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Electromagnetic Emissions Test Report and Application for Grant of Equipment Authorization pursuant to Industry Canada RSS-Gen Issue 1 / RSS 210 Issue 6 FCC Part 15 Subpart C on the OQO Transmitter Model: Model 02

IC: 6026A-A7YWFS
FCC ID: SHD-A7YWFS

GRANTEE: OQO
583 Shotwell Street
San Francisco, CA. 94111

TEST SITE: Elliott Laboratories, Inc.
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REPORT DATE: September 15, 2006

FINAL TEST DATE: August 9, August 11, August 15, August 25 and September 1, 2006

AUTHORIZED SIGNATORY:

Juan Martinez
Senior EMC Engineer

ACCREDITED
2016-01

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REVISION HISTORY

Revision #	Date	Comments	Modified By
1	October 16, 2006	Initial Release	David Guidotti

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SCOPE

An electromagnetic emissions test has been performed on the OQO model Model 02 pursuant to the following rules:

Industry Canada RSS-Gen Issue 1
RSS 210 Issue 6 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment"
FCC Part 15 Subpart C

Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in the following reference standards and as outlined in Elliott Laboratories test procedures:

ANSI C63.4:2003
RSS-212 Issue 1 Test Facilities and Test Methods for Radio Equipment

The intentional radiator above has been tested in a simulated typical installation to demonstrate compliance with the relevant Industry Canada performance and procedural standards.

Final system data was gathered in a mode that tended to maximize emissions by varying orientation of EUT, orientation of power and I/O cabling, antenna search height, and antenna polarization.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

The test results recorded herein are based on a single type test of the OQO model Model 02 and therefore apply only to the tested sample. The sample was selected and prepared by Bob Hymes of OQO.

OBJECTIVE

The primary objective of the manufacturer is compliance with the regulations outlined in the previous section.

Prior to marketing in the USA, all unlicensed transmitters and transceivers require certification. Receive-only devices operating between 30 MHz and 960 MHz are subject to either certification or a manufacturer's declaration of conformity, with all other receive-only devices exempt from the technical requirements.

Prior to marketing in Canada, Class I transmitters, receivers and transceivers require certification. Class II devices are required to meet the appropriate technical requirements but are exempt from certification requirements.

Certification is a procedure where the manufacturer submits test data and technical information to a certification body and receives a certificate or grant of equipment authorization upon successful completion of the certification body's review of the submitted documents. Once the equipment authorization has been obtained, the label indicating compliance must be attached to all identical units, which are subsequently manufactured.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

STATEMENT OF COMPLIANCE

The tested sample of OQO model Model 02 complied with the requirements of the following regulations:

Industry Canada RSS-Gen Issue 1
RSS 210 Issue 6 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment"
FCC Part 15 Subpart C

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

TEST RESULTS SUMMARY

DIGITAL TRANSMISSION SYSTEMS (2400 –2483.5 MHz) BPSK

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation	Systems uses DSSS techniques	System must utilize a digital transmission technology	Complies
15.247 (a) (2)	RSS 210 A8.2 (1)	6dB Bandwidth	12.2 MHz	>500kHz	Complies
	RSP100	99% Bandwidth	16.1 MHz	Information only	Complies
15.247 (b) (3) 15.247		Output Power (multipoint systems)	20.1dBm (0.103 Watts) EIRP=0.103 W Note 1	1Watt, EIRP limited to 4 Watts.	Complies
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density	-0.8 dBm / 3kHz	Maximum permitted is 8dBm/3kHz	Complies
15.247(c)	RSS 210 A8.5	Antenna Port Spurious Emissions – 30MHz – 40 GHz	-	< -30dBc Note 2	Integral antenna – Radiated testing performed
15.247(c) / 15.209	RSS 210 A8.5 Table 2, 3	Radiated Spurious Emissions 30MHz – 40 GHz	50.8 dBuV/m @ 4824.1 MHz (-3.2dB)	15.207 in restricted bands, all others <-30dBc Note 2	Complies

Note 1: EIRP calculated using antenna gain of 0 dBi for the highest EIRP multi-point system.

Note 2: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst).

DIGITAL TRANSMISSION SYSTEMS (2400 –2483.5 MHz) OFDM

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation	Systems uses OFDM techniques	System must utilize a digital transmission technology	Complies
15.247 (a) (2)	RSS 210 A8.2 (1)	6dB Bandwidth	16.5 MHz	>500kHz	Complies
	RSP100	99% Bandwidth	19.3 MHz	Information only	Complies
15.247 (b) (3) 15.247		Output Power (multipoint systems)	15.6 dBm (0.036 Watts) EIRP=0.036 W Note 1	1Watt, EIRP limited to 4 Watts.	Complies
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density	-5.1 dBm / 3kHz	Maximum permitted is 8dBm/3kHz	Complies
15.247(c)	RSS 210 A8.5	Antenna Port Spurious Emissions – 30MHz – 40 GHz	All Emissions < -30dBc	< -30dBc Note 2	Integral antenna – Radiated testing performed
15.247(c) / 15.209	RSS 210 A8.5 Table 2, 3	Radiated Spurious Emissions 30MHz – 40 GHz	49.0 dBuV/m @ 2390.0 MHz (-5.0dB)	15.207 in restricted bands, all others <-30dBc Note 2	Complies

Note 1: EIRP calculated using antenna gain of 0 dBi for the highest EIRP multi-point system.

Note 2: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst).

DIGITAL TRANSMISSION SYSTEMS (5725 –5850 MHz)

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation	Systems uses OFDM techniques	System must utilize a digital transmission technology	Complies
15.247 (a) (2)	RSS 210 A8.2 (1)	6dB Bandwidth	16.6 MHz	>500kHz	Complies
	RSP100	99% Bandwidth	17.5 MHz	Information only	Complies
15.247 (b) (3) 15.247		Output Power (multipoint systems)	13.8 dBm (0.024 Watts) EIRP=0.024 W Note 1	1Watt, EIRP limited to 4 Watts.	Complies
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density	-20.4 dBm / 3kHz	Maximum permitted is 8dBm/3kHz	Complies
15.247(c)	RSS 210 A8.5	Antenna Port Spurious Emissions – 30MHz – 40 GHz	All Emissions < -30dBc	< -30dBc Note 2	Integral antenna – Radiated testing performed
15.247(c) / 15.209	RSS 210 A8.5 Table 2, 3	Radiated Spurious Emissions 30MHz – 40 GHz	53.7dBµV/m (484.2µV/m) @ 11492.0MHz (-0.3dB)	15.207 in restricted bands, all others <-30dBc Note 2	Complies

Note 1: EIRP calculated using antenna gain of 0 dBi for the highest EIRP multi-point system.

Note 2: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst).

FREQUENCY HOPPING SPREAD SPECTRUM (2400 – 2483.5 MHz, 75 channels or more)

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247 (a) (1)	RSS 210 A8.1 (1)	20dB Bandwidth	890 kHz	Channel spacing > 20dB bandwidth	Complies
15.247 (a) (1)	RSS 210 A8.1 (2)	Channel Separation	1000 kHz		Complies
15.247 (a) (1) (iii)	RSS 210 A8.1 (4)	Channel Dwell Time (*average time of occupancy)*	.4 seconds per 31.6 seconds	<0.4 second within a period of 0.4 x number of channels	Complies
15.247 (a) (1) (iii)	RSS 210 A8.1 (4)	Number of Channels	79	75 or more	Complies
15.247 (a) (1)	RSS 210 A8.1 (1)	Channel Utilization	The system uses the BlueTooth algorithm and, therefore, meets all requirements for channel utilization.	All channels shall, on average, be used equally	Complies
15.247 (b) (3)	RSS 210 A8.4 (2)	Output Power (multipoint systems)	-10 dBm EIRP = 0.0001 W Note 1	1Watt, EIRP limited to 4 Watts.	Complies
15.247(c)	RSS 210 A8.5	Spurious Emissions – 30MHz – 25GHz	All spurious emissions < -20dBc	< -20dBc	Complies
15.247(c) / 15.209	RSS 210 A8.5 Table 2, 3	Radiated Spurious Emissions 30MHz – 25GHz	48.8dBµV/m (275.4µV/m) @ 4804.0MHz	15.207 in restricted bands, all others < -20dBc	Complies (- 5.2dB)
	RSS 210 A8.1(2)	Receiver bandwidth	Refer to operational description	Shall match the channel bandwidth	Complies

Note 1: EIRP calculated using radiated measurement method at 3 meters.

GENERAL REQUIREMENTS APPLICABLE TO ALL BANDS

FCC Rule Part	RSS Rule part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.203	-	RF Connector	Internal to device		Complies
15.109	RSS GEN 7.2.3 Table 1	Receiver spurious emissions	46.0dBµV/m (199.5µV/m) @ 3854.5MHz		Complies (- 8.0 dB)
15.207	RSS GEN Table 2	AC Conducted Emissions	52.5dBµV (421.7µV) @ 0.876MHz	Refer to standard	Complies (- 3.5 dB)
15.247 (b) (5) 15.407 (f)	RSS 102	RF Exposure Requirements	Refer to MPE calculations in Exhibit 11, RSS 102 declaration and User Manual statements. Refer to SAR report	Refer to OET 65, FCC Part 1 and RSS 102	Complies
	RSP 100 RSS GEN 7.1.5	User Manual	Refer to manual	Statement required regarding non-interference	
	RSP 100 RSS GEN 7.1.5	User Manual	Refer to manual	Statement required regarding detachable antenna	

MEASUREMENT UNCERTAINTIES

ISO Guide 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level and were calculated in accordance with UKAS document LAB 34.

Measurement Type	Frequency Range (MHz)	Calculated Uncertainty (dB)
Conducted Emissions	0.15 to 30	± 2.4
Radiated Emissions	0.015 to 30	± 3.0
Radiated Emissions	30 to 1000	± 3.6
Radiated Emissions	1000 to 40000	± 6.0

EQUIPMENT UNDER TEST (EUT) DETAILS

GENERAL

The OQO model Model 02 is a Handheld PC. Since the EUT would be placed on a table top during operation, the EUT was treated as table-top equipment during testing to simulate the end-user environment. The electrical rating of the EUT is -5Vdc Volts, 3.5 Amps.

The sample was received on August 9, 2006 and tested on August 9, August 11, August 15, August 25 and September 1, 2006. The EUT consisted of the following component(s):

Manufacturer	Model	Description	Serial Number	FCC ID
OQO	P79	Handheld PC	19 (potassium)	

ANTENNA SYSTEM

The EUT antenna is a internal flex .
The antenna is integral to the device.

ENCLOSURE

The EUT enclosure is primarily constructed of metal and plastic. It measures approximately 15 cm long by 5 cm Wide by 2 cm high.

MODIFICATIONS

The EUT did not require modifications during testing in order to comply with emissions specifications.

SUPPORT EQUIPMENT

No support equipment was used during emissions testing.

EUT INTERFACE PORTS

The I/O cabling configuration during emissions testing was as follows:

Port	Connected To	Cable(s)		
		Description	Shielded or Unshielded	Length(m)
EUT AC Power	AC/DC Adapter	2 wire	Unshielded	1.5

EUT OPERATION

The radio was transmitting at full power for 802.11b/g/a and bluetooth.

TEST SITE

GENERAL INFORMATION

Final test measurements were taken on August 9, August 11, August 15, August 25 and September 1, 2006 at the Elliott Laboratories Open Area Test Site #1 & #2 located at 684 West Maude Avenue, Sunnyvale, California. Pursuant to section 2.948 of the FCC's Rules and section 3.3 of RSP-100, construction, calibration, and equipment data has been filed with the Commission.

ANSI C63.4:2003 recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement with the exception of predictable local TV, radio, and mobile communications traffic. The test site contains separate areas for radiated and conducted emissions testing. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent requirements of ANSI C63.4:2003 and RSS 212.

CONDUCTED EMISSIONS CONSIDERATIONS

Conducted emissions testing is performed in conformance with ANSI C63.4:2003 and RSS 212. Measurements are made with the EUT connected to the public power network through a nominal, standardized RF impedance, which is provided by a line impedance stabilization network, known as a LISN. A LISN is inserted in series with each current-carrying conductor in the EUT power cord.

RADIATED EMISSIONS CONSIDERATIONS

The FCC has determined that radiation measurements made in a shielded enclosure are not suitable for determining levels of radiated emissions. Radiated measurements are performed in an open field environment or in a semi-anechoic chamber. The test sites are maintained free of conductive objects within the CISPR defined elliptical area incorporated in ANSI C63.4:2003 guidelines and meet the Normalized Site Attenuation (NSA) requirements of ANSI C63.4:2003 / RSS 212.

MEASUREMENT INSTRUMENTATION

RECEIVER SYSTEM

An EMI receiver as specified in CISPR 16-1 is used for emissions measurements. The receivers used can measure over the frequency range of 9 kHz up to 2000 MHz. These receivers allow both ease of measurement and high accuracy to be achieved. The receivers have Peak, Average, and CISPR (Quasi-peak) detectors built into their design so no external adapters are necessary. The receiver automatically sets the required bandwidth for the CISPR detector used during measurements. If the repetition frequency of the signal being measured is below 20Hz, peak measurements are made in lieu of Quasi-Peak measurements.

For measurements above the frequency range of the receivers, a spectrum analyzer is utilized because it provides visibility of the entire spectrum along with the precision and versatility required to support engineering analysis. Average measurements above 1000MHz are performed on the spectrum analyzer using the linear-average method with a resolution bandwidth of 1 MHz and a video bandwidth of 10 Hz, unless the signal is pulsed in which case the average (or video) bandwidth of the measuring instrument is reduced to onset of pulse desensitization and then increased.

INSTRUMENT CONTROL COMPUTER

The receivers utilize either a Rohde & Schwarz EZM Spectrum Monitor/Controller or contain an internal Spectrum Monitor/Controller to view and convert the receiver measurements to the field strength at an antenna or voltage developed at the LISN measurement port, which is then compared directly with the appropriate specification limit. This provides faster, more accurate readings by performing the conversions described under Sample Calculations within the Test Procedures section of this report. Results are printed in a graphic and/or tabular format, as appropriate. A personal computer is used to record all measurements made with the receivers.

The Spectrum Monitor provides a visual display of the signal being measured. In addition, the controller or a personal computer run automated data collection programs which control the receivers. This provides added accuracy since all site correction factors, such as cable loss and antenna factors are added automatically.

LINE IMPEDANCE STABILIZATION NETWORK (LISN)

Line conducted measurements utilize a fifty microhenry Line Impedance Stabilization Network as the monitoring point. The LISN used also contains a 250 uH CISPR adapter. This network provides for calibrated radio frequency noise measurements by the design of the internal low pass and high pass filters on the EUT and measurement ports, respectively.

FILTERS/ATTENUATORS

External filters and precision attenuators are often connected between the receiving antenna or LISN and the receiver. This eliminates saturation effects and non-linear operation due to high amplitude transient events.

ANTENNAS

A loop antenna is used below 30 MHz. For the measurement range 30 MHz to 1000 MHz either a combination of a biconical antenna and a log periodic or a bi-log antenna is used. Above 1000 MHz, horn antennas are used. The antenna calibration factors to convert the received voltage to an electric field strength are included with appropriate cable loss and amplifier gain factors to determine an overall site factor, which is then programmed into the test receivers or incorporated into the test software.

ANTENNA MAST AND EQUIPMENT TURNTABLE

The antennas used to measure the radiated electric field strength are mounted on a non-conductive antenna mast equipped with a motor-drive to vary the antenna height. Measurements below 30 MHz are made with the loop antenna at a fixed height of 1m above the ground plane.

ANSI C63.4:2003 and RSS 212 specify that the test height above ground for table mounted devices shall be 80 centimeters. Floor mounted equipment shall be placed on the ground plane if the device is normally used on a conductive floor or separated from the ground plane by insulating material from 3 to 12 mm if the device is normally used on a non-conductive floor. During radiated measurements, the EUT is positioned on a motorized turntable in conformance with this requirement.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. All antennas are calibrated at regular intervals with respect to tuned half-wave dipoles. An exhibit of this report contains the list of test equipment used and calibration information.

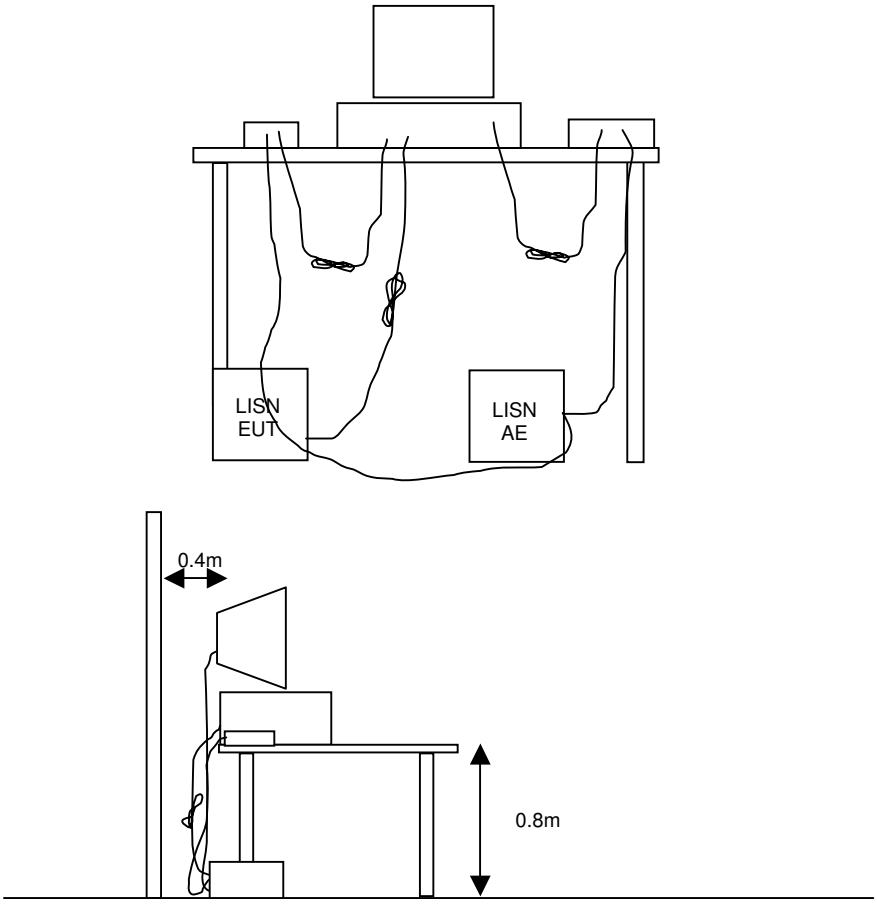
TEST PROCEDURES

EUT AND CABLE PLACEMENT

The regulations require that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate the worst case orientation that can be expected from a typical installation, so far as practicable. To this end, the position of the unit and associated cabling is varied within the guidelines of ANSI C63.4:2003, and the worst-case orientation is used for final measurements.

CONDUCTED EMISSIONS

Conducted emissions are measured at the plug end of the power cord supplied with the EUT. Excess power cord length is wrapped in a bundle between 30 and 40 centimeters in length near the center of the cord. Preliminary measurements are made to determine the highest amplitude emission relative to the specification limit for all the modes of operation. Placement of system components and varying of cable positions are performed in each mode. A final peak mode scan is then performed in the position and mode for which the highest emission was noted on all current carrying conductors of the power cord.

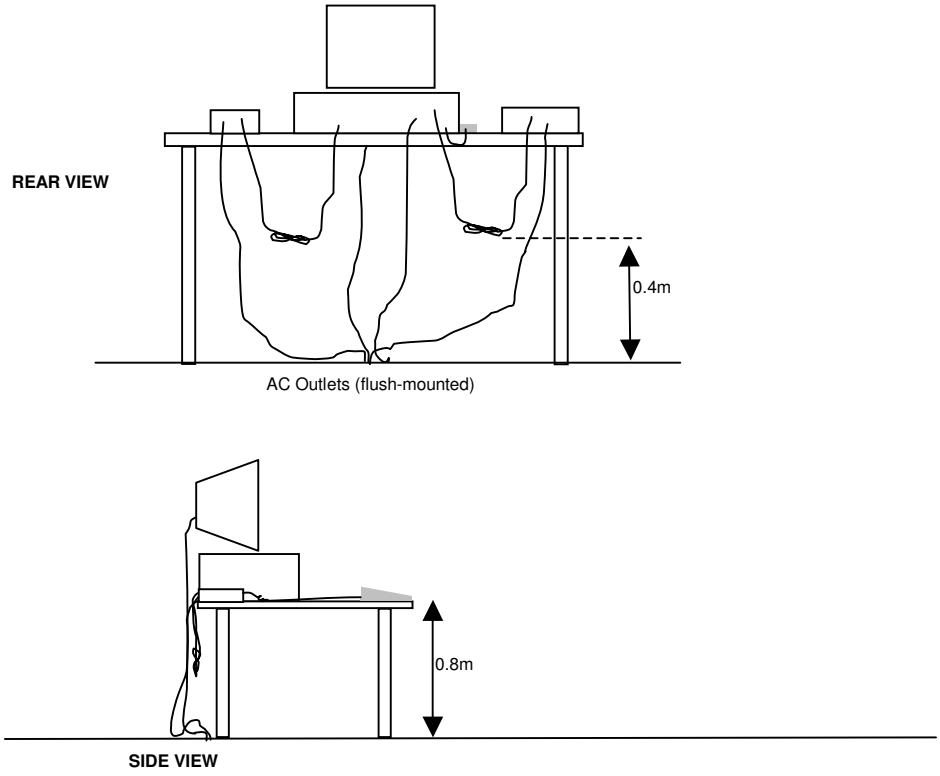


RADIATED EMISSIONS

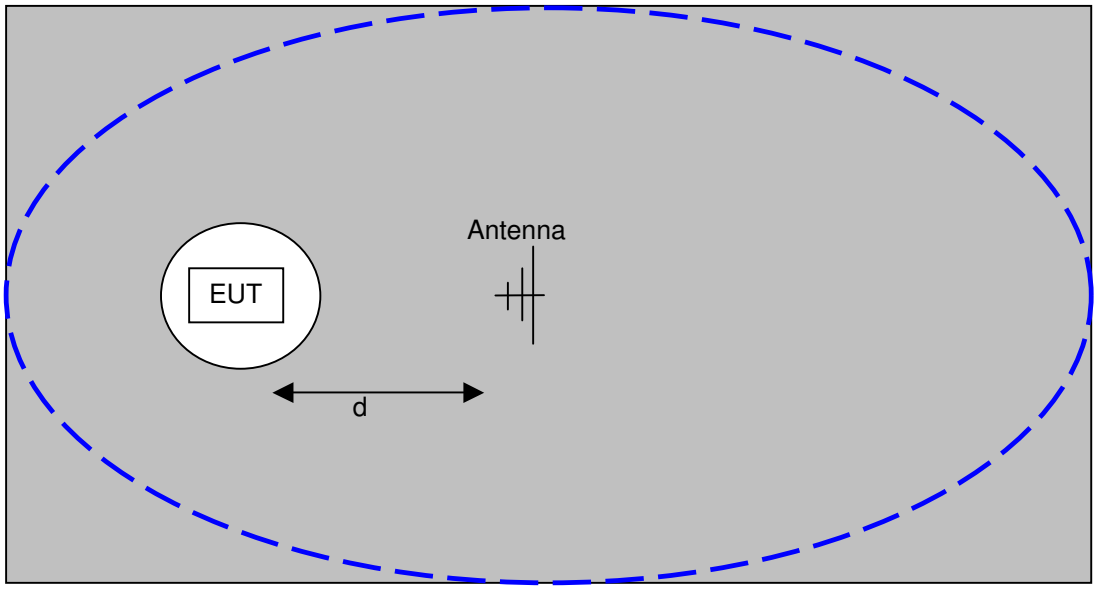
A preliminary scan of the radiated emissions is perfromed in which all significant EUT frequencies are identified with the system in a nominal configuration. At least two scans are performed, one scan for each antenna polarization (horizontal and vertical; loop parallel and perpendicular to the EUT). During the preliminary scans, the EUT is rotated through 360˚, the antenna height is varied (for measurements above 30 MHz) and cable positions are varied to determine the highest emission relative to the limit. Preliminary scans may be performed in a fully anechoic chamber for the purposes of identifying the frequencies of the highest emissions from the EUT.

A speaker is provided in the receiver to aid in discriminating between EUT and ambient emissions. Other methods used during the preliminary scan for EUT emissions involve scanning with near field magnetic loops, monitoring I/O cables with RF current clamps, and cycling power to the EUT.

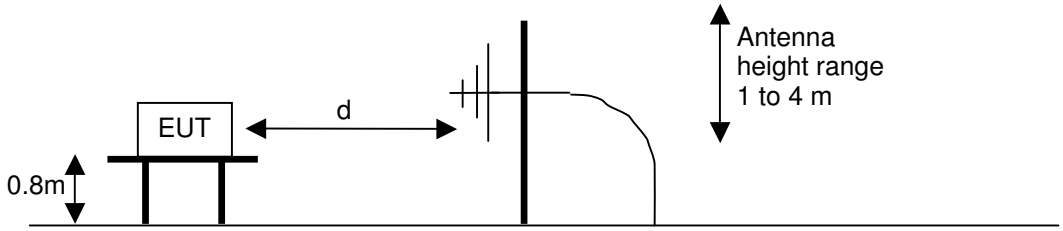
Final maximization is a phase in which the highest amplitude emissions identified in the spectral search are viewed while the EUT azimuth angle is varied from 0 to 360 degrees relative to the receiving antenna. The azimuth, which results in the highest emission is then maintained while varying the antenna height from one to four meters (for measurements above 30 MHz, measurements below 30 MHz are made with the loop antenna at a fixed height of 1m). The result is the identification of the highest amplitude for each of the highest peaks. Each recorded level is corrected in the receiver using appropriate factors for cables, connectors, antennas, and preamplifier gain.



Typical Test Configuration for Radiated Field Strength Measurements



The ground plane extends beyond the ellipse defined in CISPR 16 / CISPR 22 / ANSI C63.4 and is large enough to accommodate test distances (d) of 3m and 10m. Refer to the test data tables for the actual measurement distance.



Test Configuration for Radiated Field Strength Measurements
OATS- Plan and Side Views

BANDWIDTH MEASUREMENTS

The 6dB, 20dB and/or 26dB signal bandwidth is measured in using the bandwidths recommended by ANSI C63.4. When required, the 99% bandwidth is measured using the methods detailed in RSS GEN.

SPECIFICATION LIMITS AND SAMPLE CALCULATIONS

The limits for conducted emissions are given in units of microvolts, and the limits for radiated emissions are given in units of microvolts per meter at a specified test distance. Data is measured in the logarithmic form of decibels relative to one microvolt, or dB microvolts (dBuV). For radiated emissions, the measured data is converted to the field strength at the antenna in dB microvolts per meter (dBuV/m). The results are then converted to the linear forms of uV and uV/m for comparison to published specifications.

For reference, converting the specification limits from linear to decibel form is accomplished by taking the base ten logarithm, then multiplying by 20. These limits in both linear and logarithmic form are as follows:

GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from transmitters that fall in restricted bands[1] (with the exception of transmitters operating under FCC Part 15 Subpart D and RSS 210 Annex 9), the limits for all emissions from a low power device operating under the general rules of RSS 310 (tables 3 and 4), RSS 210 (table 2) and FCC Part 15 Subpart C section 15.209.

Frequency Range (MHz)	Limit (uV/m)	Limit (dBuV/m @ 3m)
0.009-0.490	$2400/F_{KHz}$ @ 300m	$67.6-20*\log_{10}(F_{KHz})$ @ 300m
0.490-1.705	$24000/F_{KHz}$ @ 30m	$87.6-20*\log_{10}(F_{KHz})$ @ 30m
1.705 to 30	30 @ 30m	29.5 @ 30m
30 to 88	100 @ 3m	40 @ 3m
88 to 216	150 @ 3m	43.5 @ 3m
216 to 960	200 @ 3m	46.0 @ 3m
Above 960	500 @ 3m	54.0 @ 3m

RECEIVER RADIATED SPURIOUS EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from receivers as detailed in FCC Part 15.109, RSS 210 Table 2, RSS GEN Table 1 and RSS 310 Table 3. Note that receivers operating outside of the frequency range 30 MHz – 960 MHz are exempt from the requirements of 15.109.

Frequency Range (MHz)	Limit (uV/m @ 3m)	Limit (dBuV/m @ 3m)
30 to 88	100	40
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

[1] The restricted bands are detailed in FCC 15.203, RSS 210 Table 1 and RSS 310 Table 2

OUTPUT POWER LIMITS – DIGITAL TRANSMISSION SYSTEMS

The table below shows the limits for output power and output power density. Where the signal bandwidth is less than 20 MHz the maximum output power is reduced to the power spectral density limit plus 10 times the log of the bandwidth (in MHz).

Operating Frequency (MHz)	Output Power	Power Spectral Density
902 – 928	1 Watt (30 dBm)	8 dBm/3kHz
2400 – 2483.5	1 Watt (30 dBm)	8 dBm/3kHz
5725 – 5850	1 Watt (30 dBm)	8 dBm/3kHz

The maximum permitted output power is reduced by 1dB for every dB the antenna gain exceeds 6dBi. Fixed point-to-point applications using the 5725 – 5850 MHz band are not subject to this restriction.

OUTPUT POWER LIMITS – FHSS SYSTEMS

The table below shows the limits for output power based on the number of channels available for the hopping system.

Operating Frequency (MHz)	Number of Channels	Output Power
902 – 928	≥ 50	1 Watt (30 dBm)
902 – 928	25 to 49	0.25 Watts (24 dBm)
2400 – 2483.5	≥ 75	1 Watt (30 dBm)
2400 – 2483.5	< 75	0.125 Watts (21 dBm)
5725 – 5850	75	1 Watt (30 dBm)

The maximum permitted output power is reduced by 1dB for every dB the antenna gain exceeds 6dBi. Fixed point-to-point applications using the 5725 – 5850 MHz band are not subject to this restriction.

TRANSMIT MODE SPURIOUS RADIATED EMISSIONS LIMITS – FHSS and DTS SYSTEMS

The limits for unwanted (spurious) emissions from the transmitter falling in the restricted bands are those specified in the general limits sections of FCC Part 15 and RSS 210. All other unwanted (spurious) emissions shall be at least 20dB below the level of the highest in-band signal level (30dB if the power is measured using the sample detector/power averaging method).

