



TEST REPORT

Test item description: Panel PC
FCC ID: 2BUN3-SGE-WQ
Trademark(s): YFTOUCH
Model/Type reference: SGE-WQ-190003-V1.0-001. For other series models, refer to Section 4.1.
Applicant's name: DONGGUAN YUEFENG PHOTOELECTRIC CO., LTD
Address: No.6 Lindian, Tangxia Town, Dongguan City, Guangdong Province, China
Manufacturer: DONGGUAN YUEFENG PHOTOELECTRIC CO., LTD
Address: No.6 Lindian, Tangxia Town, Dongguan City, Guangdong Province, China
Prepared By: Shenzhen CTB Testing Technology Co., Ltd.
Address: 1&2/F., Building A, No.26, Xinh Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date: Dec. 10, 2025
Sample tested Date: Dec. 10, 2025 to Feb. 09, 2026
Issue Date: Feb. 09, 2026
Report No.: CTB25121003103RF02
Test Standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247
ANSI C63.10:2020
Test Results: PASS
Remark: This is WIFI-2.4GHz band radio test report.
Compiled by: Reviewed by: Approved by:

Kai Chen

Kai Chen

Martin Feng

Martin FengBin 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
CTB25121003103RF02	Feb. 09, 2026	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 C63.10-2020	PASS
Radiated Spurious emissions	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2020	PASS
Band edge and RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)/15.205(a)	ANSI C63.10-2020	PASS
Conducted Peak Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(3)	ANSI C63.10-2020	PASS
6dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	ANSI C63.10-2020	PASS
Power Spectral Density	47 CFR Part 15 Subpart C Section 15.247 (e)	ANSI C63.10-2020/ 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 C63.10-2020.

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(1GHz-40GHz)	$U=\pm 4.8\text{dB}$
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 (9kHz-30MHz)	3.2 dB

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Model/Type reference:	SGE-WQ-190003-V1.0-001, SGE-WQ-101003-V1.0-001, SGE-WQ-104003-V1.0-001, SGE-WQ-121003-V1.0-001, SGE-WQ-133003-V1.0-001, SGE-WQ-150003-V1.0-001, SGE-WQ-156003-V1.0-001, SGE-WQ-170003-V1.0-001, SGE-WQ-185003-V1.0-001, SGE-WQ-190003-V1.0-001, SGE-WQ-215003-V1.0-001, SGE-WQ-238003-V1.0-001, SGE-WQ-320003-V1.0-001, SGE-BY-101001-V1.0-003, SGE-BY-104001-V1.0-003, SGE-BY-121001-V1.0-003, SGE-BY-133001-V1.0-003, SGE-BY-150001-V1.0-003, SGE-BY-156001-V1.0-003, SGE-BY-170001-V1.0-003, SGE-BY-185001-V1.0-003, SGE-BY-190001-V1.0-003, SGE-BY-215001-V1.0-003, SGE-BY-238001-V1.0-003, SGE-BY-270001-V1.0-003, SGE-BY-320001-V1.0-003, SGE-BY-430001-V1.0-003, SGE-BY-550001-V1.0-003, SGE-BY-650001-V1.0-003
Model Description:	All the model are the same circuit and RF module, only the model names and sizes are different. Test sample model: SGE-WQ-190003-V1.0-001
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): 17.284dBm
Type of Modulation:	WiFi (2.4G): DSSS, OFDM
Antenna installation:	WiFi (2.4G): External antenna
Antenna Gain:	WiFi (2.4G): Ant1: 3dBi Ant2: 3dBi
Ratings:	AC 120V/60Hz

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	Keyboard	DELL	KB216t	N/A	AE
2	Mouse	DELL	MS116c	N/A	AE
3	Monitor	DELL	SE2218HV	N/A	AE
4	Laptop	DELL	Vostro 5490	N/A	AE
5	Router	/	AX2 Pro	/	AE

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. 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.

ANT 1, ANT 2

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

MIMO(ANT 1+ANT 2)

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

EUT has two Internal Antenna with Max Antenna Gain 3 dBi 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)=3.01dB,

So the directional gain for PSD is 6.01dBi

2) For power measurements,

The Array gain=0 dB for NANT≤6,

So the directional gain for Power measurements is 3dBi

NOTE: Duty cycle>98%.

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

4.6 Test Environment

Humidity(%):	54
Atmospheric Pressure(kPa):	101
Normal Voltage(AC):	120V
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, Xinhe 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.

FCC Test Firm Registration Number: CN1276

5.2 Test Instrument Used

No.	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Calibrated Date	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	A.14.16	2025/5/23	2026/5/22
2	Power Sensor	Agilent	U2021XA	MY56120032	/	2025/5/23	2026/5/22
3	Power Sensor	Agilent	U2021XA	MY56120034	/	2025/5/23	2026/5/22
4	Communication test set	R&S	CMW500	108058	V3.5.80	2025/5/23	2026/5/22
5	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2025/5/23	2026/5/22
6	Signal Generator	Agilent	N5181A	MY50140365	A.01.60	2025/5/22	2026/5/21
7	Vector signal generator	Agilent	N5182A	MY47420195	A.01.87	2025/5/22	2026/5/21
8	Communication test set	Agilent	E5515C	MY50102567	B.19.07 (E1962B)	2025/5/22	2026/5/21
9	2.4 GHz Filter	Shenxiang	MSF2400-2483. 5MS-1154	20181015001	/	2025/6/18	2026/6/17
10	5 GHz Filter	Shenxiang	MSF5150-5850 MS-1155	20181015001	/	2025/6/18	2026/6/17
11	Filter	Xingbo	XBLBQ-DZA120	190821-1-1	/	2025/5/24	2026/5/23
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	/	2025/10/20	2026/10/19
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	/	2025/5/22	2026/5/21
15	234G Automatic test software	Microwave	MTS8200	Ver. 2.0.0.0	/	/	/
16	966 chamber	C.R.T.	966	/	/	2024/6/23	2027/6/22

17	Receiver	R&S	ESPI	100362	RF_ATTEN_7 (104489/003)	2025/5/23	2026/5/22
18	Amplifier	HP	8447E	2945A02747	/	2025/5/23	2026/5/22
19	Amplifier	Agilent	8449B	3008A01838	/	2025/6/2	2026/6/1
20	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	/	2025/6/29	2026/6/28
21	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA9120D	01911	/	2025/6/1	2026/5/31
22	EMI test software	Fala	EZ-EMC	FA-03A2 RE	/	/	/
23	Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2025/6/2	2026/6/1
24	loop antenna	ZHINAN	ZN30900A	GTS534	/	/	/
25	40G Horn antenna	A/H/System	SAS-574	588	/	2025/6/2	2026/6/1
26	Amplifier	AEROFLEX	Aeroflex	097	/	2025/6/2	2026/6/1
27	Power Meter	KEYSIGHT	N1912AP	N/A	A.05.00	2025/6/2	2026/6/1

Continuous disturbance							
No.	Equipment	Manufacturer	Model No.	Serial No.	Firmware version	Calibrated Date	Calibrated until
1	843 Shield Room	C/ R/ T	843	/	/	2024/6/22	2027/6/21
2	LISN	ROHDE&SCHWARZ	ESH3-Z5	831551852	/	2025/5/22	2026/5/21
3	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100428	V4.42.SP3	2025/5/22	2026/5/21
4	Coaxial cable	ZDECL	Z302S	18091904	/	2025/5/22	2026/5/21
5	ISN	Schwarzbeck	NTFM8158	183	/	2025/6/18	2026/6/17
6	Voltage sensor	Schwarzbeck	TK 9420	01189	/	2025/9/19	2026/9/18
7	EZ-EMC	Frad	EMC-con3A1.1	/	/	/	/
8	Current Probe	FCC	F-52B	199453	/	2025/5/24	2026/5/23
9	Communication test set	R&S	CMW500	108058	B.19.07 (E1962B)	2025/5/23	2026/5/22
10	Communication test set	Agilent	E5515C	MY50102567	V3.5.80	2025/5/23	2026/5/22

Radiated emission(No.2 Chamber)							
No.	Equipment	Manufacturer	Model No.	Serial No.	Firmware version	Calibrated Date	Calibrated until
1	966 Chamber	C/ R/ T	966	/	/	2024/6/8	2027/6/7
2	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA 9120 D	01911	/	2025/6/1	2026/5/31
3	Broadband Antenna	Schwarzbeck	VULB 9168	1471	/	2025/9/19	2026/9/18

4	Amplifier	Agilent	8449B	3008A01838	/	2025/6/3	2026/6/2
5	Preamplifier	Schwarzbeck	BBV 9743 B	00500	/	2025/5/30	2026/5/29
6	EMI TEST RECEIVER	R&S	ESCI7	100861	/	2025/9/19	2026/9/18
7	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2025/5/23	2026/5/22
8	EMI test software	Farad	EZ-EMC	/	Ver. FARAD-3A1+	/	/
9	Coaxial cable	Rosenberg	8m	/	/	2025/9/19	2026/9/18
10	Coaxial cable	Times	2m	/	/	2025/9/19	2026/9/18
11	Coaxial cable	Times	2m	/	/	2025/9/19	2026/9/18
12	Coaxial cable	Times	1m	/	/	2025/9/19	2026/9/18
13	loop antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2025/6/2	2026/6/1
14	Communication test set	R&S	CMW500	108058	B.19.07 (E1962B)	2025/5/23	2026/5/22
15	Communication test set	Agilent	E5515C	MY50102567	V3.5.80	2025/5/23	2026/5/22

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.

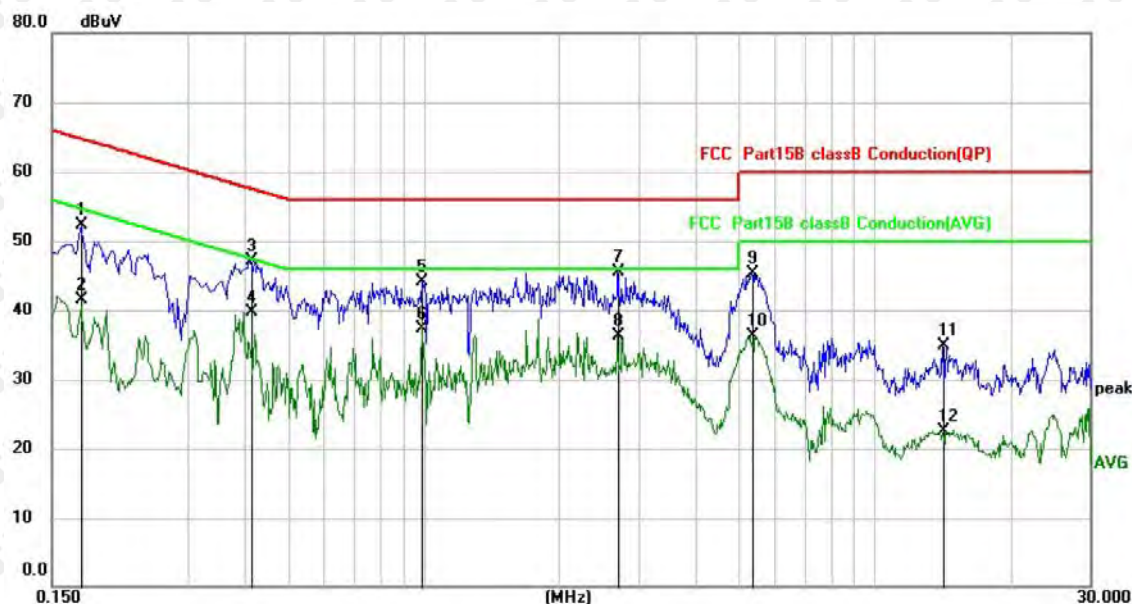
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

6.4 Test Result

Test Specification: Line

AC 120V 60Hz

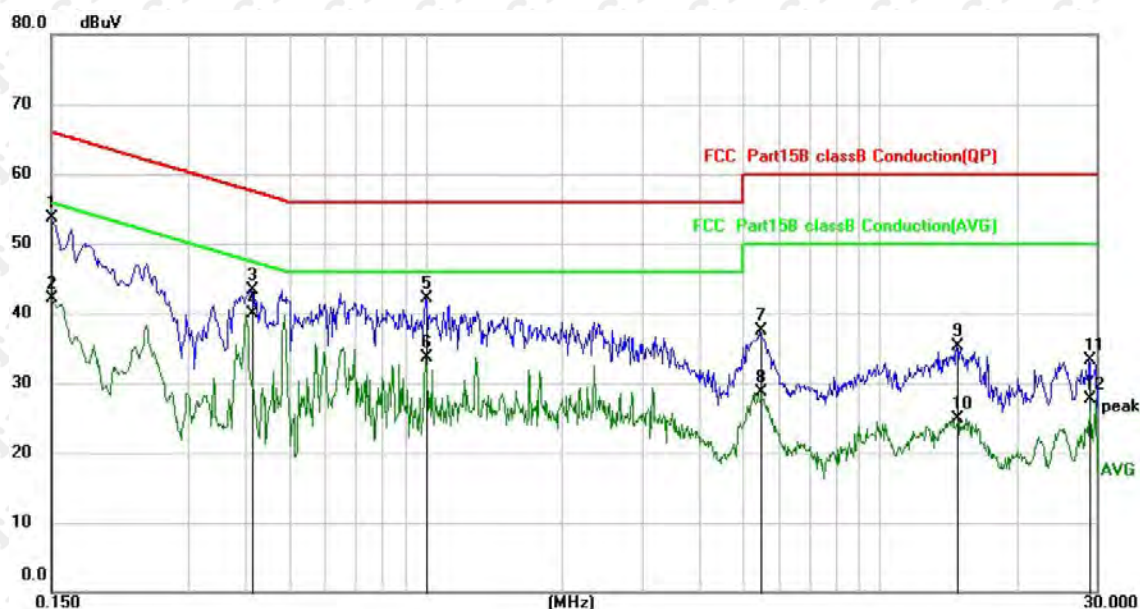
the worst: 802.11b (low channel)



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1737	42.30	10.07	52.37	64.78	-12.41	QP
2		0.1737	31.52	10.07	41.59	54.78	-13.19	AVG
3		0.4138	37.09	10.09	47.18	57.57	-10.39	QP
4	*	0.4138	29.71	10.09	39.80	47.57	-7.77	AVG
5		0.9900	34.07	10.13	44.20	56.00	-11.80	QP
6		0.9900	27.23	10.13	37.36	46.00	-8.64	AVG
7		2.6979	35.36	10.20	45.56	56.00	-10.44	QP
8		2.6979	26.01	10.20	36.21	46.00	-9.79	AVG
9		5.3578	35.02	10.30	45.32	60.00	-14.68	QP
10		5.3578	26.06	10.30	36.36	50.00	-13.64	AVG
11		14.2100	24.13	10.68	34.81	60.00	-25.19	QP
12		14.2100	11.86	10.68	22.54	50.00	-27.46	AVG

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

Test Specification: Neutral
AC 120V 60Hz
the worst: 802.11b (low channel)



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1500	43.70	10.07	53.77	66.00	-12.23	QP
2		0.1500	32.11	10.07	42.18	56.00	-13.82	AVG
3		0.4139	33.17	10.09	43.26	57.57	-14.31	QP
4	*	0.4139	29.83	10.09	39.92	47.57	-7.65	AVG
5		1.0020	32.01	10.13	42.14	56.00	-13.86	QP
6		1.0020	23.48	10.13	33.61	46.00	-12.39	AVG
7		5.4659	27.11	10.30	37.41	60.00	-22.59	QP
8		5.4659	18.45	10.30	28.75	50.00	-21.25	AVG
9		14.8178	24.55	10.72	35.27	60.00	-24.73	QP
10		14.8178	14.28	10.72	25.00	50.00	-25.00	AVG
11		29.0139	21.98	11.23	33.21	60.00	-26.79	QP
12		29.0139	16.53	11.23	27.76	50.00	-22.24	AVG

