

FCC Test Report

(Class II Permissive Change)

Product Name	Intel® Dual Band Wireless-AC 7260
Model No.	7260NGW
FCC ID.	PD97260NG, PD97260NGU

^{*} FCC ID: PD97260H (For OEM factory installation)

^{*} FCC ID: PD97260HU (For user installation)

Applicant	Intel Mobile Communications
Address	100 Center Point Circle, Suite 200 Columbia, South Carolina 29210 USA

Date of Receipt	June 24, 2014
Issued Date	July 24, 2014
Report No.	1460580R-RFUSP23V00
Report Version	V1.0





The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of QuieTek Corporation.



Test Report

Issued Date: July 24, 2014

Report No.: 1460580R-RFUSP23V00



Product Name	Intel® Dual Band Wireless-AC 7260		
Applicant	Intel Mobile Communications		
Address	100 Center Point Circle, Suite 200 Columbia, South Carolina 29210 USA		
Manufacturer	Intel Mobile Communications		
Model No.	7260NGW		
FCC ID.	PD97260NG, PD97260NGU		
EUT Rated Voltage	DC 3.3V (via Mini-PCI Express slot)		
EUT Test Voltage	AC 120V/ 60Hz		
Trade Name	Intel		
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2012		
	ANSI C63.10: 2009		
Test Result	Complied		

Documented By	:_	GenTe Chang
		(Senior Adm. Specialist / Genie Chang)
Tested By	:	Vincent chu
	_	(Engineer / Vincent Chu)
Approved By	:	Stands
		(Director / Vincent Lin)



TABLE OF CONTENTS

Des	scription	Page
1.	GENERAL INFORMATION	4
1.1.	EUT Description	4
1.2.	Operational Description	6
1.3.	Tested System Details	7
1.4.	Configuration of Tested System	7
1.5.	EUT Exercise Software	7
1.6.	Test Facility	8
2.	PEAK POWER OUTPUT	9
2.1.	Test Equipment	9
2.2.	Test Setup	9
2.3.	Limit	9
2.4.	Test Procedure	9
2.5.	Uncertainty	9
2.6.	Test Result of Peak Power Output	10
3.	RADIATED EMISSION	
3.1.	Test Equipment	12
3.2.	Test Setup	12
3.3.	Limits	13
3.4.	Test Procedure	14
3.5.	Uncertainty	14
3.6.	Test Result of Radiated Emission	15
4.	BAND EDGE	23
4.1.	Test Equipment	23
4.2.	Test Setup	24
4.3.	Limit	25
4.4.	Test Procedure	25
4.5.	Uncertainty	25
4.6.	Test Result of Band Edge	26
5.	EMI REDUCTION METHOD DURING COMPLIANCE TESTING	34
A ttooh	mant 1. EUT Tost Dhotographs	

Attachment 1: EUT Test Photographs
Attachment 2: EUT Detailed Photographs



1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Intel® Dual Band Wireless-AC 7260	
Trade Name	Intel	
Model No.	7260NGW	
FCC ID.	PD97260NG, PD97260NGU	
Frequency Range	2402 – 2480MHz	
Channel Number	79	
Type of Modulation	alation FHSS: GFSK(1Mbps) / π /4DQPSK(2Mbps) / 8DPSK(3Mbps)	
Antenna Type	PIFA / Dipole Antenna	
Channel Control	Auto	
Antenna Gain	Refer to the table "Antenna List"	
Contain Module	Intel / 7260NGW	

Antenna List

1	No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	1	Whayu Industrial	C923-510079-A(Main)	Dipole	1.78dBi for 2.4GHz
		Foxconn(NWing)	WDAN-DBTNYE37-DH(Aux)	PIFA	-0.77dBi for 2.4GHz

Note: The antenna of EUT is conform to FCC 15.203.



Center Frequency of Each Channel:

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		

Note:

- 1. The EUT is an Intel® Dual Band Wireless-AC 7260 with a built-in WLAN and Bluetooth V4.0 V3.0, V2.1+EDR transceiver, this report for Bluetooth V3.0, V2.1+EDR.
- 2. 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.
- 4. Bluetooth operation was evaluated at both 1Mb/s and 3Mb/s data rates. 2Mb/s data rate was found, through pre-testing, to produce emissions similar to those for 3Mb/s.
- 5. This is to request a Class II permissive change for FCC ID: PD97260NG, PD97260NGU, originally granted on 04/22/2013.

