FCC RADIO TEST REPORT

FCC ID: 2BBAWPFD-002

Sample : Automatic Pet Feeder

Trade Name : N/A

Main Model : PFD-002 PRO

Additional Model : PTM-701

Report No. : UNIA23051709ER-63

Prepared for

Shenzhenbenfendianzishangwuyouxiangongsi
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Prepared by

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TEST RESULT CERTIFICATION

Applicant:	Shenzhenbenfendianzishangwuyouxiangongsi
Address:	MinZhi JieDao ZhangKengSheQu XiangNanSiQu 25 Dong 703 Shenzhen Shi LongHua Qu, Shenzhen, China
Manufacturer:	Shenzhen Ipetmon Creative Technology Co., Ltd.
Address:	5th Floor, Building B, Honghengtai High-tech Park, Shangcun, Gongming Street, Guangming District, Shenzhen

Product description

Product:	Automatic Pet Feeder
Trade Name:	N/A
Model Name:	PFD-002 PRO, PTM-701
Test Methods:	FCC Rules and Regulations Part 15 Subpart C Section 15.407 ANSI C63.10: 2013

This device described above has been tested by Shenzhen ZKT Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report. This report shall not be reproduced except in full, without the written approval of UNI, this document may be altered or revised by Shenzhen United Testing Technology Co., Ltd., personnel only, and shall be noted in the revision of the document.

Date of Test:	
Date (s) of performance of tests:	May 17, 2023 ~ May 31, 2023
Date of Issue:	May 31, 2023
Test Result:	Pass

Prepared by: Jason Ye

Jason Ye/Supervisor

Reviewer: Kelly Cheng

Kelly Cheng/Supervisor

Approved & Authorized Signer: Liuze

Liuze/Manager

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1 TEST SUMMARY

1.1 TEST PROCEDURES AND RESULTS

Item	FCC Rules	Description Of Test	Result
1	FCC Part 15.407	6dB Bandwidth	Pass
2	FCC Part 15.407	Emission Bandwidth	Pass
3	FCC Part 15.407	Maximum conducted output power	Pass
4	FCC Part 15.407	Conducted Spurious Emission	Pass
5	FCC Part 15.407	Maximum Conducted Output Power Density	Pass
6	FCC Part 15.209	Radiated Emission	Pass
7	FCC Part 15.407	Band Edges	Pass
8	FCC Part 15.207	Line Conduction Emission	Pass
9	FCC Part 15.203	Antenna Requirement	Pass

Note:

"N/A" denotes test is not applicable in this Test Report.

1.2 TEST FACILITY

Test Firm : Shenzhen ZKT Technology Co., Ltd.

Address : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.The testing quality system of our laboratory meets with ISO/IEC-17025 requirements. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

Designation Number: CN1299

The EMC Laboratory has been accredited by A2LA, and in compliance with ISO/IEC 17025:2017 General Requirements for testing Laboratories.

FCC Registration Number: 692225

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission.

IC Registration Number: 27033

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada.

1.3 MEASUREMENT UNCERTAINTY

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

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
UNI	ANSI	9kHz ~ 150kHz	2.96
		150kHz ~ 30MHz	2.44

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
UNI	ANSI	9kHz ~ 30MHz	2.50
		30MHz ~ 1000MHz	4.80
		1000MHz ~ 18000MHz	4.13

C. RF Conducted Method:

Item	Measurement Uncertainty
Uncertainty of total RF power, conducted	U_c = ±0.8 dB
Uncertainty of RF power density, conducted	U_c = ±2.6 dB
Uncertainty of spurious emissions, conducted	U_c = ±2 %
Uncertainty of Occupied Channel Bandwidth	U_c = ±2 %

1.4 ENVIRONMENTAL CONDITIONS

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

Temperature:	15~35 °C
Relative Humidity:	30~60 %
Air Pressure:	950~1050 hPa

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product:	Automatic Pet Feeder
Trade Name:	N/A
Main Model:	PFD-002 PRO
Additional Model:	PTM-701
Model Difference:	All model's the function, software and electric circuit are the same, only with a product color and model named different. Test sample model: PFD-002 PRO.
Operation Frequency:	Band 1: 5150 MHz～5250MHz; Band 4: 5725 MHz～5850MHz
Modulation Type:	BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM, OFDM
Maximum Peak Conducted Output Power:	Band 1: 14.57dBm; Band 4: 14.63dBm
Antenna Type:	PCB Antenna
Antenna Gain:	Band 1: 1.97dBi; Band 4: -0.76dBi
Battery:	N/A
Adapter:	Model: QL010-0501000UU Input: 100-240V~, 50/60Hz, 0.45A Output: DC 5.0V, 1.0A
Power Source:	DC 5V from adapter or DC 6.0V from battery

2.2 CARRIER FREQUENCY OF CHANNELS

Frequency Band	Channel Number	Frequency	Frequency Band	Channel Number	Frequency
5150 MHz ~ 5250MHz	36	5180 MHz	5725 MHz ~ 5850MHz	149	5745 MHz
	38	5190 MHz		151	5755 MHz
	40	5200 MHz		153	5765 MHz
	42	5210 MHz		155	5775 MHz
	44	5220 MHz		157	5785 MHz
	46	5230 MHz		159	5795 MHz
	48	5240 MHz		165	5825MHz

Note: For 20MHz bandwidth system use Channel 36, 40, 48, 149, 157, 165; For 40MHz bandwidth system use Channel 38, 46, 151, 159.

2.3 TEST MODE

Mode	Tested channel	Modulation	Date rate(Mbps)
802.11a/n20	36, 40, 48, 149, 157, 165	OFDM	6Mbps/MCS0
802.11n40	38, 46, 151, 159	OFDM	MCS0

Note:

1. The EUT has been set to operate continuously on tested channel individually, and the EUT is operating at its maximum duty cycle>or equal 98%.
2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

2.4 DESCRIPTION OF THE TEST MODES

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

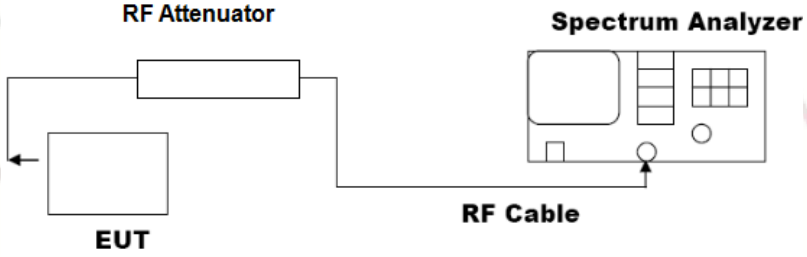
Voltage	Normal Voltage	DC 5V
	High Voltage	DC 5.5V
	Low Voltage	DC 4.5V
Other	Normal Temperature	24°C
	Relative Humidity	55 %
	Air Pressure	989 hPa

Note: All modes were test at Normal Voltage, High Voltage, and Low Voltage, only the worst results of Normal Voltage was reported in the test report.

2.5 TEST SETUP

Operation of EUT during Radiation testing:

Operation of EUT during RF Conducted testing:



2.6 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

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	Model No.	Cable Length(cm)	Remark
1	Automatic Pet Feeder	PFD-002 PRO	1.5m	EUT

Note:

1. The support equipment was authorized by Declaration of Confirmation.
2. All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

2.7 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
Conduction Emissions Measurement					
1	Conducted Emission Test Software	EZ-EMC	Ver.CCS-3A1-CE	N/A	N/A
2	AMN	Schwarzbeck	NNLK8121	8121370	2023.09.22
3	AAN	TESEQ	T8-Cat6	38888	2023.09.22
4	Pulse Limiter	CYBRTEK	EM5010	E115010056	2024.05.30
5	EMI Test Receiver	Rohde&Schwarz	ESCI	101210	2023.09.22
Radiated Emissions Measurement					
1	Radiated Emission Test Software	EZ-EMC	Ver.CCS-03A1	N/A	N/A
2	Horn Antenna	Sunol	DRH-118	A101415	2023.09.27
3	Broadband Hybrid Antenna	Sunol	JB1	A090215	2024.02.26
4	PREAMP	HP	8449B	3008A00160	2023.09.22
5	PREAMP	HP	8447D	2944A07999	2024.05.30
6	EMI TEST RECEIVER	Rohde&Schwarz	ESR3	101891	2023.09.22
7	VECTOR Signal Generator	Rohde&Schwarz	SMU200A	101521	2023.09.22
8	Signal Generator	Agilent	E4421B	MY4335105	2023.09.22
9	MXA Signal Analyzer	Agilent	N9020A	MY50510140	2023.09.22
10	MXA Signal Analyzer	Keysight	N9020A	MY51110104	2023.09.22
11	RF Power sensor	DARE	RPR3006W	15I00041SNO88	2024.05.30
12	RF Power sensor	DARE	RPR3006W	15I00041SNO89	2024.05.30
13	RF power divider	Anritsu	K241B	992289	2023.09.22
14	Wideband radio communication tester	Rohde&Schwarz	CMW500	154987	2023.09.22
15	Active Loop Antenna	Com-Power	AL-130R	10160009	2024.05.30
16	Broadband Hybrid Antennas	Schwarzbeck	VULB9163	VULB9163#958	2023.09.22
17	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1680	2024.05.30
18	Horn Antenna	A-INFOMW	LB-180400-KF	J211060660	2023.09.27
19	Microwave Broadband Preamplifier	Schwarzbeck	BBV 9721	100472	2023.09.22
20	Signal Generator	Agilent	N5183A	MY47420153	2023.09.22
21	Spctrum Analyzer	Rohde&Schwarz	FSP 40	100501	2023.09.22
22	Power Meter	KEYSIGHT	N1911A	MY50520168	2023.09.22
23	Frequency Meter	VICTOR	VC2000	997406086	2023.09.22
24	DC Power Source	HYELEC	HY5020E	055161818	2023.09.22

3 CONDUCTED EMISSION

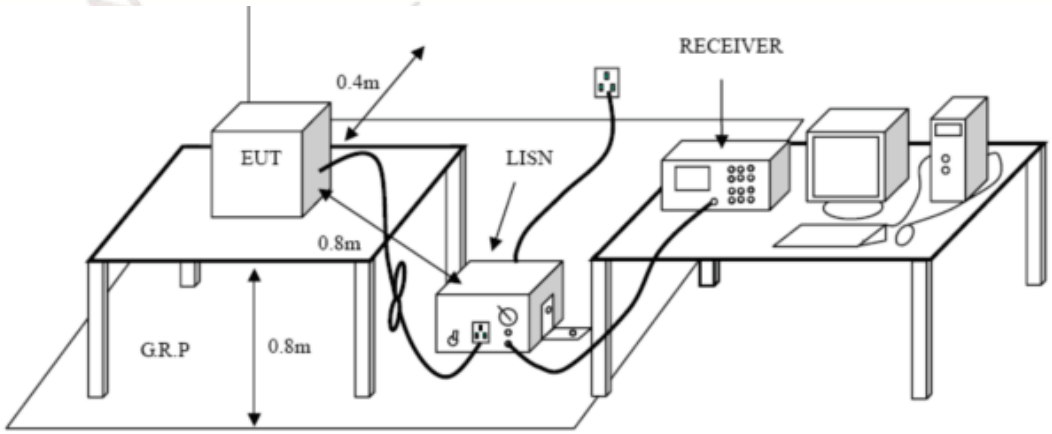
3.1 TEST LIMIT

For unintentional device, according to § 15.207(a) Line Conducted Emission Limits is as following

Frequency (MHz)	Maximum RF Line Voltage (dB□ V)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15~0.50	79	66	66~56*	56~46*
0.50~5.00	73	60	56	46
5.00~30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency.
For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

3.2 TEST SETUP



3.3 TEST PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is placed on a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

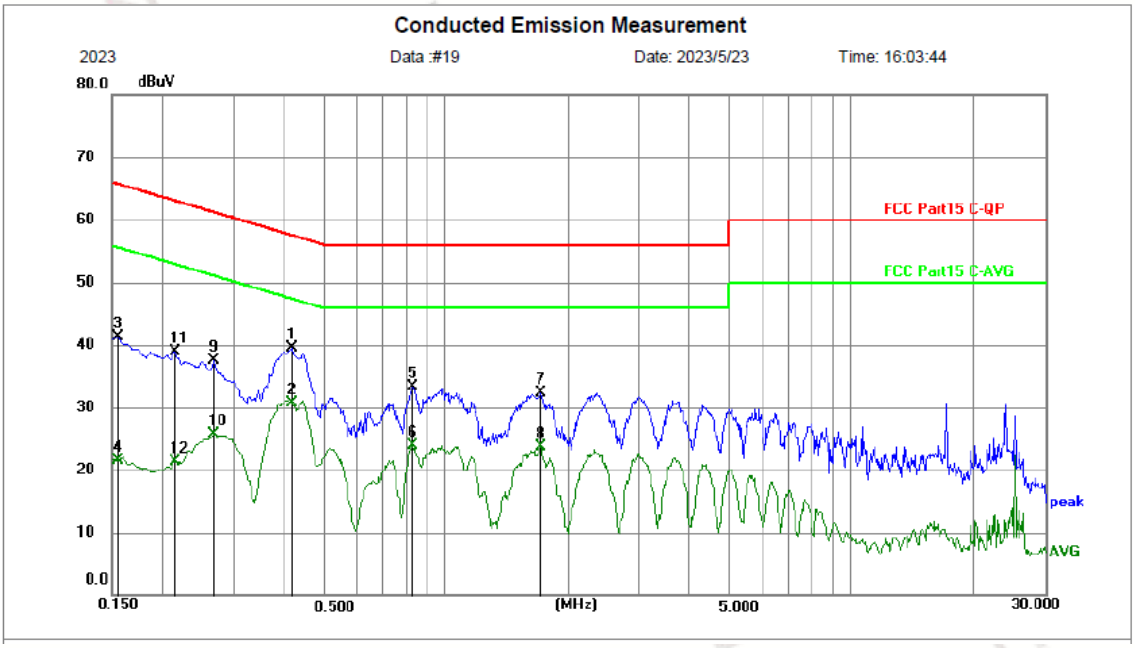
3.4 TEST RESULT

PASS

Remark:

1. All modes were test at Low, Middle, and High channel, only the worst result of Band 1 802.11a Low Channel was reported for below 1GHz test.
2. By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "X axis" position was the worst, and test data recorded in this report.

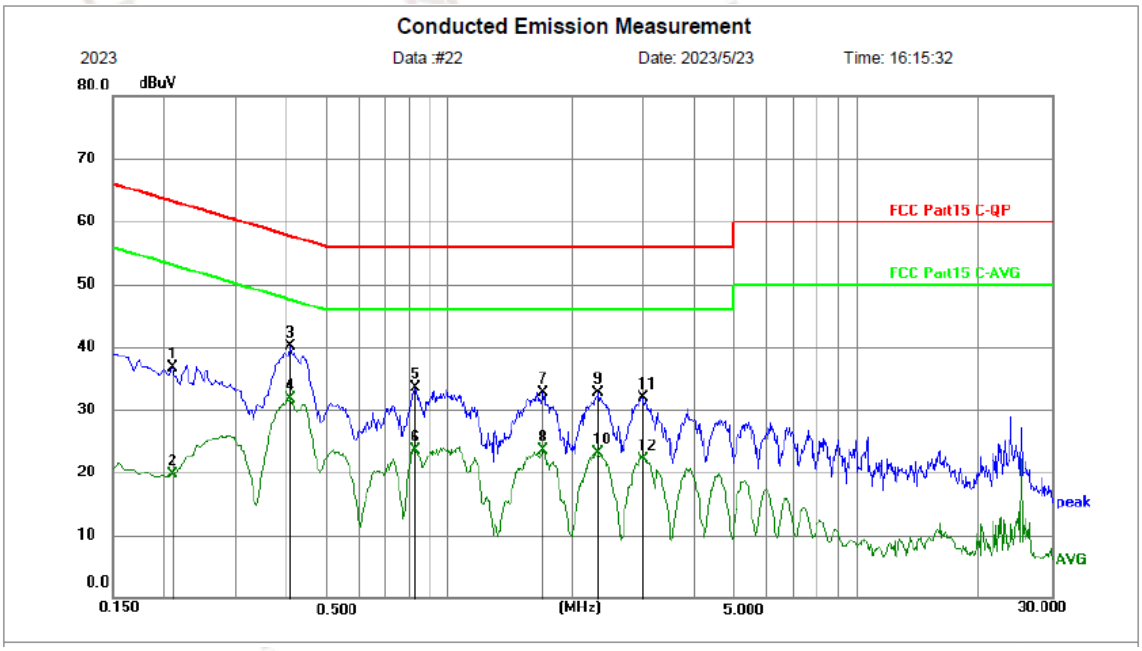
Temperature:	24℃	Relative Humidity:	48%
Test Date:	May 23, 2023	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Line
Test Mode:	Transmitting mode of Band 1 802.11a 5180MHz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.4154	29.77	9.64	39.41	57.54	-18.13	peak	P	
2 *	0.4154	21.04	9.64	30.68	47.54	-16.86	AVG	P	
3	0.1544	31.83	9.53	41.36	65.76	-24.40	peak	P	
4	0.1544	12.03	9.53	21.56	55.76	-34.20	AVG	P	
5	0.8295	23.76	9.63	33.39	56.00	-22.61	peak	P	
6	0.8295	14.26	9.63	23.89	46.00	-22.11	AVG	P	
7	1.7159	22.63	9.66	32.29	56.00	-23.71	peak	P	
8	1.7159	14.12	9.66	23.78	46.00	-22.22	AVG	P	
9	0.2670	27.75	9.69	37.44	61.21	-23.77	peak	P	
10	0.2670	16.10	9.69	25.79	51.21	-25.42	AVG	P	
11	0.2129	29.25	9.71	38.96	63.09	-24.13	peak	P	
12	0.2129	11.55	9.71	21.26	53.09	-31.83	AVG	P	

Remark: Factor = Insertion Loss + Cable Loss, Result = Reading + Factor, Margin = Result – Limit.

Temperature:	24℃	Relative Humidity:	48%
Test Date:	May 23, 2023	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Neutral
Test Mode:	Transmitting mode of Band 1 802.11a 5180MHz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2085	27.07	9.71	36.78	63.26	-26.48	peak	P	
2	0.2085	9.93	9.71	19.64	53.26	-33.62	AVG	P	
3	0.4065	30.45	9.64	40.09	57.72	-17.63	peak	P	
4 *	0.4065	21.98	9.64	31.62	47.72	-16.10	AVG	P	
5	0.8295	23.81	9.63	33.44	56.00	-22.56	peak	P	
6	0.8295	13.96	9.63	23.59	46.00	-22.41	AVG	P	
7	1.7070	23.08	9.66	32.74	56.00	-23.26	peak	P	
8	1.7070	13.86	9.66	23.52	46.00	-22.48	AVG	P	
9	2.3280	23.01	9.69	32.70	56.00	-23.30	peak	P	
10	2.3280	13.48	9.69	23.17	46.00	-22.83	AVG	P	
11	2.9849	22.24	9.62	31.86	56.00	-24.14	peak	P	
12	2.9849	12.45	9.62	22.07	46.00	-23.93	AVG	P	

Remark: Factor = Insertion Loss + Cable Loss, Result = Reading + Factor, Margin = Result – Limit.

4 RADIATED EMISSION

4.1 TEST LIMIT

For unintentional device, according to §15.209(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values：

Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F (kHz)	-	Quasi-peak	300
0.490MHz-1.705MHz	24000/F (kHz)	-	Quasi-peak	30
1.705MHz-30MHz	30	-	Quasi-peak	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3
		74.0	Peak	3

Limit calculation and transfer to 3m distance as showed in the following table:

Frequency (MHz)	**Limit (dBuV/m)**	**Distance (m)**
0.009-0.490	20log(2400/F(KHz))+40log(300/3)	3
0.490-1.705	20log(24000/F(KHz))+40log(30/3)	3
1.705-30.0	69.5	3
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

For intentional device, according to §15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

Limits of unwanted emission out of the restricted bands

Frequency (MHz)	EIRP Limits (dBm)	Equivalent Field Strength at 3m (dBuV/m)
5150~5250	-27	68.2
5250~5350	-27	68.2
5470~5725	-27	68.2
5725~5850	-27(Note 2)	68.2
	10(Note 2)	105.2
	15.6(Note 2)	110.8
	27(Note 2)	122.2

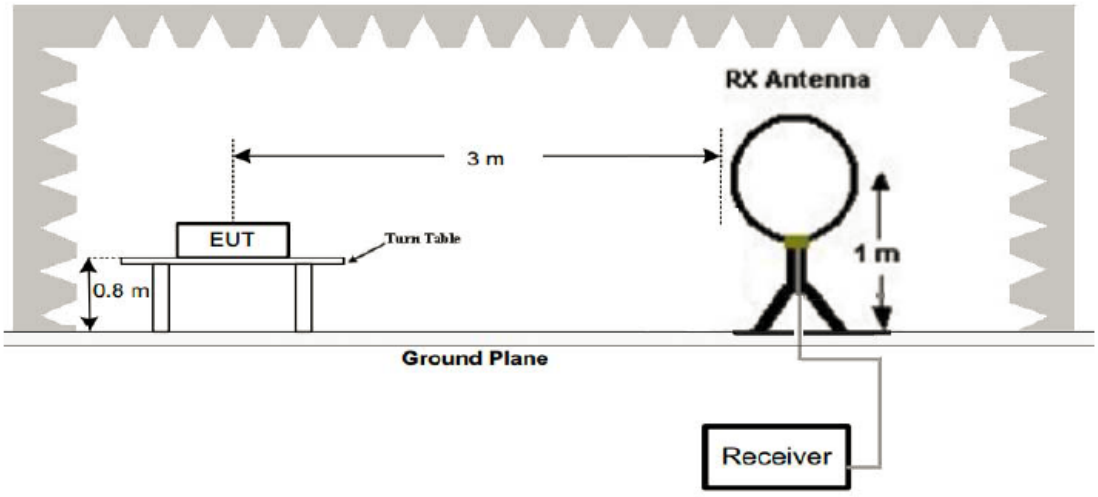
NOTE:
1, The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E=\frac{1000000\sqrt{30P}}{3}$$ uV/m, where P is the eirp (Watts)

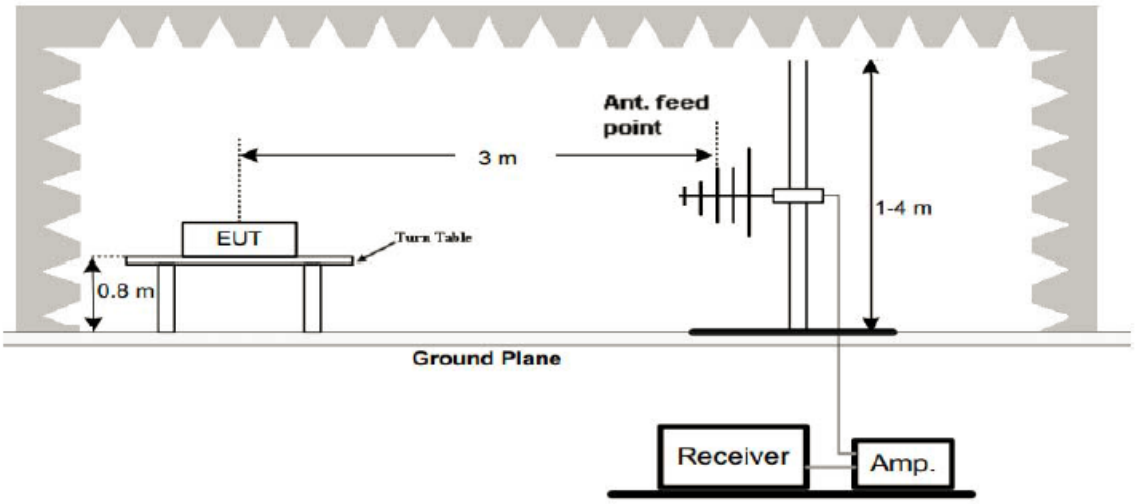
2, According to FCC 16-24,All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.

