Description of Equipment Under Test

| Equipment Under Test | |
|---|--|
| Manufacturer | Xirgo Technologies |
| Model Number | XT6360 |
| Serial Number | 1 and 2 |
| Receive Date | 3/30/2015 |
| Test Start Date | 3/30/2015 |
| Test End Date | 3/31/2015 |
| Device Received Condition | Good |
| Test Sample Type | Production |
| Frequency Band | 824.2MHz – 848.8MHz (GSM850 Band) 826.4MHz – 846.6MHz (UMTS Band V) 1850.2MHz – 1909.8MHz (GSM1900 Band) 1852.4MHz – 1907.6MHz (UMTS Band II) |
| Modulation Type | GSM / WCDMA |
| Transmission Control | Base Station Simulator |
| Maximum Output Power (Conducted) | 1.871W, (GSM850 Band) 0.1629W, (UMTS Band V) 0.9772W, (GSM1900 Band) 0.169W, (UMTS Band II) |
| Test Channels | 128, 192, 251, (GSM850 Band) 4132, 4182, 4233 (UMTS Band V) 512, 661, 810 (GSM1900 Band) 9262, 9400, 9538 (UMTS Band II) |
| Antenna Type | Internal |
| Antenna Gain | -2dB (850 Bands), 0dBi (1900 Bands) |
| Operating Voltage | 12Vdc |

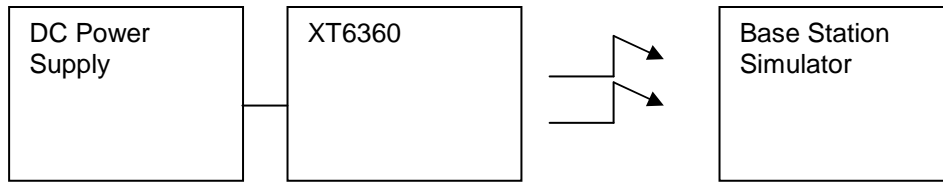
| Description of Equipment Under Test | |
|--|--|
| The XT6360 is a Vehicle GPS/Cellular Tracking Device with BT | |

Operating modes of the EUT:

| No. | Descriptions of EUT Exercising |
|-----|-----------------------------------|
| 1 | Transmitting a GSM / WCDMA signal |
| 2 | Receive / idle mode |

3.1 System setup including cable interconnection details, support equipment and simplified block diagram

3.2 EUT Block Diagram:



Block Diagram for Radiated Tests

3.3 Cables:

| Cables | | | | | |
|----------------|--------|-----------|----------|-----------------|-------------|
| Description | Length | Shielding | Ferrites | Connection | |
| | | | | From | To |
| DC Power Cable | 3ft | None | None | DC Power Supply | Test Sample |

4 Radiated Output Power

4.1 Test Limits

§ 22.913

The effective radiated power (ERP) of transmitters in the Cellular Radiotelephone Service must not exceed the limits in this section.

- (a) Maximum ERP. In general, the effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts.

§ 24.232

- (c) Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

4.2 Test Procedure

The radiated power was determined using the conducted output power and the antenna gain stated by the manufacturer. Below 1GHz, ERP was calculated by adding the antenna gain in dB to the module conducted output power in dBm. Above 1GHz the EIRP was calculated by adding the antenna gain in dBi to the module conducted output power in dBm

4.3 Results:

| TX Band | Freq (MHz) | Ch. | Cond. Power (dBm) | Ant. Gain (dB / dBi) | ERP / EIRP (dBm) |
|--------------|------------|------|-------------------|----------------------|------------------|
| GSM850 | 824.20 | Low | 32.51 | -2.00 | 30.51 |
| | 836.60 | Mid | 32.59 | -2.00 | 30.59 |
| | 848.80 | High | 32.72 | -2.00 | 30.72 |
| GSM1900 | 1850.20 | Low | 29.90 | 0.00 | 29.90 |
| | 1880.00 | Mid | 29.55 | 0.00 | 29.55 |
| | 1909.80 | High | 29.34 | 0.00 | 29.34 |
| UMTS Band V | 826.40 | Low | 21.47 | -2.00 | 19.47 |
| | 836.60 | Mid | 21.68 | -2.00 | 19.68 |
| | 846.60 | High | 21.88 | -2.00 | 19.88 |
| UMTS Band II | 1852.40 | Low | 22.28 | 0.00 | 22.28 |
| | 1880.00 | Mid | 22.18 | 0.00 | 22.18 |
| | 1907.60 | High | 21.63 | 0.00 | 21.63 |

5 Radiated Spurious Emissions (Transmitter)

5.1 Test Limits

§ 2.1053

- (a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of §2.1049, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required, with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open field measurements (e.g. a broadcast transmitter installed in a building) measurements will be accepted of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from halfwave dipole antennas.

