

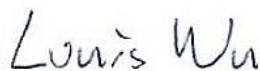


FCC RADIO TEST REPORT

FCC ID : P4Q-N672B
Equipment : LTE Module
Brand Name : MiTAC, Mio, NAVMAN, MAGELLAN
Model Name : SC600T-NA
Applicant : MiTAC Digital Technology Corporation
4F., NO. 1, R&D ROAD 2, HSINCHU SCIENCE PARK,
HSINCHU 30076, TAIWAN, R.O.C.
Manufacturer : MITAC Computer (Kunshan) Co., Ltd.
No. 269, 2nd Avenue, District A, Comprehensive
Free Trade Zone, 300 Kunshan, China
Standard : FCC Part 15 Subpart C §15.247

The product was received on Dec. 09, 2020 and testing was started from Dec. 30, 2020 and completed on Feb. 11, 2021. We, SPORTON INTERNATIONAL INC., EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FR0D1806C	01	Initial issue of report	Feb. 28, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	15.247(a)(2)	6dB Bandwidth	-	See Note
-	2.1049	99% Occupied Bandwidth	-	See Note
3.1	15.247(b)	Power Output Measurement	Pass	-
-	15.247(e)	Power Spectral Density	-	See Note
-	15.247(d)	Conducted Band Edges	-	See Note
		Conducted Spurious Emission	-	See Note
3.2	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	Under limit 0.42 dB at 2484.430 MHz
3.3	15.207	AC Conducted Emission	Pass	Under limit 13.76 dB at 0.502 MHz
3.4	15.203 & 15.247(b)	Antenna Requirement	Pass	-
Note: The module (Model: SC600T-NA) makes no difference after verifying output power, this report reuses test data from the module report.				

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Dara Chiu



1 General Description

1.1 Product Feature of Equipment Under Test

WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, and GNSS.

Product Specification subjective to this standard		
Sample 1	EUT with Host 1	
Sample 2	EUT with Host 2	
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna GPS / Glonass : Patch Antenna	

Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	0.9 dBi

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

The product was installed into Tablet (Brand Name: MiTAC, Mio, NAVMAN, MAGELLAN, Model Name: N672B) during test, and the host information was recorded in the following table.

Host Information	
Host 1	Host with SKU A
Host 2	Host with SKU B

Sample Information		
Functions	SKU A	SKU B
Screen	5" 720x1280 (HD), IPS, 350nits (w/ touch)	5" 720x1280 (HD), IPS, 350nits (w/ touch)
CPU	SD625 octa core 2.0GHz	SD625 octa core 2.0GHz
Battery	4110mAh (hard pack)	4110mAh (hard pack)
RAM	3GB	3GB
Storage	32GB	32GB
External storage	Support	Support
WWAN + WLAN Module	Support (SC600T-NA)	Support (SC600T-NA)
NFC/RFID(HF)	Support	Support
GPS	Support	Support
Barcode	Support(N6603)	Support(N3601)

Functions	SKU C	SKU D
Screen	5" 720x1280 (HD), IPS, 350nits (w/ touch)	5" 720x1280 (HD), IPS, 350nits (w/ touch)
CPU	SD625 octa core 2.0GHz	SD625 octa core 2.0GHz
Battery	4110mAh (hard pack)	4110mAh (hard pack)
RAM	2GB	2GB
Storage	16GB	16GB
External storage	Support	Support
WWAN + WLAN Module	Support (SC600T-NA)	Support (SC600T-NA)
NFC/RFID(HF)	Support	Support
GPS	Support	Support
Barcode	Support(N6603)	Support(N3601)

1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	TH05-HY, CO05-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No.
	03CH15-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190 and TW0007

1.4 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

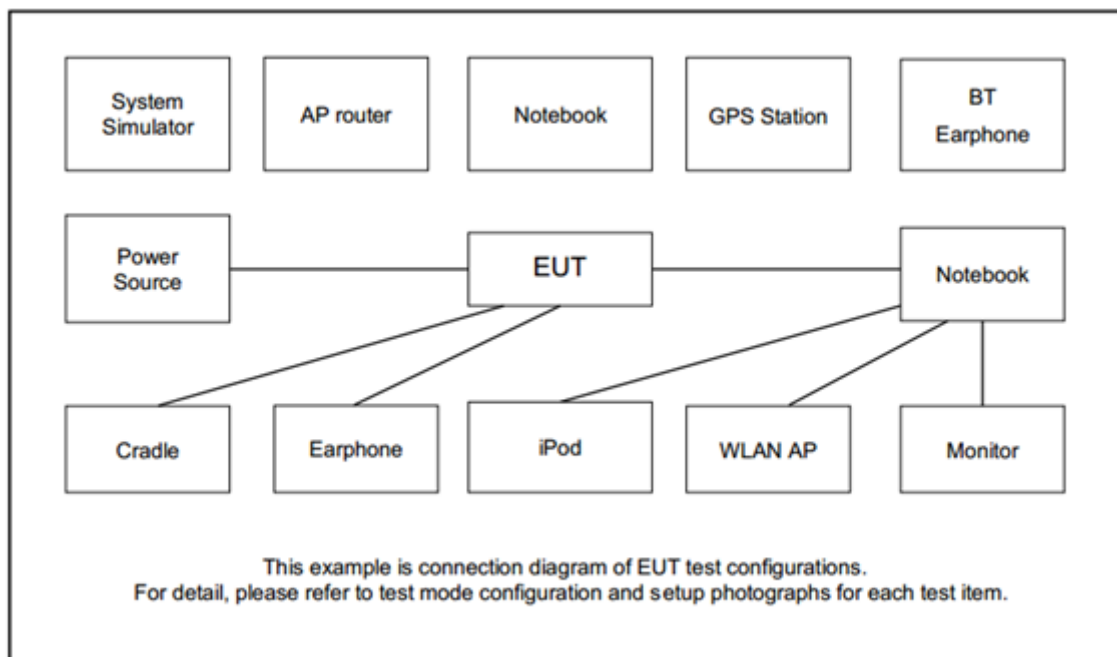
Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

Test Cases	
AC Conducted Emission	Mode 1: WLAN (2.4GHz) Link + Bluetooth Link + H-Pattern + Earphone + Battery + USB Cable (Charging with Adapter) for Sample 2

Ch. #	2400-2483.5 MHz	
	802.11g	802.11n HT40
High	11	09

Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	Shielded, 1.6 m	Unshielded, 1.8 m
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
4.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “QRCT Version 3.0.303.0” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Output Power Measurement

3.1.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

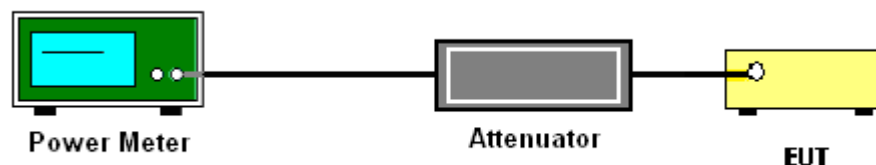
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. For Peak Power, the testing follows ANSI C63.10 Section 11.9.1.3 PKPM1
2. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.1 Method AVGPM
3. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Measure the conducted output power and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of Peak Output Power

Please refer to Appendix A.

3.1.6 Test Result of Average Output Power (Reporting Only)

Please refer to Appendix A.