4.2 TEST SETUP

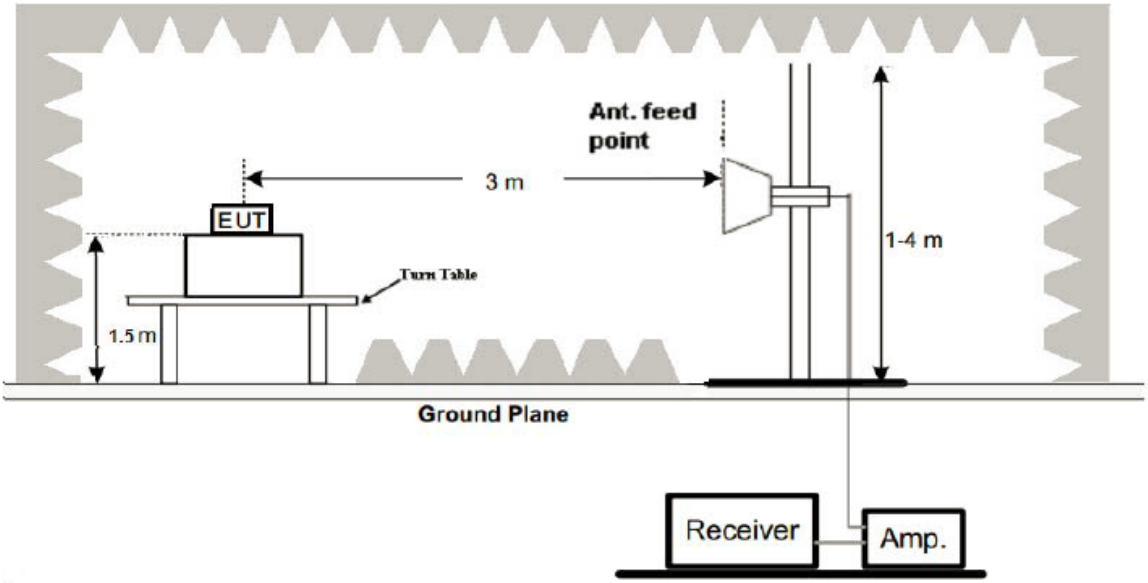
1. Radiated Emission Test-Up Frequency Below 30MHz



2. Radiated Emission Test-Up Frequency 30MHz~1GHz



3. Radiated Emission Test-Up Frequency Above 1GHz



4.3 TEST PROCEDURE

1. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The test frequency range from 9kHz to 25GHz per FCC PART 15.33(a).

Note: For battery operated equipment, the equipment tests shall be performed using a new battery.

4.4 TEST RESULT

PASS

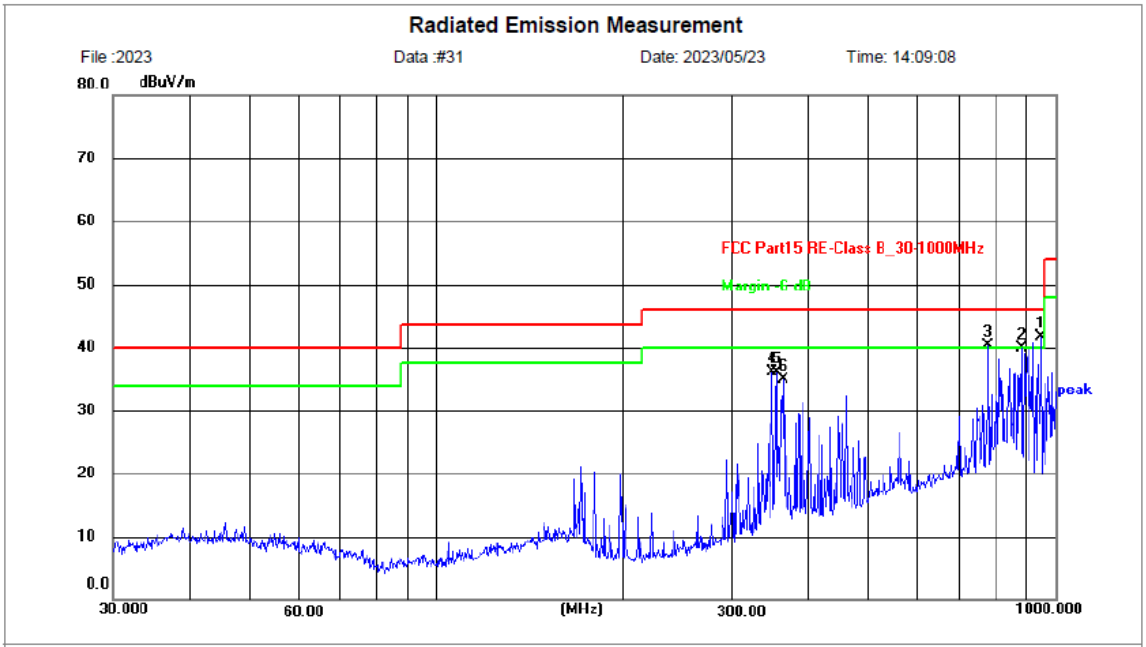
Remark:
1. All modes were test at Low, Middle, and High channel, only the worst result of band 1 802.11a Low Channel was reported for below 1GHz test.
2. By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that “X axis” position was the worst, and test data recorded in this report.

Radiated emission below 30MHz

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

Below 1GHz Test Results:

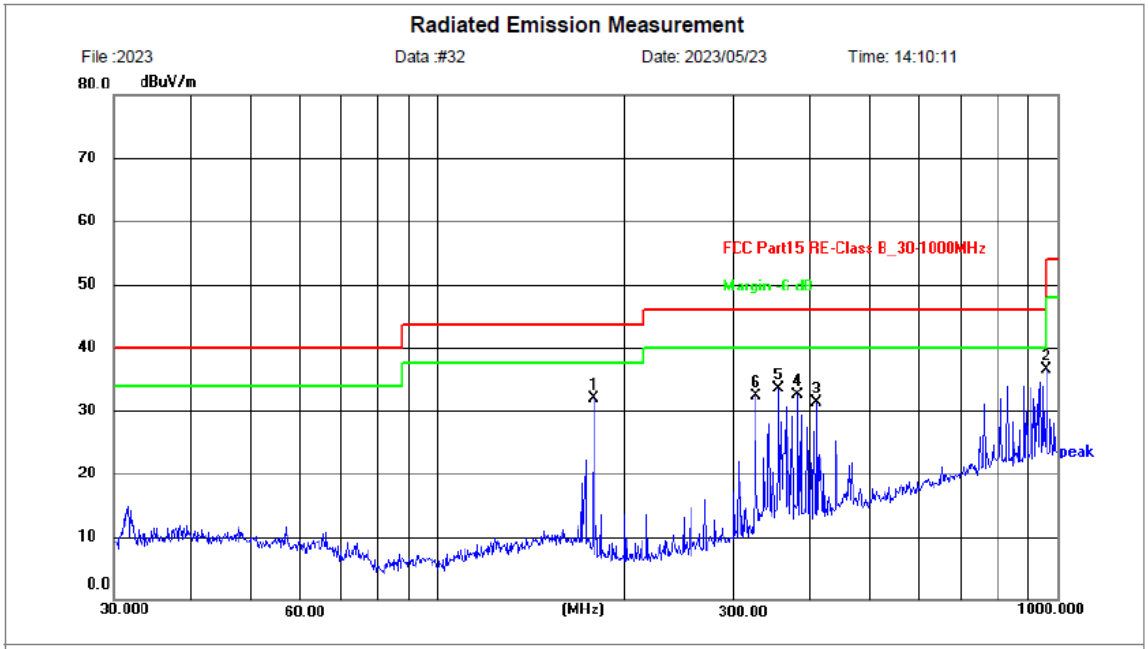
Temperature:	24℃	Relative Humidity:	48%
Test Date:	May 23, 2023	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Horizontal
Test Mode:	Transmitting mode of band 1 802.11a 5180MHz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	948.7610	44.32	-2.64	41.68	46.00	-4.32	peak	100	352	P	
2	881.4067	43.71	-3.88	39.83	46.00	-6.17	peak	100	293	P	
3 !	779.6067	45.35	-4.99	40.36	46.00	-5.64	peak	100	245	P	
4	348.0274	51.24	-15.09	36.15	46.00	-9.85	peak	100	121	P	
5	354.1831	50.97	-14.92	36.05	46.00	-9.95	peak	100	104	P	
6	362.9843	49.44	-14.58	34.86	46.00	-11.14	peak	100	113	P	

Remark: Absolute Level = Reading Level + Factor, Margin = Absolute Level – Limit
Factor = Ant. Factor + Cable Loss – Pre-amplifier

Temperature:	24℃	Relative Humidity:	48%
Test Date:	May 23, 2023	Pressure:	1010hPa
Test Voltage:	AC 120V, 60Hz	Phase:	Vertical
Test Mode:	Transmitting mode of band 1 802.11a 5180MHz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	178.1324	49.58	-17.76	31.82	43.50	-11.68	peak	100	148	P	
2	962.1621	39.07	-2.47	36.60	54.00	-17.40	peak	100	201	P	
3	408.9460	44.33	-12.97	31.36	46.00	-14.64	peak	100	294	P	
4	381.2485	46.36	-13.91	32.45	46.00	-13.55	peak	100	93	P	
5	355.4272	48.33	-14.86	33.47	46.00	-12.53	peak	100	312	P	
6	325.5957	47.61	-15.34	32.27	46.00	-13.73	peak	100	347	P	

Remark: Absolute Level = Reading Level + Factor, Margin = Absolute Level – Limit
Factor = Ant. Factor + Cable Loss – Pre-amplifier

Remark:
1. Radiated emission test from 9KHz to 10th harmonic of fundamental was verified, emission from 9kHz to 30MHz are more than 20dB below the limit, so it was not recorded in this report.
2. * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
3. The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120kHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10kHz.

Radiated emission above 1GHz

Temperature	25°C	**Relative Humidity**	60%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a 5180MHz	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10360.042	47.63	9.14	56.77	68.20	-11.43	peak
15540.063	41.54	10.22	51.76	74.00	-22.24	peak
15540.063	40.32	10.22	50.54	54.00	-3.46	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10360.042	46.93	9.14	56.07	68.20	-12.13	peak
15540.063	42.32	10.22	52.54	74.00	-21.46	peak
15540.063	31.85	10.22	42.07	54.00	-11.93	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a 5200MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10400.042	46.54	9.14	55.68	68.20	-12.52	peak
15600.063	41.62	10.22	51.84	74.00	-22.16	peak
15600.063	31.78	10.22	42.00	54.00	-12.00	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10400.042	46.25	9.14	55.39	68.20	-12.81	peak
15600.063	41.04	10.22	51.26	74.00	-22.74	peak
15600.063	32.69	10.22	42.91	54.00	-11.09	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a 5240MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10480.042	46.54	9.27	55.81	68.20	-12.39	peak
15720.063	41.69	10.38	52.07	74.00	-21.93	peak
15720.063	33.51	10.38	43.89	54.00	-10.11	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10480.042	43.21	9.27	52.48	68.20	-15.72	peak
15720.063	41.85	10.38	52.23	74.00	-21.77	peak
15720.063	33.69	10.38	44.07	54.00	-9.93	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a 5745MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11490.042	46.96	9.42	56.38	74.00	-17.62	peak
11490.042	38.73	9.42	48.15	54.00	-5.85	AVG
17235.063	41.32	10.51	51.83	68.20	-16.37	peak
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11490.042	45.63	9.42	55.05	74.00	-18.95	peak
11490.042	37.25	9.42	46.67	54.00	-7.33	AVG
17235.063	40.39	10.51	50.90	68.20	-17.30	peak
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Temperature	25°C	**Relative Humidity**	60%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a 5785MHz	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11570.042	46.96	9.42	56.38	74.00	-17.62	peak
11570.042	34.32	9.42	43.74	54.00	-10.26	AVG
17355.063	41.85	10.51	52.36	68.20	-15.84	peak
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11570.042	46.25	9.42	55.67	74.00	-18.33	peak
11570.042	34.81	9.42	44.23	54.00	-9.77	AVG
17355.063	41.79	10.51	52.30	68.20	-15.90	peak
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a 5825MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11650.042	46.88	9.62	52.92	74.00	-21.02	peak
11650.042	37.61	9.62	45.05	54.00	-8.95	AVG
17475.063	42.82	10.75	47.61	68.20	-26.39	peak
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11650.042	48.37	9.62	53.55	74.00	-20.45	peak
11650.042	36.94	9.62	47.64	54.00	-6.36	AVG
17475.063	41.81	10.75	48.61	68.20	-25.39	peak
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Note: All test channels had been tested. The 802.11a is the worst case and recorded in the test report. Other frequencies radiation emission from 1GHz to 40GHz at least have 20dB margin and not recorded in the test report.

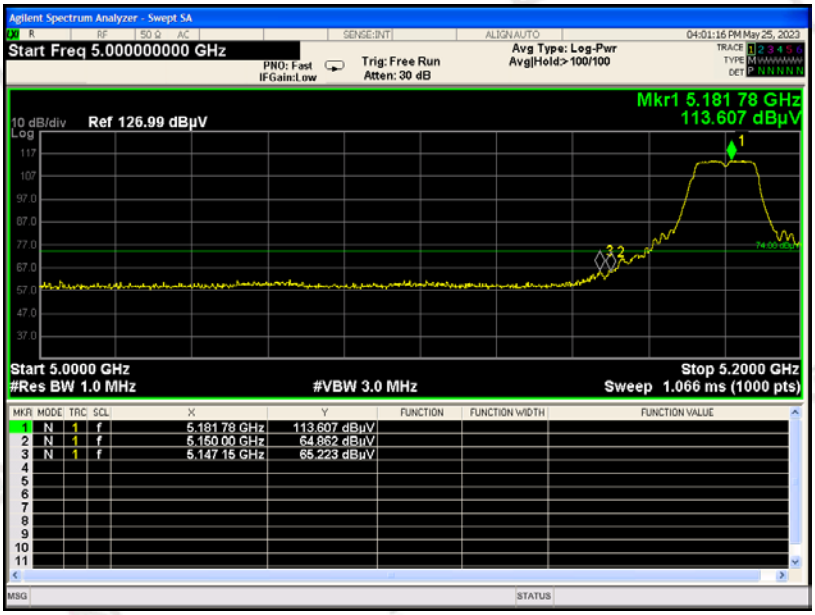
Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Limit-Level.

The “Factor” value can be calculated automatically by software of measurement system.

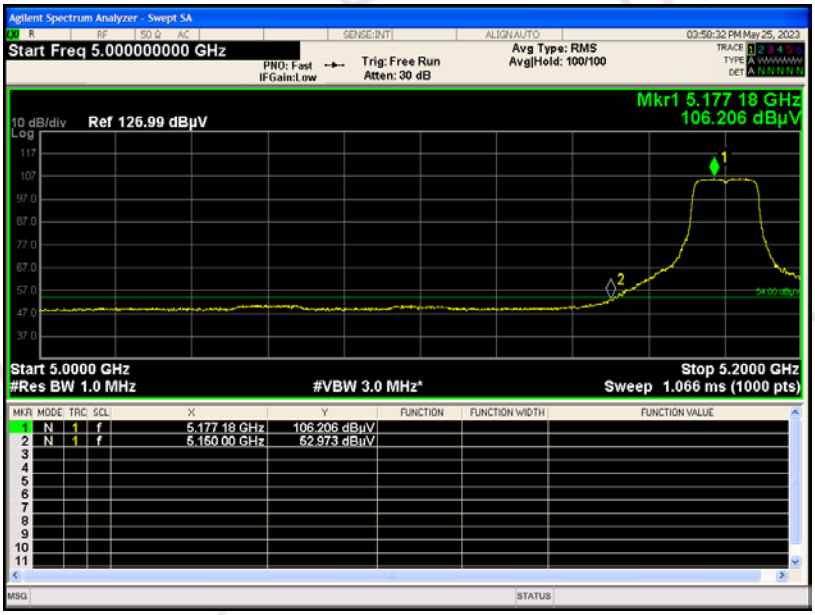
Test result for band edge emission at restricted bands

Temperature	25°C	**Relative Humidity**	60%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a 5180MHz	**Antenna**	Horizontal

Test Graph for Peak Measurement



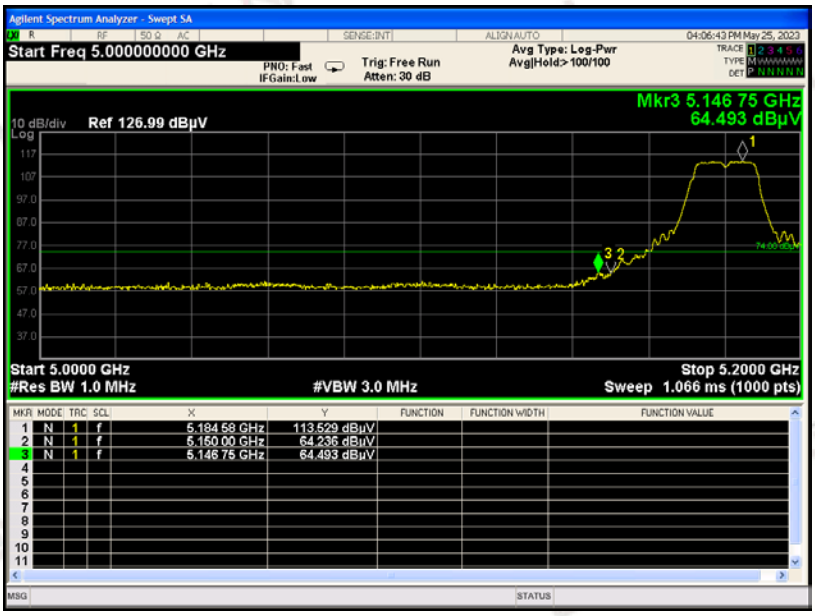
Test Graph for Average Measurement



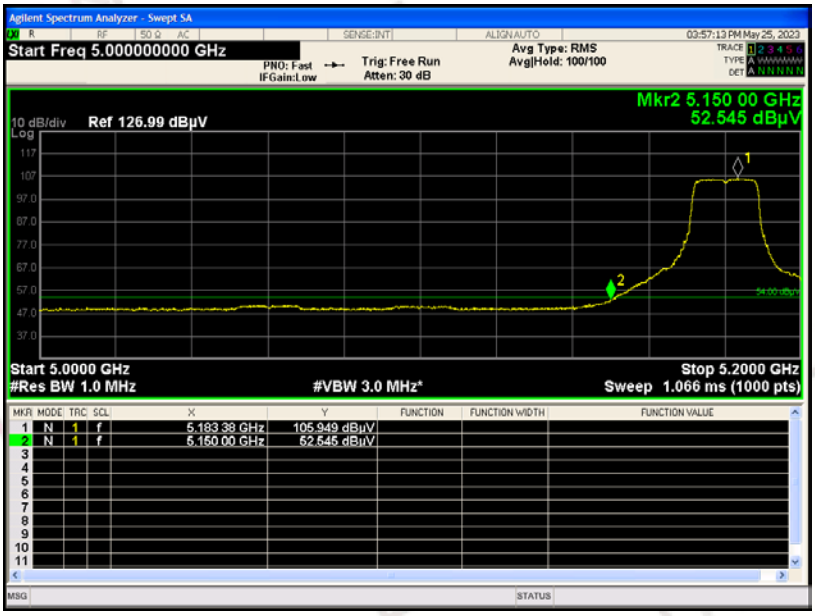
RESULT: PASS

Temperature	25°C	**Relative Humidity**	60%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a 5180MHz	**Antenna**	Vertical

Test Graph for Peak Measurement



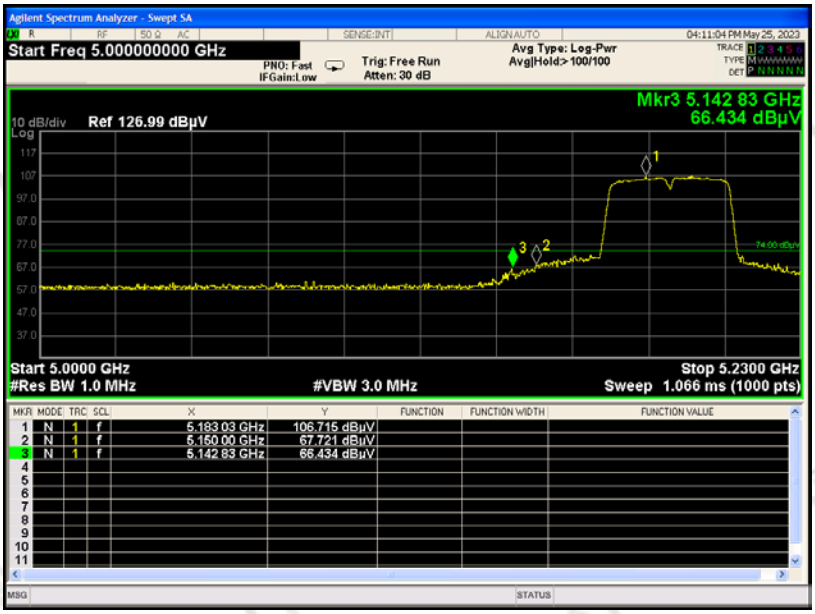
Test Graph for Average Measurement



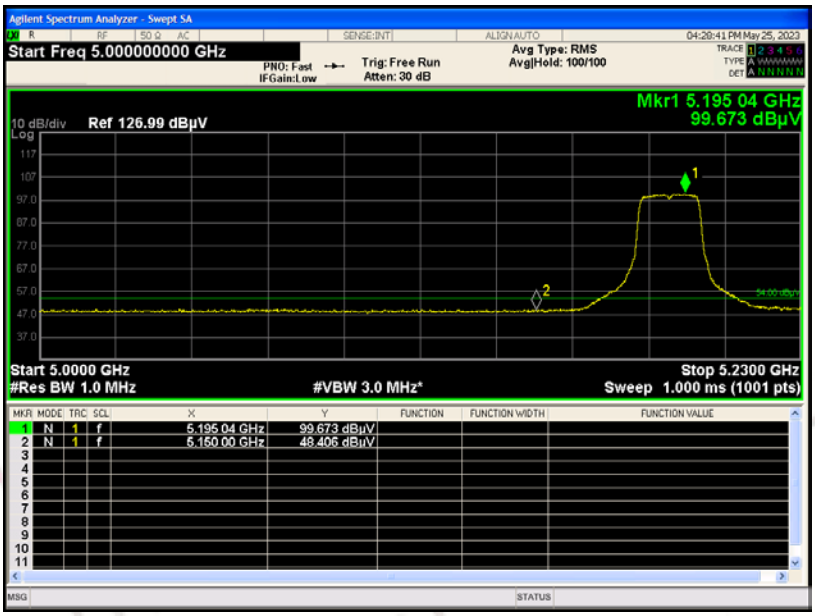
RESULT: PASS

Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n40 5190MHz	Antenna	Horizontal

Test Graph for Peak Measurement



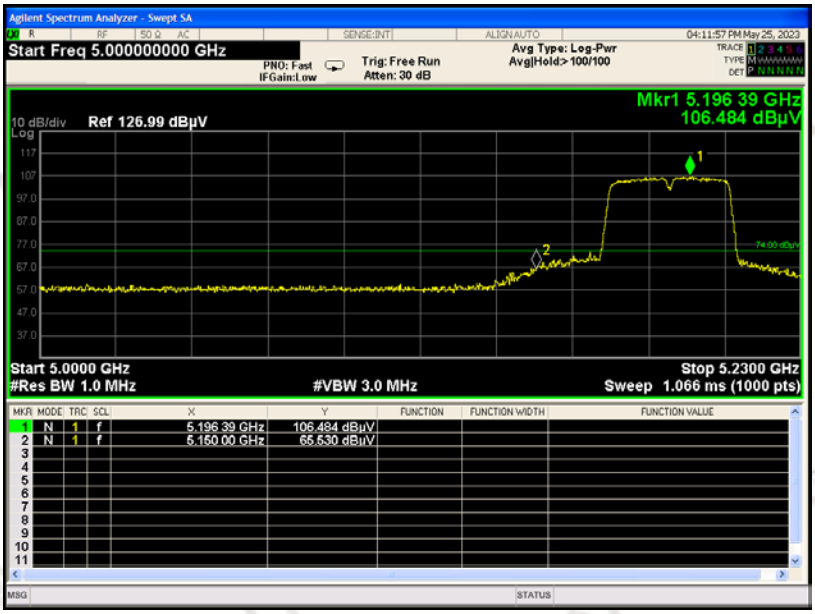
Test Graph for Average Measurement



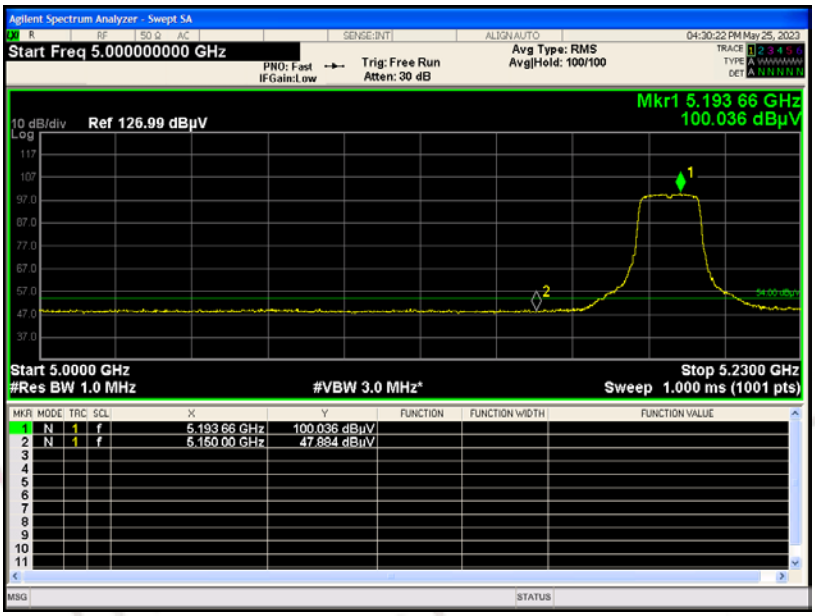
RESULT: PASS

Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n40 5190MHz	Antenna	Vertical

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: PASS

Note: 1. All the 20MHz bandwidth modulation had been tested, the 802.11a at 5180MHz was the worst case and record in his test report. All the 40MHz bandwidth modulation had been tested, the 802.11N40 at 5190MHz was the worst case and record in his test report.