§ 22.917

- (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.
- (b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

§ 24.238

- (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.
- (b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

5.2 Test Procedure

The EUT was placed on a non-conductive turntable. The measurement antenna was placed at a distance of 3 meters from the EUT. The EUT was forced to transmit at its maximum output power setting. During the tests, the antenna height and EUT azimuth were varied in order to identify the maximum level of emissions from the EUT.

The frequency range up to tenth harmonic was investigated in order to identify the spurious emission. Once the spurious emissions were identified, the power of the emission was determined using the substitution method described in TIA-603-C. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and at the spurious emissions frequency.

5.3 Test Equipment Used:

| Description | Serial Number | Manufacturer | Model | Cal. Date | Cal. Due |
|------------------------|---------------|----------------|--------------------------------|-------------|-------------|
| EMI Test Receiver | 1302.6005.40 | Rohde&Schwarz | ESU40 | 9/17/2014 | 9/17/2015 |
| Preamplifier | 122005 | Rohde&Schwarz | TS-PR18 | 11/26/2014 | 11/26/2015 |
| Horn Antenna | 00156319 | ETS | 3117 | 5/2/2014 | 5/2/2015 |
| Horn Antenna | 00154521 | ETS | 3117 | 10/21/2014 | 10/21/2015 |
| Bilog Antenna | 2362 | ETS | 3142B | 1/16/2015 | 1/16/2016 |
| Bilog Antenna | 00051864 | ETS | 3142C | 1/20/2015 | 1/20/2016 |
| System Controller | 121701-1 | Sunol Sciences | SC99V | Time of Use | Time of Use |
| High Pass Filter | 1 | Wainwright | WHKX12-2533.85-2710-18000-40SS | Time of Use | Time of Use |
| High Pass Filter | 25 | Wainwright | WHKX12-1028.5-1100-1500-40SS | Time of Use | Time of Use |
| Base Station Simulator | 2522 | Rohde&Schwarz | CMU200 | 9/19/2014 | 9/19/2015 |
| Signal Generator | 3915 | Rohde&Schwarz | SMB100A | 9/23/2014 | 9/23/2015 |

5.4 Results:

All radiated spurious emissions were attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB which is equivalent to -13dBm.

Worst Case Spurious Measurements (GSM850)

