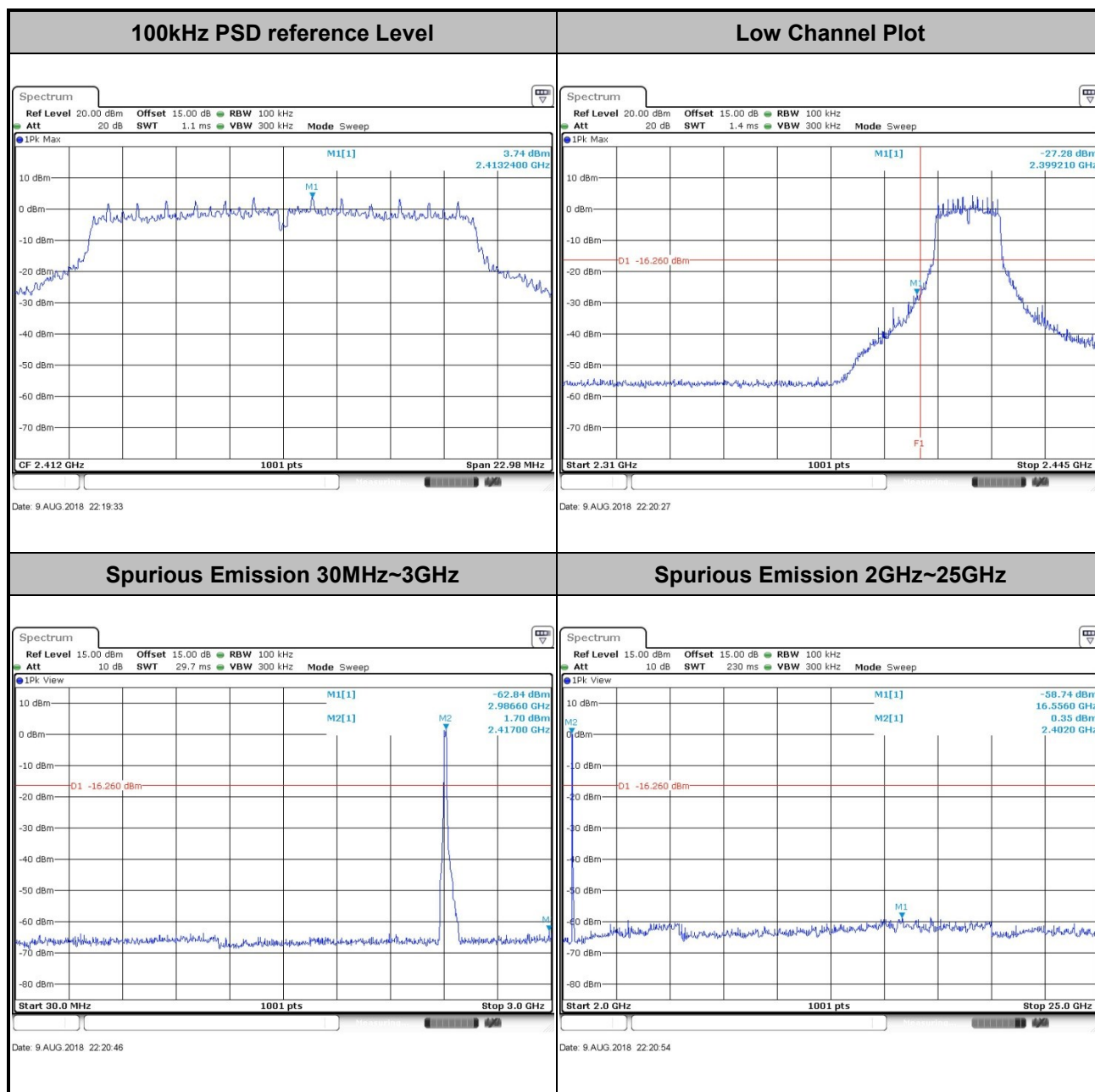




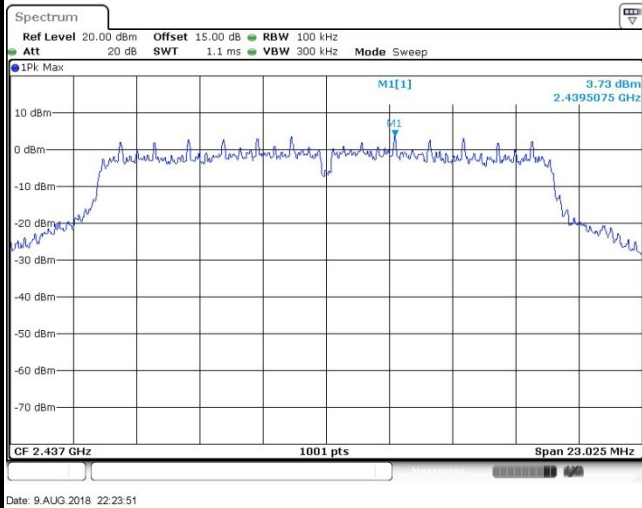
Test Mode :	802.11g	Test Channel :	01
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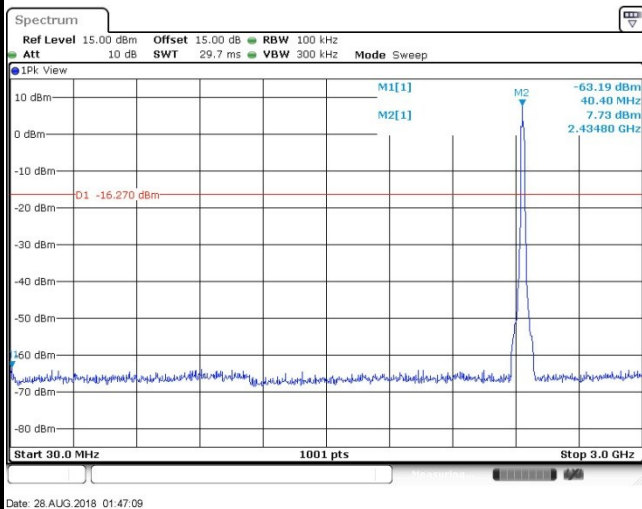


Test Mode :	802.11g	Test Channel :	06
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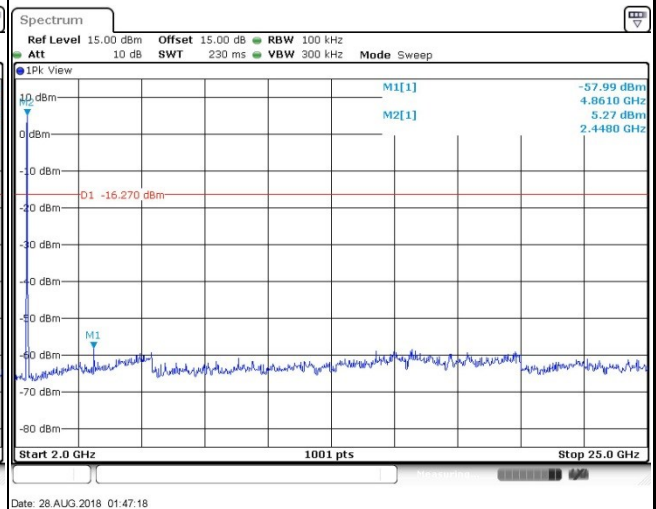
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz

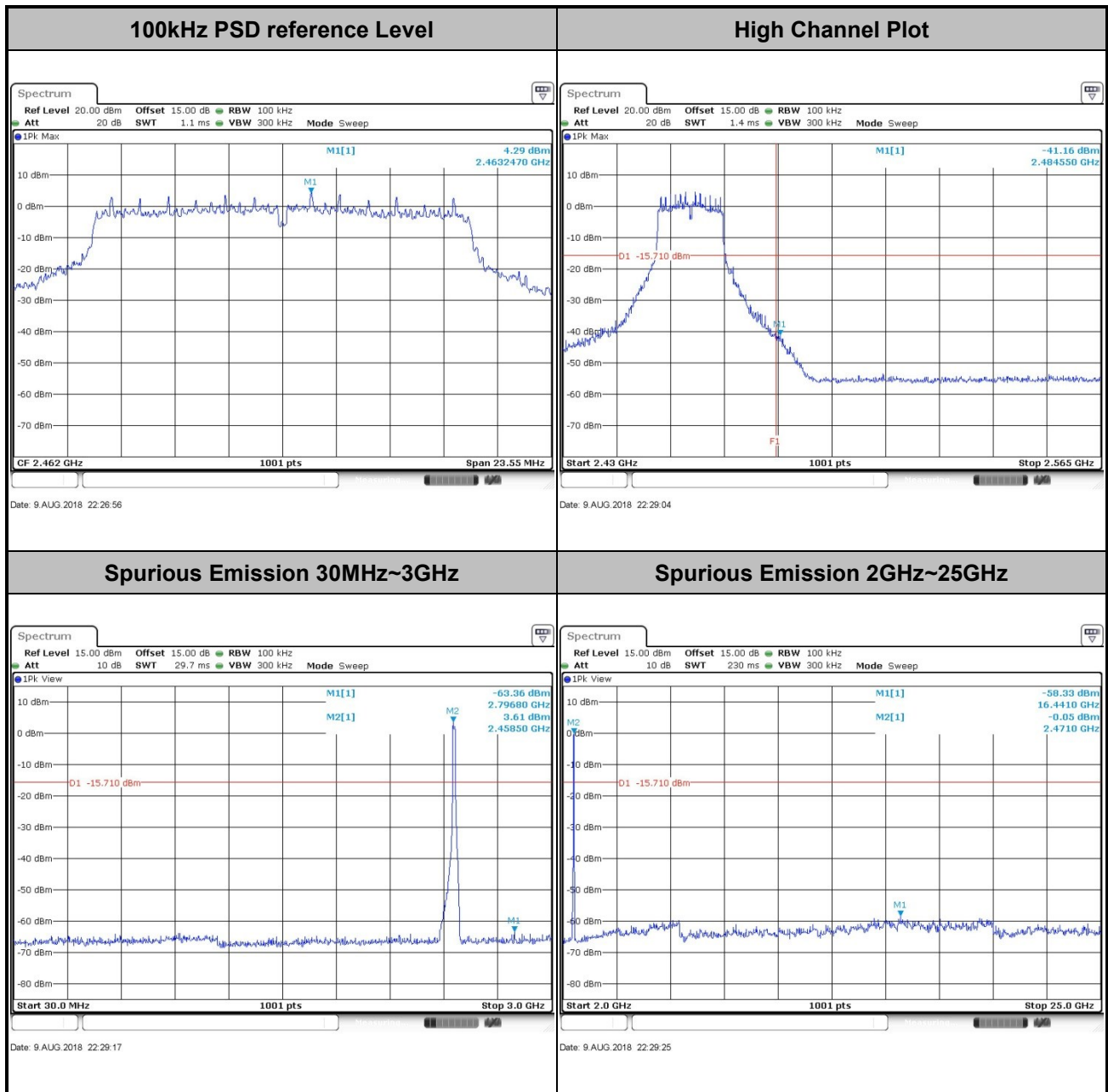


Spurious Emission 2GHz~25GHz





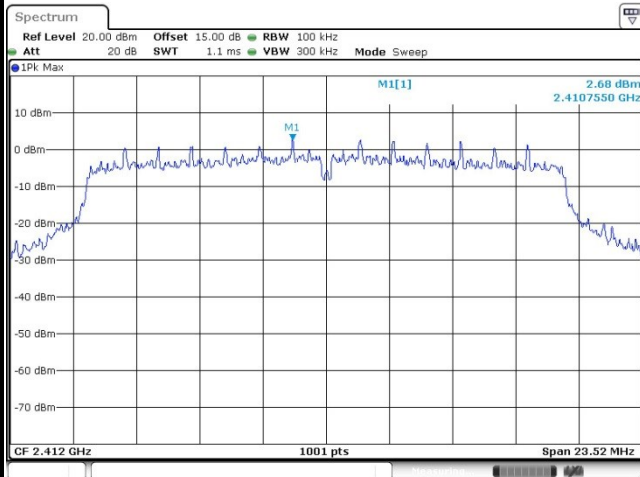
Test Mode :	802.11g	Test Channel :	11
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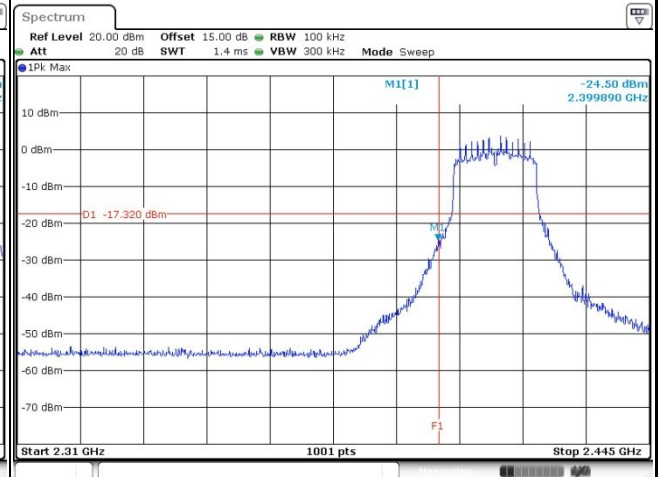
Test Mode :	802.11n HT20	Test Channel :	01
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100kHz PSD reference Level



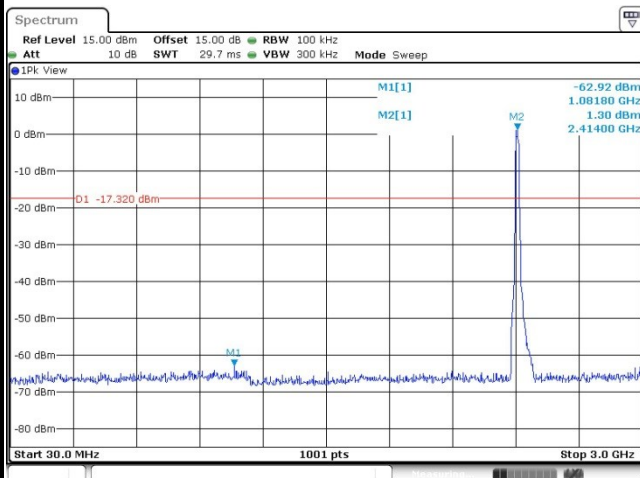
Date: 9 AUG. 2018 22:34:43

Low Channel Plot



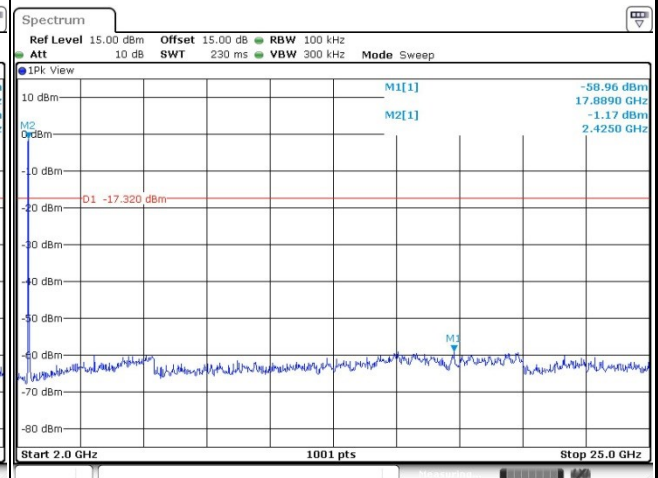
Date: 9 AUG. 2018 22:37:08

Spurious Emission 30MHz~3GHz



Date: 9 AUG. 2018 22:37:25

Spurious Emission 2GHz~25GHz

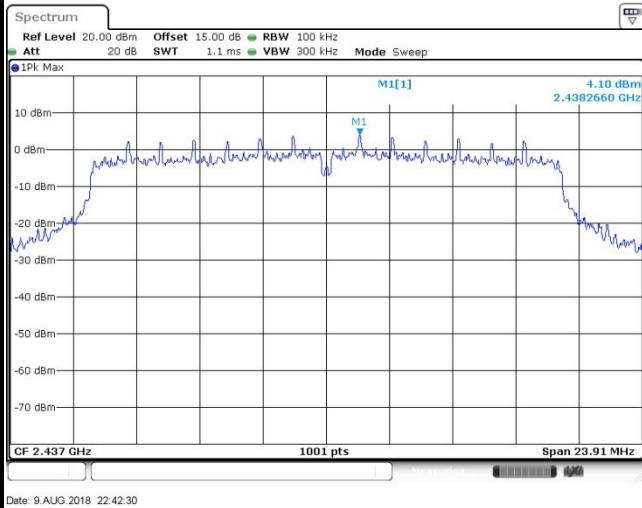


Date: 9 AUG. 2018 22:37:33

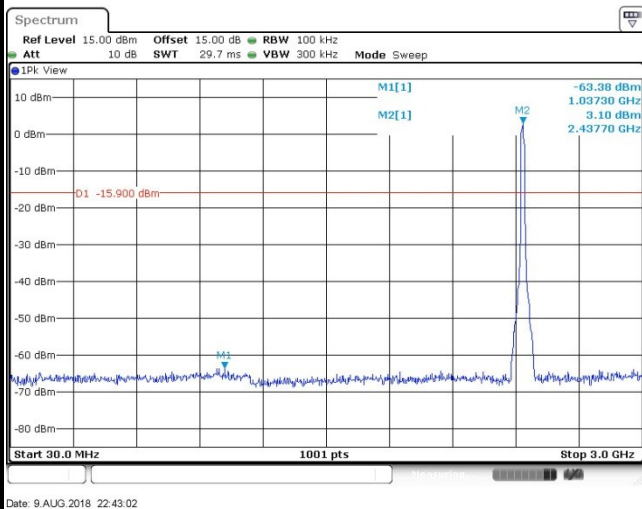


Test Mode :	802.11n HT20	Test Channel :	06
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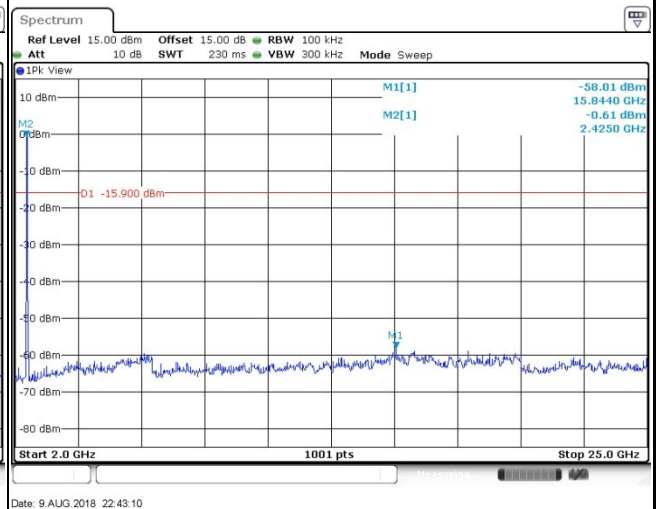
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz

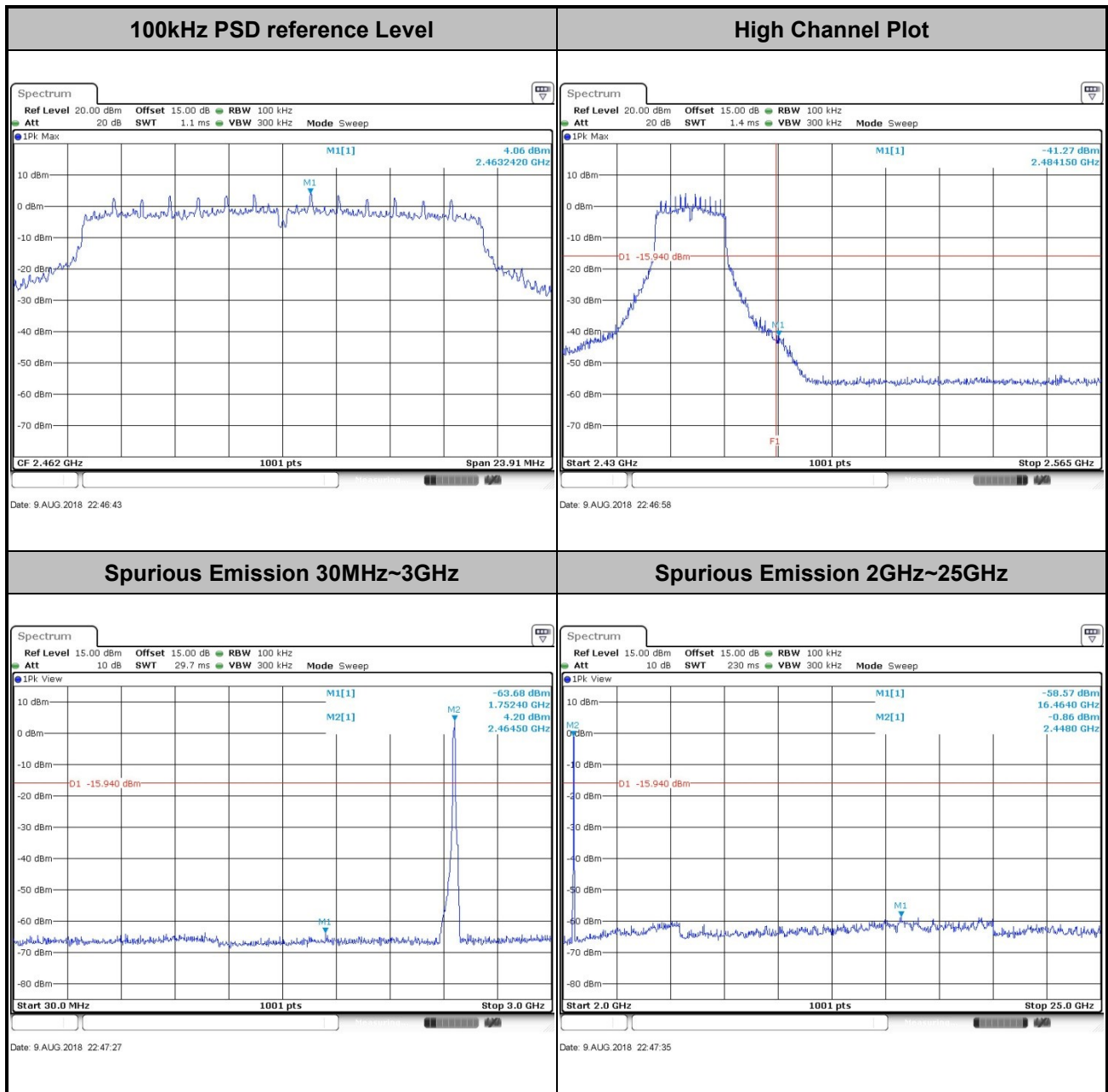


Spurious Emission 2GHz~25GHz



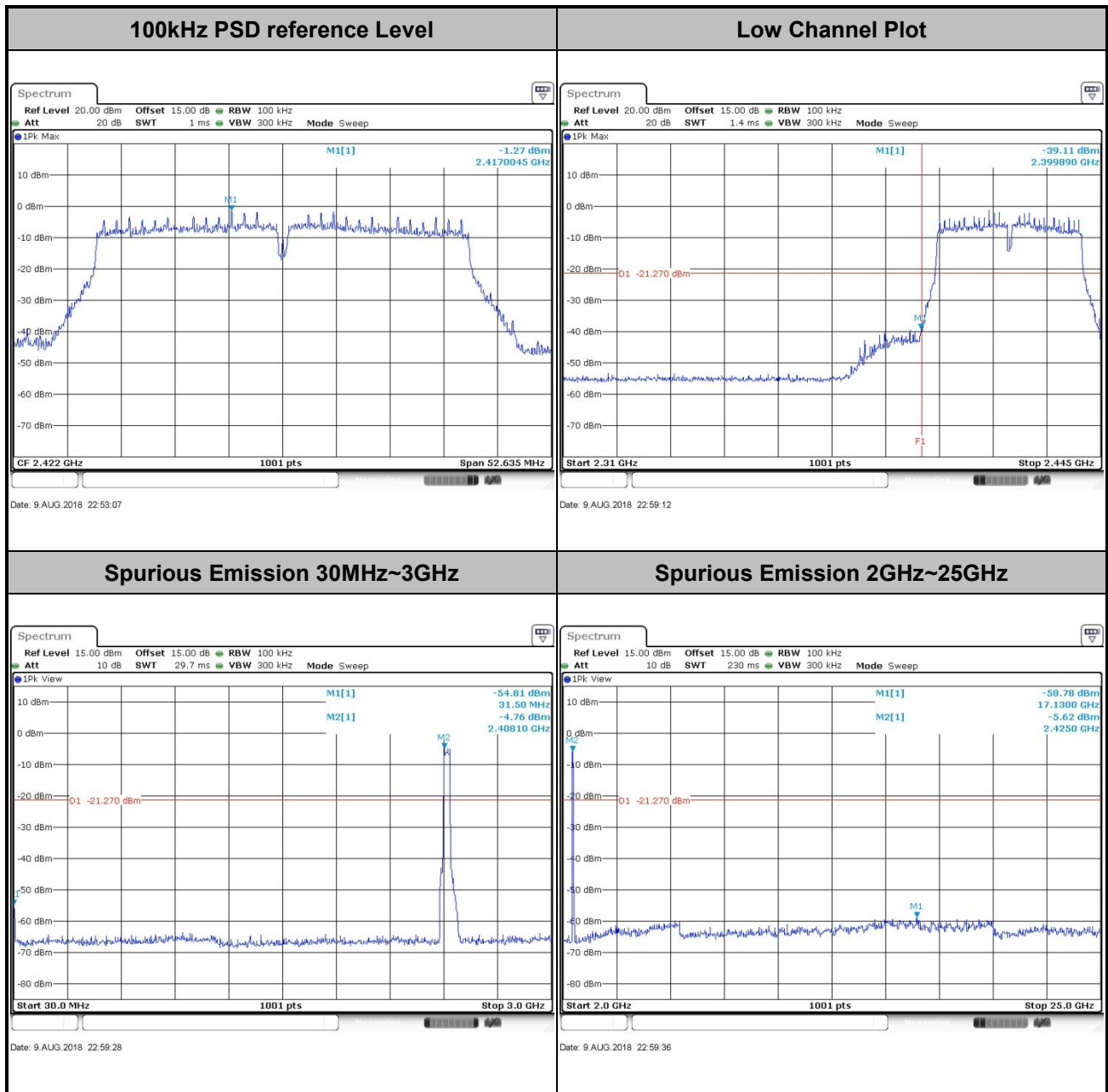


Test Mode :	802.11n HT20	Test Channel :	11
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Test Mode :	802.11n HT40	Test Channel :	03
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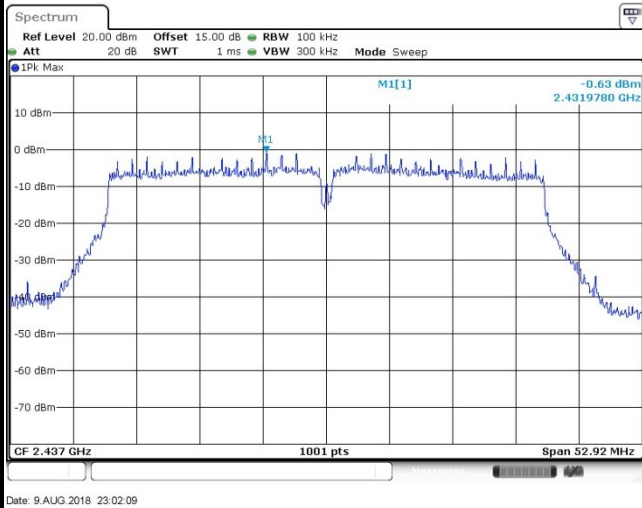




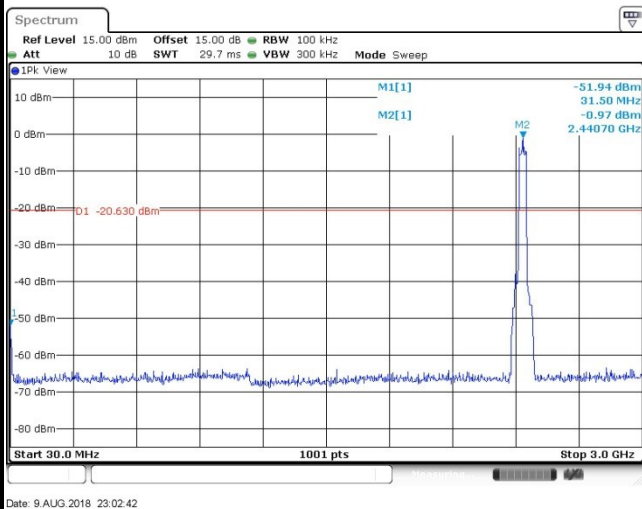
Test Mode : 802.11n HT40

Test Channel : 06

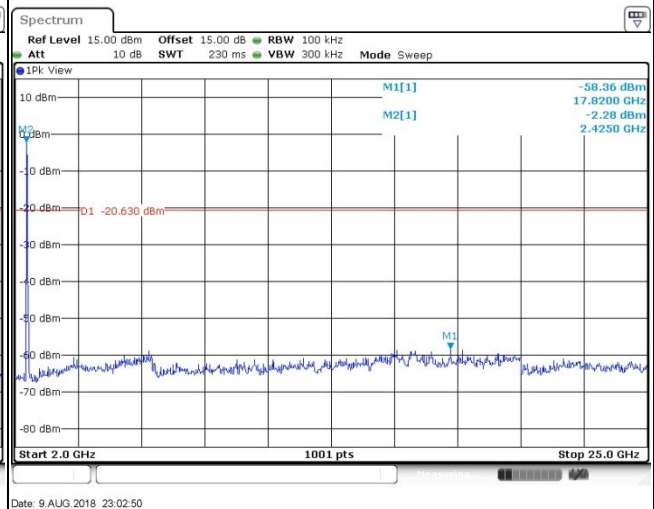
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



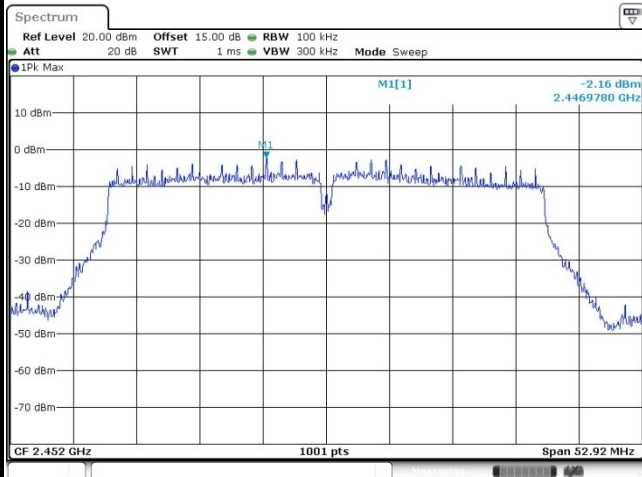
Spurious Emission 2GHz~25GHz



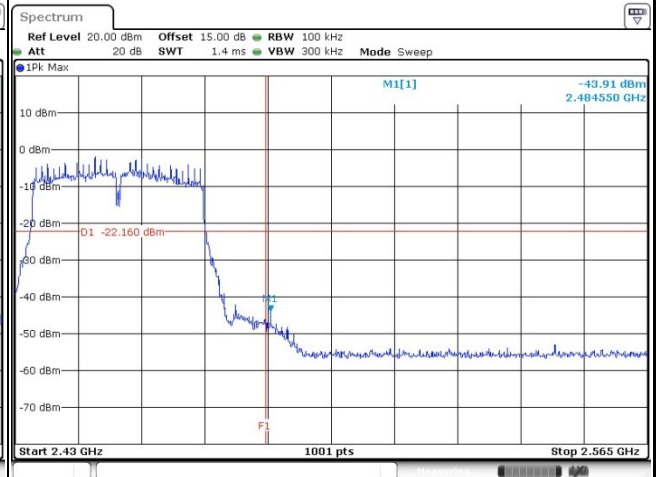


Test Mode :	802.11n HT40	Test Channel :	09
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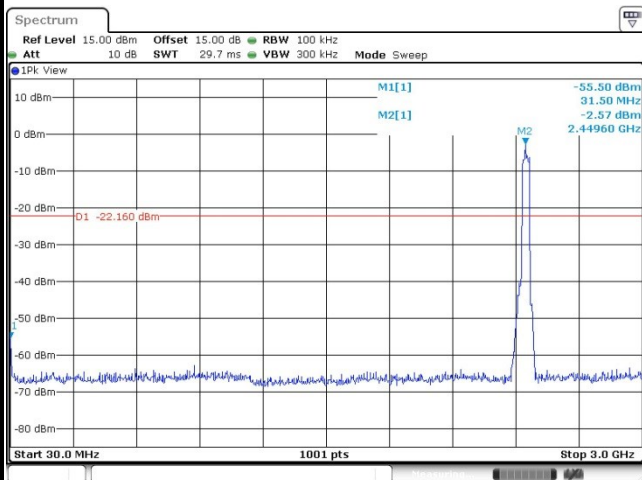
100kHz PSD reference Level



