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Rev.: 01

RF Exposure Evaluation Report

FCC 47 CFR § 2.1091

for

AX1800 Wi-Fi 6 AI Router, AX1800 SMART ROUTER

Model Name.: R18

Prepared for:

D-Link Corporation

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Prepared by

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Issue Date: July 27, 2022

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	July 19, 2022	Initial Issue	ALL	Doris Chu
01	July 27, 2022	See the following Note Rev. (01)	ALL	Doris Chu


Rev. (01)

1. Revised tune up power.

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1 Attestation of Test Results

Applicant Name	D-Link Corporation
Model Name	14420 Myford Road Suite 100 Irvine California United States 92606
Applicable Standards	FCC 47 CFR § 2.1091 KDB 447498 D04 FCC 47 CFR § 1.1307 FCC 47 CFR § 1.1310 Published RF exposure KDB procedures
Receive EUT Date:	January 17, 2022
<p>Compliance Certification Services Inc. , tested the above equipment in accordance with the requirements set forth in the above standards. Determination of compliance is based on the results of the compliance measurement,not taking into account measurement instrumentation uncertainty.All indications of Pass/Fail in this report are opinions expressed by Compliance Certification Services Inc, based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.</p>	
<p>Approved & Released By:</p> 	
<p>Sky Zhou Asst. Section Manager Compliance Certification Services Inc.</p>	



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2 Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1091, the following FCC Published RF exposure [KDB](#) procedures:

- 447498 D04 Interim General RF Exposure Guidance v01
- 865664 D02 RF Exposure Reporting v01r02

3 Device Under Test (DUT) Information

3.1 DUT Description

Product	AX1800 Wi-Fi 6 AI Router, AX1800 SMART ROUTER
Trade Name	D-Link
Model No.	R18
Model Discrepancy	N/A
Hardware Version	1A
Software Version	1.00
Sample Stage	Identical prototype

3.2 Wireless Technologies

Frequency bands	<input type="checkbox"/> Bluetooth: 2402MHz-2480MHz <input checked="" type="checkbox"/> 802.11b/g/n HT20/ac (VHT20)/ax (HE20): 2412MHz ~ 2462 MHz <input checked="" type="checkbox"/> 802.11n HT40/ac (VHT40)/ax (HE40): 2422MHz ~ 2452MHz <input checked="" type="checkbox"/> 802.11a/n HT20: 5180MHz ~ 5240MHz / 5260MHz ~ 5320MHz / 5500MHz ~ 5720MHz / 5745MHz ~ 5825MHz <input checked="" type="checkbox"/> 802.11ac VHT20: 5180MHz ~ 5240MHz / 5260MHz ~ 5320MHz / 5500MHz ~ 5720MHz / 5745MHz ~ 5825MHz <input checked="" type="checkbox"/> 802.11ax HE20: 5180MHz ~ 5240MHz / 5260MHz ~ 5320MHz / 5500MHz ~ 5720 MHz / 5745MHz ~ 5825MHz <input checked="" type="checkbox"/> 802.11n HT40: 5190MHz ~ 5230MHz / 5270MHz ~ 5310MHz / 5510MHz ~ 5710MHz / 5755MHz ~ 5795MHz <input checked="" type="checkbox"/> 802.11ac VHT 40: 5190MHz ~ 5230MHz / 5270MHz ~ 5310MHz / 5510MHz ~ 5710MHz / 5755MHz ~ 5795MHz <input checked="" type="checkbox"/> 802.11ax HE40: 5190MHz ~ 5230MHz / 5270MHz ~ 5310MHz / 5510MHz ~ 5710MHz / 5755MHz ~ 5795MHz <input checked="" type="checkbox"/> 802.11ac VHT80: 5210MHz / 5290MHz / 5530MHz ~ 5690 MHz / 5775MHz <input checked="" type="checkbox"/> 802.11ax HE80: 5210MHz / 5290MHz / 5530MHz ~ 5690 MHz / 5775MHz <input type="checkbox"/> Others
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm2) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm2)

