

RF Exposure evaluation

Product Name : AX3000 WIFI6 Mesh Router

Brand Name : N/A

Model : WS-WN588HX3

Series Model : WS-WN589HX3, WS-WN573HP3, WS-WN553X1, WL-WN588HX3, WS-WN589HX3, WL-WN573HP3, WL-WN553X1, AERIAL HD9S

FCC ID : NZ3-WN0009

Applicant : **Winstars Technology Limited**

Address : 1-5F, NO.5, Taisong Industrial Zone, Dalang Community, Dalang Street, Longhua District, Shenzhen, China

Manufacturer : **Winstars Technology Limited**

Address : 1-5F, NO.5, Taisong Industrial Zone, Dalang Community, Dalang Street, Longhua District, Shenzhen, China

Standard(s) : 47CFR §1.1310, 47CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06

Date of Receipt : Sep. 17, 2025

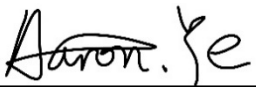
Date of Test : Sep. 18, 2025~ Oct. 24, 2025

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Issued By: **Guangdong Asia Hongke Test Technology Limited**

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Reviewed by: 
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Allen Wang



Note: This device has been tested and found to comply with the standard(s) listed, this test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory. This report shall not be reproduced except in full, without the written approval of Guangdong Asia Hongke Test Technology Limited. If there is a need to alter or revise this document, the right belongs to Guangdong Asia Hongke Test Technology Limited, and it should give a prior written notice of the revision document. This test report must not be used by the client to claim product endorsement.

Guangdong Asia Hongke Test Technology Limited

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Report Revise Record

Report Version	Issued Date	Notes
M0	Oct. 25, 2025	Initial Release

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1 GENERAL INFORMATION

1.1 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	25°C
Relative Humidity:	55 %
Air Pressure:	101 kPa

1.2 General Description of EUT

Product Name:	AX3000 WIFI6 Mesh Router			
Model/Type reference:	WS-WN588HX3			
Serial Model:	WS-WN589HX3, WS-WN573HP3, WS-WN553X1, WL-WN588HX3, WS-WN589HX3, WL-WN573HP3, WL-WN553X1, AERIAL HD9S			
Model difference:	PCB board, circuit, structure and internal of these model(s) are the same, only model name and appearance color is different for these model.			
Power Rating:	DC 54.0V from adapter			
Adapter information:	Model: TDX18-5400300E Input: 100-240V~ 50/60Hz 0.6A Output: 54.0V=0.3A 16.2			
Hardware Version:	WS-WN588HX3-B			
Software Version:	M88HX3_V250625			
Sample(s) Status:	AiTSZ-250917061-1(Normal sample) AiTSZ-250917061-2(Engineer sample)			
2.4G WIFI:				
Supported type:	802.11b/g/n(H20)/n(H40)/ax(HE20)/ax(HE40)			
Modulation:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11ax: OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)			
Operation frequency:	802.11b/g/n(H20)/ax(HE20): 2412MHz~2472MHz 802.11n(H40)/ax(HE40):2422MHz~2462MHz			
Channel number:	802.11b/g/n(H20)/ax(HE20): 11 802.11n(H40)/ax(HE40):7			
Channel separation:	5MHz			
Antenna type:	External Antenna MIMO 2*2			
Antenna gain:	Antenna 1:6.68dBi, Antenna 2: 6.68dBi			
Directional gain:	9.69dBi			
5G WIFI:				
Supported type:	20MHz system	40MHz system	80MHz system	160MHz system
	802.11a 802.11n 802.11ac 802.11ax	802.11n 802.11ac 802.11ax	802.11ac 802.11ax	N/A

Operation frequency:	5180-5240MHz 5745-5825MHz	5190-5230MHz 5755-5795MHz	5210MHz 5775MHz	N/A
Modulation:	OFDM/OFDMA	OFDM/OFDMA	OFDM/OFDMA	N/A
Channel number:	9	4	2	N/A
Channel separation:	20MHz	40MHz	N/A	N/A
MIMO	Support MIMO 3*3			
Antenna type:	ExternalAntenna			
Antenna gain:	Antenna 1:6.83dBi, Antenna 2: 6.83dBi, Antenna 3: 6.83dBi			
Directional gain:	6.83dBi			
Remark: The above DUT's information was declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.				

