

TEST REPORT

Product Name: IP Camera
FCC ID: 2AZON-B1
Trademark: N/A
Model Number: B1, B2, B3, B4, B5, B6, B7, B8, B9, B10, Y4, Y6, Y9, Y12, Y16, Y18, Y19, Y20, Y21, Y22
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Sample Received Date: Oct. 13, 2021
Sample tested Date: Oct. 13, 2021 to Oct. 19, 2021
Issue Date: Oct. 19, 2021
Report No.: CTB211019039RFX
Test Standards: FCC Part15.247
ANSI C63.10:2013
Test Results: PASS
Remark: This is WIFI-2.4GHz band radio test report.

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(Note: N/A means not applicable)

1. VERSION

Report No.	Issue Date	Description	Approved
CTB211019039RFX	Oct. 19, 2021	Original	Valid

2. TEST SUMMARY

The Product has been tested according to the following specifications:

Test Item	Test Requirement	Test method	Result
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013	PASS
Radiated Spurious emissions	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS
Band edge and RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)/15.205(a)	ANSI C63.10-2013	PASS
Conducted Peak Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(3)	ANSI C63.10-2013	PASS
6dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	ANSI C63.10-2013	PASS
Power Spectral Density	47 CFR Part 15 Subpart C Section 15.247 (e)	ANSI C63.10-2013/ KDB 558074 D01v05r02	PASS
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2013	PASS
RF Exposure Evaluation	47 CFR Part 15 Subpart C Section 15.247 (i)/1.1310/2.1091	KDB447498D01v06	PASS

Remark:

Test according to ANSI C63.4-2014 & ANSI C63.10-2013.

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Item	Uncertainty
Occupancy bandwidth	$U=\pm 54.3\text{Hz}$
Conducted output power Above 1G	$U=\pm 1.0\text{dB}$
Conducted output power below 1G	$U=\pm 0.9\text{dB}$
Power Spectral Density , Conduction	$U=\pm 1.0\text{dB}$
Conduction spurious emissions	$U=\pm 2.8\text{dB}$
Out of band emission	$U=\pm 54\text{Hz}$
3m chamber Radiated spurious emission(9KHz-30MHz)	$U=\pm 4.8\text{dB}$
3m chamber Radiated spurious emission(30MHz-1GHz)	$U=\pm 4.3\text{dB}$
3m chamber Radiated spurious emission(1GHz-18GHz)	$U=\pm 4.5\text{dB}$
3m chamber Radiated spurious emission(18GHz-40GHz)	$U=\pm 3.4\text{dB}$
humidity uncertainty	$U=\pm 5.3\%$
Temperature uncertainty	$U=\pm 0.59^{\circ}\text{C}$
Supply voltages	$U=\pm 3\%$
Time	$U=\pm 5\%$
Conducted Emission (150KHz-30MHz)	3.2 dB

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Model(s):	B1, B2, B3, B4, B5, B6, B7, B8, B9, B10, Y4, Y6, Y9, Y12, Y16, Y18, Y19, Y20, Y21, Y22
Model Description:	All the model are the same circuit and RF module, only for model name. Test sample model: B1
Wi-Fi Specification:	IEEE 802.11b/g/n
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	WiFi: IEEE 802.11b/g/n 20: 2412-2462MHz/ 11 channel IEEE 802.11n 40: 2422-2452MHz/ 7 channel
Max. RF output power:	WiFi (2.4G) :7.621dBm
Type of Modulation:	WiFi: DSSS, OFDM
Antenna installation:	WiFi: External Antenna
Antenna Gain:	WiFi (2.4G) : 1.0dBi
Ratings:	AC 120V/50Hz

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1	Adaptor	N/A	PD871 A	N/A	AE

Notes:

- All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
1	2412	2	2417	3	2422	4	2427
5	2432	6	2437	7	2442	8	2447
9	2452	10	2457	11	2462		

4.5 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

Test mode	Low channel	Middle channel	High channel
Transmitting(802.11b/g/n20)	2412MHz	2437MHz	2462MHz
Transmitting(802.11n40)	2422MHz	2437MHz	2452MHz

NOTE: Dutycycle>98%.

4.6 Test Environment

Humidity(%):	55
Atmospheric Pressure(kPa):	101.1
Normal Voltage(AC):	120
Normal Temperature(°C)	25
Low Temperature(°C)	0
High Temperature(°C)	50

5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Floor 1&2, Building A, No. 26 of Xinhe Road, Xinqiao Street, Baoan District, Shenzhen China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

5.2 Test Instrument Used

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibrated date	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	2021.09.27	2022.08.05
2	Power Sensor	Agilent	U2021XA	MY56120032	2021.09.27	2022.08.05
3	Power Sensor	Agilent	U2021XA	MY56120034	2021.09.27	2022.08.05
4	Communication test set	R&S	CMW500	108058	2021.09.27	2022.08.05
5	Spectrum Analyzer	R&S	FSP40	100550	2021.09.27	2022.08.05
6	Signal Generator	Agilent	N5181A	MY49060920	2021.09.27	2022.08.16
7	Signal Generator	Agilent	N5182A	MY47420195	2021.09.27	2022.08.05
8	Communication test set	Agilent	E5515C	MY50102567	2021.09.27	2022.08.16
9	band rejection filter	Shenxiang	MSF2400-2483.5MS-1154	20181015001	2021.09.27	2022.08.05
10	band rejection filter	Shenxiang	MSF5150-5850MS-1155	20181015001	2021.09.27	2022.08.05
11	band rejection filter	Xingbo	XBLBQ-DZA120	190821-1-1	2021.09.27	2022.08.05
12	BT&WI-FI Automatic test software	Microwave	MTS8310	Ver. 2.0.0.0	2021.09.27	2022.08.05
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU	101017	2021.09.27	2022.08.05
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	2021.09.27	2022.08.05
15	234G	Microwave	MTS8200	Ver. 2.0.0.0	2021.09.27	2022.08.05

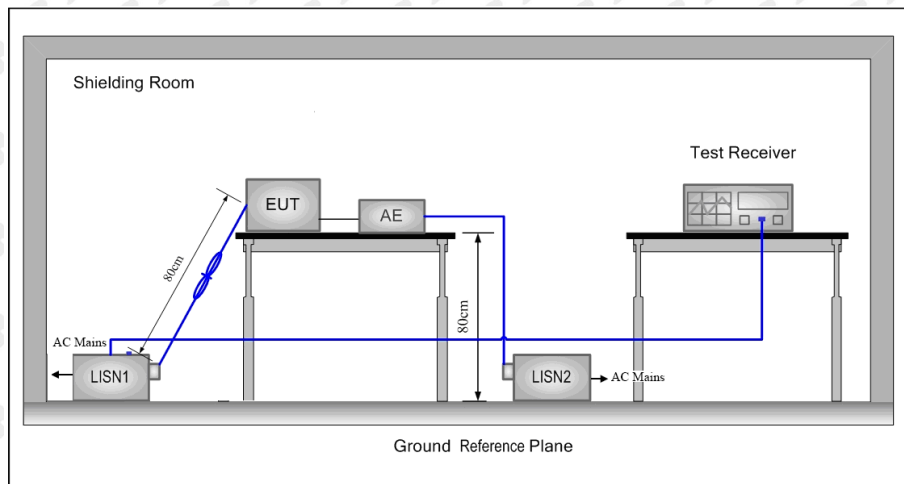
	Automatic test software					
16	966 chamber	C.R.T.	966 Room	966	2021.09.27	2024.08.11
17	Receiver	R&S	ESPI	100362	2021.09.27	2022.08.05
18	Amplifier	HP	8447E	2945A02747	2021.09.27	2022.08.05
19	Amplifier	Agilent	8449B	3008A01838	2021.09.27	2022.08.05
20	TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	869	2021.09.27	2022.08.07
21	Horn Antenna	Schwarzbeck	BBHA9120D	1911	2021.09.27	2022.08.08
22	Software	Fala	EZ-EMC	FA-03A2 RE	2021.09.27	2022.08.05
23	3-Loop Antenna	Daze	ZN30401	17014	2021.09.27	2022.08.05
24	loop antenna	ZHINAN	ZN30900A	/	2021.09.27	2022.08.05
25	Horn antenna	A/H/System	SAS-574	588	2021.09.27	2022.08.05
26	Amplifier	AEROFLEX	/	S/N/ 097	2021.09.27	2022.08.05

Continuous disturbance						
No.	Equipment	Manufacturer	Model No.	Serial No.	Calibrated date	Calibrated until
1	AMN	ROHDE&SCHWARZ	ESH3-Z5	831551852	2021.09.27	2022.08.05
2	Pulse limiter	ROHDE&SCHWARZ	ESH3Z2	357881052	2021.09.27	2022.08.05
3	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCS30	834115/006	2021.09.27	2022.08.05
4	Coaxial cable	ZDECL	Z302S	18091904	2021.09.27	2022.08.05
5	AAN	Schwarzbeck	NTFM8158	183	2021.09.27	2022.08.05
6	Communication test set	Agilent	E5515C	MY50102567	2021.09.27	2022.08.05
7	Communication test set	R&S	CMW500	108058	2021.09.27	2022.08.05
8	EZ-EMC	Frad	EMC-con3A1.1	/	/	/

Radiated emission						
No.	Equipment	Manufacturer	Model No.	Serial No.	Calibrated date	Calibrated until
1	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA 9120D	1911	2021.11.01	2022.08.05
2	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	869	2021.11.01	2022.08.05
3	Amplifier	Agilent	8449B	3008A01838	2021.09.27	2022.08.05
4	Amplifier	HP	8447E	2945A02747	2021.09.27	2022.08.05
5	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESPI7	100362	2021.09.27	2022.08.05
6	Coaxial cable	ETS	RFC-SNS-100-NMS-80 NI	/	2021.09.27	2022.08.05
7	Coaxial cable	ETS	RFC-SNS-100-NMS-20 NI	/	2021.09.27	2022.08.05
8	Coaxial cable	ETS	RFC-SNS-100-SMS-20 NI	/	2021.09.27	2022.08.05
9	Coaxial cable	ETS	RFC-NNS-100-NMS-30 0 NI	/	2021.09.27	2022.08.05
10	Communication test set	Agilent	E5515C	MY50102567	2021.09.27	2022.08.05
11	Communication test set	R&S	CMW500	108058	2021.09.27	2022.08.05
12	EZ-EMC	Frad	EMC-con3A1.1	/	/	/

6. AC POWER LINE CONDUCTED EMISSION

6.1 Block Diagram Of Test Setup



6.2 Limit

Table 4 - AC power-line conducted emissions limits

Frequency (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 ^{Note 1}	56 to 46 ^{Note 1}
0.5 - 5	56	46
5 - 30	60	50

Note 1: The level decreases linearly with the logarithm of the frequency.