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

7. RADIATED SPURIOUS EMISSION

7.1 Block Diagram Of Test Setup

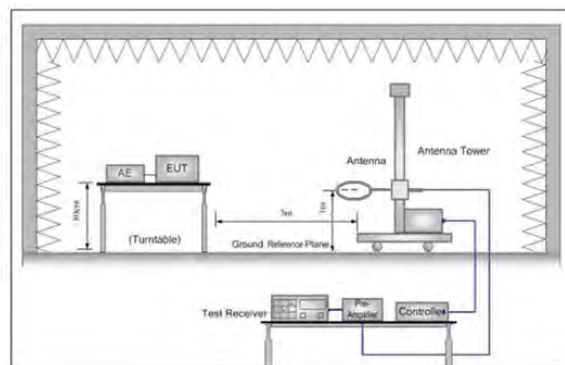


Figure 1. Below 30MHz

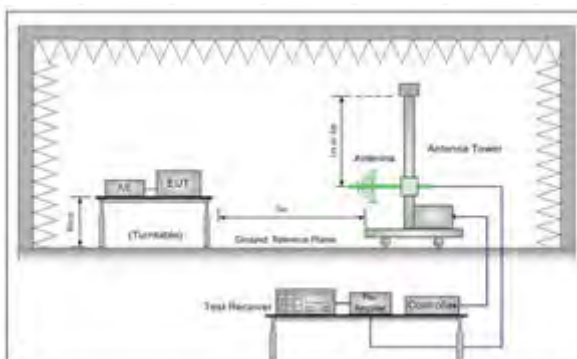


Figure 2. 30MHz to 1GHz

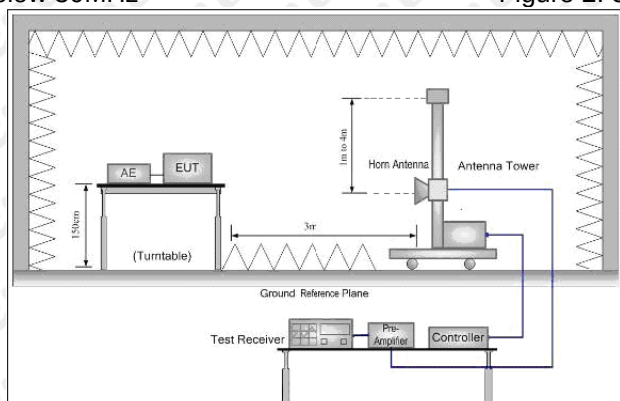


Figure 3. Above 1GHz

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:

- 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.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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:

- 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).
- Test the EUT in the lowest channel ,the middle channel ,the Highest channel
- Repeat above procedures until all frequencies measured was complete.

Receiver set:

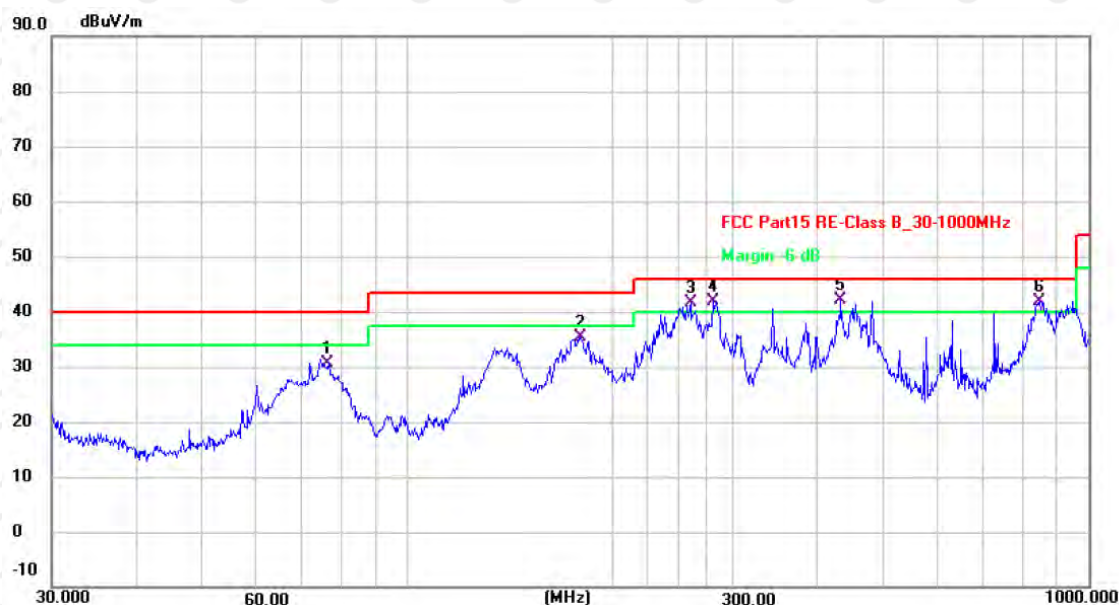
Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30KHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30KHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30KHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30KHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30KHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
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

Below 1GHz Test Results:

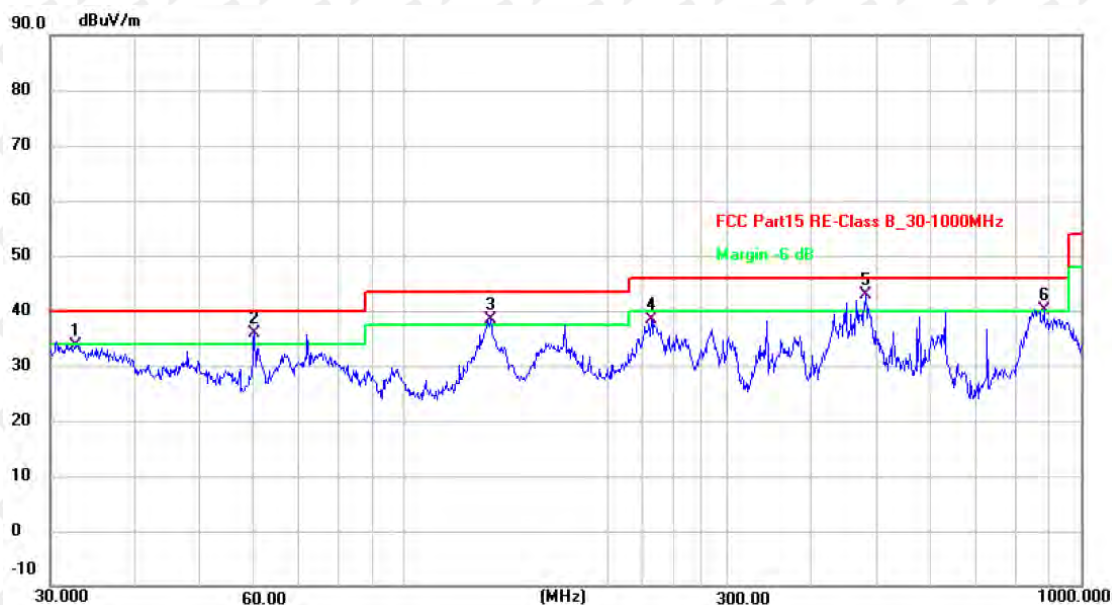
Antenna polarity: H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	76.5119	47.71	-16.97	30.74	40.00	-9.26	QP
2	179.3863	49.86	-14.36	35.50	43.50	-8.00	QP
3 !	260.1444	55.31	-13.68	41.63	46.00	-4.37	QP
4 !	281.0074	54.88	-12.93	41.95	46.00	-4.05	QP
5 *	432.5455	51.80	-9.66	42.14	46.00	-3.86	QP
6 !	845.0877	43.52	-1.57	41.95	46.00	-4.05	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	32.6340	48.40	-14.68	33.72	40.00	-6.28	QP
2 !	60.0690	50.33	-14.56	35.77	40.00	-4.23	QP
3 !	134.0880	52.61	-14.21	38.40	43.50	-5.10	QP
4	231.7178	53.13	-14.66	38.47	46.00	-7.53	QP
5 *	480.5276	51.40	-8.53	42.87	46.00	-3.13	QP
6 !	881.4067	41.14	-1.08	40.06	46.00	-5.94	QP

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

1. The margin of 9k-30MHz measurement exceeds 20dB, so the test chart is not included.
2. All modes have been tested, and the test results show that ANT1 b-mode data is the worst, only ANT1 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)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824	64.02	-3.64	60.38	74	-13.62	peak
4824	49.79	-3.64	46.15	54	-7.85	AVG
7236	58.40	-0.95	57.45	74	-16.55	peak
7236	46.09	-0.95	45.14	54	-8.86	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	66.83	-3.64	63.19	74	-10.81	peak
4824	48.97	-3.64	45.33	54	-8.67	AVG
7236	57.50	-0.95	56.55	74	-17.45	peak
7236	44.47	-0.95	43.52	54	-10.48	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	66.12	-3.51	62.61	74	-11.39	peak
4874	48.66	-3.51	45.15	54	-8.85	AVG
7311	58.30	-0.82	57.48	74	-16.52	peak
7311	44.27	-0.82	43.45	54	-10.55	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	64.48	-3.51	60.97	74	-13.03	peak
4874	49.45	-3.51	45.94	54	-8.06	AVG
7311	60.30	-0.82	59.48	74	-14.52	peak
7311	43.37	-0.82	42.55	54	-11.45	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	62.51	-3.43	59.08	74	-14.92	peak
4924	48.64	-3.43	45.21	54	-8.79	AVG
7386	58.53	-0.75	57.78	74	-16.22	peak
7386	43.90	-0.75	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	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924	65.11	-3.43	61.68	74	-12.32	peak
4924	47.53	-3.43	44.10	54	-9.90	AVG
7386	58.99	-0.75	58.24	74	-15.76	peak
7386	43.52	-0.75	42.77	54	-11.23	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	63.88	-3.64	60.24	74	-13.76	peak
4824	48.57	-3.64	44.93	54	-9.07	AVG
7236	57.20	-0.95	56.25	74	-17.75	peak
7236	46.62	-0.95	45.67	54	-8.33	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	65.89	-3.64	62.25	74	-11.75	peak
4824	48.87	-3.64	45.23	54	-8.77	AVG
7236	56.93	-0.95	55.98	74	-18.02	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						

ANT1 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	63.45	-3.51	59.94	74	-14.06	peak
4874	50.50	-3.51	46.99	54	-7.01	AVG
7311	57.44	-0.82	56.62	74	-17.38	peak
7311	45.98	-0.82	45.16	54	-8.84	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	63.22	-3.51	59.71	74	-14.29	peak
4874	49.42	-3.51	45.91	54	-8.09	AVG
7311	59.61	-0.82	58.79	74	-15.21	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 (802.11g Mode)/2462

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924	63.85	-3.43	60.42	74	-13.58	peak
4924	46.73	-3.43	43.30	54	-10.70	AVG
7386	59.40	-0.75	58.65	74	-15.35	peak
7386	44.05	-0.75	43.30	54	-10.70	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)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924	63.54	-3.43	60.11	74	-13.89	peak
4924	47.70	-3.43	44.27	54	-9.73	AVG
7386	57.73	-0.75	56.98	74	-17.02	peak
7386	42.33	-0.75	41.58	54	-12.42	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	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824	64.29	-3.64	60.65	74	-13.35	peak
4824	49.50	-3.64	45.86	54	-8.14	AVG
7236	57.92	-0.95	56.97	74	-17.03	peak
7236	45.06	-0.95	44.11	54	-9.89	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	66.54	-3.64	62.90	74	-11.10	peak
4824	48.17	-3.64	44.53	54	-9.47	AVG
7236	57.82	-0.95	56.87	74	-17.13	peak
7236	44.63	-0.95	43.68	54	-10.32	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)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874	63.57	-3.51	60.06	74	-13.94	peak
4874	49.34	-3.51	45.83	54	-8.17	AVG
7311	59.81	-0.82	58.99	74	-15.01	peak
7311	43.52	-0.82	42.70	54	-11.30	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	65.58	-3.51	62.07	74	-11.93	peak
4874	47.11	-3.51	43.60	54	-10.40	AVG
7311	59.06	-0.82	58.24	74	-15.76	peak
7311	43.90	-0.82	43.08	54	-10.92	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	63.44	-3.43	60.01	74	-13.99	peak
4924	47.44	-3.43	44.01	54	-9.99	AVG
7386	58.44	-0.75	57.69	74	-16.31	peak
7386	44.62	-0.75	43.87	54	-10.13	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)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924	63.68	-3.43	60.25	74	-13.75	peak
4924	47.56	-3.43	44.13	54	-9.87	AVG
7386	58.17	-0.75	57.42	74	-16.58	peak
7386	43.23	-0.75	42.48	54	-11.52	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 CH3 (802.11n/H40 Mode)/2422

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844	63.54	-3.63	59.91	74	-14.09	peak
4844	48.75	-3.63	45.12	54	-8.88	AVG
7266	58.48	-0.94	57.54	74	-16.46	peak
7266	46.13	-0.94	45.19	54	-8.81	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)	
4844	65.79	-3.63	62.16	74	-11.84	peak
4844	49.13	-3.63	45.50	54	-8.50	AVG
7266	57.85	-0.94	56.91	74	-17.09	peak
7266	44.22	-0.94	43.28	54	-10.72	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

ANT1+ANT2 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	62.87	-3.51	59.36	74	-14.64	peak
4874	47.25	-3.51	43.74	54	-10.26	AVG
7311	60.08	-0.82	59.26	74	-14.74	peak
7311	46.56	-0.82	45.74	54	-8.26	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	62.25	-3.51	58.74	74	-15.26	peak
4874	46.51	-3.51	43.00	54	-11.00	AVG
7311	56.66	-0.82	55.84	74	-18.16	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						

ANT1+ANT2 HIGH CH9 (802.11n/H40 Mode)/2452

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904	63.38	-3.43	59.95	74	-14.05	peak
4904	47.64	-3.43	44.21	54	-9.79	AVG
7356	56.46	-0.75	55.71	74	-18.29	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						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904	62.08	-3.43	58.65	74	-15.35	peak
4904	48.42	-3.43	44.99	54	-9.01	AVG
7356	57.75	-0.75	57.00	74	-17.00	peak
7356	44.76	-0.75	44.01	54	-9.99	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.

