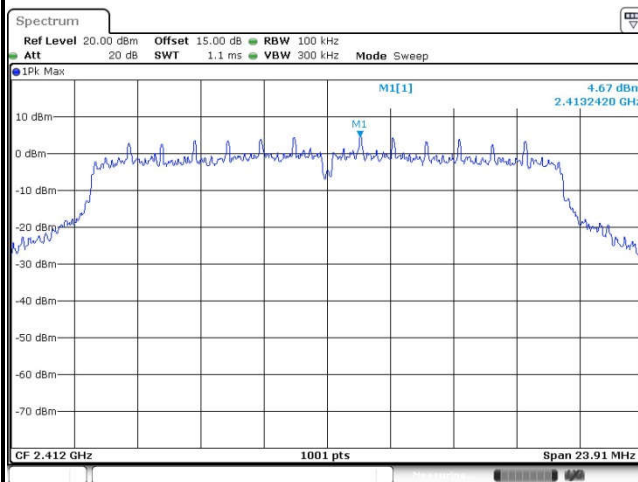




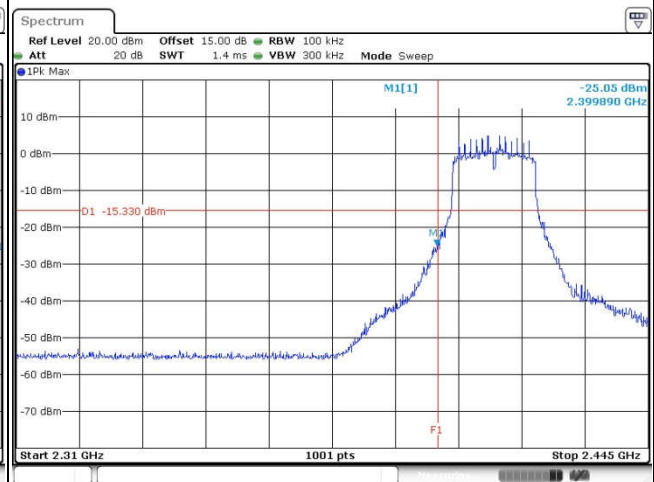
Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	48~49%
Test Channel :	01	Test Engineer :	Jeff Yao

WLAN 802.11n HT20 Channel 01

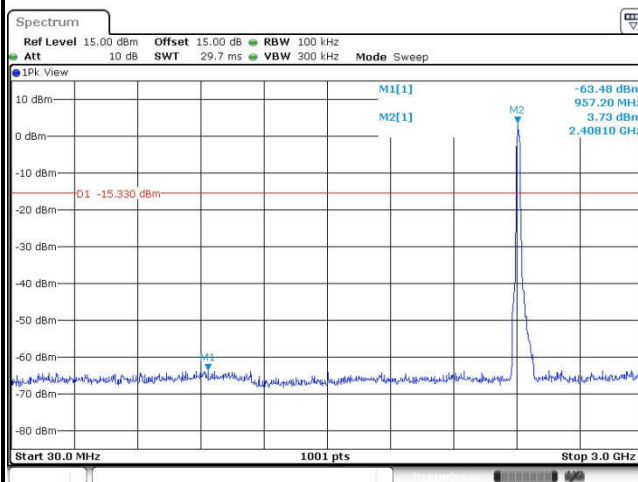
100kHz PSD reference Level



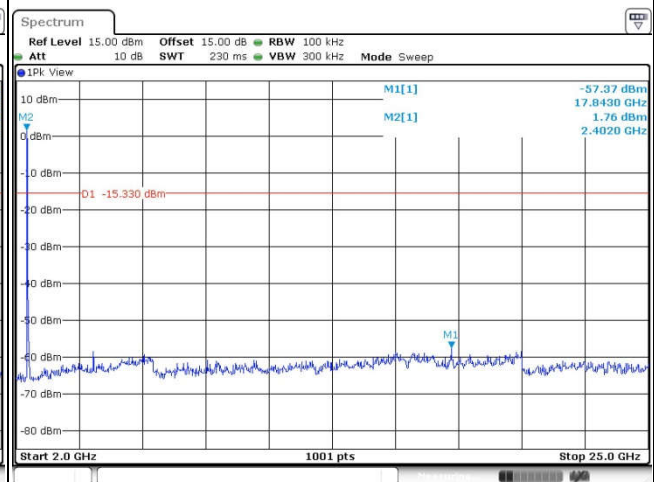
Low Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

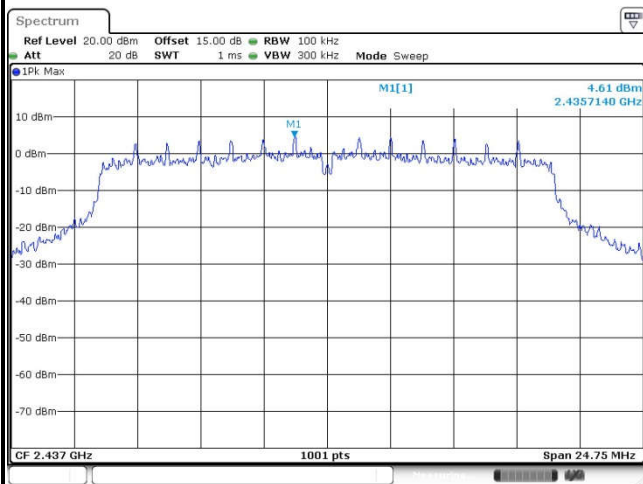




Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	48~49%
Test Channel :	06	Test Engineer :	Jeff Yao

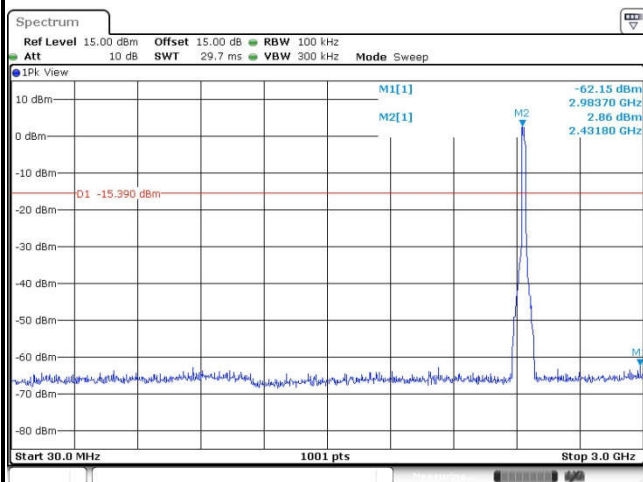
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level

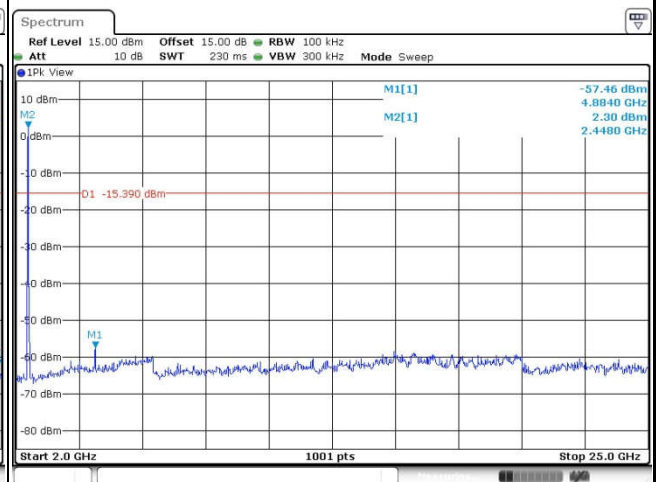


Mid Channel Plot

Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

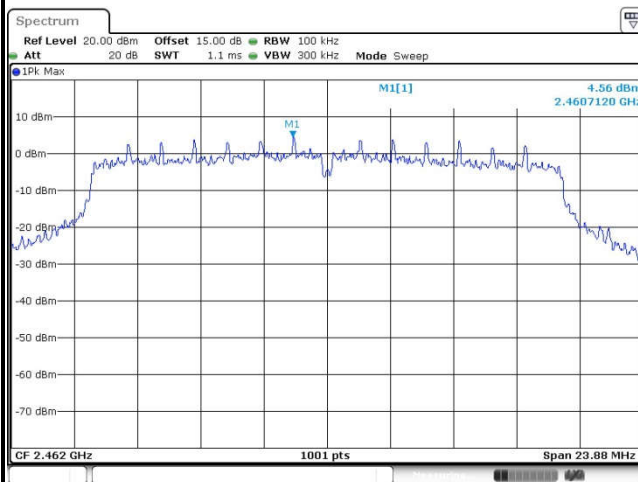




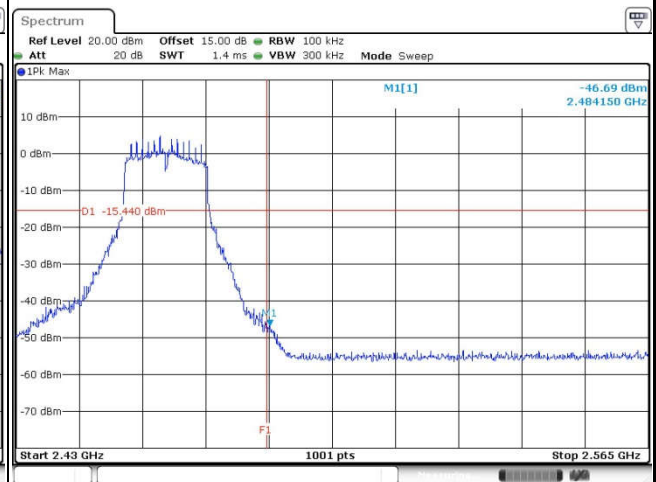
Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	48~49%
Test Channel :	11	Test Engineer :	Jeff Yao

