Shenzhen Most Technology Service Co., Ltd.
East A, 1 floor of New Aolin Factory buiding, Langshan Erlu, North District,
Hi-tech Industry Park, Nanshan,Shenzhen,Guangdong,China

RF Exposure Evaluation Report

Report Reference No......:	**MTEB24070217-H**
FCC ID..... **:**	**2AHCR-S565W**
Compiled by (position+printed name+signature)..:	File administrators Alisa Luo
Supervised by (position+printed name+signature)..:	Test Engineer Sunny Deng
Approved by (position+printed name+signature)..:	Manager Yvette Zhou
Date of issue.....:	July16,2024
Representative Laboratory Name .:	**Shenzhen Most Technology Service Co., Ltd.**
Address .....:	No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.
Applicant's name.....:	**AKUVOX (XIAMEN) NETWORKS CO., LTD.**
Address .....:	10/F, No.56 Guanri Road，Software Park II , Xiamen 361009, China
Test specification/ Standard .....**:**	**47 CFR Part 1.1307;47 CFR Part 1.1310** **KDB447498D01 General RF Exposure Guidance v06**
TRF Originator.....:	Shenzhen Most Technology Service Co., Ltd.

Test item description .....:	Indoor Monitor
Trade Mark .....:	Akuvox
Model/Type reference.....:	S565W
Listed Models .....:	N/A
Modulation Type .....:	b: DSSS ,CCK g/n: BPSK,QPSK,QAM OFDM
Operation Frequency.....:	From 2412MHz - 2462MHz From 5180MHz-5240MHz 5260MHz-5320MHz 5500MHz-5700MHz From 5745MHz-5825MHz
Hardware Version.....	V1.00
Software Version	565.30.10.36
Rating .....:	DC 12V±10% POE power supply(48V)
Result.....:	**PASS**

TEST REPORT

Equipment under Test	:	Indoor Monitor
Model /Type	:	S565W
Listed Models	:	N/A
Remark		N/A
Applicant	:	AKUVOX (XIAMEN) NETWORKS CO., LTD.
Address	:	10/F, No.56 Guanri Road，Software Park II , Xiamen 361009, China
Manufacturer	:	AKUVOX (XIAMEN) NETWORKS CO., LTD.
Address	:	10/F, No.56 Guanri Road，Software Park II , Xiamen 361009, China

Test Result:	**PASS**

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2024.07.16	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
4.3.1. Standalone SAR test exclusion considerations
Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.1.2 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

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 Exposures				
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				
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
Friis Formula
Friis transmission formula: Pd = (Pout*G)/(4* Pi * R 2) Where
Pd = power density in mW/cm2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416

R = distance between observation point and center of the radiator in cm
Pd id the limit of MPE, 1 mW/cm2 . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.3 EUT RF Exposure

WIFI 2.4G

802.11b			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2412MHz)	15.28	15.28±1	16.28
Middle(2437MHz)	15.15	15.15±1	16.15
Highest(2462MHz)	14.67	14.67±1	15.67

802.11g			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2412MHz)	16.90	16.90±1	17.9
Middle(2437MHz)	15.90	15.90±1	16.9
Highest(2462MHz)	15.56	15.56±1	16.56

802.11n(H20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2412MHz)	16.30	16.30±1	17.3
Middle(2437MHz)	15.87	15.87±1	16.87
Highest(2462MHz)	15.14	15.14±1	16.14

802.11n(H40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2422MHz)	14.94	14.94±1	15.94
Middle(2437MHz)	15.80	15.80±1	16.8
Highest(2452MHz)	15.40	15.40±1	16.4

WIFI 2.4G

Worst case: 802.11g						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm2)	Limit	Result
Lowest(2412MHz)	17.9	61.66	2.6	0.0223	1.0	Pass

Note: 1) Refer to report MTEB24070217-R for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R2)=(61.66*1.82)/(4*3.1416*20^2)=0.0223

WIFI 5G

IEEE for 802.11a			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5180.0	14.655	14.655±1	15.655
5200.0	15.324	15.324±1	16.324
5240.0	17.151	17.151±1	18.151
5260.0	15.840	15.840±1	16.84
5280.0	16.377	16.377±1	17.377
5320.0	16.944	16.944±1	17.944
5500.0	16.518	16.518±1	17.518
5600.0	15.627	15.627±1	16.627
5700.0	13.139	13.139±1	14.139

