



TEST REPORT

Product Name: Portable Computer
FCC ID: 2BEMH-N151S
Trademark: N/A
Model Number: N151S, N151R, N151B
Prepared For: YEAHER INC.
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Manufacturer: YEAHER INC.
Address: 51 Steel Dr, Unit A, New Castle, Delaware, 19720
Prepared By: Shenzhen CTB Testing Technology Co., Ltd.
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Sample Received Date: Dec. 29, 2023
Sample tested Date: Dec. 29, 2023 to Jan. 22, 2024
Issue Date: Jan. 22, 2024
Report No.: CTB240122021RFX
Test Standards: FCC Part15.247
ANSI C63.10:2013
Test Results: PASS
Remark: This is WIFI-2.4GHz band radio test report.

Compiled by:

Reviewed by:

Approved by:

Zhou kui

Arron Liu



Zhou Kui

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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
CTB240122021RFX	Jan. 22, 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. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Model(s):	N151S, N151R, N151B
Model Description:	All the model are the same circuit and RF module, only different for model name .Test sample model: N151S
Wi-Fi Specification:	IEEE 802.11b/g/n/ax
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	WiFi: IEEE 802.11b/g/n20/ax20: 2412-2462MHz/ 11 channel IEEE 802.11n40/ax40: 2422-2452MHz/ 7 channel
Max. RF output power:	WiFi (2.4G): 17.444dBm
Type of Modulation:	WiFi: DSSS, OFDM
Antenna installation:	WiFi: FPC antenna
Antenna Gain:	WiFi (2.4G): Ant1: 3.33dBi Ant2: 4.17dBi
Ratings:	Adapter: Input: 100-240V~50/60Hz 1.5A Output: 12V=3000mA DC 7.6V by battery

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	AC/DC ADAPTER	JHD	JHD-AP045U-120300-AS	/	/

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/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(DC):	7.6V
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, Xinhel 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

Item	Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	2024.07.05
2	Power Sensor	Agilent	U2021XA	MY56120032	2024.07.05
3	Power Sensor	Agilent	U2021XA	MY56120034	2024.07.05
4	Communication test set	R&S	CMW500	108058	2024.07.05
5	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	2024.07.05
6	Signal Generator	Agilent	N5181A	MY50140365	2024.07.05
7	Vector signal generator	Agilent	N5182A	MY47420195	2024.07.05
8	Communication test set	Agilent	E5515C	MY50102567	2024.07.06
9	2.4 GHz Filter	Shenxiang	MSF2400-2483.5MS-1154	20181015001	2024.07.05
10	5 GHz Filter	Shenxiang	MSF5150-5850 MS-1155	20181015001	2024.07.06
11	Filter	Xingbo	XBLBQ-DZA120	190821-1-1	2024.07.06
12	BT&WI-FI Automatic test software	Microwave	MTS8000	Ver. 2.0.0.0	/
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU	101017	2024.10.30
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	2024.07.05
15	234G Automatic test software	Microwave	MTS8200	Ver. 2.0.0.0	/
16	966 chamber	C.R.T.	966	/	2024.08.11
17	Receiver	R&S	ESPI	100362	2024.07.05
18	Amplifier	HP	8447E	2945A02747	2024.07.05
19	Amplifier	Agilent	8449B	3008A01838	2024.07.05
20	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	2024.07.08

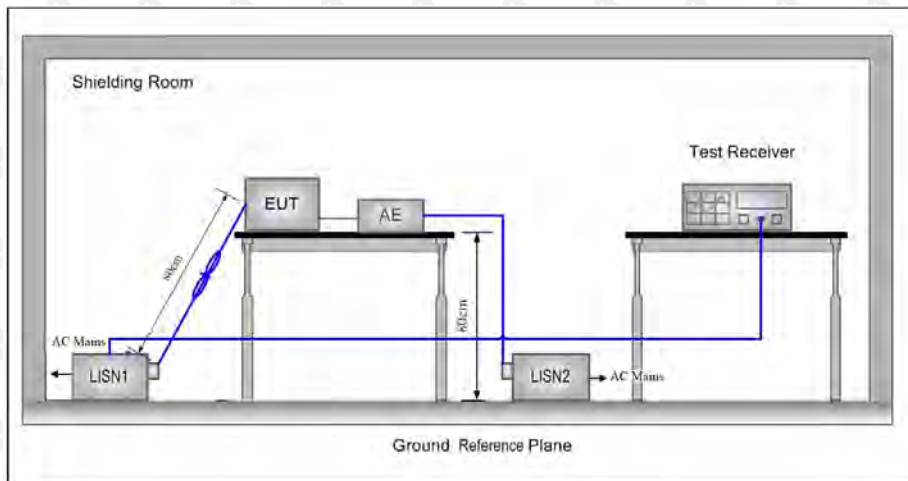
21	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA9120D	01911	2024.07.08
22	EMI test software	Fala	EZ-EMC	FA-03A2 RE	/
23	Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-224	2024.07.08
24	loop antenna	ZHINAN	ZN30900A	GTS534	/
25	40G Horn antenna	A/H/System	SAS-574	588	2024.10.30
26	Amplifier	AEROFLEX	Aeroflex	097	2024.07.05

Continuous disturbance					
No.	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	LISN	ROHDE&SCHWARZ	ESH3-Z5	100318	2024.07.05
2	Pulse limiter	ROHDE&SCHWARZ	ESH3Z2	357881052	2024.07.05
3	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100428/003	2024.07.05
4	Coaxial cable	ZDECL	Z302S-NJ-SMA J-12M	18091905	2024.07.05
5	ISN	Schwarzbeck	NTFM8158	183	2024.07.05
6	Communication test set	Agilent	E5515C	MY50102567	2024.07.05
7	Communication test set	R&S	CMW500	108058	2024.07.05
8	EZ-EMC	Frad	EMC-con3A1.1	/	/

Radiated emission					
No.	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA 9120 D	01911	2024.07.08
2	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	2024.07.08
3	Amplifier	Agilent	8449B	3008A01838	2024.07.05
4	Amplifier	HP	8447E	2945A02747	2024.07.05
5	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100428/003	2024.07.05
6	Coaxial cable	ETS	RFC-SNS-100-NMS-80 NI	/	2024.07.05
7	Coaxial cable	ETS	RFC-SNS-100-NMS-20 NI	/	2024.07.05
8	Coaxial cable	ETS	RFC-SNS-100-SMS-20 NI	/	2024.07.05
9	Coaxial cable	ETS	RFC-NNS-100-NMS-300 NI	/	2024.07.05
10	Communication test set	Agilent	E5515C	MY50102567	2024.07.05
11	Communication test set	R&S	CMW500	108058	2024.07.05
12	EZ-EMC	Frad	EMC-con3A1.1	/	/

6. AC POWER LINE CONDUCTED EMISSION

6.1 Block Diagram Of Test Setup



6.2 Limit

Table 4 – AC power-line conducted emissions limits

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

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

* Decreasing linearly with the logarithm of the frequency

6.3 Test procedure

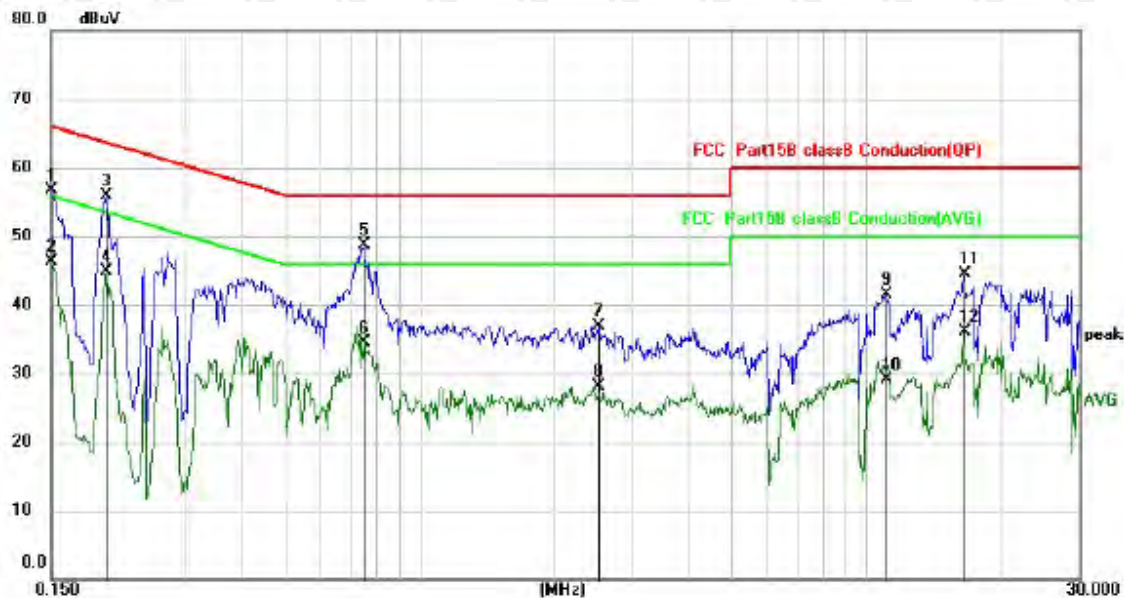
- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50 Ω /50 μ H + 5 Ω linear impedance. The power cables of all other units of the EUT were connected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

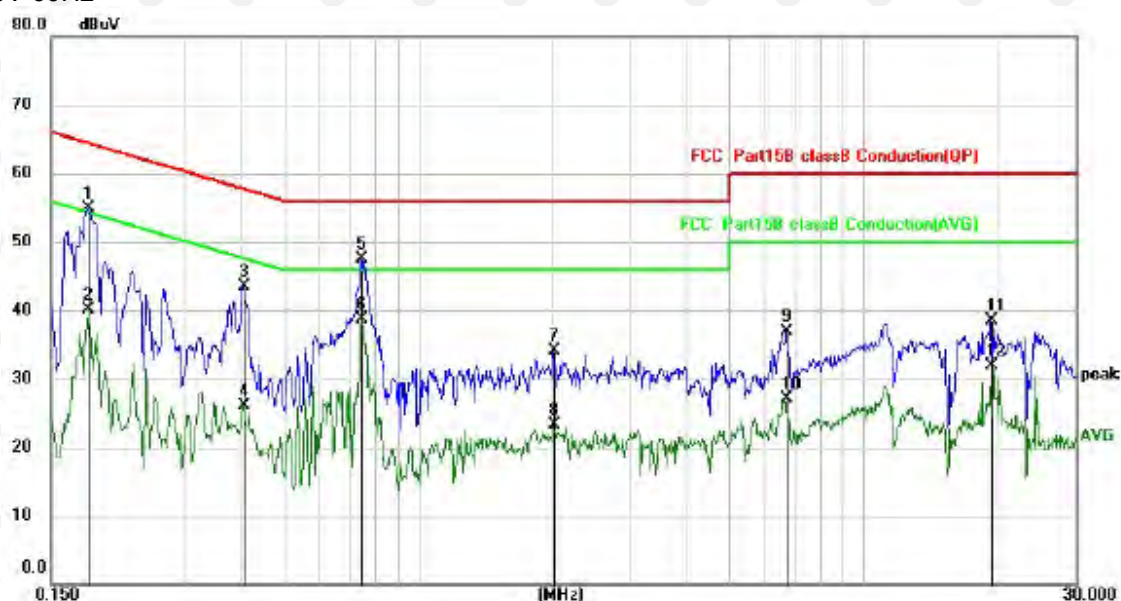
Test Specification: Line
AC 120V 60Hz



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
		MHz	Level	Factor	ment			Detector
			dBuV	dB	dBuV	dBuV	dB	
1		0.1500	46.81	9.95	56.76	66.00	-9.24	QP
2		0.1500	36.32	9.95	46.27	56.00	-9.73	AVG
3		0.1995	45.95	9.95	55.90	63.63	-7.73	QP
4		0.1995	34.97	9.95	44.92	53.63	-8.71	AVG
5 *		0.7539	38.63	10.02	48.65	56.00	-7.35	QP
6		0.7539	24.48	10.02	34.50	46.00	-11.50	AVG
7		2.5178	26.76	10.14	36.90	56.00	-19.10	QP
8		2.5178	18.05	10.14	28.19	46.00	-17.81	AVG
9		11.1339	30.86	10.61	41.47	60.00	-18.53	QP
10		11.1339	18.58	10.61	29.19	50.00	-20.81	AVG
11		16.5017	33.82	10.76	44.58	60.00	-15.42	QP
12		16.5017	25.30	10.76	36.06	50.00	-13.94	AVG

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

Test Specification: Neutral
AC 120V 60Hz



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
		MHz	Level	Factor	ment			Detector
			dBuV	dB	dBuV	dBuV	dB	
1		0.1819	44.94	9.95	54.89	64.40	-9.51	QP
2		0.1819	30.09	9.95	40.04	54.40	-14.36	AVG
3		0.4060	33.50	9.98	43.48	57.73	-14.25	QP
4		0.4060	16.12	9.98	26.10	47.73	-21.63	AVG
5		0.7459	37.57	10.02	47.59	56.00	-8.41	QP
6	*	0.7459	28.71	10.02	38.73	46.00	-7.27	AVG
7		2.0178	24.00	10.09	34.09	56.00	-21.91	QP
8		2.0178	13.17	10.09	23.26	46.00	-22.74	AVG
9		6.7259	26.31	10.50	36.81	60.00	-23.19	QP
10		6.7259	16.57	10.50	27.07	50.00	-22.93	AVG
11		19.4219	27.73	10.81	38.54	60.00	-21.46	QP
12		19.4219	21.11	10.81	31.92	50.00	-18.08	AVG

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

7. RADIATED SPURIOUS EMISSION

7.1 Block Diagram Of Test Setup

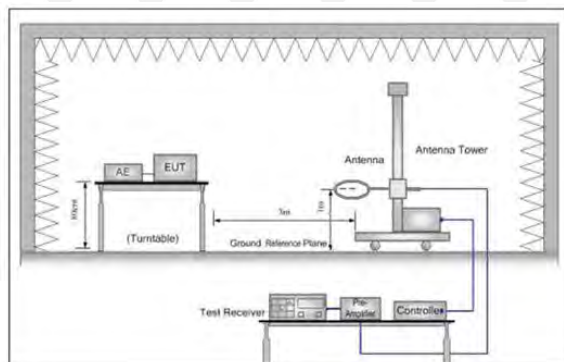


Figure 1. Below 30MHz

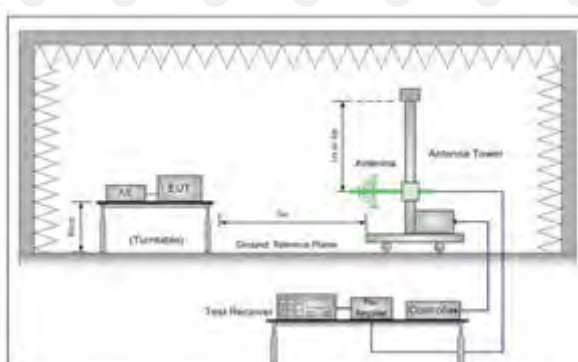


Figure 2. 30MHz to 1GHz

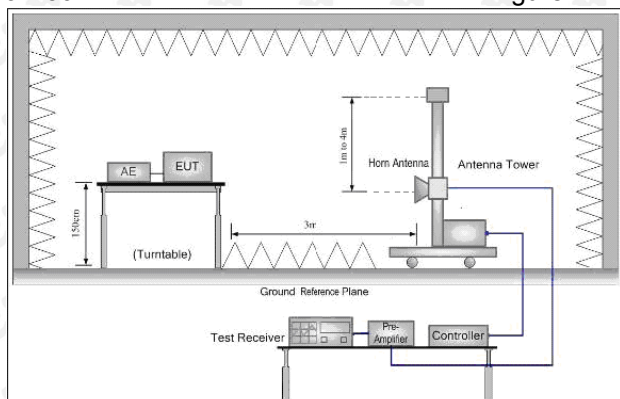


Figure 3. Above 1GHz

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

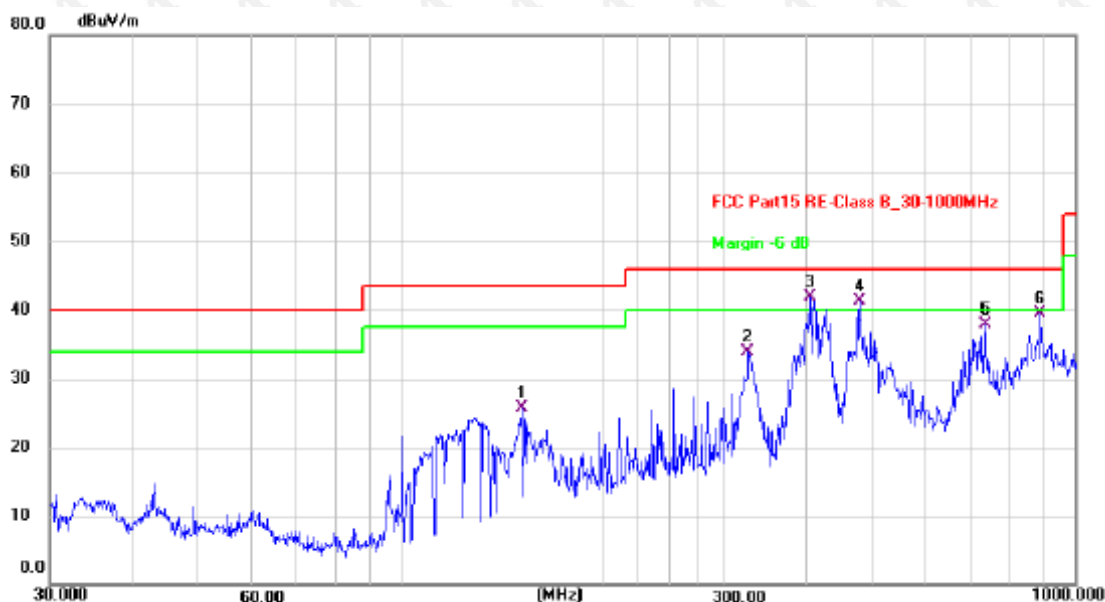
The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement –X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

7.4 Test Result

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	150.5377	40.14	-14.35	25.79	43.50	-17.71	QP
2	326.7395	48.05	-14.16	33.89	46.00	-12.11	QP
3 *	404.6664	54.66	-12.82	41.84	46.00	-4.16	QP
4 !	478.8455	51.64	-10.34	41.30	46.00	-4.70	QP
5	734.4913	42.24	-4.37	37.87	46.00	-8.13	QP
6	887.6097	39.55	0.00	39.55	46.00	-6.45	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	128.1130	43.43	-15.66	27.77	43.50	-15.73	QP
2	150.5378	42.80	-13.73	29.07	43.50	-14.43	QP
3	239.1473	35.96	-14.48	21.48	46.00	-24.52	QP
4	417.6411	41.35	-6.73	34.62	46.00	-11.38	QP
5 *	475.4991	44.15	-4.14	40.01	46.00	-5.99	QP
6	903.3094	30.31	5.21	35.52	46.00	-10.48	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)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824	65.82	-3.64	62.18	74	-11.82	peak
4824	49.76	-3.64	46.12	54	-7.88	AVG
7236	56.73	-0.95	55.78	74	-18.22	peak
7236	46.74	-0.95	45.79	54	-8.21	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	66.93	-3.64	63.29	74	-10.71	peak
4824	48.92	-3.64	45.28	54	-8.72	AVG
7236	57.13	-0.95	56.18	74	-17.82	peak
7236	44.91	-0.95	43.96	54	-10.04	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	66.14	-3.51	62.63	74	-11.37	peak
4874	49.80	-3.51	46.29	54	-7.71	AVG
7311	60.06	-0.82	59.24	74	-14.76	peak
7311	45.08	-0.82	44.26	54	-9.74	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	64.31	-3.51	60.80	74	-13.20	peak
4874	47.56	-3.51	44.05	54	-9.95	AVG
7311	58.80	-0.82	57.98	74	-16.02	peak
7311	43.41	-0.82	42.59	54	-11.41	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	64.23	-3.43	60.80	74	-13.20	peak
4924	47.59	-3.43	44.16	54	-9.84	AVG
7386	59.40	-0.75	58.65	74	-15.35	peak
7386	42.81	-0.75	42.06	54	-11.94	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	63.95	-3.43	60.52	74	-13.48	peak
4924	47.05	-3.43	43.62	54	-10.38	AVG
7386	57.68	-0.75	56.93	74	-17.07	peak
7386	43.72	-0.75	42.97	54	-11.03	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	63.65	-3.64	60.01	74	-13.99	peak
4824	48.75	-3.64	45.11	54	-8.89	AVG
7236	57.66	-0.95	56.71	74	-17.29	peak
7236	44.88	-0.95	43.93	54	-10.07	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)	
4824	66.44	-3.64	62.80	74	-11.20	peak
4824	49.18	-3.64	45.54	54	-8.46	AVG
7236	57.41	-0.95	56.46	74	-17.54	peak
7236	45.18	-0.95	44.23	54	-9.77	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	65.94	-3.51	62.43	74	-11.57	peak
4874	49.15	-3.51	45.64	54	-8.36	AVG
7311	60.12	-0.82	59.30	74	-14.70	peak
7311	45.88	-0.82	45.06	54	-8.94	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	62.92	-3.51	59.41	74	-14.59	peak
4874	49.56	-3.51	46.05	54	-7.95	AVG
7311	58.37	-0.82	57.55	74	-16.45	peak
7311	43.40	-0.82	42.58	54	-11.42	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

