



Product Name	BlackBerry Music Gateway
Model No.	BSA-3C0
FCC ID.	PPQ-BSA3C0

Applicant	LITE-ON TECHNOLOGY CORP.
Address	4F, 90, Chien 1 Road, Chung Ho, Taipei Hsien 235,
	Taiwan, R.O.C.

Date of Receipt	Dec. 23, 2011
Issued Date	Jan. 05, 2012
Report No.	11C441R-RFUSP29V01
Report Version	V1.0



The Test Results relate only to the samples tested.

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Test Report Certification

Issued Date: Jan. 05, 2012 Report No.: 11C441R-RFUSP29V01



Product Name	BlackBerry Music Gateway	
Applicant	LITE-ON TECHNOLOGY CORP.	
Address	4F, 90, Chien 1 Road, Chung Ho, Taipei Hsien 235, Taiwan, R.O.C.	
Manufacturer	DONG GUAN G-COM COMPUTER CO., LTD	
Model No.	BSA-3C0	
FCC ID.	PPQ-BSA3C0	
EUT Rated Voltage	DC 5V (Power by USB)	
EUT Test Voltage	AC 120V/ 60Hz	
Trade Name	RIM	
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2010	
	ANSI C63.4: 2003	
Test Result	Complied	

The Test Results relate only to the samples tested.

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Approved By

(Manager / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	BlackBerry Music Gateway	
Trade Name	RIM	
Model No.	BSA-3C0	
FCC ID.	PPQ-BSA3C0	
Frequency Range	2402 – 2480MHz	
Channel Number	79	
Type of Modulation	FHSS: GFSK(1Mbps) / π /4DQPSK(2Mbps) / 8DPSK(3Mbps)	
Antenna Type	PIFA Antenna (Metal)	
Channel Control	Auto	
Antenna Gain Refer to the table "Antenna List"		
Audio to RCA Cable Non-Shielded, 1.0m		
Audio Cable	Non-Shielded, 1.1m	

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	MAGLAYERS	MSA-2508-2G4C1-A1	PIFA Antenna (Metal)	1.6 dBi for 2.4 GHz

Note:

1. The antenna of EUT is conform to FCC 15.203.

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 20:	2422 MHz	Channel 40:	2442 MHz	Channel 60:	2462 MHz
Channel 01:	2403 MHz	Channel 21:	2423 MHz	Channel 41:	2443 MHz	Channel 61:	2463 MHz
Channel 02:	2404 MHz	Channel 22:	2424 MHz	Channel 42:	2444 MHz	Channel 62:	2464 MHz
Channel 03:	2405 MHz	Channel 23:	2425 MHz	Channel 43:	2445 MHz	Channel 63:	2465 MHz
Channel 04:	2406 MHz	Channel 24:	2426 MHz	Channel 44:	2446 MHz	Channel 64:	2466 MHz
Channel 05:	2407 MHz	Channel 25:	2427 MHz	Channel 45:	2447 MHz	Channel 65:	2467 MHz
Channel 06:	2408 MHz	Channel 26:	2428 MHz	Channel 46:	2448 MHz	Channel 66:	2468 MHz
Channel 07:	2409 MHz	Channel 27:	2429 MHz	Channel 47:	2449 MHz	Channel 67:	2469 MHz
Channel 08:	2410 MHz	Channel 28:	2430 MHz	Channel 48:	2450 MHz	Channel 68:	2470 MHz
Channel 09:	2411 MHz	Channel 29:	2431 MHz	Channel 49:	2451 MHz	Channel 69:	2471 MHz
Channel 10:	2412 MHz	Channel 30:	2432 MHz	Channel 50:	2452 MHz	Channel 70:	2472 MHz
Channel 11:	2413 MHz	Channel 31:	2433 MHz	Channel 51:	2453 MHz	Channel 71:	2473 MHz
Channel 12:	2414 MHz	Channel 32:	2434 MHz	Channel 52:	2454 MHz	Channel 72:	2474 MHz
Channel 13:	2415 MHz	Channel 33:	2435 MHz	Channel 53:	2455 MHz	Channel 73:	2475 MHz
Channel 14:	2416 MHz	Channel 34:	2436 MHz	Channel 54:	2456 MHz	Channel 74:	2476 MHz
Channel 15:	2417 MHz	Channel 35:	2437 MHz	Channel 55:	2457 MHz	Channel 75:	2477 MHz
Channel 16:	2418 MHz	Channel 36:	2438 MHz	Channel 56:	2458 MHz	Channel 76:	2478 MHz
Channel 17:	2419 MHz	Channel 37:	2439 MHz	Channel 57:	2459 MHz	Channel 77:	2479 MHz
Channel 18:	2420 MHz	Channel 38:	2440 MHz	Channel 58:	2460 MHz	Channel 78:	2480 MHz
Channel 19:	2421 MHz	Channel 39:	2441 MHz	Channel 59:	2461 MHz		

Frequency of Each Channel:

- 1. This device is a BlackBerry Music Gateway with a built-in 2.4GHz Bluetooth transceiver.
- These tests were conducted on a sample for the purpose of demonstrating compliance of Bluetooth transmitter with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
- 3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.

Test Mode	Mode 1: Transmit - 1Mbps (GFSK)
	Mode 2: Transmit - 3Mbps (8DPSK)

1.3. Tested System Details

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

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Test Fixture	LITE-ON	N/A	N/A	N/A
2	Notebook PC	DELL	РРТ	N/A	Non-Shielded, 0.8m
3	DVD Player	DELL	PD01S	N/A	N/A
4	Microphone & Earphone	PCHOME	N/A	N/A	N/A
5	Monitor	LG	W2261VT	907YHZK07373	Non-Shielded, 1.8m

Signal Cable Type		Signal cable Description
А	USB Cable	Non-Shielded, 0.6m
В	USB Cable	Non-Shielded, 0.5m
С	RS-232 Cable	Non-Shielded, 1.8m
D	USB Cable	Non-Shielded, 0.5m
E	Microphone & Earphone Cable	Non-Shielded, 1.6m
F	VGA Cable	Shielded, 1.8m with two ferrite cores bonded

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4.
- (2) Execute "BlueSuite (v1.24)" on the Notebook.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press "OK" to start the continuous Transmit.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	30-65
Barometric pressure (mbar)	860-1060	950-1000

Ambient conditions in the laboratory:

The related certificate for our laboratories about the test site and management system can be downloaded

from QuieTek Corporation's Web Site: <u>http://www.quietek.com/tw/ctg/cts/accreditations.htm</u> The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <u>http://www.quietek.com/</u>

Site Description:	File on
	Federal Communications Commission
	FCC Engineering Laboratory
	7435 Oakland Mills Road
	Columbia, MD 21046
	Registration Number: 92195
	Accreditation on NVLAP
	NVLAP Lab Code: 200533-0
Site Name:	Quietek Corporation
Site Address:	No.5-22, Ruishukeng,
	Linkou Dist. New Taipei City 24451,
	Taiwan, R.O.C.
	TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
	E-Mail : <u>service@quietek.com</u>

FCC Accreditation Number: TW1014

2. Conducted Emission

2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
Х	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2011	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2011	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2011	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2011	EUT
Х	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2011	
	No.1 Shielded Room				

Note:

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked by "X" are used to measure the final test results.

