RF Test Report

For

Applicant Name:	**TCL Communication Ltd.**
Address:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
EUT Name:	RayNeo X2
Model Number:	ARGT78
Series Model Number:	Refer to Section 2

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:	BTF230717R01604
Test Standards:	47 CFR Part 15E
Test Conclusion:	Pass
FCC ID:	2ACCJN067
Test Date:	2023-05-10 to 2023-07-26
Date of Issue:	2023-07-26
Prepared By:	elma.yang / Project Engineer
Date:	2023-07-26
Approved By:	Ryan.CJ / EMC Manager
Date:	2023-07-26

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Revision History		
Version	Issue Date	Revisions Content
R_V0	2023-07-26	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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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

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
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:	TCL Communication Ltd.
Address:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong

2.2 Manufacturer Information

Company Name:	Falcon innovationsTechnology (Shenzhen) Co., Ltd
Address:	5th Floor, Building D4, TCL International E City, no.1001 zhongshan Yuan Road, Nanshan District, Shenzhen,China

2.3 Factory Information

Company Name:	TCL Mobile Communication Co., LTD
Address:	No.86, Hechang 7th West Road ,Zhong Kai Hi-tech Development District, Hui Zhou, Guang Dong

2.4 General Description of Equipment under Test (EUT)

EUT Name:	RayNeo X2
Test Model Number:	ARGT78
Series Model Number:	/

2.5 Technical Information

Power Supply:	DC 3.85V from Battery
Operation Frequency:	802.11a/n/ac(HT20) : U-NII Band 1: 5180MHz to 5240MHz; U-NII Band 2A: 5260MHz to 5320MHz; U-NII Band 2C:5500MHz to 5700MHz U-NII Band 3: 5745MHz to 5825MHz; 802.11n/ac(HT40) : U-NII Band 1: 5190MHz to 5230MHz; U-NII Band 2A: 5270MHz to 5310MHz; V-NII Band 2C:5510MHz to 5670MHz U-NII Band 3: 5755MHz to 5795MHz; 802.11ac(80MHz) U-U-NII Band 1: 5210MHz U-NII Band 2A: 5290MHz U-NII Band 2C:5530MHz-5610MHz U-NII Band 3: 5775MHz; 802.11ac(160MHz) U-NII Band 2A: 5250MHz U-NII Band 2C:5570MHz
Number of Channels:	802.11a/n(HT20): U-NII Band 1: 3; U-NII Band 2A:3; V-NII Band 2C:3; W-U-NII Band 3: 3; 802.11n(HT40): U-NII Band 1: 2; U-NII Band 2A: 2;

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	U-NII Band 2C:3; U-NII Band 3: 2; 802.11ac(80MHz) U-U-NII Band 1: 1 U-NII Band 2A: 1 U-NII Band 2C:2 U-NII Band 3: 1 802.11ac(160MHz) U-NII Band 2A:1 U-NII Band 2C:1
Modulation Type:	802.11a: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM); 802.11ac:OFDM (BPSK, QPSK, 16QAM, 64QAM,256QAM);
Antenna Type:	FPC Antenna
Antenna Gain[#]:	5150-5350MHz:0.3 dBi,5470-5725MHz:0.7dBi,5745-5825MHz:1.5dBi

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 15E: Unlicensed National Information Infrastructure Devices

3.2 Uncertainty of Test

Item	Measurement Uncertainty
Conducted Emission (150 kHz-30 MHz)	±2.64dB
Occupied Channel Bandwidth	69 KHz
RF output power, conducted	0.87 dB
Power Spectral Density, conducted	0.69 dB
Unwanted Emissions, conducted	0.94 dB
All emissions, radiated(<1GHz)	4.12 dB
All emissions, radiated(>1GHz)	4.16 dB
Temperature	0.82 °C
Humidity	4.1 %
The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2 and TR100 028-1/-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 15E	Part 15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15E	47 CFR Part 15.207(a)	Pass
Maximum conducted output power	47 CFR Part 15E	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)	Pass
Power spectral density	47 CFR Part 15E	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)	Pass
Emission bandwidth and occupied bandwidth	47 CFR Part 15E	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. 47 CFR Part 15.407(e)	Pass
Band edge emissions (Radiated)	47 CFR Part 15E	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)	Pass
Undesirable emission limits (below 1GHz)	47 CFR Part 15E	47 CFR Part 15.407(b)(9)	Pass
Undesirable emission limits (above 1GHz)	47 CFR Part 15E	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)	Pass
Automatically Discontinue Transmission	47 CFR Part 15E	47 CFR Part 15.407(c)	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

Duty Cycle					
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

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Power spectral density					
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

Emission bandwidth and 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

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

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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

Undesirable emission limits (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

Undesirable emission limits (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

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RE Cable	REBES Talent	UF1-SMASMAM-1 m	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

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4.2 Test Auxiliary Equipment

The EUT was tested as an independent device.

4.3 Test Modes

No.	Test Modes	Description
TM1	802.11a mode	Keep the EUT in continuously transmitting mode with 802.11a modulation.
TM2	802.11n(HT20)mode	Keep the EUT in continuously transmitting mode with 802.11n(HT20) modulation.
TM3	802.11n(HT40) mode	Keep the EUT in continuously transmitting mode with 802.11n(HT40) modulation.
TM4	802.11ac(VHT20)mode	Keep the EUT in continuously transmitting mode with 802.11ac(VHT20) modulation.
TM5	802.11ac(VHT40)mode	Keep the EUT in continuously transmitting mode with 802.11ac(VHT40) modulation.
TM6	802.11ac(VHT80)mode	Keep the EUT in continuously transmitting mode with 802.11ac(VHT80) modulation.
TM7	802.11ac(VHT160)mode	Keep the EUT in continuously transmitting mode with 802.11ac(VHT160) modulation.

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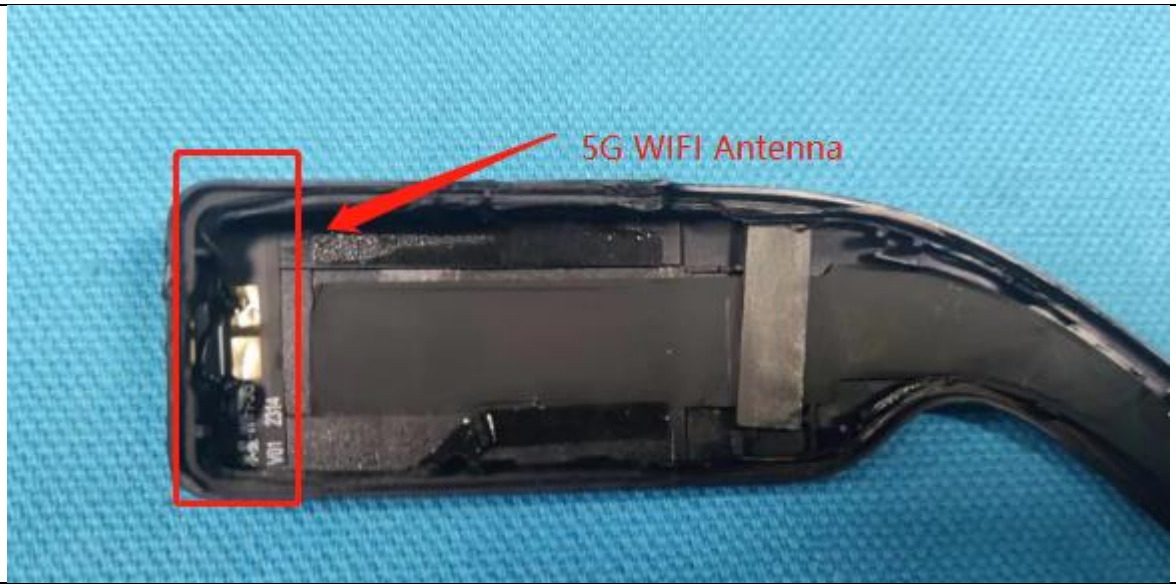
5 Evaluation Results (Evaluation)

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.

5.1.1 Conclusion:



6 Radio Spectrum Matter Test Results (RF)

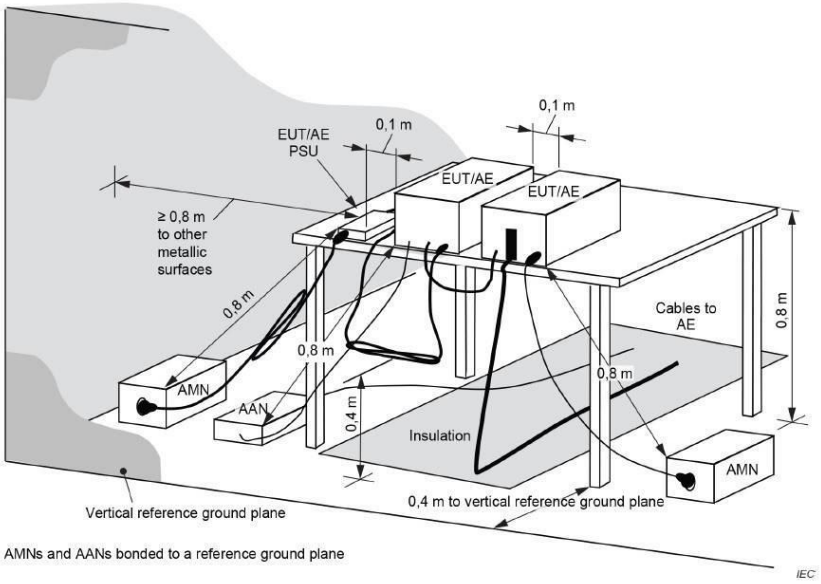
6.1 Conducted Emission at AC power line

Test Requirement:	47 CFR Part 15.207(a)
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:

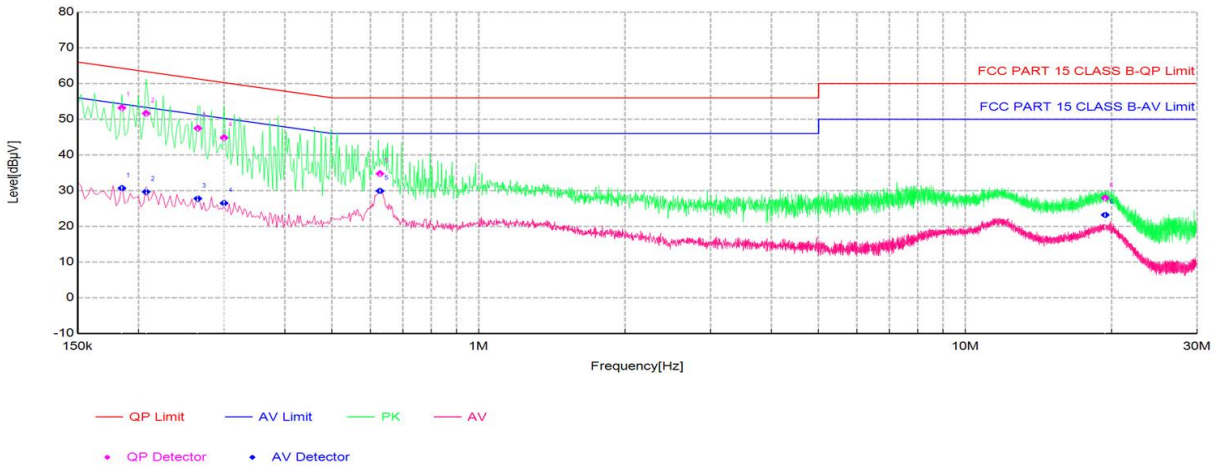
Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

6.1.2 Test Setup Diagram:



6.1.3 Test Data:

TM1 / Line: Line / Band: U-NII 1 / BW: 20 / CH: L



Final Data List										
NO.	Freq. [MHz]	Factor[dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Phase	Verdict
1	0.1850	10.19	53.18	64.26	11.08	30.68	54.26	23.58	L	PASS
2	0.2075	10.29	51.63	63.30	11.67	29.69	53.30	23.61	L	PASS
3	0.2650	10.44	47.46	61.27	13.81	27.79	51.27	23.48	L	PASS
4	0.3000	10.53	44.82	60.24	15.42	26.50	50.24	23.74	L	PASS
5	0.6275	10.25	34.77	56.00	21.23	29.92	46.00	16.08	L	PASS
6	19.4105	10.35	27.96	60.00	32.04	23.22	50.00	26.78	L	PASS

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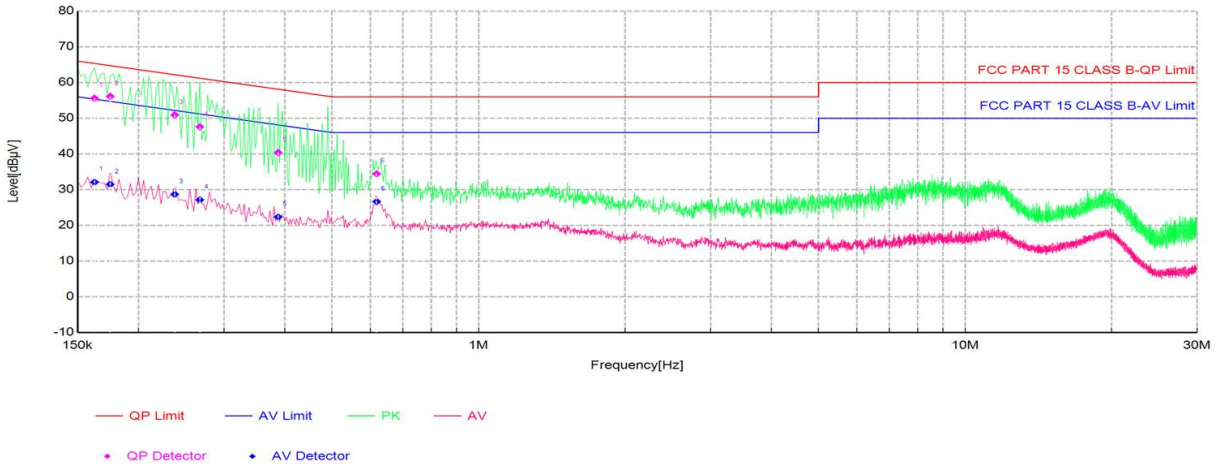
TM1 / Line: Neutral / Band: U-NII 1 / BW: 20 / CH: L



Final Data List										
NO.	Freq. [MHz]	Factor[dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Phase	Verdict
1	0.1625	10.07	55.58	65.34	9.76	32.09	55.34	23.25	N	PASS
2	0.1750	10.15	56.13	64.72	8.59	31.49	54.72	23.23	N	PASS
3	0.2375	10.38	50.92	62.18	11.26	28.70	52.18	23.48	N	PASS
4	0.2675	10.42	47.58	61.20	13.62	27.15	51.20	24.05	N	PASS
5	0.3875	10.41	40.37	58.12	17.75	22.36	48.12	25.76	N	PASS
6	0.6175	10.24	34.44	56.00	21.56	26.65	46.00	19.35	N	PASS

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6.2 Duty Cycle

Test Requirement:	All measurements are to be performed with the EUT transmitting at 100% duty cycle at its maximum power control level; however, if 100% duty cycle cannot be achieved, measurements of duty cycle, x, and maximum-power transmission duration, T, are required for each tested mode of operation.
Test Method:	ANSI C63.10-2013 section 12.2 (b)
Test Limit:	No limits, only for report use.
Procedure:	i) Set the center frequency of the instrument to the center frequency of the transmission. ii) Set RBW >= EBW if possible; otherwise, set RBW to the largest available value. iii) Set VBW >= RBW. iv) Set detector = peak. v) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T, where T is defined in item a1) of 12.2, and the number of sweep points across duration T exceeds 100.

6.2.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

6.2.2 Test Data:

Please Refer to Appendix for Details.

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6.3 Maximum conducted output power

Test Requirement:	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)
Test Method:	ANSI C63.10-2013, section 12.3
Test Limit:	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm). For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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	For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
Procedure:	Method SA-1 a) Set span to encompass the entire 26 dB EBW or 99% OBW of the signal. b) Set RBW = 1 MHz. c) Set VBW >= 3 MHz. d) Number of points in sweep >= [2 × span / RBW]. (This gives bin-to-bin spacing <= RBW / 2, so that narrowband signals are not lost between frequency bins.) e) Sweep time = auto. f) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode. g) If transmit duty cycle < 98%, use a video trigger with the trigger level set to enable triggering only on full power pulses. The transmitter shall operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no OFF intervals) or at duty cycle >= 98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run.” h) Trace average at least 100 traces in power averaging (rms) mode. i) Compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument’s band power measurement function, with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW or 99% OBW of the spectrum.

6.3.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

6.3.2 Test Data:

Please Refer to Appendix for Details.

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6.4 Power spectral density

Test Requirement:	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)
Test Method:	ANSI C63.10-2013, section 12.5
Test Limit:	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations. For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For the band 5.725-5.850 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter

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	conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
Procedure:	a) Create an average power spectrum for the EUT operating mode being tested by following the instructions in 12.3.2 for measuring maximum conducted output power using a spectrum analyzer or EMI receiver; that is, select the appropriate test method (SA-1, SA-2, SA-3, or their respective alternatives) and apply it up to, but not including, the step labeled, “Compute power….” (This procedure is required even if the maximum conducted output power measurement was performed using the power meter method PM.) b) Use the peak search function on the instrument to find the peak of the spectrum. c) Make the following adjustments to the peak value of the spectrum, if applicable: 1) If method SA-2 or SA-2A was used, then add [10 log (1 / D)], where D is the duty cycle, to the peak of the spectrum. 2) If method SA-3A was used and the linear mode was used in step h) of 12.3.2.7, add 1 dB to the final result to compensate for the difference between linear averaging and power averaging. d) The result is the PPSD. e) The procedure in item a) through item c) requires the use of 1 MHz resolution bandwidth to satisfy the 1 MHz measurement bandwidth specified by some regulatory authorities.This requirement also permits use of resolution bandwidths less than 1 MHz “provided that the measured power is integrated to show the total power over the measurement bandwidth” (i.e., 1 MHz). If measurements are performed using a reduced resolution bandwidth and integrated over 1 MHz bandwidth, the following adjustments to the procedures apply: 1) Set RBW >= 1 / T, where T is defined in 12.2 a). 2) Set VBW >= [3 × RBW]. 3) Care shall be taken such that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

6.4.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

6.4.2 Test Data:

Please Refer to Appendix for Details.

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6.5 Emission bandwidth and occupied bandwidth

Test Requirement:	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. U-NII 3, U-NII 4: 47 CFR Part 15.407(e)
Test Method:	ANSI C63.10-2013, section 6.9.3 & 12.4 KDB 789033 D02, Clause C.2
Test Limit:	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. U-NII 3, U-NII 4: Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.
Procedure:	Emission bandwidth: a) Set RBW = approximately 1% of the emission bandwidth. b) Set the VBW > RBW. c) Detector = peak. d) Trace mode = max hold. e) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%. Occupied bandwidth: a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW. b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement. c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2. d) Step a) through step c) might require iteration to adjust within the specified range. e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used. f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth. g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until

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	99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies. h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s). 6 dB emission bandwidth: a) Set RBW = 100 kHz. b) Set the video bandwidth (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.

6.5.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

6.5.2 Test Data:

Please Refer to Appendix for Details.

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6.6 Band edge emissions (Radiated)

Test Requirement:	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)
Test Method:	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6
Test Limit:	For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. For transmitters operating solely in the 5.725-5.850 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2]Above 38.6

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in § 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in § 15.209shall be demonstrated based on the average value of the measured emissions. The provisions in § 15.35apply to these measurements.

Except as provided elsewhere in this subpart, the emissions from an intentional

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	radiator shall not exceed the field strength levels specified in the following table: 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
Procedure:	Above 1GHz: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete. Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor 2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. 3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report. 4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

6.6.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %

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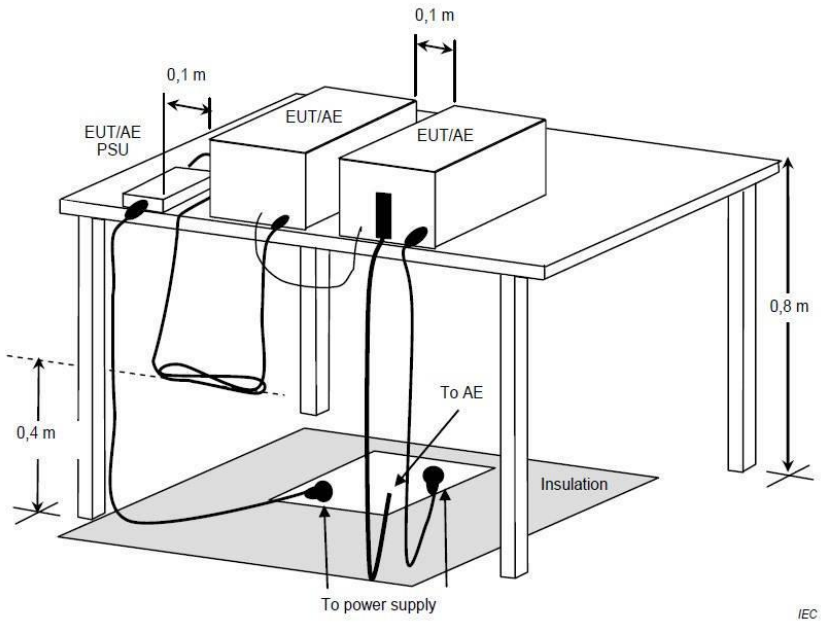
Atmospheric Pressure:	1010 mbar

6.6.2 Test Setup Diagram:



6.6.3 Test Data:

5150-5350MHz

Worse case mode:		802.11a		Test Frequency:		5180MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5150	49.9	-3.63	46.27	68.2	-21.93	peak	H
5150	47.09	-3.63	43.46	54	-10.54	AVG	H
5150	49.26	-3.63	45.63	68.2	-22.57	peak	V
5150	43.26	-3.63	39.63	54	-14.37	AVG	V

Worse case mode:		802.11a		Test Frequency:		5320MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5350	46.56	-3.59	42.97	68.2	-25.23	peak	H
5350	44.73	-3.59	41.14	54	-12.86	AVG	H
5350	48.57	-3.59	44.98	68.2	-23.22	peak	V
5350	43.42	-3.59	39.83	54	-14.17	AVG	V

Worse case mode:		802.11n20		Test Frequency:		5180MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5150	49.47	-3.63	45.84	68.2	-22.36	peak	H
5150	44.83	-3.63	41.2	54	-12.8	AVG	H
5150	45.86	-3.63	42.23	68.2	-25.97	peak	V
5150	39.29	-3.63	35.66	54	-18.34	AVG	V

Worse case mode:		802.11n20		Test Frequency:		5320MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5350	46.36	-3.59	42.77	68.2	-25.43	peak	H
5350	44.84	-3.59	41.25	54	-12.75	AVG	H
5350	44.61	-3.59	41.02	68.2	-27.18	peak	V
5350	43.58	-3.59	39.99	54	-14.01	AVG	V

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Worse case mode:		802.11n40		Test Frequency:		5190MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5150	48.42	-3.63	44.79	68.2	-23.41	peak	H
5150	43.29	-3.63	39.66	54	-14.34	AVG	H
5150	48.7	-3.63	45.07	68.2	-23.13	peak	V
5150	41.4	-3.63	37.77	54	-16.23	AVG	V

Worse case mode:		802.11n40		Test Frequency:		5310MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5350	46.92	-3.59	43.33	68.2	-24.87	peak	H
5350	41.6	-3.59	38.01	54	-15.99	AVG	H
5350	48.74	-3.59	45.15	68.2	-23.05	peak	V
5350	45.87	-3.59	42.28	54	-11.72	AVG	V

Worse case mode:		802.11ac20		Test Frequency:		5180MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5150	49.66	-3.63	46.03	68.2	-22.17	peak	H
5150	44.93	-3.63	41.3	54	-12.7	AVG	H
5150	45.58	-3.63	41.95	68.2	-26.25	peak	V
5150	39.49	-3.63	35.86	54	-18.14	AVG	V

Worse case mode:		802.11ac20		Test Frequency:		5320MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5350	45.95	-3.59	42.36	68.2	-25.84	peak	H
5350	45.44	-3.59	41.85	54	-12.15	AVG	H
5350	44.84	-3.59	41.25	68.2	-26.95	peak	V
5350	44.14	-3.59	40.55	54	-13.45	AVG	V

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Worse case mode:		802.11ac40		Test Frequency:		5190MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5150	48.61	-3.63	44.98	68.2	-23.22	peak	H
5150	42.77	-3.63	39.14	54	-14.86	AVG	H
5150	49.21	-3.63	45.58	68.2	-22.62	peak	V
5150	41.36	-3.63	37.73	54	-16.27	AVG	V

Worse case mode:		802.11ac40		Test Frequency:		5310MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5350	47.46	-3.59	43.87	68.2	-24.33	peak	H
5350	40.87	-3.59	37.28	54	-16.72	AVG	H
5350	48.29	-3.59	44.7	68.2	-23.5	peak	V
5350	45.18	-3.59	41.59	54	-12.41	AVG	V

Worse case mode:		802.11ac(VHT80)		Test Frequency:		5210MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5150	47.5	-3.63	43.87	68.2	-24.33	peak	H
5150	41.42	-3.63	37.79	54	-16.21	AVG	H
5150	49.22	-3.63	45.59	68.2	-22.61	peak	V
5150	42.09	-3.63	38.46	54	-15.54	AVG	V

Worse case mode:		802.11ac(VHT80)		Test Frequency:		5290	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5350	47.58	-3.59	43.99	68.2	-24.21	peak	H
5350	40.32	-3.59	36.73	54	-17.27	AVG	H
5350	49.5	-3.59	45.91	68.2	-22.29	peak	V
5350	43.09	-3.59	39.5	54	-14.5	AVG	V

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Worse case mode:		802.11ac(VHT160)		Test Frequency:		5250MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5150	47.68	-3.63	44.05	68.2	-24.15	peak	H
5150	41.98	-3.63	38.35	54	-15.65	AVG	H
5150	49.45	-3.63	45.82	68.2	-22.38	peak	V
5150	42.15	-3.63	38.52	54	-15.48	AVG	V
5350	47.01	-3.59	43.42	68.2	-24.78	peak	H
5350	40.02	-3.59	36.43	54	-17.57	AVG	H
5350	49.14	-3.59	45.55	68.2	-22.65	peak	V
5350	42.85	-3.59	39.26	54	-14.74	AVG	V

5500-5700MHz

Worse case mode:		802.11a		Test Frequency:		5500MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5470	50.11	-3.47	46.64	68.2	-21.56	peak	H
5470	47.51	-3.47	44.04	54	-9.96	AVG	H
5470	51.26	-3.47	47.79	68.2	-20.41	peak	V
5470	48.13	-3.47	44.66	54	-9.34	AVG	V

Worse case mode:		802.11a		Test Frequency:		5700MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5725	49.63	-3.38	46.25	68.2	-21.95	peak	H
5725	47.12	-3.38	43.74	54	-10.26	AVG	H
5725	50.36	-3.38	46.98	68.2	-21.22	peak	V
5725	47.36	-3.38	43.98	54	-10.02	AVG	V

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Worse case mode:		802.11n20		Test Frequency:		5500MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5470	50.27	-3.47	46.8	68.2	-21.4	peak	H
5470	47.09	-3.47	43.62	54	-10.38	AVG	H
5470	51.04	-3.47	47.57	68.2	-20.63	peak	V
5470	48.06	-3.47	44.59	54	-9.41	AVG	V

Worse case mode:		802.11n20		Test Frequency:		5700MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5725	49.14	-3.38	45.76	68.2	-22.44	peak	H
5725	47.39	-3.38	44.01	54	-9.99	AVG	H
5725	51.02	-3.38	47.64	68.2	-20.56	peak	V
5725	48.16	-3.38	44.78	54	-9.22	AVG	V

Worse case mode:		802.11n40		Test Frequency:		5510MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5470	50.46	-3.47	46.99	68.2	-21.21	peak	H
5470	48.15	-3.47	44.68	54	-9.32	AVG	H
5470	51.63	-3.47	48.16	68.2	-20.04	peak	V
5470	49.04	-3.47	45.57	54	-8.43	AVG	V

Worse case mode:		802.11n40		Test Frequency:		5670MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5725	51.36	-3.38	47.98	68.2	-9.11	peak	H
5725	48.27	-3.38	44.89	54	-20.62	peak	H
5725	50.96	-3.38	47.58	68.2	-9.42	peak	V
5725	47.96	-3.38	44.58	54	-9.11	peak	V

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Worse case mode:		802.11ac20		Test Frequency:		5500MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5470	50.38	-3.47	46.91	68.2	-21.29	peak	H
5470	47.83	-3.47	44.36	54	-9.64	AVG	H
5470	51.06	-3.47	47.59	68.2	-20.61	peak	V
5470	48.37	-3.47	44.9	54	-9.1	AVG	V

