

Report No.: AAEMT/RF/240507-01-01

FCC RADIO TEST REPORT

Part 15 subpart E

FCC ID: 2ABZJ-100-000116

Report Reference No.....: AAEMT/RF/240507-01-01

Date of issue.....: 2024-08-28

Testing Laboratory.....: AA Electro Magnetic Test Laboratory Private Limited

Address: Plot No 174, Udyog Vihar - Phase 4, Sector 18,
Gurgaon, Haryana, India

*Applicant's name: Mimosa Networks, Inc.

*Address: 3150 Coronado Dr, Santa Clara, CA 95054, USA

*Manufacturer.....: Mimosa Networks, Inc.

*Address: 3150 Coronado Dr, Santa Clara, CA 95054, USA

*Test item description.....: Point to Point wireless device

Sampling Details: The below Test Item provided by applicant

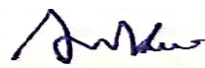
*Trade Mark: 

*Model/Type reference: B6x

Ratings: **Input of PoE: 100-240VAC, 50/60Hz, MAX 1.5A**
Output of PoE/Input of EUT: 50.0VDC, 1.2A 60.0W or DC
Power Input: +48VDC, 1A

Disclaimer: The * Information are provided by Manufacturer and it is verified through the Request form and Marking Label, AA Electro Magnetic Test Laboratory is not responsible for the above information accuracy. This device has been tested and found to comply with the stated standard(s) and indicated in the test report and are applicable only to the tested sample identified in the report. Note: This report shall not be reproduced except in full, without the written approval of AA Electro Magnetic Test Laboratory Private Limited, this document may be altered or revised by AA Electro Magnetic Test Laboratory Private Limited, personal only, and shall be noted in the revision of the document. This test report must not be used by the client to claim product endorsement.

Prepared By: (+ signature) Ankur Kumar



Reviewed & Approved by: (+ signature)



Dr. Lenin Raja (Authorized Representative) (/ lenin83/)

Report No.: AAEMT/RF/240507-01-01

TABLE OF CONTENTS

1.	Summary of test results.....	5
2.	General test information	6
2.1.	Description of EUT	6
2.2.	Accessories of EUT	7
2.3.	Assistant equipment used for test	7
3.	Equipment's List for All Test Items	8
3.1.	Block diagram of EUT configuration for test.....	10
3.2.	Test environment conditions.....	10
3.3.	Measurement uncertainty.....	10
4.	POWER SPECTRAL DENSITY TEST	11
4.1.	Block diagram of test setup	11
4.2.	Applied procedures / limit	11
4.3.	Test Procedure	12
4.4.	Test Result:	13
5.	26 dB & 99% Emission Bandwidth.....	90
5.1.	Block diagram of test setup	90
5.2.	Applied procedures / limit	90
5.3.	Test Procedure	90
5.4.	Test Result	91
6.	MAXIMUM CONDUCTED OUTPUT POWER.....	160
6.1.	Test Result	226
7.	Band Edges Measurement	230
7.1.	Test Result	231
8.	RADIATED EMISSION MEASUREMENT	273
8.1.	Block diagram of test setup	273
8.2.	Limit	275
8.3.	Test Procedure	276
8.4.	Test result(Below 30MHz)	278
9.	Power Line Conducted Emission.....	312
9.1.	Block diagram of test setup	312
9.2.	Power Line Conducted Emission Limits	312
9.3.	Test Procedure	313
9.4.	Test Result	313
10.	Conducted Spurious Emissions	316
11.	Antenna Requirements.....	403



Report No.: AAEMT/RF/240507-01-01

11.1.	Limit	403
11.2.	EUT ANTENNA	403



Report No.: AAEMT/RF/240507-01-01

TEST REPORT DECLARE

*Applicant	:	Mimosa Networks, Inc.
*Address	:	3150 Coronado Dr, Santa Clara, CA 95054, USA
*Equipment under Test	:	Point to Point wireless device
*Model No	:	B6x
*Trade Mark	:	
*Manufacturer	:	Mimosa Networks, Inc.
*Address	:	3150 Coronado Dr, Santa Clara, CA 95054, USA

Test Standard Used: FCC Part 15E 15.407

Test procedure used: ANSI C63.10-2013 and KDB 789033 D02 General UNII Test Procedures New Rules v02r01 .

We Declare:

The equipment described above is tested by AA Electro Magnetic Test Laboratory Private Limited and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and AA Electro Magnetic Test Laboratory Private Limited is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.

Report No:	AAEMT/RF/240507-01-01		
Date of Test:	May 07, 2024~ Aug. 27, 2024	Date of Report:	Aug. 30, 2024

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of AA Electro Magnetic Test Laboratory Private Limited

Report No.: AAEMT/RF/240507-01-01

1. SUMMARY OF TEST RESULTS

The EUT have been tested according to the applicable standards as referenced below.		
FCC Part15 (15.407) , Subpart E		
Description of Test Item	Standard	Results
AC Power Line Conducted Emissions	FCC §15.207/ RSS-Gen	PASS
Spurious Radiated Emissions	FCC §15.209(a), 15.407(b)	PASS
26 dB and 99% Emission Bandwidth	FCC §15.407(a)	PASS
Maximum Conducted Output Power	FCC §407(a) (1)	PASS
Band Edges	FCC §2.1051, §15.407(b)	PASS
Power Spectral Density	FCC §15.407(a)(1)	PASS
Spurious Emissions at Antenna Terminals	FCC §2.1051, §15.407(b)	PASS
Antenna Requirement	FCC §15.203	PASS

2. GENERAL TEST INFORMATION

2.1. DESCRIPTION OF EUT

*EUT Name	:	B6x
*Model Number	:	B6x
Power supply	:	Input of PoE: 100-240VAC, 50/60Hz, MAX 1.5A Output of PoE/Input of EUT: 50.0VDC, 1.2A 60.0W
Operation frequency	:	WiFi: 802.11ac (VHT20)/ax (HE20): 5180MHz~5240MHz; 5260~5320MHz, 5500~5700MHz, 5745MHz~5825MHz 802.11ac (VHT40)/ax (HE40): 5190MHz~5230MHz; 5270~5310MHz, 5510~5670MHz, 5755MHz~5795MHz 802.11ac (VHT80)/ax (HE80):5210MHz; 5290MHz, 5530~5610MHz, 5775MHz 802.11ac (VHT160)/ax (HE160): 5570MHz
Modulation	:	802.11ac/ax: BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM
Data Rate	:	802.11ac(VHT20): MCS0-MCS11 802.11ac(VHT40/80/160): MCS0-MCS11 802.11ax(HE20/40/80/160): MCS0-MCS11
Antenna Type	:	External (Screw on): Cassegrain
Antenna gain	:	25 dBi
Antenna Function Description	:	802.11ac20/ax20 802.11ac40/ax40 802.11ac80/ax80 802.11ac160/ax160 ANT0, ANT1
*H/W No.	:	100-00116
*S/W No.	:	3.3.0-4
Battery	:	N/A
Date of Receipt	:	May 07, 2024
Condition of Sample on receipt	:	Good
Note:	:	1 .For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2. Antenna gain and antenna type provided by manufacturer.
Opinions and Interpretations:	:	See the specific Note / Annexure if any in the whole /full report /NA

Channel List							
802.11ac/ax (20MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	40	5200	44	5220	48	5240
52	5260	56	5280	60	5300	64	5320
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700	149	5745
153	5765	157	5785	161	5805	165	5825
802.11ac/ax (40MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230	54	5270	62	5310
102	5510	110	5550	118	5590	126	5630
134	5670	151	5755	159	5795	--	--
802.11ac/ax (80MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	58	5290	106	5530	122	5610
155	5775	--	--	--	--	--	--
802.11ac/ax (160MHz)							
114	5570	--	--	--	--	--	--

2.2. ACCESSORIES OF EUT

Description of Accessories	Shielded Type	Ferrite Core	Length
PoE Injector	-	-	1m unshielded Cable

2.3. ASSISTANT EQUIPMENT USED FOR TEST

Description of Assistant equipment	Manufacturer	Model number or Type	EMC Compliance	SN
Laptop	DELL	Latitude 3490	-	5M2Z1W2

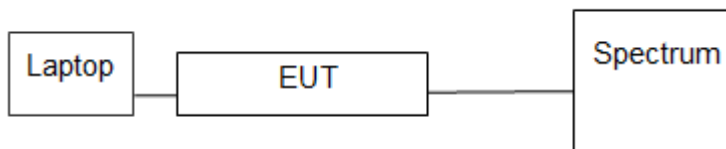
3.EQUIPMENT'S LIST FOR ALL TEST ITEMS

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal.Due Date
1	Spectrum Analyzer	Rohde and Schwarz	FSP	101163	2023/02/13	2025/02/13
2	Loop antenna	DAZE Beijing	ZN30900C	18052	2023/09/15	2026/09/15
3	Hi power horn antenna	DAZE Beijing	ZN30700	18012	2023/09/11	2026/09/10
4	MXA Signal Analyzer	Keysight	N9020A	6272323218	2023/07/27	2025/07/27
5	Horn antenna	DAZE Beijing	ZN30703	18005	2023/09/11	2026/09/10
6	Pre amplifier	KELIANDA	LNA-0009295	-	2024/01/10	2025/01/10
7	Pre amplifier	KELIANDA	CF-00218	-	2024/01/10	2025/01/10
8	Biconical Antenna	DAZE Beijing	ZN30505C	17038	2023/09/11	2026/09/10
9	EMI-RECEIVER	Schwarzbeck	FCKL	1528194	2024/01/10	2025/01/10
10	LISN	Kyoritsu	KNW-407	8-1789-5	2024/01/10	2025/01/10
11	Network-LISN	SCHWAR ZBECK	NNBM8125	81251314	2024/01/10	2025/01/10
12	Network-LISN	SCHWAR ZBECK	NNBM8125	81251315	2024/01/10	2025/01/10
13	PULSELIMITER	Rohde and Schwarz	ESH3-Z2	100681	-	-
14	50Ω Coaxial Switch	DAIWA	1565157	-	-	-
15	50Ω Coaxial Switch	-	-	-	-	-
16	Wireless signal power meter	DARE!!	RPR3006W	RFSW190220	2024/01/13	2025/01/13
17	Signal Generator	KEYSIGHT	N5181A	512071	2024/01/10	2026/01/10
18	RF Vector Signal Generator	Keysight	N5182B	512094	2024/01/10	2026/01/10

Report No.: AAEMT/RF/240507-01-01

19	Spectrum analyzer	R&S	FSV-40N	101385	2023/04/28	2024/04/28
20	Radio Communication Tester	R&S	CMW 500	124589	2023/09/08	2025/09/08
21	Signal Generator	R&S	SMP02	837017/004 836593/005	2023/09/08	2025/09/08
22	DC Regulated Power Supply	Mettravi	RPS-3005	669076	2023/12/12	2024/12/11
23	Climatic Chamber	Sunrise Scientific Instruments	-	-	2023/11/08	2024/11/07
24	Attenuators	AGILENT	8494B	-	-	-
25	Attenuators	AGILENT	8495B	-	-	-
26	Radio Communication Analyzer	Anritsu	MT8820C	6201396651	2024/01/10	2026/01/10
27	Radio Communication Analyzer	Anritsu	MT8821C	6272533819	2023/12/08	2024/12/08

3.1. BLOCK DIAGRAM OF EUT CONFIGURATION FOR TEST



3.2. TEST ENVIRONMENT CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25°C
Humidity range:	40-75%
Pressure range:	86-106kPa

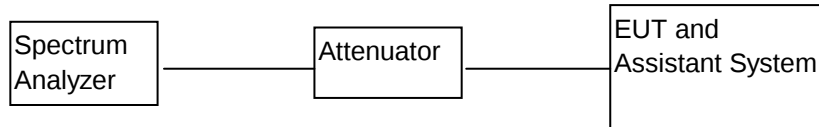
3.3. MEASUREMENT UNCERTAINTY

No.	Item	Uncertainty
1	Conducted Emission Test	2.70dB
2	Radiated Emission Test	3.09dB
3	RF power, conducted	2.46dB
4	RF power density, conducted	2.24dB
5	Spurious emissions, conducted	2.71dB
6	All emissions, radiated(<1G)	3.08dB
7	All emissions, radiated(>1G)	3.09dB

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4. POWER SPECTRAL DENSITY TEST

4.1. BLOCK DIAGRAM OF TEST SETUP



4.2. APPLIED PROCEDURES / LIMIT

According to FCC §15.407(a)(3)

For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omni directional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi..

4.3. TEST PROCEDURE

(For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set $RBW \geq 1/T$, where T is defined in section II.B.1.a).
- b) Set $VBW \geq 3$ RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHz is available on nearly all spectrum analyzers.

Report No.: AAEMT/RF/240507-01-01

4.4. TEST RESULT:

Antenna 0:

CH. No.	Frequency	Power density (dBm/MHz)	Limit (dBm/MHz)	Result
TX 802.11ac20 Mode				
CH36	5180	8.04	15.00	Pass
CH40	5200	8.10	15.00	Pass
CH48	5240	9.40	15.00	Pass
TX 802.11ac40 Mode				
CH38	5190	6.07	15.00	Pass
CH46	5230	7.54	15.00	Pass
TX 802.11ac80 Mode				
CH42	5210	2.66	15.00	Pass
TX 802.11ax20 Mode				
CH36	5180	10.53	15.00	Pass
CH40	5200	10.75	15.00	Pass
CH48	5240	11.02	15.00	Pass
TX 802.11ax40 Mode				
CH38	5190	8.53	15.00	Pass
CH46	5230	10.05	15.00	Pass
TX 802.11ax80 Mode				
CH42	5210	5.15	15.00	Pass

CH. No.	Frequency	Power density (dBm/MHz)	Limit (dBm/MHz)	Result
TX 802.11ac20 Mode				
CH52	5260	-15.70	-8.00	Pass
CH60	5300	-15.80	-8.00	Pass
CH64	5320	-16.00	-8.00	Pass
TX 802.11ac40 Mode				
CH54	5270	-18.64	-8.00	Pass
CH62	5310	-19.27	-8.00	Pass
TX 802.11ac80 Mode				
CH58	5290	-20.49	-8.00	Pass
TX 802.11ax20 Mode				
CH52	5260	-12.33	-8.00	Pass
CH60	5300	-12.51	-8.00	Pass
CH64	5320	-13.18	-8.00	Pass
TX 802.11ax40 Mode				
CH54	5270	-15.02	-8.00	Pass
CH62	5310	-14.88	-8.00	Pass
TX 802.11ax80 Mode				
CH58	5290	-17.63	-8.00	Pass

Report No.: AAEMT/RF/240507-01-01

CH. No.	Frequency	Power density (dBm/MHz)	Limit (dBm/MHz)	Result
TX 802.11ac20 Mode				
CH100	5500	-16.87	-8.00	Pass
CH116	5580	-14.93	-8.00	Pass
CH140	5700	-14.80	-8.00	Pass
TX 802.11ac40 Mode				
CH102	5510	-20.57	-8.00	Pass
CH110	5550	-18.82	-8.00	Pass
CH134	5670	-16.28	-8.00	Pass
TX 802.11ac80 Mode				
CH106	5530	-22.43	-8.00	Pass
CH122	5610	-18.71	-8.00	Pass
TX 802.11ac160 Mode				
CH114	5570	-22.37	-8.00	Pass
TX 802.11ax20 Mode				
CH100	5500	-13.43	-8.00	Pass
CH116	5580	-12.42	-8.00	Pass
CH140	5700	-12.29	-8.00	Pass
TX 802.11ax40 Mode				
CH102	5510	-17.84	-8.00	Pass
CH110	5550	-16.60	-8.00	Pass
CH134	5670	-13.81	-8.00	Pass
TX 802.11ax80 Mode				
CH106	5530	-20.54	-8.00	Pass
CH122	5610	-16.82	-8.00	Pass
TX 802.11ax160 Mode				
CH114	5570	-18.55	-8.00	Pass

Report No.: AAEMT/RF/240507-01-01

CH. No.	Frequency	Power density (dBm/500KHz)	Limit (dBm/500KHz)	Result
TX 802.11ac20 Mode				
CH 149	5745	4.59	11.00	Pass
CH 157	5785	4.00	11.00	Pass
CH 165	5825	4.96	11.00	Pass
TX 802.11ac40 Mode				
CH151	5755	3.77	11.00	Pass
CH159	5795	2.82	11.00	Pass
TX 802.11ac80 Mode				
CH155	5775	2.74	11.00	Pass
TX 802.11ax20 Mode				
CH 149	5745	6.74	11.00	Pass
CH 157	5785	6.12	11.00	Pass
CH 165	5825	6.39	11.00	Pass
TX 802.11ax40 Mode				
CH151	5755	6.14	11.00	Pass
CH159	5795	5.13	11.00	Pass
TX 802.11ax80 Mode				
CH155	5775	3.41	11.00	Pass

Report No.: AAEMT/RF/240507-01-01

Antenna 1:

CH. No.	Frequency	Power density (dBm/MHz)	Limit (dBm/MHz)	Result
TX 802.11ac20 Mode				
CH36	5180	6.05	15.00	Pass
CH40	5200	6.74	15.00	Pass
CH48	5240	9.45	15.00	Pass
TX 802.11ac40 Mode				
CH38	5190	5.00	15.00	Pass
CH46	5230	7.30	15.00	Pass
TX 802.11ac80 Mode				
CH42	5210	2.96	15.00	Pass
TX 802.11ax20 Mode				
CH36	5180	9.21	15.00	Pass
CH40	5200	9.09	15.00	Pass
CH48	5240	11.05	15.00	Pass
TX 802.11ax40 Mode				
CH38	5190	7.18	15.00	Pass
CH46	5230	10.44	15.00	Pass
TX 802.11ax80 Mode				
CH42	5210	3.50	15.00	Pass

Report No.: AAEMT/RF/240507-01-01

CH. No.	Frequency	Power density (dBm/MHz)	Limit (dBm/MHz)	Result
TX 802.11ac20 Mode				
CH52	5260	-15.57	-8.00	Pass
CH60	5300	-15.16	-8.00	Pass
CH64	5320	-14.98	-8.00	Pass
TX 802.11ac40 Mode				
CH54	5270	-18.57	-8.00	Pass
CH62	5310	-17.98	-8.00	Pass
TX 802.11ac80 Mode				
CH58	5290	-20.81	-8.00	Pass
TX 802.11ax20 Mode				
CH52	5260	-12.00	-8.00	Pass
CH60	5300	-12.30	-8.00	Pass
CH64	5320	-12.53	-8.00	Pass
TX 802.11ax40 Mode				
CH54	5270	-14.45	-8.00	Pass
CH62	5310	-14.73	-8.00	Pass
TX 802.11ax80 Mode				
CH58	5290	-18.50	-8.00	Pass

Report No.: AAEMT/RF/240507-01-01

CH. No.	Frequency	Power density (dBm/MHz)	Limit (dBm/MHz)	Result
TX 802.11ac20 Mode				
CH100	5500	-21.24	-8.00	Pass
CH116	5580	-18.09	-8.00	Pass
CH140	5700	-16.61	-8.00	Pass
TX 802.11ac40 Mode				
CH102	5510	-23.96	-8.00	Pass
CH110	5550	-22.45	-8.00	
CH134	5670	-17.22	-8.00	Pass
TX 802.11ac80 Mode				
CH106	5530	-23.63	-8.00	Pass
CH122	5610	-21.61	-8.00	Pass
TX 802.11ac160 Mode				
CH114	5570	-26.09	-8.00	Pass
TX 802.11ax20 Mode				
CH100	5500	-16.30	-8.00	Pass
CH116	5580	-13.53	-8.00	Pass
CH140	5700	-12.22	-8.00	Pass
TX 802.11ax40 Mode				
CH102	5510	-19.47	-8.00	Pass
CH110	5550	-17.38	-8.00	
CH134	5670	-14.02	-8.00	Pass
TX 802.11ax80 Mode				
CH106	5530	-22.19	-8.00	Pass
CH122	5610	-17.83	-8.00	Pass
TX 802.11ax160 Mode				
CH114	5570	-23.12	-8.00	Pass

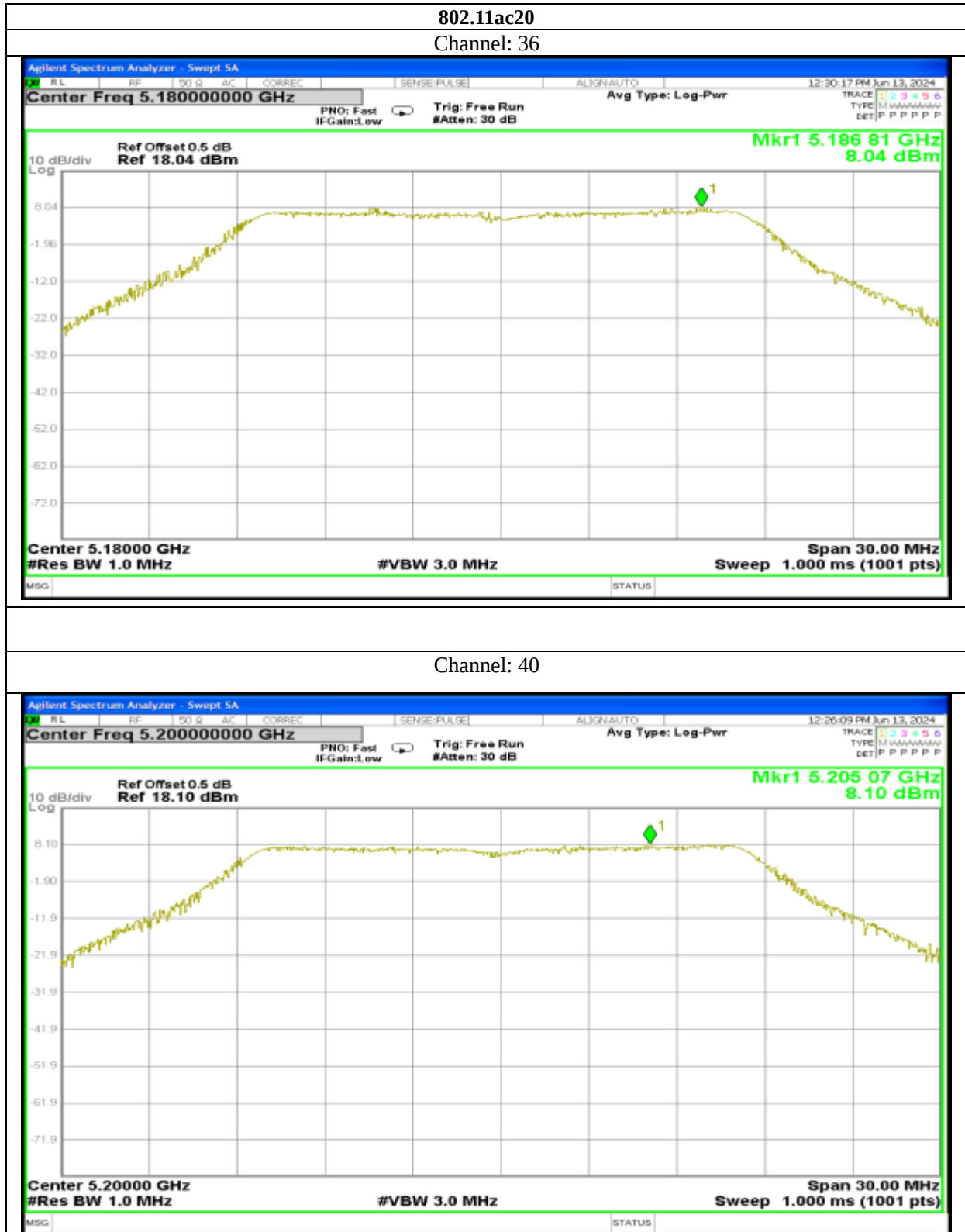
Report No.: AAEMT/RF/240507-01-01

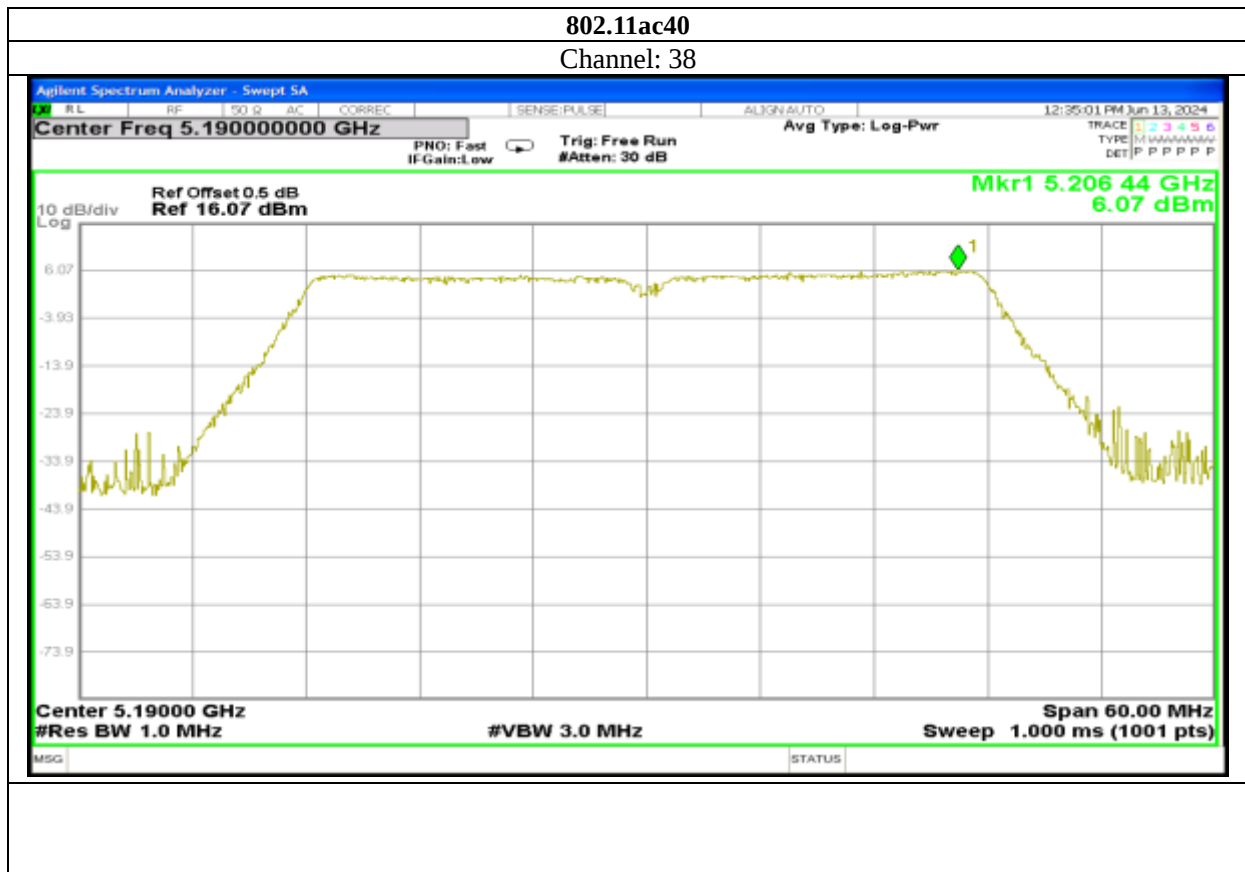
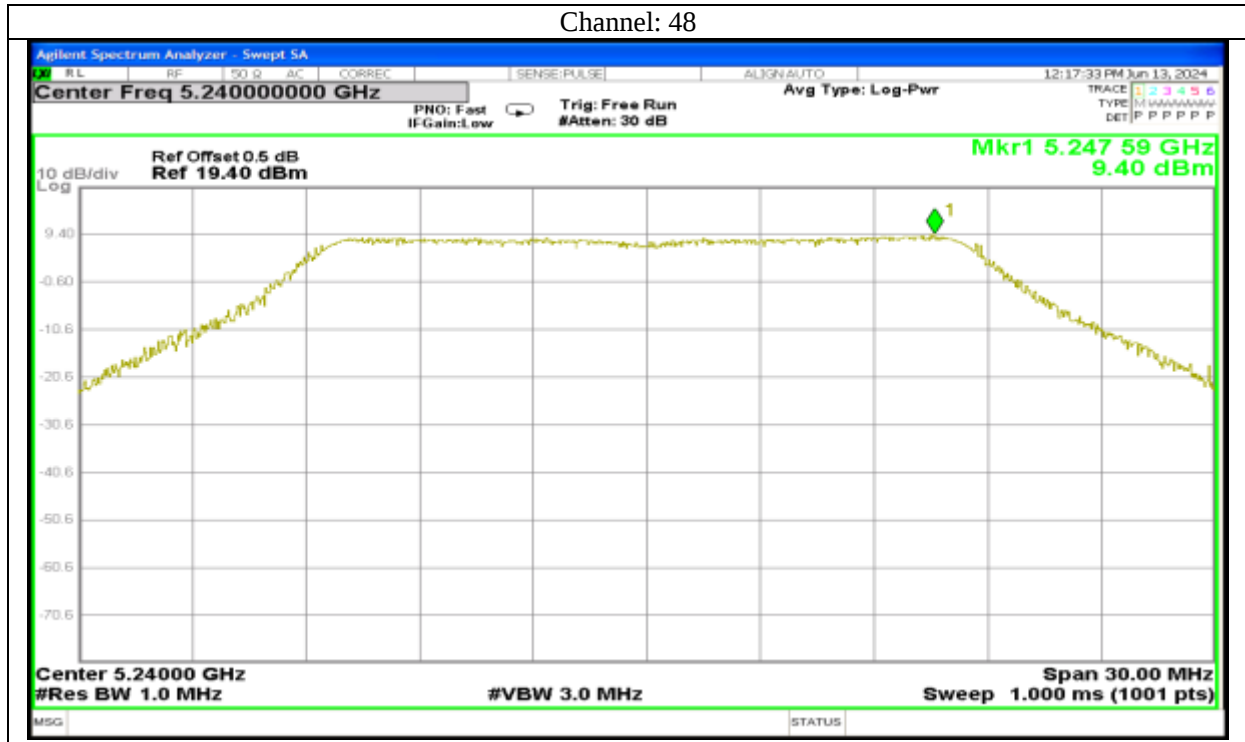
CH. No.	Frequency	Power density (dBm/500KHz)	Limit (dBm/500KHz)	Result
TX 802.11ac20 Mode				
CH 149	5745	4.70	11.00	Pass
CH 157	5785	4.11	11.00	Pass
CH 165	5825	4.57	11.00	Pass
TX 802.11ac40 Mode				
CH151	5755	2.98	11.00	Pass
CH159	5795	2.45	11.00	Pass
TX 802.11ac80 Mode				
CH155	5775	2.76	11.00	Pass
TX 802.11ax20 Mode				
CH 149	5745	6.39	11.00	Pass
CH 157	5785	6.09	11.00	Pass
CH 165	5825	6.53	11.00	Pass
TX 802.11ax40 Mode				
CH151	5755	4.66	11.00	Pass
CH159	5795	4.74	11.00	Pass
TX 802.11ax80 Mode				
CH155	5775	3.68	11.00	Pass

Report No.: AAEMT/RF/240507-01-01

Test plots as followed:

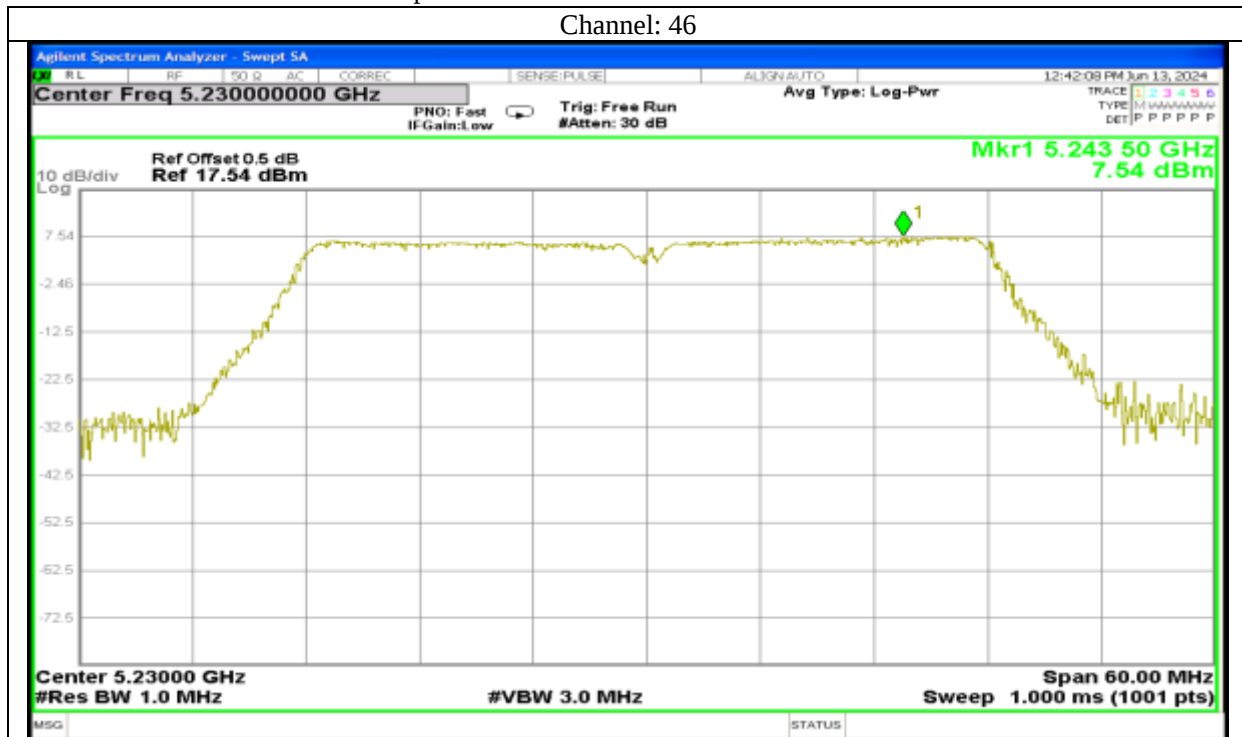
Antenna 0:





Report No.: AAEMT/RF/240507-01-01

Channel: 46



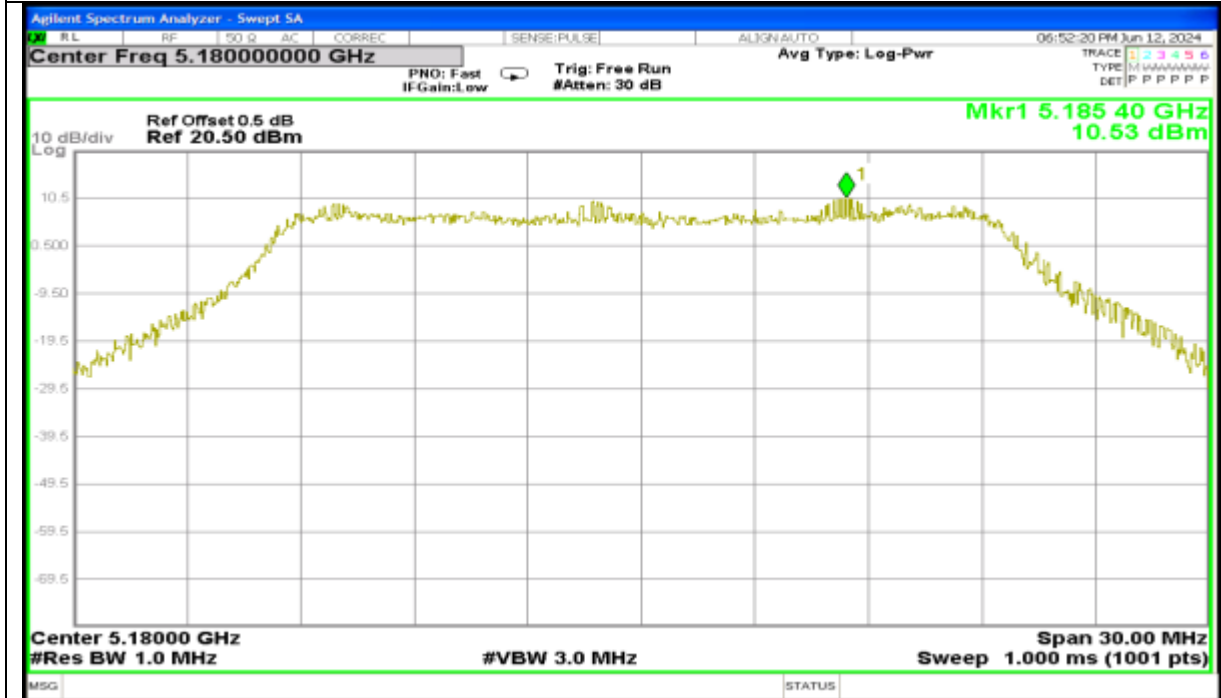
802.11ac80

Channel: 42

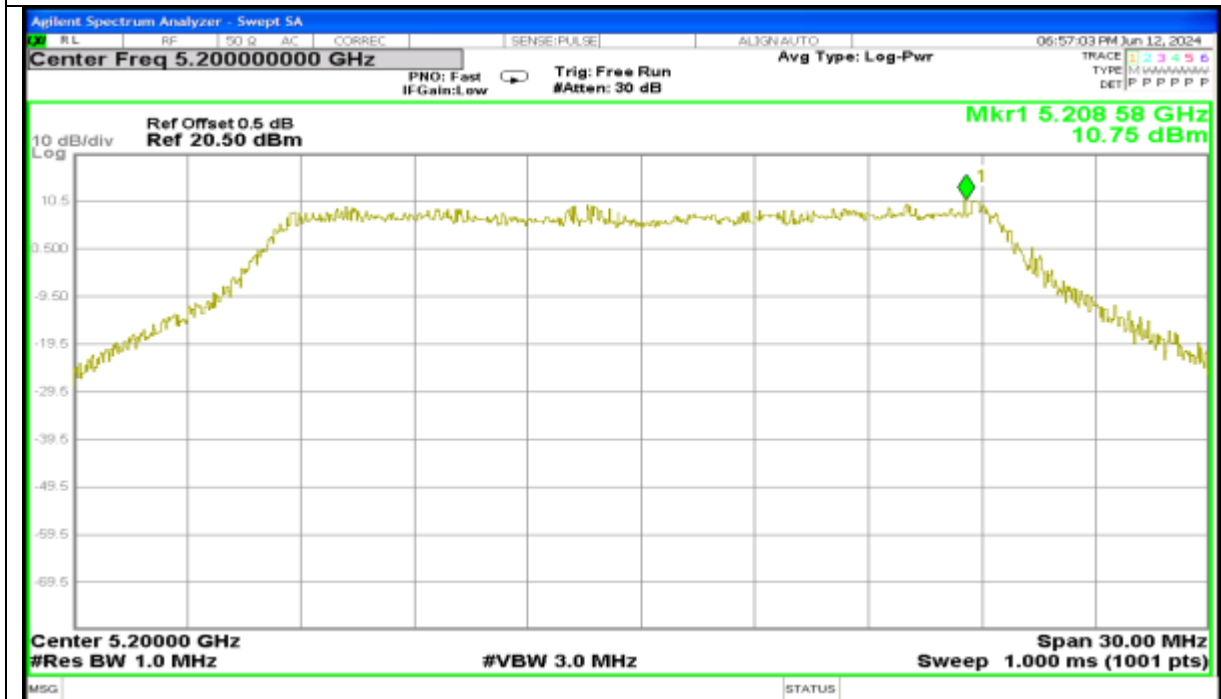


802.11ax20

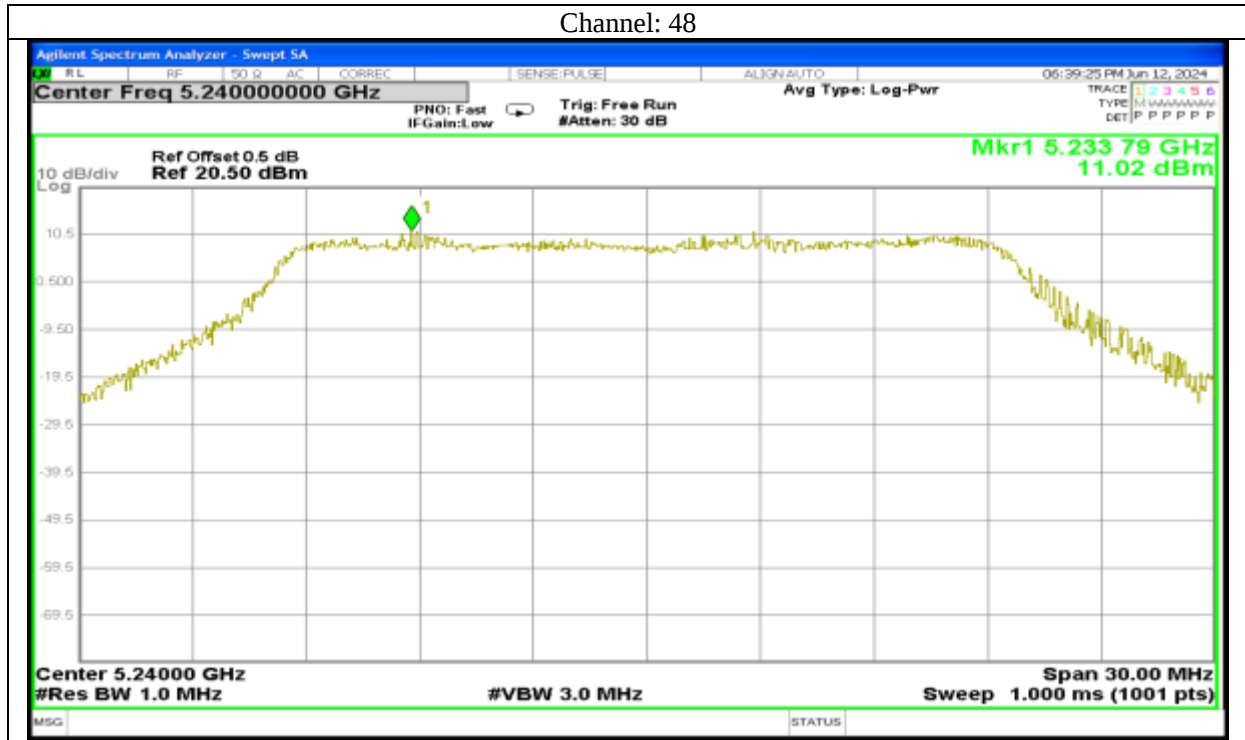
Channel: 36



Channel: 40



Channel: 48

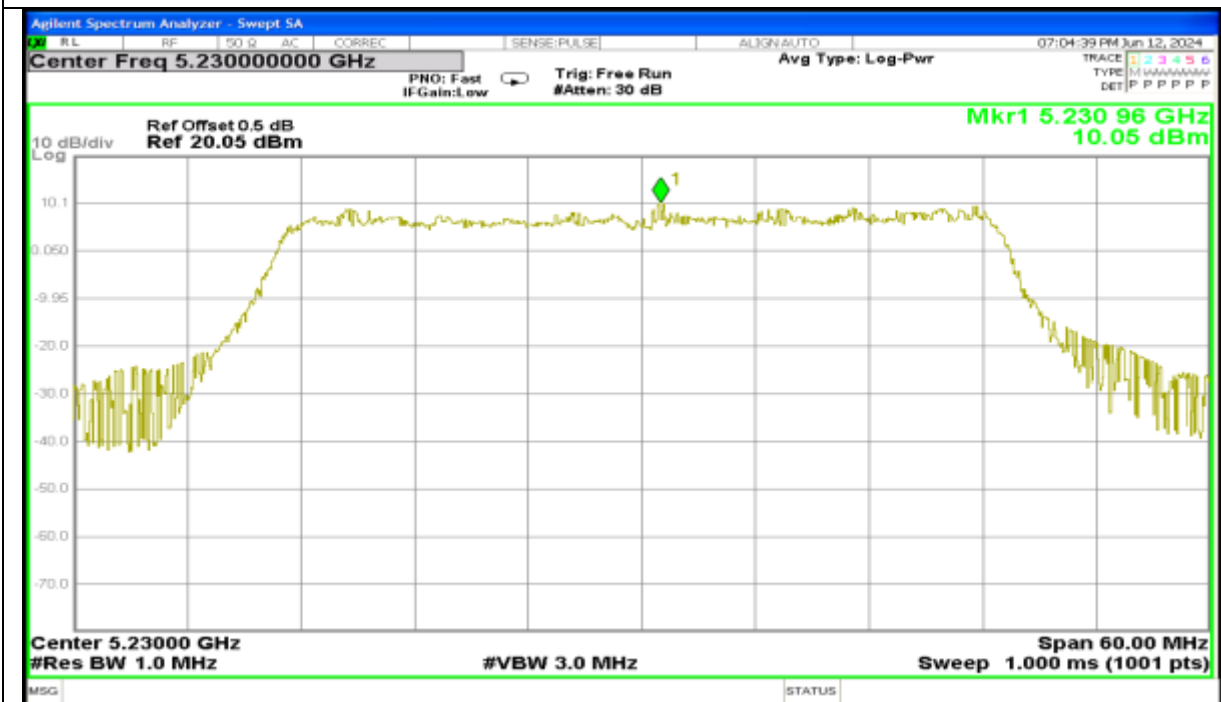


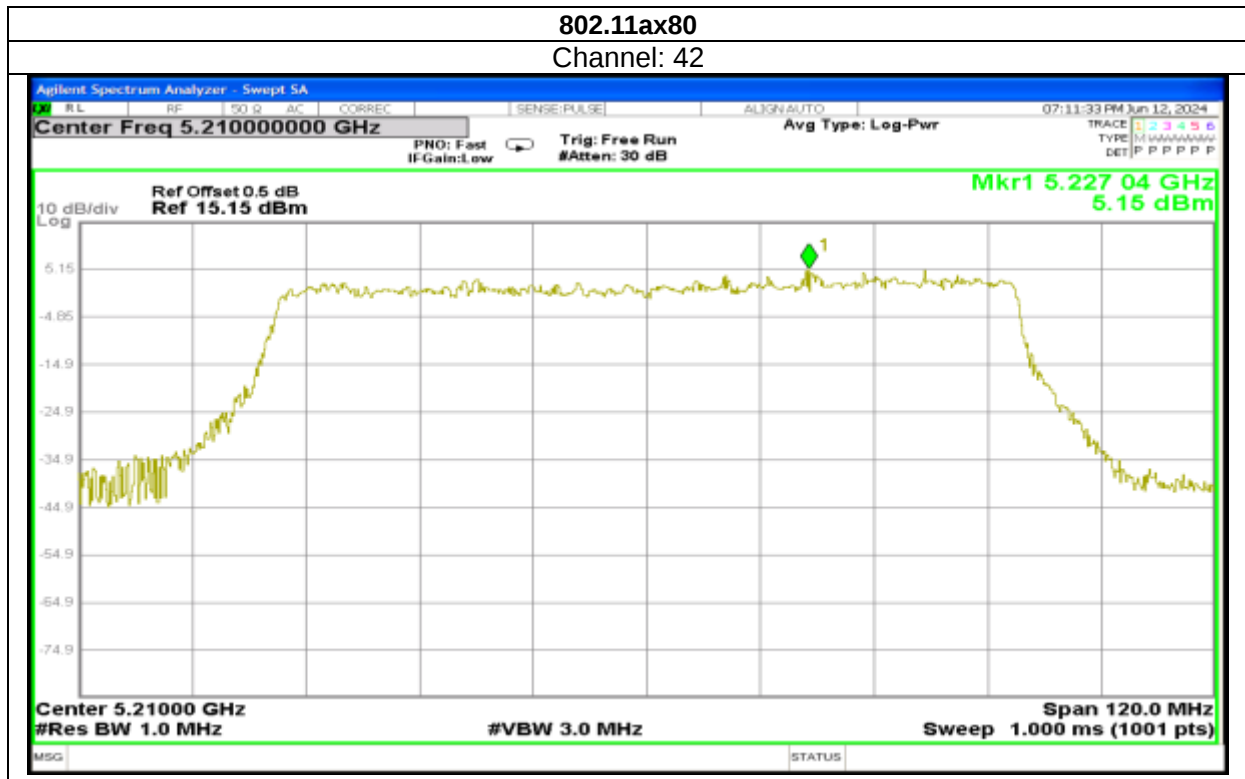
802.11ax40

Channel: 38



Channel: 46

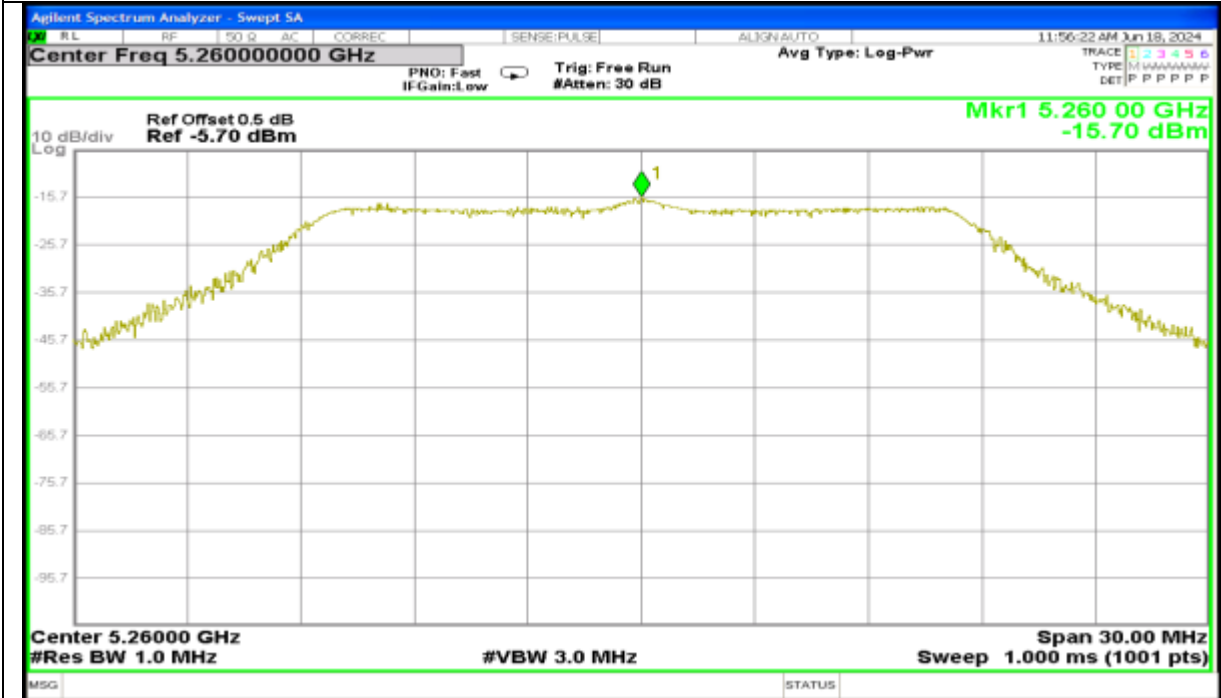




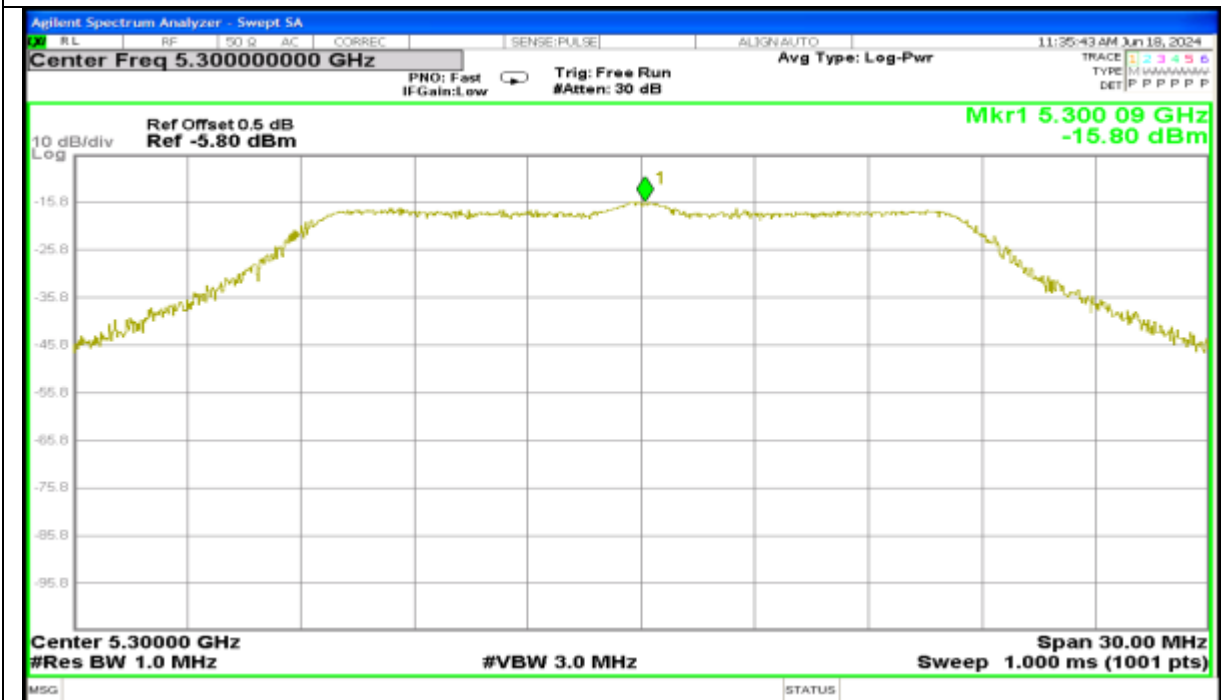
Report No.: AAEMT/RF/240507-01-01

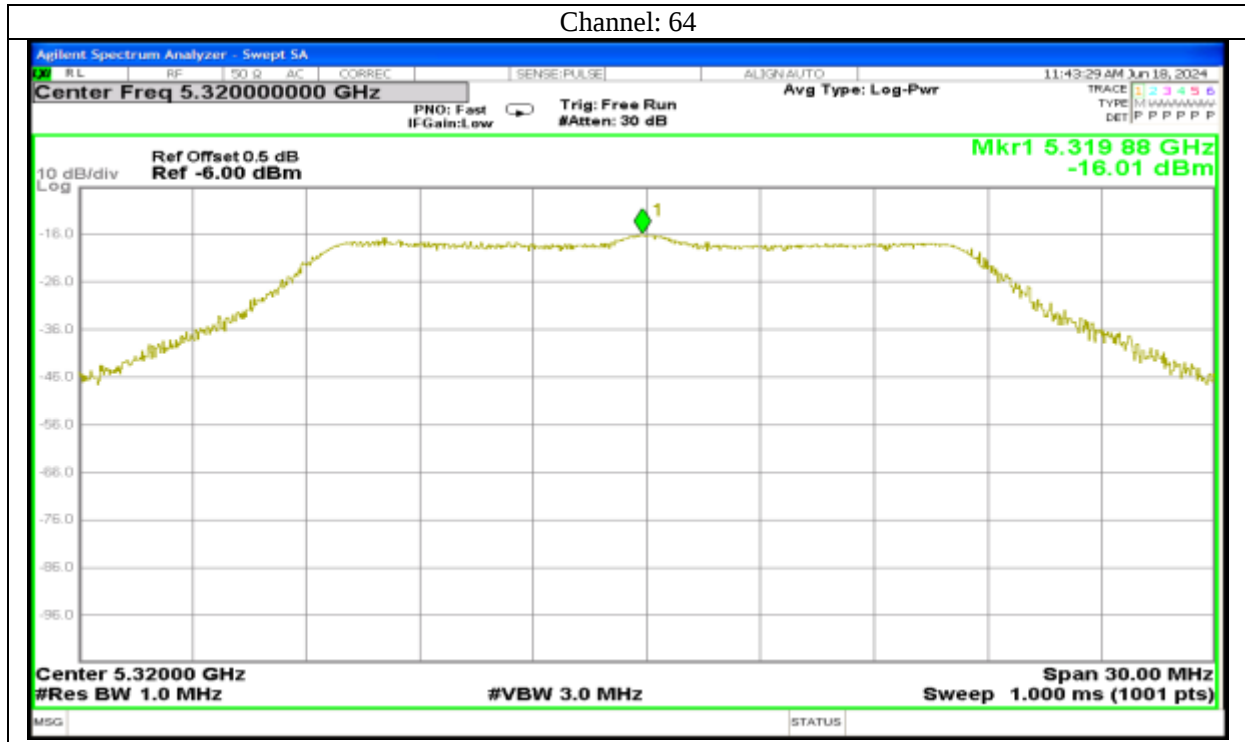
802.11ac20

Channel: 52

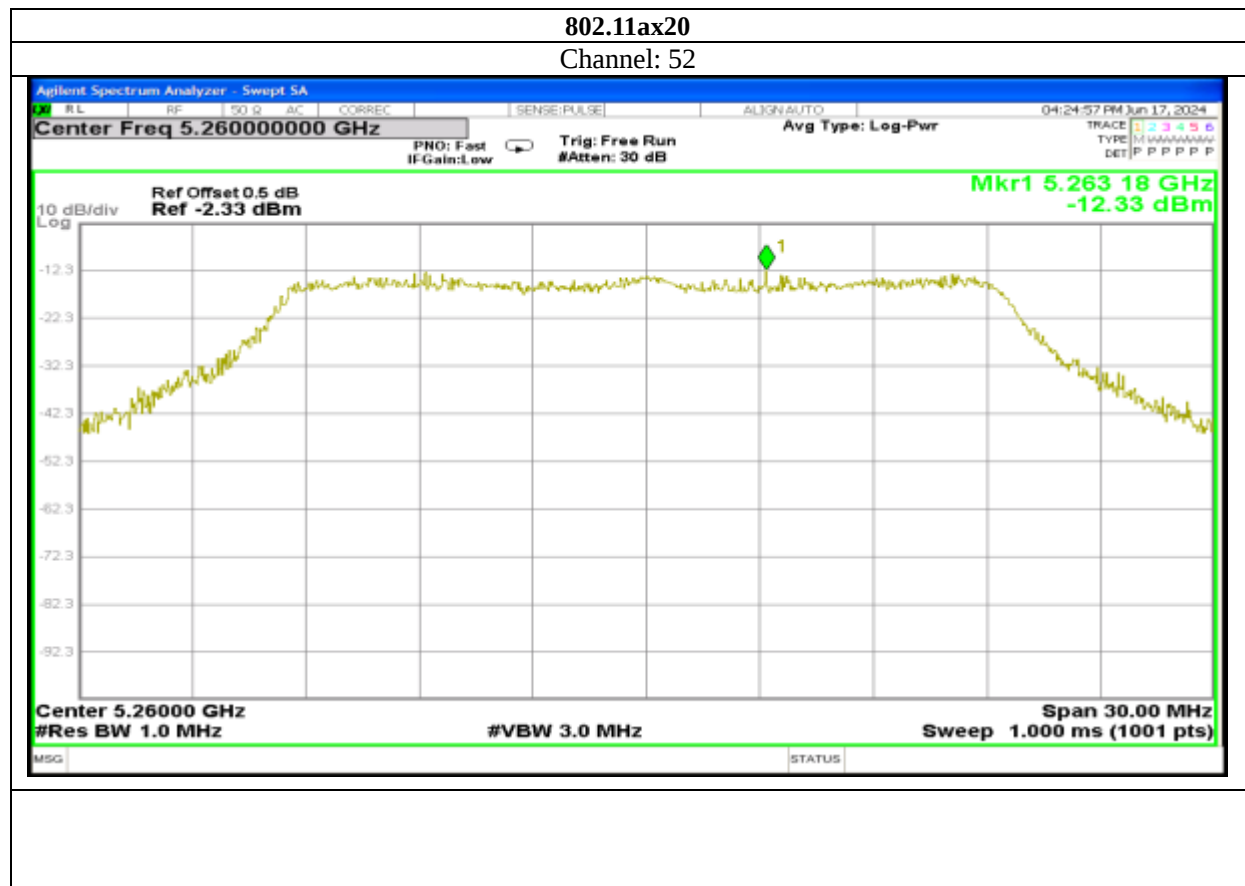
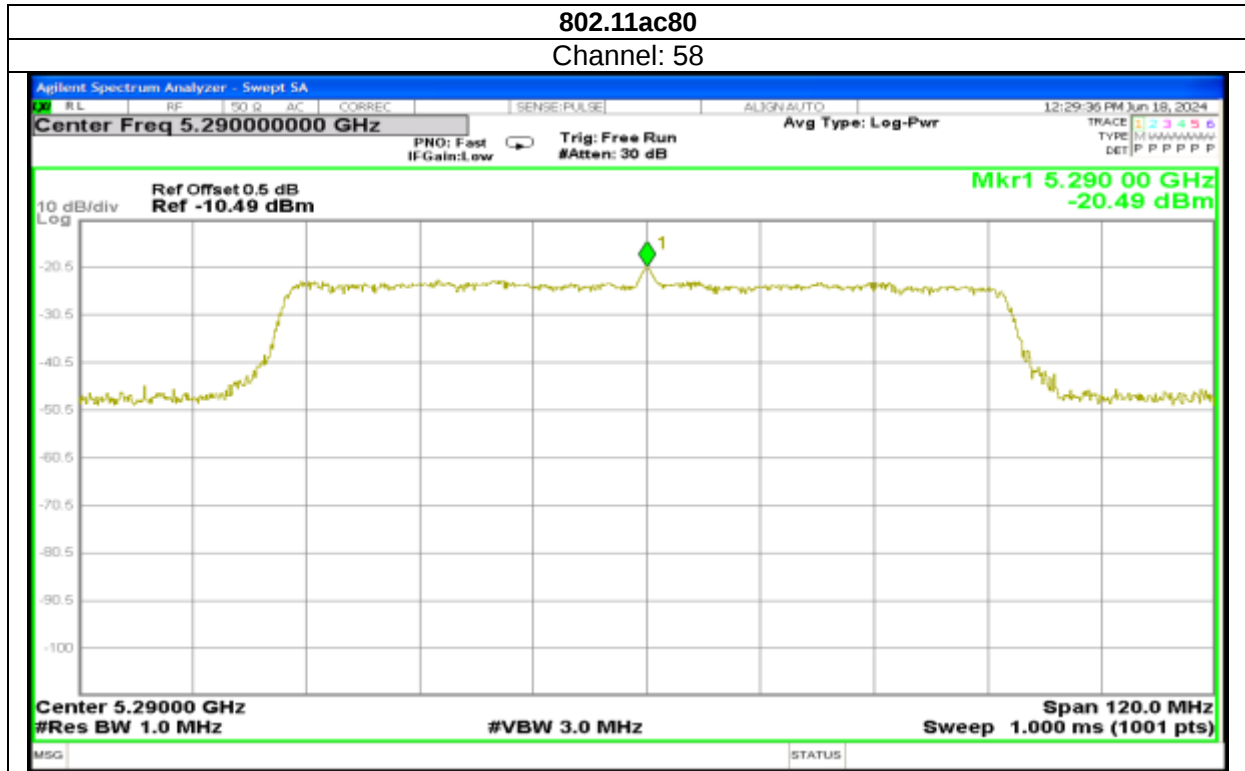


