

# **FCC Test Report**

# (Class II Permissive Change)

Product Name	Intel® Wireless-AC 9260
Model No.	9260NGW
FCC ID.	XHU-GCU040864

Applicant	Sorenson Communications, LLC
Address	4192 South Riverboat Road, Salt Lake City, Utah 84123

Date of Receipt	Dec. 21, 2020
Issued Date	Mar. 23, 2021
Report No.	20C0795R-E3032110116
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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The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd. 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: Mar. 23, 2021

Report No.: 20C0795R-E3032110116



Product Name	Intel® Wireless-AC 9260	
Applicant	Sorenson Communications, LLC	
Address	4192 South Riverboat Road, Salt Lake City, Utah 84123	
Manufacturer	INTEL CORPORATION SAS	
Model No.	9260NGW	
FCC ID.	XHU-GCU040864	
EUT Rated Voltage	DC 3.3V	
EUT Test Voltage	DC 3.3V (Power By Test Fixture)	
Trade Name	Intel	
Applicable Standard FCC CFR Title 47 Part 15 Subpart C		
	ANSI C63.4: 2014, ANSI C63.10: 2013	
Test Result	Complied	

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Tested By	:	Ivan Chuang
		( Senior Engineer / Ivan Chuang )
Approved By	:	Hun 3
	_	( Director / Vincent Lin )



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Attachment 1: EUT Test Photographs Attachment 2: EUT Detailed Photographs Report No.: 20C0795R-E3032110116



## **Revision History**

Report No.	Version	Description	<b>Issued Date</b>
20C0795R-E3032110116	V1.0	Initial issue of report.	2021-03-23



## 1. GENERAL INFORMATION

## 1.1. EUT Description

Product Name	Intel® Wireless-AC 9260	
Trade Name	Intel	
Model No.	9260NGW	
FCC ID.	XHU-GCU040864	
Frequency Range	2402 – 2480MHz	
Channel Number	V5.0: 40CH	
Type of Modulation	V5.0: GFSK	
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	Molex	1461531050	Dipole Antenna	3.2dBi for 2.4GHz

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



Center Freque	ency of Each	Channel: (For	V5.0)				
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® Wireless-AC 9260 with a built-in WLAN (802.11a/b/g/n/ac) with Bluetooth (5.0 and BT3.0+HS) combo card module, this report for Bluetooth V5.0.
- 2. These tests were conducted on a sample for the purpose of demonstrating compliance of 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: XHU-GCU040864. The major change filed under this application is:

Change #1: Addition a Dipole Antenna, the antenna type is different with the original application.

Test Mode	Mode 1: Transmit - BLE- 1Mbps
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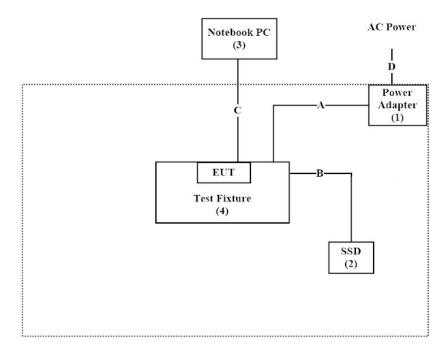
## 1.2. Tested System Details

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	Power Adapter	GIGA-BYTE	THX-120400KV	N/A	Non-Shielded, 1.8m
2	SSD	Corsair	Force LE 200	N/A	N/A
3	Notebook PC	ASUS	S1300	24NP035390	Non-Shielded, 1.8m
4	Test Fixture	Sorenson	GCU040864	N/A	N/A

	Signal Cable Type	Signal cable Description		
A Power Cable		Non-Shielded, 1.8m		
В	USB Cable	Shielded, 0.4m		
C	LAN Cable	Non-Shielded, 2m		
D	Power Cable	Non-Shielded, 1m		

## 1.3. Configuration of Tested System



## 1.4. EUT Exercise Software

- 1. Setup the EUT as shown in Section 1.3.
- 2. Execute software "DRTU v12. 1947.0-10428" on the EUT.
- 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.