* Decreasing linearly with the logarithm of the frequency

6.3 Test procedure

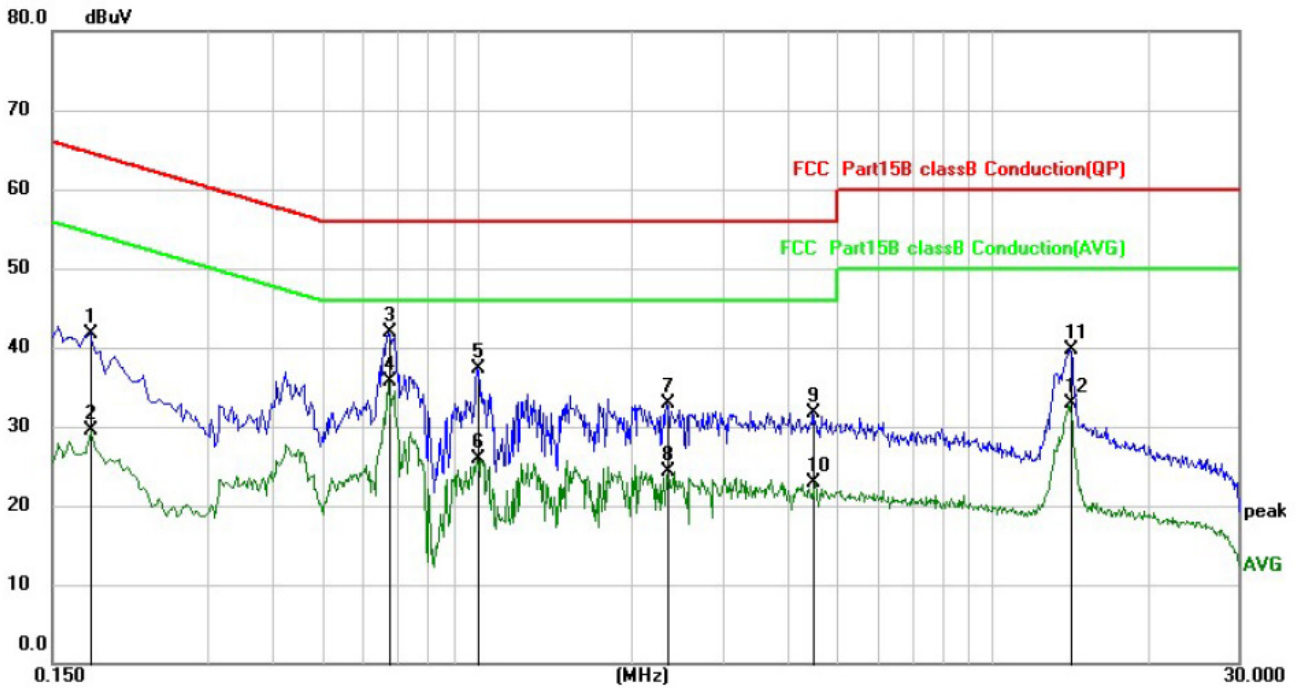
- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0,4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed

0,8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0,8 m from the LISN 2.

- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

6.4 Test Result

Test Specification: Line
AC 120V 60Hz

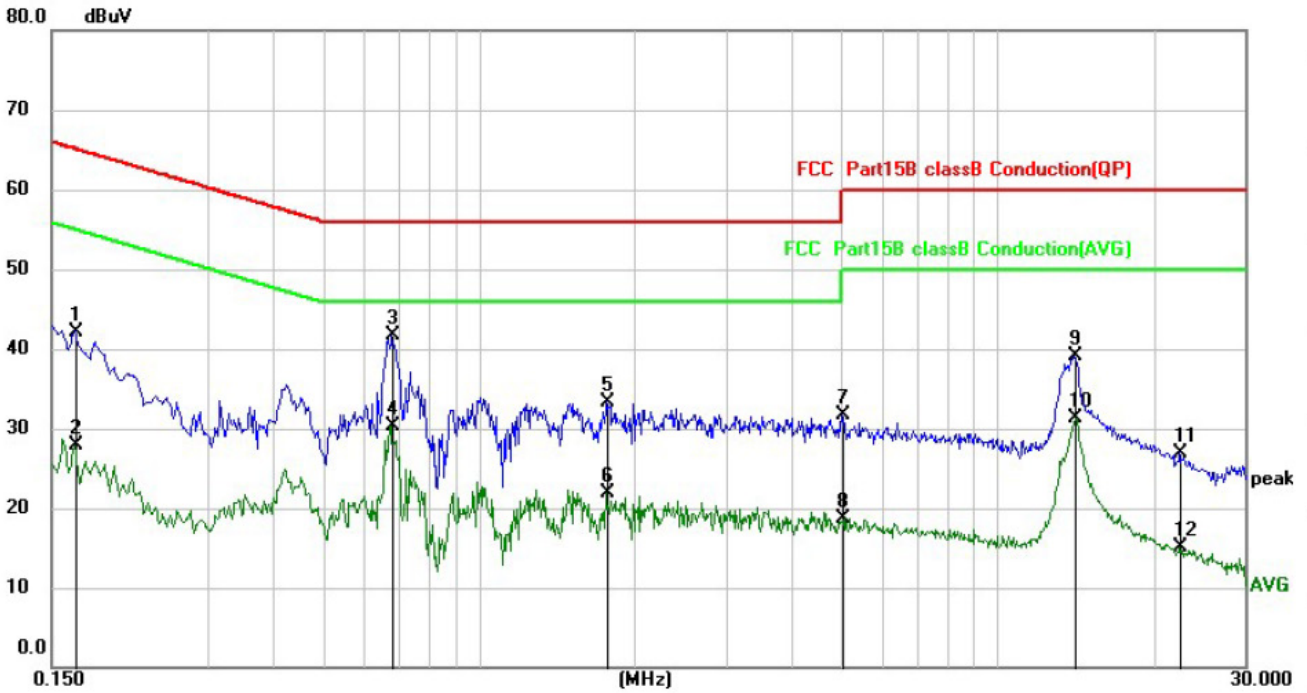


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector
		MHz	dBuV	dB	dBuV	dBuV	dB	
1		0.1780	31.03	10.70	41.73	64.58	-22.85	QP
2		0.1780	18.72	10.70	29.42	54.58	-25.16	AVG
3		0.6740	31.37	10.55	41.92	56.00	-14.08	QP
4	*	0.6740	25.07	10.55	35.62	46.00	-10.38	AVG
5		1.0020	26.62	10.62	37.24	56.00	-18.76	QP
6		1.0020	15.19	10.62	25.81	46.00	-20.19	AVG
7		2.3380	22.26	10.63	32.89	56.00	-23.11	QP
8		2.3380	13.62	10.63	24.25	46.00	-21.75	AVG
9		4.4860	20.99	10.65	31.64	56.00	-24.36	QP
10		4.4860	12.26	10.65	22.91	46.00	-23.09	AVG
11		14.1500	28.84	10.89	39.73	60.00	-20.27	QP
12		14.1500	21.92	10.89	32.81	50.00	-17.19	AVG

Remark:

Factor = Cable loss + LISN factor, Margin = Measurement – Limit

Test Specification: Neutral
AC 120V 60Hz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector
1		0.1660	31.49	10.71	42.20	65.16	-22.96	QP
2		0.1660	17.22	10.71	27.93	55.16	-27.23	AVG
3	*	0.6820	31.15	10.56	41.71	56.00	-14.29	QP
4		0.6820	19.80	10.56	30.36	46.00	-15.64	AVG
5		1.7700	22.60	10.63	33.23	56.00	-22.77	QP
6		1.7700	11.18	10.63	21.81	46.00	-24.19	AVG
7		5.0100	20.96	10.65	31.61	60.00	-28.39	QP
8		5.0100	8.01	10.65	18.66	50.00	-31.34	AVG
9		14.1140	28.26	10.89	39.15	60.00	-20.85	QP
10		14.1140	20.46	10.89	31.35	50.00	-18.65	AVG
11		22.5220	15.98	11.00	26.98	60.00	-33.02	QP
12		22.5220	4.09	11.00	15.09	50.00	-34.91	AVG

Remark:

Factor = Cable loss + LISN factor, Margin = Measurement – Limit

7. RADIATED SPURIOUS EMISSION

7.1 Block Diagram Of Test Setup

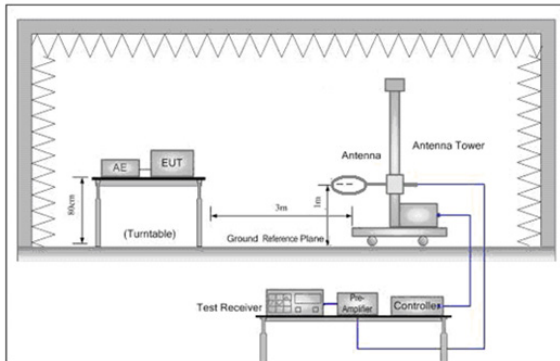


Figure 1. Below 30MHz

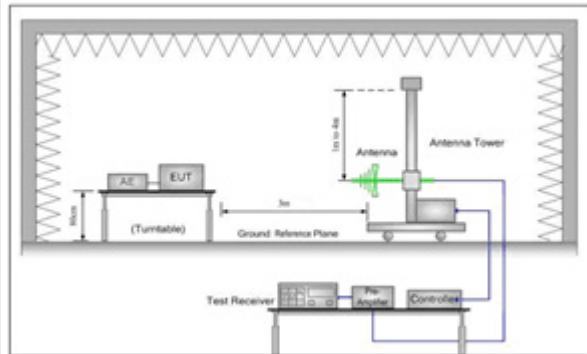


Figure 2. 30MHz to 1GHz

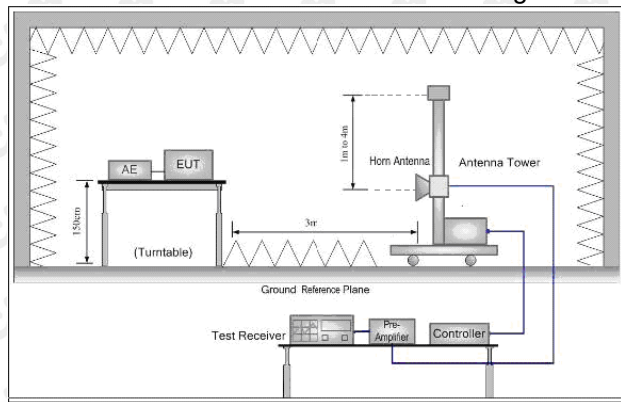


Figure 3. Above 1GHz

7.2 Limit

Spurious Emissions:

Frequency	Field strength (microvolt/meter)	Limit (dB μ V/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F (kHz)	-	-	300
0.490MHz-1.705MHz	24000/F (kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

7.3 Test procedure

Below 1GHz test procedure as below:

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

Above 1GHz test procedure as below:

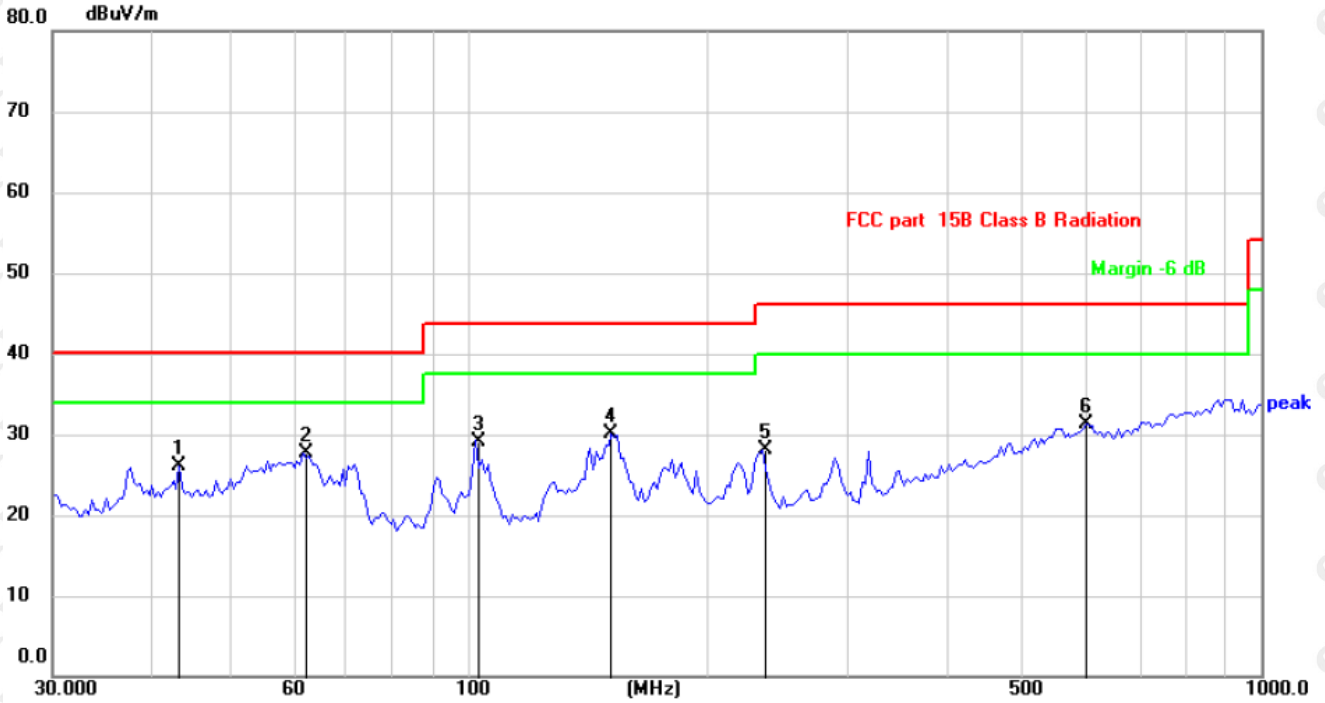
- g. Different from above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change from table 0.8 meter to 1.5 meter (Above 18GHz the distance is 1 meter and table is 1.5 meter).
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel
- j. Repeat above procedures until all frequencies measured was complete.