SAMPLE CALCULATIONS - CONDUCTED EMISSIONS

Receiver readings are compared directly to the conducted emissions specification limit (decibel form) as follows:

$$R_r - S = M$$

where:

R_r = Receiver Reading in dBuV

S = Specification Limit in dBuV

M = Margin to Specification in +/- dB

SAMPLE CALCULATIONS - RADIATED EMISSIONS

Receiver readings are compared directly to the specification limit (decibel form). The receiver internally corrects for cable loss, preamplifier gain, and antenna factor. The calculations are in the reverse direction of the actual signal flow, thus cable loss is added and the amplifier gain is subtracted. The Antenna Factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

A distance factor, when used for electric field measurements above 30MHz, is calculated by using the following formula:

$$F_d = 20*LOG_{10} (D_m/D_s)$$

where:

F_d = Distance Factor in dB

D_m = Measurement Distance in meters

D_s = Specification Distance in meters

For electric field measurements below 30MHz the extrapolation factor is either determined by making measurements at multiple distances or a theoretical value is calculated using the formula:

$$F_d = 40*LOG_{10} (D_m/D_s)$$

Measurement Distance is the distance at which the measurements were taken and Specification Distance is the distance at which the specification limits are based. The antenna factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

The margin of a given emission peak relative to the limit is calculated as follows:

$$R_c = R_r + F_d$$

and

$$M = R_c - L_s$$

where:

R_r = Receiver Reading in dBuV/m

F_d = Distance Factor in dB

R_c = Corrected Reading in dBuV/m

L_s = Specification Limit in dBuV/m

M = Margin in dB Relative to Spec

SAMPLE CALCULATIONS - FIELD STRENGTH TO EIRP CONVERSION

Where the radiated electric field strength is expressed in terms of the equivalent isotropic radiated power (eirp), or where a field strength measurement of output power is made in lieu of a direct measurement, the following formula is used to convert between eirp and field strength at a distance of 3m from the equipment under test:

$$E = \frac{1000000 \sqrt{30 P}}{3} \text{ microvolts per meter}$$

where P is the eirp (Watts)

EXHIBIT 1: Test Equipment Calibration Data

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, 11-Aug-06
Engineer: Mehran Birgani

Manufacturer	Description	Model #	Asset #	Cal Due
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	870	13-Jan-07
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	19-May-07
EMCO	Antenna, Horn, 18-26.5 GHz (SA40 30Hz)	3160-09 (84125C)	1150	12-Sep-06
Hewlett Packard	High Pass filter, 3.5 GHz	P/N 84300-80038	1157	24-Apr-07
EMCO	Antenna, Horn, 1-18 GHz (SA40)	3115	1386	11-Jul-07

EXHIBIT 2: Test Measurement Data

77 Pages

Elliott

EMC Test Data

Client:	OQO	Job Number:	J62637
Model:	Model 02	Test-Log Number:	T64964
		Project Manager:	Susan Pelzl
Contact:	Bob Hymes		
Emissions Spec:	FCC 15.247 & RSS-210	Class:	Radio
Immunity Spec:		Environment:	-

EMC Test Data

For The

OQO

Model

Model 02

Date of Last Test: 8/31/2006

Client:	OQO	Job Number:	J62637
Model:	Model 02	Test-Log Number:	T64964
		Project Manager:	Susan Pelzl
Contact:	Bob Hymes		
Emissions Spec:	FCC 15.247 & RSS-210	Class:	Radio
Immunity Spec:	Enter immunity spec on cover	Environment:	-

EUT INFORMATION

The following information was collected during the test sessions(s).

General Description

The EUT is a Handheld PC. Since the EUT would be placed on a table top during operation, the EUT was treated as table-top equipment during testing to simulate the end-user environment. The electrical rating of the EUT is -5Vdc, 3.5 Amps.

Equipment Under Test

Manufacturer	Model	Description	Serial Number	FCC ID
OQO	Model 02	Handheld PC	19 (potassium)	

Other EUT Details

The following EUT details should be noted: N/A

EUT Antenna (Intentional Radiators Only)

The EUT antenna is an internal flex.
The antenna is integral to the device.

EUT Enclosure

The EUT enclosure is primarily constructed of metal and plastic. It measures approximately 15 cm long by 5 cm Wide by 2 cm high.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manger:	Susan Pelzl
Contact:	Bob Hymes		
Emissions Standard(s):	FCC 15.247 & RSS-210	Class:	Radio
Immunity Standard(s):	Enter immunity standard(s) on	Environment:	-

Test Configuration #1

Local Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
None	-	-	-	-

Remote Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
None	-	-	-	-

Cabling and Ports

Port	Connected To	Cable(s)		
		Description	Shielded or Unshielded	Length(m)
EUT AC Power	AC/DC Adapter	2 wire	Unshielded	1.5

EUT Operation During Emissions Tests

The radio was transmitting at full power for 802.11b/g/a and bluetooth.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manger:	Susan Pelzl
Contact:	Bob Hymes		
Emissions Standard(s):	FCC 15.247 & RSS-210	Class:	Radio
Immunity Standard(s):	Enter immunity standard(s) on	Environment:	-

Test Configuration #2

Local Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
Sony (x2)	MDR-V300	Headset	-	-
Intellegent Stick	20	512MB USB Storage	-	-
Apple	iPOD A1019	Firewire Hard drive	U22325TEMMC	-
Netgear	DS104	Ethernet Hub	DS1413CDB107562	-
Samsung	171N	LCD Monitor	NB17HCJWB02528M	-
Attache	D64MB	USB Storage	511-040203002	-

Remote Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
None	-	-	-	-

Interface Cabling and Ports

Port	Connected To	Cable(s)		
		Description	Shielded or Unshielded	Length(m)
USB #1	Intelligent Stick Model 20 USB Storage Device	None	Shielded Port (Direct Connection, No Cable)	N/A
Headset	Headset (MDRV300)	Audio Wire w/ Clamp-On Ferrite	Unshielded	3.0
Firewire #1	iPOD	Firewire w/ Integral Ferrites	Shielded	1.0
Firewire #2	Unterminated	Firewire w/ Integral Ferrites	Shielded	1.5
USB #2	Attache Model D64MB USB Storage Device	None	Shielded Port (Direct Connection, No Cable)	N/A
Line Out	Headset (MDRV300)	Audio Wire w/ Clamp-On Ferrite	Unshielded	3.0
Ethernet	Netgear	Cat 5 w/ Integral Ferrites	Shielded	3.0
VGA	Monitor	VGA Cable	Shielded	2.5
DC Power	Power Supply	Power Cable (5 Wire)	Unshielded	2.0

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manger:	Susan Pelzl
Contact:	Bob Hymes		
Emissions Standard(s):	FCC 15.247 & RSS-210	Class:	Radio

EUT Operation During Emissions

During emissions testing, the EUT was running the Windows XP operating system and displaying a "Scrolling H Pattern". An active LINK was established with the external USB, Firewire, and Ethernet devices.

The Bluetooth and 802.11b transceivers were operating by transmitting link beacons.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
Power, Bandwidth and Spurious Emissions

Test specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 08/25/06
Test Engineer: Mehran Birgani
Test Location: SVOATS #1
Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spacturm analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 18 °C
Rel. Humidity: 77 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Output Power	15.247(b)	Pass	13.8 dBm
2	Power Spectral Density (PSD)	15.247(d)	Pass	-20.4 dBm/3kHz
3	6dB Bandwidth	15.247(a)	Pass	16.6 MHz
3	99% Bandwidth	RSS GEN	-	17.5 MHz
4	Spurious emissions	15.247(b)	-	Not required, performed test radiated

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

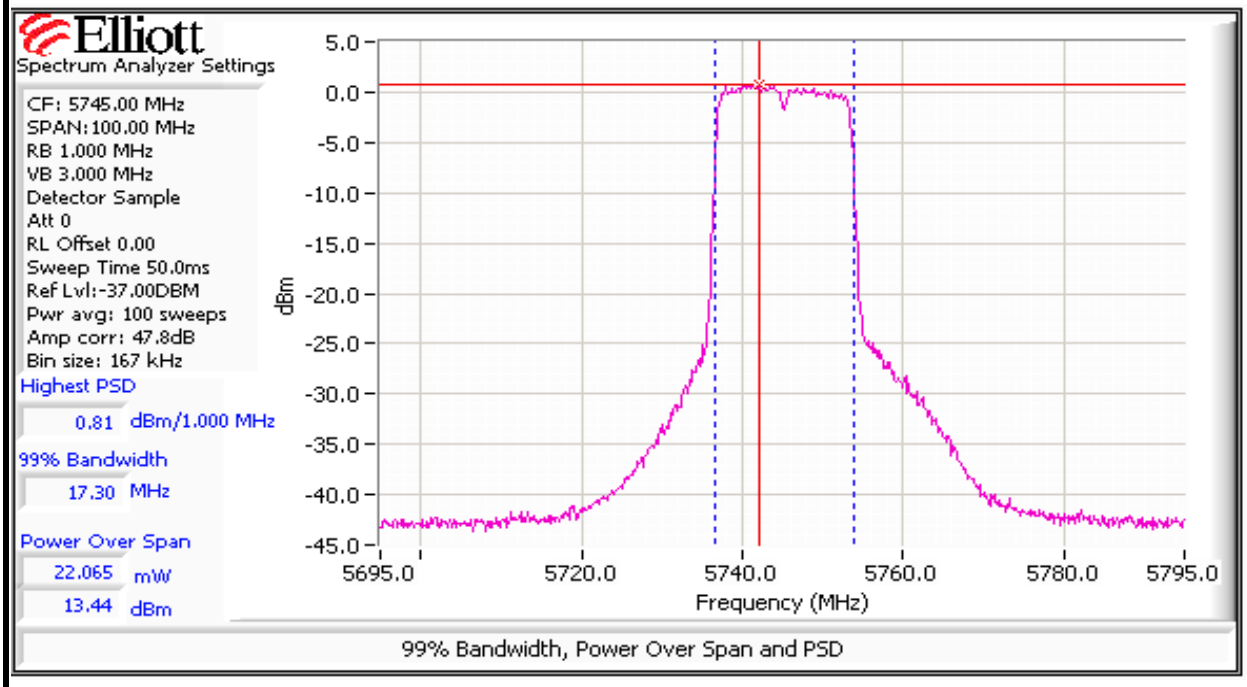
EMC Test Data

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

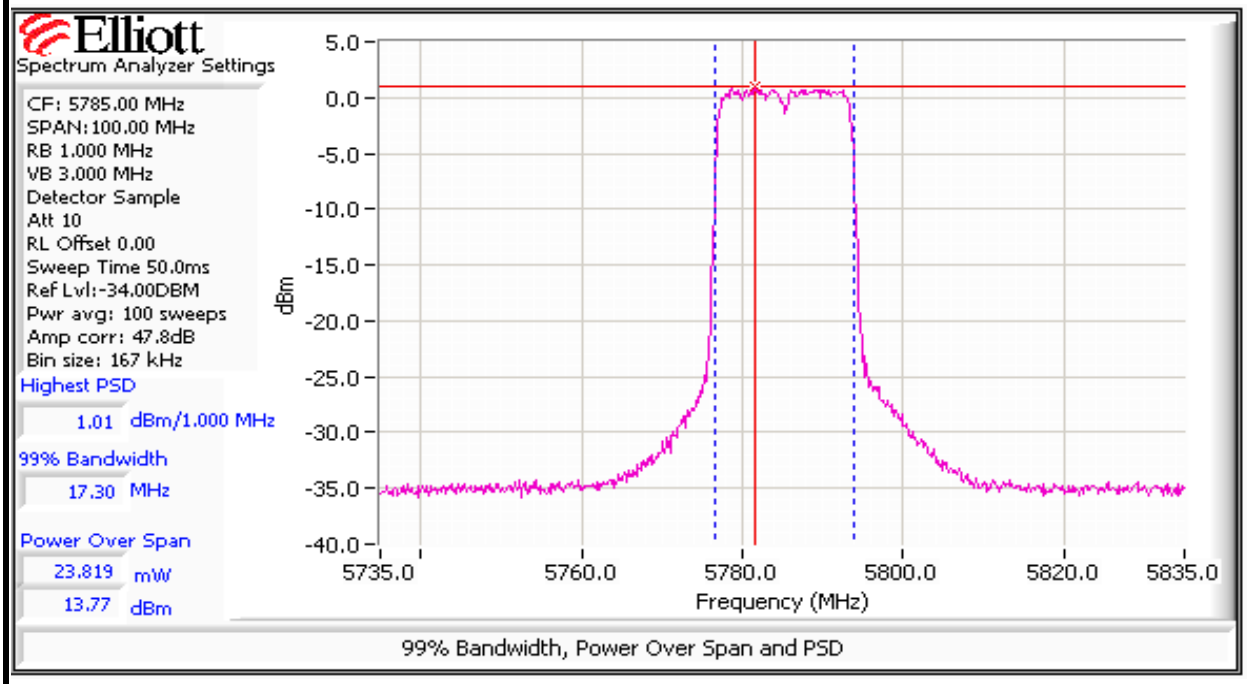
Run #1: Output Power

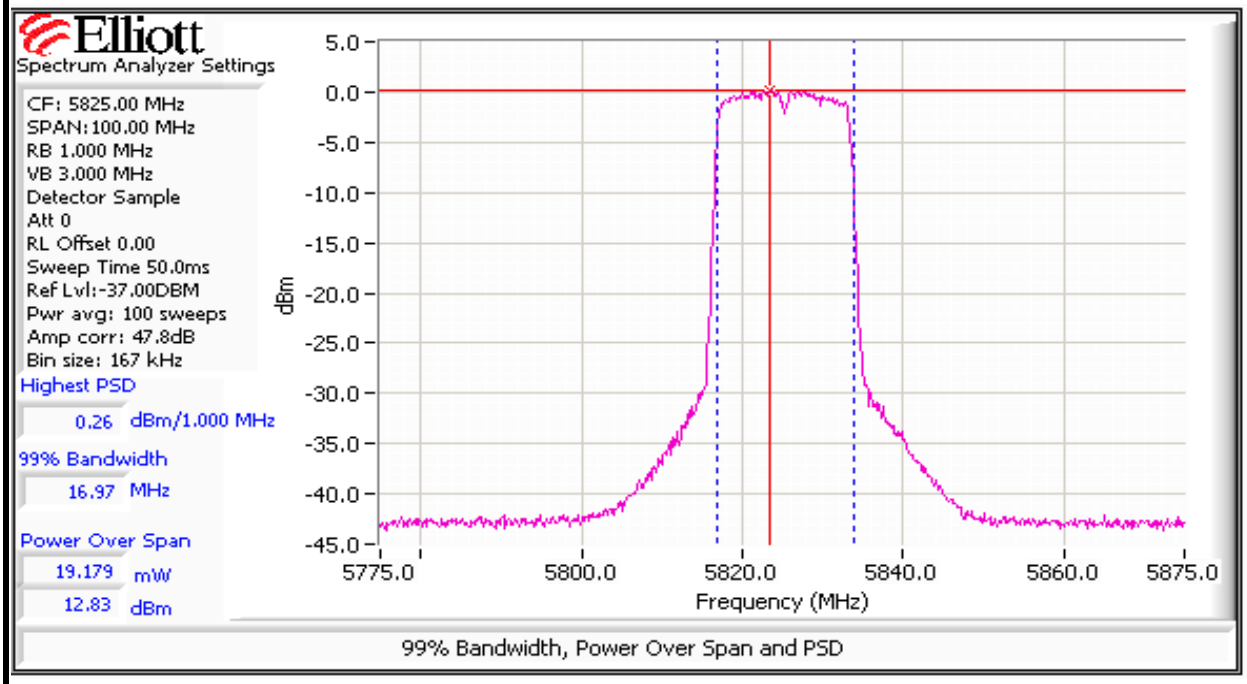
Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 1] dBm	EIRP[Note 1] W	For SAR comparison Average Power dBm	For SAR comparison Average Power W
12	5745	13.4	22.1	0.0	Pass	13.4	0.022	10.8	0.012
12	5785	13.8	23.8	0.0	Pass	13.8	0.024	9.8	0.010
11	5825	12.8	19.2	0.0	Pass	12.8	0.019	7.8	0.006

Note 1:	Output power measured using a spectrum analyzer (see plots below): RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 30 MHz The output power limit is 30dBm, EIRP calcualted from output power and antenna gain.
Note 2:	Power setting - the software power setting used during testing, included for reference only.



Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A



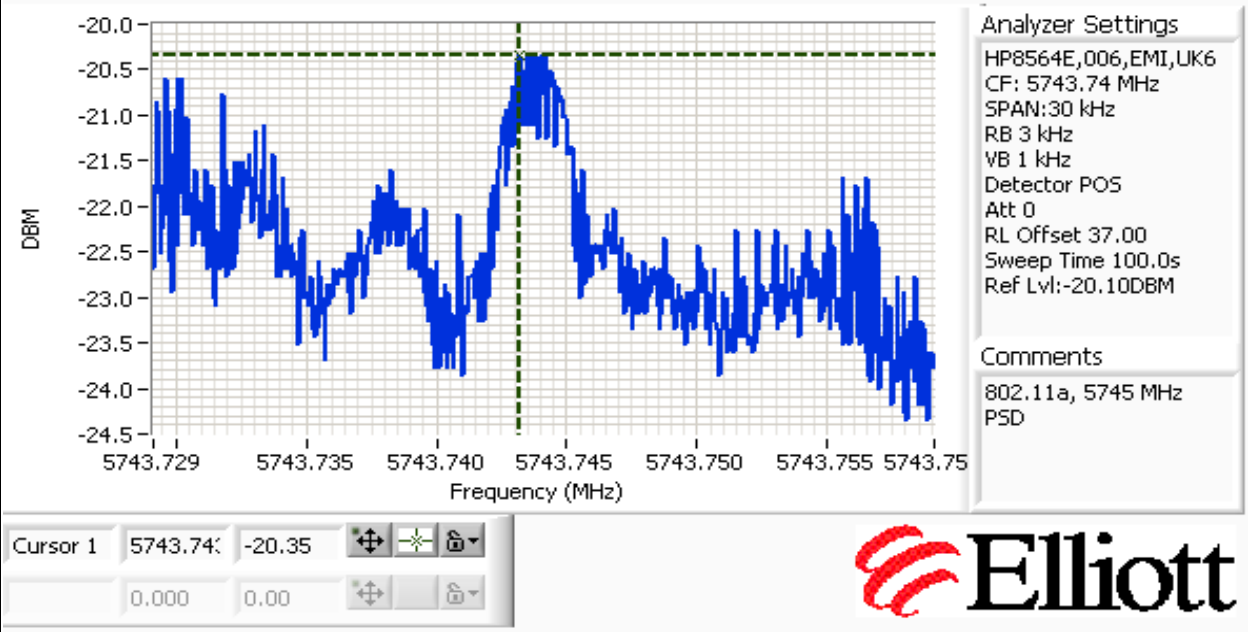


Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

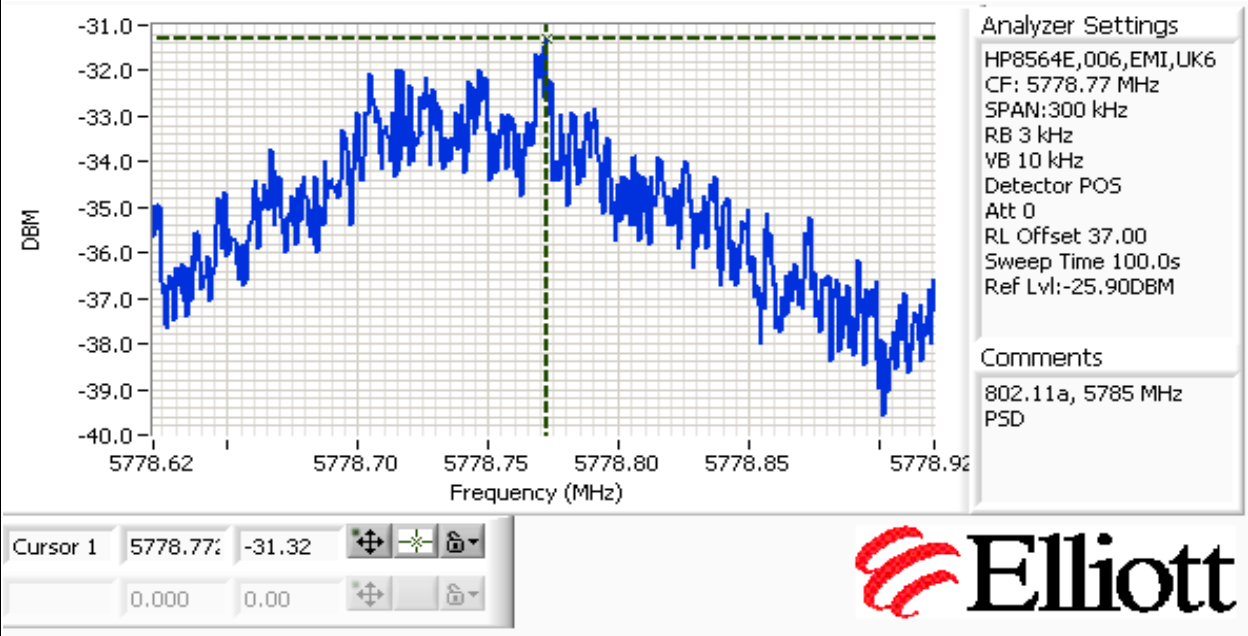
Run #2: Power Spectral Density

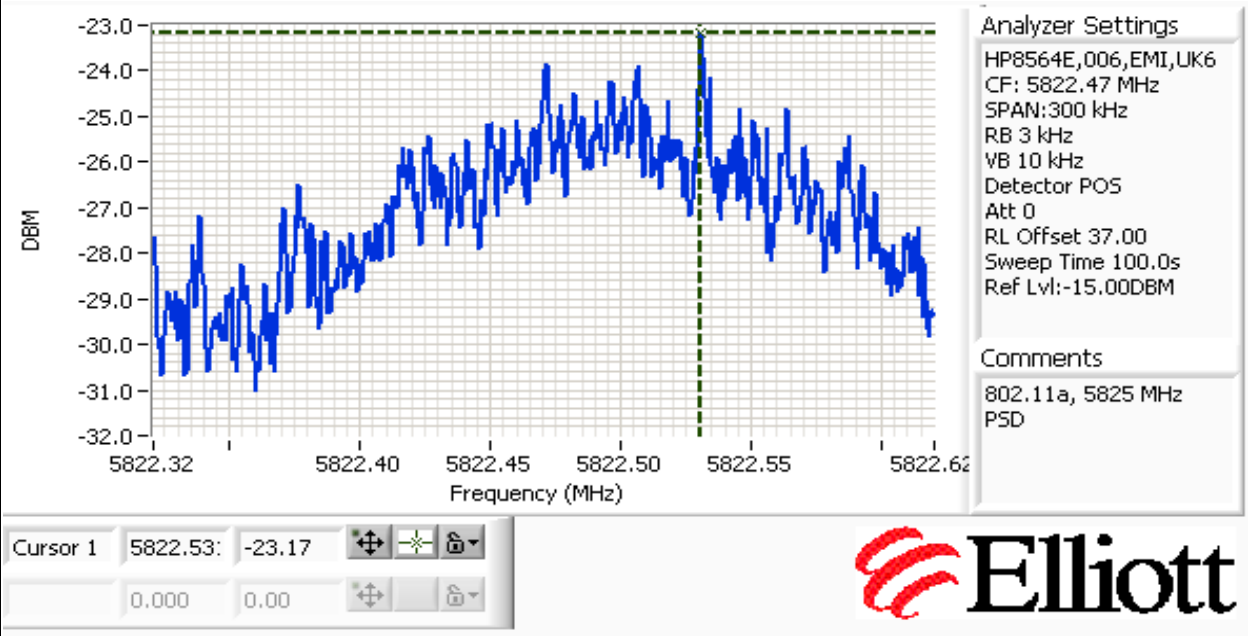
Power Setting	Frequency (MHz)	PSD (dBm/3kHz) Note 1	Limit dBm/3kHz	Result
12	5745	-20.4	8.0	Pass
12	5785	-31.3	8.0	Pass
11	5825	-23.2	8.0	Pass

Note 1:	Power standard(s)tral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.



Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





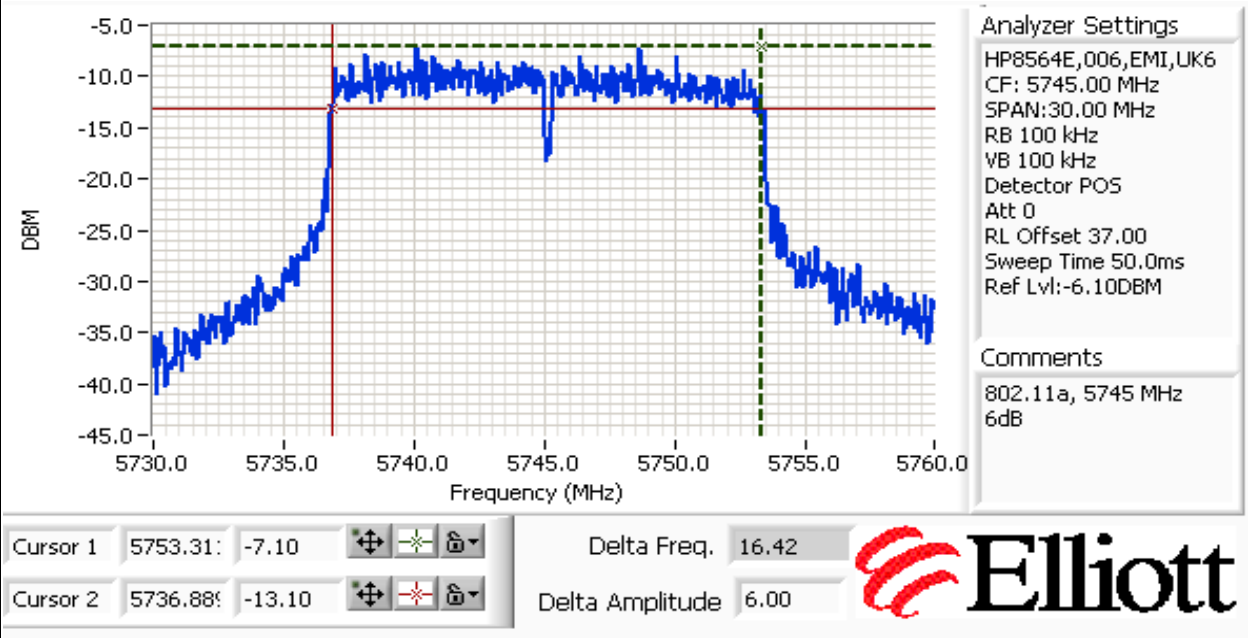
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

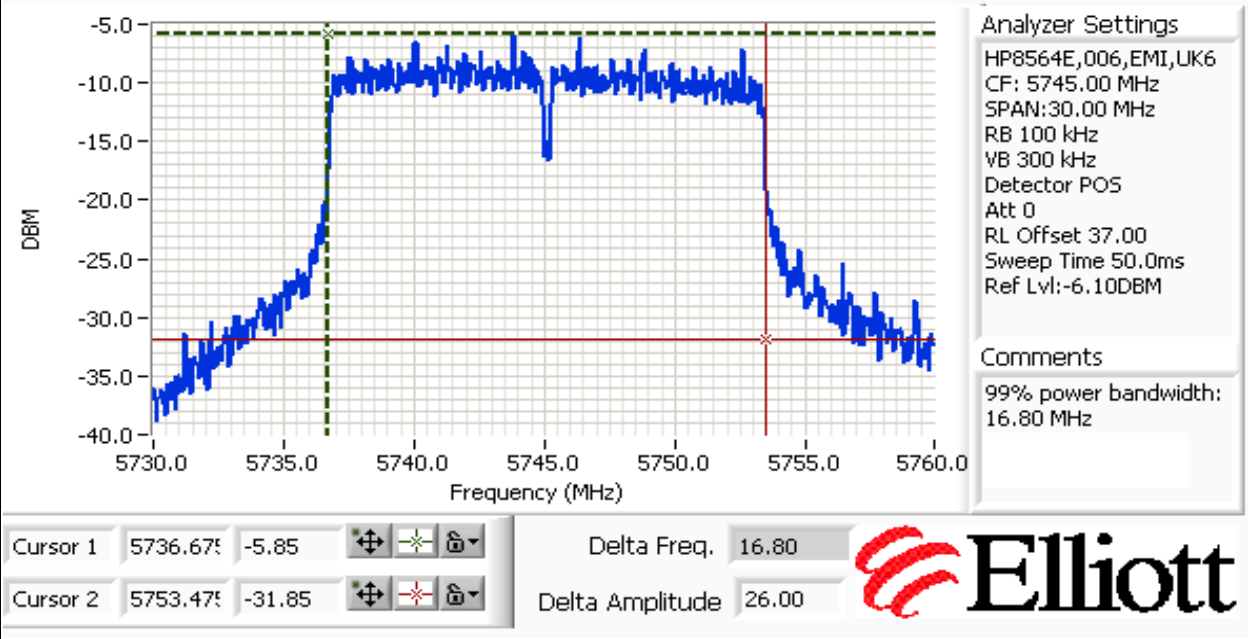
Run #3: Signal Bandwidth

Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz) 6dB	99%
12	5745	100kHz	16.4	16.8
12	5785	100kHz	16.6	17.5
11	5825	100kHz	16.4	16.4

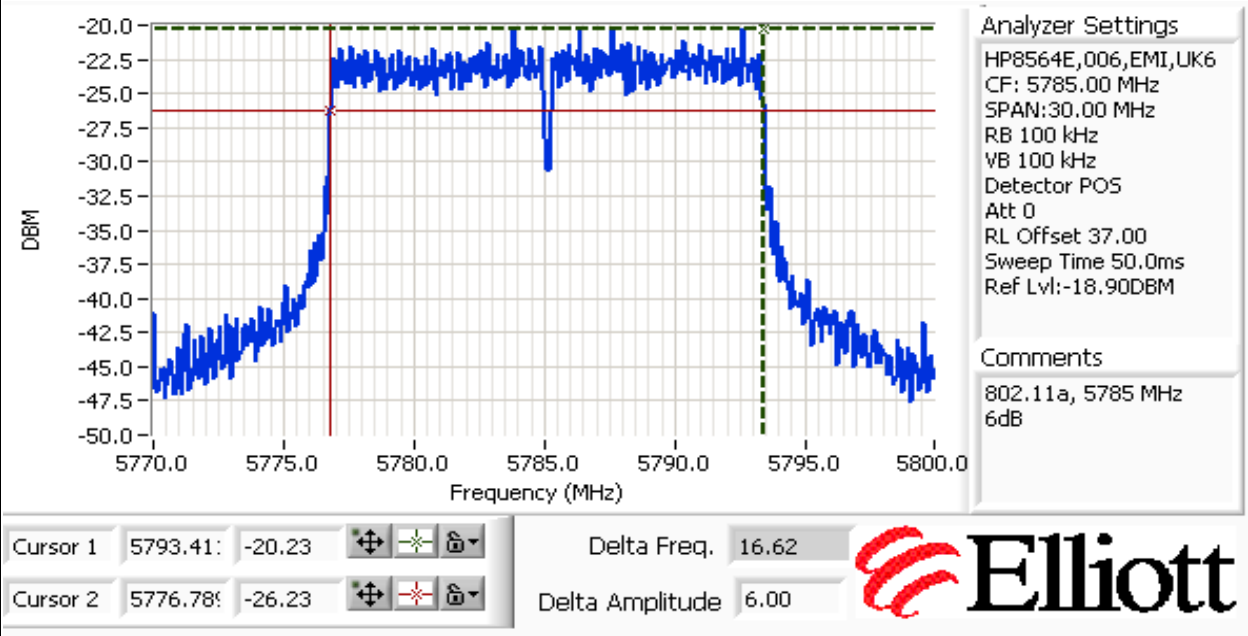
Note 1:	99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

