Certificate # 2861.01

Test Report

Verified code: 977535

Report No.: E202212085403-01-5

Customer:	Fiberhome Telecommunication Technologies Co., Ltd.
Address:	No.88 Youkeyuan Road, Hongshan District, Wuhan,Hubei, China
Sample Name:	Wireless Router
Sample Model:	SR1021FS
Receive Sample Date:	Dec.10,2022
Test Date:	Dec.14,2022 ~ Jan.10,2023
Reference Document:	CFR 47, FCC Part 2.1091Radiofrequency radiation exposure evaluation: mobile devices.
Test Result:	Pass

Prepared by: Lu Wei Reviewed by: Jiang Tao Approved by: Zhao Zetian

GUANGZHOU GRG METROLOGY & TEST CO., LTD

Issued Date: 2023-02-24

GUANGZHOU GRG METROLOGY & TEST CO., LTD.
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REPORT ISSUED HISTORY

Report Version	Report No.	Description	Compile Date
1.0	E202212085403-01-5	Original Issue	2023-02-21

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1. GENERAL DESCRIPTION OF EUT

1.1. APPLICANT

Name:	Fiberhome Telecommunication Technologies Co., Ltd.
Address:	No.88 Youkeyuan Road, Hongshan District, Wuhan,Hubei, China

1.2. MANUFACTURER

Name:	Fiberhome Telecommunication Technologies Co., Ltd.
Address:	No.88 Youkeyuan Road, Hongshan District, Wuhan,Hubei, China

1.3. FACTORY

Name:	Fiberhome Telecommunication Technologies Co., Ltd.
Address:	No.67,Chuangye Street,East Lake High-tech Development Zone,WuhanCity,HubeiProvince,P.R.China

1.4. BASIC DESCRIPTIONOF EQUIPMENTUNDER TEST

Equipment:	Wireless Router
Model No.:	SR1021FS
Adding Model:	/
Trade Name:	FiberHome
FCC ID:	2AV2N-SR1021FS
Power Supply:	DC12.0V power supplied by adapter
Adapter Specification:	Adapter1: KL-WA120100-D Input:100-240V~50/60Hz 0.5A Max Output:12V⎓1.0A Adapter2: RD1201000-C55-35MGD Input:100-240V~50/60Hz 0.6A Max Output:12V⎓1A
Frequency Range:	2.4G Wi-Fi: 2412MHz-2462MHz 5G Wi-Fi: 5150MHz-5850MHz

Transmit Power: 2.4G wifi:
21.54dBm for 802.11b mode (antenna 1)
21.01dBm for 802.11b mode (antenna 2)
21.81dBm for 802.11g mode (antenna 1)
21.32dBm for 802.11g mode (antenna 2)
20.74dBm for 802.11n HT20 mode(MIMO)
21.29dBm for 802.11ax HE20 mode(MIMO)
20.76dBm for 802.11n HT40 mode(MIMO)
21.4dBm for 802.11ax HE40 mode(MIMO)
5G wifi:
U-NII-1:
9.34dBm for IEEE 802.11a (antenna 1)
8.62dBm for IEEE 802.11a (antenna 2)
9.48dBm for IEEE 802.11a (antenna 3)
13.69dBm for IEEE 802.11n HT20(MIMO)
13.2dBm for IEEE 802.11ac VHT20(MIMO)
8.17dBm for IEEE 802.11ax HE20(MIMO)
11.43dBm for IEEE 802.11n HT40(MIMO)
11.84dBm for IEEE 802.11ac VHT40(MIMO)
8.42dBm for IEEE 802.11ax HE40(MIMO)
8.56dBm for IEEE 802.11ac VHT80(MIMO)
8.49dBm for IEEE 802.11ax HE80(MIMO)
U-NII-2A:
8.5dBm for IEEE 802.11a (antenna 1)
9.15dBm for IEEE 802.11a (antenna 2)
8.43dBm for IEEE 802.11a (antenna 3)
13.15dBm for IEEE 802.11n HT20(MIMO)
13.29dBm for IEEE 802.11ac VHT20(MIMO)
8.24dBm for IEEE 802.11ax HE20(MIMO)
11.63dBm for IEEE 802.11n HT40(MIMO)
11.52dBm for IEEE 802.11ac VHT40(MIMO)
8.58dBm for IEEE 802.11ax HE40(MIMO)
8.65dBm for IEEE 802.11ac VHT80(MIMO)
8.77dBm for IEEE 802.11ax HE80(MIMO)
9.24dBm for IEEE 802.11ax HE160(MIMO)
U-NII-2C:
9.35dBm for IEEE 802.11a (antenna 1)
8.72dBm for IEEE 802.11a (antenna 2)
8.75dBm for IEEE 802.11a (antenna 3)
13.45dBm for IEEE 802.11n HT20(MIMO)
13.18dBm for IEEE 802.11ac VHT20(MIMO)
8.23dBm for IEEE 802.11ax HE20(MIMO)
11.62dBm for IEEE 802.11n HT40(MIMO)
12.26dBm for IEEE 802.11ac VHT40(MIMO)
8.63dBm for IEEE 802.11ax HE40(MIMO)
9.3dBm for IEEE 802.11ac VHT80(MIMO)
9.61dBm for IEEE 802.11ax HE80(MIMO)
9.36dBm for IEEE 802.11ax HE160(MIMO)

