

Radio Exposure Evaluation Report

FCC ID : QXO-AP4060
Equipment : Access Point
Brand Name : Extreme Networks
Model Name : AP4060
Applicant : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Manufacturer : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Standard : 47 CFR FCC Part 2 Subpart J, section 2.1091

The product was received on Feb. 20, 2025, and testing was started from Apr. 22, 2025 and completed on Apr. 24, 2025. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR FCC Part 2 Subpart J, section 2.1091 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.



Approved by: Jackson Tsai

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Table of Contents

HISTORY OF THIS TEST REPORT	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Information.....	5
1.2 Applicable Standards	6
1.3 Testing Location	8
2 MAXIMUM PERMISSIBLE EXPOSURE	9
2.1 Limit of Maximum Permissible Exposure	9
2.2 RF Exposure Exempt Measurement	10
2.3 Multiple RF Sources Exposure.....	11
2.4 MPE Calculation Method	12
2.5 Calculated Result and Limit.....	13

Photographs of EUT V01



History of this test report

Report No.	Version	Description	Issued Date
FA512205-01B	01	Initial issue of report	Jul. 09, 2025



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

None

Reviewed by: Barry Hsiao

Report Producer: Amber Chiu



1 General Description

1.1 Information

1.1.1 EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) VHT: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850	5180-5240 5260-5320 5500-5720 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
Bluetooth	2400-2483.5	2402-2480	LE: DSSS (GFSK)
802.15.4	2400-2483.5	2405-2480	DSSS (QPSK)

**1.1.2 Antenna Information**

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	Sercomm	6172008GWA-1	PIFA	I-Pex	2.4G+5G	Radio 1_2.4G Radio 2_5G
2	Sercomm	6172008GWA-2	PIFA	I-Pex	2.4G+5G	Radio 1_2.4G Radio 2_5G
3	Sercomm	6172008GWA-3	Dipole	I-Pex	5G+6G	Radio 3_5GL/6G
4	Sercomm	6172008GWA-4	Dipole	I-Pex	5G+6G	Radio 3_5GL/6G
5	Sercomm	6172008GWA-8	PIFA	I-Pex	2.4G+5G+6G	Radio 1_Scan
6	Sercomm	6172008GWA-5	PIFA	I-Pex	BT+802.15.4	BLE_chain 1_H
7	Sercomm	6172008GWA-6	PIFA	I-Pex	BT+802.15.4	BLE_chain 1_V
8	Sercomm	6172008GWA-7	PIFA	I-Pex	BT+802.15.4	BLE_chain 0
9	Sercomm	6172008GWA-9	PIFA	I-Pex	GPS	GPS

Ant.	Port	Gain (dBi)												
		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8	BT1H	BT1V	BT0	GPS
1	1	4.97	3.2	3.51	5.51	5.28	-	-	-	-	-	-	-	-
2	2	3.08	3.51	3.3	4.19	5.82	-	-	-	-	-	-	-	-
3	1	-	10.46	9.56	-	-	11.33	11.31	10.51	11.39	-	-	-	-
4	2	-	9.34	9.87	-	-	10.61	10.75	10.62	10.52	-	-	-	-
5	1	5.33	2.89	3.35	4.93	3.56	4.96	3.88	3.55	4.32	-	-	-	-
6	1	-	-	-	-	-	-	-	-	-	3.15	-	-	-
7	2	-	-	-	-	-	-	-	-	-	-	4.25	-	-
8	1	-	-	-	-	-	-	-	-	-	-	-	3.77	-
9	1	-	-	-	-	-	-	-	-	-	-	-	-	N/A

Ant.		Composite Gain (dBi)								
		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8
1~2	DG [1SS]	5.62	4.5	5.67	6.92	6.42	-	-	-	-
	DG [2SS]	4.97	3.51	3.51	5.51	5.82	-	-	-	-
3~4	DG [1SS]	-	12.93	12.57	12.57	12.74	13.79	13.99	13.55	13.95
	DG [2SS]	-	10.46	9.87	9.72	9.82	11.33	11.31	10.62	11.39



Ant.	30 Degree Gain (dBi)			
	UNII-1	UNII-5	UNII-6	UNII-7
1~2	1.63	-	-	-
3~4	4.13	0.53	1.38	2.76

Note 1: The EUT has nine antennas.