Antenna Specification	<p>Dipole Antenna</p> <p>WIFI 2.4GHz: Chain 0: LYNwave / AOX21X-051048-00: Gain: 4.8 dBi Chain 1: LYNwave / AOX20X-051041-00: Gain: 4.4 dBi Power Directional Gain: 7.61 dBi</p> <p>WIFI 5GHz: Chain 0: LYNwave / AOX21X-091050-00 5150~5250: Gain: 5.30 dBi 5250~5350: Gain: 5.30 dBi 5470~5725: Gain: 5.30 dBi 5725~5850: Gain: 4.80 dBi Chain 1: LYNwave / AOX21X-091051-00 5150~5250: Gain: 4.90 dBi 5250~5350: Gain: 4.90 dBi 5470~5725: Gain: 4.90 dBi 5725~5850: Gain: 4.30 dBi Power Directional Gain: 5150~5250: Gain: 8.11 dBi 5250~5350: Gain: 8.11 dBi 5470~5725: Gain: 8.11 dBi 5725~5850: Gain: 7.56dBi</p> <p>2.4GHz: Direction Gain: 7.61 dBi (Numeric gain: 5.77) Worst 5GHz: Direction Gain: 8.11 dBi (Numeric gain: 6.47) Worst</p>
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Maximum Measurement Average Power	2.4GHz	
	BFM OFF	
	IEEE 802.11b Mode:	23.26 dBm (211.836 mW)
	IEEE 802.11g Mode:	21.05 dBm (127.350 mW)
	IEEE 802.11n HT 20 Mode:	21.47 dBm (140.281 mW)
	IEEE 802.11n HT 40 Mode:	21.44 dBm (139.316 mW)
	IEEE 802.11ac (VHT 20) Mode:	21.50 dBm (141.254 mW)
	IEEE 802.11ac (VHT 40) Mode:	21.68 dBm (147.231 mW)
	IEEE 802.11ax HE20 Mode:	21.59 dBm (144.212 mW)
	IEEE 802.11ax HE40 Mode:	21.64 dBm (145.881 mW)
	BFM ON	
	IEEE 802.11ac (VHT 20) Mode:	18.18 dBm (65.766 mW)
	IEEE 802.11ac (VHT 40) Mode:	18.64 dBm (73.114 mW)
	IEEE 802.11ax HE20 Mode:	18.38 dBm (68.865 mW)
	IEEE 802.11ax HE40 Mode:	18.62 dBm (72.778 mW)
	5GHz	
	BFM OFF- Master	
	IEEE 802.11a Mode:	26.74 dBm (472.063 mW)
	IEEE 802.11n HT 20 Mode:	26.91 dBm (490.908 mW)
	IEEE 802.11ac VHT 20 Mode:	27.11 dBm (514.044 mW)
	IEEE 802.11n HT 40 Mode:	27.49 dBm (561.048 mW)
	IEEE 802.11ac VHT 40 Mode:	27.49 dBm (561.048 mW)
	IEEE 802.11ac VHT 80 Mode:	23.00 dBm (199.526 mW)
	IEEE 802.11ax HE20 Mode:	27.35 dBm (543.250 mW)
	IEEE 802.11ax HE40 Mode:	27.49 dBm (561.048 mW)
	IEEE 802.11ax HE80 Mode:	22.92 dBm (195.884 mW)
	BFM OFF- Slave	
	IEEE 802.11a Mode:	26.64 dBm (461.318 mW)
	IEEE 802.11n HT 20 Mode:	26.45 dBm (441.570 mW)
	IEEE 802.11ac VHT 20 Mode:	26.46 dBm (442.588 mW)
	IEEE 802.11n HT 40 Mode:	27.28 dBm (534.564 mW)
	IEEE 802.11ac VHT 40 Mode:	27.48 dBm (559.758 mW)
IEEE 802.11ac VHT 80 Mode:	22.79 dBm (190.108 mW)	
IEEE 802.11ax HE20 Mode:	26.98 dBm (498.884 mW)	
IEEE 802.11ax HE40 Mode:	27.14 dBm (517.607 mW)	
IEEE 802.11ax HE80 Mode:	22.71 dBm (186.638 mW)	

