

FCC 47 CFR PART 15 SUBPART C

Product Type : GSM Mobile Telephone
Applicant : Doro AB
Address : Magistratsvägen 10, SE-226 43 Lund, Sweden
Trade Name : doro
Model Number : Doro PhoneEasy 610
Test Specification : FCC 47 CFR PART 15 SUBPART C: Oct., 2010
Canada RSS-210 ISSUE 8: Dec., 2010
Canada RSS-Gen ISSUE 3: Dec., 2010
ANSI C63.4-2009
Application Purpose : Original
Receive Date : Jan. 16, 2012
Issue Date : Feb. 23, 2012

Issue by

A Test Lab Techno Corp.
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Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

| Rev. | Issue Date | Revisions | Revised By |
|-------------|-------------------|------------------|-------------------|
| 00 | Feb. 23, 2012 | Initial Issue | |
| | | | |
| | | | |
| | | | |

Verification of Compliance

Issued Date: 02/23/2012

Product Type : GSM Mobile Telephone
Applicant : Doro AB
Address : Magistratsvägen 10, SE-226 43 Lund, Sweden
Trade Name : doro
Model Number : Doro PhoneEasy 610
FCC ID : WS5DORO610
EUT Rated Voltage : DC 5.0V, 1.0A
Test Voltage : 120 Vac / 60 Hz
Applicable Standard : FCC 47 CFR PART 15 SUBPART C: Oct., 2010
Canada RSS-210 ISSUE 8: Dec., 2010
Canada RSS-Gen ISSUE 3: Dec., 2010
ANSI C63.4-2009
Test Result : Complied
Application Purpose : Original
Performing Lab. : A Test Lab Techno Corp.

No. 140-1, Changan Street, Bade City,
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Taiwan Accreditation Foundation accreditation number:
1330



<http://www.atl-lab.com.tw/e-index.htm>

The above equipment was tested by A Test Lab Techno Corp. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4: 2009 and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247 .
The test results of this report relate only to the tested sample identified in this report.

Approved By : 

(Manager)

(Murphy Wang)

Reviewed By : 

(Testing Engineer)

(Fly Lu)

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1 General Information

1.1 Summary of Test Result

| Standard | | Item | Result | Remark |
|-------------------|----------|---|--------|--------|
| 15.247 | RSS-GEN | | | |
| 15.207 | 7.2.2 | AC Power Conducted Emission | PASS | ----- |
| ----- | 6 | Receiver Radiated Emissions | PASS | ----- |
| Standard | | Item | Result | Remark |
| 15.247 | RSS-210 | | | |
| 15.247(c) | A8.5 | Transmitter Radiated Emissions | PASS | ----- |
| 15.247(b)(1) | A8.4 (2) | Max. Output Power | PASS | ----- |
| 15.247(a)(1) | A8.1 (1) | 20dB RF Bandwidth | PASS | ----- |
| 15.247(a)(1)(iii) | A8.1 (2) | Carrier Frequency Separation | PASS | ----- |
| 15.247(a)(1)(iii) | A8.1 (4) | Number of Hopping | PASS | ----- |
| 15.247(a)(1)(iii) | A8.1 (4) | Time of Occupancy (Dwell Time) | PASS | ----- |
| 15.247(c) | A8.5 | Out of Band Conducted Spurious Emission | PASS | ----- |
| 15.247(c) | A8.5 | Band Edge Measurement | PASS | ----- |
| 15.203 | - | Antenna Requirement | PASS | ----- |

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

1.2 Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.24 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.072 dB.

2 EUT Description

| | | | | |
|--------------------------------|---|---|-------------|-----------|
| Product | : | GSM Mobile Telephone | | |
| Trade Name | : | doro | | |
| Model Number | : | Doro PhoneEasy 610 | | |
| Applicant | : | Doro AB Magistratsvägen 10, SE-226 43 Lund, Sweden | | |
| Manufacturer | : | CK TELECOM LTD. Technology Road.High-Tech Development Zone. Heyuan, Guangdong,P.R.China. | | |
| FCC ID | : | WS5DORO610 | | |
| Frequency Range | : | 2402 ~ 2480 MHz | | |
| Modulation Type | : | GFSK for 1Mbps | | |
| | | $\pi/4$ -DQPSK for 2Mbps | | |
| | | 8DPSK for 3Mbps | | |
| Antenna Type | : | PCB Antenna | | |
| Antenna Gain | : | -2 dBi | | |
| RF Output Power (Conducted) | : | GFSK for 1Mbps | 10.20 dBm / | 0.01047 W |
| | | $\pi/4$ -DQPSK for 2Mbps | 10.07 dBm / | 0.01016 W |
| | | 8DPSK for 3Mbps | 10.37 dBm / | 0.01089 W |
| Hardware Version | : | SHELLFISH-V2.0 | | |
| Component | | | | |
| Battery | : | doro, SHELL01A | | |
| | | DC 3.7V, 800mAh | | |

3 Test Methodology

3.1. Mode of Operation

Decision of Test ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

| Test Mode |
|----------------------------------|
| Mode 1: IDLE Mode |
| Mode 2: Normal Operation Mode |
| Mode 3: GFSK Link Mode |
| Mode 4: $\pi/4$ -DQPSK Link Mode |
| Mode 5: 8DPSK Link Mode |
| Mode 6: Receiver Mode |

Description of Test Modes

Preliminary tests were performed in different modulation to find the worst case. The modulation shown in the table below is the worst-case. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

| Modulation Type | Channel | Frequency (MHz) | Packet Type | Peak Conducted Power | | Worst Case |
|-----------------|---------|-----------------|-------------|----------------------|-------|-------------------------------------|
| | | | | (dBm) | (W) | |
| GFSK | Low | 2402 | DH1 | 9.33 | 0.009 | <input type="checkbox"/> |
| | Low | 2402 | DH3 | 9.34 | 0.009 | <input type="checkbox"/> |
| | Low | 2402 | DH5 | 9.34 | 0.009 | <input type="checkbox"/> |
| | Middle | 2441 | DH1 | 9.85 | 0.010 | <input type="checkbox"/> |
| | Middle | 2441 | DH3 | 9.87 | 0.010 | <input type="checkbox"/> |
| | Middle | 2441 | DH5 | 9.85 | 0.010 | <input type="checkbox"/> |
| | High | 2480 | DH1 | 10.18 | 0.010 | <input type="checkbox"/> |
| | High | 2480 | DH3 | 10.17 | 0.010 | <input type="checkbox"/> |
| | High | 2480 | DH5 | 10.20 | 0.010 | <input type="checkbox"/> |
| $\pi/4$ -DQPSK | Low | 2402 | 2DH1 | 9.22 | 0.008 | <input type="checkbox"/> |
| | Low | 2402 | 2DH3 | 9.20 | 0.008 | <input type="checkbox"/> |
| | Low | 2402 | 2DH5 | 9.20 | 0.008 | <input type="checkbox"/> |
| | Middle | 2441 | 2DH1 | 9.73 | 0.009 | <input type="checkbox"/> |
| | Middle | 2441 | 2DH3 | 9.72 | 0.009 | <input type="checkbox"/> |
| | Middle | 2441 | 2DH5 | 9.74 | 0.009 | <input type="checkbox"/> |
| | High | 2480 | 2DH1 | 10.07 | 0.010 | <input type="checkbox"/> |
| | High | 2480 | 2DH3 | 10.06 | 0.010 | <input type="checkbox"/> |
| | High | 2480 | 2DH5 | 10.05 | 0.010 | <input type="checkbox"/> |
| 8DPSK | Low | 2402 | 3DH1 | 9.48 | 0.009 | <input type="checkbox"/> |
| | Low | 2402 | 3DH3 | 9.43 | 0.009 | <input type="checkbox"/> |
| | Low | 2402 | 3DH5 | 9.41 | 0.009 | <input type="checkbox"/> |
| | Middle | 2441 | 3DH1 | 10.01 | 0.010 | <input type="checkbox"/> |
| | Middle | 2441 | 3DH3 | 9.93 | 0.010 | <input type="checkbox"/> |
| | Middle | 2441 | 3DH5 | 9.96 | 0.010 | <input type="checkbox"/> |
| | High | 2480 | 3DH1 | 10.29 | 0.011 | <input type="checkbox"/> |
| | High | 2480 | 3DH3 | 10.29 | 0.011 | <input type="checkbox"/> |
| | High | 2480 | 3DH5 | 10.37 | 0.011 | <input checked="" type="checkbox"/> |

Tested System Details

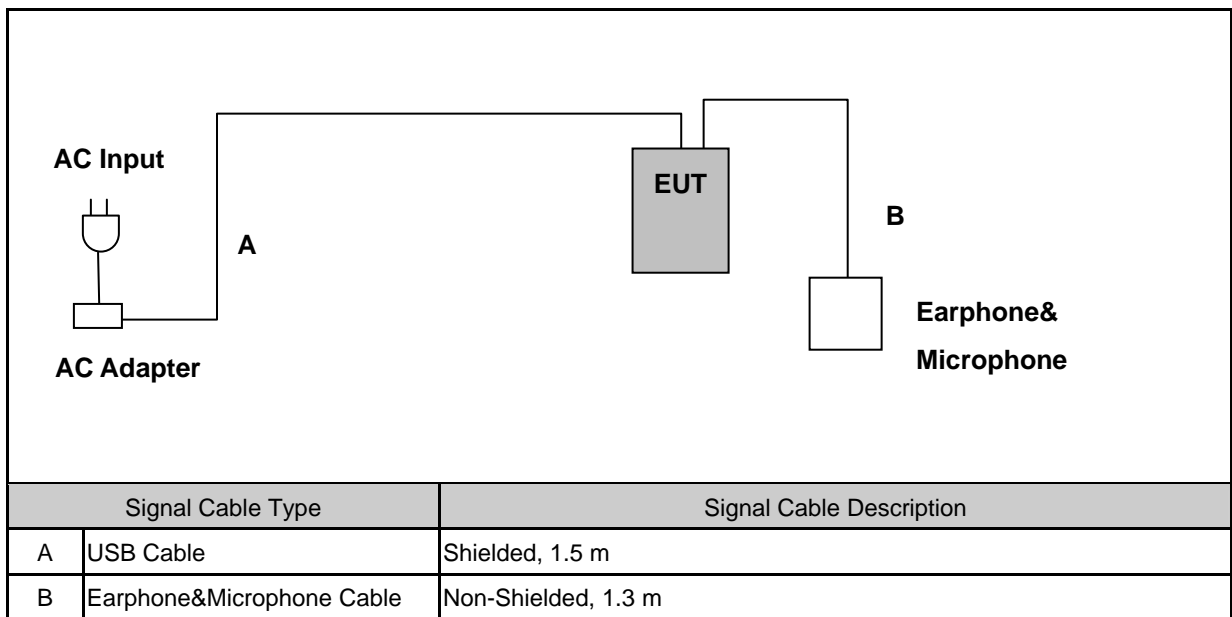
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

| | Product | Manufacturer | Model Number | Serial Number | Power Cord |
|----|------------------|--------------|--------------|---------------|------------|
| 1. | Bluetooth Tester | R & S | CBT | 100350 | NA |

3.2. EUT Exercise Software

| | |
|----|---|
| 1. | Setup the EUT and Bluetooth Tester (CBT) as shown on 3.3. |
| 2. | Turn on the power of all equipment. |
| 3. | EUT run test program. |
| 4. | Open Bluetooth function link to CBT. |

3.3. Configuration of Test System Details



3.4. Test Site Environment

| Items | Required (IEC 68-1) | Actual |
|----------------------------|---------------------|--------|
| Temperature (°C) | 15-35 | 26 |
| Humidity (%RH) | 25-75 | 60 |
| Barometric pressure (mbar) | 860-1060 | 950 |

4 Conducted Emission Measurement

4.1. Limit

| Frequency (MHz) | Quasi-peak | Average |
|-----------------|------------|----------|
| 0.15 - 0.5 | 66 to 56 | 56 to 46 |
| 0.50 - 5.0 | 56 | 46 |
| 5.0 - 30.0 | 60 | 50 |

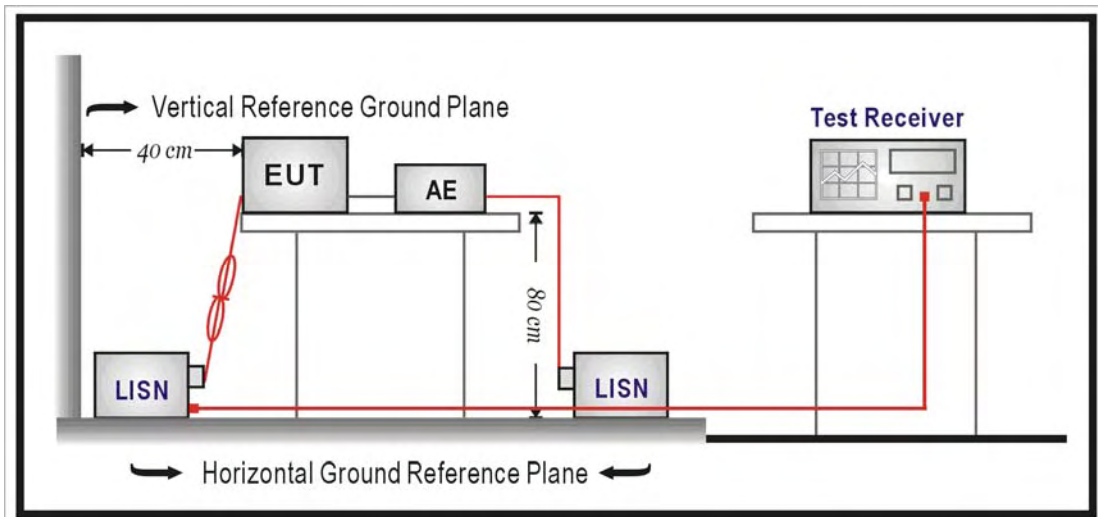
4.2. Test Instruments

| Describe | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
|---------------|--------------|--------------|---------------|------------|--------|
| Test Receiver | R&S | ESCI | 100367 | 06/30/2011 | (1) |
| LISN | R&S | ENV216 | 101040 | 03/04/2011 | (1) |
| LISN | R&S | ENV216 | 101041 | 03/04/2011 | (1) |
| Test Site | ATL | TE05 | TE05 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

4.3. Test Setup



4.4. Test Procedure

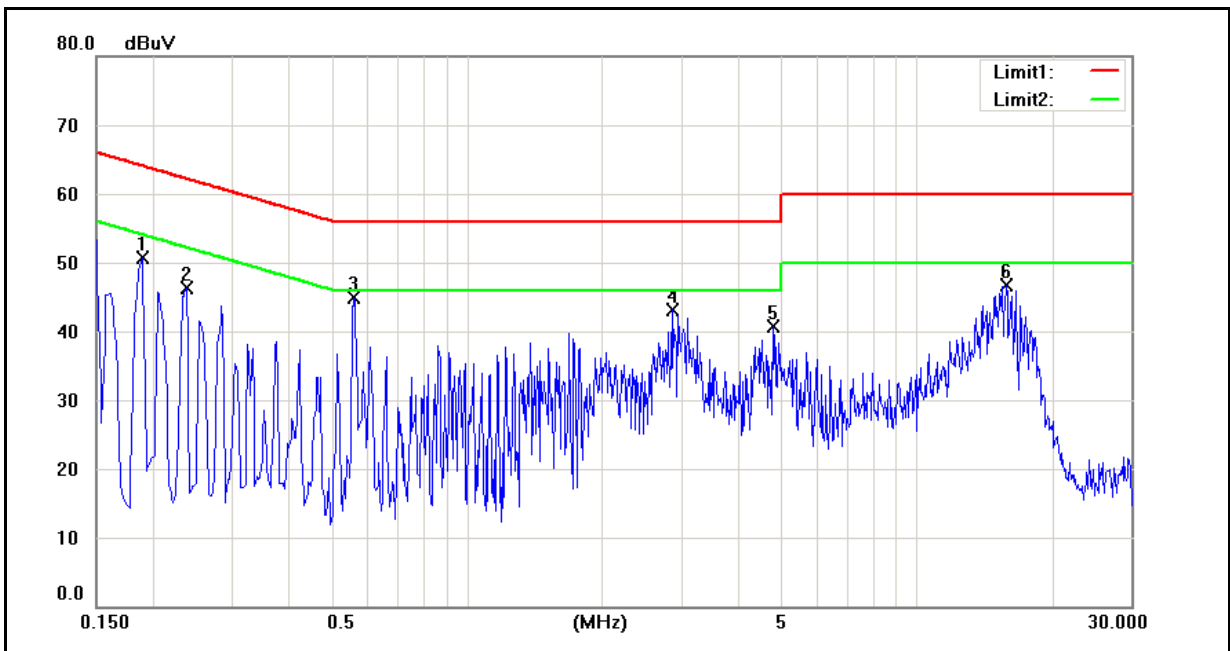
The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 4.1.