Note 2: The composite gain is derived as KDB 662911 D03 v02 which was used as directional gain. For more detail information, please refer to the Antenna Pattern Report AP512205-01.

For 2.4GHz function:

For IEEE 802.11 b/g/n/VHT/ax/be mode (1TX/2RX) < **Radio 1** >

Ant. 1 (port 1) could transmit

Ant. 1 (port 1) and Ant. 2 (port 2) receive simultaneously.

For IEEE 802.11 b/g/n/VHT/ax/be mode (2TX/2RX) < **Radio 1** >

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

For b20/g20 mode (1TX/1RX) < **Radio 1_Scan** >

Ant. 5 (port 1) could transmit/receive.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax/be mode(1TX/2RX) < **Radio 2** >

Ant. 1 (port 1) could transmit

Ant. 1 (port 1) and Ant. 2 (port 2) receive simultaneously.

For IEEE 802.11 a/n/ac/ax/be mode(2TX/2RX) < **Radio 2** >

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

For IEEE 802.11 a/n/ac/ax/be mode(1TX/2RX) < **Radio 3** > **Low band**

Ant. 3 (port 1) could transmit

Ant. 3 (port 1) and Ant. 4 (port 2) receive simultaneously.

For IEEE 802.11 a/n/ac/ax/be mode(2TX/2RX) < **Radio 3** > **Low band**

Ant. 3 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

For a20/a40/a80/a160 mode (1TX/1RX) < **Radio 1_Scan** >

Ant. 5 (port 1) could transmit/receive.

For 6GHz function:

For IEEE 802.11 a/ax/be mode(1TX/2RX) < **Radio 3** >

Ant. 3 (port 1) could transmit

Ant. 3 (port 1) and Ant. 4 (port 2) receive simultaneously.

For IEEE 802.11 a/ax/be mode(2TX/2RX) < **Radio 3** >

Ant. 3 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

For a20/a40/a80/a160 mode(1TX/1RX) < **Radio 1_Scan** >

Ant. 5 (port 1) could transmit/receive.

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX) < **chain 0** >

Ant. 8 (port 1) could transmit/receive.

For IEEE 802.15.1 Bluetooth mode (1TX/2RX) < **chain 1** >

Ant. 6 (port 1) and Ant. 7 (port 2) could transmit/receive.

Support diversity function and pre-tested on each single chain, the worst case was Ant. 6(port 1) and it was recorded in this test report.

For 802.15.4 function:

For IEEE 802.15.4 mode (1TX/1RX) < **chain 0** >

Ant. 8 (port 1) could transmit/receive.

For IEEE 802.15.4 mode (1TX/2RX) < **chain 1** >

Ant. 6 (port 1) and Ant. 7 (port 2) could transmit/receive simultaneously.

Support diversity function and pre-tested on each single chain, the worst case was Ant. 6(port 1) and it was recorded in this test report.

1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 2 Subpart J, section 2.1091
- ♦ KDB 447498 D04 Interim General RF Exposure Guidance v01

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ 47 CFR Part 1.1307
- ♦ 47 CFR Part 1.1310

1.3 Testing Location

Test Lab. : Sporton International Inc. Hsinhua Laboratory		
☒	Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)
		TEL: 886-3-327-3456 FAX: 886-3-327-0973
Test site Designation No. TW3785 with FCC.		
☐	Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)
		TEL: 886-3-318-0787 FAX: 886-3-318-0287
Test site Designation No. TW0008 with FCC.		

