

NCC RADIO TEST REPORT**Product name**

Projector

Applicant

遠寬電信股份有限公司

Manufacture

成都極米科技股份有限公司

Rating(s)

100-240V~ 50/60Hz 3.5A

Trademark

XGIMI

Model and/or type reference

XM03A

Standard

LP0002:2020

Test Result

PASS

Date of receipt : 05-28-2021

signature :



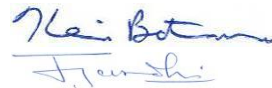
Date of Issue : 07-23-2021

NCC RADIO TEST REPORT**Report Reference No.**..... M210723N5-04

Compiled by (+ signature) Kevin Bothmann

Approved by (+ signature) Jay Gandhi

Date of issue..... 2021-07-23

**Applicant's name** 遠寬電信股份有限公司

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Manufacture's Name 成都極米科技股份有限公司

Address 中國(四川)自由貿易試驗區成都高新區世紀城路 1129 號 A 區 4 棟

Test specification:

Standard LP0002:2020

Test procedure EIA 603 、 ANSI 、 FCC/47 CFR/2.1046 、 2.1047 、 2.1049 、 2.1051 、 2.1053 and 2.1055

Non-standard testmethod..... N/A

Test item description

Product name Projector

Trademark XGIMI

Model and/or type reference XM03A

Rating(s) 100-240V~ 50/60Hz 3.5A

Testing Laboratory information:

Testing Laboratory Name Electro Magnetic Test, Inc.

Address 1547 Plymouth Street, Mountain View, CA 94043

CAB Identifier Number US0036

Tel (650) 965-4000

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E-mail jgandhi@emtlabs.com

Testing.....:

Date of receipt of test item..... Mar. 28, 2021

Date (s) of performance of tests..... Mar. 28, 2021~ July 05, 2021

Date of Issue July 23, 2021

Test Result **Pass**

GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Electro Magnetic Test, Inc., which is an independent testing and consulting firm. The test report is based on testing performed Electro Magnetic Test, Inc. personnel according to the measurement procedure described in the test specification given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full.

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Federal Government.

Electro Magnetic Test, Inc. is recognized by the following agencies for performing EMI/EMC testing:

COUNTRY	AGENCY	IDENTIFYING #
USA	Federal Communications Commission (FCC) (EMT's test site is recognized by the FCC)	Registration Number: 90576
USA, Canada, Taiwan, Australia/New Zealand, European Community	National Voluntary Lab Accreditation Program (NVLAP) (EMT is accredited by NVLAP. A copy of the NVLAP Scope Of Accreditation is available upon request.)	Lab Code: 200147-0
Canada	Industry Canada	File No.: IC 2804
Japan	Voluntary Control Council For Interference (VCCI)	A-0118
	Open Field Test Site "A"	-
	Mains Conducted Emissions Test Site "A"	-
	Telecom Conducted Emissions Test Site "A"	-
	3 Meter Semi-Anechoic Chamber Site "E"	-
	3 Meter Semi-Anechoic Chamber Site "E" (1GHz – 6GHz)	-
	Mains Conducted Emissions Test Site "E"	-
	Telecom Conducted Emissions Test Site "E"	-
Korea	Ministry of Information and Communication's Radio Research Laboratory (RRL) under the Asia Pacific Economic Cooperation (APEC) Mutual Recognition Arrangement (A copy of the Scope Of Accreditation is available upon request)	US0036
Taiwan	Bureau Of Standards, Metrology and Inspection (BSMI)	Reference Number: SL2-IN-E-1024
Australia / New Zealand	Australian Communications Authority (AUSTEL)	*

***THESE AGENCIES DO NOT ISSUE AN IDENTIFYING NUMBER TO TEST LABS.**

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

LP0002:2020			
Standard Section	Test Item	Judgment	Remark
5.7.3.4	26 dB Bandwidth	PASS	None
5.7.5	6 dB Bandwidth	PASS	None
5.7.3	Peak Transmit Power	PASS	None
5.7.3	Peak Power Spectral Density	PASS	None
5.7.4.5/3.3	AC Power Line Emissions	PASS	None
5.7.4/3.6	Radiated Emissions	PASS	None
5.7.4/3.6	Restricted Bands	PASS	None

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) Reference to the KDB-789033 and KDB-662911.

1.1 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	1.38dB
2	Radiated Emission Test	3.17dB
3	RF power,conducted	0.16dB
4	Spurious emissions,conducted	0.21dB
5	All emissions,radiated(<1G)	4.68dB
6	All emissions,radiated(>1G)	4.89dB

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Projector	
Trade Name	XGIMI	
Model Name	XM03A	
Serial Model Name	N/A	
Product Description	The EUT is a Projector	
	Operation Frequency:	5.18GHz-5.24GHz 5.26GHz-5.32GHz 5.5GHz-5.7GHz 5.745GHz-5.825GHz
	Modulation Type:	IEEE for 802.11a: OFDM (BPSK/QPSK/16QAM/64QAM) IEEE for 802.11n: OFDM (BPSK/QPSK/16QAM/64QAM) IEEE for 802.11ac:OFDM (QPSK/BPSK/16QAM/64QAM/256 QAM)
	Number Of Channel	Please see Note 2.
	Antenna Designation:	Please see Note 3.
	Antenna Gain(Peak)	Please see Note 3.
	Max Output Power:	13.072dBm
Channel List	Please refer to the Note 2.	
Rating	Input: 100-240V~ 50/60Hz 3.5A	
Connecting I/O Port(s)	Please refer to the User's Manual	
Products Covered	N/A	
EUT Modification(s)	N/A	
Model difference	N/A	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

Operation Frequency of channel			
5.180GHz-5.240GHz		5.500GHz-5.700GHz	
Channel	Frequency	Channel	Frequency
36	5180	100	5500
38	5190	102	5510
40	5200	104	5520
42	5210	106	5530
44	5220	108	5540
46	5230	110	5550
48	5240	112	5560
		116	5580
		118	5590
5.260GHz-5.320GHz		120	5600
Channel	Frequency	122	5610
52	5260	124	5620
54	5270	126	5630
56	5280	128	5640
58	5290	132	5660
60	5300	134	5670
62	5310	136	5680
64	5320	140	5700
5.745GHz-5.825GHz			
Channel	Frequency		
149	5745		
151	5755		
153	5765		
155	5775		
157	5785		
159	5795		
161	5805		
165	5825		

For 802.11a/n(HT20) /ac (VHT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
36	5180	52	5260
40	5200	60	5300
48	5240	64	5320

For 802.11a/n(HT20) /ac (VHT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
100	5500	149	5745
116	5580	157	5785
140	5700	165	5825

For 802.11n(HT40) /ac (VHT40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
38	5190	54	5270
46	5230	62	5310

For 802.11n(HT40) /ac (VHT40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
102	5510	151	5755
110	5550	159	5795
134	5670		

For 802.11ac (VHT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
42	5210	58	5290

For 802.11ac (VHT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
106	5530	155	5775
122	5610		

3.

Table for Filed Antenna

Ant	Trade Name	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	Shenzhen Zhongtian Xun	ZTX-AX01-WIFI-1-V3.0	PIFA antenna	N/A	ANT A: 6.99dBi	MIMO: 10dBi
2	Communication Technology Shares Co.,Ltd.	ZTX-AX01-WIFI-2-V3.0	PIFA antenna	N/A	ANT A: 6.99dBi	

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11a : All Rate
Mode 2	802.11n(20/40) : All Rate
Mode 3	802.11ac(20/40) : All Rate
Mode 4	802.11ac(80) : All Rate
Mode 5	RX Mode
Mode 6	Working

For Conducted Emission	
Final Test Mode	Description
Mode 2	TX Mode (Worst case)

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11a : All Rate
Mode 2	802.11n(20/40) : All Rate
Mode 3	802.11ac(20/40) : All Rate
Mode 4	802.11ac(80) : All Rate
Mode 5	RX Mode
Mode 6	Working

Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) This product can be powered by adapter, have pretested powered by adapter, found to be the worst case is powered by the adapter, and recorded the data in the report.

2.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters.

RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_A Power Class	ANT_B Power Class	Software For Testing
WIFI(5G)	5G WIFI Band1 (5150MHz-5250MHz)	802.11a	ANT A: 6.99 ANT B: 6.99 MIMO A+B: 10	12	12	QATool_Db g 0.0.1.88
		802.11n(HT20)		12	12	
		802.11n(HT40)		8	8	
		802.11ac(VHT20)		12	12	
		802.11ac(VHT40)		8	8	
		802.11ac(VHT80)		8	8	
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_A Power Class	ANT_B Power Class	Software For Testing
WIFI(5G)	5G WIFI Band2 (5250MHz-5350MHz)	802.11a	ANT A: 6.99 ANT B: 6.99 MIMO A+B: 10	12	12	QATool_Db g 0.0.1.88
		802.11n(HT20)		12	12	
		802.11n(HT40)		10	10	
		802.11ac(VHT20)		12	12	
		802.11ac(VHT40)		10	10	
		802.11ac(VHT80)		10	10	
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_A Power Class	ANT_B Power Class	Software For Testing
WIFI(5G)	5G WIFI Band3 (5470MHz-5725MHz)	802.11a	ANT A: 6.99 ANT B: 6.99 MIMO A+B: 10	10	10	QATool_Db g 0.0.1.88
		802.11n(HT20)		10	10	
		802.11n(HT40)		8	10	
		802.11ac(VHT20)		10	10	
		802.11ac(VHT40)		10	10	
		802.11ac(VHT80)		8	8	
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_A Power Class	ANT_B Power Class	Software For Testing
WIFI(5G)	5G WIFI Band4 (5725MHz-5850MHz)	802.11a	ANT A: 6.99 ANT B: 6.99 MIMO A+B: 10	12	12	QATool_Db g 0.0.1.88
		802.11n(HT20)		12	12	
		802.11n(HT40)		12	12	
		802.11ac(VHT20)		12	12	
		802.11ac(VHT40)		12	12	
		802.11ac(VHT80)		12	12	

1. Connect the computer with USB ports.
2. Open the "QATool_Db g" test software.
3. Set the commands and click "ENTER" transmitter.

2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

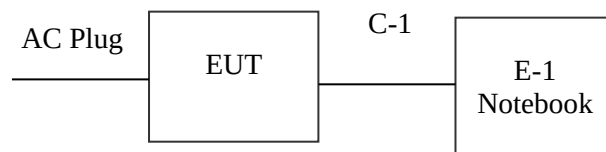
Block diagram of EUT configuration

CONDUCTED EMISSION

Test mode: mode 2

Non-Conductive Table

80 cm above Ground Plane

CONDUCTED EMISSION Test Set

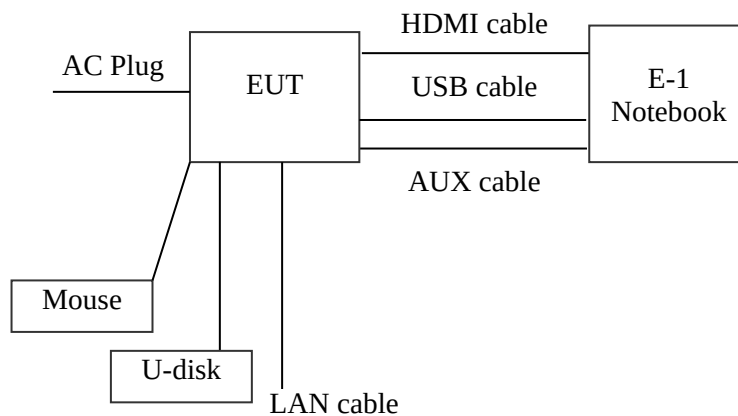
Block diagram of EUT configuration

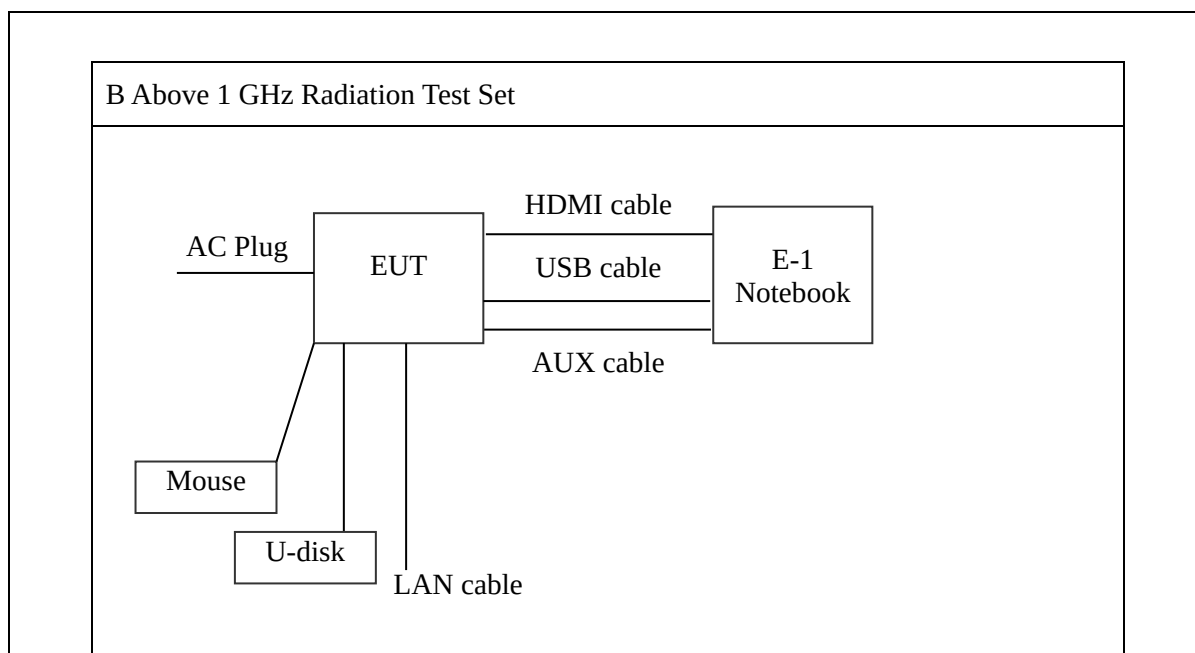
RADIATED EMISSION

Test mode: mode 1, 2, 3 ,4 ,5, 6 ,

Non-Conductive Table

80 cm above Ground Plane

Below 1 GHz Radiation Test Set



2.5 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
/	AC Cable	ASAP	246445	N/A	N/A	necessary accessories
/	Remote control	XGIMI	B981C	N/A	N/A	
E-1	Personal computer	DELL	VOSTRO.3800	N/A	N/A	support units.*
C-1	USB Cable	UGREEN	10368	N/A	N/A	
/	Mouse	HP	MODGUO	N/A	N/A	
/	HDMI Cable	SONY	20276	N/A	N/A	
/	AUX Cable	UGREEN	AV175	N/A	N/A	
/	U Disk	Kingston	DTKN/128GB	N/A	N/A	
/	LAN Cable	SAMZHE	283M	N/A	N/A	

Item	Equipment	Mfr/Brand	Model/Type No.	Note
N/A	N/A	N/A	N/A	N/A

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” means “shielded” or “with ferrite core”,”NO” means “unshielded” or”without ferrite core”
- (4) “*”:In this report, the applicant did not provide the accompanying accessories with the equipment. The accessories were provided by the laboratory (or the applicant) and inspected simultaneously.

EQUIPMENTS LIST FOR ALL TEST ITEMS

EQUIPMENT TYPE	MANU-FACT URER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
Spectrum Analyzer	Keysight	N9020A	MY53300466	April 29, 2021	1 Year
RF Preselector	Hewlett Packard	85685A	3010A01157	April 29, 2021	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650	2521A00584	April 29, 2021	1 Year
Preamplifier	Com Power	PA-102	1482	April 29, 2021	1 Year
RF Attenuator	Mini-Circuits	CAT-10	Asset #1000	September 09, 2020	1 Year
LISN	Com Power	LI-200	12012	September 09, 2020	1 Year
LISN	Com Power	LI-200	12214	September 09, 2020	1 Year
LISN	Com Power	LI-200	1767	September 09, 2020	1 Year
LISN	Com Power	LI-200	1768	December 29, 2020	1 Year
Biconical Antenna	Com Power	AB-100	01557	December 22, 2020	1 Year
Log Periodic Antenna	Com Power	AL-100	16037	December 22, 2020	1 Year
Horn Antenna	Com Power	AHA-118	711054	September 09, 2020	1 Year
Antenna Mast	Com Power	AM-400	N/A	N/A	N/A
Turntable	Com Power	TT-100	N/A	N/A	N/A
Computer	Dell, Inc.	DHS	DNSV641	N/A	N/A

EMI Test Equipment (Continued)

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
EMI Receiver	Rohde & Schwarz	ESU40	100127	June 12, 2021	1 Year
BiConiLog Antenna	ETS-Lindgren	3142D	00102183	August 14, 2020	1 Year
Horn Antenna (1GHz-18GHz)	ETS-Lindgren	3117	00109294	May 6, 2021	1 Year
Horn Antenna (15GHz-40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170242	May 6, 2021	1 Year
Preamplifier	Rohde & Schwarz	TS-PR18	100056	June 12, 2021	1 Year
Pre-Amplifier	Agilent	8449B	3008A00409	June 12, 2021	1 Year
Antenna Mast	ETS-Lindgren	2175	00095727	N/A	N/A
Turntable	ETS-Lindgren	2187-3.0	00118231	N/A	N/A
Computer	Acer	Aspire 8930	85100050123	N/A	N/A
Multi-Function Controller	ETS-Lindgren	2090	00102270	N/A	N/A
Loop Antenna	ARA	PLA-1030/B	1029	May 19, 2021	1 Year

DFS Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
Signal Generator	Agilent	N5182A	MY46240556	October 10, 2020	1 Year
Signal Analyzer	Agilent	N9020A	MY51110105	March 04, 2021	1 Year
Coupler	Rio tinto in overseas	ZFSC-2-11	15542	April 28, 2021	1 Year
Coupler	Rio tinto in overseas	ZN2PD-9G	SF078500430	April 28, 2021	1 Year
Attenuator	HP	8494B	DC-18G	April 28, 2021	1 Year
Router	TP-LINK (ID:Q87-WR T3200ACM)	TL-WR885 N	112507401073 5	N.C.R	N.C.R
Temperature & Humidity	HH660	Mieo	N/A	October 13, 2020	1 Year

2.6. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

2.6.1 LIMITS

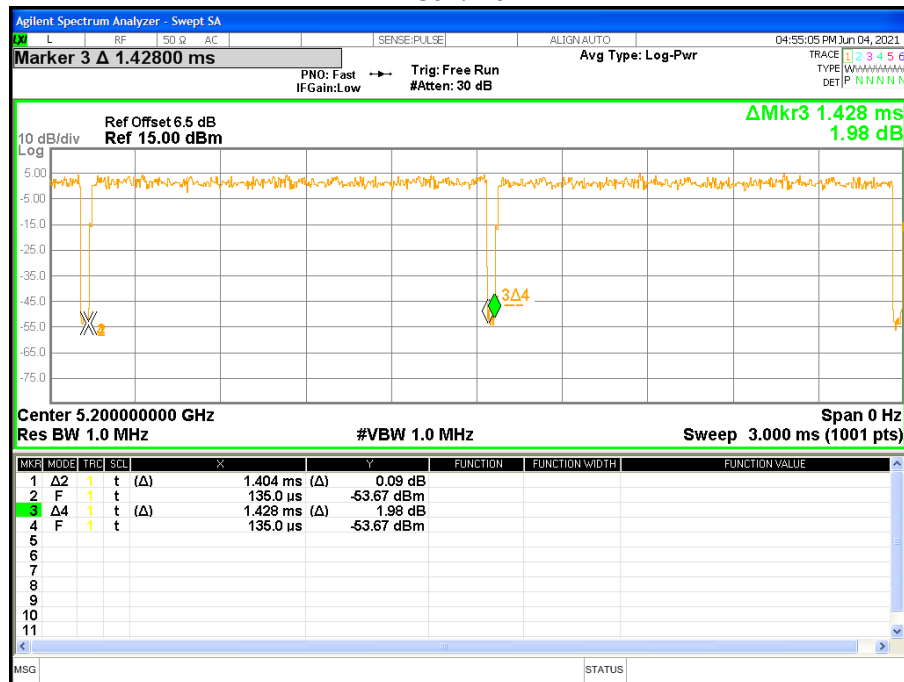
None; for reporting purposes only.

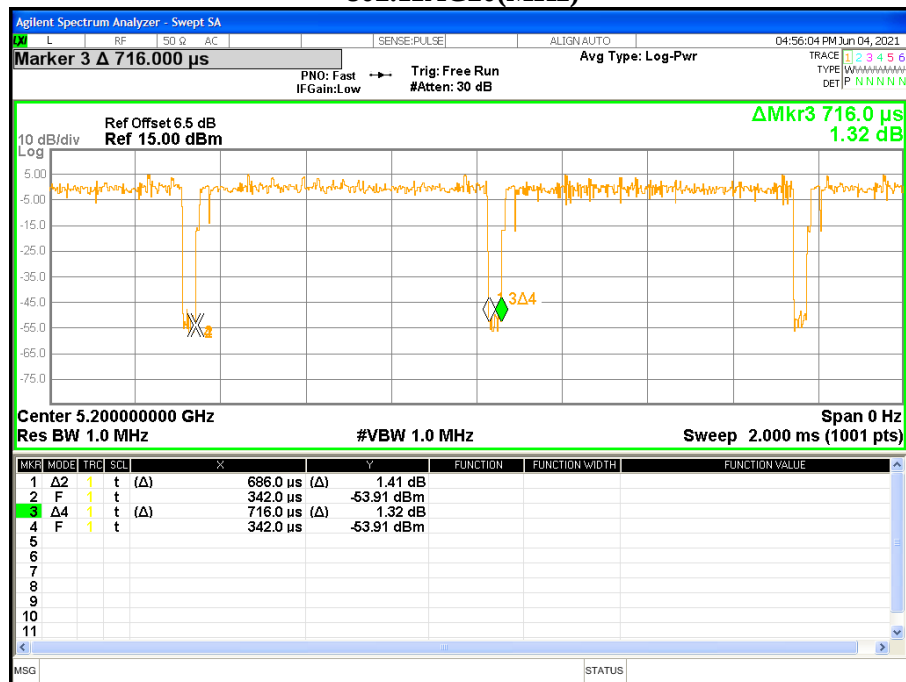
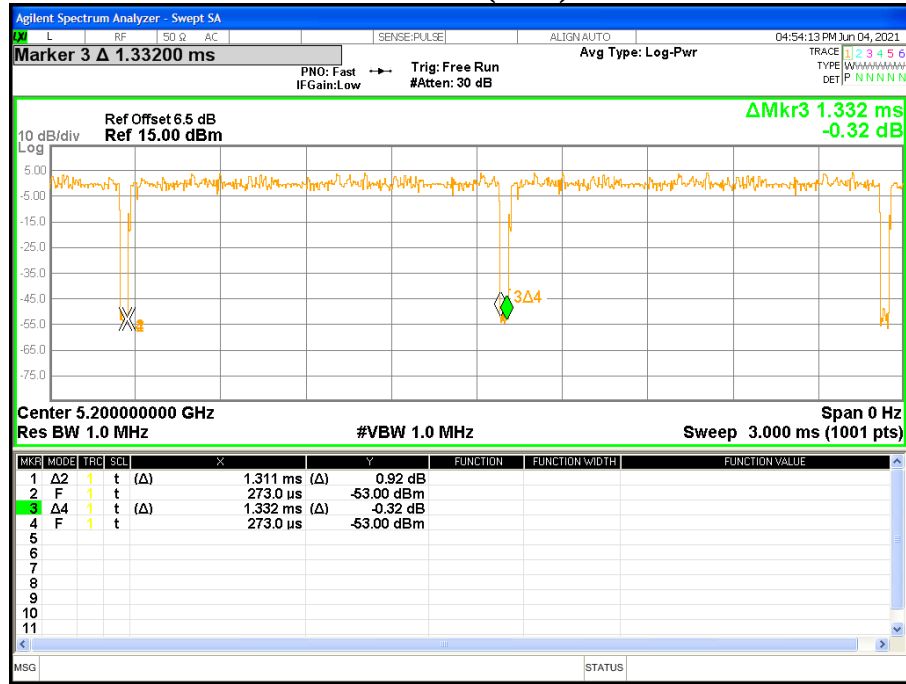
2.6.2 ON TIME AND DUTY CYCLE RESULTS

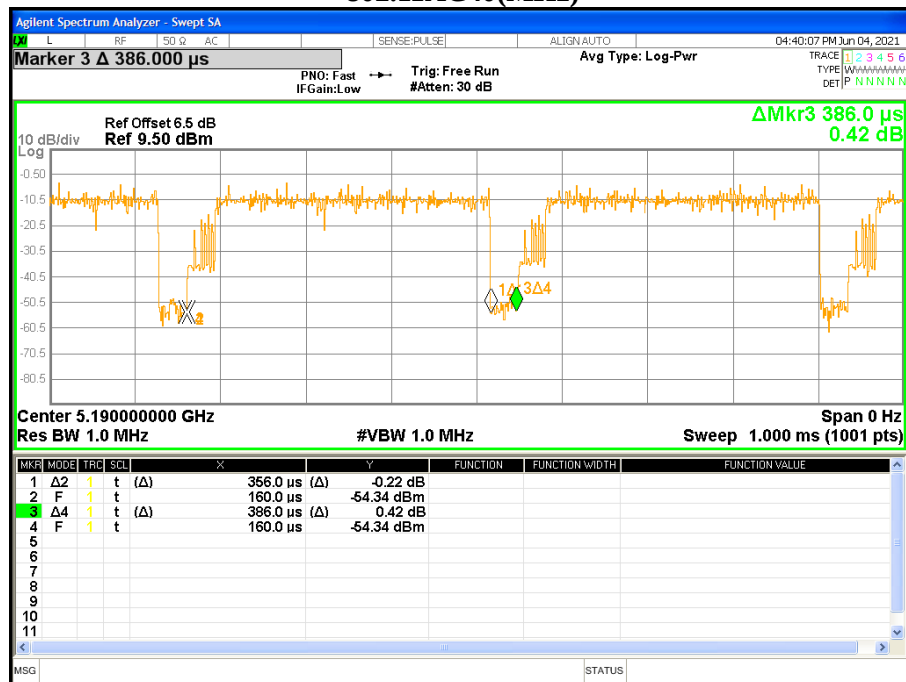
5.2G

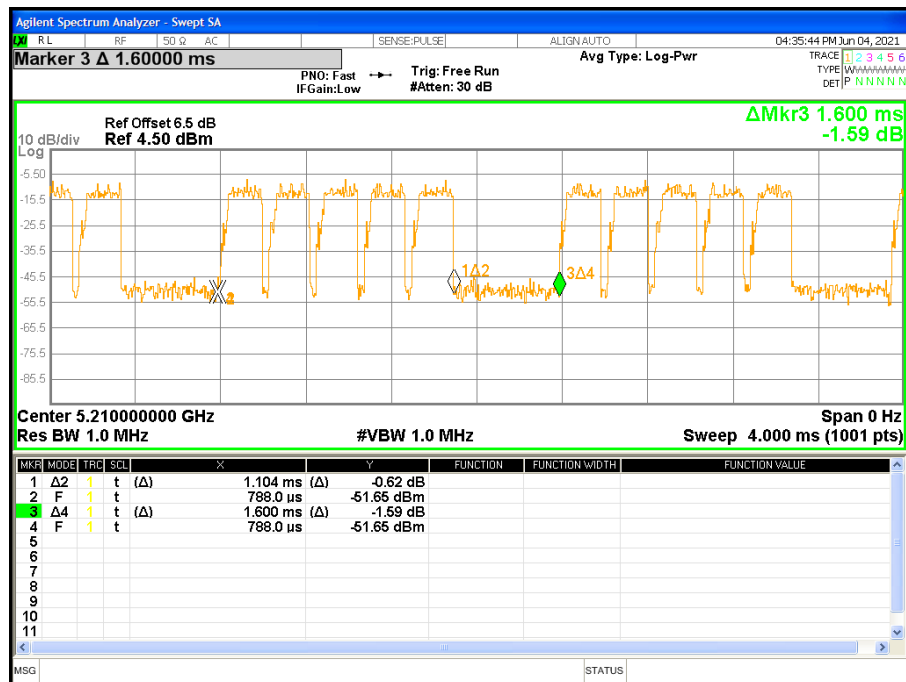
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	10log(1/x)Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a	1.404	1.428	0.983	98.32%	0.074	0.712
802.11N20(MHz)	1.311	1.332	0.984	98.42%	0.069	0.763
802.11AC20(MHz)	0.686	0.716	0.958	95.81%	0.186	1.458
802.11N40(MHz)	0.658	0.682	0.965	96.48%	0.156	1.520
802.11AC40(MHz)	0.356	0.386	0.922	92.23%	0.351	2.809
802.11AC80(MHz)	1.104	1.600	0.690	69.00%	1.612	0.906

802.11a



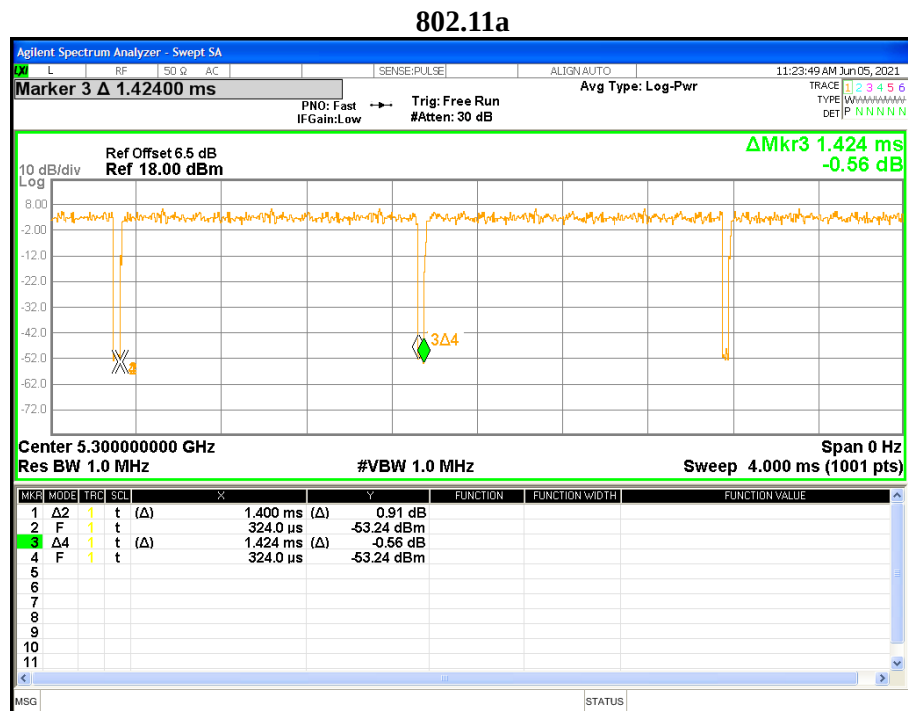




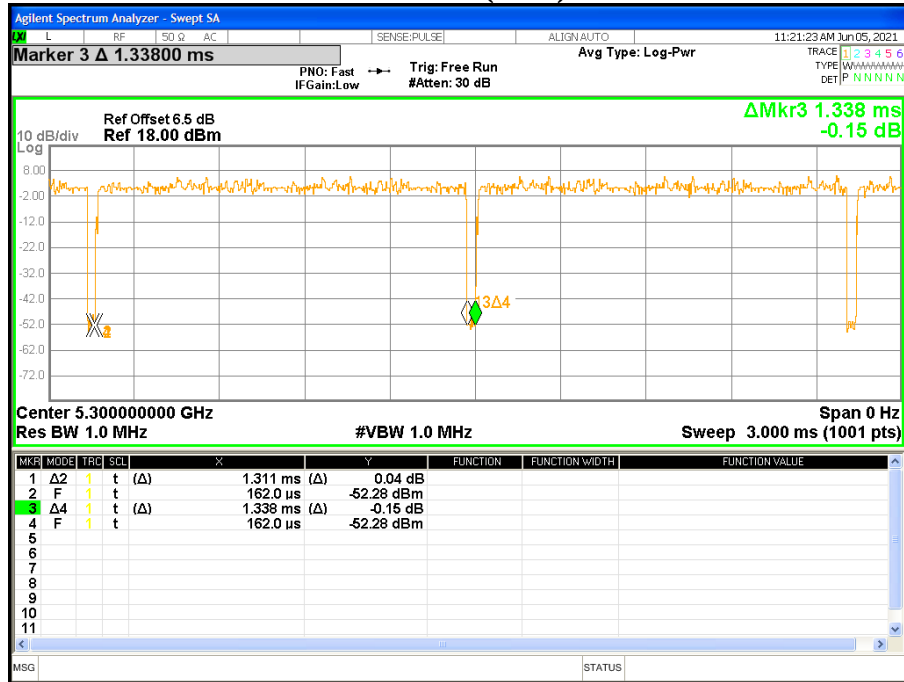


5.3G

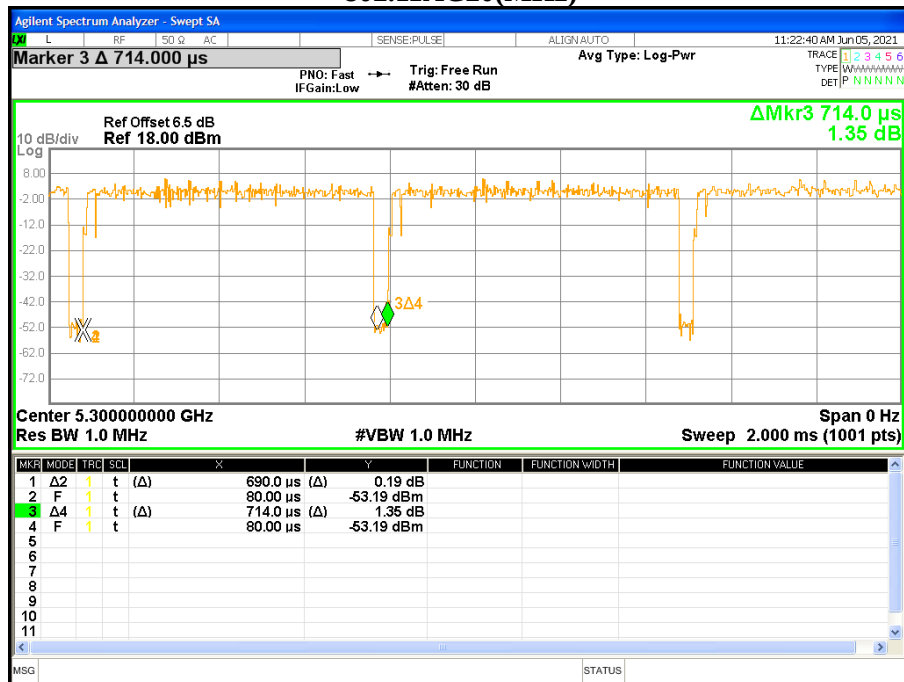
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	10log(1/x)Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a	1.400	1.424	0.983	98.31%	0.074	0.714
802.11N20(MHz)	1.311	1.338	0.980	97.98%	0.089	0.763
802.11AC20(MHz)	0.690	0.714	0.966	96.64%	0.148	1.449
802.11N40(MHz)	0.656	0.682	0.962	96.19%	0.169	1.524
802.11AC40(MHz)	0.360	0.388	0.928	92.78%	0.325	2.778
802.11AC80(MHz)	1.100	1.580	0.696	69.62%	1.573	0.909



802.11N20(MHz)



802.11AC20(MHz)





Agilent Spectrum Analyzer - Swept SA

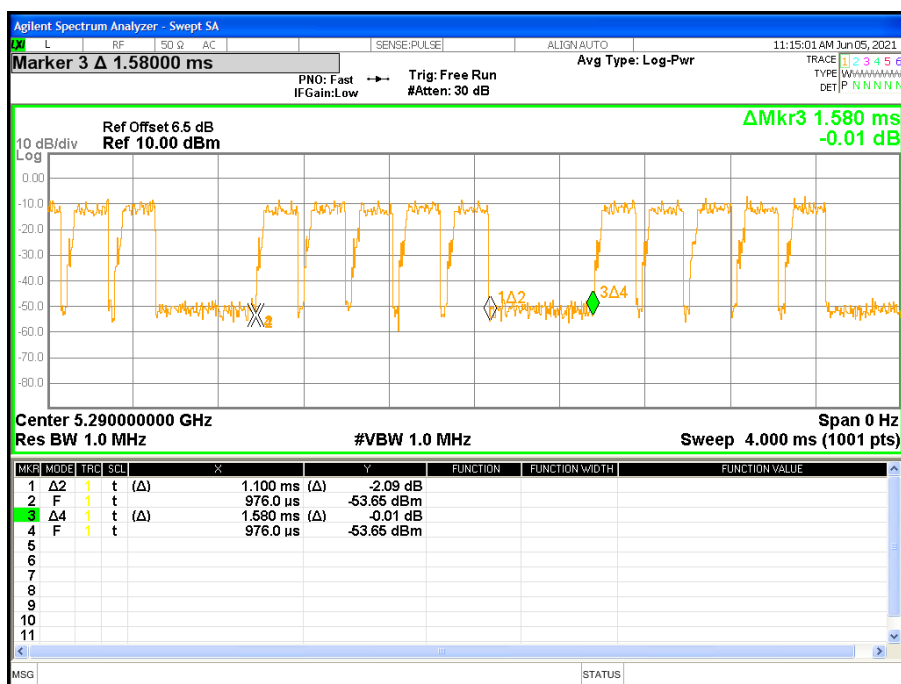
Marker 1 Δ 194.500 μs

PNO: Fast IFGain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr

Ref Offset 6.5 dB Ref 10.00 dBm

ΔMkr1 194.5 μs -2.22 dB

MKR	MODE	FREQ	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	194.5 μs	t	(Δ)	-2.22 dB			
2	F	68.00 μs	t		-56.81 dBm			



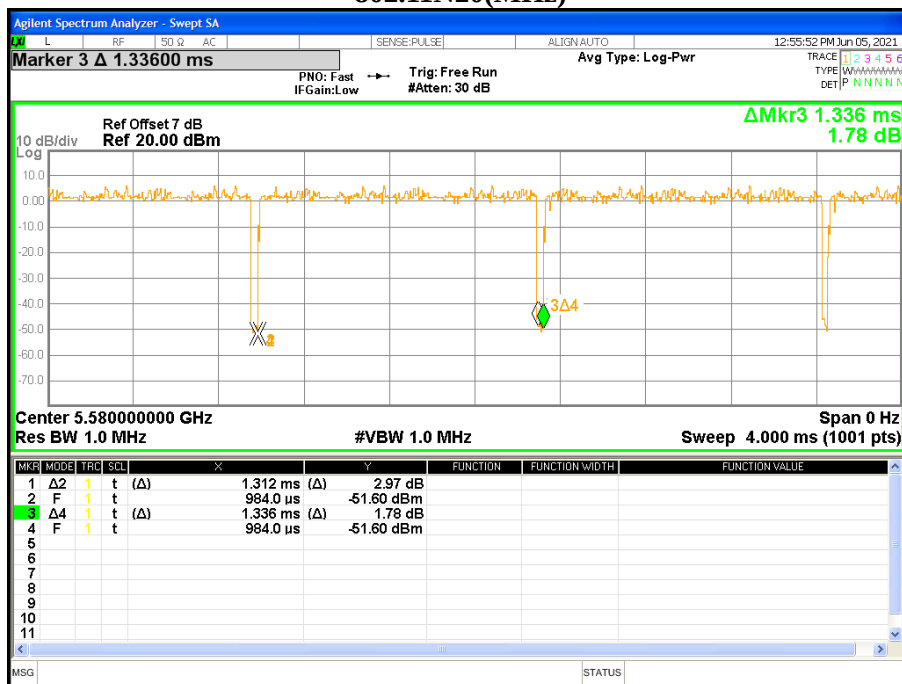
5.6G

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	10log(1/x)Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a	1.420	1.432	0.992	99.16%	0.037	0.704
802.11N20(MHz)	1.312	1.336	0.982	98.20%	0.079	0.762
802.11AC20(MHz)	0.688	0.714	0.964	96.36%	0.161	1.453
802.11N40(MHz)	0.654	0.678	0.965	96.46%	0.157	1.529
802.11AC40(MHz)	0.356	0.386	0.922	92.23%	0.351	2.809
802.11AC80(MHz)	1.092	1.556	0.702	70.18%	1.538	0.916

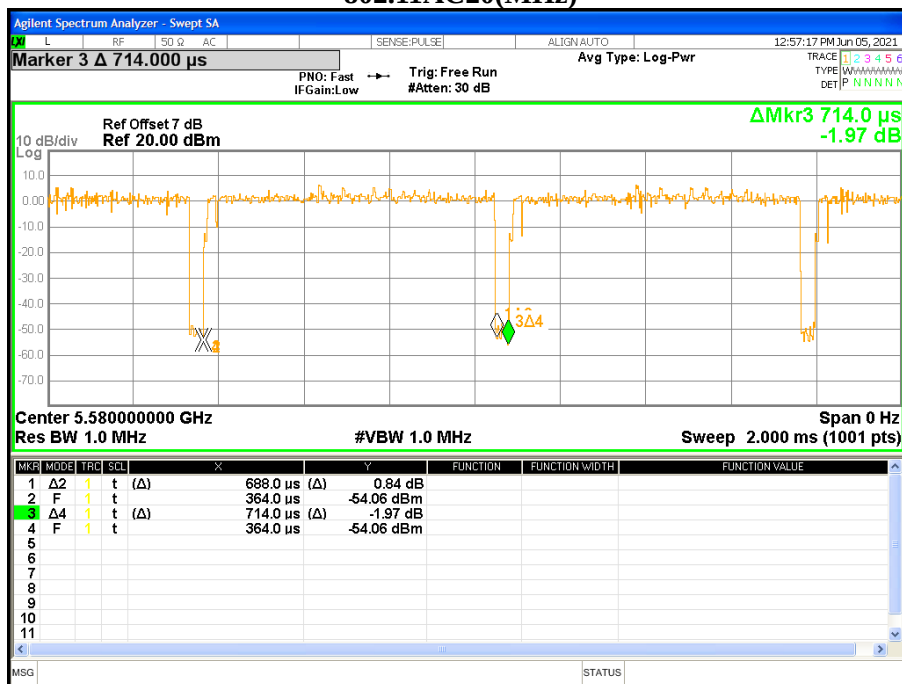
802.11a



802.11N20(MHz)



802.11AC20(MHz)



Agilent Spectrum Analyzer - Swept SA

Marker 3 Δ 678.000 μs

PNO: Fast IFGain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr

Ref Offset 7 dB Ref 20.00 dBm

ΔMkr3 678.0 μs -1.16 dB

MKR	MODE	TRG	SCL		X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	1	t	(Δ)	654.0 μs	-2.39 dB			
2	F	1	t		400.0 μs	-49.84 dBm			
3	Δ4	1	t	(Δ)	678.0 μs	-1.16 dB			
4	F	1	t		400.0 μs	-49.84 dBm			

Agilent Spectrum Analyzer - Swept SA

12:58:30 PM Jun 05, 2021

Marker 3 Δ 386.000 μ s

PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB

Avg Type: Log-Pwr

Ref Offset 7 dB Ref 20.00 dBm

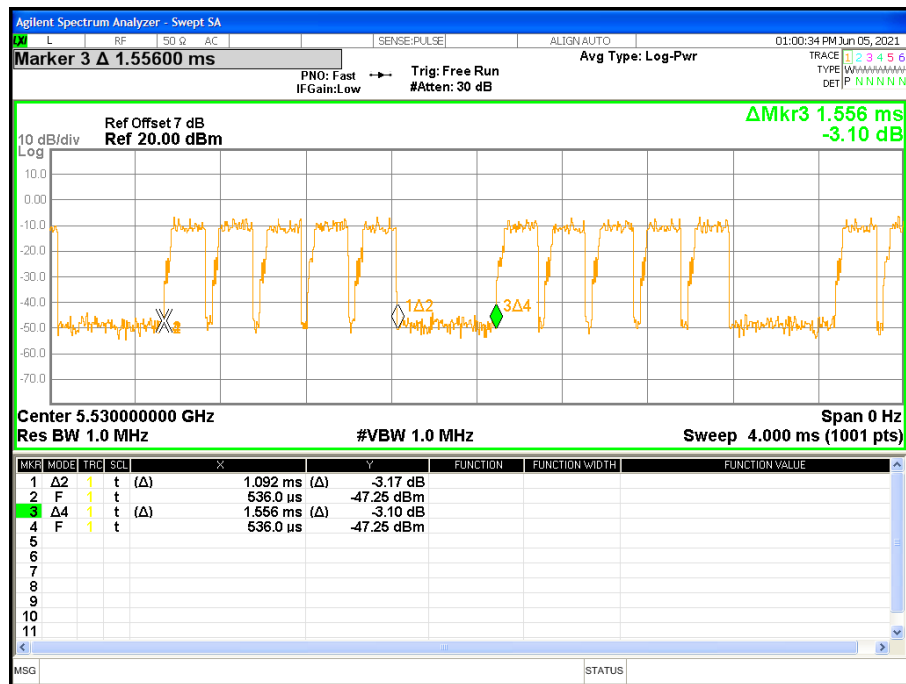
Δ Mkr3 386.0 μ s -1.46 dB

Center 5.51000000 GHz Span 0 Hz

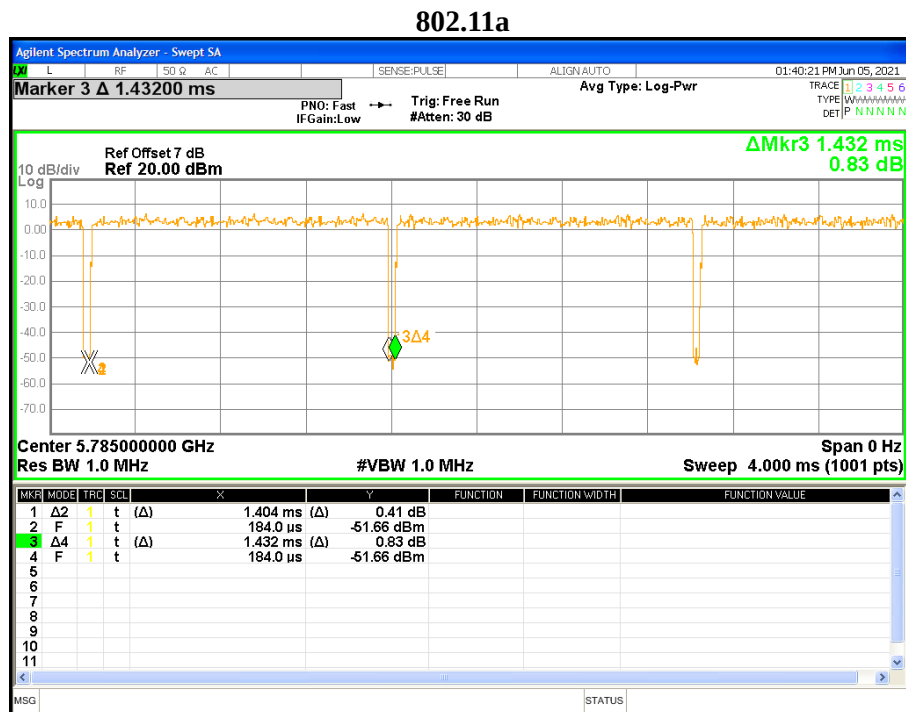
Res BW 1.0 MHz #VBW 1.0 MHz

Sweep 1.000 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ 2	1	t	(Δ)	356.0 μ s	(Δ)	1.87 dB	
2	F	1	t		186.0 μ s		-55.19 dBm	
3	Δ 4	1	t	(Δ)	386.0 μ s	(Δ)	-1.46 dB	
4	F	1	t		186.0 μ s		-55.19 dBm	



Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	10log(1/x)Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a	1.404	1.432	0.980	98.04%	0.086	0.712
802.11N20(MHz)	1.312	1.336	0.982	98.20%	0.079	0.762
802.11AC20(MHz)	0.684	0.714	0.958	95.80%	0.186	1.462
802.11N40(MHz)	0.658	0.684	0.962	96.20%	0.168	1.520
802.11AC40(MHz)	0.358	0.385	0.930	92.99%	0.316	2.793
802.11AC80(MHz)	1.088	1.576	0.690	69.04%	1.609	0.919



Agilent Spectrum Analyzer - Screenshot

Agilent Spectrum Analyzer - Screenshot

Marker 3 Δ 1.3360 ms

Ref Offset 7 dB
Ref 20.00 dBm

10 dB/div
Log

Center 5.785000000 GHz
Res BW 1.0 MHz

Span 0 Hz
Sweep 4.000 ms (1001 pts)

Marker 3 Δ 1.336 ms
4.30 dB

MARK	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ 2	1	t	(Δ)	1.312 ms	(Δ)	2.78 dB	
2	F	1	t		580.0 us		-53.64 dBm	
3	Δ 4	1	t	(Δ)	1.336 ms	(Δ)	4.30 dB	
4	F	1	t		580.0 us		-53.64 dBm	

Agilent Spectrum Analyzer - Swept SA

Marker 3 Δ 714.000 μs

PNO: Fast IFGain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr

Ref Offset 7 dB Ref 20.00 dBm

ΔMkr3 714.0 μs
-0.05 dB

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	AZ	t	(Δ)	684.0 μs	-2.97 dB			
2	F	t		232.0 μs	-52.82 dBm			
3	Δ4	t	(Δ)	714.0 μs	-0.05 dB			
4	F	t		232.0 μs	-52.82 dBm			

Agilent Spectrum Analyzer - Swept SA

Marker 3 Δ 684.000 μ s

PNO: Fast IFGain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr

Ref Offset 7 dB Ref 20.00 dBm

Δ Mkr3 684.0 μ s 2.25 dB

Center 5.755000000 GHz Span 0 Hz Res BW 1.0 MHz #VBW 1.0 MHz Sweep 2.000 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ 2	1	t	(Δ)	658.0 μ s	(Δ)	0.60 dB	
2	F	1	t		76.00 μ s		-52.75 dBm	
3	Δ 4	1	t	(Δ)	684.0 μ s	(Δ)	2.25 dB	
4	F	1	t		76.00 μ s		-52.75 dBm	

Agilent Spectrum Analyzer - Swept SA

Marker 3 Δ 385.000 μs

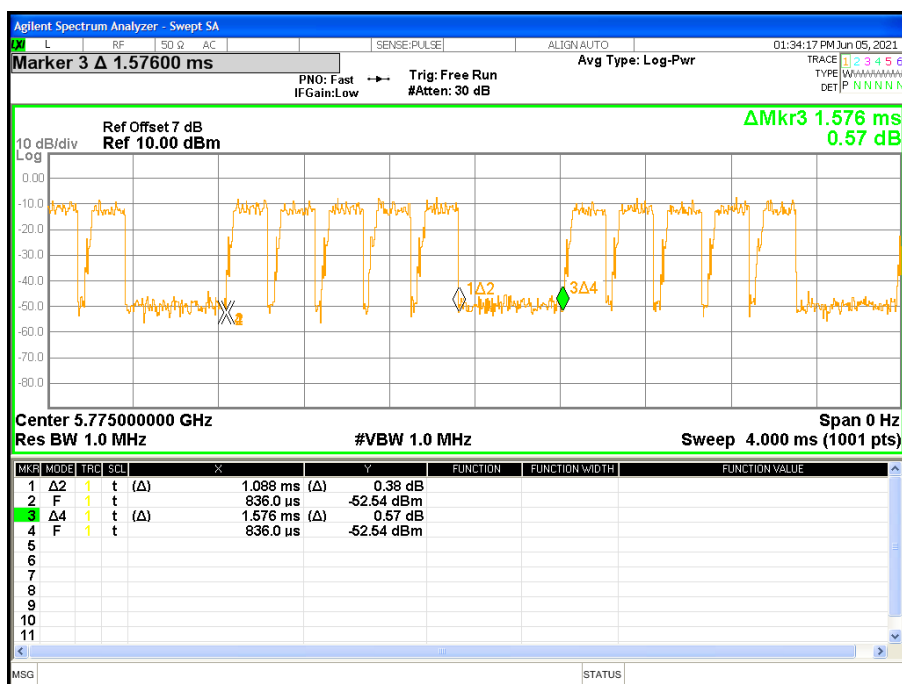
PNO: Fast IFGain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr

Ref Offset 7 dB Ref 20.00 dBm

ΔMkr3 385.0 μs
-1.07 dB

The figure shows a spectrum analyzer screen with a frequency range from 5.750 GHz to 5.760 GHz. The center frequency is set to 5.755000000 GHz. The resolution bandwidth (Res BW) is 1.0 MHz. The sweep time is 1.000 ms (1001 pts). The trace shows a noisy signal with a peak at 385.0 μs. The peak is labeled with a value of -1.07 dB. The reference level is 20.00 dBm. The offset is 7 dB. The marker is labeled ΔMkr3.

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	1	t	(Δ)	358.0 us	(Δ)	0.18 dB	
2	F	1	t		137.0 us		-52.83 dBm	
3	Δ4	1	t	(Δ)	385.0 us	(Δ)	-1.07 dB	
4	F	1	t		137.0 us		-52.83 dBm	

[illegible]

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150kHz-30MHz)

FREQUENCY (MHz)	Class B (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	56.00	46.00	
5.0 -30.0	60.00	50.00	

0.15 -0.5	66 - 56 *	56 - 46 *	Section 15.407 (b)
0.50 -5.0	56.00	46.00	
5.0 -30.0	60.00	50.00	

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

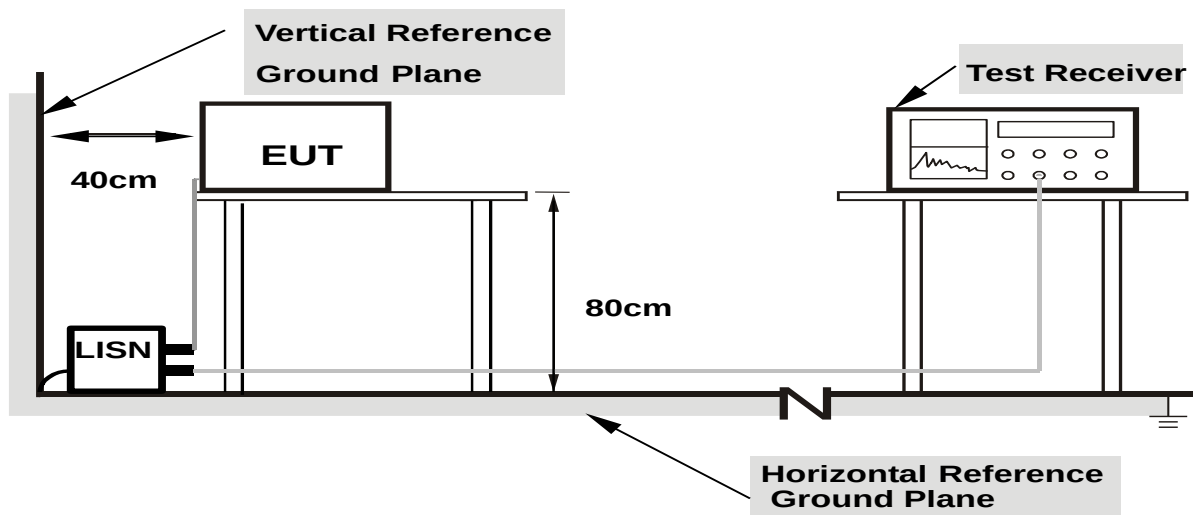
3.1.2 TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP

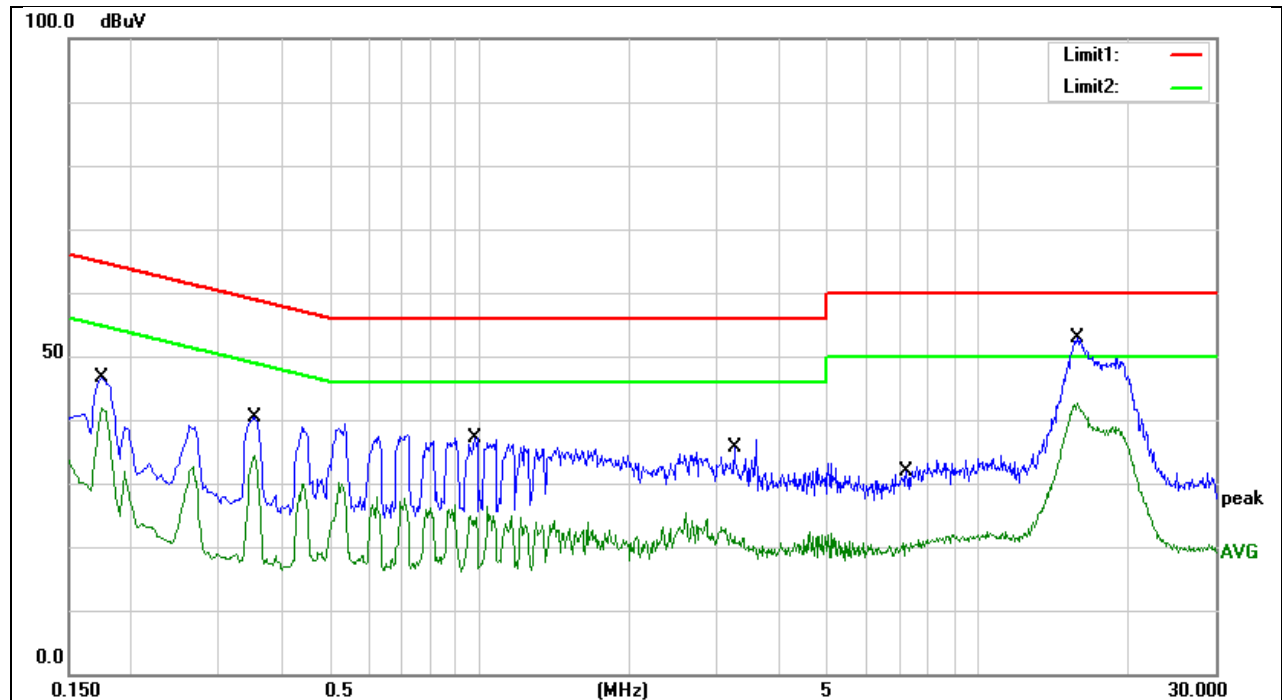


Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 TEST RESULTS

EUT :	Projector	Model Name. :	XM03A
Temperature :	26.0 °C	Relative Humidity :	59%
Pressure :	1010hPa	Test Date :	2021-06-03
Test Mode :	TX(802.11n20 CH149 worst case)	Phase :	L
Test Voltage :	AC 110V/60Hz		

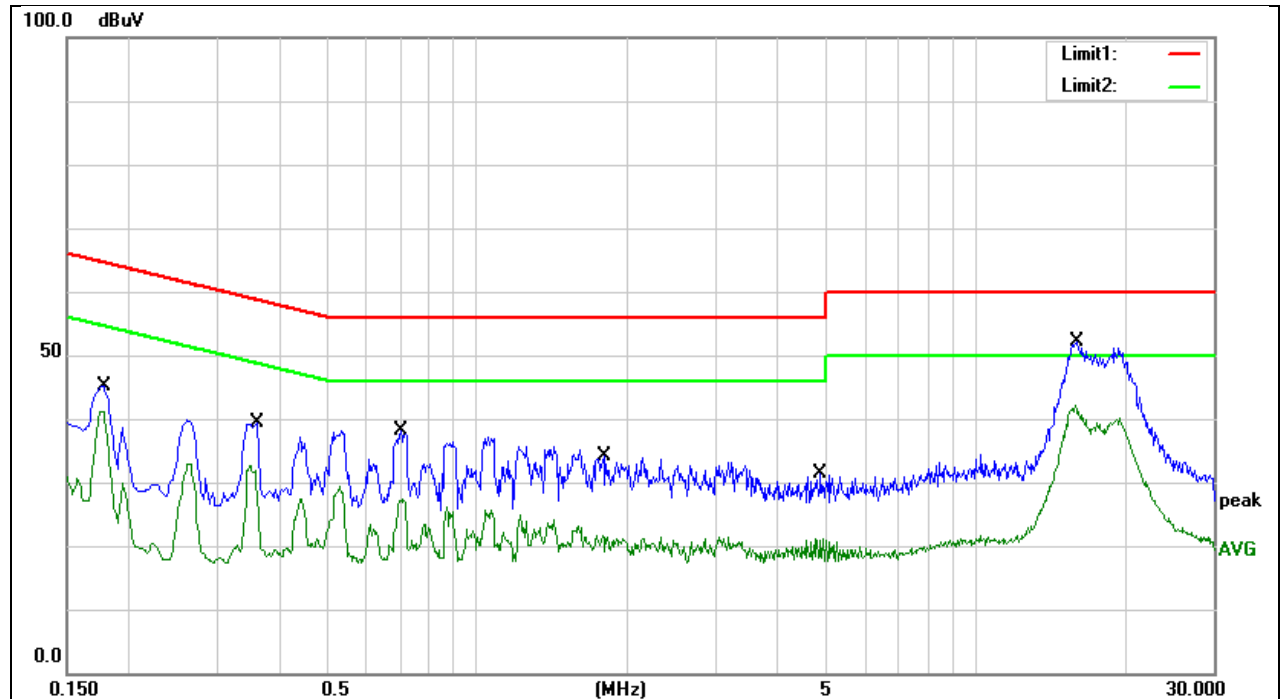


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss + Pulse limiter.

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1748	26.22	20.33	46.55	64.73	-18.18	QP
2	0.1748	21.28	20.33	41.61	54.73	-13.12	AVG
3	0.3540	19.82	20.64	40.46	58.87	-18.41	QP
4	0.3540	12.85	20.64	33.49	48.87	-15.38	AVG
5	0.9820	16.93	20.30	37.23	56.00	-18.77	QP
6	0.9820	3.35	20.30	23.65	46.00	-22.35	AVG
7	3.2500	15.27	20.36	35.63	56.00	-20.37	QP
8	3.2500	0.20	20.36	20.56	46.00	-25.44	AVG
9	7.1940	11.15	20.62	31.77	60.00	-28.23	QP
10	7.1940	-0.81	20.62	19.81	50.00	-30.19	AVG
11	15.8100	30.92	21.92	52.84	60.00	-7.16	QP
12	15.8100	20.65	21.92	42.57	50.00	-7.43	AVG

EUT :	Projector	Model Name. :	XM03A
Temperature :	26.0 °C	Relative Humidity :	59%
Pressure :	1010hPa	Test Date :	2021-06-03
Test Mode :	TX(802.11n20 CH149 worst case)	Phase :	N
Test Voltage :	AC 110V/60Hz		



Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss + Pulse limiter.

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1780	24.93	20.31	45.24	64.58	-19.34	QP
2	0.1780	19.65	20.31	39.96	54.58	-14.62	AVG
3	0.3620	18.70	20.62	39.32	58.68	-19.36	QP
4	0.3620	9.52	20.62	30.14	48.68	-18.54	AVG
5	0.7020	17.88	20.35	38.23	56.00	-17.77	QP
6	0.7020	6.45	20.35	26.80	46.00	-19.20	AVG
7	1.7940	13.75	20.30	34.05	56.00	-21.95	QP
8	1.7940	0.85	20.30	21.15	46.00	-24.85	AVG
9	4.8780	10.88	20.45	31.33	56.00	-24.67	QP
10	4.8780	0.34	20.45	20.79	46.00	-25.21	AVG
11	15.9380	30.29	21.95	52.24	60.00	-7.76	QP
12	15.9380	20.15	21.95	42.10	50.00	-7.90	AVG

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS

LIMITS OF RADIATED EMISSION MEASUREMENT (Frequency Range 9kHz-1000MHz)

Frequencies (MHz)	Field Strength (micровolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)
0.090 ~ 0.110	1660.0 ~ 1785.0
0.490 ~ 0.510	1805.0 ~ 1880.0
2.172 ~ 2.198	1885.0 ~ 1900.0
3.013 ~ 3.033	1905.0 ~ 1985.0
4.115 ~ 4.198	2010.0 ~ 2025.0
5.670 ~ 5.690	2110.0 ~ 2170.0
6.200 ~ 6.300	2200.0 ~ 2300.0
8.230 ~ 8.400	2310.0 ~ 2390.0
12.265 ~ 12.600	2483.5 ~ 2900.0
13.340 ~ 13.430	3260.0 ~ 3267.0
14.965 ~ 15.020	3332.0 ~ 3339.0
16.700 ~ 16.755	3345.8 ~ 3358.0
19.965 ~ 20.020	3500.0 ~ 4400.0
25.500 ~ 25.700	4500.0 ~ 5250.0
37.475 ~ 38.275	5350.0 ~ 5460.0
73.500 ~ 75.400	7250.0 ~ 7750.0
6.200 ~ 6.300	2200.0 ~ 2300.0

8.230 ~ 8.400	2310.0 ~ 2390.0
12.265 ~ 12.600	2483.5 ~ 2900.0
13.340 ~ 13.430	3260.0 ~ 3267.0
14.965 ~ 15.020	3332.0 ~ 3339.0
16.700 ~ 16.755	3345.8 ~ 3358.0
19.965 ~ 20.020	3500.0 ~ 4400.0
25.500 ~ 25.700	4500.0 ~ 5250.0
37.475 ~ 38.275	5350.0 ~ 5460.0
73.500 ~ 75.400	7250.0 ~ 7750.0
108.00 ~ 138.00	8025.0 ~ 8500.0
149.90 ~ 150.05	9000.0 ~ 9200.0
156.70 ~ 156.90	9300.0 ~ 9500.0
162.01 ~ 167.17	10600 ~ 12700
167.72 ~ 173.20	13250 ~ 13400
240.00 ~ 285.00	14470 ~ 14500
322.00 ~ 335.40	15350 ~ 16200
399.90 ~ 410.00	17700 ~ 21400
485.00 ~ 510.00	22010 ~ 23120
608.00 ~ 614.00	23600 ~ 24000
703.00 ~ 748.00	31200 ~ 31800
758.00 ~ 803.00	36430 ~ 36500
825.00 ~ 915.00	Above 38600
930.00 ~ 1240.0	
1300.0 ~ 1427.0	
1435.0 ~ 1626.5	

Note: In case the emission radiated emission above 1000MHz fall within the restricted band the restricted frequency bands, the peak limit is 74 dBuV/m.

LIMITS OF EMISSIONS OUTSIDE OF THE FREQUENCY BANDS

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
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.

Note: $\text{dBuV/m(at 3M)} = \text{EIRP(dBm)} + 95.2$.

Peak Limit = $-27\text{dBm/MHz} + 95.2 = 68.2 \text{ dBuV/m}$.

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Frequency measurement range:

1 The spectrum shall be measured from the lowest radio frequency signal generated in the device (without going below 9 kHz), and the upper limit of the measurement range shall be decided according to the maximum operating frequency.

1.1 Maximum operating frequency less than 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

1.2 Maximum operating frequency between 10 GHz~30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

1.3 Maximum operating frequency over 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower.

2 Particular attention should be paid to harmonics and subharmonics of the carrier frequency as well as to those frequencies removed from the carrier by multiples of the oscillator frequency. Radiation at the frequencies of multiplier stages should also be checked.

Spectrum Parameter		Setting	
Attenuation		Auto	
Start Frequency		1000 MHz	
Stop Frequency		10th carrier harmonic	
Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3MHz
AV	≥98%	1MHz	10Hz
	< 98%	1MHz	1/T

NOTE:KDB 558074 Zero-Span Spectrum Analyzer Method

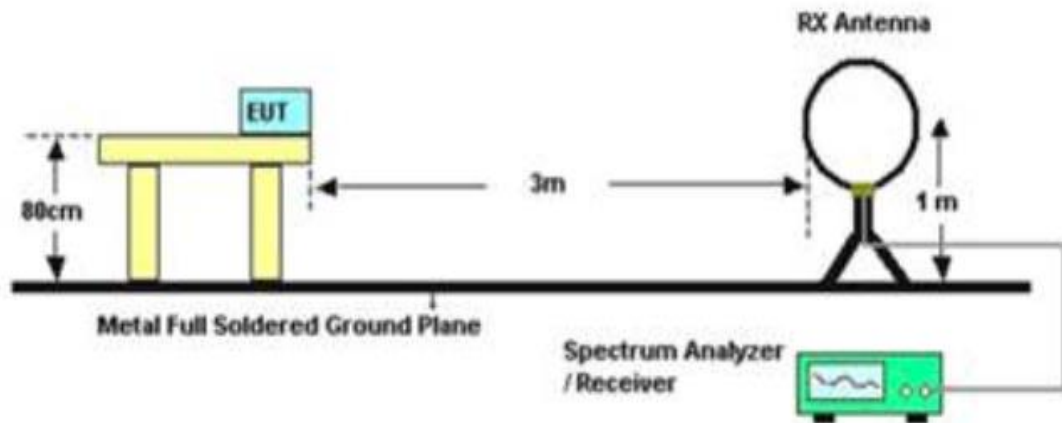
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

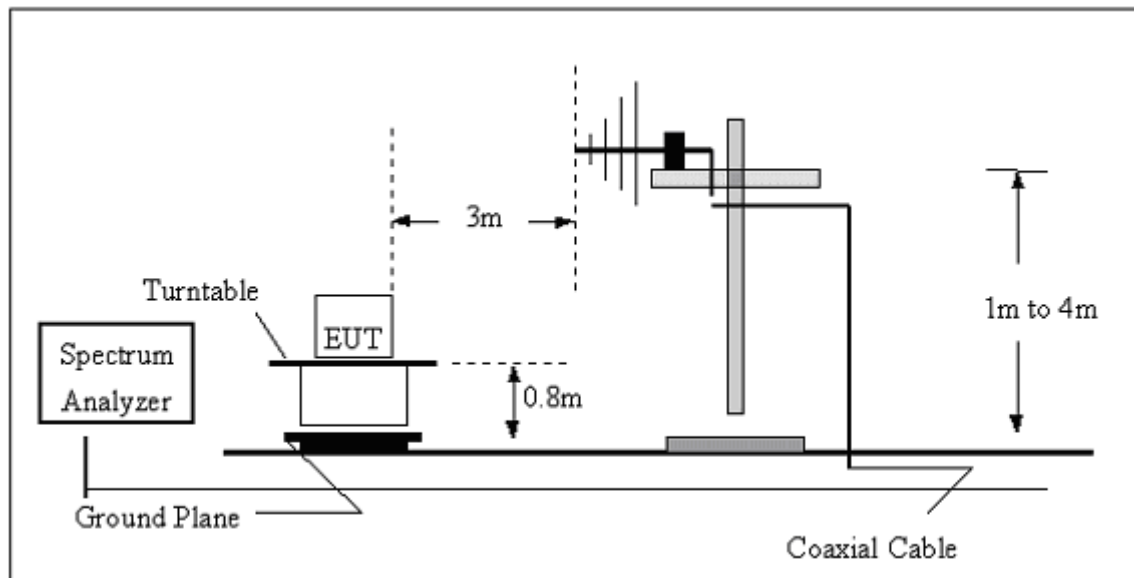
- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the Antenna 1#re set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then QuasiPeak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.2.3 TEST SETUP

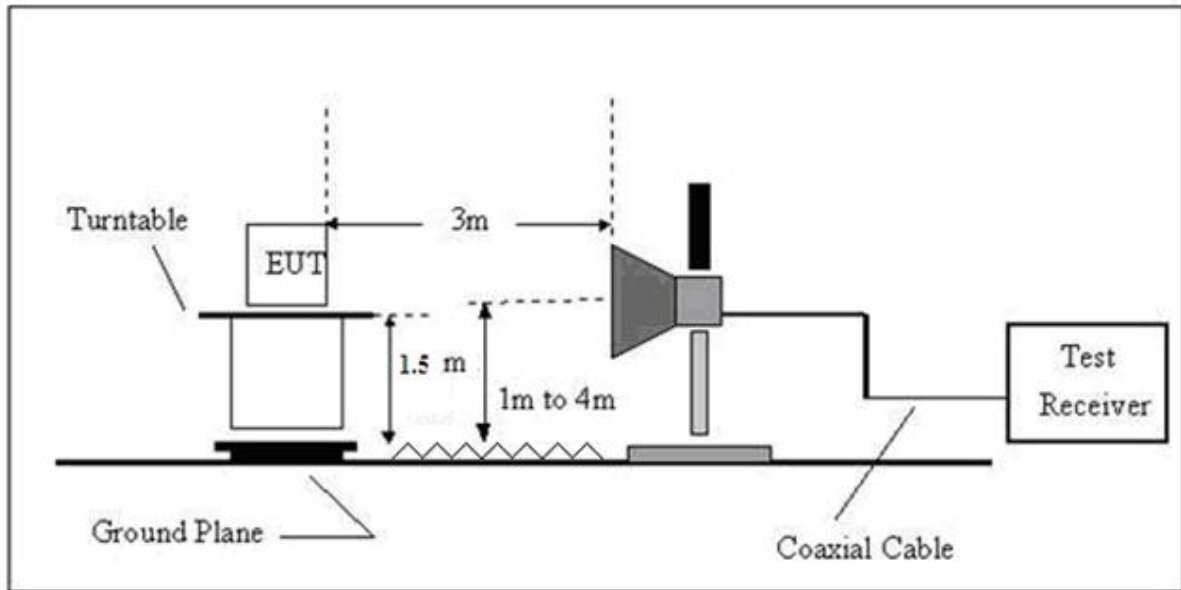
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz

**3.2.4 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.5 TEST RESULTS

Between 9KHz – 30 MHz

EUT :	Projector	Model Name. :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-19
Test Mode :	TX(802.11n20 CH149 worst case)	Polarization:	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	N/A
--	--	--	--	N/A

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

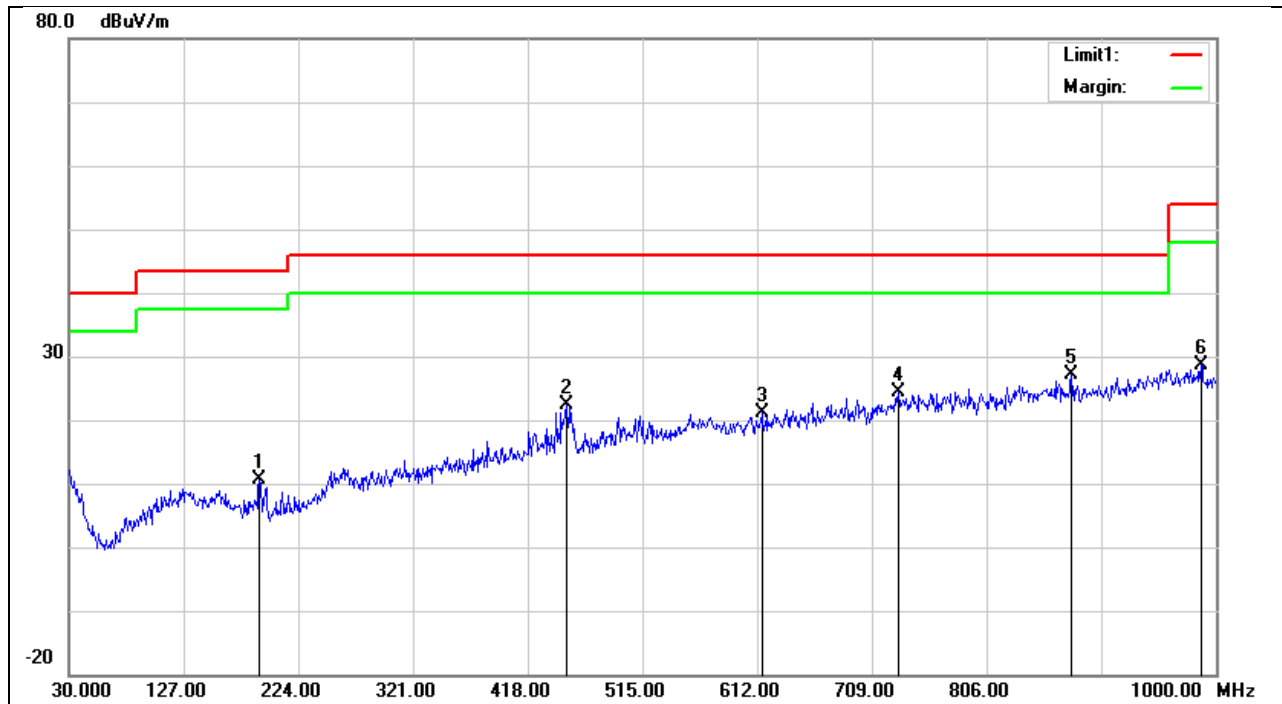
Distance extrapolation factor = $40 \log (\text{specific distance}/\text{test distance})$ (dB);

Limit line = specific limits(dBuV) + distance extrapolation factor.

BETWEEN30 – 1000 MHZ

Note: Pre-scan both the SISO and MIMO mode, only the worst-case results were reported.

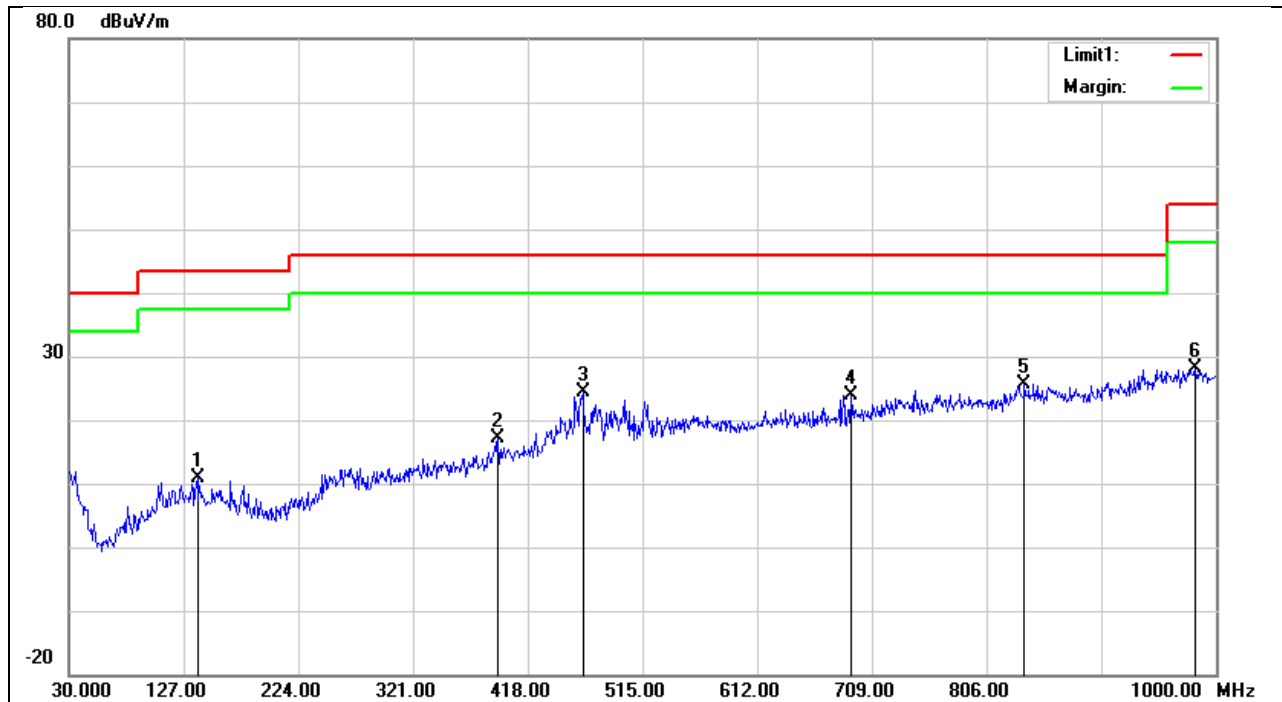
EUT :	Projector	Model Name. :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-19
Test Mode :	TX 802.11n20 CH149/ANT A+B(Worst Case)	Polarization :	Horizontal
Test Power :	AC 110V/60Hz		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	191.0200	31.52	-21.01	10.51	43.50	-32.99	QP
2	450.9800	32.08	-9.65	22.43	46.00	-23.57	QP
3	615.8800	26.55	-5.49	21.06	46.00	-24.94	QP
4	731.3100	26.78	-2.42	24.36	46.00	-21.64	QP
5	877.7800	27.82	-0.63	27.19	46.00	-18.81	QP
6	987.3900	26.39	2.21	28.60	54.00	-25.40	QP

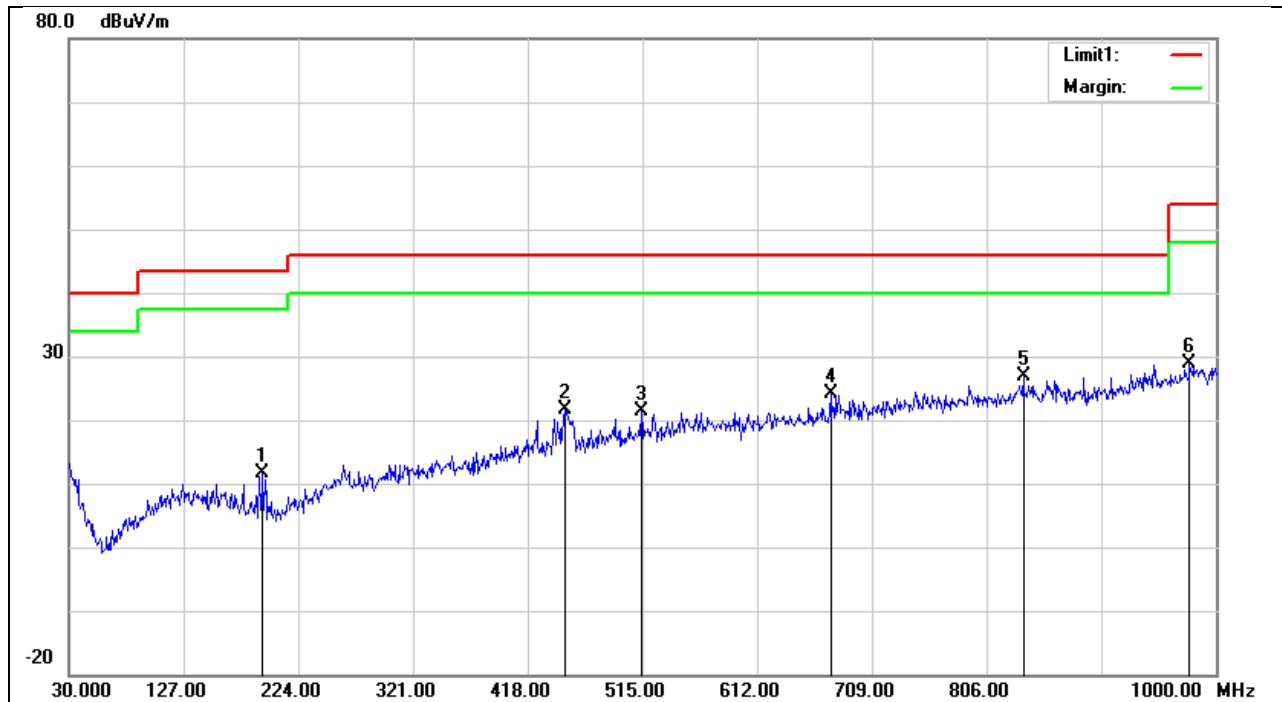
EUT :	Projector	Model Name. :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-19
Test Mode :	TX 802.11n20 CH149ANT A+B(Worst Case)	Polarization :	Vertical
Test Power :	AC 110V/60Hz		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	138.6400	28.83	-18.05	10.78	43.50	-32.72	QP
2	392.7800	28.66	-11.46	17.20	46.00	-28.80	QP
3	464.5600	33.56	-9.25	24.31	46.00	-21.69	QP
4	691.5400	28.28	-4.31	23.97	46.00	-22.03	QP
5	838.0100	26.09	-0.42	25.67	46.00	-20.33	QP
6	982.5400	25.62	2.52	28.14	54.00	-25.86	QP

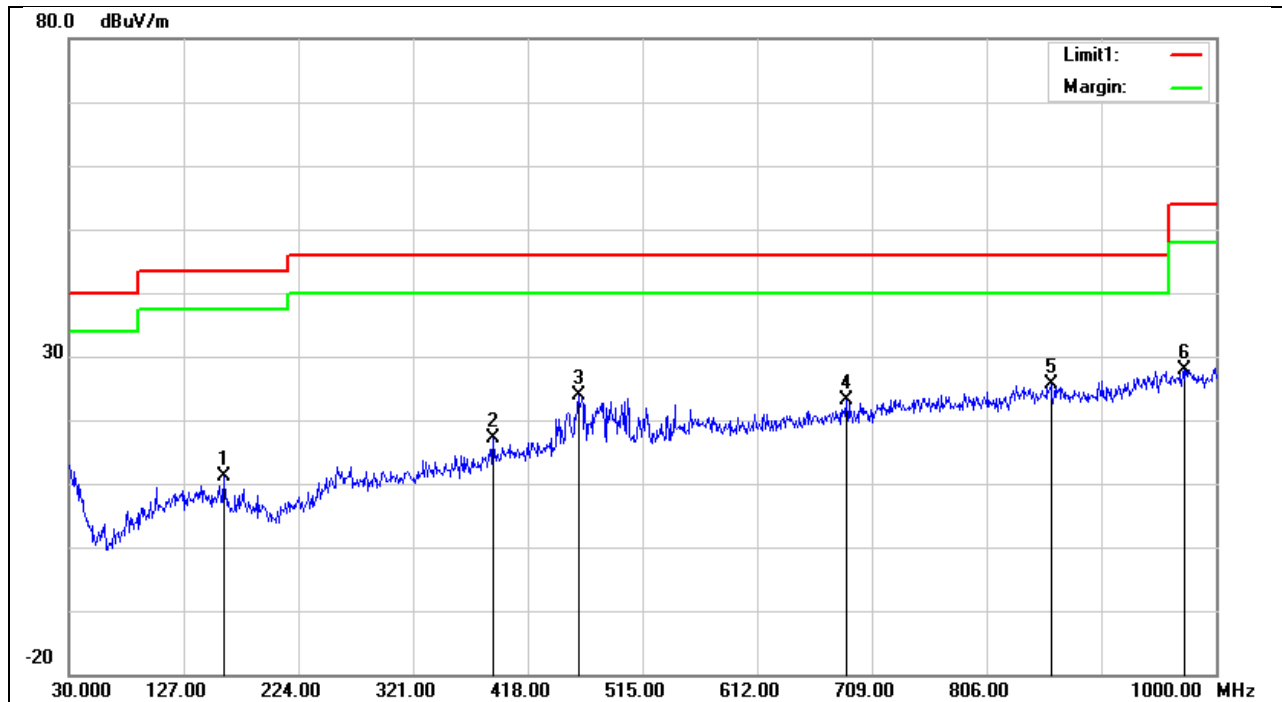
EUT :	Projector	Model Name. :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-19
Test Mode :	RX 802.11n20 CH149/ANT A+B(Worst Case)	Polarization :	Horizontal
Test Power :	AC 110V/60Hz		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	193.9300	32.71	-21.11	11.60	43.50	-31.90	QP
2	450.0100	31.26	-9.67	21.59	46.00	-24.41	QP
3	514.0300	29.20	-7.90	21.30	46.00	-24.70	QP
4	674.0800	28.65	-4.45	24.20	46.00	-21.80	QP
5	837.0400	27.41	-0.46	26.95	46.00	-19.05	QP
6	977.6900	26.47	2.52	28.99	54.00	-25.01	QP

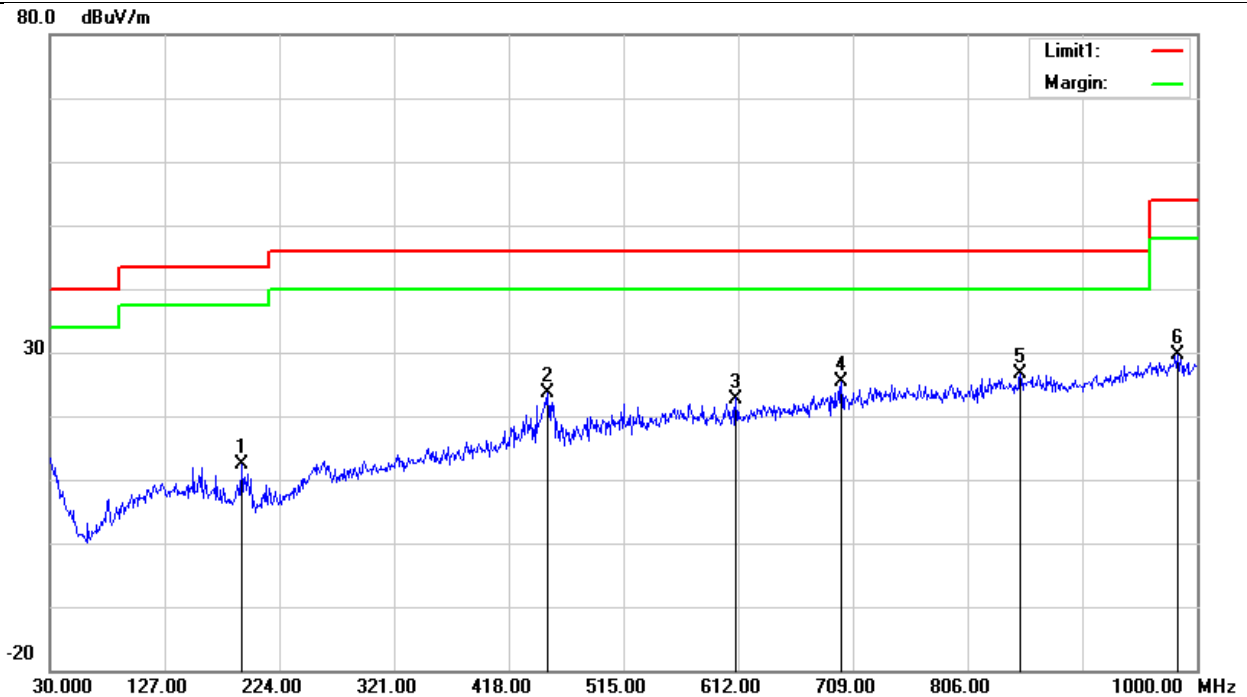
EUT :	Projector	Model Name. :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-19
Test Mode :	RX 802.11n20 CH149/ANT A+B(Worst Case)	Polarization :	Vertical
Test Power :	AC 110V/60Hz		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	160.9500	30.10	-18.91	11.19	43.50	-32.31	QP
2	388.9000	28.83	-11.66	17.17	46.00	-28.83	QP
3	460.6800	33.28	-9.43	23.85	46.00	-22.15	QP
4	687.6600	27.48	-4.32	23.16	46.00	-22.84	QP
5	860.3200	25.99	-0.42	25.57	46.00	-20.43	QP
6	972.8400	25.80	2.19	27.99	54.00	-26.01	QP

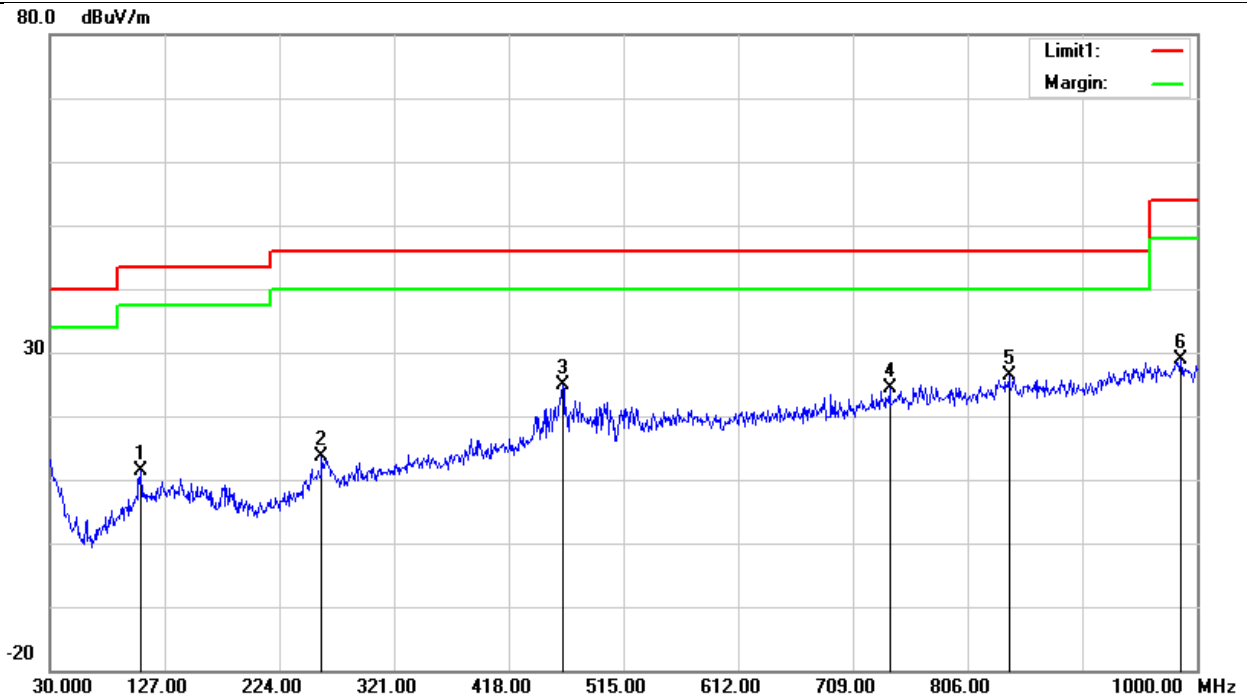
EUT :	Projector	Model Name. :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-19
Test Mode :	Working	Polarization :	Horizontal
Test Power :	AC 110V/60Hz		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	191.9900	33.51	-21.04	12.47	43.50	-31.03	QP
2	450.9800	33.32	-9.65	23.67	46.00	-22.33	QP
3	610.0600	28.25	-5.50	22.75	46.00	-23.25	QP
4	699.3000	29.47	-4.18	25.29	46.00	-20.71	QP
5	850.6200	27.39	-0.73	26.66	46.00	-19.34	QP
6	983.5100	27.28	2.46	29.74	54.00	-24.26	QP

EUT :	Projector	Model Name. :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-19
Test Mode :	Working	Polarization :	Vertical
Test Power :	AC 110V/60Hz		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	106.6300	30.78	-19.42	11.36	43.50	-32.14	QP
2	259.8900	28.41	-14.79	13.62	46.00	-32.38	QP
3	463.5900	34.17	-9.29	24.88	46.00	-21.12	QP
4	740.0400	26.49	-2.11	24.38	46.00	-21.62	QP
5	840.9200	26.69	-0.38	26.31	46.00	-19.69	QP
6	986.4200	26.64	2.27	28.91	54.00	-25.09	QP

3.2.5 TEST RESULTS (ABOVE 1000 MHZ)

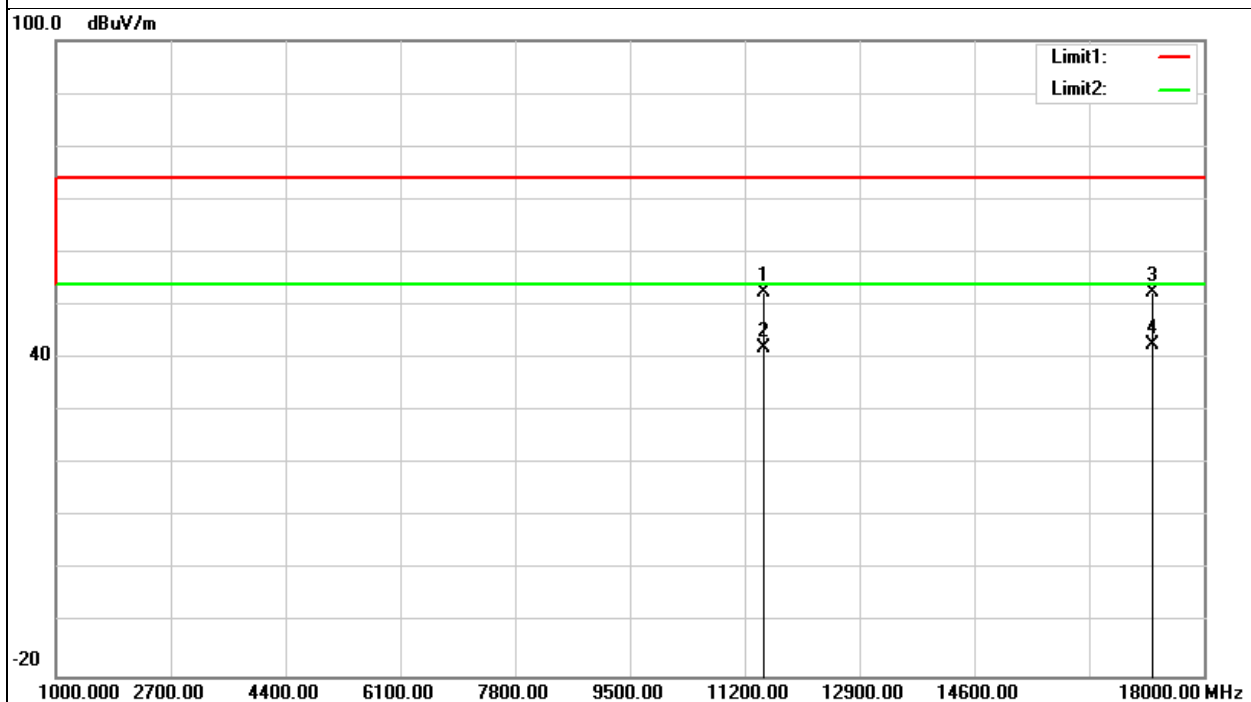
Note: Pre-scan both the SISO and MIMO mode, only the worst-case results were reported

5150MHz~5250MHz:

EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH36 802.11n20/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10366.000	48.41	4.54	52.95	74.00	-21.05	peak
10366.000	37.71	4.54	42.25	54.00	-11.75	AVG
15548.000	43.22	9.42	52.64	74.00	-21.36	peak
15548.000	32.73	9.42	42.15	54.00	-11.85	AVG

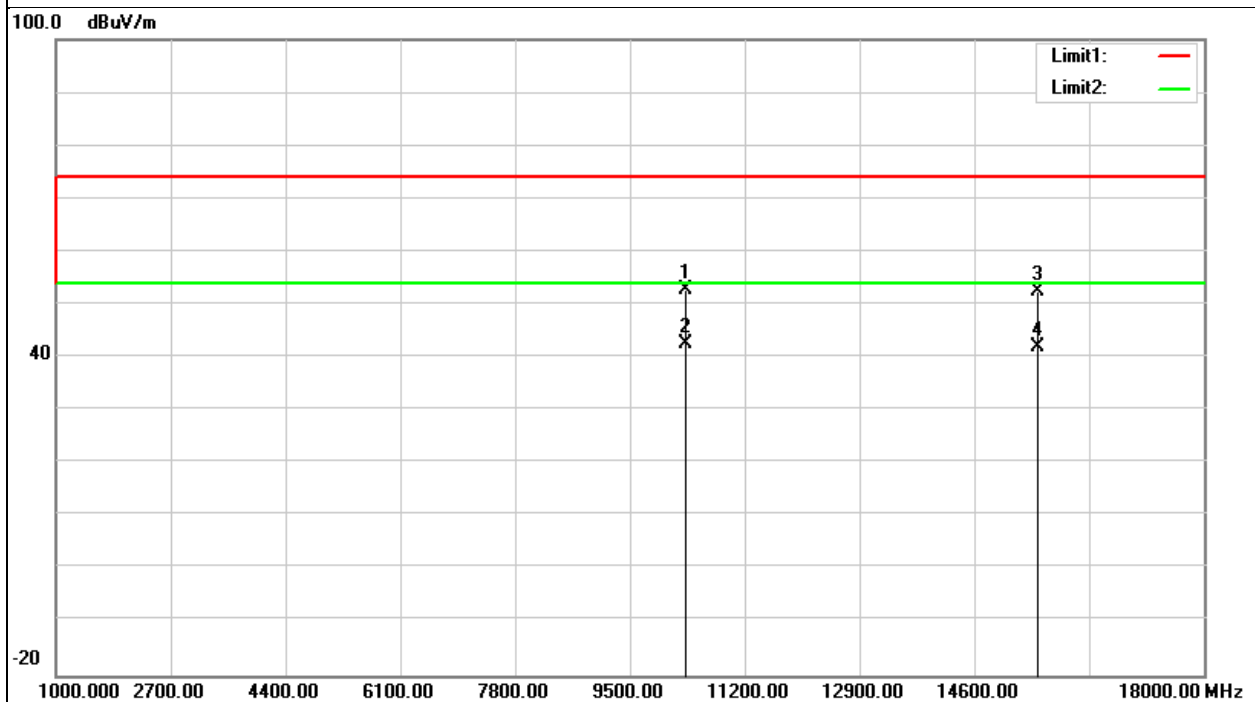
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH36 802.11n20/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frequency Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10326.000	48.38	4.41	52.79	74.00	-21.21	peak
10326.000	38.10	4.41	42.51	54.00	-11.49	AVG
15548.000	43.17	9.42	52.59	74.00	-21.41	peak
15548.000	32.60	9.42	42.02	54.00	-11.98	AVG

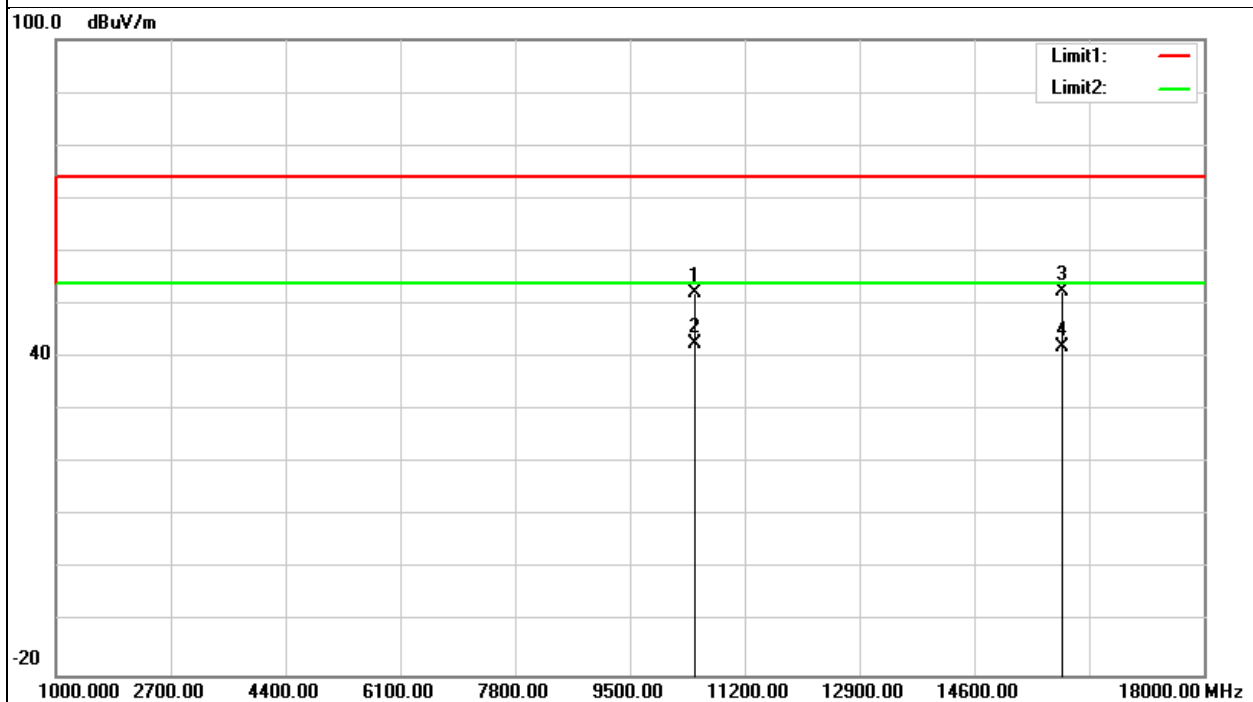
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH40 802.11n20/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10465.000	47.35	4.86	52.21	74.00	-21.79	peak
10465.000	37.76	4.86	42.62	54.00	-11.38	AVG
15894.000	45.05	7.29	52.34	74.00	-21.66	peak
15894.000	34.73	7.29	42.02	54.00	-11.98	AVG

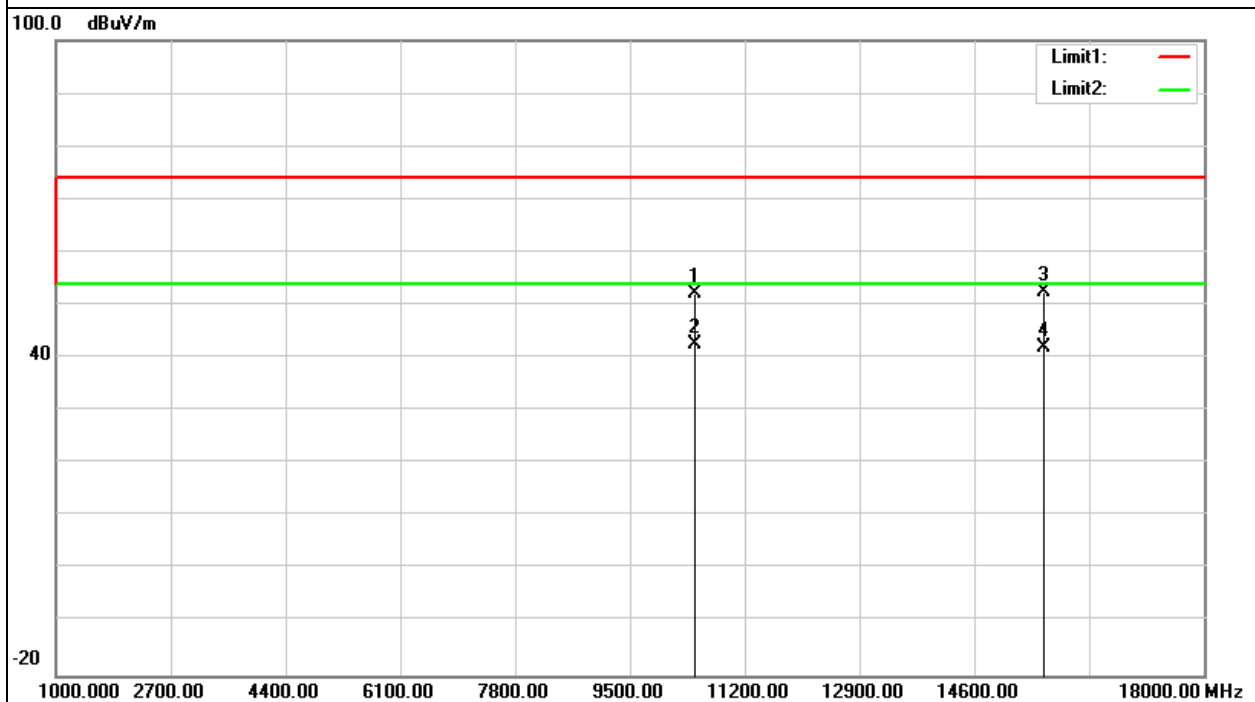
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH40 802.11n20/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10455.000	47.37	4.83	52.20	74.00	-21.80	peak
10455.000	37.75	4.83	42.58	54.00	-11.42	AVG
15621.000	43.52	8.97	52.49	74.00	-21.51	peak
15621.000	33.13	8.97	42.10	54.00	-11.90	AVG

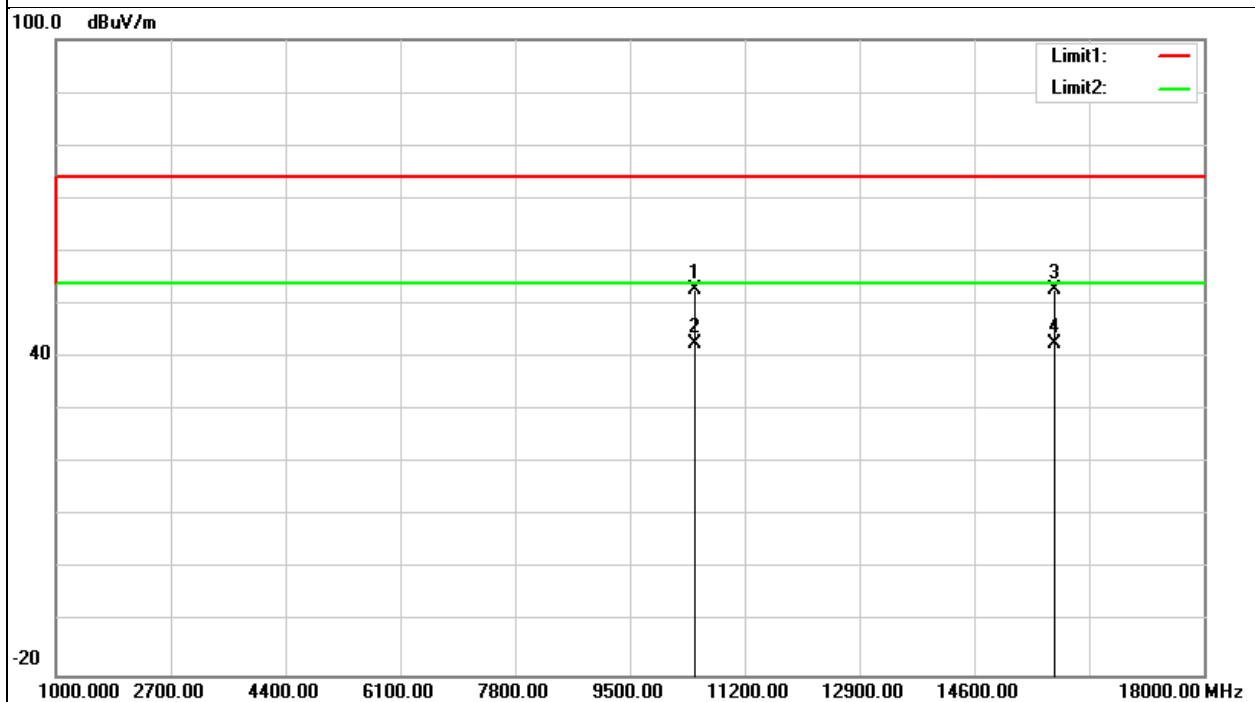
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH48 802.11n20/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10469.000	47.85	4.87	52.72	74.00	-21.28	peak
10469.000	37.64	4.87	42.51	54.00	-11.49	AVG
15784.000	44.66	7.97	52.63	74.00	-21.37	peak
15784.000	34.59	7.97	42.56	54.00	-11.44	AVG

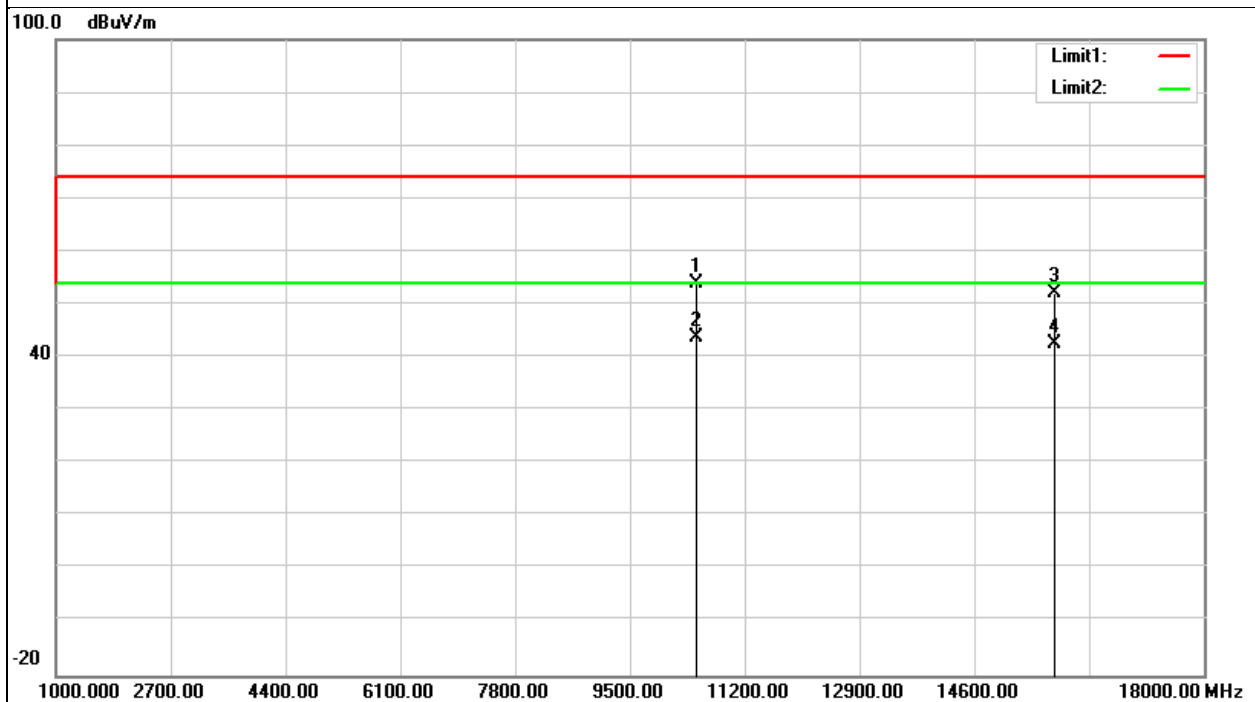
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH48 802.11n20/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10489.000	48.93	4.93	53.86	74.00	-20.14	peak
10489.000	38.69	4.93	43.62	54.00	-10.38	AVG
15784.000	44.21	7.97	52.18	74.00	-21.82	peak
15784.000	34.62	7.97	42.59	54.00	-11.41	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

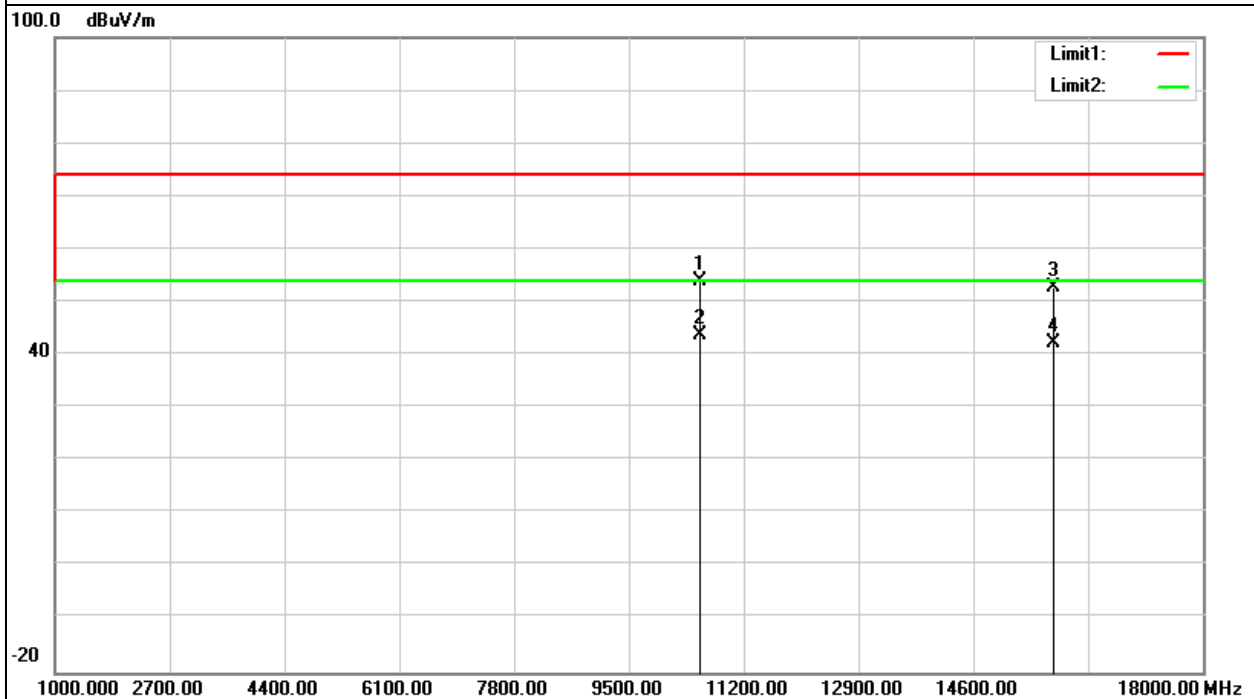


5250MHz~5350MHz:

EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH52 802.11n20/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10562.000	48.76	5.14	53.90	74.00	-20.10	peak
10562.000	38.48	5.14	43.62	54.00	-10.38	AVG
15796.000	44.75	7.89	52.64	74.00	-21.36	peak
15796.000	34.26	7.89	42.15	54.00	-11.85	AVG

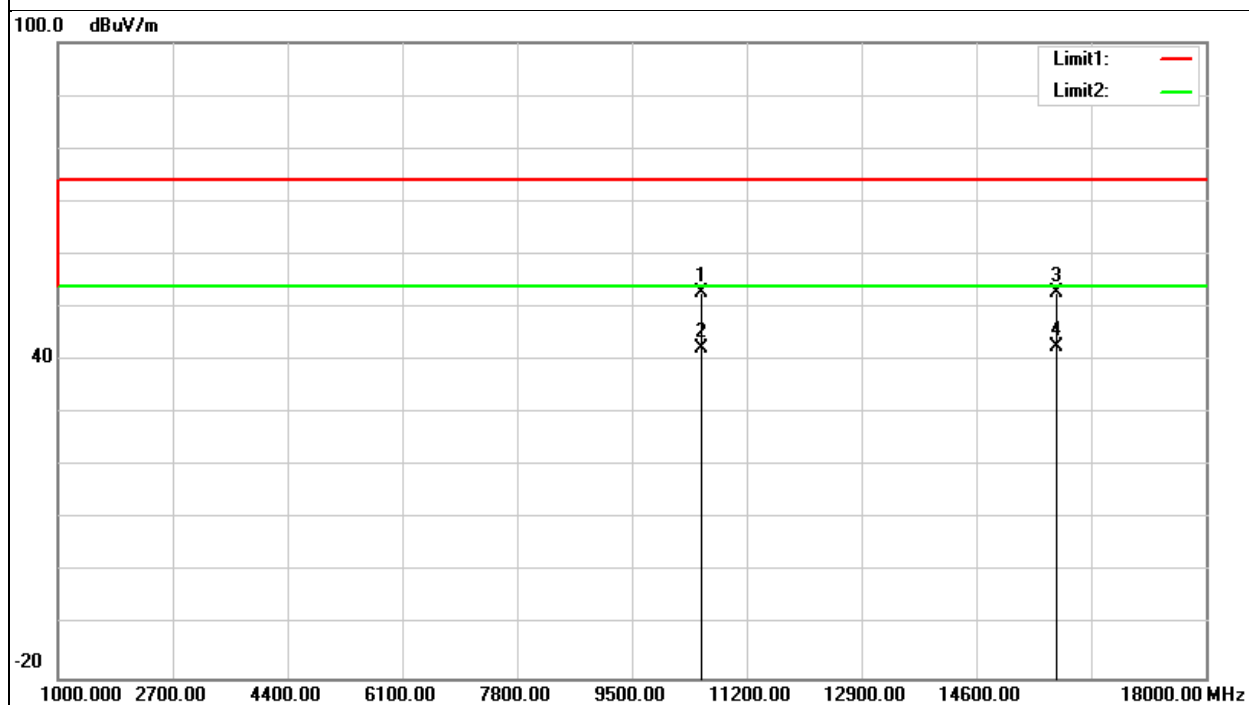
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH52 802.11n20/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frequency Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10522.000	47.59	5.03	52.62	74.00	-21.38	peak
10522.000	37.22	5.03	42.25	54.00	-11.75	AVG
15798.000	44.75	7.89	52.64	74.00	-21.36	peak
15798.000	34.74	7.89	42.63	54.00	-11.37	AVG

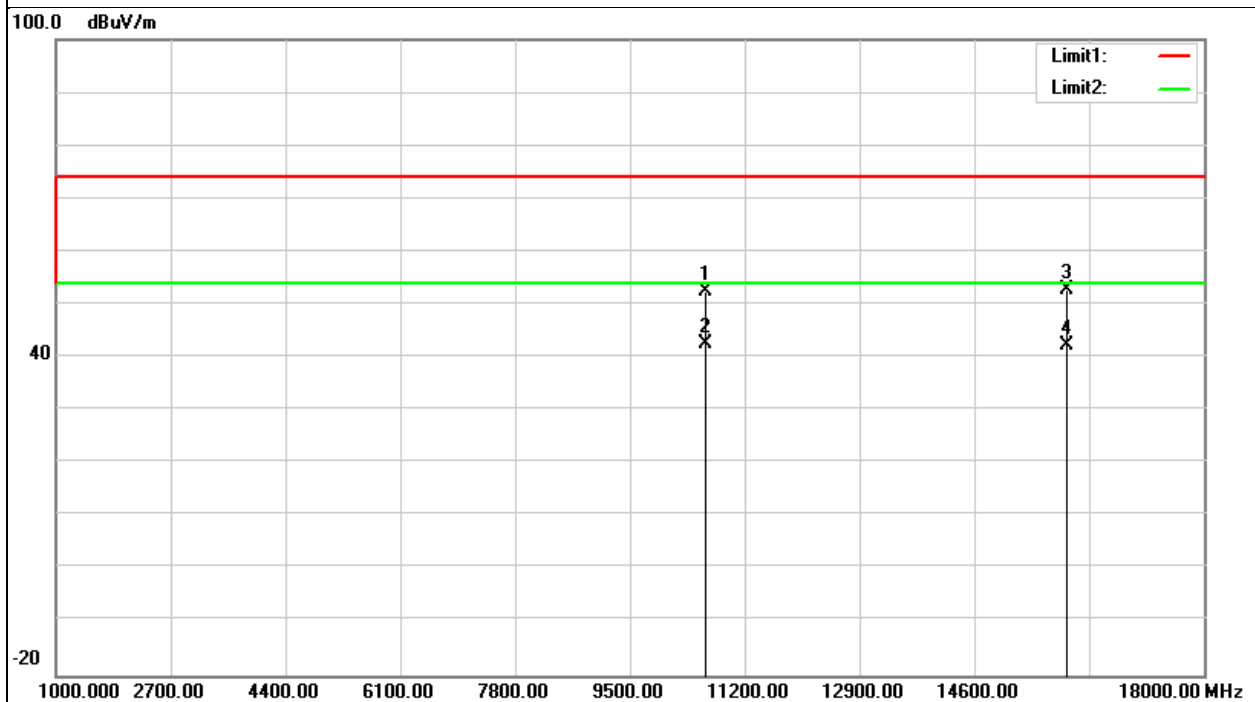
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH60 802.11n20/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dB μ V)	Factor (dB)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector Type
10633.000	47.04	5.32	52.36	74.00	-21.64	peak
10633.000	37.27	5.32	42.59	54.00	-11.41	AVG
15961.000	45.96	6.88	52.84	74.00	-21.16	peak
15961.000	35.27	6.88	42.15	54.00	-11.85	AVG

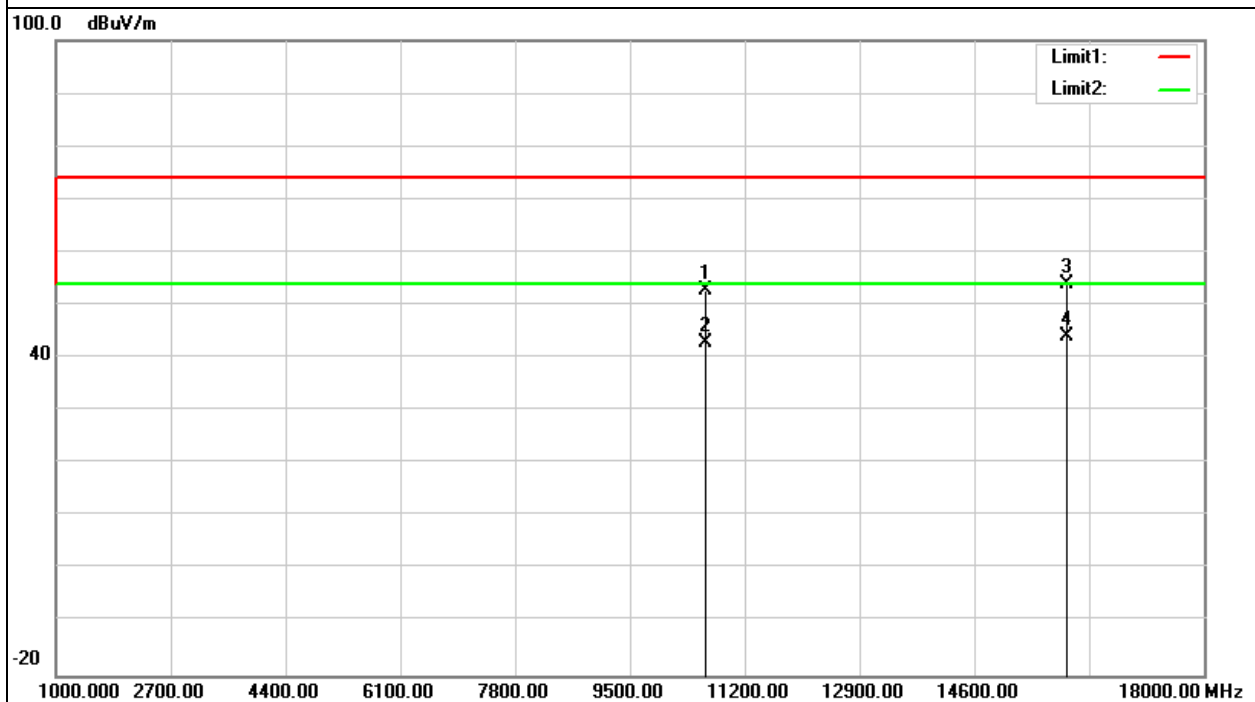
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH60 802.11n20/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10621.000	47.35	5.29	52.64	74.00	-21.36	peak
10621.000	37.56	5.29	42.85	54.00	-11.15	AVG
15963.000	47.04	6.86	53.90	74.00	-20.10	peak
15963.000	37.11	6.86	43.97	54.00	-10.03	AVG

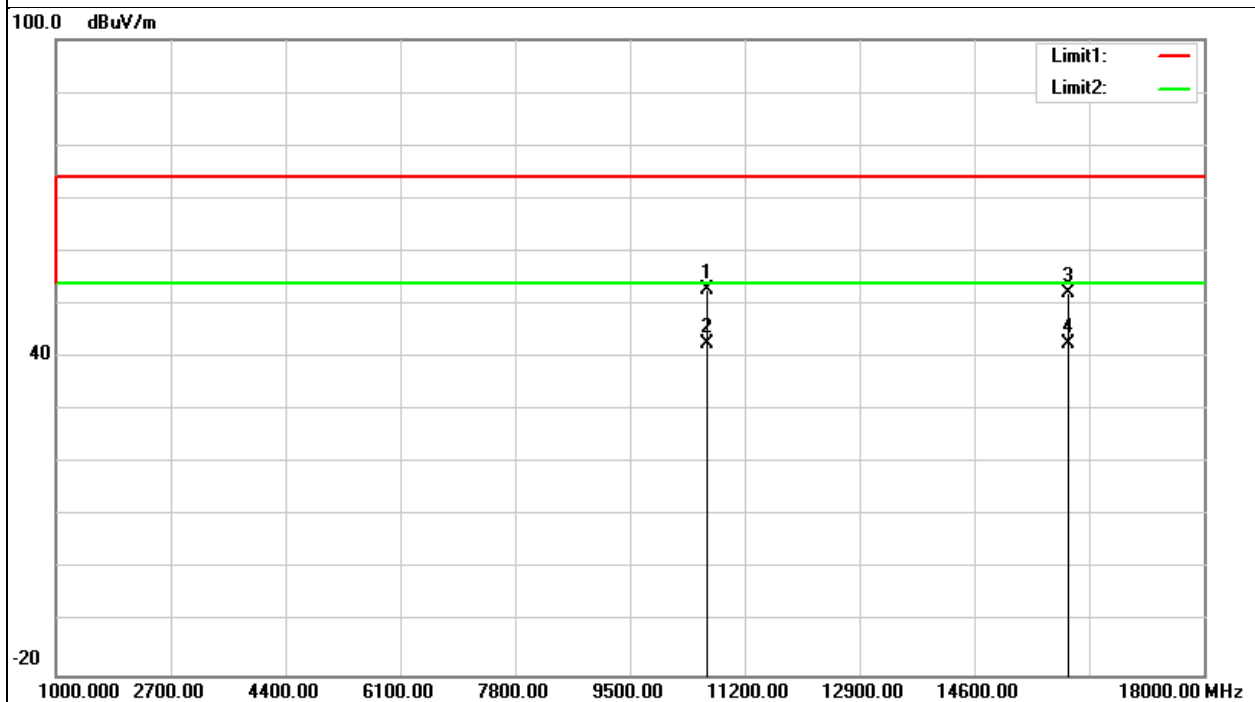
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH64 802.11n20/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10648.000	47.34	5.36	52.70	74.00	-21.30	peak
10648.000	37.12	5.36	42.48	54.00	-11.52	AVG
15987.000	45.47	6.72	52.19	74.00	-21.81	peak
15987.000	35.92	6.72	42.64	54.00	-11.36	AVG

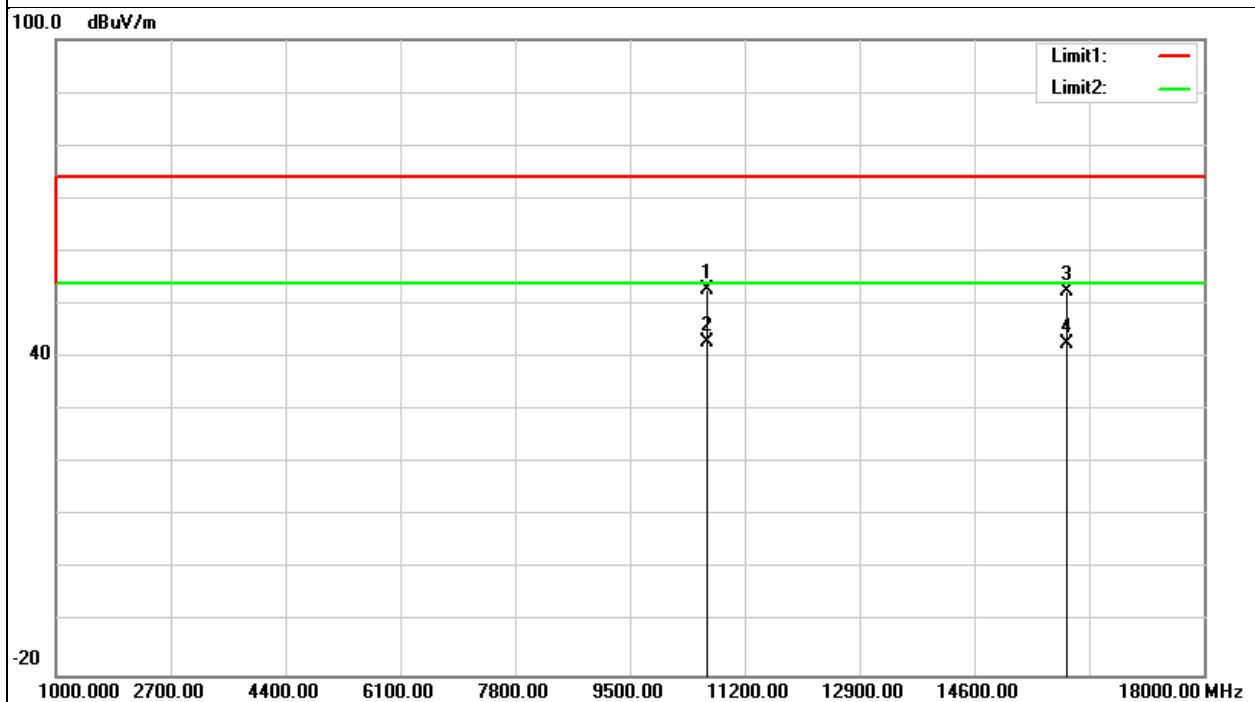
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH64 802.11n20/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10655.000	47.26	5.38	52.64	74.00	-21.36	peak
10655.000	37.59	5.38	42.97	54.00	-11.03	AVG
15966.000	45.51	6.85	52.36	74.00	-21.64	peak
15966.000	35.74	6.85	42.59	54.00	-11.41	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