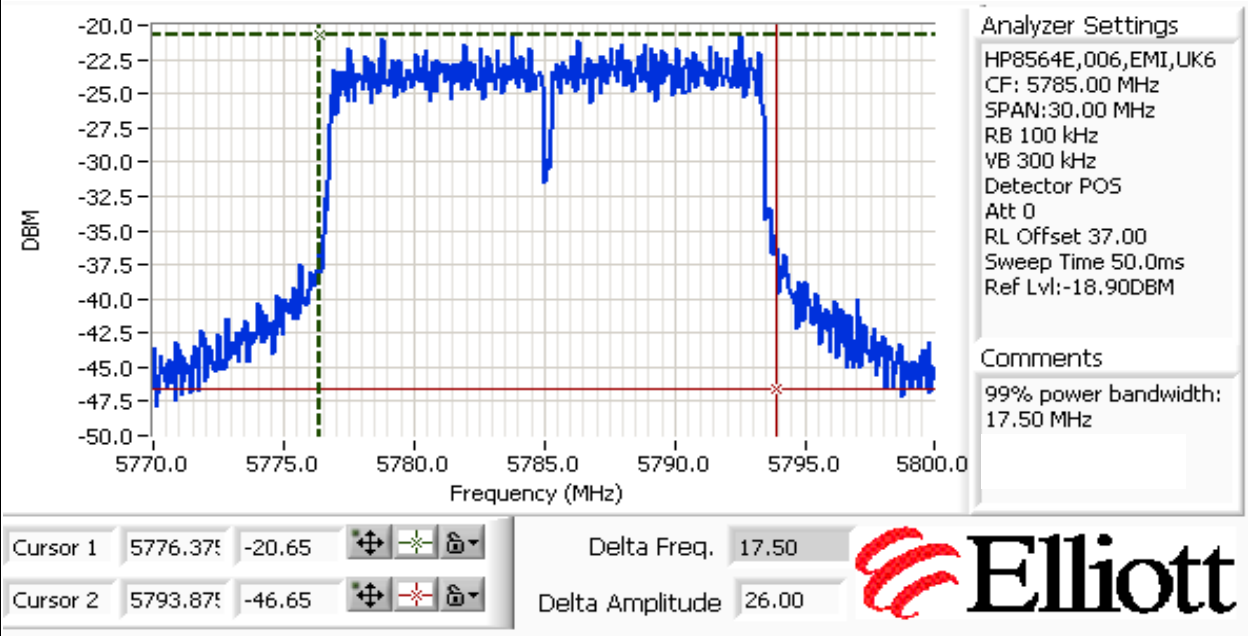
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A



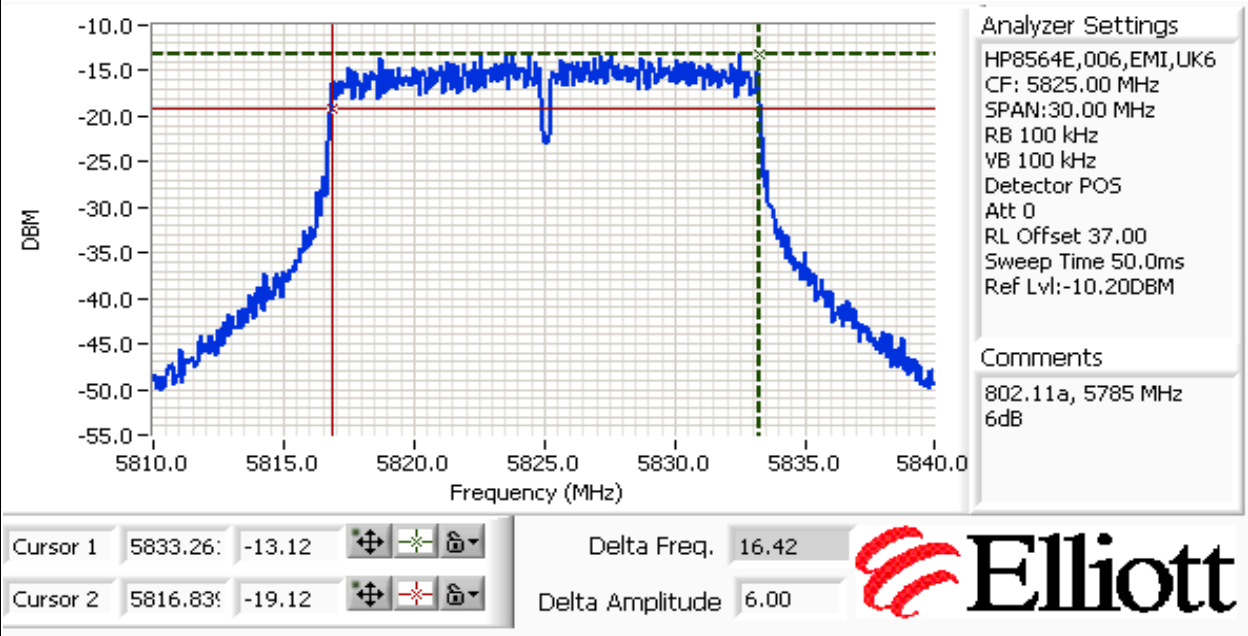


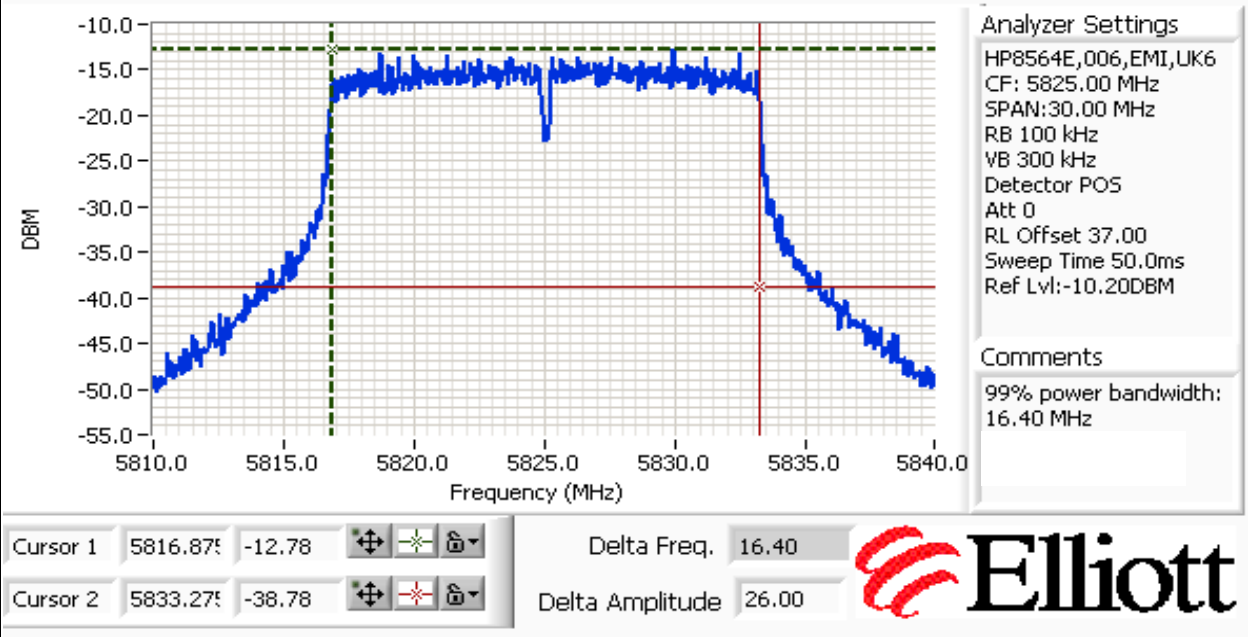
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
Power, Bandwidth and Spurious Emissions

Test specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 08/23/06
Test Engineer: Mehran Birgani
Test Location: SVOATS #1
Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spacturm analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 18 °C
Rel. Humidity: 77 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Output Power	15.247(b)	Pass	15.6 dBm
2	Power standard(s)tral Density	15.247(d)	Pass	-5.1 dBm
3	6dB Bandwidth	15.247(a)	Pass	16.5 MHz
3	99% Bandwidth	RSS GEN	Pass	19.3 MHz
4	Spurious emissions	15.247(b)	-	Not required, performed test radiated

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

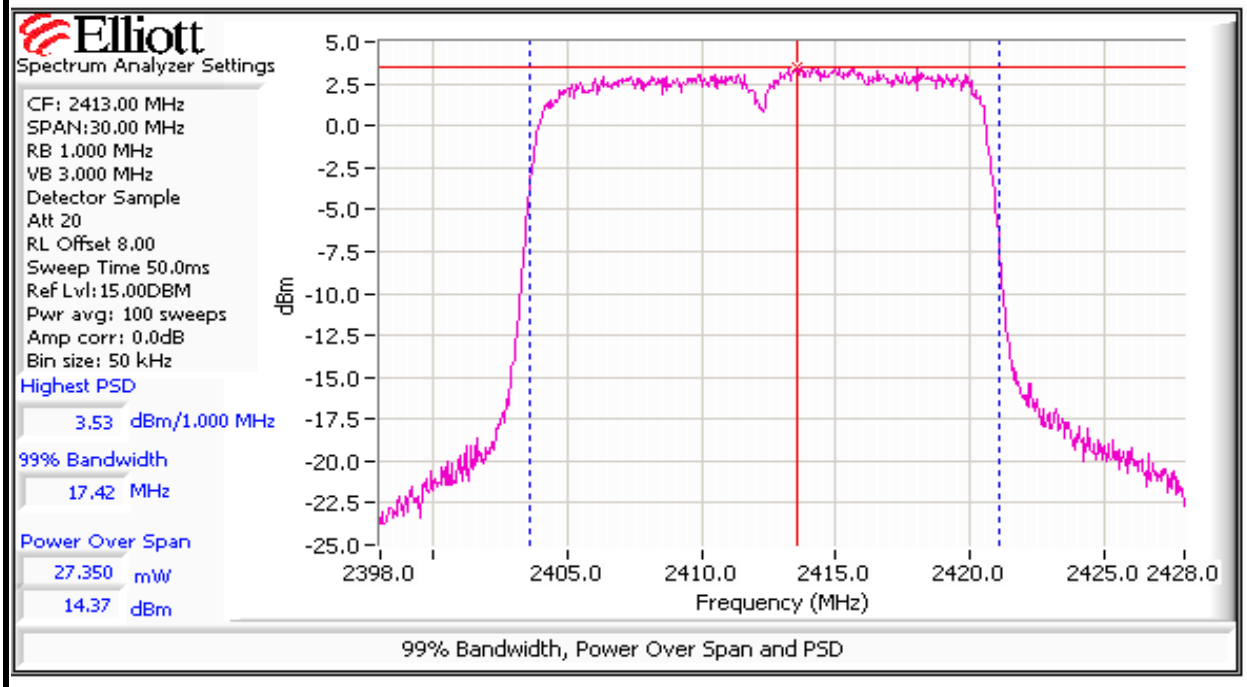
No deviations were made from the requirements of the standard.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

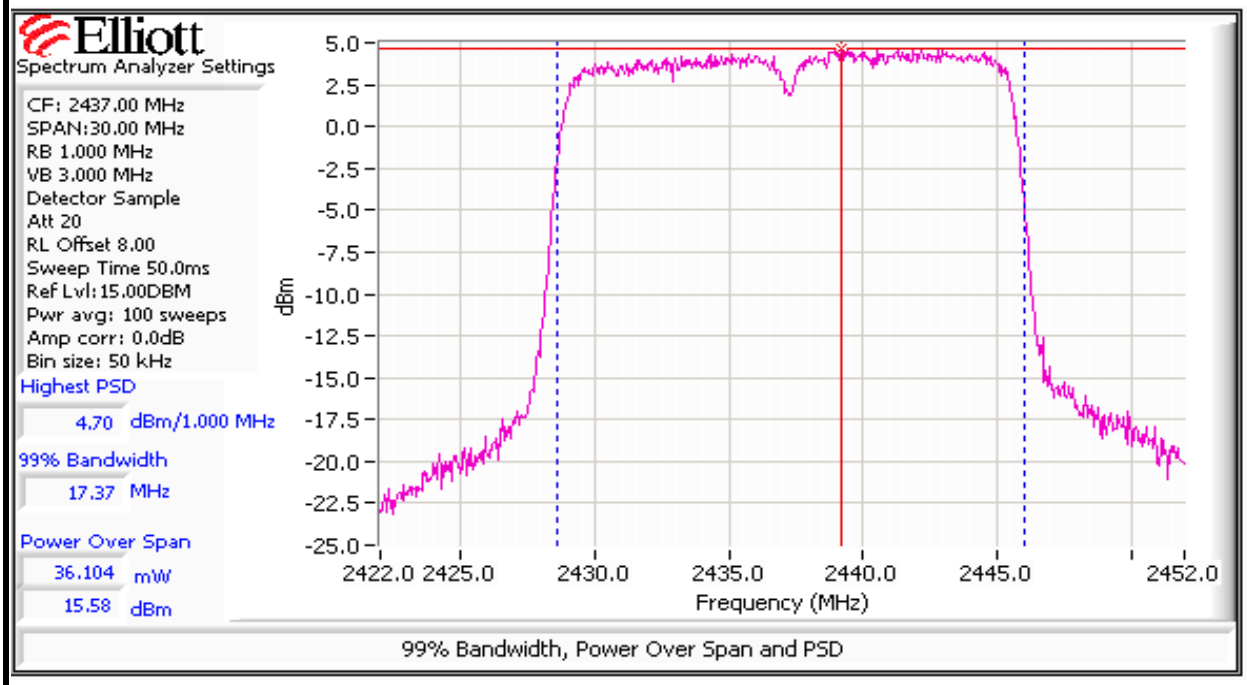
Run #1: Output Power (Power setting of 20dB)

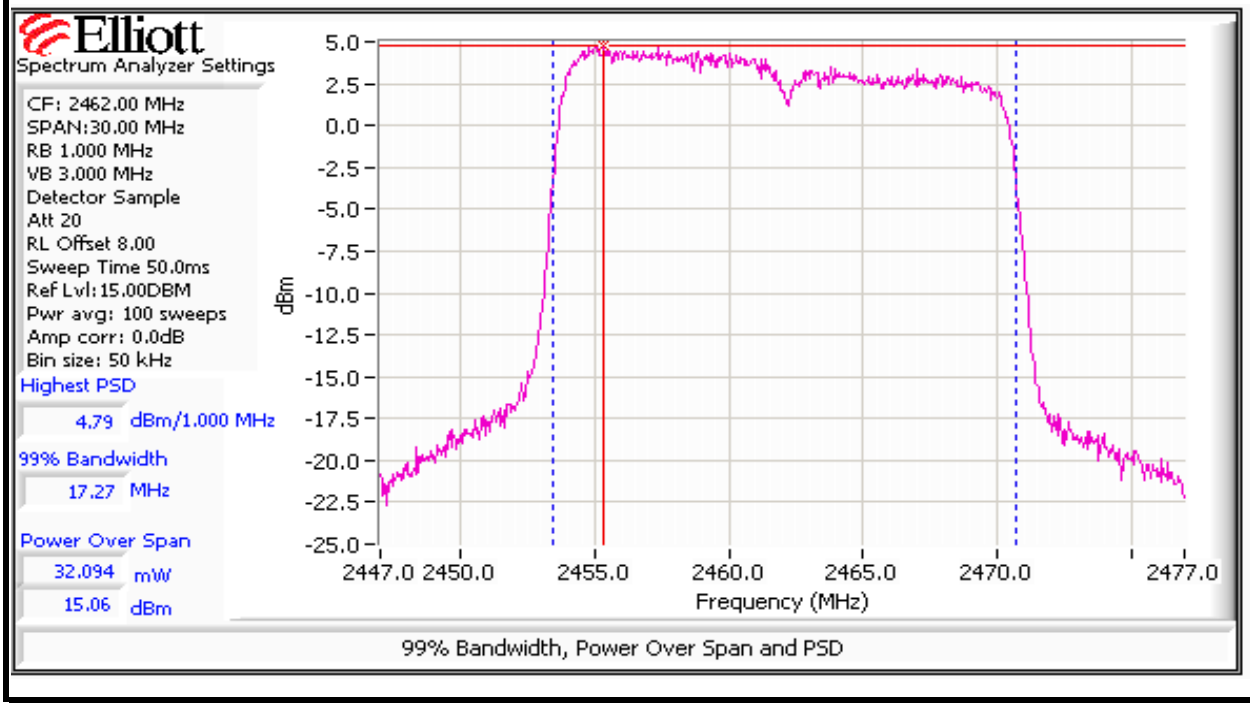
Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 1] dBm	EIRP[Note 1] W	For SAR comparison Average Power dBm	For SAR comparison Average Power W
20	2412	14.4	27.4	0.0	Pass	14.4	0.027	18.0	0.063
20	2437	15.6	36.1	0.0	Pass	15.6	0.036	17.7	0.059
20	2462	15.1	32.1	0.0	Pass	15.1	0.032	17.9	0.062

Note 1:	Output power measured using a spectrum analyzer (see plots below): RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 50 MHz The output power limit is 30dBm, EIRP calcualted from output power and antenna gain.
Note 2:	Power setting - the software power setting used during testing, included for reference only.



Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A



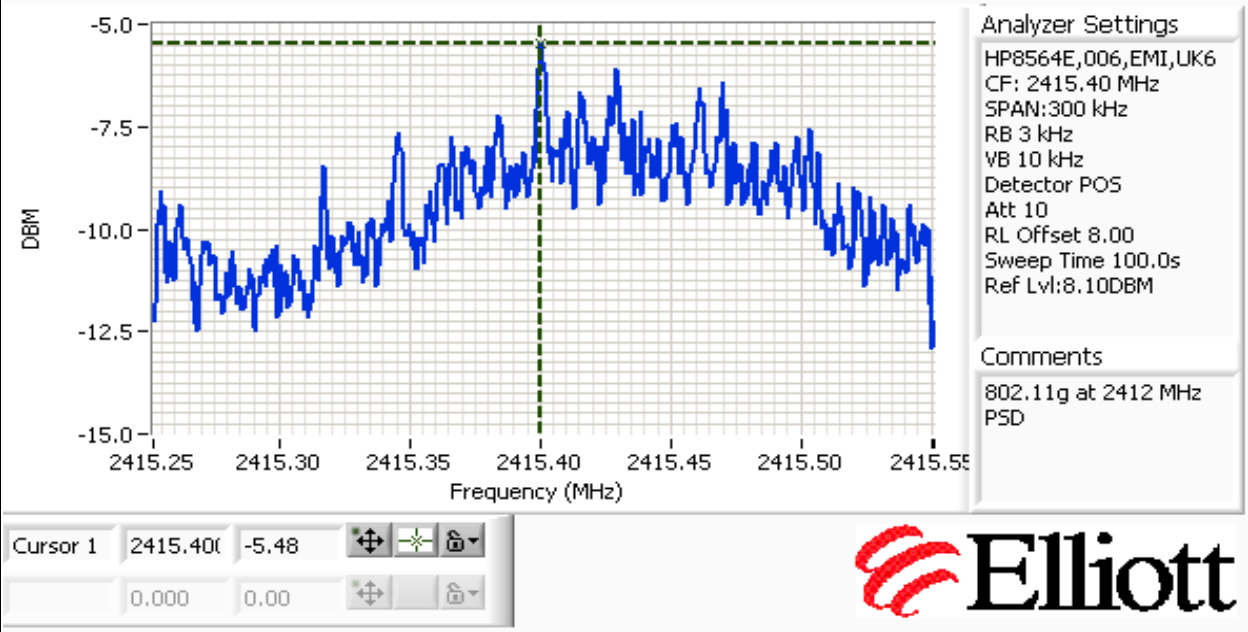


Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

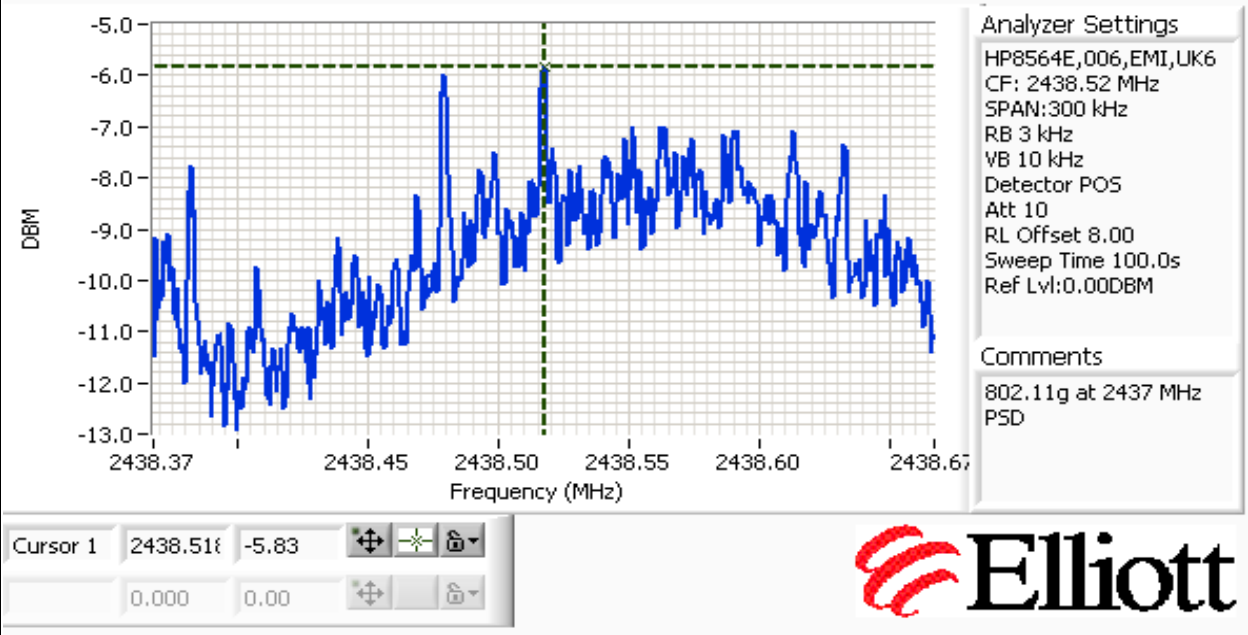
Run #2: Power Spectral Density

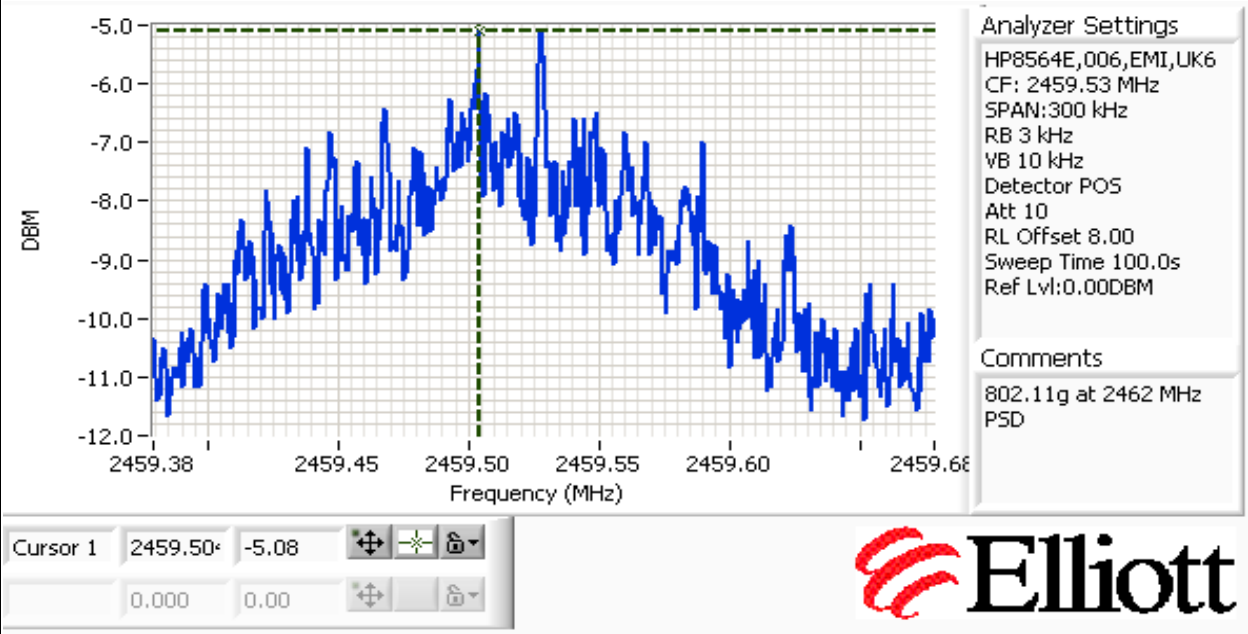
Power Setting	Frequency (MHz)	PSD (dBm/3kHz) Note 1	Limit dBm/3kHz	Result
20	2412	-5.5	8.0	Pass
20	2437	-5.8	8.0	Pass
20	2462	-5.1	8.0	Pass

Note 1:	Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.



Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





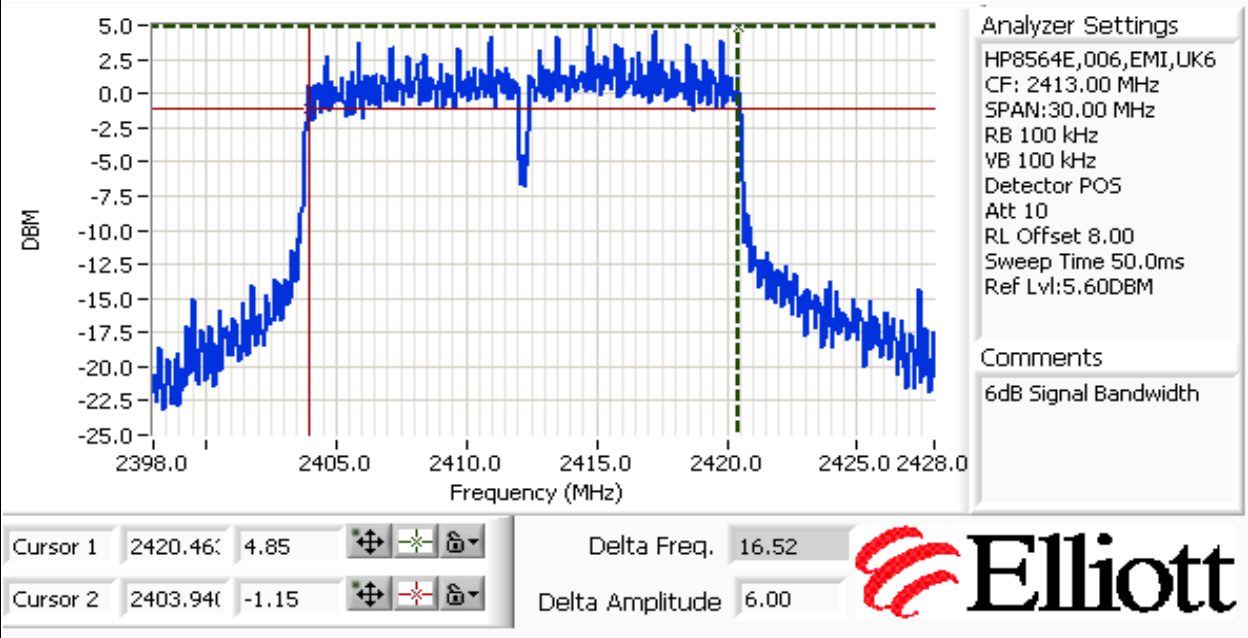
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

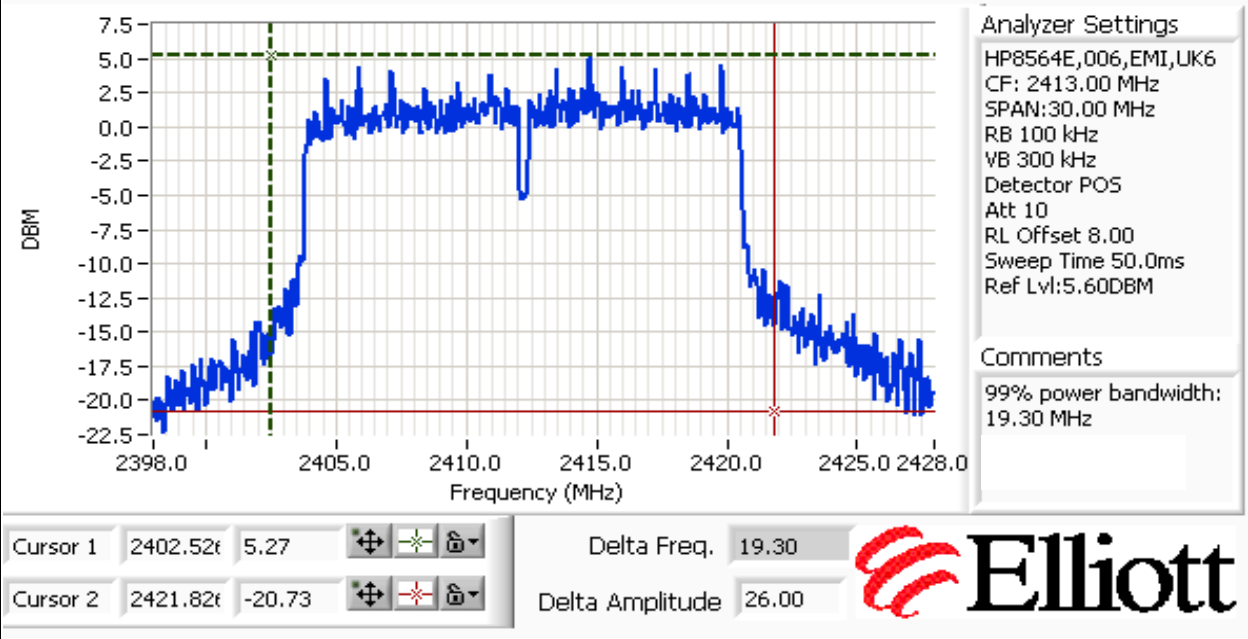
Run #3: Signal Bandwidth

Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz) 6dB	99%
20	2412	100kHz	16.5	19.3
20	2437	100kHz	16.5	18.8
20	2462	100kHz	16.5	18.0

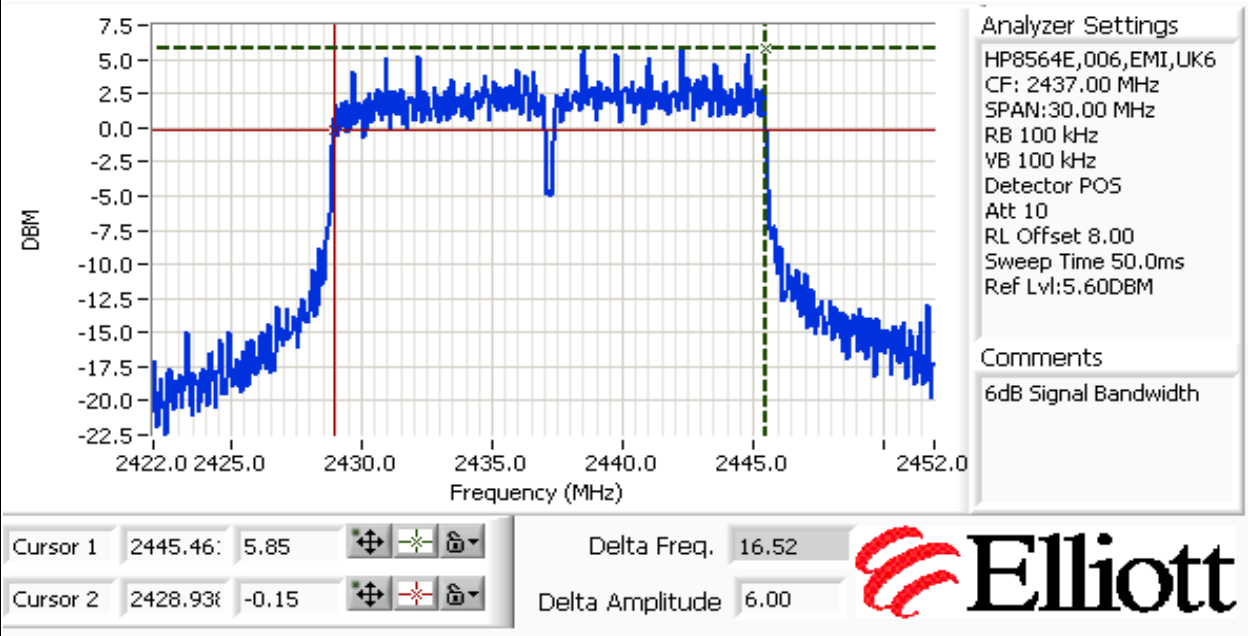
Note 1:	99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

