

TEST REPORT

Product Name: 65 inch capacitive touch all-in-one machine
FCC ID: 2BKR5-LE6510
Trademark: Game Theory Tables
Model Number: LE-6510
Prepared For: BBO Poker Tables
Address: 6775 Speedway Blvd M102 Las Vegas, NV 89115
Manufacturer: Shenzhen Letine Technology Co., Ltd.
Address: 2nd Floor, No.5 Building, Dongwu Industrial Park, Donghuan 1st Road, Longhua New District, Shenzhen
Prepared By: Shenzhen CTB Testing Technology Co., Ltd.
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Sample Received Date: Aug. 12, 2024
Sample tested Date: Aug. 12, 2024 to Aug. 20, 2024
Issue Date: Aug. 20, 2024
Report No.: CTB240820005RFX
Test Standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247
ANSI C63.10:2013
Test Results: PASS
Remark: This is WIFI-2.4GHz band radio test report.

Compiled by:

Reviewed by:

Approved by:

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Arron Liu



Zhou Kui

Arron Liu

Bin Mei / Director

Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client. "*" indicates the testing items were fulfilled by subcontracted lab. "#" indicates the items are not in CNAS accreditation scope.

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(Note: N/A means not applicable)



1. VERSION

Report No.	Issue Date	Description	Approved
CTB240820005RFX	Aug. 20, 2024	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 D01 v05r02	PASS
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (b)	/	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 C63.10-2013.

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=±54.3Hz
Conducted output power Above 1G	U=±1.0dB
Conducted output power below 1G	U=±0.9dB
Power Spectral Density , Conduction	U=±1.0dB
Conduction spurious emissions	U=±2.8dB
Out of band emission	U=±54Hz
3m chamber Radiated spurious emission(9KHz-30MHz)	U=±4.8dB
3m chamber Radiated spurious emission(30MHz-1GHz)	U=±4.3dB
3m chamber Radiated spurious emission(1GHz-18GHz)	U=±4.5dB
3m chamber Radiated spurious emission(1GHz-40GHz)	U=±4.8dB
humidity uncertainty	U=±5.3%
Temperature uncertainty	U=±0.59°C
Supply voltages	U=±3%
Time	U=±5%
Conducted Emission (9KHz-30MHz)	3.2 dB

4.4 Channel List

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.

ANT 1, ANT 2

Test mode	Low channel	Middle channel	High channel
Transmitting(802.11b/g/n20/ax20)	2412MHz	2437MHz	2462MHz
Transmitting(802.11n40/ax40)	2422MHz	2437MHz	2452MHz

MIMO(ANT 1+ANT 2)

Test mode	Low channel	Middle channel	High channel
Transmitting(802.11n20/ax20)	2412MHz	2437MHz	2462MHz
Transmitting(802.11n40/ax40)	2422MHz	2437MHz	2452MHz

EUT has two Internal Antenna with Max Antenna Gain 4.27dbi on every antenna, CDD device with two spatial streams, according to KDB662911 D01 v02r01,

Directional gain= GANT + Array Gain, where Array Gain is as follows.

1) For power spectral density(PSD) measurements,

Array Gain=10log(NANT/NSS)dB=10log(2/1)=2.14dB,

So the directional gain for PSD is 6.41dBi

2) For power measurements,

The Array gain=0 dB for NANT≤4,

So the directional gain for Power measurements is 4.27dBi

NOTE: DutyCycle>98%.

Test mode	Rate
802.11b	11M
802.11g	54M
802.11/n20	65M
802.11/n40	65M
802.11/ax20	65M
802.11/ax40	65M

4.6 Test Environment

Humidity(%):	54
Atmospheric Pressure(kPa):	101
Normal Voltage(AC):	90V
Normal Temperature(°C)	23
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 1&2F., Building A, No. 26, Xinghe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, 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	Type No.	Serial No.	Firmware Version	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	A.14.16	2025/6/28
2	Power Sensor	Agilent	U2021XA	MY56120032	/	2025/6/28
3	Power Sensor	Agilent	U2021XA	MY56120034	/	2025/6/28
4	Communication test set	R&S	CMW500	108058	V3.5.80	2025/6/28
5	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2025/6/28
6	Signal Generator	Agilent	N5181A	MY50140365	A.01.60	2025/6/28
7	Vector signal generator	Agilent	N5182A	MY47420195	A.01.87	2025/6/28
8	Communication test set	Agilent	E5515C	MY50102567	B.19.07 (E1962B)	2025/6/28
9	2.4 GHz Filter	Shenxiang	MSF2400-24 83.5MS-1154	20181015001	/	2025/6/30
10	5 GHz Filter	Shenxiang	MSF5150-58 50MS-1155	20181015001	/	2025/6/30
11	Filter	Xingbo	XBLBQ-DZA 120	190821-1-1	/	2025/6/30
12	BT&WI-FI Automatic test software	Microwave	MTS8310	Ver. 2.0.0.0	/	/
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU	101017	/	2025/6/28
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	/	2025/6/28
15	234G Automatic test software	Microwave	MTS8200	Ver. 2.0.0.0	/	/
16	966 chamber	C.R.T.	966	/	/	2027/6/21
17	Receiver	R&S	ESPI	100362	RF_ATTEN_7 (104489/003)	2025/6/28
18	Amplifier	HP	8447E	2945A02747	/	2025/6/28
19	Amplifier	Agilent	8449B	3008A01838	/	2025/6/28
20	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	/	2025/6/28
21	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA9120D	01911	/	2025/6/28

22	EMI test software	Fala	EZ-EMC	FA-03A2 RE	/	/
23	Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2025/6/28
24	loop antenna	ZHINAN	ZN30900A	GTS534	/	/
25	40G Horn antenna	A/H/System	SAS-574	588	/	2025/6/28
26	Amplifier	AEROFLEX	Aeroflex	097	/	2025/6/28
27	Power Metter	KEYSIGHT	N1912AP	N/A	A.05.00	2025/6/28

Continuous disturbance						
No.	Equipment	Manufacturer	Model No.	Serial No.	Firmware version	Calibrated until
1	843 Shield Room	C/ R/ T	843	/	/	2027/6/21
2	AMN	ROHDE&SCHWARZ	ESH3-Z5	831551852	/	2025/6/30
3	Pulse limiter	ROHDE&SCHWARZ	ESH3Z2	357881052	/	2025/6/28
4	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100428	V4.42.SP3	2025/6/30
5	Coaxial cable	ZDECL	Z302S	18091904	/	2025/6/30
6	ISN	Schwarzbeck	NTFM8158	183	/	2025/6/30
7	Voltage sensor	Schwarzbeck	TK 9420	01189	/	2024/11/16
8	EZ-EMC	Frad	EMC-con3A1.1	/	/	/
9	Current Probe	FCC	F-52B	199453	/	2025/5/27
10	Communication test set	R&S	CMW500	108058	B.19.07 (E1962B)	2025/6/28
11	Communication test set	Agilent	E5515C	MY50102567	V3.5.80	2025/6/28

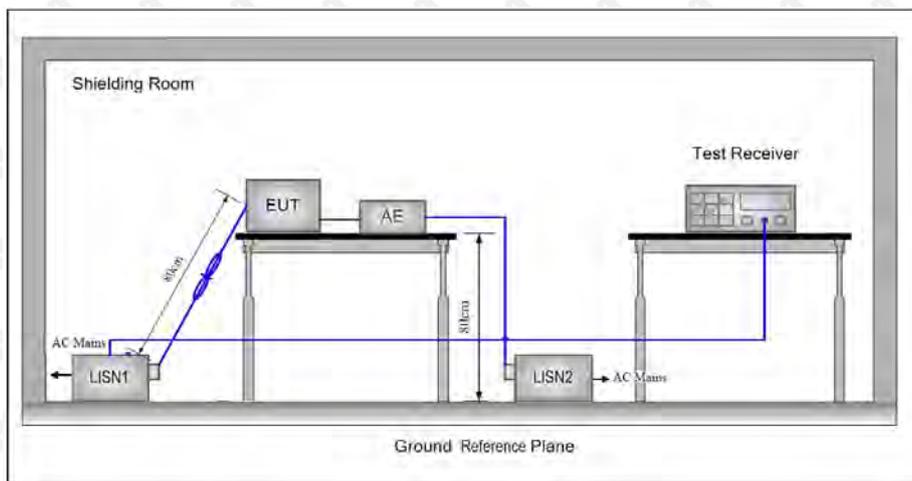
Radiated emission(No.2 Chamber)						
No.	Equipment	Manufacturer	Model No.	Serial No.	Firmware version	Calibrated until
1	966 Chamber	C/ R/ T	966	/	/	2026/11/14
2	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA 9120 D	01911	/	2026/7/07
3	Broadband Antenna	Schwarzbeck	VULB 9168	1471	/	2025/7/06
4	Amplifier	Agilent	8449B	3008A01838	/	2025/6/30
5	Preamplifier	Schwarzbeck	BBV 9743 B	00500	/	2025/5/23
6	EMI TEST RECEIVER	R&S	ESCI7	100861	/	2024/11/27
7	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2025/6/28
8	EMI test software	Farad	EZ-EMC	/	Ver. FARAD-3A1+	/
9	Coaxial cable	Rosenberg	8m	/	/	2024/11/27



10	Coaxial cable	Times	2m	/	/	2024/11/27
11	Coaxial cable	Times	2m	/	/	2024/11/27
12	Coaxial cable	Times	1m	/	/	2024/11/27
13	loop antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2025/6/29
14	Communication test set	R&S	CMW500	108058	B.19.07 (E1962B)	2025/6/28
15	Communication test set	Agilent	E5515C	MY50102567	V3.5.80	2025/6/28

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

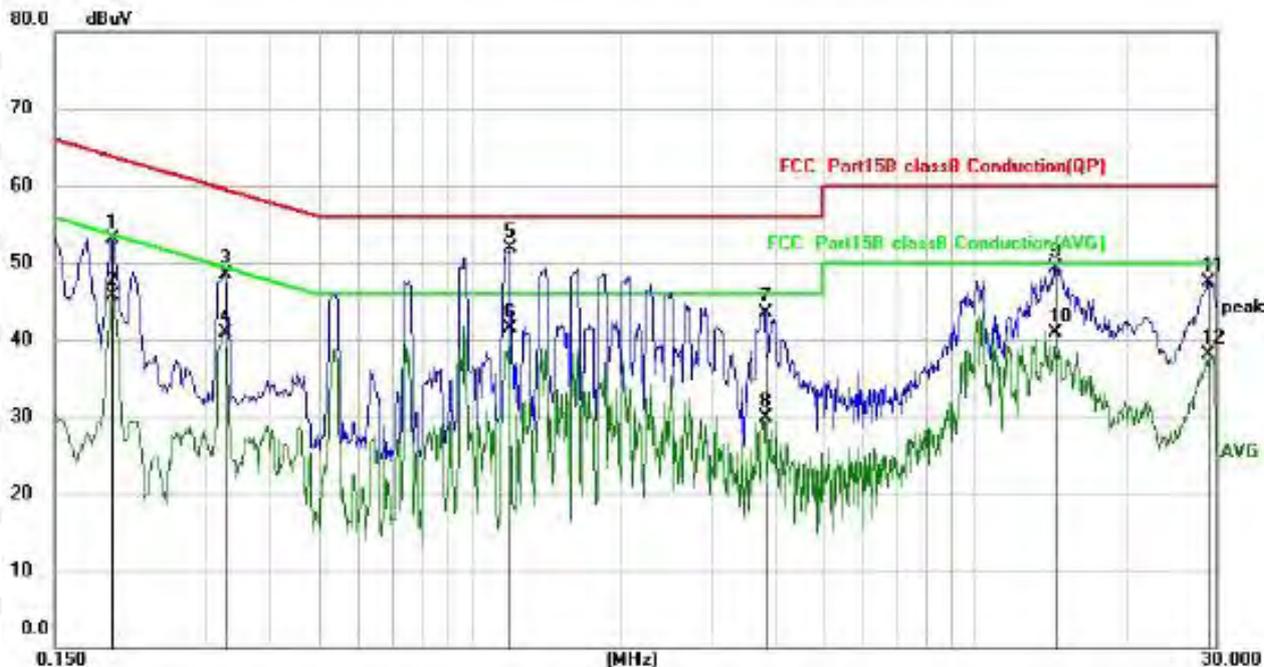
- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50 Ω /50 μ H + 5 Ω linear impedance. The power cables of all other units of the EUT were connected 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

