

# FCC Test Report (Class II Permissive Change)

Product Name	Intel® Wireless-AC 9260
Model No.	9260NGW
FCC ID.	2ABTU-9260NG

Applicant	RuggON Corporation
Address	4F, No. 298, Yang Guang St., Neihu Dist., Taipei City, Taiwan

Date of Receipt	Sep. 15, 2017
Issued Date	Sep. 09, 2020
Report No.	2060585R-E3032160654-B
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 report of the equipment and evaluated measurement uncertainty herein.

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Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.



## Test Report

Issued Date: Sep. 09, 2020

Report No.: 2060585R-E3032160654-B



Product Name	Intel® Wireless-AC 9260			
Applicant	RuggON Corporation			
Address	4F, No. 298, Yang Guang St., Neihu Dist., Taipei City, Taiwan			
Manufacturer	Intel Mobile Communications			
Model No.	9260NGW			
FCC ID.	2ABTU-9260NG			
EUT Rated Voltage	DC 3.3V			
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			
Test Result	Complied			

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Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs - External Attachment 3: EUT Detailed Photographs - Internal



## **Revision History**

Report No.	Report No. Version Description		<b>Issued Date</b>
2060585R-E3032160654-B	V1.0	Initial issue of report	Sep. 09, 2020



## 1. GENERAL INFORMATION

## 1.1. EUT Description

Product Name	Intel® Wireless-AC 9260
Trade Name	Intel
Model No.	9260NGW
FCC ID.	2ABTU-9260NG
Frequency Range	2402-2480MHz
Channel Number	79
Type of Modulation	FHSS: GFSK(1Mbps) /π/4DQPSK(2Mbps) / 8DPSK(3Mbps)
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	Dipole	2.89dBi for 2.4 GHz
	Technologies co., ltd	(Main), (Aux)		

Note: The antenna of EUT conforms 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® Wireless-AC 9260 with a built-in 802.11 a/b/g/n/ac Wireless LAN + BDR/EDR 2.1 + BLE 4.2 transceiver, this report for Bluetooth BDR/EDR 2.1.
- 2. This report is a copy report and the original report owner is the same. The original report number is 1790206R-RFUSP23V00, difference is modify the applicant and address.
- 3. 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.
- 4. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test
- 5. This is to request a Class II permissive change for FCC ID: 2ABTU-9260NG, originally granted on 07/06/2020.

The major change filed under this application is:

Change #1:

Addition of new dipole type antenna is different from originally antenna type.

Manufacturer. WIESON, Part no. GY121HT0321-003-H.

Test Mode	Mode 1: Transmit - 1Mbps
	Mode 2: Transmit - 3Mbps



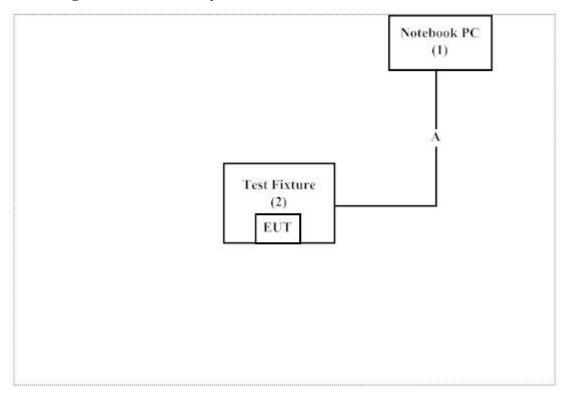
## **1.3.** Tested System Details

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

Pro	oduct	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	
A Test Fixture Line	Non-Shielded, 1.0m	

## 1.4. Configuration of Tested System



#### 1.5. EUT Exercise Software

- 1. Setup the EUT as shown in Section 1.4.
- 2. Execute software "DRTU (Ver 1.9.0-03789)" 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	50-65
Barometric pressure (mbar)	860-1060	950-1000