2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	F/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	F/1500	30
1500-100,000	-	-	1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

Multiple Transmitters Condition

Co-location as simultaneously transmitting (co-transmitting) and the evaluation shall be consider that simultaneous transmissions from co-located devices the individual transmitters are evaluated separately. After sum of the individual value (basic restriction / reference level) are measured/calculated also have to under basic restriction / reference level.

Co-transmitting mode:

- 1 R1:2.4G+R2:5G Full+Full+R1:Scan 2.4G+R1:Scan 5G+BT(chain0)
- 2 R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G+BT(chain0)
- 3 R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G+BT(chain1)
- 4 R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G+BT(chain1)
- 5 R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G +IEEE 802.15.4 (chain0)
- 6 R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G+IEEE 802.15.4 (chain0)
- 7 R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G+IEEE 802.15.4 (chain1)
- 8 R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G+IEEE 802.15.4(chain1)

2.2 RF Exposure Exempt Measurement

Option	Refer Std.	Exemption Exposure Thresholds (TL)
A	§1.1307(b)(3)(i)(A)	Available maximum time-averaged power is no more than 1 mW
B	§1.1307(b)(3)(i)(B)	$P_{th}(mW) = \begin{cases} ERP_{20cm} (d / 20cm)^x \rightarrow d \leq 20cm \\ ERP_{20cm} \rightarrow 20cm < d \leq 40cm \end{cases}$ $x = -\log_{10} \left(\frac{60}{ERP_{20cm} \sqrt{f}} \right) \text{ and } f \text{ is in GHz}$ $\begin{cases} ERP_{20cm} : 0.3GHz \leq f < 1.5GHz \rightarrow 2040 f(mW) \\ ERP_{20cm} : 1.5GHz \leq f \leq 6GHz \rightarrow 3060(mW) \end{cases}$
C	§1.1307(b)(3)(i)(C)	$\begin{cases} 0.3 \sim 1.34MHz \rightarrow ERP(W) = 1920 R^2 \\ 1.34 \sim 30MHz \rightarrow ERP(W) = 3450 R^2 / f^2 \\ 30 \sim 300MHz \rightarrow ERP(W) = 3.83R^2 \\ 300 \sim 1500MHz \rightarrow ERP(W) = 0.0128 R^2 f \\ 1500 \sim 100000MHz \rightarrow ERP(W) = 19.2R^2 \end{cases}$ f is in MHz; R is in m; $R > \lambda / 2\pi$

2.3 Multiple RF Sources Exposure

Refer Std.	Exemption Exposure Thresholds (TL)
§1.1307(b)(3)(ii)(A)	The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required)
§1.1307(b)(3)(ii)(B)	$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{ExposureLimit_k} \leq 1$ a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph §1.1307(b)(3)(i)(B) of this section for P , including existing exempt transmitters and those being added. b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph §1.1307(b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added. c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters. P_i = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive). $P_{th,i}$ = the exemption threshold power (P_{th}) according to paragraph §1.1307(b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i. ERP_j = the ERP of fixed, mobile, or portable RF source j. $ERP_{th,j}$ = exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least $\lambda/2\pi$ according to the applicable formula of paragraph §1.1307(b)(3)(i)(C) of this section. $Evaluated_k$ = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure. $Evaluated Limit_k$ = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k, as applicable from § 1.1310 of this chapter.

