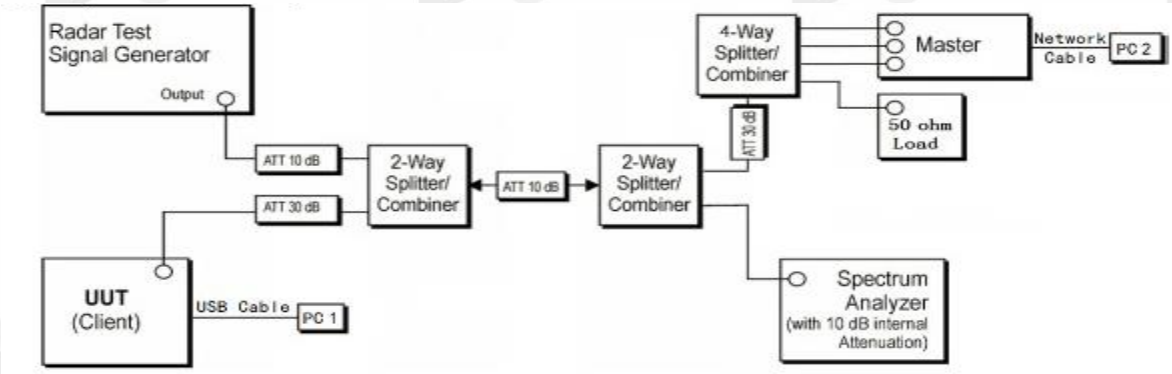
11.6. Test setup

Setup for Client with injection at the Master



11.7. Test result

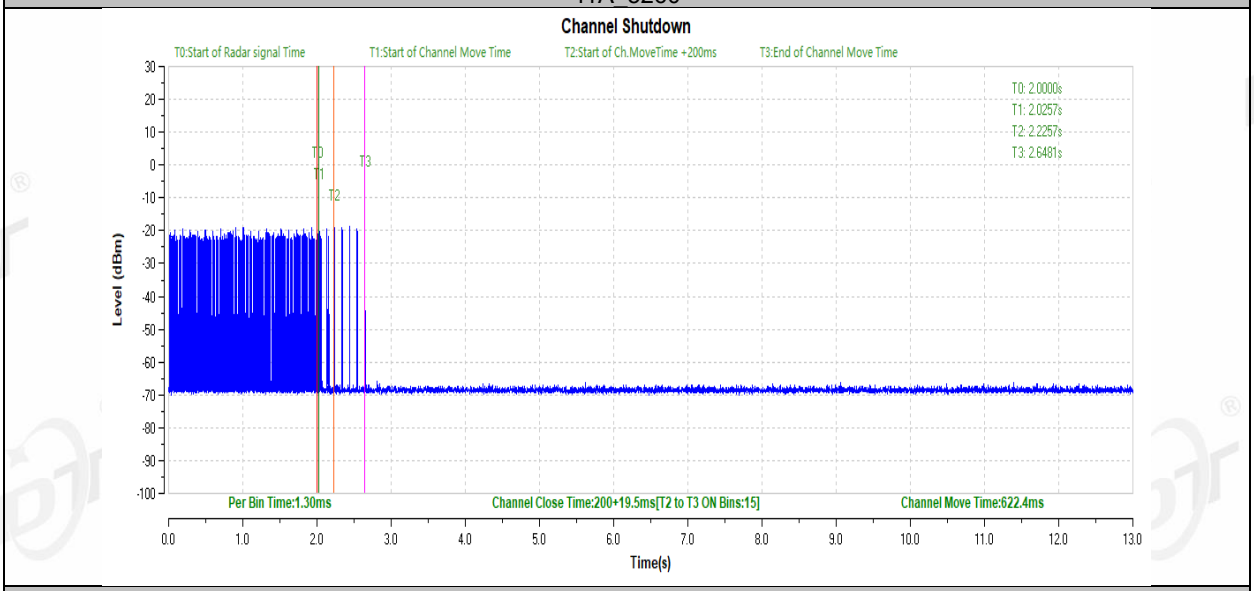
Test Engineer:	Haofeng CHEN	Test Site:	RF Measurement System 4#
Ambient Condition:	23.6℃,51.2%RH	Test Date:	2024.01.22-2024.02.05
Test Power Supply:	DC 5V	EUT:	AIoT Edge Controller
Sample Number:	S23111537-05	Model No.:	MB41

TestMode	Frequency[MHz]	CCTT[ms]	Limit[ms]	CMT[ms]	Limit[ms]	Verdict
11A	5260	200+19.5	200+60	622.4	10000	PASS
	5500	200+27.3	200+60	849.9	10000	PASS
11AC80MIMO	5290	200+46.8	200+60	1263.3	10000	PASS
	5530	200+33.8	200+60	1091.7	10000	PASS

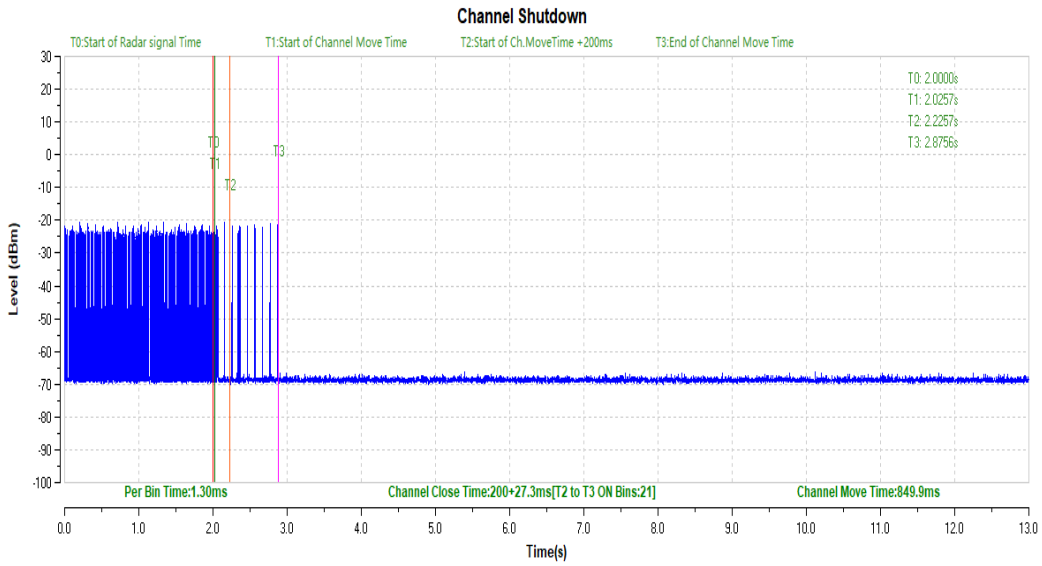
Remark: All mode have been tested, and only the worst case is shown in report.

11.8. Test Graphs

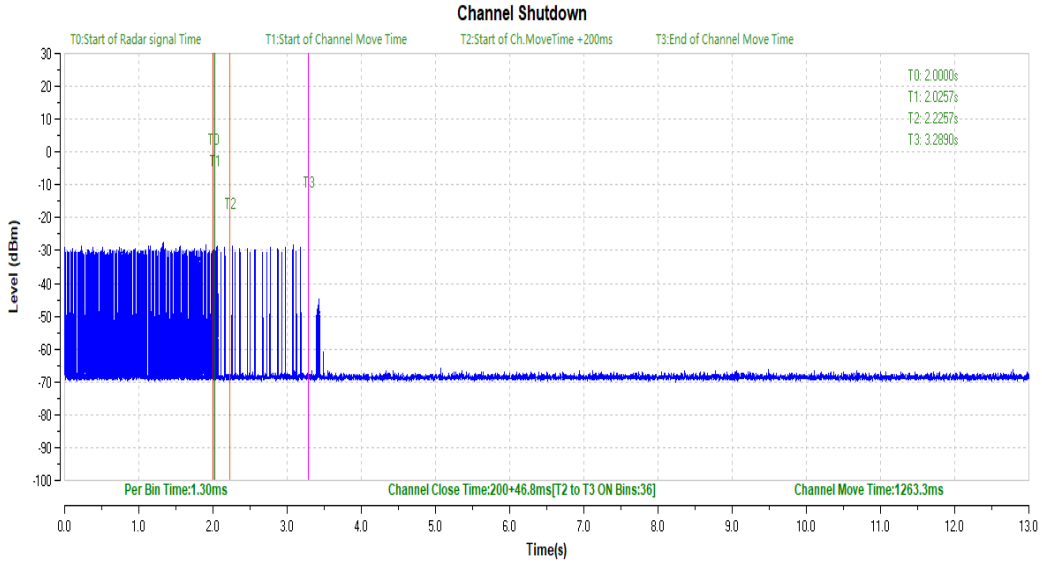
11A_5260



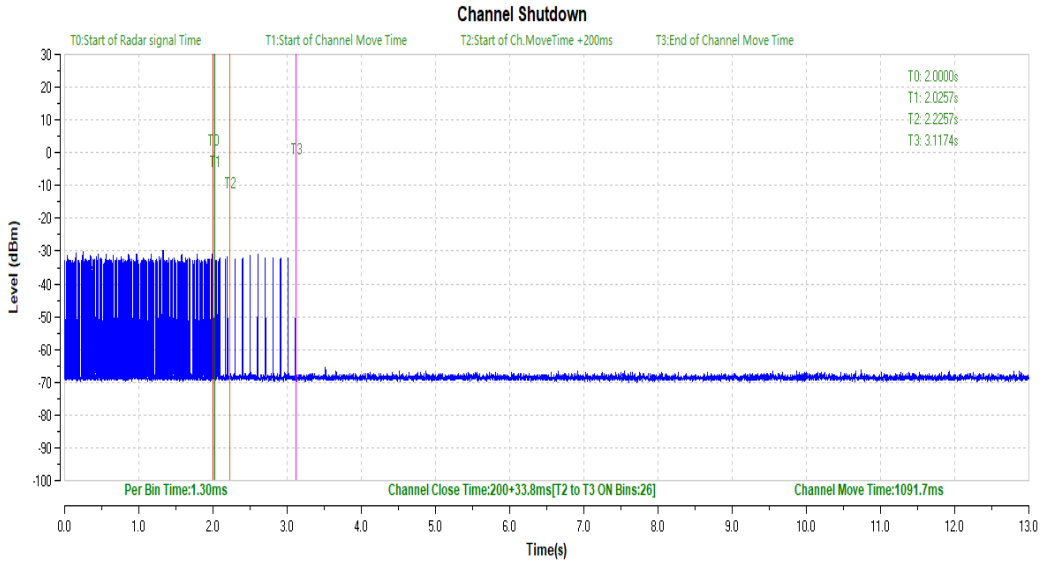
11A_5500



11AC80MIMO_5290



11AC80MIMO_5530



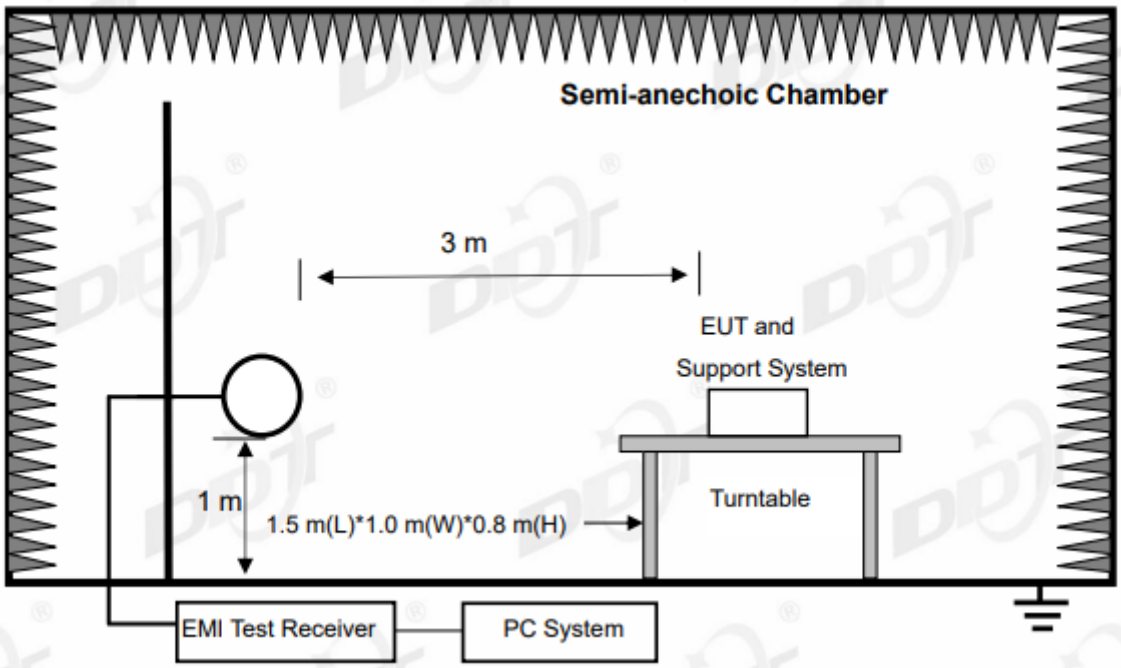
12. Emissions in Restricted Frequency Bands

