Underwriters Laboratories Inc.
333 Pfingsten Rd.
Northbrook, IL 60062

www.ul.com/emc
(847) 272-8800

Job Number:	702802 07CA36242
File Number:	E311681
Date:	September 7, 2007
Model:	Dragon

Electromagnetic Compatibility Test Report

For

Callpod Inc.

Test Report Details

Tests Performed By:	**Underwriters Laboratories Inc.** **333 Pfingsten Rd.** **Northbrook, IL 60062**
Tests Performed For:	**Callpod Inc.** Suite 260 850 W. Jackson Blvd Chicago, IL 60607
Applicant Contact: Phone: E-mail:	**Mr. Lourans Aoraha** **312-829-2680** **laoraha@callpod.com**
Test Report Date:	**September 7, 2007**
Product Type:	**Blue Tooth Hands free Cell Phone Adapter**
Product standards	**47 CFR Part 15.247, Subpart C** **RSS-210**
Model Number:	**Dragon**
EUT Category:	**Low Power Part 15 Transmitter**
Testing Start Date:	**July 2007**
Date Testing Complete:	**September 2007**
Overall Results:	**Compliant**

Underwriters Laboratories Inc. reports apply only to the specific samples tested under stated test conditions. All samples tested were in good operating condition throughout the entire test program. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. Underwriters Laboratories Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from Underwriters Laboratories Inc. issued reports. This report shall not be used to claim, constitute or imply product certification, approval, or endorsement by NVLAP, A2LA, or any agency of the US government.

This report may contain test results that are not covered by the NVLAP or A2LA accreditation. The scope of accreditation is limited to the specific tests that are listed on the NVLAP and/or A2LA websites referenced at the end of this report.

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Report Revision History

Revision Date	Description	Revised By	Revision Reviewed By
none			

1.0 G E N E R A L - Product Description

1.1 Equipment Description

The Equipment Under Test (EUT) was a Blue Tooth hands free headset for use with cellphones and other equipment with Blue Tooth Technology.

1.2 Device Configuration During Test

1.2.1 Equipment Used During Test:

Use	Product Type	Manufacturer	Model	Comments
EUT	BT Headset	Callpod Inc.	Dragon	None
Note: **EUT** - Equipment Under Test, **AE** - Auxiliary/Associated Equipment, or **SIM** - Simulator (Not Subjected to Test)				

1.2.2 Input/Output Ports:

Port #	Name	Type*	Cable Max. >3m (Y/N)	Cable Shielded (Y/N)	Comments
0	Enclosure	N/E	—	—	None
1	Mains	DC	N	N	None

Note:
AC = AC Power Port DC = DC Power Port N/E = Non-Electrical
I/O = Signal Input or Output Port (Not Involved in Process Control)
TP = Telecommunication Ports

1.2.3 EUT Internal Operating Frequencies:

Frequency (MHz)	Description
26	Local Ocsillator

1.2.4 Power Interface:

Mode # /Rated	Voltage (V)	Frequency (DC/AC-Hz)	Phases (#)	Comments
1	120V	AC	1	Used for Charging the EUT
2	3V	DC	-	Internal Battery

1.3 EUT Configurations

Mode #	Description
1	Configured in Semi-Anechoic chamber on 80cm non-conductive support
2	Configured on test bench connected to S/A thru coaxial cable

1.4 EUT Operation Modes

Mode #	Description
1	*Transmitting
2	Receiving
3	Charging

*All measurements were done with the EUT power setting as follow: EXT=125, INT=44. All final radiated and conducted spurious emissions were conducted with dh5 modulation. This modulation has the highest power level and highest emissions were recorded with this modulation in place.

2.0 Summary

The tests listed in the Summary of Testing section of this report have been performed and the results recorded by Underwriters Laboratories Inc. in accordance with the procedures stated in each test requirement and specification. The applicant determined the list of tests performed were applicable to the Equipment Under Test. As a result, the subject product has been verified to comply or not comply as noted in the Summary of Testing with each test specification. The test results relate only to the items tested.

2.1 Deviations from standard test methods

None

2.2 Device Modifications Necessary for Compliance

None

2.3 Reference Standards

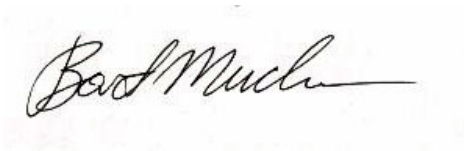
Standard Number	Standard Name	Standard Date
FCC Part 15, Subpart C	Code of Federal Regulations, Part 15, Radio Frequency Devices	2007
RSS-210, Issue 7	Low-Power Licence-Exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment	June 2007
RSS-Gen, Issue 2	General Requirements and Information for the Certification of Radiocommunication Equipment	June 2007

*In addition to the above standards, FCC DA 00-705, Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems was used.

2.4 Results Summary

Requirement – Test	Requirement – Test	Result (Compliant / Non-Compliant)*
Conducted Emissions	47 CFR Part 15.207 RSS-Gen 7.2.2	Compliant
Carrier Frequency Separation	47 CFR Part 15.247(a)(1) RSS-210 A8.1(b)	Compliant
20dB Bandwidth	47 CFR Part 15.247(a)(1) RSS-210 A8.1(a)	Compliant
Number of Hopping Frequency	47 CFR Part 15.247(a)(1)(iii) RSS-210 A8.1(d)	Compliant
Dwell Time	47 CFR Part 15.247(a)(1)(iii) RSS-210 A8.1(d)	Compliant
Maximum Peak Output Power	47 CFR Part 15.247(b)(1) RSS-210 A8.4(2)	Compliant
Band Edge Compliance	47 CFR Part 15.247(d) RSS-210 A8.5	Compliant
Spurious Emissions	47 CFR Part 15.247(d) RSS-210 A8.5 RSS-Gen 7.2.1 and 7.2.3	Compliant
99% Occupied Bandwidth	RSS-Gen 4.6.1	Compliant

Test Engineer:



Bartlomiej Mucha (Ext.41216)
Senior Project Engineer
International EMC Services
Conformity Assessment Services-

Reviewer:

Jack Steiner (Ext.42307)
Section Manager
International EMC Services
Conformity Assessment Services

3.0 Calibration of Equipment Used for Measurement

All test equipment and test accessories are calibrated on a regular basis. The maximum time between calibrations is one year or the manufacturers' recommendation, whichever is less.

All test equipment calibrations are traceable to the National Institute of Standards and Technology (NIST); therefore, all test data recorded in this report is traceable to NIST.

4.0 EMISSIONS TEST RESULTS

The emissions tests were performed according to following regulations:

---------- United States ----------

Code of Federal Regulations Title 47	Part 15, Subpart B, Radio Frequency Devices

Unless specified otherwise in the individual Methods, the tests shall be conducted under the following ambient conditions. Confirmation of these conditions shall be verified at the time the test is conducted.

Ambient Temperature, °C	22.5 ± 2.5	Relative Humidity, %	45 ± 15	Barometric Pressure, mBar	950 ± 150

4.1 Test Conditions and Results – MAINS TERMINAL – CONDUCTED EMISSIONS

Test Description	Measurements were made on a ground plane. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN.		
Basic Standard		FCC Part 15, Subpart C, 15.207 RSS-Gen 7.2.2	
UL LPG		80-EM-S0026	
		Frequency range on each side of line	Measurement Point
Fully configured sample scanned over the following frequency range		150kHz to 30MHz	Mains
Limits - Class B			
Frequency (MHz)	Limit (dBµV)		
	Quasi-Peak	Average	
0.15-0.5	66 to 56	56 to 46	
0.5-5	56	46	
5-30	60	50	
Supplementary information: None			

Table 1 Conducted Emissions EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1, 3
Supplementary information: None		

Table 2 Conducted Emissions Test Equipment

Description	Manufacturer	Model	Identifier
Spectrum Analyzer / Preselector	Advantest	R3361D / R3551	EMC4259
Transient Limiter	Electro-Metrics	EM7600-2	EMC4224
LISN - L1	Solar	8602-50-TS-50-N	EMC4052
LISN - L2	Solar	8602-50-TS-50-N	EMC4064

Figure 1 Test Setup for Conducted Emissions

Figure 2 Conducted Emissions Graph

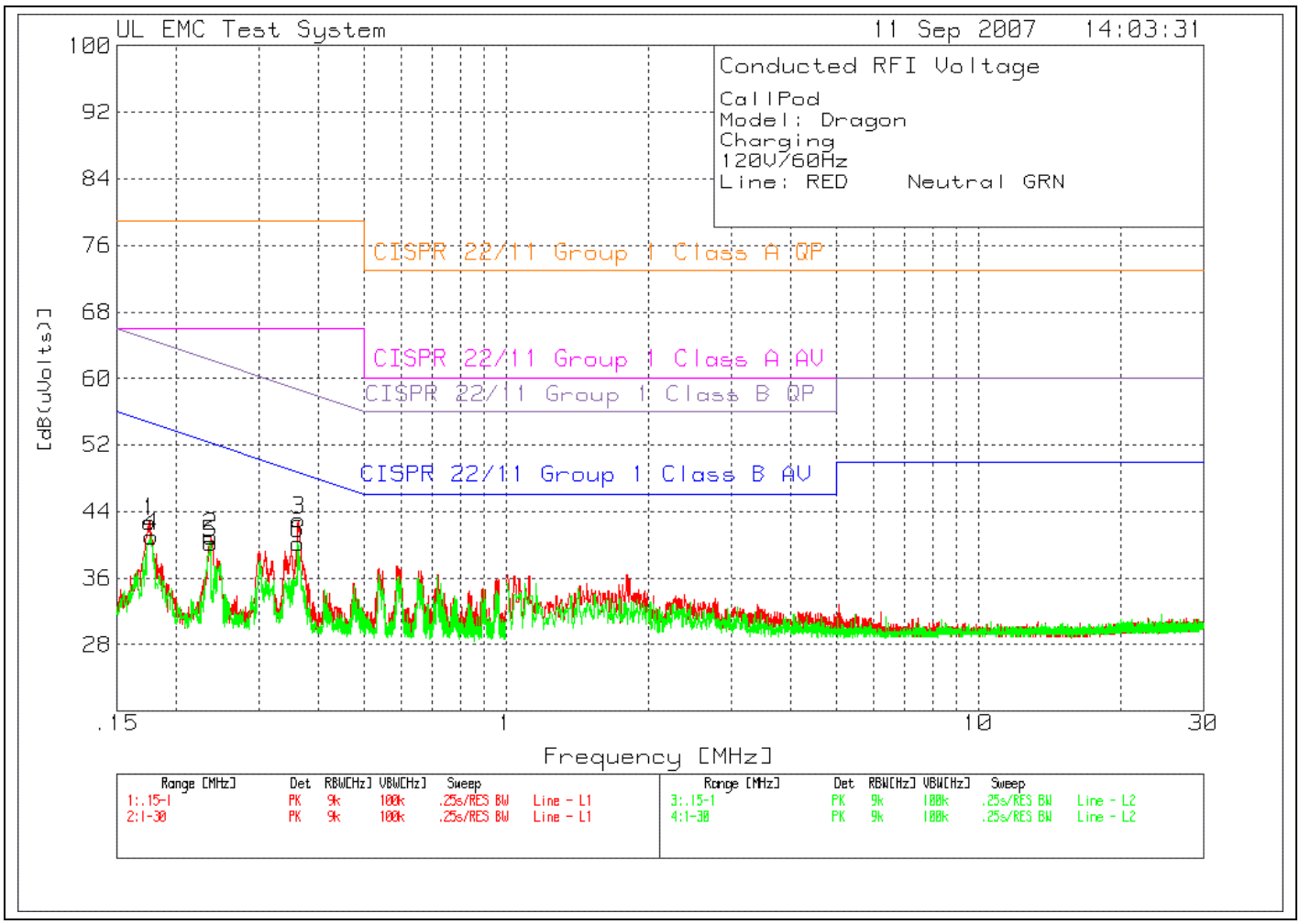


Table 3 Conducted Emissions Data Points

CallPod
Model: Dragon
Charging
120V/60Hz
Line: RED Neutral GRN

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Line											
1	.17623	31.4 pk	10.1	1.3	42.8	79	66	64.7	54.7	-	-
				Margin [dB]		-36.2	-23.2	-21.9	-11.9	-	-
2	.23779	30.1 pk	10.1	.8	41	79	66	62.2	52.2	-	-
				Margin [dB]		-38	-25	-21.2	-11.2	-	-
3	.36409	32.6 pk	10	.4	43	79	66	58.6	48.6	-	-
				Margin [dB]		-36	-23	-15.6	-5.6	-	-
Neutral											
4	.1779	29.5 pk	10.1	1.4	41	79	66	64.6	54.6	-	-
				Margin [dB]		-38	-25	-23.6	-13.6	-	-
5	.23688	29.2 pk	10.1	.9	40.2	79	66	62.2	52.2	-	-
				Margin [dB]		-38.8	-25.8	-22	-12	-	-
6	.36288	29.7 pk	10	.5	40.2	79	66	58.7	48.7	-	-
				Margin [dB]		-38.8	-25.8	-18.5	-8.5	-	-

LIMIT 1: CISPR 22/11 Group 1 Class A QP
LIMIT 2: CISPR 22/11 Group 1 Class A AV
LIMIT 3: CISPR 22/11 Group 1 Class B QP
LIMIT 4: CISPR 22/11 Group 1 Class B AV

Frequency [MHz]	Test Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Line										
.17936	24.32 qp	10.1	1.3	35.72	79	66	64.5	54.5	-	-
			Margin [dB]:		-43.28	-30.28	-28.78	-18.78	-	-
.23841	25.67 qp	10.1	.8	36.57	79	66	62.2	52.2	-	-
			Margin [dB]:		-42.43	-29.43	-25.63	-15.63	-	-
.36606	29.45 qp	10	.4	39.85	79	66	58.6	48.6	-	-
			Margin [dB]:		-39.15	-26.15	-18.75	-8.75	-	-
Neutral										
.17843	22.1 qp	10.1	1.4	33.6	79	66	64.6	54.6	-	-
			Margin [dB]:		-45.4	-32.4	-31	-21	-	-
.23926	25 qp	10.1	.9	36	79	66	62.1	52.1	-	-
			Margin [dB]:		-43	-30	-26.1	-16.1	-	-
.36732	26.6 qp	10	.5	37.1	79	66	58.6	48.6	-	-
			Margin [dB]:		-41.9	-28.9	-21.5	-11.5	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector

LIMIT 1: CISPR 22/11 Group 1 Class A QP
LIMIT 2: CISPR 22/11 Group 1 Class A AV
LIMIT 3: CISPR 22/11 Group 1 Class B QP
LIMIT 4: CISPR 22/11 Group 1 Class B AV

4.2 Test Conditions and Results – Carrier Frequency Separation

Test Description	Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
Basic Standard	47 CFR Part 15.247(a)(1) RSS-210, A8.1(b)

Table 4 Carrier Frequency Separation Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
2	2	1
Supplementary information: Separation frequencies were measured for each channel and then averaged.		