2.4 MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.
The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$



2.5 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

WLAN 2.4GHz_Non-Beamforming_Radio 1_Scan

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	5.33	21.95	25.13	0.50	365.595	20	B	3060.0	0.1195
2.4G;D1D	5.33	20.28	23.46	0.50	248.886	20	B	3060.0	0.0814

WLAN 2.4GHz_Non-Beamforming_Radio 1_1T1S

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	20.29	23.11	0.50	229.615	20	B	3060.0	0.0751
2.4G;D1D	4.97	19.41	22.23	0.50	187.499	20	B	3060.0	0.0613

WLAN 2.4GHz_Non-Beamforming_Radio 1_2T1S

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	23.22	26.04	0.50	450.817	20	B	3060.0	0.1474
2.4G;D1D	4.97	21.60	24.42	0.50	310.456	20	B	3060.0	0.1015

WLAN 2.4GHz_Non-Beamforming_Radio 1_2T2S

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	4.97	21.37	24.19	0.50	294.442	20	B	3060.0	0.0963

**WLAN 5GHz_Non-Beamforming_Radio 1_Scan_Indoor**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	2.89	18.34	19.08	0.50	90.782	20	B	3060.0	0.0297
5.3G;D1D	3.35	18.30	19.50	0.50	100.000	20	B	3060.0	0.0327
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
5.8G;D1D	3.56	20.39	21.80	0.50	169.824	20	B	3060.0	0.0555

WLAN 5GHz_Non-Beamforming_Radio 2_1T1S_Indoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	3.20	20.40	21.45	0.50	156.675	20	B	3060.0	0.0512
5.3G;D1D	3.51	19.98	21.34	0.50	152.757	20	B	3060.0	0.0499
5.6G;D1D	5.51	20.29	23.65	0.50	260.016	20	B	3060.0	0.0850
5.8G;D1D	5.28	21.55	24.68	0.50	329.610	20	B	3060.0	0.1078

WLAN 5GHz_Non-Beamforming_Radio 2_2T1S_Indoor

	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	3.51	23.13	24.49	0.50	315.500	20	B	3060.0	0.1031
5.3G;D1D	3.51	22.52	23.88	0.50	274.157	20	B	3060.0	0.0896
5.6G;D1D	5.51	22.48	25.84	0.50	430.527	20	B	3060.0	0.1407
5.8G;D1D	5.82	24.31	27.98	0.50	704.693	20	B	3060.0	0.2304

WLAN 5GHz_Non-Beamforming_Radio 2_2T2S_Indoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	3.51	23.07	24.43	0.50	311.172	20	B	3060.0	0.1017
5.3G;D1D	3.51	22.52	23.88	0.50	274.157	20	B	3060.0	0.0896
5.6G;D1D	5.51	22.52	25.88	0.50	434.510	20	B	3060.0	0.1420
5.8G;D1D	5.82	24.38	28.05	0.50	716.143	20	B	3060.0	0.2341

WLAN 5GHz_Non-Beamforming_Radio 3_1T1S_Indoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	10.46	20.12	28.43	0.50	781.628	20	B	3060.0	0.2555
5.3G;D1D	9.56	19.88	27.29	0.50	601.174	20	B	3060.0	0.1965

WLAN 5GHz_Non-Beamforming_Radio 3_2T1S_Indoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	10.46	23.04	31.35	0.50	1531.087	20	B	3060.0	0.5005
5.3G;D1D	9.87	19.46	27.18	0.50	586.138	20	B	3060.0	0.1916

**WLAN 5GHz_Non-Beamforming_Radio 3_2T2S_Indoor**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	10.46	23.00	31.31	0.50	1517.050	20	B	3060.0	0.4959
5.3G;D1D	9.87	19.52	27.24	0.50	594.292	20	B	3060.0	0.1943

WLAN 5GHz_Non-Beamforming_Radio 1_Scan_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	2.89	17.59	18.33	0.50	76.384	20	B	3060.0	0.0250
5.3G;D1D	3.35	18.30	19.50	0.50	100.000	20	B	3060.0	0.0327
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
5.8G;D1D	3.56	20.39	21.80	0.50	169.824	20	B	3060.0	0.0555