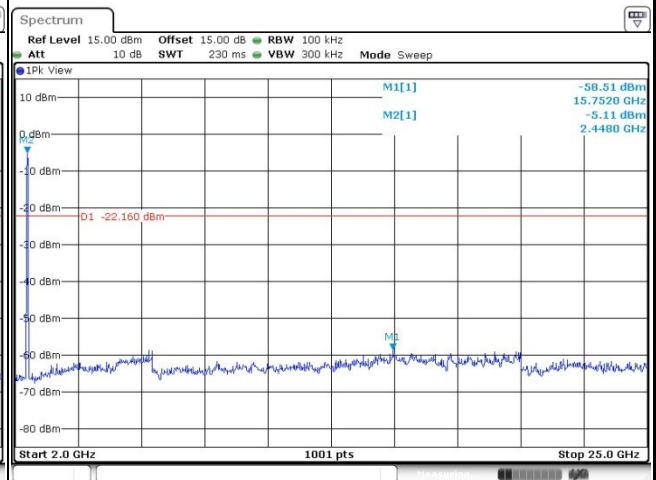
High Channel Plot



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

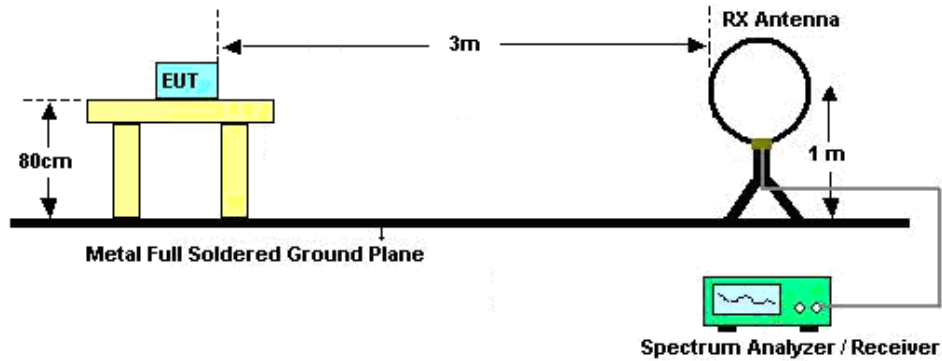
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test 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 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:

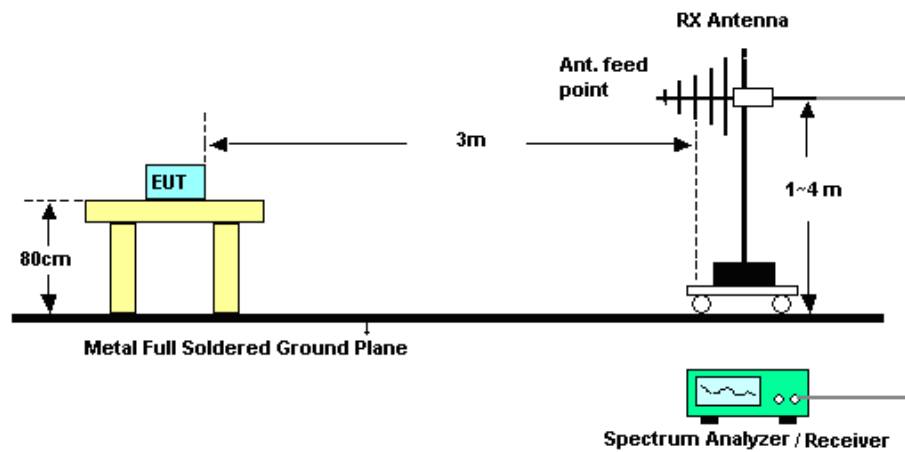
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

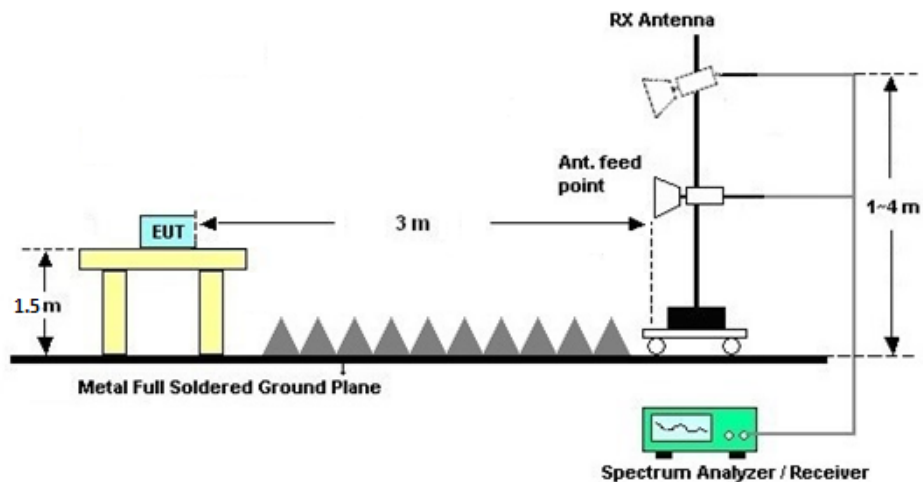
For radiated emissions below 30MHz



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.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.5.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix C.

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.

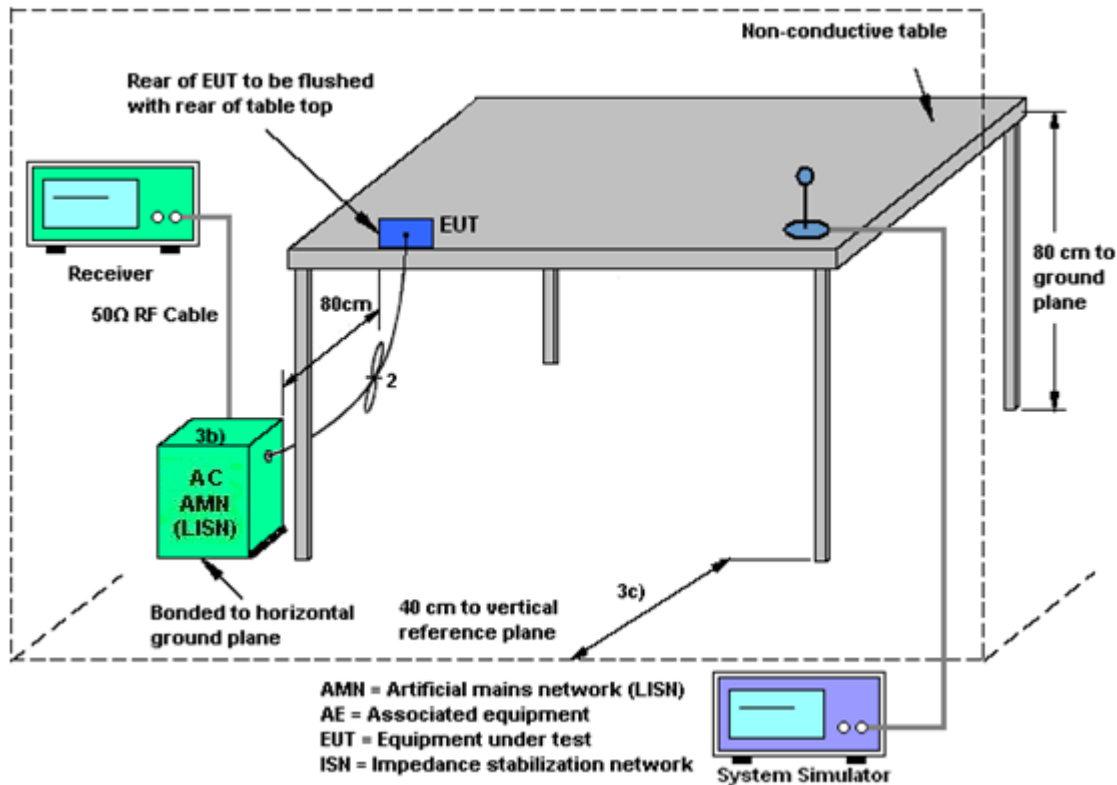
3.6.2 Measuring Instruments

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

Please refer to Appendix B.