Table 5 Carrier Frequency Separation Test Equipment

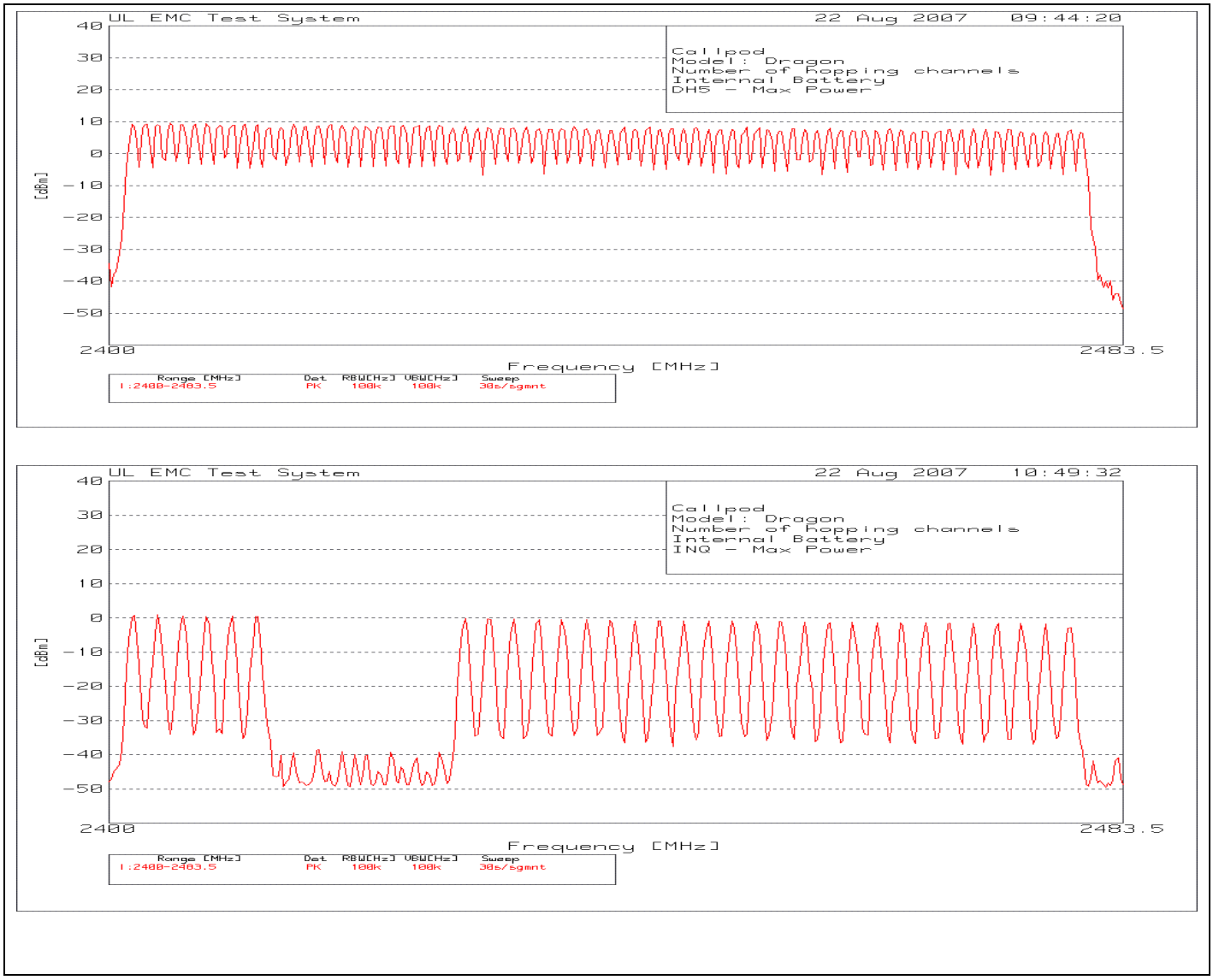
Test Equipment Used			
Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Agilent	E7405A	US41160342
Attenuator	Pasternek	10dB	None

Table 6 Carrier Frequency Separation Results

Mode	Channel	Carrier Frequency Separation Limit	Average Separation
DH1, DH3, DH5	All Channels	Minimum 20dB BW or 2/3 of the 20dB BW	1.0002MHz
Inquiry	2441	Minimum 20dB BW or 2/3 of the 20dB BW	1.932MHz

Figure 3 Test Setup for Carrier Frequency Separation

Figure 4 Carrier Frequency Separation Graphs



4.3 Test Conditions and Results – 20dB Bandwidth

Test Description	Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
Basic Standard	47 CFR Part 15.247(a)(1) RSS-210, A8.1(b)

Table 7 20dB Bandwidth Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
2	2	1
Supplementary information: None		

Table 8 20dB Bandwidth Test Equipment

Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Agilent	E7405A	US41160342
Attenuator	Pasternek	10dB	None

Table 9 20dB Bandwidth Results

Mode	Channel	20dB Bandwidth
DH1	2441	785kHz
DH3	2441	820kHz
DH5	2441	735kHz
Inquary	2441	630kHz

Figure 5 Test Setup for 20dB Bandwidth

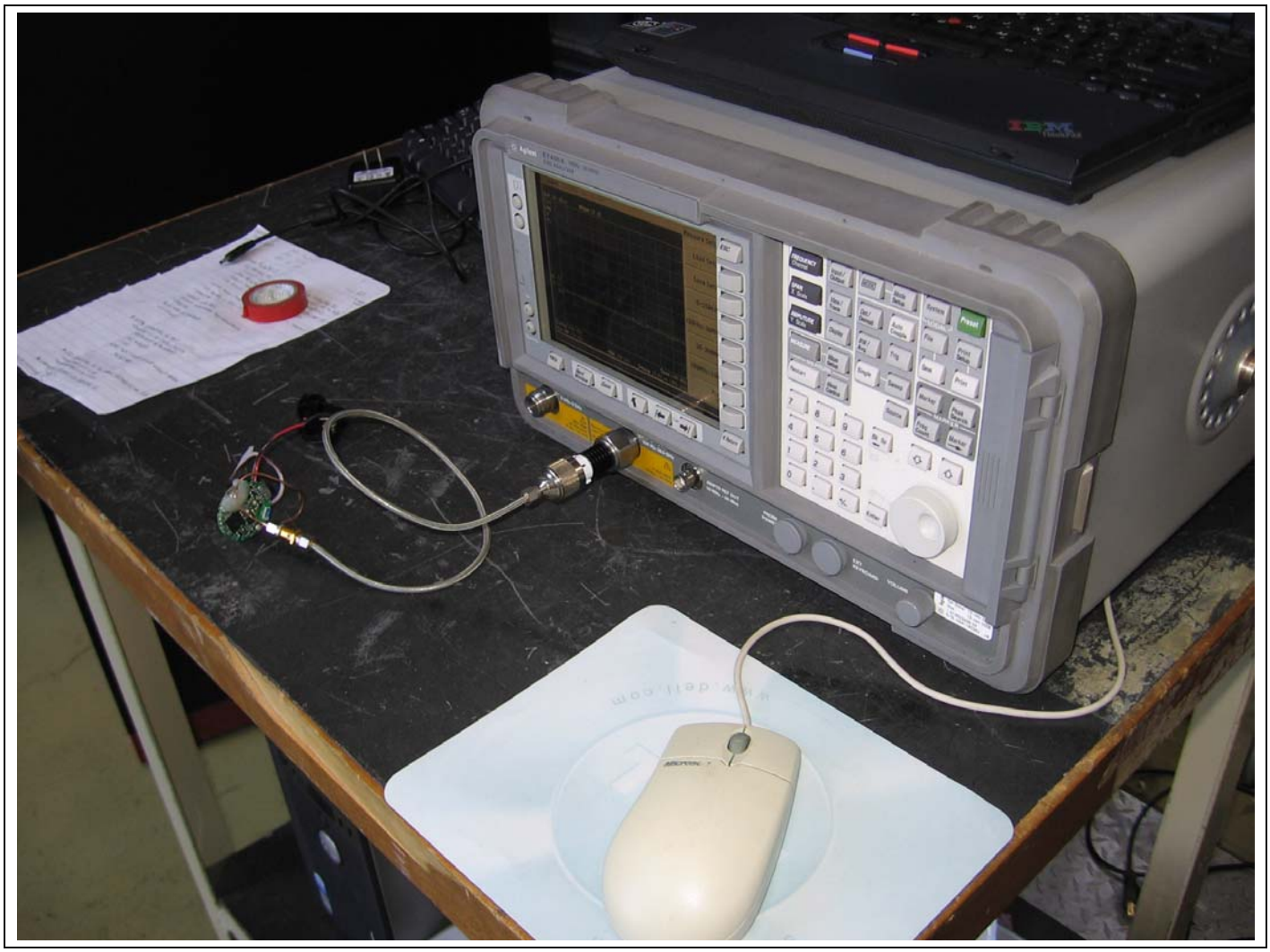
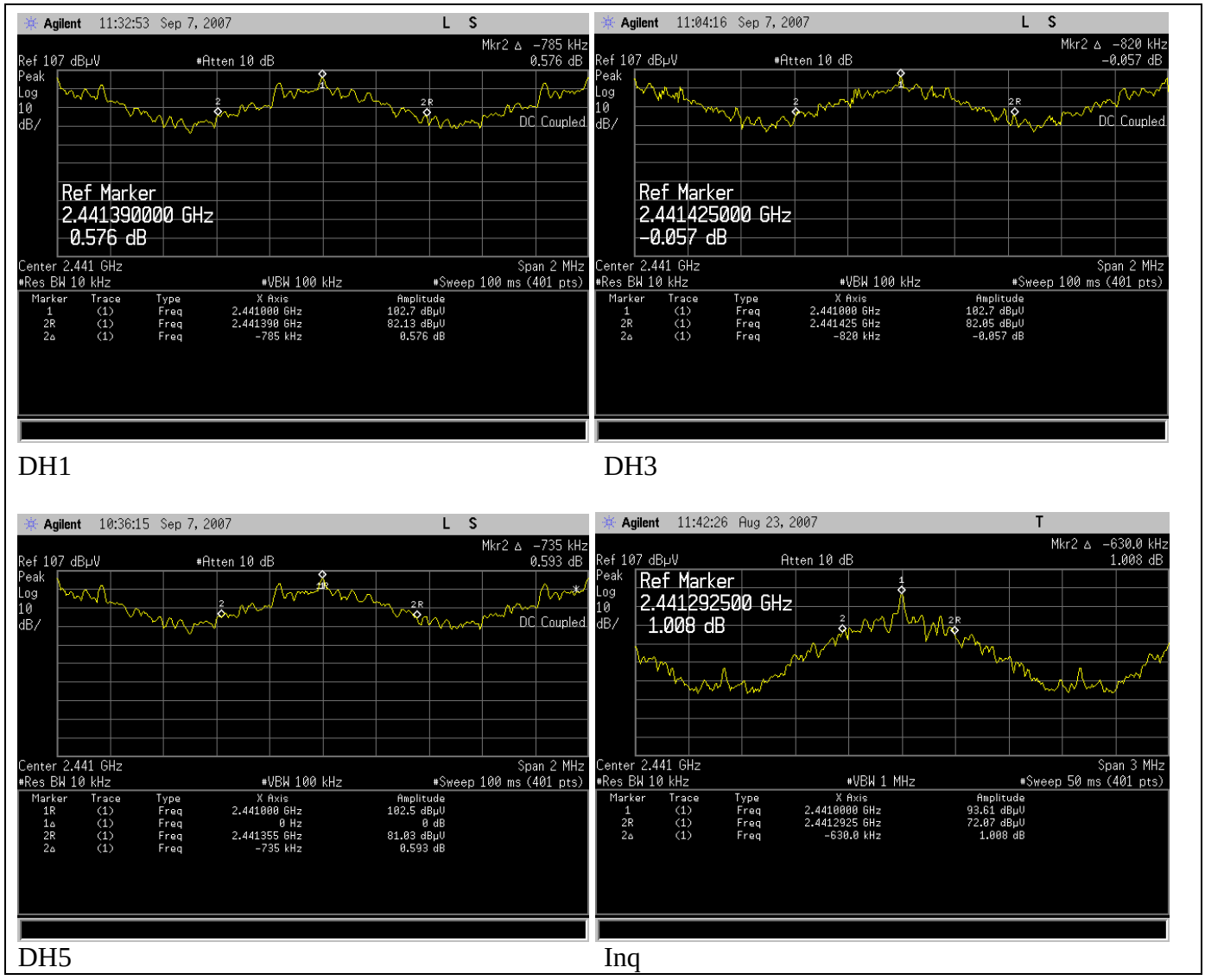


Figure 6 20dB Bandwidth Graphs



4.4 Test Conditions and Results – Number of Hopping Frequencies

Test Description	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.
Basic Standard	47 CFR Part 15.247(a)(1)(iii) RSS-210, A8.1(d)

Table 10 Number of Hopping Frequencies Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
2	2	1
Supplementary information: None		

Table 11 Number of Hopping Frequencies Test Equipment

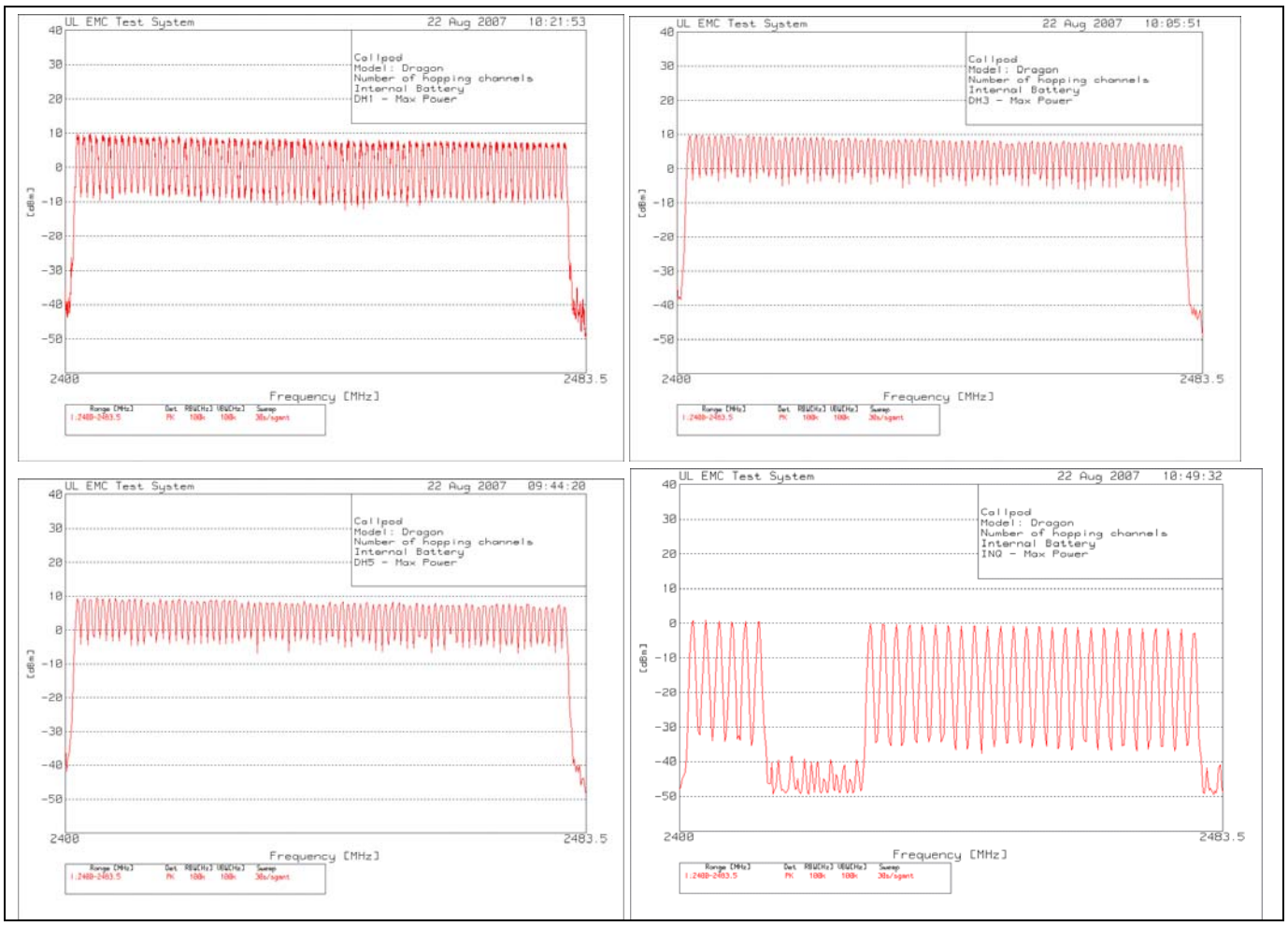
Test Equipment Used			
Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Agilent	E7405A	US41160342
Attenuator	Pasternek	10dB	None

Table 12 Number of Hopping Frequencies Results

Mode	Number of Channels	Minimum Number Required
DH1	79	15
DH3	79	15
DH5	79	15
Inquary	32	15

Figure 7 Test Setup for Number of Hopping Frequencies

Figure 8 Number of Hopping Frequencies Graphs



4.5 Test Conditions and Results – Dwell Time

Test Description	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.
Basic Standard	47 CFR Part 15.247(a)(1)(iii) RSS-210, A8.1(d)