	U-NII-3: 9.07dBm for IEEE 802.11a (antenna 1) 8.61dBm for IEEE 802.11a (antenna 2) 8.07dBm for IEEE 802.11a (antenna 3) 13.19dBm for IEEE 802.11n HT20(MIMO) 13.67dBm for IEEE 802.11ac VHT20(MIMO) 8.4dBm for IEEE 802.11ax HE20(MIMO) 11.49dBm for IEEE 802.11n HT40(MIMO) 11.56dBm for IEEE 802.11ac VHT40(MIMO) 8.28dBm for IEEE 802.11ax HE40(MIMO) 8.69dBm for IEEE 802.11ac VHT80(MIMO) 8.59dBm for IEEE 802.11ax HE80(MIMO)
Modulation type:	2.4G wifi: DSSS for 802.11b mode; OFDM for 802.11g/nmode OFDMA for 802.11ax mode 5G wifi: OFDM for 802.11a/n/ac mode OFDMA for 802.11ax mode
Channel space:	2.4G wifi:5MHz 5G wifi: 802.11a: 20MHz 802.11n HT20: 20MHz 802.11n HT40: 40MHz 802.11acVHT20: 20MHz 802.11acVHT40: 40MHz 802.11acVHT80: 80MHz 802.11ax HE20: 20MHz 802.11ax HE40: 40MHz 802.11ax HE80: 80MHz 802.11ax HE160: 160MHz
Antenna Specification:	2.4G wifi: PCB antenna 1 with 3.14dBi gain (Max) PCB antenna 2 with 3.14dBi gain (Max) 5G wifi: U-NII-1: PCBantenna 1 with 3.26dBi gain (Max.) PCBantenna 2 with 3.26dBi gain (Max.) On Board antenna 3 with 3.58dBi gain (Max.) U-NII-2A: PCBantenna 1 with 3.20dBi gain (Max.) PCBantenna 2 with 3.20dBi gain (Max.) On Board antenna 3 with 3.36dBi gain (Max.) U-NII-2C: PCBantenna 1 with 3.26dBi gain (Max.) PCBantenna 2 with 3.26dBi gain (Max.) On Board antenna 3 with 3.25dBi gain (Max.) U-NII-3: PCBantenna 1 with 3.75dBi gain (Max.)

	PCBantenna 2 with 3.75dBi gain (Max.) On Board antenna 3 with 3.88dBi gain (Max.)
Temperature Range:	-5 ℃ ~ 45 ℃
Hardware Version:	/
Software Version:	V1.0
Sample No:	E202212085403-01-0001, E202212085403-01-0002, E202212085403-01-0003
Note:	/

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2. LABORATORY AND ACCREDITATIONS

2.1. LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of Guangzhou GRG Metrology & Test Co., Ltd.

Add.:	No.1301 Guanguang Road Xinlan Community, Guanlan Street, Longhua District Shenzhen, 518110, People's Republic of China.
P.C.:	518110
Tel :	0755-61180008
Fax:	0755-61180008

2.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	A2LA(Certificate #2861.01)

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	ISED (Company Number: 24897，CAB identifier:CN0069)
USA	FCC (Registration Number: 759402，Designation Number:CN1198)

Copies of granted accreditation certificates are available for downloading from our web site, http://www.grgtest.com

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3. EVALUATION METHOD

Exposure category: General population/uncontrolled environment
EUT Type: Production Unit
Device Type: Mobile Device

Systems operating under the provisions of FCC 47 CFR 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.
In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.
In accordance with KDB447498D01 for Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0. The MPE ratio of each antenna is determined at the minimum test separation distance required by the operating configurations and exposure conditions of the host device, according to the ratio of field strengths or power density to MPE limit, at the test frequency. Either the maximum peak or spatially averaged results from measurements or numerical simulations may be used to determine the MPE ratios. Spatial averaging does not apply when MPE is estimated using simple calculations based on far-field plane-wave equivalent conditions. The antenna installation and operating requirements for the host device must meet the minimum test separation distances required by all antennas, in both standalone and simultaneous transmission operations, to satisfy compliance.