Receiver set:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30KHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30KHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30KHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30KHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30KHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120 kHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

7.4 Test Result

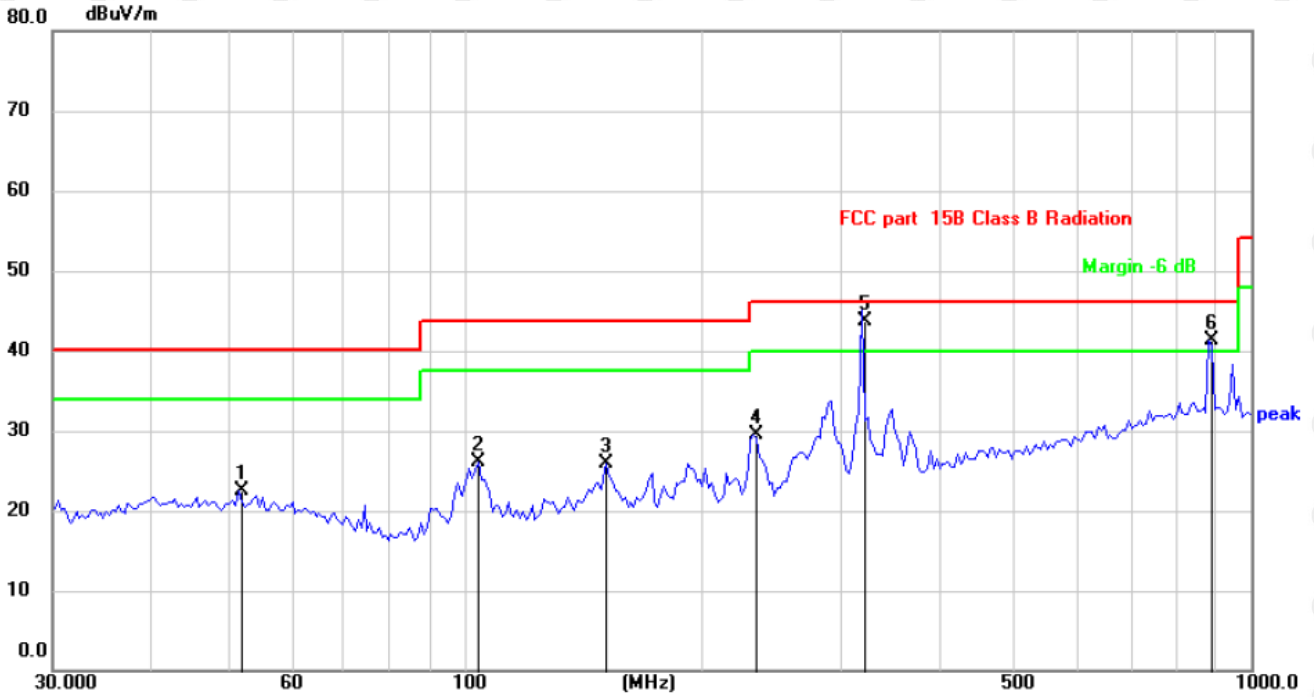
Below 1GHz Test Results:
Antenna polarity: H



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		43.3534	31.55	-5.39	26.16	40.00	-13.84	QP
2	*	62.1039	34.23	-6.54	27.69	40.00	-12.31	QP
3		102.3597	37.69	-8.49	29.20	43.50	-14.30	QP
4		151.8632	35.61	-5.51	30.10	43.50	-13.40	QP
5		235.4033	34.01	-5.84	28.17	46.00	-17.83	QP
6		601.4265	28.77	2.59	31.36	46.00	-14.64	QP

Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Margin = Limit – Level

Antenna polarity: V



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		51.6616	28.28	-5.73	22.55	40.00	-17.45	QP
2		104.1701	34.48	-8.37	26.11	43.50	-17.39	QP
3		151.8632	31.36	-5.51	25.85	43.50	-17.65	QP
4		233.3487	35.31	-5.86	29.45	46.00	-16.55	QP
5	*	320.0469	48.12	-4.51	43.61	46.00	-2.39	QP
6	!	884.5029	35.09	6.18	41.27	46.00	-4.73	QP

- Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Margin = Limit – Level
1. The margin of 9K-30MH measurement exceeds 20dB, so the test chart is not included. Test Mode: (802.11b)
 2. All modes have been tested, and the test results show that b-mode data is the worst, only b-mode test chart is put. Test Mode: TM1 (802.11b)
 3. After pre-scanning three directions, the report recorded the worst case Test Mode: TM1 (802.11b)

Above 1 GHz Test Results:

LOW CH1 (802.11b Mode)/2412

Horizontal:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4824	66.17	-3.64	62.53	74	-11.47	peak
4824	49.33	-3.64	45.69	54	-8.31	AVG
7236	57.99	-0.95	57.04	74	-16.96	peak
7236	45.70	-0.95	44.75	54	-9.25	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,
Margin = Emission level - Limits

Vertical:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4824	65.99	-3.64	62.35	74	-11.65	peak
4824	49.72	-3.64	46.08	54	-7.92	AVG
7236	58.36	-0.95	57.41	74	-16.59	peak
7236	43.14	-0.95	42.19	54	-11.81	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,
Margin = Emission level - Limits

MID CH6 (802.11b Mode)/2437

Horizontal:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4874	65.41	-3.51	61.90	74	-12.10	peak
4874	48.95	-3.51	45.44	54	-8.56	AVG
7311	57.76	-0.82	56.94	74	-17.06	peak
7311	45.89	-0.82	45.07	54	-8.93	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,
Margin = Emission level - Limits

Vertical:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4874	64.21	-3.51	60.70	74	-13.30	peak
4874	47.39	-3.51	43.88	54	-10.12	AVG
7311	58.96	-0.82	58.14	74	-15.86	peak
7311	43.78	-0.82	42.96	54	-11.04	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,
Margin = Emission level - Limits

HIGH CH11 (802.11b Mode)/2462

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
4924	63.26	-3.43	59.83	74	-14.17	peak
4924	46.71	-3.43	43.28	54	-10.72	AVG
7386	59.30	-0.75	58.55	74	-15.45	peak
7386	45.05	-0.75	44.30	54	-9.70	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
4924	64.82	-3.43	61.39	74	-12.61	peak
4924	45.90	-3.43	42.47	54	-11.53	AVG
7386	57.86	-0.75	57.11	74	-16.89	peak
7386	43.85	-0.75	43.10	54	-10.90	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Remark:

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (3) Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

LOW CH1 (802.11g Mode)/2412

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
4824	65.52	-3.64	61.88	74	-12.12	peak
4824	49.95	-3.64	46.31	54	-7.69	AVG
7236	58.82	-0.95	57.87	74	-16.13	peak
7236	46.76	-0.95	45.81	54	-8.19	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
4824	63.08	-3.64	59.44	74	-14.56	peak
4824	46.95	-3.64	43.31	54	-10.69	AVG
7236	59.96	-0.95	59.01	74	-14.99	peak
7236	45.08	-0.95	44.13	54	-9.87	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

MID CH6 (802.11g Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874	64.68	-3.51	61.17	74	-12.83	peak
4874	46.97	-3.51	43.46	54	-10.54	AVG
7311	58.69	-0.82	57.87	74	-16.13	peak
7311	43.40	-0.82	42.58	54	-11.42	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874	64.08	-3.51	60.57	74	-13.43	peak
4874	48.12	-3.51	44.61	54	-9.39	AVG
7311	57.78	-0.82	56.96	74	-17.04	peak
7311	43.11	-0.82	42.29	54	-11.71	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

HIGH CH11 (802.11g Mode)/2462

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924	62.88	-3.43	59.45	74	-14.55	peak
4924	48.62	-3.43	45.19	54	-8.81	AVG
7386	57.38	-0.75	56.63	74	-17.37	peak
7386	42.07	-0.75	41.32	54	-12.68	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4924	62.04	-3.43	58.61	74	-15.39	peak
4924	47.59	-3.43	44.16	54	-9.84	AVG
7386	57.68	-0.75	56.93	74	-17.07	peak
7386	42.49	-0.75	41.74	54	-12.26	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Remark:

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (3) Data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

LOW CH1 (802.11n/H20 Mode)/2412

Horizontal:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4824	63.47	-3.64	59.83	74	-14.17	peak
4824	46.50	-3.64	42.86	54	-11.14	AVG
7236	59.40	-0.95	58.45	74	-15.55	peak
7236	44.31	-0.95	43.36	54	-10.64	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4824	66.47	-3.64	62.83	74	-11.17	peak
4824	50.00	-3.64	46.36	54	-7.64	AVG
7236	56.62	-0.95	55.67	74	-18.33	peak
7236	42.01	-0.95	41.06	54	-12.94	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

MID CH6 (802.11n/H20 Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
4874.00	64.29	-3.51	60.78	74.00	-13.22	peak
4874.00	49.00	-3.51	45.49	54.00	-8.51	AVG
7311.00	58.71	-0.82	57.89	74.00	-16.11	peak
7311.00	46.62	-0.82	45.80	54.00	-8.20	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
4874.00	64.00	-3.51	60.49	74.00	-13.51	peak
4874.00	46.76	-3.51	43.25	54.00	-10.75	AVG
7311.00	56.92	-0.82	56.10	74.00	-17.90	peak
7311.00	42.12	-0.82	41.30	54.00	-12.70	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

HIGH CH11 (802.11n/H20 Mode)/2462

Horizontal:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4924	63.66	-3.43	60.23	74	-13.77	peak
4924	46.10	-3.43	42.67	54	-11.33	AVG
7386	58.54	-0.75	57.79	74	-16.21	peak
7386	41.70	-0.75	40.95	54	-13.05	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4924	64.64	-3.43	61.21	74	-12.79	peak
4924	46.51	-3.43	43.08	54	-10.92	AVG
7386	58.46	-0.75	57.71	74	-16.29	peak
7386	41.95	-0.75	41.20	54	-12.80	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

LOW CH3 (802.11n/H40 Mode)/2422

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
4844	64.63	-3.63	61.00	74	-13.00	peak
4844	47.06	-3.63	43.43	54	-10.57	AVG
7266	59.46	-0.94	58.52	74	-15.48	peak
7266	46.17	-0.94	45.23	54	-8.77	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
4844	65.07	-3.63	61.44	74	-12.56	peak
4844	48.16	-3.63	44.53	54	-9.47	AVG
7266	58.25	-0.94	57.31	74	-16.69	peak
7266	45.06	-0.94	44.12	54	-9.88	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

