TEST REPORT

Product Name	:	router
Brand Mark	:	NBKEY
Model No.	:	MK600 , MK700, MK800, MK900
FCC ID	:	2AWTP-MK600
Report Number	:	BLA-EMC-202010-A1601
Date of Sample Receipt	:	2020/10/13
Date of Test	:	2020/10/13 to 2020/11/18
Date of Issue	:	2020/11/18
Test Standard	:	47 CFR Part 15, Subpart C 15.247
Test Result	:	Pass

Prepared for:

Guangdong Xintengda Communication Technology Co.,Ltd.

3rd Floor,No.256,Mingyue 2 Road,Luangang Village,Shiwan Town,Boluo County,Huizhou City,Guangdong Province

Prepared by:

BlueAsia of Technical Services(Shenzhen) Co.,Ltd.

IOT Test Centre of BlueAsia

No. 448 Bulong Road, Bantian Street, Longgang District, Shenzhen,China

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Compiled by: Jozu

Review by: Sweet. Liang

Approved by:

Date: 2020/11/18

REPORT REVISE RECORD

Version No.	Date	Description
00	2020/11/18	Original

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1 TEST SUMMARY

Test item	Test Requirement	Test Method	Class/Severity	Result
Radiated Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	Pass
Conducted Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 7.8.6 & Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass
Conducted Band Edges Measurement	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2	47 CFR Part 15, Subpart C 15.247(d)	Pass
Minimum 6dB Bandwidth	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass
Power Spectrum Density	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 15.247(e)	Pass
Conducted Peak Output Power	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 7.8.5 & Section 11.9.1	47 CFR Part 15, Subpart C 15.247(b)(1) & 15.247(b)(3)	Pass
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(c)	Pass

2 GENERAL INFORMATION

Applicant	Guangdong Xintengda Communication Technology Co.,Ltd.
Address	3rd Floor,No.256,Mingyue 2 Road,Luangang Village,Shiwan Town,Boluo County,Huizhou City,Guangdong Province
Manufacturer	Guangdong Xintengda Communication Technology Co.,Ltd.
Address	3rd Floor,No.256,Mingyue 2 Road,Luangang Village,Shiwan Town,Boluo County,Huizhou City,Guangdong Province
Factory	Guangdong Xintengda Communication Technology Co.,Ltd.
Address	3rd Floor,No.256,Mingyue 2 Road,Luangang Village,Shiwan Town,Boluo County,Huizhou City,Guangdong Province
Product Name	router
Test Model No.	MK600

3 GENERAL DESCRIPTION OF E.U.T.

Hardware Version	V1.1
Software Version	V3.4
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Channel Spacing:	5MHz
Number of Channels:	802.11b/g/n(HT20):11 802.11n(HT40):7
Antenna Type:	external Antenna
Antenna Gain:	4dBi(Provided by the customer)
Power supply	DC12V
AC adapter	Model:1210 Input:100-240V, 50/60Hz Output:12V, 1A

4 TEST ENVIRONMENT

Environment	Temperature	Voltage
Normal	25 °C	DC12V

5 TEST MODE

TEST MODE	TEST MODE DESCRIPTION
TX	Keep the EUT in continuously transmitting with modulation mode. （dutycycle>98%）
Remark: Only the data of the worst mode would be recorded in this report.	

6 MEASUREMENT UNCERTAINTY

Parameter	Expanded Uncertainty (Confidence of 95%)
Radiated Emission(9kHz-30MHz)	±4.34dB
Radiated Emission(30Mz-1000MHz)	±4.24dB
Radiated Emission(1GHz-18GHz)	±4.68dB
AC Power Line Conducted Emission(150kHz-30MHz)	±3.45dB

7 DESCRIPTION OF SUPPORT UNIT

Device Type	Manufacturer	Model Name	Serial No.	Remark
PC	HASEE	K610D	N/A	N/A
N/A	N/A	N/A	N/A	N/A

8 LABORATORY LOCATION

All tests were performed at:
BlueAsia of Technical Services(Shenzhen) Co., Ltd.
IOT Test Centre of BlueAsia
No. 448 Bulong Road, Bantian Street, Longgang District, Shenzhen,China
Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673
No tests were sub-contracted.

9 TEST INSTRUMENTS LIST

Test Equipment Of Radiated Spurious Emissions					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal.Date**	**Cal.Due**
Chamber	SKET	966	N/A	5/8/2018	5/7/2021
Spectrum	R&S	FSP40	100817	7/1/2020	6/30/2021
Receiver	R&S	ESR7	101199	4/20/2020	4/19/2021
broadband Antenna	Schwarzbeck	VULB9168	00836 P:00227	7/14/2018	7/13/2021
Horn Antenna	Schwarzbeck	9120D	01892 P:00331	7/14/2018	7/13/2021
Amplifier	SKET	PA-000318G-45	N/A	7/1/2020	6/30/2021
EMI software	EZ	EZ-EMC	N/A	N/A	N/A
Loop antenna	SCHNARZBECK	FMZB1519B	00102	2/14/2019	2/13/2022
Controller	SKET	N/A	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-02	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-03	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-01	N/A	N/A	N/A

Test Equipment Of Radiated Emissions which fall in the restricted bands					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal.Date**	**Cal.Due**
Chamber	SKET	966	N/A	5/8/2018	5/7/2021
Spectrum	R&S	FSP40	100817	7/1/2020	6/30/2021
Receiver	R&S	ESR7	101199	4/20/2020	4/19/2021
broadband Antenna	Schwarzbeck	VULB9168	00836 P:00227	7/14/2018	7/13/2021
Horn Antenna	Schwarzbeck	9120D	01892 P:00331	7/14/2018	7/13/2021

Amplifier	SKET	PA-000318G-45	N/A	7/1/2020	6/30/2021
EMI software	EZ	EZ-EMC	N/A	N/A	N/A
Loop antenna	SCHNARZBECK	FMZB1519B	00102	2/14/2019	2/13/2022
Controller	SKET	N/A	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-02	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-03	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-01	N/A	N/A	N/A

Test Equipment Of Conducted Spurious Emissions					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal.Date**	**Cal.Due**
Spectrum	R&S	FSP40	100817	7/1/2020	6/30/2021
Spectrum	Agilent	N9020A	MY49100060	12/17/2019	12/16/2020
Signal Generator	Agilent	N5182A	MY49060650	12/17/2019	12/16/2020
Signal Generator	Agilent	E8257D	MY44320250	4/20/2020	4/19/2021

Test Equipment Of Conducted Band Edges Measurement					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal.Date**	**Cal.Due**
Spectrum	R&S	FSP40	100817	7/1/2020	6/30/2021
Spectrum	Agilent	N9020A	MY49100060	12/17/2019	12/16/2020
Signal Generator	Agilent	N5182A	MY49060650	12/17/2019	12/16/2020
Signal Generator	Agilent	E8257D	MY44320250	4/20/2020	4/19/2021

Test Equipment Of Minimum 6dB Bandwidth					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal.Date**	**Cal.Due**
Spectrum	R&S	FSP40	100817	7/1/2020	6/30/2021
Spectrum	Agilent	N9020A	MY49100060	12/17/2019	12/16/2020

Signal Generator	Agilent	N5182A	MY49060650	12/17/2019	12/16/2020
Signal Generator	Agilent	E8257D	MY44320250	4/20/2020	4/19/2021

Test Equipment Of Power Spectrum Density					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal.Date**	**Cal.Due**
Spectrum	R&S	FSP40	100817	7/1/2020	6/30/2021
Spectrum	Agilent	N9020A	MY49100060	12/17/2019	12/16/2020
Signal Generator	Agilent	N5182A	MY49060650	12/17/2019	12/16/2020
Signal Generator	Agilent	E8257D	MY44320250	4/20/2020	4/19/2021

Test Equipment Of Conducted Peak Output Power					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal.Date**	**Cal.Due**
Spectrum	R&S	FSP40	100817	7/1/2020	6/30/2021
Spectrum	Agilent	N9020A	MY49100060	12/17/2019	12/16/2020
Signal Generator	Agilent	N5182A	MY49060650	12/17/2019	12/16/2020
Signal Generator	Agilent	E8257D	MY44320250	4/20/2020	4/19/2021

Test Equipment Of Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal.Date**	**Cal.Due**
Shield room	SKET	833	N/A	6/10/2018	6/9/2021
Receiver	R&S	ESPI3	101082	4/20/2020	4/19/2021
LISN	R&S	ENV216	3560.6550.15	7/1/2020	6/30/2021
LISN	AT	AT166-2	AKK1806000003	12/17/2019	12/16/2020
EMI software	EZ	EZ-EMC	N/A	N/A	N/A

RADIATED SPURIOUS EMISSIONS

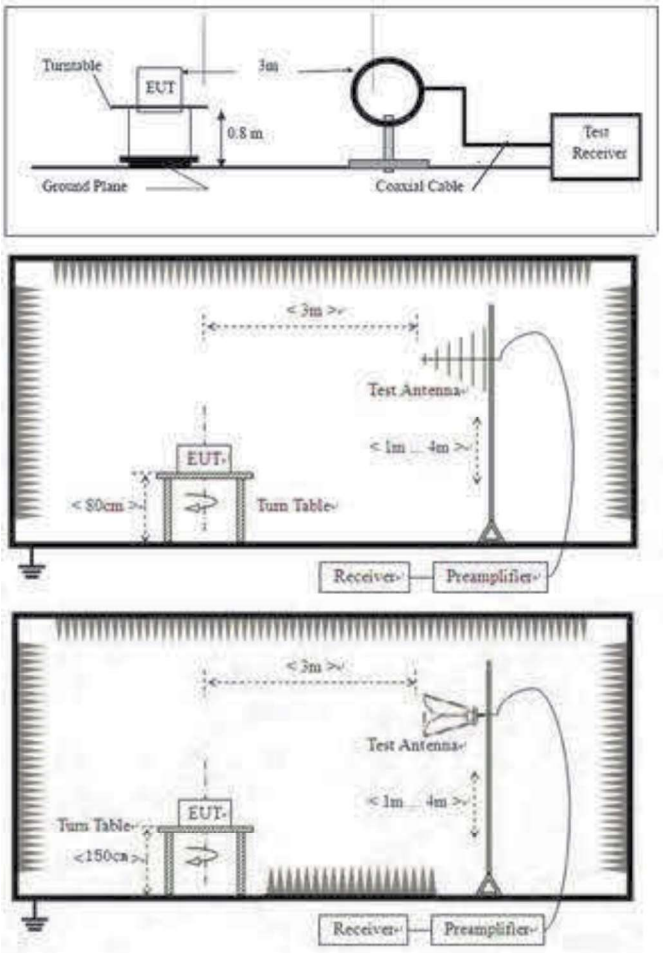
Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 6.4,6.5,6.6
Test Mode (Pre-Scan)	TX mode (SE) below 1G;TX mode (SE) Above 1G
Test Mode (Final Test)	TX mode (SE) below 1G;TX mode (SE) Above 1G
Tester	Jozu
Temperature	25℃
Humidity	60%