12.1. Test equipment

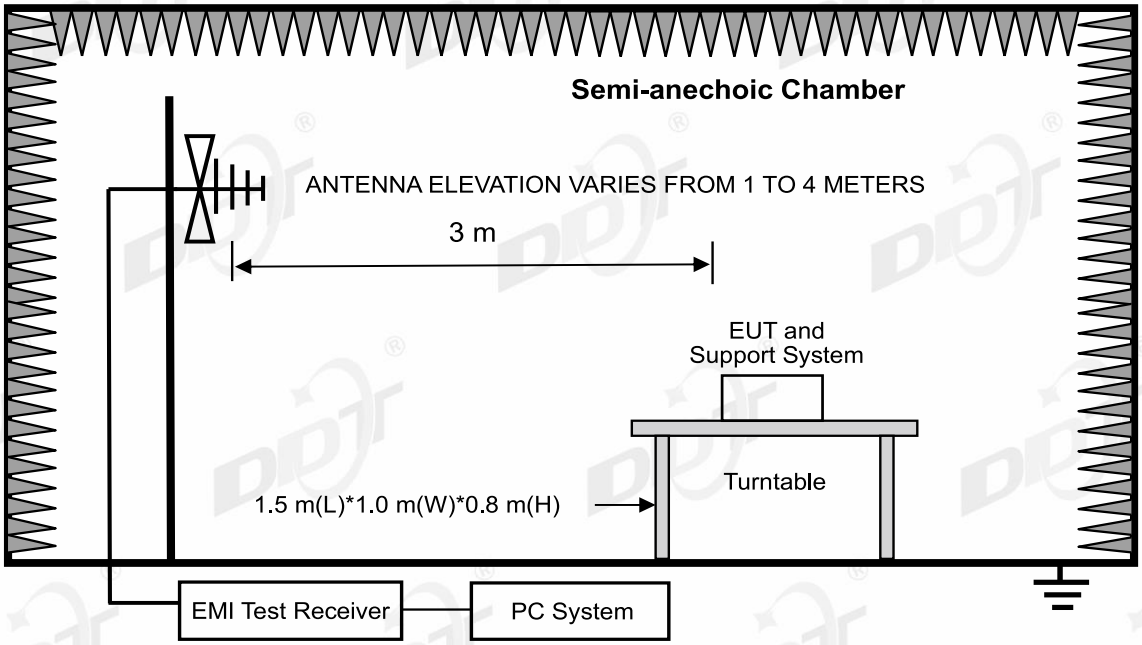
Equipment	Manufacturer	Model No.	Serial Number	Due Date
☒Radiation 3#Chamber				
EMI TEST RECEIVER	R&S	ESU26	100472	2024/04/22
PSA Series Spectrum Analyzer	Agilent	E4447A	MY50180031	2024/04/22
Active Loop Antenna	Schwarzbeck	FMZB-1519	1519-038	2024/09/10
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	01429	2024/07/11
Double Ridged Horn Antenna	Schwarzbeck	BBHA 9120 D	02468	2024/09/17
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	2024/04/25
Pre-amplifier	COM-POWER	PAM-118A	18040084	2024/07/14
Pre-amplifier	COM-POWER	PAM-840A	461369	2024/04/26
RE Cable	N/A	W23.02 CP1-X2 + W23.09 AP1-X8+ JCT26S-NJ-NJ-1.5M	4.5M+8M+1.5 M	2024/04/20
RF Cable	Yuhu	JCTB810-NJ-NJ-9M+ ZT26S-SMAJ-SMAJ-1M	21123964	2024/04/22
Band Reject Filter(5150-5880 MHz)	REBES	BRM50716	G392	N/A
Test Software	Tonscend	JS32-RE	V 5.0.0.1	N/A

12.2. Block diagram of test setup

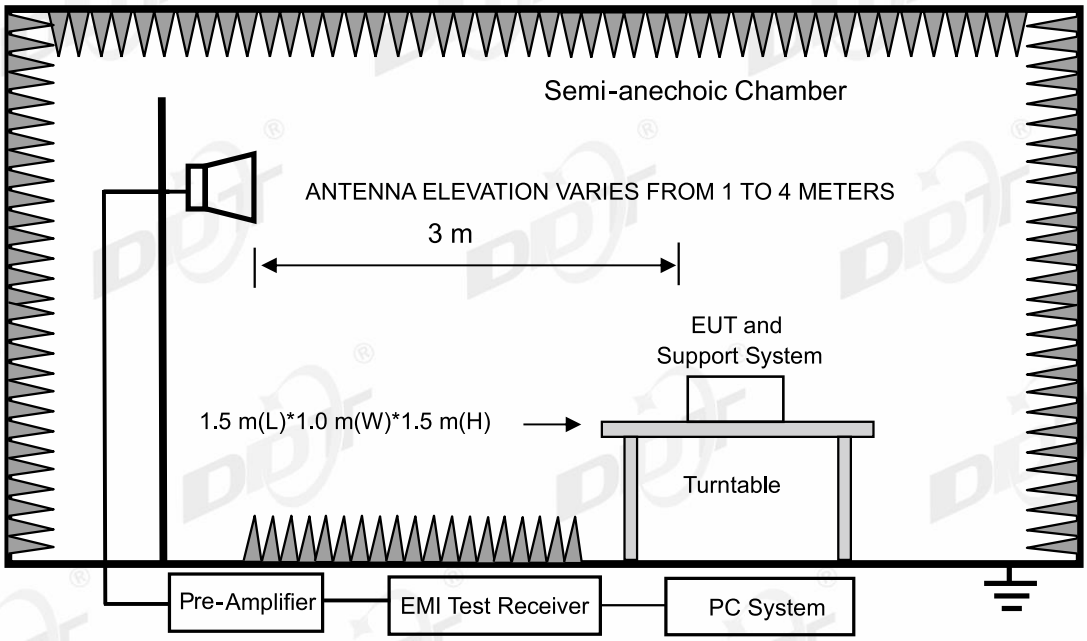
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

12.3. Limit

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2]Above 38.6

RSS-Gen section 8.10 Restricted frequency bands*

MHz	MHz	MHz	GHz
0.090-0.110	12.51975-12.52025	240-285	3.5-4.4
0.495-0.505	12.57675-12.57725	322-335.4	4.5-5.15
2.1735-2.1905	13.36-13.41	399.9-410	5.35-5.46
3.020-3.026	16.42-16.423	608-614	7.25-7.75
4.125-4.128	16.69475-16.69525	960-1427	8.025-8.5
4.1772&4.17775	16.80425-16.80475	1435-1626.5	9.0-9.2
4.2072&4.20775	25.5-25.67	1645.5-1646.5	9.3-9.5
5.677-5.683	37.5-38.25	1660-1710	10.6-12.7
6.215-6.218	73-74.6	1718.8-1722.2	13.25-13.4
6.26775-6.26825	74.8-75.2	2200-2300	14.47-14.5
6.31175-6.31225	108-138	2310-2390	15.35-16.2
8.291-8.294	149.9-150.05	2483.5-2500	17.7-21.4
8.362-8.366	156.52475-156.52525	2655-2900	22.01-23.12
8.37625-8.38675	156.7-156.9	3260-3267	23.6-24.0
8.41425-8.41475	162.0125-167.17	3332-3339	31.2-31.8
12.29-12.293	167.72-173.2	3345.8-3358	36.43-36.5
			Above 38.6

* Certain frequency bands listed in table and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

(2) FCC 15.209 Limit & RSS-Gen section 8.9 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR

QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m)$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, and the emissions appearing within RSS-Gen section 8.10 Restricted frequency bands shall not exceed the limits shown in RSS-Gen section 8.9, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits and RSS-Gen section 8.9 limits..

12.4. Test Procedure

(1) EUT height should be 0 m for below 1 GHz at a semi‐anechoic chamber while EUT height should be 0 m for above 1GHz at full chamber or semi‐anechoic chamber ground with absorbers

(2) Setup EUT and assistant system according clause 2.3 and 8.2

(3) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test distance
9 kHz-30 MHz	Active Loop antenna	3 m
30 MHz-1 GHz	Trilog Broadband Antenna	3 m
1 GHz-18 GHz	Double Ridged Horn Antenna(1GHz-18GHz)	3 m
18 GHz-40 GHz	Horn Antenna(18GHz-40GHz)	1 m

According ANSI C63.10:2013 clause 6.4.4.2 and 6,5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. for measurement above 30 MHz, the Trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(4) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 40 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 40 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9 kHz to 30 MHz and 18 GHz to 40 GHz, so below final test was performed with frequency range from 30 MHz to 18 GHz.

(5) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.

(6) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz, for emissions from 9 kHz-90kHz,110kHz-490kHz and above 1GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(7) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9 kHz-150 kHz	200 Hz
150 kHz-30 MHz	9 kHz
30 MHz-1 GHz	120 kHz

(8) For emissions above 1 GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3MHz for Peak measure, the RBW is set at 1 MHz, VBW is set at 10 Hz for AV value.

12.5. Test result

Pass. (See below detailed test result)

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limits and RSS-Gen section 8.9 limits.

Note1: According exploratory test no any obvious emission was detected from 9 kHz to 30 MHz

and 18 GHz to 40 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

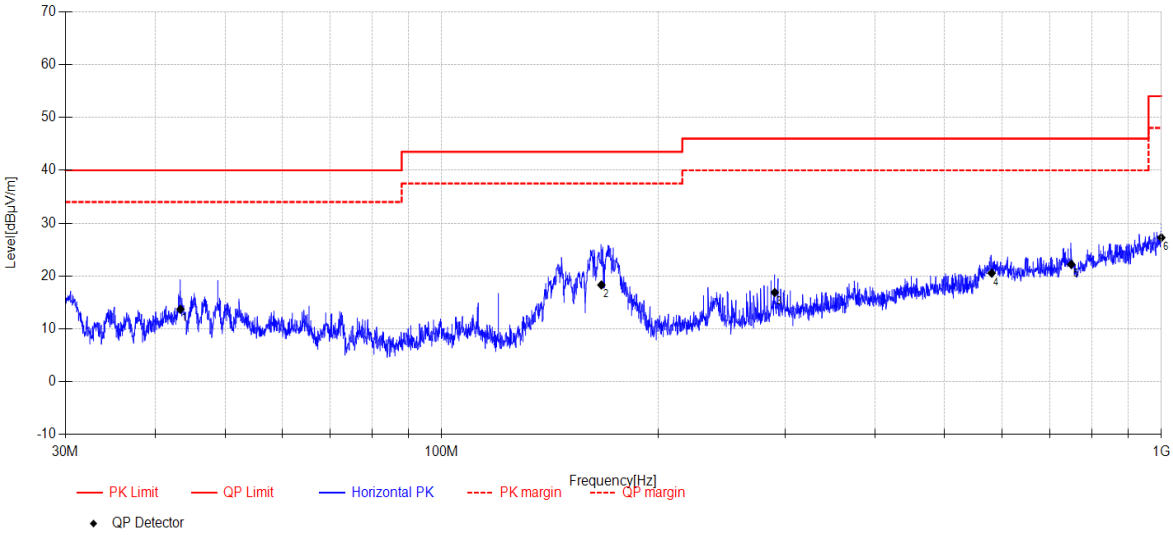
Note2: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in 802.11n20 mode.

Note3: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit. And the BT+ 5GWIFI is the worst simultaneous case and reported.