2. The factor had been edited in the “Input Correction” of the Spectrum Analyzer.

3. Only the data of band edge emission at the restricted band 4.5GHz-5.15GHz and 5.35GHz-5.46GHz record in the report. Other restricted band 7.25GHz-7.77GHz were considered as ambient noise. No recording in the test report.

4. The sideband standard of Band 4 frequency band is not defined, the transmitted signal does not fall in the restricted band, and the edge signal is far away from the edge of other restricted bands, and it is not recorded in the report.

5 OCCUPIED BANDWIDTH

5.1 TEST LIMIT

The bandwidth at 26dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in KDB 789033 D02 , and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26dB bandwidth.

FCC Part 15 Subpart C(15.407)		
Test Item	Limit	Frequency Range(MHz)
26 dB Bandwidth	N/A	5150~5250
		5250~5350
		5470~5725
6 dB Bandwidth	>500kHz	5725~5850

5.2 TEST PROCEDURE

-6dB bandwidth (DTS bandwidth):

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 100kHz.
4. Set the VBW ≥3*RBW. Detector = Peak. Trace mode = max hold.
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

99% occupied bandwidth:

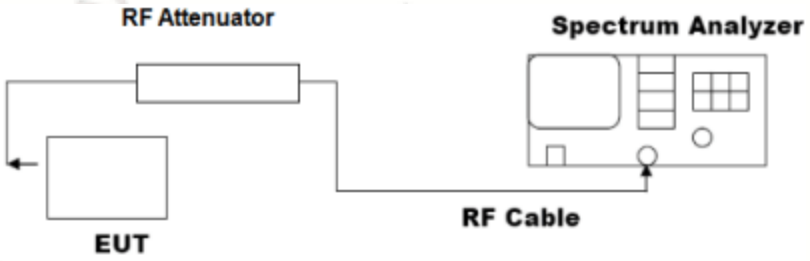
1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set Span = approximately 1.5 to 5 times the OBW, centered on a nominal channel
   The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
4. Set SPA Trace 1 Max hold, then View.

-26dB Bandwidth:

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. 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%.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

5.3 TEST SET-UP



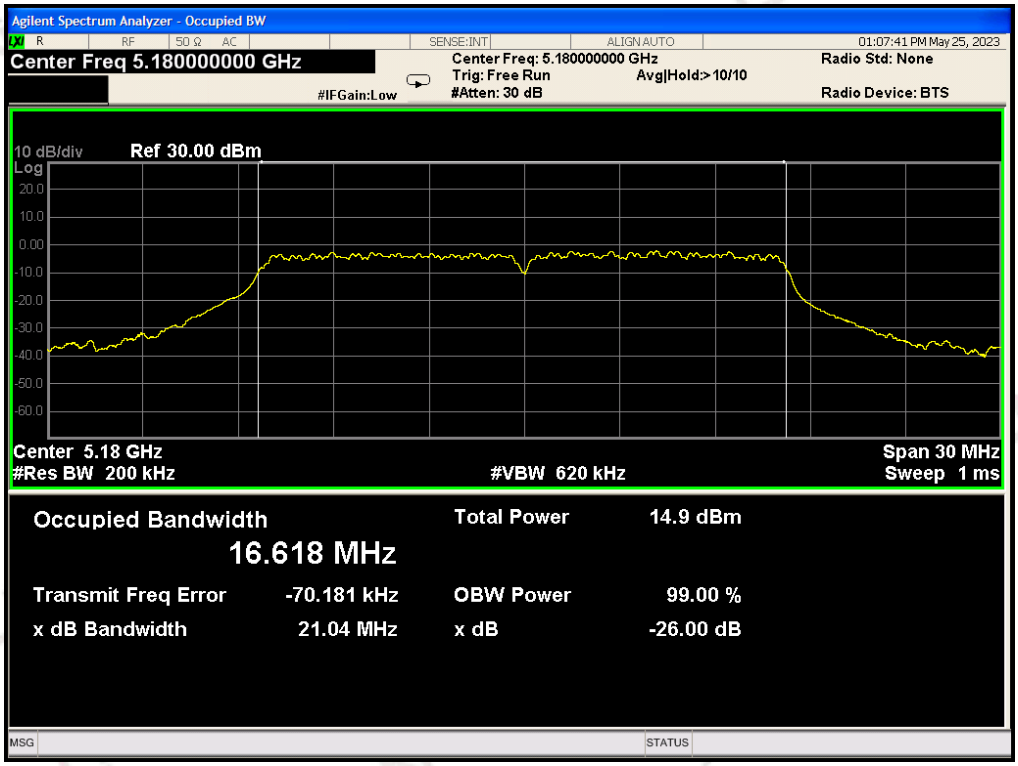
5.4 TEST RESULT

PASS

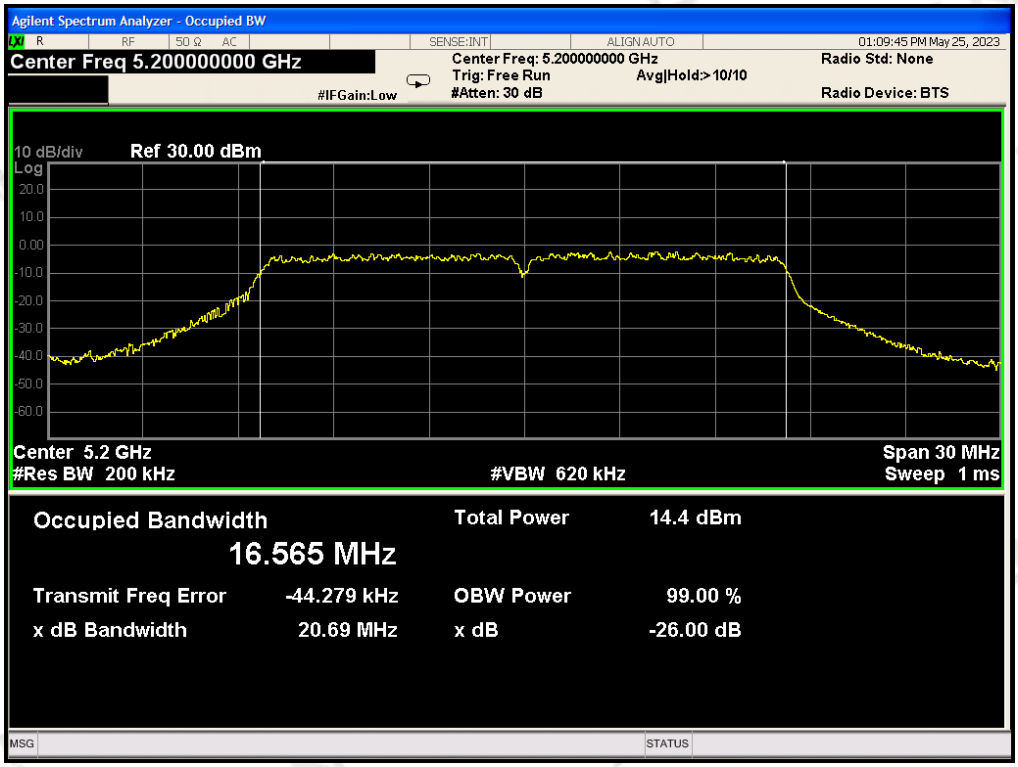
Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5180	16.618	21.04	N/A	Pass
	5200	16.565	20.69	N/A	Pass
	5240	16.540	20.75	N/A	Pass
802.11n20	5180	16.566	20.80	N/A	Pass
	5200	16.581	20.86	N/A	Pass
	5240	16.593	21.03	N/A	Pass
802.11n40	5190	35.831	38.14	N/A	Pass
	5230	35.822	37.99	N/A	Pass

Test Data of Occupied Bandwidth and DTS Bandwidth for band 5.725-5.85 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	DTS Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5745	16.516	16.53	0.5	Pass
	5785	16.429	16.51	0.5	Pass
	5825	16.441	16.55	0.5	Pass
802.11n20	5745	16.487	16.52	0.5	Pass
	5785	16.438	16.50	0.5	Pass
	5825	16.435	16.52	0.5	Pass
802.11n40	5755	35.929	36.36	0.5	Pass
	5795	35.886	36.37	0.5	Pass

Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz



802.11a_ANT1_5180_6Mbps_OBW



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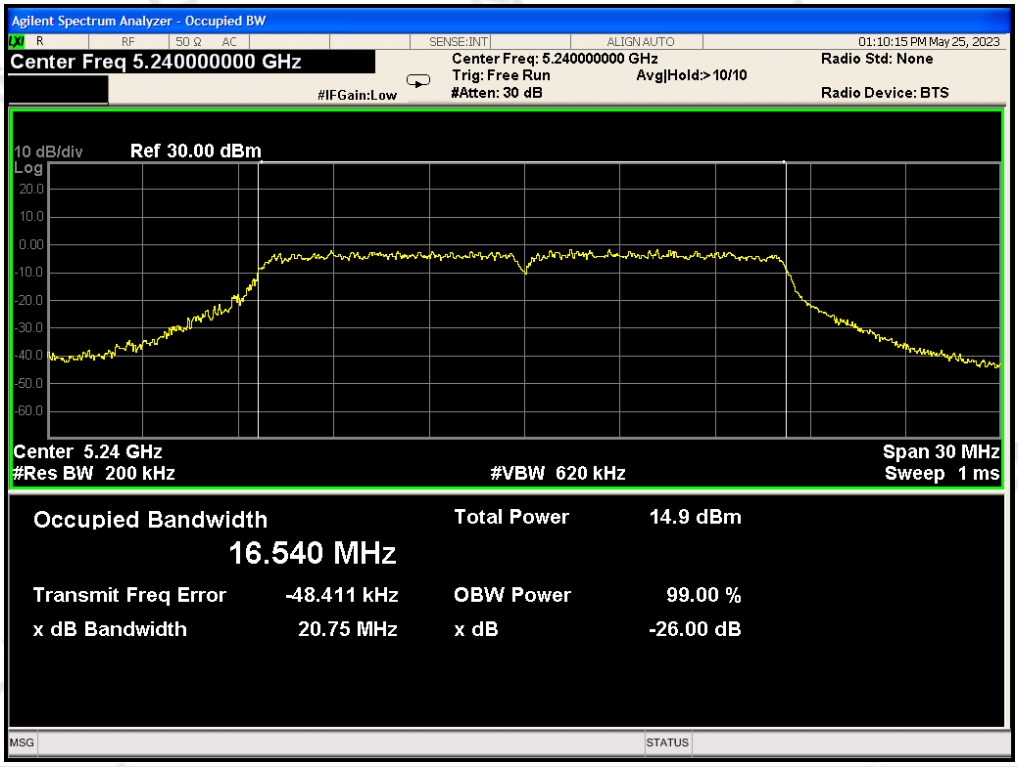
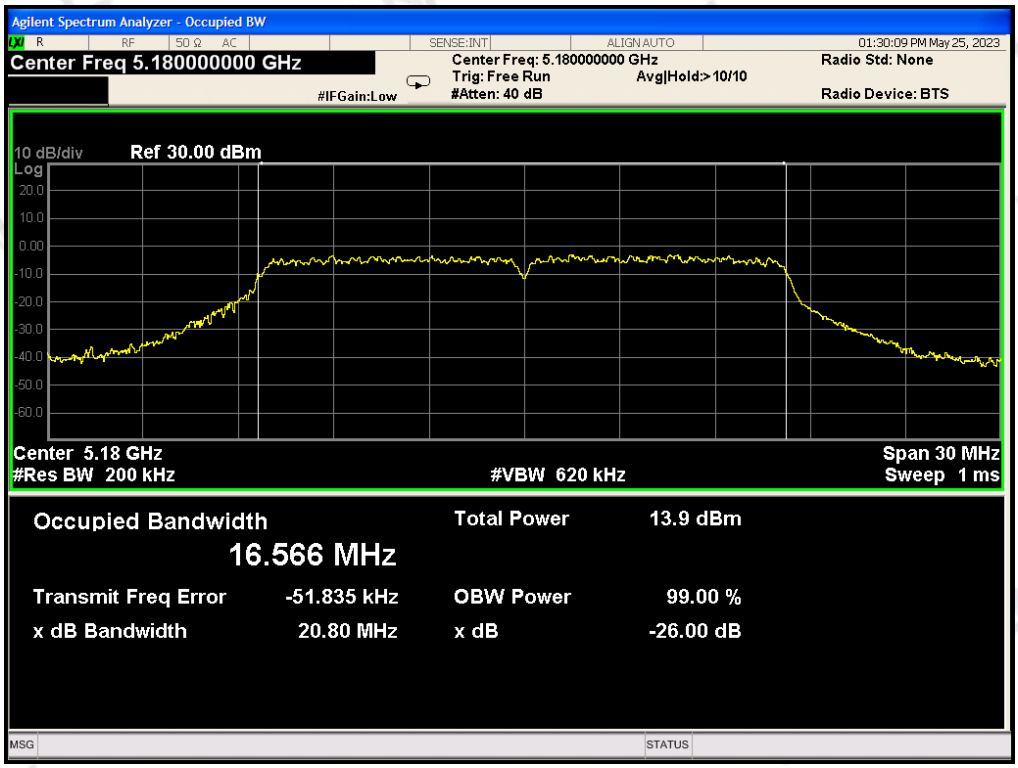
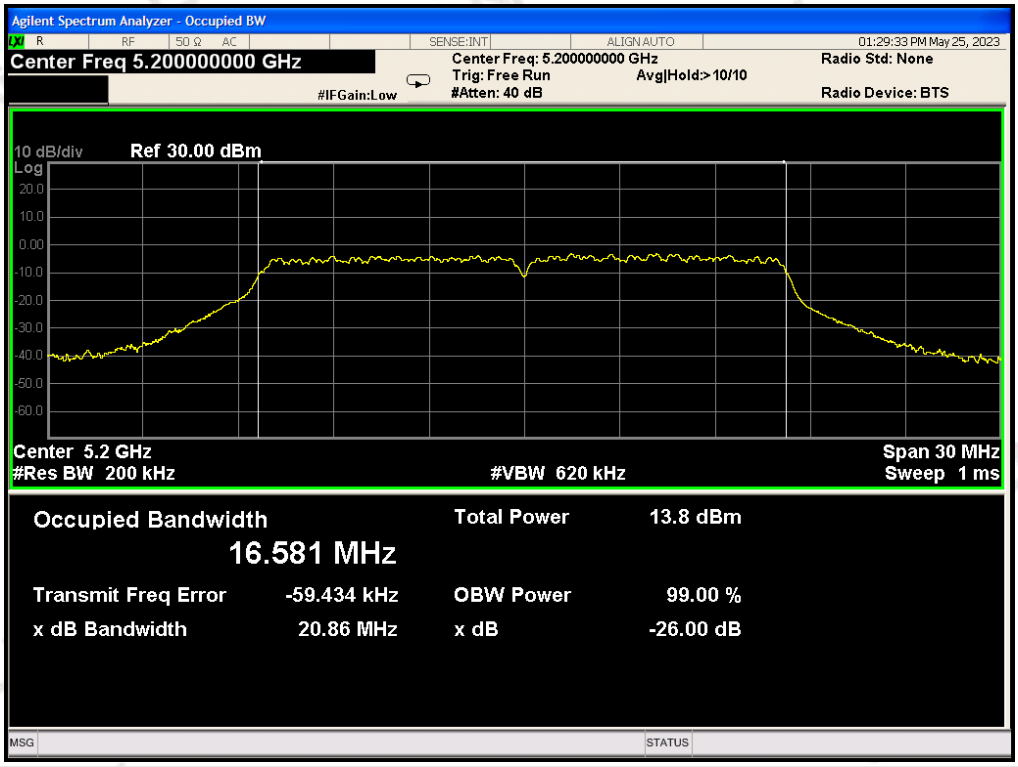


802.11a_ANT1_5240_6Mbps_OBW



802.11n20_ANT1_5180_MCS0_OBW



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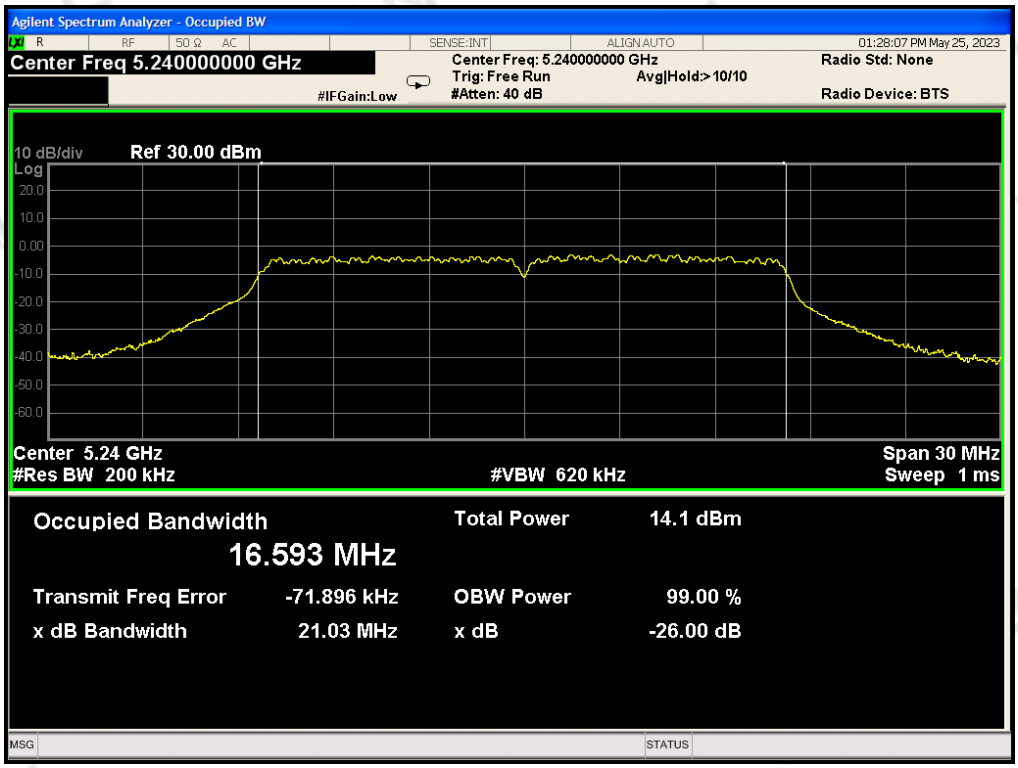

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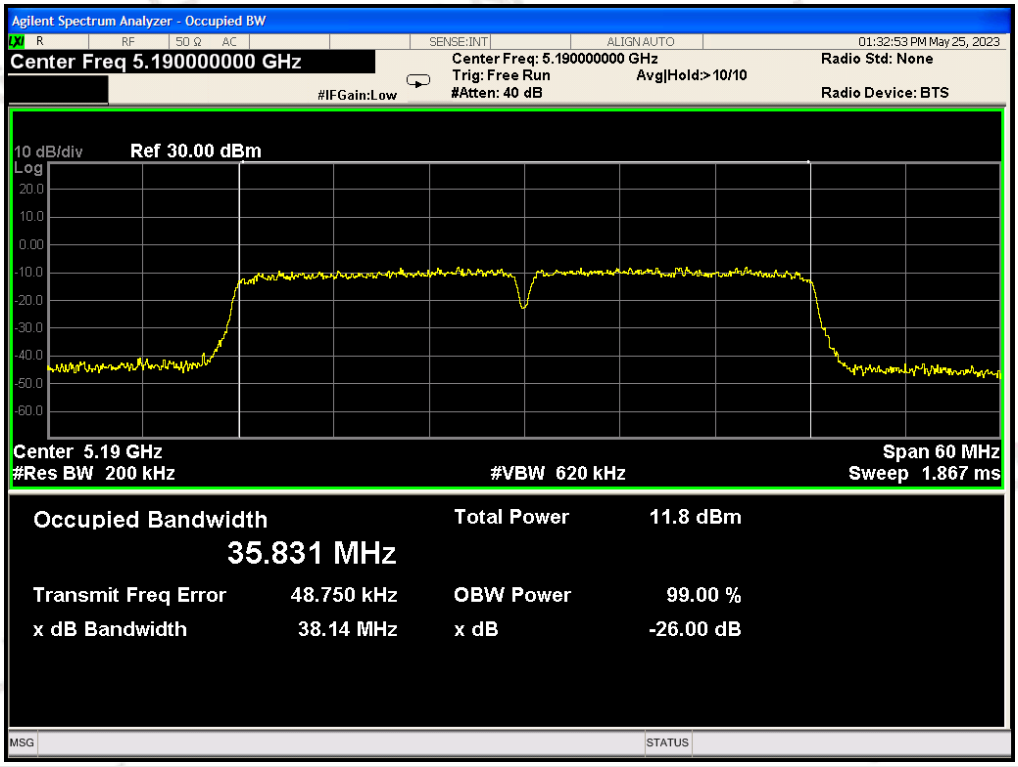
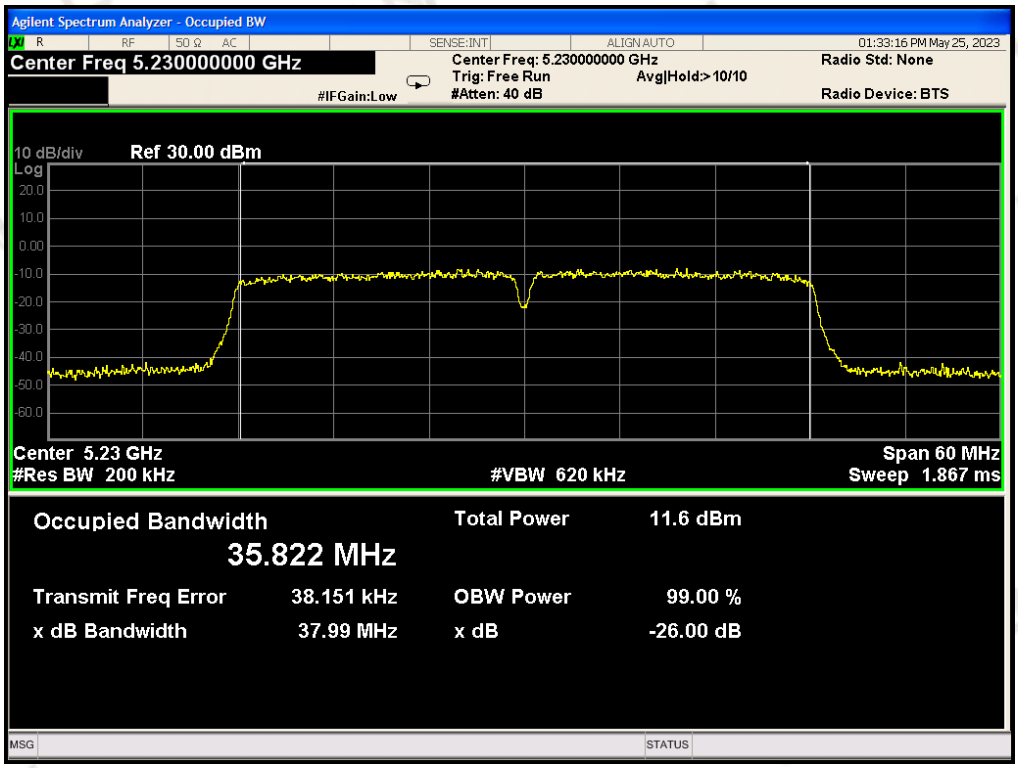
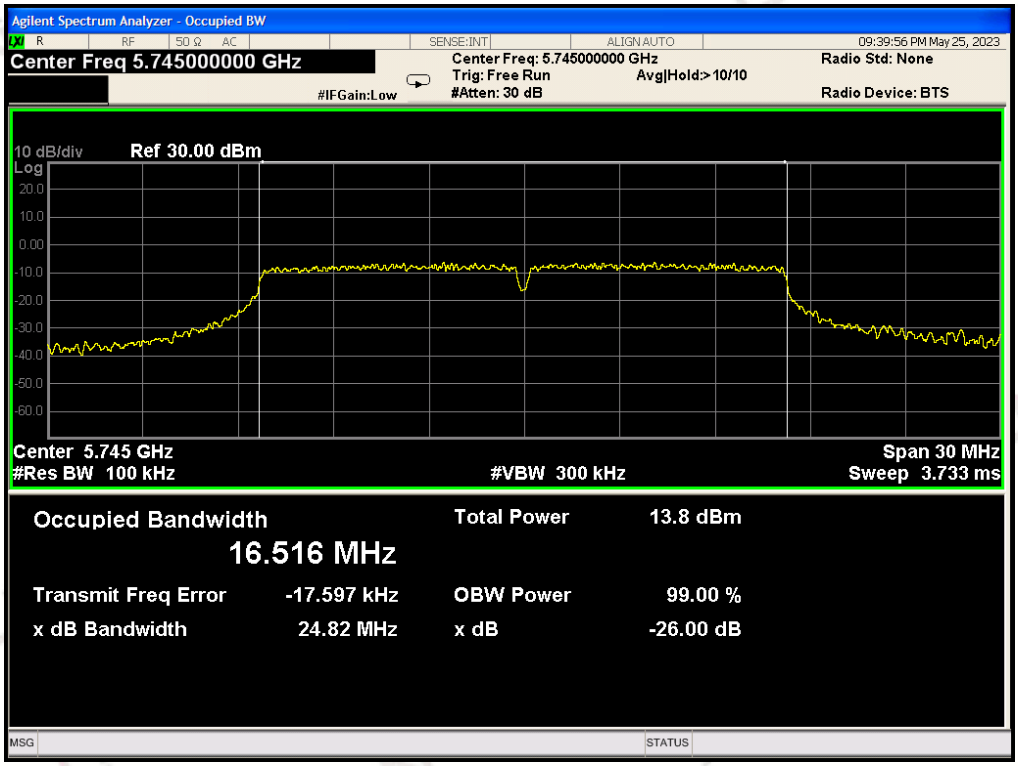