Worse case mode:		802.11ac20		Test Frequency:		5700MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5725	50.94	-3.38	47.56	68.2	-20.64	peak	H
5725	48.01	-3.38	44.63	54	-9.37	AVG	H
5725	51.23	-3.38	47.85	68.2	-20.35	peak	V
5725	47.68	-3.38	44.3	54	-9.7	AVG	V

Worse case mode:		802.11ac40		Test Frequency:		5510MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5470	49.92	-3.47	46.45	68.2	-21.75	peak	H
5470	47.03	-3.47	43.56	54	-10.44	AVG	H
5470	50.14	-3.47	46.67	68.2	-21.53	peak	V
5470	48.32	-3.47	44.85	54	-9.15	AVG	V

Worse case mode:		802.11ac40		Test Frequency:		5670MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5725	50.69	-3.38	47.31	68.2	-20.89	peak	H
5725	47.33	-3.38	43.95	54	-10.05	AVG	H

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5725	51.36	-3.38	47.98	68.2	-20.22	peak	V
5725	48.93	-3.38	45.55	54	-8.45	AVG	V

Worse case mode:		802.11ac80		Test Frequency:		5530MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5470	50.34	-3.47	46.87	68.2	-21.33	peak	H
5470	47.78	-3.47	44.31	54	-9.69	AVG	H
5470	51.74	-3.47	48.27	68.2	-19.93	peak	V
5470	49.01	-3.47	45.54	54	-8.46	AVG	V

Worse case mode:		802.11ac80		Test Frequency:		5610MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5725	50.75	-3.38	47.37	68.2	-20.83	peak	H
5725	48.35	-3.38	44.97	54	-9.03	AVG	H
5725	51.34	-3.38	47.96	68.2	-20.24	peak	V
5725	49.37	-3.38	45.99	54	-8.01	AVG	V

Worse case mode:		802.11ac160		Test Frequency:		5570MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5470	49.97	-3.47	46.5	68.2	-21.7	peak	H
5470	47.89	-3.47	44.42	54	-9.58	AVG	H
5470	50.74	-3.47	47.27	68.2	-20.93	peak	V
5470	48.83	-3.47	45.36	54	-8.64	AVG	V
5725	50.37	-3.38	46.99	68.2	-21.21	peak	H
5725	48.03	-3.38	44.65	54	-9.35	AVG	H
5725	51.37	-3.38	47.99	68.2	-20.21	peak	V
5725	48.37	-3.38	44.99	54	-9.01	AVG	V

5745-5825MHz

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Worse case mode:		802.11a		Test Frequency:		5745MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5650	55.96	-3.38	52.58	68.2	-15.62	peak	H
5700	56.17	-3.38	52.79	105.2	-52.41	peak	H
5720	61.45	-3.38	58.07	110.8	-52.73	peak	H
5725	62.07	-3.38	58.69	122.2	-63.51	peak	H
5650	54.19	-3.38	50.81	68.2	-17.39	peak	V
5700	56.37	-3.38	52.99	105.2	-52.21	peak	V
5720	58.85	-3.38	55.47	110.8	-55.33	peak	V
5725	59.47	-3.38	56.09	122.2	-66.11	peak	V

Worse case mode:		802.11a		Test Frequency:		5825MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5850	68.17	-3.29	64.88	122.2	-57.32	peak	H
5855	63.24	-3.29	59.95	110.8	-50.85	peak	H
5875	60.24	-3.29	56.95	105.2	-48.25	peak	H
5925	58.42	-3.29	55.13	68.2	-13.07	peak	H
5850	67.31	-3.29	64.02	122.2	-58.18	peak	V
5855	61.58	-3.29	58.29	110.8	-52.51	peak	V
5875	59.85	-3.29	56.56	105.2	-48.64	peak	V
5925	59.56	-3.29	56.27	68.2	-11.93	peak	V

Worse case mode:	802.11n20	Test Frequency:	5745MHz

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Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5650	57.48	-3.38	54.1	68.2	-14.1	peak	H
5700	58.43	-3.38	55.05	105.2	-50.15	peak	H
5720	61.79	-3.38	58.41	110.8	-52.39	peak	H
5725	62.47	-3.38	59.09	122.2	-63.11	peak	H
5650	55.98	-3.38	52.6	68.2	-15.6	peak	V
5700	57.96	-3.38	54.58	105.2	-50.62	peak	V
5720	58.85	-3.38	55.47	110.8	-55.33	peak	V
5725	69.78	-3.38	66.4	122.2	-55.8	peak	V

Worse case mode:		802.11n20		Test Frequency:		5825MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5850	69.60	-3.29	66.31	122.2	-55.89	peak	H
5855	62.51	-3.29	59.22	1108	-51.58	peak	H
5875	59.35	-3.29	56.06	105.2	-49.14	peak	H
5925	58.42	-3.29	55.13	68.2	-13.07	peak	H
5850	66.39	-3.29	63.1	122.2	-59.1	peak	V
5855	60.57	-3.29	57.28	1108	-53.52	peak	V
5875	58.85	-3.29	55.56	105.2	-49.64	peak	V
5925	58.69	-3.29	55.4	68.2	-12.8	peak	V

Worse case mode:	802.11n40	Test Frequency:	5755MHz

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Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5650	56.48	-3.38	53.10	68.2	-15.10	peak	H
5700	57.43	-3.38	54.05	105.2	-51.15	peak	H
5720	62.79	-3.38	59.41	110.8	-51.39	peak	H
5725	63.17	-3.38	59.79	122.2	-62.41	peak	H
5650	56.87	-3.38	53.49	68.2	-14.71	peak	V
5700	58.31	-3.38	54.93	105.2	-50.27	peak	V
5720	59.85	-3.38	56.47	110.8	-54.33	peak	V
5725	60.47	-3.38	57.09	122.2	-65.11	peak	V

Worse case mode:		802.11n40		Test Frequency:		5795MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5850	61.82	-3.29	58.53	122.2	-63.67	peak	H
5855	60.75	-3.29	57.46	110.8	-53.34	peak	H
5875	57.90	-3.29	54.61	105.2	-50.59	peak	H
5925	56.85	-3.29	53.56	68.2	-14.64	peak	H
5850	56.37	-3.29	53.08	122.2	-69.12	peak	V
5855	54.36	-3.29	51.07	110.8	-59.73	peak	V
5875	54.51	-3.29	51.22	105.2	-53.98	peak	V
5925	54.31	-3.29	51.02	68.2	-17.18	peak	V

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Worse case mode:		802.11ac20		Test Frequency:		5745MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5650	58.75	-3.38	55.37	68.2	-12.83	peak	H
5700	63.55	-3.38	60.17	105.2	-45.03	peak	H
5720	70.12	-3.38	66.74	110.8	-44.06	peak	H
5725	76.20	-3.38	72.82	122.2	-49.38	peak	H
5650	57.52	-3.38	54.14	68.2	-14.06	peak	V
5700	59.36	-3.38	55.98	105.2	-49.22	peak	V
5720	64.78	-3.38	61.4	110.8	-49.4	peak	V
5725	63.71	-3.38	60.33	122.2	-61.87	peak	V

Worse case mode:		802.11ac20		Test Frequency:		5825MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5850	69.60	-3.29	66.31	122.2	-55.89	peak	H
5855	62.51	-3.29	59.22	110.8	-51.58	peak	H
5875	59.35	-3.29	56.06	105.2	-49.14	peak	H
5925	58.42	-3.29	55.13	68.2	-13.07	peak	H
5850	66.39	-3.29	63.1	122.2	-59.1	peak	V
5855	60.57	-3.29	57.28	110.8	-53.52	peak	V
5875	58.85	-3.29	55.56	105.2	-49.64	peak	V
5925	58.69	-3.29	55.4	68.2	-12.8	peak	V

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Worse case mode:		802.11ac40		Test Frequency:		5755MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5650	57.48	-3.38	54.10	68.2	-14.10	peak	H
5700	58.44	-3.38	55.06	105.2	-50.14	peak	H
5720	63.75	-3.38	60.37	110.8	-50.43	peak	H
5725	64.10	-3.38	60.72	122.2	-61.48	peak	H
5650	57.27	-3.38	53.89	68.2	-14.31	peak	V
5700	59.33	-3.38	55.95	105.2	-49.25	peak	V
5720	60.05	-3.38	56.67	110.8	-54.13	peak	V
5725	60.42	-3.38	57.04	122.2	-65.16	peak	V

Worse case mode:		802.11ac40		Test Frequency:		5795MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5850	63.81	-3.29	60.52	122.2	-61.68	peak	H
5855	62.78	-3.29	59.49	110.8	-51.31	peak	H
5875	58.80	-3.29	55.51	105.2	-49.69	peak	H
5925	58.85	-3.29	55.56	68.2	-12.64	peak	H
5850	58.36	-3.29	55.07	122.2	-67.13	peak	V
5855	58.36	-3.29	55.07	110.8	-55.73	peak	V
5875	58.51	-3.29	55.22	105.2	-49.98	peak	V
5925	58.91	-3.29	55.62	68.2	-12.58	peak	V

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Worse case mode:		802.11ac80		Test Frequency:		5775MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5650	59.71	-3.38	56.33	68.2	-11.87	peak	H
5700	65.43	-3.38	62.05	105.2	-43.15	peak	H
5720	70.58	-3.38	67.2	110.8	-43.6	peak	H
5725	70.99	-3.38	67.61	122.2	-54.59	peak	H
5850	65.81	-3.38	62.52	122.2	-59.68	peak	H
5855	64.99	-3.38	61.7	110.8	-49.1	peak	H
5875	63.36	-3.38	60.07	105.2	-45.13	peak	H
5925	60.41	-3.38	57.12	68.2	-11.08	peak	H

Worse case mode:		802.11ac80		Test Frequency:		5775MHz	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5650	56.84	-3.38	53.46	68.2	-14.74	peak	V
5700	60.73	-3.38	57.35	105.2	-47.85	peak	V
5720	65.71	-3.38	62.33	110.8	-48.47	peak	V
5725	65.96	-3.38	62.58	122.2	-59.62	peak	V
5850	62.53	-3.38	59.24	122.2	-62.96	peak	V
5855	62.12	-3.38	58.83	110.8	-51.97	peak	V
5875	60.29	-3.38	57	105.2	-48.2	peak	V
5925	59.11	-3.38	55.82	68.2	-12.38	peak	V

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6.7 Undesirable emission limits (below 1GHz)

Test Requirement:	47 CFR Part 15.407(b)(9)
Test Method:	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6
Test Limit:	Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table: 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
Procedure:	Below 1GHz: a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete. Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor 2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. 3. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. Above 1GHz:

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	a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete. Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor 2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. 3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report. 4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

6.7.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

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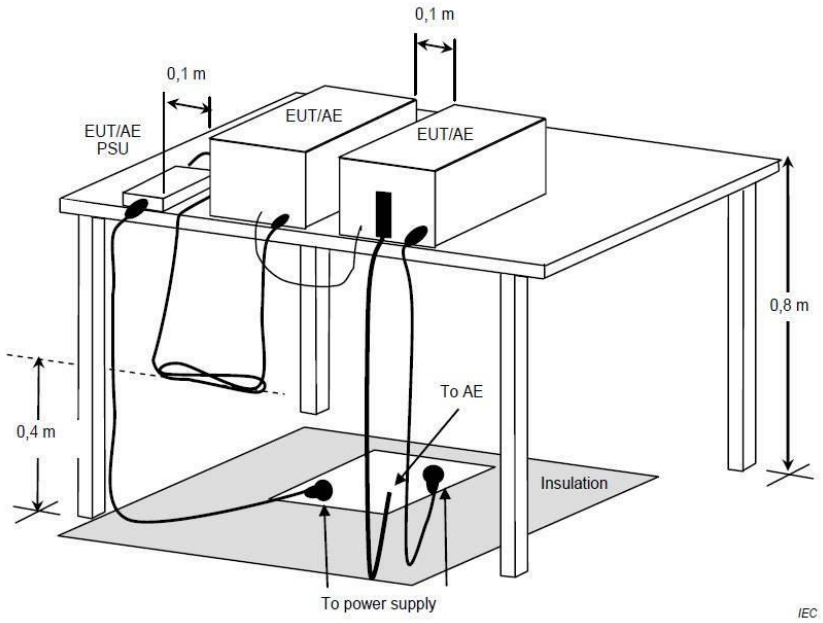
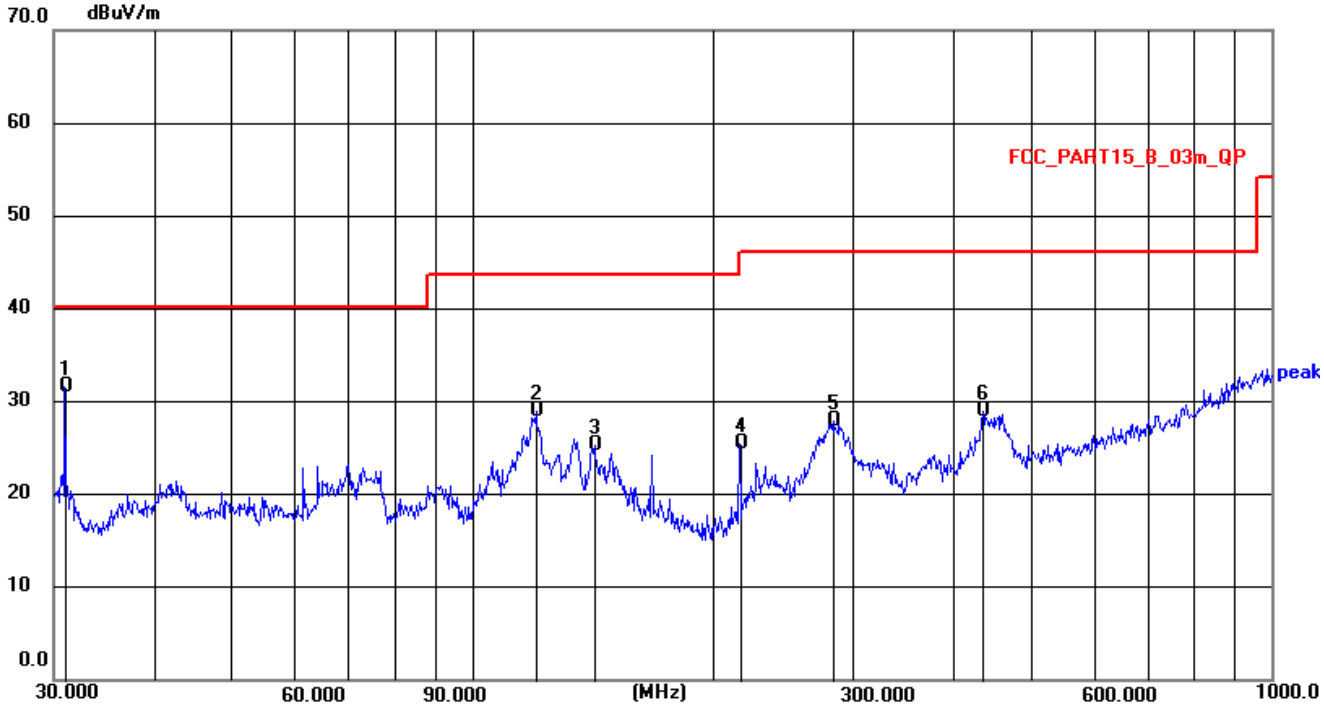
6.7.2 Test Setup Diagram:



6.7.3 Test Data:

Note: All the mode have been tested, and only the worst case mode are in the report
TM1 / Polarization: Horizontal / Band: U-NII 1 / 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 *	30.9619	18.37	13.15	31.52	40.00	8.48	QP	200	105	P	
2	120.2766	15.36	13.52	28.88	43.50	14.62	QP	200	241	P	
3	142.3243	10.81	14.44	25.25	43.50	18.25	QP	200	152	P	
4	216.0240	13.34	12.13	25.47	46.00	20.53	QP	200	141	P	
5	282.9852	13.44	14.46	27.90	46.00	18.10	QP	200	136	P	
6	435.5898	10.32	18.60	28.92	46.00	17.08	QP	200	147	P	

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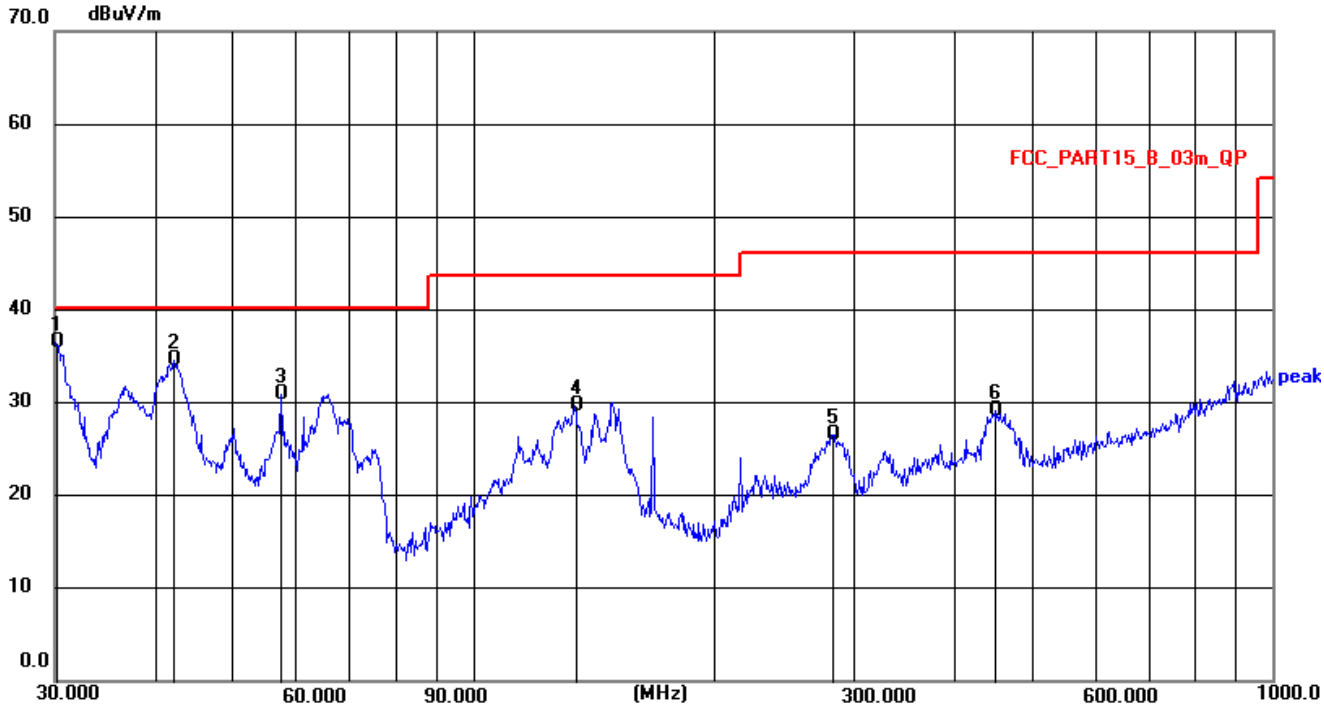
TM1 / Polarization: Vertical / Band: U-NII 1 / BW: 20 / CH: L



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 *	30. 1054	24.09	12.46	36.55	40.00	3.45	QP	100	142	P	
2	42.3022	19.93	14.55	34.48	40.00	5.52	QP	100	89	P	
3	57.5939	17.09	13.80	30.89	40.00	9. 11	QP	100	147	P	
4	134.0882	15.66	13.96	29.62	43.50	13.88	QP	100	165	P	
5	281.0075	11.86	14.72	26.58	46.00	19.42	QP	100	128	P	
6	449.5558	10.53	18.57	29. 10	46.00	16.90	QP	100	49	P	

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6.8 Undesirable emission limits (above 1GHz)

Test Requirement:	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)
Test Method:	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6
Test Limit:	For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. For transmitters operating solely in the 5.725-5.850 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2]Above 38.6

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in § 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in § 15.209shall be demonstrated based on the average value of the measured emissions. The provisions in § 15.35apply to these measurements.

Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength	Measurement

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		(microvolts/meter)	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
Procedure:	Above 1GHz: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete. Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor 2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. 3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report. 4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.		

6.8.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

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6.8.2 Test Data:

5150-5250MHz

802.11a					Test Frequency: 5180MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10359	33.99	38.96	8.27	35.64	45.58	68.2	-22.62	Vertical
15538	33.33	38.4	10.57	35.35	46.95	68.2	-21.25	Vertical
10359	35.03	38.96	8.27	35.64	46.62	68.2	-21.58	Horizontal
15538	27.16	38.4	10.57	35.35	40.78	68.2	-27.42	Horizontal
10359	29.22	38.96	8.27	35.64	40.81	54	-13.19	Vertical
15538	26.44	38.4	10.57	35.35	40.06	54	-13.94	Vertical
10359	24.21	38.96	8.27	35.64	35.8	54	-18.2	Horizontal
15538	24.77	38.4	10.57	35.35	38.39	54	-15.61	Horizontal

802.11a					Test Frequency: 5200MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10401	37.78	39.01	8.29	35.67	49.41	68.2	-18.79	Vertical
15603	31.41	38.3	10.62	35.36	44.97	68.2	-23.23	Vertical
10401	32.78	39.01	8.29	35.67	44.41	68.2	-23.79	Horizontal
15603	34.54	38.3	10.62	35.36	48.1	68.2	-20.1	Horizontal
10401	31.31	39.01	8.29	35.67	42.94	54	-11.06	Vertical
15603	28.52	38.3	10.62	35.36	42.08	54	-11.92	Vertical
10401	28.33	39.01	8.29	35.67	39.96	54	-14.04	Horizontal
15603	22.56	38.3	10.62	35.36	36.12	54	-17.88	Horizontal

802.11a					Test Frequency: 5240MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480	31.76	39.15	8.32	35.78	43.45	68.2	-24.75	Vertical
15720	31.58	38	10.72	35.37	44.93	68.2	-23.27	Vertical
10480	32.56	39.15	8.32	35.78	44.25	68.2	-23.95	Horizontal
15720	27.28	38	10.72	35.37	40.63	68.2	-27.57	Horizontal
10480	28.94	39.15	8.32	35.78	40.63	54	-13.37	Vertical
15720	28.76	38	10.72	35.37	42.11	54	-11.89	Vertical
10480	26.18	39.15	8.32	35.78	37.87	54	-16.13	Horizontal
15720	26.12	38	10.72	35.37	39.47	54	-14.53	Horizontal

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802.11n(HT20)					Test Frequency: 5180MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360	34.41	38.96	8.27	35.64	46	68.2	-22.2	Vertical
15540	33.03	38.4	10.57	35.35	46.65	68.2	-21.55	Vertical
10360	33.8	38.96	8.27	35.64	45.39	68.2	-22.81	Horizontal
15540	28.3	38.4	10.57	35.35	41.92	68.2	-26.28	Horizontal
10360	29	38.96	8.27	35.64	40.59	54	-13.41	Vertical
15540	26.43	38.4	10.57	35.35	40.05	54	-13.95	Vertical
10360	24.45	38.96	8.27	35.64	36.04	54	-17.96	Horizontal
15540	24.94	38.4	10.57	35.35	38.56	54	-15.44	Horizontal

802.11n(HT20)					Test Frequency: 5200MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400	37.98	39.01	8.29	35.67	49.61	68.2	-18.59	Vertical
15600	32.01	38.3	10.62	35.36	45.57	68.2	-22.63	Vertical
10400	33.55	39.01	8.29	35.67	45.18	68.2	-23.02	Horizontal
15600	34.19	38.3	10.62	35.36	47.75	68.2	-20.45	Horizontal
10400	30.72	39.01	8.29	35.67	42.35	54	-11.65	Vertical
15600	29.41	38.3	10.62	35.36	42.97	54	-11.03	Vertical
10400	28.11	39.01	8.29	35.67	39.74	54	-14.26	Horizontal
15600	23.23	38.3	10.62	35.36	36.79	54	-17.21	Horizontal

802.11n(HT20)					Test Frequency: 5240MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480	33.4	39.15	8.32	35.78	45.09	68.2	-23.11	Vertical
15720	32.07	38	10.72	35.37	45.42	68.2	-22.78	Vertical
10480	31.31	39.15	8.32	35.78	43	68.2	-25.2	Horizontal
15720	28.1	38	10.72	35.37	41.45	68.2	-26.75	Horizontal
10480	29.02	39.15	8.32	35.78	40.71	54	-13.29	Vertical
15720	28.5	38	10.72	35.37	41.85	54	-12.15	Vertical
10480	25.72	39.15	8.32	35.78	37.41	54	-16.59	Horizontal
15720	26.41	38	10.72	35.37	39.76	54	-14.24	Horizontal

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802.11n(HT40)					Test Frequency: 5190MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380	33.99	39.01	8.28	35.67	45.61	68.2	-22.59	Vertical
15570	31.46	38.3	10.6	35.36	45	68.2	-23.2	Vertical
10380	30.82	39.01	8.28	35.67	42.44	68.2	-25.76	Horizontal
15570	28.98	38.3	10.6	35.36	42.52	68.2	-25.68	Horizontal
10380	25.85	39.01	8.28	35.67	37.47	54	-16.53	Vertical
15570	26.99	38.3	10.6	35.36	40.53	54	-13.47	Vertical
10380	25.54	39.01	8.28	35.67	37.16	54	-16.84	Horizontal
15570	24.22	38.3	10.6	35.36	37.76	54	-16.24	Horizontal

802.11n(HT40)					Test Frequency: 5230MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460	32.74	39.11	8.31	35.75	44.41	68.2	-23.79	Vertical
15690	28.79	38.1	10.7	35.37	42.22	68.2	-25.98	Vertical
10460	30.87	39.11	8.31	35.75	42.54	68.2	-25.66	Horizontal
15690	30.41	38.1	10.7	35.37	43.84	68.2	-24.36	Horizontal
10460	25.1	39.11	8.31	35.75	36.77	54	-17.23	Vertical
15690	24.88	38.1	10.7	35.37	38.31	54	-15.69	Vertical
10460	25.98	39.11	8.31	35.75	37.65	54	-16.35	Horizontal
15690	24.68	38.1	10.7	35.37	38.11	54	-15.89	Horizontal

802.11ac(VHT20)					Test Frequency: 5180MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360	33.95	38.96	8.27	35.64	45.54	68.2	-22.66	Vertical
15540	33.2	38.4	10.57	35.35	46.82	68.2	-21.38	Vertical
10360	34.39	38.96	8.27	35.64	45.98	68.2	-22.22	Horizontal
15540	27.63	38.4	10.57	35.35	41.25	68.2	-26.95	Horizontal
10360	28.68	38.96	8.27	35.64	40.27	54	-13.73	Vertical
15540	25.79	38.4	10.57	35.35	39.41	54	-14.59	Vertical
10360	23.87	38.96	8.27	35.64	35.46	54	-18.54	Horizontal
15540	24.23	38.4	10.57	35.35	37.85	54	-16.15	Horizontal

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802.11ac(VHT20)					Test Frequency: 5200MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400	34.17	39.01	8.29	35.67	45.8	68.2	-22.4	Vertical
15600	33.03	38.3	10.62	35.36	46.59	68.2	-21.61	Vertical
10400	34.51	39.01	8.29	35.67	46.14	68.2	-22.06	Horizontal
15600	27.99	38.3	10.62	35.36	41.55	68.2	-26.65	Horizontal
10400	28.55	39.01	8.29	35.67	40.18	54	-13.82	Vertical
15600	26.3	38.3	10.62	35.36	39.86	54	-14.14	Vertical
10400	24.34	39.01	8.29	35.67	35.97	54	-18.03	Horizontal
15600	23.87	38.3	10.62	35.36	37.43	54	-16.57	Horizontal

802.11ac(VHT20)					Test Frequency: 5240MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480	37.43	39.15	8.32	35.78	49.12	68.2	-19.08	Vertical
15720	31.85	38	10.72	35.37	45.2	68.2	-23	Vertical
10480	32.86	39.15	8.32	35.78	44.55	68.2	-23.65	Horizontal
15720	34.31	38	10.72	35.37	47.66	68.2	-20.54	Horizontal
10480	31.05	39.15	8.32	35.78	42.74	54	-11.26	Vertical
15720	28.81	38	10.72	35.37	42.16	54	-11.84	Vertical
10480	28.22	39.15	8.32	35.78	39.91	54	-14.09	Horizontal
15720	23.02	38	10.72	35.37	36.37	54	-17.63	Horizontal

802.11ac(VHT40)					Test Frequency: 5190MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380	32.43	39.01	8.28	35.67	44.05	68.2	-24.15	Vertical
15570	31.59	38.3	10.6	35.36	45.13	68.2	-23.07	Vertical
10380	32.05	39.01	8.28	35.67	43.67	68.2	-24.53	Horizontal
15570	27.15	38.3	10.6	35.36	40.69	68.2	-27.51	Horizontal
10380	29.35	39.01	8.28	35.67	40.97	54	-13.03	Vertical
15570	27.54	38.3	10.6	35.36	41.08	54	-12.92	Vertical
10380	24.87	39.01	8.28	35.67	36.49	54	-17.51	Horizontal
15570	25.89	38.3	10.6	35.36	39.43	54	-14.57	Horizontal