3.2 Radiated Band Edges and Spurious Emission Measurement

3.2.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

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

3.2.2 Measuring Instruments

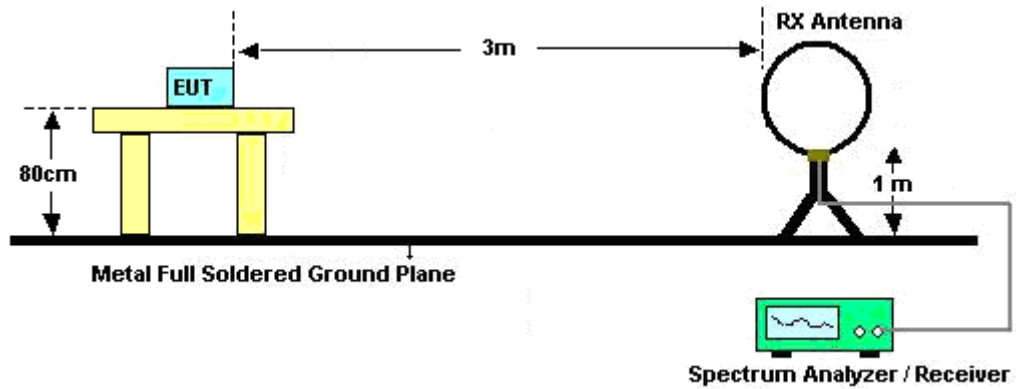
See list of measuring equipment of this test report.

3.2.3 Test Procedures

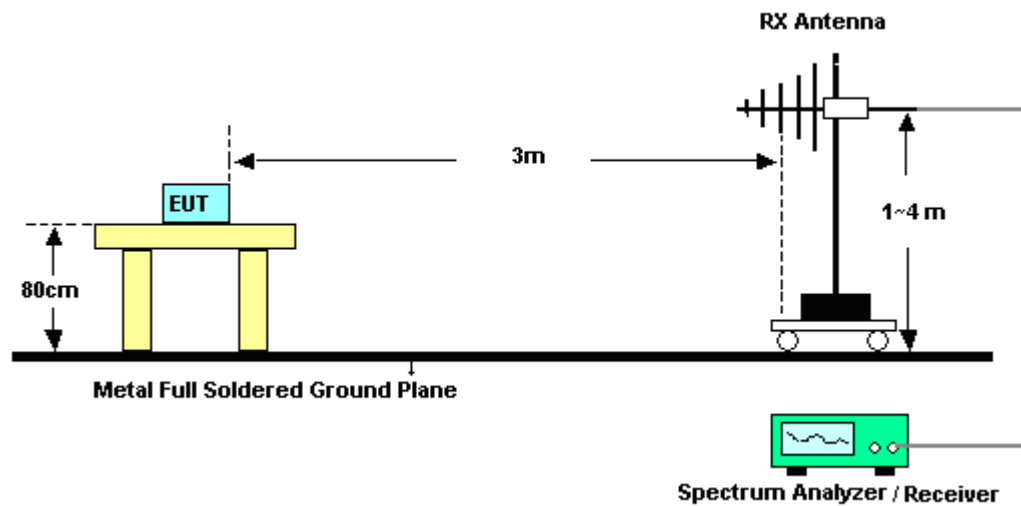
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; $VBW \geq RBW$; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.
For average measurement:
 - $VBW = 10$ Hz, when duty cycle is no less than 98 percent.
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.2.4 Test Setup

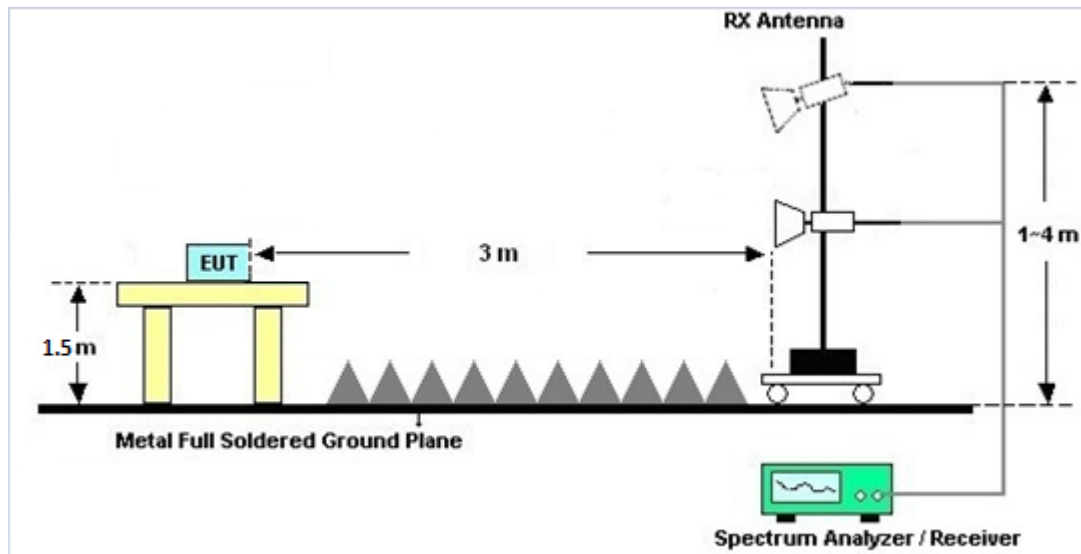
For radiated emissions below 30MHz



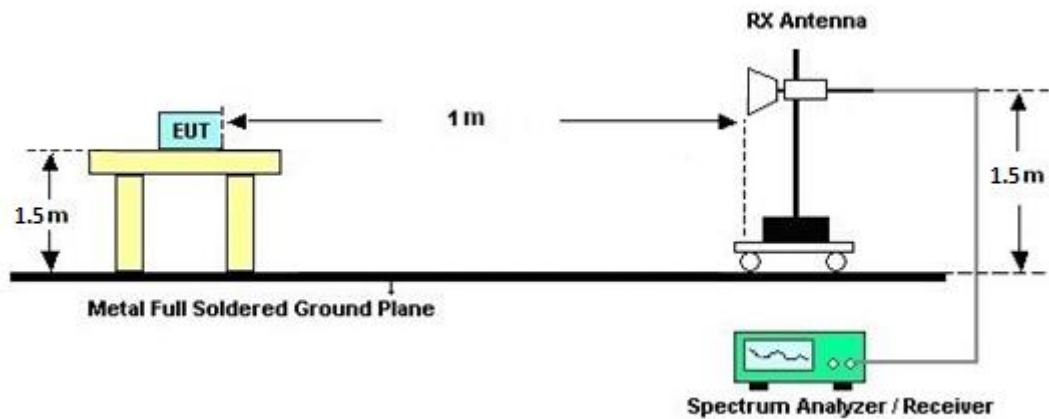
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



**3.2.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)**

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.2.7 Duty Cycle

Please refer to Appendix E.