## 1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
D 1: 4 1 E : :	Temperature (°C)	10~40 °C	23.3°C
Radiated Emission	Humidity (%RH)	10~90 %	58%
	Temperature (°C)	10~40 °C	22°C
Conductive	Humidity (%RH)	10~90 %	55%

USA : FCC Registration Number: TW0031 Canada : IC Registration Number: 26443

Site Description : Accredited by TAF

Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd : No. 6, Lane 75, Wenlin St., Linkou Dist.,

New Taipei City 24457, Taiwan, R.O.C.

Phone number : 886-2-2602-7968

Fax number : 866-2-2602-3286

Email address : info.tw@dekra.com

Website : http://www.dekra.com.tw



## 1.6. List of Test Equipment

#### For Conducted measurements /AC3

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSV30	103466	2020.12.28	2021.12.27
X	Peak Power Analyzer	KEYSIGHT	8900B	MY51000539	2020.05.13	2021.05.12
X	Power Sensor	KEYSIGHT	N1923A	MY59240002	2020.05.22	2021.05.21
X	Power Sensor	KEYSIGHT	N1923A	MY59240003	2020.05.22	2021.05.21
	Bluetooth Tester	R&S	CBT	101238	2019.01.21	2020.01.20

#### 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 : DEKRA Conduction Test System V9.0.5.

#### For Radiated measurements /AC3

	Equipment	quipment Manufacturer		Serial No.	Cali. Data	Due. Data
X	Loop Antenna	AMETEK	HLA6121	56736	2020.03.19	2021.03.18
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	01125	2020.07.31	2021.07.30
X	Horn Antenna	ETS-Lindgren	3117	00227709	2020.11.03	2021.11.02
	Horn Antenna	Com-Power	AH-840	10090014	2020.08.05	2021.08.04
X	Pre-Amplifier	SGH	EM330	060736	2020.08.03	2021.08.02
X	Pre-Amplifier	SGH	PRAMP118	20200701	2020.08.03	2021.08.02
X	Pre-Amplifier	SGH	PRAMP0510	20200703	2020.08.03	2021.08.02
	Pre-Amplifier	SGH	PRAMP184	20200705	2020.08.04	2021.08.03
X	Filter	MICRO TRONICS	BRM50702	G249	2020.08.25	2021.08.24
	Filter	MICRO TRONICS	BRM50716	G187	2020.08.25	2021.08.24
X	EMI Test Receiver	R&S	ESR7	101601	2021.01.04	2022.01.03
X	Spectrum Analyzer	R&S	FSV40	101148	2020.03.16	2021.03.15
X	Coaxial Cable	SUHNER	SUCOFLEX 106	RF003	2020.09.18	2021.09.17
X	Mircoflex Cable	HUBER SUHNER	SUCOFLEX 102	MY3381/2	2020.06.10	2021.06.09
	Wireless Connectivity Tester	R&S	CMW270	100978	2020.06.17	2021.06.16

- 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 : DEKRA Testing System V2.0.



## 1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document, and is described in each test chapter of this report.

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

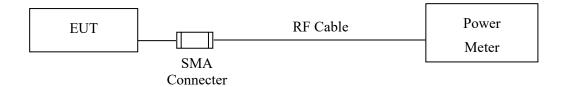
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item Uncertainty			
Peak Power Output	±0.91 dB		
D. C. A. D. C.	Under 1GHz	Above 1GHz	
Radiated Emission	±4.06 dB	±3.73 dB	
	Under 1GHz	Above 1GHz	
Band Edge	±4.06 dB	±3.73 dB	
Duty Cycle	±2.31 ms		



## 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 tested according to C63.10:2013 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using C63.10:2013 Section 11.9.1.3 PKPM1 Peak power meter method.