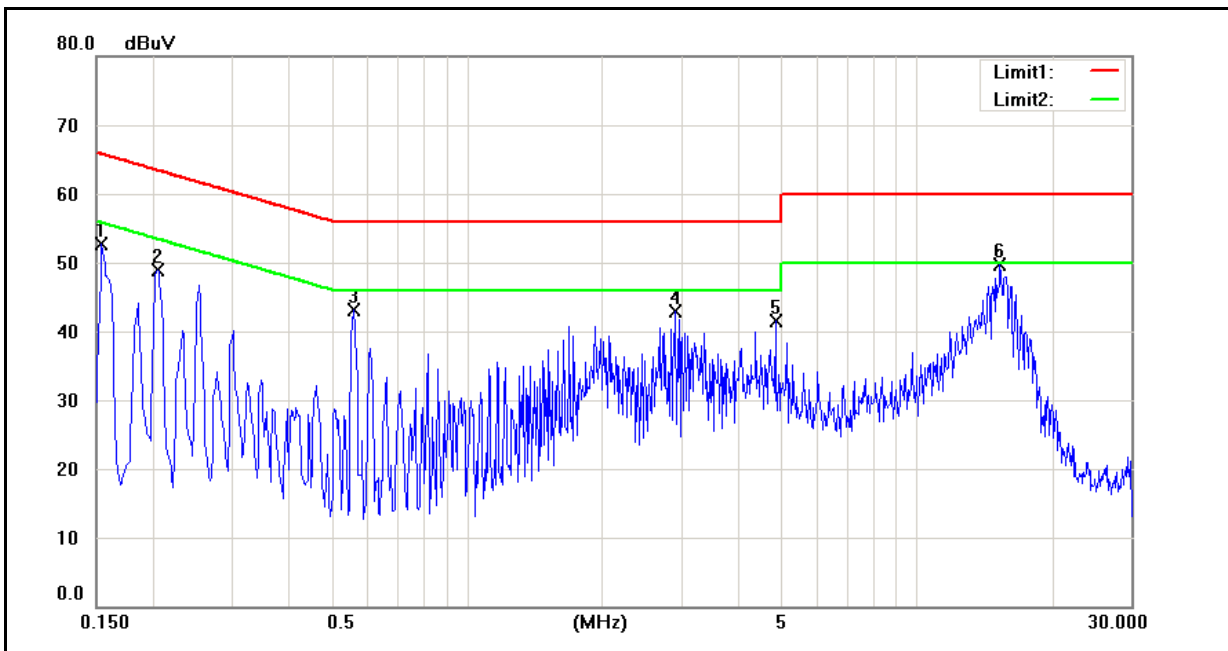
4.5. Test Result

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Line: | L1 |
| Test item: | Conducted Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 1 | Date: | 02/01/2012 |
| | | Test By: | Fly Lu |
| Description: | | | |



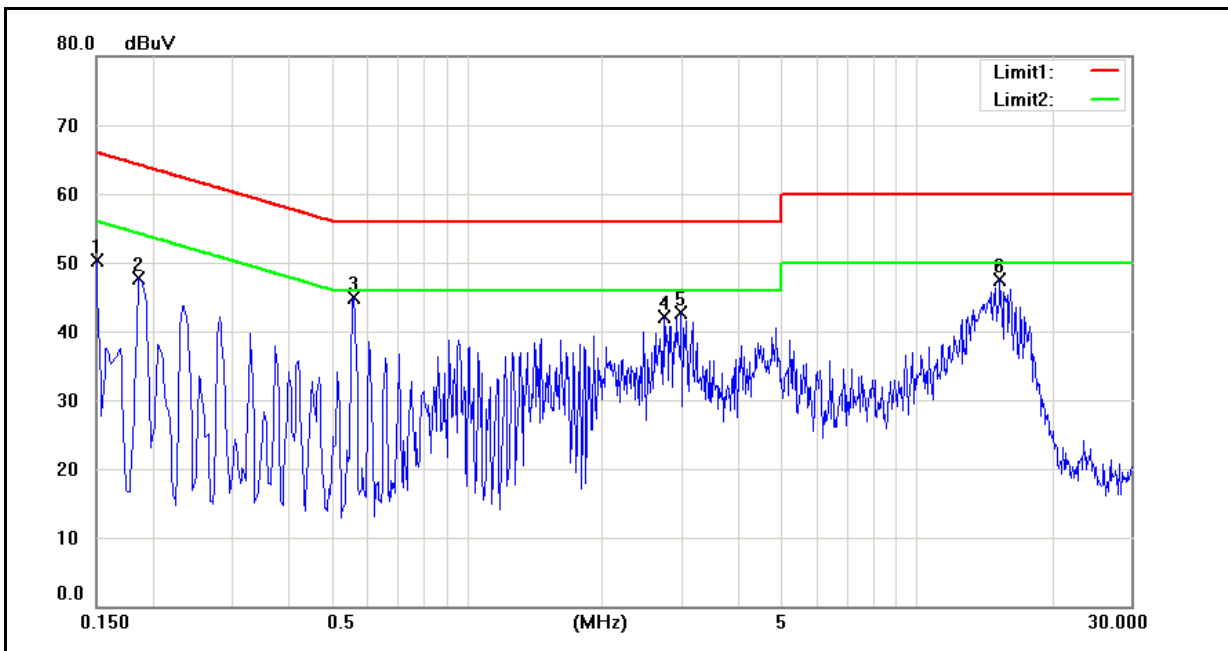
| No. | Frequency (MHz) | QP reading (dBuV) | AVG reading (dBuV) | Correction factor (dB) | QP result (dBuV) | AVG result (dBuV) | QP limit (dBuV) | AVG limit (dBuV) | QP margin (dB) | AVG margin (dB) | Remark |
|-----|-----------------|-------------------|--------------------|------------------------|------------------|-------------------|-----------------|------------------|----------------|-----------------|--------|
| 1 | 0.1900 | 33.35 | 11.79 | 9.59 | 42.94 | 21.38 | 64.04 | 54.04 | -21.10 | -32.66 | Pass |
| 2 | 0.2380 | 30.91 | 11.09 | 9.59 | 40.50 | 20.68 | 62.17 | 52.17 | -21.67 | -31.49 | Pass |
| 3 | 0.5620 | 33.92 | 27.82 | 9.59 | 43.51 | 37.41 | 56.00 | 46.00 | -12.49 | -8.59 | Pass |
| 4 | 2.8580 | 25.54 | 18.34 | 9.69 | 35.23 | 28.03 | 56.00 | 46.00 | -20.77 | -17.97 | Pass |
| 5 | 4.8220 | 22.03 | 6.76 | 9.62 | 31.65 | 16.38 | 56.00 | 46.00 | -24.35 | -29.62 | Pass |
| 6 | 15.8540 | 33.11 | 21.28 | 9.89 | 43.00 | 31.17 | 60.00 | 50.00 | -17.00 | -18.83 | Pass |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Line: | N |
| Test item: | Conducted Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 1 | Date: | 02/01/2012 |
| | | Test By: | Fly Lu |
| Description: | | | |



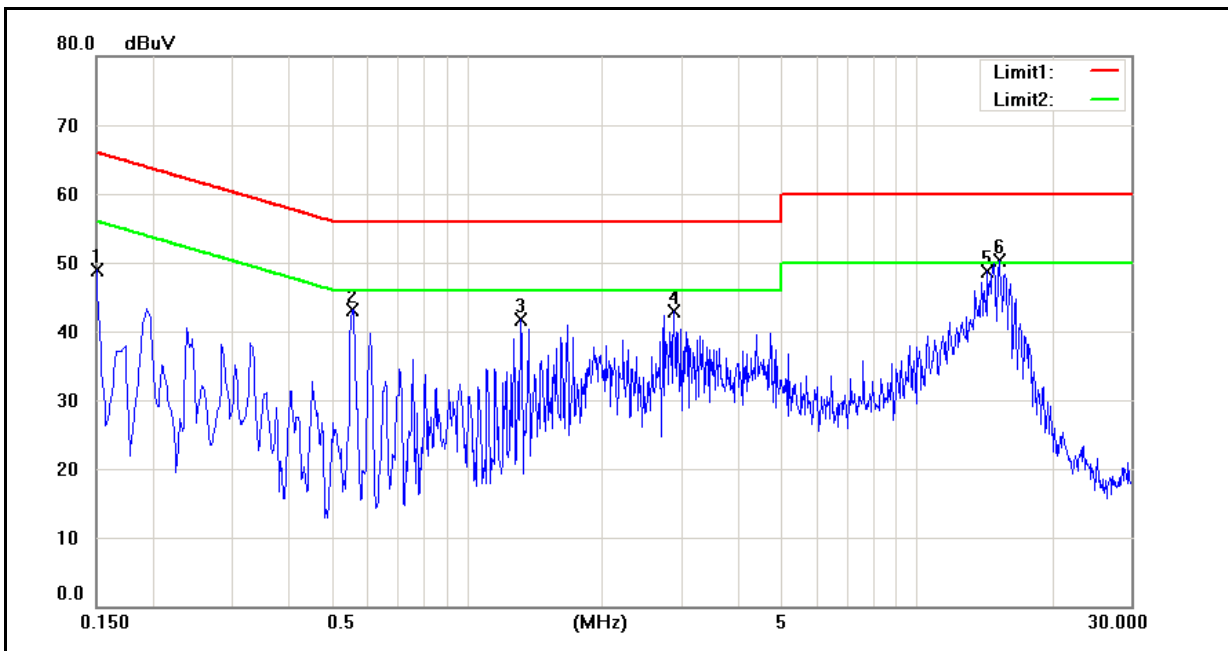
| No. | Frequency (MHz) | QP reading (dBuV) | AVG reading (dBuV) | Correction factor (dB) | QP result (dBuV) | AVG result (dBuV) | QP limit (dBuV) | AVG limit (dBuV) | QP margin (dB) | AVG margin (dB) | Remark |
|-----|-----------------|-------------------|--------------------|------------------------|------------------|-------------------|-----------------|------------------|----------------|-----------------|--------|
| 1 | 0.1540 | 41.66 | 27.55 | 9.67 | 51.33 | 37.22 | 65.78 | 55.78 | -14.45 | -18.56 | Pass |
| 2 | 0.2060 | 36.72 | 23.15 | 9.67 | 46.39 | 32.82 | 63.37 | 53.37 | -16.98 | -20.55 | Pass |
| 3 | 0.5620 | 33.01 | 31.92 | 9.67 | 42.68 | 41.59 | 56.00 | 46.00 | -13.32 | -4.41 | Pass |
| 4 | 2.9140 | 28.80 | 13.59 | 9.76 | 38.56 | 23.35 | 56.00 | 46.00 | -17.44 | -22.65 | Pass |
| 5 | 4.8540 | 25.25 | 11.14 | 9.69 | 34.94 | 20.83 | 56.00 | 46.00 | -21.06 | -25.17 | Pass |
| 6 | 15.3300 | 35.18 | 20.59 | 9.93 | 45.11 | 30.52 | 60.00 | 50.00 | -14.89 | -19.48 | Pass |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Line: | L1 |
| Test item: | Conducted Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 2 | Date: | 02/01/2012 |
| | | Test By: | Fly Lu |
| Description: | | | |



| No. | Frequency (MHz) | QP reading (dBuV) | AVG reading (dBuV) | Correction factor (dB) | QP result (dBuV) | AVG result (dBuV) | QP limit (dBuV) | AVG limit (dBuV) | QP margin (dB) | AVG margin (dB) | Remark |
|-----|-----------------|-------------------|--------------------|------------------------|------------------|-------------------|-----------------|------------------|----------------|-----------------|--------|
| 1 | 0.1500 | 38.28 | 23.32 | 9.59 | 47.87 | 32.91 | 66.00 | 56.00 | -18.13 | -23.09 | Pass |
| 2 | 0.1860 | 28.78 | 8.85 | 9.59 | 38.37 | 18.44 | 64.21 | 54.21 | -25.84 | -35.77 | Pass |
| 3 | 0.5620 | 33.04 | 25.19 | 9.59 | 42.63 | 34.78 | 56.00 | 46.00 | -13.37 | -11.22 | Pass |
| 4 | 2.7420 | 25.98 | 17.17 | 9.68 | 35.66 | 26.85 | 56.00 | 46.00 | -20.34 | -19.15 | Pass |
| 5 | 2.9980 | 29.17 | 17.89 | 9.69 | 38.86 | 27.58 | 56.00 | 46.00 | -17.14 | -18.42 | Pass |
| 6 | 15.3140 | 31.84 | 20.07 | 9.88 | 41.72 | 29.95 | 60.00 | 50.00 | -18.28 | -20.05 | Pass |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Line: | N |
| Test item: | Conducted Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 2 | Date: | 02/01/2012 |
| | | Test By: | Fly Lu |
| Description: | | | |



| No. | Frequency (MHz) | QP reading (dBuV) | AVG reading (dBuV) | Correction factor (dB) | QP result (dBuV) | AVG result (dBuV) | QP limit (dBuV) | AVG limit (dBuV) | QP margin (dB) | AVG margin (dB) | Remark |
|-----|-----------------|-------------------|--------------------|------------------------|------------------|-------------------|-----------------|------------------|----------------|-----------------|--------|
| 1 | 0.1500 | 37.53 | 24.93 | 9.67 | 47.20 | 34.60 | 66.00 | 56.00 | -18.80 | -21.40 | Pass |
| 2 | 0.5580 | 33.70 | 32.74 | 9.67 | 43.37 | 42.41 | 56.00 | 46.00 | -12.63 | -3.59 | Pass |
| 3 | 1.3220 | 26.57 | 12.67 | 9.71 | 36.28 | 22.38 | 56.00 | 46.00 | -19.72 | -23.62 | Pass |
| 4 | 2.8980 | 29.90 | 15.07 | 9.76 | 39.66 | 24.83 | 56.00 | 46.00 | -16.34 | -21.17 | Pass |
| 5 | 14.4300 | 35.13 | 18.07 | 9.88 | 45.01 | 27.95 | 60.00 | 50.00 | -14.99 | -22.05 | Pass |
| 6 | 15.2500 | 35.71 | 21.47 | 9.93 | 45.64 | 31.40 | 60.00 | 50.00 | -14.36 | -18.60 | Pass |

5 Radiated Interference Measurement

5.1. Limit

According to §15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field Strength ($\mu\text{V/m}$ at meter) | Measurement Distance (meters) |
|-----------------|--|-------------------------------|
| 0.009 – 0.490 | 2400 / F (kHz) | 300 |
| 0.490 – 1.705 | 24000 / F (kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |
| 30 - 88 | 100** | 3 |
| 88-216 | 150** | 3 |
| 216-960 | 200** | 3 |
| Above 960 | 500 | 3 |

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

5.2. Test Instruments

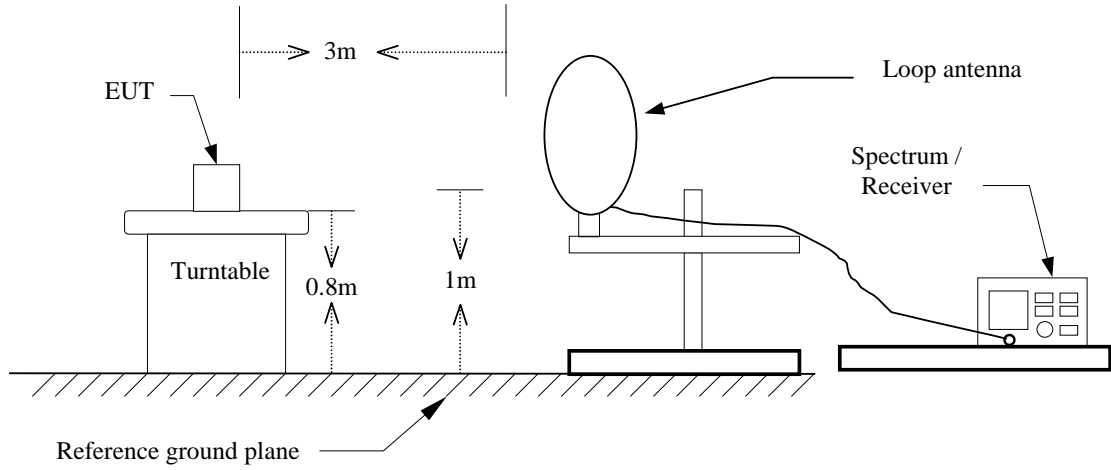
| 3 Meter Chamber | | | | | |
|--------------------------------|--------------------------------|--------------|---------------|------------|--------|
| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
| RF Pre-selector | Agilent | N9039A | MY46520256 | 01/16/2012 | (2) |
| Spectrum Analyzer | Agilent | E4446A | MY46180578 | 01/16/2012 | (1) |
| Pre Amplifier | Agilent | 8449B | 3008A02237 | 02/23/2011 | (1) |
| Pre Amplifier | Agilent | 8447D | 2944A10961 | 02/23/2011 | (1) |
| Broadband Antenna (30MHz~1GHz) | SCHWARZBECK MESS-ELEKTRONIK | VULB9163 | 9163-270 | 07/29/2011 | (1) |
| Horn Antenna (1~18GHz) | SCHWARZBECK MESS-ELEKTRONIK | BBHA9120D | 9120D-550 | 06/29/2011 | (1) |
| Horn Antenna (18~40GHz) | SCHWARZBECK MESS-ELEKTRONIK | BBHA9170 | 9170-320 | 06/28/2011 | (1) |
| Test Site | ATL | TE01 | 888001 | 12/20/2011 | (1) |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