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	62.45	-3.43	59.02	74	-14.98	peak
4924	46.82	-3.43	43.39	54	-10.61	AVG
7386	58.67	-0.75	57.92	74	-16.08	peak
7386	43.19	-0.75	42.44	54	-11.56	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	62.85	-3.43	59.42	74	-14.58	peak
4924	45.85	-3.43	42.42	54	-11.58	AVG
7386	56.98	-0.75	56.23	74	-17.77	peak
7386	41.34	-0.75	40.59	54	-13.41	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	49.16	-3.64	45.52	54	-8.48	AVG
7236	59.15	-0.95	58.20	74	-15.80	peak
7236	46.48	-0.95	45.53	54	-8.47	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	66.49	-3.64	62.85	74	-11.15	peak
4824	48.06	-3.64	44.42	54	-9.58	AVG
7236	58.81	-0.95	57.86	74	-16.14	peak
7236	44.74	-0.95	43.79	54	-10.21	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	63.65	-3.51	60.14	74	-13.86	peak
4874	49.33	-3.51	45.82	54	-8.18	AVG
7311	58.39	-0.82	57.57	74	-16.43	peak
7311	44.99	-0.82	44.17	54	-9.83	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	65.00	-3.51	61.49	74	-12.51	peak
4874	49.45	-3.51	45.94	54	-8.06	AVG
7311	57.64	-0.82	56.82	74	-17.18	peak
7311	43.18	-0.82	42.36	54	-11.64	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	62.95	-3.43	59.52	74	-14.48	peak
4924	46.48	-3.43	43.05	54	-10.95	AVG
7386	59.78	-0.75	59.03	74	-14.97	peak
7386	44.52	-0.75	43.77	54	-10.23	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	64.17	-3.43	60.74	74	-13.26	peak
4924	46.58	-3.43	43.15	54	-10.85	AVG
7386	57.04	-0.75	56.29	74	-17.71	peak
7386	41.74	-0.75	40.99	54	-13.01	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	62.95	-3.63	59.32	74	-14.68	peak
4844	49.05	-3.63	45.42	54	-8.58	AVG
7266	58.66	-0.94	57.72	74	-16.28	peak
7266	44.64	-0.94	43.70	54	-10.30	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)	
4844	65.51	-3.63	61.88	74	-12.12	peak
4844	48.12	-3.63	44.49	54	-9.51	AVG
7266	58.96	-0.94	58.02	74	-15.98	peak
7266	45.83	-0.94	44.89	54	-9.11	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	64.13	-3.51	60.62	74	-13.38	peak
4874	49.48	-3.51	45.97	54	-8.03	AVG
7311	59.12	-0.82	58.30	74	-15.70	peak
7311	45.15	-0.82	44.33	54	-9.67	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	62.26	-3.51	58.75	74	-15.25	peak
4874	46.44	-3.51	42.93	54	-11.07	AVG
7311	56.71	-0.82	55.89	74	-18.11	peak
7311	43.28	-0.82	42.46	54	-11.54	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 (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
4904	62.93	-3.43	59.50	74	-14.50	peak
4904	48.09	-3.43	44.66	54	-9.34	AVG
7356	57.11	-0.75	56.36	74	-17.64	peak
7356	41.93	-0.75	41.18	54	-12.82	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
4904	63.18	-3.43	59.75	74	-14.25	peak
4904	45.70	-3.43	42.27	54	-11.73	AVG
7356	59.08	-0.75	58.33	74	-15.67	peak
7356	42.71	-0.75	41.96	54	-12.04	AVG

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

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	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824	65.08	-3.64	61.44	74	-12.56	peak
4824	48.72	-3.64	45.08	54	-8.92	AVG
7236	56.89	-0.95	55.94	74	-18.06	peak
7236	45.13	-0.95	44.18	54	-9.82	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	63.90	-3.64	60.26	74	-13.74	peak
4824	47.78	-3.64	44.14	54	-9.86	AVG
7236	58.35	-0.95	57.40	74	-16.60	peak
7236	46.47	-0.95	45.52	54	-8.48	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	62.97	-3.51	59.46	74.00	-14.54	peak
4874.00	47.31	-3.51	43.80	54.00	-10.20	AVG
7311.00	58.19	-0.82	57.37	74.00	-16.63	peak
7311.00	42.95	-0.82	42.13	54.00	-11.87	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	64.20	-3.51	60.69	74.00	-13.31	peak
4874.00	47.82	-3.51	44.31	54.00	-9.69	AVG
7311.00	56.82	-0.82	56.00	74.00	-18.00	peak
7311.00	41.58	-0.82	40.76	54.00	-13.24	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	63.33	-3.43	59.90	74	-14.10	peak
4924	46.83	-3.43	43.40	54	-10.60	AVG
7386	58.63	-0.75	57.88	74	-16.12	peak
7386	43.45	-0.75	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)	
4924	64.71	-3.43	61.28	74	-12.72	peak
4924	47.18	-3.43	43.75	54	-10.25	AVG
7386	56.39	-0.75	55.64	74	-18.36	peak
7386	43.51	-0.75	42.76	54	-11.24	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

ANT1+ANT2 LOW CH3 (802.11ax/H40 Mode)/2422

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844	64.93	-3.63	61.30	74	-12.70	peak
4844	47.62	-3.63	43.99	54	-10.01	AVG
7266	59.01	-0.94	58.07	74	-15.93	peak
7266	45.27	-0.94	44.33	54	-9.67	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	65.06	-3.63	61.43	74	-12.57	peak
4844	48.18	-3.63	44.55	54	-9.45	AVG
7266	59.60	-0.94	58.66	74	-15.34	peak
7266	44.81	-0.94	43.87	54	-10.13	AVG

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

ANT1+ANT2 MID CH6 (802.11ax/H40 Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874	62.65	-3.51	59.14	74	-14.86	peak
4874	47.95	-3.51	44.44	54	-9.56	AVG
7311	59.54	-0.82	58.72	74	-15.28	peak
7311	44.58	-0.82	43.76	54	-10.24	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	62.28	-3.51	58.77	74	-15.23	peak
4874	46.52	-3.51	43.01	54	-10.99	AVG
7311	56.69	-0.82	55.87	74	-18.13	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

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

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904	64.32	-3.43	60.89	74	-13.11	peak
4904	47.74	-3.43	44.31	54	-9.69	AVG
7356	57.30	-0.75	56.55	74	-17.45	peak
7356	43.75	-0.75	43.00	54	-11.00	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	64.54	-3.43	61.11	74	-12.89	peak
4904	46.41	-3.43	42.98	54	-11.02	AVG
7356	58.49	-0.75	57.74	74	-16.26	peak
7356	44.07	-0.75	43.32	54	-10.68	AVG

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

Remark :

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

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	57.44	-5.81	51.63	74	-22.37	peak
2390	/	-5.81	/	54	/	AVG
2399	65.06	-5.84	59.22	74	-14.78	peak
2399	47.92	-5.84	42.08	54	-11.92	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	56.60	-5.81	50.79	74	-23.21	peak
2390	/	-5.81	/	54	/	AVG
2399	62.47	-5.84	56.63	74	-17.37	peak
2399	46.72	-5.84	40.88	54	-13.12	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	57.14	-5.65	51.49	74	-22.51	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	56.90	-5.65	51.25	74	-22.75	peak
2483.5	/	-5.65	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						
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	58.98	-5.81	53.17	74	-20.83	peak
2390	/	-5.81	/	54	/	AVG
2399	63.32	-5.84	57.48	74	-16.52	peak
2399	46.12	-5.84	40.28	54	-13.72	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	57.43	-5.81	51.62	74	-22.38	peak
2390	/	-5.81	/	54	/	AVG
2399	61.88	-5.84	56.04	74	-17.96	peak
2399	45.40	-5.84	39.56	54	-14.44	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	57.06	-5.65	51.41	74	-22.59	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	57.84	-5.65	52.19	74	-21.81	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	57.34	-5.81	51.53	74	-22.47	peak
2390	/	-5.81	/	54	/	AVG
2399	62.48	-5.84	56.64	74	-17.36	peak
2399	48.85	-5.84	43.01	54	-10.99	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	56.50	-5.81	50.69	74	-23.31	peak
2390	/	-5.81	/	54	/	AVG
2399	61.36	-5.84	55.52	74	-18.48	peak
2399	46.38	-5.84	40.54	54	-13.46	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	56.34	-5.65	50.69	74	-23.31	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	56.56	-5.65	50.91	74	-23.09	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	58.61	-5.81	52.80	74	-21.20	peak
2390	/	-5.81	/	54	/	AVG
2399	62.90	-5.84	57.06	74	-16.94	peak
2399	47.27	-5.84	41.43	54	-12.57	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	58.92	-5.81	53.11	74	-20.89	peak
2390	/	-5.81	/	54	/	AVG
2399	61.77	-5.84	55.93	74	-18.07	peak
2399	46.09	-5.84	40.25	54	-13.75	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	56.52	-5.65	50.87	74	-23.13	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	58.07	-5.65	52.42	74	-21.58	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)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	56.50	-5.81	50.69	74	-23.31	peak
2390	/	-5.81	/	54	/	AVG
2399	63.07	-5.84	57.23	74	-16.77	peak
2399	48.86	-5.84	43.02	54	-10.98	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	56.17	-5.81	50.36	74	-23.64	peak
2390	/	-5.81	/	54	/	AVG
2399	61.07	-5.84	55.23	74	-18.77	peak
2399	47.67	-5.84	41.83	54	-12.17	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	55.86	-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	56.42	-5.65	50.77	74	-23.23	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/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	58.52	-5.81	52.71	74	-21.29	peak
2390	/	-5.81	/	54	/	AVG
2399	63.18	-5.84	57.34	74	-16.66	peak
2399	47.41	-5.84	41.57	54	-12.43	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	58.92	-5.81	53.11	74	-20.89	peak
2390	/	-5.81	/	54	/	AVG
2399	61.77	-5.84	55.93	74	-18.07	peak
2399	46.09	-5.84	40.25	54	-13.75	AVG

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

Operation Mode:

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

Horizontal

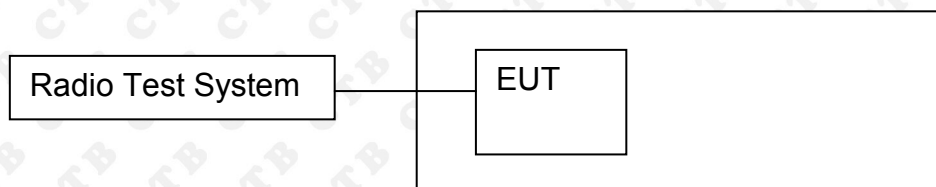
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	57.80	-5.65	52.15	74	-21.85	peak
2483.5	/	-5.65	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	55.58	-5.65	49.93	74	-24.07	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

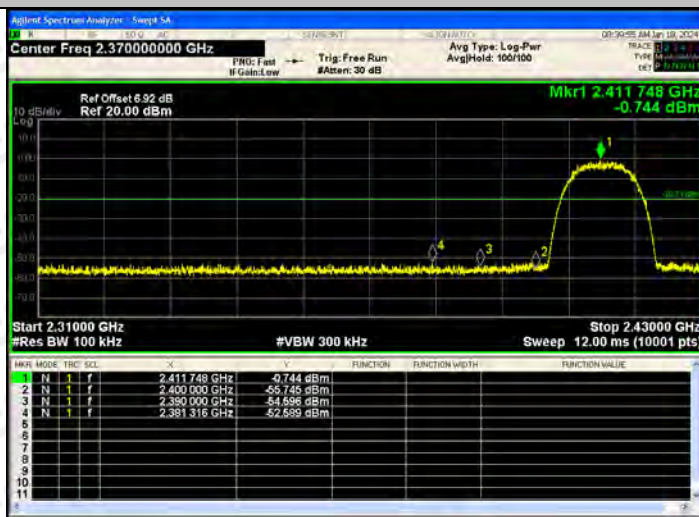
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer:
 Below 30MHz:
 RBW = 100kHz, VBW = 300kHz, Sweep = auto
 Detector function = peak, Trace = max hold
 Above 30MHz:
 RBW = 100KHz, VBW = 300KHz, Sweep = auto
 Detector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

8.4 Test Result

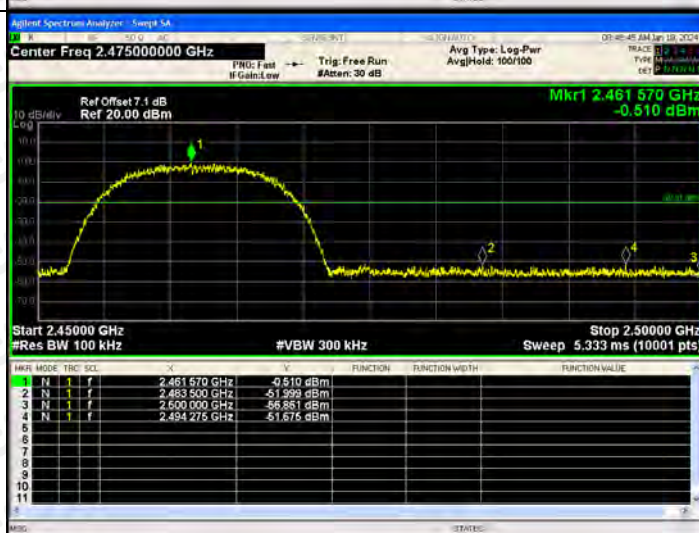
ANT1:

BAND EDGE Graphs

802.11b/LCH

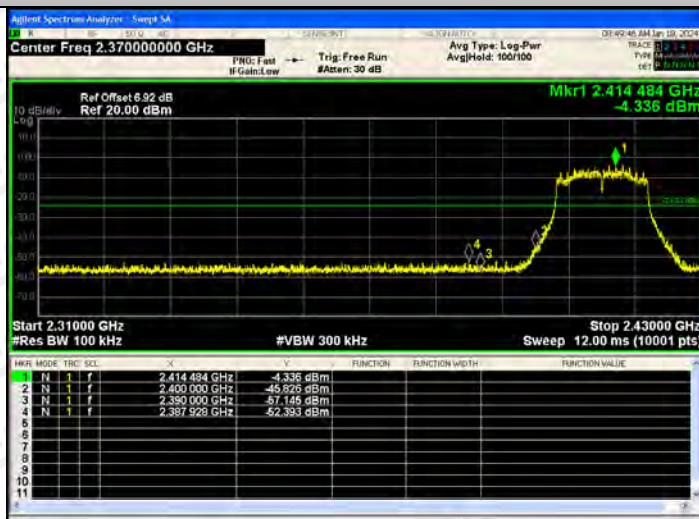


802.11b/HCH



BAND EDGE Graphs

802.11g/LCH

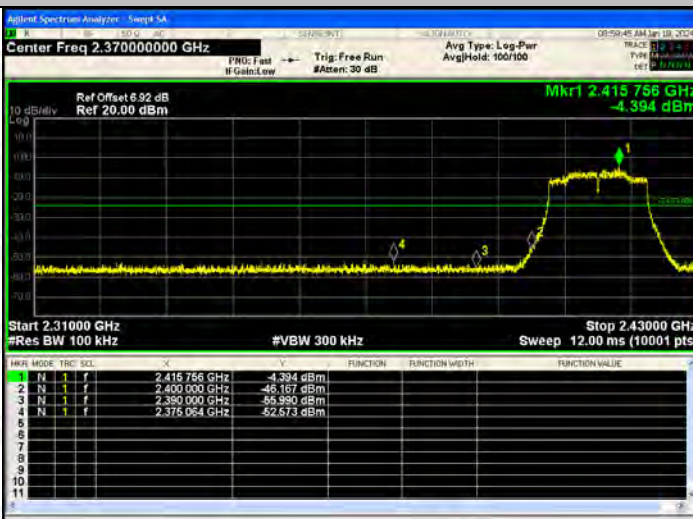


802.11g/HCH

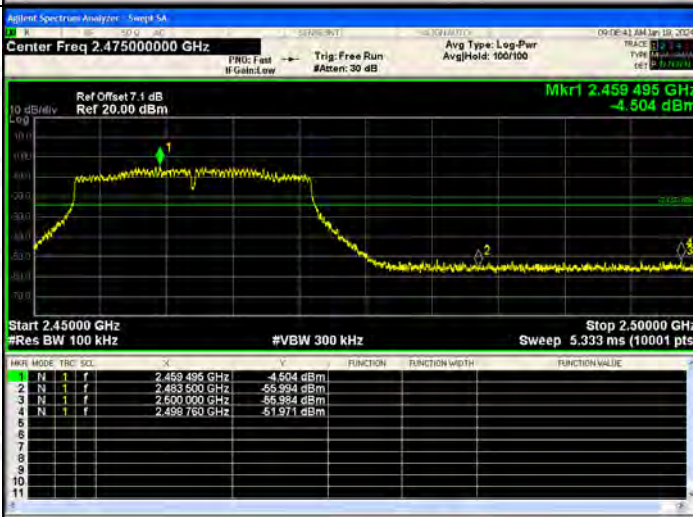


BAND EDGE Graphs

802.11n(HT20)/LCH

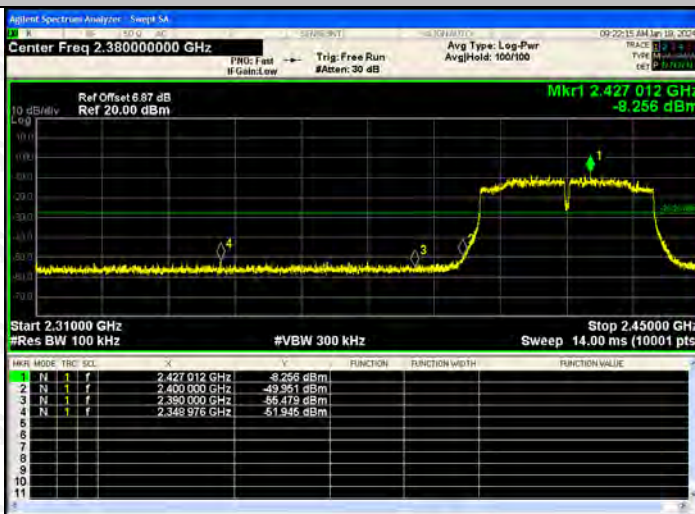


802.11n(HT20)/HCH



BAND EDGE Graphs

802.11n(HT40)/LCH



802.11n(HT40)/HCH

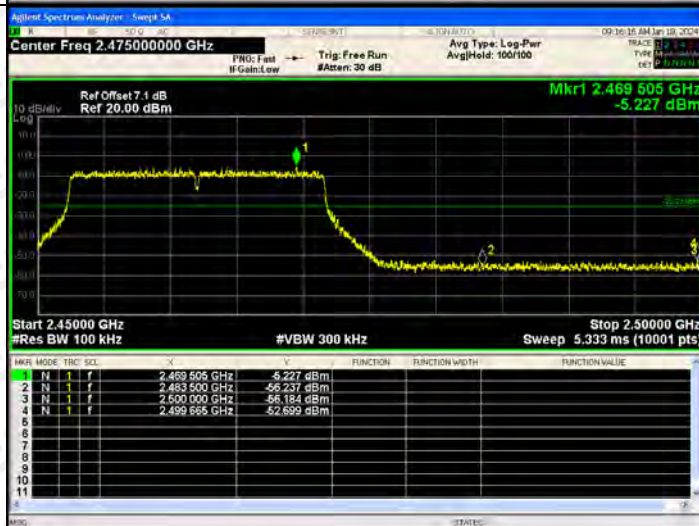


BAND EDGE Graphs

802.11ax(HT20)/
LCH

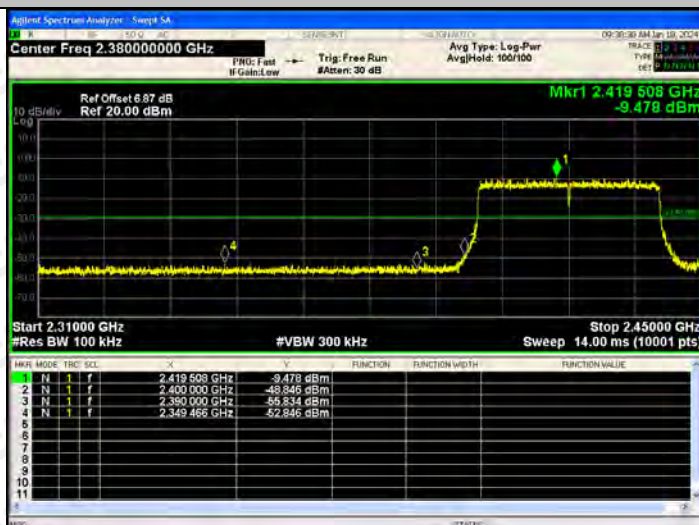


802.11ax(HT20)/
HCH



BAND EDGE Graphs

802.11ax(HT40)/
LCH

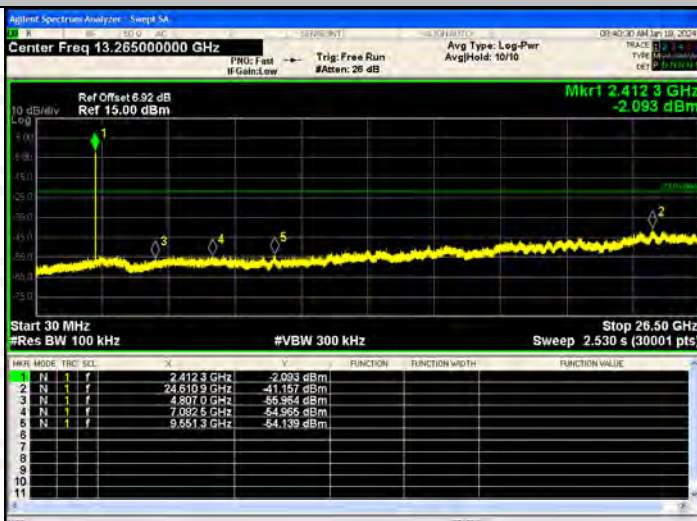


802.11ax(HT40)/
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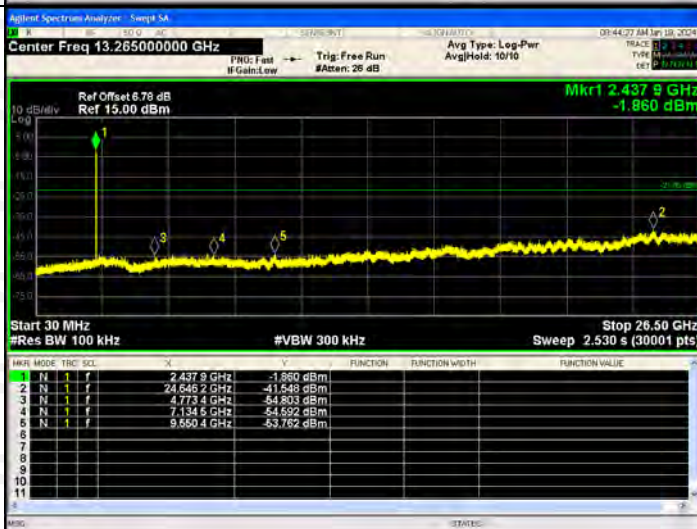