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802.11ac(VHT40)					Test Frequency: 5230MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460	33.86	39.11	8.31	35.75	45.53	68.2	-22.67	Vertical
15690	31.86	38.1	10.7	35.37	45.29	68.2	-22.91	Vertical
10460	30.78	39.11	8.31	35.75	42.45	68.2	-25.75	Horizontal
15690	30.24	38.1	10.7	35.37	43.67	68.2	-24.53	Horizontal
10460	24.61	39.11	8.31	35.75	36.28	54	-17.72	Vertical
15690	27.91	38.1	10.7	35.37	41.34	54	-12.66	Vertical
10460	25.72	39.11	8.31	35.75	37.39	54	-16.61	Horizontal
15690	23.2	38.1	10.7	35.37	36.63	54	-17.37	Horizontal

802.11ac(VHT80)					Test Frequency: 5210MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10420	33.72	39.06	8.29	35.71	45.36	68.2	-22.84	Vertical
15630	28.85	38.2	10.65	35.36	42.34	68.2	-25.86	Vertical
10420	33.55	39.06	8.29	35.71	45.19	68.2	-23.01	Horizontal
15630	30.65	38.2	10.65	35.36	44.14	68.2	-24.06	Horizontal
10420	25.67	39.06	8.29	35.71	37.31	54	-16.69	Vertical
15630	24.92	38.2	10.65	35.36	38.41	54	-15.59	Vertical
10420	23.74	39.06	8.29	35.71	35.38	54	-18.62	Horizontal
15630	21.91	38.2	10.65	35.36	35.4	54	-18.6	Horizontal

802.11ac(VHT160)					Test Frequency: 5250MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10499	34.14	39.18	8.32	35.79	45.85	68.2	-22.35	Vertical
15748	33.57	38.1	10.72	35.37	47.02	68.2	-21.18	Vertical
10499	35.06	39.18	8.32	35.79	46.77	68.2	-21.43	Horizontal
15748	29.02	38.1	10.72	35.37	42.47	68.2	-25.73	Horizontal
10499	28.39	39.18	8.32	35.79	40.10	54	-13.9	Vertical
15748	26.39	38.1	10.72	35.37	39.84	54	-14.16	Vertical
10499	23.53	39.18	8.32	35.79	35.24	54	-18.76	Horizontal
15748	24.12	38.1	10.72	35.37	37.57	54	-16.43	Horizontal

5250-5350MHz

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802.11a					Test Frequency: 5260MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10520	34.42	39.2	8.34	35.82	46.14	68.2	-22.06	Vertical
15780	33.82	37.9	10.77	35.38	47.11	68.2	-21.09	Vertical
10520	35.36	39.2	8.34	35.82	47.08	68.2	-21.12	Horizontal
15780	28.25	37.9	10.77	35.38	41.54	68.2	-26.66	Horizontal
10520	28.39	39.2	8.34	35.82	40.11	54	-13.89	Vertical
15780	26.39	37.9	10.77	35.38	39.68	54	-14.32	Vertical
10520	23.53	39.2	8.34	35.82	35.25	54	-18.75	Horizontal
15780	24.12	37.9	10.77	35.38	37.41	54	-16.59	Horizontal

802.11a					Test Frequency: 5300MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10600	37.09	39.22	8.37	35.93	48.75	68.2	-19.45	Vertical
15900	31.56	37.6	10.87	35.39	44.64	68.2	-23.56	Vertical
10600	32.59	39.22	8.37	35.93	44.25	68.2	-23.95	Horizontal
15900	34.52	37.6	10.87	35.39	47.6	68.2	-20.6	Horizontal
10600	30.57	39.22	8.37	35.93	42.23	54	-11.77	Vertical
15900	28.76	37.6	10.87	35.39	41.84	54	-12.16	Vertical
10600	27.79	39.22	8.37	35.93	39.45	54	-14.55	Horizontal
15900	22.74	37.6	10.87	35.39	35.82	54	-18.18	Horizontal

802.11a					Test Frequency: 5320MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10640	32.75	39.22	8.38	35.96	44.39	68.2	-23.81	Vertical
15960	32.66	37.5	10.92	35.4	45.68	68.2	-22.52	Vertical
10640	32.84	39.22	8.38	35.96	44.48	68.2	-23.72	Horizontal
15960	28.4	37.5	10.92	35.4	41.42	68.2	-26.78	Horizontal
10640	28.5	39.22	8.38	35.96	40.14	54	-13.86	Vertical
15960	28.67	37.5	10.92	35.4	41.69	54	-12.31	Vertical
10640	25.46	39.22	8.38	35.96	37.1	54	-16.9	Horizontal
15960	26.26	37.5	10.92	35.4	39.28	54	-14.72	Horizontal

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802.11n20					Test Frequency: 5260MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10520	34.91	39.2	8.34	35.82	46.63	68.2	-21.57	Vertical
15780	33.4	37.9	10.77	35.38	46.69	68.2	-21.51	Vertical
10520	34.64	39.2	8.34	35.82	46.36	68.2	-21.84	Horizontal
15780	29.1	37.9	10.77	35.38	42.39	68.2	-25.81	Horizontal
10520	27.89	39.2	8.34	35.82	39.61	54	-14.39	Vertical
15780	26.28	37.9	10.77	35.38	39.57	54	-14.43	Vertical
10520	23.96	39.2	8.34	35.82	35.68	54	-18.32	Horizontal
15780	24.5	37.9	10.77	35.38	37.79	54	-16.21	Horizontal

802.11n20					Test Frequency: 5300MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10600	37.25	39.22	8.37	35.93	48.91	68.2	-19.29	Vertical
15900	32.17	37.6	10.87	35.39	45.25	68.2	-22.95	Vertical
10600	33.05	39.22	8.37	35.93	44.71	68.2	-23.49	Horizontal
15900	33.88	37.6	10.87	35.39	46.96	68.2	-21.24	Horizontal
10600	29.93	39.22	8.37	35.93	41.59	54	-12.41	Vertical
15900	29.06	37.6	10.87	35.39	42.14	54	-11.86	Vertical
10600	27.44	39.22	8.37	35.93	39.1	54	-14.9	Horizontal
15900	22.81	37.6	10.87	35.39	35.89	54	-18.11	Horizontal

802.11n20					Test Frequency: 5320MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10640	33.58	39.22	8.38	35.96	45.22	68.2	-22.98	Vertical
15960	32.75	37.5	10.92	35.4	45.77	68.2	-22.43	Vertical
10640	32.31	39.22	8.38	35.96	43.95	68.2	-24.25	Horizontal
15960	29.01	37.5	10.92	35.4	42.03	68.2	-26.17	Horizontal
10640	28.79	39.22	8.38	35.96	40.43	54	-13.57	Vertical
15960	27.91	37.5	10.92	35.4	40.93	54	-13.07	Vertical
10640	25.04	39.22	8.38	35.96	36.68	54	-17.32	Horizontal
15960	25.75	37.5	10.92	35.4	38.77	54	-15.23	Horizontal

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802.11n40					Test Frequency: 5270MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10540	33.92	39.21	8.34	35.85	45.62	68.2	-22.58	Vertical
15810	32.32	37.8	10.79	35.38	45.53	68.2	-22.67	Vertical
10540	31.55	39.21	8.34	35.85	43.25	68.2	-24.95	Horizontal
15810	30.19	37.8	10.79	35.38	43.4	68.2	-24.8	Horizontal
10540	26.1	39.21	8.34	35.85	37.8	54	-16.2	Vertical
15810	27.76	37.8	10.79	35.38	40.97	54	-13.03	Vertical
10540	26.22	39.21	8.34	35.85	37.92	54	-16.08	Horizontal
15810	24.82	37.8	10.79	35.38	38.03	54	-15.97	Horizontal

802.11n40					Test Frequency: 5310MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10620	33.23	39.22	8.38	35.93	44.9	68.2	-23.3	Vertical
15930	30.00	37.5	10.89	35.4	42.99	68.2	-25.21	Vertical
10620	31.37	39.22	8.38	35.93	43.04	68.2	-25.16	Horizontal
15930	31.57	37.5	10.89	35.4	44.56	68.2	-23.64	Horizontal
10620	25.7	39.22	8.38	35.93	37.37	54	-16.63	Vertical
15930	25.77	37.5	10.89	35.4	38.76	54	-15.24	Vertical
10620	26.86	39.22	8.38	35.93	38.53	54	-15.47	Horizontal
15930	25.74	37.5	10.89	35.4	38.73	54	-15.27	Horizontal

802.11ac20					Test Frequency: 5260MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10520	34.62	39.2	8.34	35.82	46.34	68.2	-21.86	Vertical
15780	33.61	37.9	10.77	35.38	46.9	68.2	-21.3	Vertical
10520	34.82	39.2	8.34	35.82	46.54	68.2	-21.66	Horizontal
15780	28.60	37.9	10.77	35.38	41.89	68.2	-26.31	Horizontal
10520	28.43	39.2	8.34	35.82	40.15	54	-13.85	Vertical
15780	25.65	37.9	10.77	35.38	38.94	54	-15.06	Vertical
10520	23.63	39.2	8.34	35.82	35.35	54	-18.65	Horizontal
15780	23.96	37.9	10.77	35.38	37.25	54	-16.75	Horizontal

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802.11ac20					Test Frequency: 5300MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10600	37.45	39.22	8.37	35.93	49.11	68.2	-19.09	Vertical
15900	31.55	37.6	10.87	35.39	44.63	68.2	-23.57	Vertical
10600	32.8	39.22	8.37	35.93	44.46	68.2	-23.74	Horizontal
15900	34.56	37.6	10.87	35.39	47.64	68.2	-20.56	Horizontal
10600	30.79	39.22	8.37	35.93	42.45	54	-11.55	Vertical
15900	29.01	37.6	10.87	35.39	42.09	54	-11.91	Vertical
10600	27.42	39.22	8.37	35.93	39.08	54	-14.92	Horizontal
15900	23.09	37.6	10.87	35.39	36.17	54	-17.83	Horizontal

802.11ac20					Test Frequency: 5320MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10640	32.69	39.22	8.38	35.96	44.33	68.2	-23.87	Vertical
15960	32.61	37.5	10.92	35.4	45.63	68.2	-22.57	Vertical
10640	32.51	39.22	8.38	35.96	44.15	68.2	-24.05	Horizontal
15960	28.21	37.5	10.92	35.4	41.23	68.2	-26.97	Horizontal
10640	28.57	39.22	8.38	35.96	40.21	54	-13.79	Vertical
15960	28.04	37.5	10.92	35.4	41.06	54	-12.94	Vertical
10640	24.64	39.22	8.38	35.96	36.28	54	-17.72	Horizontal
15960	26.1	37.5	10.92	35.4	39.12	54	-14.88	Horizontal

802.11ac(VHT40)					Test Frequency: 5270MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10540	34.34	39.21	8.34	35.85	46.04	68.2	-22.16	Vertical
15810	32.49	37.8	10.79	35.38	45.7	68.2	-22.5	Vertical
10540	31.17	39.21	8.34	35.85	42.87	68.2	-25.33	Horizontal
15810	30.78	37.8	10.79	35.38	43.99	68.2	-24.21	Horizontal
10540	25.27	39.21	8.34	35.85	36.97	54	-17.03	Vertical
15810	28.26	37.8	10.79	35.38	41.47	54	-12.53	Vertical
10540	26.47	39.21	8.34	35.85	38.17	54	-15.83	Horizontal
15810	24.12	37.8	10.79	35.38	37.33	54	-16.67	Horizontal

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802.11ac(VHT40)					Test Frequency: 5310MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10620	32.69	39.22	8.38	35.93	44.36	68.2	-23.84	Vertical
15930	29.38	37.5	10.89	35.4	42.37	68.2	-25.83	Vertical
10620	31.56	39.22	8.38	35.93	43.23	68.2	-24.97	Horizontal
15930	31.25	37.5	10.89	35.4	44.24	68.2	-23.96	Horizontal
10620	25.11	39.22	8.38	35.93	36.78	54	-17.22	Vertical
15930	26.16	37.5	10.89	35.4	39.15	54	-14.85	Vertical
10620	27.59	39.22	8.38	35.93	39.26	54	-14.74	Horizontal
15930	25.82	37.5	10.89	35.4	38.81	54	-15.19	Horizontal

802.11ac(VHT80)					Test Frequency: 5290MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10580	33.96	39.21	8.36	35.89	45.64	68.2	-22.56	Vertical
15870	30.02	37.7	10.85	35.39	43.18	68.2	-25.02	Vertical
10580	33.53	39.21	8.36	35.89	45.21	68.2	-22.99	Horizontal
15870	31.41	37.7	10.85	35.39	44.57	68.2	-23.63	Horizontal
10580	26.37	39.21	8.36	35.89	38.05	54	-15.95	Vertical
15870	26.24	37.7	10.85	35.39	39.4	54	-14.6	Vertical
10580	24.12	39.21	8.36	35.89	35.8	54	-18.2	Horizontal
15870	23	37.7	10.85	35.39	36.16	54	-17.84	Horizontal

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5500-5700MHz

802.11a					Test Frequency: 5500MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10999	33.54	39.16	8.85	35.86	45.69	68.2	-22.51	Vertical
16503	27.02	37.4	10.96	35.35	40.03	68.2	-28.17	Vertical
10999	32.96	39.16	8.85	35.86	45.11	68.2	-23.09	Horizontal
16503	30.15	37.4	10.96	35.35	43.16	68.2	-25.04	Horizontal

802.11a					Test Frequency: 5580MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11159	33.38	39.16	8.86	35.86	45.54	68.2	-22.66	Vertical
16730	26.68	37.4	10.98	35.35	39.71	68.2	-28.49	Vertical
11159	34.02	39.16	8.86	35.86	46.18	68.2	-22.02	Horizontal
16730	29.78	37.4	10.98	35.35	42.81	68.2	-25.39	Horizontal

802.11a					Test Frequency: 5700MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11399	34.02	39.11	8.88	35.86	46.15	68.2	-22.05	Vertical
17105	27.65	37.3	11.01	35.35	40.61	68.2	-27.59	Vertical
11399	32.85	39.11	8.88	35.86	44.98	68.2	-23.22	Horizontal
17105	28.46	37.3	10.96	35.35	41.37	68.2	-26.83	Horizontal

802.11ac (VHT40)					Test Frequency: 5510MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11020	34.26	39.16	8.85	35.86	46.41	68.2	-21.79	Vertical
16524	27.09	37.4	10.96	35.35	40.10	68.2	-28.10	Vertical
11020	33.17	39.16	8.85	35.86	45.32	68.2	-22.88	Horizontal
16524	30.23	37.4	10.96	35.35	43.24	68.2	-24.96	Horizontal

802.11ac (VHT40)	Test Frequency: 5550MHz

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Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11100	33.78	39.16	8.85	35.86	45.93	68.2	-22.27	Vertical
16644	28.34	37.4	10.96	35.35	41.35	68.2	-26.85	Vertical
11100	34.26	39.16	8.85	35.86	46.41	68.2	-21.79	Horizontal
16644	31.03	37.4	10.96	35.35	44.04	68.2	-24.16	Horizontal

802.11ac(VHT40)					Test Frequency: 5670MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11340	34.19	39.11	8.85	35.86	46.29	68.2	-21.91	Vertical
17024	28.63	37.3	10.96	35.35	41.54	68.2	-26.66	Vertical
11340	31.96	39.11	8.85	35.86	44.06	68.2	-24.14	Horizontal
17024	28.96	37.3	10.96	35.35	41.87	68.2	-26.33	Horizontal

802.11a(VHT80)					Test Frequency: 5530MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11060	33.19	39.16	8.85	35.86	45.34	68.2	-22.86	Vertical
16604	28.14	37.4	10.96	35.35	41.15	68.2	-27.05	Vertical
11060	32.47	39.16	8.85	35.86	44.62	68.2	-23.58	Horizontal
16604	29.35	37.4	10.96	35.35	42.36	68.2	-25.84	Horizontal

802.11ac(VHT80)					Test Frequency: 5610MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11220	34.57	39.12	8.85	35.86	46.68	68.2	-21.52	Vertical
16825	27.83	37.3	10.96	35.35	40.74	68.2	-27.46	Vertical
11220	31.69	39.12	8.85	35.86	43.8	68.2	-24.4	Horizontal
16825	28.63	37.3	10.96	35.35	41.54	68.2	-26.66	Horizontal

802.11ac(VHT160)	Test Frequency: 5570MHz

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Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11142	33.56	39.17	8.87	35.85	45.75	68.2	-22.45	Vertical
16713	28.81	37.4	10.97	35.34	41.84	68.2	-26.36	Vertical
11142	34.03	39.17	8.87	35.85	46.22	68.2	-21.98	Horizontal
16713	32.04	37.4	10.97	35.34	45.07	68.2	-23.13	Horizontal

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5745-5825MHz

802.11a					Test Frequency: 5725MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11460	33.10	39.19	8.85	35.86	45.28	68.2	-22.92	Vertical
17235	26.82	37.4	10.96	35.35	39.83	68.2	-28.37	Vertical
11460	33.54	39.19	8.85	35.86	45.72	68.2	-22.48	Horizontal
17235	30.98	37.4	10.96	35.35	43.99	68.2	-24.21	Horizontal

802.11a					Test Frequency: 5785MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570	33.35	39.19	8.88	35.85	45.56	68.2	-22.63	Vertical
17355	26.83	37.4	10.98	35.33	39.87	68.2	-28.32	Vertical
11570	33.82	39.19	8.88	35.85	46.02	68.2	-22.16	Horizontal
17355	31.04	37.4	10.98	35.33	44.08	68.2	-24.11	Horizontal

802.11a					Test Frequency: 5825MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650	34.13	39.18	8.87	35.84	46.34	68.2	-21.86	Vertical
17475	26.42	37.4	10.95	35.31	39.46	68.2	-28.74	Vertical
11650	34.35	39.18	8.87	35.84	46.56	68.2	-21.64	Horizontal
17475	30.26	37.4	10.95	35.31	43.30	68.2	-24.90	Horizontal

802.11ac(VHT40)					Test Frequency: 5755MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11510	32.64	39.19	8.86	35.85	44.84	68.2	-23.36	Vertical
17265	25.54	37.4	10.91	35.32	38.53	68.2	-29.67	Vertical
11510	32.93	39.19	8.86	35.85	45.13	68.2	-23.07	Horizontal
17265	29.82	37.4	10.91	35.32	42.81	68.2	-25.39	Horizontal

802.11ac(VHT40)	Test Frequency: 5795MHz

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Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590	33.38	39.18	8.87	35.84	45.59	68.2	-22.61	Vertical
17385	25.56	37.4	10.93	35.31	38.58	68.2	-29.62	Vertical
11590	33.41	39.18	8.87	35.84	45.62	68.2	-22.58	Horizontal
17385	29.92	37.4	10.93	35.31	42.94	68.2	-25.26	Horizontal

802.11ac(VHT80)					Test Frequency: 5775MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11550	32.14	39.19	8.87	35.85	44.35	68.2	-23.85	Vertical
17325	24.94	37.4	10.93	35.32	37.95	68.2	-30.25	Vertical
11550	32.12	39.19	8.87	35.85	44.33	68.2	-23.87	Horizontal
17325	28.65	37.4	10.93	35.32	41.66	68.2	-26.54	Horizontal

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6.9 Automatically Discontinue Transmission

6.9.1 Requirement

Test Requirement:	The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

6.9.2 Conclusion:

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission

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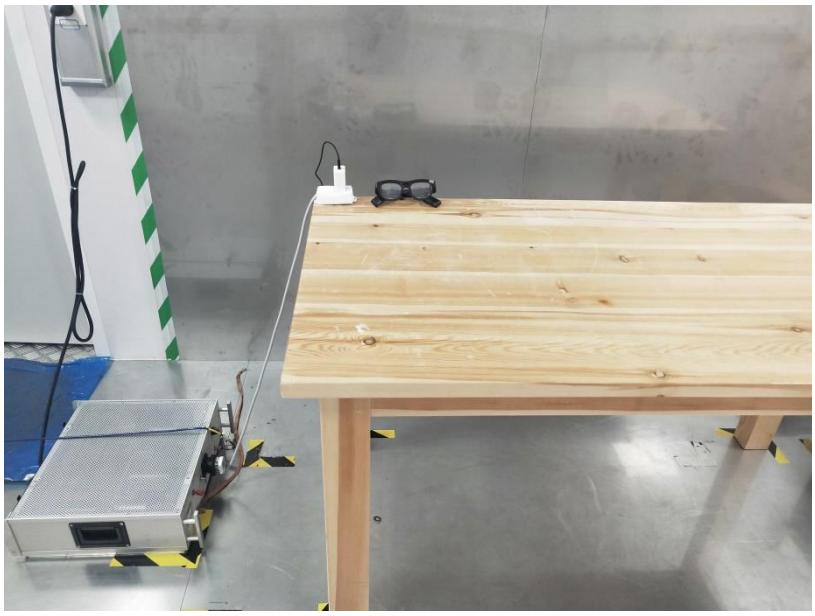
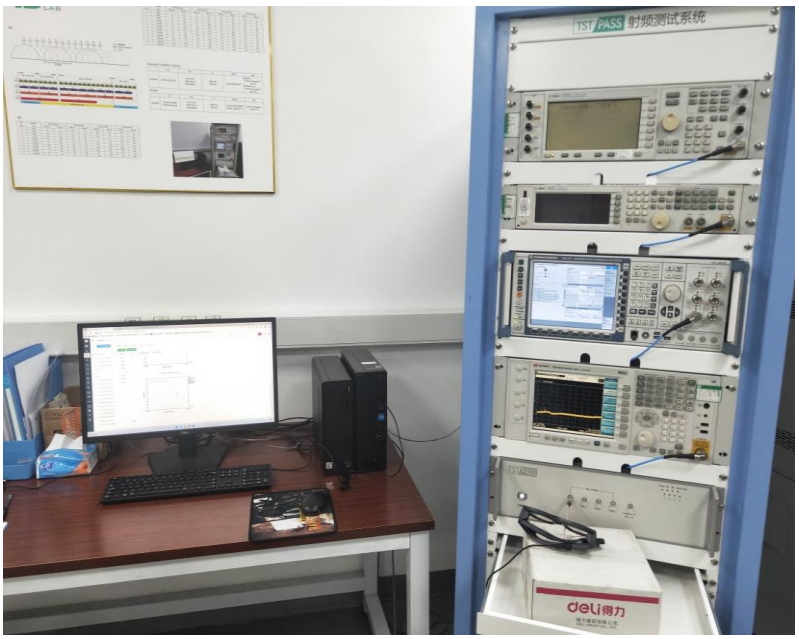
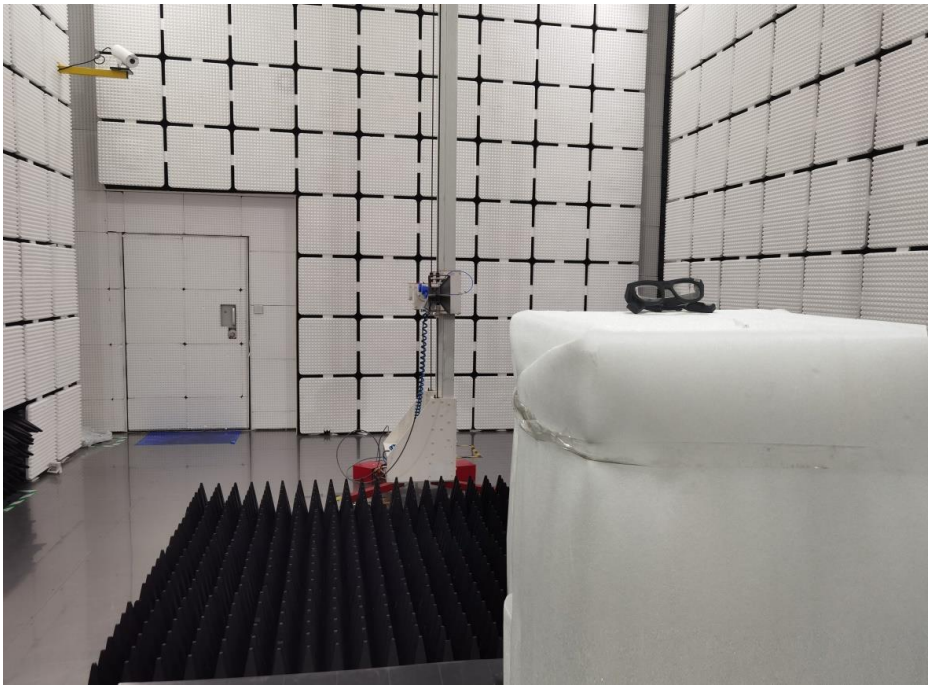
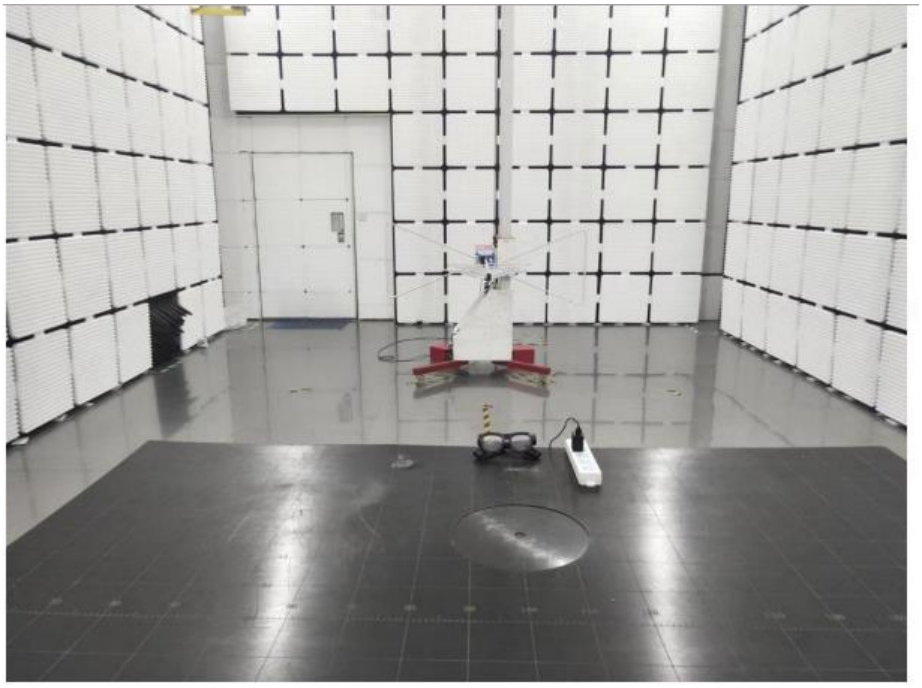
7 Test Setup Photos

Conducted Emission at AC power line


Duty Cycle Maximum conducted output power Power spectral density Emission bandwidth and occupied bandwidth


Band edge emissions (Radiated) Undesirable emission limits (above 1GHz)


Undesirable emission limits (below 1GHz)


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8 EUT Constructional Details (EUT Photos)

Please refer to the report No.BTF230717R01601

Appendix

1. Duty Cycle

1.1 Ant1

1.1.1 Test Result

ANT1				
Mode	TX Type	Frequency (MHz)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11a	SISO	5180	99.75	0.01
		5200	99.73	0.01
		5240	99.72	0.01
		5260	99.75	0.01
		5300	99.77	0.01
		5320	99.75	0.01
		5500	99.76	0.01
		5580	99.76	0.01
		5700	99.77	0.01
		5745	99.77	0.01
		5785	99.76	0.01
		5825	99.76	0.01
802.11n (HT20)	SISO	5180	99.91	0
		5200	99.91	0
		5240	99.91	0
		5260	99.91	0
		5300	99.90	0
		5320	99.91	0
		5500	99.75	0.01
		5580	99.90	0
		5700	99.91	0
		5745	99.91	0
		5785	99.90	0
		5825	99.92	0
802.11n (HT40)	SISO	5190	99.91	0
		5230	99.90	0
		5270	99.90	0
		5310	99.90	0
		5510	99.86	0.01
		5550	99.91	0
		5670	99.90	0
		5755	99.91	0
		5795	99.92	0
802.11ac20	SISO	5180	99.91	0
		5200	99.88	0.01
		5240	99.91	0
		5260	99.90	0
		5300	99.91	0
		5320	99.91	0
		5500	99.91	0
		5580	99.91	0
		5700	99.91	0
		5745	99.91	0
		5785	99.89	0.01
		5825	99.91	0
802.11ac40	SISO	5190	99.92	0

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		5230	99.90	0
		5270	99.90	0
		5310	99.91	0
		5510	99.91	0
		5550	99.90	0
		5670	99.91	0
		5755	99.91	0
		5795	99.91	0
802.11ac80	SISO	5210	99.92	0
		5290	99.91	0
		5530	99.92	0
		5610	99.90	0
		5775	99.92	0
802.11ac160	SISO	5250	99.91	0
		5570	99.92	0