WLAN 802.11n HT20 Channel 11

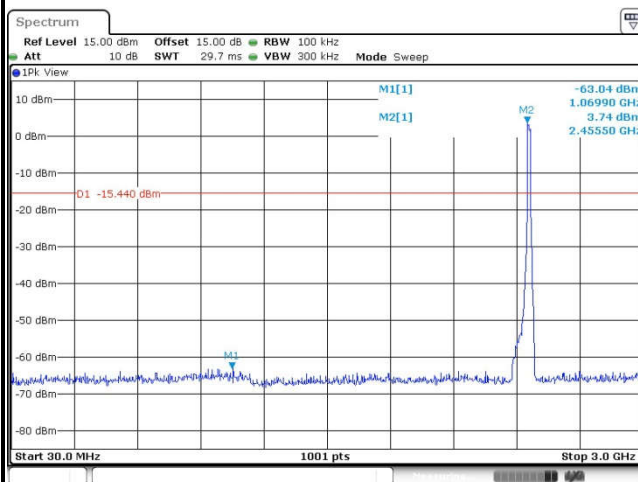
100kHz PSD reference Level



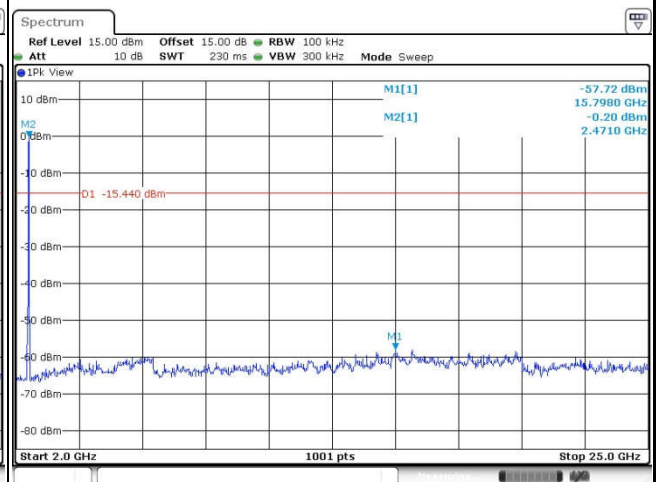
High Channel Plot



Spurious Emission 30MHz~3GHz

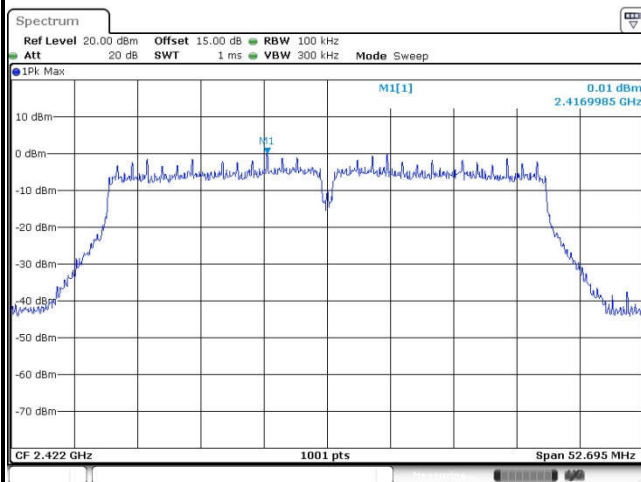


Spurious Emission 2GHz~25GHz

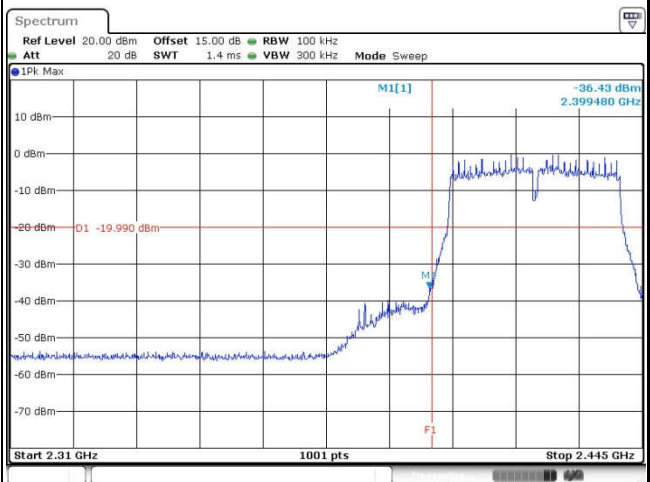




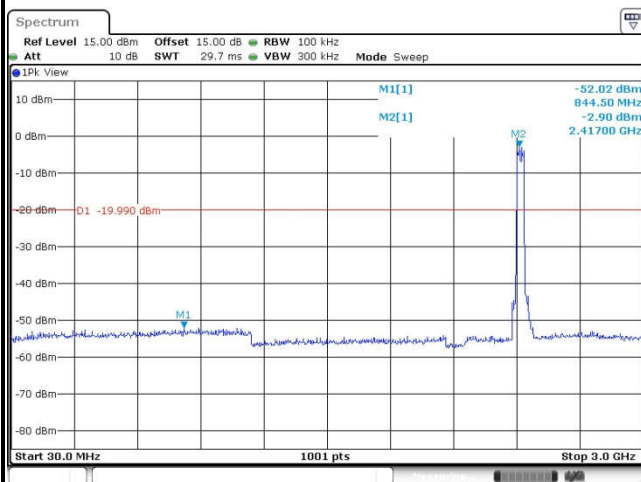
Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT40	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	48~49%
Test Channel :	03	Test Engineer :	Jeff Yao

WLAN 802.11n HT40 Channel 03**100kHz PSD reference Level**

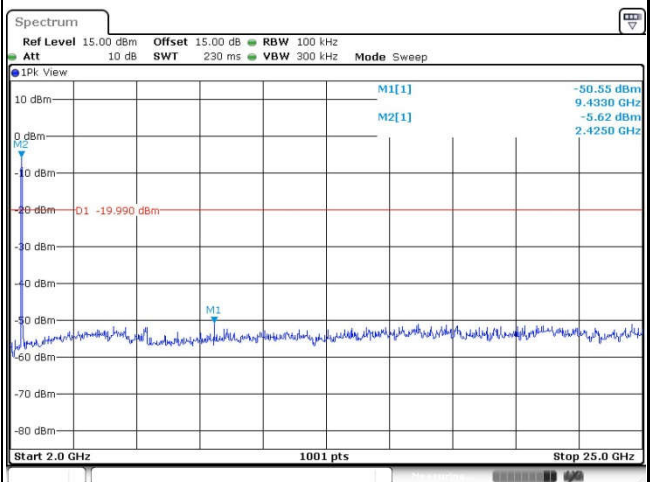
Date: 12.FEB.2018 16:52:58

Low Channel Plot

Date: 12.FEB.2018 16:53:56

Spurious Emission 30MHz~3GHz

Date: 5.MAR.2018 14:54:24

Spurious Emission 2GHz~25GHz

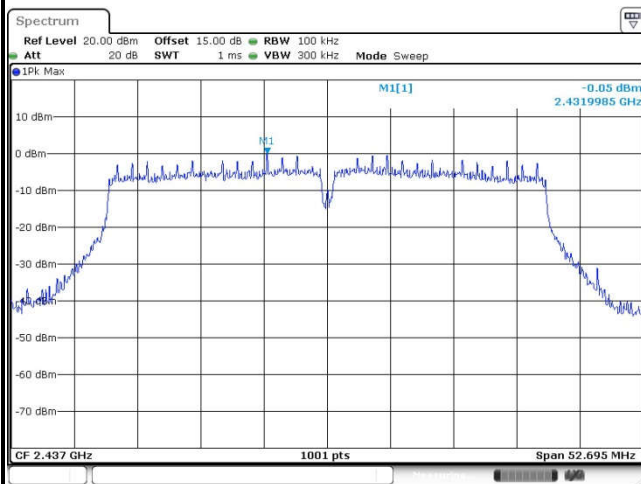
Date: 5.MAR.2018 14:46:44



Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT40	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	48~49%
Test Channel :	06	Test Engineer :	Jeff Yao