2.2. Test Setup



FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit					
Frequency	Lir	nits			
MHz	QP	AV			
0.15 - 0.50	66-56	56-46			
0.50-5.0	56	46			
5.0 - 30	60	50			

2.3. Limits

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT and Peripherals are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

The EUT was setup to ANSI C63.4: 2003; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

2.5. Uncertainty

± 2.26 dB

Product	: BlackBerry Music Gateway					
Test Item	: Conducted Emission Test					
Power Line	: Line 1					
Test Mode	: Mode 2	: Transmit - 3Mbp	s (8DPSK) (2441MH	[z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV	dB	dBuV	
LINE 1						
Quasi-Peak						
0.170	9.840	21.800	31.640	-33.789	65.429	
0.470	9.840	31.930	41.770	-15.087	56.857	
1.064	9.850	20.240	30.090	-25.910	56.000	
3.029	9.870	21.700	31.570	-24.430	56.000	
5.646	9.895	17.560	27.455	-32.545	60.000	
19.060	10.130	16.070	26.200	-33.800	60.000	
Average						
0.170	9.840	18.180	28.020	-27.409	55.429	
0.470	9.840	23.510	33.350	-13.507	46.857	
1.064	9.850	17.660	27.510	-18.490	46.000	
3.029	9.870	21.690	31.560	-14.440	46.000	
5.646	9.895	17.160	27.055	-22.945	50.000	
19.060	10.130	9.310	19.440	-30.560	50.000	

2.6. Test Result of Conducted Emission

Note:

1. All Reading Levels are Quasi-Peak and average value.

2. " " means the worst emission level.

3. Measurement Level = Reading Level + Correct Factor

Product	: BlackBerry Music Gateway						
Test Item	: Conducted Emission Test						
Power Line	: Line 2						
Test Mode	: Mode 2: T	ransmit - 3Mbp	os (8DPSK) (2441MH	z)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV	dB	dBuV		
LINE 2							
Quasi-Peak							
0.162	9.840	26.520	36.360	-29.297	65.657		
0.455	9.840	31.840	41.680	-15.606	57.286		
0.654	9.840	21.030	30.870	-25.130	56.000		
2.623	9.860	22.590	32.450	-23.550	56.000		
6.150	9.922	18.720	28.642	-31.358	60.000		
22.795	10.320	18.890	29.210	-30.790	60.000		
Average							
0.162	9.840	23.600	33.440	-22.217	55.657		
0.455	9.840	24.110	33.950	-13.336	47.286		
0.654	9.840	10.350	20.190	-25.810	46.000		
2.623	9.860	22.580	32.440	-13.560	46.000		
6.150	9.922	2.330	12.252	-37.748	50.000		
22.795	10.320	18.880	29.200	-20.800	50.000		

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. " " means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

3.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Х	Power Meter	Anritsu	ML2495A/6K00003357	May, 2011
Х	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2011

Note: 1. All equipments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

3.2. Test Setup



3.3. Limit

The maximum peak power shall be less 1Watt.

3.4. Test Procedure

The EUT was setup to ANSI C63.4: 2003; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

3.5. Uncertainty

 \pm 1.27 dB

3.6. Test Result of Peak Power Output

Product	:	BlackBerry Music Gateway
Test Item	:	Peak Power Output
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

Channel No.	Frequency	Measurement	Required Limit	Result
	(MHz)	(dBm)		
Channel 00	2402.00	6.00	1 Watt= 30 dBm	Pass
Channel 39	2441.00	6.77	1 Watt= 30 dBm	Pass
Channel 78	2480.00	2.67	1 Watt= 30 dBm	Pass

Product	:	BlackBerry Music Gateway
Test Item	:	Peak Power Output
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

Channel No.	Frequency	Measurement	Required Limit	Result
	(MHz)	(dBm)		
Channel 00	2402.00	5.15	1 Watt= 30 dBm	Pass
Channel 39	2441.00	5.66	1 Watt= 30 dBm	Pass
Channel 78	2480.00	5.85	1 Watt= 30 dBm	Pass

4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2011
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2011
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note: 1. All equipments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

4.2. Test Setup

Below 1GHz



QuieTer

Above 1GHz



4.3. Limits

General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits									
Frequency MHz	uV/m @3m	dBuV/m@3m							
30-88	100	40							
88-216	150	43.5							
216-960	200	46							
Above 960	500	54							

Remarks: 1. RF Voltage $(dBuV) = 20 \log RF$ Voltage (uV)

- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2003 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement. The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna. The worst radiated emission is measured on the Final Measurement.

The measurement frequency range form 30MHz - 10th Harmonic of fundamental was investigated.

4.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

Product	: BlackBerry Music Gateway								
Test Item	: Harmonic Radiated Emission								
Test Site	: No.3 OATS								
Test Mode	: Mode 1: Transmit - 1Mbps (GFSK)(2402MHz)								
Frequency	Correct	Limit							
1	Factor	Level	Level	6					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
Peak Detector:									
4804.000	3.327	51.190	54.517	-19.483	74.000				
7206.000	10.136	42.720	52.856	-21.144	74.000				
9608.000	13.706	36.280	49.986	-24.014	74.000				
Average									
Detector:									
4804.000	3.327	34.330	37.657	-16.343	54.000				
Vertical									
Peak Detector:									
4804.000	6.638	56.220	62.857	-11.143	74.000				
7206.000	11.005	44.390	55.395	-18.605	74.000				
9608.000	14.103	36.080	50.183	-23.817	74.000				
Average									
Detector:									
4804.000	6.638	39.160	45.797	-8.203	54.000				
7206.000	11.005	35.050	46.055	-7.945	54.000				

4.6. Test Result of Radiated Emission

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

=

Product	: BlackBerry Music Gateway							
Test Item	: Harmonic Radiated Emission							
Test Site	: No.3 OATS							
Test Mode	: Mode 1: Transmit - 1Mbps (GFSK)(2441MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
4882.000	3.001	51.070	54.071	-19.929	74.000			
7323.000	11.846	38.490	50.337	-23.663	74.000			
9764.000	12.563	37.620	50.183	-23.817	74.000			
Average								
Detector:								
4882.000	3.001	41.850	44.851	-9.149	54.000			
Vertical								
Peak Detector:								
4882.000	5.713	55.840	61.554	-12.446	74.000			
7323.000	12.727	39.450	52.178	-21.822	74.000			
9764.000	13.028	37.040	50.068	-23.932	74.000			
Average								
Detector:								
4882.000	5.713	45.850	51.564	-2.436	54.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: BlackBerry Music Gateway								
Test Item	: Harmonic Radiated Emission								
Test Site	: No.3 OATS								
Test Mode	: Mode 1:	Transmit - 1Mbp	s (GFSK)(2480MHz))					
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
Peak Detector:									
4960.000	2.760	50.970	53.730	-20.270	74.000				
7440.000	12.567	37.620	50.186	-23.814	74.000				
9920.000	13.456	36.690	50.146	-23.854	74.000				
Average									
Detector:									
Vertical									
Peak Detector:									
4960.000	5.557	55.340	60.897	-13.103	74.000				
7440.000	13.426	39.210	52.635	-21.365	74.000				
9920.000	13.958	36.480	50.438	-23.562	74.000				
Average									
Detector:									
4960.000	5.557	46.660	52.217	-1.783	54.000				