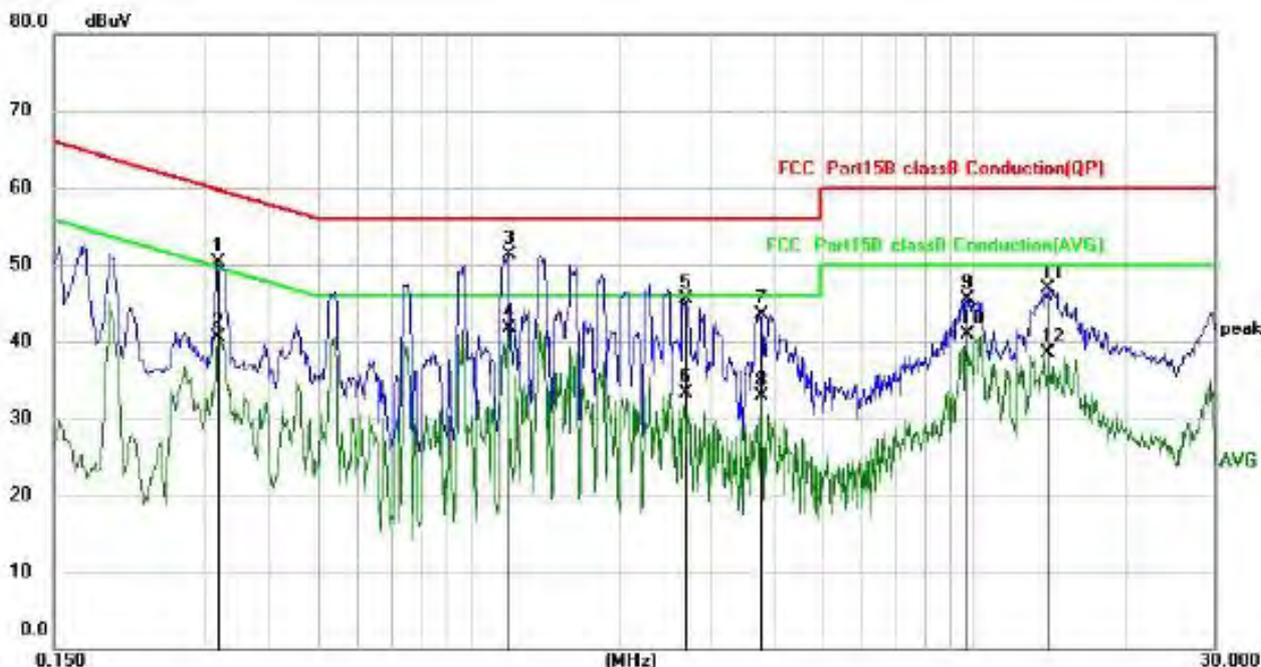
Test Specification: Line
AC 120V 60Hz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1945	42.31	10.73	53.04	63.84	-10.80	QP
2		0.1945	34.89	10.73	45.62	53.84	-8.22	AVG
3		0.3260	37.81	10.62	48.43	59.55	-11.12	QP
4		0.3260	30.34	10.62	40.96	49.55	-8.59	AVG
5	*	1.2016	40.76	11.08	51.84	56.00	-4.16	QP
6		1.2016	30.49	11.08	41.57	46.00	-4.43	AVG
7		3.8220	31.43	11.98	43.41	56.00	-12.59	QP
8		3.8220	17.92	11.98	29.90	46.00	-16.10	AVG
9		14.4300	35.90	13.33	49.23	60.00	-10.77	QP
10		14.4300	27.67	13.33	41.00	50.00	-9.00	AVG
11		28.9939	33.17	14.40	47.57	60.00	-12.43	QP
12		28.9939	23.78	14.40	38.18	50.00	-11.82	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	Over dB	Detector
1		0.3180	39.61	10.63	50.24	59.76	-9.52	QP
2		0.3180	29.95	10.63	40.58	49.76	-9.18	AVG
3		1.1976	40.32	11.07	51.39	56.00	-4.61	QP
4	*	1.1976	30.54	11.07	41.61	46.00	-4.39	AVG
5		2.6779	33.82	11.73	45.55	56.00	-10.45	QP
6		2.6779	21.56	11.73	33.29	46.00	-12.71	AVG
7		3.7900	31.56	11.97	43.53	56.00	-12.47	QP
8		3.7900	21.03	11.97	33.00	46.00	-13.00	AVG
9		9.6819	32.36	13.21	45.57	60.00	-14.43	QP
10		9.6819	27.63	13.21	40.84	50.00	-9.16	AVG
11		14.0015	33.59	13.32	46.91	60.00	-13.09	QP
12		14.0015	25.19	13.32	38.51	50.00	-11.49	AVG

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

7. RADIATED SPURIOUS EMISSION

7.1 Block Diagram Of Test Setup

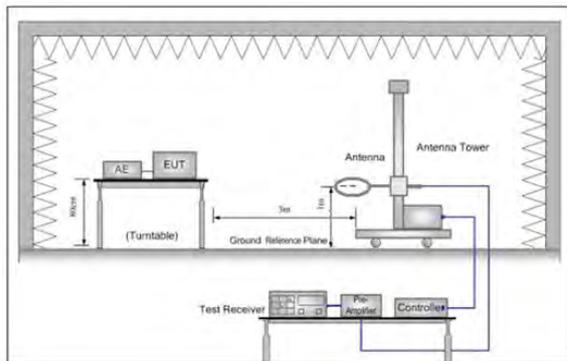


Figure 1. Below 30MHz

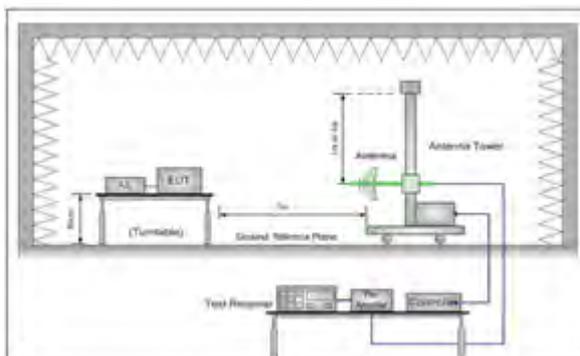


Figure 2. 30MHz to 1GHz

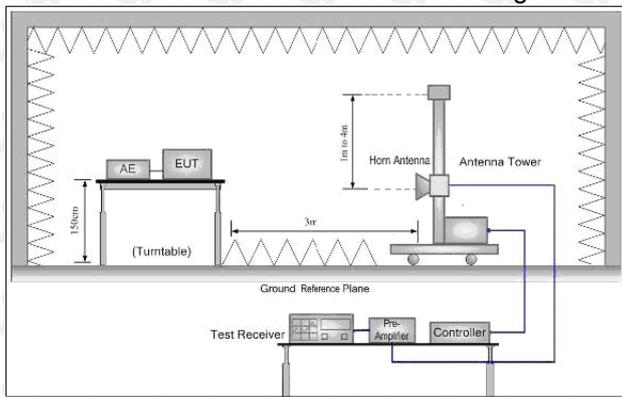


Figure 3. Above 1GHz

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 rota table 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 between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form 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:

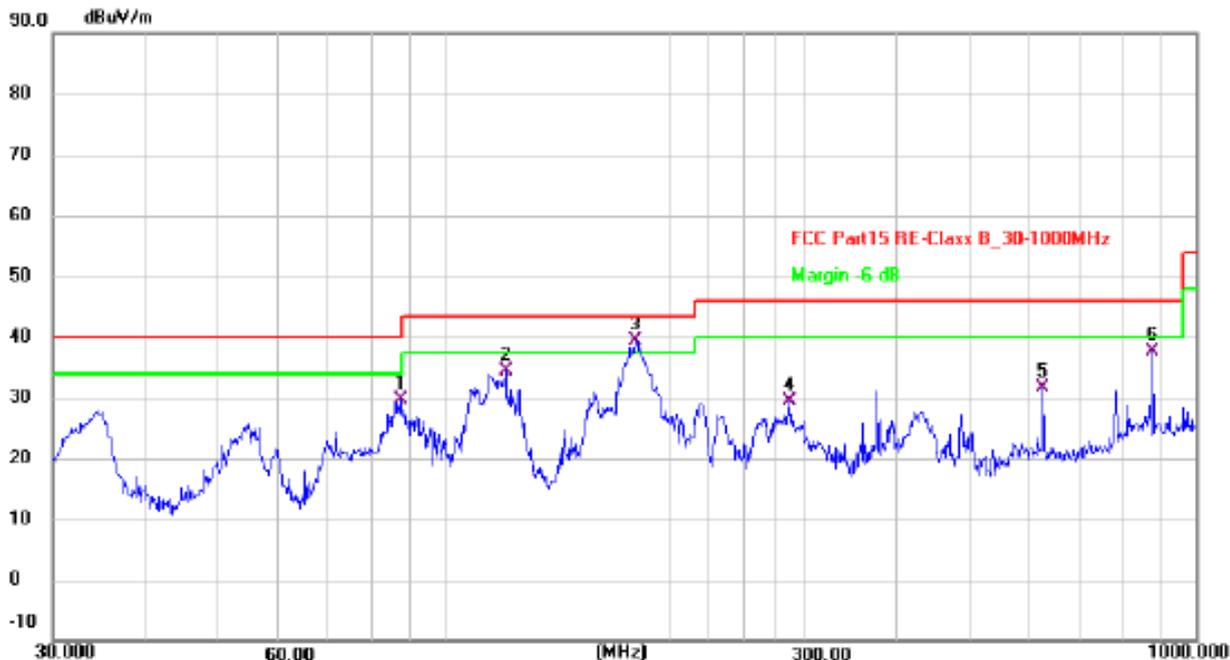
Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30KHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30KHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30KHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30KHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30KHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak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

The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement -X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

7.4 Test Result

After pre-scanning three directions, the report recorded the worst case

Below 1GHz Test Results:
Antenna polarity: H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	87.1116	48.18	-18.43	29.75	40.00	-10.25	QP
2	120.2766	50.40	-15.91	34.49	43.50	-9.01	QP
3 *	179.3863	55.10	-15.80	39.30	43.50	-4.20	QP
4	287.9904	43.87	-14.42	29.45	46.00	-16.55	QP
5	625.0780	37.93	-6.20	31.73	46.00	-14.27	QP
6	875.2470	38.62	-0.91	37.71	46.00	-8.29	QP

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

Antenna polarity: V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.1051	46.71	-12.93	33.78	40.00	-6.22	QP
2	54.2610	47.33	-14.61	32.72	40.00	-7.28	QP
3 *	117.7724	54.93	-16.19	38.74	43.50	-4.76	QP
4	180.0164	53.13	-15.90	37.23	43.50	-6.27	QP
5	375.9385	49.27	-12.75	36.52	46.00	-9.48	QP
6	875.2470	38.62	-0.91	37.71	46.00	-8.29	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.
2. All modes have been tested, and the test results show that ANT2 b-mode data is the worst, only ANT2 b-mode test chart is put.

Above 1 GHz Test Results:

ANT1 LOW CH1 (802.11b 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	65.26	-3.64	61.62	74	-12.38	peak
4824	49.35	-3.64	45.71	54	-8.29	AVG
7236	58.91	-0.95	57.96	74	-16.04	peak
7236	45.82	-0.95	44.87	54	-9.13	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	67.06	-3.64	63.42	74	-10.58	peak
4824	48.23	-3.64	44.59	54	-9.41	AVG
7236	58.52	-0.95	57.57	74	-16.43	peak
7236	43.01	-0.95	42.06	54	-11.94	AVG

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

ANT1 MID CH6 (802.11b Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874	65.41	-3.51	61.90	74	-12.10	peak
4874	48.77	-3.51	45.26	54	-8.74	AVG
7311	59.97	-0.82	59.15	74	-14.85	peak
7311	44.19	-0.82	43.37	54	-10.63	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	63.93	-3.51	60.42	74	-13.58	peak
4874	48.48	-3.51	44.97	54	-9.03	AVG
7311	59.26	-0.82	58.44	74	-15.56	peak
7311	42.95	-0.82	42.13	54	-11.87	AVG

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

ANT1 HIGH CH11 (802.11b Mode)/2462

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924	63.37	-3.43	59.94	74	-14.06	peak
4924	47.94	-3.43	44.51	54	-9.49	AVG
7386	57.23	-0.75	56.48	74	-17.52	peak
7386	42.68	-0.75	41.93	54	-12.07	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)	
4924	65.12	-3.43	61.69	74	-12.31	peak
4924	47.83	-3.43	44.40	54	-9.60	AVG
7386	59.15	-0.75	58.40	74	-15.60	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

Remark:

- (1). Measuring frequencies from 9KHz to the 25 GHz. The test range is 9K ~10 times the main wave, and other spurious below the limit of 20dB will not be reflected in the report
- (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.

ANT1 LOW CH1 (802.11g Mode)/2412

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824	66.05	-3.64	62.41	74	-11.59	peak
4824	49.09	-3.64	45.45	54	-8.55	AVG
7236	58.62	-0.95	57.67	74	-16.33	peak
7236	46.24	-0.95	45.29	54	-8.71	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)	
4824	66.90	-3.64	63.26	74	-10.74	peak
4824	47.57	-3.64	43.93	54	-10.07	AVG
7236	56.47	-0.95	55.52	74	-18.48	peak
7236	43.64	-0.95	42.69	54	-11.31	AVG

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

ANT1 MID CH6 (802.11g 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	65.20	-3.51	61.69	74	-12.31	peak
4874	50.56	-3.51	47.05	54	-6.95	AVG
7311	58.75	-0.82	57.93	74	-16.07	peak
7311	43.29	-0.82	42.47	54	-11.53	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	64.81	-3.51	61.30	74	-12.70	peak
4874	49.52	-3.51	46.01	54	-7.99	AVG
7311	59.32	-0.82	58.50	74	-15.50	peak
7311	45.03	-0.82	44.21	54	-9.79	AVG

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

ANT1 HIGH CH11 (802.11g Mode)/2462

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924	64.64	-3.43	61.21	74	-12.79	peak
4924	47.06	-3.43	43.63	54	-10.37	AVG
7386	57.80	-0.75	57.05	74	-16.95	peak
7386	44.34	-0.75	43.59	54	-10.41	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)	
4924	63.42	-3.43	59.99	74	-14.01	peak
4924	47.61	-3.43	44.18	54	-9.82	AVG
7386	58.40	-0.75	57.65	74	-16.35	peak
7386	41.71	-0.75	40.96	54	-13.04	AVG

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

Remark:

- (1). Measuring frequencies from 9KHz to the 25 GHz. The test range is 9K ~10 times the main wave, and other spurious below the limit of 20dB will not be reflected in the report
- (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.