## 2.4. Test Result of Peak Power Output

Product : Intel® Wireless-AC 9260

Test Item : Peak Power Output

Test Mode : Mode 1: Transmit - BLE- 1Mbps

Test Date : 2021/03/23

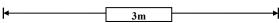
Channel No.	Channel No. Frequency		Required Limit	Result
	(MHz) (dBm)			
Channel 00	2402.00	9.29	1 Watt= 30 dBm	Pass
Channel 19	Channel 19 2440.00		1 Watt= 30 dBm	Pass
Channel 39	2480.00	9.96	1 Watt= 30 dBm	Pass

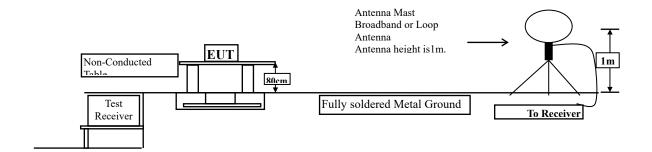


#### 3. Radiated Emission

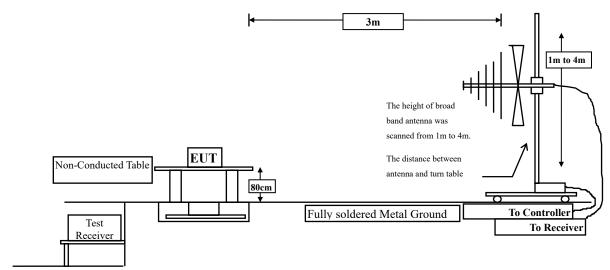
## 3.1. Test Setup

Radiated Emission Under 30MHz

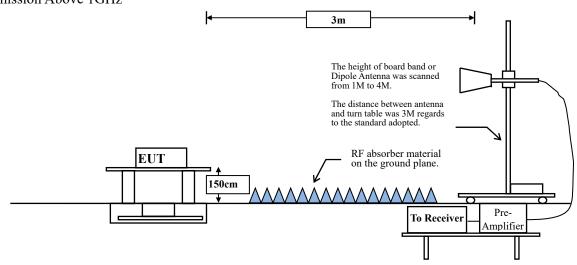




Radiated Emission Below 1GHz



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



#### 3.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to C63.10:2013 Section 11.12.1 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 measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.



## **RBW and VBW Parameter setting:**

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

 $VBW \ge 3 \times RBW$ .

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle  $\geq$  98 %

VBW  $\geq$  1/T, when duty cycle  $\leq$  98 %

( T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

2.4GHz band	Duty Cycle	T	1/T	VBW	
	(%)	(ms)	(Hz)	(Hz)	
BLE	84.88	2.1159	473	500	

Note: Duty Cycle Refer to Section 5



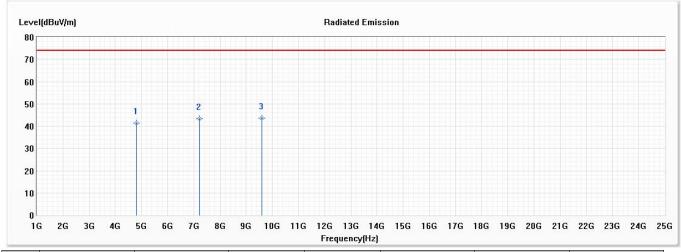
#### 3.4. Test Result of Radiated Emission

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

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

Test Date : 2021/01/06

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Туре
		(dBuV/m)					
1	4804.000	41.47	74.00	-32.53	53.16	-11.69	PK
2	7206.000	43.40	74.00	-30.60	50.05	-6.65	PK
* 3	9608.000	43.59	74.00	-30.41	48.34	-4.75	PK

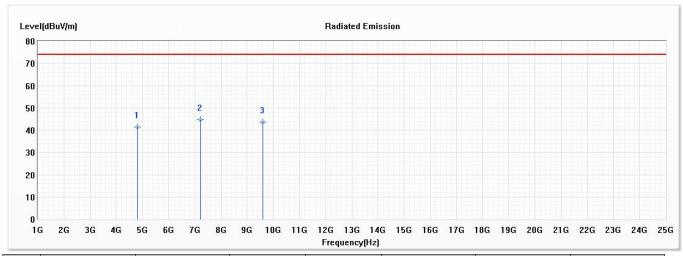
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak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



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

Test Date : 2021/01/06

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	4804.000	41.37	74.00	-32.63	53.06	-11.69	PK
* 2	7206.000	44.57	74.00	-29.43	51.22	-6.65	PK
3	9608.000	43.56	74.00	-30.44	48.31	-4.75	PK

