RF Test Report

For

Applicant Name:	**EVELAB INSIGHT (SINGAPORE) PTE. LTD.**
Address:	80 Robinson Road #02-00 Singapore 068898
EUT Name:	EveLab Insight Eve Key
Brand Name:	EveLab Insight
Model Number:	MS2201
Series Model Number:	--

Issued By

Company Name:	**BTF Testing Lab (Shenzhen) Co., Ltd.**
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Report Number:	BTF230613R00503
Test Standards:	47 CFR Part 15.247
Test Conclusion:	Pass
FCC ID:	2BAG3MS2201
Test Date:	2023-07-22 to 2023-09-11
Date of Issue:	2023-09-11

Prepared By: Elma.Yang

elma.yang / Project Engineer

Date: 2023-09-11

Approved By: Ryan.CJ

Ryan.CJ / EMC Manager

Date: 2023-09-11

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Revision History		
Version	Issue Date	Revisions Content
R_V0	2023-09-11	Original
Note: Once the revision has been made, then previous versions reports are invalid.		

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

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F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

1 Introduction

1.1 Identification of Testing Laboratory

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

1.2 Identification of the Responsible Testing Location

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130
FCC Registration Number:	518915
Designation Number:	CN1330

1.3 Announcement

(1) The test report reference to the report template version v0.
(2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
(3) The test report is invalid if there is any evidence and/or falsification.
(4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
(5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
(6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

2 Product Information

2.1 Application Information

Company Name:	EVELAB INSIGHT (SINGAPORE) PTE. LTD.
Address:	80 Robinson Road #02-00 Singapore 068898

2.2 Manufacturer Information

Company Name:	EVELAB INSIGHT (SINGAPORE) PTE. LTD.
Address:	80 Robinson Road #02-00 Singapore 068898

2.3 Factory Information

Company Name:	Kingtronics Corporation Of Elec.& Mech. Technology (Zhangzhou) Co.,Ltd.
Address:	No.20 Longchi Road, Longchi Industrial Park, Zhangzhou Taiwanese Investment Zone, Fujian, China

2.4 General Description of Equipment under Test (EUT)

EUT Name:	EveLab Insight Eve Key
Test Model Number:	MS2201
Series Model Number:	--
Description of Model name differentiation:	--

2.5 Technical Information

Power Supply:	DC 3.7V by battery, USB 5V charging
Power Adaptor:	--
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz; 802.11n(HT40): 2422MHz to 2452MHz
Number of Channels:	802.11b/g/n(HT20): 11 Channels; 802.11n(HT40): 7 Channels
Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK); 802.11g: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n(HT20 and HT40): OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type:	ANT 1: FPCB ANT, ANT 2: FPCB ANT
Antenna Gain#:	ANT 1: 3 dBi, ANT 2: 3 dBi
Note: #: The antenna gain provided by the applicant, and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.	

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3 Summary of Test Results

3.1 Test Standards

The tests were performed according to following standards: **47 CFR Part 15.247:** Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

3.2 Uncertainty of Test

Item	Measurement Uncertainty
Conducted Emission (150 kHz-30 MHz)	±2.64dB
The following measurement uncertainty levels have been estimated for tests performed on the EUT 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.	

3.3 Summary of Test Result

Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15.247	Part 15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15.247	47 CFR 15.207(a)	Pass
Occupied Bandwidth	47 CFR Part 15.247	47 CFR 15.247(a)(2)	Pass
Maximum Conducted Output Power	47 CFR Part 15.247	47 CFR 15.247(b)(3)	Pass
Power Spectral Density	47 CFR Part 15.247	47 CFR 15.247(e)	Pass
Emissions in non-restricted frequency bands	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Band edge emissions (Radiated)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions in restricted frequency bands (below 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions in restricted frequency bands (above 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Duty Cycle	ANSI 63.10 Section 11.6	ANSI 63.10 Section 11.6	Pass

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4 Test Configuration

4.1 Test Equipment List

Conducted Emission at AC power line					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Pulse Limiter	SCHWARZBECK	VTSD 9561-F	00953	2022-11-24	2023-11-23
Coaxial Switcher	SCHWARZBECK	CX210	CX210	2022-11-24	2023-11-23
V-LISN	SCHWARZBECK	NSLK 8127	01073	2022-11-24	2023-11-23
LISN	AFJ	LS16/110VAC	16010020076	2023-02-23	2024-02-22
EMI Receiver	ROHDE&SCHWARZ	ESCI3	101422	2022-11-24	2023-11-23

Occupied Bandwidth					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
RFTest software	/	V1.00	/	/	/
RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Maximum Conducted Output Power					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
RFTest software	/	V1.00	/	/	/
RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Power Spectral Density					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
RFTest software	/	V1.00	/	/	/

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RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Emissions in non-restricted frequency bands					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
RFTest software	/	V1.00	/	/	/
RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Band edge emissions (Radiated)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23

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POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ_EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

Emissions in restricted frequency bands (below 1GHz)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ_EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

Emissions in restricted frequency bands (above 1GHz)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23

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POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ_EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

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4.2 Test Auxiliary Equipment

Title	Manufacturer	Model No.	Serial No.
Adapter	Huawei	HW-100225C00	/

4.3 Test Modes

No.	Test Modes	Description
TM1	802.11b mode	Keep the EUT in 802.11b transmitting mode.
TM2	802.11g mode	Keep the EUT in 802.11g transmitting mode.
TM3	802.11n(HT20) mode	Keep the EUT in 802.11n(HT20) transmitting mode.
TM4	802.11n(HT40) mode	Keep the EUT in 802.11n(HT40) transmitting mode.

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5 Evaluation Results (Evaluation)

5.1 Antenna requirement

Test 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 shall be considered sufficient to comply with the provisions of this section.

6 Radio Spectrum Matter Test Results (RF)

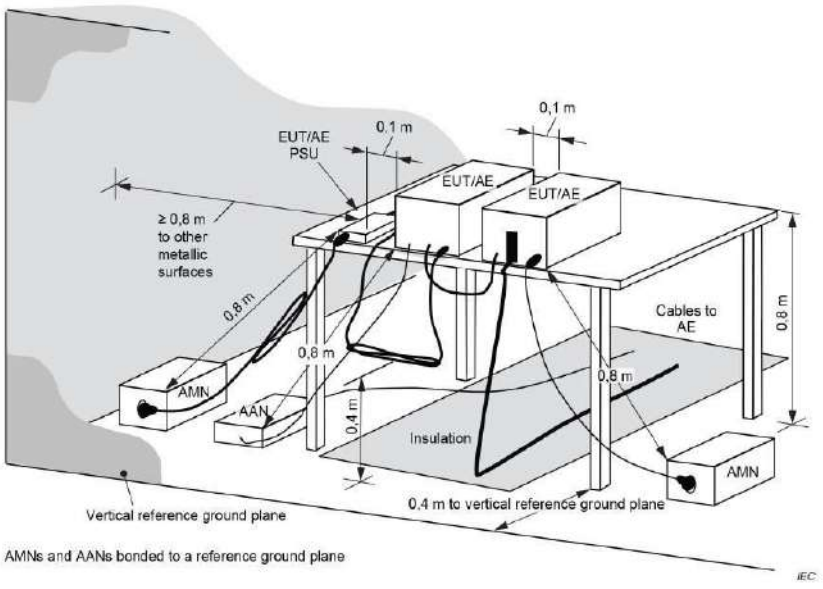
6.1 Conducted Emission at AC power line

Test Requirement:	Except as shown in paragraphs (b)and (c)of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).
Test Method:	Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices
Test Limit:	Frequency of emission (MHz) / Conducted limit (dBμV): Quasi-peak / Average 0.15-0.5: 66 to 56* / 56 to 46* 0.5-5: 56 / 46 5-30: 60 / 50 *Decreases with the logarithm of the frequency.

6.1.1 E.U.T. Operation:

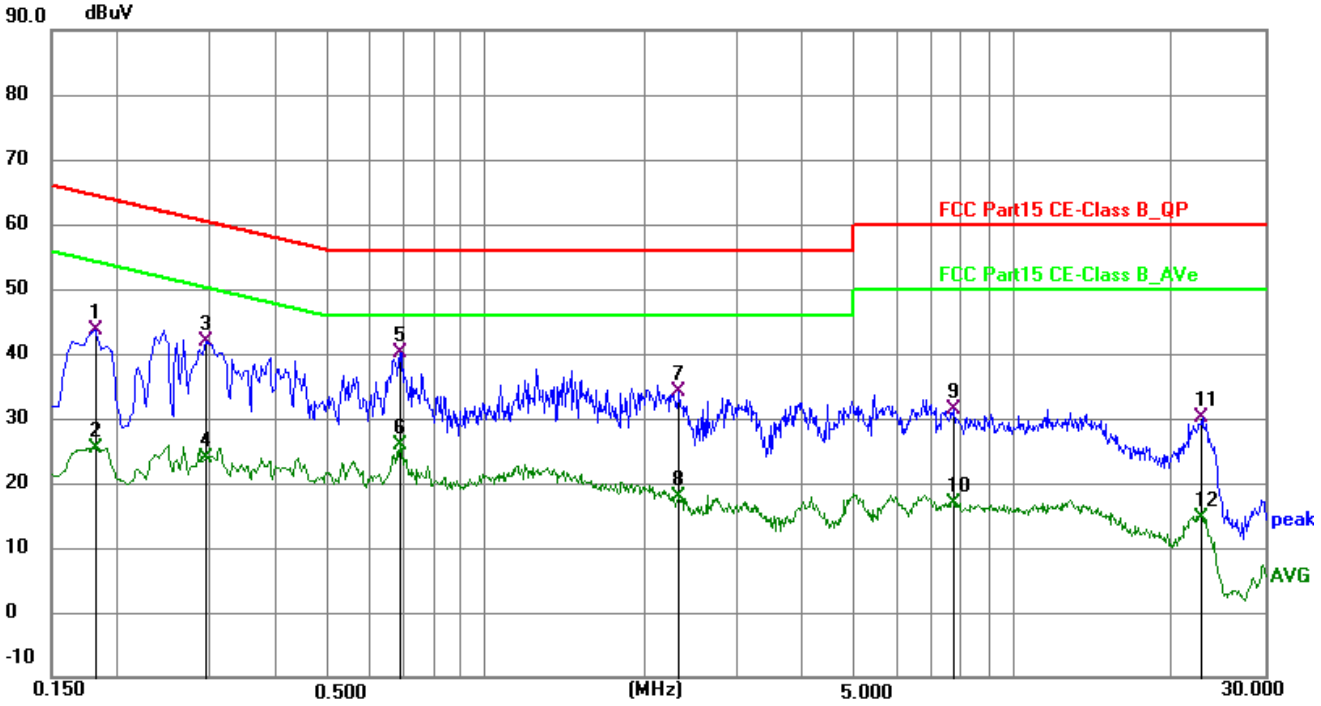
Operating Environment:	
Temperature:	23 °C
Humidity:	50.2 %
Atmospheric Pressure:	1010 mbar

6.1.2 Test Setup Diagram:



6.1.3 Test Data:

TM1 / Line: Line / Band: 2.4G / BW: 20 / CH: M



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1815	34.70	9.02	43.72	64.42	-20.70	QP	P	
2	0.1815	16.41	9.02	25.43	54.42	-28.99	AVG	P	
3	0.2940	32.13	9.75	41.88	60.41	-18.53	QP	P	
4	0.2940	14.22	9.75	23.97	50.41	-26.44	AVG	P	
5 *	0.6855	30.39	9.85	40.24	56.00	-15.76	QP	P	
6	0.6855	15.92	9.85	25.77	46.00	-20.23	AVG	P	
7	2.3235	24.00	10.07	34.07	56.00	-21.93	QP	P	
8	2.3235	7.82	10.07	17.89	46.00	-28.11	AVG	P	
9	7.7100	21.13	10.21	31.34	60.00	-28.66	QP	P	
10	7.7100	6.67	10.21	16.88	50.00	-33.12	AVG	P	
11	22.7939	19.77	10.40	30.17	60.00	-29.83	QP	P	
12	22.7939	4.31	10.40	14.71	50.00	-35.29	AVG	P	

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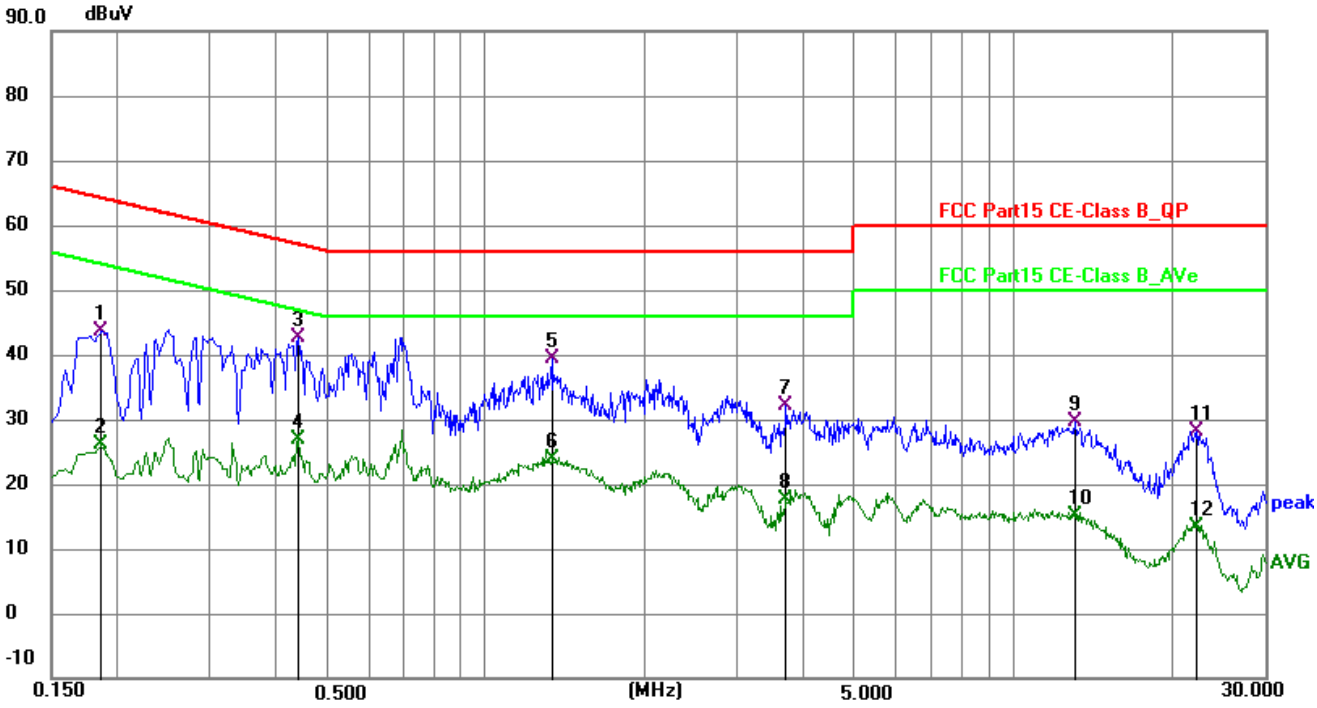
TM1 / Line: Neutral / Band: 2.4G / BW: 20 / CH: M



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1860	34.19	9.39	43.58	64.21	-20.63	QP	P	
2	0.1860	16.79	9.39	26.18	54.21	-28.03	AVG	P	
3 *	0.4380	32.58	9.94	42.52	57.10	-14.58	QP	P	
4	0.4380	16.91	9.94	26.85	47.10	-20.25	AVG	P	
5	1.3335	29.28	10.02	39.30	56.00	-16.70	QP	P	
6	1.3335	13.98	10.02	24.00	46.00	-22.00	AVG	P	
7	3.7005	21.93	10.14	32.07	56.00	-23.93	QP	P	
8	3.7005	7.47	10.14	17.61	46.00	-28.39	AVG	P	
9	13.0695	19.63	10.11	29.74	60.00	-30.26	QP	P	
10	13.0695	5.03	10.11	15.14	50.00	-34.86	AVG	P	
11	22.2764	17.75	10.41	28.16	60.00	-31.84	QP	P	
12	22.2764	2.89	10.41	13.30	50.00	-36.70	AVG	P	

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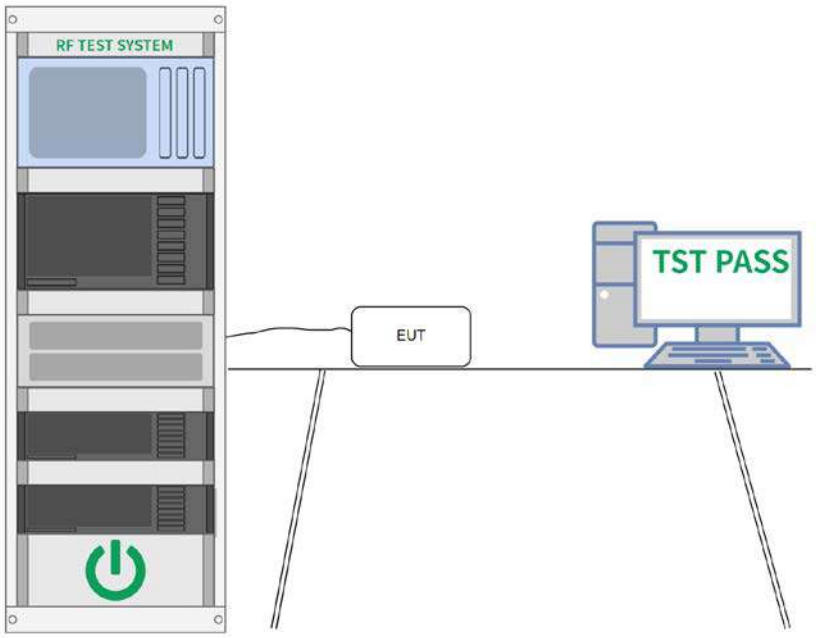
6.2 Occupied Bandwidth

Test Requirement:	Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Test Method:	DTS bandwidth
Test Limit:	Section (a)(2), Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Procedure:	a) Set RBW = 100 kHz. b) Set the VBW >= [3 × RBW]. c) Detector = peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) 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.

6.2.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23.1 °C
Humidity:	49.8 %
Atmospheric Pressure:	1010 mbar

6.2.2 Test Setup Diagram:



6.2.3 Test Data:

Please Refer to Appendix for Details.

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6.3 Maximum Conducted Output Power

Test Requirement:	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Test Method:	Maximum peak conducted output power
Test Limit:	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Procedure:	ANSI C63.10-2013, section 11.9.1 Maximum peak conducted output power

6.3.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23.1 °C
Humidity:	49.8 %
Atmospheric Pressure:	1010 mbar

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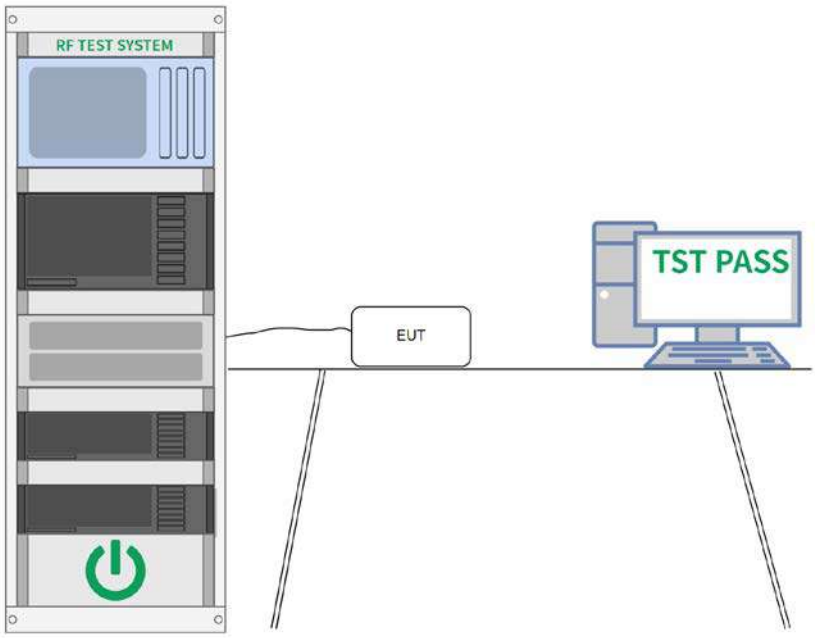
6.3.2 Test Setup Diagram:



6.3.3 Test Data:

Please Refer to Appendix for Details.

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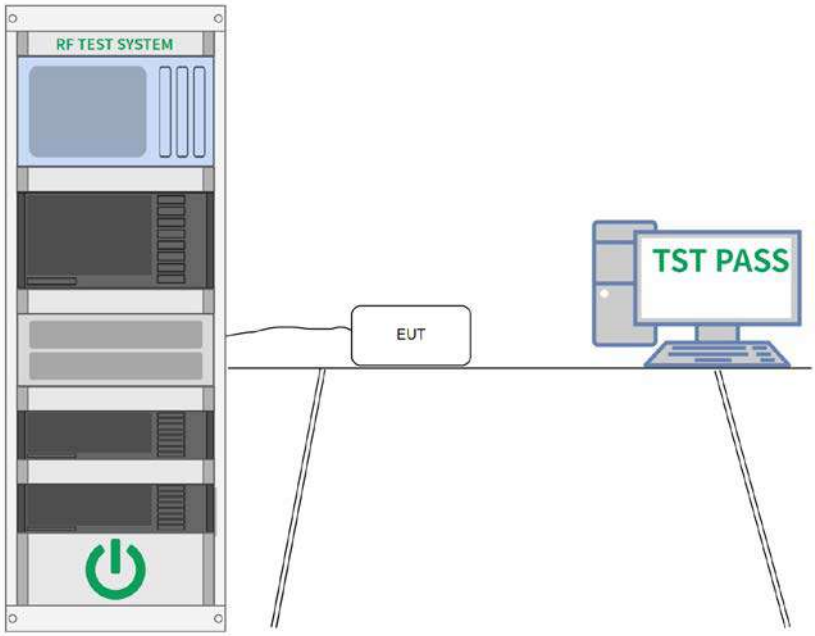
6.4 Power Spectral Density

Test Requirement:	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Test Method:	Maximum power spectral density level in the fundamental emission
Test Limit:	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

6.4.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23.1 °C
Humidity:	49.8 %
Atmospheric Pressure:	1010 mbar

6.4.2 Test Setup Diagram:



6.4.3 Test Data:

Please Refer to Appendix for Details.