5GHz		
BFM ON- Master		
IEEE 802.11ac VHT 20 Mode:	23.80 dBm	(239.883 mW)
IEEE 802.11ac VHT 40 Mode:	24.90 dBm	(309.030 mW)
IEEE 802.11ac VHT 80 Mode:	19.90 dBm	(97.724 mW)
IEEE 802.11ax HE20 Mode:	24.33 dBm	(271.019 mW)
IEEE 802.11ax HE40 Mode:	24.62 dBm	(289.734 mW)
IEEE 802.11ax HE80 Mode:	19.73 dBm	(93.972 mW)
BFM ON- Slave		
IEEE 802.11ac VHT 20 Mode:	23.30 dBm	(213.796 mW)
IEEE 802.11ac VHT 40 Mode:	24.84 dBm	(304.789 mW)
IEEE 802.11ac VHT 80 Mode:	19.51 dBm	(89.331 mW)
IEEE 802.11ax HE20 Mode:	23.89 dBm	(244.906 mW)
IEEE 802.11ax HE40 Mode:	24.02 dBm	(252.348 mW)
IEEE 802.11ax HE80 Mode:	19.69 dBm	(93.111 mW)

Maximum tune up power	2.4GHz		
	BFM OFF		
	IEEE 802.11b Mode:	23.50 dBm	(223.872 mW)
	IEEE 802.11g Mode:	22.00 dBm	(158.489 mW)
	IEEE 802.11n HT 20 Mode:	22.00 dBm	(158.489 mW)
	IEEE 802.11n HT 40 Mode:	22.00 dBm	(158.489 mW)
	IEEE 802.11ac (VHT 20) Mode:	22.50 dBm	(177.828 mW)
	IEEE 802.11ac (VHT 40) Mode:	22.50 dBm	(177.828 mW)
	IEEE 802.11ax HE20 Mode:	22.50 dBm	(177.828 mW)
	IEEE 802.11ax HE40 Mode:	22.50 dBm	(177.828 mW)
	BFM ON		
	IEEE 802.11ac (VHT 20) Mode:	19.00 dBm	(79.433 mW)
	IEEE 802.11ac (VHT 40) Mode:	19.50 dBm	(89.125 mW)
	IEEE 802.11ax HE20 Mode:	19.00 dBm	(79.433 mW)
	IEEE 802.11ax HE40 Mode:	19.50 dBm	(89.125 mW)
	5GHz		
	BFM OFF- Master		
	IEEE 802.11a Mode:	27.50 dBm	(562.341 mW)
	IEEE 802.11n HT 20 Mode:	27.50 dBm	(562.341 mW)
	IEEE 802.11ac VHT 20 Mode:	27.50 dBm	(562.341 mW)
	IEEE 802.11n HT 40 Mode:	27.50 dBm	(562.341 mW)
	IEEE 802.11ac VHT 40 Mode:	27.50 dBm	(562.341 mW)
	IEEE 802.11ac VHT 80 Mode:	24.00 dBm	(251.189 mW)
	IEEE 802.11ax HE20 Mode:	27.50 dBm	(562.341 mW)
	IEEE 802.11ax HE40 Mode:	27.50 dBm	(562.341 mW)
	IEEE 802.11ax HE80 Mode:	23.50 dBm	(223.872 mW)
	BFM OFF- Slave		
	IEEE 802.11a Mode:	27.50 dBm	(562.341 mW)
	IEEE 802.11n HT 20 Mode:	27.00 dBm	(501.187 mW)
	IEEE 802.11ac VHT 20 Mode:	27.00 dBm	(501.187 mW)
IEEE 802.11n HT 40 Mode:	27.50 dBm	(562.341 mW)	
IEEE 802.11ac VHT 40 Mode:	27.50 dBm	(562.341 mW)	
IEEE 802.11ac VHT 80 Mode:	23.50 dBm	(223.872 mW)	
IEEE 802.11ax HE20 Mode:	27.50 dBm	(562.341 mW)	
IEEE 802.11ax HE40 Mode:	27.50 dBm	(562.341 mW)	
IEEE 802.11ax HE80 Mode:	23.50 dBm	(223.872 mW)	