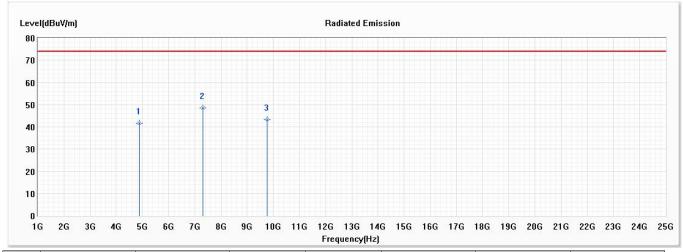
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak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



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

Test Date : 2021/01/06

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	4880.000	41.68	74.00	-32.32	53.09	-11.41	PK
* 2	7320.000	48.51	74.00	-25.49	55.21	-6.70	PK
3	9760.000	43.31	74.00	-30.69	47.61	-4.30	PK

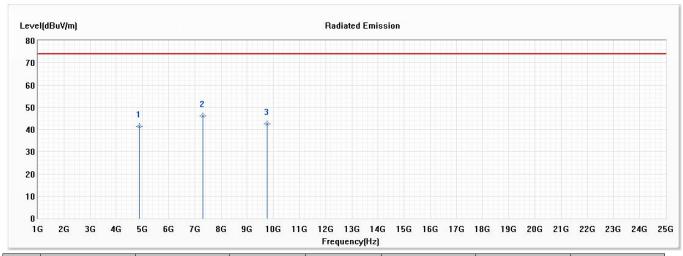
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak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



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

Test Date : 2021/01/06

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	4880.000	41.30	74.00	-32.70	52.71	-11.41	PK
* 2	7320.000	45.96	74.00	-28.04	52.66	-6.70	PK
3	9760.000	42.53	74.00	-31.47	46.83	-4.30	PK

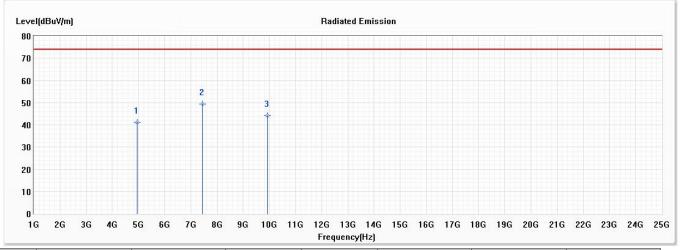
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak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



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

Test Date : 2021/01/06

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	4960.000	41.24	74.00	-32.76	52.49	-11.25	PK
* 2	7440.000	49.41	74.00	-24.59	56.00	-6.59	PK
3	9920.000	44.22	74.00	-29.78	48.16	-3.94	PK

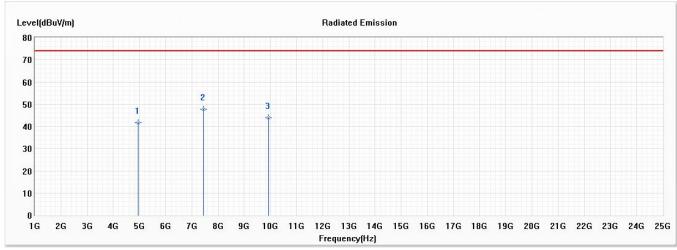
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak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



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

Test Date : 2021/01/06

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	4960.000	41.64	74.00	-32.36	52.89	-11.25	PK
* 2	7440.000	47.60	74.00	-26.40	54.19	-6.59	PK
3	9920.000	43.77	74.00	-30.23	47.71	-3.94	PK

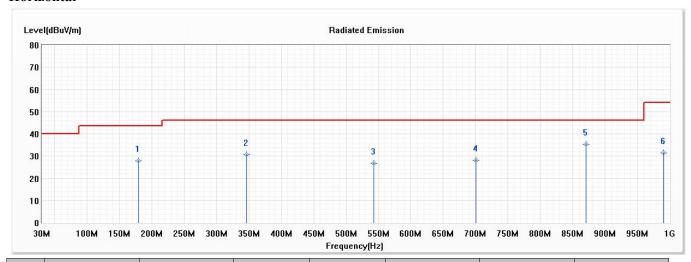
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak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