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6.5 Emissions in non-restricted frequency bands

Test Requirement:	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.
Test Method:	Emissions in nonrestricted frequency bands
Test 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.
Procedure:	ANSI C63.10-2013 Section 11.11.1, Section 11.11.2, Section 11.11.3

6.5.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23.1 °C
Humidity:	49.8 %
Atmospheric Pressure:	1010 mbar

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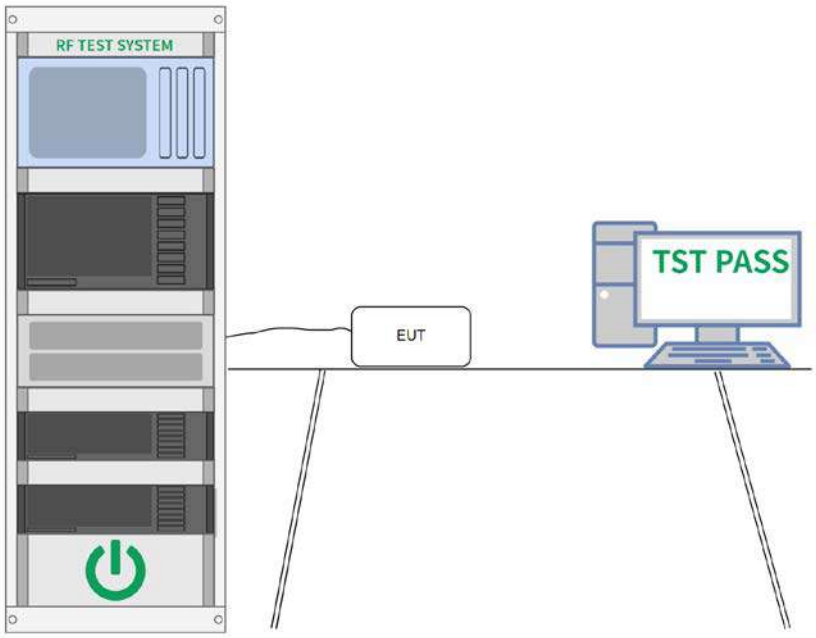
6.5.2 Test Setup Diagram:



6.5.3 Test Data:

Please Refer to Appendix for Details.

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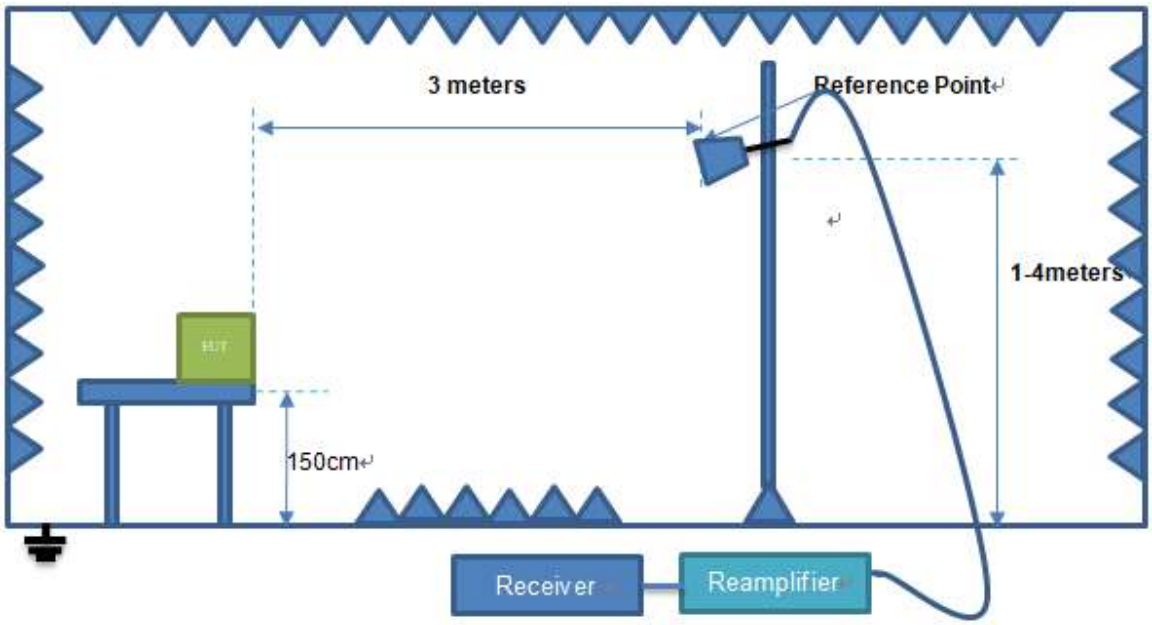
6.6 Band edge emissions (Radiated)

Test Requirement:	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)).`
Test Method:	Radiated emissions tests
Test Limit:	Frequency (MHz) / Field strength (microvolts/meter) / Measurement distance (meters) 0.009-0.490 / 2400/F(kHz) / 300 0.490-1.705 / 24000/F(kHz) / 30 1.705-30.0 / 30 / 30 30-88 / 100 ** / 3 88-216 / 150 ** / 3 216-960 / 200 ** / 3 Above 960 / 500 / 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.
Procedure:	ANSI C63.10-2013 section 6.6.4

6.6.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23 °C
Humidity:	50.2 %
Atmospheric Pressure:	1010 mbar

6.6.2 Test Setup Diagram:



6.6.3 Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	67.59	-30.59	37.00	74.00	-37.00	peak	P
2	2390.000	70.83	-30.49	40.34	74.00	-33.66	peak	P
3	2400.000	74.67	-30.48	44.19	74.00	-29.81	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	67.93	-30.59	37.34	74.00	-36.66	peak	P
2	2390.000	70.03	-30.49	39.54	74.00	-34.46	peak	P
3	2400.000	72.54	-30.48	42.06	74.00	-31.94	peak	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	75.36	-30.39	44.97	74.00	-29.03	peak	P
2	2500.000	71.44	-30.37	41.07	74.00	-32.93	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	73.59	-30.39	43.20	74.00	-30.80	peak	P
2	2500.000	70.62	-30.37	40.25	74.00	-33.75	peak	P

Note: The test data shows ANT. 1 and ANT. 2 Simultaneous emission mode.

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TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	69.89	-30.59	39.30	74.00	-34.70	peak	P
2	2390.000	69.49	-30.49	39.00	74.00	-35.00	peak	P
3	2400.000	74.96	-30.48	44.48	74.00	-29.52	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	67.62	-30.59	37.03	74.00	-36.97	peak	P
2	2390.000	69.44	-30.49	38.95	74.00	-35.05	peak	P
3	2400.000	74.44	-30.48	43.96	74.00	-30.04	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	73.66	-30.39	43.27	74.00	-30.73	peak	P
2	2500.000	72.12	-30.37	41.75	74.00	-32.25	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	72.89	-30.39	42.50	74.00	-31.50	peak	P
2	2500.000	71.22	-30.37	40.85	74.00	-33.15	peak	P

Note: The test data shows ANT. 1 and ANT. 2 Simultaneous emission mode.

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TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	68.05	-30.59	37.46	74.00	-36.54	peak	P
2	2390.000	69.36	-30.49	38.87	74.00	-35.13	peak	P
3	2400.000	74.91	-30.48	44.43	74.00	-29.57	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	69.99	-30.59	39.40	74.00	-34.60	peak	P
2	2390.000	69.19	-30.49	38.70	74.00	-35.30	peak	P
3	2400.000	73.87	-30.48	43.39	74.00	-30.61	peak	P

TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	73.71	-30.39	43.32	74.00	-30.68	peak	P
2	2500.000	70.97	-30.37	40.60	74.00	-33.40	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	75.36	-30.39	44.97	74.00	-29.03	peak	P
2	2500.000	71.01	-30.37	40.64	74.00	-33.36	peak	P

Note: The test data shows ANT. 1 and ANT. 2 Simultaneous emission mode.

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TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	70.83	-30.59	40.24	74.00	-33.76	peak	P
2	2390.000	69.06	-30.49	38.57	74.00	-35.43	peak	P
3	2400.000	74.42	-30.48	43.94	74.00	-30.06	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	67.91	-30.59	37.32	74.00	-36.68	peak	P
2	2390.000	69.01	-30.49	38.52	74.00	-35.48	peak	P
3	2400.000	74.17	-30.48	43.69	74.00	-30.31	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	74.87	-30.39	44.48	74.00	-29.52	peak	P
2	2500.000	71.46	-30.37	41.09	74.00	-32.91	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	72.46	-30.39	42.07	74.00	-31.93	peak	P
2	2500.000	72.76	-30.37	42.39	74.00	-31.61	peak	P

Note: The test data shows ANT. 1 and ANT. 2 Simultaneous emission mode.

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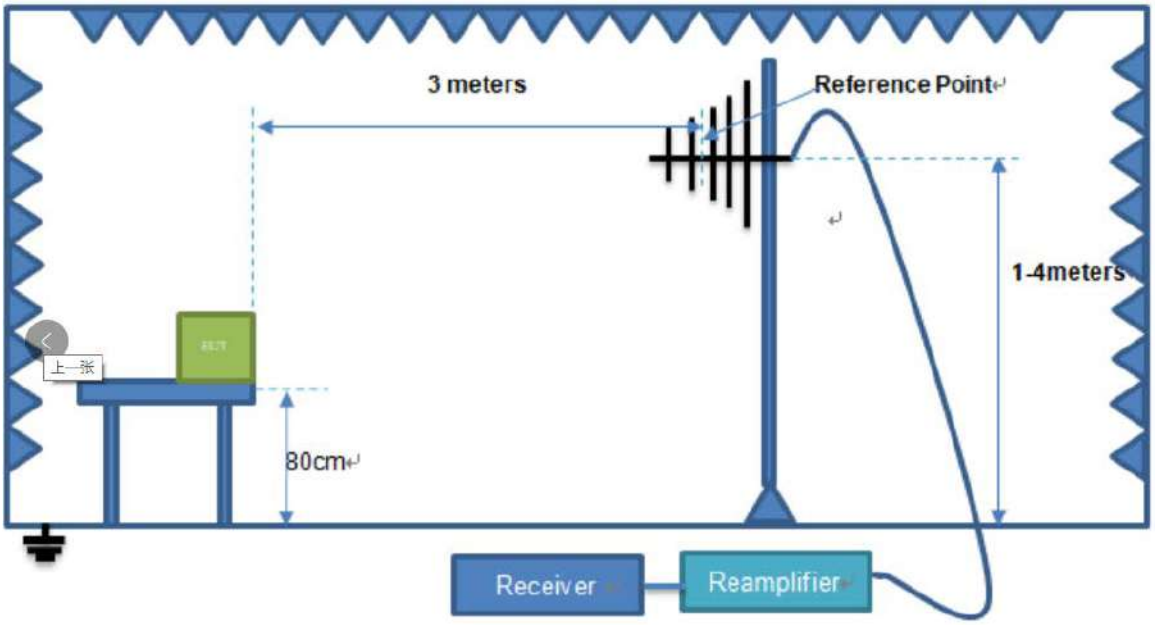
6.7 Emissions in restricted frequency bands (below 1GHz)

Test Requirement:	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)).`
Test Method:	Radiated emissions tests
Test Limit:	Frequency (MHz) / Field strength (microvolts/meter) / Measurement distance (meters) 0.009-0.490 / 2400/F(kHz) / 300 0.490-1.705 / 24000/F(kHz) / 30 1.705-30.0 / 30 / 30 30-88 / 100 ** / 3 88-216 / 150 ** / 3 216-960 / 200 ** / 3 Above 960 / 500 / 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.
Procedure:	ANSI C63.10-2013 section 6.6.4

6.7.1 E.U.T. Operation:

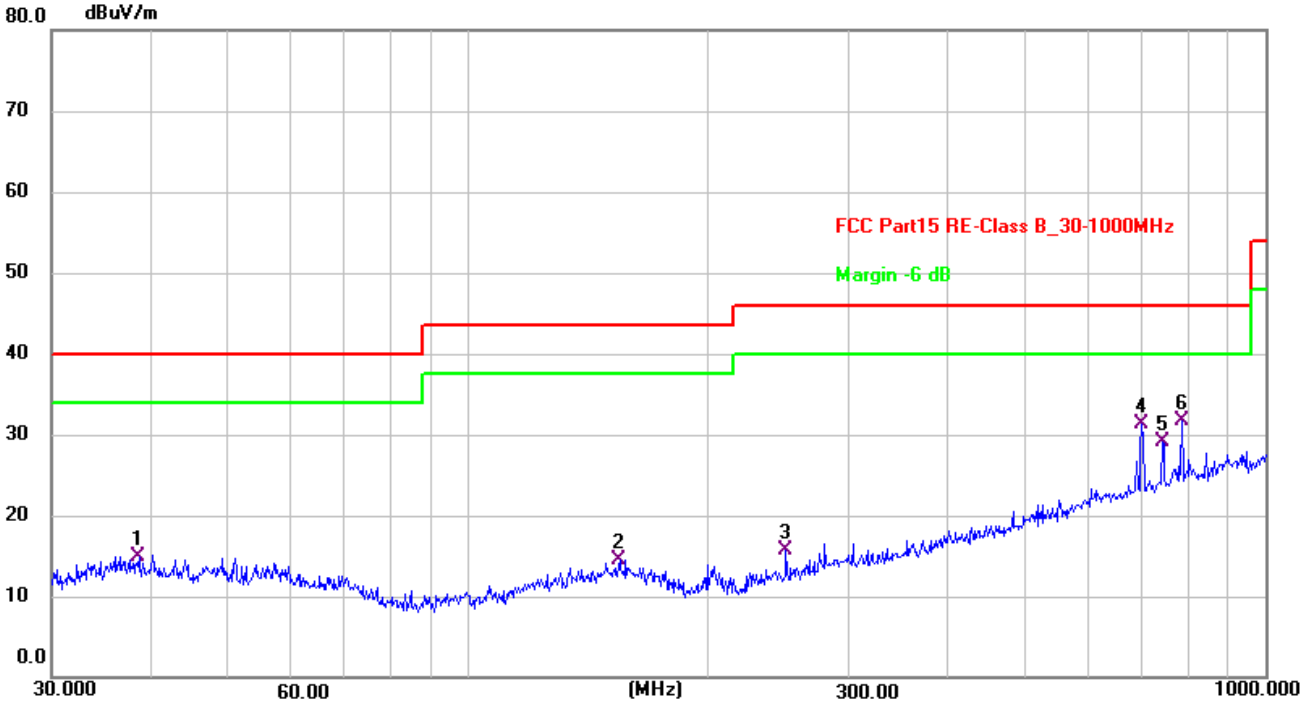
Operating Environment:	
Temperature:	23 °C
Humidity:	50.2 %
Atmospheric Pressure:	1010 mbar

6.7.2 Test Setup Diagram:



6.7.3 Test Data:

Note: All the mode have been tested, and only the worst mode are in the report
The test data shows ANT. 1 and ANT. 2 Simultaneous emission mode.
TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	38.6160	23.16	-8.30	14.86	40.00	-25.14	QP	100	21	P	
2	154.8204	23.33	-8.89	14.44	43.50	-29.06	QP	100	352	P	
3	250.3012	25.54	-9.79	15.75	46.00	-30.25	QP	100	31	P	
4	699.3046	30.59	0.66	31.25	46.00	-14.75	QP	100	284	P	
5	742.2587	28.26	0.80	29.06	46.00	-16.94	QP	100	204	P	
6 *	785.0935	29.71	1.99	31.70	46.00	-14.30	QP	100	21	P	

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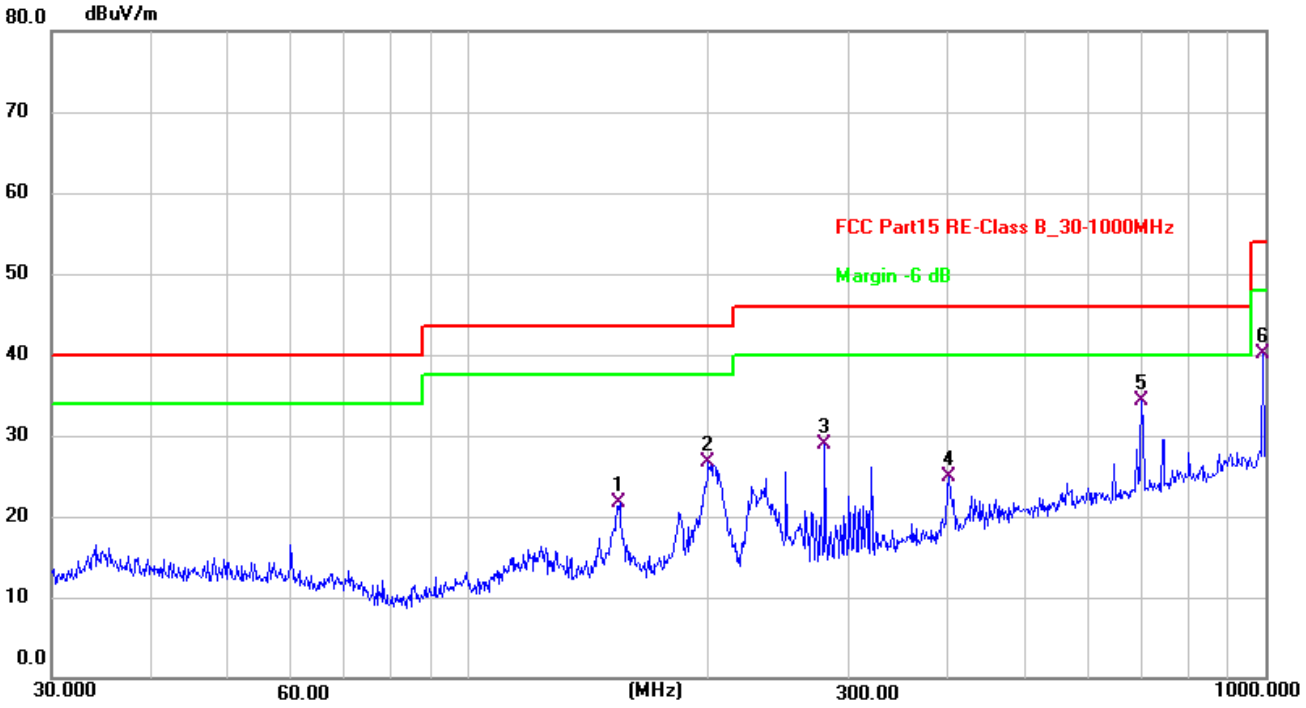
TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	154.8204	30.66	-8.89	21.77	43.50	-21.73	QP	100	257	P	
2	199.9856	38.82	-12.04	26.78	43.50	-16.72	QP	100	56	P	
3	280.0237	37.68	-8.84	28.84	46.00	-17.16	QP	100	257	P	
4	400.4319	30.83	-5.86	24.97	46.00	-21.03	QP	100	217	P	
5 *	699.3046	33.71	0.66	34.37	46.00	-11.63	QP	100	106	P	
6	993.0114	35.62	4.52	40.14	54.00	-13.86	QP	100	166	P	

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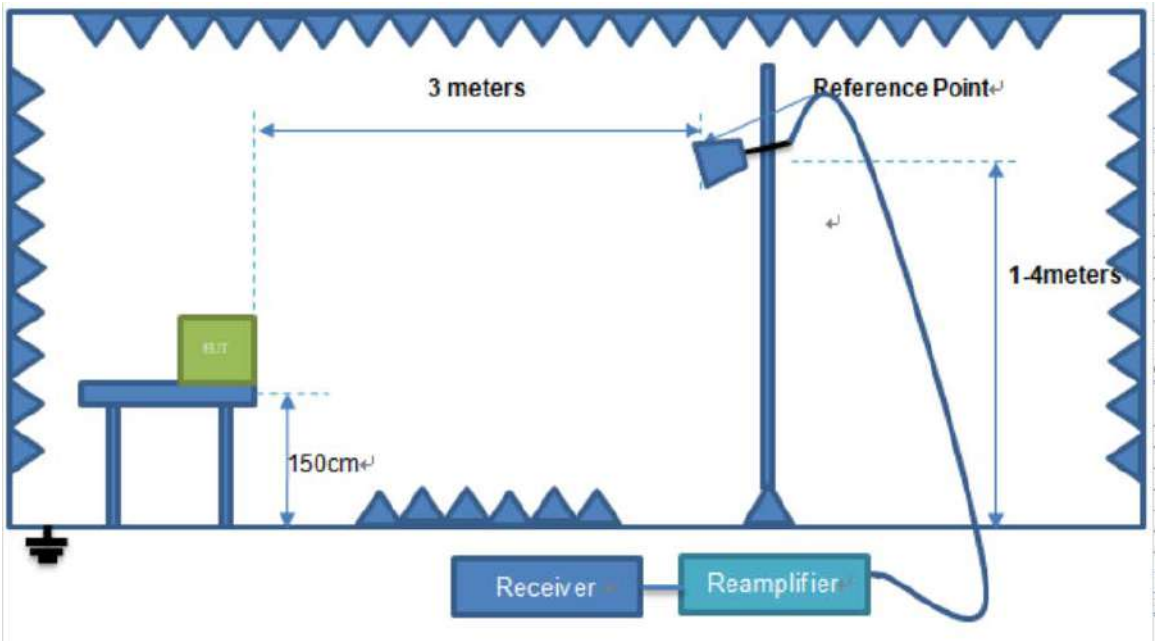
6.8 Emissions in restricted frequency bands (above 1GHz)