The major change filed under this application is:

Change #1: Addition new antenna, antenna type is different with the original application.

(Antenna type: PIFA / Dipole antenna)

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



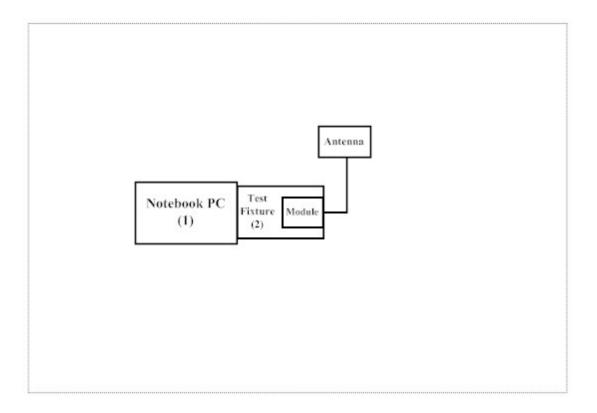
1.3. Tested System Details

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

Prod	uct	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	N/A	N/A	N/A
2	Test Fixture	INTEL	N/A	N/A	N/A

Signal Cable Type	Signal cable Description	
N/A		

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute "DRTU Ver1.7.3" program on the Notebook PC.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start transmits continually.
- (5) Verify that the EUT works properly.



1.6. Test Facility

Ambient conditions in the laboratory:

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

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

QuieTek Corporation's Web Site: http://www.quietek.com/tw/ctg/cts/accreditations.htm

The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: http://www.quietek.com/

Site Description: File on

Federal Communications Commission

FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046

Registration Number: 92195

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: service@quietek.com

FCC Accreditation Number: TW1014



2. Peak Power Output

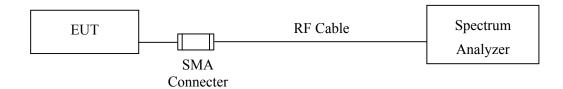
2.1. Test Equipment

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Power Mete	er Anritsu	ML2495A/6K00003357	May, 2014
Power Sens	or Anritsu	MA2411B/0738448	Jun., 2014
X Spectrum Anal	lyzer Agilent	N9010A / MY48030495	Apr., 2014

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



2.3. Limit

The maximum peak power shall be less 1Watt.

2.4. Test Procedure

The EUT was setup to ANSI C63.10: 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

2.5. Uncertainty

± 1.27 dB



2.6. Test Result of Peak Power Output

Product : Intel® Dual Band Wireless-AC 7260

Test Item : Peak Power Output

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 1Mbps (GFSK)

Channel No.	Frequency Measuremen		Required Limit	Result
	(MHz)	(dBm)		
Channel 00	2402.00	4.42	1 Watt= 30 dBm	Pass
Channel 38	2440.00	6.61	1 Watt= 30 dBm	Pass
Channel 78	2480.00	6.89	1 Watt= 30 dBm	Pass



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	1.54	1 Watt= 30 dBm	Pass
Channel 38	2440.00	6.48	1 Watt= 30 dBm	Pass
Channel 78	2480.00	7.09	1 Watt= 30 dBm	Pass



Radiated Emission 3.

Test Equipment 3.1.

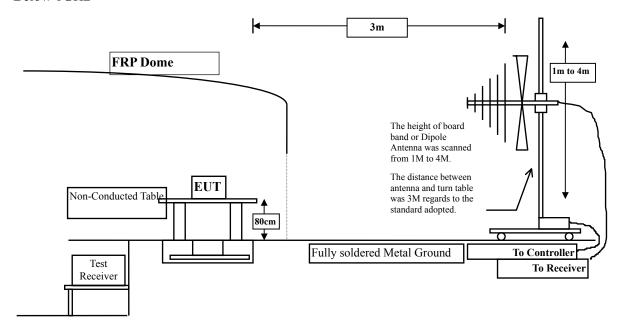
The following test equipments are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
⊠Site # 3	X	Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2014
	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2014
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2013
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2014
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2014
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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