RF Conducted Spurious Emissions Graphs

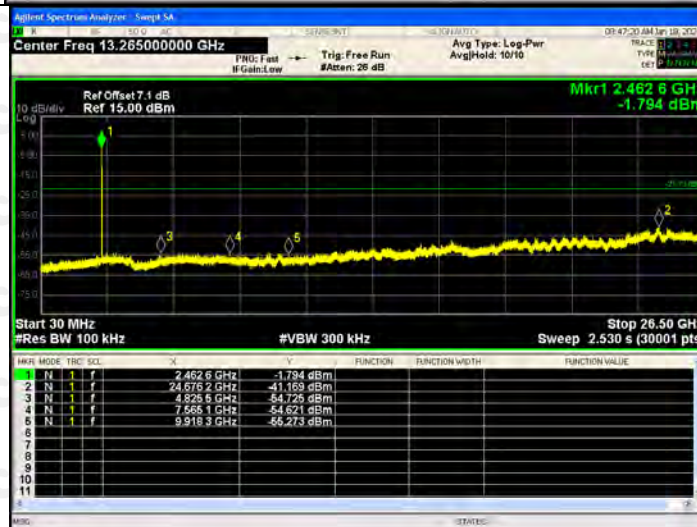
802.11b/LCH



802.11b/MCH

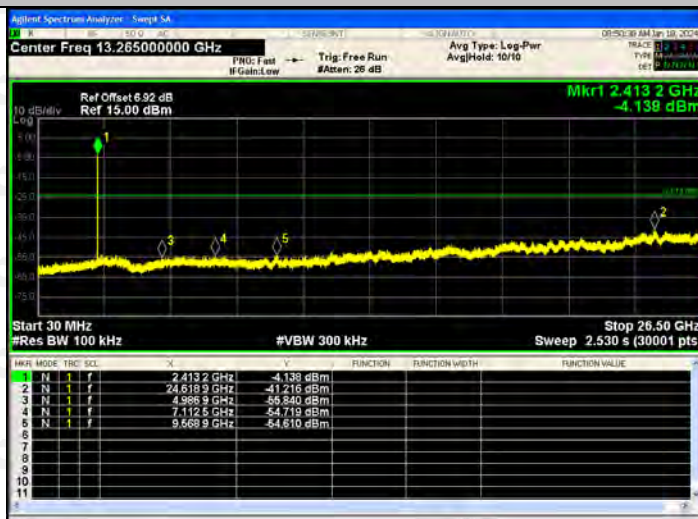


802.11b/HCH

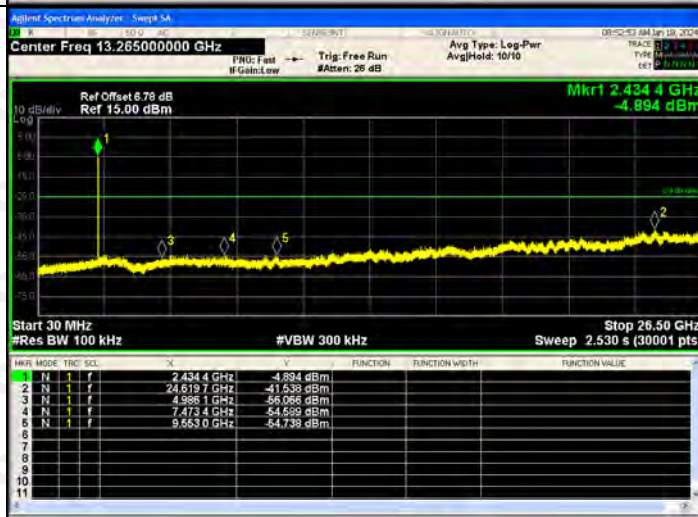


RF Conducted Spurious Emissions Graphs

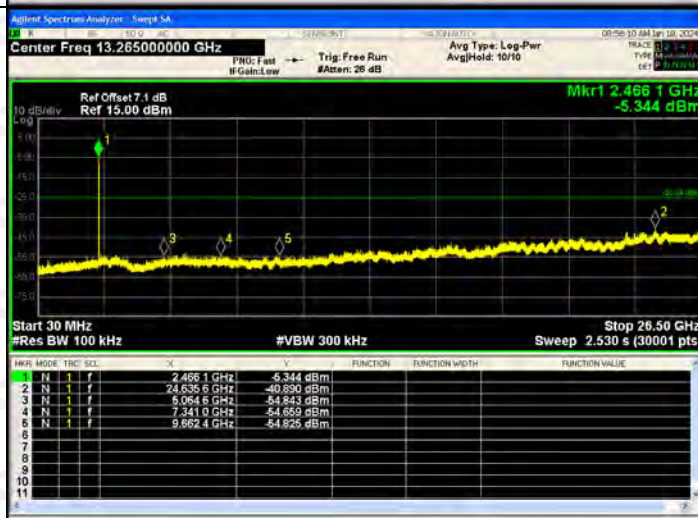
802.11g/LCH



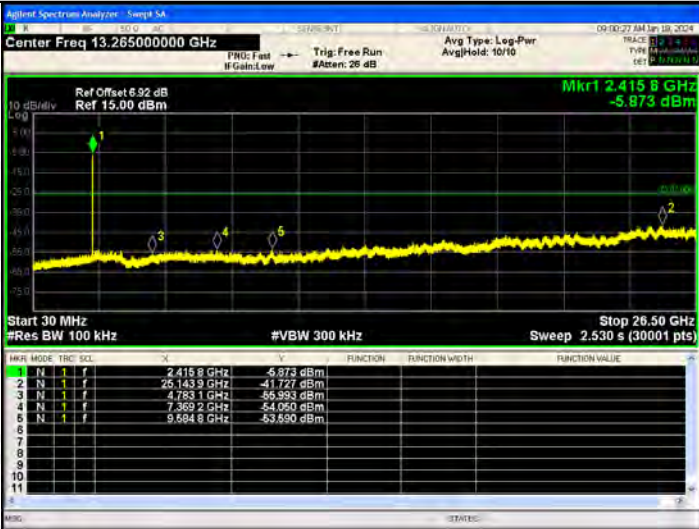
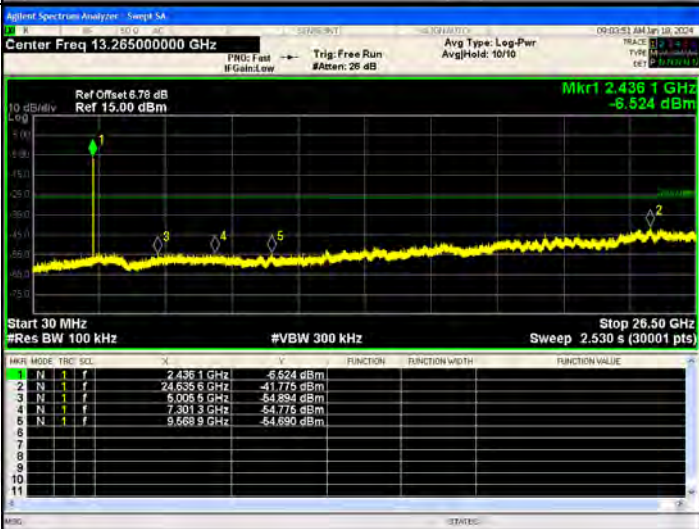
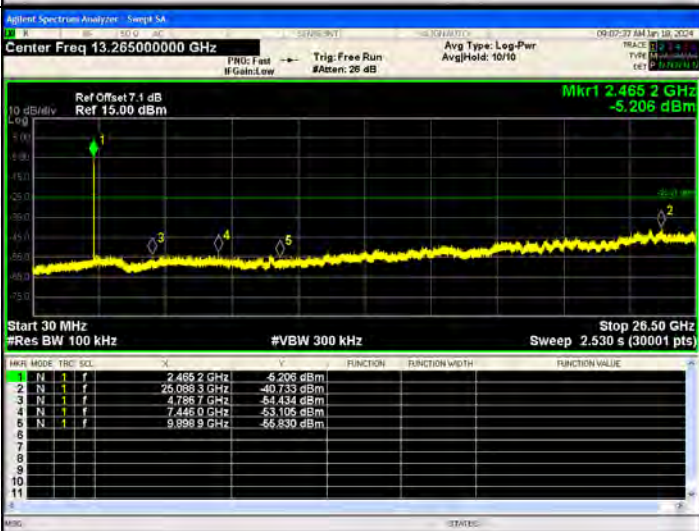
802.11g/MCH

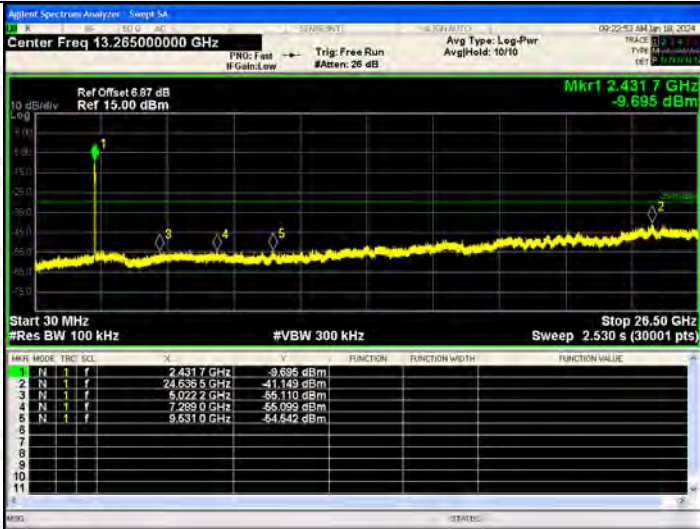
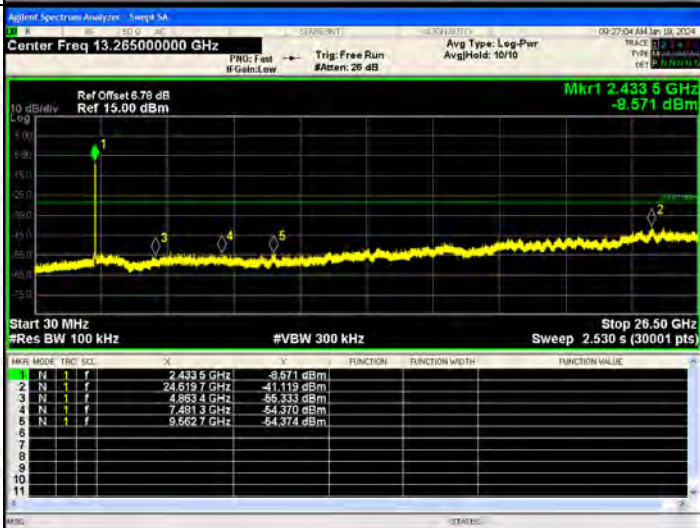
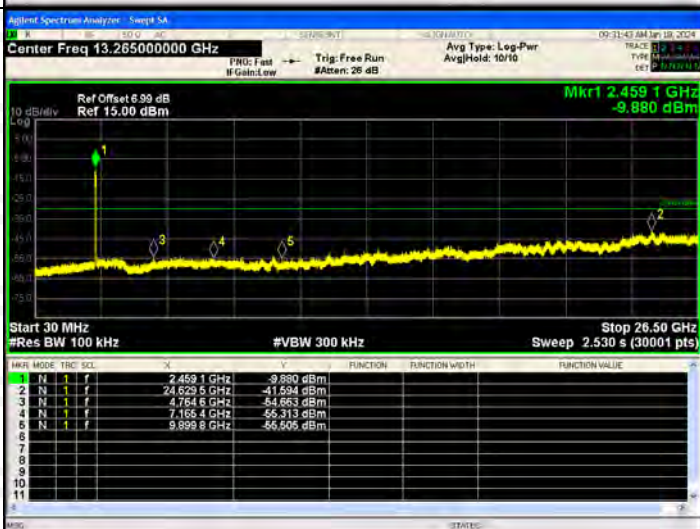


802.11g/HCH



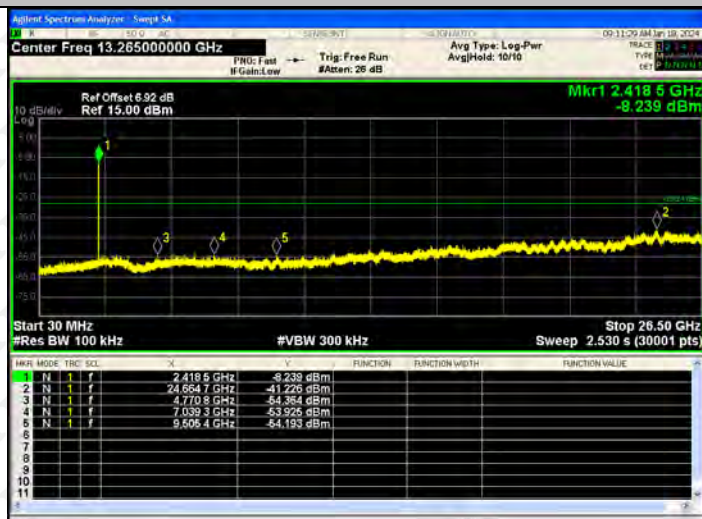
RF Conducted Spurious Emissions Graphs

802.11n(HT20)/ LCH	
802.11 n(HT20)/MCH	
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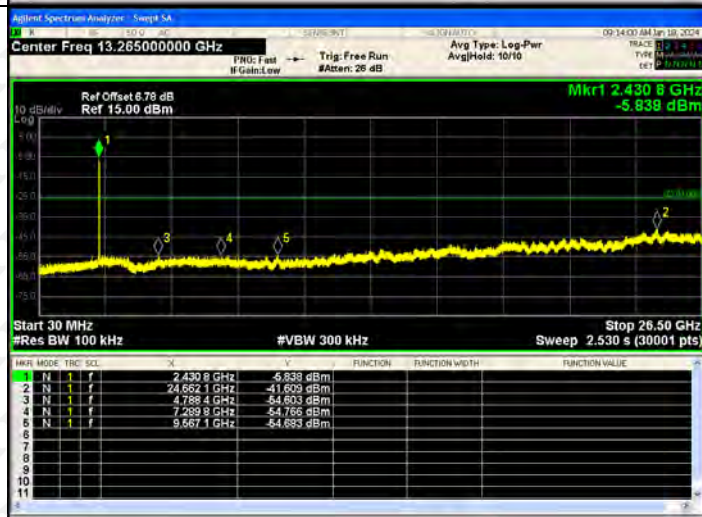
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RF Conducted Spurious Emissions Graphs

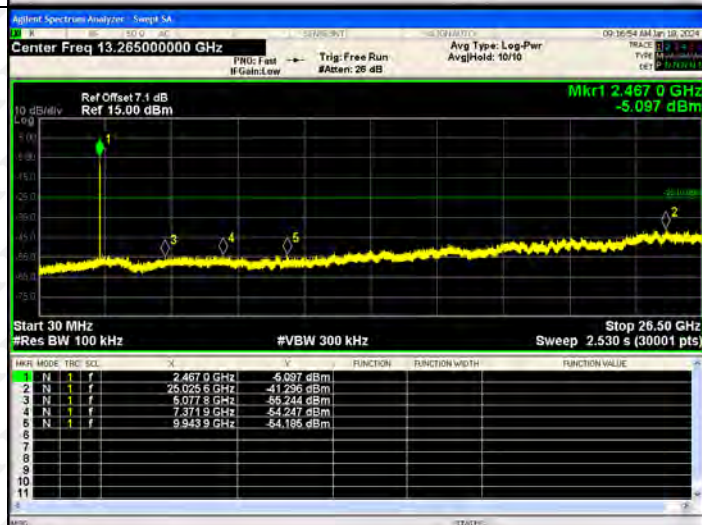
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802.11 ax(HT20)/MCH

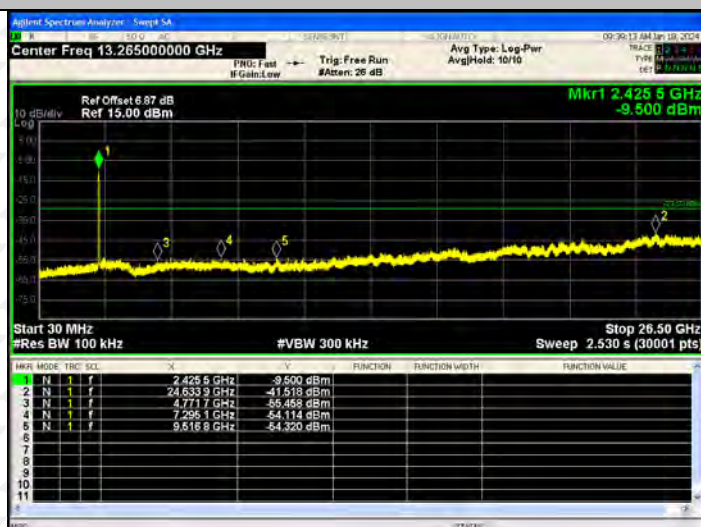


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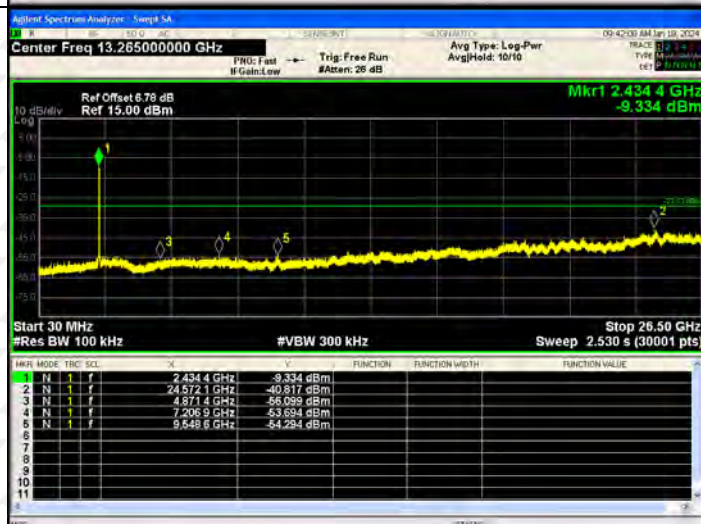


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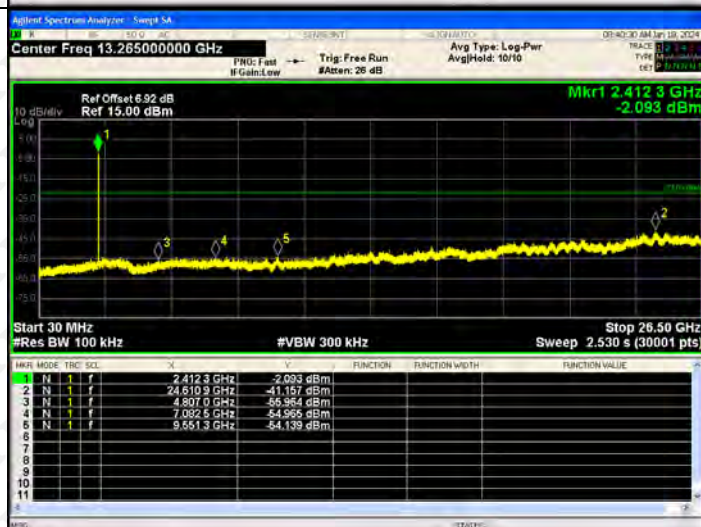
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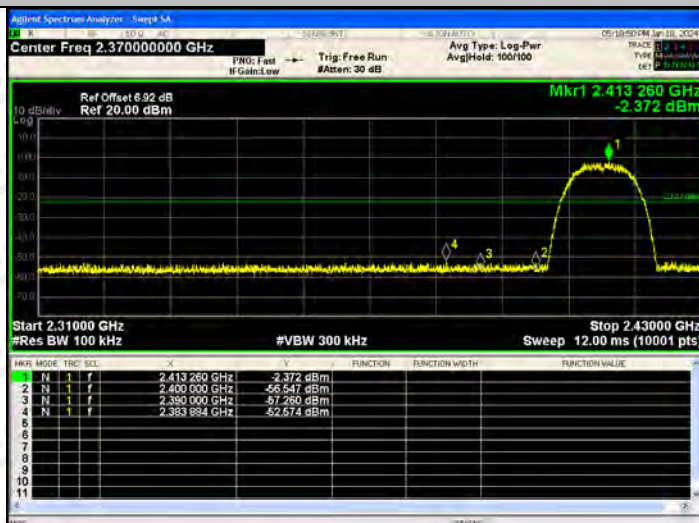
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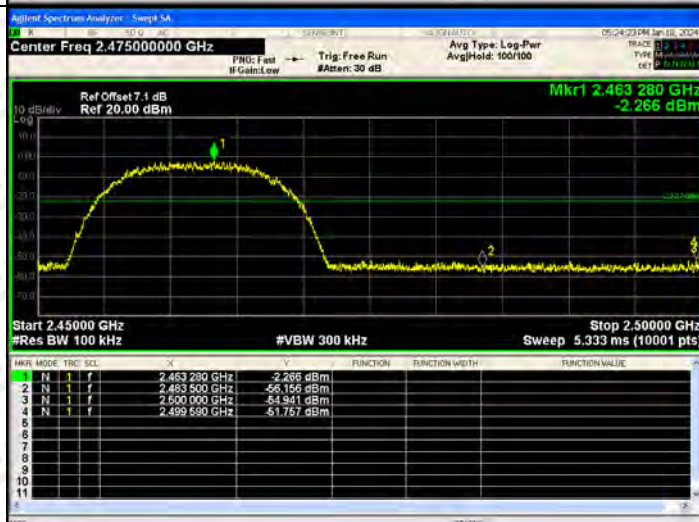
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BAND EDGE Graphs

802.11b/LCH

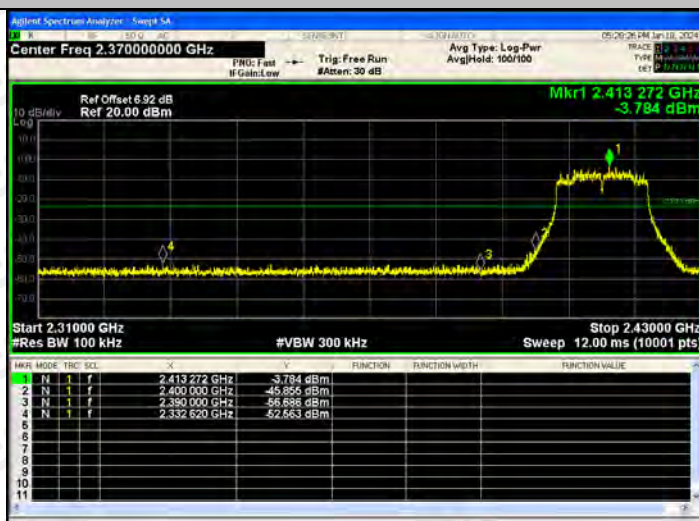


802.11b/HCH



BAND EDGE Graphs

802.11g/LCH

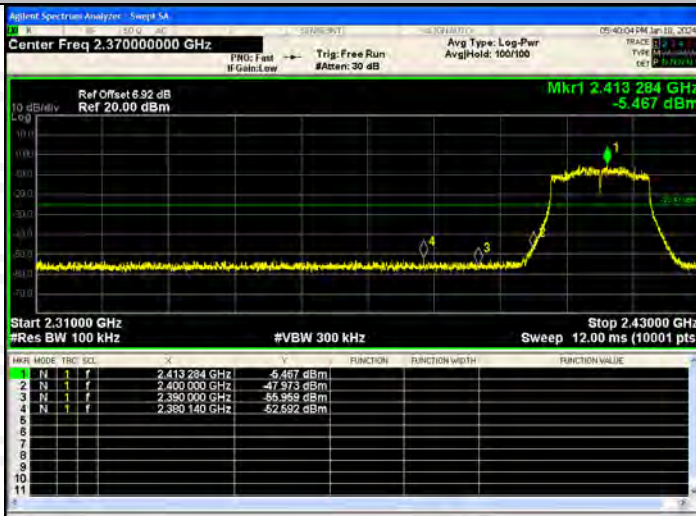


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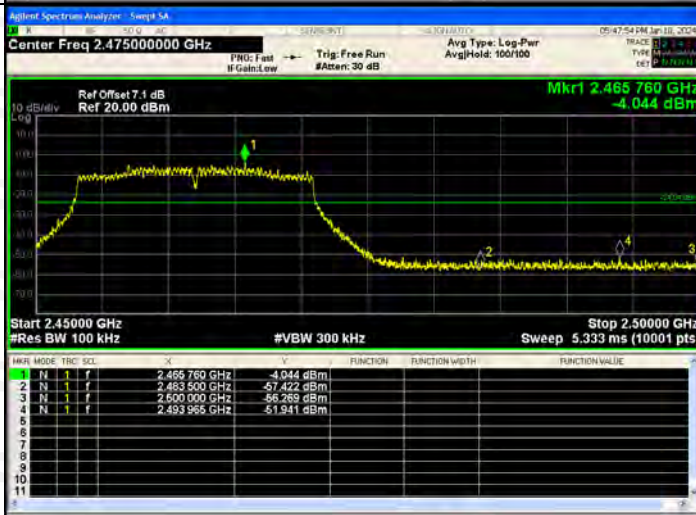