802.11n40_ANT1_5190_MCS0_OBW

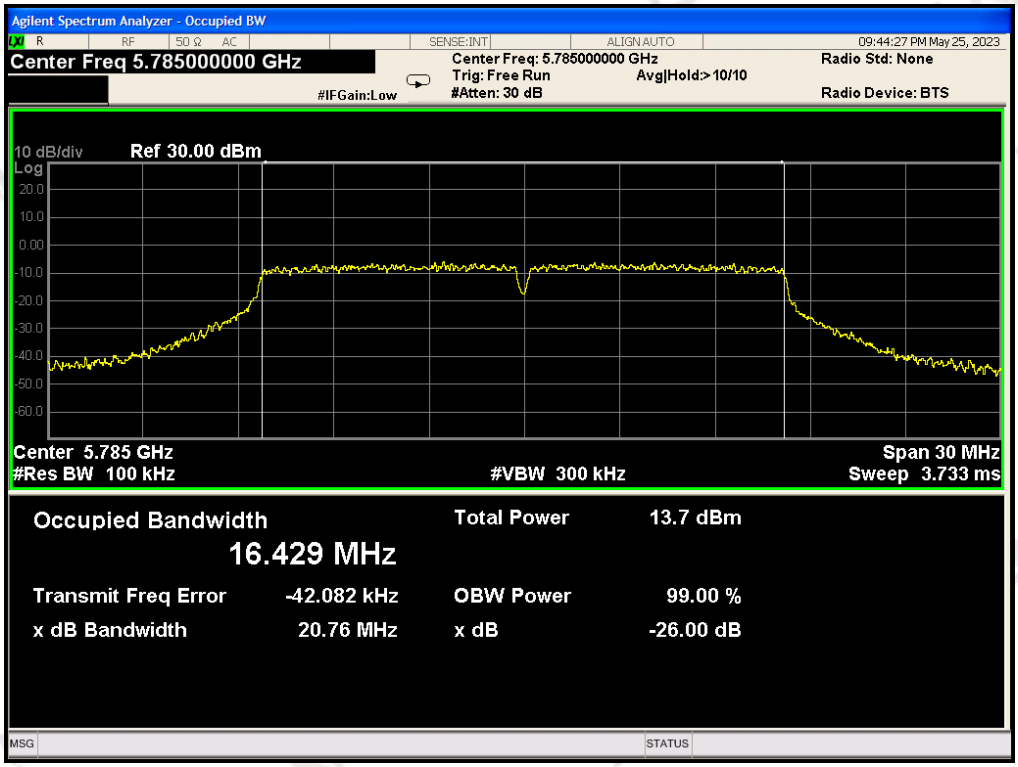


802.11n40_ANT1_5230_MCS0_OBW

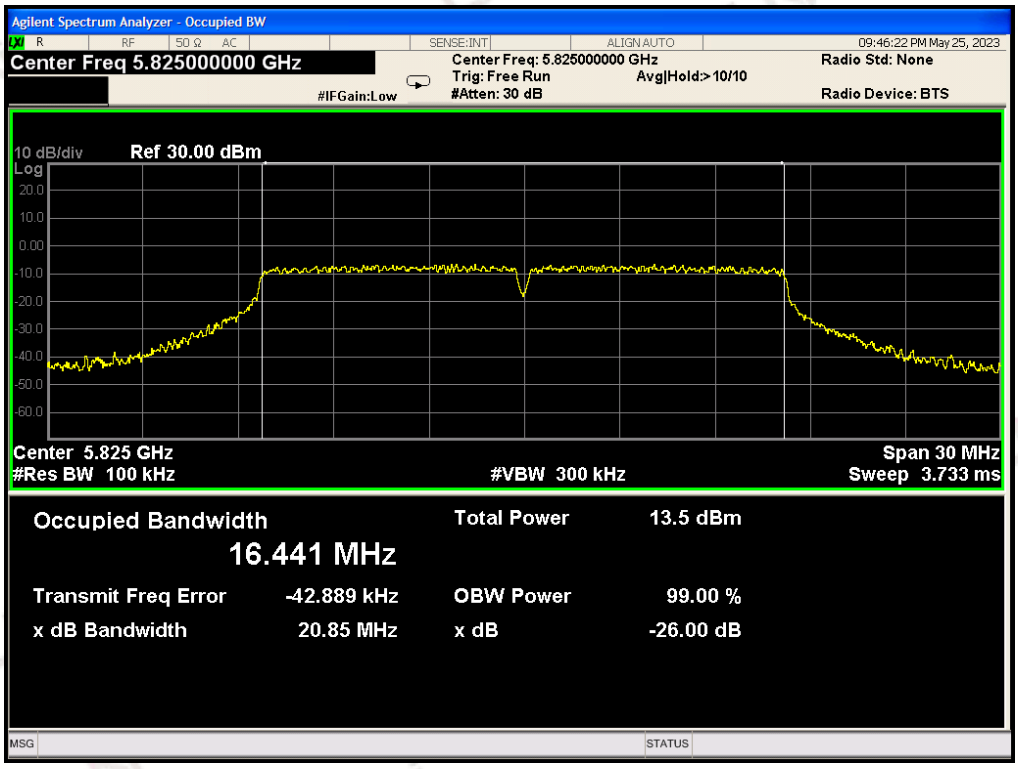
Test Graphs of Occupied Bandwidth for band 5.725-5.85 GHz