Radiated Emission test (below 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-26	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	5GWIFI TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC BELOW 1G\20240126-023621_H		
Memo:	Sample Number:S23111537-05 Power Setting:NA		

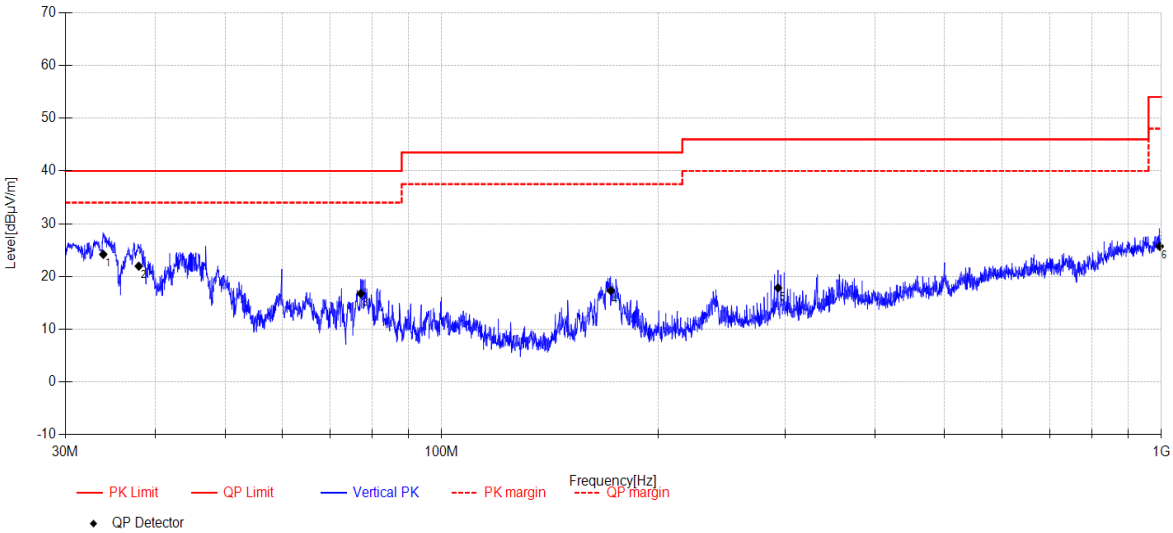


Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**AMP [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	43.35	27	12.87	4.64	-30.80	13.71	40.00	26.29	QP	Horizontal
2	166.71	34.78	8.77	5.46	-30.70	18.31	43.50	25.19	QP	Horizontal
3	290.29	27.93	13.17	6.11	-30.33	16.88	46.00	29.12	QP	Horizontal
4	581.17	24.35	18.84	7.25	-29.90	20.54	46.00	25.46	QP	Horizontal
5	749.63	24.15	20.09	7.87	-29.90	22.21	46.00	23.79	QP	Horizontal
6	1000.00	25.07	21.60	8.69	-28.10	27.26	54.00	26.74	QP	Horizontal

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-26	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	5GWIFI TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC BELOW 1G\20240126-023641_V		
Memo:	Sample Number:S23111537-05 Power Setting:NA		



Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**AMP [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	33.87	39.15	11.46	4.52	-30.94	24.19	40.00	15.81	QP	Vertical
2	37.94	36.84	11.42	4.57	-30.88	21.95	40.00	18.05	QP	Vertical
3	77.20	34.53	7.94	4.81	-30.52	16.76	40.00	23.24	QP	Vertical
4	171.81	33.21	9.27	5.50	-30.68	17.30	43.50	26.20	QP	Vertical
5	293.36	29.17	12.86	6.12	-30.32	17.83	46.00	28.17	QP	Vertical
6	995.10	22.6	22.58	8.67	-28.14	25.71	54.00	28.29	QP	Vertical

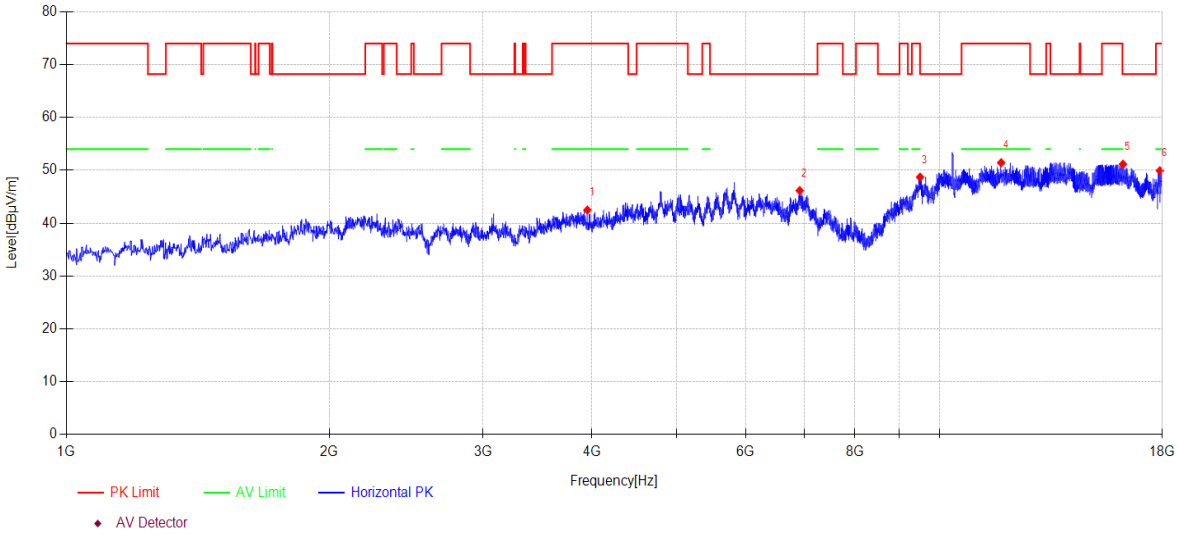
Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5180MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\1		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



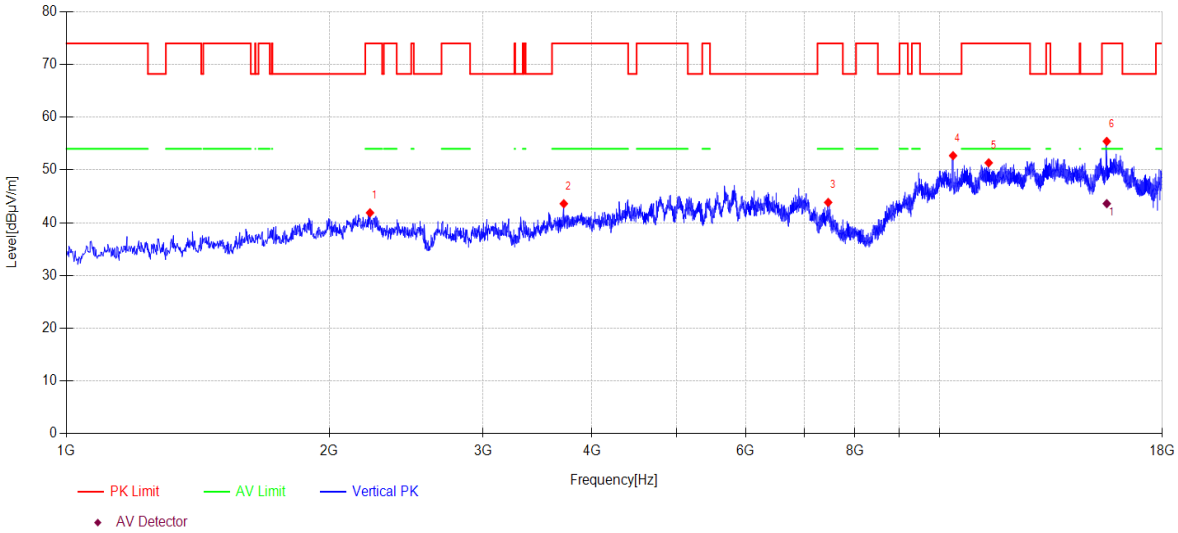
Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	3951.20	45.77	31.10	6.04	-40.42	42.49	74.00	31.51	PK	Horizontal
2	6917.70	41.67	36.14	8.99	-40.64	46.16	68.20	22.04	PK	Horizontal
3	9501.70	39.53	38.70	9.23	-38.75	48.71	68.20	19.49	PK	Horizontal
4	11767.80	41.83	38.93	10.13	-39.45	51.44	74.00	22.56	PK	Horizontal
5	16225.20	37.78	37.80	15.12	-39.54	51.16	68.20	17.04	PK	Horizontal
6	17884.40	37.60	41.73	12.74	-42.14	49.93	74.00	24.07	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5180MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\2		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2227.40	45.97	27.53	6.03	-37.65	41.88	74.00	32.12	PK	Vertical
2	3713.20	47.58	30.43	5.87	-40.28	43.60	74.00	30.40	PK	Vertical
3	7456.60	40.21	36.59	8.89	-41.84	43.85	74.00	30.15	PK	Vertical
4	10365.30	43.21	38.90	9.46	-38.86	52.71	68.20	15.49	PK	Vertical
5	11387.00	41.50	39.29	9.83	-39.27	51.35	74.00	22.65	PK	Vertical
6	15546.90	42.01	38.71	13.79	-39.09	55.42	74.00	18.58	PK	Vertical

Data List

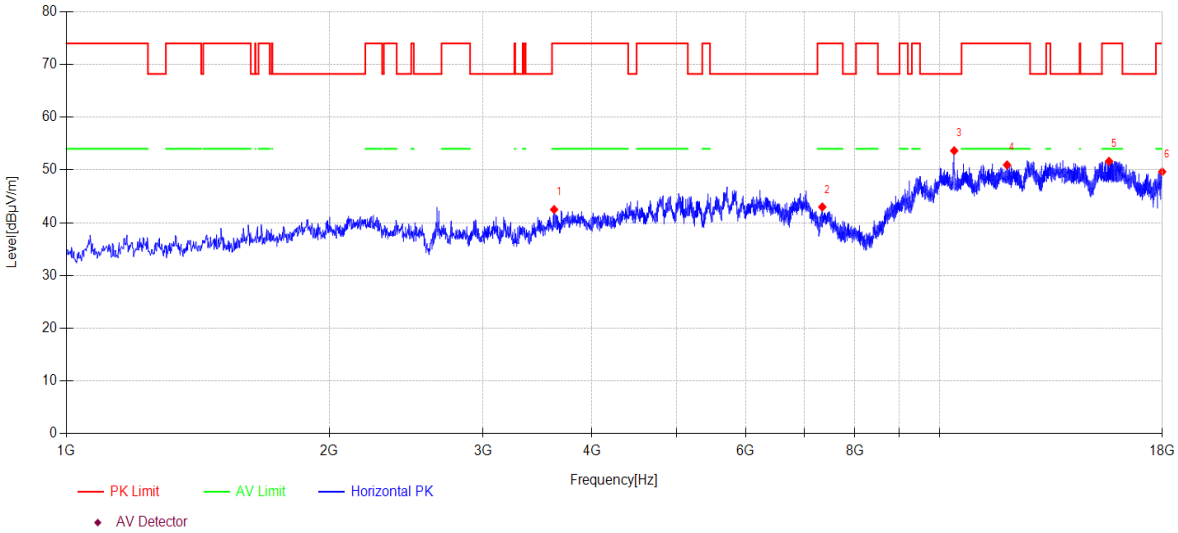
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	15546.90	30.21	38.71	13.79	-39.09	43.62	54.00	10.38	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5200MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\3		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

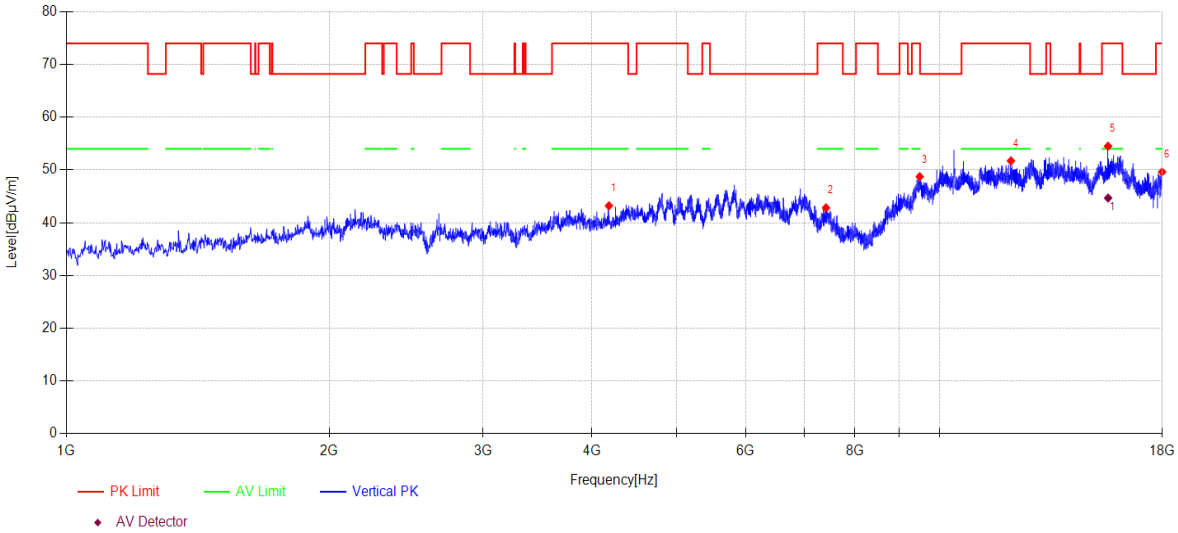
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3619.70	46.84	30.08	5.80	-40.22	42.50	74.00	31.50	PK	Horizontal
2	7342.70	38.82	36.81	8.91	-41.56	42.98	74.00	31.02	PK	Horizontal
3	10395.90	44.15	38.90	9.46	-38.87	53.64	68.20	14.56	PK	Horizontal
4	11951.40	41.16	39.05	10.28	-39.54	50.95	74.00	23.05	PK	Horizontal
5	15640.40	37.96	38.56	14.26	-39.14	51.64	74.00	22.36	PK	Horizontal
6	17993.20	36.83	42.37	12.84	-42.38	49.66	74.00	24.34	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5200MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\4		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List										
N O.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	4182.40	45.96	31.20	6.43	-40.38	43.21	74.00	30.79	PK	Vertical
2	7414.10	39.01	36.67	8.89	-41.74	42.83	74.00	31.17	PK	Vertical
3	9493.20	39.56	38.70	9.23	-38.76	48.73	74.00	25.27	PK	Vertical
4	12073.80	41.72	39.27	10.32	-39.59	51.72	74.00	22.28	PK	Vertical
5	15597.90	40.98	38.60	14.04	-39.12	54.50	74.00	19.50	PK	Vertical
6	17988.10	36.82	42.34	12.84	-42.37	49.63	74.00	24.37	PK	Vertical