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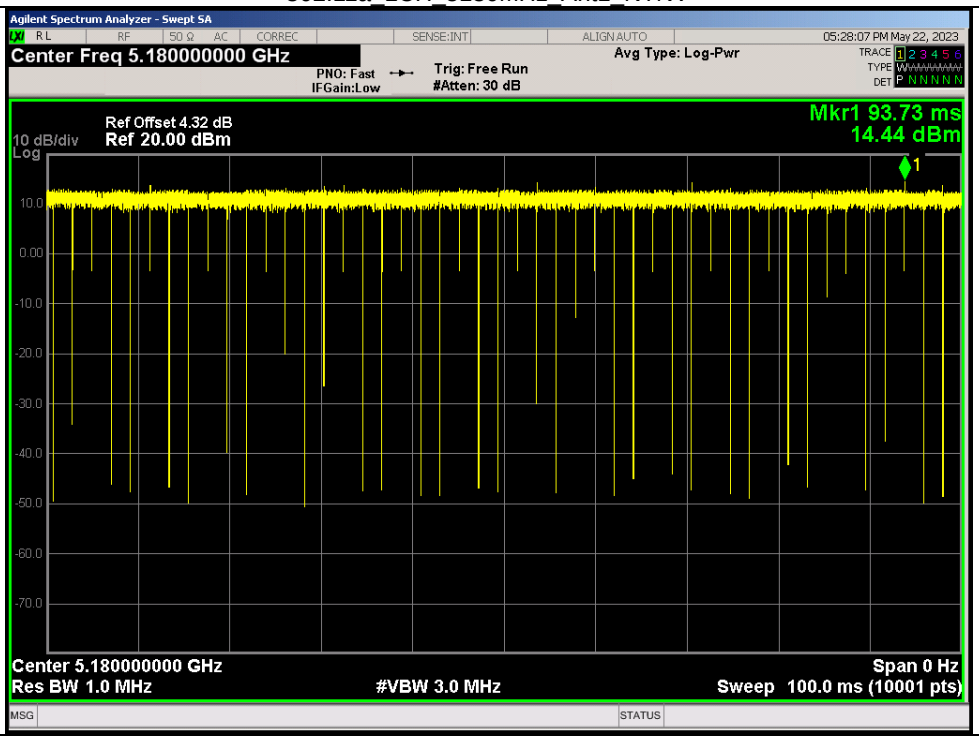
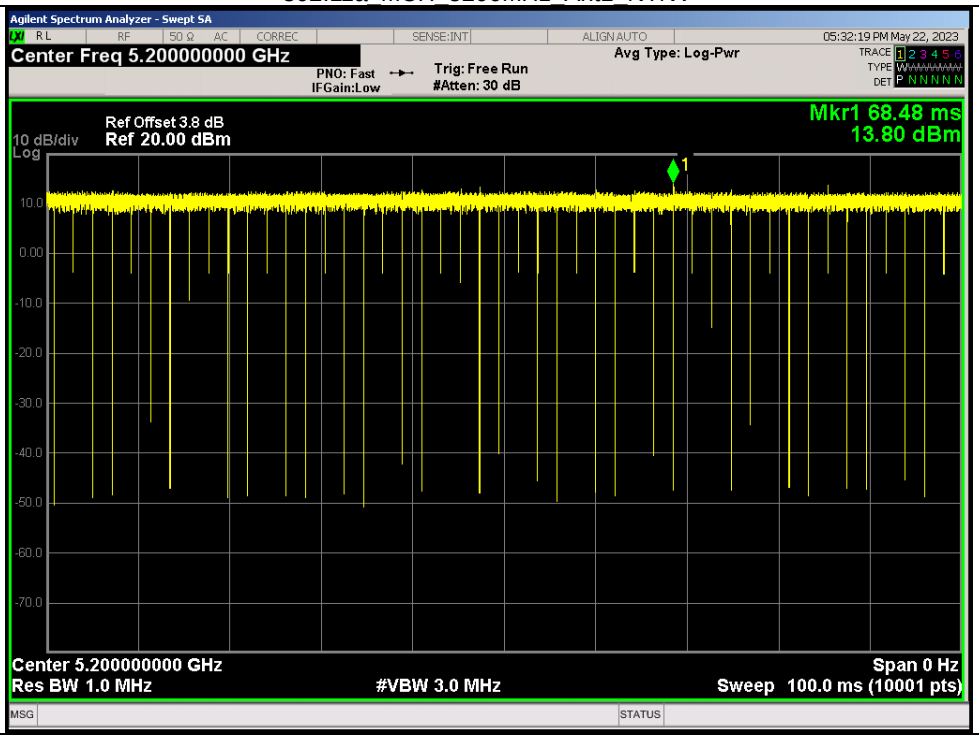
1.1.2 Test Graph

802.11a_LCH_5180MHz_Ant1_NTNV



802.11a_MCH_5200MHz_Ant1_NTNV



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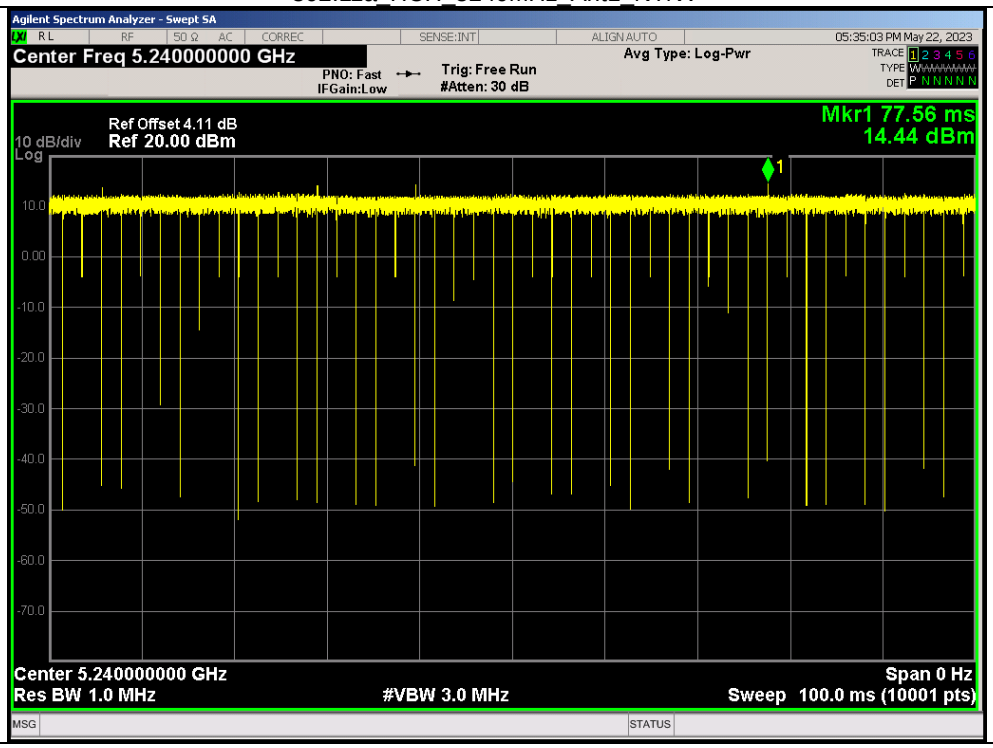
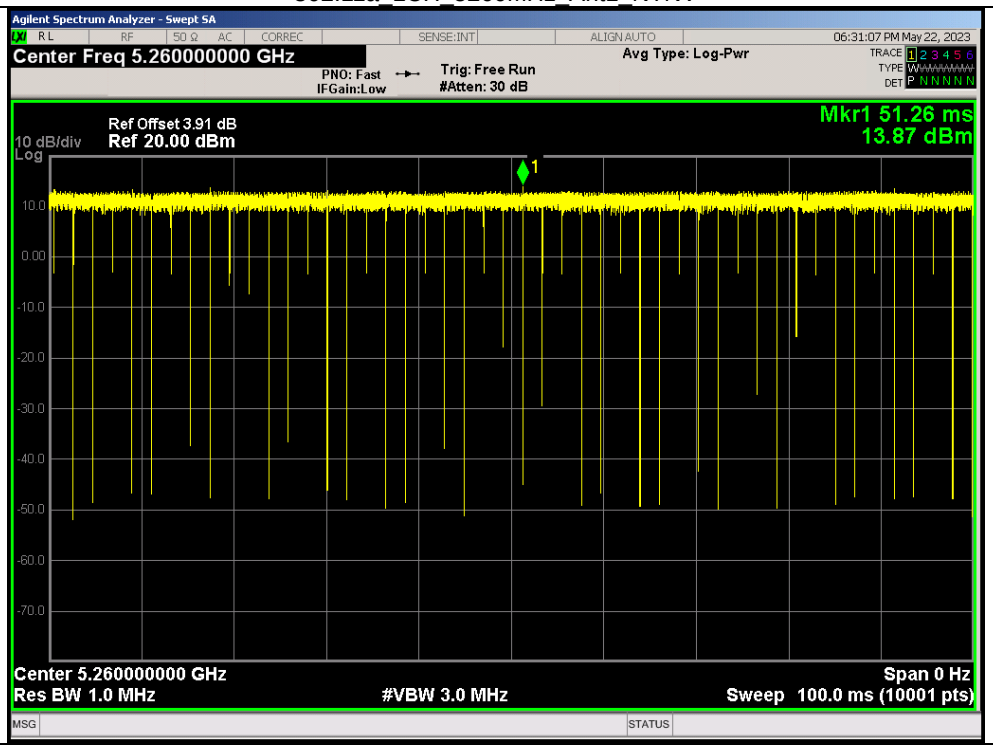
802.11a_HCH_5240MHz_Ant1_NTNV



802.11a_LCH_5260MHz_Ant1_NTNV



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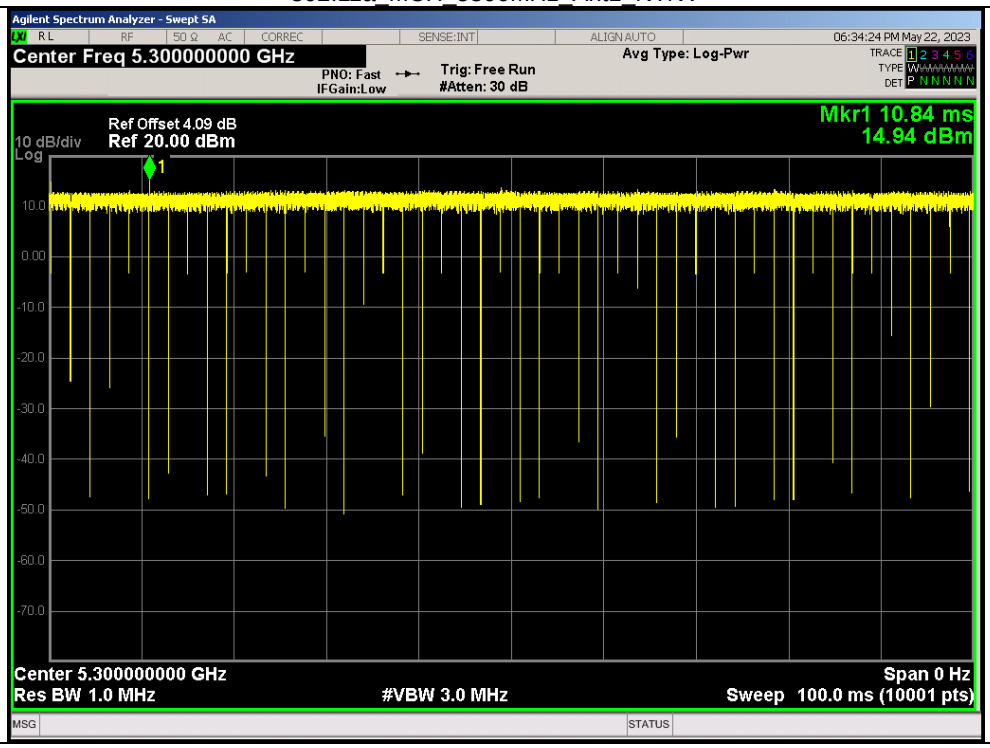
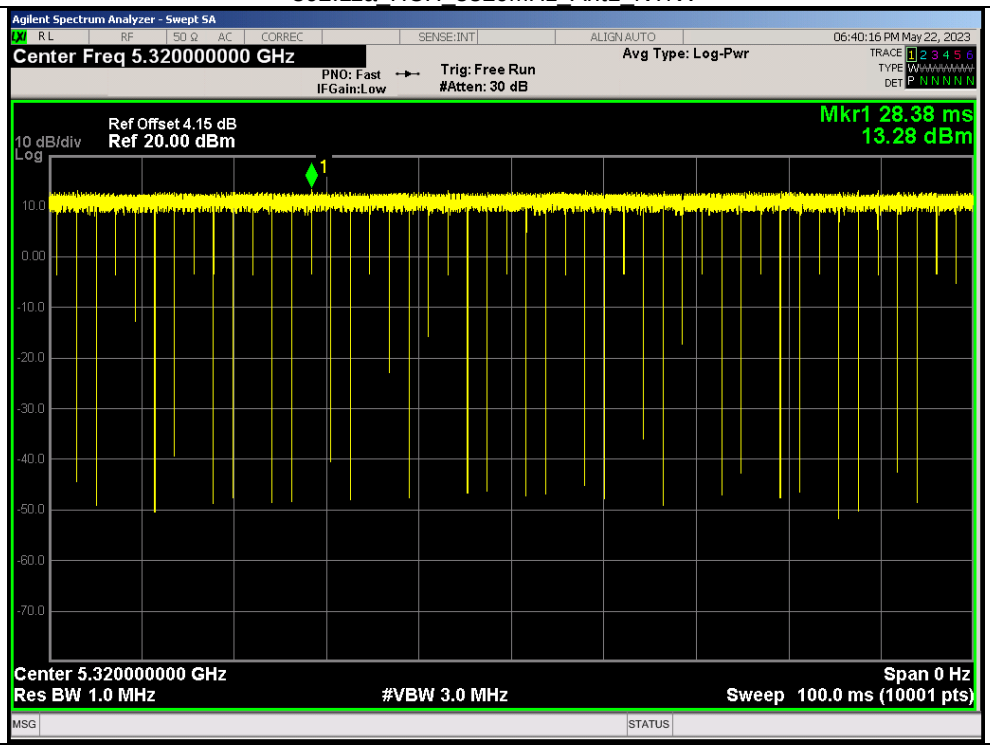
802.11a_MCH_5300MHz_Ant1_NTNV



802.11a_HCH_5320MHz_Ant1_NTNV



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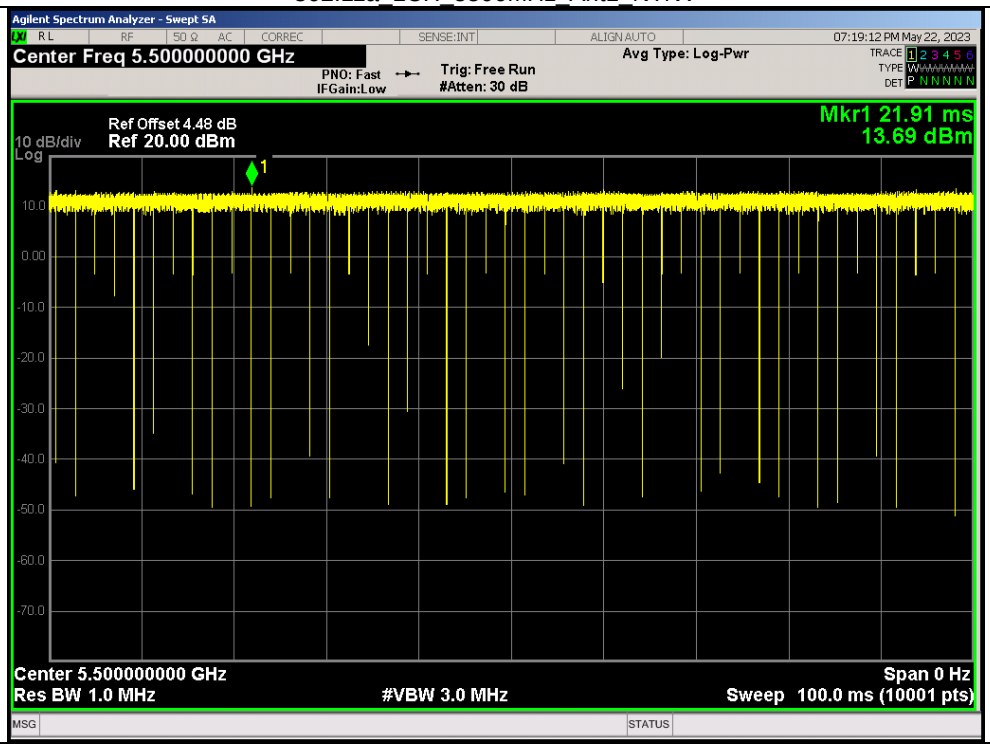
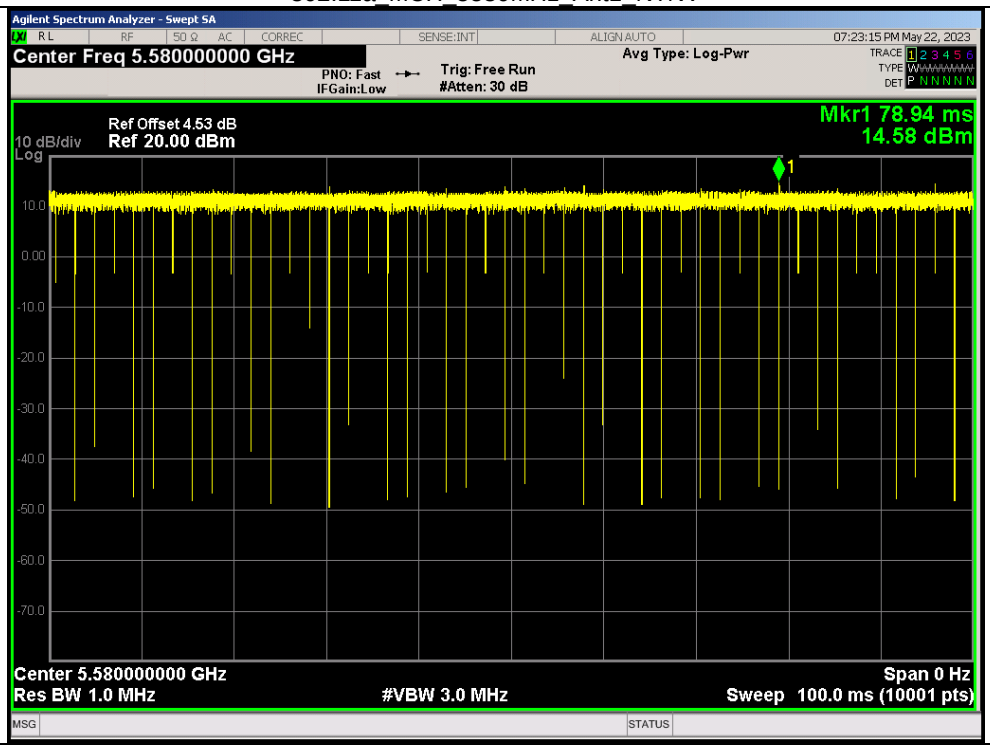
802.11a_LCH_5500MHz_Ant1_NTNV



802.11a_MCH_5580MHz_Ant1_NTNV



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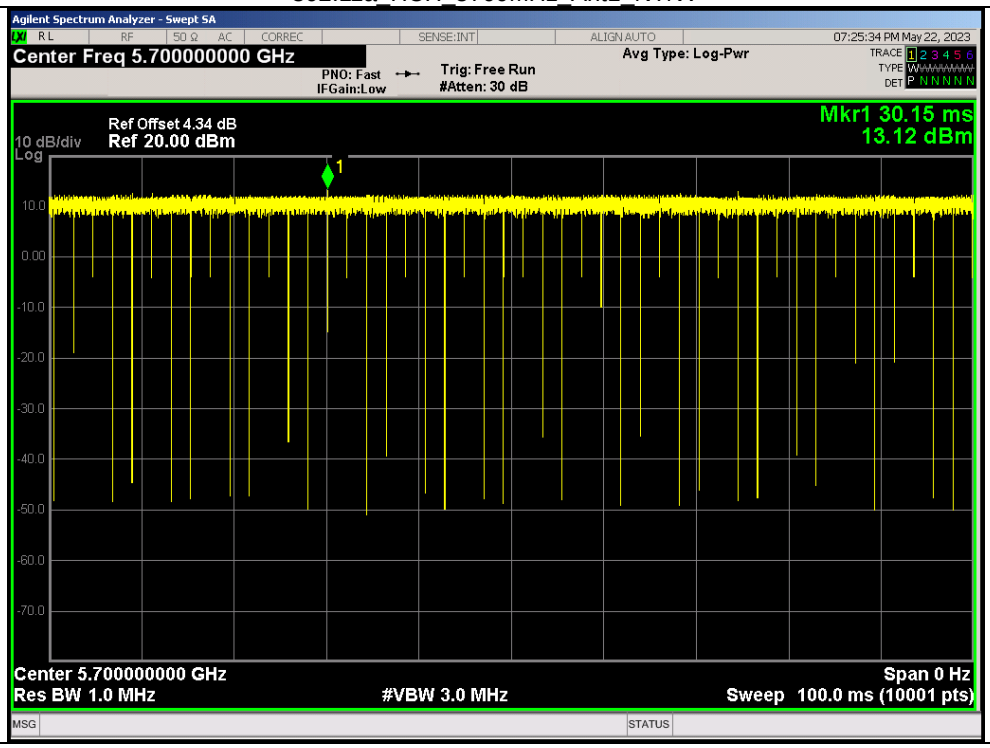
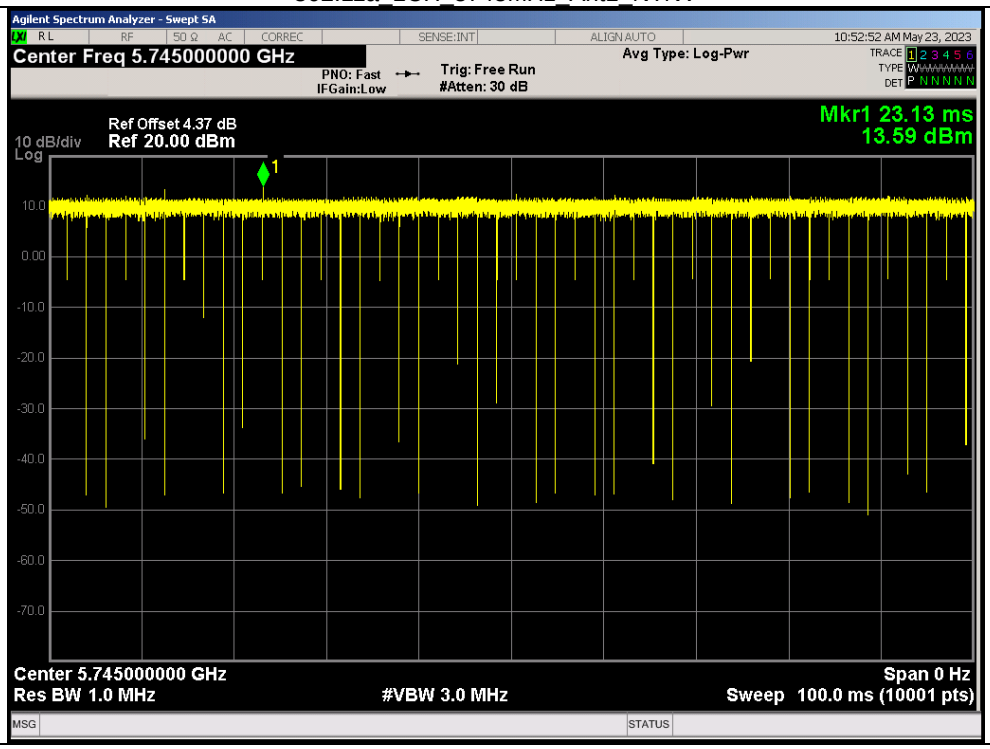
802.11a_HCH_5700MHz_Ant1_NTNV



802.11a_LCH_5745MHz_Ant1_NTNV



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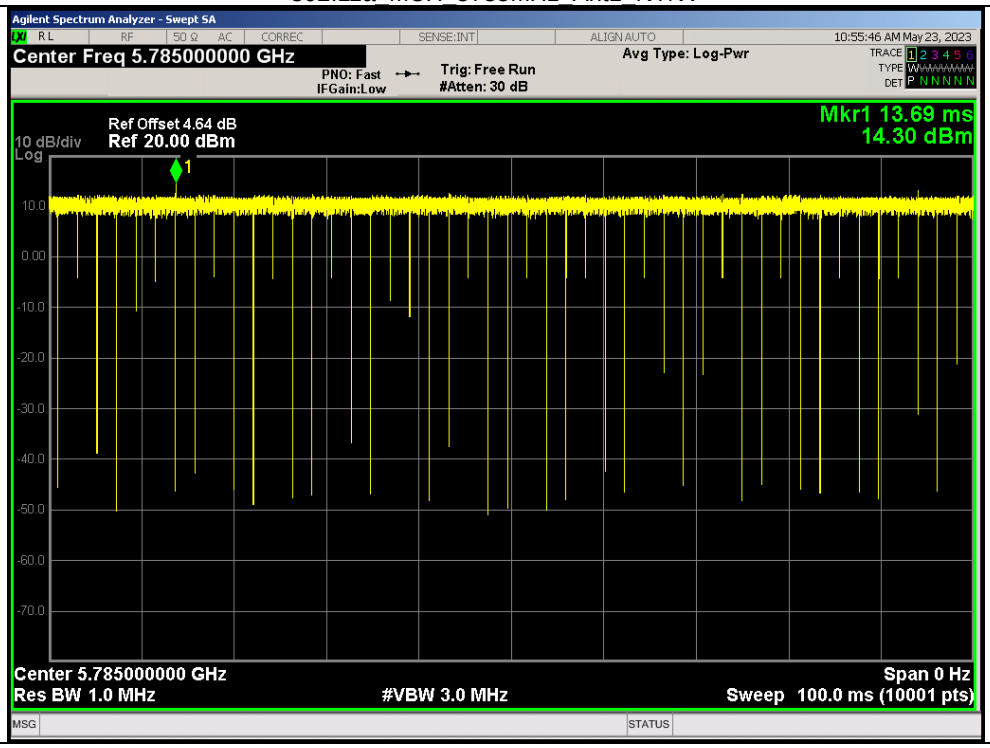
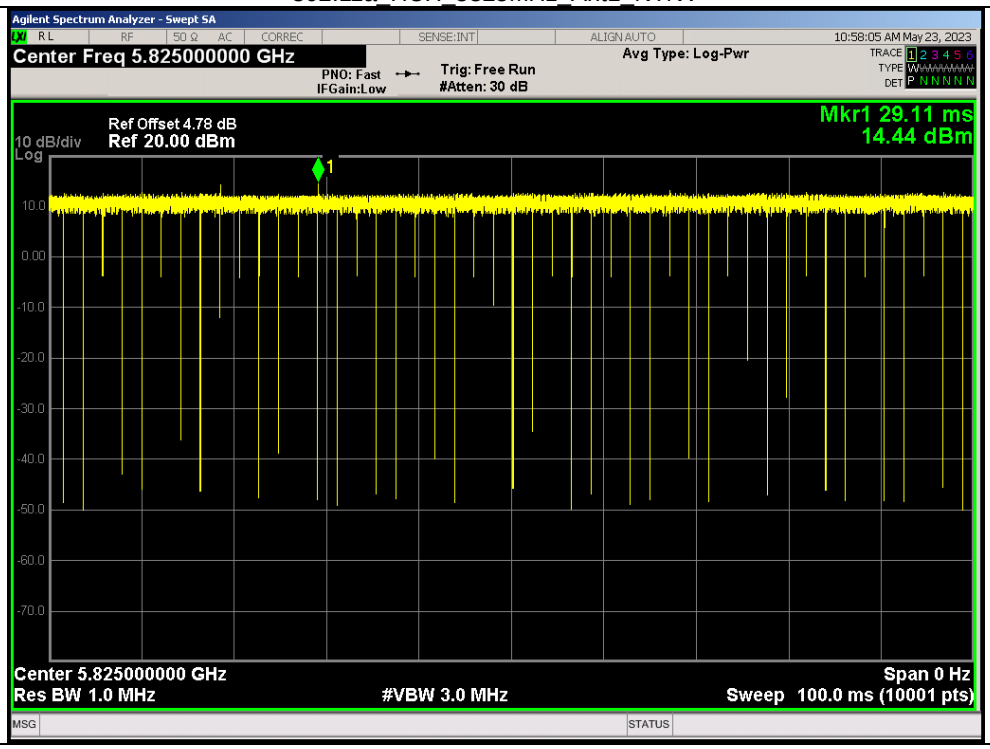
802.11a_MCH_5785MHz_Ant1_NTNV