1.3 Test Facility

Test Laboratory:

Guangdong Asia Hongke Test Technology Limited

B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified or accredited by the following organizations:

FCC-Registration No.: 251906 Designation Number: CN1376

Guangdong Asia Hongke Test Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC —Registration No.: 31737 CAB identifier: CN0165

The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

A2LA-Lab Cert. No.: 7133.01

Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Guangdong Asia Hongke Test Technology Limited's quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Asia Hongke laboratory is reported:

Test	Measurement Uncertainty	Notes
Power Line Conducted Emission	9KHz~30MHz ± 1.20 dB	(1)
Radiated Emission	9KHz~30MHz ± 3.10 dB	(1)
Radiated Emission	30MHz~1GHz ± 3.75 dB	(1)
Radiated Emission	1GHz~18GHz ± 3.88 dB	(1)
Radiated Emission	18GHz~40GHz ± 3.88 dB	(1)
RF power, conducted	30MHz~6GHz ± 0.16 dB	(1)
RF power density, conducted	± 0.24 dB	(1)
Spurious emissions, conducted	± 0.21 dB	(1)
Temperature	$\pm 1^\circ\text{C}$	(1)
Humidity	$\pm 3\%$	(1)
DC and low frequency voltages	$\pm 1.5\%$	(1)
Time	$\pm 2\%$	(1)
Duty cycle	$\pm 2\%$	(1)

The report uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty Multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

2 Method of measurement

2.1 Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

FCC KDB447498 D01 General RF Exposure Guidance v06: Mobile and Portable Device, RF Exposure, Equipment Authorization Procedures

2.2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
3.0 – 30	1842/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for Occupational/Controlled 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 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz

*=Plane-wave equivalent power density

2.3 MPE Calculation Method

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4\pi R^2$$

Where: S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

2.4 Antenna Information

EUT can only use antennas certificated as follows provided by manufacturer;

Antenna	Model No. of antenna:	Type of antenna:	Gain of the antenna (Max.)	Frequency range:
WIFI	/	External Antenna	2.4G: ANT1, ANT2: 6.68dBi Directional gain: 9.69dBi 5G: ANT1, ANT2, ANT3: 6.83dBi Directional gain: 11.60dBi	2400-2500MHz 5150-5850MHz

2.5 Manufacturing Tolerance

2.4GHz WLAN

IEEE 802.11b (Peak)						
Frequency (MHz)	Antenna 1			Antenna 2		
	2412	2437	2462	2412	2437	2462
Target (dBm)	13.0	13.0	16.0	13.0	12.0	14.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0
IEEE 802.11g (Peak)						
Frequency (MHz)	Antenna 1			Antenna 2		
	2412	2437	2462	2412	2437	2462
Target (dBm)	12.0	12.0	13.0	11.0	11.0	11.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0
IEEE 802.11n HT20 (Peak)						
Frequency (MHz)	Antenna 1			Antenna 2		
	2412	2437	2462	2412	2437	2462
Target (dBm)	12.0	12.0	12.0	11.0	11.0	11.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0
IEEE 802.11n HT40 (Peak)						
Frequency (MHz)	Antenna 1			Antenna 2		
	2422	2437	2452	2422	2437	2452
Target (dBm)	13.0	13.0	13.0	12.0	12.0	12.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0
IEEE 802.11ax HEW20 (Peak)						
Frequency (MHz)	Antenna 1			Antenna 2		
	2412	2437	2462	2412	2437	2462
Target (dBm)	13.0	13.0	12.0	12.0	12.0	12.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0
IEEE 802.11ax HEW40 (Peak)						
Frequency (MHz)	Antenna 1			Antenna 2		
	2422	2437	2452	2422	2437	2452
Target (dBm)	12.0	14.0	14.0	12.0	12.0	12.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0