IEEE for 802.11n(HT20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5180.0	15.047	15.047±1	16.047
5200.0	16.293	16.293±1	17.293
5240.0	17.491	17.491±1	18.491
5260.0	15.627	15.627±1	16.627
5280.0	15.899	15.899±1	16.899
5320.0	17.074	17.074±1	18.074
5500.0	16.418	16.418±1	17.418
5600.0	18.026	18.026±1	19.026
5700.0	15.410	15.410±1	16.41

IEEE for 802.11n(HT40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5190.0	11.777	11.777±1	12.777
5230.0	15.967	15.967±1	16.967
5270.0	14.644	14.644±1	15.644
5310.0	15.441	15.441±1	16.441
5510.0	14.677	14.677±1	15.677
5590.0	16.513	16.513±1	17.513
5670.0	10.069	10.069±1	11.069

IEEE for 802.11ac(HT20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5180.0	13.368	13.368±1	14.368
5200.0	13.806	13.806±1	14.806
5240.0	15.502	15.502±1	16.502
5260.0	12.994	12.994±1	13.994
5280.0	16.028	16.028±1	17.028
5320.0	17.574	17.574±1	18.574
5500.0	17.515	17.515±1	18.515
5600.0	17.548	17.548±1	18.548
5700.0	15.389	15.389±1	16.389

IEEE for 802.11 ac(HT40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5190.0	10.757	10.757±1	11.757
5230.0	13.895	13.895±1	14.895
5270.0	14.689	14.689±1	15.689
5310.0	15.452	15.452±1	16.452
5510.0	13.097	13.097±1	14.097
5590.0	11.276	11.276±1	12.276
5670.0	9.423	9.423±1	10.423

U-NII 1

Worst case: IEEE for 802.11n(HT20)						
Channel	Maximum Peak Conducted	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dB	(MW)	(dBi)	(mW/cm2)		
5240.0	18.491	70.65	3.8	0.0337	1.0	Pass

Note: 1) Refer to report MTEB24070217–R1 for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R2)=(70.65*2.40)/(4*3.1416*20^2)=0.0337
Note: 3)EUT's Bluetooth module is more than 20cm away from the human body.

U-NII 2A

Worst case: IEEE for 802.11ac(HT20)						
Channel	Maximum Peak Conducted	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dB	(MW)	(dBi)	(mW/cm2)		
5320.0	18.574	72.01	3.8	0.0345	1.0	Pass

Note: 1) Refer to report MTEB24070217–R1 for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R2)=(72.01*2.40)/(4*3.1416*20^2)=0.0345
Note: 3)EUT's Bluetooth module is more than 20cm away from the human body.

U-NII 2C

Worst case: IEEE for 802.11n(HT20)						
Channel	Maximum Peak Conducted	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dB	(MW)	(dBi)	(mW/cm2)		
5600.0	19.026	79.91	3.8	0.0381	1.0	Pass

Note: 1) Refer to report MTEB24070217–R1 for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R2)=(79.91*2.40)/(4*3.1416*20^2)=0.0381
Note: 3)EUT's Bluetooth module is more than 20cm away from the human body.

WIFI 5.8G

IEEE for 802.11a			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5745	12.638	12.638±1	13.638
5785	12.237	12.237±1	13.237
5825	13.061	13.061±1	14.061

IEEE for 802.11n(HT20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5745	9.332	9.332±1	10.332
5785	8.940	8.940±1	9.94
5825	9.725	9.725±1	10.725

IEEE for 802.11n(HT40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5755	7.528	7.528±1	8.528
5795	7.650	7.650±1	8.65

IEEE for 802.11ac(HT20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5745	9.354	9.354±1	10.354
5785	9.044	9.044±1	10.044
5825	9.963	9.963±1	10.963

IEEE for 802.11 ac(HT40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
5755	10.660	10.660±1	11.66
5795	10.861	10.861±1	11.861

Worst case: IEEE for 802.11a						
Channel	Maximum Peak Conducted	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dBm)	(MW)	(dBi)	(mW/cm2)		
5825	14.061	25.47	3.8	0.0122	1.0	Pass

Note: 1) Refer to report MTEB24070217–R2 for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R2)=(25.47*2.40)/(4*3.1416*20^2)=0.0122
Note: 3)EUT's Bluetooth module is more than 20cm away from the human body.

.....THE END OF REPORT.....