Test Requirement:	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)).`
Test Method:	Radiated emissions tests
Test Limit:	Frequency (MHz) / Field strength (microvolts/meter) / Measurement distance (meters) 0.009-0.490 / 2400/F(kHz) / 300 0.490-1.705 / 24000/F(kHz) / 30 1.705-30.0 / 30 / 30 30-88 / 100 ** / 3 88-216 / 150 ** / 3 216-960 / 200 ** / 3 Above 960 / 500 / 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.
Procedure:	ANSI C63.10-2013 section 6.6.4

6.8.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23 °C
Humidity:	50.2 %
Atmospheric Pressure:	1010 mbar

6.8.2 Test Setup Diagram:



6.8.3 Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4824.000	87.78	-27.92	59.86	74.00	-14.14	peak	P
2	4824.000	71.21	-27.92	43.29	54.00	-10.71	AVG	P
3	7236.000	75.07	-24.85	50.22	74.00	-23.78	peak	P
4	9648.000	76.96	-23.49	53.47	74.00	-20.53	peak	P
5	12060.000	73.79	-22.16	51.63	74.00	-22.37	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4824.000	83.67	-27.92	55.75	74.00	-18.25	peak	P
2	4824.000	68.81	-27.92	40.89	54.00	-13.11	AVG	P
3	7236.000	75.65	-24.85	50.80	74.00	-23.20	peak	P
4	9648.000	76.25	-23.49	52.76	74.00	-21.24	peak	P
5	12060.000	73.05	-22.16	50.89	74.00	-23.11	peak	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4874.000	86.82	-27.67	59.15	74.00	-14.85	peak	P
2	4874.000	74.97	-27.67	47.30	54.00	-6.70	AVG	P
3	7311.000	76.74	-24.84	51.90	74.00	-22.10	peak	P
4	9748.000	74.61	-24.12	50.49	74.00	-23.51	peak	P
5	12185.000	74.92	-22.21	52.71	74.00	-21.29	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4874.000	82.72	-27.67	55.05	74.00	-18.95	peak	P
2	4874.000	73.51	-27.67	45.84	54.00	-8.16	AVG	P
3	7311.000	74.86	-24.84	50.02	74.00	-23.98	peak	P
4	9748.000	74.74	-24.12	50.62	74.00	-23.38	peak	P
5	12185.000	72.75	-22.21	50.54	74.00	-23.46	peak	P

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TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4924.000	82.54	-27.41	55.13	74.00	-18.87	peak	P
2	4924.000	72.08	-27.41	44.67	54.00	-9.33	AVG	P
3	7386.000	75.06	-24.79	50.27	74.00	-23.73	peak	P
4	9848z000	75.92	-23.95	51.97	74.00	-22.03	peak	P
5	12310.000	73.76	-21.71	52.05	74.00	-21.95	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4924.000	85.61	-27.41	58.20	74.00	-15.80	peak	P
2	4924.000	72.32	-27.41	44.91	54.00	-9.09	AVG	P
3	7386.000	76.77	-24.79	51.98	74.00	-22.02	peak	P
4	9848.000	75.06	-23.95	51.11	74.00	-22.89	peak	P
5	12310.000	72.01	-21.71	50.30	74.00	-23.70	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4824.000	82.21	-27.92	54.29	74.00	-19.71	peak	P
2	4824.000	74.18	-27.92	46.26	54.00	-7.74	AVG	P
3	7236.000	74.13	-24.85	49.28	74.00	-24.72	peak	P
4	9648.000	74.02	-23.49	50.53	74.00	-23.47	peak	P
5	12060.000	73.80	-22.16	51.64	74.00	-22.36	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4824.000	87.76	-27.92	59.84	74.00	-14.16	peak	P
2	4824.000	73.75	-27.92	45.83	54.00	-8.17	AVG	P
3	7236.000	76.56	-24.85	51.71	74.00	-22.29	peak	P
4	9648.000	75.71	-23.49	52.22	74.00	-21.78	peak	P
5	12060.000	72.70	-22.16	50.54	74.00	-23.46	peak	P

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TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4874.000	82.29	-27.67	54.62	74.00	-19.38	peak	P
2	4874.000	68.55	-27.67	40.88	54.00	-13.12	AVG	P
3	7311.000	75.48	-24.84	50.64	74.00	-23.36	peak	P
4	9748.000	75.23	-24.12	51.11	74.00	-22.89	peak	P
5	12185.000	72.81	-22.21	50.60	74.00	-23.40	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4874.000	83.00	-27.67	55.33	74.00	-18.67	peak	P
2	4874.000	68.72	-27.67	41.05	54.00	-12.95	AVG	P
3	7311.000	74.42	-24.84	49.58	74.00	-24.42	peak	P
4	9748.000	76.54	-24.12	52.42	74.00	-21.58	peak	P
5	12185.000	74.09	-22.21	51.88	74.00	-22.12	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4924.000	86.21	-27.41	58.80	74.00	-15.20	peak	P
2	4924.000	72.96	-27.41	45.55	54.00	-8.45	AVG	P
3	7386.000	76.75	-24.79	51.96	74.00	-22.04	peak	P
4	9848.000	76.73	-23.95	52.78	74.00	-21.22	peak	P
5	12310.000	73.24	-21.71	51.53	74.00	-22.47	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4924.000	83.57	-27.41	56.16	74.00	-17.84	peak	P
2	4924.000	69.65	-27.41	42.24	54.00	-11.76	AVG	P
3	7386.000	75.76	-24.79	50.97	74.00	-23.03	peak	P
4	9848.000	74.95	-23.95	51.00	74.00	-23.00	peak	P
5	12310.000	73.34	-21.71	51.63	74.00	-22.37	peak	P

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TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4824.000	87.64	-27.92	59.72	74.00	-14.28	peak	P
2	4824.000	71.98	-27.92	44.06	54.00	-9.94	AVG	P
3	7236.000	75.31	-24.85	50.46	74.00	-23.54	peak	P
4	9648.000	75.34	-23.49	51.85	74.00	-22.15	peak	P
5	12060.000	73.45	-22.16	51.29	74.00	-22.71	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4824.000	84.94	-27.92	57.02	74.00	-16.98	peak	P
2	4824.000	70.65	-27.92	42.73	54.00	-11.27	AVG	P
3	7236.000	75.50	-24.85	50.65	74.00	-23.35	peak	P
4	9648.000	74.76	-23.49	51.27	74.00	-22.73	peak	P
5	12060.000	73.58	-22.16	51.42	74.00	-22.58	peak	P

TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4874.000	83.29	-27.67	55.62	74.00	-18.38	peak	P
2	4874.000	74.35	-27.67	46.68	54.00	-7.32	AVG	P
3	7311.000	74.83	-24.84	49.99	74.00	-24.01	peak	P
4	9748.000	75.49	-24.12	51.37	74.00	-22.63	peak	P
5	12185.000	72.79	-22.21	50.58	74.00	-23.42	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4874.000	83.15	-27.67	55.48	74.00	-18.52	peak	P
2	4874.000	74.50	-27.67	46.83	54.00	-7.17	AVG	P
3	7311.000	74.11	-24.84	49.27	74.00	-24.73	peak	P
4	9748.000	75.80	-24.12	51.68	74.00	-22.32	peak	P
5	12185.000	74.24	-22.21	52.03	74.00	-21.97	peak	P

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TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4924.000	84.76	-27.41	57.35	74.00	-16.65	peak	P
2	4924.000	70.70	-27.41	43.29	54.00	-10.71	AVG	P
3	7386.000	76.95	-24.79	52.16	74.00	-21.84	peak	P
4	9848.000	75.92	-23.95	51.97	74.00	-22.03	peak	P
5	12310.000	74.86	-21.71	53.15	74.00	-20.85	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4924.000	84.94	-27.41	57.53	74.00	-16.47	peak	P
2	4924.000	70.57	-27.41	43.16	54.00	-10.84	AVG	P
3	7386.000	74.72	-24.79	49.93	74.00	-24.07	peak	P
4	9848.000	75.75	-23.95	51.80	74.00	-22.20	peak	P
5	12310.000	73.53	-21.71	51.82	74.00	-22.18	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4844.000	82.56	-27.92	54.64	74.00	-19.36	peak	P
2	4844.000	72.63	-27.92	44.71	54.00	-9.29	AVG	P
3	7266.000	74.99	-24.85	50.14	74.00	-23.86	peak	P
4	9688.000	74.65	-23.49	51.16	74.00	-22.84	peak	P
5	12110.000	72.83	-22.16	50.67	74.00	-23.33	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4844.000	87.40	-27.92	59.48	74.00	-14.52	peak	P
2	4844.000	73.72	-27.92	45.80	54.00	-8.20	AVG	P
3	7266.000	76.78	-24.85	51.93	74.00	-22.07	peak	P
4	9688.000	74.99	-23.49	51.50	74.00	-22.50	peak	P
5	12110.000	72.70	-22.16	50.54	74.00	-23.46	peak	P

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TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4874.000	83.09	-27.67	55.42	74.00	-18.58	peak	P
2	4874.000	73.95	-27.67	46.28	54.00	-7.72	AVG	P
3	7311.000	76.41	-24.84	51.57	74.00	-22.43	peak	P
4	9748.000	76.09	-24.12	51.97	74.00	-22.03	peak	P
5	12185.000	73.46	-22.21	51.25	74.00	-22.75	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4874.000	83.02	-27.67	55.35	74.00	-18.65	peak	P
2	4874.000	68.93	-27.67	41.26	54.00	-12.74	AVG	P
3	7311.000	74.31	-24.84	49.47	74.00	-24.53	peak	P
4	9748.000	75.39	-24.12	51.27	74.00	-22.73	peak	P
5	12185.000	73.58	-22.21	51.37	74.00	-22.63	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4904.000	86.56	-27.41	59.15	74.00	-14.85	peak	P
2	4904.000	71.29	-27.41	43.88	54.00	-10.12	AVG	P
3	7356.000	76.40	-24.79	51.61	74.00	-22.39	peak	P
4	9808.000	75.59	-23.95	51.64	74.00	-22.36	peak	P
5	12260.000	74.96	-21.71	53.25	74.00	-20.75	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4904.000	86.79	-27.41	59.38	74.00	-14.62	peak	P
2	4904.000	73.04	-27.41	45.63	54.00	-8.37	AVG	P
3	7356.000	76.76	-24.79	51.97	74.00	-22.03	peak	P
4	9808.000	74.27	-23.95	50.32	74.00	-23.68	peak	P
5	12260.000	74.20	-21.71	52.49	74.00	-21.51	peak	P

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6.9 Duty Cycle

Test Requirement:	The transmitter output is connected to the Spectrum Analyzer. We tested according to the zero-span measurement method, 6.0(b) in KDB 558074 D01 DTS Meas Guidance v05r02.
Test Method:	The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission. Set RBW ⩾ OBW if possible; otherwise, set RBW to the largest available value. Set VBW ⩾ RBW. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if T ⩽ 16.7 microseconds.) The transmitter output is connected to the Spectrum Analyzer. We tested according to the zero-span measurement method, 6.0(b) in KDB 558074 D01 DTS Meas Guidance v05r02. The largest availble value of RBW is 8 MHz and VBW is 50 MHz. The zero-span method of measuring duty cycle shall not be used if T ⩽ 6.25 microseconds. (50/6.25 = 8) The zero-span method was used because all measured T data are > 6.25 microseconds and both RBW and VBW are > 50/T. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. The EUT was operating in controlled its channel. Use the following spectrum analyzer settings: Span = Zero Span RBW = 8MHz (the largest available value) VBW = 50MHz (≥RBW) Number of points in Sweep >100 Detector function = peak Trace = Clear write Measure Total and Ton Calculate Duty Cycle = Ton / Total
Test Limit:	No limit requirement.
Procedure:	ANSI C63.10-2013 section 6.6.4

6.9.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.1 °C
Humidity:	46.3 %
Atmospheric Pressure:	1010 mbar

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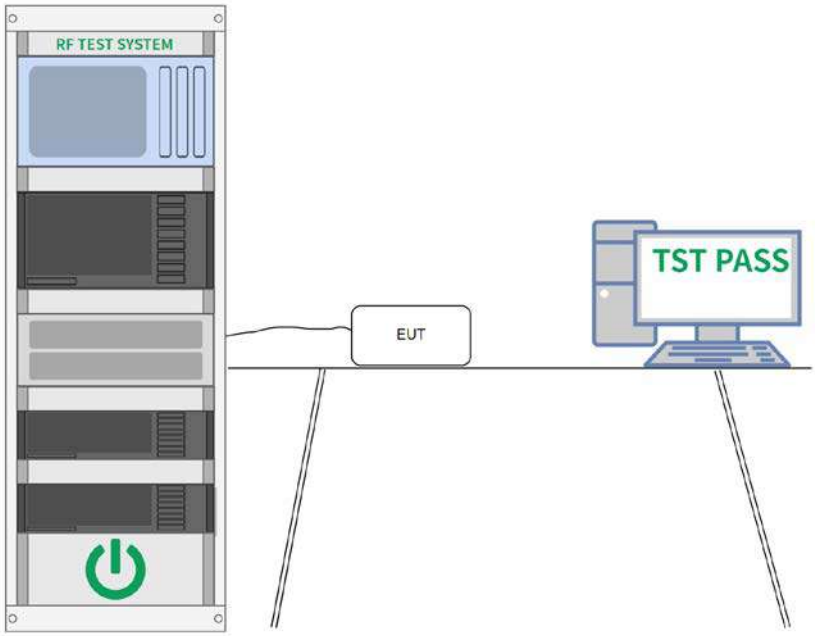
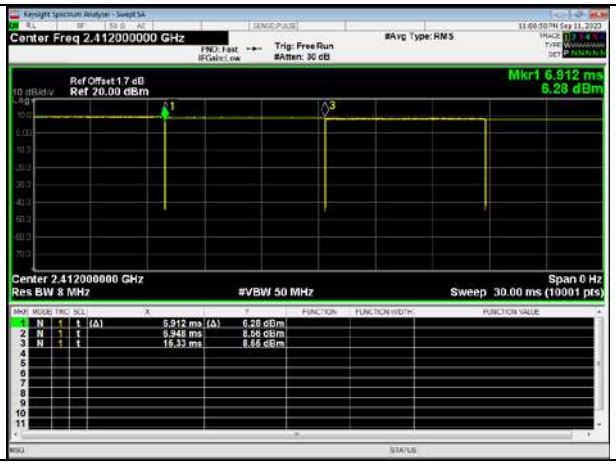
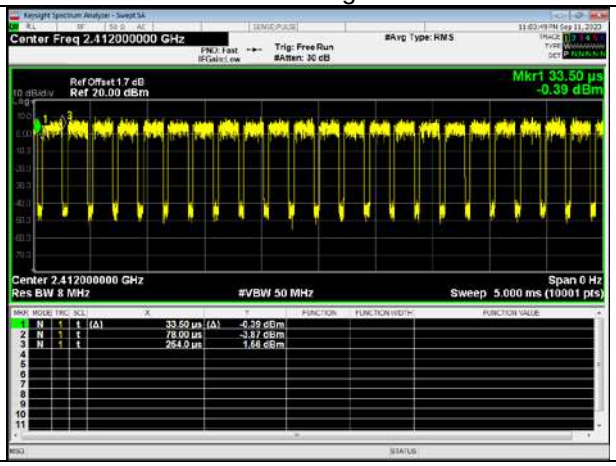
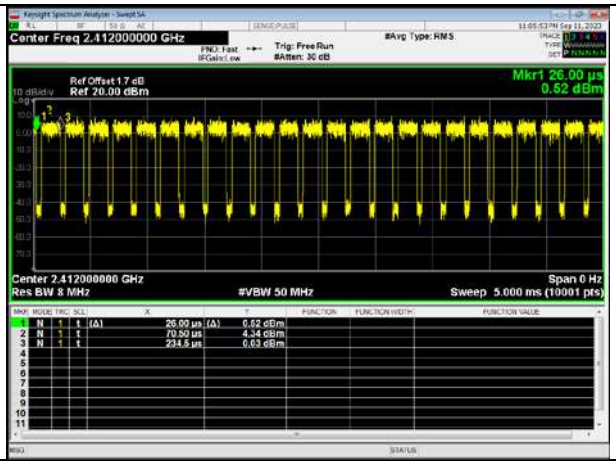
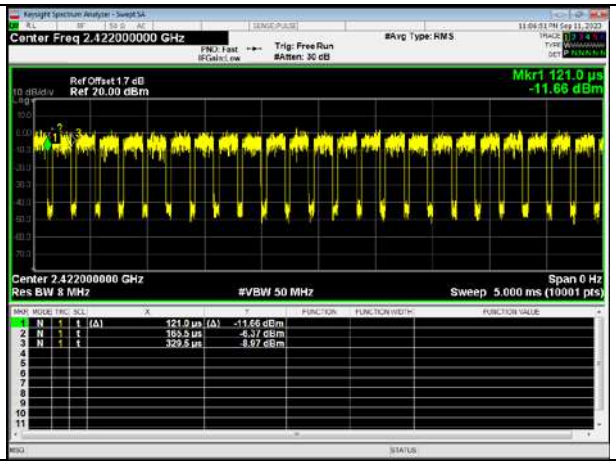
6.9.2 Test Setup Diagram:



6.9.3 Test Graph

802.11b	802.11g
	
802.11n-HT20	802.11n-HT40
	

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Appendix

1. Bandwidth

1.1 OBW

1.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz) Result	Verdict
802.11b	SISO	2412	1	14.385	Pass
		2437	1	14.342	Pass
		2462	1	14.324	Pass
802.11g	SISO	2412	1	16.277	Pass
		2437	1	16.279	Pass
		2462	1	16.263	Pass
802.11n (HT20)	SISO	2412	1	17.476	Pass
		2437	1	17.437	Pass
		2462	1	17.448	Pass
802.11n (HT40)	SISO	2422	1	35.656	Pass
		2437	1	35.787	Pass
		2452	1	35.701	Pass

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz) Result	Verdict
802.11b	SISO	2412	2	14.333	Pass
		2437	2	14.377	Pass
		2462	2	14.29	Pass
802.11g	SISO	2412	2	16.219	Pass
		2437	2	16.3	Pass
		2462	2	16.312	Pass
802.11n (HT20)	SISO	2412	2	17.434	Pass
		2437	2	17.528	Pass
		2462	2	17.463	Pass
802.11n (HT40)	SISO	2422	2	35.63	Pass
		2437	2	35.804	Pass
		2452	2	35.706	Pass

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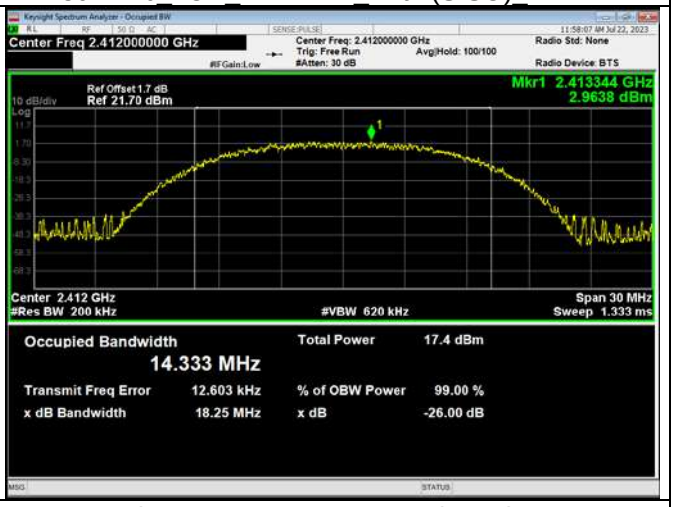
2.1.2 Test Graph

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

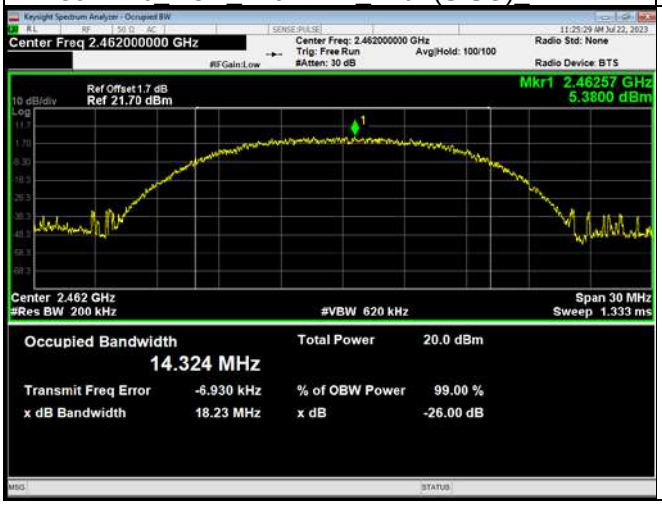
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV

802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV

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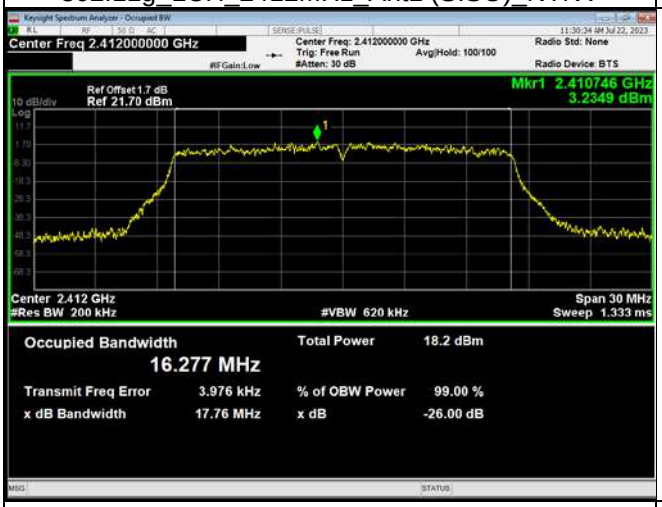
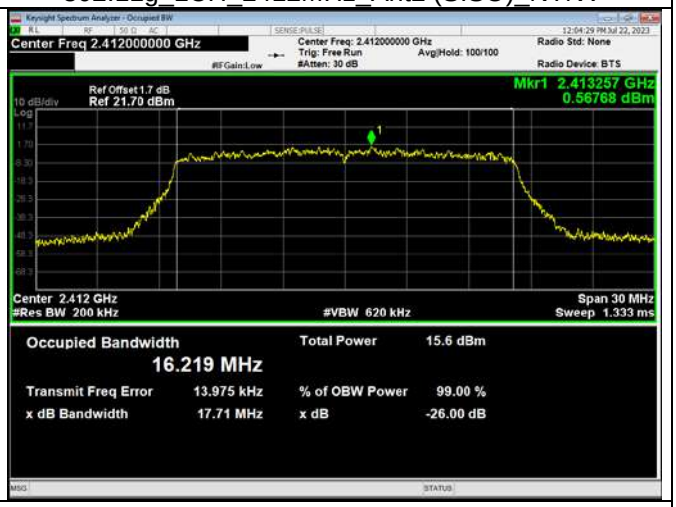
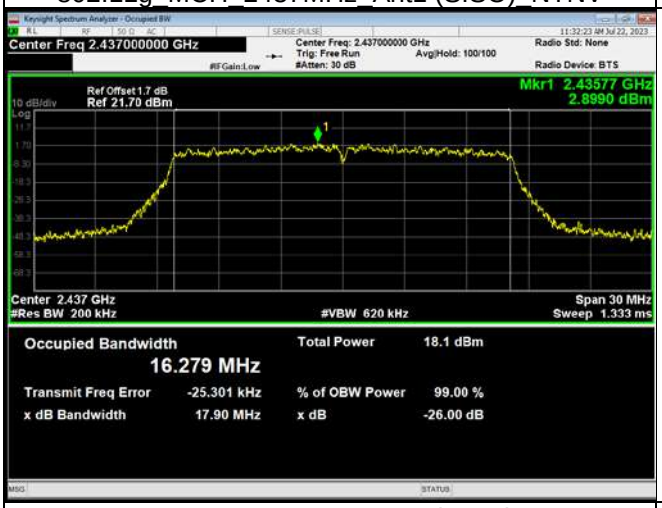
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV

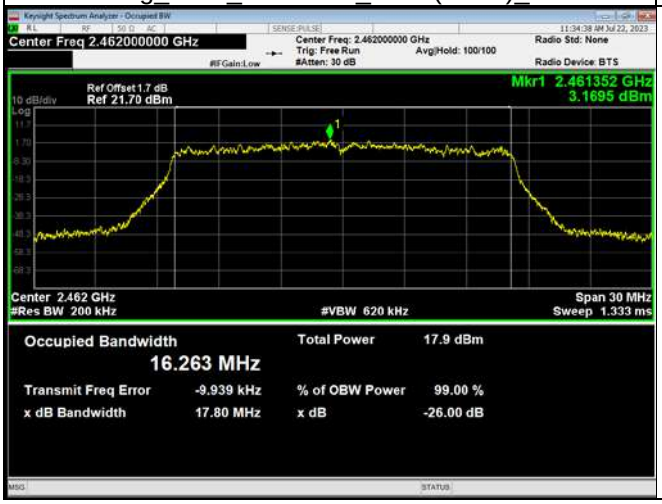


802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

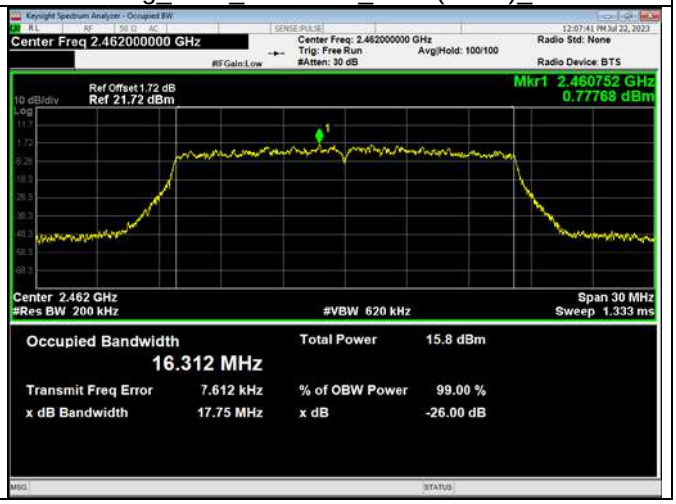


802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



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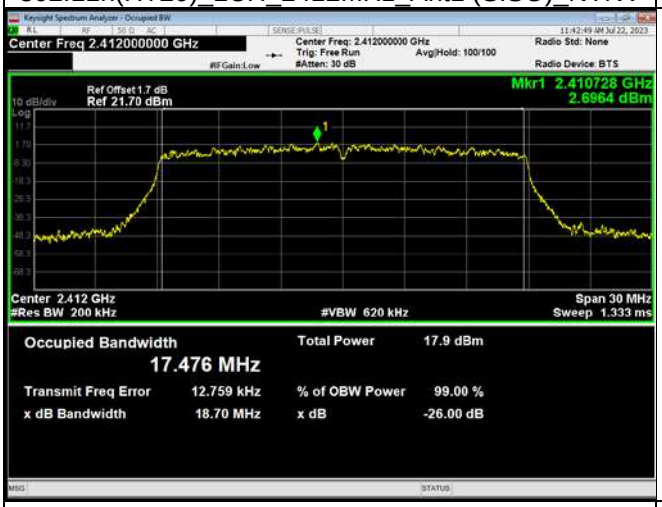
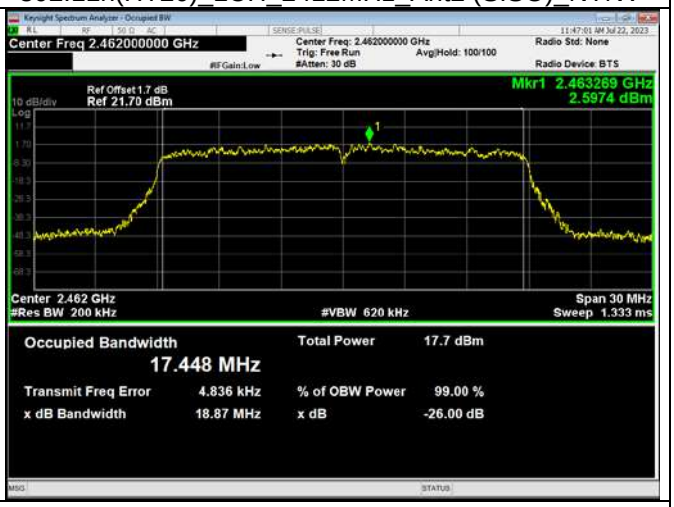
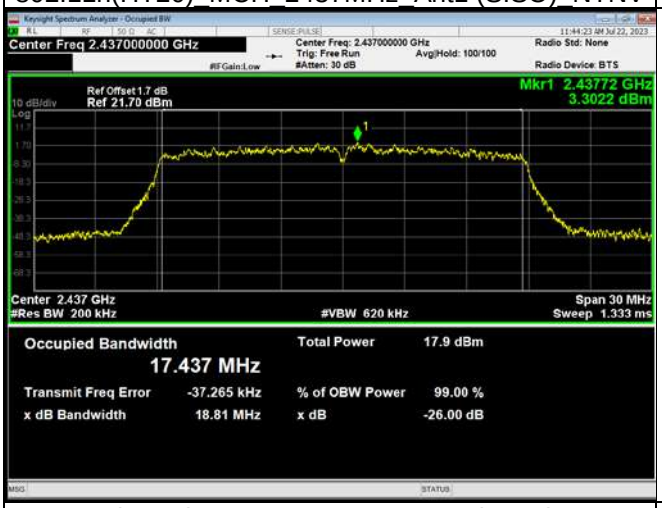
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



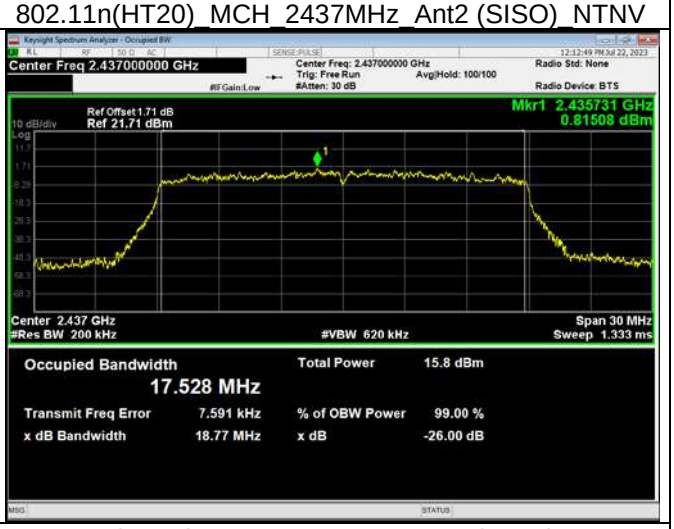
802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



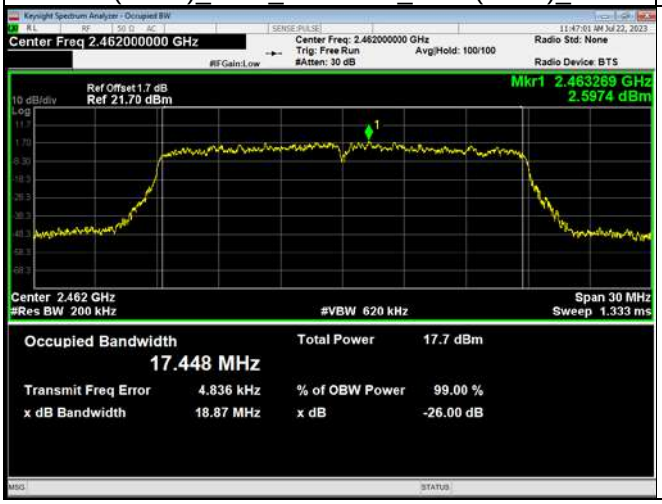
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



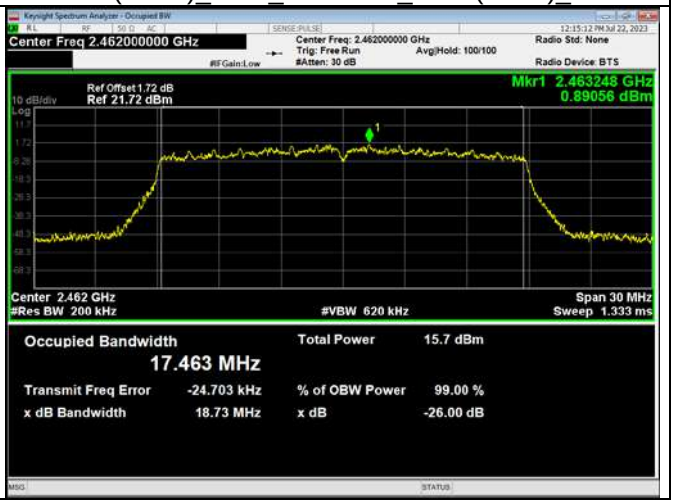
802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



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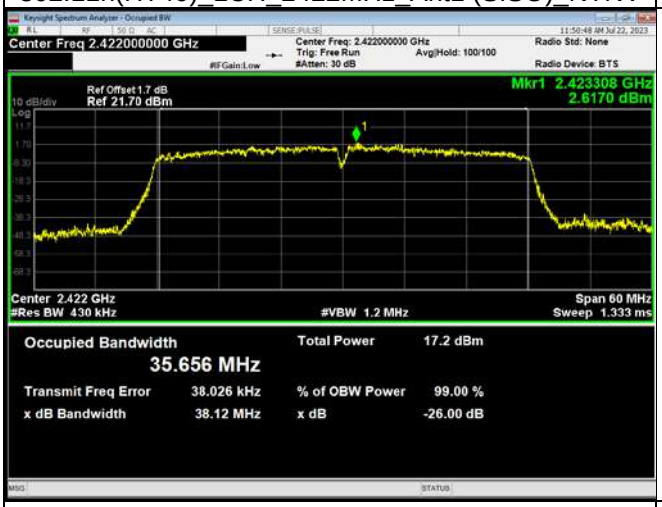
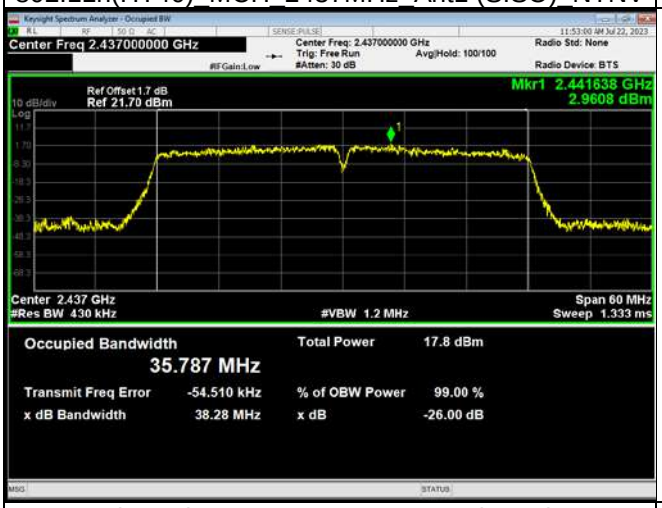
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

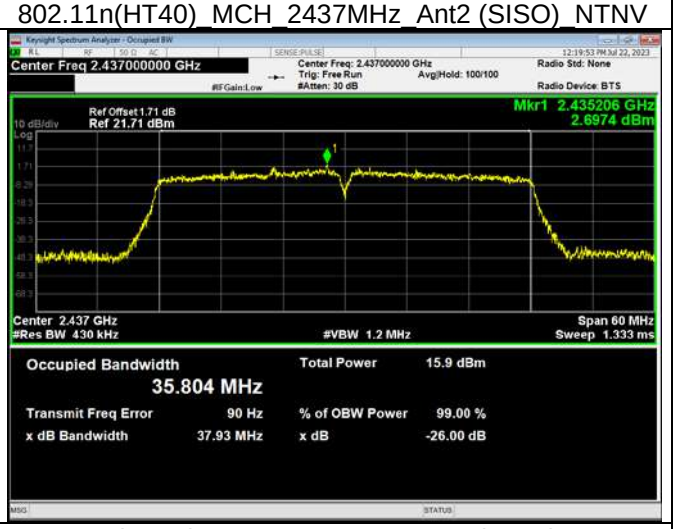


802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV

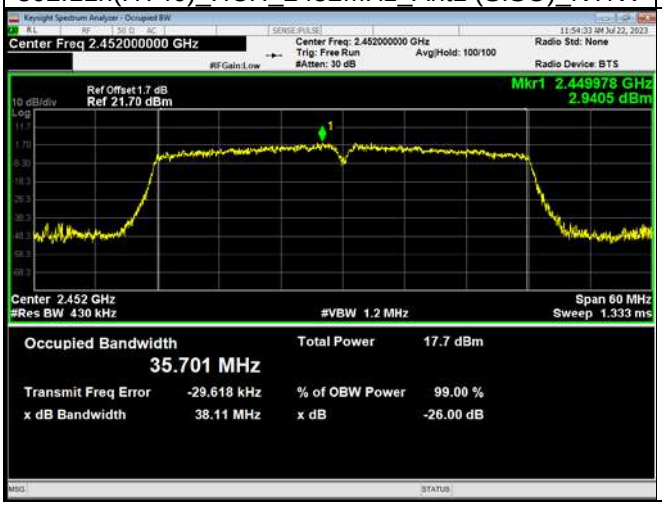
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



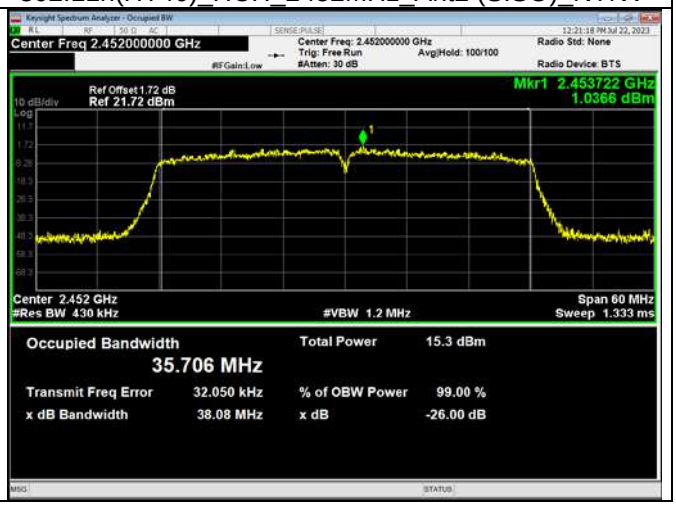
802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



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1.2 6dB BW

1.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.446	>=0.5	Pass
		2437	1	10.597	>=0.5	Pass
		2462	1	9.34	>=0.5	Pass
802.11g	SISO	2412	1	14.815	>=0.5	Pass
		2437	1	15.115	>=0.5	Pass
		2462	1	15.398	>=0.5	Pass
802.11n (HT20)	SISO	2412	1	15.691	>=0.5	Pass
		2437	1	15.09	>=0.5	Pass
		2462	1	15.367	>=0.5	Pass
802.11n (HT40)	SISO	2422	1	35.036	>=0.5	Pass
		2437	1	35.102	>=0.5	Pass
		2452	1	35.066	>=0.5	Pass

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	2	10.549	>=0.5	Pass
		2437	2	9.878	>=0.5	Pass
		2462	2	10.342	>=0.5	Pass
802.11g	SISO	2412	2	15.028	>=0.5	Pass
		2437	2	15.33	>=0.5	Pass
		2462	2	15.655	>=0.5	Pass
802.11n (HT20)	SISO	2412	2	15.987	>=0.5	Pass
		2437	2	15.102	>=0.5	Pass
		2462	2	15.717	>=0.5	Pass
802.11n (HT40)	SISO	2422	2	33.801	>=0.5	Pass
		2437	2	35.074	>=0.5	Pass
		2452	2	35.055	>=0.5	Pass

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1.2.2 Test Graph

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV

802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV

802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV

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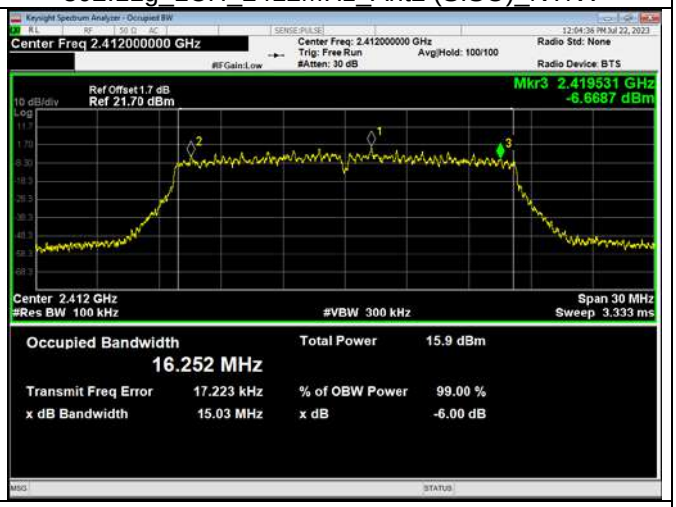
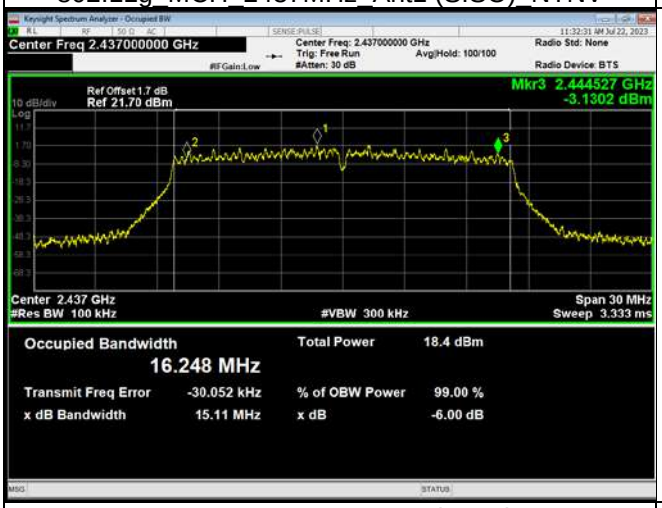
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV

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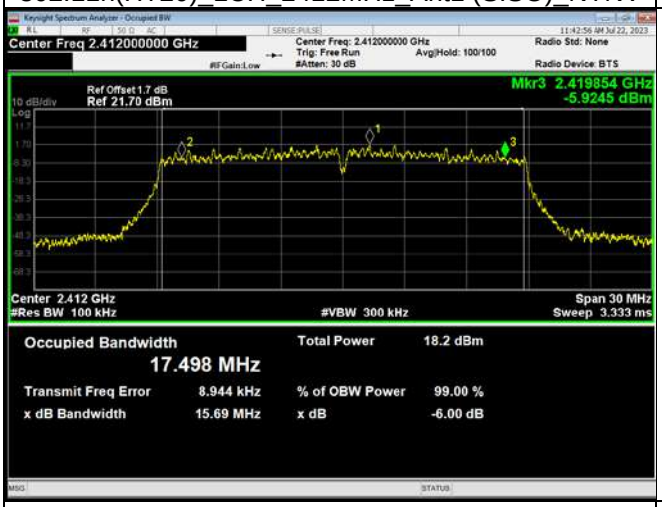
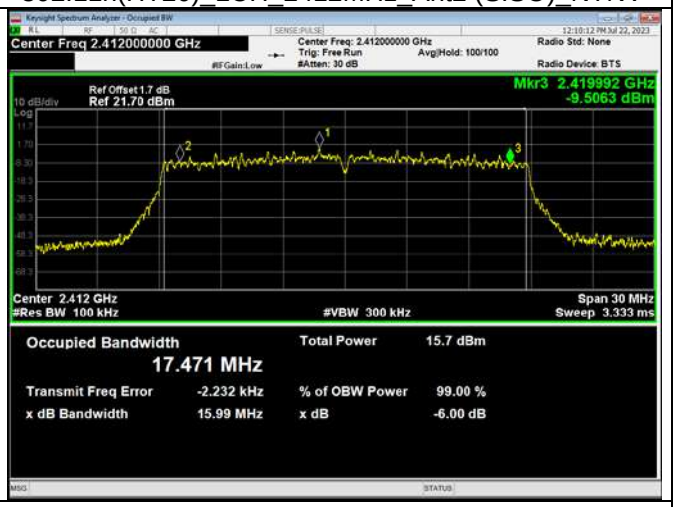
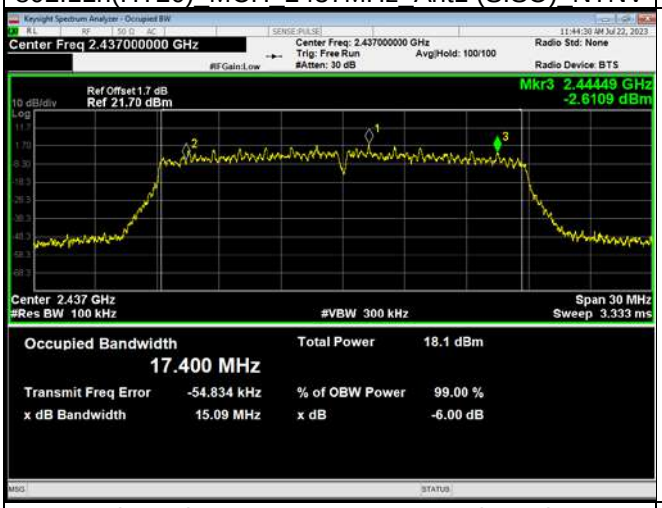
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



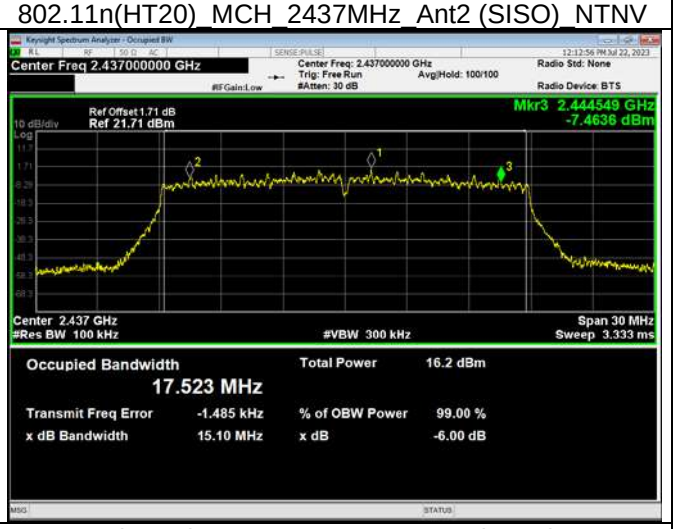
802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



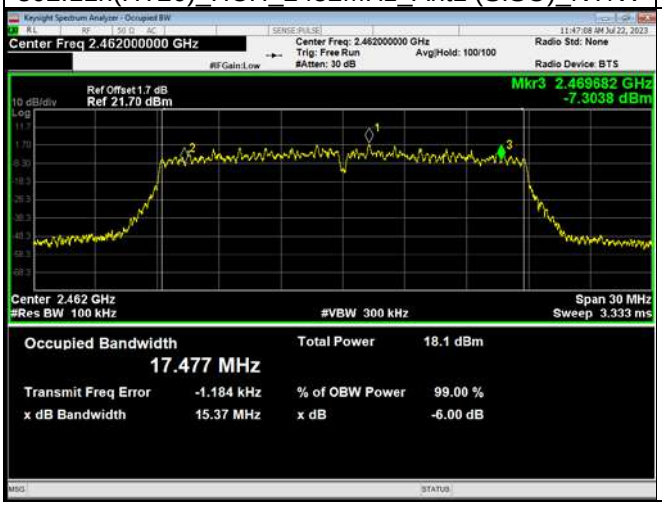
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



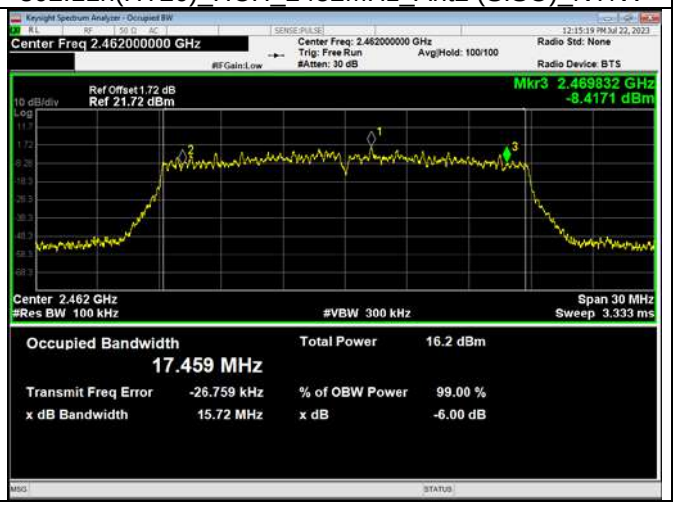
802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11n(HT20)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2452MHz_Ant2 (SISO)_NTNV



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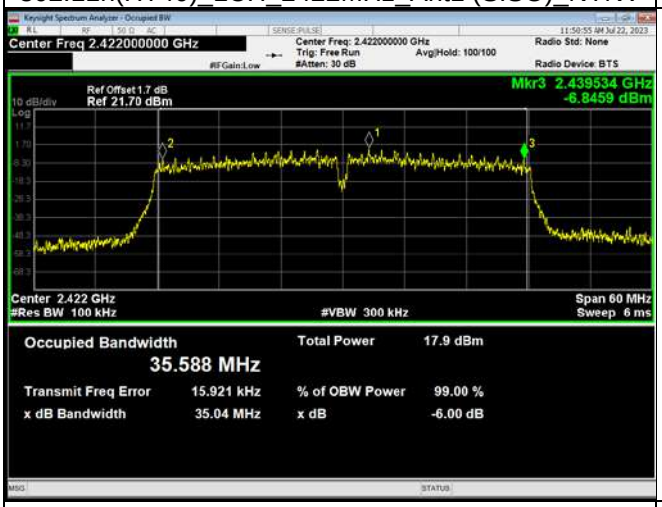
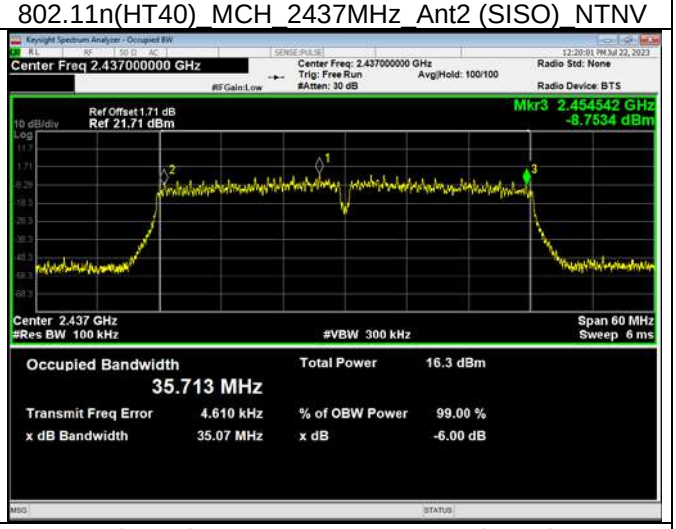
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV

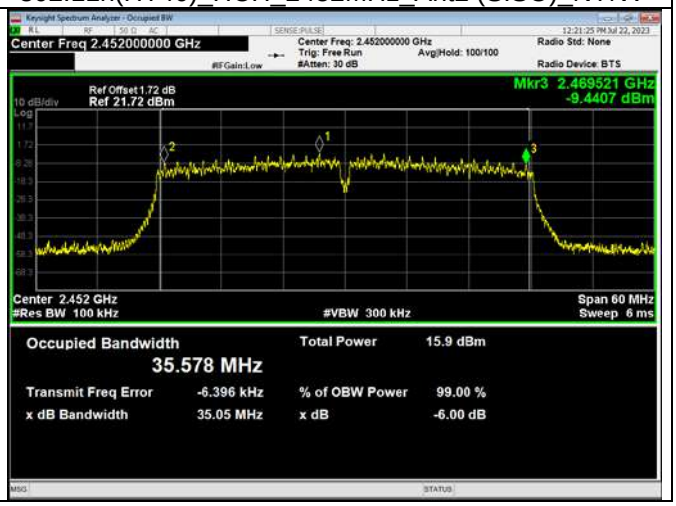
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



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2. Maximum Conducted Output Power

2.1 Power

2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)				Verdict
			ANT1	ANT2	Total	Limit	
802.11b	MIMO	2412	5.04	4.86	7.96	<=30	Pass
		2437	2.43	2.68	5.57	<=30	Pass
		2462	1.88	3.67	5.88	<=30	Pass
802.11g	MIMO	2412	4.15	4.45	7.31	<=30	Pass
		2437	2.37	2.77	5.58	<=30	Pass
		2462	2.31	3.25	5.82	<=30	Pass
802.11n (HT20)	MIMO	2412	2.97	1.21	5.19	<=30	Pass
		2437	1.53	2.48	5.04	<=30	Pass
		2462	1.56	3.49	5.64	<=30	Pass
802.11n (HT40)	MIMO	2422	2.18	2.67	5.44	<=30	Pass
		2437	1.82	3.15	5.55	<=30	Pass
		2452	1.65	3.31	5.57	<=30	Pass
Note1: Antenna Gain: Ant1: 3dBi; Ant2: 3dBi							

4. Maximum Power Spectral Density

4.1 PSD

4.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)				Verdict
			ANT1	ANT2	Total	Limit	
802.11b	MIMO	2412	-10.4	-13.27	-8.59	<=8	Pass
		2437	-11.13	-14.03	-9.33	<=8	Pass
		2462	-11.56	-13.59	-9.45	<=8	Pass
802.11g	MIMO	2412	-15.53	-17.23	-13.29	<=8	Pass
		2437	-13.92	-14.56	-11.22	<=8	Pass
		2462	-14.65	-15.05	-11.84	<=8	Pass
802.11n (HT20)	MIMO	2412	-14.74	-16.99	-12.71	<=8	Pass
		2437	-13.51	-14.54	-10.98	<=8	Pass
		2462	-14.15	-14.77	-11.44	<=8	Pass
802.11n (HT40)	MIMO	2422	-16.62	-16.21	-13.4	<=8	Pass
		2437	-17.86	-18.86	-15.32	<=8	Pass
		2452	-17.83	-16.31	-13.99	<=8	Pass
Note1: Antenna Gain: Ant1: 3dBi; Ant2: 3dBi							

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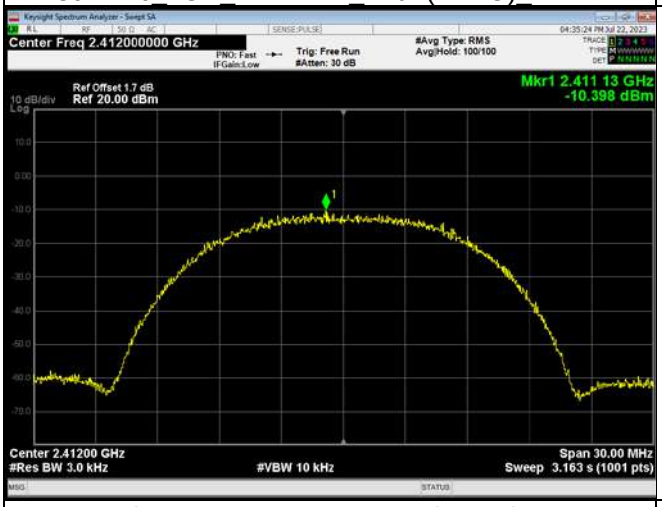
4.1.2 Test Graph

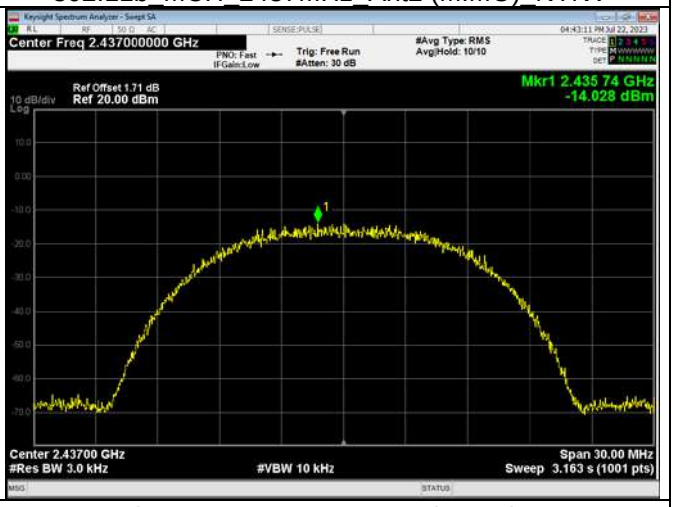
802.11b_LCH_2412MHz_Ant1 (MIMO)_NTNV



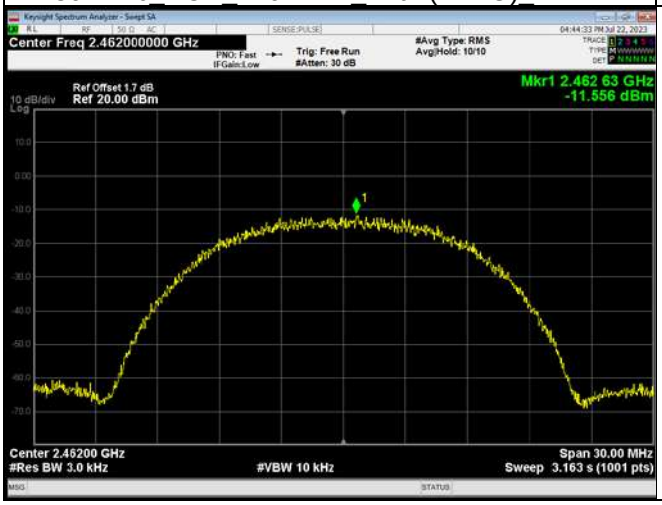
802.11b_LCH_2412MHz_Ant2 (MIMO)_NTNV

802.11b_MCH_2437MHz_Ant1 (MIMO)_NTNV

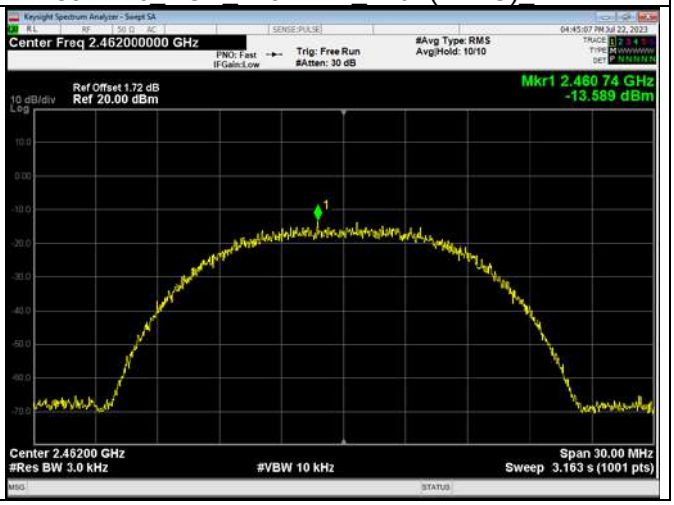
802.11b_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11b_HCH_2462MHz_Ant1 (MIMO)_NTNV



802.11b_HCH_2462MHz_Ant2 (MIMO)_NTNV



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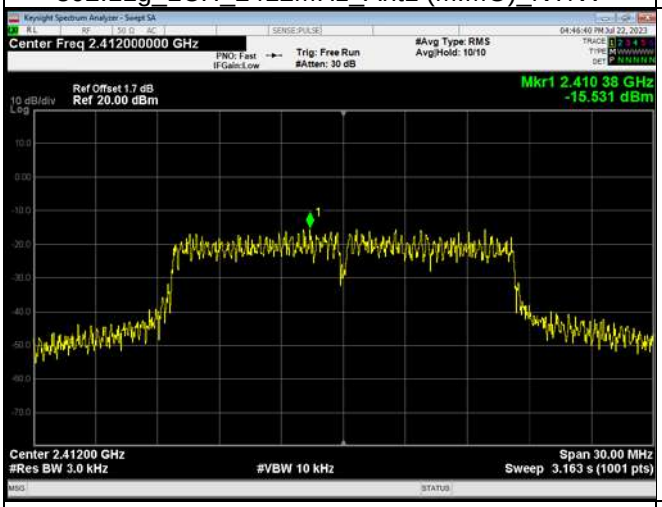
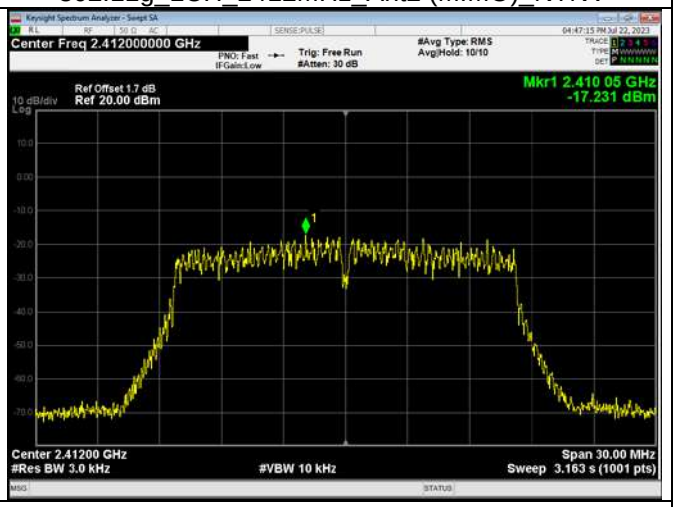
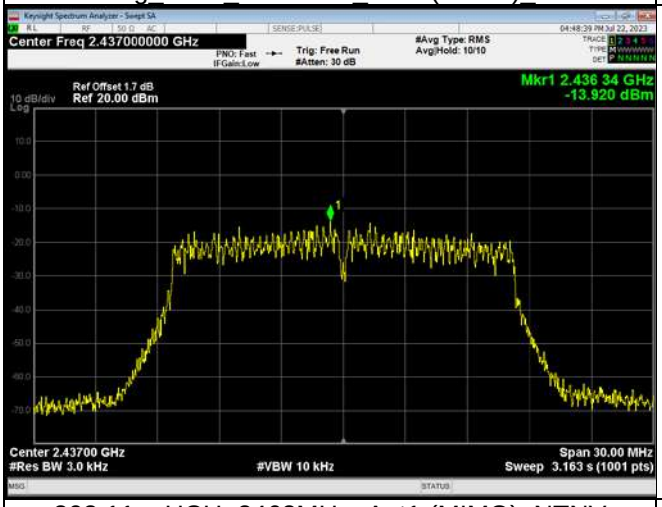
802.11g_LCH_2412MHz_Ant1 (MIMO)_NTNV



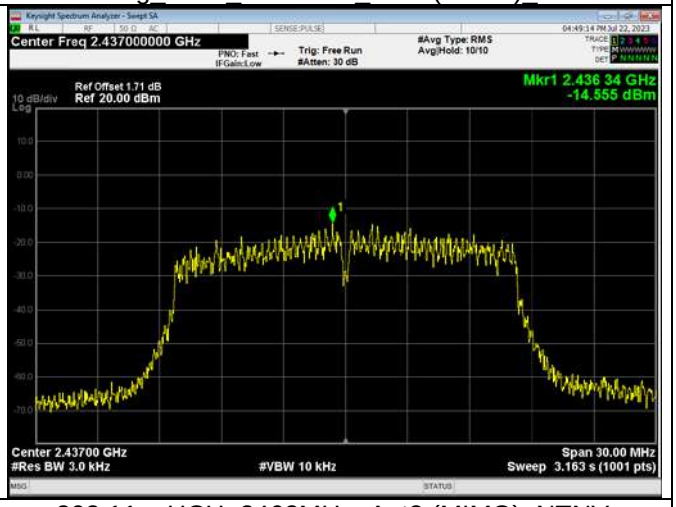
802.11g_LCH_2412MHz_Ant2 (MIMO)_NTNV



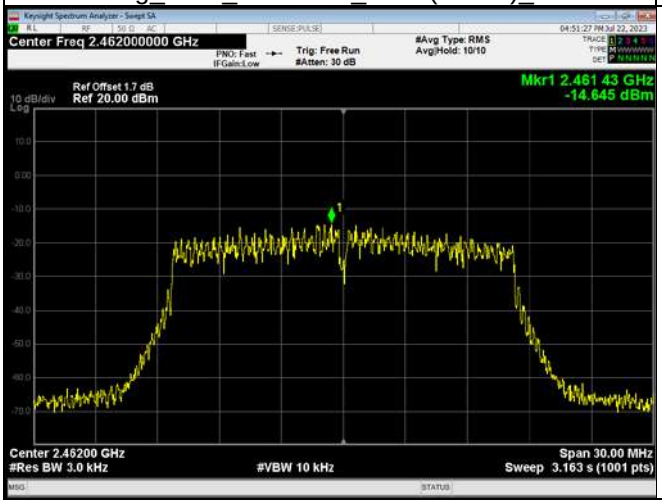
802.11g_MCH_2437MHz_Ant1 (MIMO)_NTNV



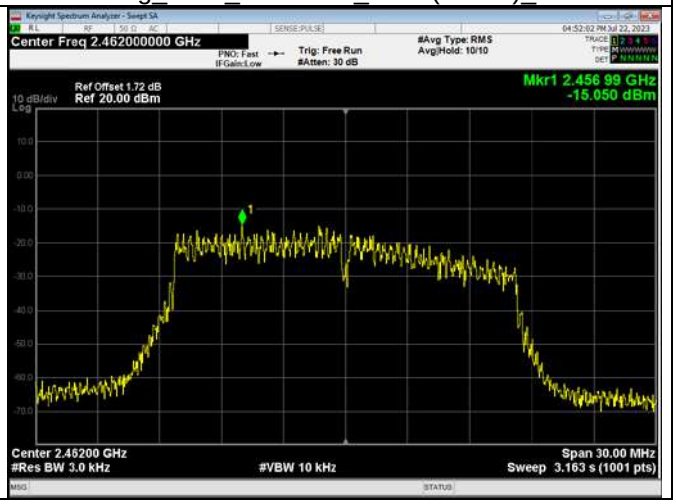
802.11g_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11g_HCH_2462MHz_Ant1 (MIMO)_NTNV