| Radiated Spurious Emissions Measurement | | | | | | | | |
|---|--------------------------|---|----------------------|------------------------------|-----------------|-----------------------|-------------|--|
| Test Engineer: | | Bryan Taylor | | | | | | |
| Test Date: | | 3/30/2015 | | | | | | |
| Temp. / Humidity / Pressure: | | 23.7C/27.4%/988.9mBar | | | | | | |
| Bandwidth Settings: | | RBW = 1MHz; VBW = 3MHz | | | | | | |
| Notes: | | Results represent the worst case from 3 orthogonal axis positions. Spurious emissions not reported here were below the measurement noise floor. | | | | | | |
| Band/Channel | Spurious Frequency (MHz) | Polarity | Device Reading (dBm) | Signal Generator Level (dBm) | Cable Loss (dB) | Tx Antenna Gain (dBd) | Limit (dBm) | Radiated Spurious Emission Level (dBm) |
| GSM 850/Channel 128 | 1648.4 | H | -54.44 | -46.91 | 3.26 | 5.64 | -13 | -44.53 |
| | 1648.4 | V | -53.81 | -45.38 | 3.26 | 5.64 | -13 | -43.00 |
| | 2472.6 | H | -50.2 | -38.77 | 4.17 | 5.87 | -13 | -37.07 |
| | 2472.6 | V | -51.84 | -38.96 | 4.17 | 5.87 | -13 | -37.26 |
| | 3296.8 | H | -62.31 | -49.89 | 4.58 | 7.32 | -13 | -47.16 |
| | 3296.8 | V | -64.87 | -52.06 | 4.58 | 7.32 | -13 | -49.33 |
| | 4121 | H | -62.14 | -48.47 | 5.33 | 8.91 | -13 | -44.89 |
| | 4121 | V | -63.05 | -49.37 | 5.33 | 8.91 | -13 | -45.79 |
| | 4945.2 | H | -72.96 | -57.19 | 5.82 | 9.90 | -13 | -53.11 |
| GSM 850/Channel 192 | 4945.2 | V | -73.45 | -57.7 | 5.82 | 9.90 | -13 | -53.62 |
| | 1674 | H | -55.93 | -47.58 | 3.30 | 5.64 | -13 | -45.24 |
| | 1674 | V | -54.56 | -45.45 | 3.30 | 5.64 | -13 | -43.11 |
| | 2511 | H | -52.38 | -40.41 | 3.97 | 5.65 | -13 | -38.73 |
| | 2511 | V | -53.65 | -40.08 | 3.97 | 5.65 | -13 | -38.40 |
| | 3348 | H | -57.82 | -45.21 | 4.63 | 7.67 | -13 | -42.17 |
| | 3348 | V | -62.06 | -49.04 | 4.63 | 7.67 | -13 | -46.00 |
| | 4185 | H | -62.33 | -48.54 | 5.19 | 8.91 | -13 | -44.82 |
| | 4185 | V | -65.94 | -52.06 | 5.19 | 8.91 | -13 | -48.34 |
| GSM 850/Channel 251 | 5022 | H | -73.59 | -58.24 | 6.19 | 9.99 | -13 | -54.44 |
| | 5022 | V | -72.86 | -57.47 | 6.19 | 9.99 | -13 | -53.67 |
| | 1697.6 | H | -48.78 | -40 | 3.18 | 5.64 | -13 | -37.54 |
| | 1697.6 | V | -50.43 | -40.49 | 3.18 | 5.64 | -13 | -38.03 |
| | 2546.4 | H | -52.55 | -40.66 | 4.09 | 5.65 | -13 | -39.10 |
| | 2546.4 | V | -47.25 | -34.09 | 4.09 | 5.65 | -13 | -32.53 |
| | 3395.2 | H | -57.65 | -44.8 | 4.84 | 7.67 | -13 | -41.97 |
| | 3395.2 | V | -62.9 | -49.52 | 4.84 | 7.67 | -13 | -46.69 |
| | 4244 | H | -60.18 | -46.04 | 5.00 | 9.01 | -13 | -42.03 |
| 4244 | V | -68.17 | -53.96 | 5.00 | 9.01 | -13 | -49.95 | |
| 5092.8 | H | -73.33 | -57.87 | 6.25 | 9.99 | -13 | -54.13 | |
| 5092.8 | V | -72.89 | -57.05 | 6.25 | 9.99 | -13 | -53.31 | |

F=B-C+D

Worst Case Spurious Measurements (UMTS Band V)