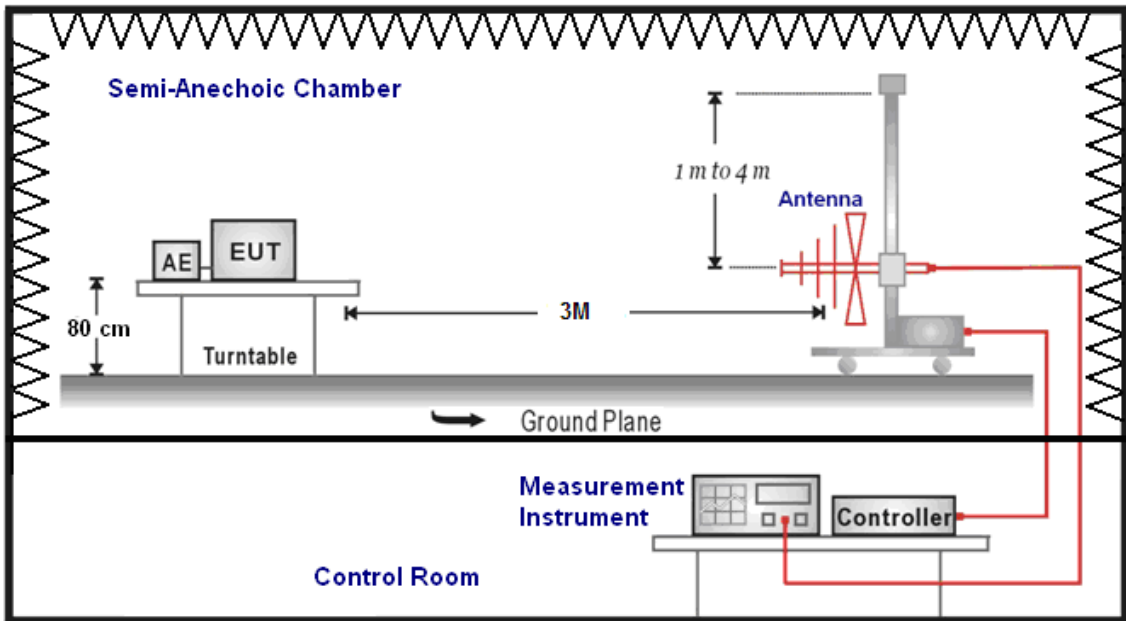
NOTE: N.C.R. = No Calibration Request.

5.3. Setup

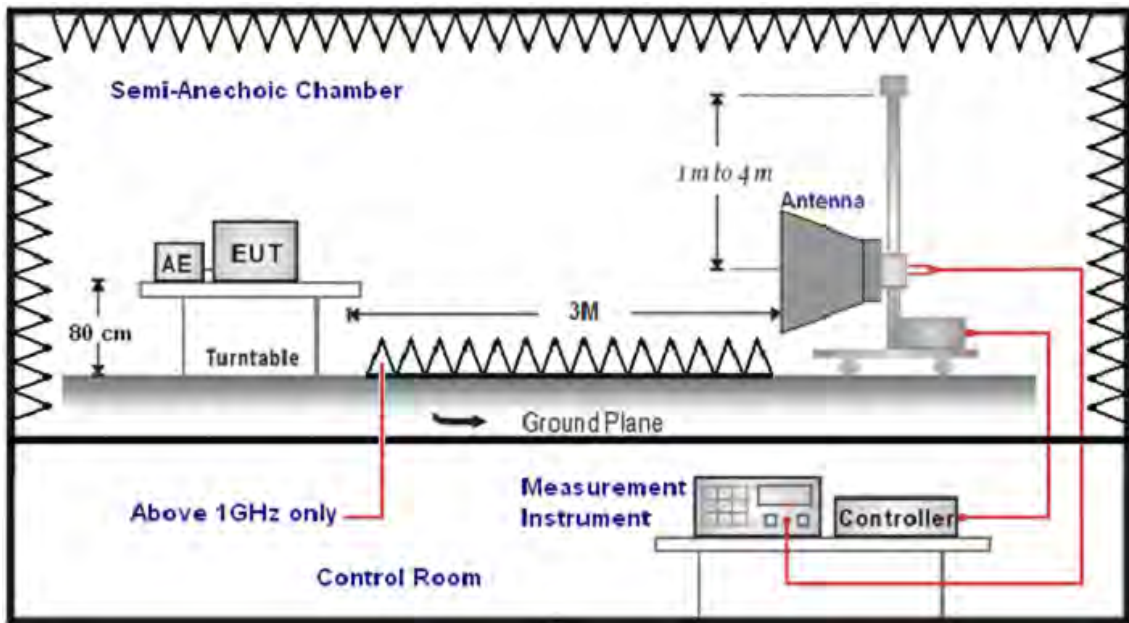
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz



5.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 9 kHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (model VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter ($\mu\text{V}/\text{m}$).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts per meter (dBuV/m).

The actual field intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

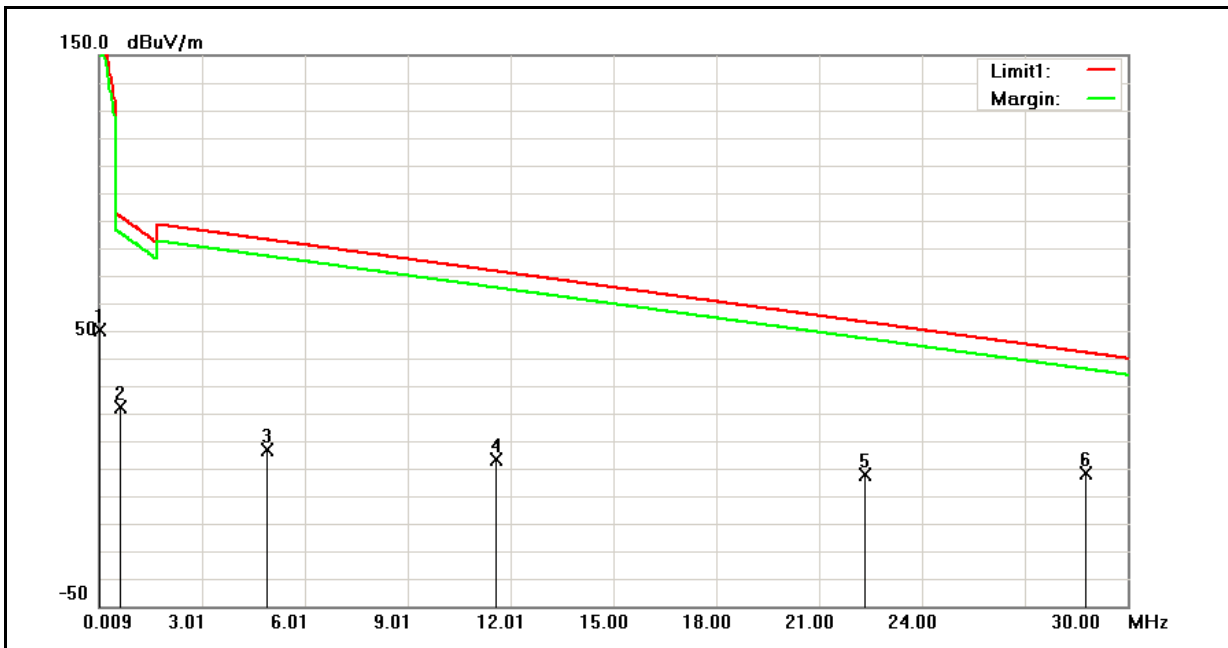
(a) For fundamental frequency : Transmitter Output < +30dBm

(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

5.5. Test Result

Below 1GHz

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 1m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 2 | Date: | 02/21/2012 |
| Ant.Polar.: | Horizontal | Test By: | Fly Lu |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 0.0090 | -65.83 | 17.00 | -48.83 | 48.52 | -97.35 | QP |
| 2 | 0.6088 | -50.34 | 13.67 | -36.67 | 31.91 | -68.58 | QP |
| 3 | 4.8974 | -67.68 | 15.56 | -52.12 | 29.54 | -81.66 | QP |
| 4 | 11.5853 | -69.48 | 13.77 | -55.71 | 29.54 | -85.25 | QP |
| 5 | 22.3521 | -74.66 | 13.14 | -61.52 | 29.54 | -91.06 | QP |
| 6 | 28.7700 | -72.88 | 11.84 | -61.04 | 29.54 | -90.58 | QP |

Note: The level is measured at 1 meter and is converted into result at 300 or 30 meter.

The converted formula listed below:

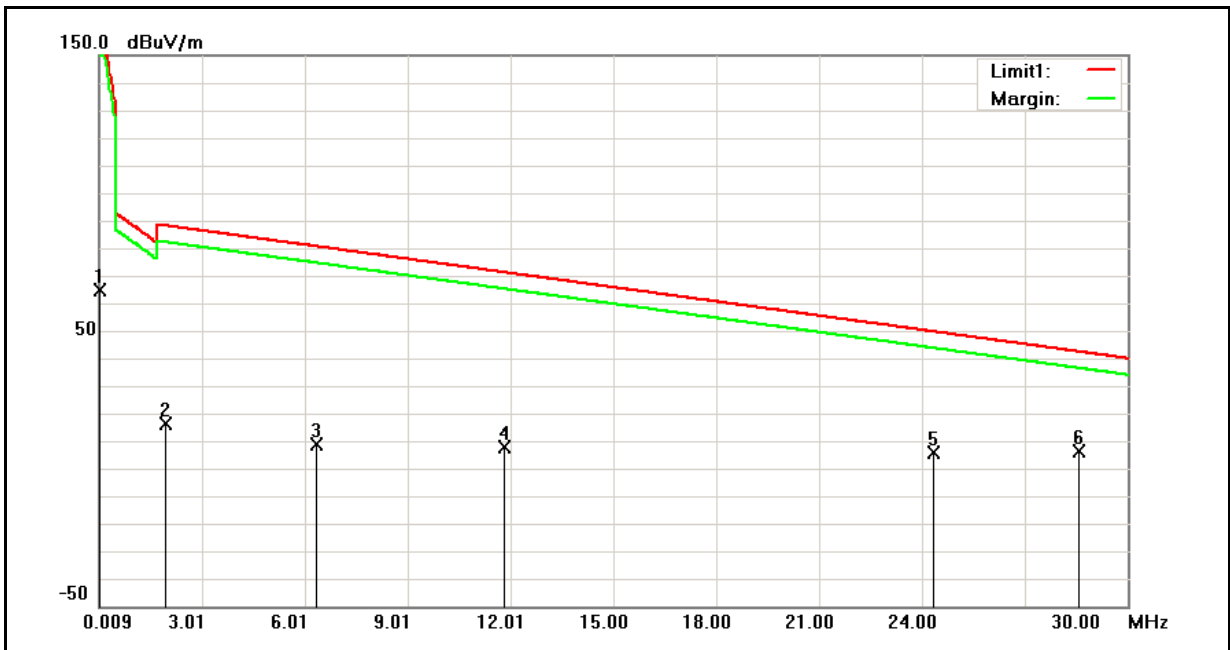
Measure result (1 meter distance): a

Compute result (30 or 300 meter distance): A

$A = a + (40 \cdot \log(1/300 \text{ or } 1/30))$

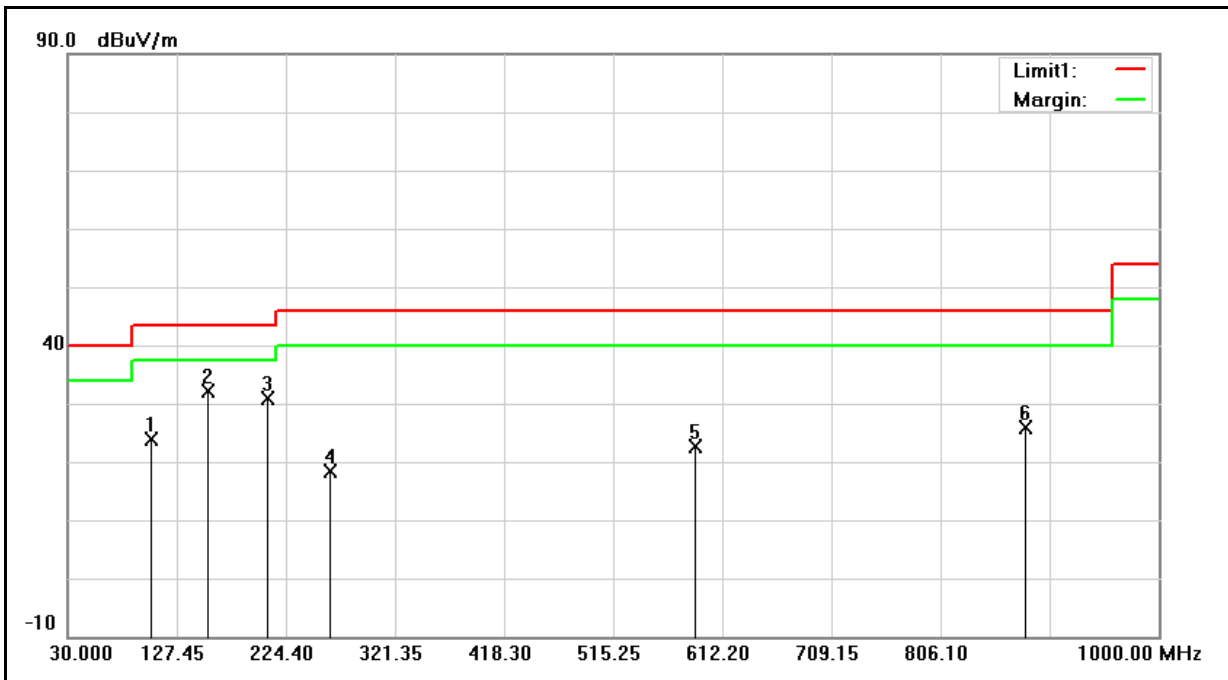
ex. a (0.0090 MHz) = 33.25 dBuV, $A = 33.25 + (40 \cdot \log(1/300)) = -65.83 \text{ dBuV}$

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 1m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 2 | Date: | 02/21/2012 |
| Ant.Polar.: | Vertical | Test By: | Fly Lu |