Site Description: Accredited by TAF

Accredited Number: 3023

Site Name: DEKRA Testing and Certification Co., Ltd

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: info.tw@dekra.com

FCC Accreditation Number: TW1014



## 1.7. List of Test Equipment

#### For Conducted measurements /ASR4

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSV30	103464	2017.01.09	2018.01.08
X	Power Meter	Anritsu	ML2496A	1548003	2016.12.15	2017.12.14
X	Power Sensor	Anritsu	MA2411B	1531024	2016.12.15	2017.12.14
X	Power Sensor	Anritsu	MA2411B	1531025	2016.12.15	2017.12.14
	Bluetooth Tester	R&S	CBT	101238	2017.01.03	2018.01.02

#### Note:

- 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: QuieTek Conduction Test System V8.0.110

#### For Radiated measurements /ACB1

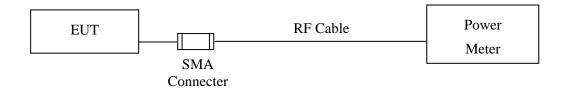
	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Loop Antenna	TESEQ	HLA6121	37133	2016.03.18	2018.03.17
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-674	2017.02.13	2018.02.12
X	Horn Antenna	ETS-Lindgren	3117	00203800	2017.11.10	2018.11.09
X	Horn Antenna	Com-Power	AH-840	101087	2017.05.24	2018.05.23
X	Pre-Amplifier	EMCI	EMC001330	980316	2017.05.16	2018.05.15
X	Pre-Amplifier	EMCI	EMC051835SE	980311	2017.05.17	2018.05.16
X	Pre-Amplifier	EMCI	EMC05820SE	980310	2017.05.17	2018.05.16
X	Pre-Amplifier	EMCI	EMC184045SE	980314	2017.05.17	2018.05.16
X	Filter	MICRO TRONICS	BRM50702	G251	2017.08.30	2018.08.29
	Filter	MICRO TRONICS	BRM50716	G188	2017.08.30	2018.08.29
X	EMI Test Receiver	R&S	ESR7	101602	2016.12.15	2017.12.14
X	Spectrum Analyzer	R&S	FSV40	101148	2017.01.24	2018.01.23
X	Coaxial Cable	SUHNER	SUCOFLEX 106	RF002	2017.05.25	2018.05.24
X	Mircoflex Cable	HUBER SUHNER	SUCOFLEX 102	MY3381/2	2017.08.11	2018.08.10

- 1. Loop Antenna is calibrated every two year, the other 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: QuieTek EMI 2.0 V2.1.113



## 2. Peak Power Output

## 2.1. Test Setup



## **2.2.** Limit

The maximum peak power shall be less 1Watt.

#### 2.3. Test Procedure

The EUT was setup to ANSI C63.4, 2014; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

## 2.4. Uncertainty

 $\pm$  0.86 dB



## 2.5. Test Result of Peak Power Output

Product : Intel® Wireless-AC 9260
Test Item : Peak Power Output

Test date : 2017/10/24

Test Mode : Mode 1: Transmit - 1Mbps

Channel No.	Frequency	Measurement	Required Limit	Result
	(MHz)	(dBm)		
Channel 00	2402.00	9.52	1 Watt= 30 dBm	Pass
Channel 39	2441.00	10.43	1 Watt= 30 dBm	Pass
Channel 78	2480.00	11.08	1 Watt= 30 dBm	Pass



Test Item : Peak Power Output

Test date : 2017/10/24

Test Mode : Mode 2: Transmit - 3Mbps

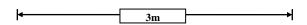
Channel No.	Frequency	Measurement	Required Limit	Result
	(MHz)	(dBm)		
Channel 00	2402.00	9.50	1 Watt= 30 dBm	Pass
Channel 39	2441.00	10.30	1 Watt= 30 dBm	Pass
Channel 78	2480.00	10.48	1 Watt= 30 dBm	Pass

