

# FCC Test Report (Class II Permissive Change)

Product Name	Intel® Dual Band Wireless-AC 8260
Model No.	8260NGW
FCC ID.	PD98260NG, PD98260NGU

\*FCC ID: PD98260NG (for OEM factory install)

\*FCC ID: PD98260NGU (for User Installation w/bios lock feature.)

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

Date of Receipt	June 03, 2015
Issued Date	Oct. 20, 2016
Report No.	1560147R-RFUSP01V00-B
Report Version	V2.0





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 report 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: Oct. 20, 2016

Report No.: 1560147R-RFUSP01V00-B



Product Name	Intel® Dual Band Wireless-AC 8260	
Applicant	Intel Mobile Communications	
Address	100 Center Point Circle, Suite 200 Columbia, South Carolina 29210 USA	
Manufacturer	Intel Mobile Communications	
Model No.	8260NGW	
FCC ID.	PD98260NG, PD98260NGU	
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: 2015	
	ANSI C63.4: 2014, ANSI C63.10: 2013	
	KDB 558074 D01 DTS Meas Guidance v03r05	
Test Result	Complied	

Documented By	:	Jinn Chen
		( Senior Adm. Specialist / Jinn Chen )
Tested By	:	Nick Chen
		(Engineer / Nick Chen)
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	
1.4.	Configuration of Tested System	
1.5.	EUT Exercise Software	7
1.6.	Test Facility	8
1.7.	List of Test Item and Equipment	9
2.	PEAK POWER OUTPUT	10
2.1.	Test Setup	10
2.2.	Limit	10
2.3.	Test Procedure	10
2.4.	Uncertainty	10
2.5.	Test Result of Peak Power Output	11
3.	RADIATED EMISSION	12
3.1.	Test Setup	12
3.2.	Limits	
3.3.	Test Procedure	14
3.4.	Uncertainty	
3.5.	Test Result of Radiated Emission	15
4.	BAND EDGE	19
4.1.	Test Setup	19
4.2.	Limit	
4.3.	Test Procedure	19
4.4.	Uncertainty	
4.5.	Test Result of Band Edge	
5	EMI REDUCTION METHOD DURING COMPLIANCE TESTING	2.4

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



# 1. GENERAL INFORMATION

# **1.1.** EUT Description

Product Name	Intel® Dual Band Wireless-AC 8260	
Trade Name	Intel	
Model No.	8260NGW	
FCC ID.	PD98260NG, PD98260NGU	
Frequency Range	2402 – 2480MHz	
Channel Number	V4.0: 40CH	
Type of Modulation	V4.0: GFSK(1Mbps)	
Antenna Type	Dipole Antenna	
Channel Control	Auto	
Antenna Gain	Refer to the table "Antenna List"	

## Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	WIESON	GY121HT0321-003-H (External)	Dipole	2.89 dBi for 2.4GHz

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



#### Center Frequency of Each Channel: (For V4.0)

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 01:	2404 MHz	Channel 02:	2406 MHz	Channel 03:	2408 MHz
Channel 04:	2410 MHz	Channel 05:	2412 MHz	Channel 06:	2414 MHz	Channel 07:	2416 MHz
Channel 08:	2418 MHz	Channel 09:	2420 MHz	Channel 10:	2422 MHz	Channel 11:	2424 MHz
Channel 12:	2426 MHz	Channel 13:	2428 MHz	Channel 14:	2430 MHz	Channel 15:	2432 MHz
Channel 16:	2434 MHz	Channel 17:	2436 MHz	Channel 18:	2438 MHz	Channel 19:	2440 MHz
Channel 20:	2442 MHz	Channel 21:	2444 MHz	Channel 22:	2446 MHz	Channel 23:	2448 MHz
Channel 24:	2450 MHz	Channel 25:	2452 MHz	Channel 26:	2454 MHz	Channel 27:	2456 MHz
Channel 28:	2458 MHz	Channel 29:	2460 MHz	Channel 30:	2462 MHz	Channel 31:	2464 MHz
Channel 32:	2466 MHz	Channel 33:	2468 MHz	Channel 34:	2470 MHz	Channel 35:	2472 MHz
Channel 36:	2474 MHz	Channel 37:	2476 MHz	Channel 38:	2478 MHz	Channel 39:	2480 MHz

#### Note:

- 1. The EUT is an Intel® Dual Band Wireless-AC 8260 with a built-in WLAN Bluetooth transceiver, this report for Bluetooth 4.0.
- 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. This is to request a Class II permissive change for FCC ID: PD98260NG (originally granted on 05/27/2015) and PD98260NGU (originally granted on 05/27/2015).