3.2.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.3 AC Conducted Emission Measurement

3.3.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

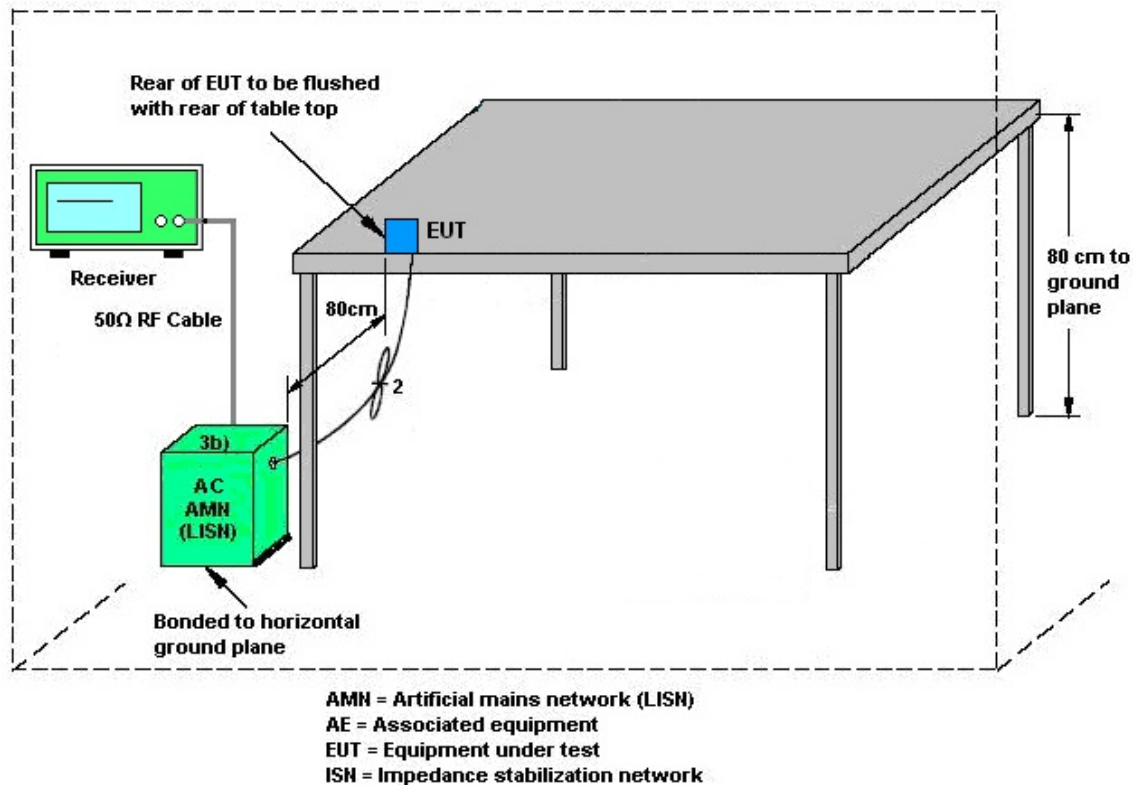
3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.3.4 Test Setup



3.3.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.4 Antenna Requirements

3.4.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.4.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.4.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 02, 2020	Dec. 30, 2020	Mar. 01, 2021	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1207363	300MHz~40GHz	Oct. 18, 2020	Dec. 30, 2020	Oct. 17, 2021	Conducted (TH05-HY)
Power Meter	Anritsu	ML2495A	1218006	N/A	Oct. 18, 2020	Dec. 30, 2020	Oct. 17, 2021	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSQ26	200578/026	20Hz~26.5GHz	Jul. 17, 2020	Dec. 30, 2020	Jul. 16, 2021	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2020	Dec. 30, 2020	Mar. 16, 2021	Conducted (TH05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jul. 14, 2020	Jan. 14, 2021~Feb. 11, 2021	Jul. 13, 2021	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	41912 & 05	30MHz~1GHz	Feb. 09, 2020	Jan. 14, 2021~Feb. 07, 2021	Feb. 08, 2021	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	41912 & 05	30MHz~1GHz	Feb. 08, 2021	Feb. 08, 2021~Feb. 11, 2021	Feb. 07, 2022	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 28, 2020	Jan. 14, 2021~Feb. 11, 2021	Dec. 27, 2021	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-01620	1GHz~18GHz	Nov. 03, 2020	Jan. 14, 2021~Feb. 11, 2021	Nov. 02, 2021	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Dec. 02, 2020	Jan. 14, 2021~Feb. 11, 2021	Dec. 01, 2021	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055006	1GHz~18GHz	May 07, 2020	Jan. 14, 2021~Feb. 11, 2021	May 06, 2021	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 21, 2020	Jan. 14, 2021~Feb. 11, 2021	Aug. 20, 2021	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	0600789	18-40GHz	Oct. 27, 2020	Jan. 14, 2021~Feb. 11, 2021	Oct. 26, 2021	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Nov. 02, 2020	Jan. 14, 2021~Feb. 11, 2021	Nov. 01, 2021	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	May 04, 2020	Jan. 14, 2021~Feb. 11, 2021	May 03, 2021	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jan. 14, 2021~Feb. 11, 2021	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jan. 14, 2021~Feb. 11, 2021	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24 (k5)	RK-000451	N/A	N/A	Jan. 14, 2021~Feb. 11, 2021	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/4, MY9838/4PE, 508405/2E	30MHz~18G	Nov. 16, 2020	Jan. 14, 2021~Feb. 11, 2021	Nov. 15, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 25, 2020	Jan. 14, 2021~Feb. 11, 2021	Feb. 24, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz~40GHz	Feb. 25, 2020	Jan. 14, 2021~Feb. 11, 2021	Feb. 24, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 12, 2020	Jan. 14, 2021~Feb. 11, 2021	Mar. 11, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WLJ4-1000-1530-6000-40ST	SN4	1.53GHz Low Pass Filter	Jul. 03, 2020	Jan. 14, 2021~Feb. 11, 2021	Jul. 02, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN4	3GHz High Pass Filter	Sep. 16, 2020	Jan. 14, 2021~Feb. 11, 2021	Sep. 15, 2021	Radiation (03CH15-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jan. 06, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 11, 2020	Jan. 06, 2021	Sep. 10, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Jan. 06, 2021	Nov. 17, 2021	Conduction (CO05-HY)
ISN	TESEQ	ISN T8-Cat6	41537	N/A	Feb. 03, 2020	Jan. 06, 2021	Feb. 02, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Jan. 06, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jan. 06, 2021	N/A	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Jan. 06, 2021	Dec. 30, 2021	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	ESHVTS 9561-F N3-Z2	109561-F N003730851	9kHz-200MHz	Nov. 02, 2020	Jan. 06, 2021	Nov. 01, 2021	Conduction (CO05-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.3
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.7
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.3
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Rebecca Li	Temperature:	20~21	°C
Test Date:	2020/12/30	Relative Humidity:	55~56	%