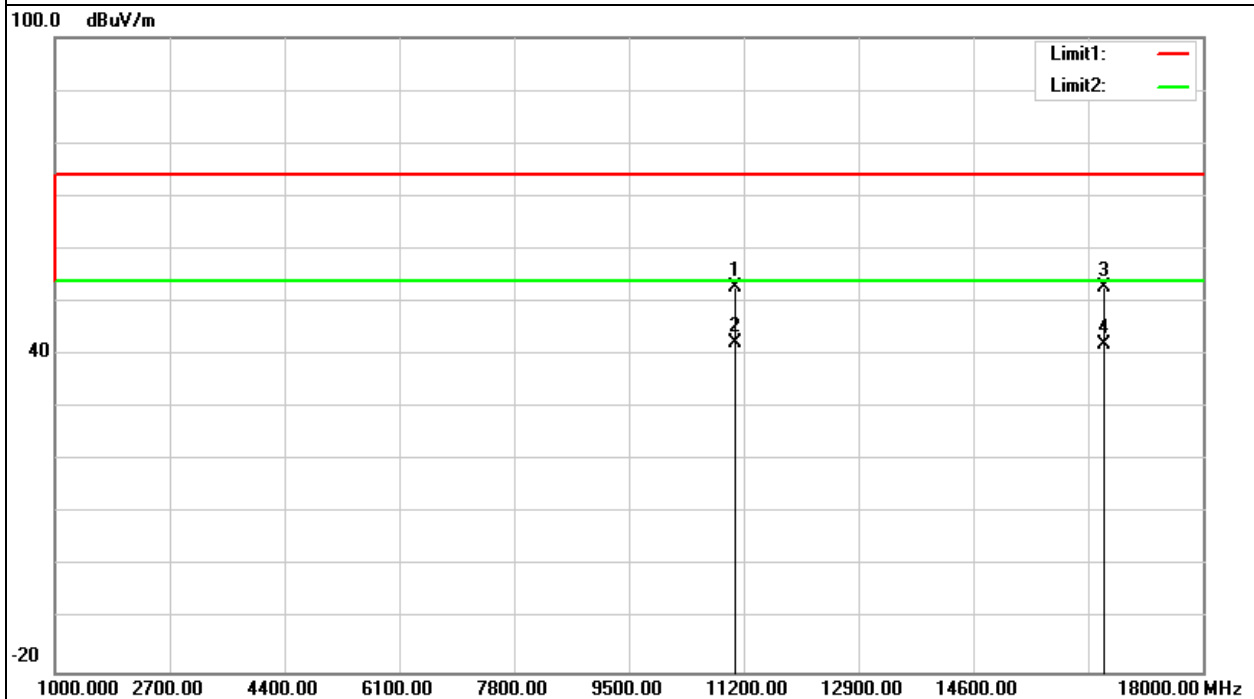


5470MHz~5725MHz:

EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH102 802.11n40/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11065.000	46.31	6.30	52.61	74.00	-21.39	peak
11065.000	36.04	6.30	42.34	54.00	-11.66	AVG
16548.000	43.31	9.34	52.65	74.00	-21.35	peak
16548.000	32.71	9.34	42.05	54.00	-11.95	AVG

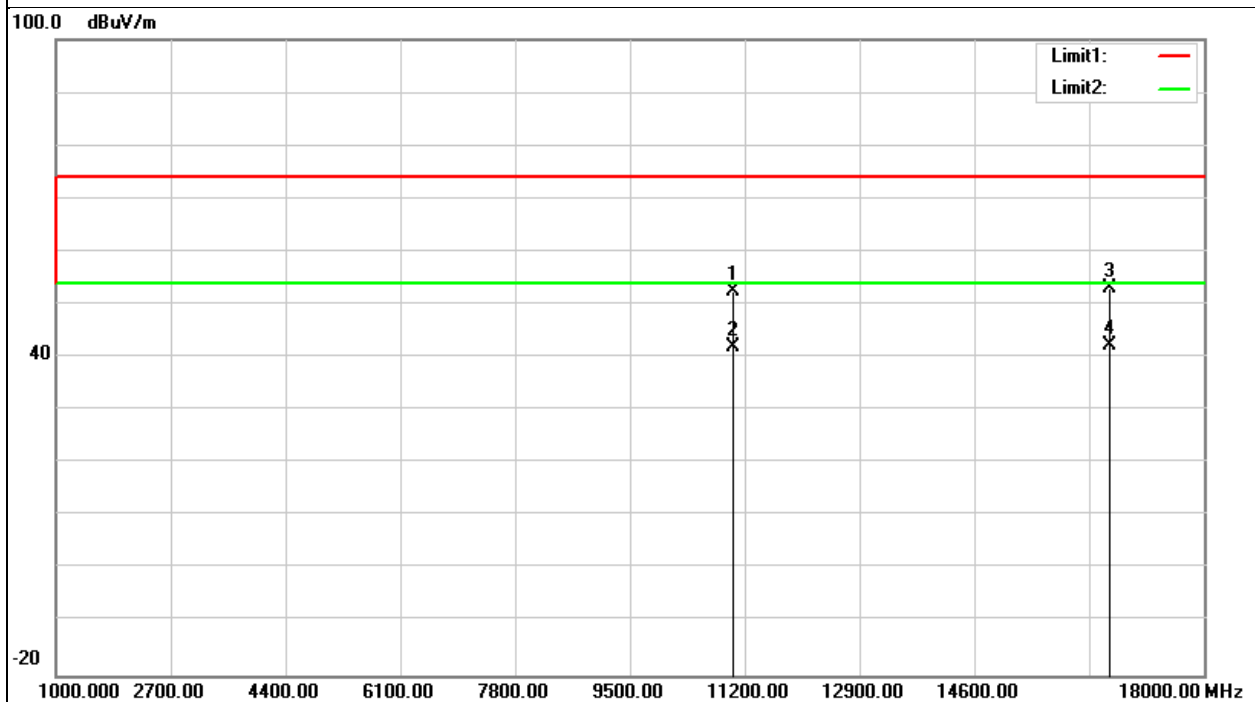
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH102 802.11n40/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11023.000	46.04	6.30	52.34	74.00	-21.66	peak
11023.000	35.75	6.30	42.05	54.00	-11.95	AVG
16596.000	43.58	9.39	52.97	74.00	-21.03	peak
16596.000	32.76	9.39	42.15	54.00	-11.85	AVG

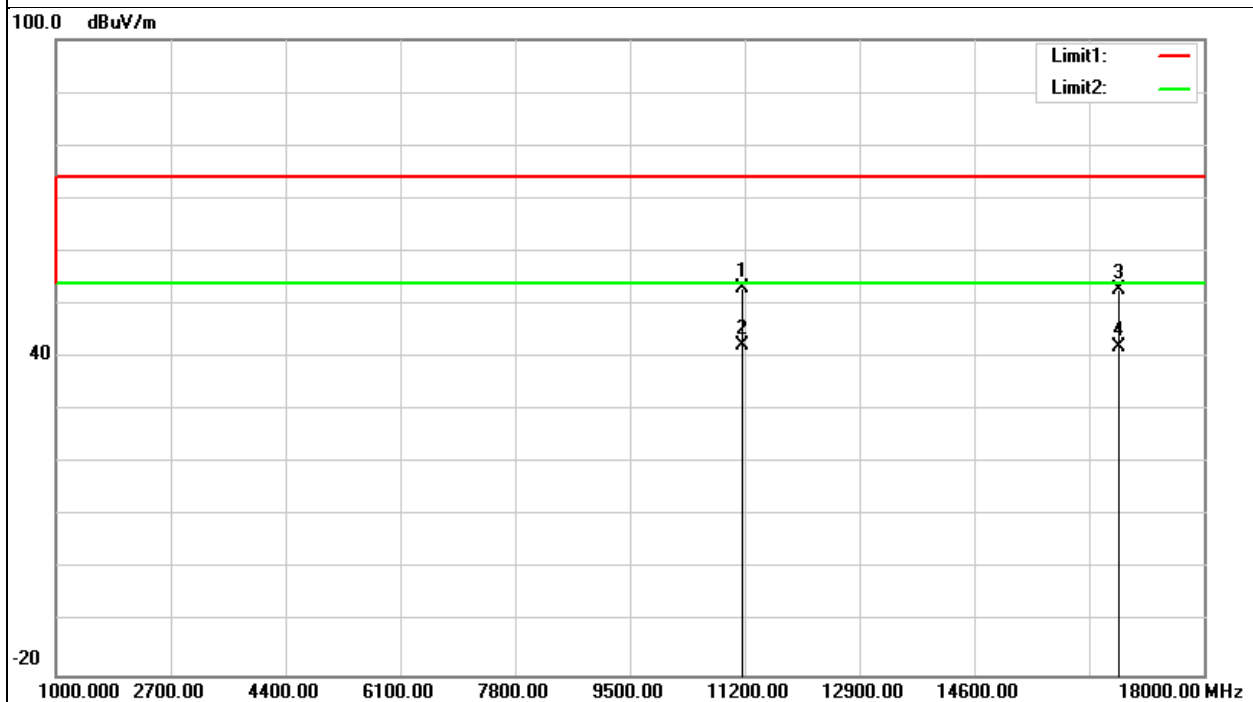
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH110 802.11n40/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11166.000	46.61	6.33	52.94	74.00	-21.06	peak
11166.000	35.92	6.33	42.25	54.00	-11.75	AVG
16749.000	43.09	9.55	52.64	74.00	-21.36	peak
16749.000	32.47	9.55	42.02	54.00	-11.98	AVG

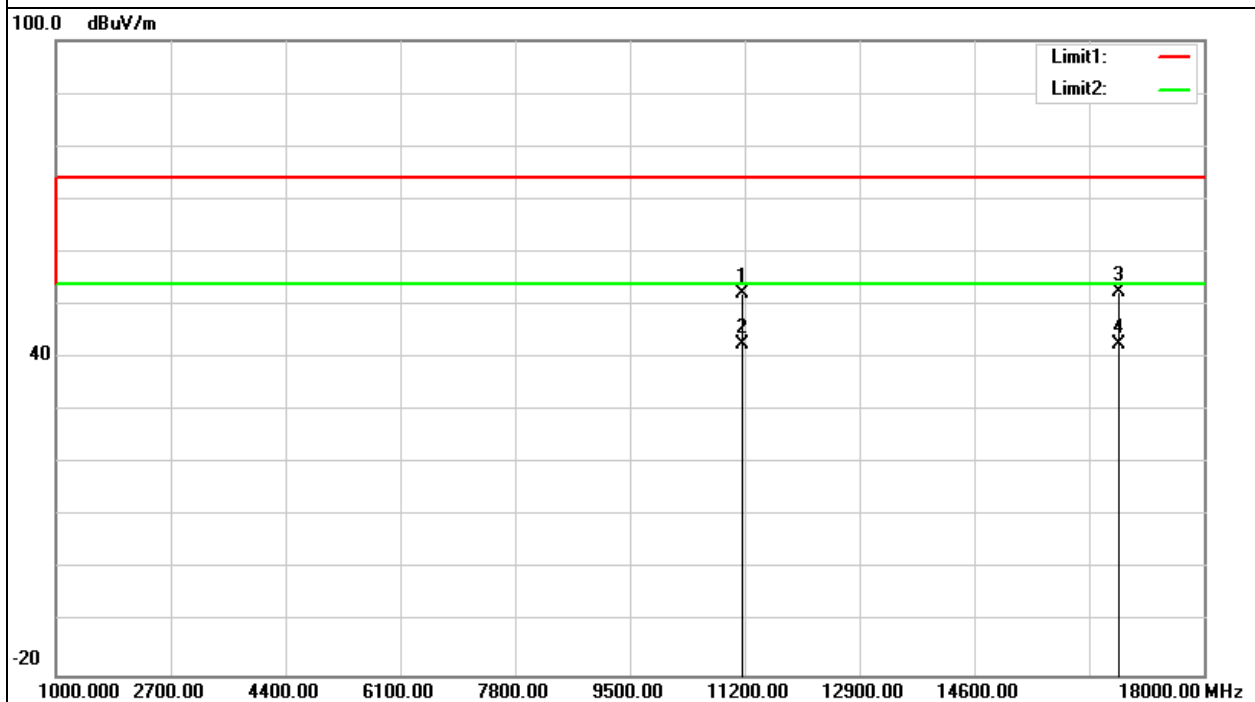
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH110 802.11n40/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11163.000	45.97	6.33	52.30	74.00	-21.70	peak
11163.000	36.35	6.33	42.68	54.00	-11.32	AVG
16745.000	42.98	9.55	52.53	74.00	-21.47	peak
16745.000	32.96	9.55	42.51	54.00	-11.49	AVG

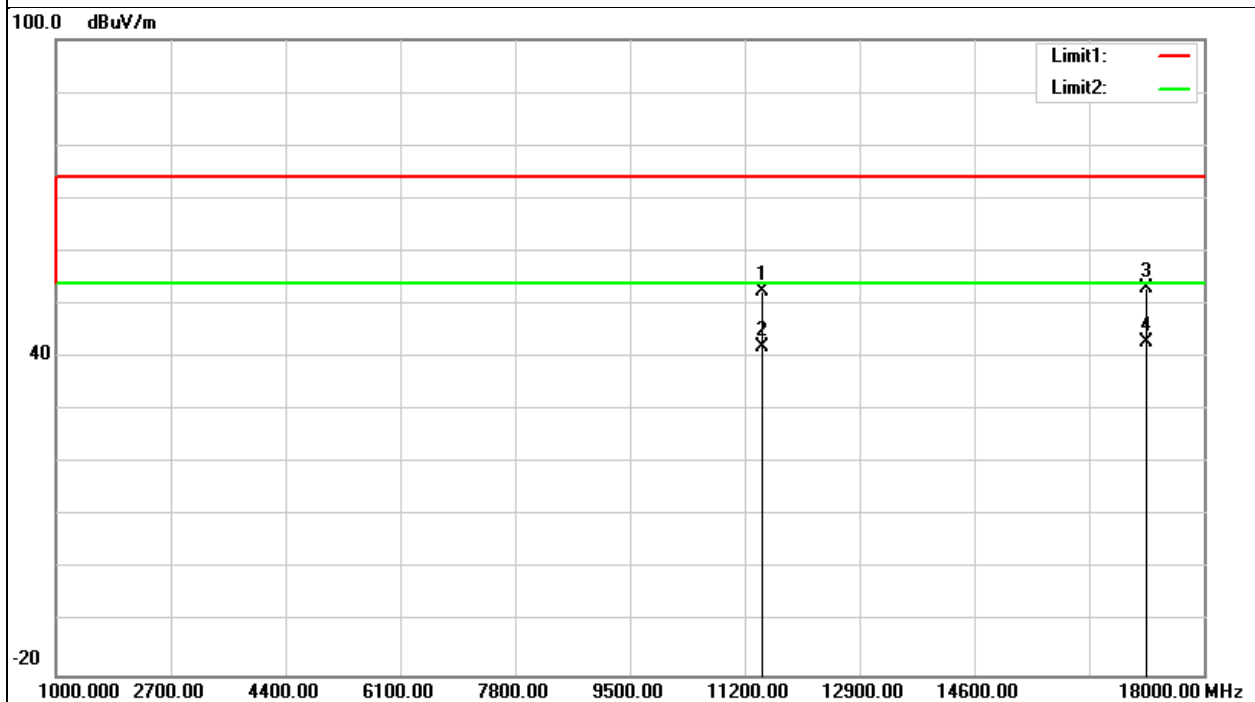
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH134 802.11n40/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11458.000	45.94	6.40	52.34	74.00	-21.66	peak
11458.000	35.65	6.40	42.05	54.00	-11.95	AVG
17154.000	41.02	11.92	52.94	74.00	-21.06	peak
17154.000	30.92	11.92	42.84	54.00	-11.16	AVG

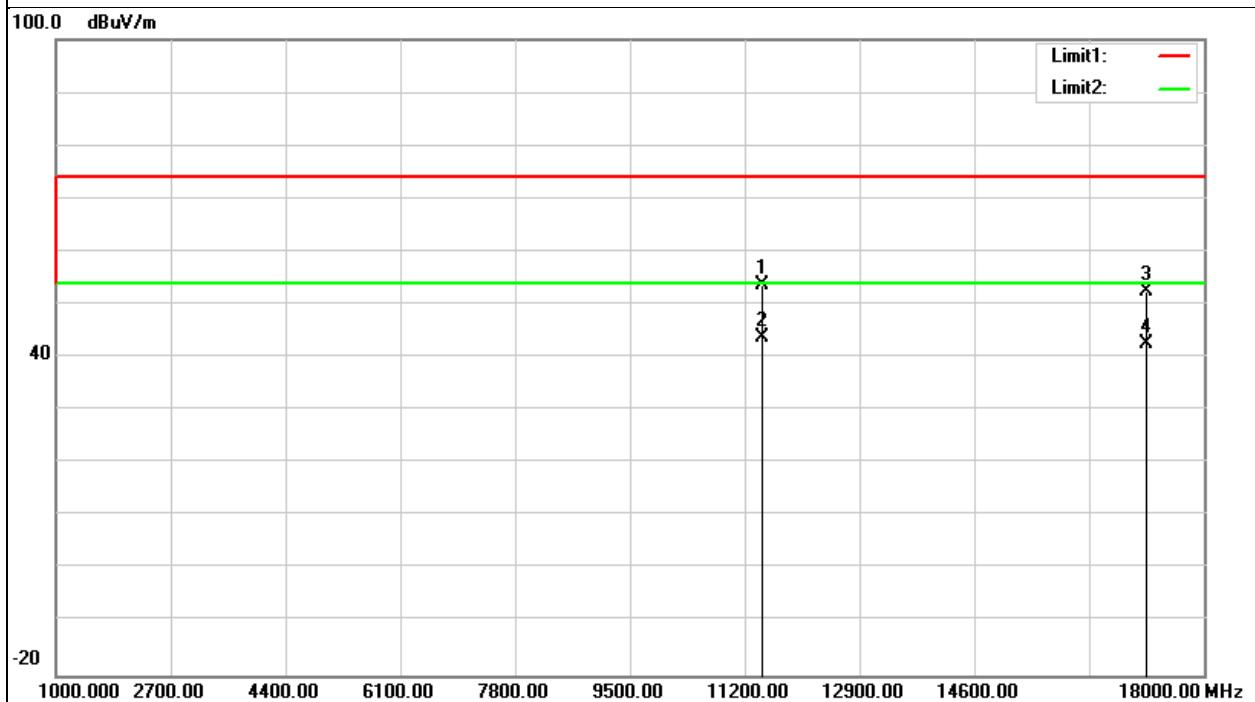
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH134 802.11n40/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11459.000	47.36	6.40	53.76	74.00	-20.24	peak
11459.000	37.25	6.40	43.65	54.00	-10.35	AVG
17159.000	40.32	11.99	52.31	74.00	-21.69	peak
17159.000	30.56	11.99	42.55	54.00	-11.45	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

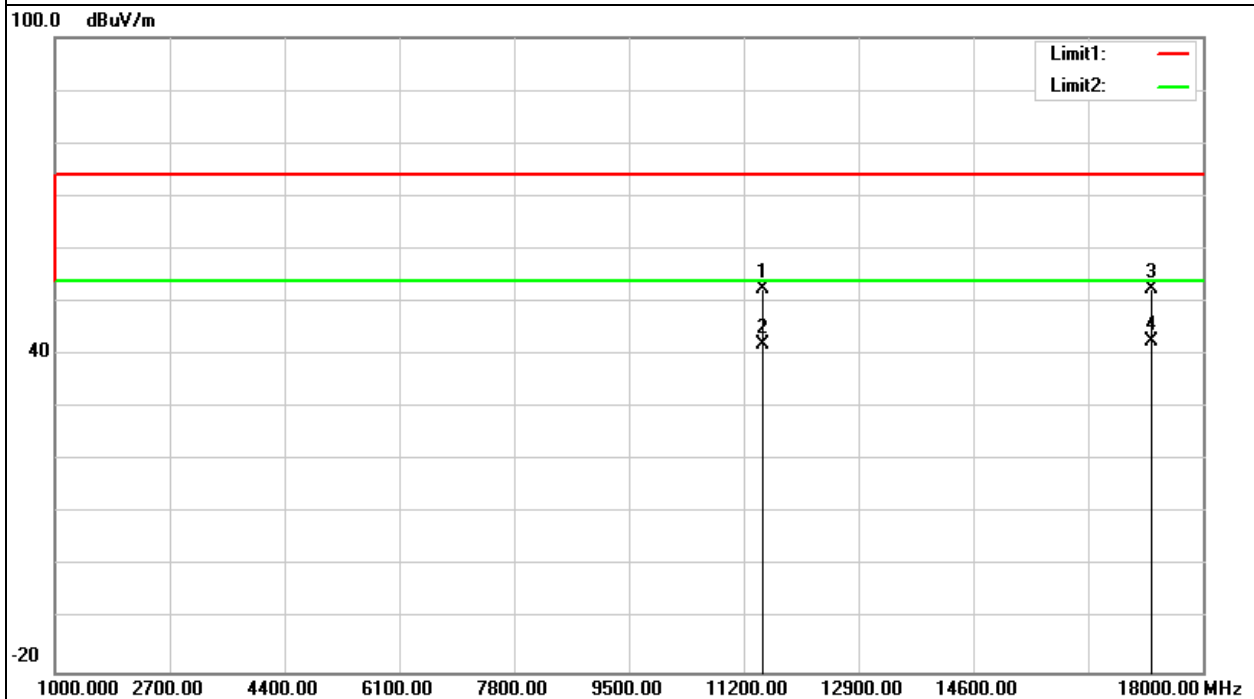


5725MHz~5850MHz:

EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH149 802.11n20/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11491.000	45.93	6.41	52.34	74.00	-21.66	peak
11491.000	35.61	6.41	42.02	54.00	-11.98	AVG
17236.000	39.30	13.04	52.34	74.00	-21.66	peak
17236.000	29.50	13.04	42.54	54.00	-11.46	AVG

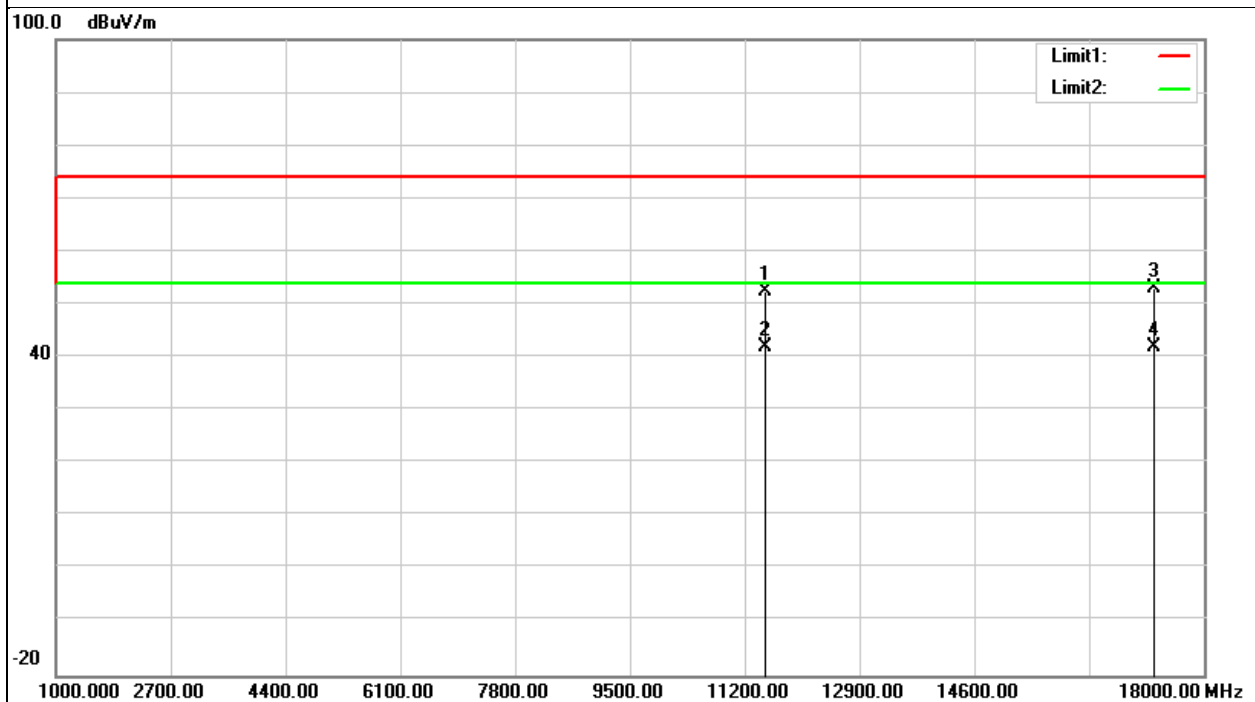
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH149 802.11n20/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11495.000	45.94	6.40	52.34	74.00	-21.66	peak
11495.000	35.65	6.40	42.05	54.00	-11.95	AVG
17255.000	39.65	13.30	52.95	74.00	-21.05	peak
17255.000	28.73	13.30	42.03	54.00	-11.97	AVG

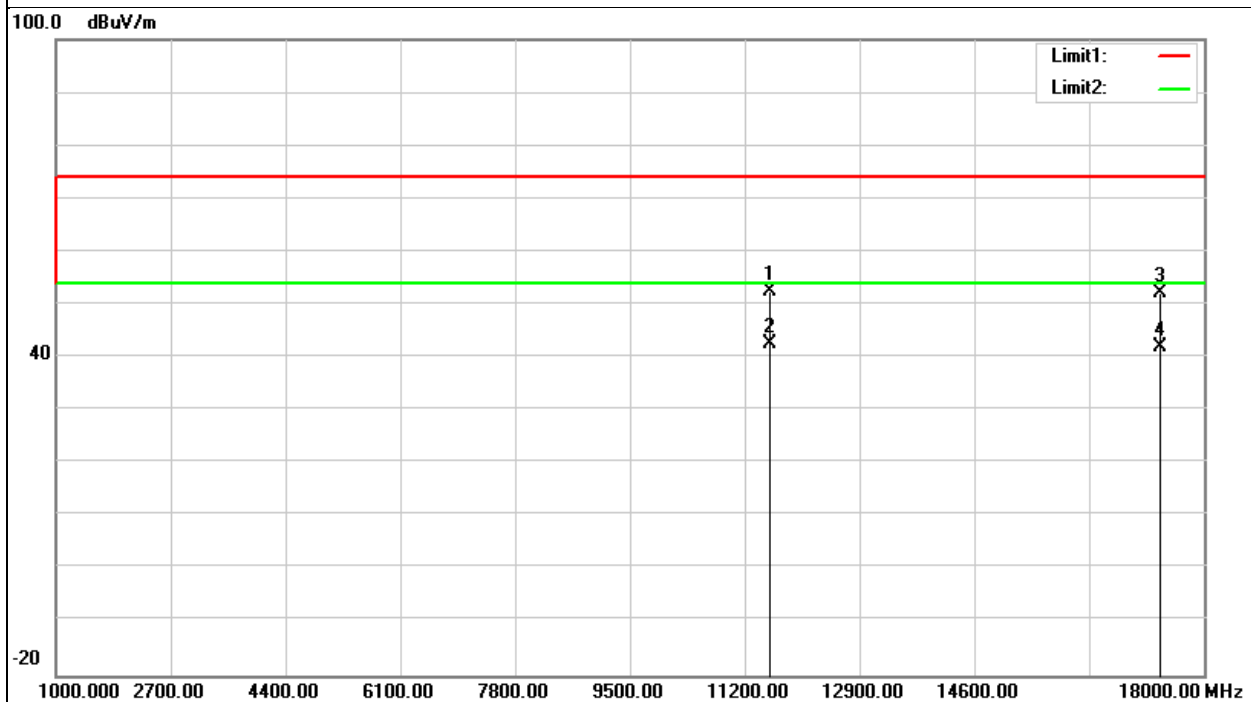
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH157 802.11n20/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11584.000	46.15	6.30	52.45	74.00	-21.55	peak
11584.000	36.35	6.30	42.65	54.00	-11.35	AVG
17365.000	37.50	14.80	52.30	74.00	-21.70	peak
17365.000	27.30	14.80	42.10	54.00	-11.90	AVG

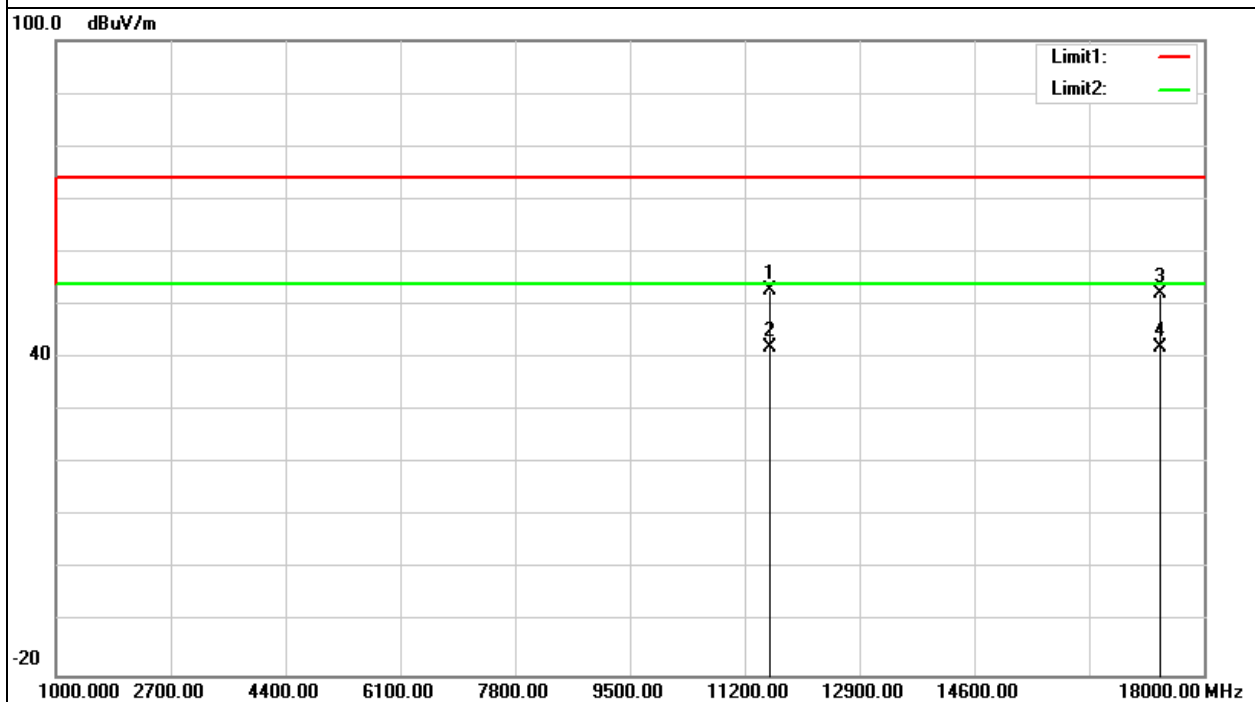
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH157 802.11n20/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11574.000	46.32	6.32	52.64	74.00	-21.36	peak
11574.000	35.73	6.32	42.05	54.00	-11.95	AVG
17365.000	37.50	14.80	52.30	74.00	-21.70	peak
17365.000	27.27	14.80	42.07	54.00	-11.93	AVG

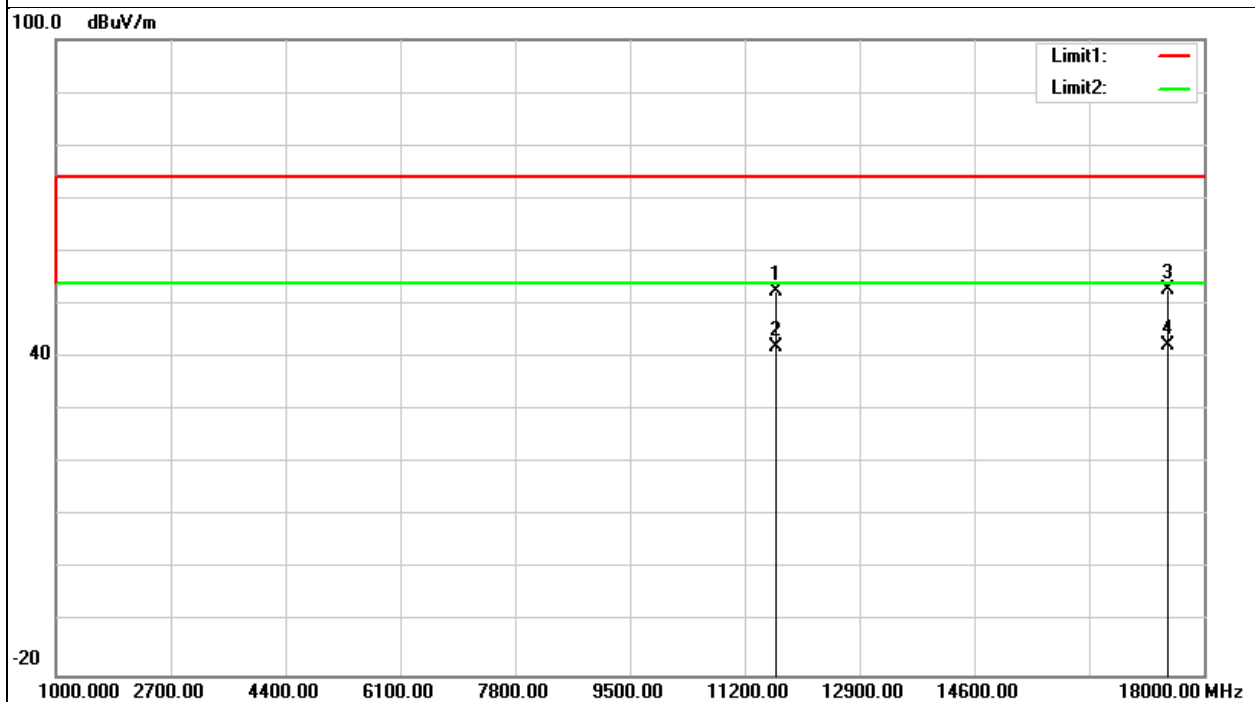
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH165 802.11n20/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11659.000	46.12	6.22	52.34	74.00	-21.66	peak
11659.000	35.84	6.22	42.06	54.00	-11.94	AVG
17469.000	36.44	16.22	52.66	74.00	-21.34	peak
17469.000	26.02	16.22	42.24	54.00	-11.76	AVG

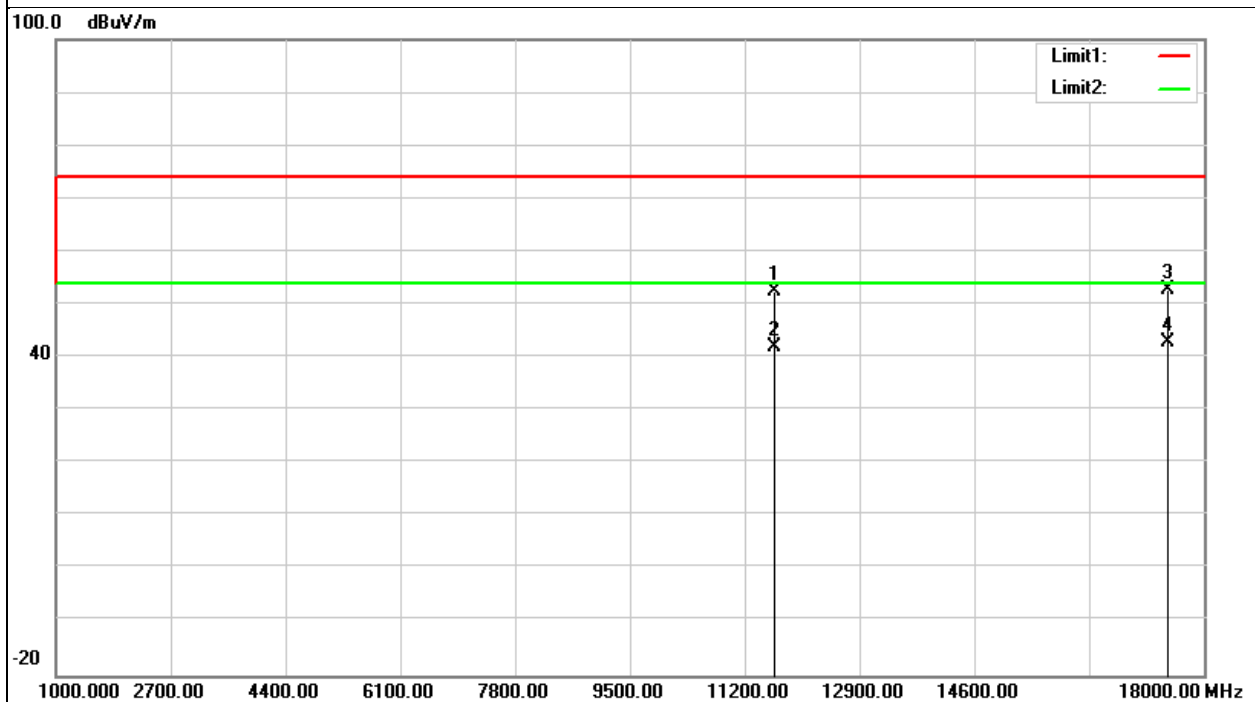
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	TX CH165 802.11n20/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
11652.000	46.09	6.22	52.31	74.00	-21.69	peak
11652.000	35.80	6.22	42.02	54.00	-11.98	AVG
17462.000	36.54	16.12	52.66	74.00	-21.34	peak
17462.000	26.72	16.12	42.84	54.00	-11.16	AVG

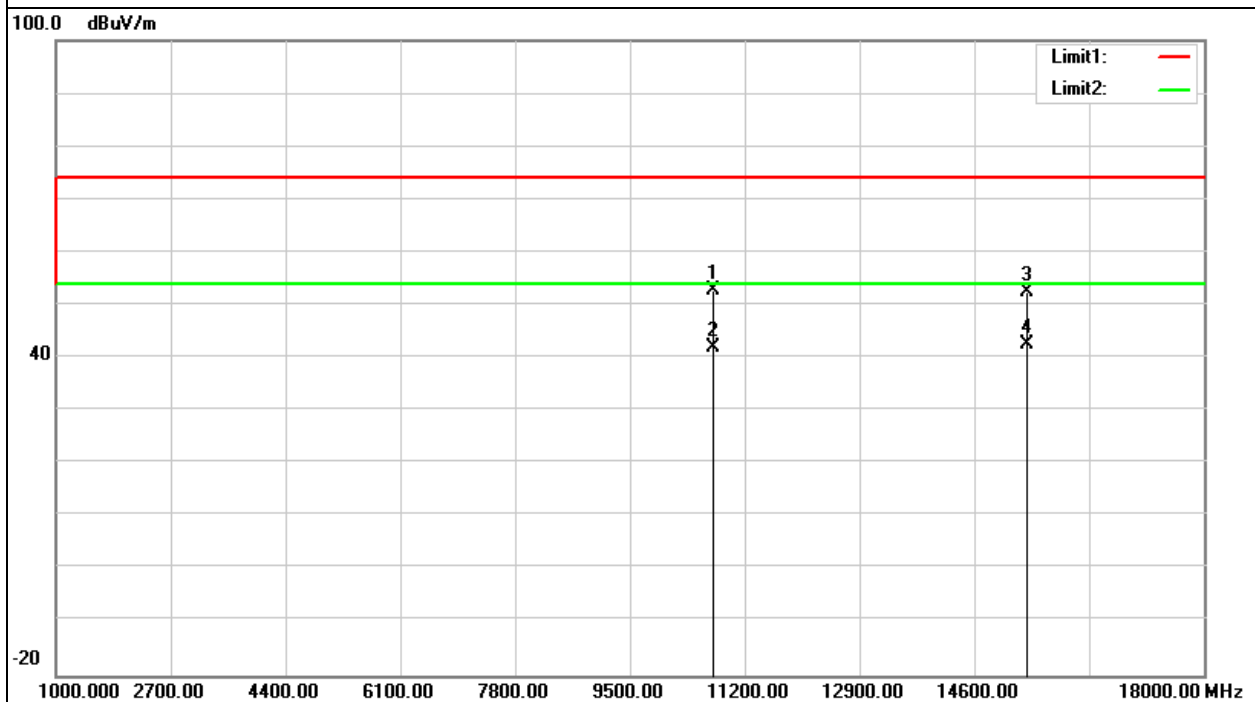
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	RX 802.11n20 CH149/ANT A+B(Worst Case)	Polarization :	Horizontal
Measurement Distance	3 m	Frequency Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10724.000	47.08	5.56	52.64	74.00	-21.36	peak
10724.000	36.50	5.56	42.06	54.00	-11.94	AVG
15382.000	42.54	9.80	52.34	74.00	-21.66	peak
15382.000	32.85	9.80	42.65	54.00	-11.35	AVG

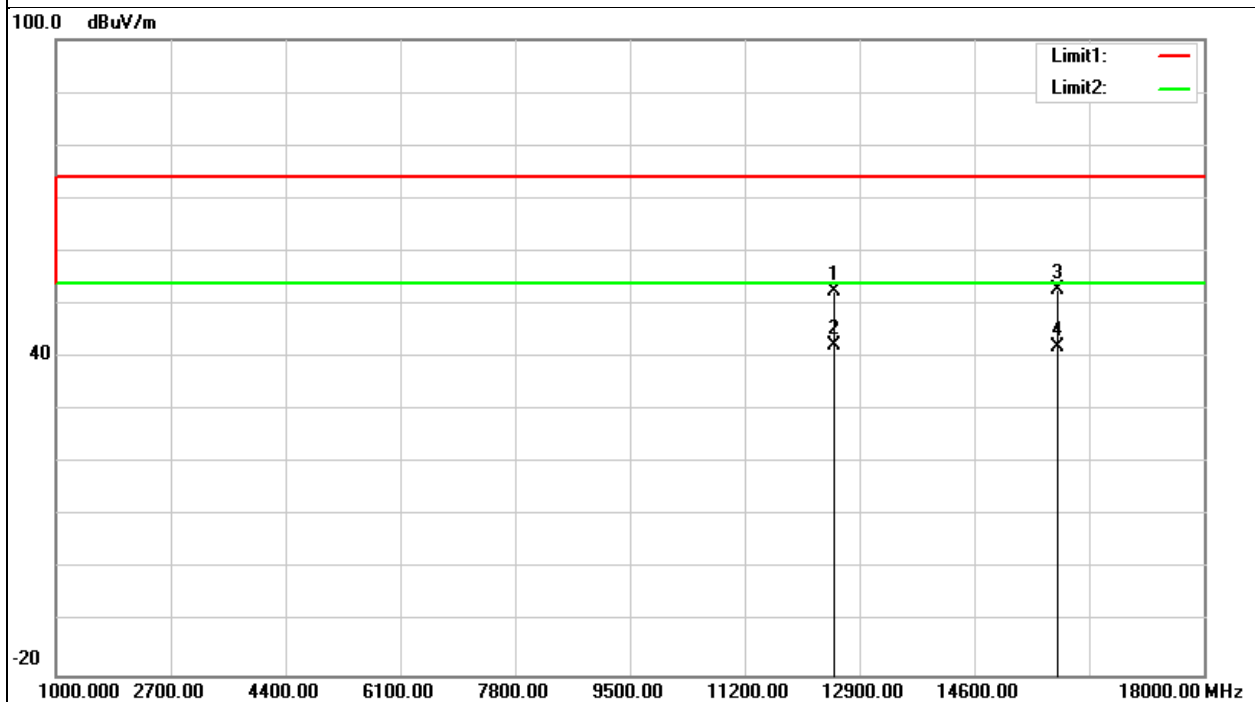
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	RX 802.11n20 CH149/ANT A+B(Worst Case)	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	1GHz to 18GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
12526.000	46.72	5.87	52.59	74.00	-21.41	peak
12526.000	36.48	5.87	42.35	54.00	-11.65	AVG
15824.000	44.99	7.73	52.72	74.00	-21.28	peak
15824.000	34.30	7.73	42.03	54.00	-11.97	AVG

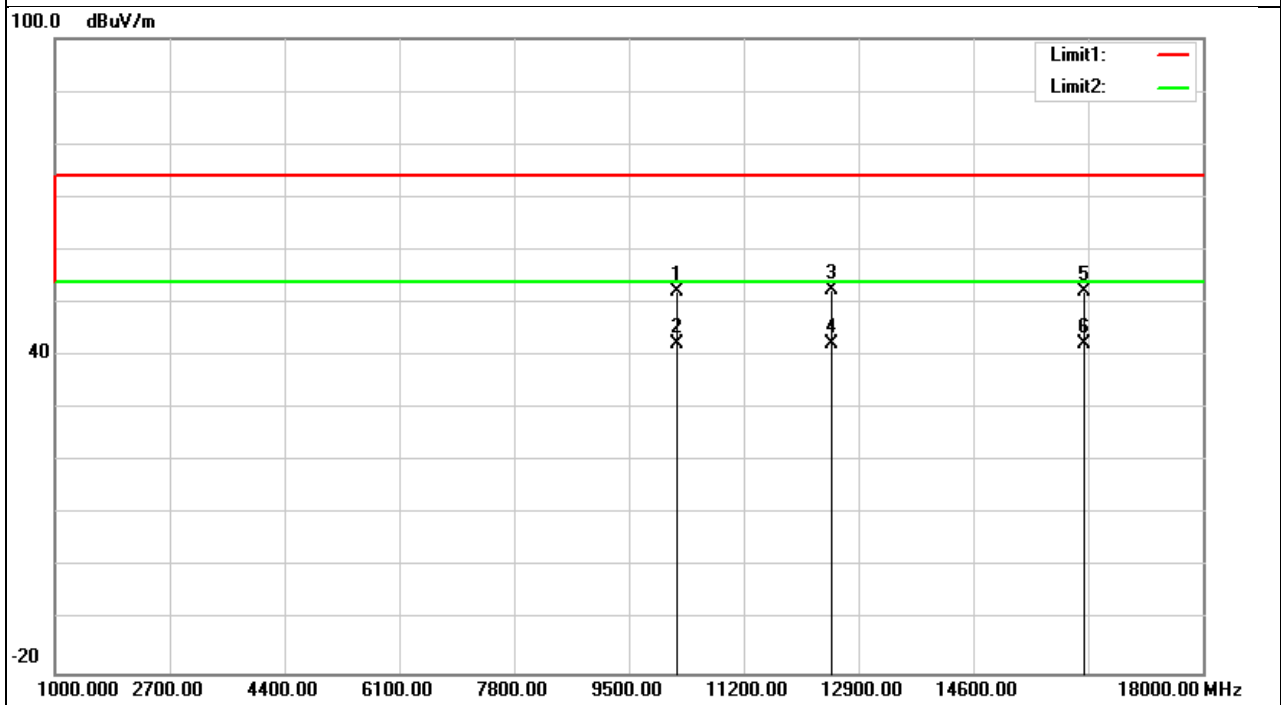
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	Working	Polarization :	Horizontal
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
10214.000	48.20	4.05	52.25	74.00	-21.75	peak
10214.000	38.12	4.05	42.17	54.00	-11.83	AVG
12492.000	46.50	5.83	52.33	74.00	-21.67	peak
12492.000	36.32	5.83	42.15	54.00	-11.85	AVG
16232.000	44.34	7.87	52.21	74.00	-21.79	peak
16232.000	34.52	7.87	42.39	54.00	-11.61	AVG
10214.000	48.20	4.05	52.25	74.00	-21.75	peak
10214.000	38.12	4.05	42.17	54.00	-11.83	AVG

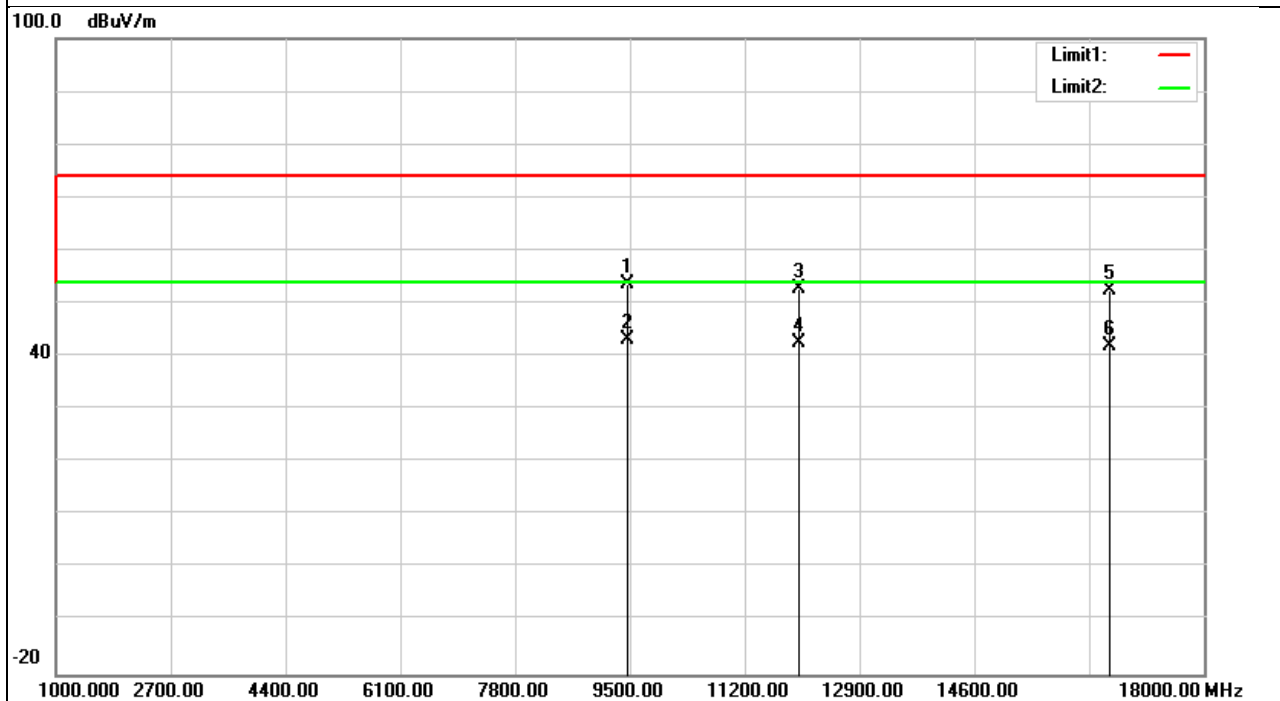
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Projector	Model Name :	XM03A
Temperature :	23.1 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2021-06-23
Test Mode :	Working	Polarization :	Vertical
Measurement Distance	3 m	Frenqucy Range	18GHz to 25GHz
Test Power :	AC 110V/60Hz		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
9466.000	50.58	3.10	53.68	74.00	-20.32	peak
9466.000	40.15	3.10	43.25	54.00	-10.75	AVG
11999.000	46.84	5.80	52.64	74.00	-21.36	peak
11999.000	36.77	5.80	42.57	54.00	-11.43	AVG
16606.000	42.90	9.41	52.31	74.00	-21.69	peak
16606.000	32.64	9.41	42.05	54.00	-11.95	AVG
9466.000	50.58	3.10	53.68	74.00	-20.32	peak
9466.000	40.15	3.10	43.25	54.00	-10.75	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.

3.2.6 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

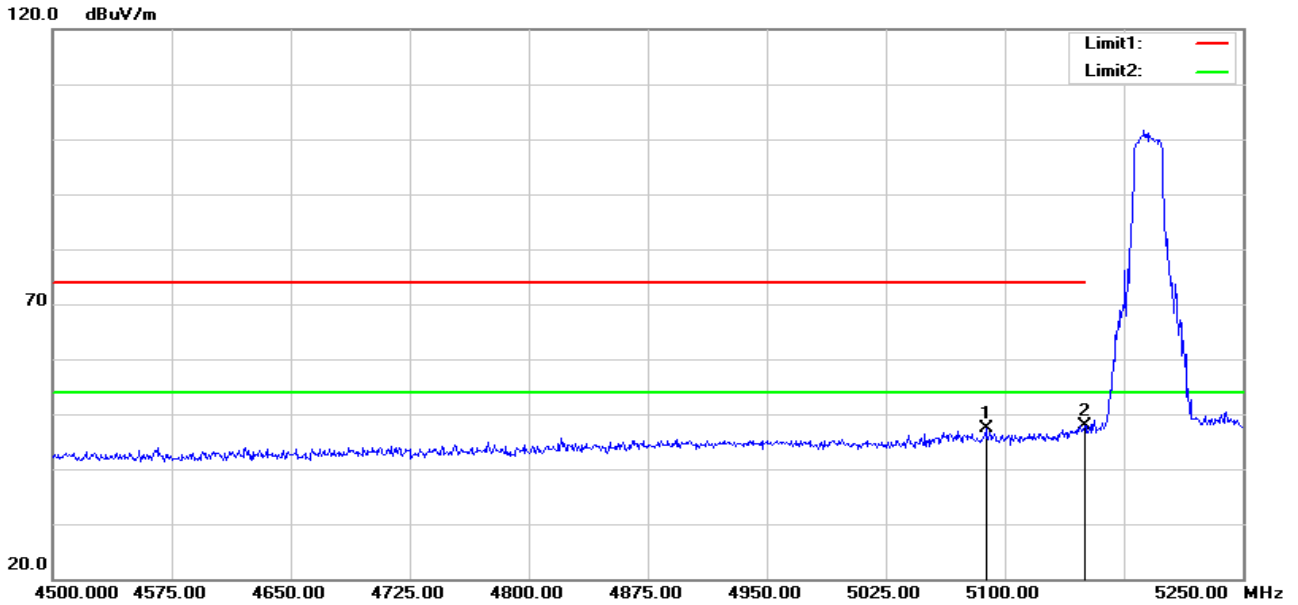
Note: Pre-scan both the SISO and MIMO mode, only the worst-case results were reported.

Temperature :	23.1 °C	Relative Humidity :	60%
Test Mode :	TX	Test Date :	2021-06-22

5.2G

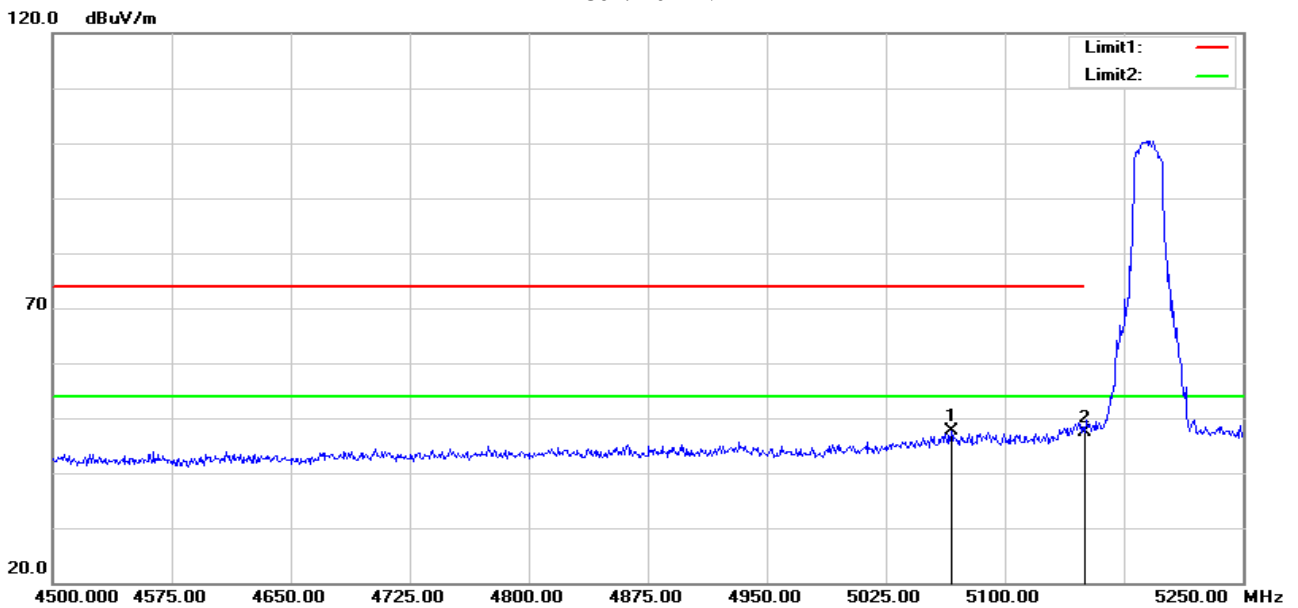
SISO

802.11a-L-H



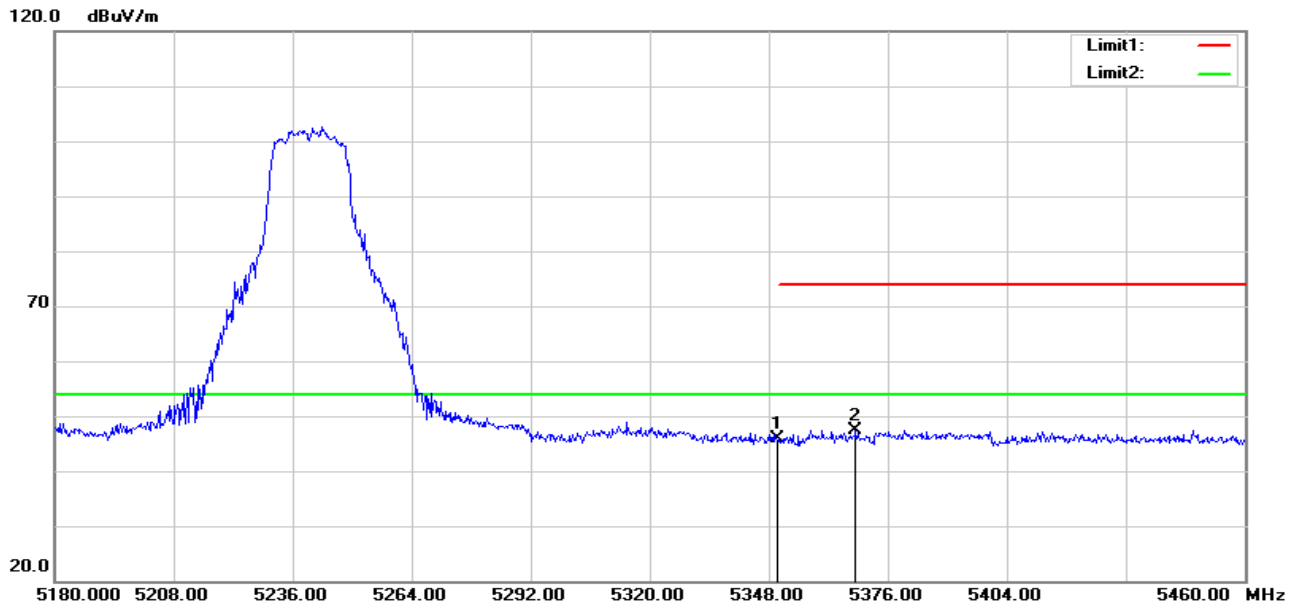
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5088.000	53.12	-5.79	47.33	74.00	-26.67	peak
2	5150.000	53.58	-5.73	47.85	74.00	-26.15	peak

802.11a-L-V



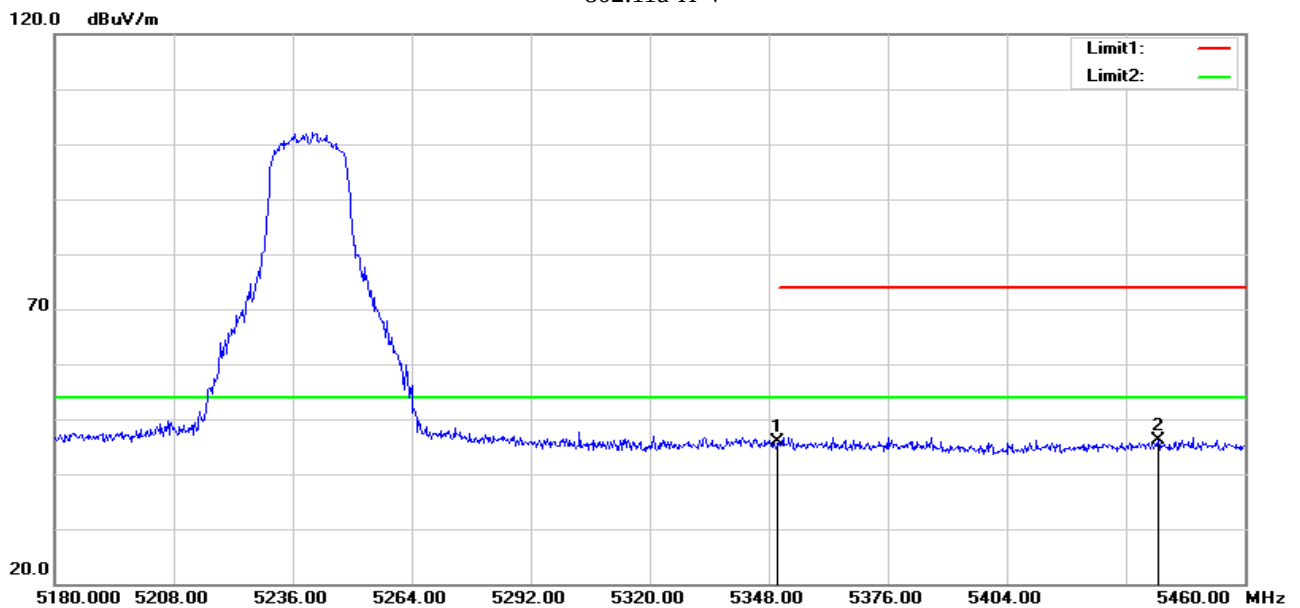
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5066.250	53.51	-5.89	47.62	74.00	-26.38	peak
2	5150.000	53.19	-5.73	47.46	74.00	-26.54	peak

802.11a-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	51.11	-5.23	45.88	74.00	-28.12	peak
2	5368.440	52.62	-5.24	47.38	74.00	-26.62	peak

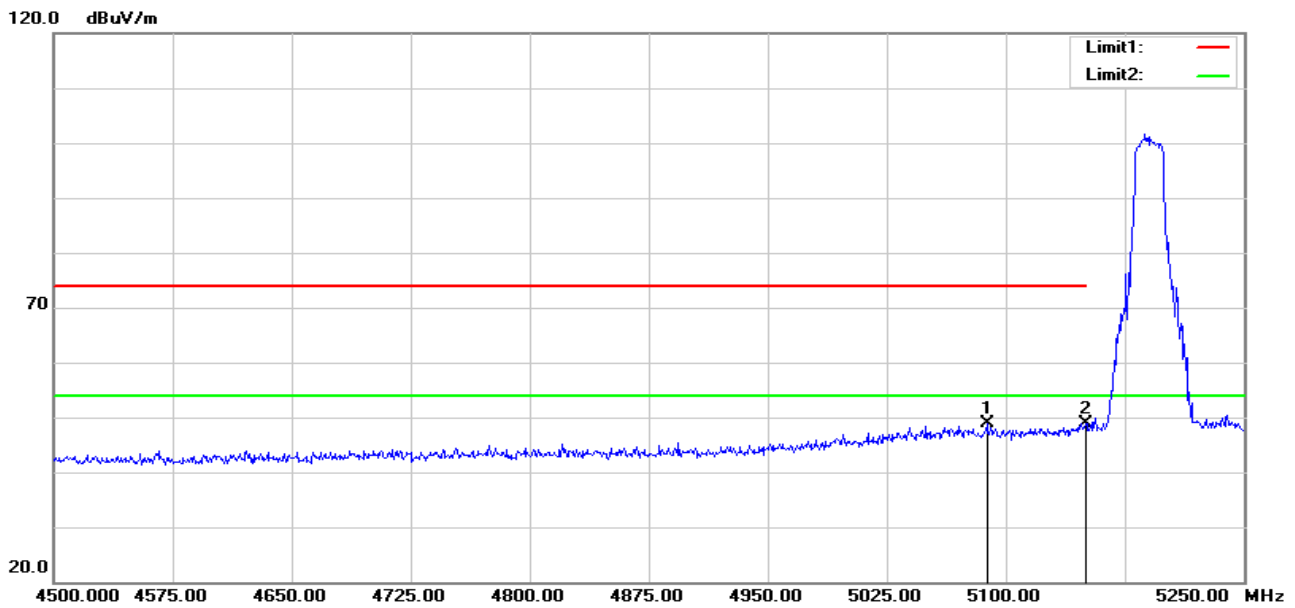
802.11a-H-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	51.06	-5.23	45.83	74.00	-28.17	peak
2	5439.560	51.25	-5.16	46.09	74.00	-27.91	peak

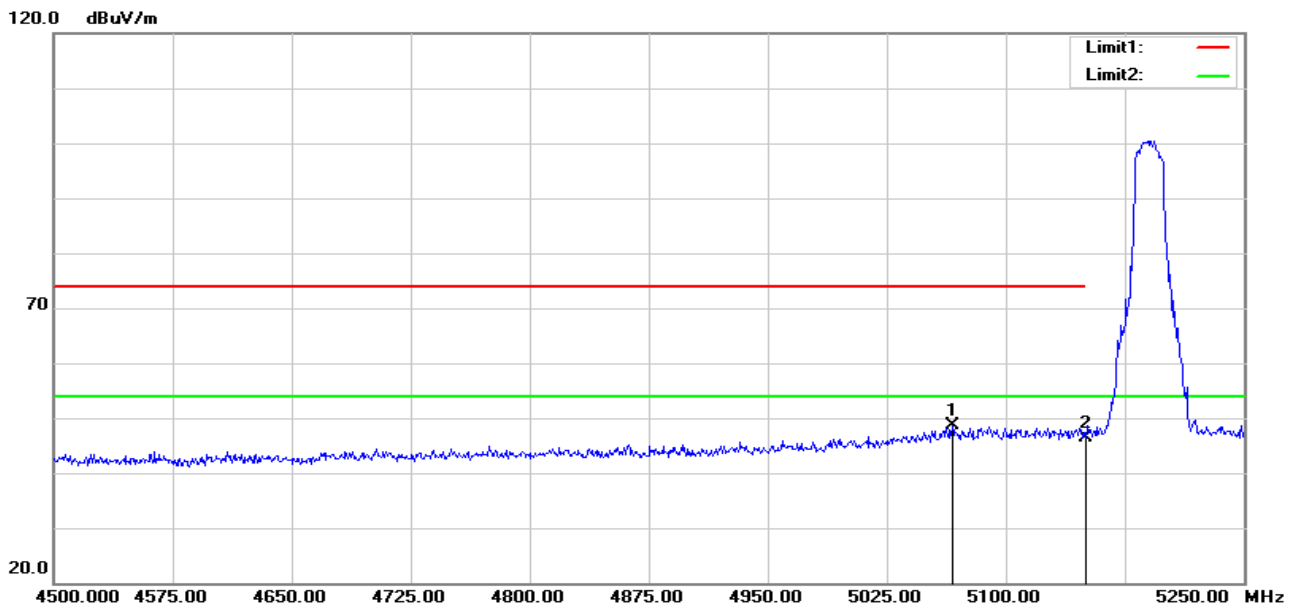
MIMO

802.11n20-L-H



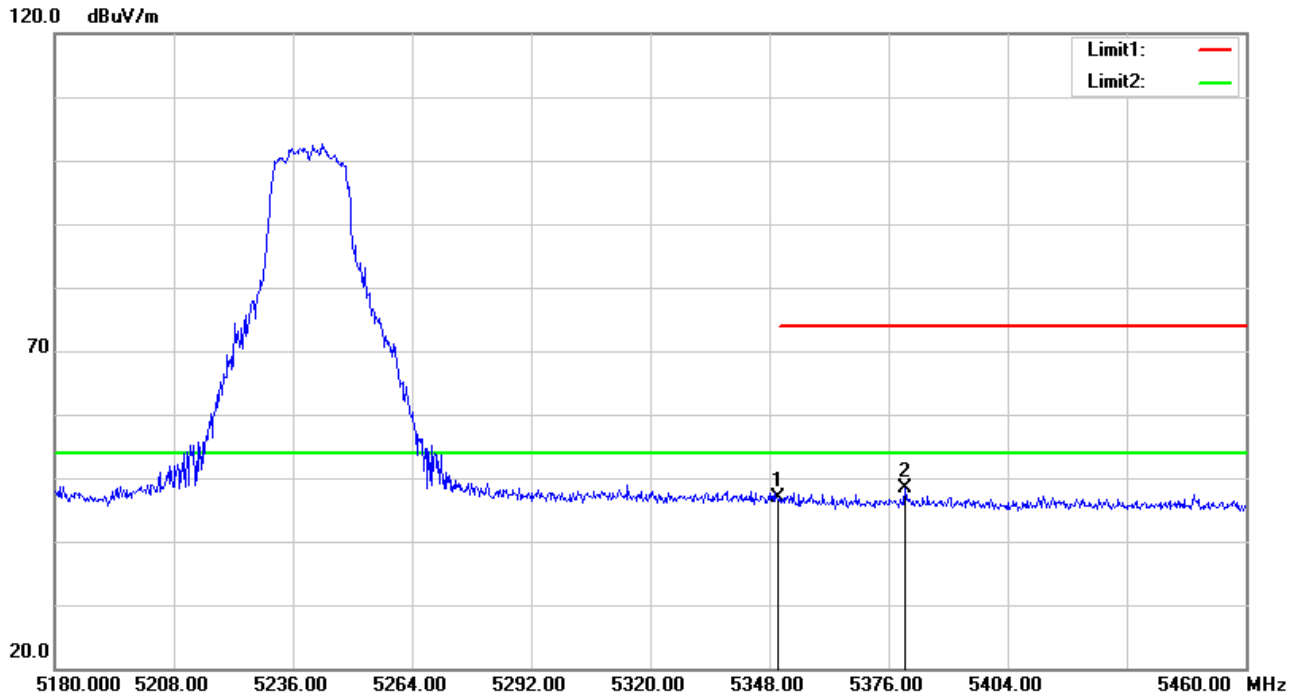
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5088.000	54.62	-5.79	48.83	74.00	-25.17	peak
2	5150.000	54.58	-5.73	48.85	74.00	-25.15	peak

802.11n20-L-V



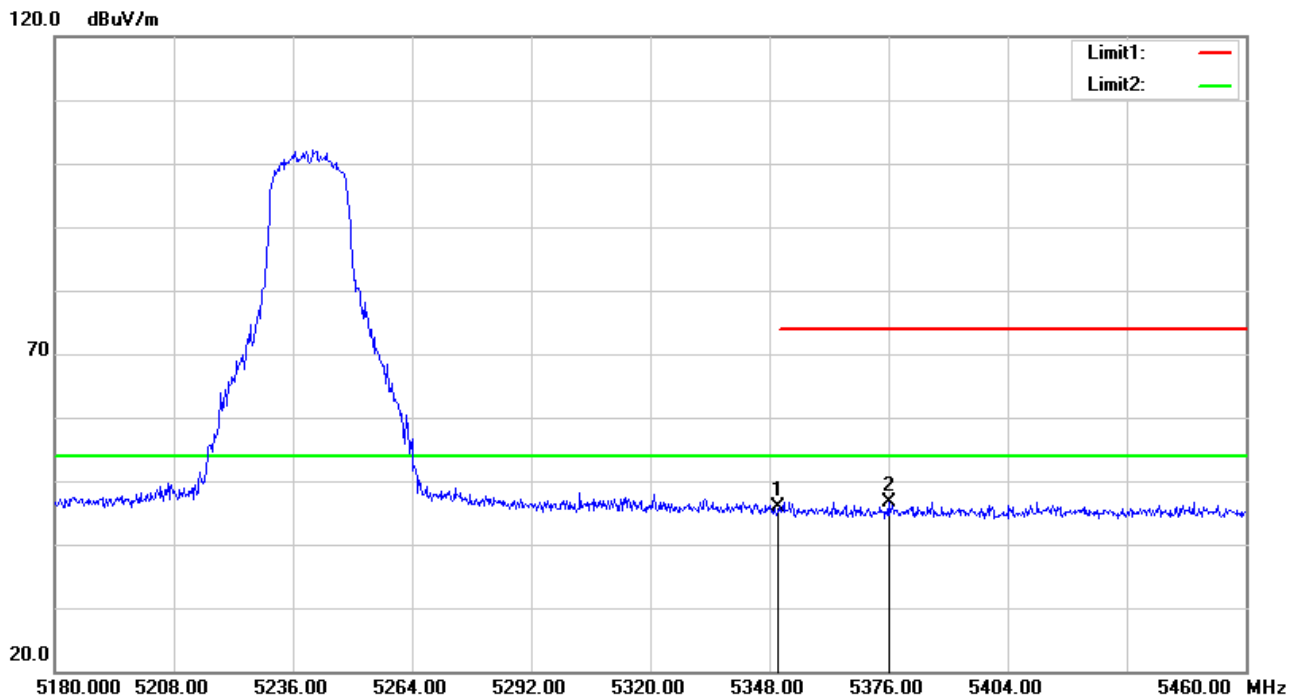
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5066.250	54.51	-5.89	48.62	74.00	-25.38	peak
2	5150.000	52.19	-5.73	46.46	74.00	-27.54	peak

802.11n20-H-H



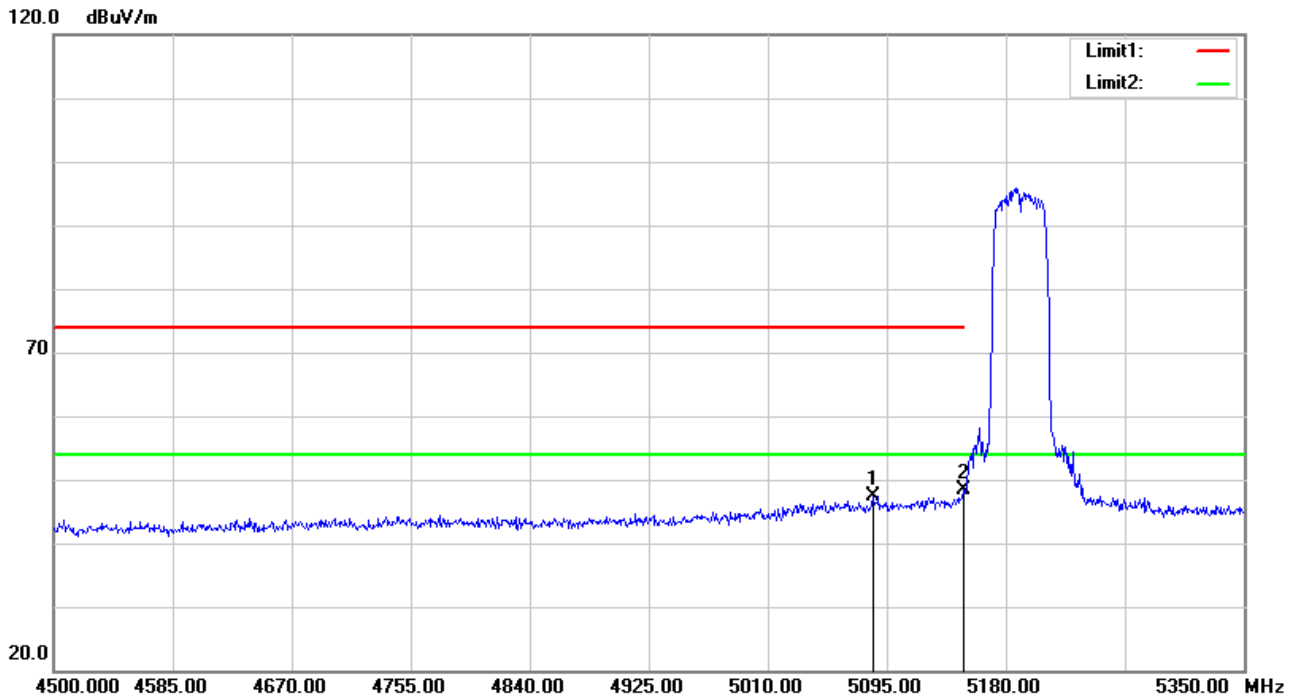
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	52.11	-5.23	46.88	74.00	-27.12	peak
2	5379.920	53.51	-5.25	48.26	74.00	-25.74	peak

802.11n20-H-V



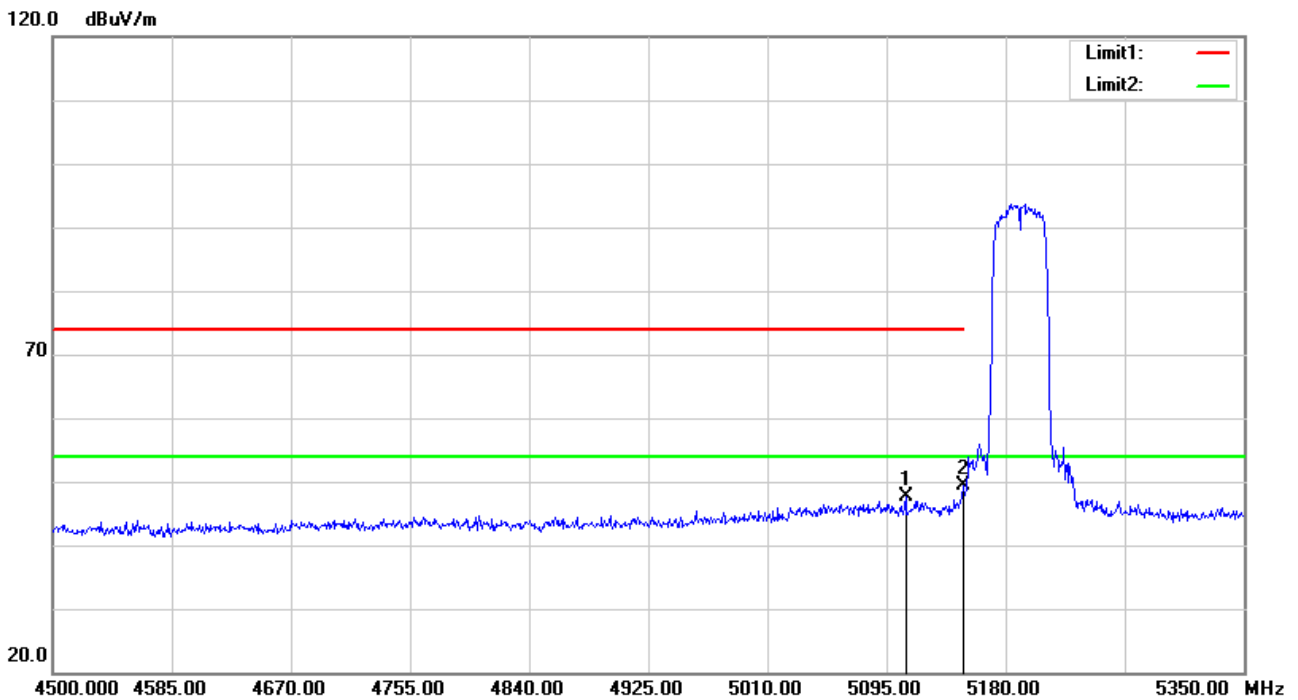
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	51.06	-5.23	45.83	74.00	-28.17	peak
2	5376.000	51.98	-5.24	46.74	74.00	-27.26	peak

802.11n40-L-H



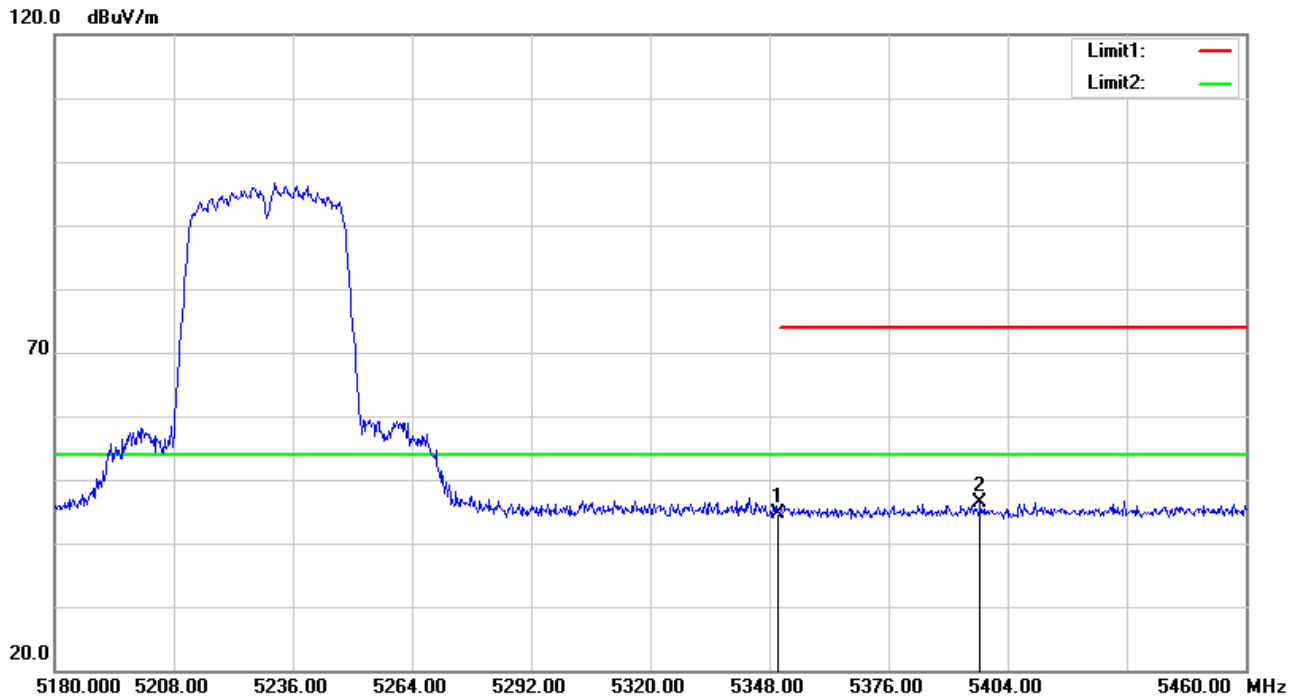
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5084.800	53.20	-5.81	47.39	74.00	-26.61	peak
2	5150.000	54.00	-5.73	48.27	74.00	-25.73	peak

802.11n40-L-V



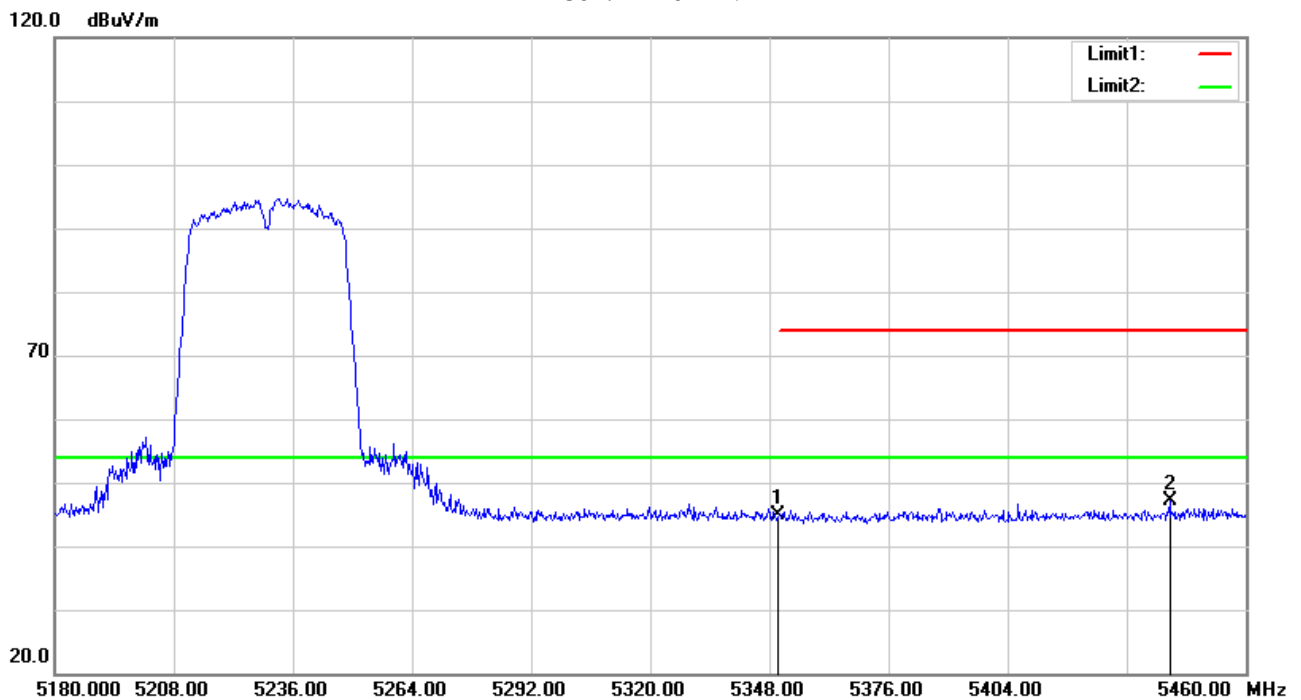
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5108.600	53.36	-5.74	47.62	74.00	-26.38	peak
2	5150.000	55.10	-5.73	49.37	74.00	-24.63	peak

802.11n40-H-H



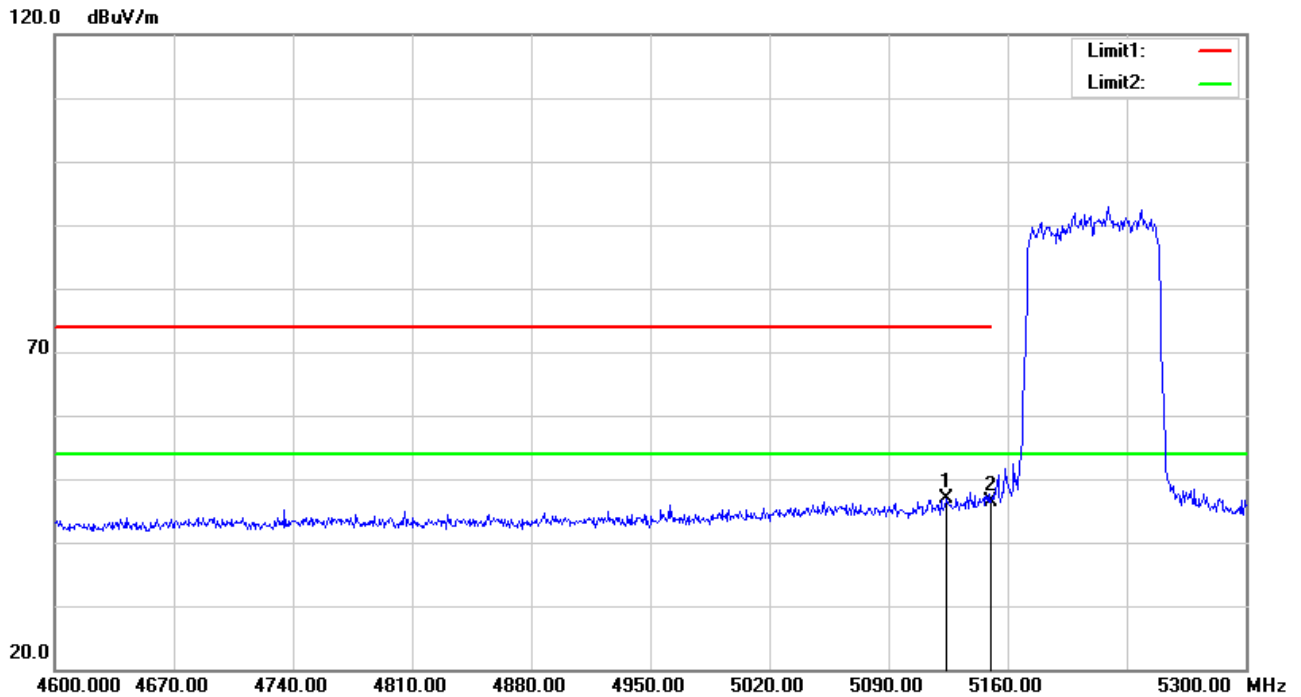
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	49.76	-5.23	44.53	74.00	-29.47	peak
2	5397.560	51.60	-5.25	46.35	74.00	-27.65	peak

802.11n40-H-V



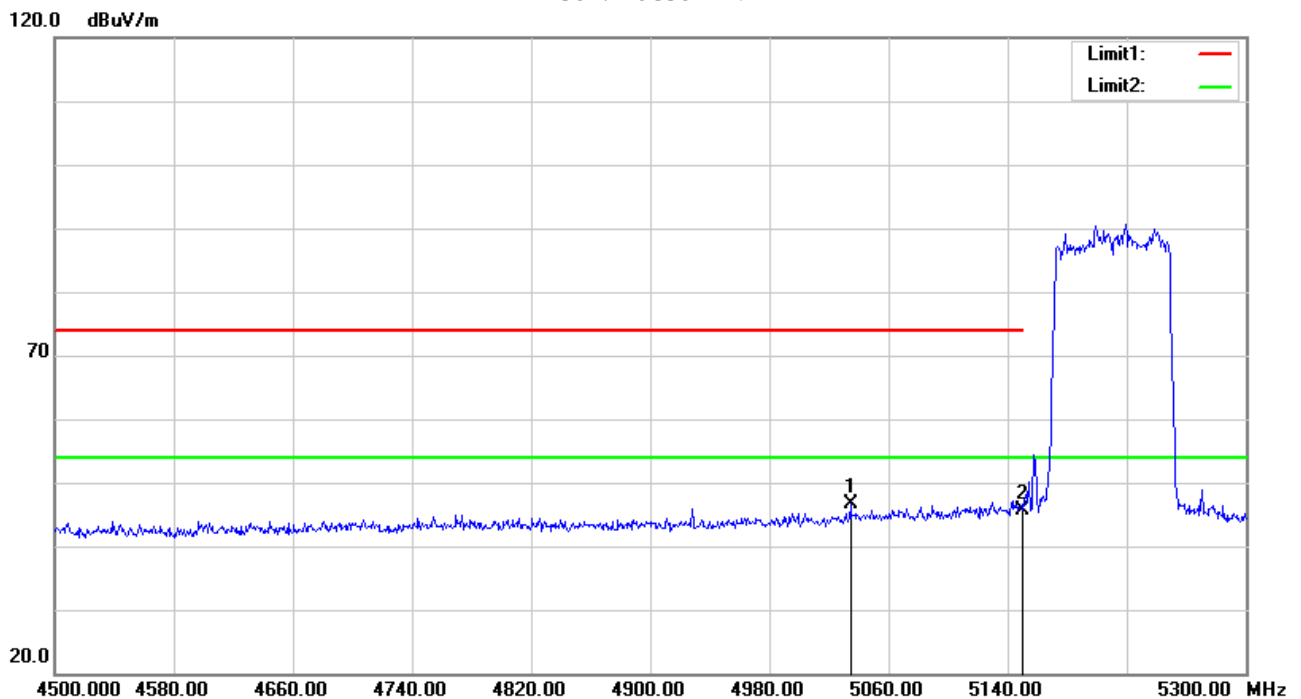
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	50.10	-5.23	44.87	74.00	-29.13	peak
2	5442.080	52.31	-5.16	47.15	74.00	-26.85	peak

802.11ac80-L-H



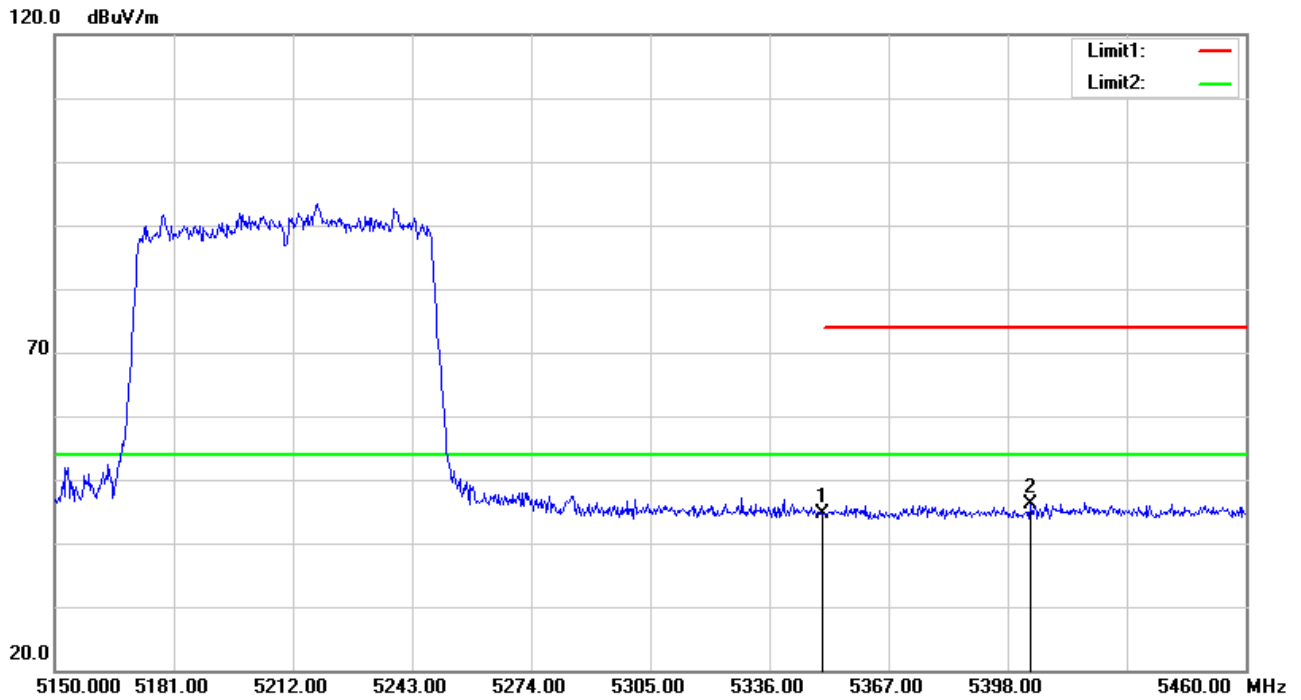
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5124.300	52.71	-5.74	46.97	74.00	-27.03	peak
2	5150.000	52.19	-5.73	46.46	74.00	-27.54	peak

802.11ac80-L-V



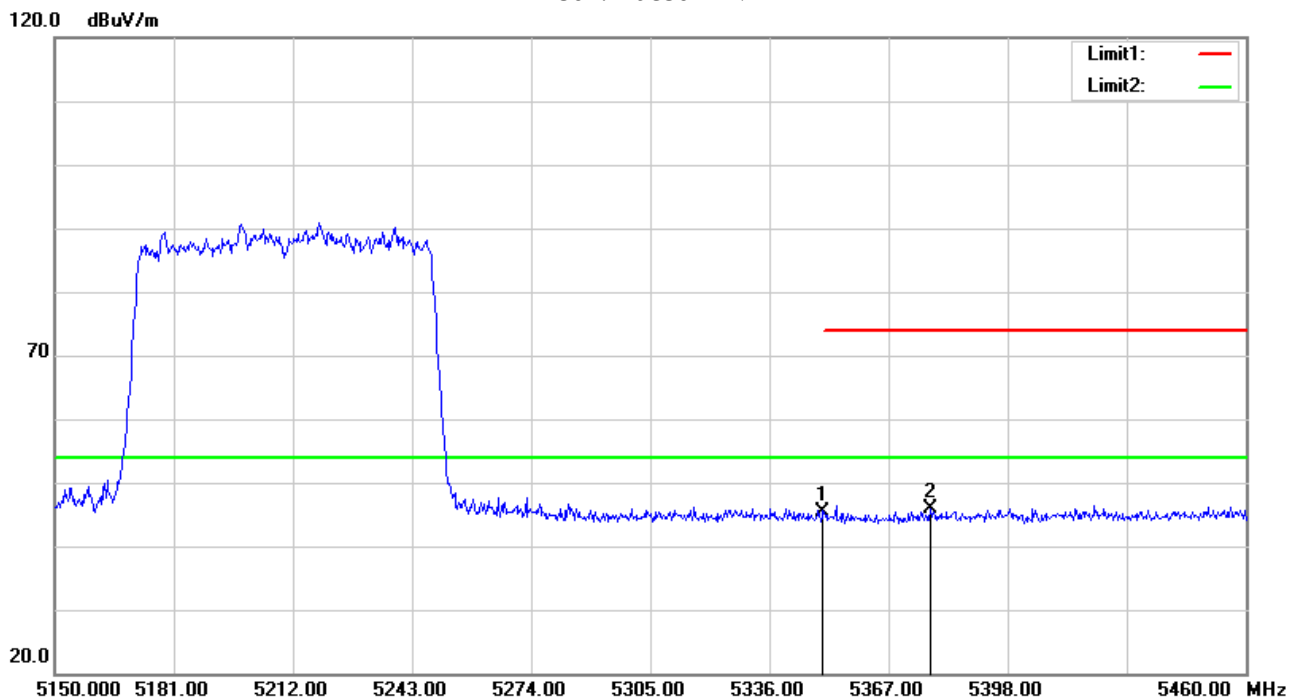
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5034.400	52.69	-6.03	46.66	74.00	-27.34	peak
2	5150.000	51.38	-5.73	45.65	74.00	-28.35	peak

802.11ac80-H-H



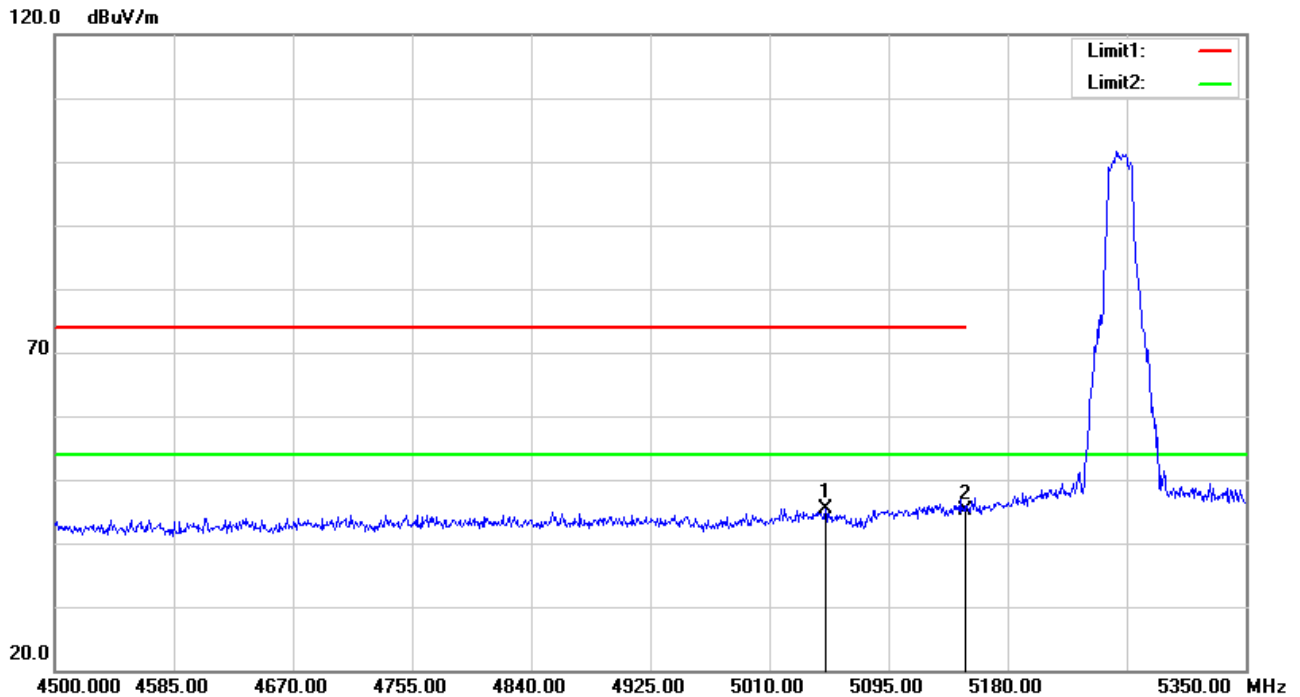
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	49.89	-5.23	44.66	74.00	-29.34	peak
2	5403.890	51.45	-5.24	46.21	74.00	-27.79	peak

802.11ac80-H-V



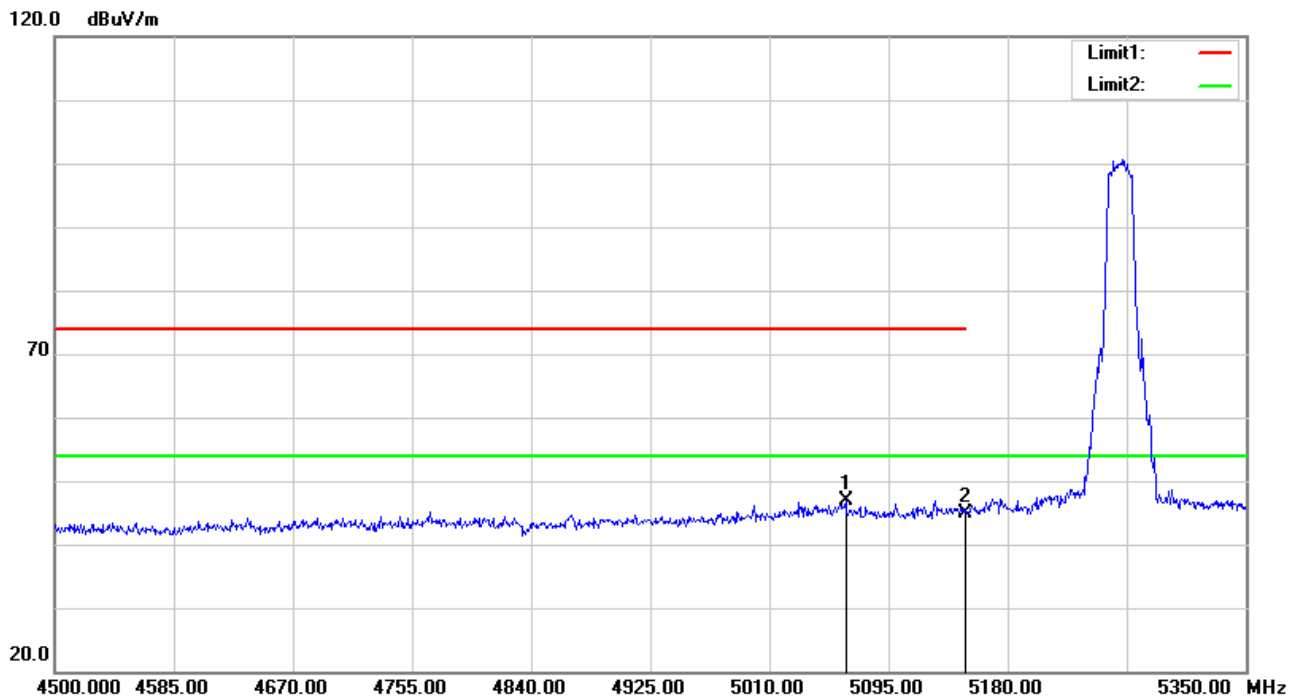
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	50.72	-5.23	45.49	74.00	-28.51	peak
2	5377.850	51.13	-5.24	45.89	74.00	-28.11	peak

5.3G
SISO
802.11a-L-H



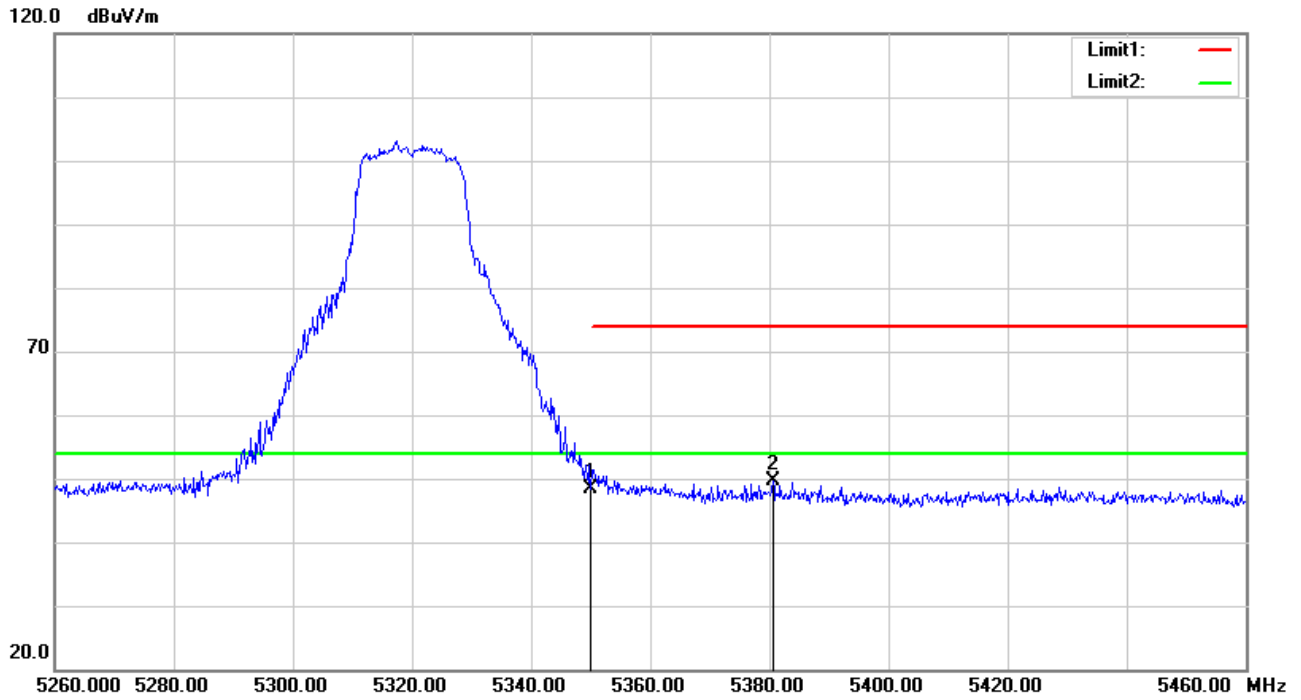
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5049.950	51.44	-5.97	45.47	74.00	-28.53	peak
2	5150.000	50.95	-5.73	45.22	74.00	-28.78	peak

802.11a-L-V



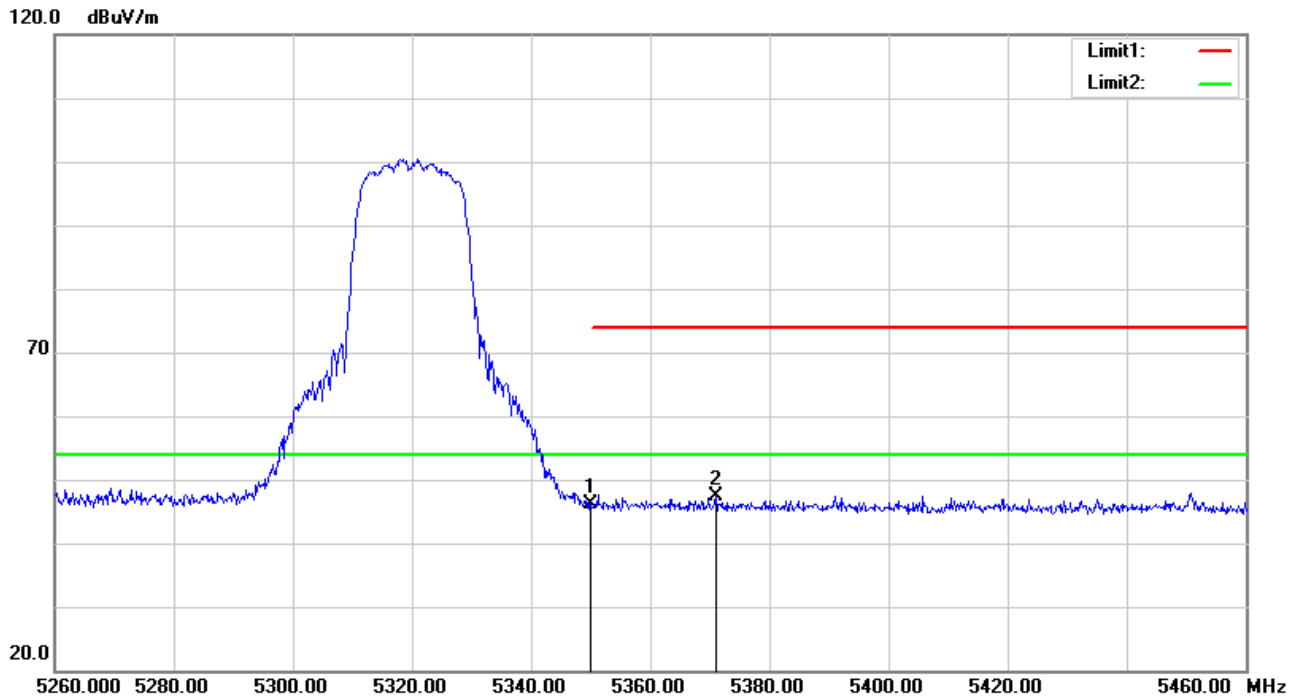
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5064.400	52.73	-5.90	46.83	74.00	-27.17	peak
2	5150.000	50.58	-5.73	44.85	74.00	-29.15	peak

802.11a-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	53.53	-5.23	48.30	74.00	-25.70	peak
2	5380.600	54.77	-5.25	49.52	74.00	-24.48	peak

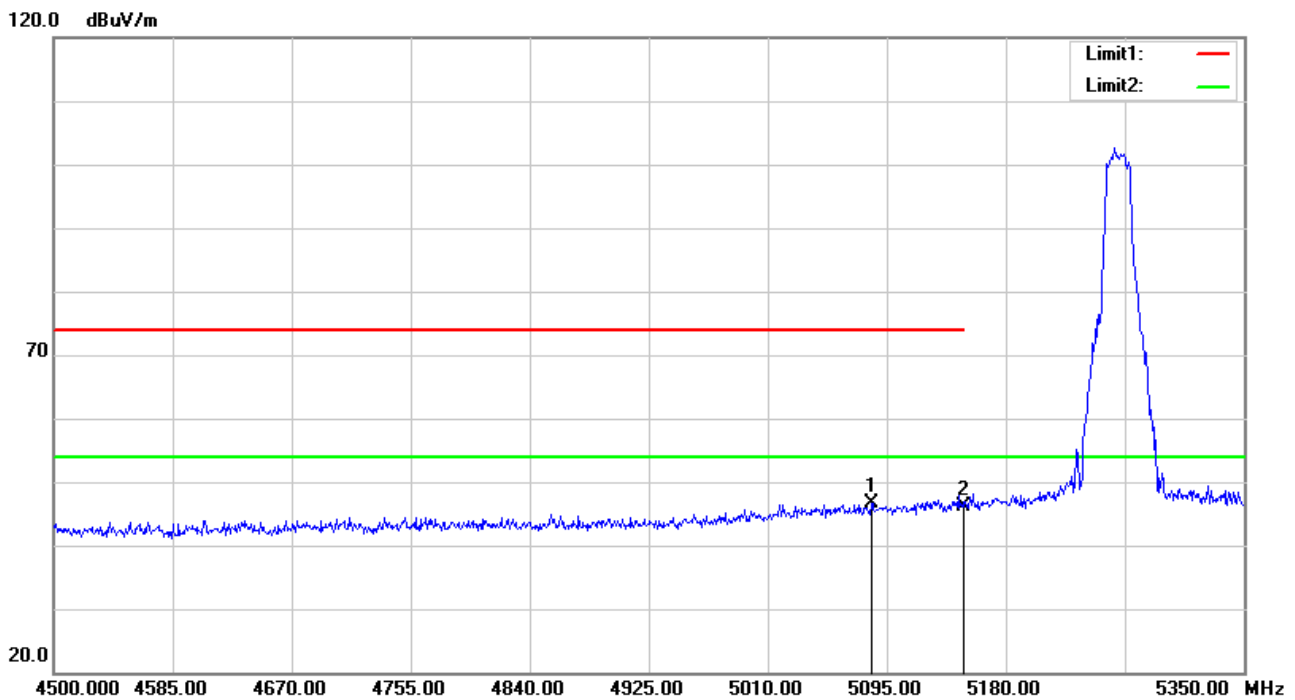
802.11a-H-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	51.45	-5.23	46.22	74.00	-27.78	peak
2	5371.000	52.64	-5.24	47.40	74.00	-26.60	peak

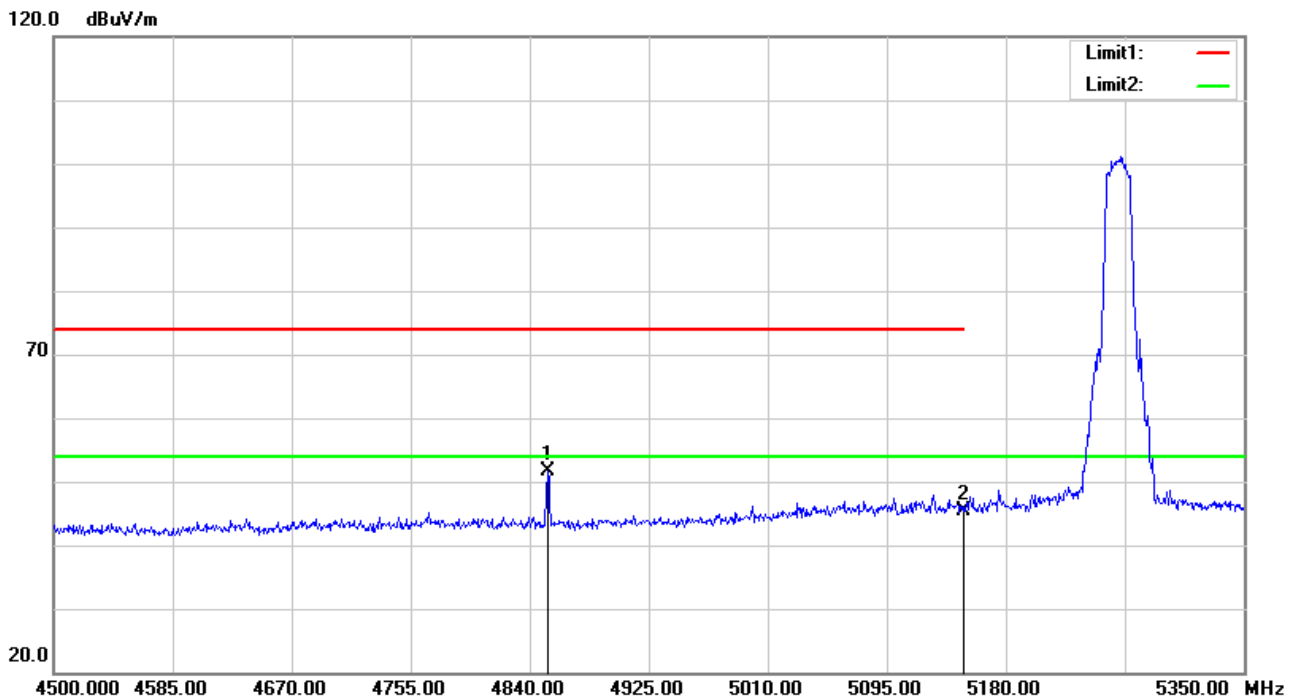
MIMO

802.11n20-L-H



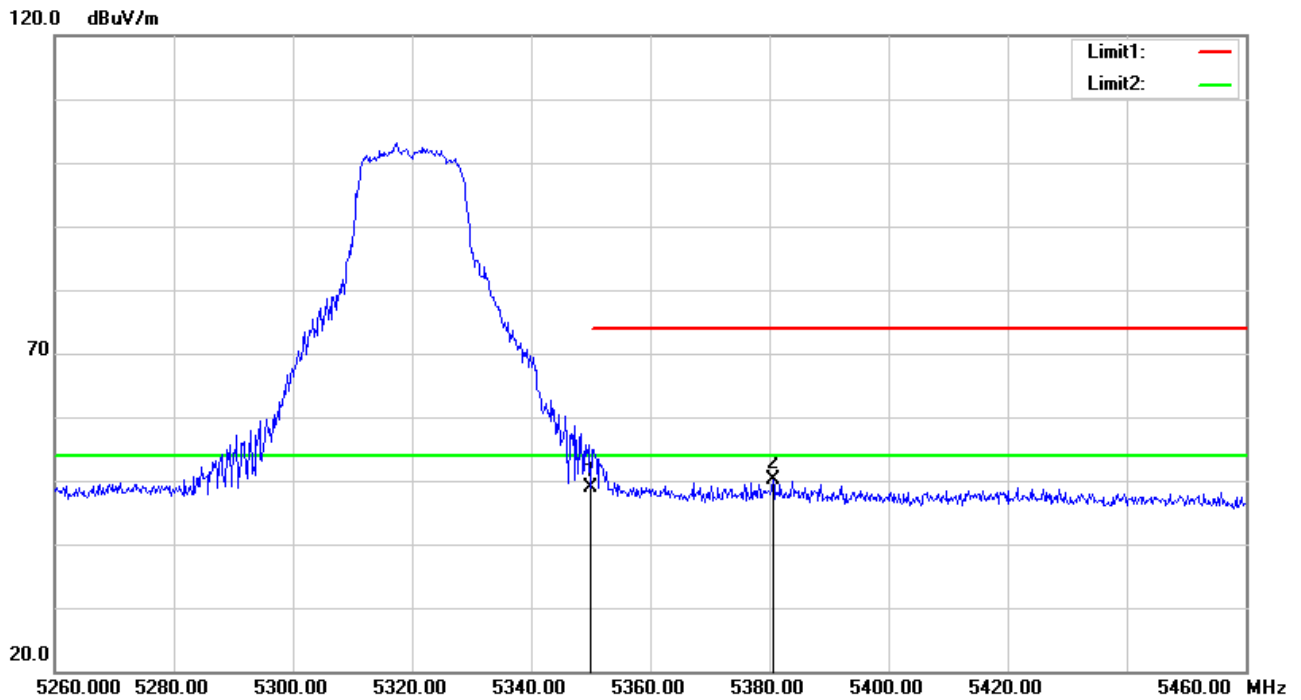
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5083.950	52.48	-5.81	46.67	74.00	-27.33	peak
2	5150.000	51.95	-5.73	46.22	74.00	-27.78	peak

802.11n20-L-V



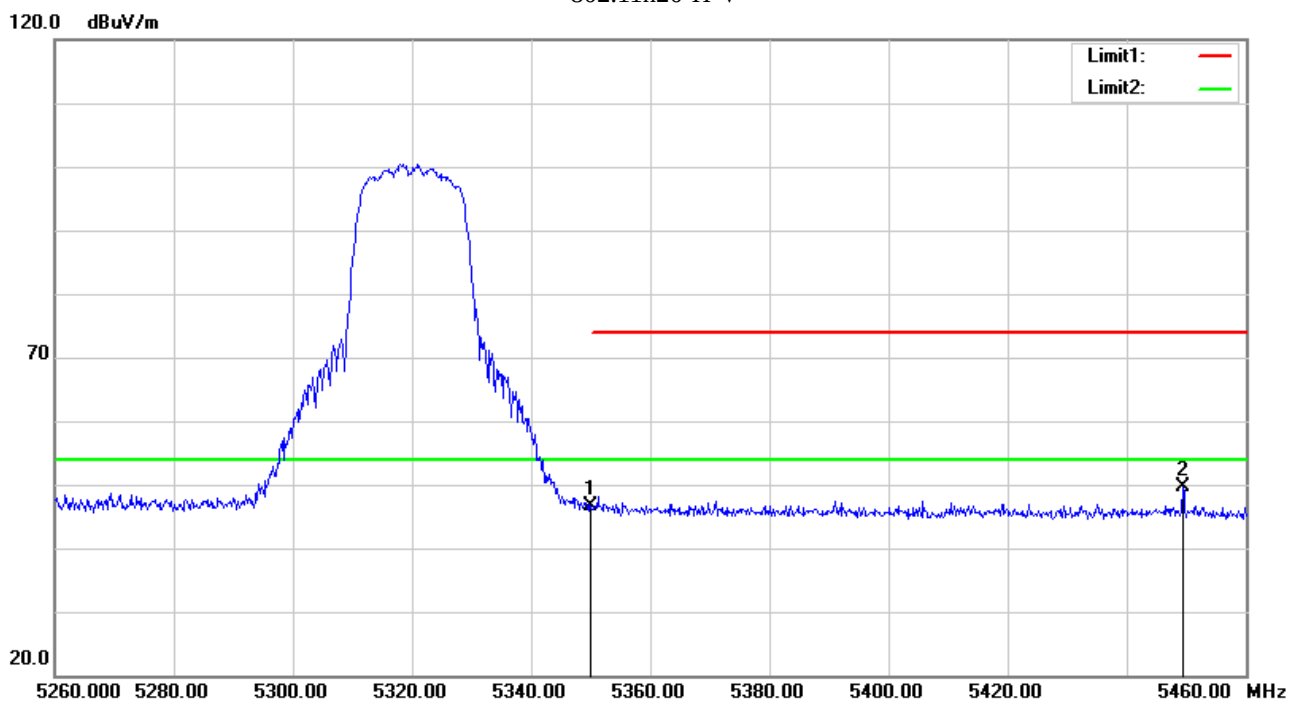
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4852.750	58.59	-7.02	51.57	74.00	-22.43	peak
2	5150.000	51.08	-5.73	45.35	74.00	-28.65	peak

802.11n20-H-H



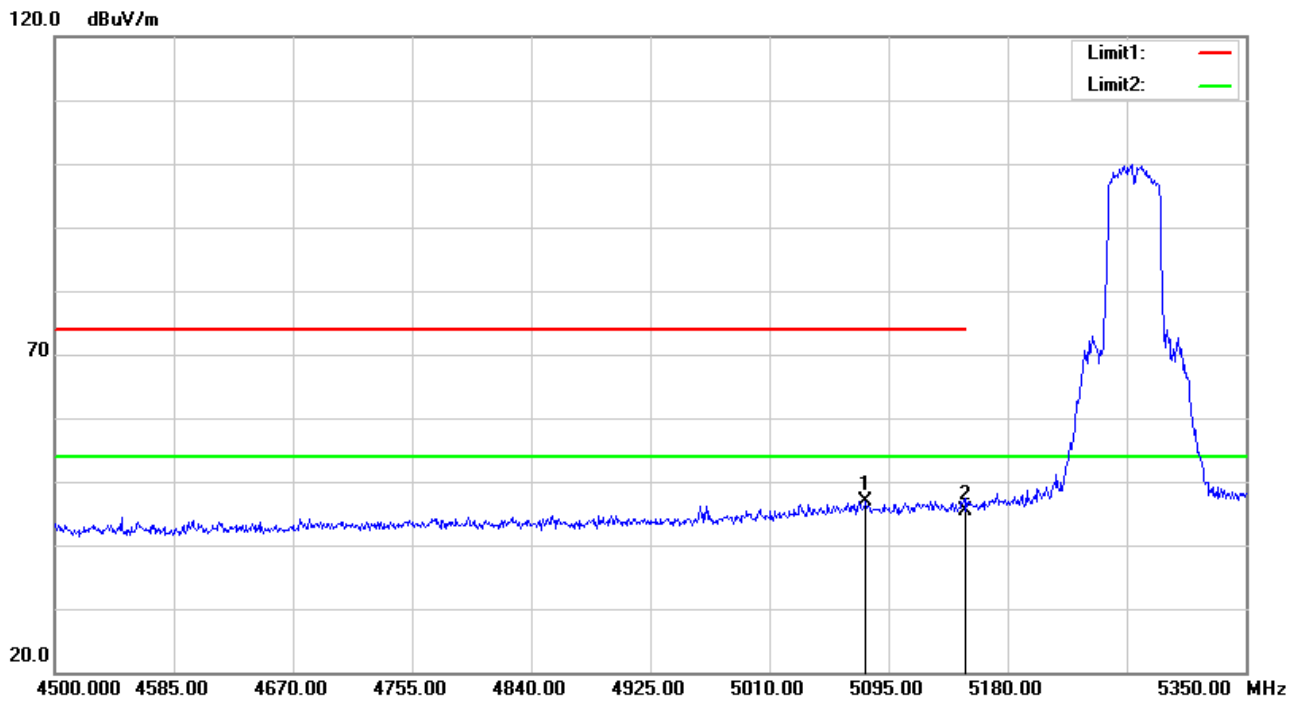
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	54.03	-5.23	48.80	74.00	-25.20	peak
2	5380.600	55.27	-5.25	50.02	74.00	-23.98	peak

802.11n20-H-V



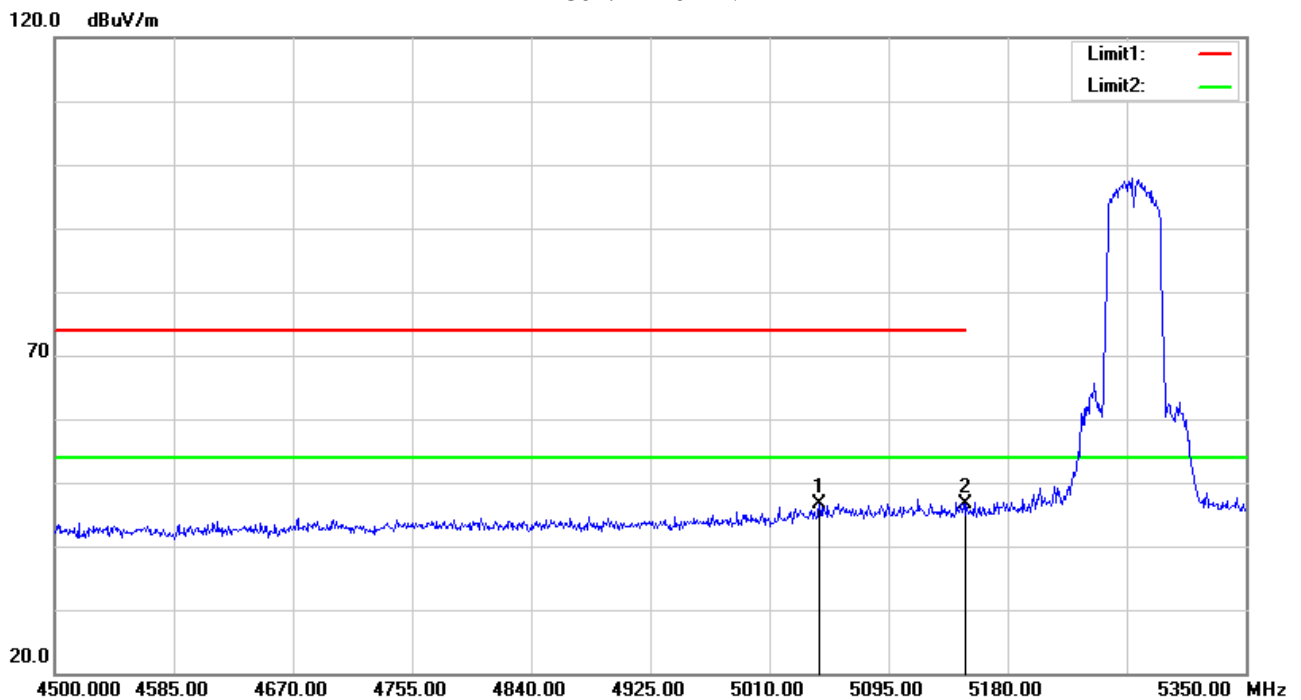
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	51.95	-5.23	46.72	74.00	-27.28	peak
2	5449.400	54.81	-5.14	49.67	74.00	-24.33	peak

802.11n40-L-H



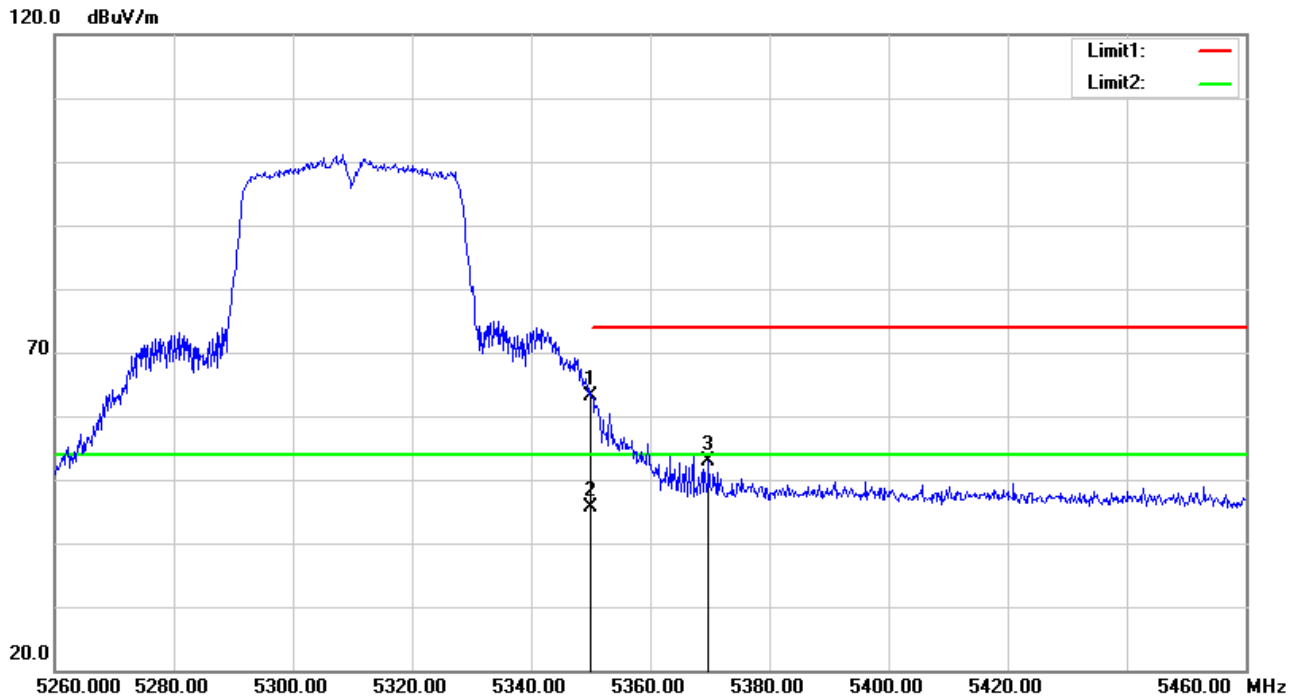
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5078.850	52.71	-5.84	46.87	74.00	-27.13	peak
2	5150.000	51.12	-5.73	45.39	74.00	-28.61	peak