Above 1GHz ANT1+ANT2 :

LOW CH1 (802.11n/H20 Mode)/2412

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824	65.78	-3.64	62.14	74	-11.86	peak
4824	49.42	-3.64	45.78	54	-8.22	AVG
7236	59.48	-0.95	58.53	74	-15.47	peak
7236	44.10	-0.95	43.15	54	-10.85	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
4824	66.47	-3.64	62.83	74	-11.17	peak
4824	49.28	-3.64	45.64	54	-8.36	AVG
7236	58.32	-0.95	57.37	74	-16.63	peak
7236	43.83	-0.95	42.88	54	-11.12	AVG

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

LOW CH1 (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	66.12	-3.51	62.61	74	-11.39	peak
4874	49.23	-3.51	45.72	54	-8.28	AVG
7311	57.71	-0.82	56.89	74	-17.11	peak
7311	43.79	-0.82	42.97	54	-11.03	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	64.75	-3.51	61.24	74	-12.76	peak
4874	49.12	-3.51	45.61	54	-8.39	AVG
7311	58.23	-0.82	57.41	74	-16.59	peak
7311	44.42	-0.82	43.60	54	-10.40	AVG

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

LOW CH1 (802.11n/H20 Mode)/2462

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924	62.24	-3.43	58.81	74	-15.19	peak
4924	46.10	-3.43	42.67	54	-11.33	AVG
7386	59.59	-0.75	58.84	74	-15.16	peak
7386	42.90	-0.75	42.15	54	-11.85	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)	
4924	64.04	-3.43	60.61	74	-13.39	peak
4924	47.39	-3.43	43.96	54	-10.04	AVG
7386	56.75	-0.75	56.00	74	-18.00	peak
7386	44.08	-0.75	43.33	54	-10.67	AVG

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

Remark:

- (1). Measuring frequencies from 9KHz to the 25 GHz. The test range is 9K ~10 times the main wave, and other spurious below the limit of 20dB will not be reflected in the report
- (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.

ANT1+ANT2 LOW CH1 (802.11ax/H20 Mode)/2412

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4824	64.11	-3.64	60.47	74	-13.53	peak
4824	47.12	-3.64	43.48	54	-10.52	AVG
7236	59.78	-0.95	58.83	74	-15.17	peak
7236	45.44	-0.95	44.49	54	-9.51	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
4824	62.58	-3.64	58.94	74	-15.06	peak
4824	48.74	-3.64	45.10	54	-8.90	AVG
7236	58.42	-0.95	57.47	74	-16.53	peak
7236	44.34	-0.95	43.39	54	-10.61	AVG

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

ANT1+ANT2 MID CH6 (802.11ax/H20 Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	65.44	-3.51	61.93	74.00	-12.07	peak
4874.00	48.93	-3.51	45.42	54.00	-8.58	AVG
7311.00	59.63	-0.82	58.81	74.00	-15.19	peak
7311.00	44.33	-0.82	43.51	54.00	-10.49	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)	
4874.00	62.40	-3.51	58.89	74.00	-15.11	peak
4874.00	46.36	-3.51	42.85	54.00	-11.15	AVG
7311.00	59.30	-0.82	58.48	74.00	-15.52	peak
7311.00	43.94	-0.82	43.12	54.00	-10.88	AVG

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

ANT1+ANT2 HIGH CH11 (802.11ax/H20 Mode)/2462

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924	63.38	-3.43	59.95	74	-14.05	peak
4924	46.55	-3.43	43.12	54	-10.88	AVG
7386	57.39	-0.75	56.64	74	-17.36	peak
7386	42.56	-0.75	41.81	54	-12.19	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)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924	64.28	-3.43	60.85	74	-13.15	peak
4924	46.11	-3.43	42.68	54	-11.32	AVG
7386	57.06	-0.75	56.31	74	-17.69	peak
7386	41.45	-0.75	40.70	54	-13.30	AVG

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

Restricted bands around fundamental frequency (Radiated)

Operation Mode:

ANT 1 802.11b 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	57.20	-5.81	51.39	74	-22.61	peak
2390	/	-5.81	/	54	/	AVG
2399	64.38	-5.84	58.54	74	-15.46	peak
2399	48.31	-5.84	42.47	54	-11.53	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	56.21	-5.81	50.40	74	-23.60	peak
2390	/	-5.81	/	54	/	AVG
2399	63.32	-5.84	57.48	74	-16.52	peak
2399	46.69	-5.84	40.85	54	-13.15	AVG

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

When the peak value is smaller than the AVG limit, AVG is not reflected.

Operation Mode:

ANT1 802.11b 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	55.87	-5.65	50.22	74	-23.78	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	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

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

Operation Mode:

ANT1 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	59.31	-5.81	53.50	74	-20.50	peak
2390	/	-5.81	/	54	/	AVG
2399	61.89	-5.84	56.05	74	-17.95	peak
2399	47.55	-5.84	41.71	54	-12.29	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	56.42	-5.81	50.61	74	-23.39	peak
2390	/	-5.81	/	54	/	AVG
2399	62.65	-5.84	56.81	74	-17.19	peak
2399	45.50	-5.84	39.66	54	-14.34	AVG

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

Operation Mode:

ANT1 802.11g 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	56.89	-5.65	51.24	74	-22.76	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	56.22	-5.65	50.57	74	-23.43	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:

ANT1+ANT2 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	56.83	-5.81	51.02	74	-22.98	peak
2390	/	-5.81	/	54	/	AVG
2399	63.40	-5.84	57.56	74	-16.44	peak
2399	47.21	-5.84	41.37	54	-12.63	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	56.27	-5.81	50.46	74	-23.54	peak
2390	/	-5.81	/	54	/	AVG
2399	61.12	-5.84	55.28	74	-18.72	peak
2399	47.90	-5.84	42.06	54	-11.94	AVG

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

Operation Mode:

ANT1+ANT2 802.11n/H20 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	57.34	-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	56.31	-5.65	50.66	74	-23.34	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:

ANT1+ANT2 802.11ax/H20 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	56.24	-5.81	50.43	74	-23.57	peak
2390	/	-5.81	/	54	/	AVG
2399	63.85	-5.84	58.01	74	-15.99	peak
2399	48.76	-5.84	42.92	54	-11.08	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	56.38	-5.81	50.57	74	-23.43	peak
2390	/	-5.81	/	54	/	AVG
2399	60.45	-5.84	54.61	74	-19.39	peak
2399	47.06	-5.84	41.22	54	-12.78	AVG

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

Operation Mode:

ANT1+ANT2 802.11ax/H20 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	55.90	-5.65	50.25	74	-23.75	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:

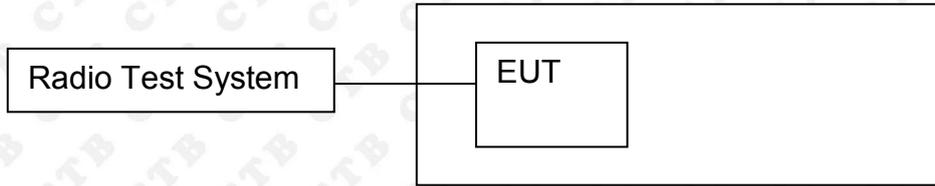
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	56.35	-5.65	50.70	74	-23.30	peak
2483.5	/	-5.65	/	54	/	AVG

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



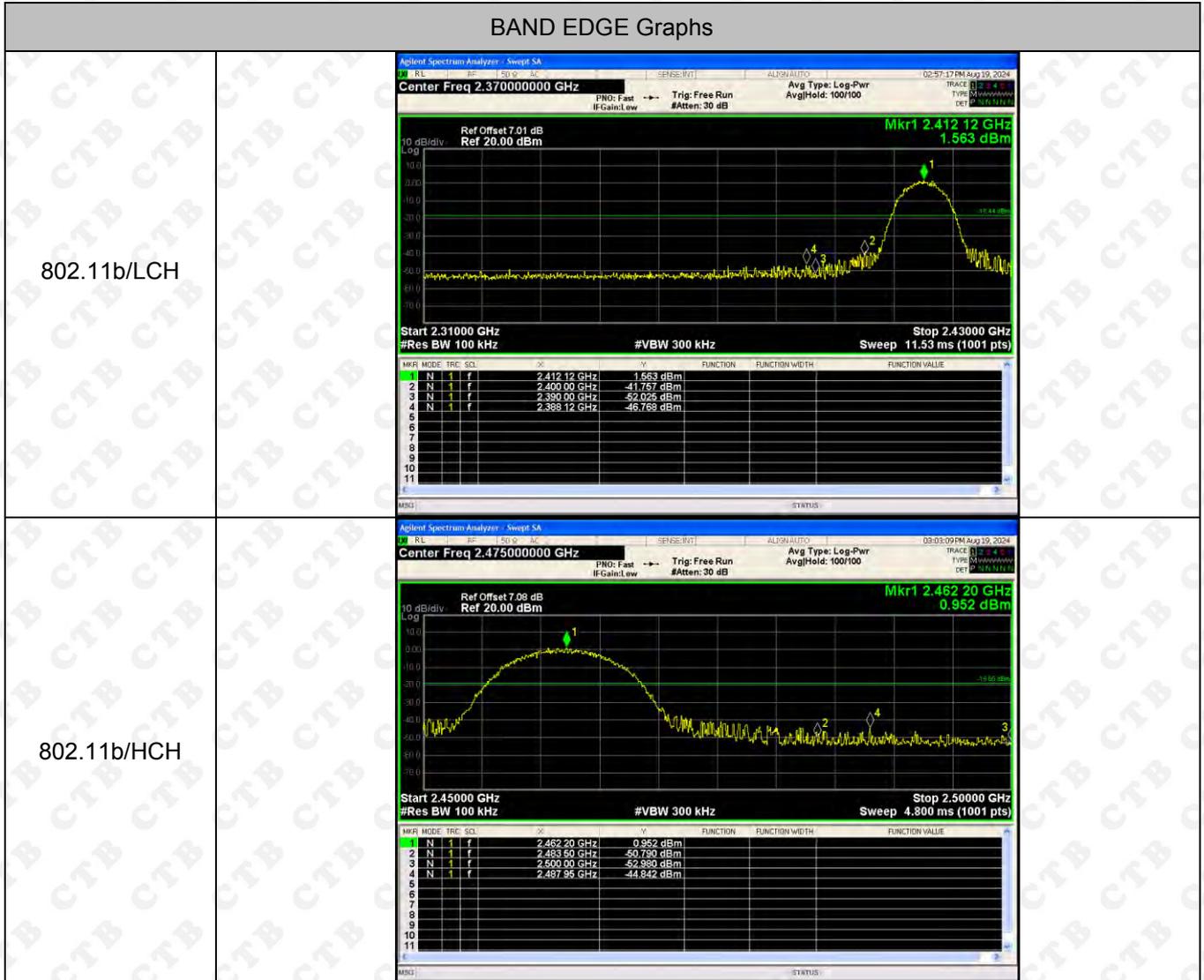
8.2 Limit

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

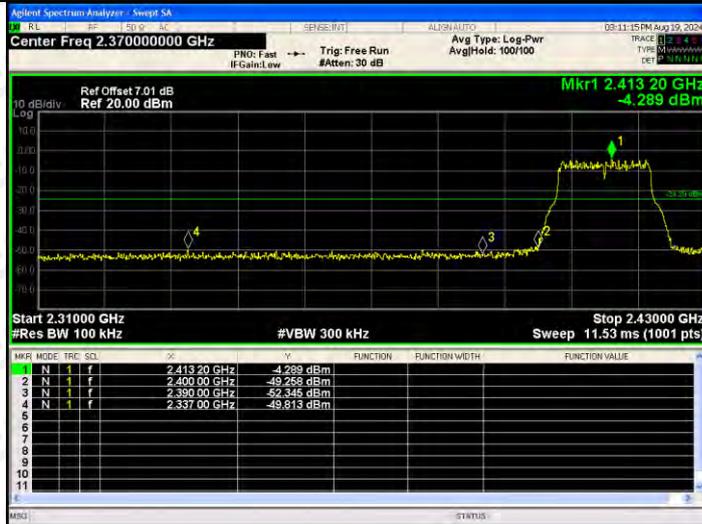
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer:
 - Below 30MHz:
 - RBW = 100kHz, VBW = 300kHz, Sweep = auto
 - Detector function = peak, Trace = max hold
 - Above 30MHz:
 - RBW = 100KHz, VBW = 300KHz, Sweep = auto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

