



FCC CO-LOCATION RADIO TEST REPORT

FCC ID : 2ADWC-AI7688H
Equipment : 802.11b/g/n IoT Module
Brand Name : Acsip
Model Name : AI7688H
Applicant : AcSiP Technology Corporation
9F, No. 242, Bo'ai St., Shulin Dist, New Taipei 23805, Taiwan
Manufacturer : Lite-On Technology Corporation
29F, No.555, Siyuan Rd., Xinzhuang Dist., New Taipei City,
Taiwan (R.O.C.)
Standard : FCC Part 15 Subpart C §15.247

The product was received on Aug. 11, 2022 and testing was started from Sep. 07, 2022 to Sep. 30, 2022. We, Sporton International Inc. Wensan 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. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C)



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Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	0.23 dB under the limit at 57.160 MHz for Quasi-Peak
3.2	15.203	Antenna Requirement	Pass	-

Declaration of Conformity:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to this report "Uncertainty of Evaluation".
Comments and Explanations:
The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Lewis Ho
Report Producer: Clio Lo



1 General Description

1.1 Product Feature of Equipment Under Test

WCDMA/LTE, Wi-Fi 2.4GHz 802.11b/g/n and NFC.

Product Feature	
Sample 1	SKU 1
Sample 2	SKU 2
Sample 3	SKU 3
Antenna Type	WWAN: Fixed Internal Antenna WLAN: monopole Antenna NFC: PCB Antenna

WLAN Antenna information		
2412 MHz ~ 2462 MHz	Peak Gain (dBi)	2

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

Item	SKU1	SKU2	SKU3
	SC3 (Smart)	SC3+ (Smart+)	IC3 (Intelligent)
Model	SC3-32A-H	SC3-32A-H	IC3-32A-H
	SC3-32A-N	SC3-32A-N	IC3-32A-N
	SC3-40A-H	SC3-40A-H	IC3-40A-H
	SC3-40A-N	SC3-40A-N	IC3-40A-N
LTE module	X	X	Quectel EG91-NAXD
WIFI module	AI7688H-LO	AI7688H-LO	AI7688H-LO
RFID module	X	REYAX RYORR2L	REYAX RYORR2L
	X	Elatec TWN4 Multi Tech 3M	Elatec TWN4 Multi Tech 3M
with OLED dsplay	V	V	V

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. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. 03CH16-HY

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

FCC designation No.: TW3786

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 15.247 Meas Guidance v05r02
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ 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

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: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