MID CH6 (802.11n/H40 Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874	62.48	-3.51	58.97	74	-15.03	peak
4874	48.13	-3.51	44.62	54	-9.38	AVG
7311	60.00	-0.82	59.18	74	-14.82	peak
7311	43.87	-0.82	43.05	54	-10.95	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874	62.33	-3.51	58.82	74	-15.18	peak
4874	46.44	-3.51	42.93	54	-11.07	AVG
7311	56.63	-0.82	55.81	74	-18.19	peak
7311	43.36	-0.82	42.54	54	-11.46	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

HIGH CH9 (802.11n/H40 Mode)/2452

Horizontal:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4904	62.84	-3.43	59.41	74	-14.59	peak
4904	49.17	-3.43	45.74	54	-8.26	AVG
7356	57.88	-0.75	57.13	74	-16.87	peak
7356	42.71	-0.75	41.96	54	-12.04	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
4904	63.67	-3.43	60.24	74	-13.76	peak
4904	46.08	-3.43	42.65	54	-11.35	AVG
7356	57.73	-0.75	56.98	74	-17.02	peak
7356	43.25	-0.75	42.50	54	-11.50	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Remark:

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (3) Data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

Restricted bands around fundamental frequency (Radiated)

Operation Mode:
802.11b Mode TX CH Low (2412MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
2390	57.14	-5.81	51.33	74	-22.67	peak
2390	/	-5.81	/	54	/	AVG
2399	64.29	-5.84	58.45	74	-15.55	peak
2399	48.43	-5.84	42.59	54	-11.41	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,
Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
2390	57.24	-5.81	51.43	74	-22.57	peak
2390	/	-5.81	/	54	/	AVG
2399	62.83	-5.84	56.99	74	-17.01	peak
2399	46.48	-5.84	40.64	54	-13.36	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,
Margin = Emission level - Limits

Operation Mode: TX CH High (2462MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	57.49	-5.65	51.84	74	-22.16	peak
2483.5	/	-5.65	/	54	/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	55.34	-5.65	49.69	74	-24.31	peak
2483.5	/	-5.65	/	54	/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Operation Mode: 802.11g Mode TX CH Low (2412MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	58.01	-5.81	52.20	74	-21.80	peak
2390	/	-5.81	/	54	/	AVG
2399	61.52	-5.84	55.68	74	-18.32	peak
2399	47.50	-5.84	41.66	54	-12.34	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	56.15	-5.81	50.34	74	-23.66	peak
2390	/	-5.81	/	54	/	AVG
2399	63.15	-5.84	57.31	74	-16.69	peak
2399	46.12	-5.84	40.28	54	-13.72	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Operation Mode: TX CH High (2462MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
2483.5	56.93	-5.65	51.28	74	-22.72	peak
2483.5	/	-5.65	/	54	/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
2483.5	56.79	-5.65	51.14	74	-22.86	peak
2483.5	/	-5.65	/	54	/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Operation Mode: 802.11n/H20 Mode TX CH Low (2412MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	56.30	-5.81	50.49	74	-23.51	peak
2390	/	-5.81	/	54	/	AVG
2399	63.26	-5.84	57.42	74	-16.58	peak
2399	48.43	-5.84	42.59	54	-11.41	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	57.59	-5.81	51.78	74	-22.22	peak
2390	/	-5.81	/	54	/	AVG
2399	59.80	-5.84	53.96	74	-20.04	peak
2399	47.75	-5.84	41.91	54	-12.09	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Operation Mode: TX CH High (2462MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
2483.5	56.39	-5.65	50.74	74	-23.26	peak
2483.5	/	-5.65	/	54	/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,
Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
2483.5	57.19	-5.65	51.54	74	-22.46	peak
2483.5	/	-5.65	/	54	/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,
Margin = Emission level - Limits

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Operation Mode: 802.11n/H40 Mode TX CH Low (2422MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
2390	59.28	-5.81	53.47	74	-20.53	peak
2390	/	-5.81	/	54	/	AVG
2399	62.92	-5.84	57.08	74	-16.92	peak
2399	47.43	-5.84	41.59	54	-12.41	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB μ V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)	
2390	58.46	-5.81	52.65	74	-21.35	peak
2390	/	-5.81	/	54	/	AVG
2399	61.04	-5.84	55.20	74	-18.80	peak
2399	45.30	-5.84	39.46	54	-14.54	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Operation Mode: TX CH High (2452MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	57.34	-5.65	51.69	74	-22.31	peak
2483.5	/	-5.65	/	54	/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

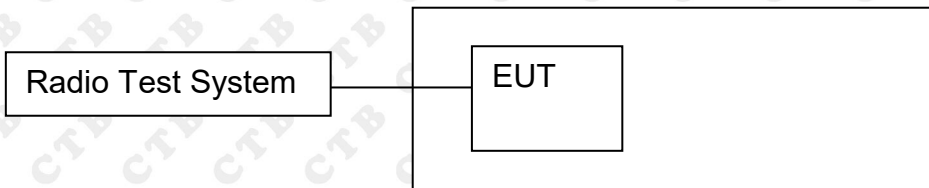
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	55.73	-5.65	50.08	74	-23.92	peak
2483.5	/	-5.65	/	54	/	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.

8. BAND EDGE AND RF CONDUCTED SPURIOUS EMISSIONS

8.1 Block Diagram Of Test Setup



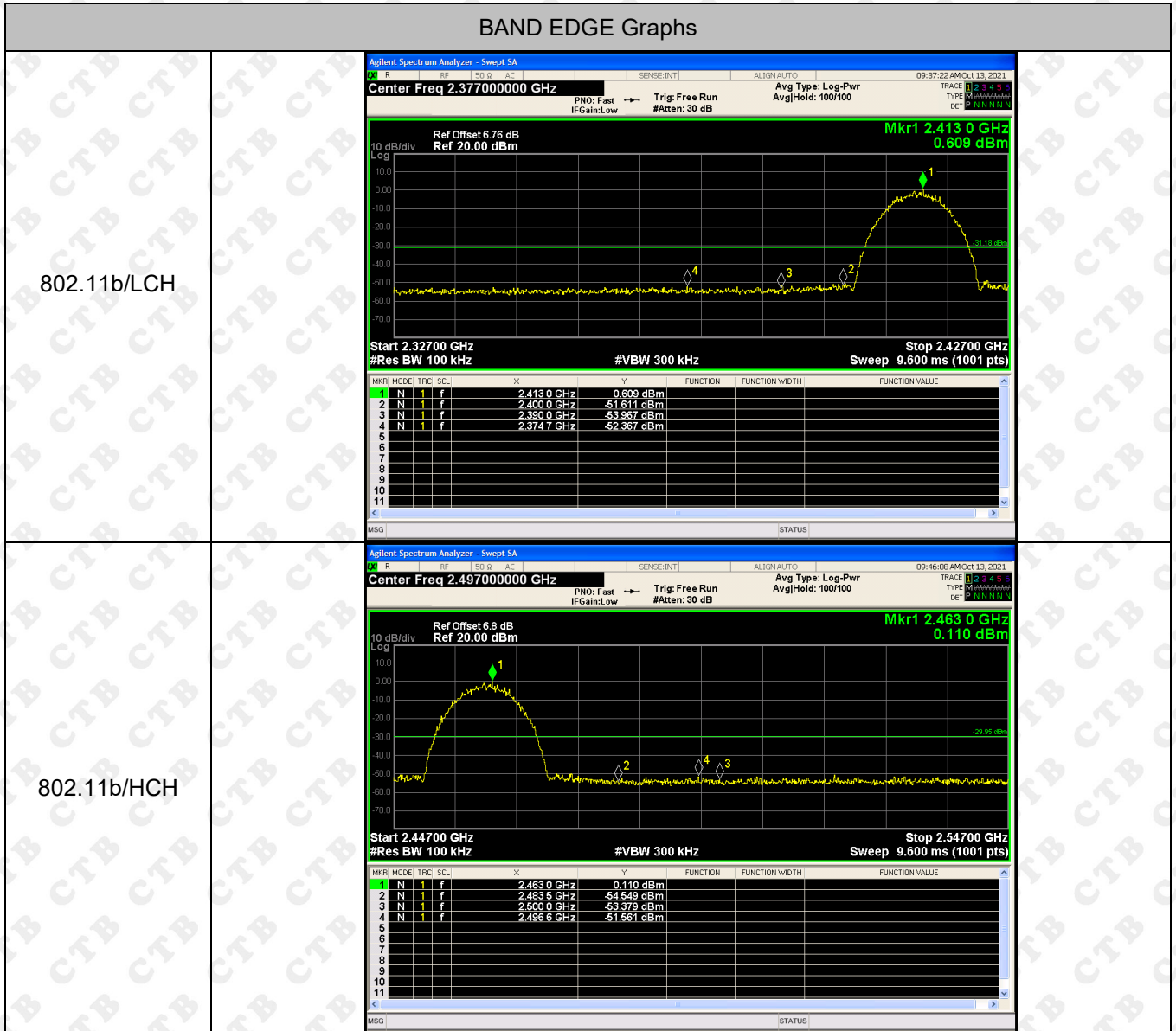
8.2 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

8.3 Test procedure

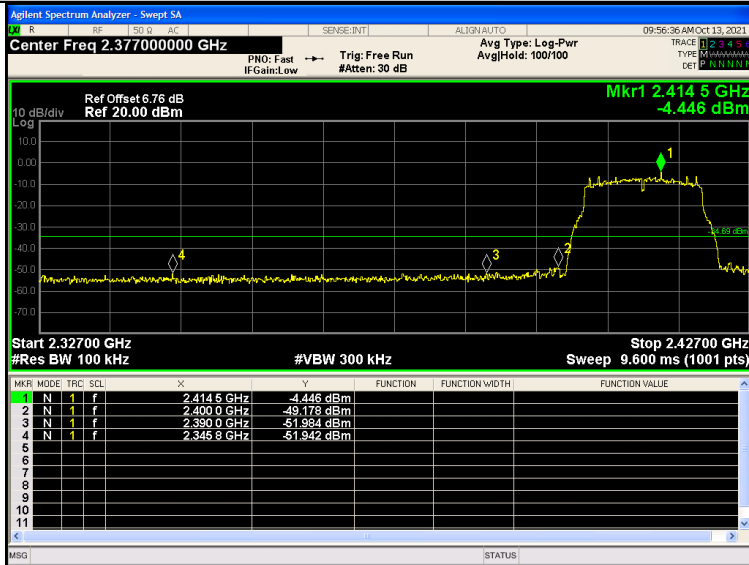
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer:
Below 30MHz:
RBW = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold
Above 30MHz:
RBW = 100KHz, VBW = 300KHz, Sweep = auto
Detector function = peak, Trace = max hold