Table 13 Dwell Time Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
2	2	1
Supplementary information: Duty cycle also measured/calculated for use in radiated spurious measurements		

Table 14 Dwell Time Test Equipment

Test Equipment Used			
Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Agilent	E7405A	US41160342
Attenuator	Pasternek	10dB	None

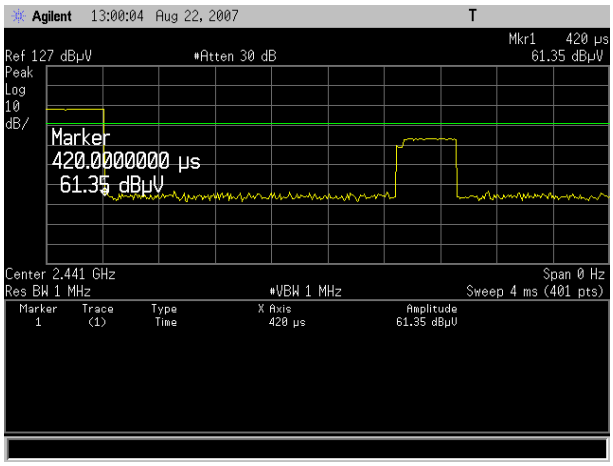
Table 15 Dwell Time Results

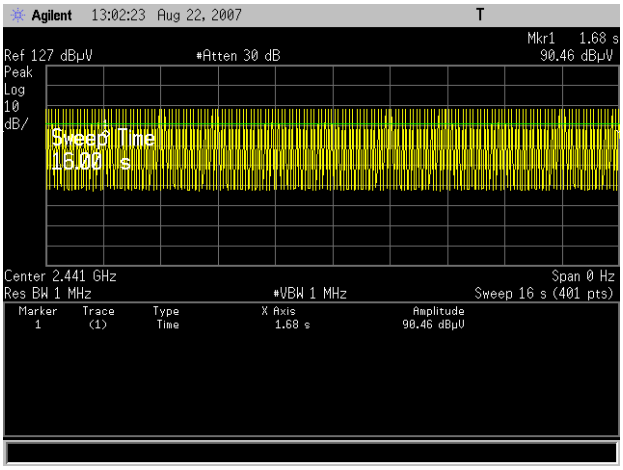
Mode	Number of Channels	Maximum Time Allowed	Measured Dwell Time	Duty Cycle Factor 20*log(t1/t2)
DH1	79	0.4 sec within 31.6sec	0.138 seconds	-41.5
DH3	79	0.4 sec within 31.6sec	0.273 seconds	-35.55
DH5	79	0.4 sec within 31.6sec	0.321 seconds	-30.69
Inquary	32	0.4 sec within 12.8sec	0.096 seconds	-37.6

Figure 9 Test Setup for Dwell Time

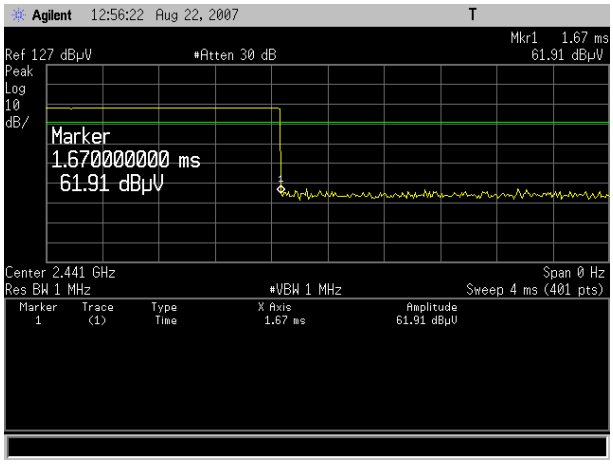
Figure 10 Dwell Time Graphs

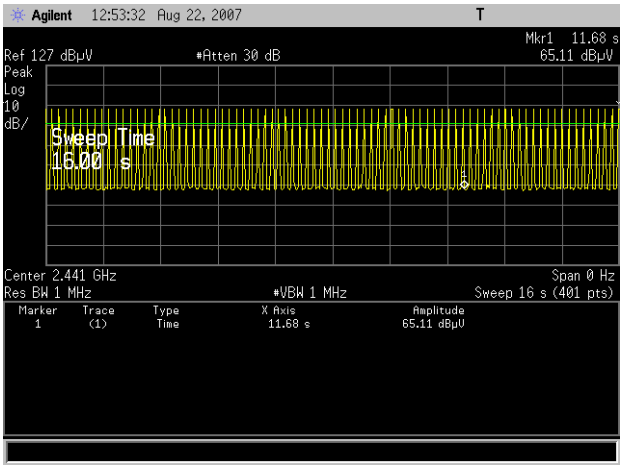
DH1



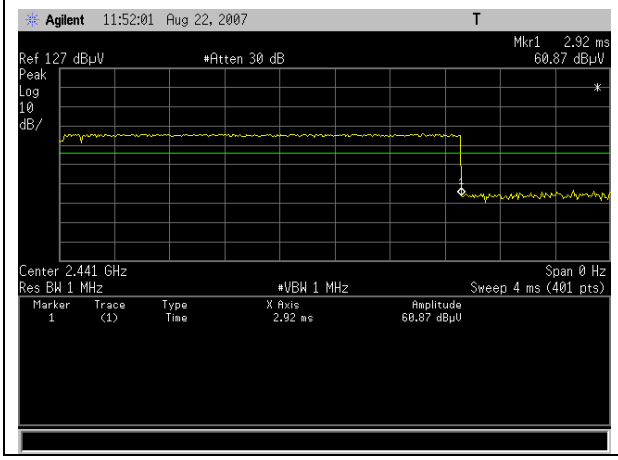


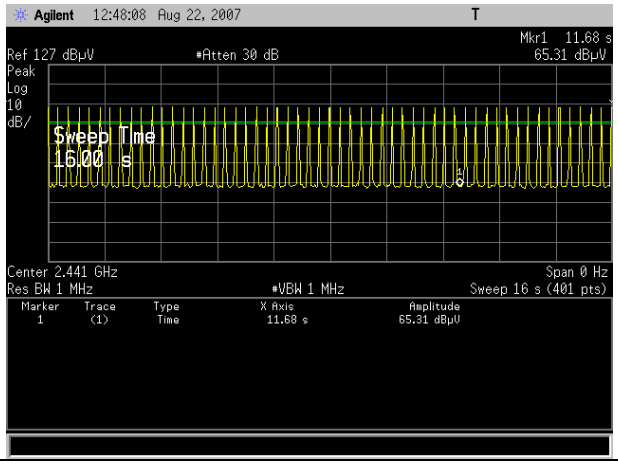
DH3



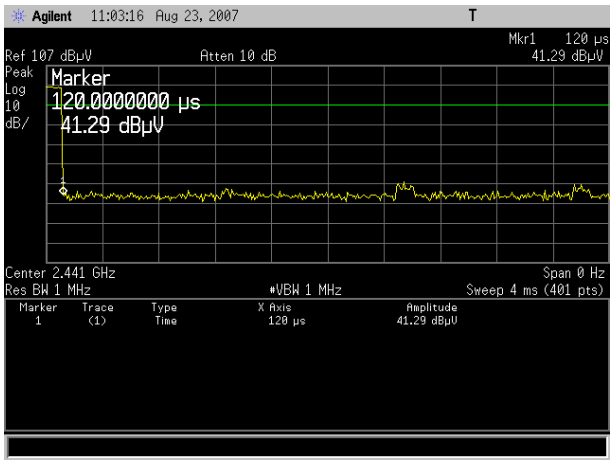


DH5

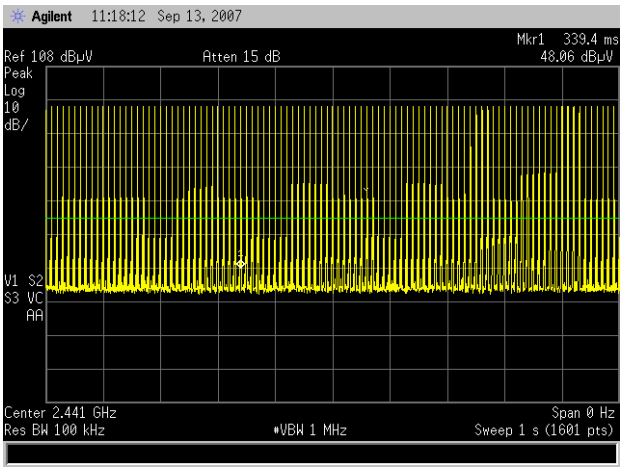




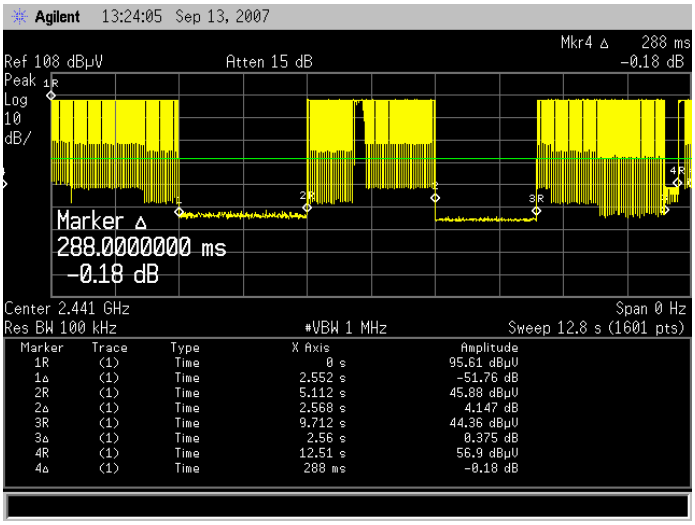
Inquiry



Individual Pulse Length



Number of individual pulses in 1 second



Pulse burst duration in 12.8 seconds

4.6 Test Conditions and Results – Maximum Peak Output Power

Test Description	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.

Basic Standard	47 CFR Part 15.247(b)(1) RSS-210, A8.4(2)	
	Frequency range	Measurement Point
Fully configured sample scanned over the following frequency range	2400MHz – 2483.5MHz	Antenna Conducted

Limits	
Frequency (MHz)	Limit mW
	Peak
2400 – 2483.5	125 (20.97dBm)
Supplementary information: None	

Table 16 Maximum Peak Output Power EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
2	2	1
Supplementary information: None		

Table 17 Maximum Peak Output Power Test Equipment

Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Agilent	E7405A	US41160342
Attenuator	Pasternek	10dB	None