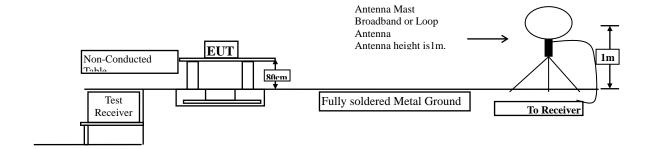


#### 3. Radiated Emission

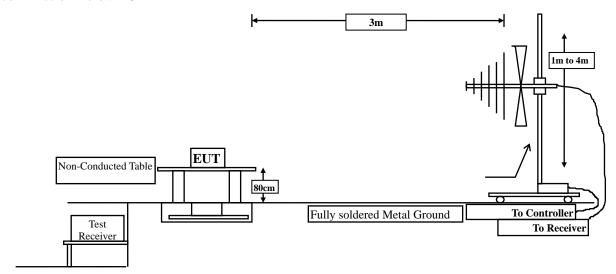
## 3.1. Test Setup

Radiated Emission Under 30MHz

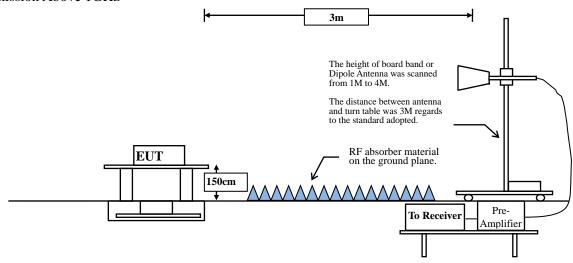




Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



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#### 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 (microvolts/meter)	Measurement distance (meter)			
0.009-0.490	2400/F(kHz)	300			
0.009-0.490	2400/Γ(ΚΠΖ)	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  $(dB\mu V) = 20 \log RF \text{ Voltage } (uV)$
- 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.



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

The EUT was setup according to ANSI C63.10, 2013 and tested 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

Horizontal polarization:

30-300MHz: ±4.08dB; 300M-1GHz: ±3.86dB; 1-18GHz: ±3.77dB; 18-40GHz: ±3.98dB

Vertical polarization:

30-300MHz: ±4.81dB; 300M-1GHz: ±3.87dB; 1-18GHz: ±3.83dB; 18-40GHz: ±3.98dB



#### 3.5. Test Result of Radiated Emission

Product : Intel® Wireless-AC 9260
Test Item : Harmonic Radiated Emission

Test date : 2017/10/14

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

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4804.000	-6.114	51.570	45.456	-28.544	74.000
7206.000	-3.112	46.520	43.408	-30.592	74.000
9608.000	-0.801	44.580	43.780	-30.220	74.000
Average					
<b>Detector:</b>					
Vertical					
<b>Peak Detector:</b>					
4882.000	-6.066	45.820	39.754	-34.246	74.000
7323.000	-3.022	45.680	42.658	-31.342	74.000
9764.000	-0.522	46.520	45.997	-28.003	74.000
Average					
<b>Detector:</b>					

- 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 : Intel® Wireless-AC 9260
Test Item : Harmonic Radiated Emission

Test date : 2017/10/14

Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4882.000	-6.066	45.720	39.654	-34.346	74.000
7323.000	-3.022	45.420	42.398	-31.602	74.000
9764.000	-0.522	46.380	45.857	-28.143	74.000
Average					
<b>Detector:</b>					
Vertical					
Peak Detector:					
4882.000	-6.066	50.250	44.184	-29.816	74.000
7323.000	-3.022	45.290	42.268	-31.732	74.000
9764.000	-0.522	46.380	45.857	-28.143	74.000
Average					
<b>Detector:</b>					

- 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 : Intel® Wireless-AC 9260
Test Item : Harmonic Radiated Emission

Test date : 2017/10/14

Test Mode : Mode 1: Transmit - 1Mbps (2480MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4960.000	-6.055	49.320	43.265	-30.735	74.000
7440.000	-2.861	44.580	41.718	-32.282	74.000
9920.000	-0.306	43.130	42.824	-31.176	74.000
Average					
<b>Detector:</b>					
Vertical					
Peak Detector:					
4960.000	-6.055	50.130	44.075	-29.925	74.000
7440.000	-2.861	46.280	43.418	-30.582	74.000
9920.000	-0.306	44.380	44.074	-29.926	74.000
Average					
<b>Detector:</b>					

- 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	:	Intel® Wireless-AC 9260
Test Item	:	Harmonic Radiated Emission