4. LIMITS FOR GENERAL POPULATION/UNCONTROLLEDEXPOSURE

(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)*	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

5. 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 anisotropic radiator
R=distance to the center of radiation of the antenna
From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the maximum gain of the used as following information, the RF power density can be obtained.

Frequency Band	Antenna type	Internal Identification		Maximum antenna gain
2.4GHz	PCBantenna	Antenna 1		3.14dBi
		Antenna 2		3.14dBi
5GHz	PCBantenna	Antenna 1	U-NII-1	3.26dBi
			U-NII-2A	3.20dBi
			U-NII-2C	3.26dBi
			U-NII-3	3.75dBi
		Antenna 2	U-NII-1	3.26dBi
			U-NII-2A	3.20dBi
			U-NII-2C	3.26dBi
			U-NII-3	3.75dBi
	On Board antenna	Antenna 3	U-NII-1	3.58dBi
			U-NII-2A	3.36dBi
			U-NII-2C	3.25dBi
			U-NII-3	3.88dBi

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6. ESTIMATION RESULT

6.1. CONDUCTED POWER RESULTS

2.4G wifi

Antenna	Mode	Frequency(MHz)	Peak Conducted Output Power (dBm)
Antenna 1	802.11b	2412	21.41
		2437	21.07
		2462	21.54
	802.11g	2412	**21.81**
		2437	21.31
		2462	21.75
	802.11n HT20	2412	17.88
		2437	17.45
		2462	18.03
	802.11n HT40	2422	18.03
		2437	17.63
		2452	17.76
	802.11ax HE20	2412	18.42
		2437	18.05
		2462	18.56
	802.11ax HE40	2422	18.79
		2437	18.35
		2452	18.19
Antenna	**Mode**	**Frequency(MHz)**	**PeakConducted Output Power (dBm)**
Antenna 2	802.11b	2412	21
		2437	20.78
		2462	21.01
	802.11g	2412	21.13
		2437	21.07
		2462	21.32
	802.11n HT20	2412	17.28
		2437	17.14
		2462	17.41
	802.11n HT40	2422	17.46
		2437	17.26
		2452	17.16
	802.11ax HE20	2412	17.72
		2437	17.66
		2462	17.98
	802.11ax HE40	2422	17.95
		2437	17.86
		2452	17.86

5GHz WIFI

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power (dBm)		
			antenna 1	antenna 2	antenna 3
802.11a	U-NII-1	5180	9.34	8.62	9.07
		5200	8.55	8.5	8.69
		5240	8.56	8.58	9.48
	U-NII-2A	5260	8.5	9.15	8.15
		5300	8.34	9.12	8.43
		5320	7.55	8.58	7.75
	U-NII-2C	5500	9.35	8.72	7.57
		5600	8.94	7.93	8.21
		5700	8.49	8	8.75
	U-NII-3	5745	9.07	8.52	7.4
		5785	8.51	8.61	8.07
		5825	8.24	7.39	7.35
802.11n HT20	U-NII-1	5180	8.26	9.15	9.28
		5200	8.45	9.08	8.29
		5240	8.9	8.46	8.87
	U-NII-2A	5260	8.09	8.74	8.29
		5300	8.25	8.48	7.99
		5320	8.31	7.7	8.26
	U-NII-2C	5500	9.84	8.67	7.11
		5600	8.4	7.91	8.07
		5700	8.33	8.29	8.05
	U-NII-3	5745	8.95	7.8	7.95
		5785	8.96	8.39	7.83
		5825	8.15	8.06	7.54
802.11n HT40	U-NII-1	5190	6.55	6.63	6.43
		5230	6.93	6.72	6.28
	U-NII-2A	5270	6.96	7.03	6.57
		5310	6.76	6.84	6.96
	U-NII-2C	5510	8.18	6.55	6.95
		5550	6.99	6.07	6.84
		5670	7.74	6.06	6.57
	U-NII-3	5755	7.49	6.9	5.53
		5795	7.15	6.45	5.7
802.11acVHT20	U-NII-1	5180	6.98	8.67	8.05
		5200	7.75	7.81	8.87
		5240	7.84	8.17	9.16
	U-NII-2A	5260	7.98	8.02	8.7
		5300	8.78	8.44	8.32
		5320	7.78	7.99	7.82