8.4 Test Result

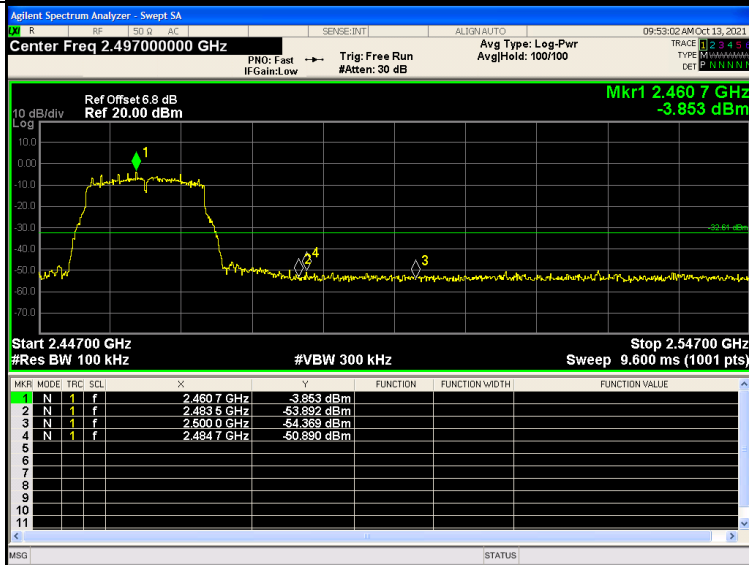


BAND EDGE Graphs

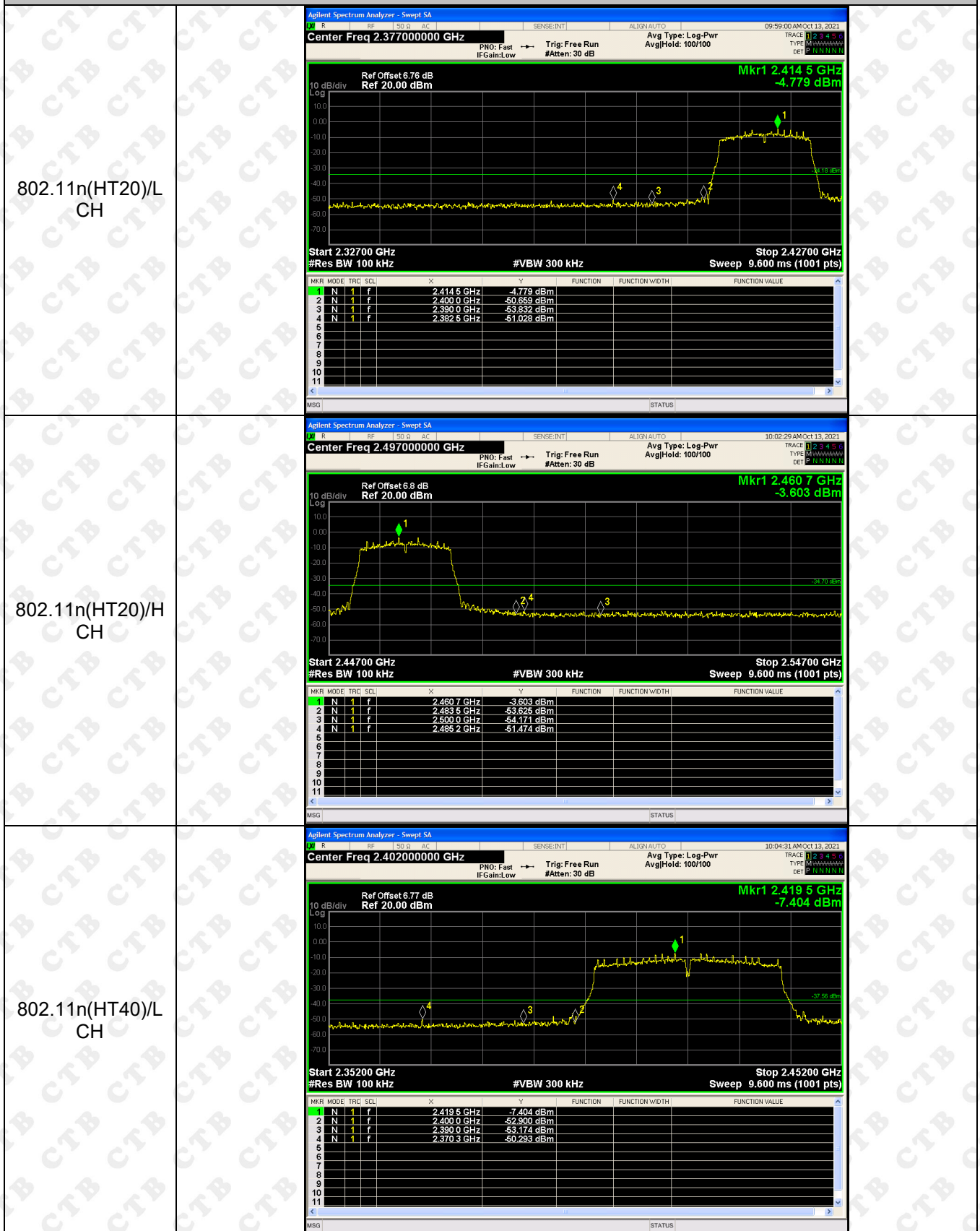
802.11g/LCH



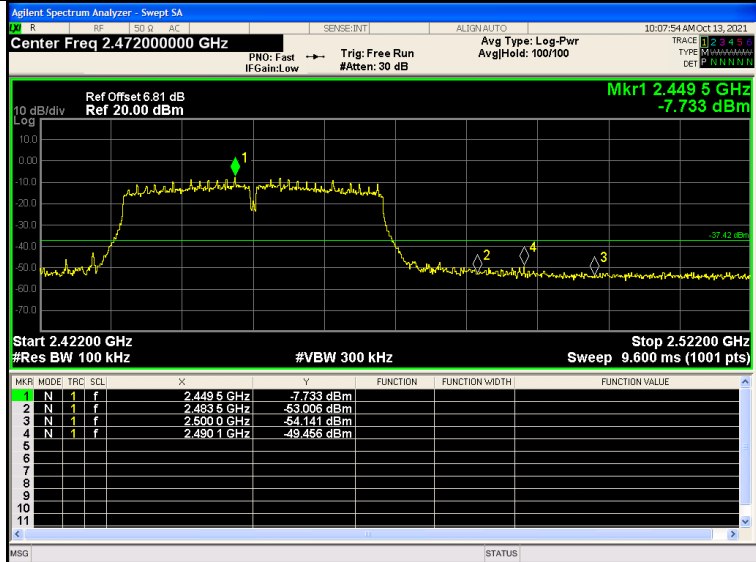
802.11g/HCH



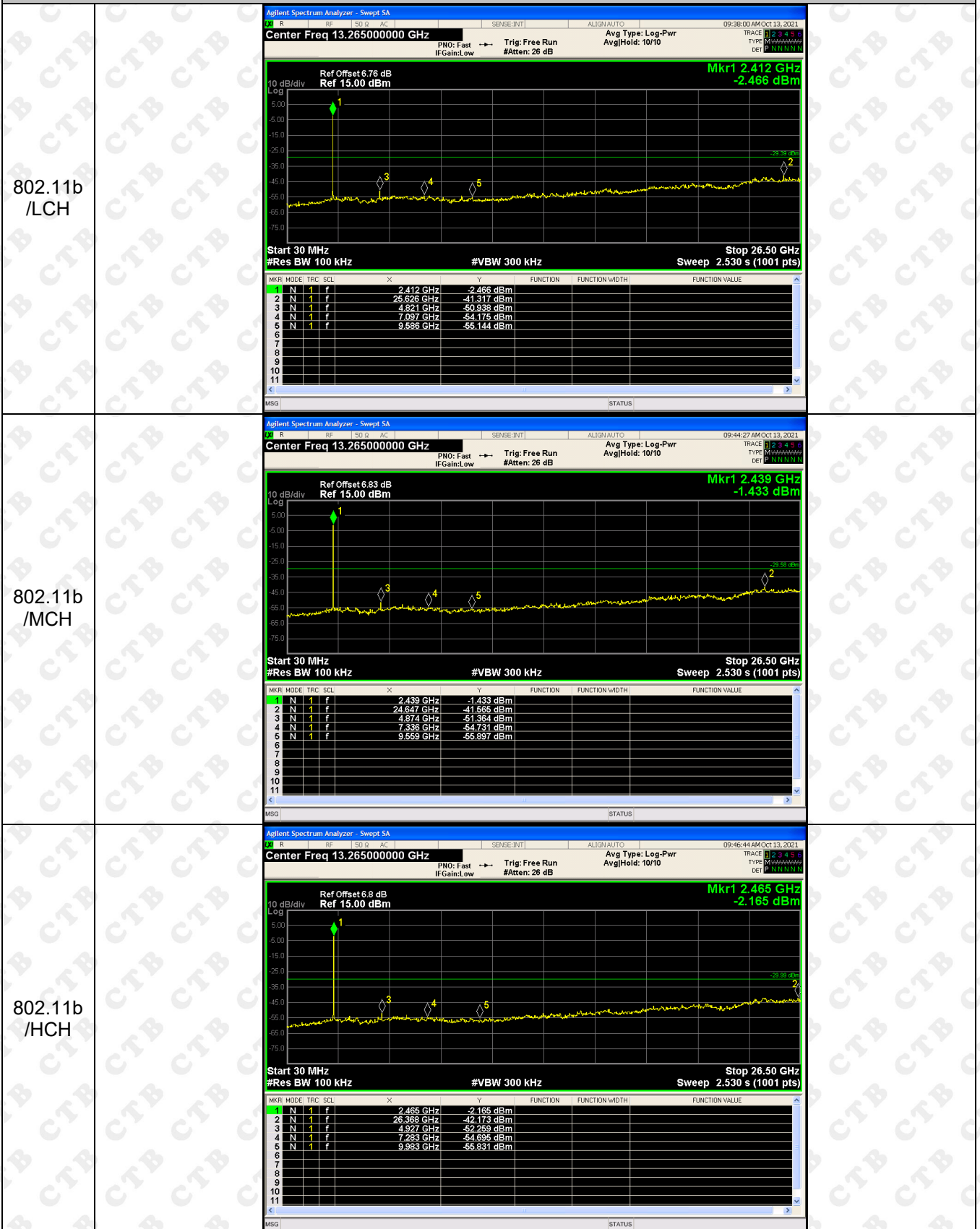
BAND EDGE Graphs



802.11n(HT40)/H
CH

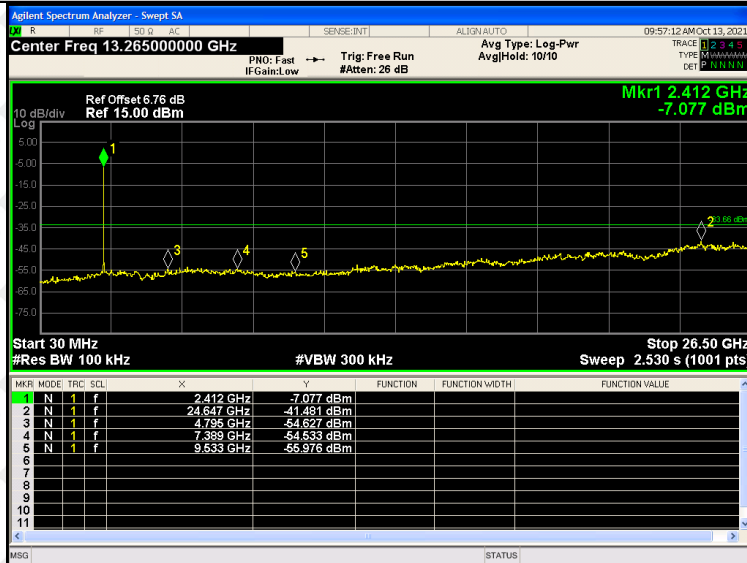


RF Conducted Spurious Emissions Graphs

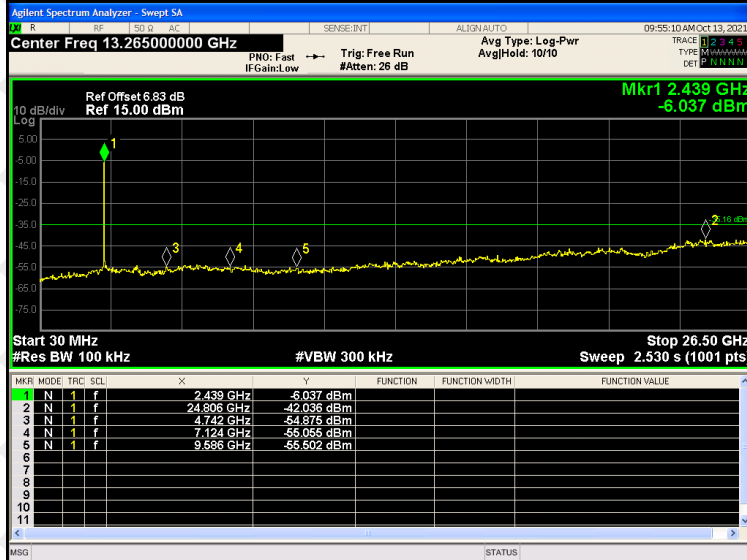


RF Conducted Spurious Emissions Graphs

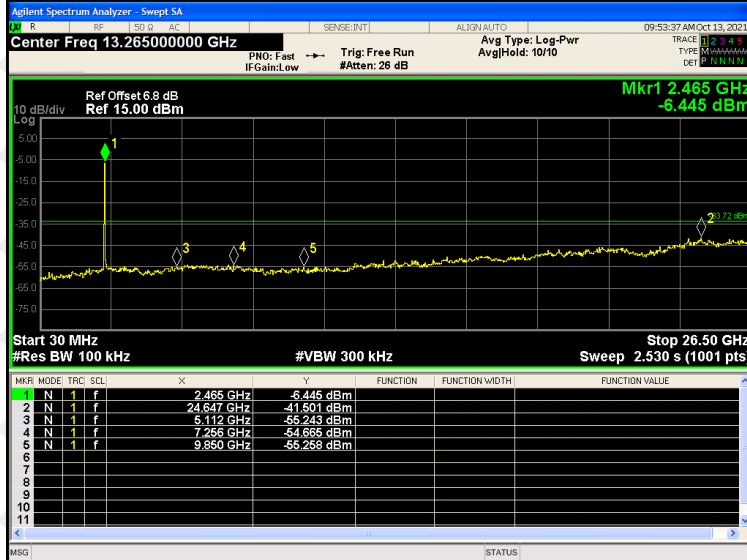
802.11g
/LCH



802.11g
/MCH



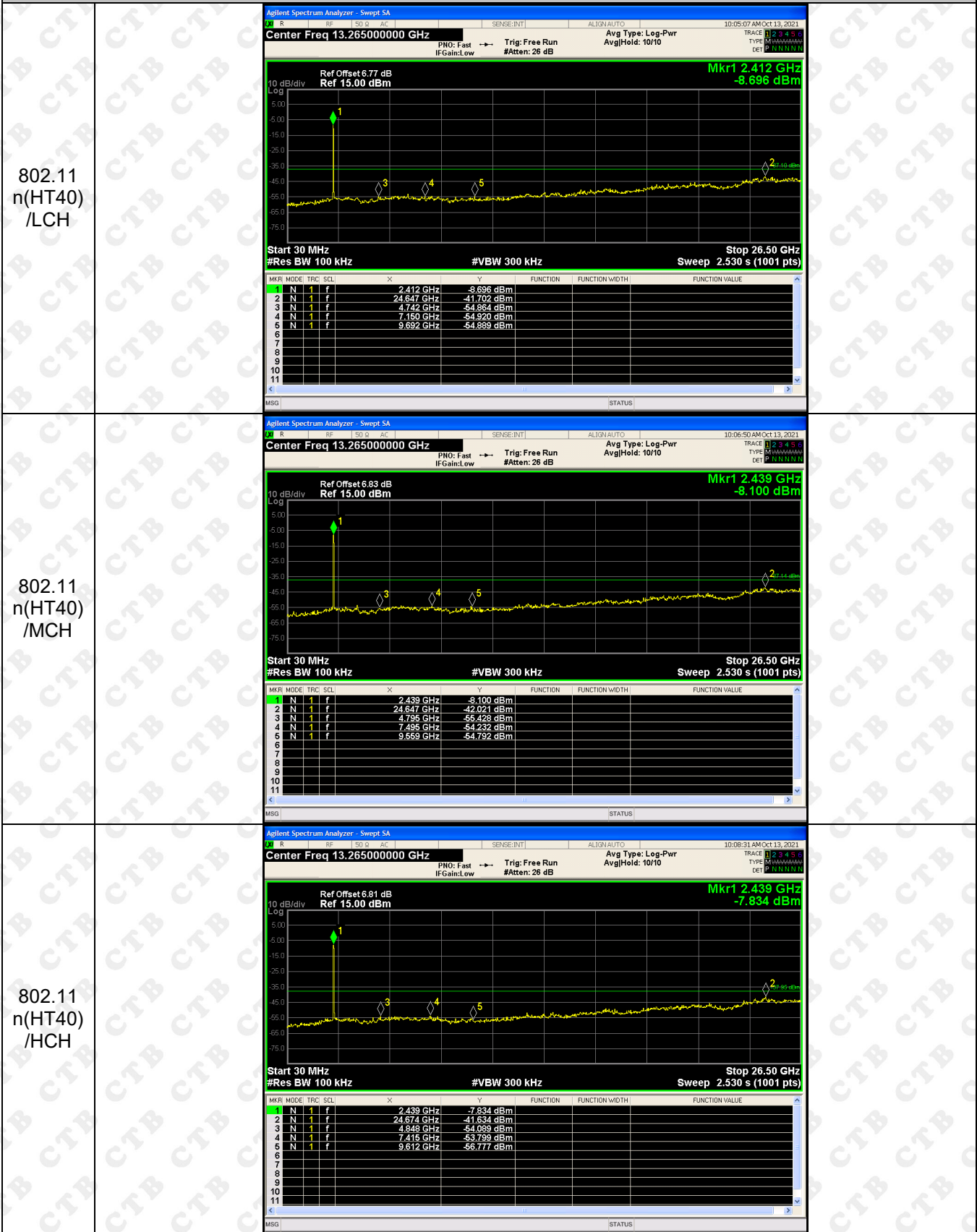
802.11g
/HCH



RF Conducted Spurious Emissions Graphs

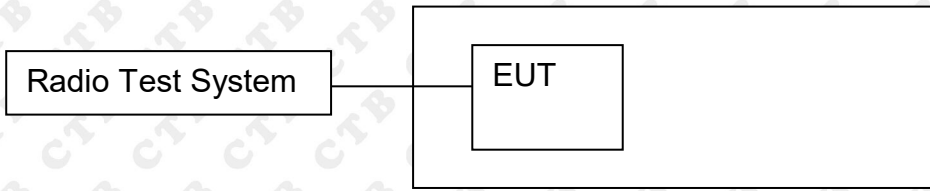
<p>802.11n (HT20)/ LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 13.26500000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 26 dB Avg Type: Log-Pwr AvgHold: 10/10 Ref Offset 6.76 dB Ref 15.00 dBm Mkr1 2.412 GHz -7.775 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.50 GHz Sweep 2.530 s (1001 pts)</p> <table border="1"> <thead> <tr> <th>MKR MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.412 GHz</td> <td>-7.775 dBm</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>26.262 GHz</td> <td>-42.263 dBm</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>4.795 GHz</td> <td>-55.623 dBm</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>7.389 