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

<CDD Modes >

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

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

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



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. 19, 2018	Jul. 17, 2018~ Aug. 23, 2018	Apr. 18, 2019	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 26, 2017	Jul. 17, 2018~ Aug. 23, 2018	Dec. 25, 2018	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 26, 2017	Jul. 17, 2018~ Aug. 23, 2018	Dec. 25, 2018	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 19, 2018	Jul. 17, 2018~ Jul. 23, 2018	Apr. 18, 2019	Radiation (03CH02-SZ)
Spectrum Analyzer	R&S	FSV40	101041	10kHz~40GHz; Max 30dBm	Oct. 19, 2017	Jul. 17, 2018~ Jul. 23, 2018	Oct. 18, 2018	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 14, 2018	Jul. 17, 2018~ Jul. 23, 2018	May 13, 2019	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	May 10, 2018	Jul. 17, 2018~ Jul. 23, 2018	May 09, 2019	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Dec. 13, 2017	Jul. 17, 2018~ Jul. 23, 2018	Dec. 12, 2018	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz-40GHz	Mar. 30, 2018	Jul. 17, 2018~ Jul. 23, 2018	Mar. 29, 2019	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 19, 2017	Jul. 17, 2018~ Jul. 23, 2018	Oct. 18, 2018	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P-R	1707137	1GHz~18GHz	Oct. 19, 2017	Jul. 17, 2018~ Jul. 23, 2018	Oct. 18, 2018	Radiation (03CH02-SZ)
Amplifier	Agilent	8449B	3008A01023	1GHz~26.5GHz	Oct. 19, 2017	Jul. 17, 2018~ Jul. 23, 2018	Oct. 18, 2018	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1988315	18GHz~40GHz	Jul.27, 2017	Jul. 17, 2018~ Jul. 23, 2018	Jul.26, 2018	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jul. 17, 2018~ Jul. 23, 2018	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jul. 17, 2018~ Jul. 23, 2018	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jul. 17, 2018~ Jul. 23, 2018	NCR	Radiation (03CH02-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 26, 2017	Aug. 21, 2018	Dec. 25, 2018	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Dec. 26, 2017	Aug. 21, 2018	Dec. 25, 2018	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	3816/2SH	00103892	9kHz~30MHz	Nov. 01, 2017	Aug. 21, 2018	Oct. 31, 2018	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 18, 2018	Aug. 21, 2018	Jul. 17, 2019	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% ($U = 2Uc(y)$)	2.6dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.4dB
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Appendix A. Conducted Test Results

Test Engineer:	Sam Zheng	Temperature:	24~26	°C
Test Date:	2018/7/17~2018/8/23	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	14.49	14.24	8.57	8.07	0.50	Pass
11b	1Mbps	2	6	2437	14.29	14.19	8.07	8.07	0.50	Pass
11b	1Mbps	2	11	2462	14.34	13.99	8.07	8.07	0.50	Pass
11g	6Mbps	2	1	2412	17.63	17.43	15.68	15.33	0.50	Pass
11g	6Mbps	2	6	2437	17.53	17.53	15.35	15.35	0.50	Pass
11g	6Mbps	2	11	2462	17.58	17.48	15.64	15.70	0.50	Pass
HT20	MCS0	2	1	2412	18.78	18.73	15.96	15.68	0.50	Pass
HT20	MCS0	2	6	2437	18.58	18.73	15.96	15.94	0.50	Pass
HT20	MCS0	2	11	2462	18.93	18.68	16.78	15.94	0.50	Pass
HT40	MCS0	2	3	2422	36.66	36.36	35.72	35.09	0.50	Pass
HT40	MCS0	2	6	2437	36.46	36.46	35.09	35.29	0.50	Pass
HT40	MCS0	2	9	2452	36.56	36.26	35.29	35.29	0.50	Pass

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	1	1	2412	0.03	0.03	18.60	15.77	
11b	1Mbps	1	6	2437	0.03	0.03	19.03	16.24	
11b	1Mbps	1	11	2462	0.03	0.03	18.84	15.87	
11g	6Mbps	1	1	2412	0.08	0.08	17.73	15.23	
11g	6Mbps	1	6	2437	0.08	0.08	18.34	15.30	
11g	6Mbps	1	11	2462	0.08	0.08	18.14	15.31	
HT20	MCS0	1	1	2412	0.08	0.08	16.53	14.06	
HT20	MCS0	1	6	2437	0.08	0.08	18.16	15.11	
HT20	MCS0	1	11	2462	0.08	0.08	17.94	15.14	
HT40	MCS0	1	3	2422	0.24	0.24	14.56	12.11	
HT40	MCS0	1	6	2437	0.24	0.24	15.80	13.38	
HT40	MCS0	1	9	2452	0.24	0.24	14.93	11.80	
VHT20	MCS0	1	1	2412	0.08	0.10	16.46	14.04	
VHT20	MCS0	1	6	2437	0.08	0.10	18.08	15.11	
VHT20	MCS0	1	11	2462	0.08	0.10	17.89	15.12	
VHT40	MCS0	1	3	2422	0.24	0.26	14.55	12.09	
VHT40	MCS0	1	6	2437	0.24	0.26	15.77	13.37	
VHT40	MCS0	1	9	2452	0.24	0.26	14.91	11.77	
11b	1Mbps	2	1	2412	0.03	0.03	18.44	15.55	20.24
11b	1Mbps	2	6	2437	0.03	0.03	19.08	16.18	20.88
11b	1Mbps	2	11	2462	0.03	0.03	18.67	15.60	20.41
11g	6Mbps	2	1	2412	0.08	0.09	17.78	15.03	19.63
11g	6Mbps	2	6	2437	0.08	0.09	18.29	15.19	20.02
11g	6Mbps	2	11	2462	0.08	0.09	18.04	15.22	19.86
HT20	MCS0	2	1	2412	0.08	0.10	16.70	14.01	18.57
HT20	MCS0	2	6	2437	0.08	0.10	18.10	15.11	19.87
HT20	MCS0	2	11	2462	0.08	0.10	17.81	14.97	19.63
HT40	MCS0	2	3	2422	0.23	0.23	14.61	11.99	16.51
HT40	MCS0	2	6	2437	0.23	0.23	15.73	13.29	17.69
HT40	MCS0	2	9	2452	0.23	0.23	14.42	11.74	16.30
VHT20	MCS0	2	1	2412	0.17	0.17	16.62	13.95	18.50
VHT20	MCS0	2	6	2437	0.17	0.17	18.03	15.03	19.79
VHT20	MCS0	2	11	2462	0.17	0.17	17.70	14.88	19.52
VHT40	MCS0	2	3	2422	0.43	0.43	14.65	11.88	16.49
VHT40	MCS0	2	6	2437	0.43	0.43	15.61	13.17	17.57
VHT40	MCS0	2	9	2452	0.43	0.43	14.37	11.64	16.23

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

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	1	1	2412	20.90	18.09		30.00	30.00	-2.80	-3.00	18.10	15.09	36.00	36.00	Pass
11b	1Mbps	1	6	2437	21.27	18.58		30.00	30.00	-2.80	-3.00	18.47	15.58	36.00	36.00	Pass
11b	1Mbps	1	11	2462	21.10	18.20		30.00	30.00	-2.80	-3.00	18.30	15.20	36.00	36.00	Pass
11g	6Mbps	1	1	2412	22.49	19.82		30.00	30.00	-2.80	-3.00	19.69	16.82	36.00	36.00	Pass
11g	6Mbps	1	6	2437	23.02	19.98		30.00	30.00	-2.80	-3.00	20.22	16.98	36.00	36.00	Pass
11g	6Mbps	1	11	2462	23.02	20.02		30.00	30.00	-2.80	-3.00	20.22	17.02	36.00	36.00	Pass
HT20	MCS0	1	1	2412	21.38	18.92		30.00	30.00	-2.80	-3.00	18.58	15.92	36.00	36.00	Pass
HT20	MCS0	1	6	2437	23.02	20.00		30.00	30.00	-2.80	-3.00	20.22	17.00	36.00	36.00	Pass
HT20	MCS0	1	11	2462	22.95	20.07		30.00	30.00	-2.80	-3.00	20.15	17.07	36.00	36.00	Pass
HT40	MCS0	1	3	2422	20.61	18.39		30.00	30.00	-2.80	-3.00	17.81	15.39	36.00	36.00	Pass
HT40	MCS0	1	6	2437	22.14	19.50		30.00	30.00	-2.80	-3.00	19.34	16.50	36.00	36.00	Pass
HT40	MCS0	1	9	2452	21.63	18.14		30.00	30.00	-2.80	-3.00	18.83	15.14	36.00	36.00	Pass
VHT20	MCS0	1	1	2412	21.41	18.95		30.00	30.00	-2.80	-3.00	18.61	15.95	36.00	36.00	Pass
VHT20	MCS0	1	6	2437	23.00	20.00		30.00	30.00	-2.80	-3.00	20.20	17.00	36.00	36.00	Pass
VHT20	MCS0	1	11	2462	22.95	20.04		30.00	30.00	-2.80	-3.00	20.15	17.04	36.00	36.00	Pass
VHT40	MCS0	1	3	2422	20.61	18.35		30.00	30.00	-2.80	-3.00	17.81	15.35	36.00	36.00	Pass
VHT40	MCS0	1	6	2437	22.11	19.45		30.00	30.00	-2.80	-3.00	19.31	16.45	36.00	36.00	Pass
VHT40	MCS0	1	9	2452	21.59	18.16		30.00	30.00	-2.80	-3.00	18.79	15.16	36.00	36.00	Pass
11b	1Mbps	2	1	2412	20.63	18.00	22.52	30.00		-2.80		19.72		36.00		Pass
11b	1Mbps	2	6	2437	21.35	18.56	23.19	30.00		-2.80		20.39		36.00		Pass
11b	1Mbps	2	11	2462	21.03	18.08	22.81	30.00		-2.80		20.01		36.00		Pass
11g	6Mbps	2	1	2412	22.52	19.83	24.39	30.00		-2.80		21.59		36.00		Pass
11g	6Mbps	2	6	2437	23.13	20.05	24.87	30.00		-2.80		22.07		36.00		Pass
11g	6Mbps	2	11	2462	22.95	20.09	24.76	30.00		-2.80		21.96		36.00		Pass
HT20	MCS0	2	1	2412	21.41	18.83	23.32	30.00		-2.80		20.52		36.00		Pass
HT20	MCS0	2	6	2437	23.11	20.22	24.91	30.00		-2.80		22.11		36.00		Pass
HT20	MCS0	2	11	2462	22.72	19.97	24.57	30.00		-2.80		21.77		36.00		Pass
HT40	MCS0	2	3	2422	20.71	18.54	22.77	30.00		-2.80		19.97		36.00		Pass
HT40	MCS0	2	6	2437	21.86	19.40	23.81	30.00		-2.80		21.01		36.00		Pass
HT40	MCS0	2	9	2452	20.85	18.21	22.74	30.00		-2.80		19.94		36.00		Pass
VHT20	MCS0	2	1	2412	21.43	18.84	23.34	30.00		-2.80		20.54		36.00		Pass
VHT20	MCS0	2	6	2437	23.01	20.17	24.83	30.00		-2.80		22.03		36.00		Pass
VHT20	MCS0	2	11	2462	22.70	19.91	24.54	30.00		-2.80		21.74		36.00		Pass
VHT40	MCS0	2	3	2422	20.73	18.41	22.73	30.00		-2.80		19.93		36.00		Pass
VHT40	MCS0	2	6	2437	21.80	19.34	23.75	30.00		-2.80		20.95		36.00		Pass
VHT40	MCS0	2	9	2452	20.87	18.06	22.70	30.00		-2.80		19.90		36.00		Pass