LIMITS

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

BLOCK DIAGRAM OF TEST SETUP



PROCEDURE

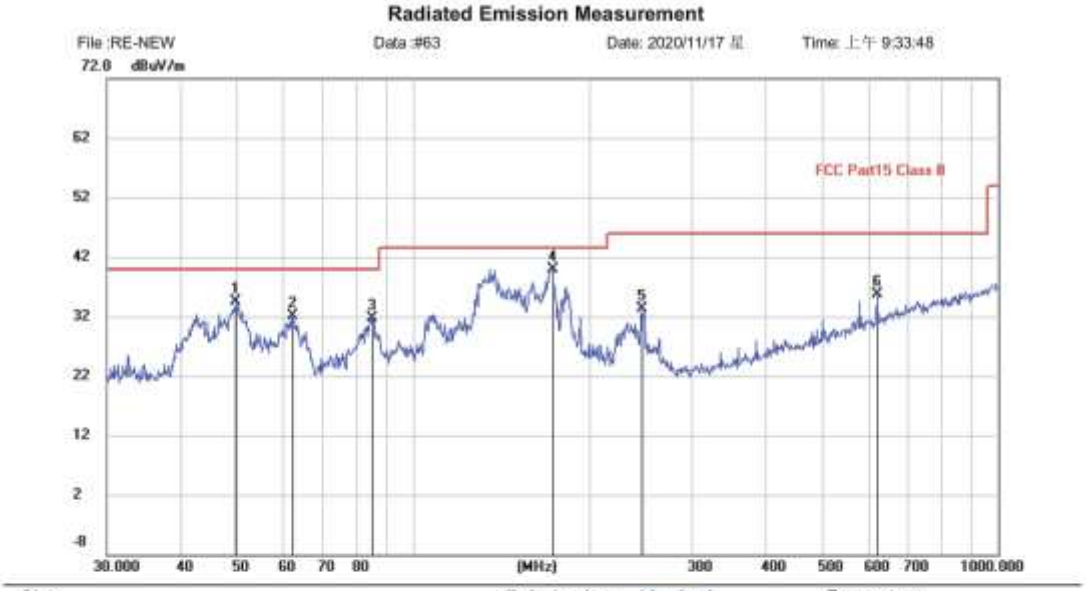
a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
j. Repeat above procedures until all frequencies measured was complete.

Remark:
1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.
2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level =Receiver Reading + Antenna Factor + Cable Factor ¨C Preamplifier Factor
3) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. Fundamental frequency was blocked by filter,only spurious emission is shown.
4) For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

TEST DATA

[TestMode: TX mode (SE) below 1G]; [Polarity: Vertical]
Power:AC120V/60Hz



Site
Limit: FCC Part15 Class B
EUT: router
M/N: MK600
Mode: TX
Note:

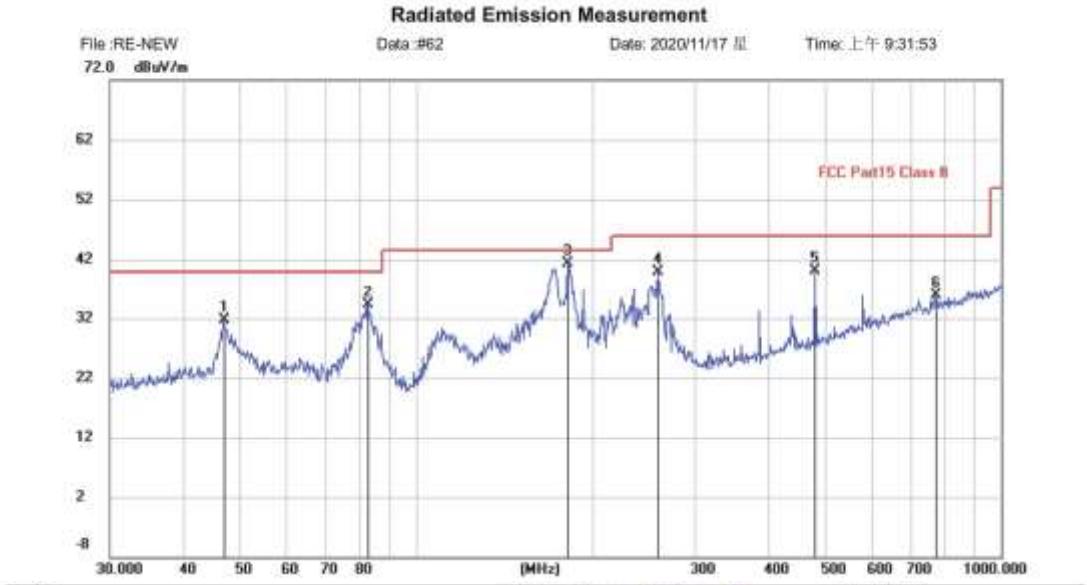
Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		49.8814	10.14	24.27	34.41	40.00	-5.59	QP			
2		61.9951	9.48	22.72	32.20	40.00	-7.80	QP			
3		84.9995	12.62	19.10	31.72	40.00	-8.28	QP			
4	*	173.2051	18.37	21.57	39.94	43.50	-3.56	QP			
5		245.9509	10.35	22.93	33.28	46.00	-12.72	QP			
6		620.7096	4.06	31.58	35.64	46.00	-10.36	QP			

Test Result: Pass

[TestMode: TX mode (SE) below 1G]; [Polarity: Horizontal]
Power:AC120V/60Hz



Site
Limit: FCC Part15 Class B
EUT: router
M/N: MK600
Mode: TX
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

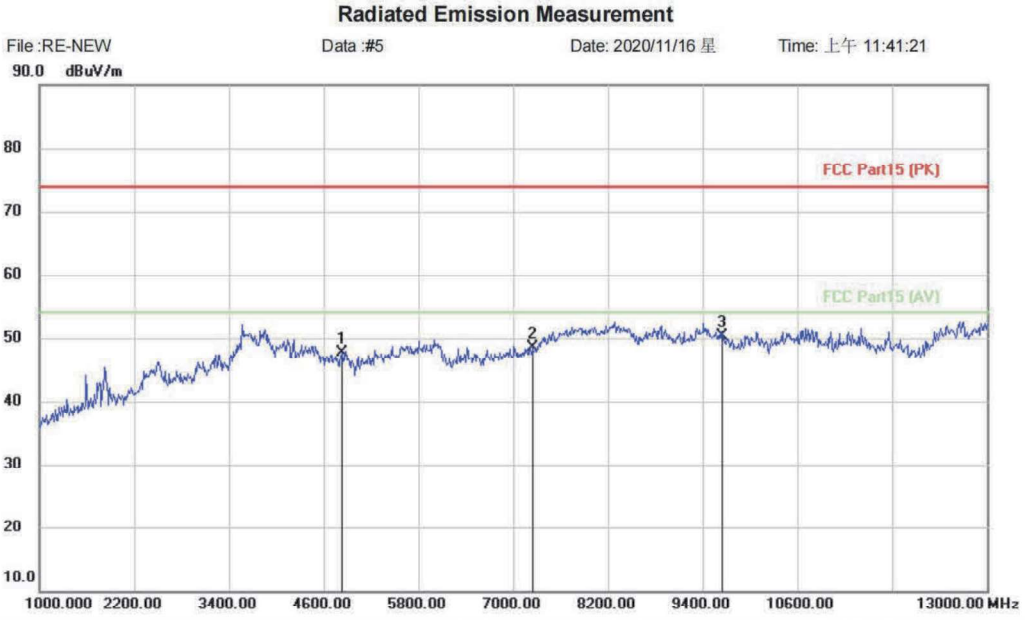
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		46.8303	7.60	24.20	31.80	40.00	-8.20	QP			
2		82.6482	15.36	18.98	34.34	40.00	-5.66	QP			
3	*	181.9202	20.64	20.75	41.39	43.50	-2.11	QP			
4		259.2338	16.99	22.89	39.88	46.00	-6.12	QP			
5		480.5276	11.57	28.57	40.14	46.00	-5.86	QP			
6		771.4486	2.02	33.94	35.96	46.00	-10.04	QP			

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]

802.11b:lowest channel



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: B-2412
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