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product	: BlackBerry Music Gateway								
Test Item	: Harmonic Radiated Emission								
Test Site	: No.3 OATS								
Test Mode	: Mode 2: '	Transmit - 3Mbp	os (8DPSK)(2402MHz	z)					
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
Peak Detector:									
4804.000	3.327	46.530	49.857	-24.143	74.000				
7206.000	10.136	37.140	47.276	-26.724	74.000				
9608.000	13.706	36.490	50.196	-23.804	74.000				
Average									
Detector:									
Vertical									
Peak Detector:									
4804.000	6.638	51.550	58.187	-15.813	74.000				
7206.000	11.005	39.570	50.575	-23.425	74.000				
9608.000	14.103	36.510	50.613	-23.387	74.000				
Average									
Detector:									
4804.000	6.638	30.930	37.567	-16.433	54.000				

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: BlackBerry Music Gateway							
Test Item	: Harmonic Radiated Emission							
Test Site	: No.3 OATS							
Test Mode	: Mode 2: Transmit - 3Mbps (8DPSK) (2441MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
4882.000	3.001	46.640	49.641	-24.359	74.000			
7323.000	11.846	11.846 36.230 48.077	48.077	-25.923	74.000			
9764.000	12.563	37.090	49.653	-24.347	74.000			
Average								
Detector:								
Vertical								
Peak Detector:								
4882.000	5.713	51.120	56.834	-17.166	74.000			
7323.000	12.727	36.080	48.808	-25.192	74.000			
9764.000	13.028	37.050	50.078	-23.922	74.000			
Average								
Detector:								
4882.000	5.713	36.740	42.454	-11.546	54.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: BlackBerry Music Gateway									
Test Item	: Harmonic Radiated Emission									
Test Site	: No.3 OATS									
Test Mode	: Mode 2: Transmit - 3Mbps (8DPSK) (2480MHz)									
Frequency	Correct	Reading	Measurement	Margin	Limit					
	Factor	Level	Level							
MHz	dB	dBuV	dBuV/m	dB	dBuV/m					
Horizontal										
Peak Detector:										
4960.000	2.760	49.790	52.550	-21.450	74.000					
7440.000	12.567	39.420	51.986	-22.014	74.000					
9920.000	13.456	36.590	50.046	-23.954	74.000					
Average										
Detector:										
Vertical										
Peak Detector:										
4960.000	5.557	53.630	59.187	-14.813	74.000					
7440.000	13.426	42.360	55.785	-18.215	74.000					
9920.000	13.958	36.770	50.728	-23.272	74.000					
Average										
Detector:										
4960.000	5.557	40.750	46.307	-7.693	54.000					
7440.000	13.426	29.190	42.615	-11.385	54.000					

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: BlackBerry Music Gateway								
Test Item	: General Radiated Emission								
Test Site	: No.3 OATS								
Test Mode	: Mode 1: Transmit - 1Mbps (GFSK) (2441MHz)								
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
249.220	-6.014	45.738	39.724	-6.276	46.000				
398.600	-2.268	35.686	33.418	-12.582	46.000				
499.480	0.048	34.994	35.042	-10.958	46.000				
625.580	1.770	31.132	32.902	-13.098	46.000				
798.240	5.148	32.221	37.369	-8.631	46.000				
932.100	6.922	25.491	32.413	-13.587	46.000				
Vertical									
132.820	-4.440	35.752	31.312	-12.188	43.500				
198.780	-8.221	40.098	31.877	-11.623	43.500				
381.140	-1.558	31.860	30.302	-15.698	46.000				
532.460	-0.563	32.429	31.866	-14.134	46.000				
796.300	2.831	29.928	32.759	-13.241	46.000				
932.100	6.152	26.985	33.137	-12.863	46.000				

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: BlackBerry Music Gateway							
Test Item	: General	Radiated Emissio	on					
Test Site	: No.3 OATS							
Test Mode	: Mode 2: Transmit - 3Mbps (8DPSK) (2441MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
340.400	-3.859	33.565	29.706	-16.294	46.000			
398.600	-2.268	34.200	31.932	-14.068	46.000			
499.480	0.048	34.193	34.241	-11.759	46.000			
666.320	2.031	28.494	30.526	-15.474	46.000			
796.300	5.161	28.110	33.271	-12.729	46.000			
932.100	6.922	23.830	30.752	-15.248	46.000			
Vertical								
109.540	-0.418	32.366	31.948	-11.552	43.500			
198.780	-8.221	40.792	32.571	-10.929	43.500			
398.600	-4.678	39.707	35.029	-10.971	46.000			
532.460	-0.563	31.149	30.586	-15.414	46.000			
749.740	2.510	33.730	36.240	-9.760	46.000			
967.020	8.071	27.039	35.110	-18.890	54.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

5. **RF** Antenna Conducted Test

5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2011
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2011
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2011

Note: 1. All equipments are calibrated every one year.

2. The test instruments Marked "X" are used to measure the final test results.

5.2. Test Setup



5.3. Limits

According to FCC Section 15.247(d). 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 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, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

5.4. Test Procedure

The EUT was setup to ANSI C63.4: 2003; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

5.5. Uncertainty

± 150Hz

5.6. Test Result of RF Antenna Conducted Test

Product	:	BlackBerry Music Gateway
Test Item	:	RF Antenna Conducted Test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

Figure Channel 00:

Agilen	it Spectru	m Analyzer - S	wept SA								
Cen	ter Fr	RF 50 eq 515.0	Ω AC 00000 MH	łz	SEI	NSE:INT	Avg Type	ALIGN AUTO	02:53:43 P	MDec 28, 2011 E 1 2 3 4 5 6	Frequency
10 dE	3/div	Ref 10.00	₽ IF I dBm	'NO: Fast 🖵 Gain:Low	Atten: 20	dB		Mk	r1 153.3 -62.	84 MHz 30 dBm	Auto Tune
0.00											Center Freq 515.000000 MHz
-10.0 -20.0										-14.10 dBm	Start Freq 30.000000 MHz
-30.0 -40.0											Stop Freq 1.000000000 GHz
-50.0 -60.0		1									CF Step 97.000000 MHz <u>Auto</u> Man
-70.0			and the troppelland	a ju je po na slod do na na slod na slo Na slod na slod Na slod na slod	n generation of product (in herd itten i tren	ellenja (menel lekikaped)		a da da ang ang ang ang ang ang ang ang ang an		Freq Offset 0 Hz
-80.0 Star #Re:	t 30.0 s BW 1	MHz 00 kHz		#VBW	1.0 MHz			Sweep !	Stop 1.0 90.0 ms (1)000 GHz 0001 pts)	
MSG 🤇	₽File <	mage.png>	saved					STATU	IS		