| Radiated Spurious Emissions Measurement | | | | | | | | |
|---|--------------------------|---|----------------------|------------------------------|-----------------|-----------------------|-------------|--|
| Test Engineer: | | Bryan Taylor | | | | | | |
| Test Date: | | 3/30/2015 | | | | | | |
| Temp. / Humidity / Pressure: | | 23.7C/27.4%/988.9mBar | | | | | | |
| Bandwidth Settings: | | RBW = 1MHz; VBW = 3MHz | | | | | | |
| Notes: | | Results represent the worst case from 3 orthogonal axis positions. Spurious emissions not reported here were below the measurement noise floor. | | | | | | |
| | | | A | B | C | D | E | F |
| Band/Channel | Spurious Frequency (MHz) | Polarity | Device Reading (dBm) | Signal Generator Level (dBm) | Cable Loss (dB) | Tx Antenna Gain (dBd) | Limit (dBm) | Radiated Spurious Emission Level (dBm) |
| WCDMA Band V / Channel 4132 | 1652.8 | H | -52.52 | -44.99 | 3.30 | 5.64 | -13 | -42.65 |
| | 1652.8 | V | -54.18 | -45.75 | 3.30 | 5.64 | -13 | -43.41 |
| | 2479.2 | H | -63.96 | -52.53 | 4.17 | 5.87 | -13 | -50.83 |
| | 2479.2 | V | -63.33 | -50.45 | 4.17 | 5.87 | -13 | -48.75 |
| | 3305.6 | H | -71.53 | -59.11 | 4.58 | 7.67 | -13 | -56.02 |
| | 3305.6 | V | -71.68 | -58.87 | 4.58 | 7.67 | -13 | -55.78 |
| | 4132 | H | -71.99 | -58.32 | 5.22 | 8.91 | -13 | -54.63 |
| | 4132 | V | -72.51 | -58.83 | 5.22 | 8.91 | -13 | -55.14 |
| | 4958.4 | H | -73.14 | -57.37 | 5.82 | 9.90 | -13 | -53.29 |
| 4958.4 | V | -72.56 | -56.81 | 5.82 | 9.90 | -13 | -52.73 | |
| WCDMA Band V / Channel 4182 | 1672.8 | H | -54.21 | -45.86 | 3.30 | 5.64 | -13 | -43.52 |
| | 1672.8 | V | -57.48 | -48.37 | 3.30 | 5.64 | -13 | -46.03 |
| | 2509.2 | H | -62.22 | -50.25 | 3.97 | 5.65 | -13 | -48.57 |
| | 2509.2 | V | -62.85 | -49.28 | 3.97 | 5.65 | -13 | -47.60 |
| | 3345.6 | H | -71.64 | -59.03 | 4.63 | 7.67 | -13 | -55.99 |
| | 3345.6 | V | -70.72 | -57.7 | 4.63 | 7.67 | -13 | -54.66 |
| | 4182 | H | -71.84 | -58.05 | 5.19 | 8.91 | -13 | -54.33 |
| | 4182 | V | -70.72 | -56.84 | 5.19 | 8.91 | -13 | -53.12 |
| | 5018.4 | H | -73.18 | -57.83 | 6.19 | 9.99 | -13 | -54.03 |
| 5018.4 | V | -72.93 | -57.54 | 6.19 | 9.99 | -13 | -53.74 | |
| WCDMA Band V / Channel 4233 | 1693.2 | H | -52.97 | -44.19 | 3.48 | 5.64 | -13 | -42.03 |
| | 1693.2 | V | -58.26 | -48.32 | 3.48 | 5.64 | -13 | -46.16 |
| | 2539.8 | H | -62.43 | -50.54 | 4.09 | 5.65 | -13 | -48.98 |
| | 2539.8 | V | -61.41 | -48.25 | 4.09 | 5.65 | -13 | -46.69 |
| | 3386.4 | H | -71.22 | -58.37 | 4.84 | 7.67 | -13 | -55.54 |
| | 3386.4 | V | -71.46 | -58.08 | 4.84 | 7.67 | -13 | -55.25 |
| | 4233 | H | -72.58 | -58.44 | 4.87 | 9.01 | -13 | -54.30 |
| | 4233 | V | -73.14 | -58.93 | 4.87 | 9.01 | -13 | -54.79 |
| | 5079.6 | H | -72.91 | -57.45 | 6.25 | 9.99 | -13 | -53.71 |
| 5079.6 | V | -73.08 | -57.24 | 6.25 | 9.99 | -13 | -53.50 | |

F=B-C+D

Worst Case Spurious Measurements (GSM1900)