BAND EDGE Graphs

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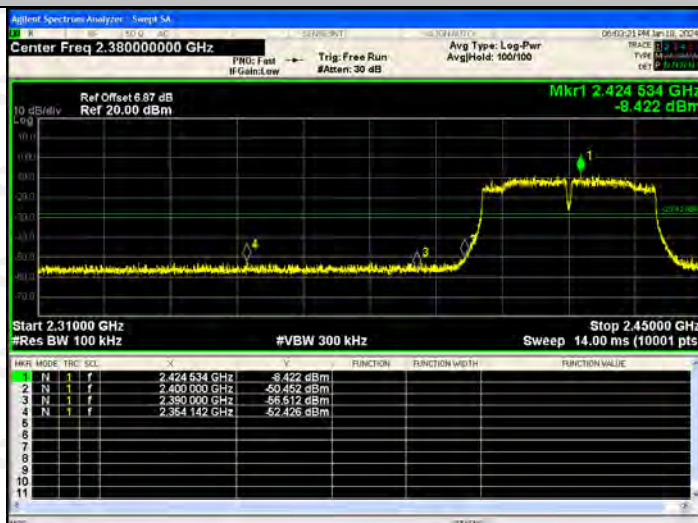


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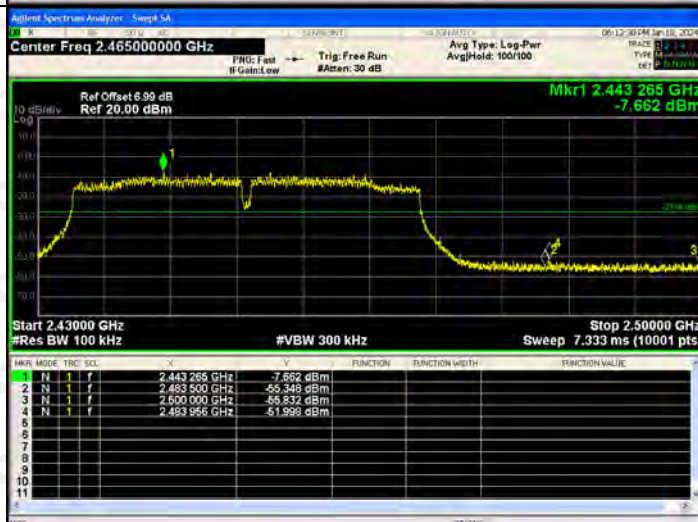


BAND EDGE Graphs

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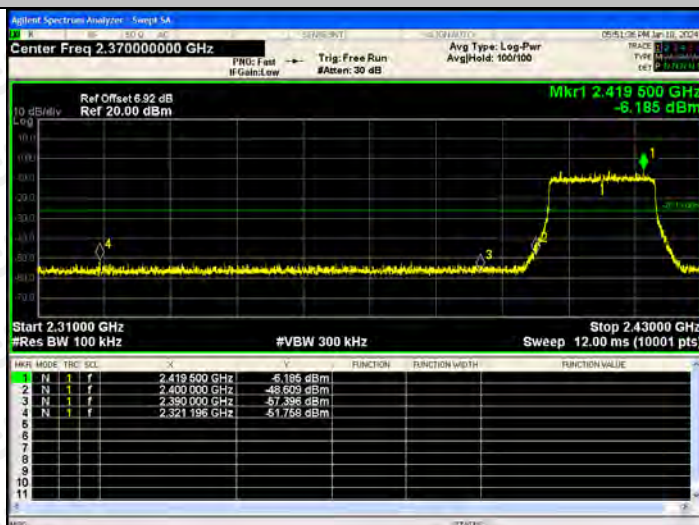


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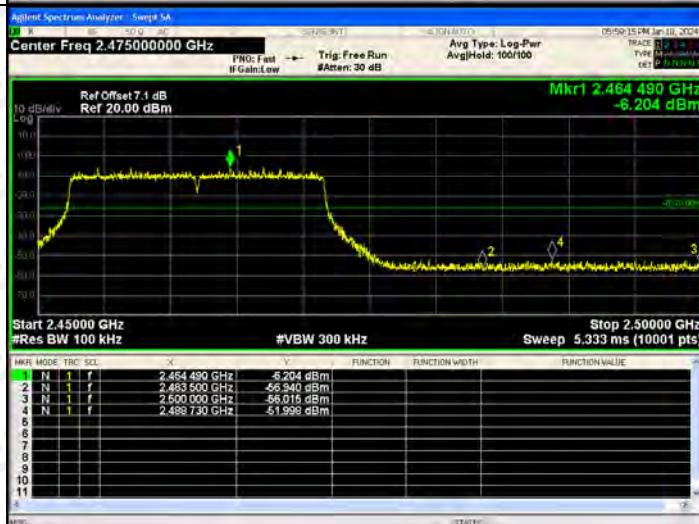


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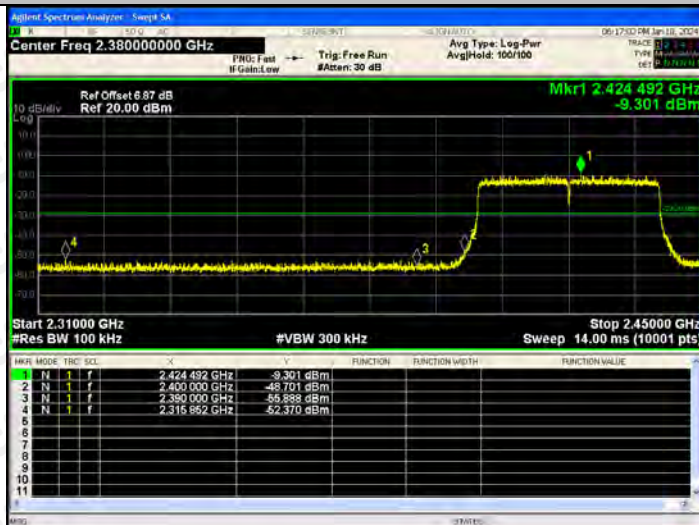


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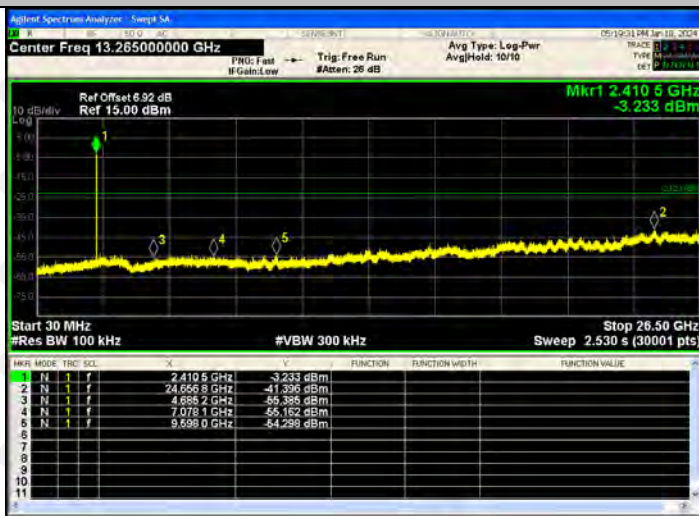


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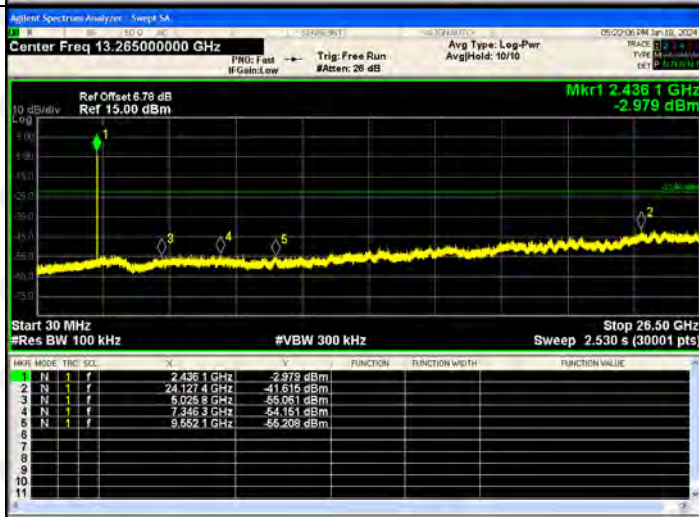


RF Conducted Spurious Emissions Graphs

802.11b/LCH



802.11b/MCH

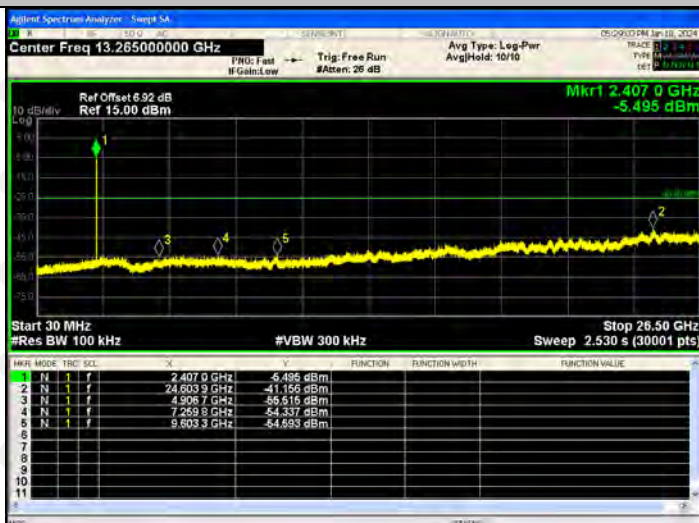


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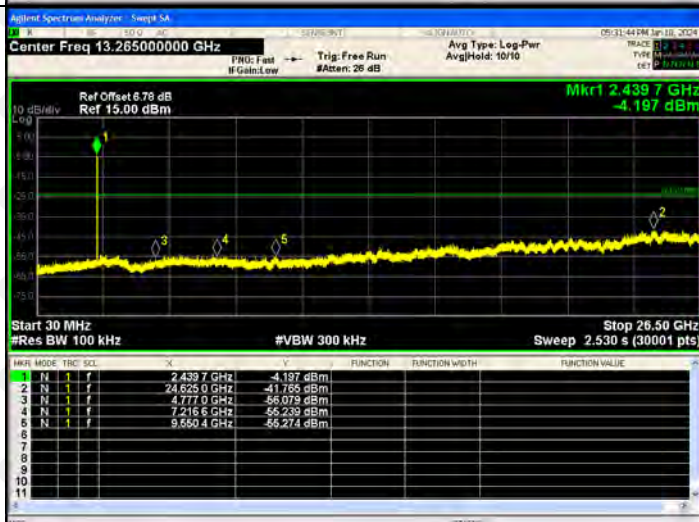


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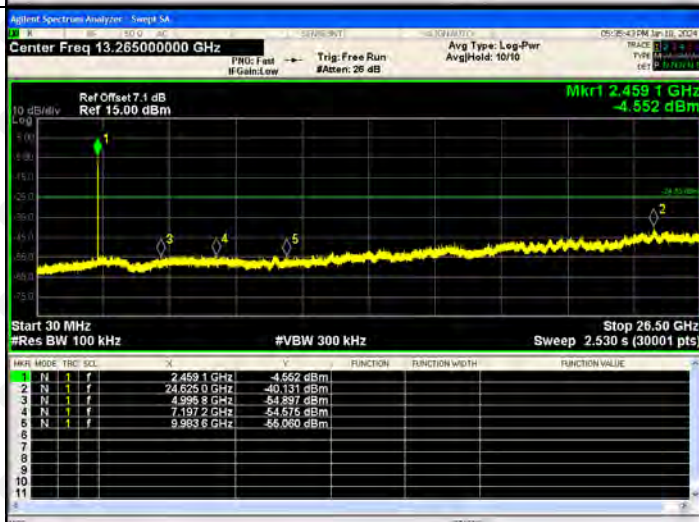
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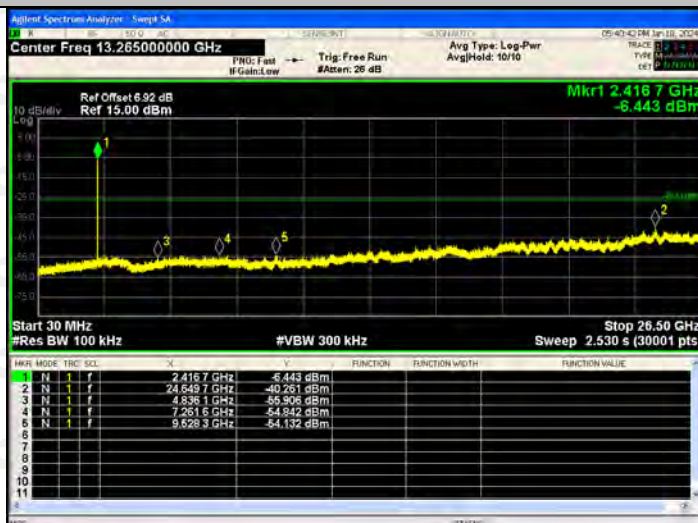
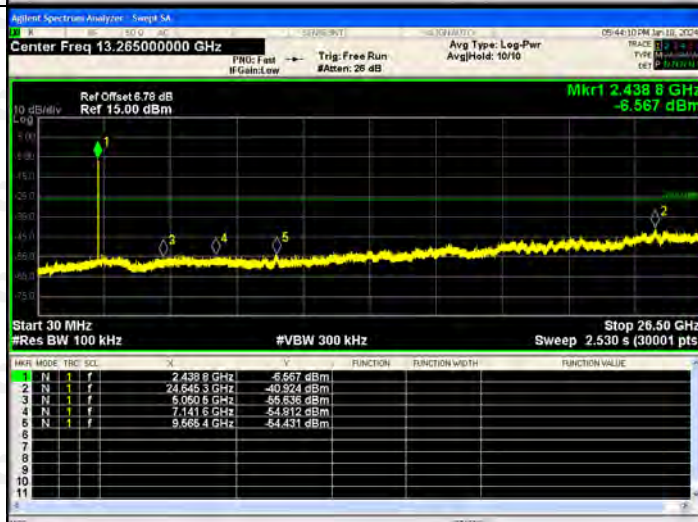
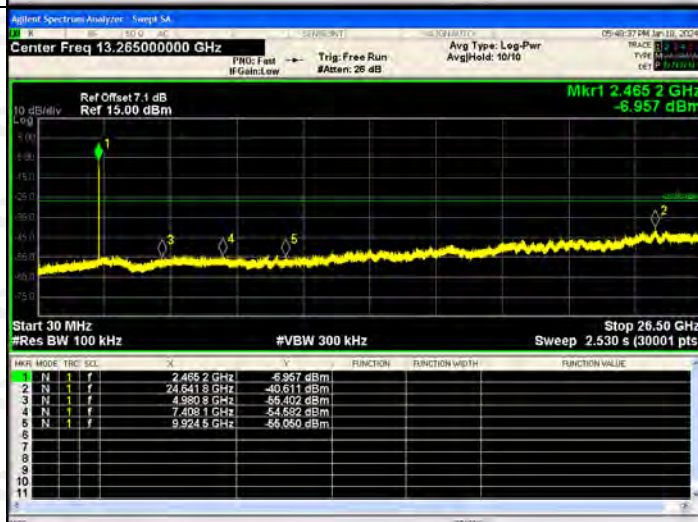
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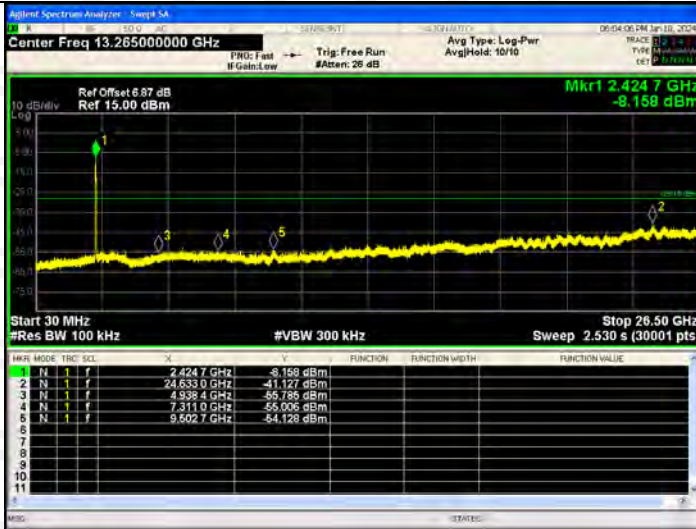
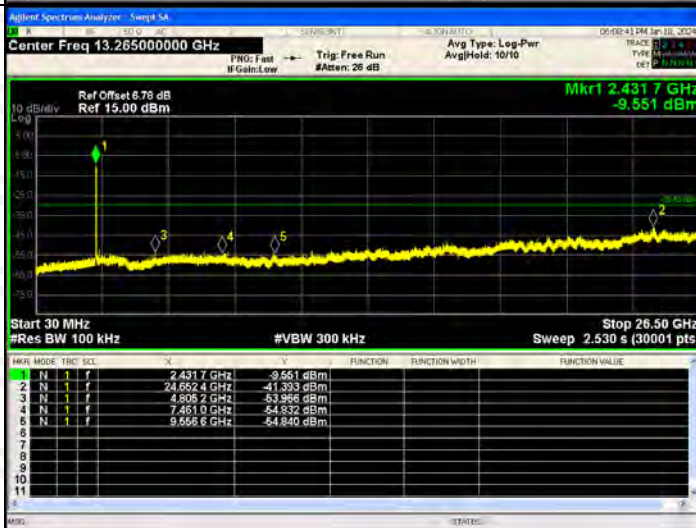
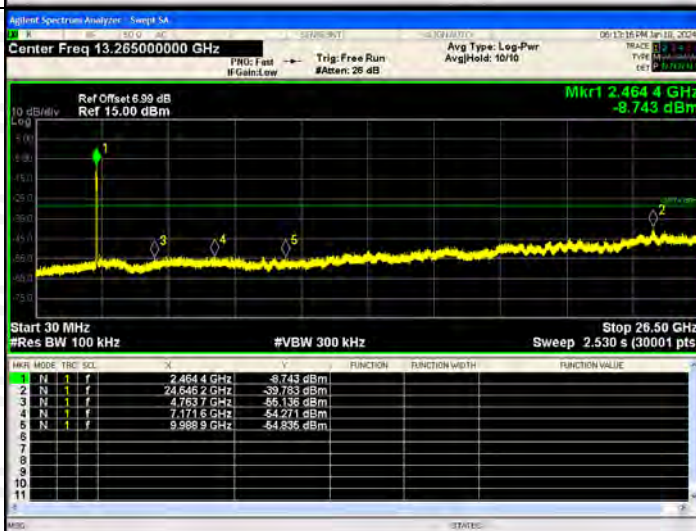


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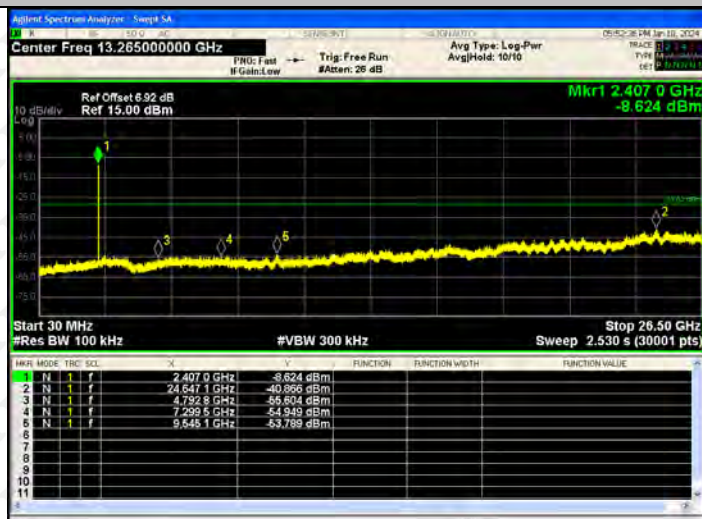
RF Conducted Spurious Emissions Graphs

802.11n(HT20)/
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802.11
n(HT20)/MCH