Agilen	it Spectrum A	nalyzer - S	wept SA			12					
LXI R	L R	F 50	Ω AC		SEI	NSE:INT		ALIGN AUTO	02:53:02 F	MDec 28, 2011	Frequency
Cen	ter Freq	6.500	000000 G	iHz	T		Avg Type:	Log-Pwr	TRAC	E123456	Frequency
			F	NO: Fast 🖵	Atton: 20	a Run			D	PNNNN	
			JI-	Gain:Low	Atten. 20	40			No. 2 Second		
								MK	r1 2.40	2 5 GHz	Autorune
10 di	B/div Re	f 10.00	dBm						5.	90 dBm	
Log				T T			· · · ·				
		T I									Center Fred
0.00											Centerrieq
0.00											6.500000000 GHz
-10.0											
				2						-14.10 dBm	Start Freq
20.0											1 00000000 GHz
-20.0											
-30.0				-							01
											StopFreq
10.0											12.00000000 GHz
-40.0											
-50.0		_	-								CF Step
				1							1.100000000 GHz
	100	18									<u>Auto</u> Man
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	Letter an establish	the second	and the second second		and specific second second second	* Professiolansases	in the second second second	And Manuel	(and a strength of the streng	PARTY INCOME.	
-70.0	operation allowed beautiful			u a late.				and the second second second second		will an adda 1	Freq Offset
											0 Hz
-80.0											
Star	t 1.000 G	Hz							Stop 12	.000 GHz	
#Re	s BW 100	kHz		#VBW	1.0 MHz			Sweep	1.02 s (1	0001 pts)	
MSG	Dointe oh	angod: a	Il tracos clos	rod				STATUS			1
WIGG \	Promis ch	angeu, a	i uaces clea	ieu				314103			

wenten	Agilent Spectrum Analyzer - Swept SA													
Cen	ter Fr	eq 18.500	2 AC	GHz	SEI	NSE:INT	Avg Type	ALIGNAUTO : Log-Pwr	02:54:24 P TRAC	MDec 28, 2011 E 1 2 3 4 5 6	Frequency			
10 dE	PNO: hast High rive Rull Der [P NNNNN IFGain:Low Atten: 20 dB Mkr1 23.605 1 GHz 10 dB/div Ref 10.00 dBm50.09 dBm													
0.00											Center Freq 18.50000000 GHz			
-10.0 -20.0										-14.10 dBm	Start Freq 12.000000000 GHz			
-30.0 -40.0											Stop Freq 25.00000000 GHz			
-50.0 -60.0											CF Step 1.30000000 GHz <u>Auto</u> Man			
-70.0	an an Arthread Arthr Arthread Arthread Arthr										Freq Offset 0 Hz			
Star #Re:	t 12.00 s BW	00 GHz 100 kHz		#VBW	1.0 MHz			Sweep	Stop 25 1.20 s (1	.000 GHz 0001 pts)				

:	BlackBerry Music Gateway
:	RF Antenna Conducted Test
:	No.3 OATS
:	Mode 1: Transmit - 1Mbps (GFSK)
	: : :

Figure Channel 39:

Agilent Spectrum Analyzer - Swept SA							
Center Freq 515.000000) MHz	SENSE	Avg	ALIGN AUT	03:02:11 PM	Dec 28, 2011	Frequency
10 dB/div Ref 10.00 dBm	PNO: Fast 😱 IFGain:Low	Atten: 20 dE	un 3	N	/lkr1 96.63 -57.8	9 MHz 1 dBm	Auto Tune
0.00							Center Freq 515.000000 MHz
-10.0						-13.73 dBm	Start Freq 30.000000 MHz
-30.0							Stop Freq 1.000000000 GHz
-50.0							CF Step 97.000000 MHz <u>Auto</u> Man
-70.0	te het op geloge telegenhete dog ble		Merile Estaville, da estavistica est	naldana na da Barrat		lad ^{ta} lan di kana kasa	Freq Offset 0 Hz
Start 30.0 MHz #Res BW 100 kHz	#VBW	1.0 MHz		Sweep	Stop 1.00 90.0 ms (10	000 GHz 001 pts)	



Agilent Spe	ctrum Analyzer - Swept SA								
LXI RL	RF 50 Ω AC		SEN	ISE:INT	Aug Type	ALIGN AUTO	03:01:30 P	MDec 28, 2011	Frequency
Center	Pred 6.50000000	U GHZ PNO: Fast 🖵 IFGain:Low	Trig: Free Atten: 20	Run dB	Avg Type	Mk	r1 2.44		Auto Tune
	▼1 ▼1						0		Center Freq 6.50000000 GHz
-10.0								-13.73 dBm	Start Freq 1.000000000 GHz
-30.0									Stop Freq 12.000000000 GHz
-50.0			Male on posterior Marca	1 ⁻¹					CF Step 1.100000000 GHz <u>Auto</u> Man
-70.0				and a start is the second of a second se					Freq Offset 0 Hz
Start 1.0 #Res BM	000 GHz N 100 KHz vints changed: all traces	#VBW	1.0 MHz			Sweep STATUS	Stop 12 1.02 s (1	.000 GHz 0001 pts)	

Agilen	t Spectru	ım Analyzer -	Swept SA								
Cen	ter Fr	req 18.50	DQ AC	GHz	SEI	NSE:INT	Avg Type	ALIGNAUTO	03:02:52 P TRAC	MDec 28, 2011 E 1 2 3 4 5 6	Frequency
10 de	3/div	Ref 10.0	P IF 0 dBm	NO: Fast 🌩 Gain:Low	Atten: 20	dB		Mkr	1 23.597 -49.	7 3 GHz 70 dBm	Auto Tune
0.00											Center Freq 18.50000000 GHz
-10.0 -20.0										-13.73 dBm	Start Freq 12.000000000 GHz
-30.0 -40.0											Stop Freq 25.00000000 GHz
-50.0			L		out to any light	president and the second		a la desta la como	and the second second		CF Step 1.30000000 GHz <u>Auto</u> Man
-70.0			n ar an								Freq Offset 0 Hz
-80.0 Star #Re:	t 12.00 s BW 1	00 GHz 100 kHz		#VBW	1.0 MHz			Sweep	Stop 25 1.20 s (1	.000 GHz 0001 pts)	
MSG 🤇	File <	Image.png>	saved					STATUS			

:	BlackBerry Music Gateway
:	RF Antenna Conducted Test
:	No.3 OATS
:	Mode 1: Transmit - 1Mbps (GFSK)
	: : :

Figure Channel 78:

Agilent Spectrum Analyzer - Swept SA			
Center Freq 515.000000 MHz	SENSE:INT Avg	ALIGNAUTO 03:10:46 PM Dec 28, 2011 Type: Log-Pwr TRACE 1 2 3 4 5 6	Frequency
PNO: Fast IFGain:Low	Atten: 20 dB	Mkr1 254.846 MHz -58.85 dBm	Auto Tune
0.00			Center Freq 515.000000 MHz
-20.0		-17.66 dBm	Start Freq 30.000000 MHz
-30.0			Stop Freq 1.000000000 GHz
-50.0			CF Step 97.000000 MHz <u>Auto</u> Man
-70.0		ne a fa a baran U fanns her ne de die die ander an generatie is die generatie date die service An een die generatie generatie generatie begeneratie begeneratie die een die de eerste andere An eerste die generatie generatie generatie begeneratie die generatie die eerste die eerste andere	Freq Offset 0 Hz
Start 30.0 MHz #Res BW 100 kHz #VI	3W 1.0 MHz	Stop 1.0000 GHz Sweep 90.0 ms (10001 pts)	