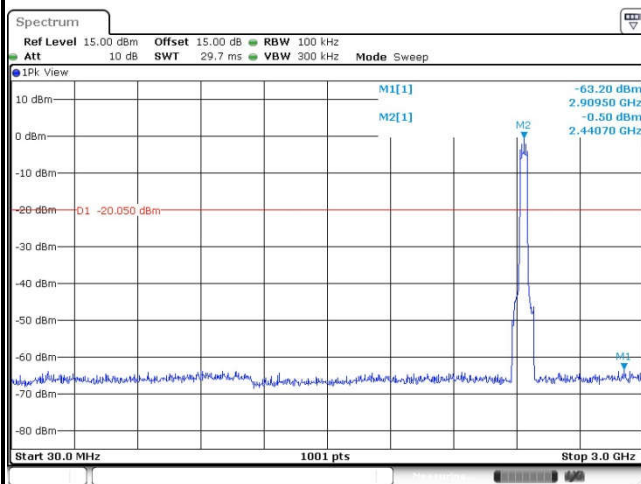
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level

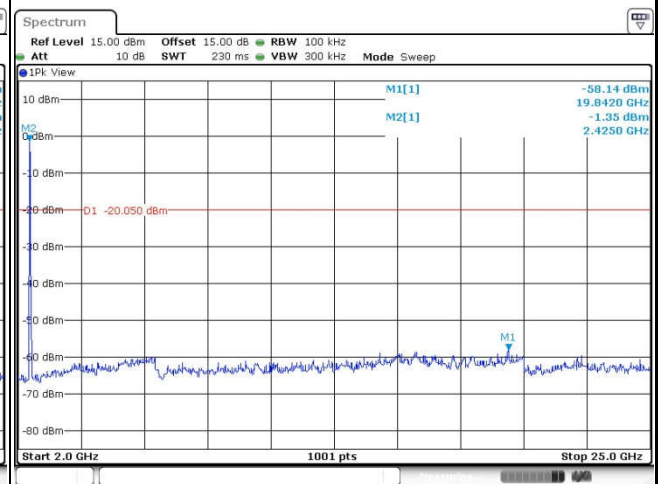


Mid Channel Plot

Spurious Emission 30MHz~3GHz

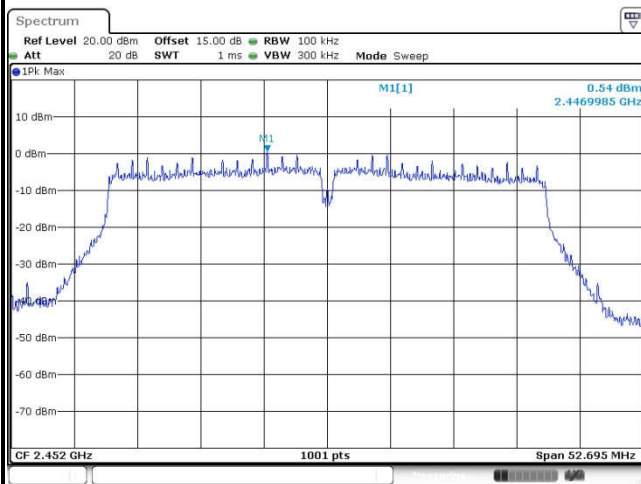
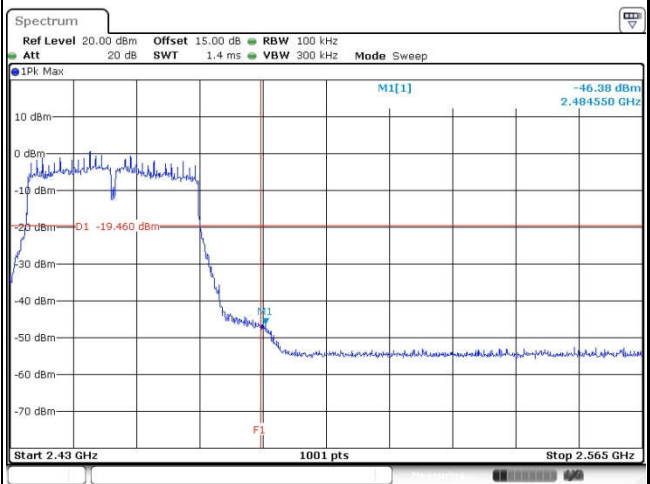
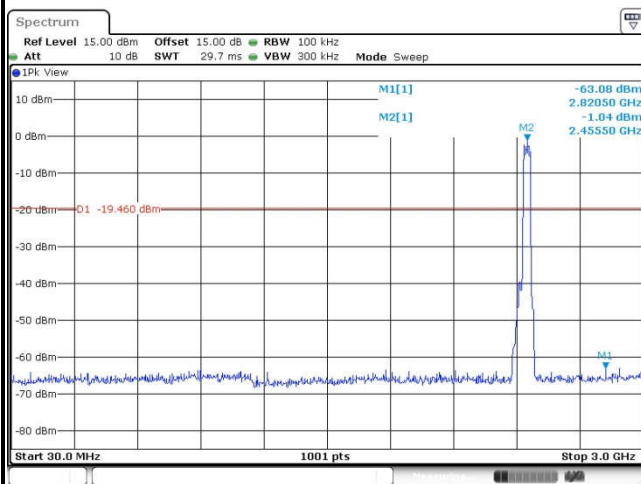
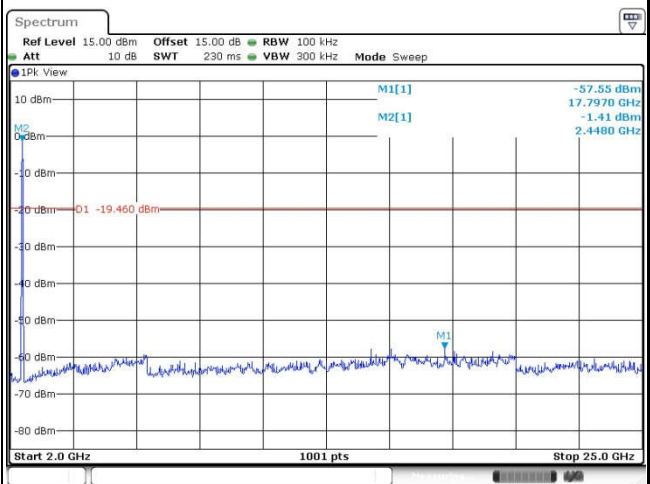


Spurious Emission 2GHz~25GHz





Number of TX :	2	Ant. :	2
Test Mode :	802.11n HT40	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	48~49%
Test Channel :	09	Test Engineer :	Jeff Yao

WLAN 802.11n HT40 Channel 09**100kHz PSD reference Level****High Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 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

3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

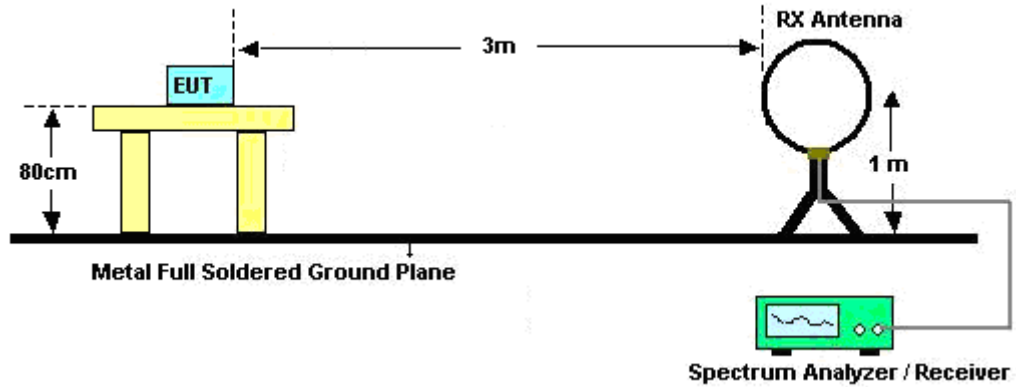
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test 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 measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. 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:

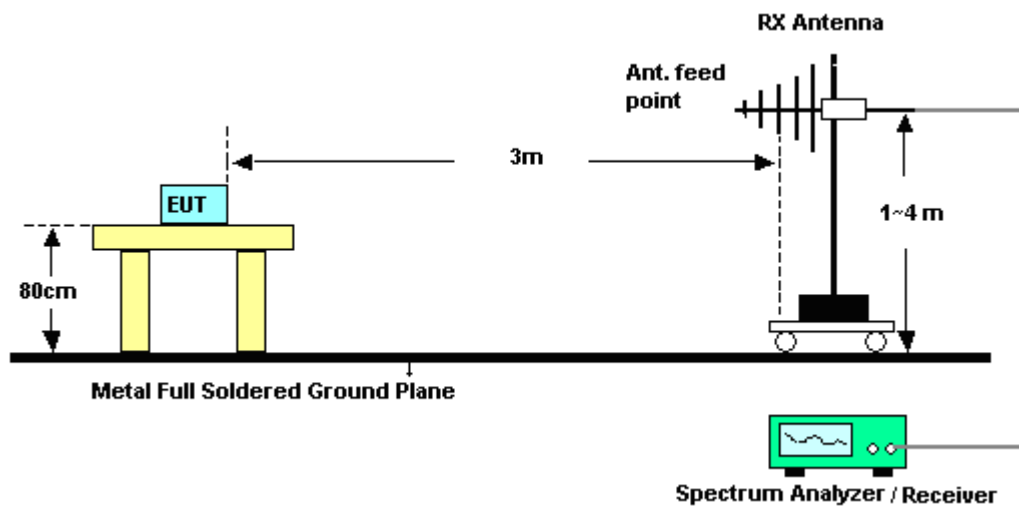
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

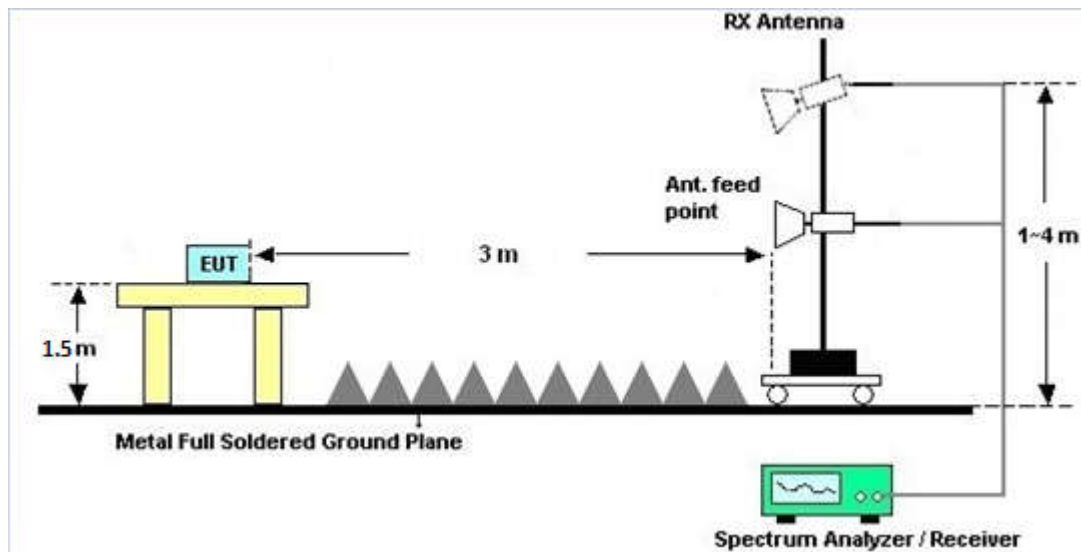
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 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.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B.

3.5.7 Duty Cycle

Please refer to Appendix C.

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

Please refer to Appendix B.

3.6 AC Conducted Emission Measurement

3.6.1 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.

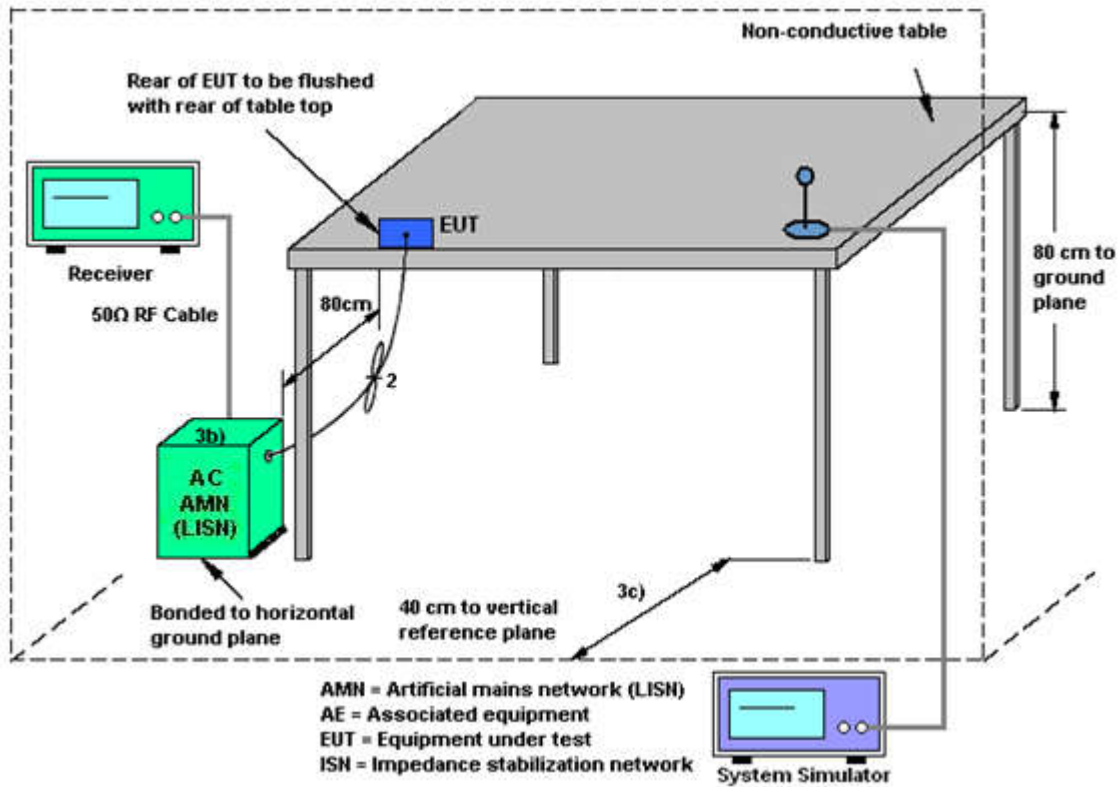
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 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.

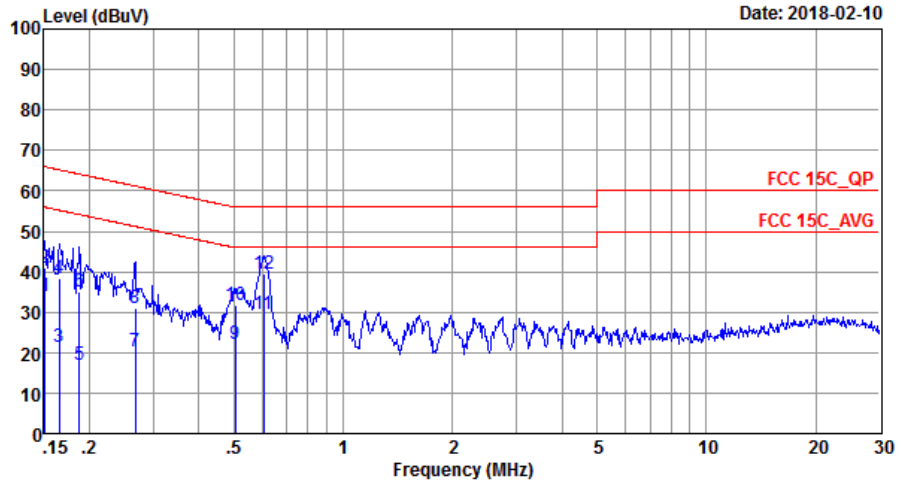
3.6.4 Test Setup





3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	24~25℃
Test Engineer :	Walker YE	Relative Humidity :	50~55 %
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter) + Earphone + SIM1		



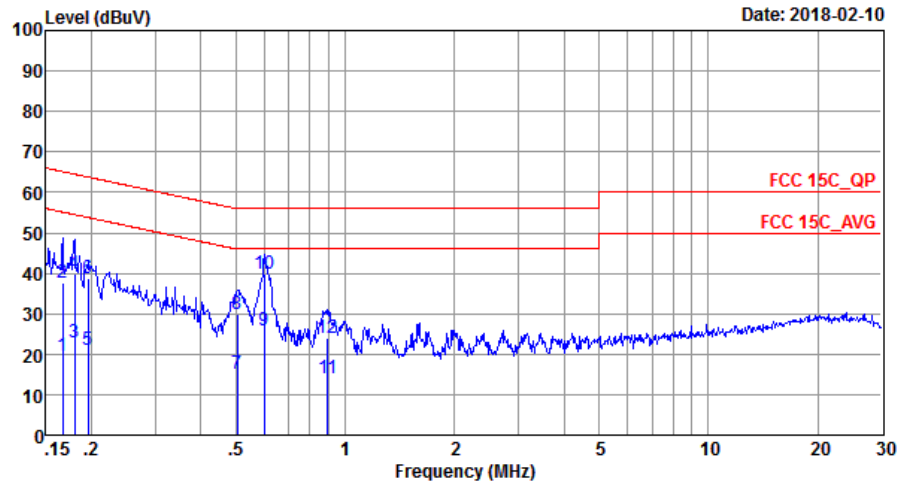
Site : CO01-SZ
Condition: FCC 15C QP LISN 20170907_L LINE

