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# RF EXPOSURE REPORT

**REPORT NO.:** SA140313E05

**MODEL NO.:** QCNFA34AC

**FCC ID:** PPD-QCNFA34AC

**IC:** 4104A-QCNFA34AC

**RECEIVED:** Mar. 13, 2014

**TESTED:** May 08 to 09, 2014

**ISSUED:** May 20, 2014

**APPLICANT:** Qualcomm Atheros, Inc.

**ADDRESS:** 1700 Technology Drive, San Jose, CA 95110

**ISSUED BY:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

**LAB ADDRESS :** No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C.

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA140313E05	Original release	May 20, 2014



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## 1. CERTIFICATION

**PRODUCT:** 802.11 a/b/g/n/ac+ BT 4.1 M.2 Type Card

**BRAND NAME:** Qualcomm Atheros

**MODEL NO.:** QCNFA34AC

**TEST SAMPLE:** R&D SAMPLE

**APPLICANT:** Qualcomm Atheros, Inc.

**STANDARDS:** FCC Part 2 (Section 2.1091)

FCC OET Bulletin 65, Supplement C (01-01)

IEEE C95.1

The above equipment (Model: QCNFA34AC) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY :** Midoli Peng , **DATE:** May 20, 2014  
( Midoli Peng, Specialist )

**APPROVED BY :** May Chen , **DATE:** May 20, 2014  
( May Chen, Manager )



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## 2. RF EXPOSURE LIMIT

### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm <sup>2</sup> )	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

## 3. MPE CALCULATION FORMULA

$$Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

pi = 3.1416

r = distance between observation point and center of the radiator in cm

## 4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



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## 5. ANTENNA GAIN

The antenna provided to the EUT, please refer to the following table:

Brand	Model	Antenna Type	2.4G Gain with cable loss (dBi)	5G Gain with cable loss (dBi)	2.4G Cable Loss (dBi)	5G Cable Loss (dBi)	Connector Type	Cable Length (mm)
WNC	81-EBJ15.005	PIFA	3.62	Band 1&2: 3.08 Band 3: 4.76 Band 4: 4.76	1.15	Band1&2: 1.70 Band 3: 1.74 Band 4: 1.79	IPEX	300

Note: 1. Above antenna gains of antenna are Total (H+V).

2. All of antenna can be application for WLAN and Bluetooth.



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## 6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For WLAN: 15.247(2.4GHz - WLAN):

With SKU #2(NFA345) - 1Tx:

### 802.11b

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	302.691	3.62	20	0.13859	1.00

NOTE: 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

### 802.11g

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	381.066	3.62	20	0.17447	1.00

NOTE: 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

### 802.11n (HT20)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	431.519	3.62	20	0.19757	1.00

NOTE: 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

### 802.11n (HT40)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2422-2452	343.558	3.62	20	0.15730	1.00

NOTE: 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.



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**802.11n\_256QAM(BW20)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	428.549	3.62	20	0.19621	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

**802.11n\_256QAM(BW40)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2422-2452	364.754	3.62	20	0.16700	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table



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### For WLAN: 15.247(2.4GHz - WLAN):

With SKU #1(NFA344) - 2Tx:

#### 802.11b

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	594.478	6.63	20	0.54433	1.00

NOTE: 1. Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi}$

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11g

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	754.465	6.63	20	0.69083	1.00

NOTE: 1. Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi}$

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11n (HT20)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	900.407	6.63	20	0.82446	1.00

NOTE: 1. Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi}$

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11n (HT40)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2422-2452	492.330	6.63	20	0.45080	1.00

NOTE: 1. Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi}$

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table



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**802.11n\_256QAM(BW20)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	895.499	6.63	20	0.81996	1.00

**NOTE:** 1. Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi}$

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

**802.11n\_256QAM(BW40)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2422-2452	532.505	6.63	20	0.48759	1.00

**NOTE:** 1. Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi}$

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table



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**For WLAN: 15.247(2.4GHz - BT\_LE):**

With SKU #1(NFA344) :

**BT\_LE**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2402-2480	2.113	3.62	20	0.00097	1.00



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**For WLAN: 15.247(5GHz):**

With SKU #2(NFA345) - 1Tx:

**802.11a**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5745 - 5825	209.894	4.76	20	0.12495	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

**802.11n(HT20)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5745 - 5825	217.771	4.76	20	0.12964	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

**802.11n (HT40)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5755 - 5795	185.353	4.76	20	0.11034	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

**802.11ac(VHT20)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5745 - 5825	228.034	4.76	20	0.13575	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.



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**802.11ac(VHT40)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5755 - 5795	174.985	4.76	20	0.10417	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

**802.11ac(VHT80)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5775	164.437	4.76	20	0.09789	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.



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### For WLAN: 15.247(5GHz):

With SKU #2(NFA344) - 2Tx:

#### 802.11a

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5745 - 5825	313.216	7.77	20	0.37288	1.00

NOTE: 1. Directional gain = 4.76dBi + 10log(2) = 7.77dBi

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11n(HT20)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5745 - 5825	315.360	7.77	20	0.37544	1.00

NOTE: 1. Directional gain = 4.76dBi + 10log(2) = 7.77dBi

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11n (HT40)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5755 - 5795	251.791	7.77	20	0.29976	1.00

NOTE: 1. Directional gain = 4.76dBi + 10log(2) = 7.77dBi

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11ac(VHT20)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5745 - 5825	325.180	7.77	20	0.38713	1.00

NOTE: 1. Directional gain = 4.76dBi + 10log(2) = 7.77dBi

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table



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**802.11ac(VHT40)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5755 - 5795	241.023	7.77	20	0.28694	1.00