Agilent	Spectrum A	nalyzer - Sv	vept SA								
LXI RL	RI	F 50 S	2 AC		SEI	VSE:INT		ALIGN AUTO	03:10:05 P	MDec 28, 2011	Frequency
Cent	ter Freq	6.5000	000000 G	iHz	Tuin Ens	Dun	Avg Type	: Log-Pwr	TRAC TVI	E123456	requeriey
			F	NO: Fast 🖵	Atten 20 dB				DE	PNNNN	
			16	Gain:Low	Atten. 20	uD					Auto Tupo
								Mk	r1 2.47	95GHz	Autorune
10 dB	Idiu De	f 10 00	dBm						2.	34 dBm	
Log		1 10.00				0					
		▲1									Conton From
											Center Freq
0.00		-	2	8			1				6.50000000 GHz
10.0											
-10.0								()			Otort Erer
										-17.66 dBm	StartFreq
-20.0											1.00000000 GHz
-30.0			-				-				Stop From
											StopFreq
40.0											12.000000000 GHz
-40.0											
-50.0											CF Step
											1.100000000 GHz
			1								Auto Man
-60.0					THE SPECIFIC PROPERTY.		1	-			
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70.0	all the star star	and the second	A REAL PROPERTY.	1			The second se	Minister Received	and the second s	and a second of the second	Fred Offset
-70.0											ricquisci
											0 Hz
-80.0						-					
00.0											
	4 0 0 0 0	■ 355									
stan	1.000 G	HZ						-	Stop 12	.000 GHZ	
#Res	5 BW 100	kHz		#VBW	1.0 MHz			Sweep	1.02 s (1	0001 pts)	
MSG G	Points ch	anned: all	traces clea	red				STATUS			
	i onto chi	angeu, an	addea clea					0			

Agilen	t Spectru	m Analyzer - S	wept SA								
Cen	ter Fr	RF 50 eq 18.50	Ω AC 0000000	GHz	SEI	NSE:INT	Avg Type	LIGNAUTO	03:11:27 P TRAC	MDec 28, 2011 E 1 2 3 4 5 6	Frequency
10 de	PN0: Fast C Atten: 20 dB Der PNNNNN IFGain:Low Atten: 20 dB Mkr1 23.510 2 GHz 10 dB/div Ref 10.00 dBm -50.65 dBm									Auto Tune	
0.00											Center Freq 18.50000000 GHz
-10.0 -20.0										-17.66 dBm	Start Freq 12.000000000 GHz
-30.0 -40.0											Stop Freq 25.00000000 GHz
-50.0 -60.0					In the part of the second s	and from the states	a brill and the barry bit				CF Step 1.30000000 GHz <u>Auto</u> Man
-70.0	and Western										Freq Offset 0 Hz
-80.0 Star #Re:	t 12.00 s BW 1	00 GHz 100 kHz		#VBW	1.0 MHz			Sweep	Stop 25 1.20 s (1	.000 GHz 0001 pts)	
MSG 🤇	File <	Image.png>	saved	19. men 19.99° 19.97 19.97				STATUS			1

BlackBerry Music Gateway
RF Antenna Conducted Test
No.3 OATS
Mode 2: Transmit - 3Mbps (8DPSK)

Figure Channel 00:

Agiler	nt Spectru	m Analyzer - S	wept SA								
Cen	ter Fr	RF 50 eq 515.0	Ω AC 00000 MH	Ηz	SEI	NSE:INT	Avg Type	LIGNAUTO	03:19:03 F	MDec 28, 2011	Frequency
10 di Log	B/div	Ref 10.00	dBm	PNO: Fast G	Atten: 20	dB		М	kr1 49.9 -61.	82 MHz 85 dBm	Auto Tune
0.00											Center Freq 515.000000 MHz
-10.0 -20.0										-15.64 dBm	Start Freq 30.000000 MHz
-30.0 -40.0											Stop Freq 1.000000000 GHz
-50.0 -60.0	♦ ¹										CF Step 97.000000 MHz <u>Auto</u> Man
-70.0			- Ann	nt Pelantin and a later of		de las plus protestas na de las de las de las de				peti dun projektor projektor p	Freq Offset 0 Hz
-80.0 Star	t 30.0	MHz		10 (514)					Stop 1.0	0000 GHz	
#Ke	s BW 1 i)File <	mage.png>	saved	#vBW	1.U WIHZ			SWEED 9	0.0 ms (1	ooun pts)	

Agilent Spectrum Analyzer - Swe	ept SA				
Center Freq 6.5000	AC 00000 GHz	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	03:18:22 PM Dec 28, 2011 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 10.00 c	PNO: Fast GP ' IFGain:Low /	Atten: 20 dB	Mk	r1 2.402 5 GHz 4.36 dBm	Auto Tune
0.00					Center Freq 6.50000000 GHz
-10.0				-15.64 dBm	Start Freq 1.000000000 GHz
-30.0					Stop Freq 12.000000000 GHz
-50.0					CF Step 1.100000000 GHz <u>Auto</u> Man
-70.0			t ha hand en han de <mark>staarde gebreen na de de de de s</mark> taarde gebreen het		Freq Offset 0 Hz
-80.0 Start 1.000 GHz #Res BW 100 kHz	#VBW 1.	0 MHz	Sweep	Stop 12.000 GHz 1.02 s (10001 pts)	

Agiler	nt Spectrum	Analyzer - Sw	vept SA								
tx∥ ℝ Cer	ter Fre	RF 50 ۵ q 18.500	2 AC	GHz	SE	NSE:INT	Avg Type	ALIGNAUTO	03:19:43 P TRAC TYI	MDec 28, 2011 E 1 2 3 4 5 6 PE MWWWWW	Frequency
10 di Log	B/div F	Ref 10.00	dBm	Gain:Low	Atten: 20	dB		Mkr	⊓ 1 23.61 _50.	9 4 GHz 23 dBm	Auto Tune
0.00											Center Freq 18.50000000 GHz
-10.0 -20.0										-15.64 dBm	Start Freq 12.000000000 GHz
-30.0 -40.0											Stop Freq 25.000000000 GHz
-50.0			and attend of the		alam and the second state	and a start and a start of the	and the second state				CF Step 1.300000000 GHz <u>Auto</u> Man
-70.0	ana ana ina fa Tara na Casa di Mana di Ka										Freq Offset 0 Hz
-80.0 Stai #Re	t 12.000 s BW 10	GHz 00 kHz		#VBW	1.0 MHz			Sweep	Stop 25 1.20 s (1	.000 GHz 0001 pts)	
MSG	₽File <im< td=""><td>nage.png> s</td><td>aved</td><td>1000 AUG 2012</td><td>999 - 1990 - 14 AV - 1990 (* 1</td><td></td><td></td><td>STATUS</td><td></td><td></td><td></td></im<>	nage.png> s	aved	1000 AUG 2012	999 - 1990 - 14 AV - 1990 (* 1			STATUS			

Product	:	BlackBerry Music Gateway
Test Item	:	RF Antenna Conducted Test
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

Figure Channel 39:

Agilent	Spectrum A	nalyzer - Sw	ept SA								
Cent	er Frea	F 50 Ω		7	SE	NSE:INT	Avg Type	ALIGNAUTO : Log-Pwr	03:25:30 F	MDec 28, 2011 E 1 2 3 4 5 6	Frequency
10 dB/	/div Re	ef 10.00 (dBm	NO: Fast 😱 Gain:Low	┘ Trig: Free Atten: 20	e Run dB		м	™ ₪ kr1 49.9 -60.	82 MHz 98 dBm	Auto Tune
0.00 -											Center Freq 515.000000 MHz
-10.0 - -20.0 =										-18.45 dBm	Start Freq 30.000000 MHz
-30.0 - -40.0 -											Stop Freq 1.000000000 GHz
-50.0 - -60.0 -	♦ ¹		1.0								CF Step 97.000000 MHz <u>Auto</u> Man
-70.0		apladt, see		a, toolo erikatentiik			an an Angel ang Angel Angel Angel Angel Angel Angel	an an talah dan baran Managan an talah dari sa			Freq Offset 0 Hz
-80.0 Start #Res	30.0 MH BW 100	z kHz		#vbw	1.0 MHz			Sweep	Stop 1.0 90.0 ms (1	0000 GHz 0001 pts)	
MSG 🤳	File <ima< td=""><td>ge.png> s</td><td>aved</td><td></td><td></td><td></td><td></td><td>STATU</td><td>JS</td><td></td><td></td></ima<>	ge.png> s	aved					STATU	JS		