Test date : 2017/10/14

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

Frequency	Correct	Reading	Measurement	Margin	Limit
•	Factor	Level	Level	C	
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4804.000	-6.114	50.170	44.056	-29.944	74.000
7206.000	-3.112	46.420	43.308	-30.692	74.000
9608.000	-0.801	44.520	43.720	-30.280	74.000
Average					
<b>Detector:</b>					
Vertical					
Peak Detector:					
4804.000	-6.114	51.280	45.166	-28.834	74.000
7206.000	-3.112	46.140	43.028	-30.972	74.000
9608.000	-0.801	44.320	43.520	-30.480	74.000
Average					
<b>Detector:</b>					

- 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 : Intel® Wireless-AC 9260
Test Item : Harmonic Radiated Emission

Test date : 2017/10/14

Test Mode : Mode 2: Transmit - 3Mbps (2441MHz)

dBμV/m
dBμV/m
74.000
74.000
74.000
74.000
74.000
74.000

- 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 : Intel® Wireless-AC 9260
Test Item : Harmonic Radiated Emission

Test date : 2017/10/14

Test Mode : Mode 2: Transmit - 3Mbps (2480MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	dBμV/m	dB	dBμV/m
Horizontal					_
Peak Detector:					
4960.000	-6.055	48.520	42.465	-31.535	74.000
7440.000	-2.861	44.620	41.758	-32.242	74.000
9920.000	-0.306	46.270	45.964	-28.036	74.000
Average					
<b>Detector:</b>					
Vertical					
Peak Detector:					
4960.000	-6.055	49.120	43.065	-30.935	74.000
7440.000	-2.861	44.120	41.258	-32.742	74.000
9920.000	-0.306	44.170	43.864	-30.136	74.000
Average					
<b>Detector:</b>					

- 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 : Intel® Wireless-AC 9260
Test Item : General Radiated Emission

Test date : 2017/10/02

Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
160.950	-10.890	34.871	23.980	-19.520	43.500
273.470	-11.201	34.557	23.355	-22.645	46.000
405.390	-7.944	31.845	23.901	-22.099	46.000
532.460	-5.516	23.697	18.181	-27.819	46.000
698.330	-3.075	28.751	25.676	-20.324	46.000
869.050	-0.720	25.067	24.347	-21.653	46.000
Vertical					
158.040	-10.904	33.714	22.810	-20.690	43.500
333.610	-9.586	34.018	24.432	-21.568	46.000
455.830	-6.752	33.328	26.576	-19.424	46.000
602.300	-4.040	22.733	18.692	-27.308	46.000
743.920	-2.200	33.902	31.702	-14.298	46.000
885.540	-0.508	21.182	20.674	-25.326	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 : Intel® Wireless-AC 9260
Test Item : General Radiated Emission

Test date : 2017/10/02

Test Mode : Mode 2: Transmit - 3Mbps (2441MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	dBμV/m
Horizontal					
148.340	-11.157	31.584	20.428	-23.072	43.500
309.360	-10.141	34.411	24.270	-21.730	46.000
436.430	-7.183	33.570	26.386	-19.614	46.000
587.750	-4.346	24.027	19.682	-26.318	46.000
729.370	-2.482	30.508	28.026	-17.974	46.000
880.690	-0.570	21.953	21.383	-24.617	46.000
Vertical					
159.980	-10.857	33.764	22.907	-20.593	43.500
272.500	-11.244	34.860	23.616	-22.384	46.000
409.270	-7.849	33.780	25.931	-20.069	46.000
531.490	-5.532	26.677	21.146	-24.854	46.000
668.260	-3.496	25.890	22.394	-23.606	46.000
843.830	-1.059	20.097	19.038	-26.962	46.000

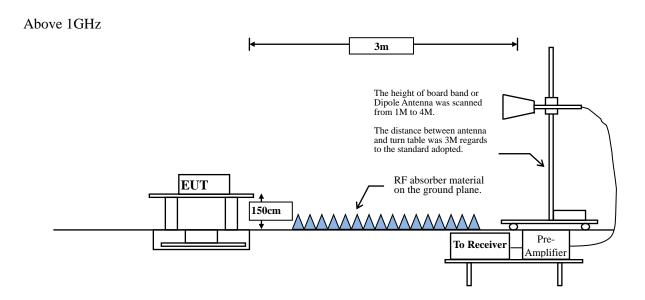
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 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.