802.11a_HCH_5825MHz_Ant1_NTNV



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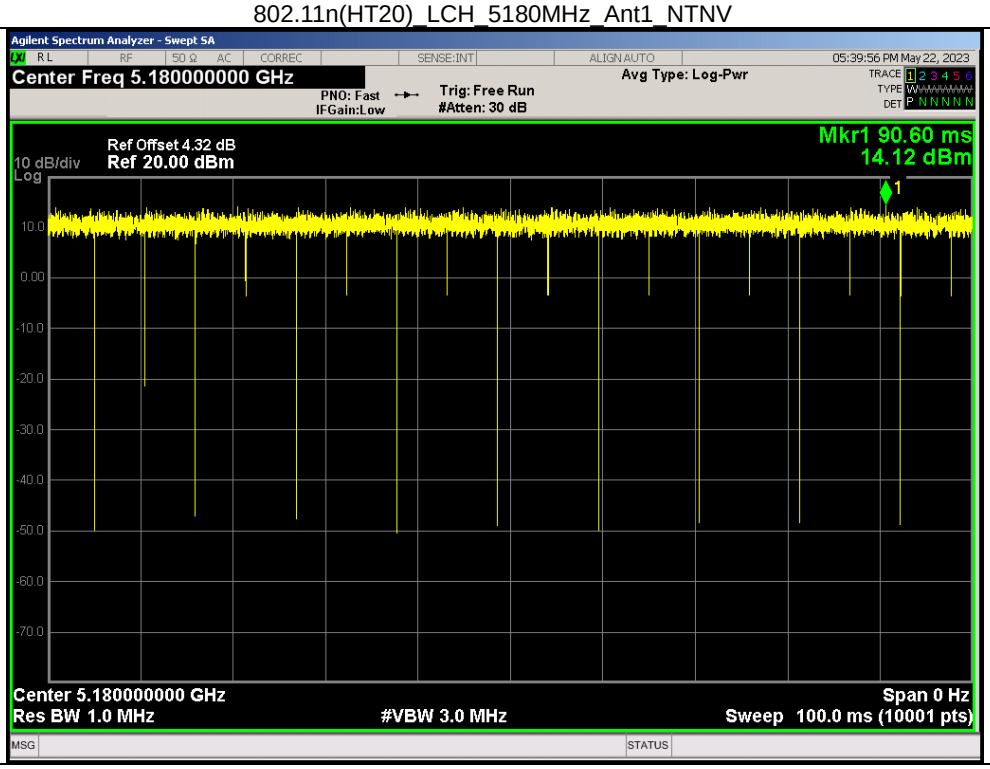
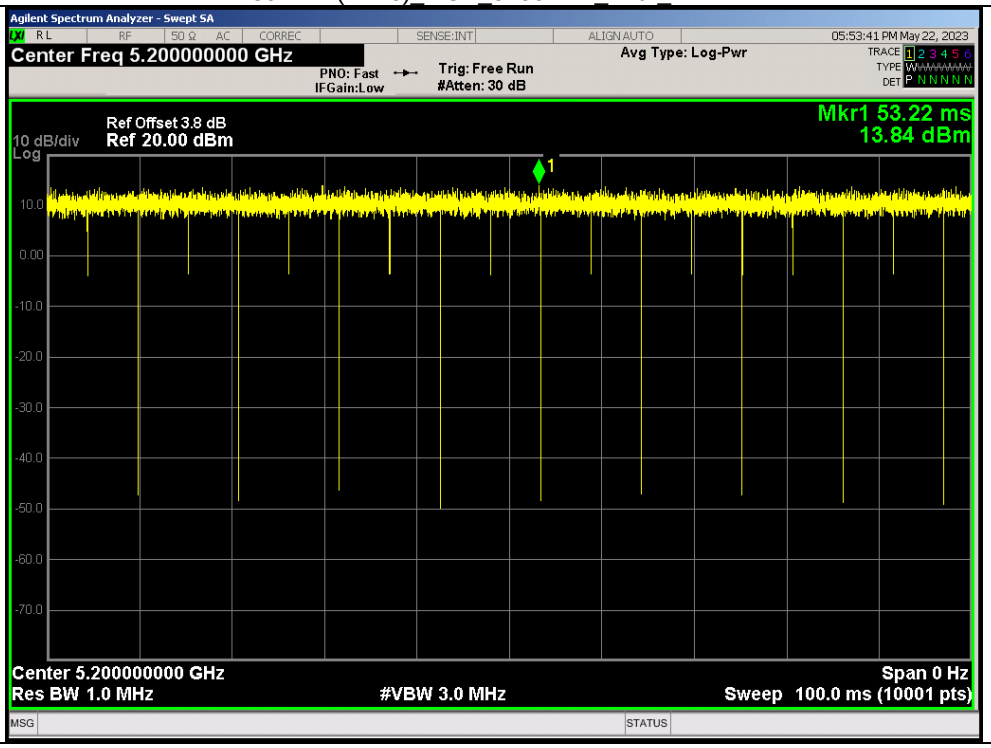
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



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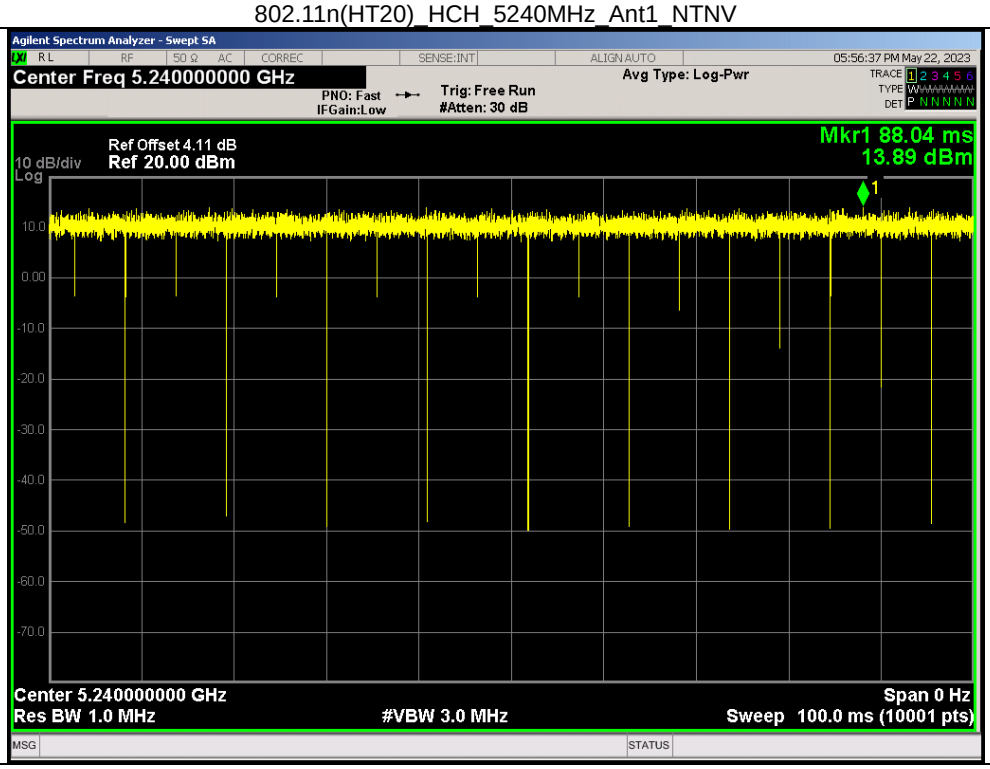
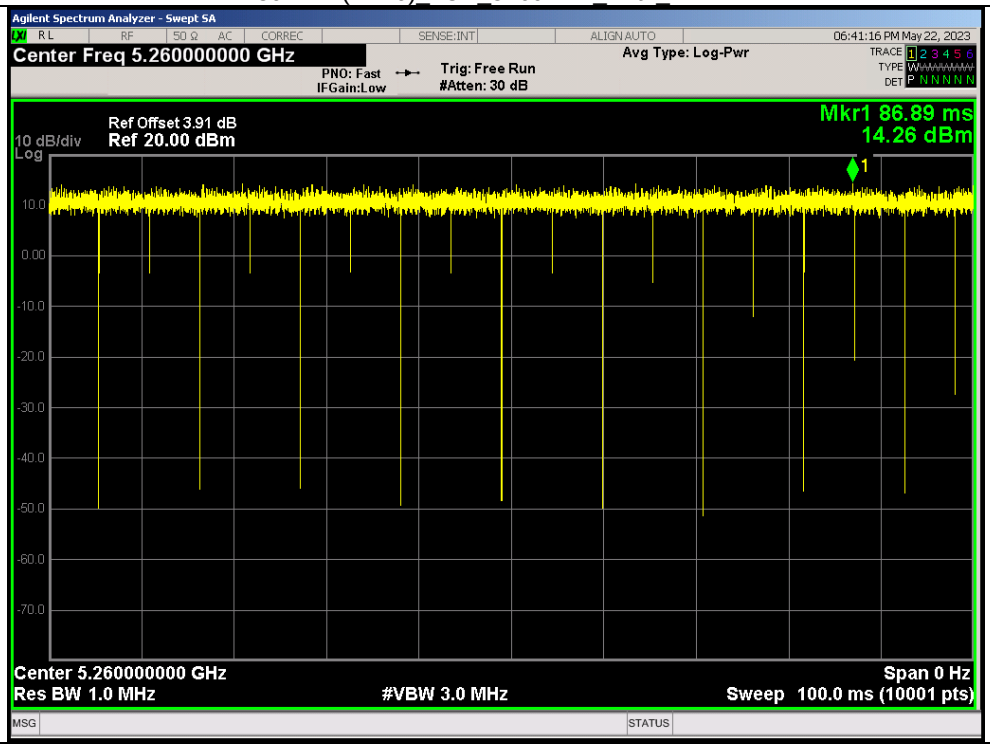
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



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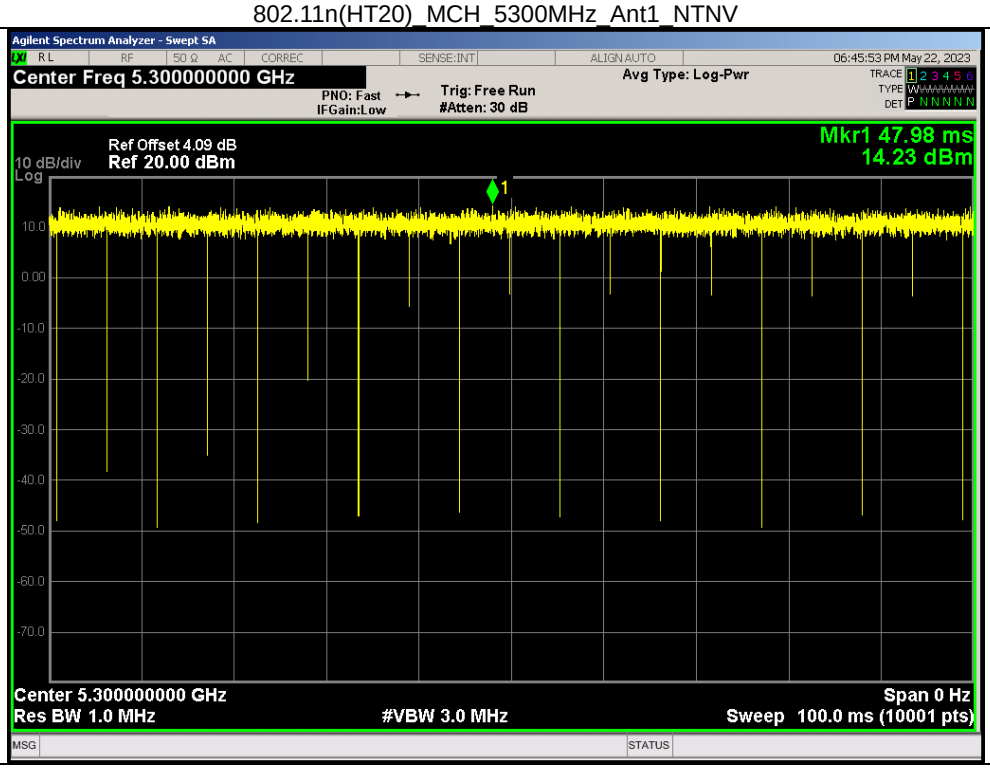
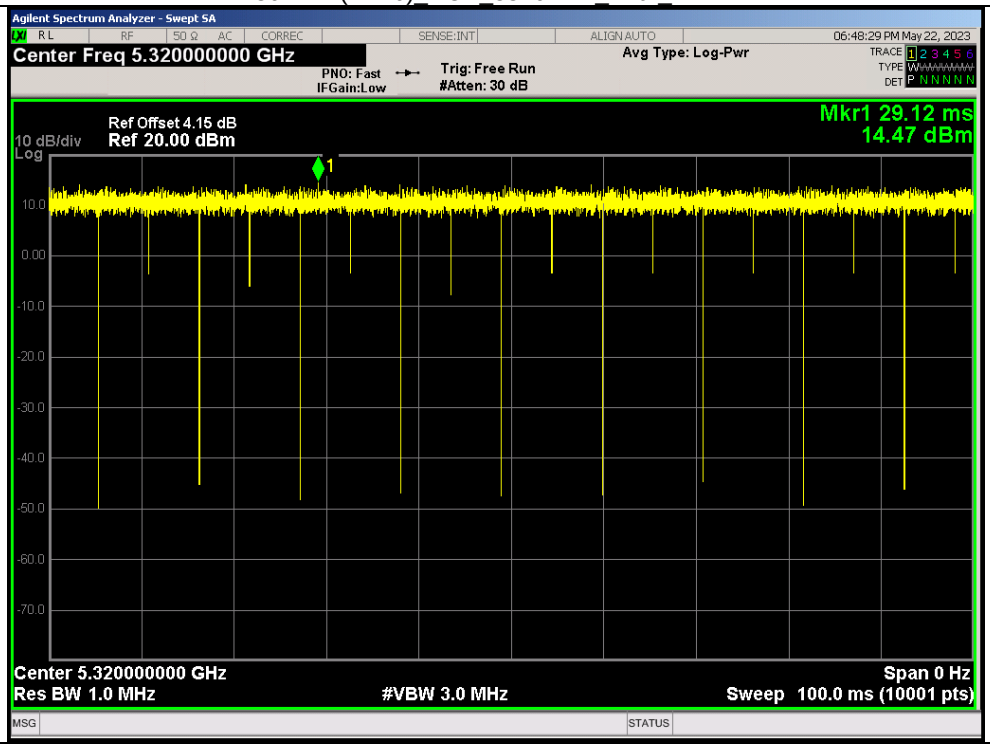
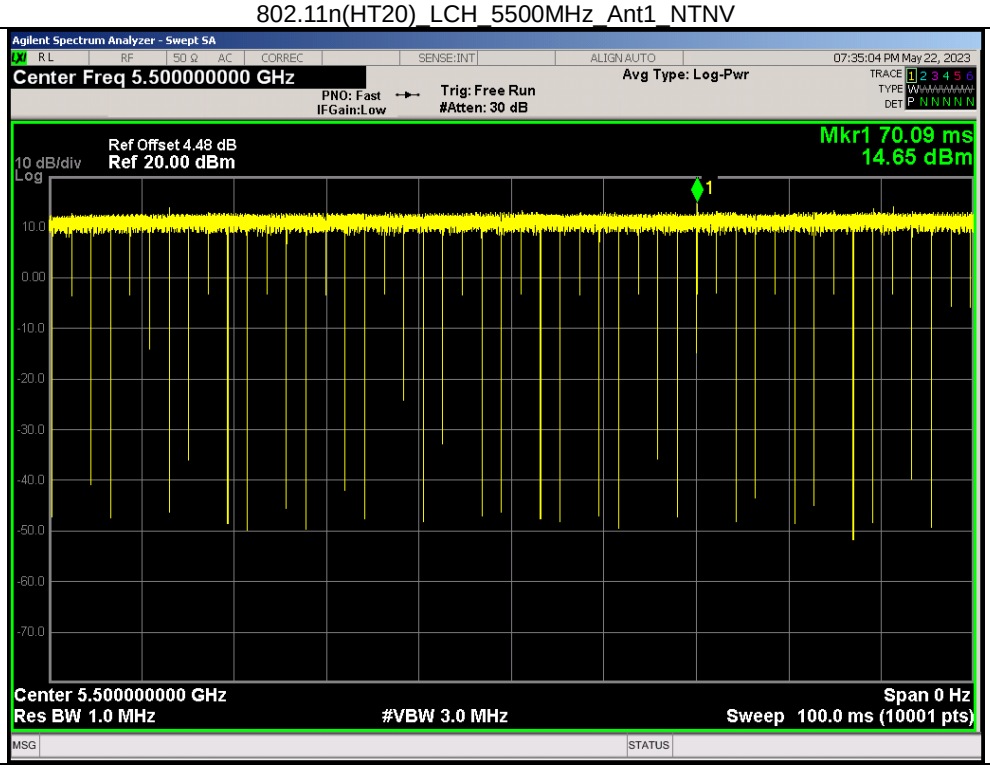
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



802.11n(HT20)_LCH_5500MHz_Ant1_NTNV



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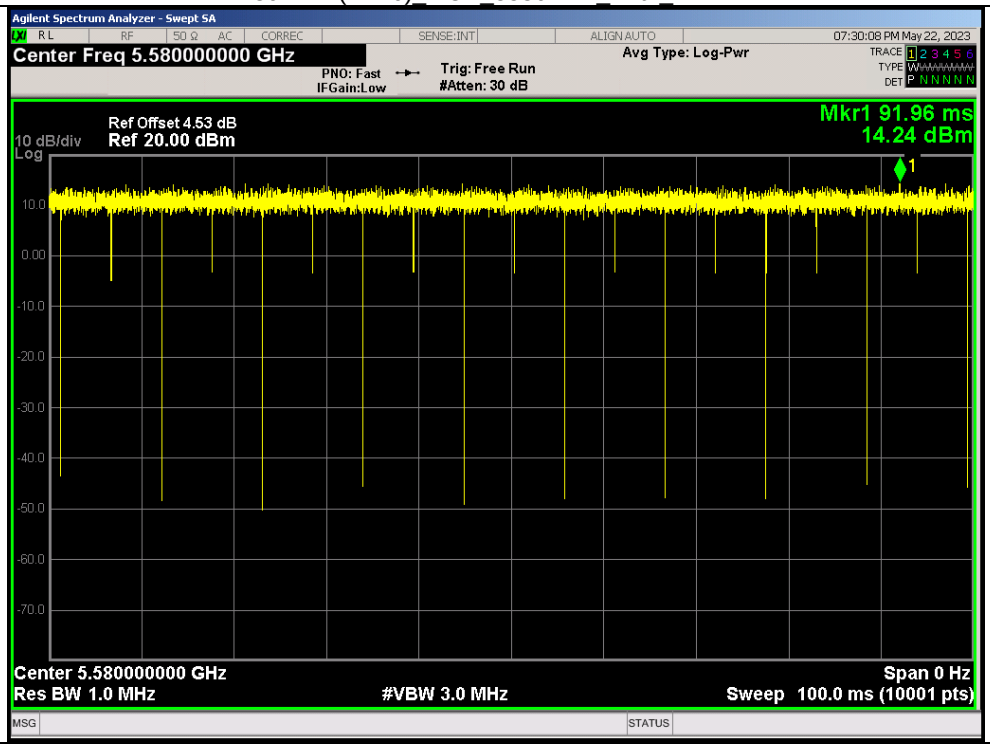

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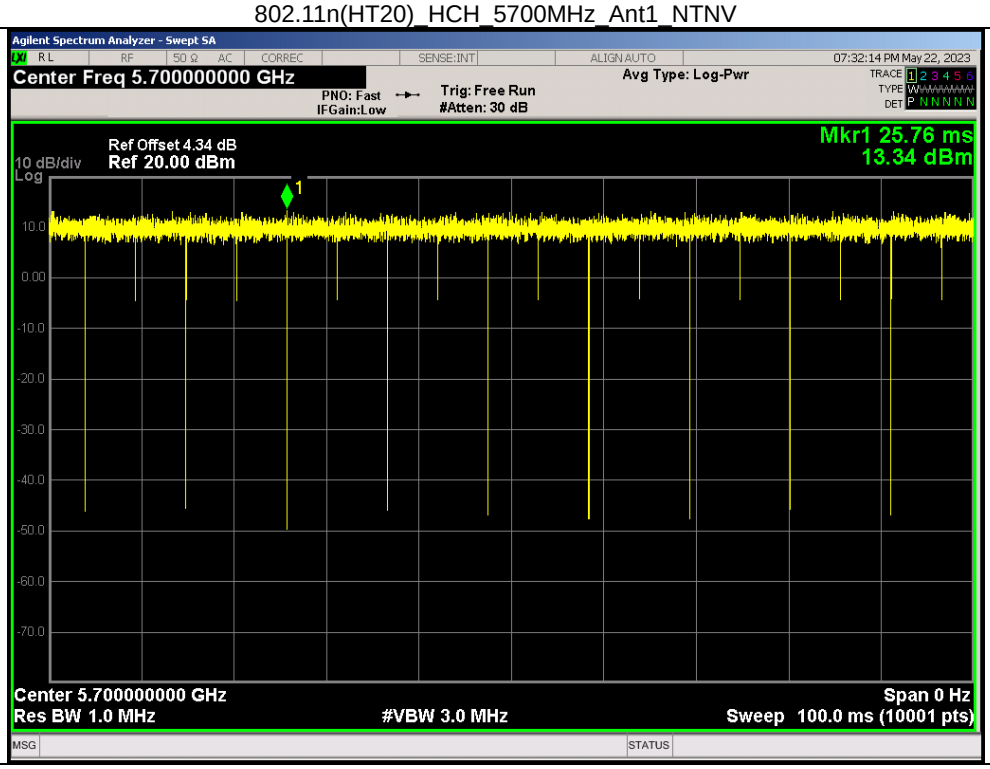
802.11n(HT20)_HCH_5700MHz_Ant1_NTNV



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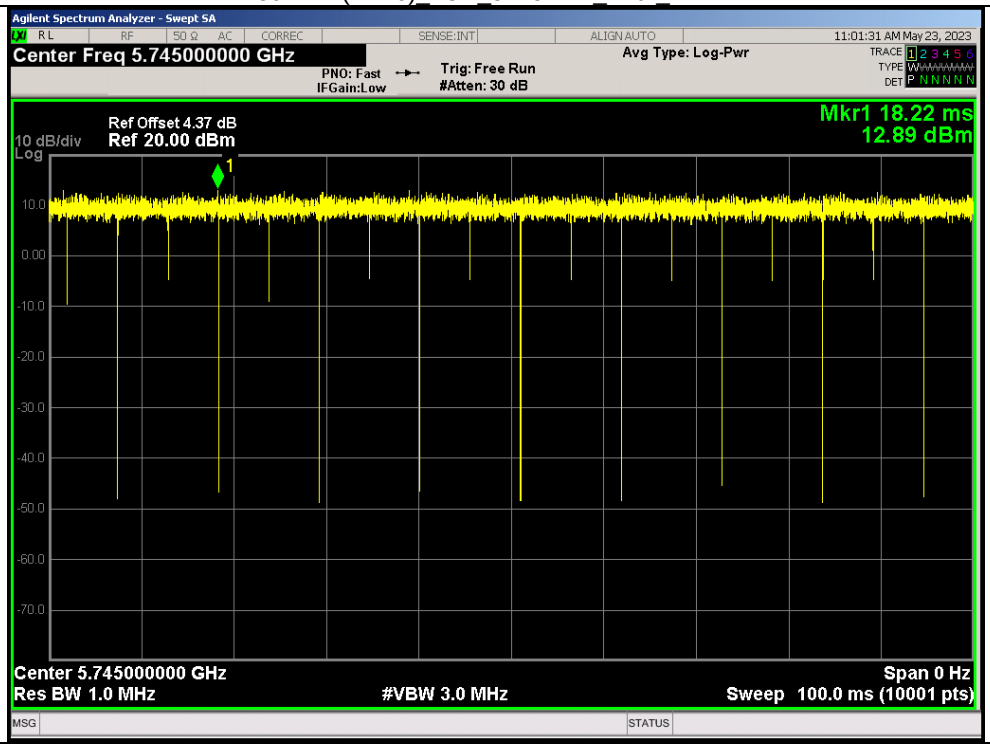

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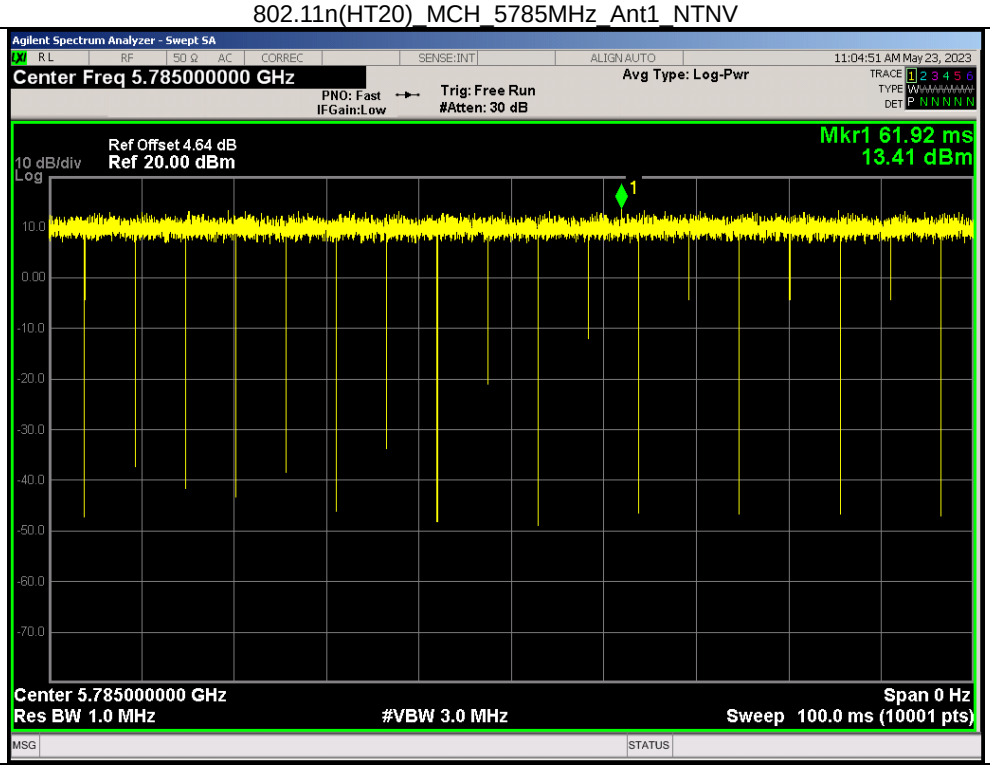
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



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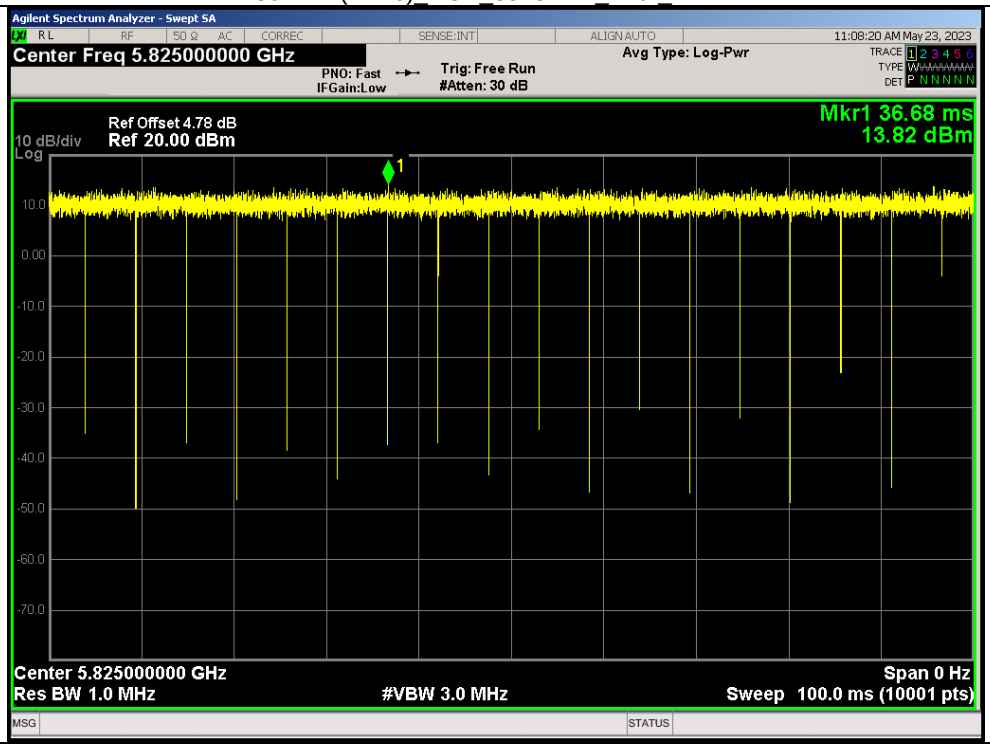