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

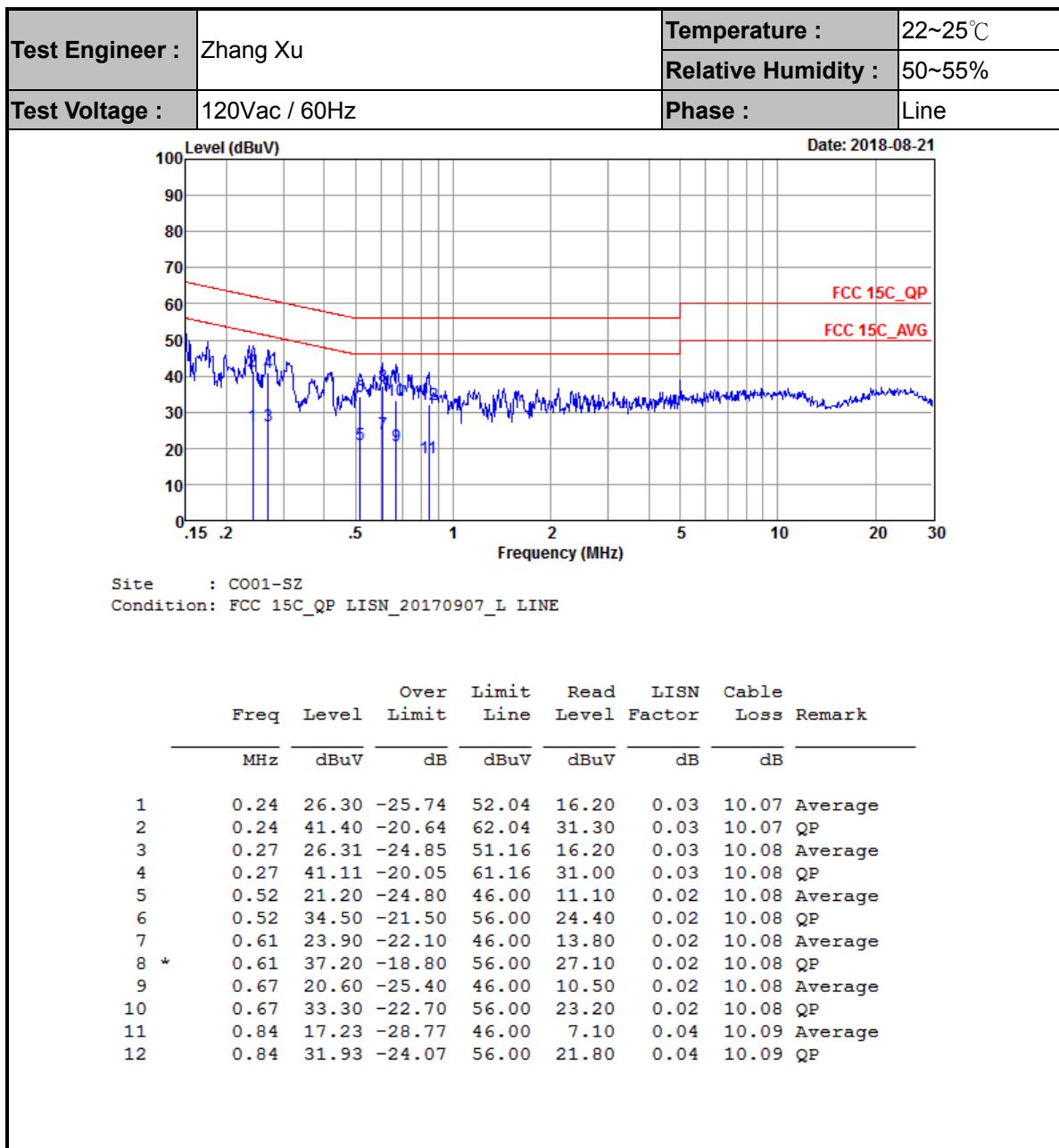
TEST RESULTS DATA
Peak Power Spectral Density

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	-9.18	-10.65	-6.17	0.11		8.00		Pass
11b	1Mbps	2	6	2437	-7.68	-9.46	-4.67	0.11		8.00		Pass
11b	1Mbps	2	11	2462	-8.19	-11.98	-5.18	0.11		8.00		Pass
11g	6Mbps	2	1	2412	-10.30	-12.75	-7.29	0.11		8.00		Pass
11g	6Mbps	2	6	2437	-12.09	-12.25	-9.08	0.11		8.00		Pass
11g	6Mbps	2	11	2462	-9.35	-12.20	-6.34	0.11		8.00		Pass
HT20	MCS0	2	1	2412	-11.08	-13.73	-8.07	0.11		8.00		Pass
HT20	MCS0	2	6	2437	-8.71	-12.22	-5.70	0.11		8.00		Pass
HT20	MCS0	2	11	2462	-10.57	-11.63	-7.56	0.11		8.00		Pass
HT40	MCS0	2	3	2422	-15.06	-16.42	-12.05	0.11		8.00		Pass
HT40	MCS0	2	6	2437	-14.66	-15.09	-11.65	0.11		8.00		Pass
HT40	MCS0	2	9	2452	-14.65	-18.47	-11.64	0.11		8.00		Pass

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

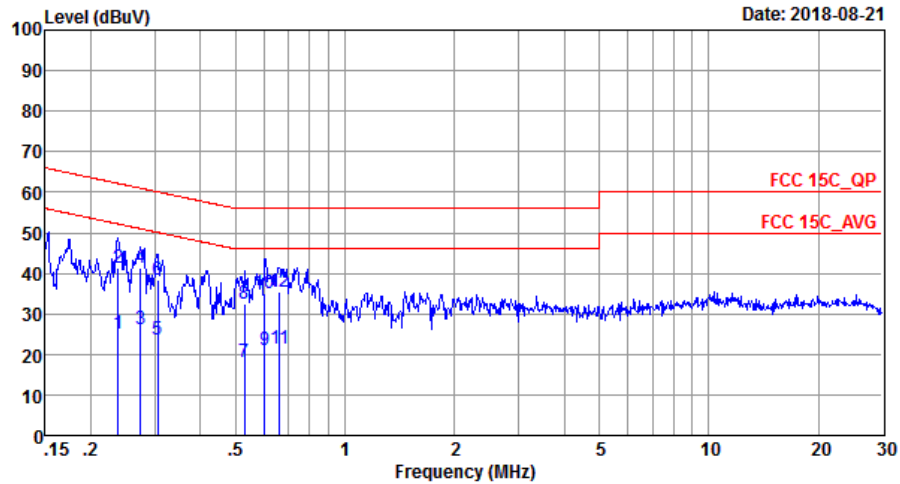


Appendix B. AC Conducted Emission Test Results





Test Engineer :	Zhang Xu	Temperature :	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral



Site : CO01-SZ
Condition: FCC 15C_QP LISN_20170907_N NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.24	25.20	-26.97	52.17	15.10	0.03	10.07	Average
2	0.24	41.20	-20.97	62.17	31.10	0.03	10.07	QP
3	0.27	26.21	-24.77	50.98	16.10	0.03	10.08	Average
4 *	0.27	41.31	-19.67	60.98	31.20	0.03	10.08	QP
5	0.31	23.51	-26.59	50.10	13.40	0.03	10.08	Average
6	0.31	38.21	-21.89	60.10	28.10	0.03	10.08	QP
7	0.53	18.00	-28.00	46.00	7.90	0.02	10.08	Average
8	0.53	32.40	-23.60	56.00	22.30	0.02	10.08	QP
9	0.60	21.20	-24.80	46.00	11.10	0.02	10.08	Average
10	0.60	35.00	-21.00	56.00	24.90	0.02	10.08	QP
11	0.66	21.40	-24.60	46.00	11.30	0.02	10.08	Average
12	0.66	35.40	-20.60	56.00	25.30	0.02	10.08	QP



Appendix C. Radiated Spurious Emission

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2387.39	50.68	-23.32	74	48.3	27.09	6.57	31.28	164	287	P	H
		2387.39	43.27	-10.73	54	40.89	27.09	6.57	31.28	164	287	A	H
	*	2412	109.22	-	-	106.74	27.14	6.6	31.26	164	287	P	H
	*	2412	105.1	-	-	102.62	27.14	6.6	31.26	164	287	A	H
		2387.81	48.87	-25.13	74	46.46	27.09	6.6	31.28	330	258	P	V
		2386.13	40.03	-13.97	54	37.65	27.09	6.57	31.28	330	258	A	V
	*	2412	107.47	-	-	104.99	27.14	6.6	31.26	330	258	P	V
	*	2412	104.33	-	-	101.85	27.14	6.6	31.26	330	258	A	V
802.11b CH 06 2437MHz		2384.9	47.71	-26.29	74	45.41	27.04	6.57	31.31	100	278	P	H
		2388.12	37.45	-16.55	54	35.04	27.09	6.6	31.28	100	278	A	H
	*	2437	109.83	-	-	107.22	27.24	6.63	31.26	100	278	P	H
	*	2437	106.82	-	-	104.21	27.24	6.63	31.26	100	278	A	H
		2491.6	47.77	-26.23	74	44.84	27.4	6.73	31.2	100	278	P	H
		2483.5	37.63	-16.37	54	34.8	27.35	6.7	31.22	100	278	A	H
		2382.66	47.43	-26.57	74	45.13	27.04	6.57	31.31	320	265	P	V
		2387.28	36.86	-17.14	54	34.48	27.09	6.57	31.28	320	265	A	V
	*	2437	109.69	-	-	107.08	27.24	6.63	31.26	320	265	P	V
	*	2437	106.4	-	-	103.79	27.24	6.63	31.26	320	265	A	V
		2490.34	48.28	-25.72	74	45.35	27.4	6.73	31.2	320	265	P	V
		2483.5	37.33	-16.67	54	34.5	27.35	6.7	31.22	320	265	A	V