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	57.69	-5.81	51.88	74	-22.12	peak
2390	/	-5.81	/	54	/	AVG
2399	63.46	-5.84	57.62	74	-16.38	peak
2399	49.74	-5.84	43.90	54	-10.10	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	57.08	-5.81	51.27	74	-22.73	peak
2390	/	-5.81	/	54	/	AVG
2399	62.89	-5.84	57.05	74	-16.95	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						

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)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	57.67	-5.65	52.02	74	-21.98	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	55.98	-5.65	50.33	74	-23.67	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	59.03	-5.81	53.22	74	-20.78	peak
2390	/	-5.81	/	54	/	AVG
2399	63.43	-5.84	57.59	74	-16.41	peak
2399	46.55	-5.84	40.71	54	-13.29	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	57.83	-5.81	52.02	74	-21.98	peak
2390	/	-5.81	/	54	/	AVG
2399	61.60	-5.84	55.76	74	-18.24	peak
2399	45.92	-5.84	40.08	54	-13.92	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	57.82	-5.65	52.17	74	-21.83	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	56.94	-5.65	51.29	74	-22.71	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	56.26	-5.81	50.45	74	-23.55	peak
2390	/	-5.81	/	54	/	AVG
2399	62.64	-5.84	56.80	74	-17.20	peak
2399	47.53	-5.84	41.69	54	-12.31	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	57.09	-5.81	51.28	74	-22.72	peak
2390	/	-5.81	/	54	/	AVG
2399	61.01	-5.84	55.17	74	-18.83	peak
2399	48.21	-5.84	42.37	54	-11.63	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	55.86	-5.65	50.21	74	-23.79	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	56.04	-5.65	50.39	74	-23.61	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/H40 Mode TX CH Low (2422MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	58.86	-5.81	53.05	74	-20.95	peak
2390	/	-5.81	/	54	/	AVG
2399	62.95	-5.84	57.11	74	-16.89	peak
2399	46.46	-5.84	40.62	54	-13.38	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	57.01	-5.81	51.20	74	-22.80	peak
2390	/	-5.81	/	54	/	AVG
2399	61.48	-5.84	55.64	74	-18.36	peak
2399	47.00	-5.84	41.16	54	-12.84	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Operation Mode:

ANT1+ANT2 802.11n/H40 Mode TX CH High (2452MHz)

Horizontal

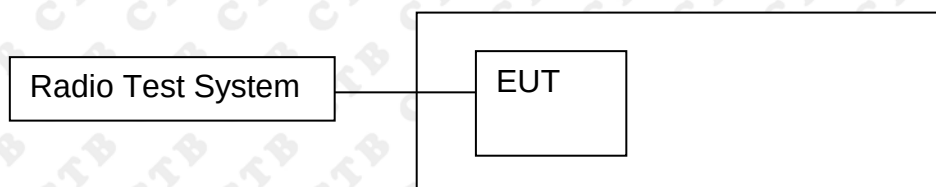
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	56.62	-5.65	50.97	74	-23.03	peak
2483.5	/	-5.65	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	55.24	-5.65	49.59	74	-24.41	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:

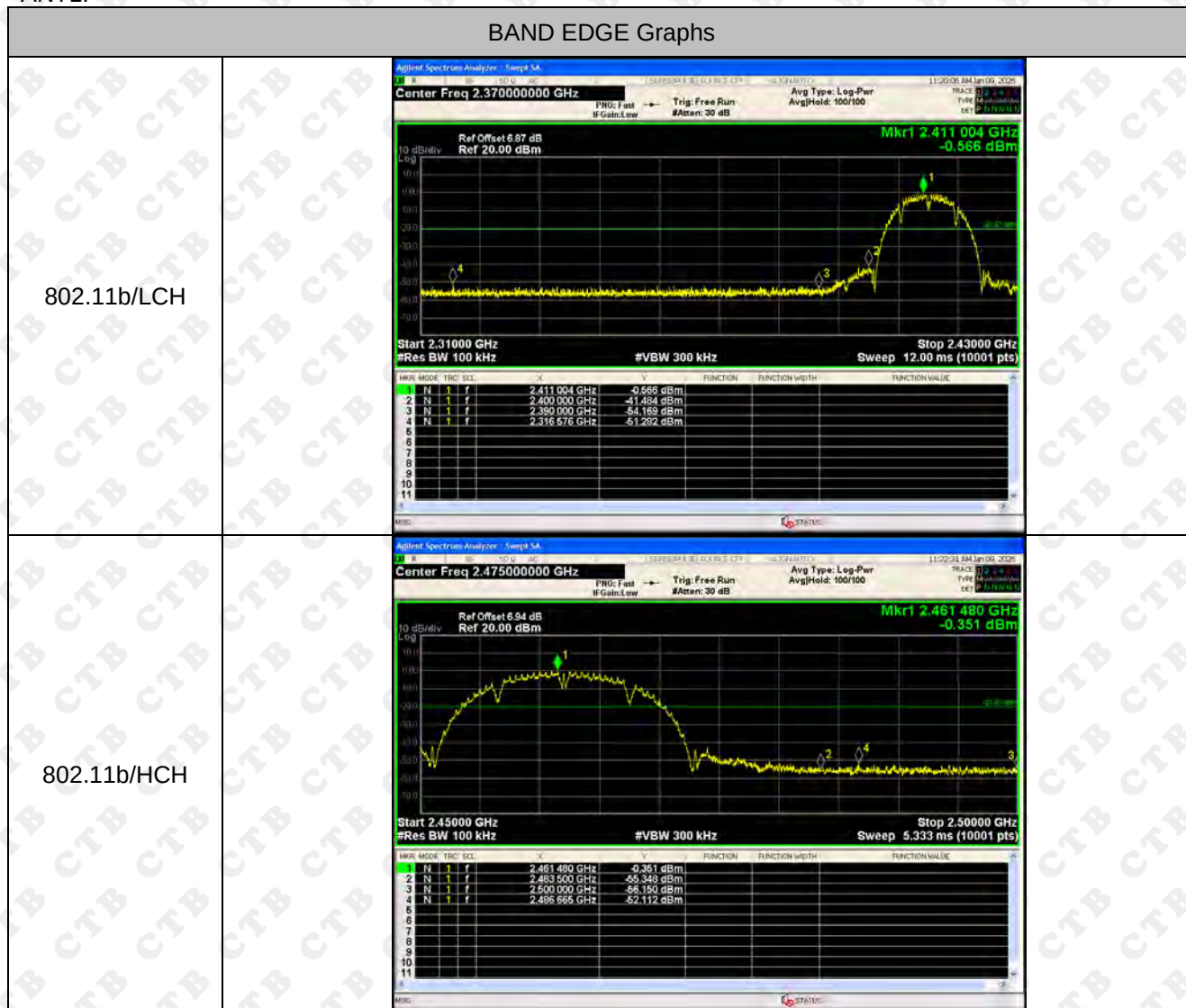
RBW = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold

Above 30MHz:

RBW = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold

8.4 Test Result

ANT1:

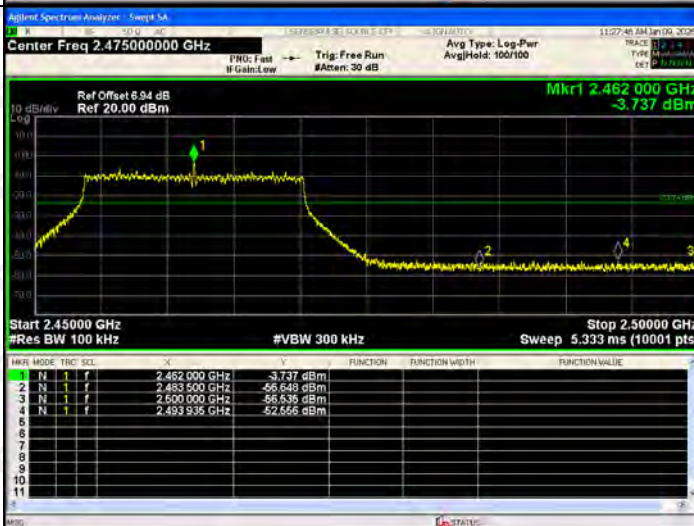


BAND EDGE Graphs

802.11g/LCH



802.11g/HCH

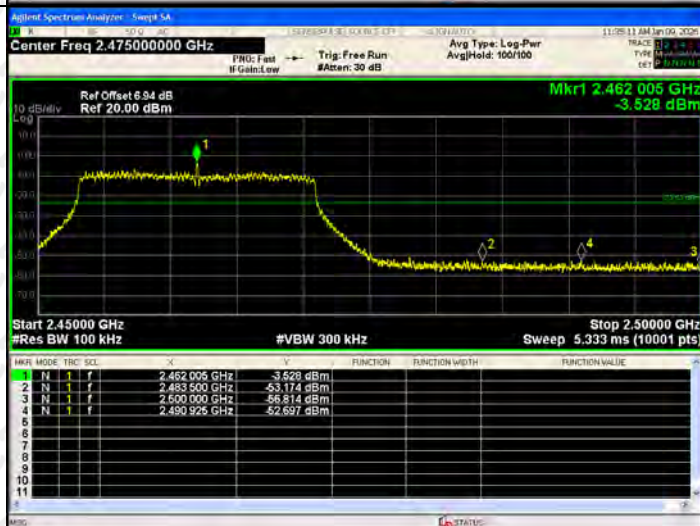


BAND EDGE Graphs

802.11n(HT20)/LCH

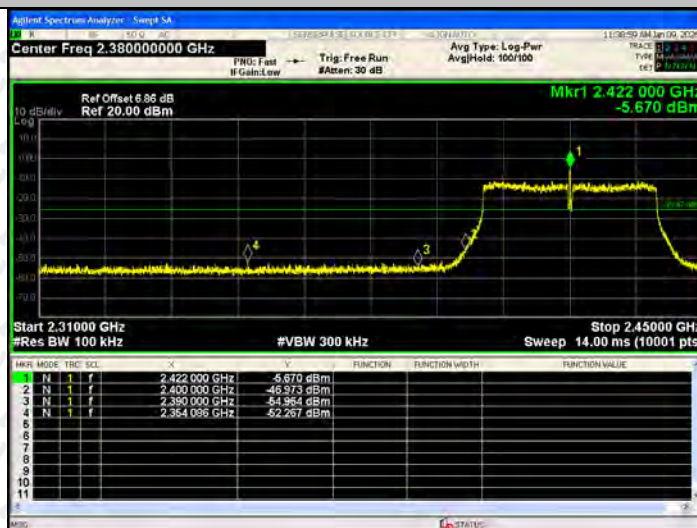


802.11n(HT20)/HCH

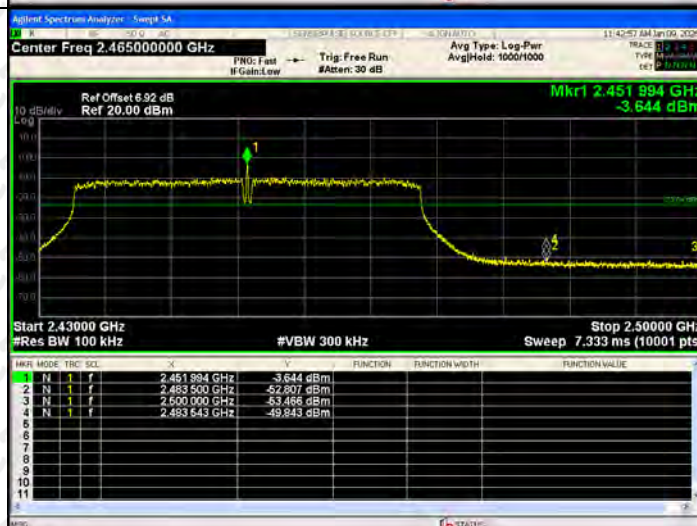


BAND EDGE Graphs

802.11n(HT40)/LCH

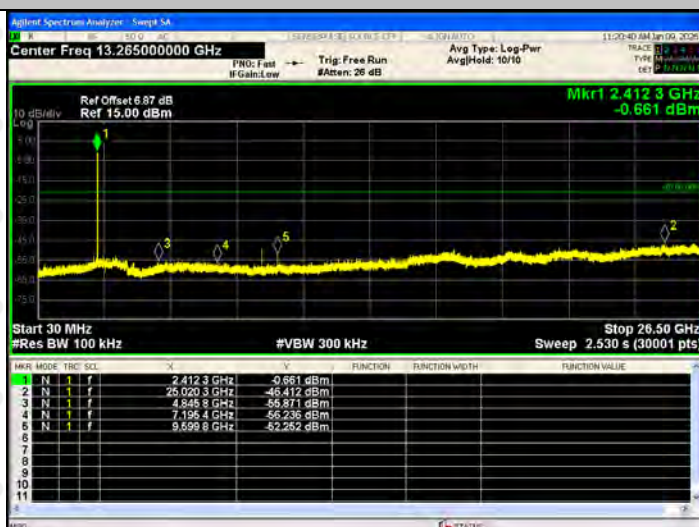


802.11n(HT40)/HCH

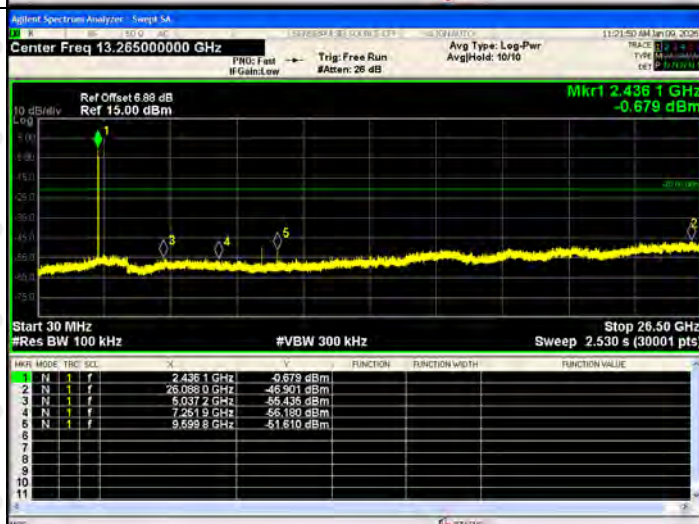


RF Conducted Spurious Emissions Graphs

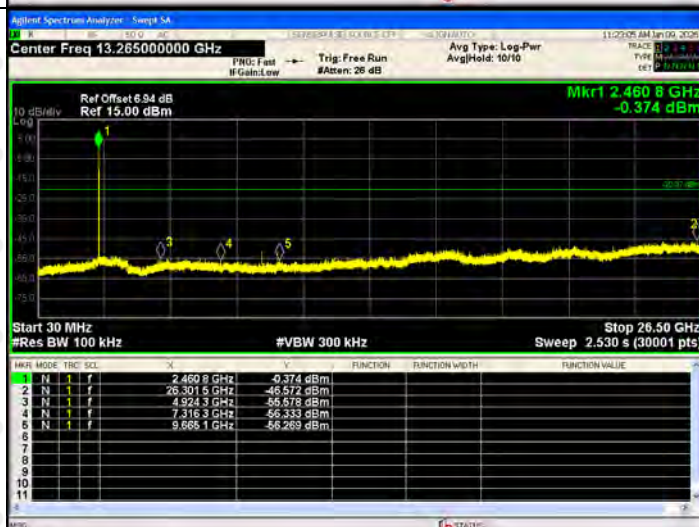
802.11b/LCH



802.11b/MCH

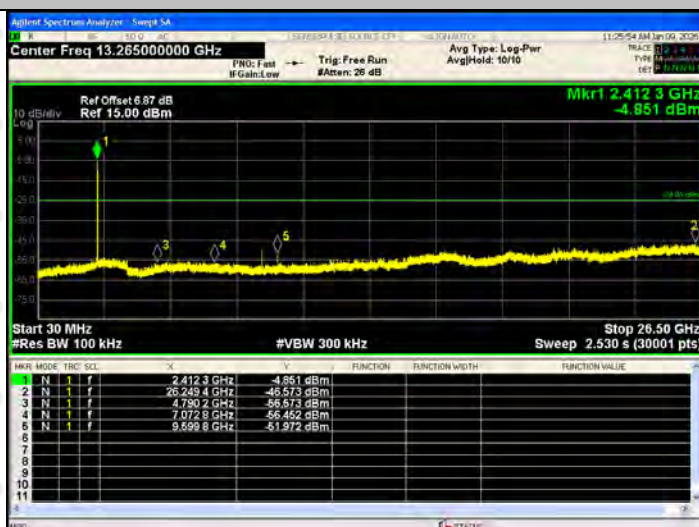


802.11b/HCH

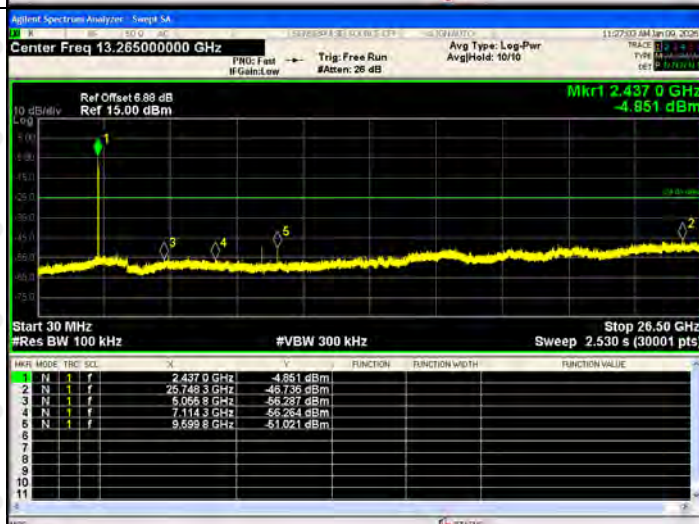


RF Conducted Spurious Emissions Graphs

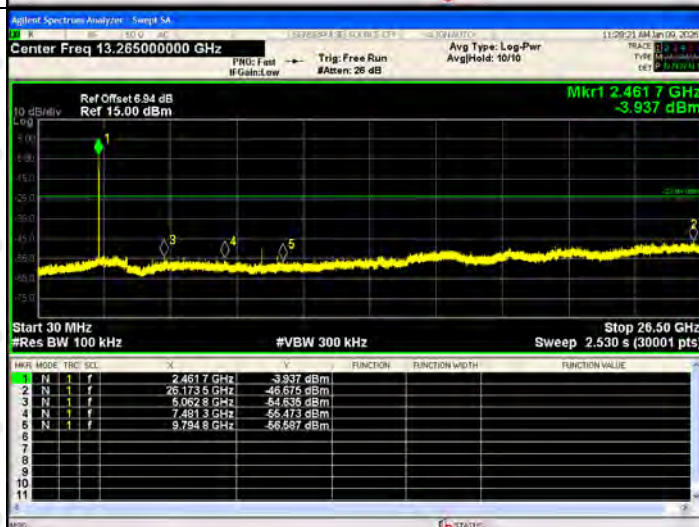
802.11g/LCH



802.11g/MCH

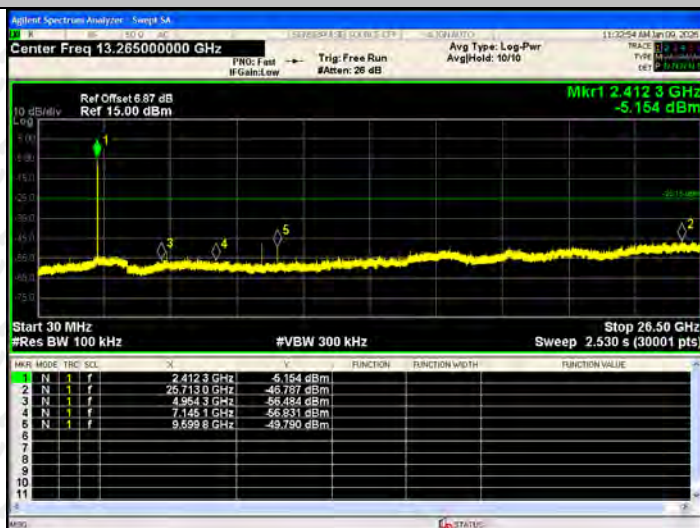


802.11g/HCH

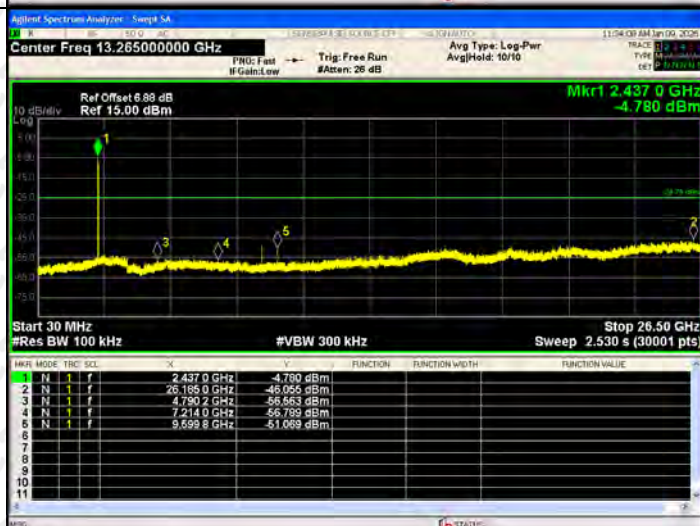


RF Conducted Spurious Emissions Graphs

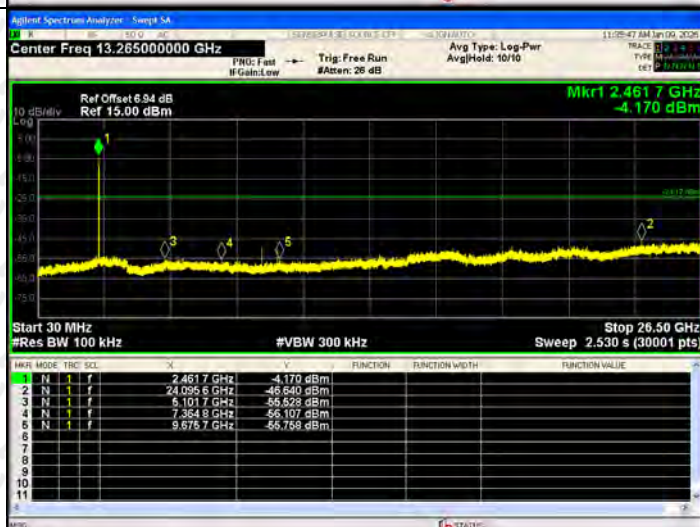
802.11n(HT20)/LCH

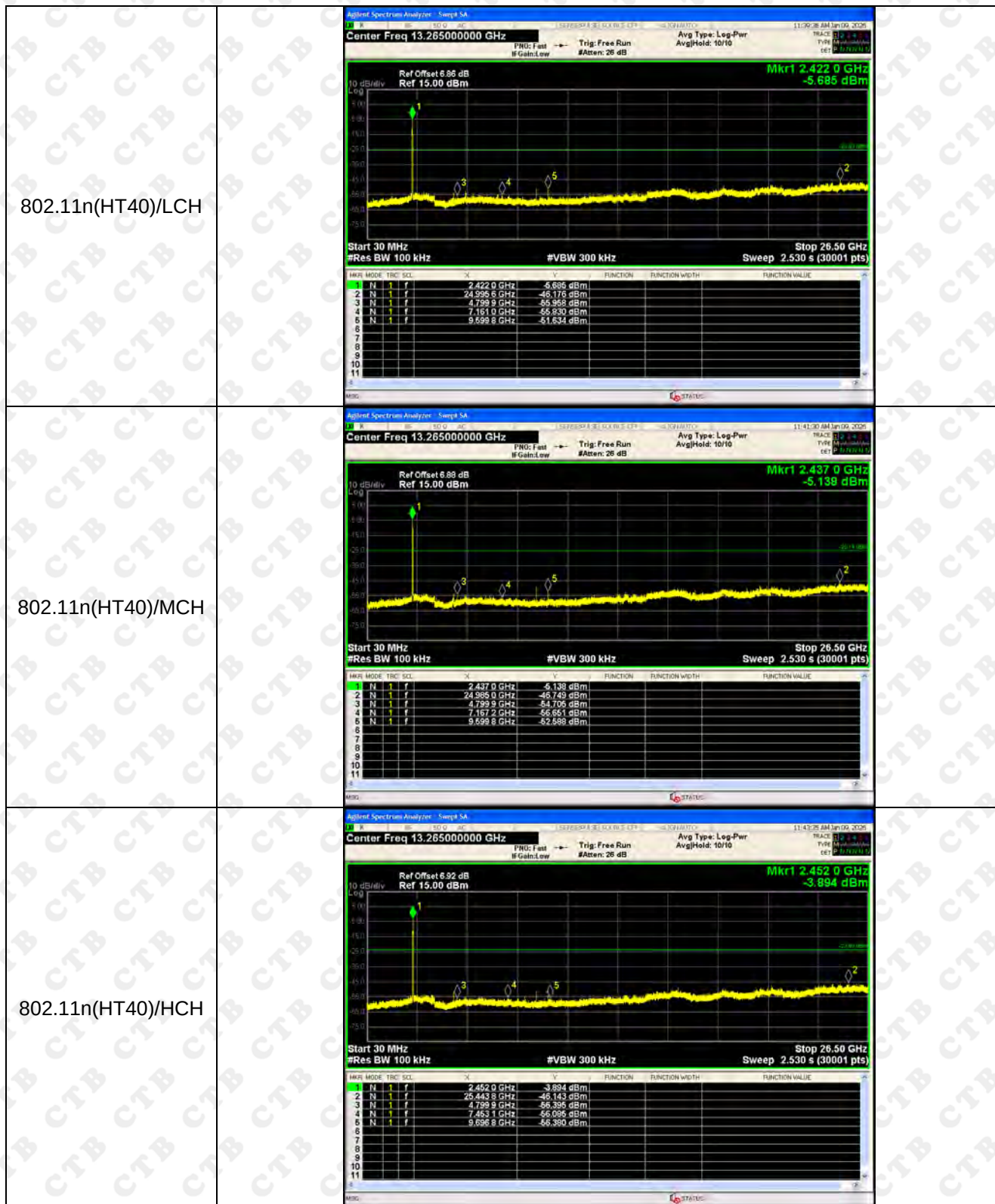


802.11n(HT20)/MCH



802.11n(HT20)/HCH

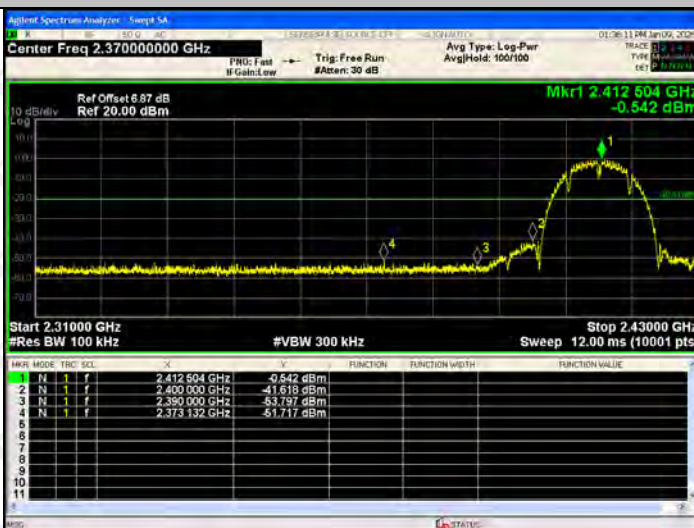




ANT2:

BAND EDGE Graphs

802.11b/LCH

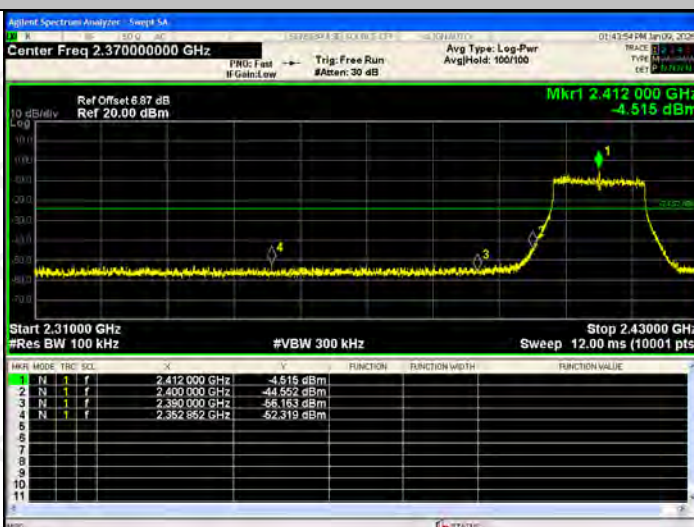


802.11b/HCH

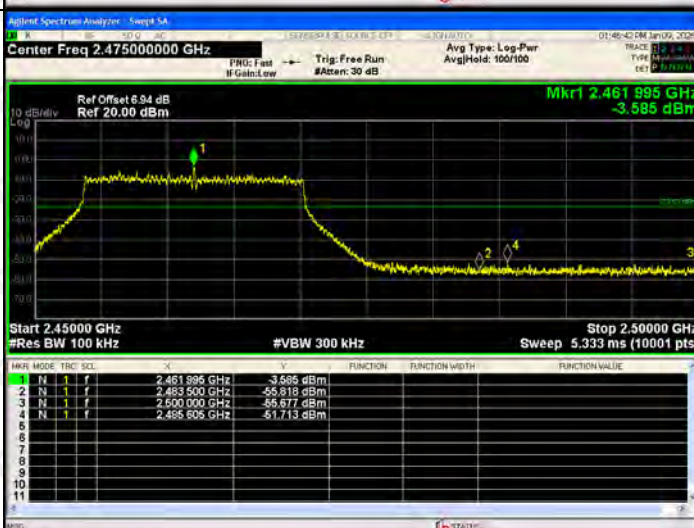


BAND EDGE Graphs

802.11g/LCH

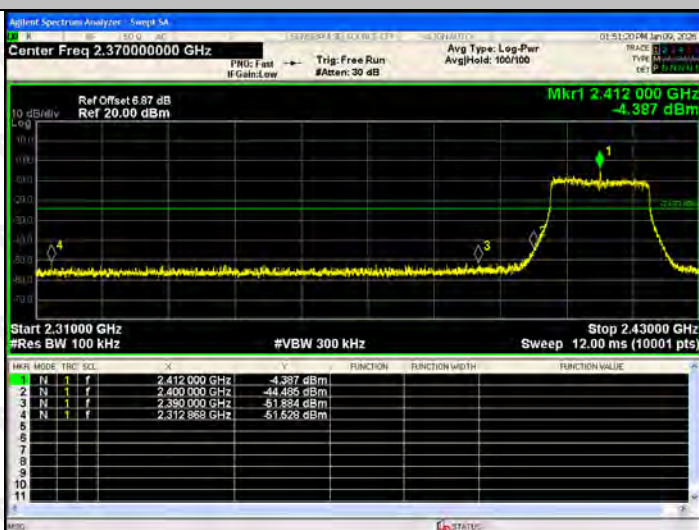


802.11g/HCH

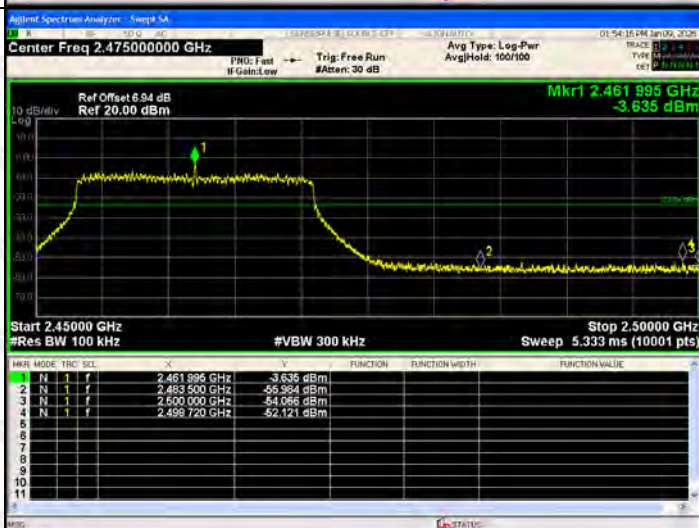


BAND EDGE Graphs

802.11n(HT20)/LCH

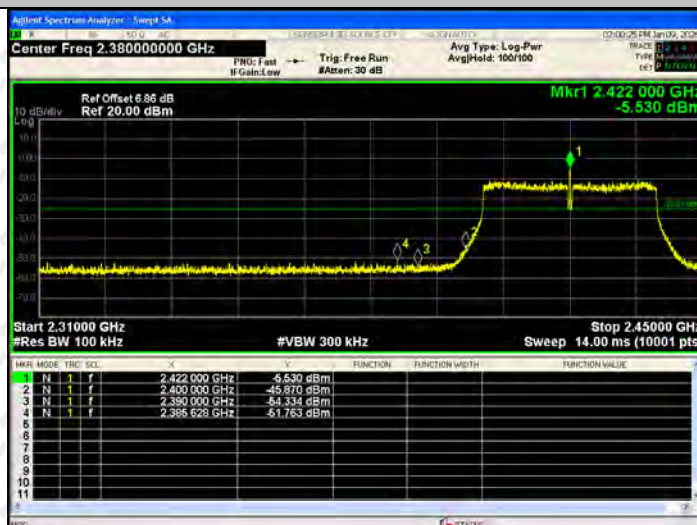


802.11n(HT20)/HCH



BAND EDGE Graphs

802.11n(HT40)/LCH

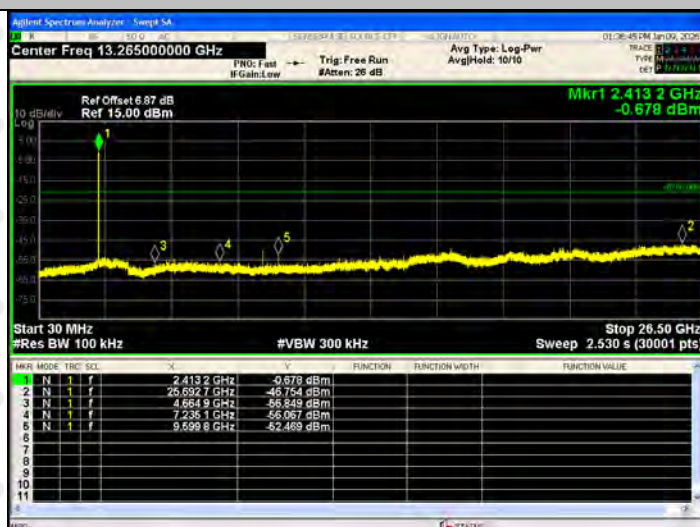


802.11n(HT40)/HCH

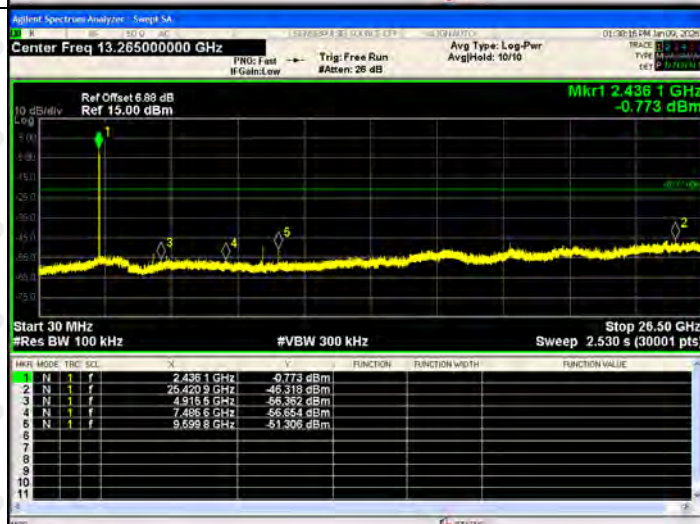


RF Conducted Spurious Emissions Graphs

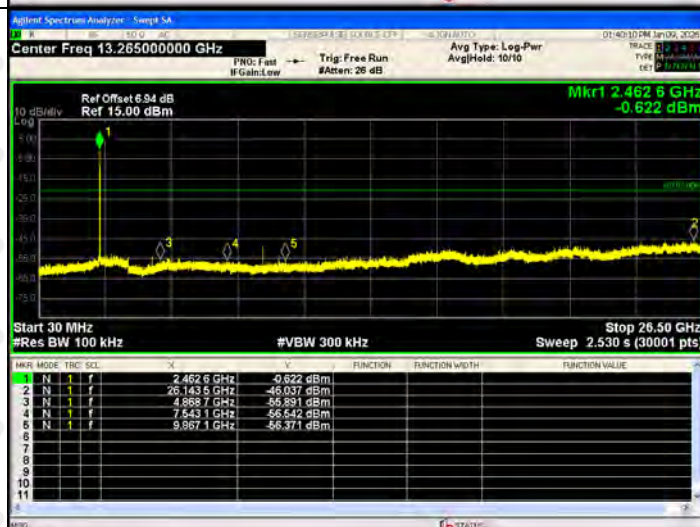
802.11b/LCH



802.11b/MCH

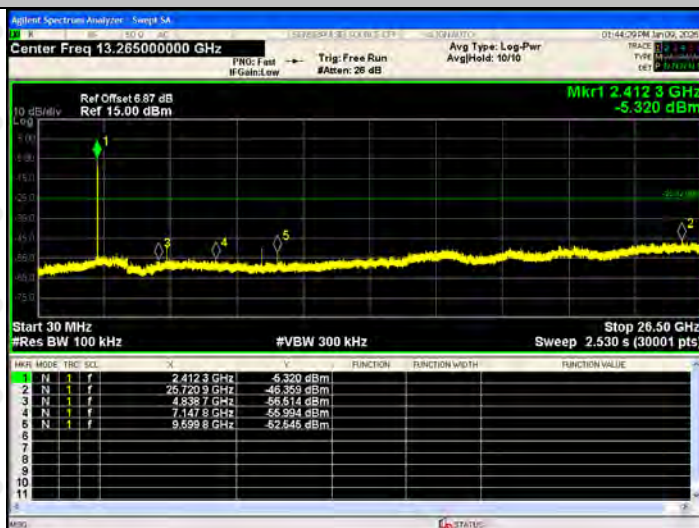


802.11b/HCH

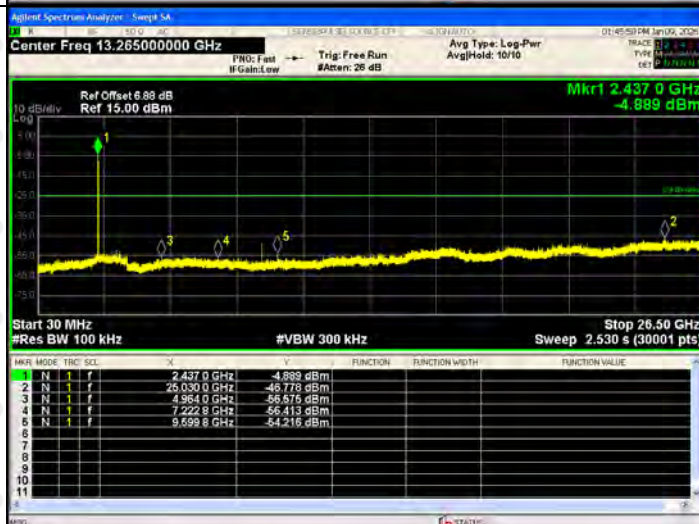


RF Conducted Spurious Emissions Graphs

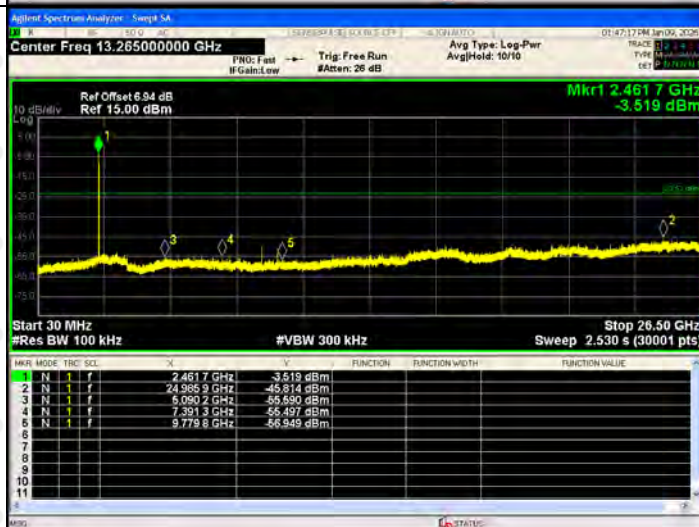
802.11g/LCH



802.11g/MCH

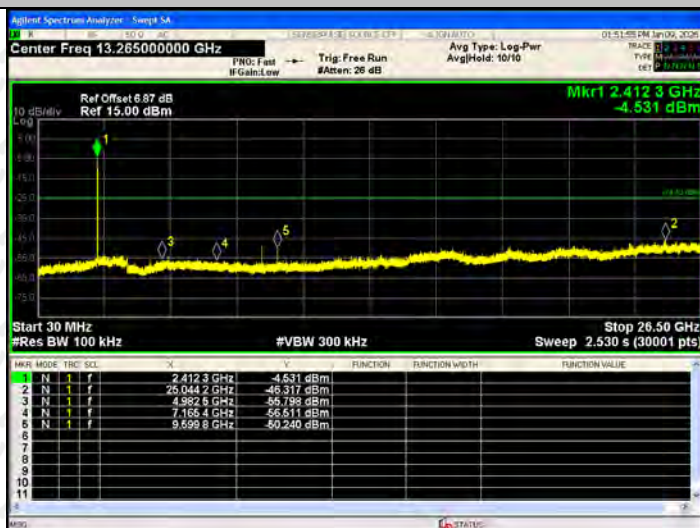


802.11g/HCH

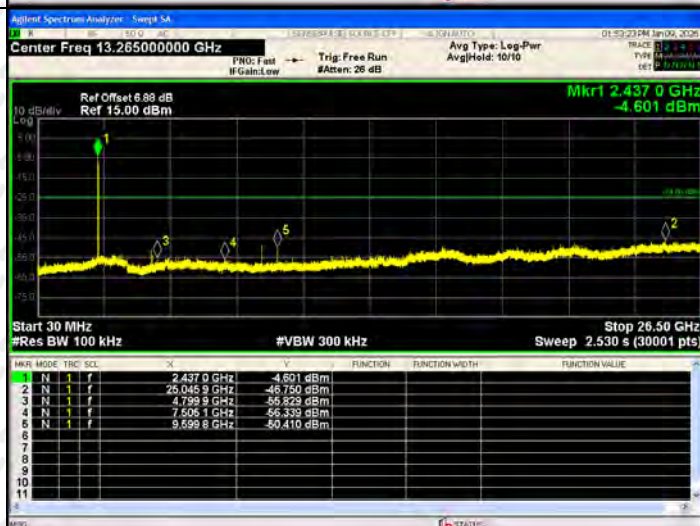


RF Conducted Spurious Emissions Graphs

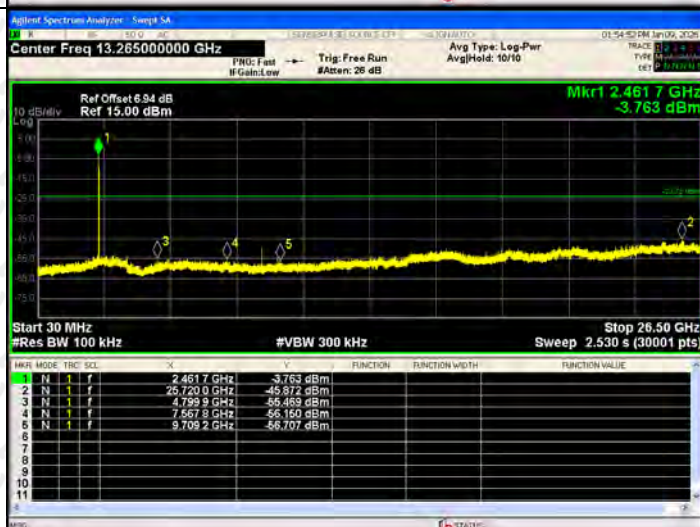
802.11n(HT20)/LCH



802.11n(HT20)/MCH

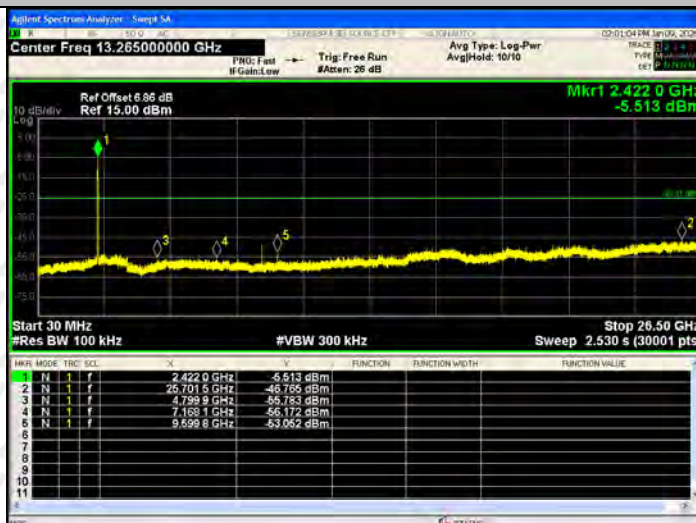


802.11n(HT20)/HCH

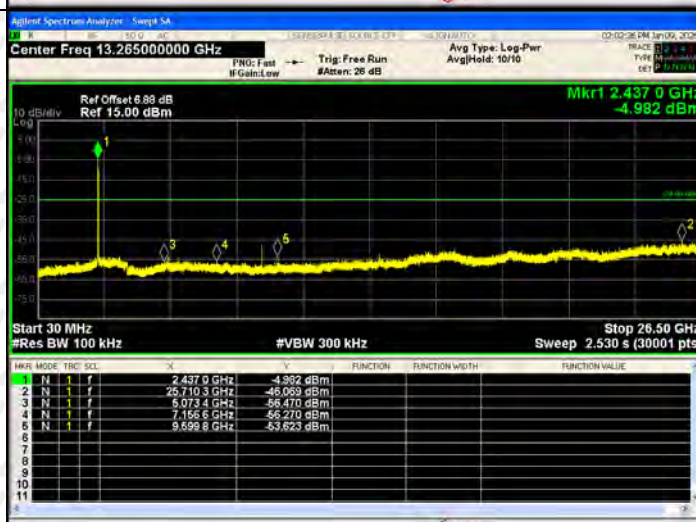


RF Conducted Spurious Emissions Graphs

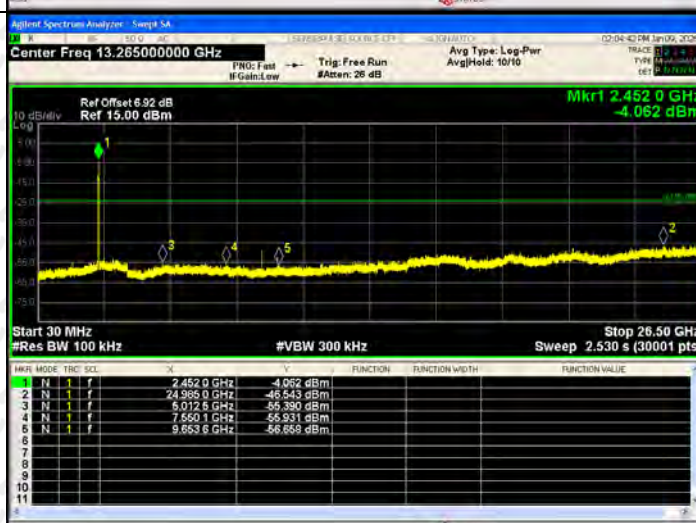
802.11n(HT40)/LCH



802.11n(HT40)/MCH



802.11n(HT40)/HCH



9. CONDUCTED 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)	Maximum Conducted Output Power	1 watt or 30dBm	2400-2483.5	PASS

9.3 Test procedure

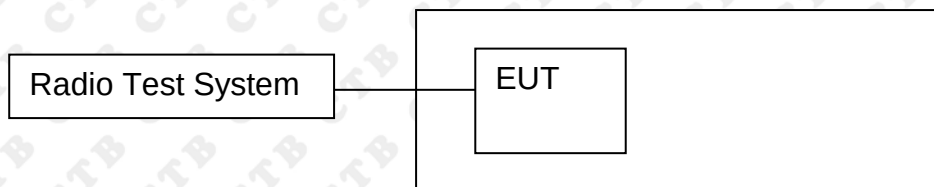
1. The EUT was directly connected to the Power meter

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	13.419	13.351	/	30
	MCH	13.2	13.269	/	30
	HCH	13.538	14.058	/	30
802.11g	LCH	12.674	12.922	/	30
	MCH	12.071	13.025	/	30
	HCH	12.962	13.826	/	30
802.11n(HT20)	LCH	12.548	12.553	15.561	30
	MCH	12.6	12.57	15.595	30
	HCH	13.292	13.409	16.361	30
802.11n(HT40)	LCH	12.359	12.512	15.446	30
	MCH	13.89	13.565	16.741	30
	HCH	14.431	14.11	17.284	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	$\geq 500\text{kHz}$ (6dB bandwidth)	2400-2483.5	PASS

10.3 Test procedure

1. Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
2. Set the VBW $> [3 \times \text{RBW}]$.
3. Detector = Peak.
4. Trace mode = max-hold.
5. Sweep = No faster than coupled (auto) time.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "-6 dB down amplitude". If a marker is below this "-6 dB down amplitude" value, then it shall be as close as possible to this value.