The major change filed under this application is:

Change #1: Addition of new dipole type antenna, WIESON, part no. GY121HT0321-003-H (External). This antenna will be restricted to mobile category computers and stationary desktop computers.

Test Mode	Mode 1: Transmit - BLE (GFSK)
10st Wiode	Mode 1. Hunshit BEE (OI SK)



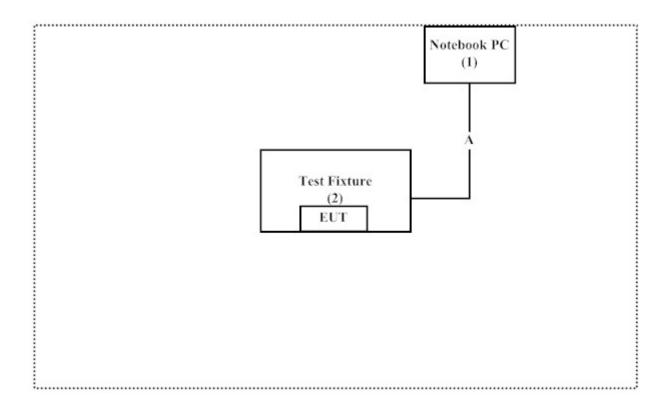
## 1.3. Tested System Details

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	Notebook PC	DELL	N/A	N/A	Non-Shielded, 1.8m
2	Test Fixture	Intel	N/A	N/A	N/A

Sign	al Cable Type	Signal cable Description
A	Test Fixture Cable	Non-Shielded, 1.0m

# 1.4. Configuration of Tested System



## 1.5. EUT Exercise Software

- (1) Setup the EUT and Peripherals as shown on 1.4
- (2) Execute software "DRTU (Ver 1.8.1-01253)" on the Notebook PC.
- (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

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: <a href="http://www.quietek.com/chinese/about/certificates.aspx?bval=5">http://www.quietek.com/chinese/about/certificates.aspx?bval=5</a>
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <a href="http://www.quietek.com/">http://www.quietek.com/</a>

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: <a href="mailto:service@quietek.com">service@quietek.com</a>

FCC Accreditation Number: TW1014



# 1.7. List of Test Item and Equipment

#### For Conducted measurements /CB3

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	Agilent	N9010A	MY48030495	2016/7/22	2017/7/21
X	Power Meter	Anritsu	ML2495A	6K00003357	2016/6/23	2017/6/22
X	Power Sensor	Agilent	U2021XA	MY53400007	2015/11/26	2016/11/24
X	Power Sensor	Agilent	U2021XA	MY53400006	2015/11/26	2016/11/24
X	Power Sensor	Agilent	U2021XA	MY53360005	2015/11/26	2016/11/24
X	Power Sensor	Agilent	U2021XA	MY53400008	2015/11/26	2016/11/24
	Signal Generator	Agilent	N5182B	MY53050685	2016/5/31	2017/5/30
	Analog Signal Geator	Agilent	E8257DK/E825	MY44320633	2016/9/13	2017/9/12

## For Radiated measurements /Site3/CB10/CB8

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSP40	100170	2016/1/5	2017/1/3
	Loop Antenna	TESEQ	HLA6121	37133	2016/3/18	2017/3/17
X	Bi-Log Antenna	Schaffner Chase	CBL6112B	2707	2016/6/11	2017/6/10
X	Horn Antenna	ETS-Lindgren	3117	00203761	2015/10/15	2016/10/13
	Horn Antenna	Schwarzbeck	BBHA9170	209	2016/4/14	2017/4/13
X	Pre-Amplifier	QuieTek	QTK-LK-E-I-A	N/A	2016/6/16	2017/6/15
X	Pre-Amplifier	EMCI	EMC012630SE	980210	2016/1/26	2017/1/24
	Pre-Amplifier	NARDA WE	DBL-1840N506	013	2016/8/6	2017/8/4
X	Filter	MicroTRON	BRM50701	019	2015/10/20	2016/10/18
	Filter	Microwave Circuits	N0257881	36681	2015/12/7	2016/12/5
X	EMI Test Receiver	R&S	ESCS 30	838251/001	2016/7/21	2017/7/20
X	Coaxial Cable	QTK(Arnist)	RG 214	LC003-RG	2016/6/16	2017/6/15
X	Coaxial signal switch	Anritsu	MP59B	6201415889	2016/6/16	2017/6/15

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked with "X" are used to measure the final test results.
- 3. Test Software version: Keysight EN300328&EN301893 Test System V2.151229.