Figure 11 Test setup for Maximum Peak Output Power

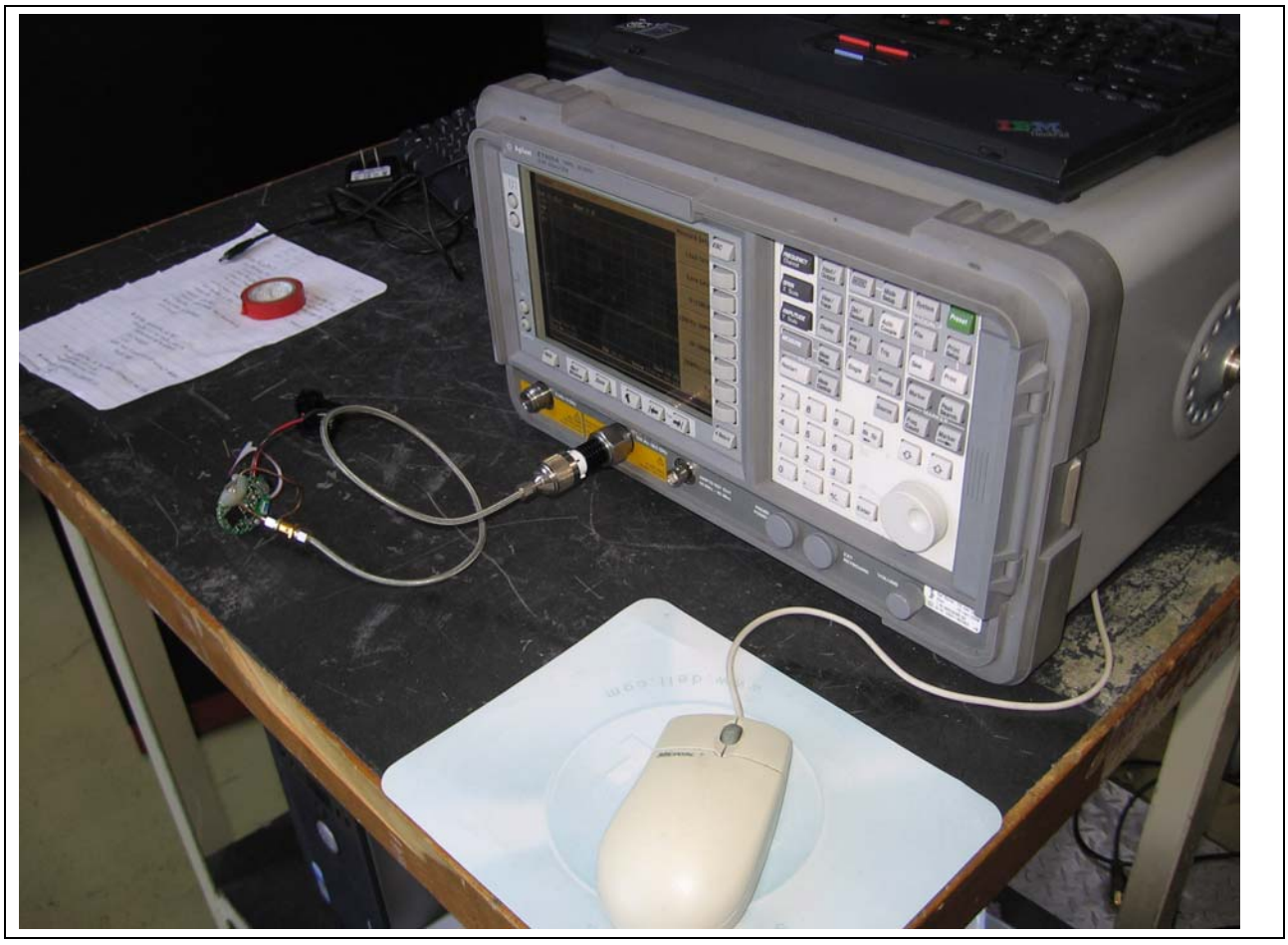


Figure 12 Maximum Peak Output Power Graph

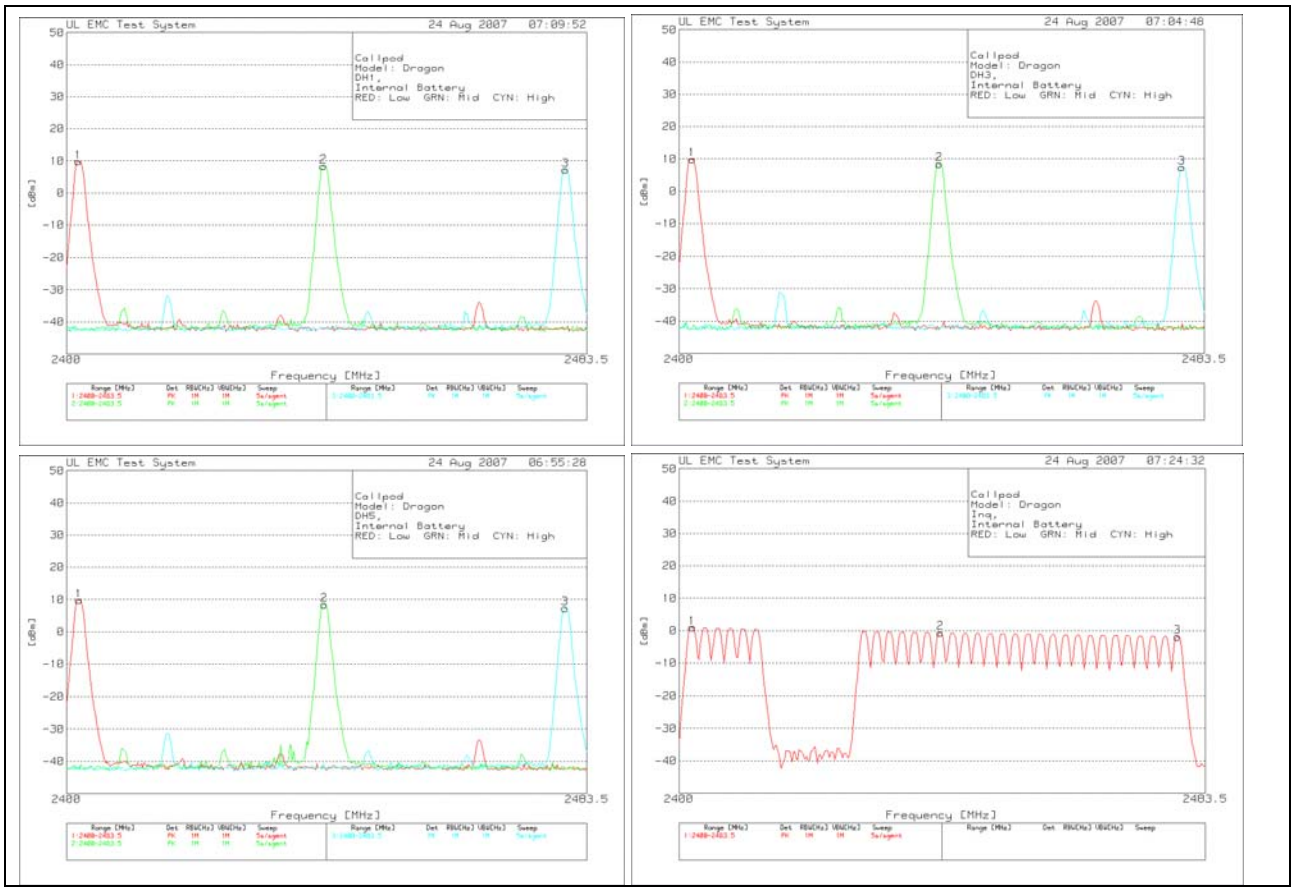


Table 18 Maximum Peak Output Power Emissions Data Points

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor (dBuV to dBm) [dB]	Level [dBm]
DH5						
1	2401.983	106.38	pk	10.4	-107	9.78
2	2441.019	105.02	pk	10.4	-107	8.42
3	2479.951	103.93	pk	10.4	-107	7.33
DH3						
1	2402.088	106.14	pk	10.4	-107	9.54
2	2441.019	105.02	pk	10.4	-107	8.42
3	2479.847	103.97	pk	10.4	-107	7.37
DH1						
1	2401.879	106.34	pk	10.4	-107	9.74
2	2440.915	104.94	pk	10.4	-107	8.34
3	2480.056	103.83	pk	10.4	-107	7.23
Inqury						
1	2402.088	97.56	pk	10.4	-107	.96
2	2441.124	95.91	pk	10.4	-107	-.69
3	2479.012	94.69	pk	10.4	-107	-1.91

4.7 Test [BD8]Conditions and Results – Band Edge Compliance

Test Description	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section15.205(c)).		
Basic Standard	47 CFR Part 15.247(d) RSS-210, A8.5		
	Frequency range	Measurement Point	
Fully configured sample scanned over the following frequency range	2.350GHz – 2.5335GHz	Antenna Conducted	
	2.3GHz – 2.5835GHz	3 meter measurement distance	
Limits			
Frequency (MHz)	Limits		
	Antenna Conducted - 20dB below the fundamental	Radiated – Peak 20dB below the fundamental and Average must meet the general limit in restricted bands.	
Below 2.4GHz and Above 2.4835GHz	Aprox. –10dBm (See Data Table Below)	54dBuV/m	
Supplementary information: Spurious limits are only applied against products of the transmitter. All other emissions must meet the general limits. Portable transmitters are to be checked in 3 orthogonal axis.			

Table 19 Band Edge Compliance EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
2	1, 2	1
Supplementary information: None		

Table 20 Band Edge Compliance Test Equipment

Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Rhode & Schwartz	FSEK	EMC4182
Antenna Array	UL	BOMS	EMC4276
Spectrum Analyzer	Agilent	E7405A	US41160342
Attenuator	Pasternek	10dB	None

Figure 13 Test setup for Band Edge Compliance - Conducted

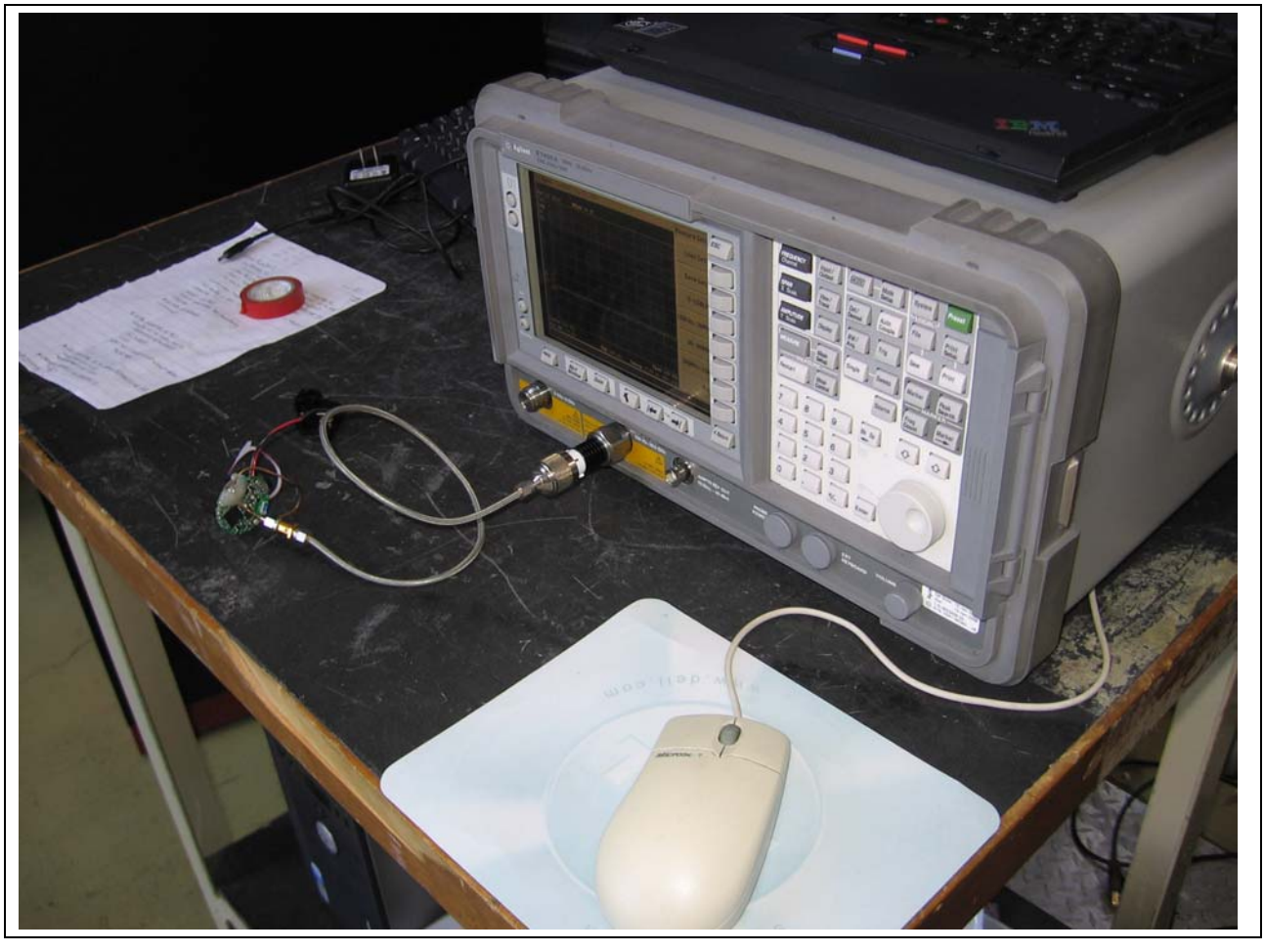


Figure 14 Test setup for Band Edge Compliance – Radiated

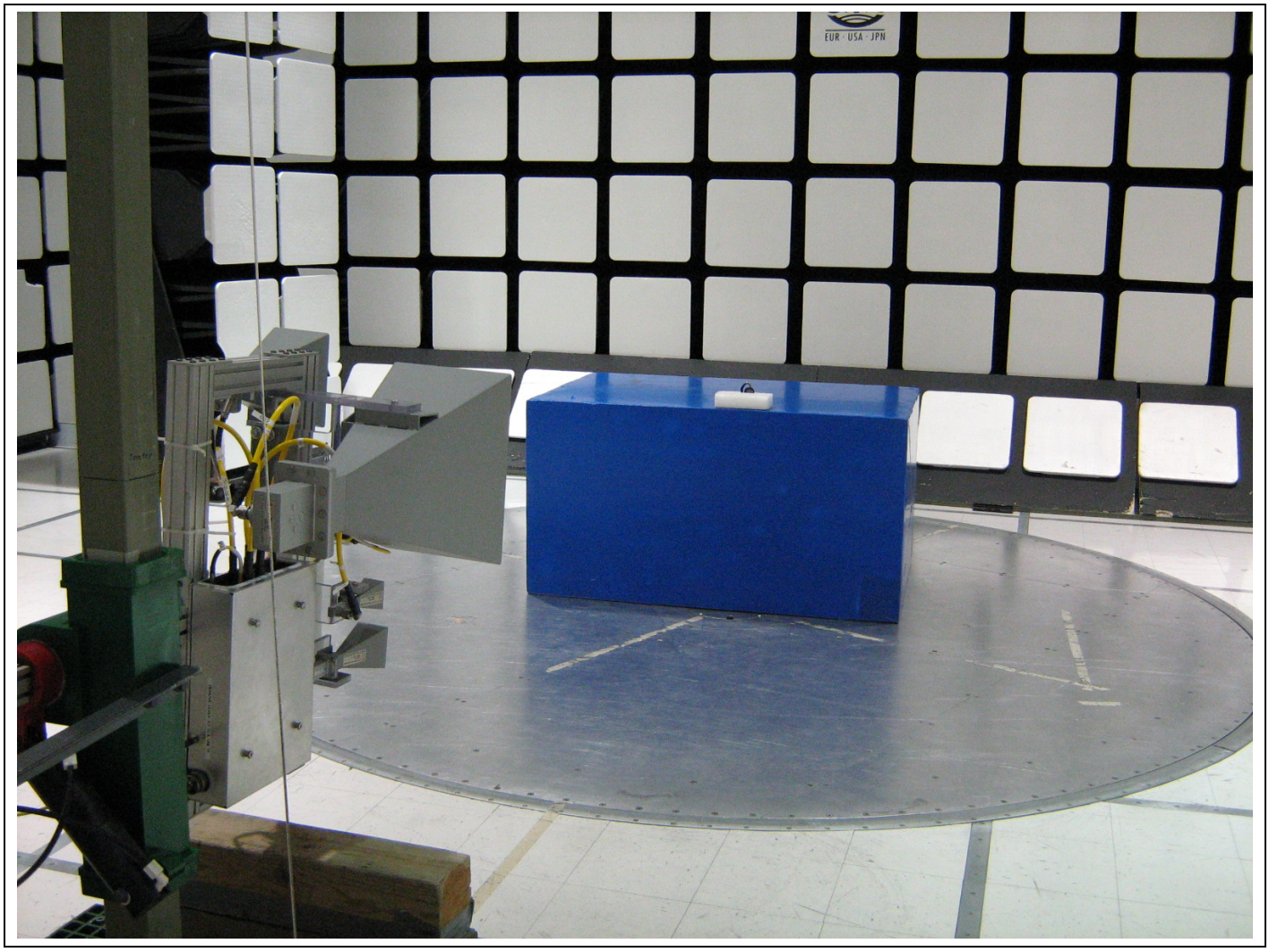


Figure 15 Conducted Band Edge Compliance Graph

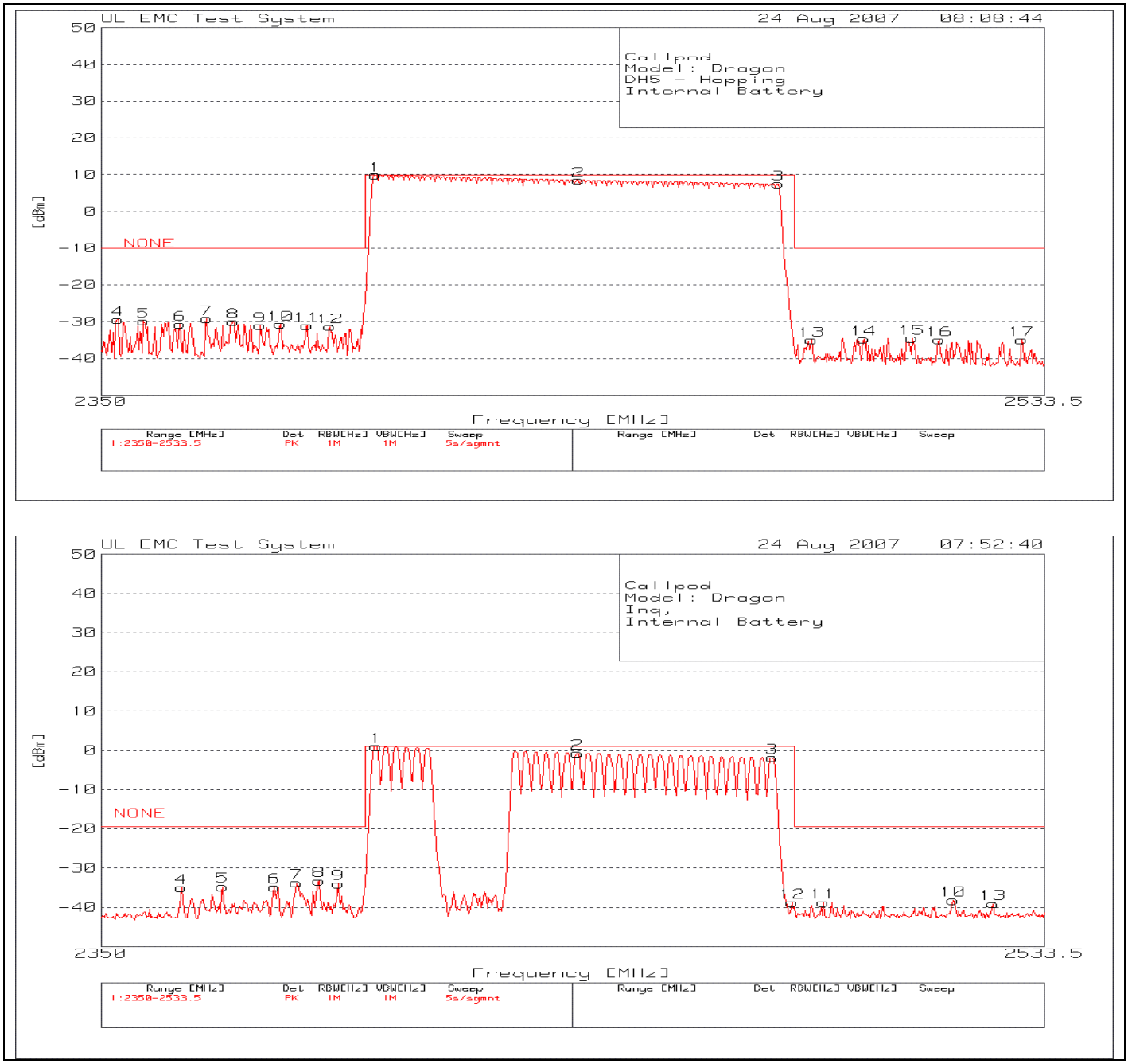


Table 21 Band Edge Compliance Data Points

Callpod
Model: Dragon
DH5 - Hopping
Internal Battery

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dBm]	Limit 1	Margin 1[dB]
1	2402.003	106.51	pk	10.4	-107	9.91	8.9	1.01
2	2441.177	105.05	pk	10.4	-107	8.45	9.9	-1.45
3	2480.351	104.1	pk	10.4	-107	7.5	9.9	-2.4
4	2353.207	67.27	pk	10.3	-107	-29.43	-10.1	-19.33
5	2358.018	66.86	pk	10.3	-107	-29.84	-10.1	-19.74
6	2364.891	66.02	pk	10.3	-107	-30.68	-10.1	-20.58
7	2369.931	67.5	pk	10.3	-107	-29.2	-10.1	-19.1
8	2374.971	66.71	pk	10.3	-107	-29.99	-10.1	-19.89
9	2380.011	65.54	pk	10.4	-107	-31.06	-10.1	-20.96
10	2383.905	65.91	pk	10.4	-107	-30.69	-10.1	-20.59
11	2388.945	65.51	pk	10.4	-107	-31.09	-10.1	-20.99
12	2393.298	65.23	pk	10.4	-107	-31.37	-10.1	-21.27
13	2486.995	61.59	pk	10.4	-107	-35.01	-10.1	-24.91
14	2497.304	61.9	pk	10.4	-107	-34.7	-10.1	-24.6
15	2506.926	62.06	pk	10.4	-107	-34.54	-10.1	-24.44
16	2512.424	61.68	pk	10.4	-107	-34.92	-10.1	-24.82
17	2528.918	61.68	pk	10.4	-107	-34.92	-10.1	-24.82