2.1 Carrier Frequency and Channel

2412-2462 MHz	
802.11n HT40	
Channel	Freq. (MHz)
03	2422

2.2 Test Mode

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

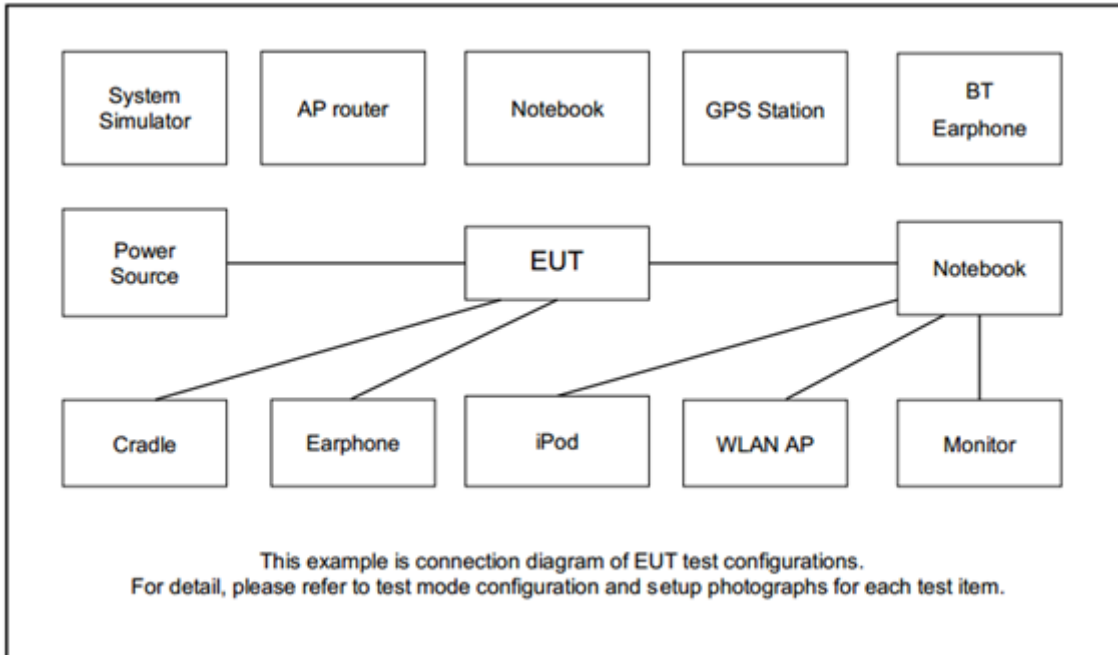
<Co-Location>

Modulation	Data Rate
WLAN 2.4GHz 802.11n + LTE Band 2	MCS0 + QPSK

Remark:

1. During the Radiated Spurious Emission test, the EUT turn on the WWAN functions simultaneously.
2. All the tests were performed with SKU 3.

2.3 Connection Diagram of Test System



2.4 EUT Operation Test Setup

For WLAN function, the RF test items, utility “Tftpd64 V4.64 and Tera Term V4.89” was installed in EUT 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 Radiated Band Edges and Spurious Emission Measurement

3.1.1 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 is 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

3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is 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 is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-“.

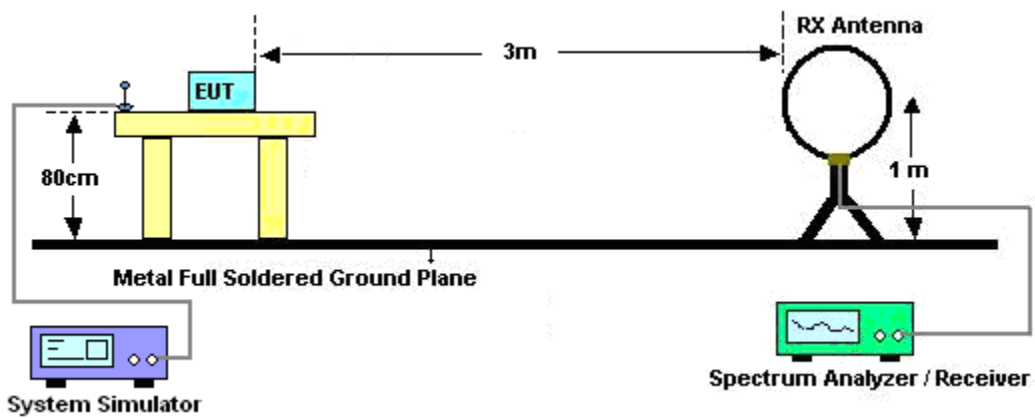
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-”.
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= 3 MHz for $f \geq 1$ GHz for peak measurement.

For average measurement:

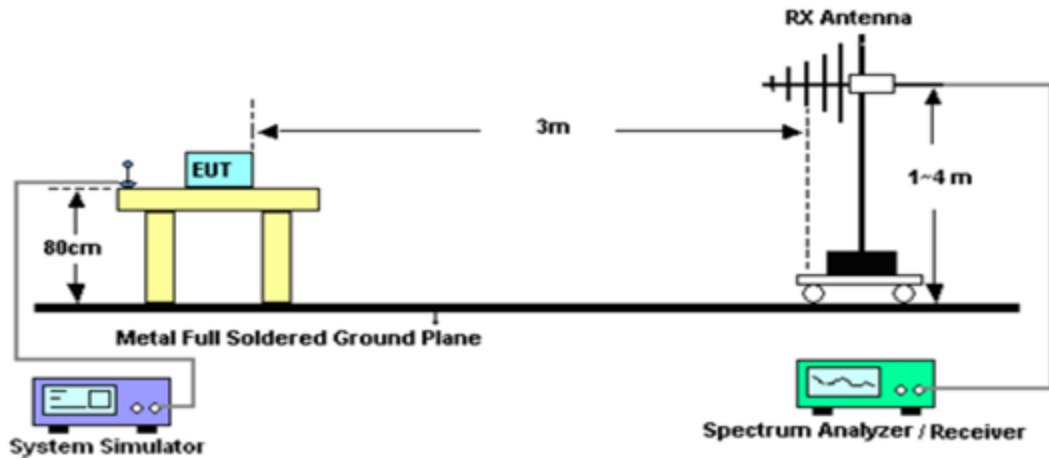
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.1.4 Test Setup