802.11n40-L-V



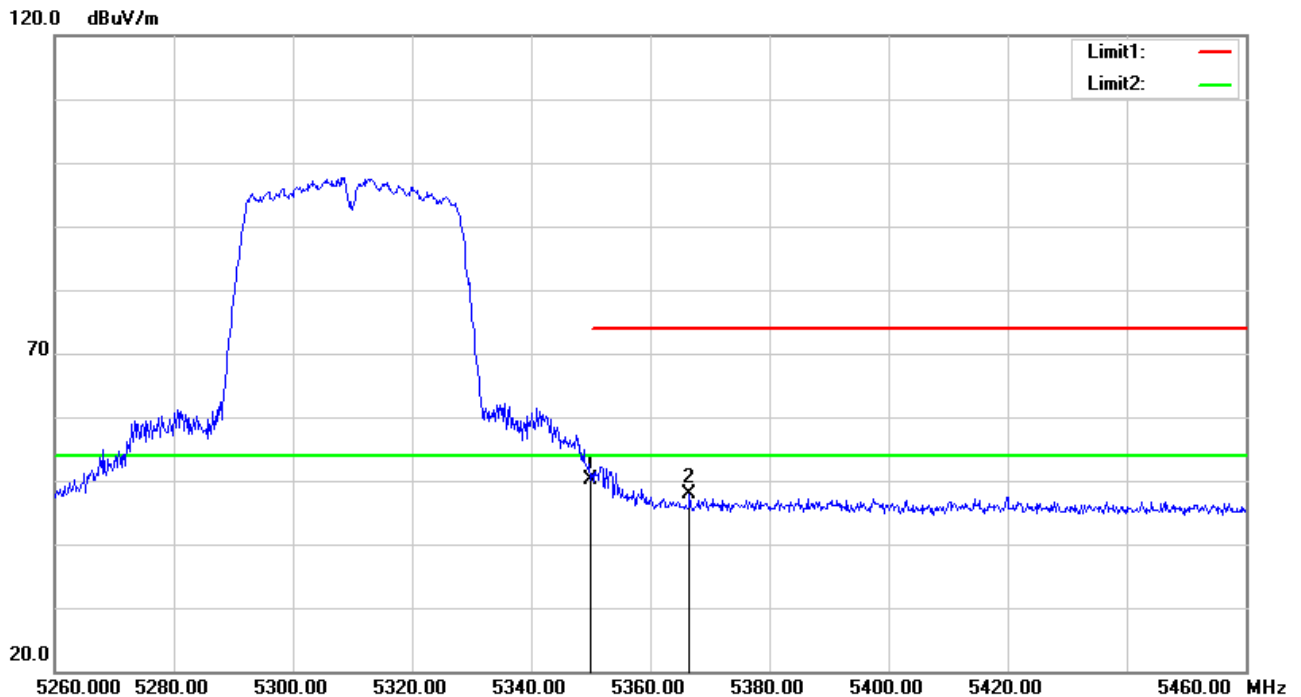
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5045.700	52.50	-5.98	46.52	74.00	-27.48	peak
2	5150.000	52.35	-5.73	46.62	74.00	-27.38	peak

802.11n40-H-H



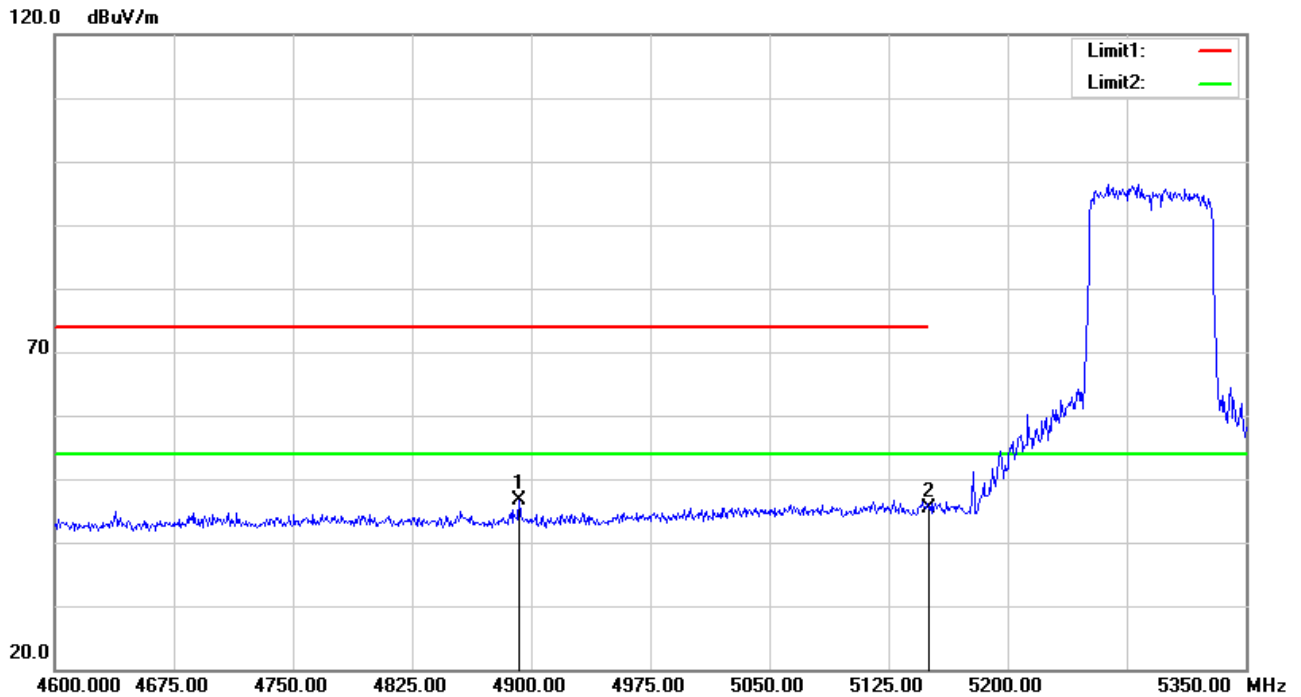
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	68.37	-5.23	63.14	74.00	-10.86	peak
2	5350.000	50.85	-5.23	45.62	54.00	-8.38	AVG
3	5369.800	58.03	-5.23	52.80	74.00	-21.20	peak

802.11n40-H-V



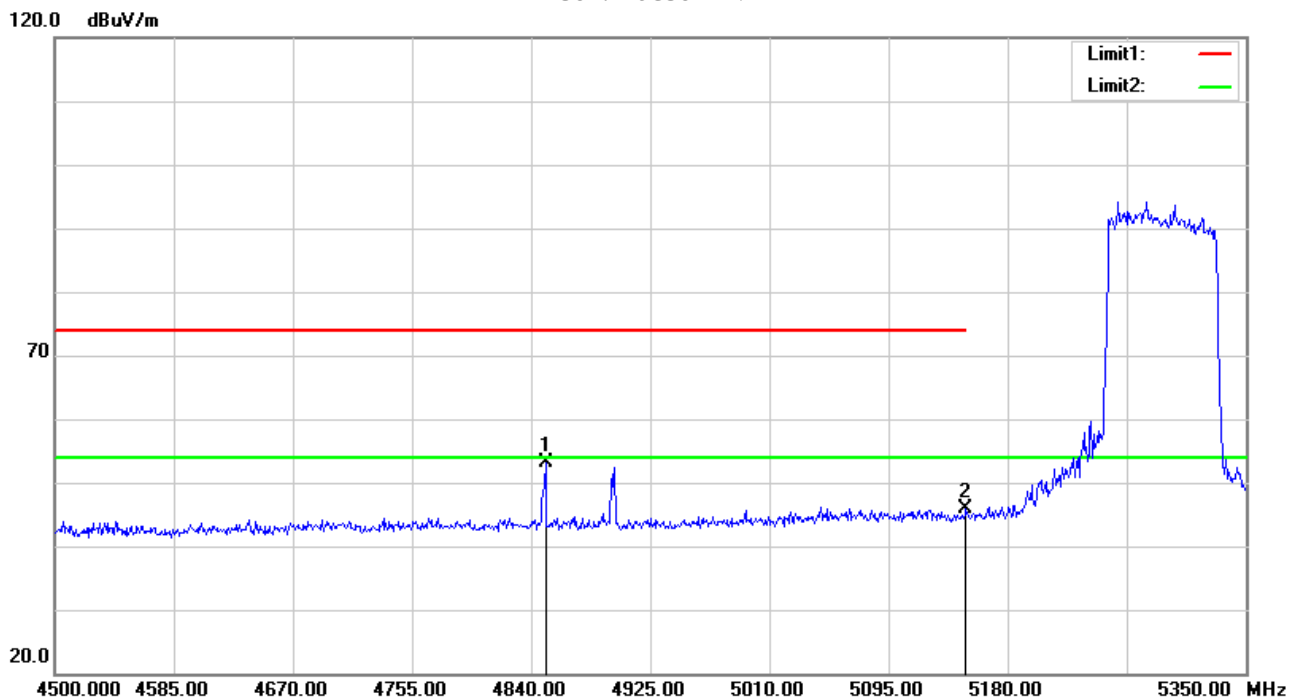
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	55.24	-5.23	50.01	74.00	-23.99	peak
2	5366.600	53.16	-5.24	47.92	74.00	-26.08	peak

802.11ac80-L-H



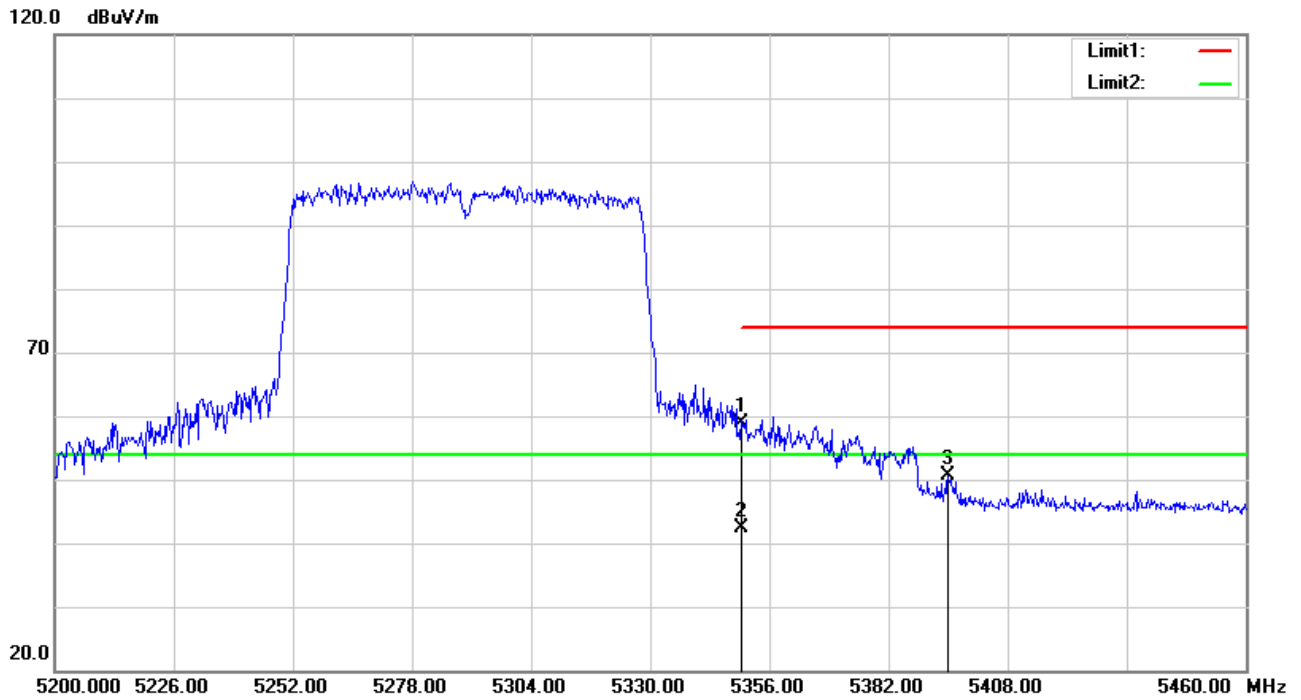
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4892.500	53.53	-6.86	46.67	74.00	-27.33	peak
2	5150.000	51.20	-5.73	45.47	74.00	-28.53	peak

802.11ac80-L-V



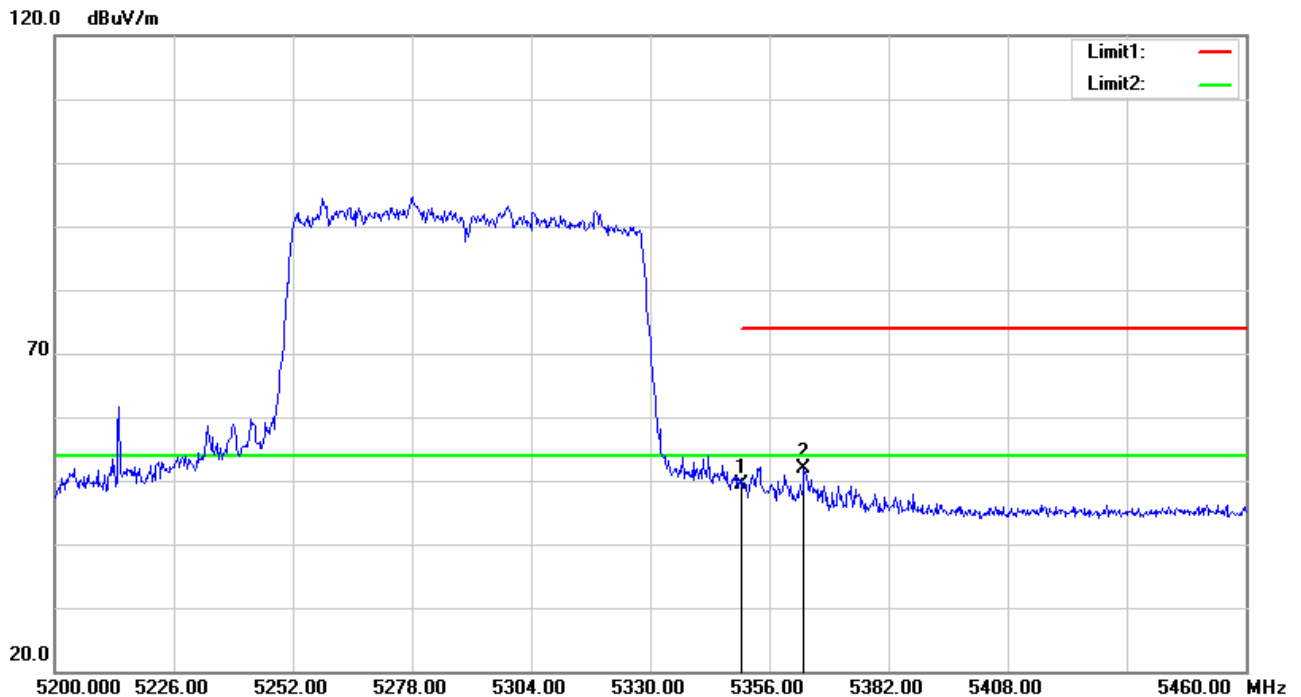
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4850.200	60.22	-7.03	53.19	74.00	-20.81	peak
2	5150.000	51.59	-5.73	45.86	74.00	-28.14	peak

802.11ac80-H-H



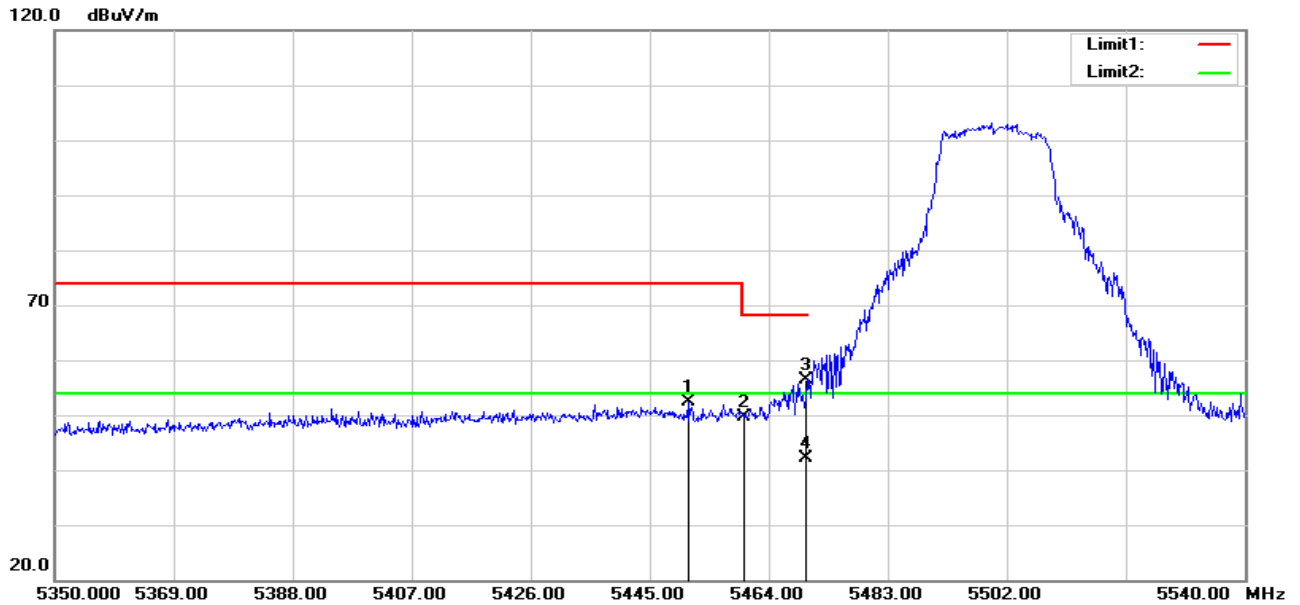
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	64.19	-5.23	58.96	74.00	-15.04	peak
2	5350.000	47.58	-5.23	42.35	54.00	-11.65	AVG
3	5395.000	55.88	-5.24	50.64	74.00	-23.36	peak

802.11ac80-H-V



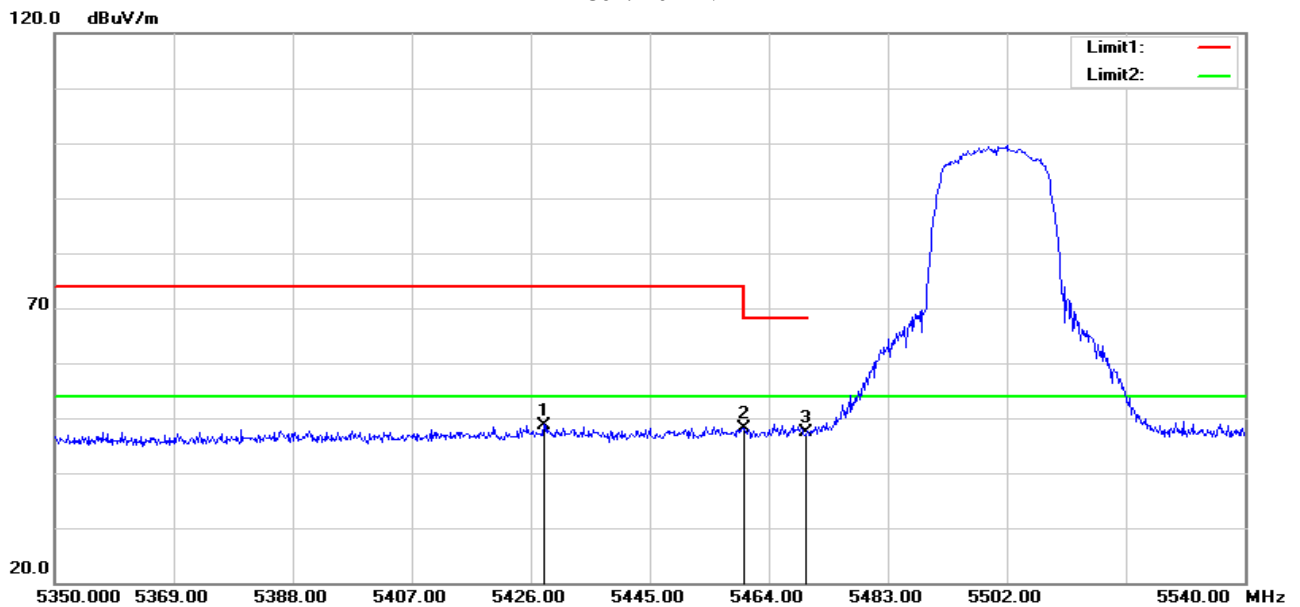
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	54.71	-5.23	49.48	74.00	-24.52	peak
2	5363.540	57.17	-5.24	51.93	74.00	-22.07	peak

5.6G
SISO
802.11a-L-H



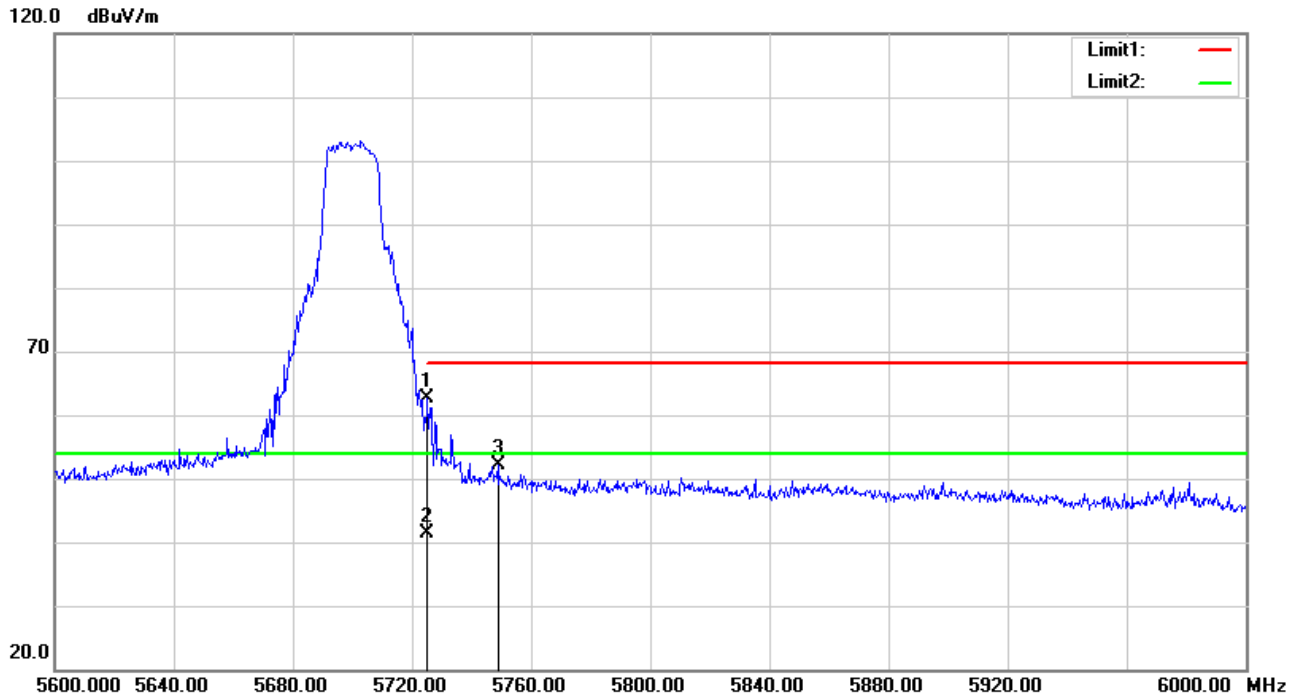
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5451.080	57.59	-5.13	52.46	74.00	-21.54	peak
2	5460.000	54.71	-5.11	49.60	68.20	-18.60	peak
3	5470.000	61.37	-5.09	56.28	68.20	-11.92	peak
4	5470.000	47.21	-5.09	42.12	54.00	-11.88	AVG

802.11a-L-V

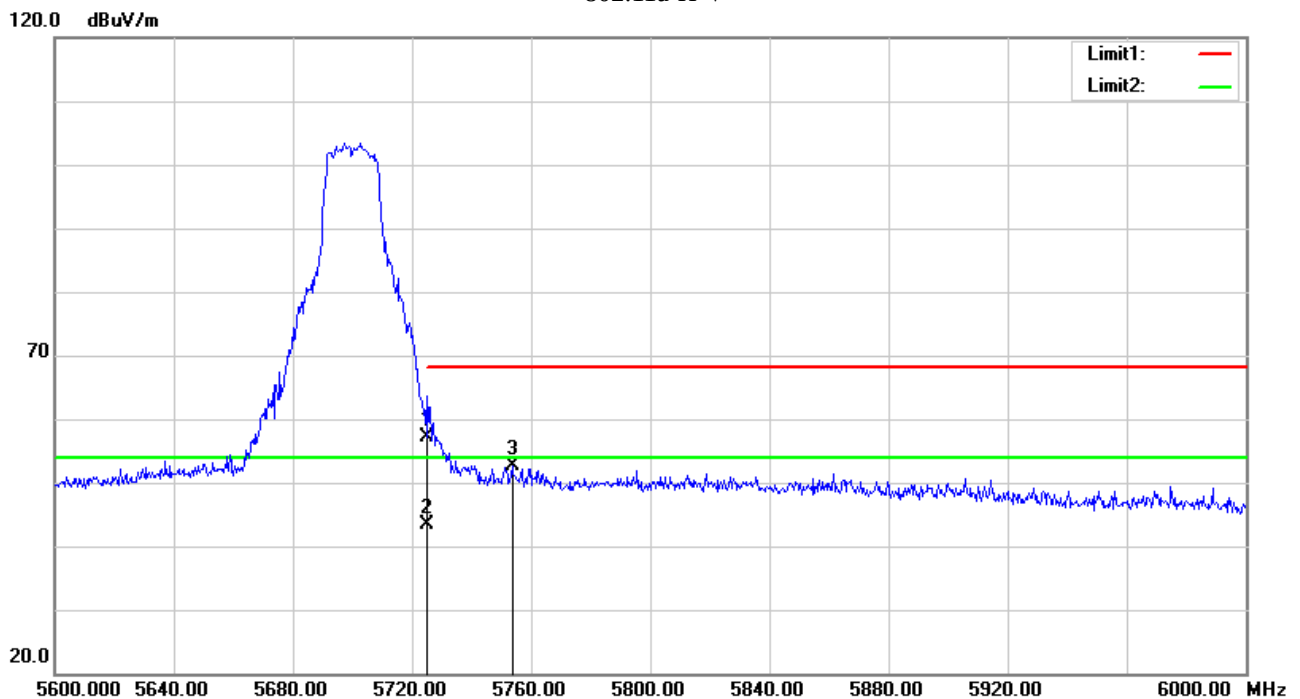


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5428.090	53.94	-5.19	48.75	74.00	-25.25	peak
2	5460.000	53.29	-5.11	48.18	68.20	-20.02	peak
3	5470.000	52.51	-5.09	47.42	68.20	-20.78	peak

802.11a-H-H



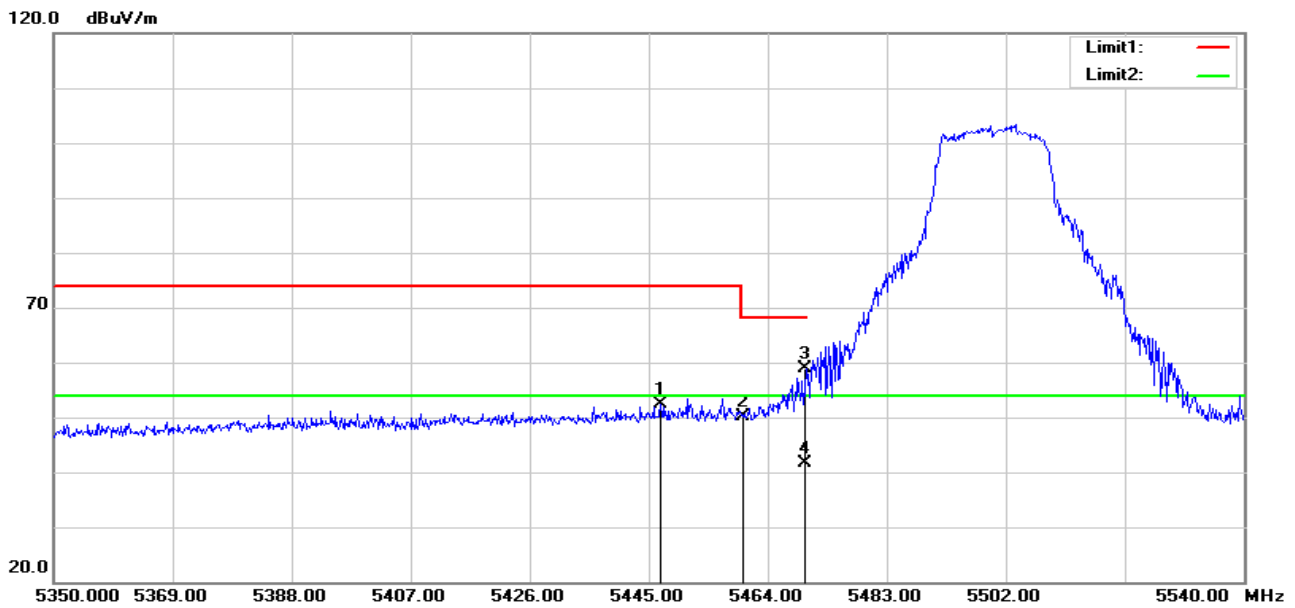
802.11a-H-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	61.72	-4.57	57.15	68.20	-11.05	peak
2	5725.000	47.83	-4.57	43.26	54.00	-10.74	AVG
3	5753.600	57.13	-4.47	52.66	68.20	-15.54	peak

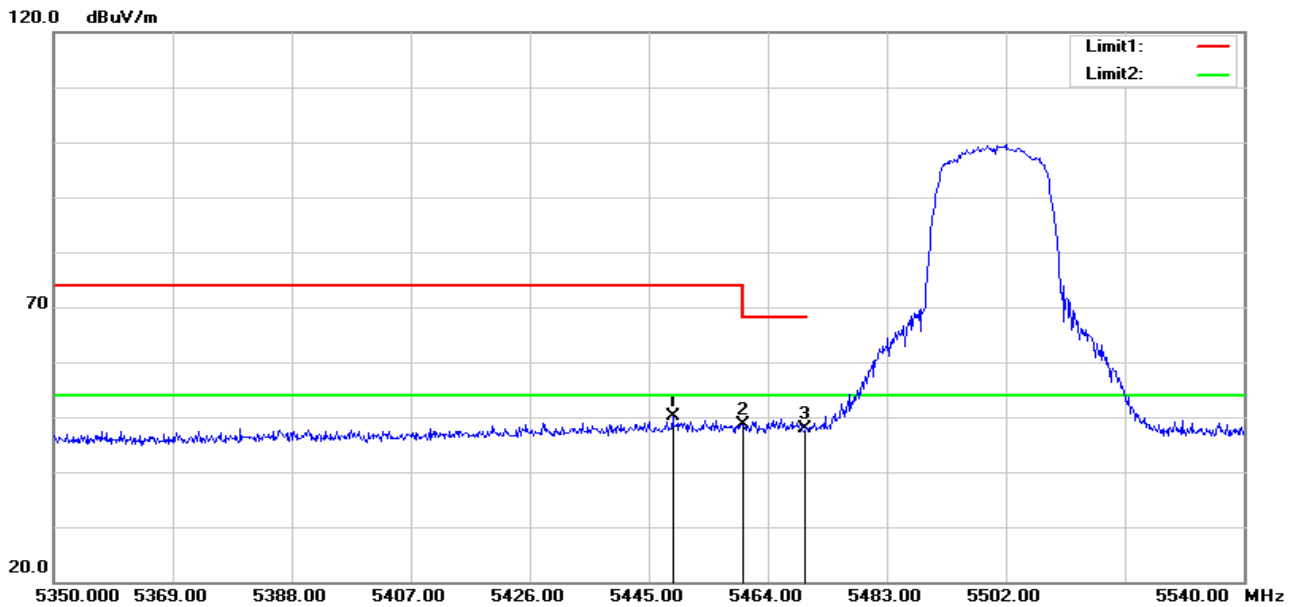
MIMO

802.11n20-L-H



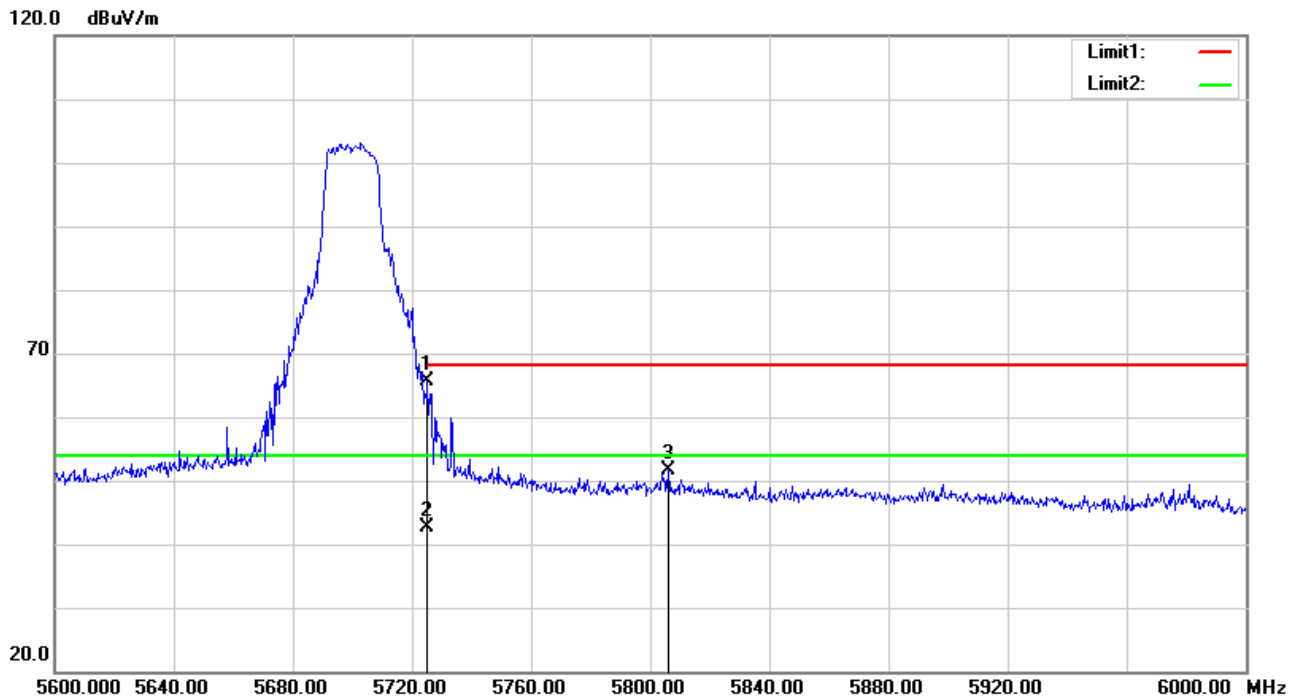
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5446.900	57.55	-5.14	52.41	74.00	-21.59	peak
2	5460.000	55.21	-5.11	50.10	68.20	-18.10	peak
3	5470.000	63.87	-5.09	58.78	68.20	-9.42	peak
4	5470.000	46.73	-5.09	41.64	54.00	-12.36	AVG

802.11n20-L-V



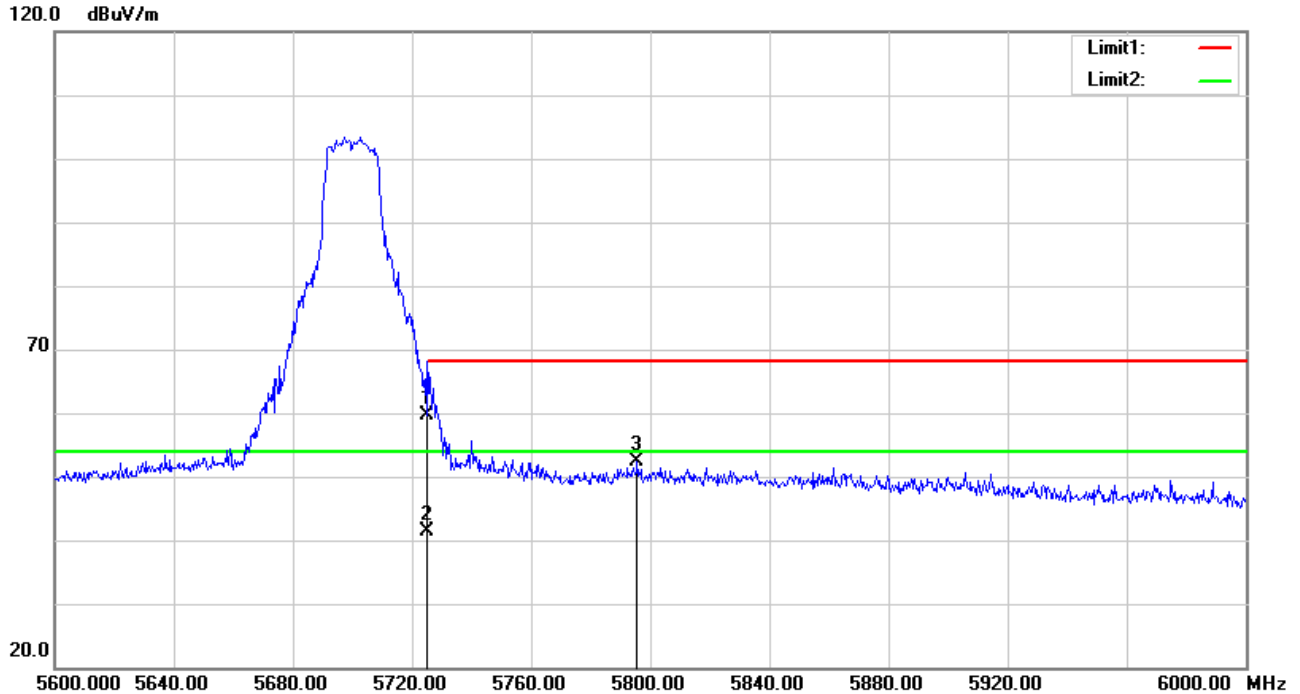
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5448.800	55.21	-5.14	50.07	74.00	-23.93	peak
2	5460.000	53.79	-5.11	48.68	68.20	-19.52	peak
3	5470.000	53.01	-5.09	47.92	68.20	-20.28	peak

802.11n20-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	70.30	-4.57	65.73	68.20	-2.47	peak
2	5725.000	47.23	-4.57	42.66	54.00	-11.34	AVG
3	5806.000	56.03	-4.29	51.74	68.20	-16.46	peak

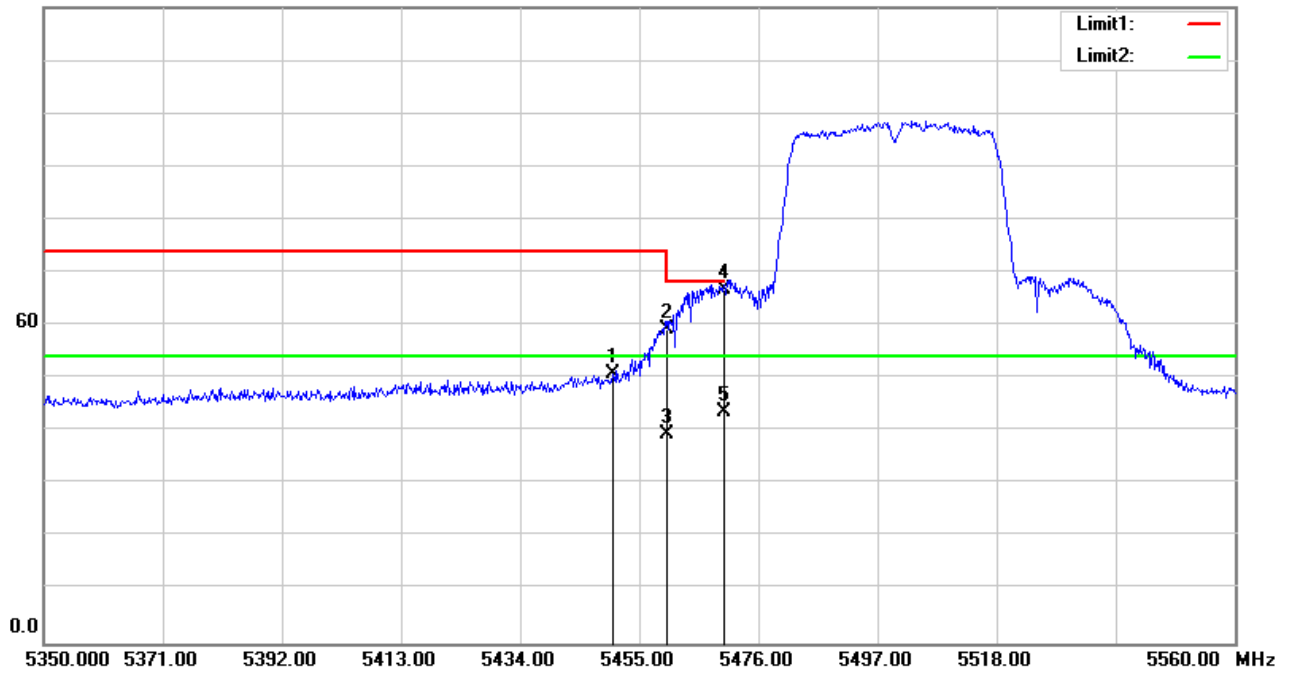
802.11n20-H-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	64.22	-4.57	59.65	68.20	-8.55	peak
2	5725.000	45.92	-4.57	41.35	54.00	-12.65	AVG
3	5795.600	56.64	-4.34	52.30	68.20	-15.90	peak

802.11n40-L-H

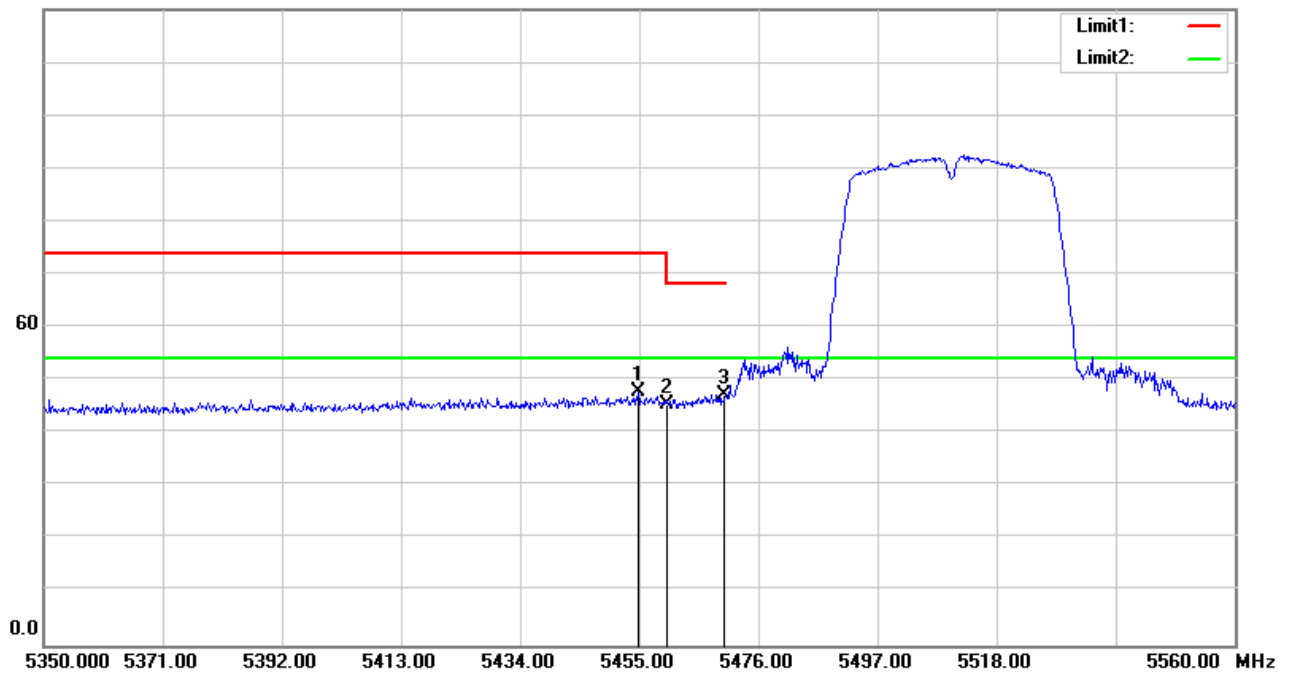
120.0 dBuV/m



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5450.380	55.98	-5.13	50.85	74.00	-23.15	peak
2	5460.000	64.39	-5.11	59.28	68.20	-8.92	peak
3	5460.000	44.45	-5.11	39.34	54.00	-14.66	AVG
4	5470.000	71.95	-5.09	66.86	68.20	-1.34	peak
5	5470.000	48.63	-5.09	43.54	54.00	-10.46	AVG

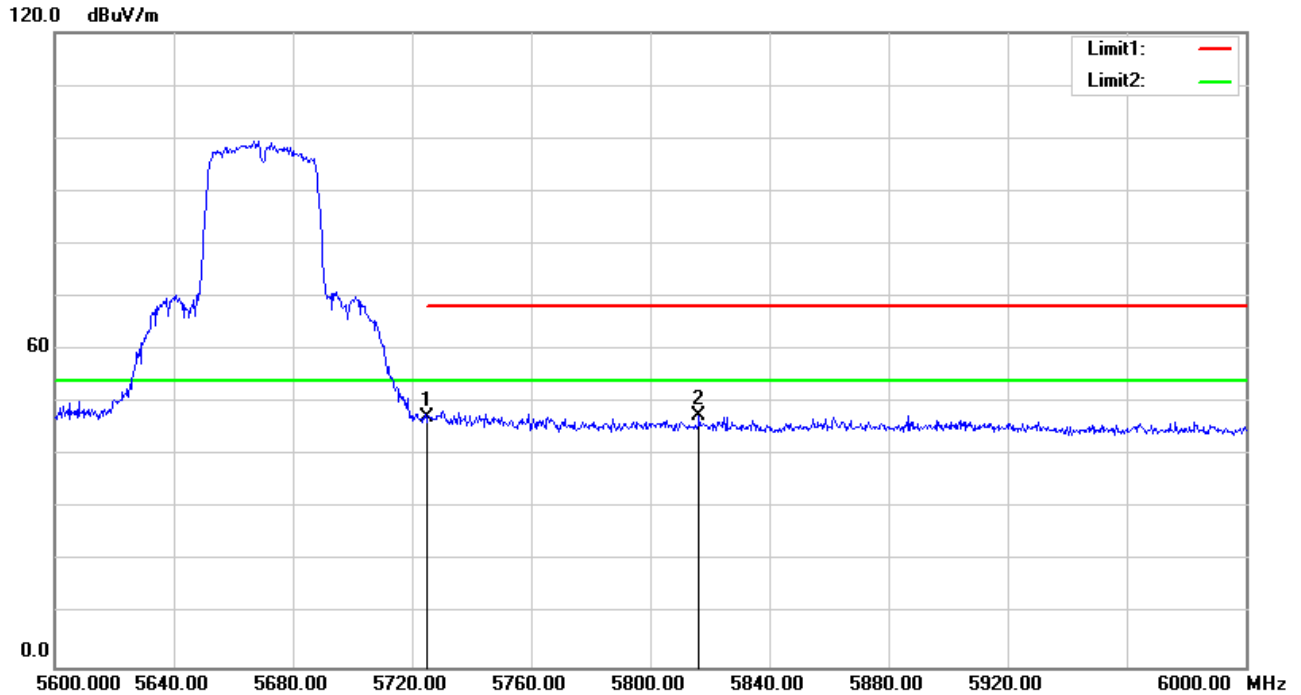
802.11n40-L-V

120.0 dBuV/m



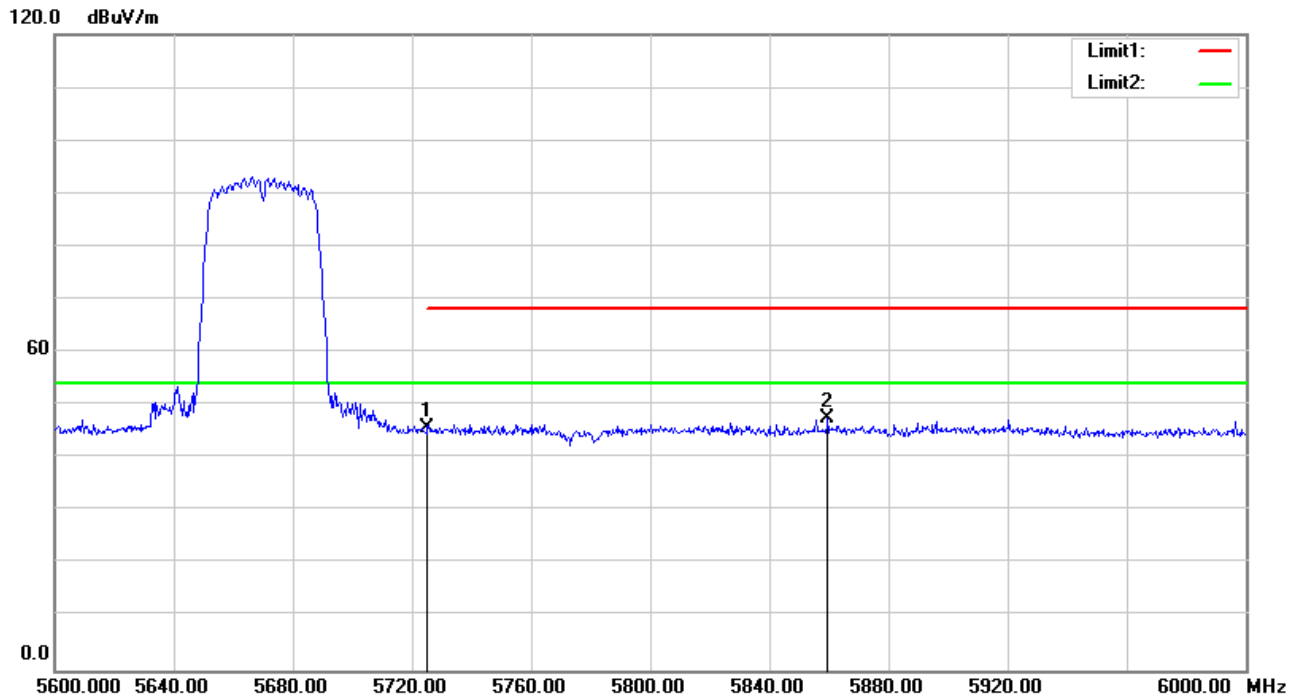
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5454.790	52.91	-5.13	47.78	74.00	-26.22	peak
2	5460.000	50.65	-5.11	45.54	68.20	-22.66	peak
3	5470.000	52.43	-5.09	47.34	68.20	-20.86	peak

802.11n40-H-H



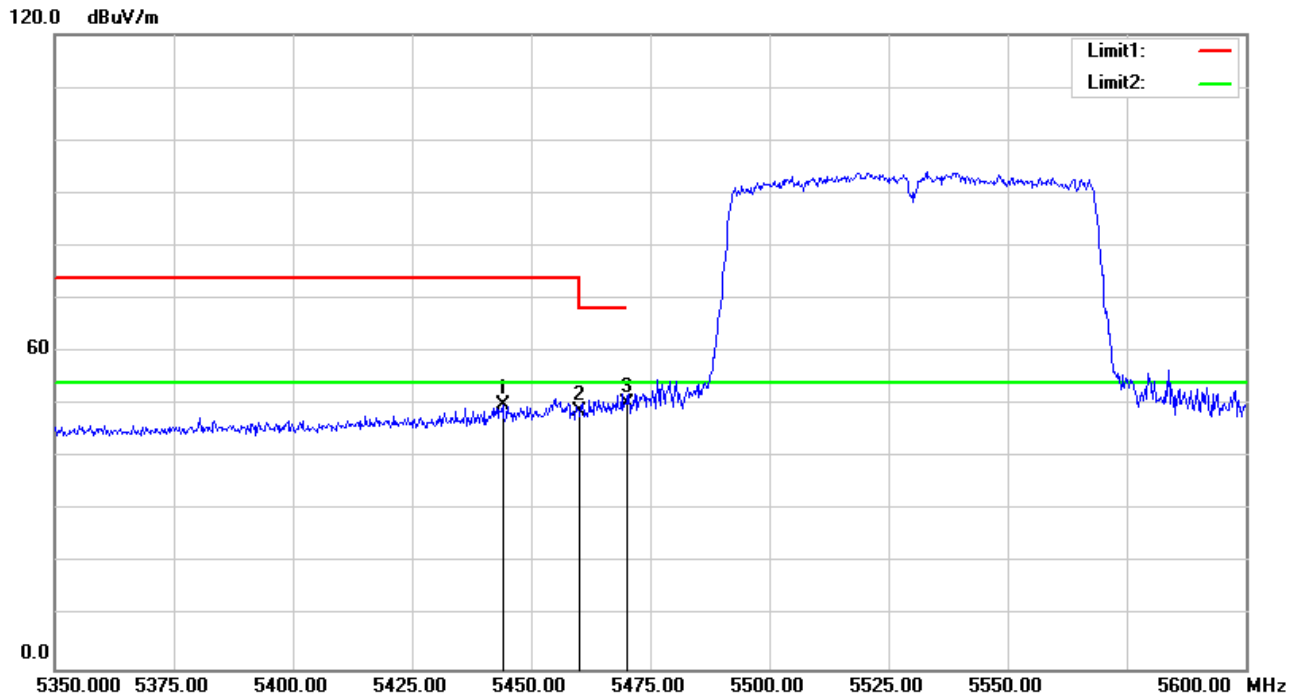
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	51.95	-4.57	47.38	68.20	-20.82	peak
2	5816.400	51.77	-4.24	47.53	68.20	-20.67	peak

802.11n40-H-V



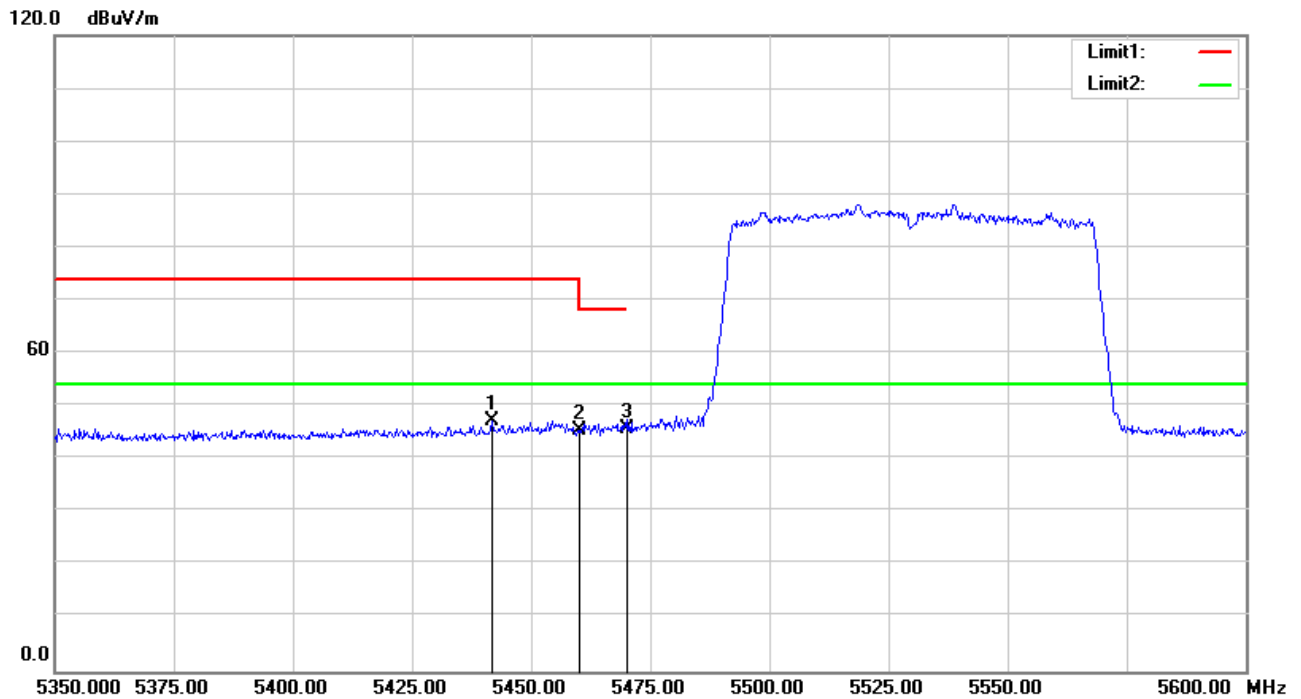
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	50.47	-4.57	45.90	68.20	-22.30	peak
2	5859.600	51.48	-4.05	47.43	68.20	-20.77	peak

802.11ac80-L-H



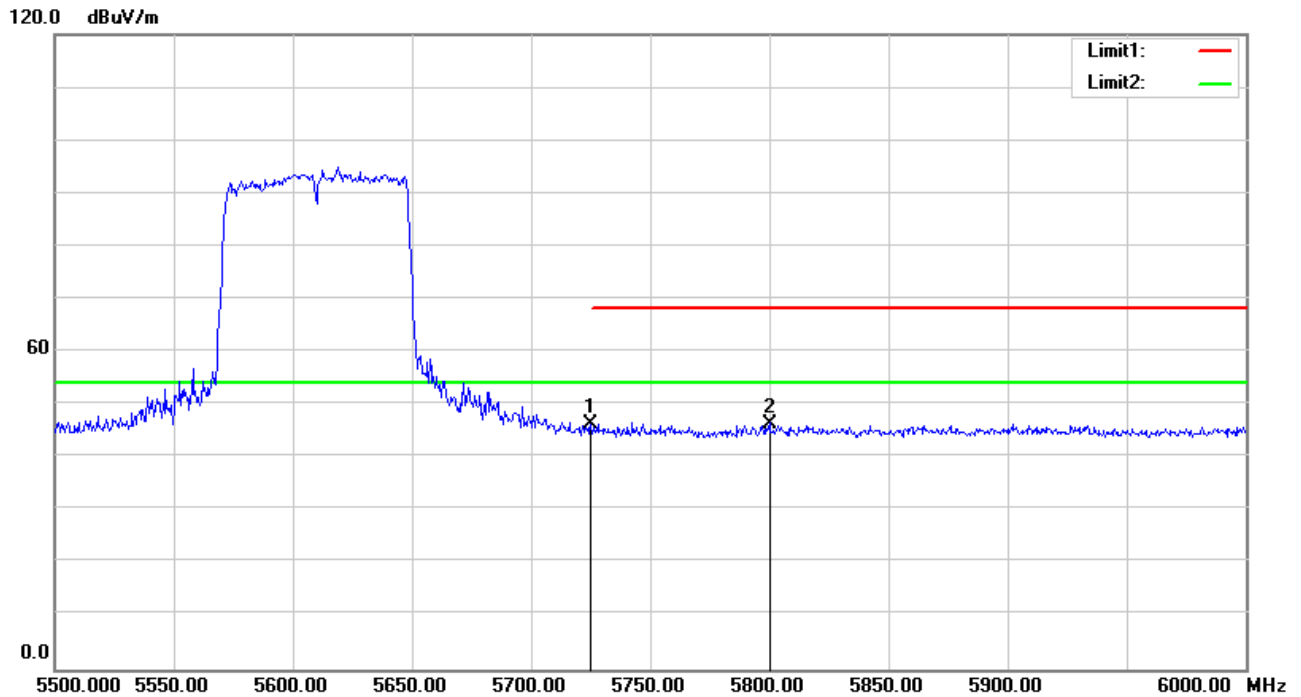
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5444.000	55.17	-5.14	50.03	74.00	-23.97	peak
2	5460.000	53.91	-5.11	48.80	68.20	-19.40	peak
3	5470.000	55.20	-5.09	50.11	68.20	-18.09	peak

802.11ac80-L-V



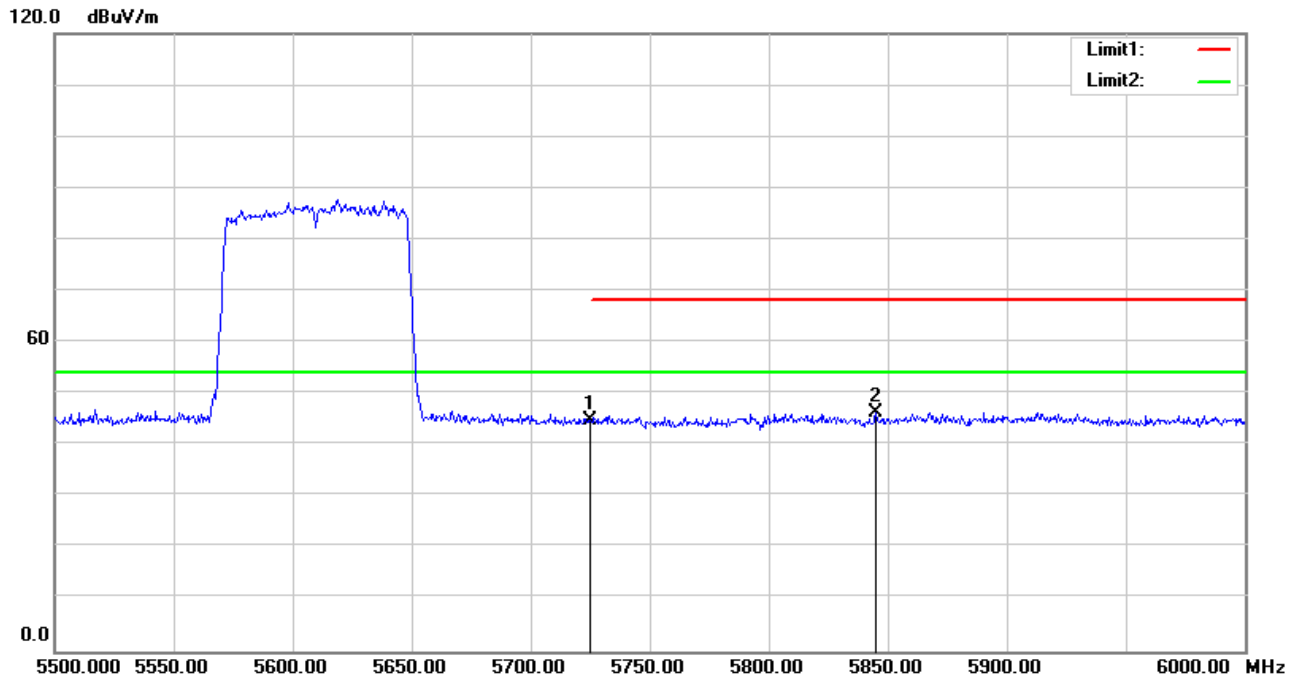
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5441.750	52.50	-5.16	47.34	74.00	-26.66	peak
2	5460.000	50.50	-5.11	45.39	68.20	-22.81	peak
3	5470.000	50.71	-5.09	45.62	68.20	-22.58	peak

802.11ac80-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	50.91	-4.57	46.34	68.20	-21.86	peak
2	5800.000	50.82	-4.32	46.50	68.20	-21.70	peak

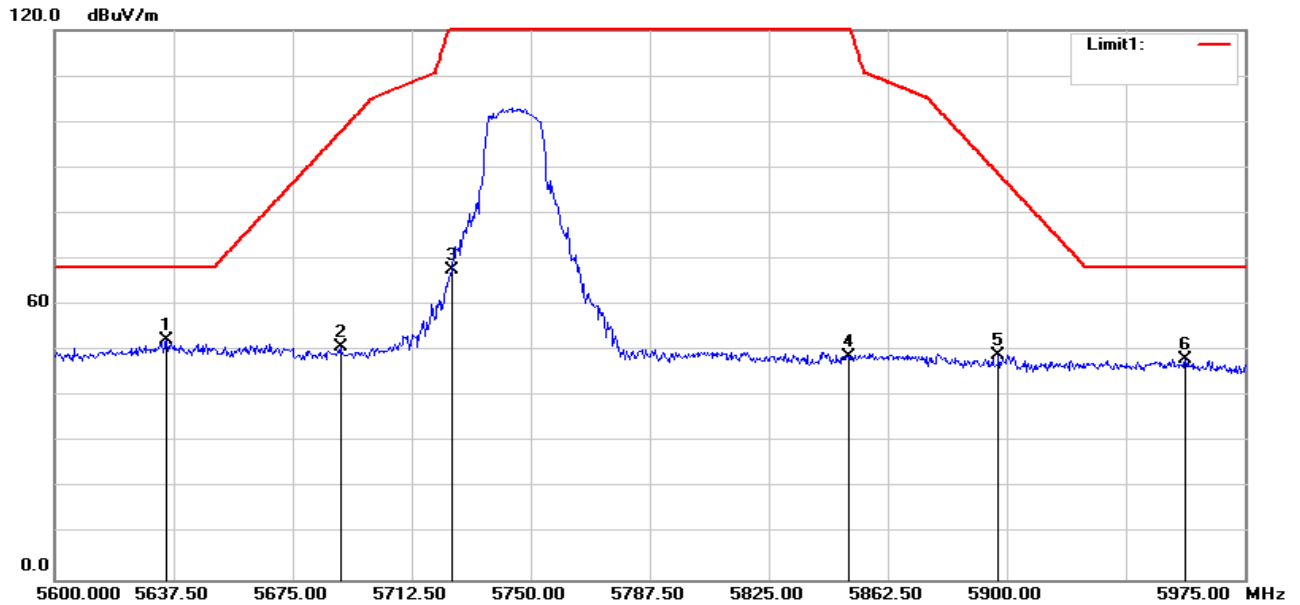
802.11ac80-H-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	49.34	-4.57	44.77	68.20	-23.43	peak
2	5845.000	50.39	-4.12	46.27	68.20	-21.93	peak

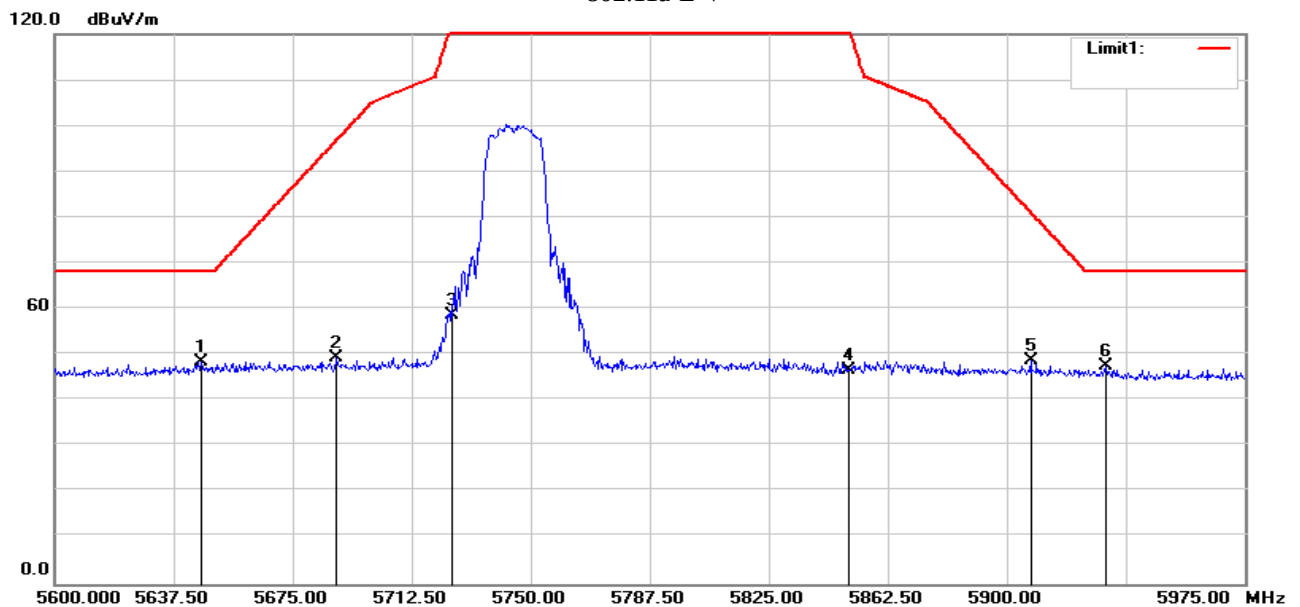
5.8G SISO

802.11a-L-H



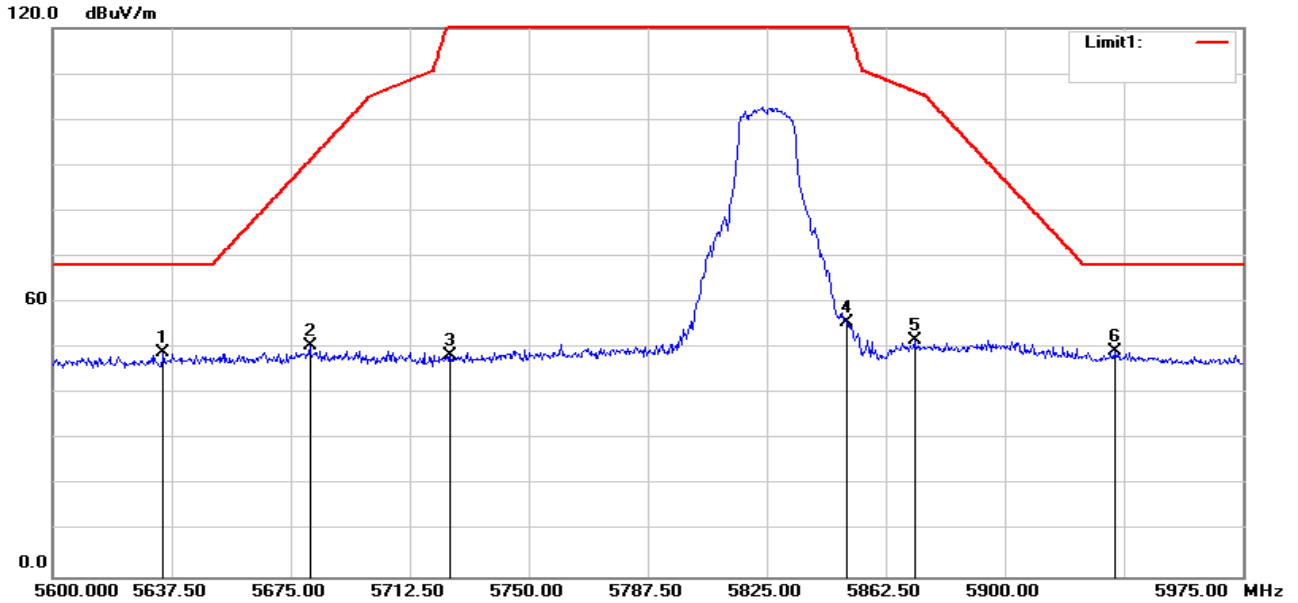
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5635.250	56.92	-4.68	52.24	68.20	-15.96	peak
2	5690.000	55.55	-4.67	50.88	97.80	-46.92	peak
3	5725.000	72.27	-4.57	67.70	122.20	-54.50	peak
4	5850.000	52.98	-4.10	48.88	122.20	-73.32	peak
5	5897.375	52.96	-3.89	49.07	88.64	-39.57	peak
6	5956.250	52.24	-3.98	48.26	68.20	-19.94	peak

802.11a-L-V



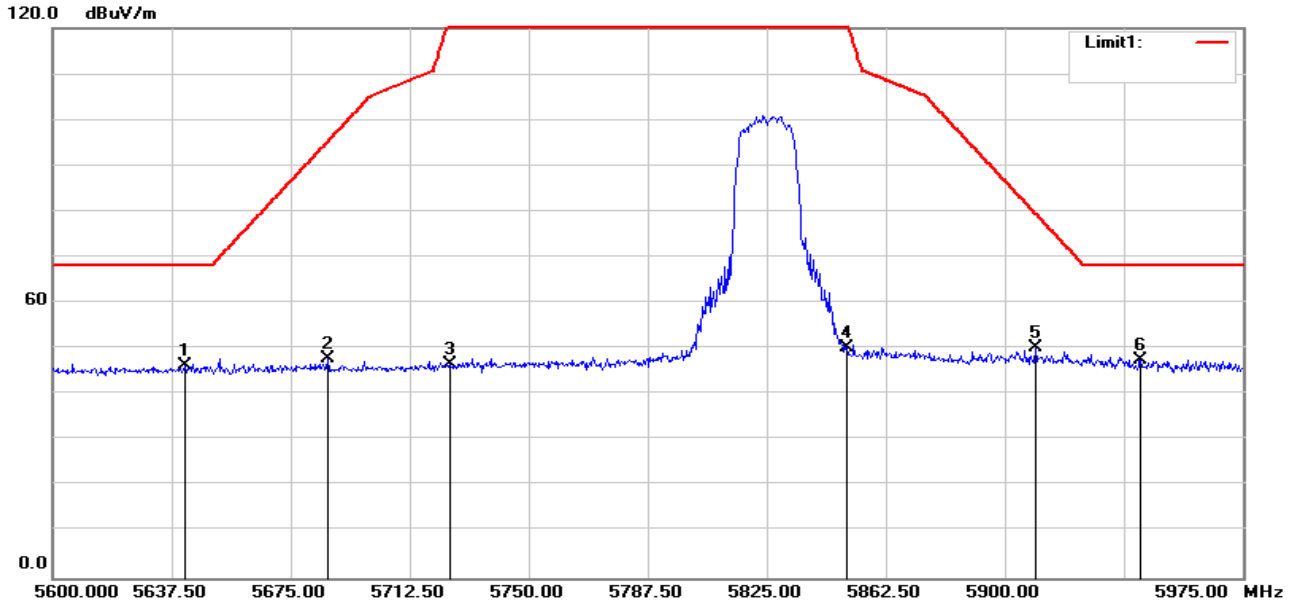
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5646.125	53.24	-4.69	48.55	68.20	-19.65	peak
2	5688.875	54.11	-4.67	49.44	96.97	-47.53	peak
3	5725.000	63.31	-4.57	58.74	122.20	-63.46	peak
4	5850.000	50.85	-4.10	46.75	122.20	-75.45	peak
5	5907.500	52.60	-3.89	48.71	81.15	-32.44	peak
6	5931.125	51.45	-3.93	47.52	68.20	-20.68	peak

802.11a-H-H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5634.875	53.62	-4.68	48.94	68.20	-19.26	peak
2	5681.000	55.12	-4.67	50.45	91.14	-40.69	peak
3	5725.000	53.07	-4.57	48.50	122.20	-73.70	peak
4	5850.000	59.86	-4.10	55.76	122.20	-66.44	peak
5	5871.500	55.91	-4.01	51.90	106.18	-54.28	peak
6	5934.500	53.33	-3.93	49.40	68.20	-18.80	peak

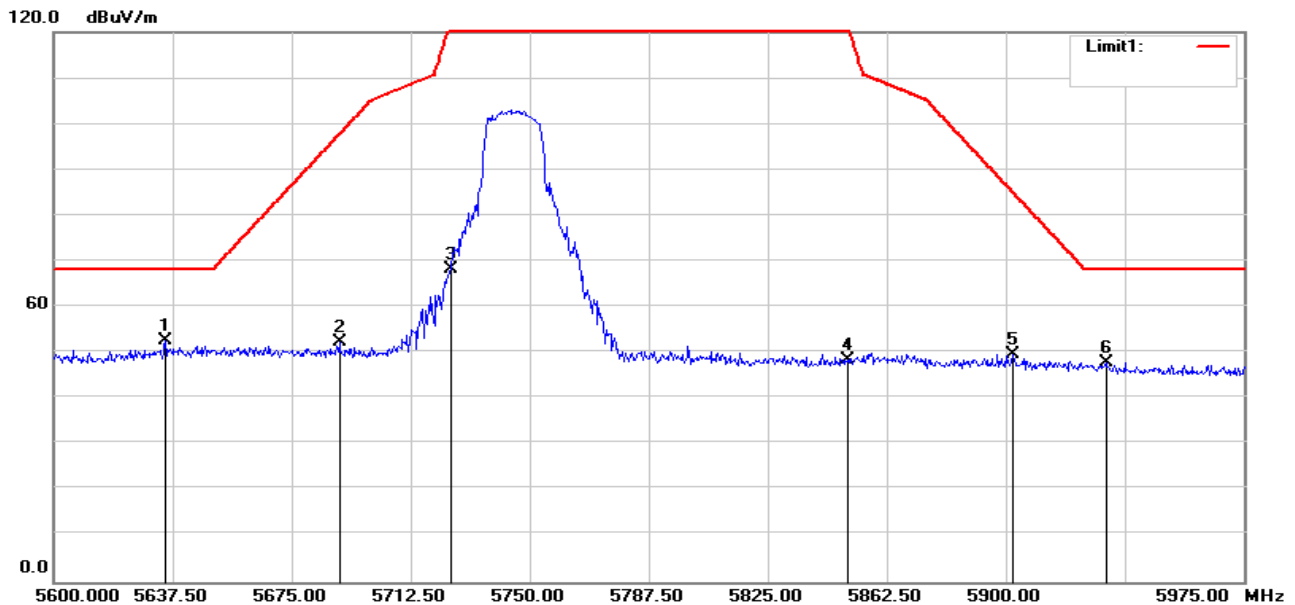
802.11a-H-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5641.625	50.89	-4.68	46.21	68.20	-21.99	peak
2	5686.625	52.65	-4.66	47.99	95.30	-47.31	peak
3	5725.000	51.27	-4.57	46.70	122.20	-75.50	peak
4	5850.000	54.24	-4.10	50.14	122.20	-72.06	peak
5	5909.750	54.01	-3.89	50.12	79.48	-29.36	peak
6	5942.750	51.57	-3.95	47.62	68.20	-20.58	peak

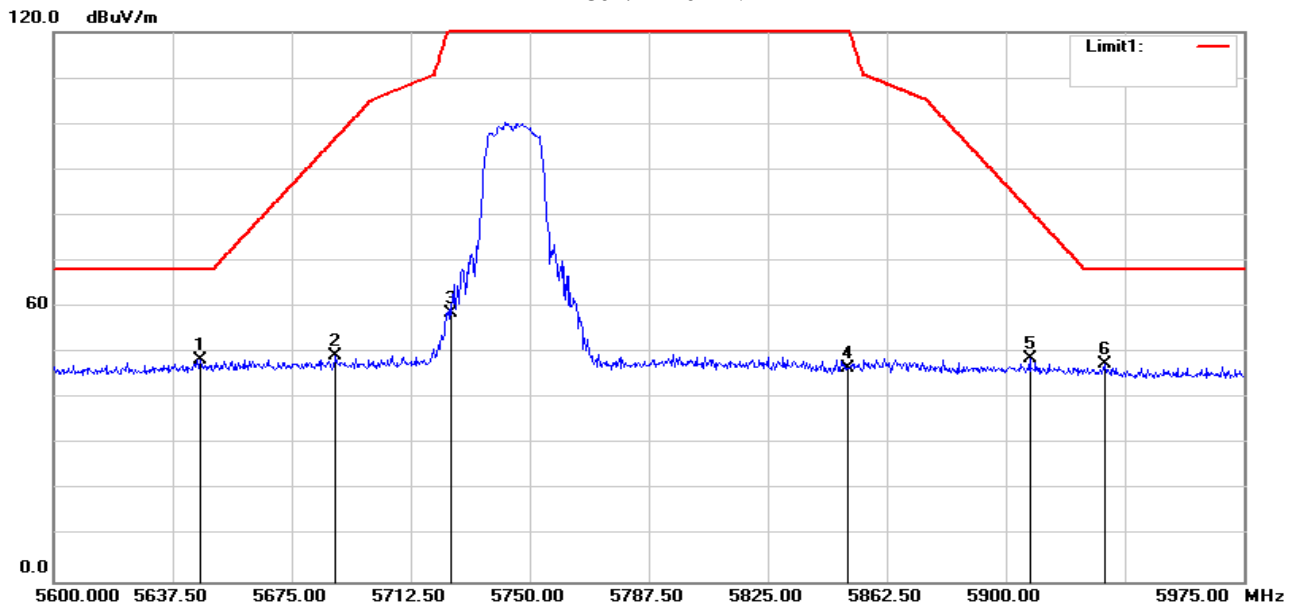
MIMO

802.11n20-L-H



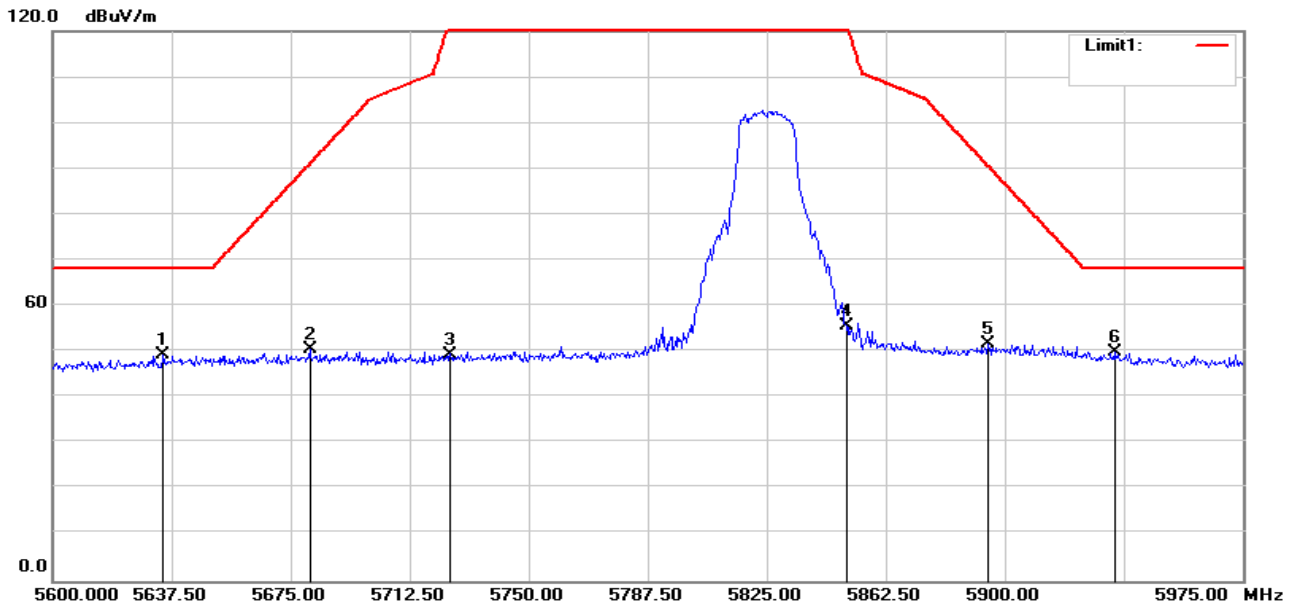
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5635.250	57.42	-4.68	52.74	68.20	-15.46	peak
2	5690.000	57.05	-4.67	52.38	97.80	-45.42	peak
3	5725.000	72.77	-4.57	68.20	122.20	-54.00	peak
4	5850.000	52.48	-4.10	48.38	122.20	-73.82	peak
5	5902.250	53.66	-3.89	49.77	85.03	-35.26	peak
6	5931.500	51.92	-3.93	47.99	68.20	-20.21	peak

802.11n20-L-V



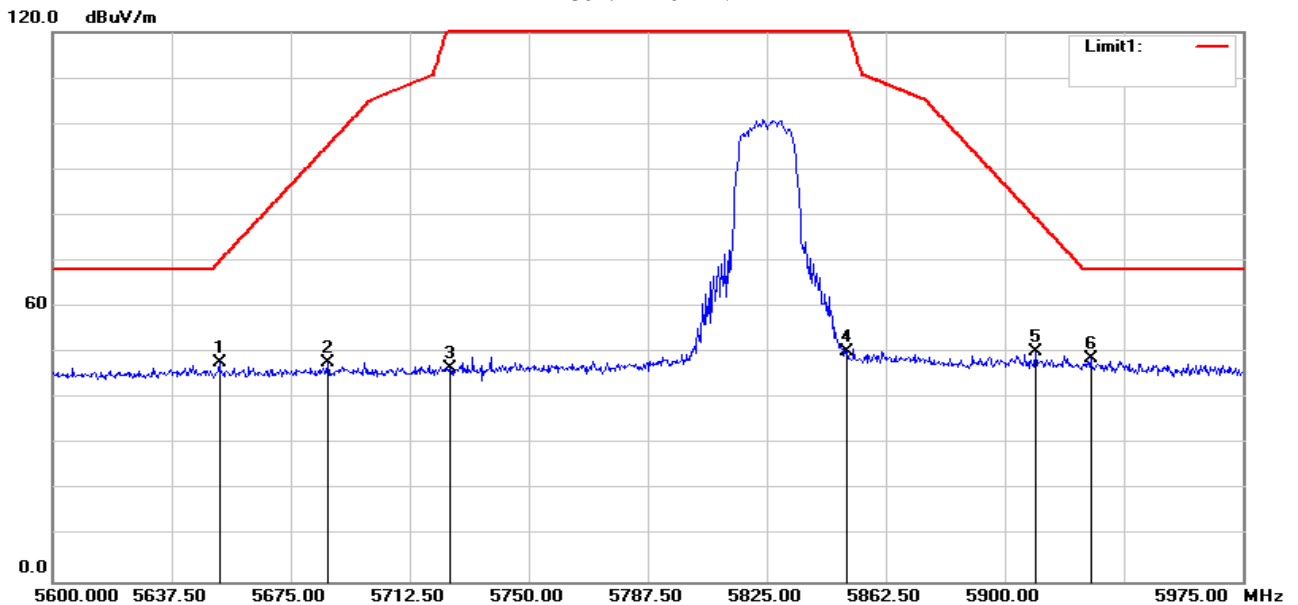
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5646.125	53.24	-4.69	48.55	68.20	-19.65	peak
2	5688.875	54.11	-4.67	49.44	96.97	-47.53	peak
3	5725.000	63.31	-4.57	58.74	122.20	-63.46	peak
4	5850.000	50.85	-4.10	46.75	122.20	-75.45	peak
5	5907.500	52.60	-3.89	48.71	81.15	-32.44	peak
6	5931.125	51.45	-3.93	47.52	68.20	-20.68	peak

802.11n20-H-H



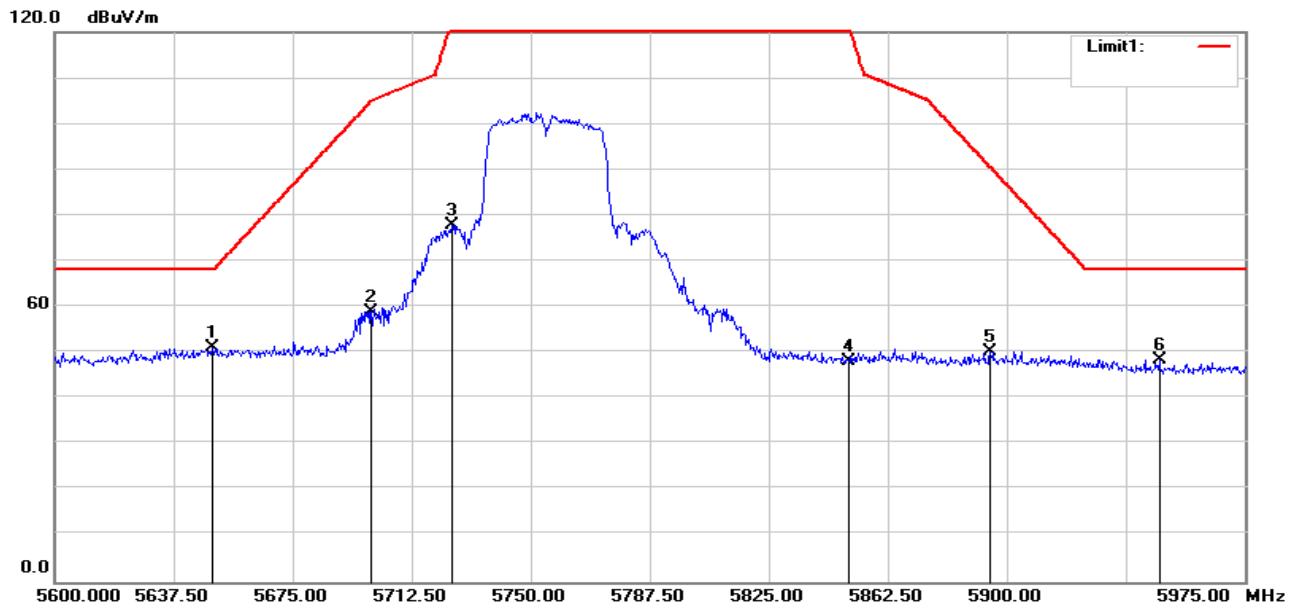
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5634.875	54.12	-4.68	49.44	68.20	-18.76	peak
2	5681.000	55.12	-4.67	50.45	91.14	-40.69	peak
3	5725.000	54.07	-4.57	49.50	122.20	-72.70	peak
4	5850.000	59.86	-4.10	55.76	122.20	-66.44	peak
5	5894.750	55.72	-3.90	51.82	90.59	-38.77	peak
6	5934.500	53.83	-3.93	49.90	68.20	-18.30	peak

802.11n20-H-V



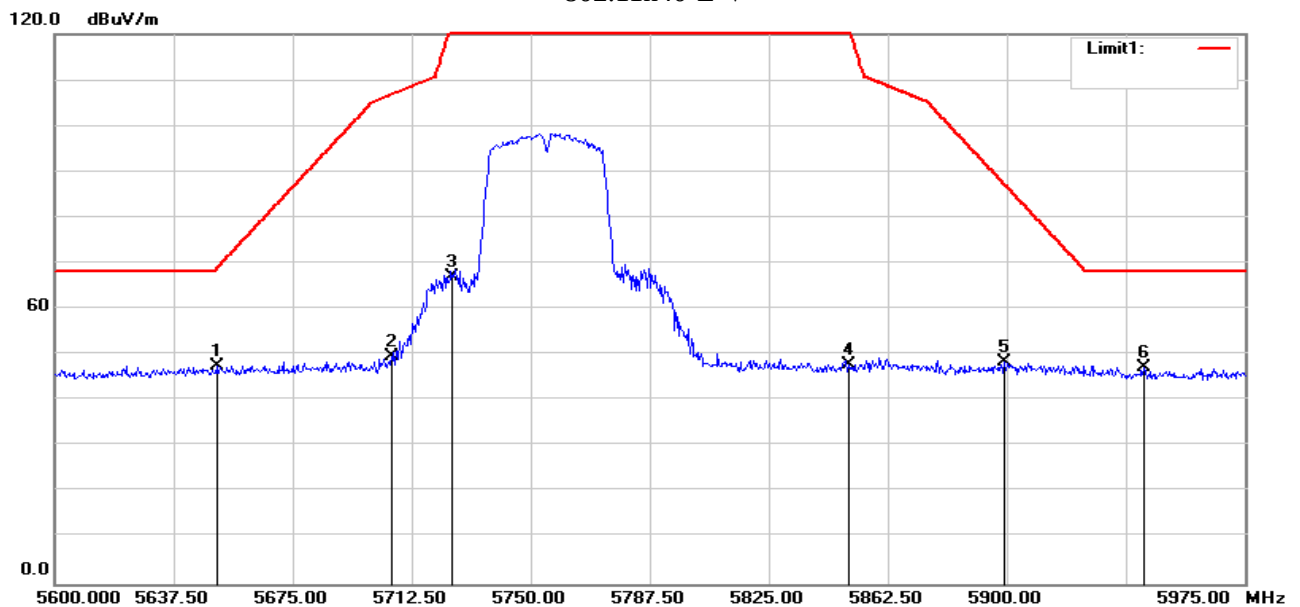
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5652.500	52.58	-4.68	47.90	70.05	-22.15	peak
2	5686.625	52.65	-4.66	47.99	95.30	-47.31	peak
3	5725.000	51.27	-4.57	46.70	122.20	-75.50	peak
4	5850.000	54.24	-4.10	50.14	122.20	-72.06	peak
5	5909.750	54.01	-3.89	50.12	79.48	-29.36	peak
6	5927.000	52.58	-3.93	48.65	68.20	-19.55	peak

802.11n40-L-H



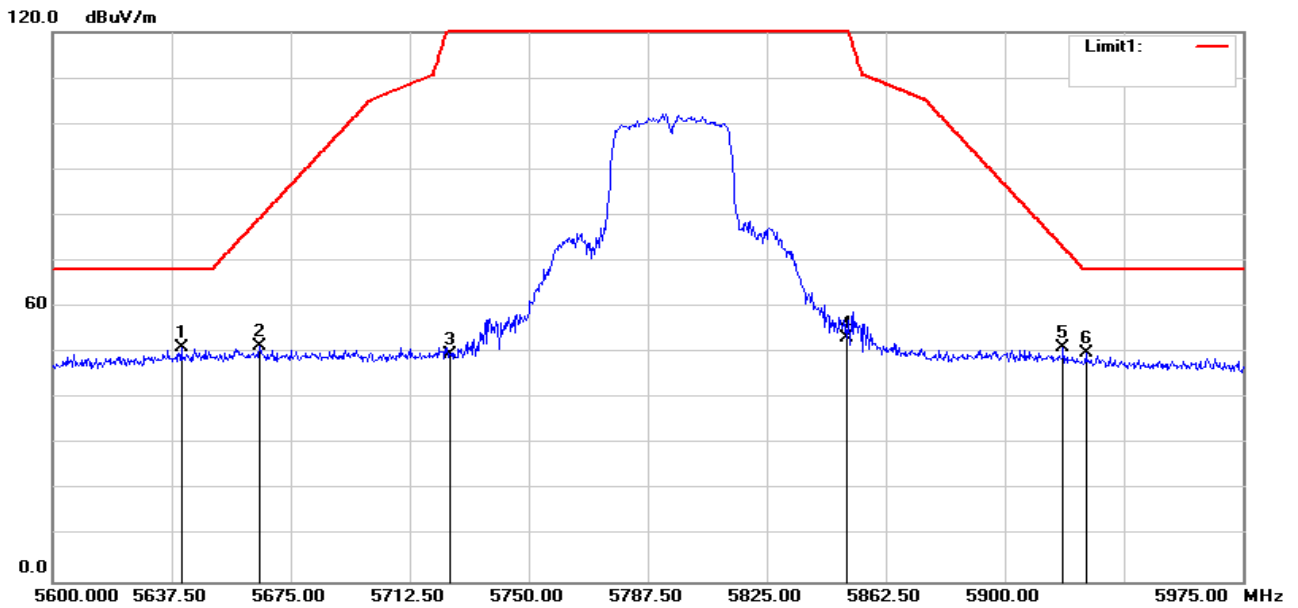
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5649.875	55.72	-4.68	51.04	68.20	-17.16	peak
2	5699.750	63.67	-4.66	59.01	105.02	-46.01	peak
3	5725.000	82.35	-4.57	77.78	122.20	-44.42	peak
4	5850.000	52.39	-4.10	48.29	122.20	-73.91	peak
5	5894.750	54.28	-3.90	50.38	90.59	-40.21	peak
6	5948.000	52.47	-3.96	48.51	68.20	-19.69	peak

802.11n40-L-V



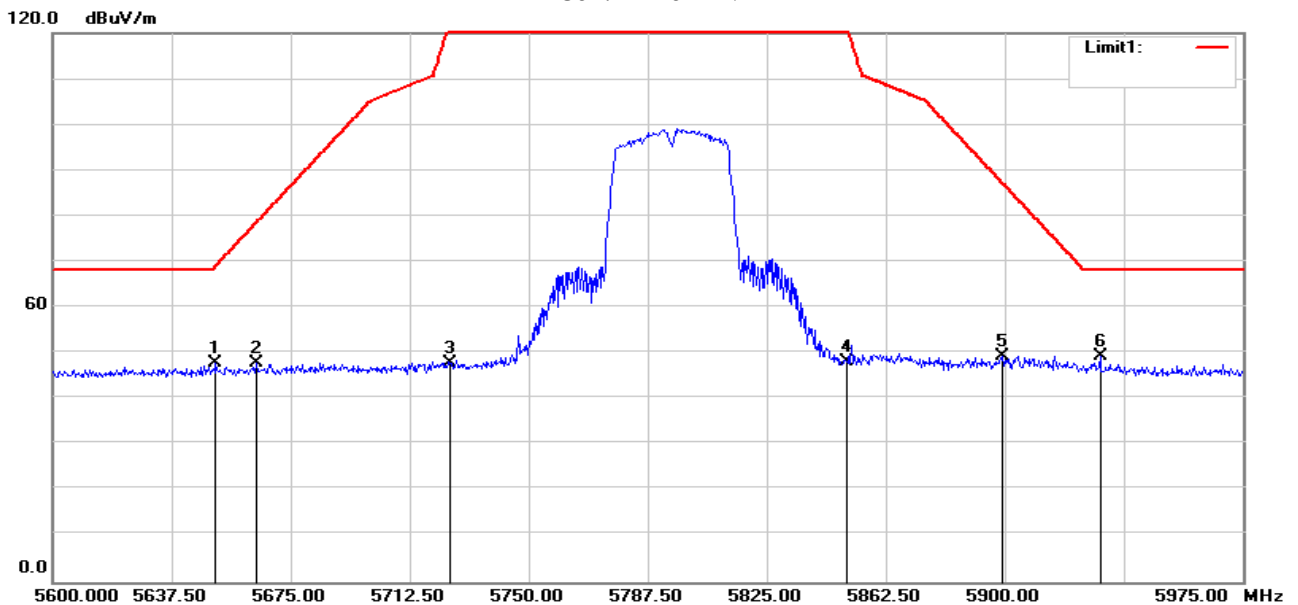
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5651.000	52.11	-4.68	47.43	68.94	-21.51	peak
2	5706.125	54.37	-4.64	49.73	106.92	-57.19	peak
3	5725.000	71.64	-4.57	67.07	122.20	-55.13	peak
4	5850.000	52.03	-4.10	47.93	122.20	-74.27	peak
5	5899.250	52.45	-3.88	48.57	87.26	-38.69	peak
6	5943.125	51.11	-3.95	47.16	68.20	-21.04	peak

802.11n40-H-H



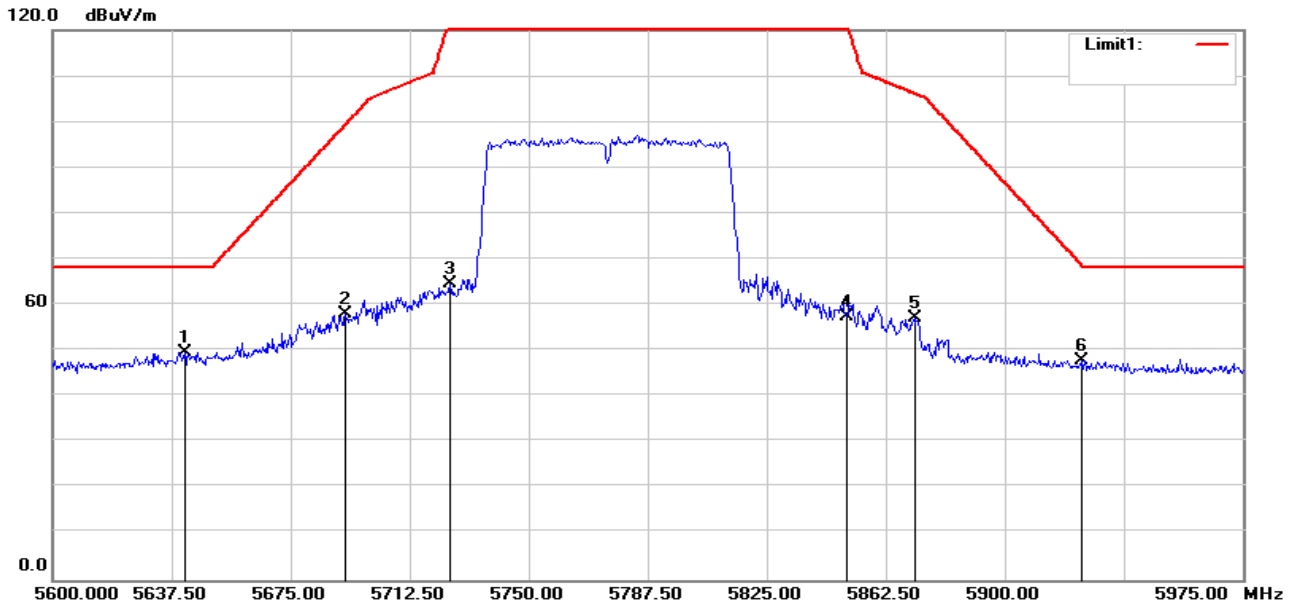
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5640.500	55.73	-4.69	51.04	68.20	-17.16	peak
2	5665.250	56.09	-4.68	51.41	79.48	-28.07	peak
3	5725.000	54.32	-4.57	49.75	122.20	-72.45	peak
4	5850.000	57.24	-4.10	53.14	122.20	-69.06	peak
5	5918.375	55.03	-3.91	51.12	73.10	-21.98	peak
6	5925.500	53.94	-3.92	50.02	68.20	-18.18	peak

802.11n40-H-V



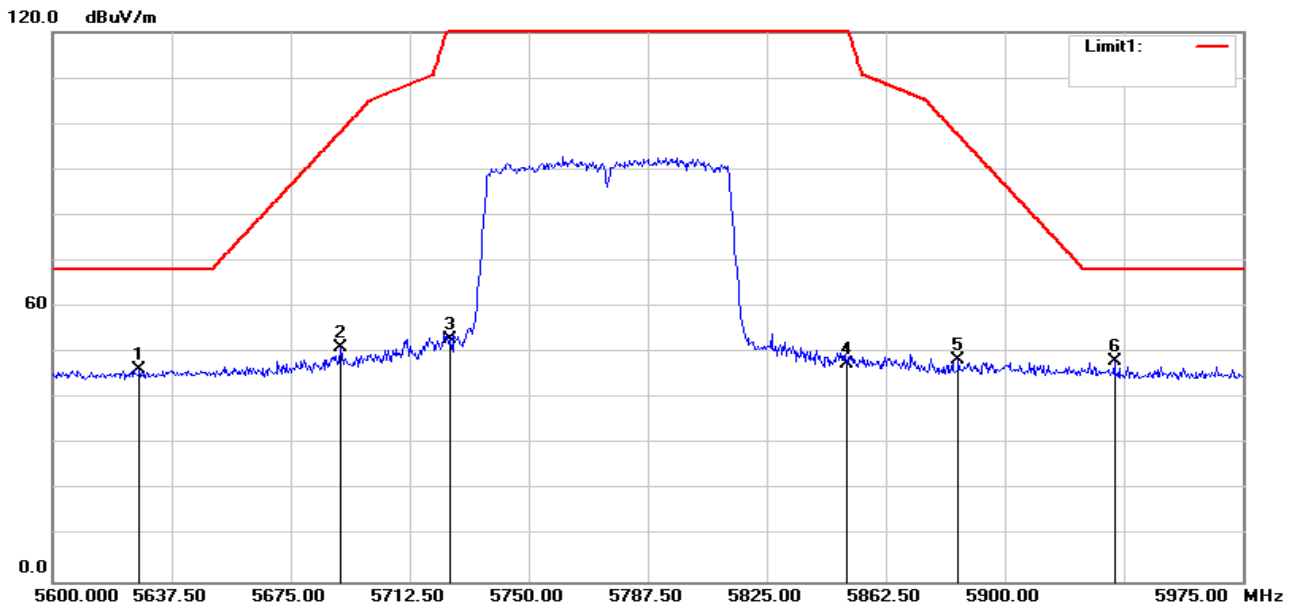
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5651.375	52.53	-4.68	47.85	69.22	-21.37	peak
2	5664.125	52.53	-4.68	47.85	78.65	-30.80	peak
3	5725.000	52.40	-4.57	47.83	122.20	-74.37	peak
4	5850.000	52.21	-4.10	48.11	122.20	-74.09	peak
5	5899.250	53.11	-3.88	49.23	87.26	-38.03	peak
6	5930.000	53.24	-3.93	49.31	68.20	-18.89	peak

802.11ac80- H



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5641.625	54.40	-4.68	49.72	68.20	-18.48	peak
2	5692.250	62.62	-4.66	57.96	99.47	-41.51	peak
3	5725.000	69.26	-4.57	64.69	122.20	-57.51	peak
4	5850.000	61.61	-4.10	57.51	122.20	-64.69	peak
5	5871.500	61.19	-4.01	57.18	106.18	-49.00	peak
6	5924.000	51.82	-3.92	47.90	68.94	-21.04	peak

802.11ac80- V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5627.375	51.06	-4.69	46.37	68.20	-21.83	peak
2	5690.750	55.76	-4.66	51.10	98.36	-47.26	peak
3	5725.000	57.65	-4.57	53.08	122.20	-69.12	peak
4	5850.000	51.59	-4.10	47.49	122.20	-74.71	peak
5	5885.375	52.35	-3.94	48.41	97.52	-49.11	peak
6	5934.500	52.01	-3.93	48.08	68.20	-20.12	peak

4 OCCUPIED BANDWIDTH TEST

4.1 26DB BANDWIDTH TEST

According to §15.303(c), for purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Compliance with the emissions limits is based on the use of measurement instrumentation employing a peak detector function with an instrument resolutions bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

4.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 200kHz(802.11a/n20/ac20), RBW=430kHz(802.11n40/ac40), RBW=820kHz(802.11ac80), VBW $\geq$ RBW, Sweep time = Auto.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



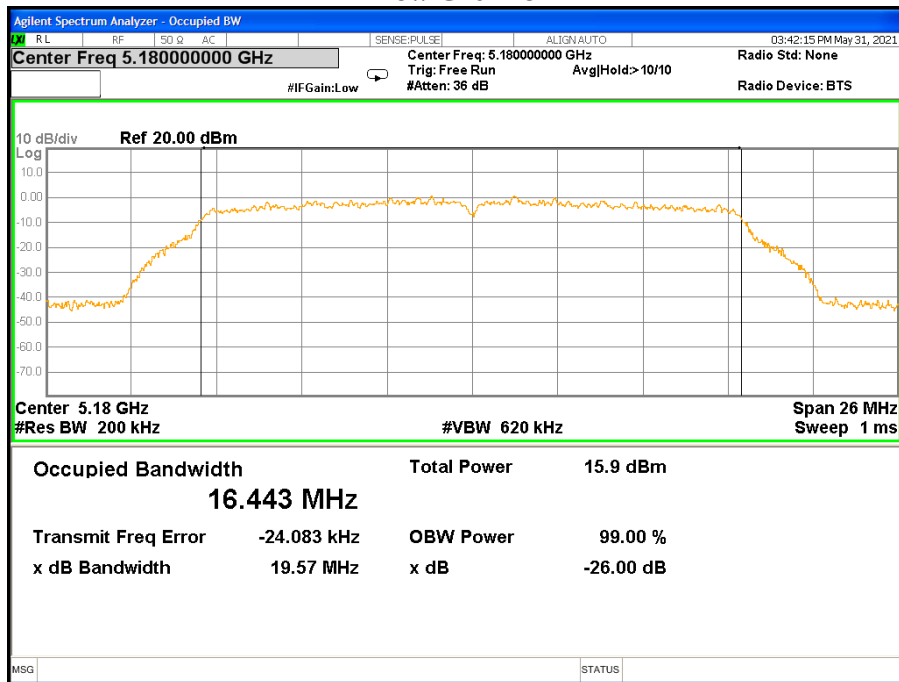
4.1.4 TEST RESULTS

Note: ANT B Power> ANT A Power, Both ANT A and B have been test, Only show the worst data of ANT B

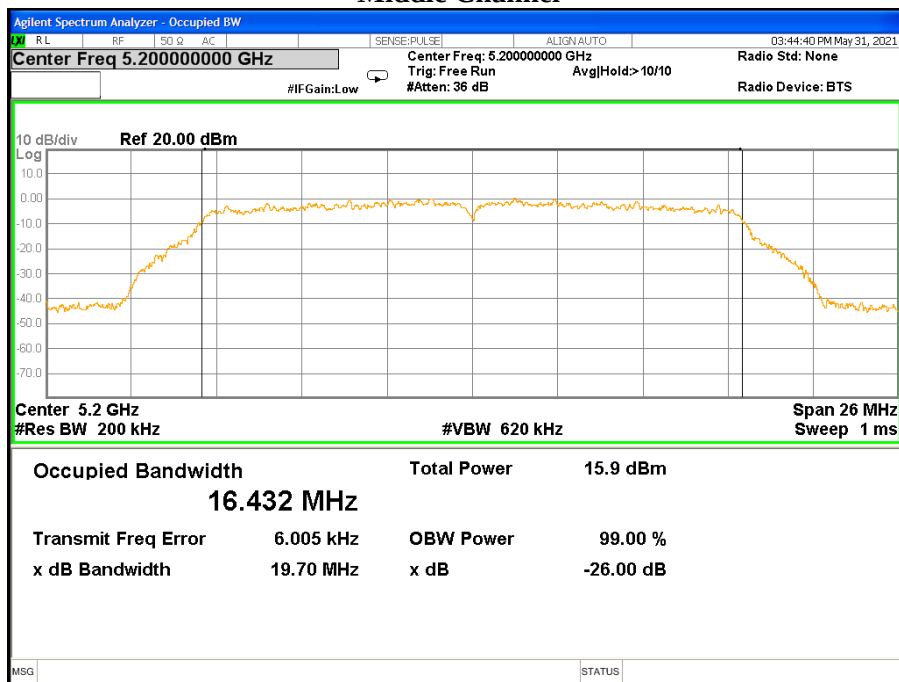
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80 (worst case)		
Test Date :	2021-05-31		

Frequency (MHz)	26dB Bandwidth (MHz)	Pass/Fail
802.11a		
5180	19.57	Pass
5200	19.70	Pass
5240	19.68	Pass
802.11n(HT20)		
5180	19.94	Pass
5200	19.99	Pass
5240	19.91	Pass
802.11n(HT40)		
5190	39.87	Pass
5230	39.81	Pass
802.11ac(VHT20)		
5180	19.89	Pass
5200	19.97	Pass
5240	19.87	Pass
802.11ac(VHT40)		
5190	40.39	Pass
5230	39.88	Pass
802.11ac(VHT80)		
5210	79.76	Pass

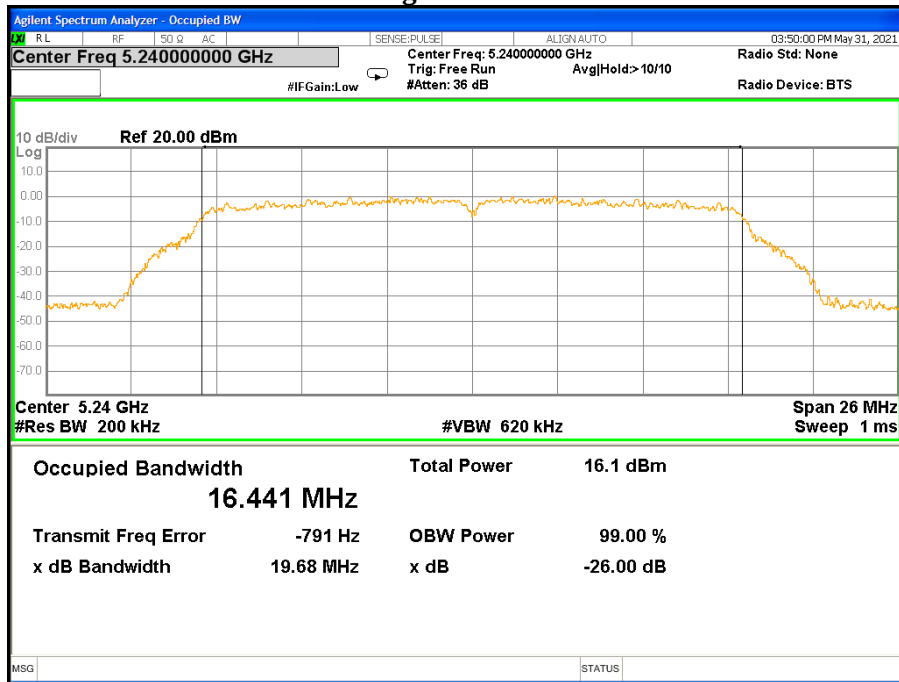
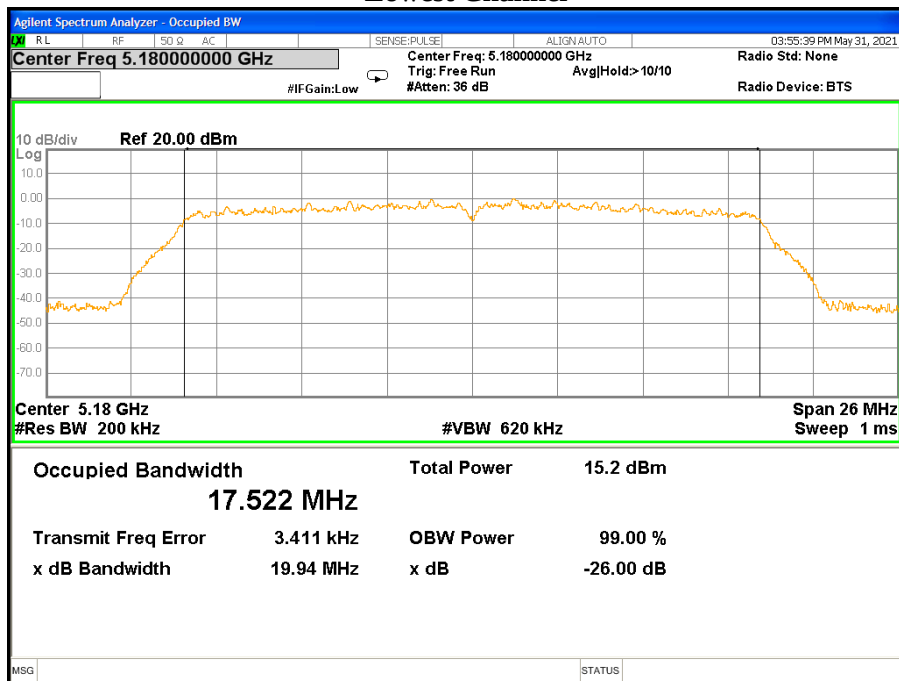
802.11a Low Channel



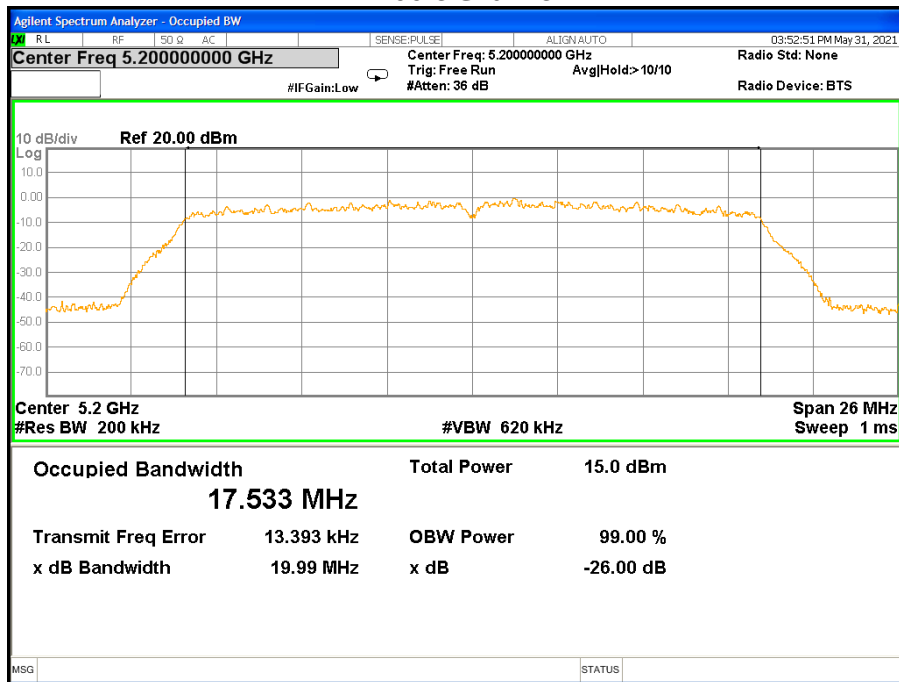
Middle Channel



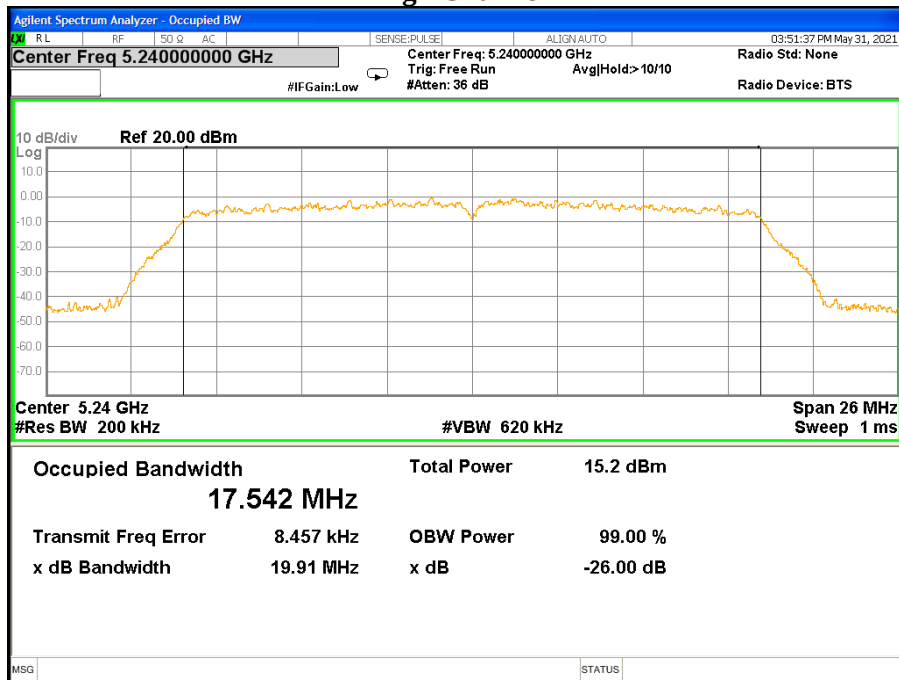
High Channel

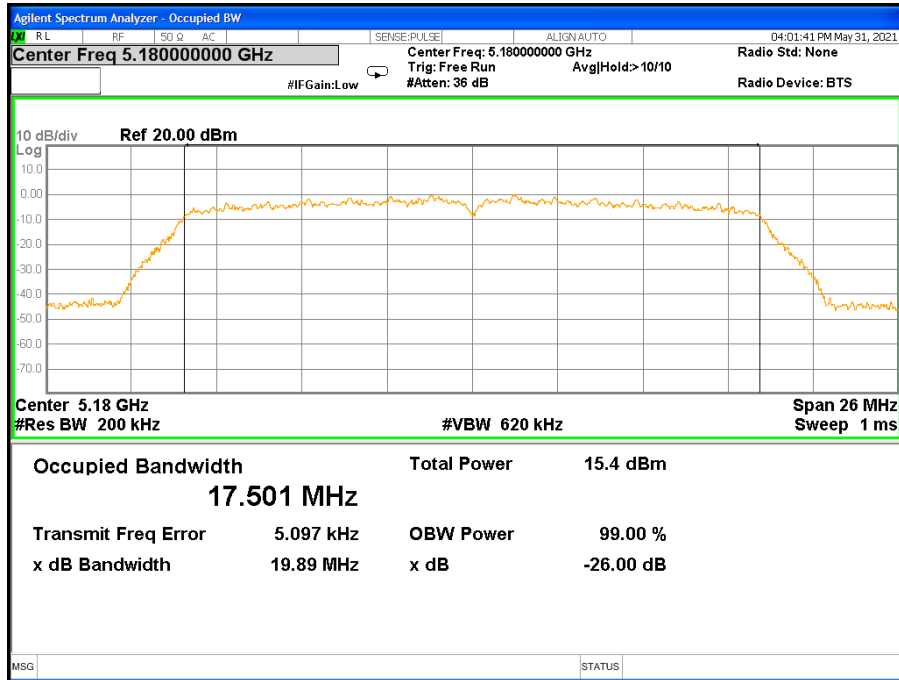
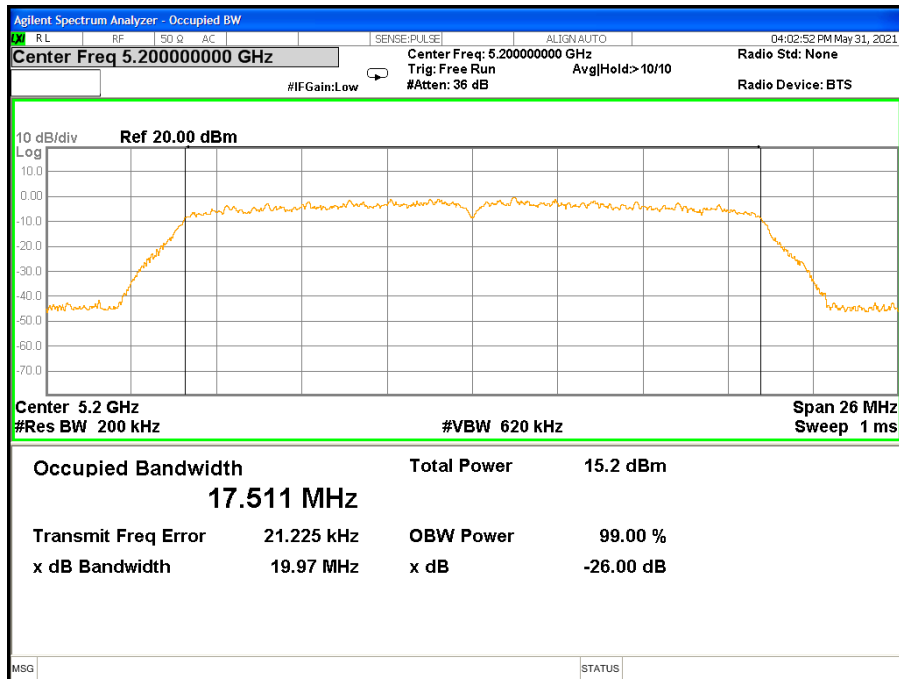
802.11n(20M)
Lowest Channel

Middle Channel

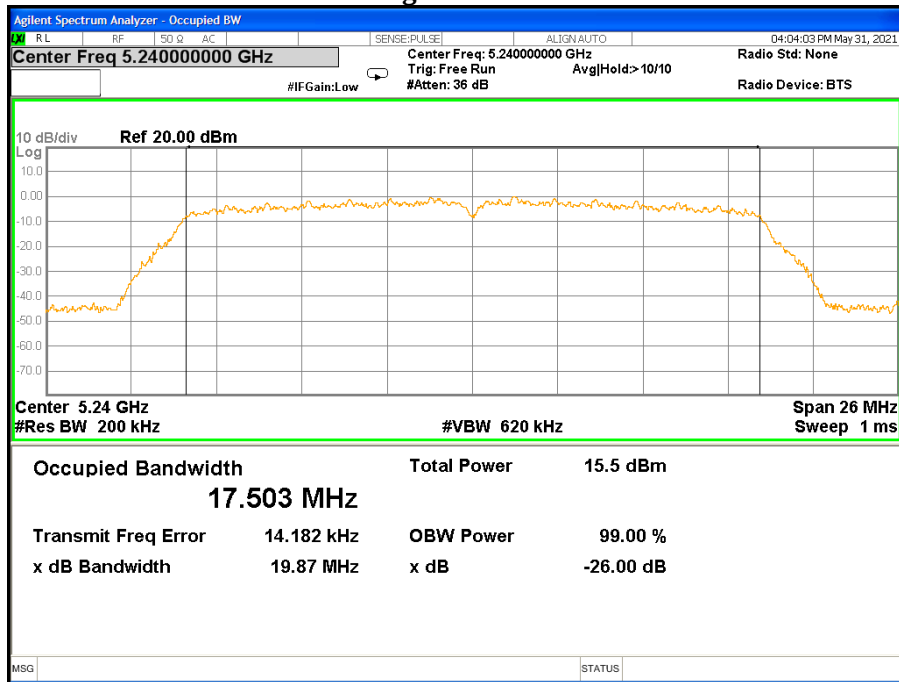
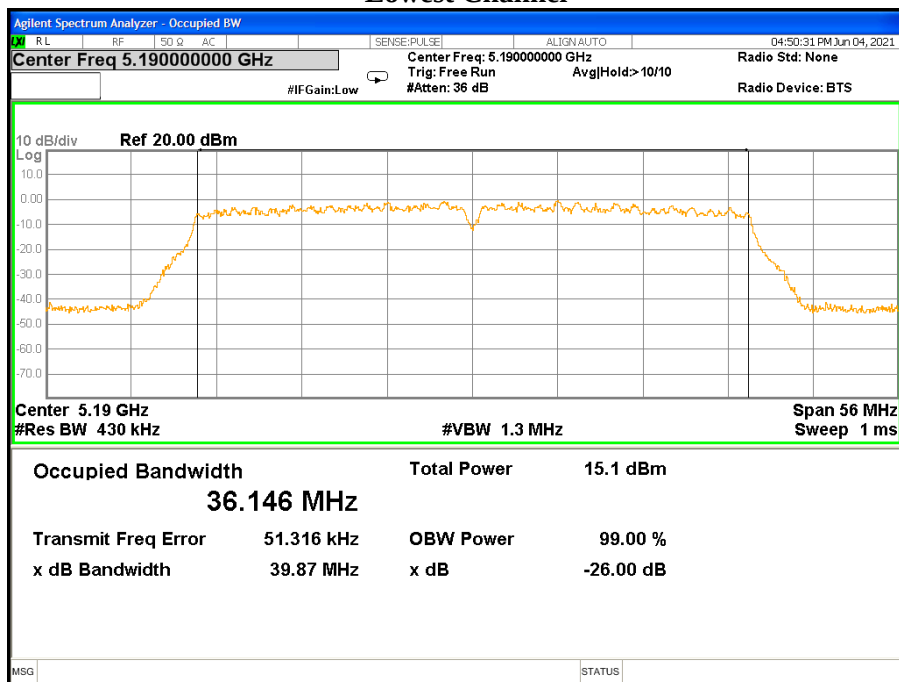


High Channel

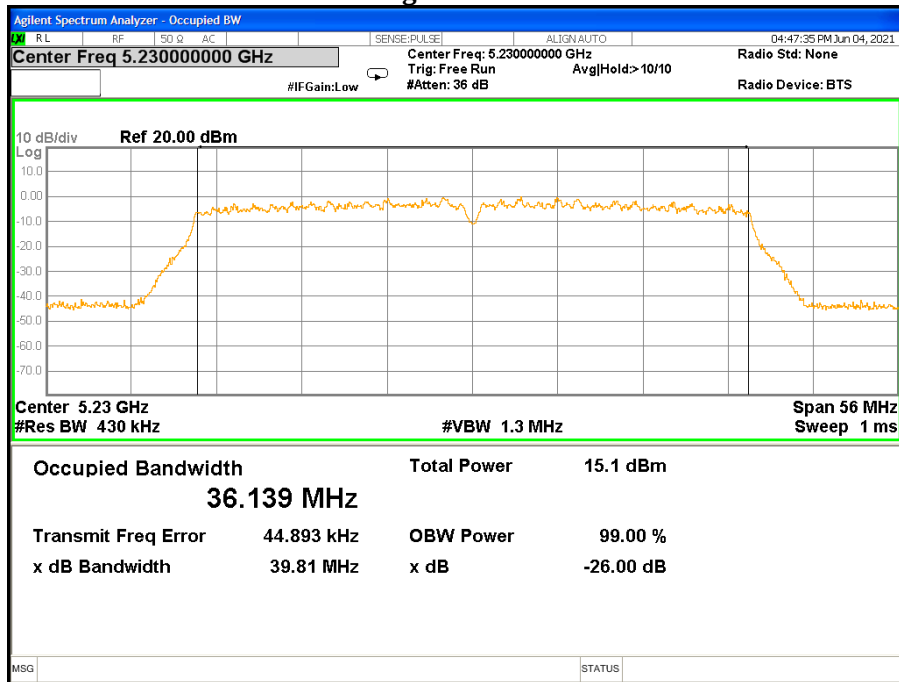
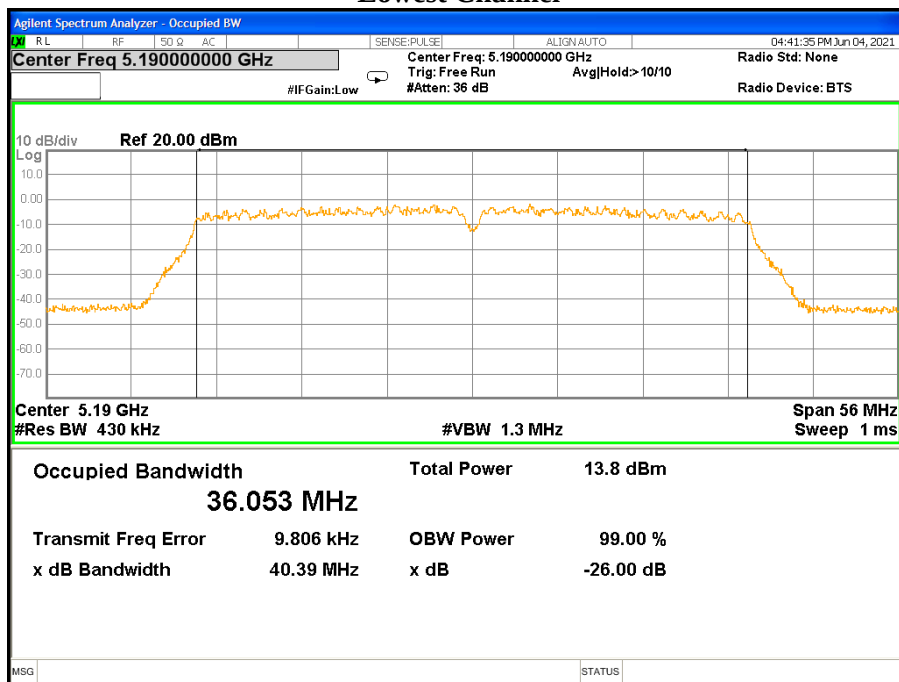