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

Test Date : 2021/01/08

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	179.014	27.92	43.50	-15.58	48.27	-20.35	QP
2	346.304	30.73	46.00	-15.27	47.69	-16.96	QP
3	543.116	26.79	46.00	-19.21	39.23	-12.44	QP
4	700.565	28.07	46.00	-17.93	37.64	-9.57	QP
* 5	870.667	35.28	46.00	-10.72	39.95	-4.67	QP
6	990.159	31.52	54.00	-22.48	37.36	-5.84	QP

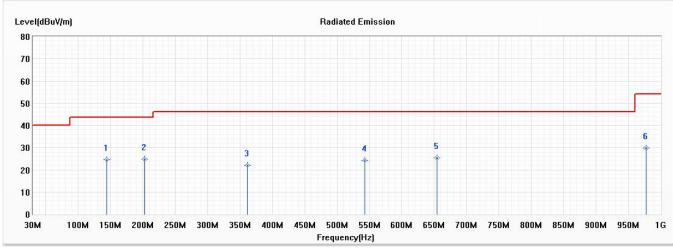
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.



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

Test Date : 2021/01/08

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	143.870	24.55	43.50	-18.95	43.63	-19.08	QP
* 2	202.913	24.79	43.50	-18.71	46.39	-21.60	QP
3	361.768	22.13	46.00	-23.87	38.77	-16.64	QP
4	543.116	24.34	46.00	-21.66	36.78	-12.44	QP
5	654.174	25.44	46.00	-20.56	35.97	-10.53	QP
6	977.507	29.75	54.00	-24.25	35.75	-6.00	QP

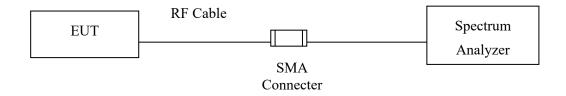
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.



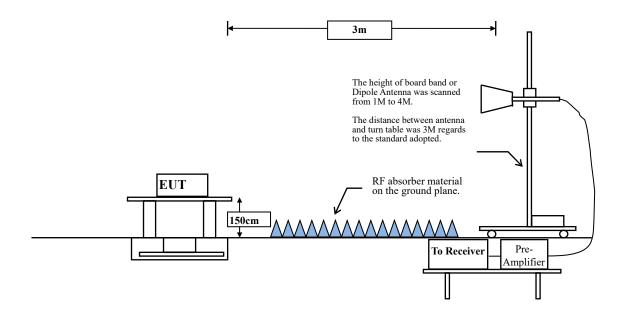
## 4. Band Edge

## 4.1. Test Setup

## **RF Conducted Measurement**



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





#### **4.2.** Limit

According to FCC Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. 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 C63.10:2013 Section 11.12.1 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.



## **RBW and VBW Parameter setting:**

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

 $VBW \ge 3 \times RBW$ .

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle  $\geq$  98 %

VBW  $\geq$  1/T, when duty cycle  $\leq$  98 %

( T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

2.4GHz band	Duty Cycle	T	1/T	VBW
	(%)	(ms)	(Hz)	(Hz)
BLE	84.88	2.1159	473	500

Note: Duty Cycle Refer to Section 5



## 4.4. Test Result of Band Edge

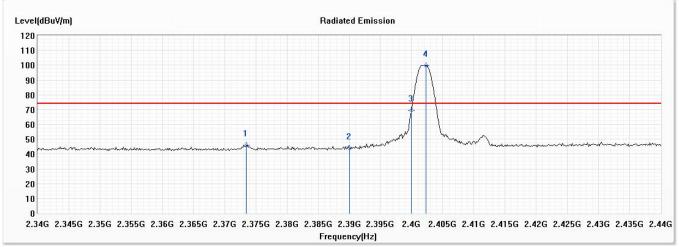
Product : Intel® Wireless-AC 9260

Test Item : Band Edge

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

Test Date : 2021/01/06

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	2373.478	46.09	74.00	-27.91	33.48	12.61	PK
2	2390.000	44.04	74.00	-29.96	31.49	12.55	PK
3	2400.000	69.42			56.89	12.53	PK
! 4	2402.319	99.89			87.34	12.55	PK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. The average measurement was not performed when the peak measured data under the limit of average detection.