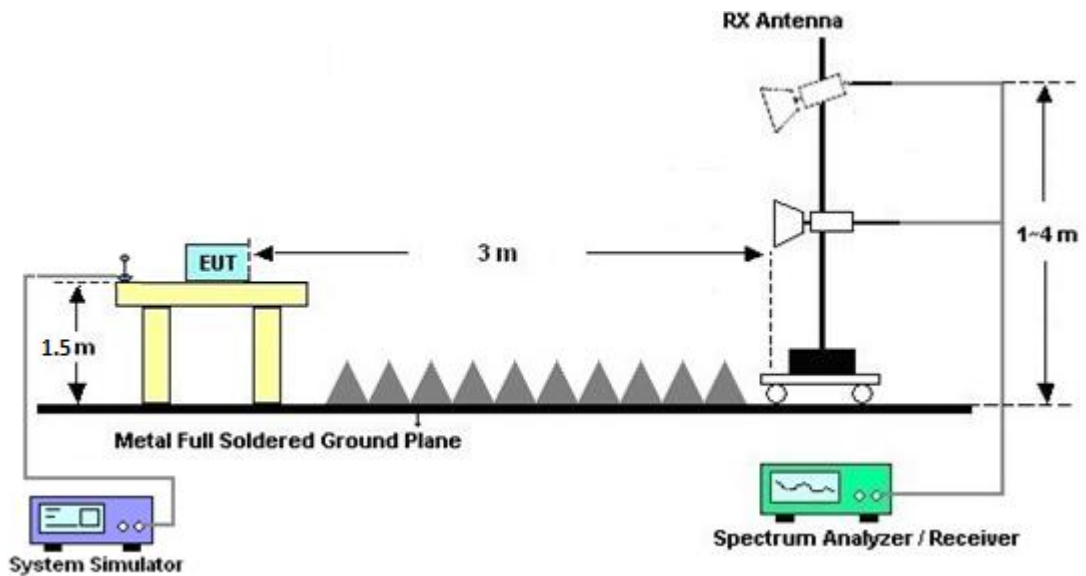
For radiated emissions below 30MHz



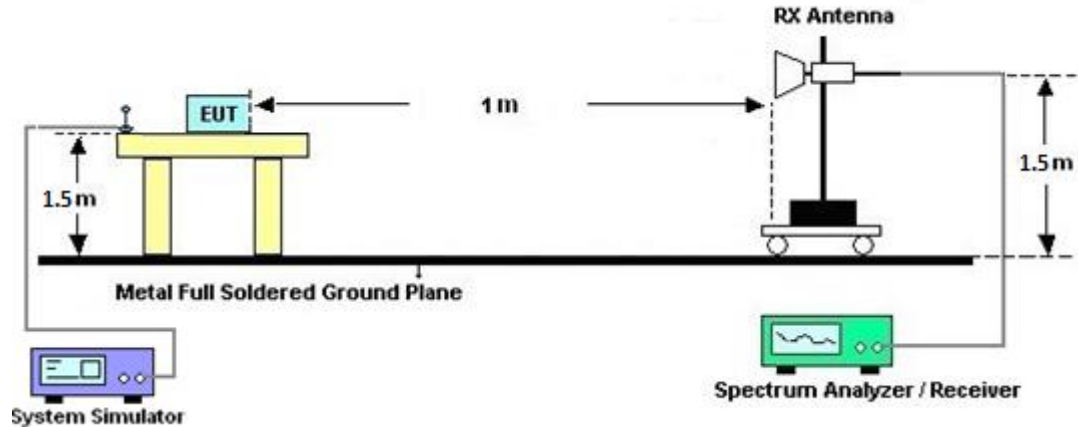
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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

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

3.1.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A and B.