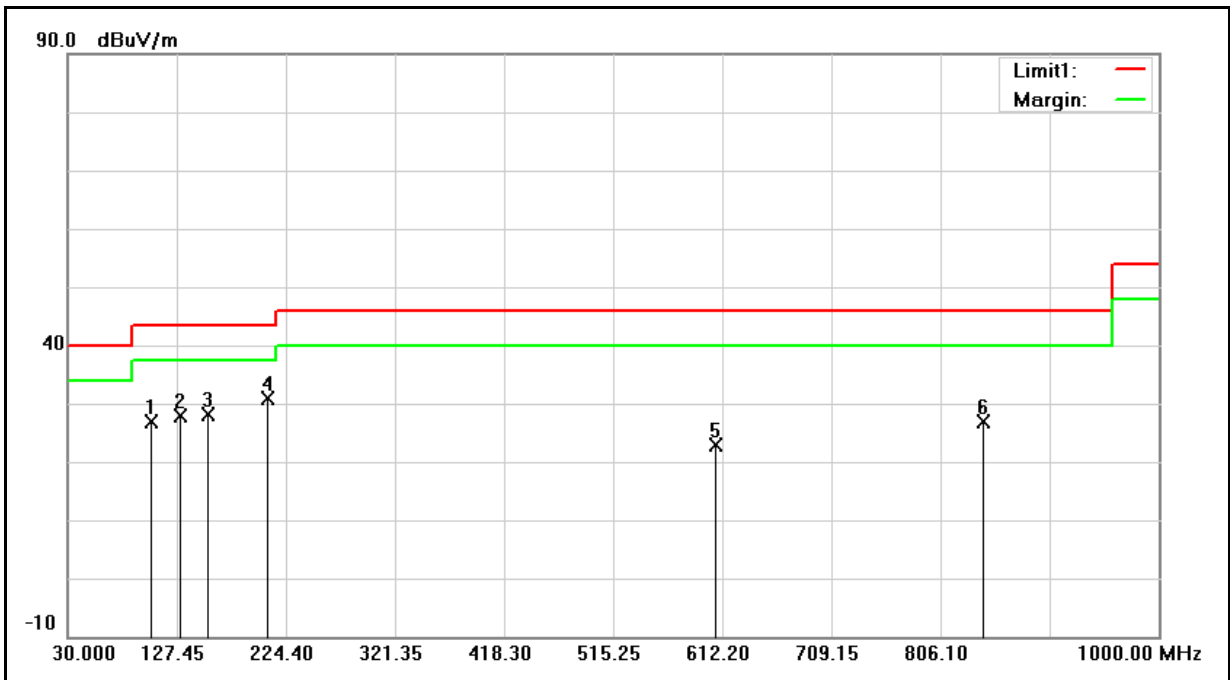
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 0.0090 | -51.25 | 17.00 | -34.25 | 48.52 | -82.77 | QP |
| 2 | 1.9280 | -57.83 | 15.09 | -42.74 | 29.54 | -72.28 | QP |
| 3 | 6.3371 | -65.71 | 15.52 | -50.19 | 29.54 | -79.73 | QP |
| 4 | 11.8254 | -65.10 | 13.72 | -51.38 | 29.54 | -80.92 | QP |
| 5 | 24.3317 | -65.52 | 12.21 | -53.31 | 29.54 | -82.85 | QP |
| 6 | 28.5900 | -64.88 | 11.84 | -53.04 | 29.54 | -82.58 | QP |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 2 | Date: | 01/19/2012 |
| Ant.Polar.: | Horizontal | Test By: | Fly Lu |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 104.0000 | 37.54 | -13.73 | 23.81 | 43.50 | -19.69 | QP |
| 2 | 156.0000 | 48.84 | -16.81 | 32.03 | 43.50 | -11.47 | QP |
| 3 | 208.0000 | 44.82 | -14.05 | 30.77 | 43.50 | -12.73 | QP |
| 4 | 264.0000 | 29.94 | -11.65 | 18.29 | 46.00 | -27.71 | QP |
| 5 | 588.0000 | 27.89 | -5.28 | 22.61 | 46.00 | -23.39 | QP |
| 6 | 882.0000 | 26.17 | -0.31 | 25.86 | 46.00 | -20.14 | QP |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 2 | Date: | 01/19/2012 |
| Ant.Polar.: | Vertical | Test By: | Fly Lu |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 104.0000 | 40.58 | -13.73 | 26.85 | 43.50 | -16.65 | QP |
| 2 | 130.0000 | 44.83 | -16.95 | 27.88 | 43.50 | -15.62 | QP |
| 3 | 156.0000 | 44.99 | -16.81 | 28.18 | 43.50 | -15.32 | QP |
| 4 | 208.0000 | 44.84 | -14.05 | 30.79 | 43.50 | -12.71 | QP |
| 5 | 607.0000 | 27.63 | -4.82 | 22.81 | 46.00 | -23.19 | QP |
| 6 | 844.0000 | 27.87 | -0.98 | 26.89 | 46.00 | -19.11 | QP |

Above 1GHz

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 3 | Date: | 01/19/2012 |
| Frequency: | 2402 MHz | Test By: | Fly Lu |

| Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Ant.Polar. H / V |
|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|------------------|
| 2428.000 | 41.08 | 0.11 | 41.19 | 74.00 | -32.81 | peak | H |
| 4052.000 | 38.26 | 5.49 | 43.75 | 74.00 | -30.25 | peak | H |
| 5606.000 | 35.92 | 10.18 | 46.10 | 74.00 | -27.90 | peak | H |
| 2463.000 | 40.92 | 0.27 | 41.19 | 74.00 | -32.81 | peak | V |
| 3849.000 | 38.59 | 4.72 | 43.31 | 74.00 | -30.69 | peak | V |
| 5480.000 | 36.44 | 9.93 | 46.37 | 74.00 | -27.63 | peak | V |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 3 | Date: | 01/19/2012 |
| Frequency: | 2441 MHz | Test By: | Fly Lu |

| Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Ant.Polar. H / V |
|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|------------------|
| 2806.000 | 40.29 | 1.52 | 41.81 | 74.00 | -32.19 | peak | H |
| 4269.000 | 37.84 | 6.20 | 44.04 | 74.00 | -29.96 | peak | H |
| 5641.000 | 37.33 | 10.24 | 47.57 | 74.00 | -26.43 | peak | H |
| 2484.000 | 42.11 | 0.35 | 42.46 | 74.00 | -31.54 | peak | V |
| 4269.000 | 38.02 | 6.20 | 44.22 | 74.00 | -29.78 | peak | V |
| 6054.000 | 36.83 | 11.10 | 47.93 | 74.00 | -26.07 | peak | V |

| Standard: | FCC Part 15C | | | Test Distance: | 3m | | |
|-----------------|--------------------|----------------------|-----------------|----------------------|--------------|--------|------------------|
| Test item: | Radiated Emission | | | Power: | AC 120V/60Hz | | |
| Model Number: | Doro PhoneEasy 610 | | | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH | | |
| Mode: | Mode 3 | | | Date: | 01/19/2012 | | |
| Frequency: | 2480 MHz | | | Test By: | Fly Lu | | |
| Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Ant.Polar. H / V |
| 2477.000 | 41.46 | 0.33 | 41.79 | 74.00 | -32.21 | peak | H |
| 4143.000 | 38.34 | 5.80 | 44.14 | 74.00 | -29.86 | peak | H |
| 5249.000 | 36.47 | 9.24 | 45.71 | 74.00 | -28.29 | peak | H |
| 2778.000 | 40.54 | 1.42 | 41.96 | 74.00 | -32.04 | peak | V |
| 4066.000 | 38.77 | 5.54 | 44.31 | 74.00 | -29.69 | peak | V |
| 5676.000 | 36.77 | 10.29 | 47.06 | 74.00 | -26.94 | peak | V |

| Standard: | FCC Part 15C | | | Test Distance: | 3m | | |
|-----------------|--------------------|----------------------|-----------------|----------------------|--------------|--------|------------------|
| Test item: | Radiated Emission | | | Power: | AC 120V/60Hz | | |
| Model Number: | Doro PhoneEasy 610 | | | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH | | |
| Mode: | Mode 5 | | | Date: | 01/19/2012 | | |
| Frequency: | 2402 MHz | | | Test By: | Fly Lu | | |
| Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Ant.Polar. H / V |
| 2484.000 | 40.72 | 0.35 | 41.07 | 74.00 | -32.93 | peak | H |
| 4234.000 | 37.69 | 6.08 | 43.77 | 74.00 | -30.23 | peak | H |
| 5900.000 | 35.87 | 10.69 | 46.56 | 74.00 | -27.44 | peak | H |
| 2435.000 | 41.39 | 0.15 | 41.54 | 74.00 | -32.46 | peak | V |
| 4542.000 | 37.58 | 7.09 | 44.67 | 74.00 | -29.33 | peak | V |
| 5921.000 | 35.30 | 10.72 | 46.02 | 74.00 | -27.98 | peak | V |

| Standard: | FCC Part 15C | | | Test Distance: | 3m | | |
|-----------------|--------------------|----------------------|-----------------|----------------------|--------------|--------|------------------|
| Test item: | Radiated Emission | | | Power: | AC 120V/60Hz | | |
| Model Number: | Doro PhoneEasy 610 | | | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH | | |
| Mode: | Mode 5 | | | Date: | 01/19/2012 | | |
| Frequency: | 2441 MHz | | | Test By: | Fly Lu | | |
| Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Ant.Polar. H / V |
| 2449.000 | 41.68 | 0.20 | 41.88 | 74.00 | -32.12 | peak | H |
| 4549.000 | 37.68 | 7.11 | 44.79 | 74.00 | -29.21 | peak | H |
| 5872.000 | 36.25 | 10.64 | 46.89 | 74.00 | -27.11 | peak | H |
| 2526.000 | 40.47 | 0.53 | 41.00 | 74.00 | -33.00 | peak | V |
| 4122.000 | 37.83 | 5.73 | 43.56 | 74.00 | -30.44 | peak | V |
| 5858.000 | 36.16 | 10.61 | 46.77 | 74.00 | -27.23 | peak | V |

| Standard: | FCC Part 15C | | | Test Distance: | 3m | | |
|-----------------|--------------------|----------------------|-----------------|----------------------|--------------|--------|------------------|
| Test item: | Radiated Emission | | | Power: | AC 120V/60Hz | | |
| Model Number: | Doro PhoneEasy 610 | | | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH | | |
| Mode: | Mode 5 | | | Date: | 01/19/2012 | | |
| Frequency: | 2480 MHz | | | Test By: | Fly Lu | | |
| Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Ant.Polar. H / V |
| 2428.000 | 41.22 | 0.11 | 41.33 | 74.00 | -32.67 | peak | H |
| 4346.000 | 37.17 | 6.45 | 43.62 | 74.00 | -30.38 | peak | H |
| 6187.000 | 35.76 | 11.69 | 47.45 | 74.00 | -26.55 | peak | H |
| 2519.000 | 41.24 | 0.49 | 41.73 | 74.00 | -32.27 | peak | V |
| 4234.000 | 36.74 | 6.08 | 42.82 | 74.00 | -31.18 | peak | V |
| 5879.000 | 35.61 | 10.66 | 46.27 | 74.00 | -27.73 | peak | V |

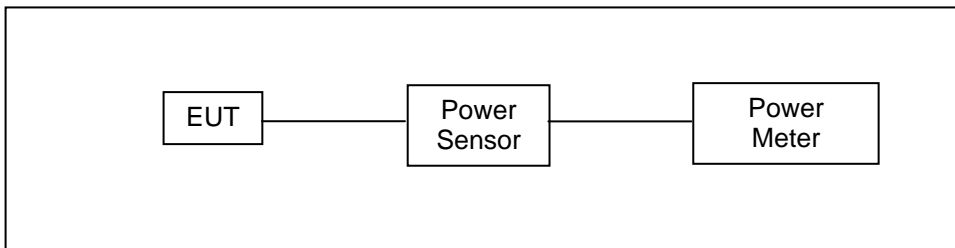
| Standard: | FCC Part 15C | | | Test Distance: | 3m | | | |
|--------------------|--------------------|-------------------------|--------------------|------------------------|------------------------|----------------|--------|---------------------|
| Test item: | Radiated Emission | | | Power: | AC 120V/60Hz | | | |
| Model Number: | Doro PhoneEasy 610 | | | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH | | | |
| Mode: | Mode 6 | | | Date: | 01/19/2012 | | | |
| Frequency: | 2441 MHz | | | Test By: | Fly Lu | | | |
| Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Peak Limit (dBuV/m) | AVG. Limit (dBuV/m) | Margin (dB) | Remark | Ant.Polar. H / V |
| 2421.000 | 40.98 | 0.07 | 41.05 | 74.00 | 54.00 | -32.95 | peak | H |
| 4675.000 | 36.67 | 7.50 | 44.17 | 74.00 | 54.00 | -29.83 | peak | H |
| 5984.000 | 34.87 | 10.83 | 45.70 | 74.00 | 54.00 | -28.30 | peak | H |
| 2463.000 | 41.40 | 0.27 | 41.67 | 74.00 | 54.00 | -32.33 | peak | V |
| 4269.000 | 37.44 | 6.20 | 43.64 | 74.00 | 54.00 | -30.36 | peak | V |
| 5921.000 | 36.59 | 10.72 | 47.31 | 74.00 | 54.00 | -26.69 | peak | V |

6 Maximum Conducted Output Power Measurement

6.1. Limit

For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels < 1 watt.

6.2. Test Setup



6.3. Test Instruments

| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
|--------------------------------|--------------|--------------|---------------|------------|--------|
| Single Channel PK Power Sensor | Agilent | N1911A | MY45101619 | 07/19/2010 | (2) |
| Wideband Power Meter | Agilent | N1921A | MY45241957 | 07/19/2010 | (2) |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

6.4. Test Procedure

The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to power sensor. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the power sensor, for prevent the power sensor input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to (GAIN - 6)/3 dBm.

The antenna port of the EUT was connected to the input of a power sensor. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

6.5. Test Result

| Model Number | Doro PhoneEasy 610 | | | | | |
|-----------------|--------------------------------|---------------|---------|--------------|----------------|-----------|
| Test Item | Maximum Conducted Output Power | | | | | |
| Test Mode | Mode 3: GFSK Link Mode | | | | | |
| Date of Test | 01/17/2012 | | | Test Site | TE02 | |
| Frequency (MHz) | Packet Type | Average Power | | Peak Power | | Limit (W) |
| | | (dBm) | (W) | (dBm) | (W) | |
| 2402 | DH1 | 9.08 | 0.00809 | 9.33 | 0.00857 | < 1 |
| | DH3 | 9.09 | 0.00811 | 9.34 | 0.00859 | < 1 |
| | DH5 | 9.09 | 0.00811 | 9.34 | 0.00859 | < 1 |
| 2441 | DH1 | 9.62 | 0.00916 | 9.85 | 0.00966 | < 1 |
| | DH3 | 9.62 | 0.00916 | 9.87 | 0.00971 | < 1 |
| | DH5 | 9.61 | 0.00914 | 9.85 | 0.00966 | < 1 |
| 2480 | DH1 | 9.97 | 0.00993 | 10.18 | 0.01042 | < 1 |
| | DH3 | 9.97 | 0.00993 | 10.17 | 0.01040 | < 1 |
| | DH5 | 9.98 | 0.00995 | 10.20 | 0.01047 | < 1 |

| Model Number | Doro PhoneEasy 610 | | | | | |
|-----------------|--------------------------------|---------------|---------|--------------|----------------|-----------|
| Test Item | Maximum Conducted Output Power | | | | | |
| Test Mode | Mode 4: $\pi/4$ -DQPSK Mode | | | | | |
| Date of Test | 01/17/2012 | | | Test Site | TE02 | |
| Frequency (MHz) | Packet Type | Average Power | | Peak Power | | Limit (W) |
| | | (dBm) | (W) | (dBm) | (W) | |
| 2402 | DH1 | 7.97 | 0.00627 | 9.22 | 0.00836 | < 1 |
| | DH3 | 7.97 | 0.00627 | 9.20 | 0.00832 | < 1 |
| | DH5 | 7.98 | 0.00628 | 9.20 | 0.00832 | < 1 |
| 2441 | DH1 | 8.52 | 0.00711 | 9.73 | 0.00940 | < 1 |
| | DH3 | 8.52 | 0.00711 | 9.72 | 0.00938 | < 1 |
| | DH5 | 8.52 | 0.00711 | 9.74 | 0.00942 | < 1 |
| 2480 | DH1 | 8.89 | 0.00774 | 10.07 | 0.01016 | < 1 |
| | DH3 | 8.89 | 0.00774 | 10.06 | 0.01014 | < 1 |
| | DH5 | 8.89 | 0.00774 | 10.05 | 0.01012 | < 1 |

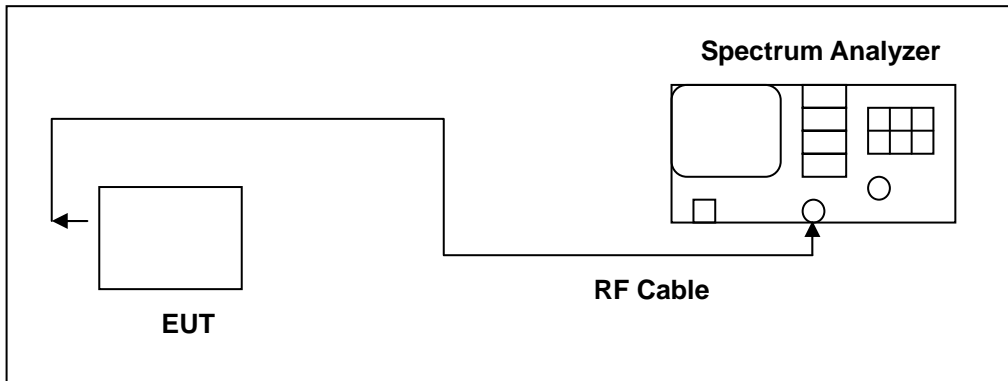
| Model Number | Doro PhoneEasy 610 | | | | | |
|-----------------|--------------------------------|---------------|---------|--------------|----------------|-----------|
| Test Item | Maximum Conducted Output Power | | | | | |
| Test Mode | Mode 5: 8DPSK Link Mode | | | | | |
| Date of Test | 01/17/2012 | | | Test Site | TE02 | |
| Frequency (MHz) | Packet Type | Average Power | | Peak Power | | Limit (W) |
| | | (dBm) | (W) | (dBm) | (W) | |
| 2402 | DH1 | 7.96 | 0.00625 | 9.48 | 0.00887 | < 1 |
| | DH3 | 7.97 | 0.00627 | 9.43 | 0.00877 | < 1 |
| | DH5 | 7.97 | 0.00627 | 9.41 | 0.00873 | < 1 |
| 2441 | DH1 | 8.52 | 0.00711 | 10.01 | 0.01002 | < 1 |
| | DH3 | 8.51 | 0.00710 | 9.93 | 0.00984 | < 1 |
| | DH5 | 8.51 | 0.00710 | 9.96 | 0.00991 | < 1 |
| 2480 | DH1 | 8.89 | 0.00774 | 10.29 | 0.01069 | < 1 |
| | DH3 | 8.88 | 0.00773 | 10.29 | 0.01069 | < 1 |
| | DH5 | 8.89 | 0.00774 | 10.37 | 0.01089 | < 1 |

7 Minimum 20dB RF Bandwidth Measurement

7.1. Limit

N/A

7.2. Test Setup



7.3. Test Instruments

| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
|-------------------|--------------|--------------|---------------|------------|--------|
| Spectrum Analyzer | Agilent | E4445A | MY45300744 | 12/28/2010 | (2) |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

7.4. Test Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

1. Span = approx. 2 to 3 times the 20dB bandwidth, centered on a hopping frequency
2. RBW \geq 1% of the 20dB span
3. VBW \geq RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

The trace was allowed to stabilize. The EUT was transmitting at its maximum data rate. The marker-to-peak function was used to set the marker to the peak of the emission. The marker-delta function was used to measure 20dB down one side of the emission. The marker-delta function and marker was moved to the other side of the emission until it was even with the reference marker. The marker-delta reading at this point was the 20dB bandwidth of the emission.