IMEI : 868263030005057/868263030006550

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	34.09	-21.87	55.96	24.00	0.03	10.06	Average
2	0.15	40.99	-24.97	65.96	30.90	0.03	10.06	QP
3	0.17	21.30	-33.91	55.21	11.20	0.03	10.07	Average
4	0.17	38.40	-26.81	65.21	28.30	0.03	10.07	QP
5	0.19	16.80	-37.35	54.15	6.70	0.03	10.07	Average
6	0.19	34.99	-29.16	64.15	24.89	0.03	10.07	QP
7	0.27	20.21	-30.99	51.20	10.10	0.03	10.08	Average
8	0.27	31.01	-30.19	61.20	20.90	0.03	10.08	QP
9	0.50	22.00	-24.00	46.00	11.90	0.02	10.08	Average
10	0.50	31.80	-24.20	56.00	21.70	0.02	10.08	QP
11 *	0.60	29.70	-16.30	46.00	19.60	0.02	10.08	Average
12	0.60	39.50	-16.50	56.00	29.40	0.02	10.08	QP



Test Mode :	Mode 1	Temperature :	24~25°C
Test Engineer :	Walker YE	Relative Humidity :	50~55 %
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter) + Earphone + SIM1		



Site : CO01-SZ
Condition: FCC 15C QP LISN 20170907_N NEUTRAL

IMEI : 868263030005057/868263030006550

	Freq	Level	Over Limit	Limit	Read	LISN	Cable	
	MHz	dBuV	dB	dBuV	Level	Factor	Loss	Remark
1	0.17	19.40	-35.72	55.12	9.30	0.03	10.07	Average
2	0.17	37.69	-27.43	65.12	27.59	0.03	10.07	QP
3	0.18	22.69	-31.81	54.50	12.59	0.03	10.07	Average
4	0.18	39.80	-24.70	64.50	29.70	0.03	10.07	QP
5	0.20	21.00	-32.80	53.80	10.90	0.03	10.07	Average
6	0.20	38.80	-25.00	63.80	28.70	0.03	10.07	QP
7	0.50	15.30	-30.70	46.00	5.20	0.02	10.08	Average
8	0.50	29.80	-26.20	56.00	19.70	0.02	10.08	QP
9	0.60	25.80	-20.20	46.00	15.70	0.02	10.08	Average
10 *	0.60	40.00	-16.00	56.00	29.90	0.02	10.08	QP
11	0.89	14.03	-31.97	46.00	3.90	0.04	10.09	Average
12	0.89	23.83	-32.17	56.00	13.70	0.04	10.09	QP

3.7 Antenna Requirements

3.7.1 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.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain "DG" is calculated as following table.

			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 1	Ant. 2	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
2.4 GHz	-2.80	-3.00	-2.80	0.11	0.00	0.00

Power Limit Reduction = $DG(\text{Power}) - 6\text{dBi}$, (min = 0)

PSD Limit Reduction = $DG(\text{PSD}) - 6\text{dBi}$, (min = 0)



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	9kHz~40GHz	Apr. 20, 2017	Feb. 11, 2018~ Mar. 05, 2018	Apr. 19, 2018	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 26, 2017	Feb. 11, 2018~ Mar. 05, 2018	Dec. 25, 2018	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 26, 2017	Feb. 11, 2018~ Mar. 05, 2018	Dec. 25, 2018	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Apr. 20, 2017	Feb. 10, 2018~ Feb. 16, 2018	Apr. 19, 2018	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 20, 2017	Feb. 10, 2018~ Feb. 16, 2018	Apr. 19, 2018	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 14, 2017	Feb. 10, 2018~ Feb. 16, 2018	May 13, 2018	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	May 16, 2017	Feb. 10, 2018~ Feb. 16, 2018	May 15, 2018	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1285	1GHz~18GHz	Dec. 13, 2017	Feb. 10, 2018~ Feb. 16, 2018	Dec. 12, 2018	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	May 17, 2017	Feb. 10, 2018~ Feb. 16, 2018	May 16, 2018	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz~3000MHz	Oct. 19, 2017	Feb. 10, 2018~ Feb. 16, 2018	Oct. 18, 2018	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P-R	1989346	1GHz~18GHz	Jul. 27, 2017	Feb. 10, 2018~ Feb. 16, 2018	Jul. 26, 2018	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35-H G	1988315	18GHz~40GHz	Jul. 27, 2017	Feb. 10, 2018~ Feb. 16, 2018	Jul. 26, 2018	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY53270156	500MHz~26.5GHz	Apr. 20, 2017	Feb. 10, 2018~ Feb. 16, 2018	Apr. 19, 2018	Radiation (03CH04-SZ)
AC Power Source	Chroma	61601	N/A	N/A	NCR	Feb. 10, 2018~ Feb. 16, 2018	NCR	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Feb. 10, 2018~ Feb. 16, 2018	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Feb. 10, 2018~ Feb. 16, 2018	NCR	Radiation (03CH04-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 26, 2017	Feb. 10, 2018	Dec. 25, 2018	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Dec. 26, 2017	Feb. 10, 2018	Dec. 25, 2018	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	3816/2SH	00103892	9kHz~30MHz	Nov. 01, 2017	Feb. 10, 2018	Oct. 31, 2018	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 19, 2017	Feb. 10, 2018	Jul. 18, 2018	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.6 dB
--	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.1 dB
--	--------

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.8 dB
--	--------

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.1 dB
--	--------



Appendix A. Conducted Test Results

Test Engineer:	Sam Zheng	Temperature:	24~26	°C
Test Date:	2018/2/11~2018/3/05	Relative Humidity:	50~53	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2		
11b	1Mbps	2	1	2412	14.34	13.89	8.05	8.07	0.50	Pass
11b	1Mbps	2	6	2437	14.49	14.64	9.03	9.03	0.50	Pass
11b	1Mbps	2	11	2462	14.09	14.19	8.07	8.07	0.50	Pass
11g	6Mbps	2	1	2412	17.53	17.48	15.33	15.68	0.50	Pass
11g	6Mbps	2	6	2437	17.68	17.53	15.45	16.38	0.50	Pass
11g	6Mbps	2	11	2462	17.53	17.53	15.29	15.43	0.50	Pass
HT20	MCS0	2	1	2412	18.68	18.68	15.68	15.94	0.50	Pass
HT20	MCS0	2	6	2437	18.78	18.68	15.94	16.50	0.50	Pass
HT20	MCS0	2	11	2462	18.68	18.63	15.92	15.92	0.50	Pass
HT40	MCS0	2	3	2422	36.36	36.46	35.09	35.13	0.50	Pass
HT40	MCS0	2	6	2437	36.76	36.36	35.68	35.13	0.50	Pass
HT40	MCS0	2	9	2452	36.46	36.46	35.13	35.13	0.50	Pass

TEST RESULTS DATA
Peak Output Power

2.4GHz Band																
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	2	1	2412	20.74	18.00	22.59	30.00		-2.80		19.79		36.00		Pass
11b	1Mbps	2	6	2437	21.27	18.00	22.95	30.00		-2.80		20.15		36.00		Pass
11b	1Mbps	2	11	2462	21.20	17.86	22.85	30.00		-2.80		20.05		36.00		Pass
11g	6Mbps	2	1	2412	19.87	16.81	21.61	30.00		-2.80		18.81		36.00		Pass
11g	6Mbps	2	6	2437	22.59	19.07	24.19	30.00		-2.80		21.39		36.00		Pass
11g	6Mbps	2	11	2462	21.11	16.92	22.51	30.00		-2.80		19.71		36.00		Pass
HT20	MCS0	2	1	2412	21.02	18.20	22.85	30.00		-2.80		20.05		36.00		Pass
HT20	MCS0	2	6	2437	22.60	19.15	24.22	30.00		-2.80		21.42		36.00		Pass
HT20	MCS0	2	11	2462	20.92	16.70	22.31	30.00		-2.80		19.51		36.00		Pass
HT40	MCS0	2	3	2422	19.43	16.43	21.19	30.00		-2.80		18.39		36.00		Pass
HT40	MCS0	2	6	2437	20.92	17.45	22.53	30.00		-2.80		19.73		36.00		Pass
HT40	MCS0	2	9	2452	19.60	16.90	21.47	30.00		-2.80		18.67		36.00		Pass
VHT20	MCS0	2	1	2412	20.98	18.15	22.80	30.00		-2.80		20.00		36.00		Pass
VHT20	MCS0	2	6	2437	22.53	19.10	24.16	30.00		-2.80		21.36		36.00		Pass
VHT20	MCS0	2	11	2462	20.81	16.63	22.21	30.00		-2.80		19.41		36.00		Pass
VHT40	MCS0	2	3	2422	19.41	16.41	21.17	30.00		-2.80		18.37		36.00		Pass
VHT40	MCS0	2	6	2437	20.87	17.32	22.46	30.00		-2.80		19.66		36.00		Pass
VHT40	MCS0	2	9	2452	19.57	16.85	21.43	30.00		-2.80		18.63		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Average Output Power