Channel: 60



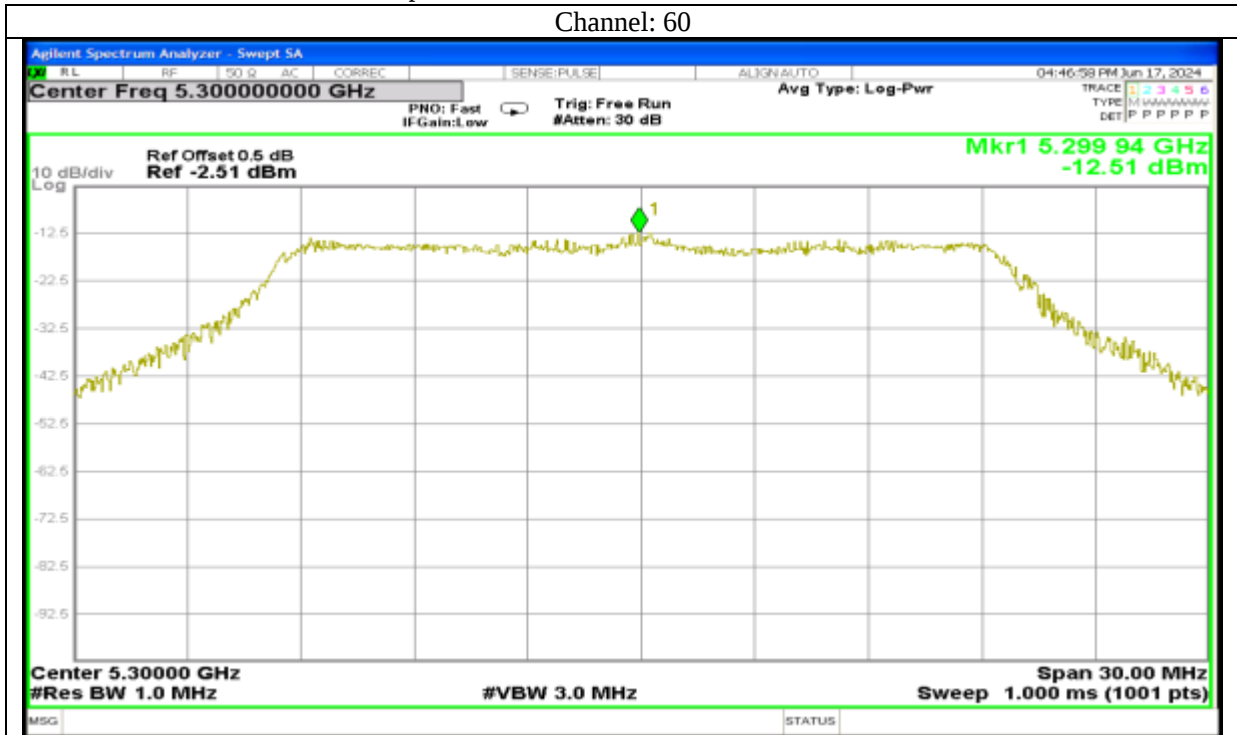




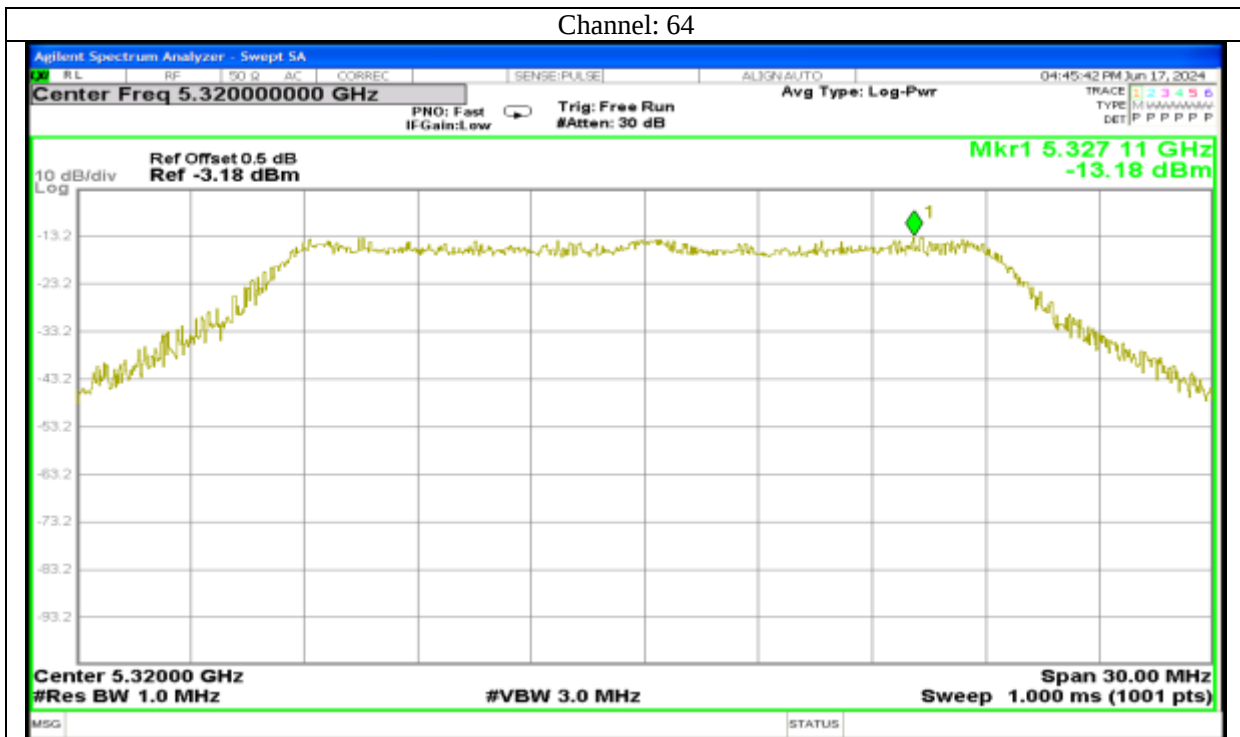


Report No.: AAEMT/RF/240507-01-01

Channel: 60

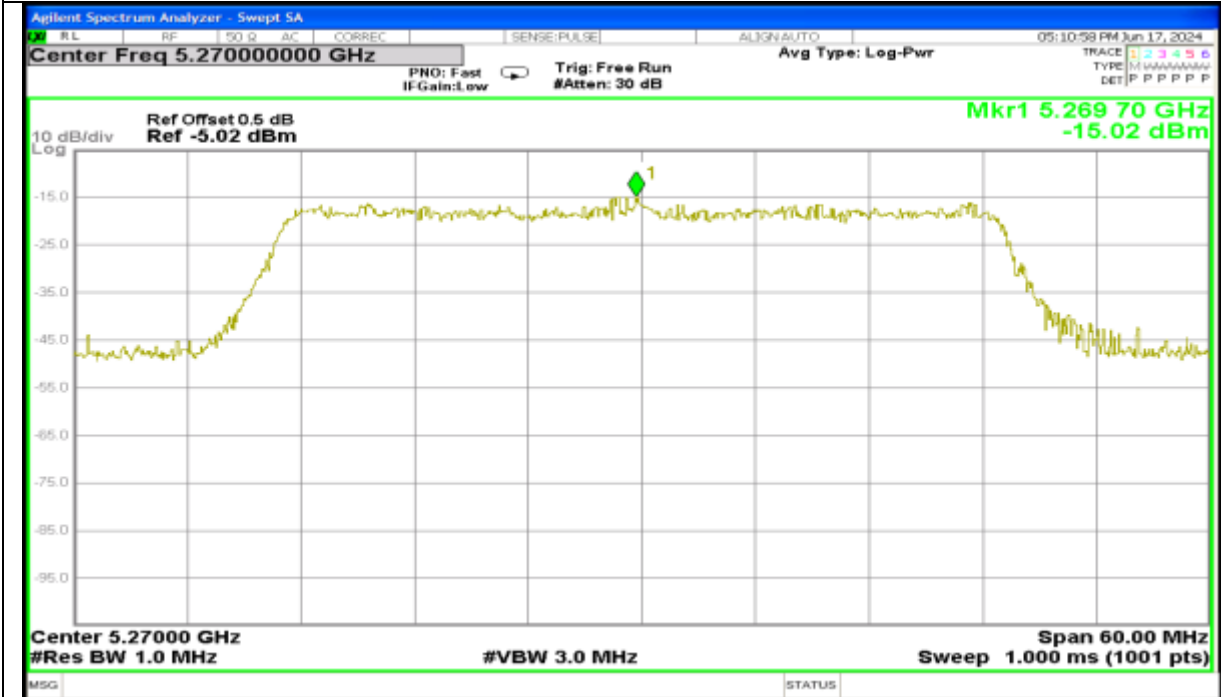


Channel: 64

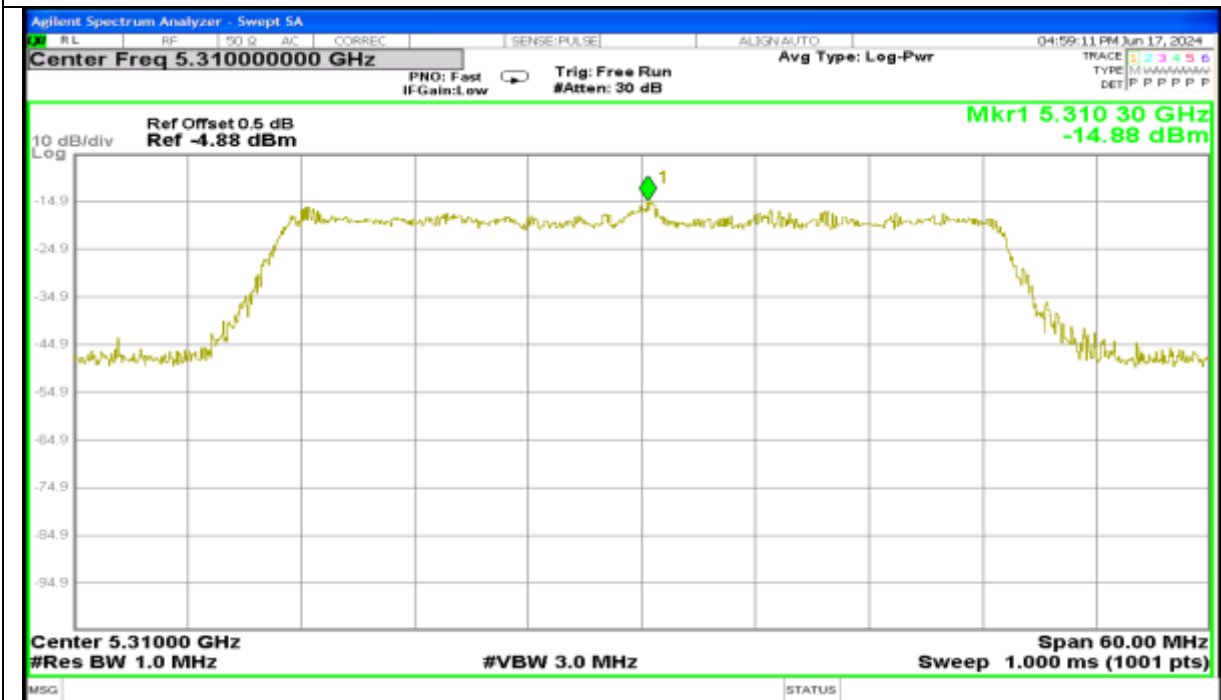


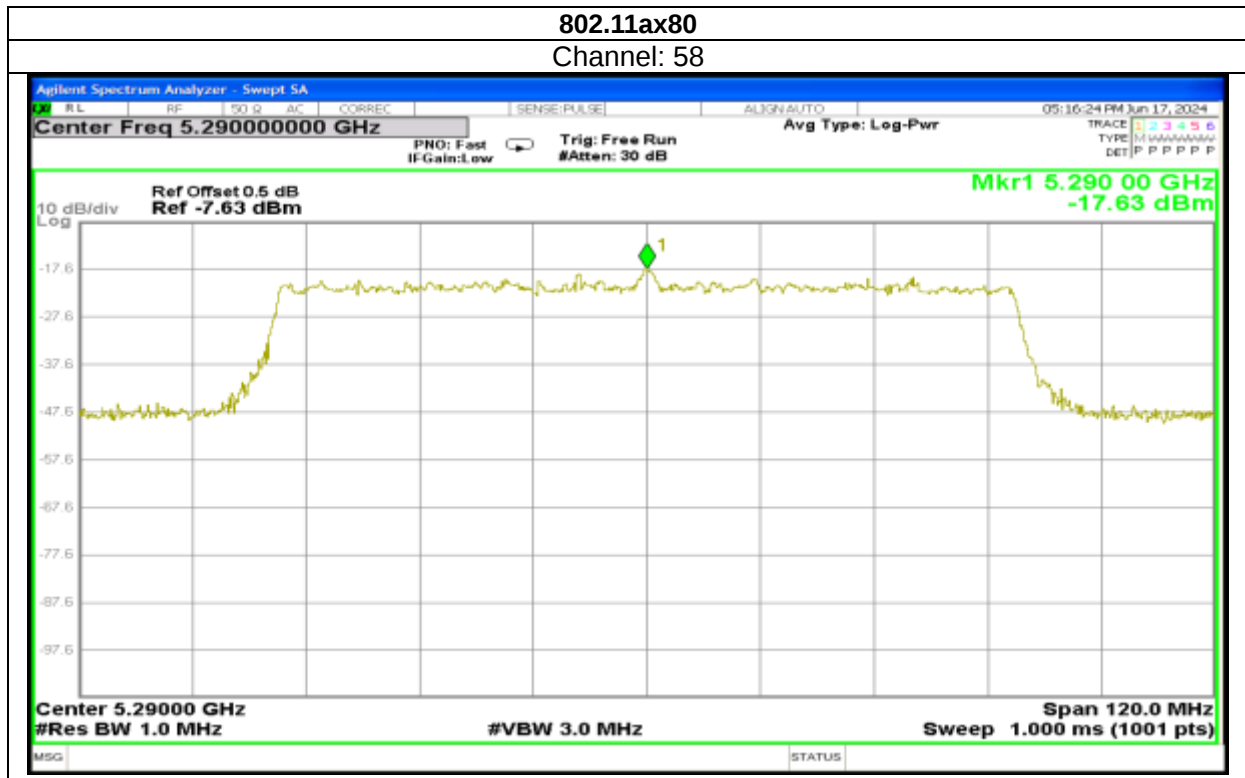
802.11ax40

Channel: 54



Channel: 62

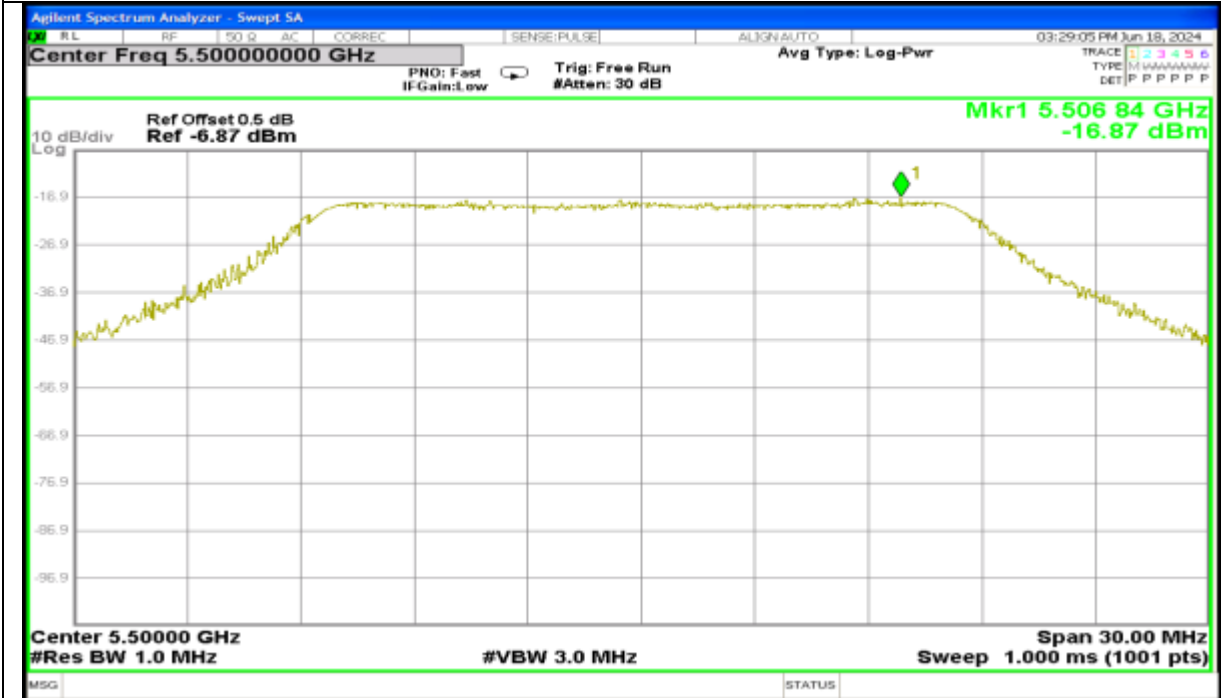




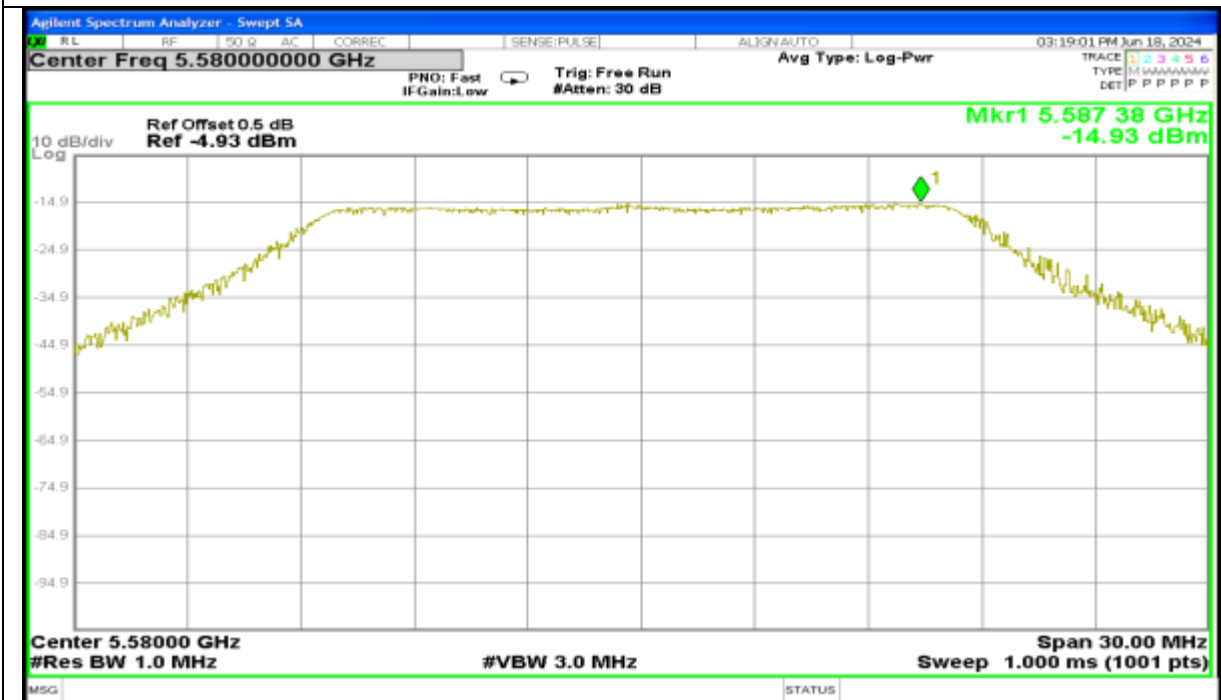
Report No.: AAEMT/RF/240507-01-01

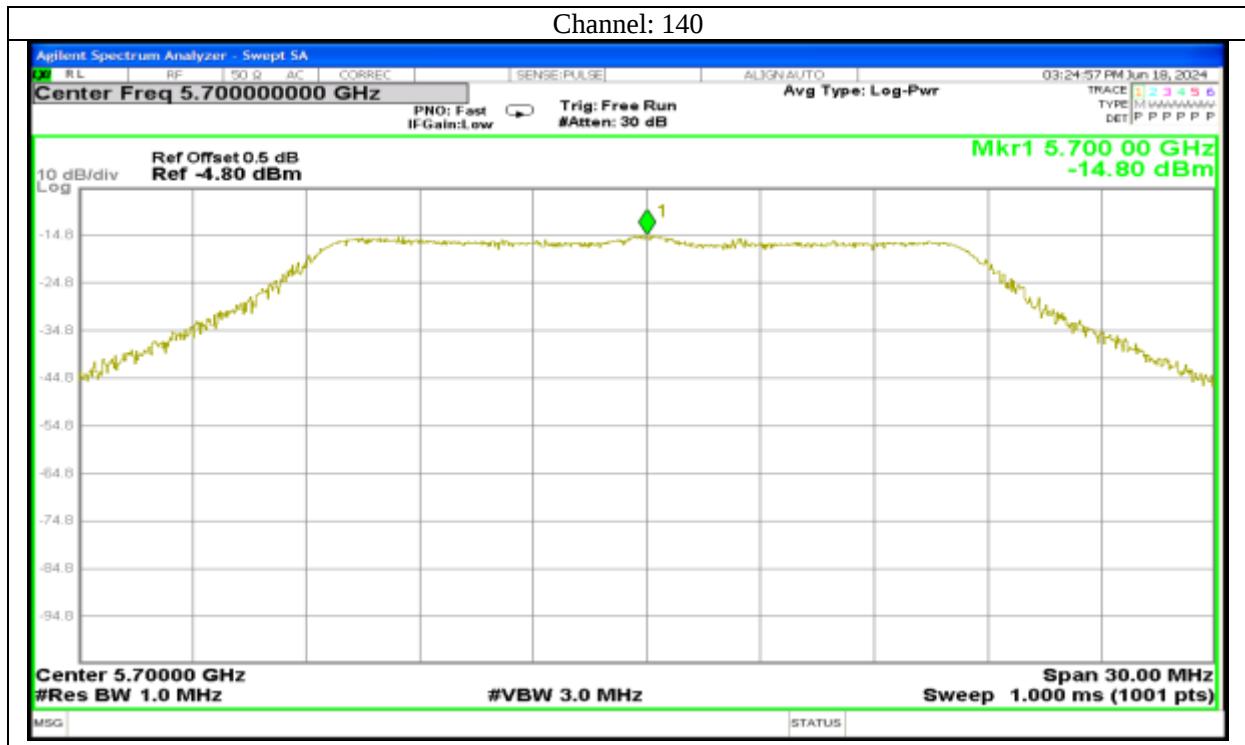
802.11ac20

Channel: 100



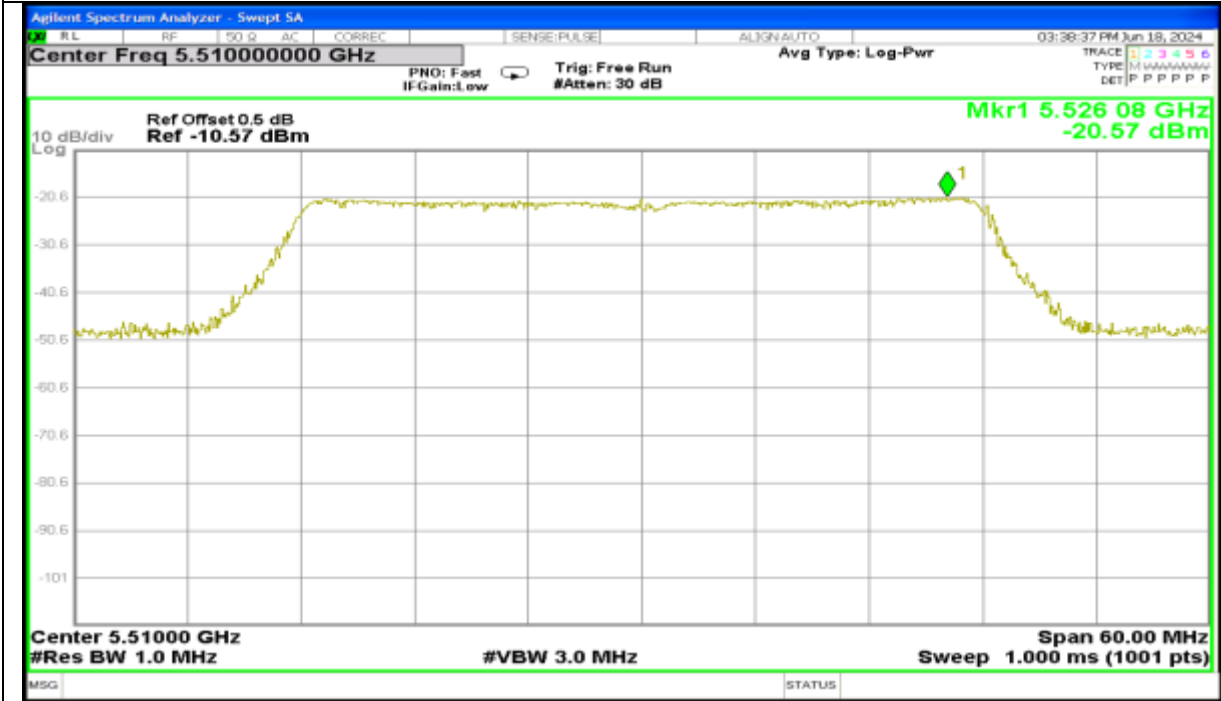
Channel: 116





802.11ac40

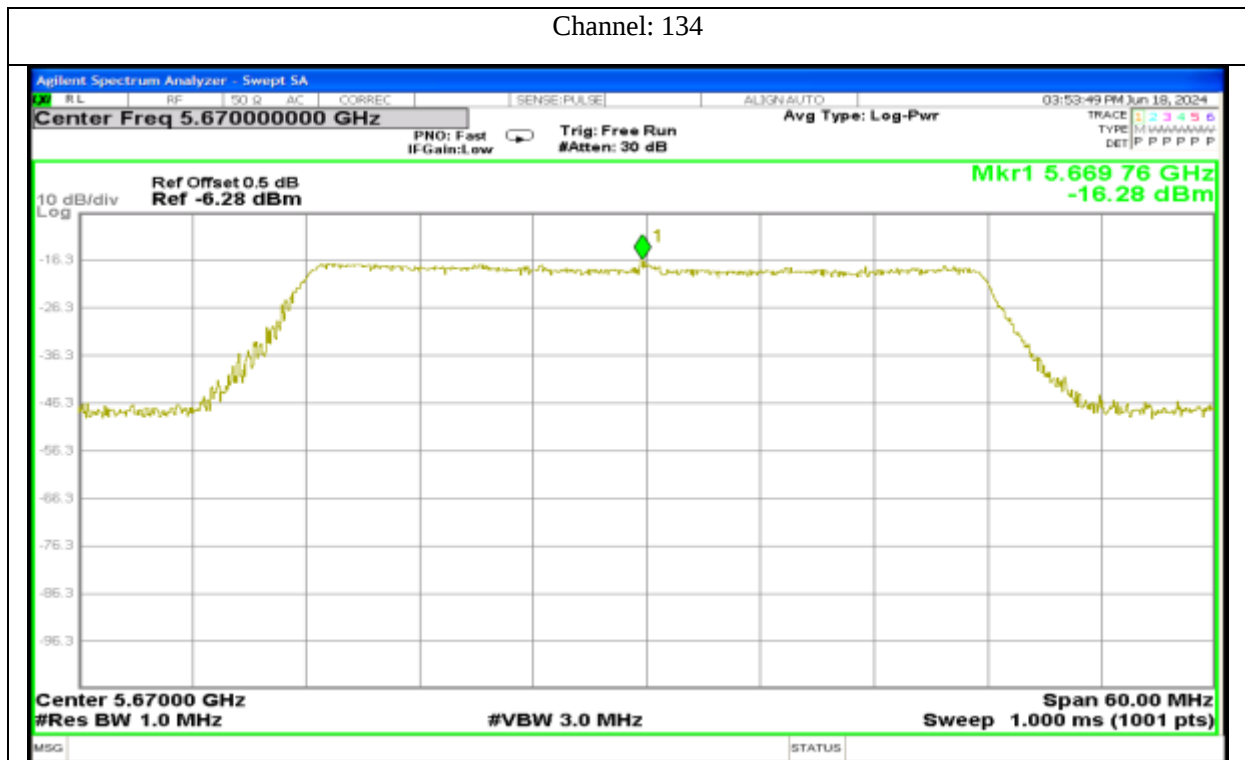
Channel: 102

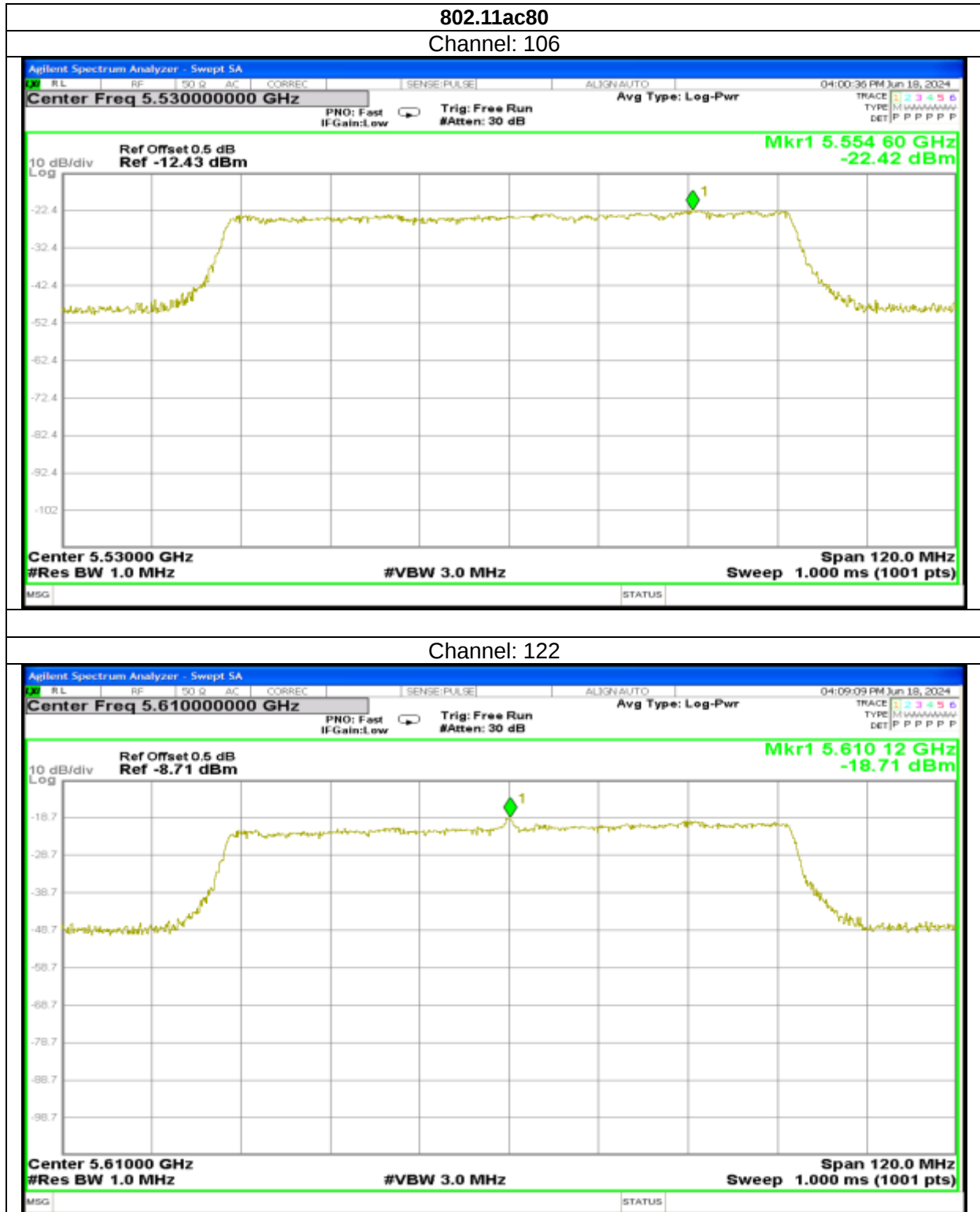