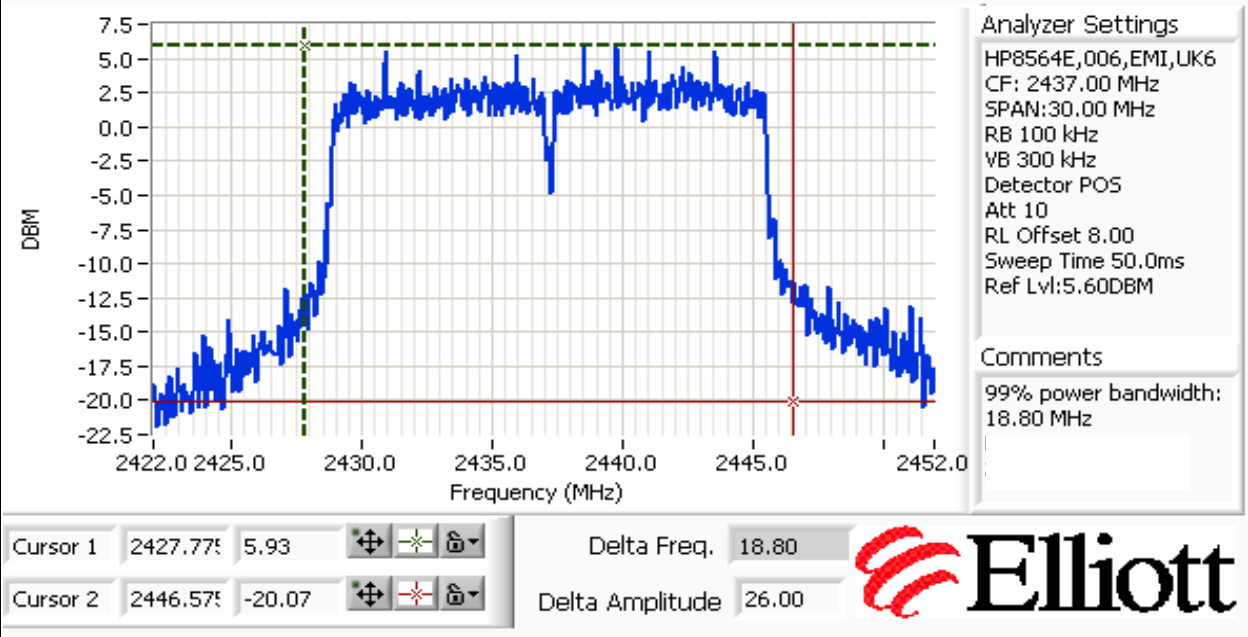
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A



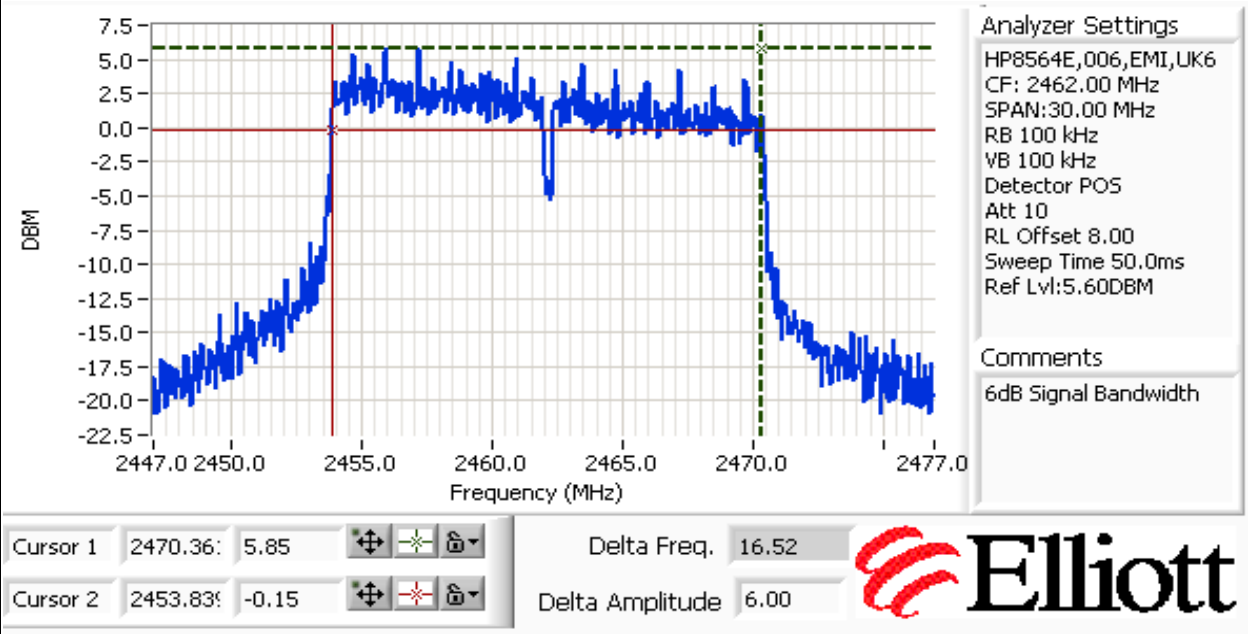


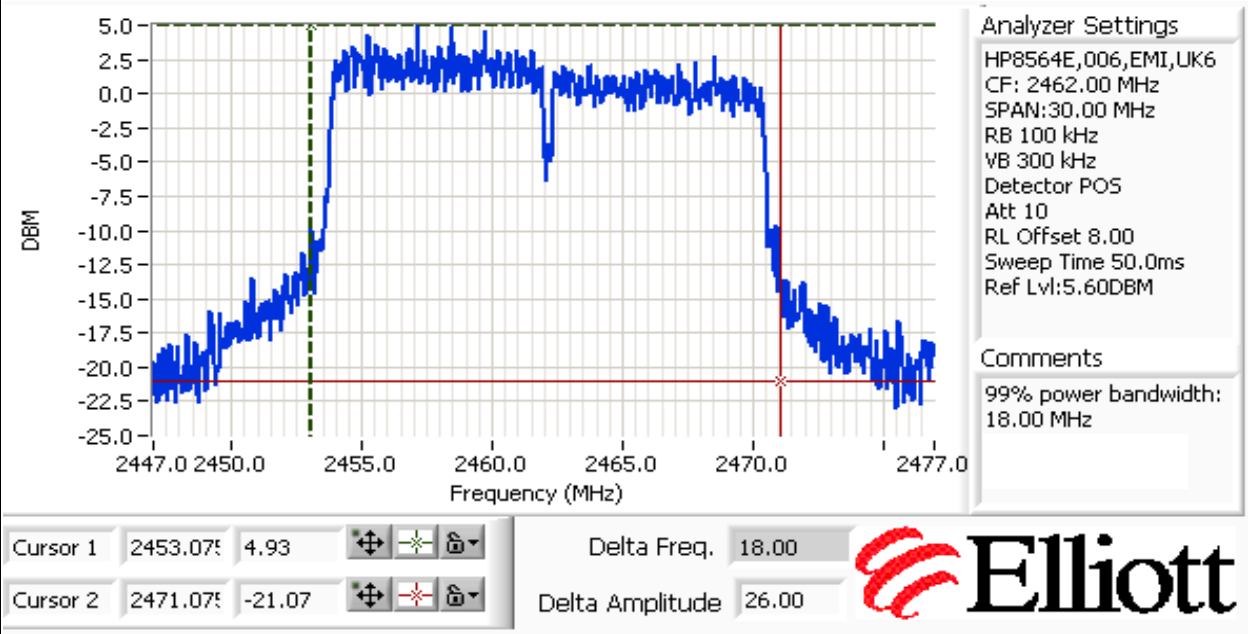
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
Power, Bandwidth and Spurious Emissions

Test specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 08/23/06
Test Engineer: Mehran Birgani
Test Location: SVOATS #1
Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spacturm analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 18 °C
Rel. Humidity: 77 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Output Power	15.247(b)	Pass	20.1 dBm
2	Power standard(s)tral Density	15.247(d)	Pass	-0.8 dBm/3kHz
3	6dB Bandwidth	15.247(a)	Pass	12.2 MHz
3	99% Bandwidth	RSS GEN	Pass	16.1 MHz
4	Spurious emissions	15.247(b)	-	Not required, performed test radiated

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

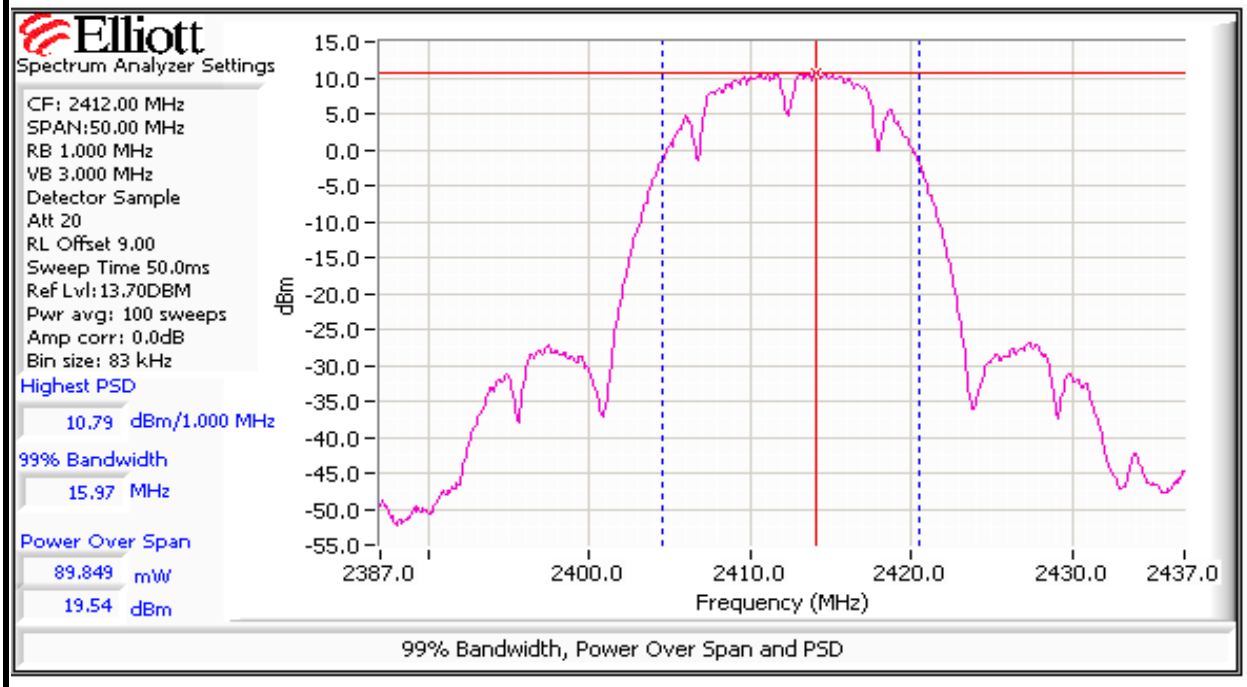
EMC Test Data

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

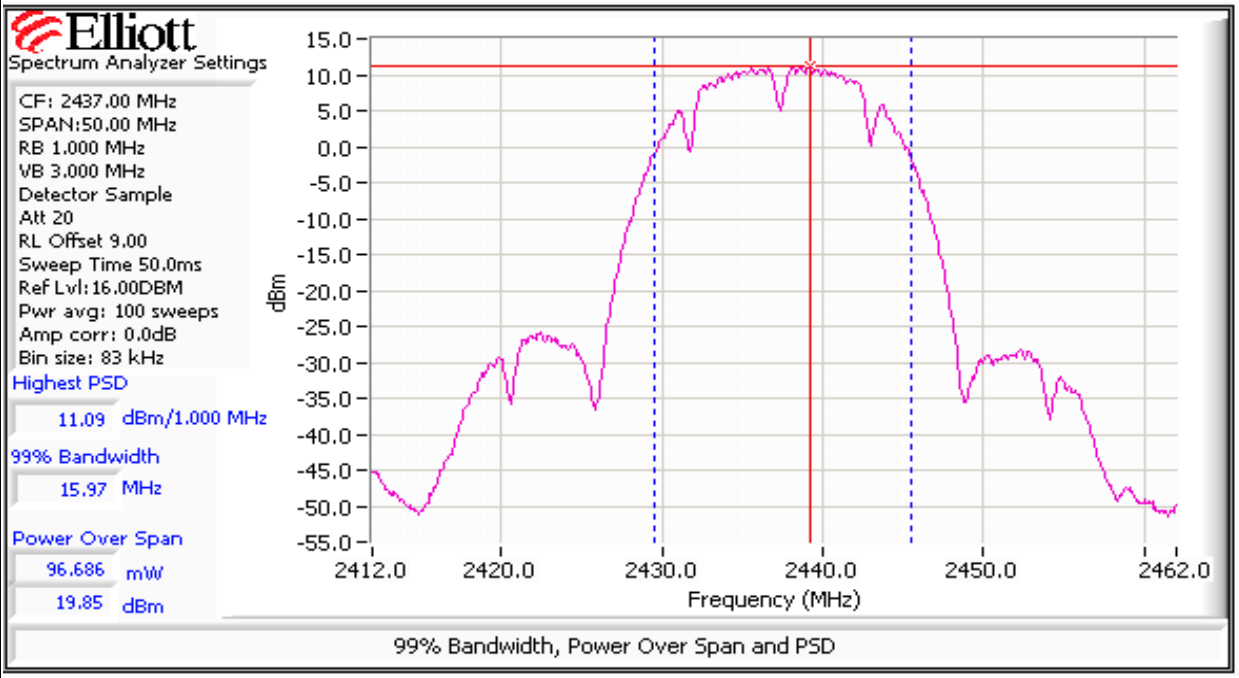
Run #1: Output Power

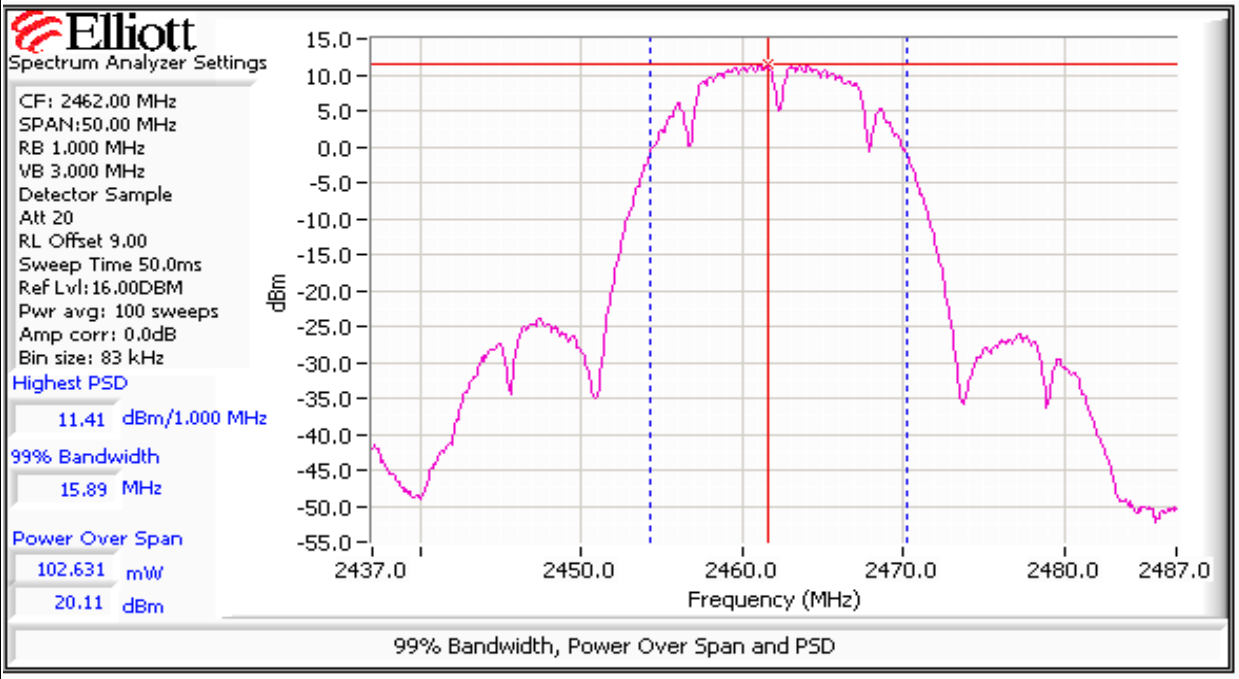
Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 1] dBm	EIRP W	For SAR comparison Average Power dBm	Average Power W
20	2412	19.5	89.9	0.0	Pass	19.5	0.090	18.0	0.063
20	2437	19.9	96.6	0.0	Pass	19.9	0.097	18.1	0.065
20	2462	20.1	102.6	0.0	Pass	20.1	0.103	18.1	0.065

Note 1:	Output power measured using a standard(s)trum analyzer (see plots below): RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 50 MHz The output power limit is 30dBm, EIRP calculated from output powr and antenna gain.
Note 2:	Power setting - the software power setting used during testing, included for reference only.



Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A



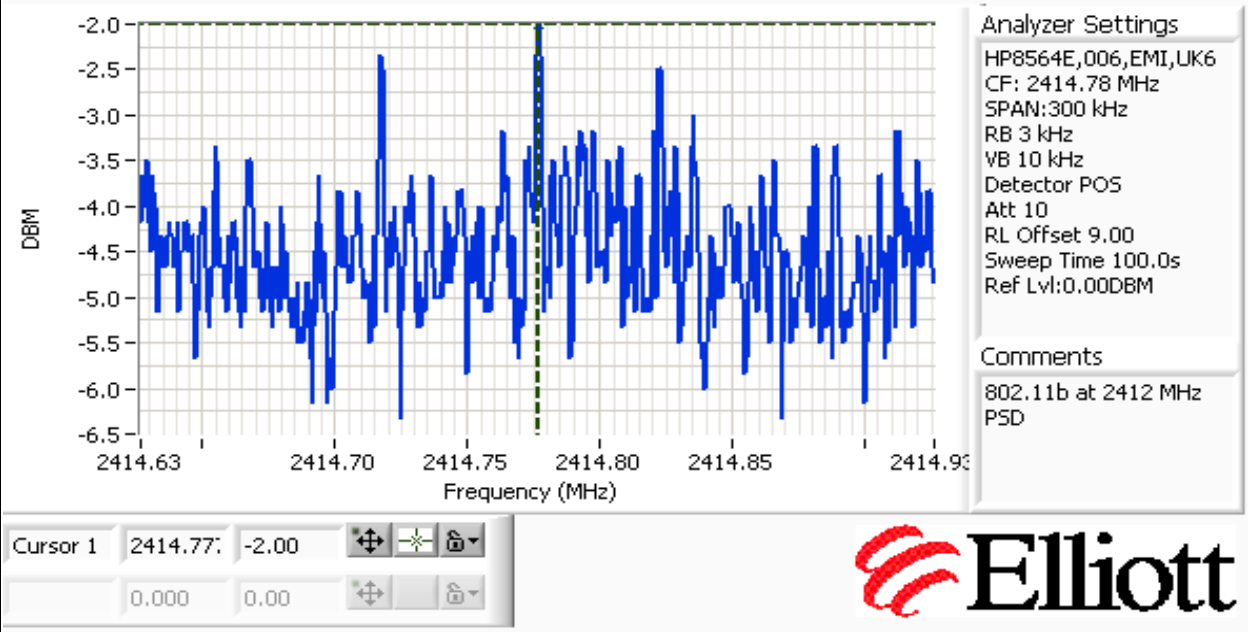


Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

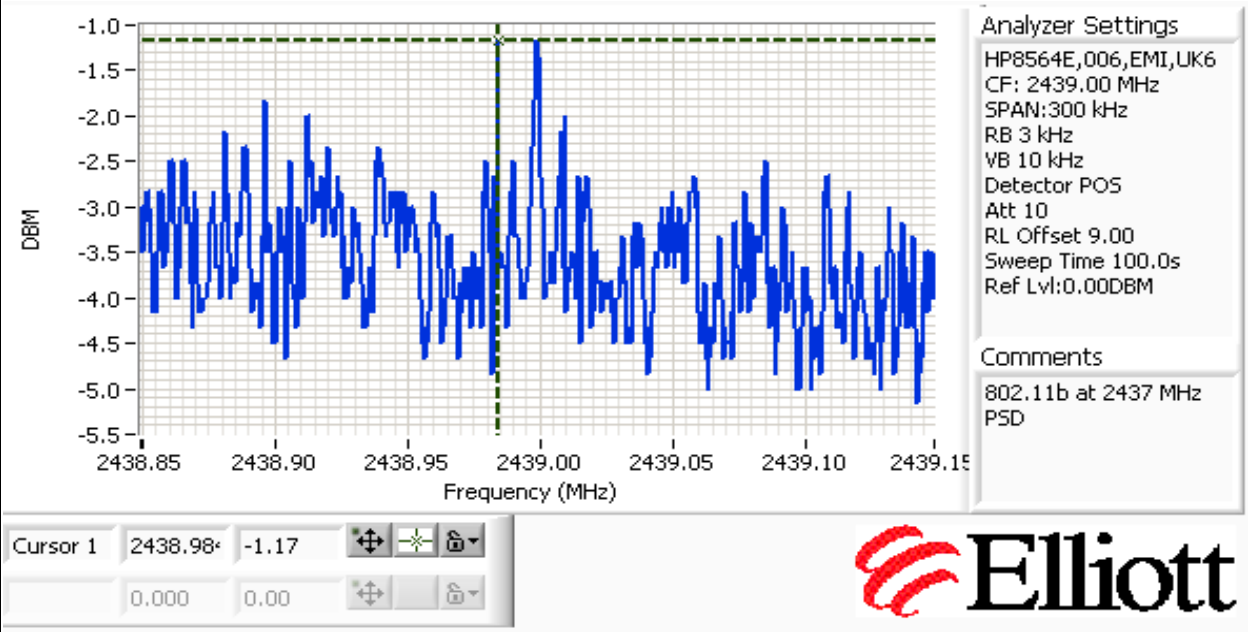
Run #2: Power Spectral Density

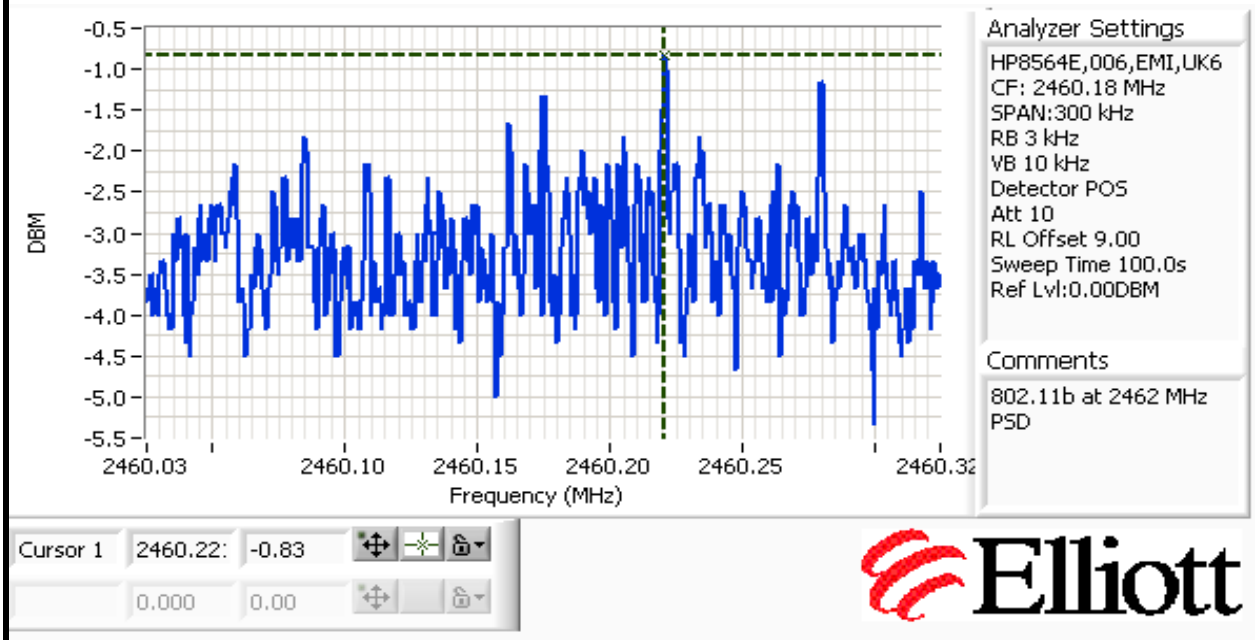
Power Setting	Frequency (MHz)	PSD (dBm/3kHz) Note 1	Limit dBm/3kHz	Result
20	2412	-2.0	8.0	Pass
20	2437	-1.2	8.0	Pass
20	2462	-0.8	8.0	Pass

Note 1:	Power standard(s)tral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.



Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





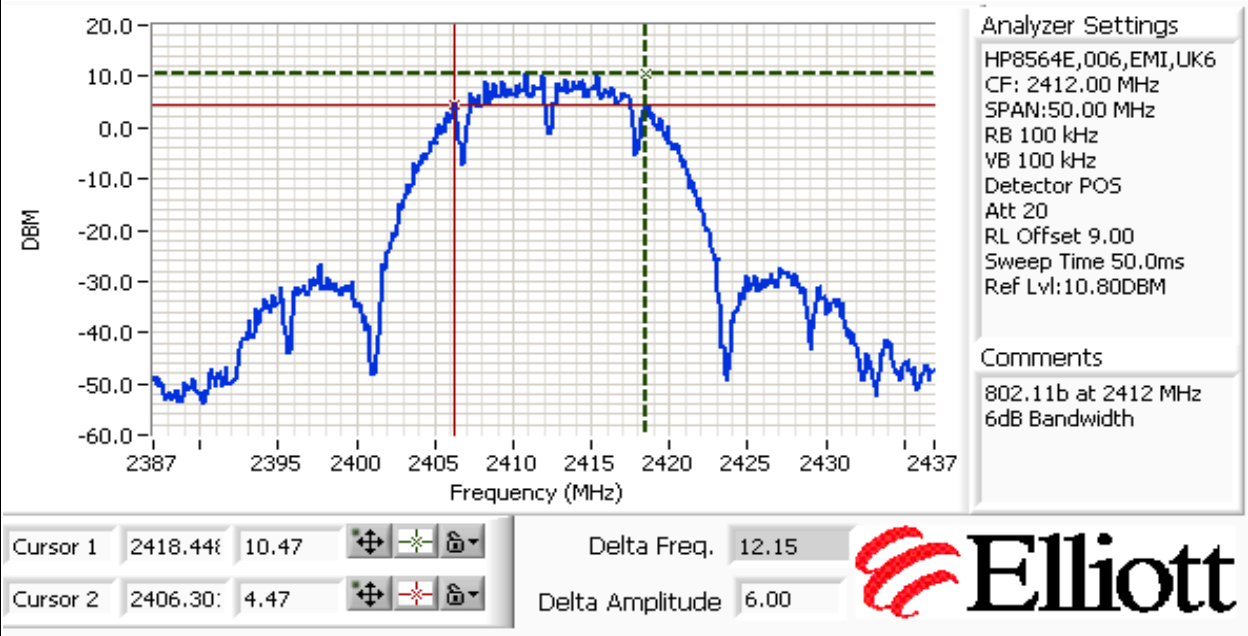
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

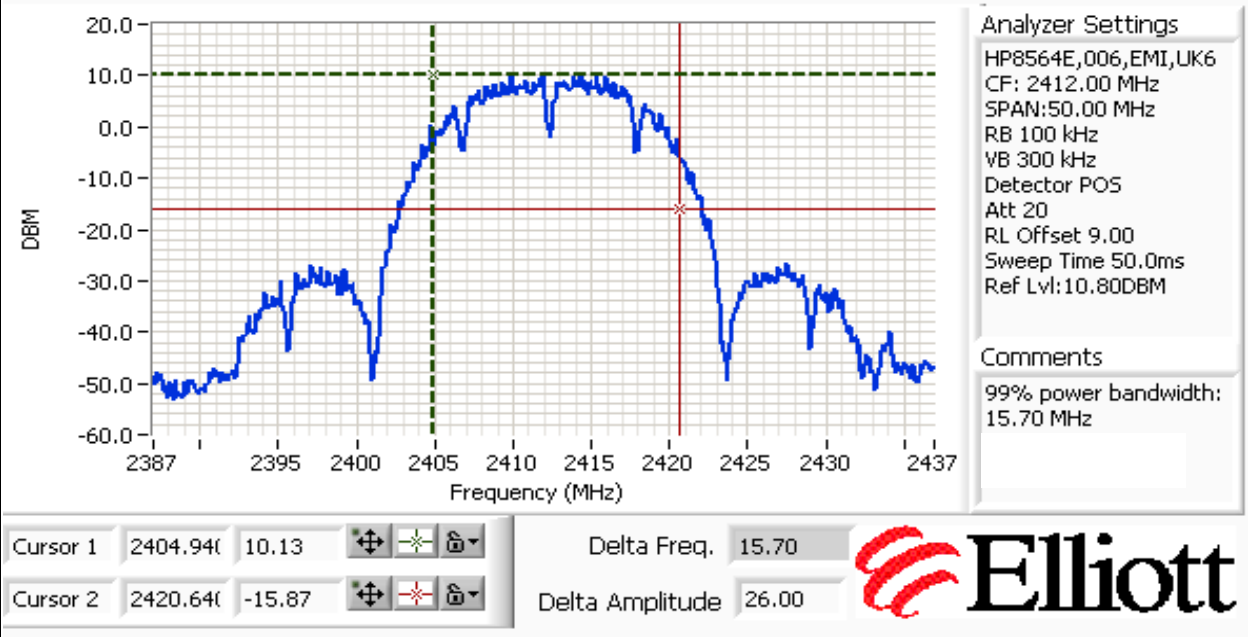
Run #3: Signal Bandwidth

Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz) 6dB	99%
20	2412	1MHz	12.2	15.7
20	2437	1MHz	11.2	16.1
20	2462	1MHz	10.1	15.7

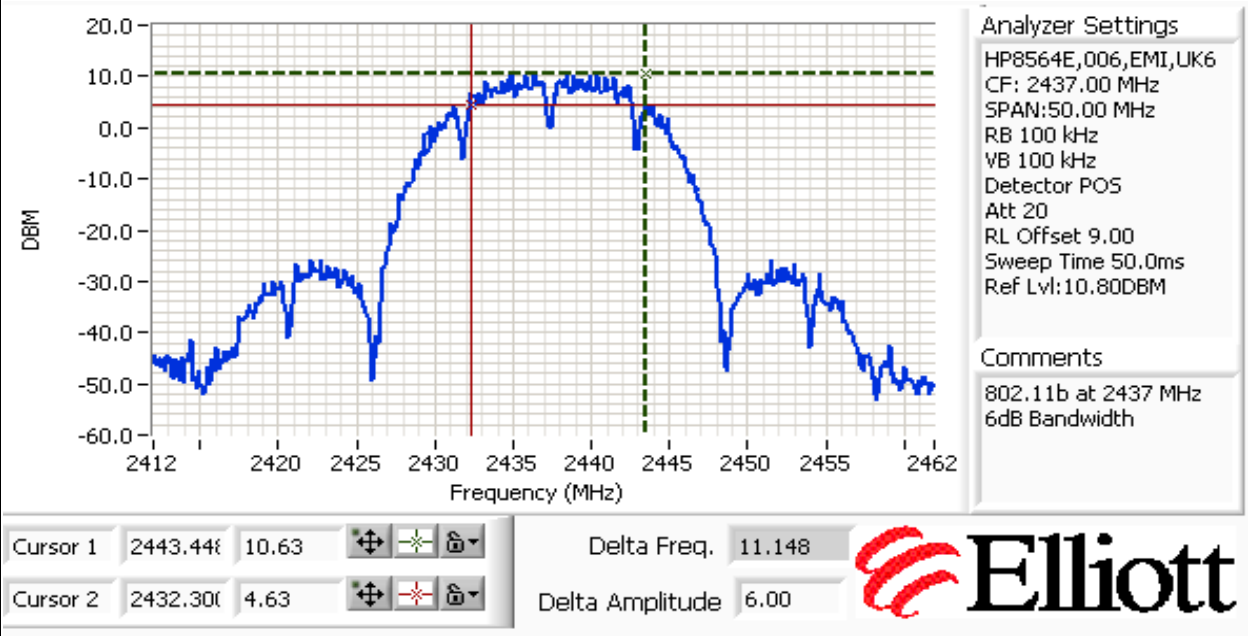
Note 1: 99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