7.5. Test Result

| | | | |
|-----------------|---------------------------|-------------|------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | Minimum 20dB RF Bandwidth | | |
| Test Mode | Mode 3: GFSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| Frequency (MHz) | Measurement (MHz) | Limit (MHz) | |
| 2402 | 1.02300 | ----- | |
| 2441 | 0.96880 | ----- | |
| 2480 | 1.03900 | ----- | |

| | | | |
|-----------------|---------------------------|-------------|------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | Minimum 20dB RF Bandwidth | | |
| Test Mode | Mode 5: 8DPSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| Frequency (MHz) | 20dB Bandwidth (MHz) | Limit (MHz) | |
| 2402 | 1.301 | ----- | |
| 2441 | 1.251 | ----- | |
| 2480 | 1.249 | ----- | |

7.6. Test Graphs

| Mode 3: GFSK Link Mode | |
|------------------------|---|
| 2402 | <p>Agilent R T Freq/Channel</p> <p>Ch Freq 2.402 GHz Trig Free</p> <p>Center Freq 2.40200000 GHz</p> <p>Start Freq 2.40050000 GHz</p> <p>Stop Freq 2.40350000 GHz</p> <p>CF Step 300.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20.3 dBm #Atten 30 dB</p> <p>#Samp Log 10 dB/Offset 0.3 dB</p> <p>Center 2.402 GHz Span 3 MHz</p> <p>#Res BW 30 kHz #VBW 100 kHz Sweep 5.425 ms (401 pts)</p> <p>Occupied Bandwidth 896.9205 kHz Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -2.563 kHz x dB Bandwidth 1.023 MHz*</p> |
| 2441 | <p>Agilent R T Freq/Channel</p> <p>Ch Freq 2.441 GHz Trig Free</p> <p>Center Freq 2.44100000 GHz</p> <p>Start Freq 2.43950000 GHz</p> <p>Stop Freq 2.44250000 GHz</p> <p>CF Step 300.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20.3 dBm #Atten 30 dB</p> <p>#Samp Log 10 dB/Offset 0.3 dB</p> <p>Center 2.441 GHz Span 3 MHz</p> <p>#Res BW 30 kHz #VBW 100 kHz Sweep 5.425 ms (401 pts)</p> <p>Occupied Bandwidth 885.7376 kHz Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -4.089 kHz x dB Bandwidth 968.799 kHz*</p> |
| 2480 | <p>Agilent R T Freq/Channel</p> <p>Ch Freq 2.48 GHz Trig Free</p> <p>Center Freq 2.48000000 GHz</p> <p>Start Freq 2.47850000 GHz</p> <p>Stop Freq 2.48150000 GHz</p> <p>CF Step 300.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20.3 dBm #Atten 30 dB</p> <p>#Samp Log 10 dB/Offset 0.3 dB</p> <p>Center 2.48 GHz Span 3 MHz</p> <p>#Res BW 30 kHz #VBW 100 kHz Sweep 5.425 ms (401 pts)</p> <p>Occupied Bandwidth 927.3417 kHz Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -3.119 kHz x dB Bandwidth 1.039 MHz*</p> |

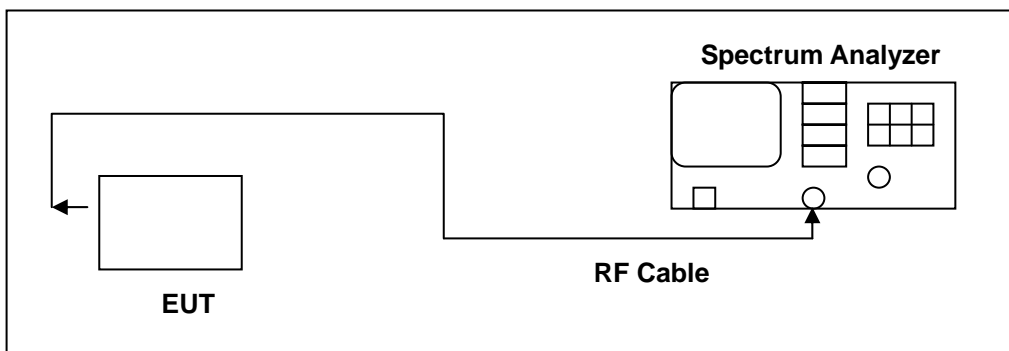
| Mode 5: 8DPSK Link Mode | |
|-------------------------|--|
| 2402 | <p>Agilent R T</p> <p>Ch Freq 2.402 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20.3 dBm #Atten 30 dB</p> <p>#Samp Log 10 dB/Offset 0.3 dB</p> <p>Center 2.402 GHz Span 3 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 5.425 ms (401 pts)</p> <p>Occupied Bandwidth 1.1817 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -6.067 kHz x dB Bandwidth 1.301 MHz*</p> <p>Freq/Channel</p> <p>Center Freq 2.4020000 GHz</p> <p>Start Freq 2.4005000 GHz</p> <p>Stop Freq 2.4035000 GHz</p> <p>CF Step 300.000000 kHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> |
| 2441 | <p>Agilent R T</p> <p>Ch Freq 2.441 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20.3 dBm #Atten 30 dB</p> <p>#Samp Log 10 dB/Offset 0.3 dB</p> <p>Center 2.441 GHz Span 3 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 5.425 ms (401 pts)</p> <p>Occupied Bandwidth 1.1687 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -3.711 kHz x dB Bandwidth 1.251 MHz*</p> <p>Freq/Channel</p> <p>Center Freq 2.4410000 GHz</p> <p>Start Freq 2.4395000 GHz</p> <p>Stop Freq 2.4425000 GHz</p> <p>CF Step 300.000000 kHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> |
| 2480 | <p>Agilent R T</p> <p>Ch Freq 2.48 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20.3 dBm #Atten 30 dB</p> <p>#Samp Log 10 dB/Offset 0.3 dB</p> <p>Center 2.48 GHz Span 3 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 5.425 ms (401 pts)</p> <p>Occupied Bandwidth 1.1582 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -2.896 kHz x dB Bandwidth 1.249 MHz*</p> <p>Freq/Channel</p> <p>Center Freq 2.4800000 GHz</p> <p>Start Freq 2.4785000 GHz</p> <p>Stop Freq 2.4815000 GHz</p> <p>CF Step 300.000000 kHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> |

8 Carrier Frequency Separation Measurement

8.1. Limit

Title 47 of the CFR, Part 15 Subpart (c) 15.247(a)(1)(i) requires the measurement of the bandwidth of the transmission between the -20 dB points on the transmitted spectrum. The results of this test determine the limits for channel spacing. The channel spacing shall be a minimum of 25 kHz or the 20 dB bandwidth.

8.2. Test Setup



8.3. Test Instruments

| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
|-------------------|--------------|--------------|---------------|------------|--------|
| Spectrum Analyzer | Agilent | E4445A | MY45300744 | 12/28/2010 | (2) |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

8.4. Test Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth transmitter of the V6 had its hopping function enabled. The following spectrum analyzer settings were used:

1. Span = wide enough to capture the peaks of two adjacent channels
2. Resolution (or IF) Bandwidth (RBW) \geq 1% of the span
3. Video (or Average) Bandwidth (VBW) \geq RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

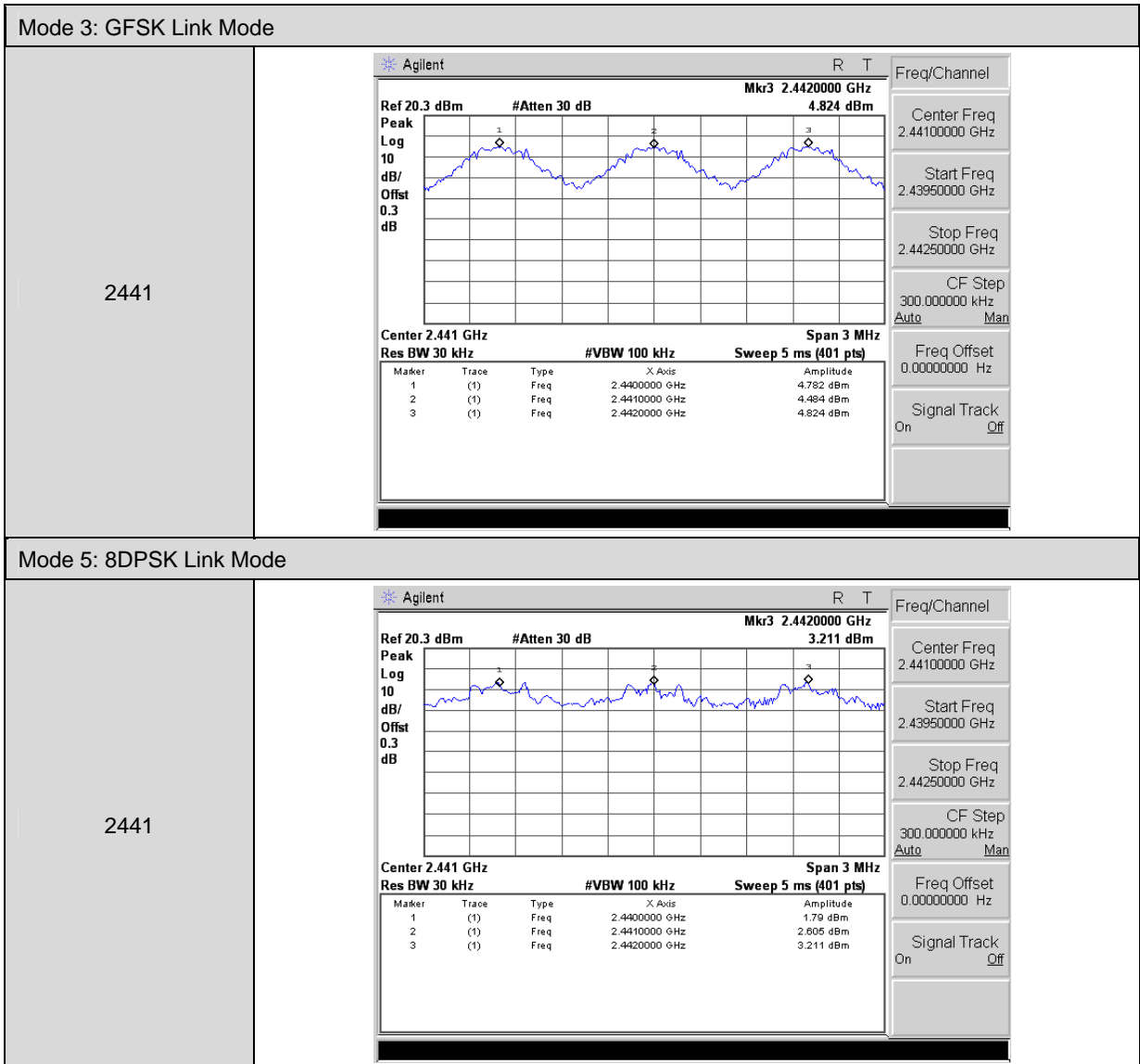
The trace was allowed to stabilize. The marker-delta function was used to determine the separation between the peaks of the adjacent channels.

8.5. Test Result

| | | | |
|-----------------|------------------------------|-------------|------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | Carrier Frequency Separation | | |
| Test Mode | Mode 3: GFSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| Frequency (MHz) | Measurement (MHz) | Limit (MHz) | |
| 2441 | 1 | > 0.693 | |

| | | | |
|-----------------|------------------------------|-------------|------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | Carrier Frequency Separation | | |
| Test Mode | Mode 5: 8DPSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| Frequency (MHz) | Measurement (MHz) | Limit (MHz) | |
| 2441 | 1 | > 0.867 | |

8.6. Test Graphs

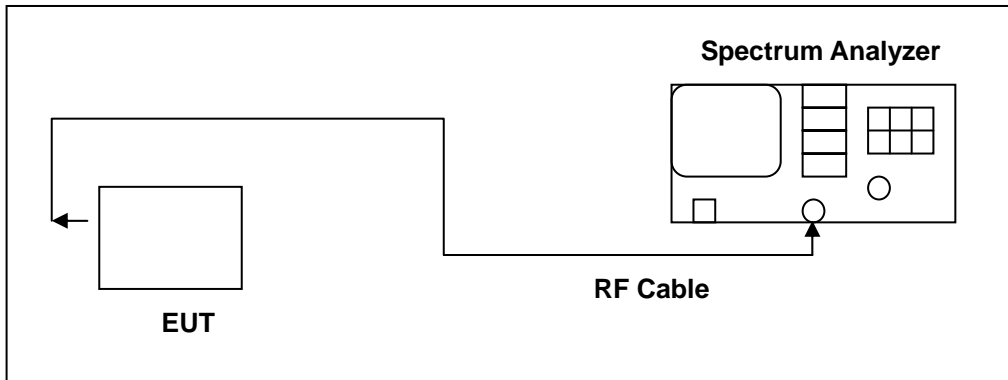


9 Number of Hopping Measurement

9.1. Limit

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels.

9.2. Test Setup



9.3. Test Instruments

| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
|-------------------|--------------|--------------|---------------|------------|--------|
| Spectrum Analyzer | Agilent | E4445A | MY45300744 | 12/28/2010 | (2) |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

9.4. Test Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

1. Span = the frequency band of operation
2. RBW \geq 1% of the span
3. VBW \geq RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

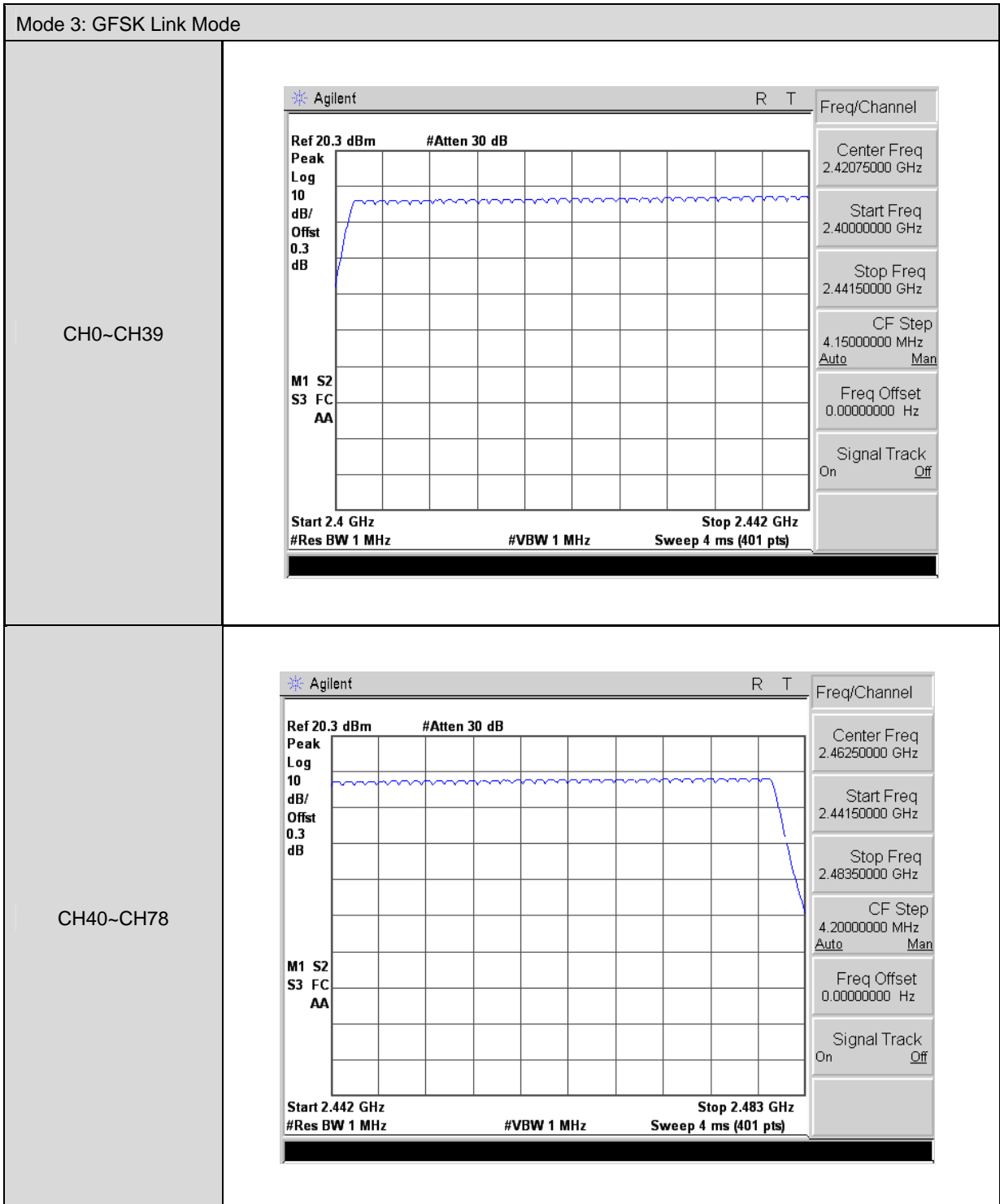
The trace was allowed to stabilize.