5GHz		
BFM ON- Master		
IEEE 802.11ac VHT 20 Mode:	24.50 dBm	(281.838 mW)
IEEE 802.11ac VHT 40 Mode:	25.50 dBm	(354.813 mW)
IEEE 802.11ac VHT 80 Mode:	20.50 dBm	(112.202 mW)
IEEE 802.11ax HE20 Mode:	25.00 dBm	(316.228 mW)
IEEE 802.11ax HE40 Mode:	25.50 dBm	(354.813 mW)
IEEE 802.11ax HE80 Mode:	20.50 dBm	(112.202 mW)
BFM ON- Slave		
IEEE 802.11ac VHT 20 Mode:	24.00 dBm	(251.189 mW)
IEEE 802.11ac VHT 40 Mode:	25.50 dBm	(354.813 mW)
IEEE 802.11ac VHT 80 Mode:	20.50 dBm	(112.202 mW)
IEEE 802.11ax HE20 Mode:	24.50 dBm	(281.838 mW)
IEEE 802.11ax HE40 Mode:	25.00 dBm	(316.228 mW)
IEEE 802.11ax HE80 Mode:	20.50 dBm	(112.202 mW)

Notes:

1. For more details, please refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. The tune up power referred the AVG power of the test report TMWK2201000140KR and TMWK2201000141KR for RF Exposure assessment purpose.

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4 Maximum Permissible Exposure

4.1 Limits for Maximum Permissible Exposure (MPE)

Table 1 - Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
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
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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4.2 MPE Calculation Method

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

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

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \text{ Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

If, Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

4.3 MPE EXEMPTION

- (A) The available maximum time-averaged power is no more than 1 mW
- (B) The available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

- (C) Using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Single RF Sources Subject to Routine Environmental Evaluation	
RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R ² .
1.34-30	3,450 R ² /f ² .
30-300	3.83 R ² .
300-1,500	0.0128 R ² f.
1,500-100,000	19.2R ² .

Note: R is in meters, f is in MHz.

4.4 Multiple RF sources

In the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation),

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

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5 MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

WIFI 2.4GHz- BFM OFF

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm2	Limit Power Density in mW/cm2
IEEE 802.11b	2462.00	23.50	223.87	7.61	5.77	20.0	0.257	1.000
IEEE 802.11g	2462.00	22.00	158.49	7.61	5.77	20.0	0.182	1.000
IEEE 802.11n HT20	2462.00	22.00	158.49	7.61	5.77	20.0	0.182	1.000
IEEE 802.11n HT40	2452.00	22.00	158.49	7.61	5.77	20.0	0.182	1.000
IEEE 802.11ac VHT20	2462.00	22.50	177.83	7.61	5.77	20.0	0.204	1.000
IEEE 802.11ac VHT40	2452.00	22.50	177.83	7.61	5.77	20.0	0.204	1.000
IEEE 802.11ax HE20	2462.00	22.50	177.83	7.61	5.77	20.0	0.204	1.000
IEEE 802.11ax HE40	2452.00	22.50	177.83	7.61	5.77	20.0	0.204	1.000

WIFI 2.4GHz- BFM ON

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm2	Limit Power Density in mW/cm2
IEEE 802.11ac VHT20	2462.00	19.00	79.43	7.61	5.77	20.0	0.091	1.000
IEEE 802.11ac VHT40	2452.00	19.50	89.13	7.61	5.77	20.0	0.102	1.000
IEEE 802.11ax HE20	2462.00	19.00	79.43	7.61	5.77	20.0	0.091	1.000
IEEE 802.11ax HE40	2452.00	19.50	89.13	7.61	5.77	20.0	0.102	1.000