**802.11ac(20M)
Low Channel****Middle Channel**

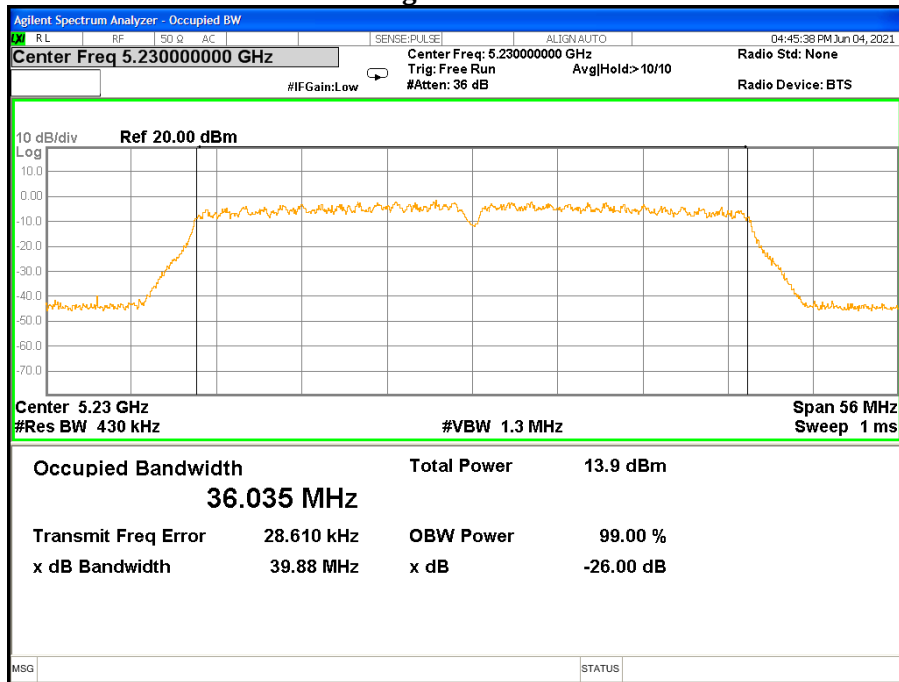
High Channel

802.11n(40M)
Lowest Channel

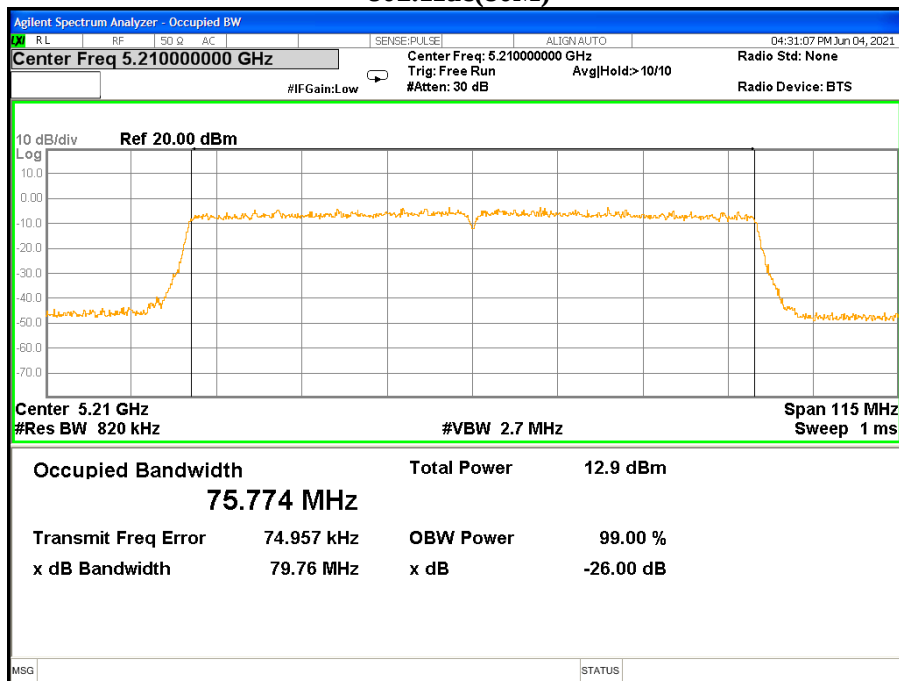
High Channel

802.11ac(40M)
Lowest Channel

High Channel



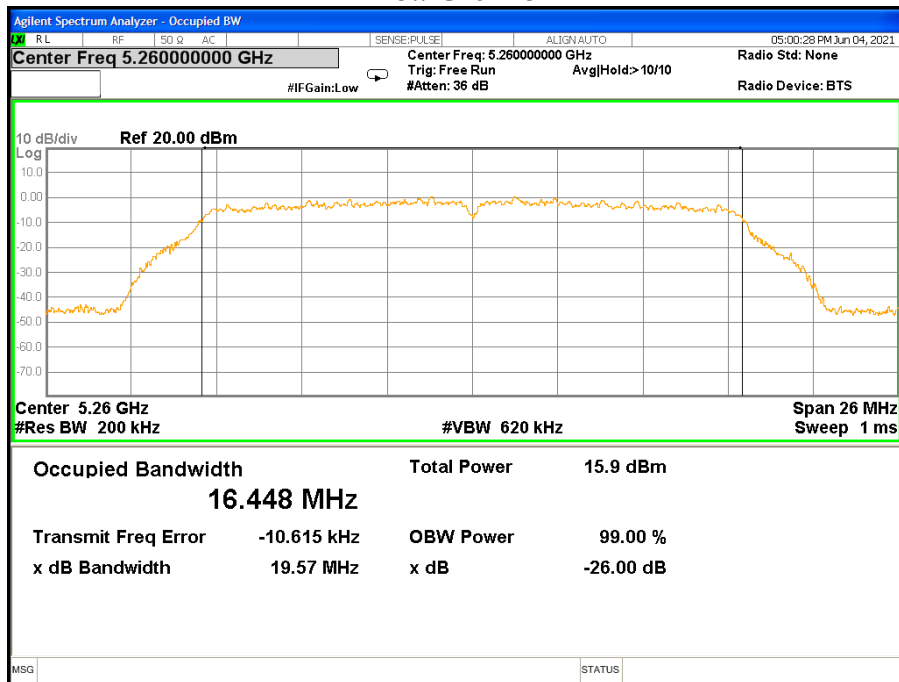
802.11ac(80M)



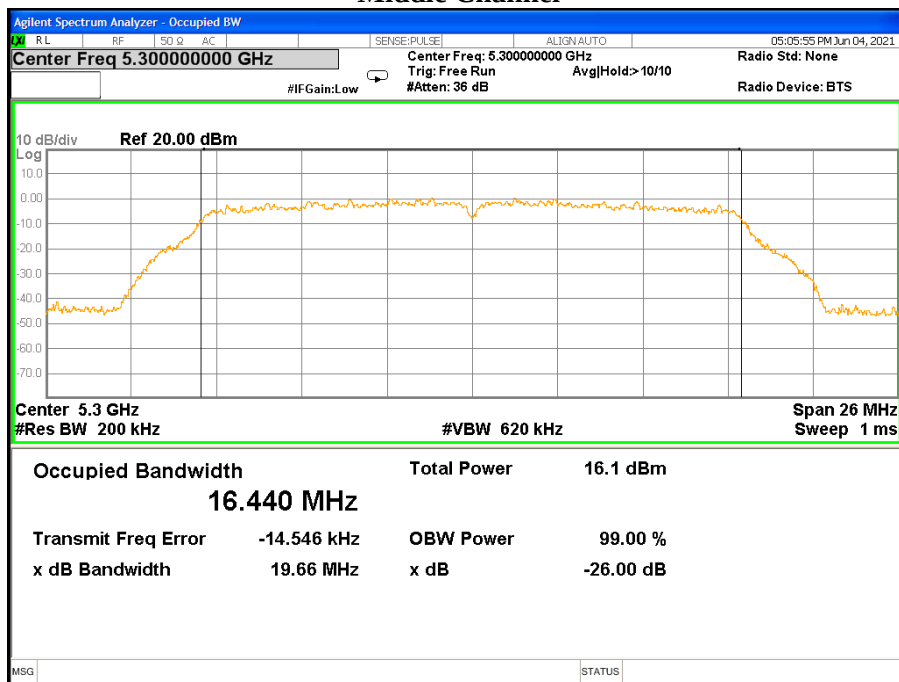
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80 (worst case)		
Test Date :	2021-06-04		

Frequency (MHz)	26dB Bandwidth (MHz)	Pass/Fail
802.11a		
5260	19.57	Pass
5300	19.66	Pass
5320	19.62	Pass
802.11n(HT20)		
5260	19.91	Pass
5300	19.83	Pass
5320	19.88	Pass
802.11n(HT40)		
5270	39.82	Pass
5310	39.74	Pass
802.11ac(VHT20)		
5260	19.86	Pass
5300	19.90	Pass
5320	19.82	Pass
802.11ac(VHT40)		
5270	39.99	Pass
5310	39.96	Pass
802.11ac(VHT80)		
5290	80.26	Pass

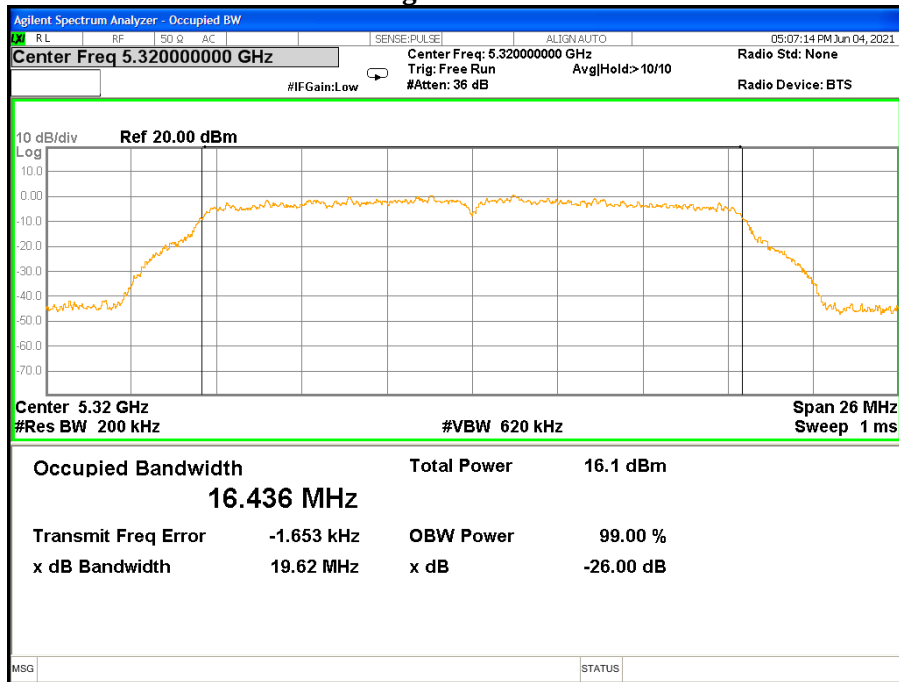
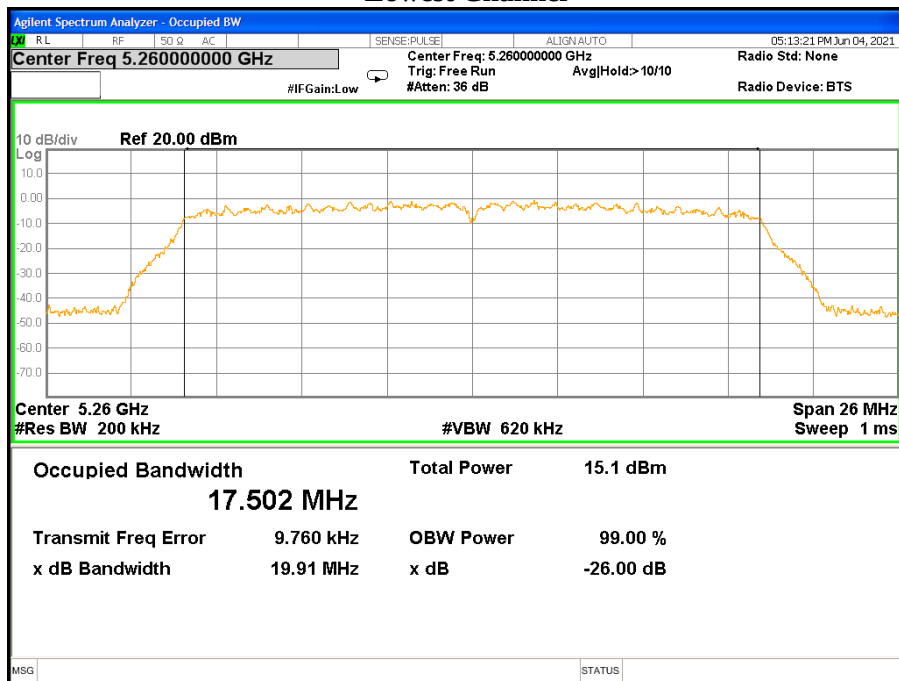
802.11a Low Channel



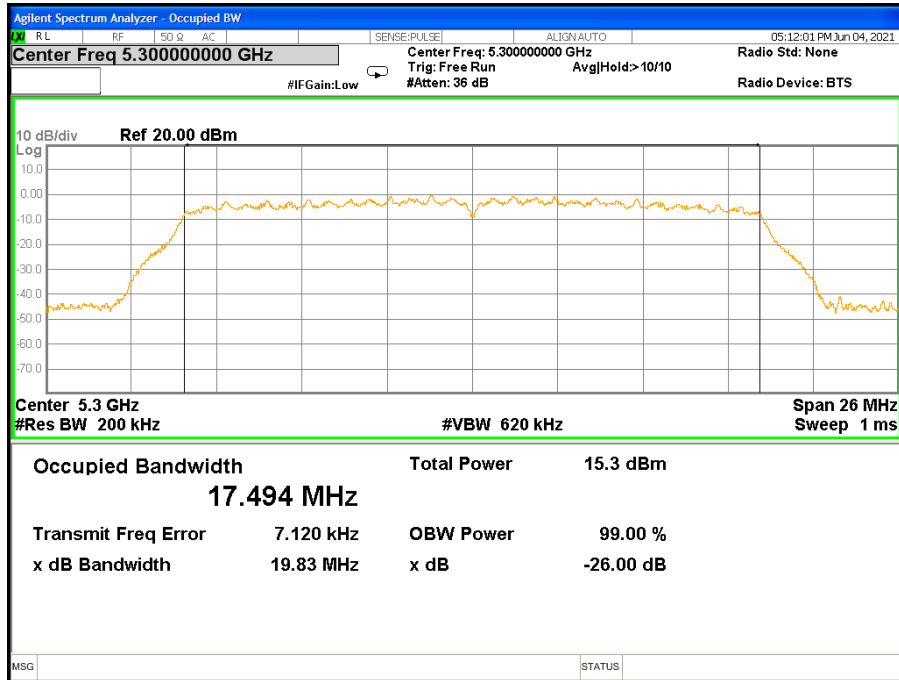
Middle Channel



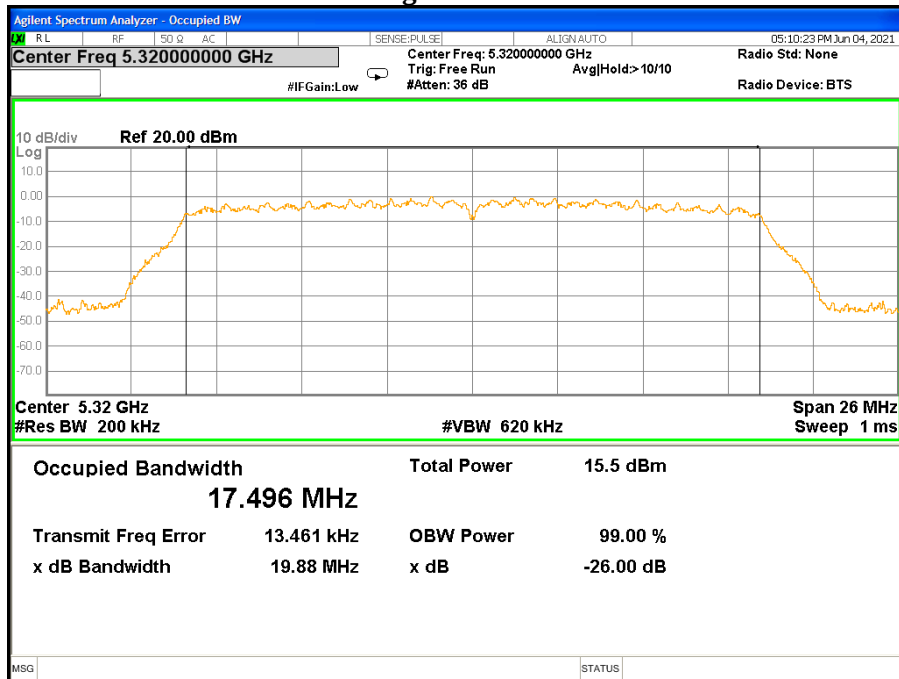
High Channel

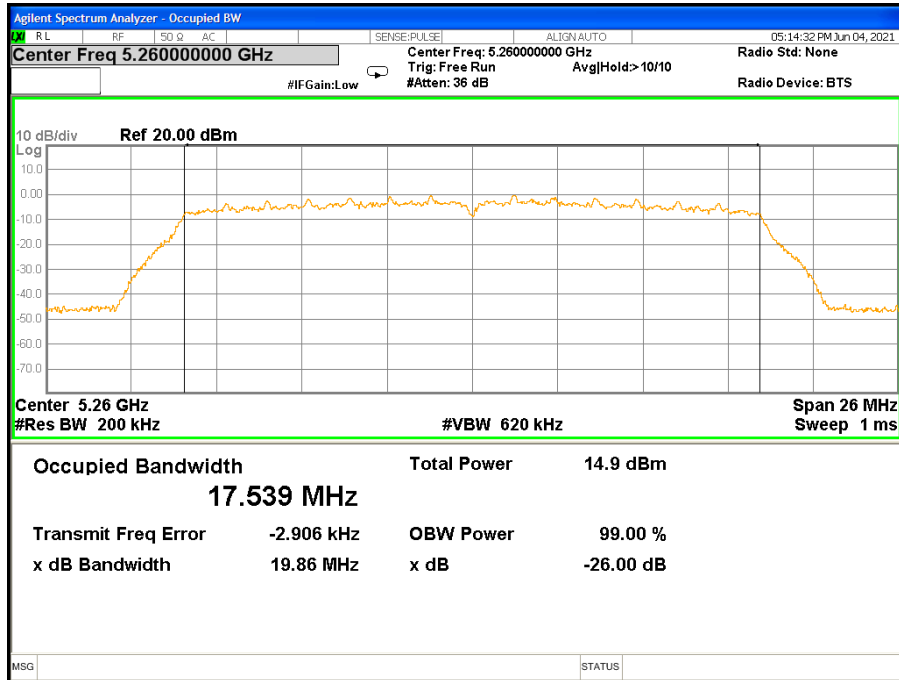
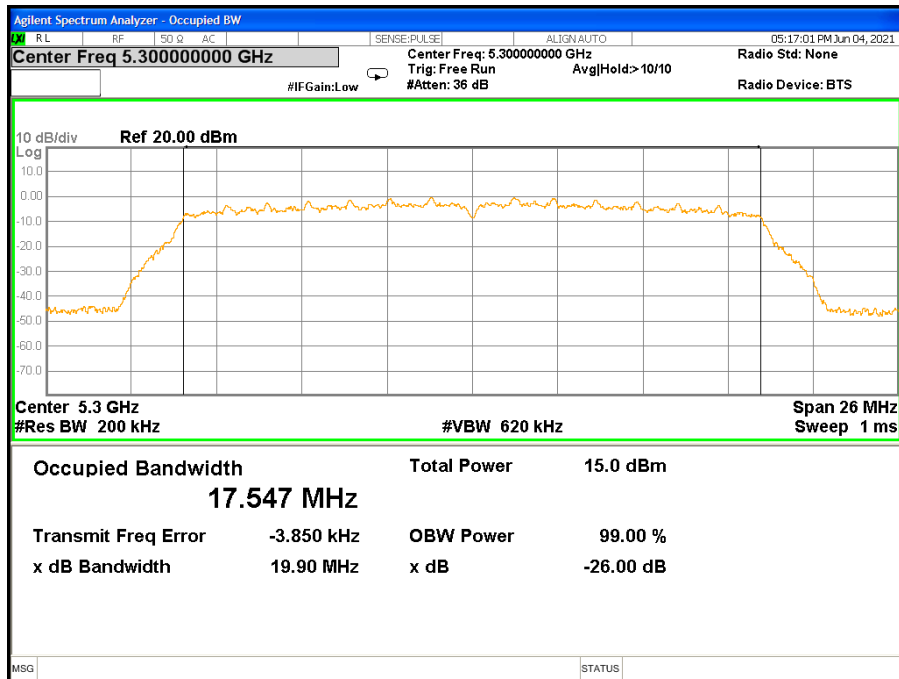
802.11n(20M)
Lowest Channel

Middle Channel

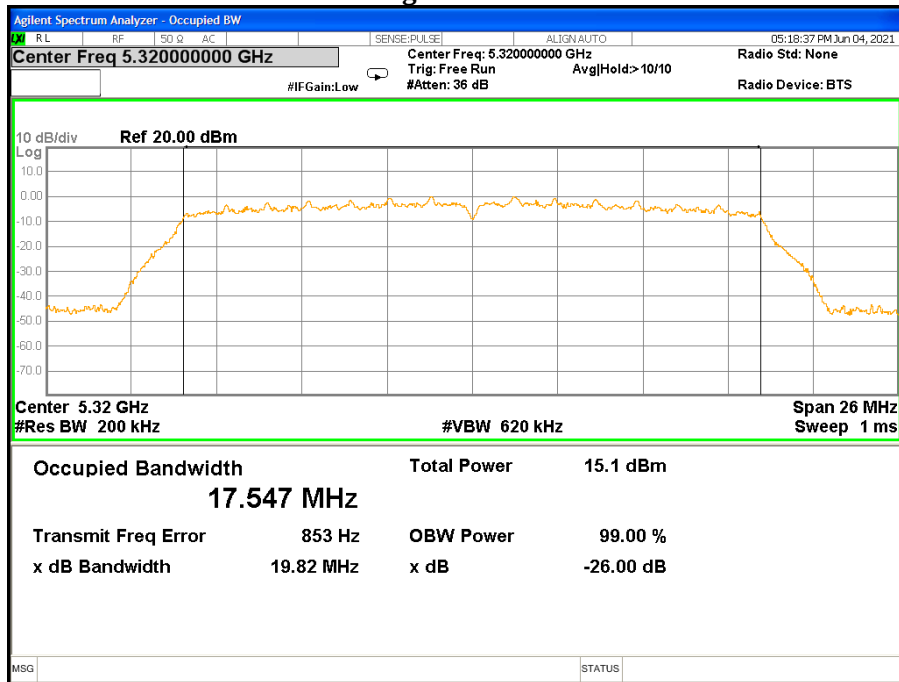
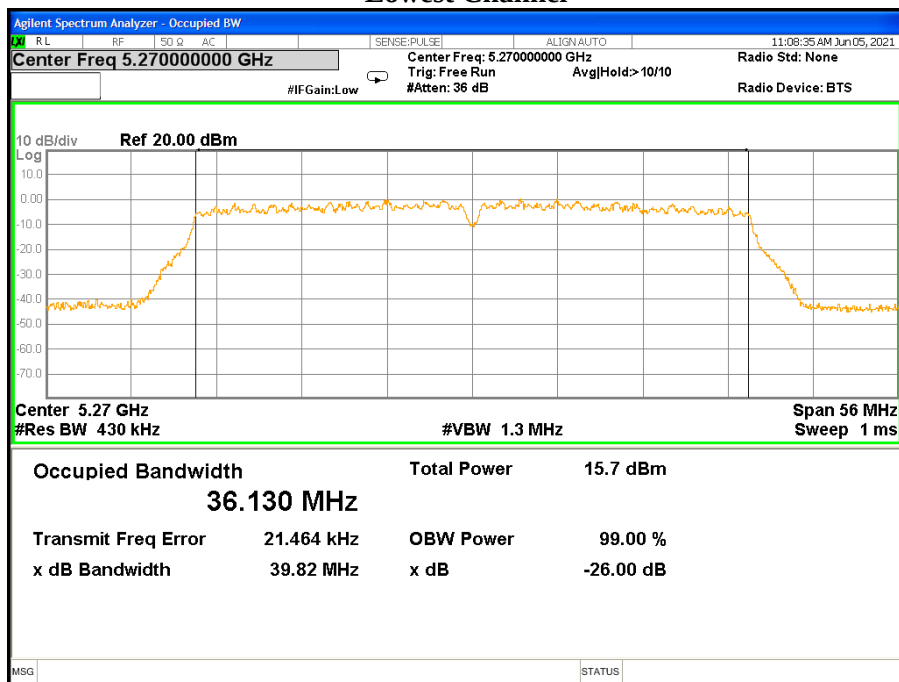


High Channel

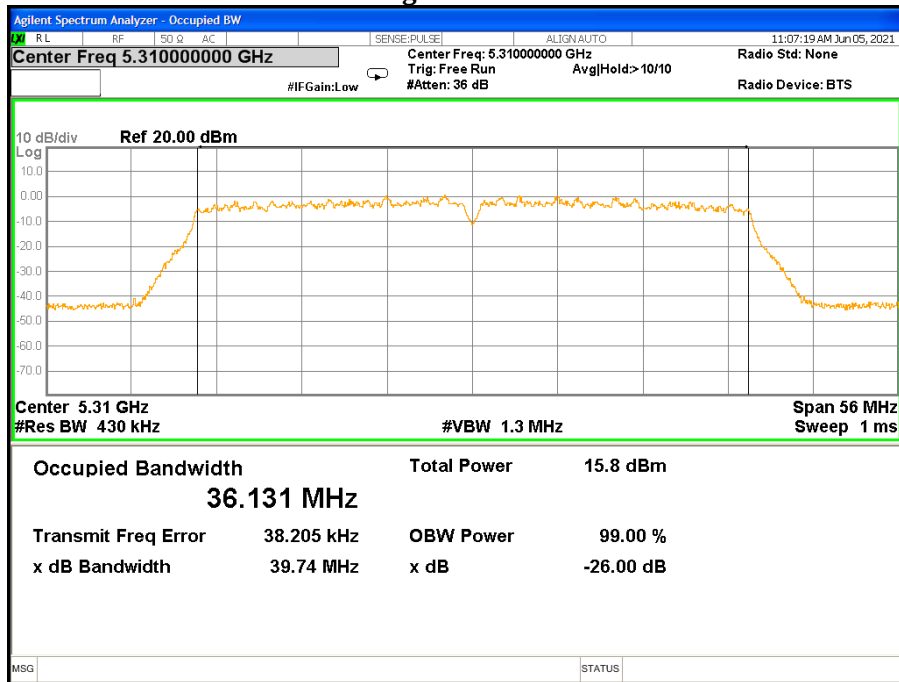
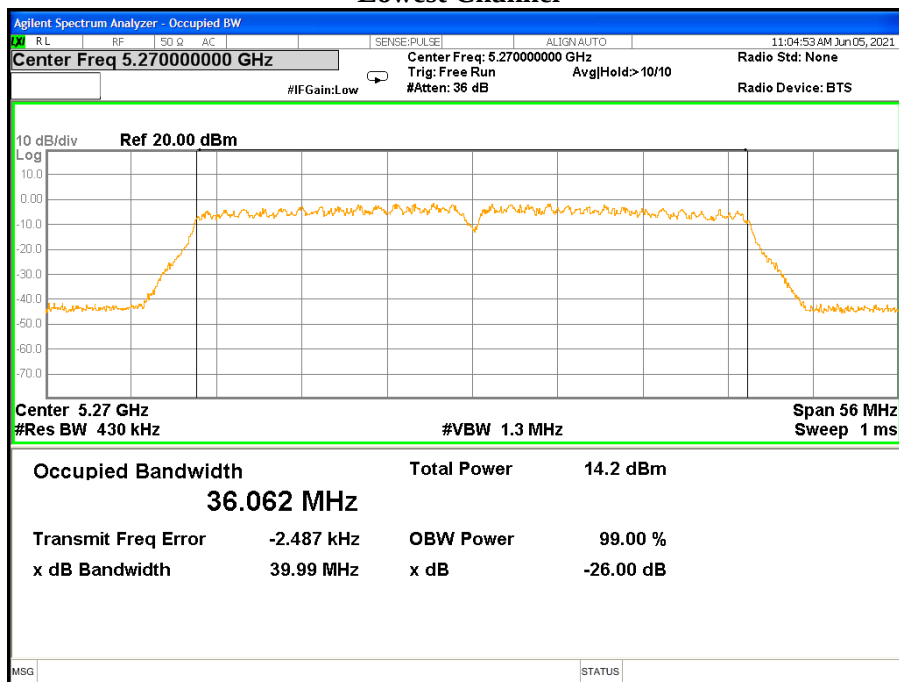


**802.11ac(20M)
Low Channel****Middle Channel**

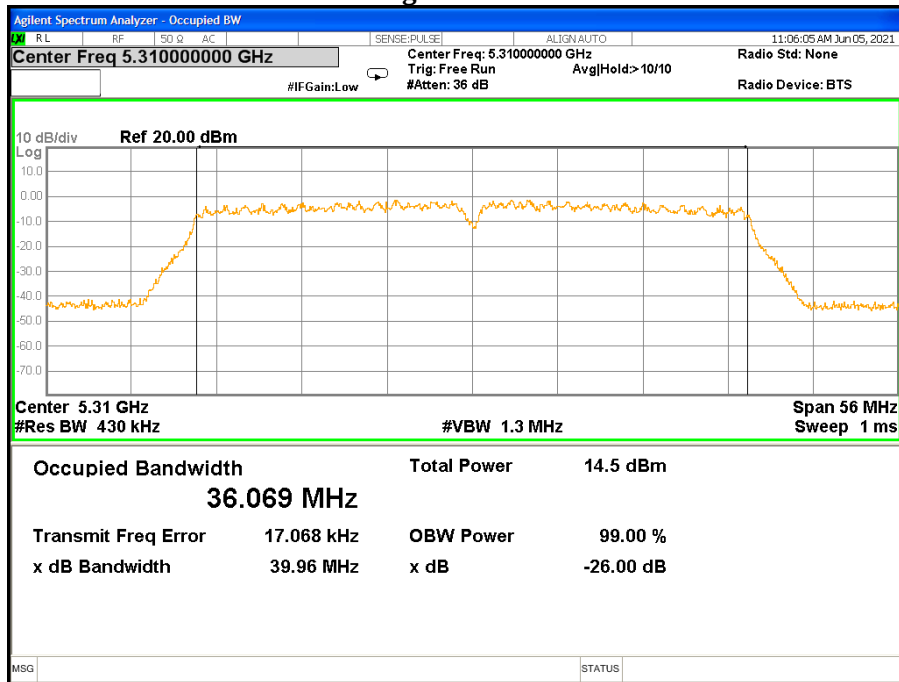
High Channel

802.11n(40M)
Lowest Channel

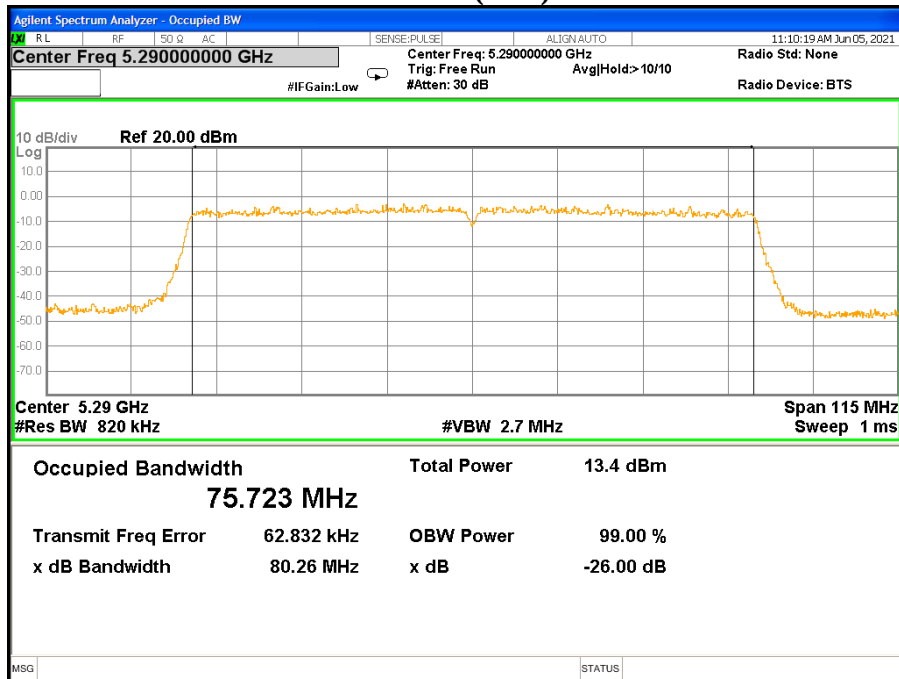
High Channel

802.11ac(40M)
Lowest Channel

High Channel



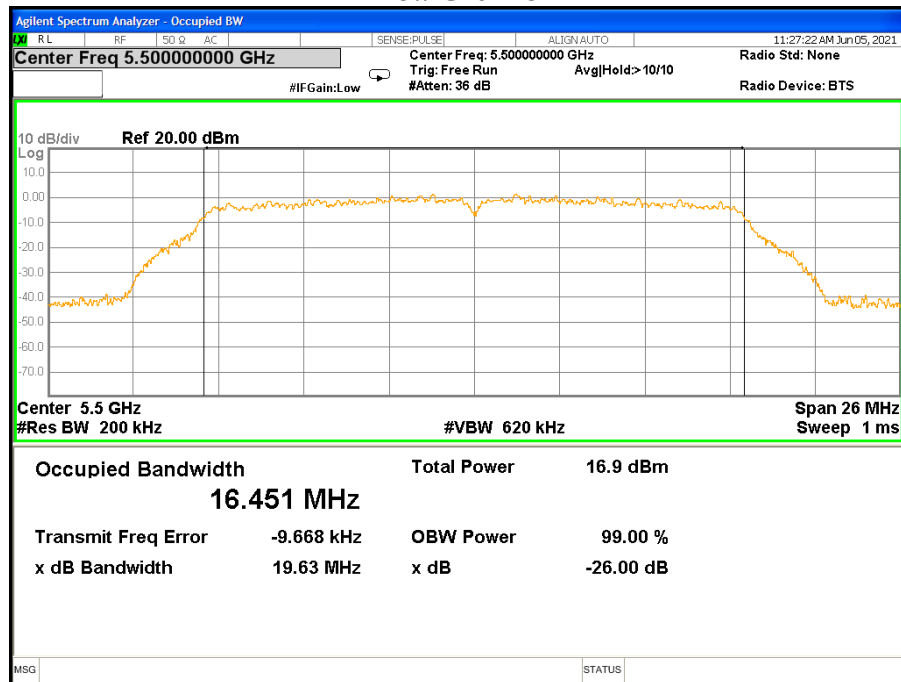
802.11ac(80M)



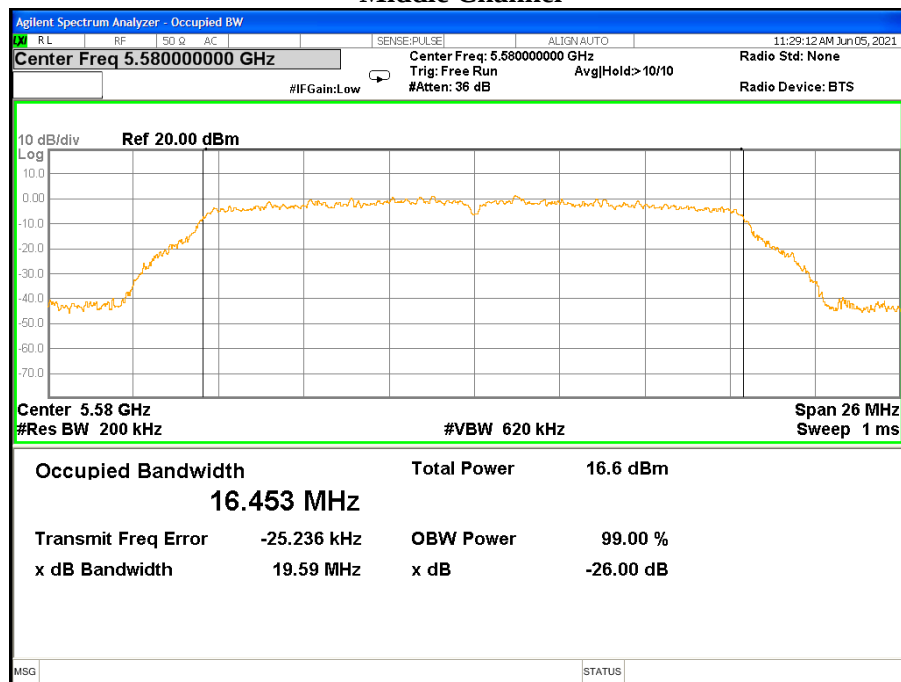
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80 (worst case)		
Test Date :	2021-06-05		

Frequency (MHz)	26dB Bandwidth (MHz)	Pass/Fail
802.11a		
5500	19.63	Pass
5580	19.59	Pass
5700	19.50	Pass
802.11n(HT20)		
5500	19.78	Pass
5580	19.65	Pass
5700	19.87	Pass
802.11n(HT40)		
5510	39.87	Pass
5550	40.00	Pass
5670	40.02	Pass
802.11ac(VHT20)		
5500	19.94	Pass
5580	19.83	Pass
5700	19.90	Pass
802.11ac(VHT40)		
5510	39.82	Pass
5550	40.12	Pass
5670	39.96	Pass
802.11ac(VHT80)		
5530	79.63	Pass
5610	80.42	Pass

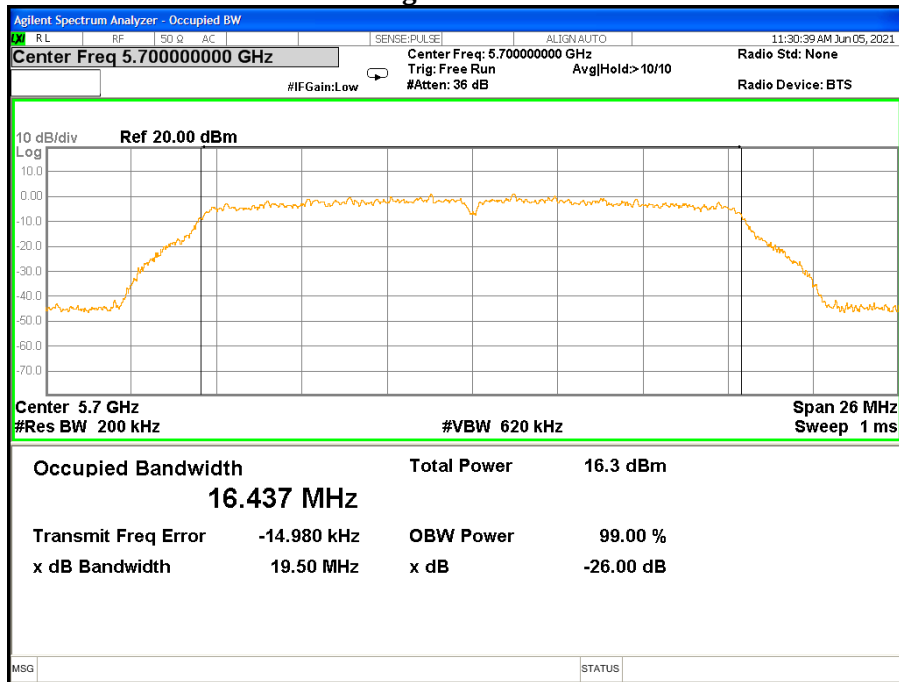
802.11a Low Channel



Middle Channel

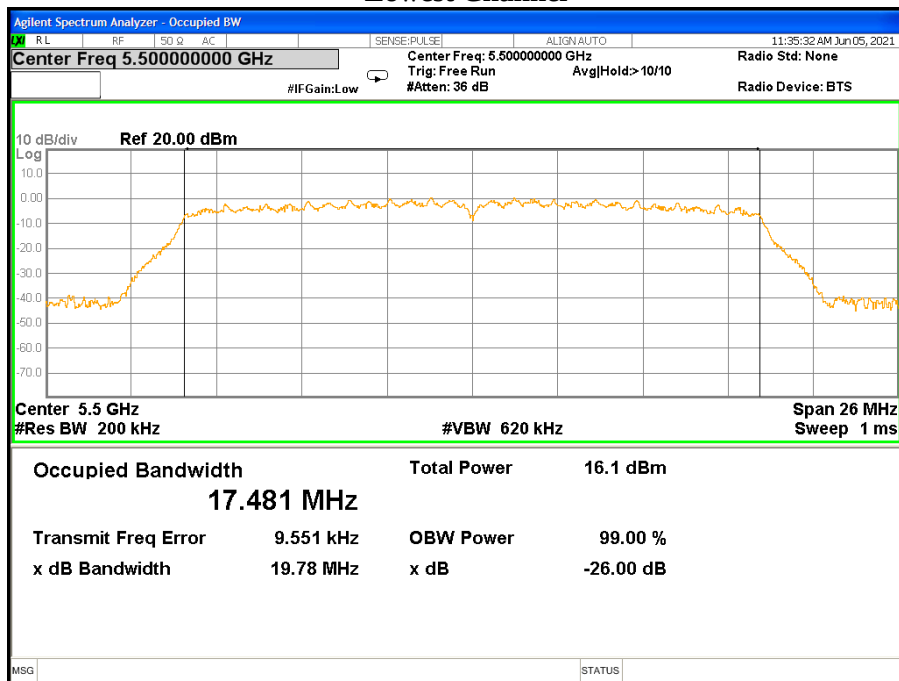


High Channel

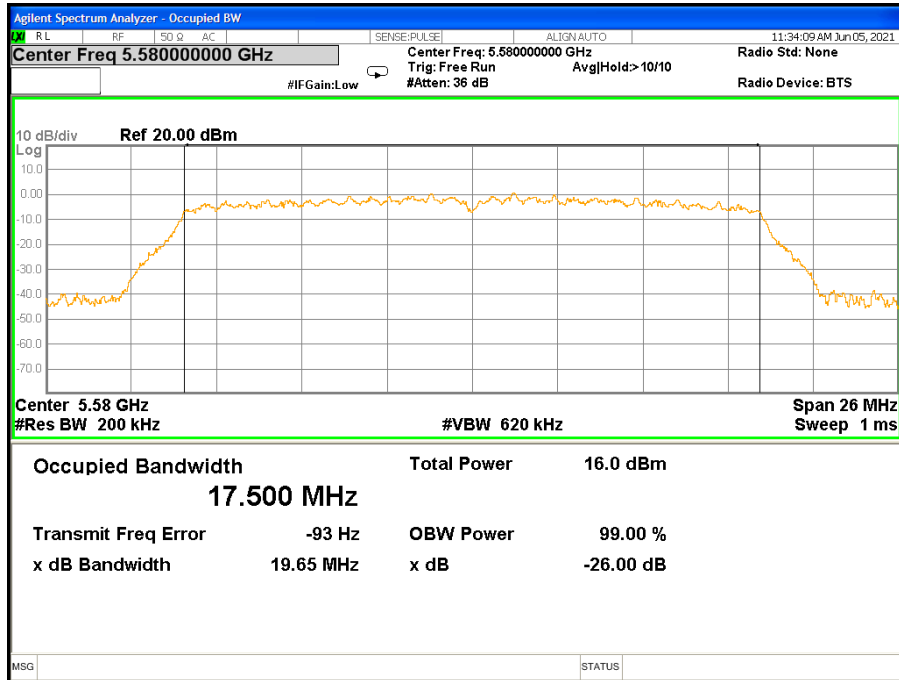


802.11n(20M)

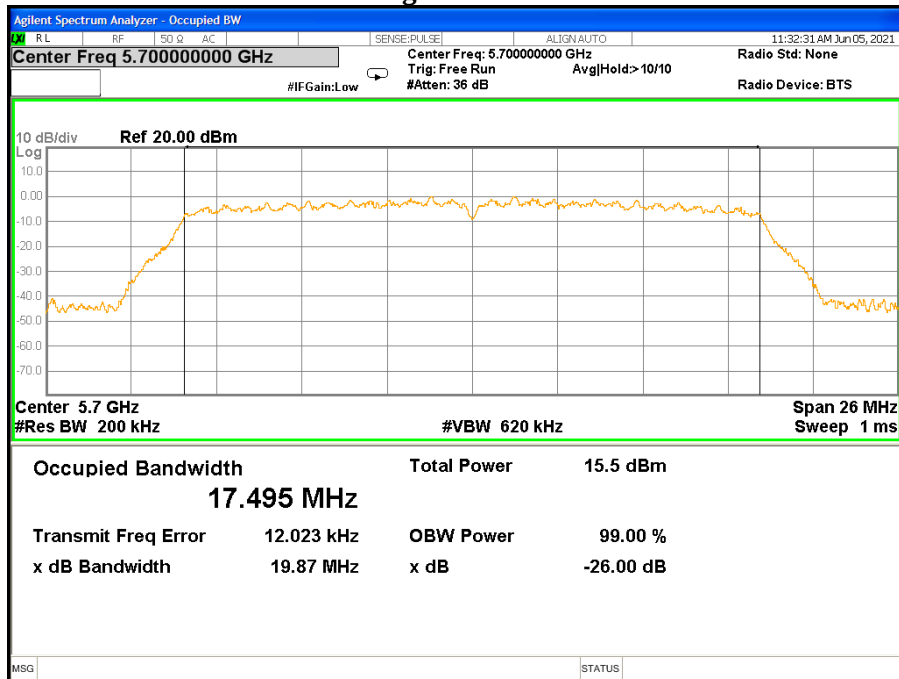
Lowest Channel

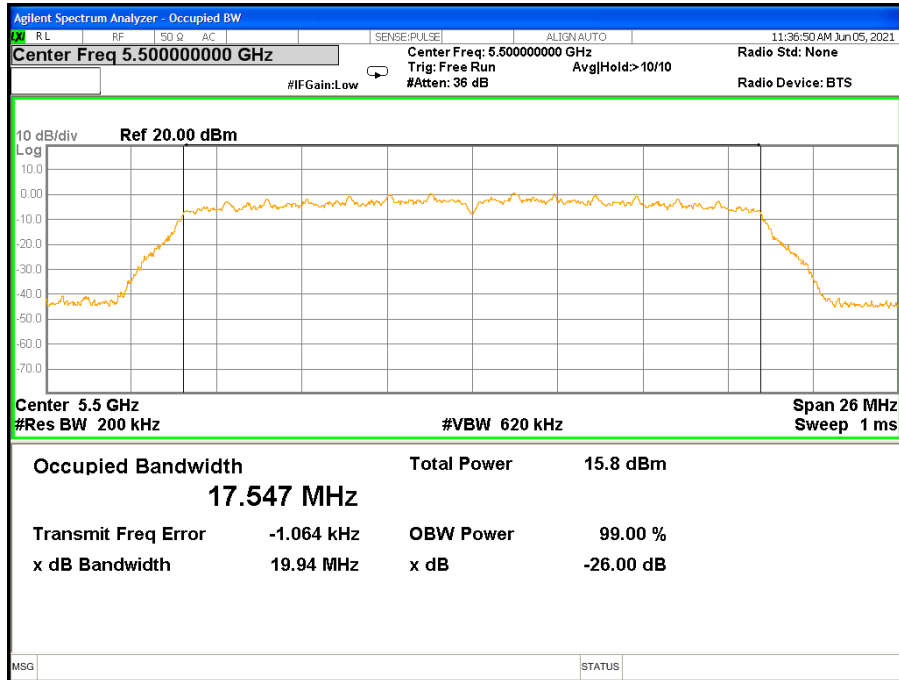
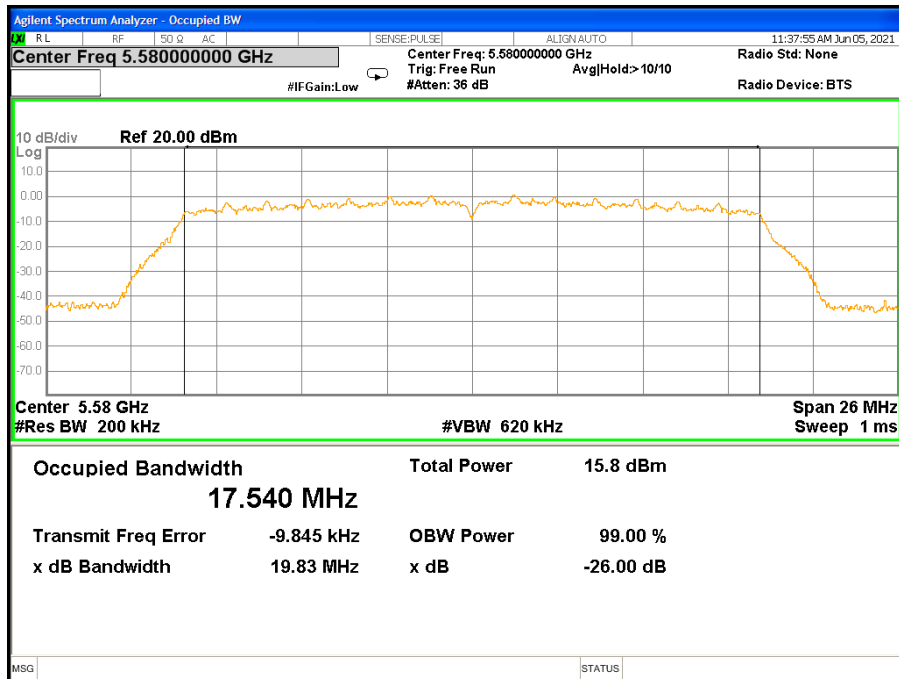


Middle Channel

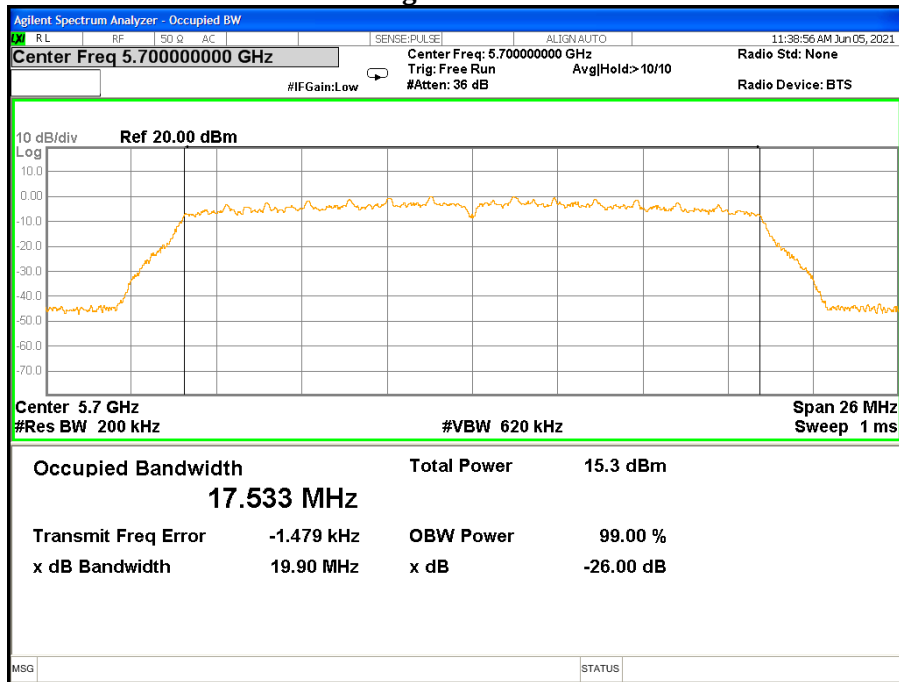
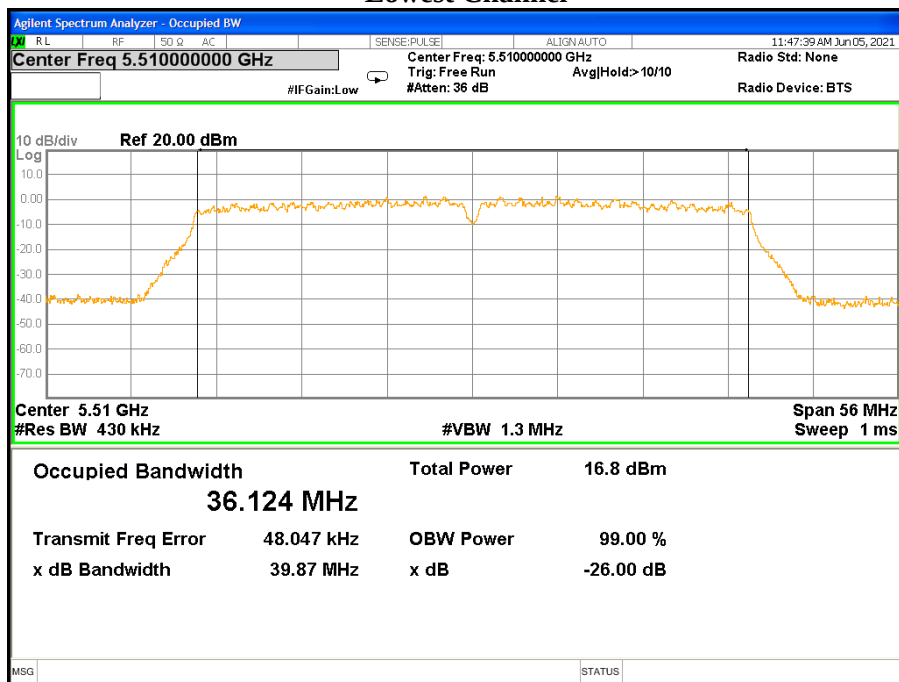


High Channel

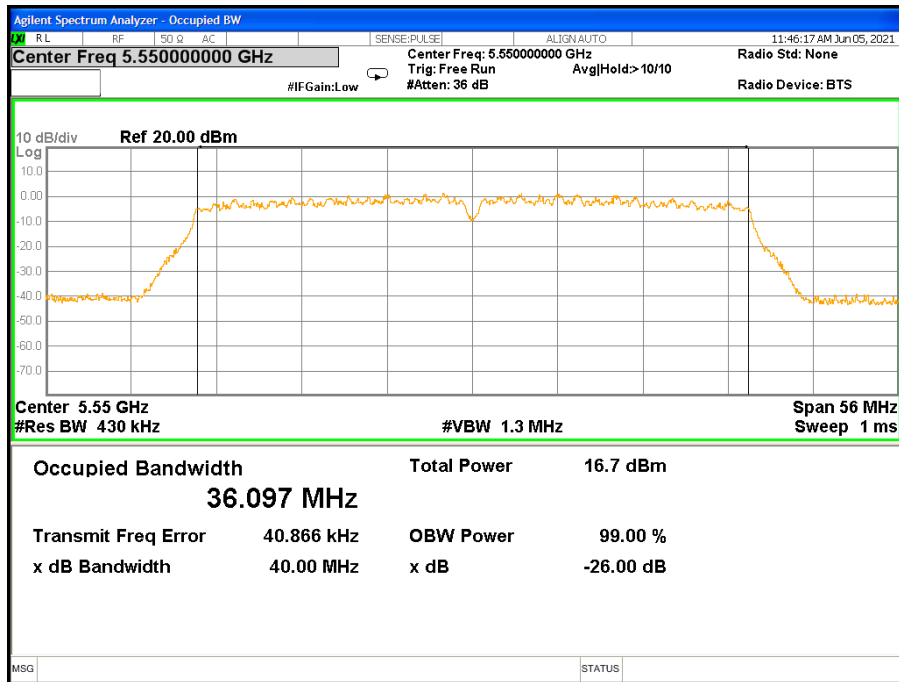


**802.11ac(20M)
Low Channel****Middle Channel**

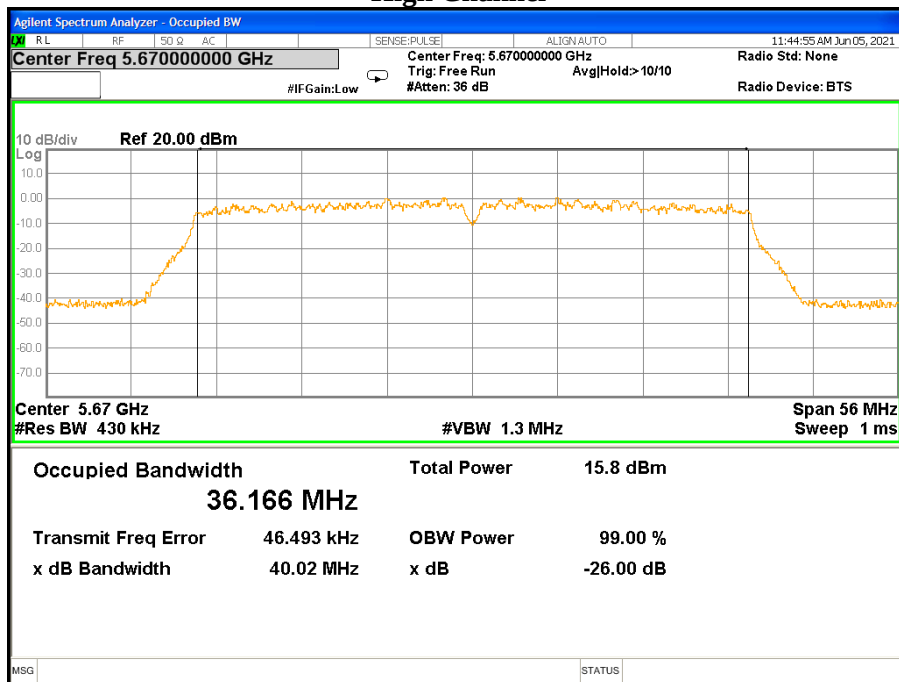
High Channel

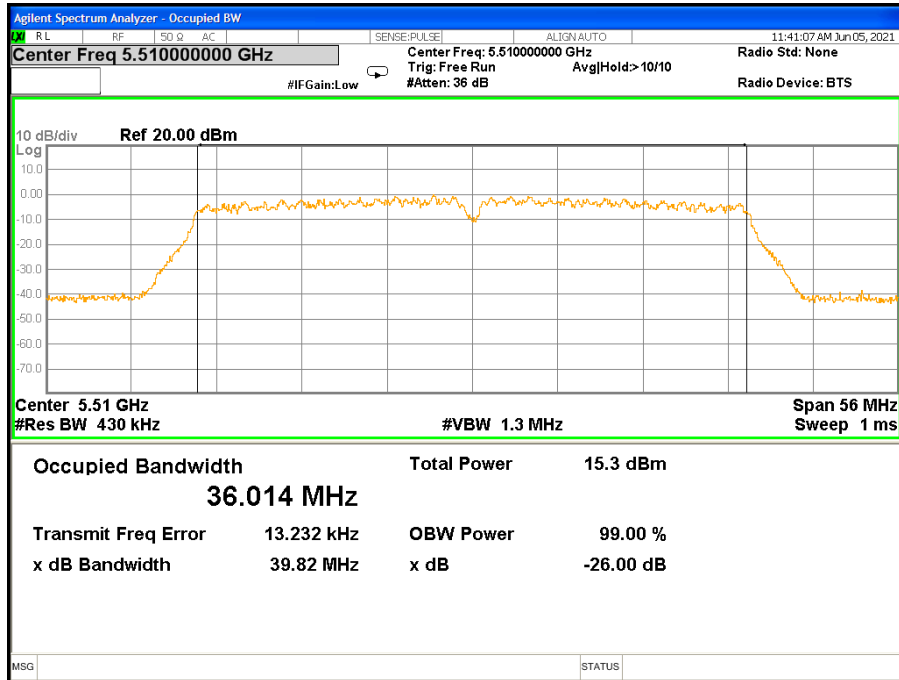
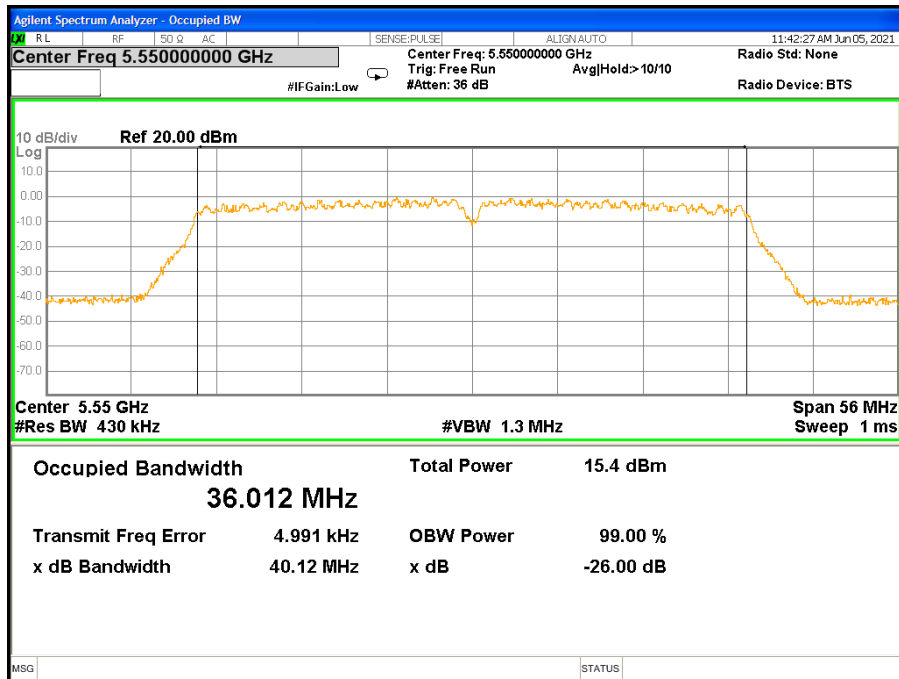
802.11n(40M)
Lowest Channel

Middle Channel

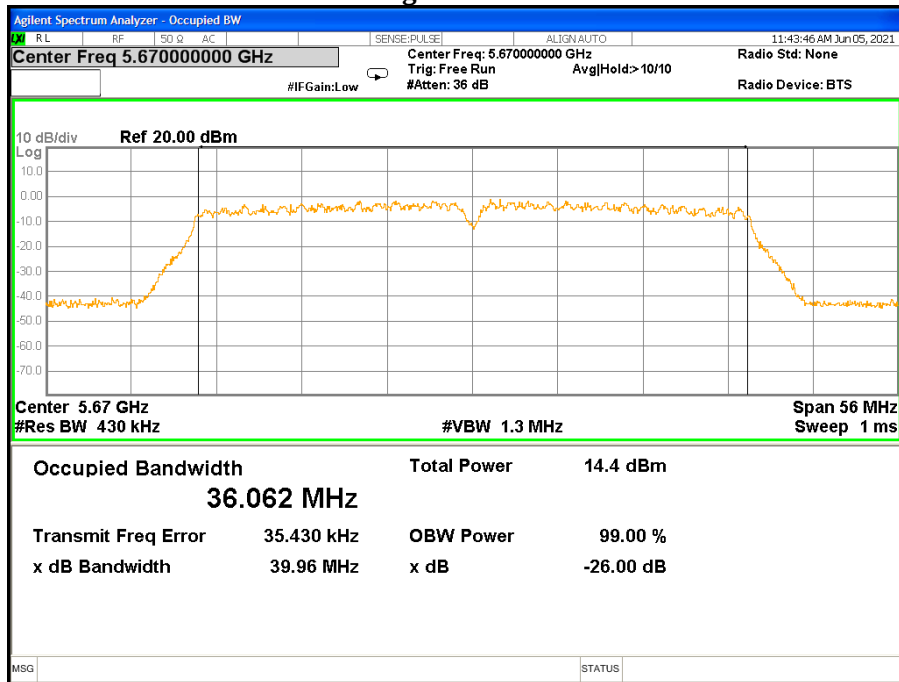
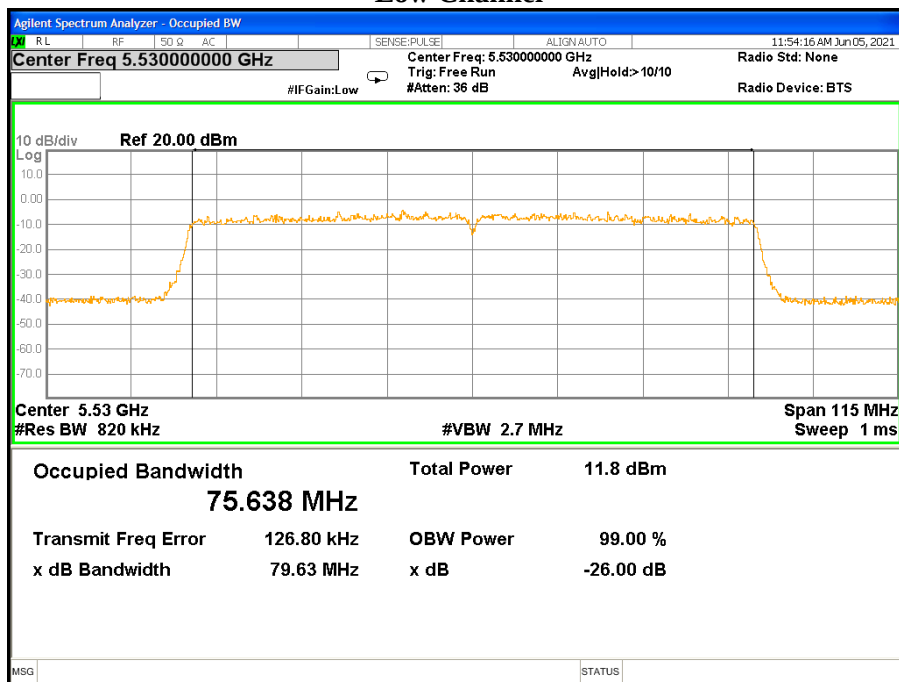


High Channel

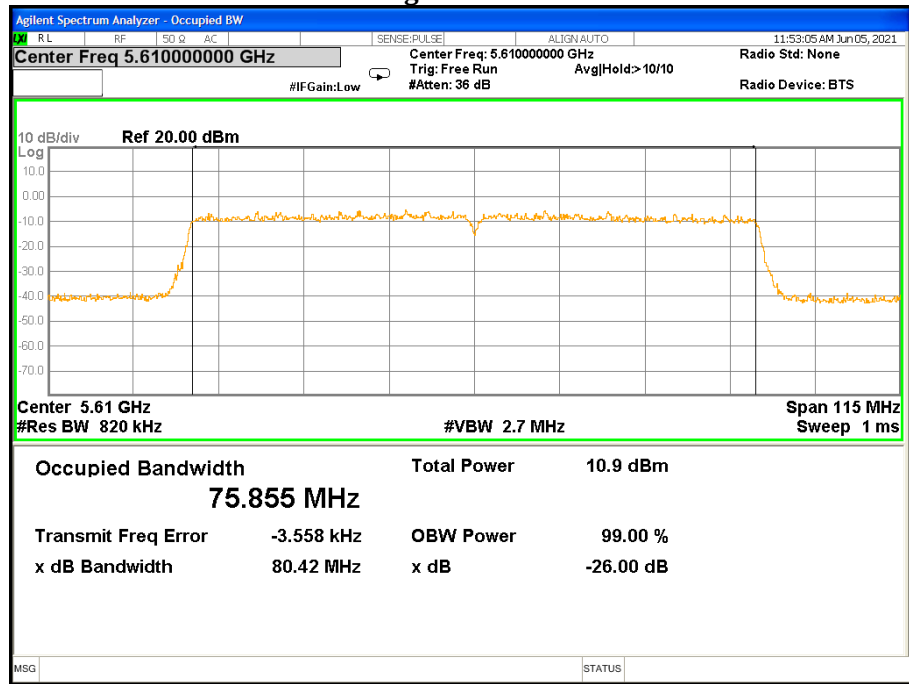


**802.11ac(40M)
Lowest Channel****Middle Channel**

High Channel

802.11ac(80M)
Low Channel

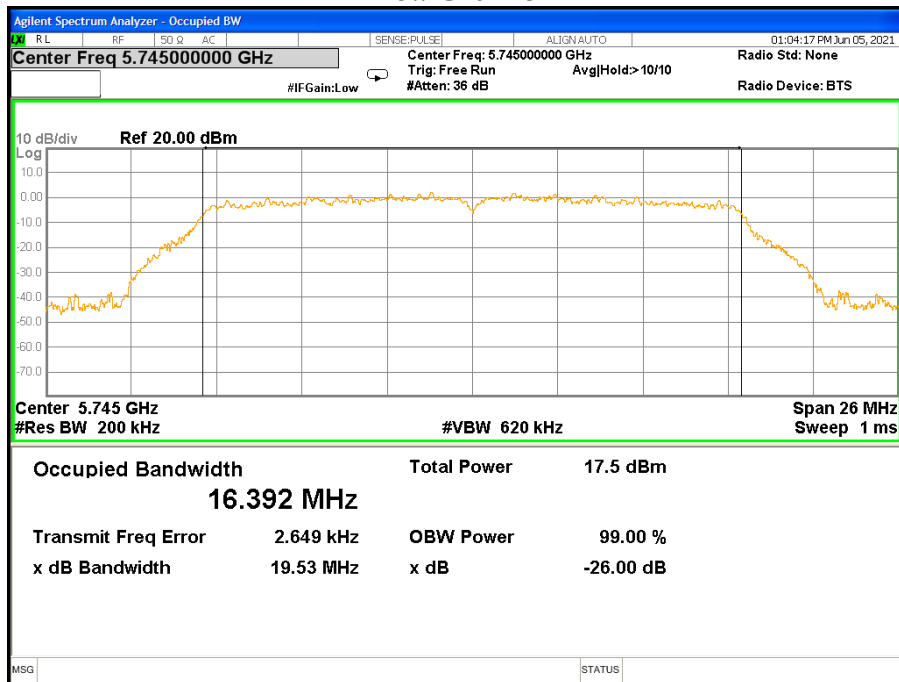
High Channel



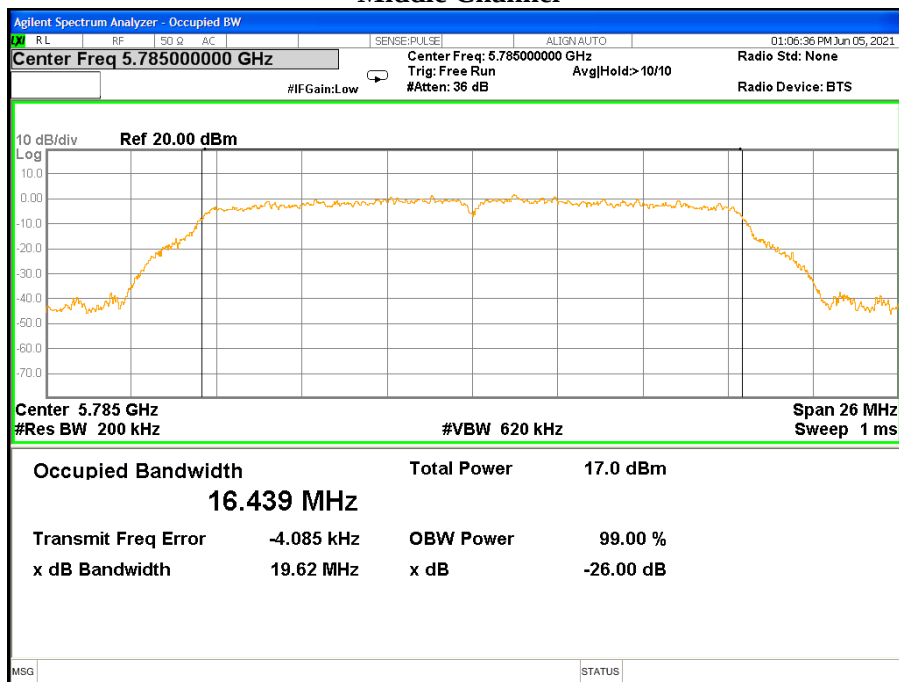
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80 (worst case)		
Test Date :	2021-06-05		

Frequency (MHz)	26dB Bandwidth (MHz)	Pass/Fail
802.11a		
5745	19.53	Pass
5785	19.62	Pass
5825	19.75	Pass
802.11n(HT20)		
5745	19.88	Pass
5785	19.75	Pass
5825	19.85	Pass
802.11n(HT40)		
5755	39.88	Pass
5795	39.79	Pass
802.11ac(VHT20)		
5745	19.72	Pass
5785	19.75	Pass
5825	19.78	Pass
802.11ac(VHT40)		
5755	39.92	Pass
5795	39.89	Pass
802.11ac(VHT80)		
5775	80.34	Pass

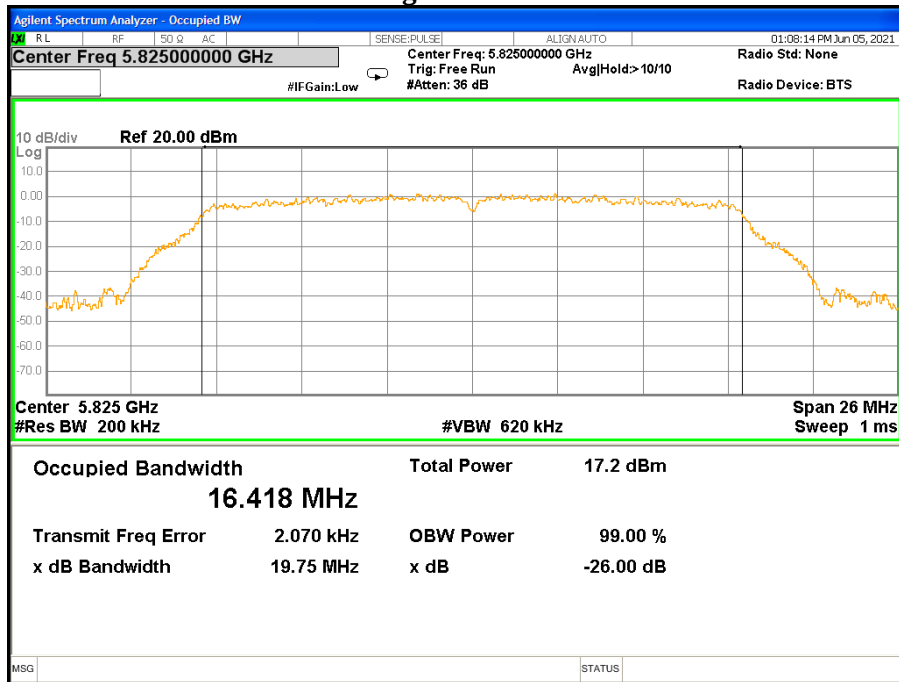
802.11a Low Channel



Middle Channel

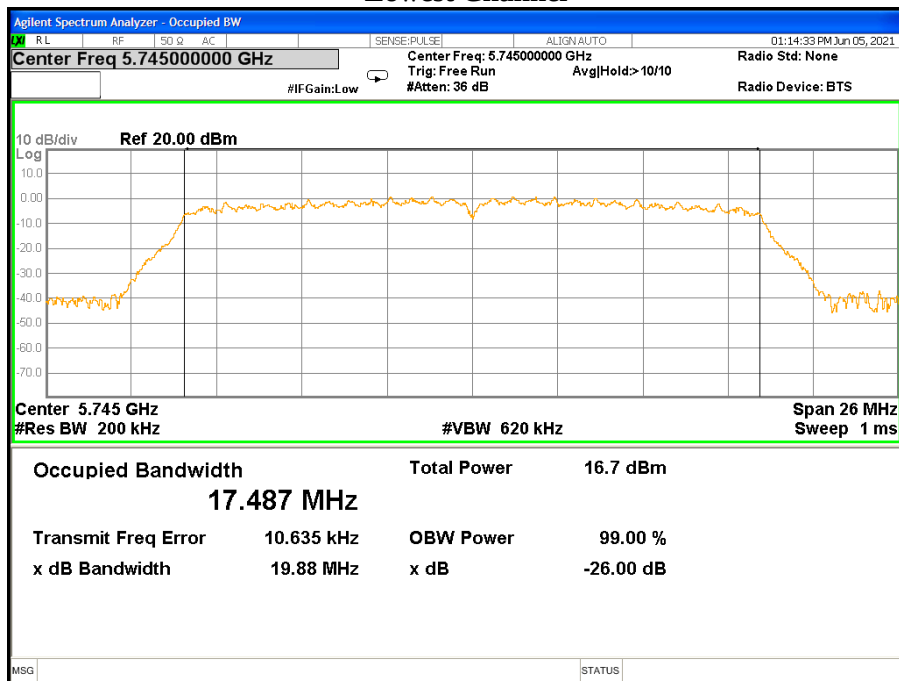


High Channel

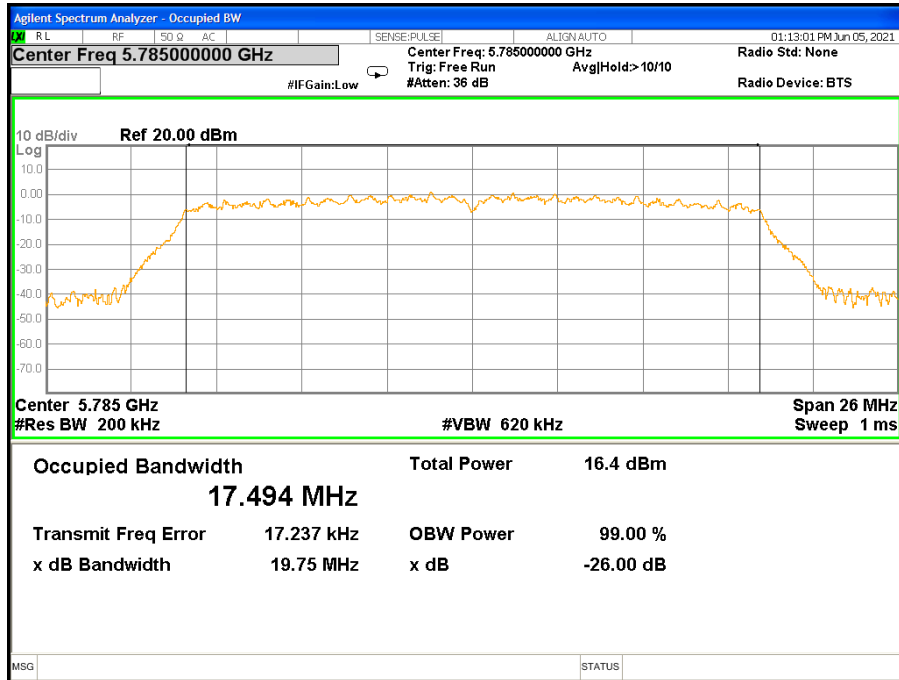


802.11n(20M)

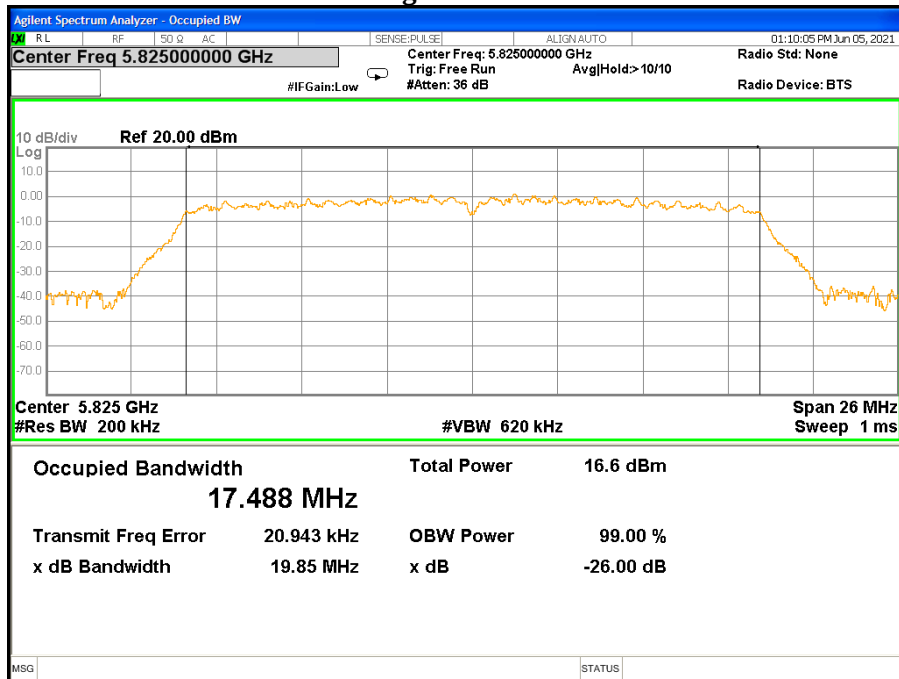
Lowest Channel

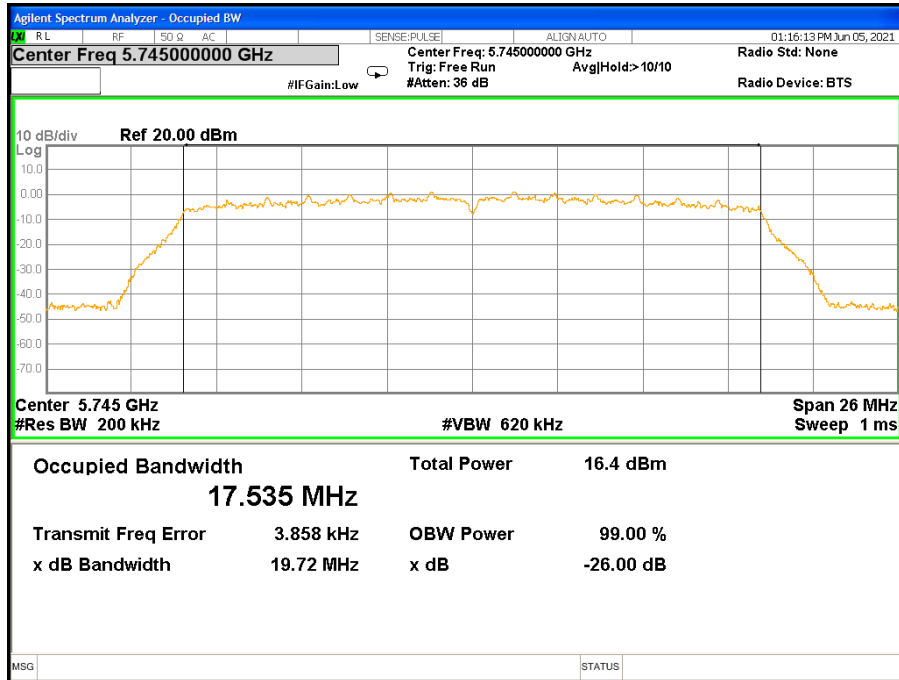
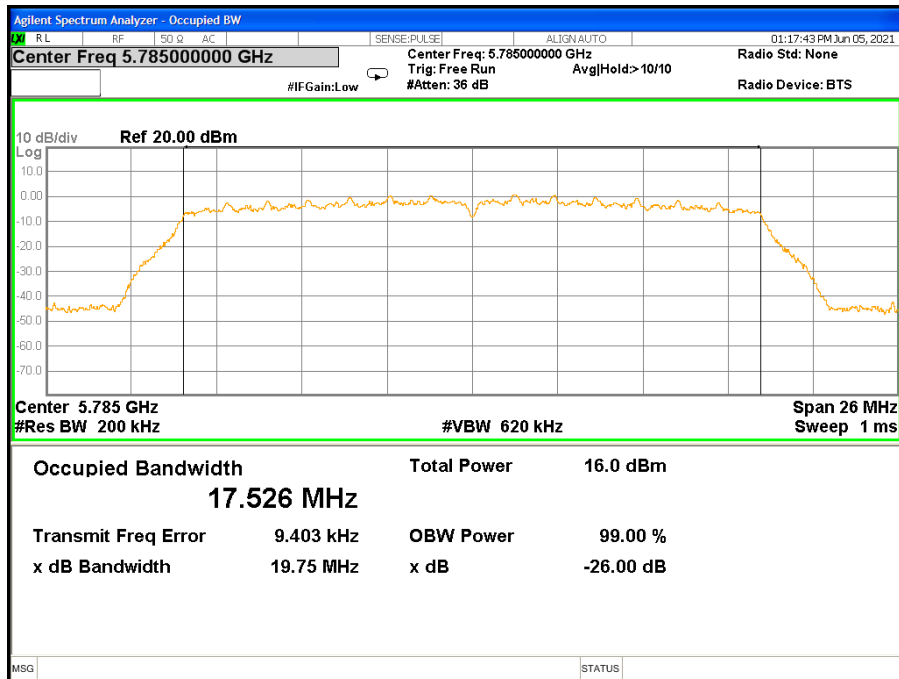


Middle Channel

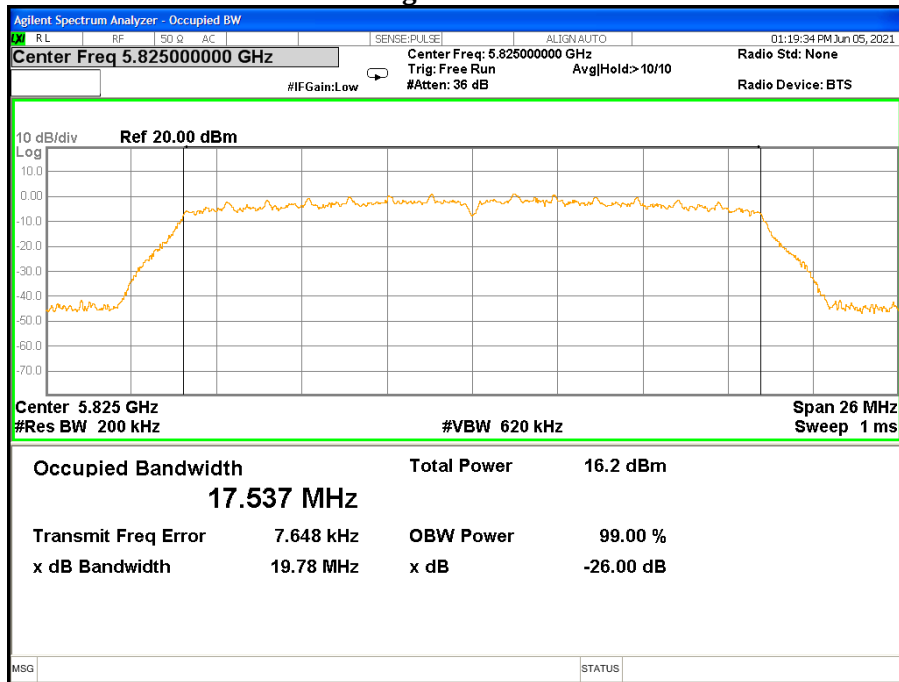
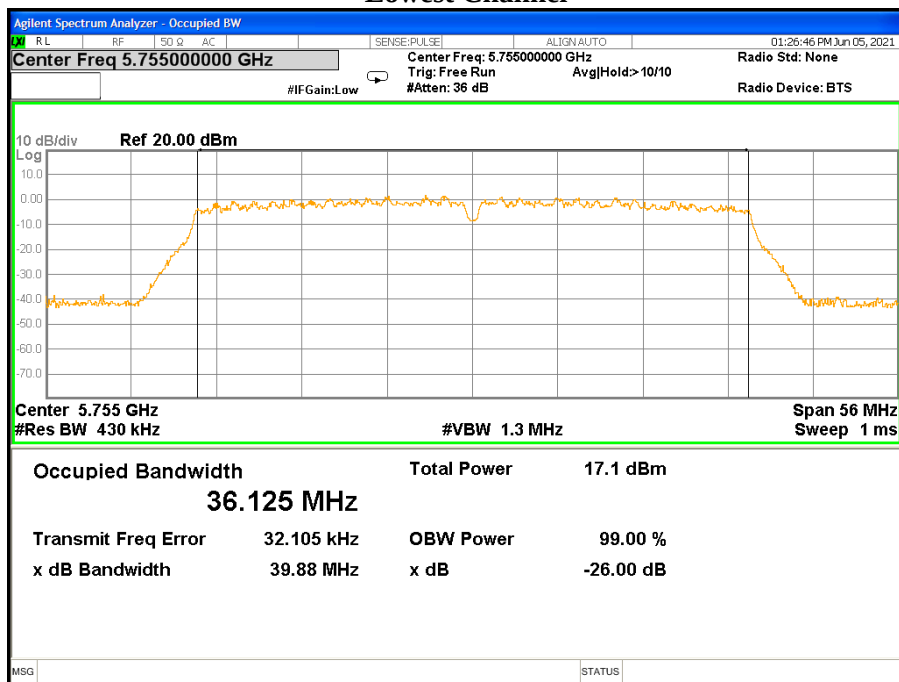


High Channel

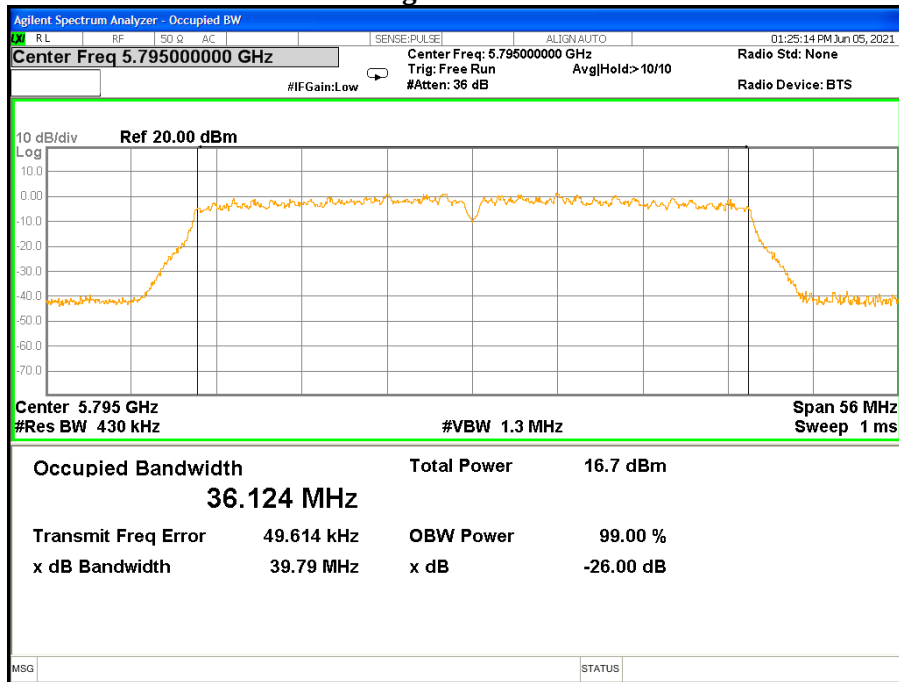
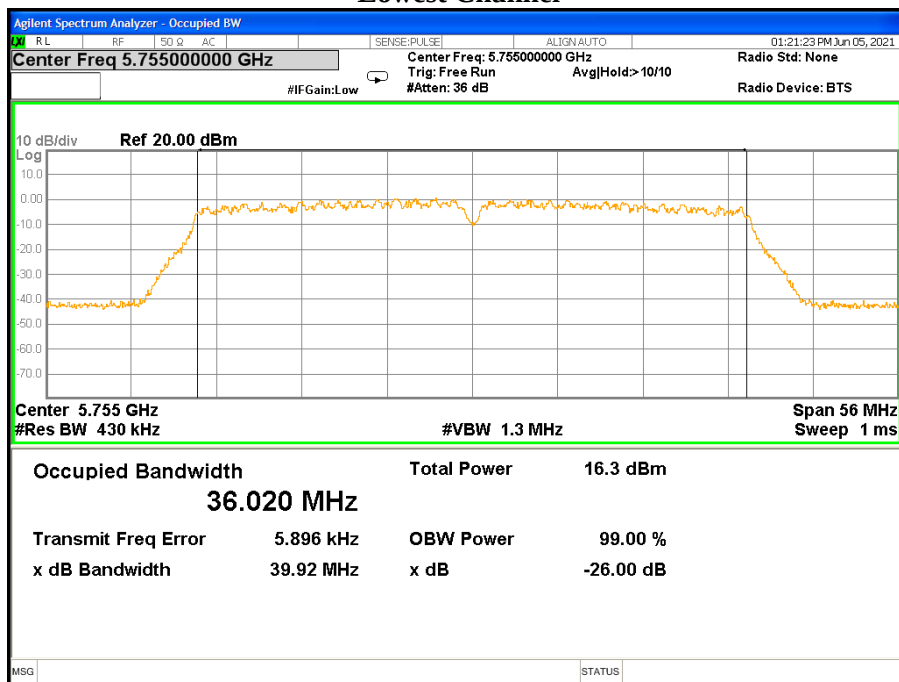


**802.11ac(20M)
Low Channel****Middle Channel**

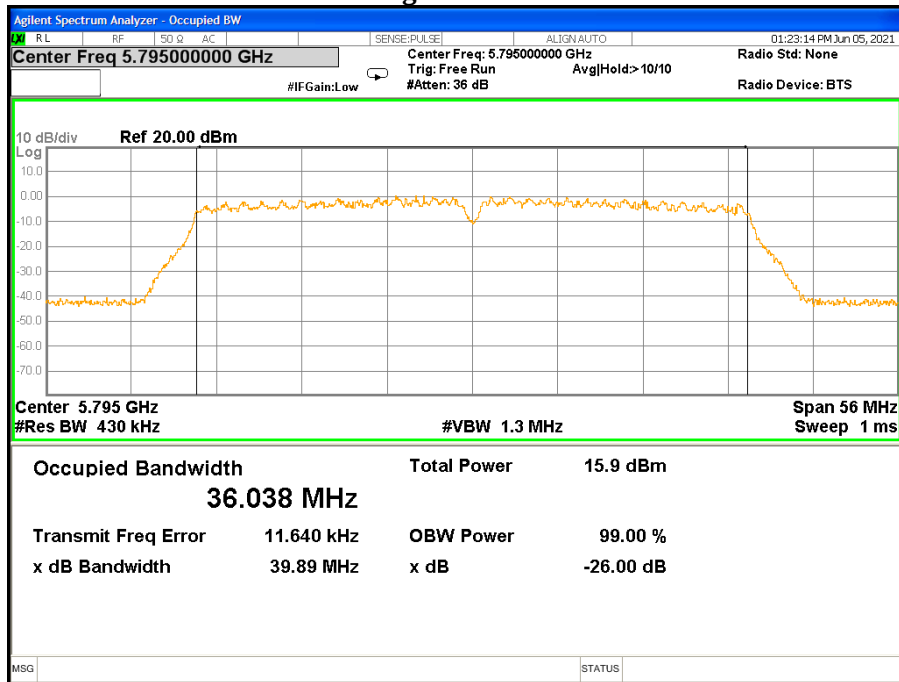
High Channel

802.11n(40M)
Lowest Channel

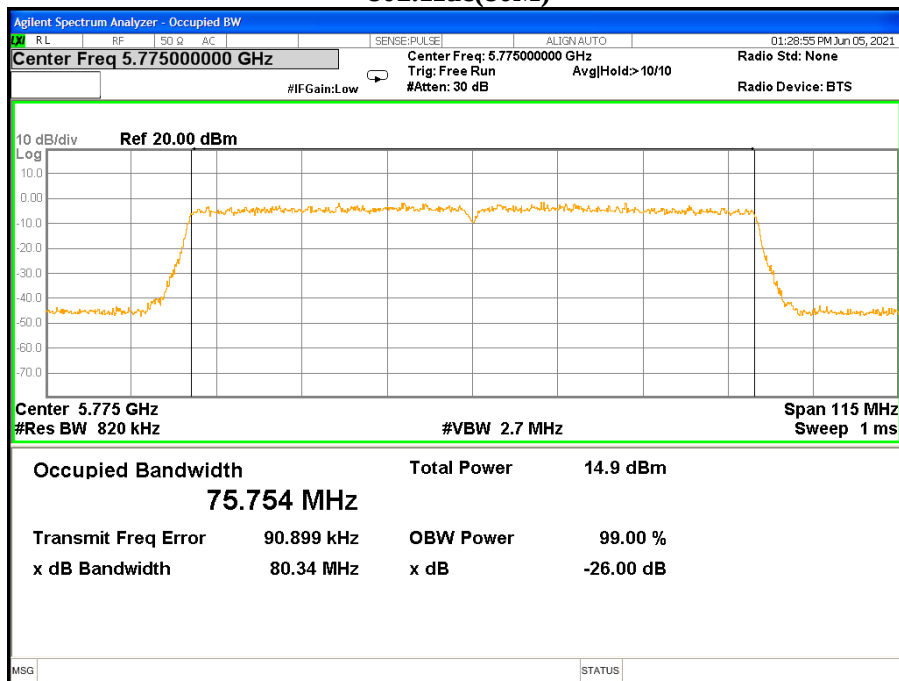
High Channel

802.11ac(40M)
Lowest Channel

High Channel



802.11ac(80M)



4.2 6DB BANDWIDTH TEST

LP0002				
Section	Test Item	Limit	Frequency Range (MHz)	Result
4.7.5	Bandwidth	$\geq 500\text{kHz}$ (6dB bandwidth)	5725-5825	PASS

4.2.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 100kHz, VBW=300kHz, Sweep time = Auto.

4.2.2 DEVIATION FROM STANDARD

No deviation.

4.2.3 TEST SETUP

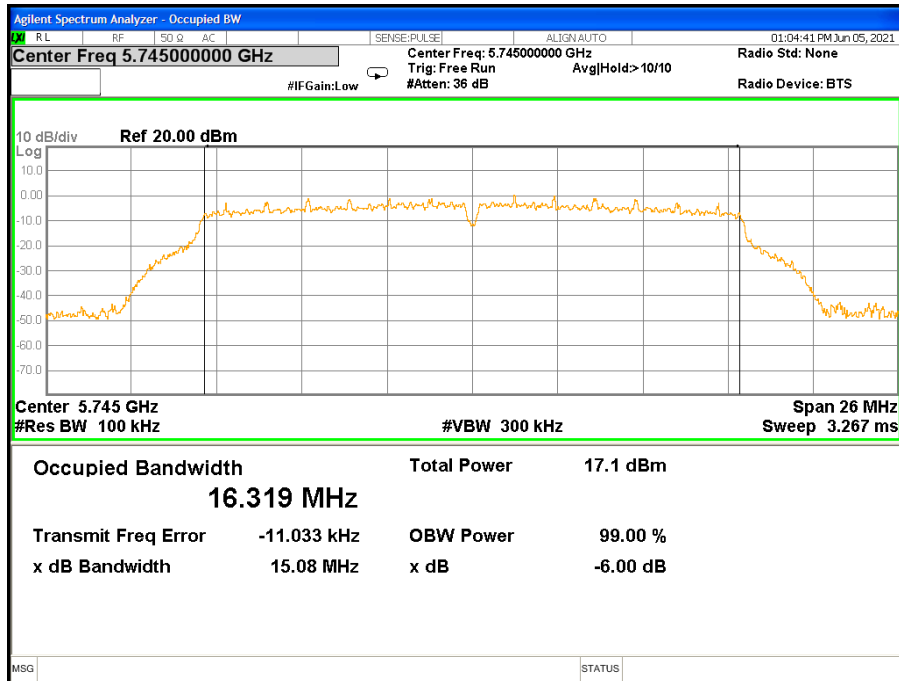
4.2.4 TEST RESULTS

Note: ANT B Power> ANT A Power, Both ANT A and B have been test, Only show the worst data of ANT B.

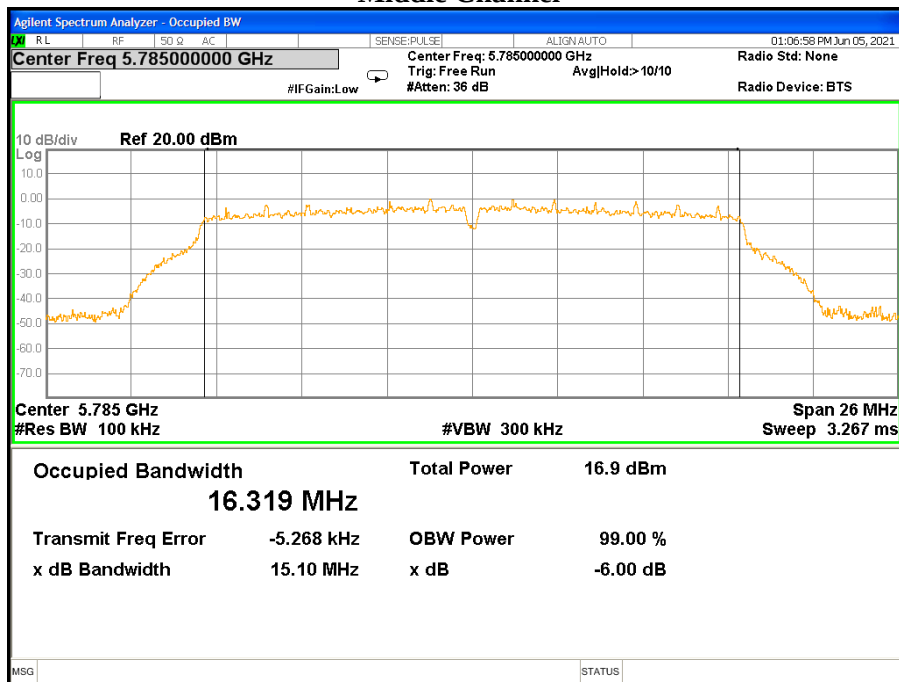
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80 (worst case)		
Test Date :	2021-06-05		

Frequency (MHz)	6dB Bandwidth (MHz)	Pass/Fail
802.11a		
5745	15.08	Pass
5785	15.10	Pass
5825	15.10	Pass
802.11n(HT20)		
5745	16.29	Pass
5785	16.31	Pass
5825	16.31	Pass
802.11n(HT40)		
5755	35.70	Pass
5795	35.70	Pass
802.11ac(VHT20)		
5745	15.12	Pass
5785	15.12	Pass
5825	15.12	Pass
802.11ac(VHT40)		
5755	35.13	Pass
5795	35.12	Pass
802.11ac(VHT80)		
5775	76.39	Pass

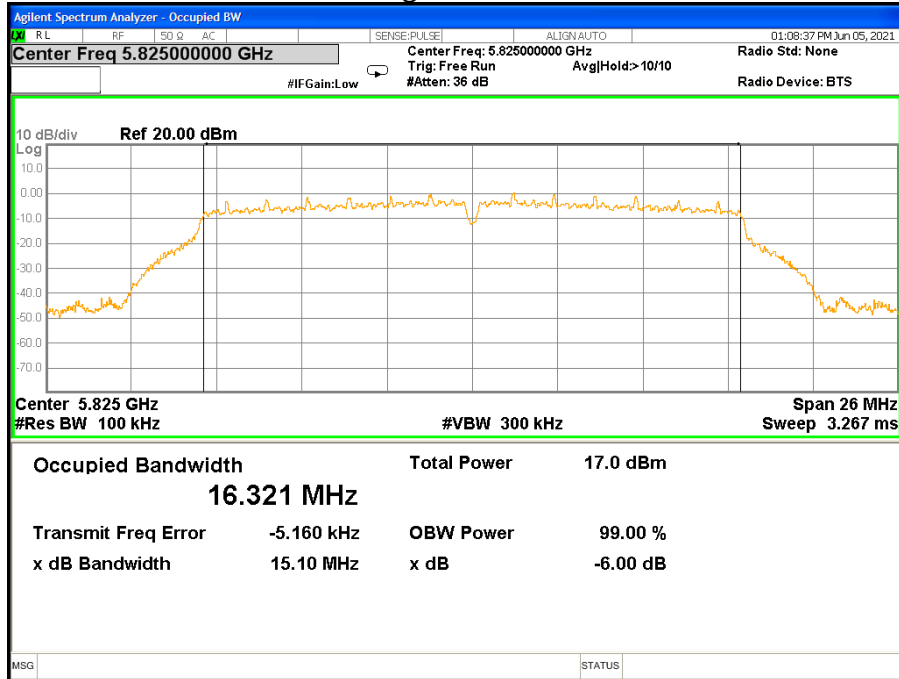
802.11a Low Channel



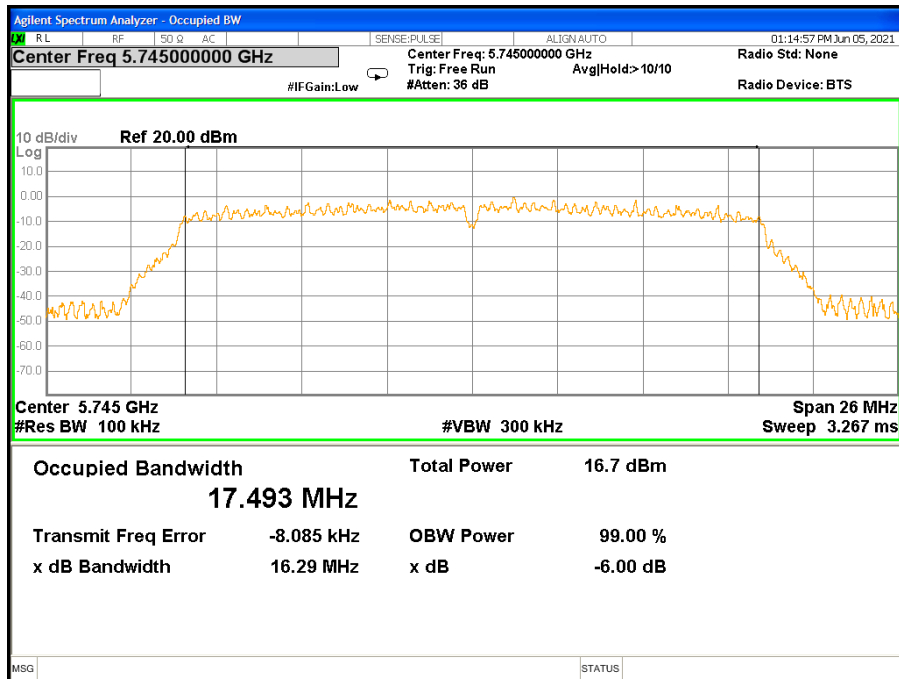
Middle Channel



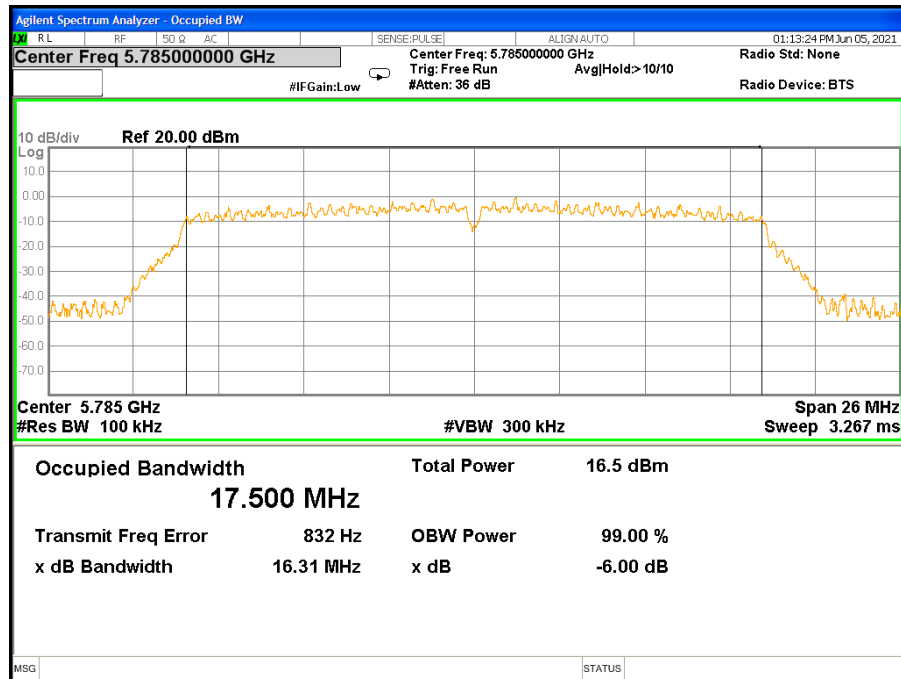
High Channel



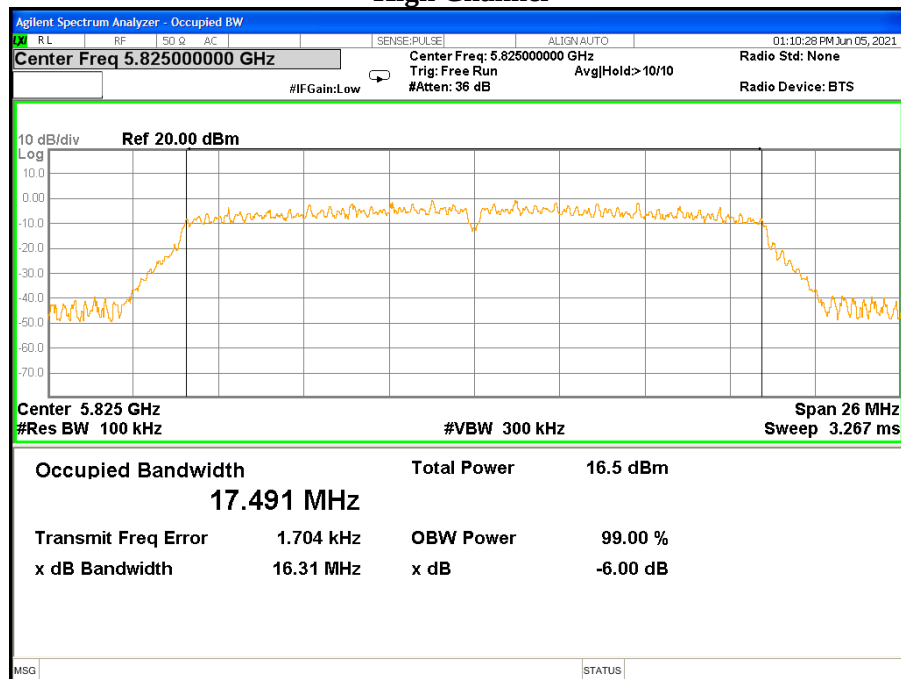
802.11n(20M) Lowest Channel



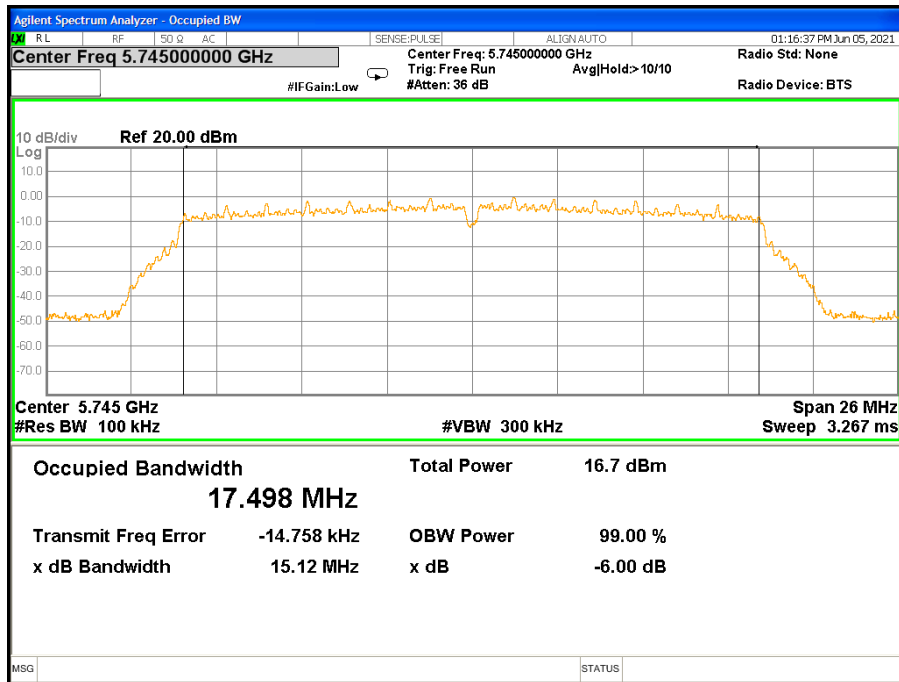
Middle Channel



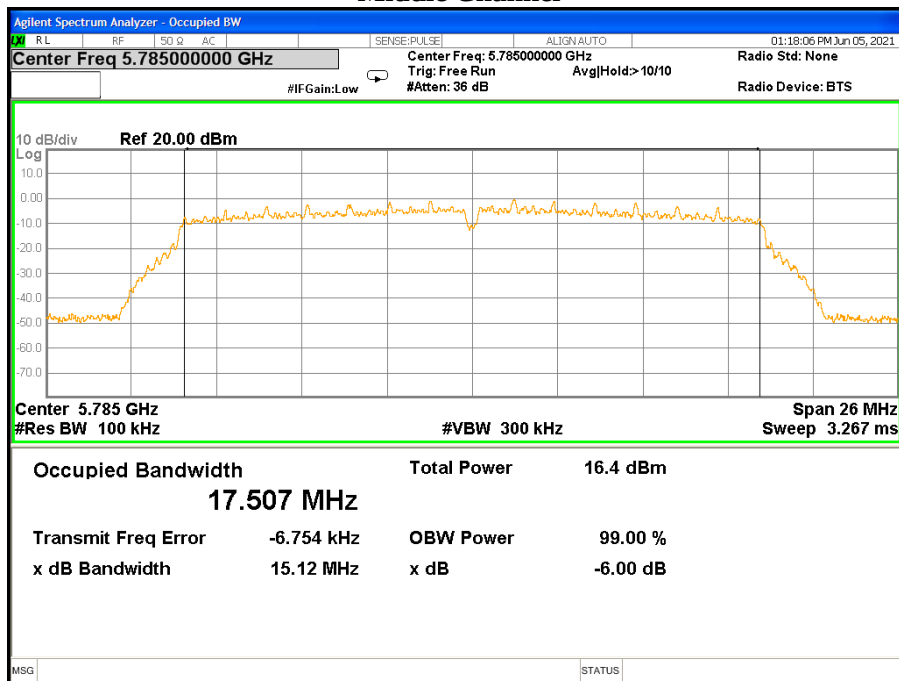
High Channel



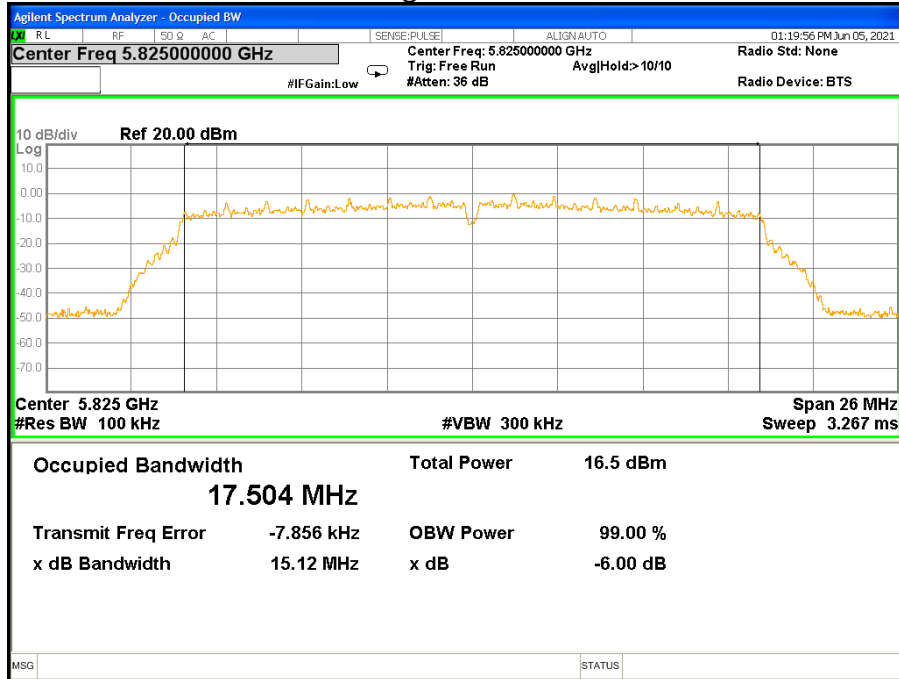
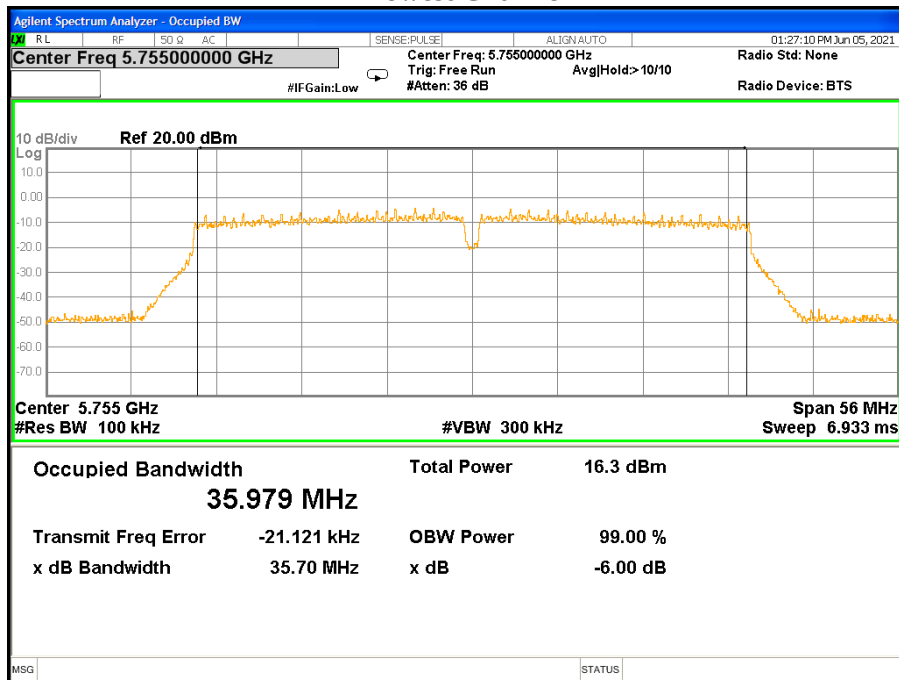
802.11ac(20M) Low Channel



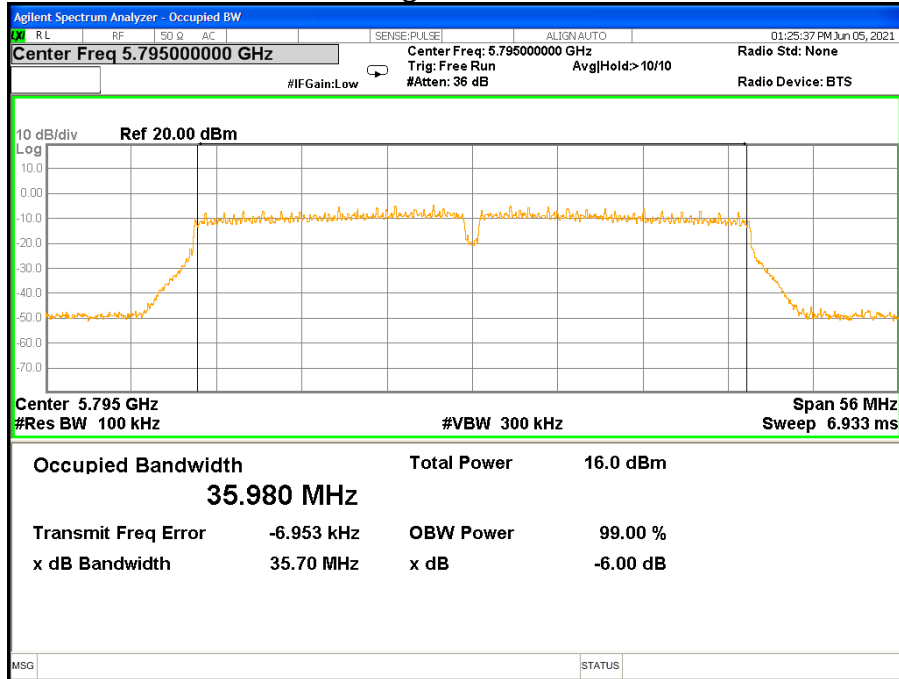
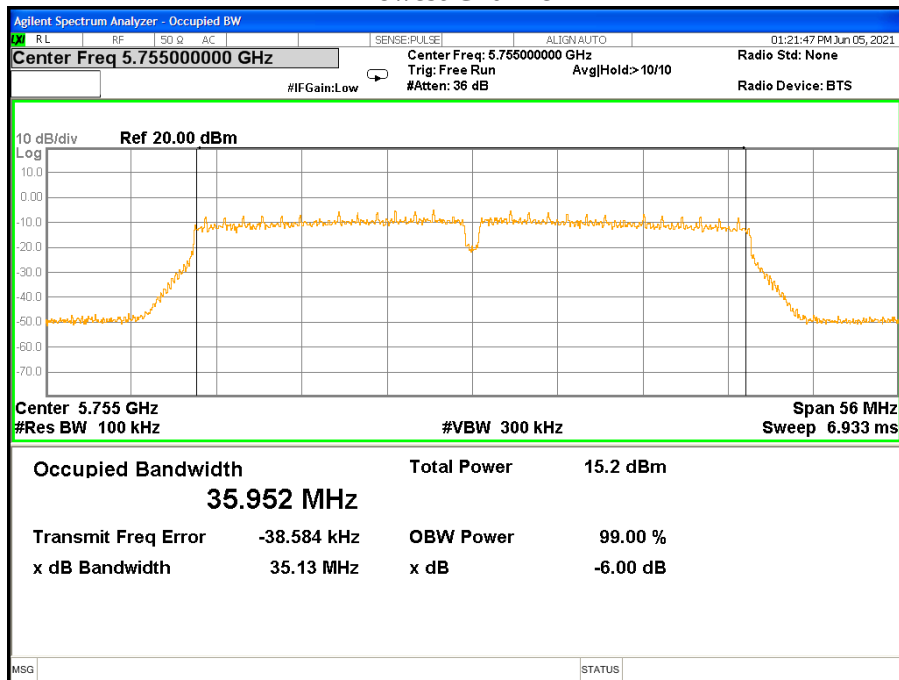
Middle Channel



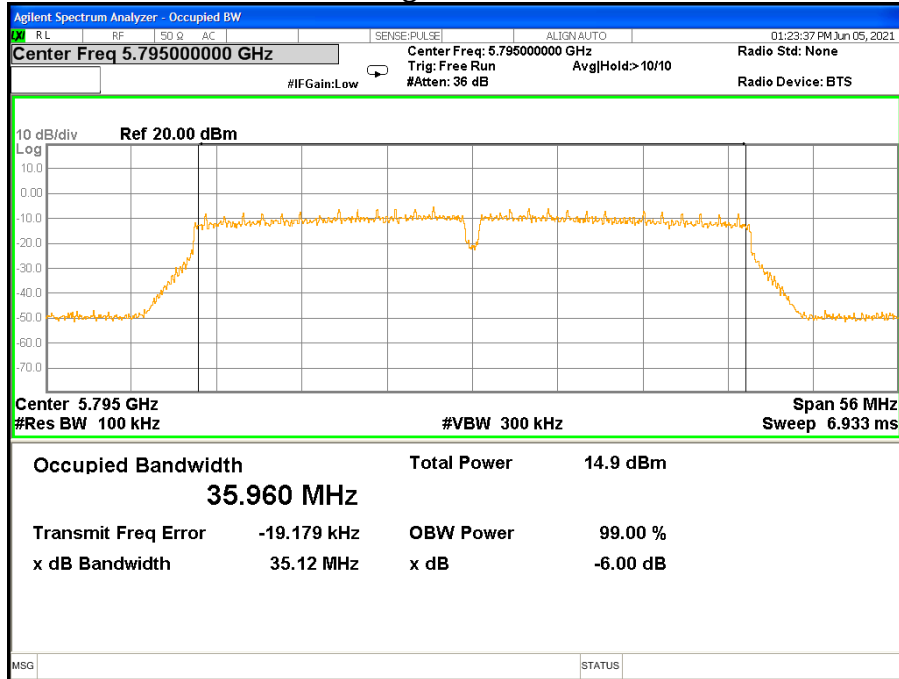
High Channel

802.11n(40M)
Lowest Channel

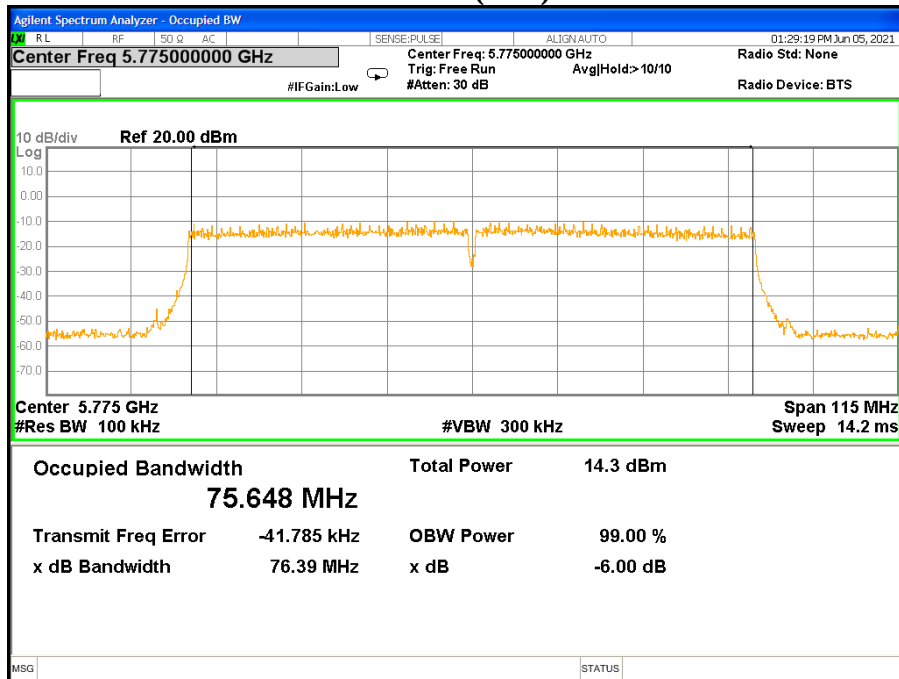
High Channel

802.11ac(40M)
Lowest Channel

High Channel



802.11ac(80M)



5 PEAK POWER DENSITY

5.1 APPLIED PROCEDURES / LIMIT

Frequency Band	Limit
5.15 – 5.25 GHz	11dBm
5.25– 5.35GHz	11dBm
5.47 – 5.725 GHz	11dBm
5.725 – 5.85 GHz	30dBm

5.2 TEST PROCEDURE

- a. The Transmitter output of EUT was connected to the spectrum analyzer.

Equipment mode: Spectrum analyzer

Detector function: Peak mode

SPAN: 40MHz/80MHz/120MHz

RBW: 1MHz

VBW: 3MHz

Center frequency: fundamental frequency tested.

Sweep time= 1msec.

- b. Using Peak Search to read the peak power after Maximum Hold function is completed.

5.3 DEVIATION FROM STANDARD

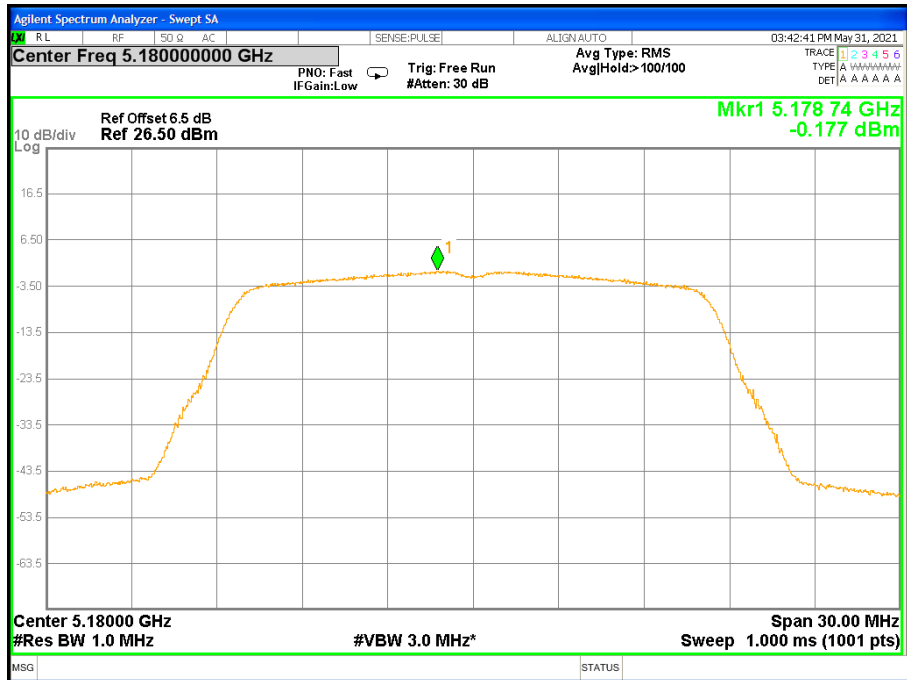
No deviation.