9.5. Test Result

| | | | |
|-----------------------|------------------------|-----------|------------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | Number of Hopping | | |
| Test Mode | Mode 3: GFSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| Frequency Range (MHz) | Measurement (ch) | | Limit (ch) |
| 2402 - 2480 | 79 | | > 15 |

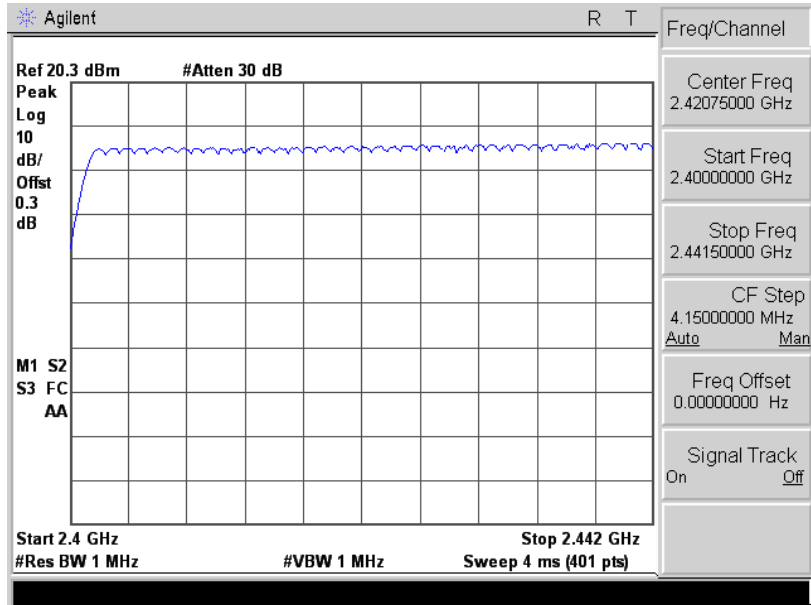
| | | | |
|-----------------------|-------------------------|-----------|------------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | Number of Hopping | | |
| Test Mode | Mode 5: 8DPSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| Frequency Range (MHz) | Measurement (ch) | | Limit (ch) |
| 2402 - 2480 | 79 | | > 15 |

9.6. Test Graphs

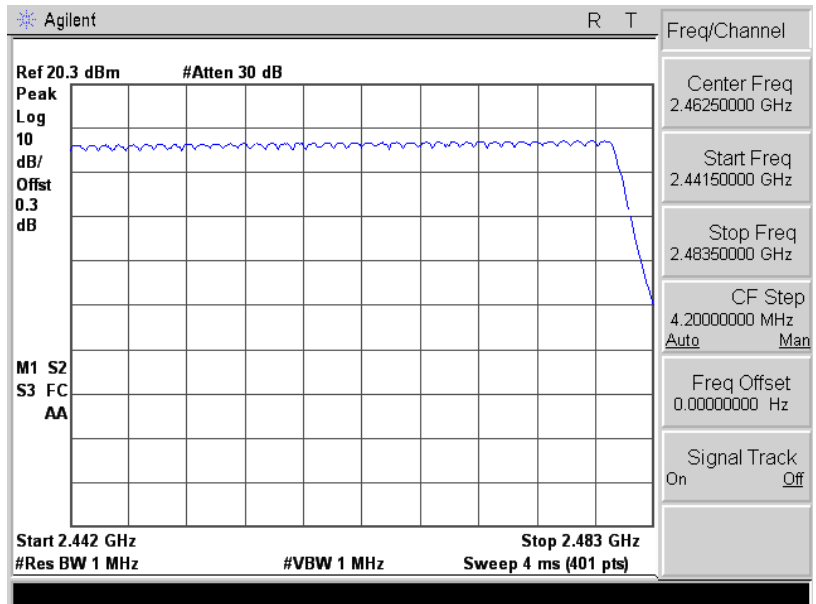


Mode 5: 8DPSK Link Mode

CH0~CH39



CH40~CH78

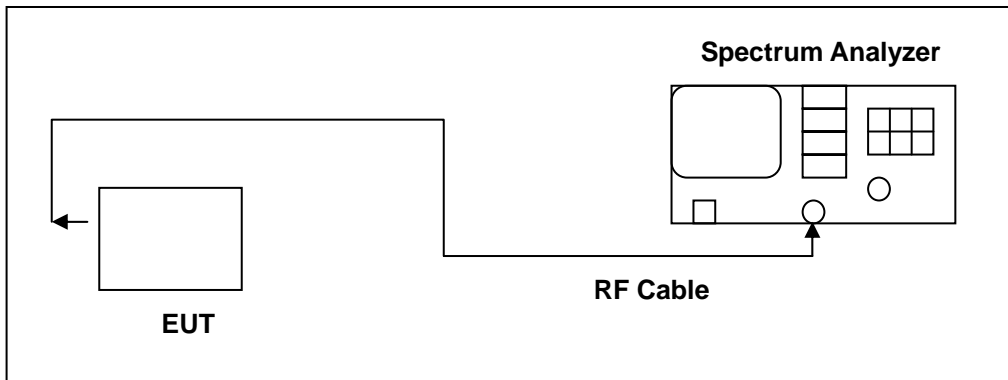


10 Time of Occupancy (Dwell Time) Measurement

10.1.Limit

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

10.2.Test Setup



10.3.Test Instruments

| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
|-------------------|--------------|--------------|---------------|------------|--------|
| Spectrum Analyzer | Agilent | E4445A | MY45300744 | 12/28/2010 | (2) |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

10.4.Test Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth hopping function of the EUT was enabled. The following spectrum analyzer settings were used:

1. Span = zero span, centered on a hopping channel
2. RBW = 1 MHz
3. VBW \geq RBW
4. Sweep = as necessary to capture the entire dwell time per hopping channel
5. Detector function = peak
6. Trace = max hold

The marker-delta function was used to determine the dwell time.

10.5.Test Result

| | | | |
|--------------------------------------|--------------------------------|-----------|------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | Time of Occupancy (Dwell Time) | | |
| Test Mode | Mode 3: GFSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| DH1 | | | |
| Cycle Calculate | 79CH * 0.4 = 31.6 (sec) | | |
| The EUT Hopping Number per Sec | 1600 times/sec | | |
| Each Channel Dwell Times per Sec | 800/79CH = 10.13(times/sec) | | |
| Each Channel Dwell Times (1) | 0.500 | ms (sec) | |
| Each Channel Dwell Times on Cycle(2) | 31.6 * 10.13 = 320.108(times) | | |
| Dwell Times on Cycle (1) * (2) | 160.0540 | ms (sec) | |
| LIMIT(msec) | < = 400 | | |
| DH3 | | | |
| Cycle Calculate | 79CH * 0.4 = 31.6 (sec) | | |
| The EUT Hopping Number per Sec | 1600 times/sec | | |
| Each Channel Dwell Times per Sec | 400/79CH = 5.1(times/sec) | | |
| Each Channel Dwell Times (1) | 1.725 | ms (sec) | |
| Each Channel Dwell Times on Cycle(2) | 31.6 * 5.1 = 161.16(times) | | |
| Dwell Times on Cycle (1) * (2) | 278.0010 | ms (sec) | |
| LIMIT(msec) | < = 400 | | |
| DH5 | | | |
| Cycle Calculate | 79CH * 0.4 = 31.6 (sec) | | |
| The EUT Hopping Number per Sec | 1600 times/sec | | |
| Each Channel Dwell Times per Sec | 266.7/79CH = 3.37(times/sec) | | |
| Each Channel Dwell Times (1) | 2.950 | ms (sec) | |
| Each Channel Dwell Times on Cycle(2) | 31.6 * 3.37 = 106.492(times) | | |
| Dwell Times on Cycle (1) * (2) | 314.1514 | ms (sec) | |
| LIMIT(msec) | < = 400 | | |

| | | | |
|--------------------------------------|--|-----------|------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | Time of Occupancy (Dwell Time) | | |
| Test Mode | Mode 5: 8DPSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| 3DH1 | | | |
| Cycle Calculate | $79\text{CH} * 0.4 = 31.6 \text{ (sec)}$ | | |
| The EUT Hopping Number per Sec | 1600 times/sec | | |
| Each Channel Dwell Times per Sec | $800/79\text{CH} = 10.13(\text{times/sec})$ | | |
| Each Channel Dwell Times (1) | 0.500 | ms (sec) | |
| Each Channel Dwell Times on Cycle(2) | $31.6 * 10.13 = 320.108(\text{times})$ | | |
| Dwell Times on Cycle (1) * (2) | 160.0540 | ms (sec) | |
| LIMIT(msec) | < = 400 | | |
| 3DH3 | | | |
| Cycle Calculate | $79\text{CH} * 0.4 = 31.6 \text{ (sec)}$ | | |
| The EUT Hopping Number per Sec | 1600 times/sec | | |
| Each Channel Dwell Times per Sec | $400/79\text{CH} = 5.1(\text{times/sec})$ | | |
| Each Channel Dwell Times (1) | 1.725 | ms (sec) | |
| Each Channel Dwell Times on Cycle(2) | $31.6 * 5.1 = 161.16(\text{times})$ | | |
| Dwell Times on Cycle (1) * (2) | 278.0010 | ms (sec) | |
| LIMIT(msec) | < = 400 | | |
| 3DH5 | | | |
| Cycle Calculate | $79\text{CH} * 0.4 = 31.6 \text{ (sec)}$ | | |
| The EUT Hopping Number per Sec | 1600 times/sec | | |
| Each Channel Dwell Times per Sec | $266.7/79\text{CH} = 3.37(\text{times/sec})$ | | |
| Each Channel Dwell Times (1) | 2.950 | ms (sec) | |
| Each Channel Dwell Times on Cycle(2) | $31.6 * 3.37 = 106.492(\text{times})$ | | |
| Dwell Times on Cycle (1) * (2) | 314.1514 | ms (sec) | |
| LIMIT(msec) | < = 400 | | |

10.6. Test Graphs

| Mode 3: GFSK Link Mode | |
|------------------------|--|
| DH1 | |
| DH3 | |
| DH5 | |

Mode 5: 8DPSK Link Mode

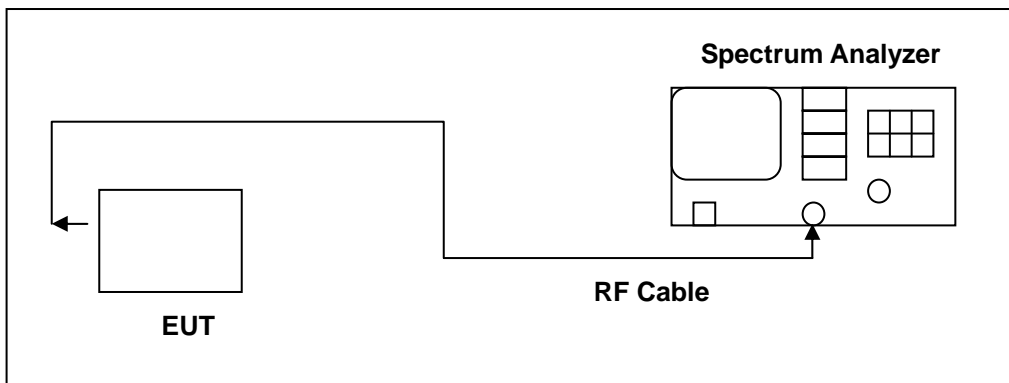
| | |
|-------------|--|
| <p>2DH1</p> | |
| <p>2DH3</p> | |
| <p>2DH5</p> | |

11 Out of Band Conducted Emissions Measurement

11.1.Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

11.2.Test Setup



11.3.Test Instruments

| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
|-------------------|--------------|--------------|---------------|------------|--------|
| Spectrum Analyzer | Agilent | E4445A | MY45300744 | 12/28/2010 | (2) |
| Spectrum Analyzer | Agilent | E4408B | MY45107753 | 07/07/2011 | (1) |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

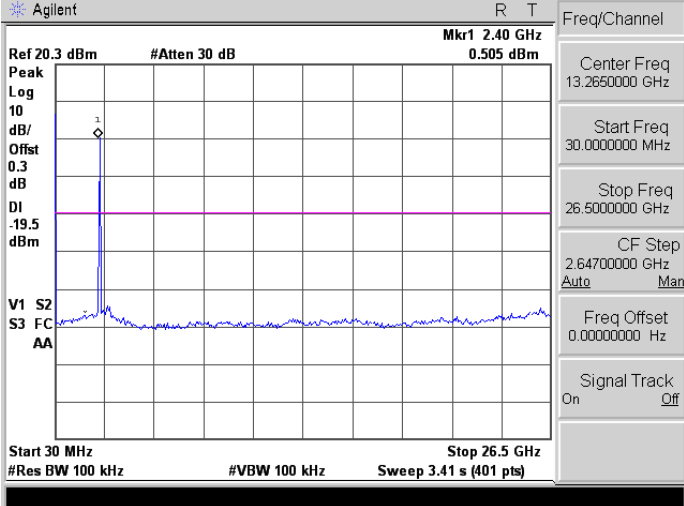
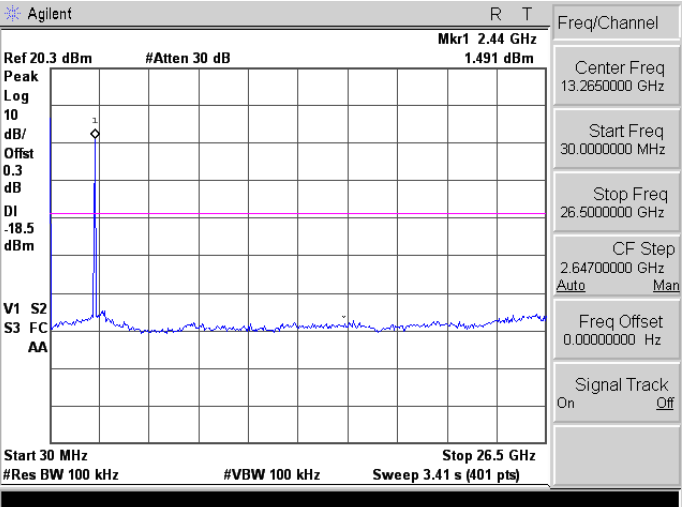
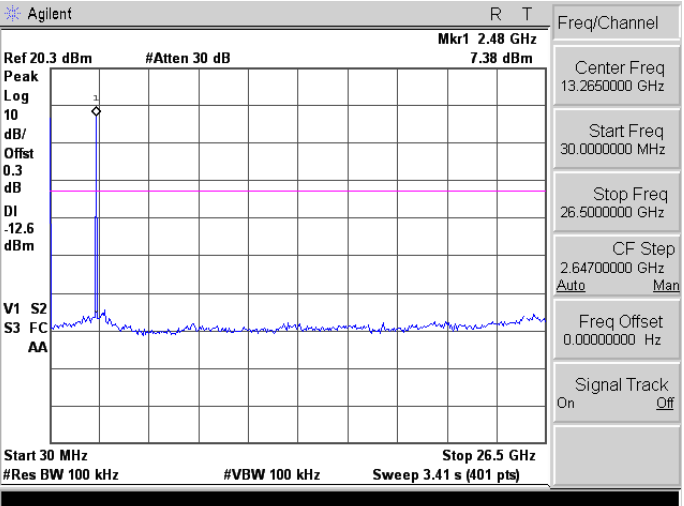
11.4.Test Procedure