TEST RESULTS DATA
Peak Output Power

2.4GHz Band Single Antenna																
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	16.66	-		30.00	-	0.90	-	17.56	-	36.00	-	Pass
11b	1Mbps	1	6	2437	15.55	-		30.00	-	0.90	-	16.45	-	36.00	-	Pass
11b	1Mbps	1	11	2462	16.14	-		30.00	-	0.90	-	17.04	-	36.00	-	Pass
11g	6Mbps	1	1	2412	19.69	-		30.00	-	0.90	-	20.59	-	36.00	-	Pass
11g	6Mbps	1	6	2437	18.62	-		30.00	-	0.90	-	19.52	-	36.00	-	Pass
11g	6Mbps	1	11	2462	18.41	-		30.00	-	0.90	-	19.31	-	36.00	-	Pass
HT20	MCS0	1	1	2412	19.66	-		30.00	-	0.90	-	20.56	-	36.00	-	Pass
HT20	MCS0	1	6	2437	18.66	-		30.00	-	0.90	-	19.56	-	36.00	-	Pass
HT20	MCS0	1	11	2462	18.76	-		30.00	-	0.90	-	19.66	-	36.00	-	Pass
HT40	MCS0	1	3	2422	19.35	-		30.00	-	0.90	-	20.25	-	36.00	-	Pass
HT40	MCS0	1	6	2437	18.82	-		30.00	-	0.90	-	19.72	-	36.00	-	Pass
HT40	MCS0	1	9	2452	18.45	-		30.00	-	0.90	-	19.35	-	36.00	-	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna												
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	
						Ant1	Ant1	Ant2	SUM	Ant1	Ant2	Ant1
11b	1Mbps	1	1	2412	0.03	13.61	-		0.90	-	14.51	-
11b	1Mbps	1	6	2437	0.03	12.34	-		0.90	-	13.24	-
11b	1Mbps	1	11	2462	0.03	12.91	-		0.90	-	13.81	-
11g	6Mbps	1	1	2412	0.22	12.56	-		0.90	-	13.46	-
11g	6Mbps	1	6	2437	0.22	11.41	-		0.90	-	12.31	-
11g	6Mbps	1	11	2462	0.22	11.41	-		0.90	-	12.31	-
HT20	MCS0	1	1	2412	0.24	12.45	-		0.90	-	13.35	-
HT20	MCS0	1	6	2437	0.24	11.38	-		0.90	-	12.28	-
HT20	MCS0	1	11	2462	0.24	11.76	-		0.90	-	12.66	-
HT40	MCS0	1	3	2422	0.43	11.41	-		0.90	-	12.31	-
HT40	MCS0	1	6	2437	0.43	11.28	-		0.90	-	12.18	-
HT40	MCS0	1	9	2452	0.43	10.89	-		0.90	-	11.79	-



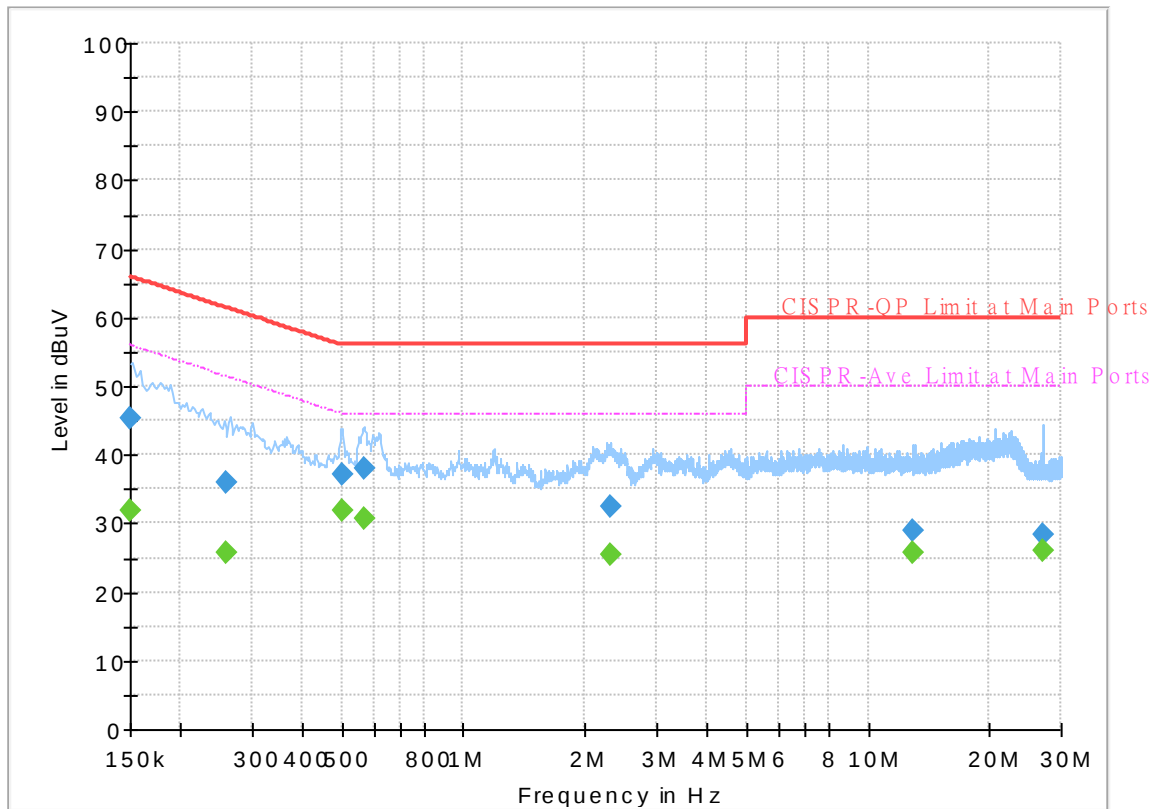
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Howard Huang	Temperature :	23~26℃
		Relative Humidity :	40~50%

EUT Information

Report NO : 0D1806
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



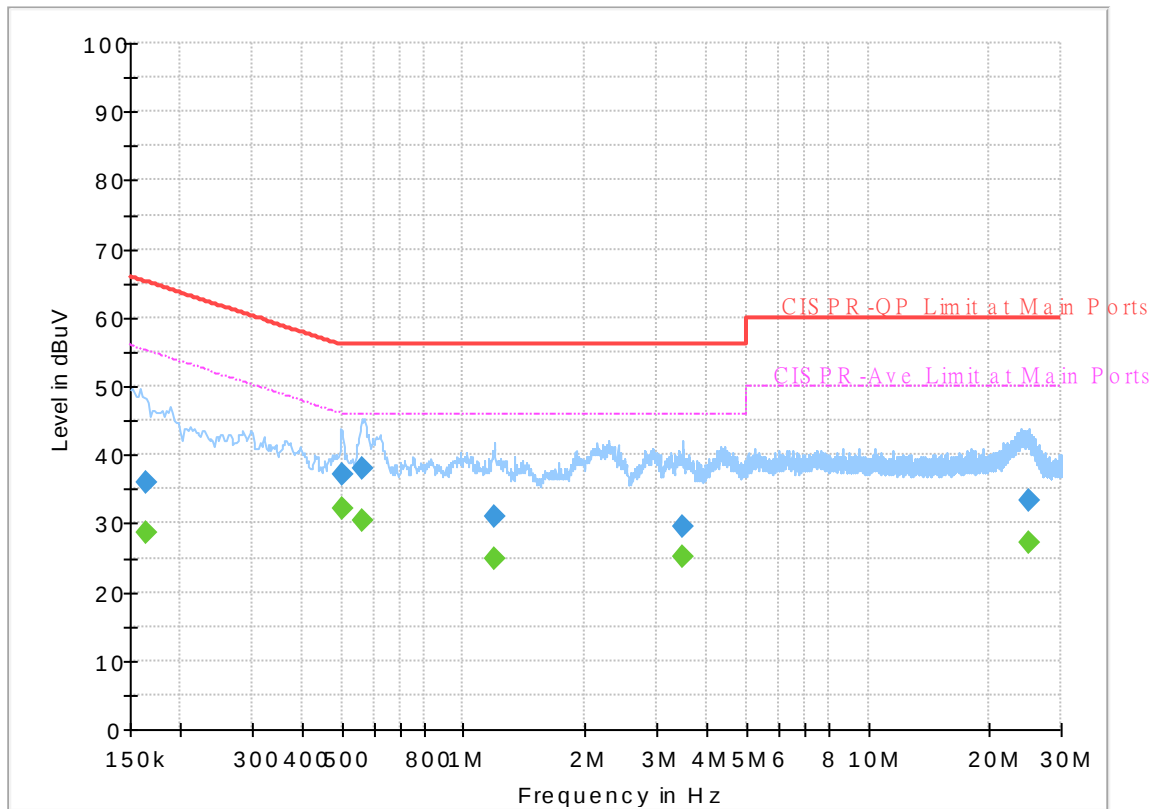
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	31.97	56.00	24.03	L1	OFF	19.7
0.150000	45.39	---	66.00	20.61	L1	OFF	19.7
0.260250	---	25.85	51.42	25.57	L1	OFF	19.7
0.260250	35.82	---	61.42	25.60	L1	OFF	19.7
0.501900	---	31.99	46.00	14.01	L1	OFF	19.9
0.501900	37.22	---	56.00	18.78	L1	OFF	19.9
0.570030	---	30.76	46.00	15.24	L1	OFF	19.9
0.570030	38.14	---	56.00	17.86	L1	OFF	19.9
2.301000	---	25.44	46.00	20.56	L1	OFF	20.2
2.301000	32.59	---	56.00	23.41	L1	OFF	20.2
12.898500	---	25.62	50.00	24.38	L1	OFF	20.3
12.898500	29.01	---	60.00	30.99	L1	OFF	20.3
27.031380	---	25.93	50.00	24.07	L1	OFF	20.7
27.031380	28.30	---	60.00	31.70	L1	OFF	20.7