5.4 TEST RESULTS

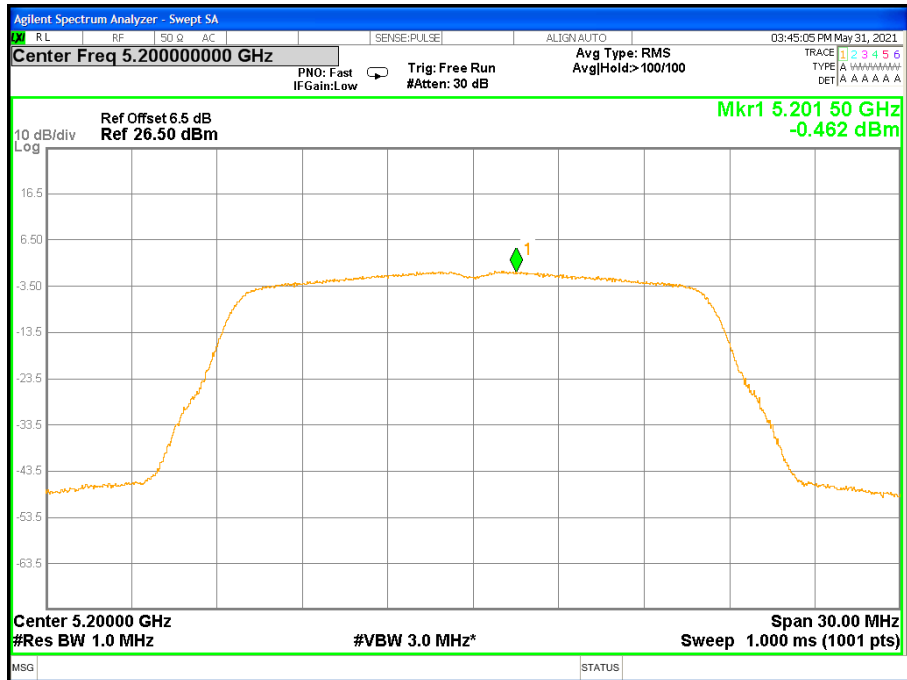
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80		
Test Date :	2021-05-31		

5150-5250MHz								
Frequency	Direct measurement Ant_A Power Density (dBm)	Direct measurement Ant_B Power Density (dBm)	Duty cycle factor	Final Ant_A Power Density (dBm)	Final Ant_B Power Density (dBm)	Power Density Total (dBm)	Limit (dBm)	Result
802.11a								
5180	-0.177	0.212	0.074	-0.103	0.286	--	10.01	PASS
5200	-0.462	-0.183	0.074	-0.388	-0.109	--	10.01	PASS
5240	-0.136	-0.052	0.074	-0.062	0.022	--	10.01	PASS
802.11n20								
5180	-1.547	-1.426	0.069	-1.478	-1.357	1.593	7	PASS
5200	-1.637	-1.356	0.069	-1.568	-1.287	1.585	7	PASS
5240	-1.247	-1.120	0.069	-1.178	-1.051	1.896	7	PASS
802.11n40								
5190	-10.286	-5.413	0.156	-10.130	-5.257	-4.033	7	PASS
5230	-9.886	-5.004	0.156	-9.730	-4.848	-3.626	7	PASS
802.11ac20								
5180	-1.607	-1.133	0.186	-1.421	-0.947	1.833	7	PASS
5200	-1.648	-1.080	0.186	-1.462	-0.894	1.841	7	PASS
5240	-1.306	-1.093	0.186	-1.120	-0.907	1.998	7	PASS
802.11ac40								
5190	-10.998	-6.948	0.231	-10.767	-6.717	-5.276	7	PASS
5230	-10.608	-6.441	0.231	-10.377	-6.210	-4.801	7	PASS
802.11ac80								
5210	-16.780	-11.985	2.207	-14.573	-9.778	-8.534	7	PASS

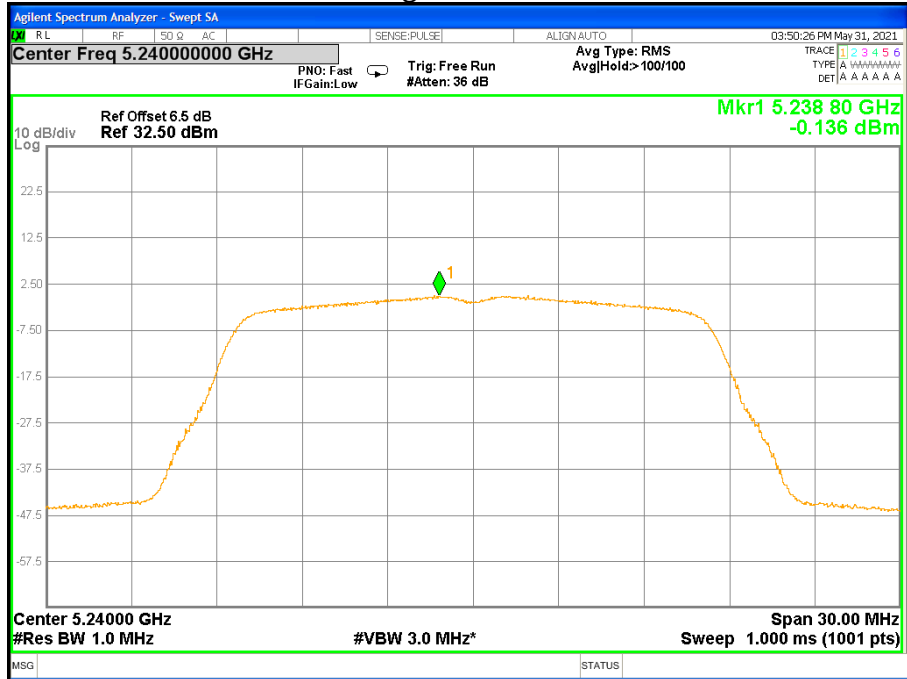
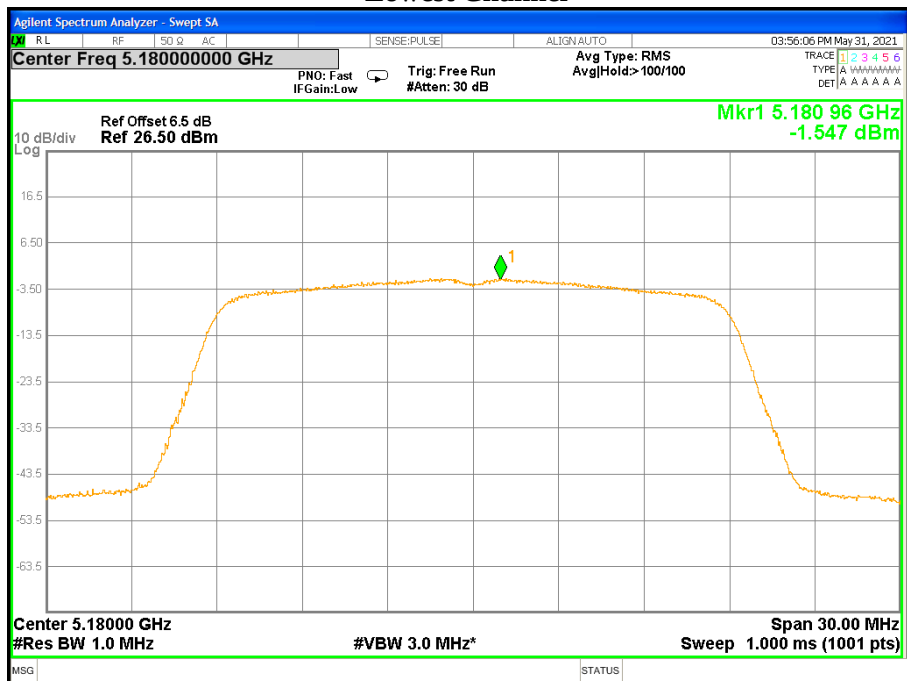
ANT A
802.11a
Low Channel



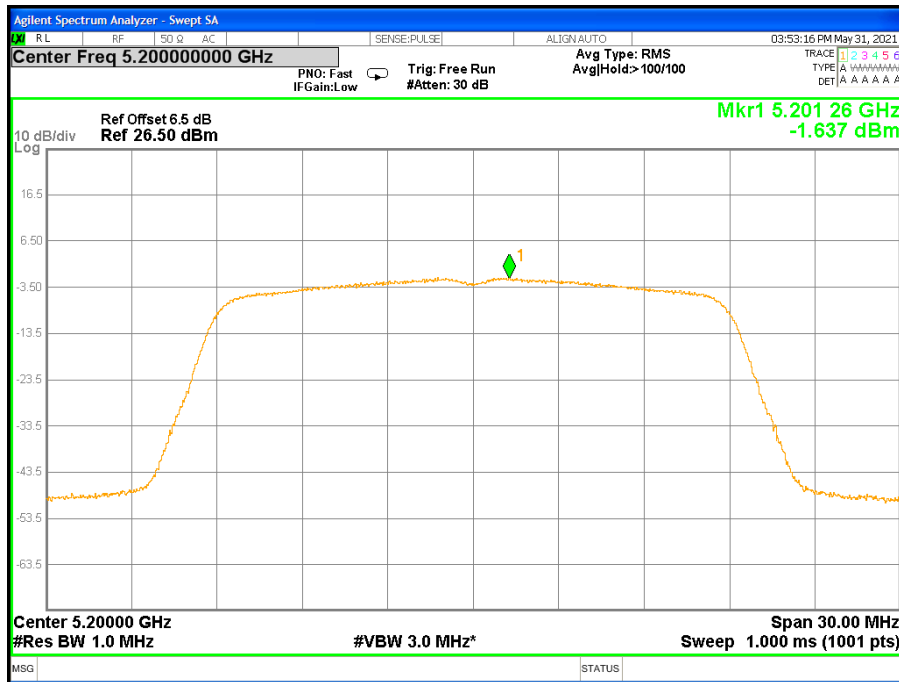
Middle Channel



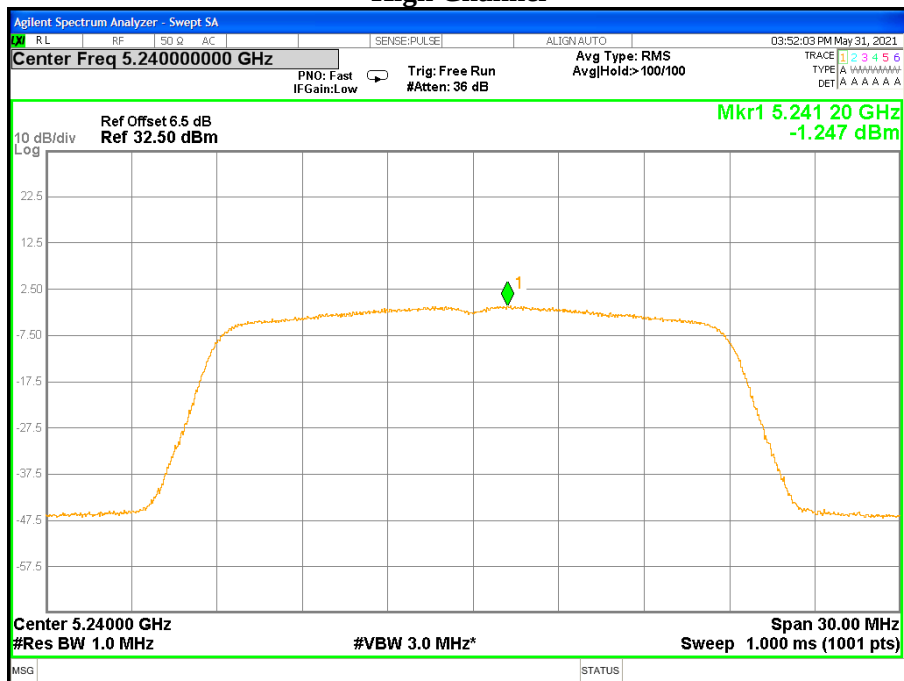
High Channel

802.11n(20M)
Lowest Channel

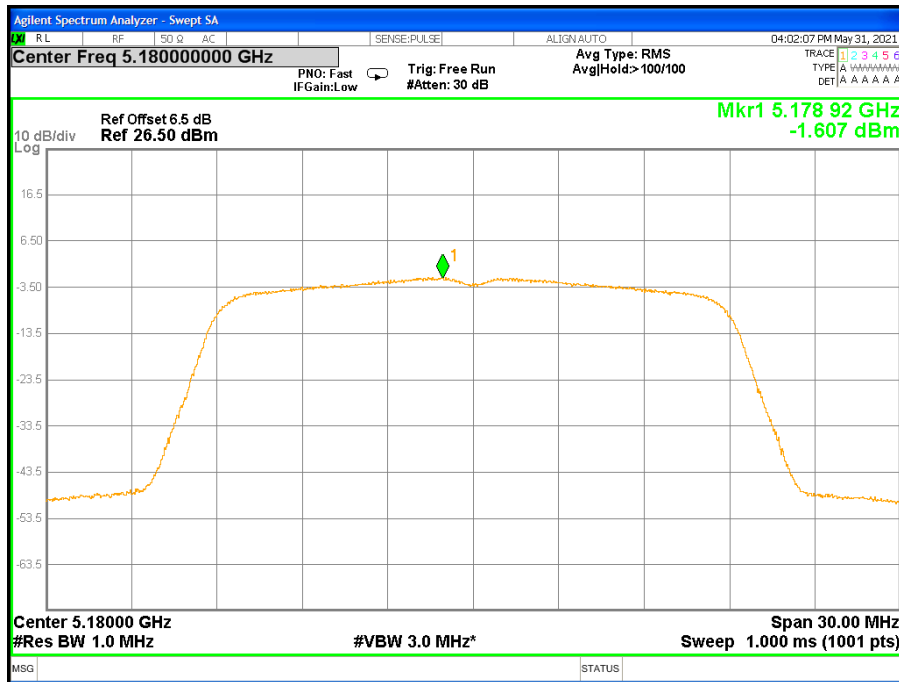
Middle Channel



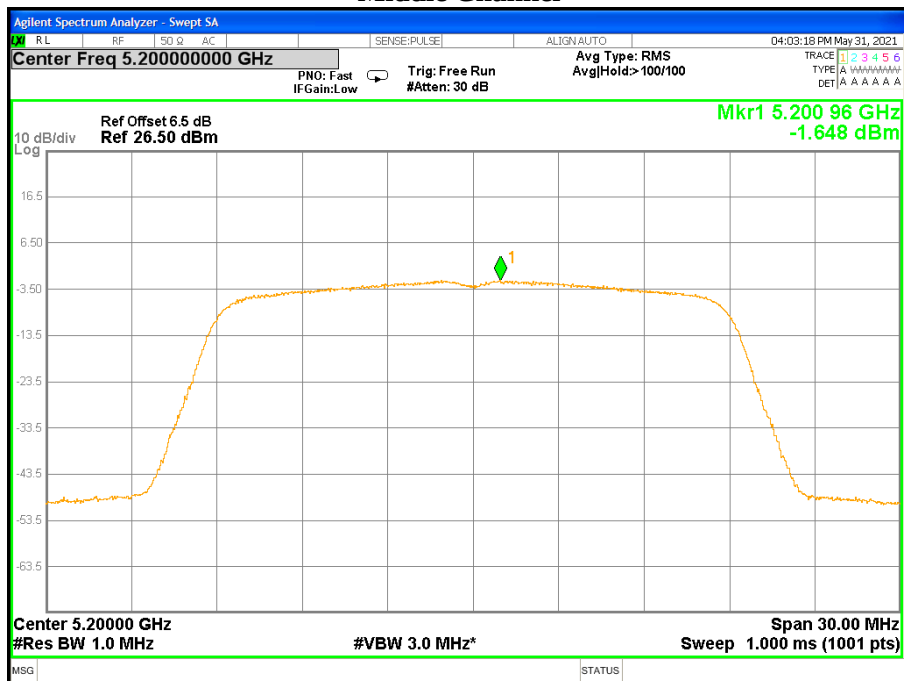
High Channel



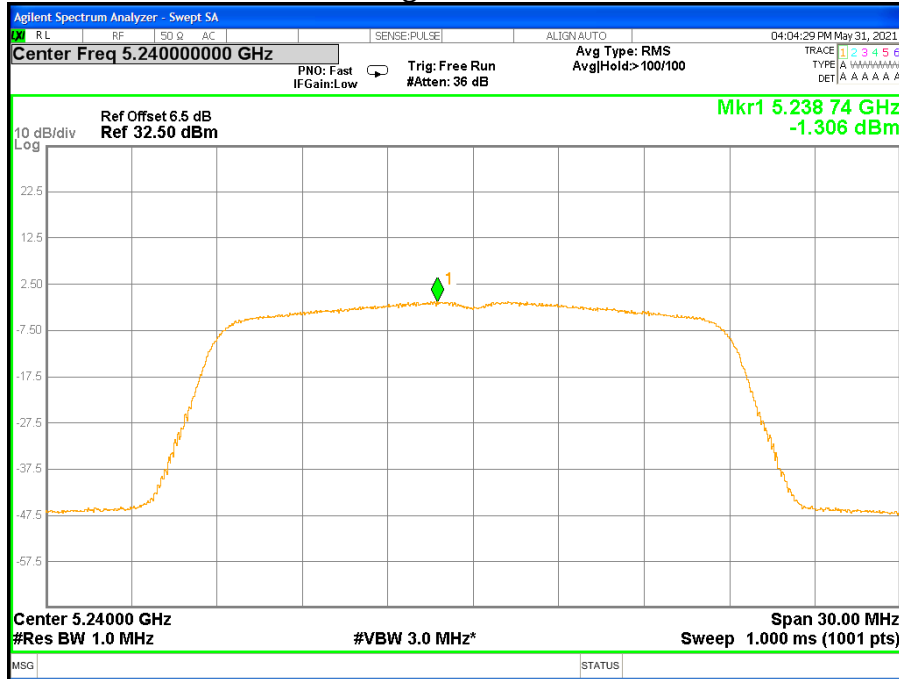
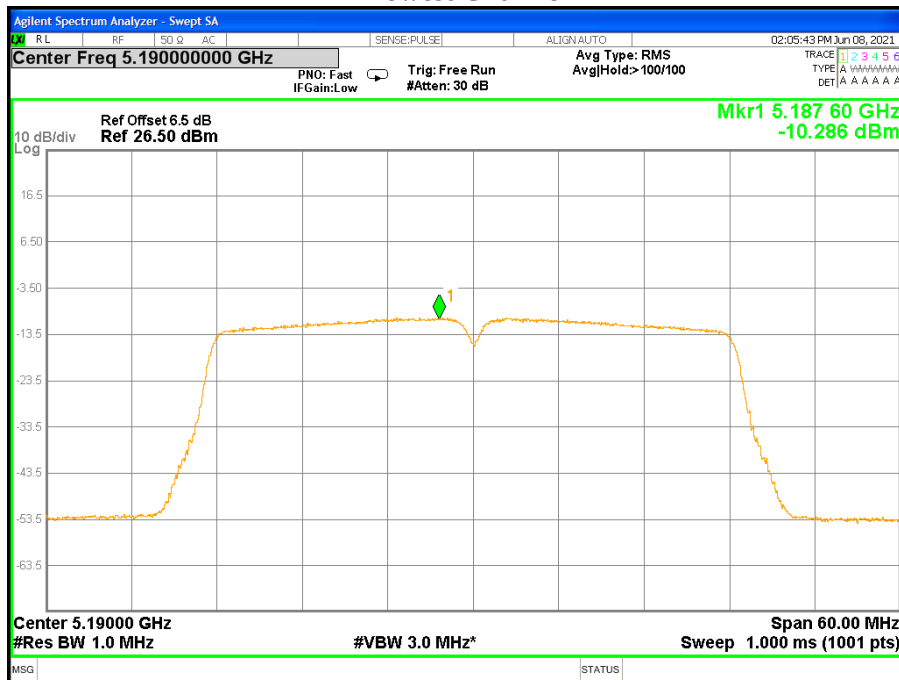
802.11ac(20M) Low Channel



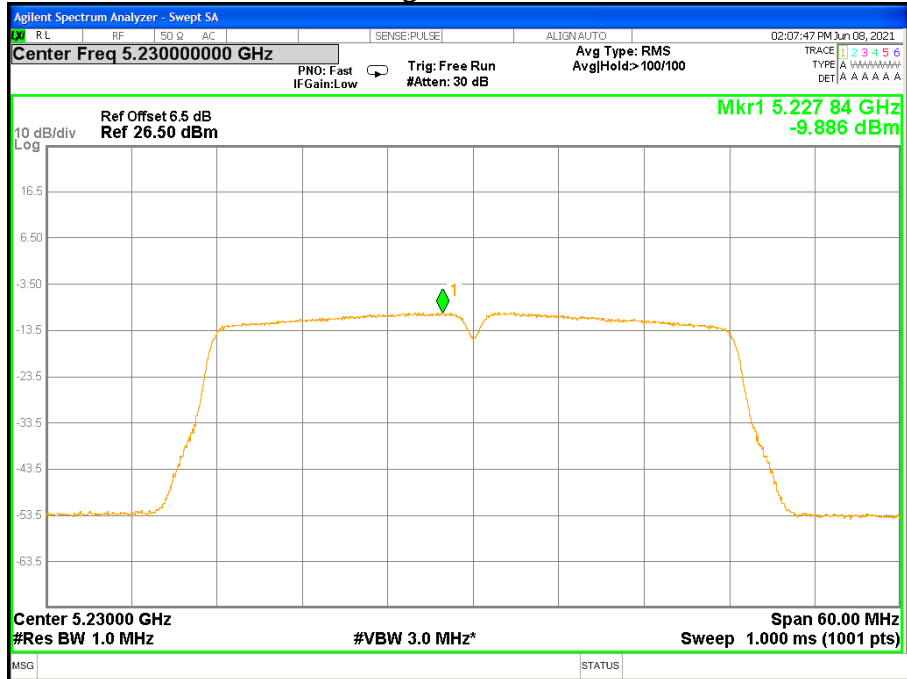
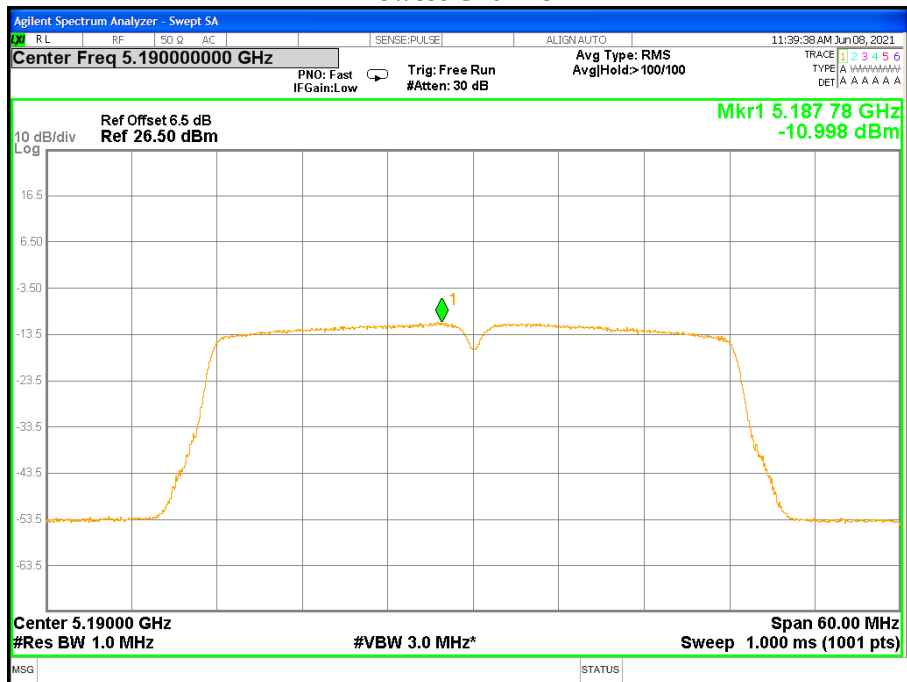
Middle Channel



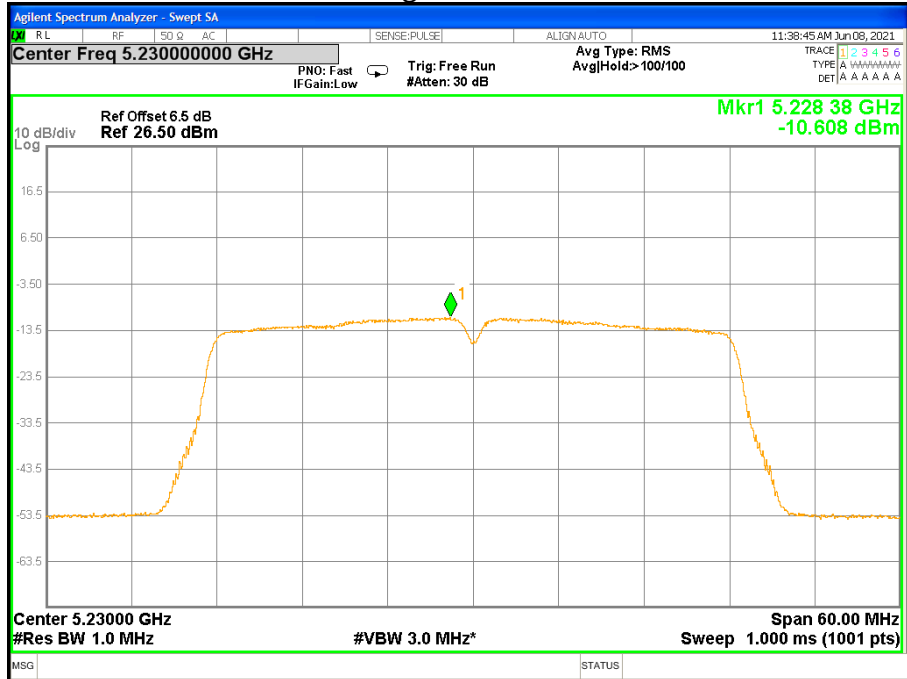
High Channel

802.11n(40M)
Lowest Channel

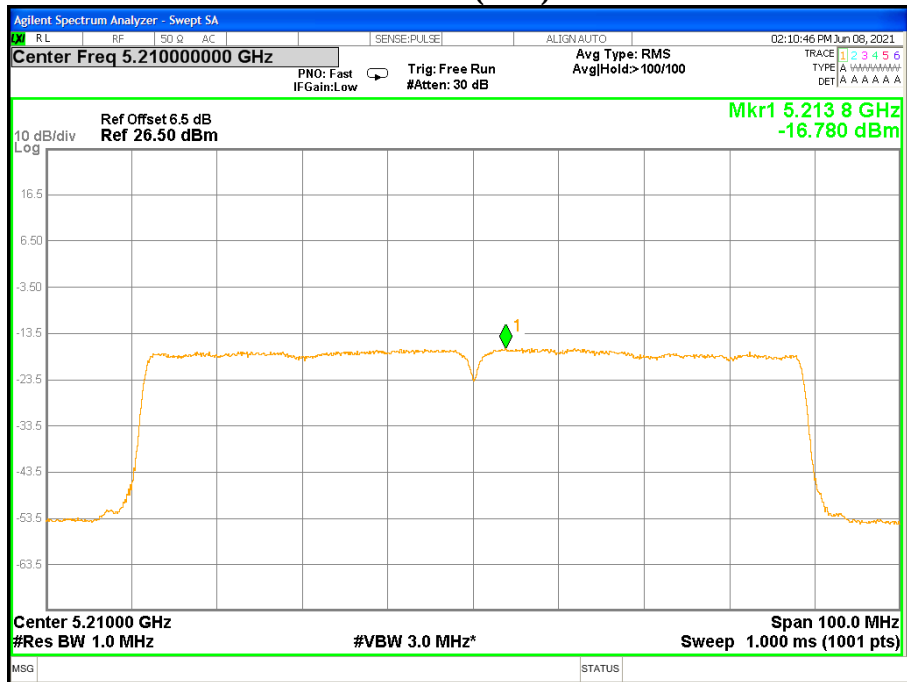
High Channel

802.11ac(40M)
Lowest Channel

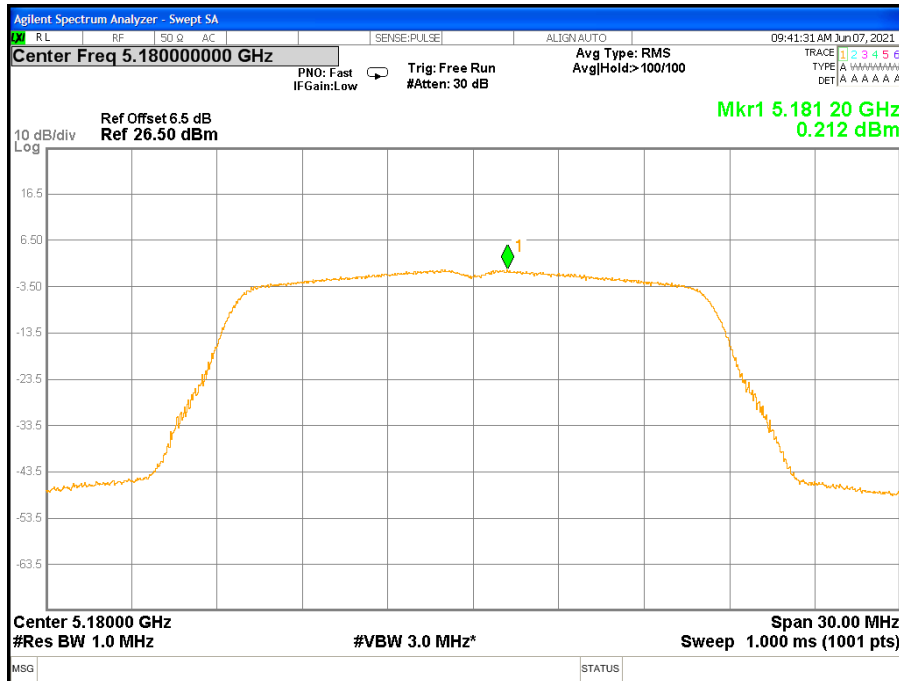
High Channel



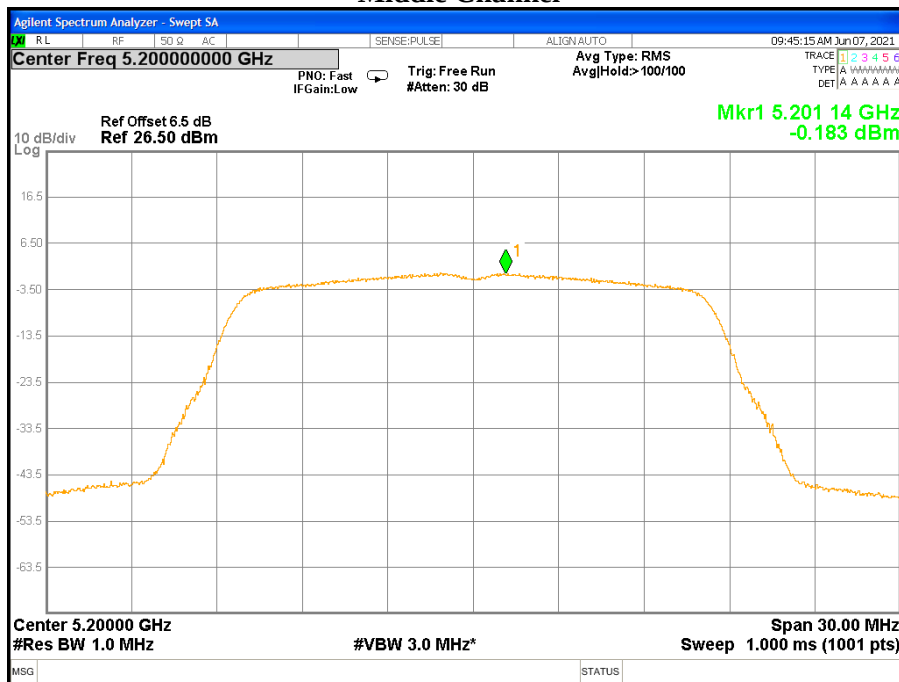
802.11ac(80M)



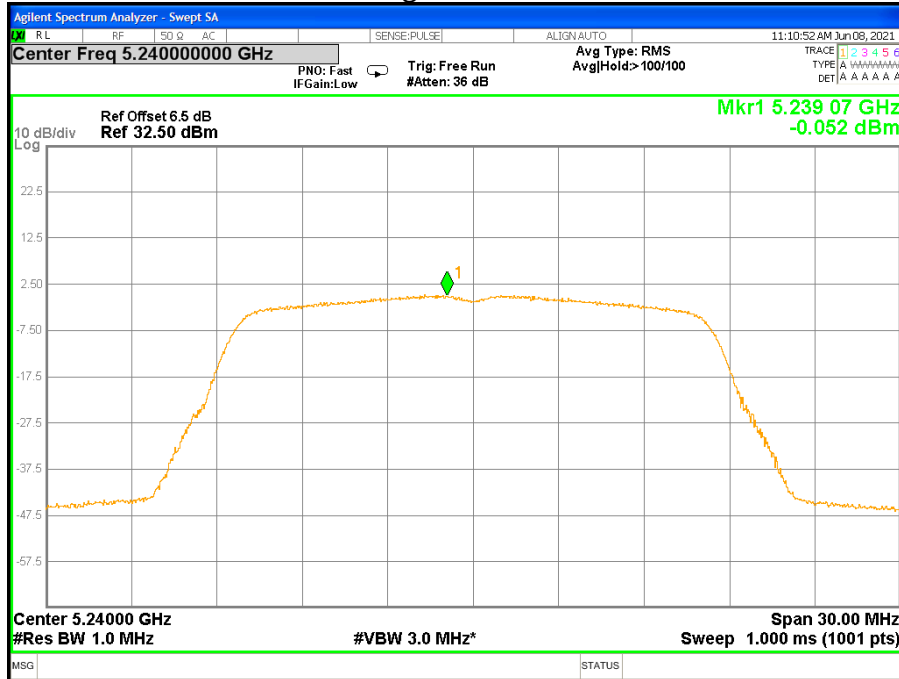
ANT B
802.11a
Low Channel



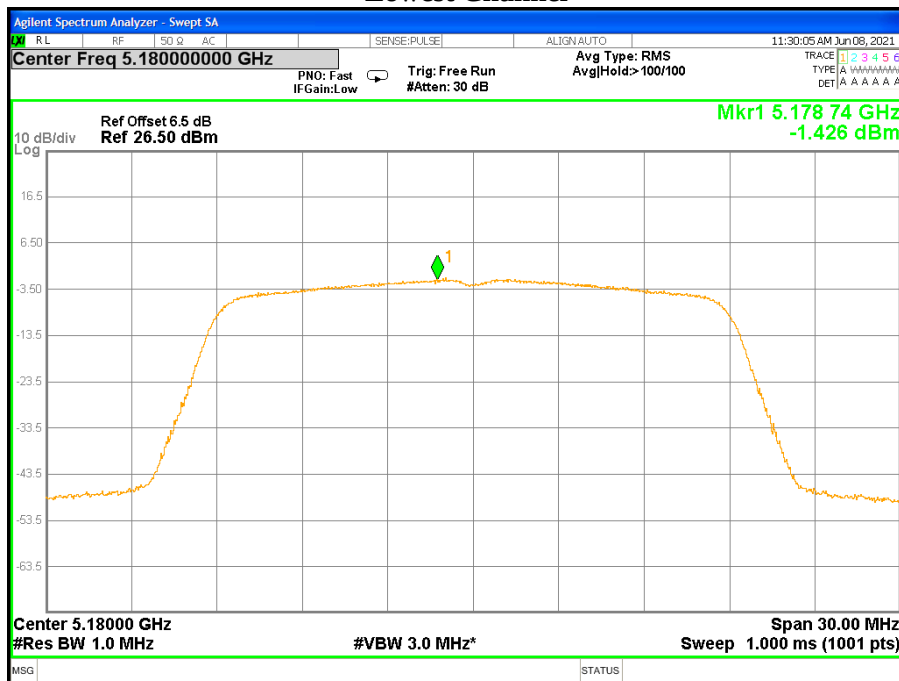
Middle Channel



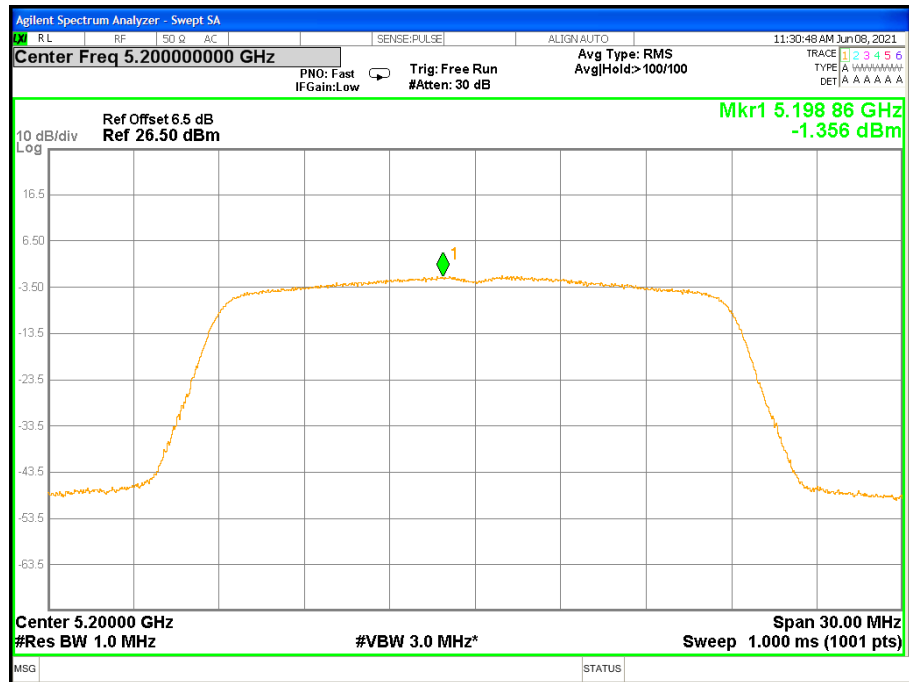
High Channel



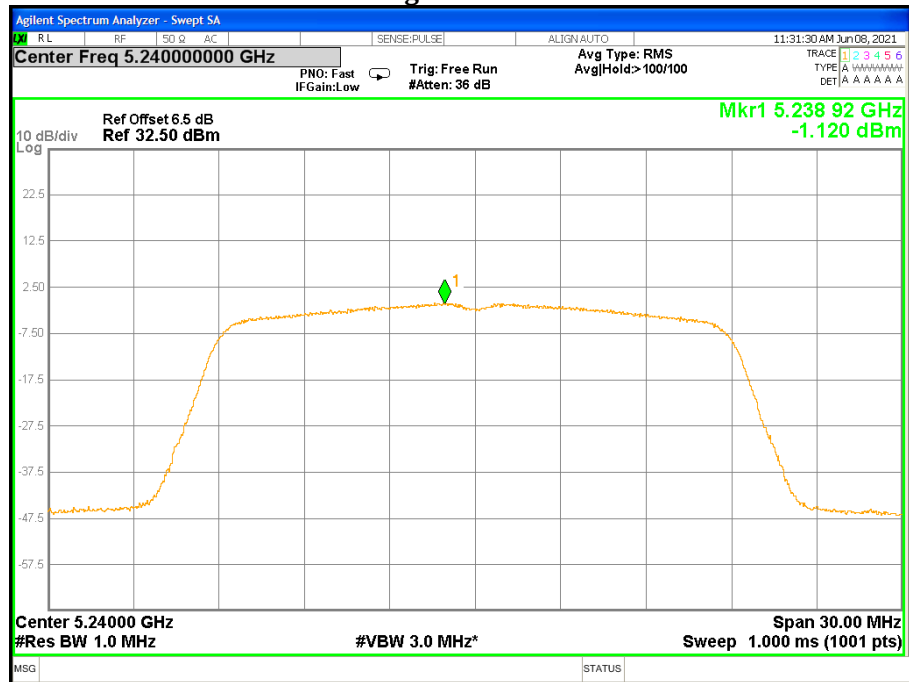
802.11n(20M) Lowest Channel

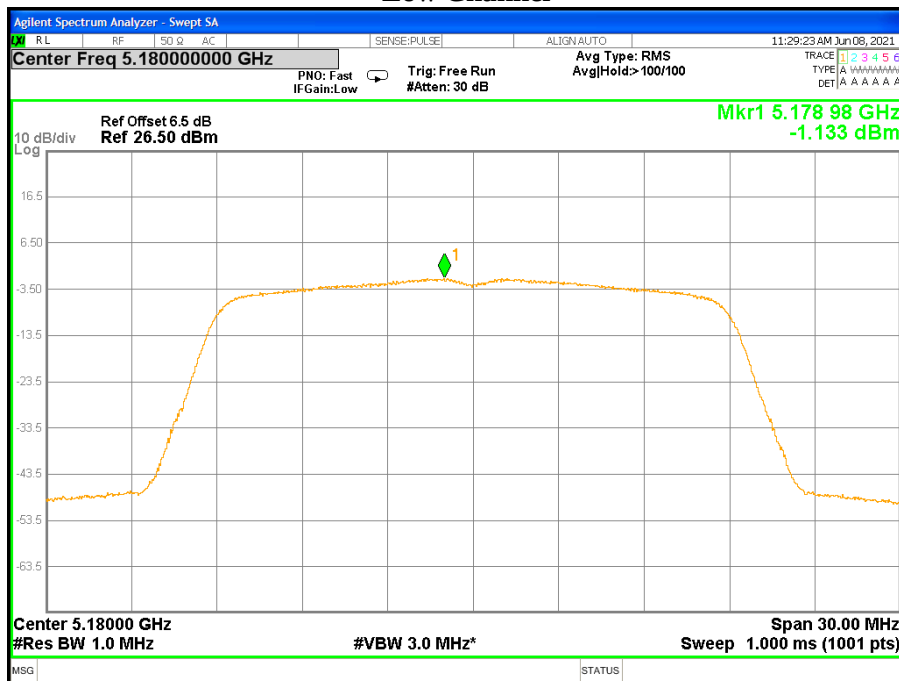
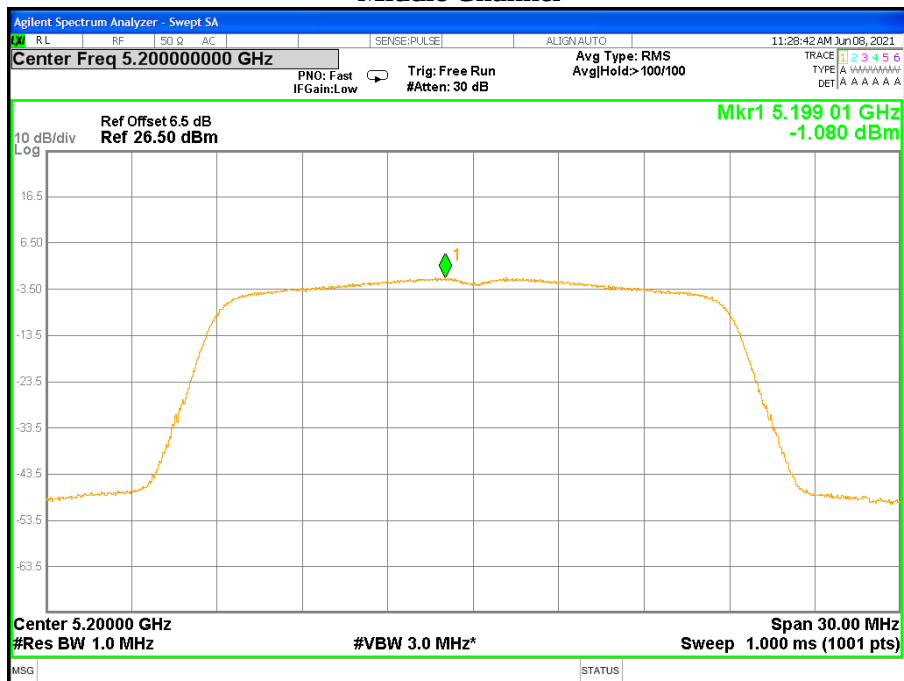


Middle Channel

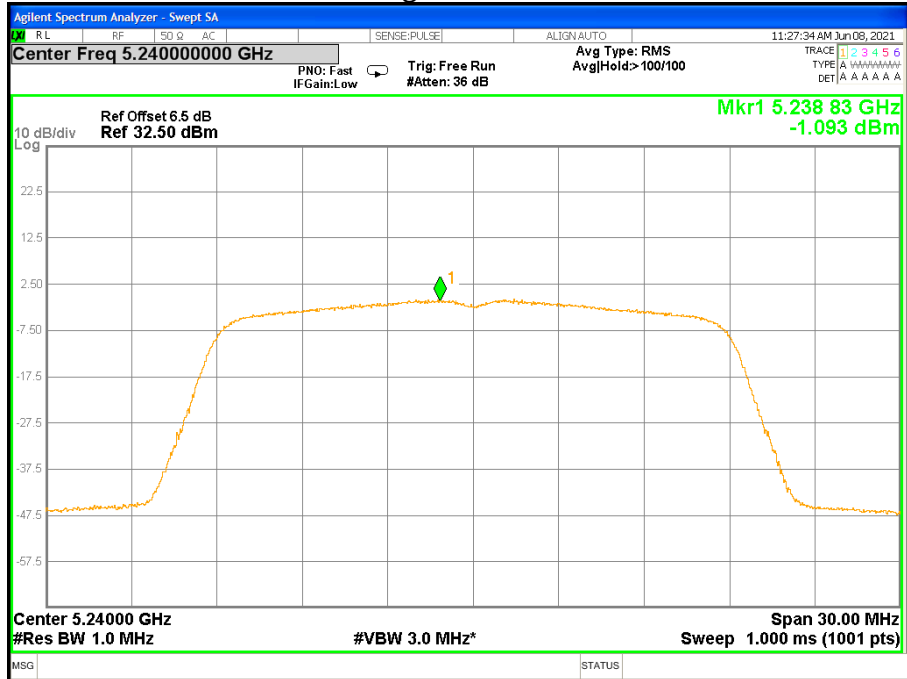
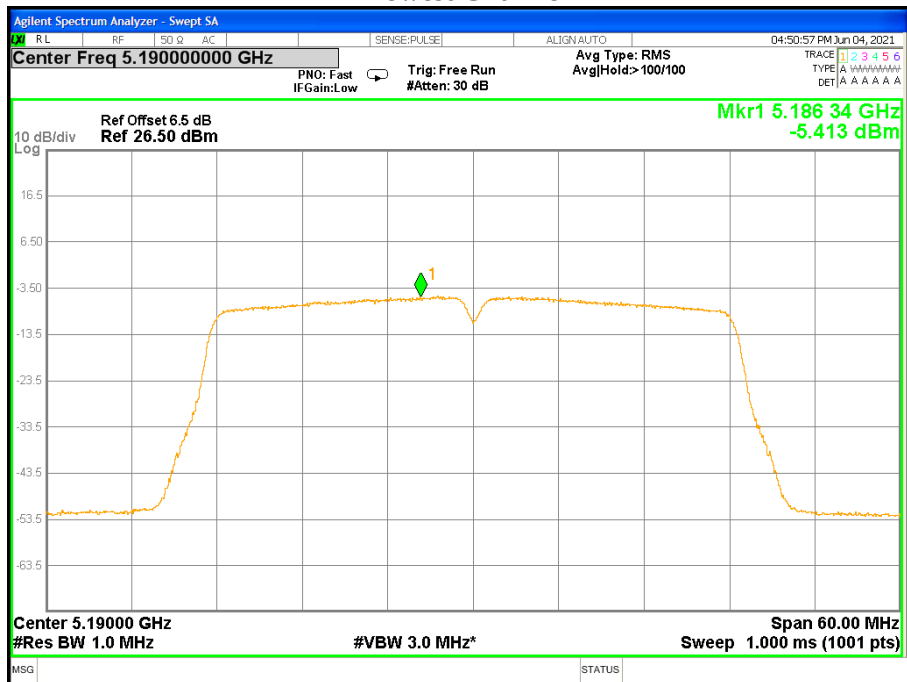


High Channel

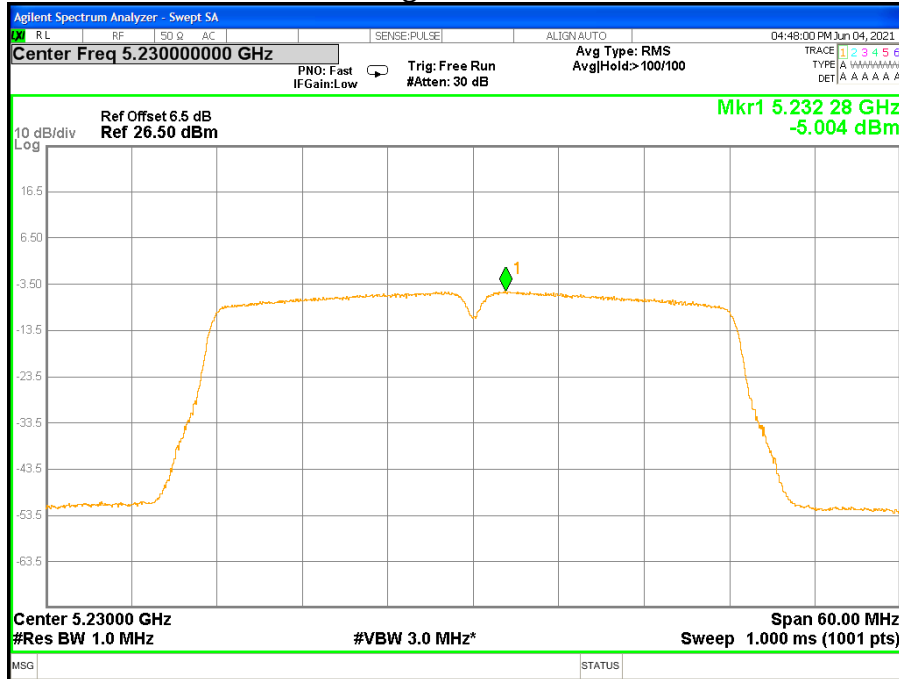


**802.11ac(20M)
Low Channel****Middle Channel**

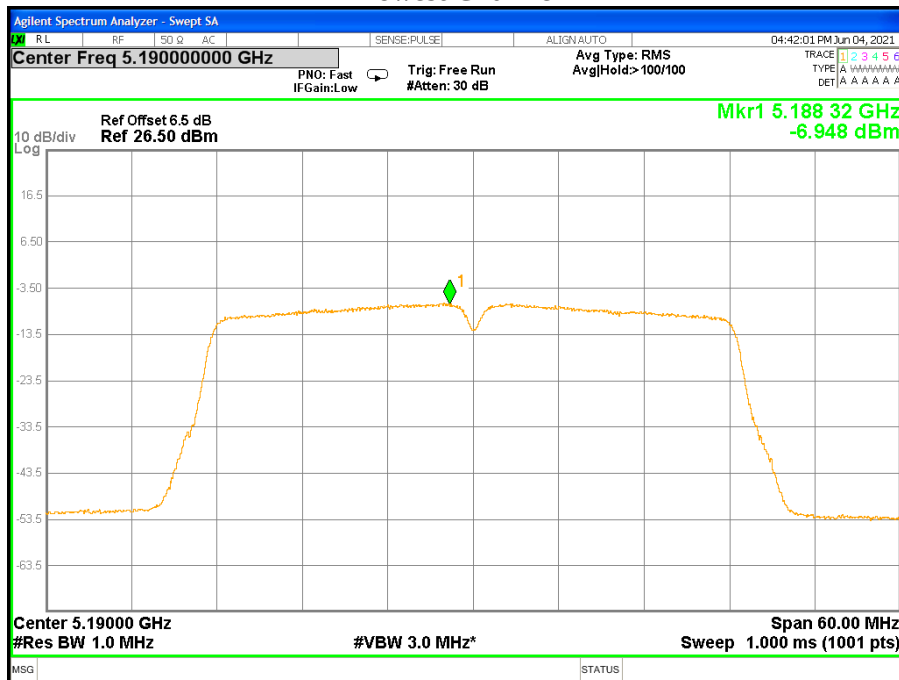
High Channel

802.11n(40M)
Lowest Channel

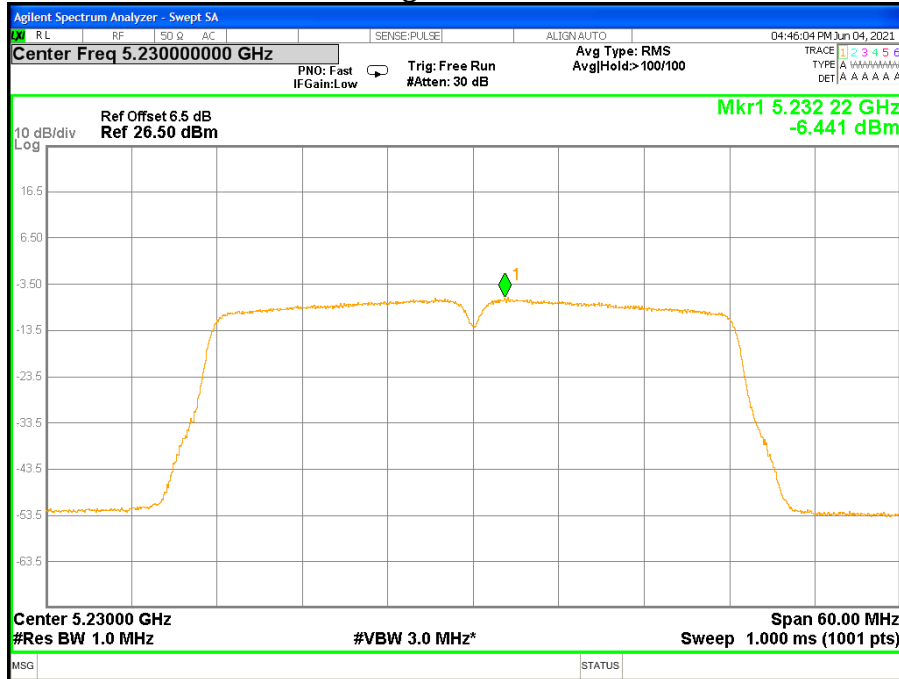
High Channel



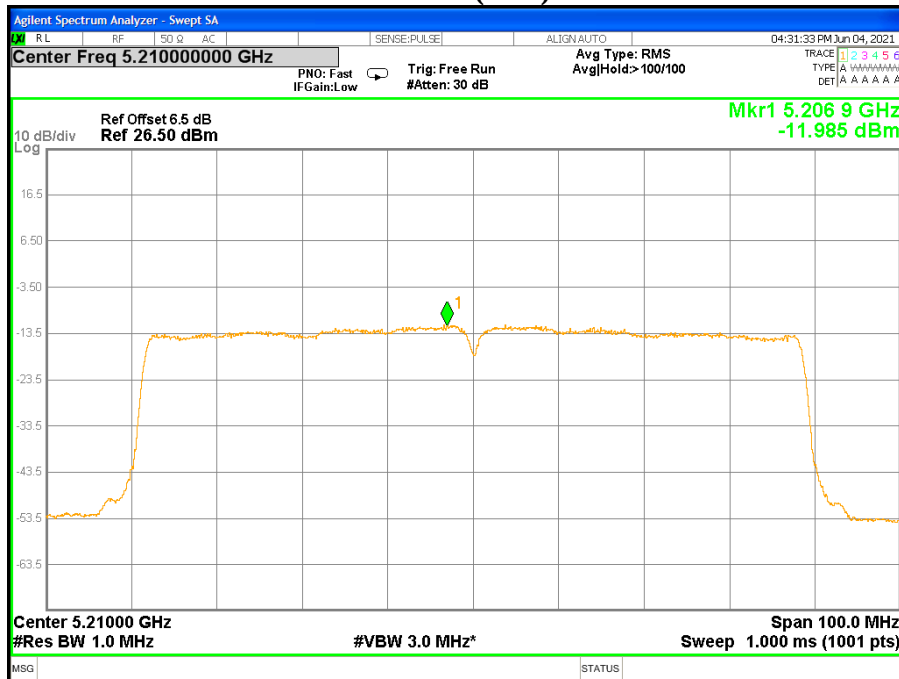
802.11ac(40M) Lowest Channel



High Channel



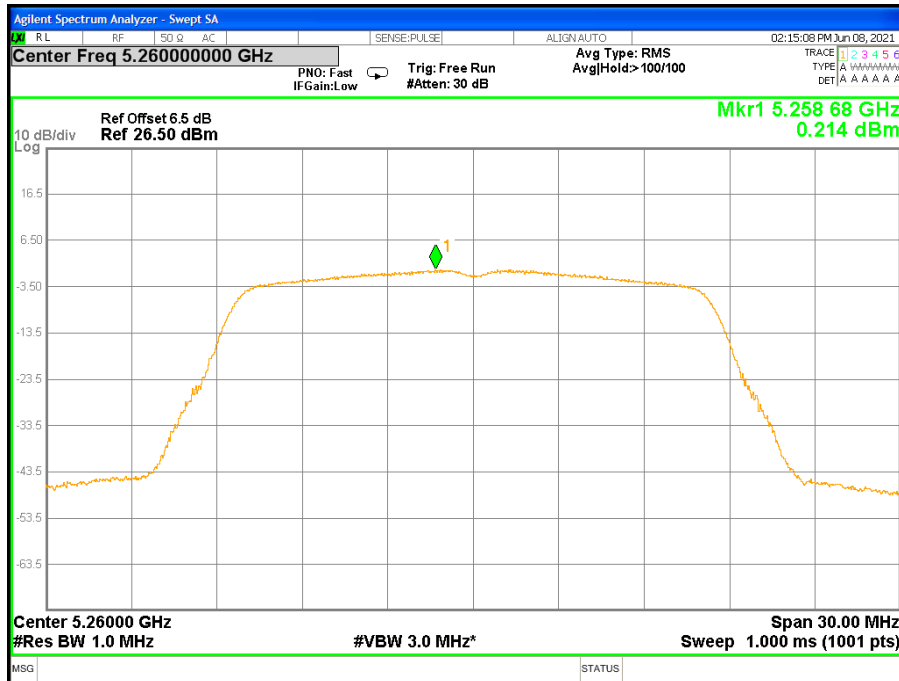
802.11ac(80M)



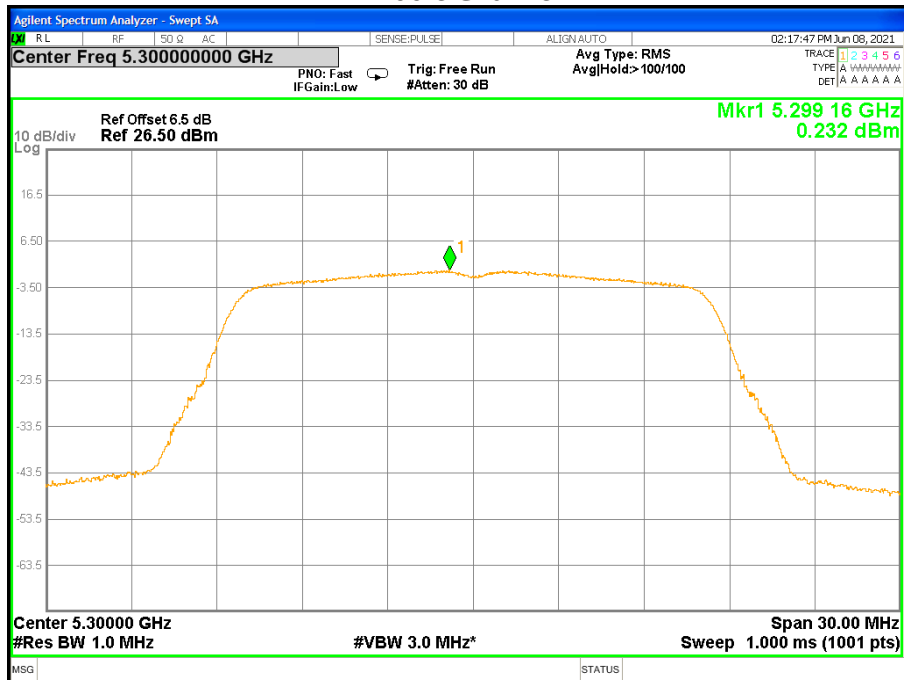
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80		
Test Date :	2021-06-05		

5250-5350MHz								
Frequency	Direct measurement Ant_A Power Density (dBm)	Direct measurement Ant_B Power Density (dBm)	Duty cycle factor	Final Ant_A Power Density (dBm)	Final Ant_B Power Density (dBm)	Power Density Total (dBm)	Limit (dBm)	Result
802.11a								
5260	0.214	0.675	0.074	0.288	0.749	--	10.01	PASS
5300	0.232	0.649	0.074	0.306	0.723	--	10.01	PASS
5320	0.220	0.869	0.074	0.294	0.943	--	10.01	PASS
802.11n20								
5260	-1.329	-0.203	0.089	-1.240	-0.114	2.369	7	PASS
5300	-1.096	-0.455	0.089	-1.007	-0.366	2.335	7	PASS
5320	-1.014	-0.277	0.089	-0.925	-0.188	2.469	7	PASS
802.11n40								
5270	-5.049	-4.807	0.103	-4.946	-4.704	-1.813	7	PASS
5310	-5.297	-4.530	0.103	-5.194	-4.427	-1.783	7	PASS
802.11ac20								
5260	-1.126	-0.639	0.148	-0.978	-0.491	2.283	7	PASS
5300	-1.055	-0.224	0.148	-0.907	-0.076	2.539	7	PASS
5320	-0.903	-0.290	0.148	-0.755	-0.142	2.573	7	PASS
802.11ac40								
5270	-7.072	-6.742	0.325	-6.747	-6.417	-3.568	7	PASS
5310	-6.899	-6.527	0.325	-6.574	-6.202	-3.373	7	PASS
802.11ac80								
5290	-12.232	-11.452	2.108	-10.124	-9.344	-6.707	7	PASS

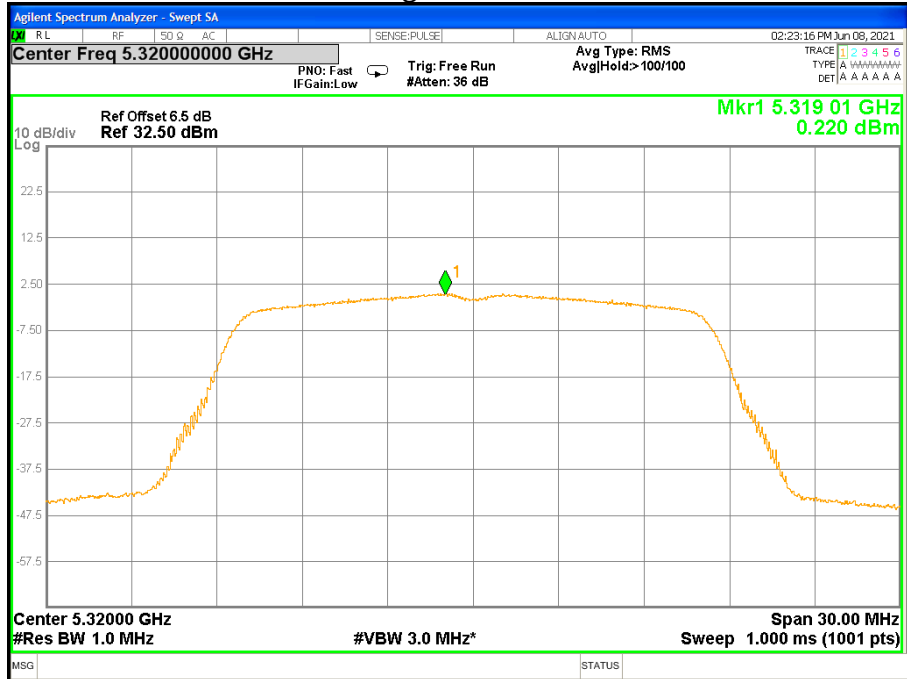
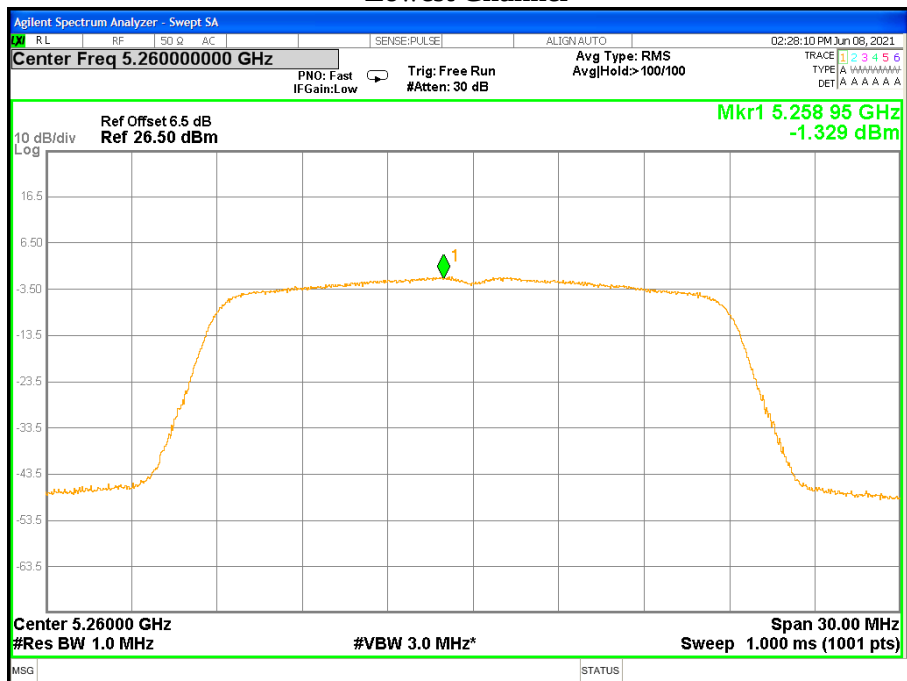
ANT A
802.11a
Low Channel



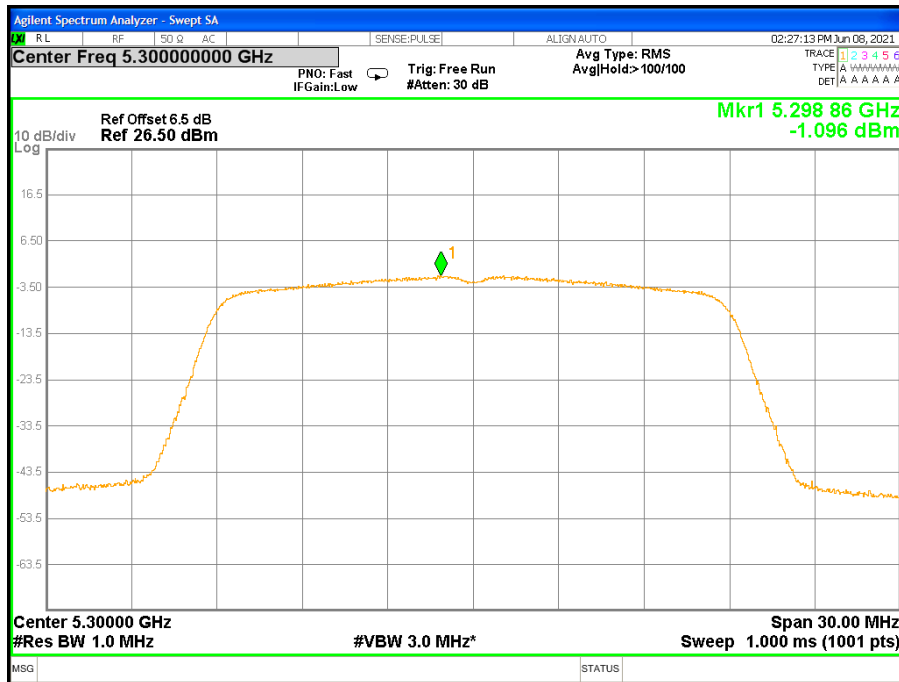
Middle Channel



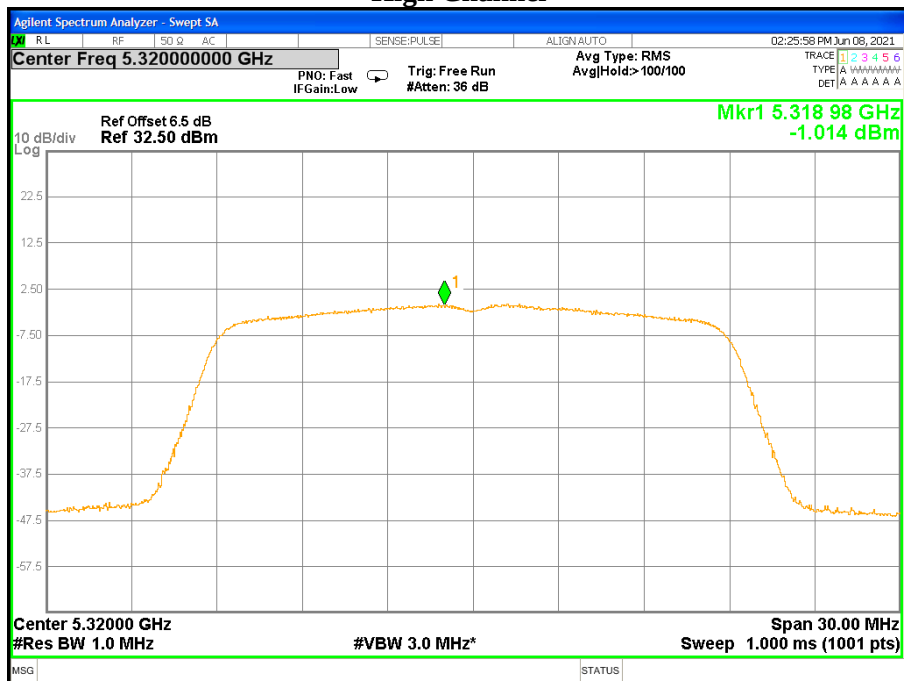
High Channel

802.11n(20M)
Lowest Channel

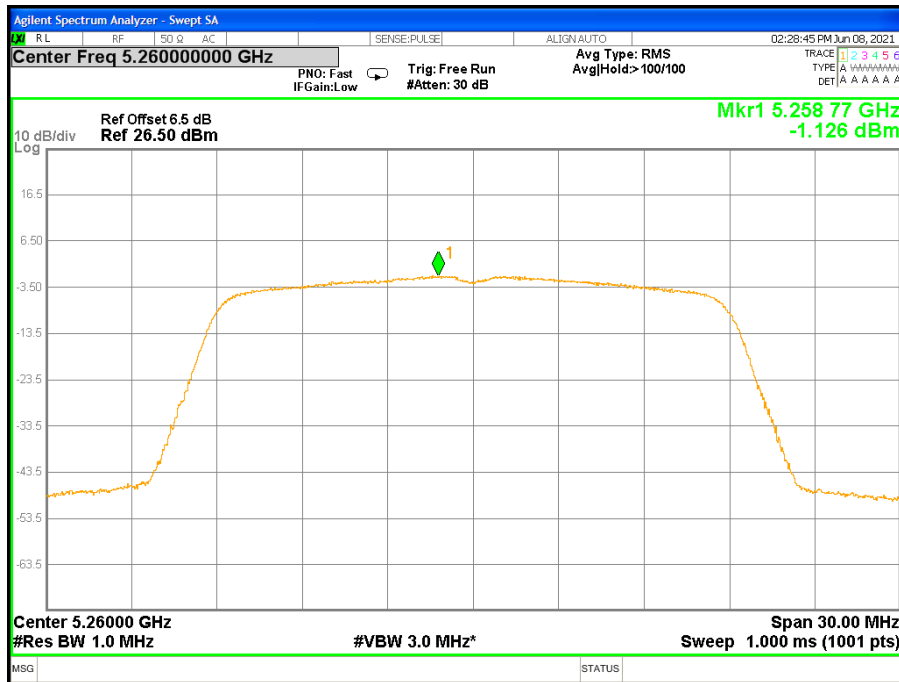
Middle Channel



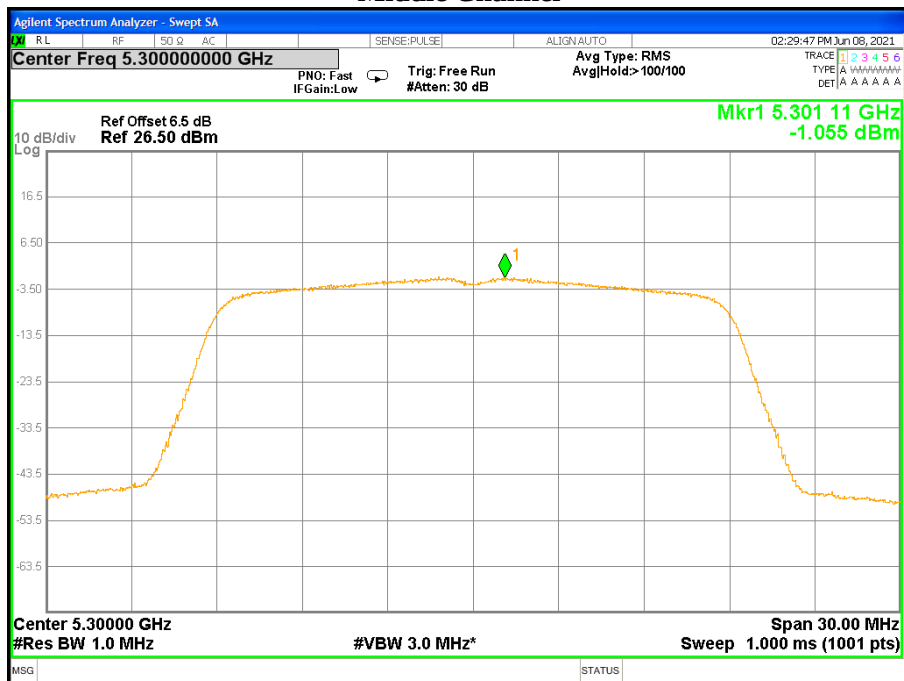
High Channel



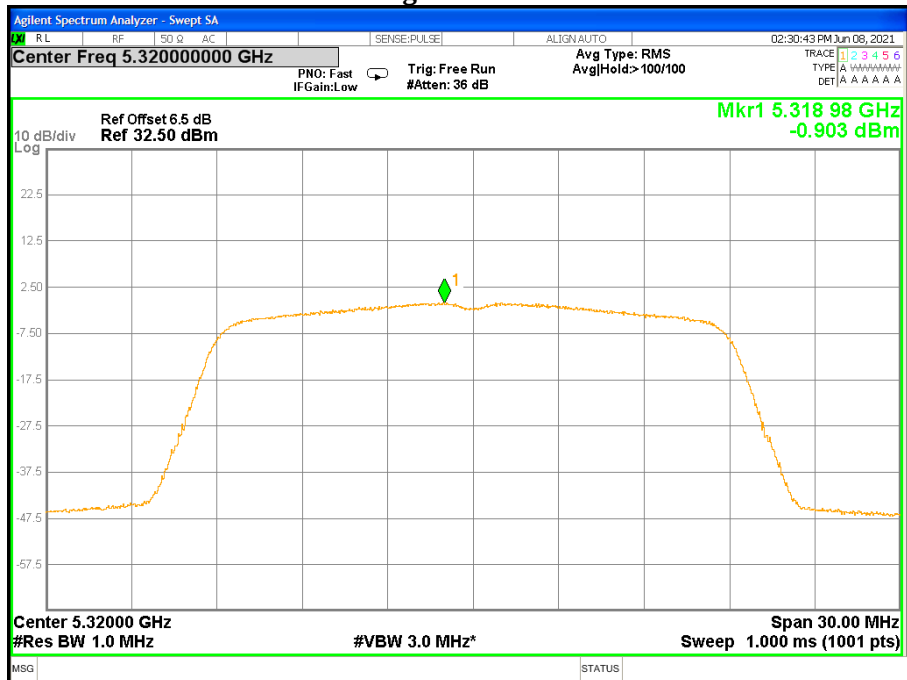
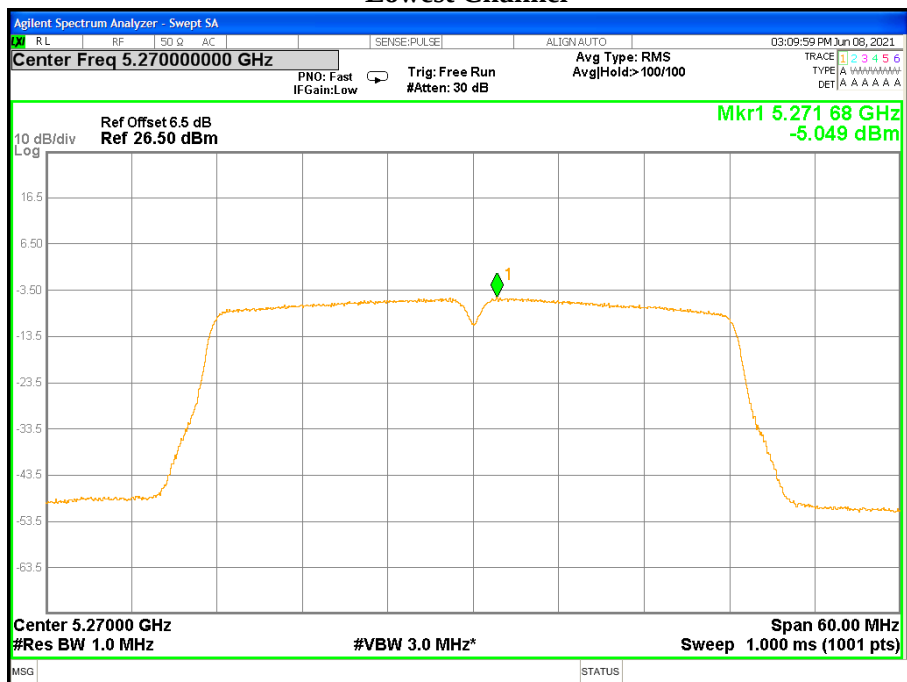
802.11ac(20M) Low Channel



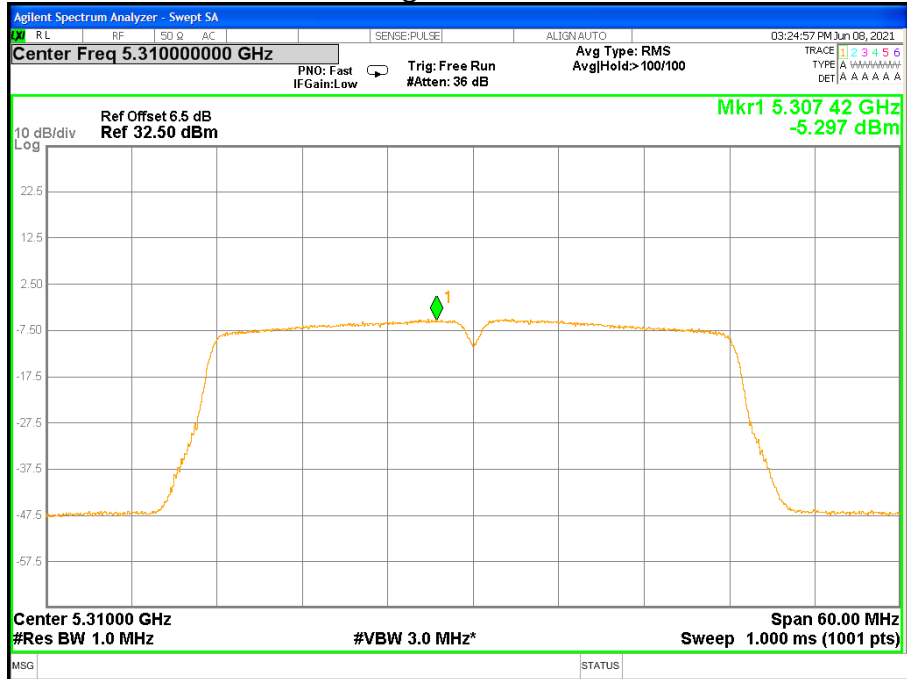
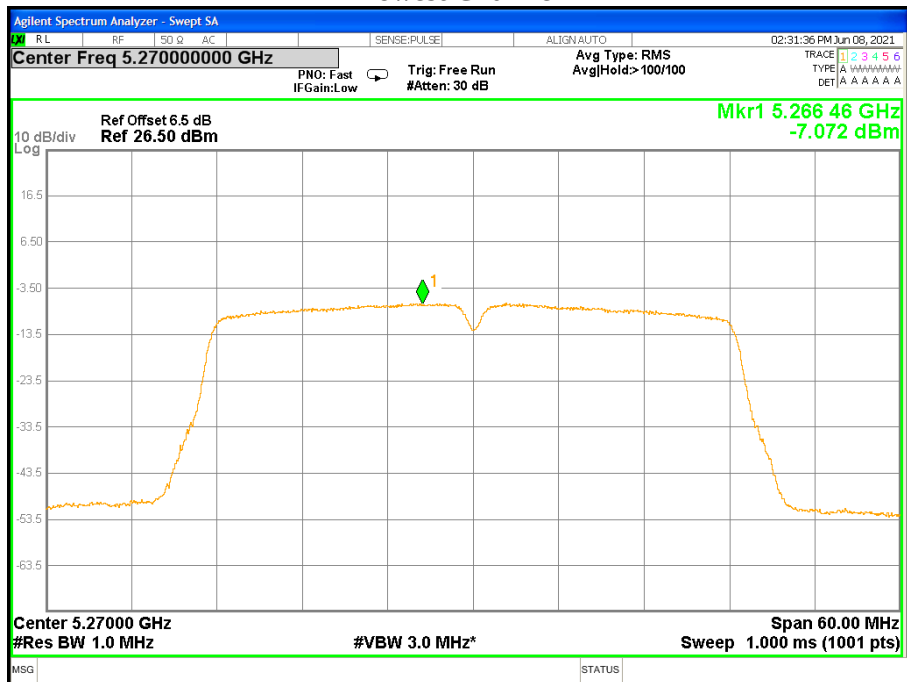
Middle Channel



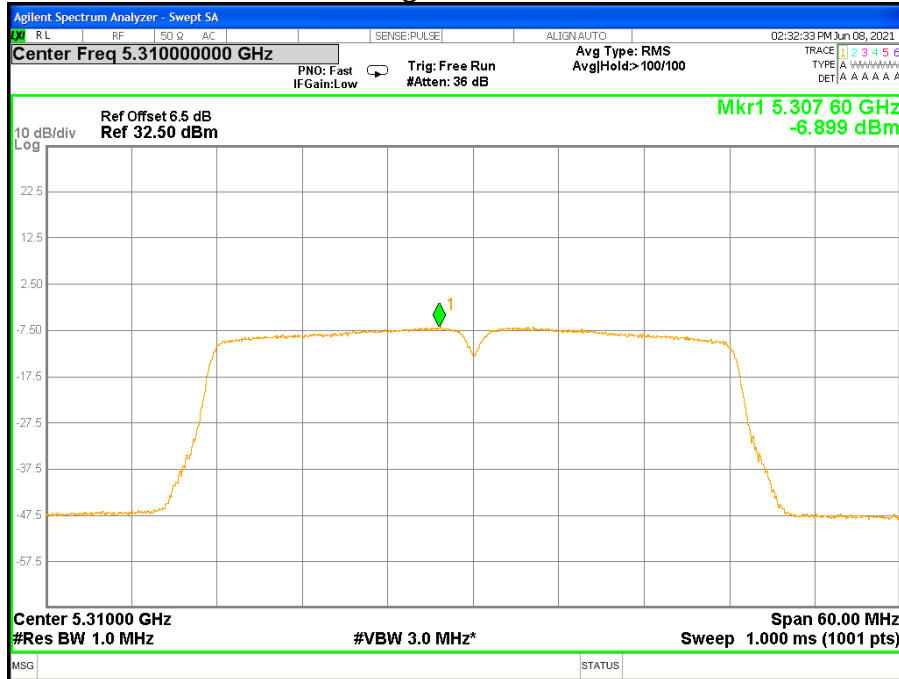
High Channel

802.11n(40M)
Lowest Channel

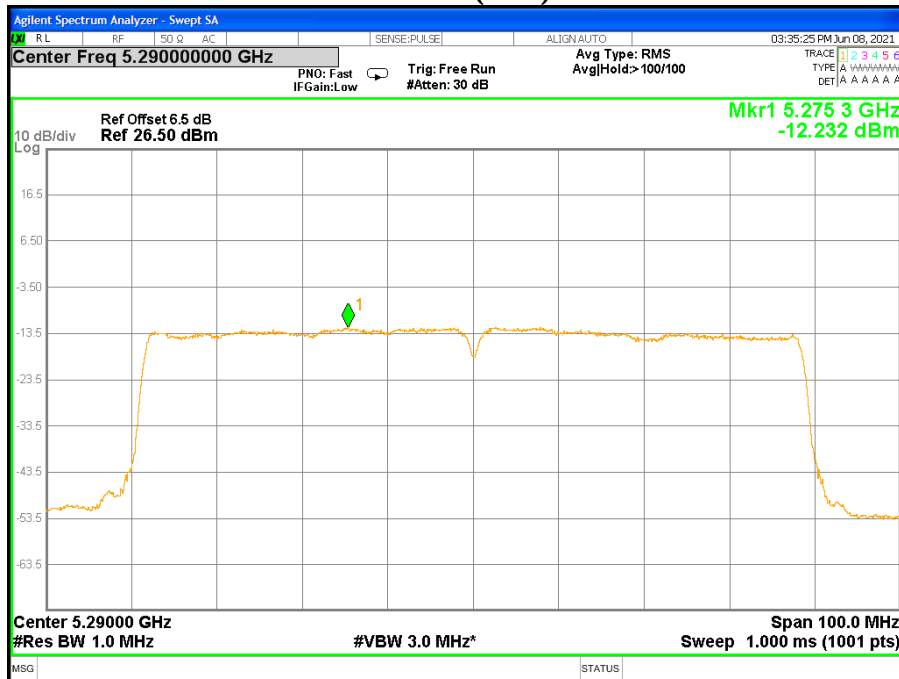
High Channel

802.11ac(40M)
Lowest Channel

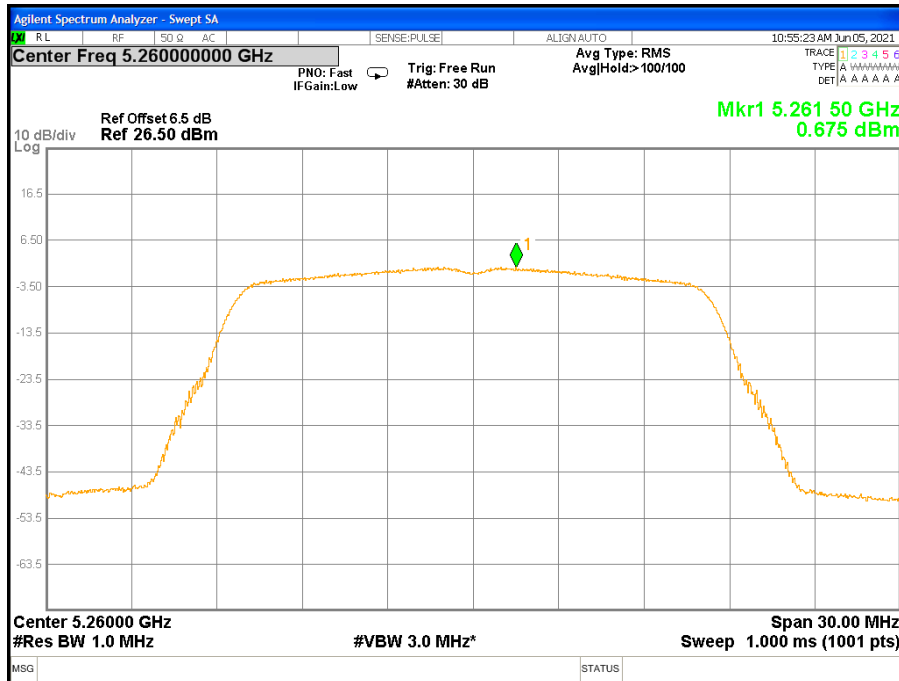
High Channel



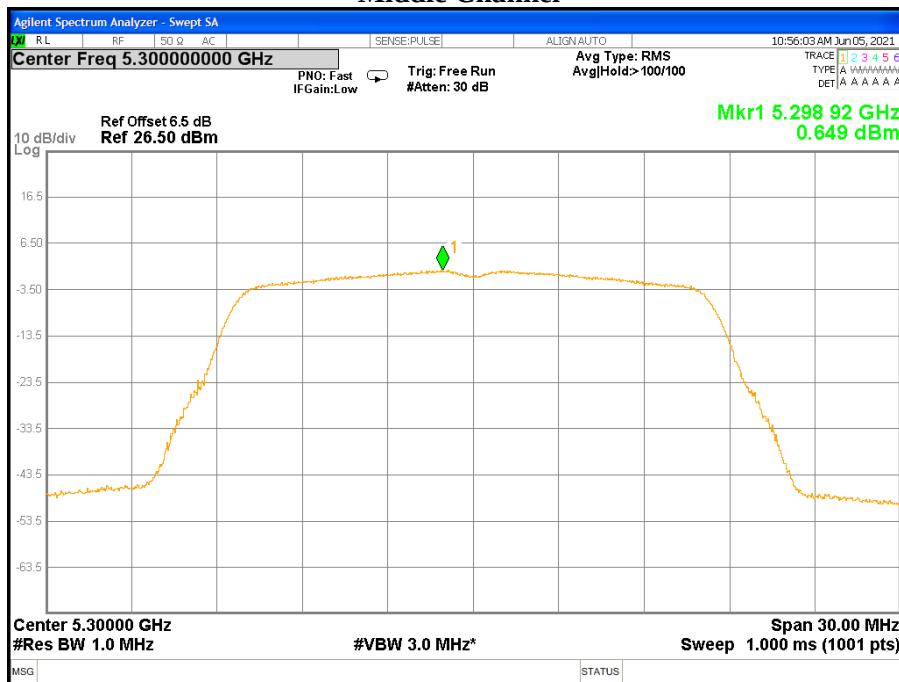
802.11ac(80M)



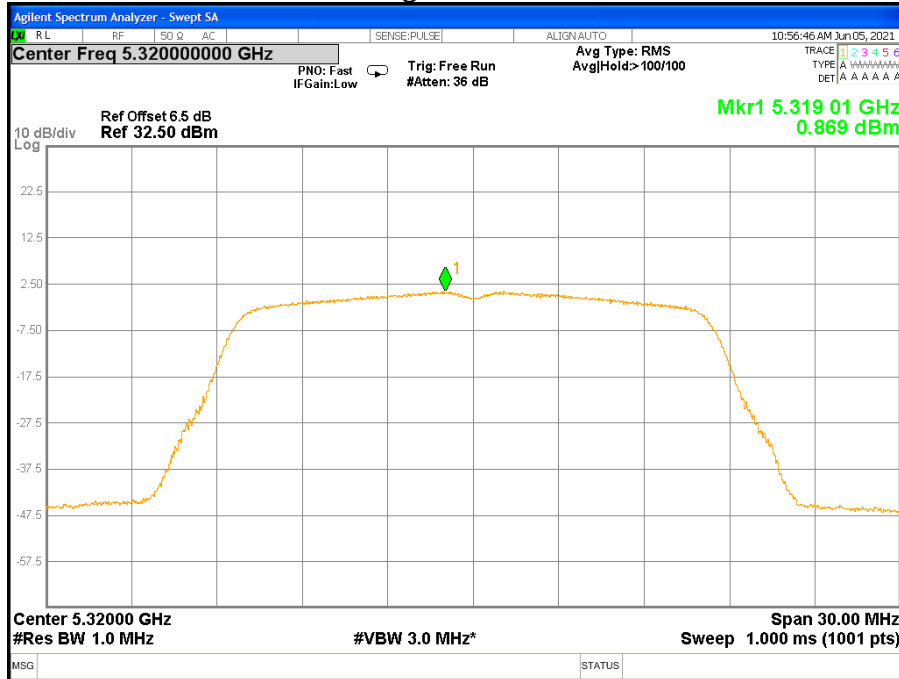
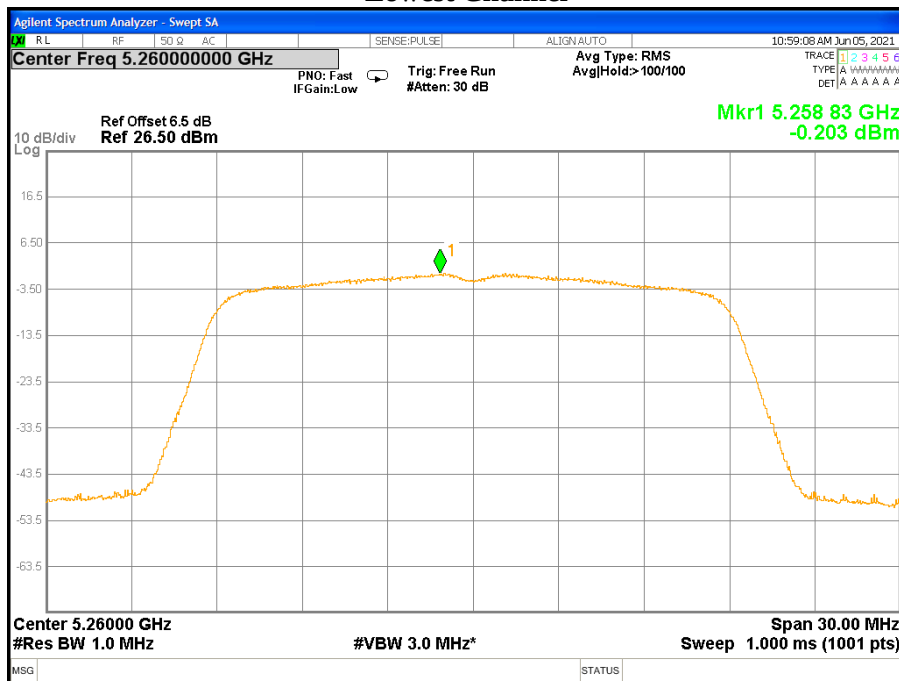
ANT B 802.11a Low Channel



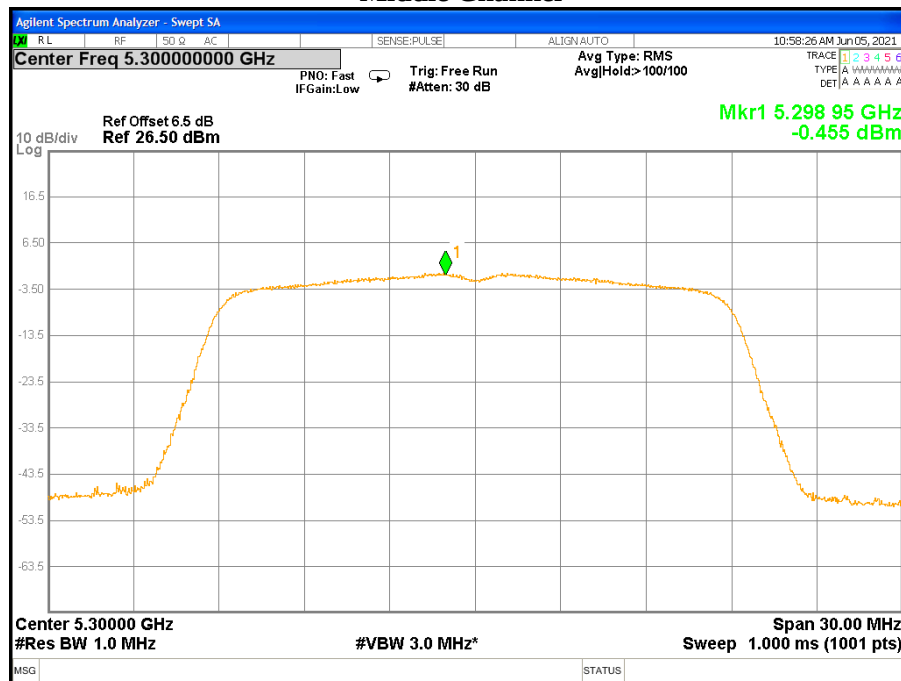
Middle Channel



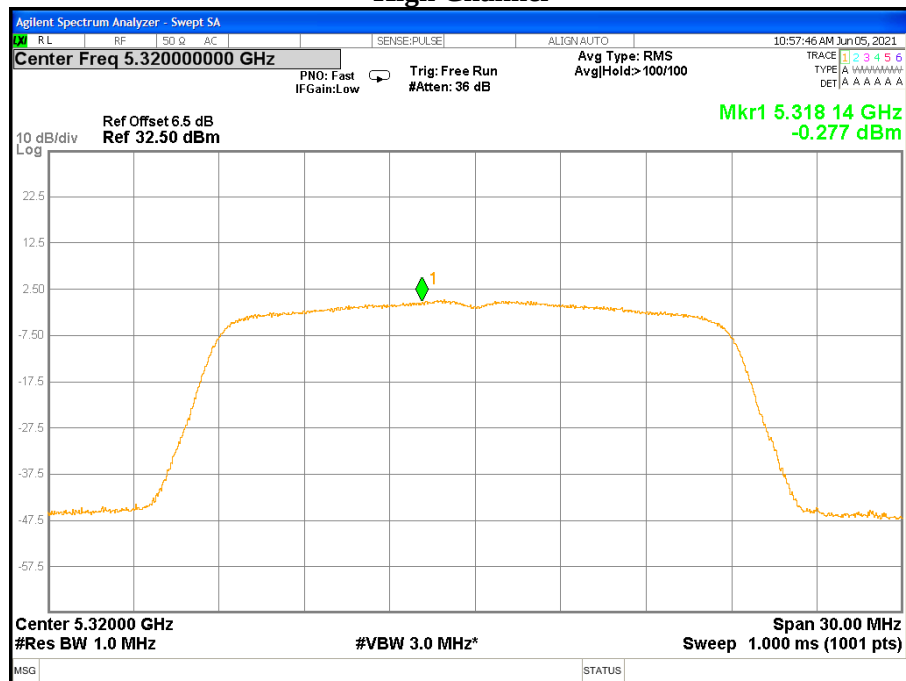
High Channel

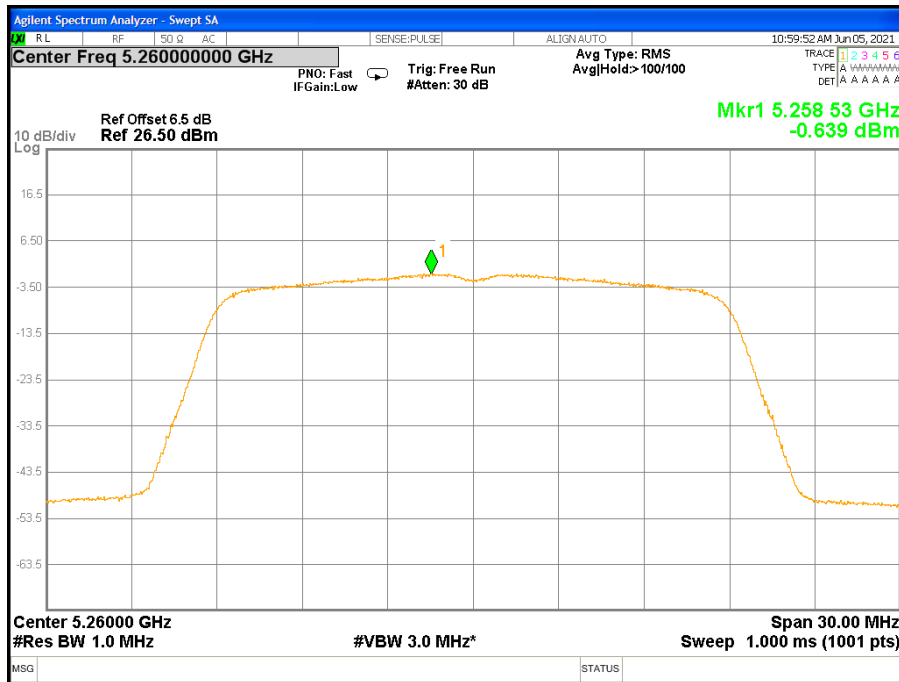
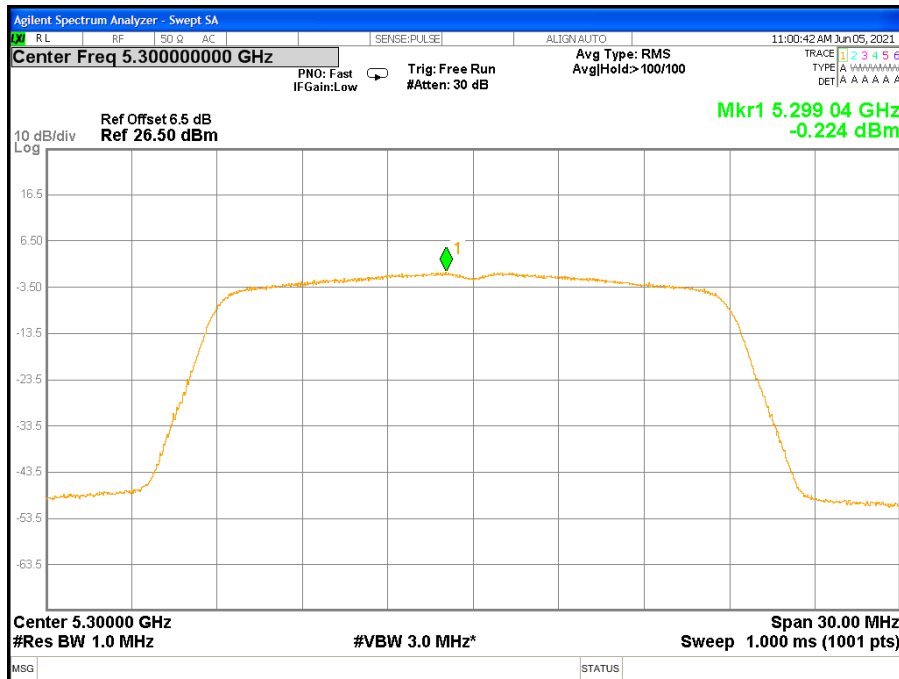
802.11n(20M)
Lowest Channel

Middle Channel

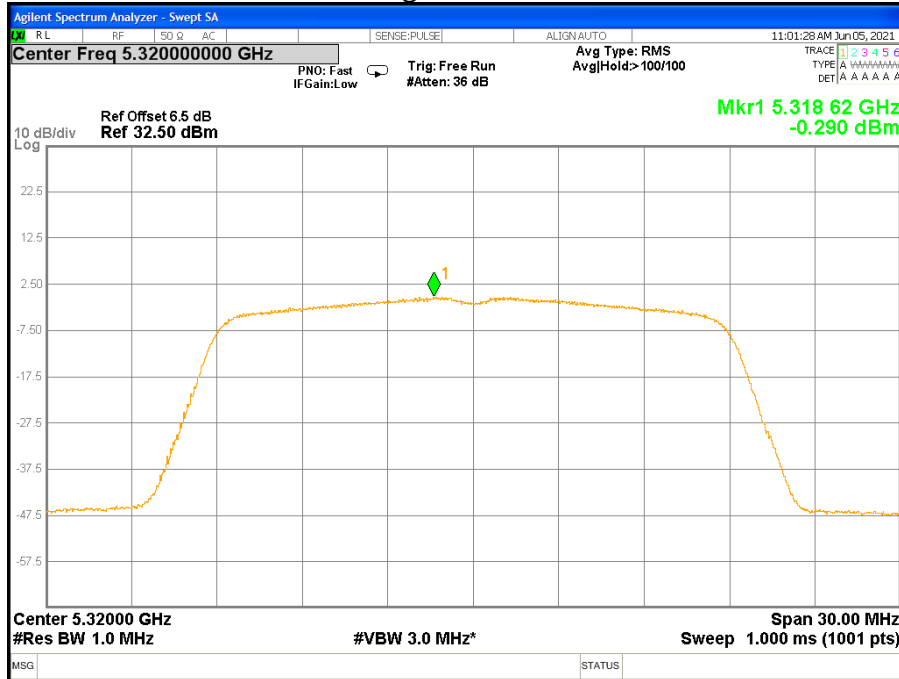


High Channel



**802.11ac(20M)
Low Channel****Middle Channel**

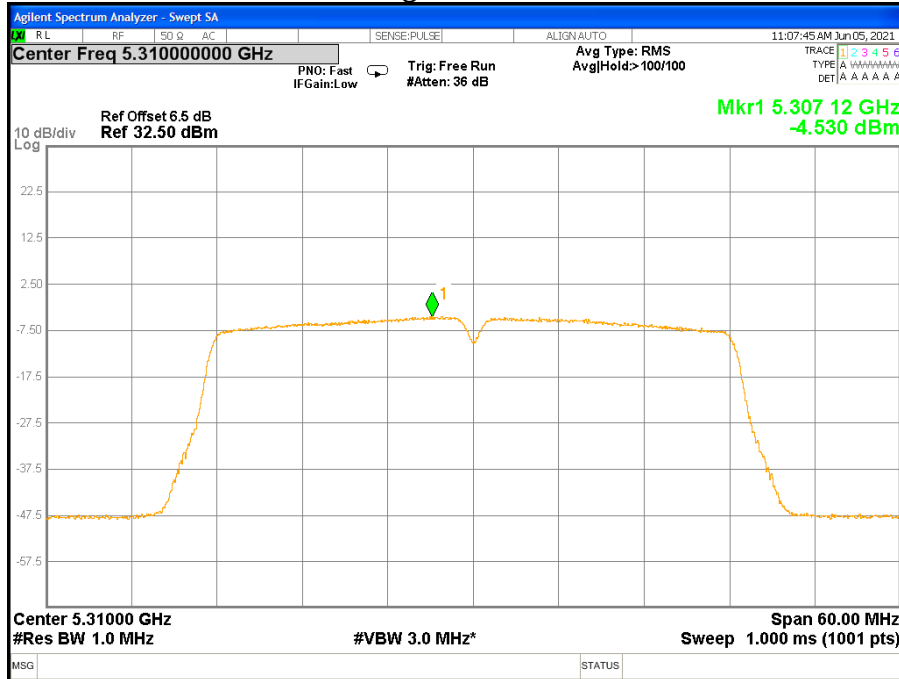
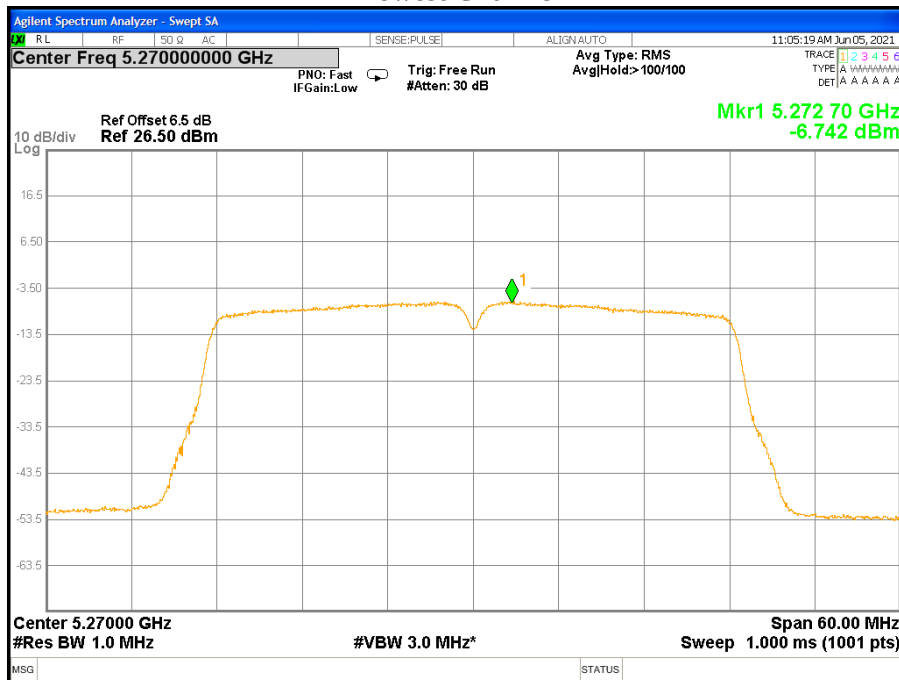
High Channel



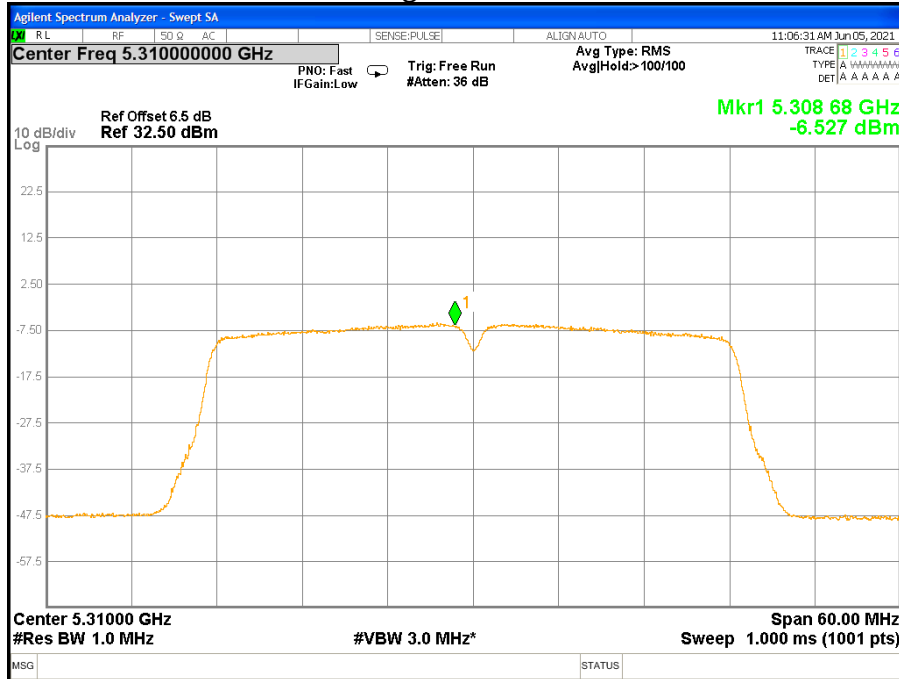
802.11n(40M) Lowest Channel



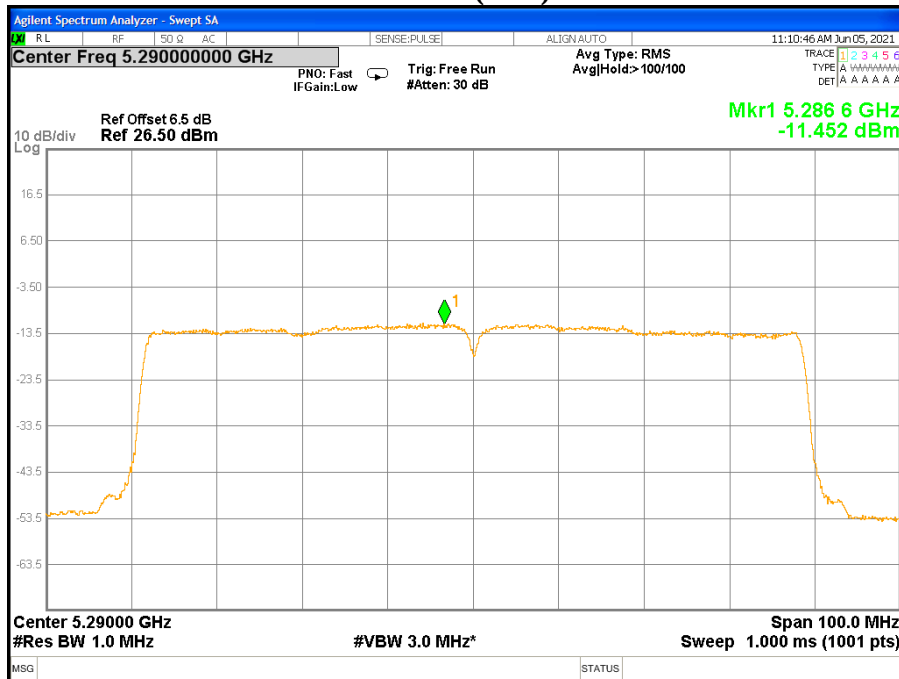
High Channel

802.11ac(40M)
Lowest Channel

High Channel



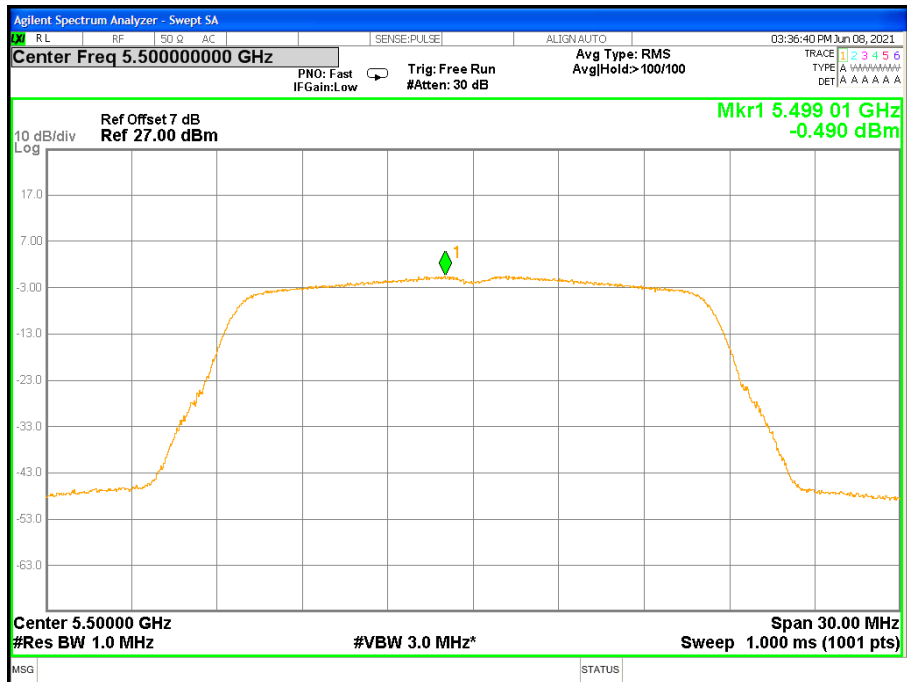
802.11ac(80M)



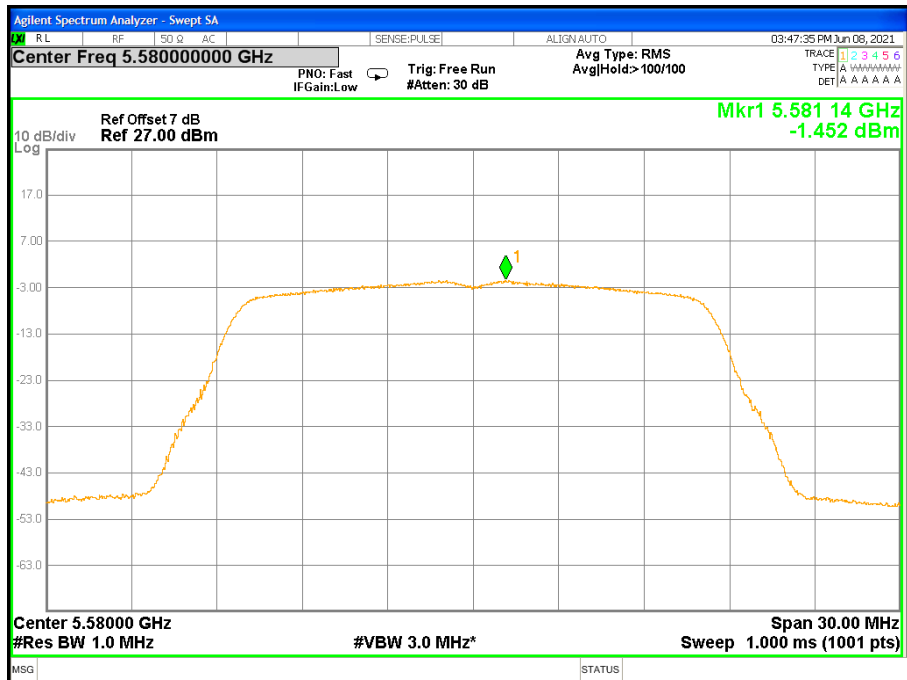
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80		
Test Date :	2021-06-05		

5470-5725MHz								
Frequency	Direct measurement Ant_A Power Density (dBm)	Direct measurement Ant_B Power Density (dBm)	Duty cycle factor	Final Ant_A Power Density (dBm)	Final Ant_B Power Density (dBm)	Power Density Total (dBm)	Limit (dBm)	Result
802.11a								
5500	-0.490	0.520	0.037	-0.453	0.557	--	10.01	PASS
5580	-1.452	0.221	0.037	-1.415	0.258	--	10.01	PASS
5700	-1.252	-0.204	0.037	-1.215	-0.167	--	10.01	PASS
802.11n20								
5500	-2.486	-0.312	0.079	-2.407	-0.233	1.825	7	PASS
5580	-2.547	-0.241	0.079	-2.468	-0.162	1.846	7	PASS
5700	-2.584	-0.920	0.079	-2.505	-0.841	1.416	7	PASS
802.11n40								
5510	-5.665	-3.791	0.157	-5.508	-3.634	-1.461	7	PASS
5550	-5.536	-3.526	0.157	-5.379	-3.369	-1.249	7	PASS
5670	-7.691	-4.885	0.157	-7.534	-4.728	-2.898	7	PASS
802.11ac20								
5500	-2.581	-0.471	0.161	-2.420	-0.310	1.772	7	PASS
5580	-2.577	-0.500	0.161	-2.416	-0.339	1.756	7	PASS
5700	-2.562	-1.110	0.161	-2.401	-0.949	1.396	7	PASS
802.11ac40								
5510	-7.317	-5.377	0.351	-6.966	-5.026	-2.878	7	PASS
5550	-7.173	-5.137	0.351	-6.822	-4.786	-2.675	7	PASS
5670	-9.172	-6.345	0.351	-8.821	-5.994	-4.171	7	PASS
802.11ac80								
5530	-15.771	-13.835	2.052	-13.719	-11.783	-9.633	7	PASS
5610	-16.658	-14.198	2.052	-14.606	-12.146	-10.193	7	PASS

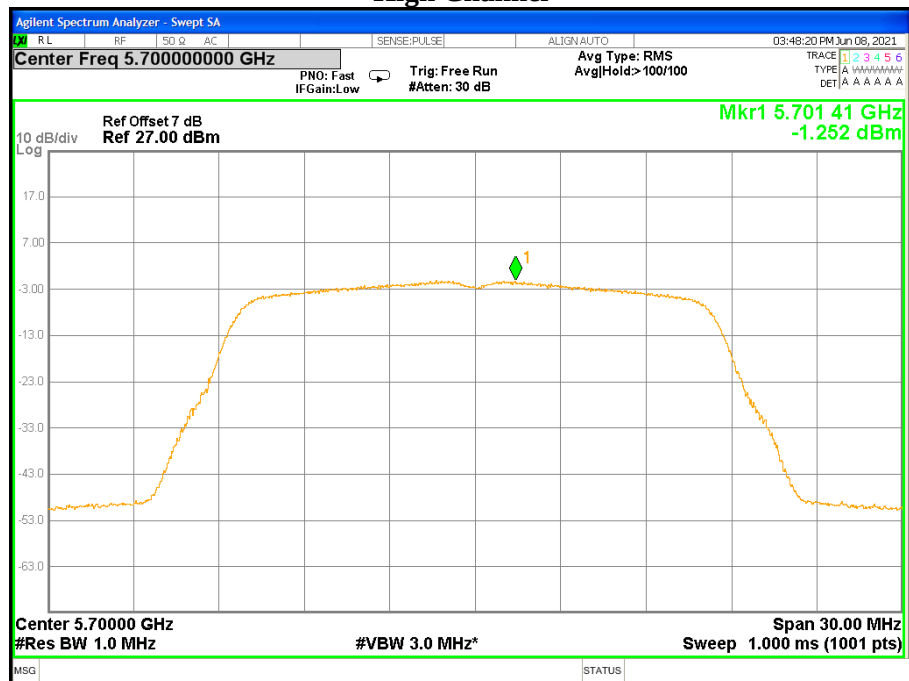
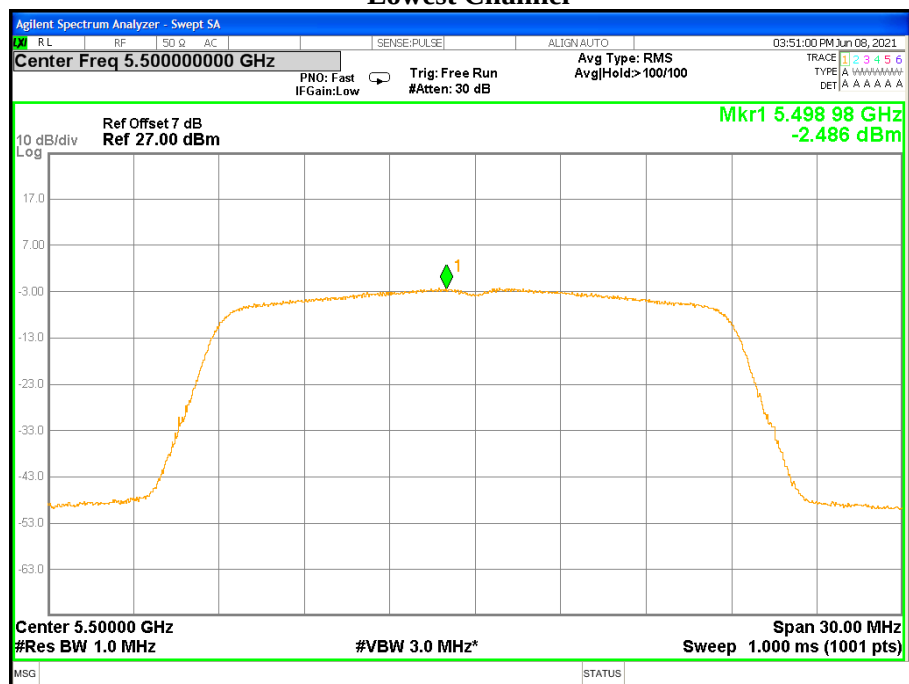
ANT A
802.11a
Low Channel



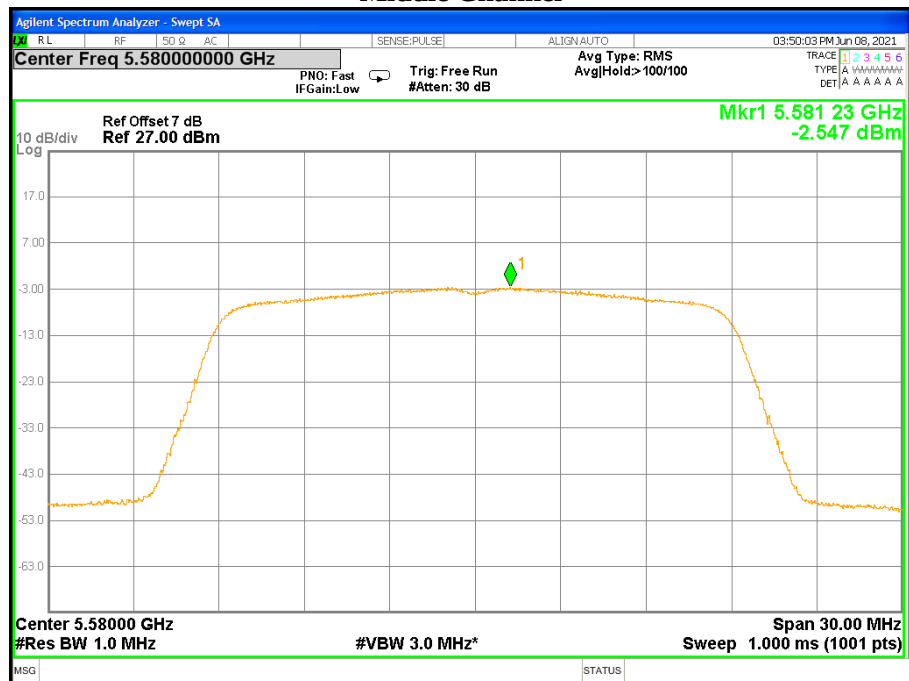
Middle Channel



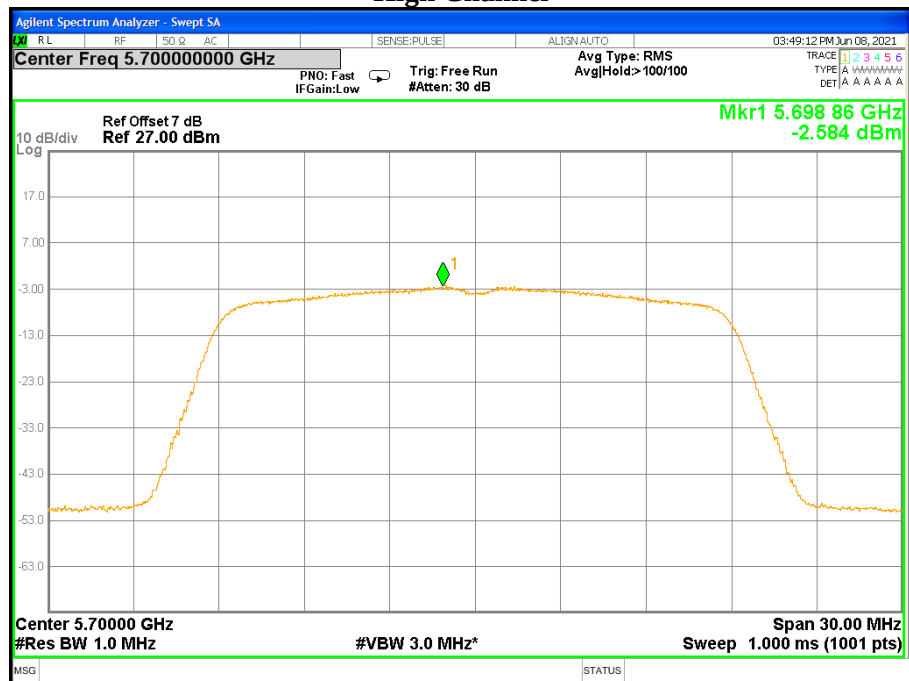
High Channel

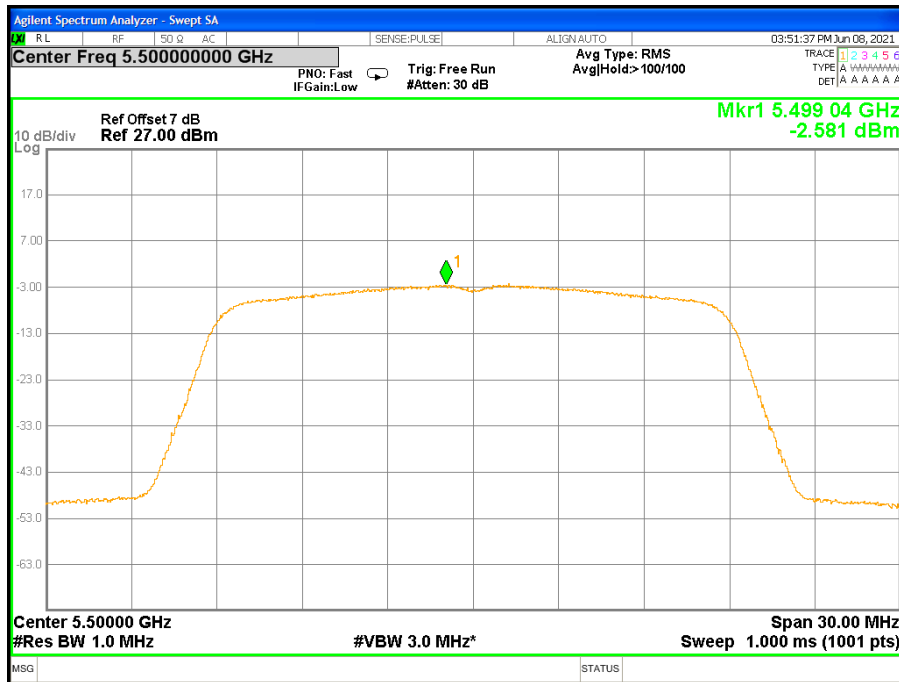
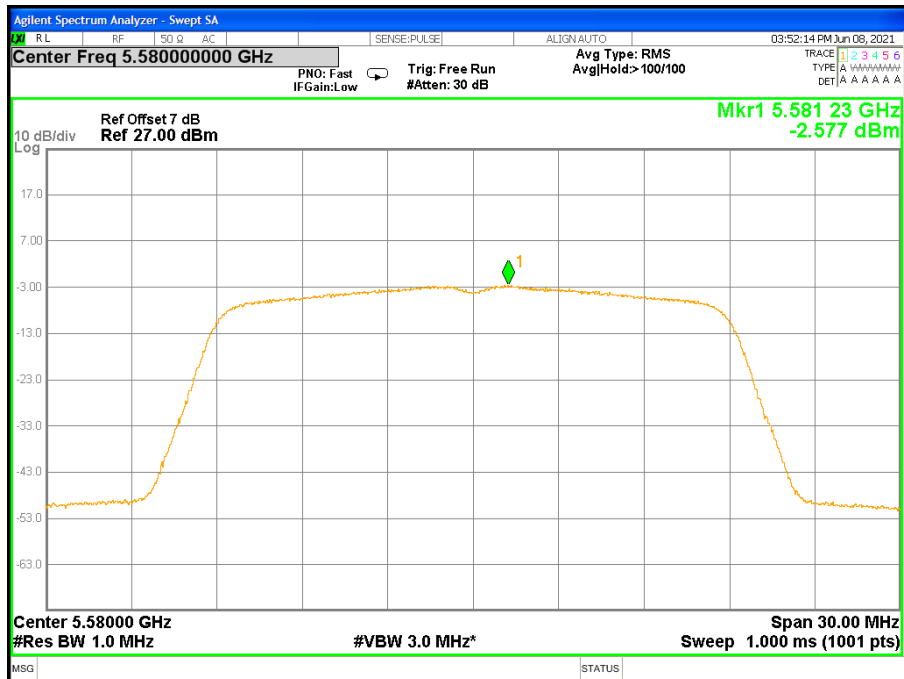
802.11n(20M)
Lowest Channel

Middle Channel

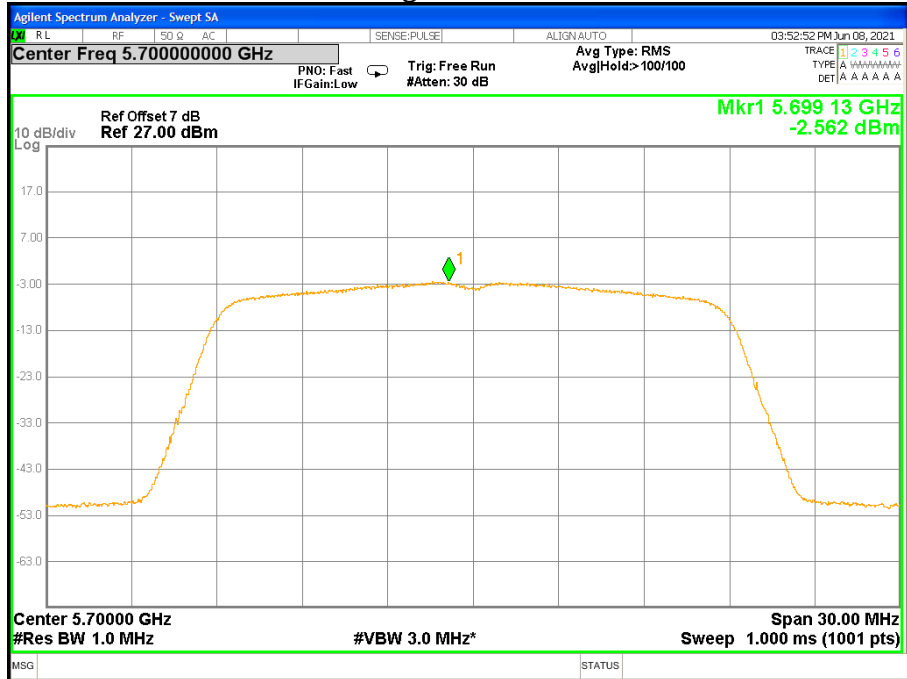
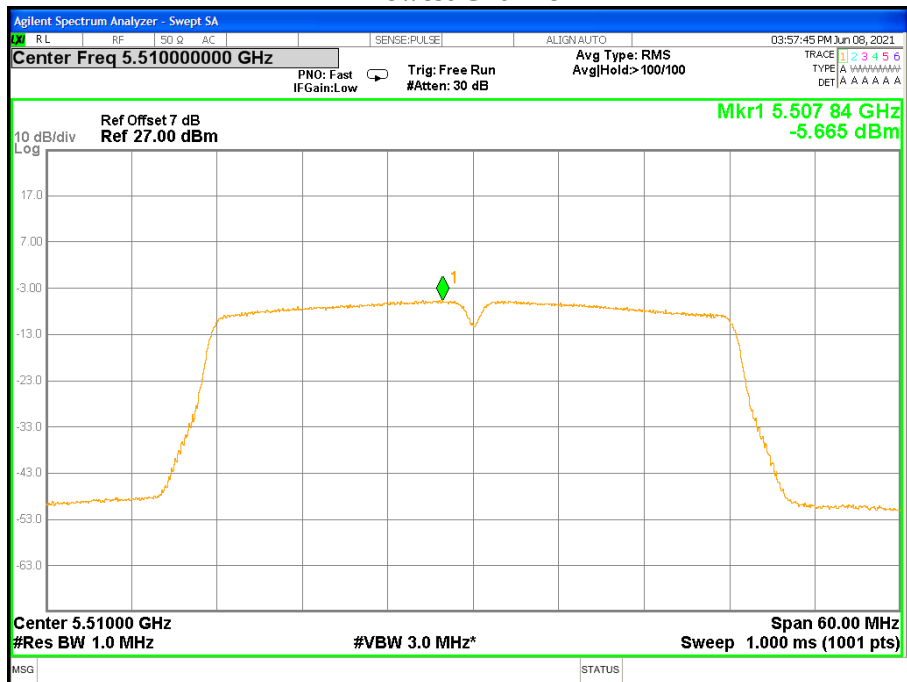