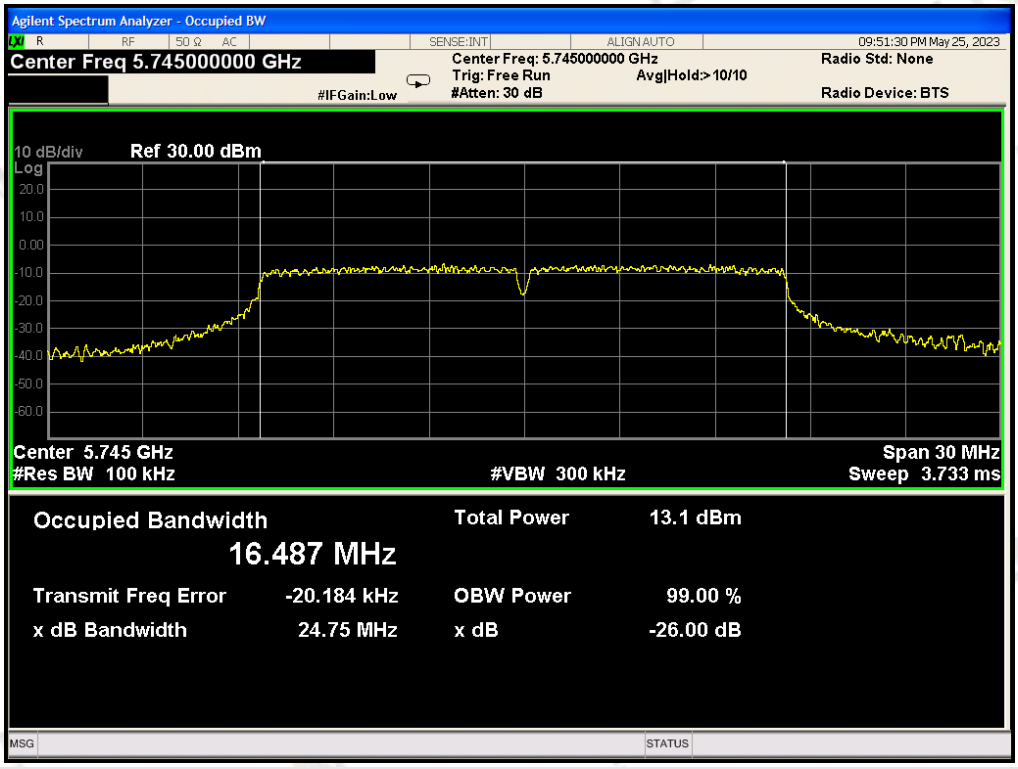
802.11a_ANT1_5745_6Mbps_OBW



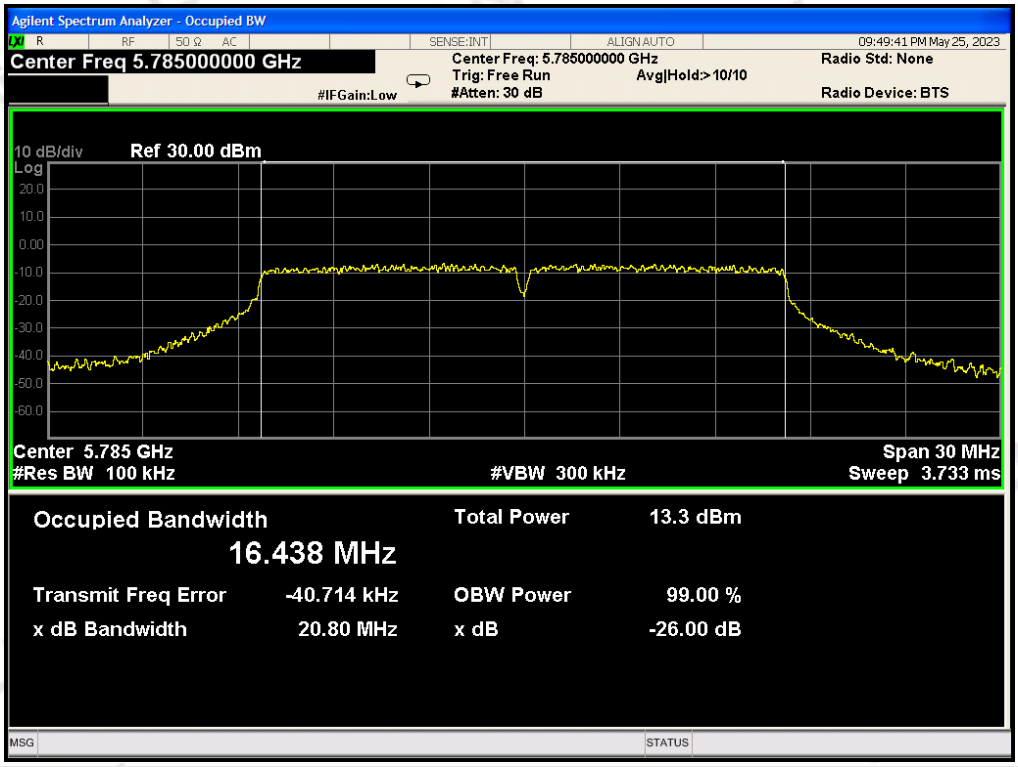
802.11a_ANT1_5785_6Mbps_OBW



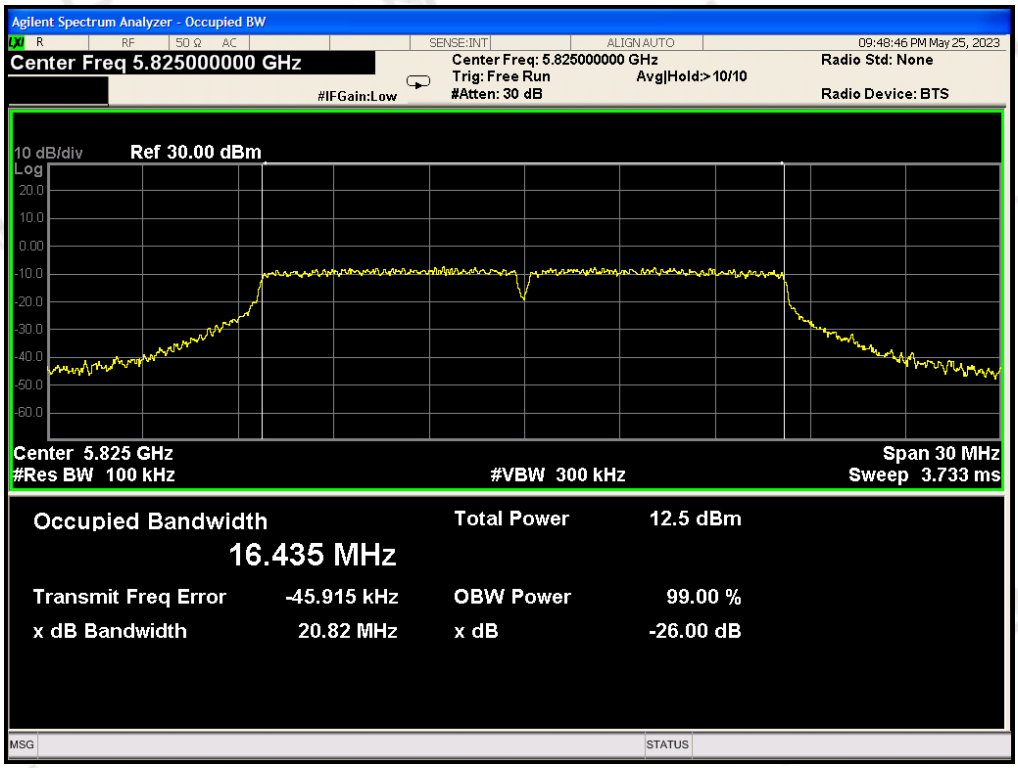
802.11a_ANT1_5825_6Mbps_OBW



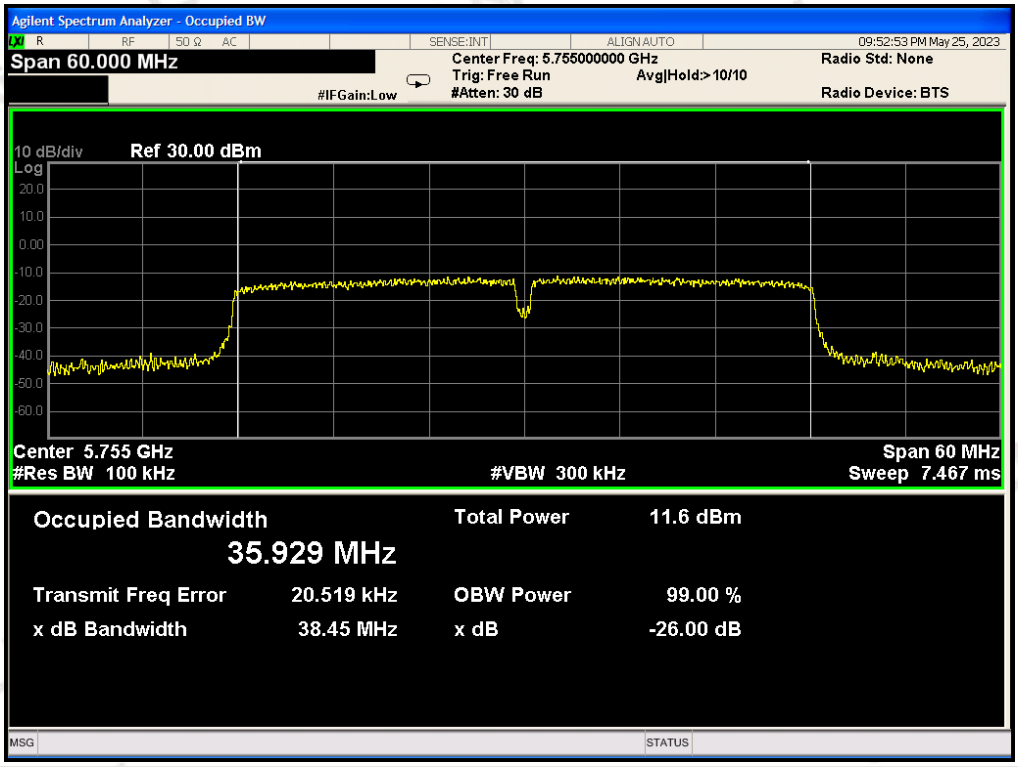
802.11n20_ANT1_5745_MCS0_OBW



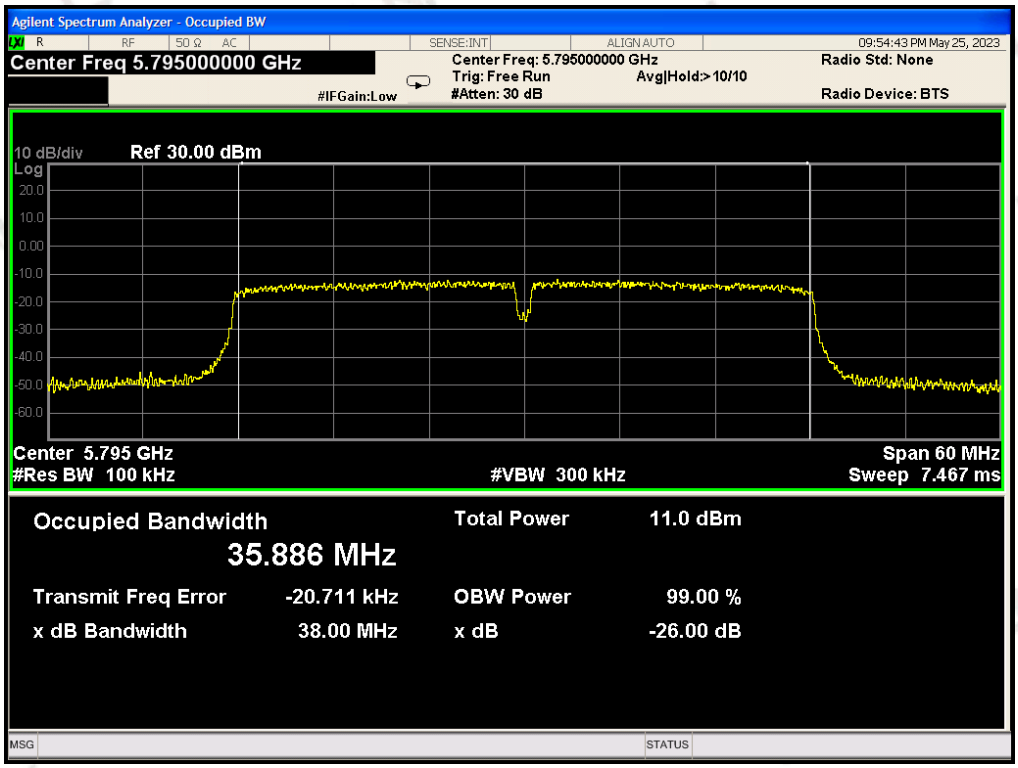
802.11n20_ANT1_5785_MCS0_OBW



802.11n20_ANT1_5825_MCS0_OBW

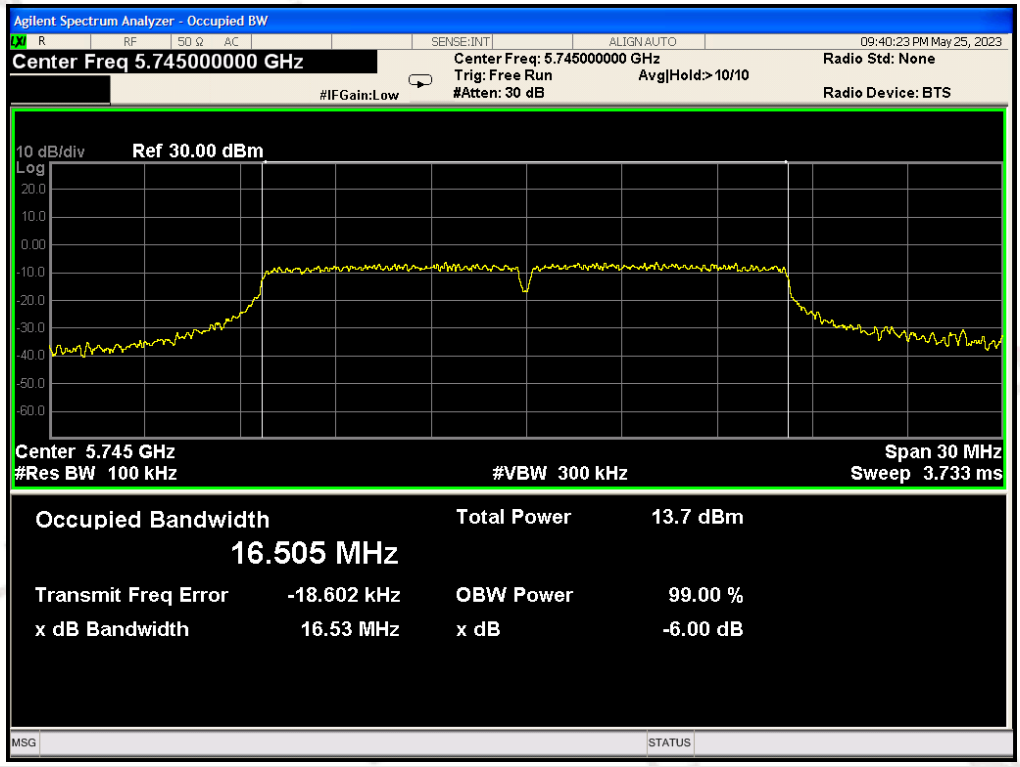


802.11n40_ANT1_5755_MCS0_OBW

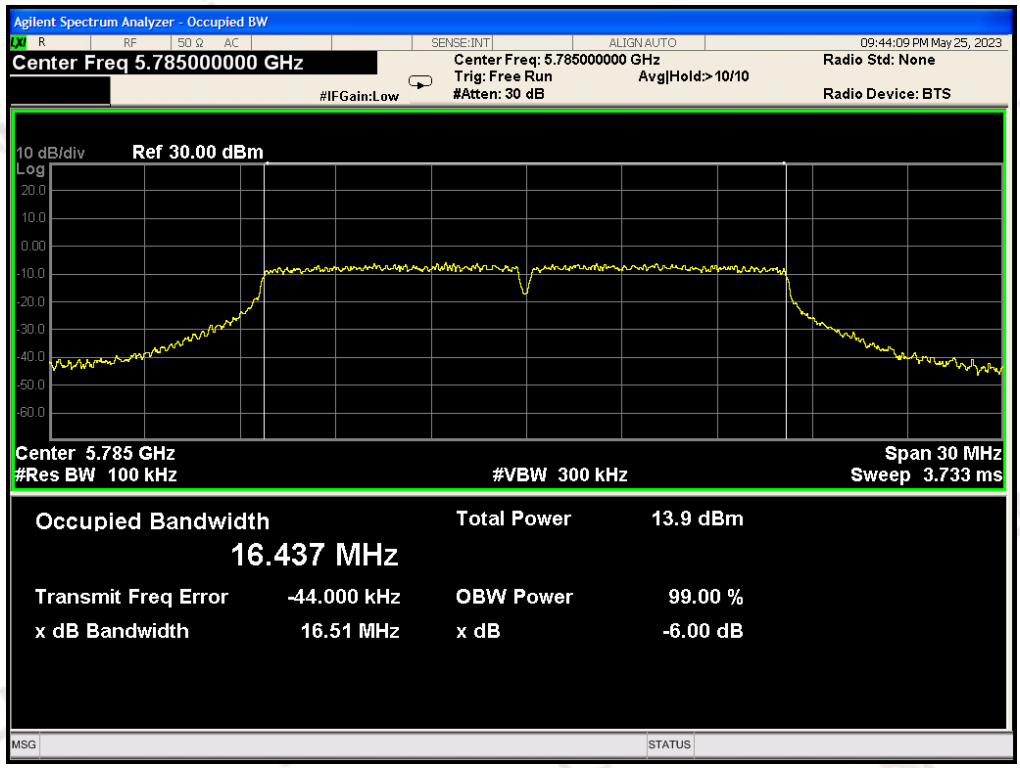


802.11n40_ANT1_5795_MCS0_OBW

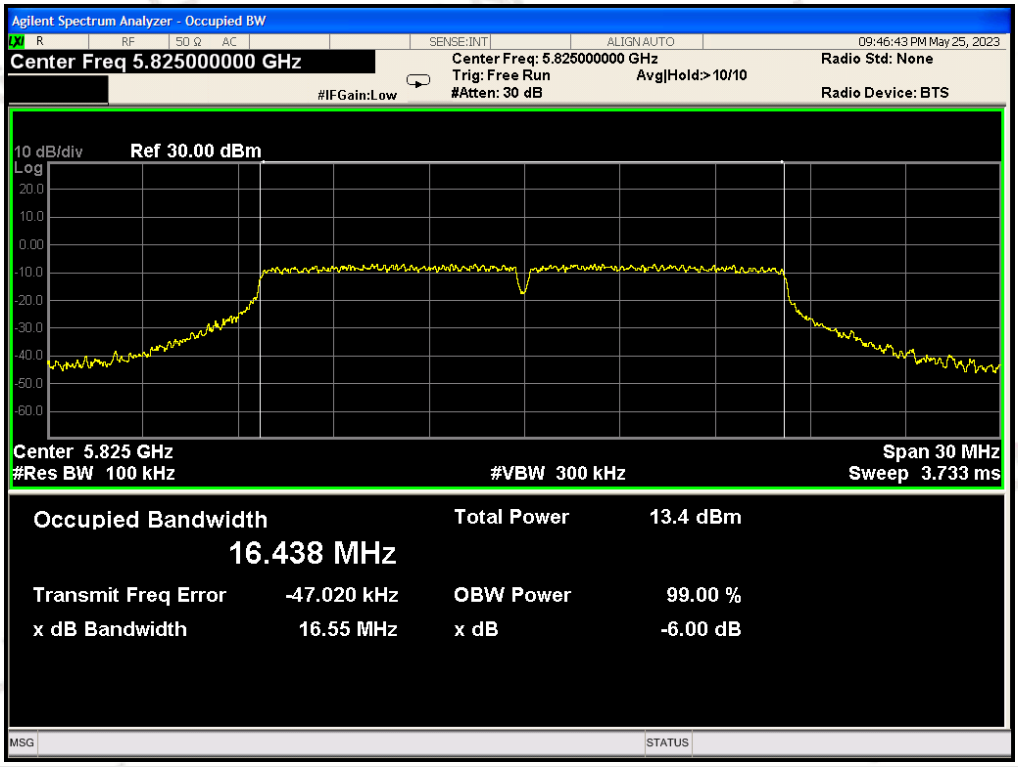
Test Graphs of DTS Bandwidth for band 5.725-5.85 GHz



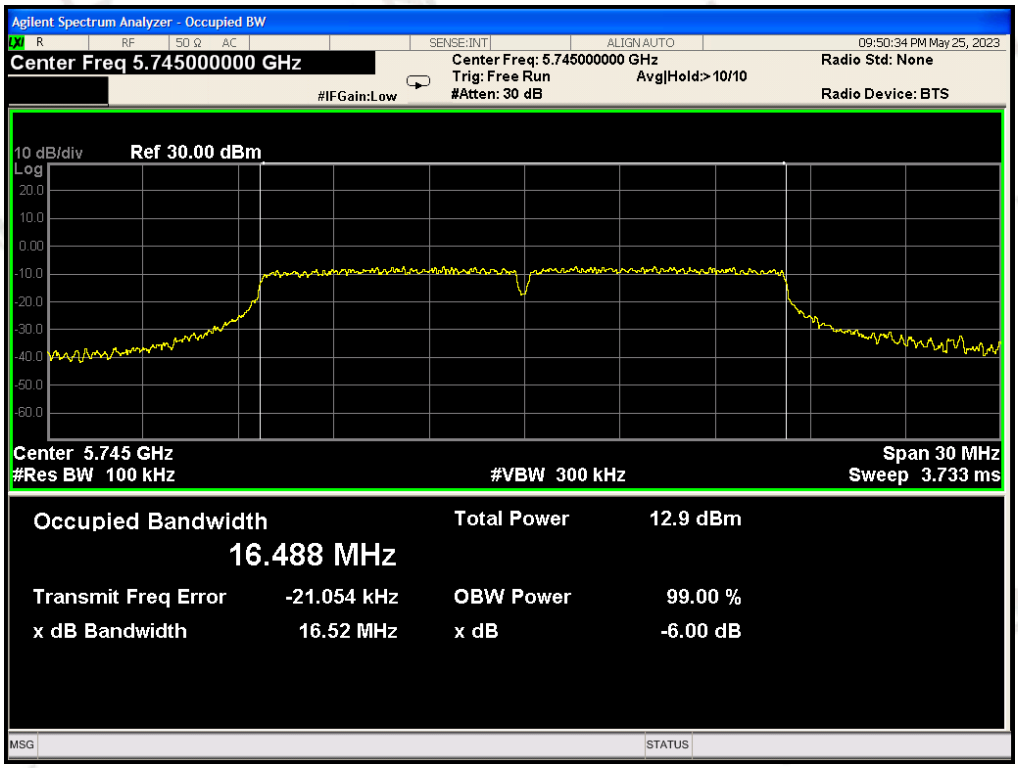
802.11a_ANT1_5745_6Mbps_DTSBW



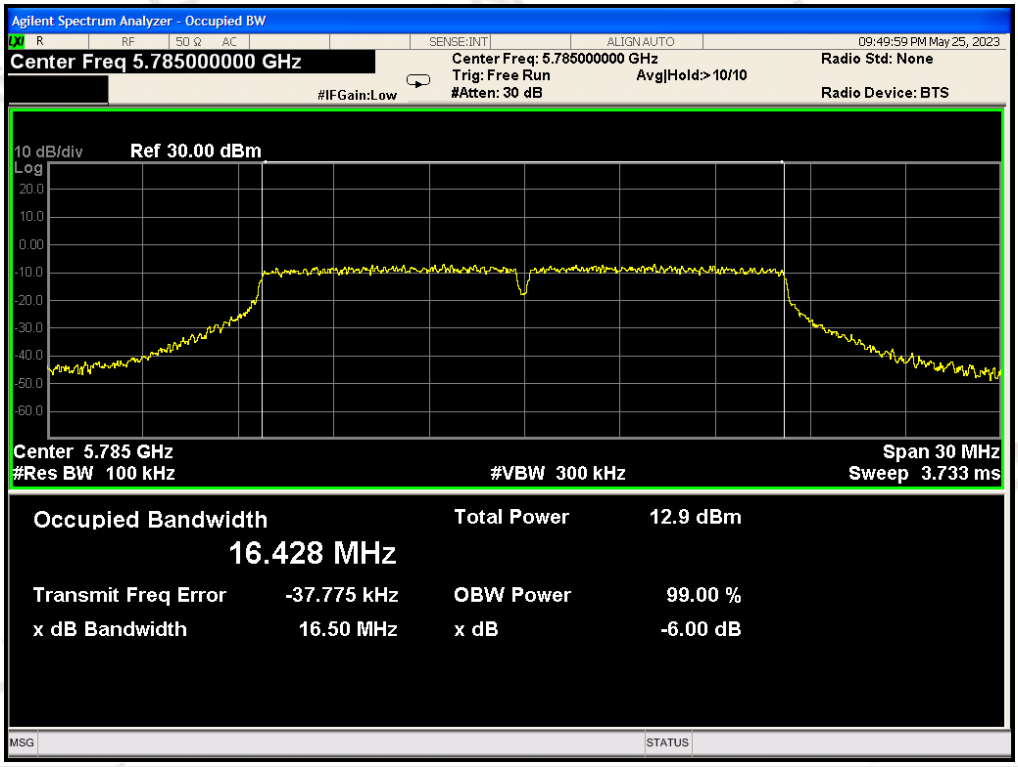
802.11a_ANT1_5785_6Mbps_DTSBW



802.11a_ANT1_5825_6Mbps_DTSBW



802.11n20_ANT1_5745_MCS0_DTSBW



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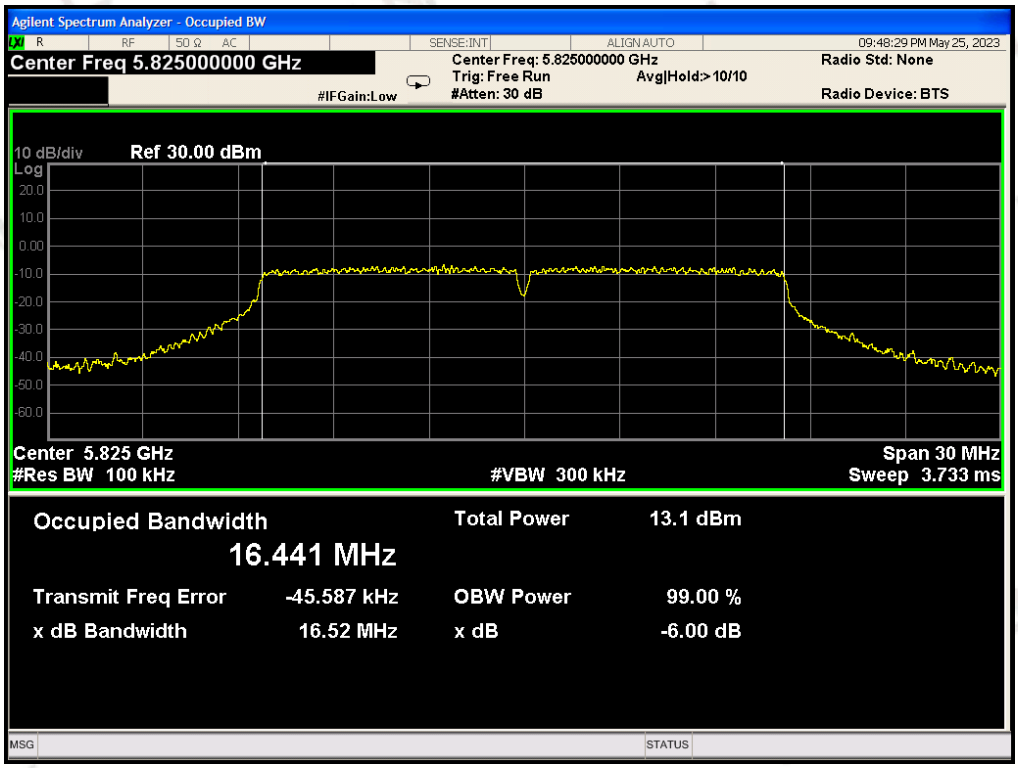
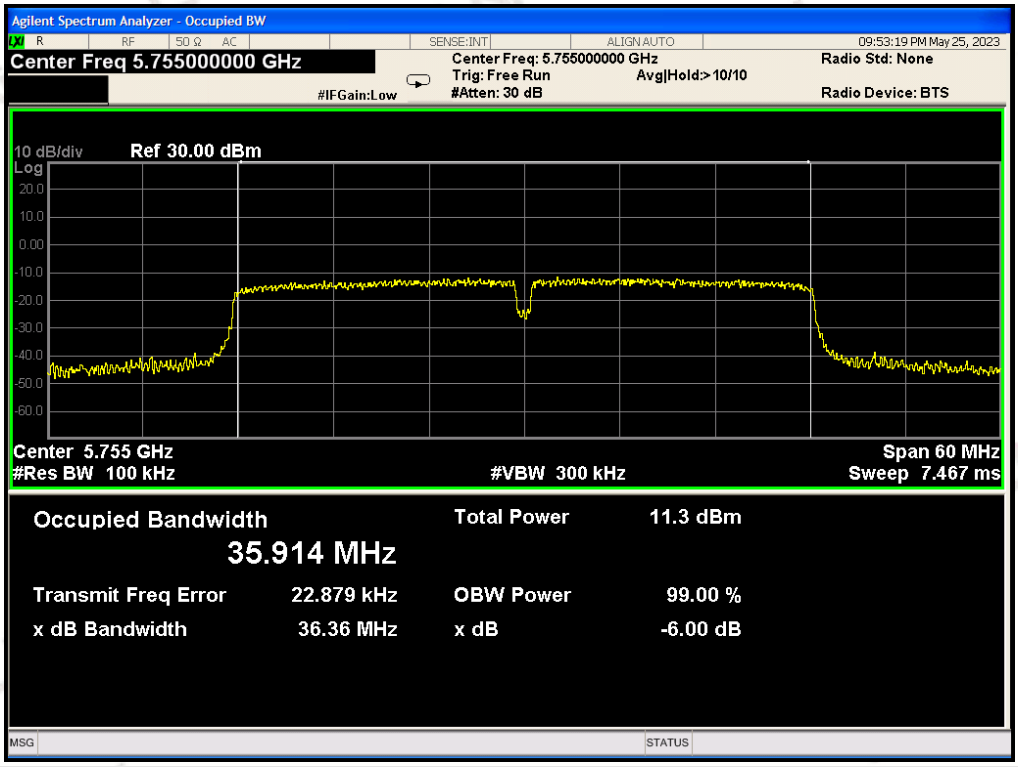
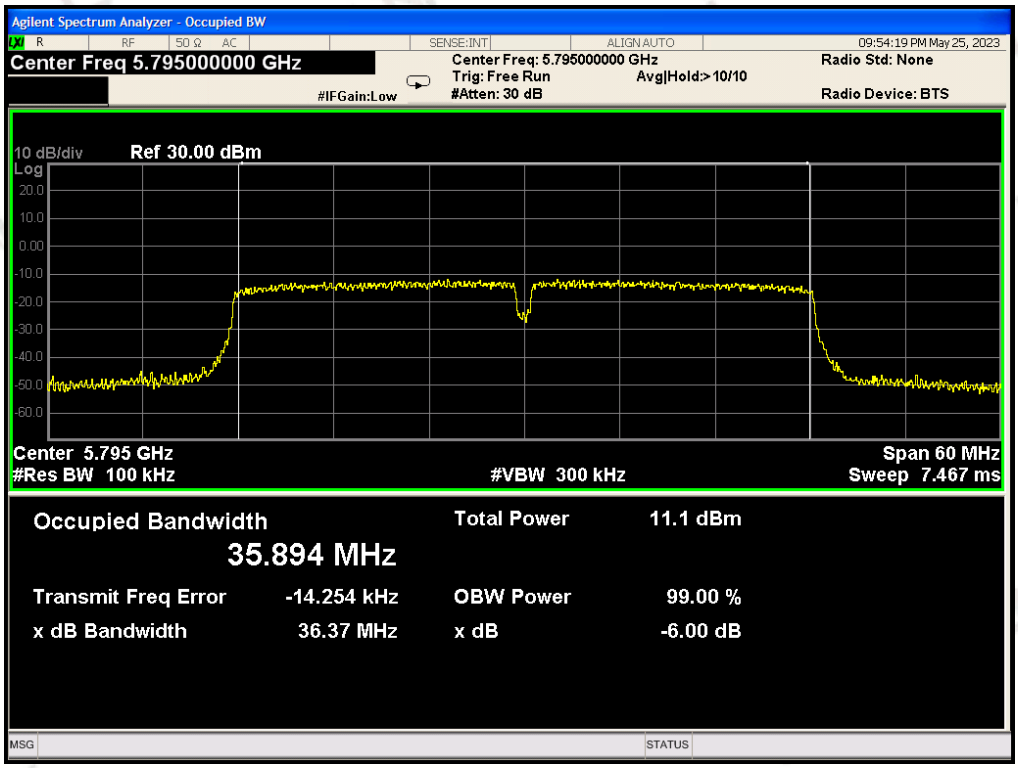


802.11n20_ANT1_5825_MCS0_DTSBW



802.11n40_ANT1_5755_MCS0_DTSBW



802.11n40_ANT1_5795_MCS0_DTSBW

6 MAXIMUM CONDUCTED OUTPUT AVERAGE POWER SPECTRAL DENSITY

6.1 TEST LIMIT

FCC CFR Title 47 Part 15 Subpart E Section 15.407(a):

FCC Part 15 Subpart E(15.407)		
Test Item	**Limit**	**Frequency Range(MHz)**
Power Spectral Density	Other than Mobile and Portable : 17dBm/MHz Mobile and Portable : 11dBm/MHz	5150~5250
	11dBm/MHz	5250~5350
	11dBm/MHz	5470~5725
	30dBm/500kHz	5725~5850

6.2 TEST PROCEDURE

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement is according to KDB 789033 D02 General UNII Test Procedures New Rules V02r01.

(1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
(2) Set analyser centre frequency to transmitting frequency.
(3) Set the span to encompass the entire emissions bandwidth (EBW)(alternatively, the entire 99% OBW) of the signal.
(4) Set the RBW to: 1 MHz
(5) Set the VBW to: 3 MHz
(6) Detector: RMS
(7) Trace: Max Hold
(7) Sweep time: auto
(8) Trace average at least 100 traces in power averaging.
(9) User the peak marker function to determine the maximum amplitude level within the RBW. Apply correction to the result if different RBW is used.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

6.3 TEST SET-UP

Same as 5.3.

6.4 EQUIPMENT USED

Same as Radiated Emission Measurement.

6.5 TEST RESULT

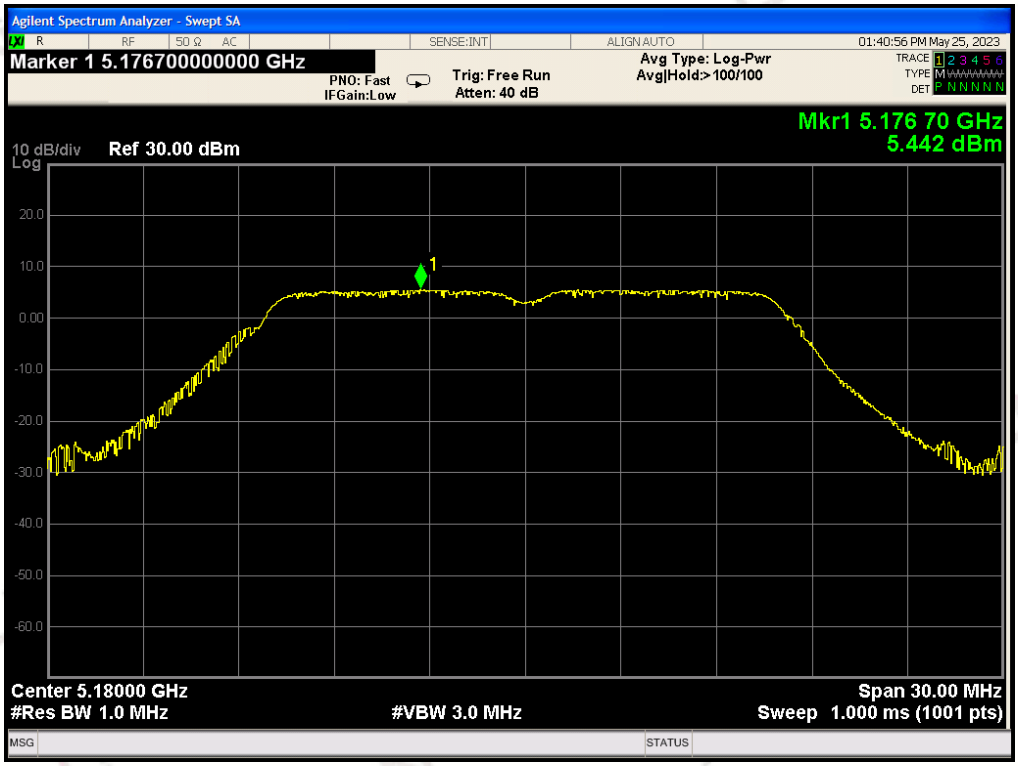
PASS

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5180	5.442	11	Pass
	5200	5.460	11	Pass
	5240	6.051	11	Pass
802.11n20	5180	4.722	11	Pass
	5200	4.677	11	Pass
	5240	4.801	11	Pass
802.11n40	5190	1.376	11	Pass
	5230	0.361	11	Pass

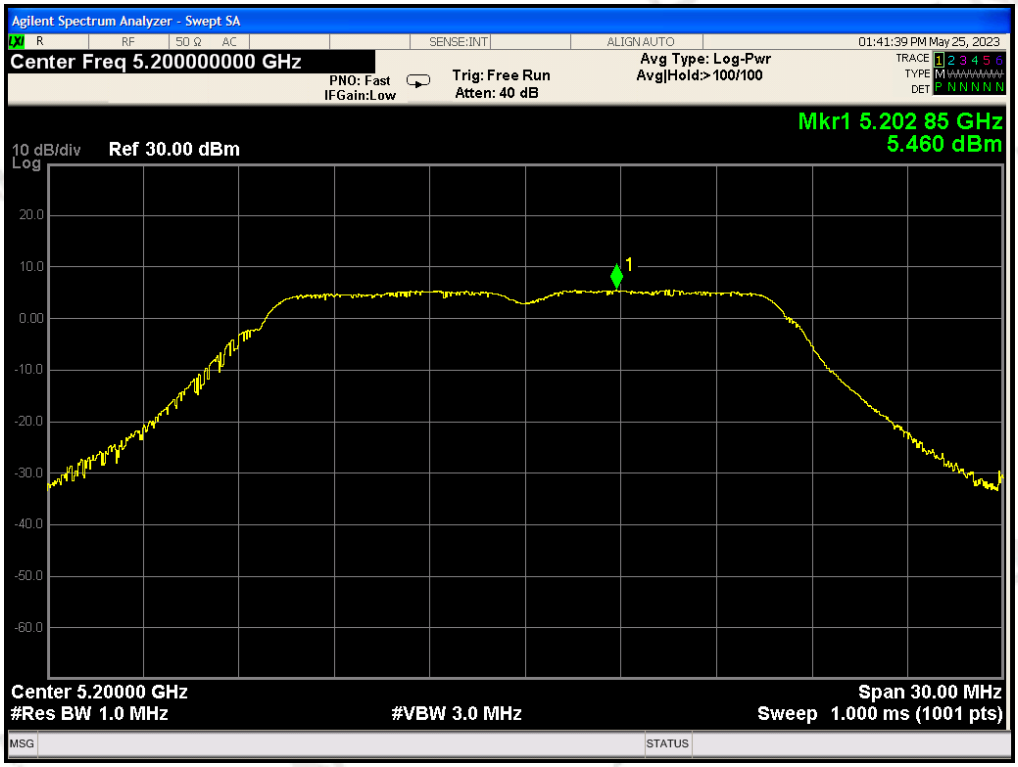
Test Data of Conducted Output Power Density for band 5.725-5.85 GHz					
Test Mode	Test Channel (MHz)	Average Power Density(dBm/100kHz)	Average Power Density(dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11a	5745	-5.126	1.864	30	Pass
	5785	-5.508	1.482	30	Pass
	5825	-4.825	2.165	30	Pass
802.11n20	5745	-6.326	0.664	30	Pass
	5785	-6.110	0.880	30	Pass
	5825	-6.154	0.836	30	Pass
802.11n40	5755	-10.074	-3.084	30	Pass
	5795	-10.521	-3.531	30	Pass

Note:1. Power density(dBm/500kHz) = Power density(dBm/100kHz) +10*log(500/100).