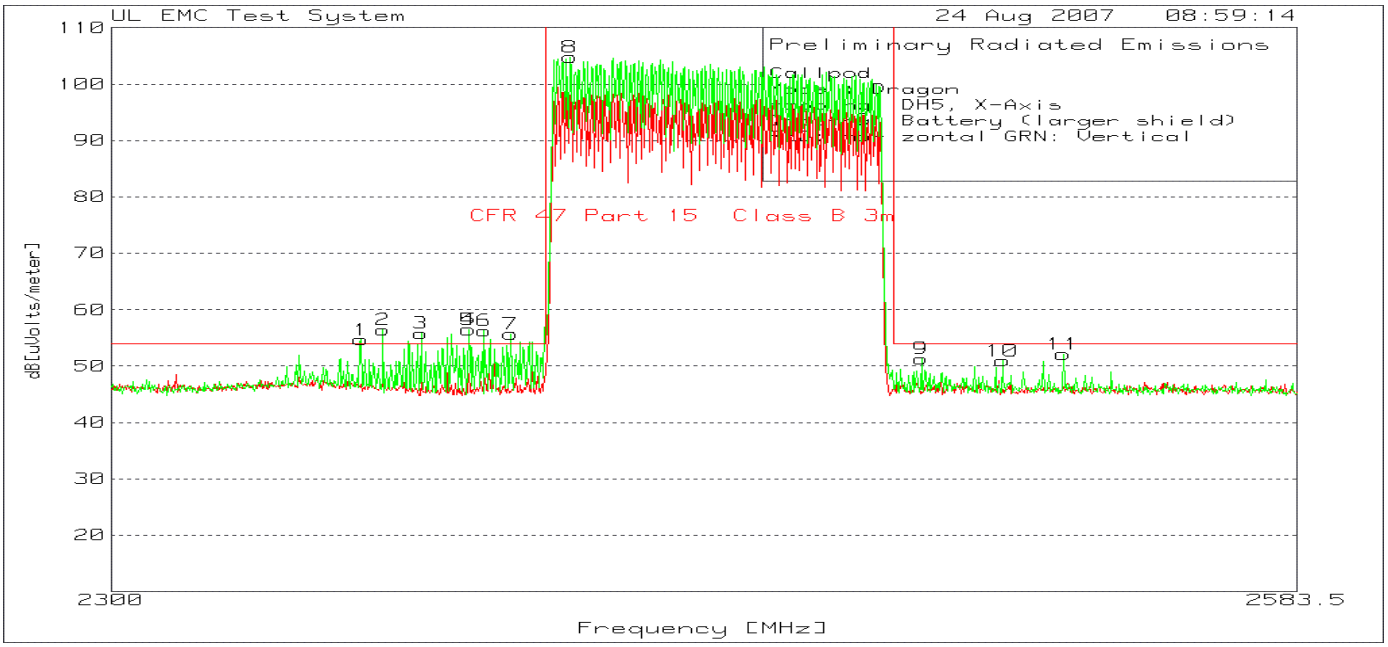
pk - Peak detector

Callpod
Model: Dragon
Inq,
Internal Battery

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dBm]	Limit 1	Margin 1[dB]
1	2402.118	97.56	pk	10.4	-107	.96	1	-.04
2	2440.948	95.86	pk	10.4	-107	-.74	1	-1.74
3	2479.206	94.74	pk	10.4	-107	-1.86	1	-2.86
4	2365.12	61.68	pk	10.3	-107	-35.02	-19.4	-15.62
5	2372.909	62	pk	10.3	-107	-34.7	-19.4	-15.3
6	2382.76	61.79	pk	10.4	-107	-34.81	-19.4	-15.41
7	2386.883	62.84	pk	10.4	-107	-33.76	-19.4	-14.36
8	2391.236	63.32	pk	10.4	-107	-33.28	-19.4	-13.88
9	2394.901	62.59	pk	10.4	-107	-34.01	-19.4	-14.61
10	2515.173	58.39	pk	10.4	-107	-38.21	-19.4	-18.81
11	2489.286	57.78	pk	10.4	-107	-38.82	-19.4	-19.42
12	2483.1	57.78	pk	10.4	-107	-38.82	1	-39.82
13	2523.191	57.52	pk	10.4	-107	-39.08	-19.4	-19.68

pk - Peak detector

Figure 16 Radiated Band Edge Compliance Graph



Band Edge Data Prescan

Band Edge Data with reduced VBW (1kHz) to simulate average measurement

Table 22 Radiated Band Edge Compliance Data Points

Callpod
Model: Dragon
Hopping, DH5, X-Axis
Internal Battery (larger shield)
RED: Horizontal GRN: Vertical

Peak **Pre-scan** data points

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/ meter]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
1	2357.041	28.54	pk	4.32	21.8	54.66	54	.66	100	Vert
2	2362.149	30.47	pk	4.17	21.8	56.44	54	2.44	100	Vert
3	2370.946	30.13	pk	3.85	21.8	55.78	54	1.78	100	Vert
4	2382.014	30.92	pk	3.76	21.8	56.48	54	2.48	100	Vert
5	2382.014	30.92	pk	3.76	21.8	56.48	54	2.48	100	Vert
6	2385.703	30.61	pk	3.85	21.8	56.26	54	2.26	100	Vert
7	2391.946	29.8	pk	4.08	21.8	55.68	54	1.68	100	Vert
8	2405.851	78.54	pk	4.44	21.8	104.78	999	-894.22	100	Vert
9	2490.135	25.11	pk	4.07	22.1	51.28	54	-2.72	149	Vert
10	2510	24.93	pk	3.9	22.1	50.93	54	-3.07	100	Vert
11	2525.041	25.98	pk	3.92	22.2	52.1	54	-1.9	100	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector

CallPod
Model: Dragon
VBW=1kHz
Bandedge Hopping DH5
RED: Horizontal GRN: Vert

Pre-scan data with 1kHz VBW to simulate average measurement – **data shows compliance at the bandedge**.

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/ meter]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
1	2386.774	18.44	pk	3.89	21.8	44.13	54	-9.87	100	Vert
2	2400.38	24.99	pk	4.26	21.8	51.05	999	-947.95	150	Vert
3	2403.689	73.13	pk	4.36	21.8	99.29	999	-899.71	100	Vert
4	2480.546	58.3	pk	4.09	22	84.39	999	-914.61	100	Vert
5	2490.107	16.11	pk	4.07	22.1	42.28	54	-11.72	100	Vert
6	2495.256	18.31	pk	4	22.1	44.41	54	-9.59	150	Vert
7	2507.023	18.13	pk	3.91	22.1	44.14	54	-9.86	100	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
av - Average detector

4.8 Test Conditions and Results – SPURIOUS EMISSIONS

Test Description	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section15.205(c)).

Basic Standard	47 CFR Part 15.247(d) RSS-210, A8.5 RSS-Gen 7.2.1 and 7.2.3	
	Frequency range	Measurement Point
Fully configured sample scanned over the following frequency range	30MHz – 1GHz	(10 meter measurement distance)
Fully configured sample scanned over the following frequency range	1GHz – 25GHz	(3 meter measurement distance)

Limits

Frequency (MHz)	Limit (dBµV/m)		
	Quasi-Peak	Average	
	General Emissions	Fundamental	Spurious
30 – 88	40	-	-
88 – 216	43.5	-	-
216-960	46	-	
1,000-25,000	-	-	54

Supplementary information: Spurious limits are only applied against products of the transmitter. All other emissions must meet the general limits. Portable transmitters are to be checked in 3 orthogonal axis.

Table 23 SPURIOUS EMISSIONS EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
2	1	1
Supplementary information: None		

Table 24 SPURIOUS EMISSIONS Test Equipment

Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Rhode & Schwartz	FSEK	EMC4182
Antenna Array	UL	BOMS	EMC4276
Spectrum Analyzer	Agilent	E7405A	US41160342
Attenuator	Pasternek	10dB	None

Figure 17 Test setup for SPURIOUS EMISSIONS

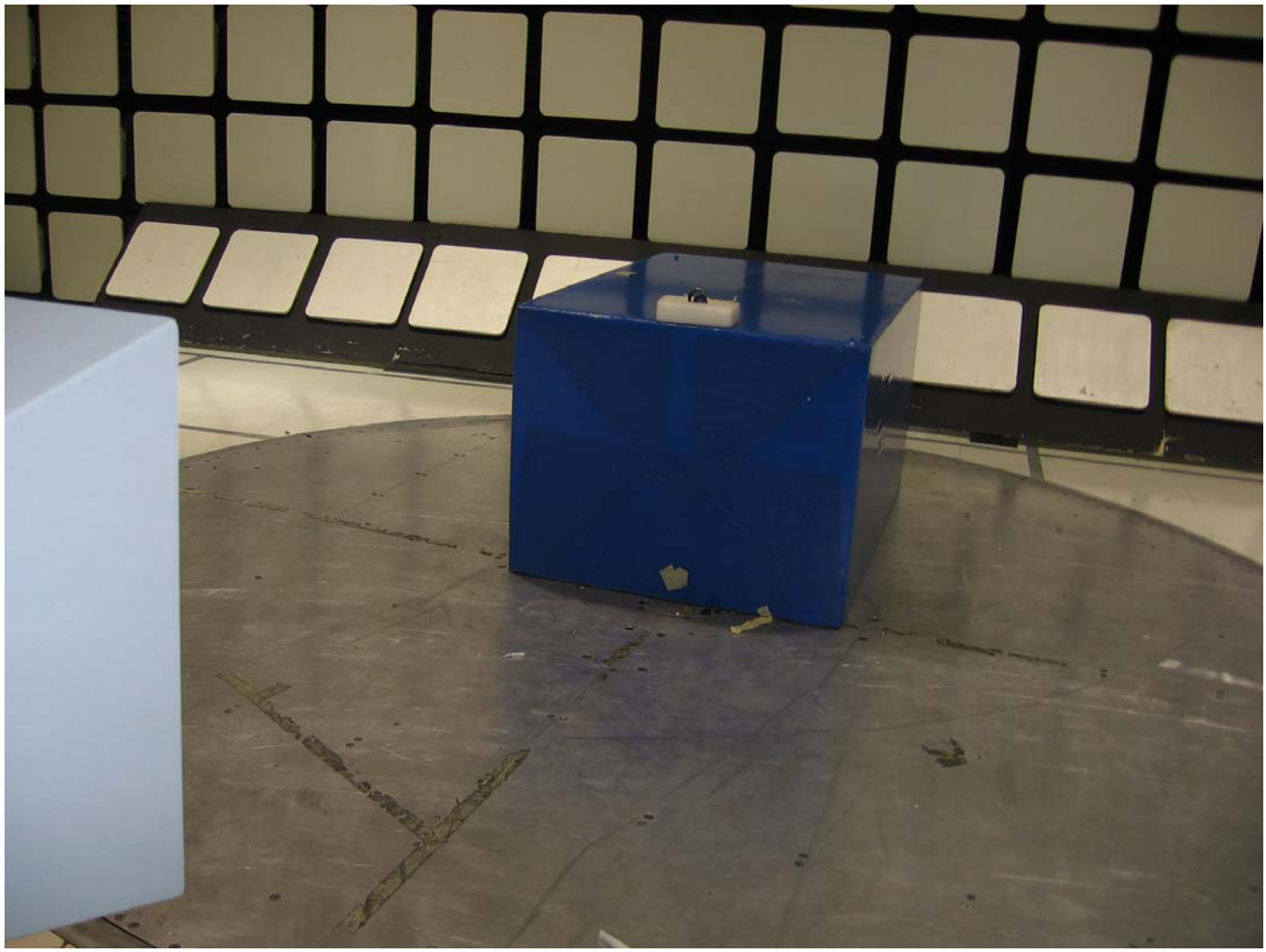
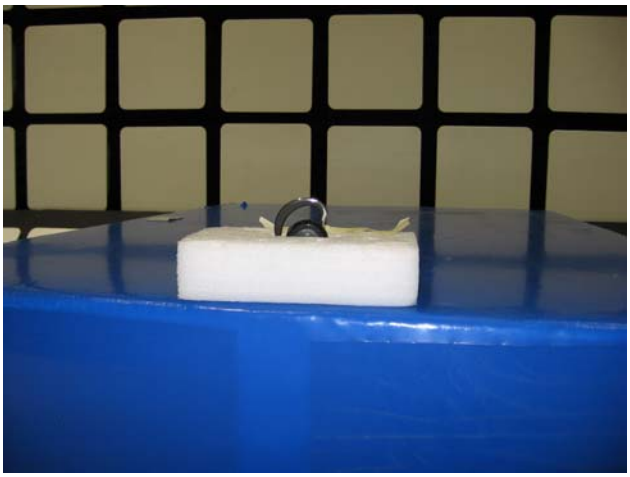
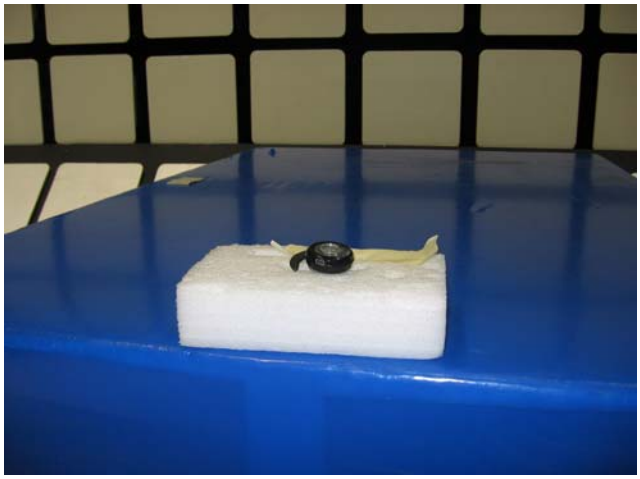


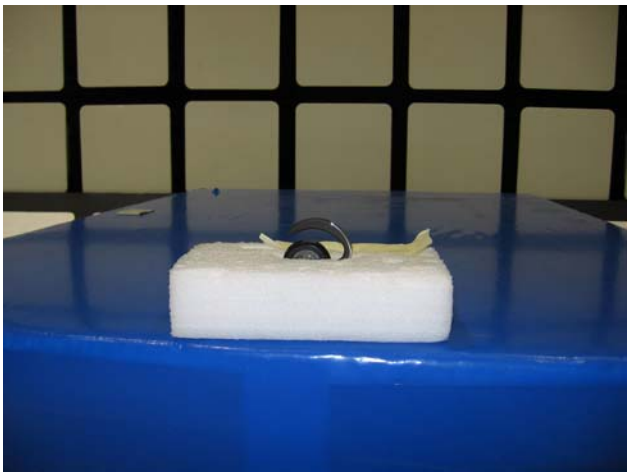
Figure 18 Test setup for SPURIOUS EMISSIONS – Axis Close-up