High Channel

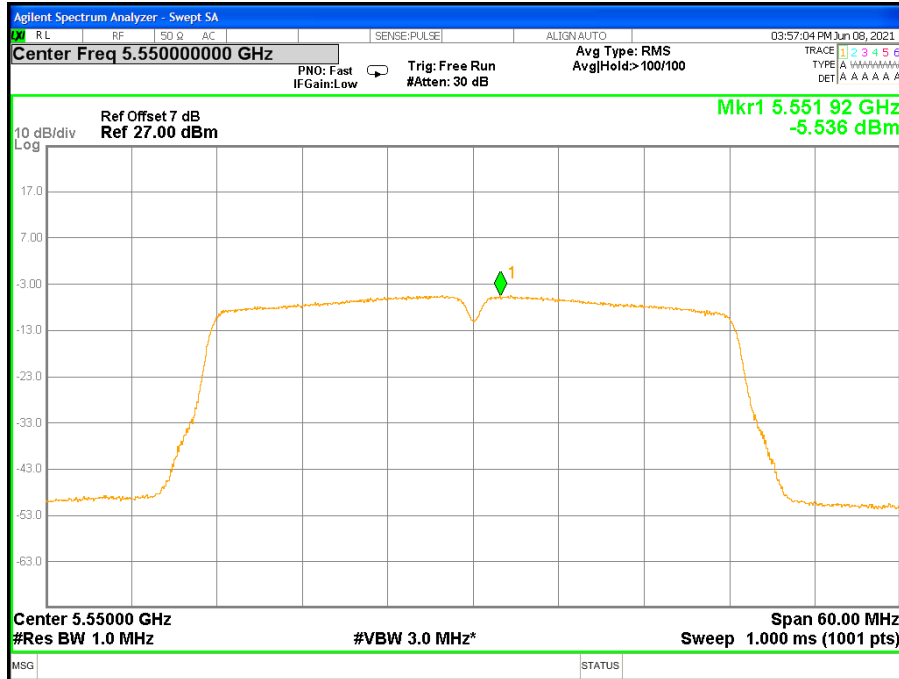


**802.11ac(20M)
Low Channel****Middle Channel**

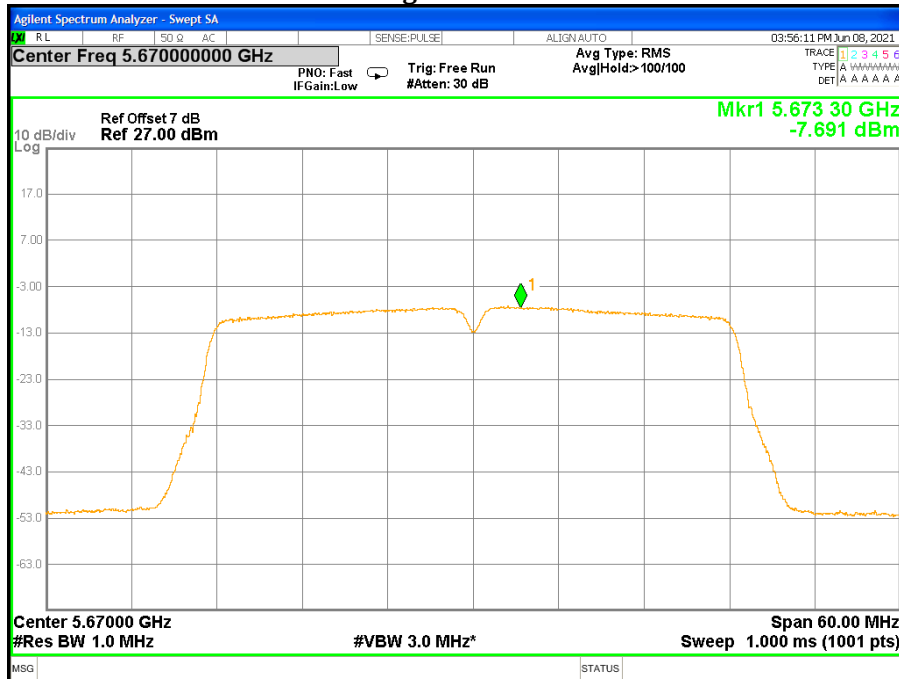
High Channel

802.11n(40M)
Lowest Channel

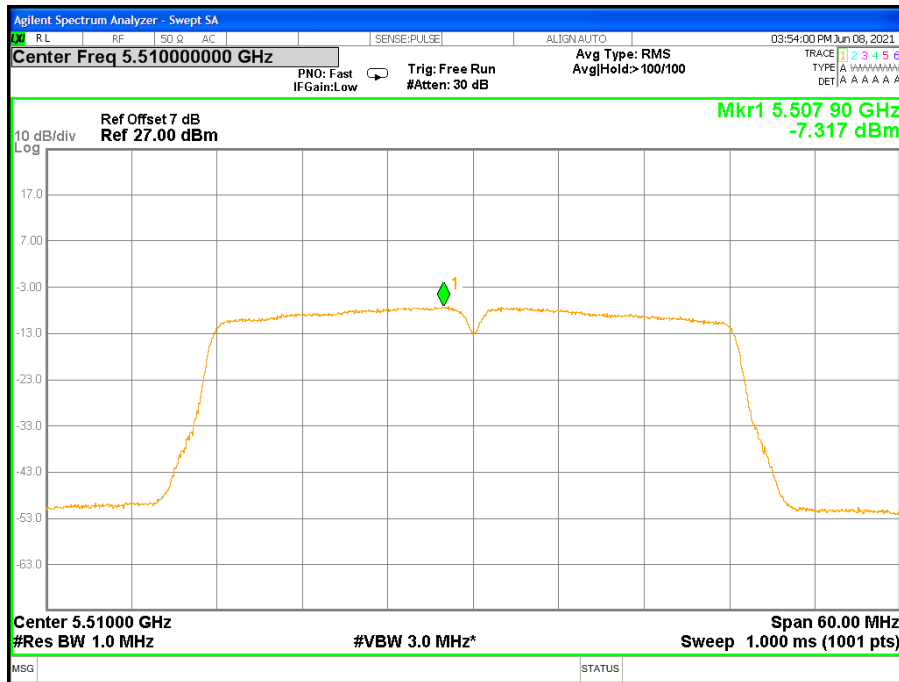
Middle Channel



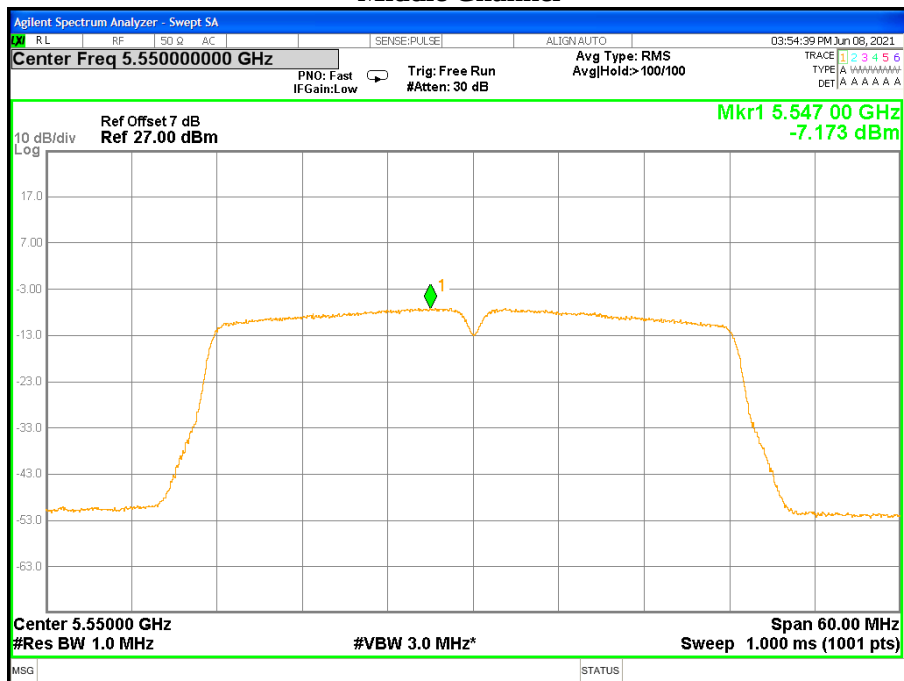
High Channel



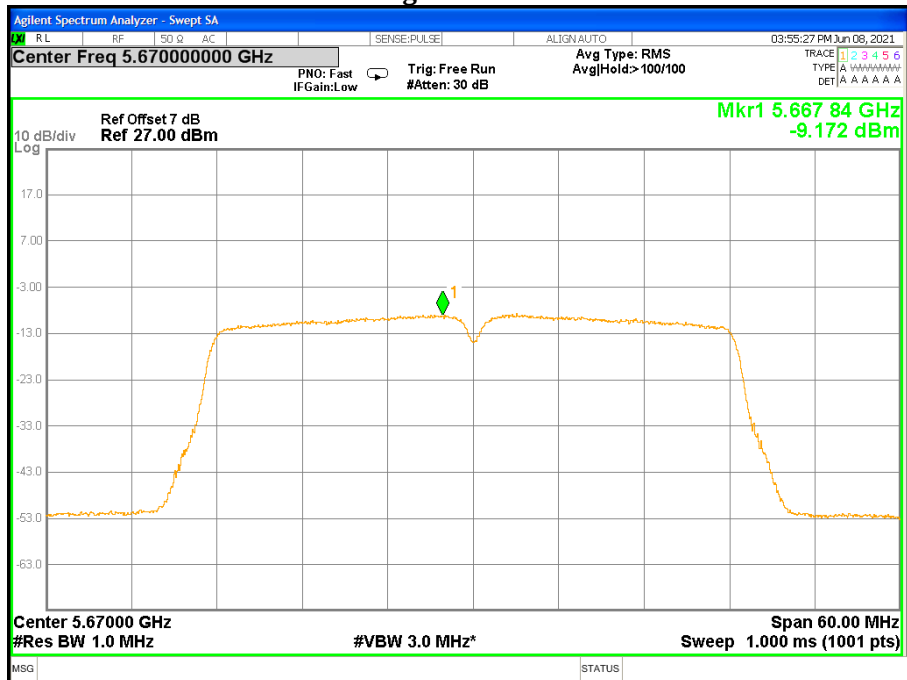
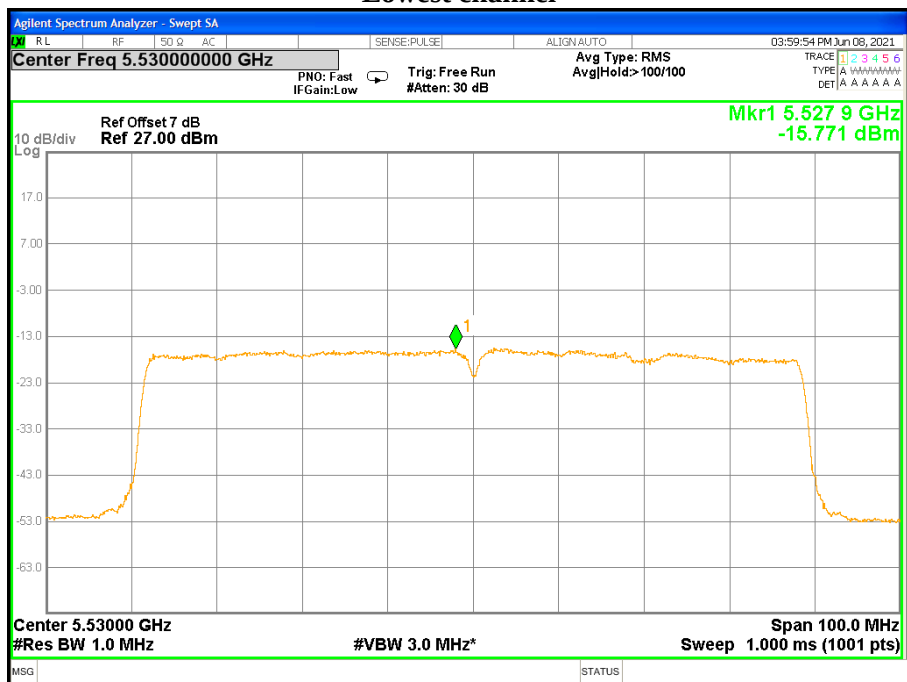
802.11ac(40M) Lowest Channel



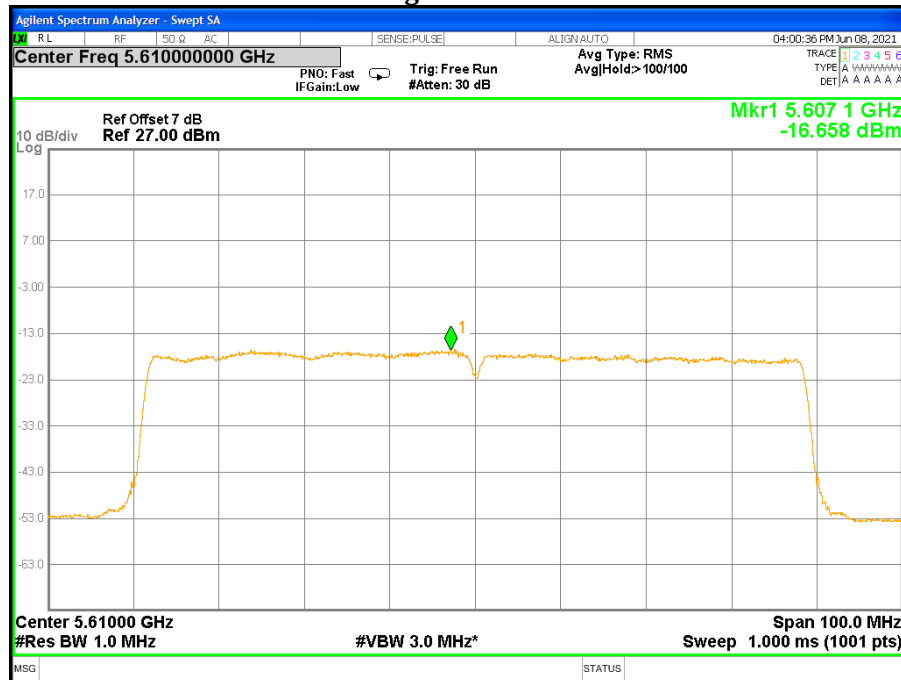
Middle Channel



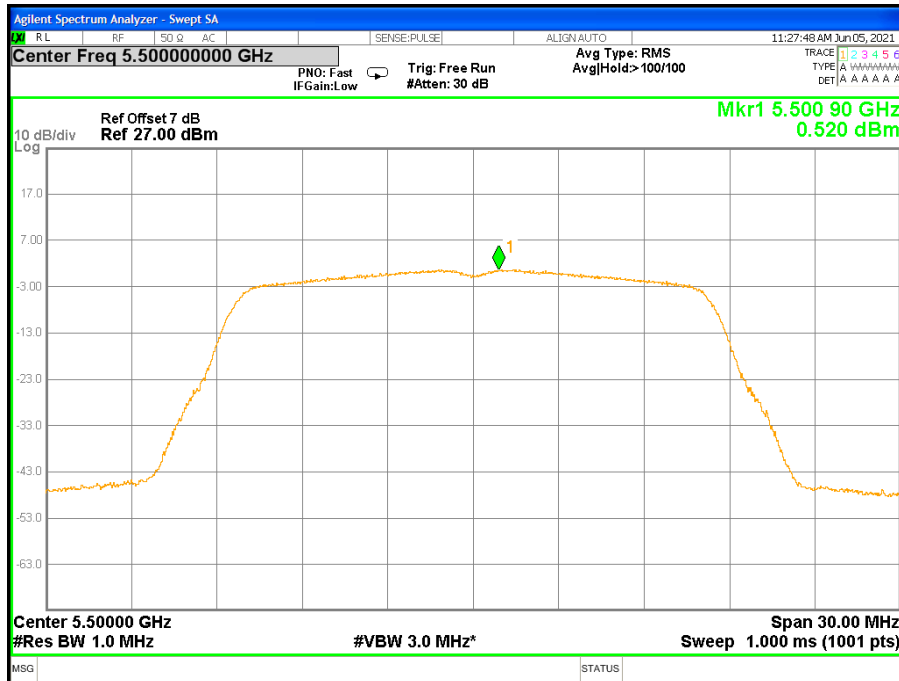
High Channel

802.11ac(80M)
Lowest channel

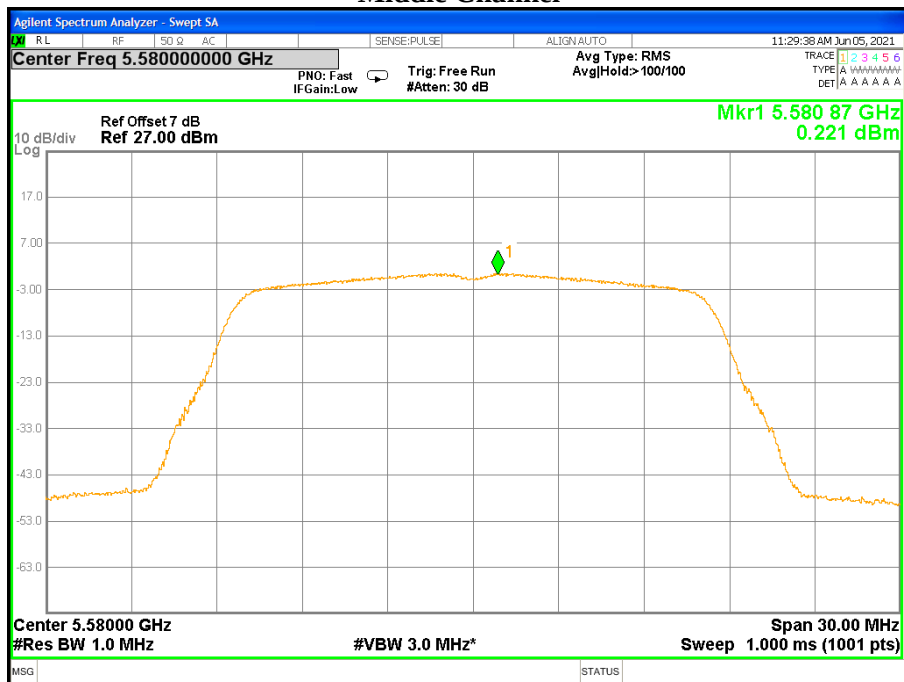
High Channel



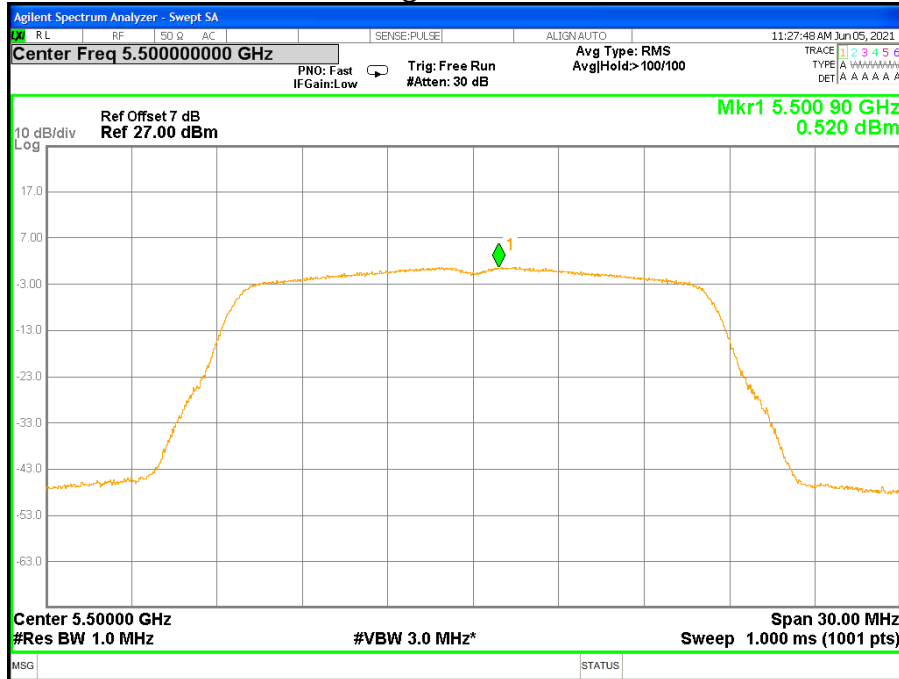
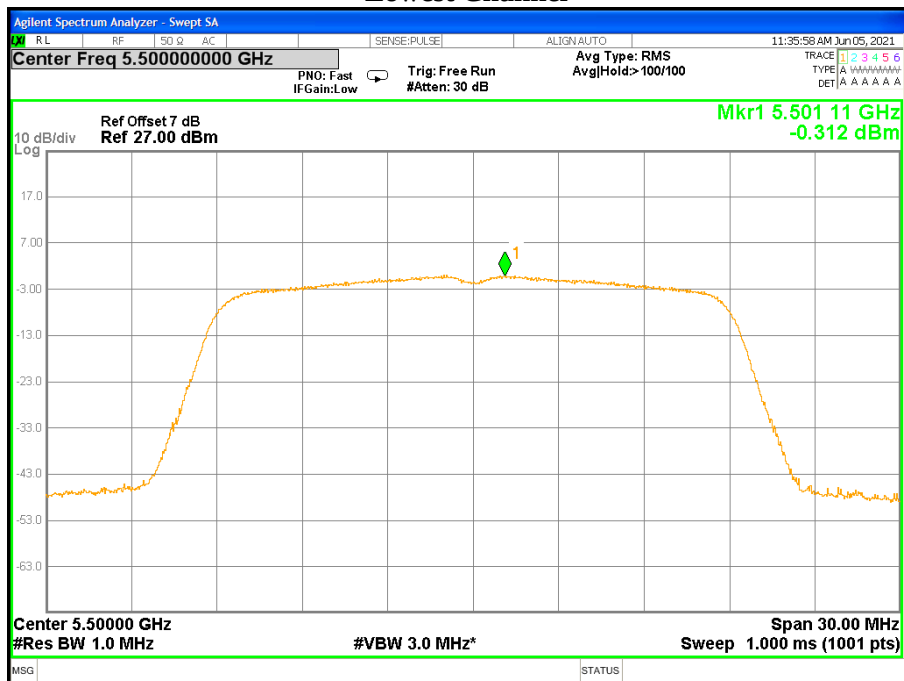
ANT B
802.11a
Low Channel



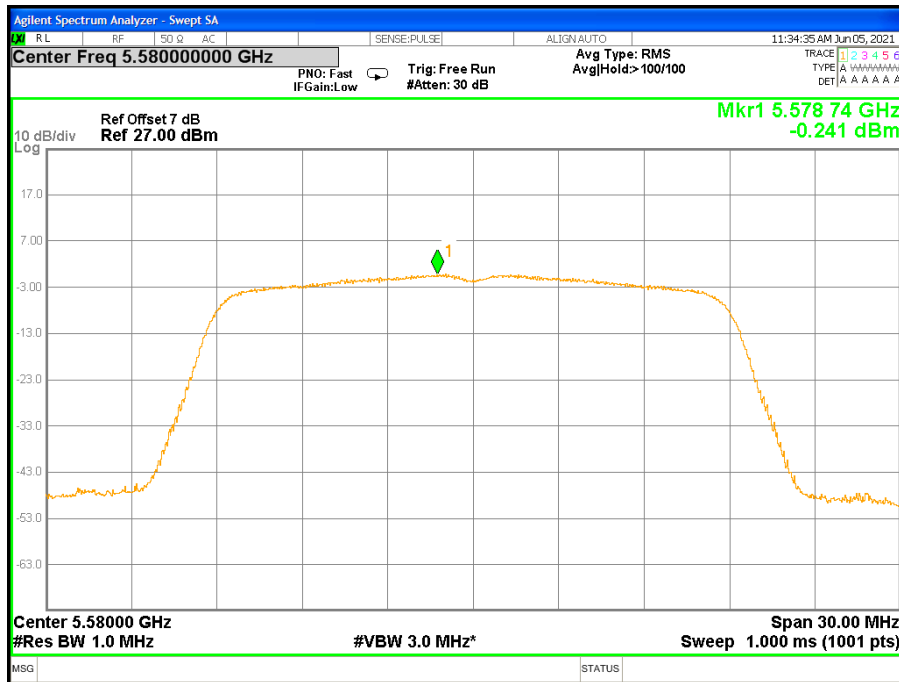
Middle Channel



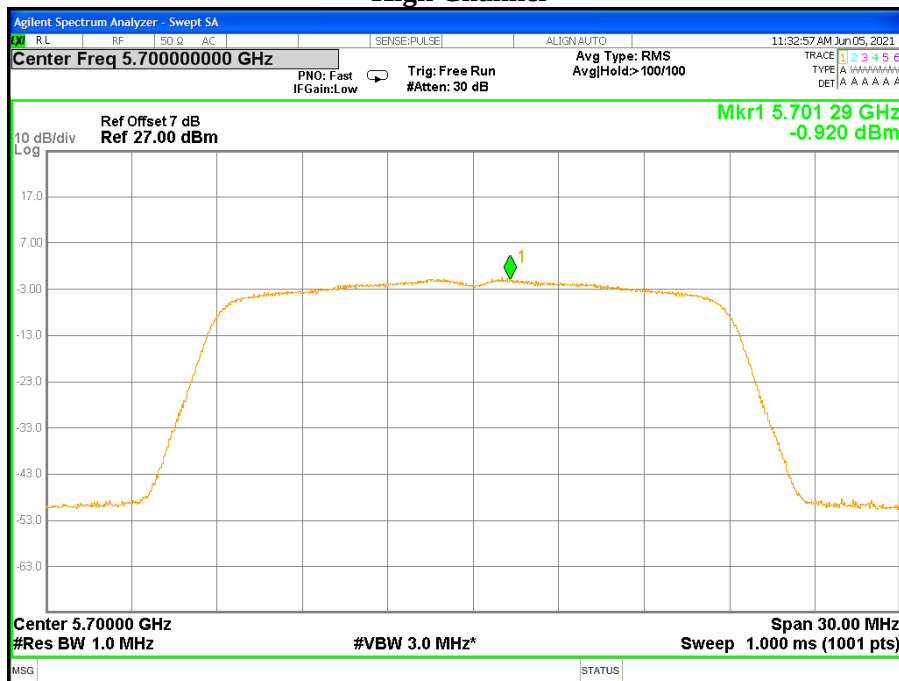
High Channel

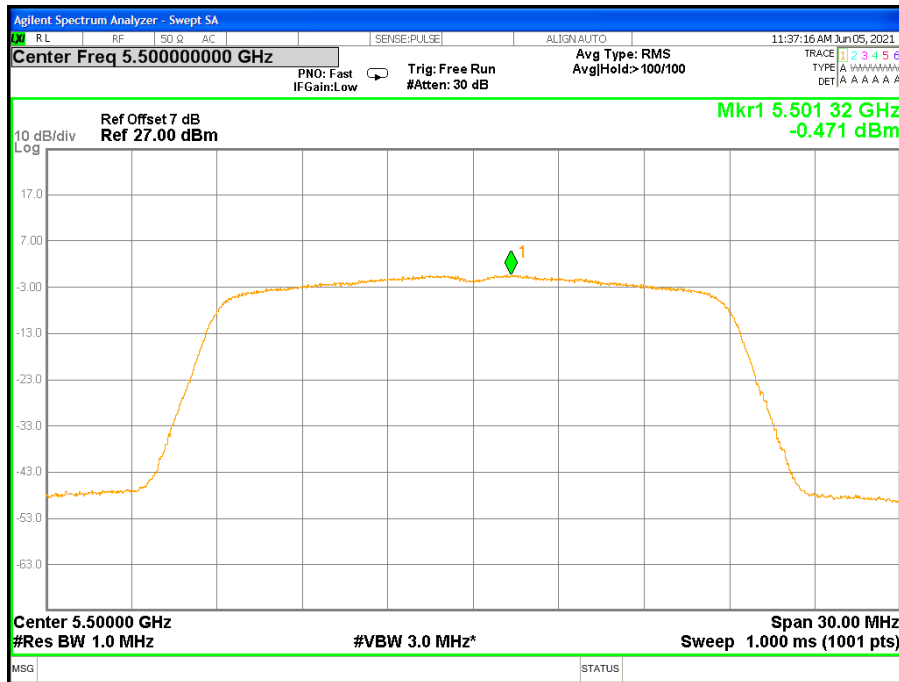
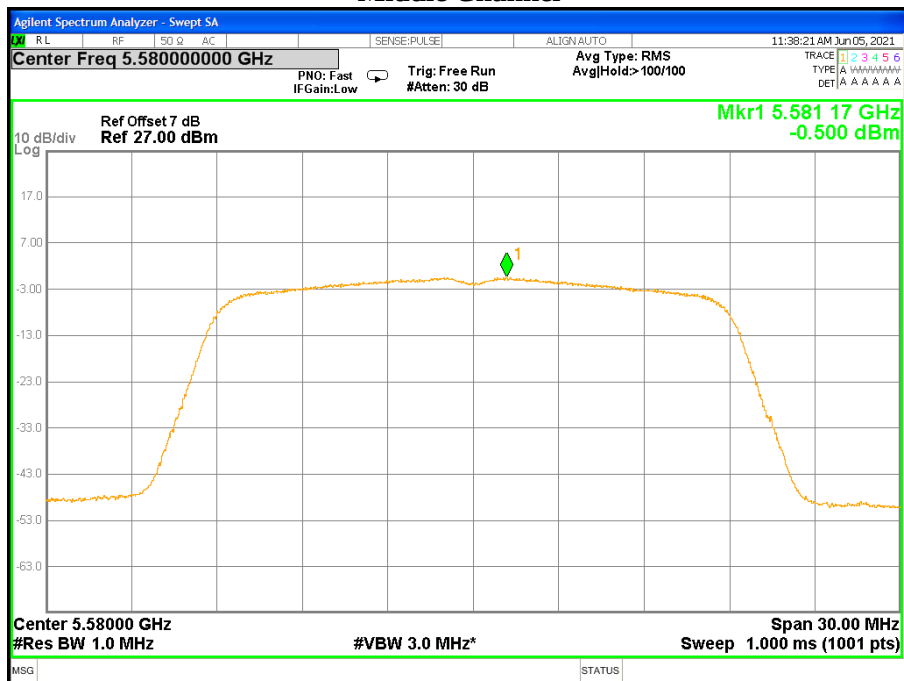
802.11n(20M)
Lowest Channel

Middle Channel

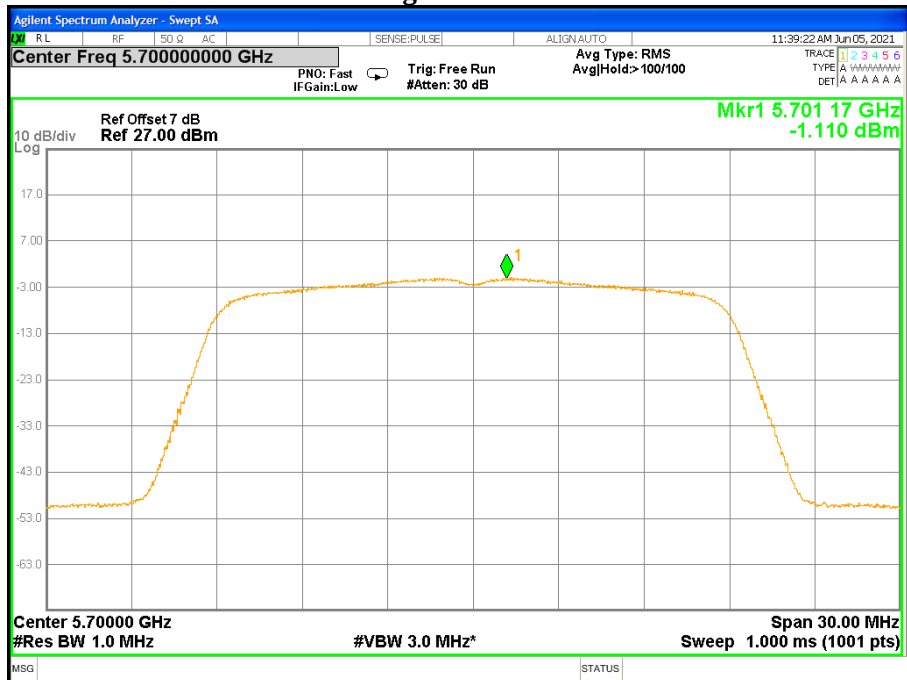
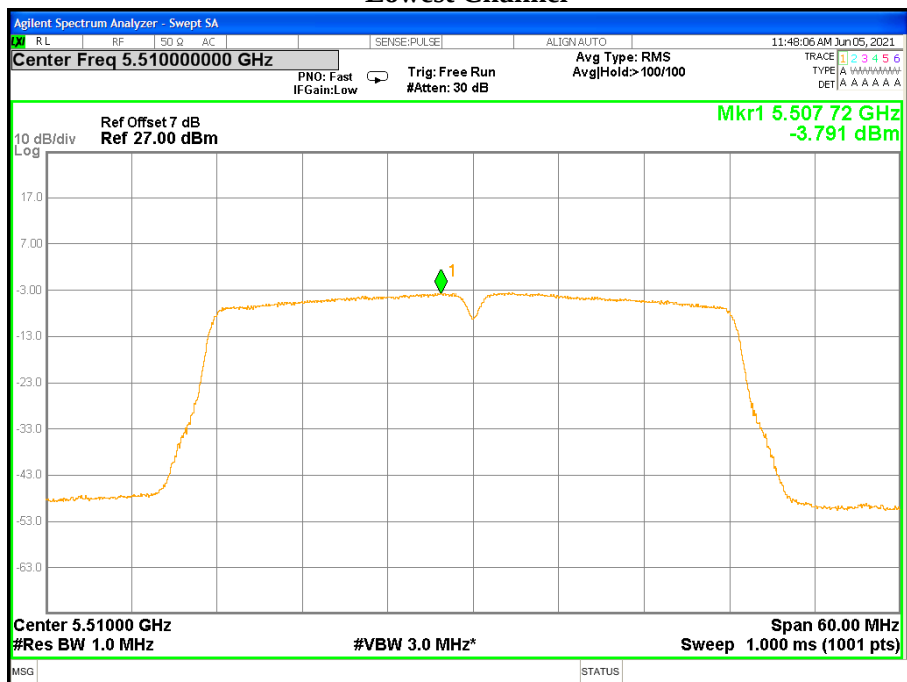


High Channel

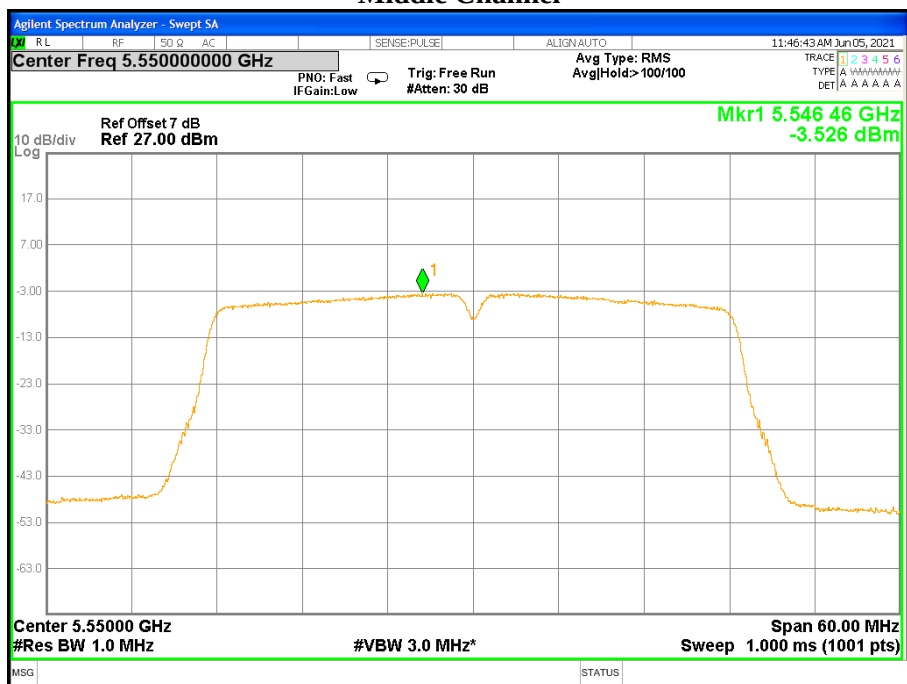


**802.11ac(20M)
Low Channel****Middle Channel**

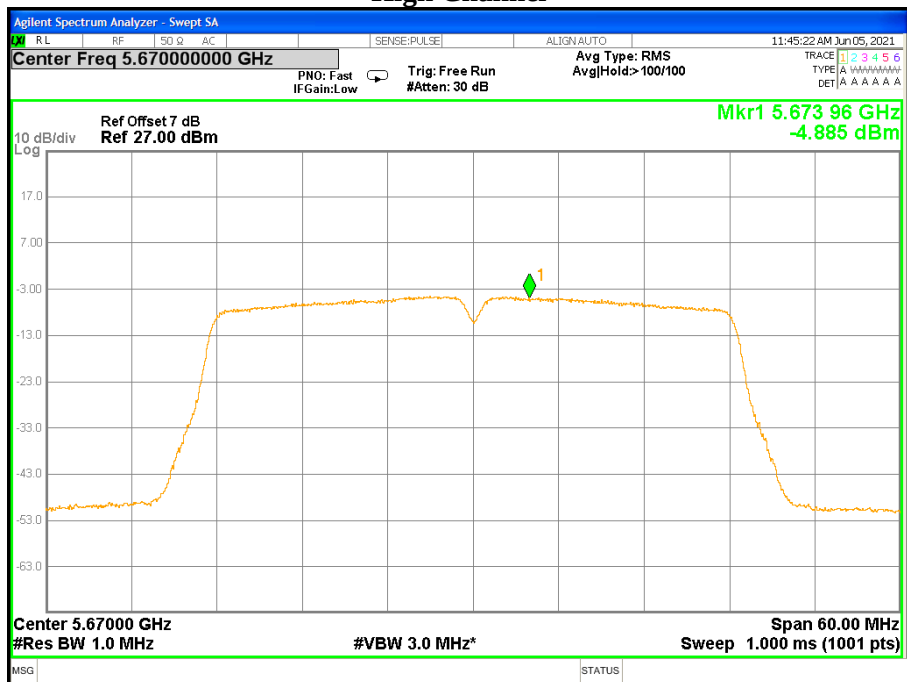
High Channel

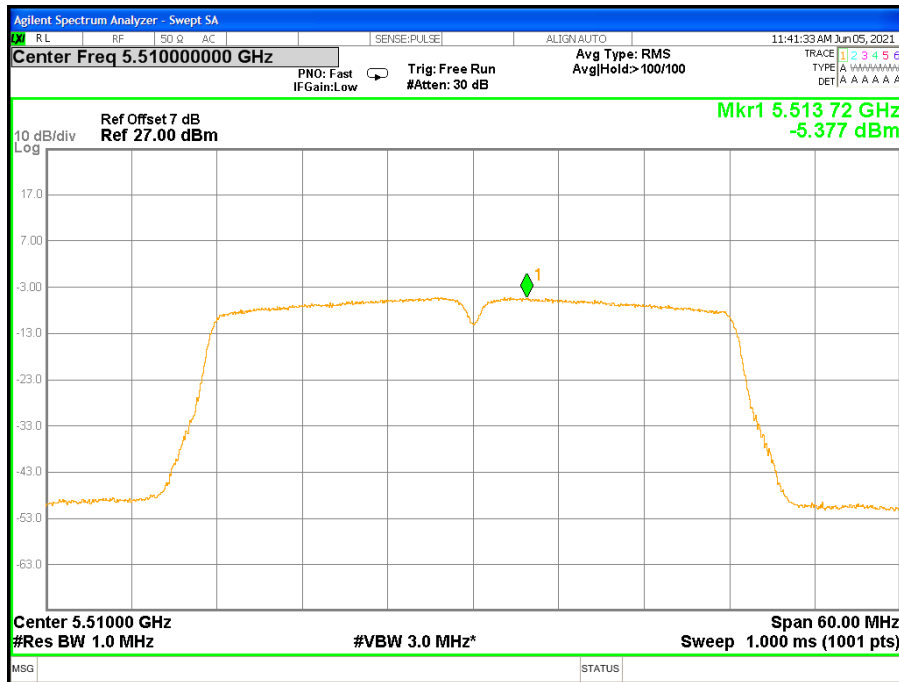
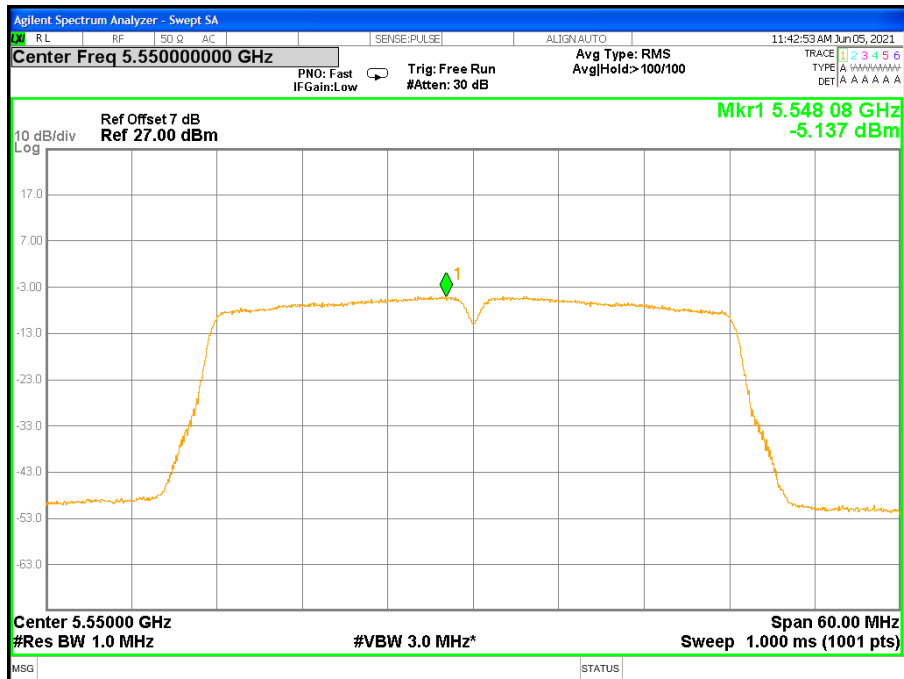
802.11n(40M)
Lowest Channel

Middle Channel

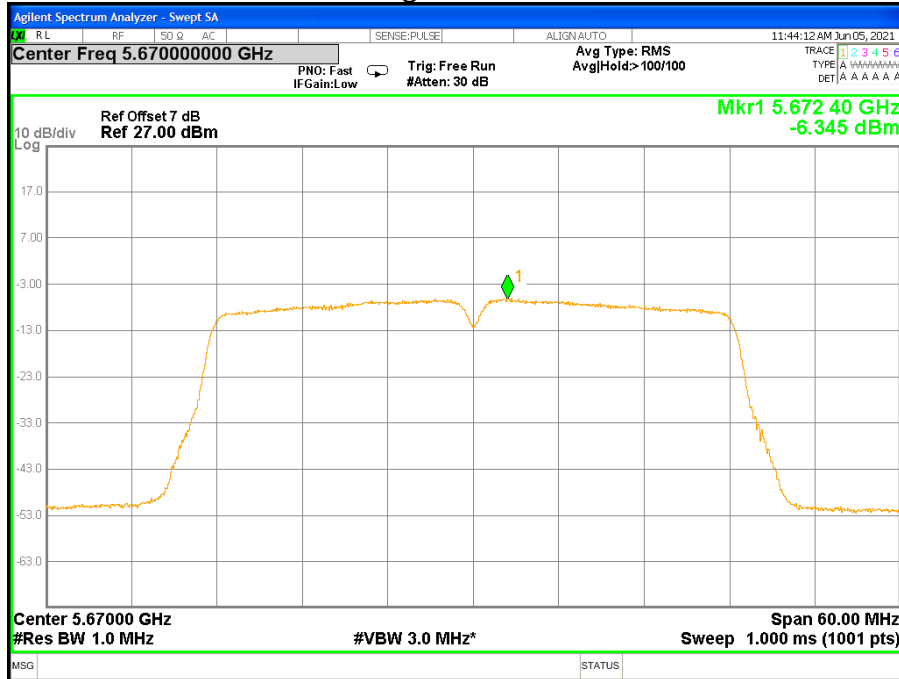


High Channel

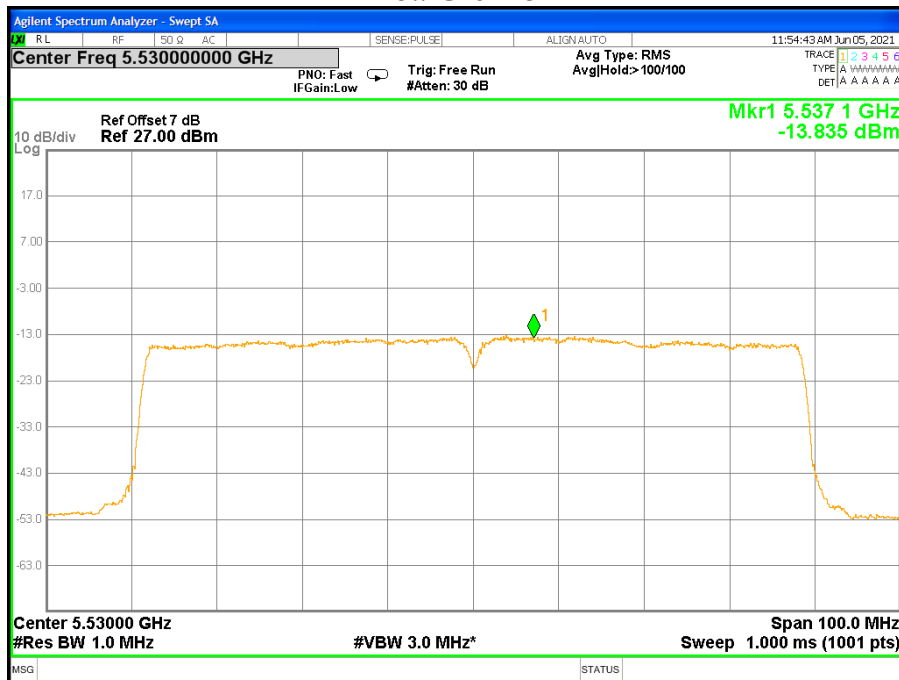


**802.11ac(40M)
Lowest Channel****Middle Channel**

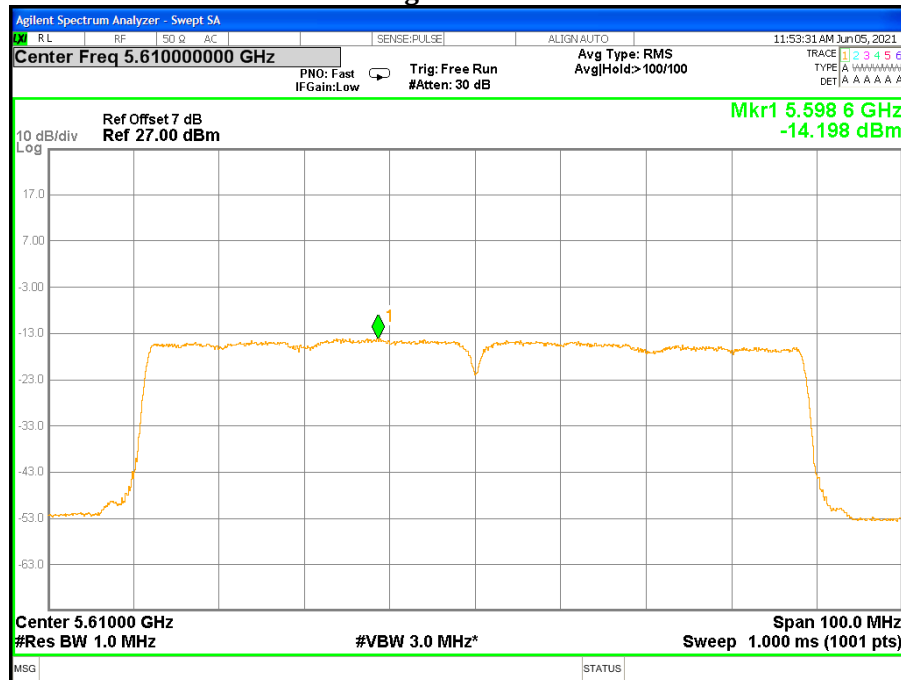
High Channel



802.11ac(80M) Low Channel



High Channel

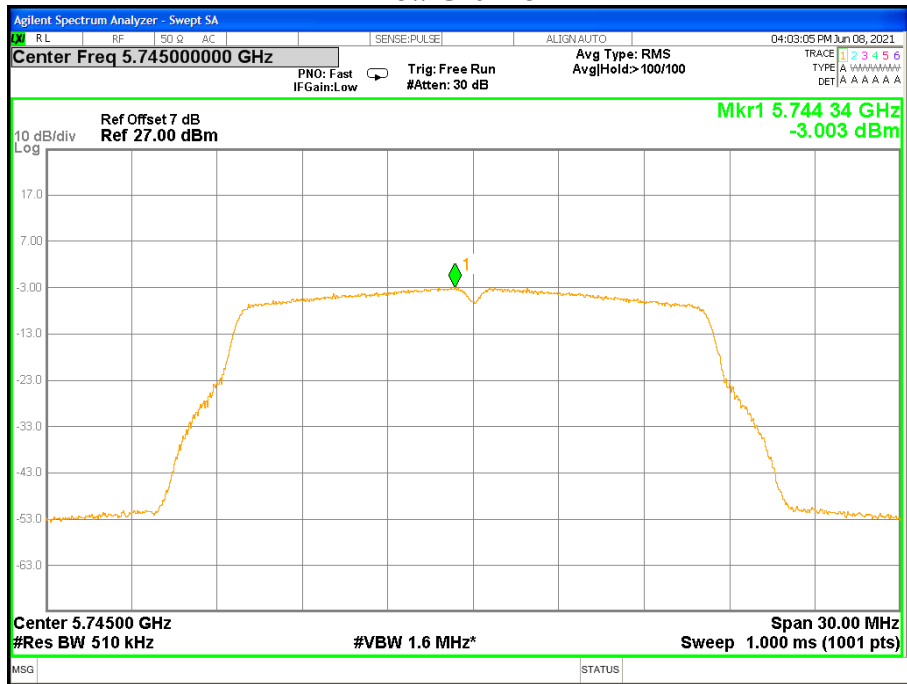


EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80		
Test Date :	2021-06-05		

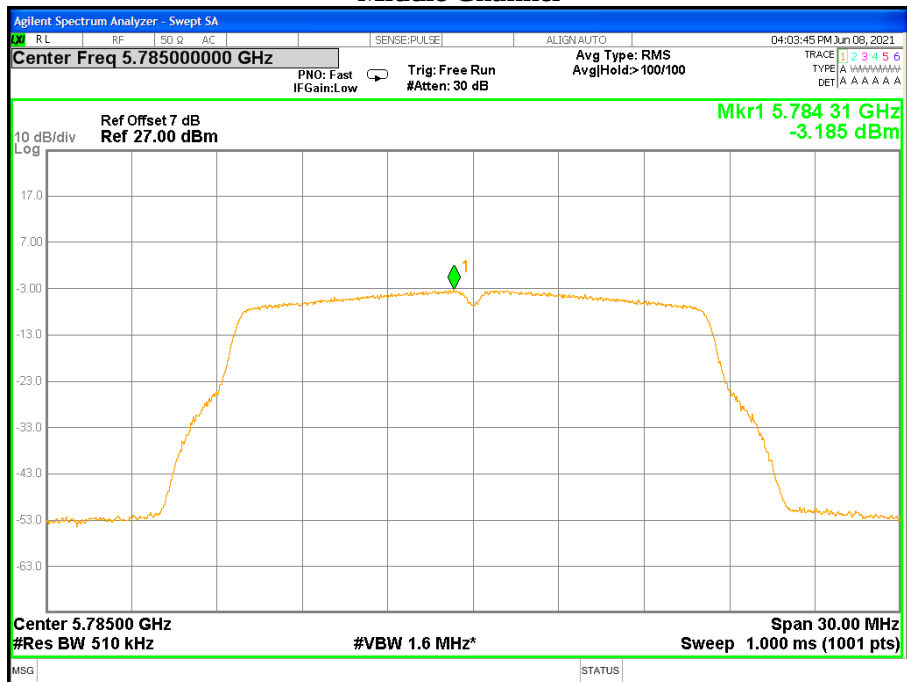
5725-5850MHz										
Frequency	Use RBW 510KHz direct measurement Ant_A Power Density (dBm)	Use RBW 510KHz direct measurement Ant_B Power Density (dBm)	Convert to RBW 500KHz direct measurement Ant_A Power Density (dBm)	Convert to RBW 500KHz direct measurement Ant_B Power Density (dBm)	Duty cycle factor (dB)	Final Ant_A Power Density (dBm)	Final Ant_B Power Density (dBm)	Power Density Total (dBm)	Limit (dBm)	Result
802.11a										
5745	-3.003	-1.885	-3.089	-1.971	0.086	-3.003	-1.885	--	29.01	PASS
5785	-3.185	-2.028	-3.271	-2.114	0.086	-3.185	-2.028	--	29.01	PASS
5825	-3.747	-1.914	-3.833	-2.000	0.086	-3.747	-1.914	--	29.01	PASS
802.11n20										
5745	-4.185	-2.530	-4.271	-2.616	0.079	-4.192	-2.537	-0.276	26	PASS
5785	-4.484	-2.863	-4.570	-2.949	0.079	-4.491	-2.870	-0.595	26	PASS
5825	-5.007	-3.167	-5.093	-3.253	0.079	-5.014	-3.174	-0.987	26	PASS
802.11n40										
5755	-8.286	-6.102	-8.372	-6.188	0.168	-8.204	-6.020	-3.966	26	PASS
5795	-7.764	-6.306	-7.850	-6.392	0.168	-7.682	-6.224	-3.882	26	PASS
802.11ac20										
5745	-4.340	-2.860	-4.426	-2.946	0.186	-4.240	-2.760	-0.427	26	PASS
5785	-4.706	-3.169	-4.792	-3.255	0.186	-4.606	-3.069	-0.759	26	PASS
5825	-4.997	-2.853	-5.083	-2.939	0.186	-4.897	-2.753	-0.683	26	PASS
802.11ac40										
5755	-8.716	-7.230	-8.802	-7.316	0.316	-8.486	-7.000	-4.670	26	PASS
5795	-8.470	-7.724	-8.556	-7.810	0.316	-8.240	-7.494	-4.841	26	PASS
802.11ac80										
5775	-16.072	-12.570	-16.158	-12.656	2.153	-14.005	-10.503	-8.900	26	PASS

RB conversion formula: $10 \cdot \log(500\text{KHz}/\text{RBW})$

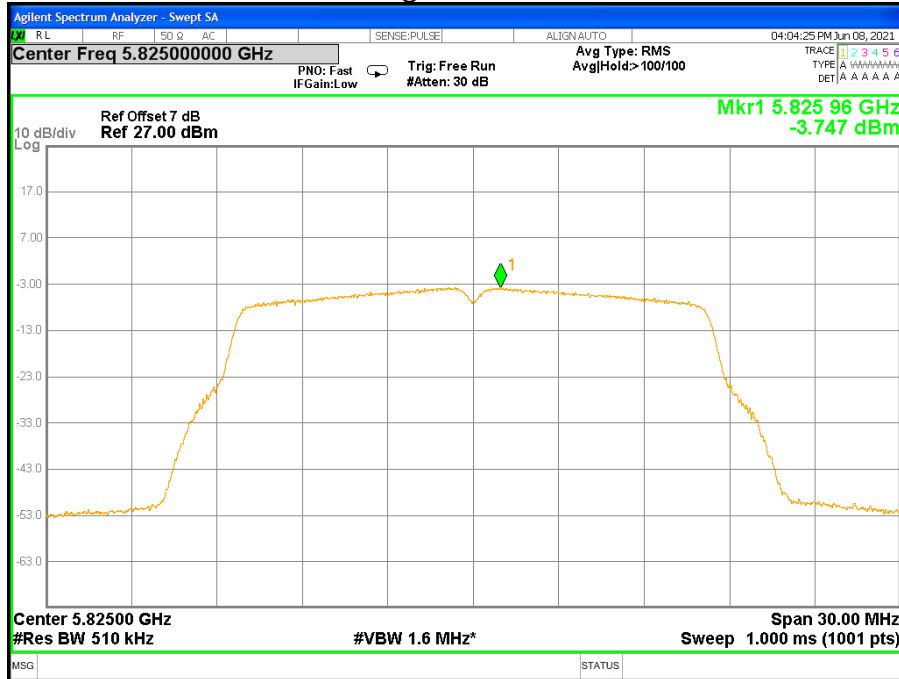
ANT A
802.11a
Low Channel



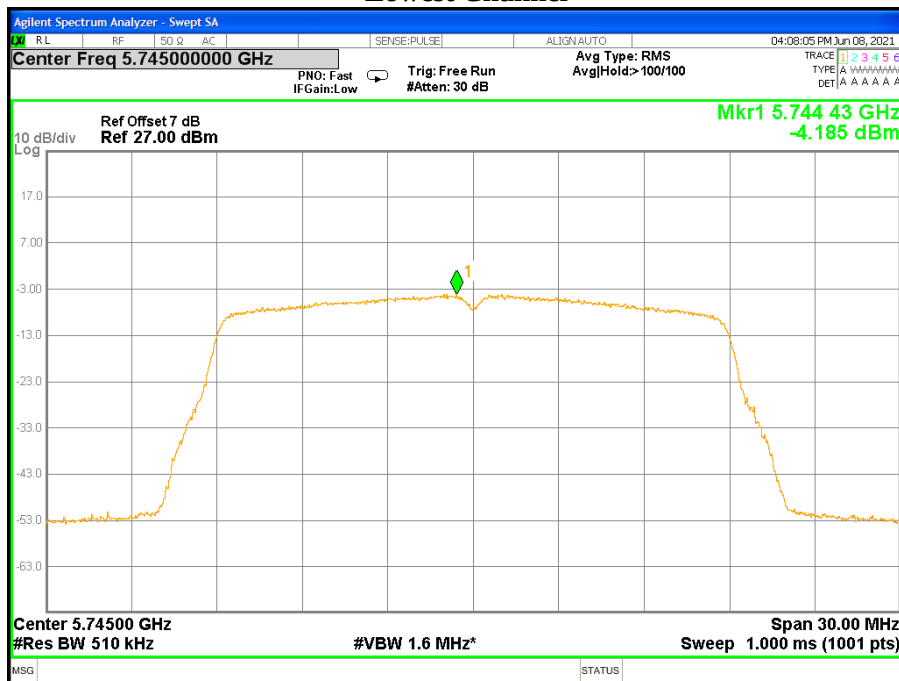
Middle Channel



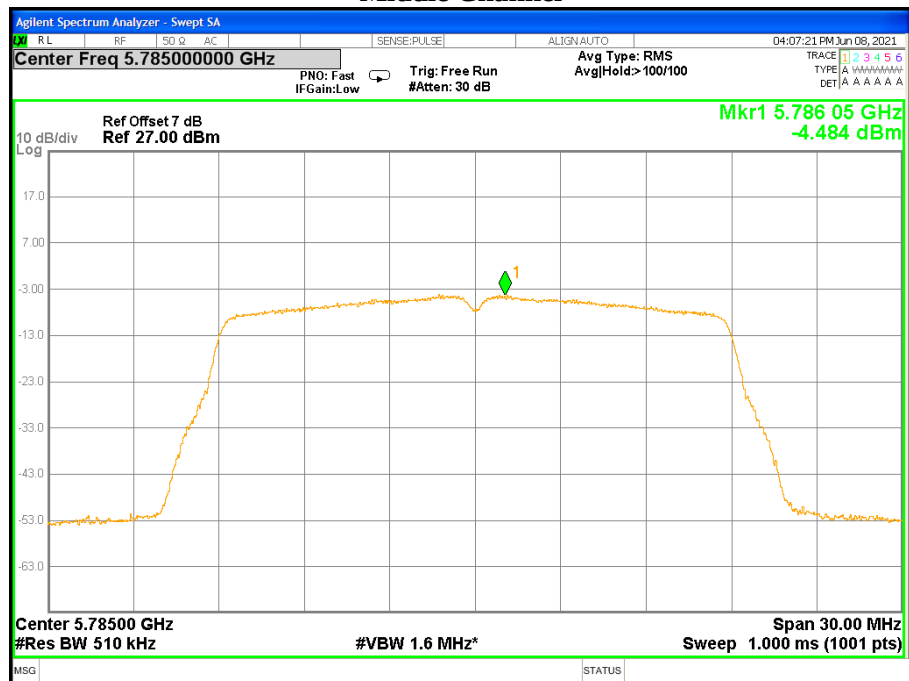
High Channel



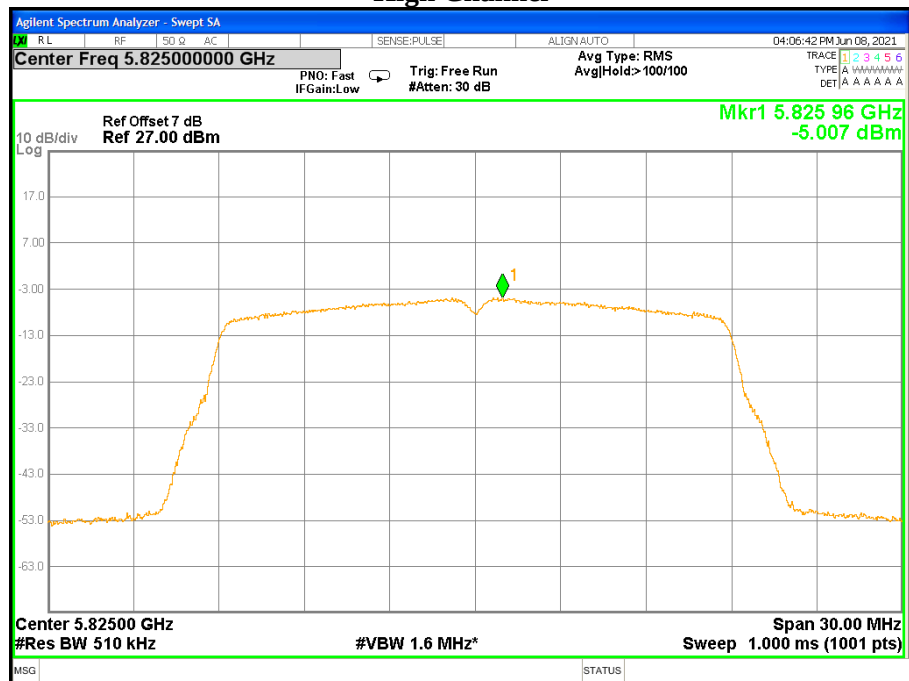
802.11n(20M) Lowest Channel

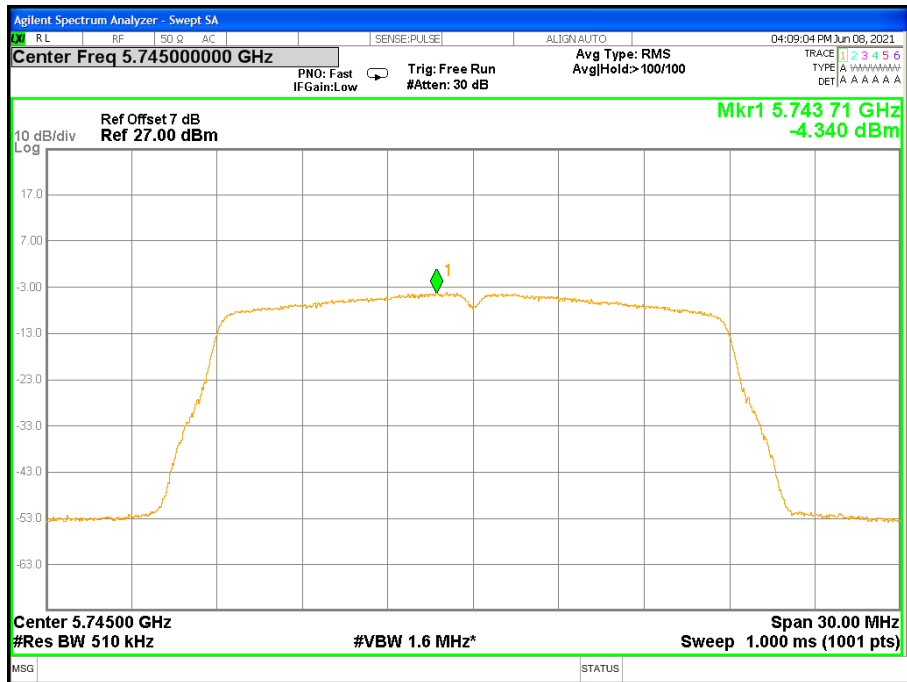
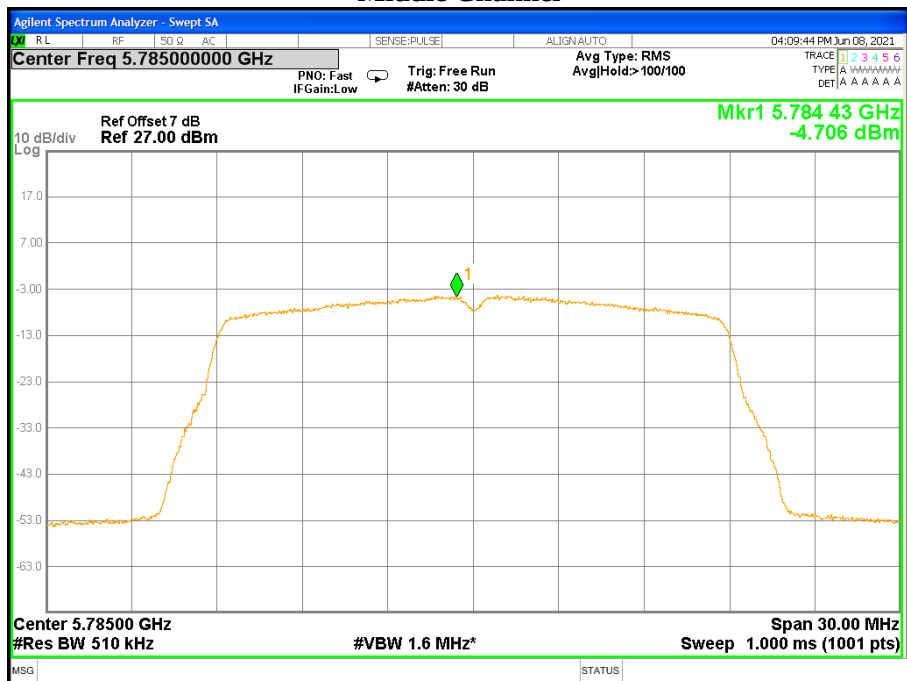


Middle Channel

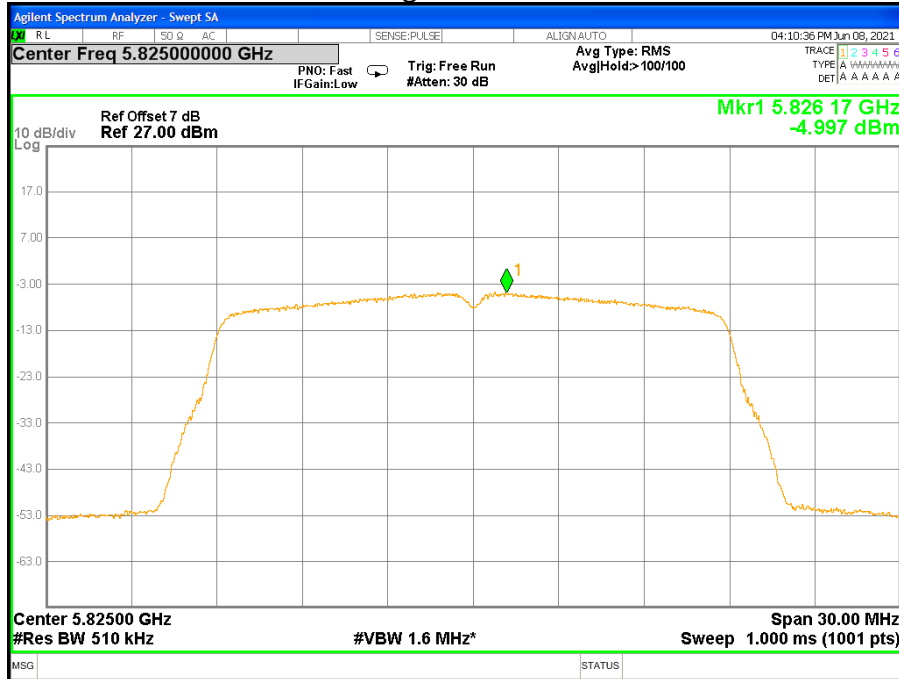


High Channel

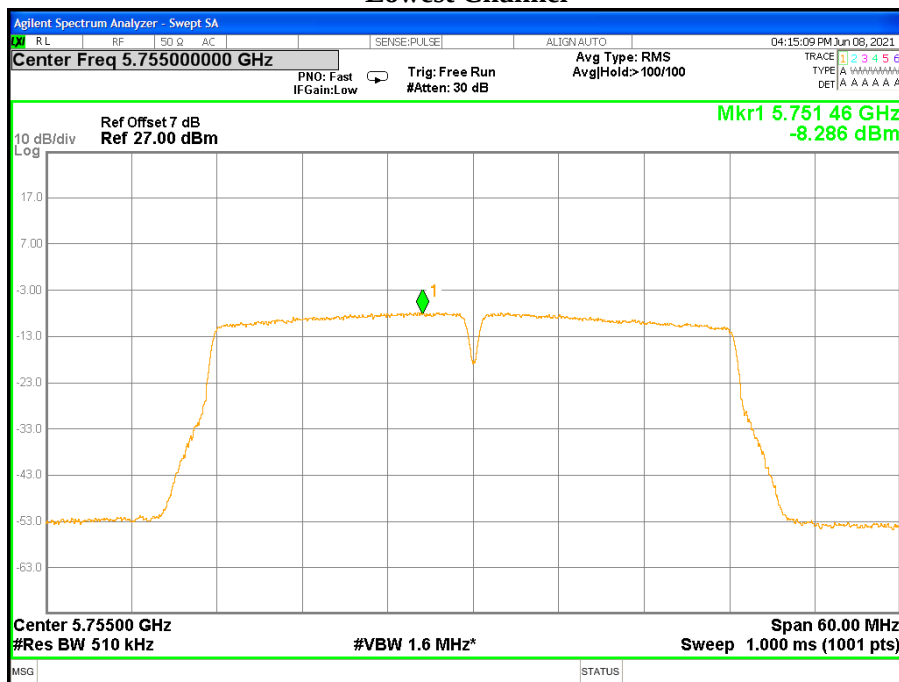


**802.11ac(20M)
Low Channel****Middle Channel**

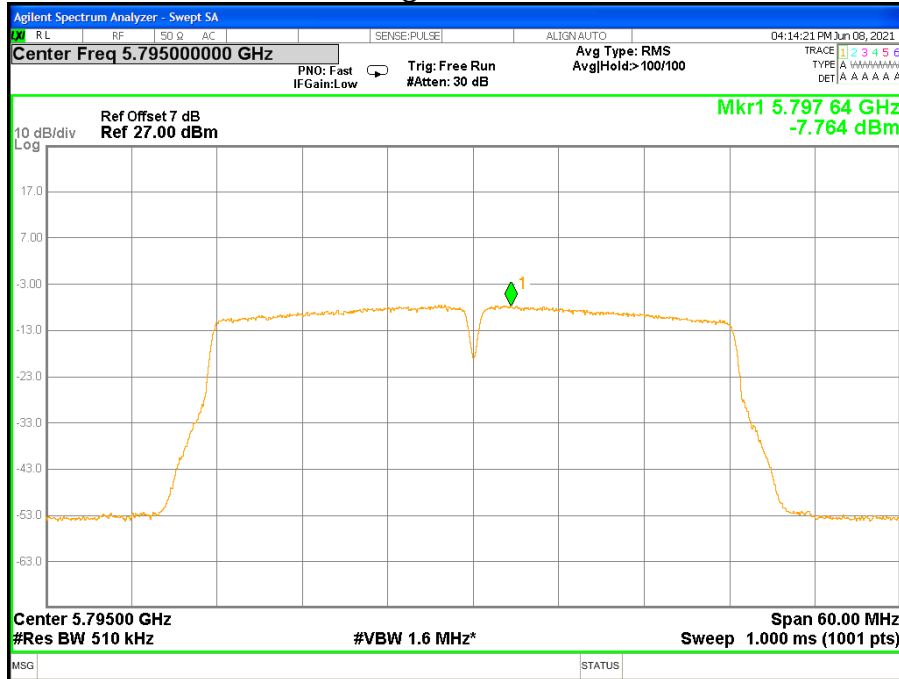
High Channel



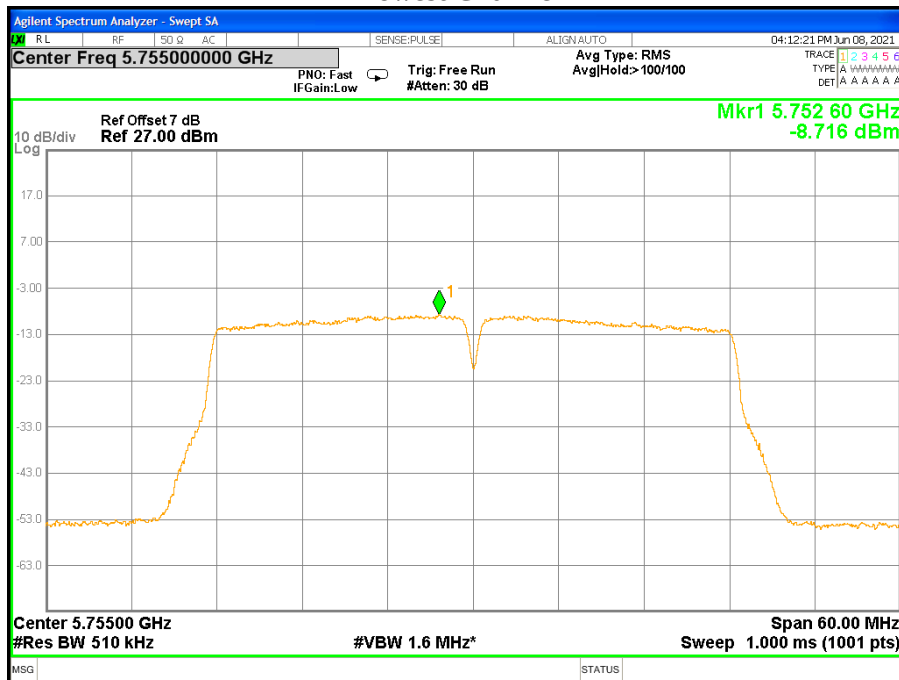
802.11n(40M) Lowest Channel



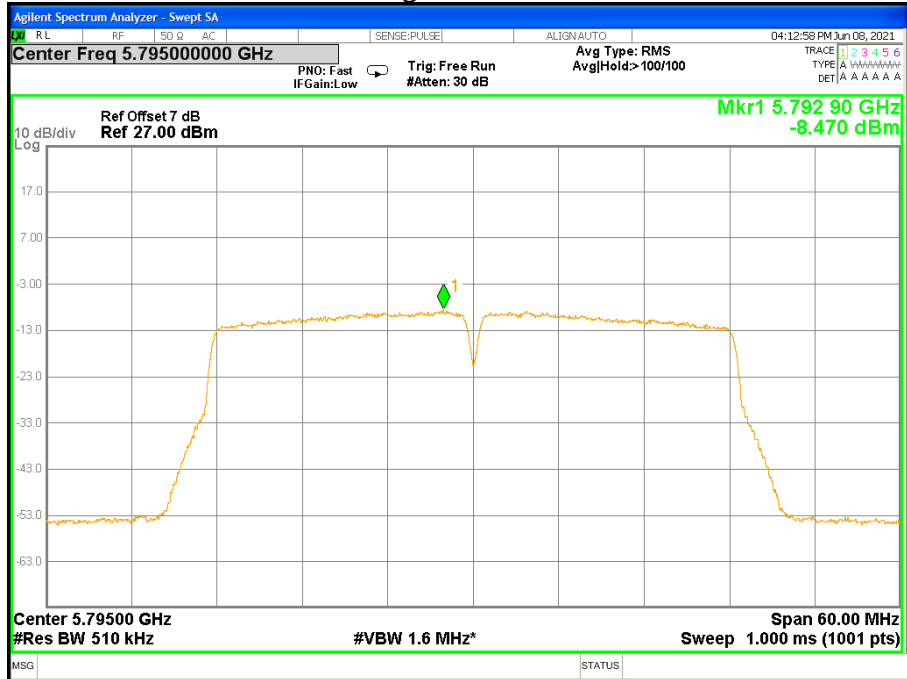
High Channel



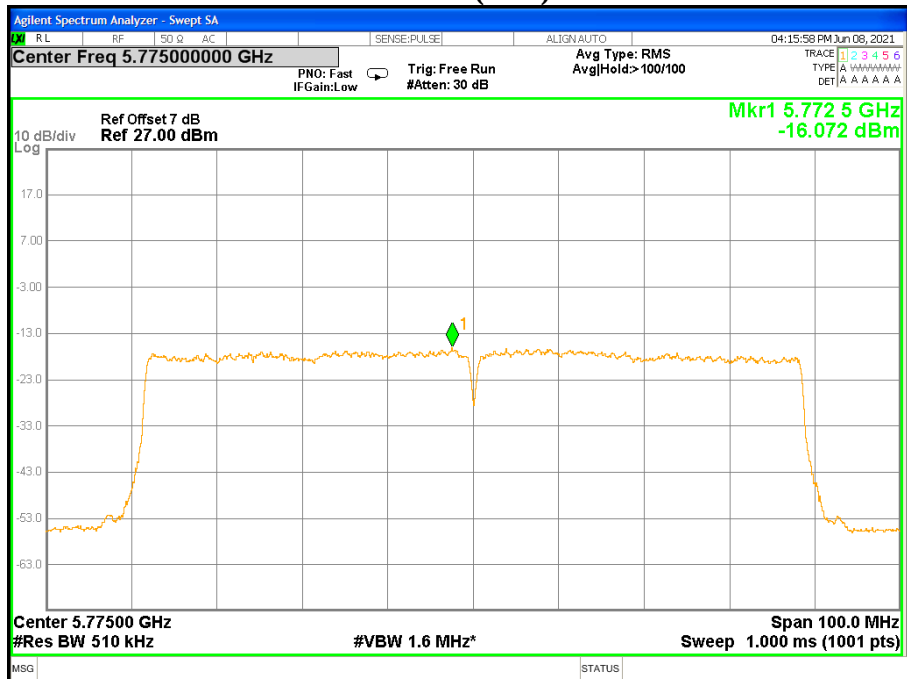
802.11ac(40M) Lowest Channel



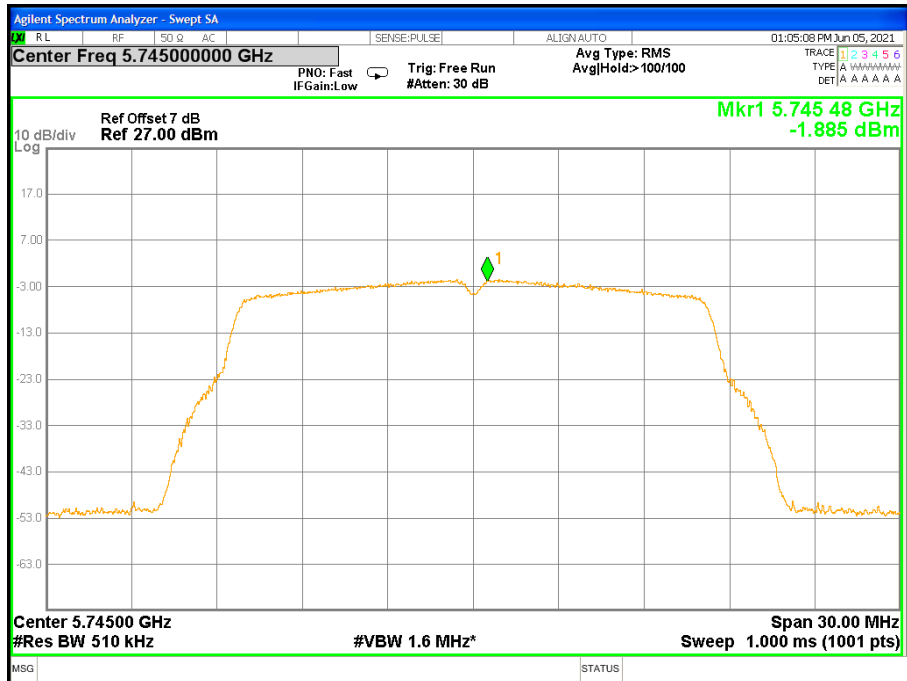
High Channel



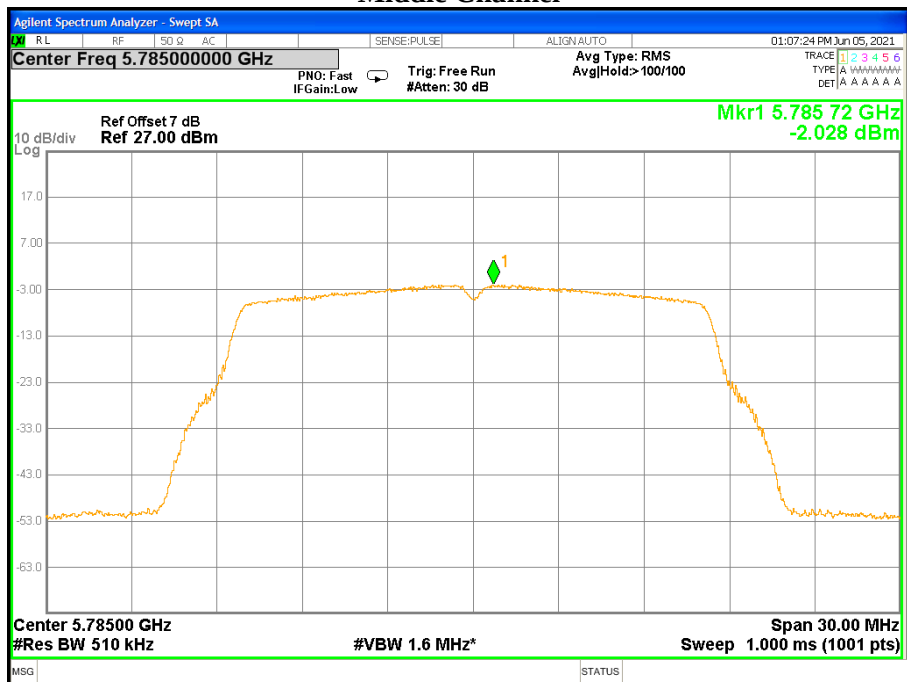
802.11ac(80M)



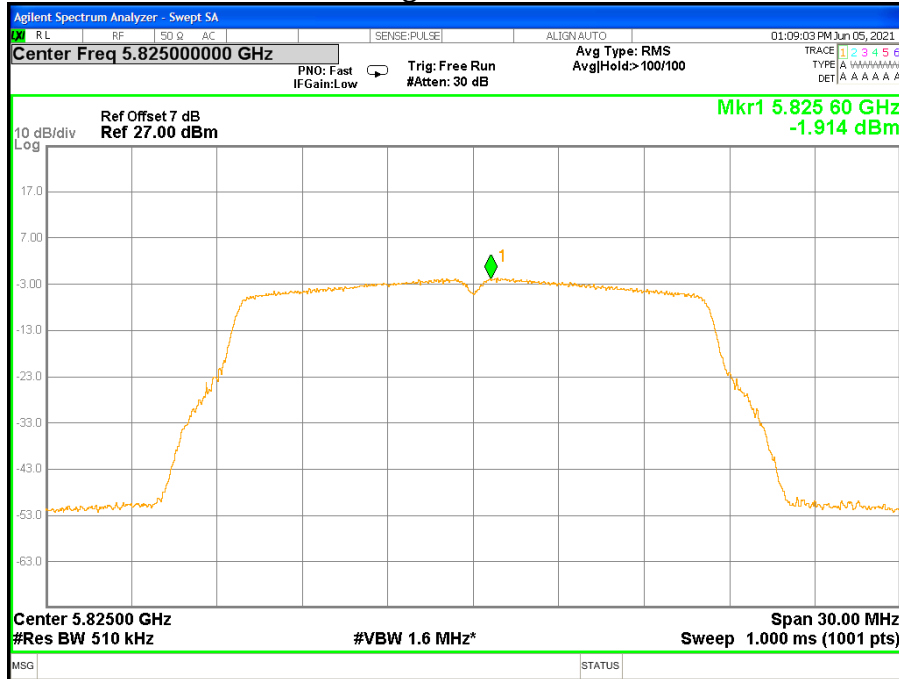
ANT B
802.11a
Low Channel



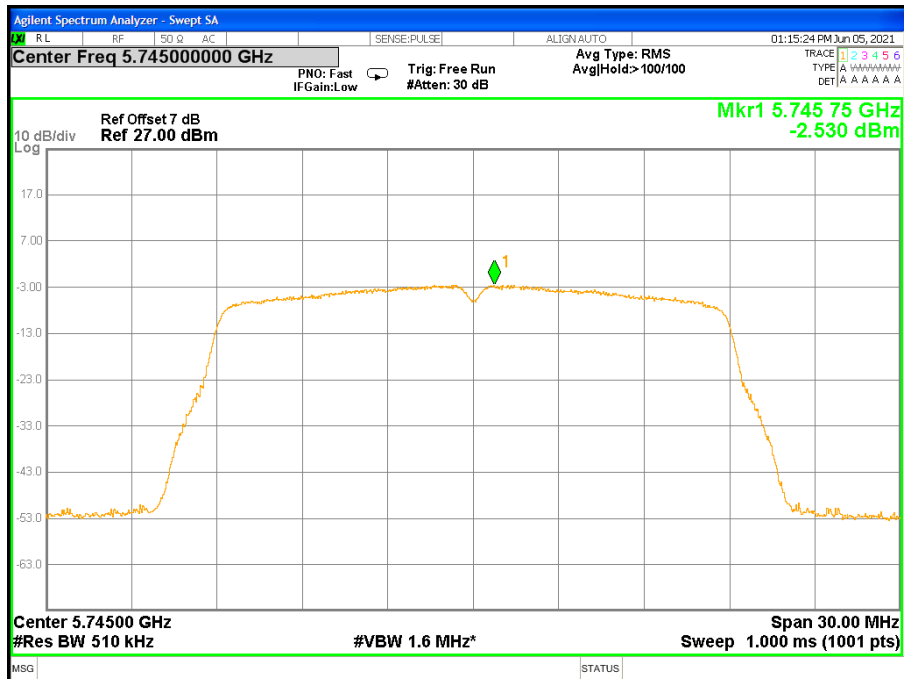
Middle Channel



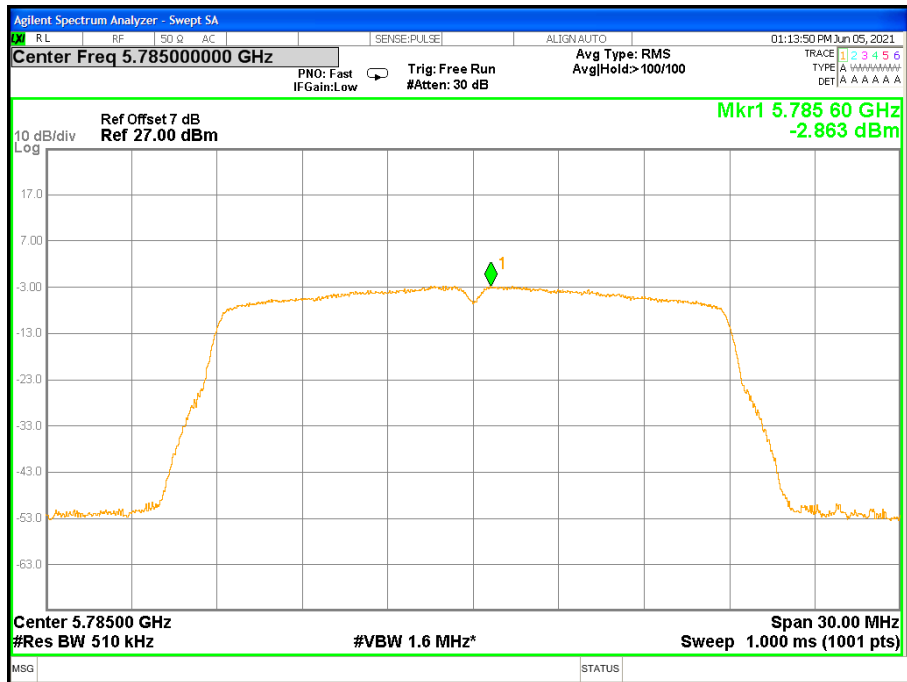
High Channel



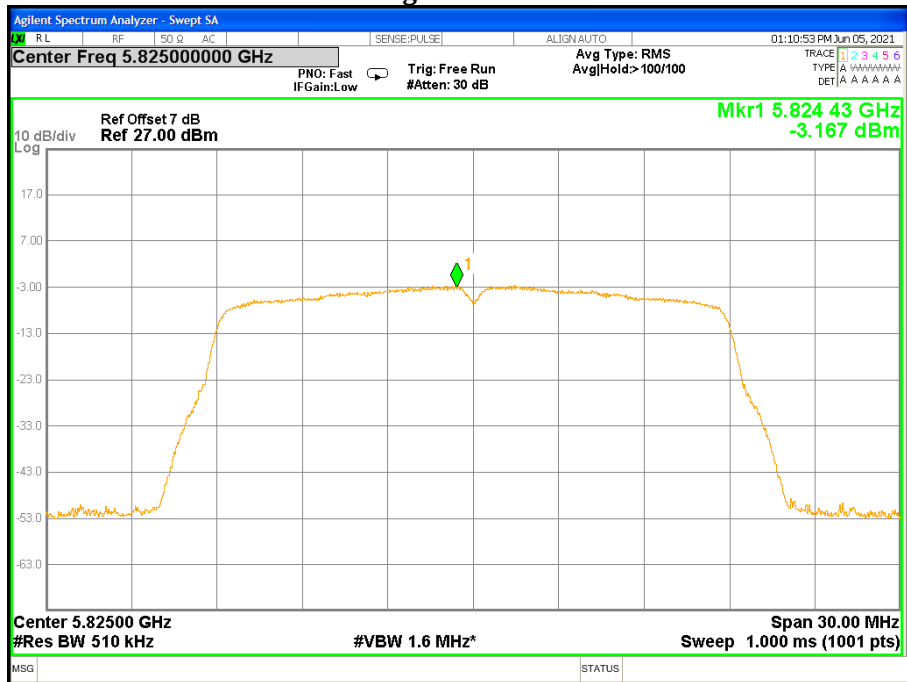
802.11n(20M) Lowest Channel



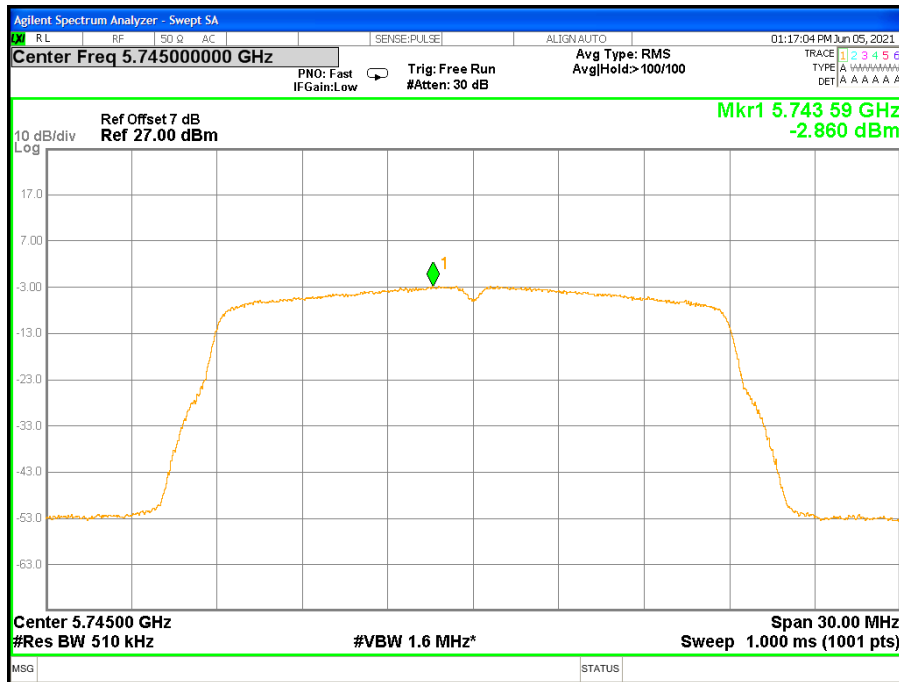
Middle Channel



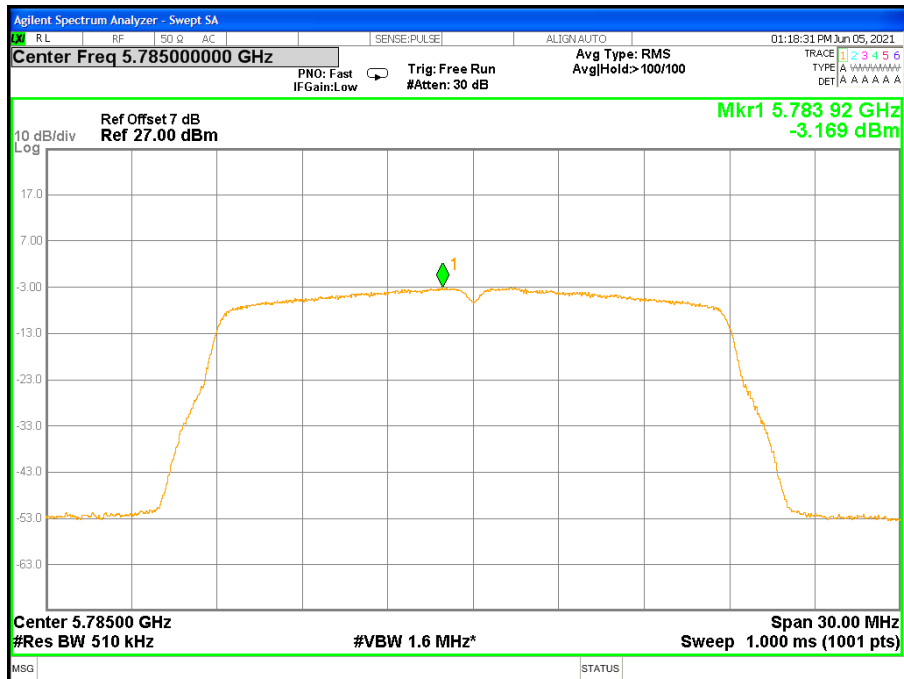
High Channel



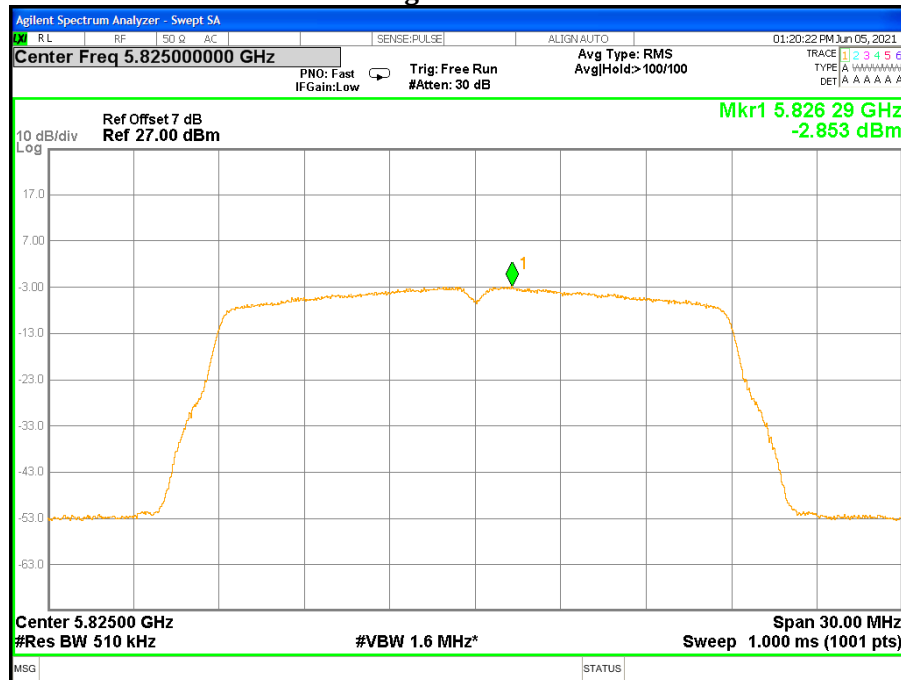
802.11ac(20M) Low Channel



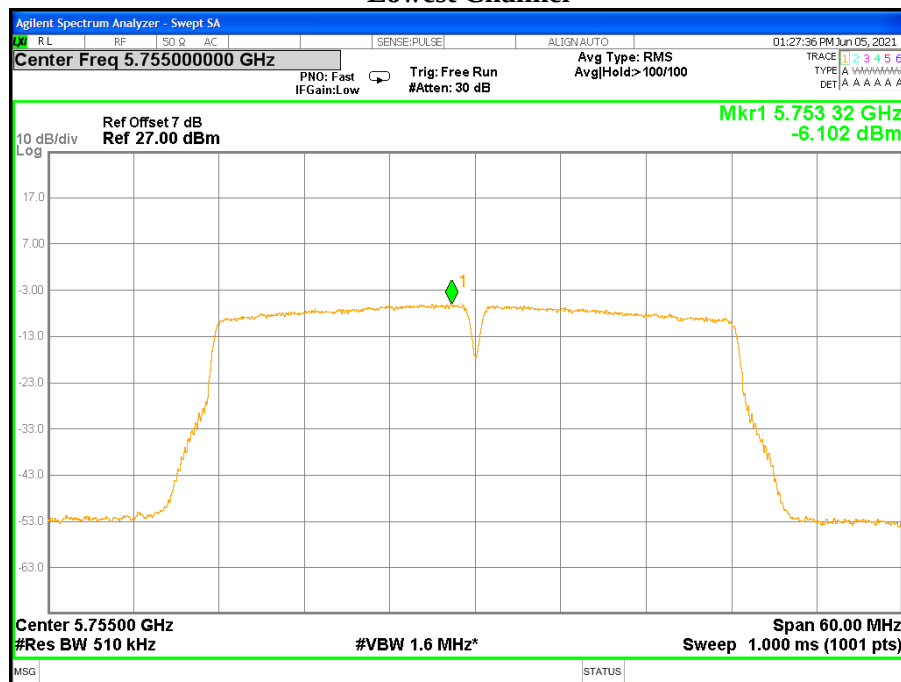
Middle Channel



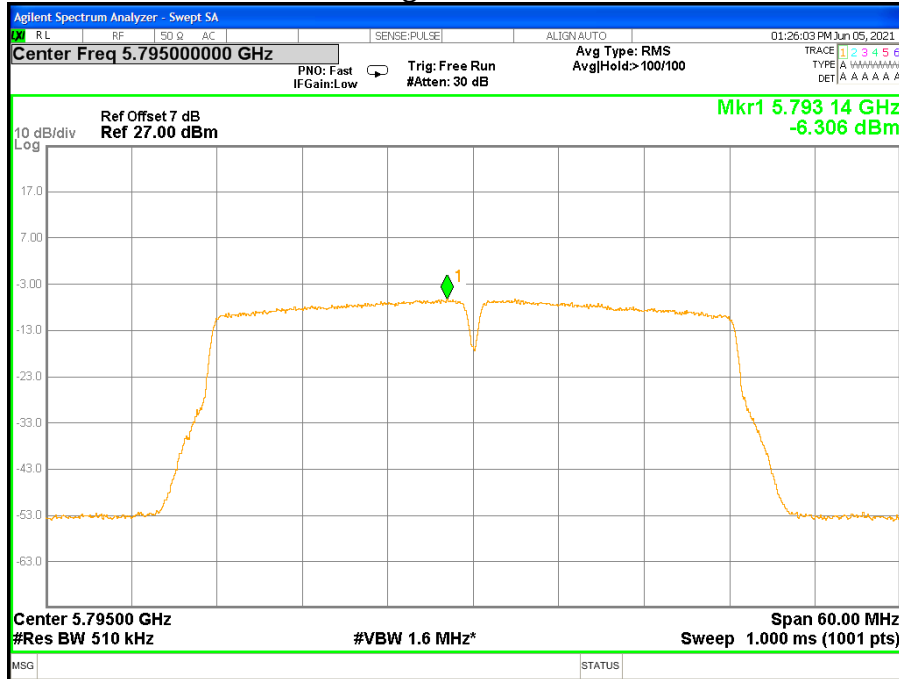
High Channel



802.11n(40M) Lowest Channel



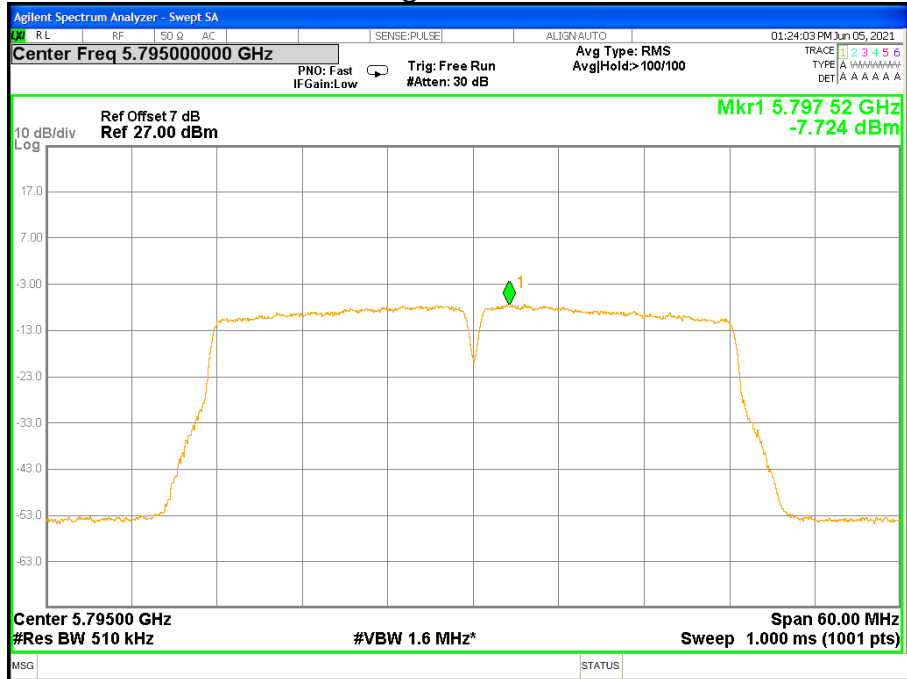
High Channel



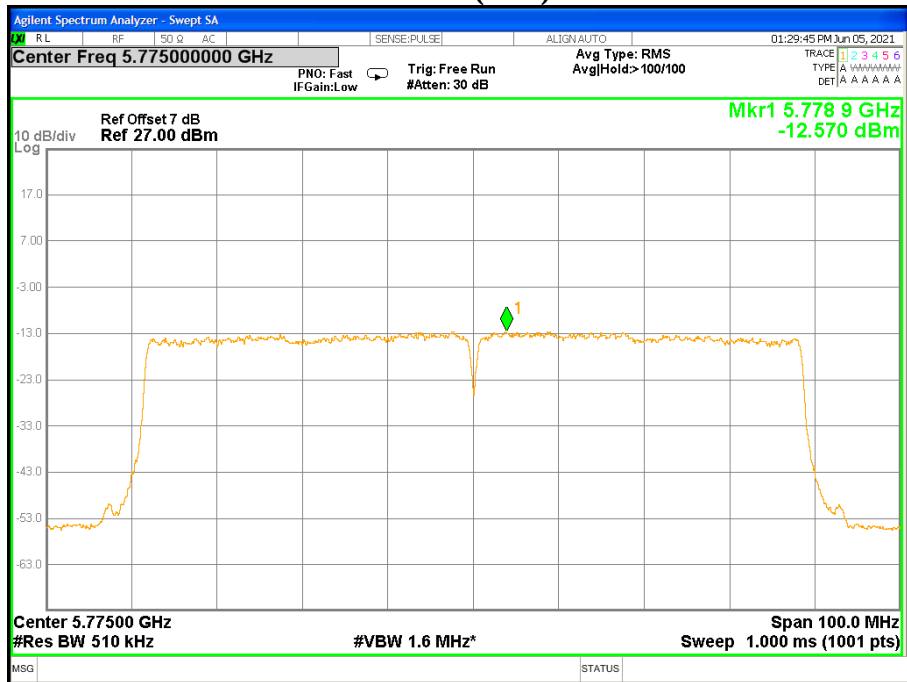
802.11ac(40M) Lowest Channel



High Channel



802.11ac(80M)



6 MAXIMUM PEAK OUTPUT POWER

6.1 APPLIED PROCEDURES / LIMIT

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Frequency Band	Limit
5.15 – 5.25 GHz	24dBm
5.25-5.35 GHz	24dBm
5.47 – 5.725 GHz	24dBm
5.725 – 5.85 GHz	1 watt (30dBm)

6.2 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

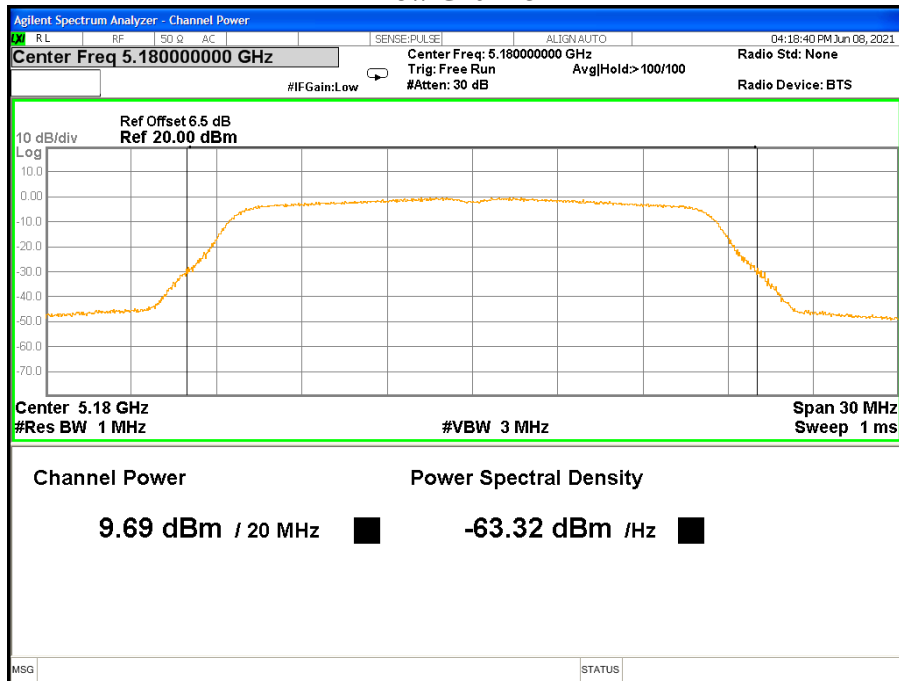


6.5 TEST RESULTS

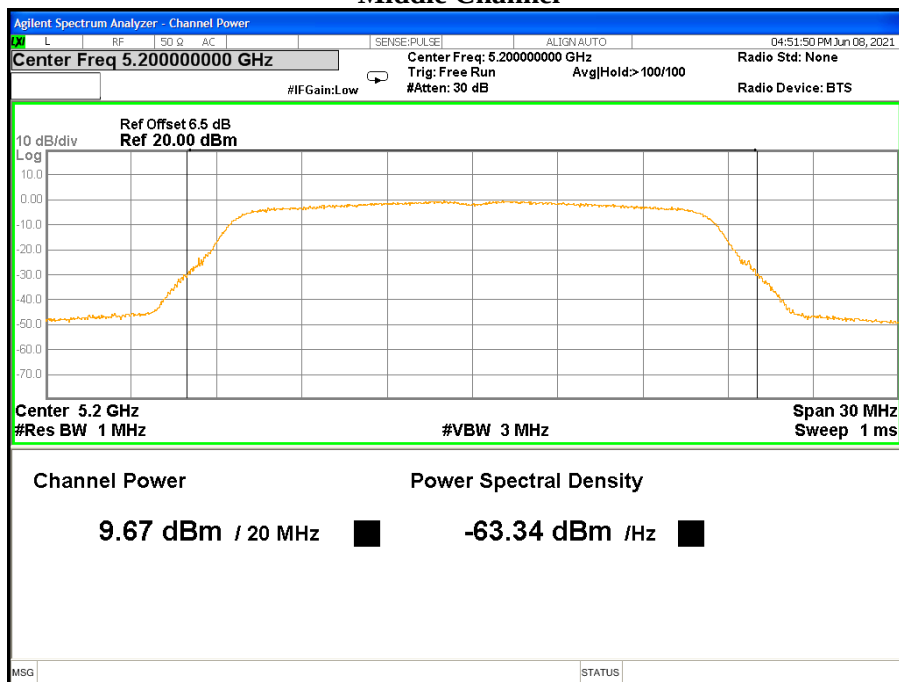
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80		
Test Date :	2021-06-04		

Band I (5.15-5.25GHz)								
Test Channel	Frequency (MHz)	Direct measurement Ant_A AV Power (dBm)	Direct measurement Ant B_AV Power (dBm)	Duty cycle factor (dB)	Final Ant_A AV Power (dBm)	Final Ant_B AV Power (dBm)	AV Power Total (dBm)	LIMIT (dBm)
802.11a								
36	5180	9.69	10.19	0.074	9.76	10.26	--	21.99
40	5200	9.67	10.30	0.074	9.74	10.37	--	21.99
48	5240	9.83	10.47	0.074	9.90	10.54	--	21.99
802.11n(HT20)								
36	5180	8.51	9.48	0.069	8.58	9.55	12.10	19.98
40	5200	8.61	9.57	0.069	8.68	9.64	12.20	19.98
48	5240	8.80	9.79	0.069	8.87	9.86	12.40	19.98
802.11n(HT40)								
38	5190	7.81	8.52	0.156	7.97	8.68	11.35	19.98
46	5230	7.97	8.56	0.156	8.13	8.72	11.44	19.98
802.11ac(VHT20)								
36	5180	8.53	9.31	0.186	8.72	9.50	12.13	19.98
40	5200	8.60	9.23	0.186	8.79	9.42	12.12	19.98
48	5240	8.70	9.53	0.186	8.89	9.72	12.33	19.98
802.11ac(VHT40)								
38	5190	6.21	6.95	0.231	6.44	7.18	9.84	19.98
46	5230	6.32	6.97	0.231	6.55	7.20	9.90	19.98
802.11ac(VHT80)								
42	5210	4.73	4.83	2.207	6.94	7.04	10.00	19.98

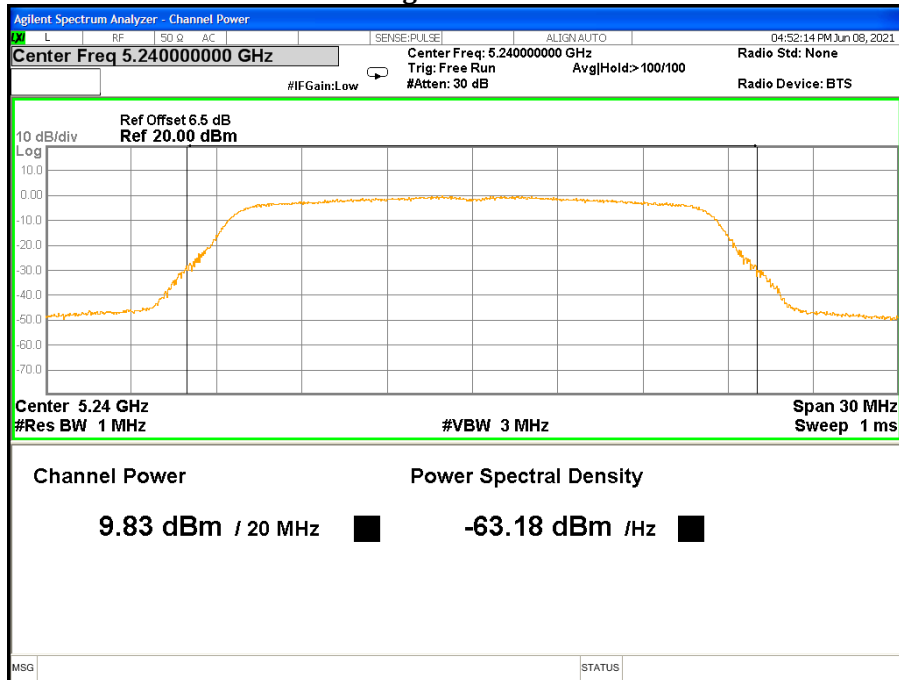
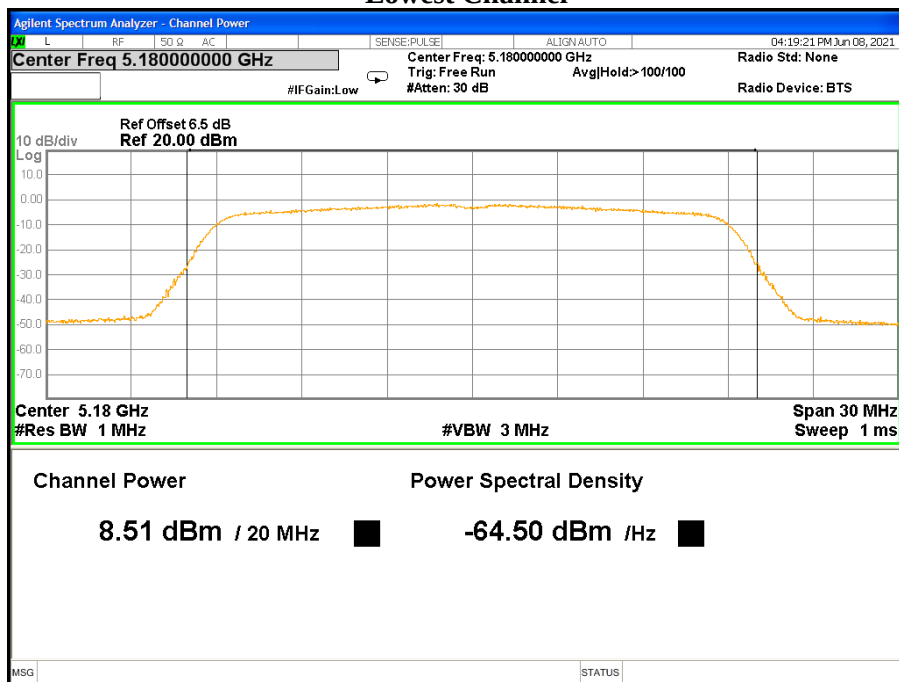
ANT A
802.11a
Low Channel



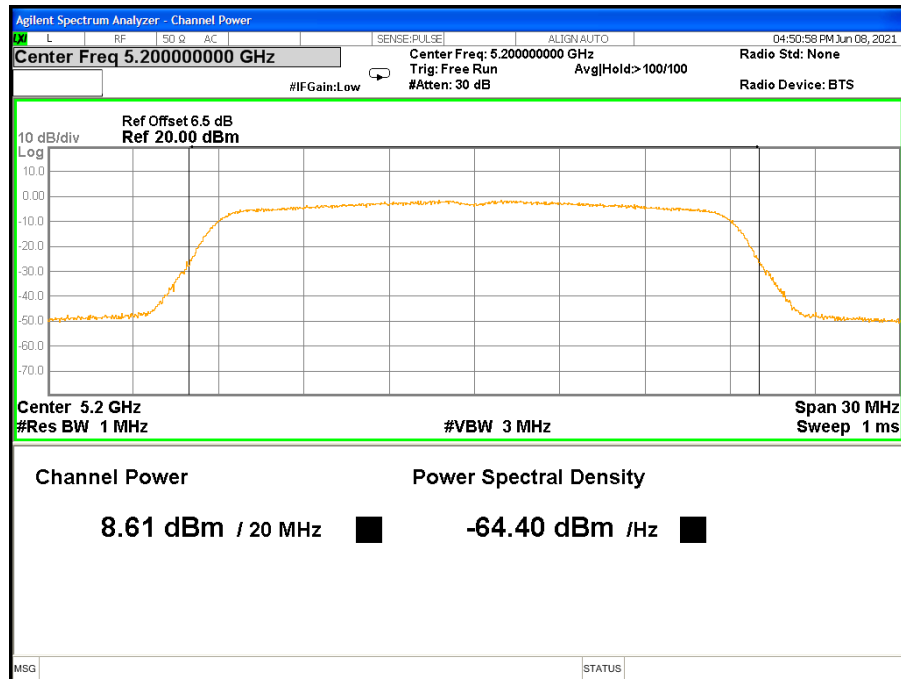
Middle Channel



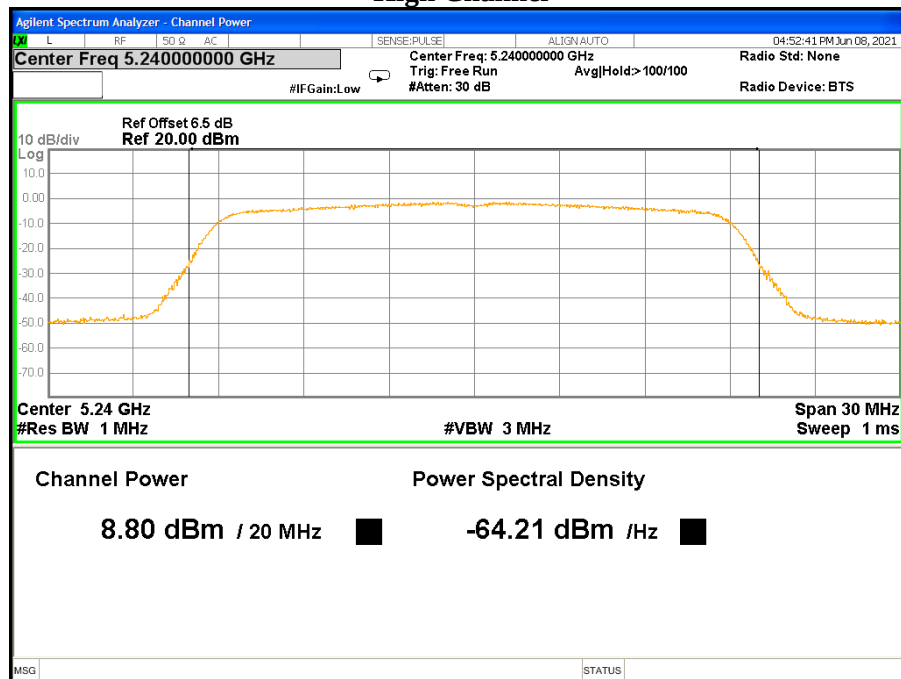
High Channel

802.11n(20M)
Lowest Channel

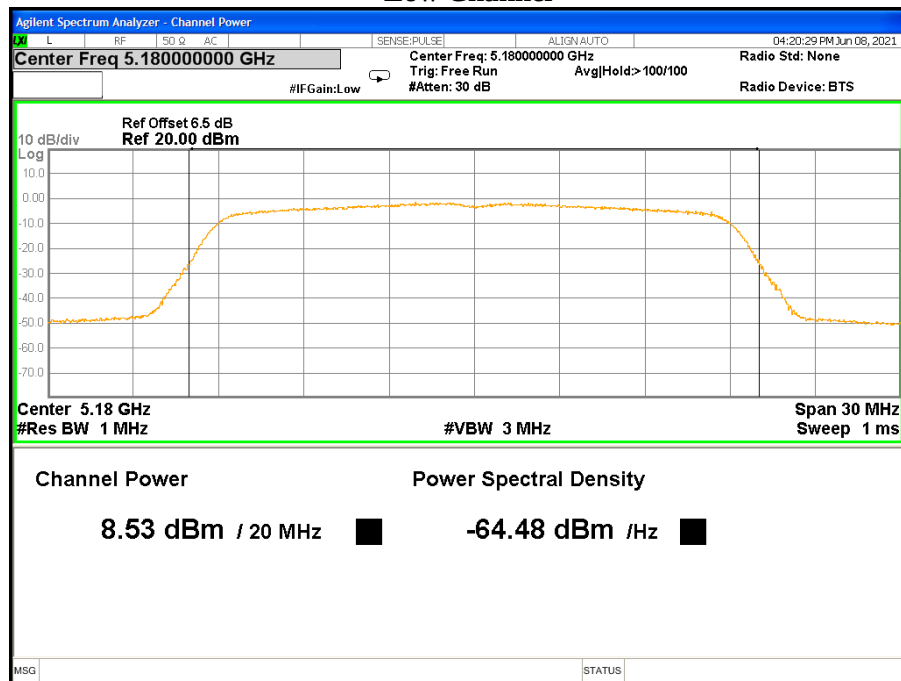
Middle Channel



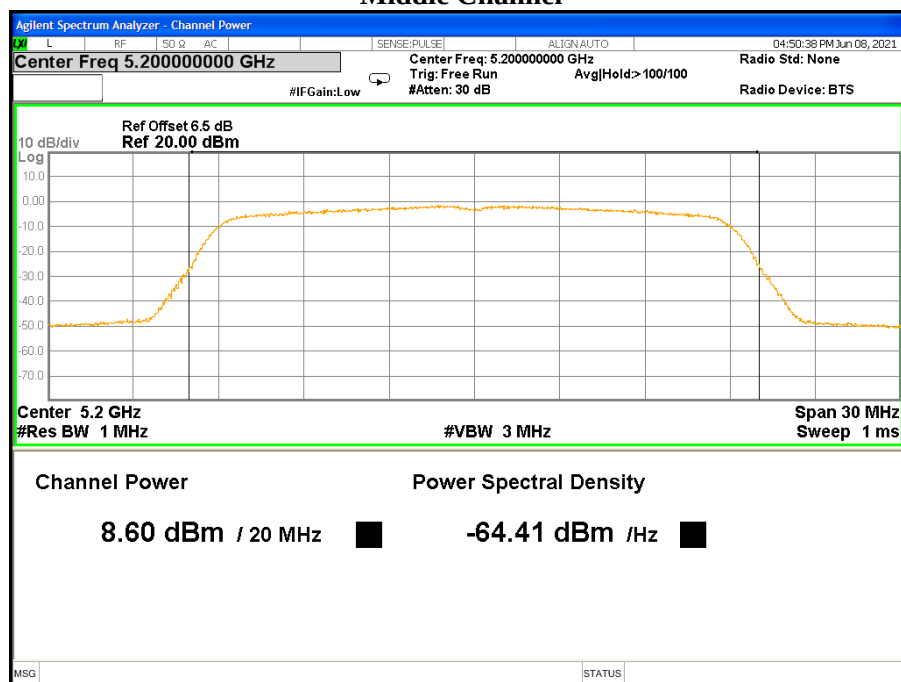
High Channel



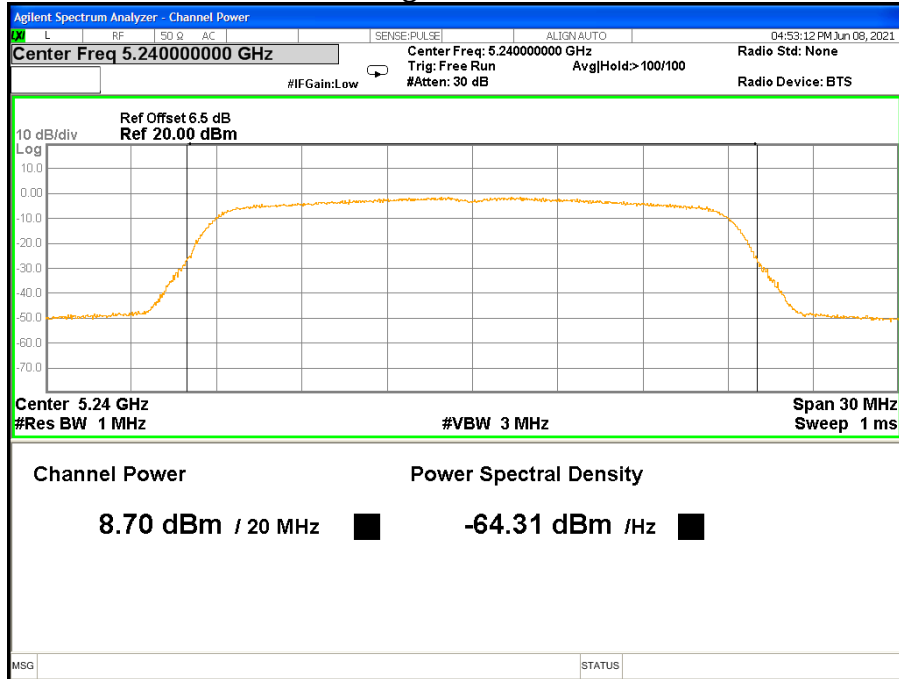
802.11ac(20M) Low Channel



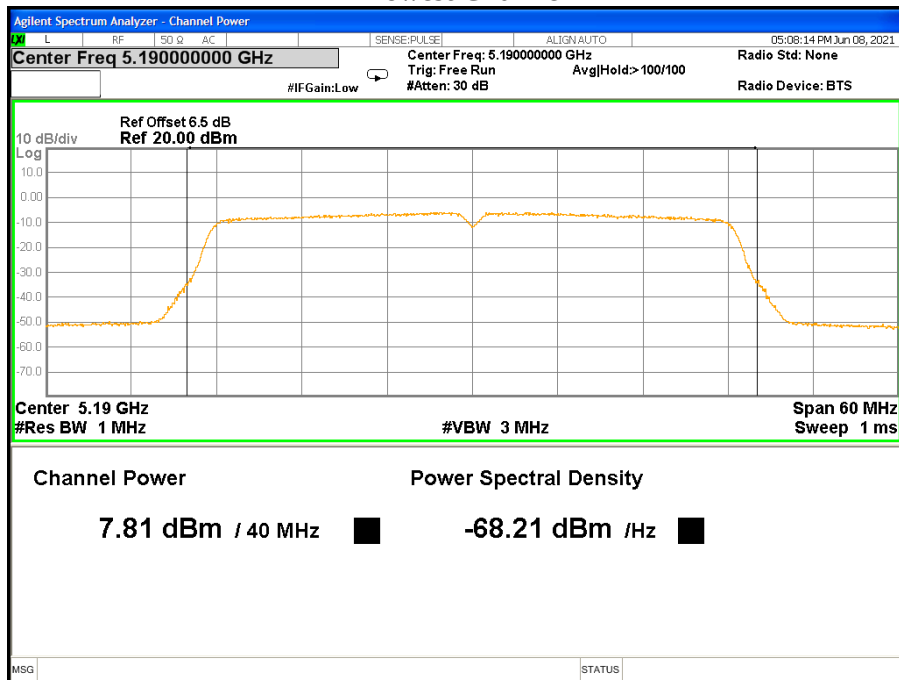
Middle Channel



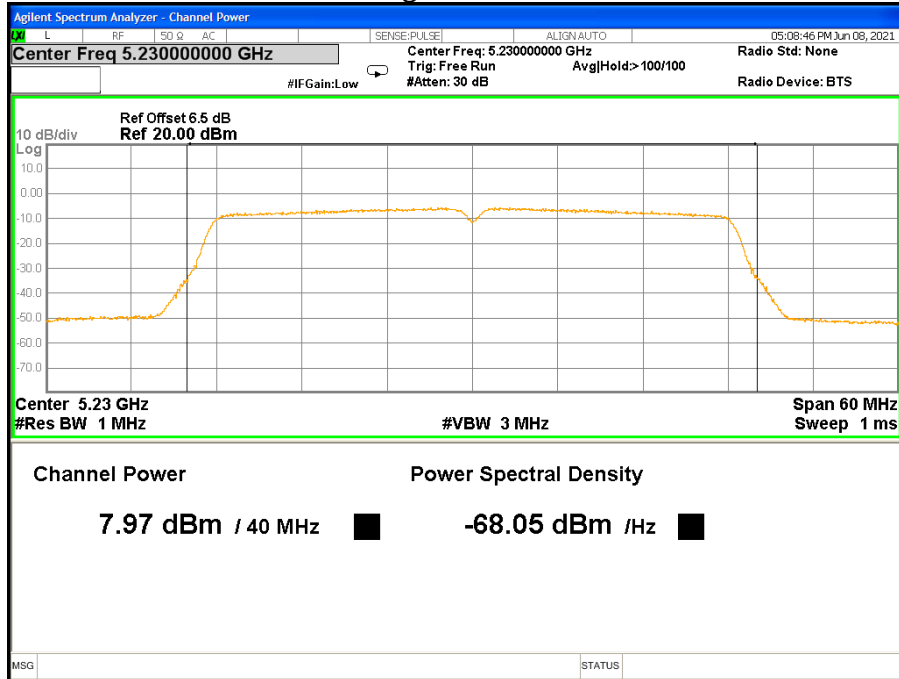
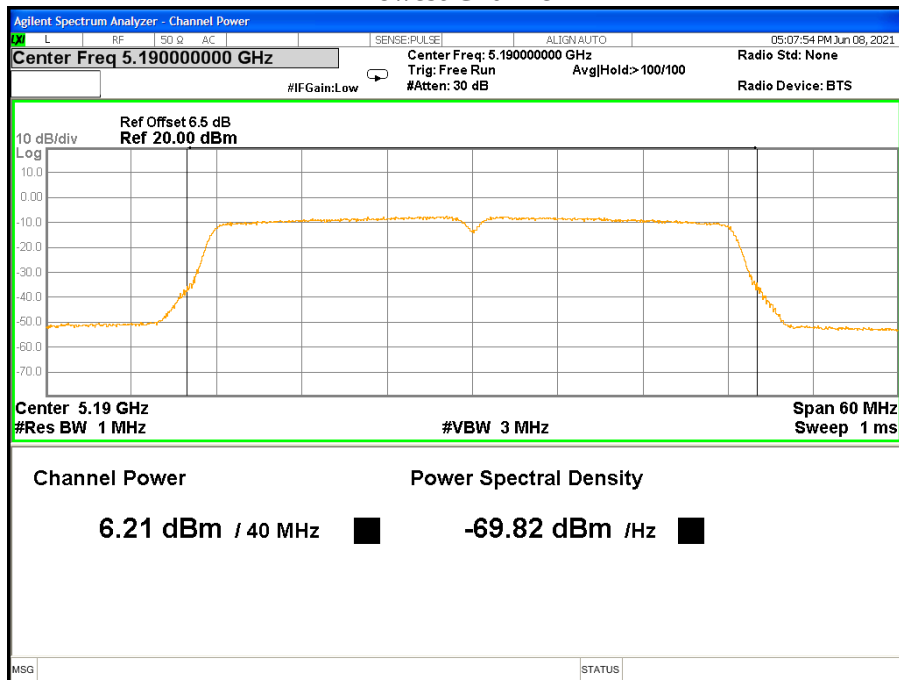
High Channel