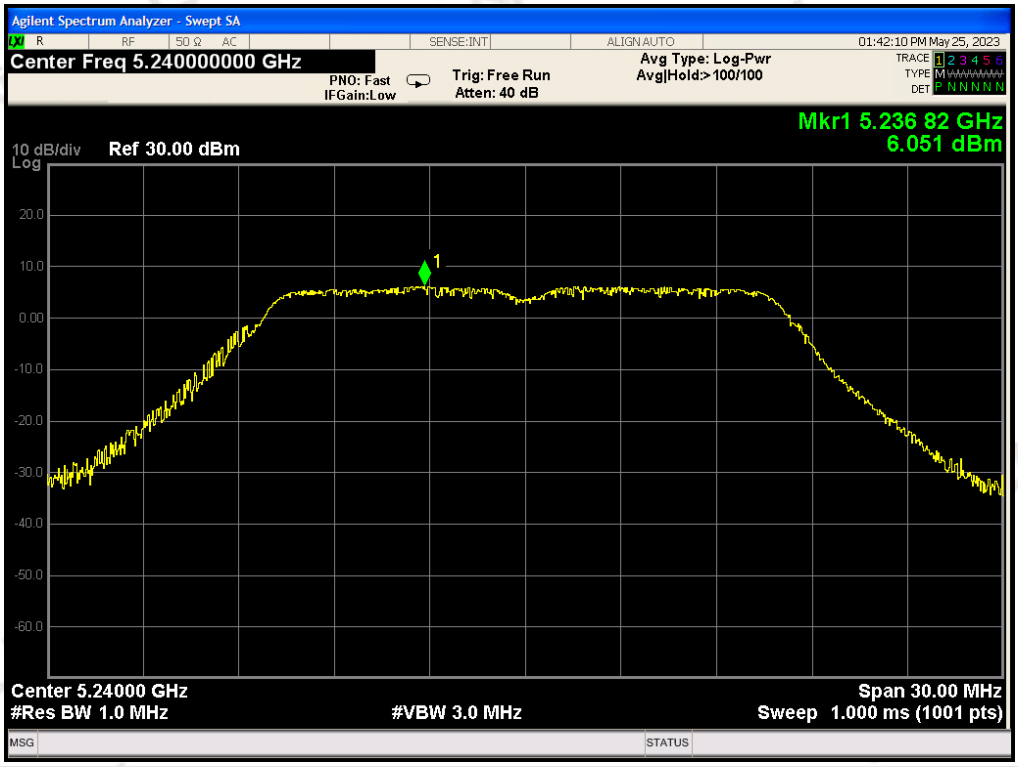
Test Graphs of Conducted Output Power Spectral Density for band 5.15-5.25 GHz



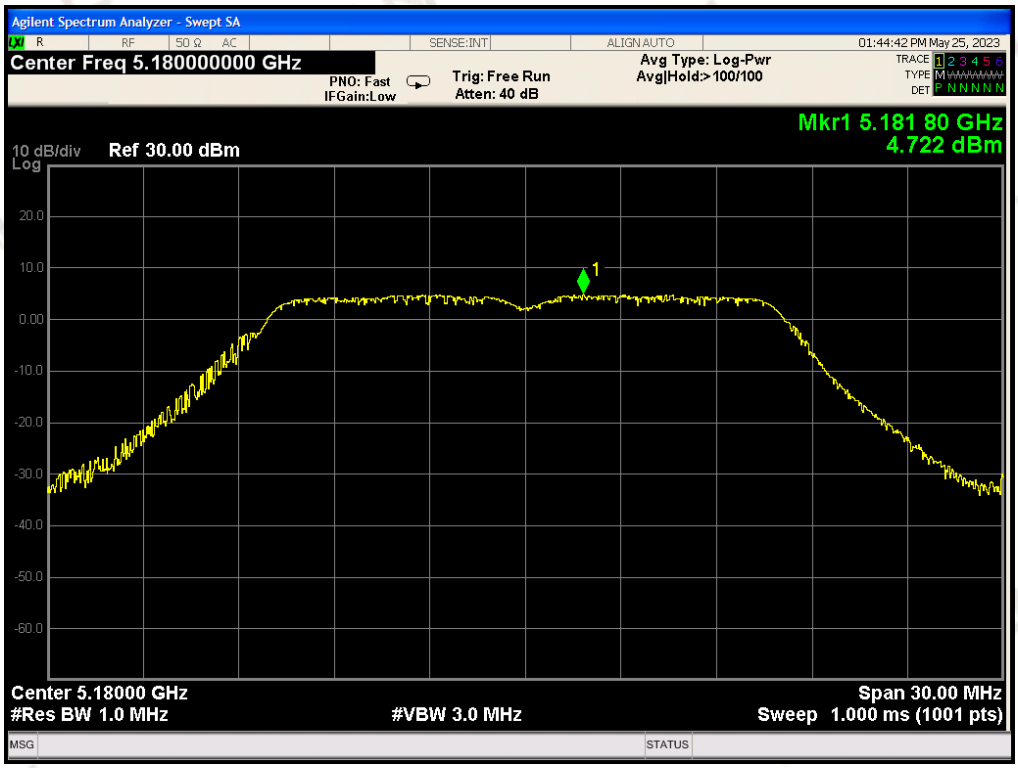
802.11a_ANT1_5180_6Mbps_PSD



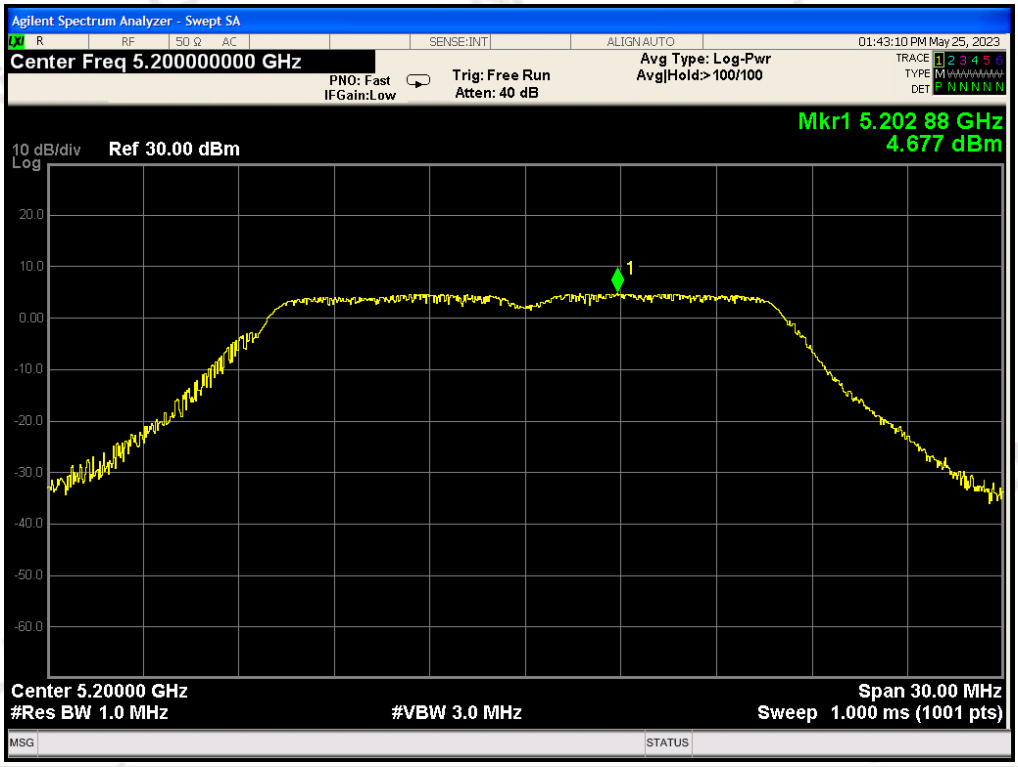
802.11a_ANT1_5200_6Mbps_PSD



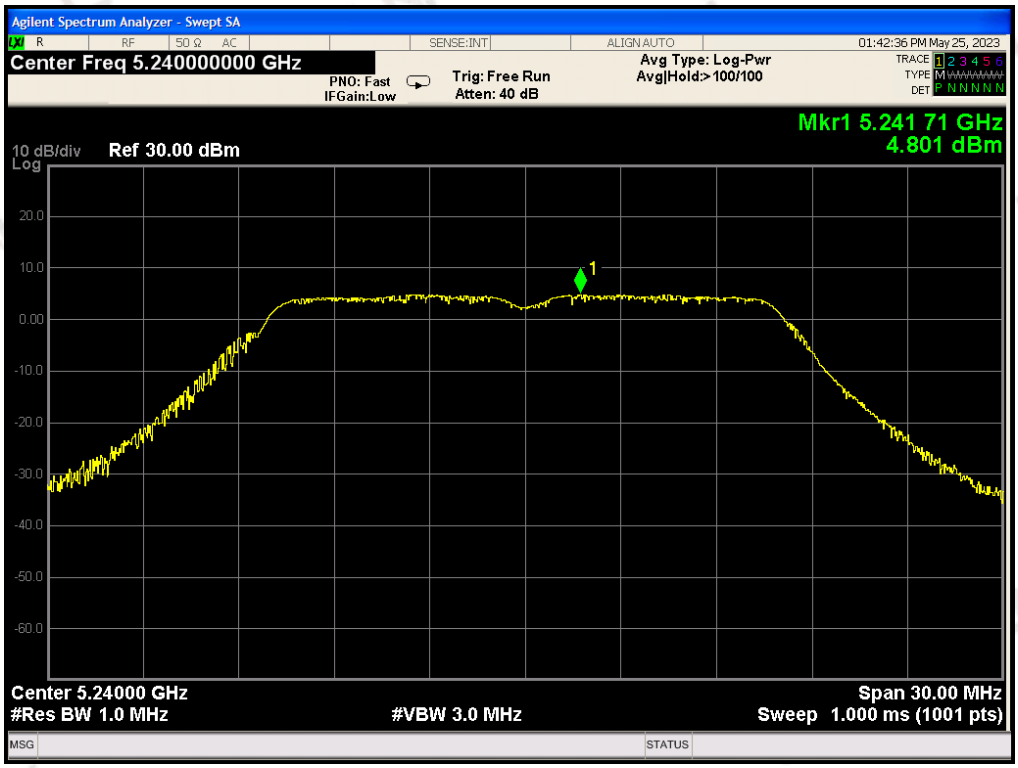
802.11a_ANT1_5240_6Mbps_PSD



802.11n20_ANT1_5180_MCS0_PSD



802.11n20_ANT1_5200_MCS0_PSD



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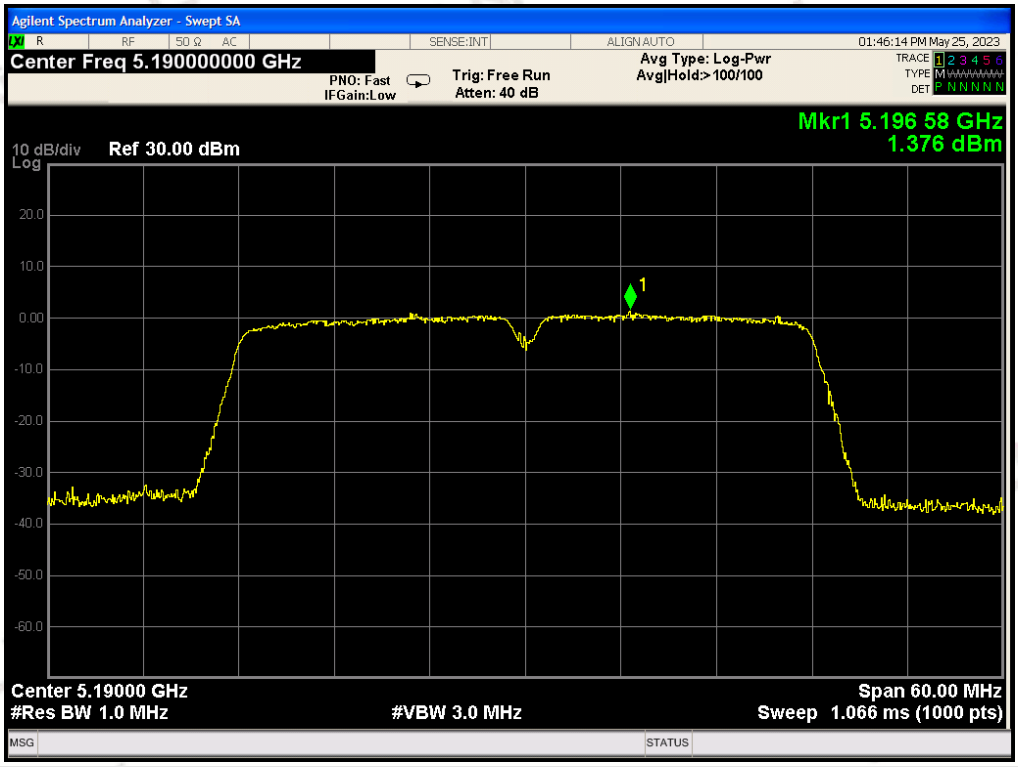
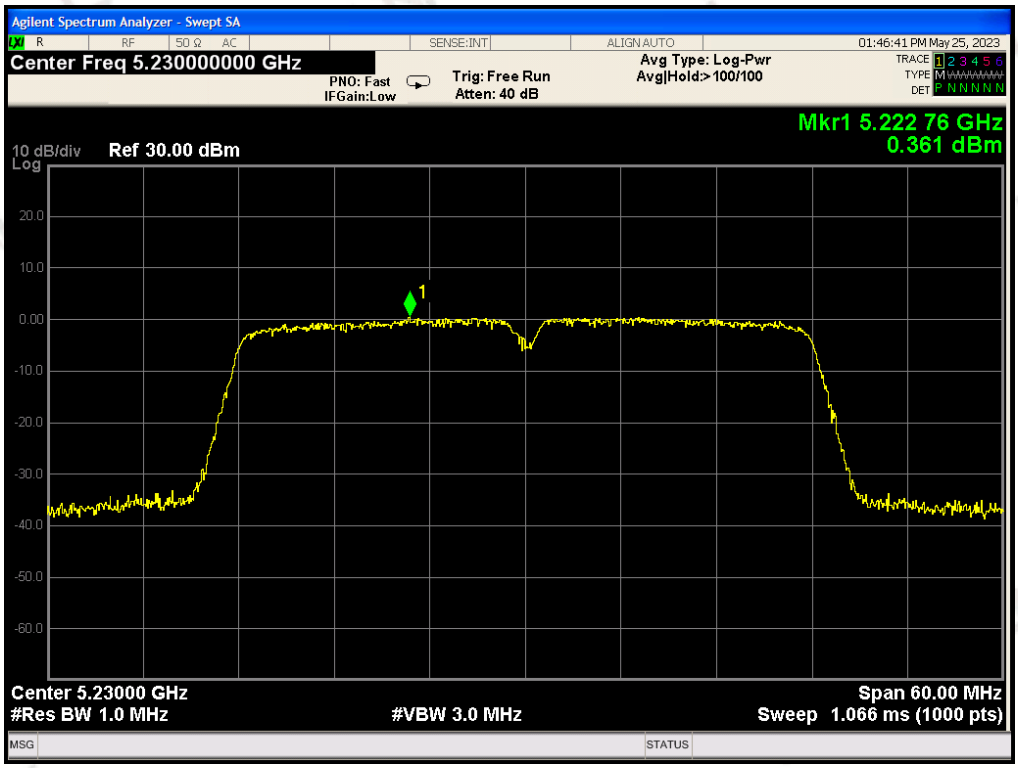
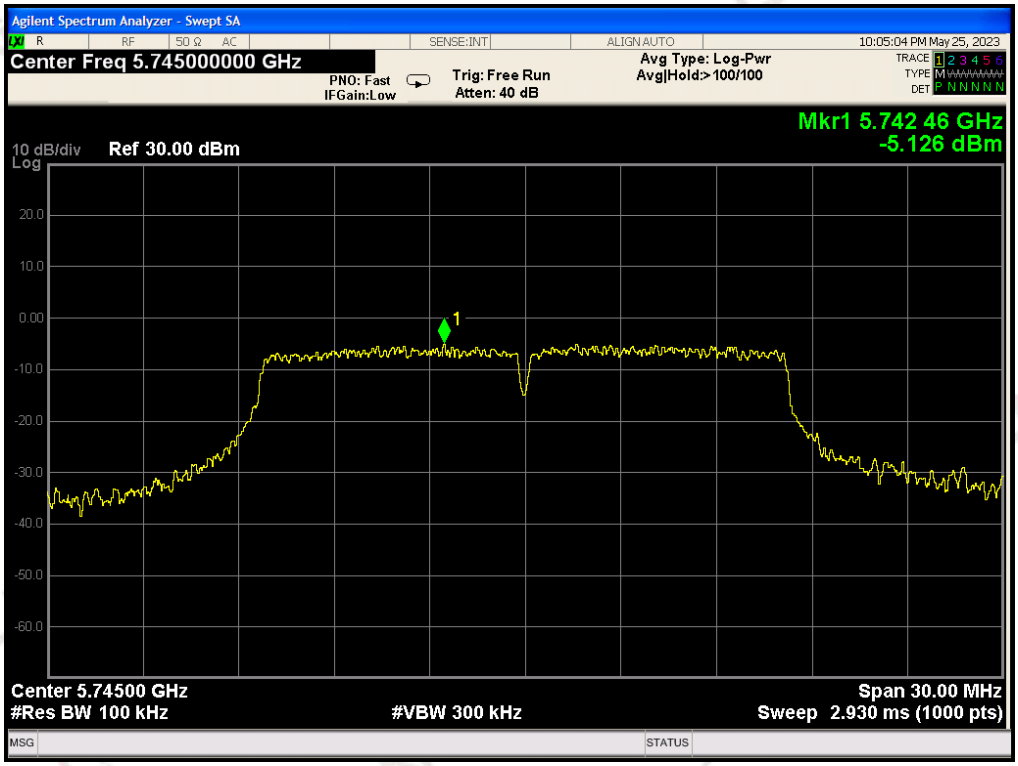


802.11n40_ANT1_5190_MCS0_PSD

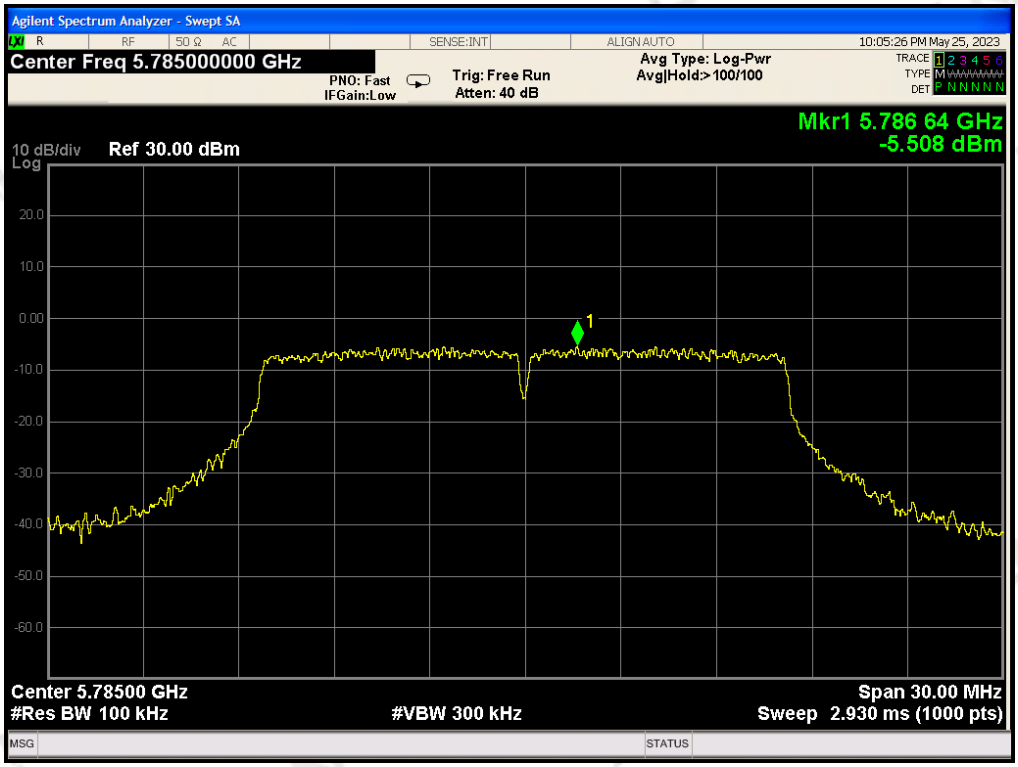


802.11n40_ANT1_5230_MCS0_PSD

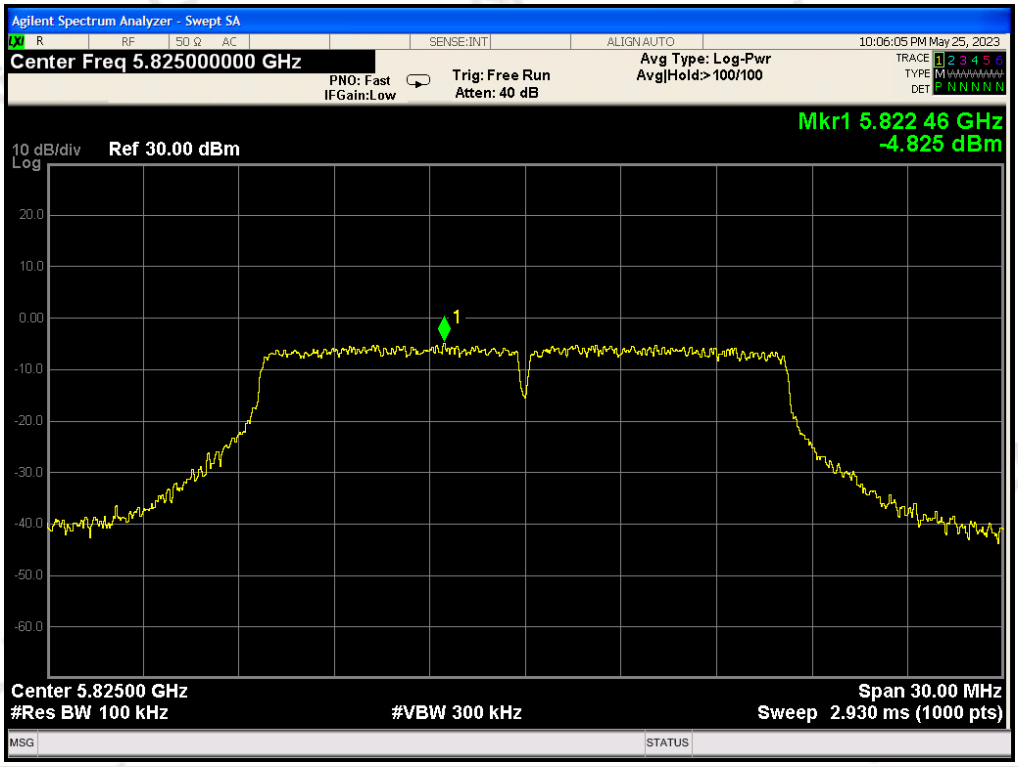
Test Graphs of Conducted Output Power Spectral Density for band 5.725-5.85 GHz