10.4 Test Result

ANT1:

Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	10.185	500	PASS
	MCH	10.187	500	PASS
	HCH	10.19	500	PASS
802.11g	LCH	16.541	500	PASS
	MCH	16.504	500	PASS
	HCH	16.481	500	PASS
802.11n(HT20)	LCH	17.412	500	PASS
	MCH	17.696	500	PASS
	HCH	17.596	500	PASS
802.11n(HT40)	LCH	36.202	500	PASS
	MCH	36.117	500	PASS
	HCH	36.051	500	PASS

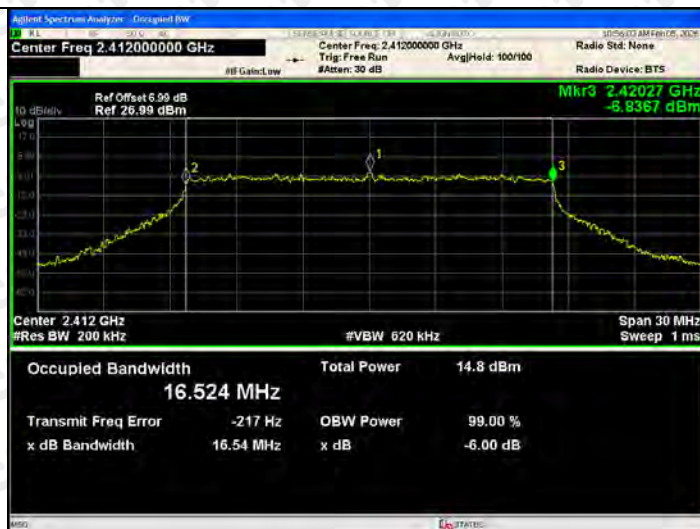
ANT2:

Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	10.184	500	PASS
	MCH	10.185	500	PASS
	HCH	10.189	500	PASS
802.11g	LCH	16.522	500	PASS
	MCH	16.516	500	PASS
	HCH	16.539	500	PASS
802.11n(HT20)	LCH	17.665	500	PASS
	MCH	17.674	500	PASS
	HCH	17.535	500	PASS
802.11n(HT40)	LCH	36.051	500	PASS
	MCH	36.138	500	PASS
	HCH	36.149	500	PASS

ANT1:
Test Graph:



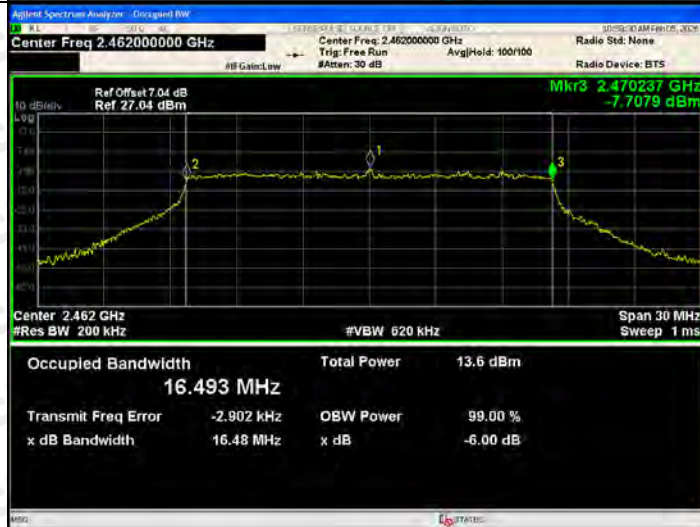
802.11g/LCH

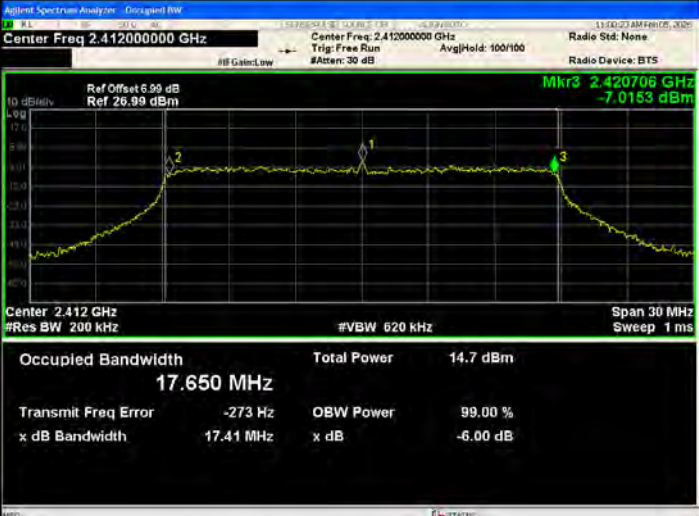


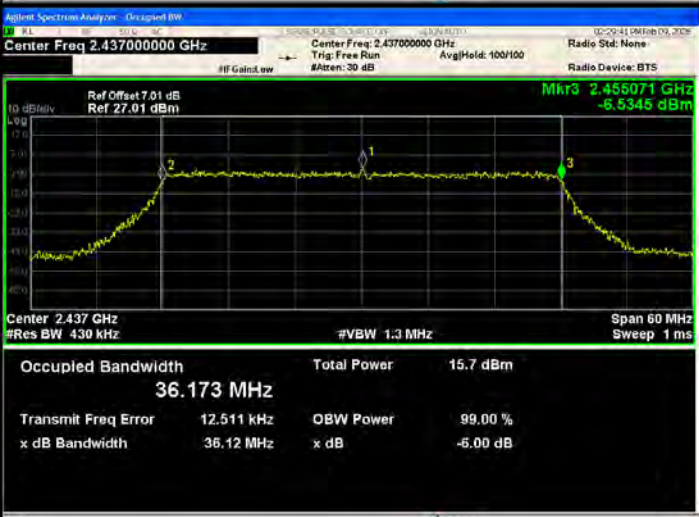
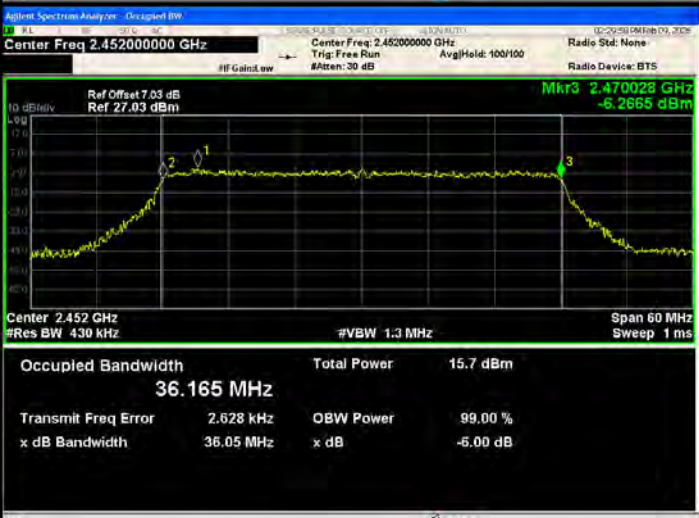
802.11g/MCH



802.11g/HCH



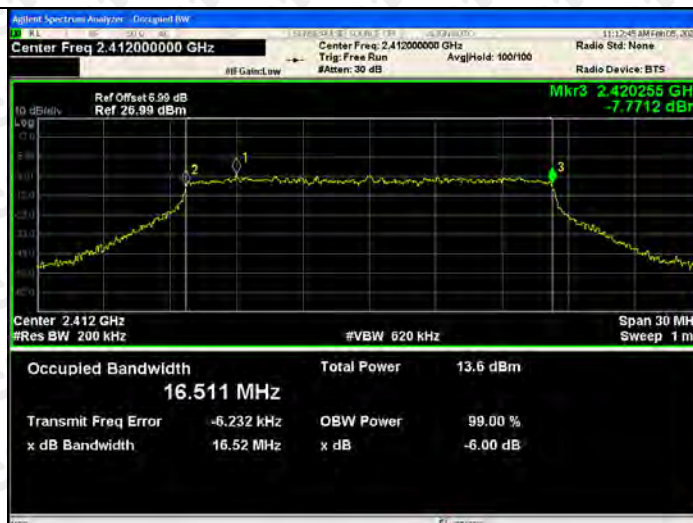
802.11n(HT20)/LCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.412000000 GHz Ref Offset: 6.99 dB Ref: 26.99 dBm Occupied Bandwidth: 17.650 MHz Total Power: 14.7 dBm Transmit Freq Error: -273 Hz x dB Bandwidth: 17.41 MHz
802.11n(HT20)/MCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.437000000 GHz Ref Offset: 7.01 dB Ref: 27.01 dBm Occupied Bandwidth: 17.634 MHz Total Power: 13.7 dBm Transmit Freq Error: 8.469 kHz x dB Bandwidth: 17.70 MHz
802.11n(HT20)/HCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.462000000 GHz Ref Offset: 7.04 dB Ref: 27.04 dBm Occupied Bandwidth: 17.640 MHz Total Power: 13.6 dBm Transmit Freq Error: 3.102 kHz x dB Bandwidth: 17.60 MHz

802.11n(HT40)/LCH	
802.11n(HT40)/MCH	
802.11n(HT40)/HCH	

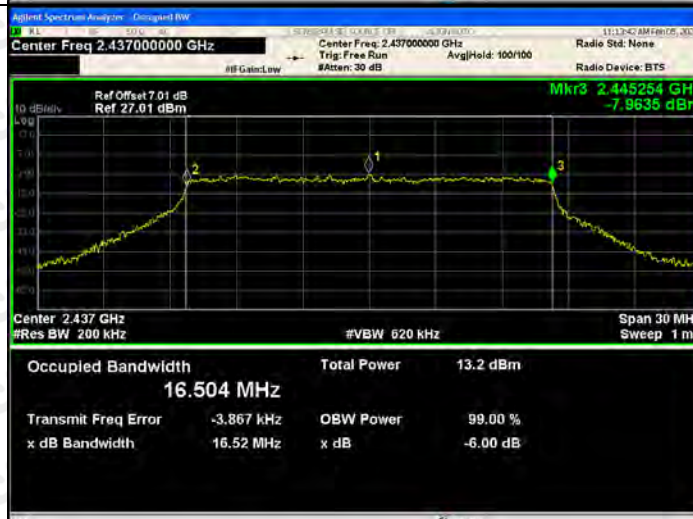
ANT2:
Test Graph:



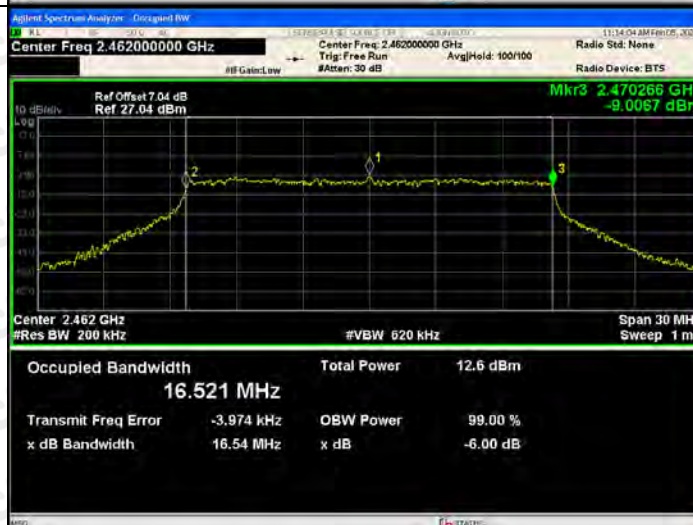
802.11g/LCH

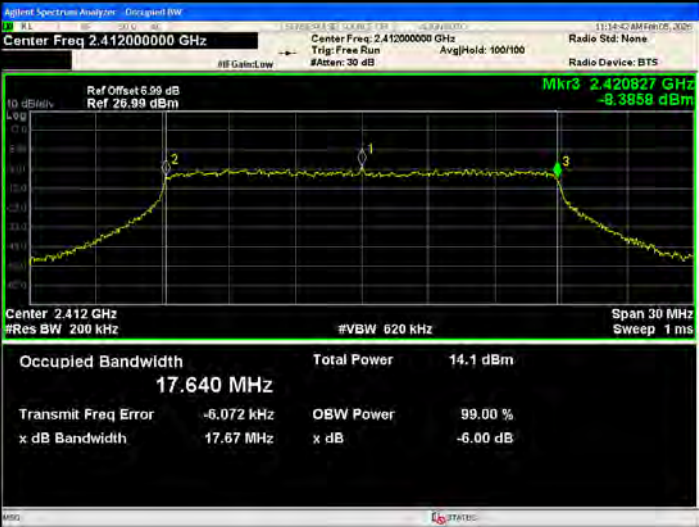
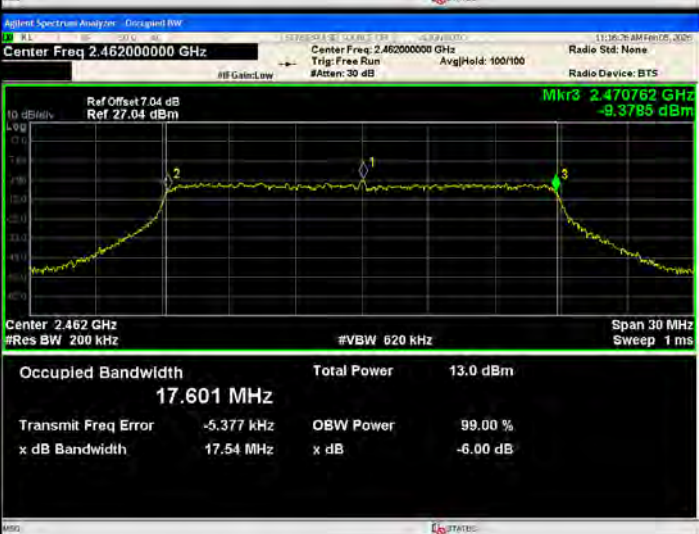


802.11g/MCH



802.11g/HCH

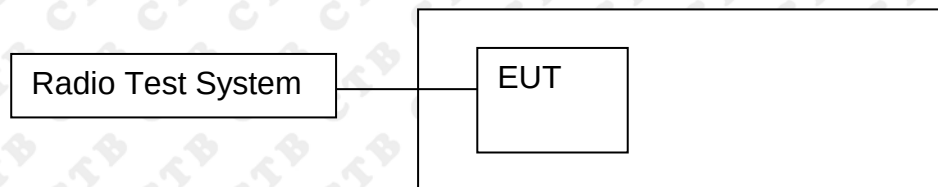


802.11n(HT20)/LCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.412000000 GHz Occupied Bandwidth: 17.640 MHz Total Power: 14.1 dBm Transmit Freq Error: -6.072 kHz x dB Bandwidth: 17.67 MHz Mkr3: 2.420827 GHz, -8.3958 dBm
802.11n(HT20)/MCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.437000000 GHz Occupied Bandwidth: 17.633 MHz Total Power: 13.8 dBm Transmit Freq Error: -12.354 kHz x dB Bandwidth: 17.67 MHz Mkr3: 2.445825 GHz, -9.3425 dBm
802.11n(HT20)/HCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.462000000 GHz Occupied Bandwidth: 17.601 MHz Total Power: 13.0 dBm Transmit Freq Error: -5.377 kHz x dB Bandwidth: 17.54 MHz Mkr3: 2.470762 GHz, -9.3785 dBm