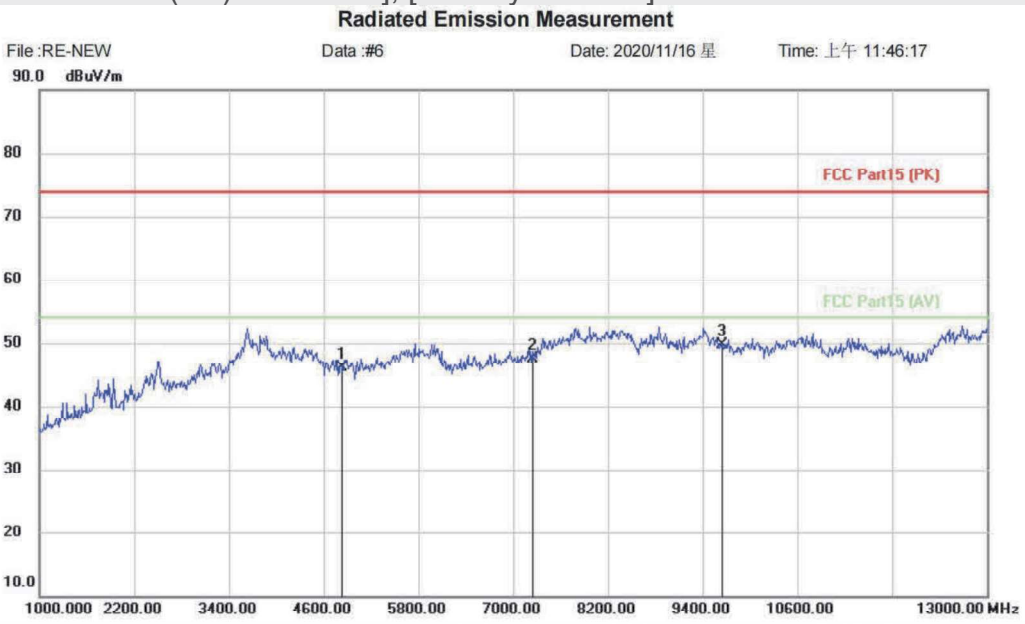
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4824.000	52.33	-4.66	47.67	74.00	-26.33	peak			
2		7236.000	50.31	-1.90	48.41	74.00	-25.59	peak			
3	*	9648.000	49.52	0.69	50.21	74.00	-23.79	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: B-2412
Note:

Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

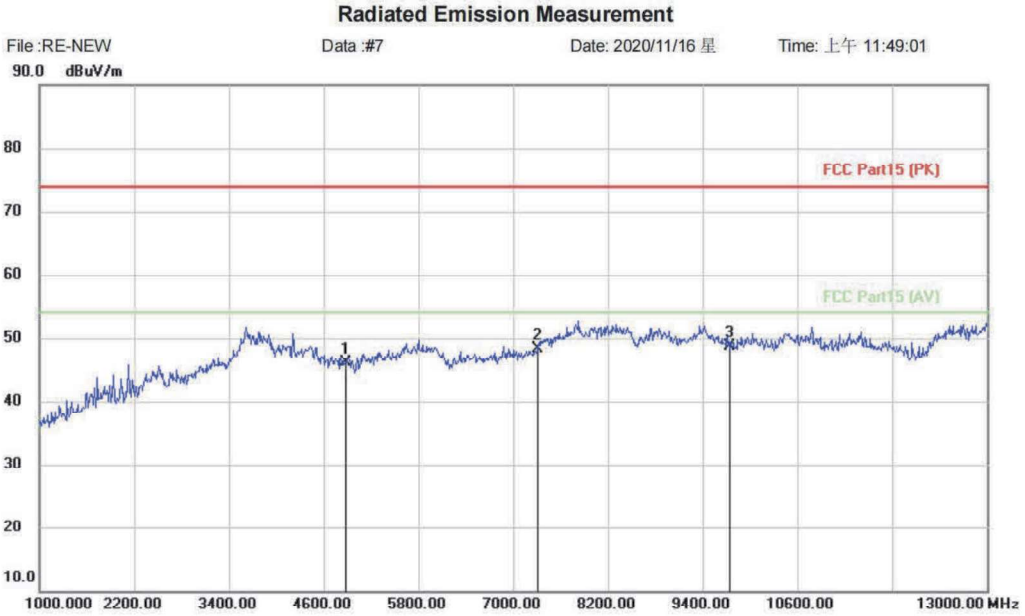
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4824.000	50.71	-4.66	46.05	74.00	-27.95	peak			
2		7236.000	49.38	-1.90	47.48	74.00	-26.52	peak			
3	*	9648.000	49.07	0.69	49.76	74.00	-24.24	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]

Middle channel



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: B-2437
Note:

Polarization: *Vertical*
Power:
Distance: 3m

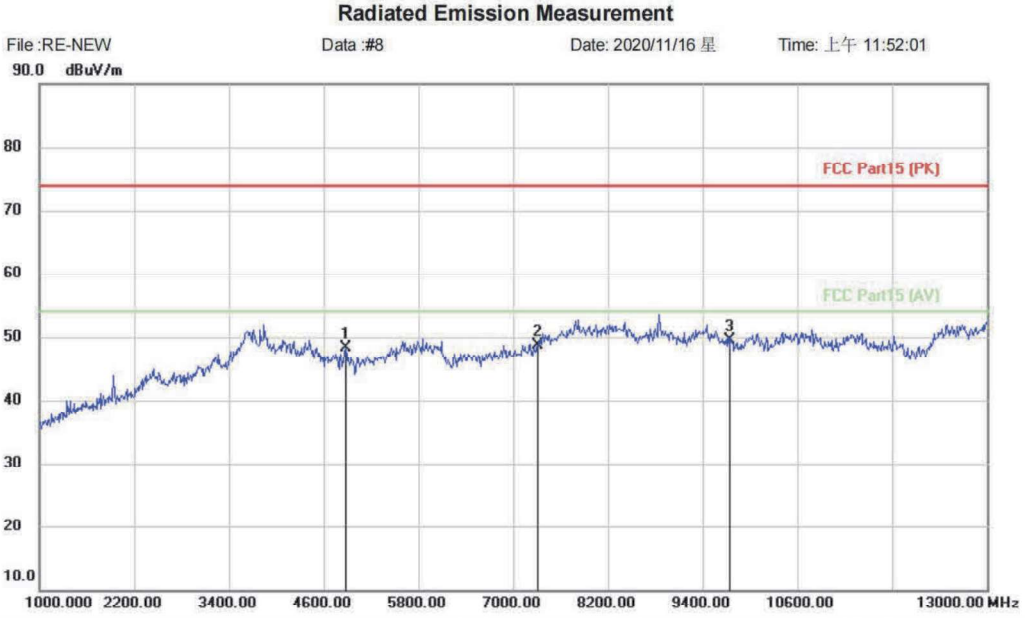
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4874.000	51.06	-5.00	46.06	74.00	-27.94	peak			
2		7311.000	49.88	-1.55	48.33	74.00	-25.67	peak			
3	*	9748.000	47.83	0.87	48.70	74.00	-25.30	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: B-2437
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature:
Humidity: %

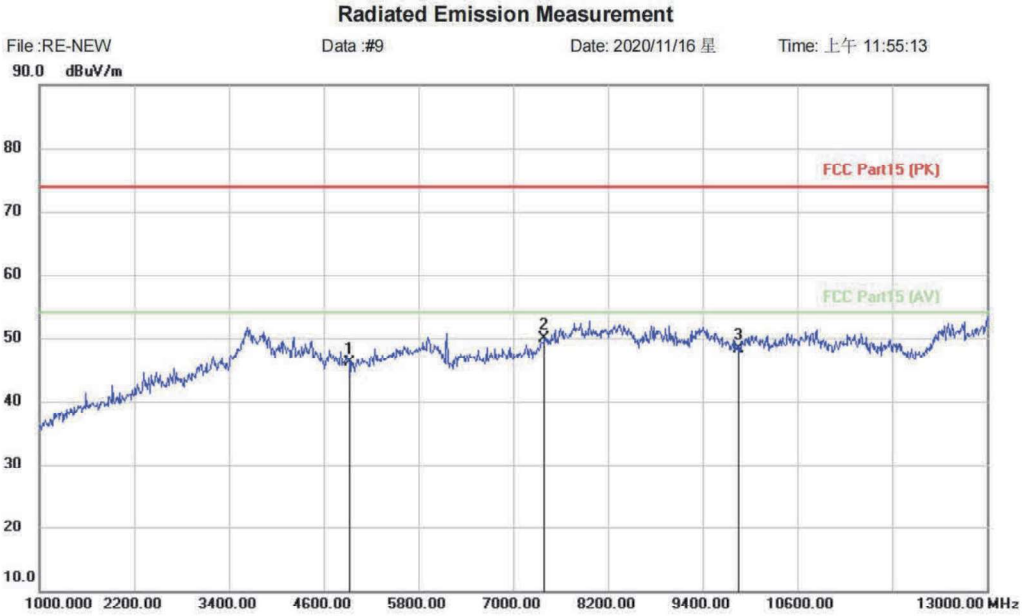
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4874.000	53.26	-5.00	48.26	74.00	-25.74	peak			
2		7311.000	50.10	-1.45	48.65	74.00	-25.35	peak			
3	*	9748.000	48.49	0.93	49.42	74.00	-24.58	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]

Highest channel:



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: B-2462
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