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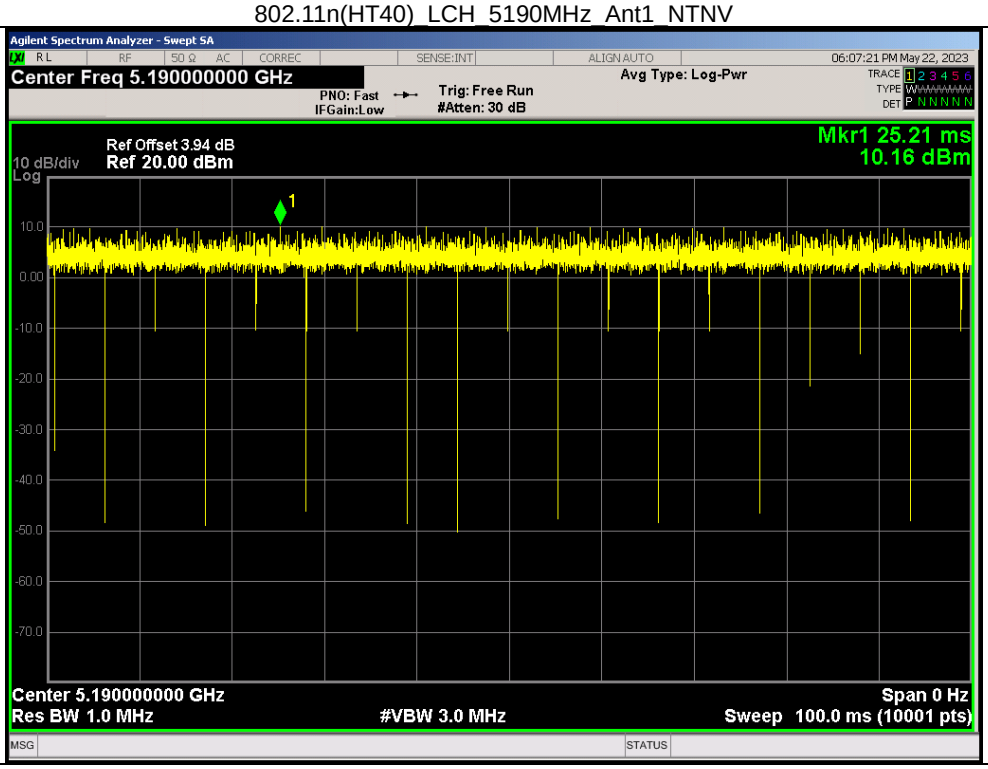
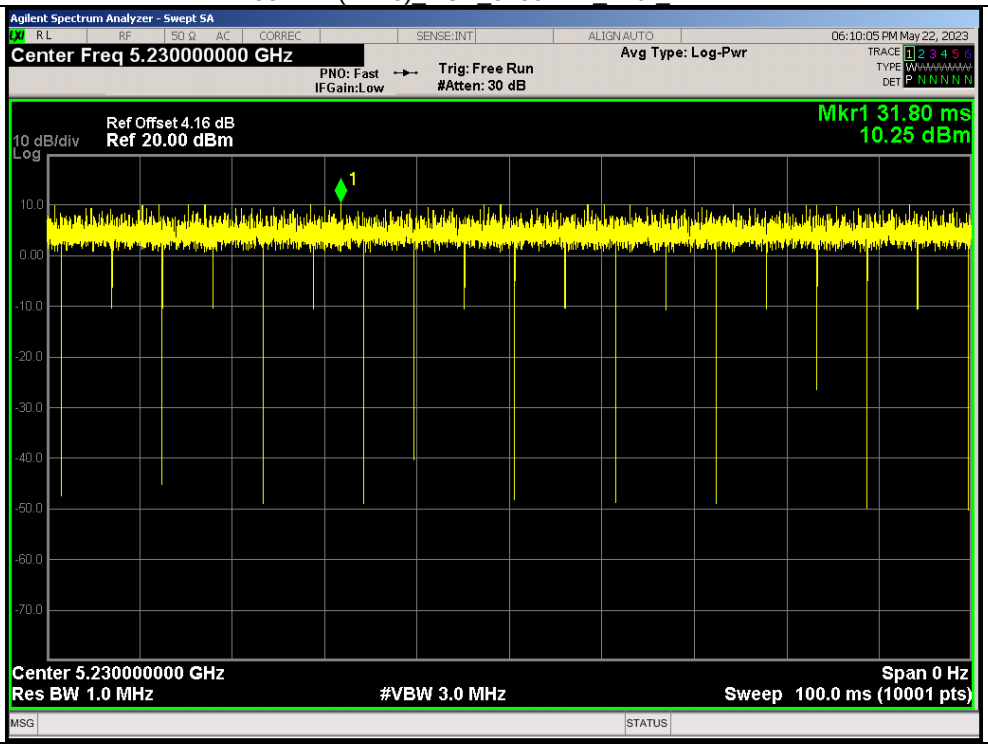
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



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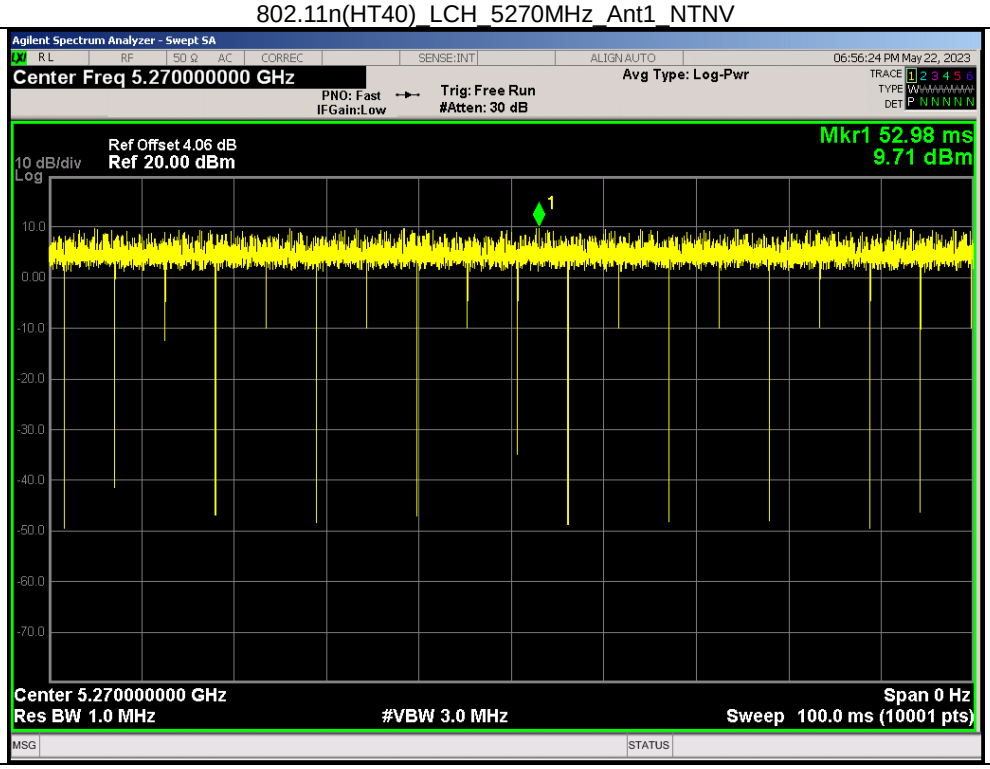
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



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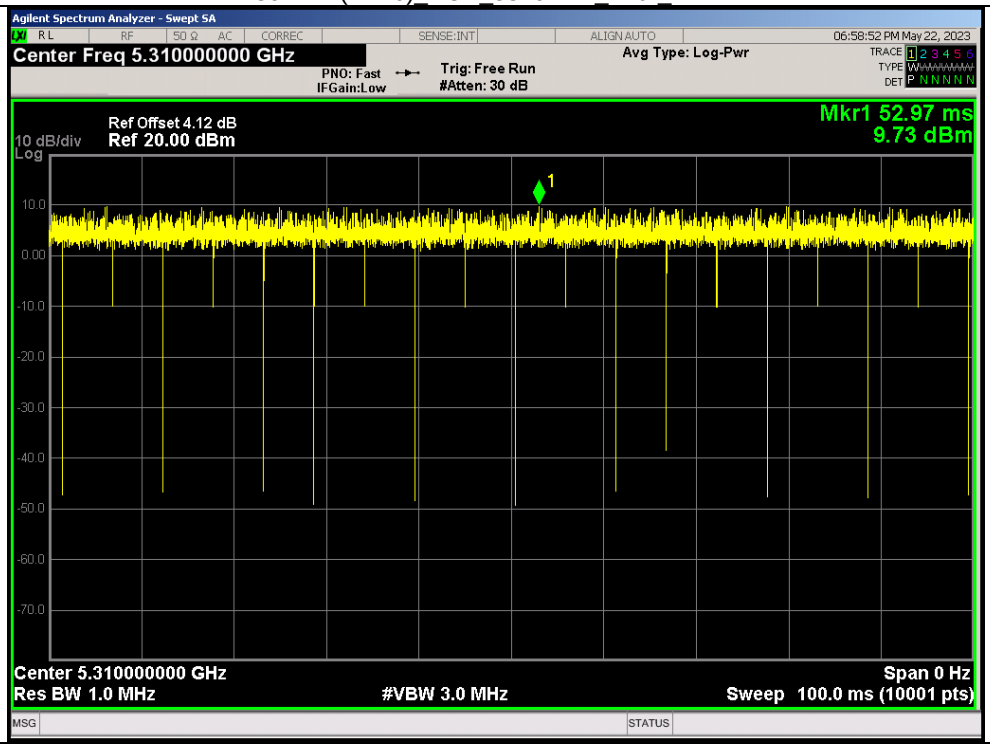

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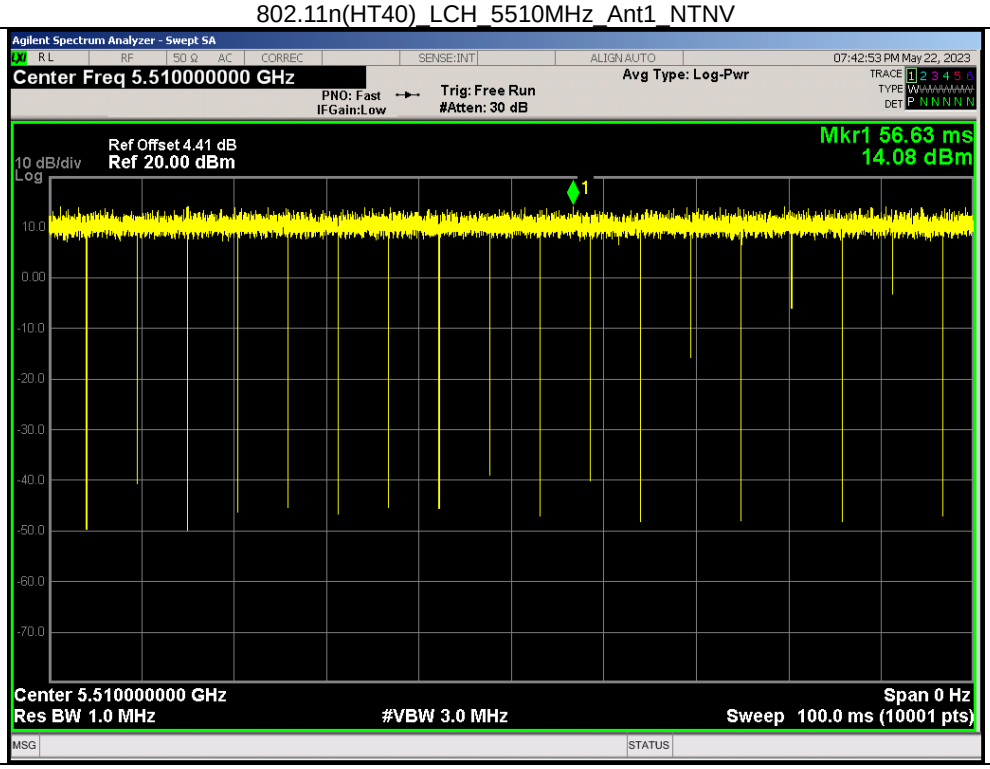
802.11n(HT40)_LCH_5510MHz_Ant1_NTNV



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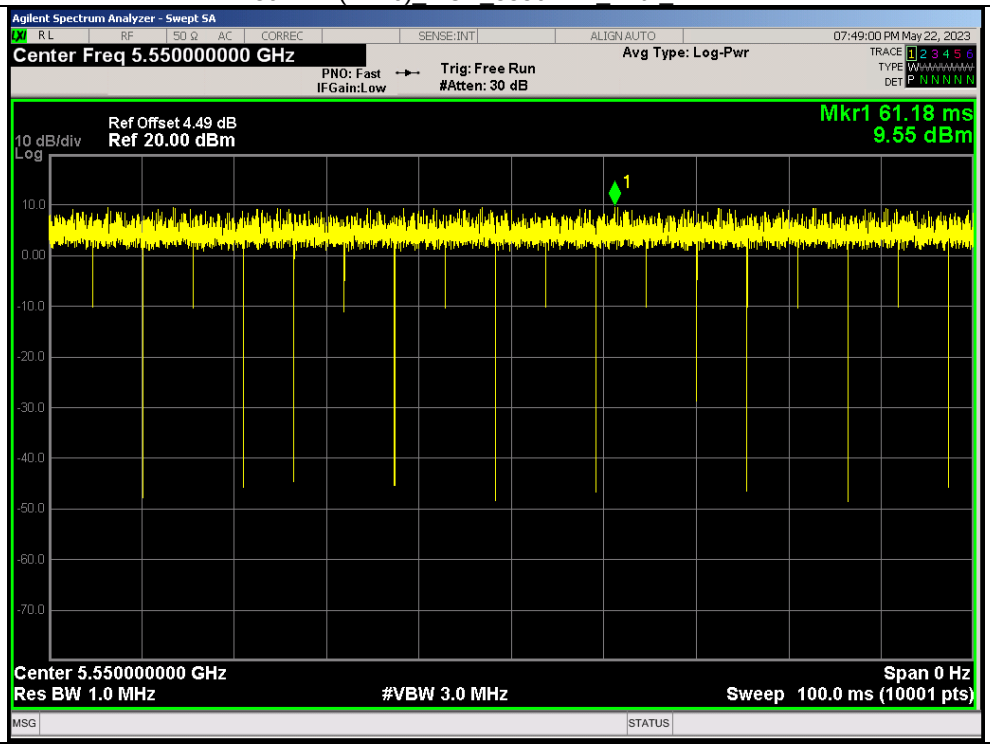

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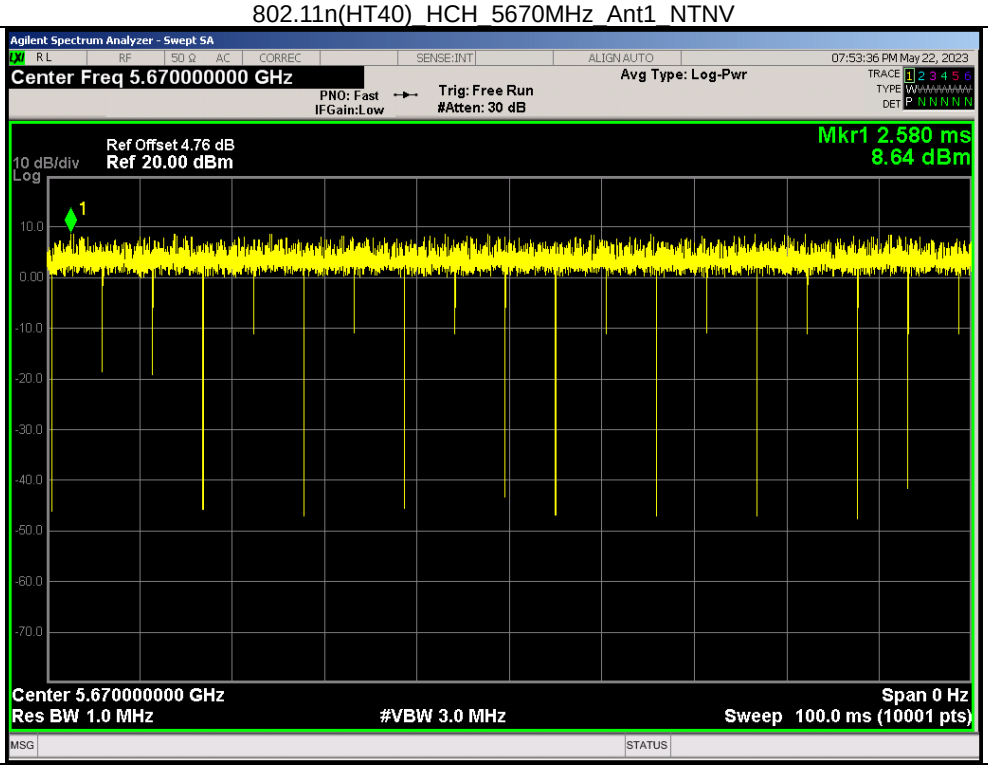
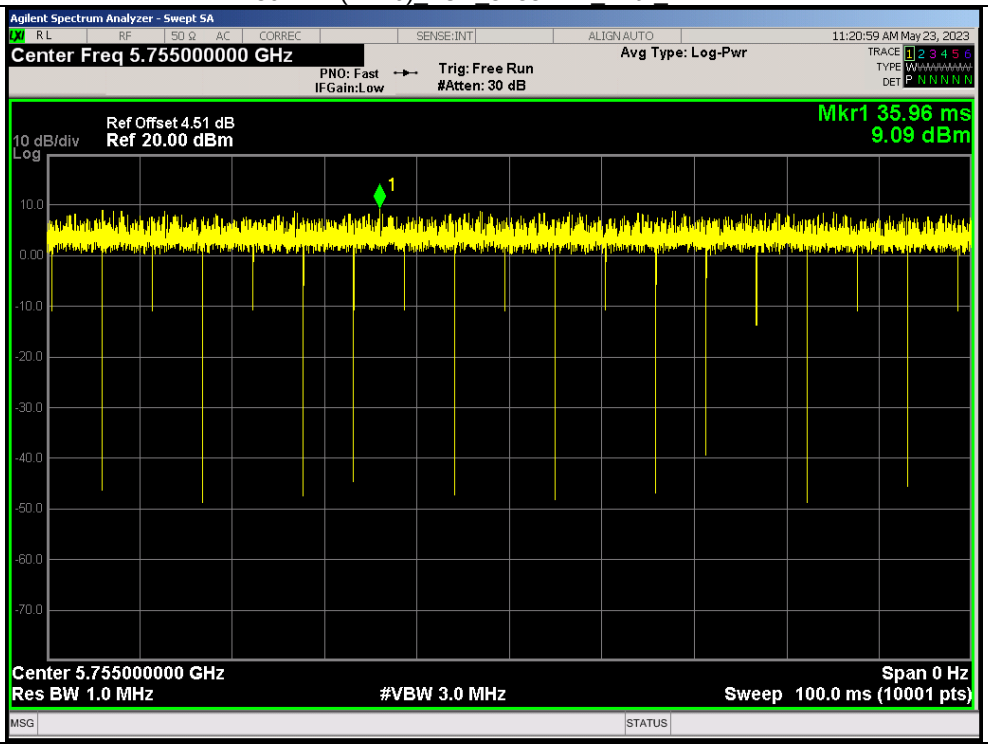
802.11n(HT40)_HCH_5670MHz_Ant1_NTNV



802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



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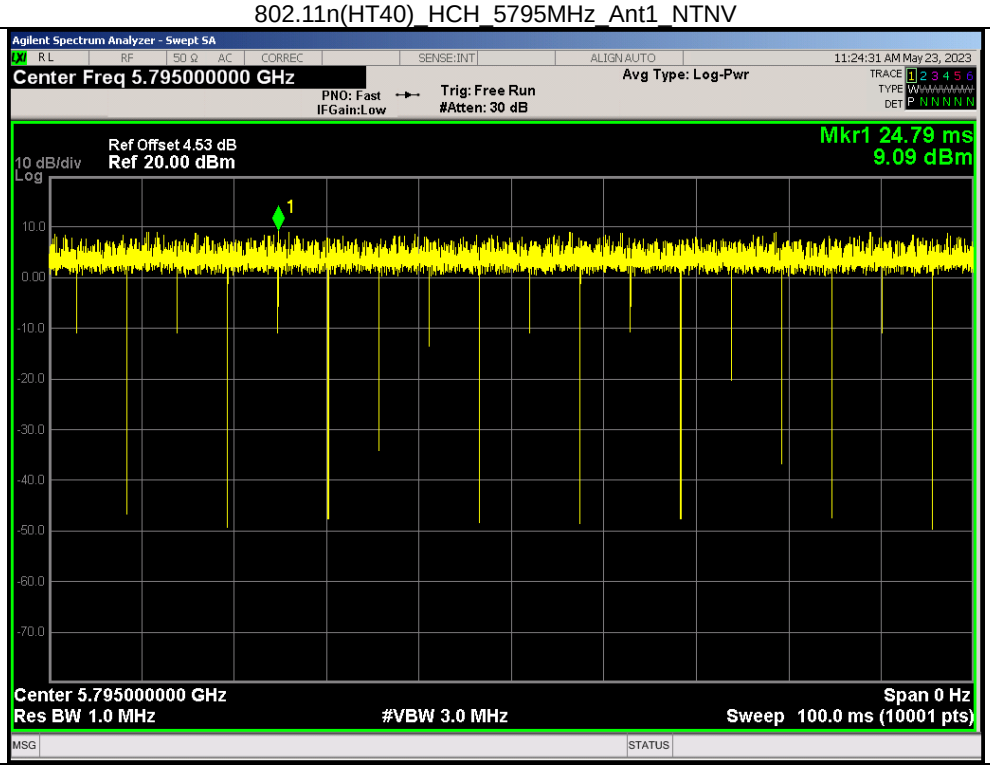
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



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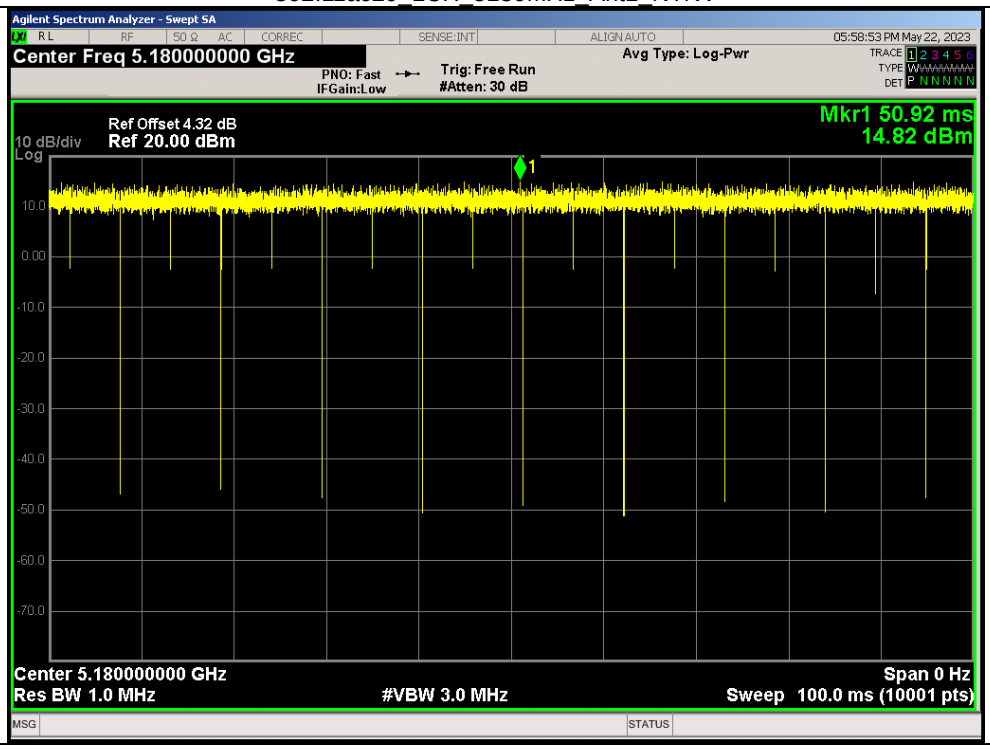

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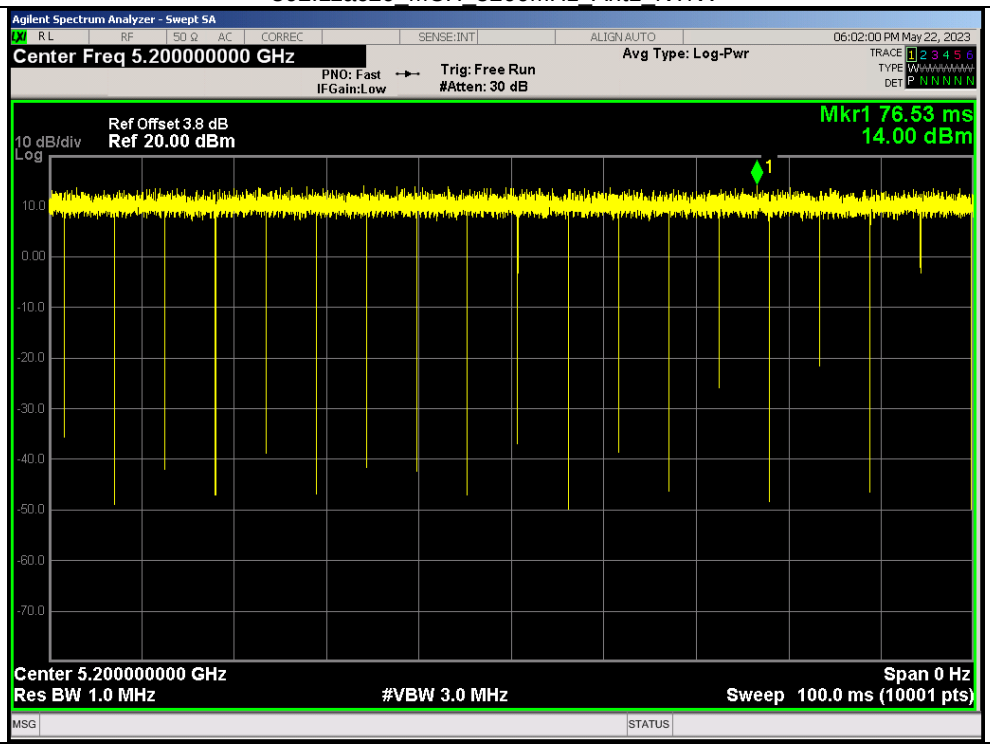
802.11ac20_MCH_5200MHz_Ant1_NTNV



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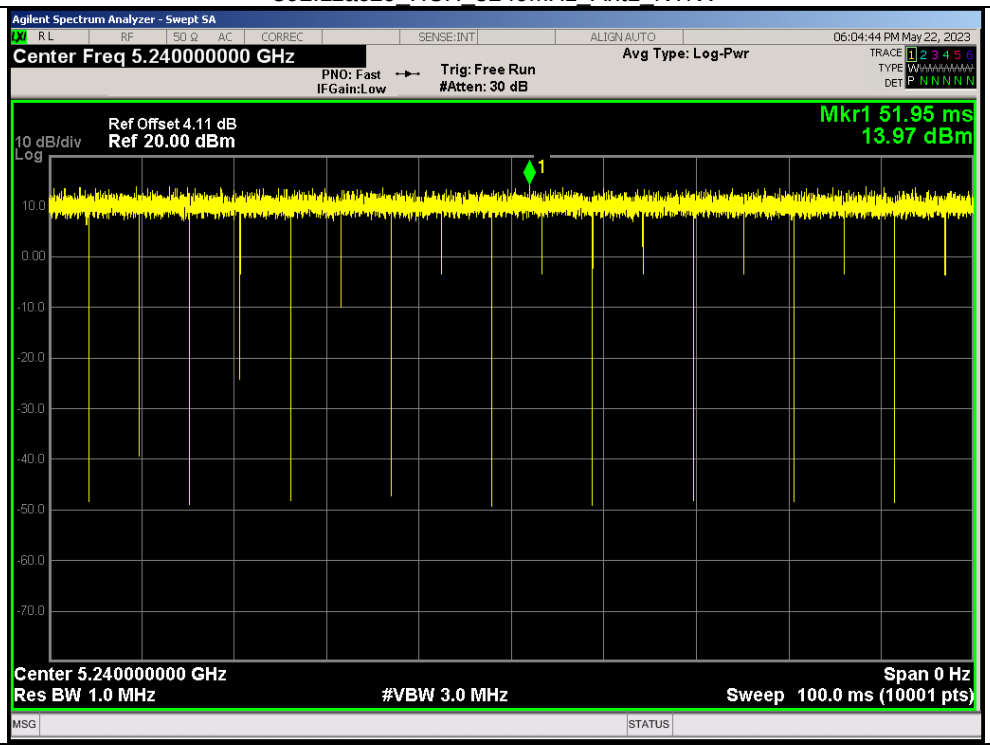