802.11
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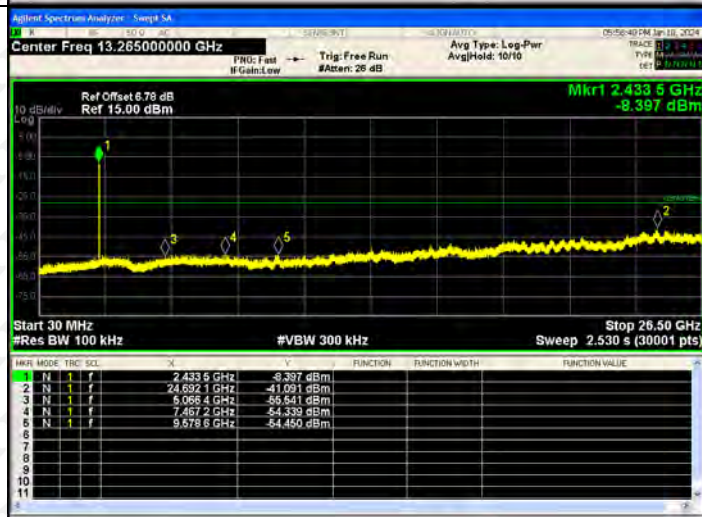
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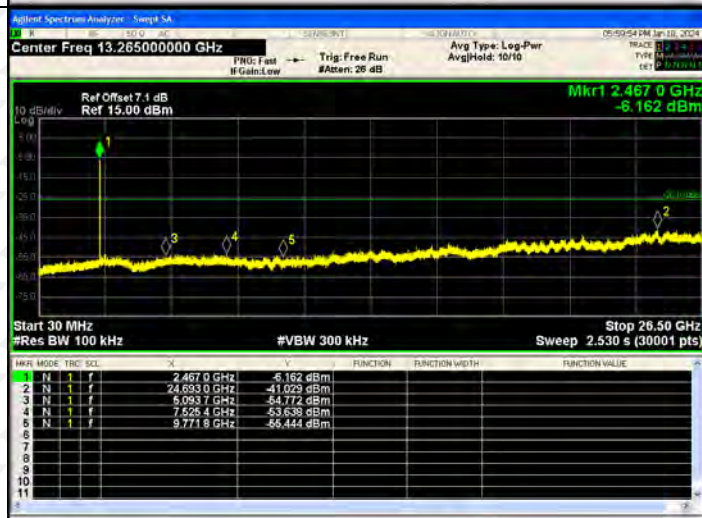
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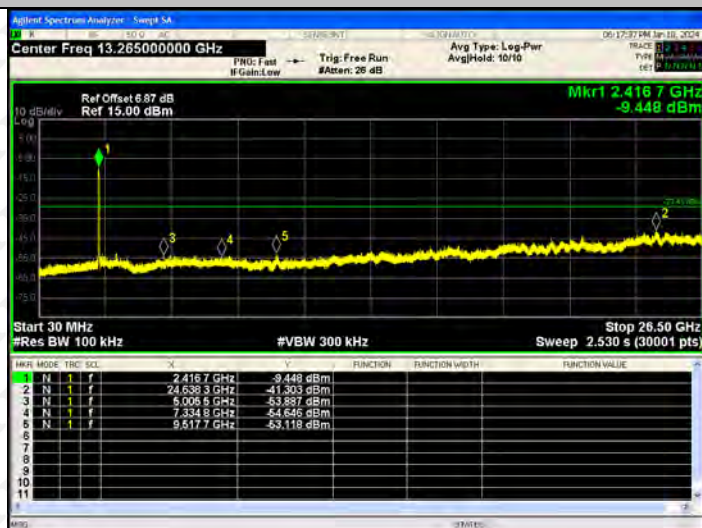


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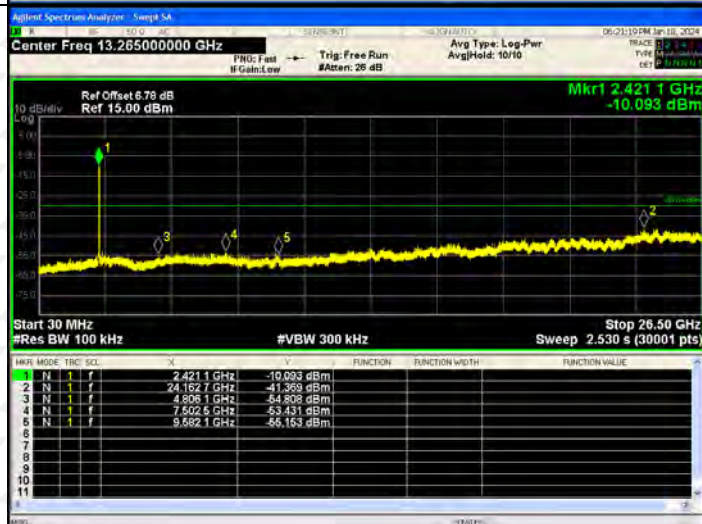


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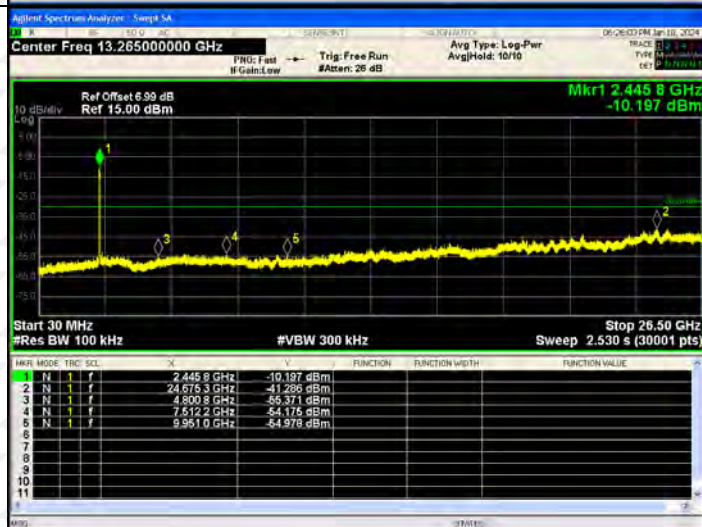
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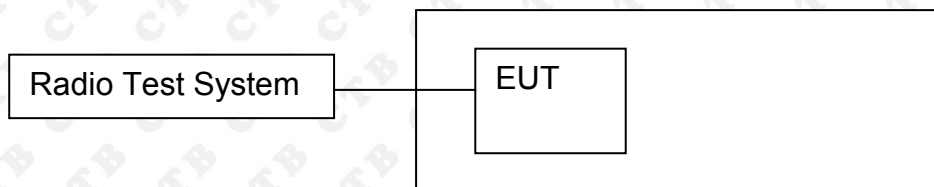


802.11 ax(HT40)/HCH



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

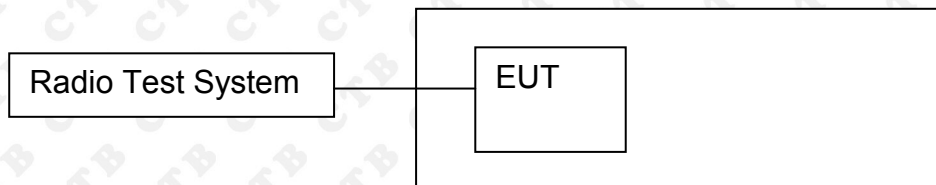
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1MHz. VBW = 3MHz. Sweep = auto; Detector Function = Peak. Channel power function is used
3. Keep the EUT in transmitting at lowest, middle and highest channel 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	14.576	14.199	/	30
	MCH	14.482	13.396	/	30
	HCH	14.821	13.580	/	30
802.11g	LCH	13.585	13.909	/	30
	MCH	13.977	13.969	/	30
	HCH	14.527	13.939	/	30
802.11n(HT20)	LCH	13.636	13.939	16.800	30
	MCH	14.065	13.986	17.036	30
	HCH	14.637	14.221	17.444	30
802.11n(HT40)	LCH	13.067	13.127	16.107	30
	MCH	13.190	13.097	16.154	30
	HCH	13.724	13.220	16.490	30
802.11ax(HT20)	LCH	13.640	13.408	16.536	30
	MCH	14.034	13.460	16.767	30
	HCH	14.579	13.588	17.122	30
802.11ax(HT40)	LCH	13.460	13.473	16.477	30
	MCH	13.617	13.473	16.556	30
	HCH	14.123	13.673	16.914	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. Rem1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

10.4 Test Result

ANT1:

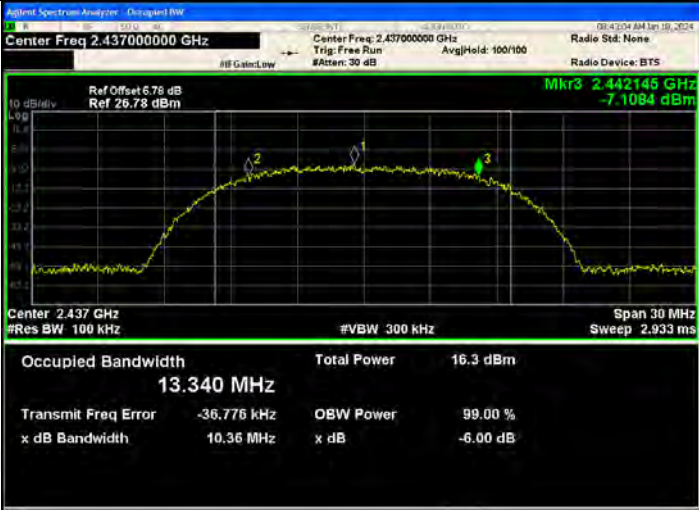
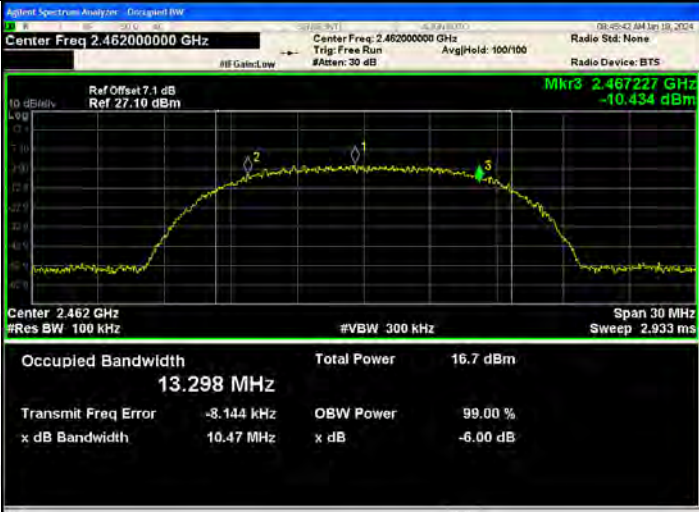
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	10.462	500	PASS
	MCH	10.363	500	PASS
	HCH	10.471	500	PASS
802.11g	LCH	15.722	500	PASS
	MCH	15.892	500	PASS
	HCH	15.507	500	PASS
802.11n(HT20)	LCH	17.232	500	PASS
	MCH	17.302	500	PASS
	HCH	16.040	500	PASS
802.11n(HT40)	LCH	34.519	500	PASS
	MCH	34.709	500	PASS
	HCH	35.814	500	PASS
802.11ax(HT20)	LCH	19.047	500	PASS
	MCH	19.066	500	PASS
	HCH	19.000	500	PASS
802.11ax(HT40)	LCH	38.052	500	PASS
	MCH	37.905	500	PASS
	HCH	38.077	500	PASS

ANT2:

Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	10.478	500	PASS
	MCH	10.473	500	PASS
	HCH	10.346	500	PASS
802.11g	LCH	15.121	500	PASS
	MCH	15.970	500	PASS
	HCH	15.133	500	PASS
802.11n(HT20)	LCH	17.678	500	PASS
	MCH	15.402	500	PASS
	HCH	16.430	500	PASS
802.11n(HT40)	LCH	35.085	500	PASS
	MCH	32.824	500	PASS
	HCH	35.367	500	PASS
802.11ax(HT20)	LCH	18.958	500	PASS
	MCH	19.094	500	PASS
	HCH	19.078	500	PASS
802.11ax(HT40)	LCH	37.793	500	PASS
	MCH	38.091	500	PASS
	HCH	37.956	500	PASS

ANT1:

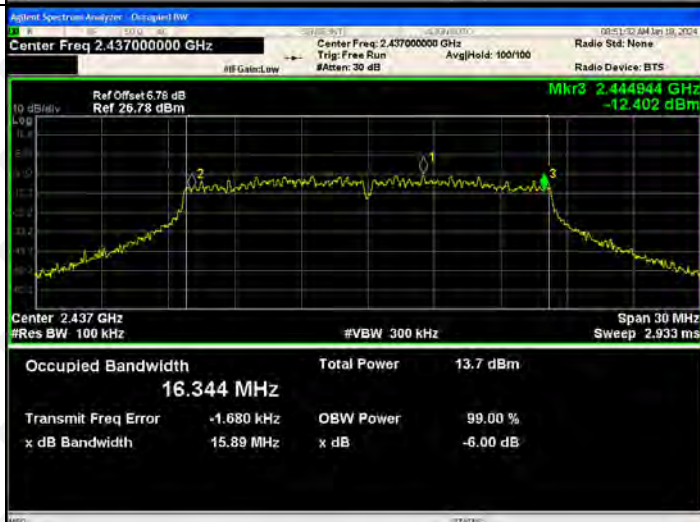
Test Graph:

Graphs	
802.11b /LCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.41200000 GHz Ref Offset 5.92 dB Ref 26.92 dBm Mkr3 2.417275 GHz -7.8406 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 13.267 MHz Total Power 16.3 dBm Transmit Freq Error 43.902 kHz OBW Power 99.00 % x dB Bandwidth 10.46 MHz x dB -6.00 dB
802.11b /MCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.43700000 GHz Ref Offset 6.78 dB Ref 26.78 dBm Mkr3 2.442145 GHz -7.1084 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 13.340 MHz Total Power 16.3 dBm Transmit Freq Error -36.776 kHz OBW Power 99.00 % x dB Bandwidth 10.36 MHz x dB -6.00 dB
802.11b/HCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.46200000 GHz Ref Offset 7.1 dB Ref 27.10 dBm Mkr3 2.467227 GHz -10.434 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 13.298 MHz Total Power 16.7 dBm Transmit Freq Error -8.144 kHz OBW Power 99.00 % x dB Bandwidth 10.47 MHz x dB -6.00 dB

802.11g/LCH

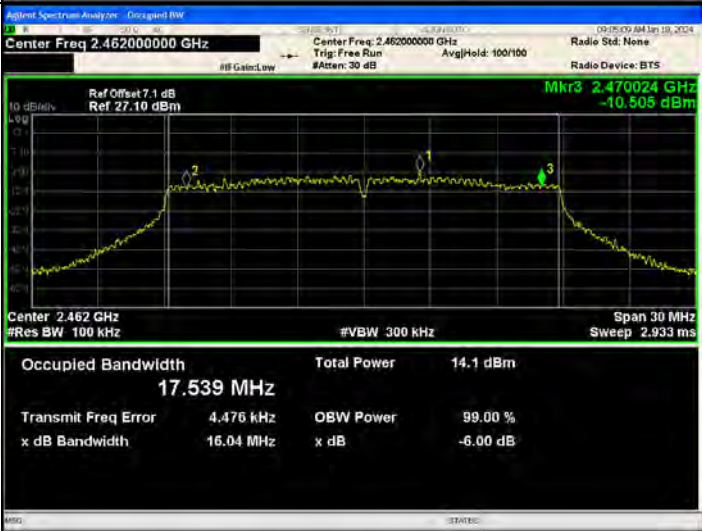


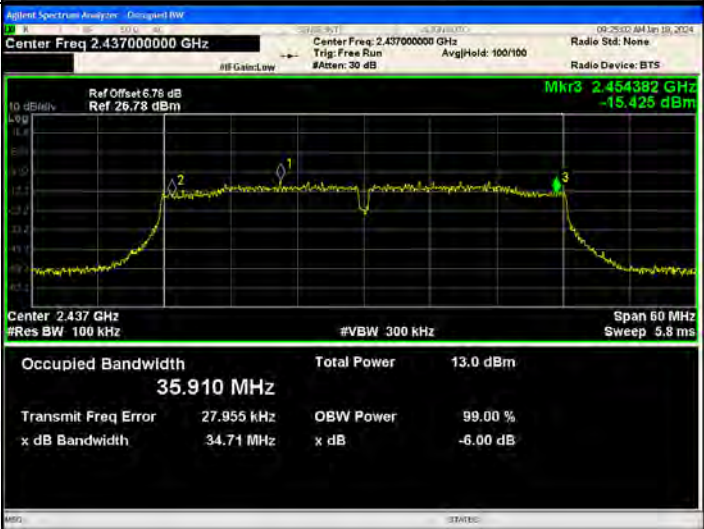
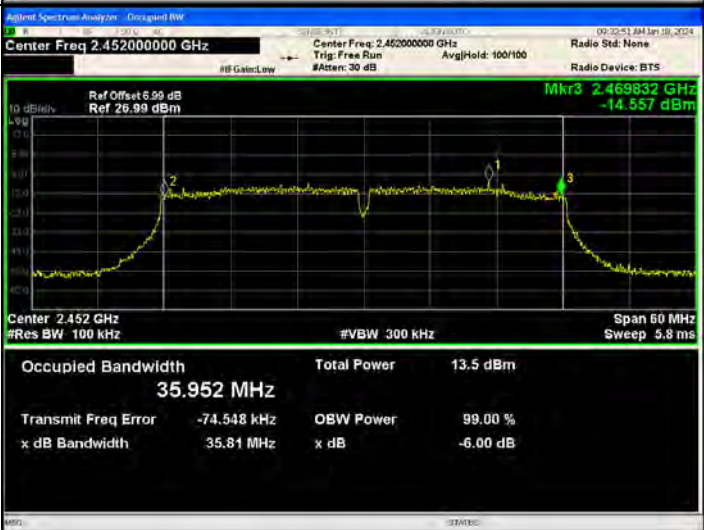
802.11g/MCH

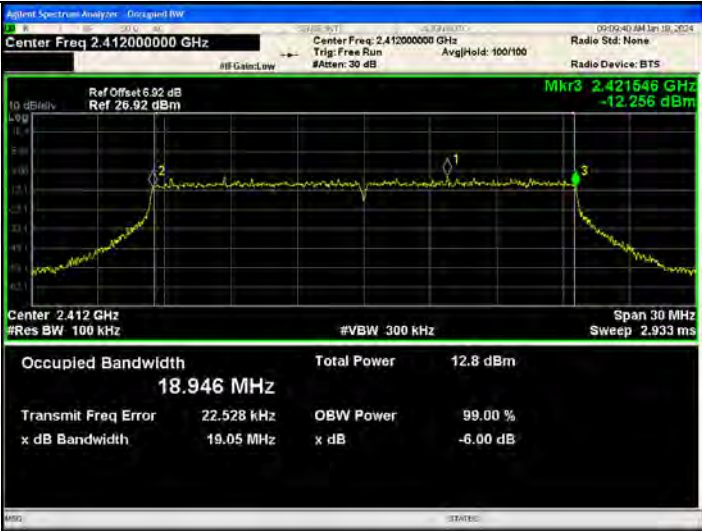
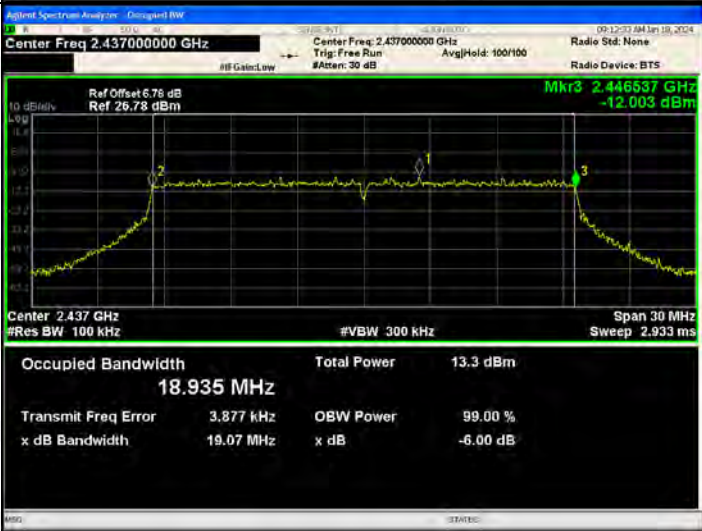
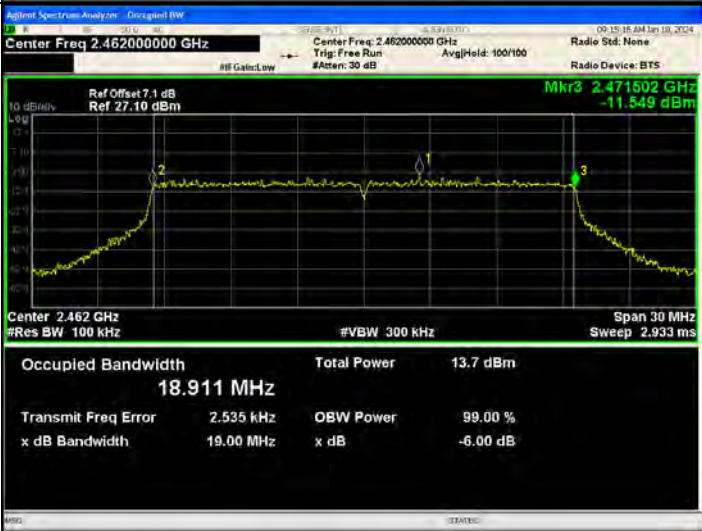


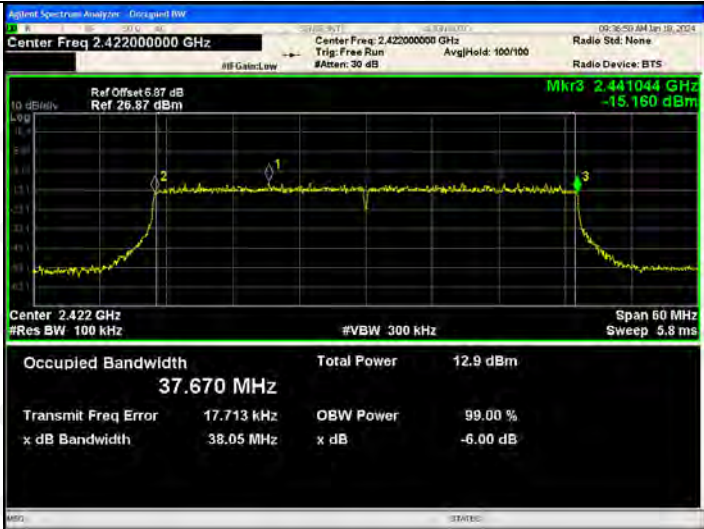
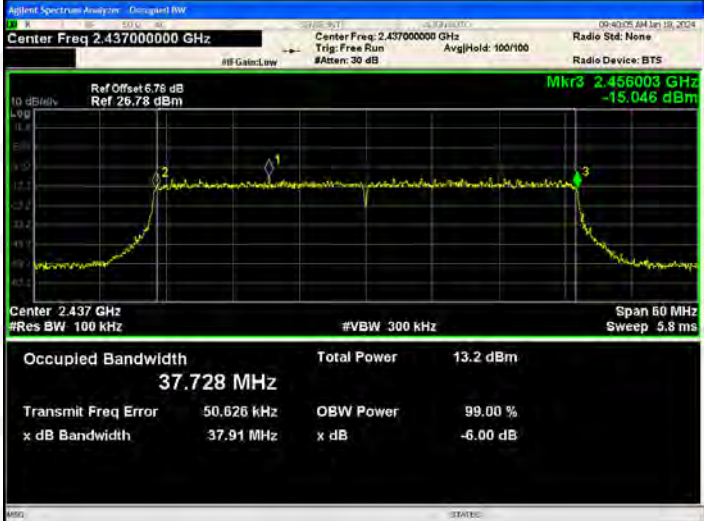
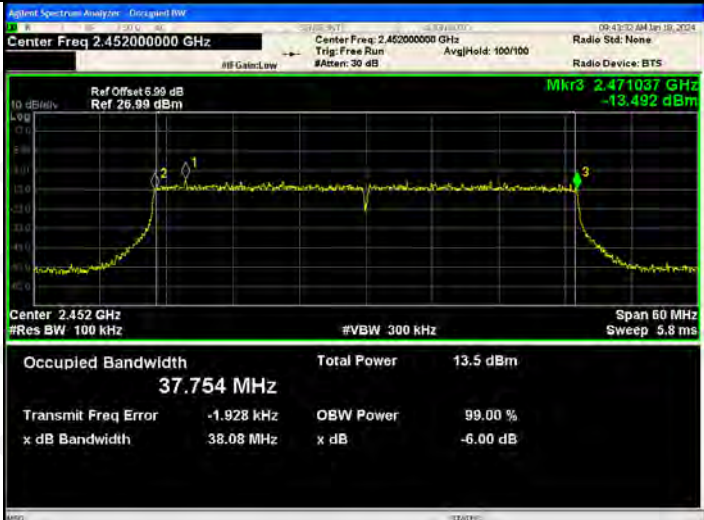
802.11g/HCH