EUT Information

Report NO : 0D1806
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.163500	---	28.52	55.28	26.76	N	OFF	19.7
0.163500	35.92	---	65.28	29.36	N	OFF	19.7
0.502440	---	32.24	46.00	13.76	N	OFF	19.9
0.502440	37.20	---	56.00	18.80	N	OFF	19.9
0.564000	---	30.33	46.00	15.67	N	OFF	20.0
0.564000	38.00	---	56.00	18.00	N	OFF	20.0
1.196250	---	24.94	46.00	21.06	N	OFF	20.3
1.196250	31.09	---	56.00	24.91	N	OFF	20.3
3.490170	---	25.20	46.00	20.80	N	OFF	20.1
3.490170	29.63	---	56.00	26.37	N	OFF	20.1
24.861750	---	27.12	50.00	22.88	N	OFF	20.8
24.861750	33.30	---	60.00	26.70	N	OFF	20.8



Appendix C. Radiated Spurious Emission

Test Engineer :	Leo Lee, Mancy Chou, and Bigshow Wang	Temperature :	22.1 ~ 23.1°C
		Relative Humidity :	55 ~ 60%

<Sample 1>

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 09 2452MHz		2310.8	55.06	-18.94	74	41.8	27.78	16.43	30.95	185	10	P	H
		2320.24	45.64	-8.36	54	32.38	27.76	16.45	30.95	185	10	A	H
	*	2452	94.85	-	-	81.58	27.5	16.66	30.89	185	10	P	H
	*	2452	87.12	-	-	73.85	27.5	16.66	30.89	185	10	A	H
		2486.77	63.07	-10.93	74	49.81	27.43	16.71	30.88	185	10	P	H
		2484.43	53.58	-0.42	54	40.32	27.43	16.71	30.88	185	10	A	H
		2361.52	54.79	-19.21	74	41.55	27.65	16.52	30.93	312	12	P	V
		2318.64	45.61	-8.39	54	32.35	27.76	16.45	30.95	312	12	A	V
	*	2452	92.7	-	-	79.43	27.5	16.66	30.89	312	12	P	V
	*	2452	84.98	-	-	71.71	27.5	16.66	30.89	312	12	A	V
		2483.62	62.94	-11.06	74	49.68	27.43	16.71	30.88	312	12	P	V
		2484.43	52.89	-1.11	54	39.63	27.43	16.71	30.88	312	12	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 09 2452MHz		4904	39.67	-34.33	74	57.67	31.02	10.12	59.14	100	0	P	H
		7356	45	-29	74	54.86	36.3	12.34	58.5	100	0	P	H
		18000	59.22	-14.78	74	49.23	49	18.89	57.9	100	31	P	H
		18000	49.1	-4.9	54	39.11	49	18.89	57.9	100	31	A	H
		4904	40.04	-33.96	74	58.04	31.02	10.12	59.14	100	0	P	V
		7356	45.09	-28.91	74	54.95	36.3	12.34	58.5	100	0	P	V
		18000	60.43	-13.57	74	50.44	49	18.89	57.9	100	19	P	V
		18000	50.21	-3.79	54	40.22	49	18.89	57.9	100	19	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission above 18GHz
2.4GHz WIFI 802.11n HT40 (SHF)

[illegible]



Emission below 1GHz
2.4GHz WIFI 802.11n HT40 (LF)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
2.4GHz 802.11n HT40 LF		67.83	32.88	-7.12	40	51.75	12.54	1.13	32.54	-	-	P	H
		94.99	35.61	-7.89	43.5	51.19	15.52	1.38	32.48	-	-	P	H
		203.63	40.09	-3.41	43.5	55.51	14.95	2.07	32.44	164	252	Q	H
		325.85	40.85	-5.15	46	51.34	19.55	2.48	32.52	100	7	Q	H
		433.52	39.51	-6.49	46	46.43	22.68	2.81	32.41	200	0	Q	H
		555.74	33.62	-12.38	46	37.46	25.55	3.23	32.62	-	-	P	H
													H
													H
													H
													H
													H
													H
		40.67	36.84	-3.16	40	49.47	19.11	0.82	32.56	100	270	Q	V
		94.99	37.11	-6.39	43.5	52.69	15.52	1.38	32.48	-	-	P	V
		203.63	36.54	-6.96	43.5	51.96	14.95	2.07	32.44	-	-	P	V
		325.85	32.02	-13.98	46	42.51	19.55	2.48	32.52	-	-	P	V
		447.1	31.21	-14.79	46	37.94	22.84	2.84	32.41	-	-	P	V
		528.58	30.91	-15.09	46	36.6	23.76	3.16	32.61	-	-	P	V
													V
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													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