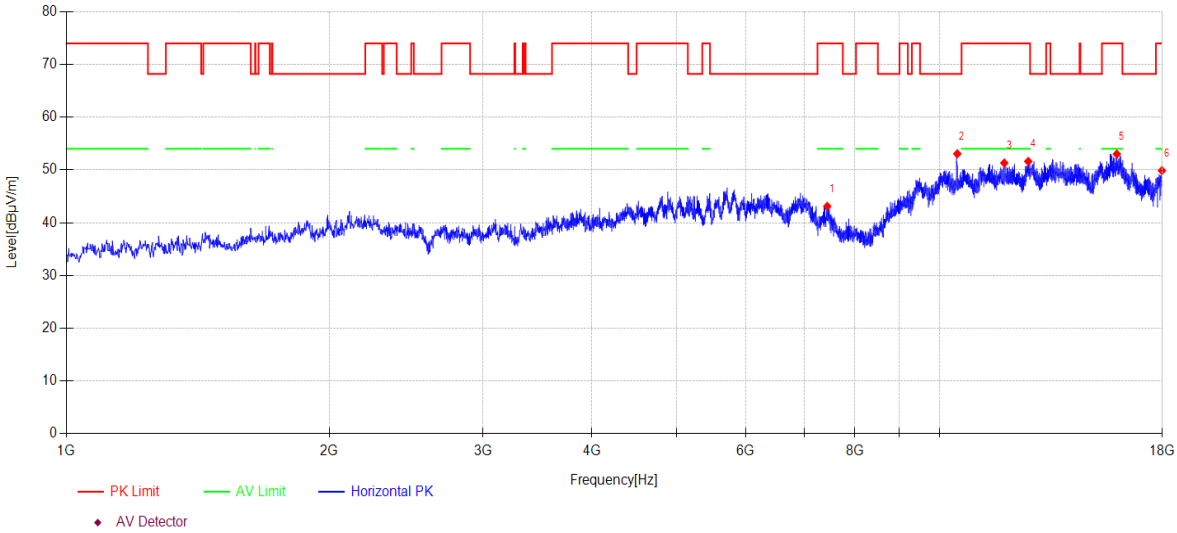
Data List										
N O.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	15601.70	31.17	38.60	14.04	-39.12	44.69	54.00	9.31	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5240MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\5		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

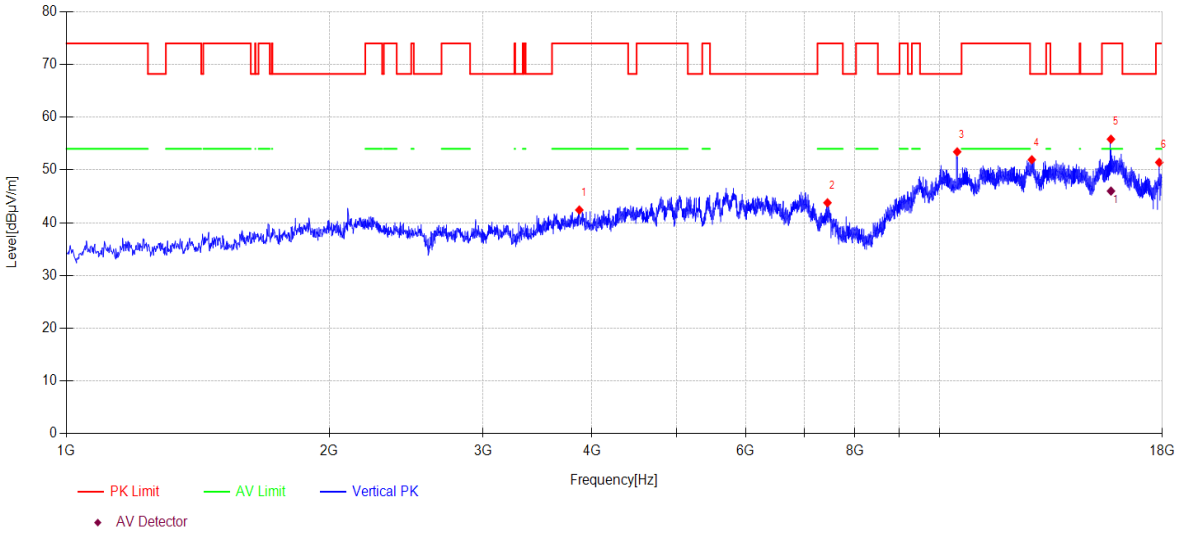
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7437.90	39.39	36.62	8.89	-41.79	43.11	74.00	30.89	PK	Horizontal
2	10480.90	43.43	39.06	9.47	-38.90	53.06	68.20	15.14	PK	Horizontal
3	11864.70	41.71	38.90	10.21	-39.50	51.32	74.00	22.68	PK	Horizontal
4	12638.20	41.60	39.48	10.36	-39.81	51.63	74.00	22.37	PK	Horizontal
5	15965.10	38.43	38.03	15.89	-39.34	53.01	74.00	20.99	PK	Horizontal
6	17981.30	37.10	42.31	12.83	-42.36	49.88	74.00	24.12	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5240MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\6		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List										
N O.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	3867.90	45.79	31.01	5.98	-40.37	42.41	74.00	31.59	PK	Vertical
2	7443.00	40.09	36.61	8.89	-41.81	43.78	74.00	30.22	PK	Vertical
3	10479.20	43.81	39.06	9.47	-38.90	53.44	68.20	14.76	PK	Vertical
4	12758.90	41.71	39.72	10.37	-39.86	51.94	68.20	16.26	PK	Vertical
5	15718.60	41.91	38.46	14.65	-39.19	55.83	74.00	18.17	PK	Vertical
6	17853.80	39.41	41.39	12.71	-42.07	51.44	74.00	22.56	PK	Vertical

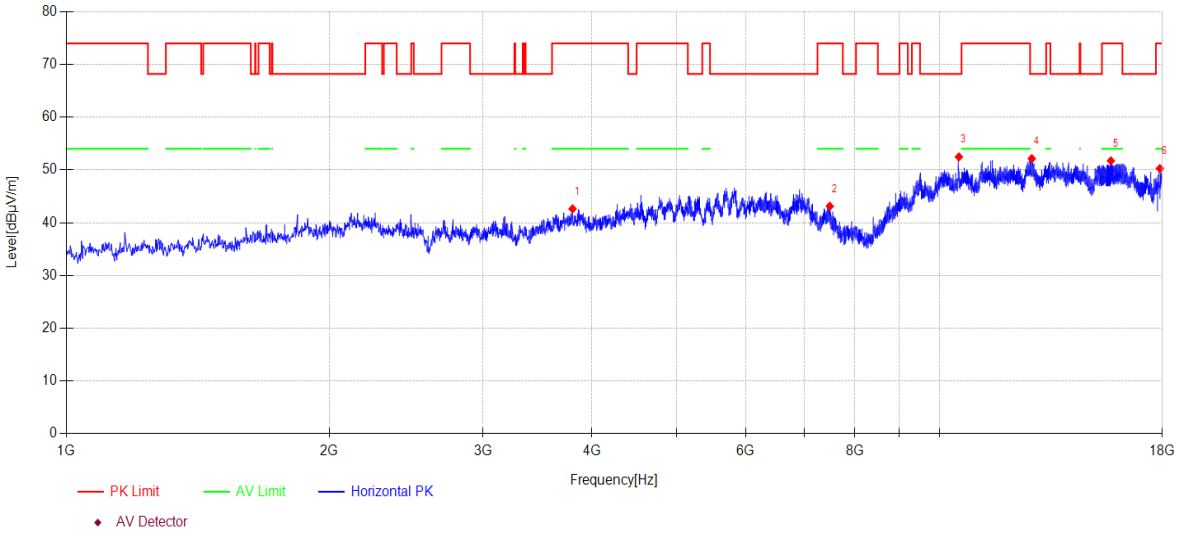
Data List										
N O.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	15718.60	32.08	38.46	14.65	-39.19	46.00	54.00	8.00	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5260MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\7		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

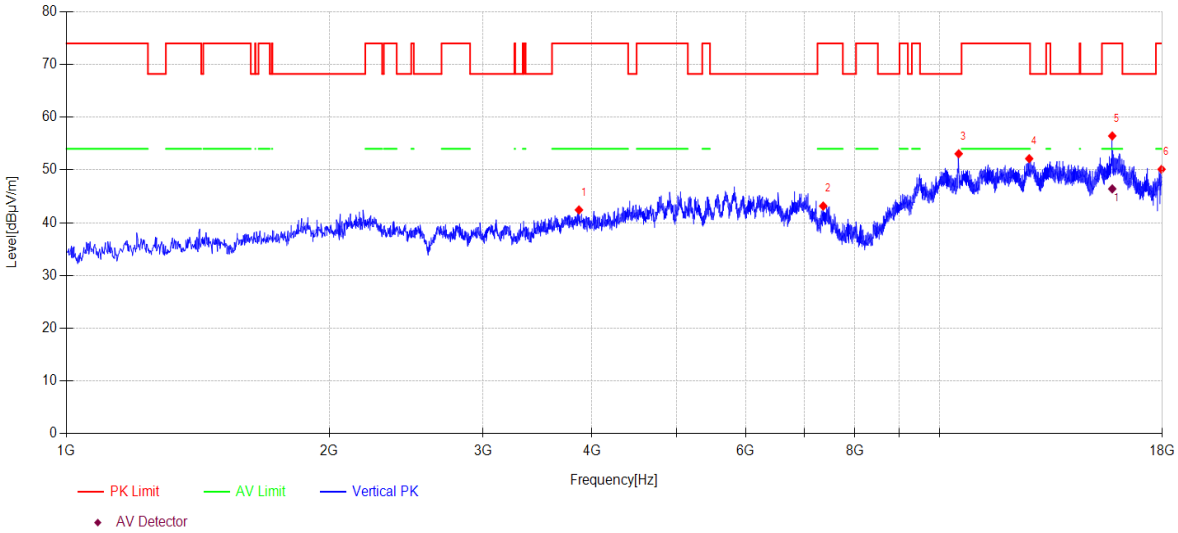
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3799.90	46.33	30.70	5.93	-40.33	42.63	74.00	31.37	PK	Horizontal
2	7488.90	39.64	36.52	8.88	-41.92	43.12	74.00	30.88	PK	Horizontal
3	10526.80	42.79	39.13	9.47	-38.91	52.48	68.20	15.72	PK	Horizontal
4	12757.20	41.94	39.71	10.37	-39.86	52.16	68.20	16.04	PK	Horizontal
5	15716.90	37.81	38.47	14.64	-39.19	51.73	74.00	22.27	PK	Horizontal
6	17882.70	37.96	41.71	12.74	-42.14	50.27	74.00	23.73	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5260MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\8		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3864.50	45.82	30.99	5.98	-40.37	42.42	74.00	31.58	PK	Vertical
2	7359.70	39.08	36.78	8.90	-41.60	43.16	74.00	30.84	PK	Vertical
3	10520.00	43.39	39.12	9.47	-38.91	53.07	68.20	15.13	PK	Vertical
4	12670.50	42.06	39.54	10.36	-39.82	52.14	74.00	21.86	PK	Vertical
5	15773.00	42.39	38.35	14.93	-39.22	56.45	74.00	17.55	PK	Vertical
6	17962.60	37.42	42.21	12.81	-42.32	50.12	74.00	23.88	PK	Vertical