802.11n(HT20)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Ref Offset: 6.92 dB Ref: 26.92 dBm Mkr3 2.420616 GHz -12.009 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.562 MHz Total Power 13.1 dBm Transmit Freq Error 428 Hz OBW Power 99.00 % x dB Bandwidth 17.23 MHz x dB -6.00 dB
802.11n(HT20)/MC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset: 6.78 dB Ref: 26.78 dBm Mkr3 2.445654 GHz -11.641 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.577 MHz Total Power 13.5 dBm Transmit Freq Error 2.966 kHz OBW Power 99.00 % x dB Bandwidth 17.30 MHz x dB -6.00 dB
802.11n(HT20)/HC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Ref Offset: 7.1 dB Ref: 27.10 dBm Mkr3 2.470024 GHz -10.505 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.539 MHz Total Power 14.1 dBm Transmit Freq Error 4.476 kHz OBW Power 99.00 % x dB Bandwidth 16.04 MHz x dB -6.00 dB

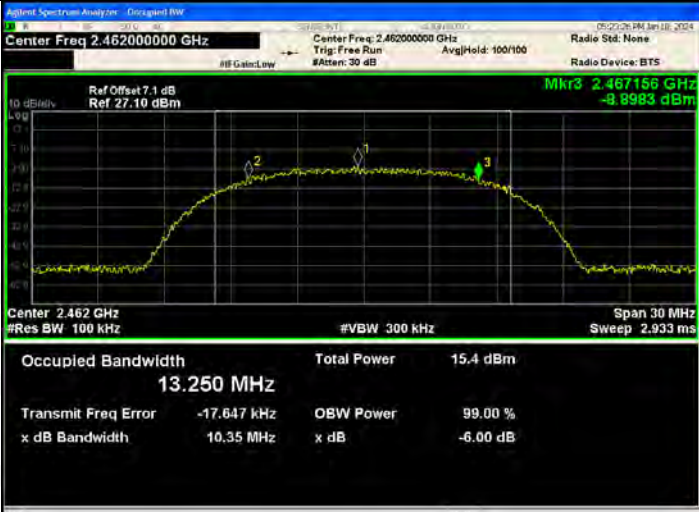
802.11n(HT40)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.42200000 GHz Ref Offset: 6.87 dB Ref: 26.87 dBm Mkr3 2.43928 GHz -14.980 dBm Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms Occupied Bandwidth 35.840 MHz Total Power 12.8 dBm Transmit Freq Error 20.509 kHz OBW Power 99.00 % x dB Bandwidth 34.52 MHz x dB -6.00 dB
802.11n(HT40)/MC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.43700000 GHz Ref Offset: 6.78 dB Ref: 26.78 dBm Mkr3 2.454382 GHz -15.425 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms Occupied Bandwidth 35.910 MHz Total Power 13.0 dBm Transmit Freq Error 27.955 kHz OBW Power 99.00 % x dB Bandwidth 34.71 MHz x dB -6.00 dB
802.11n(HT40)/HC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.45200000 GHz Ref Offset: 6.99 dB Ref: 26.99 dBm Mkr3 2.469832 GHz -14.557 dBm Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms Occupied Bandwidth 35.952 MHz Total Power 13.5 dBm Transmit Freq Error -74.548 kHz OBW Power 99.00 % x dB Bandwidth 35.81 MHz x dB -6.00 dB

802.11ax(HT20)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.41200000 GHz Ref Offset 6.92 dB Ref 26.92 dBm Mkr3 2.421546 GHz -12.256 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 18.946 MHz Total Power 12.8 dBm Transmit Freq Error 22.528 kHz OBW Power 99.00 % x dB Bandwidth 19.05 MHz x dB -6.00 dB
802.11ax(HT20)/M CH	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.43700000 GHz Ref Offset 6.78 dB Ref 26.78 dBm Mkr3 2.446537 GHz -12.003 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 18.935 MHz Total Power 13.3 dBm Transmit Freq Error 3.877 kHz OBW Power 99.00 % x dB Bandwidth 19.07 MHz x dB -6.00 dB
802.11ax(HT20)/H CH	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.46200000 GHz Ref Offset 7.1 dB Ref 27.10 dBm Mkr3 2.471502 GHz -11.549 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 18.911 MHz Total Power 13.7 dBm Transmit Freq Error 2.535 kHz OBW Power 99.00 % x dB Bandwidth 19.00 MHz x dB -6.00 dB

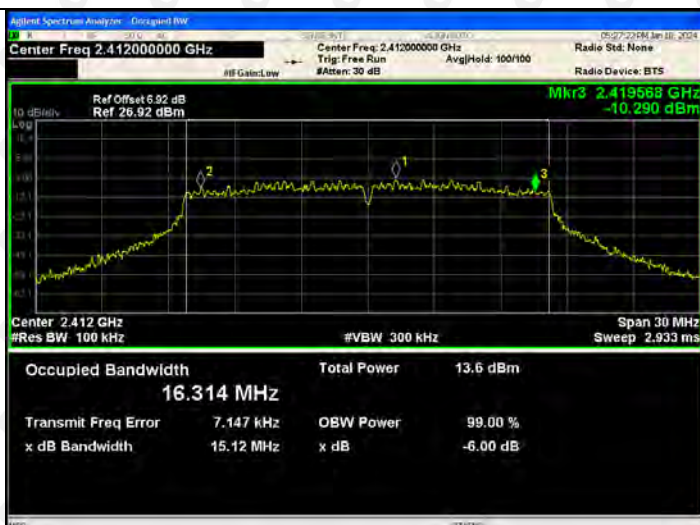
802.11ax(HT40)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.42200000 GHz Ref Offset: 6.87 dB Ref: 26.87 dBm Mkr3: 2.441044 GHz -15.160 dBm Center: 2.422 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 60 MHz Sweep: 5.8 ms <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>12.9 dBm</td></tr><tr><td>37.670 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>17.713 kHz</td><td>OBW Power</td></tr><tr><td>x dB Bandwidth</td><td>38.05 MHz</td><td>x dB</td></tr><tr><td></td><td></td><td>99.00 %</td></tr><tr><td></td><td></td><td>-6.00 dB</td></tr></table>	Occupied Bandwidth	Total Power	12.9 dBm	37.670 MHz			Transmit Freq Error	17.713 kHz	OBW Power	x dB Bandwidth	38.05 MHz	x dB			99.00 %			-6.00 dB
Occupied Bandwidth	Total Power	12.9 dBm																	
37.670 MHz																			
Transmit Freq Error	17.713 kHz	OBW Power																	
x dB Bandwidth	38.05 MHz	x dB																	
		99.00 %																	
		-6.00 dB																	
802.11ax(HT40)/M CH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.43700000 GHz Ref Offset: 6.78 dB Ref: 26.78 dBm Mkr3: 2.456003 GHz -15.046 dBm Center: 2.437 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 60 MHz Sweep: 5.8 ms <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.2 dBm</td></tr><tr><td>37.728 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>50.626 kHz</td><td>OBW Power</td></tr><tr><td>x dB Bandwidth</td><td>37.91 MHz</td><td>x dB</td></tr><tr><td></td><td></td><td>99.00 %</td></tr><tr><td></td><td></td><td>-6.00 dB</td></tr></table>	Occupied Bandwidth	Total Power	13.2 dBm	37.728 MHz			Transmit Freq Error	50.626 kHz	OBW Power	x dB Bandwidth	37.91 MHz	x dB			99.00 %			-6.00 dB
Occupied Bandwidth	Total Power	13.2 dBm																	
37.728 MHz																			
Transmit Freq Error	50.626 kHz	OBW Power																	
x dB Bandwidth	37.91 MHz	x dB																	
		99.00 %																	
		-6.00 dB																	
802.11ax(HT40)/H CH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.45200000 GHz Ref Offset: 6.99 dB Ref: 26.99 dBm Mkr3: 2.471037 GHz -13.492 dBm Center: 2.452 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 60 MHz Sweep: 5.8 ms <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.5 dBm</td></tr><tr><td>37.754 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>-1.928 kHz</td><td>OBW Power</td></tr><tr><td>x dB Bandwidth</td><td>38.08 MHz</td><td>x dB</td></tr><tr><td></td><td></td><td>99.00 %</td></tr><tr><td></td><td></td><td>-6.00 dB</td></tr></table>	Occupied Bandwidth	Total Power	13.5 dBm	37.754 MHz			Transmit Freq Error	-1.928 kHz	OBW Power	x dB Bandwidth	38.08 MHz	x dB			99.00 %			-6.00 dB
Occupied Bandwidth	Total Power	13.5 dBm																	
37.754 MHz																			
Transmit Freq Error	-1.928 kHz	OBW Power																	
x dB Bandwidth	38.08 MHz	x dB																	
		99.00 %																	
		-6.00 dB																	

ANT2:

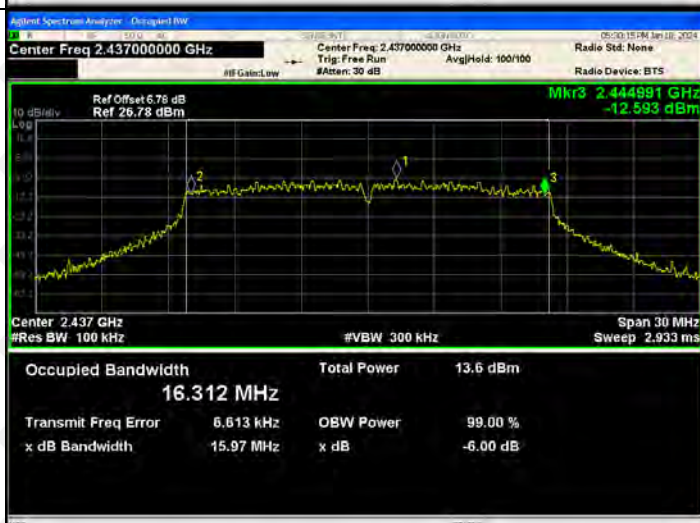
Test Graph:

Graphs	
802.11b /LCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.41200000 GHz Ref Offset: 5.92 dB Ref: 26.92 dBm Mkr3: 2.417239 GHz -9.2834 dBm Center: 2.412 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms Occupied Bandwidth: 13.290 MHz Total Power: 15.1 dBm Transmit Freq Error: -524 Hz OBW Power: 99.00 % x dB Bandwidth: 10.48 MHz x dB: -6.00 dB
802.11b /MCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.43700000 GHz Ref Offset: 6.78 dB Ref: 26.78 dBm Mkr3: 2.44219 GHz -10.686 dBm Center: 2.437 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms Occupied Bandwidth: 13.312 MHz Total Power: 15.3 dBm Transmit Freq Error: -46.074 kHz OBW Power: 99.00 % x dB Bandwidth: 10.47 MHz x dB: -6.00 dB
802.11b/HCH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.46200000 GHz Ref Offset: 7.1 dB Ref: 27.10 dBm Mkr3: 2.467156 GHz -9.8983 dBm Center: 2.462 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms Occupied Bandwidth: 13.250 MHz Total Power: 15.4 dBm Transmit Freq Error: -17.647 kHz OBW Power: 99.00 % x dB Bandwidth: 10.35 MHz x dB: -6.00 dB

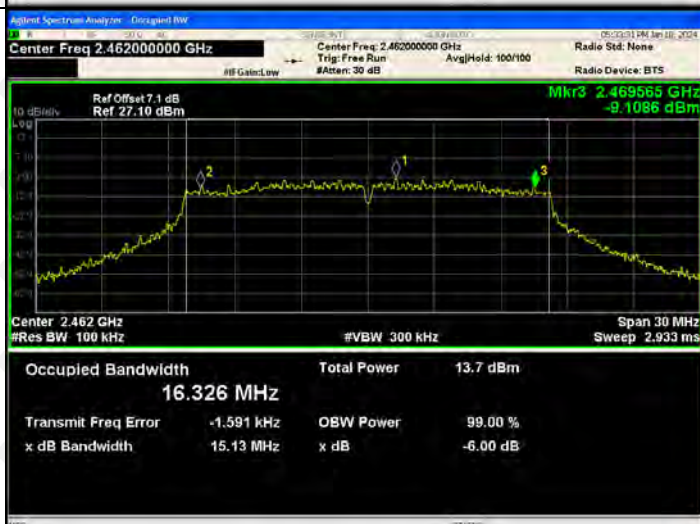
802.11g/LCH

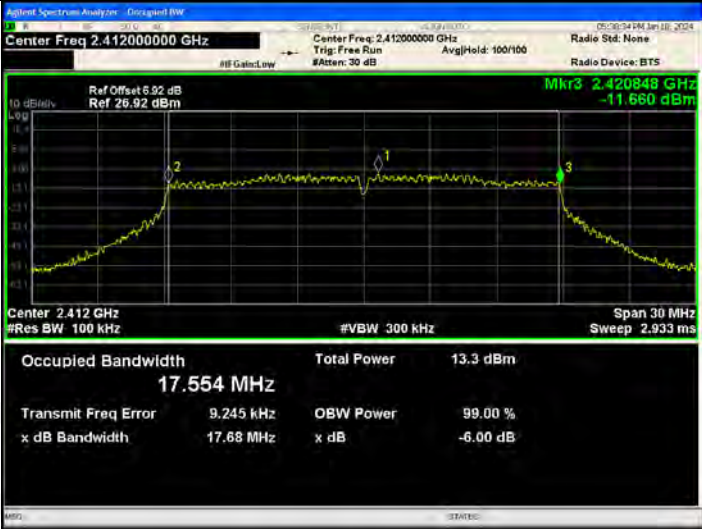


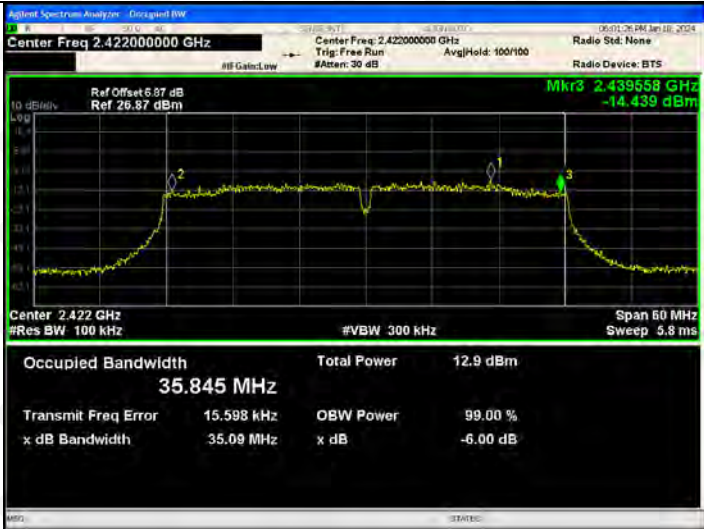
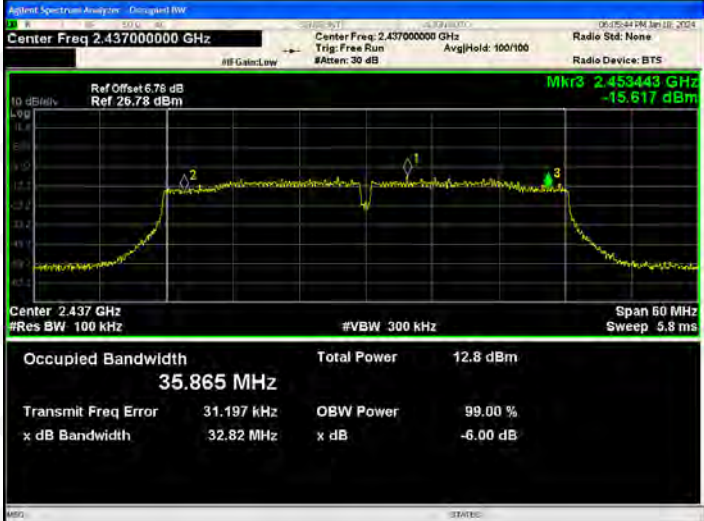
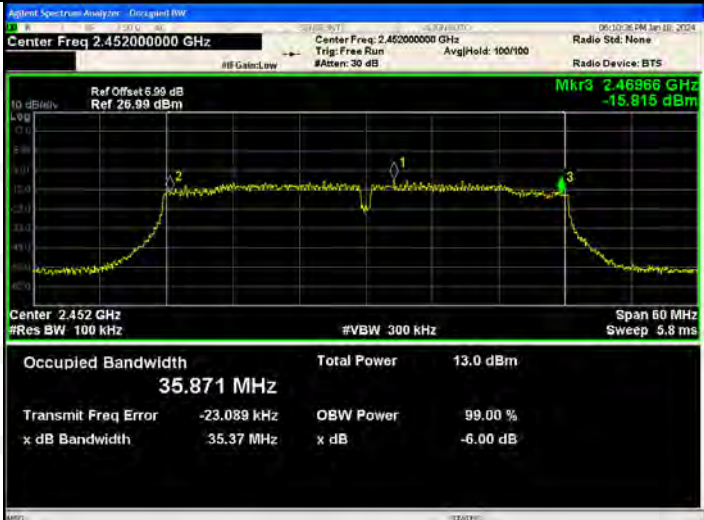
802.11g/MCH

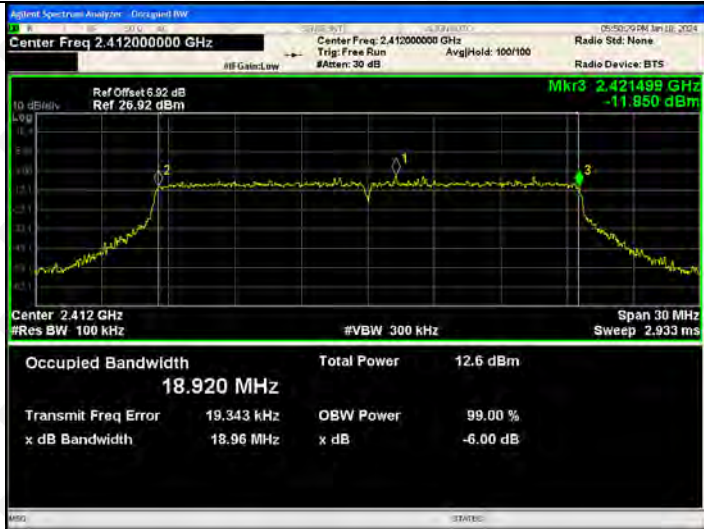
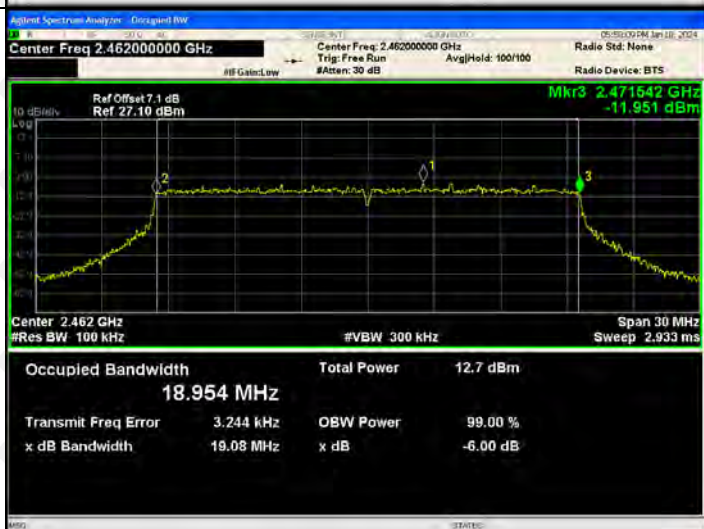


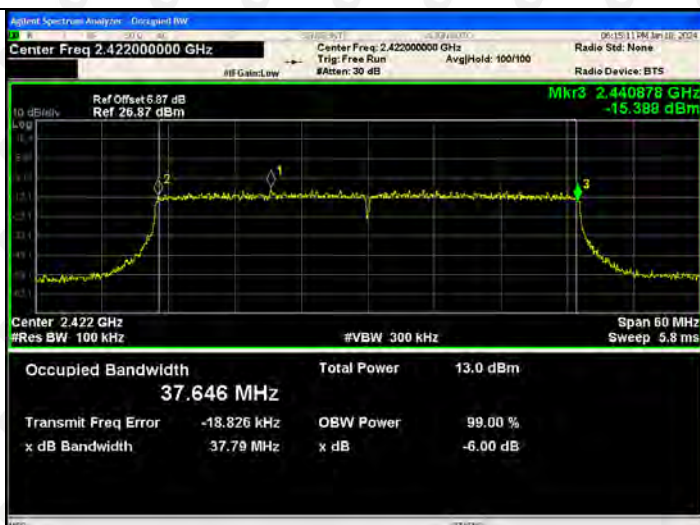
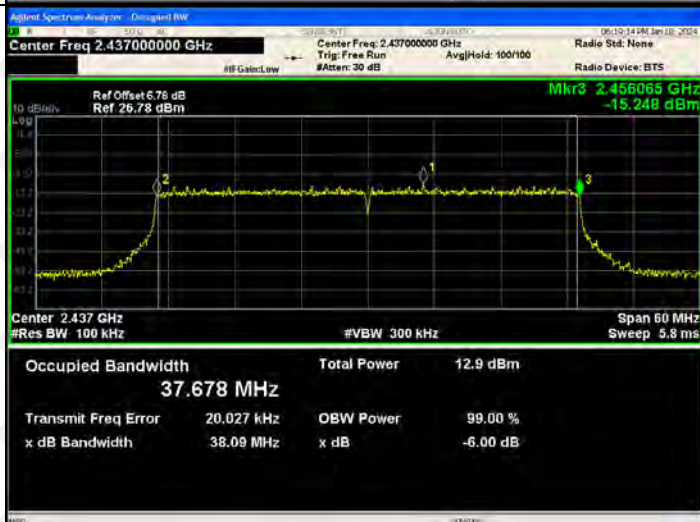
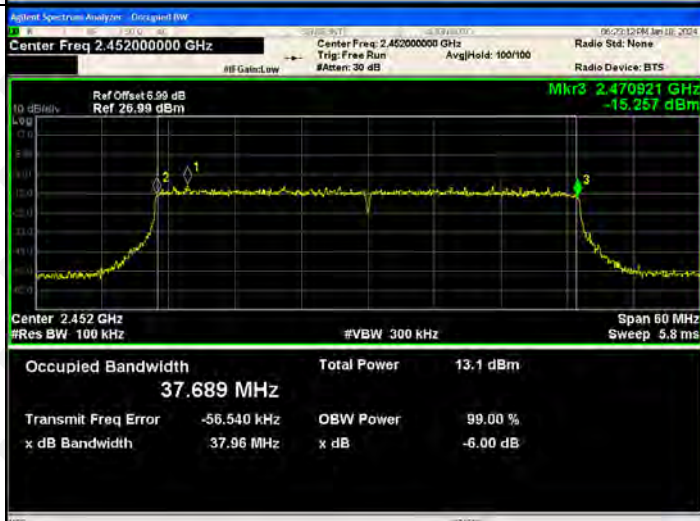
802.11g/HCH