802.11b CH 11 2462MHz	*	2462	109.82	-	-	107.09	27.3	6.67	31.24	131	289	P	H
	*	2462	106.66	-	-	103.93	27.3	6.67	31.24	131	289	A	H
		2483.64	49.44	-24.56	74	46.61	27.35	6.7	31.22	131	289	P	H
		2483.52	40.74	-13.26	54	37.91	27.35	6.7	31.22	131	289	A	H
	*	2462	108.01	-	-	105.28	27.3	6.67	31.24	318	267	P	V
	*	2462	104.96	-	-	102.23	27.3	6.67	31.24	318	267	A	V
		2487.2	47.86	-26.14	74	45.03	27.35	6.7	31.22	318	267	P	V
		2483.92	38.27	-15.73	54	35.44	27.35	6.7	31.22	318	267	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	39.86	-34.14	74	56.98	31.42	9.65	58.19	185	255	P	H
		4824	39.23	-34.77	74	56.35	31.42	9.65	58.19	185	255	P	V
802.11b CH 06 2437MHz		4874	36.93	-37.07	74	53.81	31.51	9.71	58.1	165	106	P	H
		7311	44.96	-29.04	74	54.51	36.36	12.01	57.92	174	100	P	H
		4874	38.61	-35.39	74	55.49	31.51	9.71	58.1	165	106	P	V
		7311	46.86	-27.14	74	56.41	36.36	12.01	57.92	174	100	P	V
802.11b CH 11 2462MHz		4924	39.33	-34.67	74	55.99	31.59	9.77	58.02	150	285	P	H
		7386	47.42	-26.58	74	56.34	36.65	12.08	57.65	155	274	P	H
		4924	39.24	-34.76	74	55.9	31.59	9.77	58.02	150	285	P	V
		7386	46.16	-27.84	74	55.08	36.65	12.08	57.65	155	274	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		2389.905	63.18	-10.82	74	60.77	27.09	6.6	31.28	100	284	P	H
		2389.59	53.13	-0.87	54	50.72	27.09	6.6	31.28	100	284	A	H
	*	2412	110.55	-	-	108.07	27.14	6.6	31.26	100	284	P	H
	*	2412	103.01	-	-	100.53	27.14	6.6	31.26	100	284	A	H
		2389.065	60.71	-13.29	74	58.3	27.09	6.6	31.28	354	263	P	V
		2389.275	50.89	-3.11	54	48.48	27.09	6.6	31.28	354	263	A	V
	*	2412	109.57	-	-	107.09	27.14	6.6	31.26	354	263	P	V
	*	2412	102.12	-	-	99.64	27.14	6.6	31.26	354	263	A	V
802.11g CH 06 2437MHz		2388.26	50.35	-23.65	74	47.94	27.09	6.6	31.28	100	286	P	H
		2389.38	41.35	-12.65	54	38.94	27.09	6.6	31.28	100	286	A	H
	*	2437	112.28	-	-	109.67	27.24	6.63	31.26	100	286	P	H
	*	2437	104.57	-	-	101.96	27.24	6.63	31.26	100	286	A	H
		2484.39	49.5	-24.5	74	46.67	27.35	6.7	31.22	100	286	P	H
		2483.5	41.6	-12.4	54	38.77	27.35	6.7	31.22	100	286	A	H
		2389.66	48.68	-25.32	74	46.27	27.09	6.6	31.28	340	257	P	V
		2389.52	39.82	-14.18	54	37.41	27.09	6.6	31.28	340	257	A	V
	*	2437	109.49	-	-	106.88	27.24	6.63	31.26	340	257	P	V
	*	2437	102	-	-	99.39	27.24	6.63	31.26	340	257	A	V
		2483.55	48.24	-25.76	74	45.41	27.35	6.7	31.22	340	257	P	V
		2484.04	39.06	-14.94	54	36.23	27.35	6.7	31.22	340	257	A	V



802.11g CH 11 2462MHz	*	2462	111.89	-	-	109.16	27.3	6.67	31.24	100	284	P	H
	*	2462	104.25	-	-	101.52	27.3	6.67	31.24	100	284	A	H
		2483.56	61.04	-12.96	74	58.21	27.35	6.7	31.22	100	284	P	H
		2483.52	51.66	-2.34	54	48.83	27.35	6.7	31.22	100	284	A	H
	*	2462	107.35	-	-	104.62	27.3	6.67	31.24	380	252	P	V
	*	2462	100.06	-	-	97.33	27.3	6.67	31.24	380	252	A	V
		2483.72	54.85	-19.15	74	52.02	27.35	6.7	31.22	380	252	P	V
		2483.52	46.41	-7.59	54	43.58	27.35	6.7	31.22	380	252	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	39.18	-34.82	74	56.3	31.42	9.65	58.19	185	255	P	H
		4824	39.91	-34.09	74	57.03	31.42	9.65	58.19	185	255	P	V
802.11g CH 06 2437MHz		4874	39.62	-34.38	74	56.5	31.51	9.71	58.1	165	106	P	H
		7311	46.27	-27.73	74	55.82	36.36	12.01	57.92	174	100	P	H
		4874	39.96	-34.04	74	56.84	31.51	9.71	58.1	165	106	P	V
		7311	46.96	-27.04	74	56.51	36.36	12.01	57.92	174	100	P	V
802.11g CH 11 2462MHz		4924	40.87	-33.13	74	57.53	31.59	9.77	58.02	150	285	P	H
		7386	46.25	-27.75	74	55.17	36.65	12.08	57.65	155	274	P	H
		4924	39.33	-34.67	74	55.99	31.59	9.77	58.02	150	285	P	V
		7386	45.87	-28.13	74	54.79	36.65	12.08	57.65	155	274	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		2389.91	62.14	-11.86	74	59.73	27.09	6.6	31.28	110	283	P	H
		2389.91	51.72	-2.28	54	49.31	27.09	6.6	31.28	110	283	A	H
	*	2412	108.76	-	-	106.28	27.14	6.6	31.26	110	283	P	H
	*	2412	100.01	-	-	97.53	27.14	6.6	31.26	110	283	A	H
		2389.59	60.54	-13.46	74	58.13	27.09	6.6	31.28	354	248	P	V
		2389.91	49.93	-4.07	54	47.52	27.09	6.6	31.28	354	248	A	V
	*	2412	107.19	-	-	104.71	27.14	6.6	31.26	354	248	P	V
	*	2412	99.55	-	-	97.07	27.14	6.6	31.26	354	248	A	V
802.11n HT20 CH 06 2437MHz		2388.26	49.41	-24.59	74	47	27.09	6.6	31.28	100	291	P	H
		2389.94	40.94	-13.06	54	38.53	27.09	6.6	31.28	100	291	A	H
	*	2437	111.7	-	-	109.09	27.24	6.63	31.26	100	291	P	H
	*	2437	103.66	-	-	101.05	27.24	6.63	31.26	100	291	P	H
		2484.04	48.73	-25.27	74	45.9	27.35	6.7	31.22	100	291	P	H
		2483.55	40.46	-13.54	54	37.63	27.35	6.7	31.22	100	291	A	H
		2388.26	48.07	-25.93	74	45.66	27.09	6.6	31.28	341	269	P	V
		2389.8	39.24	-14.76	54	36.83	27.09	6.6	31.28	341	269	A	V
	*	2437	109.92	-	-	107.31	27.24	6.63	31.26	341	269	P	V
	*	2437	102.85	-	-	100.24	27.24	6.63	31.26	341	269	A	V
		2483.69	47.83	-26.17	74	45	27.35	6.7	31.22	341	269	P	V
		2483.48	39.53	-14.47	150	36.7	27.35	6.7	31.22	341	269	A	V



802.11n HT20 CH 11 2462MHz	*	2462	110.62	-	-	107.89	27.3	6.67	31.24	116	285	P	H
	*	2462	103.36	-	-	100.63	27.3	6.67	31.24	116	285	A	H
		2483.96	62.01	-11.99	74	59.18	27.35	6.7	31.22	116	285	P	H
		2483.6	53.29	-0.71	54	50.46	27.35	6.7	31.22	116	285	A	H
	*	2462	110.1	-	-	107.37	27.3	6.67	31.24	379	247	P	V
	*	2462	102.2	-	-	99.47	27.3	6.67	31.24	379	247	A	V
		2484.16	59.93	-14.07	74	57.1	27.35	6.7	31.22	379	247	P	V
		2483.52	50.44	-3.56	54	47.61	27.35	6.7	31.22	379	247	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	39.59	-34.41	74	56.71	31.42	58.19	9.65	185	255	P	H
													V
		4824	39.78	-34.22	74	56.9	31.42	58.19	9.65	185	255	P	
802.11n HT20 CH 06 2437MHz		4874	39.41	-34.59	74	56.29	31.51	9.71	58.1	165	106	P	H
		7311	45.83	-28.17	74	55.38	36.36	12.01	57.92	174	100	P	H
		4874	40.87	-33.13	74	57.75	31.51	9.71	58.1	165	106	P	V
		7311	46.5	-27.5	74	56.05	36.36	12.01	57.92	174	100	P	V
802.11n HT20 CH 11 2462MHz		4924	39.55	-34.45	74	56.21	31.59	9.77	58.02	150	285	P	H
		7386	47.04	-26.96	74	55.96	36.65	12.08	57.65	155	274	P	H
		4924	40.55	-33.45	74	57.21	31.59	9.77	58.02	150	285	P	V
		7386	46.43	-27.57	74	55.35	36.65	12.08	57.65	155	274	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		2387.7	62.31	-11.69	74	59.9	27.09	6.6	31.28	100	288	P	H
		2389.24	53.49	-0.51	54	51.08	27.09	6.6	31.28	100	288	A	H
	*	2422	104.19	-	-	101.63	27.19	6.63	31.26	100	288	P	H
	*	2422	96.18	-	-	93.62	27.19	6.63	31.26	100	288	A	H
		2483.5	50.34	-23.66	74	47.51	27.35	6.7	31.22	100	288	P	H
		2483.55	41.68	-12.32	54	38.85	27.35	6.7	31.22	100	288	A	H
		2389.8	57.27	-16.73	74	54.86	27.09	6.6	31.28	347	270	P	V
		2389.52	50.06	-3.94	54	47.65	27.09	6.6	31.28	347	270	A	V
	*	2422	101.01	-	-	98.45	27.19	6.63	31.26	347	270	P	V
	*	2422	93.59	-	-	91.03	27.19	6.63	31.26	347	270	A	V
		2494.4	47.38	-26.62	74	44.45	27.4	6.73	31.2	347	270	P	V
		2483.9	38.87	-15.13	54	36.04	27.35	6.7	31.22	347	270	A	V
802.11n HT40 CH 06 2437MHz		2387.98	59.03	-14.97	74	56.62	27.09	6.6	31.28	122	285	P	H
		2389.52	50.17	-3.83	54	47.76	27.09	6.6	31.28	122	285	A	H
	*	2437	107.99	-	-	105.38	27.24	6.63	31.26	122	285	P	H
	*	2437	100.69	-	-	98.08	27.24	6.63	31.26	122	285	A	H
		2483.5	54.93	-19.07	74	52.1	27.35	6.7	31.22	122	285	P	H
		2483.62	46.66	-7.34	54	43.83	27.35	6.7	31.22	122	285	A	H
		2389.8	50.67	-23.33	74	48.26	27.09	6.6	31.28	347	262	P	V
		2389.94	42.25	-11.75	54	39.84	27.09	6.6	31.28	347	262	A	V
	*	2437	103.69	-	-	101.08	27.24	6.63	31.26	347	262	P	V
	*	2437	96.58	-	-	93.97	27.24	6.63	31.26	347	262	A	V
		2484.32	48.57	-25.43	74	45.74	27.35	6.7	31.22	347	262	P	V
		2483.55	40.34	-13.66	54	37.51	27.35	6.7	31.22	347	262	A	V