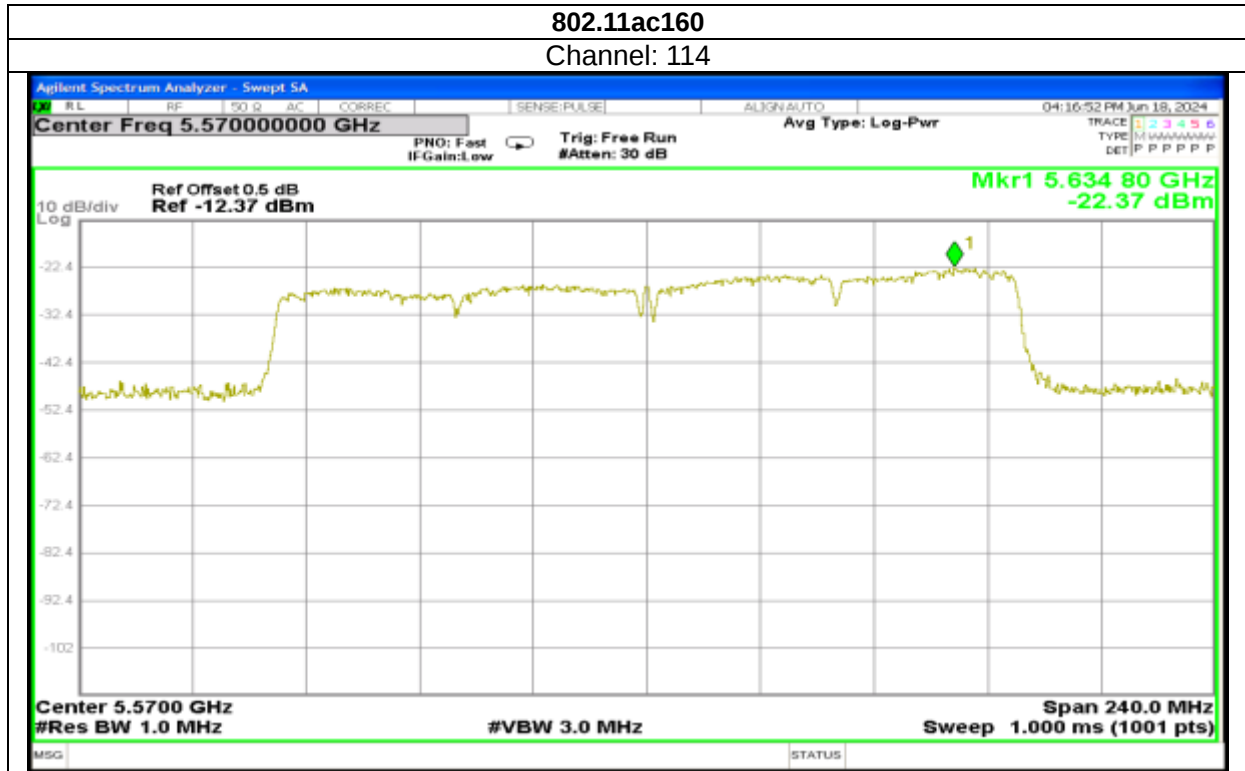
Channel: 110



Report No.: AAEMT/RF/240507-01-01





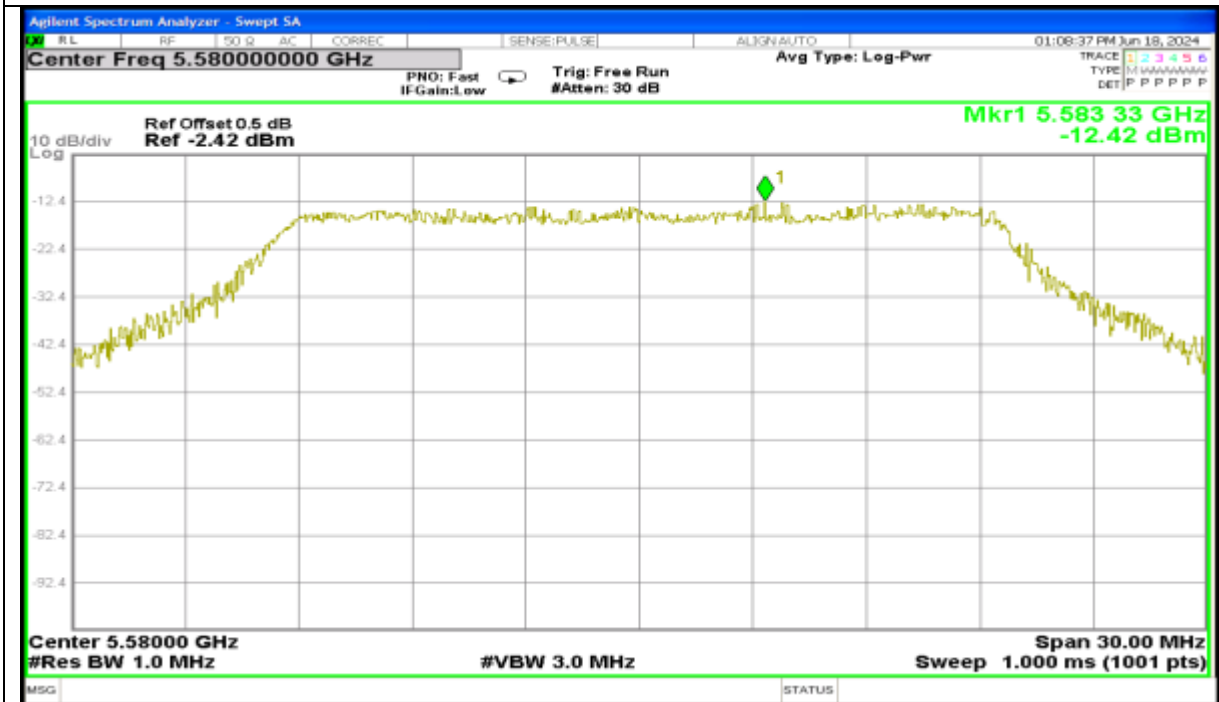


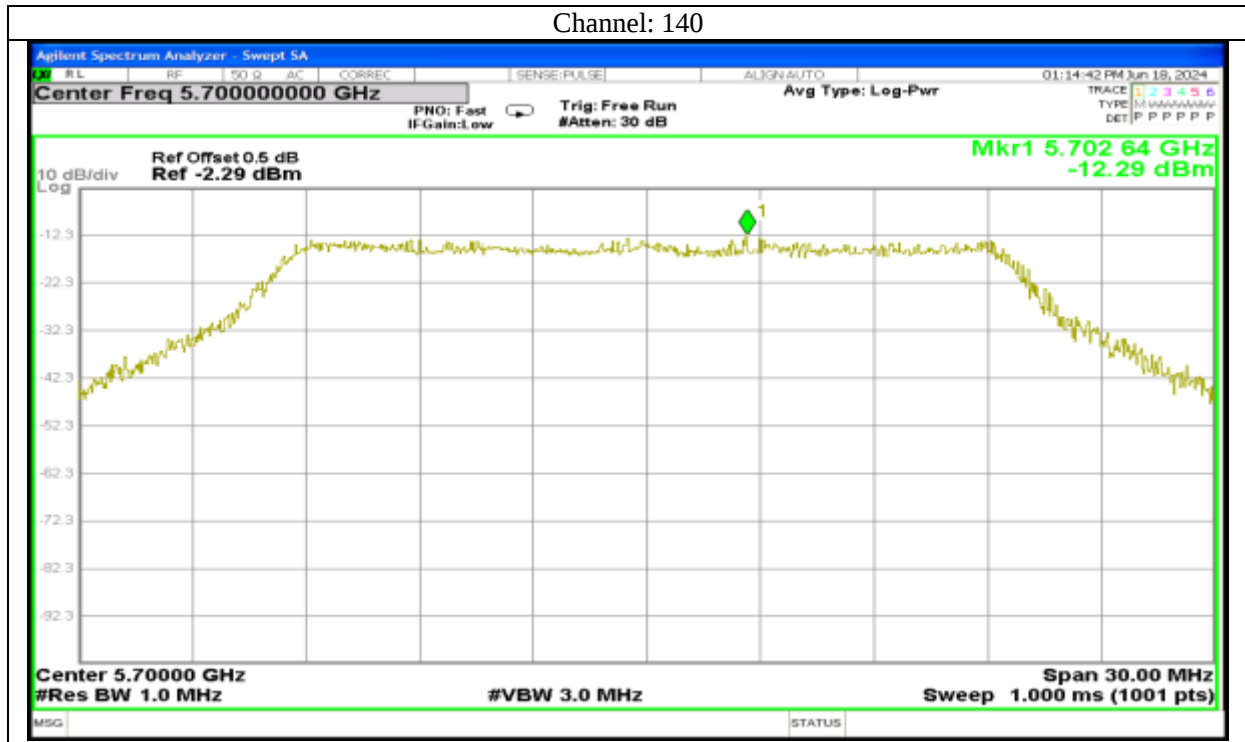
802.11ax20

Channel: 100



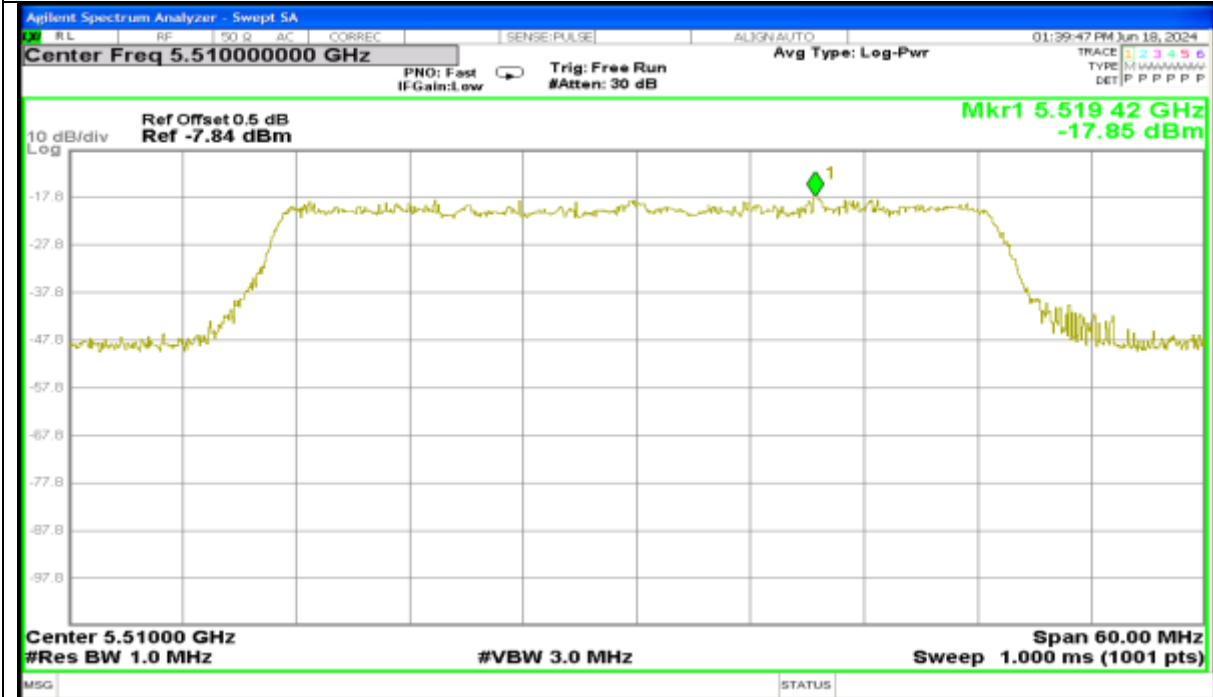
Channel: 116



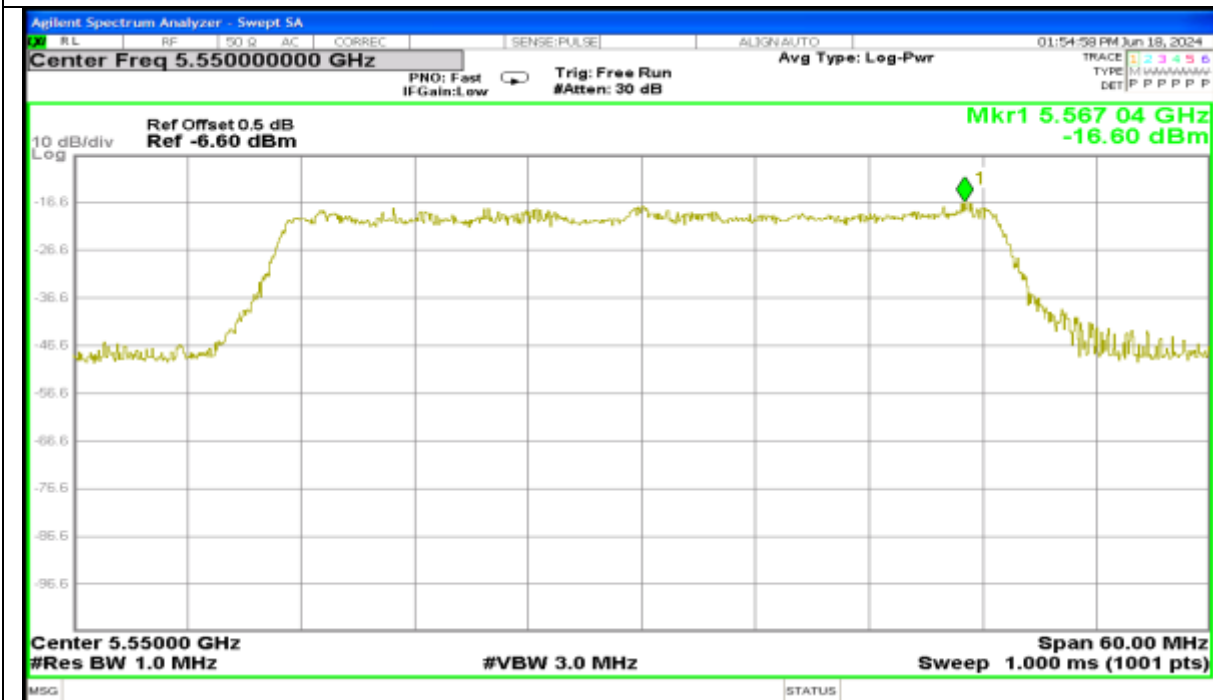


802.11ax40

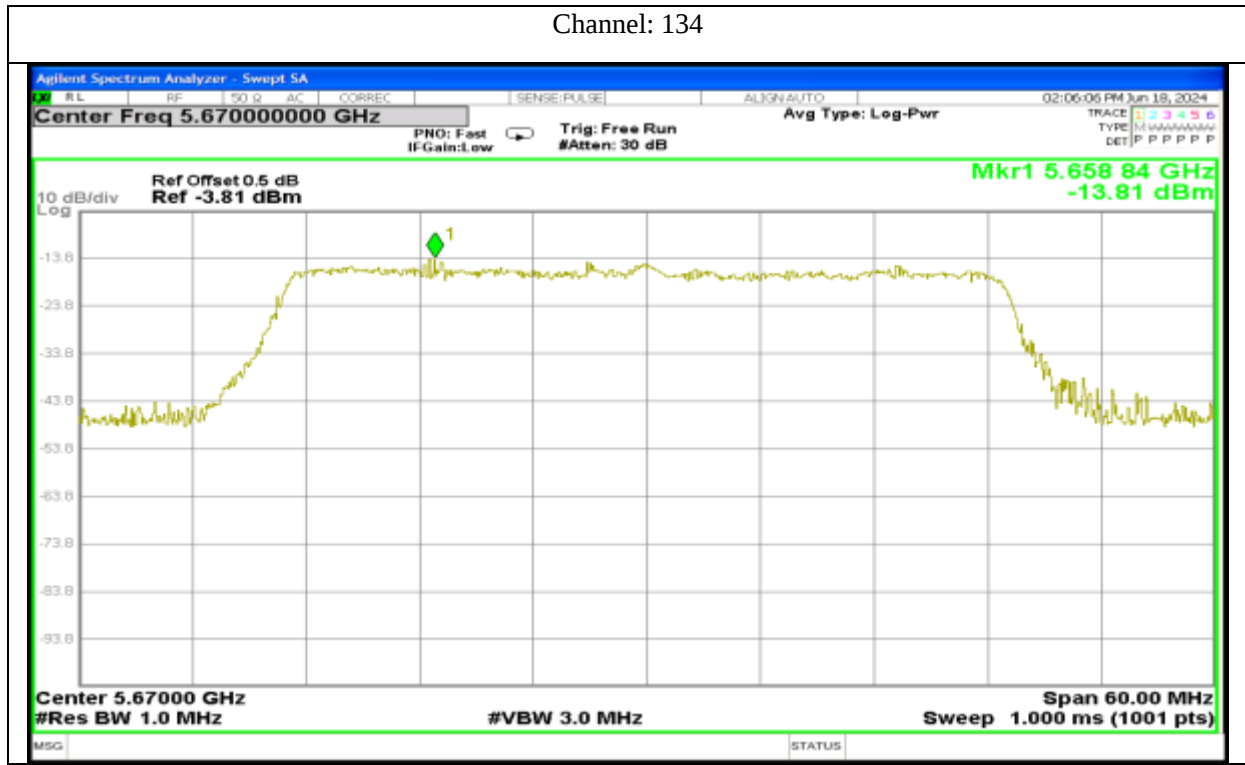
Channel: 102



Channel: 110



Channel: 134





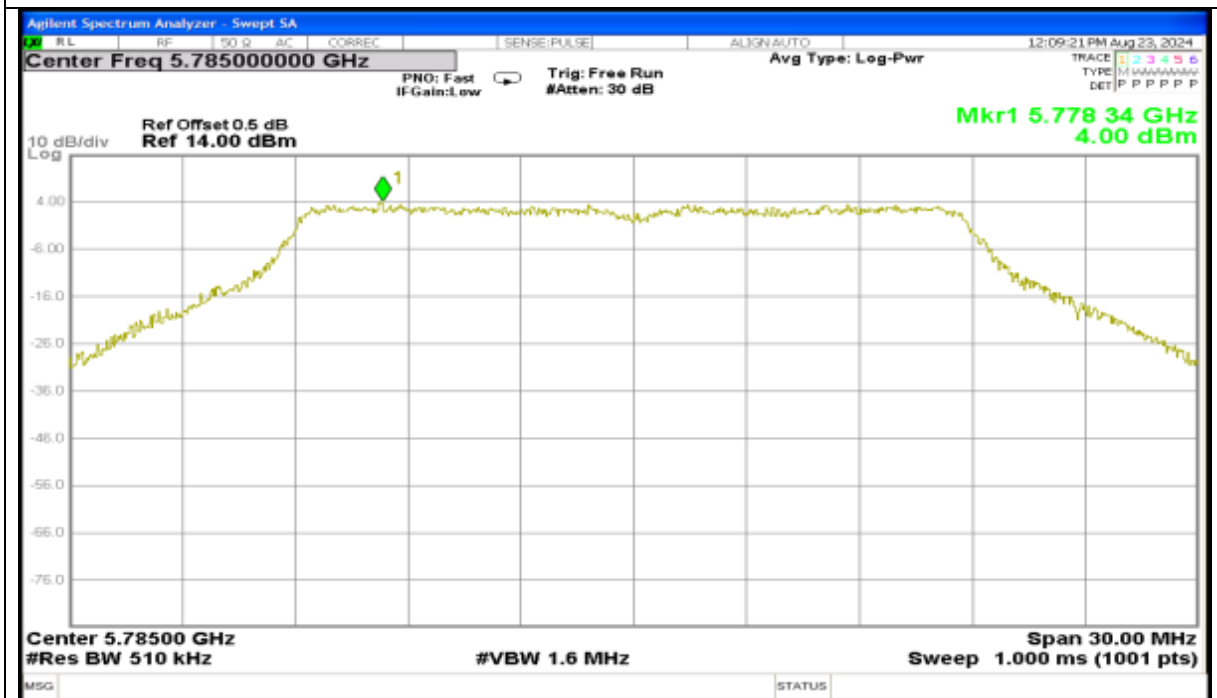


802.11ac20

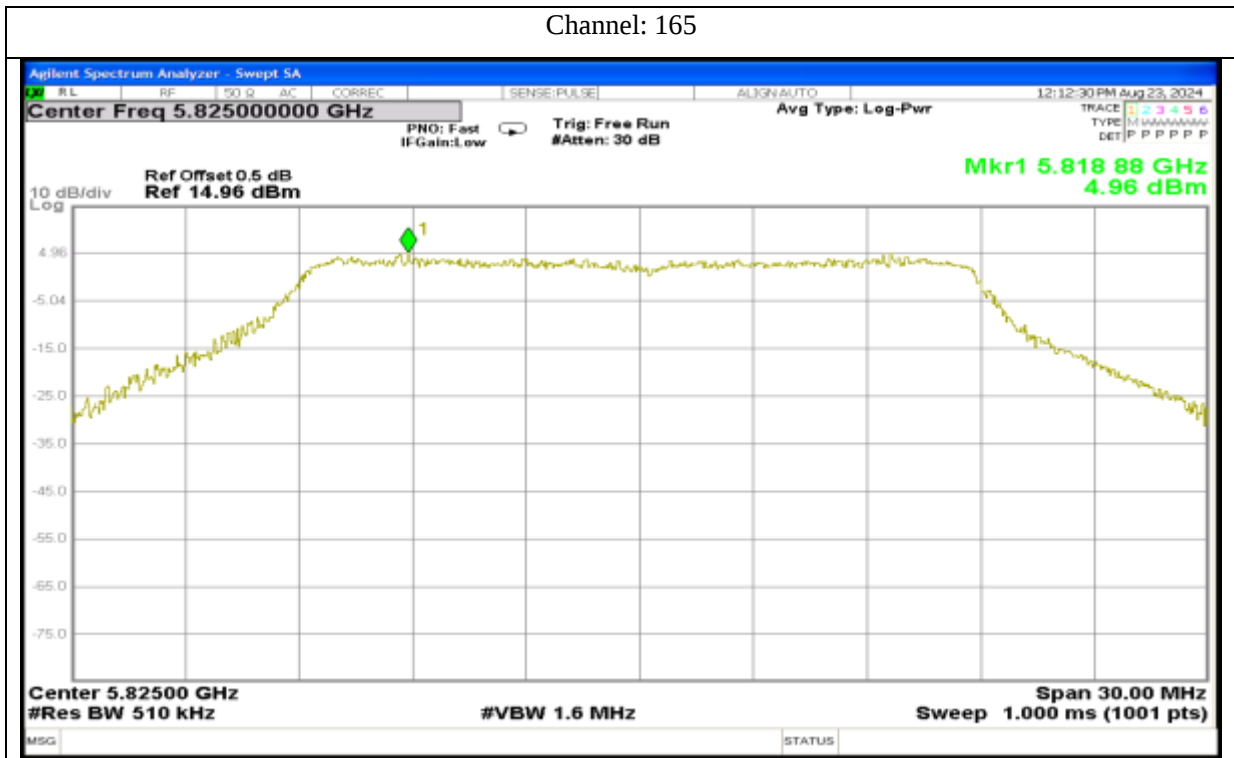
Channel: 149



Channel: 157

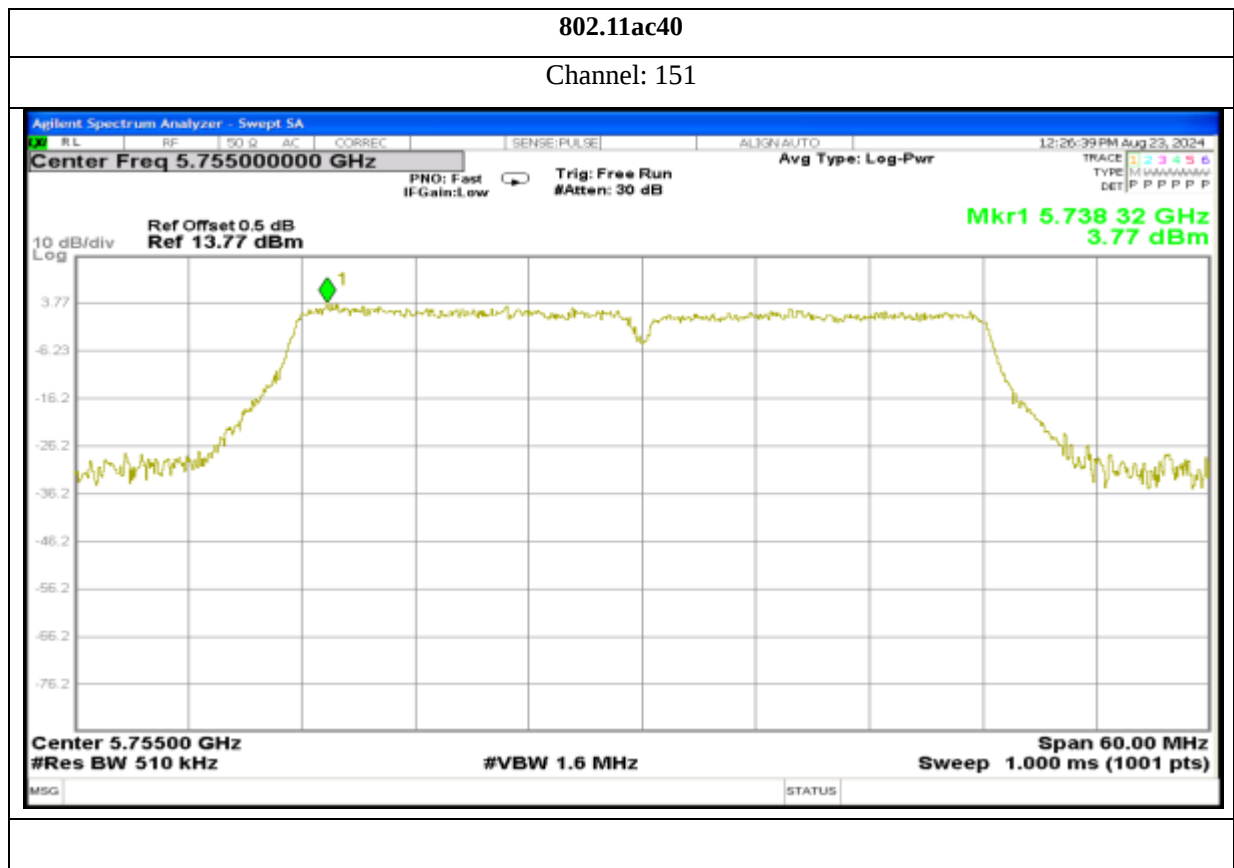


Channel: 165



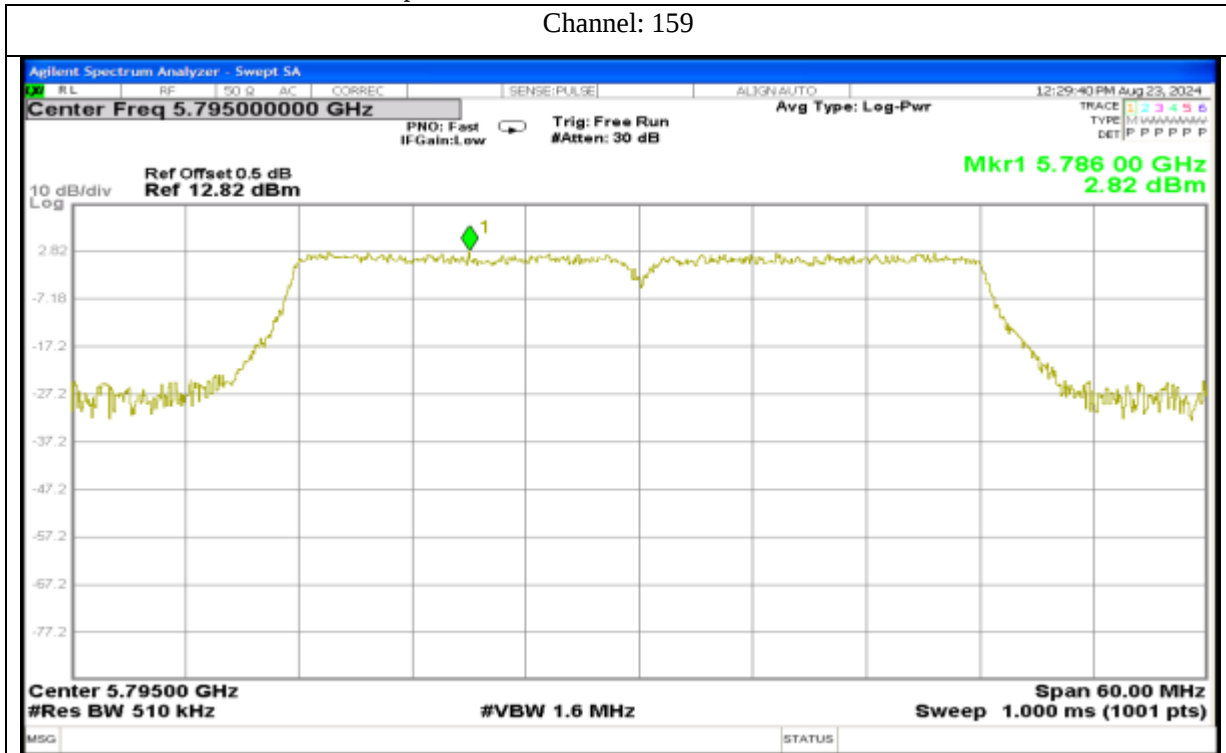
802.11ac40

Channel: 151