	U-NII-2C	5500	9.09	8.29	7.54
		5600	8.6	7.99	7.56
		5700	8.49	7.89	8.8
	U-NII-3	5745	8.2	8.15	7.5
		5785	9.42	9.1	8.09
		5825	8.53	7.62	7.15
802.11ac VHT40	U-NII-1	5190	6.41	6.65	7.6
		5230	6.7	7.3	7.17
	U-NII-2A	5270	6.41	6.97	6.84
		5310	6.39	6.64	6.8
	U-NII-2C	5510	8.58	7.44	6.09
		5550	7.73	5.87	6.51
		5670	7.27	6.88	6.73
	U-NII-3	5755	6.96	6.87	5.52
		5795	7.44	6.72	6.09
802.11ac VHT80	U-NII-1	5210	4.02	3.64	3.72
	U-NII-2A	5290	3.65	3.96	4.01
	U-NII-2C	5530	5.22	4.48	3.77
		5610	4.4	3.7	3.88
	U-NII-3	5775	4.54	4.02	3.05
802.11ax HE20	U-NII-1	5180	2.97	2.63	2.68
		5200	2.68	2.41	3.16
		5240	3.18	3.6	3.4
	U-NII-2A	5260	3.51	3.8	3.05
		5300	3.33	3.33	3.25
		5320	3.35	3.18	2.88
	U-NII-2C	5500	4.37	3.37	2.4
		5600	3.39	2.53	3.39
		5700	3.45	2.76	2.86
	U-NII-3	5745	3.47	3.04	2.26
		5785	4.12	3.93	2.68
		5825	3.22	2.66	2.08
802.11ax HE40	U-NII-1	5190	3.43	3.09	3.35
		5230	3.74	3.62	3.59
	U-NII-2A	5270	3.61	3.76	4.04
		5310	3.55	3.73	3.48
	U-NII-2C	5510	4.82	4.06	3.21
		5550	3.71	3.05	4.07
		5670	4.76	3.14	3.51
	U-NII-3	5755	4.06	3.48	2.51
		5795	3.97	3.6	2.87
802.11ax HE80	U-NII-1	5210	3.96	3.71	3.48

	U-NII-2A	5290	3.9	4.45	3.6
	U-NII-2C	5530	5.03	3.86	3.72
		5610	4.09	4.03	3.71
	U-NII-3	5775	4.41	4.02	2.89
802.11ax HE160	U-NII-2A	5250	4.3	4.1	4.96
	U-NII-2C	5570	5.22	4.22	4.26

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6.2. MANUFACTURING TOLERANCE

Frequency (MHz)	2.4G Wifi-Antenna 1					
	802.11b	802.11g	802.11n HT20	802.11ax HE20	802.11n HT40	802.11ax HE40
	2462	2412	2462	2462	2422	2422
Target(dBm)	22.0	22.0	18.0	18.0	18.0	18.0
Tolerance ±(dB)	1.0	1.0	1.0	1.0	1.0	1.0

Frequency (MHz)	2.4G Wifi-Antenna 2					
	802.11b	802.11g	802.11n HT20	802.11ax HE20	802.11n HT40	802.11ax HE40
	2462	2462	2462	2462	2422	2452
Target(dBm)	21.0	21.0	18.0	18.0	18.0	18.0
Tolerance ±(dB)	1.0	1.0	1.0	1.0	1.0	1.0

Frequency (MHz)	5G Wifi-Antenna 1			
	802.11a	802.11n HT20	802.11acVHT20	802.11n HT40
	5500	5500	5500	5510
Target (dBm)	9.0	9.0	8.0	7.0
Tolerance ±(dB)	2.0	2.0	2.0	2.0

Frequency (MHz)	5G Wifi-Antenna 2			
	802.11a	802.11n HT20	802.11acVHT20	802.11n HT40
	5260	5180	5580	5270
Target (dBm)	9.0	9.0	8.0	7.0
Tolerance ±(dB)	2.0	2.0	2.0	2.0

Frequency (MHz)	5G Wifi-Antenna 3			
	802.11a	802.11n HT20	802.11acVHT20	802.11n HT40
	5240	5180	5580	5310
Target (dBm)	9.0	9.0	8.0	7.0
Tolerance ±(dB)	2.0	2.0	2.0	2.0