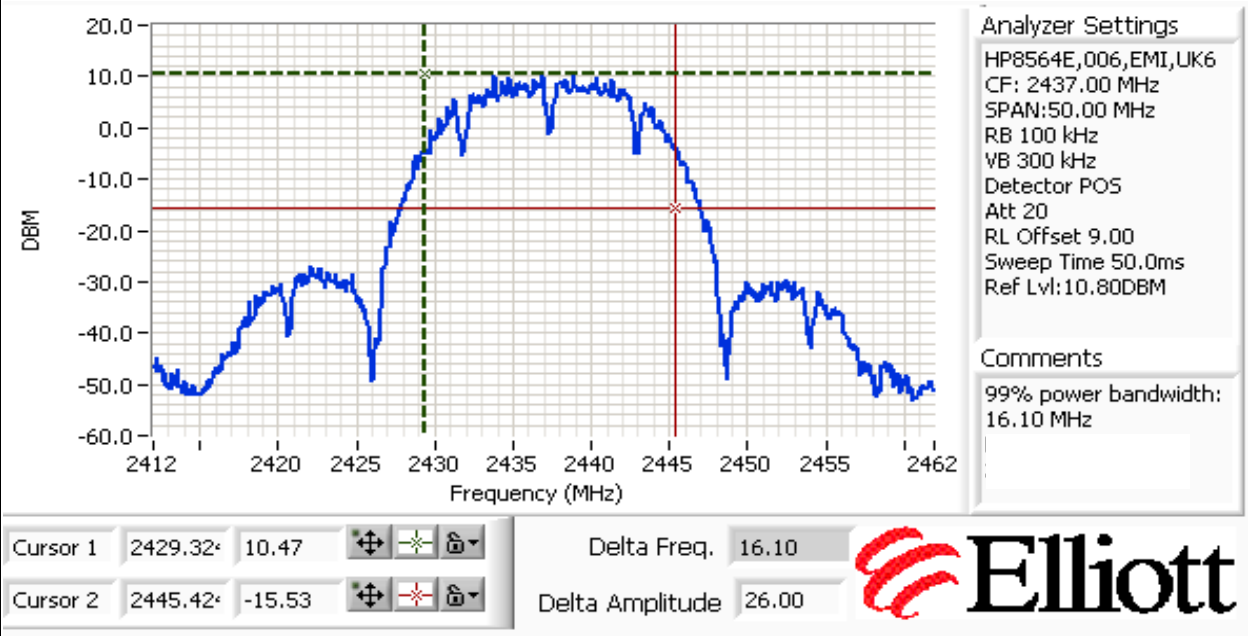
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A



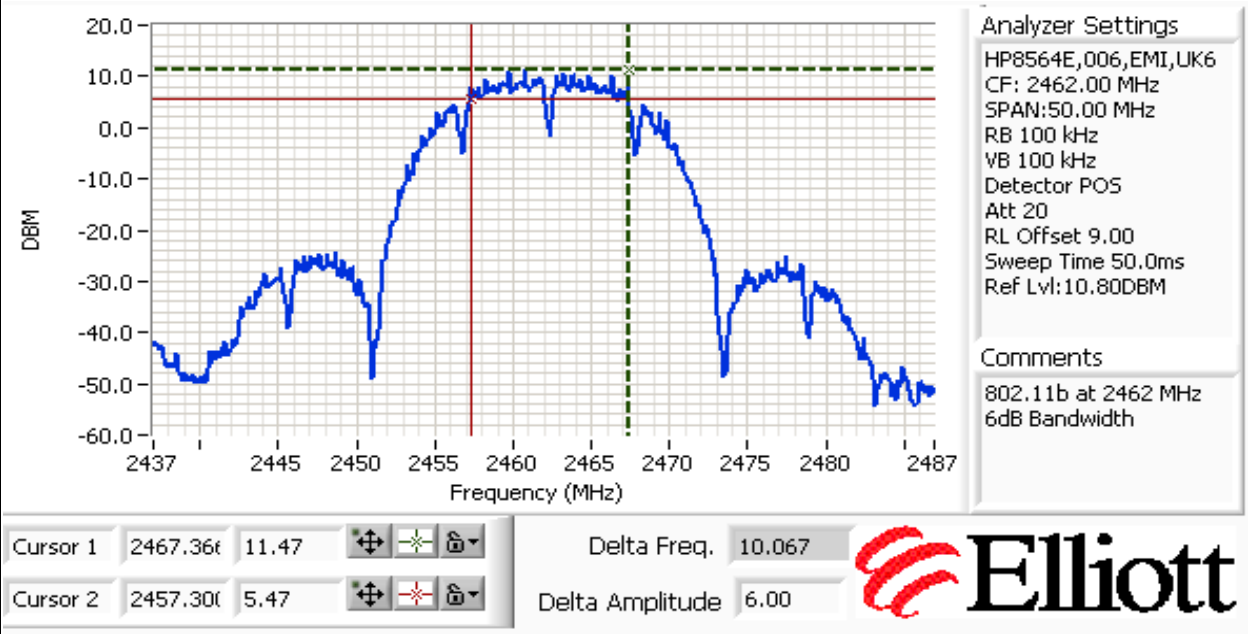


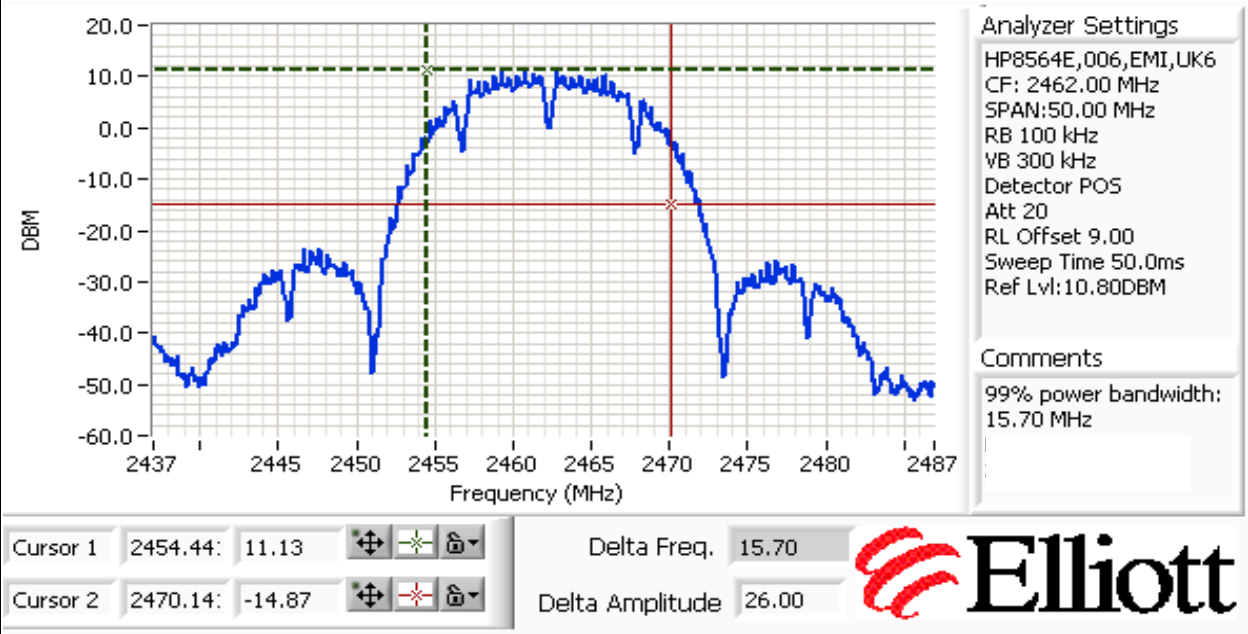
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

RSS 210, FCC 15.247 FHSS
Power, Bandwidth and Spurious Emissions

Test specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 08/23/06
Test Engineer: Mehran Birgani
Test Location: SVOATS #2

Config. Used: 1
Config Change: -
EUT Voltage: 120V/ 60Hz

General Test Configuration

The EUT was located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Unless stated otherwise the EUT was operating such that it constantly hopped on either the low, center or high channels.

Ambient Conditions:

Temperature: 21 °C
Rel. Humidity: 59 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	30-24,800 MHz - Transmitter Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	48.8dBµV/m (275.4µV/m) @ 4804.0MHz (-5.2dB)
2	30-18,000 MHz - Receiver Spurious Emissions	RSS 210	Pass	40.8dBµV/m @ 1625.7MHz (-13.2dB)
3	Output Power	15.247(b)	Pass	-3.2 dBm (0.0005 W)
4	20dB Bandwidth/ Channel Spacing	15.247(a)	Pass	890kHz / 1000kHz
4	99% bandwidth	15.247(a)	N/A	870kHz
4	Channel Occupancy	15.247(a)	Pass	< 0.4s
4	Number of Channels	15.247(a)	Pass	79

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Note: Power setting are base on 255 and 63 per software setting.

Run #1: Radiated Spurious Emissions, 30 - 24020 MHz.

Run #1a: Low Channel @ 2402 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

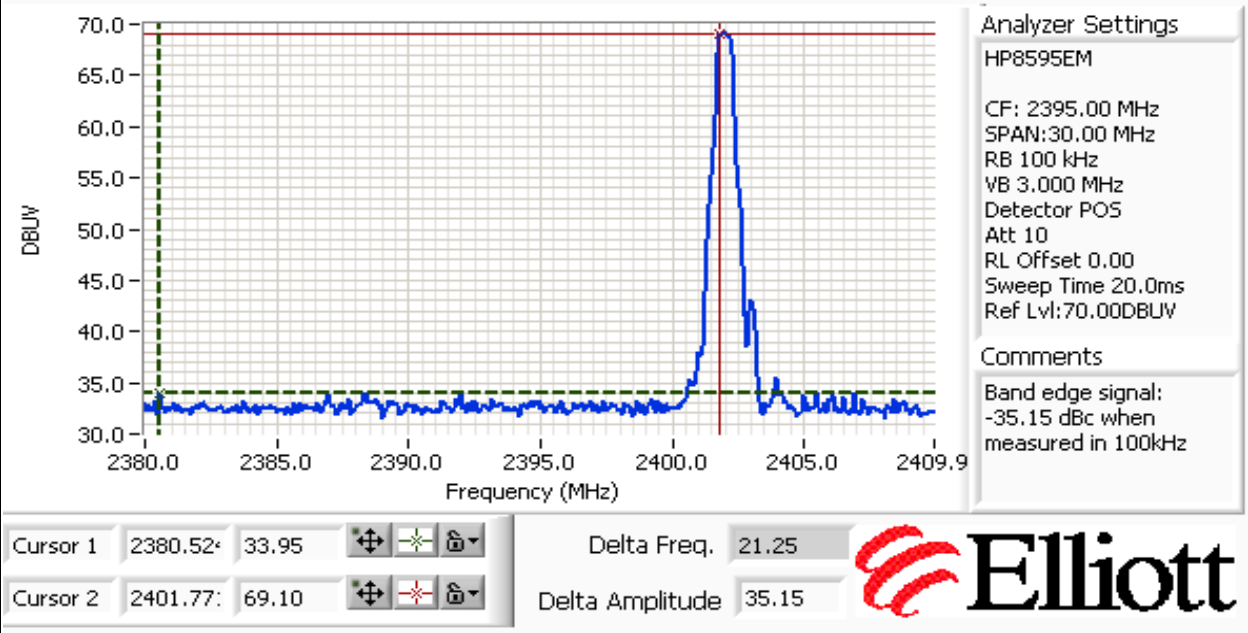
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2402.010	84.5	H	-	-	AVG	184	1.9	Upright, RB = 1MHz, VB = 10Hz
2402.010	84.9	H	-	-	PK	184	1.9	Upright, RB = VB = 1MHz
2402.030	84.8	H	-	-	PK	184	1.9	Upright, RB = VB = 100kHz
2402.010	76.8	V	-	-	AVG	57	1.3	Upright, RB = 1MHz, VB = 10Hz
2402.010	77.4	V	-	-	PK	57	1.3	Upright, RB = VB = 1MHz
2402.010	77.3	V	-	-	PK	57	1.3	Upright, RB = VB = 100kHz
2402.020	75.0	H	-	-	AVG	204	1.9	Flat, RB = 1MHz, VB = 10Hz
2402.020	75.1	H	-	-	PK	204	1.9	Flat, RB = VB = 1MHz
2402.020	74.9	H	-	-	PK	204	1.9	Flat, RB = VB = 100kHz
2402.050	77.5	V	-	-	AVG	75	1.6	Flat, RB = 1MHz, VB = 10Hz
2402.050	77.8	V	-	-	PK	75	1.6	Flat, RB = VB = 1MHz
2402.050	77.6	V	-	-	PK	75	1.6	Flat, RB = VB = 100kHz
2402.050	83.9	H	-	-	AVG	211	1.6	Side, RB = 1MHz, VB = 10Hz
2402.050	83.9	H	-	-	PK	211	1.6	Side, RB = VB = 1MHz
2402.050	83.5	H	-	-	PK	211	1.6	Side, RB = VB = 100kHz
2402.030	81.8	V	-	-	AVG	148	1.1	Side, RB = 1MHz, VB = 10Hz
2402.030	81.9	V	-	-	PK	148	1.1	Side, RB = VB = 1MHz
2402.030	81.8	V	-	-	PK	148	1.1	Side, RB = VB = 100kHz

Fundamental emission level @ 3m in 100kHz RBW:	84.8 dBµV/m	
Limit for emissions outside of restricted bands:	64.8 dBµV/m	Limit is -20dBc (Peak power measurement)
Delta Marker - Peak	30.8 dB	Delta between highest in-band and highest
Delta Marker - Average	43.6 dB	

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2355.500	40.9	H	54.0	-13.1	AVG	184	1.9	Upright, RB = 1MHz, VB = 10Hz
2388.362	54.1	H	74.0	-19.9	PK	184	1.9	Upright, RB = VB = 1MHz

Note 1:	Field strength measured directly - refer also to plots showing compliance with -20dBc limit between 2390 MHz and 2400 MHz. Measured with EUT upright - orientation with highest fundamental field strength.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4804.030	48.8	H	54.0	-5.2	AVG	22	1.0	Side
4804.060	45.3	V	54.0	-8.7	AVG	174	1.1	Upright
4804.010	42.7	H	54.0	-11.3	AVG	300	1.4	Flat
4804.000	42.0	V	54.0	-12.0	AVG	33	1.4	Flat
4804.050	39.9	V	54.0	-14.1	AVG	23	1.1	Side
4804.090	37.2	H	54.0	-16.8	AVG	186	2.0	Upright
4804.030	51.2	H	74.0	-22.8	PK	22	1.0	Side
4804.060	48.5	V	74.0	-25.5	PK	174	1.1	Upright
4804.010	47.2	H	74.0	-26.8	PK	300	1.4	Flat
4804.000	46.7	V	74.0	-27.3	PK	33	1.4	Flat
4804.050	45.6	V	74.0	-28.4	PK	23	1.1	Side
4804.090	44.0	H	74.0	-30.0	PK	186	2.0	Upright

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 20dB below the level of the fundamental and measured in 100kHz.
Note 2:	All harmonics were measure, and harmonics above noise floor in 3 orientation were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #1b: Center Channel @ 2440 MHz

Fundamental emission level @ 3m in 100kHz RBW:	83.9 dBµV/m
Limit for emissions outside of restricted bands:	63.9 dBµV/m

Limit is -20dBc (Peak power measurement)

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4880.010	47.8	H	54.0	-6.2	AVG	9	1.0	Side
4880.110	40.9	V	54.0	-13.1	AVG	18	1.2	Side
4880.010	50.5	H	74.0	-23.5	PK	9	1.0	Side
4880.110	46.4	V	74.0	-27.6	PK	18	1.2	Side

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 20dB below the level of the fundamental and measured in 100kHz.
Note 2:	All harmonics were measure, and worse case of 3 orientation of harmonics that were above noise floor were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #1c: High Channel @ 2480 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2480.010	82.2	H	-	-	AVG	217	1.2	Side, RB = 1MHz, VB = 10Hz
2480.010	82.3	H	-	-	PK	217	1.2	Side, RB = VB = 1MHz
2479.990	82.2	H	-	-	PK	217	1.2	Side, RB = VB = 100kHz
2480.040	79.6	V	-	-	AVG	153	1.1	Side, RB = 1MHz, VB = 10Hz
2480.040	79.8	V	-	-	PK	153	1.1	Side, RB = VB = 1MHz
2480.040	79.7	V	-	-	PK	153	1.1	Side, RB = VB = 100kHz
2480.040	74.0	H	-	-	AVG	128	1.9	Flat, RB = 1MHz, VB = 10Hz
2480.040	74.3	H	-	-	PK	128	1.9	Flat, RB = VB = 1MHz
2480.040	74.2	H	-	-	PK	128	1.9	Flat, RB = VB = 100kHz
2480.030	73.1	V	-	-	AVG	231	1.4	Flat, RB = 1MHz, VB = 10Hz
2480.030	73.3	V	-	-	PK	231	1.4	Flat, RB = VB = 1MHz
2480.030	73.3	V	-	-	PK	231	1.4	Flat, RB = VB = 100kHz
2480.050	80.5	H	-	-	AVG	122	1.6	Upright, RB = 1MHz, VB = 10Hz
2480.050	80.8	H	-	-	PK	122	1.6	Upright, RB = VB = 1MHz
2480.050	80.7	H	-	-	PK	122	1.6	Upright, RB = VB = 100kHz
2480.060	77.4	V	-	-	AVG	201	1.1	Upright, RB = 1MHz, VB = 10Hz
2480.060	77.7	V	-	-	PK	201	1.1	Upright, RB = VB = 1MHz
2480.060	77.7	V	-	-	PK	201	1.1	Upright, RB = VB = 100kHz

Fundamental emission level @ 3m in 100kHz RBW:	82.2 dBµV/m	
Limit for emissions outside of restricted bands:	62.2 dBµV/m	Limit is -20dBc (Peak power measurement)

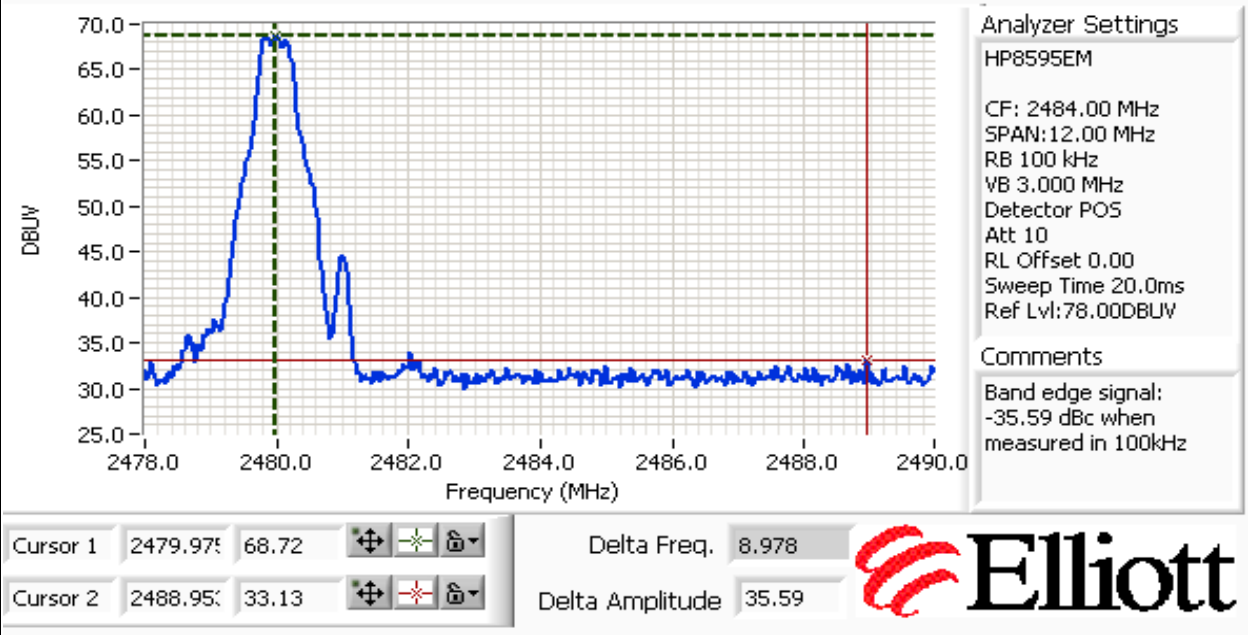
Delta Marker - Peak	27.4 dB	Delta between highest in-band and highest
Delta Marker - Average	35.6 dB	

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2488.950	46.6	H	54.0	-7.4	AVG	217	1.2	Side, RB = 1MHz, VB = 10Hz
2488.950	54.9	H	74.0	-19.1	PK	217	1.2	Side, RB = VB = 1MHz

Note 1: Calculated by subtracting the marker delta values from the fundamental field strength measurements.

EMC Test Data

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A



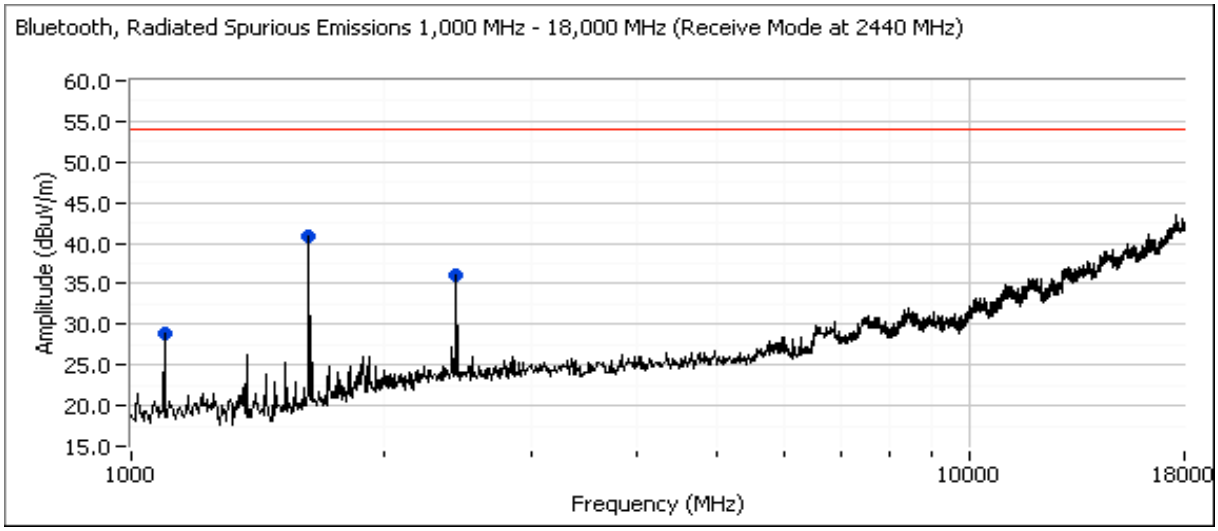
Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4944.020	46.3	H	54.0	-7.7	AVG	55	1.1	Side
4960.060	45.2	V	54.0	-8.8	AVG	145	1.0	Upright
4960.040	42.8	V	54.0	-11.2	AVG	330	2.1	Flat
4960.000	40.0	H	54.0	-14.0	AVG	296	1.4	Flat
4960.020	39.2	V	54.0	-14.8	AVG	12	1.0	Side
4960.010	35.3	H	54.0	-18.7	AVG	121	2.1	Upright
4960.020	50.2	H	74.0	-23.8	PK	55	1.1	Side
4960.060	48.7	V	74.0	-25.3	PK	145	1.0	Upright
4960.040	47.6	V	74.0	-26.4	PK	330	2.1	Flat
4960.000	46.3	H	74.0	-27.7	PK	296	1.4	Flat
4960.020	45.2	V	74.0	-28.8	PK	12	1.0	Side
4960.010	43.9	H	74.0	-30.1	PK	121	2.1	Upright

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 20dB below the level of the fundamental and measured in 100kHz.
Note 2:	All harmonics were measured, and harmonics above noise floor in 3 orientation were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #2: Radiated Spurious Emissions, 30 - 18,000 MHz (Receive Mode).



Frequency	Level	Pol	RSS 210		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
1625.720	40.8	H	54.0	-13.2	Peak	167	1.7	
2438.540	36.1	H	54.0	-17.9	Peak	353	1.7	
1095.391	29.0	V	54.0	-25.0	Peak	260	1.7	

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #3: Output Power

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2402.010	85.3	H	-	-	PK	184	1.9	Upright
2439.960	84.2	H	-	-	PK	290	2.1	Side
2480.010	82.9	H	-	-	PK	217	1.2	Side

Note 1:	Field strength measurements made with RB=2MHz, VB=3MHz with the EUT and measurement antenna oriented in the positions that gave the highest field strength in run #1.

Channel	Frequency (MHz)	Field Strength at 3m (dBuV/m)	Antenna Pol. (H/V)	Res BW (kHz)	Signal Bandwidth (kHz)	Bandwidth Correction	Power (dBm)	Power (Watts)
Low	2402	85.3	H	2000	890	0	-10.0	0.00010
Mid	2440	84.2	H	2000	890	0	-11.1	0.00008
High	2480	82.9	H	2000	890	0	-12.4	0.00006

Note 1:	Output power calculated from field strength at 3m based on free space path loss formula E = √(30PG) / d, where E is the field strength (V/m), PG is the effective isotropic radiated power (W) and d is the distance (3m). Additional correction to the calculated power is made to account for the difference between the measurement bandwidth and signal bandwidth.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #4: Bandwidth, Channel Occupancy, Spacing and Number of Channels

Channel	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Low	2402	845	840
Mid	2440	860	840
High	2480	890	870

Note 1:	20dB bandwidth measured using RB = 30kHz, VB = 100kHz (VB > RB)
Note 2:	99% bandwidth measured using RB = 30kHz, VB = 100kHz (VB >=3RB)

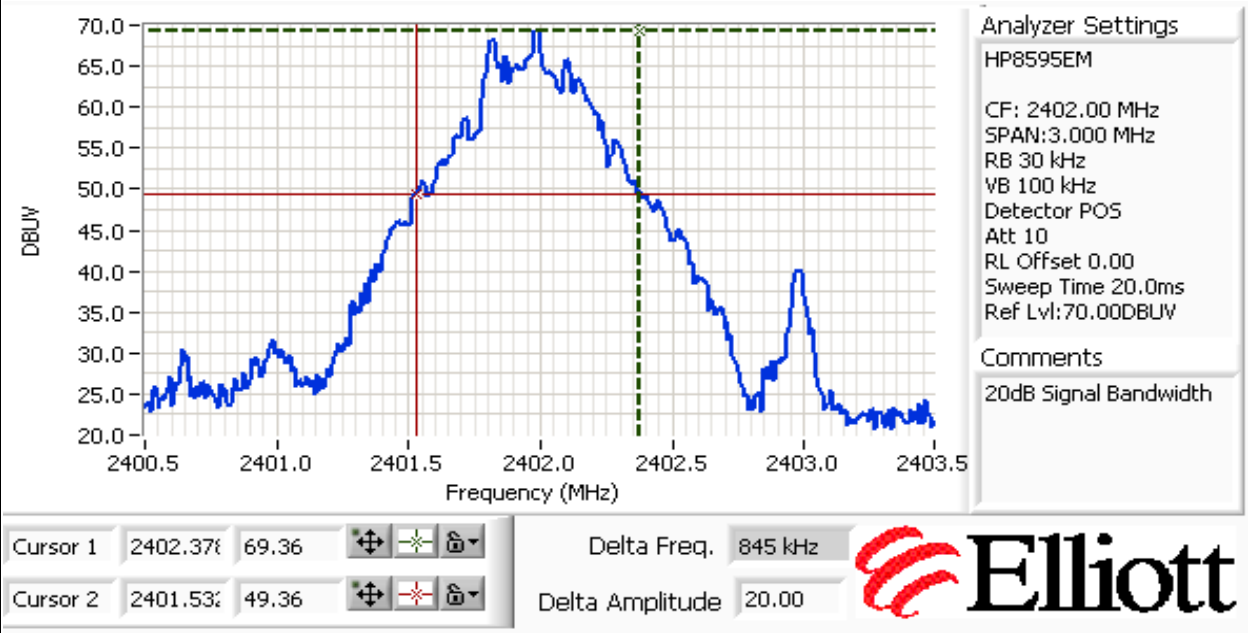
Frequency hopping systems in the **2400-2483.5 MHz** band shall use at least 15 channels.
The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. (Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.)
The channel dwell time is calculated from the transmit time on a channel mulitplied by the number of times a channel could be used in a period of 0.4 times the number of channels, N (i.e. 0.4N divided by the time between successive hops, rounded up to the closest integer), unless the time between successive hops exceeds 0.4N, in which case the channel dwell time is the transmit time on a channel.