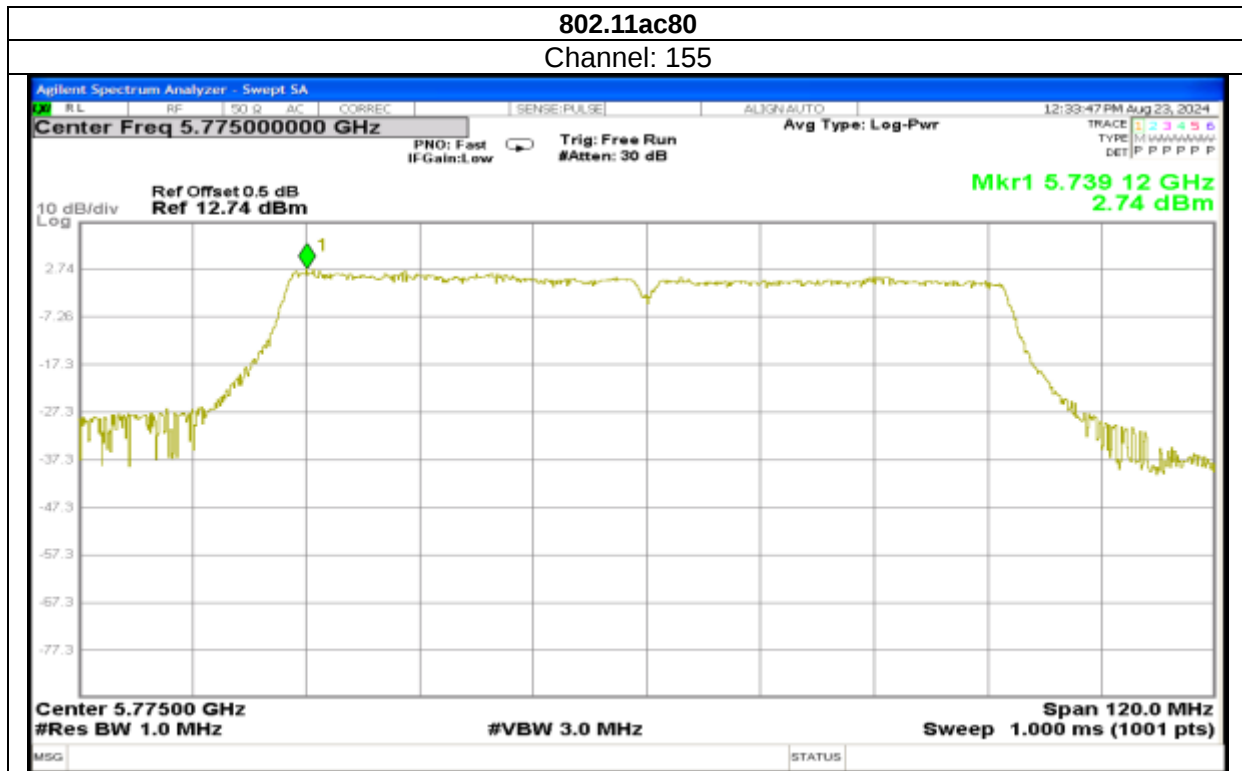
Report No.: AAEMT/RF/240507-01-01

Channel: 159



802.11ac80

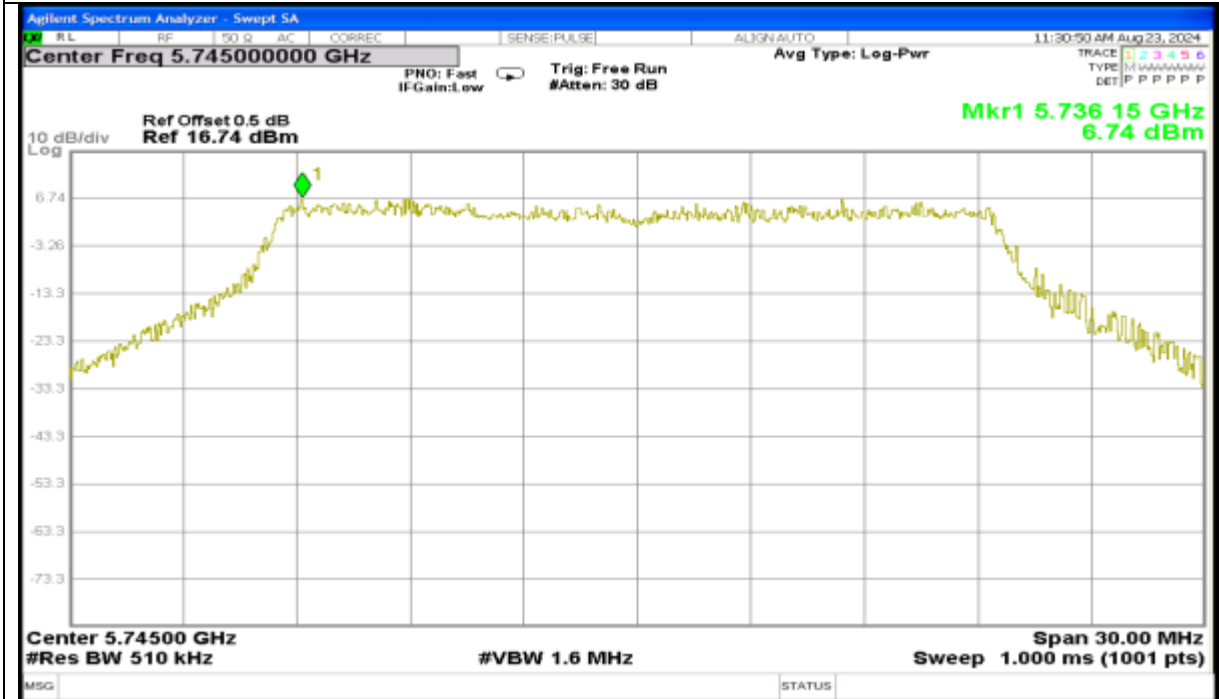
Channel: 155



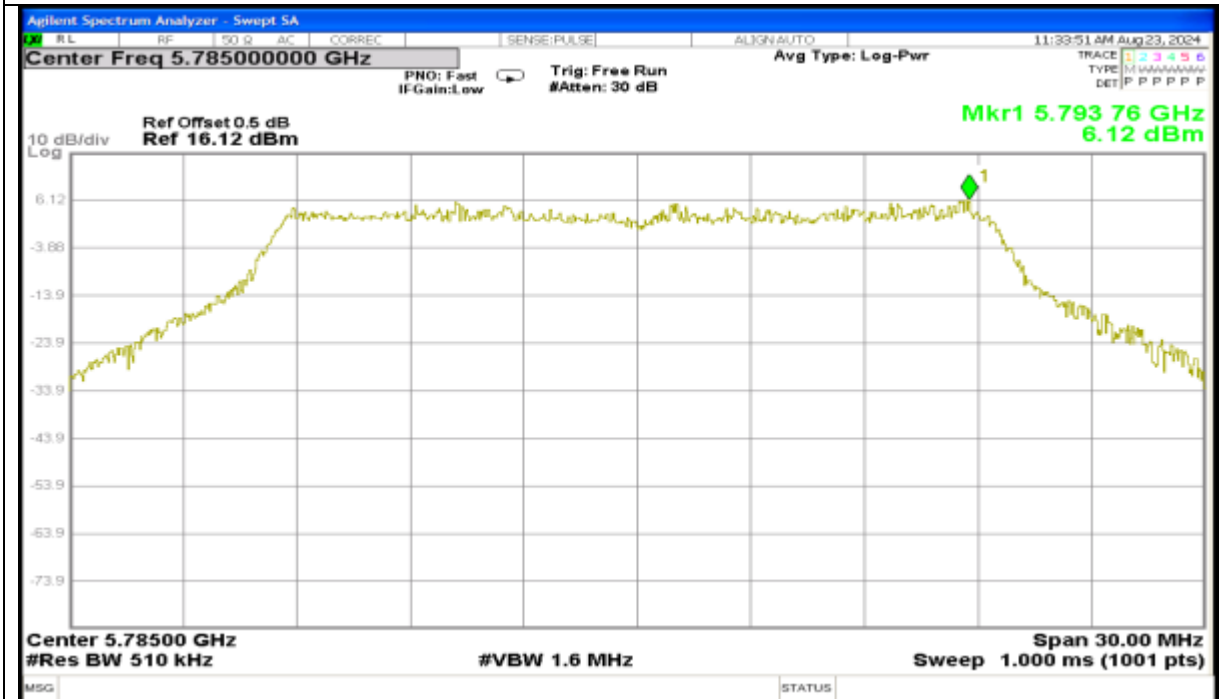
Report No.: AAEMT/RF/240507-01-01

802.11ax20

Channel: 149

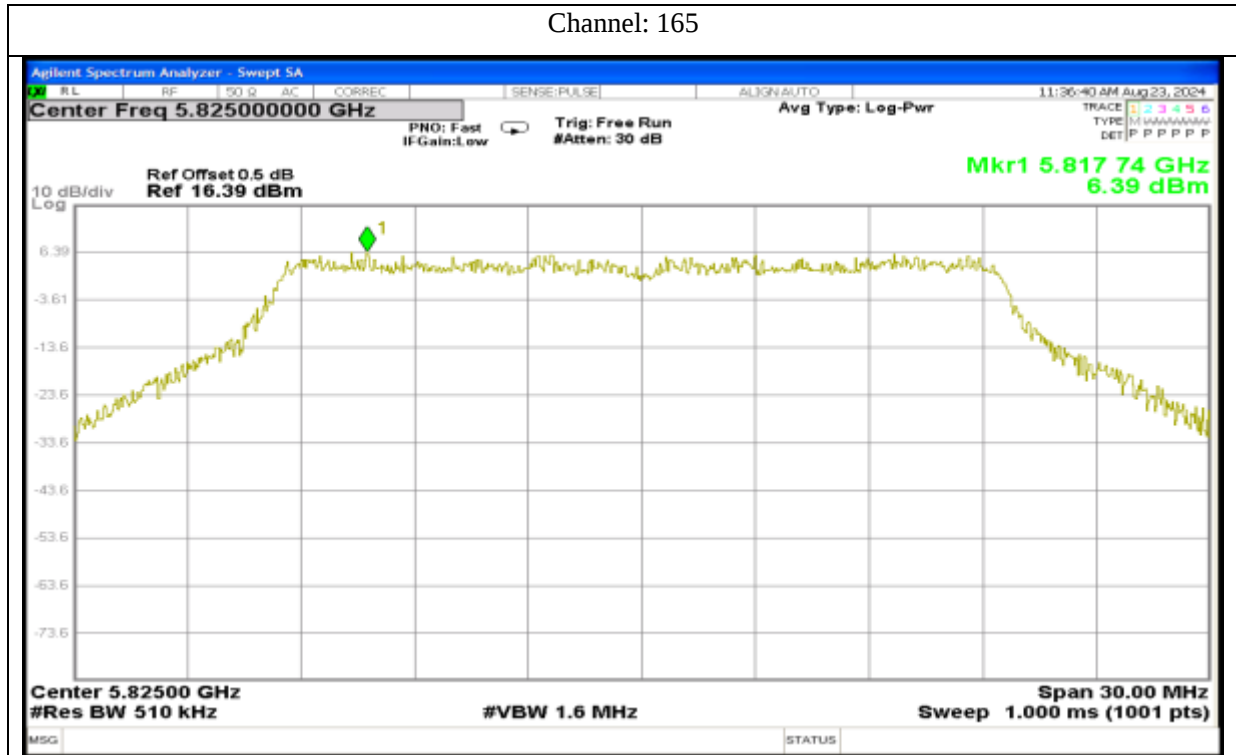


Channel: 157



Report No.: AAEMT/RF/240507-01-01

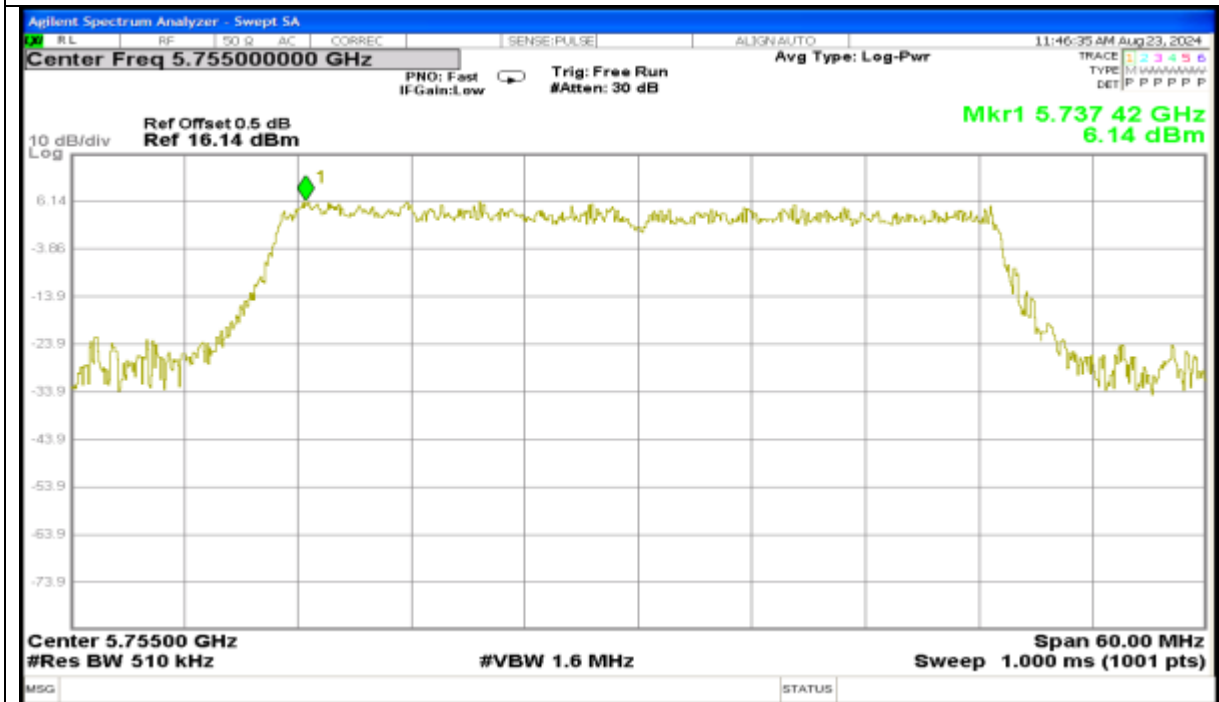
Channel: 165



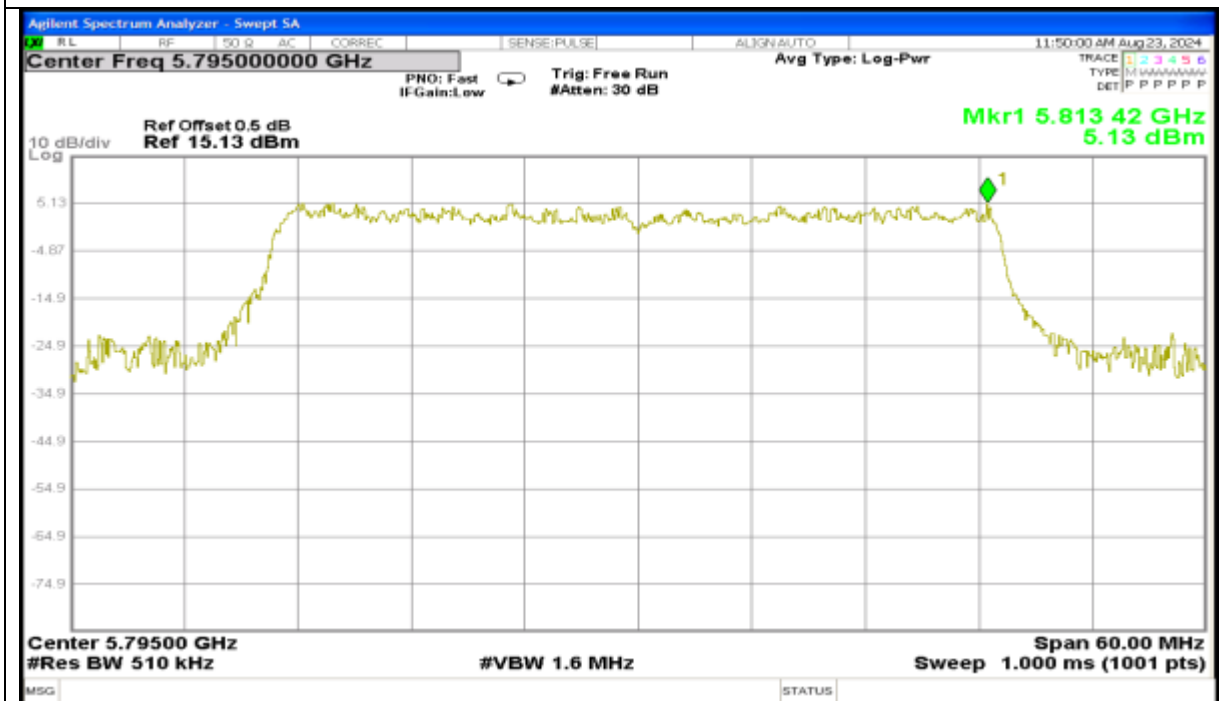
Report No.: AAEMT/RF/240507-01-01

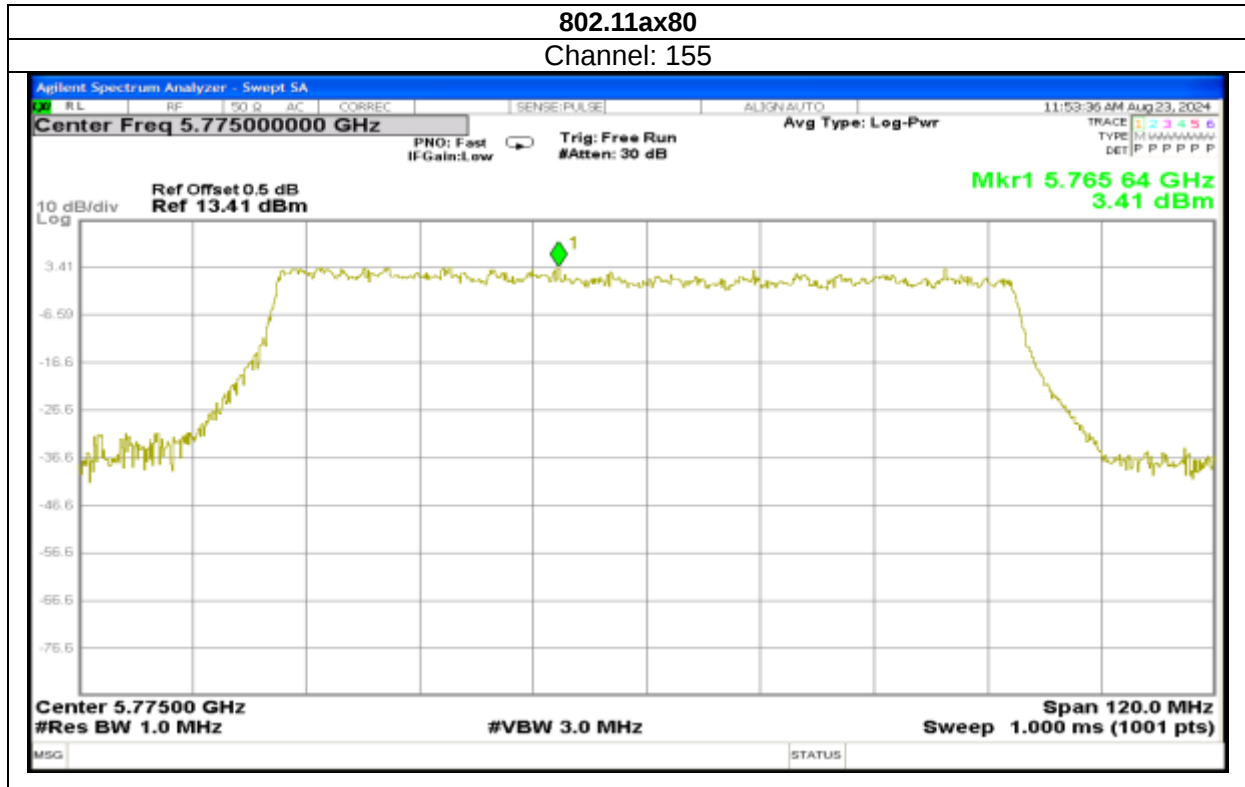
802.11ax40

Channel: 151



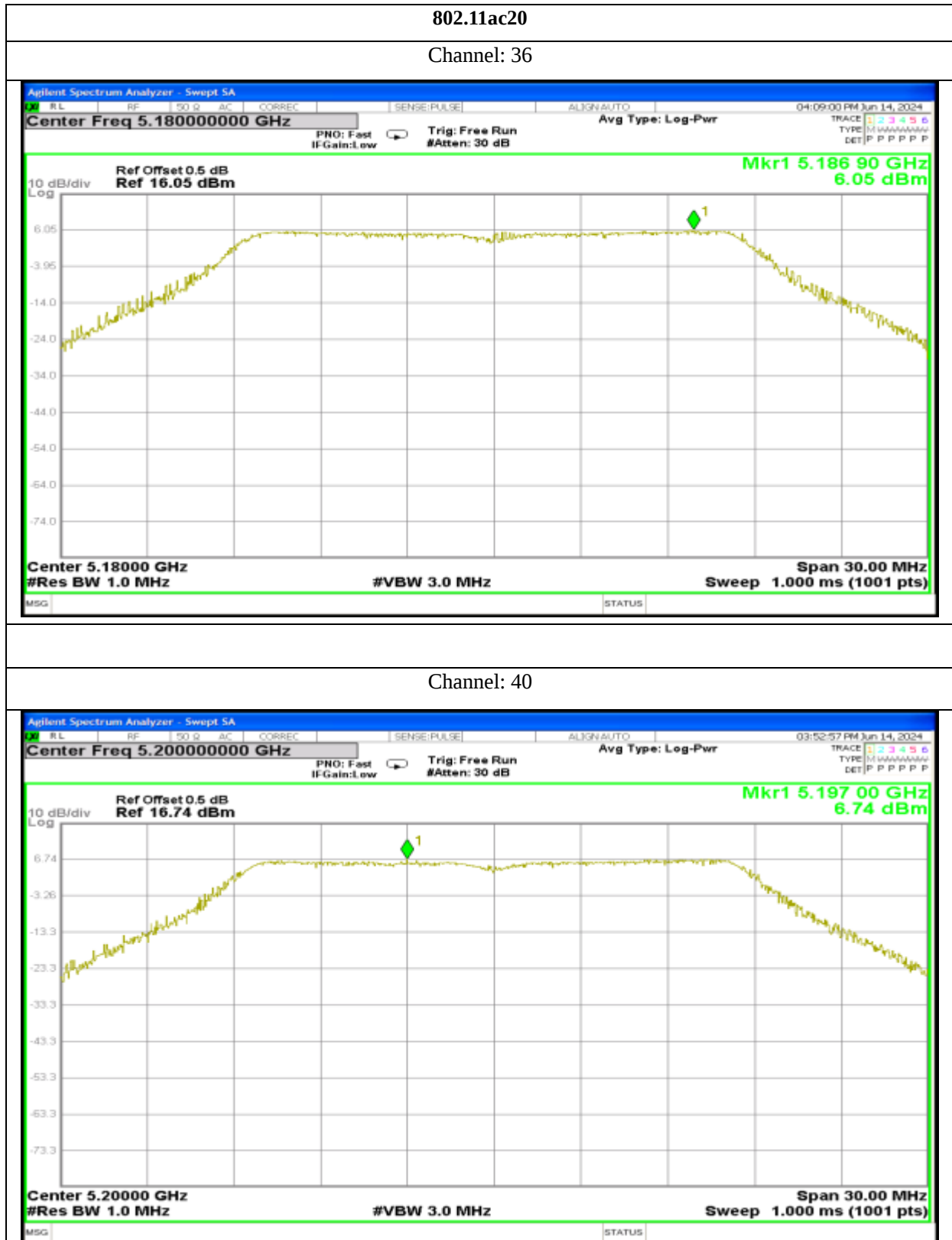
Channel: 159



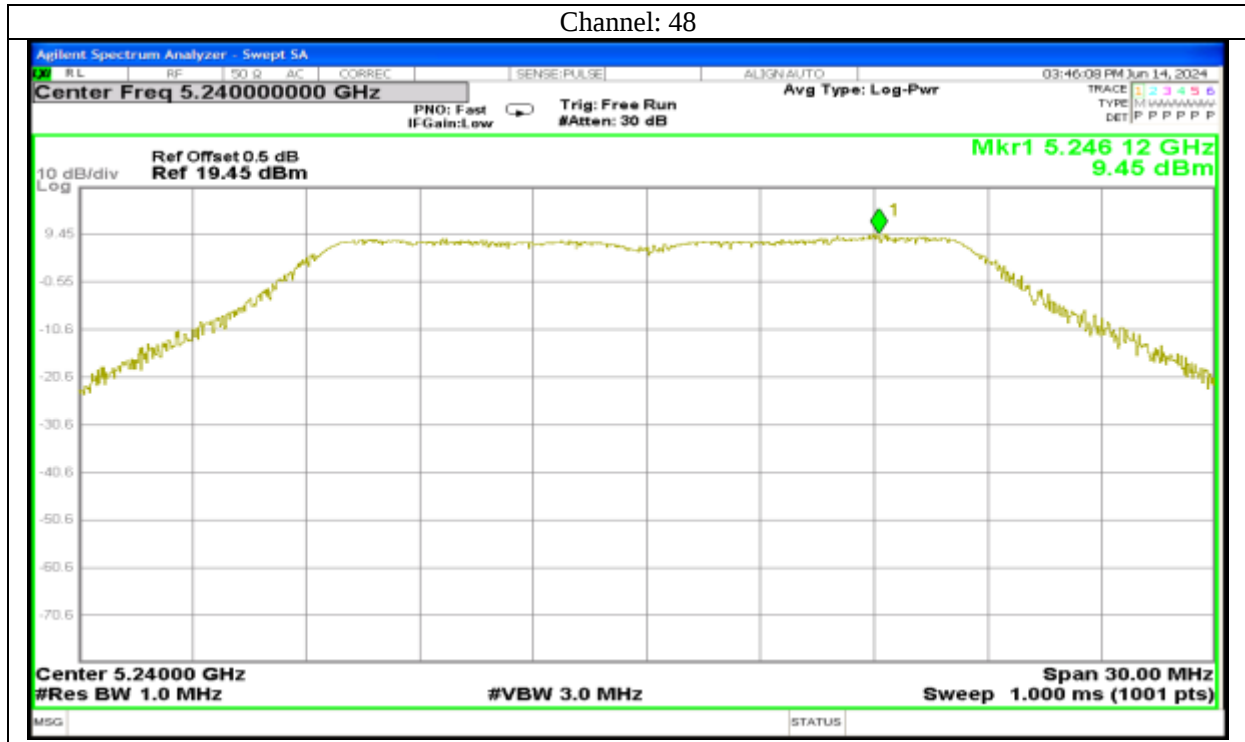


Report No.: AAEMT/RF/240507-01-01

Antenna 1:



Report No.: AAEMT/RF/240507-01-01



Report No.: AAEMT/RF/240507-01-01

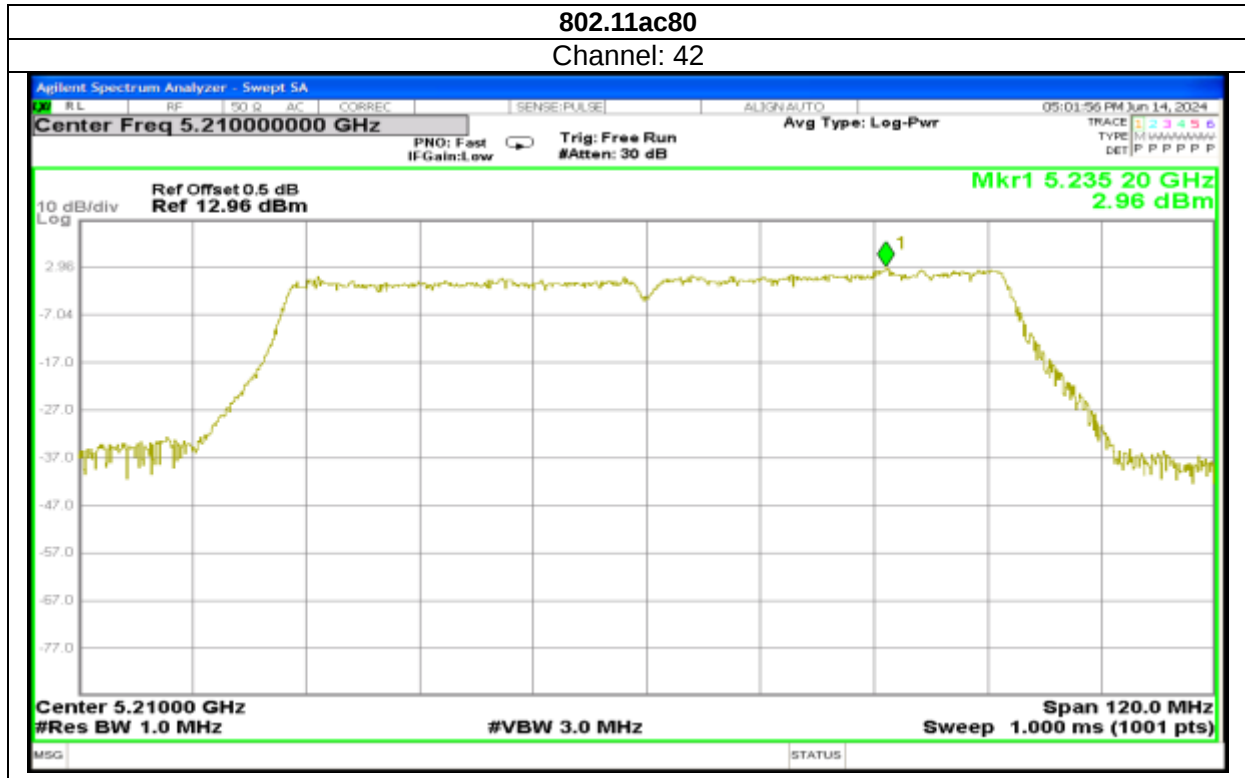
802.11ac40

Channel: 38



Channel: 46

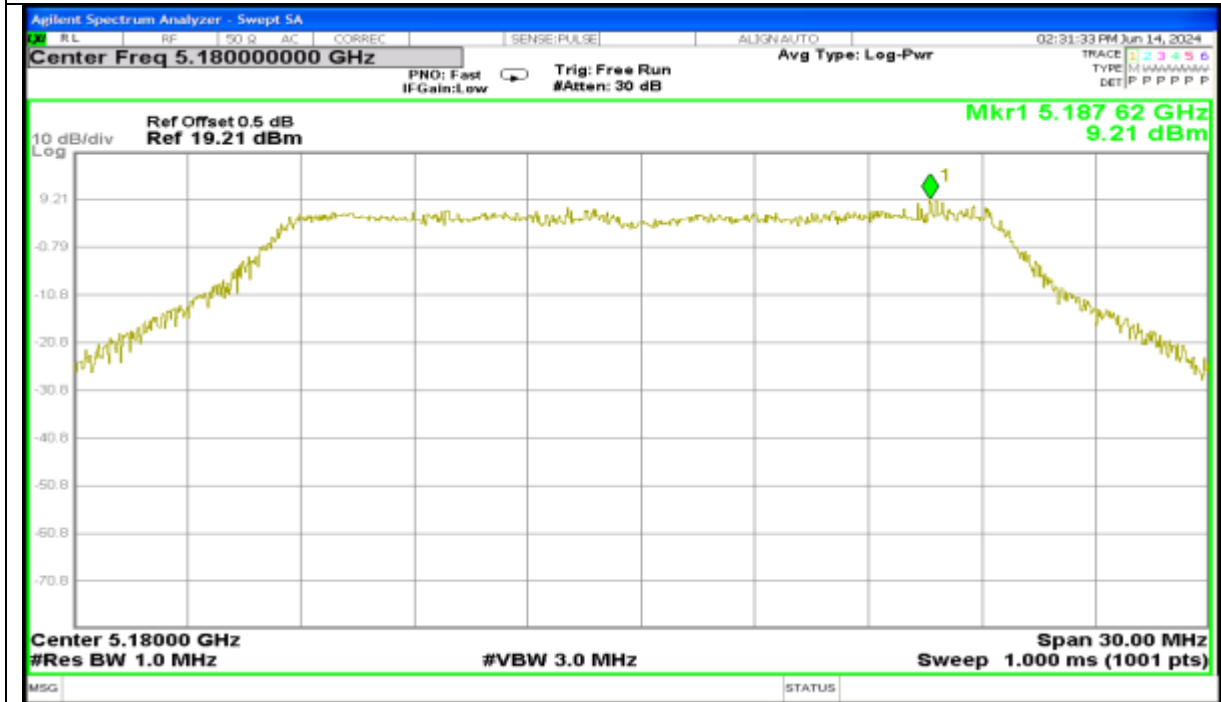




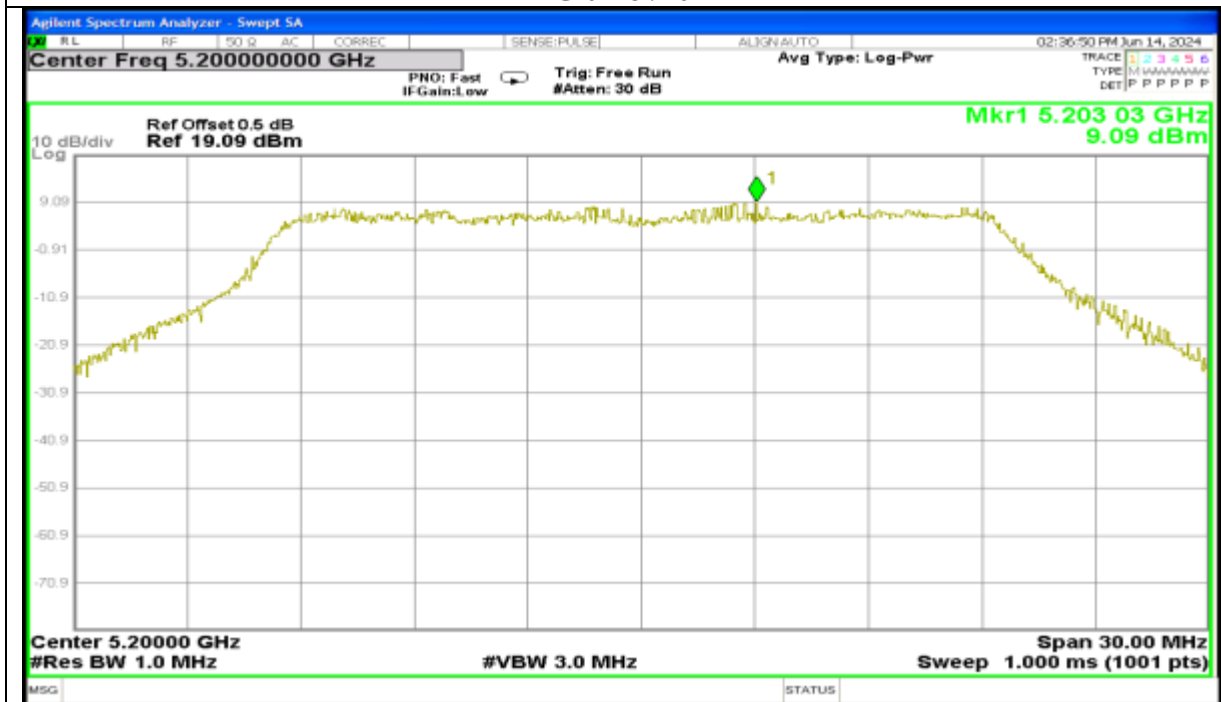
Report No.: AAEMT/RF/240507-01-01

802.11ax20

Channel: 36



Channel: 40



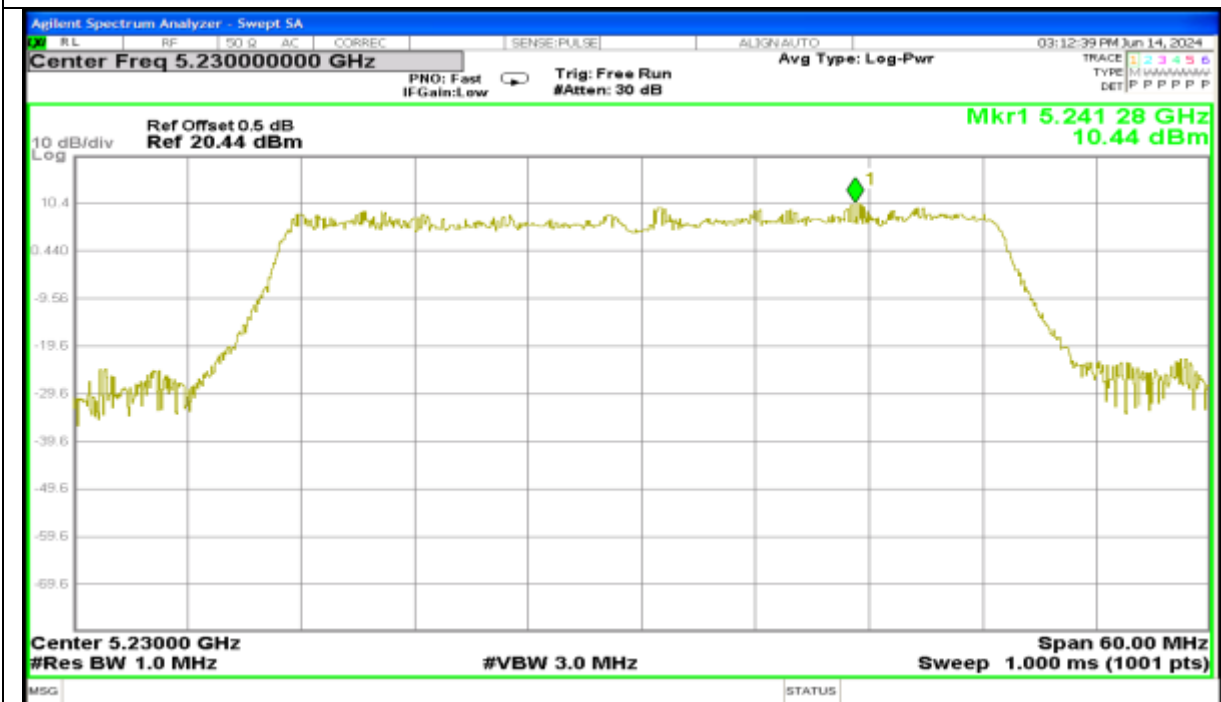


802.11ax40

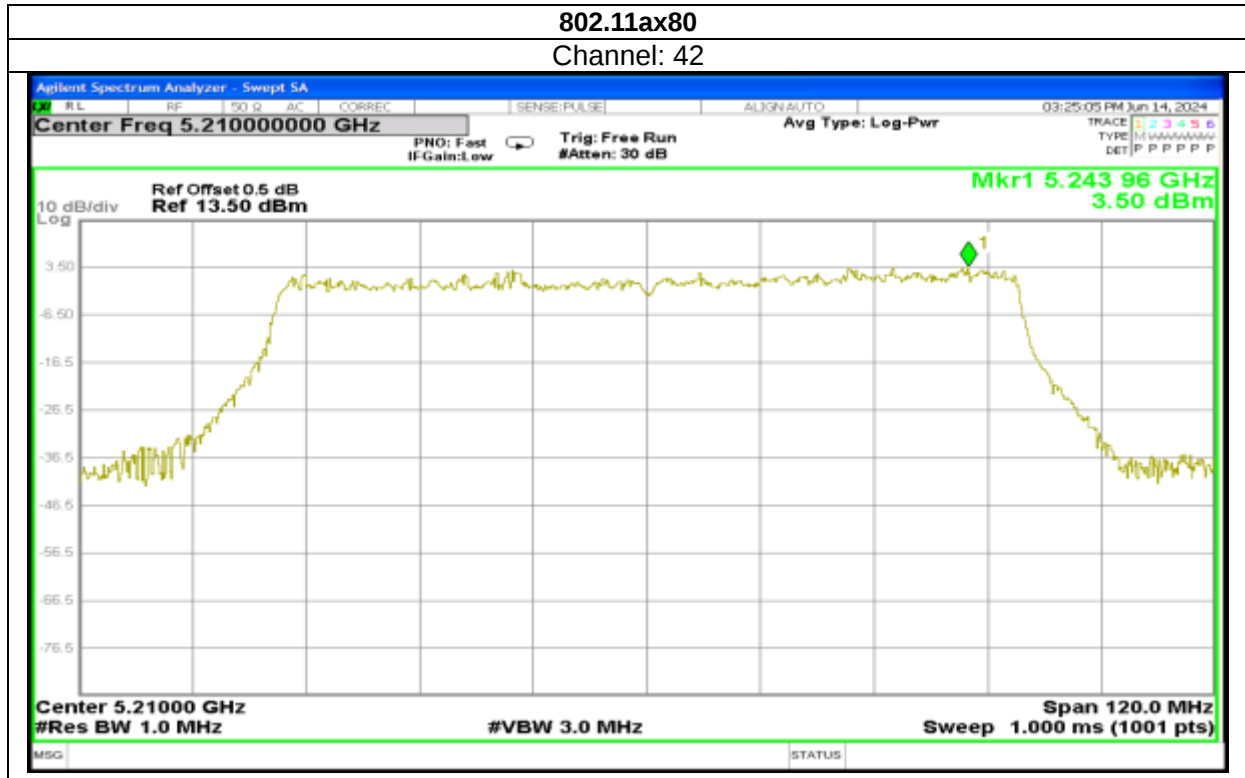
Channel: 38



Channel: 46



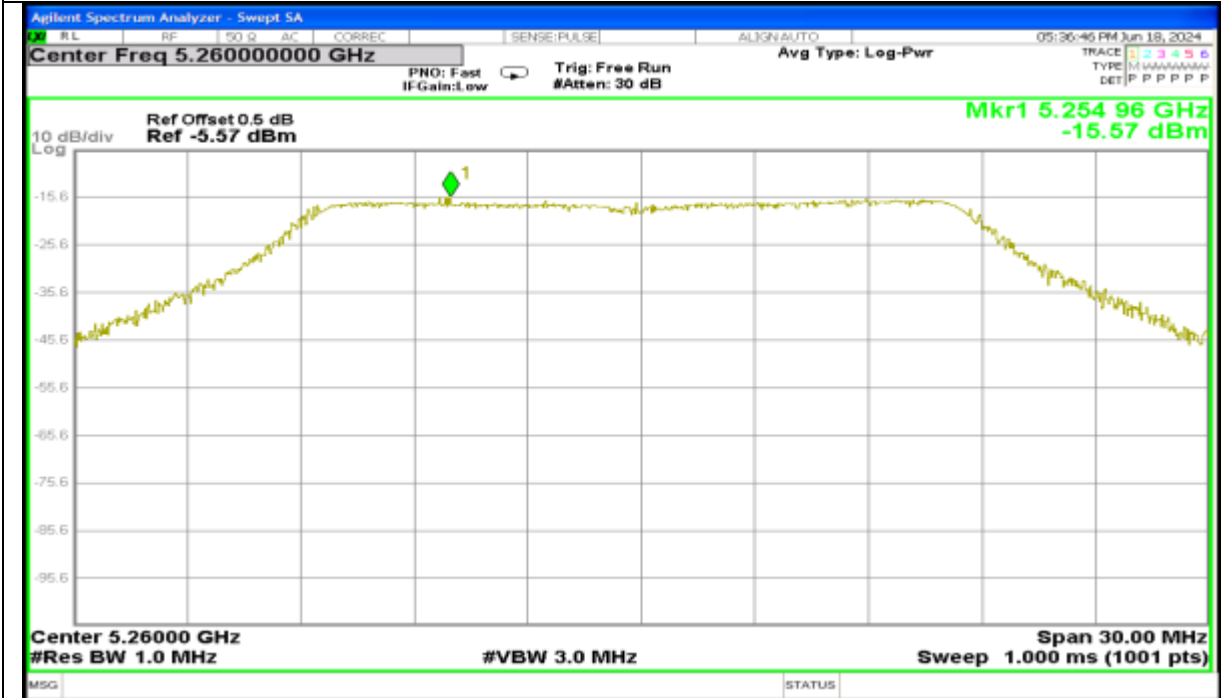
Report No.: AAEMT/RF/240507-01-01



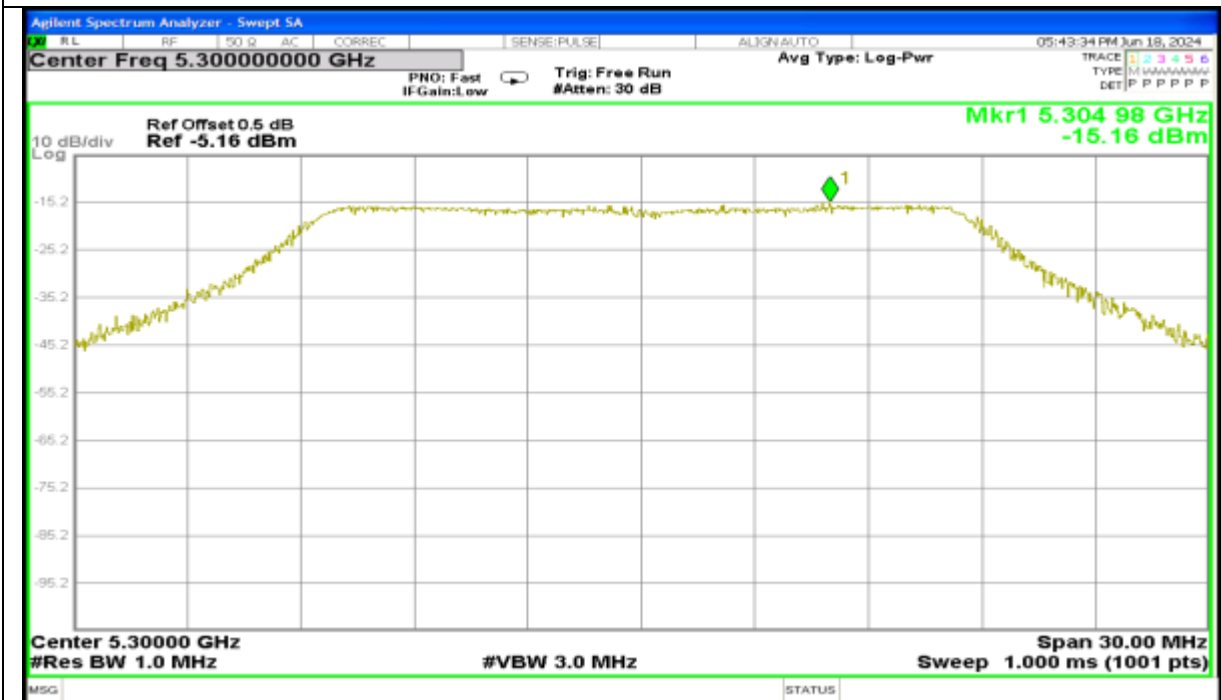
Report No.: AAEMT/RF/240507-01-01

802.11ac20

Channel: 52



Channel: 60



Report No.: AAEMT/RF/240507-01-01



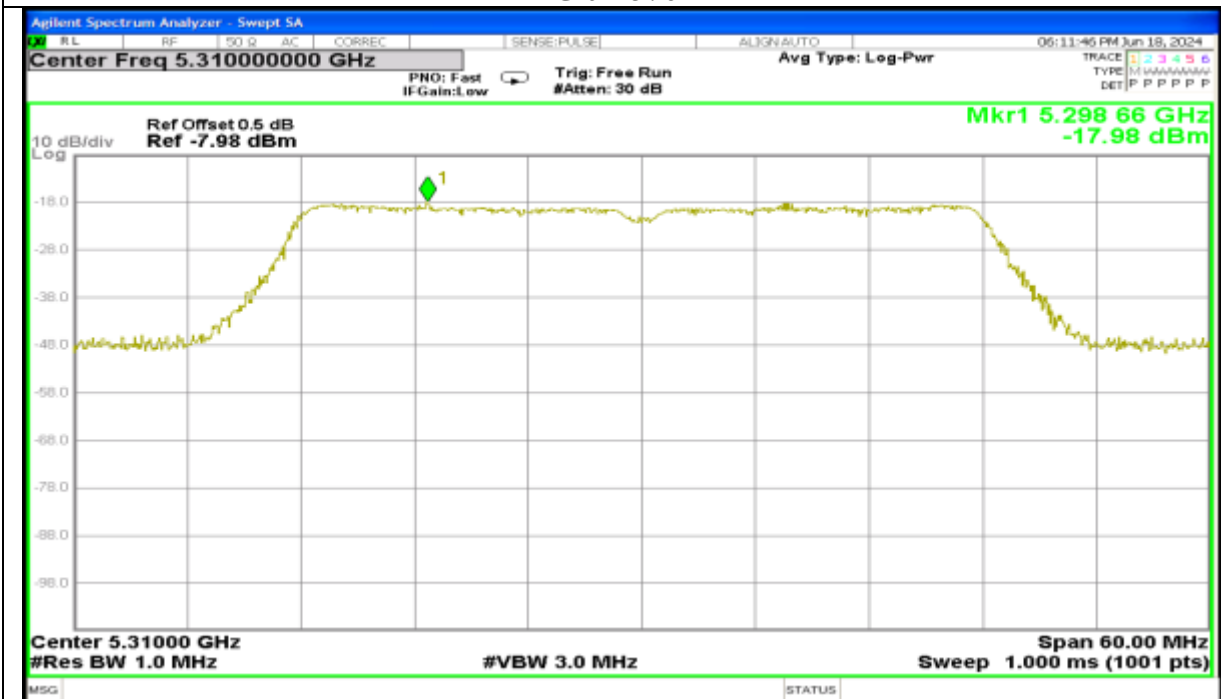
Report No.: AAEMT/RF/240507-01-01

802.11ac40

Channel: 54



Channel: 62

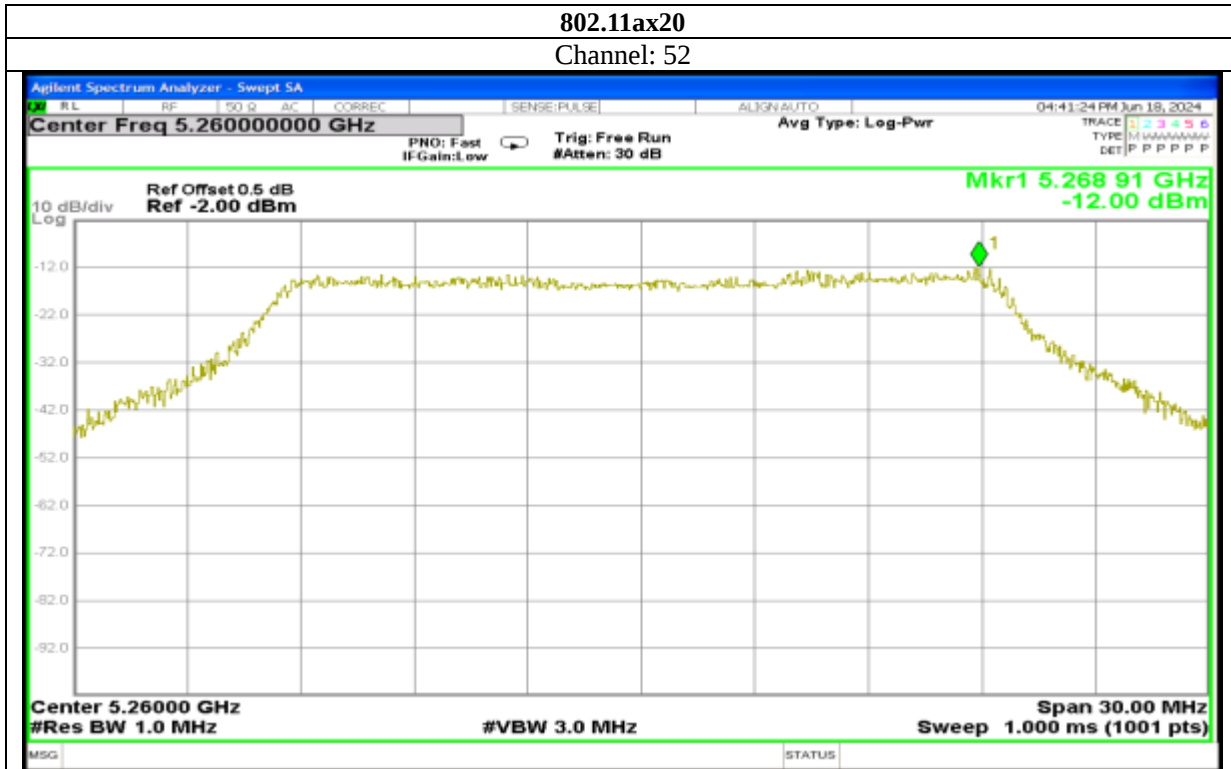




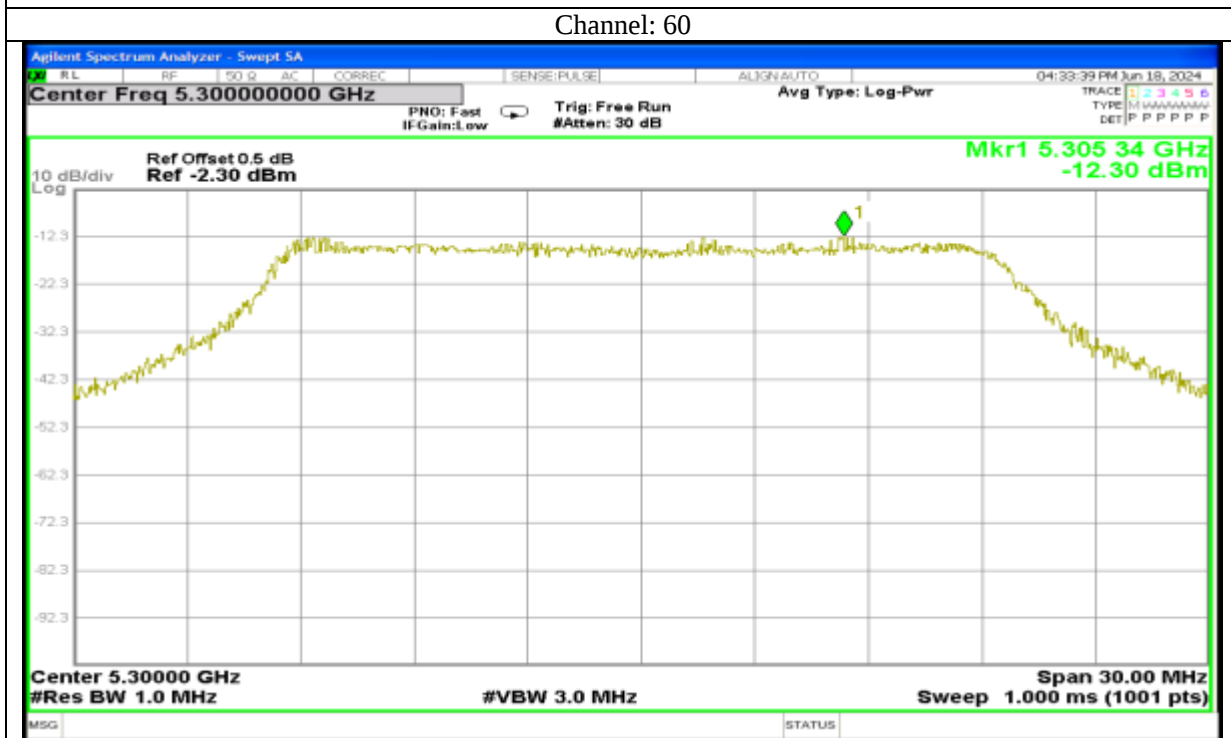
Report No.: AAEMT/RF/240507-01-01

802.11ax20

Channel: 52



Channel: 60





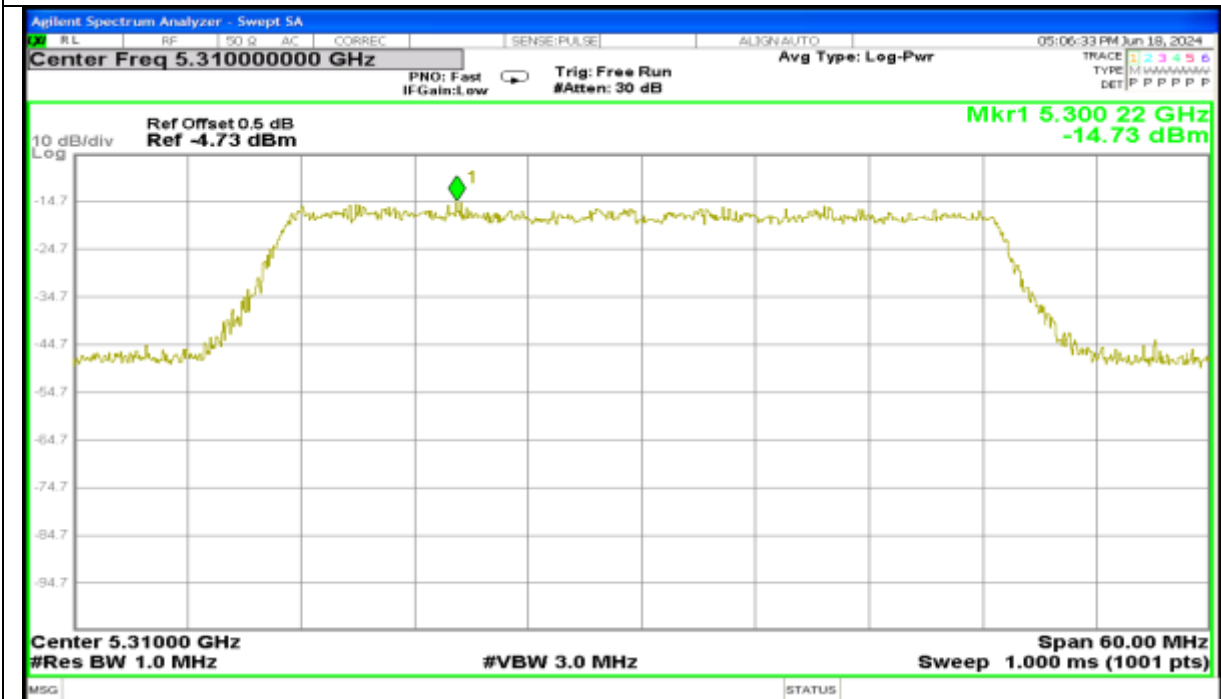
Report No.: AAEMT/RF/240507-01-01

802.11ax40

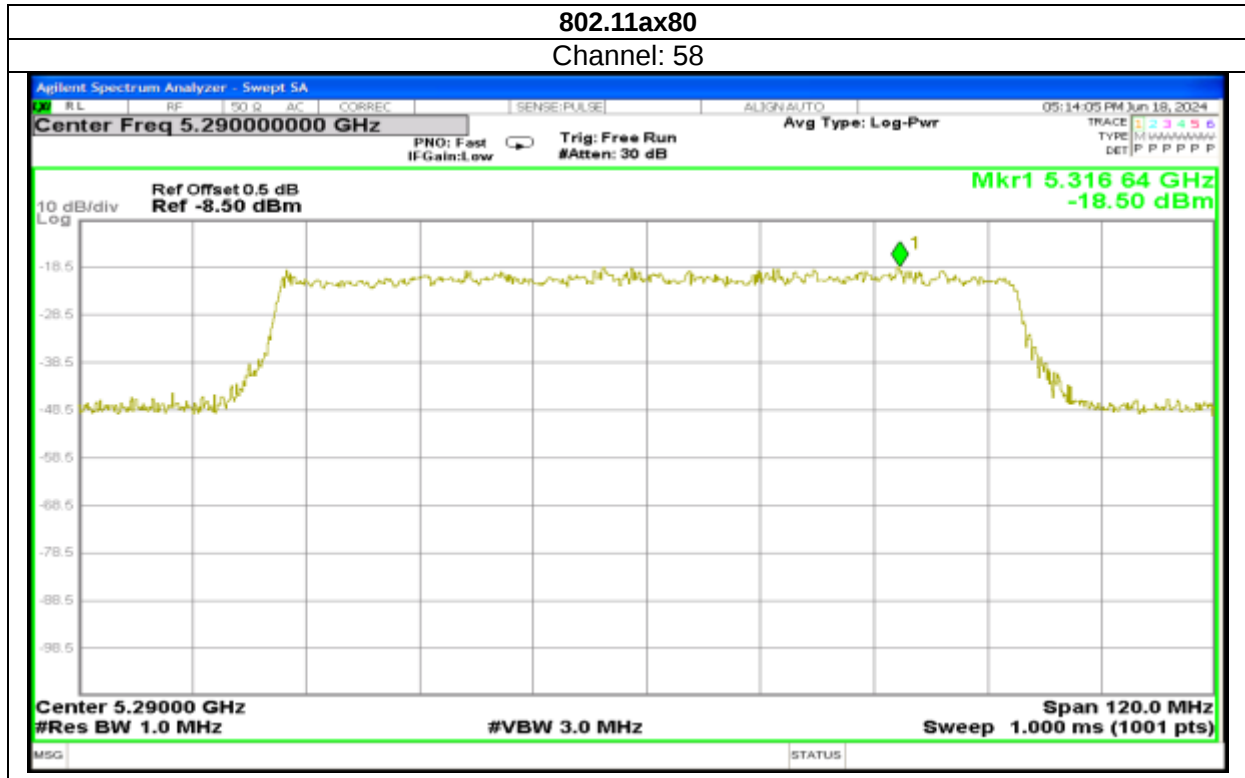
Channel: 54



Channel: 62



Report No.: AAEMT/RF/240507-01-01



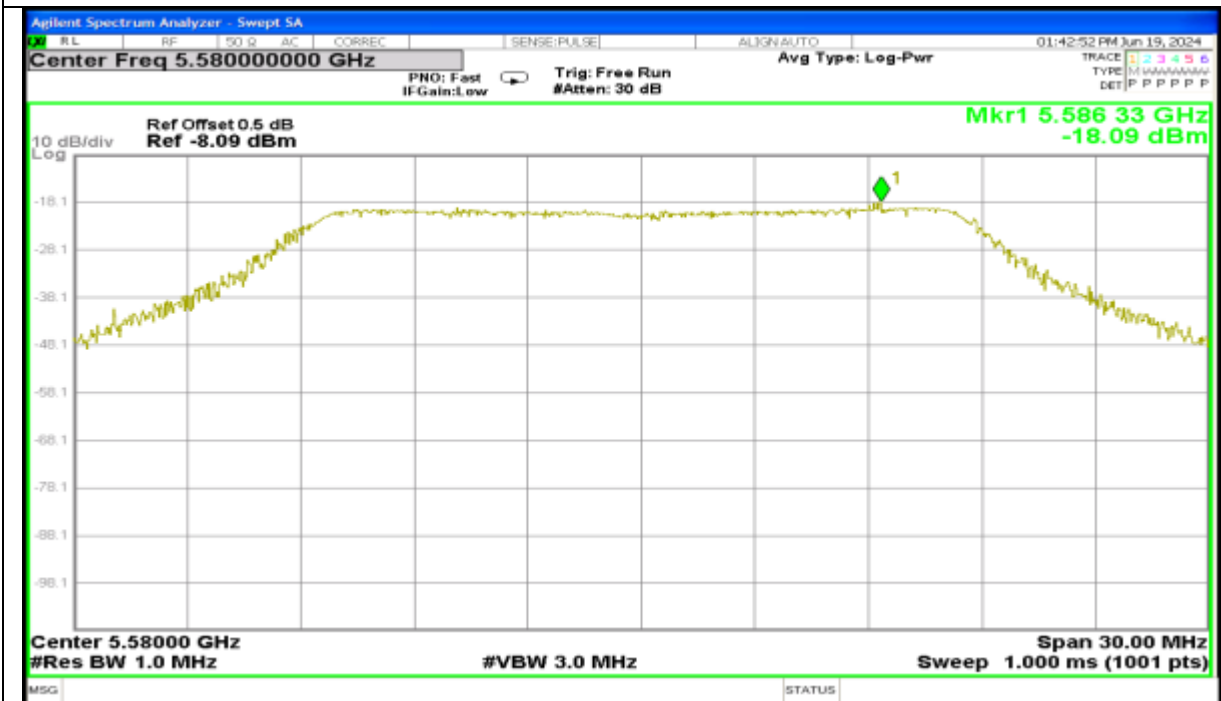
Report No.: AAEMT/RF/240507-01-01

802.11ac20

Channel: 100



Channel: 116

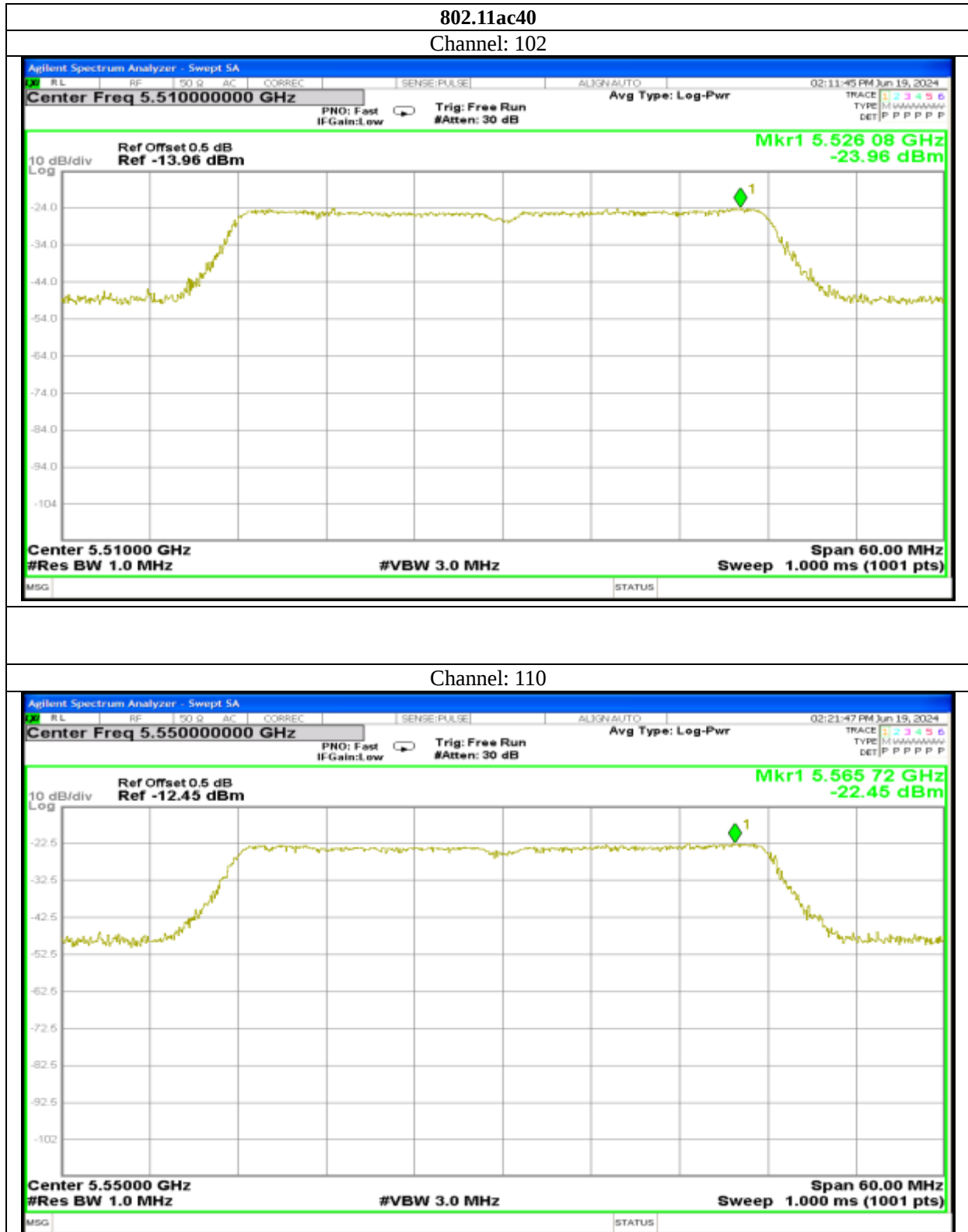


Report No.: AAEMT/RF/240507-01-01

Channel: 140

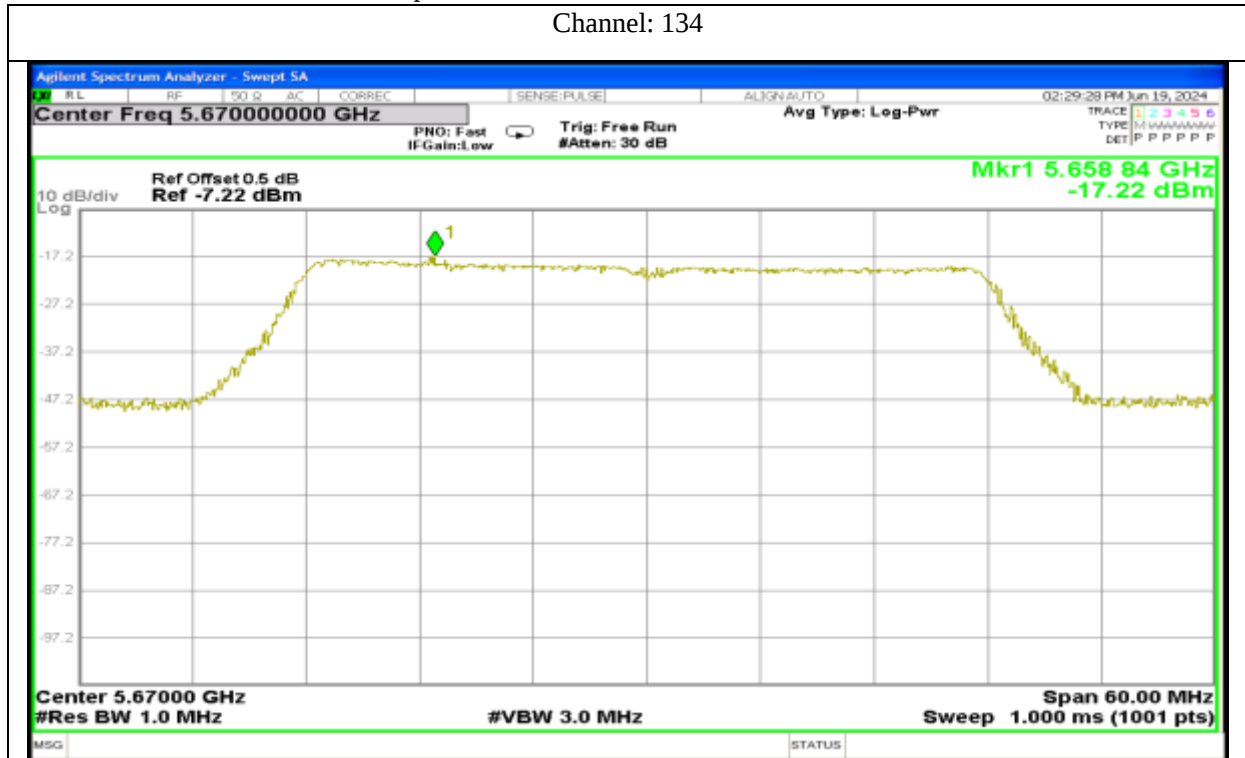


Report No.: AAEMT/RF/240507-01-01



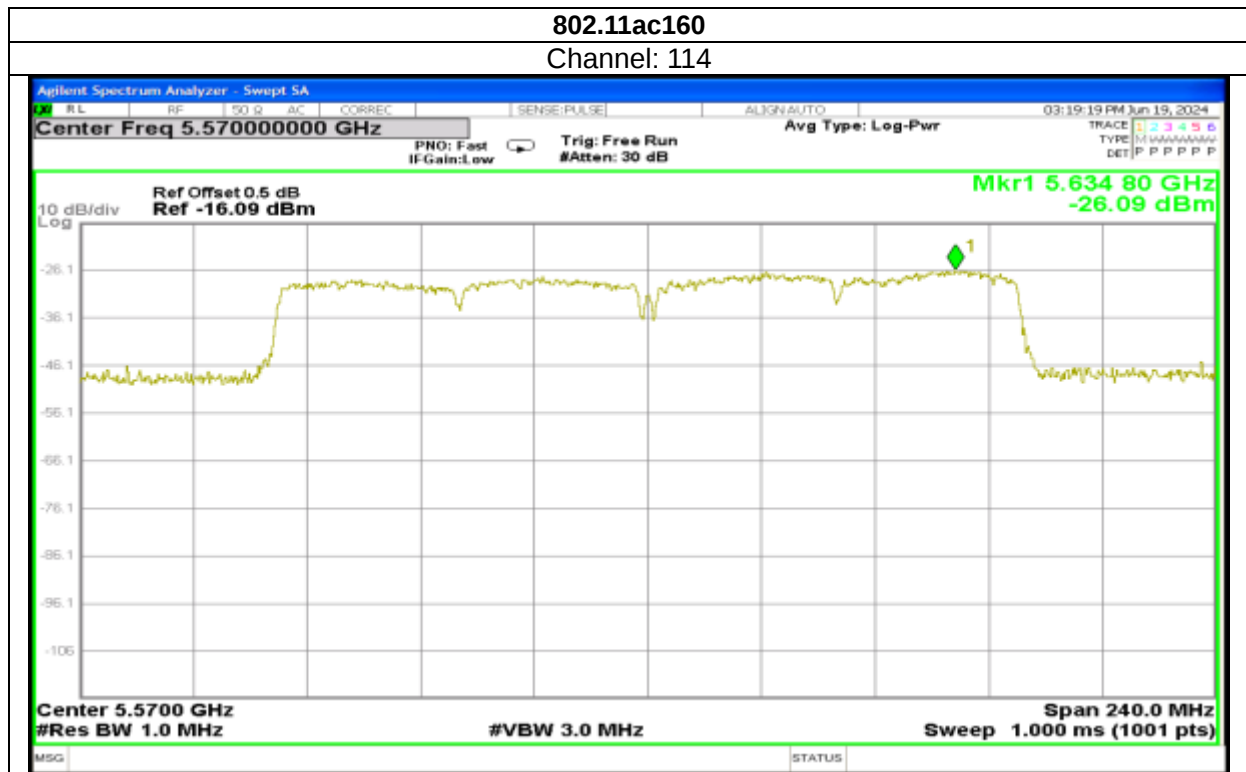
Report No.: AAEMT/RF/240507-01-01

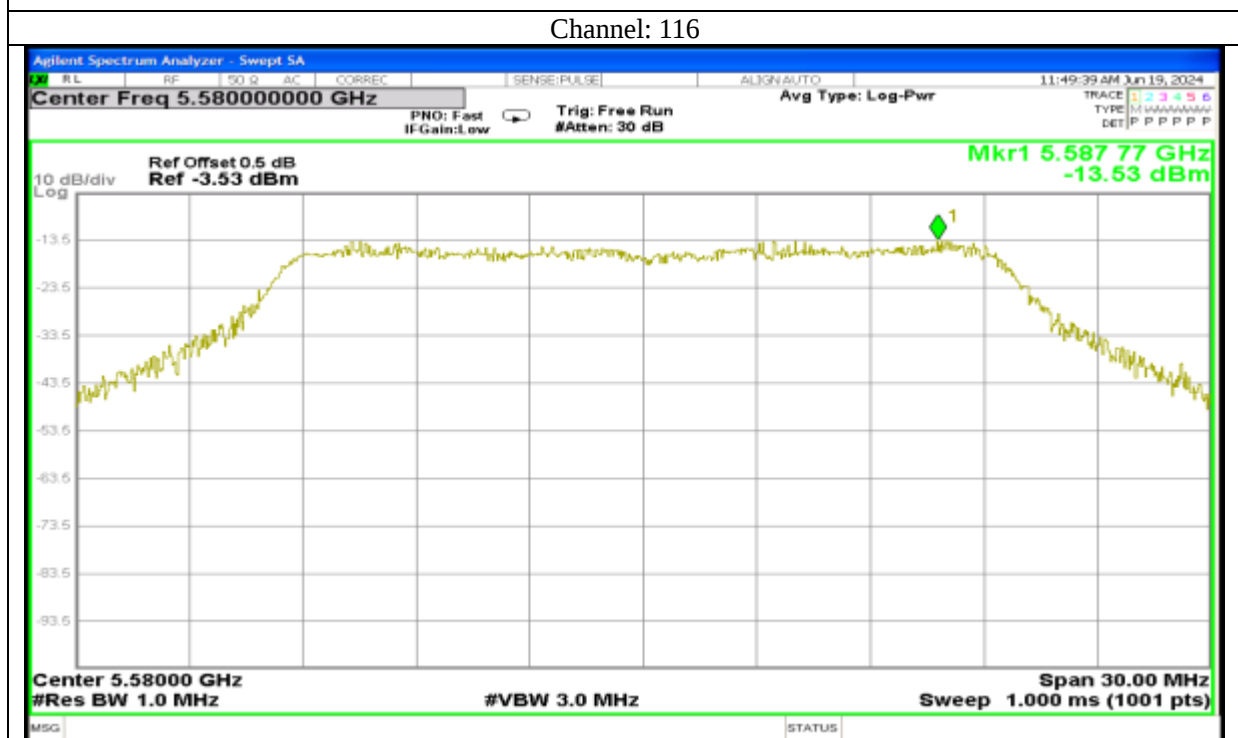
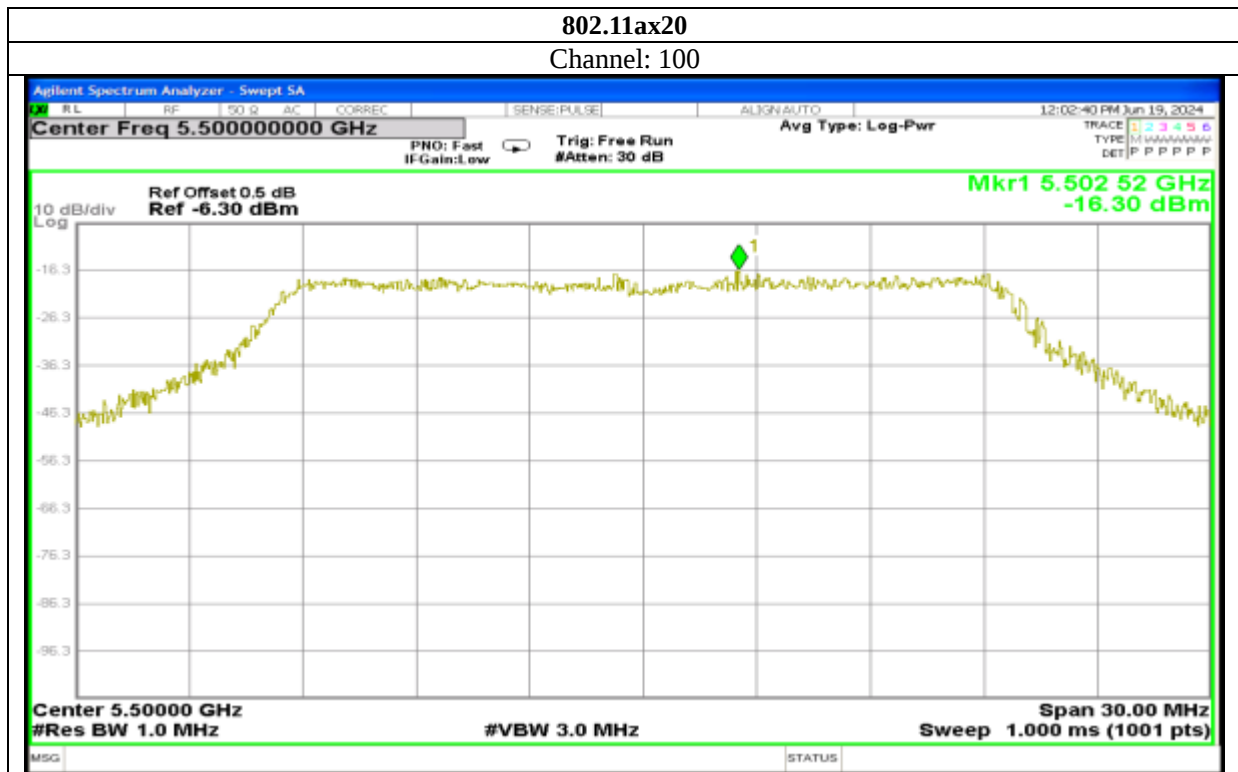
Channel: 134