Frequency (MHz)	5G Wifi-Antenna 1		5G Wifi-Antenna 2		5G Wifi-Antenna 3	
	802.11ac VHT40	802.11ac VHT80	802.11ac VHT40	802.11ac VHT80	802.11ac VHT40	802.11ac VHT80
	5510	5510	5510	5775	5230	5775
Target (dBm)	7.0	4.0	7.0	4.0	7.0	4.0
Tolerance ±(dB)	2.0	2.0	2.0	1.0	2.0	1.0

Frequency (MHz)	5G Wifi-Antenna 1			
	802.11ax HE20	802.11ax HE40	802.11ax HE80	802.11ax HE160
	5500	5755	5530	5570
Target (dBm)	4.0	4.0	4.0	4.0
Tolerance ±(dB)	2.0	1.0	2.0	2.0

Frequency (MHz)	5G Wifi-Antenna 2			
	802.11ax HE20	802.11ax HE40	802.11ax HE80	802.11ax HE160
	5785	5510	5290	5570
Target (dBm)	4.0	4.0	4.0	4.0
Tolerance ±(dB)	2.0	1.0	1.0	1.0

Frequency (MHz)	5G Wifi-Antenna 3			
	802.11ax HE20	802.11ax HE40	802.11ax HE80	802.11ax HE160
	5600	5550	5530	5250
Target (dBm)	4.0	4.0	4.0	4.0
Tolerance ±(dB)	2.0	1.0	2.0	1.0

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6.3. MEASUREMENT RESULTS

6.3.1. STANDALONE MPE

2.4Gwifi

Antenna 1

Mode	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm^2)	MPE Limits (mW/cm^2)
	(dBm)	(mW)				
802.11b	23.00	199.5262	3.14	2.06	0.065	1.00
802.11g	23.00	199.5262	3.14	2.06	0.065	1.00
802.11n HT20	19.00	79.43282	3.14	2.06	0.0326	1.00
802.11ax HE20	19.00	79.43282	3.14	2.06	0.0326	1.00
802.11n HT40	19.00	79.43282	3.14	2.06	0.0326	1.00
802.11ax HE40	19.00	79.43282	3.14	2.06	0.0326	1.00

Antenna 2

Mode	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm^2)	MPE Limits (mW/cm^2)
	(dBm)	(mW)				
802.11b	22.00	158.4893	3.14	2.06	0.0818	1.00
802.11g	22.00	158.4893	3.14	2.06	0.0818	1.00
802.11n HT20	19.00	79.43282	3.14	2.06	0.0326	1.00
802.11ax HE20	19.00	79.43282	3.14	2.06	0.0326	1.00
802.11n HT40	19.00	79.43282	3.14	2.06	0.0326	1.00
802.11ax HE40	19.00	79.43282	3.14	2.06	0.0326	1.00

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5Gwifi

Antenna 1

Mode	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm^2)	MPE Limits (mW/cm^2)
	(dBm)	(mW)				
802.11a	11	12.58925	3.75	2.37	0.00594	1
802.11n HT20	11	12.58925	3.75	2.37	0.00594	1
802.11n HT40	9	7.943282	3.75	2.37	0.00375	1
802.11ac VHT20	10	10	3.75	2.37	0.00472	1
802.11ac VHT40	9	7.943282	3.75	2.37	0.00375	1
802.11ac VHT80	6	3.981072	3.75	2.37	0.00188	1
802.11ax HE20	6	3.981072	3.75	2.37	0.00188	1
802.11ax HE40	5	3.162278	3.75	2.37	0.00149	1
802.11ax HE80	6	3.981072	3.75	2.37	0.00188	1
802.11ax HE160	6	3.981072	3.75	2.37	0.00188	1

Antenna 2

Mode	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm^2)	MPE Limits (mW/cm^2)
	(dBm)	(mW)				
802.11a	11	12.58925	3.75	2.37	0.00594	1
802.11n HT20	11	12.58925	3.75	2.37	0.00594	1
802.11n HT40	9	7.943282	3.75	2.37	0.00375	1
802.11ac VHT20	10	10	3.75	2.37	0.00472	1
802.11ac VHT40	9	7.943282	3.75	2.37	0.00375	1
802.11ac VHT80	5	3.162278	3.75	2.37	0.00149	1
802.11ax HE20	6	3.981072	3.75	2.37	0.00188	1
802.11ax HE40	5	3.162278	3.75	2.37	0.00149	1
802.11ax HE80	5	3.162278	3.75	2.37	0.00149	1
802.11ax HE160	5	3.162278	3.75	2.37	0.00149	1