GHz</td> <td>-53.386 dBm</td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>N</td> <td>1</td> <td>f</td> <td>9.797 GHz</td> <td>-54.901 dBm</td> <td></td> <td></td> </tr> </tbody> </table>	MKR MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.412 GHz	-7.775 dBm			2	N	1	f	26.262 GHz	-42.263 dBm			3	N	1	f	4.795 GHz	-55.623 dBm			4	N	1	f	7.389 GHz	-53.386 dBm			5	N	1	f	9.797 GHz	-54.901 dBm		
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RF Conducted Spurious Emissions Graphs



9. COUDUCTED OUTPUT POWER

9.1 Block Diagram Of Test Setup



9.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

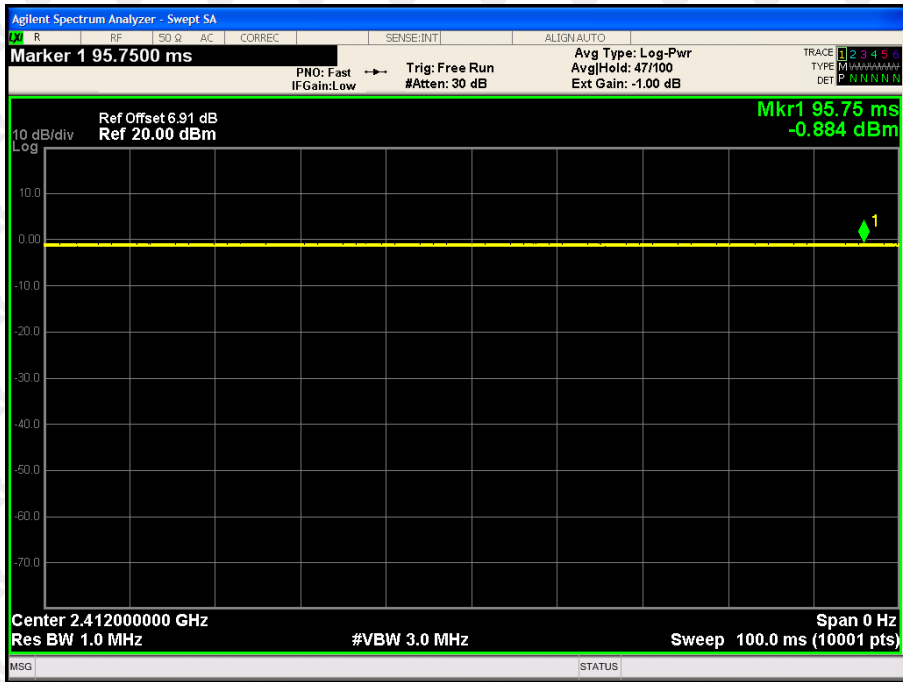
9.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1MHz. VBW = 3MHz. Sweep = auto; Detector Function = RMS. Channel power function is used
3. Keep the EUT in transmitting at lowest, middle and highest channel individually. Record the max value.

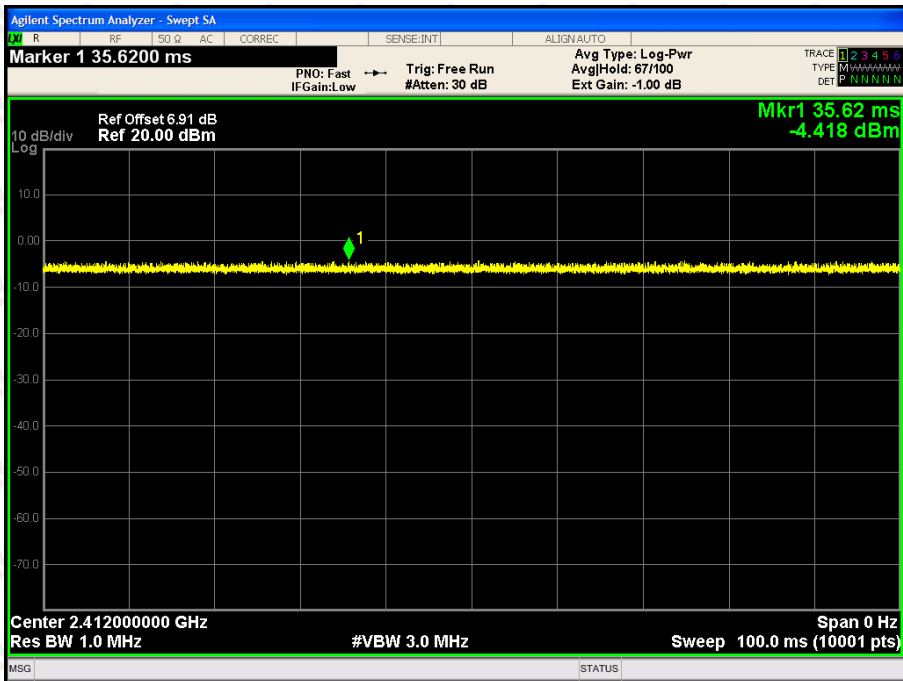
9.4 Test Result

Mode	Channel.	Maximum Output Power [dBm]	Limit[dBm]	Verdict
802.11b	LCH	7.621	30	PASS
	MCH	7.56	30	PASS
	HCH	7.124	30	PASS
802.11g	LCH	6.52	30	PASS
	MCH	6.476	30	PASS
	HCH	6.978	30	PASS
802.11n(HT20)	LCH	6.39	30	PASS
	MCH	6.392	30	PASS
	HCH	6.808	30	PASS
802.11n(HT40)	LCH	5.462	30	PASS
	MCH	5.35	30	PASS
	HCH	5.083	30	PASS