Data List

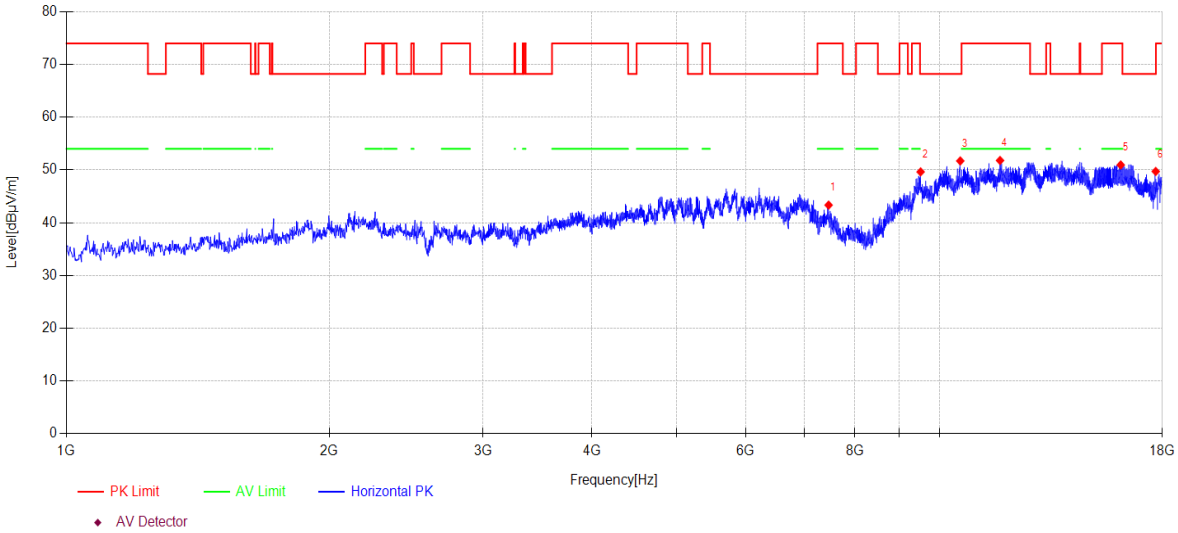
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	15773.00	32.36	38.35	14.93	-39.22	46.42	54.00	7.58	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5280MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\9		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



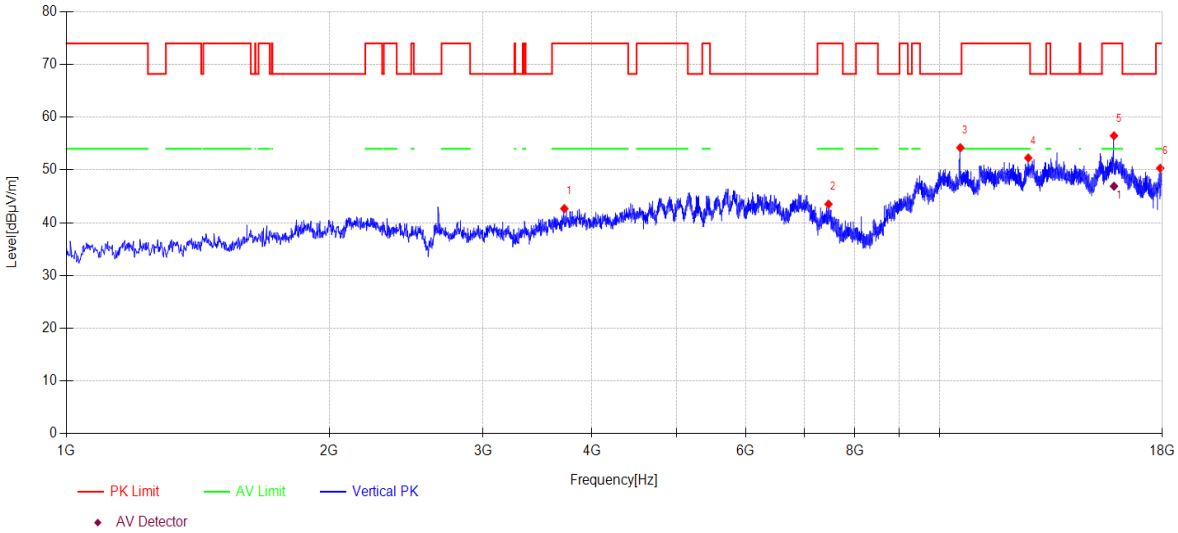
Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	7465.10	39.74	36.57	8.89	-41.86	43.34	74.00	30.66	PK	Horizontal
2	9515.30	40.48	38.67	9.24	-38.75	49.64	68.20	18.56	PK	Horizontal
3	10564.20	42.00	39.16	9.48	-38.93	51.71	68.20	16.49	PK	Horizontal
4	11732.10	42.15	38.97	10.11	-39.43	51.80	74.00	22.20	PK	Horizontal
5	16128.30	37.01	37.87	15.53	-39.46	50.95	74.00	23.05	PK	Horizontal
6	17688.90	38.55	40.33	12.55	-41.71	49.72	68.20	18.48	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5280MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\10		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3718.30	46.65	30.44	5.87	-40.28	42.68	74.00	31.32	PK	Vertical
2	7463.40	39.92	36.57	8.89	-41.86	43.52	74.00	30.48	PK	Vertical
3	10565.90	44.50	39.17	9.48	-38.93	54.22	68.20	13.98	PK	Vertical
4	12639.90	42.24	39.48	10.36	-39.81	52.27	74.00	21.73	PK	Vertical
5	15844.40	42.25	38.21	15.29	-39.27	56.48	74.00	17.52	PK	Vertical
6	17901.40	37.85	41.91	12.75	-42.18	50.33	74.00	23.67	PK	Vertical

Data List

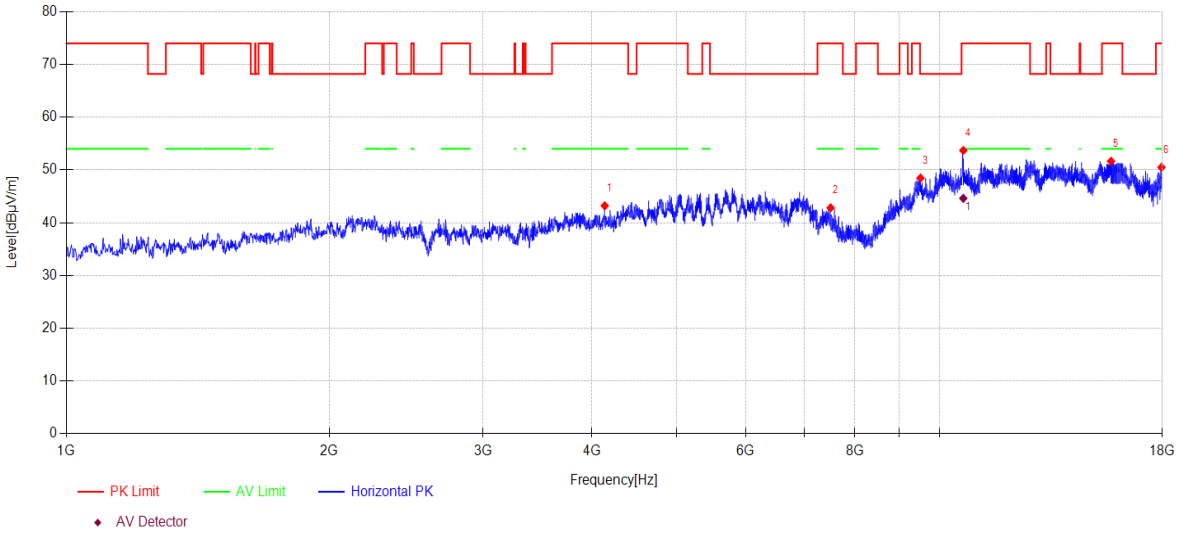
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	15844.40	32.69	38.21	15.29	-39.27	46.92	54.0	7.08	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5320MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\11		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4136.50	46.10	31.17	6.34	-40.40	43.21	74.00	30.79	PK	Horizontal
2	7504.20	39.42	36.49	8.88	-41.96	42.83	74.00	31.17	PK	Horizontal
3	9513.60	39.31	38.67	9.24	-38.75	48.47	68.20	19.73	PK	Horizontal
4	10649.20	43.88	39.30	9.48	-38.96	53.70	74.00	20.30	PK	Horizontal
5	15723.70	37.71	38.45	14.68	-39.19	51.65	74.00	22.35	PK	Horizontal
6	17959.20	37.80	42.20	12.81	-42.31	50.50	74.00	23.50	PK	Horizontal

Data List

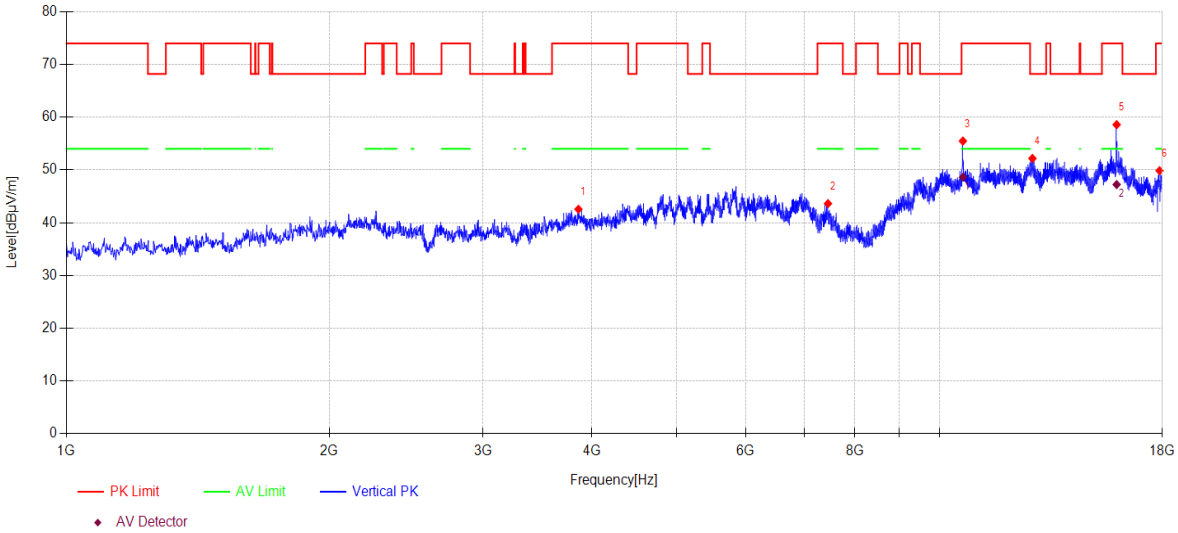
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	10649.20	34.80	39.30	9.48	-38.96	44.62	54.00	9.38	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5320MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\12		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3859.40	45.98	30.96	5.98	-40.36	42.56	74.00	31.44	PK	Vertical
2	7453.20	39.98	36.59	8.89	-41.83	43.63	74.00	30.37	PK	Vertical
3	10637.30	45.69	39.27	9.48	-38.96	55.48	74.00	18.52	PK	Vertical
4	12779.30	41.92	39.76	10.37	-39.86	52.19	68.20	16.01	PK	Vertical
5	15956.60	44.03	38.04	15.85	-39.33	58.59	74.00	15.41	PK	Vertical
6	17869.10	37.70	41.56	12.72	-42.11	49.87	74.00	24.13	PK	Vertical

Data List

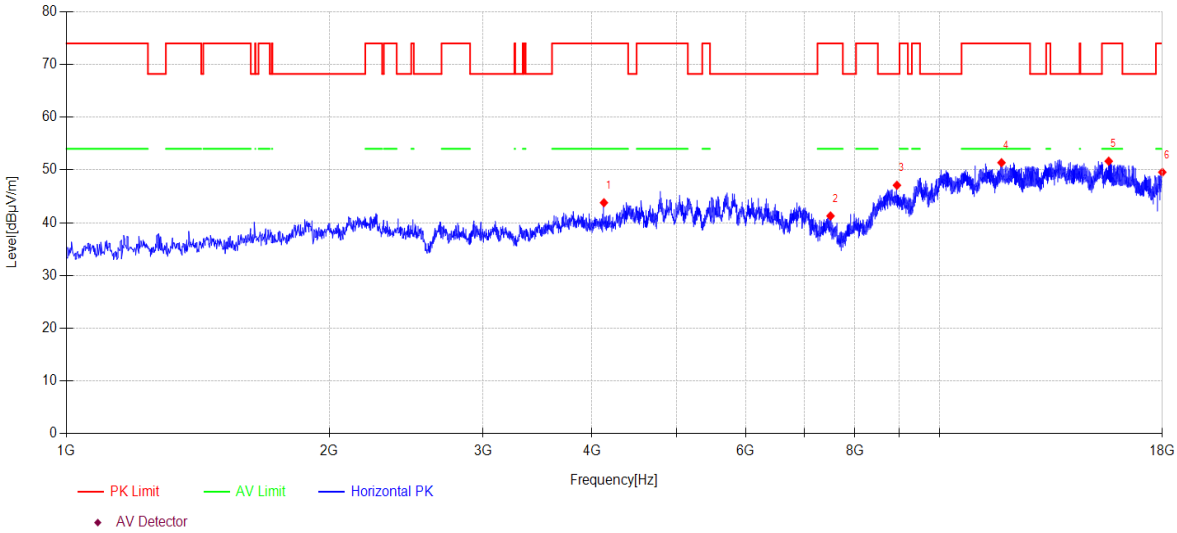
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	10642.04	38.85	39.27	9.48	-38.96	48.64	54.00	5.36	AV	Vertical
2	15956.60	32.68	38.04	15.85	-39.33	47.24	54.00	6.76	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5500MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\13		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