---------- The following blanks ----------

Antenna 3

Mode	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm^2)	MPE Limits (mW/cm^2)
	(dBm)	(mW)				
802.11a	11	12.58925	3.88	2.44	0.00611	1
802.11n HT20	11	12.58925	3.88	2.44	0.00611	1
802.11n HT40	9	7.943282	3.88	2.44	0.00386	1
802.11ac VHT20	10	10	3.88	2.44	0.00486	1
802.11ac VHT40	9	7.943282	3.88	2.44	0.00386	1
802.11ac VHT80	5	3.162278	3.88	2.44	0.00154	1
802.11ax HE20	6	3.981072	3.88	2.44	0.00193	1
802.11ax HE40	5	3.162278	3.88	2.44	0.00154	1
802.11ax HE80	6	3.981072	3.88	2.44	0.00193	1
802.11ax HE160	5	3.162278	3.88	2.44	0.00154	1

Remark: 1. Maximum average power including tune-up tolerance;
2. MPE use distance is 20cm from manufacturer declaration of user manual.

---------- The following blanks ----------

Antennas for 2.4G WLAN and 5G WLAN

Band	Mode	MPE Ratio (mW/cm^2) Antenna 1	MPE Ratio (mW/cm^2) Antenna 2	∑MPE Ratios (mW/cm^2)	Limit (mW/cm^2)	Results
2.4G	802.11b	0.065	0.0818	0.1468	1.000	Pass
	802.11g	0.065	0.0818	0.1468	1.000	Pass
	802.11n HT20	0.0326	0.0326	0.0652	1.000	Pass
	802.11n HT40	0.0326	0.0326	0.0652	1.000	Pass
	802.11ax HE20	0.0326	0.0326	0.0652	1.000	Pass
	802.11ax HE40	0.0326	0.0326	0.0652	1.000	Pass

Band	Mode	MPE Ratio (mW/cm^2) Antenna 1	MPERatio (mW/cm^2) Antenna 2	MPE Ratio (mW/cm^2) Antenna 3	∑MPE Ratios (mW/cm^2)	Limit (mW/cm^2)	Results
5G	802.11a	0.00594	0.00594	0.00611	0.01799	1.000	Pass
	802.11n HT20	0.00594	0.00594	0.00611	0.01799	1.000	Pass
	802.11n HT40	0.00375	0.00375	0.00386	0.01136	1.000	Pass
	802.11acVHT20	0.00472	0.00472	0.00486	0.0143	1.000	Pass
	802.11acVHT40	0.00375	0.00375	0.00386	0.01136	1.000	Pass
	802.11ac VHT80	0.00188	0.00149	0.00154	0.00491	1.000	Pass
	802.11ax HE20	0.00188	0.00188	0.00193	0.00569	1.000	Pass
	802.11ax HE40	0.00149	0.00149	0.00154	0.00452	1.000	Pass
	802.11axHE80	0.00188	0.00149	0.00193	0.0053	1.000	Pass
	802.11axHE160	0.00188	0.00149	0.00154	0.00491	1.000	Pass

Remark:

1. Maximum average power including tune-up tolerance;
2. MPE use distance is 20cm from manufacturer declaration of user manual.

We first evaluate WLAN simultaneous transmission and later evaluate WLAN simultaneous transmission;

Maximum Simultaneous transmission MPE Ratio for WLAN

Maximum MPE ratio 2.4G	Maximum MPE ratio 5G	∑ MPE ratios	Limit	Results
0.0818	0.00594	0.08774	1.000	Pass

Note:
1.The 2.4G wifi and 5G wifi support simultaneous transmission.
2. According to KDB447498 for Transmitters used in mobile exposure conditions for simultaneous transmission operations; ∑of MPE ratios≤1.0
3. Maximum MPE Ratio (2.4G wifi)=Max tune-up power/ Limit(EIRP Exemption)=0.1995W/2.439W=0.0818
Maximun MPE Ratio (5G wifi)= Max tune-up power/Limit(EIRPExemption)=0.01259W/2.119W=0.00594
4. MPE ratios= Maximum MPE Ratio (2.4G wifi)+ Maximum MPE Ratio(5G wifi)= 0.0818+0.00594=0.08774
5. The estimation distance is 20cm

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 ----------