WLAN 5GHz_Non-Beamforming_Radio 2_1T1S_Peak Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	3.20	17.27	18.32	0.50	76.208	20	B	3060.0	0.0249
5.3G;D1D	3.51	19.98	21.34	0.50	152.757	20	B	3060.0	0.0499
5.6G;D1D	5.51	20.29	23.65	0.50	260.016	20	B	3060.0	0.0850
5.8G;D1D	5.28	21.55	24.68	0.50	329.610	20	B	3060.0	0.1078

WLAN 5GHz_Non-Beamforming_Radio 2_2T1S_Peak Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	3.51	16.97	18.33	0.50	76.384	20	B	3060.0	0.0250
5.3G;D1D	3.51	22.52	23.88	0.50	274.157	20	B	3060.0	0.0896
5.6G;D1D	5.51	22.48	25.84	0.50	430.527	20	B	3060.0	0.1407
5.8G;D1D	5.82	24.31	27.98	0.50	704.693	20	B	3060.0	0.2304

WLAN 5GHz_Non-Beamforming_Radio 2_2T2S_Peak Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	3.51	16.96	18.32	0.50	76.208	20	B	3060.0	0.0249
5.3G;D1D	3.51	22.52	23.88	0.50	274.157	20	B	3060.0	0.0896
5.6G;D1D	5.51	22.52	25.88	0.50	434.510	20	B	3060.0	0.1420
5.8G;D1D	5.82	24.38	28.05	0.50	716.143	20	B	3060.0	0.2341

WLAN 5GHz_Non-Beamforming_Radio 3_1T1S_Peak Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	10.46	9.99	18.30	0.50	75.858	20	B	3060.0	0.0248
5.3G;D1D	9.56	19.88	27.29	0.50	601.174	20	B	3060.0	0.1965

**WLAN 5GHz_Non-Beamforming_Radio 3_2T1S_Peak Gain_Outdoor**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	10.46	10.02	18.33	0.50	76.384	20	B	3060.0	0.0250
5.3G;D1D	9.87	19.46	27.18	0.50	586.138	20	B	3060.0	0.1916

WLAN 5GHz_Non-Beamforming_Radio 3_2T2S_Peak Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	10.46	9.95	18.26	0.50	75.162	20	B	3060.0	0.0246
5.3G;D1D	9.87	19.52	27.24	0.50	594.292	20	B	3060.0	0.1943

WLAN 5GHz_Non-Beamforming_Radio 2_1T1S_30 Degree Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	1.63	18.84	18.32	0.50	76.208	20	B	3060.0	0.0249
5.3G;D1D	3.51	19.98	21.34	0.50	152.757	20	B	3060.0	0.0499
5.6G;D1D	5.51	20.29	23.65	0.50	260.016	20	B	3060.0	0.0850
5.8G;D1D	5.28	21.55	24.68	0.50	329.610	20	B	3060.0	0.1078

WLAN 5GHz_Non-Beamforming_Radio 2_2T1S_30 Degree Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	1.63	18.85	18.33	0.50	76.384	20	B	3060.0	0.0250
5.3G;D1D	3.51	22.52	23.88	0.50	274.157	20	B	3060.0	0.0896
5.6G;D1D	5.51	22.48	25.84	0.50	430.527	20	B	3060.0	0.1407
5.8G;D1D	5.82	24.31	27.98	0.50	704.693	20	B	3060.0	0.2304

WLAN 5GHz_Non-Beamforming_Radio 2_2T2S_30 Degree Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	1.63	18.84	18.32	0.50	76.208	20	B	3060.0	0.0249
5.3G;D1D	3.51	22.52	23.88	0.50	274.157	20	B	3060.0	0.0896
5.6G;D1D	5.51	22.52	25.88	0.50	434.510	20	B	3060.0	0.1420
5.8G;D1D	5.82	24.38	28.05	0.50	716.143	20	B	3060.0	0.2341

WLAN 5GHz_Non-Beamforming_Radio 3_1T1S_30 Degree Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	4.13	16.35	18.33	0.50	76.384	20	B	3060.0	0.0250
5.3G;D1D	9.56	19.88	27.29	0.50	601.174	20	B	3060.0	0.1965