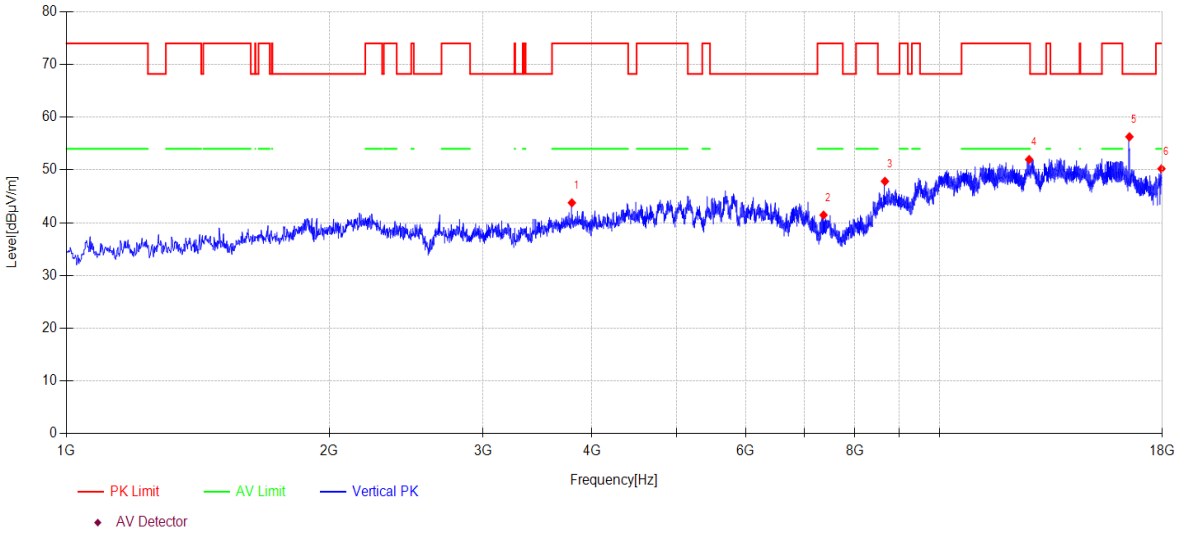
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4128.00	46.70	31.16	6.33	-40.40	43.79	74.00	30.21	PK	Horizontal
2	7502.50	37.86	36.50	8.88	-41.96	41.28	74.00	32.72	PK	Horizontal
3	8939.00	38.75	38.38	9.03	-39.06	47.10	68.20	21.10	PK	Horizontal
4	11778.00	41.78	38.92	10.14	-39.46	51.38	74.00	22.62	PK	Horizontal
5	15626.80	38.04	38.57	14.19	-39.14	51.66	74.00	22.34	PK	Horizontal
6	17996.60	36.73	42.38	12.85	-42.39	49.57	74.00	24.43	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5500MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\14		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

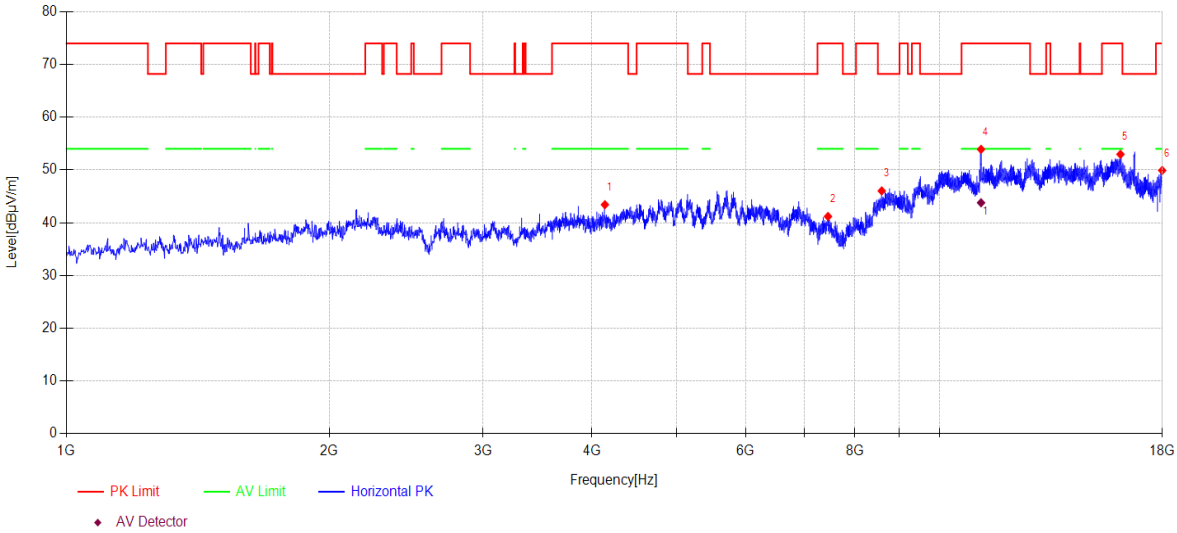
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3793.10	47.50	30.67	5.93	-40.32	43.78	74.00	30.22	PK	Vertical
2	7366.50	37.40	36.77	8.90	-41.62	41.45	74.00	32.55	PK	Vertical
3	8660.20	41.24	37.94	8.96	-40.29	47.85	68.20	20.35	PK	Vertical
4	12668.80	41.90	39.54	10.36	-39.82	51.98	74.00	22.02	PK	Vertical
5	16504.00	44.30	37.80	13.95	-39.77	56.28	68.20	11.92	PK	Vertical
6	17957.50	37.54	42.19	12.81	-42.31	50.23	74.00	23.77	PK	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5580MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\15		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List										
N O.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	4138.20	46.29	31.18	6.35	-40.40	43.42	74.00	30.58	PK	Horizontal
2	7453.20	37.54	36.59	8.89	-41.83	41.19	74.00	32.81	PK	Horizontal
3	8587.10	39.88	37.83	8.94	-40.61	46.04	68.20	22.16	PK	Horizontal
4	11159.20	44.18	39.24	9.65	-39.16	53.91	74.00	20.09	PK	Horizontal
5	16119.80	38.98	37.88	15.57	-39.46	52.97	74.00	21.03	PK	Horizontal
6	17993.20	37.08	42.37	12.84	-42.38	49.91	74.00	24.09	PK	Horizontal

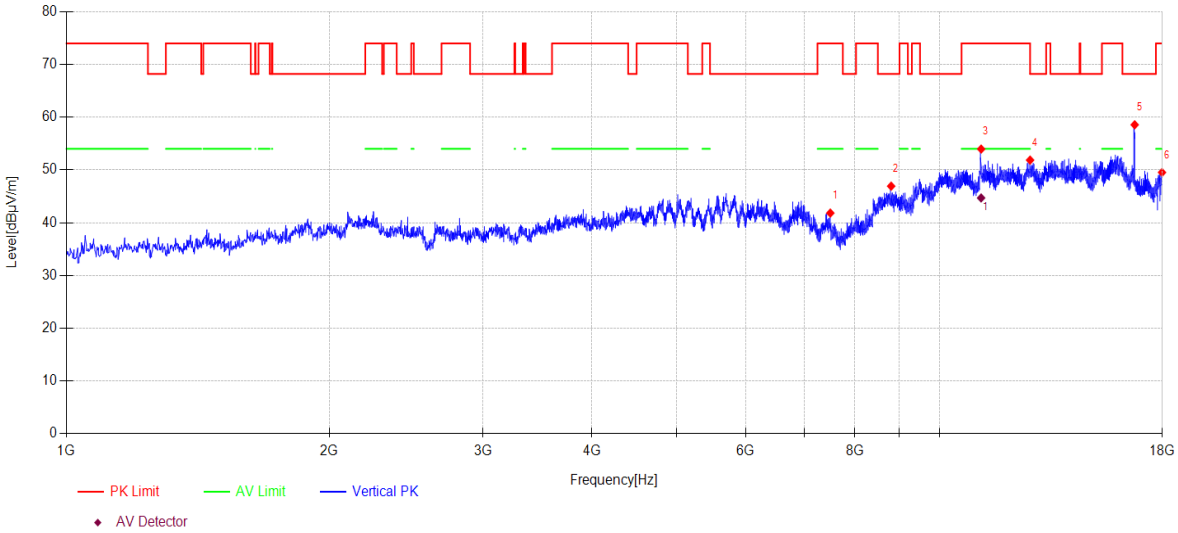
Data List										
N O.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	11159.20	34.06	39.24	9.65	-39.16	43.79	54.00	10.21	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5580MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\16		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List										
N O.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	7499.10	38.40	36.50	8.88	-41.95	41.83	74.00	32.17	PK	Vertical
2	8804.70	39.38	38.21	8.99	-39.65	46.93	68.20	21.27	PK	Vertical
3	11162.60	44.25	39.24	9.65	-39.17	53.97	74.00	20.03	PK	Vertical
4	12701.10	41.74	39.60	10.36	-39.83	51.87	68.20	16.33	PK	Vertical
5	16733.50	47.52	38.00	12.99	-39.95	58.56	68.20	9.64	PK	Vertical
6	17984.70	36.74	42.32	12.84	-42.37	49.53	74.00	24.47	PK	Vertical

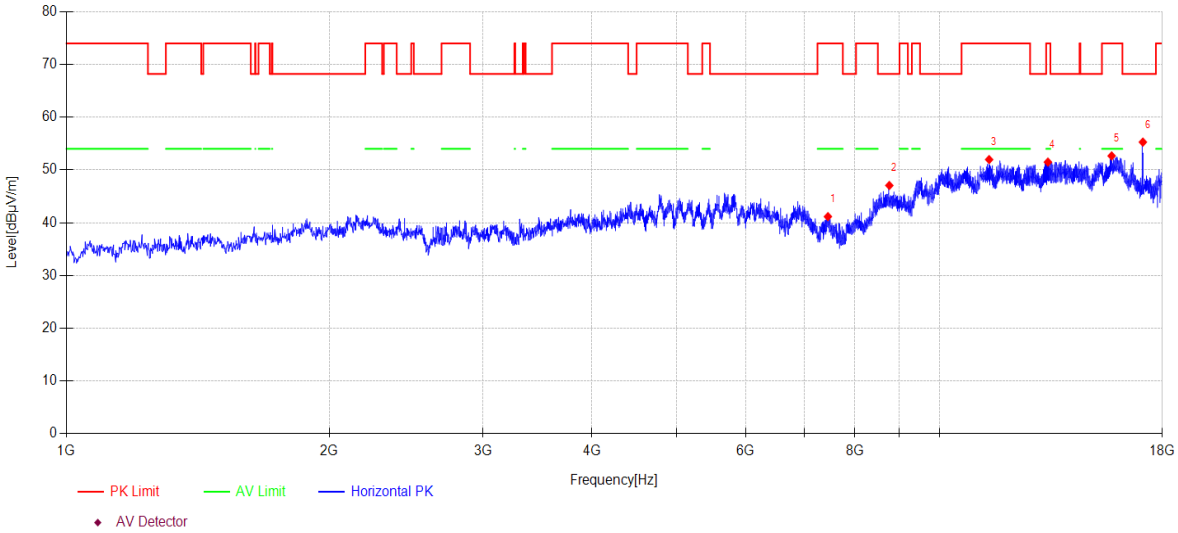
Data List										
N O.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	11161.50	34.98	39.24	9.65	-39.17	44.70	54.00	9.30	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5700MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\17		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