802.11n(HT20)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Ref Offset: 6.92 dB Ref: 26.92 dBm Mkr3 2.420848 GHz -11.660 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.554 MHz Total Power 13.3 dBm Transmit Freq Error 9.245 kHz OBW Power 99.00 % x dB Bandwidth 17.68 MHz x dB -6.00 dB
802.11n(HT20)/MC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset: 6.78 dB Ref: 26.78 dBm Mkr3 2.444703 GHz -11.595 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.556 MHz Total Power 13.5 dBm Transmit Freq Error 1.871 kHz OBW Power 99.00 % x dB Bandwidth 15.40 MHz x dB -6.00 dB
802.11n(HT20)/HC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Ref Offset: 7.1 dB Ref: 27.10 dBm Mkr3 2.470217 GHz -10.576 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.589 MHz Total Power 13.7 dBm Transmit Freq Error 2.591 kHz OBW Power 99.00 % x dB Bandwidth 16.43 MHz x dB -6.00 dB

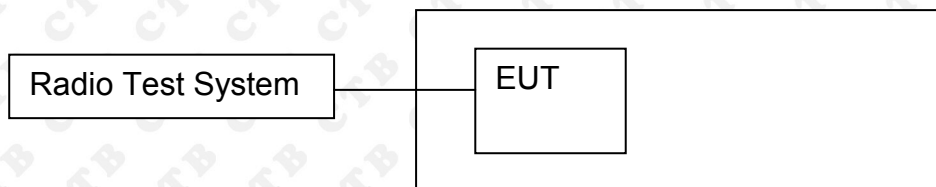
802.11n(HT40)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.42200000 GHz Ref Offset: 6.87 dB Ref: 26.87 dBm Mkr3: 2.439558 GHz -14.439 dBm Center: 2.422 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 60 MHz Sweep: 5.8 ms <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>12.9 dBm</td></tr><tr><td>35.845 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>15.598 kHz</td><td>OBW Power</td></tr><tr><td>x dB Bandwidth</td><td>35.08 MHz</td><td>x dB</td></tr><tr><td></td><td></td><td>99.00 %</td></tr><tr><td></td><td></td><td>-6.00 dB</td></tr></table>	Occupied Bandwidth	Total Power	12.9 dBm	35.845 MHz			Transmit Freq Error	15.598 kHz	OBW Power	x dB Bandwidth	35.08 MHz	x dB			99.00 %			-6.00 dB
Occupied Bandwidth	Total Power	12.9 dBm																	
35.845 MHz																			
Transmit Freq Error	15.598 kHz	OBW Power																	
x dB Bandwidth	35.08 MHz	x dB																	
		99.00 %																	
		-6.00 dB																	
802.11n(HT40)/MC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.43700000 GHz Ref Offset: 6.78 dB Ref: 26.78 dBm Mkr3: 2.453443 GHz -15.617 dBm Center: 2.437 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 60 MHz Sweep: 5.8 ms <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>12.8 dBm</td></tr><tr><td>35.865 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>31.197 kHz</td><td>OBW Power</td></tr><tr><td>x dB Bandwidth</td><td>32.82 MHz</td><td>x dB</td></tr><tr><td></td><td></td><td>99.00 %</td></tr><tr><td></td><td></td><td>-6.00 dB</td></tr></table>	Occupied Bandwidth	Total Power	12.8 dBm	35.865 MHz			Transmit Freq Error	31.197 kHz	OBW Power	x dB Bandwidth	32.82 MHz	x dB			99.00 %			-6.00 dB
Occupied Bandwidth	Total Power	12.8 dBm																	
35.865 MHz																			
Transmit Freq Error	31.197 kHz	OBW Power																	
x dB Bandwidth	32.82 MHz	x dB																	
		99.00 %																	
		-6.00 dB																	
802.11n(HT40)/HC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.45200000 GHz Ref Offset: 6.99 dB Ref: 26.99 dBm Mkr3: 2.469866 GHz -15.815 dBm Center: 2.452 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 60 MHz Sweep: 5.8 ms <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.0 dBm</td></tr><tr><td>35.871 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>-23.089 kHz</td><td>OBW Power</td></tr><tr><td>x dB Bandwidth</td><td>35.37 MHz</td><td>x dB</td></tr><tr><td></td><td></td><td>99.00 %</td></tr><tr><td></td><td></td><td>-6.00 dB</td></tr></table>	Occupied Bandwidth	Total Power	13.0 dBm	35.871 MHz			Transmit Freq Error	-23.089 kHz	OBW Power	x dB Bandwidth	35.37 MHz	x dB			99.00 %			-6.00 dB
Occupied Bandwidth	Total Power	13.0 dBm																	
35.871 MHz																			
Transmit Freq Error	-23.089 kHz	OBW Power																	
x dB Bandwidth	35.37 MHz	x dB																	
		99.00 %																	
		-6.00 dB																	

802.11ax(HT20)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.412000000 GHz Ref Offset: 6.92 dB Ref: 26.92 dBm Mkr3: 2.421499 GHz -11.950 dBm Center: 2.412 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>12.6 dBm</td></tr><tr><td>18.920 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>19.343 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>18.96 MHz</td><td></td><td></td></tr></table>	Occupied Bandwidth	Total Power	12.6 dBm	18.920 MHz			Transmit Freq Error	OBW Power	99.00 %	19.343 kHz	x dB	-6.00 dB	x dB Bandwidth			18.96 MHz		
Occupied Bandwidth	Total Power	12.6 dBm																	
18.920 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
19.343 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
18.96 MHz																			
802.11ax(HT20)/M CH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.437000000 GHz Ref Offset: 6.78 dB Ref: 26.78 dBm Mkr3: 2.446562 GHz -12.918 dBm Center: 2.437 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>12.7 dBm</td></tr><tr><td>18.967 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>15.175 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>19.09 MHz</td><td></td><td></td></tr></table>	Occupied Bandwidth	Total Power	12.7 dBm	18.967 MHz			Transmit Freq Error	OBW Power	99.00 %	15.175 kHz	x dB	-6.00 dB	x dB Bandwidth			19.09 MHz		
Occupied Bandwidth	Total Power	12.7 dBm																	
18.967 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
15.175 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
19.09 MHz																			
802.11ax(HT20)/H CH	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.462000000 GHz Ref Offset: 7.1 dB Ref: 27.10 dBm Mkr3: 2.471642 GHz -11.951 dBm Center: 2.462 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>12.7 dBm</td></tr><tr><td>18.954 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>3.244 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>19.08 MHz</td><td></td><td></td></tr></table>	Occupied Bandwidth	Total Power	12.7 dBm	18.954 MHz			Transmit Freq Error	OBW Power	99.00 %	3.244 kHz	x dB	-6.00 dB	x dB Bandwidth			19.08 MHz		
Occupied Bandwidth	Total Power	12.7 dBm																	
18.954 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
3.244 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
19.08 MHz																			

802.11ax(HT40)/LC
H

802.11ax(HT40)/M
CH

802.11ax(HT40)/H
CH


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	-15.201	-17.016	/	8
	MCH	-15.342	-16.418	/	8
	HCH	-14.922	-16.263	/	8
802.11g	LCH	-18.162	-18.058	/	8
	MCH	-17.603	-17.626	/	8
	HCH	-17.426	-17.882	/	8
802.11n(H T20)	LCH	-16.992	-18.618	-14.719	8
	MCH	-18.278	-17.075	-14.625	8
	HCH	-17.759	-18.585	-15.142	8
802.11n(H T40)	LCH	-20.347	-21.472	-17.863	8
	MCH	-21.813	-21.814	-18.803	8
	HCH	-21.467	-21.807	-18.623	8
802.11ax(HT20)	LCH	-20.504	-20.49	-17.487	8
	MCH	-20.336	-21.091	-17.687	8
	HCH	-19.861	-20.828	-17.307	8
802.11ax(HT40)	LCH	-23.741	-23.918	-20.818	8
	MCH	-24.050	-23.574	-20.795	8
	HCH	-23.335	-23.342	-20.328	8

ANT1: Test Graph

Graphs

802.11b /LCH



802.11b /MCH



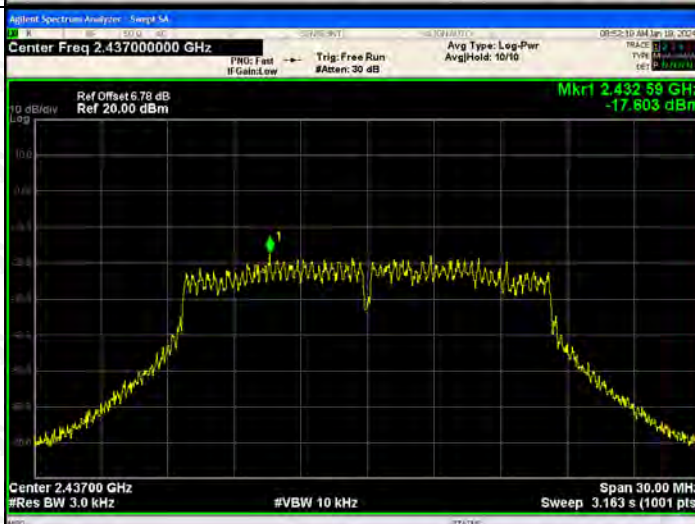
802.11b/HCH



802.11g/LCH

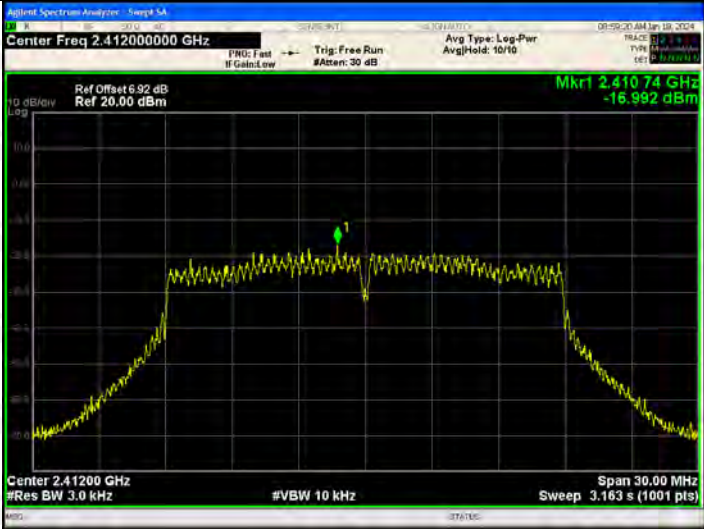


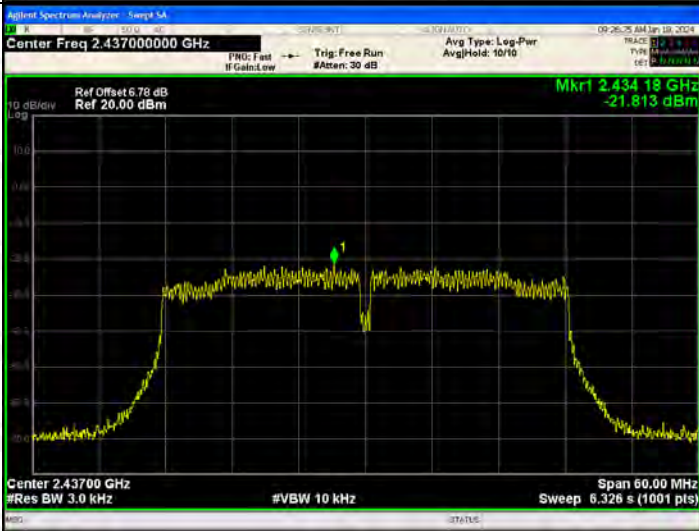
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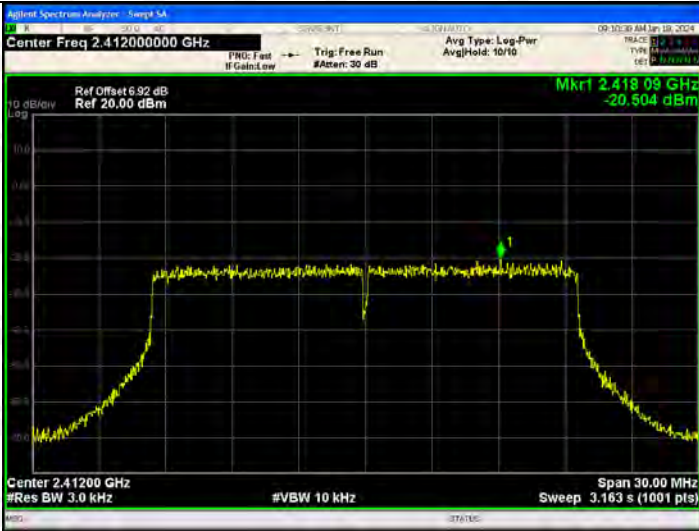
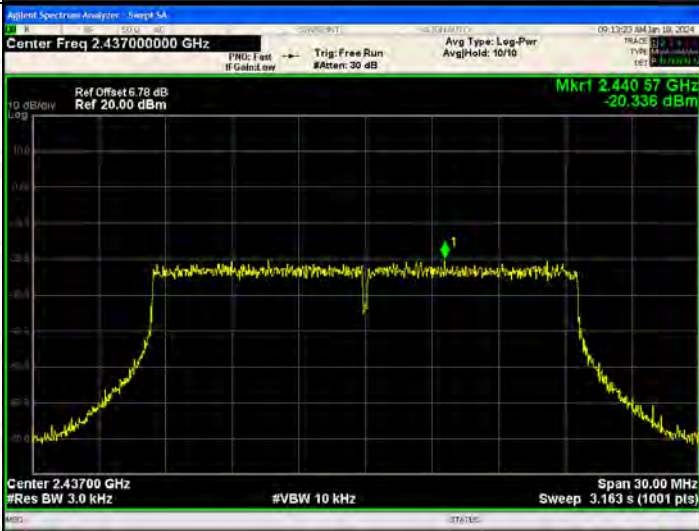
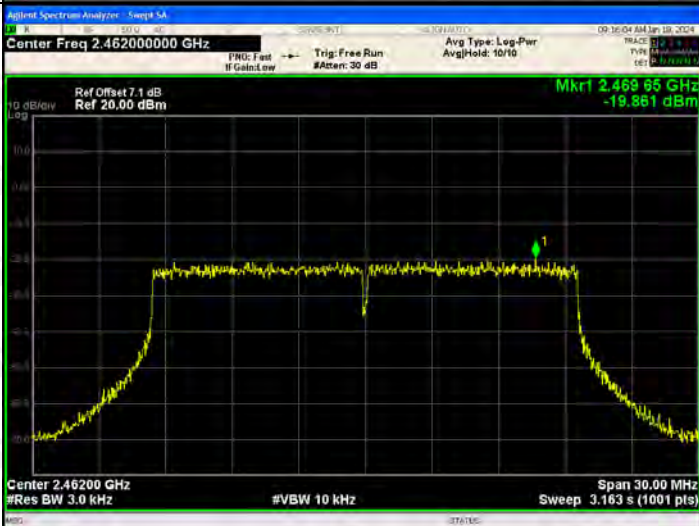


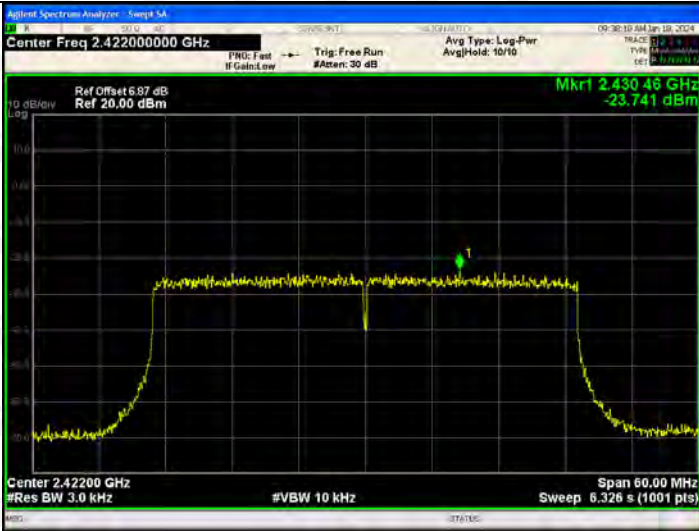
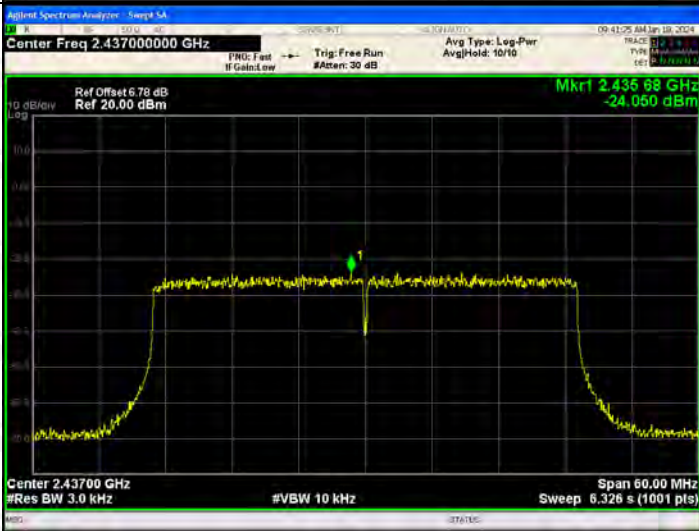
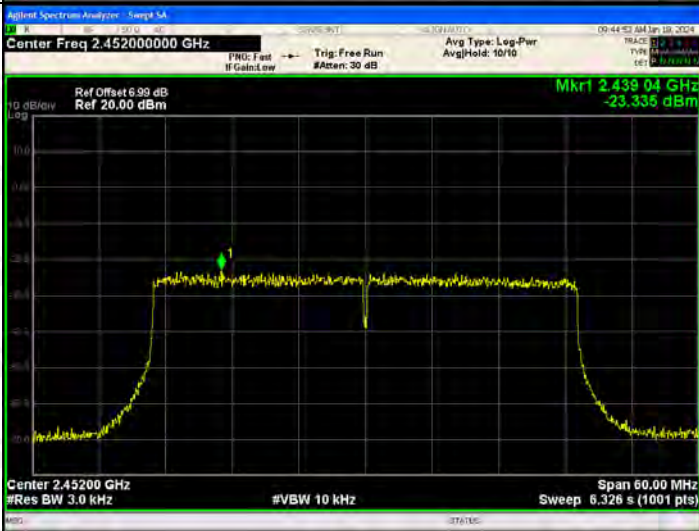
802.11g/HCH



802.11n(HT20)/LCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.41200000 GHz Ref Offset 6.92 dB Ref 20.00 dBm Mkr1 2.410 74 GHz -16.992 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11n(HT20)/MCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.43700000 GHz Ref Offset 6.78 dB Ref 20.00 dBm Mkr1 2.439 43 GHz -18.278 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11n(HT20)/HCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.46200000 GHz Ref Offset 7.1 dB Ref 20.00 dBm Mkr1 2.466 32 GHz -17.759 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)

802.11n(HT40)/LCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.42200000 GHz Ref Offset 6.97 dB Ref 20.00 dBm Mkr1 2.416 00 GHz -20.347 dBm Center 2.4220 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 6.78 dB Ref 20.00 dBm Mkr1 2.434 18 GHz -21.813 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 6.99 dB Ref 20.00 dBm Mkr1 2.445 76 GHz -21.467 dBm Center 2.45200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)

802.11ax(HT20)/LC H	 Agilent Spectrum Analyzer - Sweep SA Center Freq 2.41200000 GHz Ref Offset 6.92 dB Ref 20.00 dBm Mkr1 2.418 09 GHz -20.504 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11ax(HT20)/MC H	 Agilent Spectrum Analyzer - Sweep SA Center Freq 2.43700000 GHz Ref Offset 6.78 dB Ref 20.00 dBm Mkr1 2.440 57 GHz -20.336 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11ax(HT20)/HC H	 Agilent Spectrum Analyzer - Sweep SA Center Freq 2.46200000 GHz Ref Offset 7.1 dB Ref 20.00 dBm Mkr1 2.468 65 GHz -19.861 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)

802.11ax(HT40)/LC H	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.42200000 GHz Ref Offset 6.97 dB Ref 20.00 dBm Mkr1 2.43046 GHz -23.741 dBm Center 2.42200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)
802.11ax(HT40)/MC H	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.43700000 GHz Ref Offset 6.78 dB Ref 20.00 dBm Mkr1 2.43658 GHz -24.050 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)
802.11ax(HT40)/HC H	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.45200000 GHz Ref Offset 6.99 dB Ref 20.00 dBm Mkr1 2.43904 GHz -23.335 dBm Center 2.45200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)