| Radiated Spurious Emissions Measurement | | | | | | | | |
|---|--------------------------|---|---------------------------|-----------------------------------|----------------------|----------------------------|------------------|---|
| Test Engineer: | | Bryan Taylor | | | | | | |
| Test Date: | | 3/31/2015 | | | | | | |
| Temp. / Humidity / Pressure: | | 23.7C/27.4%/988.9mBar | | | | | | |
| Bandwidth Settings: | | RBW = 1MHz; VBW = 3MHz | | | | | | |
| Notes: | | Results represent the worst case from 3 orthogonal axis positions. Spurious emissions not reported here were below the measurement noise floor. | | | | | | |
| Band/Channel | Spurious Frequency (MHz) | Polarity | A Device Reading (dBm) | B Signal Generator Level (dBm) | C Cable Loss (dB) | D Tx Antenna Gain (dBd) | E Limit (dBm) | F Radiated Spurious Emission Level (dBm) |
| GSM 1900/Channel 512 | 3700.4 | H | -58.59 | -44.44 | 4.85 | 8.26 | -13 | -41.03 |
| | 3700.4 | V | -66.12 | -52.27 | 4.85 | 8.26 | -13 | -48.86 |
| | 5550.6 | H | -70.34 | -54.48 | 6.91 | 10.40 | -13 | -51.00 |
| | 5550.6 | V | -71.28 | -55.37 | 6.91 | 10.40 | -13 | -51.89 |
| | 7400.8 | H | -73.47 | -55.14 | 7.75 | 11.84 | -13 | -51.05 |
| | 7400.8 | V | -73.57 | -55.59 | 7.75 | 11.84 | -13 | -51.50 |
| | 9251 | H | -74.01 | -54.43 | 9.21 | 13.19 | -13 | -50.45 |
| | 9251 | V | -73.62 | -53.96 | 9.21 | 13.19 | -13 | -49.98 |
| GSM 1900/Channel 661 | 11101.2 | H | -75.48 | -51.89 | 10.47 | 13.23 | -13 | -49.13 |
| | 11101.2 | V | -75.62 | -52.23 | 10.47 | 13.23 | -13 | -49.47 |
| | 3760 | H | -59.73 | -44.68 | 5.20 | 8.26 | -13 | -41.62 |
| | 3760 | V | -65.58 | -50.78 | 5.20 | 8.26 | -13 | -47.72 |
| | 5640 | H | -70.36 | -55.14 | 7.09 | 10.56 | -13 | -51.67 |
| | 5640 | V | -70.34 | -55.02 | 7.09 | 10.56 | -13 | -51.55 |
| | 7520 | H | -71.63 | -53.02 | 8.01 | 11.93 | -13 | -49.11 |
| | 7520 | V | -72.64 | -54.29 | 8.01 | 11.93 | -13 | -50.38 |
| GSM 1900/Channel 810 | 9400 | H | -73.21 | -52.68 | 9.15 | 13.12 | -13 | -48.72 |
| | 9400 | V | -72.83 | -52.23 | 9.15 | 13.12 | -13 | -48.27 |
| | 11280 | H | -75.69 | -51.36 | 10.16 | 13.26 | -13 | -48.26 |
| | 11280 | V | -75.18 | -51.1 | 10.16 | 13.26 | -13 | -48.00 |
| | 3819.6 | H | -62.17 | -47.46 | 5.00 | 8.25 | -13 | -44.21 |
| | 3819.6 | V | -61.37 | -47.02 | 5.00 | 8.25 | -13 | -43.77 |
| | 5729.4 | H | -71.59 | -54.46 | 7.06 | 10.66 | -13 | -50.86 |
| | 5729.4 | V | -71.38 | -54.32 | 7.06 | 10.66 | -13 | -50.72 |
| | 7639.2 | H | -72.47 | -54.48 | 7.87 | 11.98 | -13 | -50.37 |
| | 7639.2 | V | -72.34 | -54.37 | 7.87 | 11.98 | -13 | -50.26 |
| 9549 | H | -73.24 | -52.43 | 8.41 | 13.09 | -13 | -47.76 | |
| 9549 | V | -72.11 | -51.08 | 8.41 | 13.09 | -13 | -46.41 | |
| 11458.8 | H | -73.69 | -48.6 | 9.51 | 13.25 | -13 | -44.86 | |
| 11458.8 | V | -74.87 | -50.13 | 9.51 | 13.25 | -13 | -46.39 | |
| | | | | | | | | F=B-C+D |

Worst Case Spurious Measurements (UMTS Band II)