IEEE 802.11a (Average)

IEEE 802.11a (Average)									
Frequency (MHz)	Antenna 1			Antenna 2			Antenna 3		
	5180	5200	5240	5180	5200	5240	5180	5200	5240
Target (dBm)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
IEEE 802.11n HT20 (Average)									
Frequency (MHz)	Antenna 1			Antenna 2			Antenna 3		
	5180	5200	5240	5180	5200	5240	5180	5200	5240
Target (dBm)	1.0	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
IEEE 802.11ac VHT20 (Average)									
Frequency (MHz)	Antenna 1			Antenna 2			Antenna 3		
	5180	5200	5240	5180	5200	5240	5180	5200	5240
Target (dBm)	2.0	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
IEEE 802.11ax HEW20 (Average)									
Frequency (MHz)	Antenna 1			Antenna 2			Antenna 3		
	5180	5200	5240	5180	5200	5240	5180	5200	5240
Target (dBm)	4.0	2.0	2.0	5.0	3.0	3.0	4.0	2.0	2.0
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
IEEE 802.11n HT40 (Average)									
Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3				
	5190	5230	5190	5230	5190	5230			
Target (dBm)	2.0	2.0	2.0	2.0	2.0	2.0			
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0			
IEEE 802.11ac VHT40 (Average)									
Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3				
	5190	5230	5190	5230	5190	5230			
Target (dBm)	2.0	3.0	2.0	3.0	2.0	3.0			
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0			
IEEE 802.11ax HEW40 (Average)									
Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3				
	5190	5230	5190	5230	5190	5230			
Target (dBm)	2.0	3.0	2.0	3.0	2.0	3.0			
Tolerance ± (dB)	1.0	1.0	1.0	1.0	1.0	1.0			
IEEE 802.11ac VHT80 (Average)									
Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3				
	5210		5210		5210				
Target (dBm)	2.0		3.0		2.0				
Tolerance ± (dB)	1.0		1.0		1.0				
IEEE 802.11ax HEW80 (Average)									
Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3				
	5210		5210		5210				
Target (dBm)	2.0		3.0		2.0				
Tolerance ± (dB)	1.0		1.0		1.0				

5GHz WLAN Band 3

IEEE 802.11a (Average)

Frequency (MHz)	Antenna 1			Antenna 2			Antenna 3		
	5745	5785	5825	5745	5785	5825	5745	5785	5825
Target (dBm)	9.0	9.0	8.0	9.0	9.0	8.0	9.0	9.0	8.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

IEEE 802.11n HT20 (Average)

Frequency (MHz)	Antenna 1			Antenna 2			Antenna 3		
	5745	5785	5825	5745	5785	5825	5745	5785	5825
Target (dBm)	7.0	7.0	6.0	7.0	7.0	6.0	7.0	7.0	6.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

IEEE 802.11ac VHT20 (Average)

Frequency (MHz)	Antenna 1			Antenna 2			Antenna 3		
	5745	5785	5825	5745	5785	5825	5745	5785	5825
Target (dBm)	8.0	8.0	6.0	8.0	8.0	6.0	8.0	8.0	6.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

IEEE 802.11ax HEW20 (Average)

Frequency (MHz)	Antenna 1			Antenna 2			Antenna 3		
	5745	5785	5825	5745	5785	5825	5745	5785	5825
Target (dBm)	10.0	10.0	8.0	10.0	10.0	8.0	10.0	10.0	8.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

IEEE 802.11n HT40 (Average)

Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3	
	5755	5795	5755	5795	5755	5795
Target (dBm)	8.0	8.0	8.0	8.0	8.0	8.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0	1.0	1.0	1.0

IEEE 802.11ac VHT40 (Average)

Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3	
	5755	5795	5755	5795	5755	5795
Target (dBm)	8.0	8.0	8.0	8.0	8.0	8.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0	1.0	1.0	1.0