802.11n(HT40)/LCH	
802.11n(HT40)/MCH	
802.11n(HT40)/HCH	

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

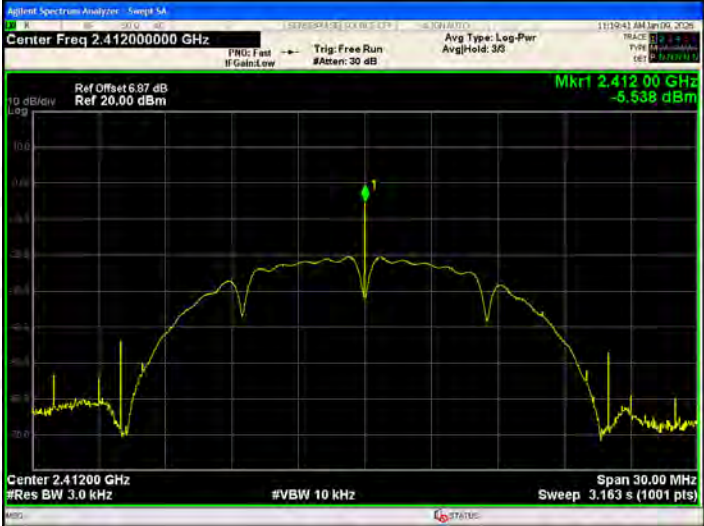
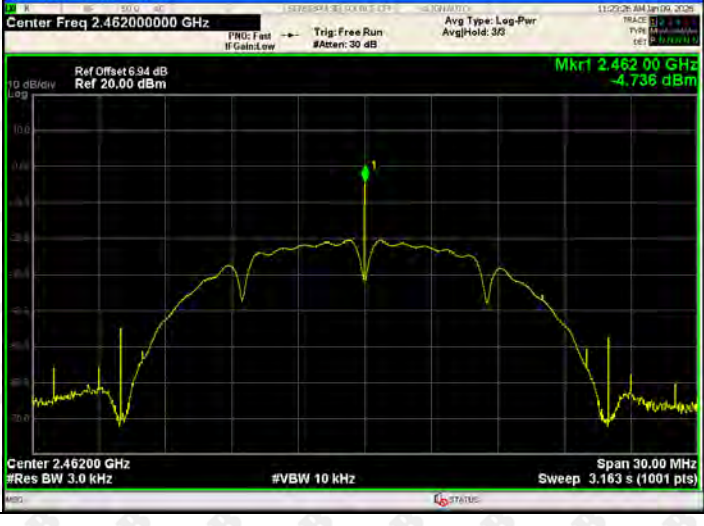
11.3 Test procedure

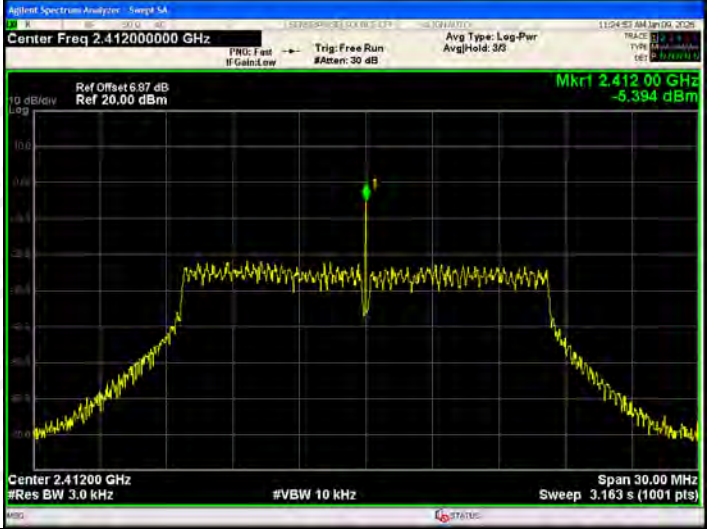
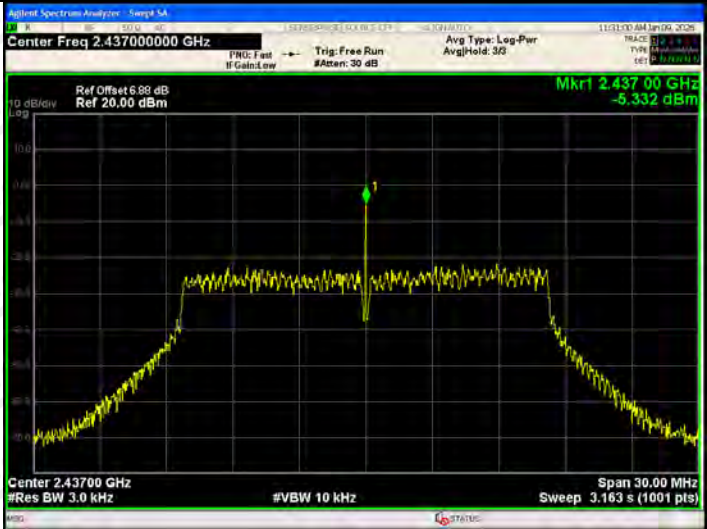
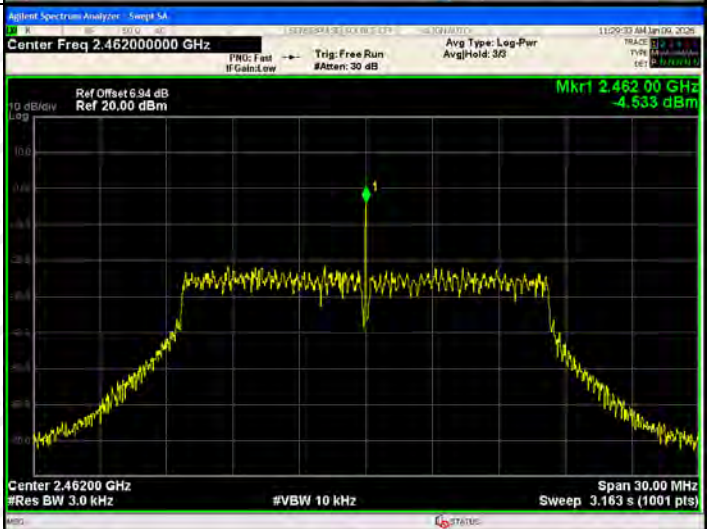
1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: $3\text{ kHz} \leq \text{RBW} \leq 100\text{ kHz}$.
4. Set the VBW $\geq 3 \times \text{RBW}$.
5. Detector = Peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
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.

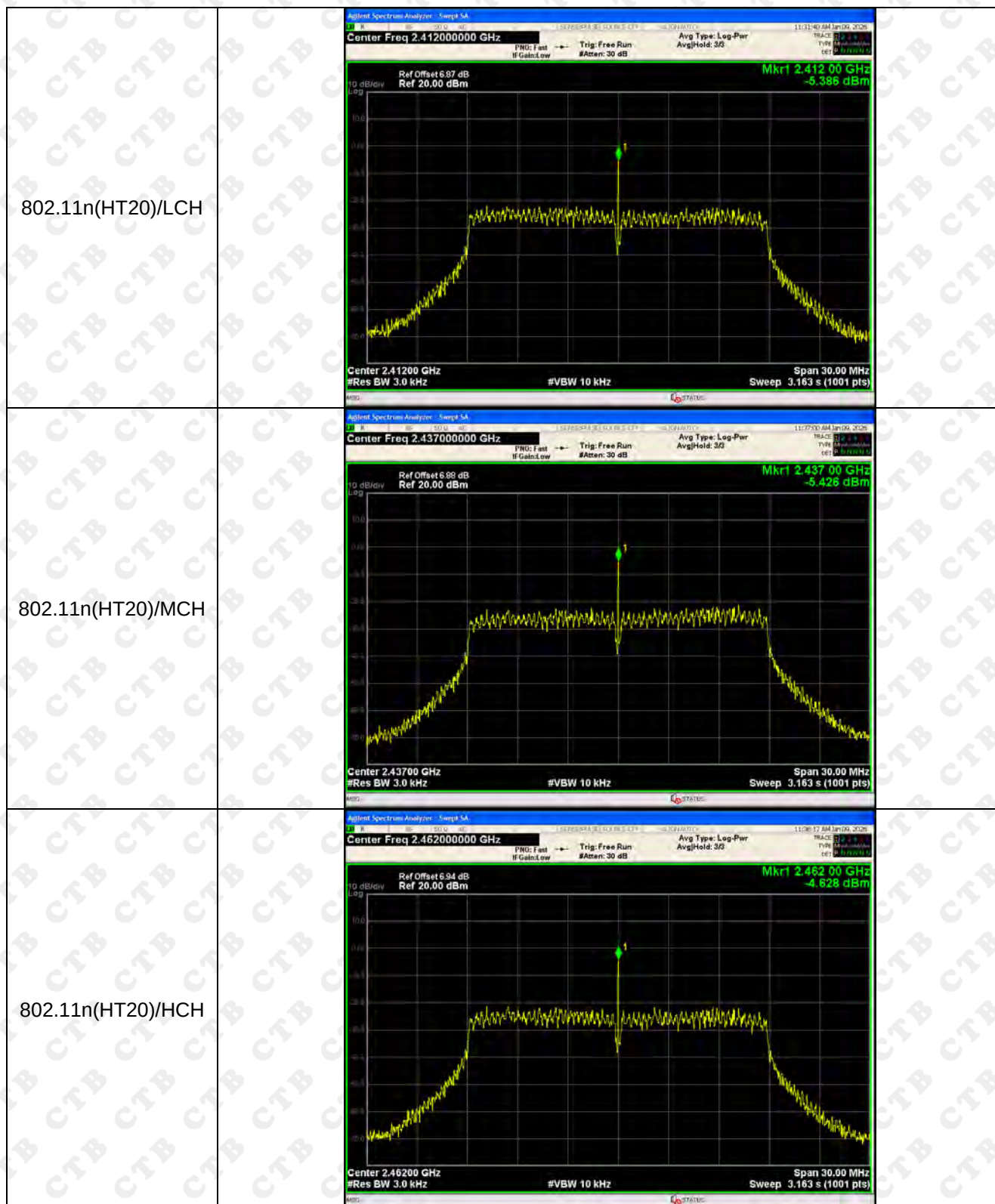
11.4 Test Result

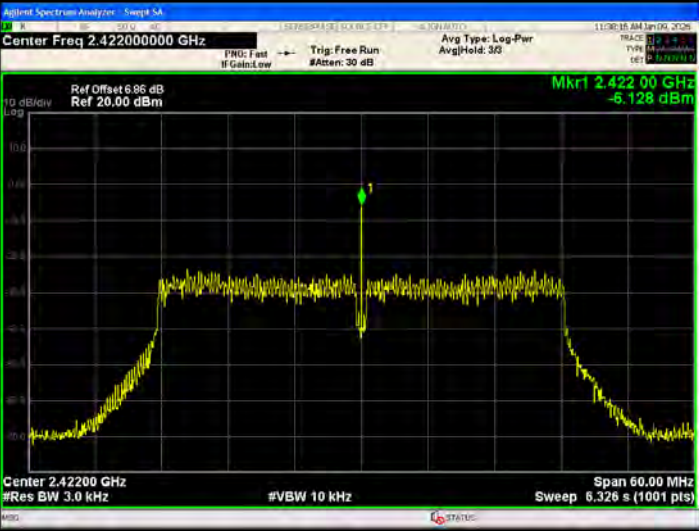
Mode	Channel.	Power Spectral Density [dBm /3kHz] ANT 1	Power Spectral Density [dBm /3kHz] ANT 2	Power Spectral Density [dBm /3kHz] Total	Limit(dBm /3kHz)
802.11b	LCH	-5.538	-5.449	/	8
	MCH	-5.442	-5.499	/	8
	HCH	-4.736	-4.727	/	8
802.11g	LCH	-5.394	-5.403	/	8
	MCH	-5.332	-5.367	/	8
	HCH	-4.533	-4.502	/	8
802.11n(HT20)	LCH	-5.386	-5.395	-2.380	8
	MCH	-5.426	-5.354	-2.380	8
	HCH	-4.628	-4.516	-1.561	8
802.11n(HT40)	LCH	-6.128	-5.994	-3.050	8
	MCH	-5.464	-5.349	-2.396	8
	HCH	-4.415	-4.285	-1.339	8

ANT1:
Test Graph

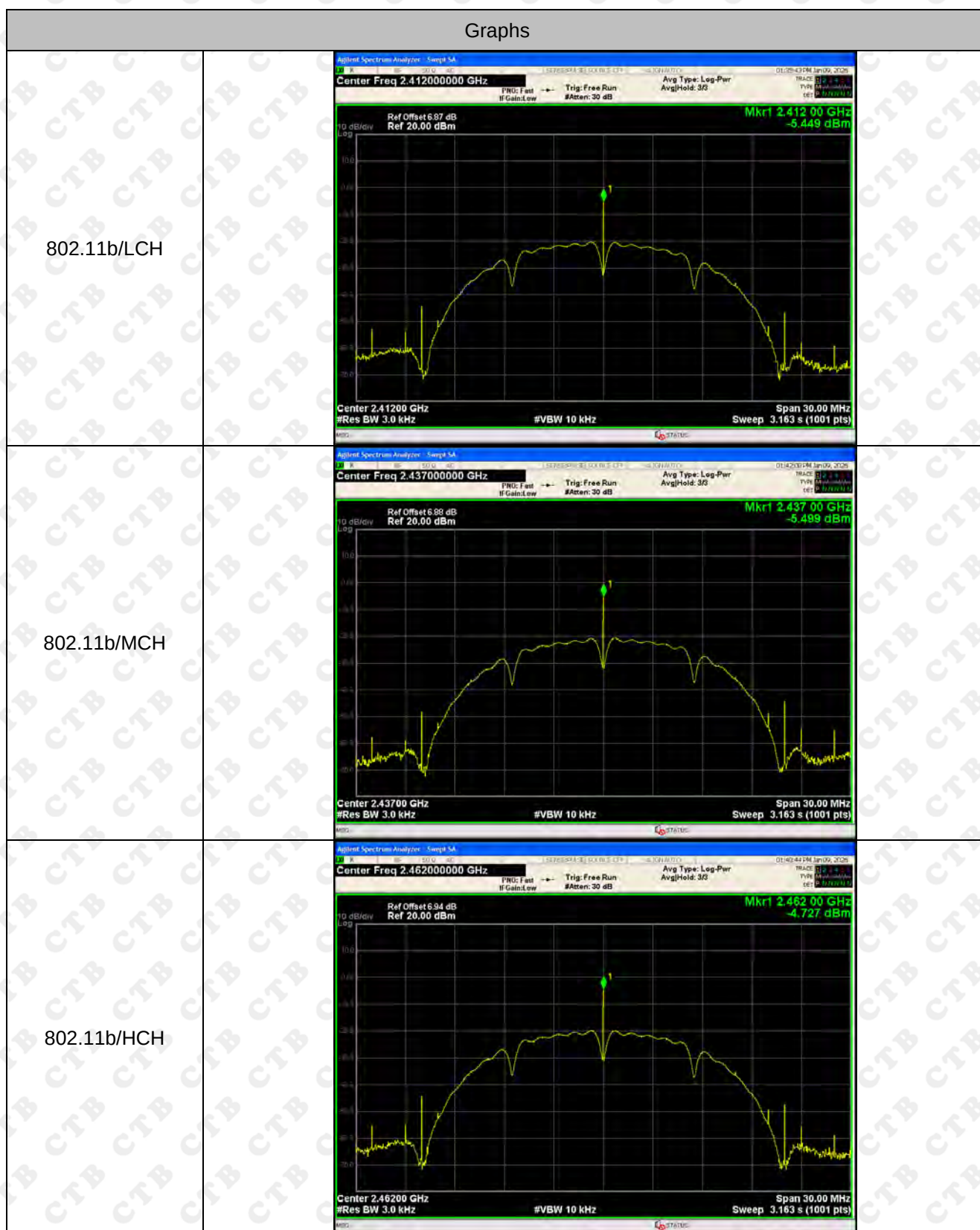
Graphs	
802.11b/LCH	
802.11b/MCH	
802.11b/HCH	