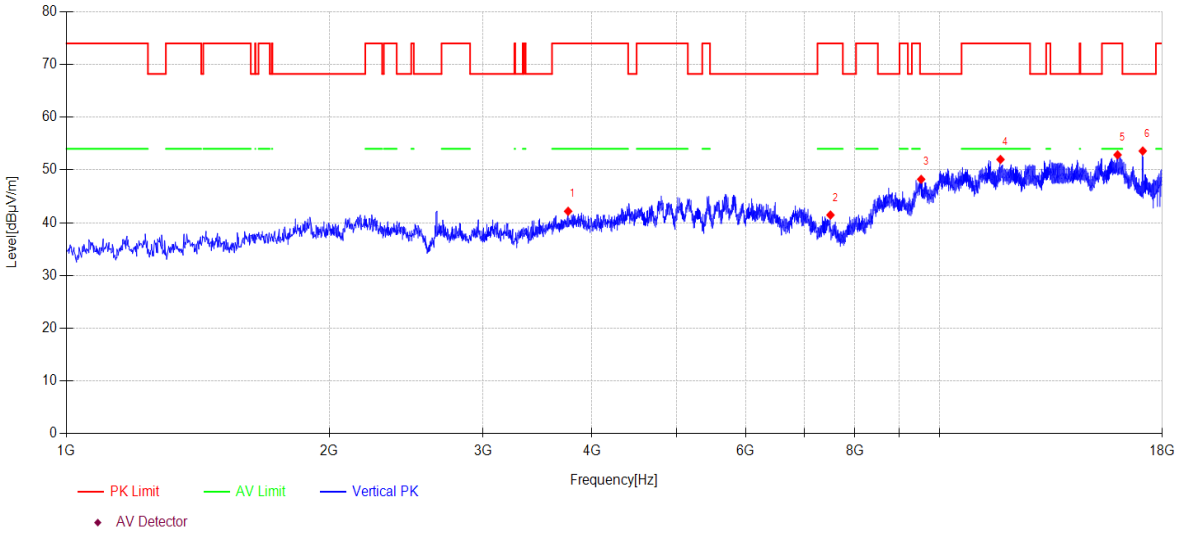
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7451.50	37.50	36.60	8.89	-41.83	41.16	74.00	32.84	PK	Horizontal
2	8762.20	39.72	38.20	8.98	-39.84	47.06	68.20	21.14	PK	Horizontal
3	11400.60	42.11	39.30	9.84	-39.28	51.97	74.00	22.03	PK	Horizontal
4	13311.40	40.74	40.10	10.50	-39.85	51.49	74.00	22.51	PK	Horizontal
5	15747.50	38.66	38.41	14.80	-39.21	52.66	74.00	21.34	PK	Horizontal
6	17099.00	45.00	38.70	11.97	-40.39	55.28	68.20	12.92	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5700MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\18		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

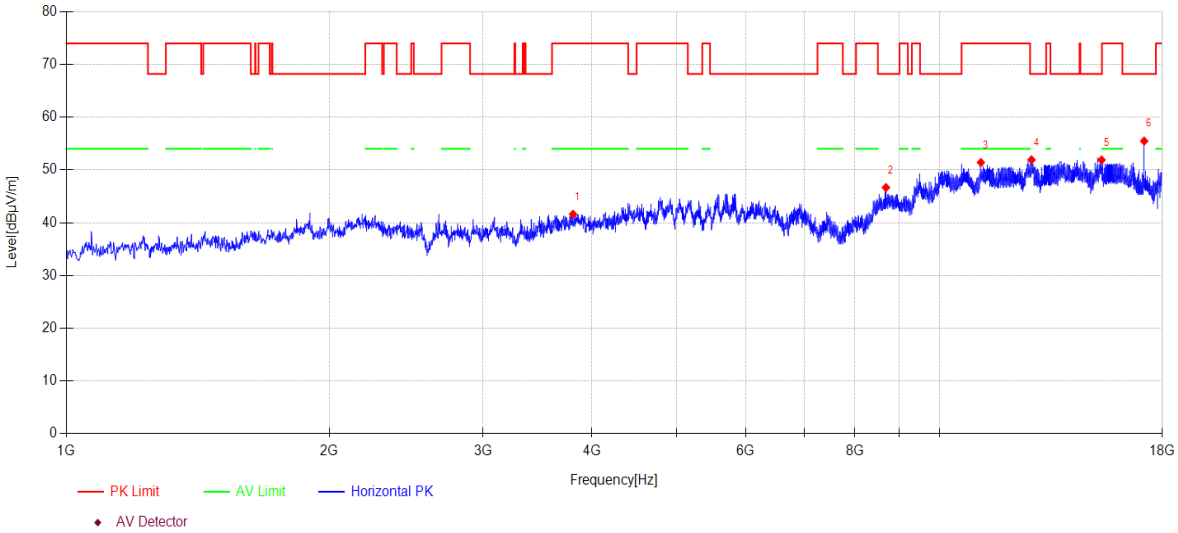
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3755.70	46.05	30.52	5.90	-40.30	42.17	74.00	31.83	PK	Vertical
2	7502.50	38.04	36.50	8.88	-41.96	41.46	74.00	32.54	PK	Vertical
3	9528.90	39.10	38.64	9.24	-38.75	48.23	68.20	19.97	PK	Vertical
4	11745.70	42.36	38.95	10.12	-39.44	51.99	74.00	22.01	PK	Vertical
5	15995.70	38.17	38.00	16.05	-39.36	52.86	74.00	21.14	PK	Vertical
6	17093.90	43.33	38.69	11.96	-40.38	53.60	68.20	14.60	PK	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5720MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\19		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

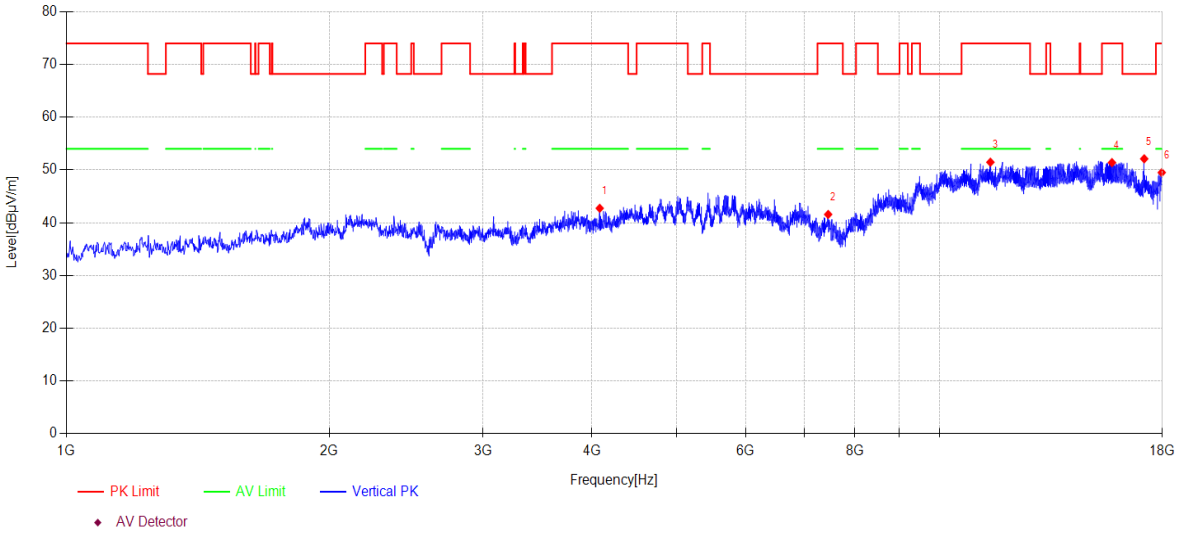
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3805.00	45.28	30.72	5.94	-40.33	41.61	74.00	32.39	PK	Horizontal
2	8684.00	39.85	38.04	8.96	-40.18	46.67	68.20	21.53	PK	Horizontal
3	11154.10	41.70	39.25	9.64	-39.16	51.43	74.00	22.57	PK	Horizontal
4	12747.00	41.73	39.69	10.36	-39.85	51.93	68.20	16.27	PK	Horizontal
5	15336.10	38.62	39.51	12.72	-38.96	51.89	68.20	16.31	PK	Horizontal
6	17158.50	45.34	38.64	12.03	-40.52	55.49	68.20	12.71	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5720MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5GWIFI\20		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

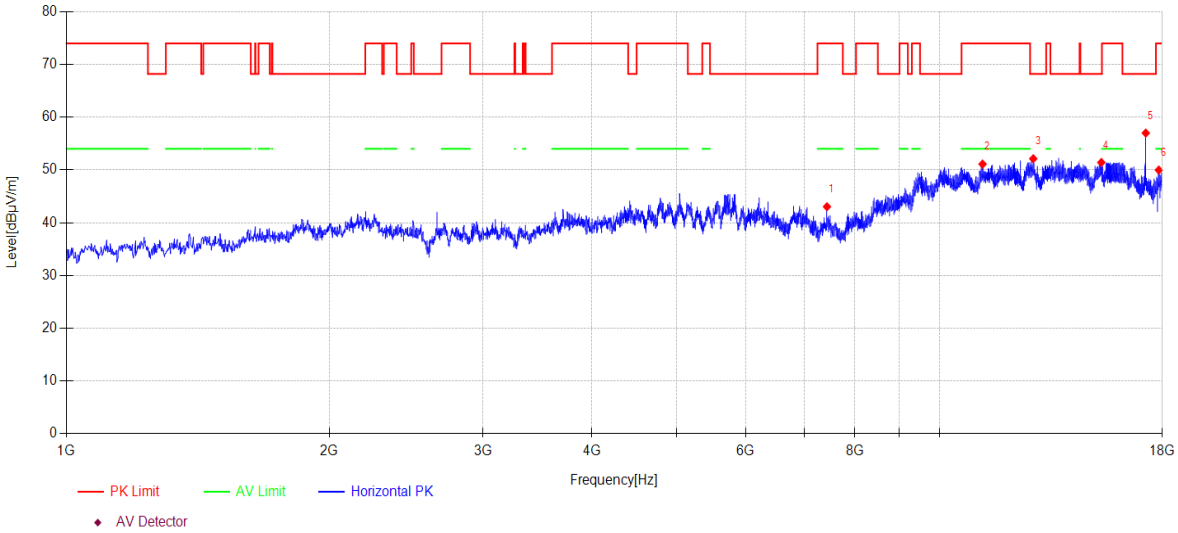
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4082.10	45.86	31.06	6.24	-40.42	42.74	74.00	31.26	PK	Vertical
2	7456.60	37.93	36.59	8.89	-41.84	41.57	74.00	32.43	PK	Vertical
3	11438.00	41.64	39.26	9.87	-39.30	51.47	74.00	22.53	PK	Vertical
4	15761.10	37.37	38.38	14.87	-39.22	51.40	74.00	22.60	PK	Vertical
5	17160.20	41.97	38.64	12.03	-40.53	52.11	68.20	16.09	PK	Vertical
6	17972.80	36.77	42.26	12.82	-42.34	49.51	74.00	24.49	PK	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5745MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5.8GWIFI\1		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

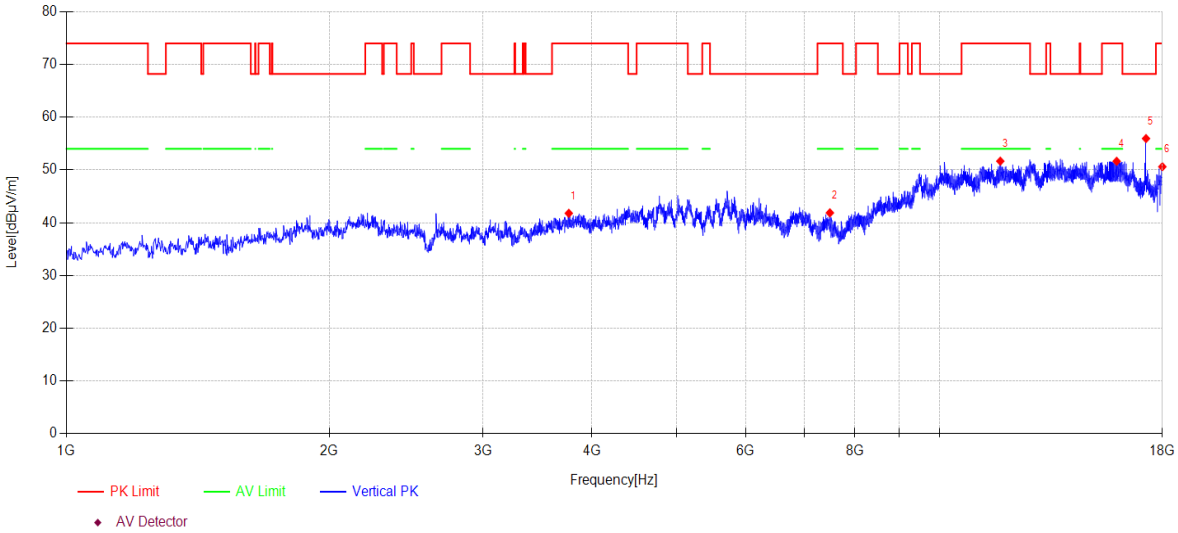
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7432.80	39.29	36.63	8.89	-41.78	43.03	74.00	30.97	PK	Horizontal
2	11203.40	41.42	39.20	9.68	-39.19	51.11	74.00	22.89	PK	Horizontal
3	12806.50	41.82	39.81	10.37	-39.87	52.13	68.20	16.07	PK	Horizontal
4	15324.20	38.10	39.61	12.66	-38.95	51.42	68.20	16.78	PK	Horizontal
5	17231.60	46.93	38.66	12.10	-40.69	57.00	68.20	11.20	PK	Horizontal
6	17833.40	38.15	41.17	12.69	-42.03	49.98	74.00	24.02	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5745MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5.8GWIFI\2		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