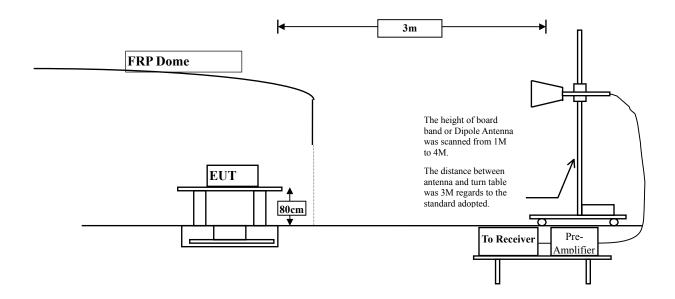
3.2. **Test Setup**

Below 1GHz





Above 1GHz



3.3. 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	Field strength (microvolts/meter)	Measurement distance (meter)				
0.009-0.490	2400/F(kHz)	300				
0.490-1.705	24000/F(kHz)	30				
1.705-30	30	30				
30-88	100	3				
88-216	150	3				
216-960	200	3				
Above 960	500	3				

Remarks:

- 1. RF Voltage $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 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.



3.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009 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 C63.10, 2009 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~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 9kHz - 10th Harmonic of fundamental was investigated.

3.5. Uncertainty

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



3.6. Test Result of Radiated Emission

Product : Intel® Dual Band Wireless-AC 7260

Test Item : Harmonic Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 1Mbps (GFSK)(2402MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.327	37.650	40.977	-33.023	74.000
7206.000	10.136	36.560	46.696	-27.304	74.000
9608.000	13.706	35.580	49.286	-24.714	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4804.000	6.638	37.260	43.897	-30.103	74.000
7206.000	11.005	36.020	47.025	-26.975	74.000
9608.000	14.103	35.980	50.083	-23.917	74.000
Average					
Detector:					

- 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.



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	2.992	36.020	39.013	-34.987	74.000
7323.000	11.846	36.260	48.107	-25.893	74.000
9764.000	12.563	36.260	48.823	-25.177	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4882.000	5.713	35.450	41.164	-32.836	74.000
7323.000	12.727	35.560	48.288	-25.712	74.000
9764.000	13.028	36.260	49.288	-24.712	74.000
Average					
Detector:					

- 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.



Test Item : Harmonic Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 1Mbps (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	36.560	39.320	-34.680	74.000
7440.000	12.567	36.020	48.586	-25.414	74.000
9920.000	13.456	35.150	48.606	-25.394	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4960.000	5.557	36.150	41.707	-32.293	74.000
7440.000	13.426	35.150	48.575	-25.425	74.000
9920.000	13.958	36.230	50.188	-23.812	74.000
Average					
Detector:					

- 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.



Test Item : Harmonic Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit - 3Mbps (8DPSK)(2402MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.327	36.560	39.887	-34.113	74.000
7206.000	10.136	35.840	45.976	-28.024	74.000
9608.000	13.706	35.260	48.966	-25.034	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4804.000	6.638	36.560	43.197	-30.803	74.000
7206.000	11.005	35.260	46.265	-27.735	74.000
9608.000	14.103	35.560	49.663	-24.337	74.000
Average					
Detector:					

- 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.



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	36.560	39.561	-34.439	74.000
7223.000	10.428	35.120	45.548	-28.452	74.000
9764.000	12.563	35.230	47.793	-26.207	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4882.000	5.713	36.230	41.944	-32.056	74.000
7323.000	12.727	36.040	48.768	-25.232	74.000
9764.000	13.028	35.980	49.008	-24.992	74.000
Average					
Detector:					

- 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.



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	36.890	39.650	-34.350	74.000
7440.000	12.567	35.980	48.546	-25.454	74.000
9920.000	13.456	36.230	49.686	-24.314	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4960.000	5.557	36.590	42.147	-31.853	74.000
7440.000	13.426	35.980	49.405	-24.595	74.000
9920.000	13.958	35.980	49.938	-24.062	74.000
Average					
Detector:					

- 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.



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					
62.980	-13.103	44.347	31.244	-8.756	40.000
179.380	-11.771	40.095	28.324	-15.176	43.500
340.400	-3.859	29.223	25.364	-20.636	46.000
520.820	1.762	26.136	27.898	-18.102	46.000
660.500	2.097	26.732	28.829	-17.171	46.000
809.880	5.049	23.884	28.933	-17.067	46.000
Vertical					
132.820	-4.440	40.856	36.416	-7.084	43.500
239.520	-8.581	37.570	28.990	-17.010	46.000
400.540	-5.156	27.056	21.901	-24.099	46.000
559.620	-5.246	30.509	25.263	-20.737	46.000
745.860	1.828	25.134	26.962	-19.038	46.000
920.460	5.517	22.393	27.910	-18.090	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.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