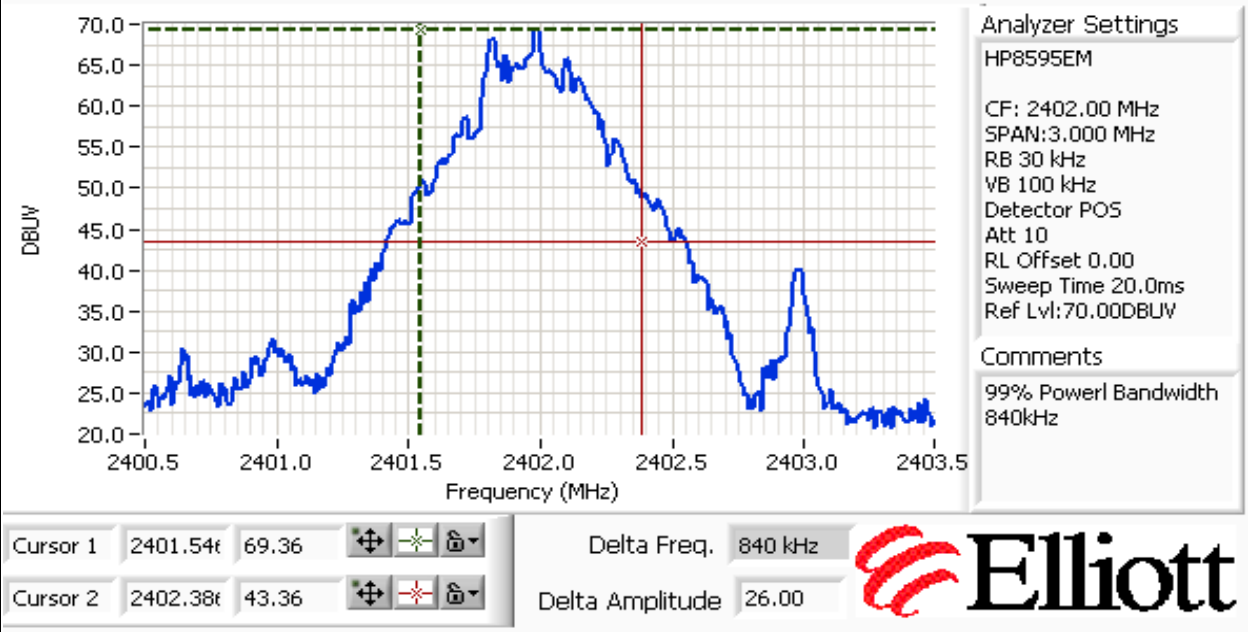
Maximum 20dB bandwidth:	890	kHz	
Channel spacing:	1000	kHz	**Pass**
Transmission time per hop:	0.001253	s	Calculated based on 79 channels
The time between successive hops on a channel:	0.099	s	
Number of channels (N):	79		**Pass**
Channel dwell time in 31.6 seconds:	0.40	ms	**Pass**

Note: The device operates using the Bluetooth hopping algorithm which complies with the hopping timing requirements of 15.247. Measurements described above and plots shown below are provided to support this fact.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

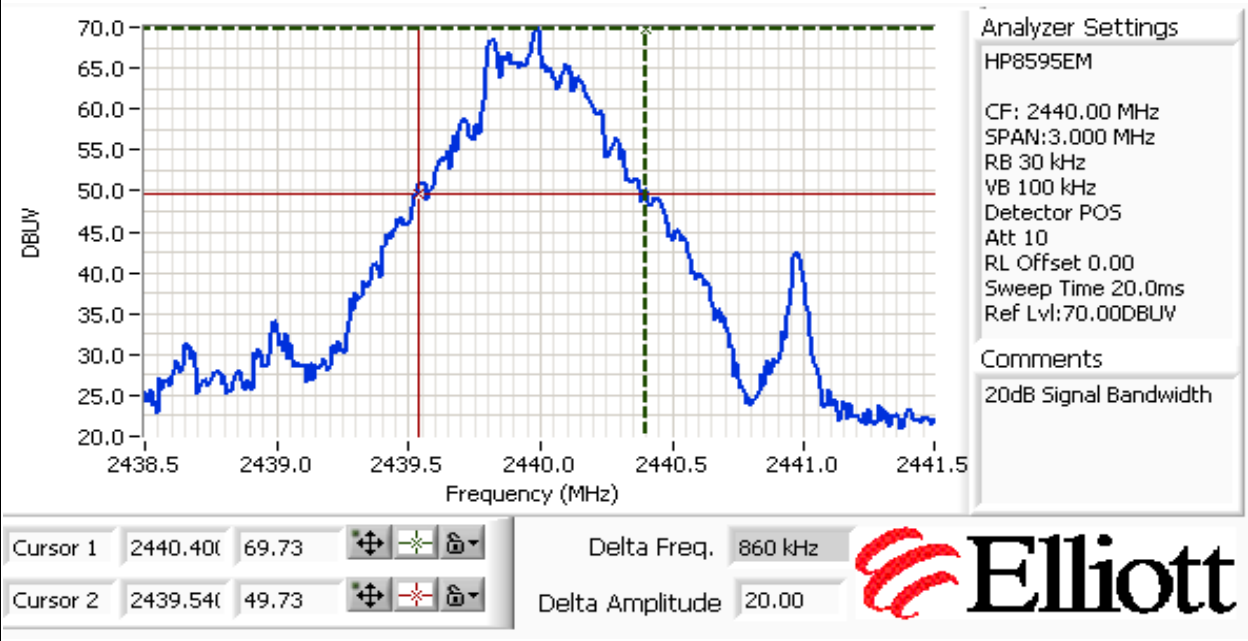
Bandwidth Plots

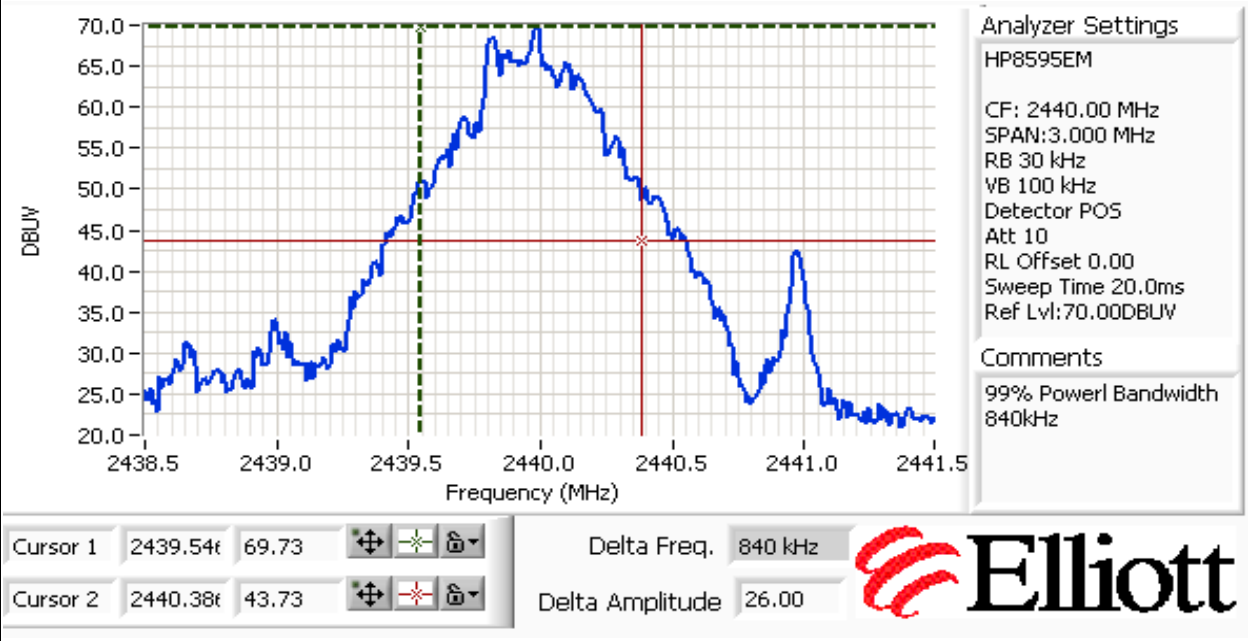




EMC Test Data

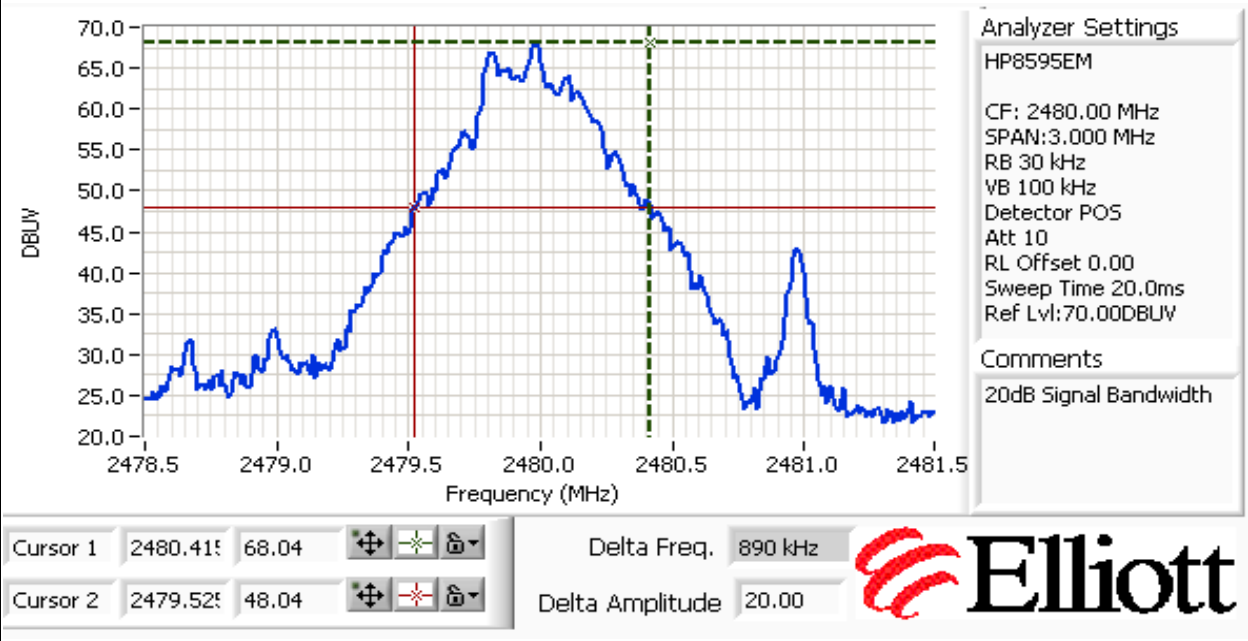
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

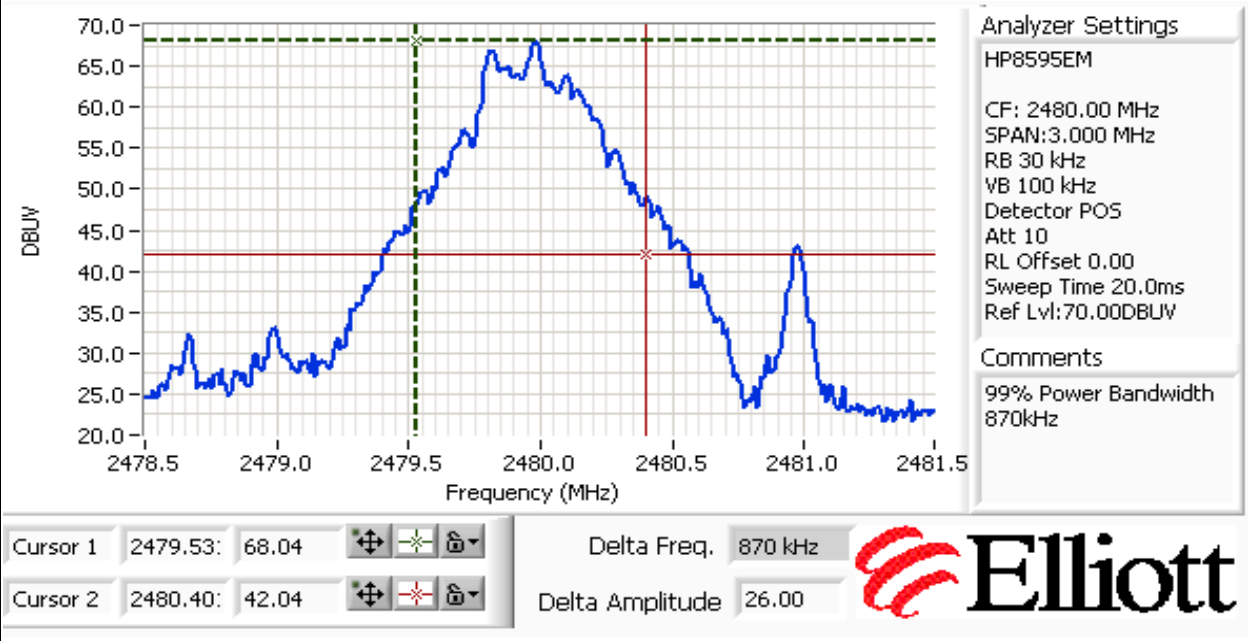




EMC Test Data

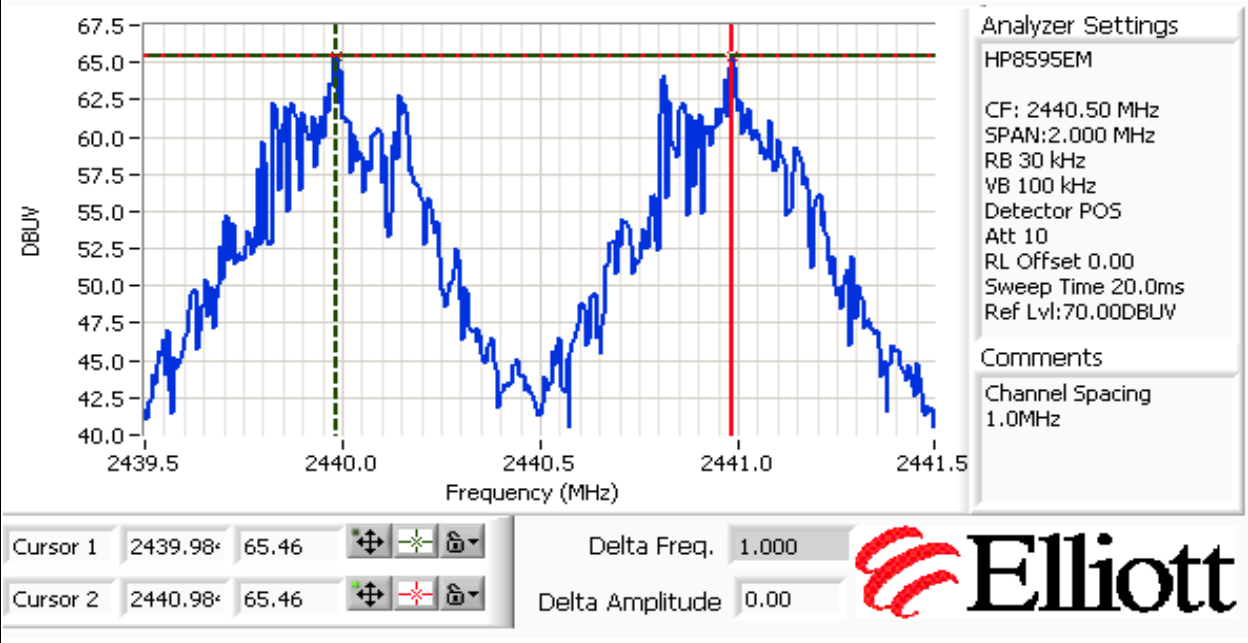
Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

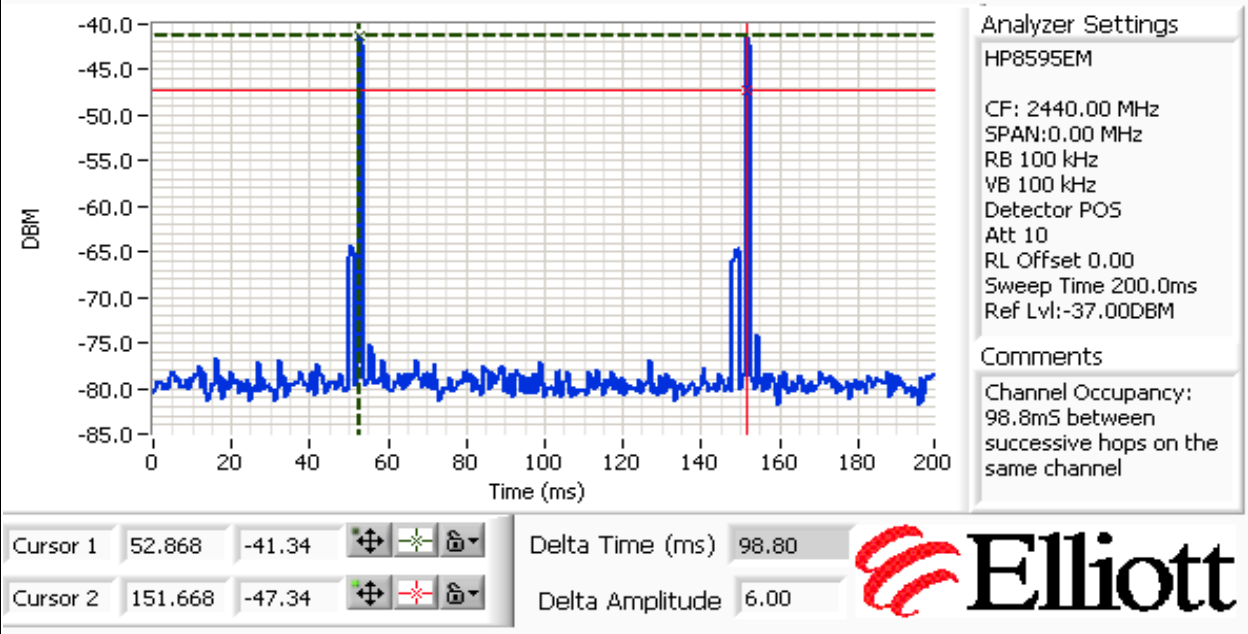




Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

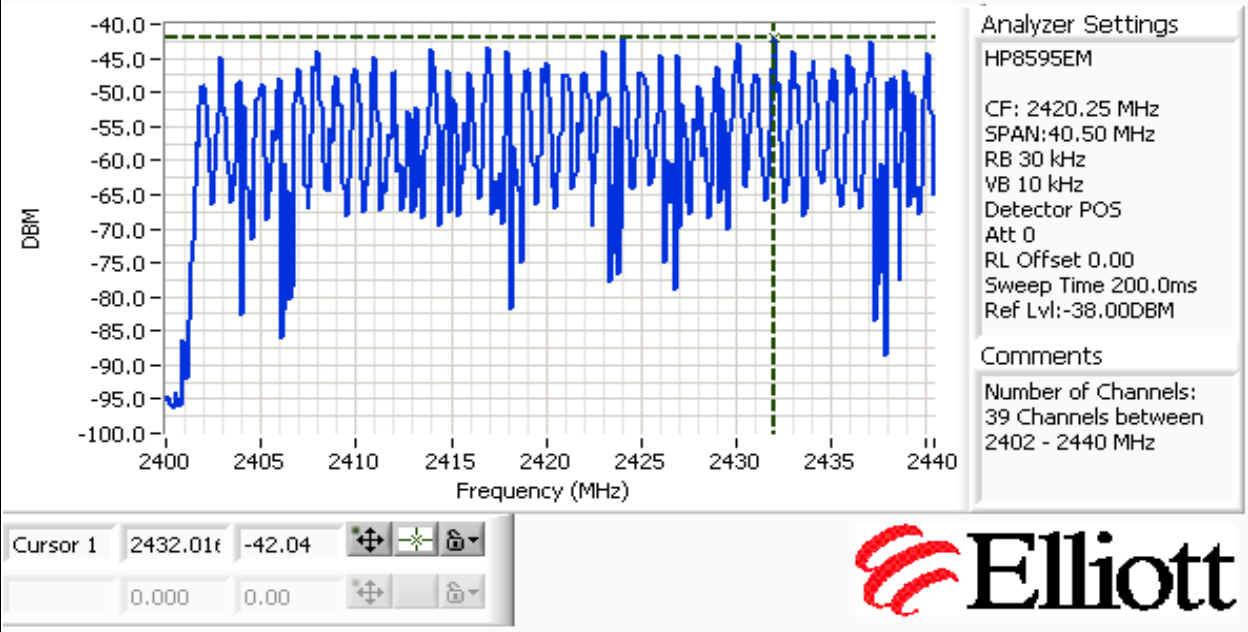
Channel Spacing and Channel Occupancy Plots



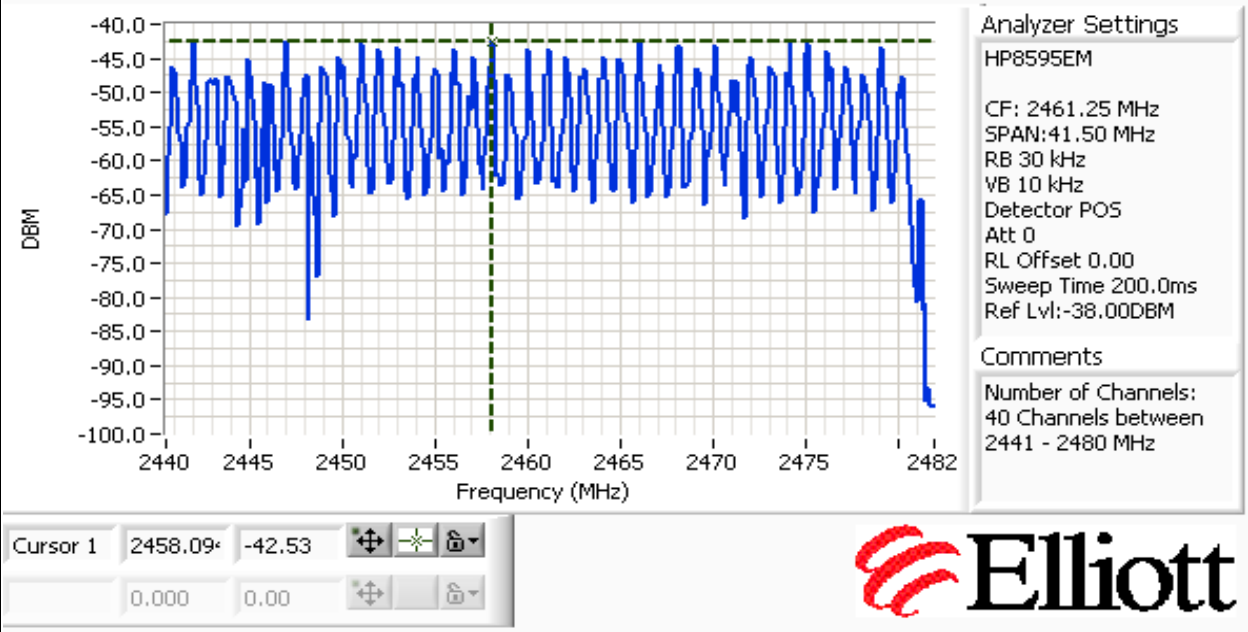


Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Plots Showing Number of Channels



Elliott



Elliott

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Radiated Spurious Emissions (802.11a)

Test specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 8/15/2006
Test Engineer: Mehran Birgani
Test Location: SVOATS #2

Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 19 °C
Rel. Humidity: 58 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1 (802.11a Mode) 5150-5250 MHz	RE, 30 - 40000 MHz Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	53.8dBµV/m (489.8µV/m) @ 10439.2MHz (-0.2dB)
4 (802.11a Mode) 5725-5850 MHz	RE, 30 - 40000 MHz Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	53.7dBµV/m (484.2µV/m) @ 11492.0MHz (-0.3dB)

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #1: Radiated Spurious Emissions, 30 - 40000 MHz. Operating Mode: 802.11a (5150-5250 MHz)

Run #1a: Low Channel @ 5180 MHz with power setting of 17

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
5181.730	94.1	H	-	-	AVG	207	1.8	Flat, RB = 1MHz, VB = 10Hz
5181.730	102.2	H	-	-	PK	207	1.8	Flat, RB = VB = 1MHz
5173.870	88.2	V	-	-	AVG	80	1.0	Flat, RB = 1MHz, VB = 10Hz
5173.870	97.1	V	-	-	PK	80	1.0	Flat, RB = VB = 1MHz
5177.200	90.8	H	-	-	AVG	164	1.2	Upright, RB = 1MHz, VB = 10Hz
5177.200	99.5	H	-	-	PK	164	1.2	Upright, RB = VB = 1MHz
5181.900	93.6	V	-	-	AVG	283	1.4	Upright, RB = 1MHz, VB = 10Hz
5181.900	102.3	V	-	-	PK	283	1.4	Upright, RB = VB = 1MHz
5181.830	90.0	H	-	-	AVG	63	2.1	Side, RB = 1MHz, VB = 10Hz
5181.830	98.9	H	-	-	PK	63	2.1	Side, RB = VB = 1MHz
5181.600	89.8	V	-	-	AVG	201	1.1	Side, RB = 1MHz, VB = 10Hz
5181.600	98.2	V	-	-	PK	201	1.1	Side, RB = VB = 1MHz

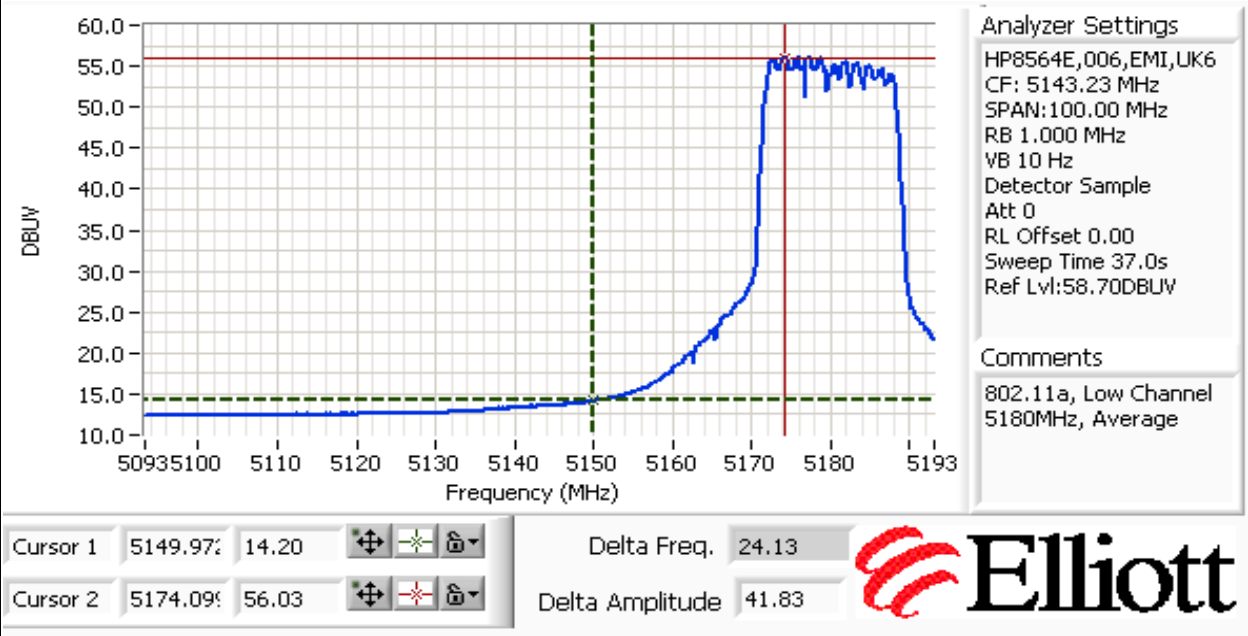
Band Edge Signal Field Strength

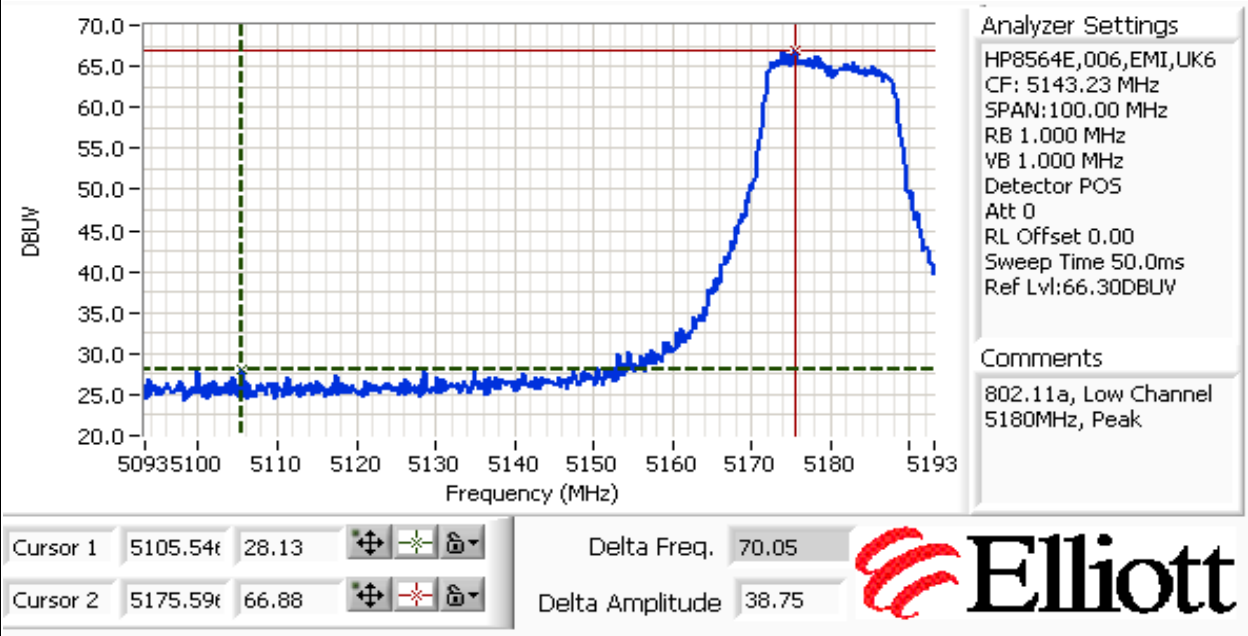
Delta Marker - Peak	38.8 dB	Delta between highest in-band and highest
Delta Marker - Average	41.8 dB	

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
5149.970	52.3	H	54.0	-1.7	AVG	207	1.8	Flat, RB = 1MHz, VB = 10Hz
5105.540	63.4	H	74.0	-10.6	PK	207	1.8	Flat, RB = VB = 1MHz

Note 1:	Calculated by subtracting the marker delta values from the fundamental field strength measurements.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
10361.430	52.7	H	54.0	-1.3	AVG	189	1.3	Flat
10360.800	51.0	V	54.0	-3.0	AVG	187	1.3	Flat
10359.930	51.0	V	54.0	-3.0	AVG	282	1.0	Side
10361.030	49.1	H	54.0	-4.9	AVG	302	1.0	Side
10362.430	48.6	V	54.0	-5.4	AVG	341	1.0	Upright
10361.800	45.5	H	54.0	-8.5	AVG	323	1.2	Upright
10361.430	65.3	H	74.0	-8.7	PK	189	1.3	Flat
10359.930	63.4	V	74.0	-10.6	PK	282	1.0	Side
10360.800	62.9	V	74.0	-11.1	PK	187	1.3	Flat
10361.030	61.9	H	74.0	-12.1	PK	302	1.0	Side
10362.430	61.7	V	74.0	-12.3	PK	341	1.0	Upright
10361.800	57.9	H	74.0	-16.1	PK	323	1.2	Upright

Note 1:	All spurious and harmonics were measured and the worse case of 3 orientation of these that were above noise floor were recorded.

Run #1b: Middle Channel @ 5220 MHz with power setting of 15.0- re-tested on 8/01/2006 by JMM
Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
10439.210	53.8	H	54.0	-0.2	AVG	149	1.2	
10440.500	53.5	V	54.0	-0.5	AVG	131	1.3	
15668.030	48.9	H	54.0	-5.1	AVG	163	1.0	
10449.210	66.7	H	74.0	-7.3	PK	149	1.2	
10400.500	65.6	V	74.0	-8.4	PK	131	1.3	
15668.030	62.3	H	74.0	-11.7	PK	163	1.0	

Note 1:	All harmonics were measure, and worse case of 3 orientation of harmonics that were above noise floor were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #1c: High Channel @ 5250 MHz with power setting of 15.5
Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
10499.0	53.7	H	54.0	-0.3	AVG	149	1.2	
15800.0	53.4	V	54.0	-0.6	AVG	131	1.3	
15719.0	48.7	H	54.0	-5.3	AVG	163	1.0	
10499.0	66.5	H	74.0	-7.5	PK	149	1.2	
15800.0	65.8	V	74.0	-8.2	PK	131	1.3	
15719.0	61.2	H	74.0	-12.8	PK	163	1.0	

Note 1:	All spurious and harmonics were measured and the worse case of 3 orientation of these that were above noise floor were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #4: Radiated Spurious Emissions, 30 - 40000 MHz. Operating Mode: 802.11a (5725-5850 MHz)

Run #1a: Low Channel @ 5745 MHz with power setting of 12

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
11492.000	53.7	H	54.0	-0.3	AVG	356	1.0	Side
11489.700	46.3	V	54.0	-7.7	AVG	0	1.3	Side
11492.000	65.8	H	74.0	-8.2	PK	356	1.0	Side
11489.700	58.5	V	74.0	-15.5	PK	0	1.3	Side

Note 1:	All spurious and harmonics were measured and the worse case of 3 orientation of these that were above noise floor were recorded.

Run #1b: Center Channel @ 5785 MHz with power setting of 12

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
11569.600	52.9	H	54.0	-1.1	AVG	359	1.1	Side
11569.870	50.5	V	54.0	-3.5	AVG	297	2.2	Side
11569.600	64.5	H	74.0	-9.5	PK	359	1.1	Side
11569.870	61.6	V	74.0	-12.4	PK	297	2.2	Side

Note 1:	All spurious and harmonics were measured and the worse case of 3 orientation of these that were above noise floor were recorded.