X-Axis

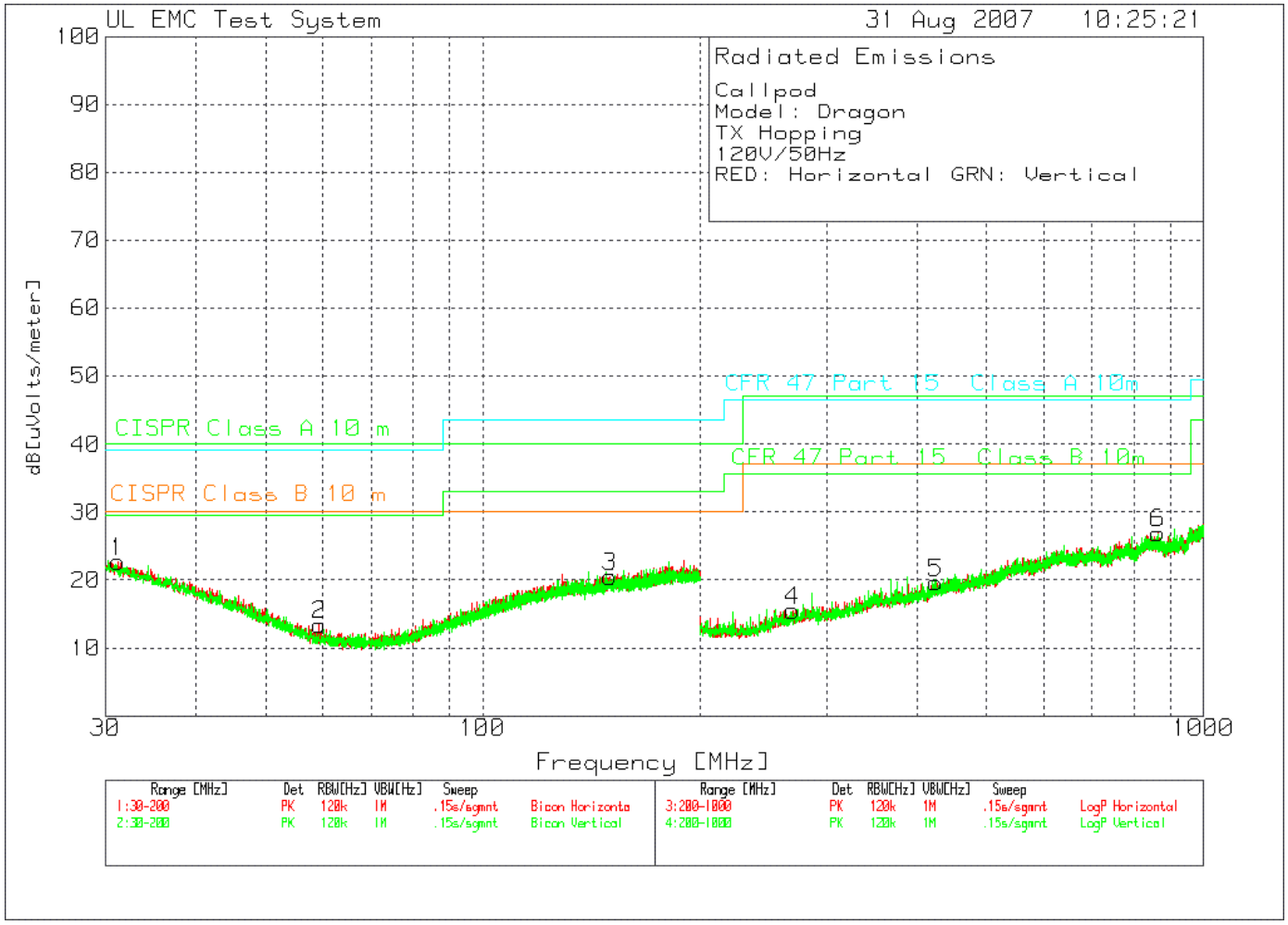


Y-Axis



Z-Axis

Figure 19 SPURIOUS Emissions Graph



No Emissions detected from the EUT

Figure 20 SPURIOUS Emissions Graph – Radiated High Channel

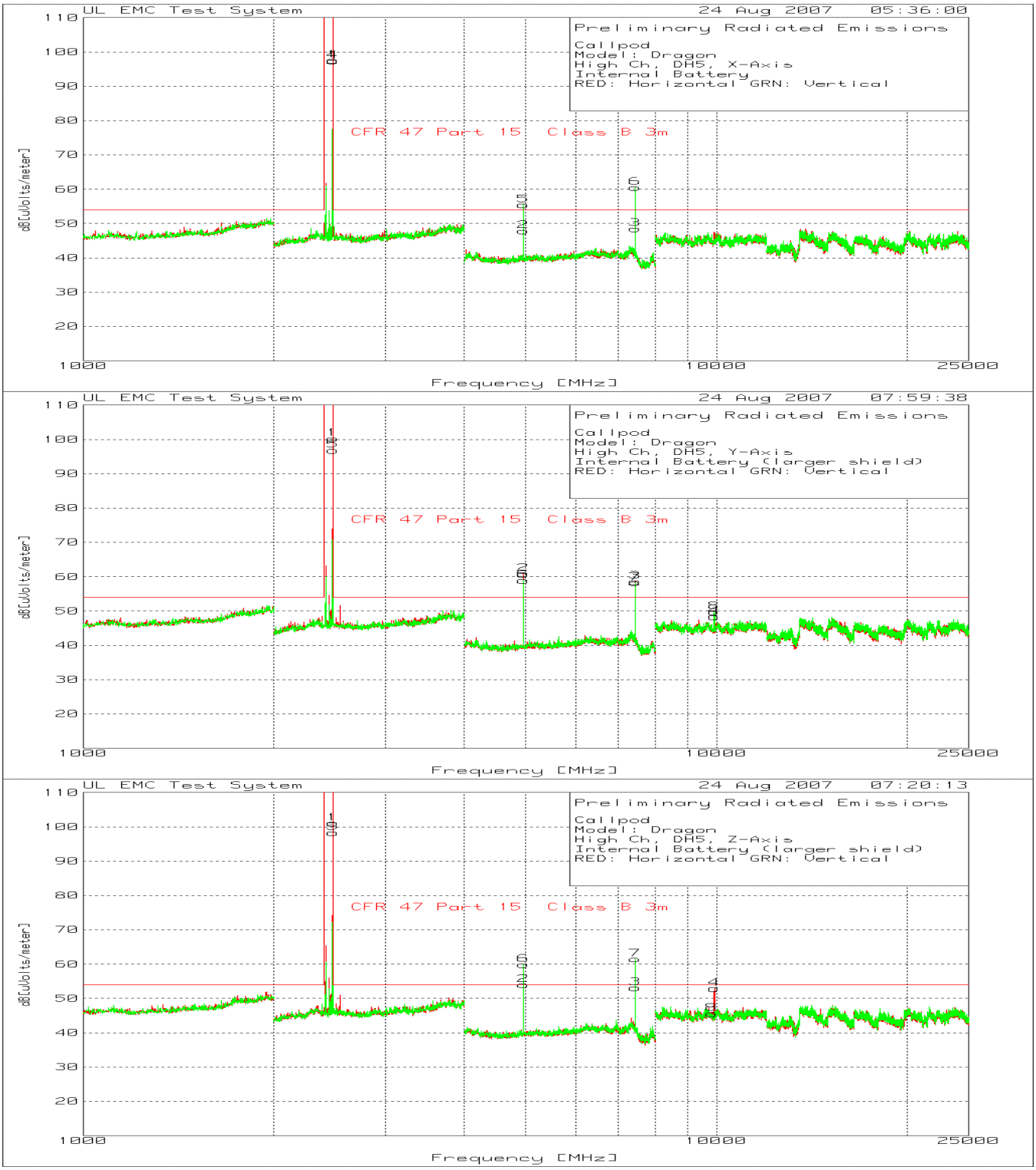


Table 25 SPURIOUS EMISSIONS Preliminary Scan Peak Data Points – Radiated High Channel

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
High Channel, X-Axis										
1	2480.48	71.52	pk	4.1	22	97.62	999	-901.38	100	Horz
2	4960.64	71.35	pk	-51.3	27.8	47.85	54	-6.15	100	Horz
3	7439.626	65.19	pk	-47.31	30.6	48.48	54	-5.52	100	Horz
4	2480.48	71.28	pk	4.1	22	97.38	999	-901.62	150	Vert
5	4960.64	78.95	pk	-51.3	27.8	55.45	54	1.45	100	Vert
6	7442.295	77.27	pk	-47.28	30.5	60.49	54	6.49	100	Vert
High Channel, Y-Axis										
1	2480.48	74.14	pk	4.1	22	100.24	999	-898.76	100	Horz
2	4957.972	84.37	pk	-51.27	27.8	60.9	54	6.9	100	Horz
3	7439.626	75.31	pk	-47.31	30.6	58.6	54	4.6	100	Horz
4	9921.281	62.56	pk	-50.58	36.4	48.38	54	-5.62	150	Horz
5	2480.48	70.73	pk	4.1	22	96.83	999	-902.17	150	Vert
6	4960.64	82.39	pk	-51.3	27.8	58.89	54	4.89	150	Vert
7	7439.626	74.92	pk	-47.31	30.6	58.21	54	4.21	150	Vert
8	9918.612	64.03	pk	-50.66	36.4	49.77	54	-4.23	150	Vert
High Channel, Z-Axis										
1	2480.48	74.95	pk	4.1	22	101.05	999	-897.95	100	Horz
2	4957.972	77.49	pk	-51.27	27.8	54.02	54	.02	100	Horz
3	7442.295	69.88	pk	-47.28	30.5	53.1	54	-.9	100	Horz
4	9921.281	67.06	pk	-50.58	36.4	52.88	54	-1.12	150	Horz
5	2480.48	72.2	pk	4.1	22	98.3	999	-900.7	150	Vert
6	4960.64	83.38	pk	-51.3	27.8	59.88	54	5.88	100	Vert
7	7439.626	78.2	pk	-47.31	30.6	61.49	54	7.49	100	Vert
8	9833.222	59.94	pk	-50.76	36.4	45.58	54	-8.42	150	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m
pk - Peak detector

Figure 21 SPURIOUS Emissions Graph – Radiated Middle Channel

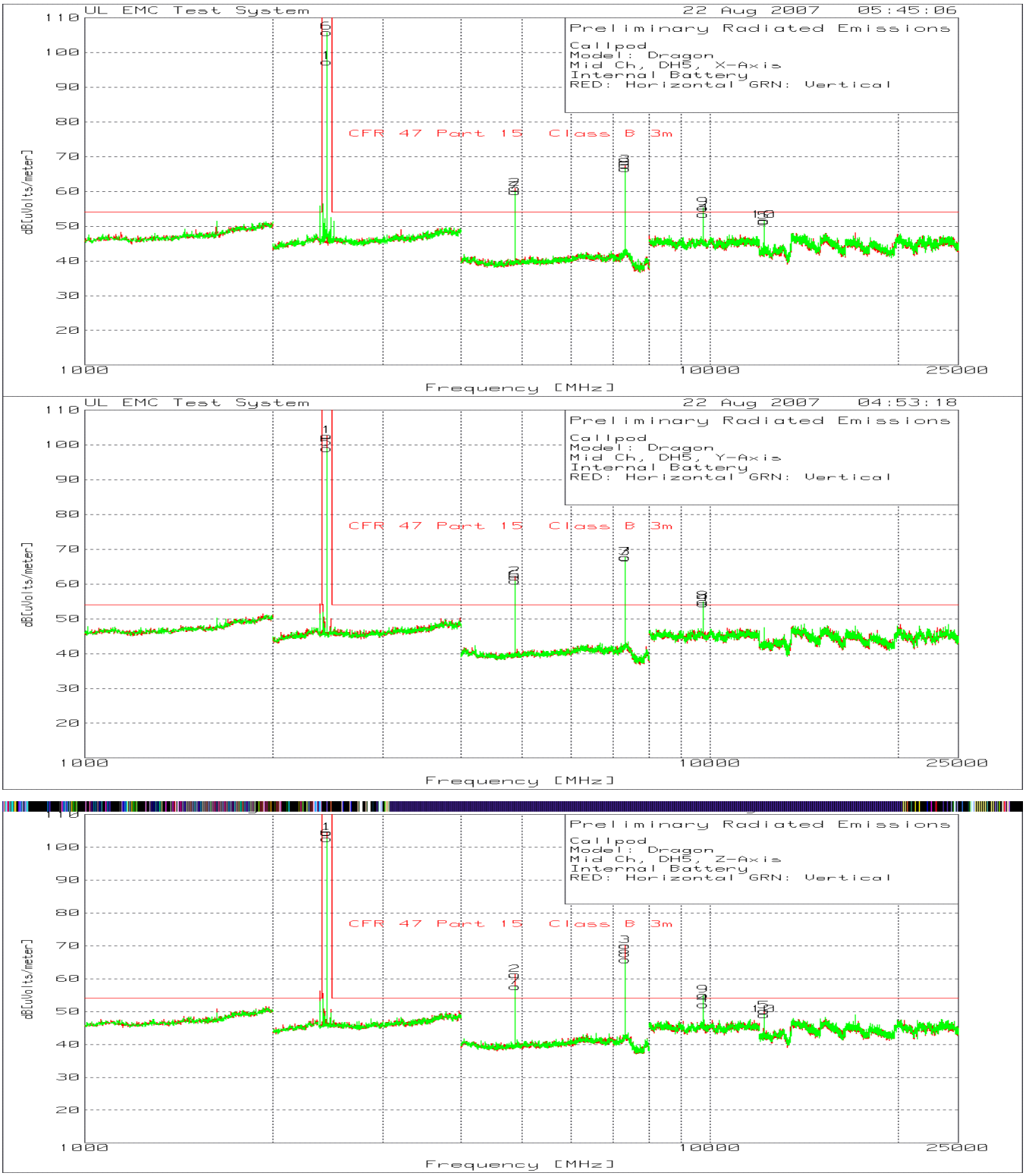


Table 26 SPURIOUS EMISSIONS Preliminary Scan Peak Data Points – Radiated Middle Channel

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/ meter]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
Middle Channel, X-Axis										
1	2440.44	71.57	pk	3.85	21.9	97.32	999	-901.68	100	Horz
2	4880.587	84.31	pk	-51.13	27.7	60.88	54	6.88	100	Horz
3	7324.883	83.34	pk	-46.39	30.6	67.55	54	13.55	100	Horz
4	9763.843	67.38	pk	-50.39	36.4	53.39	54	-.61	100	Horz
5	12204.102	57.92	pk	-45.99	39.4	51.33	54	-2.67	100	Horz
6	2440.44	80.08	pk	3.85	21.9	105.83	999	-893.17	100	Vert
7	4880.587	83.38	pk	-51.13	27.7	59.95	54	5.95	150	Vert
8	7324.883	82.38	pk	-46.39	30.6	66.59	54	12.59	100	Vert
9	9763.843	69.28	pk	-50.39	36.4	55.29	54	1.29	100	Vert
10	12204.102	58.15	pk	-45.99	39.4	51.56	54	-2.44	150	Vert
Middle Channel, Y-Axis										
1	2440.44	76.8	pk	3.85	21.9	102.55	999	-896.45	100	Horz
2	4880.587	85.47	pk	-51.13	27.7	62.04	54	8.04	100	Horz
3	7324.883	83.38	pk	-46.39	30.6	67.59	54	13.59	100	Horz
4	9763.843	68.34	pk	-50.39	36.4	54.35	54	.35	150	Horz
5	2440.44	73.22	pk	3.85	21.9	98.97	999	-900.03	150	Vert
6	4880.587	84.33	pk	-51.13	27.7	60.9	54	6.9	150	Vert
7	7324.883	83.47	pk	-46.39	30.6	67.68	54	13.68	100	Vert
8	9763.843	68.99	pk	-50.39	36.4	55	54	1	150	Vert
Middle Channel, Z-Axis										
1	2440.44	78.73	pk	3.85	21.9	104.48	999	-894.52	100	Horz
2	4883.256	84.66	pk	-51.1	27.7	61.26	54	7.26	100	Horz
3	7324.883	85.85	pk	-46.39	30.6	70.06	54	16.06	100	Horz
4	9763.843	66.13	pk	-50.39	36.4	52.14	54	-1.86	150	Horz
5	12204.102	56.83	pk	-45.99	39.4	50.24	54	-3.76	100	Horz
6	2440.44	76.84	pk	3.85	21.9	102.59	999	-896.41	100	Vert
7	4880.587	80.98	pk	-51.13	27.7	57.55	54	3.55	150	Vert
8	7324.883	81.58	pk	-46.39	30.6	65.79	54	11.79	100	Vert
9	9763.843	69.01	pk	-50.39	36.4	55.02	54	1.02	150	Vert
10	12204.102	55.61	pk	-45.99	39.4	49.02	54	-4.98	100	Vert