In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band. The test was performed at 3 channels (Channel 0, 39, 78)

11.5. Test Graphs

| Mode 3: GFSK Link Mode | |
|------------------------|--|
| 2402 | |
| 2441 | |
| 2480 | |

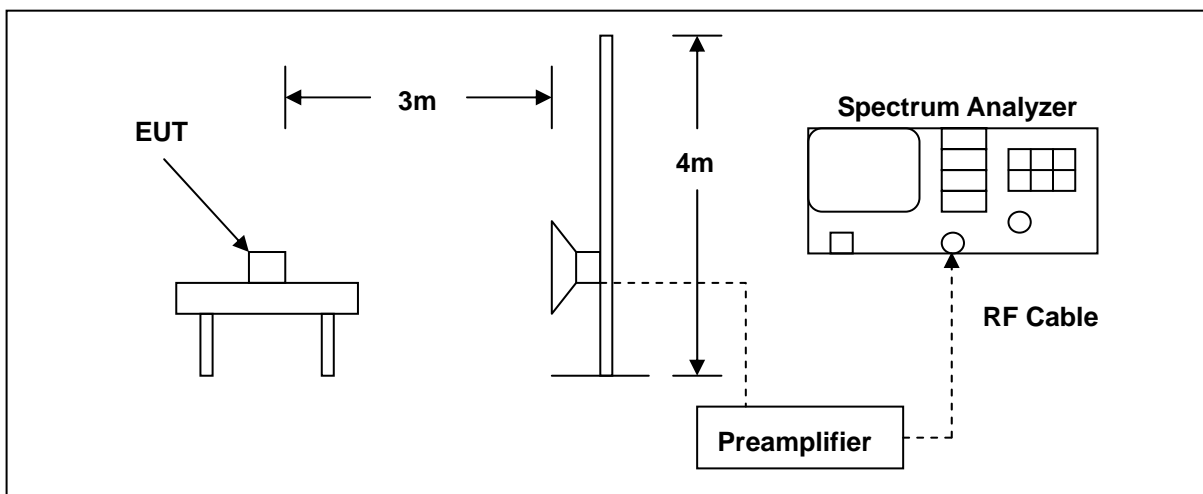
| Mode 5: 8DPSK Link Mode | |
|-------------------------|--|
| 2402 |  |
| 2441 |  |
| 2480 |  |

12 Band Edges Measurement

12.1.Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

12.2.Test Setup



12.3.Test Instruments

| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
|-------------------|--------------------------------|--------------|---------------|------------|--------|
| Spectrum Analyzer | Agilent | E4408B | MY45107753 | 07/07/2011 | (1) |
| Pre Amplifier | Agilent | 8449B | 3008A02237 | 02/23/2011 | (1) |
| Horn Antenna | SCHWARZBECK MESS-ELEKTRONIK | 9120D | 9120D-550 | 06/29/2011 | (1) |
| Test Site | ATL | TE01 | 888001 | 12/20/2011 | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

12.4. Test Procedure

The emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter was in full radiated power. The additional test was performed to show compliance with the requirement at the band-edge frequency 2483.5 MHz and up to 2500 MHz and at 2390.0 MHz.

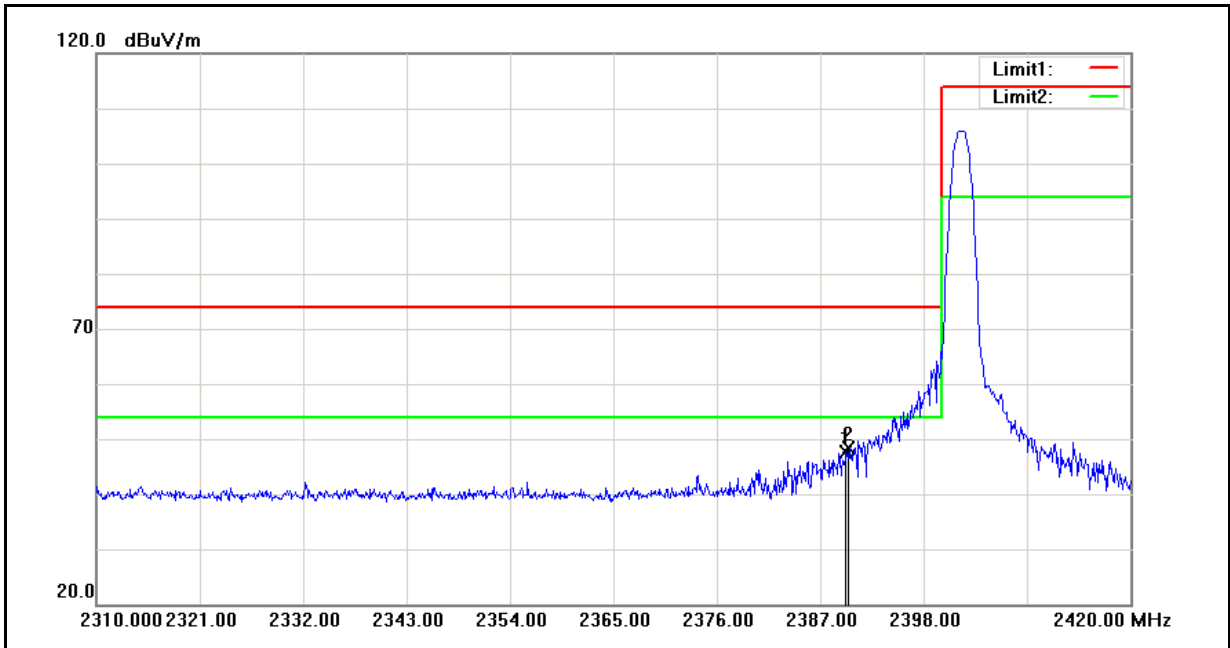
The transmitter was configured with the worst case antenna and setup to transmit at the highest channel. Then the field strength was measured at 2483.5 MHz.

The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel. Then the field strength was measured at 2390.0 MHz. These tests were performed at 4 different bit rates.

For measurements the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

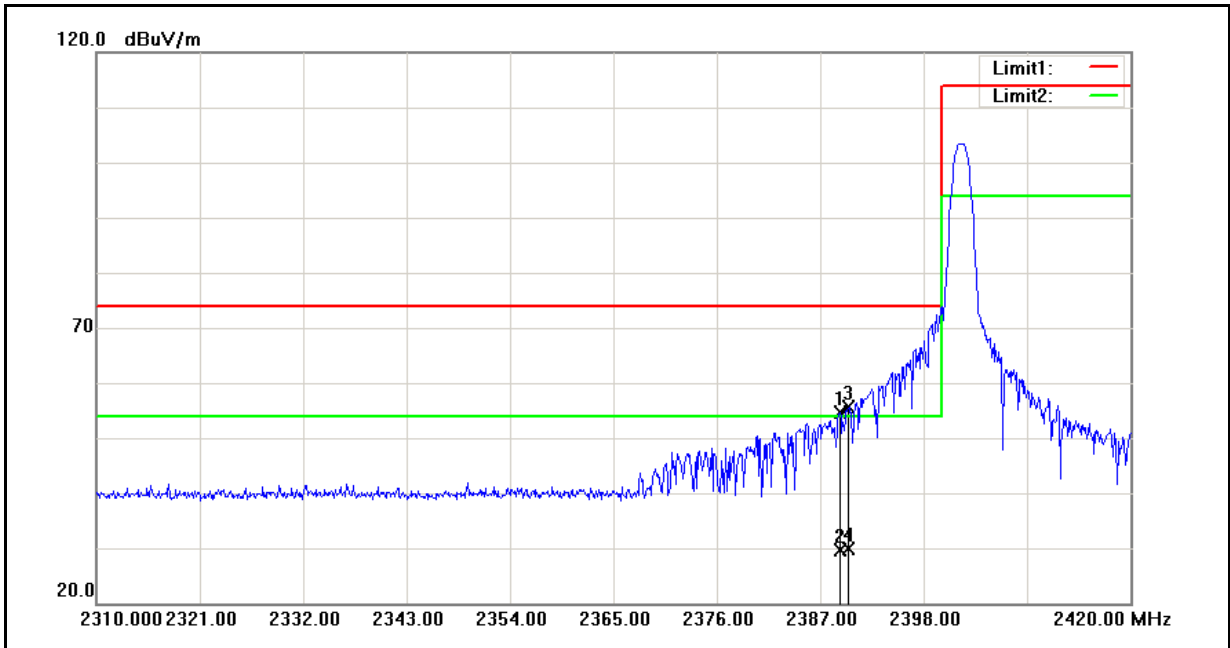
12.5.Test Result

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 3 | Date: | 01/19/2012 |
| Frequency: | 2402 MHz | Test By: | Fly Lu |
| Ant.Polar.: | Horizontal | | |



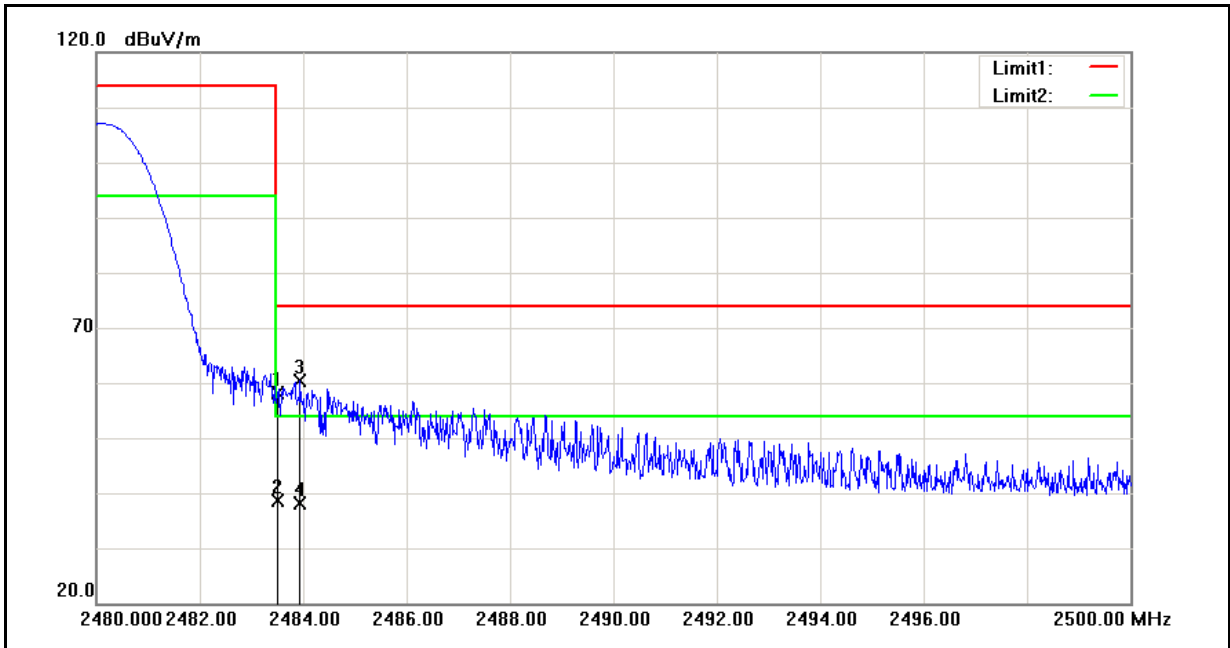
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 2389.750 | 47.57 | -0.06 | 47.51 | 74.00 | -26.49 | peak |
| 2 | 2390.000 | 48.43 | -0.06 | 48.37 | 74.00 | -25.63 | peak |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 3 | Date: | 01/19/2012 |
| Frequency: | 2402 MHz | Test By: | Fly Lu |
| Ant.Polar.: | Vertical | | |



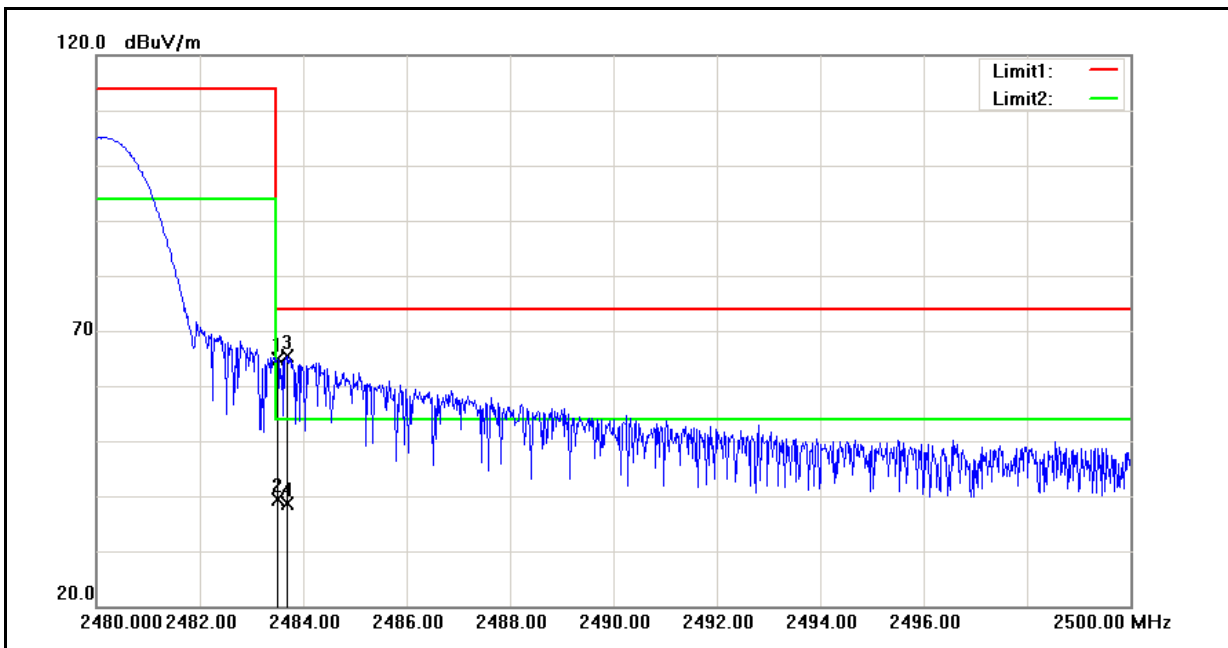
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 2389.090 | 54.61 | -0.06 | 54.55 | 74.00 | -19.45 | peak |
| 2 | 2389.090 | 29.74 | -0.06 | 29.68 | 54.00 | -24.32 | AVG |
| 3 | 2390.000 | 55.71 | -0.06 | 55.65 | 74.00 | -18.35 | peak |
| 4 | 2390.000 | 30.03 | -0.06 | 29.97 | 54.00 | -24.03 | AVG |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 3 | Date: | 01/19/2012 |
| Frequency: | 2480 MHz | Test By: | Fly Lu |
| Ant.Polar.: | Horizontal | | |



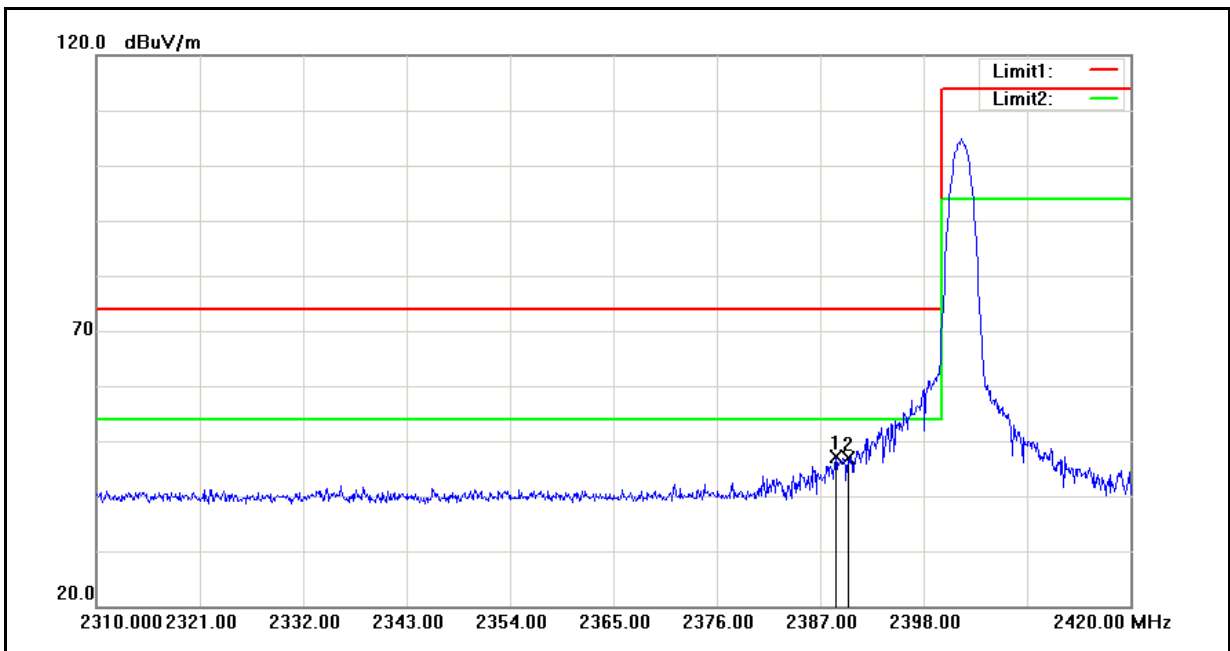
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 2483.500 | 57.74 | 0.35 | 58.09 | 74.00 | -15.91 | peak |
| 2 | 2483.500 | 38.29 | 0.35 | 38.64 | 54.00 | -15.36 | AVG |
| 3 | 2483.940 | 59.94 | 0.35 | 60.29 | 74.00 | -13.71 | peak |
| 4 | 2483.940 | 37.79 | 0.35 | 38.14 | 54.00 | -15.86 | AVG |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 3 | Date: | 01/19/2012 |
| Frequency: | 2480 MHz | Test By: | Fly Lu |
| Ant.Polar.: | Vertical | | |