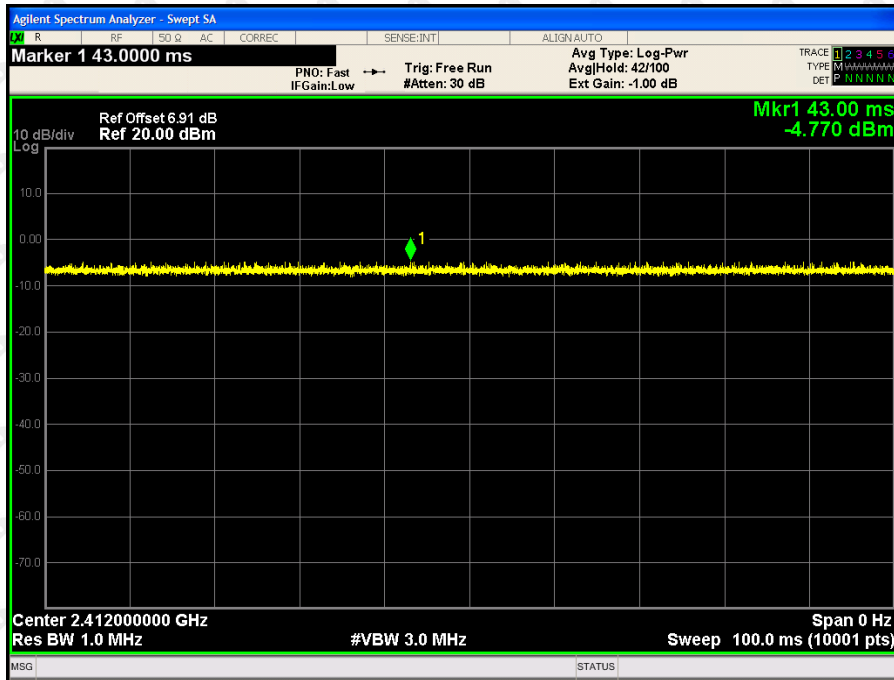
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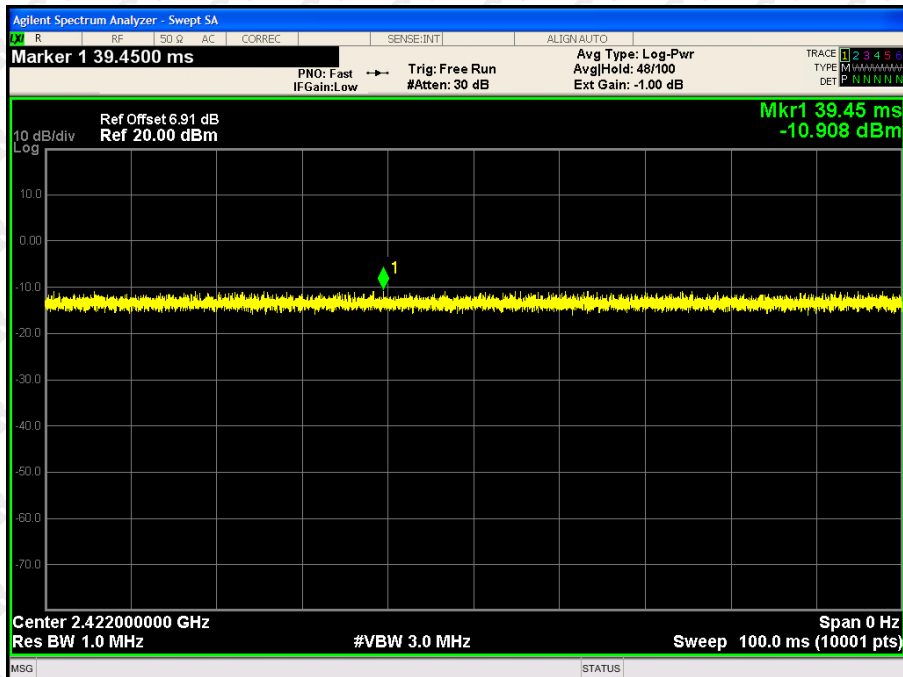
G:



N20:



N40:



Mode	Channel.	Maximum Output Power [dBm]
	LCH	<p>Agilent Spectrum Analyzer - Channel Power Center Freq 2.412000000 GHz Ref Offset 6.76 dB Ref 26.76 dBm Channel Power: 7.62 dBm / 20 MHz Power Spectral Density: -65.39 dBm / Hz</p>
802.11b	MCH	<p>Agilent Spectrum Analyzer - Channel Power Center Freq 2.437000000 GHz Ref Offset 6.83 dB Ref 26.83 dBm Channel Power: 7.56 dBm / 20 MHz Power Spectral Density: -65.45 dBm / Hz</p>
	HCH	<p>Agilent Spectrum Analyzer - Channel Power Center Freq 2.462000000 GHz Ref Offset 6.8 dB Ref 26.80 dBm Channel Power: 7.12 dBm / 20 MHz Power Spectral Density: -65.89 dBm / Hz</p>

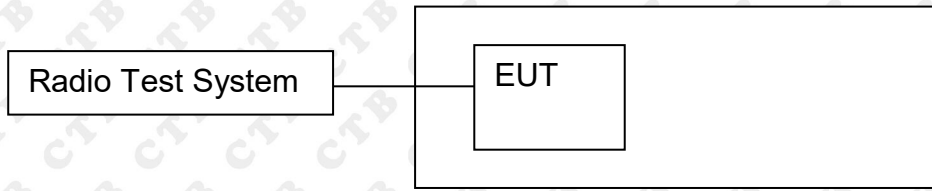
	LCH	 <p>Agilent Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.412000000 GHz</p> <p>Ref Offset: 6.76 dB Ref: 26.76 dBm</p> <p>Channel Power: 6.52 dBm / 20 MHz</p> <p>Power Spectral Density: -66.49 dBm / Hz</p>	
802.11g	MCH	 <p>Agilent Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.437000000 GHz</p> <p>Ref Offset: 6.83 dB Ref: 26.83 dBm</p> <p>Channel Power: 6.48 dBm / 20 MHz</p> <p>Power Spectral Density: -66.53 dBm / Hz</p>	
	HCH	 <p>Agilent Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.462000000 GHz</p> <p>Ref Offset: 6.8 dB Ref: 26.80 dBm</p> <p>Channel Power: 6.98 dBm / 20 MHz</p> <p>Power Spectral Density: -66.03 dBm / Hz</p>	

	LCH	<p>Agilent Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.412000000 GHz</p> <p>Ref Offset: 6.76 dB Ref: 26.76 dBm</p> <p>Channel Power: 6.39 dBm / 20 MHz</p> <p>Power Spectral Density: -66.62 dBm / Hz</p>	
802.11n(HT20)	MCH	<p>Agilent Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.437000000 GHz</p> <p>Ref Offset: 6.83 dB Ref: 26.83 dBm</p> <p>Channel Power: 6.39 dBm / 20 MHz</p> <p>Power Spectral Density: -66.62 dBm / Hz</p>	
	HCH	<p>Agilent Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.462000000 GHz</p> <p>Ref Offset: 6.8 dB Ref: 26.80 dBm</p> <p>Channel Power: 6.81 dBm / 20 MHz</p> <p>Power Spectral Density: -66.20 dBm / Hz</p>	

	LCH	<p>Agilent Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.422000000 GHz</p> <p>Ref Offset: 6.77 dB, Ref: 26.77 dBm</p> <p>Channel Power: 5.46 dBm / 40 MHz</p> <p>Power Spectral Density: -70.56 dBm / Hz</p>	
802.11n(HT40)	MCH	<p>Agilent Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.437000000 GHz</p> <p>Ref Offset: 6.83 dB, Ref: 26.83 dBm</p> <p>Channel Power: 5.35 dBm / 40 MHz</p> <p>Power Spectral Density: -70.67 dBm / Hz</p>	
	HCH	<p>Agilent Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.452000000 GHz</p> <p>Ref Offset: 6.81 dB, Ref: 26.81 dBm</p> <p>Channel Power: 5.08 dBm / 40 MHz</p> <p>Power Spectral Density: -70.94 dBm / Hz</p>	

10. 6DB OCCUPIED BANDWIDTH

10.1 Block Diagram Of Test Setup



10.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	$\geq 500\text{KHz}$ (6dB bandwidth)	2400-2483.5	PASS

10.3 Test procedure

1. Rem1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

10.4 Test Result

Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	6.672	500	PASS
	MCH	7.842	500	PASS
	HCH	8.098	500	PASS
802.11g	LCH	14.205	500	PASS
	MCH	15.023	500	PASS
	HCH	16.298	500	PASS
802.11n(HT20)	LCH	15.048	500	PASS
	MCH	14.993	500	PASS
	HCH	15.092	500	PASS
802.11n(HT40)	LCH	35.063	500	PASS
	MCH	33.808	500	PASS
	HCH	34.977	500	PASS

Test Graph:

Graphs																			
802.11b /LCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.41200000 GHz</p> <p>Center Freq: 2.41200000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Device: BTS</p> <p>Ref Offset 6.76 dB</p> <p>Ref 26.76 dBm</p> <p>Mkr3 2.415361 GHz</p> <p>-6.4951 dBm</p> <p>Center 2.412 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 3.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.8 dBm</td> </tr> <tr> <td>12.449 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>25.326 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>6.672 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	14.8 dBm	12.449 MHz			Transmit Freq Error	OBW Power	99.00 %	25.326 kHz			x dB Bandwidth	x dB	-6.00 dB	6.672 MHz		
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Transmit Freq Error	OBW Power	99.00 %																	
-37.065 kHz																			
x dB Bandwidth	x dB	-6.00 dB																	
7.842 MHz																			
802.11b/HCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.46200000 GHz</p> <p>Center Freq: 2.46200000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Device: BTS</p> <p>Ref Offset 6.8 dB</p> <p>Ref 26.80 dBm</p> <p>Mkr3 2.466033 GHz</p> <p>-6.8897 dBm</p> <p>Center 2.462 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 3.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.0 dBm</td> </tr> <tr> <td>12.589 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-15.799 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>8.098 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	14.0 dBm	12.589 MHz			Transmit Freq Error	OBW Power	99.00 %	-15.799 kHz			x dB Bandwidth	x dB	-6.00 dB	8.098 MHz		
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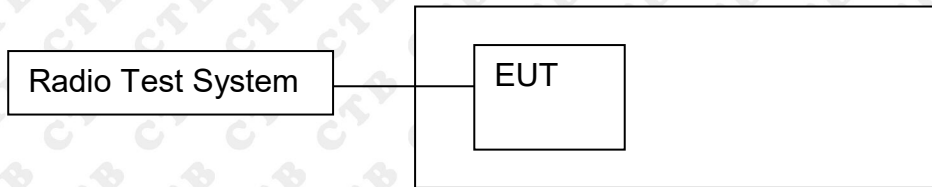
<p>802.11g/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.41200000 GHz</p> <p>Center Freq: 2.41200000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 6.76 dB Ref 26.76 dBm</p> <p>Mkr3 2.419112 GHz -9.8968 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 3.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>12.4 dBm</td> </tr> <tr> <td>16.328 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>9.801 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>14.21 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	12.4 dBm	16.328 MHz			Transmit Freq Error	OBW Power	99.00 %	9.801 kHz	x dB	-6.00 dB	x dB Bandwidth			14.21 MHz		
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<p>802.11n(HT20)/LC H</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.41200000 GHz</p> <p>Ref Offset 6.76 dB Ref 26.76 dBm</p> <p>Mkr3 2.419547 GHz -8.2494 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 3.333 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>12.2 dBm</td> </tr> <tr> <td>17.536 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>22.712 kHz</td> <td>OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>15.05 MHz</td> <td>x dB -6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	12.2 dBm	17.536 MHz			Transmit Freq Error	22.712 kHz	OBW Power 99.00 %	x dB Bandwidth	15.05 MHz	x dB -6.00 dB
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<p>802.11n(HT40)/LC H</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.422000000 GHz</p> <p>Center Freq: 2.422000000 GHz Trig: Free Run #Atten: 30 dB AvgHold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 6.77 dB Ref 26.77 dBm</p> <p>Mkr3 2.439549 GHz -13.596 dBm</p> <p>Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 6 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>11.7 dBm</td> </tr> <tr> <td>35.789 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>17.364 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>35.06 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	11.7 dBm	35.789 MHz			Transmit Freq Error	OBW Power	99.00 %	17.364 kHz			x dB Bandwidth	x dB	-6.00 dB	35.06 MHz		
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<p>802.11n(HT40)/HC H</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.452000000 GHz</p> <p>Center Freq: 2.452000000 GHz Trig: Free Run #Atten: 30 dB AvgHold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 6.81 dB Ref 26.81 dBm</p> <p>Mkr3 2.469503 GHz -11.734 dBm</p> <p>Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 6 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>11.4 dBm</td> </tr> <tr> <td>35.891 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>14.964 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>34.98 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	11.4 dBm	35.891 MHz			Transmit Freq Error	OBW Power	99.00 %	14.964 kHz			x dB Bandwidth	x dB	-6.00 dB	34.98 MHz		
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11. POWER SPECTRAL DENSITY