IEEE 802.11ax HEW40 (Average)

Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3	
	5755	5795	5755	5795	5755	5795
Target (dBm)	9.0	10.0	9.0	10.0	9.0	10.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0	1.0	1.0	1.0

IEEE 802.11ac VHT80 (Average)

Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3	
	5775		5775		5775	
Target (dBm)	9.0		9.0		9.0	
Tolerance $\pm$ (dB)	1.0		1.0		1.0	

IEEE 802.11ax HEW80 (Average)

Frequency (MHz)	Antenna 1		Antenna 2		Antenna 3	
	5775		5775		5775	
Target (dBm)	9.0		9.0		9.0	
Tolerance $\pm$ (dB)	1.0		1.0		1.0	

2.6 MPE Result

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, $r=20\text{cm}$, as well as the gain of the used antenna is refer to section 2.4, the RF power density can be obtained.

Standalone

WIFI2.4G Antenna 1

Modulation Type	Output power with tune up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	Ratio
	dBm	mW					
IEEE 802.11b	17.0	50.1187	6.68	4.6559	0.04642	1.0000	0.0464
IEEE 802.11g	14.0	25.1189	6.68	4.6559	0.0233	1.0000	0.0233
IEEE 802.11n HT20	13.0	19.9526	9.69	9.3111	0.03696	1.0000	0.0370
IEEE 802.11n HT40	14.0	25.1189	9.69	9.3111	0.04653	1.0000	0.0465
IEEE 802.11ax HEW20	14.0	25.1189	9.69	9.3111	0.04653	1.0000	0.0465
IEEE 802.11ax HEW40	15.0	31.6228	9.69	9.3111	0.05858	1.0000	0.0586

WIFI2.4G Antenna 2

Modulation Type	Output power with tune up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	Ratio
	dBm	mW					
IEEE 802.11b	15.0	31.6228	6.68	4.6559	0.02929	1.0000	0.0293
IEEE 802.11g	12.0	15.8489	6.68	4.6559	0.0147	1.0000	0.0147
IEEE 802.11n HT20	12.0	15.8489	9.69	9.3111	0.02936	1.0000	0.0294
IEEE 802.11n HT40	13.0	19.9526	9.69	9.3111	0.03696	1.0000	0.0370
IEEE 802.11ax HEW20	13.0	19.9526	9.69	9.3111	0.03696	1.0000	0.0370
IEEE 802.11ax HEW40	13.0	19.9526	9.69	9.3111	0.03696	1.0000	0.0370

5GHz WLAN Band 1 Antenna 1

Modulation Type	Output power with tune up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	Ratio
	dBm	mW					
IEEE 802.11a	4.0	2.5119	6.83	4.8195	0.00241	1.0000	0.0024
IEEE 802.11n HT20	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ac VHT20	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ax HEW20	5.0	3.1623	11.6	14.4544	0.00909	1.0000	0.0091
IEEE 802.11n HT40	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ac VHT40	4.0	2.5119	11.6	14.4544	0.00722	1.0000	0.0072
IEEE 802.11ax HEW40	4.0	2.5119	11.6	14.4544	0.00722	1.0000	0.0072
IEEE 802.11ac VHT80	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ax HEW80	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057

5GHz WLAN Band 1 Antenna 2

Modulation Type	Output power with tune up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	Ratio
	dBm	mW					
IEEE 802.11a	4.0	2.5119	6.83	4.8195	0.00241	1.0000	0.0024
IEEE 802.11n HT20	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ac VHT20	4.0	2.5119	11.6	14.4544	0.00722	1.0000	0.0072
IEEE 802.11ax HEW20	6.0	3.9811	11.6	14.4544	0.01145	1.0000	0.0115
IEEE 802.11n HT40	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ac VHT40	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ax HEW40	4.0	2.5119	11.6	14.4544	0.00722	1.0000	0.0072
IEEE 802.11ac VHT80	4.0	2.5119	11.6	14.4544	0.00722	1.0000	0.0072
IEEE 802.11ax HEW80	4.0	2.5119	11.6	14.4544	0.00722	1.0000	0.0072