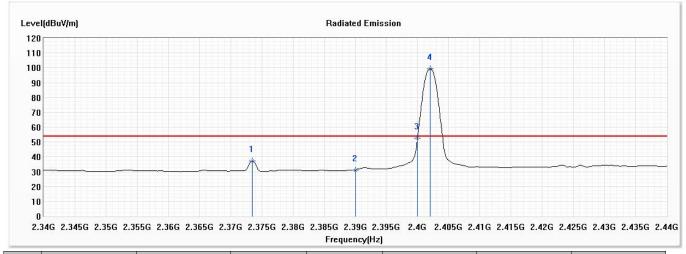


Test Item : Band Edge

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

Test Date : 2021/01/06

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	2373.478	37.04	54.00	-16.96	24.43	12.61	AV
2	2390.000	31.21	54.00	-22.79	18.66	12.55	AV
3	2400.000	52.50		-	39.97	12.53	AV
! 4	2402.029	99.27			86.72	12.55	AV

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. The average measurement was not performed when the peak measured data under the limit of average detection.

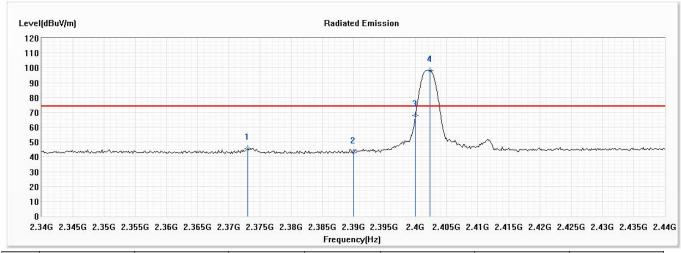


Test Item : Band Edge

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

Test Date : 2021/01/06

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	2373.043	45.69	74.00	-28.31	33.08	12.61	PK
2	2390.000	42.91	74.00	-31.09	30.36	12.55	PK
3	2400.000	67.78			55.25	12.53	PK
! 4	2402.319	98.26			85.71	12.55	PK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. The average measurement was not performed when the peak measured data under the limit of average detection.

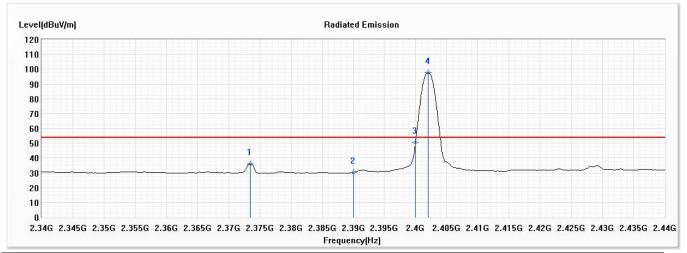


Test Item : Band Edge

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

Test Date : 2021/01/06

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
1	2373.478	36.17	54.00	-17.83	23.56	12.61	AV
2	2390.000	30.26	54.00	-23.74	17.71	12.55	AV
3	2400.000	50.65			38.12	12.53	AV
! 4	2402.029	97.59			85.04	12.55	AV

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. The average measurement was not performed when the peak measured data under the limit of average detection.

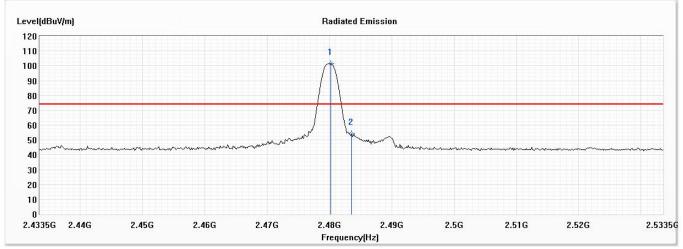


Test Item : Band Edge

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

Test Date : 2021/01/06

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
! 1	2480.167	101.22			88.40	12.82	PK
2	2483.500	54.18	74.00	-19.82	41.38	12.80	PK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. The average measurement was not performed when the peak measured data under the limit of average detection.