3.1.7 Duty Cycle

Please refer to Appendix C.

3.1.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix A and B.



3.2 Antenna Requirements

3.2.1 Standard Applicable

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.

3.2.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	May 13, 2022	Sep. 07, 2022~ Sep. 30, 2022	May 12, 2023	Radiation (03CH16-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 24, 2021	Sep. 07, 2022~ Sep. 30, 2022	Dec. 23, 2022	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00993	18GHz~40GHz	Nov. 30, 2021	Sep. 07, 2022~ Sep. 30, 2022	Nov. 29, 2022	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1GHz	Jul. 04, 2022	Sep. 07, 2022~ Sep. 30, 2022	Jul. 03, 2023	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01N-06	47020 & 06	30MHz~1GHz	Oct. 09, 2021	Sep. 07, 2022~ Sep. 30, 2022	Oct. 08, 2022	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY57290111	3Hz~26.5GHz	Dec. 15, 2021	Sep. 07, 2022~ Sep. 30, 2022	Dec. 14, 2022	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1522	1GHz~18GHz	Mar. 10, 2022	Sep. 07, 2022~ Sep. 30, 2022	Mar. 09, 2023	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec. 09, 2021	Sep. 07, 2022~ Sep. 30, 2022	Dec. 08, 2022	Radiation (03CH16-HY)
Preamplifier	EMEC	EM1G18G	060812	1GHz~18GHz	Dec. 27, 2021	Sep. 07, 2022~ Sep. 30, 2022	Dec. 26, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	805935/4	N/A	Aug. 09, 2022	Sep. 07, 2022~ Sep. 30, 2022	Aug. 08, 2023	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	802434/4	N/A	Aug. 09, 2022	Sep. 07, 2022~ Sep. 30, 2022	Aug. 08, 2023	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300-5757	N/A	Aug. 09, 2022	Sep. 07, 2022~ Sep. 30, 2022	Aug. 08, 2023	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Sep. 07, 2022~ Sep. 30, 2022	N/A	Radiation (03CH16-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Sep. 07, 2022~ Sep. 30, 2022	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Sep. 07, 2022~ Sep. 30, 2022	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Sep. 07, 2022~ Sep. 30, 2022	N/A	Radiation (03CH16-HY)



5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.2 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
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Appendix A. Radiated Spurious Emission

Test Engineer :	Karl Hou and Andy Yang	Temperature :	18~25°C
		Relative Humidity :	50~65%

2.4GHz 2400~2483.5MHz

802.11n HT40_TX_CH03 + LTE Band 2

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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 03 2422MHz		2389.8	64	-10	74	49.35	27.36	17.36	30.07	400	69	P	H
		2389.66	53.18	-0.82	54	38.53	27.36	17.36	30.07	400	69	A	H
	*	2422	100.06	-	-	85.18	27.53	17.41	30.06	400	69	P	H
	*	2422	92.56	-	-	77.68	27.53	17.41	30.06	400	69	A	H
		2492.79	56.28	-17.72	74	40.93	27.87	17.52	30.04	400	69	P	H
		2485.02	46.4	-7.6	54	31.09	27.84	17.51	30.04	400	69	A	H
		2387.14	63.33	-10.67	74	48.7	27.35	17.35	30.07	114	118	P	V
		2389.8	53.37	-0.63	54	38.72	27.36	17.36	30.07	114	118	A	V
	*	2422	97.83	-	-	82.95	27.53	17.41	30.06	114	118	P	V
	*	2422	90.25	-	-	75.37	27.53	17.41	30.06	114	118	A	V
		2485.65	55.8	-18.2	74	40.49	27.84	17.51	30.04	114	118	P	V
		2489.15	46.39	-7.61	54	31.06	27.86	17.51	30.04	114	118	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