| Radiated Spurious Emissions Measurement | | | | | | | | |
|---|--------------------------|---|---------------------------|-----------------------------------|----------------------|----------------------------|------------------|---|
| Test Engineer: | | Bryan Taylor | | | | | | |
| Test Date: | | 3/31/2015 | | | | | | |
| Temp. / Humidity / Pressure: | | 23.7C/27.4%/988.9mBar | | | | | | |
| Bandwidth Settings: | | RBW = 1MHz; VBW = 3MHz | | | | | | |
| Notes: | | Results represent the worst case from 3 orthogonal axis positions. Spurious emissions not reported here were below the measurement noise floor. | | | | | | |
| Band/Channel | Spurious Frequency (MHz) | Polarity | A Device Reading (dBm) | B Signal Generator Level (dBm) | C Cable Loss (dB) | D Tx Antenna Gain (dBd) | E Limit (dBm) | F Radiated Spurious Emission Level (dBm) |
| UMTS Band II/Channel 9262 | 3704.8 | H | -53.92 | -39.77 | 4.85 | 8.26 | -13 | -36.36 |
| | 3704.8 | V | -60.92 | -47.07 | 4.85 | 8.26 | -13 | -43.66 |
| | 5557.2 | H | -60.23 | -44.37 | 6.91 | 10.40 | -13 | -40.89 |
| | 5557.2 | V | -64.29 | -48.38 | 6.91 | 10.40 | -13 | -44.90 |
| | 7409.6 | H | -73.11 | -54.78 | 7.75 | 11.84 | -13 | -50.69 |
| | 7409.6 | V | -72.64 | -54.66 | 7.75 | 11.84 | -13 | -50.57 |
| | 9262 | H | -74.29 | -54.71 | 9.08 | 13.19 | -13 | -50.60 |
| | 9262 | V | -73.44 | -53.78 | 9.08 | 13.19 | -13 | -49.67 |
| | 11114.4 | H | -74.28 | -50.69 | 10.47 | 13.23 | -13 | -47.93 |
| 11114.4 | V | -74.63 | -51.24 | 10.47 | 13.23 | -13 | -48.48 | |
| UMTS Band II/Channel 9400 | 3760 | H | -51.98 | -36.93 | 5.20 | 8.26 | -13 | -33.87 |
| | 3760 | V | -62.88 | -48.08 | 5.20 | 8.26 | -13 | -45.02 |
| | 5640 | H | -65.05 | -49.83 | 7.09 | 10.56 | -13 | -46.36 |
| | 5640 | V | -61.05 | -45.73 | 7.09 | 10.56 | -13 | -42.26 |
| | 7520 | H | -73.61 | -55 | 8.01 | 11.93 | -13 | -51.09 |
| | 7520 | V | -73.73 | -55.38 | 8.01 | 11.93 | -13 | -51.47 |
| | 9400 | H | -74.12 | -53.59 | 9.15 | 13.12 | -13 | -49.63 |
| | 9400 | V | -74.11 | -53.51 | 9.15 | 13.12 | -13 | -49.55 |
| | 11280 | H | -76.29 | -51.96 | 10.16 | 13.26 | -13 | -48.86 |
| 11280 | V | -75.93 | -51.85 | 10.16 | 13.26 | -13 | -48.75 | |
| UMTS Band II/Channel 9538 | 3815.2 | H | -56.01 | -41.3 | 5.00 | 8.25 | -13 | -38.05 |
| | 3815.2 | V | -65.49 | -51.14 | 5.00 | 8.25 | -13 | -47.89 |
| | 5722.8 | H | -66.84 | -49.71 | 6.61 | 10.66 | -13 | -45.66 |
| | 5722.8 | V | -68.35 | -51.29 | 6.61 | 10.66 | -13 | -47.24 |
| | 7630.4 | H | -73.43 | -55.44 | 8.15 | 11.98 | -13 | -51.61 |
| | 7630.4 | V | -73.67 | -55.7 | 8.15 | 11.98 | -13 | -51.87 |
| | 9538 | H | -72.95 | -52.14 | 8.41 | 13.09 | -13 | -47.47 |
| | 9538 | V | -73.28 | -52.25 | 8.41 | 13.09 | -13 | -47.58 |
| | 11445.6 | H | -74.18 | -49.09 | 9.13 | 13.25 | -13 | -44.97 |
| 11445.6 | V | -73.64 | -48.9 | 9.13 | 13.25 | -13 | -44.78 | |
| | | | | | | | | F=B-C+D |

6 Measurement Uncertainty

The measured value related to the corresponding limit will be used to decide whether the equipment meets the requirements.

The measurement uncertainty figures were calculated and correspond to a coverage factor of $k = 2$, providing a confidence level of respectively 95.45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian).

Measurement uncertainty Table

| Parameter | Uncertainty | Notes |
|--|-------------|-------|
| Radiated emissions, 30 to 1000 MHz | +3.9dB | |
| Radiated emissions, 1 to 18 GHz | +4.2dB | |
| Radiated emissions, 18 to 40 GHz | +4.3dB | |
| Power Port Conducted emissions, 150kHz to 30 MHz | +2.8dB | |

7 Revision History

| Revision Level | Date | Report Number | Notes |
|-----------------------|-------------|----------------------|----------------|
| 0 | 4/6/2015 | 102048164LEX-002 | Original Issue |
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