<Sample 2>

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 11 2462MHz	*	2462	101.42	-	-	88.15	27.48	16.68	30.89	132	23	P	H
	*	2462	93.23	-	-	79.96	27.48	16.68	30.89	132	23	A	H
		2483.8	62.27	-11.73	74	49.01	27.43	16.71	30.88	132	23	P	H
		2483.6	49.38	-4.62	54	36.12	27.43	16.71	30.88	132	23	A	H
													H
													H
	*	2462	98.69	-	-	85.42	27.48	16.68	30.89	147	349	P	V
	*	2462	90.41	-	-	77.14	27.48	16.68	30.89	147	349	A	V
		2484.2	58.12	-15.88	74	44.86	27.43	16.71	30.88	147	349	P	V
		2483.52	47.1	-6.9	54	33.84	27.43	16.71	30.88	147	349	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**2.4GHz 2400~2483.5MHz****WIFI 802.11g (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 11 2462MHz		4924	41.05	-32.95	74	58.96	31.1	10.14	59.15	100	0	P	H
		7386	44.77	-29.23	74	54.58	36.3	12.35	58.46	100	0	P	H
		17985	59.42	-14.58	74	49.73	48.73	18.88	57.92	100	41	P	H
		17985	50.57	-3.43	54	40.88	48.73	18.88	57.92	100	41	A	H
		4924	39.57	-34.43	74	57.48	31.1	10.14	59.15	100	0	P	V
		7386	45.59	-28.41	74	55.4	36.3	12.35	58.46	100	0	P	V
		18000	58.67	-15.33	74	48.68	49	18.89	57.9	100	312	P	V
		18000	49.38	-4.62	54	39.39	49	18.89	57.9	100	312	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 09 2452MHz		2355.76	54.81	-19.19	74	41.55	27.68	16.51	30.93	100	20	P	H
		2343.92	45.5	-8.5	54	32.24	27.71	16.49	30.94	100	20	A	H
	*	2452	95.06	-	-	81.79	27.5	16.66	30.89	100	20	P	H
	*	2452	86.8	-	-	73.53	27.5	16.66	30.89	100	20	A	H
		2484.79	61.54	-12.46	74	48.28	27.43	16.71	30.88	100	20	P	H
		2483.62	51.07	-2.93	54	37.81	27.43	16.71	30.88	100	20	P	H
		2351.6	54.98	-19.02	74	41.72	27.69	16.5	30.93	200	345	P	V
		2311.28	45.51	-8.49	54	32.25	27.78	16.43	30.95	200	345	A	V
	*	2452	93.04	-	-	79.77	27.5	16.66	30.89	200	345	P	V
	*	2452	85.18	-	-	71.91	27.5	16.66	30.89	200	345	A	V
		2484.88	59.57	-14.43	74	46.31	27.43	16.71	30.88	200	345	P	V
		2483.53	49.06	-4.94	54	35.8	27.43	16.71	30.88	200	345	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 09 2452MHz		4904	39.52	-34.48	74	57.52	31.02	10.12	59.14	100	0	P	H
		7356	45.21	-28.79	74	55.07	36.3	12.31	58.56	100	0	P	H
		18000	58.88	-15.12	74	48.89	49	18.89	57.9	100	301	P	H
		18000	49.86	-4.14	54	39.87	49	18.89	57.9	100	301	A	H
		4904	39.23	-34.77	74	57.23	31.05	10.11	59.12	100	0	P	V
		7356	44.76	-29.24	74	54.62	36.3	12.31	58.56	100	0	P	V
		17985	58.96	-15.04	74	49.27	48.73	18.88	57.92	100	62	P	V
		17985	49.79	-4.21	54	40.1	48.73	18.88	57.92	100	62	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

[illegible]



Emission below 1GHz
2.4GHz WIFI 802.11n HT40 (LF)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
2.4GHz 802.11n HT40 LF		67.83	33.47	-6.53	40	52.34	12.54	1.13	32.54	346	19	Q	H
		94.99	37.17	-6.33	43.5	52.75	15.52	1.38	32.48	-	-	P	H
		176.47	38.19	-5.31	43.5	53.36	15.39	1.92	32.48	129	201	Q	H
		285.11	40.31	-5.69	46	51.7	18.71	2.36	32.46	100	147	Q	H
		745.86	38.96	-7.04	46	40.05	27.65	3.71	32.45	-	-	P	H
		888.45	39.72	-6.28	46	38.78	28.5	4.13	31.69	-	-	P	H
													H
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													H
													H
													H
		40.67	33.75	-6.25	40	46.38	19.11	0.82	32.56	100	318	Q	V
		94.99	35.63	-7.87	43.5	51.21	15.52	1.38	32.48	100	231	Q	V
		176.47	36.33	-7.17	43.5	51.5	15.39	1.92	32.48	100	3	Q	V
		285.11	35.82	-10.18	46	47.21	18.71	2.36	32.46	-	-	P	V
		722.58	39.12	-6.88	46	40.96	26.97	3.64	32.45	-	-	P	V
		885.54	38.86	-7.14	46	37.88	28.55	4.13	31.7	-	-	P	V
													V
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													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	Peak or Average
H/V	Horizontal or Vertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =
Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)
= 55.45 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
= 43.54 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.



Appendix D. Radiated Spurious Emission Plots

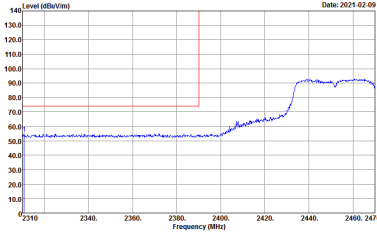
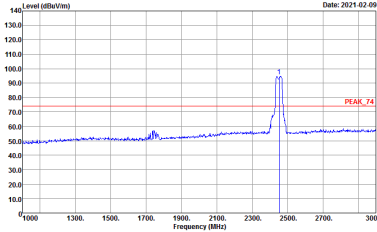
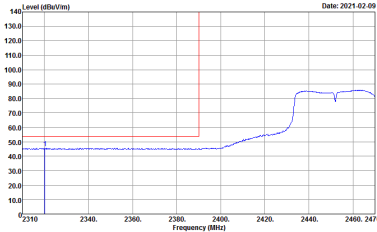
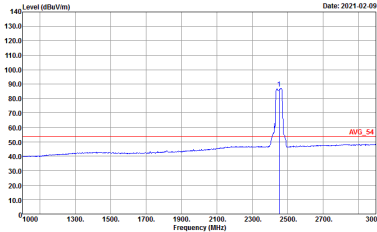
Test Engineer :	Leo Lee, Mancy Chou, and Bigshow Wang	Temperature :	22.1 ~ 23.1°C
		Relative Humidity :	55 ~ 60%

Note symbol

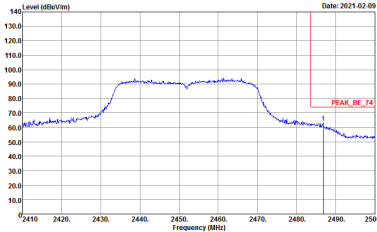
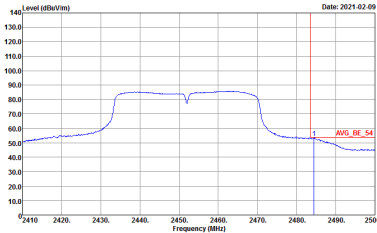
-L	Low channel location
-R	High channel location

<Sample 1>

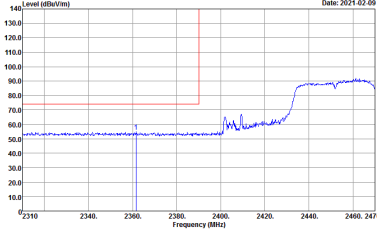
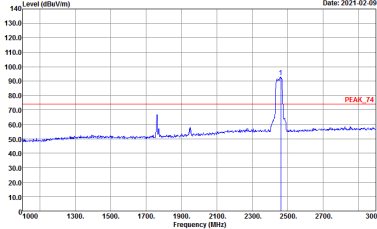
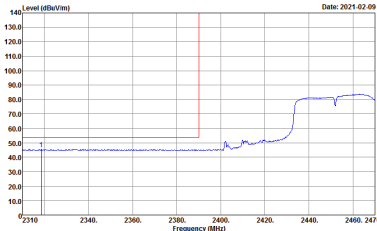
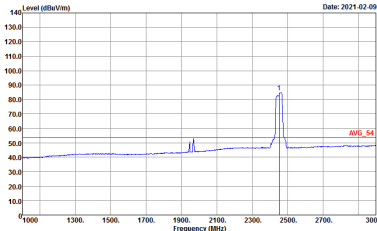
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