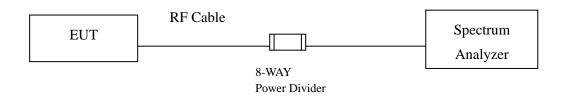
## 4. Band Edge

## 4.1. Test Setup

#### **RF Radiated Measurement:**



#### **RF** Conducted Measurement



#### **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 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 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: 2013 on radiated measurement.

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

## 4.4. Uncertainty

Horizontal polarization: 1-18GHz: ±3.77dB Vertical polarization: 1-18GHz: ±3.83dB



#### 4.5. **Test Result of Band Edge**

Product Intel® Wireless-AC 9260

Test Item Band Edge Test date 2017/09/21

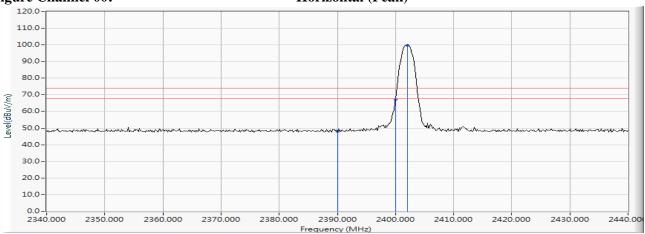
Test Mode Mode 1: Transmit - 1Mbps (2402MHz)

#### **RF Radiated Measurement (Horizontal):**

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
Chamilei No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
00 (Peak)	2390.000	12.148	35.938	48.086	74.00	54.00	Pass
00 (Peak)	2400.000	12.176	55.198	67.374	74.00	54.00	Pass
00 (Peak)	2402.029	12.182	87.684	99.865			Pass
00 (Average)	2390.000	12.148	24.177	36.325	74.00	54.00	Pass
00 (Average)	2400.000	12.176	43.622	55.798	74.00	54.00	Pass
00 (Average)	2402.029	12.182	87.303	99.484			Pass

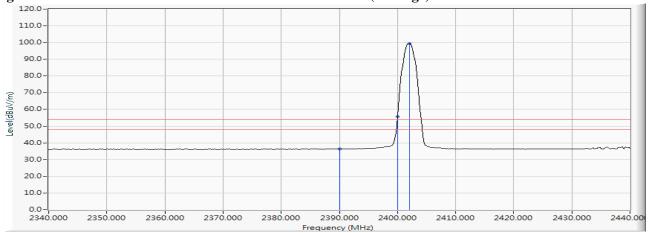
#### **Figure Channel 00:**

#### Horizontal (Peak)



#### **Figure Channel 00:**

#### **Horizontal (Average)**



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



Test Item Band Edge Test date 2017/09/21

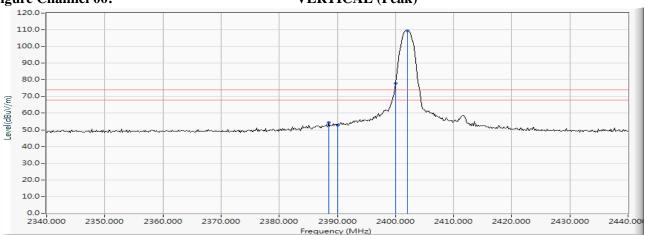
Mode 1: Transmit - 1Mbps (2402MHz) Test Mode

#### **RF Radiated Measurement (VERTICAL):**

		`	/				
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
Chamie No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
00 (Peak)	2388.551	12.144	42.182	54.326	74.00	54.00	Pass
00 (Peak)	2390.000	12.148	40.633	52.781	74.00	54.00	Pass
00 (Peak)	2400.000	12.176	65.781	77.957			Pass
00 (Peak)	2402.029	12.182	97.354	109.535			
00 (Average)	2390.000	12.148	25.458	37.606	74.00	54.00	Pass
00 (Average)	2400.000	12.176	53.113	65.289			Pass
00 (Average)	2402.029	12.182	96.967	109.148			

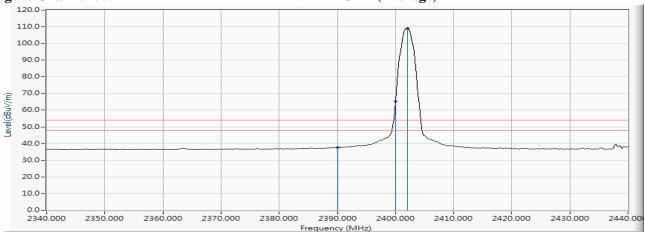
#### Figure Channel 00:

#### **VERTICAL** (Peak)



#### Figure Channel 00:

#### **VERTICAL** (Average)



- All readings above 1GHz are performed with peak and/or average measurements as necessary. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.

  Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.

  "\*", means this data is the worst emission level.

- Measurement Level = Reading Level + Correction Factor.
- The average measurement was not performed when the peak measured data is under the limit of average detection.



Test Item Band Edge Test date 2017/09/21

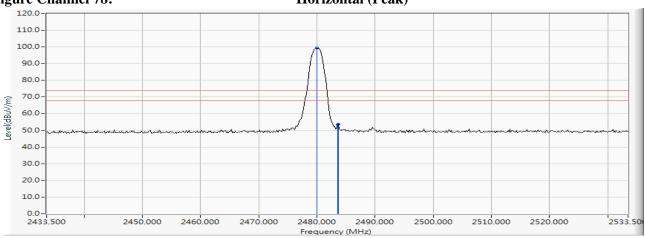
Test Mode Mode 1: Transmit - 1Mbps (2480MHz)

#### **RF Radiated Measurement (Horizontal):**

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
78 (Peak)	2480.022	12.393	86.860	99.253			Pass
78 (Peak)	2483.500	12.403	41.099	53.502	74.00	54.00	Pass
78 (Peak)	2483.645	12.403	41.439	53.842	74.00	54.00	Pass
78 (Average)	2480.022	12.393	86.463	98.856			Pass
78 (Average)	2483.500	12.403	25.414	37.817	74.00	54.00	Pass

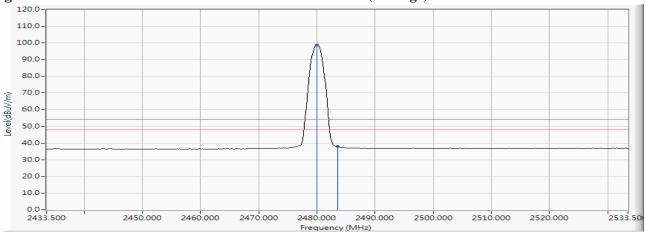
## **Figure Channel 78:**

#### Horizontal (Peak)



#### **Figure Channel 78:**

#### **Horizontal** (Average)



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



Test Item Band Edge Test date 2017/09/21

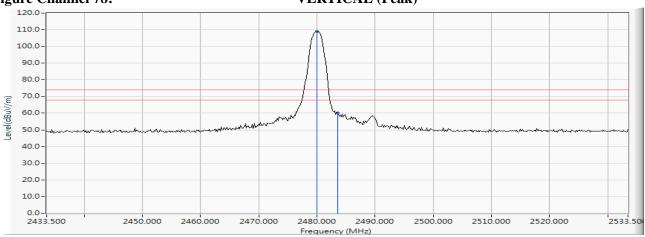
Mode 1: Transmit - 1Mbps (2480MHz) Test Mode

#### **RF Radiated Measurement (VERTICAL):**

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level		0	Result
Chamlel No.	(MHz)	(dB)	(dBµV)	(dBµV/m)	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
78 (Peak)	2480.022	12.393	96.571	108.964		1	Pass
78 (Peak)	2483.500	12.403	47.784	60.187	74.00	54.00	Pass
78 (Average)	2480.022	12.393	96.188	108.581		1	Pass
78 (Average)	2483.500	12.403	30.546	42.949	74.00	54.00	Pass