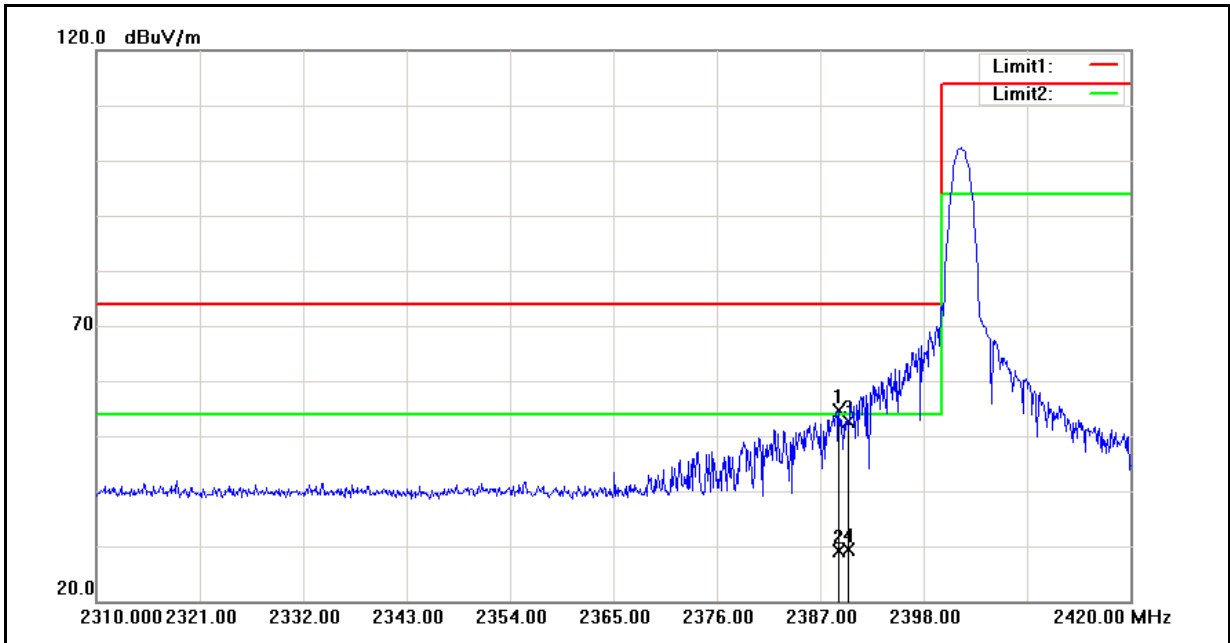
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 2483.500 | 64.61 | 0.35 | 64.96 | 74.00 | -9.04 | peak |
| 2 | 2483.500 | 39.15 | 0.35 | 39.50 | 54.00 | -14.50 | AVG |
| 3 | 2483.680 | 65.09 | 0.35 | 65.44 | 74.00 | -8.56 | peak |
| 4 | 2483.680 | 38.26 | 0.35 | 38.61 | 54.00 | -15.39 | AVG |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 5 | Date: | 01/19/2012 |
| Frequency: | 2402 MHz | Test By: | Fly Lu |
| Ant.Polar.: | Horizontal | | |



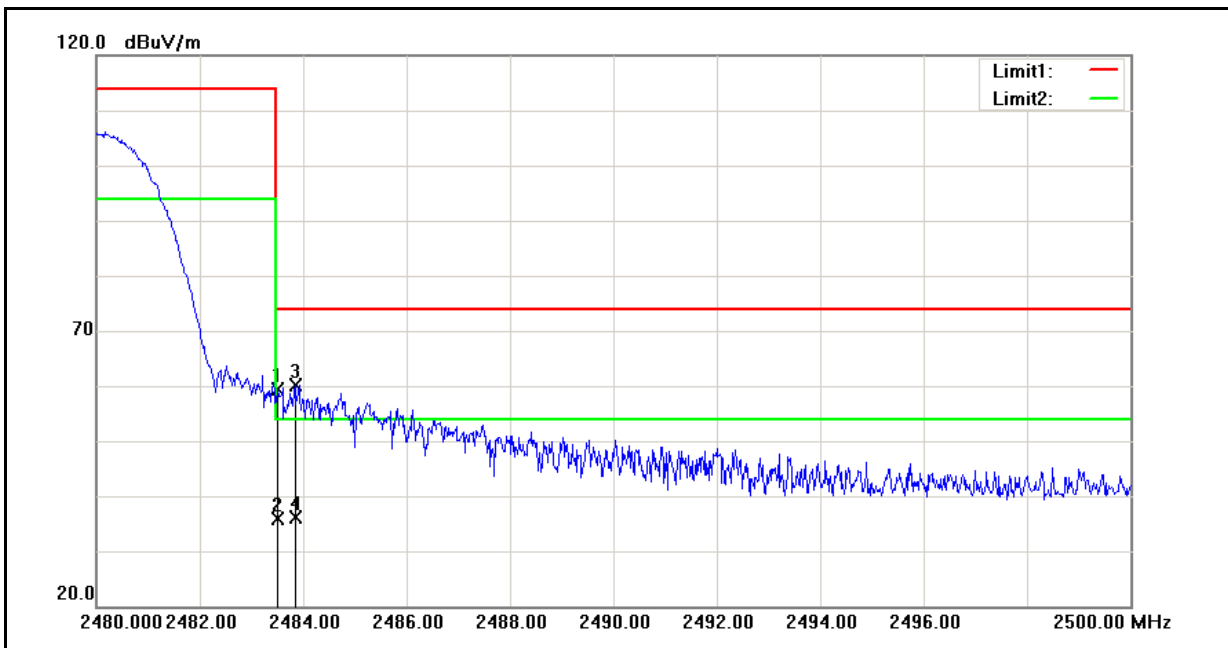
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 2388.650 | 47.16 | -0.06 | 47.10 | 74.00 | -26.90 | peak |
| 2 | 2390.000 | 46.95 | -0.06 | 46.89 | 74.00 | -27.11 | peak |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 5 | Date: | 01/19/2012 |
| Frequency: | 2402 MHz | Test By: | Fly Lu |
| Ant.Polar.: | Vertical | | |



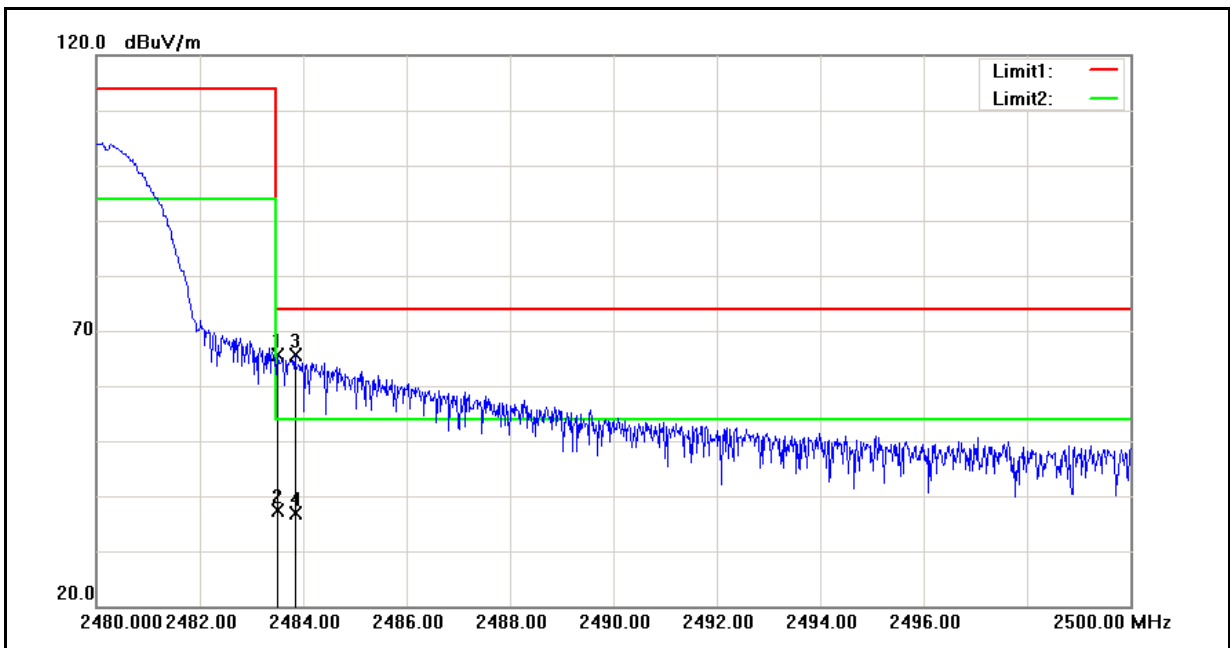
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 2388.980 | 54.76 | -0.06 | 54.70 | 74.00 | -19.30 | peak |
| 2 | 2388.980 | 29.16 | -0.06 | 29.10 | 54.00 | -24.90 | AVG |
| 3 | 2390.000 | 52.69 | -0.06 | 52.63 | 74.00 | -21.37 | peak |
| 4 | 2390.000 | 29.41 | -0.06 | 29.35 | 54.00 | -24.65 | AVG |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 5 | Date: | 01/19/2012 |
| Frequency: | 2480 MHz | Test By: | Fly Lu |
| Ant.Polar.: | Horizontal | | |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 2483.500 | 58.92 | 0.35 | 59.27 | 74.00 | -14.73 | peak |
| 2 | 2483.500 | 35.62 | 0.35 | 35.97 | 54.00 | -18.03 | AVG |
| 3 | 2483.840 | 59.81 | 0.35 | 60.16 | 74.00 | -13.84 | peak |
| 4 | 2483.840 | 35.69 | 0.35 | 36.04 | 54.00 | -17.96 | AVG |

| | | | |
|---------------|--------------------|----------------------|--------------|
| Standard: | FCC Part 15C | Test Distance: | 3m |
| Test item: | Radiated Emission | Power: | AC 120V/60Hz |
| Model Number: | Doro PhoneEasy 610 | Temp.(°C)/Hum.(%RH): | 26(°C)/60%RH |
| Mode: | Mode 5 | Date: | 01/19/2012 |
| Frequency: | 2480 MHz | Test By: | Fly Lu |
| Ant.Polar.: | Vertical | | |



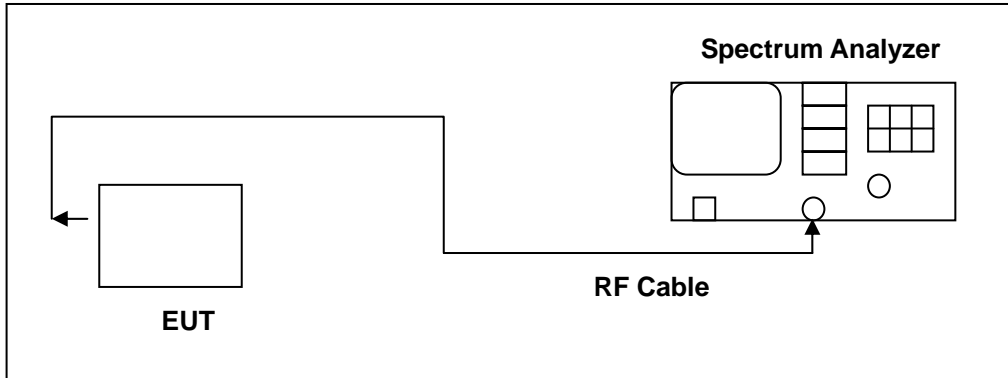
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1 | 2483.500 | 65.26 | 0.35 | 65.61 | 74.00 | -8.39 | peak |
| 2 | 2483.500 | 37.03 | 0.35 | 37.38 | 54.00 | -16.62 | AVG |
| 3 | 2483.840 | 65.23 | 0.35 | 65.58 | 74.00 | -8.42 | peak |
| 4 | 2483.840 | 36.63 | 0.35 | 36.98 | 54.00 | -17.02 | AVG |

13 99 % Occupied Bandwidth Measurement

13.1.Limit

N/A

13.2.Test Setup



13.3.Test Instruments

| Equipment | Manufacturer | Model Number | Serial Number | Cal. Date | Remark |
|-------------------|--------------|--------------|---------------|------------|--------|
| Spectrum Analyzer | Agilent | E4445A | MY45300744 | 12/28/2010 | (2) |
| Test Site | ATL | TE02 | TE02 | N.C.R. | ----- |

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

13.4.Test Procedure

The transmitter shall be operated at its maximum carrier power measured under normal test conditions. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or peak hold, may produce a wider bandwidth than actual.

The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded.

13.5.Test Result

| | | | |
|-----------------|-------------------------|-----------|-------------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | 99 % Occupied Bandwidth | | |
| Test Mode | Mode 3: GFSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| Frequency (MHz) | Measurement (MHz) | | Limit (MHz) |
| 2402 | 0.8969205 | | ----- |
| 2441 | 0.8857376 | | ----- |
| 2480 | 0.9273417 | | ----- |

| | | | |
|-----------------|-------------------------|-----------|-------------|
| Model Number | Doro PhoneEasy 610 | | |
| Test Item | 99 % Occupied Bandwidth | | |
| Test Mode | Mode 5: 8DPSK Link Mode | | |
| Date of Test | 01/18/2012 | Test Site | TE02 |
| Frequency (MHz) | Measurement (MHz) | | Limit (MHz) |
| 2402 | 1.1817 | | ----- |
| 2441 | 1.1687 | | ----- |
| 2480 | 1.1582 | | ----- |

13.6. Test Graphs

| Mode 3: GFSK Link Mode | |
|------------------------|--|
| 2402 | |
| 2441 | |
| 2480 | |

| Mode 5: 8DPSK Link Mode | |
|-------------------------|--|
| 2402 | <p>Agilent R T</p> <p>Ch Freq 2.402 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20.3 dBm #Atten 30 dB</p> <p>#Samp Log 10 dB/Offset 0.3 dB</p> <p>Center 2.402 GHz Span 3 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 5.425 ms (401 pts)</p> <p>Occupied Bandwidth 1.1817 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -6.087 kHz x dB Bandwidth 1.301 MHz*</p> <p>Freq/Channel</p> <p>Center Freq 2.40200000 GHz</p> <p>Start Freq 2.40050000 GHz</p> <p>Stop Freq 2.40350000 GHz</p> <p>CF Step 300.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> |
| 2441 | <p>Agilent R T</p> <p>Ch Freq 2.441 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20.3 dBm #Atten 30 dB</p> <p>#Samp Log 10 dB/Offset 0.3 dB</p> <p>Center 2.441 GHz Span 3 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 5.425 ms (401 pts)</p> <p>Occupied Bandwidth 1.1687 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -3.711 kHz x dB Bandwidth 1.251 MHz*</p> <p>Freq/Channel</p> <p>Center Freq 2.44100000 GHz</p> <p>Start Freq 2.43950000 GHz</p> <p>Stop Freq 2.44250000 GHz</p> <p>CF Step 300.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> |
| 2480 | <p>Agilent R T</p> <p>Ch Freq 2.48 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20.3 dBm #Atten 30 dB</p> <p>#Samp Log 10 dB/Offset 0.3 dB</p> <p>Center 2.48 GHz Span 3 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 5.425 ms (401 pts)</p> <p>Occupied Bandwidth 1.1582 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -2.896 kHz x dB Bandwidth 1.249 MHz*</p> <p>Freq/Channel</p> <p>Center Freq 2.48000000 GHz</p> <p>Start Freq 2.47850000 GHz</p> <p>Stop Freq 2.48150000 GHz</p> <p>CF Step 300.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> |

14 Antenna Measurement

14.1.Limit

For intentional device, according to 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And According to 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

14.2.Antenna Connector Construction

The antenna used in this product is **PCB antenna**. And the maximum Gain of this antenna is only **-2 dBi**.