Test Item : General 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					
62.980	-13.103	45.625	32.522	-7.478	40.000
319.060	-4.317	32.985	28.668	-17.332	46.000
480.080	-0.329	25.961	25.632	-20.368	46.000
660.500	2.097	27.346	29.443	-16.557	46.000
840.920	5.191	24.537	29.728	-16.272	46.000
951.500	6.641	22.386	29.027	-16.973	46.000
Vertical					
55.220	-4.699	35.752	31.053	-8.947	40.000
192.960	-9.878	37.995	28.117	-15.383	43.500
400.540	-5.156	27.821	22.666	-23.334	46.000
520.820	-0.298	25.039	24.741	-21.259	46.000
745.860	1.828	23.672	25.500	-20.500	46.000
932.100	6.152	21.033	27.185	-18.815	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.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



4. Band Edge

4.1. 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., 2014	_
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2014	
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014	

RF Radiated Measurement:

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

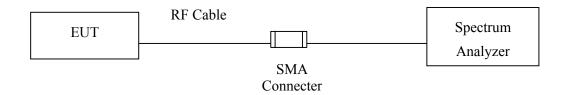
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
⊠Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2014
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2013
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2014
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2014
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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



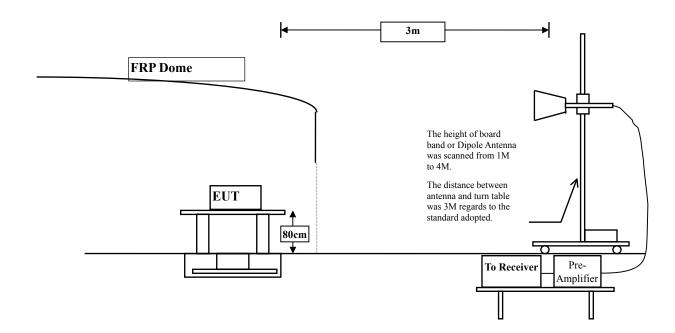
4.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:

Above 1GHz





4.3. 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)).

4.4. 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 C63.10: 2009 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 C63.10: 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

4.5. Uncertainty

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



4.6. Test Result of Band Edge

Product : Intel® Dual Band Wireless-AC 7260

Test Item : Band Edge
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 1Mbps (GFSK)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level [dB	Emission Level	Detector
Pole	[MHz]	[dB/m]	μV]	$[dB \mu V/m]$	
Horizontal	2402	31.573	64.35	95.924	Peak
Horizontal	2402	31.573	51.86	83.434	Average
Vertical	2402	30.917	61.38	92.297	Peak
Vertical	2402	30.917	49.44	80.357	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Bana Bage						
Antenna Pole	Test Frequency (MHz)	Fundamental (dBµV/m)	Δ (dB)	Band Edge Field Strength (dBµV/m)	Limit (dBµV/m)	Detector
Horizontal	2341.5	95.924	50.75	45.174	74.000	Peak
Horizontal	2341.9	83.434	49.47	33.964	54.000	Average
Vertical	2341.5	92.297	50.75	41.547	74.000	Peak
Vertical	2341.9	80.357	49.47	30.887	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

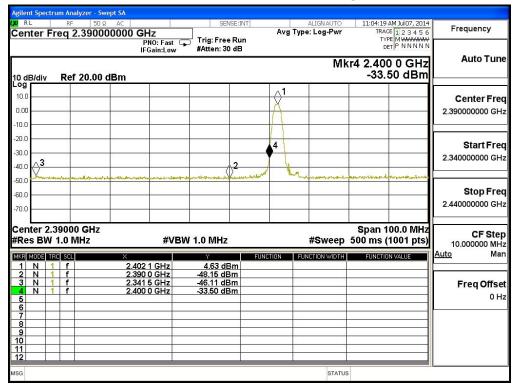
Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

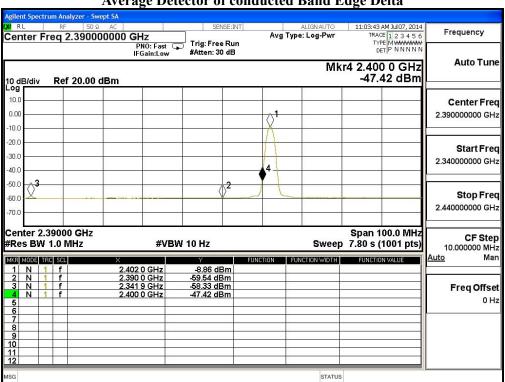
 Δ = Conducted Band Edge Delta (Peak or Average)