Agilent Spectrum Analyzer - Sw	vept SA				
Center Freq 6.500	2 AC	SENSE:INT Avg Ty	ALIGNAUTO	03:24:49 PMDec 28, 2011 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 10.00	PNO: Fast C Irig IFGain:Low Atte	: Free Run n: 20 dB	Mk	r1 2.441 0 GHz 1.55 dBm	Auto Tune
0.00					Center Freq 6.50000000 GHz
-20.0				-18.45 dBm	Start Freq 1.000000000 GHz
-30.0			_		Stop Freq 12.000000000 GHz
-50.0					CF Step 1.100000000 GHz <u>Auto</u> Man
-70.0			Party of Alexandrometer Strengt	a the second	Freq Offset 0 Hz
-80.0 Start 1.000 GHz #Res BW 100 kHz	#VBW 1.0 M	ЛНz	Sweep	Stop 12.000 GHz 1.02 s (10001 pts)	
MSG DAlignment Complet	ed		STATUS		

Agilen	it Spectrum	n Analyzer - Sv	wept SA								
Cen	ter Fre	RF 50	Ω AC	GHz	SE Trig: Free		Avg Type	LIGNAUTO	03:26:11 P TRAC TYP	MDec 28, 2011 E 1 2 3 4 5 6 E M MMMMM	Frequency
10 di Log	3/div	Ref 10.00	dBm	Gain:Low	Atten: 20	dB		Mkr	□ 1 24.930 -50.	6 3 GHz 78 dBm	Auto Tune
0.00											Center Freq 18.50000000 GHz
-10.0 -20.0										-18.45 dBm	Start Freq 12.000000000 GHz
-30.0 -40.0											Stop Freq 25.00000000 GHz
-50.0			M. C. Marshand		-	and grant th			and the state of the		CF Step 1.300000000 GHz <u>Auto</u> Man
-70.0	n stad h										Freq Offset 0 Hz
-80.0 Star #Re:	t 12.000 s BW 10	0 GHz 00 kHz		#VBW	1.0 MHz			Sweep	Stop 25 1.20 s (1	.000 GHz 0001 pts)	
MSG 🤇	₽File <ir< td=""><td>mage.png></td><td>saved</td><td></td><td></td><td></td><td></td><td>STATUS</td><td></td><td>• • • • •</td><td></td></ir<>	mage.png>	saved					STATUS		• • • • •	

Product	:	BlackBerry Music Gateway
Test Item	:	RF Antenna Conducted Test
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

Figure Channel 78:

Agilent Spectr	ım Analyzer - Swe	ept SA								
Center Fi	RF 50 Ω	AC 0000 MHz		SEI	NSE:INT	Avg Ty	ALIGNAUTO pe: Log-Pwr	03:35:32 P	MDec 28, 2011 E 1 2 3 4 5 6	Frequency
10 dB/div	Ref 10.00 d	PNC IFG2 IBm	D: Fast 😱 iin:Low	¹ Trig: Free Atten: 20	e Run dB		М	kr1 139.7 -59.	07 MHz 39 dBm	Auto Tune
0.00										Center Freq 515.000000 MHz
-10.0									-17.02 dBm	Start Freq 30.000000 MHz
-30.0										Stop Freq 1.000000000 GHz
-50.0	● ¹									CF Step 97.000000 MHz <u>Auto</u> Man
-70.0		alad ha balan		sallalusan)	dan talah	e sijlenijeno	dege direction of the process			Freq Offset 0 Hz
-80.0 Start 30.0	MHz			2 Augustan				Stop 1.0	0000 GHz	
#Res BW	100 kHz Image.png> sa	aved	#VBW	1.0 MHz			Sweep STAT	90.0 ms (1	0001 pts)	

Agilent Spectrum Anal	yzer - Swept SA								
Center Freq 6	50 Ω AC 5.500000000 C	Hz	SEI	NSE:INT	Avg Type	ALIGNAUTO Log-Pwr	03:34:51 F TRAC	MDec 28, 2011	Frequency
10 dB/div Ref	" 10.00 dBm	PNO: Fast 😱 Gain:Low	Atten: 20	dB		Mk	r1 2.47 2.	9 5 GHz 98 dBm	Auto Tune
0.00	↓ ¹								Center Freq 6.500000000 GHz
-20.0								-17.02 dBm	Start Freq 1.000000000 GHz
-30.0									Stop Freq 12.000000000 GHz
-50.0			in a state de la de la casa da si	Addition of the	-1				CF Step 1.100000000 GHz <u>Auto</u> Man
-70.0	Andread		a _n alaon 1966 ka panana						Freq Offset 0 Hz
Start 1.000 GHz #Res BW 100 k	r Hz	#VBW	1.0 MHz			Sweep	Stop 12 1.02 s (1	.000 GHz 0001 pts)	
MSG						STATUS			

Agilent	Spectrum	ı Analyzer - S	wept SA								
Cent	ter Fre	RF 50 q 18.50	Ω AC 0000000	GHz	SE	NSE:INT	Avg Type	ALIGNAUTO : Log-Pwr	03:36:13 P TRAC TYF	MDec 28, 2011 E 1 2 3 4 5 6 E MWWWWW	Frequency
10 dB	Vdiv I	Ref 10.00	dBm	Gain:Low	Atten: 20	dB		Mkr	^{ته} 1 23.64 -50.1	5 4 GHz 64 dBm	Auto Tune
0.00											Center Freq 18.50000000 GHz
-10.0 - -20.0 -										-17.02 dBm	Start Freq 12.000000000 GHz
-30.0 -											Stop Freq 25.000000000 GHz
-50.0 -			ma, teach mh		(b), proping 1 to	anal state match		and the close of			CF Step 1.300000000 GHz <u>Auto</u> Man
-70.0	and a share the					in gutte freifer geweiten.					Freq Offset 0 Hz
-80.0 Start	12.00) GHz		#\/B\A	1 0 MHz			Sween	Stop 25	.000 GHz	
MSG 🤤	File <ir< td=""><td>nage.png></td><td>saved</td><td></td><td></td><td></td><td></td><td>STATUS</td><td></td><td> pt3)</td><td></td></ir<>	nage.png>	saved					STATUS		pt3)	

6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2011
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2011
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2011

RF Radiated Measurement:

The following test equipments are used during the band edge tests:

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2011
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2011
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Χ	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note:

1. All equipments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:

Above 1GHz



6.3. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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. 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 Section 15.205(c)).