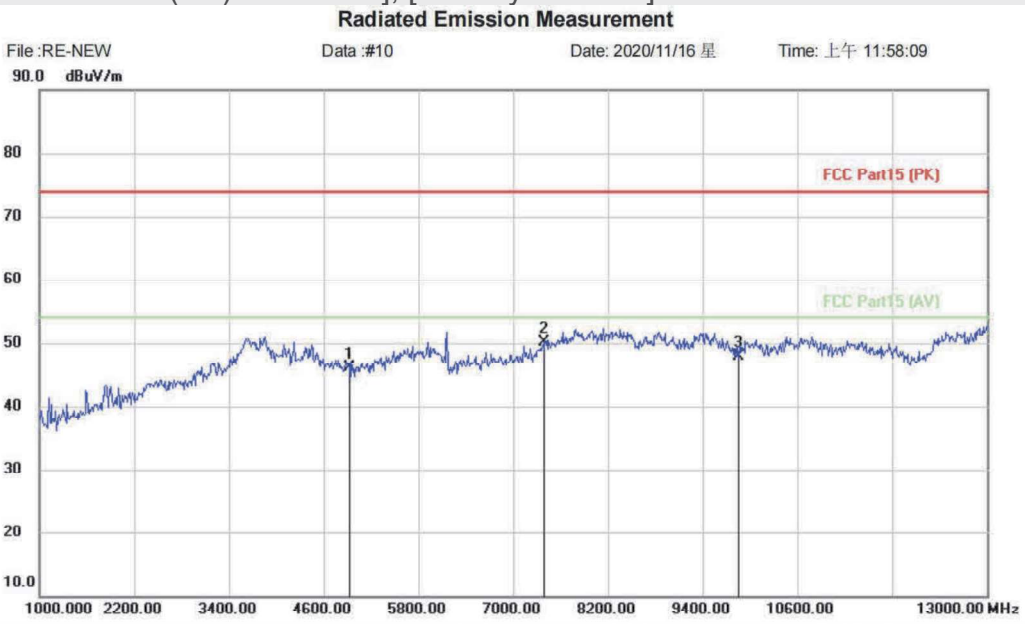
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.000	51.10	-5.04	46.06	74.00	-27.94	peak			
2	*	7386.000	50.70	-0.85	49.85	74.00	-24.15	peak			
3		9848.000	47.14	1.10	48.24	74.00	-25.76	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: B-2462
Note:

Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

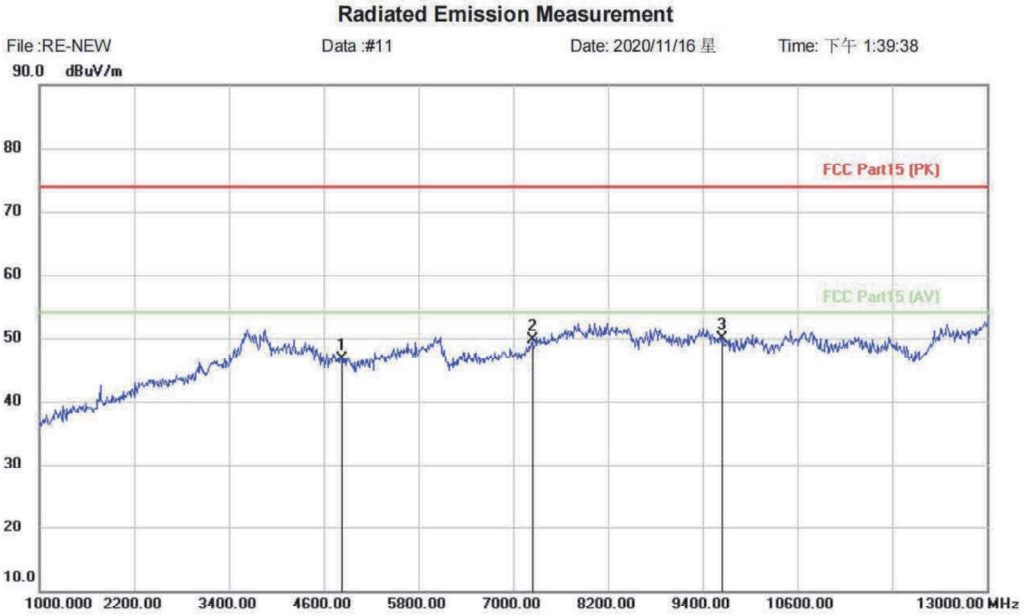
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.000	51.06	-5.04	46.02	74.00	-27.98	peak			
2	*	7386.000	51.34	-1.19	50.15	74.00	-23.85	peak			
3		9848.000	46.76	1.14	47.90	74.00	-26.10	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]

802.11g



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: G-2412
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

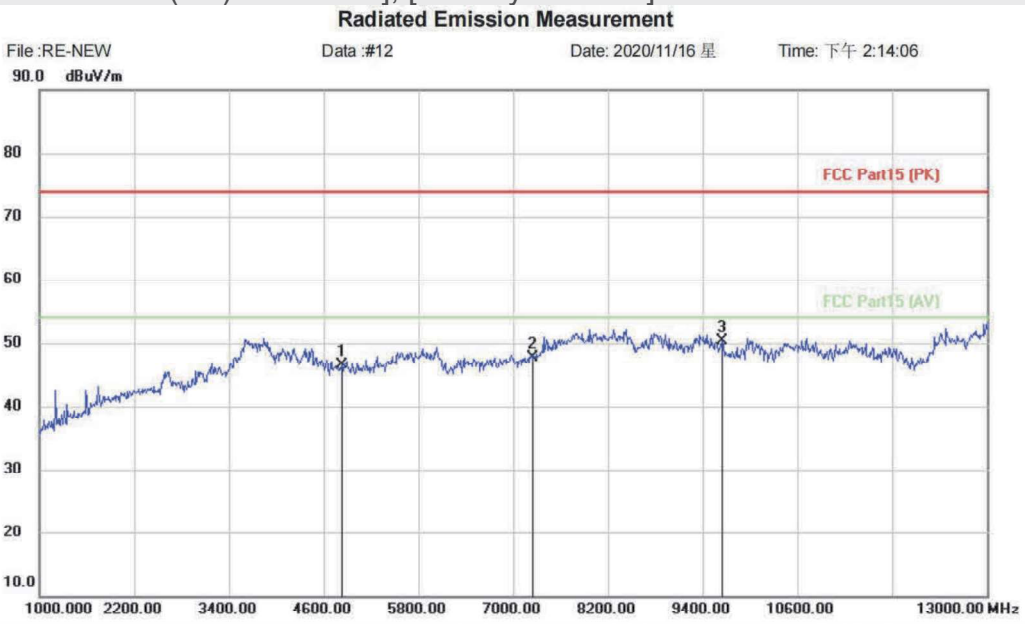
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4824.000	51.43	-4.66	46.77	74.00	-27.23	peak			
2		7236.000	51.75	-2.04	49.71	74.00	-24.29	peak			
3	*	9648.000	49.11	0.85	49.96	74.00	-24.04	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: G-2412
Note:

Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

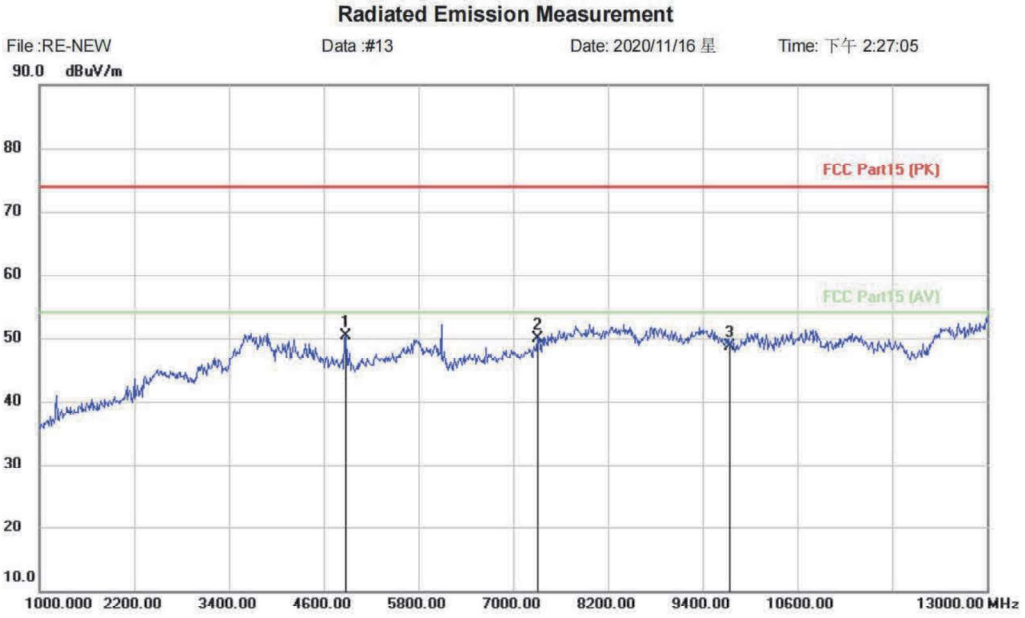
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4824.000	51.16	-4.66	46.50	74.00	-27.50	peak			
2		7236.000	49.57	-1.90	47.67	74.00	-26.33	peak			
3	*	9648.000	49.67	0.69	50.36	74.00	-23.64	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]

Middle channel:



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: G-2437
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

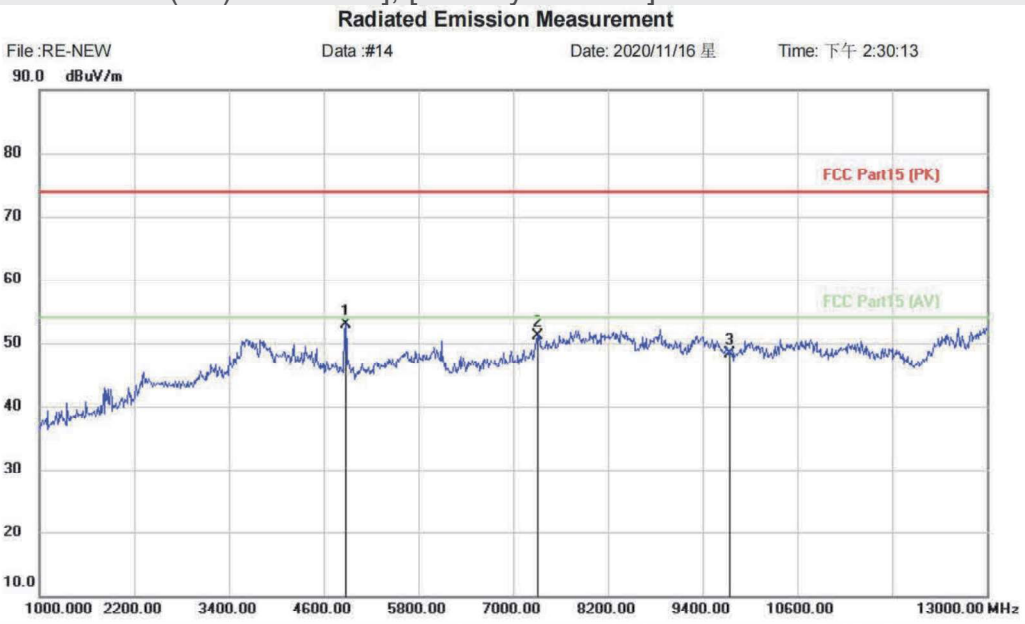
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	55.37	-5.00	50.37	74.00	-23.63	peak			
2		7311.000	51.37	-1.45	49.92	74.00	-24.08	peak			
3		9748.000	47.77	0.93	48.70	74.00	-25.30	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: G-2437
Note:

Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

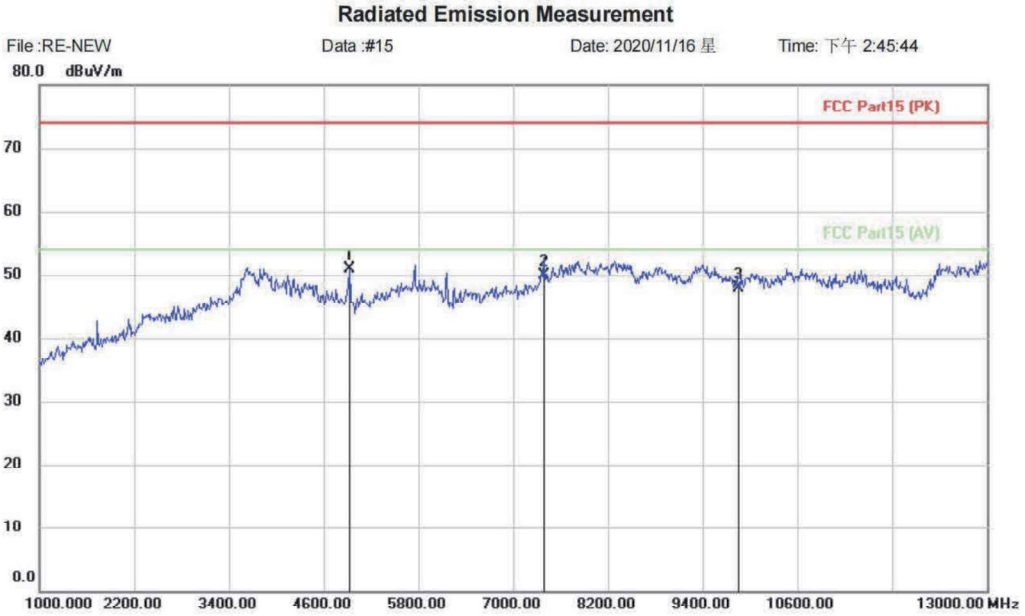
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	57.98	-5.00	52.98	74.00	-21.02	peak			
2		7311.000	52.56	-1.55	51.01	74.00	-22.99	peak			
3		9748.000	47.47	0.87	48.34	74.00	-25.66	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]

Highest channel



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: G-2462
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

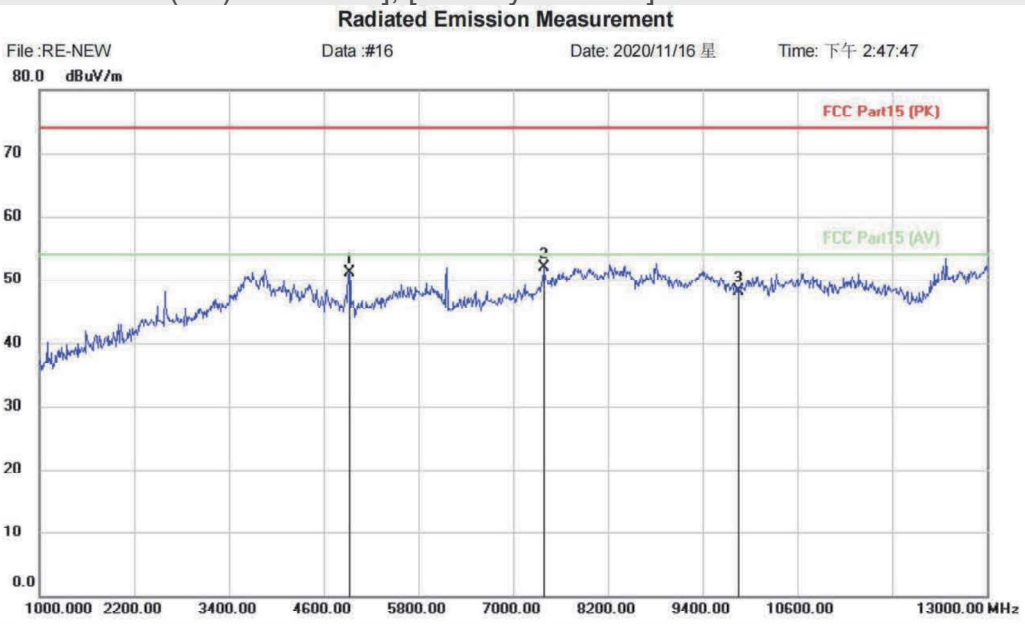
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4924.000	56.02	-5.04	50.98	74.00	-23.02	peak			
2		7386.000	50.84	-0.85	49.99	74.00	-24.01	peak			
3		9848.000	46.85	1.10	47.95	74.00	-26.05	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: G-2462
Note:

Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

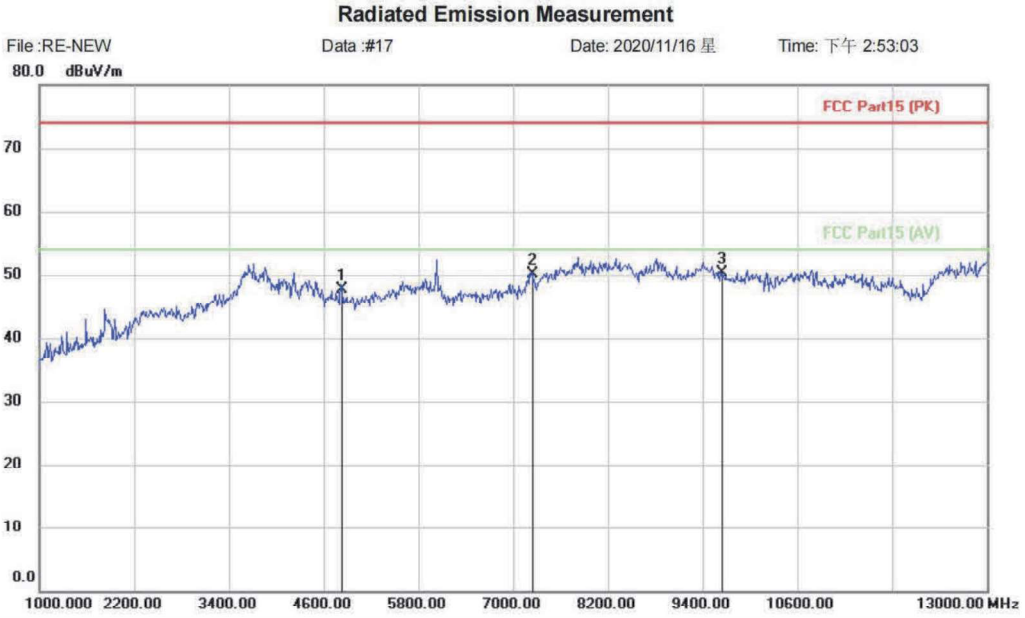
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.000	56.13	-5.04	51.09	74.00	-22.91	peak			
2	*	7386.000	53.15	-1.19	51.96	74.00	-22.04	peak			
3		9848.000	46.90	1.14	48.04	74.00	-25.96	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]

802.11n20



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N20-2412
Note:

Polarization: *Vertical*
Power:
Distance: 3m

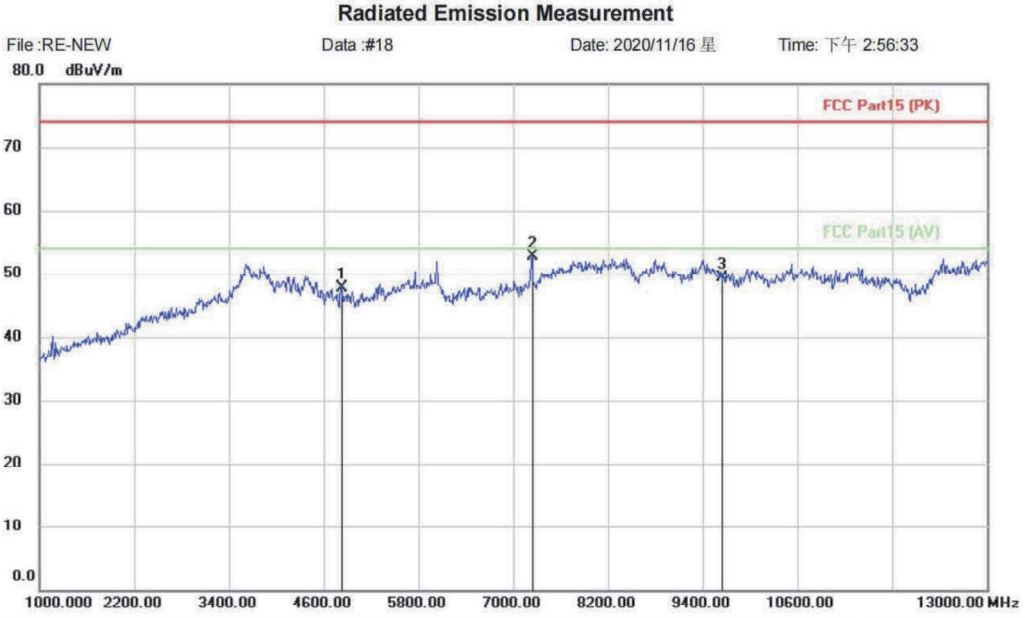
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4824.000	52.41	-4.66	47.75	74.00	-26.25	peak			
2		7236.000	52.01	-1.90	50.11	74.00	-23.89	peak			
3	*	9648.000	49.64	0.69	50.33	74.00	-23.67	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N20-2412
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature:
Humidity: %