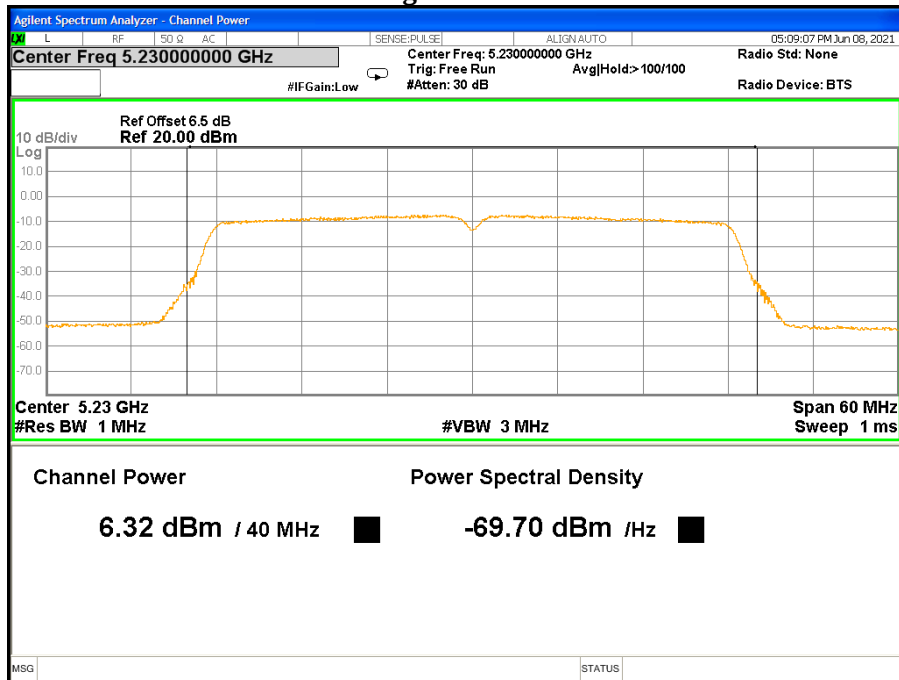
802.11n(40M) Lowest Channel



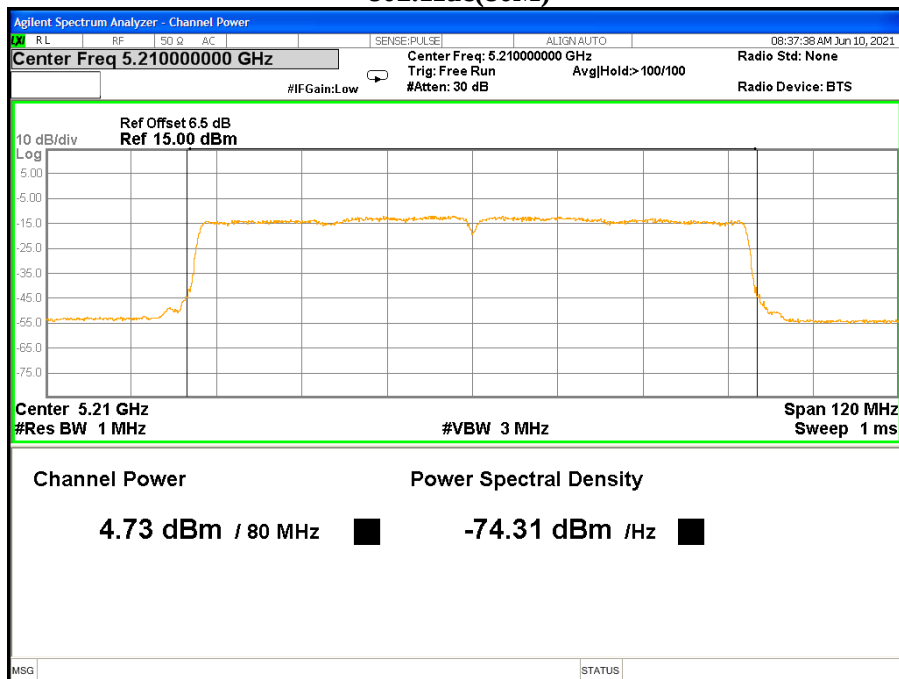
High Channel

802.11ac(40M)
Lowest Channel

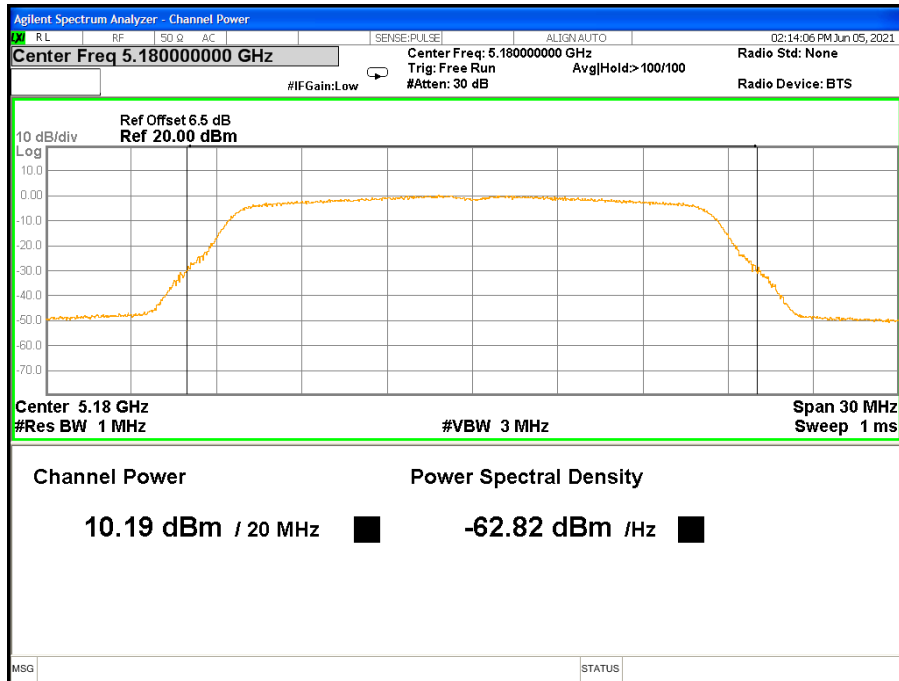
High Channel



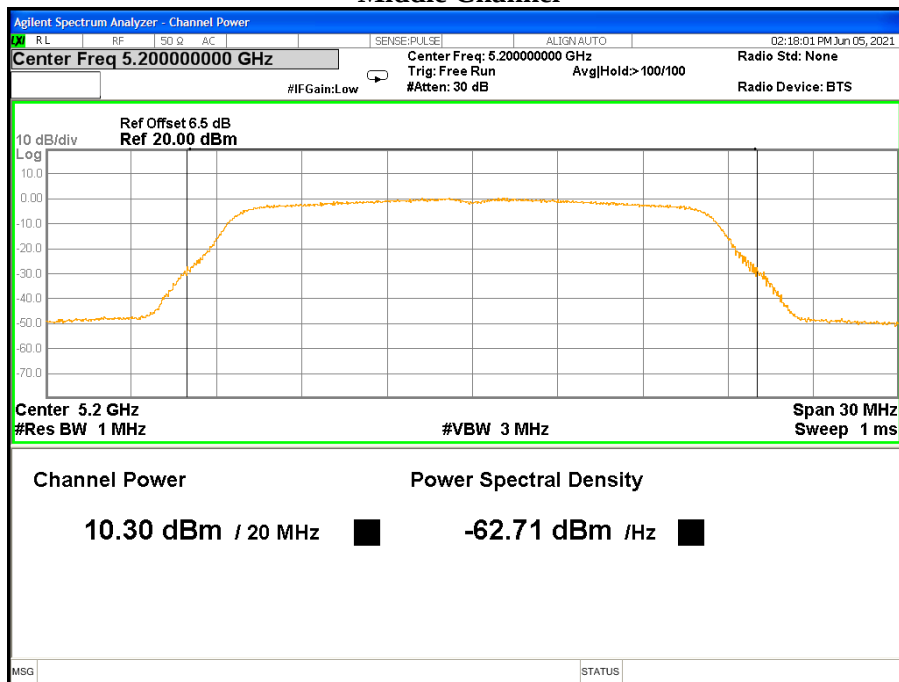
802.11ac(80M)



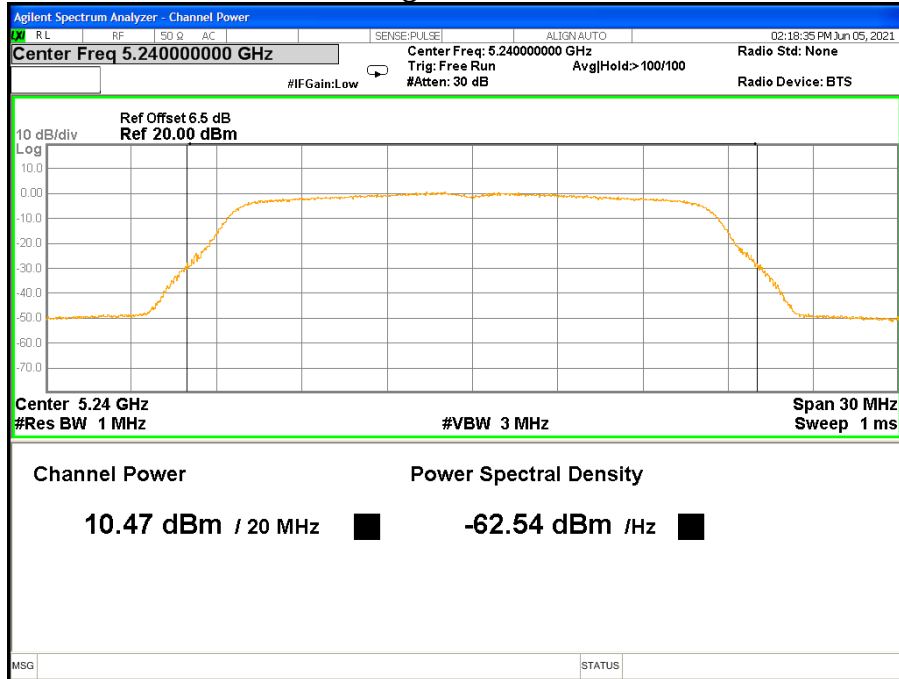
ANT B 802.11a Low Channel



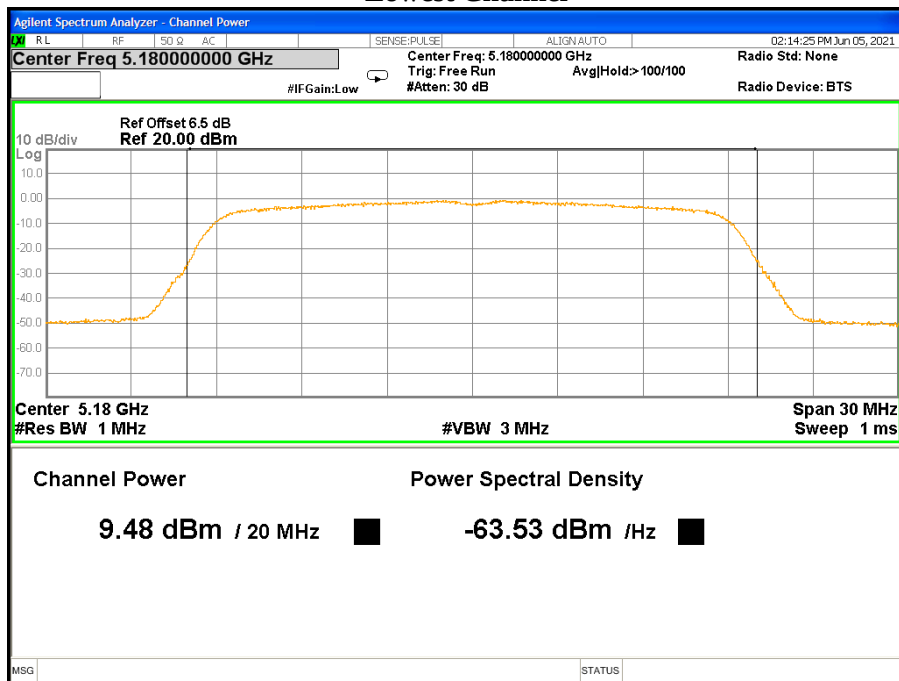
Middle Channel



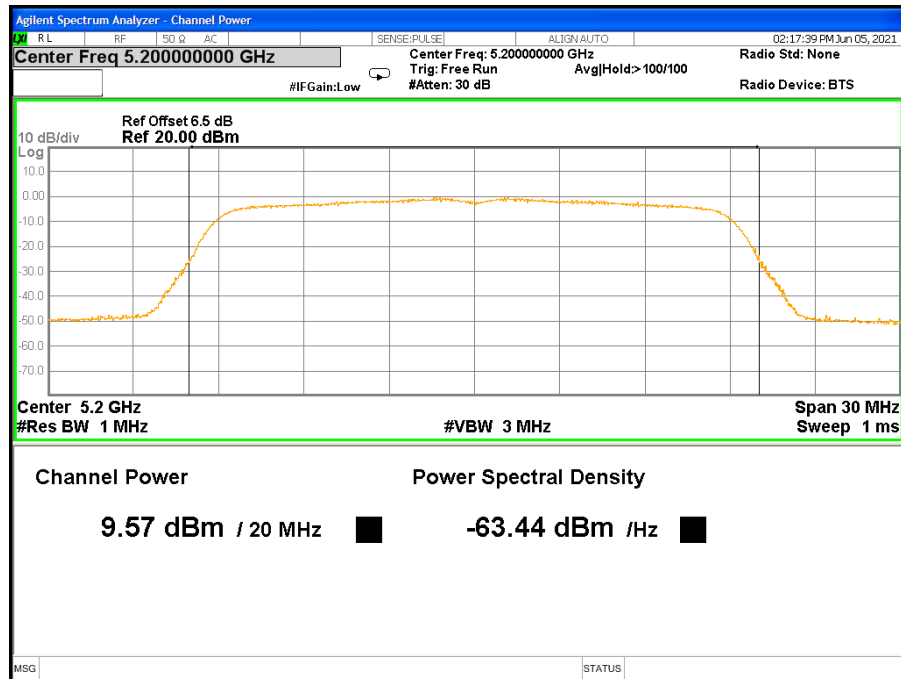
High Channel



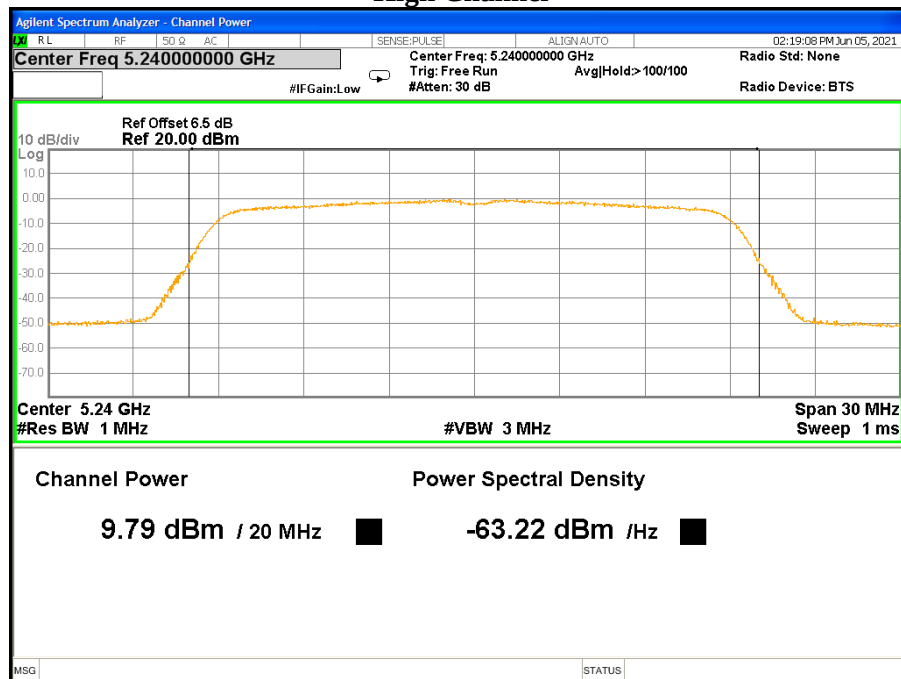
802.11n(20M) Lowest Channel

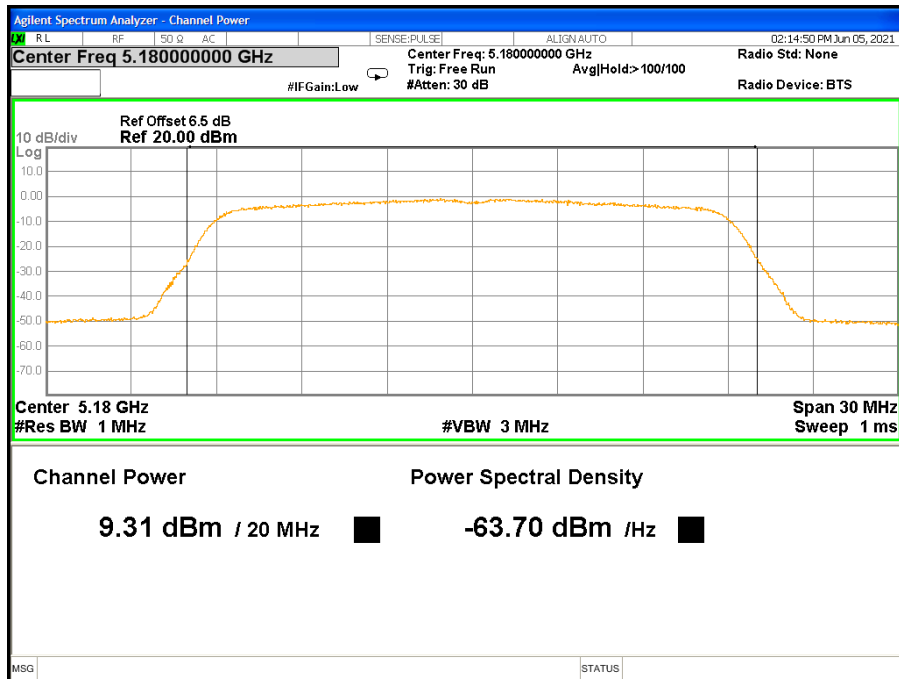
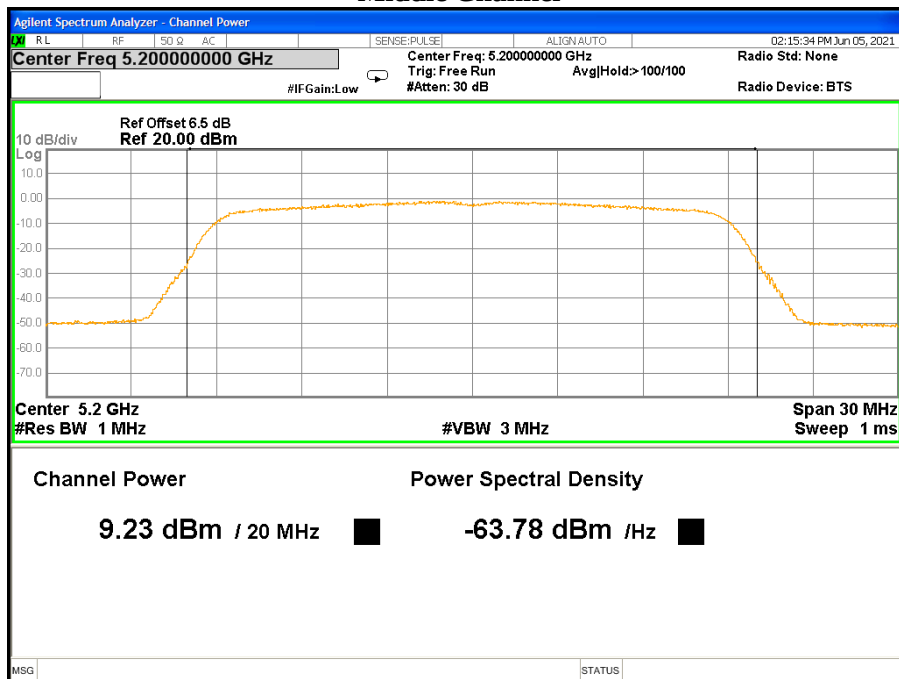


Middle Channel

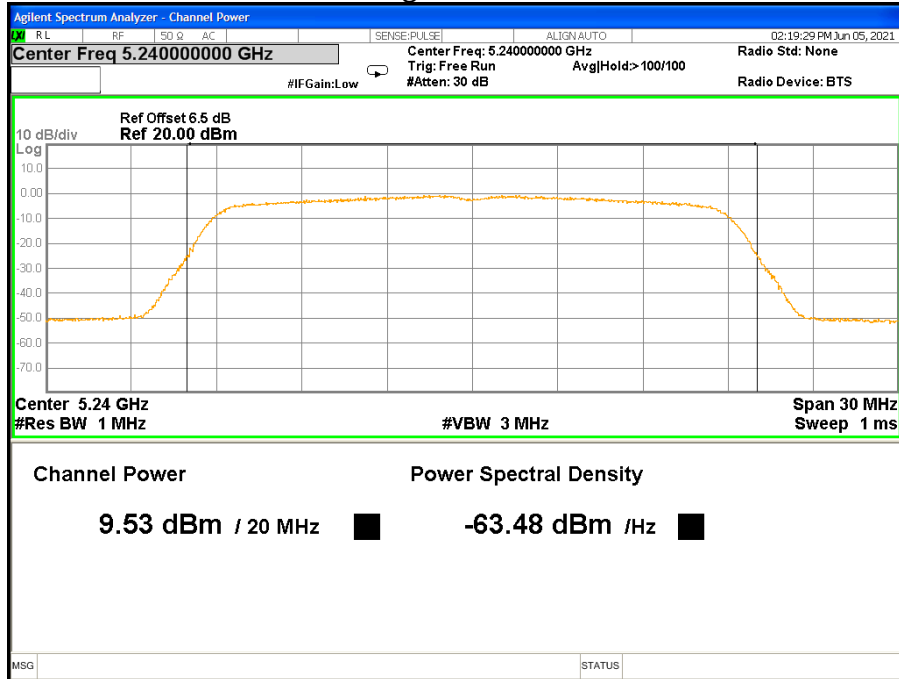
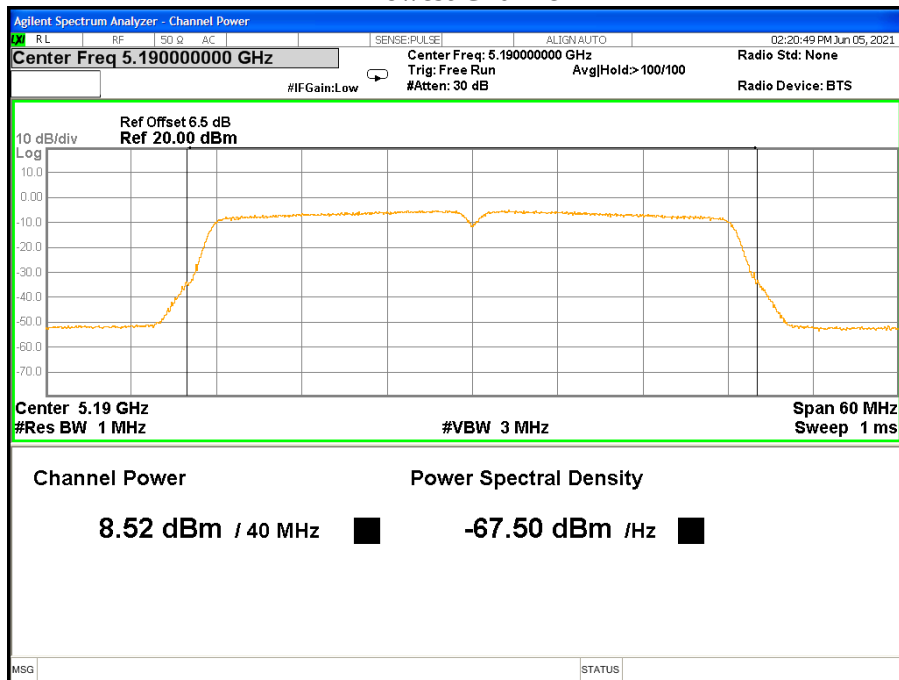


High Channel

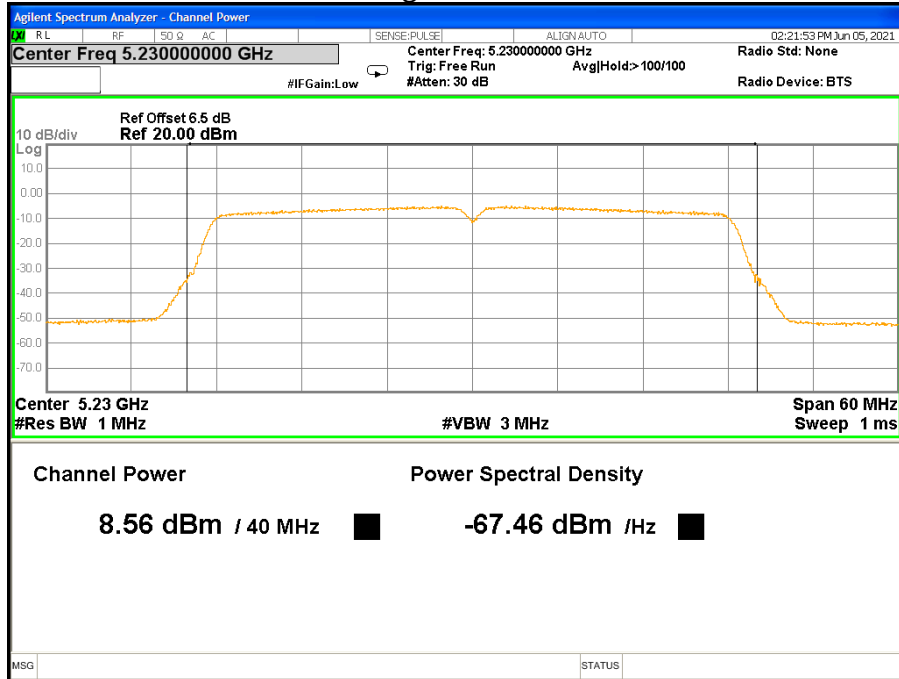
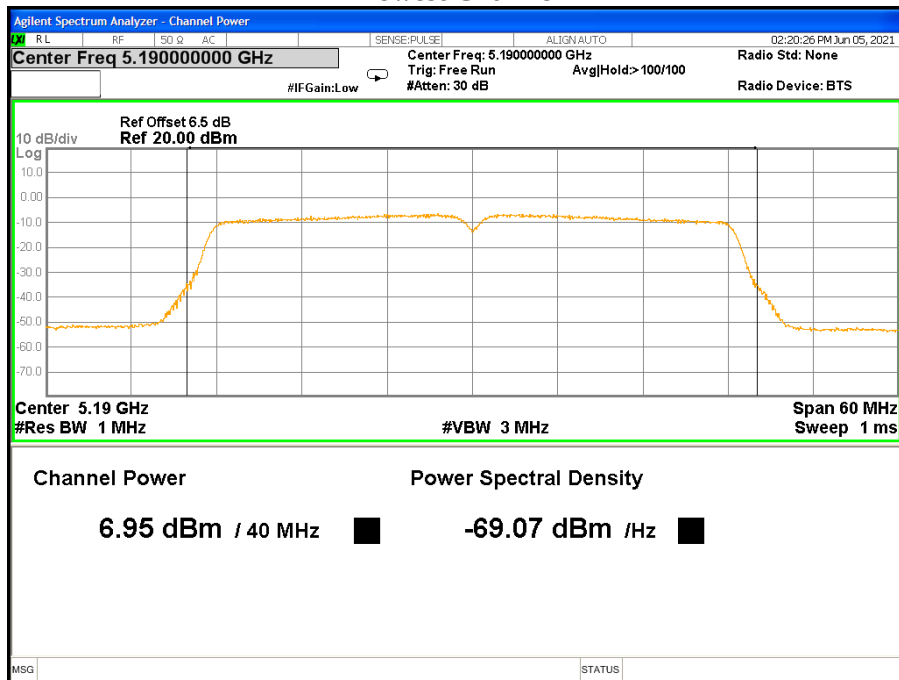


**802.11ac(20M)
Low Channel****Middle Channel**

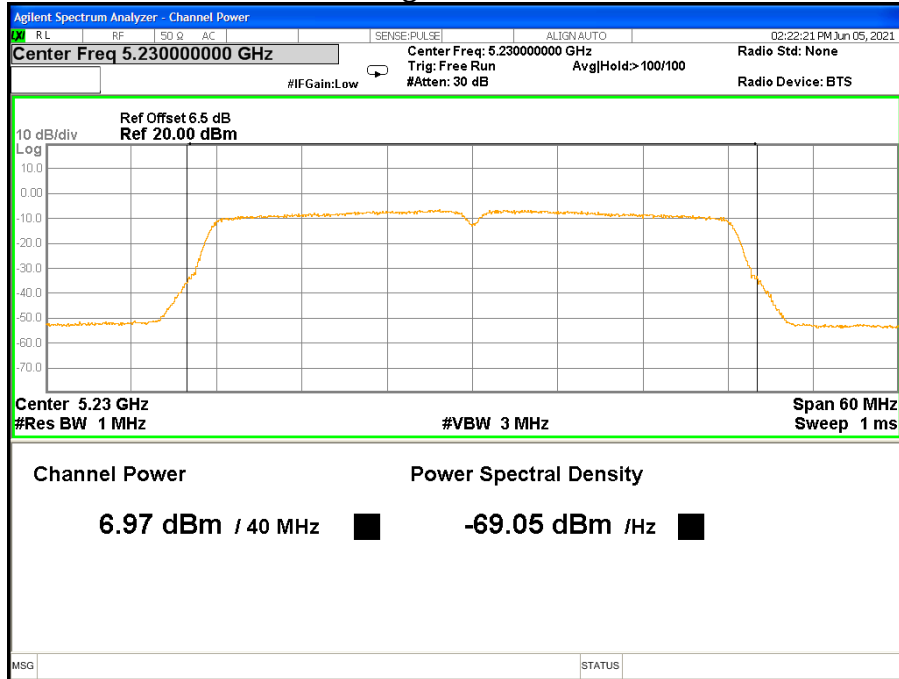
High Channel

802.11n(40M)
Lowest Channel

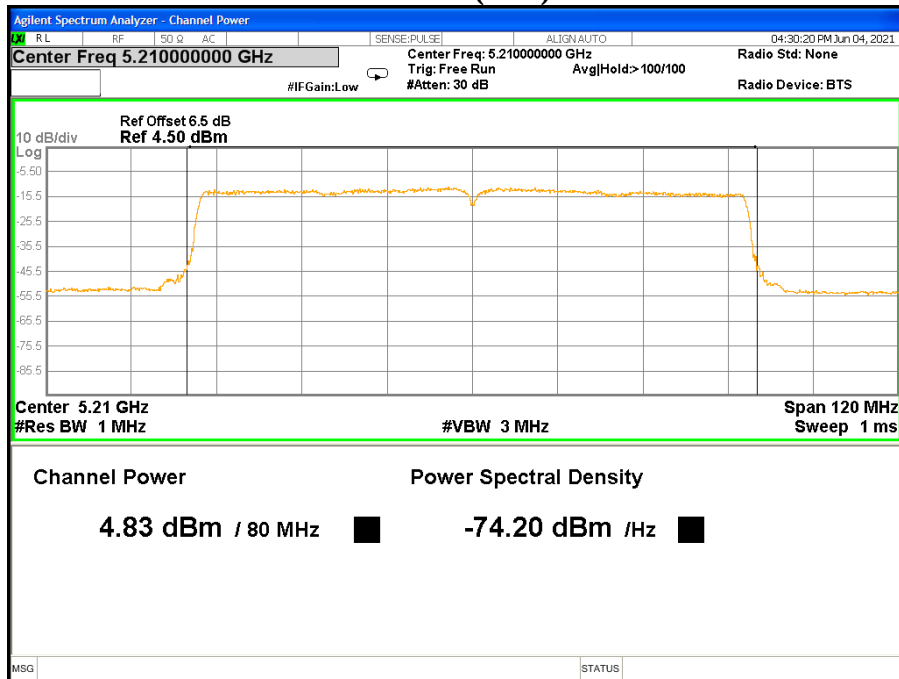
High Channel

802.11ac(40M)
Lowest Channel

High Channel



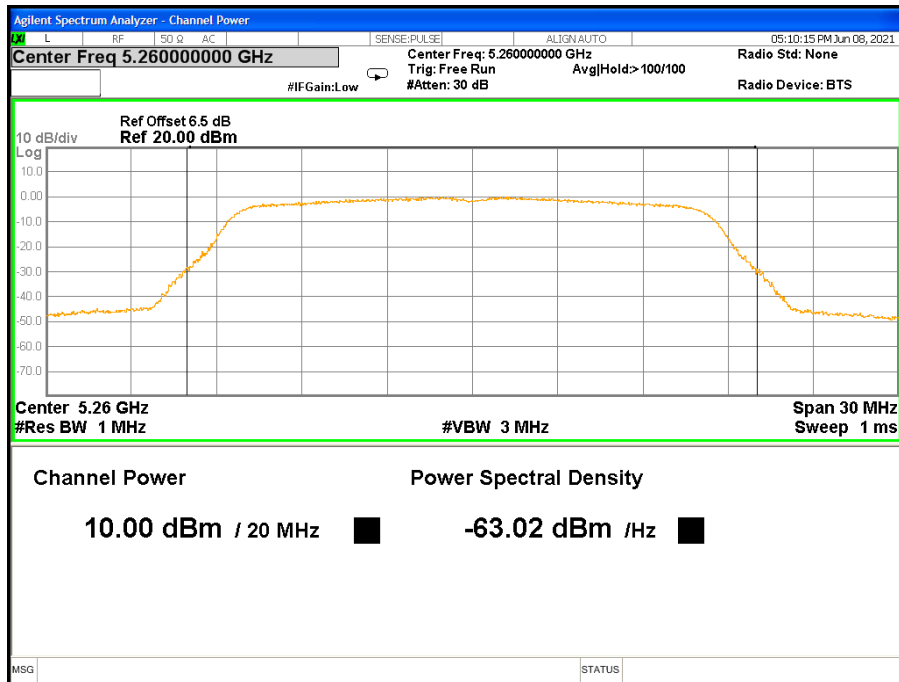
802.11ac(80M)



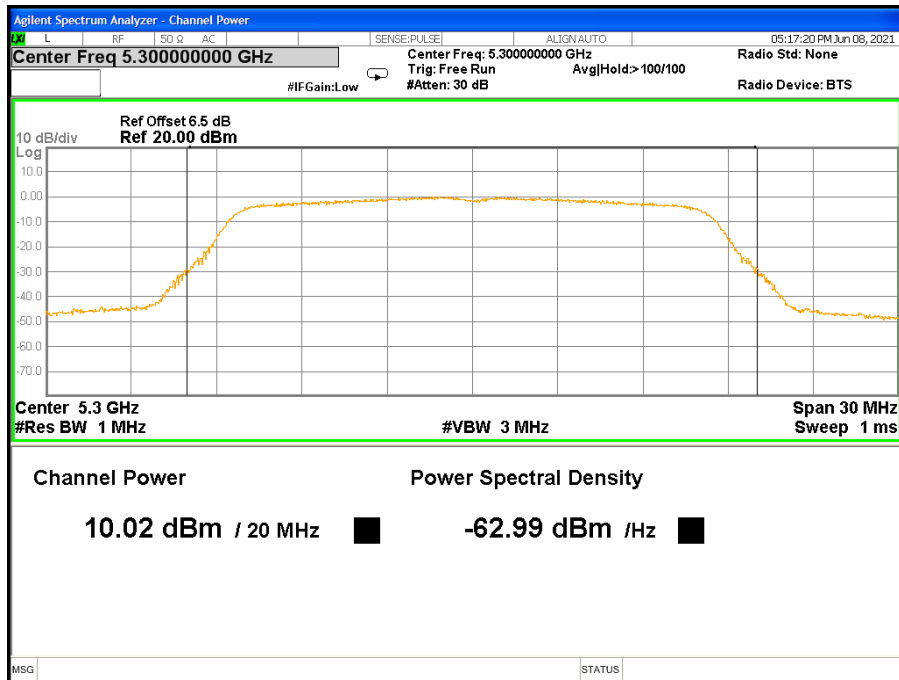
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1℃	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80		
Test Date :	2021-06-05		

Band II(5.25-5.35GHz)								
Test Channel	Frequency (MHz)	Direct measurement Ant_A AV Power (dBm)	Direct measurement Ant B_AV Power (dBm)	Duty cycle factor (dB)	Final Ant_A AV Power (dBm)	Final Ant_B AV Power (dBm)	AV Power Total (dBm)	LIMIT (dBm)
802.11a								
52	5260	10.00	10.88	0.074	10.07	10.95	--	22.93
60	5300	10.02	11.16	0.074	10.09	11.23	--	22.95
64	5320	10.08	11.13	0.074	10.15	11.20	--	22.94
802.11n(HT20)								
52	5260	8.84	10.12	0.089	8.93	10.21	12.63	19.98
60	5300	9.06	10.38	0.089	9.15	10.47	12.87	19.97
64	5320	9.01	10.42	0.089	9.10	10.51	12.87	19.98
802.11n(HT40)								
54	5270	8.14	9.12	0.103	8.24	9.22	11.77	19.98
62	5310	8.24	9.41	0.103	8.34	9.51	11.98	19.98
802.11ac(VHT20)								
52	5260	8.80	9.85	0.148	8.95	10.00	12.52	19.98
60	5300	8.95	10.09	0.148	9.10	10.24	12.72	19.98
64	5320	8.98	10.11	0.148	9.13	10.26	12.74	19.97
802.11ac(VHT40)								
54	5270	6.46	7.39	0.325	6.79	7.72	10.29	19.98
62	5310	6.52	7.74	0.325	6.85	8.07	10.51	23.98
802.11ac(VHT80)								
58	5290	5.22	5.42	2.108	7.33	7.53	10.44	23.98

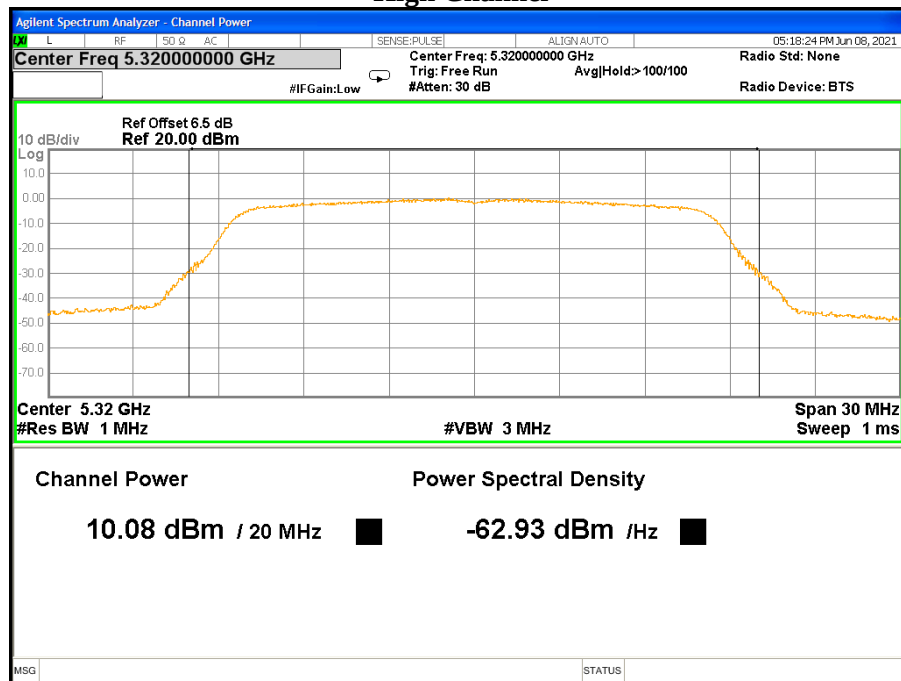
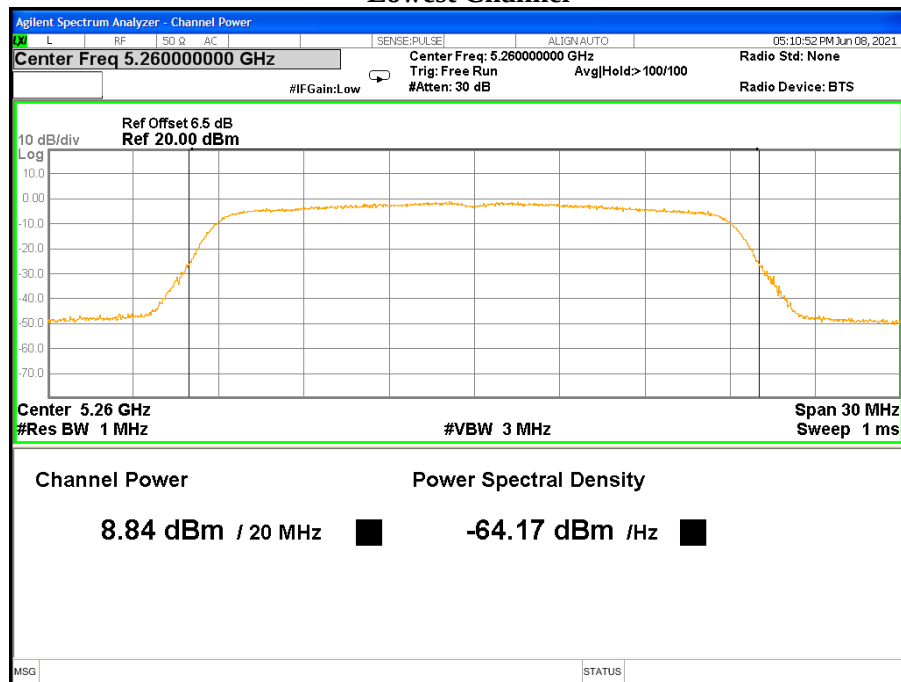
ANT A
802.11a
Low Channel



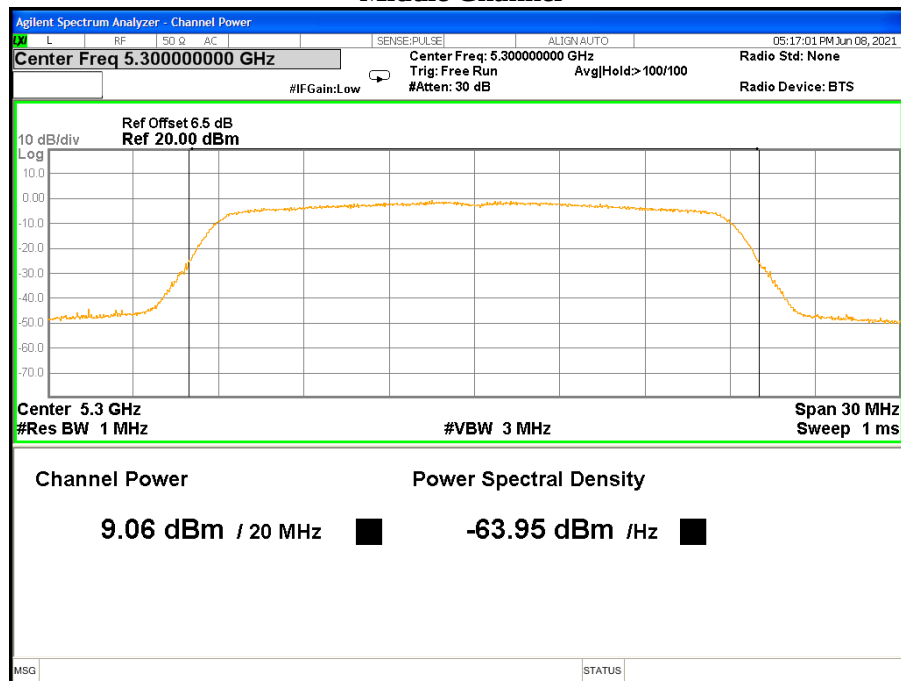
Middle Channel



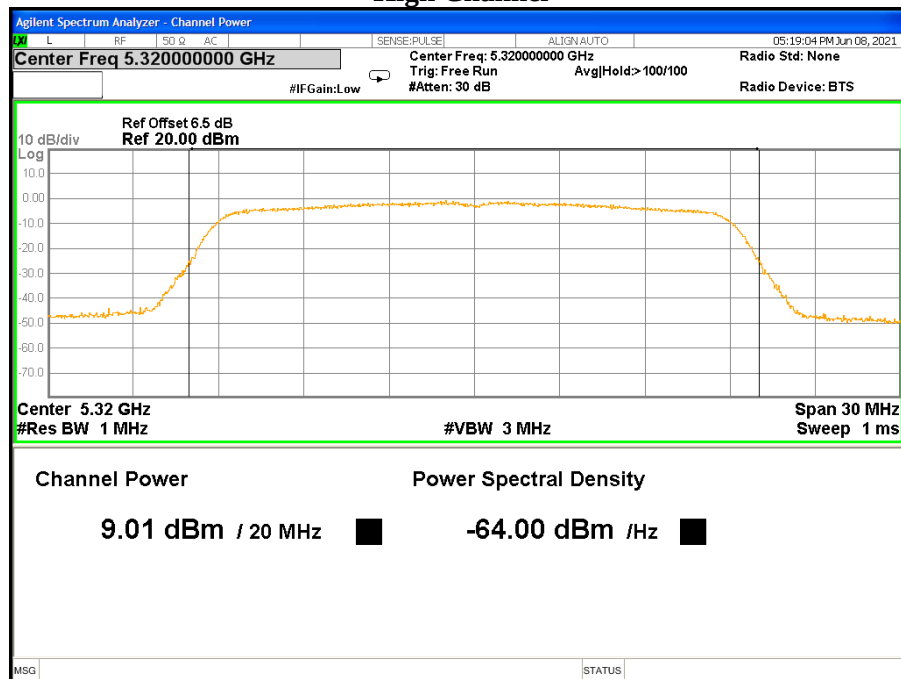
High Channel

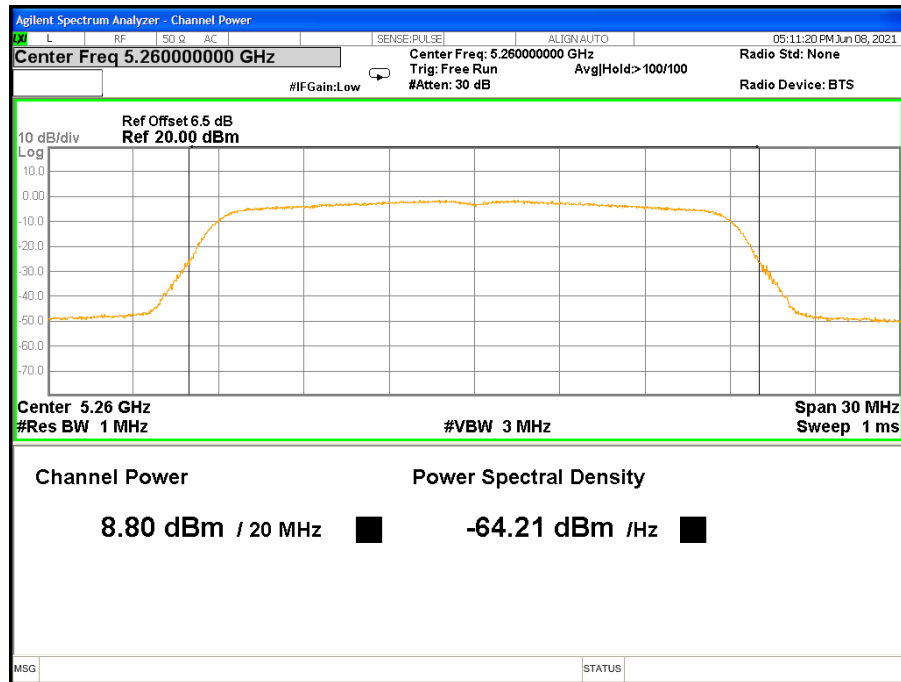
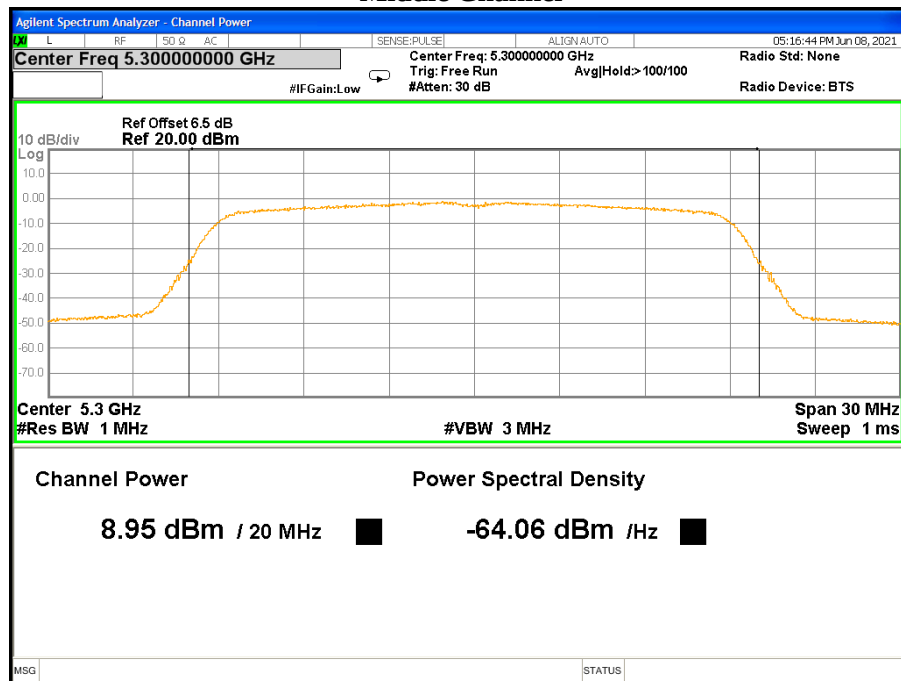
802.11n(20M)
Lowest Channel

Middle Channel

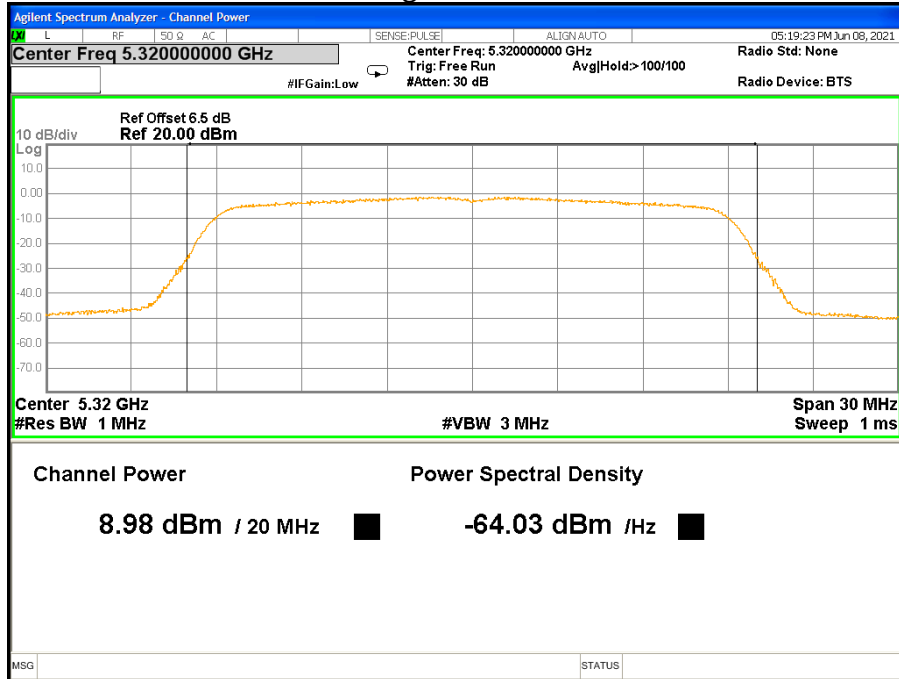
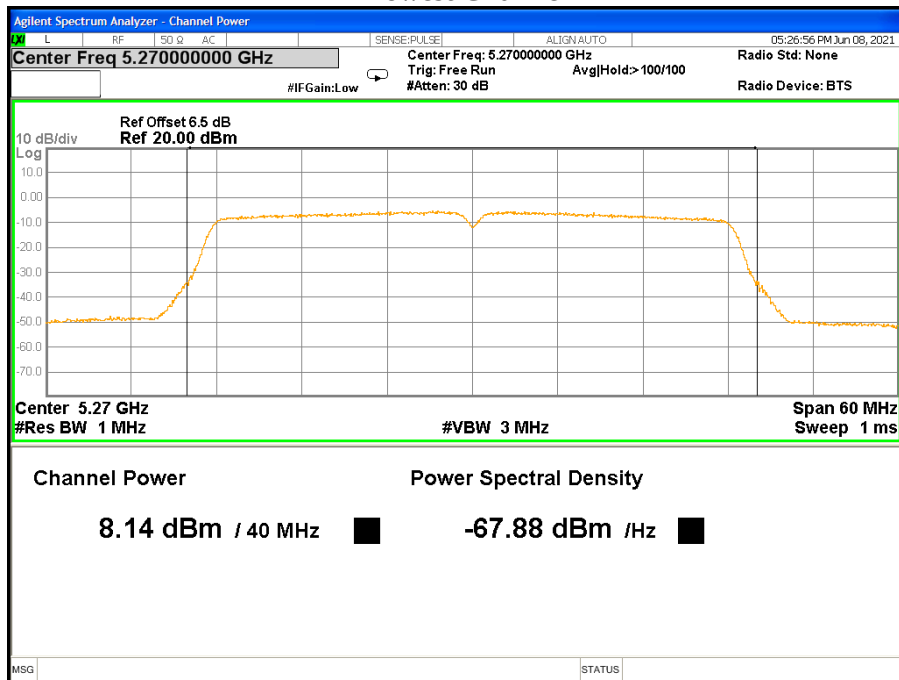


High Channel

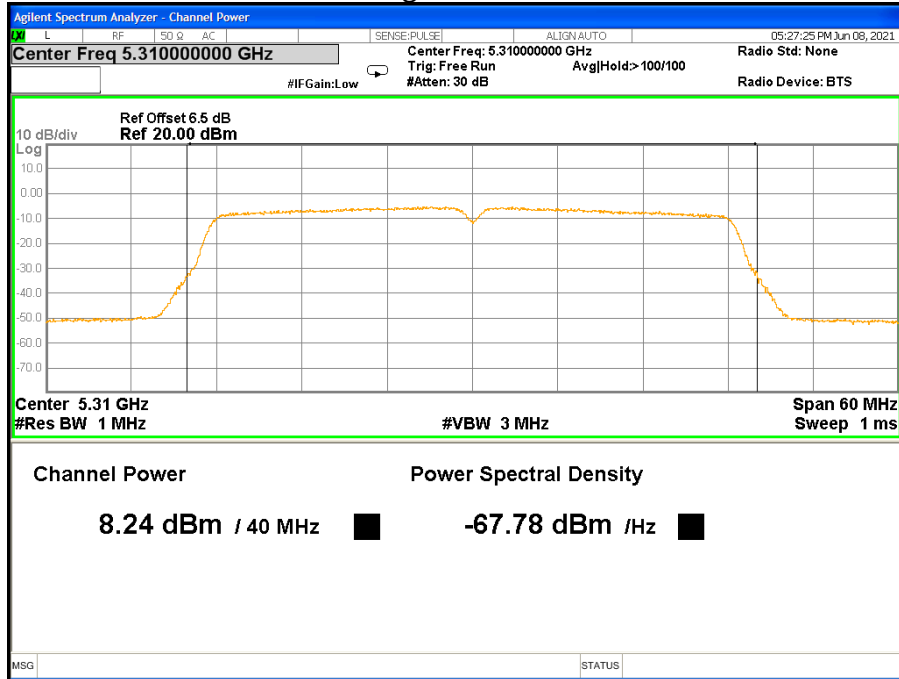
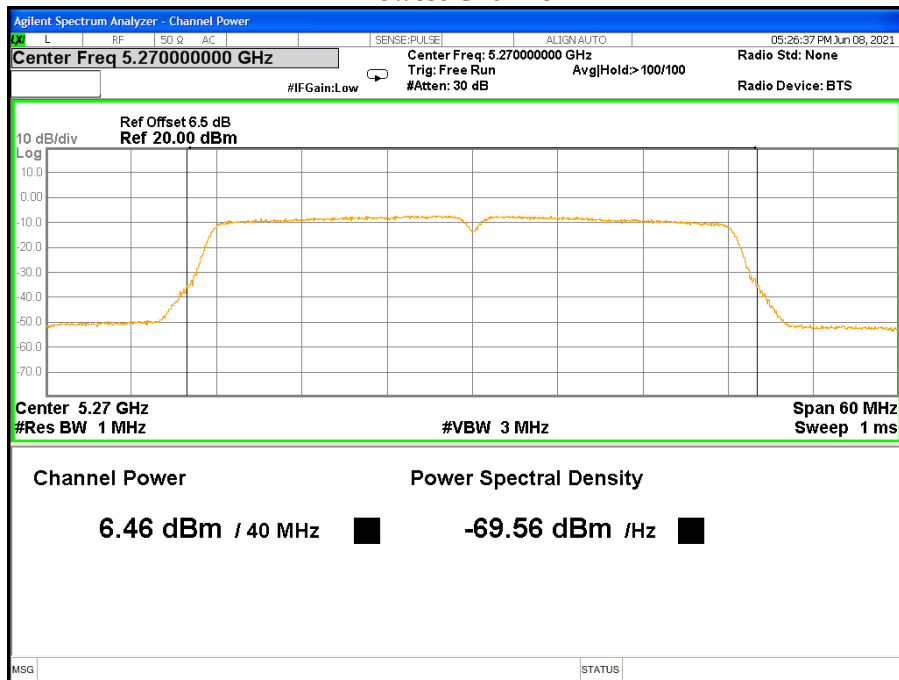


**802.11ac(20M)
Low Channel****Middle Channel**

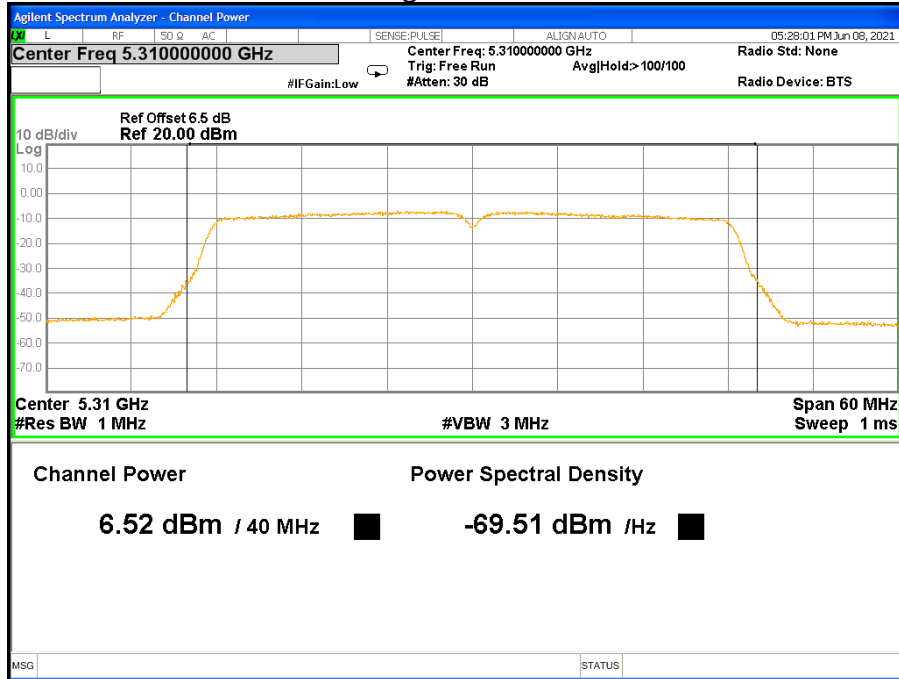
High Channel

802.11n(40M)
Lowest Channel

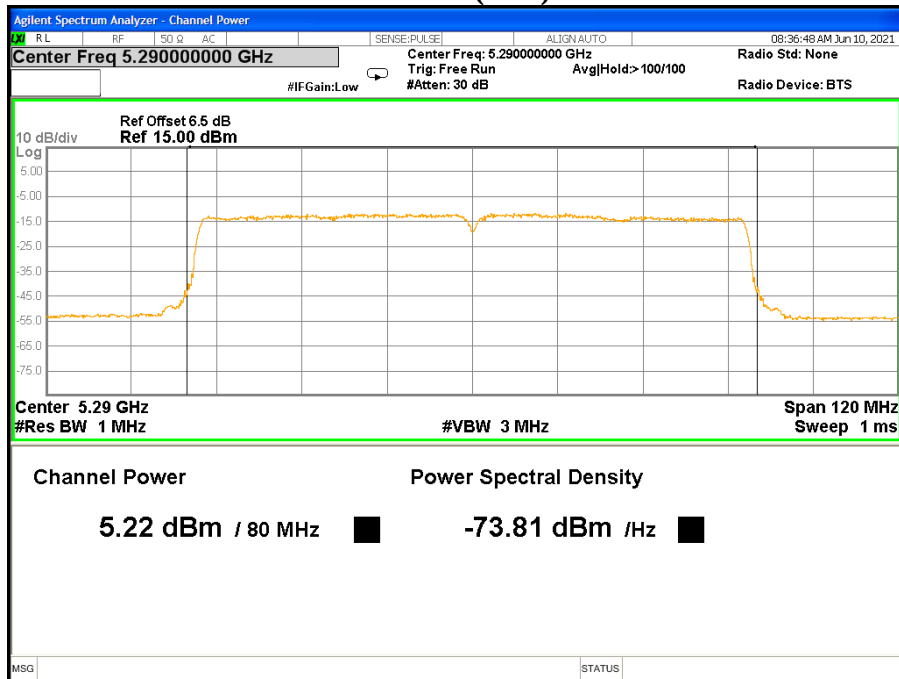
High Channel

802.11ac(40M)
Lowest Channel

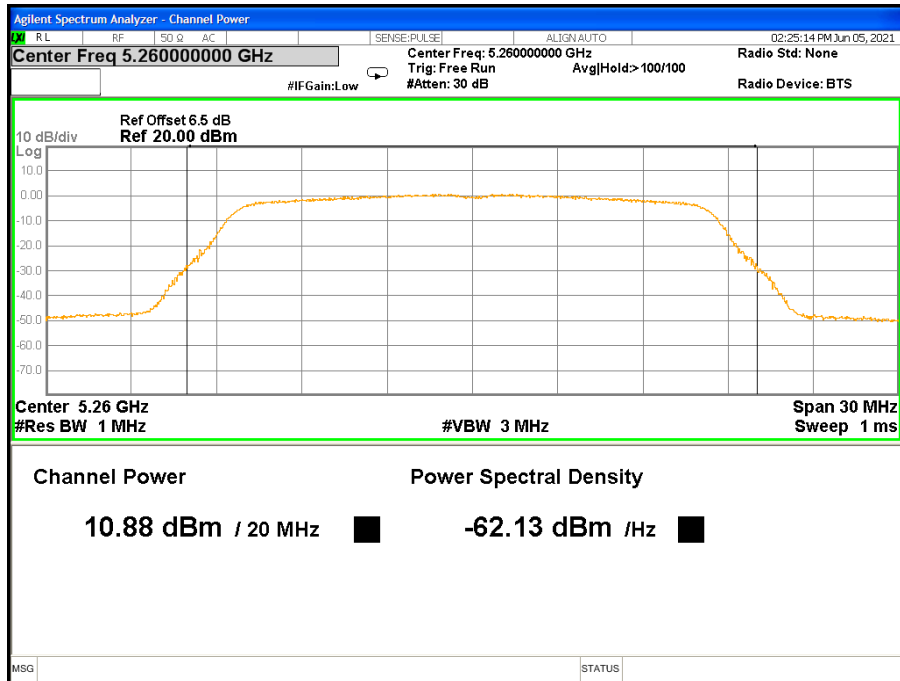
High Channel



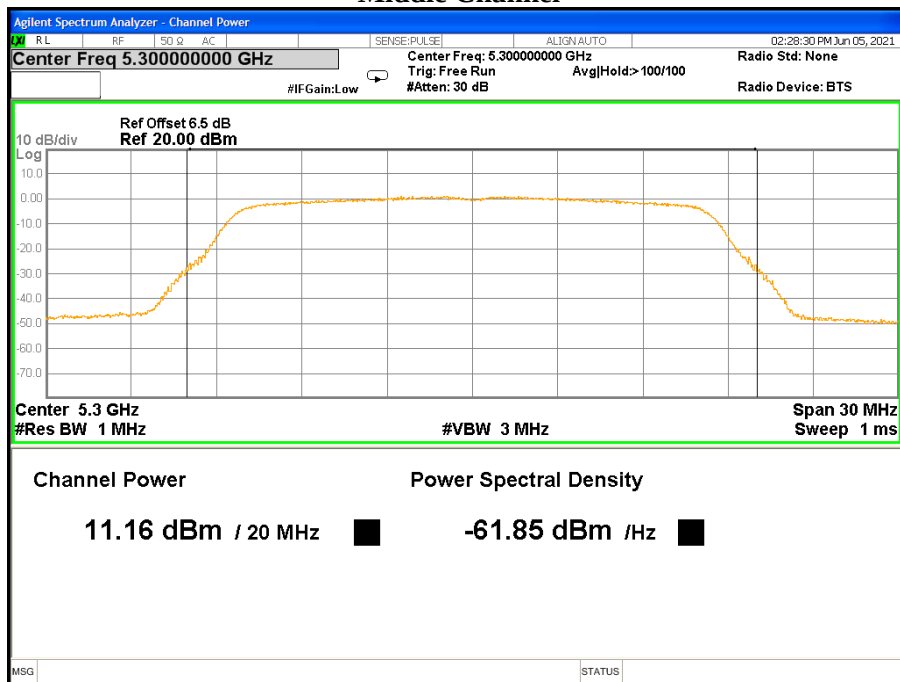
802.11ac(80M)



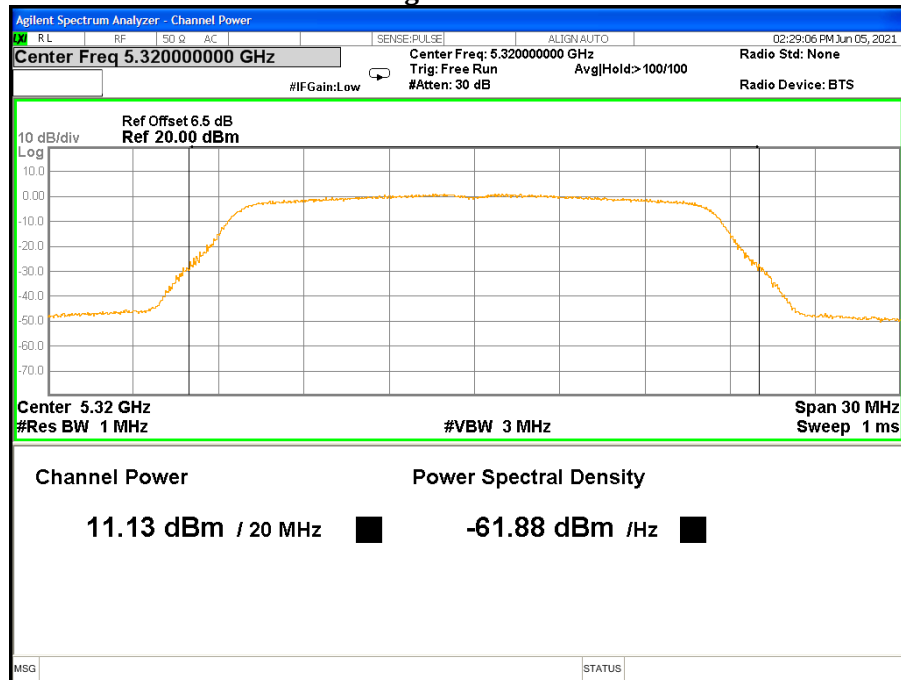
ANT B
802.11a
Low Channel



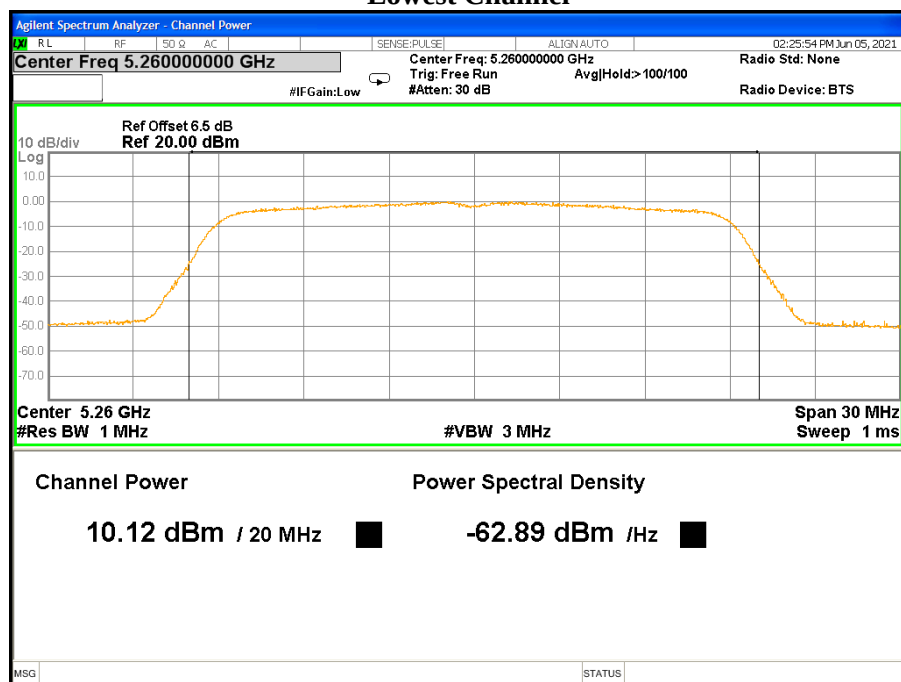
Middle Channel



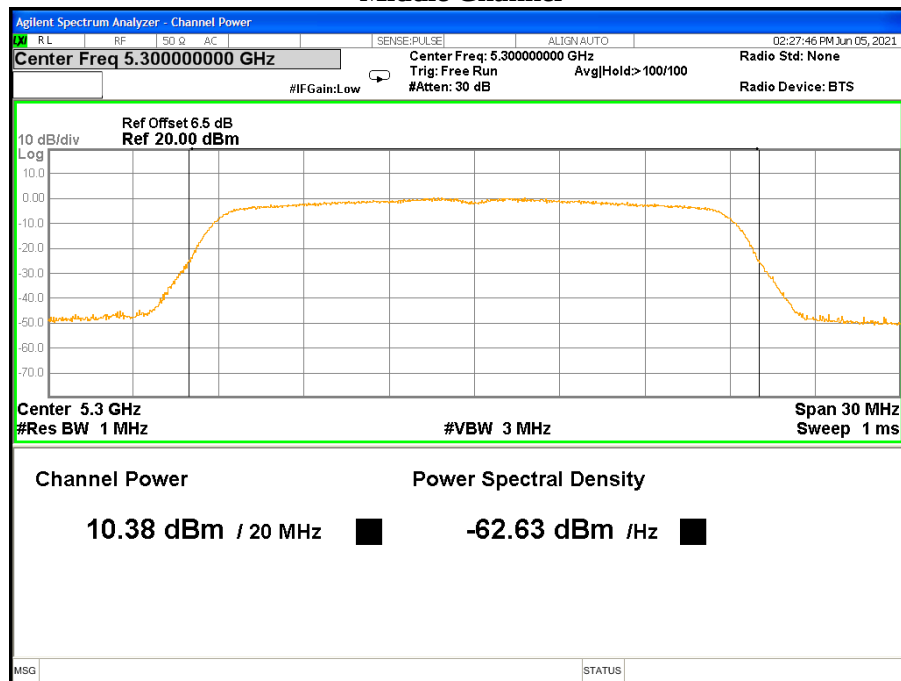
High Channel



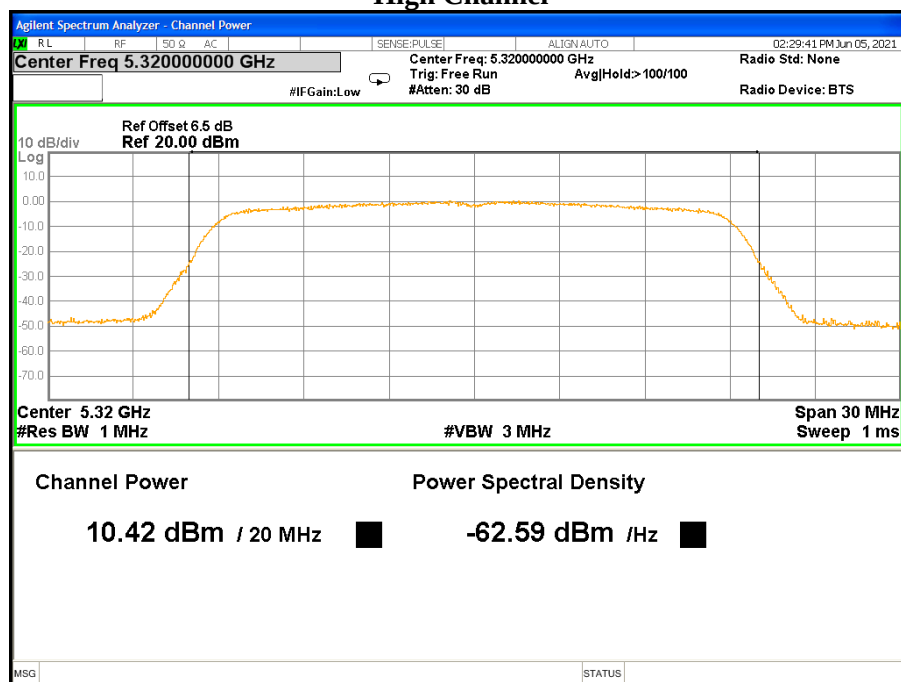
802.11n(20M) Lowest Channel

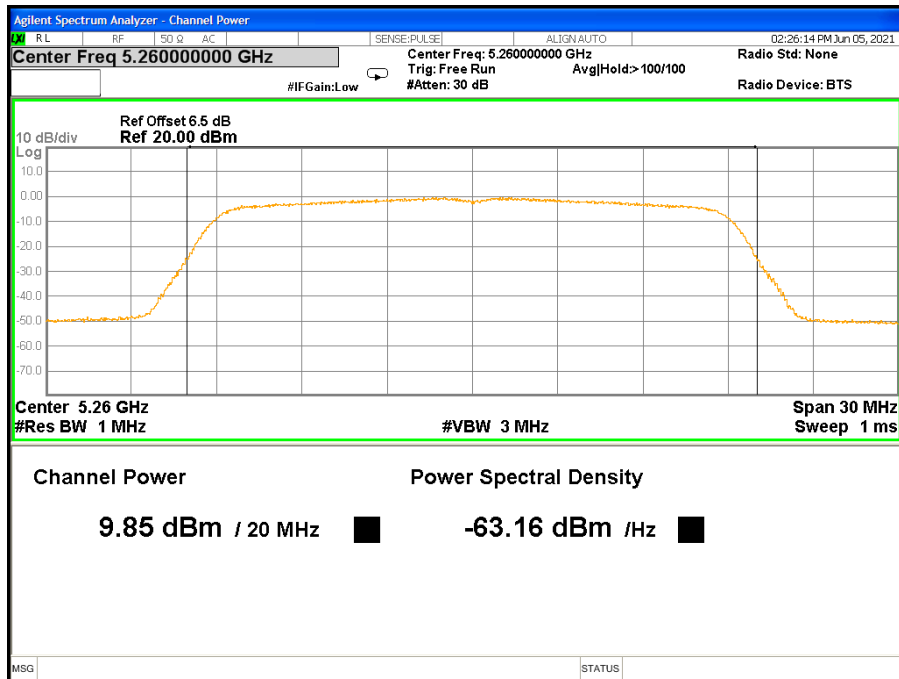
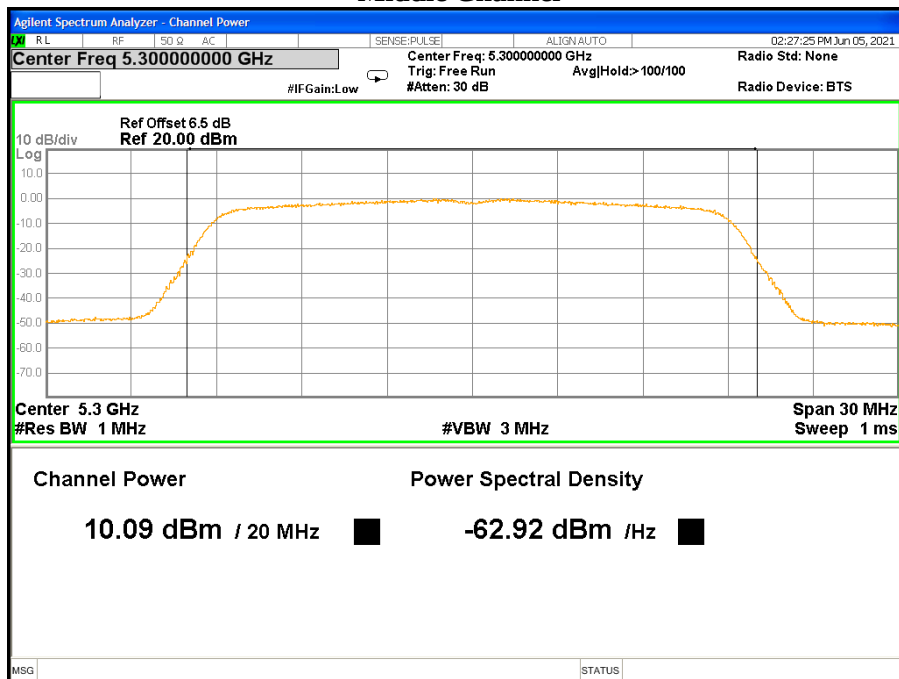


Middle Channel

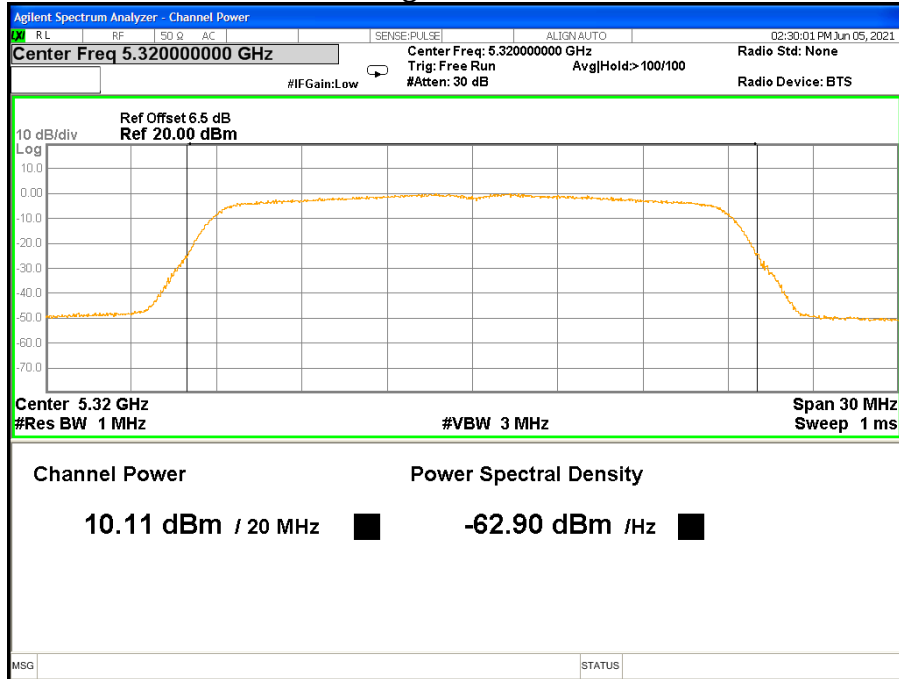


High Channel

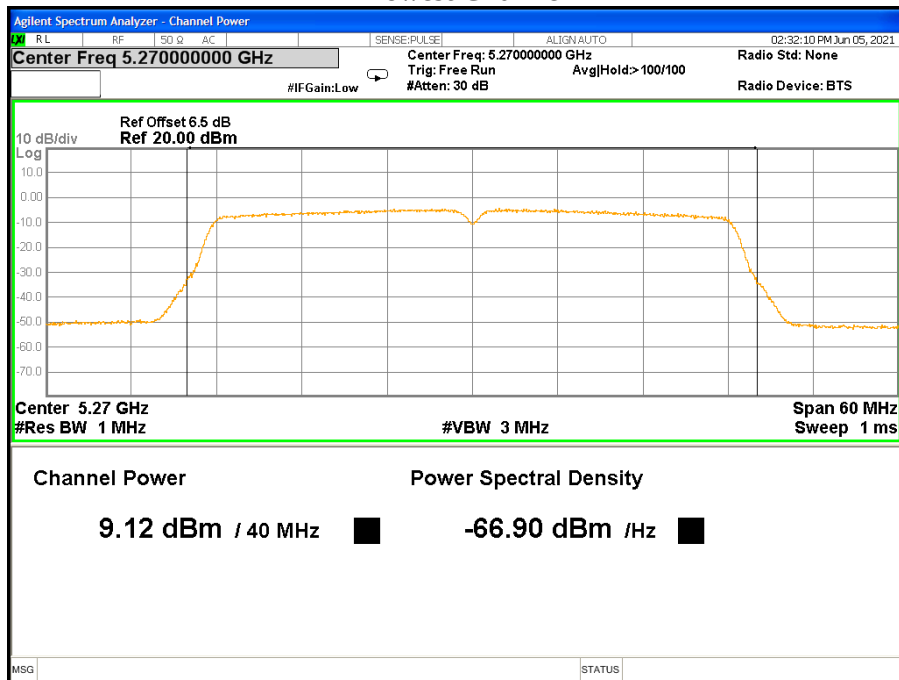


**802.11ac(20M)
Low Channel****Middle Channel**

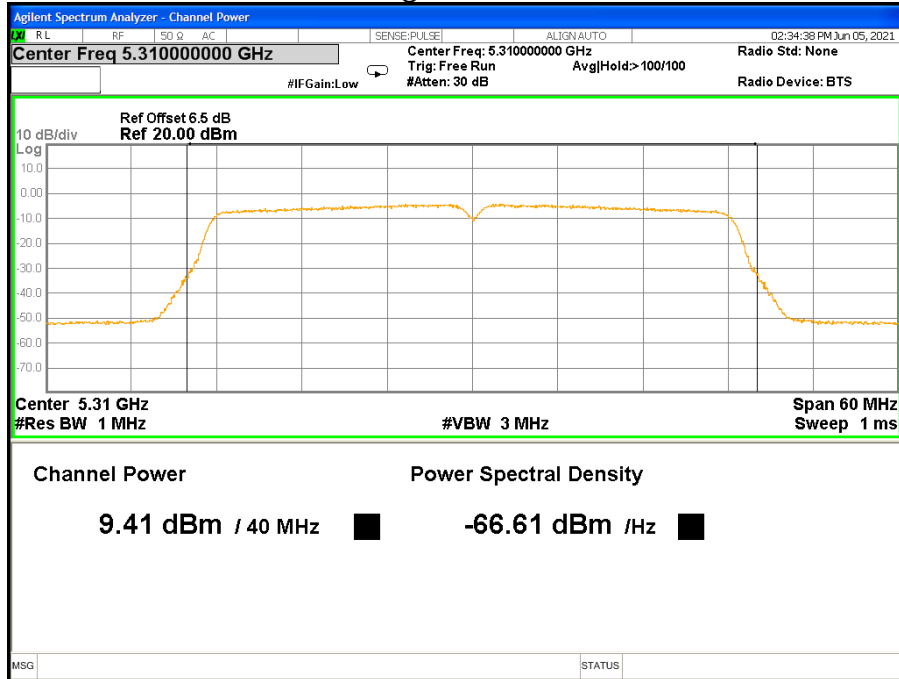
High Channel



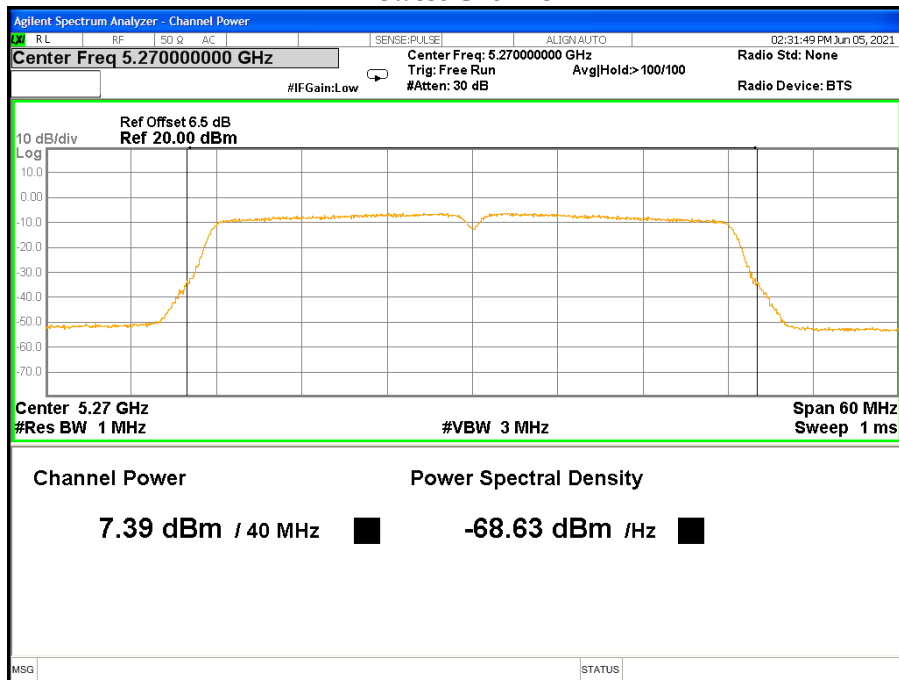
802.11n(40M) Lowest Channel



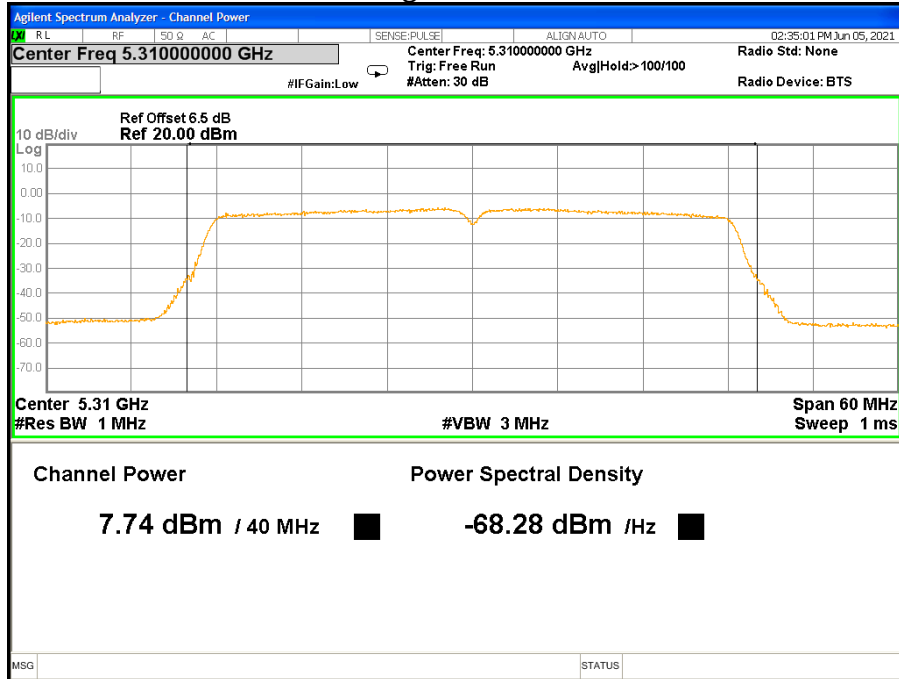
High Channel



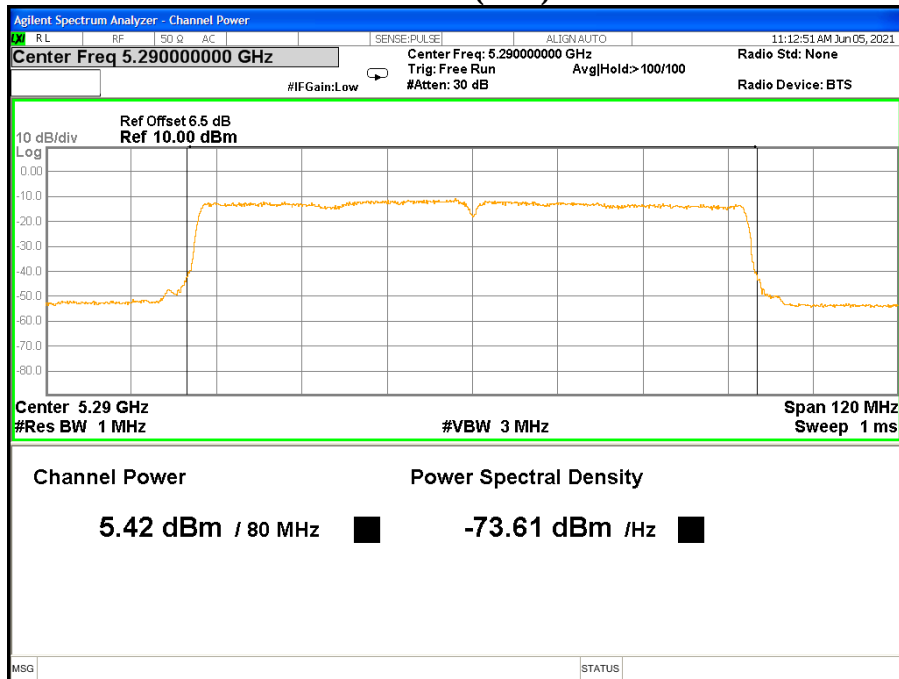
802.11ac(40M) Lowest Channel



High Channel



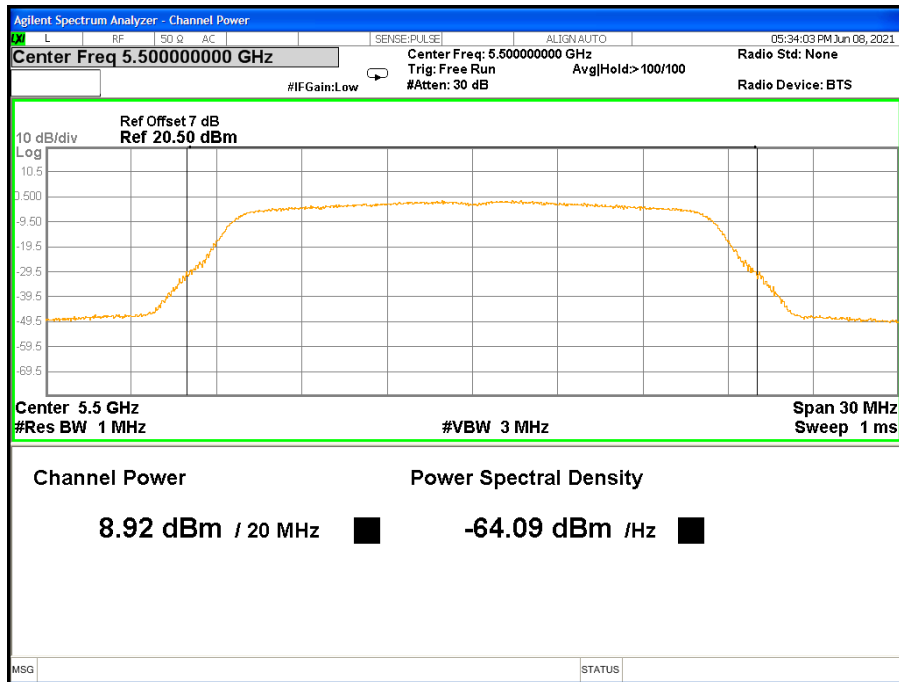
802.11ac(80M)



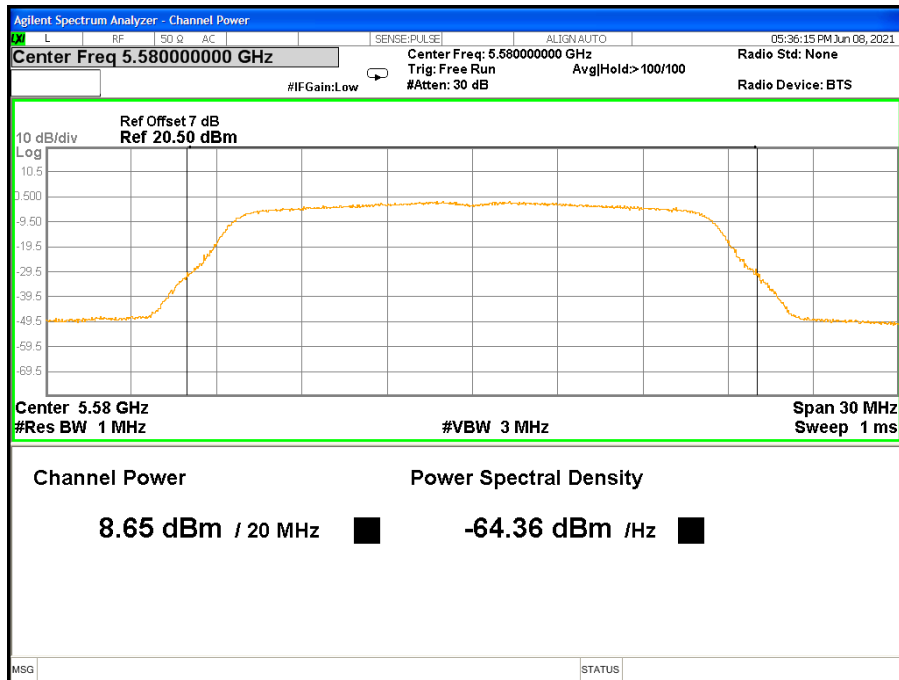
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80		
Test Date :	2021-06-05		

Band III(5.47-5.725GHz)								
Test Channel	Frequency (MHz)	Direct measurement Ant_A AV Power (dBm)	Direct measurement Ant B_AV Power (dBm)	Duty cycle factor (dB)	Final Ant_A AV Power (dBm)	Final Ant_B AV Power (dBm)	AV Power Total (dBm)	LIMIT (dBm)
802.11a								
100	5500	8.92	11.11	0.037	8.96	11.15	--	22.94
116	5580	8.65	10.90	0.037	8.69	10.94	--	22.93
140	5700	8.88	10.46	0.037	8.92	10.50	--	22.91
802.11n(HT20)								
100	5500	7.80	10.42	0.079	7.88	10.50	12.39	19.96
116	5580	7.67	9.71	0.079	7.75	9.79	11.90	19.93
140	5700	7.92	9.70	0.079	8.00	9.78	11.99	19.98
802.11n(HT40)								
102	5510	8.06	8.64	0.157	8.22	8.80	11.53	19.98
110	5550	8.16	9.30	0.157	8.32	9.46	11.93	19.98
134	5670	6.60	9.23	0.157	6.76	9.39	11.28	19.98
802.11ac(VHT20)								
100	5500	7.96	9.96	0.161	8.12	10.12	12.25	19.98
116	5580	7.63	9.82	0.161	7.79	9.98	12.03	19.97
140	5700	7.89	9.41	0.161	8.05	9.57	11.89	19.98
802.11ac(VHT40)								
102	5510	6.41	8.68	0.351	6.76	9.03	11.05	19.98
110	5550	6.55	8.46	0.351	6.90	8.81	10.97	19.98
134	5670	5.05	7.63	0.351	5.40	7.98	9.89	19.98
802.11ac(VHT80)								
106	5530	3.07	3.82	2.052	5.12	5.87	8.52	19.98
122	5610	1.97	2.96	2.052	4.02	5.01	7.56	19.98

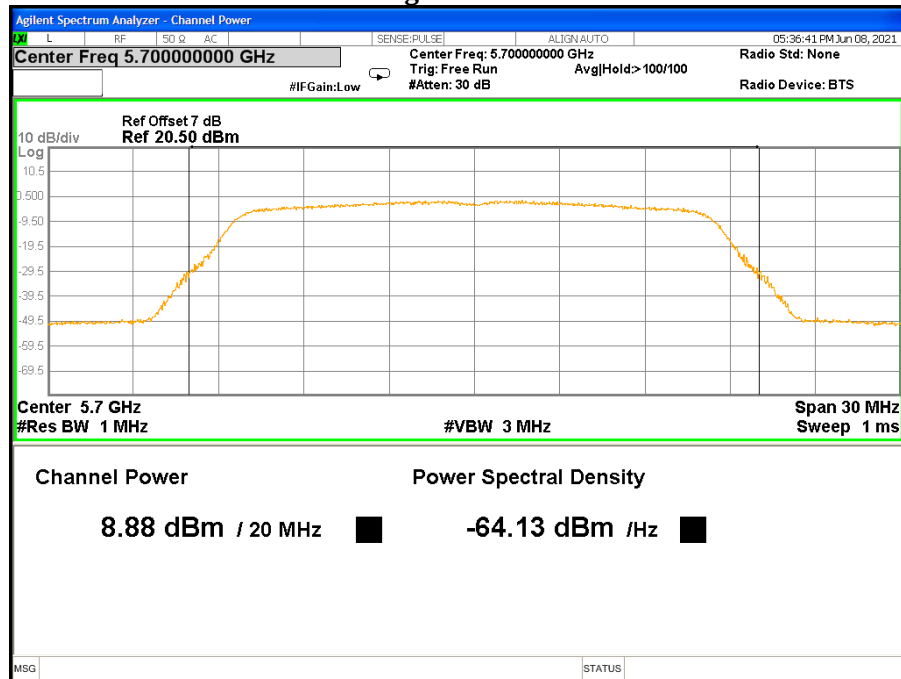
ANT A
802.11a
Low Channel



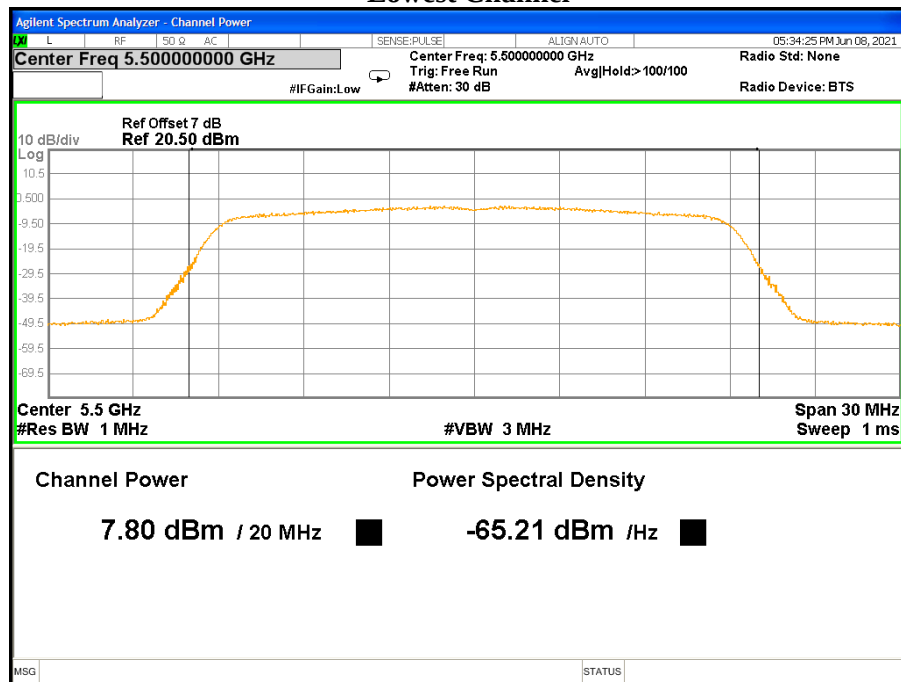
Middle Channel



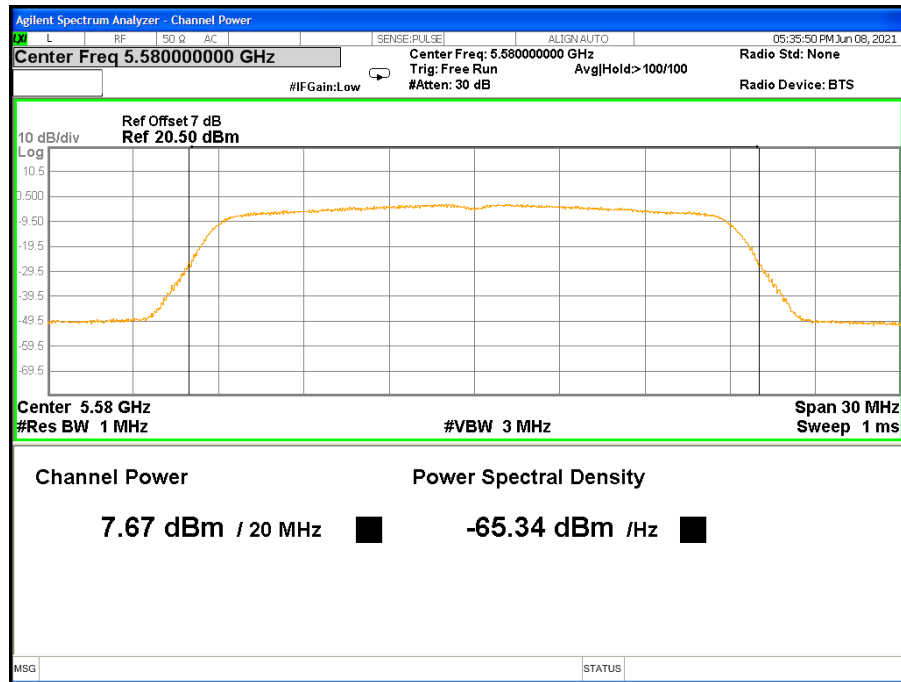
High Channel



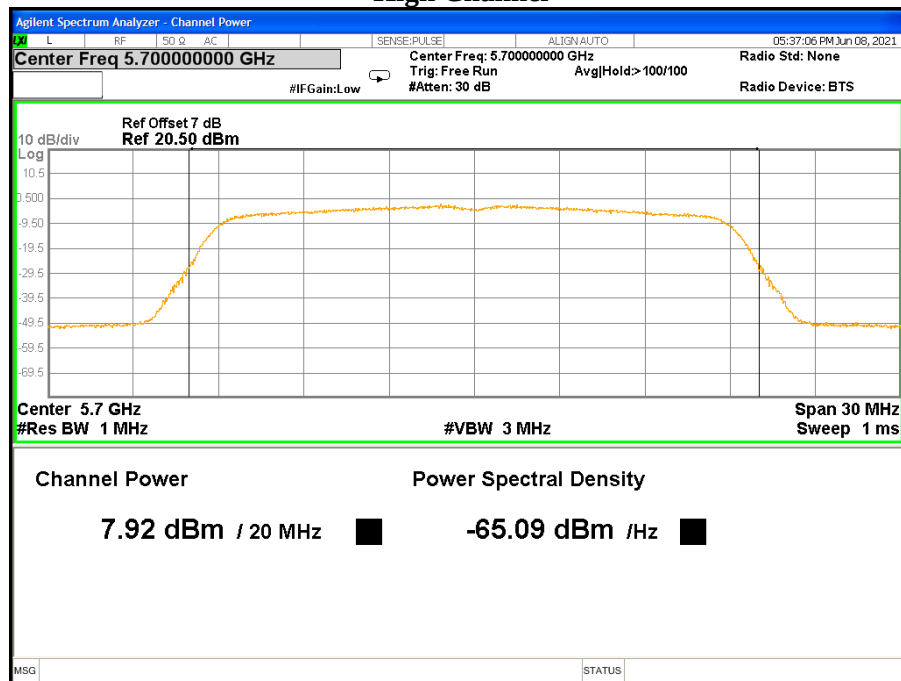
802.11n(20M) Lowest Channel

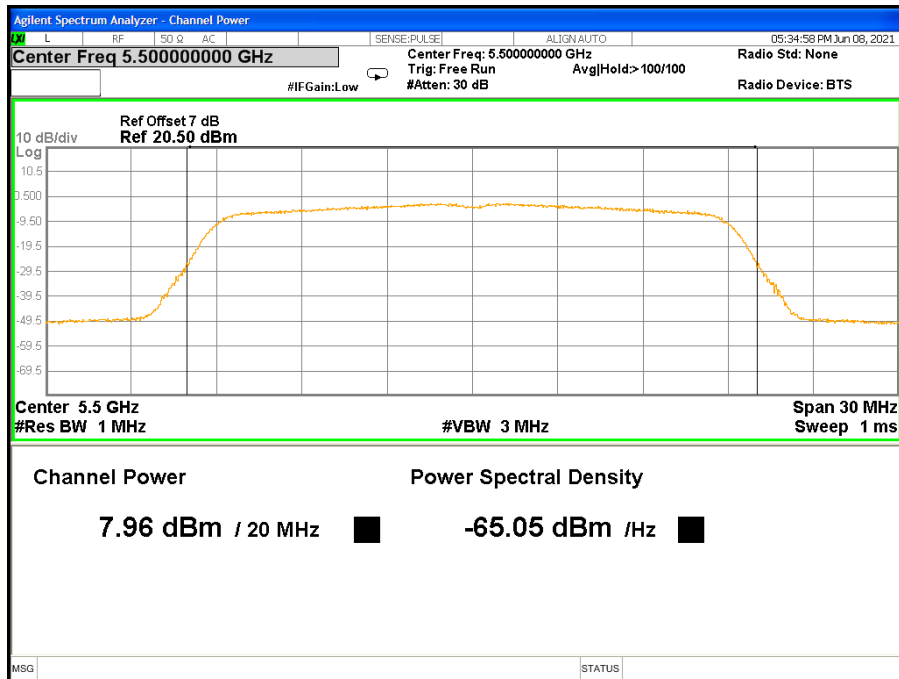
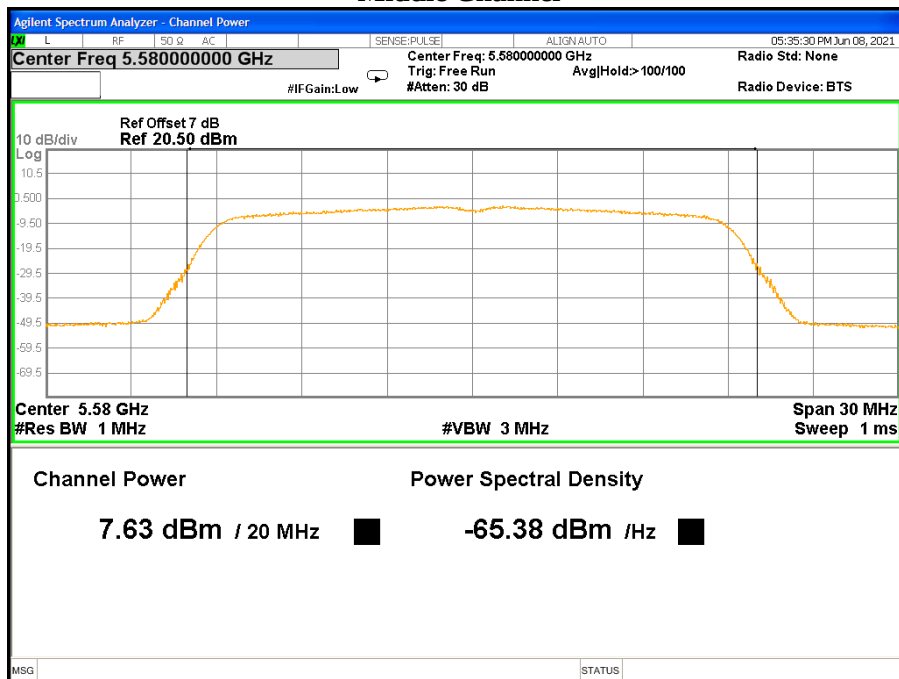


Middle Channel

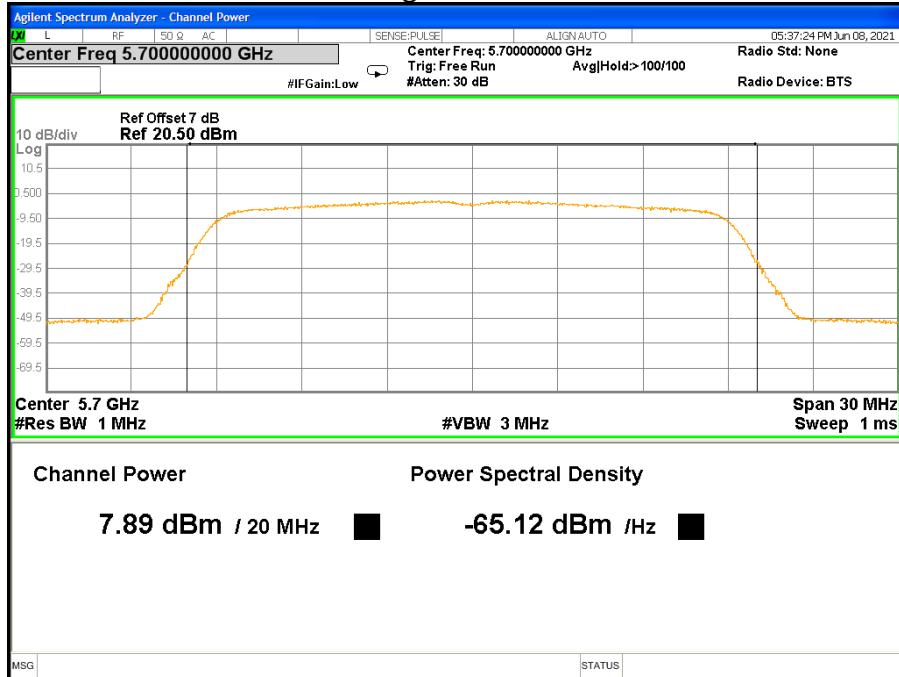
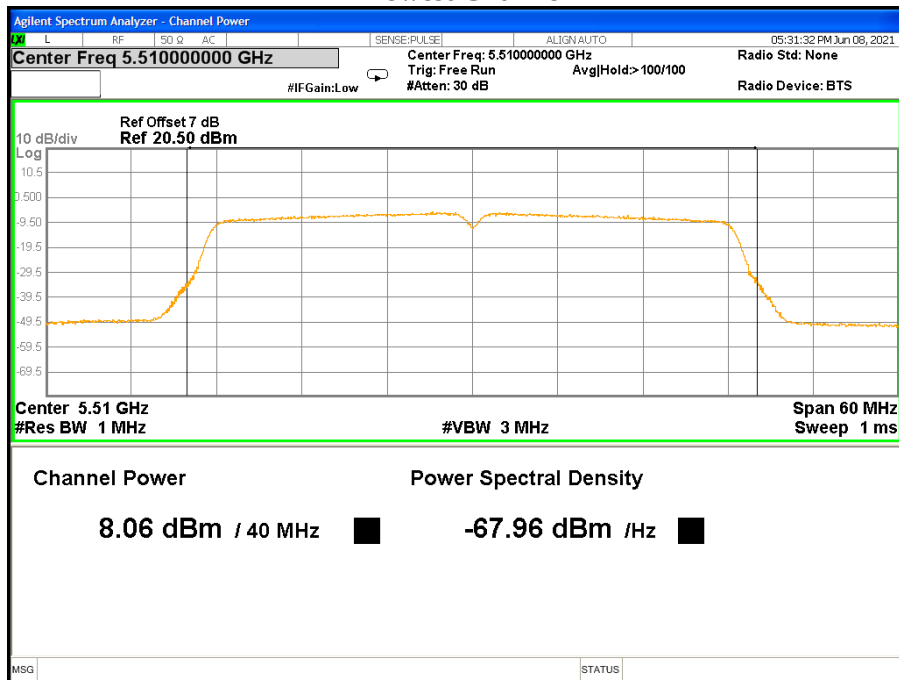


High Channel

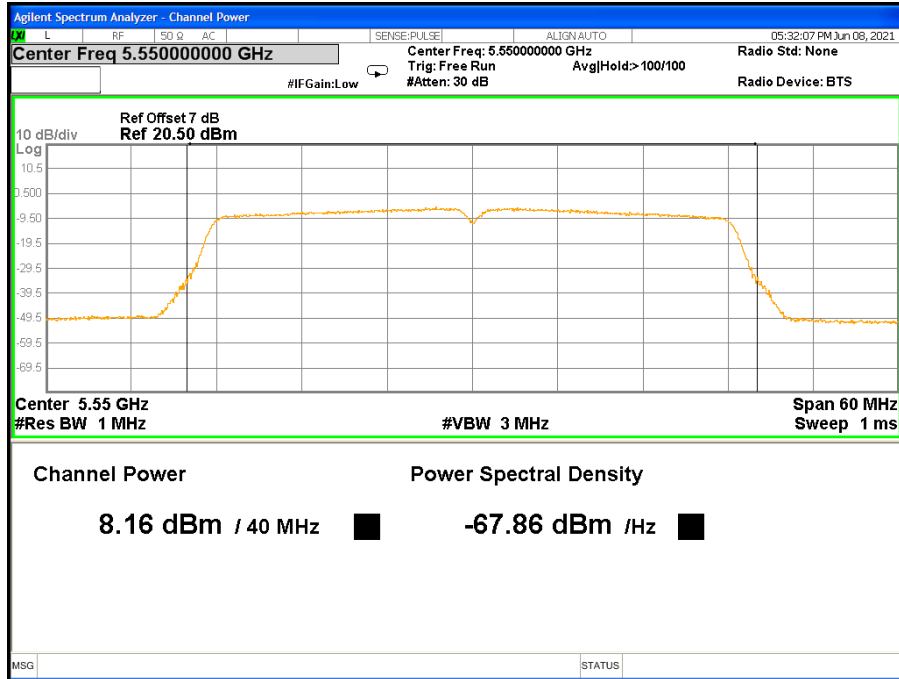


**802.11ac(20M)
Low Channel****Middle Channel**

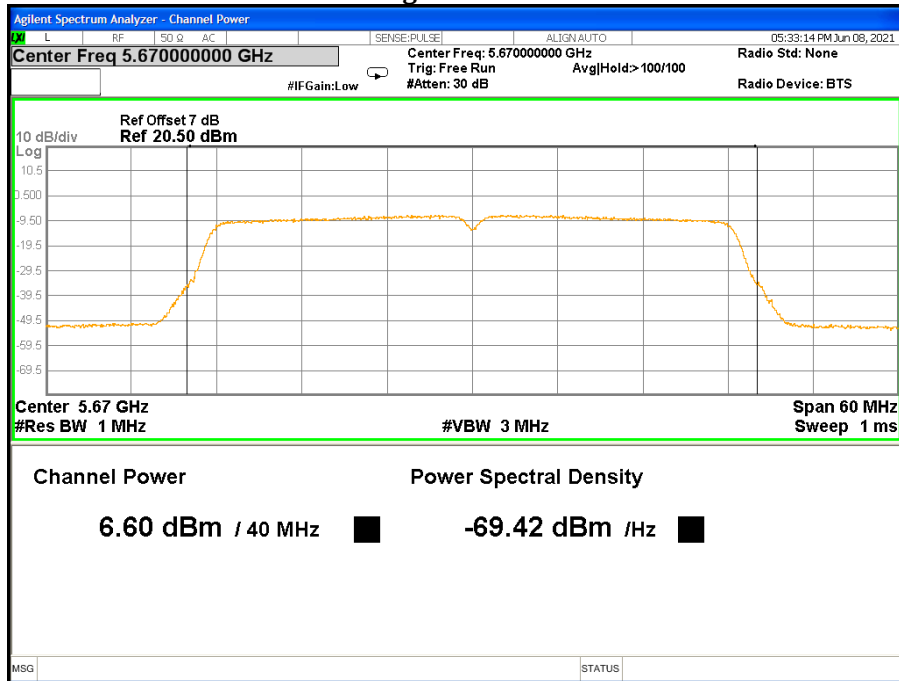
High Channel

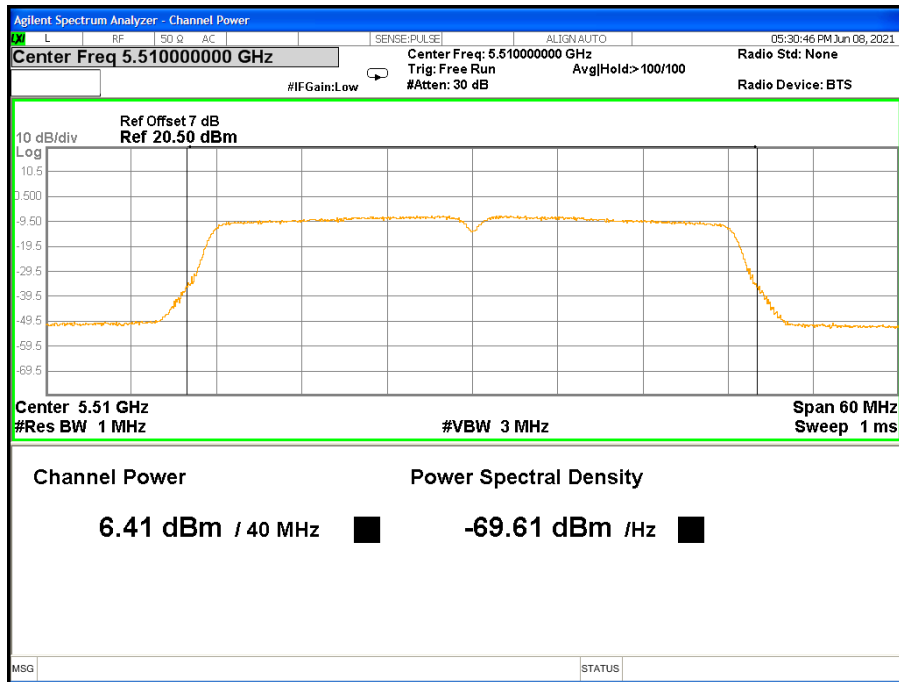
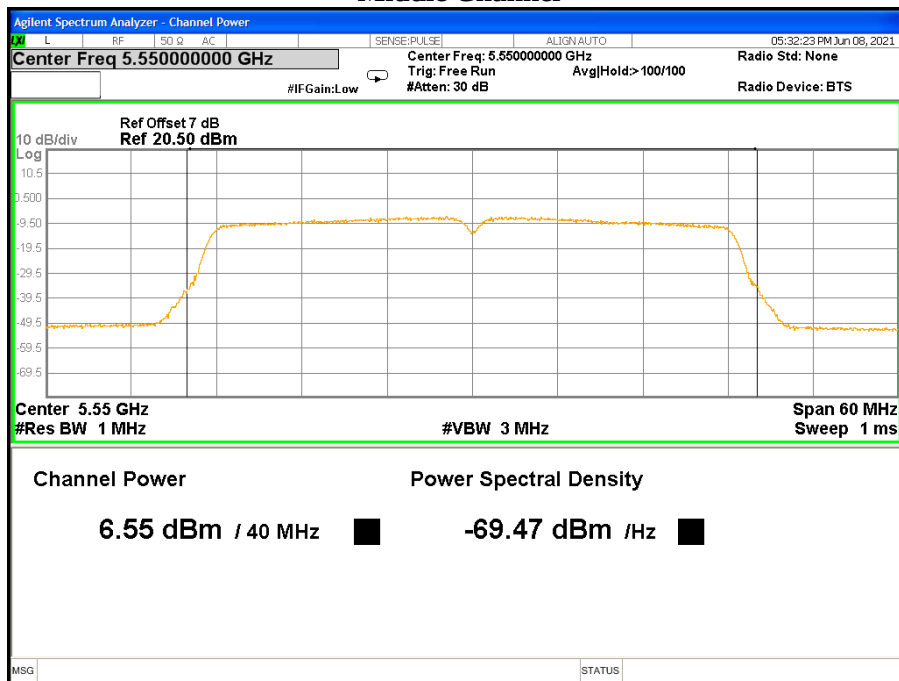
802.11n(40M)
Lowest Channel

Middle Channel

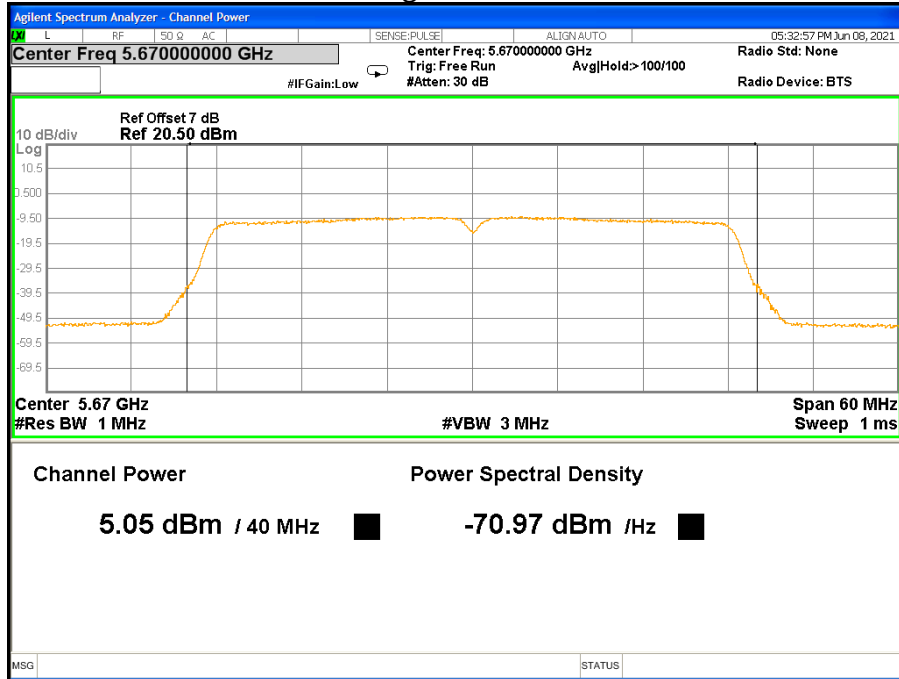
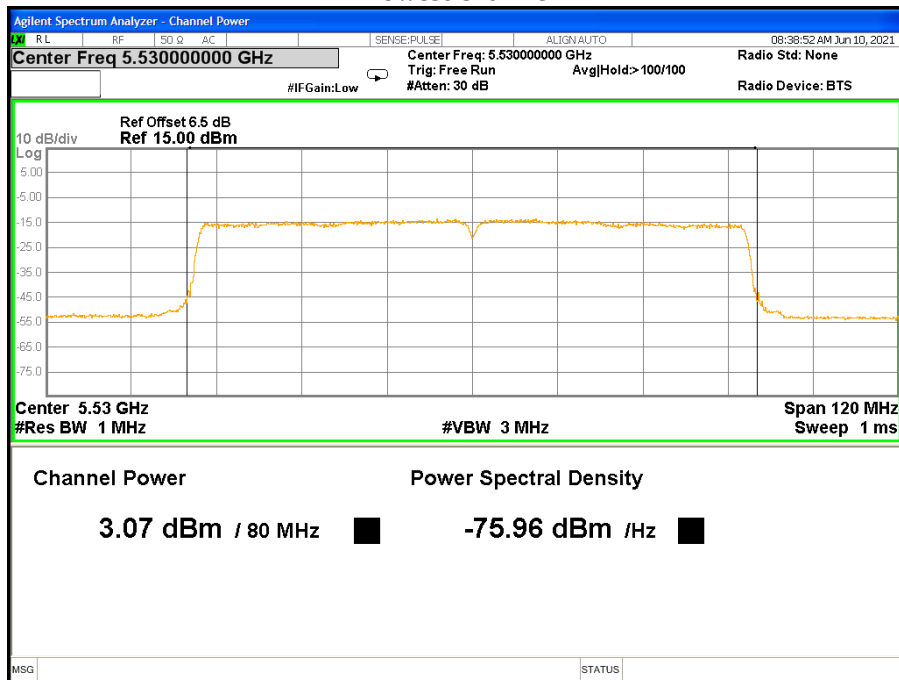