802.11g_HCH_2462MHz_Ant2 (MIMO)_NTNV



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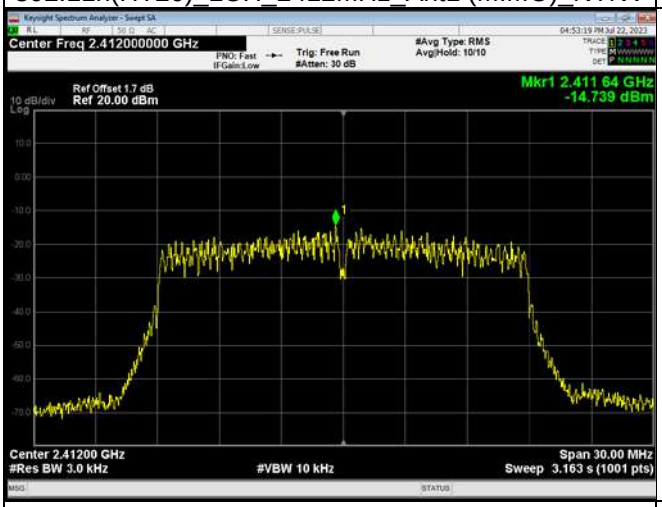
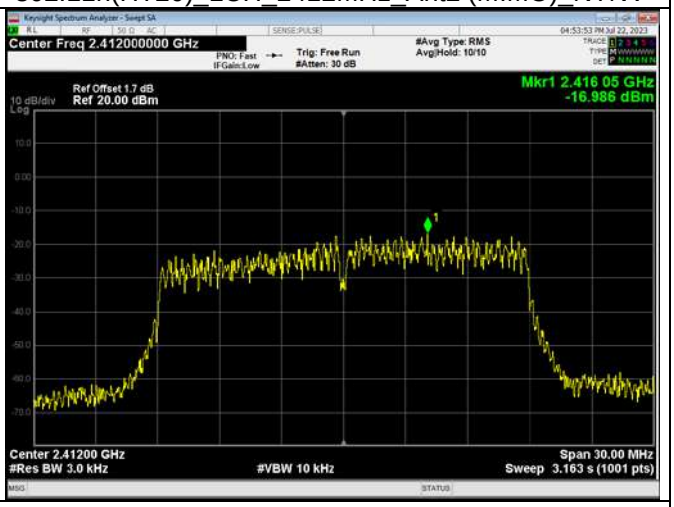
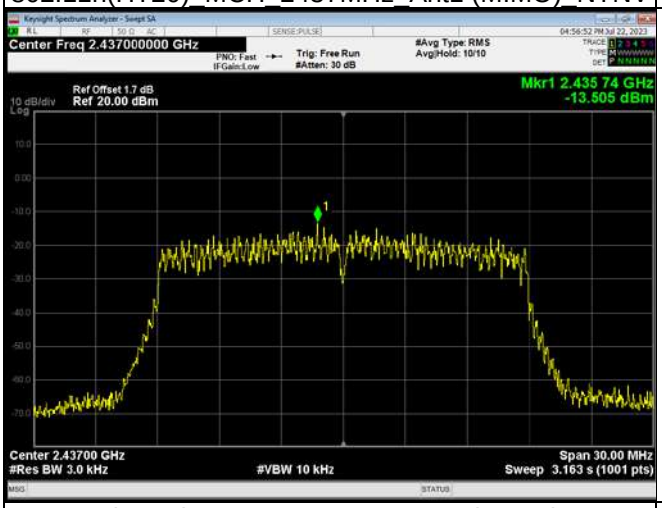
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



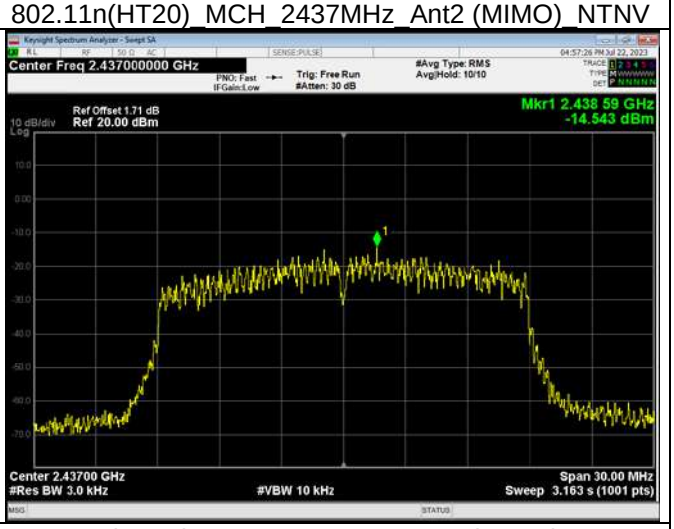
802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



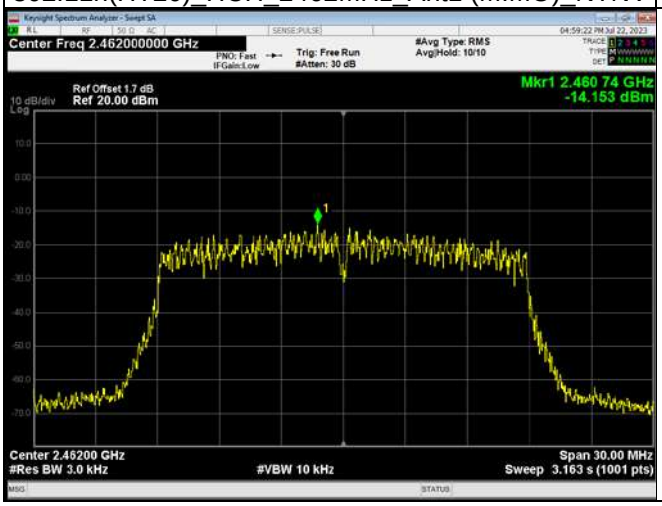
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



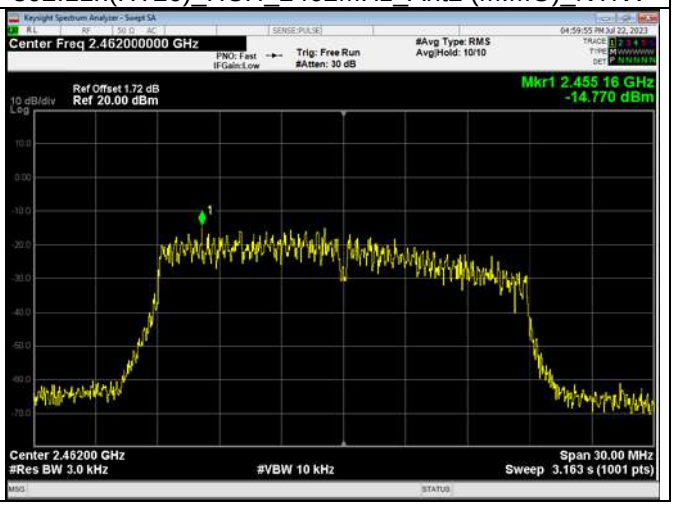
802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



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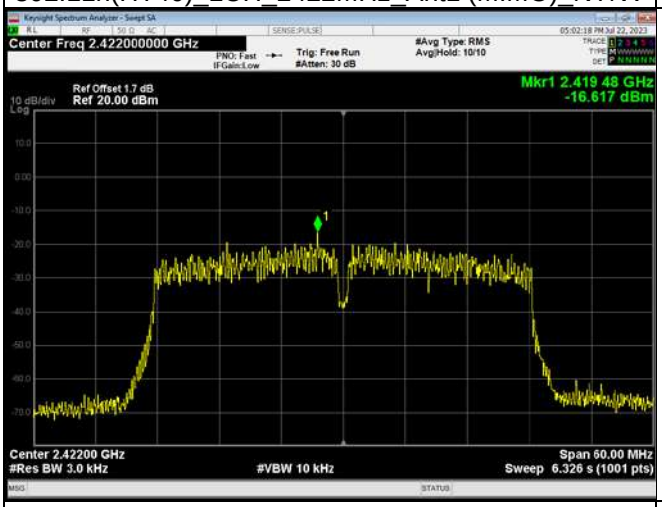
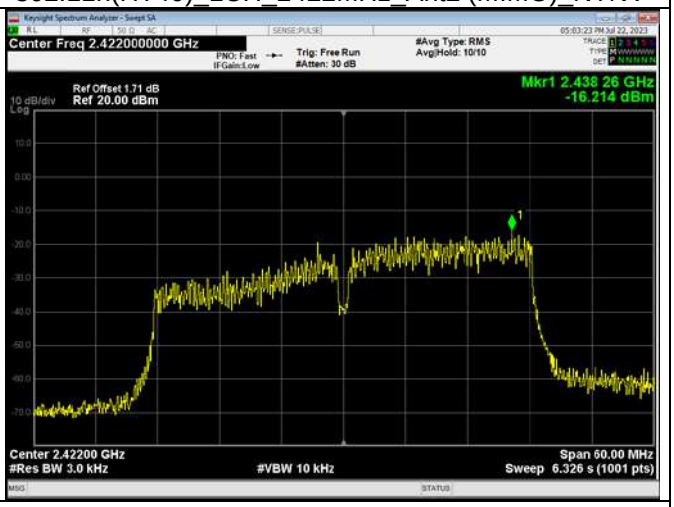
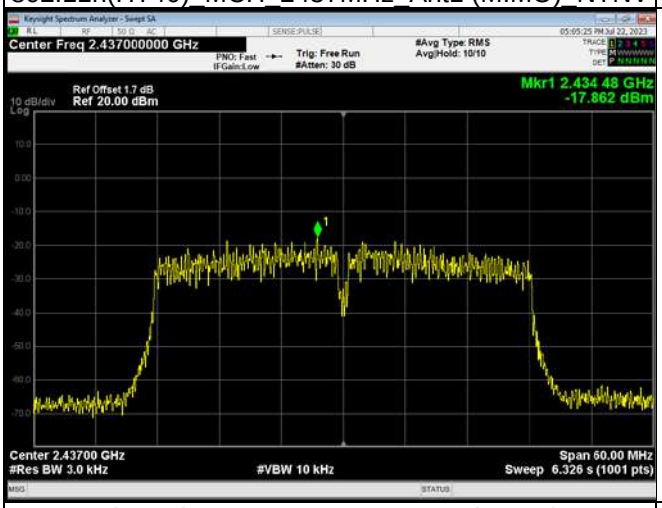
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



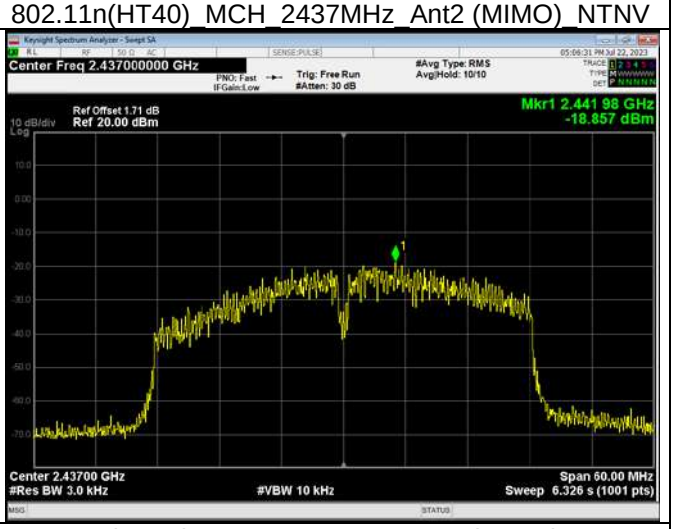
802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV



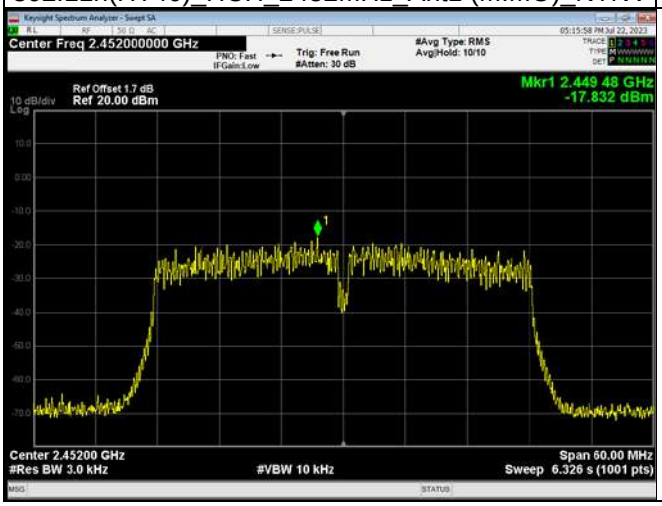
802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



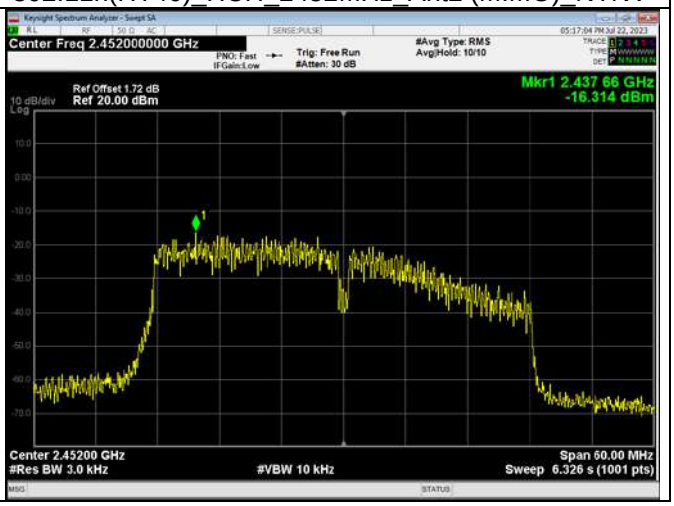
802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (MIMO)_NTNV



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4. Unwanted Emissions In Non-restricted Frequency Bands

4.1 Ref

4.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	3.459
		2437	1	3.894
		2462	1	2.989
802.11g	SISO	2412	1	1.872
		2437	1	2.344
		2462	1	1.845
802.11n (HT20)	SISO	2412	1	2.151
		2437	1	2.218
		2462	1	1.639
802.11n (HT40)	SISO	2422	1	-0.782
		2437	1	-0.456
		2452	1	-0.560
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.				

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	2	1.225
		2437	2	1.269
		2462	2	0.852
802.11g	SISO	2412	2	-0.173
		2437	2	-0.520
		2462	2	-0.332
802.11n (HT20)	SISO	2412	2	-0.073
		2437	2	0.353
		2462	2	-0.483
802.11n (HT40)	SISO	2422	2	-3.199
		2437	2	-2.821
		2452	2	-2.733
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.				

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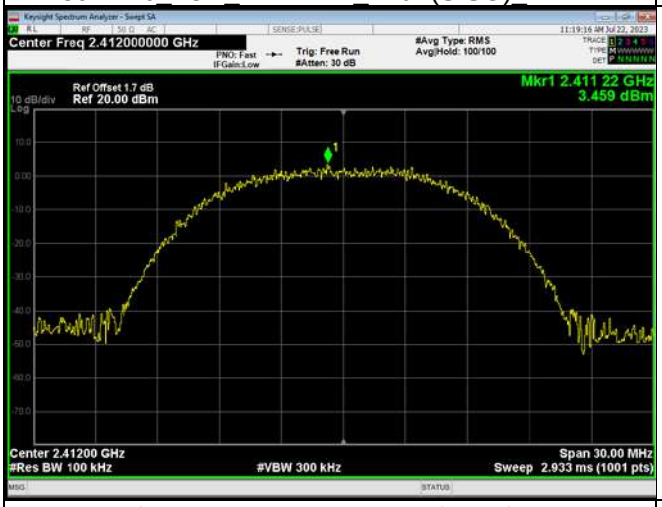
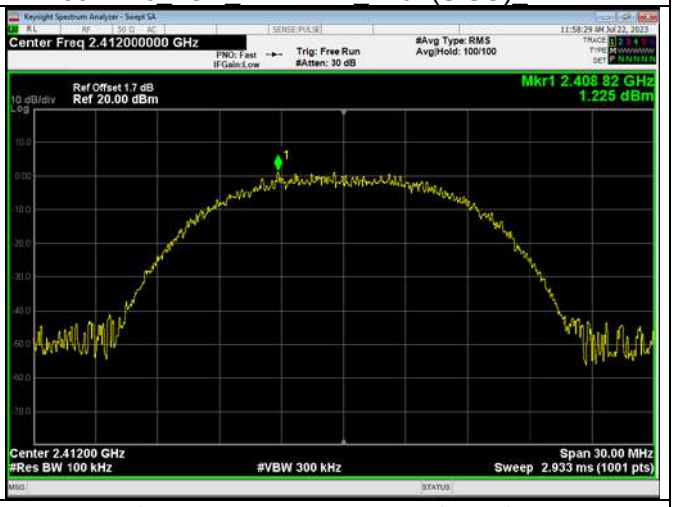
4.1.2 Test Graph

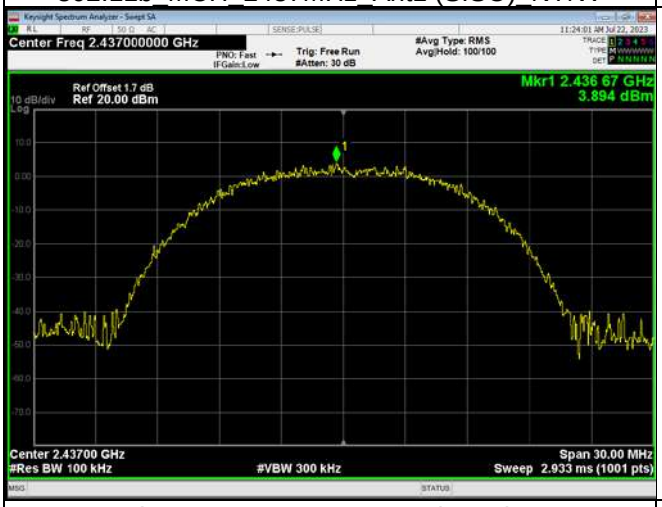
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



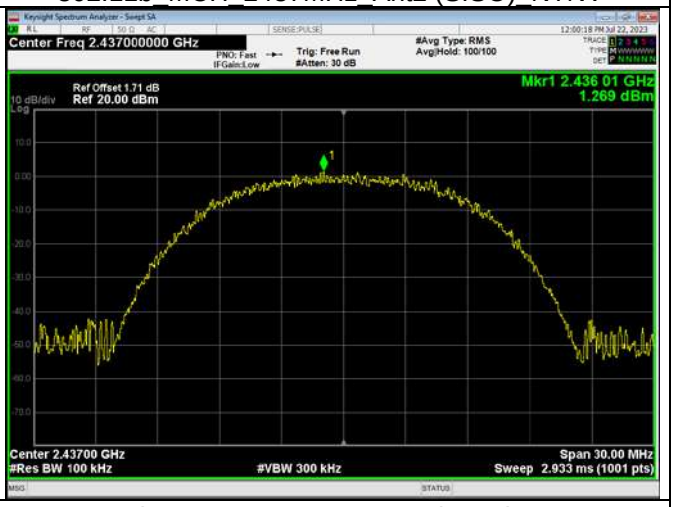
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



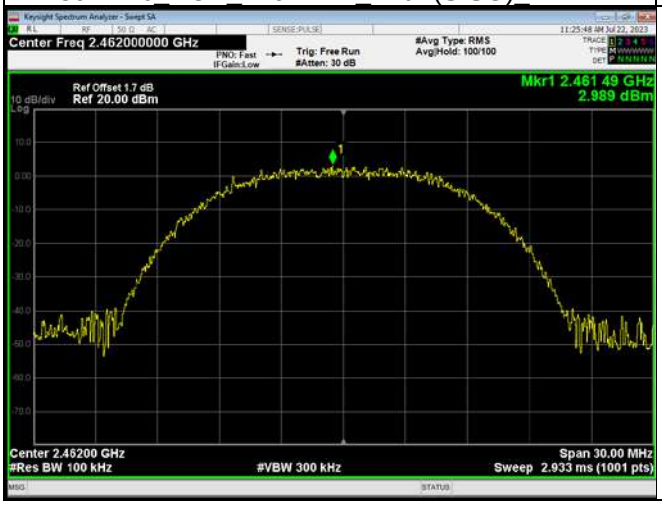
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