2.4GHz Band									
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant 1	Ant 2	Ant 1	Ant 2	SUM
11b	1Mbps	2	1	2412	0.05	0.03	18.55	15.66	20.35
11b	1Mbps	2	6	2437	0.05	0.03	19.00	15.87	20.72
11b	1Mbps	2	11	2462	0.05	0.03	18.98	15.41	20.56
11g	6Mbps	2	1	2412	0.09	0.08	15.24	11.94	16.91
11g	6Mbps	2	6	2437	0.09	0.08	17.73	14.30	19.35
11g	6Mbps	2	11	2462	0.09	0.08	15.74	11.76	17.20
HT20	MCS0	2	1	2412	0.08	0.08	16.13	12.96	17.84
HT20	MCS0	2	6	2437	0.08	0.08	17.61	14.21	19.25
HT20	MCS0	2	11	2462	0.08	0.08	15.44	11.52	16.92
HT40	MCS0	2	3	2422	0.21	0.23	12.85	9.36	14.46
HT40	MCS0	2	6	2437	0.21	0.23	14.56	10.85	16.10
HT40	MCS0	2	9	2452	0.21	0.23	13.50	10.37	15.22
VHT20	MCS0	2	1	2412	0.17	0.15	16.07	12.94	17.79
VHT20	MCS0	2	6	2437	0.17	0.15	17.58	14.19	19.22
VHT20	MCS0	2	11	2462	0.17	0.15	15.40	11.51	16.89
VHT40	MCS0	2	3	2422	0.43	0.43	12.78	9.26	14.38
VHT40	MCS0	2	6	2437	0.43	0.43	14.51	10.78	16.04
VHT40	MCS0	2	9	2452	0.43	0.43	13.41	10.25	15.12

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant 1	Ant 2	Worse + 3.01	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	2	1	2412	-8.24	-10.92	-5.23	0.11		8.00		Pass
11b	1Mbps	2	6	2437	-8.33	-11.05	-5.32	0.11		8.00		Pass
11b	1Mbps	2	11	2462	-8.49	-10.76	-5.48	0.11		8.00		Pass
11g	6Mbps	2	1	2412	-7.10	-11.27	-4.09	0.11		8.00		Pass
11g	6Mbps	2	6	2437	-7.53	-11.09	-4.52	0.11		8.00		Pass
11g	6Mbps	2	11	2462	-7.55	-11.90	-4.54	0.11		8.00		Pass
HT20	MCS0	2	1	2412	-7.55	-10.72	-4.54	0.11		8.00		Pass
HT20	MCS0	2	6	2437	-6.79	-11.16	-3.78	0.11		8.00		Pass
HT20	MCS0	2	11	2462	-7.00	-11.09	-3.99	0.11		8.00		Pass
HT40	MCS0	2	3	2422	-11.86	-15.96	-8.85	0.11		8.00		Pass
HT40	MCS0	2	6	2437	-12.57	-15.56	-9.56	0.11		8.00		Pass
HT40	MCS0	2	9	2452	-12.12	-14.61	-9.11	0.11		8.00		Pass

Measured power density (dBm) has offset with cable loss.



Appendix B. Radiated Spurious Emission

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2388.855	50.34	-23.66	74	46.61	27.43	4.78	28.48	115	311	P	H
		2387.175	43.75	-10.25	54	40.02	27.43	4.78	28.48	115	311	A	H
	*	2412	104.77	-	-	100.86	27.49	4.78	28.36	115	311	P	H
	*	2412	102.3	-	-	98.39	27.49	4.78	28.36	115	311	A	H
		2387.07	49.58	-24.42	74	45.85	27.43	4.78	28.48	110	275	P	V
		2387.28	43	-11	54	39.27	27.43	4.78	28.48	110	275	A	V
	*	2412	106.68	-	-	102.77	27.49	4.78	28.36	110	275	P	V
	*	2412	102.83	-	-	98.92	27.49	4.78	28.36	110	275	A	V
802.11b CH 06 2437MHz		2389.66	48.07	-25.93	74	44.34	27.43	4.78	28.48	115	311	P	H
		2386.86	38.09	-15.91	54	34.36	27.43	4.78	28.48	115	311	A	H
	*	2437	106.43	-	-	102.24	27.61	4.82	28.24	115	311	P	H
	*	2437	103.7	-	-	99.51	27.61	4.82	28.24	115	311	A	H
		2485.23	46.97	-27.03	74	42.39	27.74	4.85	28.01	115	311	P	H
		2484.74	37.28	-16.72	54	32.7	27.74	4.85	28.01	115	311	A	H
		2389.1	46.49	-27.51	74	42.76	27.43	4.78	28.48	110	275	P	V
		2389.52	38.16	-15.84	54	34.43	27.43	4.78	28.48	110	275	A	V
	*	2437	107.67	-	-	103.48	27.61	4.82	28.24	110	275	P	V
	*	2437	104.44	-	-	100.25	27.61	4.82	28.24	110	275	A	V
		2485.02	46.2	-27.8	74	41.62	27.74	4.85	28.01	110	275	P	V
		2484.6	36.9	-17.1	54	32.32	27.74	4.85	28.01	110	275	A	V



802.11b CH 11 2462MHz	*	2462	107.78	-	-	103.41	27.68	4.82	28.13	115	311	P	H
	*	2462	104.84	-	-	100.47	27.68	4.82	28.13	115	311	A	H
		2483.76	48.18	-25.82	74	43.6	27.74	4.85	28.01	115	311	P	H
		2483.52	40.17	-13.83	54	35.59	27.74	4.85	28.01	115	311	A	H
	*	2462	107.75	-	-	103.38	27.68	4.82	28.13	110	275	P	V
	*	2462	104.56	-	-	100.19	27.68	4.82	28.13	110	275	A	V
		2484.08	47.95	-26.05	74	43.37	27.74	4.85	28.01	110	275	P	V
		2483.52	38.43	-15.57	54	33.85	27.74	4.85	28.01	110	275	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 802.11b (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	36.12	-37.88	74	57.27	31.49	5.55	58.19	152	260	P	H
		4824	36.79	-37.21	74	57.94	31.49	5.55	58.19	152	260	P	V
802.11b CH 06 2437MHz		4874	35.79	-38.21	74	56.63	31.61	5.65	58.1	152	260	P	H
		7311	42.85	-31.15	74	57.34	36.17	7.26	57.92	189	238	P	H
		4874	37.08	-36.92	74	57.92	31.61	5.65	58.1	152	260	P	V
		7311	43.03	-30.97	74	57.52	36.17	7.26	57.92	189	238	P	V
802.11b CH 11 2462MHz		4924	36.87	-37.13	74	57.3	31.73	5.86	58.02	152	260	P	H
		7386	42.86	-31.14	74	57.03	36.28	7.2	57.65	189	238	P	H
		4924	37.45	-36.55	74	57.88	31.73	5.86	58.02	152	260	P	V
		7386	42.54	-31.46	74	56.71	36.28	7.2	57.65	189	238	P	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 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2389.38	54.89	-19.11	74	51.16	27.43	4.78	28.48	139	320	P	H
		2389.695	45.77	-8.23	54	42.04	27.43	4.78	28.48	139	320	A	H
	*	2412	106.69	-	-	102.78	27.49	4.78	28.36	139	320	P	H
	*	2412	98.76	-	-	94.85	27.49	4.78	28.36	139	320	A	H
		2386.23	54.76	-19.24	74	51.03	27.43	4.78	28.48	131	273	P	V
		2389.8	45.55	-8.45	54	41.7	27.43	4.78	28.36	131	273	A	V
	*	2412	107.38	-	-	103.47	27.49	4.78	28.36	131	273	P	V
	*	2412	100.26	-	-	96.35	27.49	4.78	28.36	131	273	A	V
802.11g CH 06 2437MHz		2389.52	52.67	-21.33	74	48.94	27.43	4.78	28.48	116	318	P	H
		2389.66	44.12	-9.88	54	40.39	27.43	4.78	28.48	116	318	A	H
	*	2437	108.38	-	-	104.19	27.61	4.82	28.24	116	318	P	H
	*	2437	101.37	-	-	97.18	27.61	4.82	28.24	116	318	A	H
		2483.55	49.61	-24.39	74	45.03	27.74	4.85	28.01	116	318	P	H
		2483.5	42.15	-11.85	54	37.57	27.74	4.85	28.01	116	318	A	H
		2389.52	54.56	-19.44	74	50.83	27.43	4.78	28.48	156	273	P	V
		2389.94	45.72	-8.28	54	41.87	27.43	4.78	28.36	156	273	A	V
	*	2437	110.5	-	-	106.31	27.61	4.82	28.24	156	273	P	V
	*	2437	102.92	-	-	98.73	27.61	4.82	28.24	156	273	A	V
		2484.32	51.53	-22.47	74	46.95	27.74	4.85	28.01	156	273	P	V
		2484.39	41.53	-12.47	54	36.95	27.74	4.85	28.01	156	273	A	V