8.4 Test Result
ANT1:

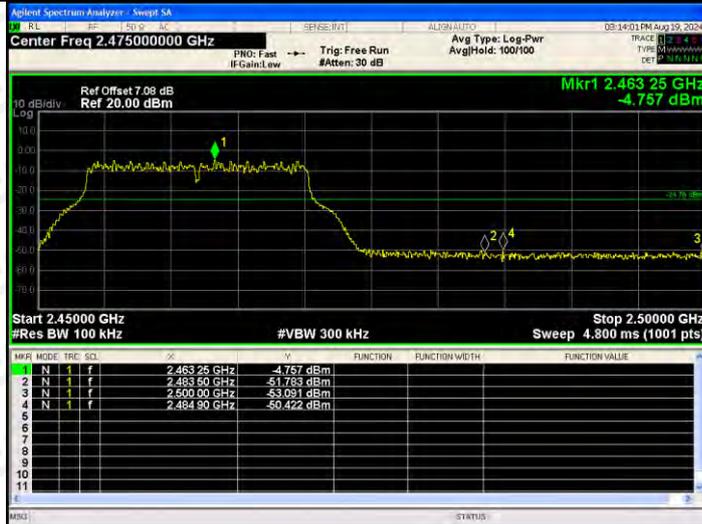


BAND EDGE Graphs

802.11g/LCH

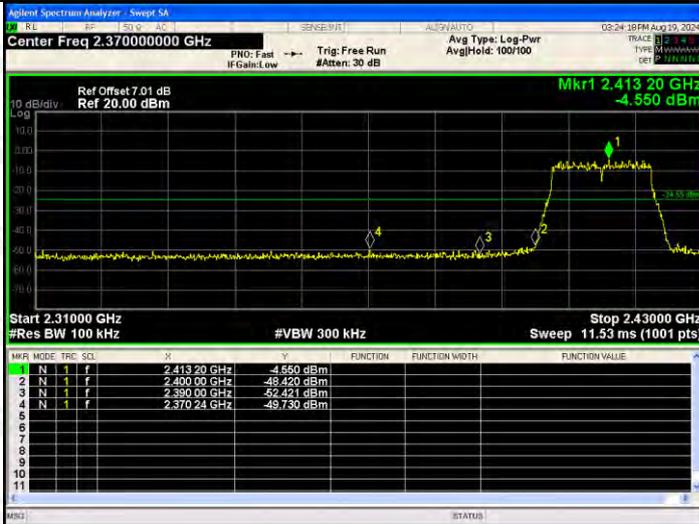


802.11g/HCH

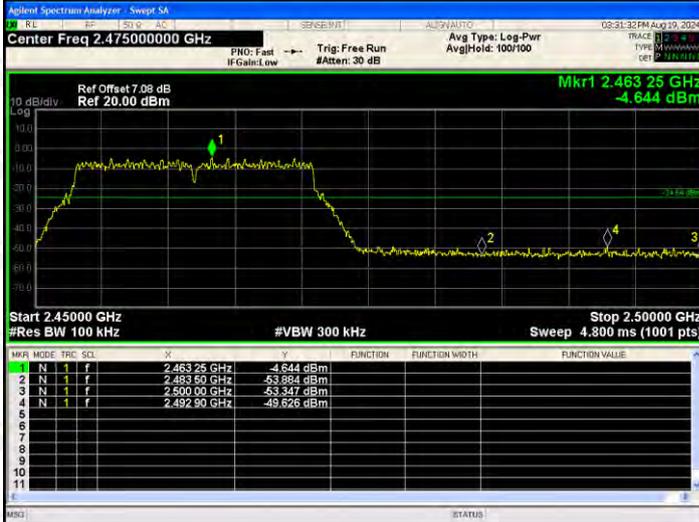


BAND EDGE Graphs

802.11n(HT20)/LCH

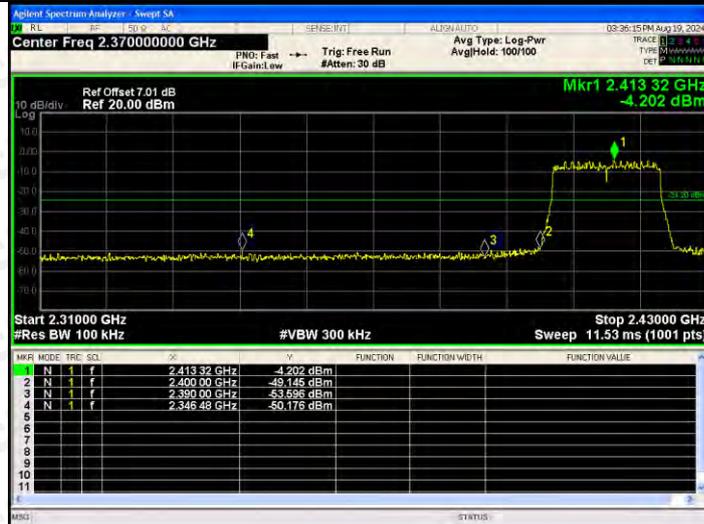


802.11n(HT20)/HCH

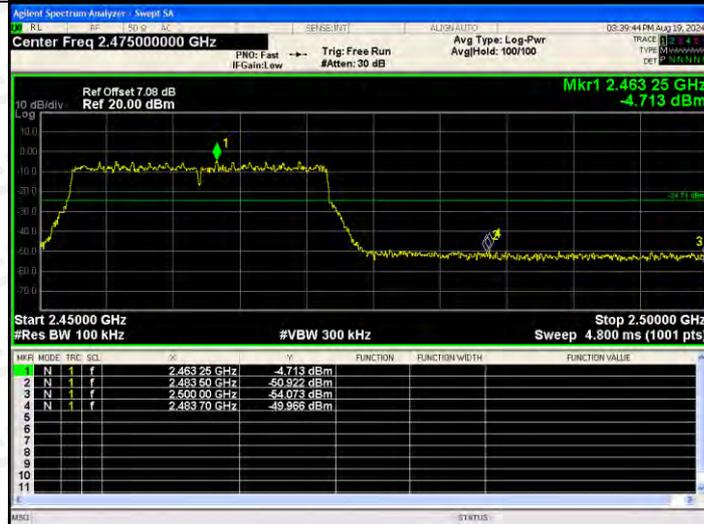


BAND EDGE Graphs

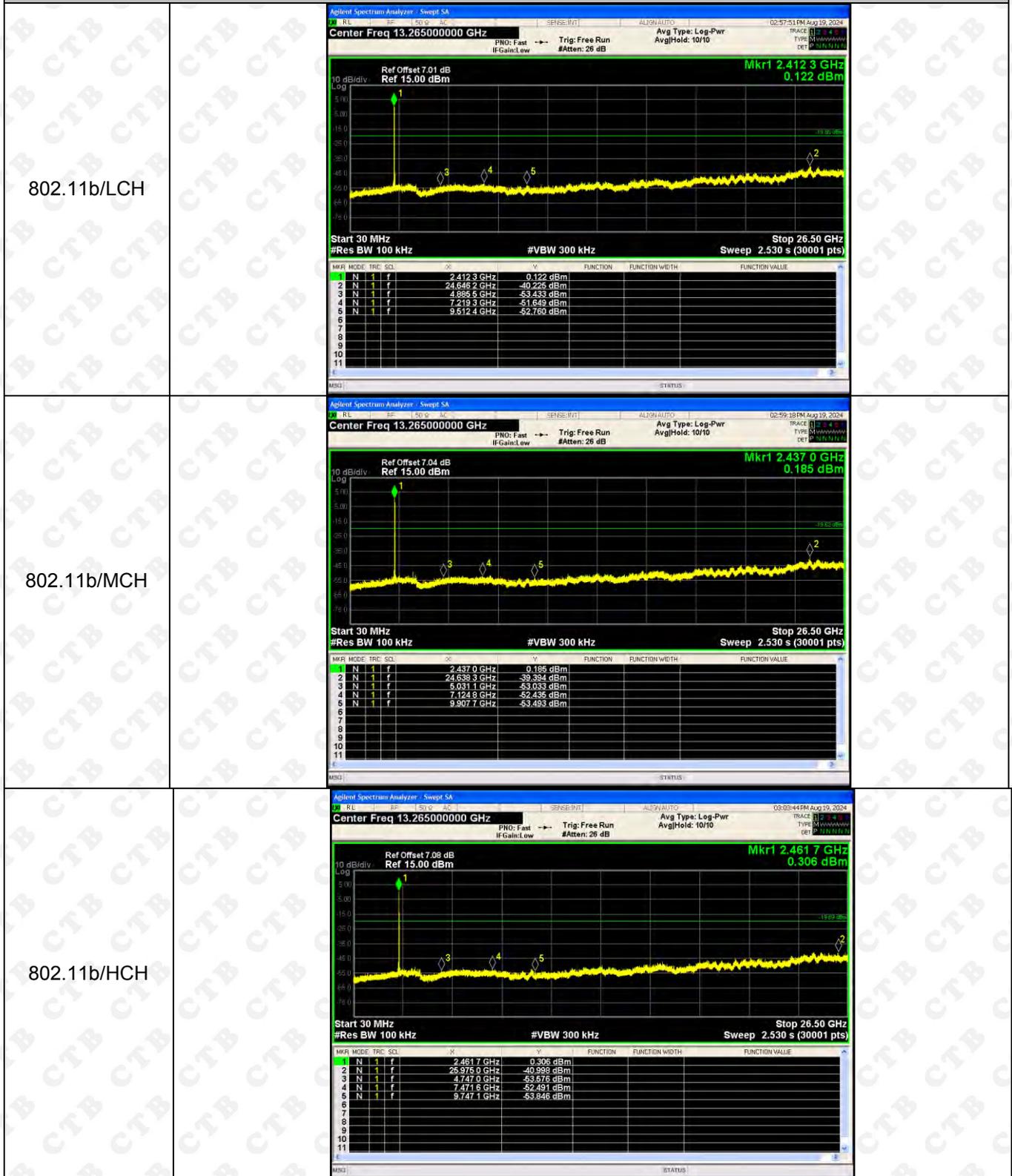
802.11ax(HT20)/
LCH



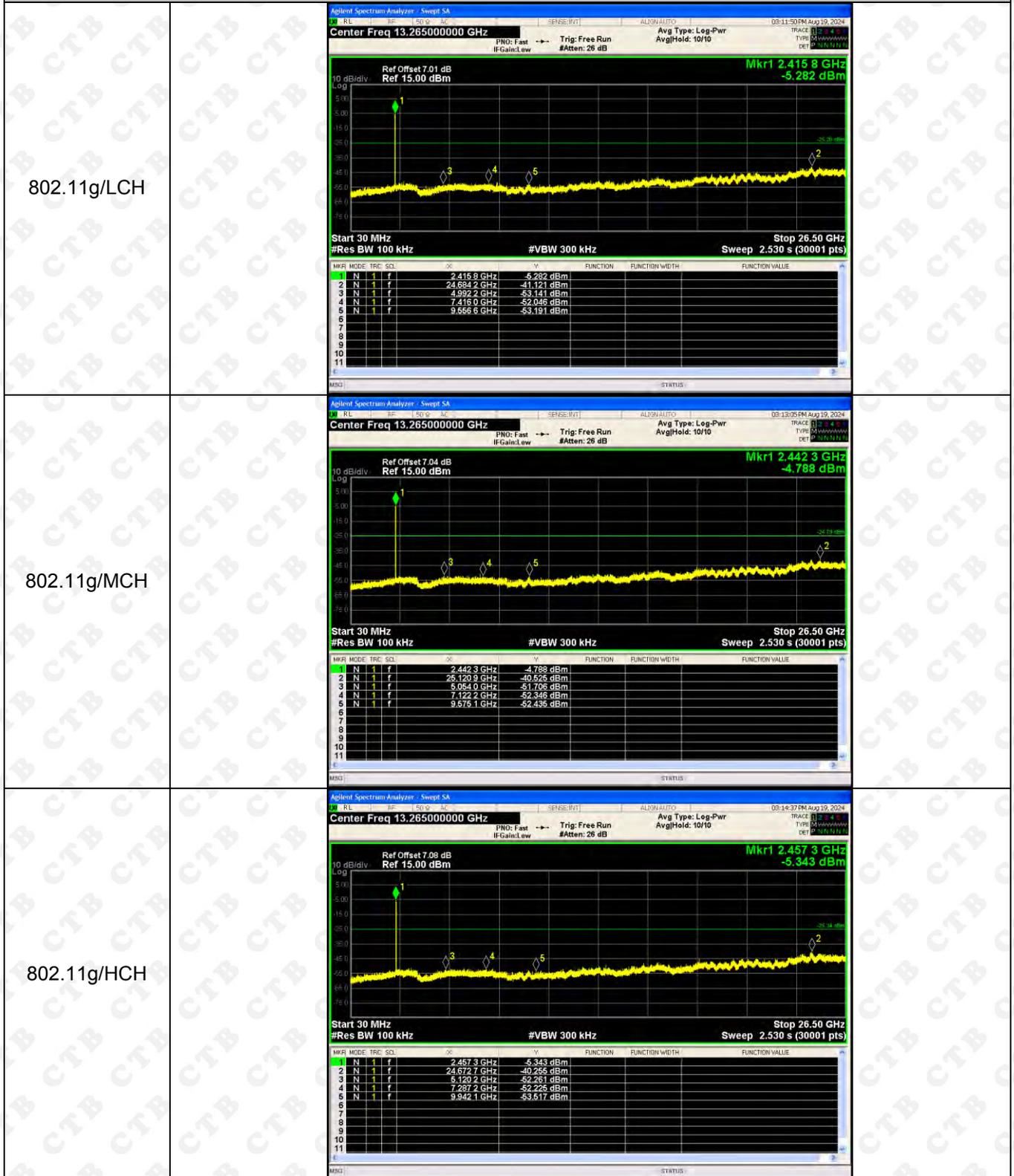
802.11ax(HT20)/
HCH