## 2. Peak Power Output

## 2.1. Test Setup



## **2.2.** Limit

The maximum peak power shall be less 1Watt.

## 2.3. Test Procedure

Tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.2 PKPM1 Peak power meter method.

## 2.4. Uncertainty

 $\pm$  1.27 dB



# 2.5. Test Result of Peak Power Output

Product : Intel® Dual Band Wireless-AC 8260

Test Item : Peak Power Output

Test Site : No.3 OATS

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

Test Date : 2016/09/22

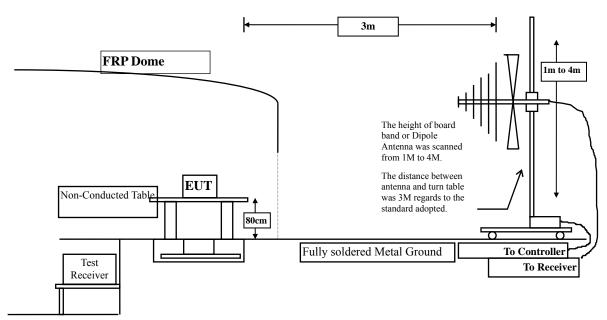
Channel No.	Frequency	Measurement	Required Limit	Result
	(MHz)	(dBm)		
Channel 00	2402.00	9.84	1 Watt= 30 dBm	Pass
Channel 19	2440.00	9.96	1 Watt= 30 dBm	Pass
Channel 39	2480.00	9.89	1 Watt= 30 dBm	Pass



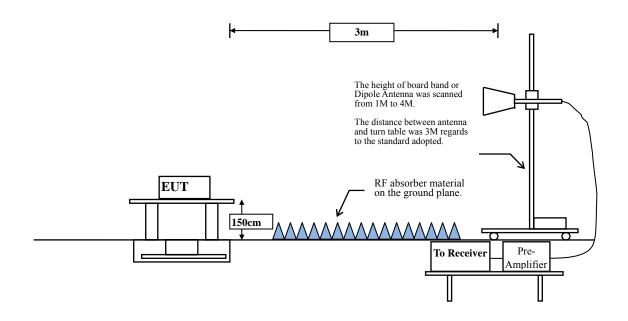
## 3. Radiated Emission

## 3.1. Test Setup

Below 1GHz



Above 1GHz





#### 3.2. 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	Measurement distance							
IVIIIZ	(microvolts/meter)	(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 ( $dB\mu V$ ) = 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.

Page: 13 of 26



#### **3.3.** Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 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 between 1 meter and 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: 2013 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 in the Open Area Test Site on the Final Measurement.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

#### 3.4. Uncertainty

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



#### 3.5. Test Result of Radiated Emission

Product : Intel® Dual Band Wireless-AC 8260

Test Item : Harmonic Radiated Emission

Test Site : No.3 OATS

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

Test Date : 2016/09/26

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4804.000	2.511	39.431	41.941	-32.059	74.000
7206.000	9.511	42.572	52.083	-21.917	74.000
9608.000	10.394	41.029	51.423	-22.577	74.000
<b>Average Detector:</b>					
					54.000
Vertical					
Peak Detector:					
4804.000	2.923	46.427	49.349	-24.651	74.000
7206.000	9.988	42.128	52.117	-21.883	74.000
9608.000	10.847	40.727	51.574	-22.426	74.000
Average Detector:					
					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.



Test Item : Harmonic Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - BLE (GFSK) (2440MHz)

Test Date : 2016/09/26

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4880.000	2.038	40.756	42.794	-31.206	74.000
7320.000	9.699	43.799	53.498	-20.502	74.000
9760.000	9.665	40.532	50.197	-23.803	74.000
Average Detector:					
					54.000
Vertical					
<b>Peak Detector:</b>					
4880.000	2.499	45.882	48.381	-25.619	74.000
7320.000	10.303	43.183	53.486	-20.514	74.000
9760.000	10.299	40.514	50.814	-23.186	74.000
Average Detector:					-1.00
					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.



Test Item : Harmonic Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - BLE (GFSK) (2480MHz)

Test Date : 2016/09/26

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					_
<b>Peak Detector:</b>					
4960.000	2.582	38.505	41.087	-32.913	74.000
7440.000	10.555	43.062	53.617	-20.383	74.000
9920.000	10.206	40.643	50.849	-23.151	74.000
<b>Average Detector:</b>					
					54.000
Vertical					
Peak Detector:					
	2 200	44.050	40.050	25.722	<b>=</b> 4 000
4960.000	3.398	44.879	48.278	-25.722	74.000
7440.000	11.214	42.260	53.474	-20.526	74.000
9920.000	11.245	40.489	51.734	-22.266	74.000
Axiomaga Dotactom					
Average Detector:					<b>7.4</b> .000
					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.



Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - BLE (GFSK) (2440MHz)

Test Date : 2016/09/26

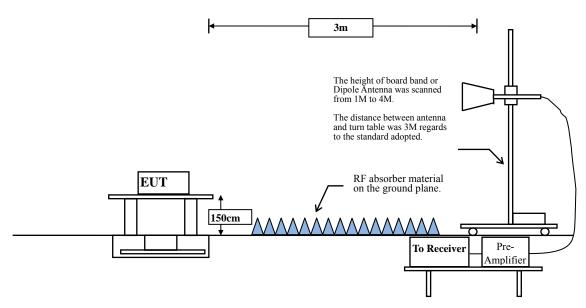
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
131.480	-7.418	40.702	33.284	-10.216	43.500
259.370	-5.447	35.565	30.118	-15.882	46.000
409.940	-0.069	36.159	36.089	-9.911	46.000
607.610	3.999	31.592	35.591	-10.409	46.000
764.830	5.093	25.379	30.473	-15.527	46.000
925.170	6.654	25.894	32.548	-13.452	46.000
Vertical					
147.150	-5.438	38.308	32.871	-10.629	43.500
258.060	-4.946	37.672	32.726	-13.274	46.000
386.200	-0.693	37.922	37.228	-8.772	46.000
504.170	-0.060	37.975	37.915	-8.085	46.000
626.740	-0.038	38.531	38.493	-7.507	46.000
784.590	2.737	33.975	36.711	-9.289	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 Setup



#### **4.2.** 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)).

#### 4.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 1.5 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 C63.10:2013 on radiated measurement.

## 4.4. Uncertainty

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



## 4.5. Test Result of Band Edge

Product : Intel® Dual Band Wireless-AC 8260

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

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

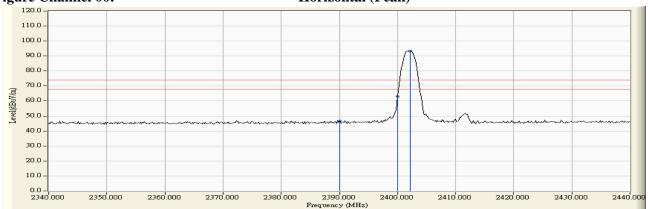
Test Date : 2016/09/26

#### RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Arerage Limit (dBµV/m)	Result
00 (Peak)	2390.000	-1.131	47.719	46.588	74.00	54.00	Pass
00 (Peak)	2400.000	-1.084	64.107	63.024	74.00	54.00	Pass
00 (Peak)	2402.174	-1.072	94.430	93.358	-		
00 (Average)	2390.000	-1.131	33.951	32.820	74.00	54.00	Pass
00 (Average)	2400.000	-1.084	42.391	41.308	74.00	54.00	Pass
00 (Average)	2402.029	-1.073	73.750	72.678			

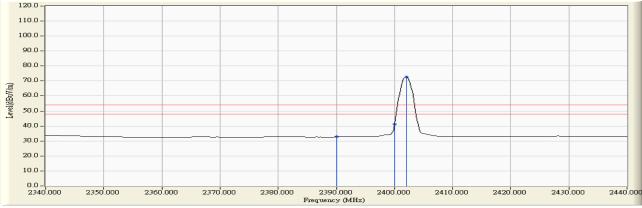
## Figure Channel 00:

## Horizontal (Peak)



#### Figure Channel 00:

#### 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.



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

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

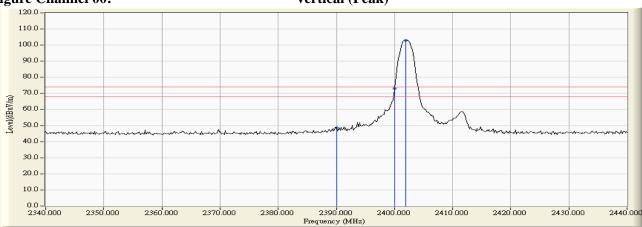
Test Date : 2016/09/26

#### RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Arerage Limit (dBμV/m)	Result
00 (Peak)	2390.000	-1.725	50.444	48.719	74.00	54.00	Pass
00 (Peak)	2400.000	-1.733	74.916	73.184	74.00	54.00	Pass
00 (Peak)	2401.884	-1.729	104.620	102.891			
00 (Average)	2390.000	-1.725	34.511	32.786	74.00	54.00	Pass
00 (Average)	2400.000	-1.733	48.894	47.162	74.00	54.00	Pass
00 (Average)	2402.029	-1.729	81.267	79.538			