Run #1c: High Channel @ 5825 MHz with power setting of 11

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
11650.130	53.5	H	54.0	-0.5	AVG	263	1.8	Side
11650.130	67.7	H	74.0	-6.3	PK	263	1.8	Side
11652.470	51.4	V	54.0	-2.6	AVG	314	1.2	Side
11652.470	63.1	V	74.0	-10.9	PK	314	1.2	Side

Note 1:	All spurious and harmonics were measured and the worse case of 3 orientation of these that were above noise floor were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

RSS 210 and FCC 15.247 Radiated Spurious Emissions

Test specifics

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: Aug 9-11, 2006
Test Engineer: Mehran Birgani
Test Location: SVOATS #2

Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 21 °C
Rel. Humidity: 65 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1 (802.11b Mode)	RE, 30 - 26500 MHz Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	50.8dBµV/m @ 4824.1MHz (-3.2dB)
2 (802.11g Mode)	RE, 30 - 26500 MHz Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	49.0dBµV/m @ 2390.0MHz (-5.0dB)

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

EUT Power Setting: 20

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #1: Radiated Spurious Emissions, 30 - 26500 MHz. Operating Mode: 802.11b

Run #1a: Low Channel @ 2412 MHz with power setting of 20dB

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2412.970	89.1	V	-	-	Avg	197	1.0	Side, RB = 1MHz, VB = 10Hz
2412.970	92.6	V	-	-	Pk	197	1.0	Side, RB = VB = 1MHz
2411.200	87.7	V	-	-	Pk	197	1.0	Side, RB = VB = 100kHz
2409.770	80.8	H	-	-	Avg	103	1.7	Side, RB = 1MHz, VB = 10Hz
2409.770	83.5	H	-	-	Pk	103	1.7	Side, RB = VB = 1MHz
2412.770	79.4	H	-	-	Pk	103	1.7	Side, RB = VB = 100kHz
2410.330	81.4	V	-	-	Avg	268	1.0	Upright, RB = 1MHz, VB = 10Hz
2410.330	84.4	V	-	-	Pk	268	1.0	Upright, RB = VB = 1MHz
2410.730	79.3	V	-	-	Pk	268	1.0	Upright, RB = VB = 100kHz
2410.330	80.2	H	-	-	Avg	10	1.0	Upright, RB = 1MHz, VB = 10Hz
2410.330	83.3	H	-	-	Pk	10	1.0	Upright, RB = VB = 1MHz
2410.730	78.5	H	-	-	Pk	10	1.0	Upright, RB = VB = 100kHz
2411.400	82.4	V	-	-	Avg	205	1.0	Flat, RB = 1MHz, VB = 10Hz
2411.400	85.6	V	-	-	Pk	205	1.0	Flat, RB = VB = 1MHz
2408.670	81.1	V	-	-	Pk	205	1.0	Flat, RB = VB = 100kHz
2410.400	82.6	H	-	-	Avg	154	1.9	Flat, RB = 1MHz, VB = 10Hz
2410.400	85.7	H	-	-	Pk	154	1.9	Flat, RB = VB = 1MHz
2412.730	81.8	H	-	-	Pk	154	1.1	Flat, RB = VB = 100kHz

Fundamental emission level @ 3m in 100kHz RBW:	87.7 dBµV/m	
Limit for emissions outside of restricted bands:	57.7 dBµV/m	Limit is -30dBc (Power averaged measurement)

Band Edge Signal Field Strength

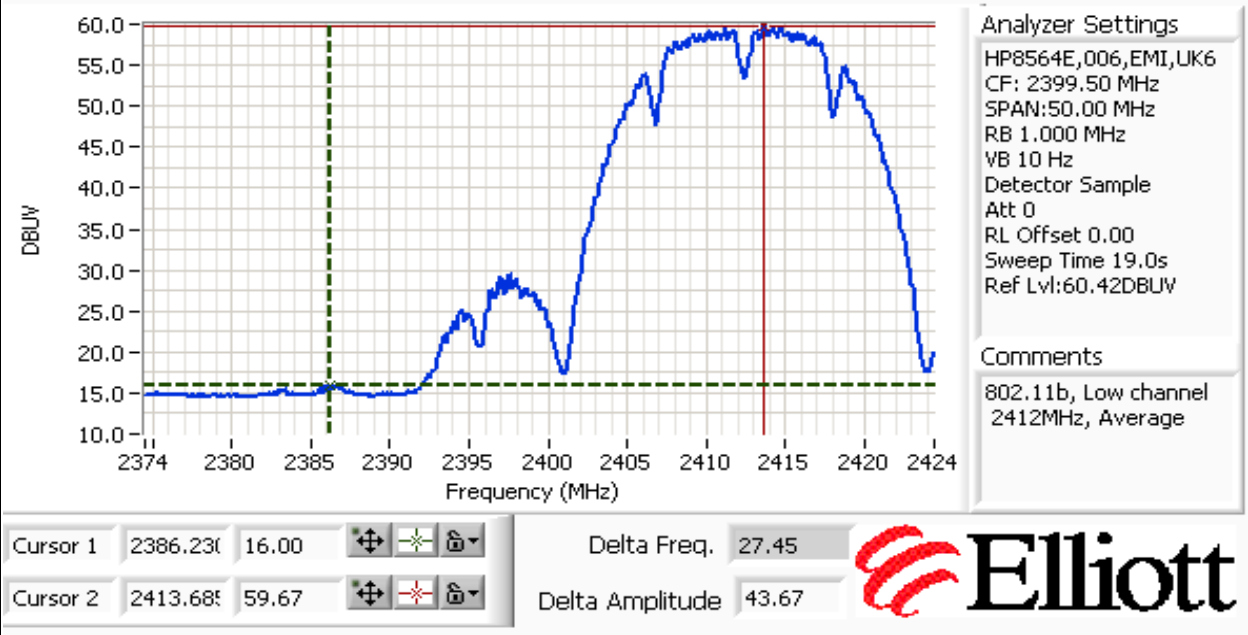
Delta Marker - Peak	34.7 dB	Delta between highest in-band and highest
Delta Marker - Average	43.7 dB	

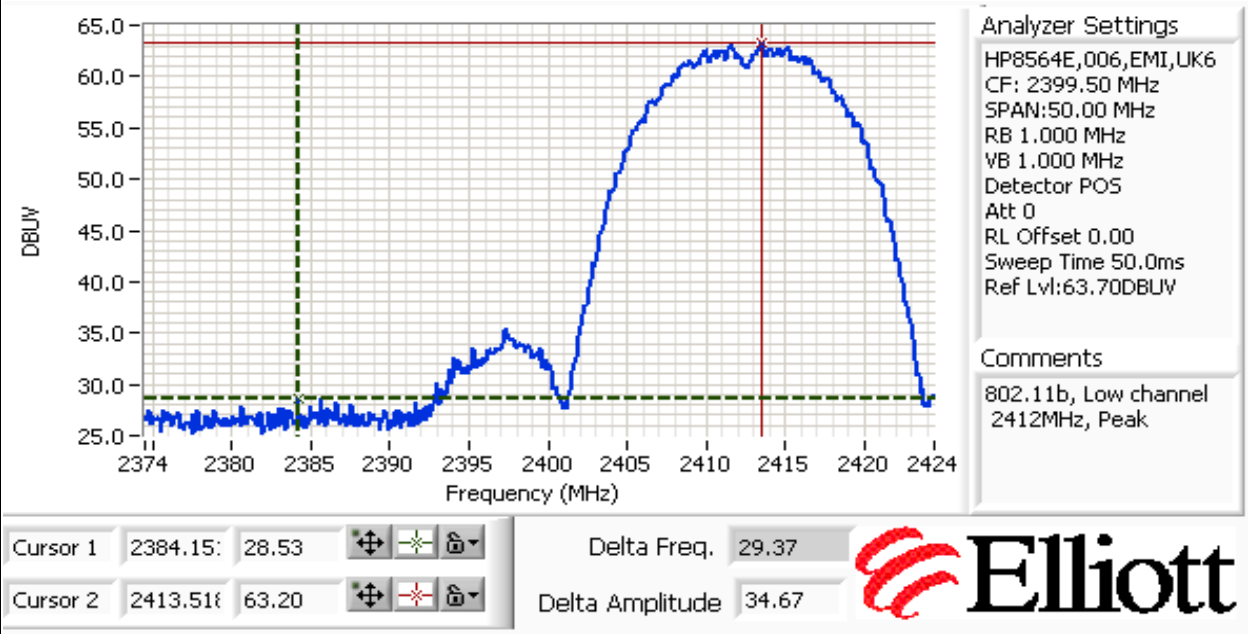
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2386.230	45.4	V	54.0	-8.6	Avg	197	1.0	Side, RB = 1MHz, VB = 10Hz
2384.150	57.9	V	74.0	-16.1	Pk	197	1.0	Side, RB = VB = 1MHz

Note 1:	Calculated by subtracting the marker delta values from the fundamental field strength measurements.

EMC Test Data

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4824.080	50.8	V	54.0	-3.2	AVG	171	1.3	Upright
4824.000	50.1	H	54.0	-3.9	AVG	223	1.3	Side
4824.060	46.8	V	54.0	-7.2	AVG	185	1.0	Side
4824.030	45.3	H	54.0	-8.7	AVG	311	1.4	Upright
4824.020	44.8	V	54.0	-9.2	AVG	93	1.4	Flat
4824.040	39.9	H	54.0	-14.1	AVG	205	1.0	Flat
4824.080	52.9	V	74.0	-21.1	PK	171	1.3	Upright
4824.000	52.0	H	74.0	-22.0	PK	223	1.3	Side
4824.060	49.4	V	74.0	-24.6	PK	185	1.0	Side
4824.020	48.2	V	74.0	-25.8	PK	93	1.4	Flat
4824.030	48.1	H	74.0	-25.9	PK	311	1.4	Upright
4824.040	45.7	H	74.0	-28.3	PK	205	1.0	Flat

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	All spurious and harmonics were measured and those above the noise floor in 3 orientations were recorded.

Run #1b: Center Channel @ 2437 MHz with power setting of 20dB

Fundamental emission level @ 3m in 100kHz RBW:	88.6 dBµV/m	
Limit for emissions outside of restricted bands:	58.6 dBµV/m	Limit is -30dBc (Power averaged measurement)

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4873.930	48.4	H	54.0	-5.6	AVG	289	1.2	Upright
4873.990	47.3	V	54.0	-6.7	AVG	308	1.0	Upright
4873.930	50.9	H	74.0	-23.1	PK	289	1.2	Upright
4873.990	50.2	V	74.0	-23.8	PK	308	1.0	Upright

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	All spurious and harmonics were measured and worse case of 3 orientation of those above noise floor were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #1c: High Channel @ 2462 MHz with power setting of 20dB

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2460.350	98.3	H	-	-	AVG	35	2.1	Flat, RB = 1MHz, VB = 10Hz
2460.350	100.7	H	-	-	PK	35	2.1	Flat, RB = VB = 1MHz
2460.350	99.6	H	-	-	PK	35	2.1	RB = VB = 100kHz
2460.300	87.3	V	-	-	AVG	209	1.5	Flat, RB = 1MHz, VB = 10Hz
2460.300	89.2	V	-	-	PK	209	1.5	Flat, RB = VB = 1MHz
2460.300	88.4	V	-	-	PK	209	1.5	RB = VB = 100kHz
2461.000	92.5	H	-	-	AVG	33	2.1	Side, RB = 1MHz, VB = 10Hz
2461.000	95.0	H	-	-	PK	33	2.1	Side, RB = VB = 1MHz
2461.390	91.1	V	-	-	AVG	279	1.0	Side, RB = 1MHz, VB = 10Hz
2461.390	93.7	V	-	-	PK	279	1.0	Side, RB = VB = 1MHz
2460.900	92.6	H	-	-	AVG	261	1.6	Upright, RB = 1MHz, VB = 10Hz
2460.900	95.1	H	-	-	PK	261	1.6	Upright, RB = VB = 1MHz
2463.000	90.0	V	-	-	AVG	44	1.1	Upright, RB = 1MHz, VB = 10Hz
2463.000	92.7	V	-	-	PK	44	1.1	Upright, RB = VB = 1MHz

Fundamental emission level @ 3m in 100kHz RBW:	99.6 dBµV/m	
Limit for emissions outside of restricted bands:	69.6 dBµV/m	Limit is -30dBc (Power averaged measurement)

Band Edge Signal Field Strength

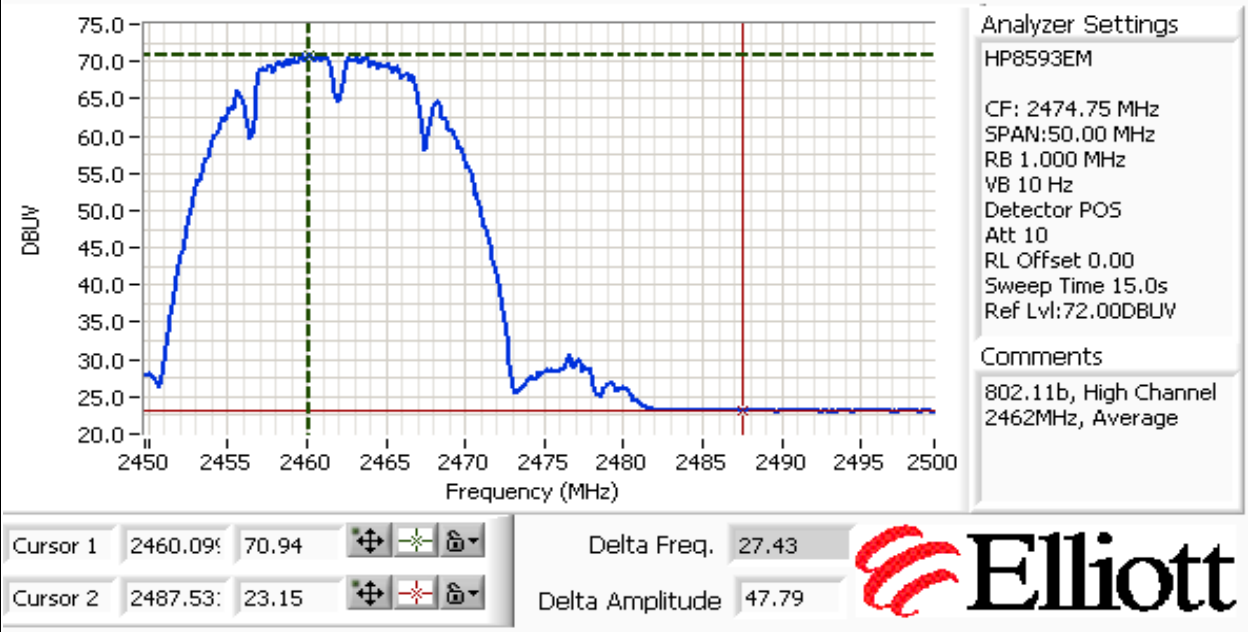
Delta Marker - Peak	38.8 dB	Delta between highest in-band and highest
Delta Marker - Average	47.8 dB	

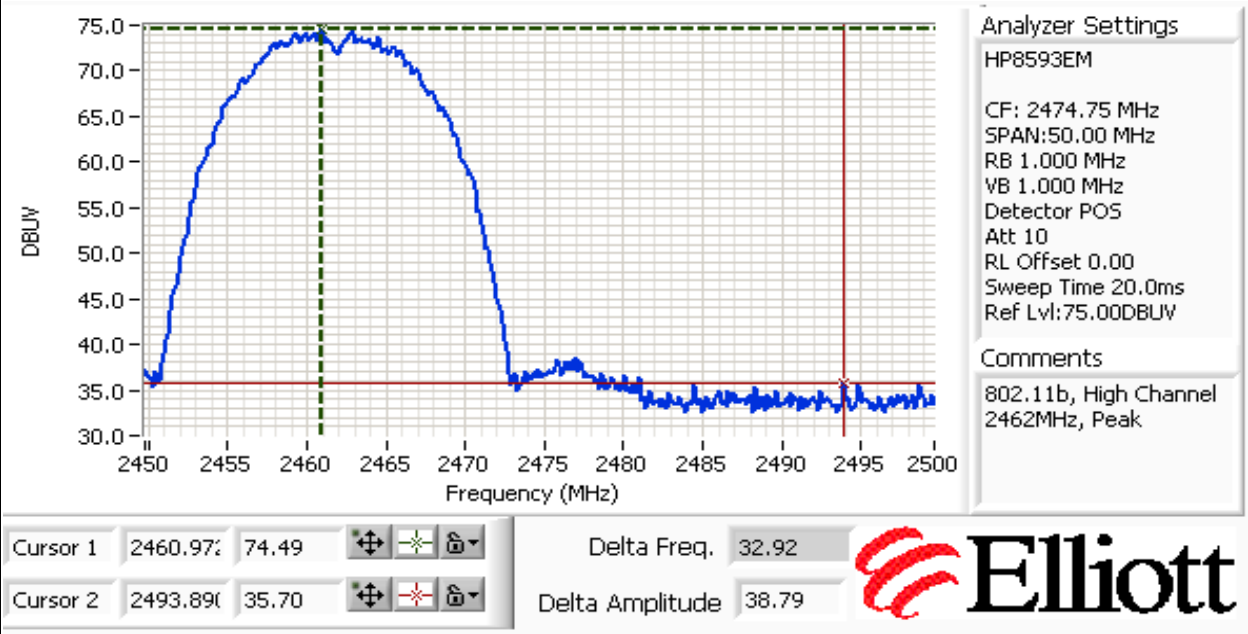
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2487.530	50.5	H	54.0	-3.5	AVG	35	2.1	Flat, RB = 1MHz, VB = 10Hz
2493.890	61.9	H	74.0	-12.1	PK	35	2.1	Flat, RB = VB = 1MHz

Note 1:	Calculated by subtracting the marker delta values from the fundamental field strength measurements.

EMC Test Data

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4923.950	46.9	V	54.0	-7.1	AVG	299	1.0	Upright
4923.940	46.7	V	54.0	-7.3	AVG	183	1.0	Side
4924.030	46.0	H	54.0	-8.0	AVG	215	1.7	Flat
4924.010	45.6	H	54.0	-8.4	AVG	311	1.0	Side
4923.980	45.2	H	54.0	-8.8	AVG	290	1.3	Upright
4924.020	43.5	V	54.0	-10.5	AVG	303	1.0	Flat
4923.950	49.9	V	74.0	-24.1	PK	299	1.0	Upright
4923.940	49.5	V	74.0	-24.5	PK	183	1.0	Side
4924.030	49.4	H	74.0	-24.6	PK	215	1.7	Flat
4923.980	48.7	H	74.0	-25.3	PK	290	1.3	Upright
4924.010	48.6	H	74.0	-25.4	PK	311	1.0	Side
4924.020	47.0	V	74.0	-27.0	PK	303	1.0	Flat

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	All spurious and harmonics were measured and those above the noise floor in 3 orientations were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #2: Radiated Spurious Emissions, 30 - 26500 MHz. Operating Mode: 802.11g

Run #2a: Low Channel @ 2412 MHz with power setting of 20dB

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2407.800	85.9	H	-	-	AVG	76	2.1	Flat, RB = 1MHz, VB = 10Hz
2407.800	93.4	H	-	-	PK	76	2.1	Flat, RB = VB = 1MHz
2407.800	88.0	H	-	-	PK	76	2.1	Flat, RB = VB = 100kHz
2405.350	76.7	V	-	-	AVG	237	1.3	Flat, RB = 1MHz, VB = 10Hz
2405.350	83.8	V	-	-	PK	237	1.3	Flat, RB = VB = 1MHz
2405.350	77.4	V	-	-	PK	237	1.3	Flat, RB = VB = 100kHz
2404.700	81.0	H	-	-	AVG	297	1.0	Upright, RB = 1MHz, VB = 10Hz
2404.700	88.4	H	-	-	PK	297	1.0	Upright, RB = VB = 1MHz
2404.700	82.6	H	-	-	PK	297	1.0	Upright, RB = VB = 100kHz
2405.100	79.0	V	-	-	AVG	91	1.1	Upright, RB = 1MHz, VB = 10Hz
2405.100	86.2	V	-	-	PK	91	1.1	Upright, RB = VB = 1MHz
2405.100	80.3	V	-	-	PK	91	1.1	Upright, RB = VB = 100kHz
2406.150	83.4	H	-	-	AVG	234	2.1	Side, RB = 1MHz, VB = 10Hz
2406.150	91.2	H	-	-	PK	234	2.1	Side, RB = VB = 1MHz
2406.150	84.6	H	-	-	PK	234	2.1	Side, RB = VB = 100kHz
2412.650	82.0	V	-	-	AVG	335	1.0	Side, RB = 1MHz, VB = 10Hz
2412.650	89.8	V	-	-	PK	335	1.0	Side, RB = VB = 1MHz
2412.650	83.4	V	-	-	PK	335	1.0	Side, RB = VB = 100kHz

Fundamental emission level @ 3m in 100kHz RBW:	88.0 dBµV/m	
Limit for emissions outside of restricted bands:	58.0 dBµV/m	Limit is -30dBc (Power averaged measurement)

Band Edge Signal Field Strength

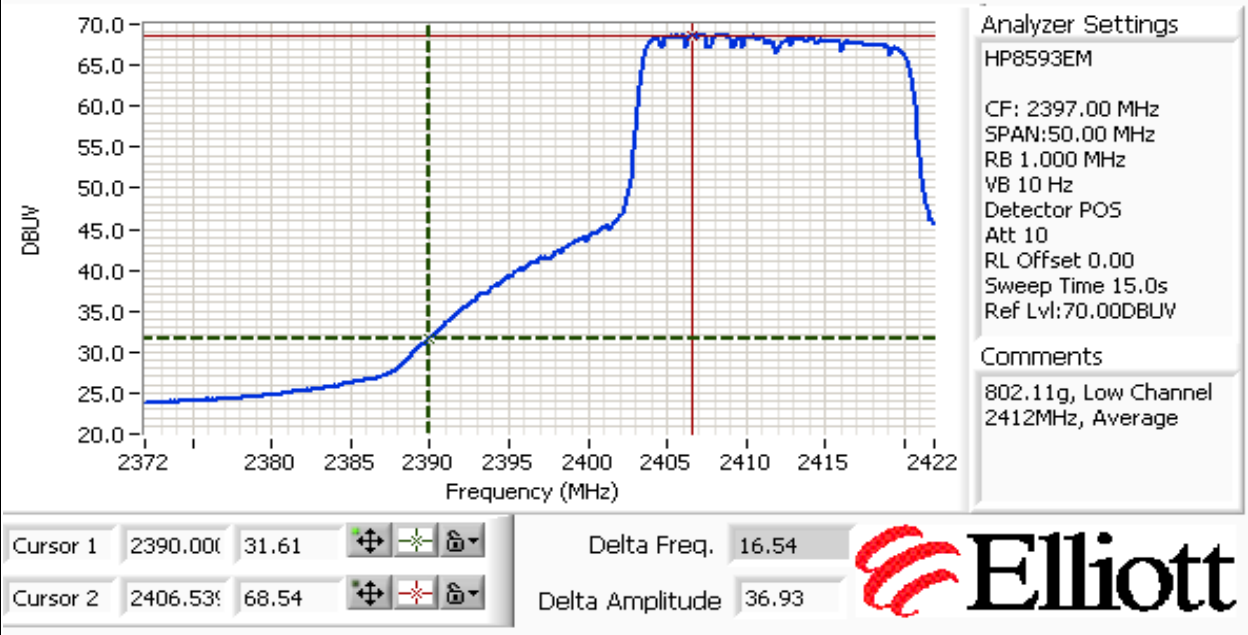
Delta Marker - Peak	28.7 dB	Delta between highest in-band and highest
Delta Marker - Average	36.9 dB	

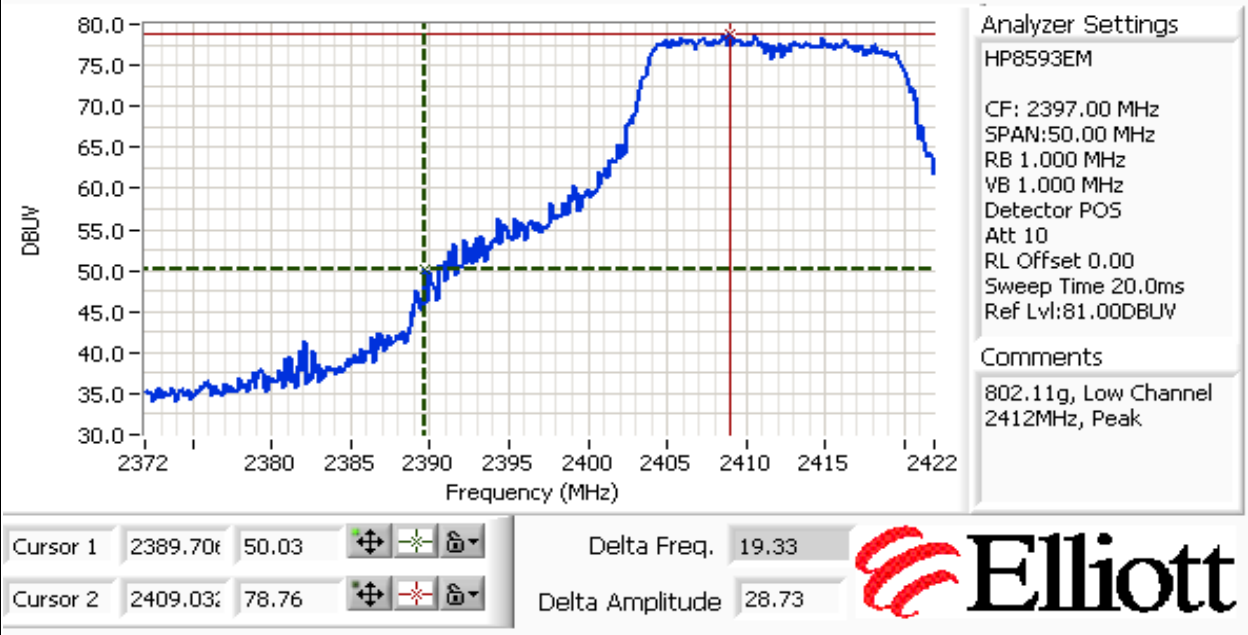
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2390.000	49.0	V	54.0	-5.0	AVG	76	2.1	Flat, RB = 1MHz, VB = 10Hz
2389.700	64.7	V	74.0	-9.3	PK	76	2.1	Flat, RB = VB = 1MHz

Note 1: Calculated by subtracting the marker delta values from the fundamental field strength measurements.

EMC Test Data

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4821.900	35.9	V	54.0	-18.1	AVG	84	1.0	Flat
4822.100	34.6	H	54.0	-19.4	AVG	100	1.0	Upright
4822.100	34.3	H	54.0	-19.7	AVG	102	1.0	Side
4815.330	32.7	V	54.0	-21.3	AVG	80	1.0	Side
4822.500	29.6	H	54.0	-24.4	AVG	132	1.0	Flat
4822.500	29.5	V	54.0	-24.5	AVG	78	1.0	Upright
4821.900	48.2	V	74.0	-25.8	PK	84	1.0	Flat
4822.100	46.8	H	74.0	-27.2	PK	100	1.0	Upright
4822.100	46.7	H	74.0	-27.3	PK	102	1.0	Side
4815.330	45.4	V	74.0	-28.6	PK	80	1.0	Side
4822.500	41.2	H	74.0	-32.8	PK	132	1.0	Flat
4822.500	41.2	V	74.0	-32.8	PK	78	1.0	Upright

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	All spurious and harmonics were measured and those above the noise floor in 3 orientations were recorded.

Run #2b: Center Channel @ 2437 MHz with power setting of 20dB

Fundamental emission level @ 3m in 100kHz RBW:	85.1	dBµV/m	
Limit for emissions outside of restricted bands:	55.1	dBµV/m	Limit is -30dBc (Power averaged measurement)

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4874.370	37.4	V	54.0	-16.6	AVG	213	1.0	Side
4872.690	35.6	H	54.0	-18.4	AVG	122	1.0	Side
4874.370	49.2	V	74.0	-24.8	PK	213	1.0	Side
4872.690	46.9	H	74.0	-27.1	PK	122	1.0	Side

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	All spurious and harmonics were measured and worse case of 3 orientation of those above noise floor were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Run #2c: High Channel @ 2462 MHz with power setting of 20dB

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2454.550	86.4	H	-	-	AVG	87	2.1	Flat, RB = 1MHz, VB = 10Hz
2454.550	94.9	H	-	-	PK	87	2.1	Flat, RB = VB = 1MHz
2454.550	87.7	H	-	-	PK	87	2.1	Flat, RB = VB = 100kHz
2465.850	78.5	V	-	-	AVG	199	2.1	Flat, RB = 1MHz, VB = 10Hz
2465.850	86.7	V	-	-	PK	199	2.1	Flat, RB = VB = 1MHz
2465.850	79.5	V	-	-	PK	199	2.1	Flat, RB = VB = 100kHz
2460.750	83.6	V	-	-	AVG	136	1.2	Side, RB = 1MHz, VB = 10Hz
2460.750	92.1	V	-	-	PK	136	1.2	Side, RB = VB = 1MHz
2460.750	84.6	V	-	-	PK	136	1.2	Side, RB = VB = 100kHz
2469.600	84.8	H	-	-	AVG	174	2.1	Side, RB = 1MHz, VB = 10Hz
2469.600	91.7	H	-	-	PK	174	2.1	Side, RB = VB = 1MHz
2469.600	86.2	H	-	-	PK	174	2.1	Side, RB = VB = 100kHz
2464.550	81.5	H	-	-	AVG	104	1.0	Upright, RB = 1MHz, VB = 10Hz
2464.550	90.0	H	-	-	PK	104	1.0	Upright, RB = VB = 1MHz
2464.550	83.2	H	-	-	PK	104	1.0	Upright, RB = VB = 100kHz
2460.800	84.3	V	-	-	AVG	330	1.1	Upright, RB = 1MHz, VB = 10Hz
2460.800	92.5	V	-	-	PK	330	1.1	Upright, RB = VB = 1MHz
2460.800	84.5	V	-	-	PK	330	1.1	Upright, RB = VB = 100kHz

Fundamental emission level @ 3m in 100kHz RBW:	87.7 dBµV/m	
Limit for emissions outside of restricted bands:	57.7 dBµV/m	Limit is -30dBc (Power averaged measurement)

Band Edge Signal Field Strength

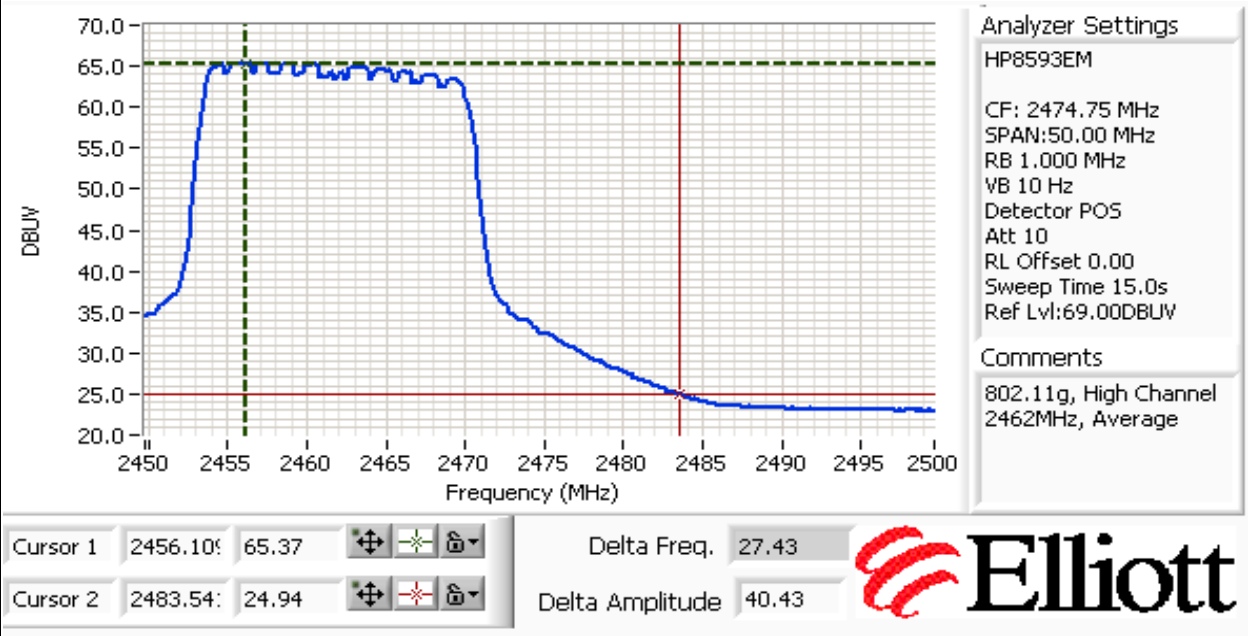
Delta Marker - Peak	33.5 dB	Delta between highest in-band and highest
Delta Marker - Average	40.4 dB	

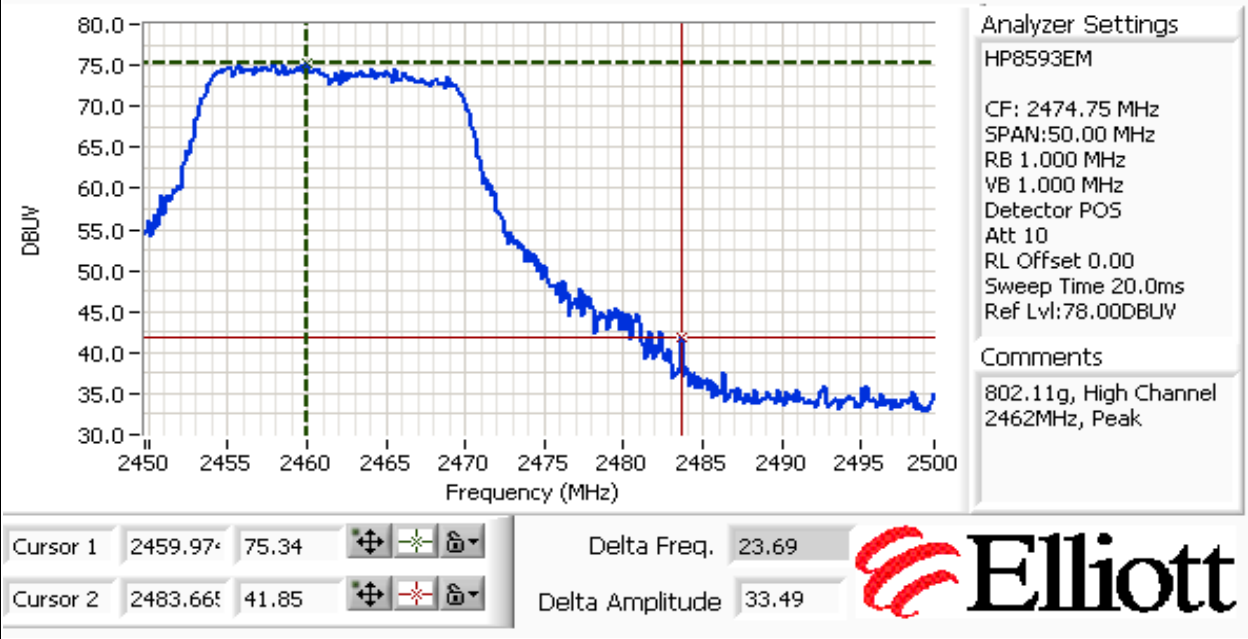
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.540	46.0	H	54.0	-8.0	AVG	87	2.1	Flat, RB = 1MHz, VB = 10Hz
2483.660	61.4	H	74.0	-12.6	PK	87	2.1	Flat, RB = VB = 1MHz

Note 1: Calculated by subtracting the marker delta values from the fundamental field strength measurements.