WIFI 5GHz- BFM OFF- Master

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm ²	Limit Power Density in mW/cm ²
IEEE 802.11a	5825.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11n HT20	5825.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11n HT40	5795.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11ac VHT20	5825.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11ac VHT40	5795.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11ac VHT80	5775.00	24.00	251.19	8.11	6.47	20.0	0.323	1.000
IEEE 802.11ax HE20	5825.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11ax HE40	5795.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11ax HE80	5775.00	23.50	223.87	8.11	6.47	20.0	0.288	1.000

WIFI 5GHz- BFM OFF- Slave

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm ²	Limit Power Density in mW/cm ²
IEEE 802.11a	5825.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11n HT20	5825.00	27.00	501.19	8.11	6.47	20.0	0.645	1.000
IEEE 802.11n HT40	5795.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11ac VHT20	5825.00	27.00	501.19	8.11	6.47	20.0	0.645	1.000
IEEE 802.11ac VHT40	5795.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11ac VHT80	5775.00	23.50	223.87	8.11	6.47	20.0	0.288	1.000
IEEE 802.11ax HE20	5825.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11ax HE40	5795.00	27.50	562.34	8.11	6.47	20.0	0.724	1.000
IEEE 802.11ax HE80	5775.00	23.50	223.87	8.11	6.47	20.0	0.288	1.000

WIFI 5GHz- BFM ON- Master

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm ²	Limit Power Density in mW/cm ²
IEEE 802.11ac VHT20	5825.00	24.50	281.84	8.11	6.47	20.0	0.363	1.000
IEEE 802.11ac VHT40	5795.00	25.50	354.81	8.11	6.47	20.0	0.457	1.000
IEEE 802.11ac VHT80	5775.00	20.50	112.20	8.11	6.47	20.0	0.144	1.000
IEEE 802.11ax HE20	5825.00	25.00	316.23	8.11	6.47	20.0	0.407	1.000
IEEE 802.11ax HE40	5795.00	25.50	354.81	8.11	6.47	20.0	0.457	1.000
IEEE 802.11ax HE80	5775.00	20.50	112.20	8.11	6.47	20.0	0.144	1.000

WIFI 5GHz- BFM ON- Slave

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm ²	Limit Power Density in mW/cm ²
IEEE 802.11ac VHT20	5825.00	24.00	251.19	8.11	6.47	20.0	0.323	1.000
IEEE 802.11ac VHT40	5795.00	25.50	354.81	8.11	6.47	20.0	0.457	1.000
IEEE 802.11ac VHT80	5775.00	20.50	112.20	8.11	6.47	20.0	0.144	1.000
IEEE 802.11ax HE20	5825.00	24.50	281.84	8.11	6.47	20.0	0.363	1.000
IEEE 802.11ax HE40	5795.00	25.00	316.23	8.11	6.47	20.0	0.407	1.000
IEEE 802.11ax HE80	5775.00	20.50	112.20	8.11	6.47	20.0	0.144	1.000

6 MPE Exemption Option B

WIFI 2.4GHz- BFM OFF

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11b	2462.00	0.2	31.11	28.96	787.046	3060	Complies
IEEE 802.11g	2462.00	0.2	29.61	27.46	557.186	3060	Complies
IEEE 802.11n HT20	2462.00	0.2	29.61	27.46	557.186	3060	Complies
IEEE 802.11n HT40	2452.00	0.2	29.61	27.46	557.186	3060	Complies
IEEE 802.11ac VHT20	2462.00	0.2	30.11	27.96	625.173	3060	Complies
IEEE 802.11ac VHT40	2452.00	0.2	30.11	27.96	625.173	3060	Complies
IEEE 802.11ax HE20	2462.00	0.2	30.11	27.96	625.173	3060	Complies
IEEE 802.11ax HE40	2452.00	0.2	30.11	27.96	625.173	3060	Complies