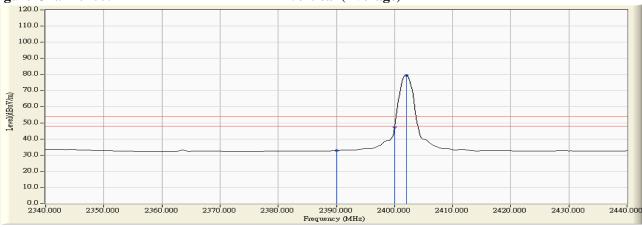
#### Figure Channel 00:

#### Vertical (Peak)

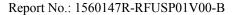


#### Figure Channel 00:

#### 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.





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

Test Mode : Mode 1: Transmit - BLE (GFSK) (2480MHz)

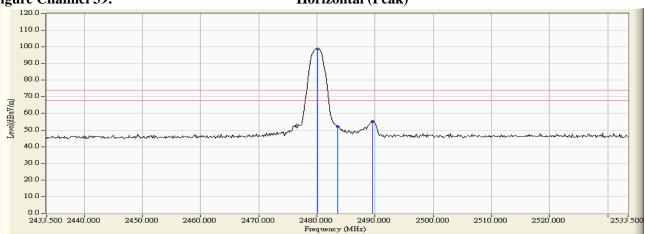
Test Date : 2016/09/26

#### RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
Chamiei No.	(MHz)	(dB)	$(dB\mu V)$	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
39 (Peak)	2480.167	-0.579	99.237	98.658			
39 (Peak)	2483.500	-0.558	52.597	52.039	74.00	54.00	Pass
39 (Peak)	2489.587	-0.518	55.852	55.333	74.00	54.00	Pass
39 (Average)	2480.022	-0.580	77.472	76.892			
39 (Average)	2483.500	-0.558	39.162	38.604	74.00	54.00	Pass

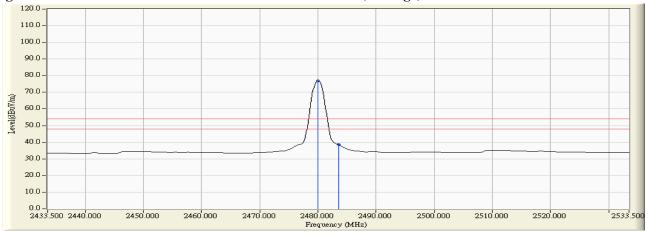
#### **Figure Channel 39:**

#### Horizontal (Peak)



#### Figure Channel 39:

#### **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.



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

Test Mode : Mode 1: Transmit - BLE (GFSK) (2480MHz)

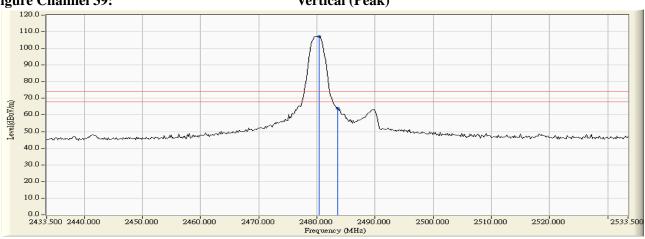
Test Date : 2016/09/26

#### RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	$(dB\mu V)$	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	
39 (Peak)	2480.312	-1.323	108.582	107.259			
39 (Peak)	2483.500	-1.305	65.198	63.893	74.00	54.00	Pass
39 (Average)	2480.022	-1.324	84.330	83.006			
39 (Average)	2483.500	-1.305	43.894	42.589	74.00	54.00	Pass

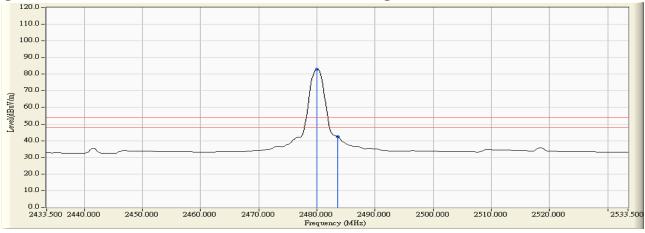
#### Figure Channel 39:

### Vertical (Peak)



#### Figure Channel 39:

#### **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.



# 5. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Page: 24 of 26



Attachment 1: EUT Test Photographs



Attachment 2: EUT Detailed Photographs