EMC Test Data

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	N/A

Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4923.850	36.2	H	54.0	-17.8	AVG	256	1.2	Upright
4923.900	36.0	V	54.0	-18.0	AVG	288	1.4	Upright
4922.810	35.9	H	54.0	-18.1	AVG	252	1.0	Flat
4925.400	35.8	H	54.0	-18.2	AVG	342	1.0	Side
4923.700	35.8	V	54.0	-18.2	AVG	217	1.0	Side
4924.010	35.6	V	54.0	-18.4	AVG	350	1.0	Flat
4923.900	48.3	V	74.0	-25.7	PK	288	1.4	Upright
4923.850	48.1	H	74.0	-25.9	PK	256	1.2	Upright
4923.700	47.2	V	74.0	-26.8	PK	217	1.0	Side
4922.810	46.8	H	74.0	-27.2	PK	252	1.0	Flat
4925.400	46.8	H	74.0	-27.2	PK	342	1.0	Side
4924.010	46.5	V	74.0	-27.5	PK	350	1.0	Flat

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	All spurious and harmonics were measured and those above the noise floor in 3 orientations were recorded.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

RSS 210 and FCC 15.247 Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 9/1/2006
Test Engineer: Mehran Birgani
Test Location: SVOATS #2
Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 20 °C
Rel. Humidity: 54 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1 (802.11b Mode)	RE, 30 - 7500 MHz Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	33.2dBµV/m (45.7µV/m) @ 3256.5MHz (-20.8dB)
2 (802.11g Mode)	RE, 30 - 7500 MHz Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	32.7dBµV/m (43.2µV/m) @ 3256.5MHz (-21.3dB)
3 (802.11a Mode) 5150 - 5250MHz	RE, 30 - 18000 MHz Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	39.9dBµV/m (98.9µV/m) @ 3498.0MHz (-14.1dB)
4 (802.11a Mode) 5725 - 5850MHz	RE, 30 - 18000 MHz Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	46.0dBµV/m (199.5µV/m) @ 3854.5MHz (-8.0dB)

Modifications Made During Testing:

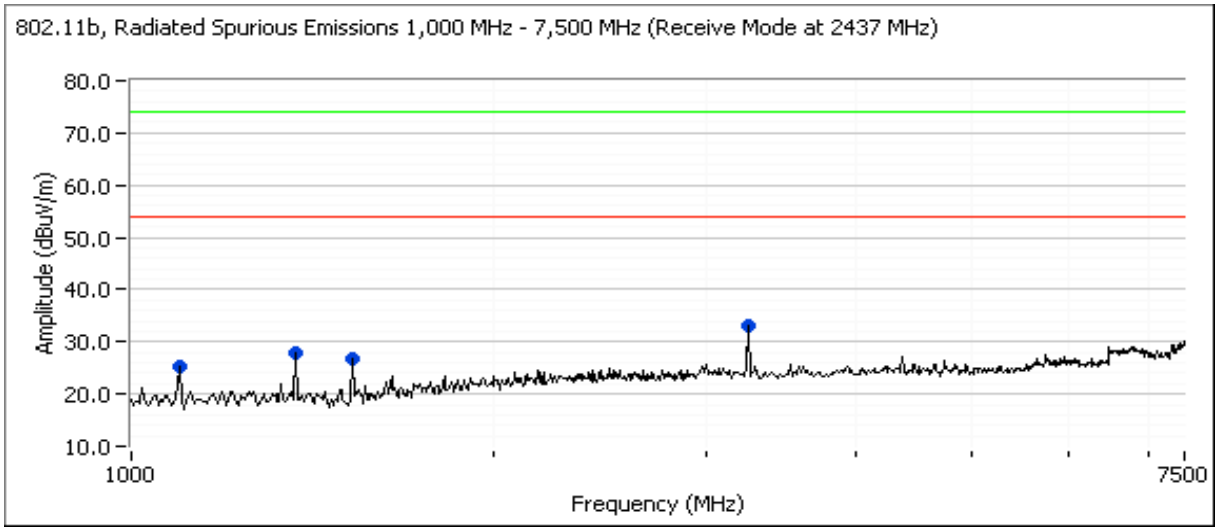
No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

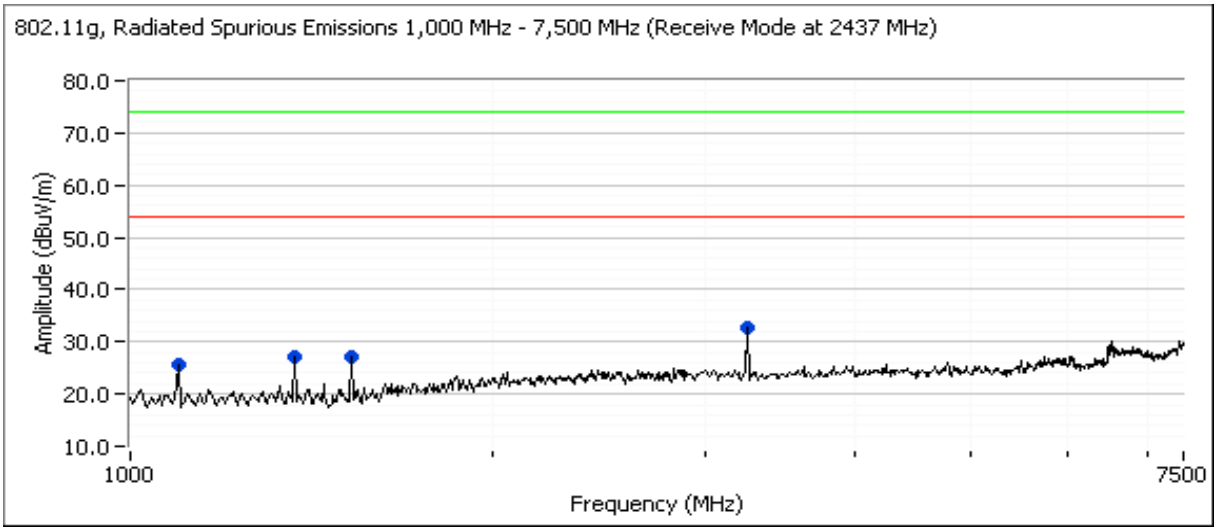
Run #1: Radiated Spurious Emissions, 30 - 7,500 MHz. Operating Mode: 802.11b @ 2437 MHz



Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
3256.500	33.2	V	54.0	-20.8	Peak	236	1.7	
1370.500	27.9	H	54.0	-26.1	Peak	195	1.7	
1527.250	26.8	H	54.0	-27.2	Peak	186	1.7	
1095.000	25.1	V	54.0	-28.9	Peak	28	1.7	

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

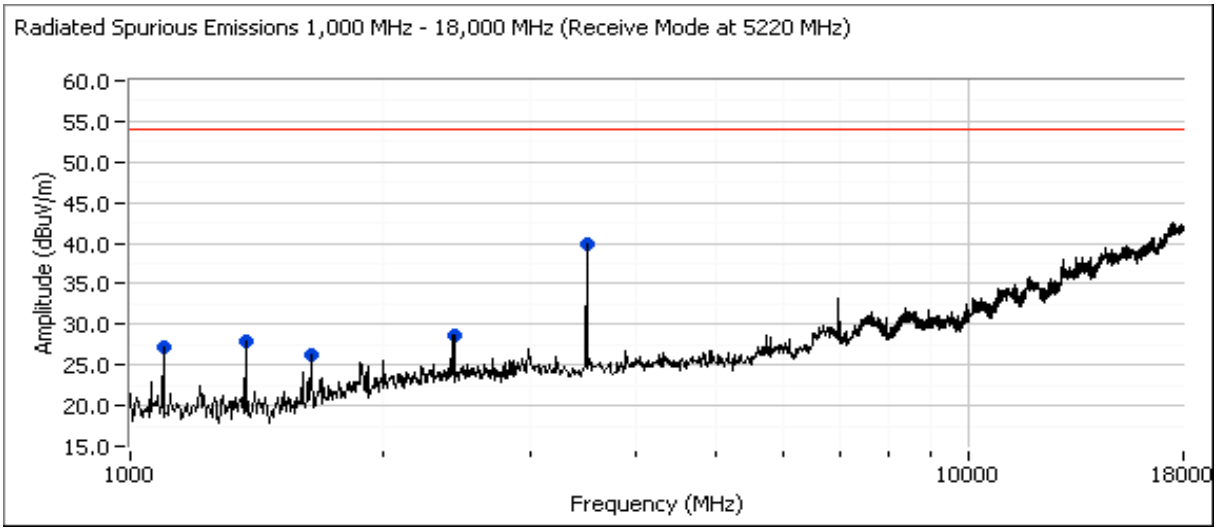
Run #2: Radiated Spurious Emissions, 30 - 7,500 MHz. Operating Mode: 802.11g @ 2437 MHz



Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
3256.500	32.7	H	54.0	-21.3	Peak	244	1.7	
1370.500	27.9	H	54.0	-26.1	Peak	195	1.7	
1527.250	26.8	H	54.0	-27.2	Peak	186	1.7	
1095.000	25.1	V	54.0	-28.9	Peak	28	1.7	

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

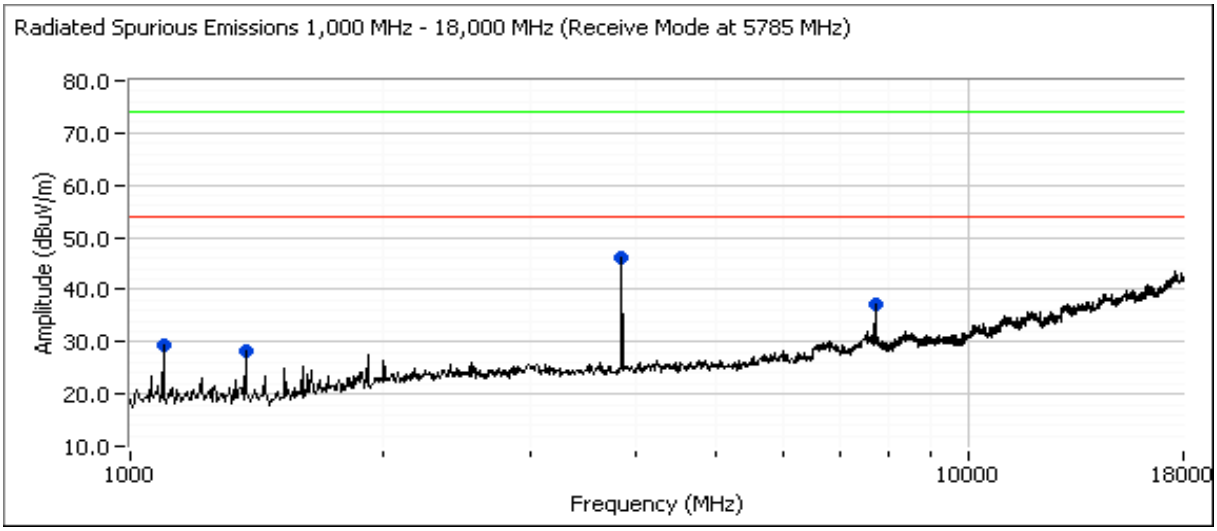
Run #3: Radiated Spurious Emissions, 30 - 18,000 MHz. Operating Mode: 802.11a @ 5220 MHz



Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
3498.000	39.9	V	54.0	-14.1	Peak	268	1.7	
2429.750	28.7	H	54.0	-25.3	Peak	73	1.7	
1370.500	28.0	H	54.0	-26.0	Peak	193	1.7	
1095.000	27.3	V	54.0	-26.7	Peak	277	1.7	
1641.250	26.3	V	54.0	-27.7	Peak	267	1.7	

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

Run #4: Radiated Spurious Emissions, 30 - 18,000 MHz. Operating Mode: 802.11a @ 5785 MHz



Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
3854.500	46.0	H	54.0	-8.0	Peak	188	1.7	
3854.500	46.0	H	54.0	-8.0	Peak	188	1.7	
7718.750	37.1	H	54.0	-16.9	Peak	260	1.7	
1095.000	29.4	H	54.0	-24.6	Peak	214	1.7	
1370.500	28.1	H	54.0	-25.9	Peak	166	1.7	

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

Conducted Emissions - Power Ports

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 10/7/2006 14:51
Test Engineer: Juan Martinez
Test Location: Fremont Chamber #3

Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

For tabletop equipment, the EUT was located on a wooden table, 40 cm from a vertical coupling plane and 80cm from the LISN. A second LISN was used for all local support equipment.

A pre-liminary scan was peformed for Tx and Rx mode. It was determined scans that Tx mode was the worst case.

Ambient Conditions:

Temperature: 21.3 °C
Rel. Humidity: 40 %

Summary of Results

Run #	Test Performed	Limit	Result	Margin
1	CE, AC Power, 120V/60Hz	EN 55022 Class B	Pass	52.5dBµV @ 0.876MHz (-3.5dB)

Modifications Made During Testing:

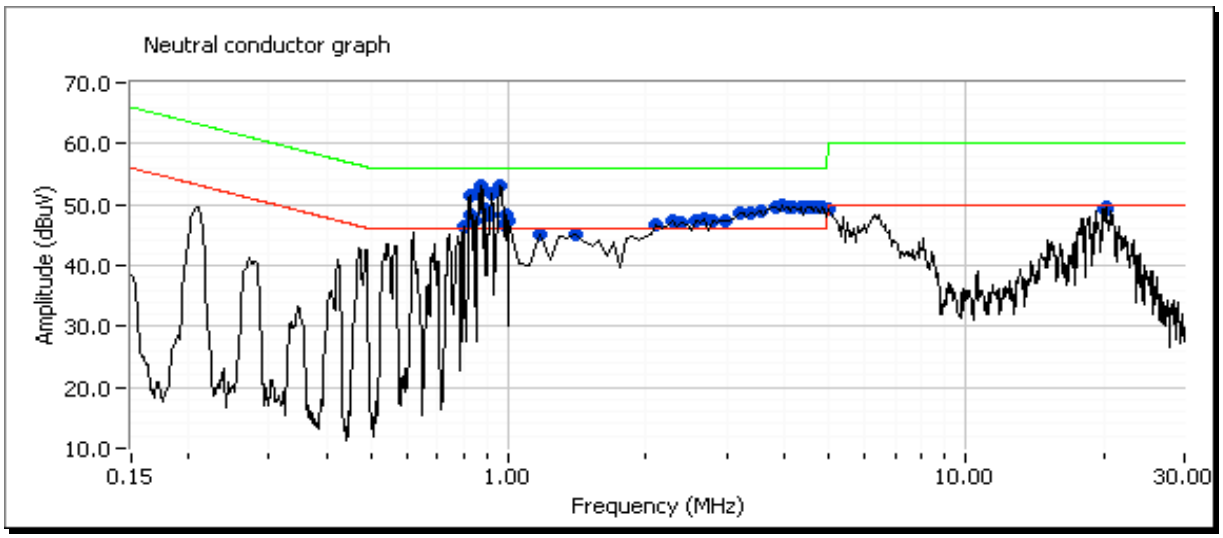
Modifications are detailed under each run description.

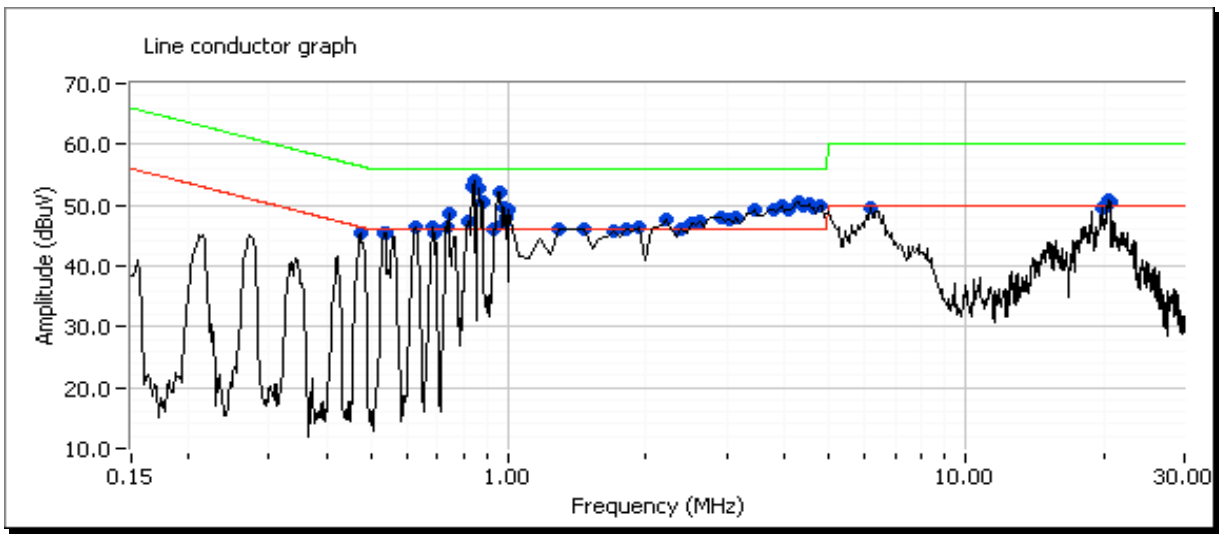
Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

Run #1: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz
Model 02





Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

Run #1: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz
Model 02

Frequency	Level	AC	EN55022 B		Detector	Comments
MHz	dBµV	Line	Limit	Margin	QP/Ave	
0.909	51.9	neutral	56.0	-4.2	QP	
0.889	51.7	neutral	56.0	-4.3	QP	
0.875	51.1	neutral	56.0	-4.9	QP	
0.863	50.6	neutral	56.0	-5.4	QP	
0.841	50.3	neutral	56.0	-5.7	QP	
0.979	50.2	neutral	56.0	-5.8	QP	
0.961	49.8	neutral	56.0	-6.2	QP	
0.830	49.6	neutral	56.0	-6.4	QP	
0.823	49.6	neutral	56.0	-6.4	QP	
0.799	48.5	neutral	56.0	-7.5	QP	
0.991	47.7	neutral	56.0	-8.3	QP	
0.921	46.6	neutral	56.0	-9.4	QP	
0.889	35.2	neutral	46.0	-10.8	Average	
0.875	35.0	neutral	46.0	-11.0	Average	
0.830	34.6	neutral	46.0	-11.4	Average	
0.863	34.3	neutral	46.0	-11.7	Average	
0.823	34.1	neutral	46.0	-11.9	Average	
0.909	34.1	neutral	46.0	-11.9	Average	
0.841	34.0	neutral	46.0	-12.0	Average	
0.799	32.8	neutral	46.0	-13.2	Average	
0.979	30.6	neutral	46.0	-15.4	Average	
0.961	30.5	neutral	46.0	-15.5	Average	
0.991	28.1	neutral	46.0	-17.9	Average	
0.921	27.3	neutral	46.0	-18.7	Average	

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

Run #1: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz
Model 02

Frequency	Level	AC	EN55022 B		Detector	Comments
MHz	dBµV	Line	Limit	Margin	QP/Ave	
0.999	47.9	neutral	56.0	-8.1	QP	
4.503	46.7	neutral	56.0	-9.3	QP	
4.226	46.7	neutral	56.0	-9.3	QP	
4.566	46.5	neutral	56.0	-9.5	QP	
4.362	46.5	neutral	56.0	-9.6	QP	
4.711	46.3	neutral	56.0	-9.7	QP	
4.100	46.1	neutral	56.0	-9.9	QP	
3.870	46.0	neutral	56.0	-10.0	QP	
3.925	46.0	neutral	56.0	-10.0	QP	
3.434	45.6	neutral	56.0	-10.4	QP	
3.590	45.6	neutral	56.0	-10.4	QP	
4.815	45.4	neutral	56.0	-10.6	QP	
2.957	45.3	neutral	56.0	-10.7	QP	
3.232	44.9	neutral	56.0	-11.1	QP	
2.577	44.7	neutral	56.0	-11.3	QP	
2.252	44.4	neutral	56.0	-11.6	QP	
2.667	44.3	neutral	56.0	-11.7	QP	
4.711	32.0	neutral	46.0	-14.0	Average	
4.503	31.6	neutral	46.0	-14.5	Average	
4.226	31.3	neutral	46.0	-14.7	Average	
4.566	31.2	neutral	46.0	-14.8	Average	
4.362	30.6	neutral	46.0	-15.4	Average	
4.100	30.5	neutral	46.0	-15.5	Average	
3.590	30.5	neutral	46.0	-15.6	Average	
3.434	30.2	neutral	46.0	-15.8	Average	
3.232	30.2	neutral	46.0	-15.9	Average	
3.870	29.7	neutral	46.0	-16.3	Average	
3.925	29.5	neutral	46.0	-16.5	Average	
4.815	29.3	neutral	46.0	-16.7	Average	
2.577	29.1	neutral	46.0	-16.9	Average	
2.252	29.1	neutral	46.0	-17.0	Average	
0.999	28.7	neutral	46.0	-17.3	Average	
2.667	28.7	neutral	46.0	-17.3	Average	
2.957	28.6	neutral	46.0	-17.4	Average	

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

Run #1: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz
Model 02

Frequency	Level	AC	EN55022 B		Detector	Comments
MHz	dBµV	Line	Limit	Margin	QP/Ave	
0.876	52.5	Line 1	56.0	-3.5	QP	
0.863	51.8	Line 1	56.0	-4.2	QP	
0.931	51.8	Line 1	56.0	-4.3	QP	
0.957	51.7	Line 1	56.0	-4.3	QP	
0.843	51.3	Line 1	56.0	-4.7	QP	
0.833	51.2	Line 1	56.0	-4.8	QP	
0.981	50.9	Line 1	56.0	-5.1	QP	
0.819	50.7	Line 1	56.0	-5.3	QP	
0.975	50.7	Line 1	56.0	-5.3	QP	
0.741	47.0	Line 1	56.0	-9.0	QP	
0.732	46.5	Line 1	56.0	-9.5	QP	
0.876	36.3	Line 1	46.0	-9.7	Average	
0.833	35.8	Line 1	46.0	-10.2	Average	
0.538	45.8	Line 1	56.0	-10.2	QP	
0.534	45.7	Line 1	56.0	-10.3	QP	
0.628	45.7	Line 1	56.0	-10.3	QP	
0.819	35.7	Line 1	46.0	-10.3	Average	
0.863	35.2	Line 1	46.0	-10.8	Average	
0.682	45.0	Line 1	56.0	-11.0	QP	
0.686	44.9	Line 1	56.0	-11.1	QP	
0.475	44.7	Line 1	56.4	-11.7	QP	
0.931	34.2	Line 1	46.0	-11.8	Average	
0.957	33.8	Line 1	46.0	-12.2	Average	
0.538	33.8	Line 1	46.0	-12.2	Average	
0.475	33.9	Line 1	46.4	-12.5	Average	
0.843	33.2	Line 1	46.0	-12.8	Average	
0.741	33.2	Line 1	46.0	-12.8	Average	
0.534	32.9	Line 1	46.0	-13.1	Average	
0.732	32.3	Line 1	46.0	-13.7	Average	
0.628	31.8	Line 1	46.0	-14.2	Average	
0.975	31.7	Line 1	46.0	-14.3	Average	
0.981	31.6	Line 1	46.0	-14.5	Average	
0.686	31.4	Line 1	46.0	-14.7	Average	
0.682	30.3	Line 1	46.0	-15.7	Average	

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

Run #1: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz
Model 02

Frequency	Level	AC	EN55022 B		Detector	Comments
MHz	dBµV	Line	Limit	Margin	QP/Ave	
0.998	49.2	Line 1	56.0	-6.8	QP	
4.424	46.6	Line 1	56.0	-9.4	QP	
4.566	46.5	Line 1	56.0	-9.5	QP	
3.943	46.3	Line 1	56.0	-9.7	QP	
4.773	46.2	Line 1	56.0	-9.8	QP	
4.282	46.2	Line 1	56.0	-9.8	QP	
4.070	46.2	Line 1	56.0	-9.8	QP	
3.792	46.1	Line 1	56.0	-9.9	QP	
4.651	46.0	Line 1	56.0	-10.0	QP	
3.451	45.7	Line 1	56.0	-10.3	QP	
3.017	44.9	Line 1	56.0	-11.1	QP	
3.175	44.8	Line 1	56.0	-11.2	QP	
2.600	44.8	Line 1	56.0	-11.3	QP	
2.910	44.6	Line 1	56.0	-11.4	QP	
2.528	44.5	Line 1	56.0	-11.5	QP	
2.244	44.2	Line 1	56.0	-11.8	QP	
20.514	36.9	Line 1	50.0	-13.1	Average	
4.773	32.1	Line 1	46.0	-13.9	Average	
4.566	32.1	Line 1	46.0	-13.9	Average	
20.514	45.9	Line 1	60.0	-14.1	QP	
3.943	31.4	Line 1	46.0	-14.6	Average	
4.424	31.4	Line 1	46.0	-14.6	Average	
4.651	31.3	Line 1	46.0	-14.7	Average	
3.451	30.6	Line 1	46.0	-15.4	Average	
3.792	30.6	Line 1	46.0	-15.4	Average	
4.070	30.5	Line 1	46.0	-15.5	Average	
4.282	29.9	Line 1	46.0	-16.1	Average	
0.998	29.9	Line 1	46.0	-16.1	Average	
2.600	29.6	Line 1	46.0	-16.4	Average	
2.910	29.6	Line 1	46.0	-16.4	Average	
2.528	29.0	Line 1	46.0	-17.0	Average	
2.244	28.8	Line 1	46.0	-17.2	Average	
3.017	28.6	Line 1	46.0	-17.4	Average	
3.175	28.6	Line 1	46.0	-17.4	Average	

Client:	OQO	Job Number:	J62637
Model:	Model 02	T-Log Number:	T64964
		Account Manager:	Susan Pelzl
Contact:	Bob Hymes		
Standard:	FCC 15.247 & RSS-210	Class:	Radio

Run #1: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz
Model 02

Frequency	Level	AC	EN55022 B		Detector	Comments
MHz	dBµV	Line	Limit	Margin	QP/Ave	
1.409	44.3	Line 1	56.0	-11.7	QP	
1.826	44.2	Line 1	56.0	-11.8	QP	
2.385	44.1	Line 1	56.0	-12.0	QP	
20.366	37.9	Line 1	50.0	-12.1	Average	
1.283	43.7	Line 1	56.0	-12.3	QP	
1.658	43.5	Line 1	56.0	-12.6	QP	
1.902	43.4	Line 1	56.0	-12.6	QP	
20.722	36.7	Line 1	50.0	-13.3	Average	
20.366	46.2	Line 1	60.0	-13.9	QP	
20.722	45.9	Line 1	60.0	-14.2	QP	
6.199	44.9	Line 1	60.0	-15.1	QP	
2.385	28.9	Line 1	46.0	-17.1	Average	
6.199	32.5	Line 1	50.0	-17.5	Average	
1.826	28.1	Line 1	46.0	-17.9	Average	
1.658	28.0	Line 1	46.0	-18.0	Average	
1.409	27.7	Line 1	46.0	-18.3	Average	
1.902	26.3	Line 1	46.0	-19.7	Average	
1.283	23.1	Line 1	46.0	-22.9	Average	

EXHIBIT 3: Photographs of Test Configurations

Pages

EXHIBIT 4: Proposed FCC ID Label & Label Location

EXHIBIT 5: Detailed Photographs of OQO Model Model 02Construction

Pages

EXHIBIT 6: Operator's Manual for OQO Model Model 02

Pages

EXHIBIT 7: Block Diagram of OQO Model Model 02

Pages

EXHIBIT 8: Schematic Diagrams for OQO Model Model 02

Pages

EXHIBIT 9: Theory of Operation for OQO Model Model 02

Pages

EXHIBIT 10: RF Exposure Information

Pages