802.11n HT40_TX_CH03 + LTE Band 2 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
Simultaneously		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
11n(HT40) _TX_CH 03 + Band 2		4844	40.69	-33.31	74	62.94	32.56	11.33	66.14	-	-	P	H
		7266	45.34	-28.66	74	60.26	37.2	13.57	65.69	-	-	P	H
													H
													H
													H
													H
		4844	41.79	-32.21	74	64.04	32.56	11.33	66.14	-	-	P	V
		7266	45.39	-28.61	74	60.31	37.2	13.57	65.69	-	-	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												



Emission below 1GHz

802.11n HT40_TX_CH03 + LTE Band 2 (LF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
Simultaneously		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
11n(HT40) _TX_CH 03 + Band 2		77.53	36.08	-3.92	40	53.87	13.19	1.25	32.29	200	279	Q	H	
		103.72	38.24	-5.26	43.5	52.5	16.41	1.52	32.24	-	-	P	H	
		303.54	29.8	-16.2	46	40.18	19.3	2.59	32.34	-	-	P	H	
		638.19	27.87	-18.13	46	30.25	26.31	3.79	32.61	-	-	P	H	
		846.74	32.08	-13.92	46	30.57	29.07	4.38	32.11	-	-	P	H	
		958.29	33.8	-12.2	46	29.4	30.83	4.62	31.26	-	-	P	H	
														H
														H
														H
														H
														H
			57.16	39.77	-0.23	40	58.78	12.25	0.97	32.31	100	323	Q	V
			71.71	37.02	-2.98	40	55.69	12.36	1.18	32.28	100	271	Q	V
			77.53	37.15	-2.85	40	54.94	13.19	1.25	32.29	118	284	Q	V
			126.03	39.82	-3.68	43.5	52.92	17.48	1.67	32.29	-	-	Q	V
			485.9	25.23	-20.77	46	30.6	23.78	3.29	32.53	-	-	P	V
			698.33	28.1	-17.9	46	30.11	26.47	3.96	32.56	-	-	P	V
														V
														V
														V
													V	
													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.													



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 Margin 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	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					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		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H
2412MHz													

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. Margin(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. Margin(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. Margin(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 B. Radiated Spurious Emission Plots

Test Engineer :	Karl Hou and Andy Yang	Temperature :	18~25°C
		Relative Humidity :	50~65%

Note symbol

-L	Low channel location
-R	High channel location



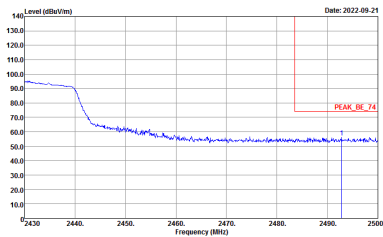
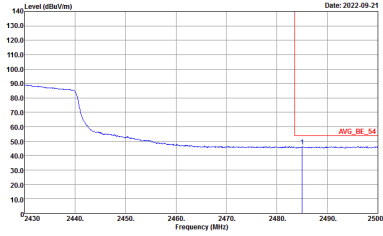
2.4GHz 2400~2483.5MHz

802.11n HT40_TX_CH03 + LTE Band 2

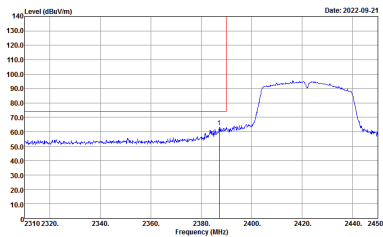
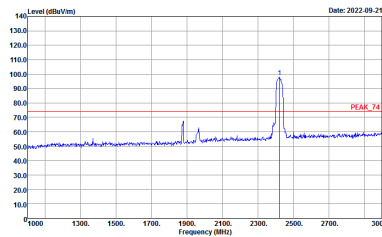
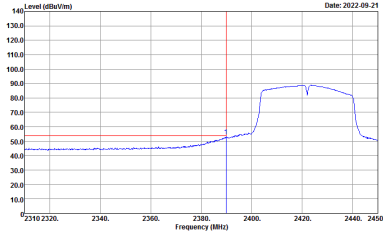
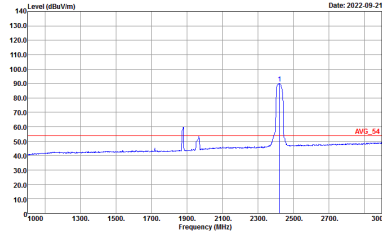
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_86_74 3m 91200_1922_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH16-HY Condition : PEAK_74 3m 91200_1922_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	<p>Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1922_220310 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto</p>	<p>Site : 03CH16-HY Condition : AVG_54 3m 91200_1922_220310 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto</p>