11.1 Block Diagram Of Test Setup



11.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

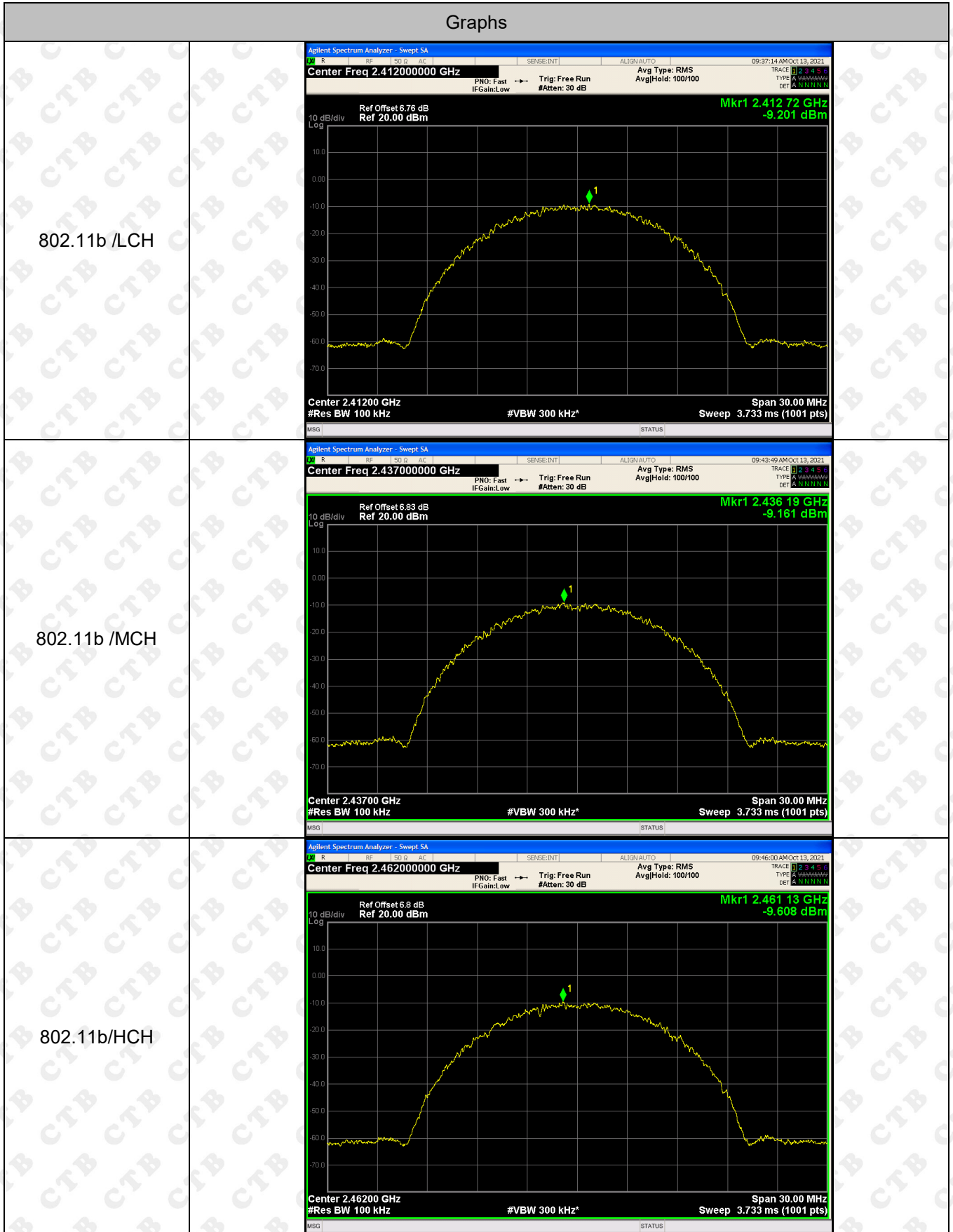
11.3 Test procedure

- a) Set instrument center frequency to DTS channel center frequency.
- b) Set span to at least 1.5 times the OBW.
- c) Set RBW to: $3\text{kHz} < \text{RBW} < 100\text{kHz}$.
- d) Set $\text{VBW} > 3 \times \text{RBW}$.
- e) Detector-power averaging (rms) or sample detector (when rms not available).
- f) Ensure that the number of measurement points in the sweep $> [2 \times \text{span} / \text{RBW}]$.
- g) Sweep time-auto couple.
- h) Employ trace averaging (rms) mode over a minimum of 100 traces.
- i) Use the peak marker function to determine the maximum amplitude level.
- j) If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and re-dusing the span to meet the minimum measurement point requirement as the RBW is reduced).

11.4 Test Result

Mode	Channel.	Power Spectral Density [dBm /100KHz]	Power Spectral Density [dBm /3KHz]	Limit(8 dBm (in any 3KHz))	Verdict
802.11b	LCH	-9.201	-24.401	8	PASS
	MCH	-9.161	-24.361	8	PASS
	HCH	-9.608	-24.808	8	PASS
802.11g	LCH	-12.891	-28.091	8	PASS
	MCH	-12.885	-28.085	8	PASS
	HCH	-12.1	-27.3	8	PASS
802.11n(H T20)	LCH	-12.721	-27.921	8	PASS
	MCH	-13.25	-28.45	8	PASS
	HCH	-12.324	-27.524	8	PASS
802.11n(H T40)	LCH	-16.885	-32.085	8	PASS
	MCH	-16.448	-31.648	8	PASS
	HCH	-17.415	-24.401	8	PASS

Test Graph



<p>802.11g/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset 6.76 dB Ref 20.00 dBm Mkr1 2.411 37 GHz -12.891 dBm Center 2.41200 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts)</p>
<p>802.11g/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 6.83 dB Ref 20.00 dBm Mkr1 2.436 70 GHz -12.885 dBm Center 2.43700 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts)</p>
<p>802.11g/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset 6.8 dB Ref 20.00 dBm Mkr1 2.460 77 GHz -12.100 dBm Center 2.46200 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts)</p>

<p>802.11n(HT20)/LC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset 6.76 dB Ref 20.00 dBm Mkr1 2.413 26 GHz -12.721 dBm Center 2.41200 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts)</p>
<p>802.11n(HT20)/MC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 6.83 dB Ref 20.00 dBm Mkr1 2.437 33 GHz -13.250 dBm Center 2.43700 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts)</p>
<p>802.11n(HT20)/HC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset 6.8 dB Ref 20.00 dBm Mkr1 2.463 26 GHz -12.324 dBm Center 2.46200 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts)</p>

<p>802.11n(HT40)/LC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.42200000 GHz Ref Offset 6.77 dB Ref 20.00 dBm Mkr1 2.424 52 GHz -16.885 dBm Center 2.42200 GHz #Res BW 100 kHz #VBW 300 kHz* Span 60.00 MHz Sweep 7.467 ms (1001 pts)</p>
<p>802.11n(HT40)/MC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 6.83 dB Ref 20.00 dBm Mkr1 2.434 48 GHz -16.448 dBm Center 2.43700 GHz #Res BW 100 kHz #VBW 300 kHz* Span 60.00 MHz Sweep 7.467 ms (1001 pts)</p>
<p>802.11n(HT40)/HC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.45200000 GHz Ref Offset 6.81 dB Ref 20.00 dBm Mkr1 2.454 52 GHz -17.415 dBm Center 2.45200 GHz #Res BW 100 kHz #VBW 300 kHz* Span 60.00 MHz Sweep 7.467 ms (1001 pts)</p>

12. ANTENNA REQUIREMENT

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

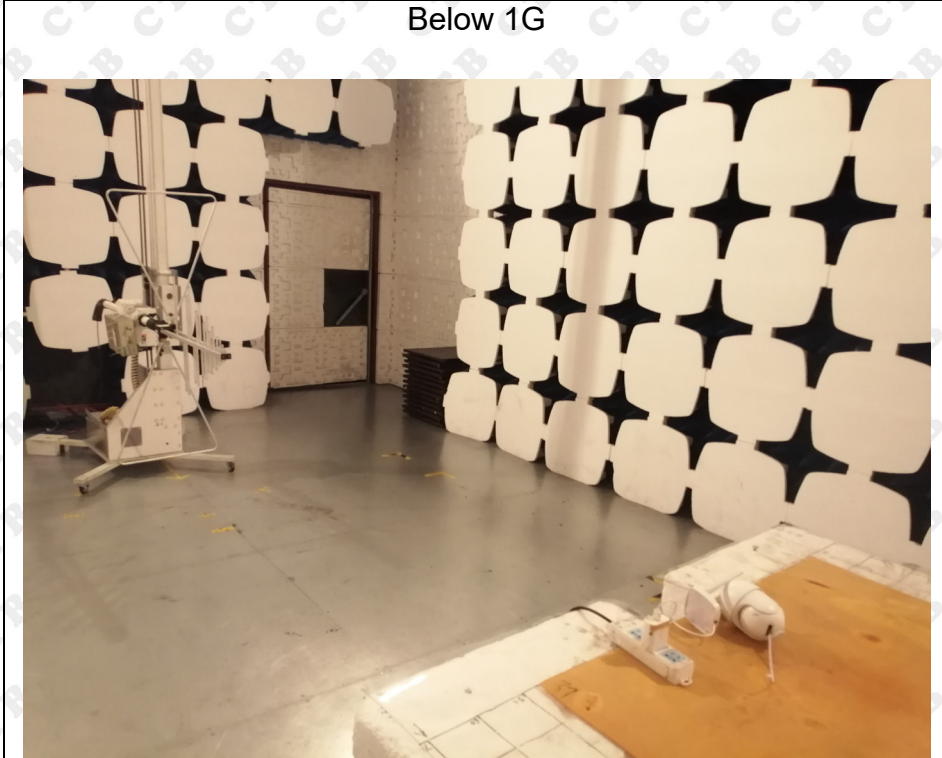
EUT Antenna:

The antenna is External Antenna and no consideration of replacement. The best case gain of the antenna is 1.0dBi.

13. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

Below 1G



Above 1G



Conducted Emission



XXXXXXXX END OF REPORT XXXXXXXX