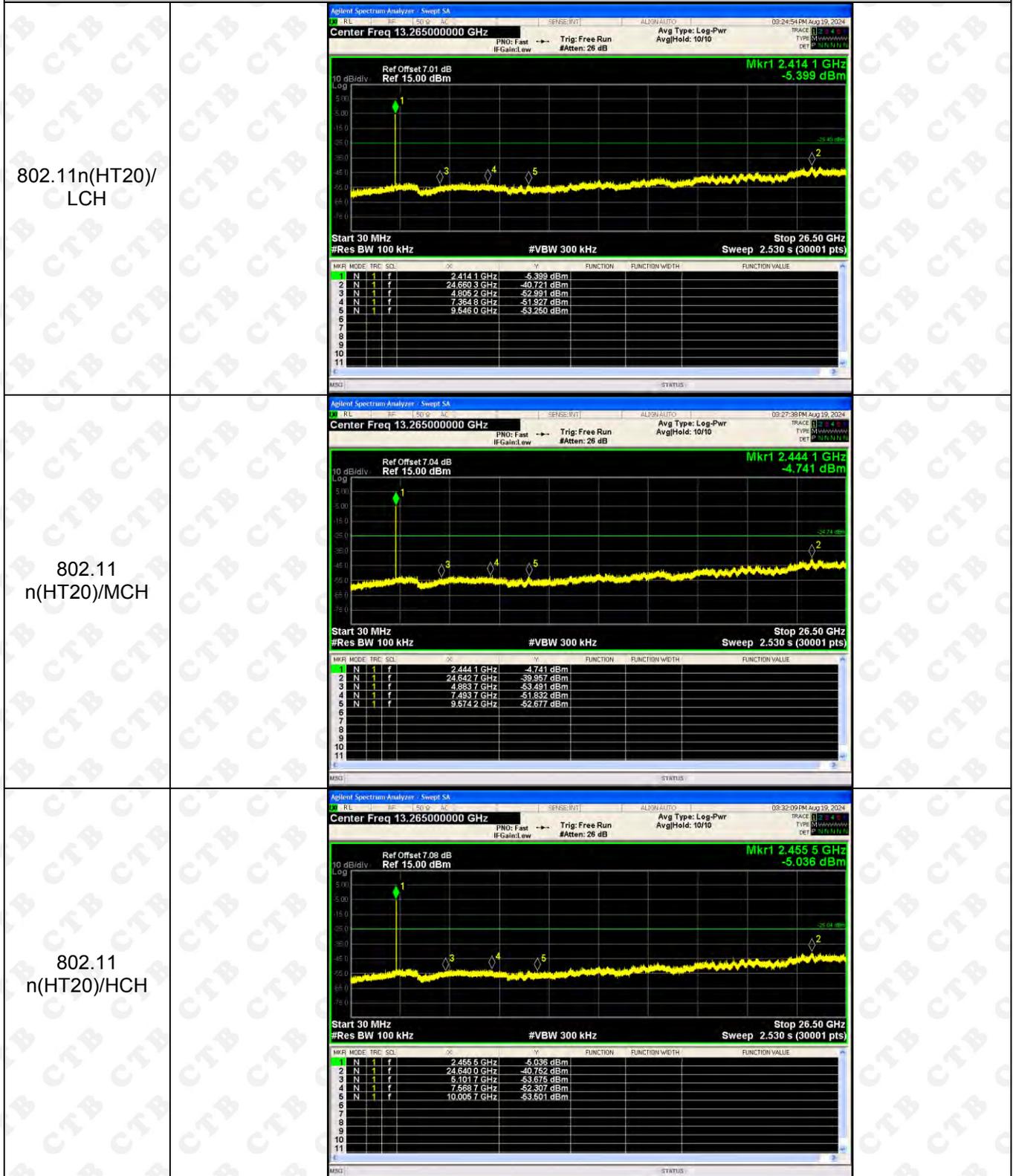
RF Conducted Spurious Emissions Graphs



RF Conducted Spurious Emissions Graphs

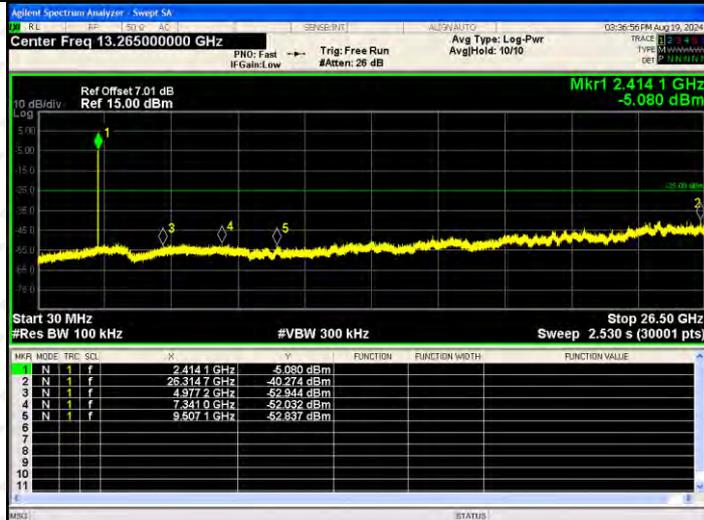


RF Conducted Spurious Emissions Graphs

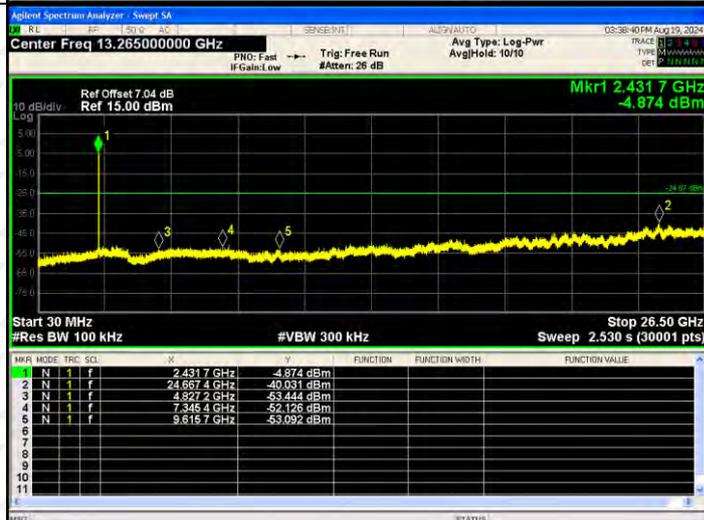


RF Conducted Spurious Emissions Graphs

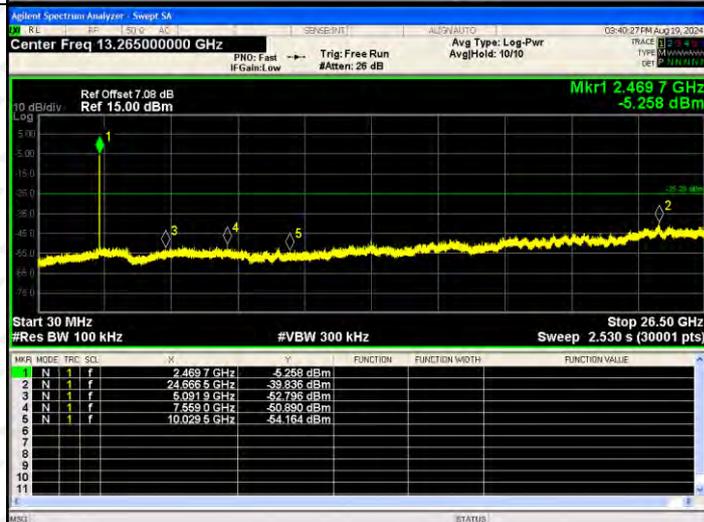
802.11ax(HT20)/LCH



802.11 ax(HT20)/MCH



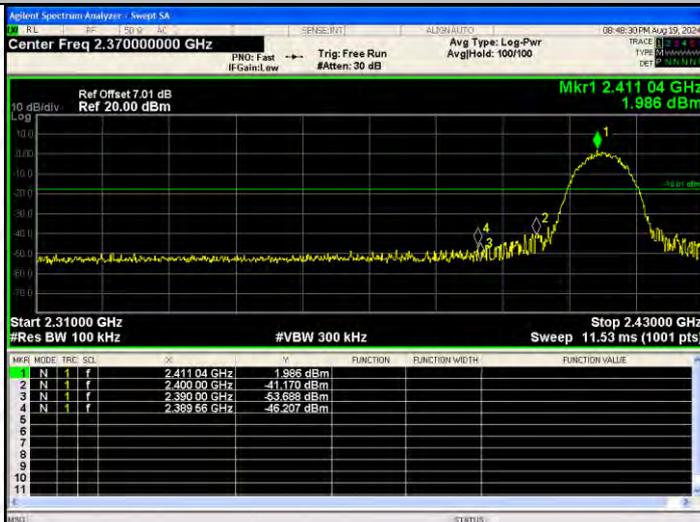
802.11 ax(HT20)/HCH



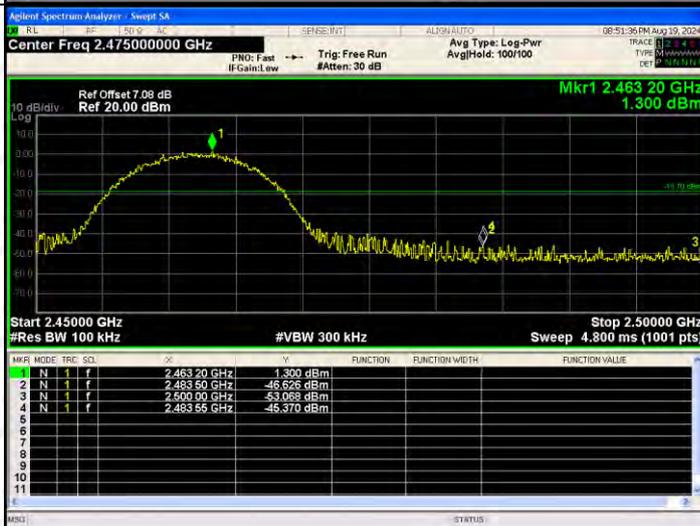
ANT2:

BAND EDGE Graphs

802.11b/LCH

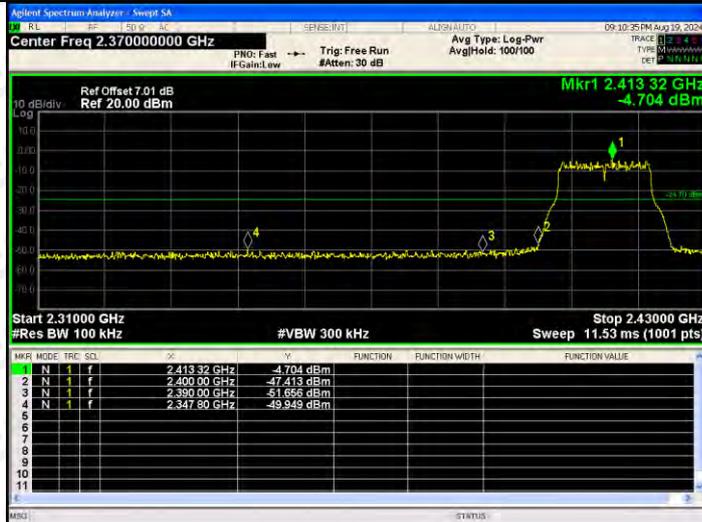


802.11b/HCH

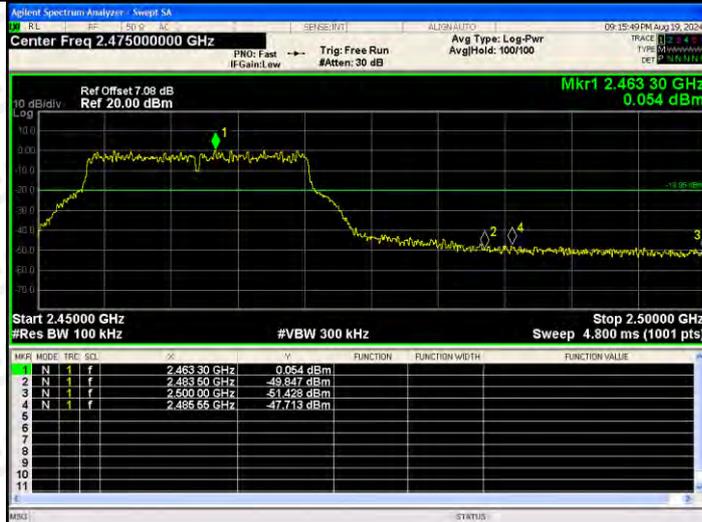


BAND EDGE Graphs

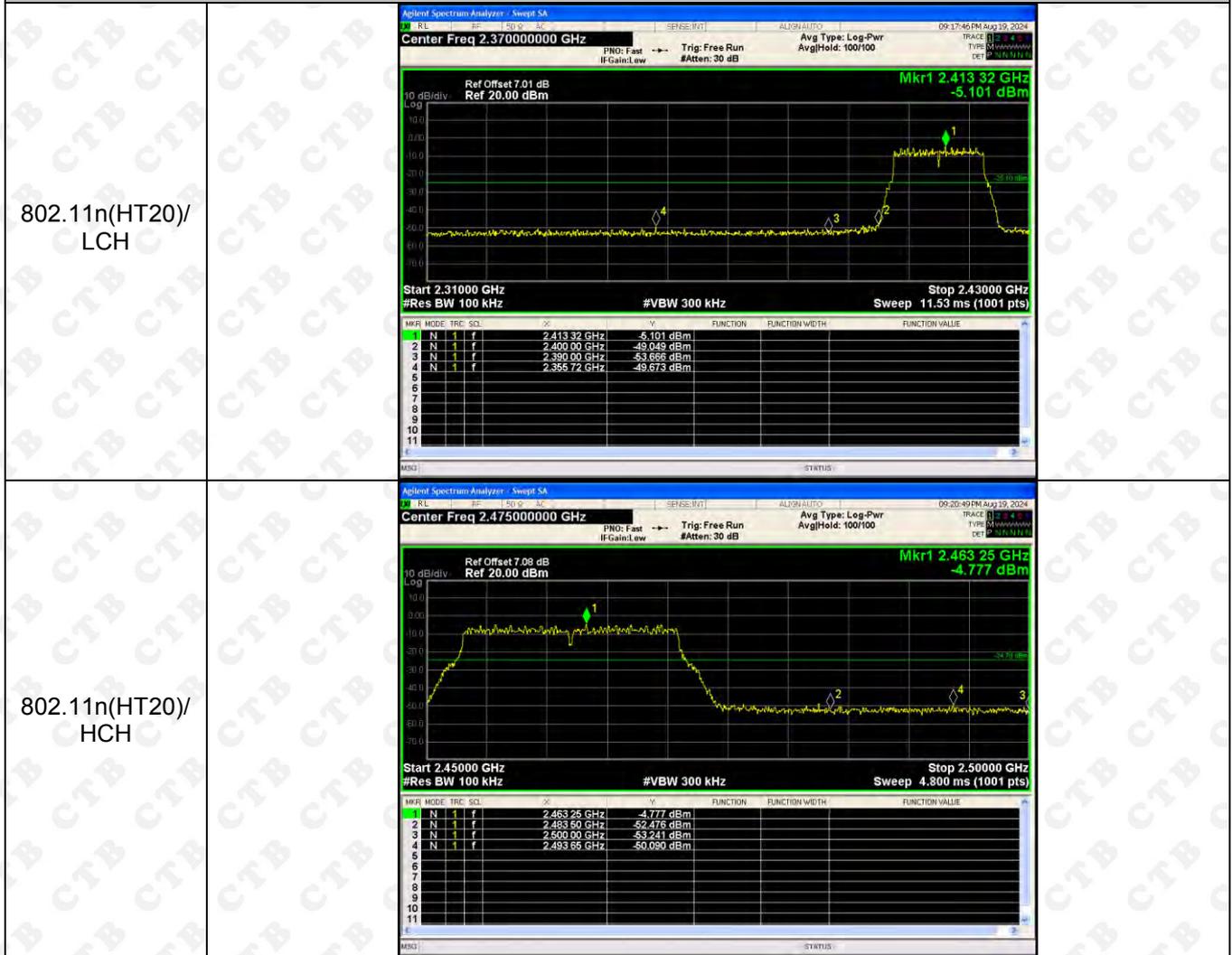
802.11g/LCH



802.11g/HCH

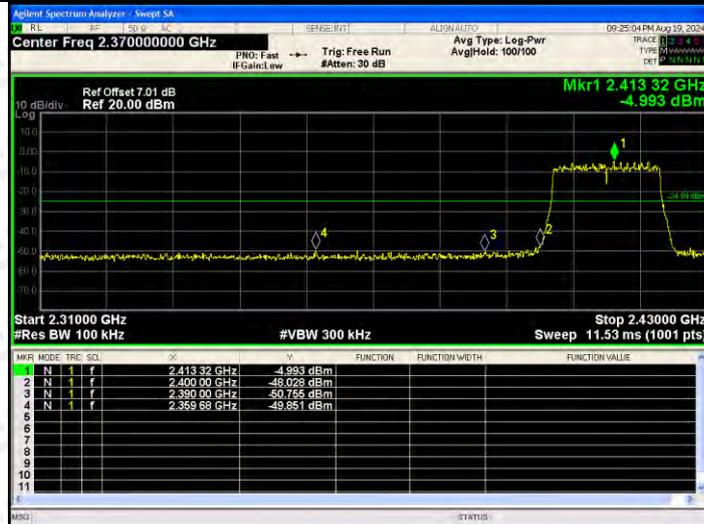


BAND EDGE Graphs

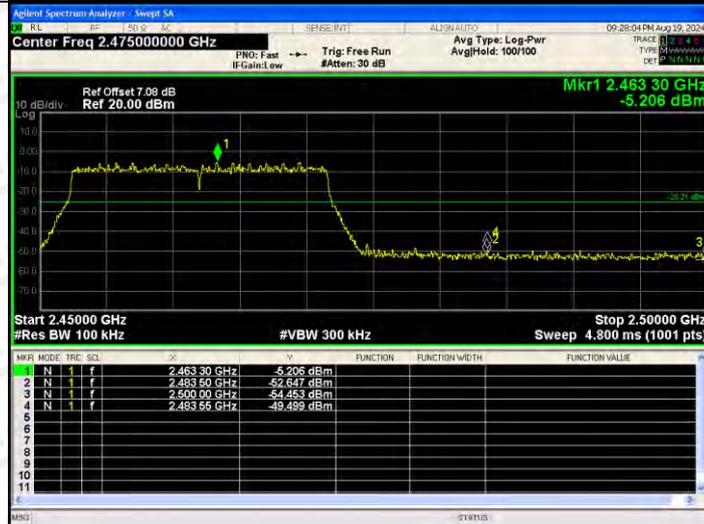


BAND EDGE Graphs

802.11ax(HT20)/
LCH



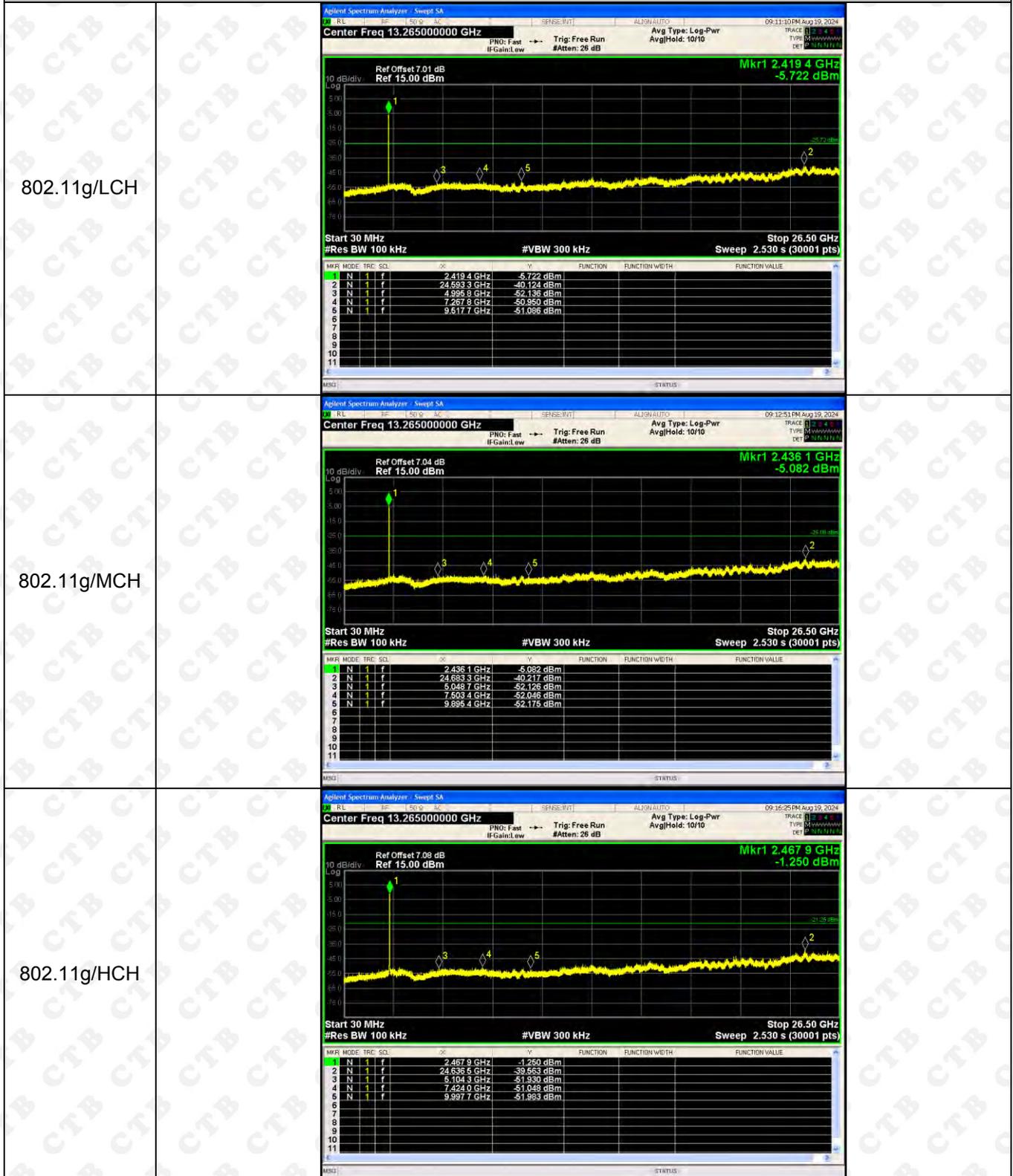
802.11ax(HT20)/
HCH



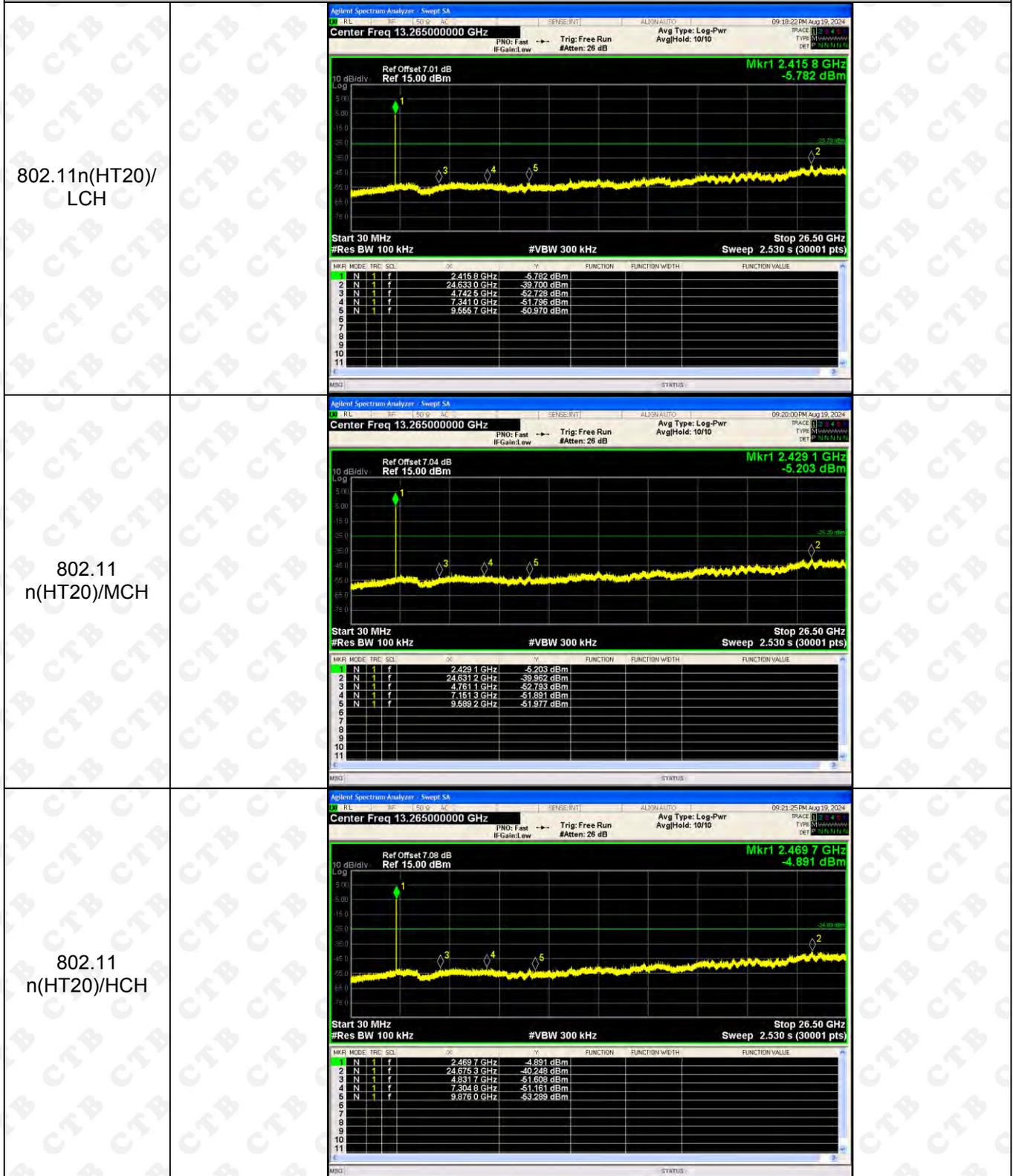
RF Conducted Spurious Emissions Graphs



RF Conducted Spurious Emissions Graphs

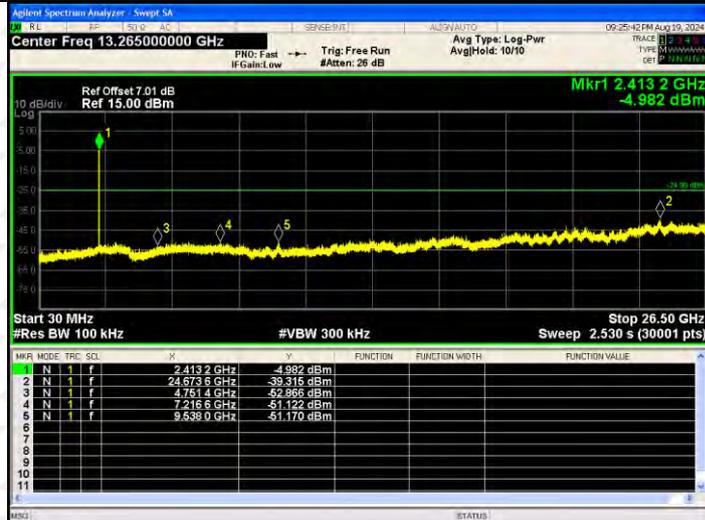


RF Conducted Spurious Emissions Graphs

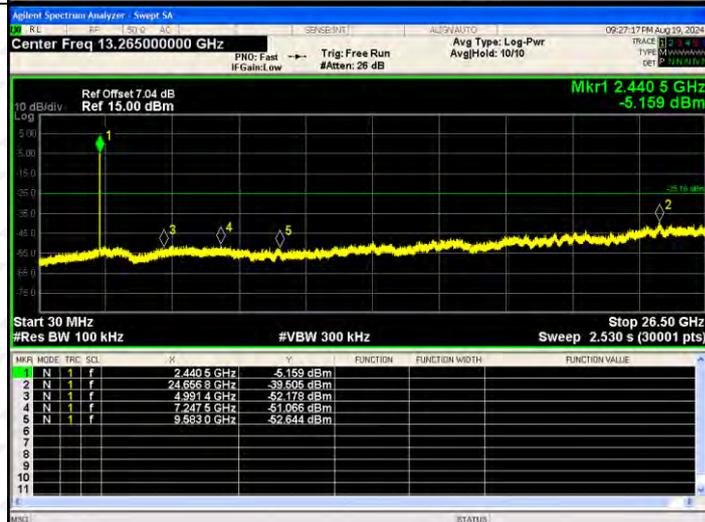


RF Conducted Spurious Emissions Graphs

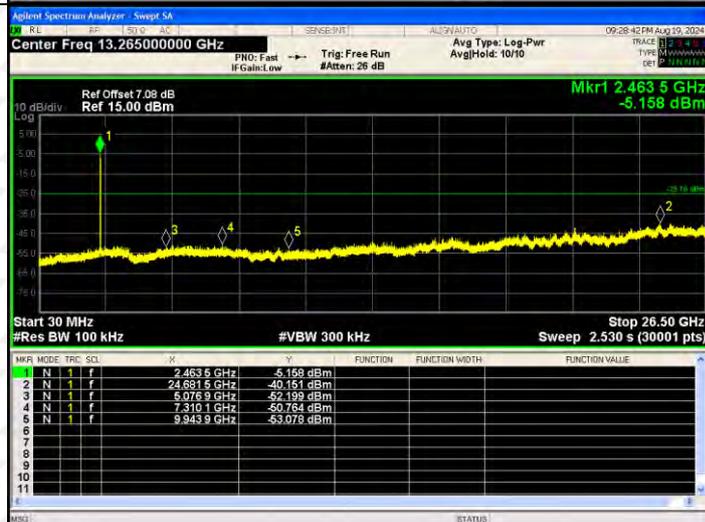
802.11ax(HT20)/LCH



802.11 ax(HT20)/MCH

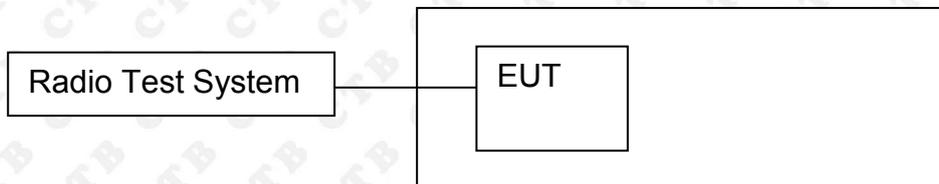


802.11 ax(HT20)/HCH



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

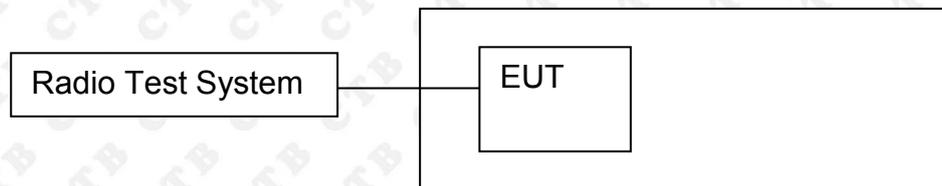
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1MHz. VBW = 3MHz. Sweep = auto; Detector Function = Peak. Channel power function is used
3. Keep the EUT in transmitting at lowest, middle and highest channel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

9.4 Test Result

Mode	Channel.	Maximum Peak Power [dBm] ant 1	Maximum Peak Power [dBm] ant 2	Total Power Peak Output Power(dBm)	Limit[dBm]
802.11b	LCH	15.669	15.19	/	30
	MCH	15.93	15.541	/	30
	HCH	15.337	15.083	/	30
802.11g	LCH	14.762	14.408	/	30
	MCH	14.524	14.824	/	30
	HCH	14.36	19.346	/	30
802.11n(HT20)	LCH	14.504	13.904	17.225	30
	MCH	14.679	14.567	17.634	30
	HCH	14.438	14.571	17.515	30
802.11ax(HT20)	LCH	15.251	14.718	18.003	30
	MCH	15.378	15.287	18.343	30
	HCH	14.934	14.571	17.767	30

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	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

10.3 Test procedure

1. Rem1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x 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

ANT1:

Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	7.31	500	PASS
	MCH	7.567	500	PASS
	HCH	7.459	500	PASS
802.11g	LCH	16.495	500	PASS
	MCH	16.461	500	PASS
	HCH	16.418	500	PASS
802.11n(HT20)	LCH	17.716	500	PASS
	MCH	17.751	500	PASS
	HCH	17.778	500	PASS
802.11ax(HT20)	LCH	19.091	500	PASS
	MCH	19.074	500	PASS
	HCH	19.076	500	PASS

ANT2:

Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	8.2	500	PASS
	MCH	7.071	500	PASS
	HCH	7.504	500	PASS
802.11g	LCH	16.468	500	PASS
	MCH	16.461	500	PASS
	HCH	16.479	500	PASS
802.11n(HT20)	LCH	17.733	500	PASS
	MCH	17.73	500	PASS
	HCH	17.726	500	PASS
802.11ax(HT20)	LCH	19.07	500	PASS
	MCH	19.079	500	PASS
	HCH	19.12	500	PASS

ANT1:
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>#Atten: 30 dB</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset 7.01 dB</p> <p>Ref 27.01 dBm</p> <p>Mkr3 2.41565 GHz</p> <p>-3.7623 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 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>17.4 dBm</td> </tr> <tr> <td>11.453 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-4.665 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>7.310 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	17.4 dBm	11.453 MHz			Transmit Freq Error	OBW Power	99.00 %	-4.665 kHz			x dB Bandwidth	x dB	-6.00 dB	7.310 MHz		
Occupied Bandwidth	Total Power	17.4 dBm																	
11.453 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
-4.665 kHz																			
x dB Bandwidth	x dB	-6.00 dB																	
7.310 MHz																			
802.11b /MCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz</p> <p>Trig: Free Run</p> <p>#Atten: 30 dB</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset 7.04 dB</p> <p>Ref 27.04 dBm</p> <p>Mkr3 2.440753 GHz</p> <p>-4.1582 dBm</p> <p>Center 2.437 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>17.9 dBm</td> </tr> <tr> <td>11.429 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-30.594 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>7.567 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	17.9 dBm	11.429 MHz			Transmit Freq Error	OBW Power	99.00 %	-30.594 kHz			x dB Bandwidth	x dB	-6.00 dB	7.567 MHz		
Occupied Bandwidth	Total Power	17.9 dBm																	
11.429 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
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x dB Bandwidth	x dB	-6.00 dB																	