5GHz WLAN Band 1 Antenna 3

Modulation Type	Output power with tune up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	Ratio
	dBm	mW					
IEEE 802.11a	4.0	2.5119	6.83	4.8195	0.00241	1.0000	0.0024
IEEE 802.11n HT20	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ac VHT20	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ax HEW20	5.0	3.1623	11.6	14.4544	0.00909	1.0000	0.0091
IEEE 802.11n HT40	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ac VHT40	4.0	2.5119	11.6	14.4544	0.00722	1.0000	0.0072
IEEE 802.11ax HEW40	4.0	2.5119	11.6	14.4544	0.00722	1.0000	0.0072
IEEE 802.11ac VHT80	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057
IEEE 802.11ax HEW80	3.0	1.9953	11.6	14.4544	0.00574	1.0000	0.0057

5GHz WLAN Band 3 Antenna 1

Modulation Type	Output power with tune up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	Ratio
	dBm	mW					
IEEE 802.11a	10.0	10.0000	6.83	4.8195	0.00959	1.0000	0.0096
IEEE 802.11n HT20	8.0	6.3096	11.6	14.4544	0.01814	1.0000	0.0181
IEEE 802.11ac VHT20	9.0	7.9433	11.6	14.4544	0.02284	1.0000	0.0228
IEEE 802.11ax HEW20	11.0	12.5893	11.6	14.4544	0.03620	1.0000	0.0362
IEEE 802.11n HT40	9.0	7.9433	11.6	14.4544	0.02284	1.0000	0.0228
IEEE 802.11ac VHT40	9.0	7.9433	11.6	14.4544	0.02284	1.0000	0.0228
IEEE 802.11ax HEW40	11.0	12.5893	11.6	14.4544	0.03620	1.0000	0.0362
IEEE 802.11ac VHT80	10.0	10.0000	11.6	14.4544	0.02876	1.0000	0.0288
IEEE 802.11ax HEW80	10.0	10.0000	11.6	14.4544	0.02876	1.0000	0.0288

5GHz WLAN Band 3 Antenna 2

Modulation Type	Output power with tune up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	Ratio
	dBm	mW					
IEEE 802.11a	10.0	10.0000	6.83	4.8195	0.00959	1.0000	0.0096
IEEE 802.11n HT20	8.0	6.3096	11.6	14.4544	0.01814	1.0000	0.0181
IEEE 802.11ac VHT20	9.0	7.9433	11.6	14.4544	0.02284	1.0000	0.0228
IEEE 802.11ax HEW20	11.0	12.5893	11.6	14.4544	0.03620	1.0000	0.0362
IEEE 802.11n HT40	9.0	7.9433	11.6	14.4544	0.02284	1.0000	0.0228
IEEE 802.11ac VHT40	9.0	7.9433	11.6	14.4544	0.02284	1.0000	0.0228
IEEE 802.11ax HEW40	11.0	12.5893	11.6	14.4544	0.03620	1.0000	0.0362
IEEE 802.11ac VHT80	10.0	10.0000	11.6	14.4544	0.02876	1.0000	0.0288
IEEE 802.11ax HEW80	10.0	10.0000	11.6	14.4544	0.02876	1.0000	0.0288

5GHz WLAN Band 3 Antenna 3

Modulation Type	Output power with tune up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)	Ratio
	dBm	mW					
IEEE 802.11a	10.0	10.0000	6.83	4.8195	0.00959	1.0000	0.0096
IEEE 802.11n HT20	8.0	6.3096	11.6	14.4544	0.01814	1.0000	0.0181
IEEE 802.11ac VHT20	9.0	7.9433	11.6	14.4544	0.02284	1.0000	0.0228
IEEE 802.11ax HEW20	11.0	12.5893	11.6	14.4544	0.03620	1.0000	0.0362
IEEE 802.11n HT40	9.0	7.9433	11.6	14.4544	0.02284	1.0000	0.0228
IEEE 802.11ac VHT40	9.0	7.9433	11.6	14.4544	0.02284	1.0000	0.0228
IEEE 802.11ax HEW40	11.0	12.5893	11.6	14.4544	0.03620	1.0000	0.0362
IEEE 802.11ac VHT80	10.0	10.0000	11.6	14.4544	0.02876	1.0000	0.0288
IEEE 802.11ax HEW80	10.0	10.0000	11.6	14.4544	0.02876	1.0000	0.0288