WLAN 5GHz_Non-Beamforming_Radio 3_2T1S_30 Degree Gain_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	4.13	16.33	18.31	0.50	76.033	20	B	3060.0	0.0249
5.3G;D1D	9.87	19.46	27.18	0.50	586.138	20	B	3060.0	0.1916

**WLAN 5GHz_Non-Beamforming_Radio 3_2T2S_30 Degree Gain_Outdoor**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	4.13	16.35	18.33	0.50	76.384	20	B	3060.0	0.0250
5.3G;D1D	9.87	19.52	27.24	0.50	594.292	20	B	3060.0	0.1943

BT_Chain 0

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;BT-LE	3.77	12.37	13.99	0.50	28.119	20	B	3060.0	0.0092

BT_Chain 1

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;BT-LE	3.15	12.36	13.36	0.50	24.322	20	B	3060.0	0.0080

802.15.4_Chain 0

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;	3.77	12.38	14.00	0.50	28.184	20	B	3060.0	0.0092

802.15.4_Chain 1

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;	3.15	12.48	13.48	0.50	25.003	20	B	3060.0	0.0082

**WLAN 2.4GHz_Beamforming_Radio 1**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	5.62	20.99	24.46	0.50	313.329	20	B	3060.0	0.1024

WLAN 5GHz_Beamforming_Radio 2_Indoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	4.50	23.13	25.48	0.50	396.278	20	B	3060.0	0.1295
5.3G;D1D	5.67	22.48	26.00	0.50	446.684	20	B	3060.0	0.1460
5.6G;D1D	6.92	22.48	27.25	0.50	595.662	20	B	3060.0	0.1947
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645

WLAN 5GHz_Beamforming_Radio 3_Indoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	12.93	22.49	33.27	0.50	2382.319	20	B	3060.0	0.7788
5.3G;D1D	12.57	16.82	27.24	0.50	594.292	20	B	3060.0	0.1943

WLAN 5GHz_Beamforming_Radio 2_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	4.50	15.96	18.31	0.50	76.033	20	B	3060.0	0.0249
5.3G;D1D	5.67	22.48	26.00	0.50	446.684	20	B	3060.0	0.1460
5.6G;D1D	6.92	22.48	27.25	0.50	595.662	20	B	3060.0	0.1947
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645

WLAN 5GHz_Beamforming_Radio 3_Outdoor

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	12.93	7.51	18.29	0.50	75.683	20	B	3060.0	0.0247
5.3G;D1D	12.57	16.82	27.24	0.50	594.292	20	B	3060.0	0.1943

Note 1: Option A, B and C refer as clause 2.2

Note 2: For option B, Pth(mW) convert to TL ERP(mW); For option C, ERP(W) convert to TL ERP(mW)

Note 3: TL Ratio=Tune-up ERP(mW)/TL ERP(mW)

**Simultaneous Transmission Analysis Mode:****1. R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G +BT(chain0)**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	23.22	26.04	0.50	450.817	20	B	3060.0	0.1474
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645
2.4G;G1D	5.33	21.95	25.13	0.50	365.595	20	B	3060.0	0.1195
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
2.4G;BT-LE	3.77	12.37	13.99	0.50	28.119	20	B	3060.0	0.0092
Sum Ratio	0.5977								
Ratio Limit	1								

2. R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G +BT(chain0)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	23.22	26.04	0.50	450.817	20	B	3060.0	0.1474
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645
5.2G;D1D	10.46	20.12	28.43	0.50	781.628	20	B	3060.0	0.2555
2.4G;G1D	5.33	21.95	25.13	0.50	365.595	20	B	3060.0	0.1195
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
2.4G;BT-LE	3.77	12.37	13.99	0.50	28.119	20	B	3060.0	0.0092
Sum Ratio	0.8532								
Ratio Limit	1								