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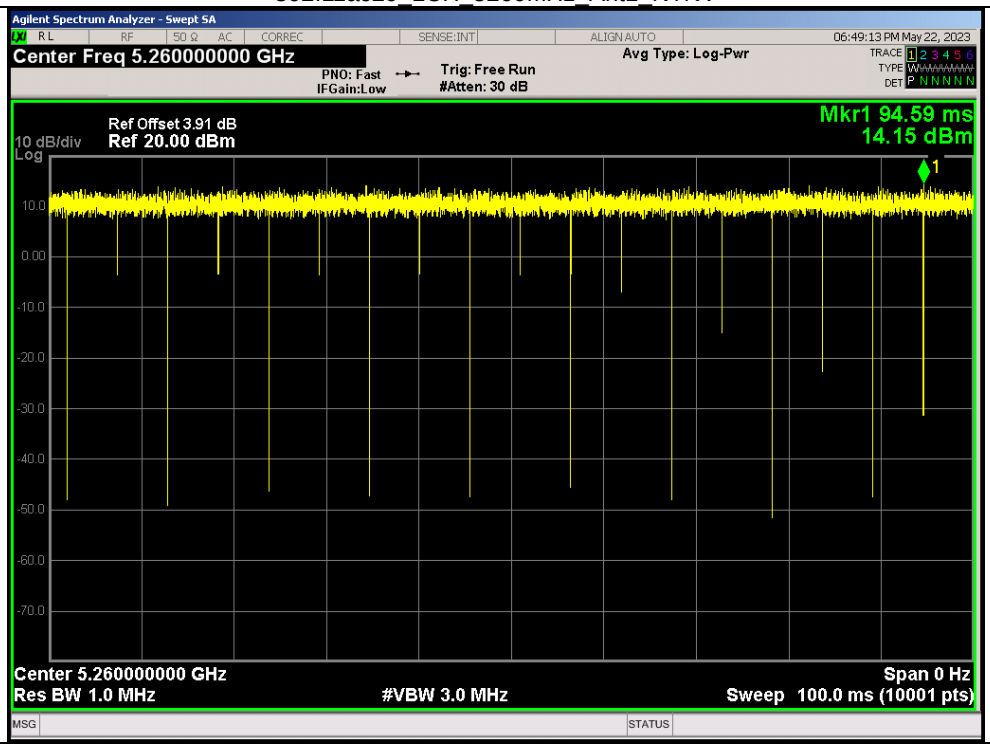
802.11ac20_LCH_5260MHz_Ant1_NTNV



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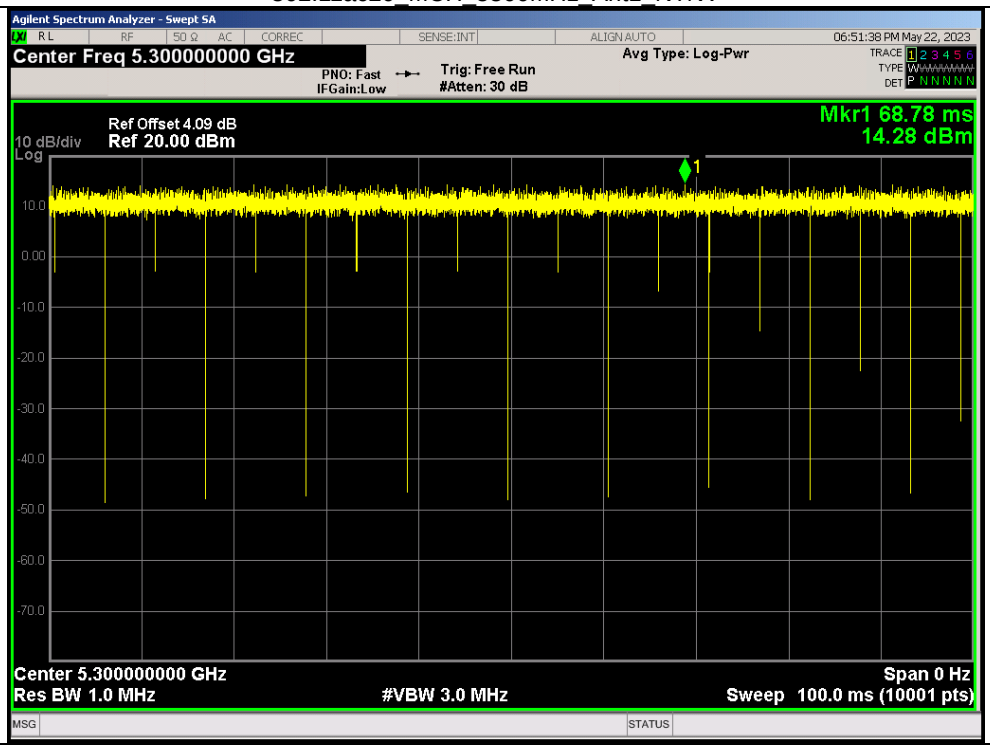

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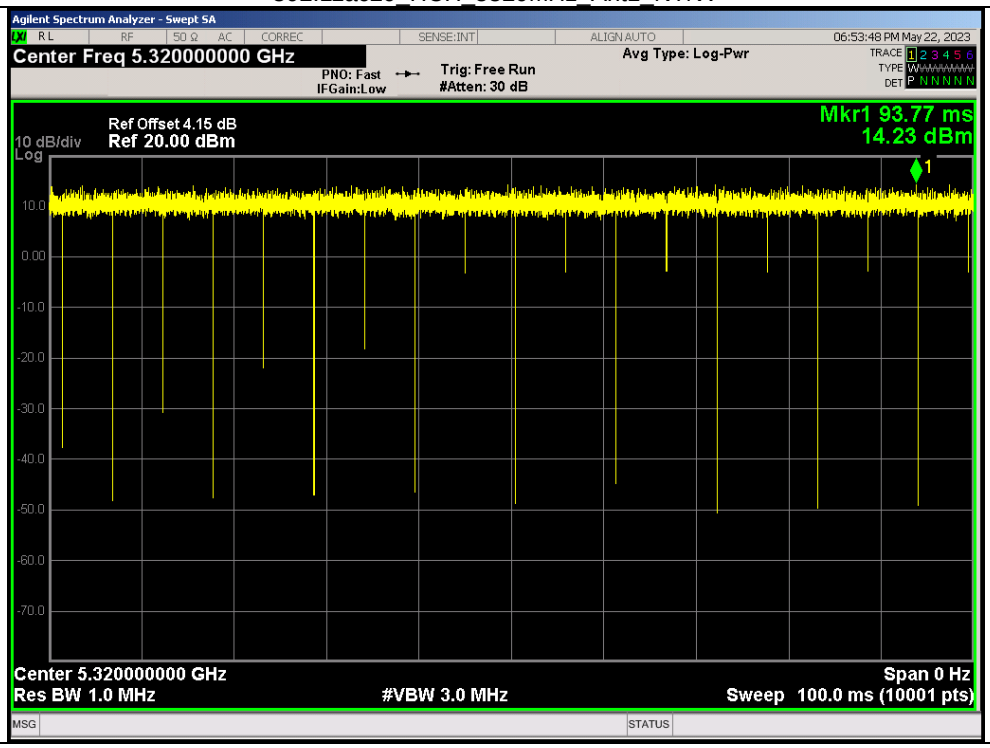
802.11ac20_HCH_5320MHz_Ant1_NTNV



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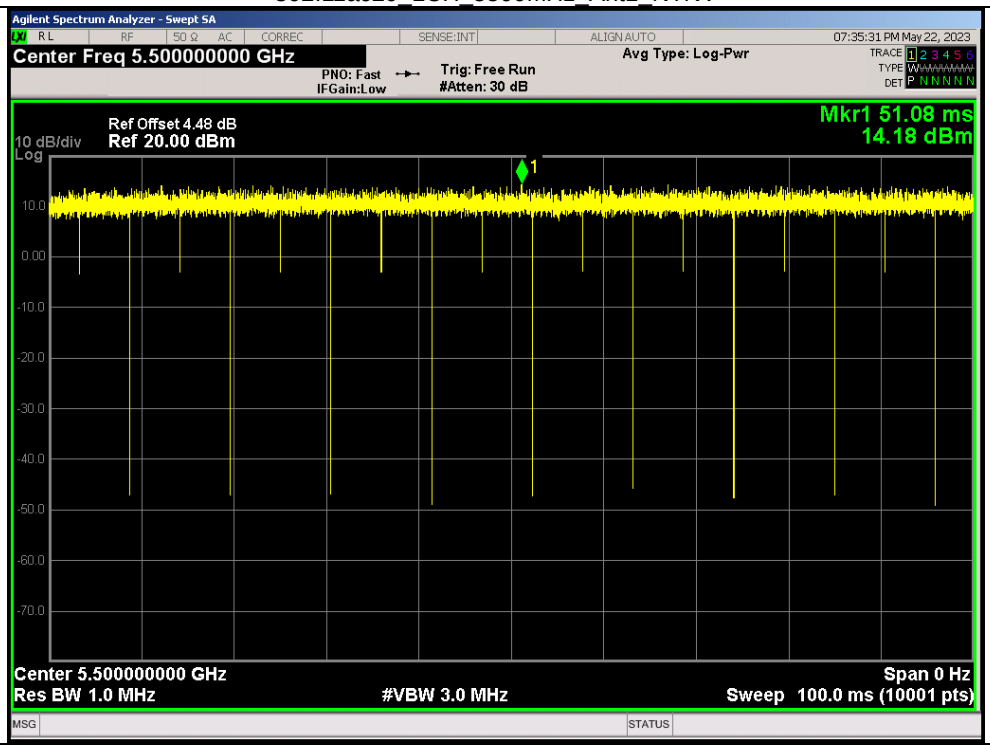

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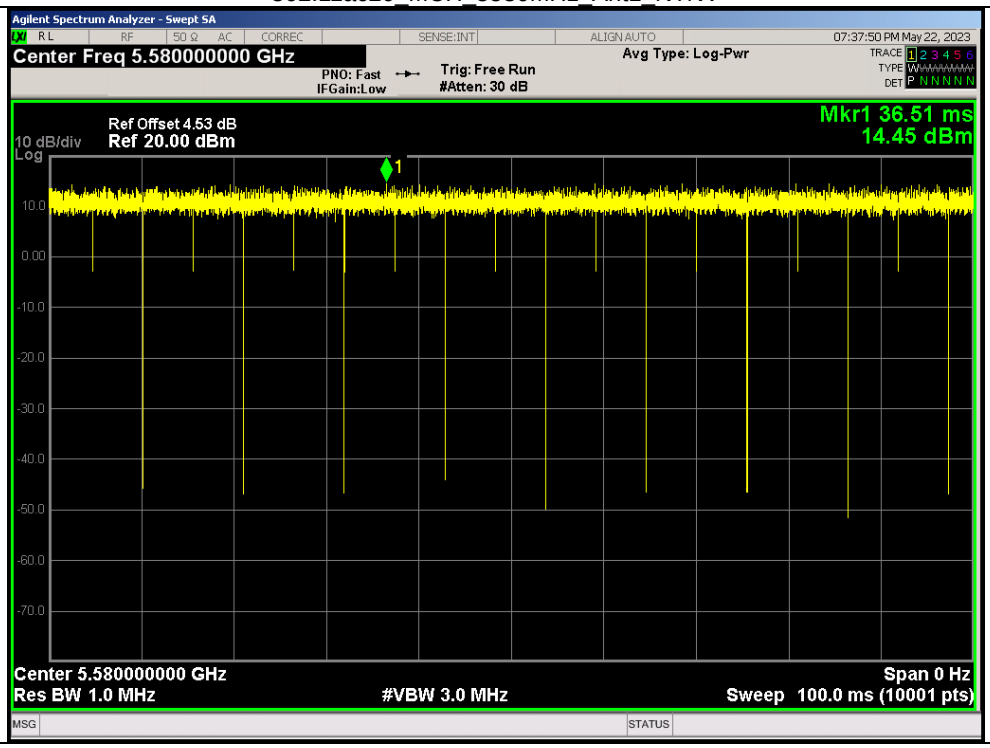
802.11ac20_MCH_5580MHz_Ant1_NTNV



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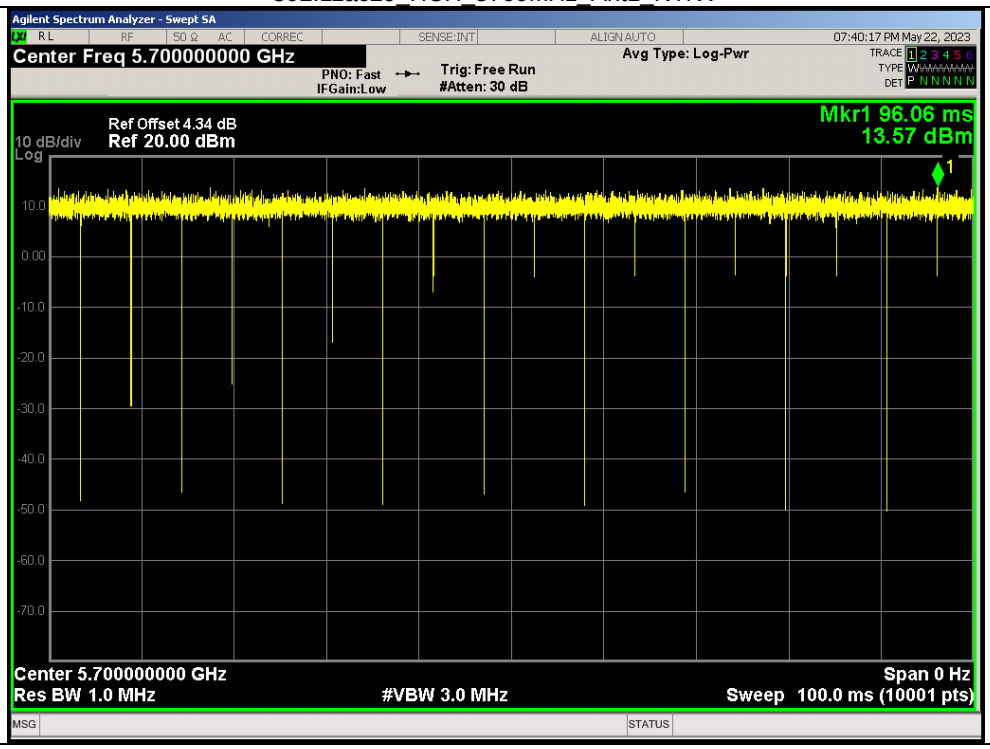

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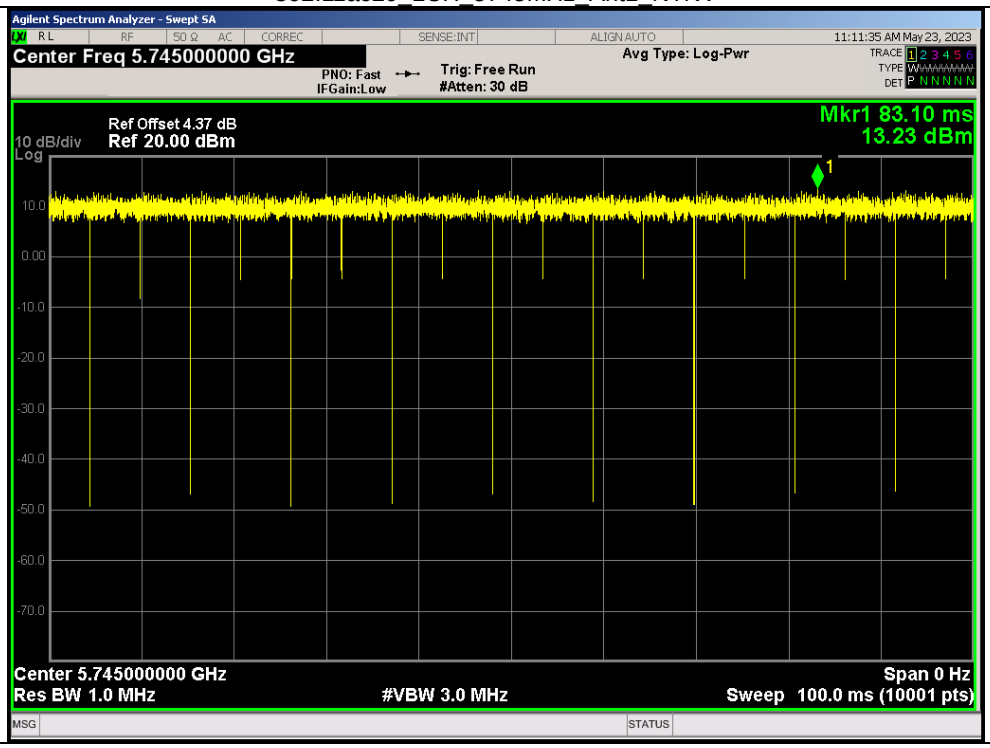
802.11ac20_LCH_5745MHz_Ant1_NTNV



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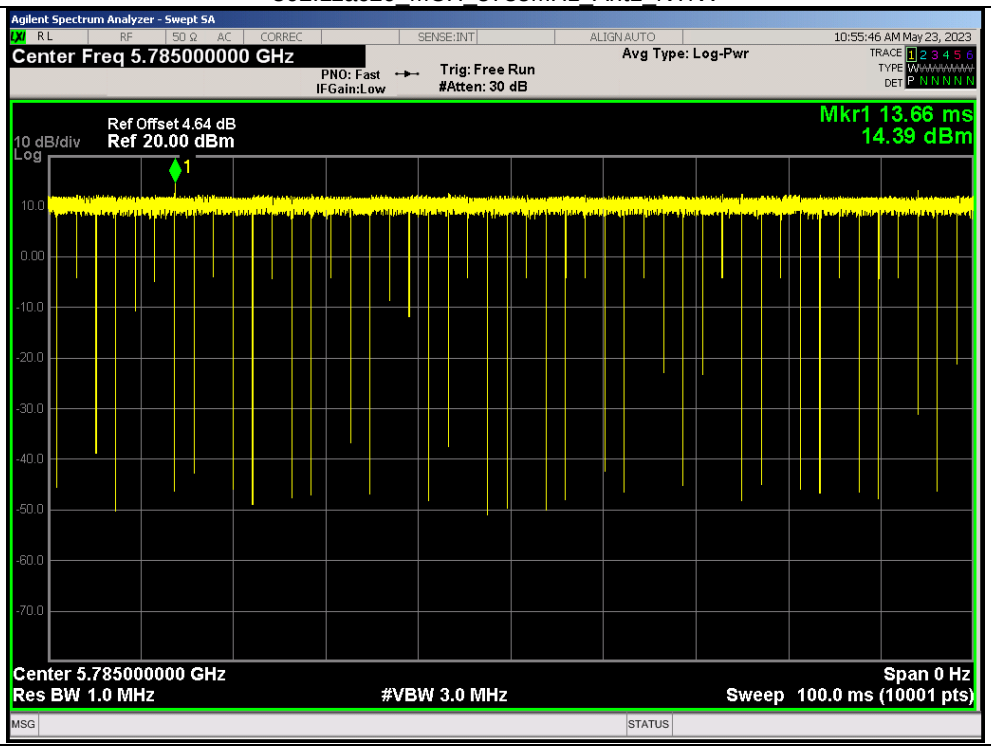

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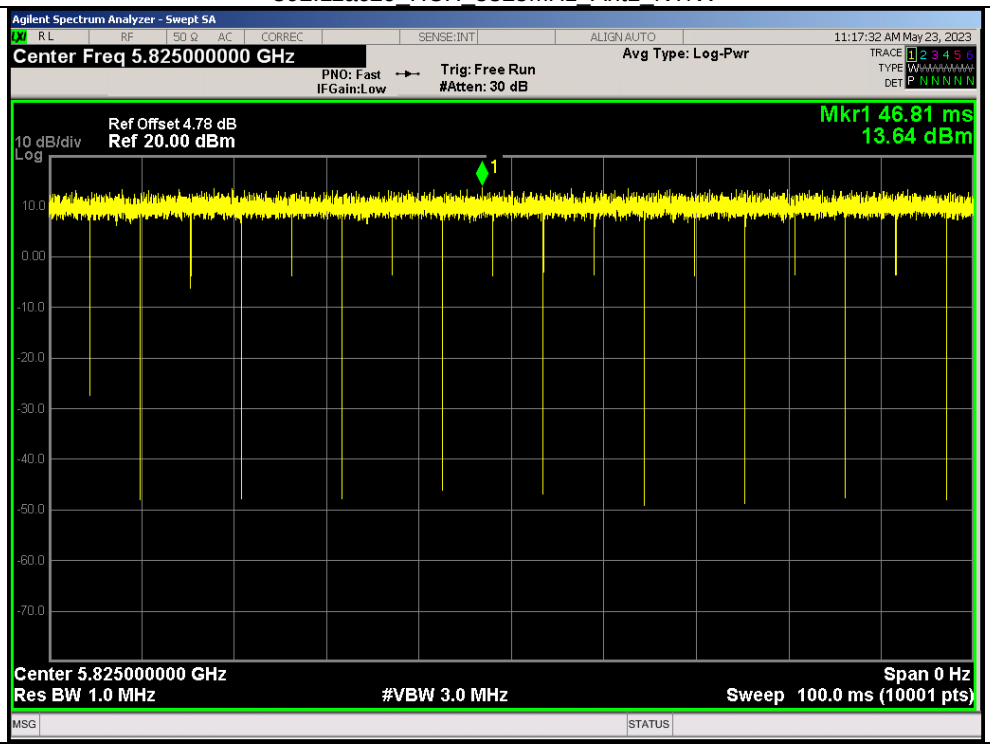
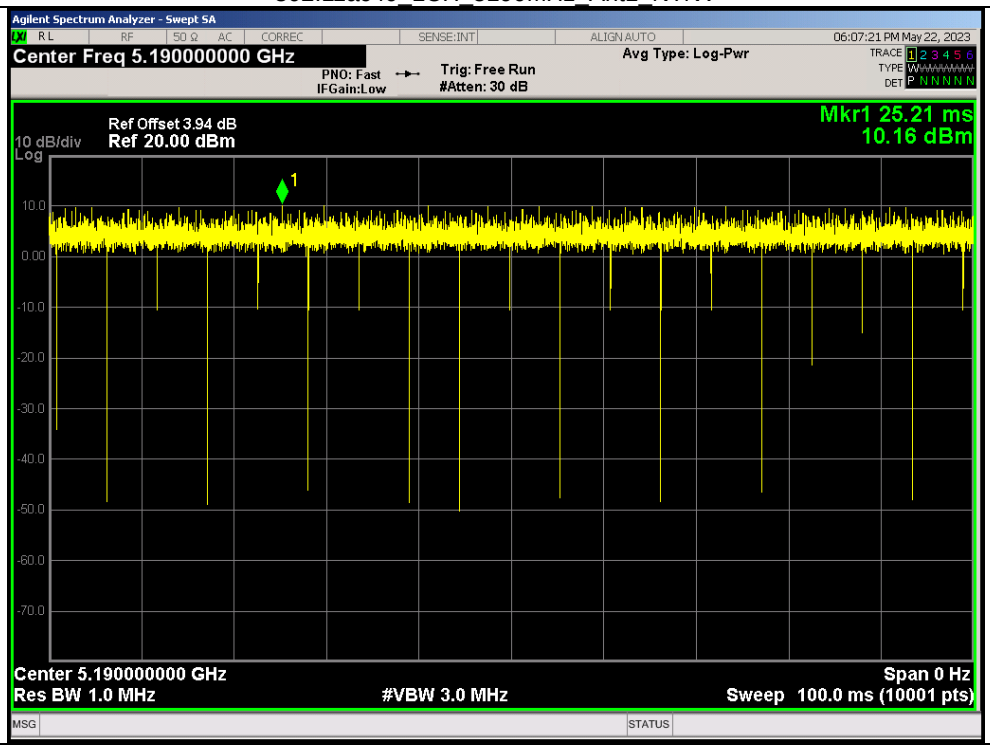
802.11ac20_HCH_5825MHz_Ant1_NTNV



802.11ac40_LCH_5190MHz_Ant1_NTNV



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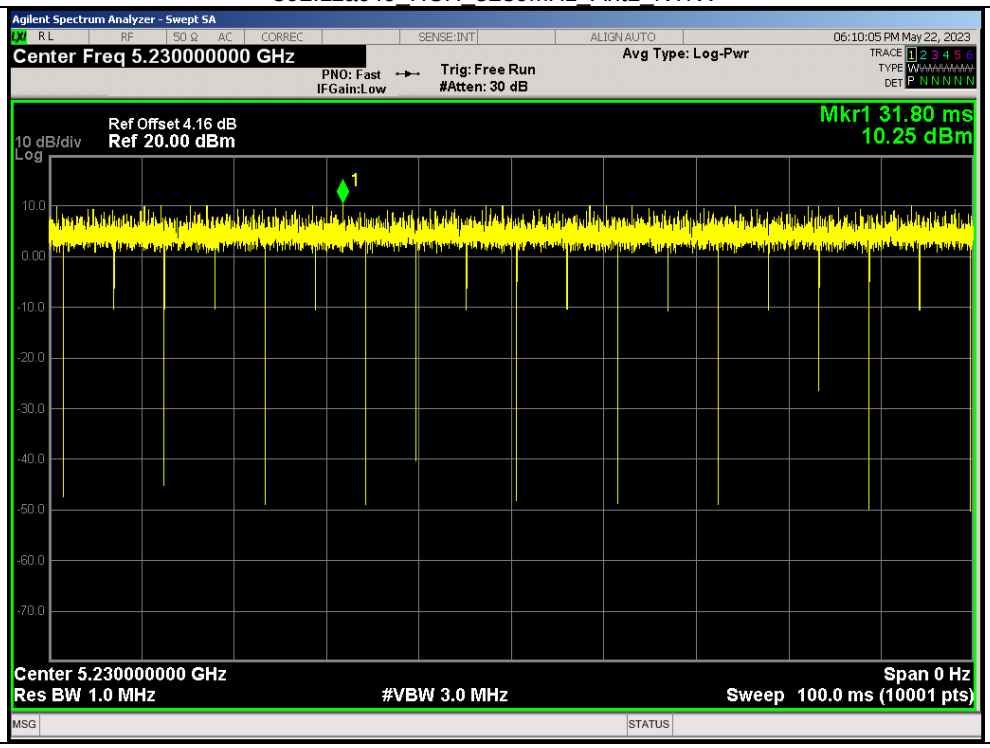
802.11ac40_HCH_5230MHz_Ant1_NTNV



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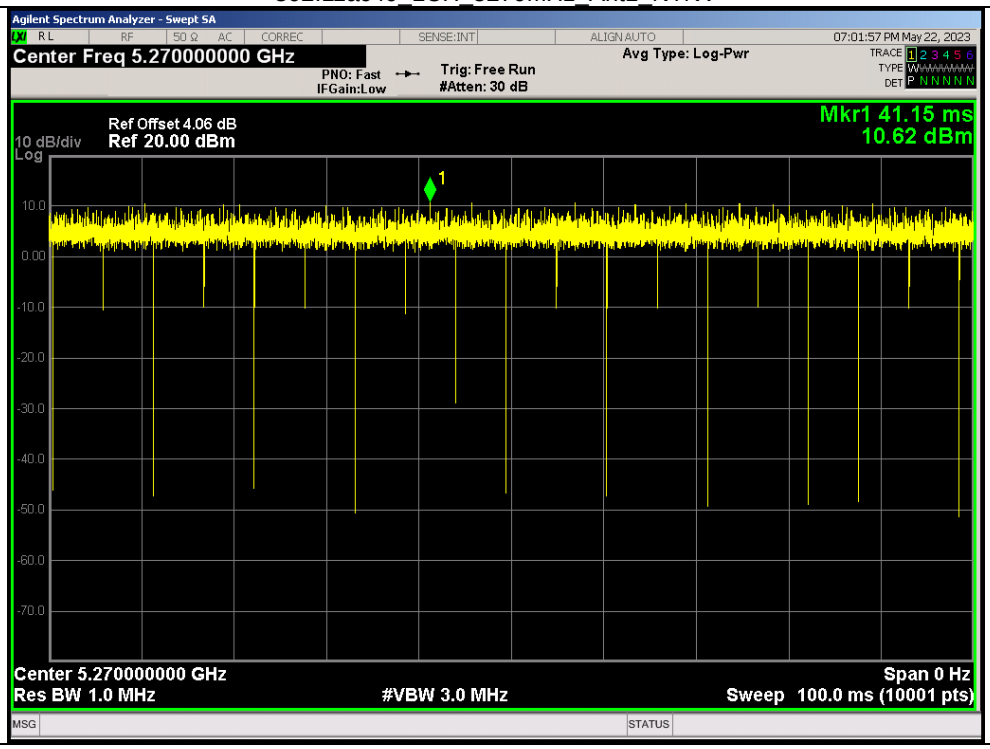