802.11g CH 11 2462MHz	*	2462	106.59	-	-	102.22	27.68	4.82	28.13	135	317	P	H
	*	2462	99.22	-	-	94.85	27.68	4.82	28.13	135	317	A	H
		2483.92	55.11	-18.89	74	50.53	27.74	4.85	28.01	135	317	P	H
		2484.04	45.39	-8.61	54	40.81	27.74	4.85	28.01	135	317	A	H
	*	2462	108.46	-	-	104.09	27.68	4.82	28.13	179	273	P	V
	*	2462	100.78	-	-	96.41	27.68	4.82	28.13	179	273	A	V
		2486.36	54.45	-19.55	74	49.87	27.74	4.85	28.01	179	273	P	V
		2483.52	46.03	-7.97	54	41.45	27.74	4.85	28.01	179	273	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 802.11g (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	33.96	-40.04	74	55.11	31.49	5.55	58.19	152	260	P	H
		4824	33.86	-40.14	74	55.01	31.49	5.55	58.19	152	260	P	V
802.11g CH 06 2437MHz		4874	35.86	-38.14	74	56.7	31.61	5.65	58.1	152	260	P	H
		7311	42.1	-31.9	74	56.59	36.17	7.26	57.92	189	238	P	H
		4874	36.88	-37.12	74	57.72	31.61	5.65	58.1	152	260	P	V
		7311	41.65	-32.35	74	56.14	36.17	7.26	57.92	189	238	P	V
802.11g CH 11 2462MHz		4924	35.41	-38.59	74	55.84	31.73	5.86	58.02	152	260	P	H
		7386	42.57	-31.43	74	56.74	36.28	7.2	57.65	189	238	P	H
		4924	35.92	-38.08	74	56.35	31.73	5.86	58.02	152	260	P	V
		7386	42.41	-31.59	74	56.58	36.28	7.2	57.65	189	238	P	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 HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2389.695	56.93	-17.07	74	53.2	27.43	4.78	28.48	100	215	P	H
		2389.695	48.4	-5.6	54	44.67	27.43	4.78	28.48	100	215	A	H
	*	2412	105.29	-	-	101.38	27.49	4.78	28.36	100	215	P	H
	*	2412	97.84	-	-	93.93	27.49	4.78	28.36	100	215	A	H
		2389.59	57.96	-16.04	74	54.23	27.43	4.78	28.48	133	263	P	V
		2389.8	49.92	-4.08	54	46.07	27.43	4.78	28.36	133	263	A	V
	*	2412	107.59	-	-	103.68	27.49	4.78	28.36	133	263	P	V
	*	2412	99.96	-	-	96.05	27.49	4.78	28.36	133	263	A	V
802.11n HT20 CH 06 2437MHz		2389.94	54.04	-19.96	74	50.19	27.43	4.78	28.36	108	306	P	H
		2389.94	43.4	-10.6	54	39.55	27.43	4.78	28.36	108	306	A	H
	*	2437	107.82	-	-	103.63	27.61	4.82	28.24	108	306	P	H
	*	2437	100.01	-	-	95.82	27.61	4.82	28.24	108	306	A	H
		2484.53	50.28	-23.72	74	45.7	27.74	4.85	28.01	108	306	P	H
		2483.69	41.07	-12.93	54	36.49	27.74	4.85	28.01	108	306	A	H
		2389.94	53.92	-20.08	74	50.07	27.43	4.78	28.36	157	263	P	V
		2389.8	43.98	-10.02	54	40.13	27.43	4.78	28.36	157	263	A	V
	*	2437	110.23	-	-	106.04	27.61	4.82	28.24	157	263	P	V
	*	2437	101.93	-	-	97.74	27.61	4.82	28.24	157	263	A	V
		2483.83	52.56	-21.44	74	47.98	27.74	4.85	28.01	157	263	P	V
		2483.55	42.66	-11.34	54	38.08	27.74	4.85	28.01	157	263	A	V



802.11n HT20 CH 11 2462MHz	*	2462	105.89	-	-	101.52	27.68	4.82	28.13	163	307	P	H
	*	2462	98.03	-	-	93.66	27.68	4.82	28.13	163	307	A	H
		2484.12	55.04	-18.96	74	50.46	27.74	4.85	28.01	163	307	P	H
		2483.68	45.43	-8.57	54	40.85	27.74	4.85	28.01	163	307	A	H
	*	2462	105.92	-	-	101.55	27.68	4.82	28.13	159	263	P	V
	*	2462	98.21	-	-	93.84	27.68	4.82	28.13	159	263	A	V
		2484.08	54.82	-19.18	74	50.24	27.74	4.85	28.01	159	263	P	V
		2483.52	46.02	-7.98	54	41.44	27.74	4.85	28.01	159	263	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 HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	35.41	-38.59	74	56.56	31.49	5.55	58.19	152	260	P	H
		4824	34.95	-39.05	74	56.1	31.49	5.55	58.19	152	260	P	V
802.11n HT20 CH 06 2437MHz		4874	36.08	-37.92	74	56.92	31.61	5.65	58.1	152	260	P	H
		7311	41.99	-32.01	74	56.48	36.17	7.26	57.92	189	238	P	H
		4874	37.3	-36.7	74	58.14	31.61	5.65	58.1	152	260	P	V
		7311	42.87	-31.13	74	57.36	36.17	7.26	57.92	189	238	P	V
802.11n HT20 CH 11 2462MHz		4924	34.27	-39.73	74	54.7	31.73	5.86	58.02	152	260	P	H
		7386	42.49	-31.51	74	56.66	36.28	7.2	57.65	189	238	P	H
		4924	35.4	-38.6	74	55.83	31.73	5.86	58.02	152	260	P	V
		7386	41.95	-32.05	74	56.12	36.28	7.2	57.65	189	238	P	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+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2388.68	57.11	-16.89	74	53.38	27.43	4.78	28.48	139	307	P	H
		2389.1	49.48	-4.52	54	45.75	27.43	4.78	28.48	139	307	A	H
	*	2422	102.26	-	-	98.17	27.55	4.78	28.24	139	307	P	H
	*	2422	94.71	-	-	90.62	27.55	4.78	28.24	139	307	A	H
		2483.55	46.44	-27.56	74	41.86	27.74	4.85	28.01	139	307	P	H
		2484.32	37.31	-16.69	54	32.73	27.74	4.85	28.01	139	307	A	H
		2389.94	59.67	-14.33	74	55.82	27.43	4.78	28.36	132	264	P	V
		2389.38	49.69	-4.31	54	45.96	27.43	4.78	28.48	132	264	A	V
	*	2422	104.49	-	-	100.4	27.55	4.78	28.24	132	264	P	V
	*	2422	96.54	-	-	92.45	27.55	4.78	28.24	132	264	A	V
		2484.39	46.58	-27.42	74	42	27.74	4.85	28.01	132	264	P	V
		2483.69	37.44	-16.56	54	32.86	27.74	4.85	28.01	132	264	A	V
802.11n HT40 CH 06 2437MHz		2389.94	57.77	-16.23	74	53.92	27.43	4.78	28.36	108	324	P	H
		2389.94	48.05	-5.95	54	44.2	27.43	4.78	28.36	108	324	A	H
	*	2437	102.69	-	-	98.5	27.61	4.82	28.24	108	324	P	H
	*	2437	95.24	-	-	91.05	27.61	4.82	28.24	108	324	A	H
		2484.81	53.97	-20.03	74	49.39	27.74	4.85	28.01	108	324	P	H
		2484.04	45.51	-8.49	54	40.93	27.74	4.85	28.01	108	324	A	H
		2388.68	57.77	-16.23	74	54.04	27.43	4.78	28.48	158	265	P	V
		2389.24	48.68	-5.32	54	44.95	27.43	4.78	28.48	158	265	A	V
	*	2437	104.96	-	-	100.77	27.61	4.82	28.24	158	265	P	V
	*	2437	96.78	-	-	92.59	27.61	4.82	28.24	158	265	A	V
		2485.51	54.89	-19.11	74	50.31	27.74	4.85	28.01	158	265	P	V
		2483.5	44.39	-9.61	54	39.81	27.74	4.85	28.01	158	265	A	V