3. R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G +BT(chain1)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	23.22	26.04	0.50	450.817	20	B	3060.0	0.1474
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645
2.4G;G1D	5.33	21.95	25.13	0.50	365.595	20	B	3060.0	0.1195
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
2.4G;BT-LE	3.15	12.36	13.36	0.50	24.322	20	B	3060.0	0.0080
Sum Ratio	0.5965								
Ratio Limit	1								

**4. R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G +BT(chain1)**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	23.22	26.04	0.50	450.817	20	B	3060.0	0.1474
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645
5.2G;D1D	10.46	20.12	28.43	0.50	781.628	20	B	3060.0	0.2555
2.4G;G1D	5.33	21.95	25.13	0.50	365.595	20	B	3060.0	0.1195
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
2.4G;BT-LE	3.15	12.36	13.36	0.50	24.322	20	B	3060.0	0.0080
Sum Ratio	0.8520								
Ratio Limit	1								

5. R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G +IEEE 802.15.4 (chain0)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	23.22	26.04	0.50	450.817	20	B	3060.0	0.1474
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645
2.4G;G1D	5.33	21.95	25.13	0.50	365.595	20	B	3060.0	0.1195
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
2.4G;	3.77	12.38	14.00	0.50	28.184	20	B	3060.0	0.0092
Sum Ratio	0.5977								
Ratio Limit	1								

6. R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G +IEEE 802.15.4 (chain0)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	23.22	26.04	0.50	450.817	20	B	3060.0	0.1474
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645
5.2G;D1D	10.46	20.12	28.43	0.50	781.628	20	B	3060.0	0.2555
2.4G;G1D	5.33	21.95	25.13	0.50	365.595	20	B	3060.0	0.1195
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
2.4G;	3.77	12.38	14.00	0.50	28.184	20	B	3060.0	0.0092
Sum Ratio	0.8532								
Ratio Limit	1								



7. R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G +IEEE 802.15.4 (chain1)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	23.22	26.04	0.50	450.817	20	B	3060.0	0.1474
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645
2.4G;G1D	5.33	21.95	25.13	0.50	365.595	20	B	3060.0	0.1195
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
2.4G;	3.15	12.48	13.48	0.50	25.003	20	B	3060.0	0.0082
Sum Ratio	0.5967								
Ratio Limit	1								

8. R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G +IEEE 802.15.4(chain1)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	4.97	23.22	26.04	0.50	450.817	20	B	3060.0	0.1474
5.8G;D1D	6.42	24.31	28.58	0.50	809.096	20	B	3060.0	0.2645
5.2G;D1D	10.46	20.12	28.43	0.50	781.628	20	B	3060.0	0.2555
2.4G;G1D	5.33	21.95	25.13	0.50	365.595	20	B	3060.0	0.1195
5.6G;D1D	4.93	19.14	21.92	0.50	174.582	20	B	3060.0	0.0571
2.4G;	3.15	12.48	13.48	0.50	25.003	20	B	3060.0	0.0082
Sum Ratio	0.8522								
Ratio Limit	1								

Note 1: Option A, B and C refer as clause 2.2

Note 2: For option B, Pth(mW) convert to TL ERP(mW); For option C, ERP(W) convert to TL ERP(mW)

Note 3: TL Ratio=Tune-up ERP(mW)/TL ERP(mW)

Note 4: Refer as clause 2.3 Multiple RF Sources Exposure. Please follow below option and sum TL ration table.

Option	Sum TL Ratio_B	Option	Sum TL Ratio_C	Option	Sum TL Ratio_E
B	$\sum_{i=1}^a \frac{P_i}{P_{th,i}}$	C	$\sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}}$	E	$\sum_{k=1}^c \frac{Evaluated_k}{ExposureLimit_k}$

Note: The above antenna gain was declared by manufacturer.

—THE END—