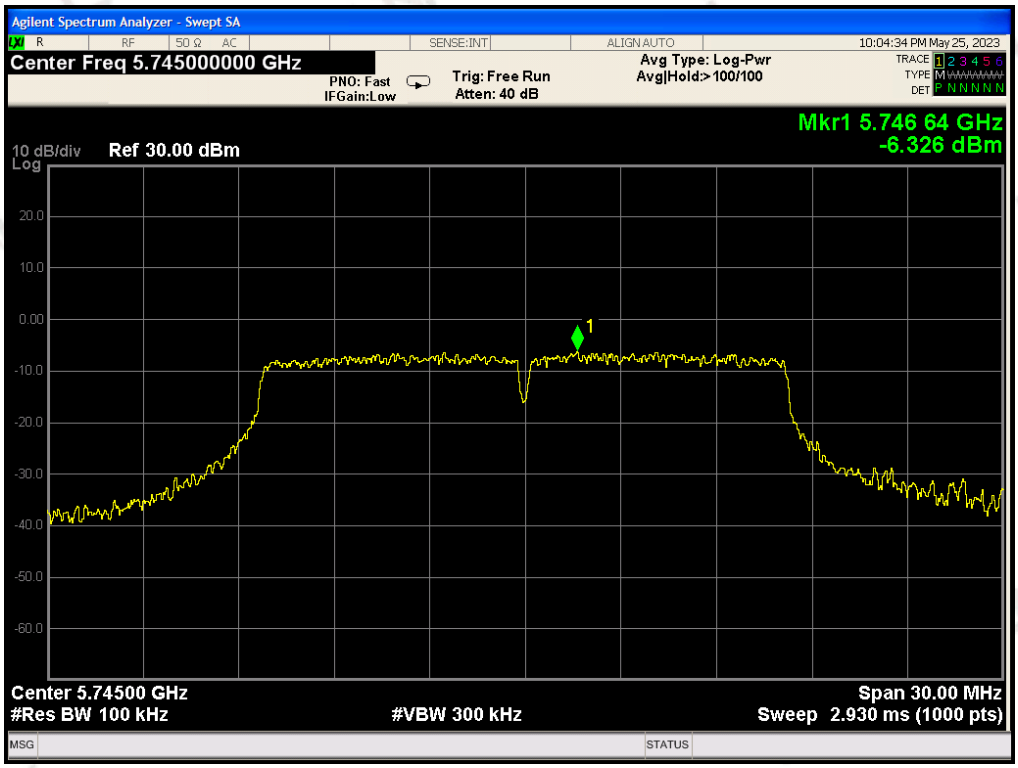
802.11a_ANT1_5745_6Mbps_PSD



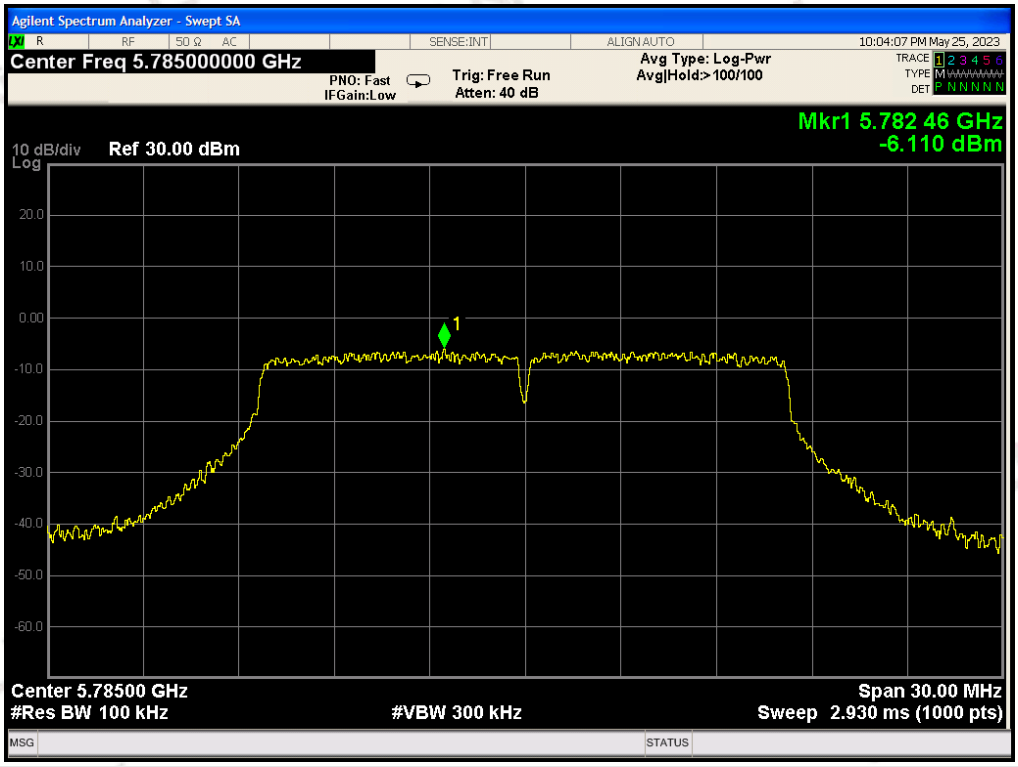
802.11a_ANT1_5785_6Mbps_PSD



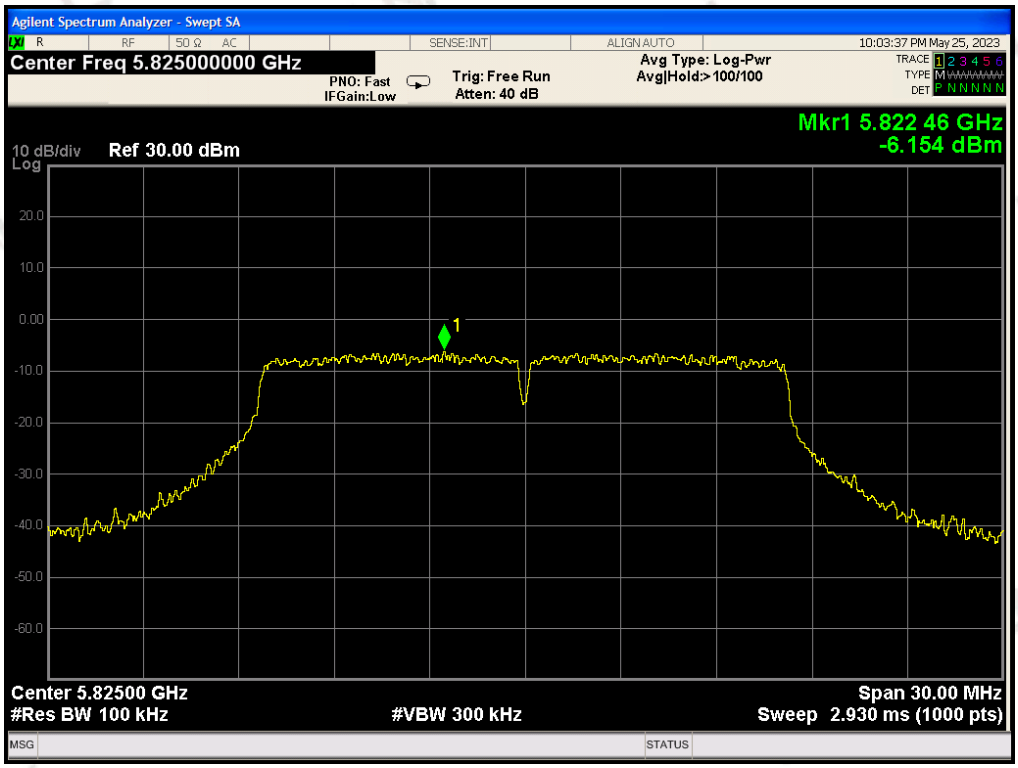
802.11a_ANT1_5825_6Mbps_PSD



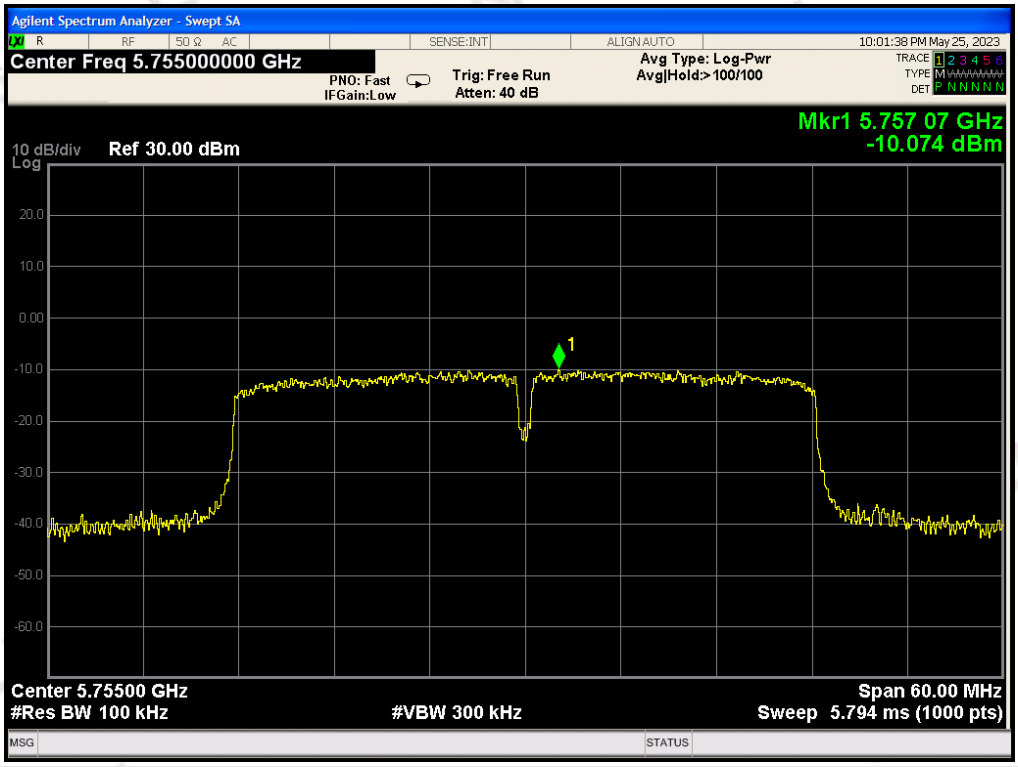
802.11n20_ANT1_5745_MCS0_PSD



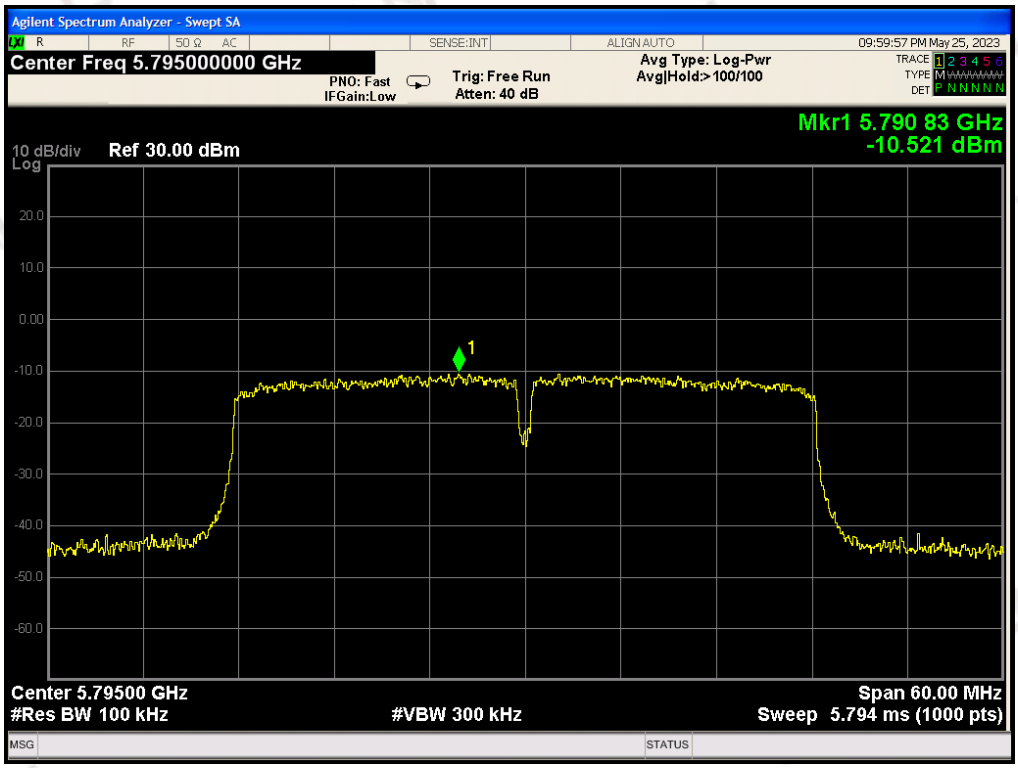
802.11n20_ANT1_5785_MCS0_PSD



802.11n20_ANT1_5825_MCS0_PSD



802.11n40_ANT1_5755_MCS0_PSD



802.11n40_ANT1_5795_MCS0_PSD

7 AVERAGE OUTPUT POWER

7.1 TEST LIMIT

FCC CFR Title 47 Part 15 Subpart E Section 15.407(a):

FCC Part 15 Subpart E(15.407)		
Test Item	**Limit**	**Frequency Range(MHz)**
Conducted Output Power	Fixed: 1 Watt (30dBm) Mobile and Portable: 250mW (24dBm)	5150~5250
	250mW (24dBm)	5250~5350
	250mW (24dBm)	5470~5725
	1 Watt (30dBm)	5725~5850

7.2 TEST PROCEDURE

1.The EUT was tested according to according to section 3 of KDB 789033 D02 General UNII Test Procedures New Rules V02r01.

2.The maximum conducted output power may be measured using a broadband AVG RF power meter.

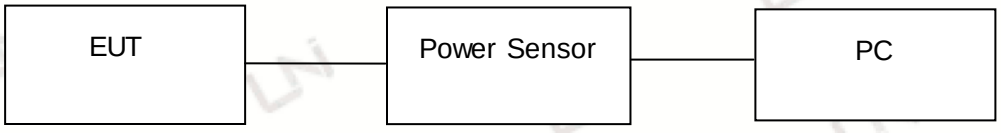
3. Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor.

4.The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

5.Record the measurement data.

7.3 TEST SET-UP

AVERAGE POWER SETUP



7.4 EQUIPMENT USED

Same as Radiated Emission Measurement.

7.5 TEST RESULT

PASS

Test Data of Conducted Output Power for band 5.15-5.25 GHz				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5180	14.57	23.98	Pass
	5200	14.55	23.98	Pass
	5240	14.56	23.98	Pass
802.11n20	5180	13.02	23.98	Pass
	5200	13.01	23.98	Pass
	5240	13.01	23.98	Pass
802.11n40	5190	11.82	23.98	Pass
	5230	11.79	23.98	Pass

Test Data of Conducted Output Power for band 5.725-5.85 GHz				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5745	14.63	30	Pass
	5782	14.52	30	Pass
	5825	14.55	30	Pass
802.11n20	5745	13.21	30	Pass
	5782	13.20	30	Pass
	5825	13.20	30	Pass
802.11n40	5755	11.93	30	Pass
	5795	11.92	30	Pass

8 CONDUCTED SPURIOUS EMISSION

8.1 TEST LIMIT

Applicable Limits	Channel
-27dBm/MHz	5150MHz-5250MHz
All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	5725MHz-5850MHz

8.2 TEST SETUP

Same as 5.3

8.3 TEST PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Trace 1 Max hold, then View.

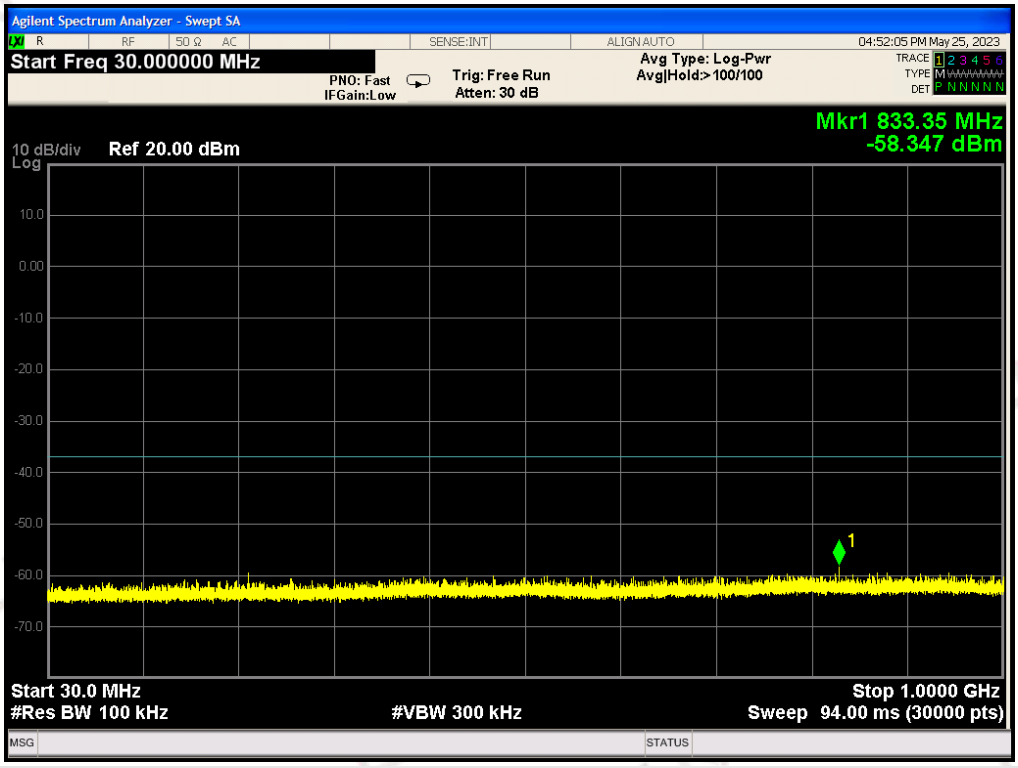
Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

8.4 TEST RESUL

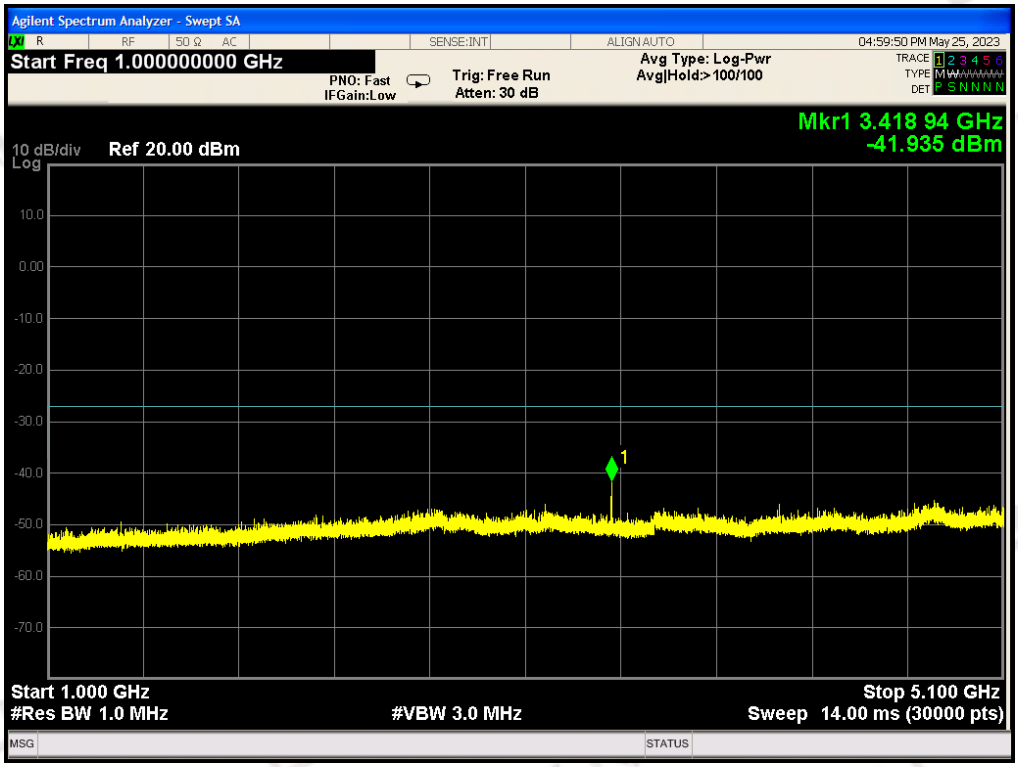
PASS

Note: All the 20MHz bandwidth modulation had been tested, the 802.11a was the worst case and record in this test report. All the 40MHz bandwidth modulation had been tested, the 802.11N40 was the worst case and record in this test report.

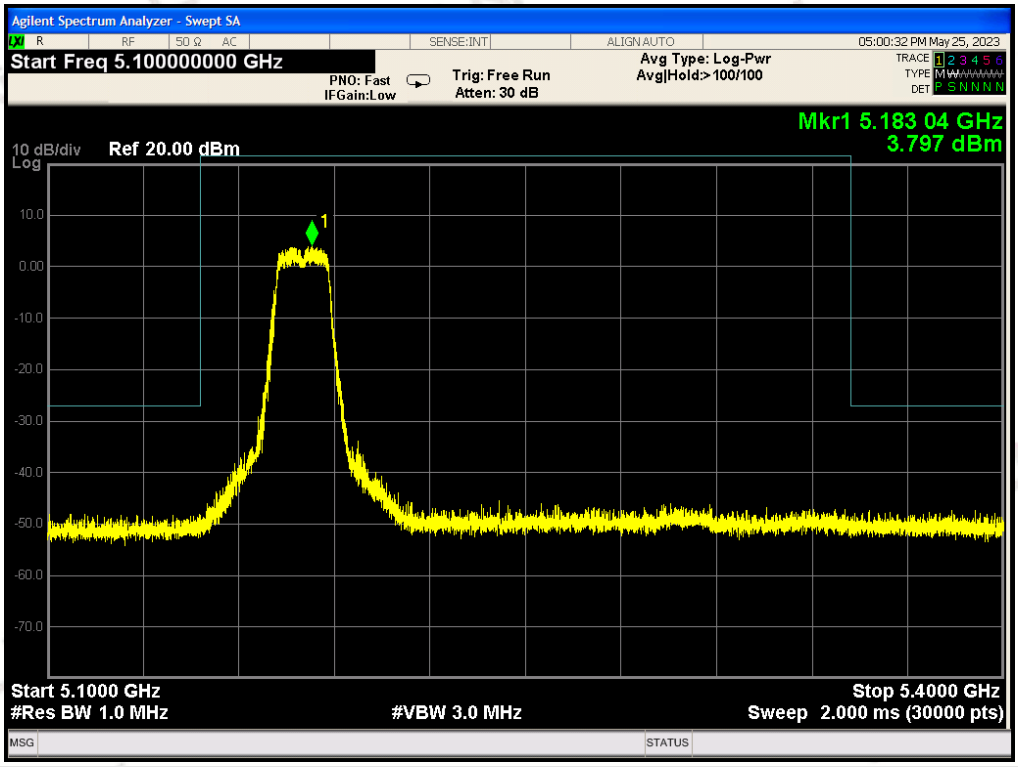
Test Graphs of Spurious Emissions outside of the 5.15-5.35 GHz band for transmitters operating in the 5.15-5.25 GHz band



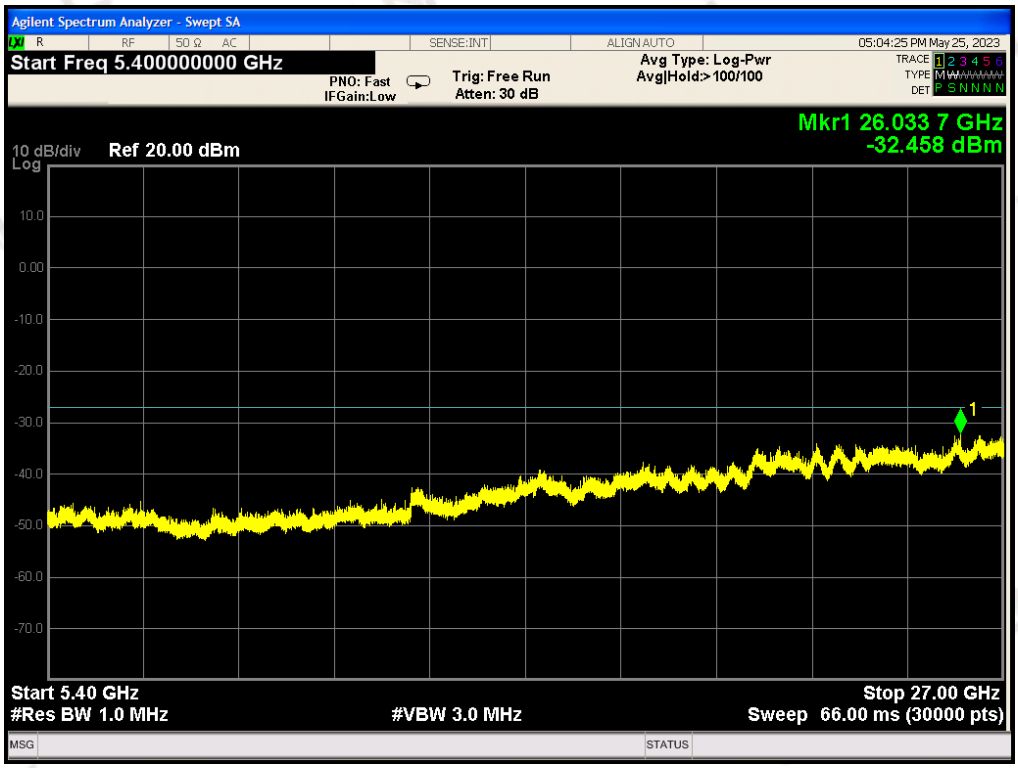
802.11a_ANT1_5180_6Mbps_Frequency Band 1