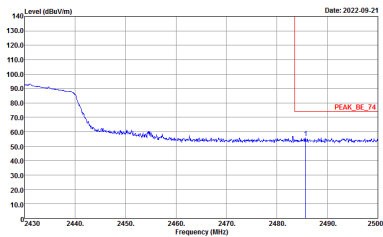
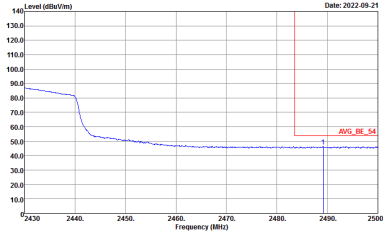


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Horizontal	Fundamental
<p>Peak</p>	 <p>Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left Blank</p>
<p>Avg.</p>	 <p>Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto</p>	<p>Left Blank</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto</p>

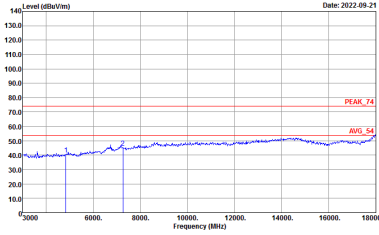
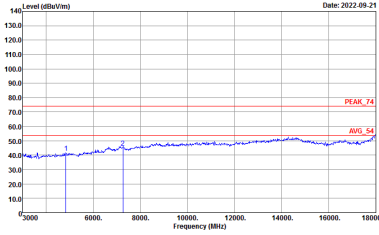


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000kHz VBW:3.000kHz SWT:Auto</p>	<p>Left blank</p>



2.4GHz 2400~2483.5MHz

802.11n HT40_TX_CH03 + LTE Band 2 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n (HT40)_TX_CH 03 + Band 2	
Simultaneously	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>	 <p>Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522_220310 HORIZONTAL</p>	 <p>Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522_220310 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n (HT40) _TX_CH 03 + Band 2	
Simultaneously	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>		
<p>17.7G ~18G Avg</p>		



Emission above 18GHz

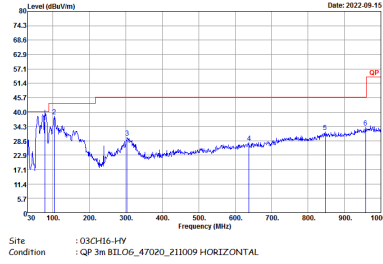
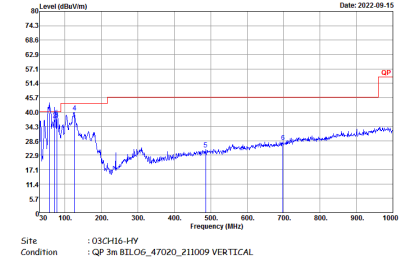
802.11n HT40_TX_CH03 + LTE Band 2 (SHF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n (HT40)_TX_CH 03 + Band 2	
Simultaneously	Horizontal	Vertical
Peak/ AVG	<p>Site : 03CH16-HY Condition : PEAK_74 1m SHF ANT_9170_00993 HORIZONTAL</p>	<p>Site : 03CH16-HY Condition : PEAK_74 1m SHF ANT_9170_00993 VERTICAL</p>



Emission below 1GHz

802.11n HT40_TX_CH03 + LTE Band 2 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n (HT40)_TX_CH 03 + Band 2	
Simultaneously	Horizontal	Vertical
QP / Peak	 <p>Site : 03CH16-HY Condition : QP 3m BILOG_47020_Z11009 HORIZONTAL</p>	 <p>Site : 03CH16-HY Condition : QP 3m BILOG_47020_Z11009 VERTICAL</p>



Appendix C. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
2.4GHz 802.11n HT40	82.81	636	1.57	3kHz