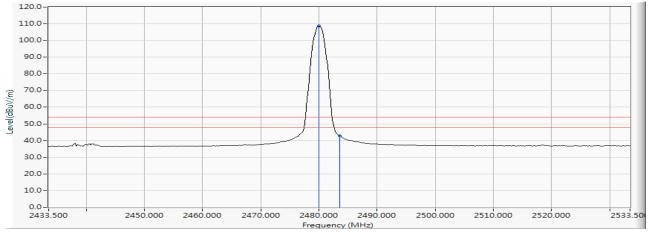
#### **Figure Channel 78:**

#### VERTICAL (Peak)



#### **Figure Channel 78:**

#### **VERTICAL** (Average)



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



Test Item Band Edge Test date 2017/09/21

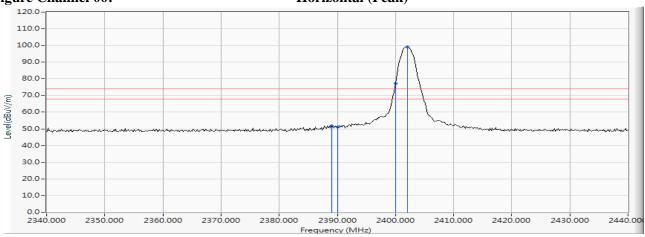
Test Mode Mode 2: Transmit - 3Mbps (2402MHz)

#### **RF Radiated Measurement (Horizontal):**

		,					
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
Chamilei No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
00 (Peak)	2388.986	12.145	39.692	51.837	74.00	54.00	Pass
00 (Peak)	2390.000	12.148	38.904	51.052	74.00	54.00	Pass
00 (Peak)	2400.000	12.176	65.127	77.303			Pass
00 (Peak)	2402.029	12.182	86.955	99.136			
00 (Average)	2390.000	12.148	24.919	37.067	74.00	54.00	Pass
00 (Average)	2400.000	12.176	53.325	65.501			Pass
00 (Average)	2402.029	12.182	84.516	96.697			

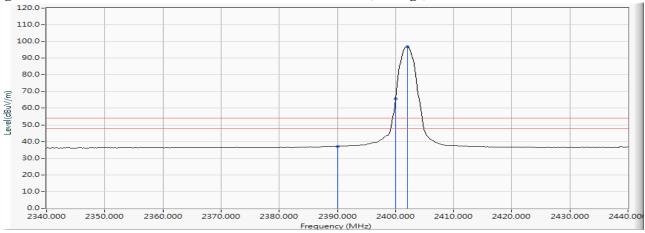
#### **Figure Channel 00:**

## Horizontal (Peak)



#### Figure Channel 00:

#### **Horizontal (Average)**



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



Test Item Band Edge Test date 2017/09/21

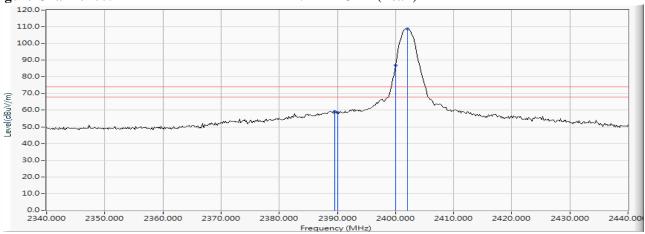
Test Mode Mode 2: Transmit - 3Mbps (2402MHz)

#### **RF Radiated Measurement (VERTICAL):**

		`	/				
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Arerage Limit	Result
Chamie No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
00 (Peak)	2389.565	12.147	47.106	59.253	74.00	54.00	Pass
00 (Peak)	2390.000	12.148	46.387	58.535	74.00	54.00	Pass
00 (Peak)	2400.000	12.176	74.627	86.803			Pass
00 (Peak)	2402.029	12.182	96.605	108.786			
00 (Average)	2390.000	12.148	29.556	41.704	74.00	54.00	Pass
00 (Average)	2400.000	12.176	62.867	75.043			Pass
00 (Average)	2402.029	12.182	94.167	106.348			