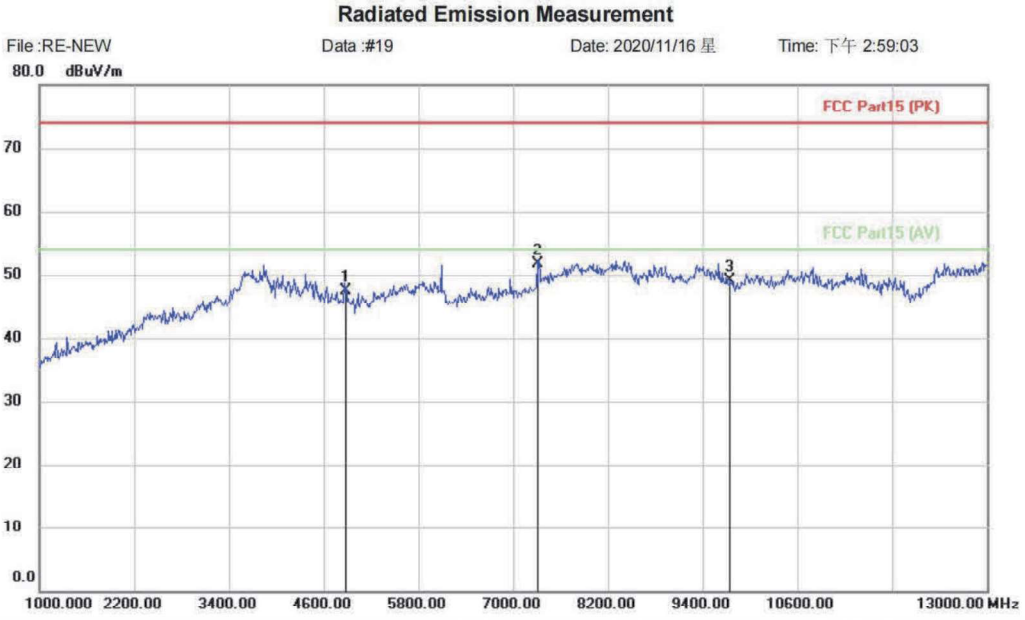
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4824.000	52.27	-4.66	47.61	74.00	-26.39	peak			
2	*	7236.000	54.66	-2.04	52.62	74.00	-21.38	peak			
3		9648.000	48.52	0.85	49.37	74.00	-24.63	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]

Middle channel:



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N20-2437
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

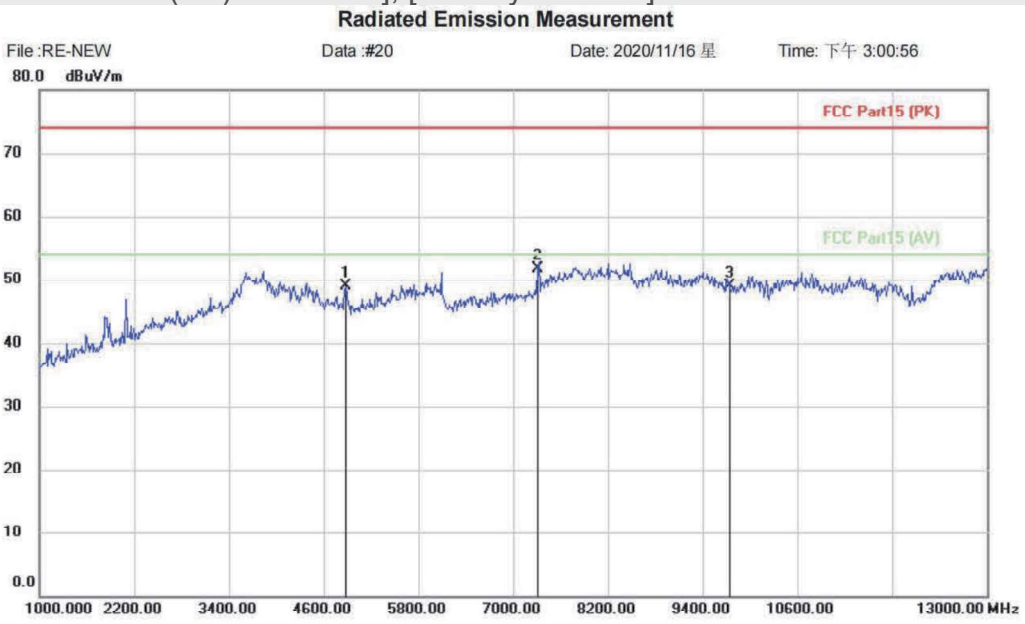
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4874.000	52.54	-5.00	47.54	74.00	-26.46	peak			
2	*	7311.000	53.14	-1.45	51.69	74.00	-22.31	peak			
3		9748.000	48.14	0.93	49.07	74.00	-24.93	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N20-2437
Note:

Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

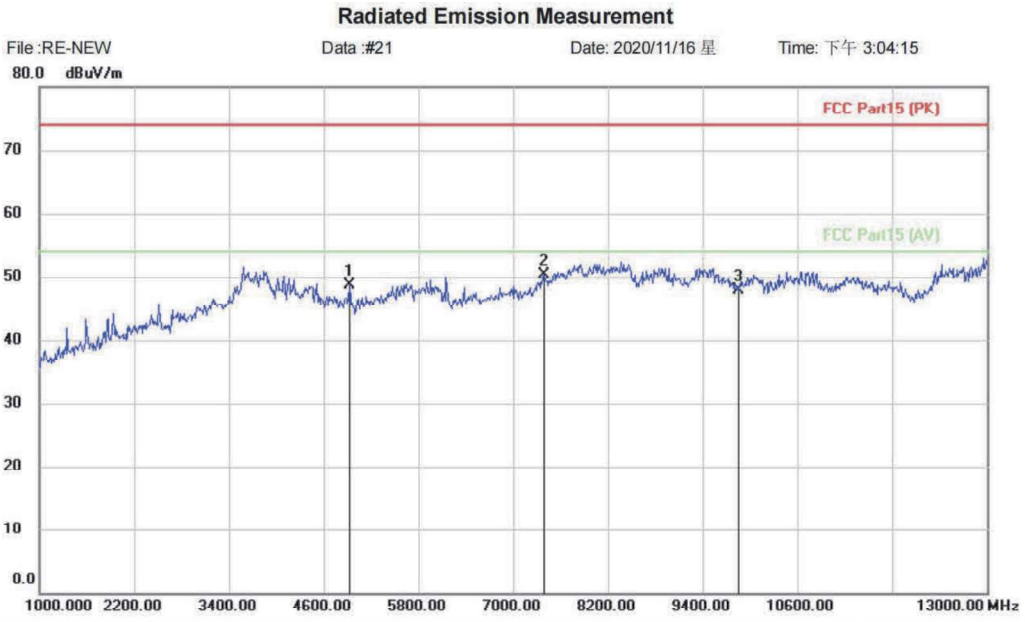
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4874.000	54.00	-5.00	49.00	74.00	-25.00	peak			
2	*	7311.000	53.33	-1.55	51.78	74.00	-22.22	peak			
3		9748.000	47.97	0.87	48.84	74.00	-25.16	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

Highest channel:

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N20-2462
Note:

Polarization: *Vertical*
Power:
Distance: 3m

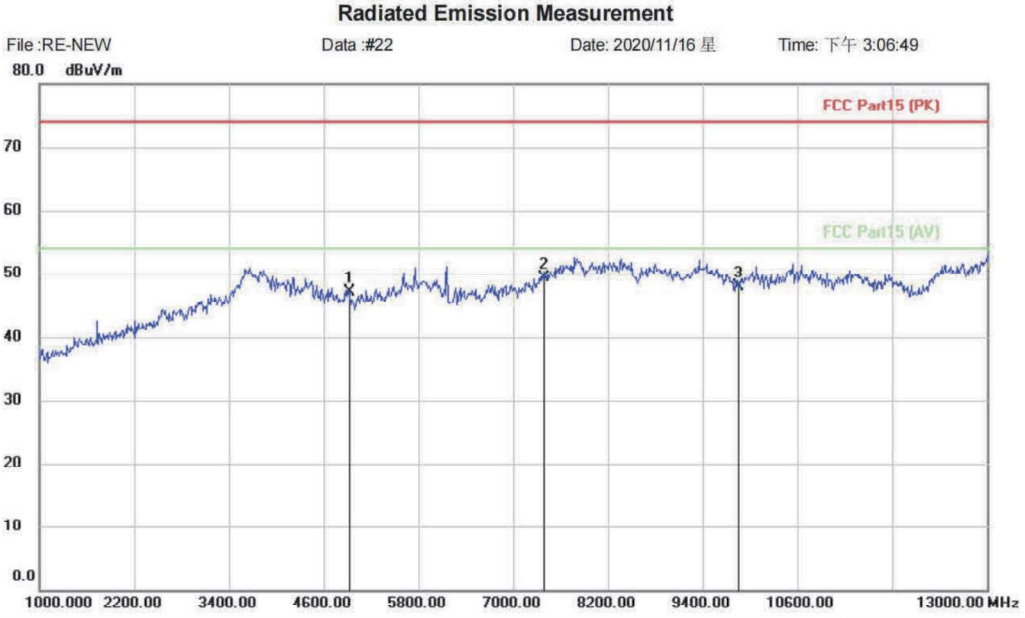
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.000	53.84	-5.04	48.80	74.00	-25.20	peak			
2	*	7386.000	51.42	-1.19	50.23	74.00	-23.77	peak			
3		9848.000	46.82	1.14	47.96	74.00	-26.04	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N20-2462
Note:

Polarization: ***Horizontal***
Power:
Distance: 3m

Temperature:
Humidity: %

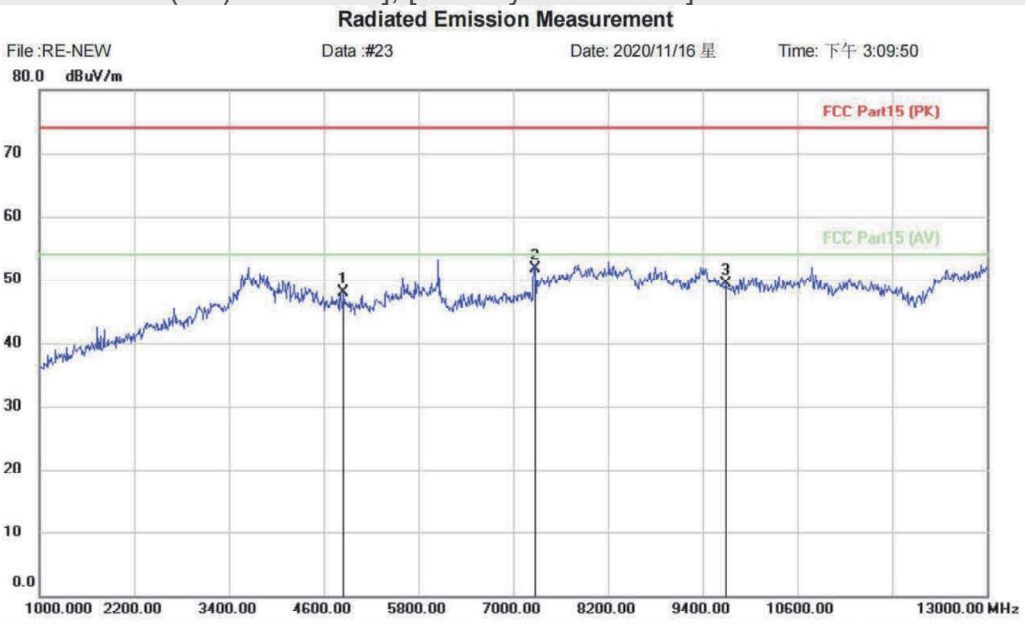
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.000	52.19	-5.04	47.15	74.00	-26.85	peak			
2	*	7386.000	50.22	-0.85	49.37	74.00	-24.63	peak			
3		9848.000	46.72	1.10	47.82	74.00	-26.18	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

802.11n40: lowest channel

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N40-2422
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

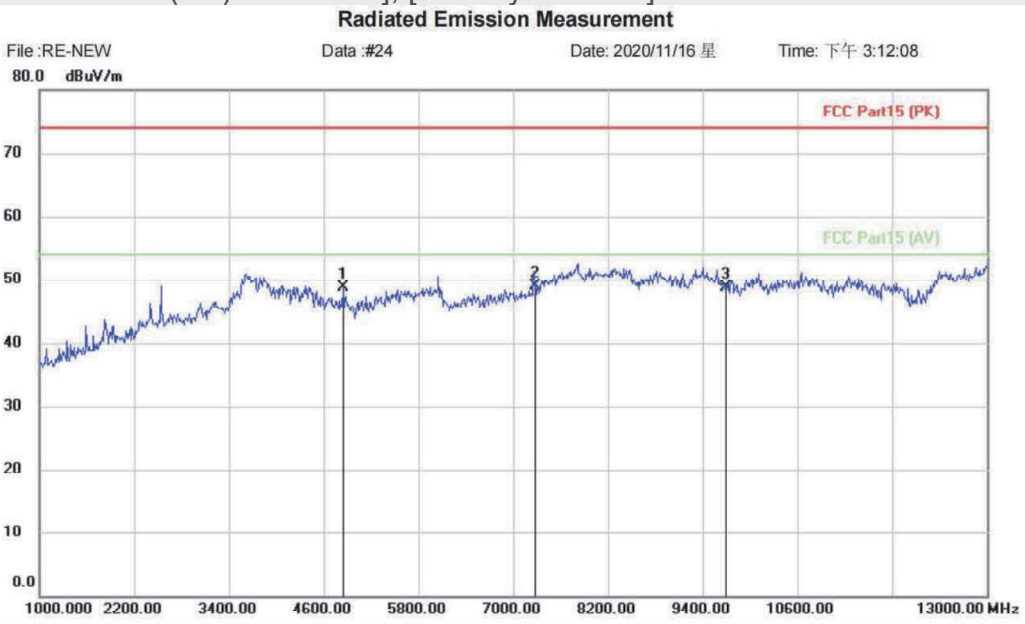
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4844.000	52.64	-4.80	47.84	74.00	-26.16	peak			
2	*	7266.000	53.45	-1.80	51.65	74.00	-22.35	peak			
3		9688.000	48.34	0.88	49.22	74.00	-24.78	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N40-2422
Note:

Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

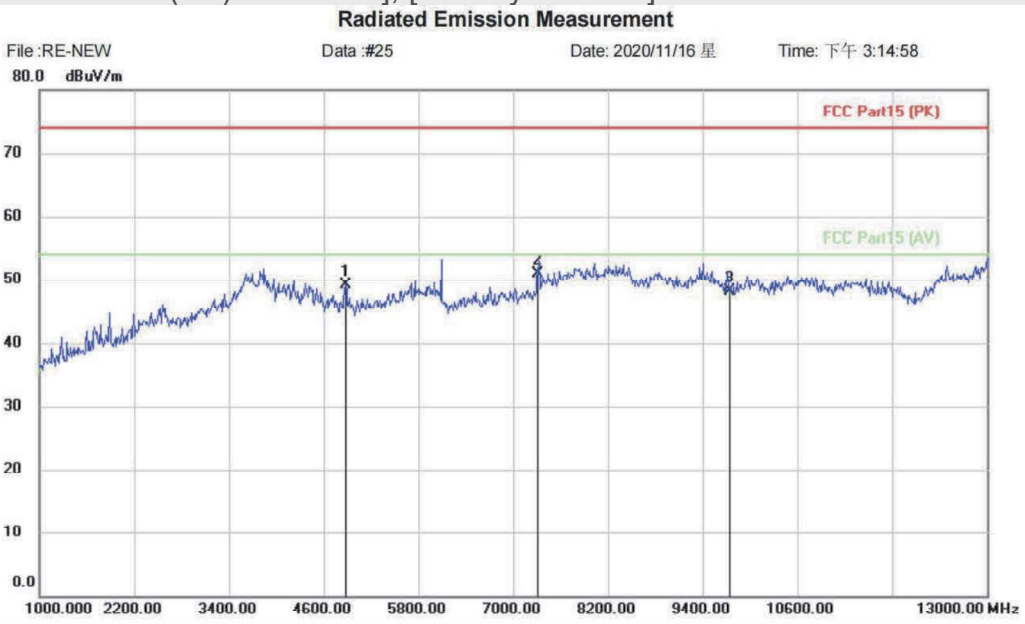
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4844.000	53.46	-4.80	48.66	74.00	-25.34	peak			
2	*	7266.000	50.69	-1.75	48.94	74.00	-25.06	peak			
3		9688.000	47.93	0.77	48.70	74.00	-25.30	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

Middle channel:

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N40-2437
Note:

Polarization: *Vertical*
Power:
Distance: 3m

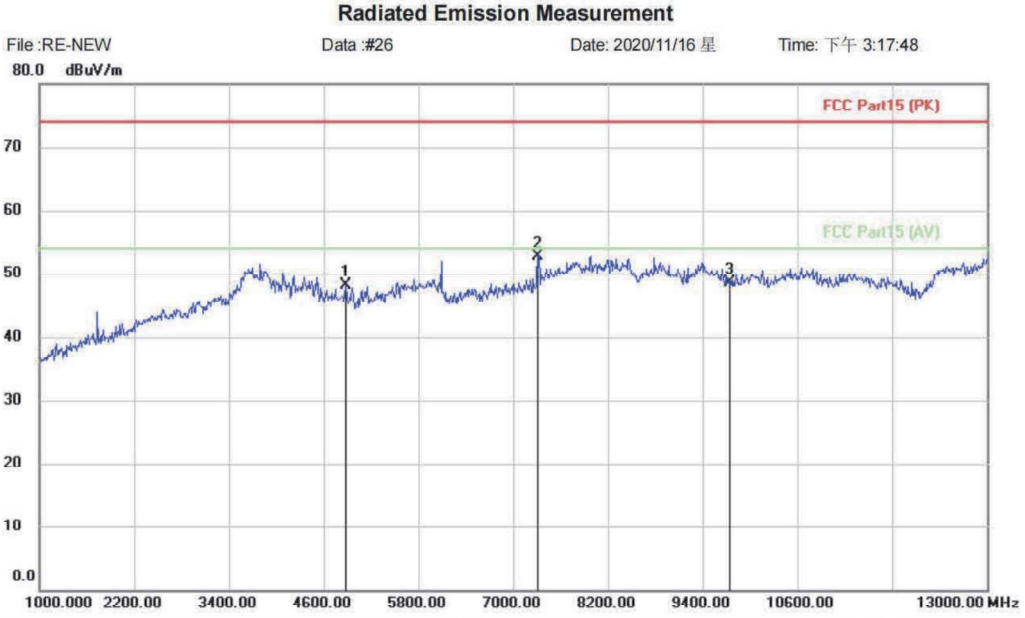
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4874.000	54.08	-5.00	49.08	74.00	-24.92	peak			
2	*	7311.000	52.51	-1.55	50.96	74.00	-23.04	peak			
3		9748.000	47.14	0.87	48.01	74.00	-25.99	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N40-2437
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature:
Humidity: %