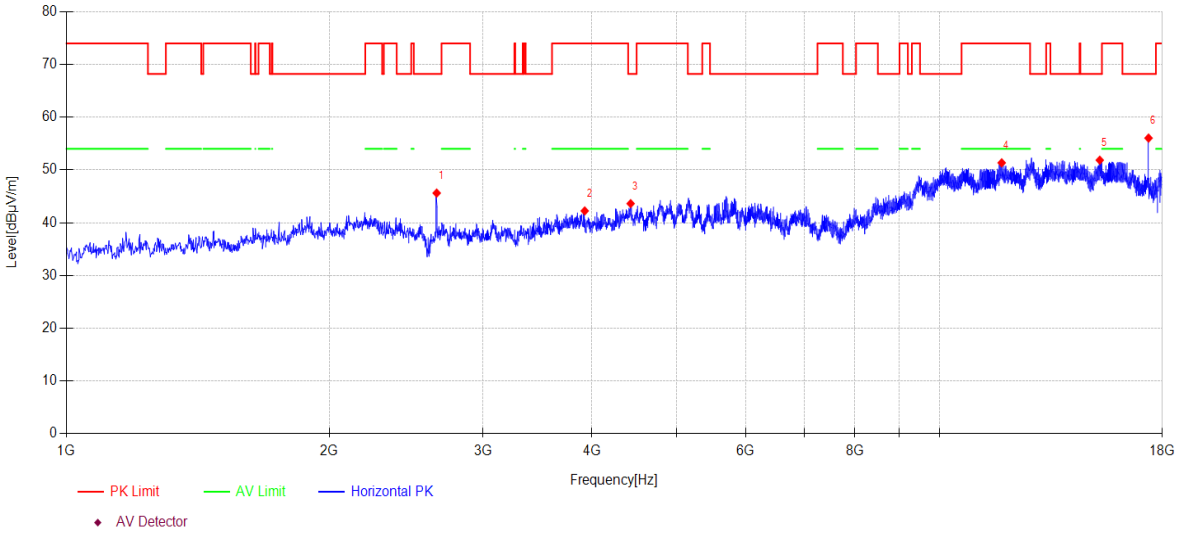
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3762.50	45.64	30.55	5.91	-40.31	41.79	74.00	32.21	PK	Vertical
2	7490.60	38.40	36.52	8.88	-41.93	41.87	74.00	32.13	PK	Vertical
3	11740.60	42.04	38.96	10.11	-39.44	51.67	74.00	22.33	PK	Vertical
4	15956.60	37.09	38.04	15.85	-39.33	51.65	74.00	22.35	PK	Vertical
5	17241.80	45.88	38.68	12.11	-40.71	55.96	68.20	12.24	PK	Vertical
6	18000.00	37.76	42.40	12.85	-42.40	50.61	74.00	23.39	PK	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5785MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5.8GWIFI\3		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

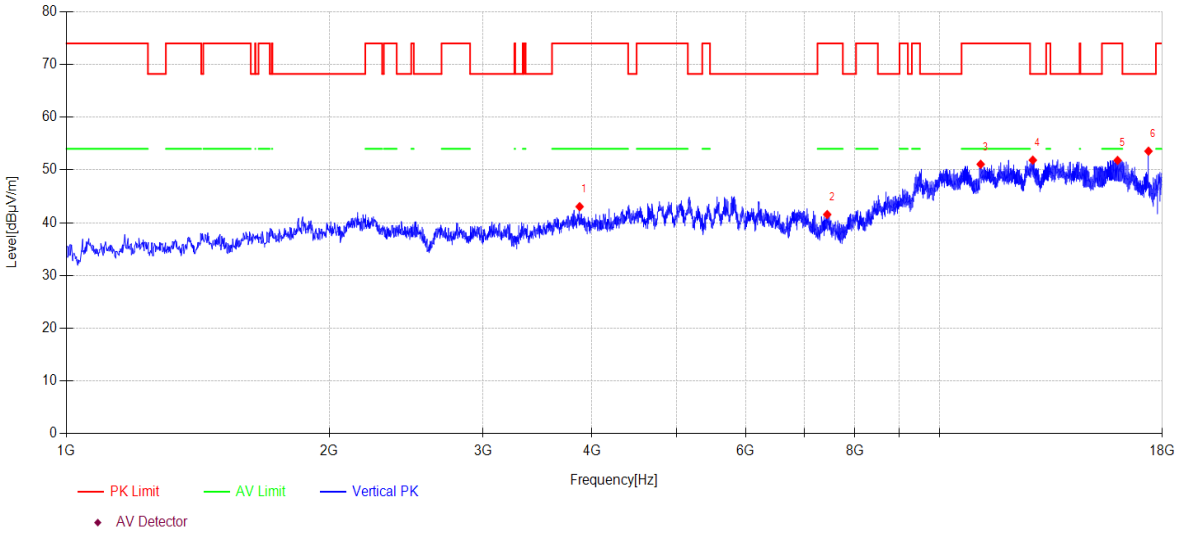
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2655.80	51.25	27.59	5.65	-38.87	45.62	68.20	22.58	PK	Horizontal
2	3924.00	45.47	31.15	6.02	-40.40	42.24	74.00	31.76	PK	Horizontal
3	4428.90	45.31	31.70	6.91	-40.29	43.63	68.20	24.57	PK	Horizontal
4	11783.10	41.74	38.92	10.15	-39.46	51.35	74.00	22.65	PK	Horizontal
5	15261.30	38.98	39.45	12.35	-38.92	51.86	68.20	16.34	PK	Horizontal
6	17355.70	45.87	38.91	12.22	-40.96	56.04	68.20	12.16	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5785MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5.8GWIFI\4		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

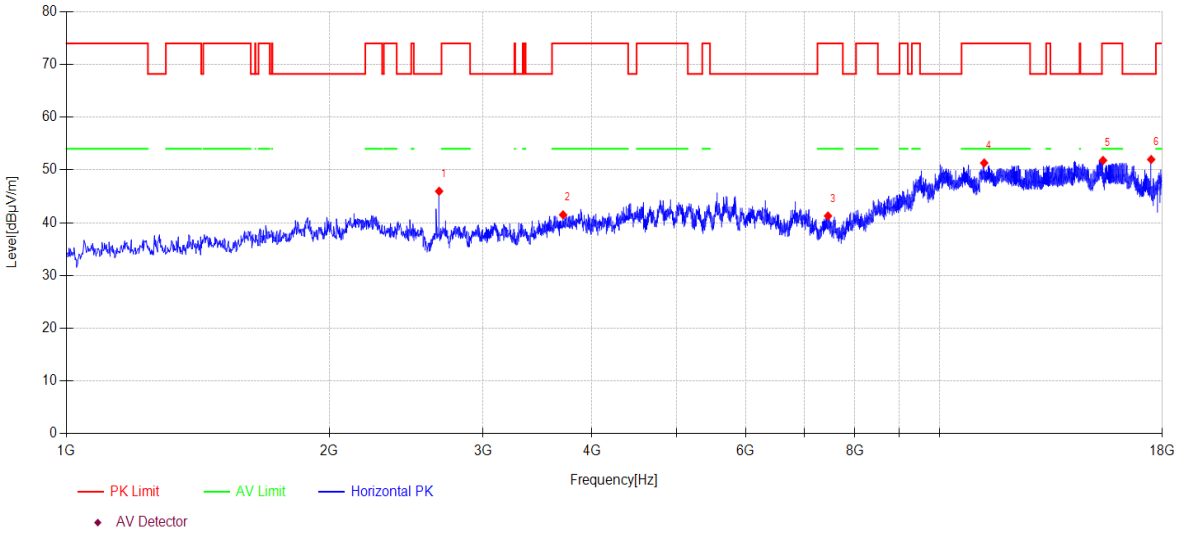
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3871.30	46.39	31.03	5.99	-40.37	43.04	74.00	30.96	PK	Vertical
2	7437.90	37.84	36.62	8.89	-41.79	41.56	74.00	32.44	PK	Vertical
3	11147.30	41.35	39.25	9.64	-39.16	51.08	74.00	22.92	PK	Vertical
4	12791.20	41.58	39.78	10.37	-39.87	51.86	68.20	16.34	PK	Vertical
5	15997.40	37.11	38.00	16.06	-39.36	51.81	74.00	22.19	PK	Vertical
6	17354.00	43.39	38.91	12.22	-40.96	53.56	68.20	14.64	PK	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5825MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5.8GWIFI\5		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



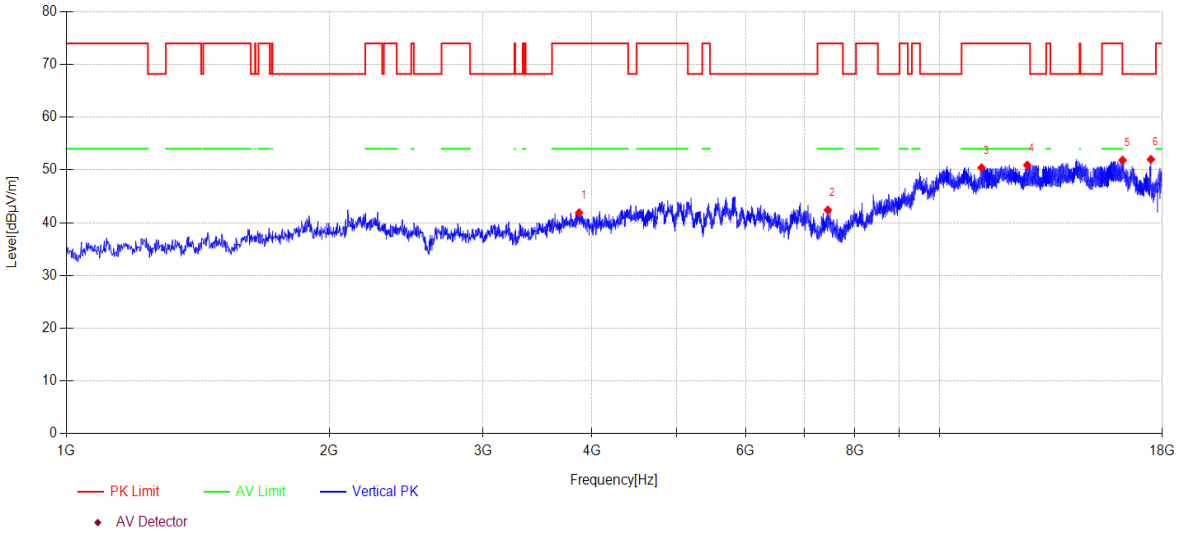
Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	2672.80	51.68	27.55	5.64	-38.91	45.96	68.20	22.24	PK	Horizontal
2	3706.40	45.49	30.41	5.87	-40.27	41.50	74.00	32.50	PK	Horizontal
3	7453.20	37.63	36.59	8.89	-41.83	41.28	74.00	32.72	PK	Horizontal
4	11252.70	41.62	39.20	9.72	-39.21	51.33	74.00	22.67	PK	Horizontal
5	15395.60	38.75	39.04	13.02	-39.00	51.81	74.00	22.19	PK	Horizontal
6	17478.10	41.66	39.23	12.34	-41.24	51.99	68.20	16.21	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2024-01-05	**Tested By**:	Bairong
EUT:	AIoT Edge Controller	**Model Number**:	MB41
Test Mode:	11N20MIMO 5825MHz TX	**Power Supply**:	DC 5V
Condition:	Temp:21.4°C;Humi:54.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23111537-2E MB41\FCC ABOVE 1G 5.8GWIFI\6		
Memo:	Sample Number:S23111537-05 Power Setting:100		

Test Graph



Data List

NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3866.20	45.27	31.00	5.98	-40.37	41.88	74.00	32.12	PK	Vertical
2	7449.80	38.73	36.60	8.89	-41.82	42.40	74.00	31.60	PK	Vertical
3	11172.80	40.70	39.23	9.66	-39.17	50.42	74.00	23.58	PK	Vertical
4	12605.90	40.94	39.41	10.36	-39.80	50.91	74.00	23.09	PK	Vertical
5	16206.50	38.39	37.80	15.20	-39.53	51.86	68.20	16.34	PK	Vertical
6	17462.80	41.69	39.19	12.32	-41.20	52.00	68.20	16.20	PK	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.