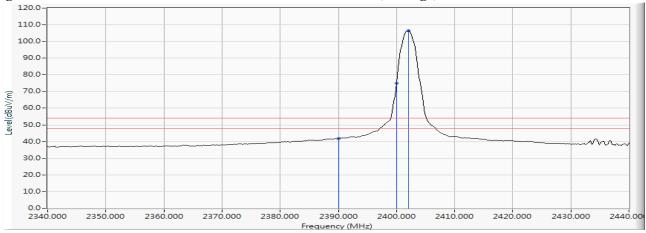
#### **Figure Channel 00:**

## **VERTICAL** (Peak)



#### Figure Channel 00:

#### **VERTICAL** (Average)



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



Test Item Band Edge Test date 2017/09/21

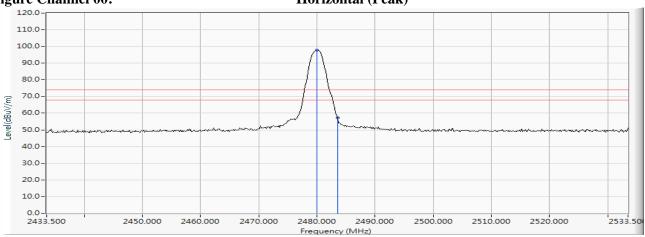
Test Mode Mode 2: Transmit - 3Mbps (2480MHz)

#### **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
78 (Peak)	2480.022	12.393	85.379	97.772			Pass
78 (Peak)	2483.500	12.403	44.838	57.241	74.00	54.00	Pass
78 (Average)	2480.022	12.393	82.804	95.197			Pass
78 (Average)	2483.500	12.403	28.418	40.821	74.00	54.00	Pass

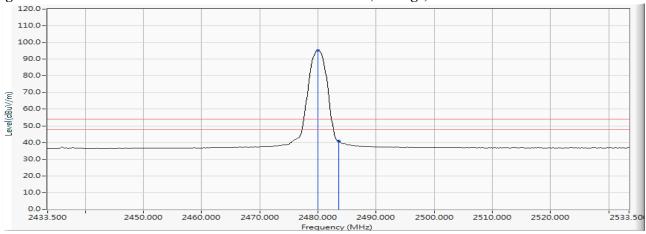
## Figure Channel 00:

## Horizontal (Peak)



#### Figure Channel 00:

#### **Horizontal (Average)**



- All readings above 1GHz are performed with peak and/or average measurements as necessary. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. "\*", means this data is the worst emission level. 1. 2. 3.

- Measurement Level = Reading Level + Correction Factor. 5.
- The average measurement was not performed when the peak measured data is under the limit of average detection.



Test Item Band Edge Test date 2017/09/21

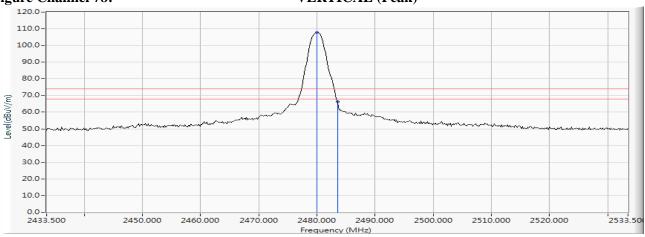
Test Mode Mode 2: Transmit - 3Mbps (2480MHz)

#### **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
78 (Peak)	2480.022	12.393	95.363	107.756			Pass
78 (Peak)	2483.500	12.403	53.830	66.233	74.00	54.00	Pass
78 (Average)	2480.022	12.393	92.802	105.195			Pass
78 (Average)	2483.500	12.403	36.197	48.600	74.00	54.00	Pass

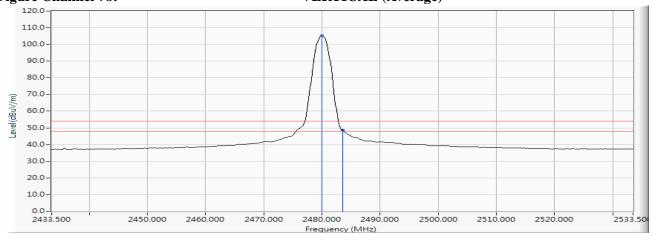
#### **Figure Channel 78:**

#### VERTICAL (Peak)



#### Figure Channel 78:

#### **VERTICAL** (Average)



- All readings above 1GHz are performed with peak and/or average measurements as necessary. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.

  Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.

  "\*\*", means this data is the worst emission level 1.
- 2. 3. 4.
- ', means this data is the worst emission level.
- Measurement Level = Reading Level + Correction Factor.
- The average measurement was not performed when the peak measured data is under the limit of average detection.