6.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.4: 2003; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

6.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

Product	:	BlackBerry Music Gateway
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Docult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
00 (Peak)	2388.400	31.503	25.249	56.752	74.000	54.000	Pass
00 (Peak)	2390.000	31.509	24.679	56.188	74.000	54.000	Pass
00 (Peak)	2402.200	31.574	68.537	100.112			
00 (Average)	2390.000	31.509	12.040	43.549	74.000	54.000	Pass
00 (Average)	2402.000	31.573	55.957	87.531			





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	BlackBerry Music Gateway
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Docult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
00 (Peak)	2389.000	30.920	23.896	54.816	74.000	54.000	Pass
00 (Peak)	2390.000	30.915	23.616	54.531	74.000	54.000	Pass
00 (Peak)	2402.200	30.917	68.864	99.782			
00 (Average)	2390.000	30.915	12.038	42.953	74.000	54.000	Pass
00 (Average)	2402.200	30.917	56.558	87.476			

Figure Channel 00:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	BlackBerry Music Gateway
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Docult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
78 (Peak)	2479.900	32.155	60.944	93.099			
78 (Peak)	2483.500	32.182	26.036	58.218	74.000	54.000	Pass
78 (Average)	2480.100	32.157	50.227	82.383			
78 (Average)	2483.500	32.182	19.356	51.538	74.000	54.000	Pass

Figure Channel 78:

Horizontal (Peak)



Figure Channel 78:

Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	BlackBerry Music Gateway
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Degult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
78 (Peak)	2479.900	31.411	62.745	94.156			
78 (Peak)	2483.500	31.435	26.886	58.321	74.000	54.000	Pass
78 (Average)	2480.100	31.413	51.392	82.805			
78 (Average)	2483.500	31.435	20.764	52.199	74.000	54.000	Pass

Figure Channel 78:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	BlackBerry Music Gateway
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2388.600	31.504	23.838	55.342	74.000	54.000	Pass
00 (Peak)	2390.000	31.509	23.082	54.591	74.000	54.000	Pass
00 (Peak)	2402.000	31.573	65.980	97.554			
00 (Average)	2390.000	31.509	11.976	43.485	74.000	54.000	Pass
00(Average)	2402.000	31.573	51.991	83.565			

Figure Channel 00:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	BlackBerry Music Gateway
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Docult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
00 (Peak)	2389.400	30.918	25.006	55.924	74.000	54.000	Pass
00 (Peak)	2390.000	30.915	23.618	54.533	74.000	54.000	Pass
00 (Peak)	2402.000	30.917	66.747	97.664			
00 (Average)	2390.000	30.915	12.024	42.939	74.000	54.000	Pass
00 (Average)	2402.000	30.917	52.424	83.341			

Figure Channel 00:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	BlackBerry Music Gateway
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

RF Radiated Measurement (Horizontal):

Channal No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
78 (Peak)	2479.700	32.154	62.585	94.738			
78 (Peak)	2483.500	32.182	27.382	59.564	74.000	54.000	Pass
78 (Average)	2480.100	32.157	49.811	81.967			
78 (Average)	2483.500	32.182	20.192	52.374	74.000	54.000	Pass

Figure Channel 78:

Horizontal (Peak)





Horizontal (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average etection.



Product	:	BlackBerry Music Gateway
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Decult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
78 (Peak)	2479.900	31.411	64.111	95.522			
78 (Peak)	2483.500	31.435	29.461	60.896	74.000	54.000	Pass
78 (Average)	2480.100	31.413	51.144	82.557			
78 (Average)	2483.500	31.435	21.613	53.048	74.000	54.000	Pass

Figure Channel 78:

Vertical (Peak)





Vertical (Average)



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. Channel Number

7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2011
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2011
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2011

Note: 1. All equipments are calibrated every one year.2. The test instruments marked by "X" are used to measure the final test results.

7.2. Test Setup



7.3. Limit

Frequency hopping systems operating in the 2400-2483.5 MHz bands shall use at least 75 hopping frequencies.

7.4. Test Procedure

The EUT was setup to ANSI C63.4: 2003; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

7.5. Uncertainty

N/A

7.6. Test Result of Channel Number

BlackBerry Music Gateway
Channel Number
No.3 OATS
Mode 1: Transmit - 1Mbps (GFSK)

Frequency Range	Measurement	Required Limit	Pogult
(MHz)	(Hopping Channel)	(Hopping Channel)	Kesuit
2402 ~ 2480	79	>75	Pass

2402-2421MHz

2422-2441MHz

Aglia	nt Spe	Spectrum Analyzer - Swept SA														Agilant Spectrum Analyzer - Swept SA																			
Cer	ter	Freq	۶ 2.41	^{20 0} 11500	000 9	Hz		Trie Fr	sevsen	INT]	Avg T)	ALIGNAU pe: Log-Pu	10) Ar	03:45:41 PMC TRACE TVPE	Dec 28, 2011		Frequency	Cer	nter	∣ ⊪ Freq	÷ 2.4	30 g 43150	AC 00000	GHz		Trie: F	SENSE IN	ιπ]	Avg Typ	ALDONAUTO Pe: Log-Pwr	03:1	TVPC	Dec 28, 2011 1 2 3 4 5 6 M	Frequen	cy
10.4	r (Califed www Attion: 20 dB دوا) ۱۹۸۹ Attion: 20 dB Mkr2 2.411 50 GF 10.82 dB													0 GHz 2 dBm		Auto Tune	10.0	D/div	Pa	F 1	0.00 d	Bm	IFGain	dinw	Atten:	20 dB			Mk	r2 2.4	υει 441 (6.2	0 GHz	Auto	Tune	
10.0	M	$\langle \rangle$	\sim		V	$\langle n \rangle$	$ \land $	ſV	Vî	M	Ŵ	VV	V	Vγ	M	2	Center Freq 411500000 GHz	1 og 1 og 1 uu 1 uu		1	Λ	Ŵ	ÑV	V	V	ſV	Ŵ	N	Ŵ	٧V	M	ΓV		Center 2.43150000	r Freq 00 GHz
-30.0 40.0 -2011										_		-	+	_		2	Start Freq 401500000 GHz	30.0 40.0 40.0														_	_	Start 2.42150000	t Freq 00 GHz
-50 f 70.0						-			+	_		+	+	+		2	Stop Freq 421500000 GHz	-60 0 70.0				-		+				_		-	+	-	_	Stop 2.44150000	Freq 00 GHz
Sta #Re	rt2. sB	40150 N 100	GHZ KHZ			π	VBW	100 kH	z			#Swee	St p 50	op 2.421 30 ms (10	150 GHz 001 pts)		CF Step 2.000000 MHz	Sta #Re	rt 2.4 es BV	12150 N 100	GI KH	lz Iz			#VBW	/ 100 kł	lz			#Sweep	Stop 500) 2.44 ms (1	150 GHz 001 pts)	2.00000	Step
1	N	1 1			2.402	00 GHz		5.30	dBm	FIN	1 MA		212	RINGTION	WATE:	Aut	<u>o</u> Man	1	N	1 f			2.42	2 00 G	Hz	6,15	dBm	RING	anna i a	INPTONICO1		INTIN	WATE:	Auto	Man
345	N	1 1			2.421	00 GHz		5.92	dBm								Freq Offset 0 Hz	3466	N	1 1			2.44	100 G	Hz	6.28	dBm							Freq	Offset 0 Hz
7 8 9 10																		7 9 10																	
12 MSC	1) Al	gnmer	it Com	pleted								SIA	ius			1		12 MSC												SIAI	15				