ANT 2: Test Graph

Graphs

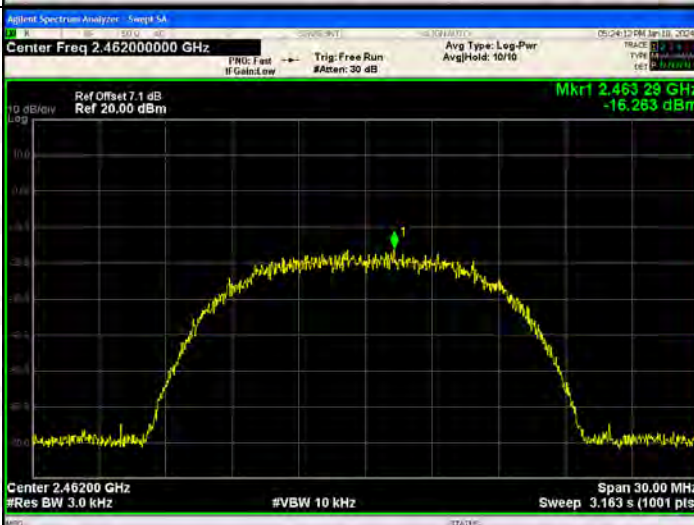
802.11b /LCH



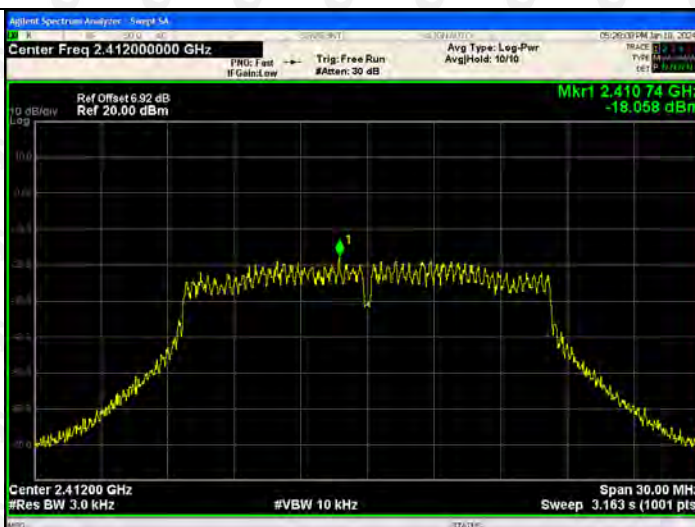
802.11b /MCH



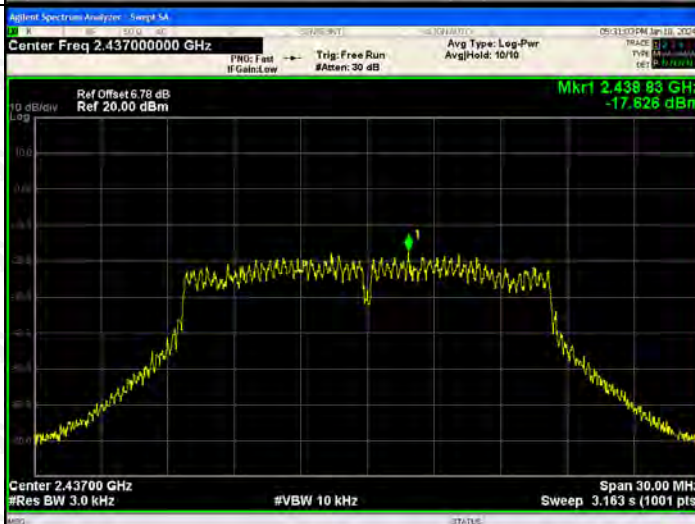
802.11b/HCH



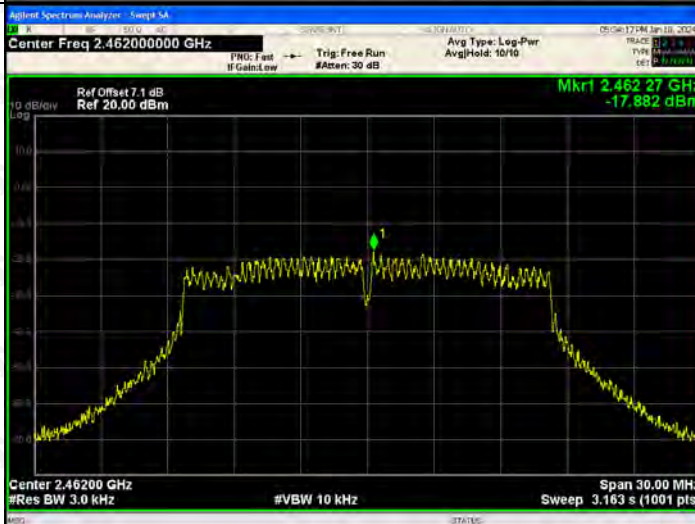
802.11g/LCH

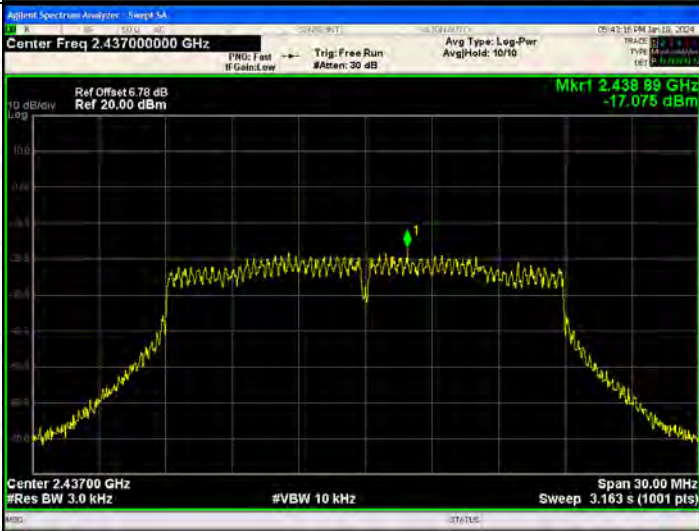
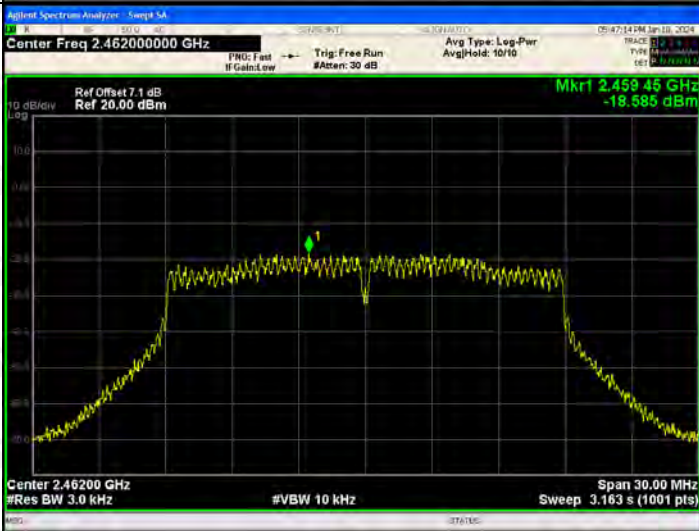


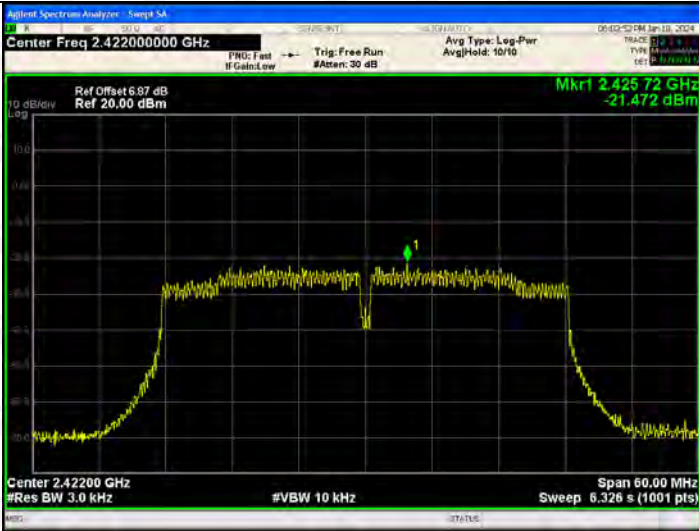
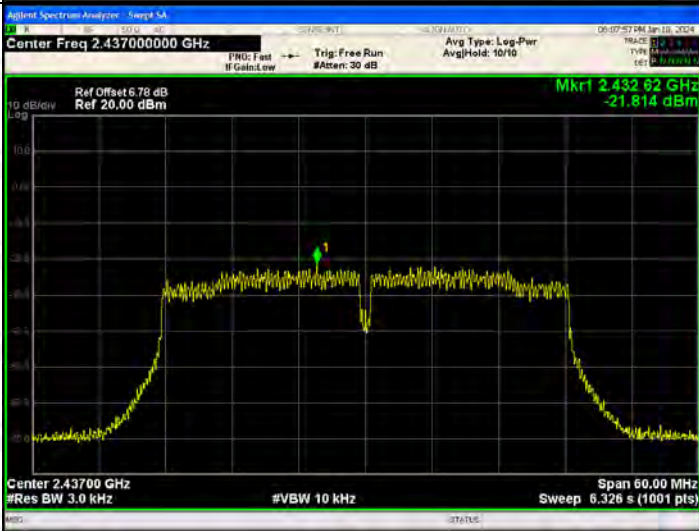
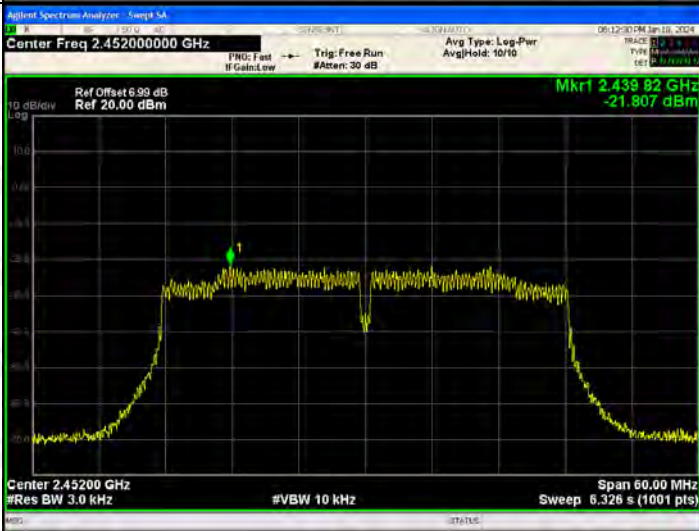
802.11g/MCH

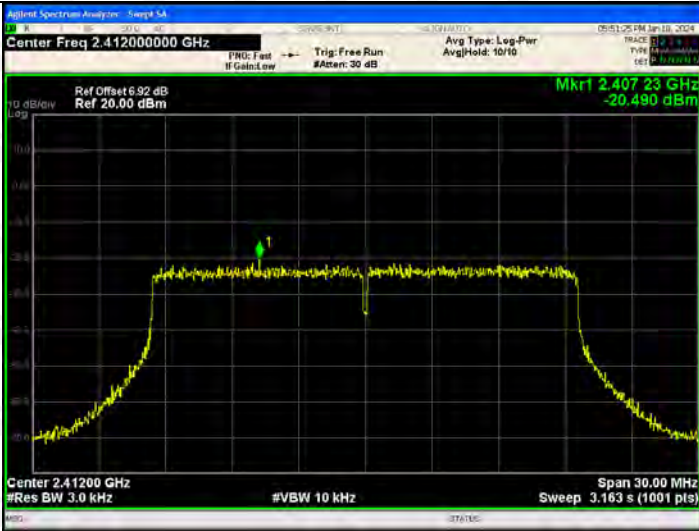
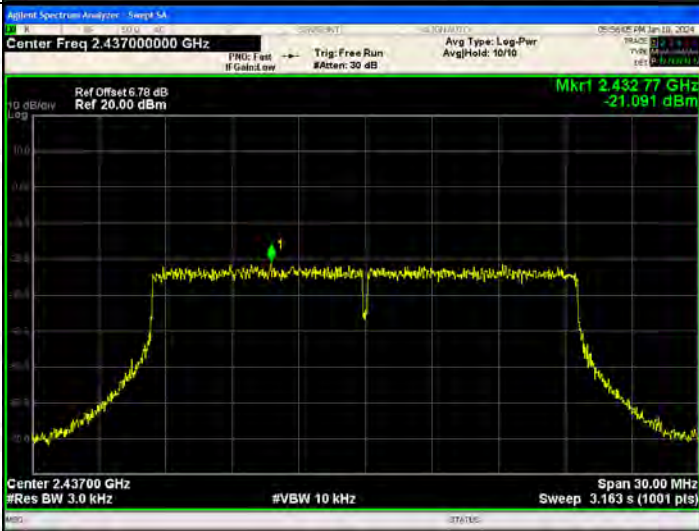
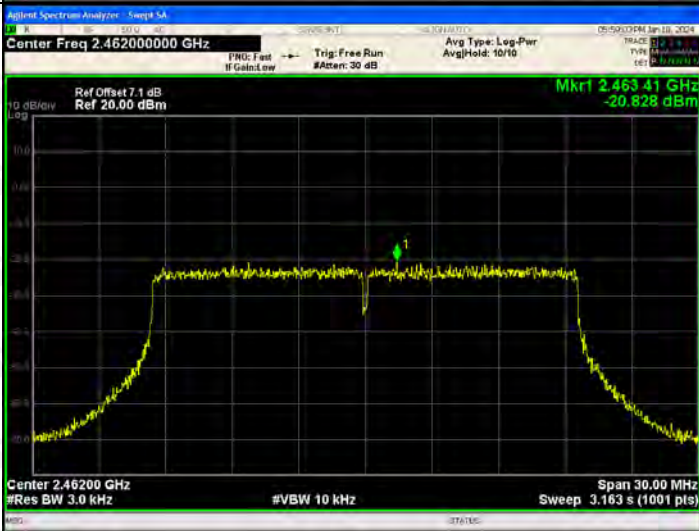


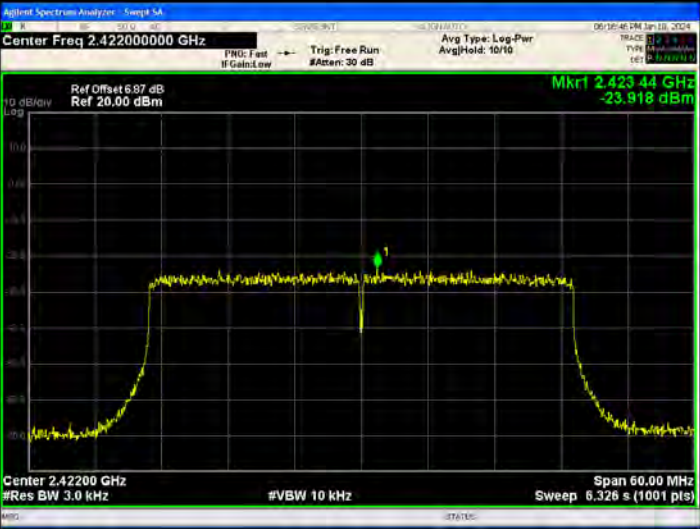
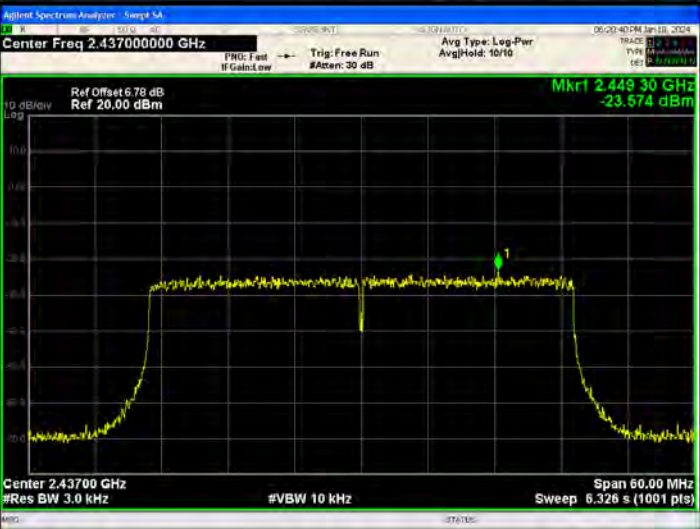
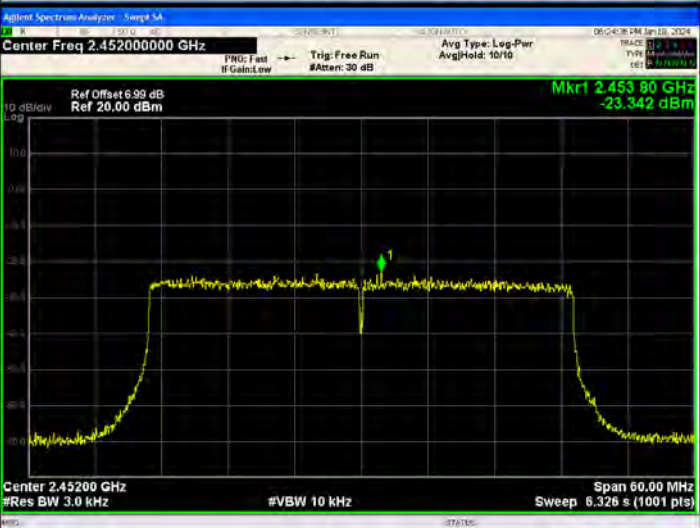
802.11g/HCH



802.11n(HT20)/LCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.41200000 GHz Ref Offset 6.92 dB Ref 20.00 dBm Mkr1 2.411 01 GHz -18.818 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11n(HT20)/MCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.43700000 GHz Ref Offset 6.78 dB Ref 20.00 dBm Mkr1 2.438 99 GHz -17.075 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11n(HT20)/HCH	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.46200000 GHz Ref Offset 7.1 dB Ref 20.00 dBm Mkr1 2.459 45 GHz -18.585 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)

802.11n(HT40)/LCH	 Agilent Spectrum Analyzer - Sweep SA Center Freq 2.42200000 GHz Ref Offset 6.97 dB Ref 20.00 dBm Mkr1 2.42572 GHz -21.472 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 SA Center Freq 2.43700000 GHz Ref Offset 6.78 dB Ref 20.00 dBm Mkr1 2.43262 GHz -21.814 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 SA Center Freq 2.45200000 GHz Ref Offset 6.99 dB Ref 20.00 dBm Mkr1 2.43982 GHz -21.807 dBm Center 2.45200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)

802.11ax(HT20)/LC H	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.41200000 GHz Ref Offset 6.92 dB Ref 20.00 dBm Mkr1 2.407 23 GHz -20.490 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11ax(HT20)/MC H	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.43700000 GHz Ref Offset 6.78 dB Ref 20.00 dBm Mkr1 2.432 77 GHz -21.091 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11ax(HT20)/HC H	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.46200000 GHz Ref Offset 7.1 dB Ref 20.00 dBm Mkr1 2.463 41 GHz -20.828 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)

802.11ax(HT40)/LC H	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.42200000 GHz Ref Offset 6.97 dB Ref 20.00 dBm Mkr1 2.42344 GHz -23.918 dBm Center 2.42200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)
802.11ax(HT40)/MC H	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.43700000 GHz Ref Offset 6.78 dB Ref 20.00 dBm Mkr1 2.44930 GHz -23.574 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)
802.11ax(HT40)/HC H	 Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.45200000 GHz Ref Offset 6.99 dB Ref 20.00 dBm Mkr1 2.45390 GHz -23.342 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.

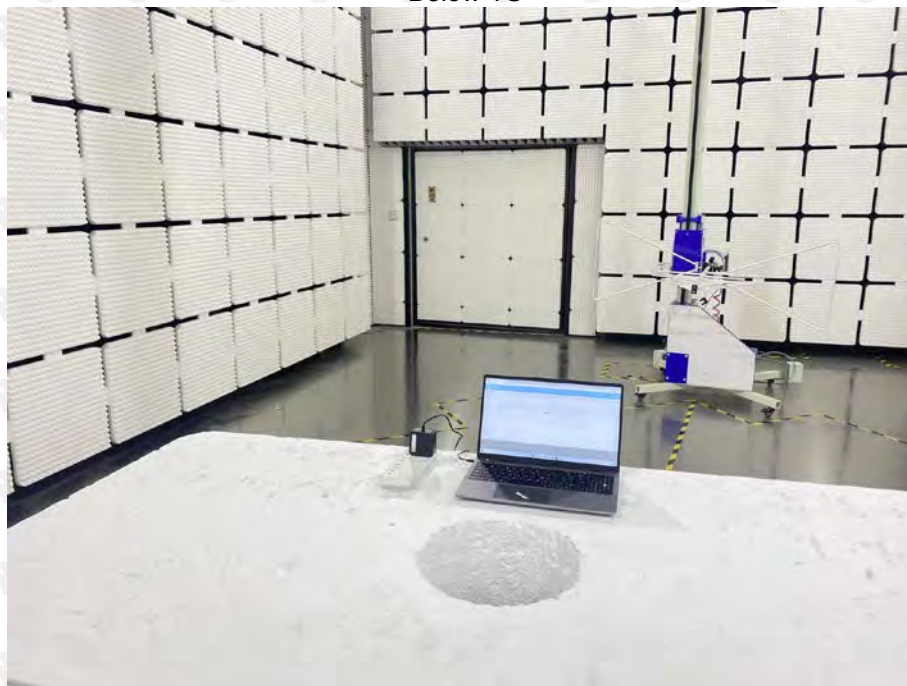
EUT Antenna:

The antenna is FPC antenna and no consideration of replacement. The best case gain of the antenna is Ant1: 3.33dBi, Ant2: 4.17dBi

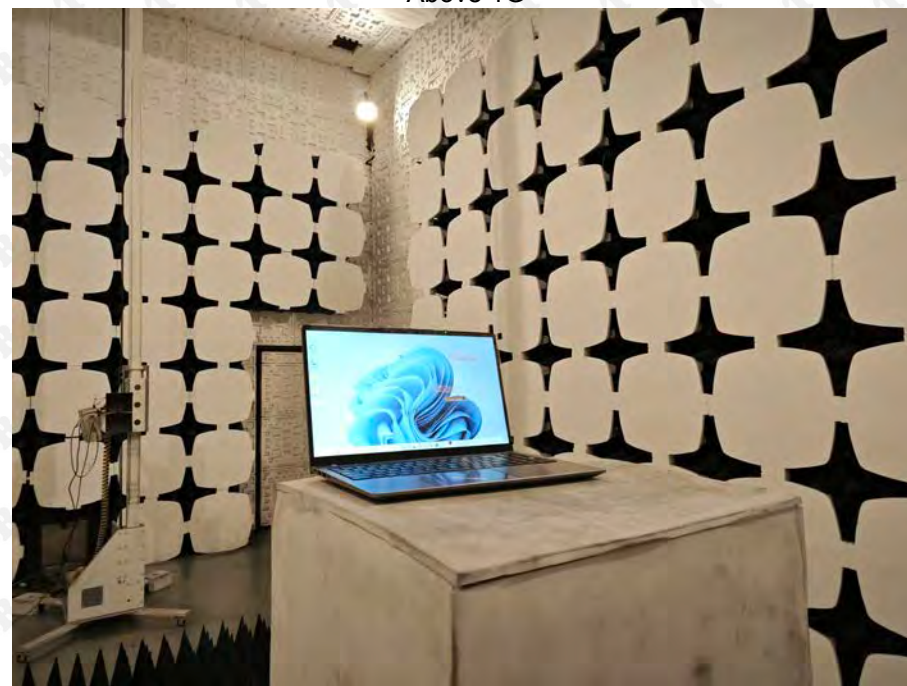
13. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

Below 1G



Above 1G



Conducted Emission



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