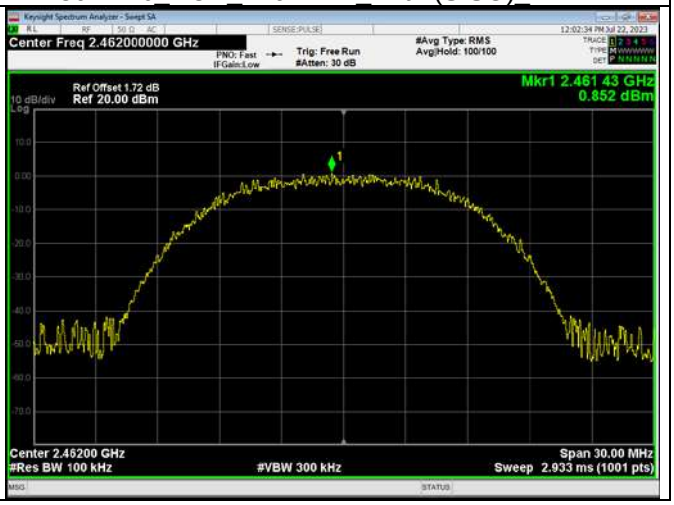
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



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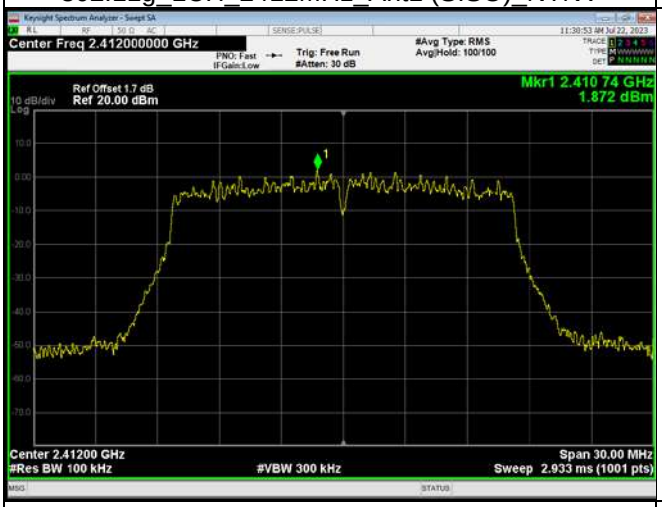
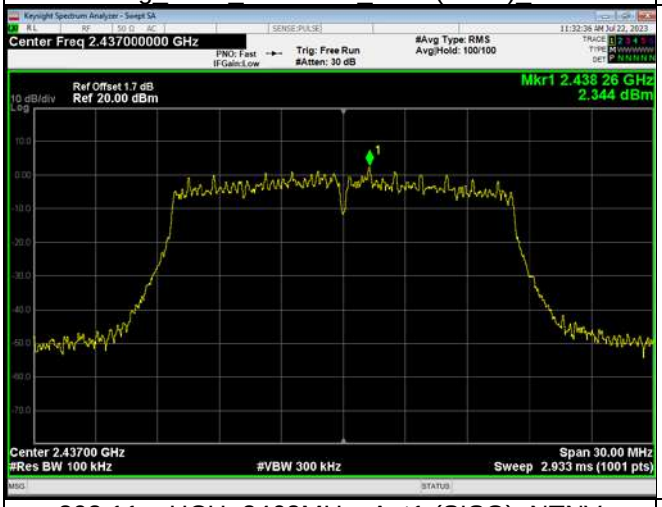
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

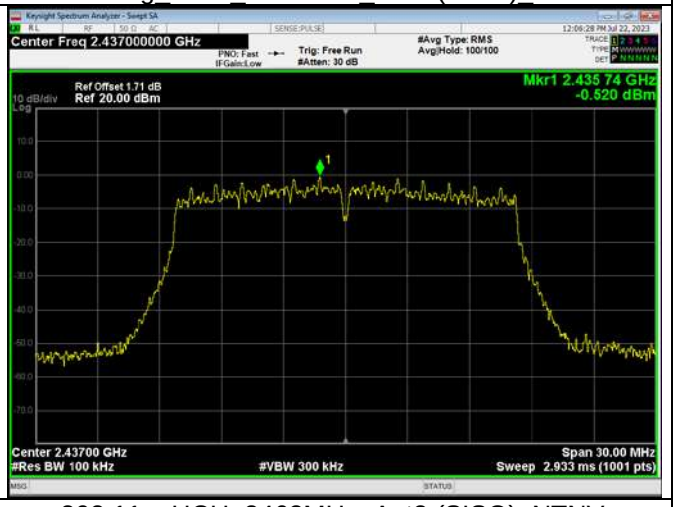


802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV

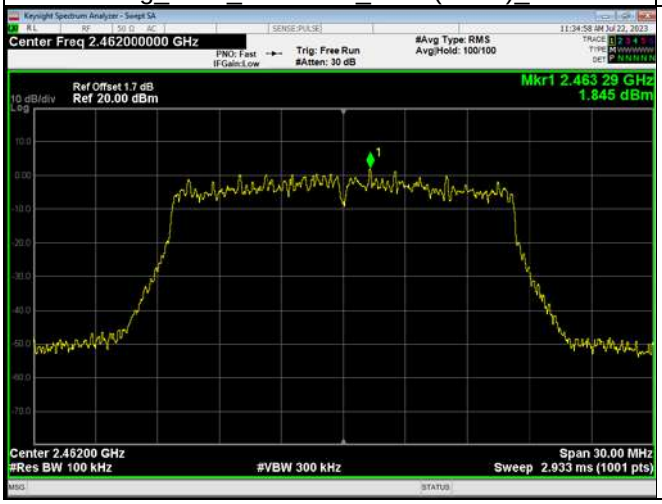
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV

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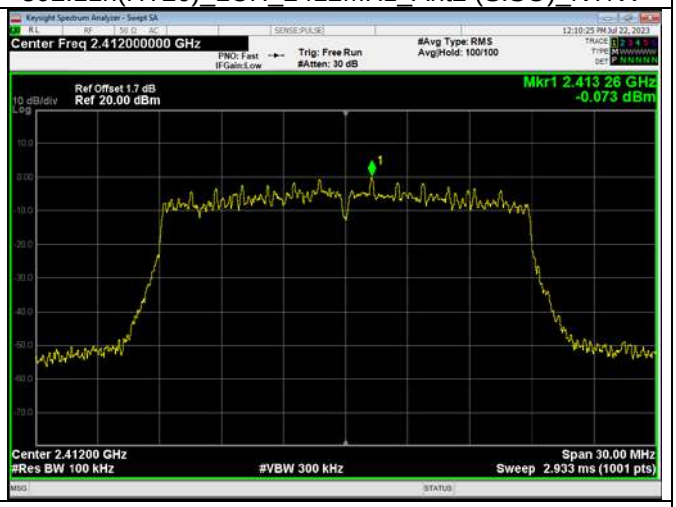
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

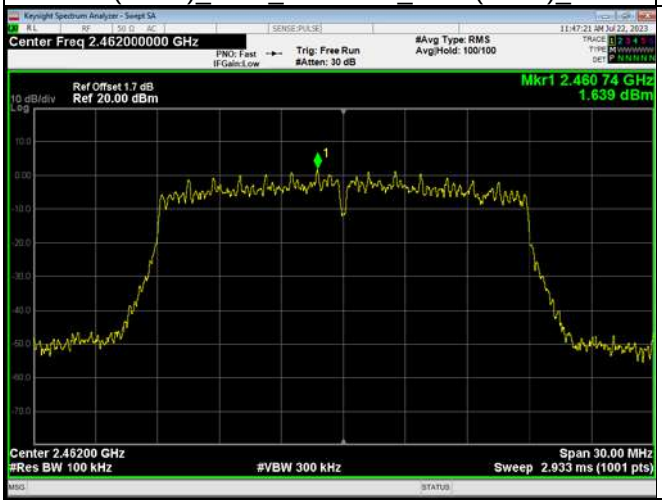
802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



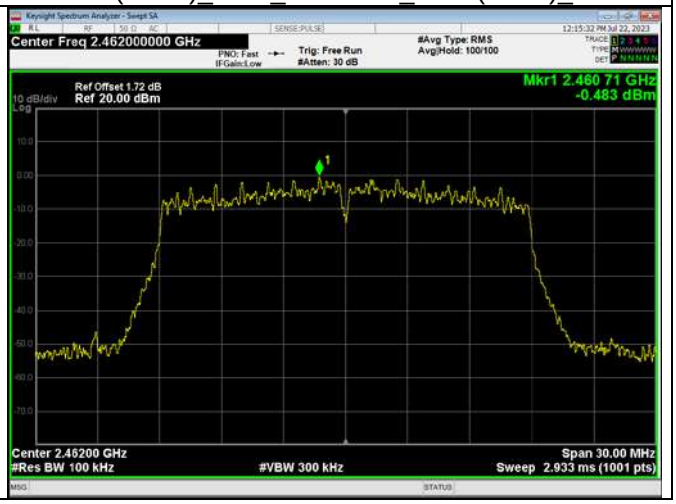
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV

802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



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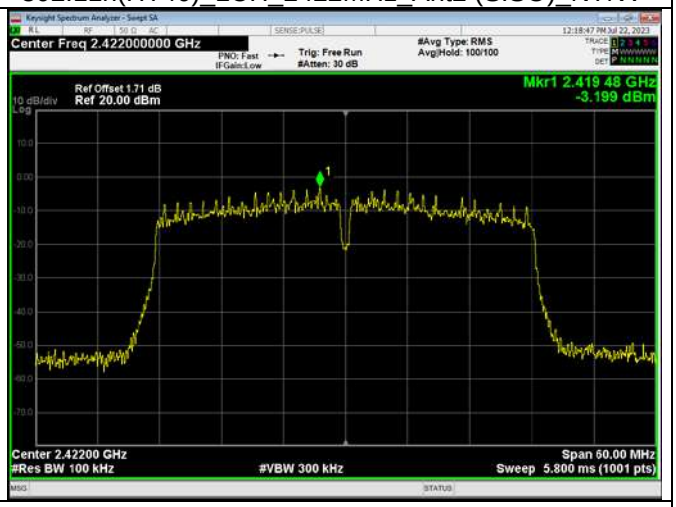
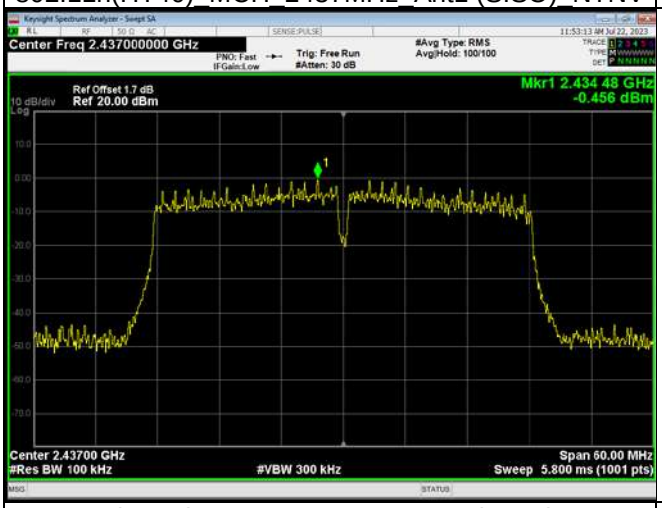
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

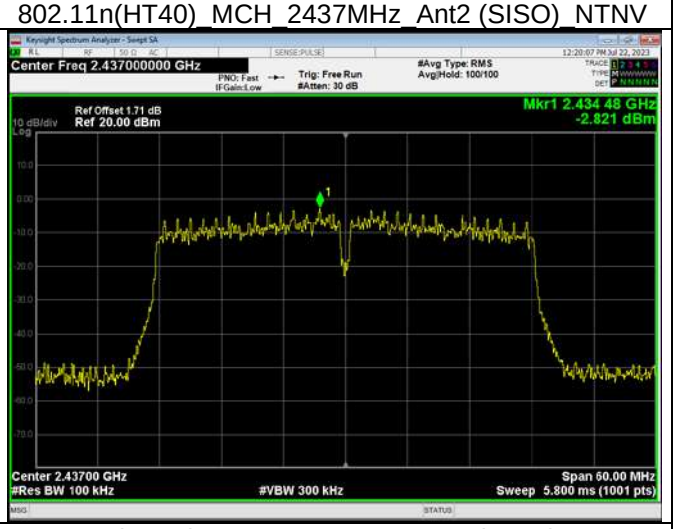
802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV



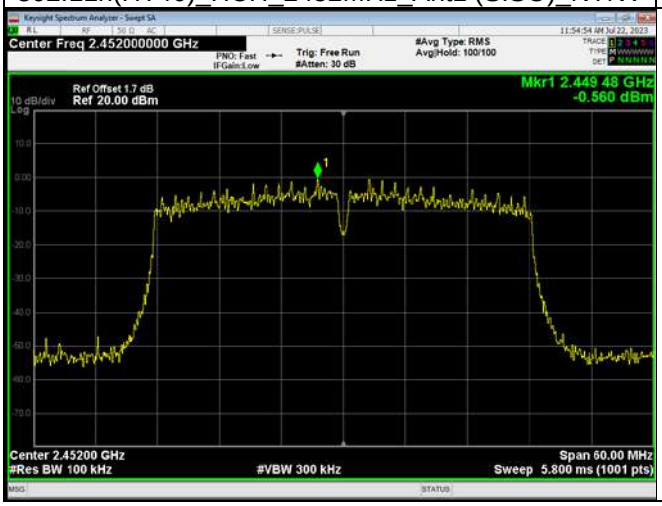
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



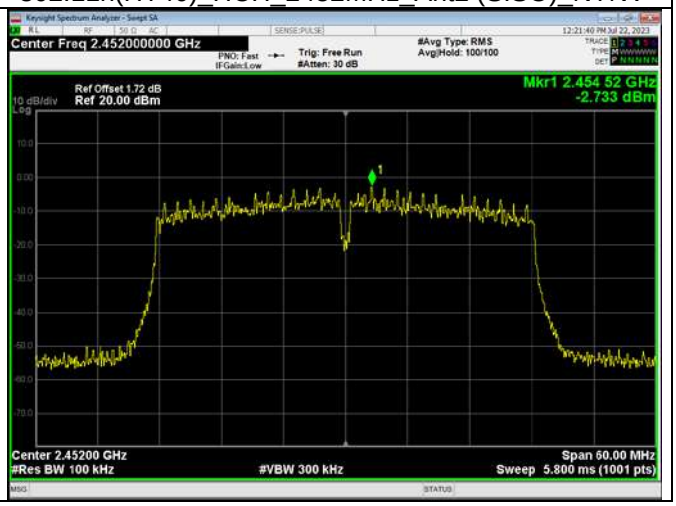
802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



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4.2 CSE

4.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	3.459	-16.54	Pass
		2437	1	3.894	-16.11	Pass
		2462	1	2.989	-17.01	Pass
802.11g	SISO	2412	1	1.872	-18.13	Pass
		2437	1	2.344	-17.66	Pass
		2462	1	1.845	-18.16	Pass
802.11n (HT20)	SISO	2412	1	2.151	-17.85	Pass
		2437	1	2.218	-17.78	Pass
		2462	1	1.639	-18.36	Pass
802.11n (HT40)	SISO	2422	1	-0.782	-20.78	Pass
		2437	1	-0.456	-20.46	Pass
		2452	1	-0.560	-20.56	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.						

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	2	1.225	-18.77	Pass
		2437	2	1.269	-18.73	Pass
		2462	2	0.852	-19.15	Pass
802.11g	SISO	2412	2	-0.173	-20.17	Pass
		2437	2	-0.520	-20.52	Pass
		2462	2	-0.332	-20.33	Pass
802.11n (HT20)	SISO	2412	2	-0.073	-20.07	Pass
		2437	2	0.353	-19.65	Pass
		2462	2	-0.483	-20.48	Pass
802.11n (HT40)	SISO	2422	2	-3.199	-23.20	Pass
		2437	2	-2.821	-22.02	Pass
		2452	2	-2.733	-22.73	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.						

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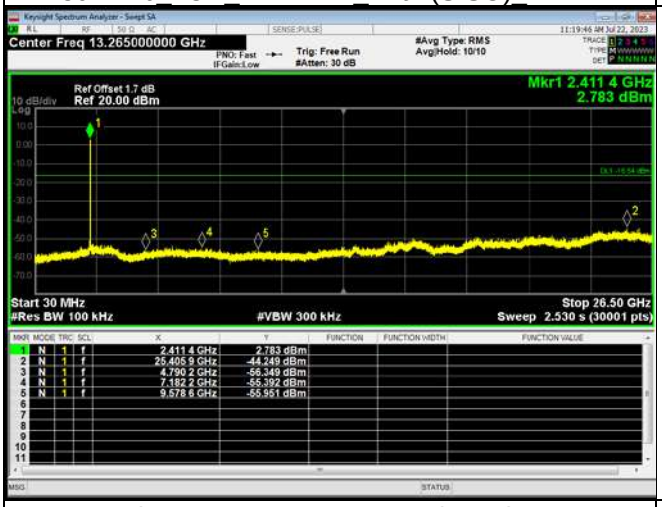
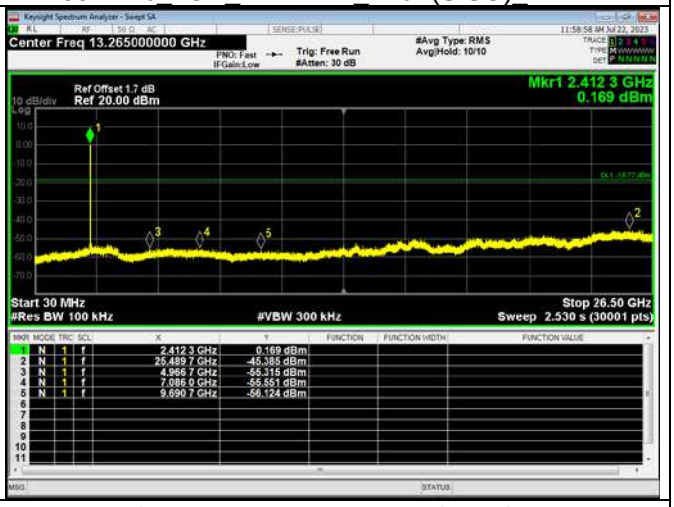
4.2.2 Test Graph

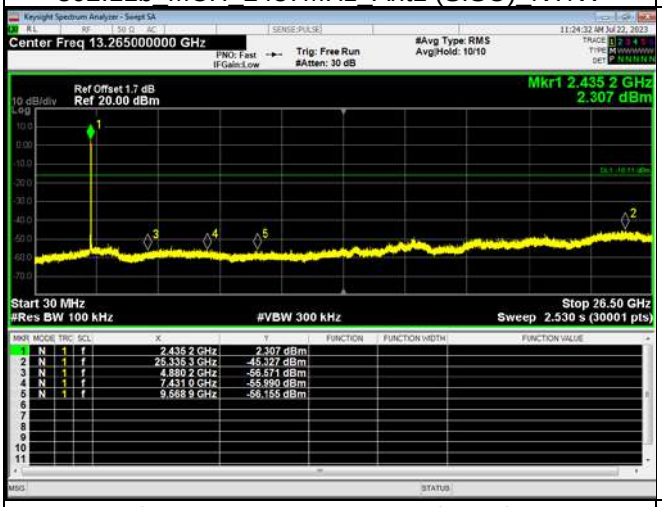
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



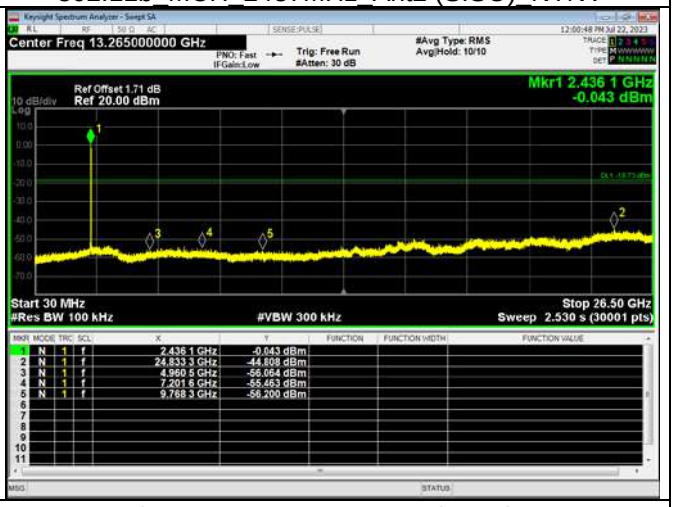
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



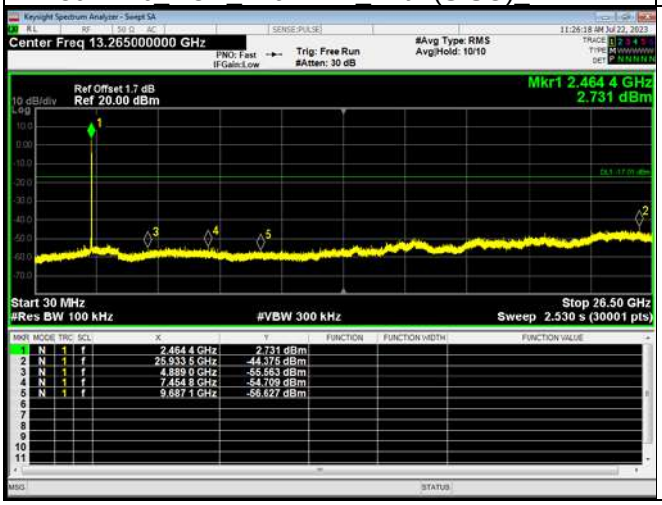
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