2442-2461MHz

2462-2480MHz

Agliant Spa	yllant Spactrum Analyzer - Swept SA. A													Agilant Spactrum Analyzer - Swept SA													
Center	Freq	2.4515	ac 500000	GHz		Trig Fre		Av	g Type: L	JONAUTO	03:55:04 PM TEAC	MDec 28, 2011	Frequency	Cer	nter F	req	2.471	a ac 500000) GHz		Si Trio: Fra	NSE:INT	Avg Typ	ALIGNAUTO	01:00:231 TEA	MDec 28, 2011	Frequency
	Auto Tune	.	0/4	Bot	F 10 00	dBm	PNU: F IFGaind	wition Inw	Atten: 20	dB		Mki	2 2.480	00 GHz	Auto Tune												
			Ŵ	γ	M	\sim	Ŵ	W	Ŵ	V	\mathcal{M}	$\mathbb{N}^{\mathbb{N}}$	Center Freq 2.451500000 GHz	10 a 1 ag 1 uu 1 uu		Ň	Г. <u></u>	Ŵ	η	Ś	۲V	ſV	٧V	Ŵ	Ŵ	2 1	Center Freq 2.471500000 GHz
-30.0 40.0 <4111													Start Freq 2.441500000 GHz	-30.0 40.0 -200		_			_	_						h	Start Freq 2.461500000 GHz
-50.0 70.0	_								+				Stop Freq 2.461500000 GHz	-60.0 70.0 1111		+			+	_			-	-			Stop Freq 2.481500000 GHz
Start 2.4 #Res Bi	44150 W 100	GHZ kHZ		1	#VBW	100 kH:	z		#8	Sweep	Stop 2.46 500 ms (1	150 GHz 1001 pts)	CF Step 2.000000 MHz	Sta #Re	rt 2.46 es BW	150	GHZ KHZ		1	TVBW	100 kHz			#Sweep	Stop 2.4 500 ms (8150 GHz (1001 pts)	CF Step 2.000000 MHz
			2.44	2 00 GH	HZ	5.65 c	iBm IBm	RINCTION	RING	INN HOTH	BINCTIO	NWHE	<u>Auto</u> Man		N 1	39 539 1 7		2.46	52 00 GH	iz	5.61 d	Bm Bm	NATION	INCTION LADTE	FUNATI	IN VALUE	<u>Auto</u> Man
3 4 6			2.40										Freq Offset 0 Hz	345													Freq Offset 0 Hz
7 8 9 10														7 8 9 10													
11 12										SIAUR				11 12										*1411			
5 7 9 10 11 12														6 7 9 10 11 12													

Product	:	BlackBerry Music Gateway
Test Item	:	Channel Number
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

Frequency Range	Measurement	Required Limit	Result
(MHz)	(Hopping Channel)	(Hopping Channel)	
2402 ~ 2480	79	>75	Pass

2402-2421MHz

2422-2441MHz

Agiles	gilani Spaci rum Andiyzar - Swapi SA Agilan														Agiliant Spactrum Analyzar - Swapt SA										
Cen	L nter i	Freq	2.4115	00000 0	SH7	Tric Fre	e Run	Avg T)	ype: Log-Pwr) HONOUPHINE TRACE 1	23456	Frequency	Cer	nter	Freq	2.431	500000 0	GH7	Trin: Fre	e Run	Avg Typ	e: Log-Pwr) HEITE 143 TRA	MIN 21,2111 (* 123456 15 Montology	Frequency
	IFGuintLow Attan: 20 dB Loci P NNNN												_				ľ	PNU: Fast 1. FGuin:Luw	Atten: 20	Bb		Mkr	2 2 4 4 1		Auto Tune
10 d	B/div	Re	f 10.00	dBm					IVIKI	4.36	dBm		10 d	B/div	Re	ef 10.00	dBm					IVIN	4.	23 dBm	
-1111	ľ.	~	الشريانكم	~~~~	هر ۲۹	N. M. M	n	مراهده	n a m	M.M.M.M	u, R	Center Freq 2.411500000 GHz	-1111		-~~	والسور بالمحلم	العرراطي ا	ب ام	en.m	A.A	ما _م يلام.	-M-M	M_M	Λ,M	Center Freq 2.431500000 GHz
-300 -300 400												Start Freq 2.401500000 GHz	-2110 -30.0 -40.0												Start Freq 2.421500000 GHz
-80.0 /U.U -80.0		_						-				Stop Freq 2.421600000 GHz	-60.0 70.0 -60.0		_										Stop Freq 2.441500000 GHz
Star #Re	t 2.4 s BV	0150 / 100	GHz kHz		#VE	3W 100 kHz	2	· ·	#Sweep	Stop 2.4215 500 ms (100	i0 GHz)1 pts)	CF Step 2.000000 MHz	Sta #Re	rt 2.4 es Bl	42150 N 100	GHz kHz		#VB	W 100 kHz	:	<u> </u>	#Sweep	Stop 2.4 500 ms	4150 GHz (1001 pts)	CF Step 2.000000 MHz
1 2	N N	1 f 1 f		2.402 2.421	00 GHz 00 GHz	4.37 d 4.36 d	iBm iBm	INCLUM	HINCHNWDH	TINGTINW	410	<u>Auto</u> Man	1	N N N	1 f 1 f		× 2.422 2.441	00 GHz 00 GHz	2.84 d 4.23 d	Bm Bm	NULIN	NUTINYIDI	LINCI	IN SOUTH	<u>Auto</u> Man
3 4 6												Freq Offset 0 Hz	3 4 5												Freq Offset 0 Hz
7 8 9	-	+			-		-	-			=			-				+			-			=	
10 11 12													10 11 12												
Most I													Moto -									STATU			

2442-2461MHz

2462-2480MHz

Agilant Spectrum Analyzer - Swept SA						Arjilant Spactrum Analyzer - Swept SA									
Center Freq 2.451500000 GHz	AVG Type: Log-Pw	0 0412044004 20,2011 7 10AC 123450	Frequency	Cen	ter Fred	g 2.47	71500000 GHz	Trin Free F	Avg	Type: Log-Pwr	DR:1/25PMIN TRACE 12	жцянт 3456	Frequency		
PN0: Fast Free Run IFGuin:Luw Atten: 20 dB		UEI P NNNN		PN0: Fast High Previous IFGuin:Low Atten: 20 dB						UEI P NNNN					
10 dB/div Ref 10.00 dBm		10 dB/div Ref 10.00 dBm						Mkr2 2.480 00 GHz 2.83 dBm							
	n M. M. M. M.	n My My My A	Center Freq 2.451500000 GHz	Log 0.00 -1111	M'n	, M.,	M. M. M.	لهدالله سالكم	M.M.M.	المصوحة يحسب الألا			Center Freq 2.471500000 GHz		
-30.0 40.0 -50.0			Start Freq 2.441500000 GHz	-3110 40.0 -5110								h	Start Freq 2.461500000 GHz		
-300 /UU -300			Stop Freq 2.451500000 GHz	-80.0 70.0 -80.0									Stop Freq 2.481500000 GHz		
Start 2.44150 GHz #Res BW 100 kHz #VBW 100 k	CF Step 2.000000 MHz	Star #Re:	Start 2.46150 GHz Stop 2.48150 #Res BW 100 kHz #VBW 100 kHz #Sweep 500 ms (1001								CF Step 2.000000 MHz				
XIII XIIII XIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	dBm dBm	TUNCHIN WITH	Auto Man	1	N 1 N 1	f f	2.482 00 GHz 2.480 00 GHz	4.14 dBr 2.83 dBr	n n	TINCIEN WD1	II IINCIIN W		<u>Auto</u> Man		
			Freq Offset 0 Hz	4 6 6									Freq Offset 0 Hz		
/ 9 10				7 8 9 10		+						=			
11 12 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	514	ILES	1	11 12 MENA	Allanme	ent Com	picted			SIAR	Es .				
		1			- J										