Figure 22 SPURIOUS Emissions Graph – Radiated Low Channel

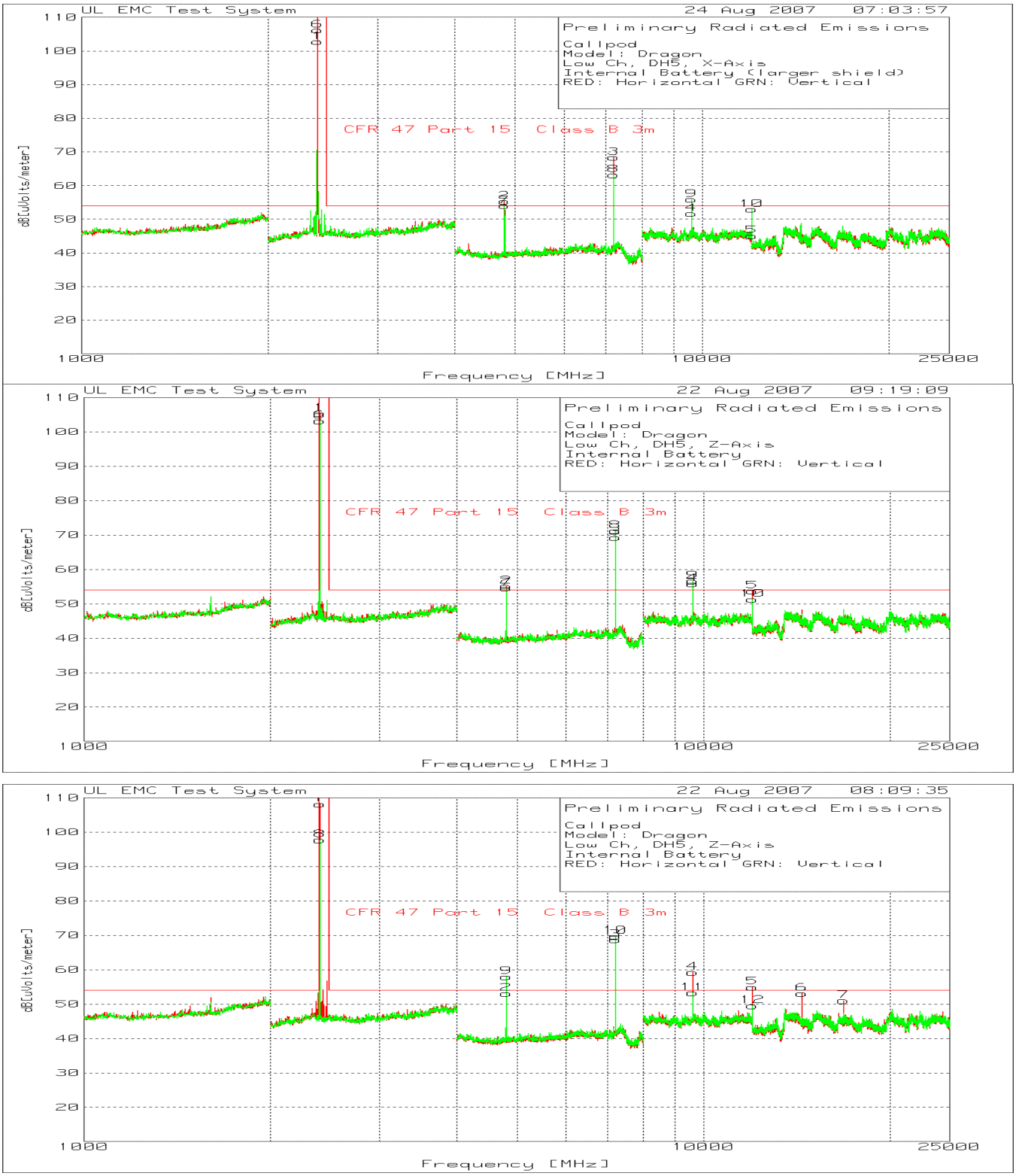


Table 27 SPURIOUS EMISSIONS Preliminary Scan Peak Data Points – Radiated Low Channel

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/ meter]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
Low Channel, X-Axis										
1	2402.402	76.67	pk	4.32	21.8	102.79	999	-896.21	100	Horz
2	4803.202	79.05	pk	-51.43	27.7	55.32	54	1.32	100	Horz
3	7207.472	85.49	pk	-46.92	29.8	68.37	54	14.37	100	Horz
4	9606.404	65.55	pk	-50.27	36.4	51.68	54	-2.32	100	Horz
5	12009.005	51.2	pk	-45.56	39.4	45.04	54	-8.96	100	Horz
6	2402.402	80.1	pk	4.32	21.8	106.22	999	-892.78	100	Vert
7	4803.202	77.73	pk	-51.43	27.7	54	54	0	100	Vert
8	7207.472	80.31	pk	-46.92	29.8	63.19	54	9.19	100	Vert
9	9609.073	69.73	pk	-50.26	36.4	55.87	54	1.87	100	Vert
10	12009.005	59.1	pk	-45.56	39.4	52.94	54	-1.06	150	Vert
Low Channel, Y-Axis										
1	2402.402	79.35	pk	4.32	21.8	105.47	999	-893.53	100	Horz
2	4803.202	78.91	pk	-51.43	27.7	55.18	54	1.18	100	Horz
3	7207.472	86.46	pk	-46.92	29.8	69.34	54	15.34	100	Horz
4	9609.073	69.72	pk	-50.26	36.4	55.86	54	1.86	150	Horz
5	12009.005	59.85	pk	-45.56	39.4	53.69	54	-.31	100	Horz
6	2402.402	77.1	pk	4.32	21.8	103.22	999	-895.78	150	Vert
7	4803.202	78.3	pk	-51.43	27.7	54.57	54	.57	150	Vert
8	7207.472	88.39	pk	-46.92	29.8	71.27	54	17.27	100	Vert
9	9609.073	70.5	pk	-50.26	36.4	56.64	54	2.64	150	Vert
10	12009.005	57.44	pk	-45.56	39.4	51.28	54	-2.72	100	Vert
Low Channel, Z-Axis										
1	2402.402	82.01	pk	4.32	21.8	108.13	999	-890.87	100	Horz
2	4803.202	76.85	pk	-51.43	27.7	53.12	54	-.88	100	Horz
3	7207.472	85.83	pk	-46.92	29.8	68.71	54	14.71	100	Horz
4	9609.073	73.1	pk	-50.26	36.4	59.24	54	5.24	150	Horz
5	12009.005	61.11	pk	-45.56	39.4	54.95	54	.95	100	Horz
6	14413.207	51.73	pk	-38.4	39.8	53.13	54	-.87	100	Horz
7	16814.407	50.03	pk	-39.1	40.1	51.03	54	-2.97	100	Horz
8	2402.402	71.67	pk	4.32	21.8	97.79	999	-901.21	100	Vert
9	4803.202	81.71	pk	-51.43	27.7	57.98	54	3.98	150	Vert
10	7207.472	86.83	pk	-46.92	29.8	69.71	54	15.71	100	Vert
11	9609.073	67.15	pk	-50.26	36.4	53.29	54	-.71	150	Vert
12	12009.005	55.72	pk	-45.56	39.4	49.56	54	-4.44	100	Vert

Table 28 SPURIOUS EMISSIONS Final Maximized Worst Case – Radiated

All emissions from the above table were analyzed and the worst case Azimuth/Channel combinations were measured. In addition, only harmonics in restricted bands and in close proximity to the limit were maximized and measured.

Test Frequency [MHz]	Meter Reading [dBuV]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit 1	Duty Cycle Correction	Margin 1 [dB]	Azimuth	Height [cm]	Polarity	Axis
Low Channel												
4804.1733	75.83	pk	-51.4	27.7	52.13	74	0	-21.87	6	110	H	X
4804.0591	71.84	av	-51.41	27.7	48.13	54	-30.69	-36.56	6	110	H	X
4803.9629	76.54	pk	-51.41	27.7	52.83	74	0	-21.17	341	169	V	Z
4804.0711	72.87	av	-51.41	27.7	49.16	54	-30.69	-35.53	341	169	V	Z
7206.2605	79	pk	-46.92	29.7	61.78	74	0	-12.22	87	102	H	Y
7206.0381	75.67	av	-46.92	29.7	58.45	54	-30.69	-26.24	87	102	H	Y
7206.7054	82.29	pk	-46.92	29.8	65.17	74	0	-8.83	339	114	V	Y
7206.0621	79.04	av	-46.92	29.7	61.82	54	-30.69	-22.87	339	114	V	Y
Middle Channel												
4882.4379	84.81	pk	-51.1	27.7	61.41	74	0	-12.59	280	116	H	Y
4882.0651	81.48	av	-51.11	27.7	58.07	54	-30.69	-26.62	280	116	H	Y
4881.6142	83.05	pk	-51.12	27.7	59.63	74	0	-14.37	0	130	V	Y
4882.0471	79.6	av	-51.11	27.7	56.19	54	-30.69	-28.5	0	130	V	Y
7322.4669	83.74	pk	-46.4	30.6	67.94	74	0	-6.06	67	100	H	Z
7323.0561	79.42	av	-46.4	30.6	63.62	54	-30.69	-21.07	67	100	H	Z
7322.5691	85.91	pk	-46.4	30.6	70.11	74	0	-3.89	340	113	V	Y
7323.0681	81.56	av	-46.4	30.6	65.76	54	-30.69	-18.93	340	113	V	Y
High Channel												
4960.017	83.8	pk	-51.3	27.8	60.3	74	0	-13.7	319	100	H	Y
4960.0711	80.77	av	-51.3	27.8	57.27	54	-30.69	-27.42	319	100	H	Y
4960.2515	82.47	pk	-51.3	27.8	58.97	74	0	-15.03	46	125	V	Y
4960.0591	79.37	av	-51.3	27.8	55.87	54	-30.69	-28.82	46	125	V	Y
7439.493	77.55	pk	-47.32	30.6	60.83	74	0	-13.17	118	101	H	Y
7440.0641	73.72	av	-47.3	30.6	57.02	54	-30.69	-27.67	118	101	H	Y
7439.6643	80.32	pk	-47.31	30.6	63.61	74	0	-10.39	37	100	V	Z
7440.0551	76.68	av	-47.3	30.6	59.98	54	-30.69	-24.71	37	100	V	Z

Figure 23 SPURIOUS Emissions Graph – Conducted

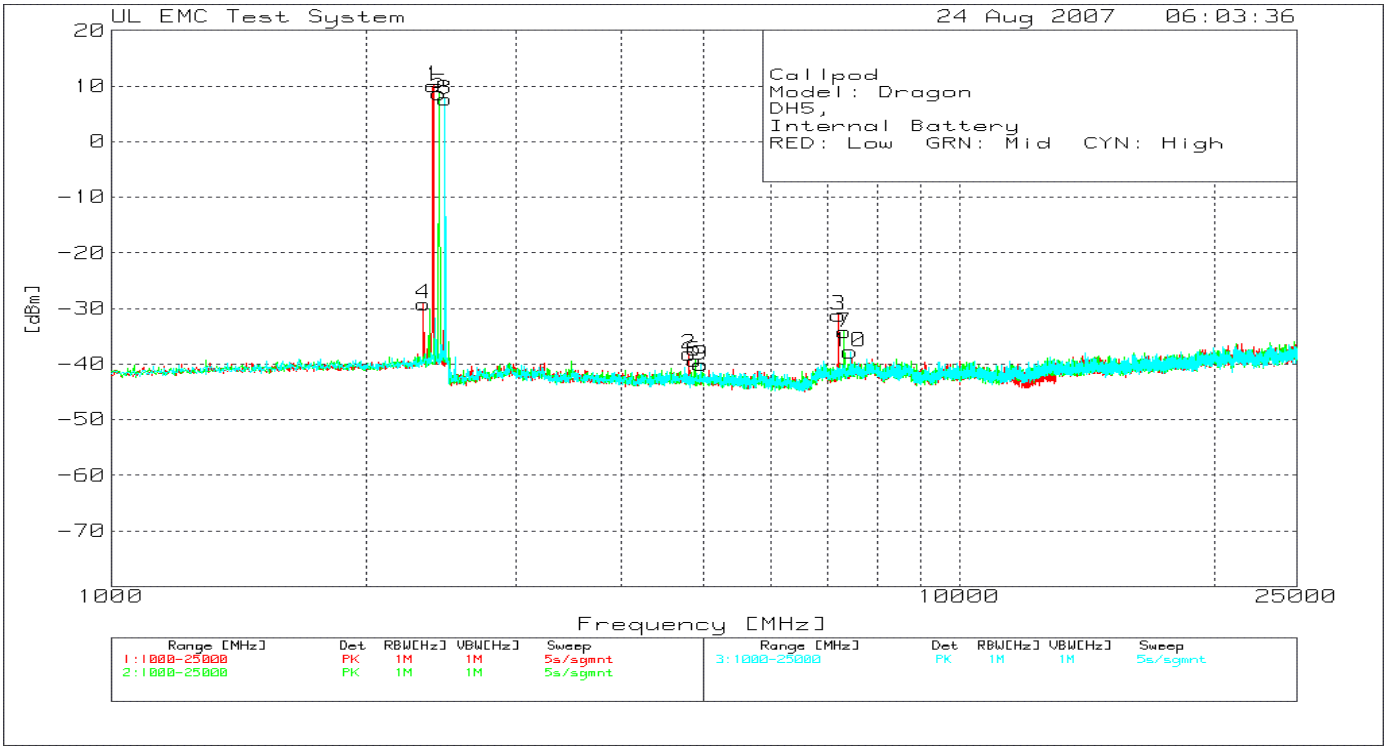


Table 29 SPURIOUS EMISSIONS Data Points – Conducted

Callpod
Model: Dragon
DH5,
Internal Battery
RED: Low GRN: Mid CYN: High

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dBm]
1	2399.221	106.7	pk	10.4	-107	10.1
2	4804.832	57.82	pk	11	-107	-38.18
3	7206.703	64.56	pk	11.2	-107	-31.24
4	2335.62	67.54	pk	10.3	-107	-29.16
5	2436.633	105.25	pk	10.4	-107	8.65
6	4879.657	56.64	pk	11	-107	-39.36
7	7322.681	61.58	pk	11.2	-107	-34.22
8	2477.786	104.24	pk	10.4	-107	7.64
9	4958.223	55.87	pk	11	-107	-40.13
10	7438.659	57.89	pk	11.3	-107	-37.81

All Harmonics are attenuated more then 20dB below the limit.

pk - Peak detector

4.9 Test Conditions and Results – Radiated Emissions - Digital

Test Description	Measurements were made in a 10-meter semi-anechoic chamber that complies to CISPR 16/ANSI C63.4. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 10-meter below 1GHz and 3 meters above 1GHz. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in both horizontal and vertical polarities. Final measurements (quasi-peak or average as noted) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4-meters. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.