802.11n HT40 CH 09 2452MHz		2389.8	47.98	-26.02	74	44.13	27.43	4.78	28.36	134	227	P	H
		2389.94	39.22	-14.78	54	35.37	27.43	4.78	28.36	134	227	A	H
	*	2452	103.68	-	-	99.38	27.61	4.82	28.13	134	227	P	H
	*	2452	95.94	-	-	91.64	27.61	4.82	28.13	134	227	A	H
		2484.11	55.2	-18.8	74	50.62	27.74	4.85	28.01	134	227	P	H
		2483.5	47.29	-6.71	54	42.71	27.74	4.85	28.01	134	227	A	H
		2389.38	48.72	-25.28	74	44.99	27.43	4.78	28.48	166	293	P	V
		2389.8	40.26	-13.74	54	36.41	27.43	4.78	28.36	166	293	A	V
	*	2452	102.88	-	-	98.58	27.61	4.82	28.13	166	293	P	V
	*	2452	95.55	-	-	91.25	27.61	4.82	28.13	166	293	A	V
		2483.9	55.08	-18.92	74	50.5	27.74	4.85	28.01	166	293	P	V
		2483.5	47.03	-6.97	54	42.45	27.74	4.85	28.01	166	293	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+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		4844	36.24	-37.76	74	57.22	31.53	5.65	58.16	164	360	P	H
		7266	43.59	-30.41	74	58.2	36.13	7.29	58.03	164	360	P	H
		4844	35.95	-38.05	74	56.93	31.53	5.65	58.16	164	360	P	V
		7266	43.64	-30.36	74	58.25	36.13	7.29	58.03	164	360	P	V
802.11n HT40 CH 06 2437MHz		4874	36.96	-37.04	74	57.8	31.61	5.65	58.1	152	260	P	H
		7311	43.28	-30.72	74	57.77	36.17	7.26	57.92	189	238	P	H
		4874	36.53	-37.47	74	57.37	31.61	5.65	58.1	152	260	P	V
		7311	43.99	-30.01	74	58.48	36.17	7.26	57.92	189	238	P	V
802.11n HT40 CH 09 2452MHz		4904	36.27	-37.73	74	56.86	31.69	5.76	58.04	163	360	P	H
		7356	42.59	-31.41	74	56.89	36.23	7.23	57.76	163	360	P	H
		4904	35.97	-38.03	74	56.56	31.69	5.76	58.04	163	360	P	V
		7356	42.54	-31.46	74	56.84	36.23	7.23	57.76	163	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT20 LF		30.97	24.5	-15.5	40	31.77	24.43	0.27	31.97	-	-	P	H
		262.8	21.84	-24.16	46	31.13	20.2	1.75	31.24	-	-	P	H
		571.26	28.63	-17.37	46	31.99	25.28	2.62	31.26	-	-	P	H
		694.45	30.2	-15.8	46	31.89	26.65	2.92	31.26	-	-	P	H
		784.66	32.52	-13.48	46	32.35	28.22	3.12	31.17	-	-	P	H
		955.38	33.82	-12.18	46	31.72	29.96	3.48	31.34	100	0	P	H
		30.97	24.26	-15.74	40	31.53	24.43	0.27	31.97	-	-	P	V
		88.2	19.04	-24.46	43.5	35.13	14.72	0.97	31.78	-	-	P	V
		260.86	21.6	-24.4	46	30.77	20.33	1.74	31.24	-	-	P	V
		488.81	26.81	-19.19	46	31.89	23.76	2.4	31.24	-	-	P	V
		844.8	32.55	-13.45	46	31.64	28.86	3.24	31.19	100	0	P	V
		963.14	33.69	-20.31	54	31.48	30.06	3.49	31.34	-	-	P	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	P eak or A verage
H/V	H orizontal or V ertical



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(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. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable 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) + Cable 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)

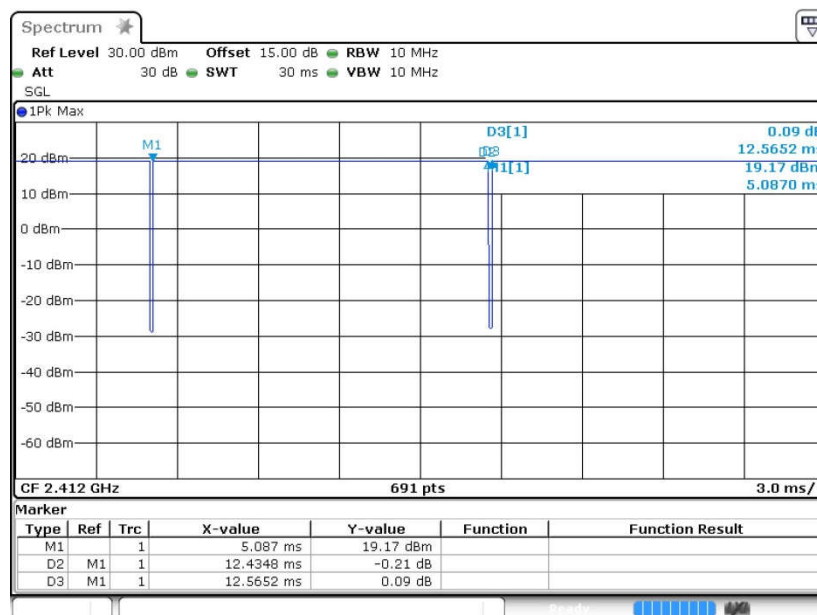
Both peak and average measured complies with the limit line, so test result is “PASS”.

Appendix C. Duty Cycle Plots

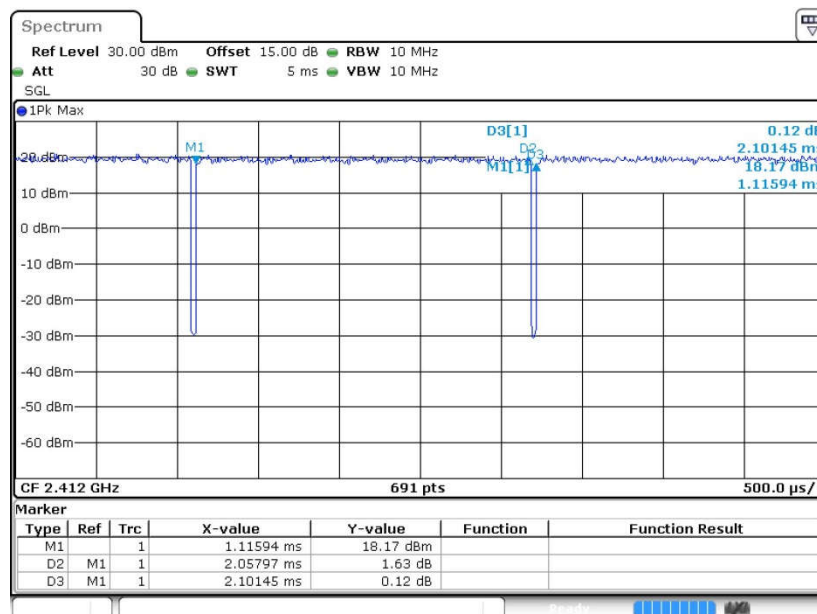
Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
11b ANT1+2	98.96	-	-	10Hz
11g ANT1+2	97.93	2.058	0.486	1KHz
11n HT20 ANT1+2	98.16	-	-	10Hz
11n HT40 ANT1+2	95.22	0.952	1.050	3KHz



11b ANT1+2

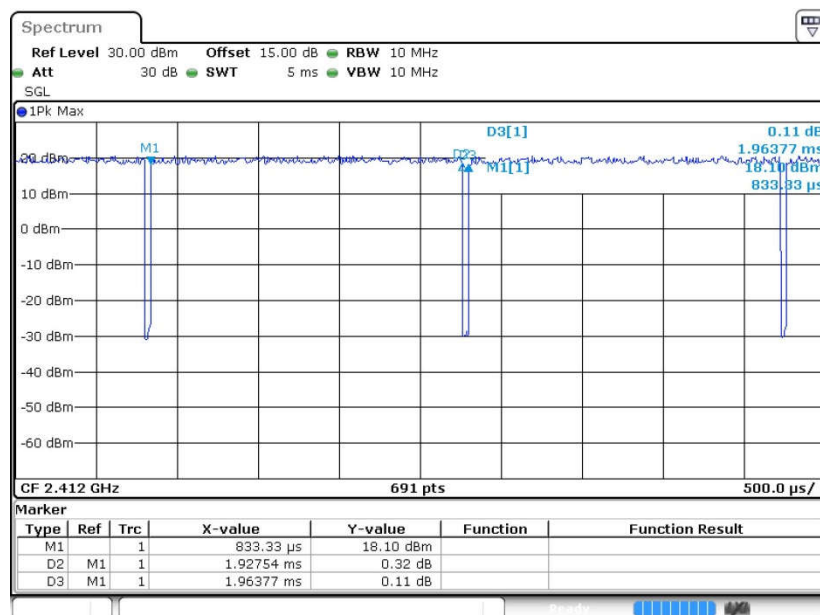


11g ANT1+2





11n HT20 ANT1+2



11n HT40 ANT1+2