Peak Detector of conducted Band Edge Delta



Average Detector of conducted Band Edge Delta





Test Item : Band Edge Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 1Mbps (GFSK)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level Emission Level		Detector
Pole	[MHz]	[dB/m]	[dB μ V]	[dB(uV/m)]	
Horizontal	2480	32.155	63.74	95.896	Peak
Horizontal	2480	32.155	51.63	83.786	Average
Vertical	2480	31.412	59.98	91.392	Peak
Vertical	2480	31.412	48.79	80.202	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz
Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

2414 2450 1050 2404						
Antenna Pole	Test Frequency (MHz)	Fundamental (dBμV/m)	Δ (dB)	Band Edge Field Strength (dBµV/m)	Limit (dBµV/m)	Detector
Horizontal	2485.1	95.896	47.43	48.466	74.000	Peak
Horizontal	2483.5	83.786	49.18	34.606	54.000	Average
Vertical	2485.1	91.392	47.43	43.962	74.000	Peak
Vertical	2483.5	80.202	49.18	31.022	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)



Peak Detector of conducted Band Edge Delta 11:11:02 AM Jul 07, 2014 TRACE 1 2 3 4 5 6 TYPE M WWWWWW DET P N N N N N ALIGNAUTO
Avg Type: Log-Pwr Center Freq 2.483500000 GHz Frequency Trig: Free Run #Atten: 30 dB PNO: Fast IFGain:Low **Auto Tune** Mkr3 2.485 1 GHz -43.23 dBm Ref 20.00 dBm 10 dB/div Log **⊘**1 10.0 Center Freq 0.00 2.483500000 GHz -20.0 Start Freq -30.0 2.433500000 GHz 40.0 -50.0 Stop Freq -60.0 2.533500000 GHz Center 2.48350 GHz Span 100.0 MHz CF Step 10.000000 MHz #Res BW 1.0 MHz **#VBW 1.0 MHz** #Sweep 500 ms (1001 pts) MKR MODE TRC SCL FUNCTION FUNCTION WIDTH FUNCTION VALUE <u>Auto</u> Man 2.480 1 GHz 2.483 5 GHz 2.485 1 GHz 4.20 dBm -46.32 dBm -43.23 dBm Freq Offset 0 Hz

STATUS

Average Detector of conducted Band Edge Delta Center Freq 2.483500000 GHz Avg Type: Log-Pwr Frequency Trig: Free Run #Atten: 30 dB PNO: Fast 🖵 IFGain:Low **Auto Tune** Mkr2 2.483 5 GHz 10 dB/div Log -58.33 dBm Ref 20.00 dBm Center Freq 0.00 2.483500000 GHz -10.0 20.0 Start Freq 30.0 2.433500000 GHz 40.0 -50.0 Stop Freq -60.0 2.533500000 GHz Span 100.0 MHz Center 2.48350 GHz #Res BW 1.0 MHz CF Step 10.000000 MHz Sweep 7.80 s (1001 pts) **#VBW 10 Hz** Auto FUNCTION FUNCTION WIDTH MKR MODE TRC SCL FUNCTION VALUE -9.15 dBm -58.33 dBm 2.480 0 GHz 2.483 5 GHz 1 N 1 f 2 N 1 f Freq Offset 0 Hz 8 9 10 11 12



Test Item : Band Edge Test Site : No.3 OATS

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

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB μ V]	Emission Level [dB μ V/m]	Detector
Horizontal	2402	31.573	63.12	94.694	Peak
Horizontal	2402	31.573	48.65	80.224	Average
Vertical	2402	30.917	60.14	91.057	Peak
Vertical	2402	30.917	46.58	77.497	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBµV/m)	Δ (dB)	Band Edge Field Strength (dBµV/m)	Limit (dBµV/m)	Detector
Horizontal	2389.3	94.694	45.98	48.714	74.000	Peak
Horizontal	2341.9	80.224	45.96	34.264	54.000	Average
Vertical	2389.3	91.057	45.98	45.077	74.000	Peak
Vertical	2341.9	77.497	45.96	31.537	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