Basic Standard	47 CFR Part 15.209 RSS-Gen 7.2.1 and 7.2.3	
	Frequency range	Measurement Point
Fully configured sample scanned over the following frequency range	30MHz – 1GHz	(10 meter measurement distance)
Fully configured sample scanned over the following frequency range	1GHz – 25GHz	(3 meter measurement distance)

Limits

Frequency (MHz)	Limit (dBµV/m)		
	Quasi-Peak	Average	
	General Emissions	Fundamental	Spurious
30 – 88	40	-	-
88 – 216	43.5	-	-
216-960	46	-	
1,000-25,000	-	-	54

Supplementary information: None

Table 30 SPURIOUS EMISSIONS EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1, 2

Supplementary information: None

Table 31 SPURIOUS EMISSIONS Test Equipment

Description	Manufacturer	Model	Identifier
Spectrum Analyzer	HP	8566B	EMC4085
Quasi-Peak Detector	HP	85650A	EMC4016
Bicon Antenna	Electro-Metrics	EM6912A	EMC4070
Log-P Antenna	Chase	UPA6109	EMC4258
Spectrum Analyzer	Rhode & Schwartz	FSEK	EMC4182
Antenna Array	UL	BOMS	EMC4276

Figure 24 Test setup for SPURIOUS EMISSIONS

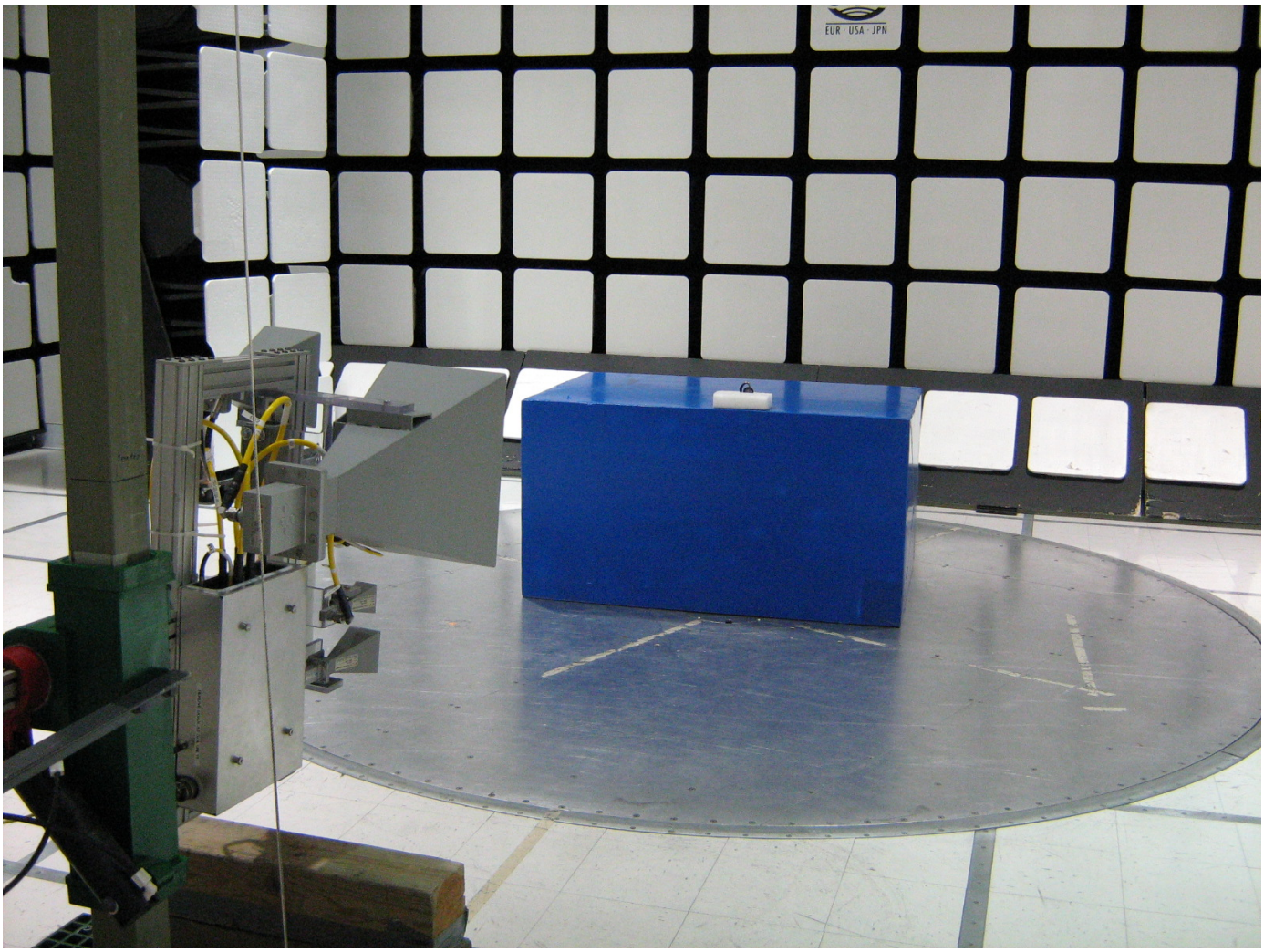


Figure 25 Radiated Emissions Graph

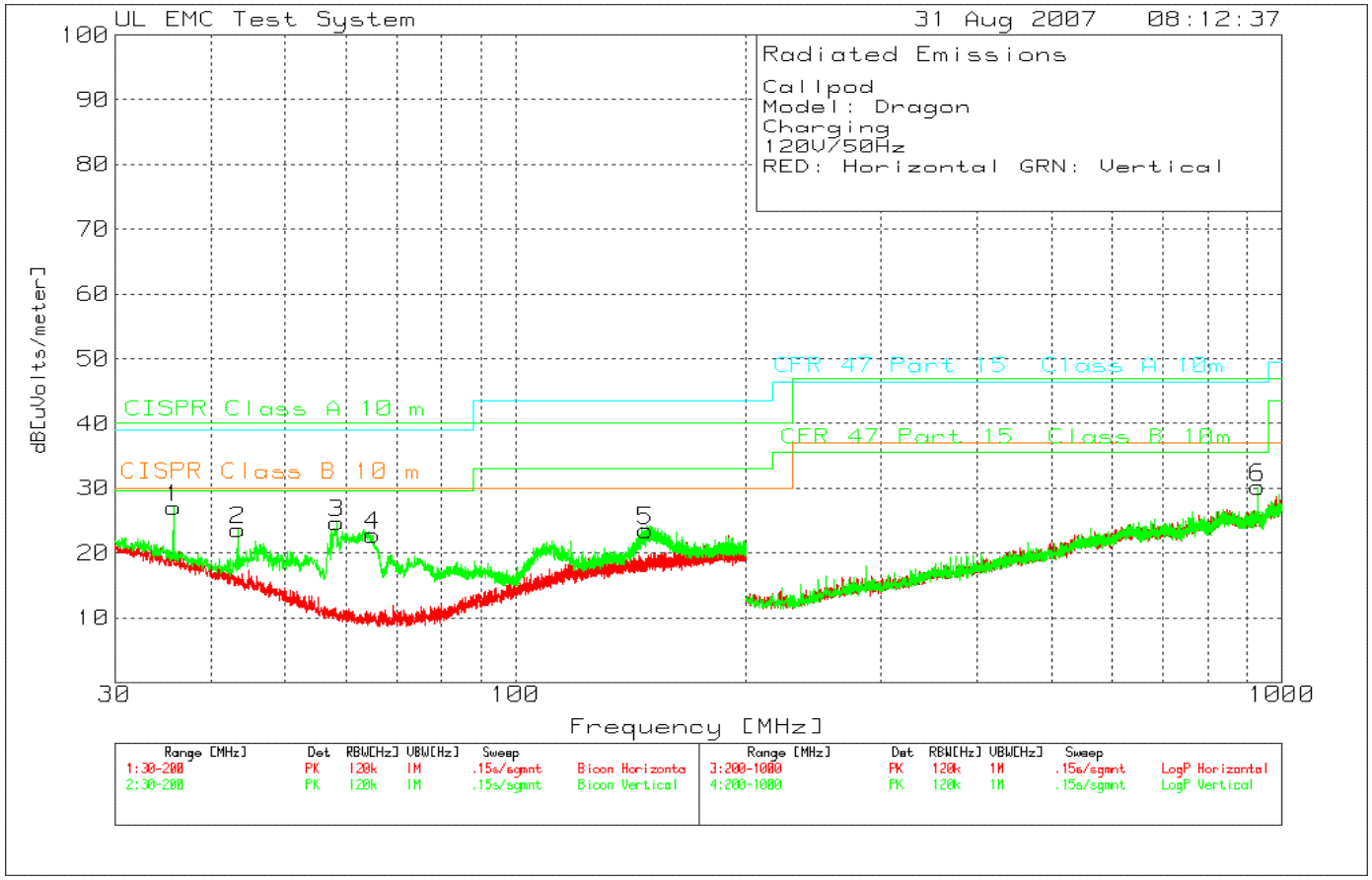


Table 32 SPURIOUS EMISSIONS Data Points

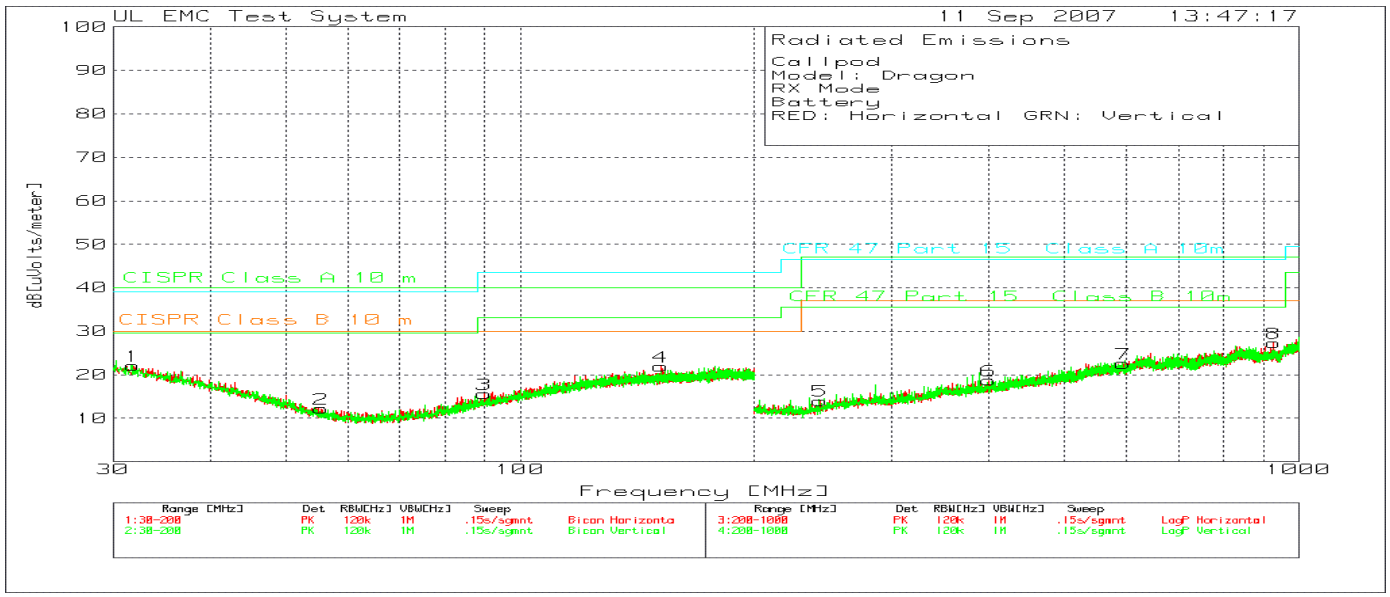
Callpod
Model: Dragon
Charging
120V/50Hz
RED: Horizontal GRN: Vertical

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
Random Click, Not from EUT											
1	35.7332	41.8 pk	-30.3	15.5	27	40	30	39.1	29.6	-	-
	Azimuth:60	Height:200 Vert		Margin [dB]		-13	-3	-12.1	-2.6	-	-
Random Click, Not from EUT											
2	43.335	41.2 pk	-30.3	12.7	23.6	40	30	39.1	29.6	-	-
	Azimuth:246	Height:200 Vert		Margin [dB]		-16.4	-6.4	-15.5	-6	-	-
3	58.3263	47.8 pk	-30.2	7.1	24.7	40	30	39.1	29.6	-	-
	Azimuth:339	Height:300 Vert		Margin [dB]		-15.3	-5.3	-14.4	-4.9	-	-
4	65.0787	46.7 pk	-30.2	6.3	22.8	40	30	39.1	29.6	-	-
	Azimuth:327	Height:300 Vert		Margin [dB]		-17.2	-7.2	-16.3	-6.8	-	-
5	147.8916	38.9 pk	-30	14.6	23.5	40	30	43.5	33.1	-	-
	Azimuth:218	Height:100 Vert		Margin [dB]		-16.5	-6.5	-20	-9.6	-	-
6	931.2516	39.2 pk	-31.9	22.9	30.2	47	37	46.4	35.6	-	-
	Azimuth:14	Height:101 Vert		Margin [dB]		-16.8	-6.8	-16.2	-5.4	-	-

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
59.6677	43.48 qp	-30.2	6.8	20.08	40	30	39.1	29.6	-	-
Azimuth: 74	Height:256 Vert		Margin [dB]:		-19.92	-9.92	-19.02	-9.52	-	-

LIMIT 1: CISPR Class A 10 m
LIMIT 2: CISPR Class B 10 m
LIMIT 3: CFR 47 Part 15 Class A 10m
LIMIT 4: CFR 47 Part 15 Class B 10m

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector



No Emissions Detected from the EUT

4.10 Test Conditions and Results – 99% Bandwidth

Test Description	When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured.

Basic Standard	RSS-Gen 4.6.1	
UL LPG	None	
	Frequency range	Measurement Point
Fully configured sample scanned over the following frequency range	2400MHz – 2483.5MHz	Antenna Port Conducted
Supplementary information: None		

Table 33 99% Bandwidth EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	2	1
Supplementary information: None		

Table 34 99% Bandwidth Test Equipment

Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Agilent	E7405A	US41160342
Attenuator	Pasternek	10dB	None

Table 35 99% Bandwidth Results

Modulation Mode	99% Bandwidth
DH1	1.006250MHz
DH3	1.006250MHz
DH5	1.006250MHz
Inquiry	0.996250MHz
DH5 – all Channels	78.061875MHz

5.0 IMMUNITY TEST RESULTS

The immunity tests were not performed nor required:

Appendix A

Accreditations and Authorizations

NVLAP Lab code: 100414-0

NVLAP: Recognized under the National Voluntary Laboratory Accreditation Program (NVLAP) for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC EN17025 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. For a full scope listing see http://ts.nist.gov/ts/htdocs/210/214/scopes/1004140.htm

FCC: Details of the measurement facilities used for these tests have been filed with the Federal Communications Commission's Laboratory in Columbia, Maryland (Ref. No. 91044).

Industry Canada Industrie Canada

Industry of Canada: Accredited by Industry Canada for performance of radiated measurements. Our test site complies with RSP 100, Issue 7, Section 3.3. File #: IC 2180

VCCI: Accepted as an Associate Member to the VCCI. The measurement facilities detailed in this test report have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. Registration Nos.: Radiated Emissions R-621, Conducted Emissions C-642.

ICASA: ICASA (Independent Communications Authority of South Africa) has appointed UL as a Designated Test Laboratory to test Telecommunications equipment for type approval in compliance with CISPR 22 to assist in fulfilling its mandate under section 54(1) of the Telecommunications Act, 1996 (Act 103 of 1996).

NIST/CAB: Validated by the European Commission as a U.S. Conformity Assessment Body (CAB) of the U.S.-EU Mutual Recognition Agreement (MRA) for the Electromagnetic Compatibility - Council Directive 89/336/EEC, Article 10 (2). Also validated for the Telecommunication Equipment-Council Directive 99/5/EC, Annex III and IV, Identification Number: 0983.
NIST/CAB: Provisioned to act as a U.S. Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the Asia Pacific Economic Cooperation (APEC) MRA between the American Institute in Taiwan (AIT) and the United States. Our laboratory is considered qualified to test equipment subject to the applicable EMC regulations of the Chinese Taipei Bureau of Standards, Metrology and Inspection (BSMI) which require testing to CNS 13438 (CISPR 22).
NIST/CAB: Recognized by the Infocomm Development Authority of Singapore (IDA) under the Asia Pacific Economic Cooperation Mutual Recognition Agreement (APEC MRA). Our laboratory is provisionally designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC MRA. Our scope of designation includes IDA TS EMC (CISPR 22), IEC 61000-4-2, -4-3, -4-4, -4-5, and -4-6