**NOTE:** 1. Directional gain = 4.76dBi + 10log(2) = 7.77dBi

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

**802.11ac(VHT80)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5775	222.133	7.77	20	0.26445	1.00

**NOTE:** 1. Directional gain = 4.76dBi + 10log(2) = 7.77dBi

2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table



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**For 15.407(5GHz):**  
**With SKU #2(NFA345) - 1Tx:**

**802.11a**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5180 - 5240, 5260 - 5320	44.668	3.08	20	0.01806	1.00
5500 -5580 & 5660 - 5720	44.668	4.76	20	0.02659	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

**802.11n(HT20)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5180 - 5240, 5260 - 5320	44.668	3.08	20	0.01806	1.00
5500 -5580 & 5660 - 5720	44.668	4.76	20	0.02659	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

**802.11n(HT40)**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5190-5230 5270-5310	35.481	3.08	20	0.01435	1.00
5510 - 5550 & 5670- 5710	35.481	4.76	20	0.02112	1.00

**NOTE:** 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.



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#### 802.11ac(VHT20)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5180 - 5240, 5260 - 5320	44.668	3.08	20	0.01806	1.00
5500 -5580 & 5660 - 5720	44.668	4.76	20	0.02659	1.00

NOTE: 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

#### 802.11ac(VHT40)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5190-5230 5270-5310	35.481	3.08	20	0.01435	1.00
5510 - 5550 & 5670- 5710	35.481	4.76	20	0.02112	1.00

NOTE: 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.

#### 802.11ac(VHT80)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5210, 5290	28.184	3.08	20	0.01140	1.00
5530, 5690	28.184	4.76	20	0.01678	1.00

NOTE: 1. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table.



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### For 15.407(5GHz):

With SKU #2(NFA344) - 2Tx:

#### 802.11a

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5180 - 5240, 5260 - 5320	70.800	6.09	20	0.05725	1.00
5500 -5580 & 5660 - 5720	70.800	7.77	20	0.0429	1.00

**NOTE:** 1. Band1~2 : Directional gain =  $3.08\text{dBi} + 10\log(2) = 6.09\text{dBi}$   
2. Band3 : Directional gain =  $4.76\text{dBi} + 10\log(2) = 7.77\text{dBi}$   
2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11n(HT20)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5180 - 5240, 5260 - 5320	63.100	6.09	20	0.05102	1.00
5500 -5580 & 5660 - 5720	63.100	7.77	20	0.07512	1.00

**NOTE:** 1. Band1~2 : Directional gain =  $3.08\text{dBi} + 10\log(2) = 6.09\text{dBi}$   
2. Band3 : Directional gain =  $4.76\text{dBi} + 10\log(2) = 7.77\text{dBi}$   
2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11n(HT40)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5190-5230 5270-5310	44.672	6.09	20	0.03612	1.00
5510 - 5550 & 5670 - 5710	44.672	7.77	20	0.05318	1.00

**NOTE:** 1. Band1~2 : Directional gain =  $3.08\text{dBi} + 10\log(2) = 6.09\text{dBi}$   
2. Band3 : Directional gain =  $4.76\text{dBi} + 10\log(2) = 7.77\text{dBi}$   
2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table



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#### 802.11ac(VHT20)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5180 - 5240, 5260 - 5320	63.100	6.09	20	0.05102	1.00
5500 -5580 & 5660 - 5720	63.100	7.77	20	0.07512	1.00

**NOTE:** 1. Band1~2 : Directional gain =  $3.08\text{dBi} + 10\log(2) = 6.09\text{dBi}$   
2. Band3 : Directional gain =  $4.76\text{dBi} + 10\log(2) = 7.77\text{dBi}$   
2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11ac(VHT40)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5190-5230 5270-5310	50.122	6.09	20	0.04053	1.00
5510 - 5550 & 5670- 5710	50.122	7.77	20	0.05967	1.00

**NOTE:** 1. Band1~2 : Directional gain =  $3.08\text{dBi} + 10\log(2) = 6.09\text{dBi}$   
2. Band3 : Directional gain =  $4.76\text{dBi} + 10\log(2) = 7.77\text{dBi}$   
2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table

#### 802.11ac(VHT80)

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5210, 5290	31.624	6.09	20	0.02557	1.00
5530, 5690	39.814	7.77	20	0.04740	1.00

**NOTE:** 1. Band1~2 : Directional gain =  $3.08\text{dBi} + 10\log(2) = 6.09\text{dBi}$   
2. Band3 : Directional gain =  $4.76\text{dBi} + 10\log(2) = 7.77\text{dBi}$   
2. This power include tune-up tolerance range that specified in QCNFA34AC Tune Up power table



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**For BT:**

With SKU #1(NFA344) :

**GFSK**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2402-2480	13.002	3.62	20	0.00595	1.00

**8DPSK**

FREQUENCY BAND (MHz)	MAX POWER AVG. (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2402-2480	15.776	3.62	20	0.00722	1.00

## **CONCLUSION:**

Both of the Bluetooth and WLAN(5GHz) can transmit simultaneously, the formula of calculated the MPE is:

$$\text{CPD}_1 / \text{LPD}_1 + \text{CPD}_2 / \text{LPD}_2 + \dots \text{etc.} < 1$$

**CPD = Calculation power density**

**LPD = Limit of power density**

Therefore, the worst-case situation is  $0.38713 / 1 + 0.00722 / 1 = 0.394$ , which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

**--- END ---**