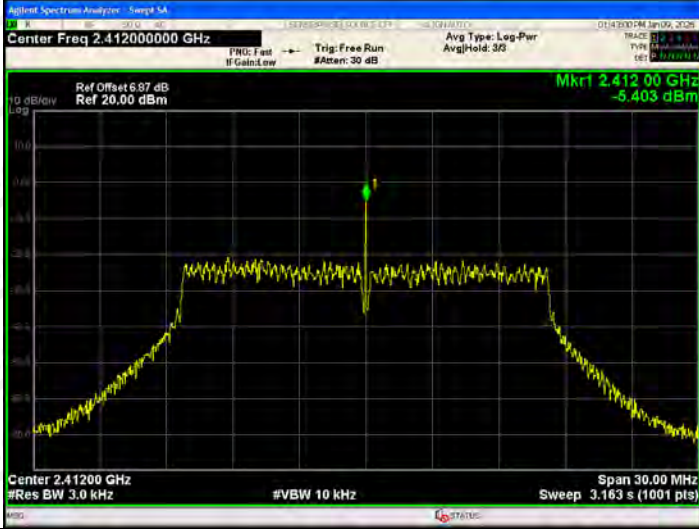
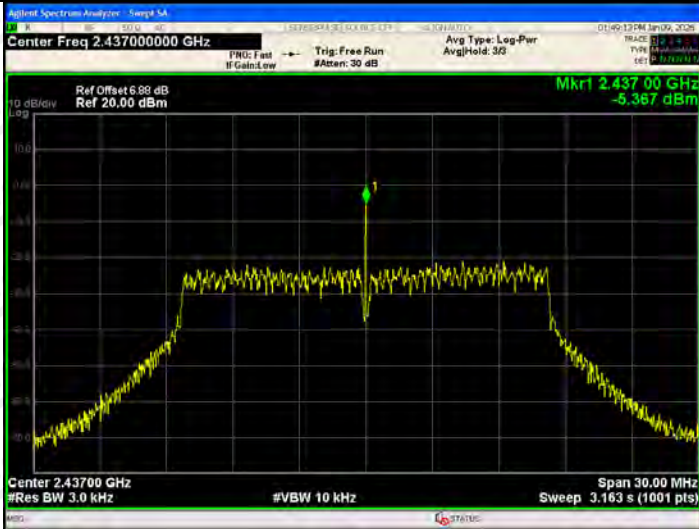
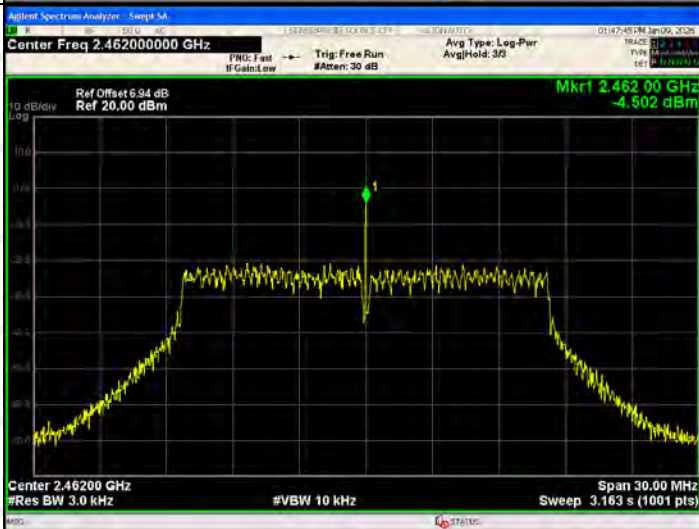
802.11g/LCH	
802.11g/MCH	
802.11g/HCH	

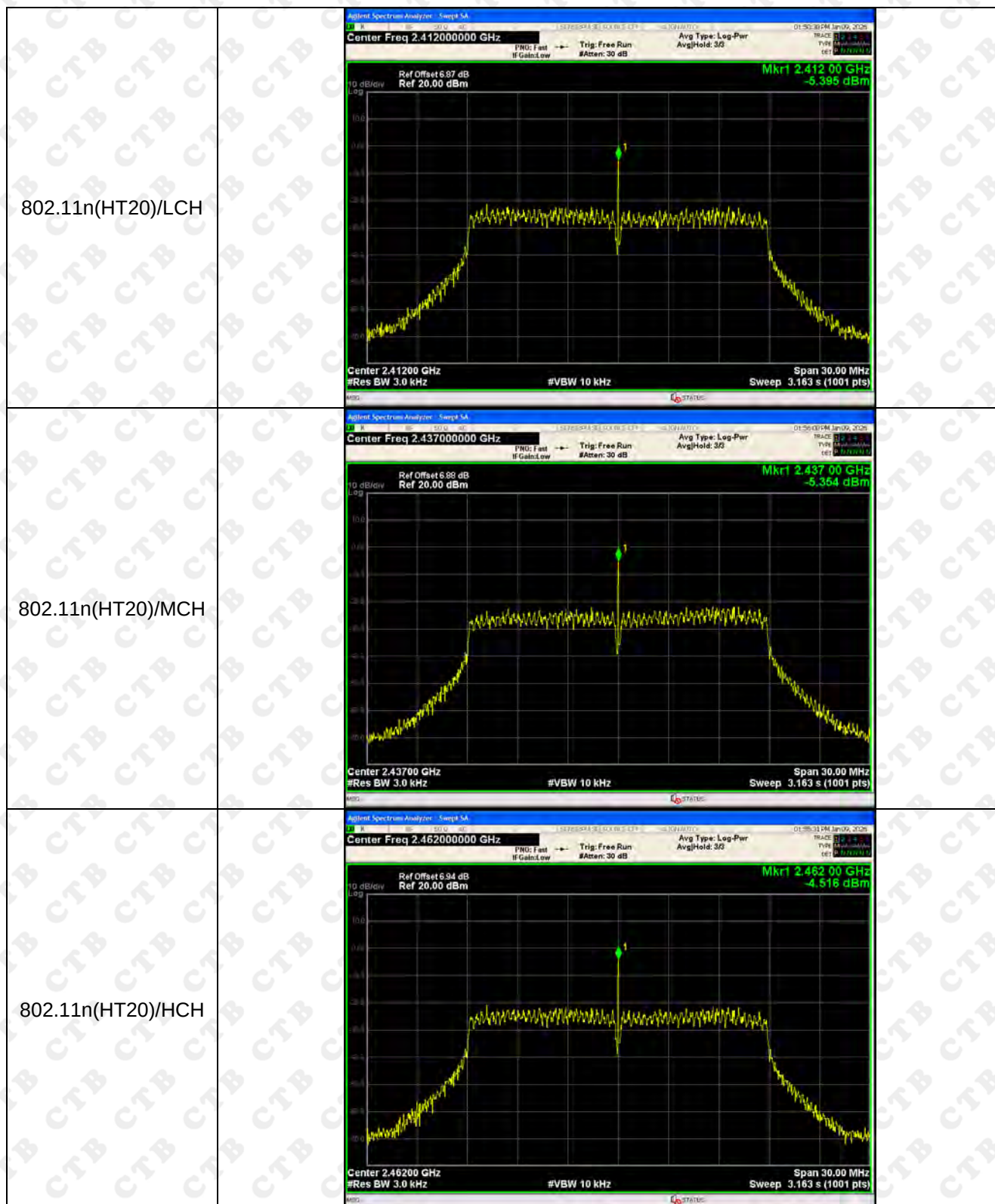


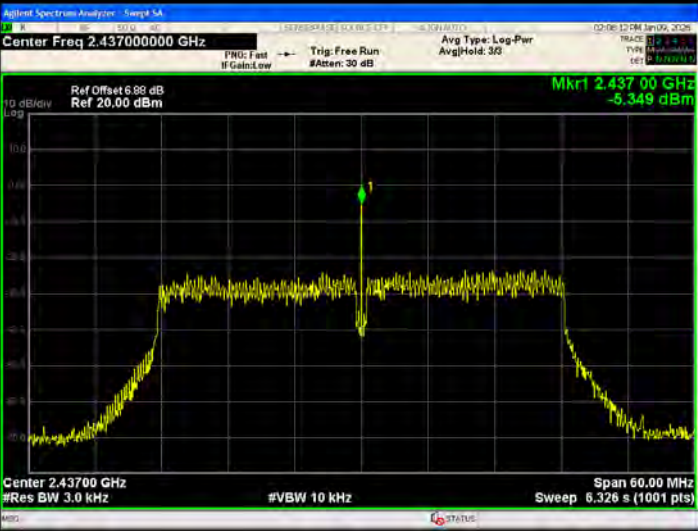
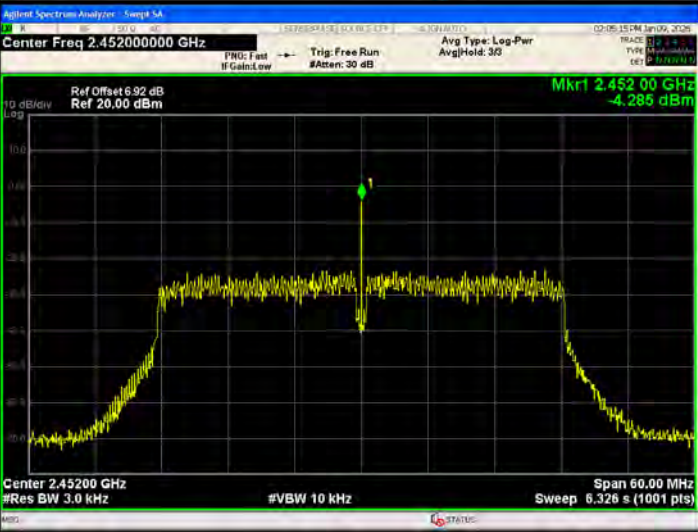
802.11n(HT40)/LCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.42200000 GHz Ref Offset 6.86 dB Ref 20.00 dBm Mkr1 2.422 00 GHz -6.128 dBm Center 2.42200 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 6.326 s (1001 pts)
802.11n(HT40)/MCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.43700000 GHz Ref Offset 6.86 dB Ref 20.00 dBm Mkr1 2.437 00 GHz -5.484 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 6.326 s (1001 pts)
802.11n(HT40)/HCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.45200000 GHz Ref Offset 6.92 dB Ref 20.00 dBm Mkr1 2.452 00 GHz -4.415 dBm Center 2.45200 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 6.326 s (1001 pts)

ANT 2: Test Graph



802.11g/LCH	
802.11g/MCH	
802.11g/HCH	



802.11n(HT40)/LCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.42200000 GHz Ref Offset 6.86 dB Ref 20.00 dBm Mkr1 2.422 00 GHz -5.994 dBm Center 2.42200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)
802.11n(HT40)/MCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.43700000 GHz Ref Offset 6.86 dB Ref 20.00 dBm Mkr1 2.437 00 GHz -5.349 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)
802.11n(HT40)/HCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.45200000 GHz Ref Offset 6.92 dB Ref 20.00 dBm Mkr1 2.452 00 GHz -4.285 dBm Center 2.45200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)

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.

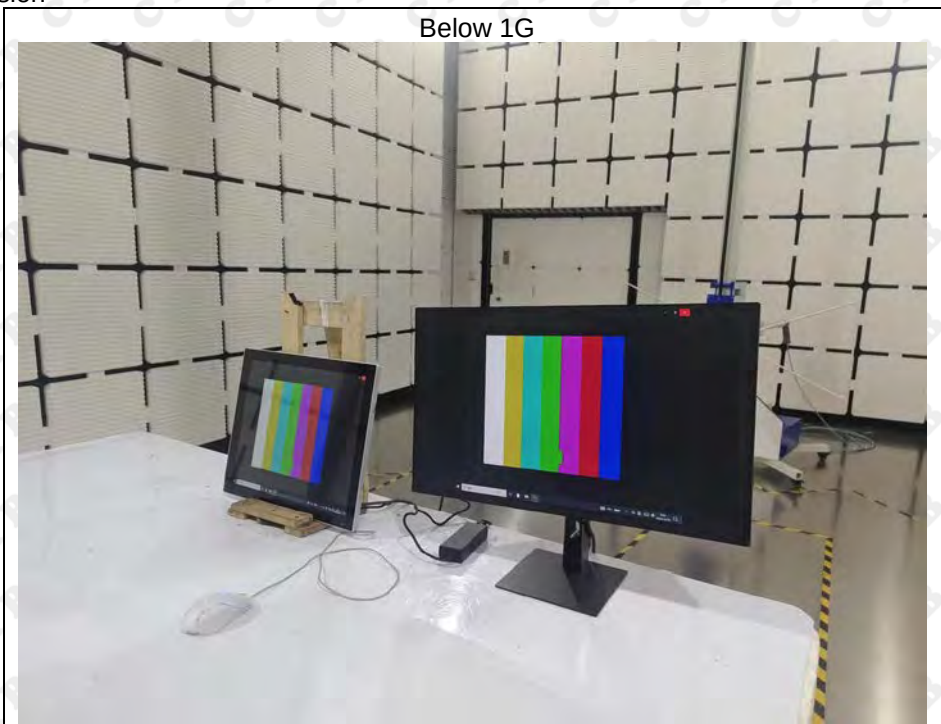
EUT Antenna:

The antenna is External antenna and no consideration of replacement. The best case gain of the antenna is 3dBi.

13. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

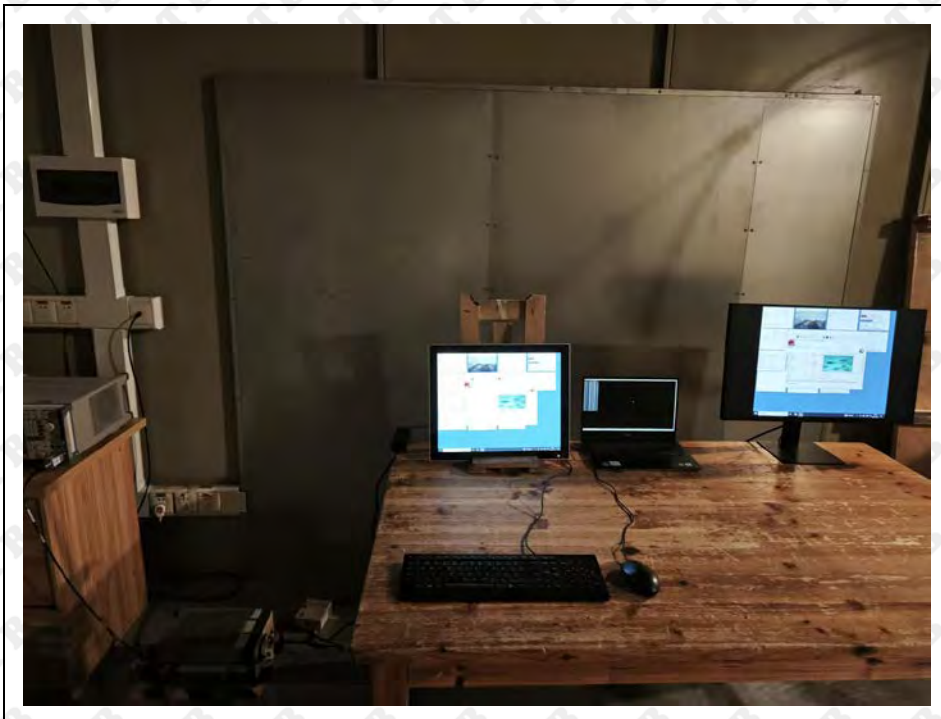
Below 1G



Above 1G



Conducted Emission



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