7.567 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>#Atten: 30 dB</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset 7.08 dB</p> <p>Ref 27.08 dBm</p> <p>Mkr3 2.465671 GHz</p> <p>-4.0628 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 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>17.2 dBm</td> </tr> <tr> <td>11.433 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-57.889 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>7.459 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	17.2 dBm	11.433 MHz			Transmit Freq Error	OBW Power	99.00 %	-57.889 kHz			x dB Bandwidth	x dB	-6.00 dB	7.459 MHz		
Occupied Bandwidth	Total Power	17.2 dBm																	
11.433 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
-57.889 kHz																			
x dB Bandwidth	x dB	-6.00 dB																	
7.459 MHz																			

<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</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 7.01 dB</p> <p>Ref: 27.01 dBm</p> <p>Mkr3 2.420243 GHz</p> <p>-10.496 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 2.933 ms</p> <p>Occupied Bandwidth 16.445 MHz</p> <p>Total Power 14.0 dBm</p> <p>Transmit Freq Error -4.251 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 16.50 MHz</p> <p>x dB -6.00 dB</p>
<p>802.11g/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 7.04 dB</p> <p>Ref: 27.04 dBm</p> <p>Mkr3 2.445227 GHz</p> <p>-10.433 dBm</p> <p>Center 2.437 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 16.447 MHz</p> <p>Total Power 13.9 dBm</p> <p>Transmit Freq Error -3.450 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 16.46 MHz</p> <p>x dB -6.00 dB</p>
<p>802.11g/HCH</p>	<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 Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 7.08 dB</p> <p>Ref: 27.08 dBm</p> <p>Mkr3 2.470186 GHz</p> <p>-10.965 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 2.933 ms</p> <p>Occupied Bandwidth 16.429 MHz</p> <p>Total Power 13.6 dBm</p> <p>Transmit Freq Error -23.016 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 16.42 MHz</p> <p>x dB -6.00 dB</p>

<p>802.11n(HT20)/LC H</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: 7.01 dB Ref: 27.01 dBm</p> <p>Mkr3 2.420855 GHz -9.9248 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.1 dBm</td> </tr> <tr> <td colspan="3">17.668 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	14.1 dBm	17.668 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	14.1 dBm											
17.668 MHz													
Transmit Freq Error	OBW Power	99.00 %											
x dB Bandwidth	x dB	-6.00 dB											
<p>802.11n(HT20)/MC H</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset: 7.04 dB Ref: 27.04 dBm</p> <p>Mkr3 2.445863 GHz -10.071 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.4 dBm</td> </tr> <tr> <td colspan="3">17.683 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	14.4 dBm	17.683 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
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Transmit Freq Error	OBW Power	99.00 %											
x dB Bandwidth	x dB	-6.00 dB											
<p>802.11n(HT20)/HC H</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.46200000 GHz</p> <p>Center Freq: 2.46200000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset: 7.06 dB Ref: 27.06 dBm</p> <p>Mkr3 2.470886 GHz -9.6201 dBm</p> <p>Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.1 dBm</td> </tr> <tr> <td colspan="3">17.721 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	14.1 dBm	17.721 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	14.1 dBm											
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<p>802.11ax(HT20)/LC H</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: 7.01 dB Ref: 27.01 dBm</p> <p>Mkr3 2.42154 GHz -9.5187 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.8 dBm</td> </tr> <tr> <td colspan="3">18.967 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	14.8 dBm	18.967 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
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<p>802.11ax(HT20)/M CH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Ref Offset: 7.04 dB Ref: 27.04 dBm</p> <p>Mkr3 2.44653 GHz -10.264 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.9 dBm</td> </tr> <tr> <td colspan="3">18.942 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	14.9 dBm	18.942 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	14.9 dBm											
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ANT2:
Test Graph:



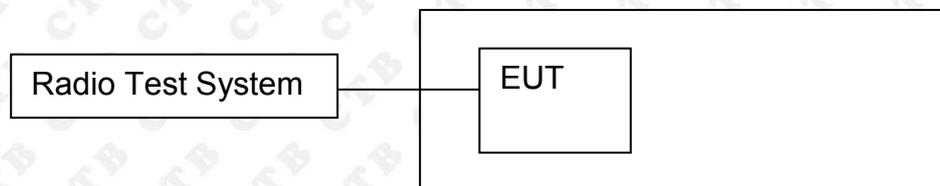
<p>802.11g/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.41200000 GHz</p> <p>Center Freq: 2.41200000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100</p> <p>Radio Std: None Radio Device: BTS</p> <p>10 dB/div Log Ref Offset 7.01 dB Ref 27.01 dBm</p> <p>Mkr3 2.420235 GHz -10.912 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 16.451 MHz</p> <p>Total Power 13.5 dBm</p> <p>Transmit Freq Error 633 Hz</p> <p>x dB Bandwidth 16.47 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>
<p>802.11g/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100</p> <p>Radio Std: None Radio Device: BTS</p> <p>10 dB/div Log Ref Offset 7.04 dB Ref 27.04 dBm</p> <p>Mkr3 2.44522 GHz -10.437 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 16.437 MHz</p> <p>Total Power 14.2 dBm</p> <p>Transmit Freq Error -9.939 kHz</p> <p>x dB Bandwidth 16.46 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>
<p>802.11g/HCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.46200000 GHz</p> <p>Center Freq: 2.46200000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100</p> <p>Radio Std: None Radio Device: BTS</p> <p>10 dB/div Log Ref Offset 7.08 dB Ref 27.08 dBm</p> <p>Mkr3 2.470237 GHz -6.3700 dBm</p> <p>Center 2.462 GHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 16.455 MHz</p> <p>Total Power 18.7 dBm</p> <p>Transmit Freq Error -2.630 kHz</p> <p>x dB Bandwidth 16.48 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>

<p>802.11n(HT20)/LC H</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.41200000 GHz</p> <p>Ref Offset 7.01 dB Ref 27.01 dBm</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>Mkr3 2.420868 GHz -11.761 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>13.6 dBm</td> </tr> <tr> <td colspan="3">17.669 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	13.6 dBm	17.669 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	13.6 dBm											
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<p>802.11n(HT20)/MC H</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Ref Offset 7.04 dB Ref 27.04 dBm</p> <p>Center Freq: 2.43700000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Mkr3 2.445863 GHz -9.6819 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.4 dBm</td> </tr> <tr> <td colspan="3">17.679 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	14.4 dBm	17.679 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
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<p>802.11n(HT20)/HC H</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 7.08 dB Ref 27.08 dBm</p> <p>Center Freq: 2.46200000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS</p> <p>Mkr3 2.470857 GHz -10.513 dBm</p> <p>Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.3 dBm</td> </tr> <tr> <td colspan="3">17.661 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	14.3 dBm	17.661 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	14.3 dBm											
17.661 MHz													
Transmit Freq Error	OBW Power	99.00 %											
x dB Bandwidth	x dB	-6.00 dB											

<p>802.11ax(HT20)/LC H</p>	<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>#Atten: 30 dB</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 7.01 dB</p> <p>Ref: 27.01 dBm</p> <p>Mkr3 2.421533 GHz</p> <p>-10.595 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 2.933 ms</p> <p>Occupied Bandwidth 18.971 MHz</p> <p>Total Power 14.1 dBm</p> <p>Transmit Freq Error -1.589 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 19.07 MHz</p> <p>x dB -6.00 dB</p>
<p>802.11ax(HT20)/M CH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz</p> <p>Trig: Free Run</p> <p>#Atten: 30 dB</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 7.04 dB</p> <p>Ref: 27.04 dBm</p> <p>Mkr3 2.44652 GHz</p> <p>-10.509 dBm</p> <p>Center 2.437 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 18.944 MHz</p> <p>Total Power 14.7 dBm</p> <p>Transmit Freq Error -19.310 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 19.08 MHz</p> <p>x dB -6.00 dB</p>
<p>802.11ax(HT20)/H CH</p>	<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>#Atten: 30 dB</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 7.08 dB</p> <p>Ref: 27.08 dBm</p> <p>Mkr3 2.471554 GHz</p> <p>-10.546 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 2.933 ms</p> <p>Occupied Bandwidth 18.974 MHz</p> <p>Total Power 14.0 dBm</p> <p>Transmit Freq Error -5.590 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 19.12 MHz</p> <p>x dB -6.00 dB</p>

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

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
4. Set the VBW $\geq 3 \times \text{RBW}$.
5. Detector = Peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

11.4 Test Result

Mode	Channel.	Power Spectral Density [dBm /3KHz] ANT 1	Power Spectral Density [dBm /3KHz] ANT 2	Power Spectral Density [dBm /3KHz]Total	Limit(dBm)
802.11b	LCH	-12.75	-12.396	/	8
	MCH	-12.734	-11.374	/	8
	HCH	-13.388	-13.134	/	8
802.11g	LCH	-20.005	-16.458	/	8
	MCH	-19.787	-16.114	/	8
	HCH	-20.379	-16.859	/	8
802.11n(H T20)	LCH	-18.139	-16.735	-14.370	8
	MCH	-18.572	-15.924	-14.039	8
	HCH	-18.992	-16.942	-14.837	8
802.11ax(HT20)	LCH	-18.442	-16.196	-14.165	8
	MCH	-19.369	-16.564	-14.734	8
	HCH	-19.565	-15.68	-14.192	8

**ANT1:
Test Graph**

Graphs	
802.11b /LCH	<p>Agilent Spectra Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset at 7.01 dB Ref 20.00 dBm Mkr1 2.41179 GHz -12.750 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
802.11b /MCH	<p>Agilent Spectra Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset at 7.04 dB Ref 20.00 dBm Mkr1 2.43691 GHz -12.734 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
802.11b/HCH	<p>Agilent Spectra Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset at 7.09 dB Ref 20.00 dBm Mkr1 2.46257 GHz -13.388 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>

<p>802.11g/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset: 7.01 dB Ref 20.00 dBm Mkr1 2.41479 GHz -20.005 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (1001 pts)</p>
<p>802.11g/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset: 7.04 dB Ref 20.00 dBm Mkr1 2.43979 GHz -19.787 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (1001 pts)</p>
<p>802.11g/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset: 7.09 dB Ref 20.00 dBm Mkr1 2.46479 GHz -20.379 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (1001 pts)</p>

<p>802.11n(HT20)/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset: 7.01 dB Ref 20.00 dBm Mkr1 2.418 27 GHz -18.139 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
<p>802.11n(HT20)/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset: 7.04 dB Ref 20.00 dBm Mkr1 2.444 83 GHz -18.572 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
<p>802.11n(HT20)/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset: 7.09 dB Ref 20.00 dBm Mkr1 2.465 72 GHz -18.992 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>

<p>802.11ax(HT20)/LC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset: 7.01 dB Ref 20.00 dBm Mkr1 2.41947 GHz -18.442 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
<p>802.11ax(HT20)/MC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset: 7.04 dB Ref 20.00 dBm Mkr1 2.43448 GHz -19.369 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
<p>802.11ax(HT20)/HC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset: 7.09 dB Ref 20.00 dBm Mkr1 2.46947 GHz -19.565 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>

**ANT 2:
Test Graph**

Graphs	
802.11b /LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.413 11 GHz -12.396 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
802.11b /MCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 7.04 dB Ref 20.00 dBm Mkr1 2.437 15 GHz -11.374 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
802.11b/HCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset 7.08 dB Ref 20.00 dBm Mkr1 2.462 33 GHz -13.134 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>

<p>802.11g/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (1001 pts) Mkr1 2.414 79 GHz -16.458 dBm</p>
<p>802.11g/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (1001 pts) Mkr1 2.439 79 GHz -16.114 dBm</p>
<p>802.11g/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (1001 pts) Mkr1 2.458 22 GHz -16.859 dBm</p>

<p>802.11n(HT20)/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset: 7.01 dB Ref 20.00 dBm Mkr1 2.408 22 GHz -16.735 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
<p>802.11n(HT20)/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset: 7.04 dB Ref 20.00 dBm Mkr1 2.433 22 GHz -15.924 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
<p>802.11n(HT20)/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset: 7.09 dB Ref 20.00 dBm Mkr1 2.458 22 GHz -16.942 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>

<p>802.11ax(HT20)/LC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset: 7.01 dB Ref 20.00 dBm Mkr1 2.41071 GHz -16.196 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
<p>802.11ax(HT20)/MC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset: 7.04 dB Ref 20.00 dBm Mkr1 2.43451 GHz -16.564 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>
<p>802.11ax(HT20)/HC H</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset: 7.09 dB Ref 20.00 dBm Mkr1 2.46071 GHz -15.680 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (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.

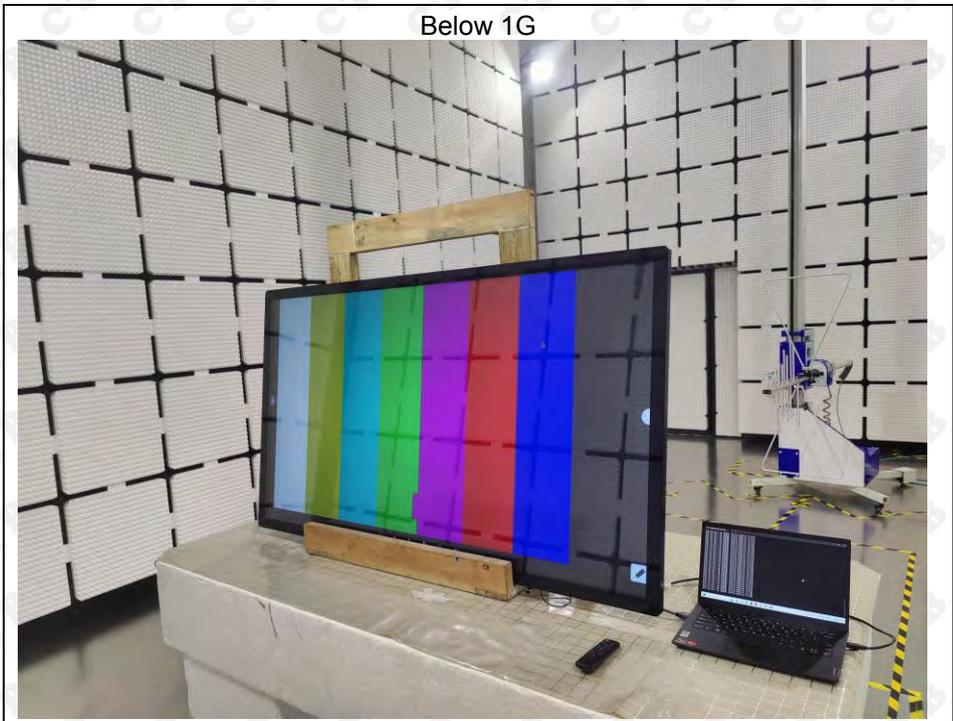
EUT Antenna:

The antenna is External antenna and no consideration of replacement. The best case gain of the antenna is Ant1: 5.29dBi, Ant2: 5.29dBi

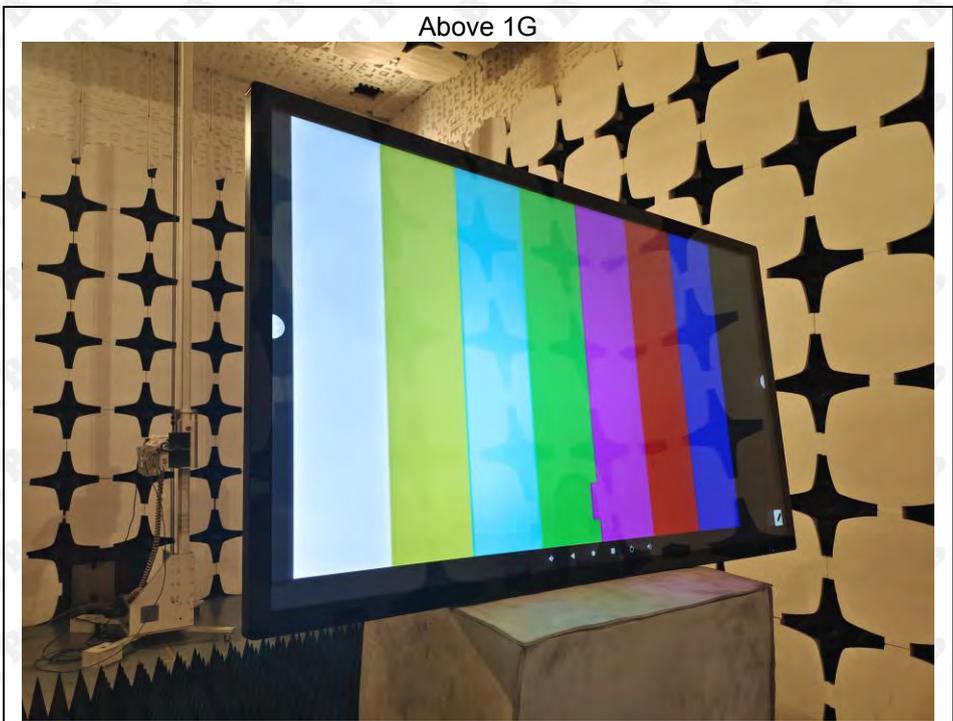
13. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

Below 1G



Above 1G



Conducted Emission



***** END OF REPORT *****