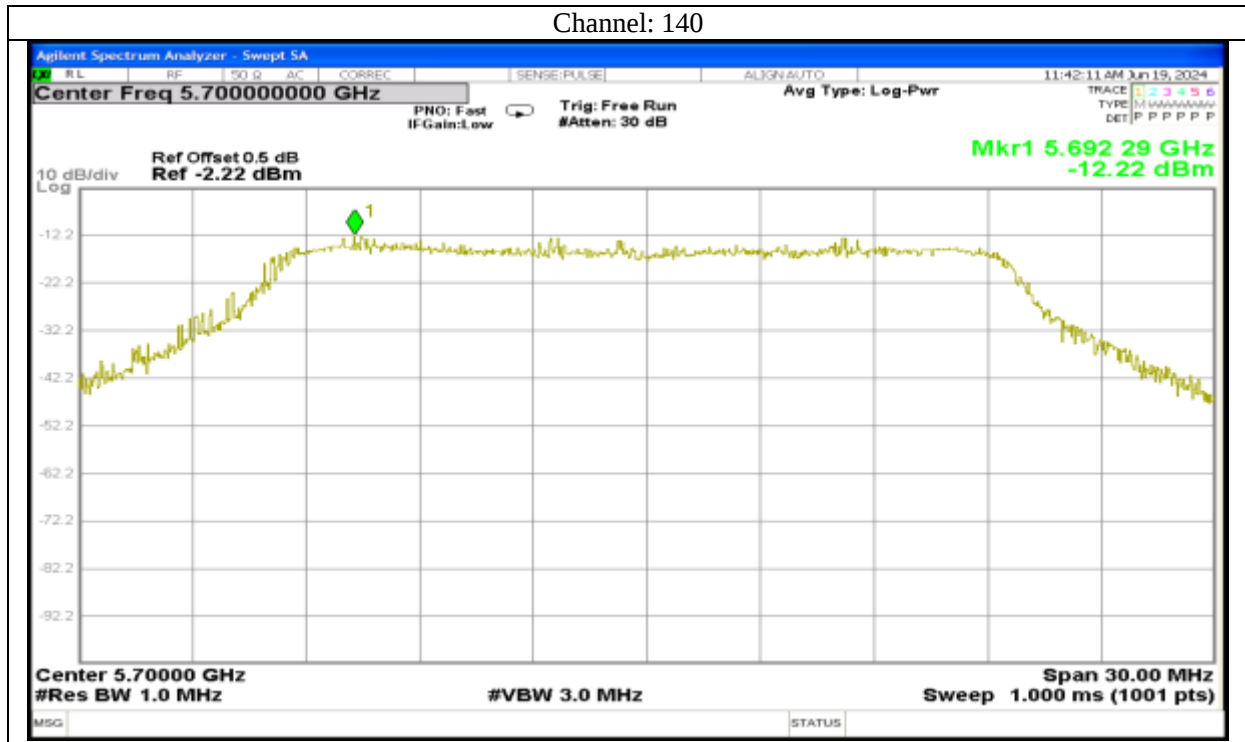




Report No.: AAEMT/RF/240507-01-01

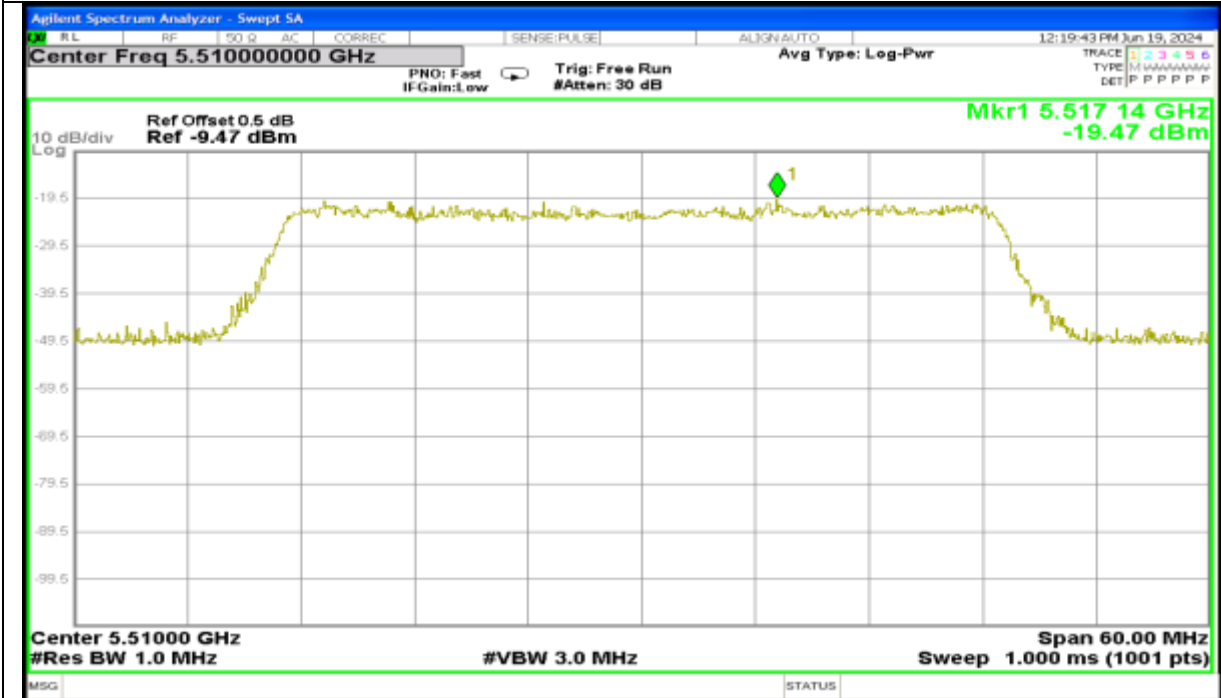




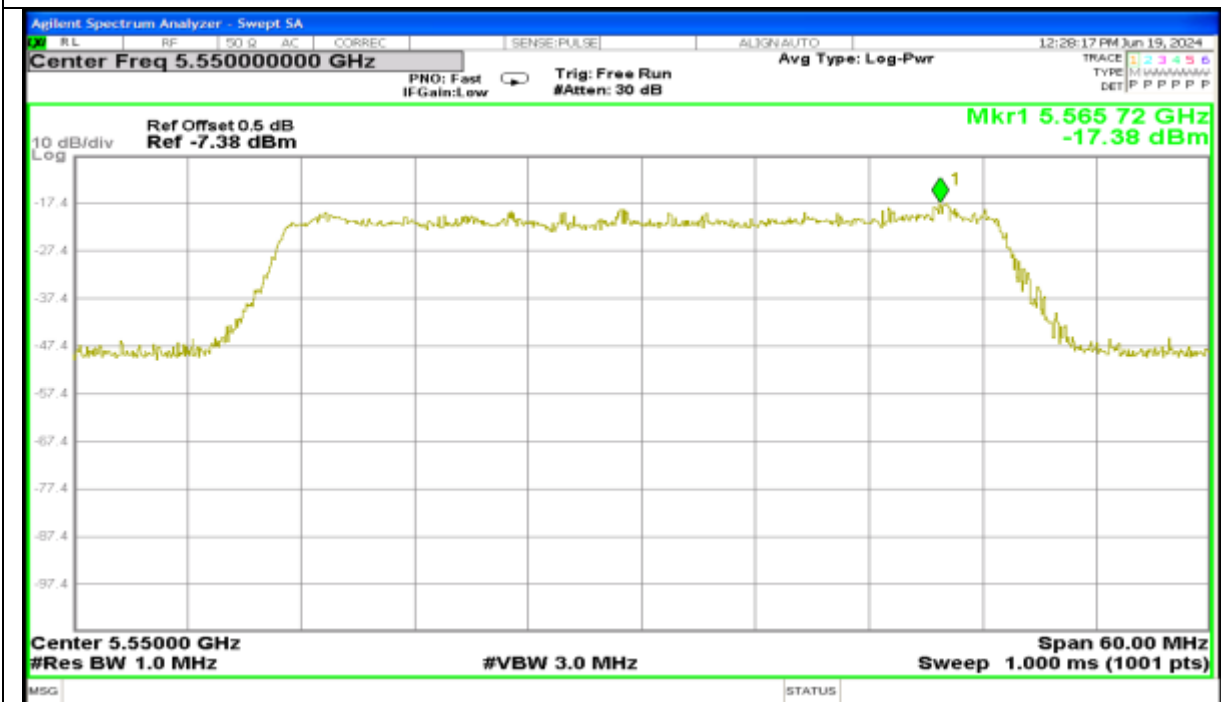


802.11ax40

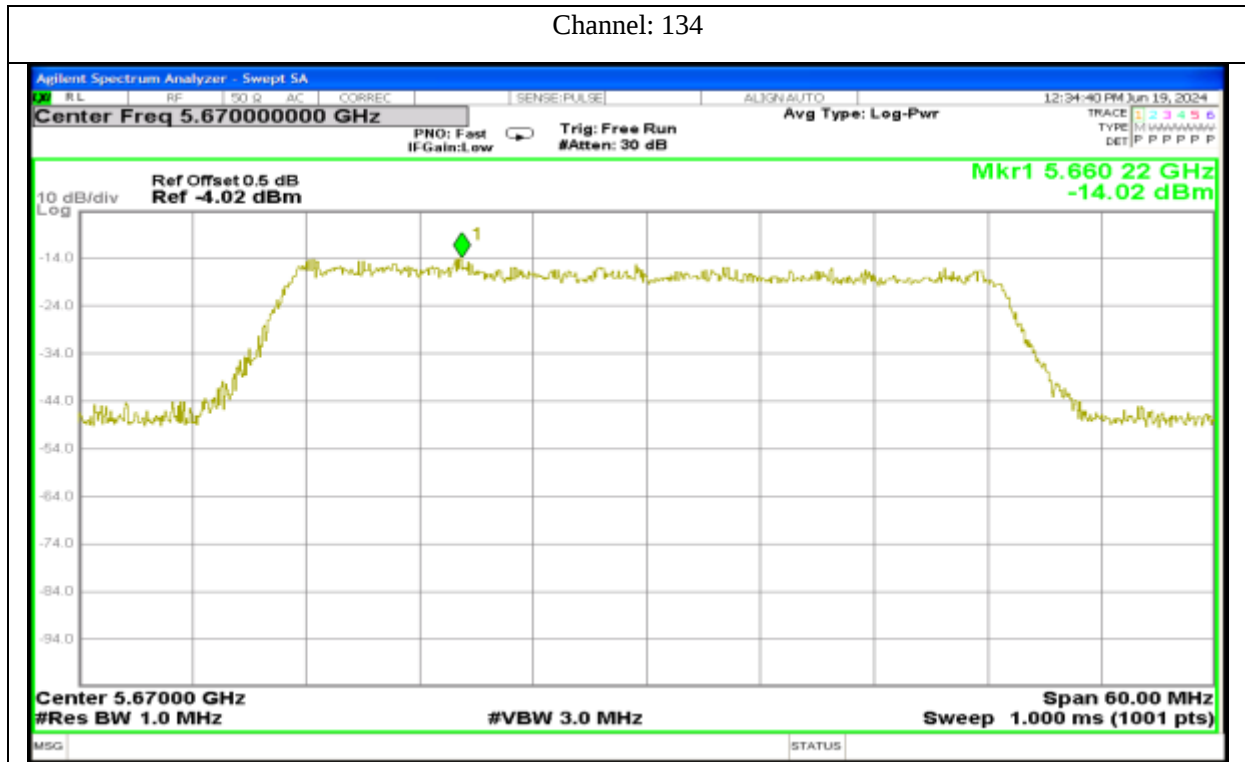
Channel: 102



Channel: 110



Channel: 134

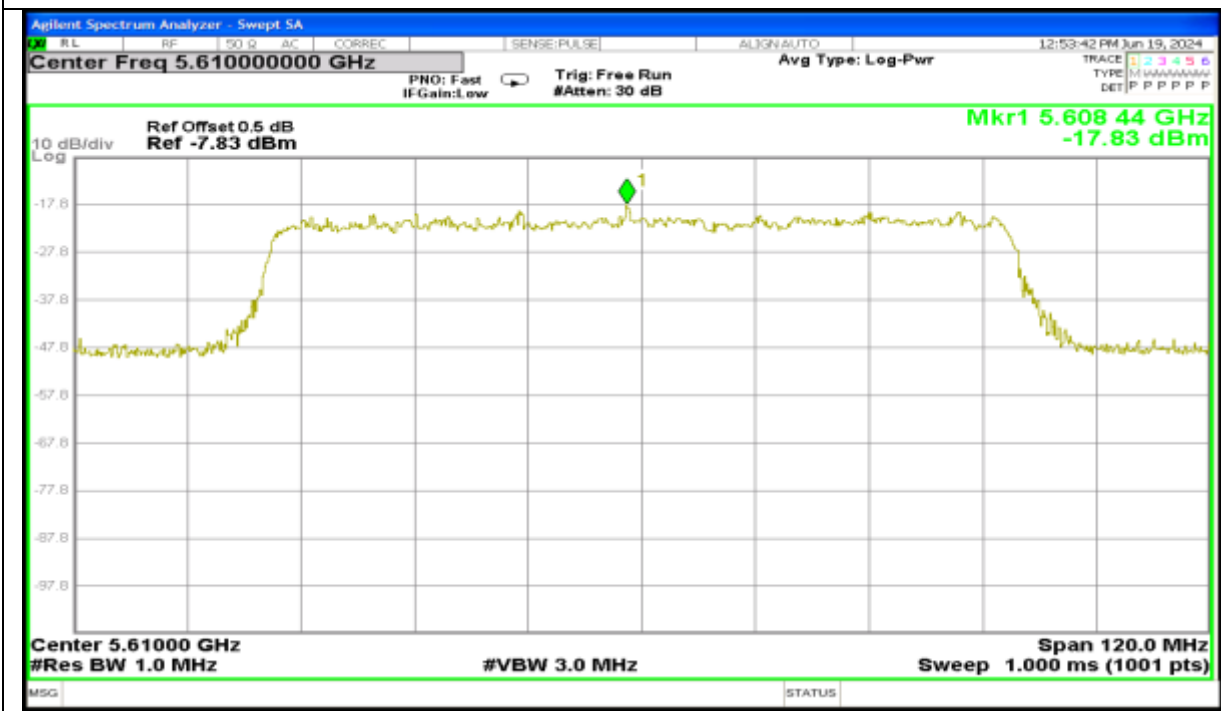


802.11ax80

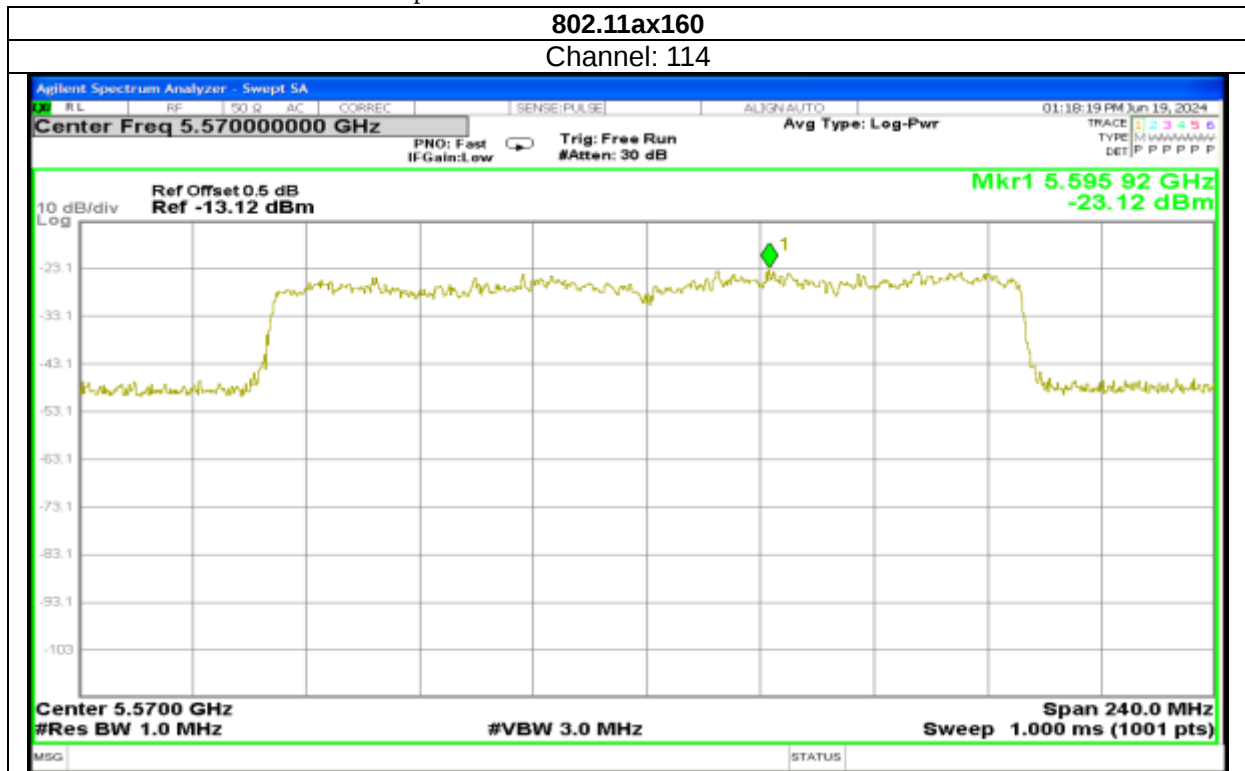
Channel: 106



Channel: 122



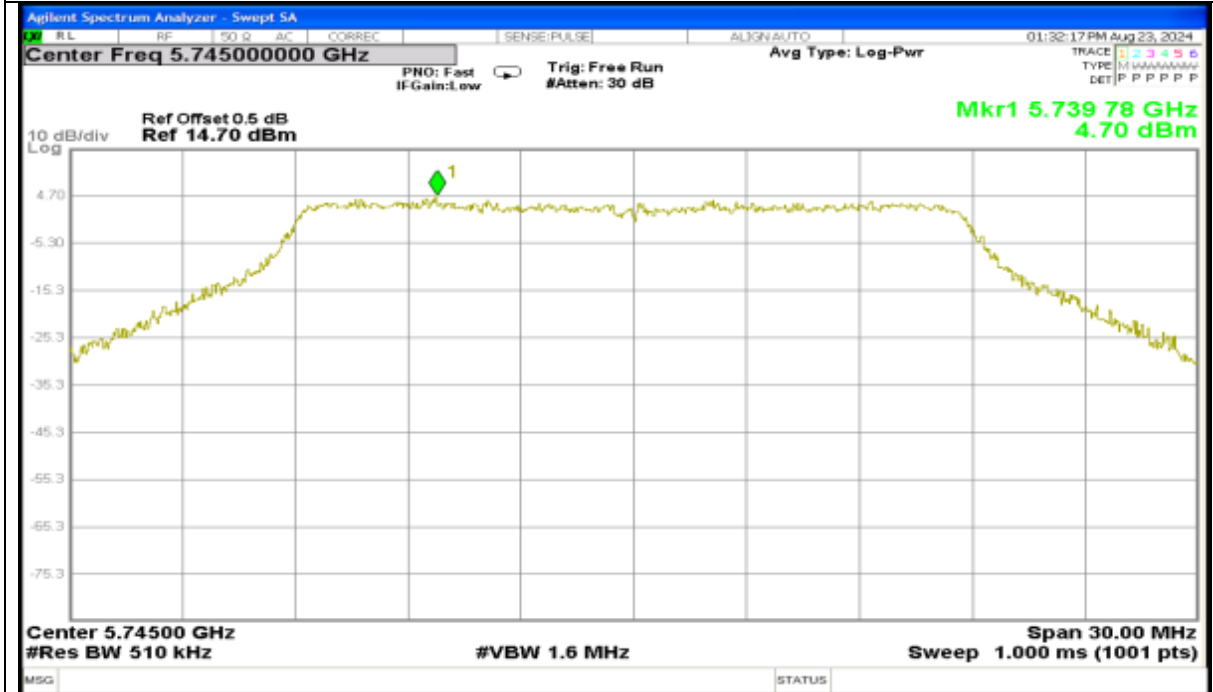
Report No.: AAEMT/RF/240507-01-01



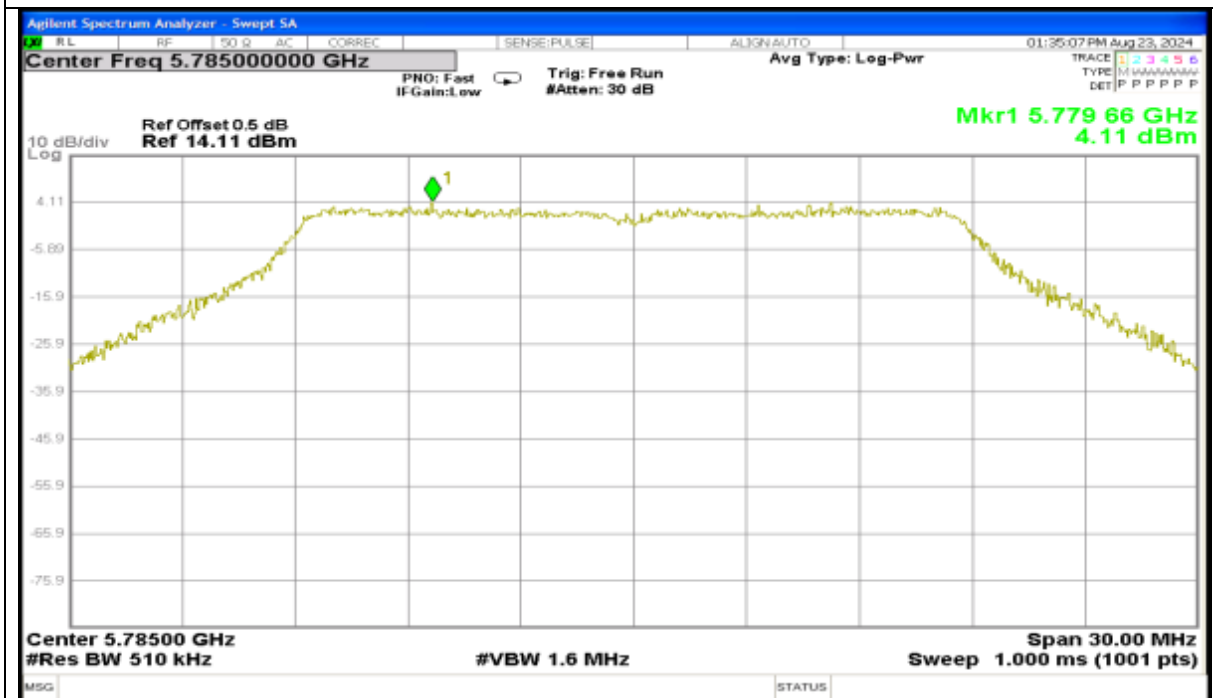
Report No.: AAEMT/RF/240507-01-01

802.11ac20

Channel: 149

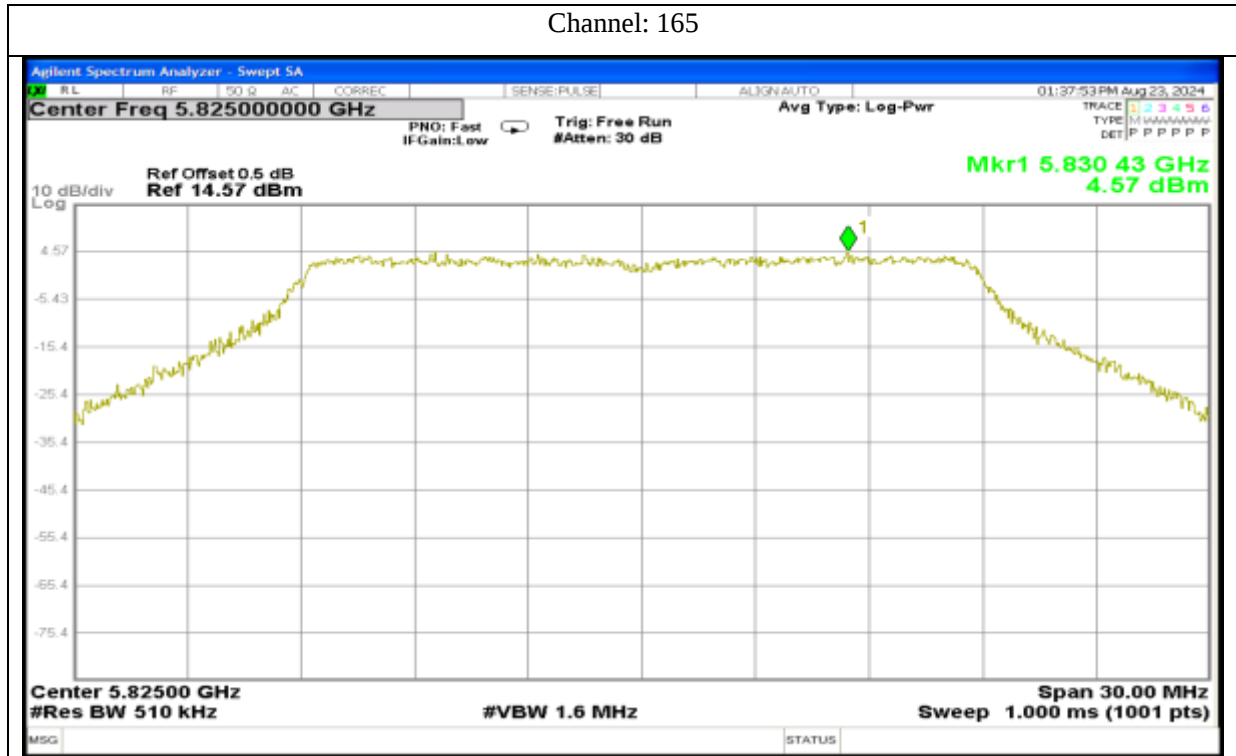


Channel: 157



Report No.: AAEMT/RF/240507-01-01

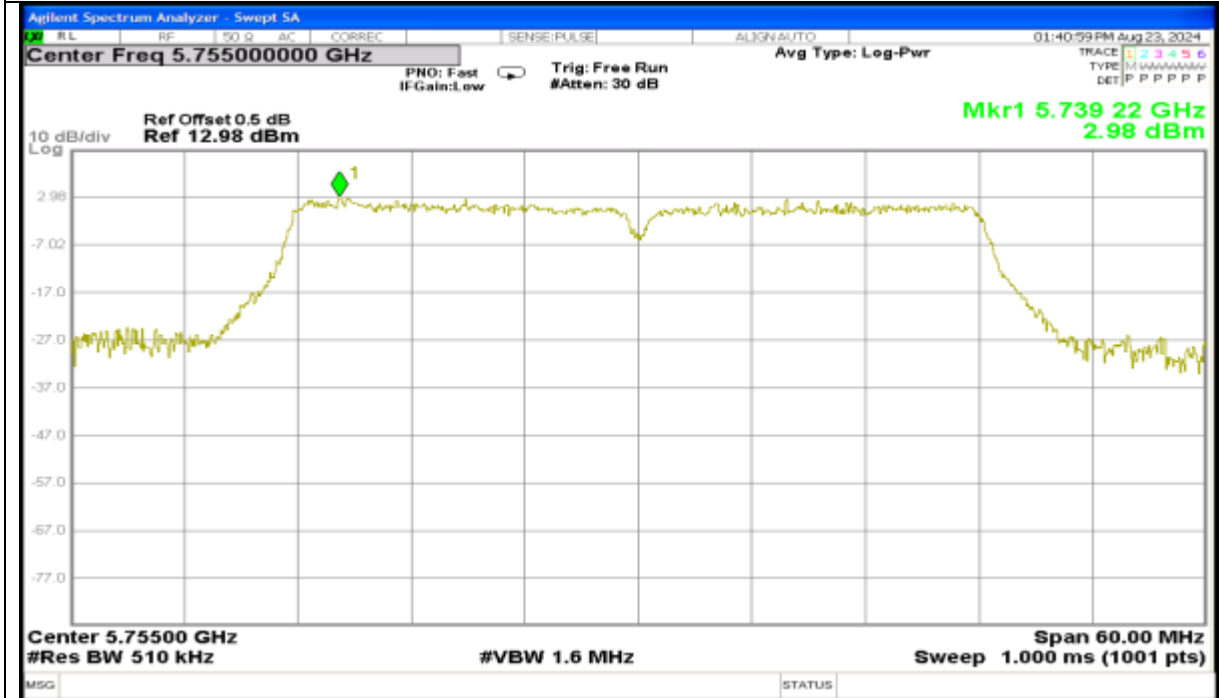
Channel: 165



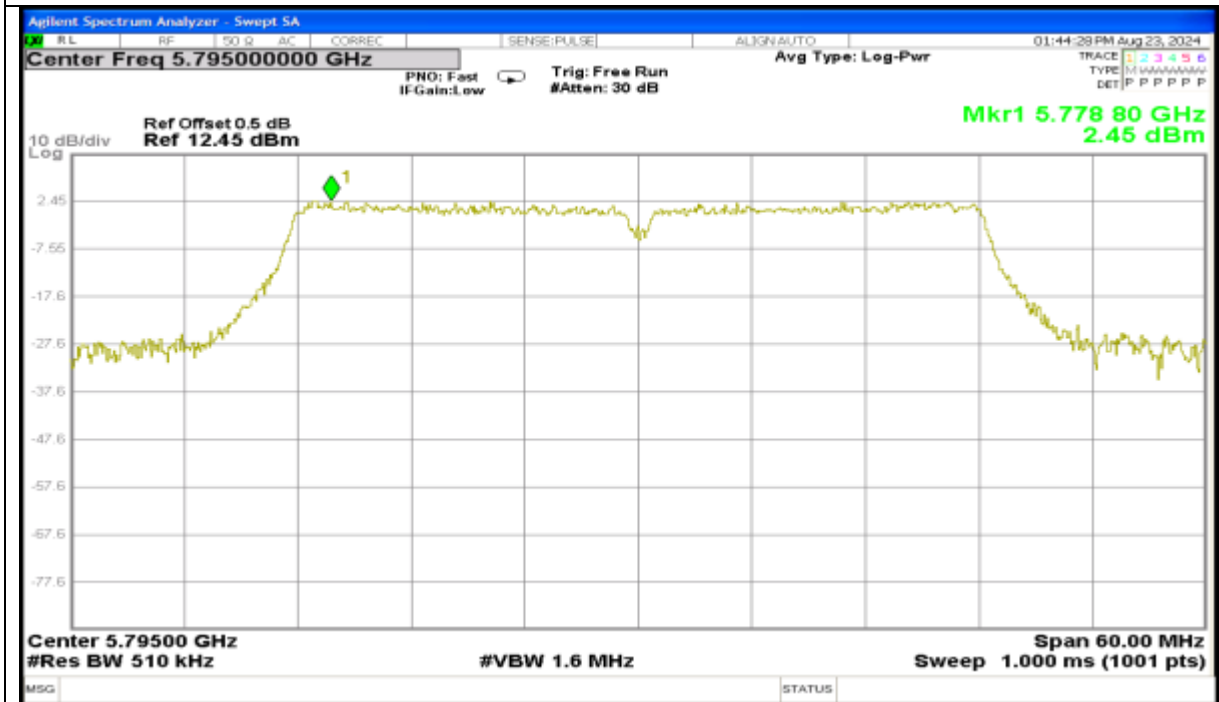
Report No.: AAEMT/RF/240507-01-01

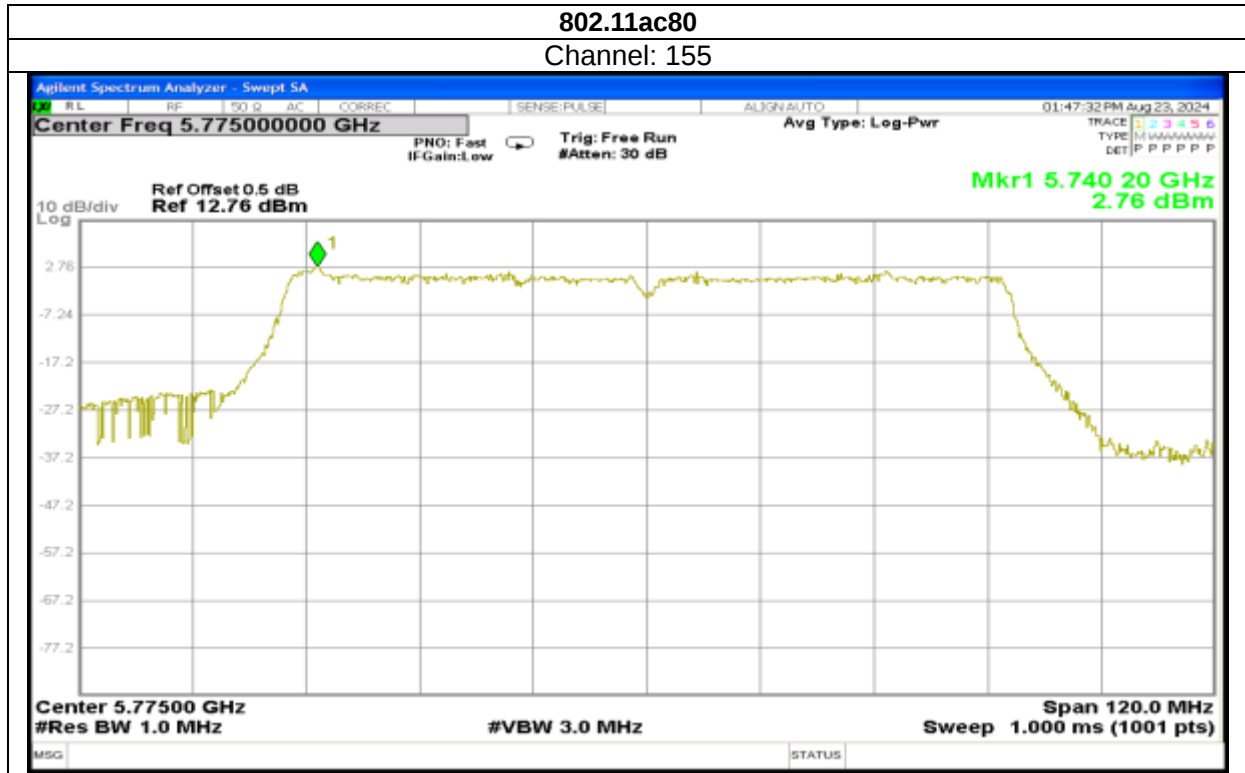
802.11ac40

Channel: 151



Channel: 159

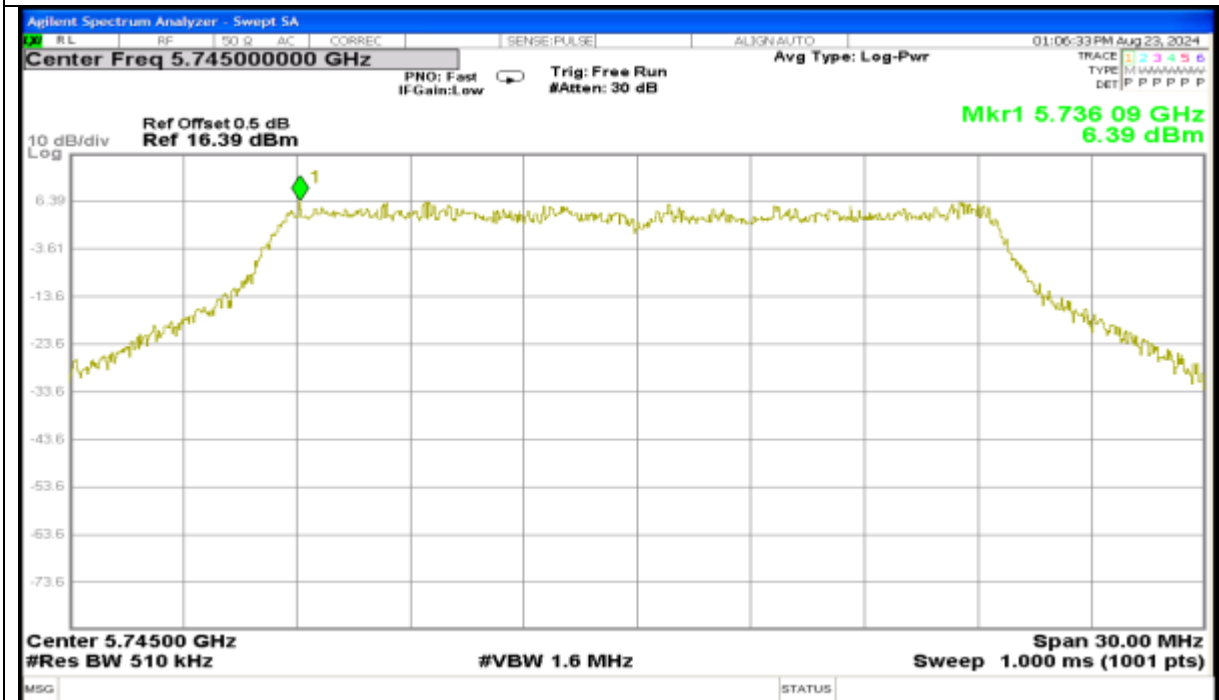




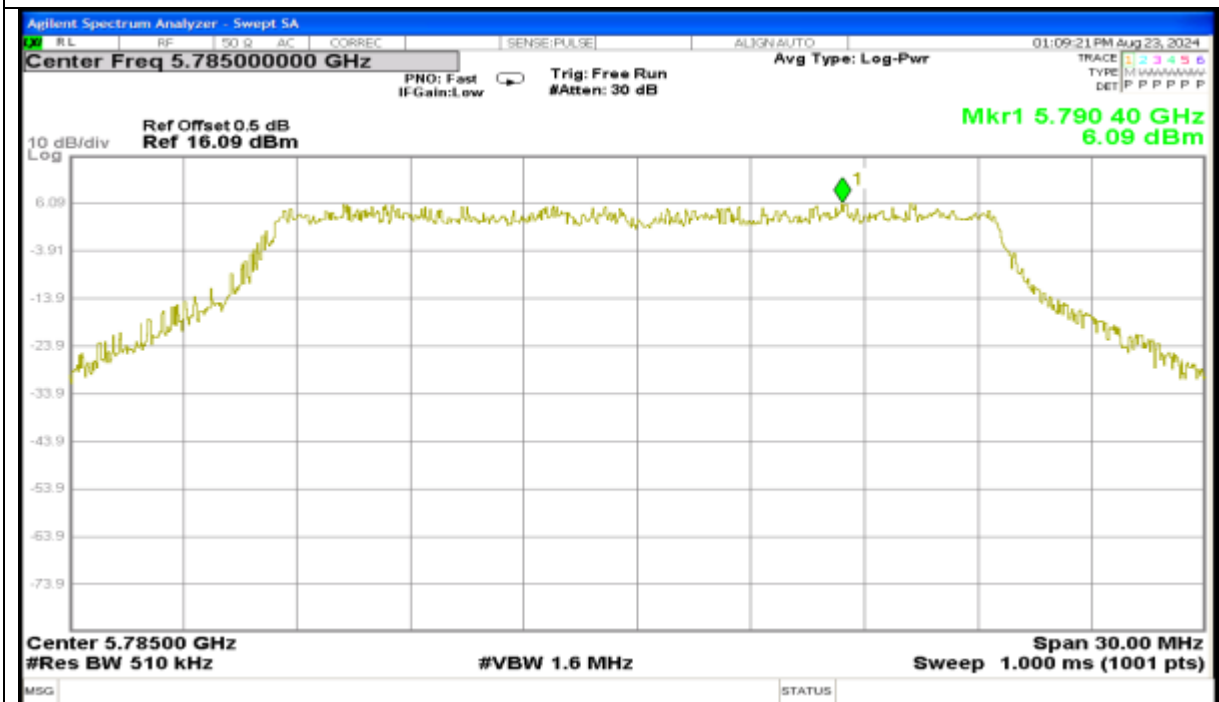
Report No.: AAEMT/RF/240507-01-01

802.11ax20

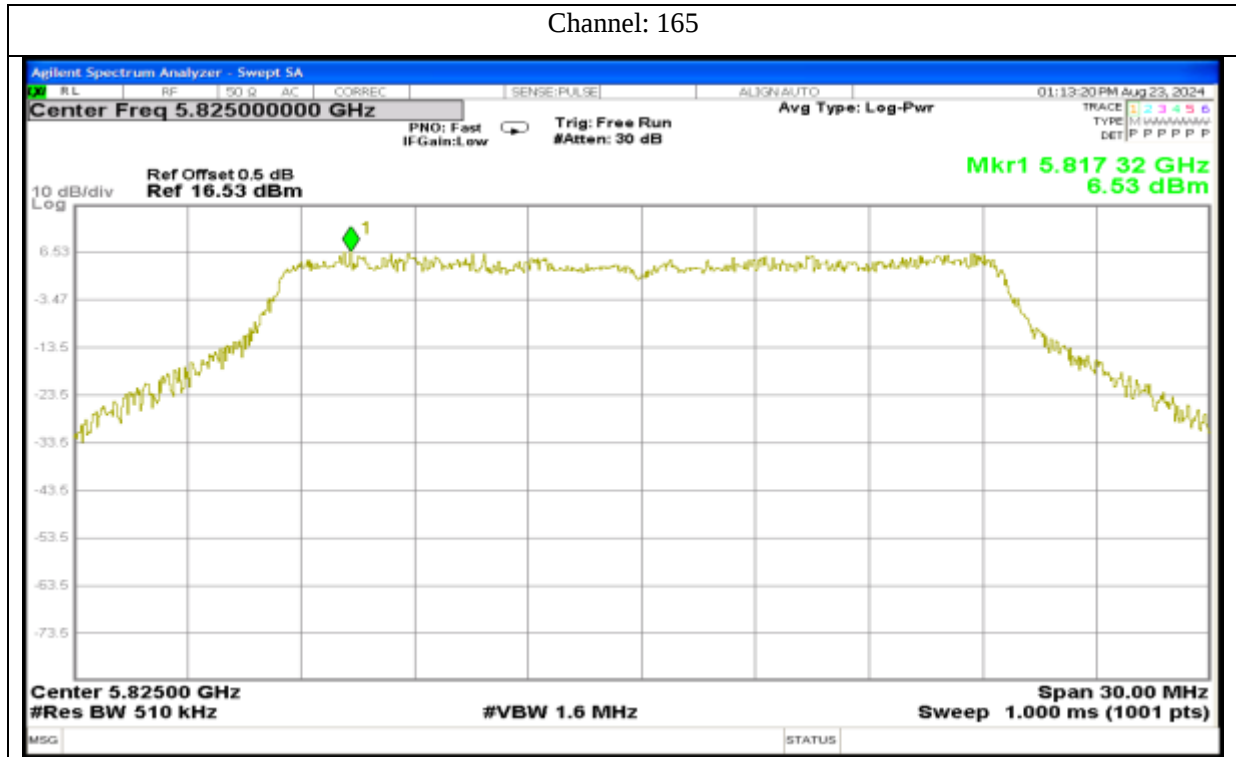
Channel: 149



Channel: 157

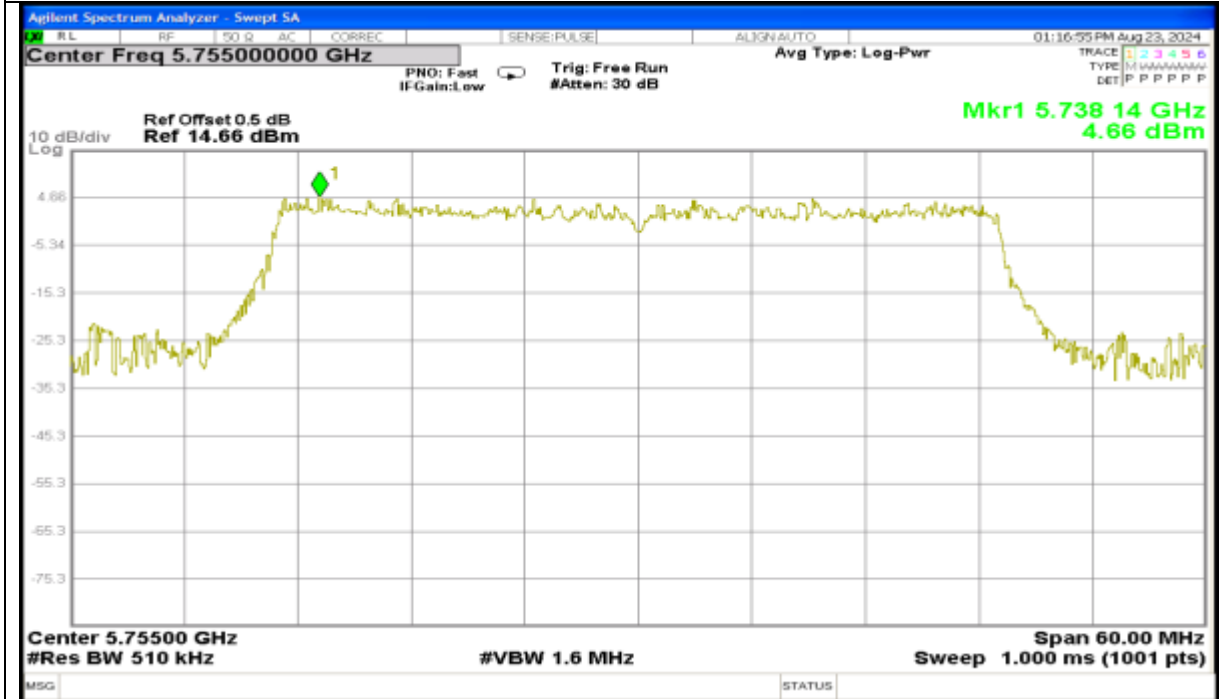


Channel: 165

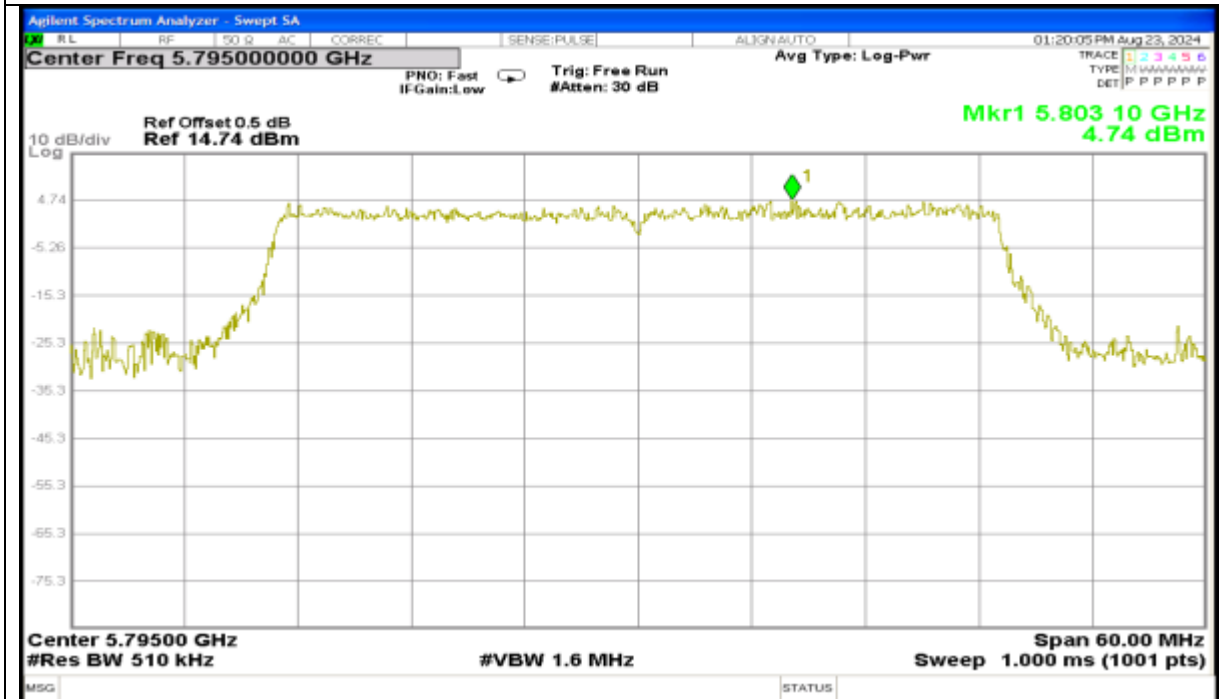


802.11ax40

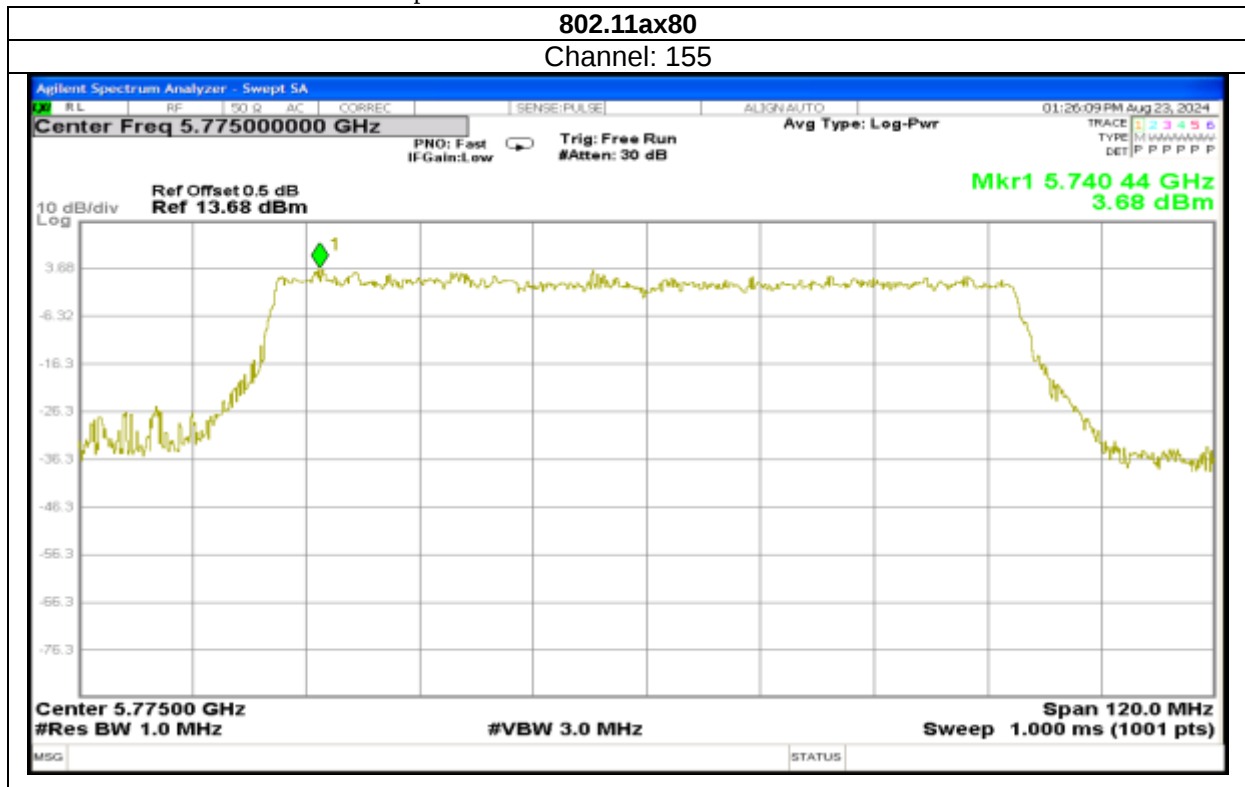
Channel: 151



Channel: 159



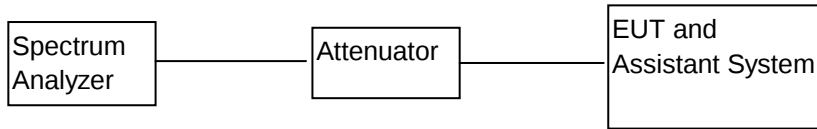
Report No.: AAEMT/RF/240507-01-01



Report No.: AAEMT/RF/240507-01-01

5. 26 dB & 99% Emission Bandwidth

5.1. BLOCK DIAGRAM OF TEST SETUP



5.2. APPLIED PROCEDURES / LIMIT

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

5.3. TEST PROCEDURE

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth:

- Set center frequency to the nominal EUT channel center frequency.
- Set span = 1.5 times to 5.0 times the OBW.
- Set RBW = 1 % to 5 % of the OBW
- Set $VBW \geq 3 \cdot RBW$
- Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- Use the 99 % power bandwidth function of the instrument (if available).
- If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

5.4. TEST RESULT

Antenna 0:

CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT20)	802.11ax (HE20)	802.11ac (VHT20)	802.11ax (HE20)
36	5180.00	24.270	23.760	17.932	19.112
40	5200.00	24.090	24.180	17.991	19.109
48	5240.00	23.610	23.700	17.944	19.130
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT20)	802.11ax (HE20)	802.11ac (VHT20)	802.11ax (HE20)
52	5260.00	22.830	23.310	18.024	19.060
60	5300.00	22.710	24.030	17.991	19.040
64	5320.00	22.830	23.040	17.983	19.102
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT20)	802.11ax (HE20)	802.11ac (VHT20)	802.11ax (HE20)
100	5500.00	24.480	23.970	17.974	19.149
116	5580.00	25.230	23.850	18.039	19.067
140	5700.00	25.020	23.970	18.010	19.143
CH. No.	Frequency (MHz)	6dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT20)	802.11ax (HE20)	802.11ac (VHT20)	802.11ax (HE20)
149	5745.00	17.700	19.050	17.982	19.076
157	5785.00	17.820	19.140	18.046	19.101
165	5825.00	17.700	19.020	17.956	19.037

CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT40)	802.11ax (HE40)	802.11ac (VHT40)	802.11ax (HE40)
38	5190.00	42.780	42.420	36.500	37.938
46	5230.00	43.140	42.060	36.488	37.867
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT40)	802.11ax (HE40)	802.11ac (VHT40)	802.11ax (HE40)
54	5270.00	42.120	42.900	36.532	37.984
62	5310.00	42.480	43.320	36.593	38.019
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT40)	802.11ax (HE40)	802.11ac (VHT40)	802.11ax (HE40)
102	5510.00	51.660	46.200	36.536	37.912
110	5550.00	47.160	44.340	36.592	37.961
134	5670.00	43.380	42.720	36.558	37.926
CH. No.	Frequency (MHz)	6dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT40)	802.11ax (HE40)	802.11ac (VHT40)	802.11ax (HE40)
151	5755.00	36.480	38.160	36.496	37.901
159	5795.00	36.480	38.100	36.503	37.917

CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT80)	802.11ax (HE80)	802.11ac (VHT80)	802.11ax (HE80)
42	5210.00	87.960	85.200	76.172	77.595
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT80)	802.11ax (HE80)	802.11ac (VHT80)	802.11ax (HE80)
58	5290.00	115.320	86.520	76.446	77.680
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT80)	802.11ax (HE80)	802.11ac (VHT80)	802.11ax (HE80)
106	5530.00	119.640	94.440	76.566	77.940
122	5610.00	87.720	85.800	76.142	77.811
CH. No.	Frequency (MHz)	6dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT80)	802.11ax (HE80)	802.11ac (VHT80)	802.11ax (HE80)
155	5775.00	76.200	78.000	76.326	77.762

CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT160)	802.11ax (HE160)	802.11ac (VHT160)	802.11ax (HE160)
114	5570.00	234.720	164.880	155.516	156.905

Antenna 1:

CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT20)	802.11ax (HE20)	802.11ac (VHT20)	802.11ax (HE20)
36	5180.00	24.300	23.640	17.972	19.105
40	5200.00	23.640	23.370	17.998	19.138
48	5240.00	24.870	23.490	18.058	19.114
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT20)	802.11ax (HE20)	802.11ac (VHT20)	802.11ax (HE20)
52	5260.00	25.050	23.100	17.987	19.072
60	5300.00	24.840	23.910	17.996	19.109
64	5320.00	24.930	24.000	18.026	19.123
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT20)	802.11ax (HE20)	802.11ac (VHT20)	802.11ax (HE20)
100	5500.00	29.760	24.300	18.115	19.159
116	5580.00	25.890	24.600	18.078	19.086
140	5700.00	24.750	23.970	18.013	19.212
CH. No.	Frequency (MHz)	6dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT20)	802.11ax (HE20)	802.11ac (VHT20)	802.11ax (HE20)
149	5745.00	17.700	19.020	18.021	19.084
157	5785.00	17.760	19.110	17.977	19.097
165	5825.00	17.670	19.200	17.919	19.142

CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT40)	802.11ax (HE40)	802.11ac (VHT40)	802.11ax (HE40)
38	5190.00	43.140	42.240	36.534	37.876
46	5230.00	42.660	41.520	36.482	37.840
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT40)	802.11ax (HE40)	802.11ac (VHT40)	802.11ax (HE40)
54	5270.00	51.060	43.020	36.550	37.976
62	5310.00	43.800	43.020	36.558	37.897
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT40)	802.11ax (HE40)	802.11ac (VHT40)	802.11ax (HE40)
102	5510.00	60.000	42.660	36.830	37.931
110	5550.00	60.000	42.420	36.700	37.960
134	5670.00	43.560	42.480	36.563	37.862
CH. No.	Frequency (MHz)	6dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT40)	802.11ax (HE40)	802.11ac (VHT40)	802.11ax (HE40)
151	5755.00	36.480	38.220	36.542	37.934
159	5795.00	36.480	37.980	36.597	37.932

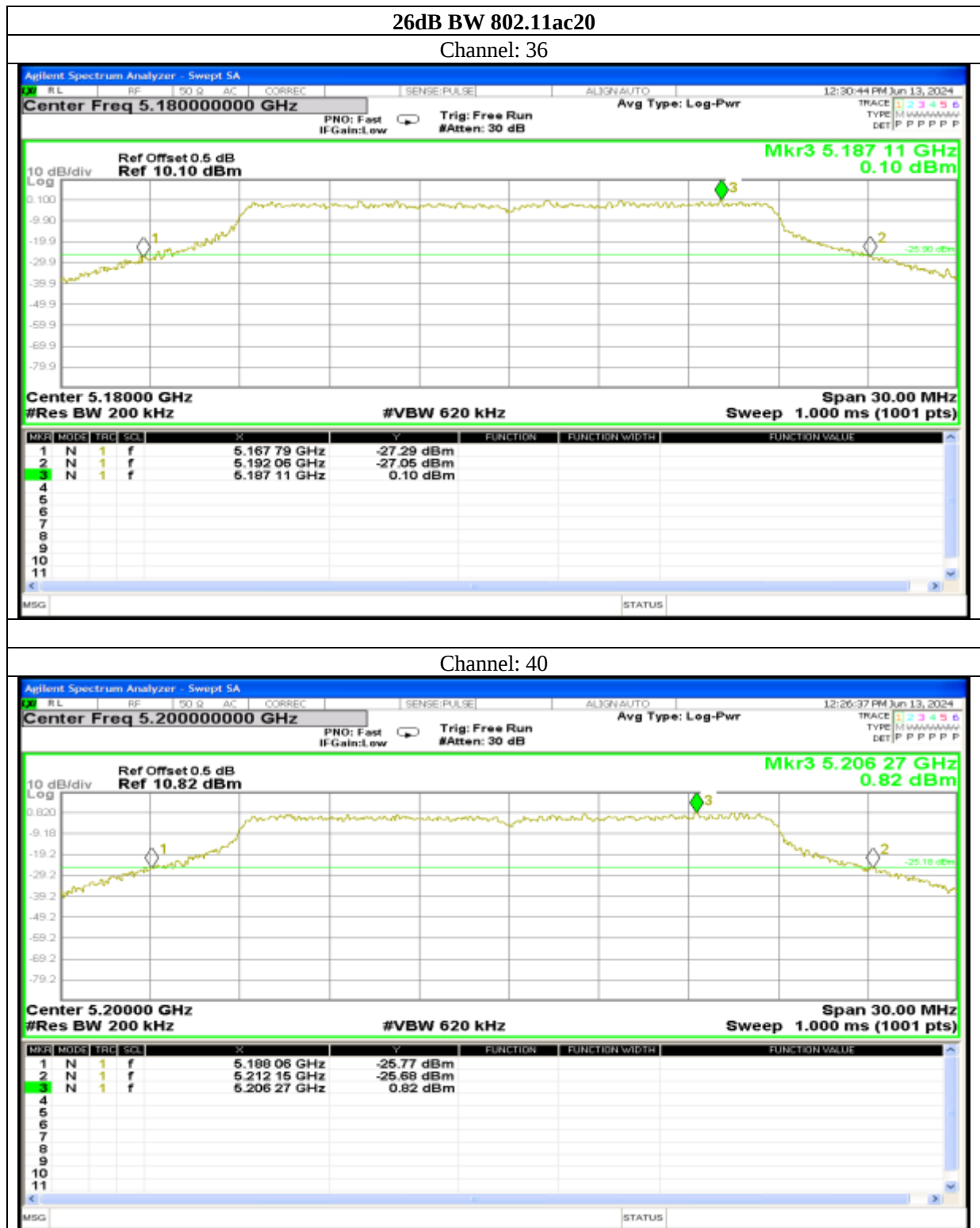
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT80)	802.11ax (HE80)	802.11ac (VHT80)	802.11ax (HE80)
42	5210.00	87.480	86.520	76.459	77.712
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT80)	802.11ax (HE80)	802.11ac (VHT80)	802.11ax (HE80)
58	5290.00	118.920	87.360	76.188	77.556
CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT80)	802.11ax (HE80)	802.11ac (VHT80)	802.11ax (HE80)
106	5530.00	120.000	117.960	76.709	77.783
122	5610.00	116.160	86.040	76.445	77.676
CH. No.	Frequency (MHz)	6dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT80)	802.11ax (HE80)	802.11ac (VHT80)	802.11ax (HE80)
155	5775.00	76.560	78.120	76.545	77.665

CH. No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)		99% Occupied Bandwidth (MHz)	
		802.11ac (VHT160)	802.11ax (HE160)	802.11ac (VHT160)	802.11ax (HE160)
114	5570.00	240.000	240.000	156.371	157.258

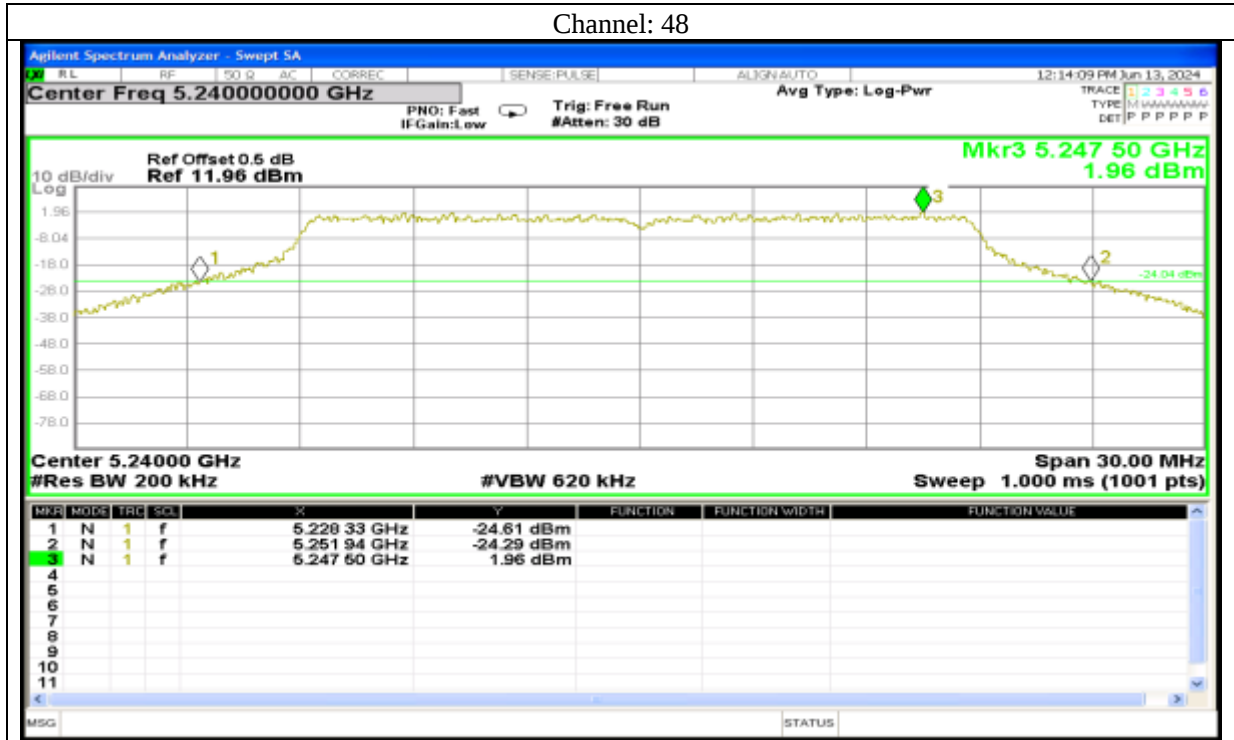
Report No.: AAEMT/RF/240507-01-01

Test plots as followed:

Antenna 0:

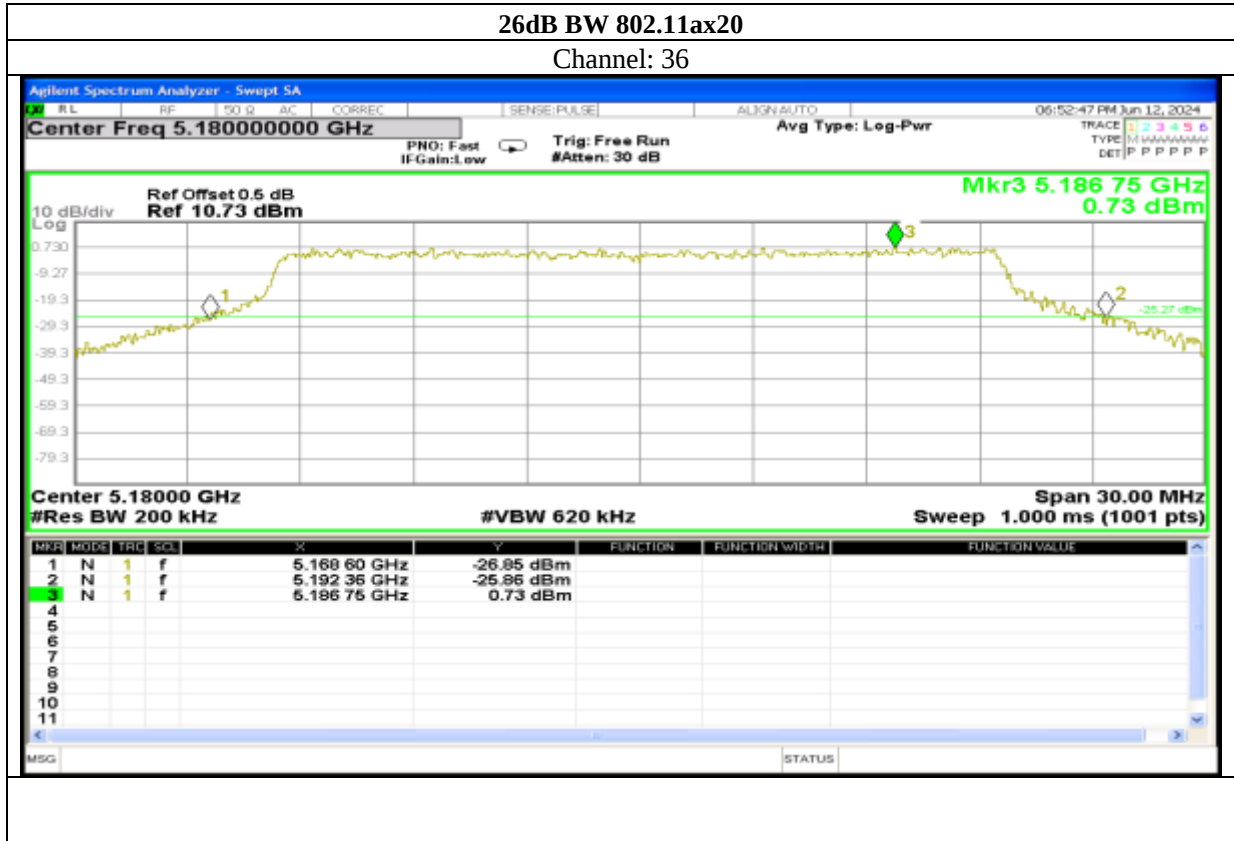


Channel: 48



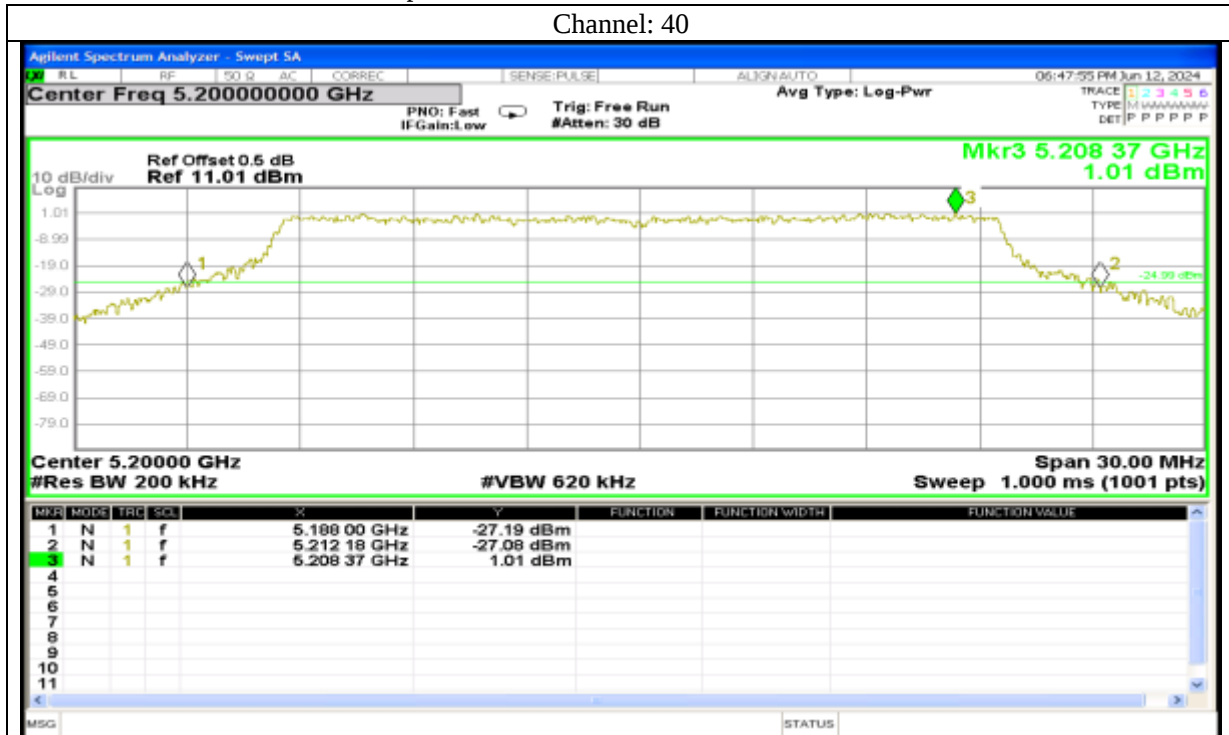
26dB BW 802.11ax20

Channel: 36

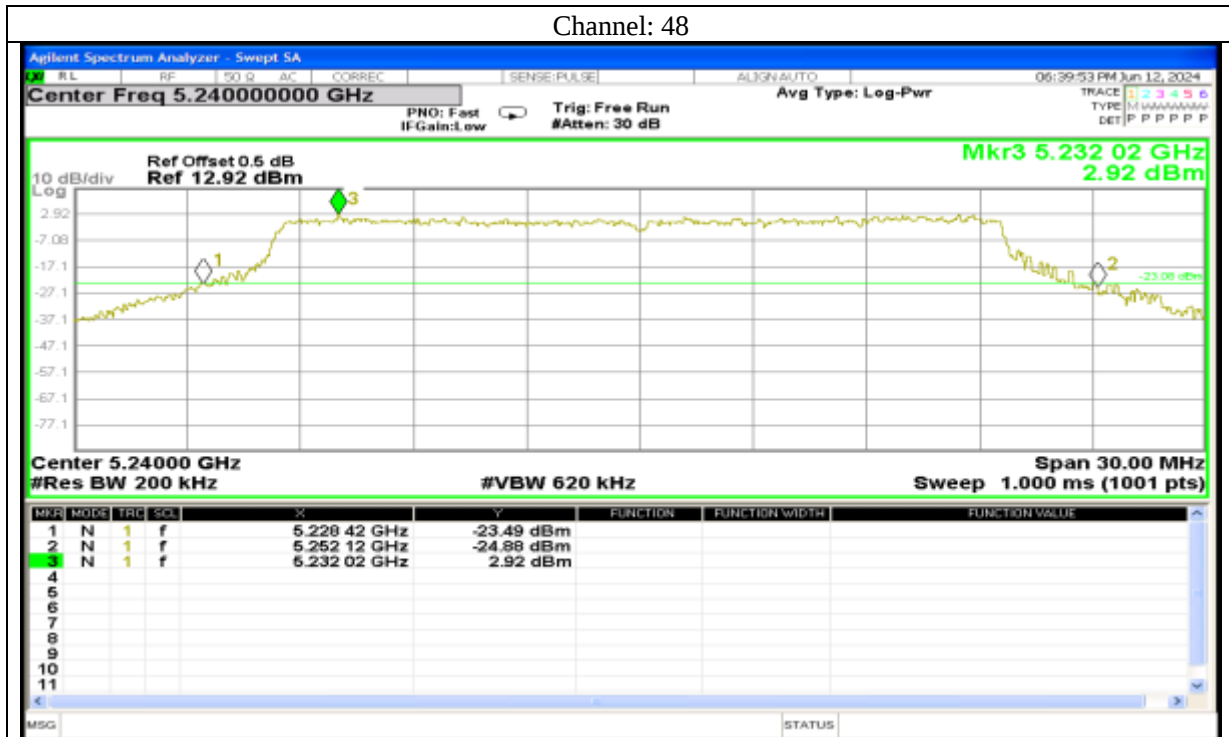


Report No.: AAEMT/RF/240507-01-01

Channel: 40



Channel: 48



Report No.: AAEMT/RF/240507-01-01