WIFI 2.4GHz- BFM ON

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11ac VHT20	2462.00	0.2	26.61	24.46	279.254	3060	Complies
IEEE 802.11ac VHT40	2452.00	0.2	27.11	24.96	313.329	3060	Complies
IEEE 802.11ax HE20	2462.00	0.2	26.61	24.46	279.254	3060	Complies
IEEE 802.11ax HE40	2452.00	0.2	27.11	24.96	313.329	3060	Complies

WIFI 5GHz- BFM OFF- Master

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11a	5825.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11n HT20	5825.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11n HT40	5795.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11ac VHT20	5825.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11ac VHT40	5795.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11ac VHT80	5775.00	0.2	32.11	29.96	990.832	3060	Complies
IEEE 802.11ax HE20	5825.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11ax HE40	5795.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11ax HE80	5775.00	0.2	31.61	29.46	883.080	3060	Complies

WIFI 5GHz- BFM OFF- Slave

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11a	5825.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11n HT20	5825.00	0.2	35.11	32.96	1976.970	3060	Complies
IEEE 802.11n HT40	5795.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11ac VHT20	5825.00	0.2	35.11	32.96	1976.970	3060	Complies
IEEE 802.11ac VHT40	5795.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11ac VHT80	5775.00	0.2	31.61	29.46	883.080	3060	Complies
IEEE 802.11ax HE20	5825.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11ax HE40	5795.00	0.2	35.61	33.46	2218.196	3060	Complies
IEEE 802.11ax HE80	5775.00	0.2	31.61	29.46	883.080	3060	Complies

WIFI 5GHz- BFM ON- Master

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11ac VHT20	5825.00	0.2	32.61	30.46	1111.732	3060	Complies
IEEE 802.11ac VHT40	5795.00	0.2	33.61	31.46	1399.587	3060	Complies
IEEE 802.11ac VHT80	5775.00	0.2	28.61	26.46	442.588	3060	Complies
IEEE 802.11ax HE20	5825.00	0.2	33.11	30.96	1247.384	3060	Complies
IEEE 802.11ax HE40	5795.00	0.2	33.61	31.46	1399.587	3060	Complies
IEEE 802.11ax HE80	5775.00	0.2	28.61	26.46	442.588	3060	Complies

WIFI 5GHz- BFM ON- Slave

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11ac VHT20	5825.00	0.2	32.11	29.96	990.832	3060	Complies
IEEE 802.11ac VHT40	5795.00	0.2	33.61	31.46	1399.587	3060	Complies
IEEE 802.11ac VHT80	5775.00	0.2	28.61	26.46	442.588	3060	Complies
IEEE 802.11ax HE20	5825.00	0.2	32.61	30.46	1111.732	3060	Complies
IEEE 802.11ax HE40	5795.00	0.2	33.11	30.96	1247.384	3060	Complies
IEEE 802.11ax HE80	5775.00	0.2	28.61	26.46	442.588	3060	Complies

7 Simultaneous Transmission Analysis

In the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation),

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Simultaneous Transmission Condition

RF Exposure Condition	Item	Capable Transmit Configurations	
	1	DTS	+

7.1 Sum of the MPE for WIFI 2.4GHz & WIFI 5GHz

WiFi 2.4GHz + WiFi 5GHz

Simultaneous Transmission Mode:					
Mode	Frequency (MHz)	Max Tune-up ERP (mW)	ERP Threshold (mW)	simultaneous Transmission	simultaneous Transmission Limit
WIFI 2.4GHz	2462.00	787.05	3060.00	0.98	≤ 1
WIFI 5GHz	5825.00	2218.20	3060.00		



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8 Facilities

All measurement facilities used to collect the measurement data are located at

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)

END OF REPORT