802.11n HT40 CH 09 2452MHz		2389.66	50.3	-23.7	74	47.89	27.09	6.6	31.28	123	285	P	H
		2389.1	40.93	-13.07	54	38.52	27.09	6.6	31.28	123	285	A	H
	*	2452	104.98	-	-	102.31	27.24	6.67	31.24	123	285	P	H
	*	2452	97.11	-	-	94.44	27.24	6.67	31.24	123	285	A	H
		2483.62	58.54	-15.46	74	55.71	27.35	6.7	31.22	123	285	P	H
		2483.62	50.63	-3.37	54	47.8	27.35	6.7	31.22	123	285	A	H
		2389.66	48.62	-25.38	74	46.21	27.09	6.6	31.28	342	264	P	V
		2387	39.58	-14.42	54	37.2	27.09	6.57	31.28	342	264	A	V
	*	2452	103.01	-	-	100.34	27.24	6.67	31.24	342	264	P	V
	*	2452	96.93	-	-	94.26	27.24	6.67	31.24	342	264	A	V
		2483.55	55.06	-18.94	74	52.23	27.35	6.7	31.22	342	264	P	V
		2483.5	47.53	-6.47	54	44.7	27.35	6.7	31.22	342	264	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		4844	39.66	-34.34	74	56.69	31.45	58.16	9.68	150	350	P	H
HT40		7266	46.6	-27.4	74	56.4	36.24	58.03	11.99	200	360	P	H
CH 03		4844	39.23	-34.77	74	56.26	31.45	58.16	9.68	150	350	P	V
2422MHz		7266	46.38	-27.62	74	56.18	36.24	58.03	11.99	200	360	P	V
802.11n		4874	38.52	-35.48	74	55.4	31.51	9.71	58.1	165	230	P	H
HT40		7311	47.14	-26.86	74	56.69	36.36	12.01	57.92	186	323	P	H
CH 06		4874	39.41	-34.59	74	56.29	31.51	9.71	58.1	165	230	P	V
2437MHz		7311	47.26	-26.74	74	56.81	36.36	12.01	57.92	186	323	P	V
802.11n		4904	39.16	-34.84	74	55.9	31.56	58.04	9.74	150	360	P	H
HT40		7356	47.18	-26.82	74	56.35	36.53	57.76	12.06	165	335	P	H
CH 09		4904	38.59	-35.41	74	55.33	31.56	58.04	9.74	150	360	P	V
2452MHz		7356	47.01	-26.99	74	56.18	36.53	57.76	12.06	165	335	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11n HT40 (LF)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT40 LF		30	23.28	-16.72	40	30.35	24.3	0.23	31.6	157	119	P	H
		63.95	17.94	-22.06	40	36.54	12.46	0.54	31.6	-	-	P	H
		95.96	19.94	-23.56	43.5	34.72	15.92	0.8	31.5	-	-	P	H
		156.1	24.67	-18.83	43.5	38.43	16.27	1.35	31.38	-	-	P	H
		191.99	24.73	-18.77	43.5	38.95	15.44	1.56	31.22	-	-	P	H
		581.93	27.61	-18.39	46	31.38	24.48	2.95	31.2	-	-	P	H
		34.85	29.59	-10.41	40	39.52	21.35	0.32	31.6	200	149	P	V
		63.95	24.34	-15.66	40	42.94	12.46	0.54	31.6	-	-	P	V
		95.96	19.86	-23.64	43.5	34.64	15.92	0.8	31.5	-	-	P	V
		127.97	20.71	-22.79	43.5	33.28	17.76	1.11	31.44	-	-	P	V
		168.71	27.32	-16.18	43.5	41.56	15.66	1.42	31.32	-	-	P	V
		610.06	28.51	-17.49	46	31.93	24.74	3.04	31.2	-	-	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		(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)

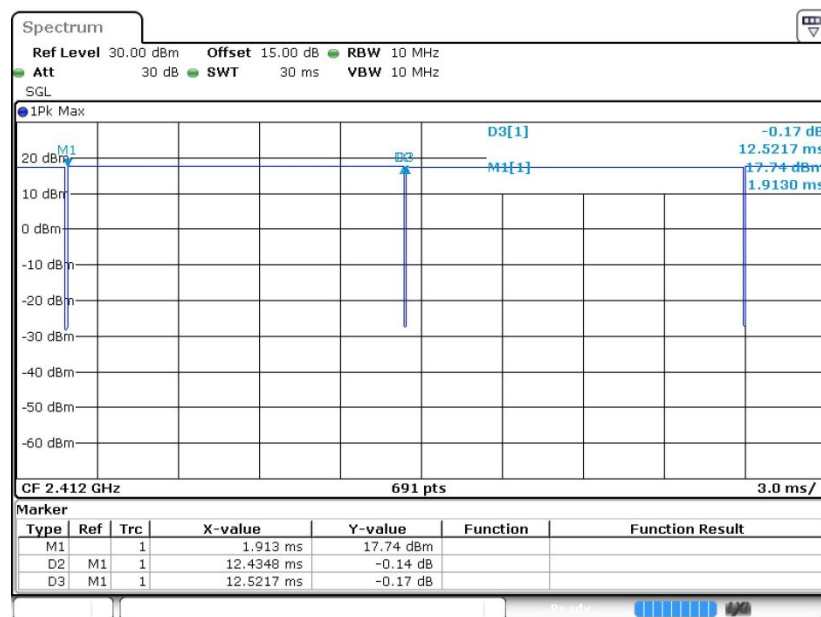
= -10.46(dB)

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

Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
11b ANT1+2	99.31	-	-	10Hz
11g ANT1+2	97.94	2.065	0.484	1KHz
11n HT20 ANT1+2	97.79	1.920	0.521	1KHz
11n HT40 ANT1+2	94.78	0.948	1.055	3KHz

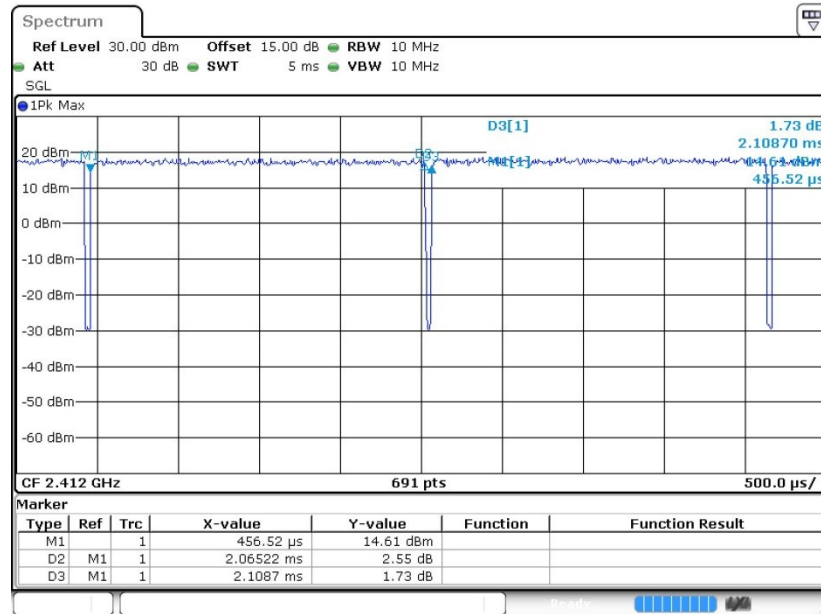
11b ANT1+2



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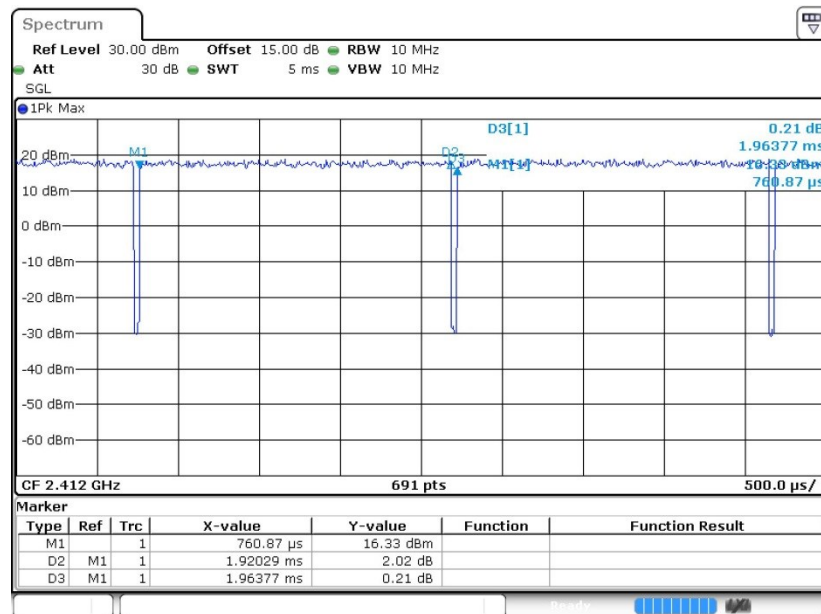


11g ANT1+2



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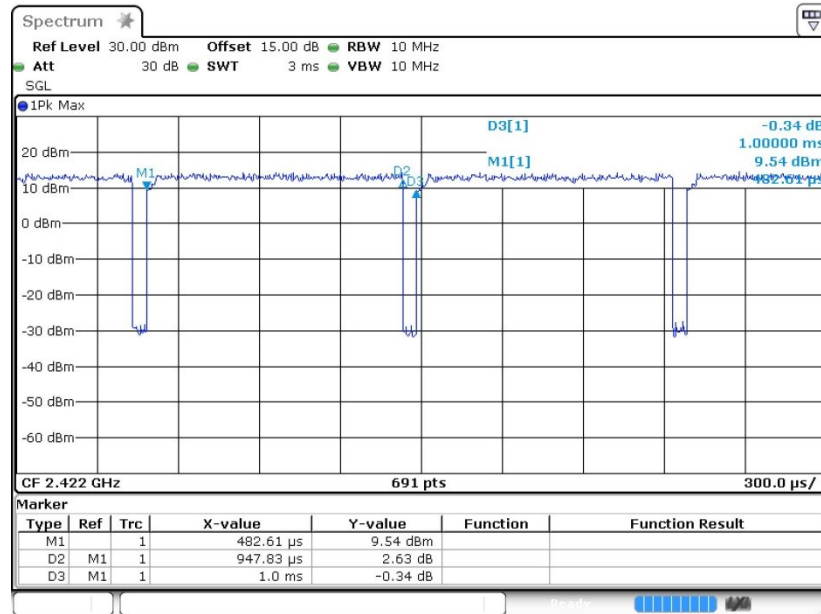
11n HT20 ANT1+2



Date: 17.JUL.2018 16:11:32



11n HT40 ANT1+2



Date: 17.JUL.2018 16:17:49