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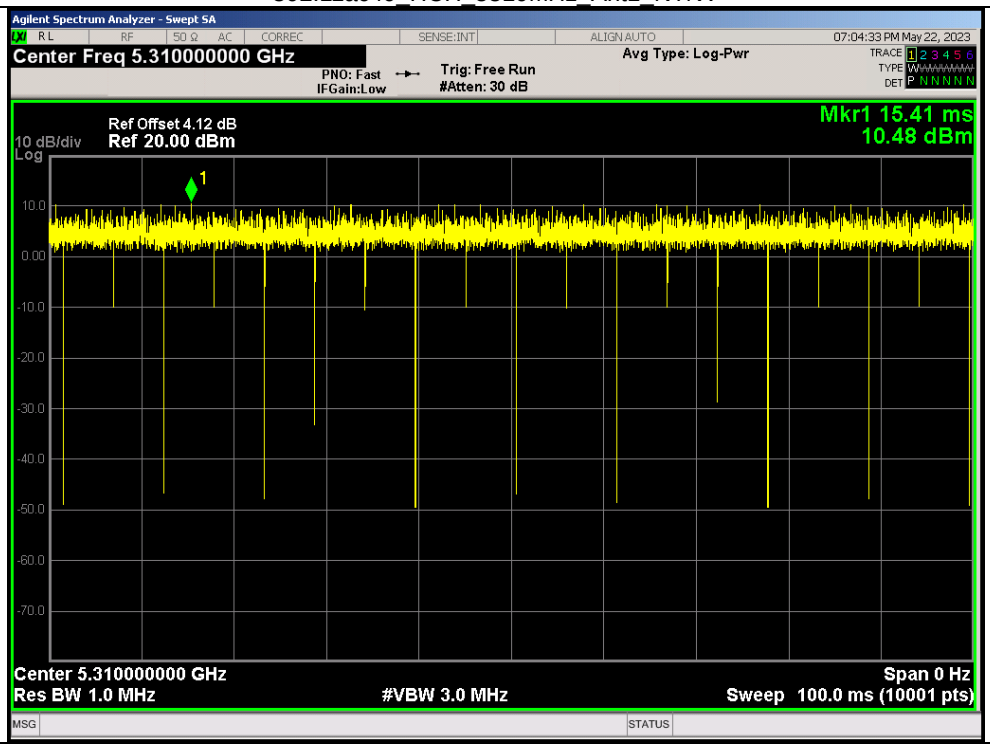
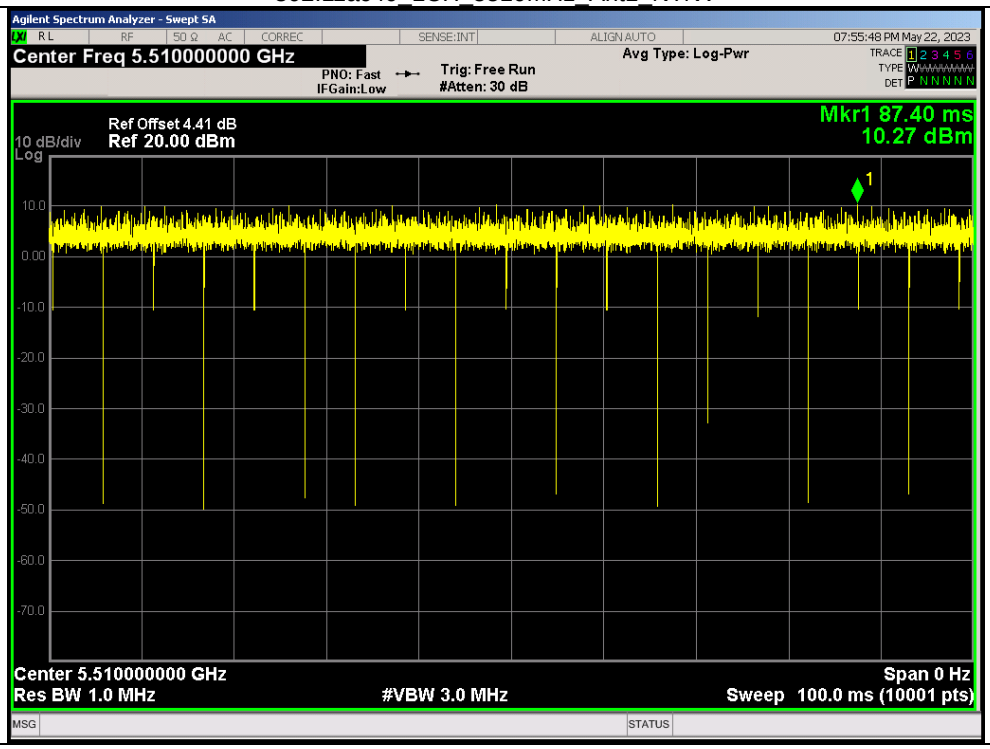
802.11ac40_HCH_5310MHz_Ant1_NTNV



802.11ac40_LCH_5510MHz_Ant1_NTNV



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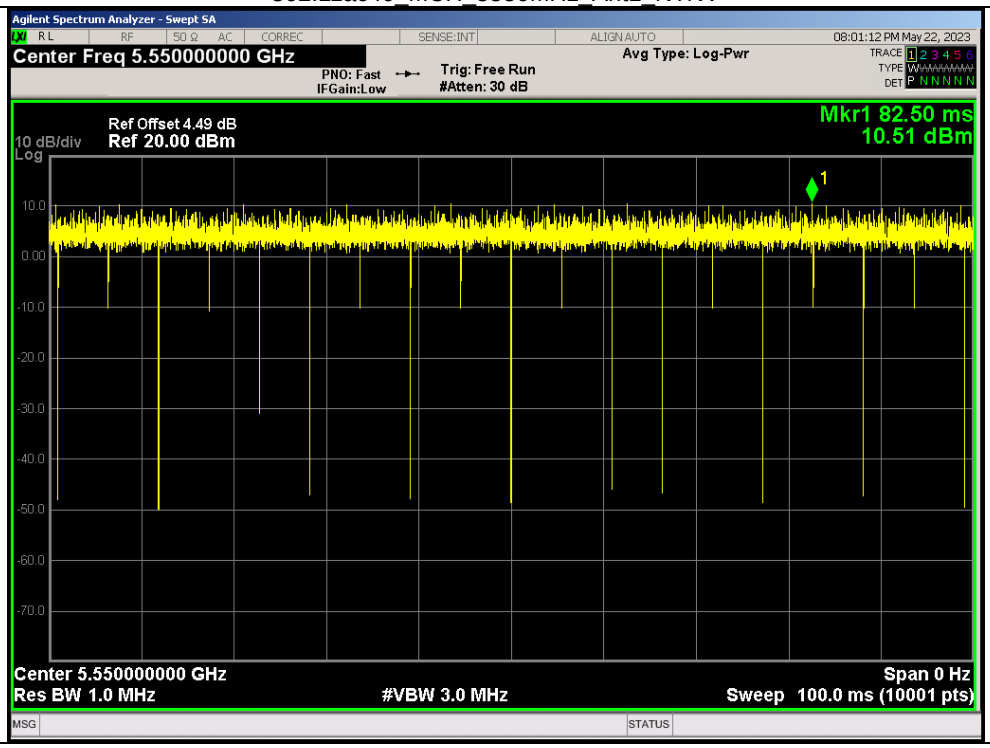
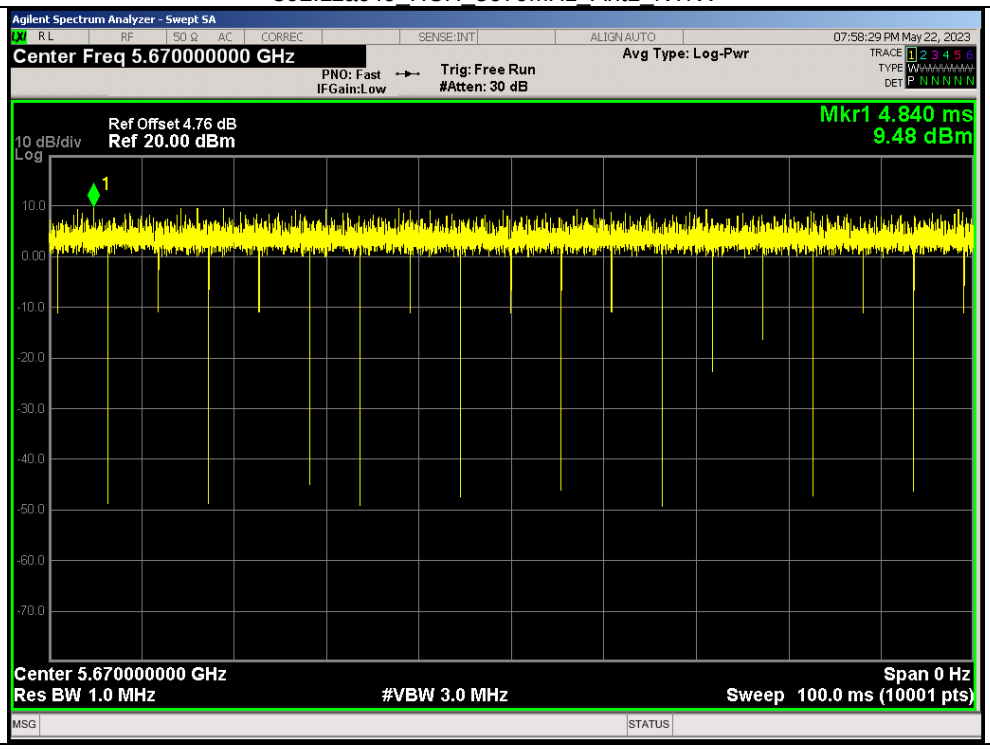
802.11ac40_MCH_5550MHz_Ant1_NTNV



802.11ac40_HCH_5670MHz_Ant1_NTNV



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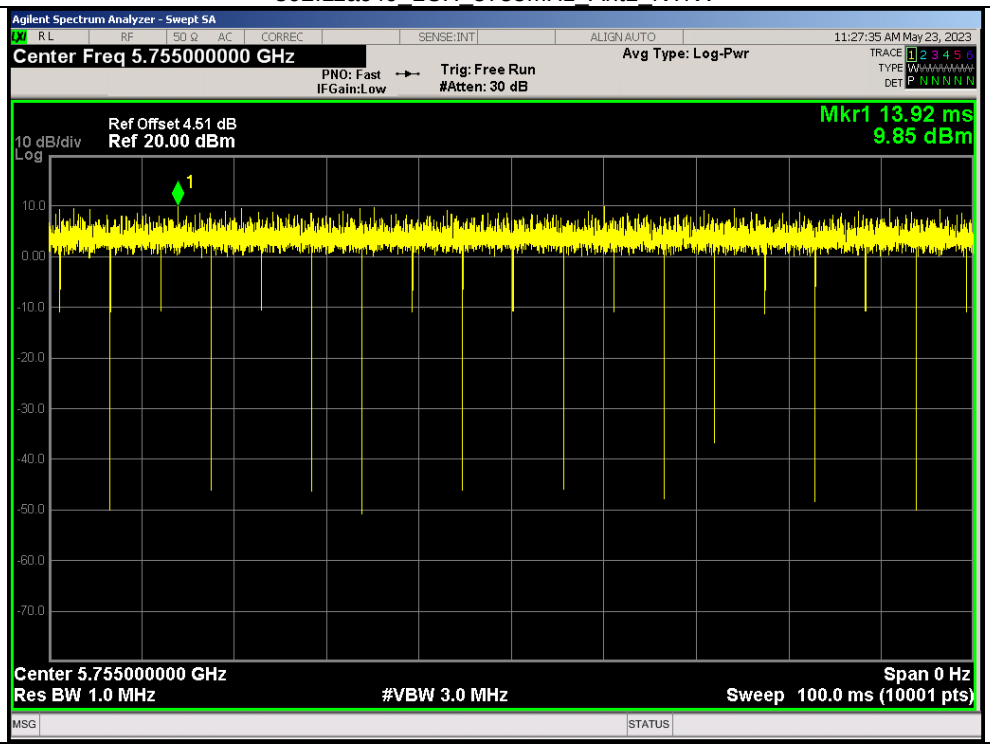
802.11ac40_LCH_5755MHz_Ant1_NTNV



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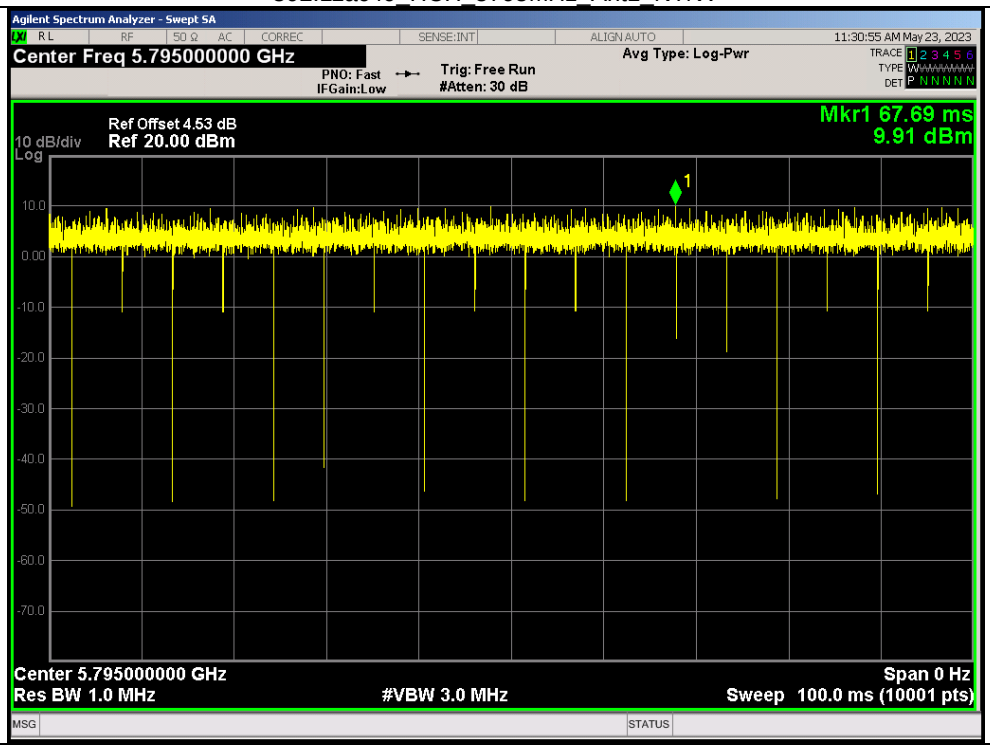

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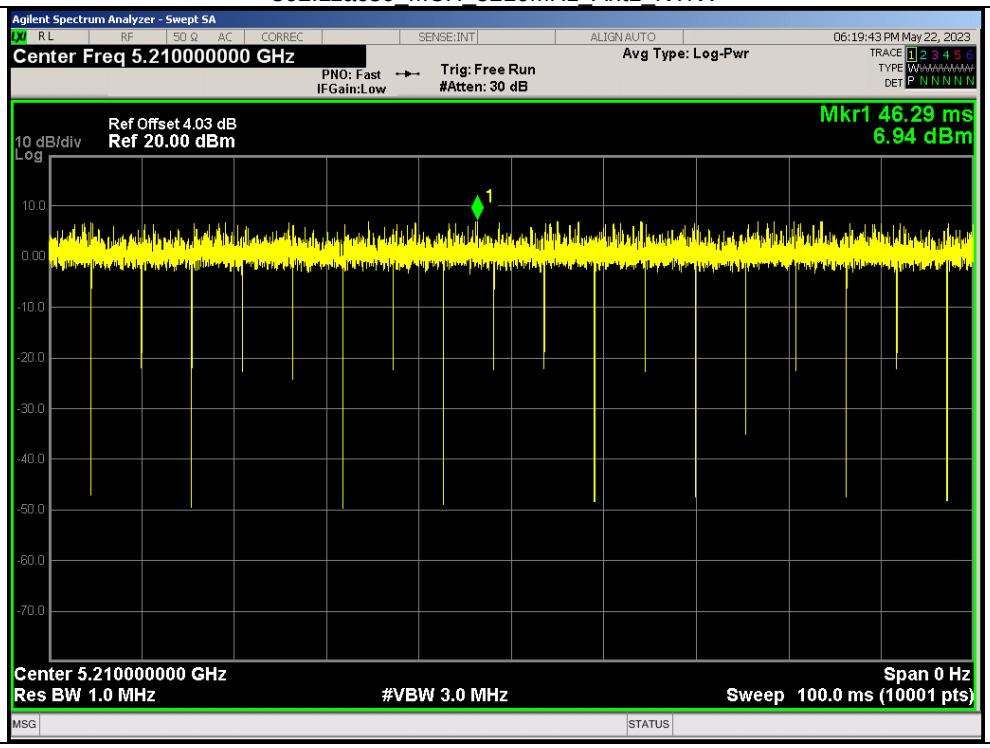
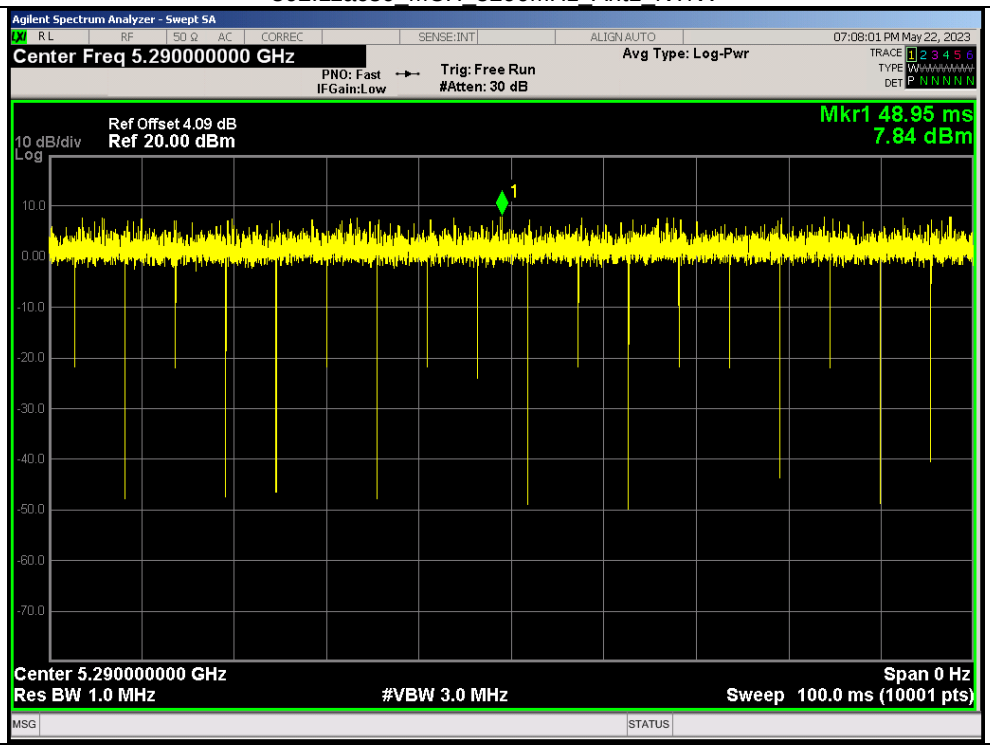
802.11ac80_MCH_5210MHz_Ant1_NTNV



802.11ac80_MCH_5290MHz_Ant1_NTNV



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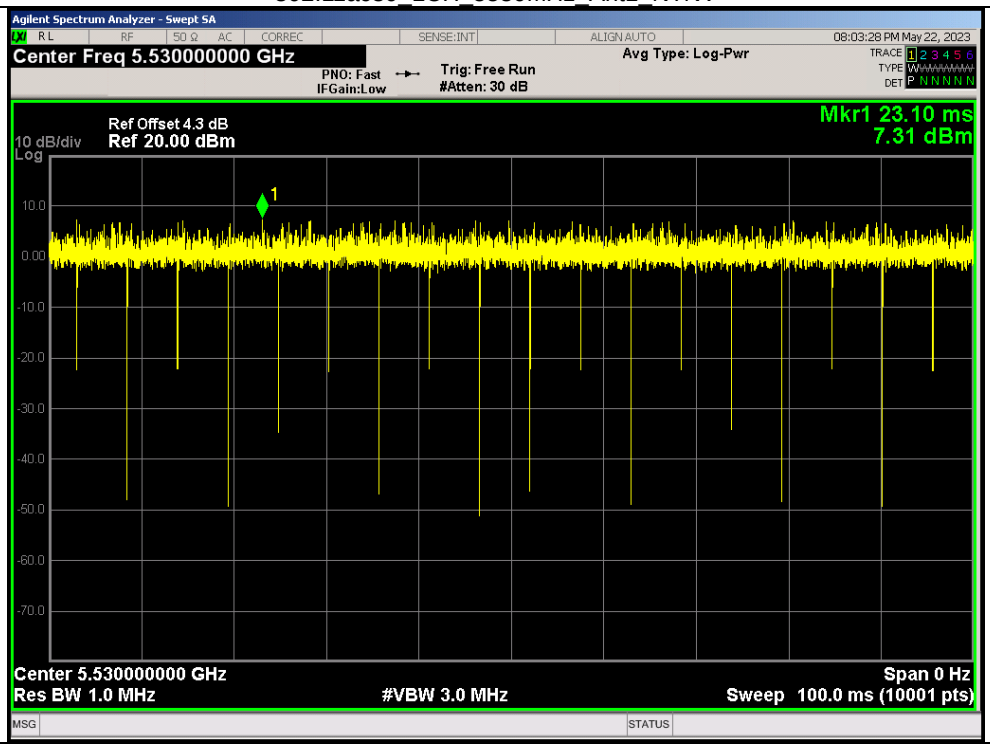
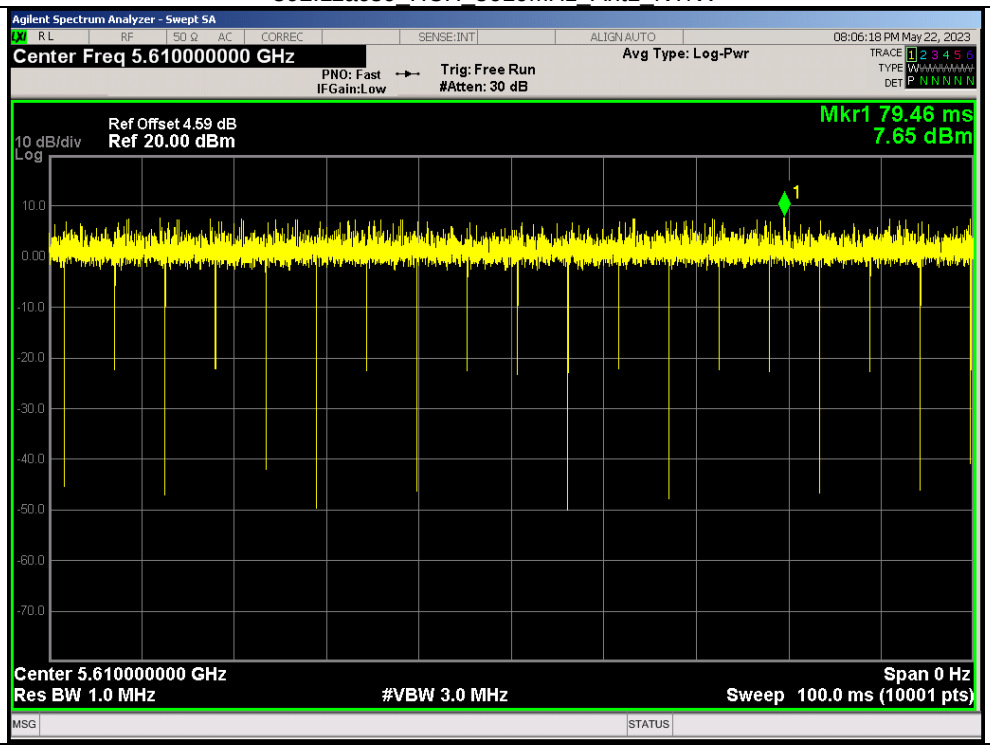
802.11ac80_LCH_5530MHz_Ant1_NTNV



802.11ac80_HCH_5610MHz_Ant1_NTNV



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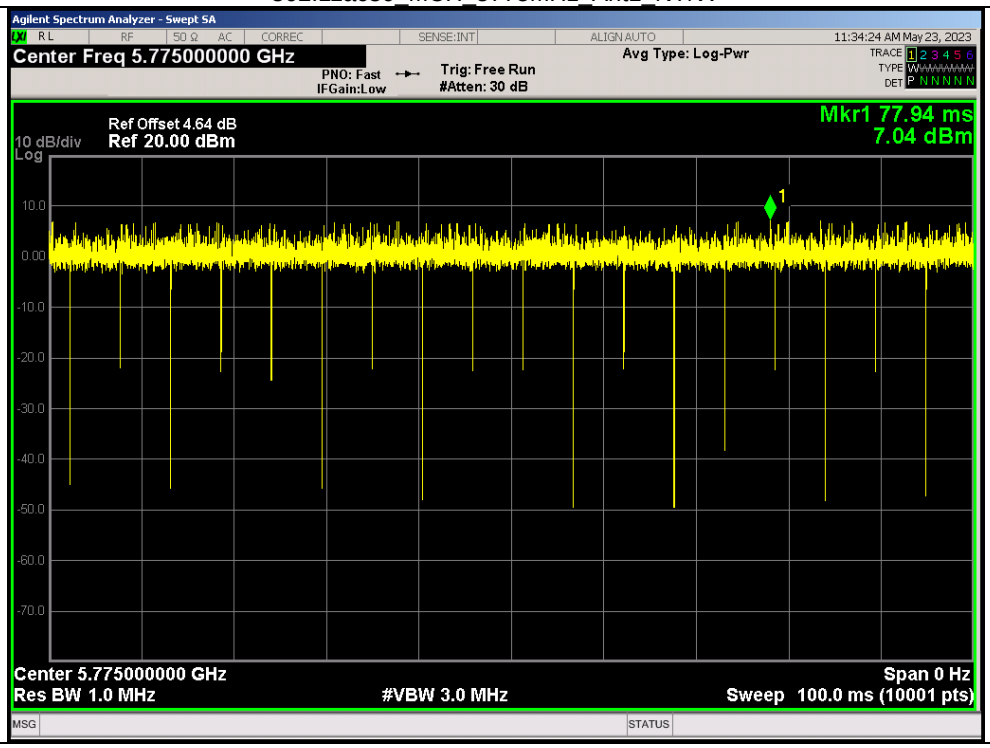
802.11ac80_MCH_5775MHz_Ant1_NTNV



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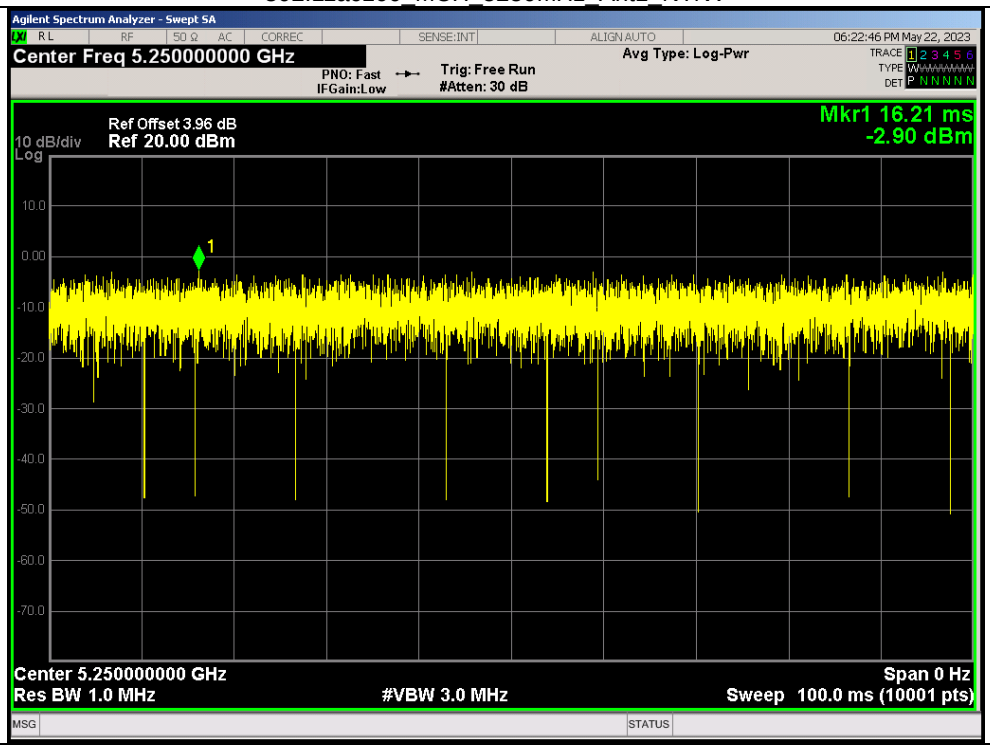

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802.11ac160_HCH_5570MHz_Ant1_NTNV