Remark:

1. Output power including turn-up tolerance;
2. MPE evaluate distance is 20cm from user manual provide by manufacturer.

simultaneous transmission Evaluation

In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is.

$$\sum_{i=1}^n \frac{S_i}{MPE_i} \leq 1$$

The product also has multiple transmitters The Simultaneous Transmission Possibilities are as below:

Simultaneous Tx Combination	Configuration
1	WLAN 2.4ANT1+ WLAN 2.4G ANT2 in MIMO mode
2	WLAN 5GANT1+ WLAN 5G ANT2 + WLAN 5G ANT3 in MIMO mode
3	WLAN 2.4+ WLAN 5G

Simultaneous Combination	Mode	Max. Result Ratio ANT1	Max. Result Ratio ANT2	Total Ratio	Limit	Limit Result
1	IEEE 802.11n HT20	0.03696	0.02936	0.06632	1.0	Pass
	IEEE 802.11n HT40	0.04653	0.03696	0.08349		
	IEEE 802.11ax HEW20	0.04653	0.03696	0.08349		
	IEEE 802.11ax HEW40	0.05858	0.03696	0.09554		

Simultaneous Combination	Mode	Max. Result Ratio ANT1	Max. Result Ratio ANT2	Max. Result Ratio ANT3	Total Ratio	Limit	Limit Result
2 (5GHz WLAN Band 1)	IEEE 802.11n HT20	0.00574	0.00574	0.00574	0.01722	1.0	Pass
	IEEE 802.11ac VHT20	0.00574	0.00722	0.00574	0.01870		
	IEEE 802.11ax HEW20	0.00909	0.01145	0.00909	0.02963		
	IEEE 802.11n HT40	0.00574	0.00574	0.00574	0.01722		
	IEEE 802.11ac VHT40	0.00722	0.00574	0.00722	0.02018		
	IEEE 802.11ax HEW40	0.00722	0.00722	0.00722	0.02166		
	IEEE 802.11ac VHT80	0.00574	0.00722	0.00574	0.01870		
	IEEE 802.11ax HEW80	0.00574	0.00722	0.00574	0.01870		

Simultaneous Combination	Mode	Max. Result Ratio ANT1	Max. Result Ratio ANT2	Max. Result Ratio ANT3	Total Ratio	Limit	Limit Result
2 (5GHz WLAN Band 3)	IEEE 802.11n HT20	0.01814	0.01814	0.01814	0.05442	1.0	Pass
	IEEE 802.11ac VHT20	0.02284	0.02284	0.02284	0.06852		
	IEEE 802.11ax HEW20	0.03620	0.03620	0.03620	0.10860		
	IEEE 802.11n HT40	0.02284	0.02284	0.02284	0.06852		
	IEEE 802.11ac VHT40	0.02284	0.02284	0.02284	0.06852		
	IEEE 802.11ax HEW40	0.03620	0.03620	0.03620	0.10860		
	IEEE 802.11ac VHT80	0.02876	0.02876	0.02876	0.08628		
	IEEE 802.11ax HEW80	0.02876	0.02876	0.02876	0.08628		

Simultaneous Combination	Mode	Max. Result Ratio WLAN 2.4	Max. Result Ratio WLAN 5G	Total Ratio	Limit	Limit Result
3	WLAN 2.4+ WLAN 5G	0.09554	0.02963	0.12517	1.0	Pass

2.7 Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

***** End of Report *****