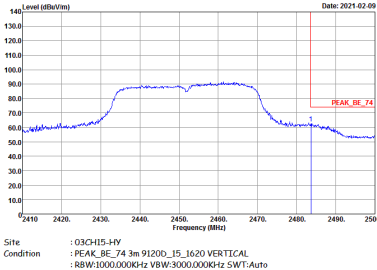
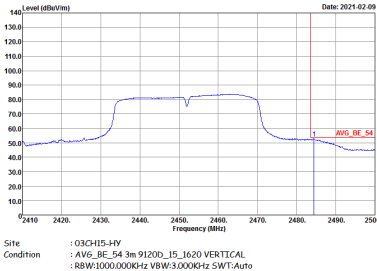


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



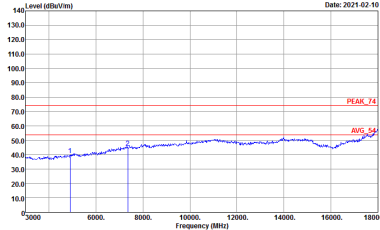
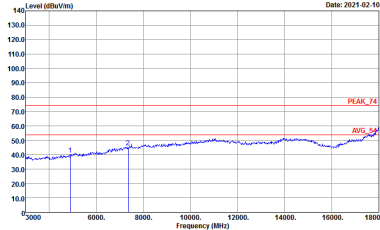
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_9C_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

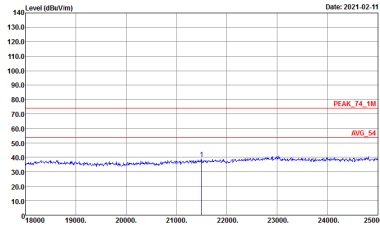
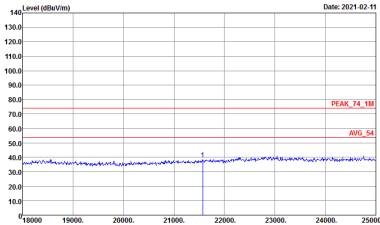


2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

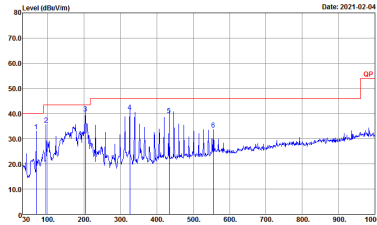
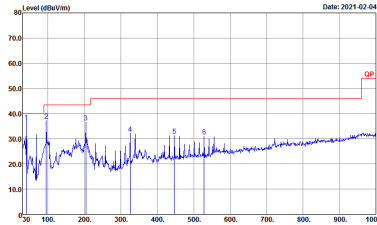
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 VERTICAL



Emission above 18GHz
2.4GHz WIFI 802.11n HT40 (SHF)

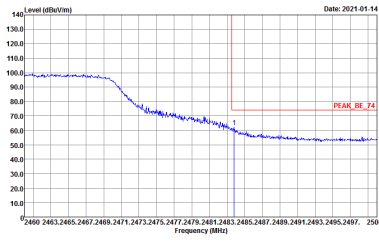
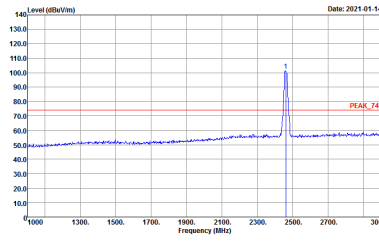
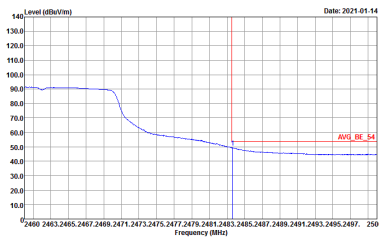
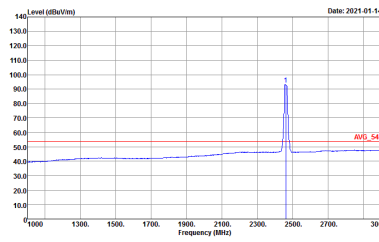
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 SHF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH16-HY Condition : PEAK_74_1M 1m SHF HORN 88HA9170576 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74_1M 1m SHF HORN 88HA9170576 VERTICAL

Emission below 1GHz
2.4GHz WIFI 802.11n HT40 (LF)

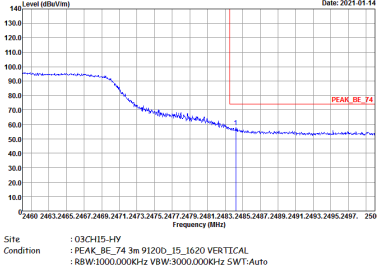
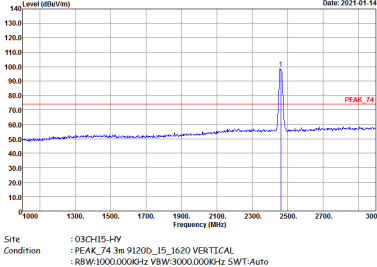
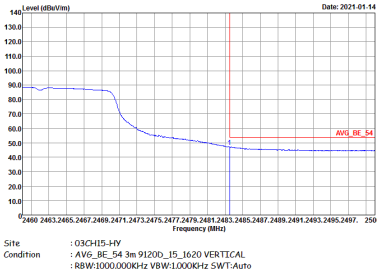
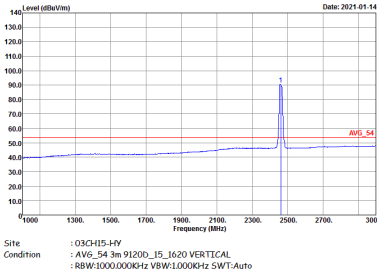
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m 81LO6_15_41912 HORIZONTAL	 Site : 03CH15-HY Condition : QP 3m 81LO6_15_41912 VERTICAL

<Sample 2>

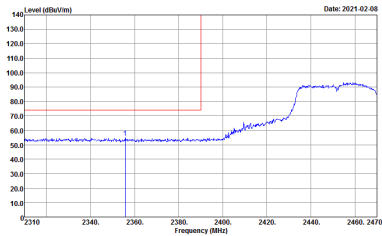
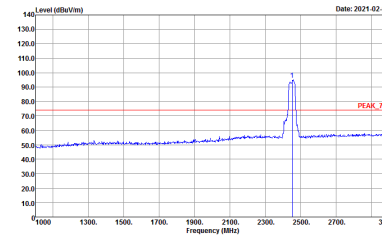
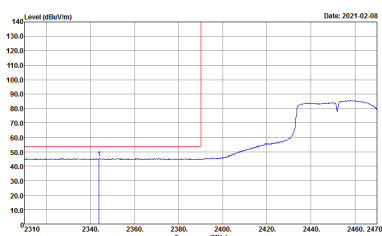
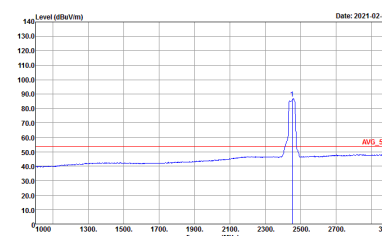
2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