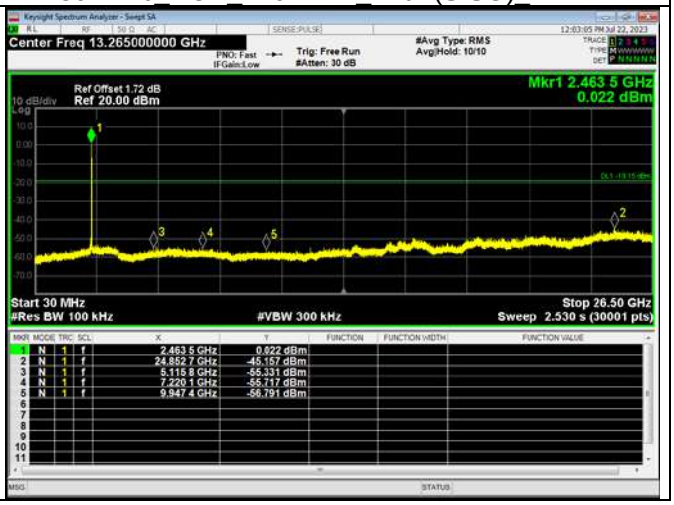
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



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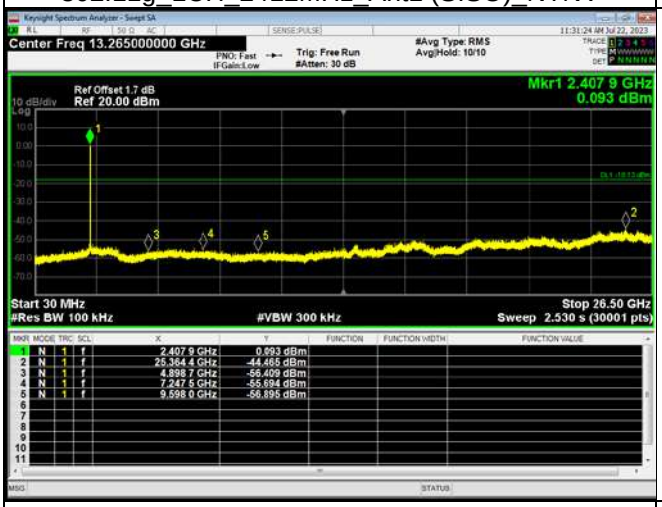
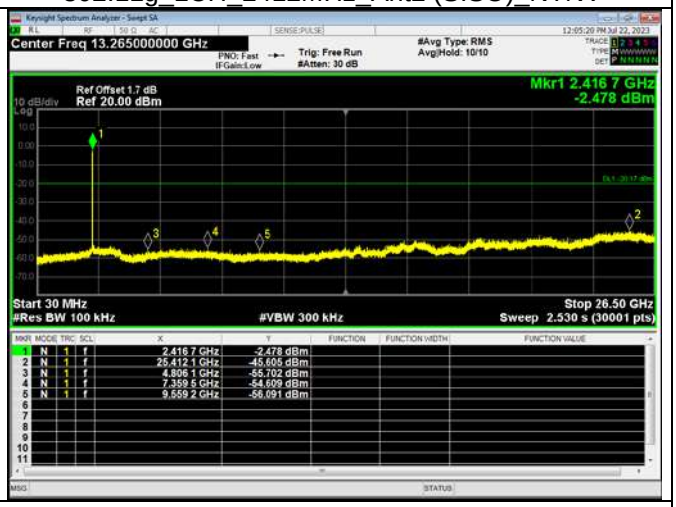
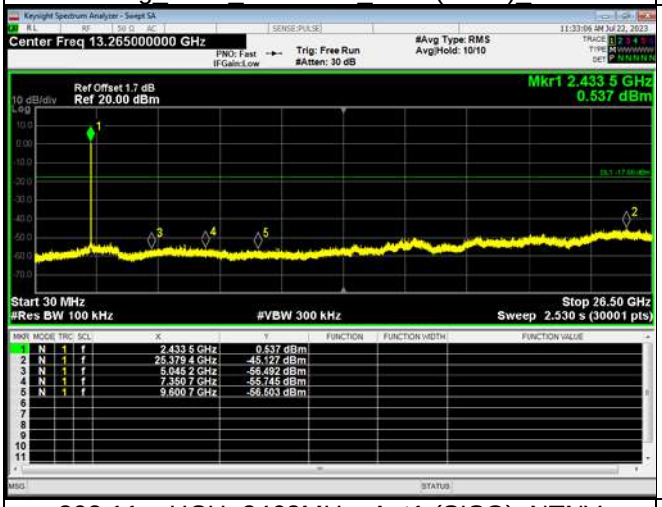
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



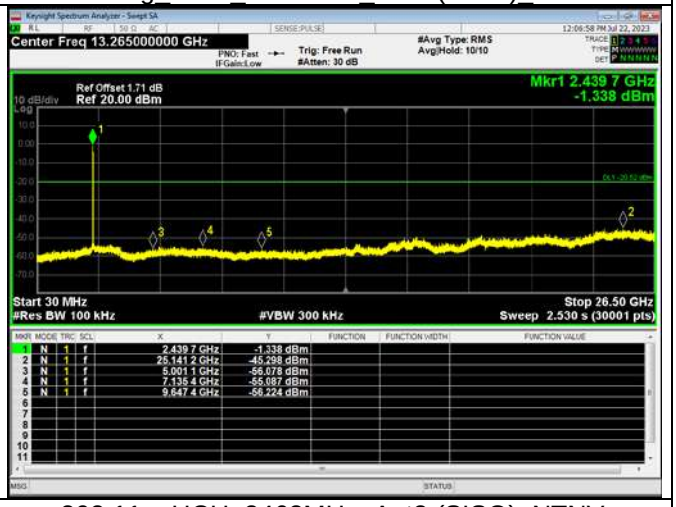
802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



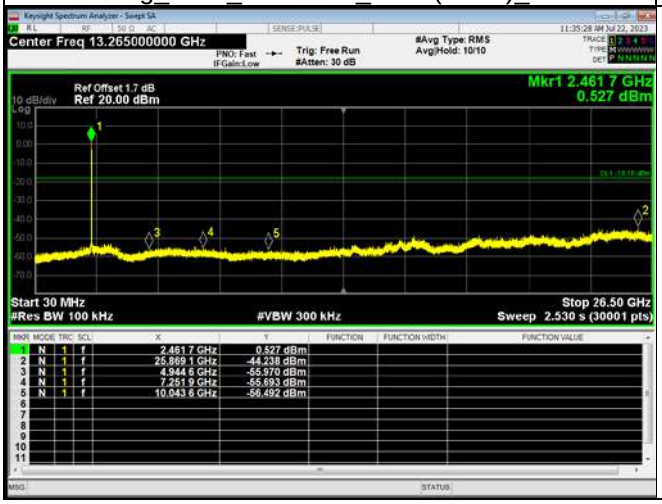
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



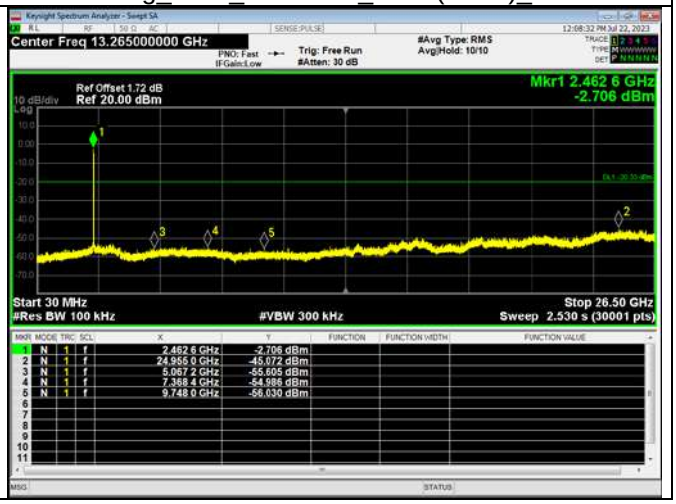
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



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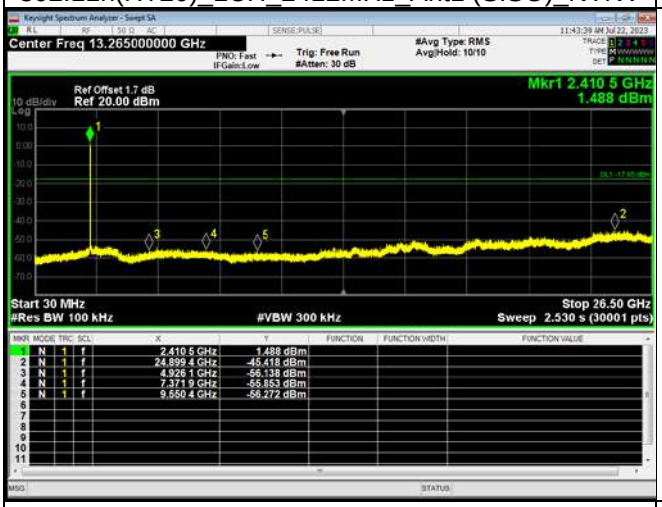
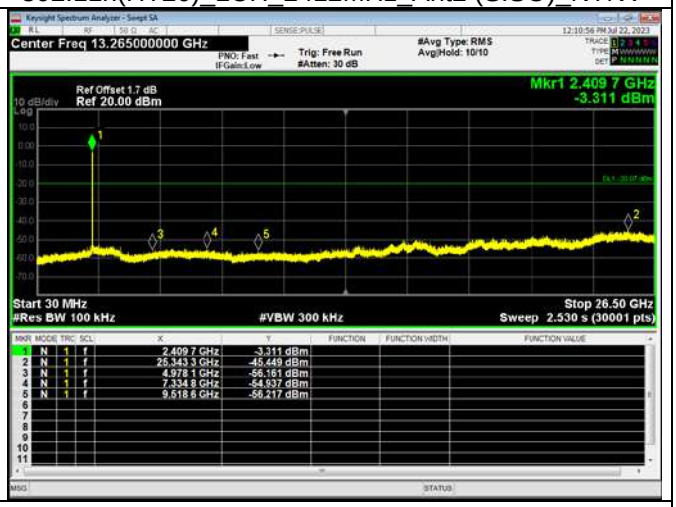
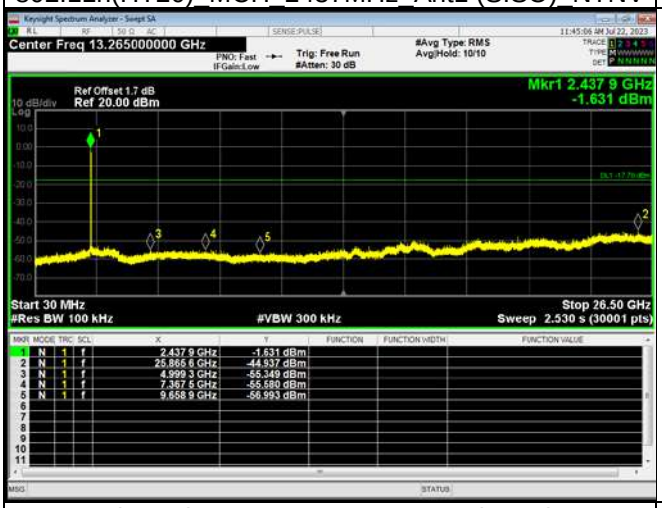
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



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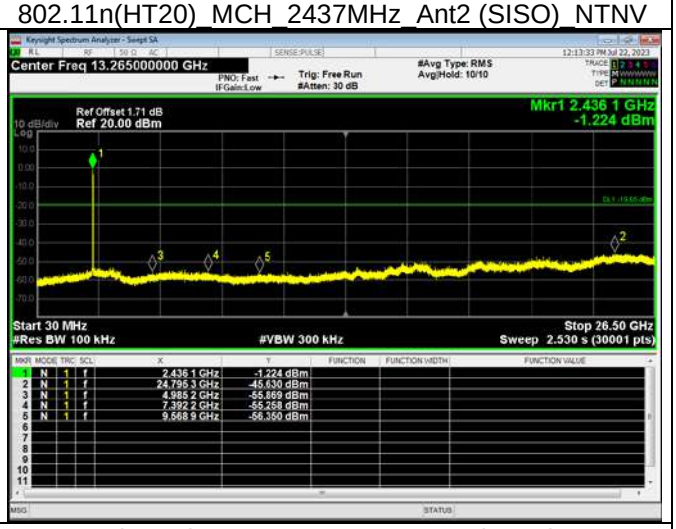
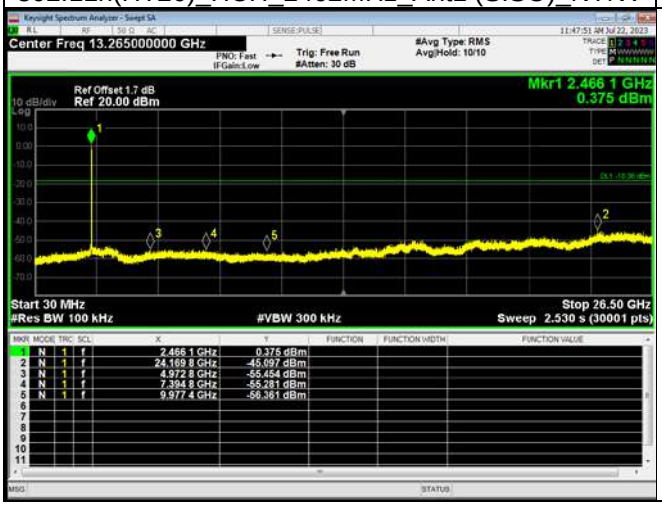
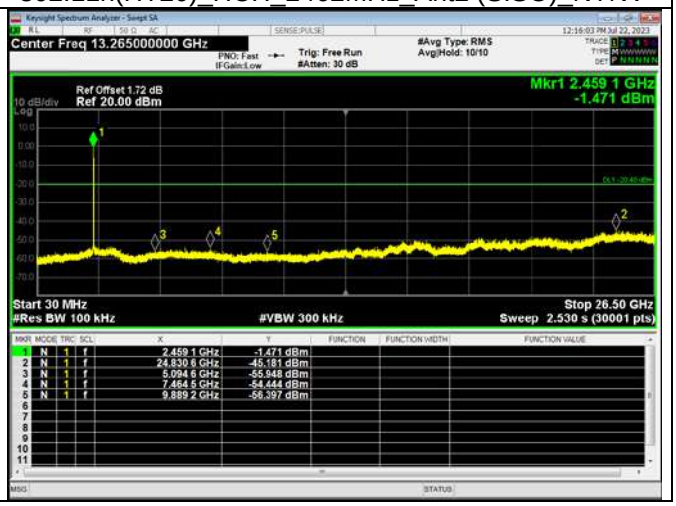


802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



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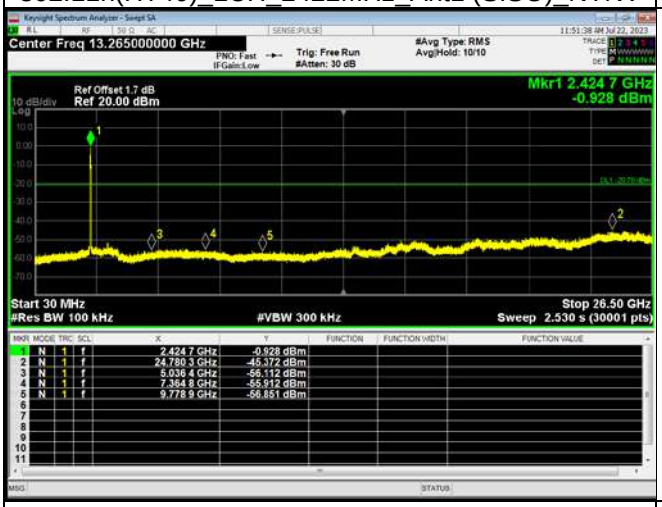
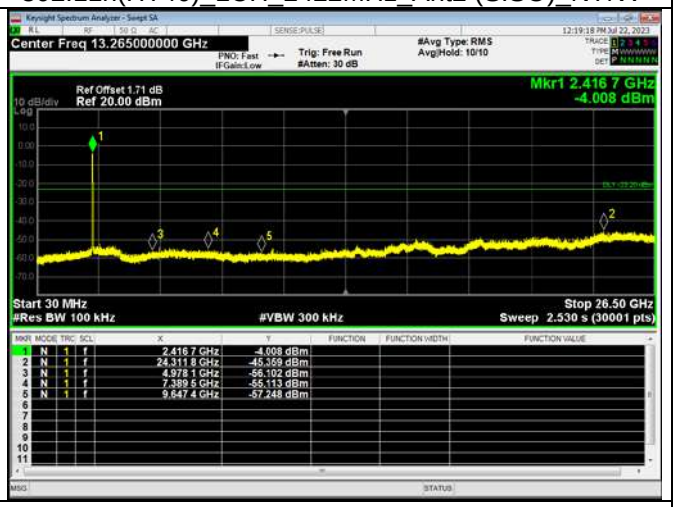
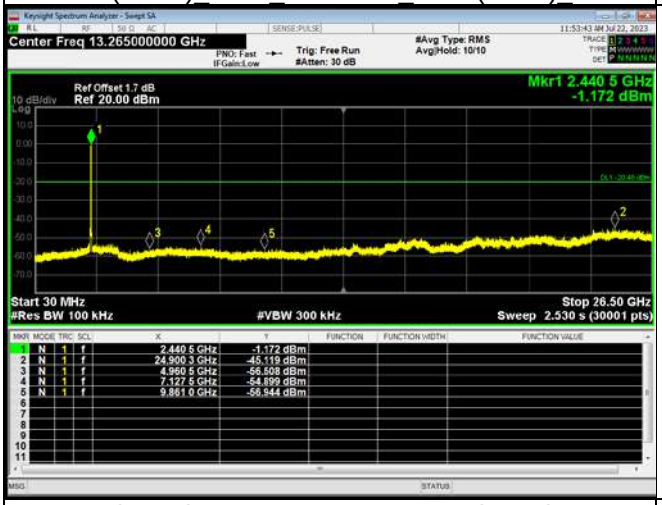
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



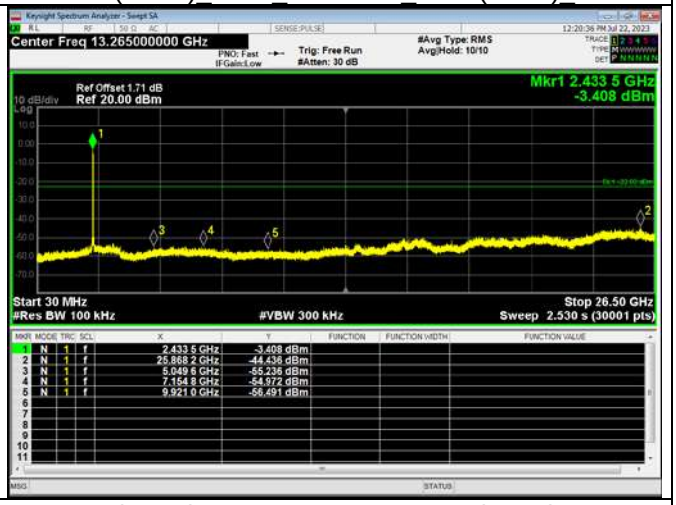
802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV



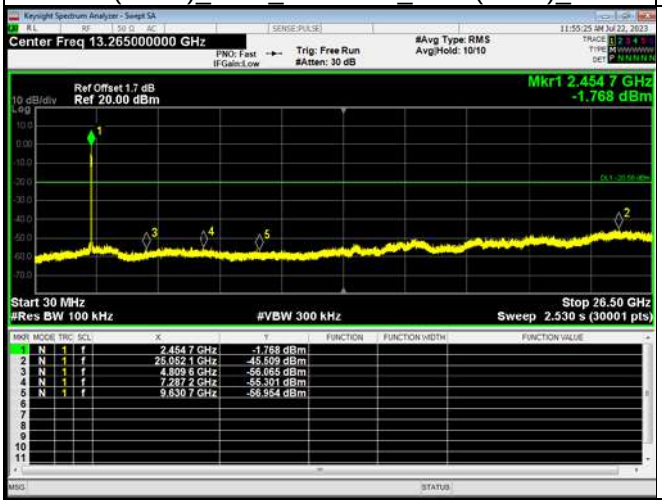
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



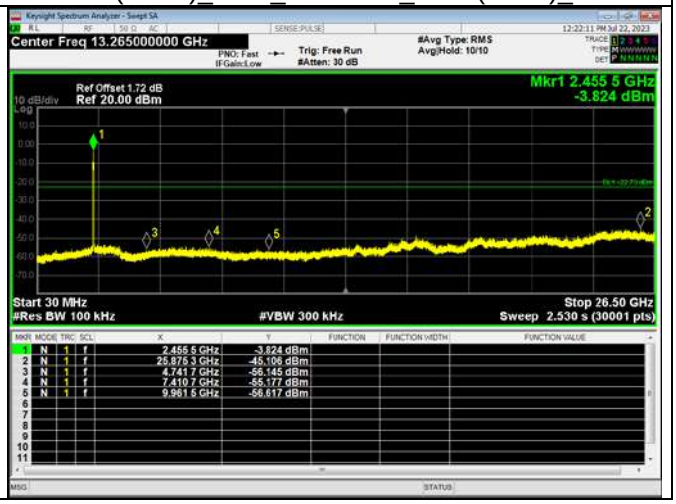
802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



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-- END OF REPORT --

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