High Channel

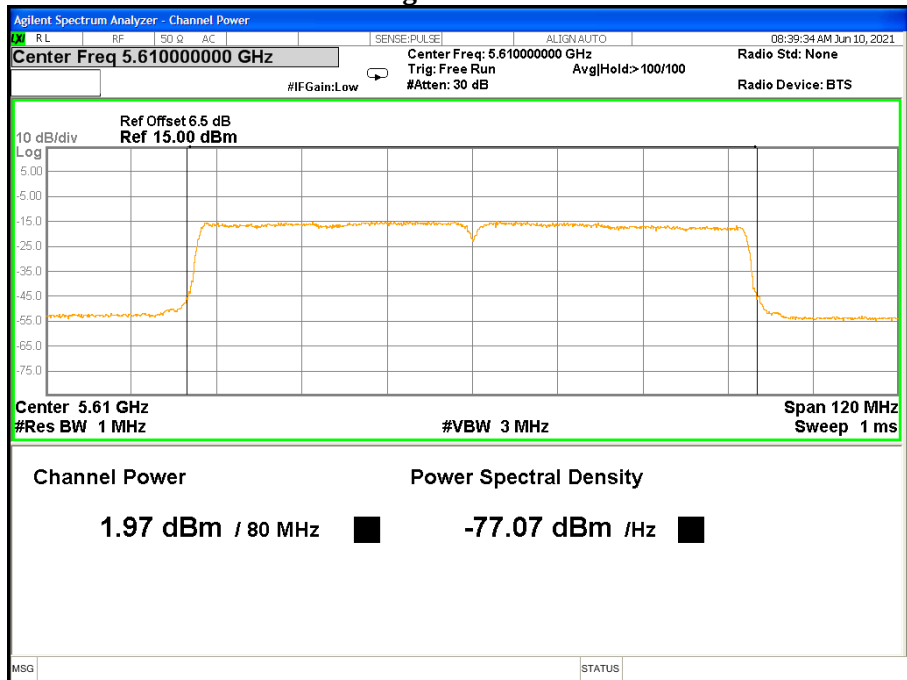


**802.11ac(40M)
Lowest Channel****Middle Channel**

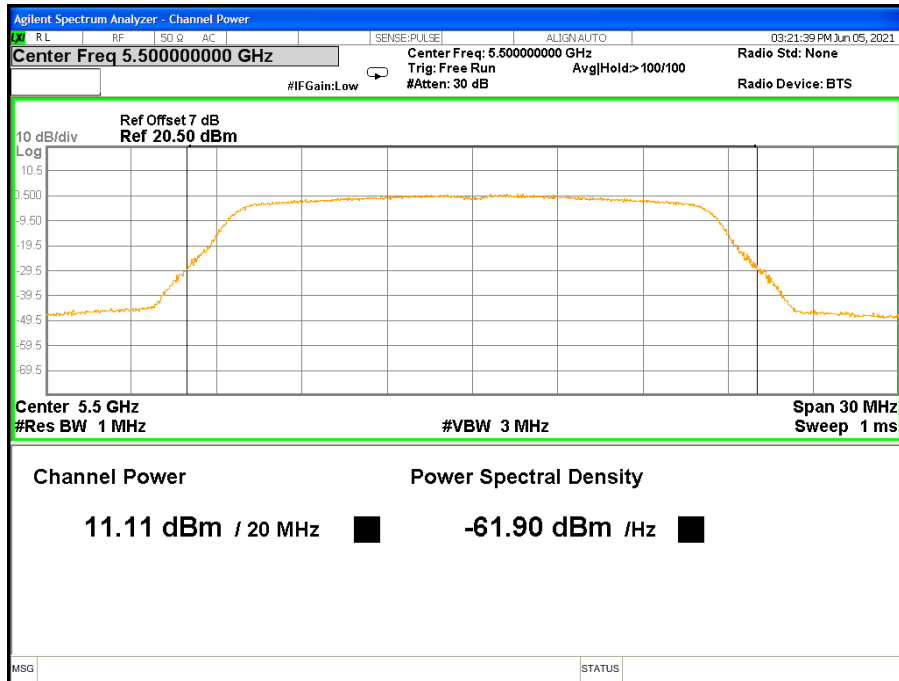
High Channel

802.11ac(80M)
Lowest channel

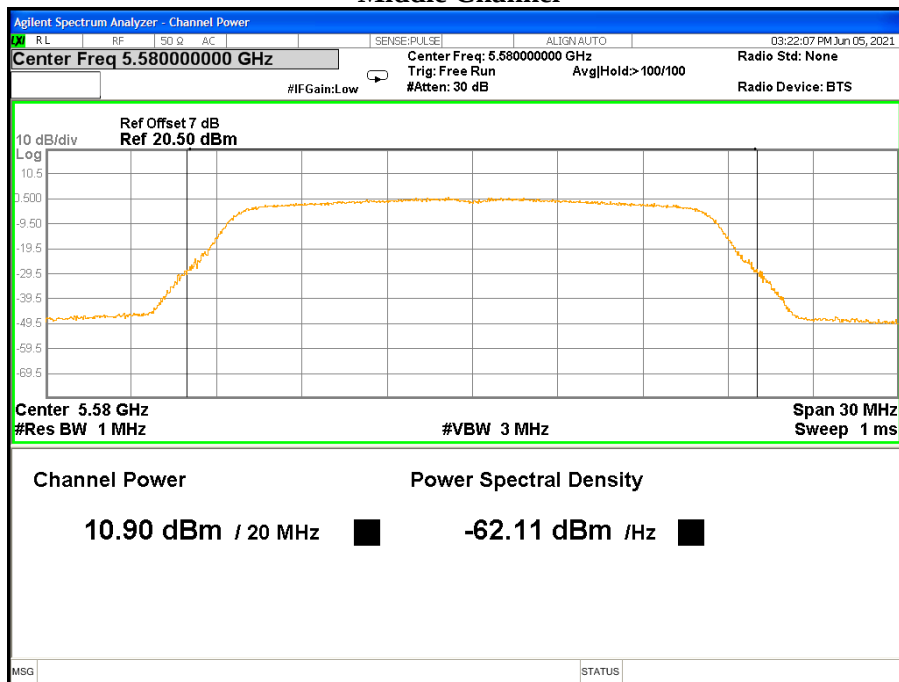
High Channel



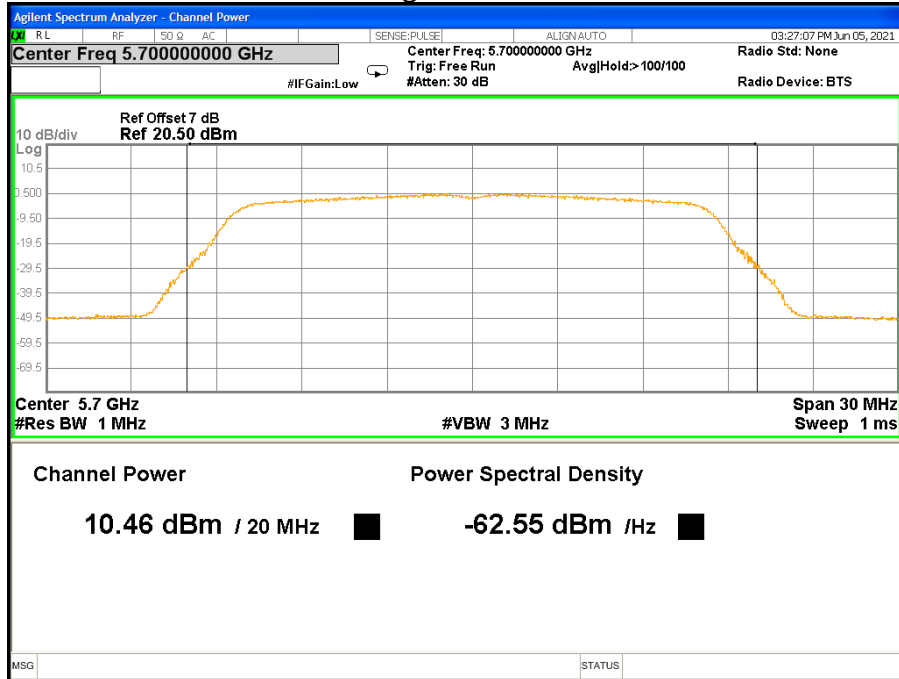
ANT B
802.11a
Low Channel



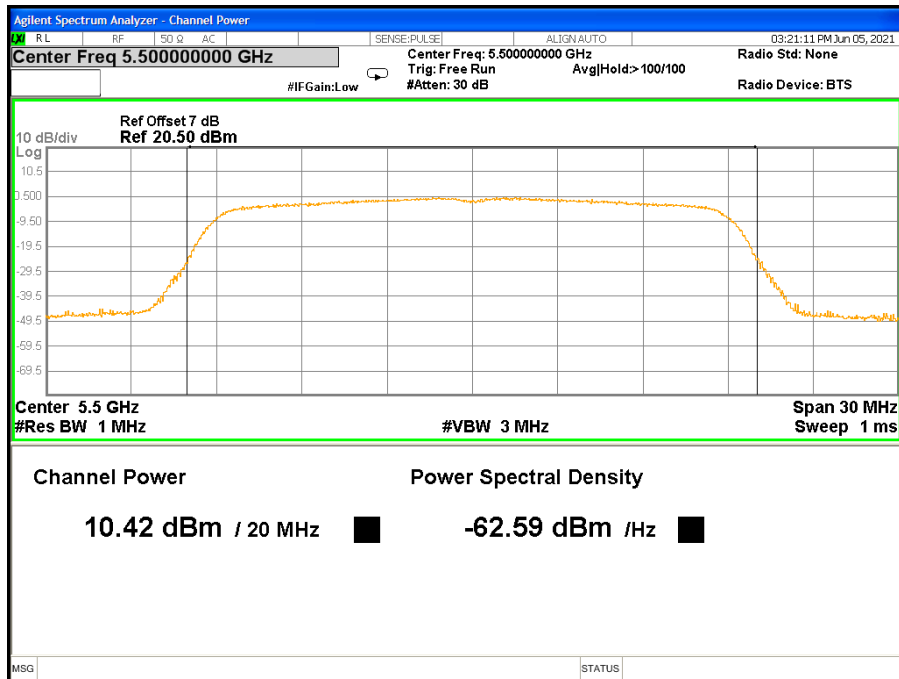
Middle Channel



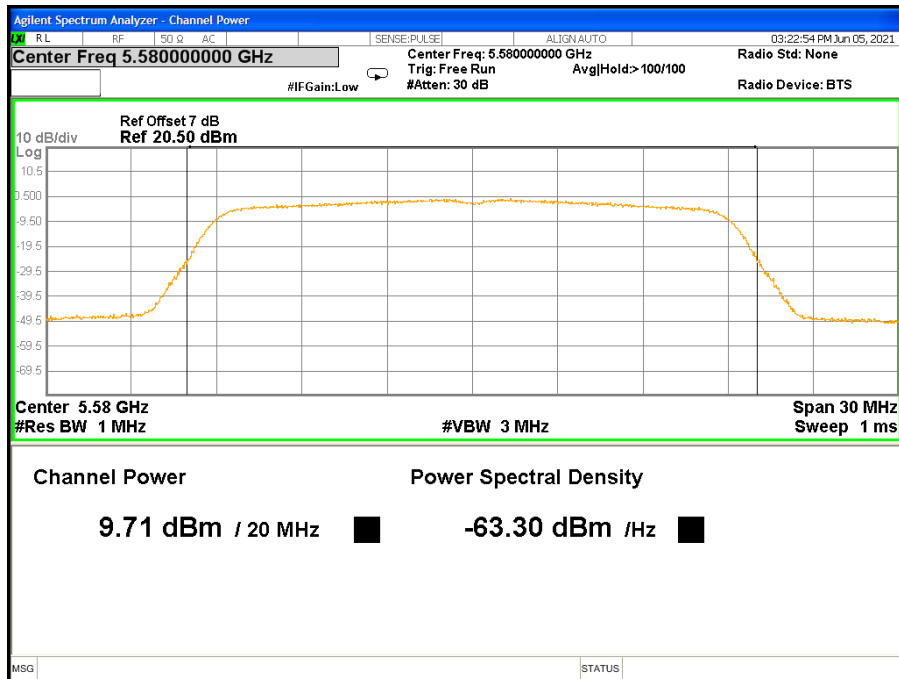
High Channel



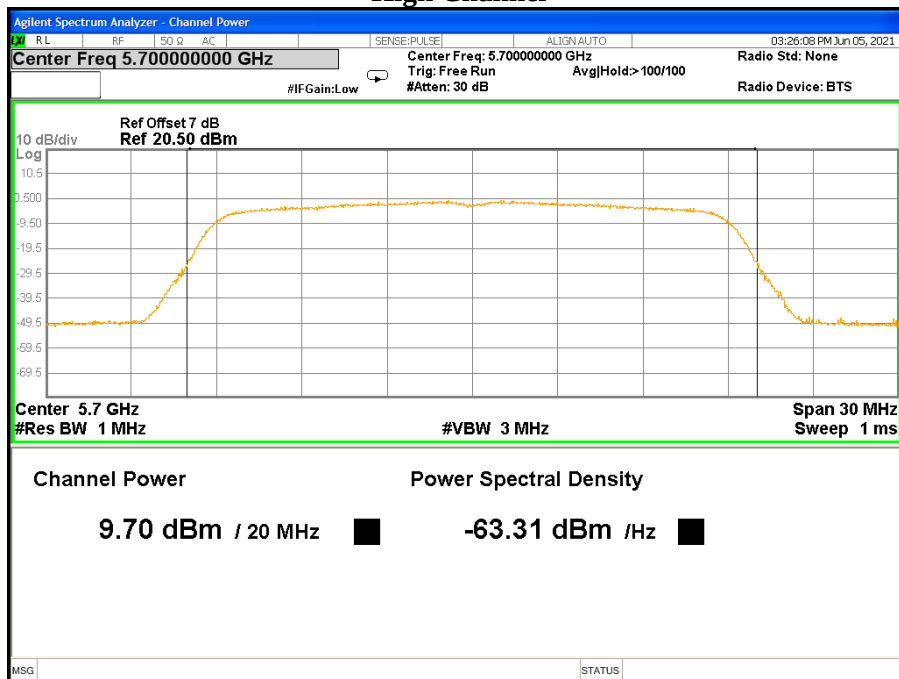
802.11n(20M) Lowest Channel

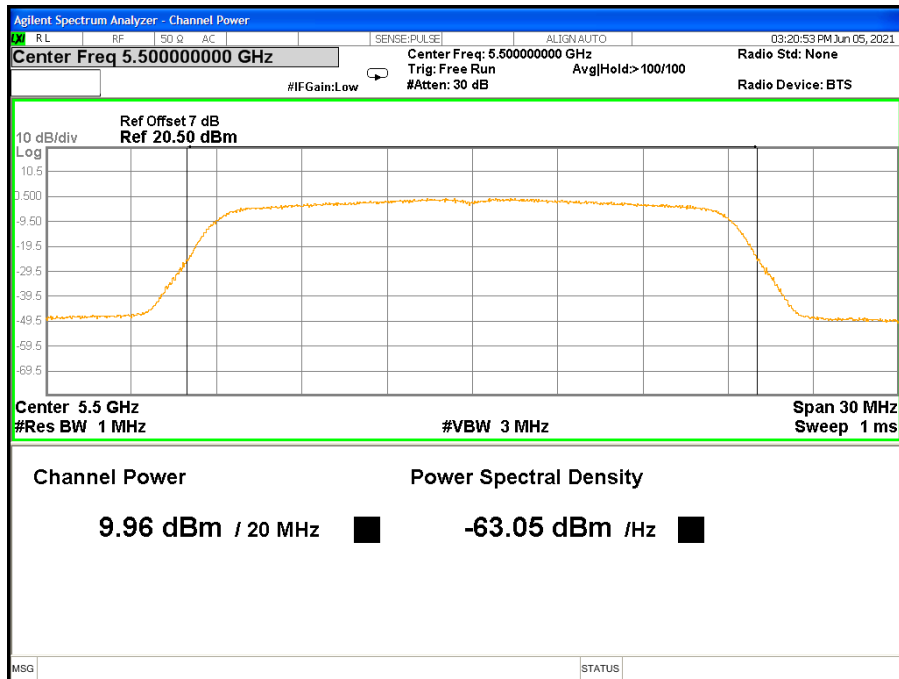
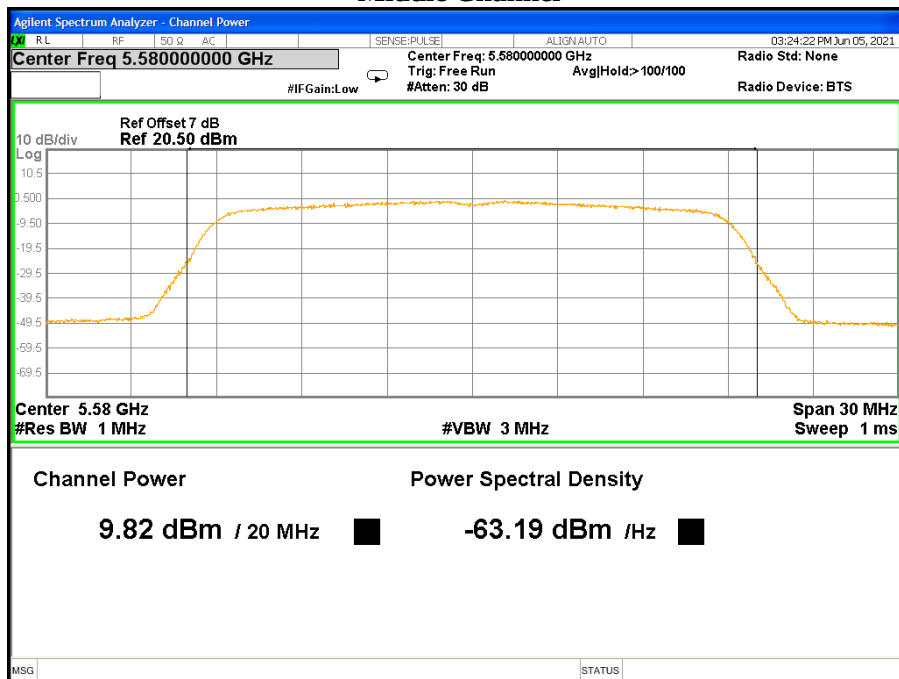


Middle Channel

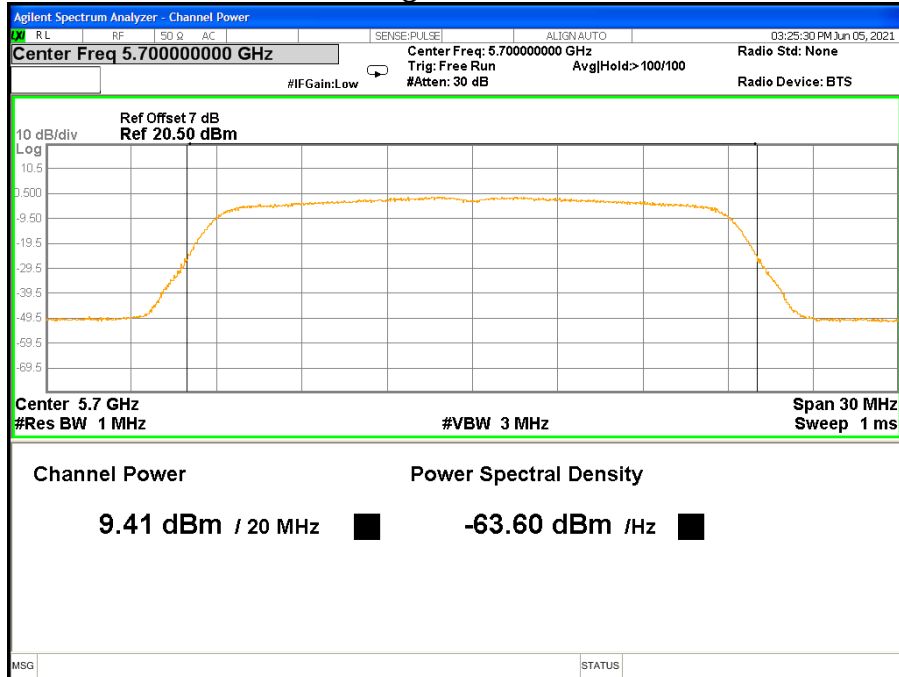


High Channel

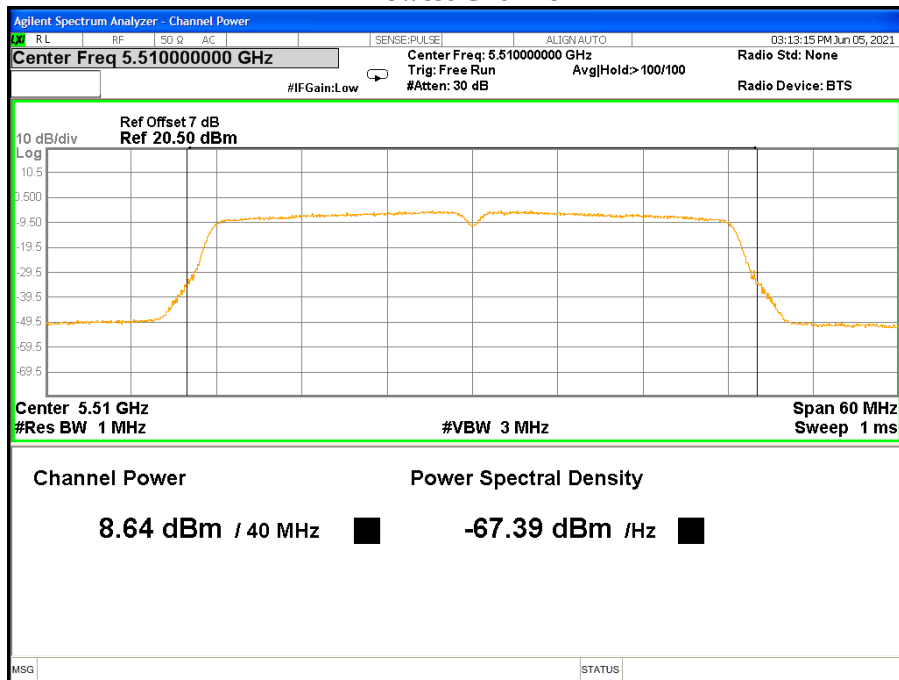


**802.11ac(20M)
Low Channel****Middle Channel**

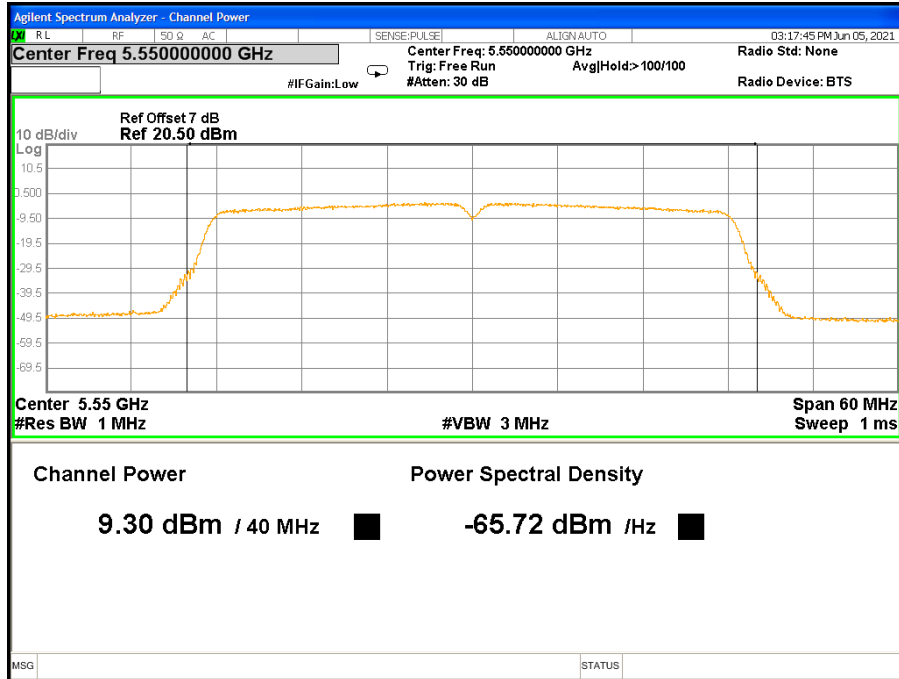
High Channel



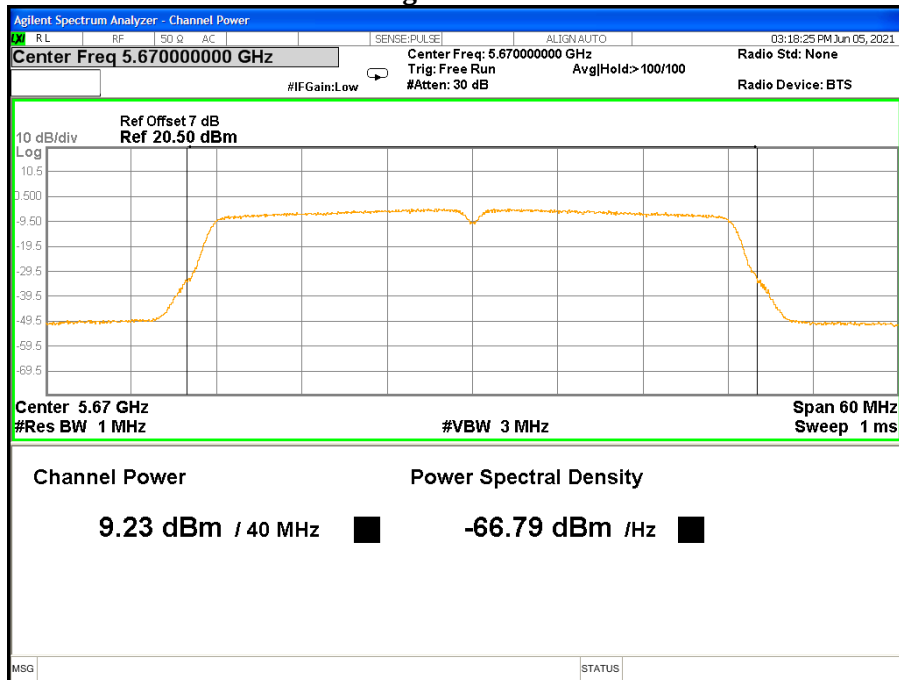
802.11n(40M) Lowest Channel

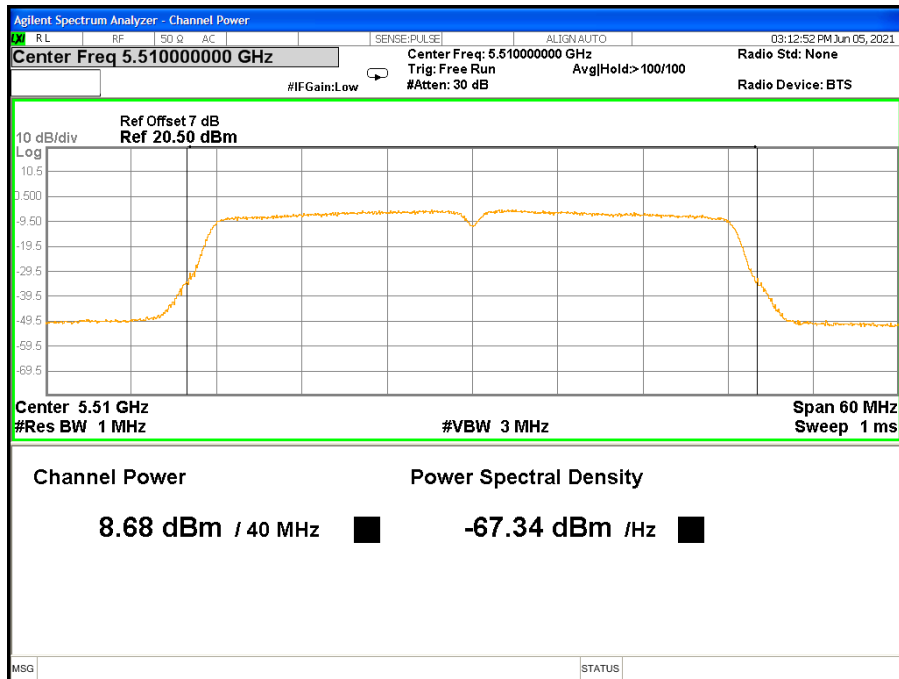
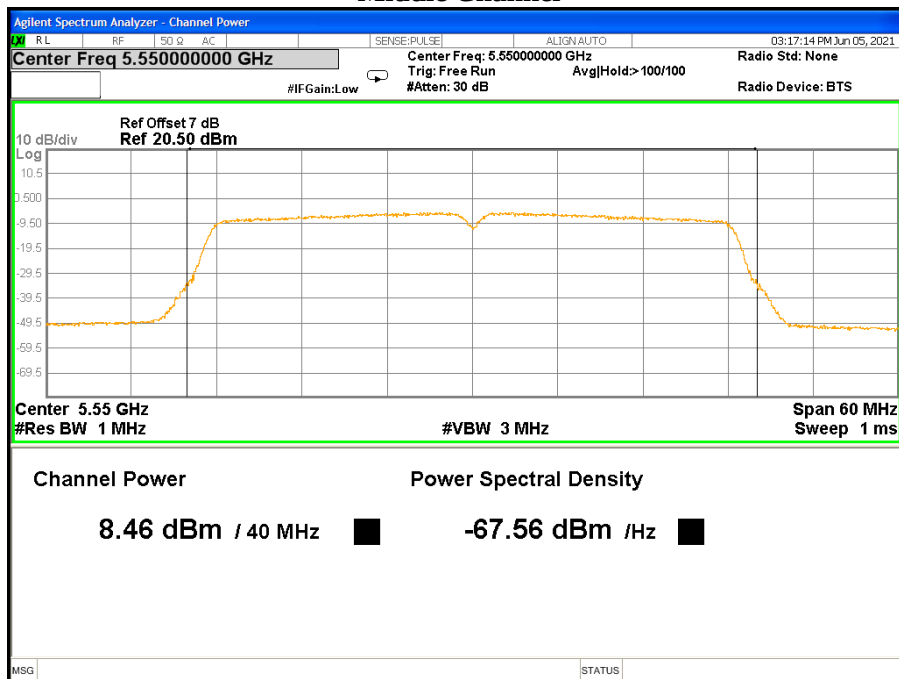


Middle Channel

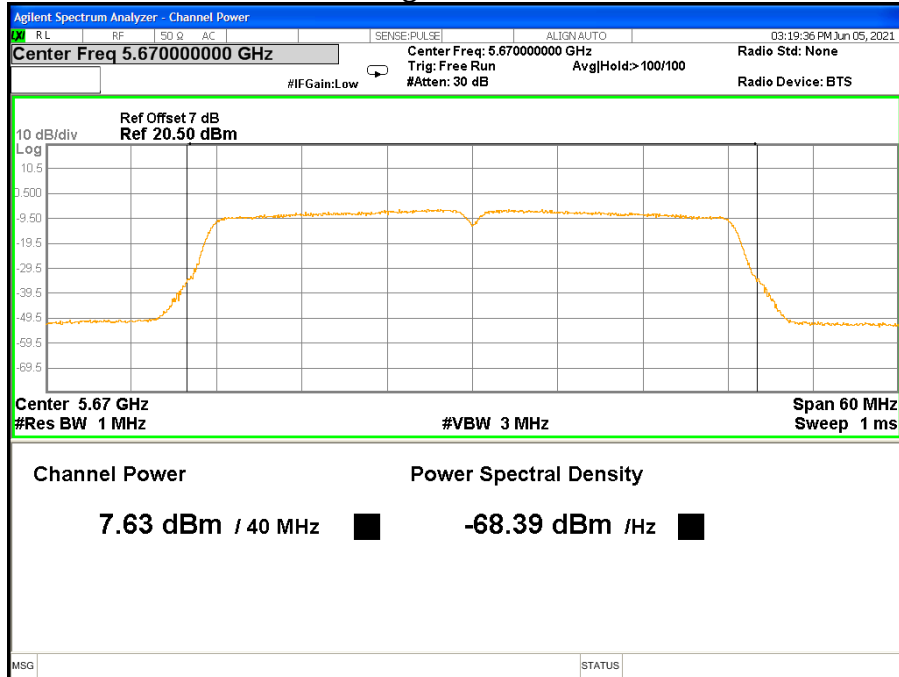


High Channel



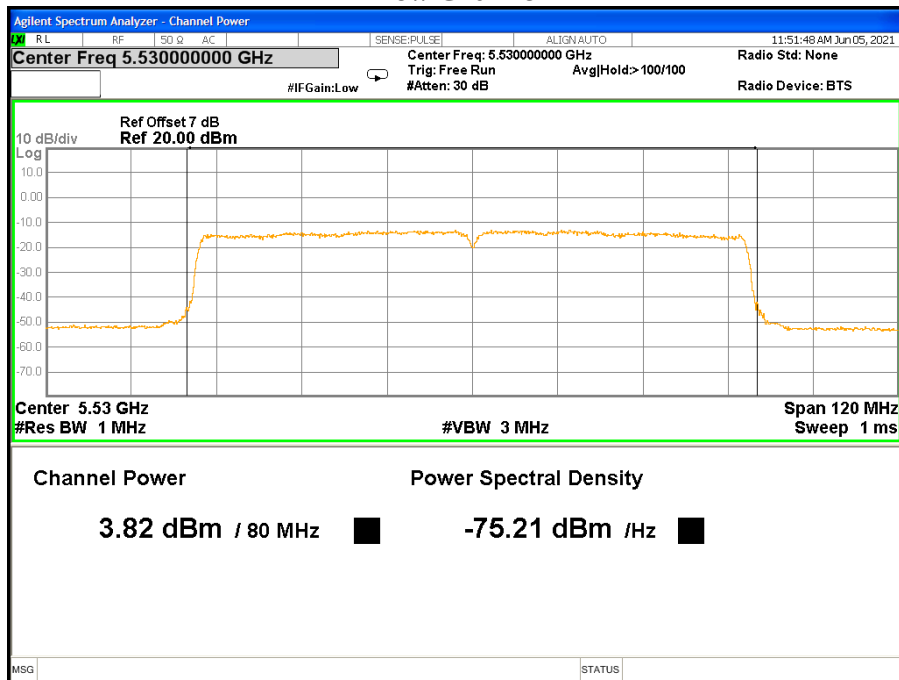
**802.11ac(40M)
Lowest Channel****Middle Channel**

High Channel

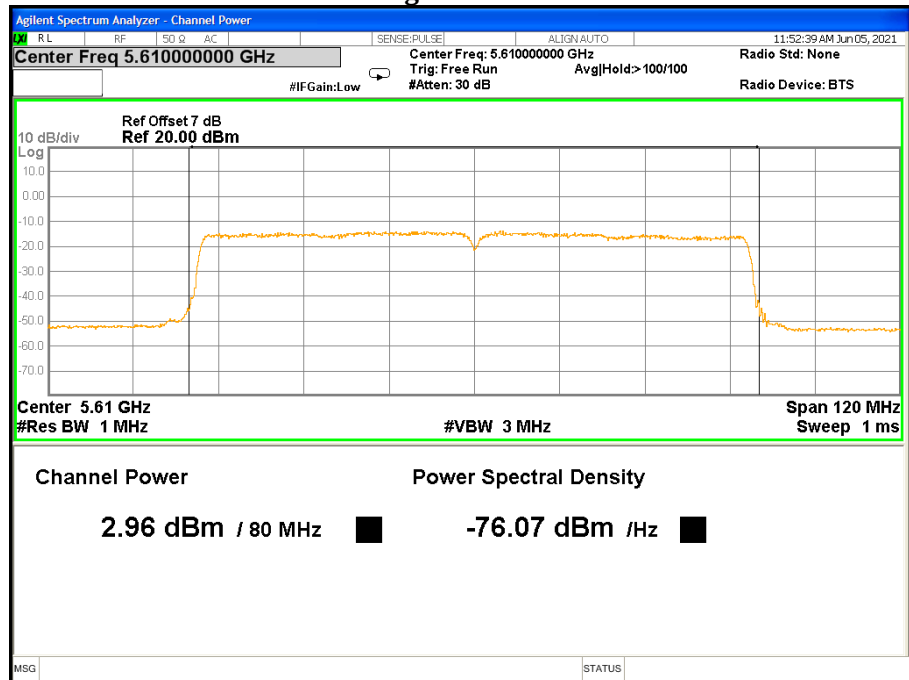


802.11ac(80M)

Low Channel



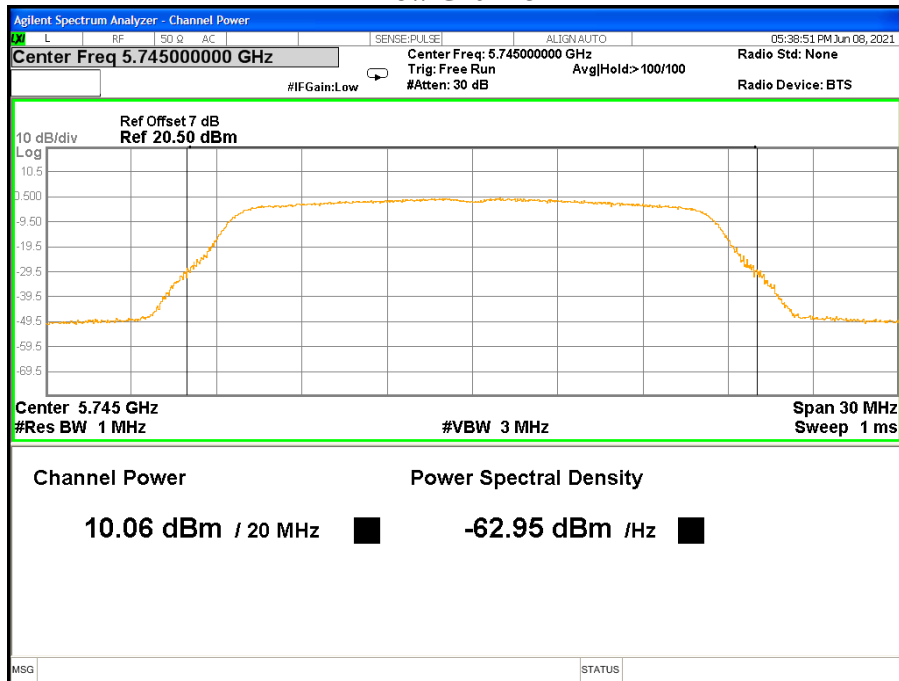
High Channel



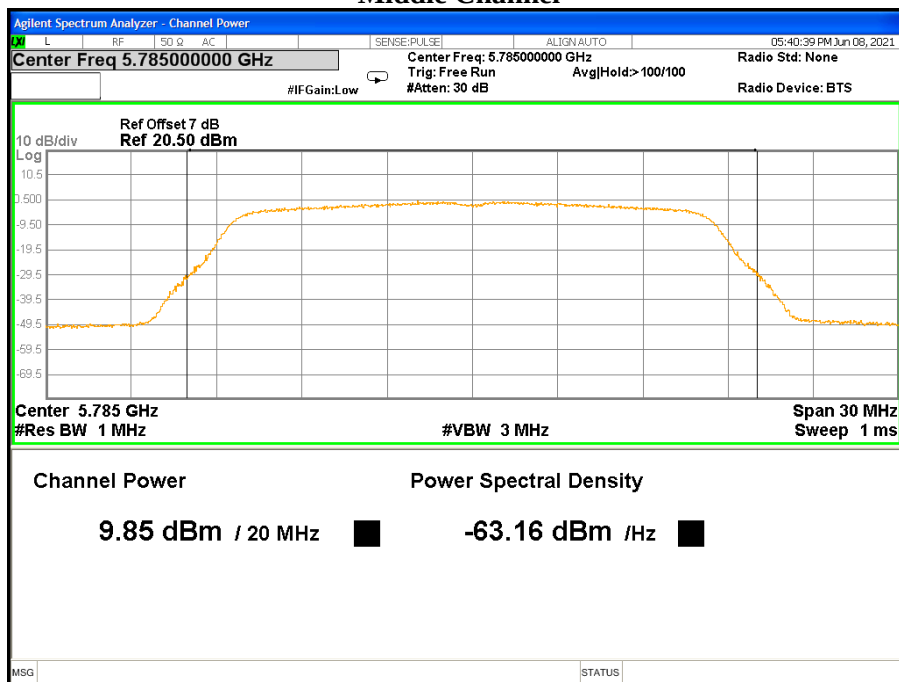
EUT :	Projector	Model Name :	XM03A
Temperature :	25.1°C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Power :	AC 110V/60Hz
Test Mode :	802.11a/n20/ac20/n40/ac40/ac 80		
Test Date :	2021-06-05		

Band IV (5.725-5.85GHz)								
Test Channel	Frequency (MHz)	Direct measurement Ant_A AV Power (dBm)	Direct measurement Ant B_AV Power (dBm)	Duty cycle factor (dB)	Final Ant_A AV Power (dBm)	Final Ant_B AV Power (dBm)	AV Power Total (dBm)	LIMIT (dBm)
802.11a								
149	5745	10.06	11.53	0.086	10.15	11.62	--	29.01
157	5785	9.85	11.24	0.086	9.94	11.33	--	29.01
165	5825	9.33	11.17	0.086	9.42	11.26	--	29.01
802.11n(HT20)								
149	5745	9.08	10.73	0.079	9.16	10.81	13.072	26.00
157	5785	8.57	10.44	0.079	8.65	10.52	12.694	26.00
165	5825	8.32	10.54	0.079	8.40	10.62	12.659	26.00
802.11n(HT40)								
151	5755	9.09	10.45	0.168	9.26	10.62	13.002	26.00
159	5795	8.94	10.26	0.168	9.11	10.43	12.829	26.00
802.11ac(VHT20)								
149	5745	8.86	10.42	0.186	9.05	10.61	12.906	26.00
157	5785	8.66	10.16	0.186	8.85	10.35	12.671	26.00
165	5825	8.29	10.21	0.186	8.48	10.40	12.552	26.00
802.11ac(VHT40)								
151	5755	7.90	9.20	0.316	8.22	9.52	11.925	26.00
159	5795	7.71	9.03	0.316	8.03	9.35	11.746	26.00
802.11ac(VHT80)								
155	5775	4.84	5.63	2.153	6.99	7.78	10.416	26.00

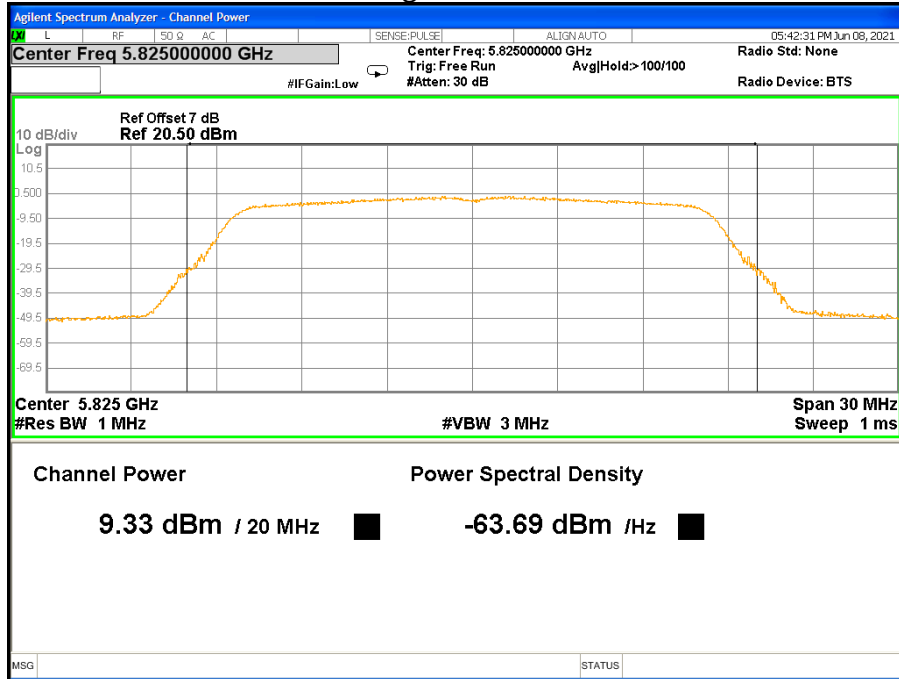
ANT A
802.11a
Low Channel



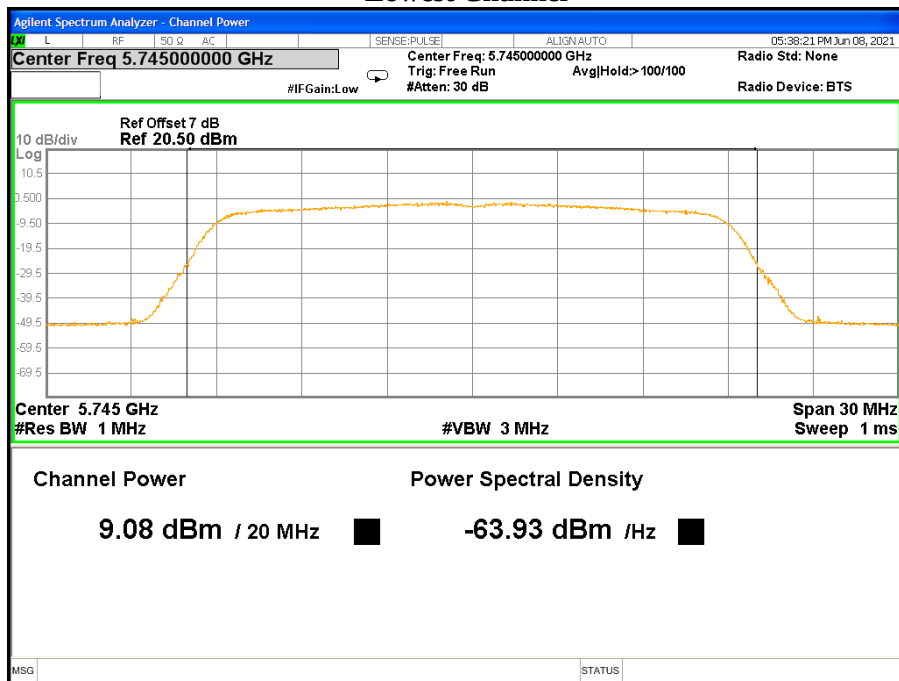
Middle Channel



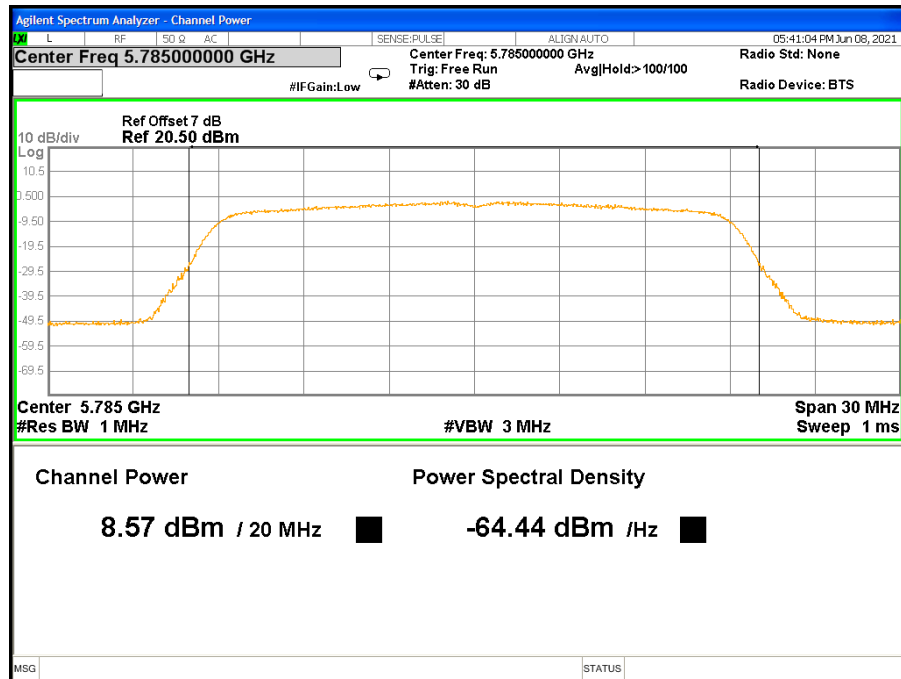
High Channel



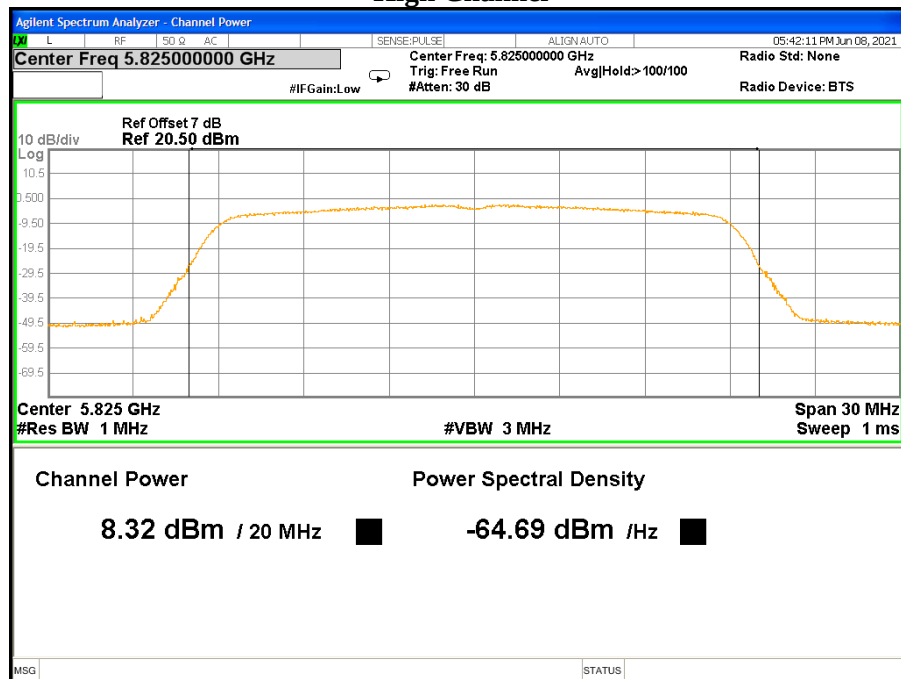
802.11n(20M) Lowest Channel

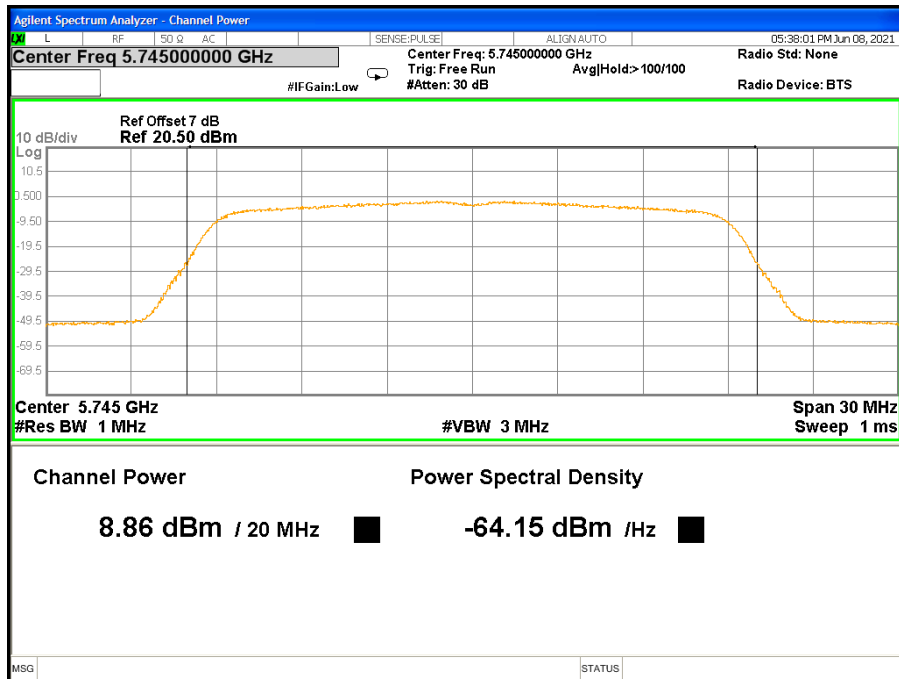
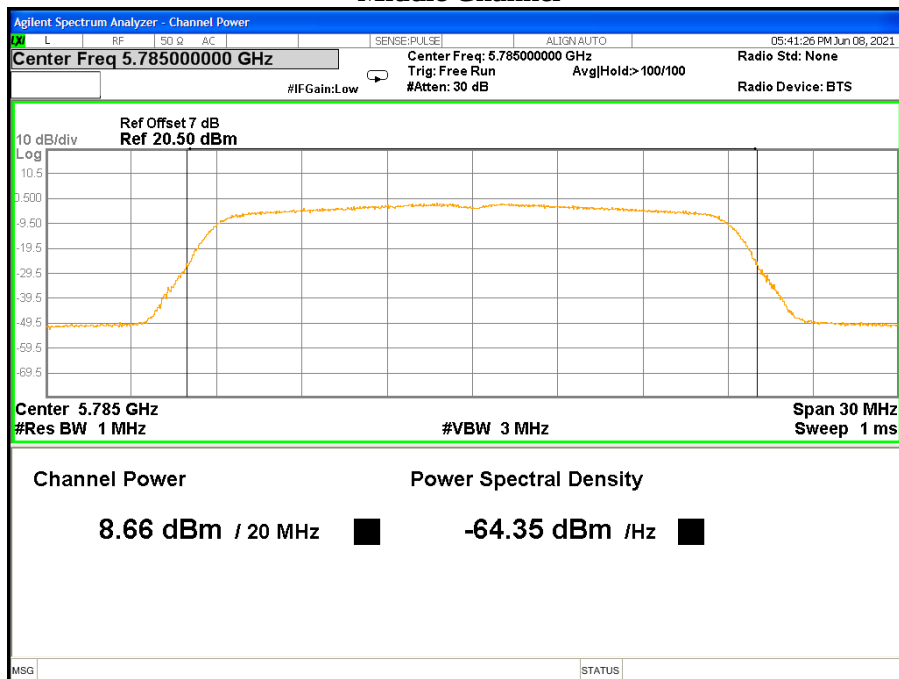


Middle Channel

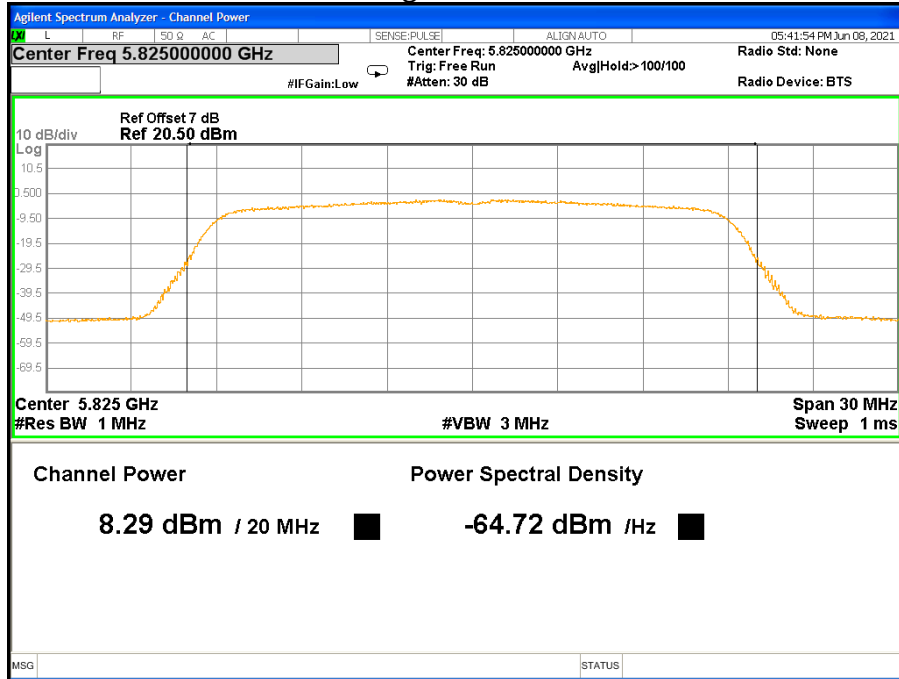


High Channel

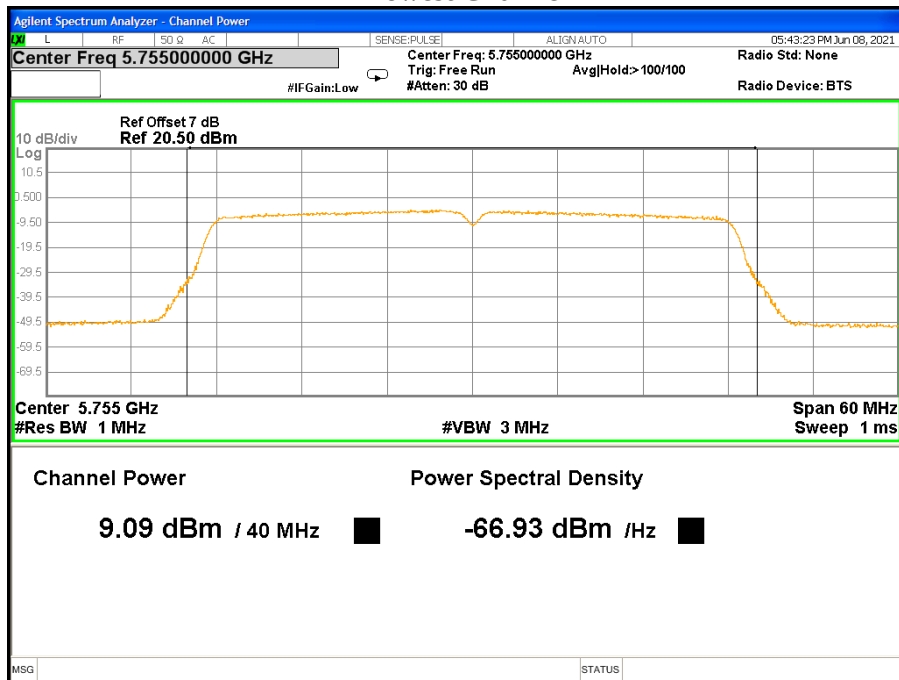


**802.11ac(20M)
Low Channel****Middle Channel**

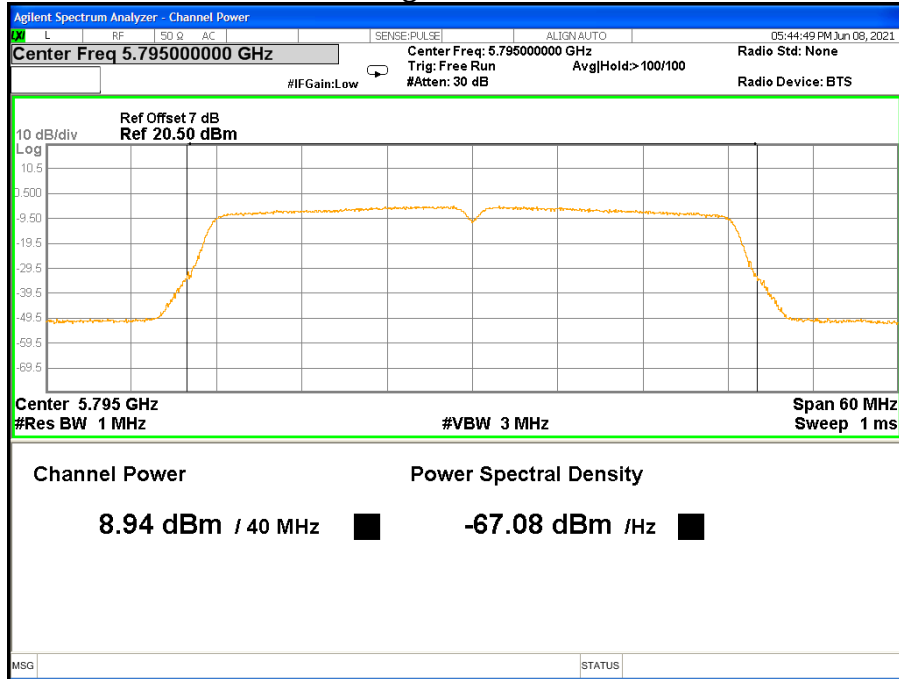
High Channel



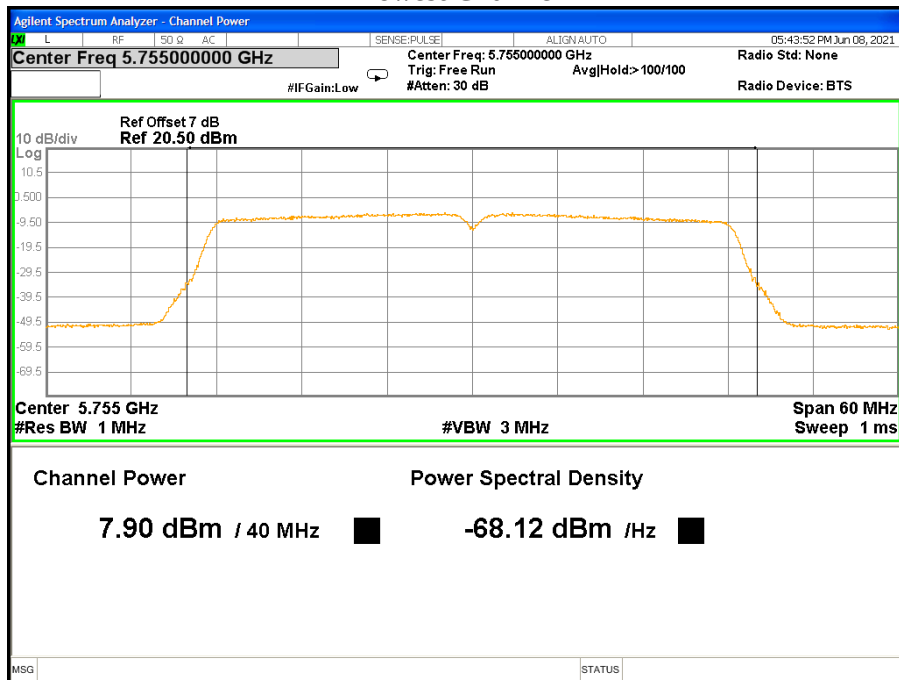
802.11n(40M) Lowest Channel



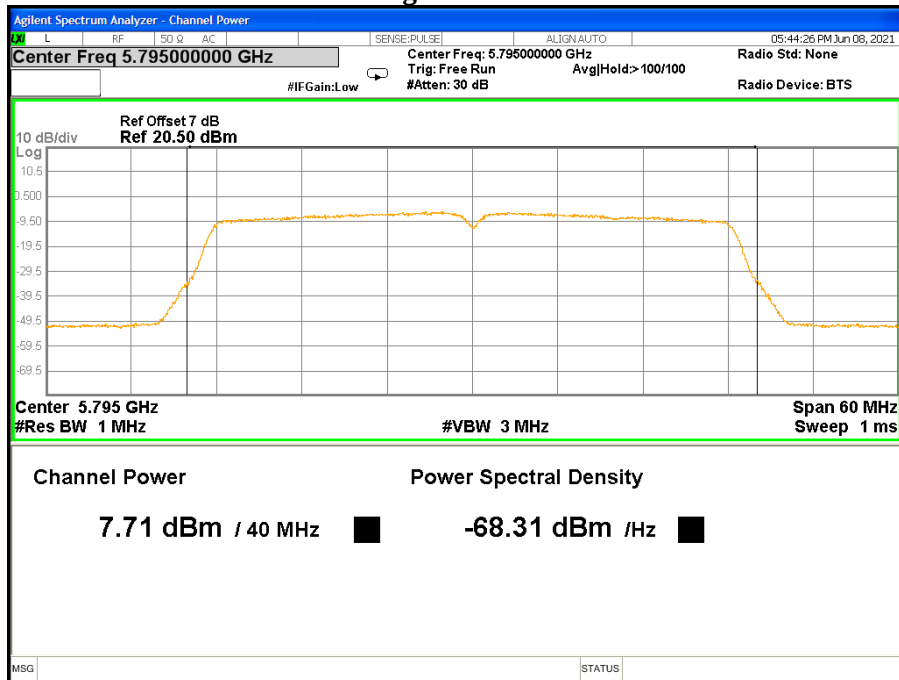
High Channel



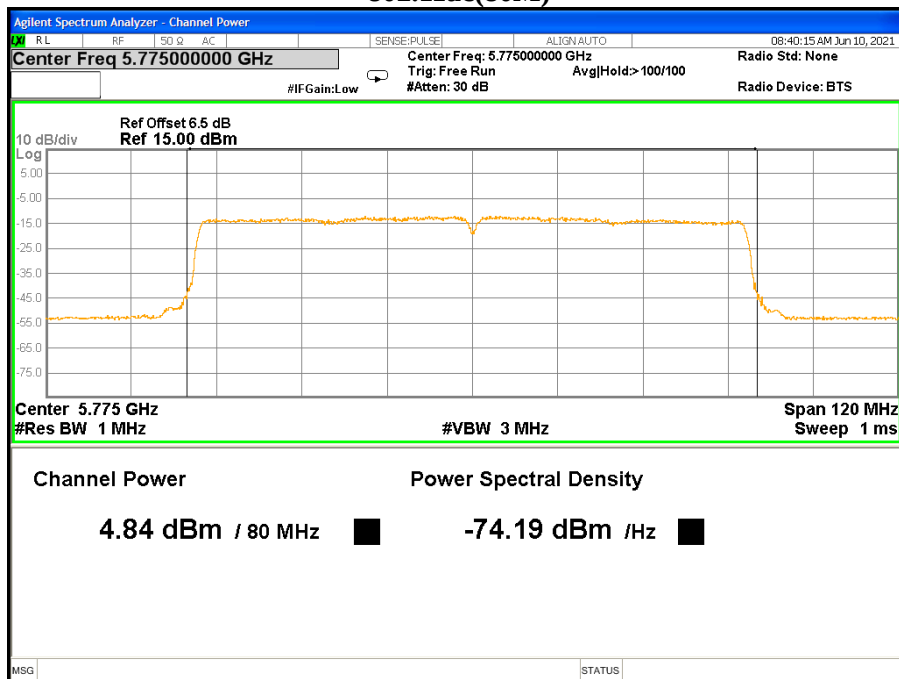
802.11ac(40M) Lowest Channel



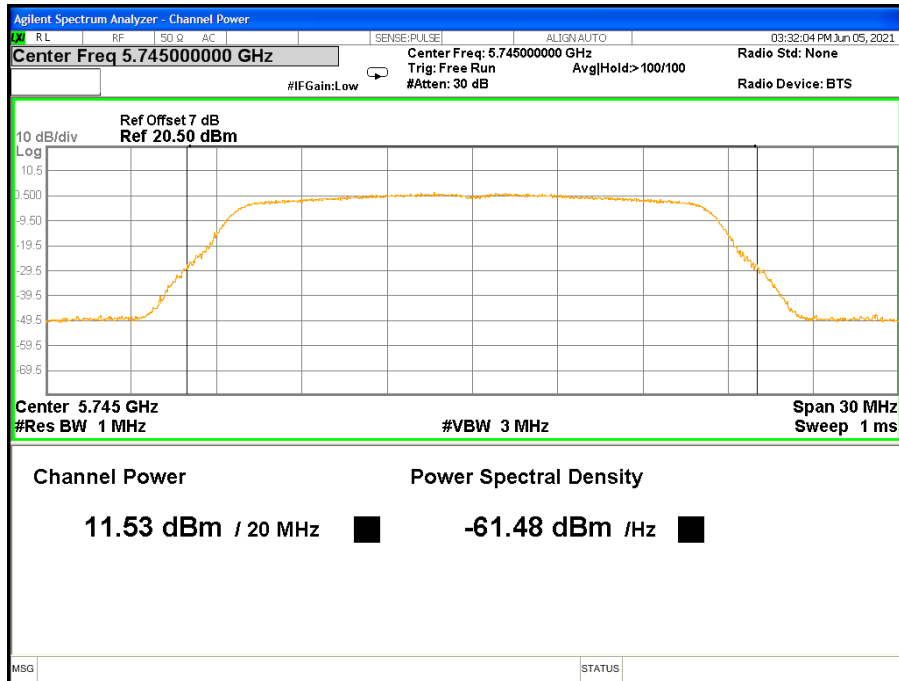
High Channel



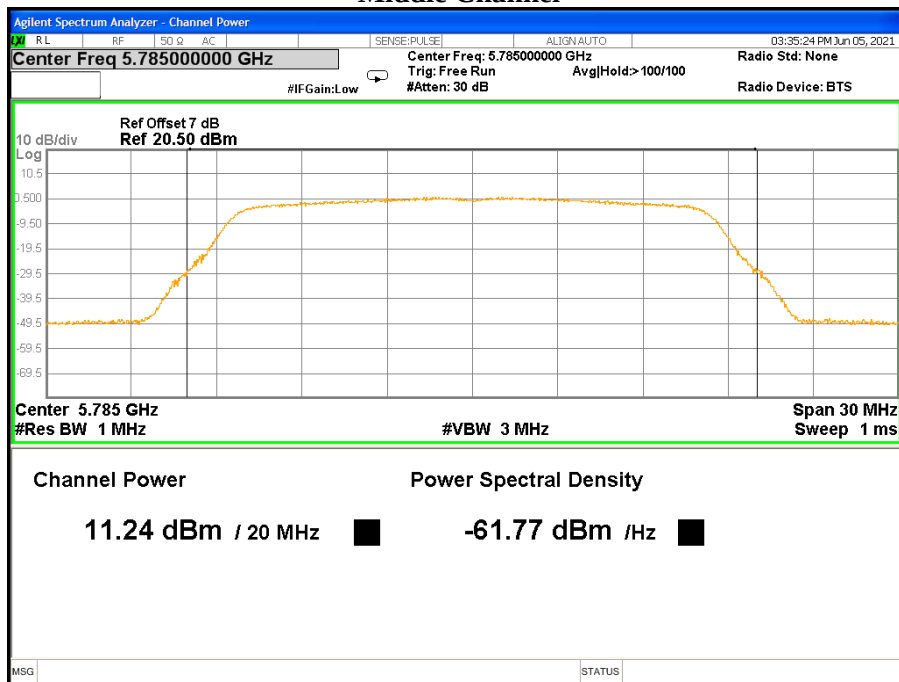
802.11ac(80M)



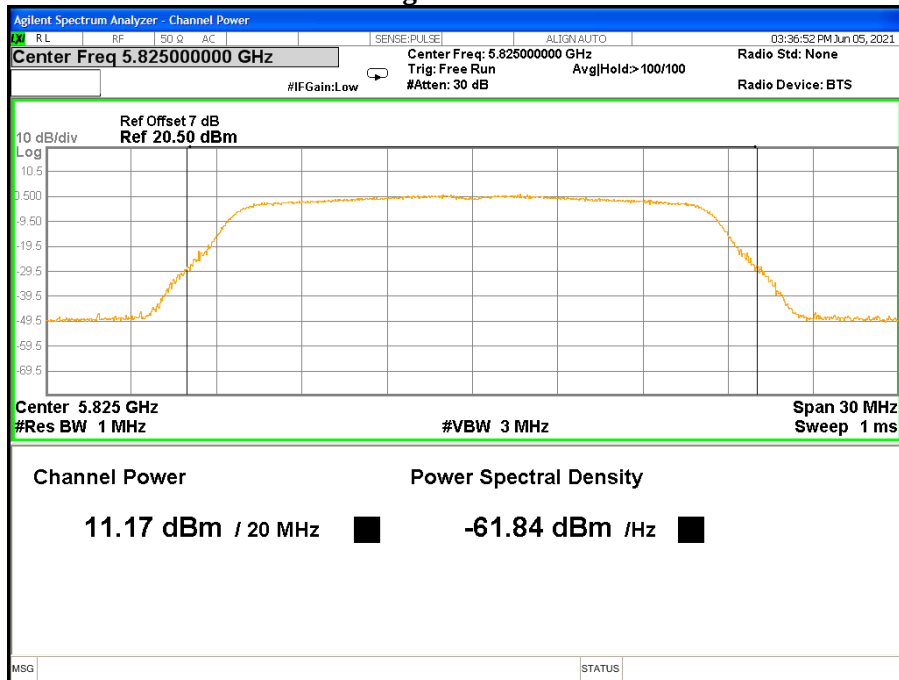
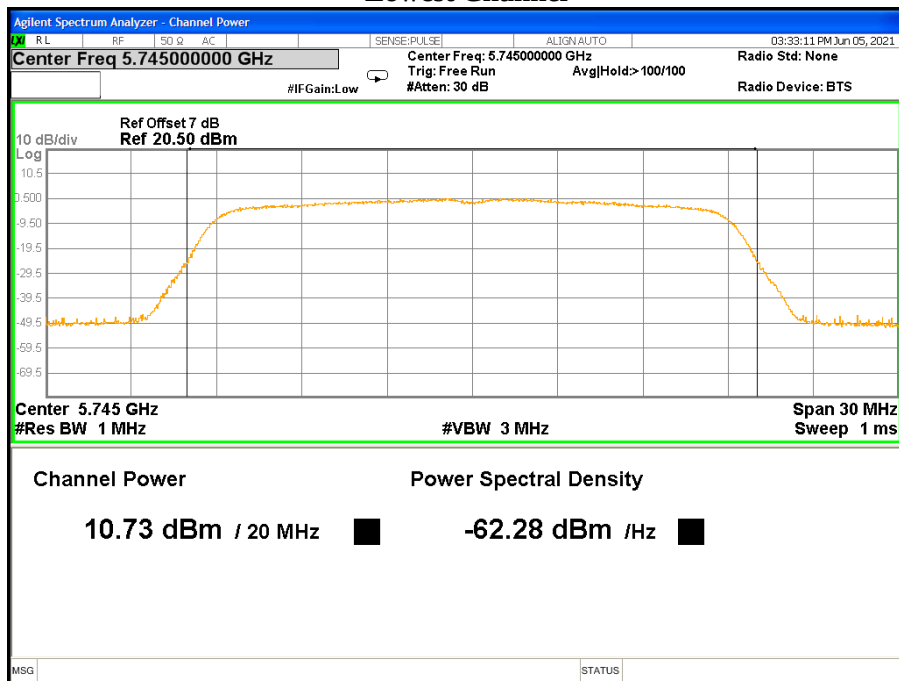
ANT B 802.11a Low Channel



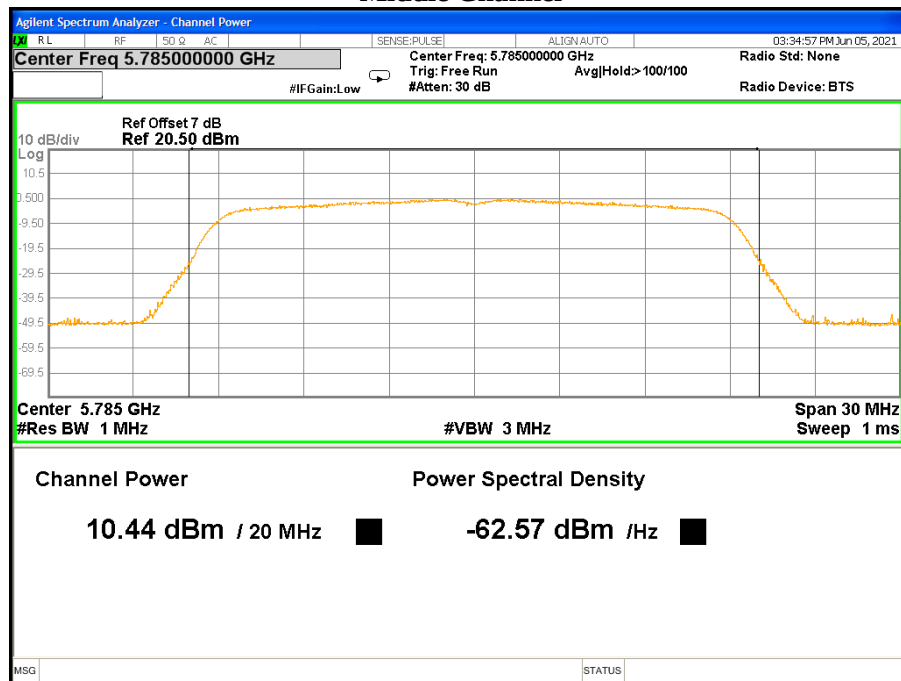
Middle Channel



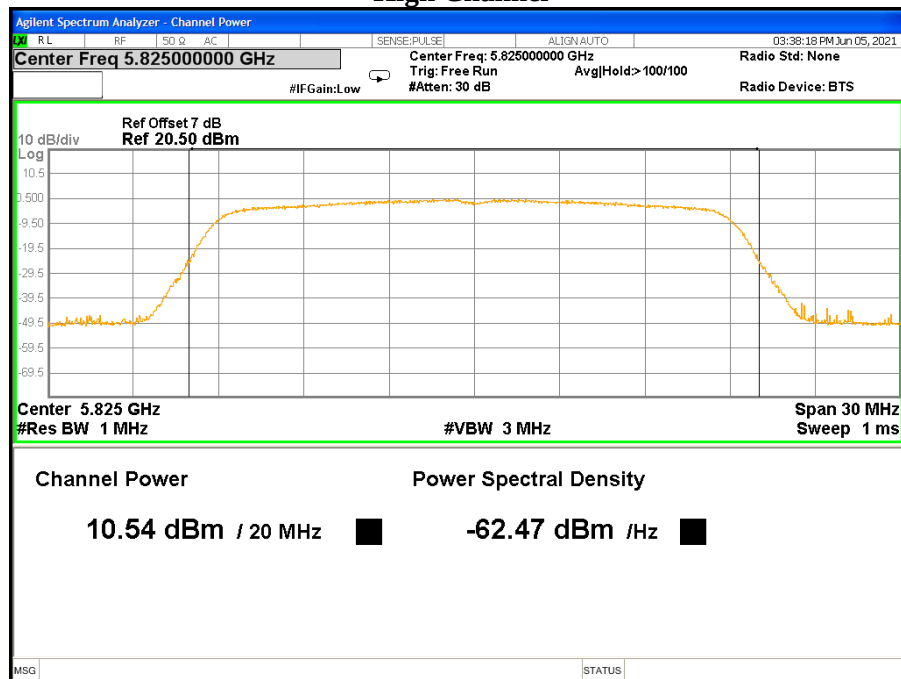
High Channel

802.11n(20M)
Lowest Channel

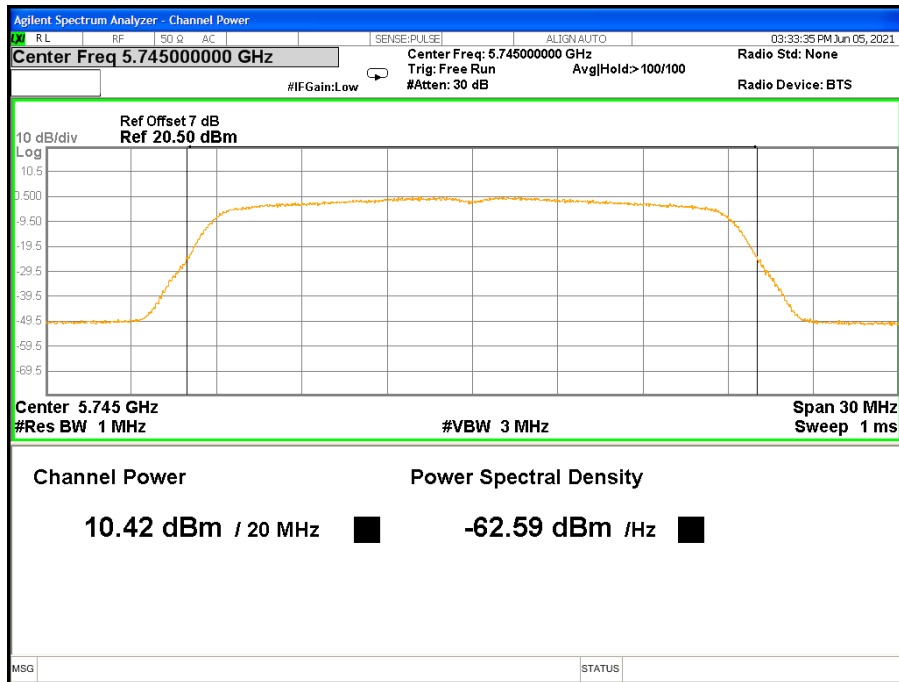
Middle Channel



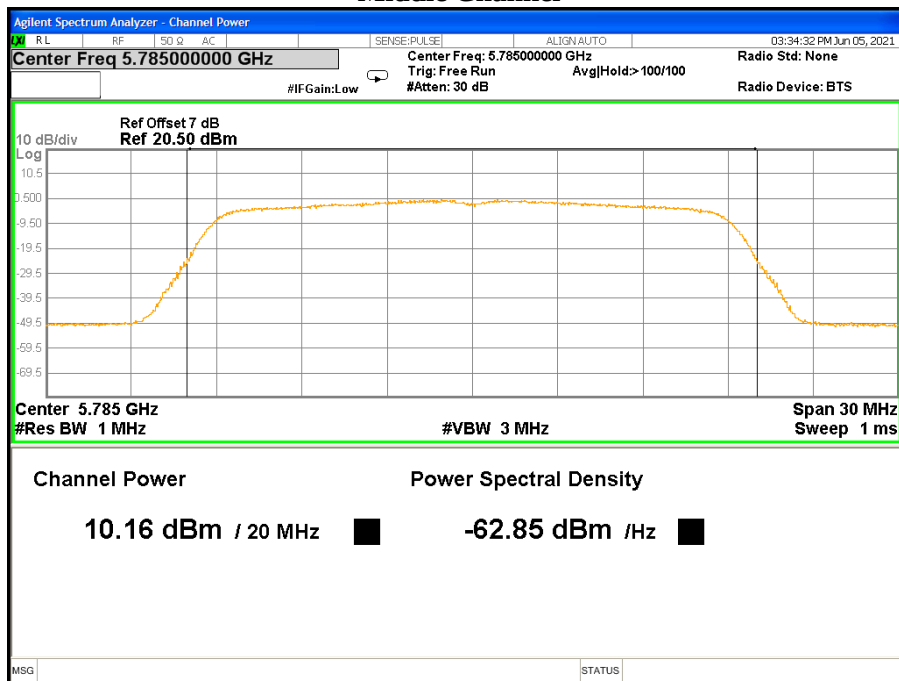
High Channel



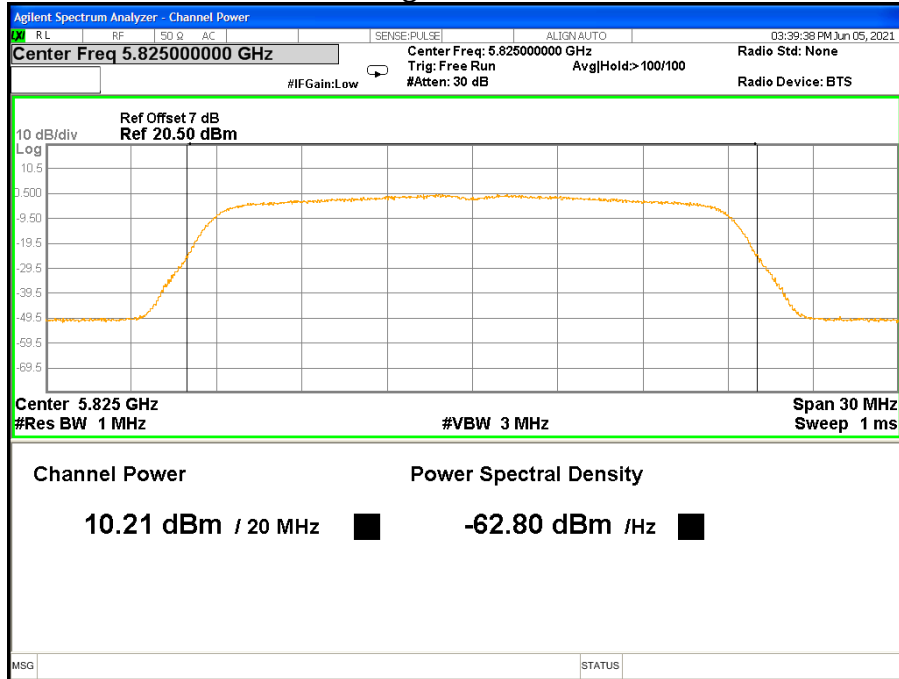
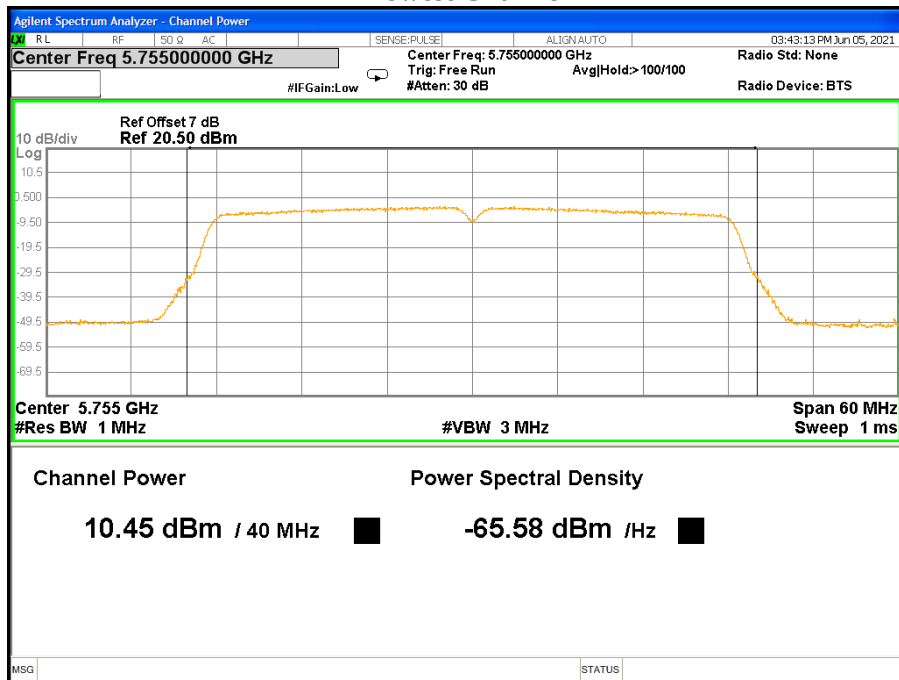
802.11ac(20M) Low Channel



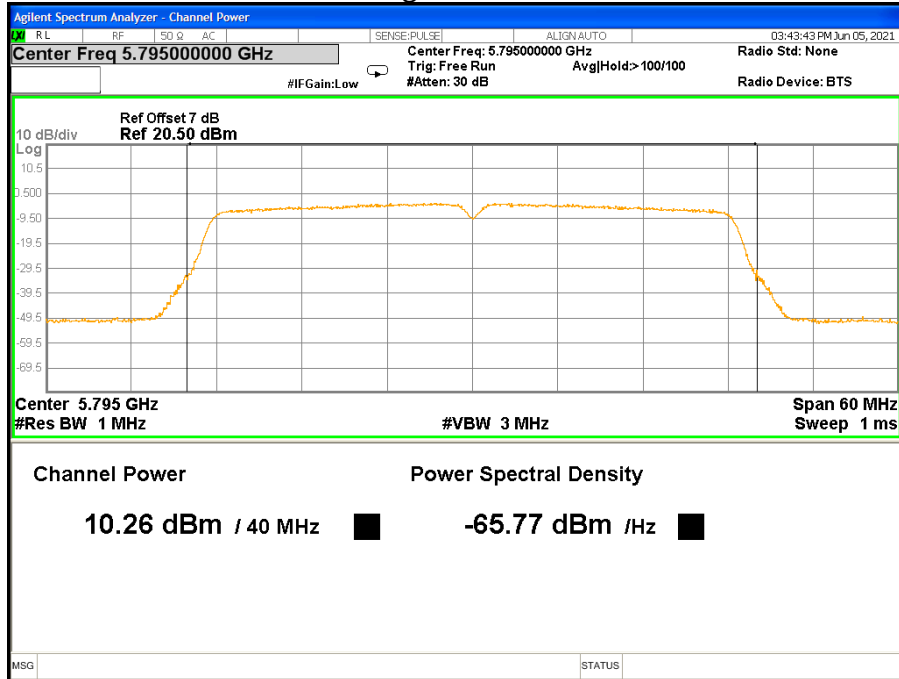
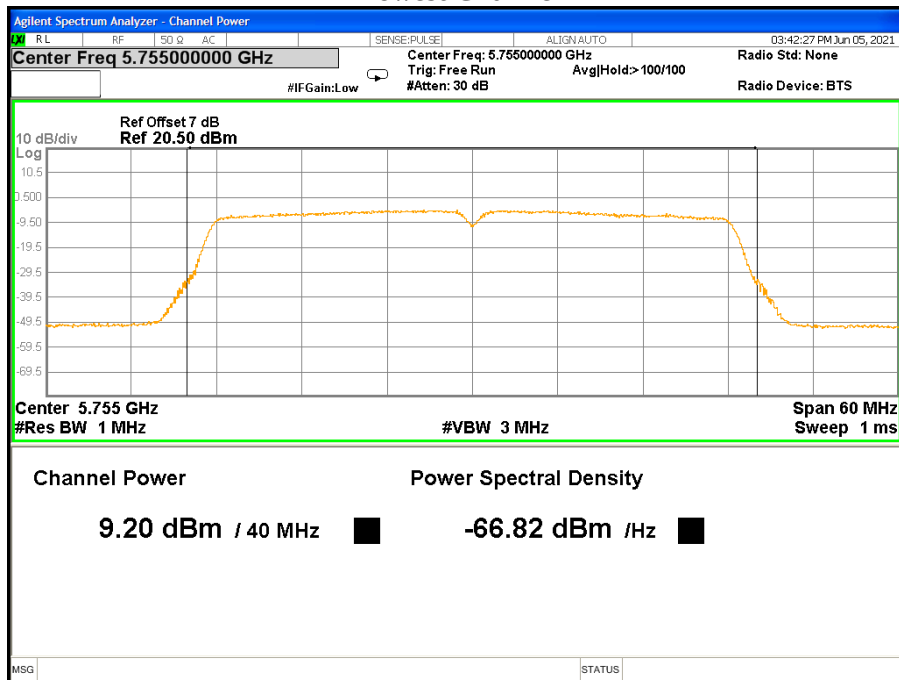
Middle Channel



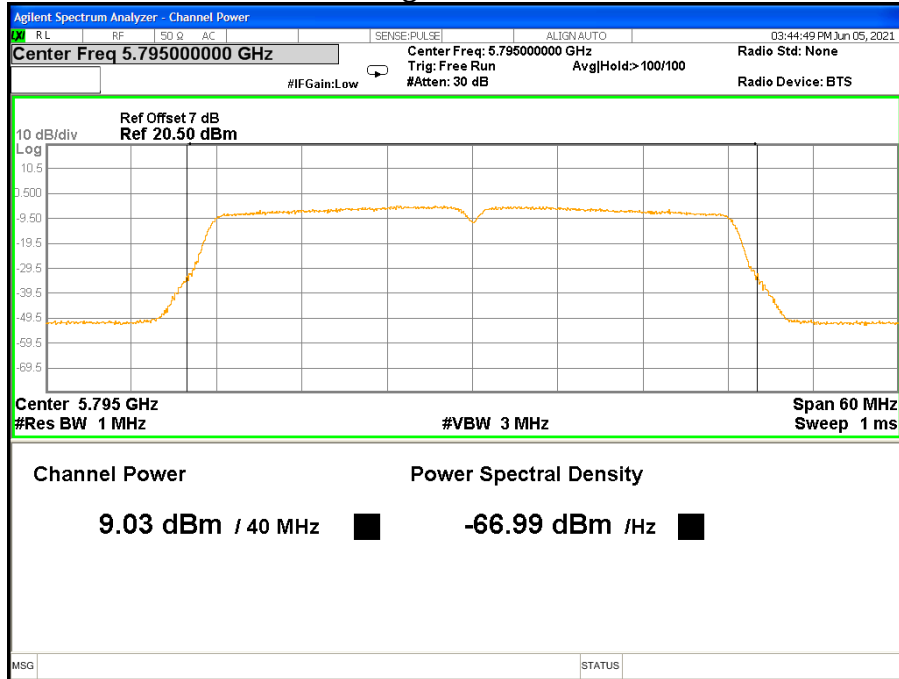
High Channel

802.11n(40M)
Lowest Channel

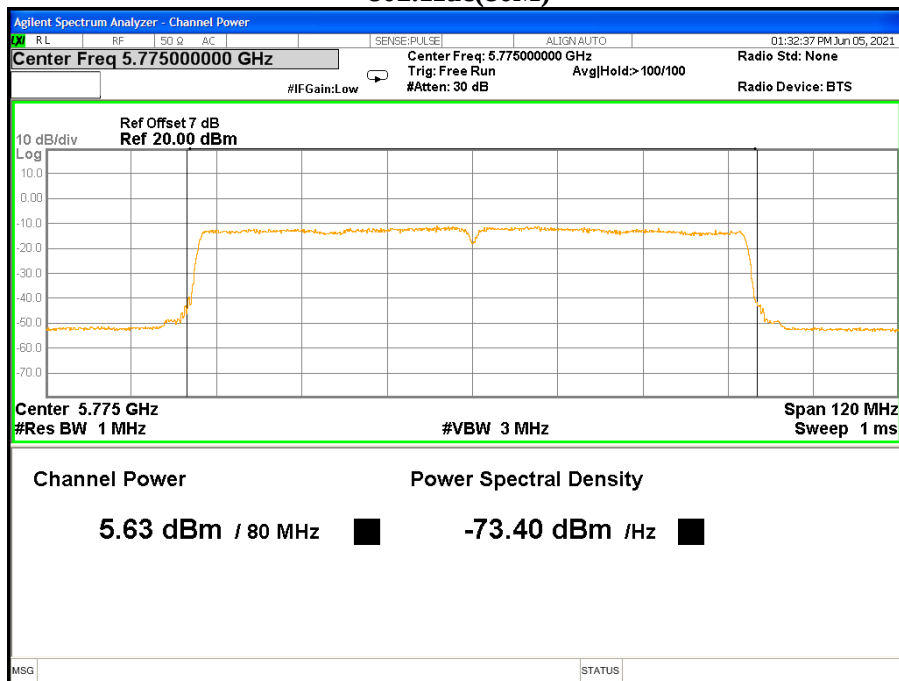
High Channel

802.11ac(40M)
Lowest Channel

High Channel



802.11ac(80M)



7. DYNAMIC FREQUENCY SELECTION (DFS)

7.1 APPLICABILITY OF DFS REQUIREMENTS

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

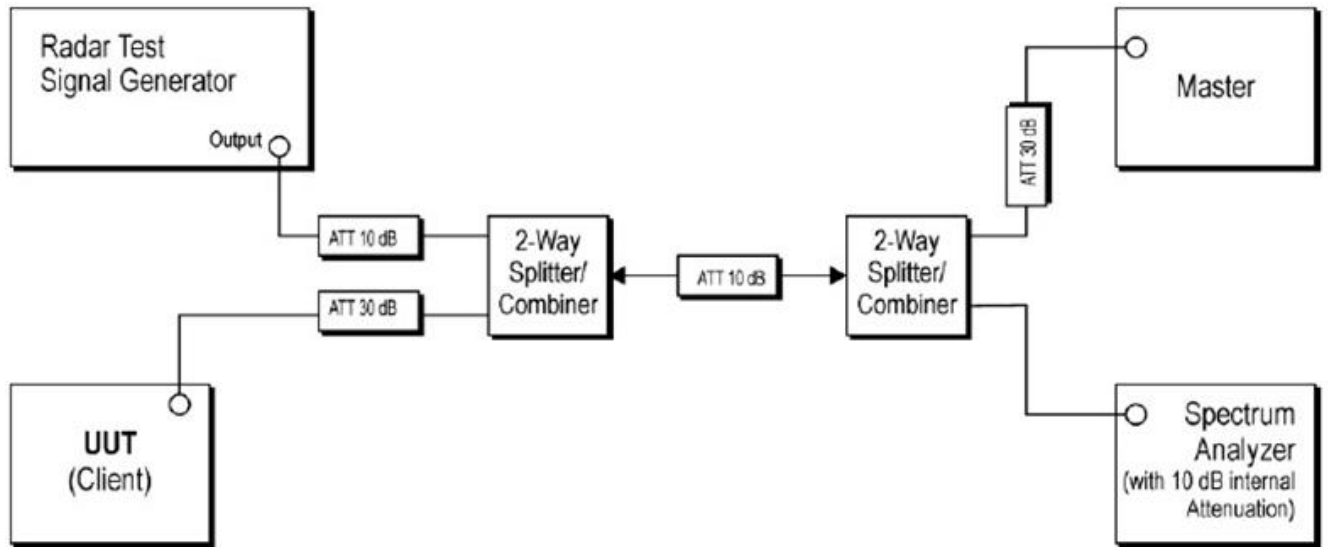
Requirement	Operational Mode		
	☐ Master	☒ Client Without Radar Detection	☐ Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	☒ Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	☒ Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

7.2 TEST SET-UP



7.3 LIMITS

Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value(See Notes 1, 2, and 3)
$\text{EIRP} \geq 200$ milliwatt	-64 dBm
$\text{EIRP} < 200$ milliwatt and power spectral density $< 10\text{dBm/MHz}$	-62 dBm
$\text{EIRP} < 200$ milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

RADAR TEST WAVEFORMS

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1

7.4 TEST PROCEDURE

1. When a Client Device without Radar Detection is the UUT, the Master Device is the Radar DetectionDevice.
2. A spectrum analyzer is used to establish the test signal level for each radartype.
3. During this process, there are no transmissions by either the Master Device or ClientDevice.
4. The spectrum analyzer is switched to the zero span (time domain) mode at the frequency of the Radar Waveformgenerator.Thepeakdetectorfunctionofthespectrumanalyzerisutilized.Thespectrumanalyzer resolution bandwidth (RBW) and video bandwidth (VBW) are set to at least 3MHz.
5. The measured channels are 5530MHz in 80MHz Bandwidth and 5290MHz in 80MHz Bandwidth. TheRadar signal was the same as transmitted channels, and injected into the antenna port of AP(master) ,measured the DFS parameters. The master transmitted the test data to client, the transmitted duty cycle is30.8%.

7.5 TEST RESULT

DFS DETECTIONTHRESHOLD

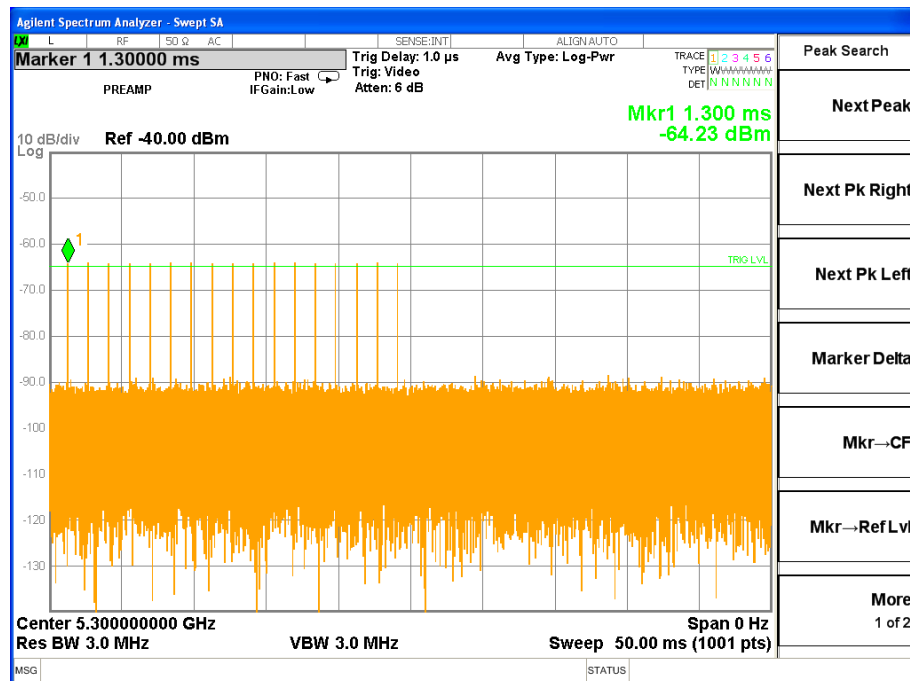
Calibration:

For a detection threshold level of -64dBm and the antenna gain is 6.99dBi, required detection threshold is -54.01 dBm (= -64+6.99).

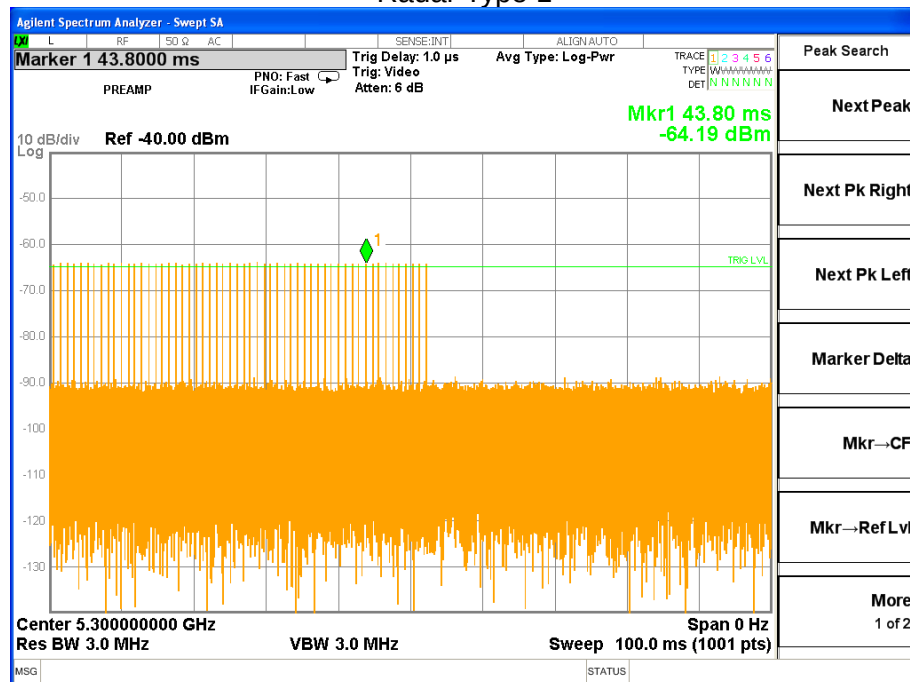
Note: Maximum Transmit Power is greater than 200 milliwatt in this report, so detection threshold level is -64dBm .

Note : This EUT does not support TPC.

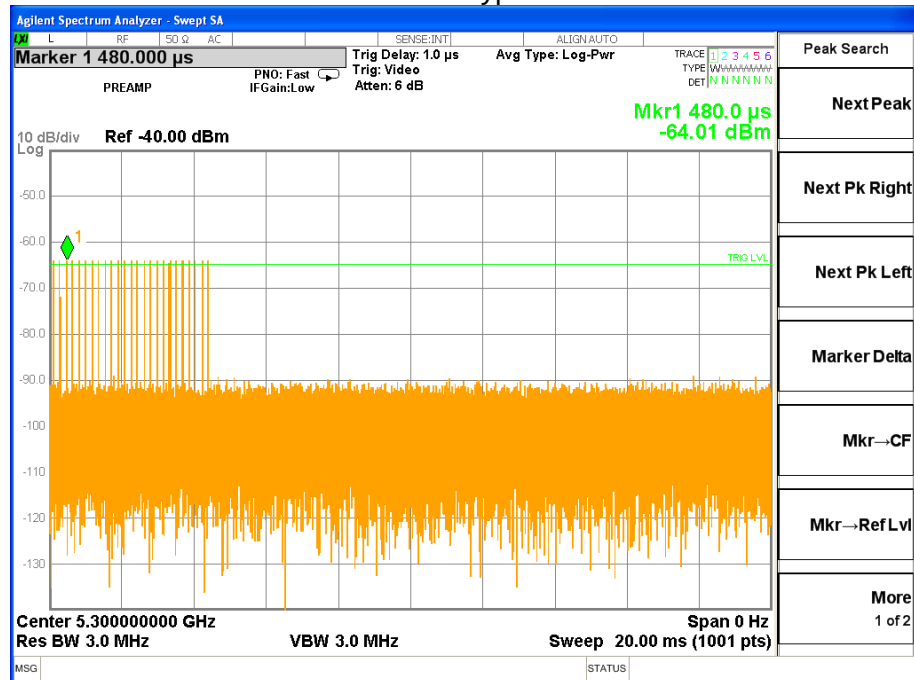
Radar Type 0



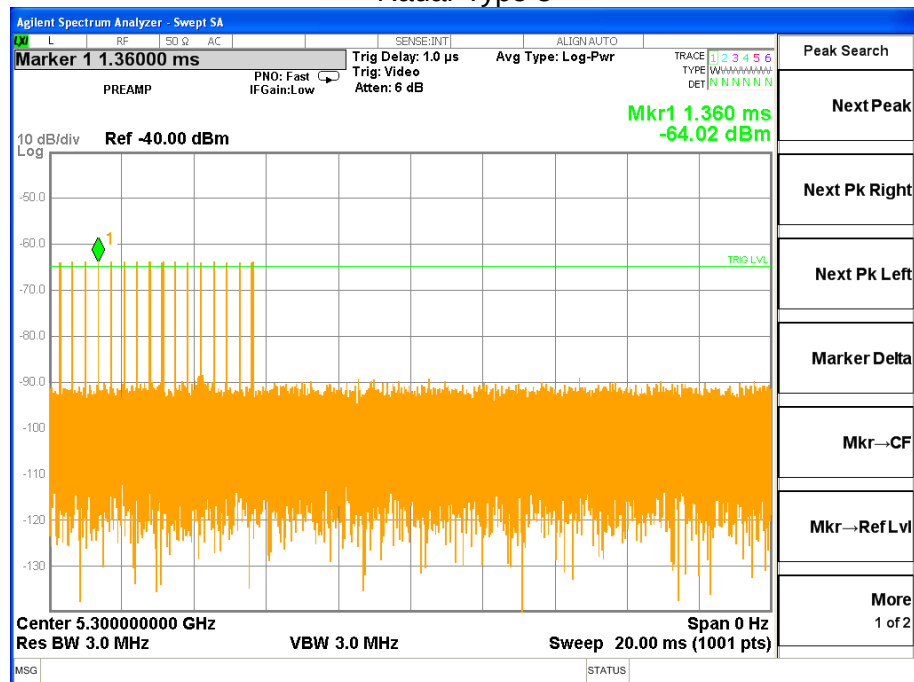
Radar Type 1



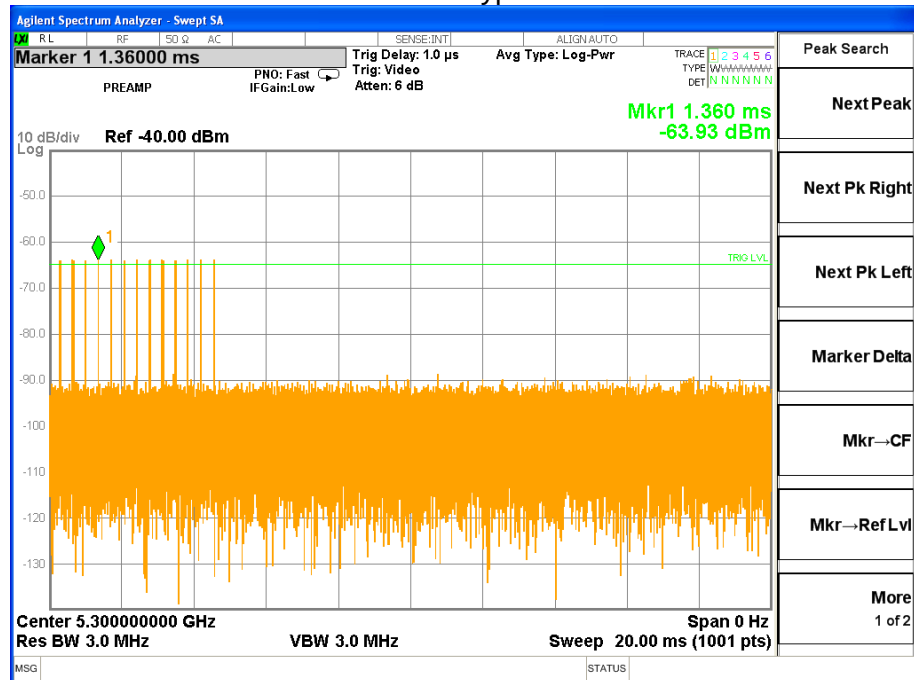
Radar Type 2



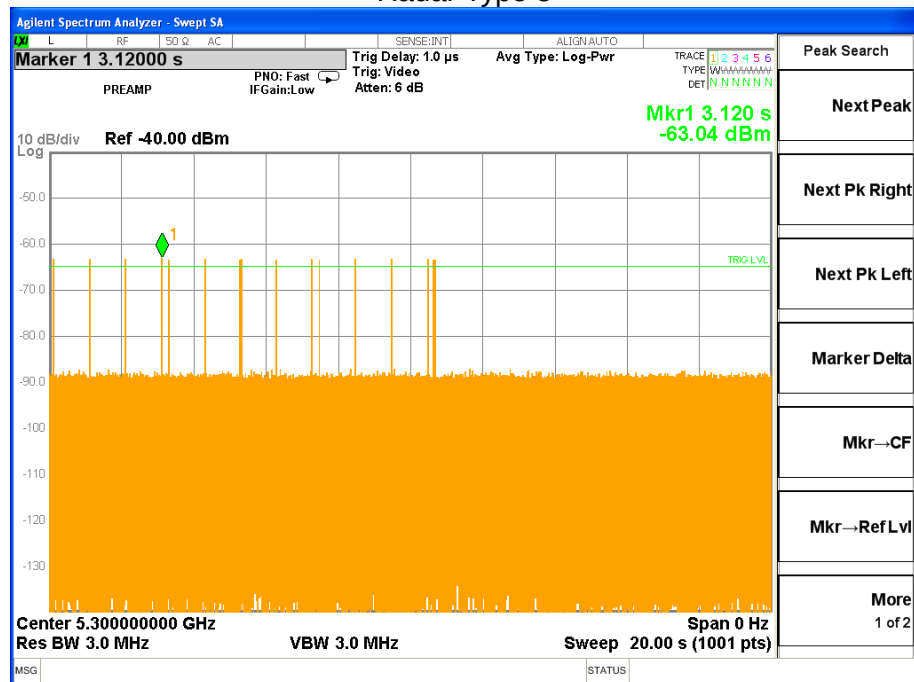
Radar Type 3



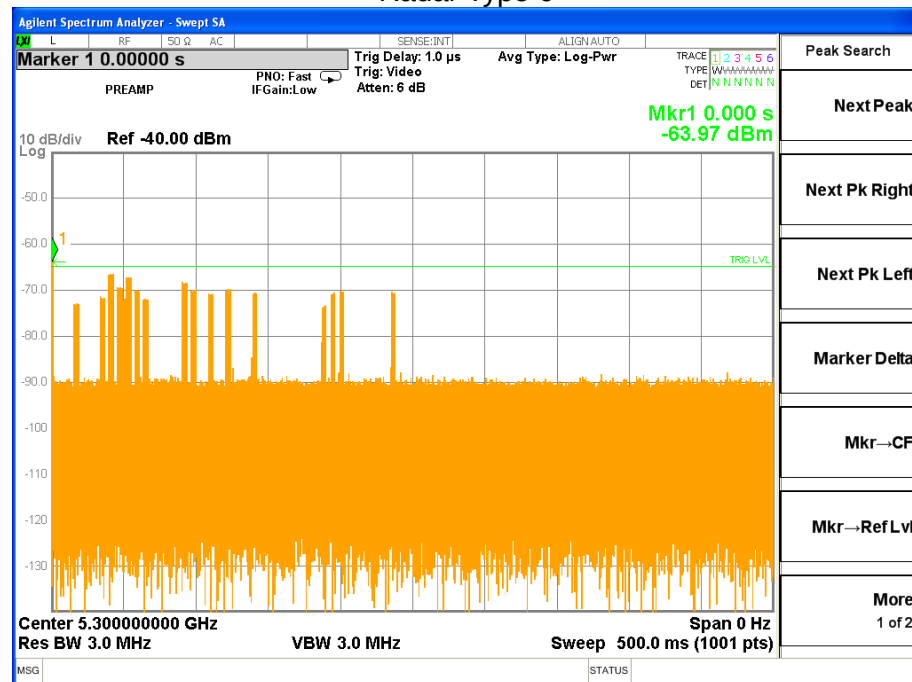
Radar Type 4



Radar Type 5



Radar Type 6



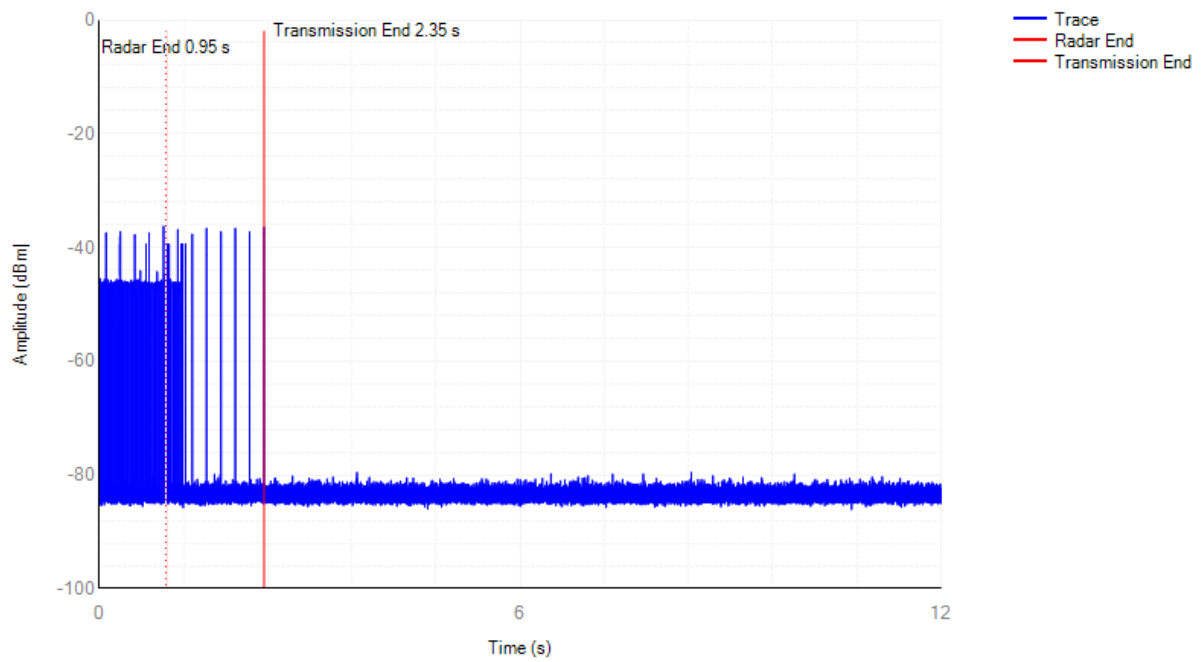
7.6 TEST RESULT

Shutdown Time

Mode	Frequency (MHz)	Channel Move Time (s)	Limit Channel Move Time (s)	Close Transmission Time (s)	Limit Close Transmission Time (s)	Verdict
ac80	5290	1.3977	10	0.0219	0.26	Pass
ac80	5530	1.3184	10	0.0246	0.26	Pass
a	5300	1.2765	10	0.0477	0.26	Pass
a	5580	1.2517	10	0.0456	0.26	Pass

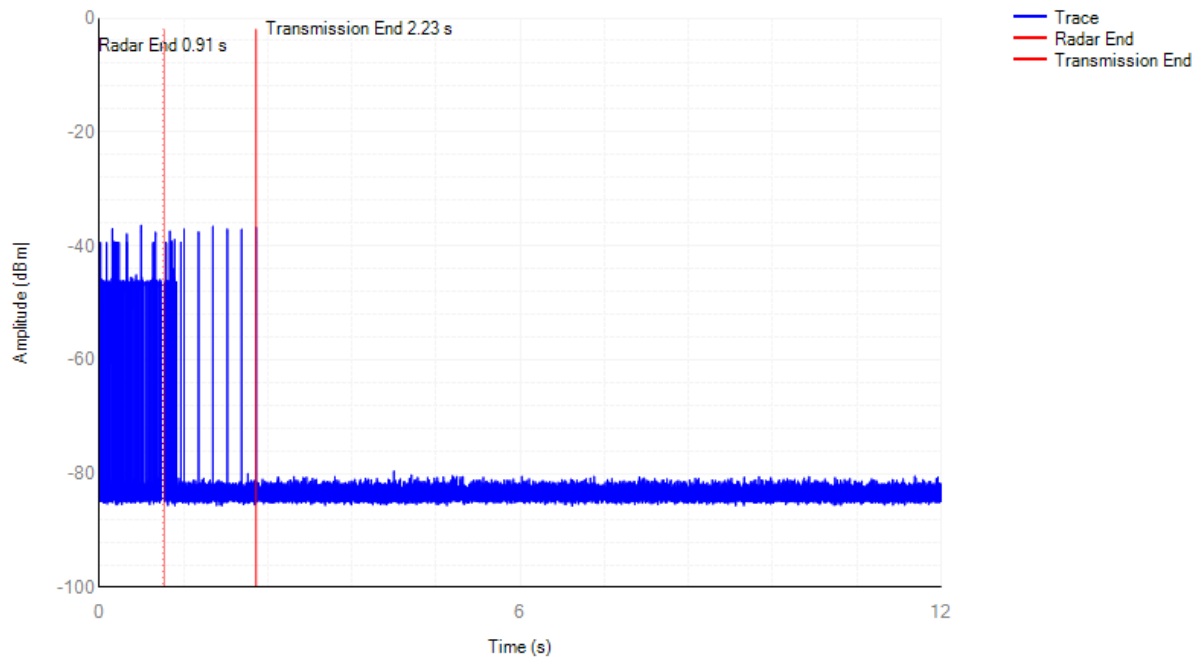
5290MHz ac80 Shutdown

Channel Shutdown



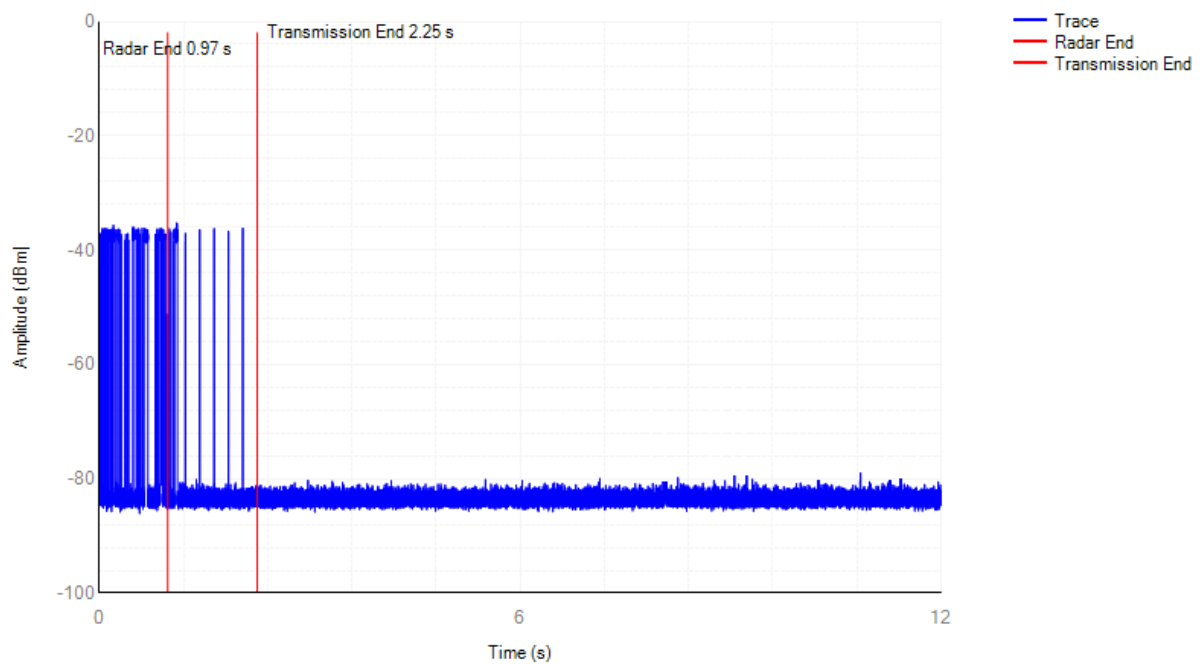
5530MHz ac80 Shutdown

Channel Shutdown



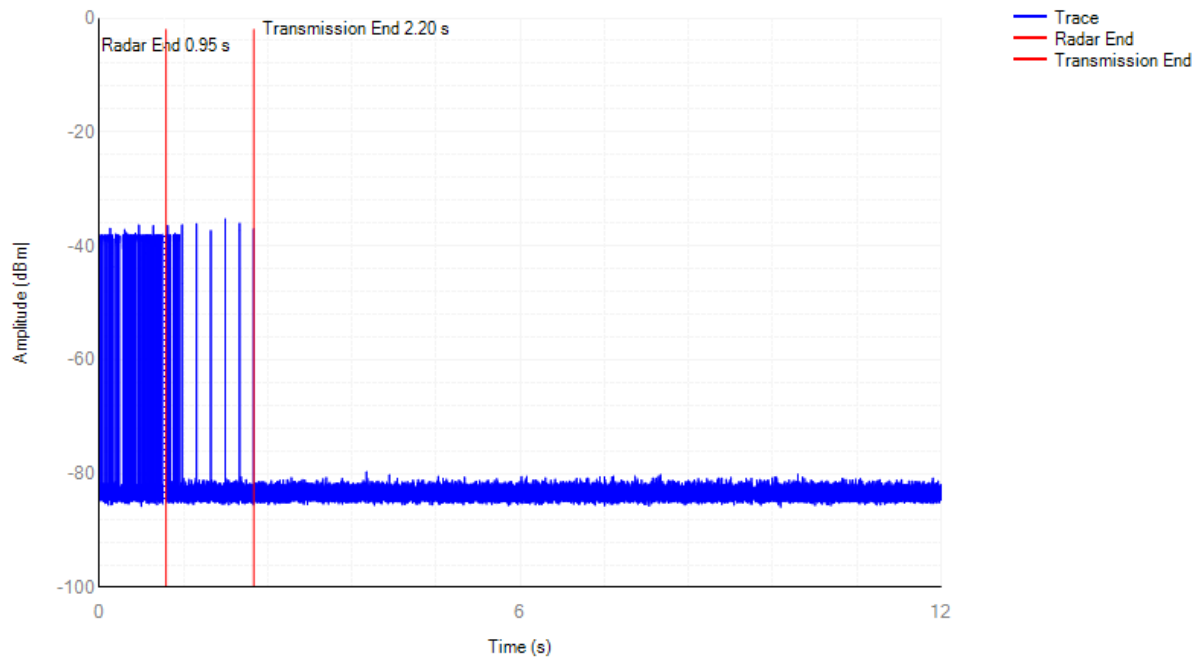
5300MHz a Shutdown

Channel Shutdown



5580MHz a Shutdown

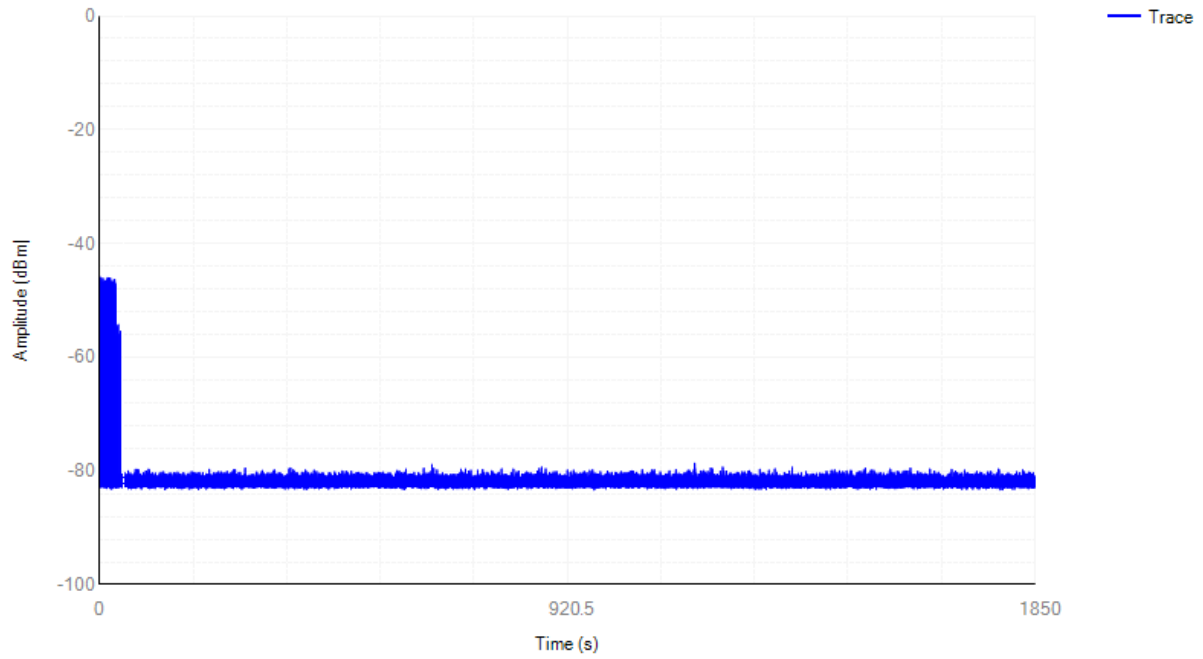
Channel Shutdown



Non-Occupancy

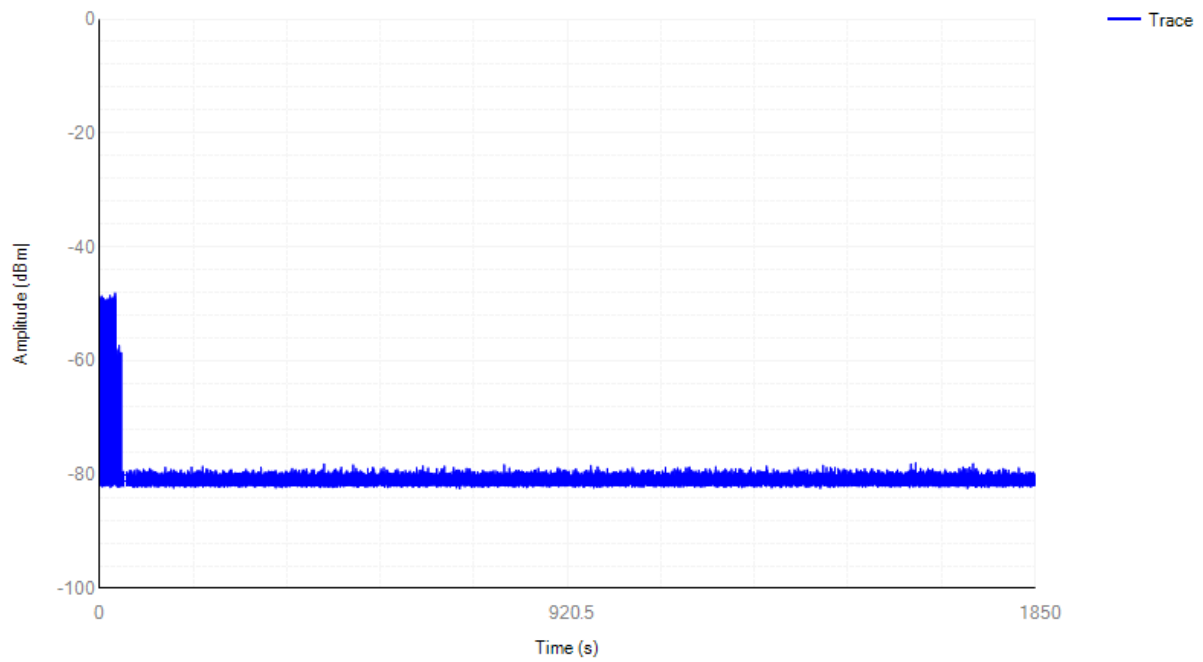
5290MHz ac80 Non-Occupancy

Non-Occupancy period



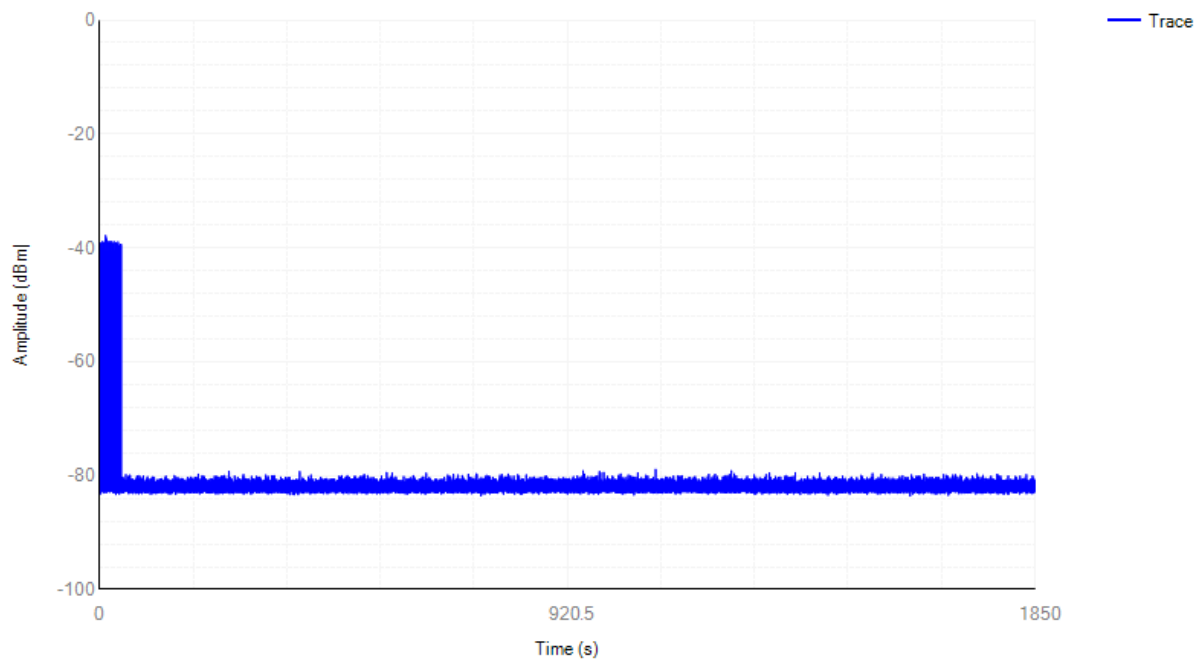
5530MHz ac80 Non-Occupancy

Non-Occupancy period



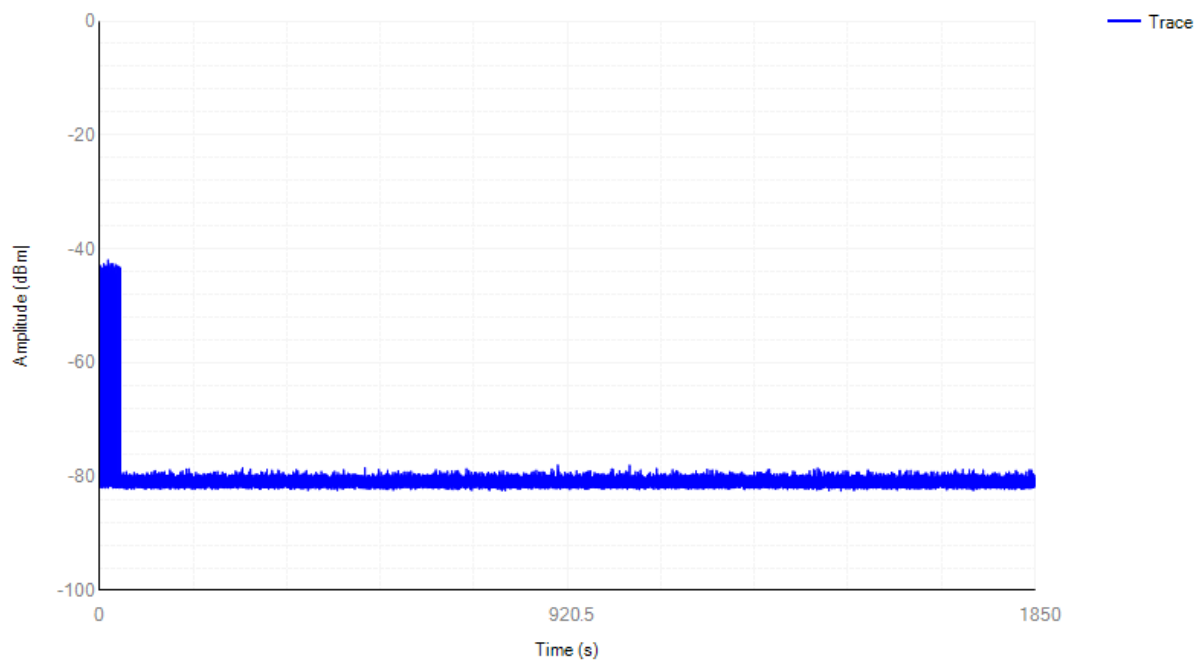
5300MHz a Non-Occupancy

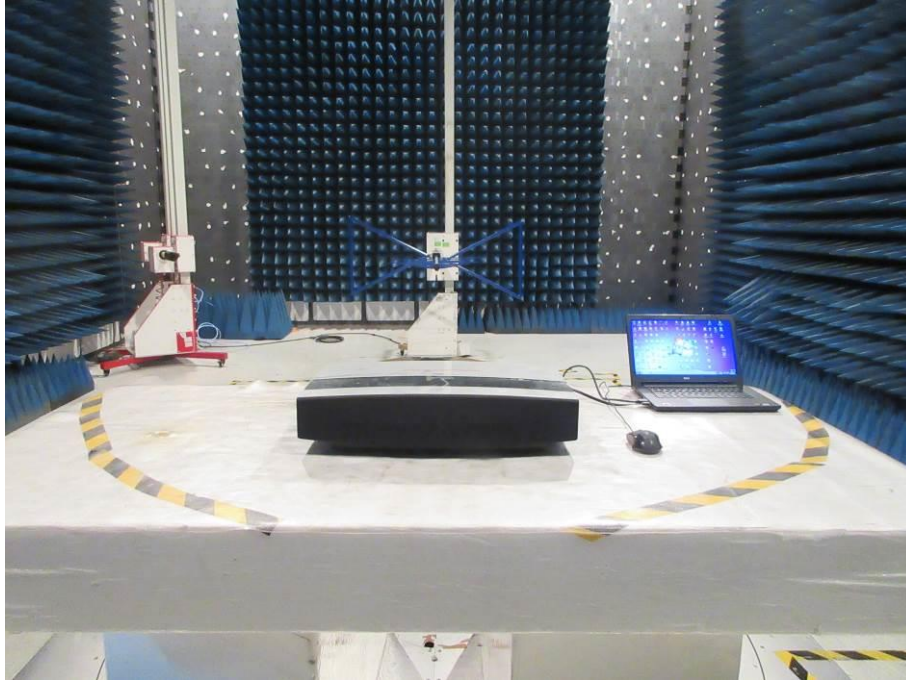
Non-Occupancy period



5580MHz a Non-Occupancy

Non-Occupancy period



8. EUT TEST PHOTO**Radiated Measurement Photos
30MHz-1GHz****Radiated Measurement Photos
Above 1GHz**

Conducted Measurement Photos



DFS



9. APPENDIX-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

Please refer to report APPENDIX.

**** End of Report ****