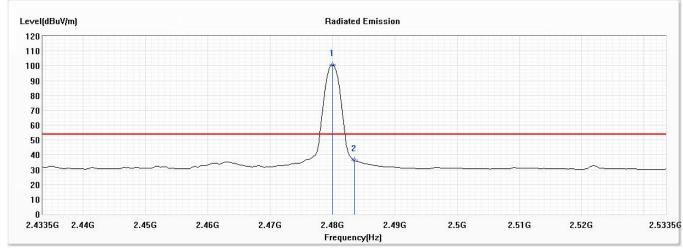


Test Item : Band Edge

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

Test Date : 2021/01/06

#### Horizontal



No	Frequency (MHz)	Emission Level	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
		(dBuV/m)					
! 1	2480.022	100.70			87.88	12.82	AV
2	2483.500	36.25	54.00	-17.75	23.45	12.80	AV

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. The average measurement was not performed when the peak measured data under the limit of average detection.

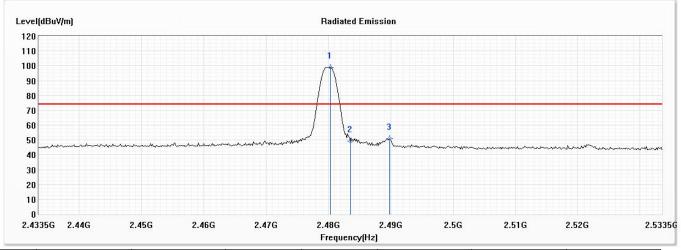


Test Item : Band Edge

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

Test Date : 2021/01/06

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
! 1	2480.312	99.08			86.26	12.82	PK
2	2483.500	49.39	74.00	-24.61	36.59	12.80	PK
3	2489.877	50.81	74.00	-23.19	38.04	12.77	PK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. The average measurement was not performed when the peak measured data under the limit of average detection.

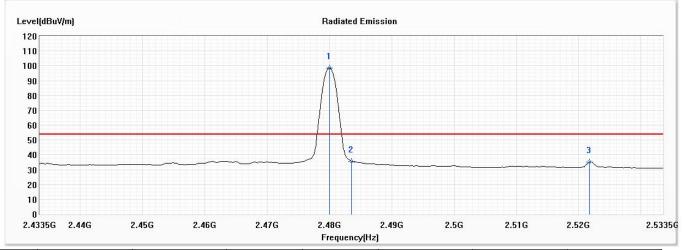


Test Item : Band Edge

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

Test Date : 2021/01/06

## Vertical



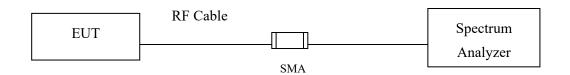
No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB)	Type
		(dBuV/m)					
! 1	2480.022	98.57			85.75	12.82	AV
2	2483.500	35.79	54.00	-18.21	22.99	12.80	AV
3	2521.761	35.14	54.00	-18.86	22.32	12.82	AV

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. The average measurement was not performed when the peak measured data under the limit of average detection.



## 5. Duty Cycle

## 5.1. Test Setup



## **5.2.** Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to ANSI C63.10 2013 for compliance to FCC 47CFR 15.247 requirements.



## 5.3. Test Result of Duty Cycle

Product : Intel® Wireless-AC 9260

Test Item : Duty Cycle

Test Mode : Mode 1: Transmit - BLE- 1Mbps

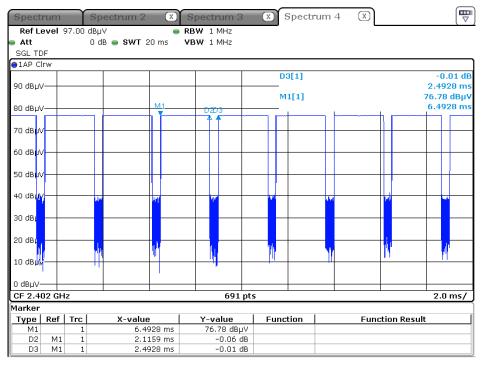
Duty Cycle Formula:

Duty Cycle = Ton / (Ton + Toff)

Duty Factor = 10 Log (1/Duty Cycle)

#### Results:

2.4GHz band	Ton Ton + Toff		Duty Cycle	Duty Factor	
	(ms)	(ms)	(%)	(dB)	
BLE-1Mbps	2.1159	2.4928	84.88	0.71	



Date: 5.JAN.2021 10:15:48



6.	EMI Re	duction	Method	During	Comi	oliance	Testing

No modification was made during testing.