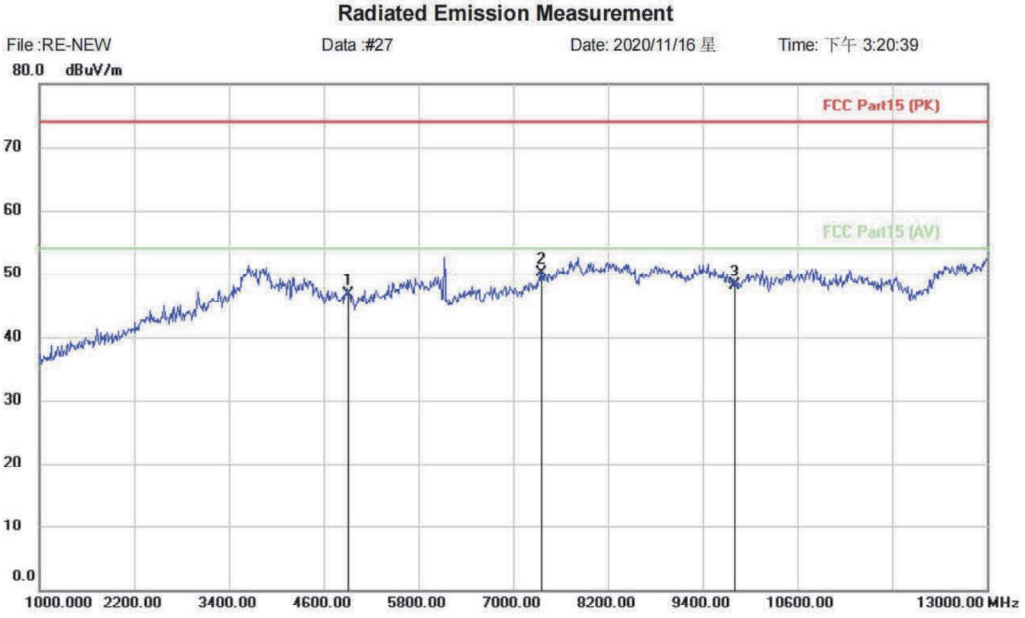
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4874.000	53.05	-5.00	48.05	74.00	-25.95	peak			
2	*	7311.000	54.17	-1.45	52.72	74.00	-21.28	peak			
3		9748.000	47.59	0.93	48.52	74.00	-25.48	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

Highest channel:

[TestMode: TX mode (SE) Above 1G]; [Polarity: Horizontal]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N40-2452
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

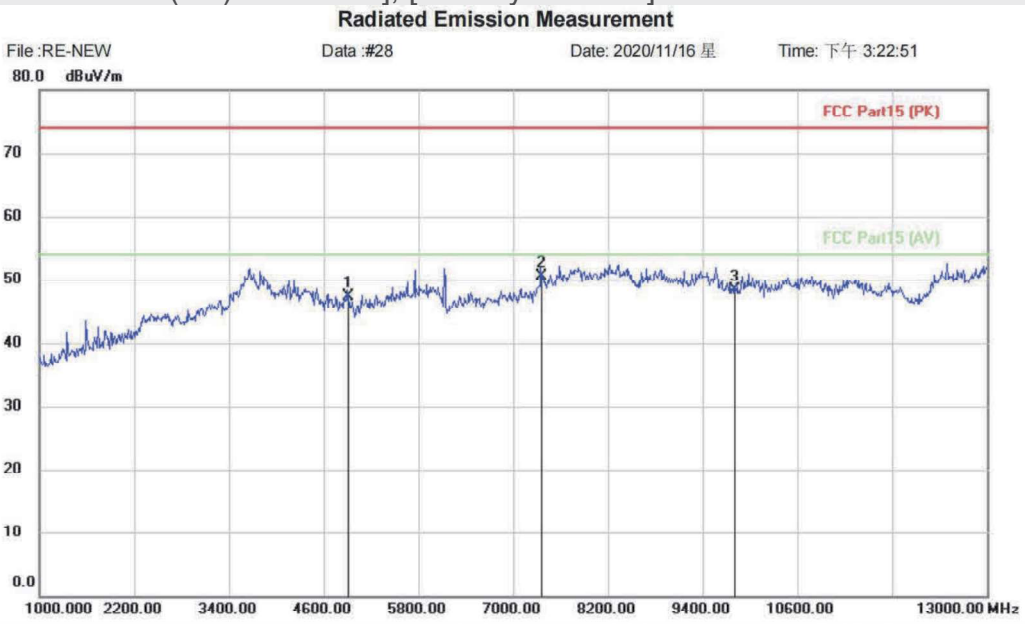
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4904.000	51.80	-5.16	46.64	74.00	-27.36	peak			
2	*	7356.000	51.16	-1.09	50.07	74.00	-23.93	peak			
3		9808.000	47.12	0.99	48.11	74.00	-25.89	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

[TestMode: TX mode (SE) Above 1G]; [Polarity: Vertical]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: N40-2452
Note:

Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4904.000	52.50	-5.16	47.34	74.00	-26.66	peak			
2	*	7356.000	51.81	-1.32	50.49	74.00	-23.51	peak			
3		9808.000	47.26	1.00	48.26	74.00	-25.74	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass

RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS

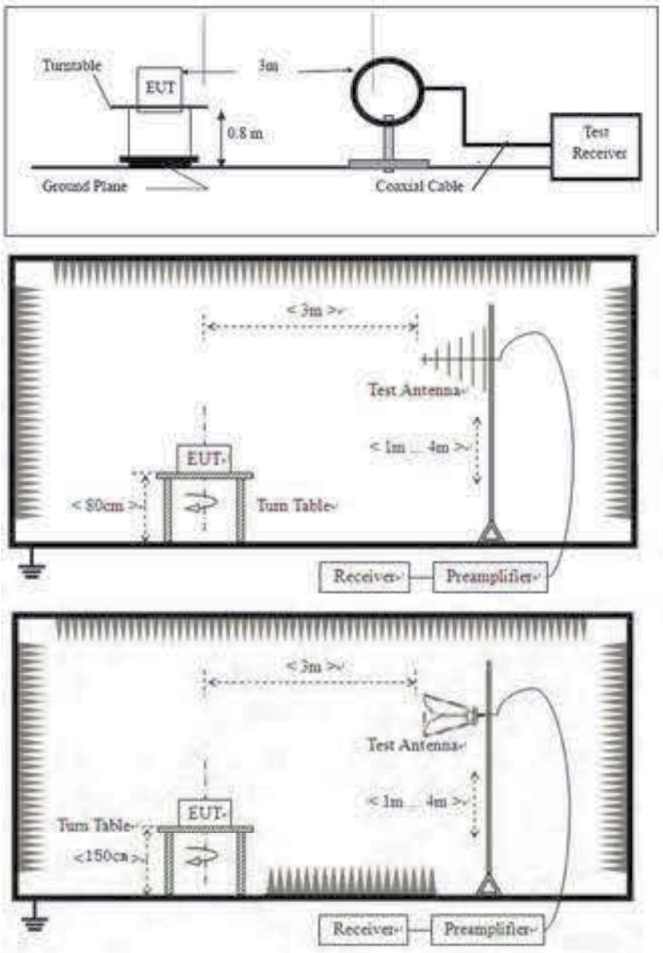
Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 6.10.5
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25℃
Humidity	60%

LIMITS

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

BLOCK DIAGRAM OF TEST SETUP



PROCEDURE

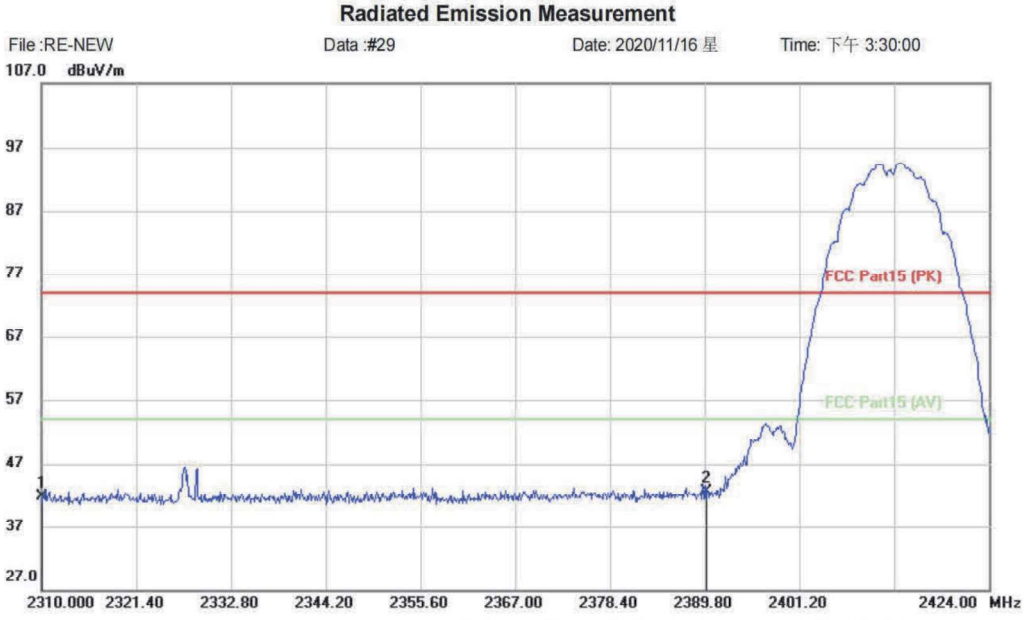
a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
j. Repeat above procedures until all frequencies measured was complete.
Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

TEST DATA

802.11b: lowest channel

[TestMode: TX]; [Polarity: Horizontal]



Site
Limit: FCC Part15 (PK)
EUT: router
M/N: MK600
Mode: BD-B-2412
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	55.78	-14.01	41.77	74.00	-32.23	peak			
2	*	2390.000	56.14	-13.62	42.52	74.00	-31.48	peak			

*:Maximum data x:Over limit !:over margin 〈Reference Only

Test Result: Pass