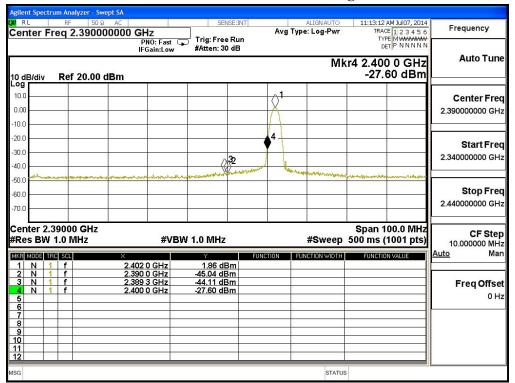
Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

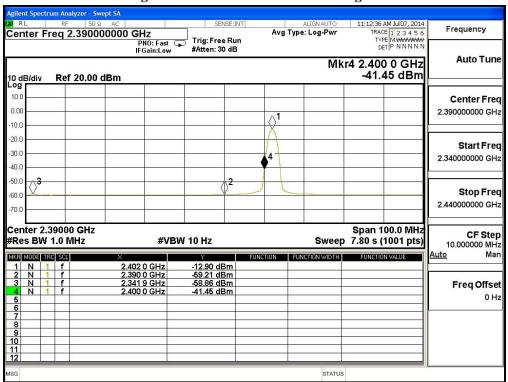
 Δ = Conducted Band Edge Delta (Peak or Average)



Peak Detector of conducted Band Edge Delta



Average Detector of conducted Band Edge Delta





Test Item : Band Edge Test Site : No.3 OATS

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

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB μ V]	Emission Level [dB(uV/m)]	Detector
Horizontal	2480	32.155	63.13	95.286	Peak
Horizontal	2480	32.155	49.64	81.796	Average
Vertical	2480	31.412	59.78	91.192	Peak
Vertical	2480	31.412	46.94	78.352	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz
Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBµV/m)	Δ (dB)	Band Edge Field Strength (dBµV/m)	Limit (dBµV/m)	Detector
Horizontal	2483.8	95.286	44.10	51.186	74.000	Peak
Horizontal	2483.5	81.796	44.48	37.316	54.000	Average
Vertical	2483.8	91.192	44.10	47.092	74.000	Peak
Vertical	2483.5	78.352	44.48	33.872	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)



Peak Detector of conducted Band Edge Delta AVg Type: Log-Pwr TRACE | 12 3 4 5 6 5 TYPE M VM/M/M DET | P N N N N N N Center Freq 2.483500000 GHz Frequency Trig: Free Run #Atten: 30 dB PNO: Fast IFGain:Low **Auto Tune** Mkr3 2.483 8 GHz 10 dB/div Ref 20.00 dBm -42.65 dBm 10.0 Center Freq 0.00 2.483500000 GHz -20.0 Start Freq -30.0 2.433500000 GHz 40.0 50.0 Stop Freq -60.0 2.533500000 GHz Center 2.48350 GHz Span 100.0 MHz CF Step 10.000000 MHz #Res BW 1.0 MHz **#VBW 1.0 MHz** #Sweep 500 ms (1001 pts) MKR MODE TRC SCL FUNCTION FUNCTION WIDTH FUNCTION VALUE <u>Auto</u> Man 2.480 0 GHz 2.483 5 GHz 2.483 8 GHz 1.45 dBm -44.17 dBm -42.65 dBm Freq Offset 0 Hz

STATUS

Average Detector of conducted Band Edge Delta 11:14:19 AM Jul 07, 2014 TRACE 1 2 3 4 5 6 TYPE M WWWWWW DET P N N N N N Frequency Center Freq 2.483500000 GHz Avg Type: Log-Pwr Trig: Free Run PNO: Fast IFGain:Low #Atten: 30 dB **Auto Tune** Mkr2 2.483 5 GHz -57.68 dBm 10 dB/div Log Ref 20.00 dBm 10.0 Center Freq 0.00 2.483500000 GHz -10.0 -20.0 Start Freq 30.0 2.433500000 GHz 40.0 -50.0 Stop Freq -60.0 2.533500000 GHz Center 2.48350 GHz Span 100.0 MHz **CF Step #VBW 10 Hz** Sweep 7.80 s (1001 pts) #Res BW 1.0 MHz 10.000000 MHz Auto Man MKR MODE TRC SCL FUNCTION FUNCTION WIDTH -13.20 dBm -57.68 dBm 2.480 1 GHz 2.483 5 GHz Freq Offset 0 Hz



5. EMI Reduction Method During Compliance Testing

No modification was made during testing.