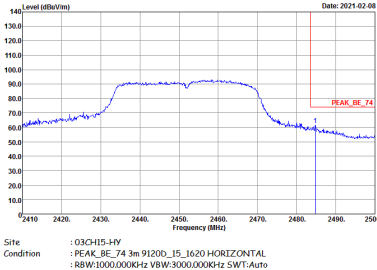
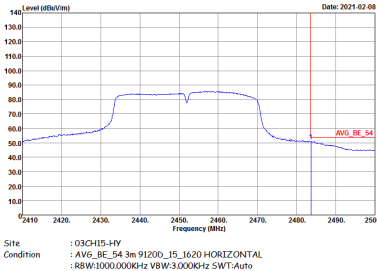


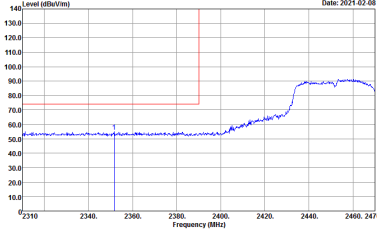
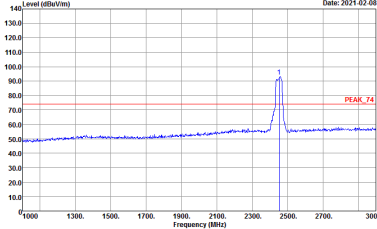
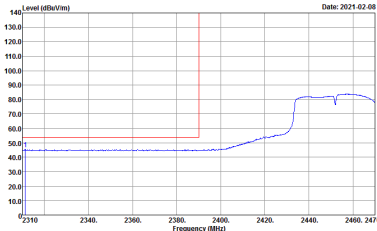
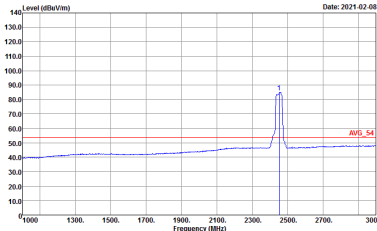
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Date: 2021-01-14 Frequency (MHz) PEAK_BE_74 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Level (dBuV/m) Date: 2021-01-14 Frequency (MHz) PEAK_74 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Level (dBuV/m) Date: 2021-01-14 Frequency (MHz) AVG_BE_54 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Level (dBuV/m) Date: 2021-01-14 Frequency (MHz) AVG_54 Site : 03CH15-HY Condition : AVG_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

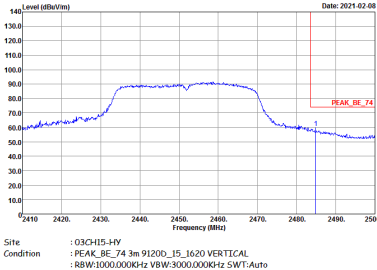
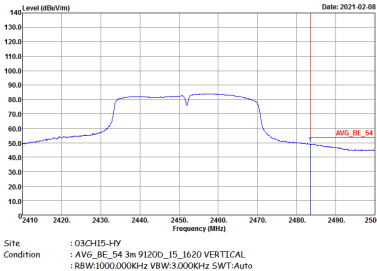
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_9C_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto



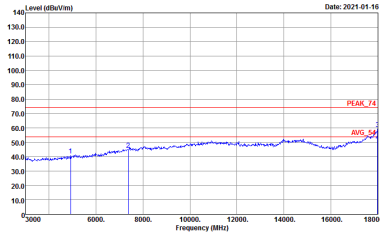
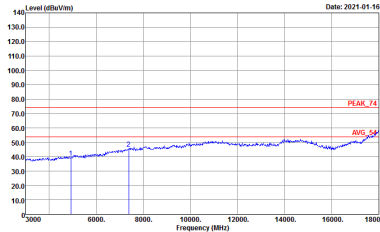
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Vertical	Fundamental
Peak	 Level (dBuV/m) Frequency (MHz) Date: 2021-02-08 Site : 03CH15-HY Condition : PEAK_9C_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Level (dBuV/m) Frequency (MHz) Date: 2021-02-08 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Level (dBuV/m) Frequency (MHz) Date: 2021-02-08 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Level (dBuV/m) Frequency (MHz) Date: 2021-02-08 Site : 03CH15-HY Condition : AVG_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank

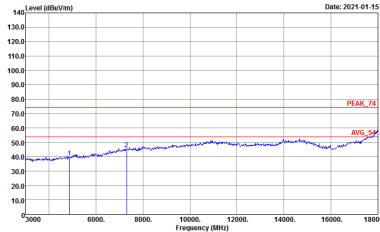
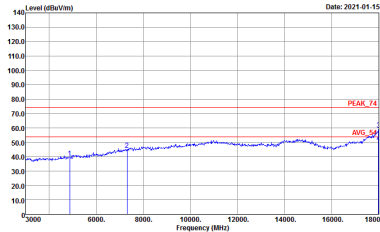


2.4GHz 2400~2483.5MHz
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 VERTICAL

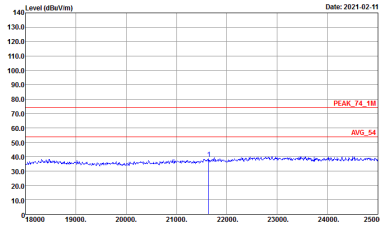
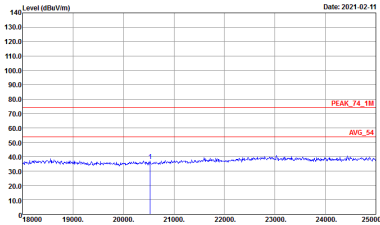


2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 VERTICAL

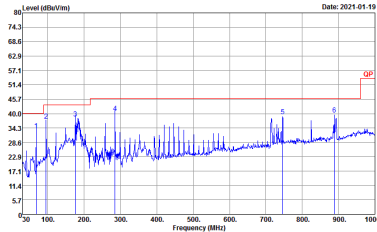
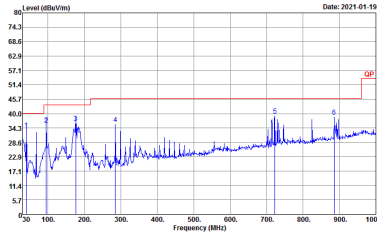


Emission above 18GHz
2.4GHz WIFI 802.11n HT40 (SHF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 SHF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH16-HY Condition : PEAK_74_1M 1m SHF HORN 88HA9170576 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74_1M 1m SHF HORN 88HA9170576 VERTICAL



Emission below 1GHz
2.4GHz WIFI 802.11n HT40 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m 81LO6_15_41912 HORIZONTAL	 Site : 03CH15-HY Condition : QP 3m 81LO6_15_41912 VERTICAL



Appendix E. Duty Cycle Plots

Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor (dB)
802.11g	95.04	2032.00	0.49	1kHz	0.22
2.4GHz 802.11n HT40	90.53	938.00	1.07	3kHz	0.43