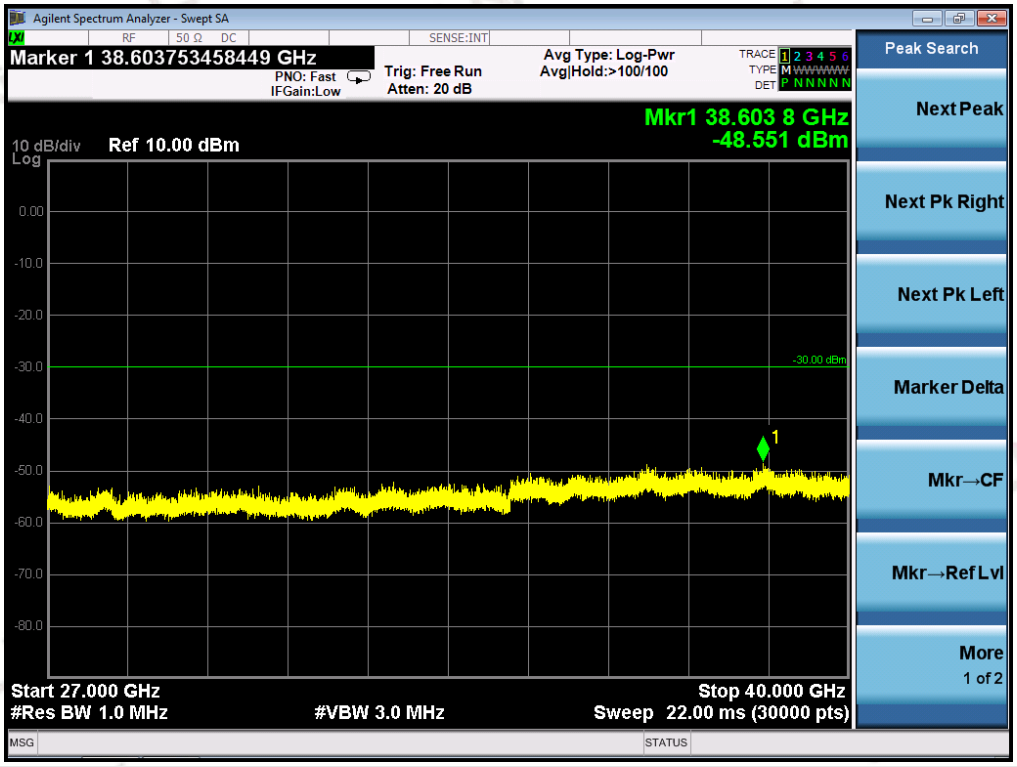
802.11a_ANT1_5180_6Mbps_Frequency Band 2



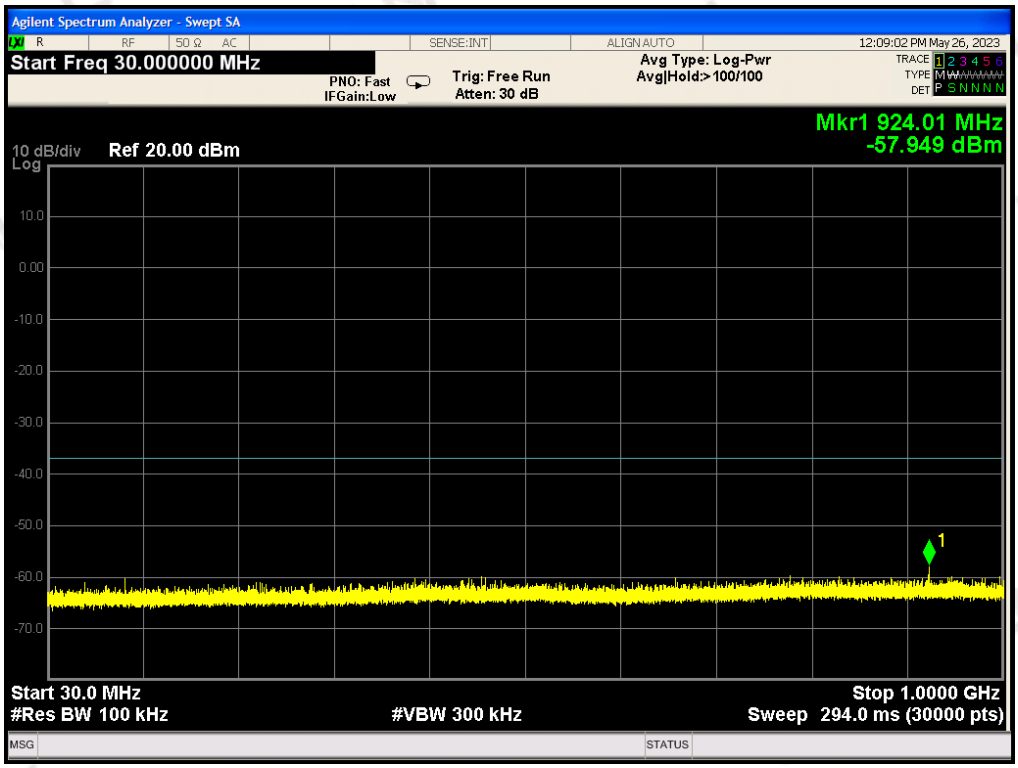
802.11a_ANT1_5180_6Mbps_Frequency Band 3



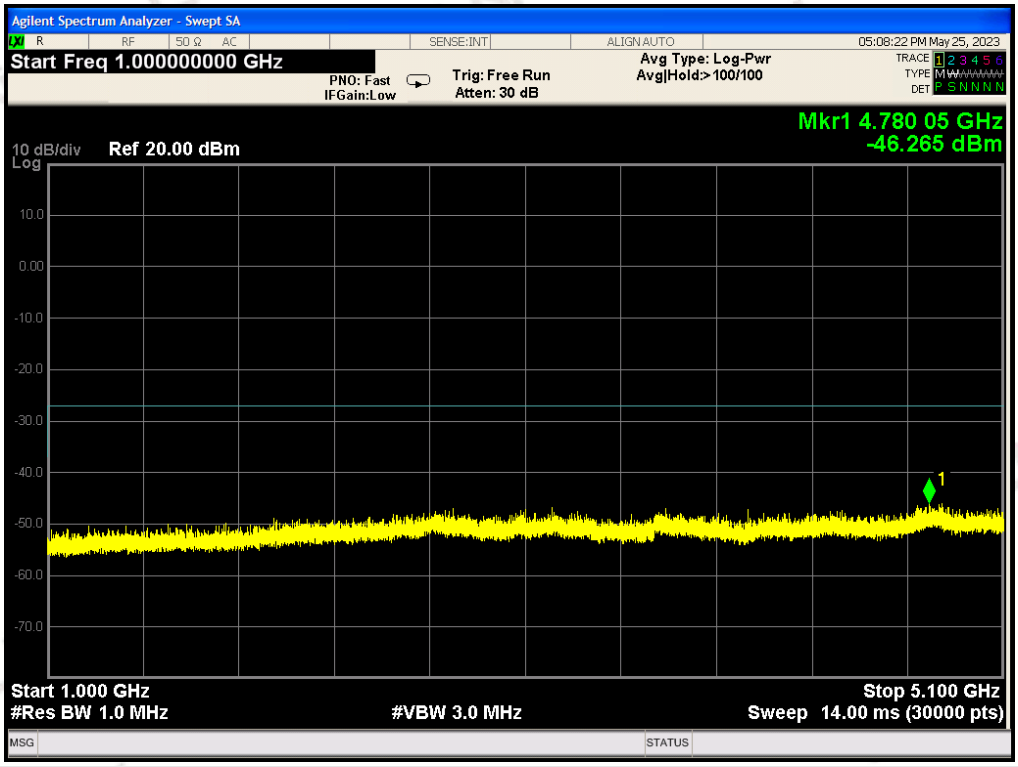
802.11a_ANT1_5180_6Mbps_Frequency Band 4



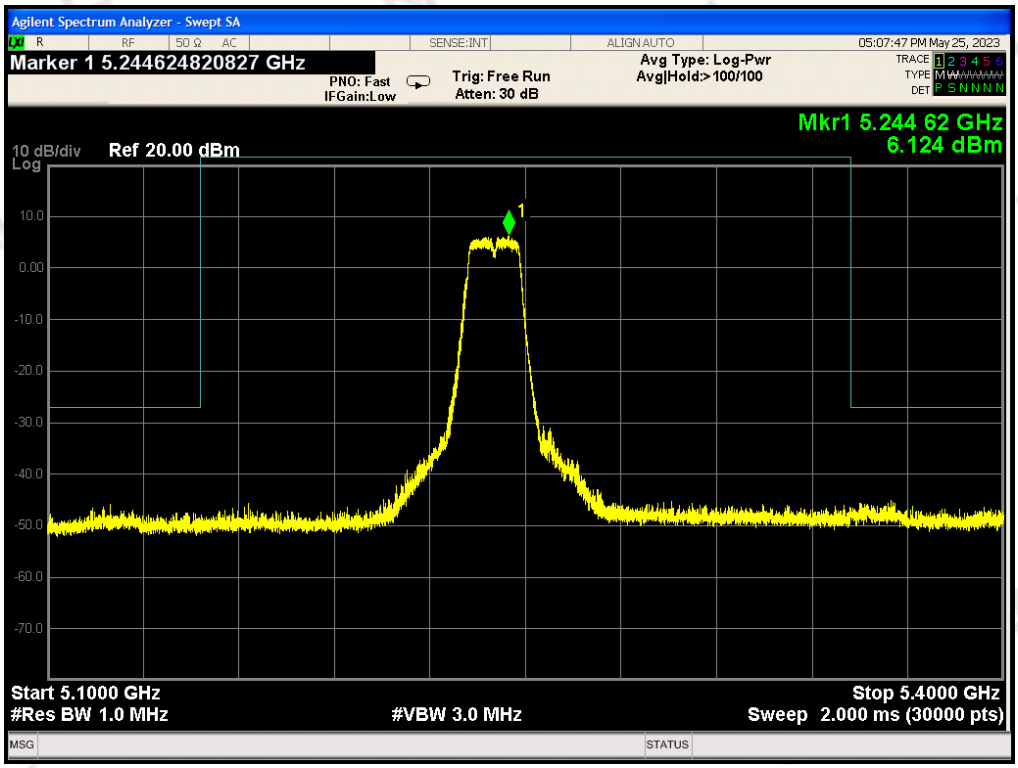
802.11a_ANT1_5180_6Mbps_Frequency Band 5



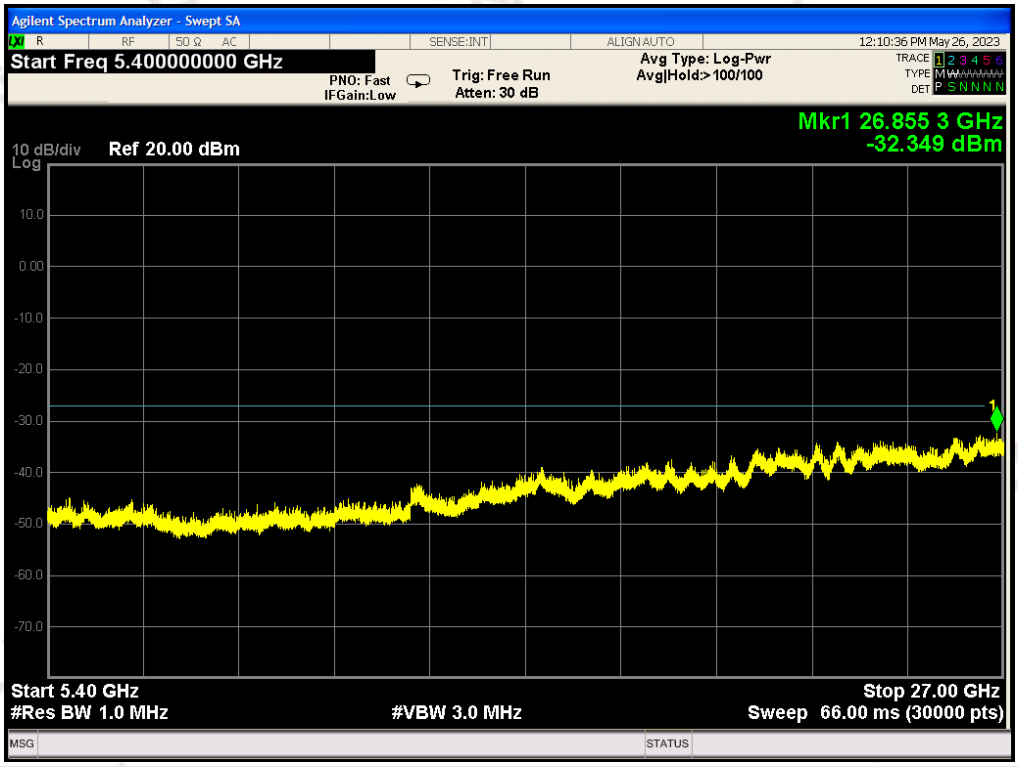
802.11a_ANT1_5240_6Mbps_Frequency Band 1



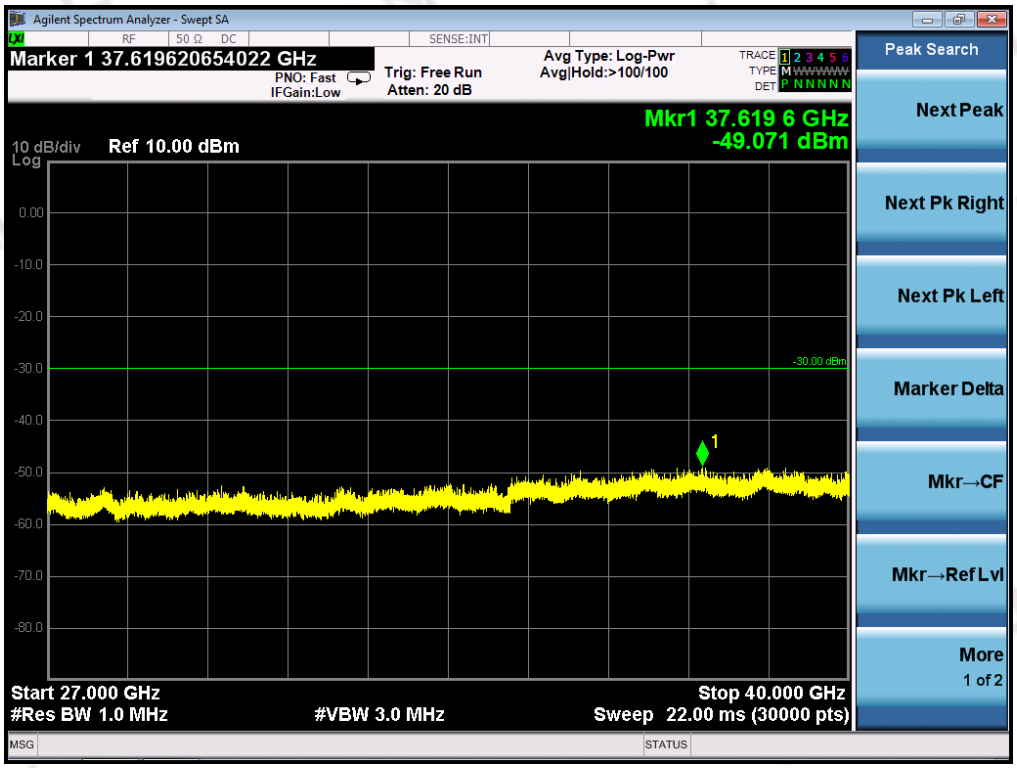
802.11a_ANT1_5240_6Mbps_Frequency Band 2



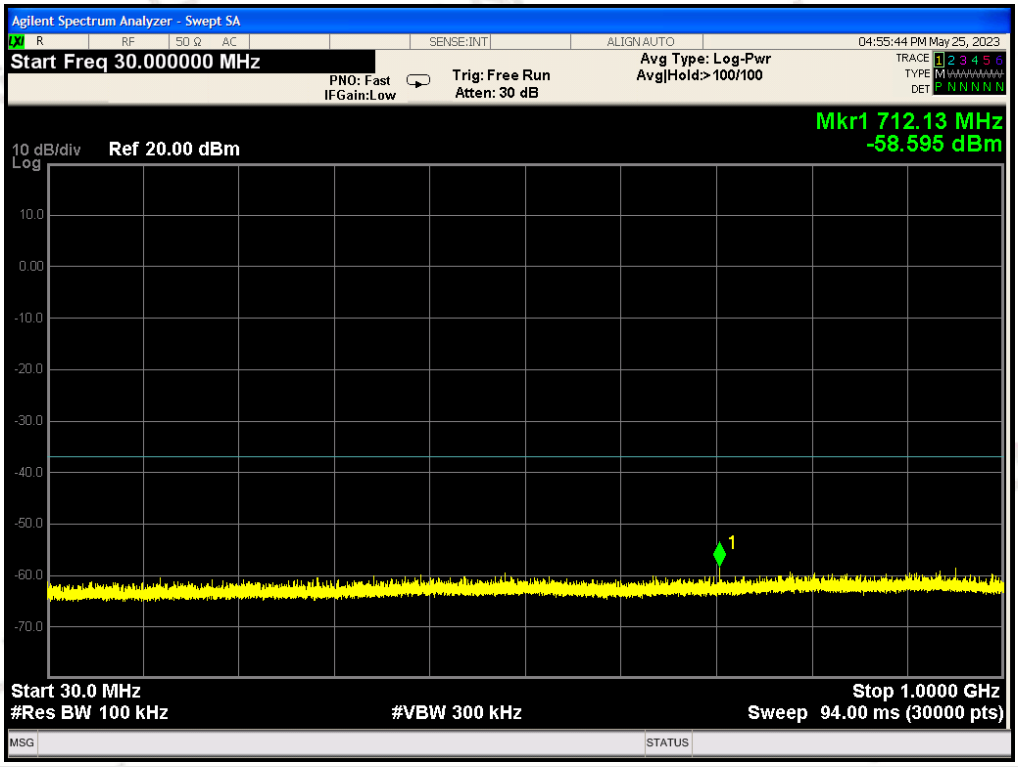
802.11a_ANT1_5240_6Mbps_Frequency Band 3



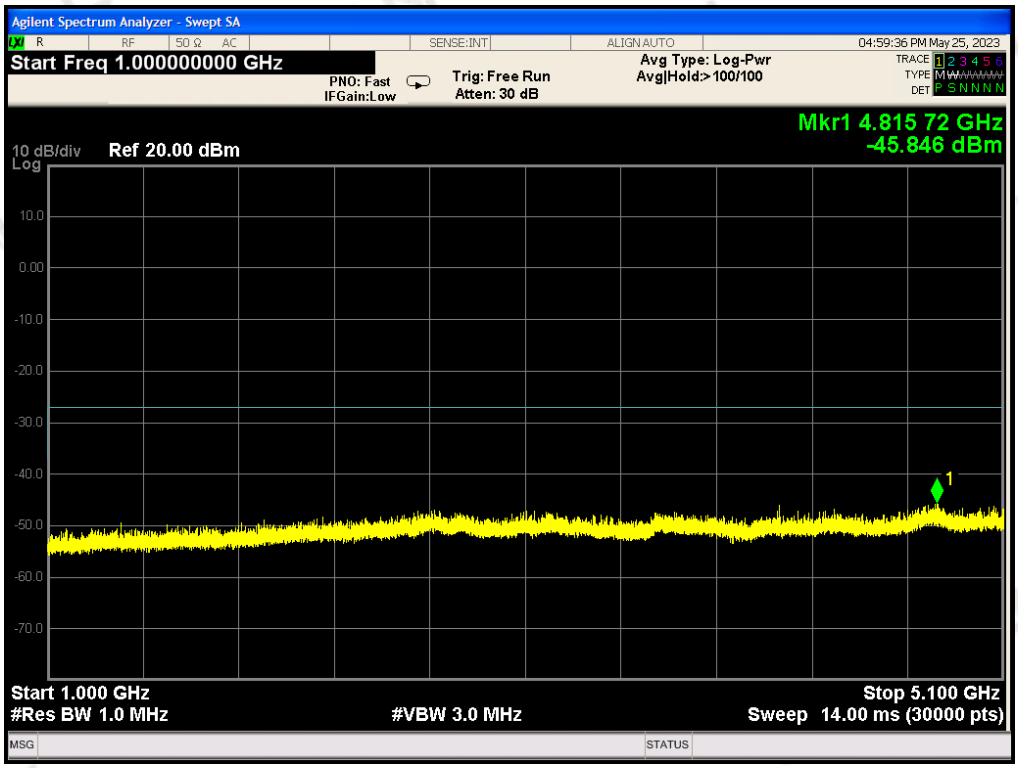
802.11a_ANT1_5240_6Mbps_Frequency Band 4



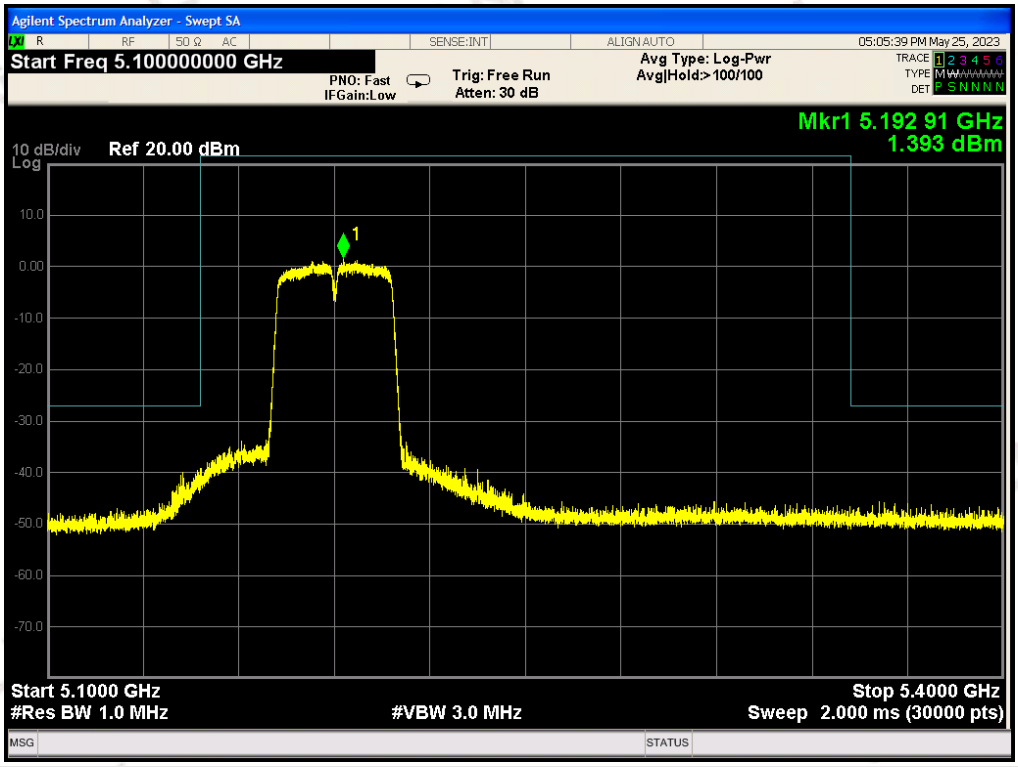
802.11a_ANT1_5240_6Mbps_Frequency Band 5



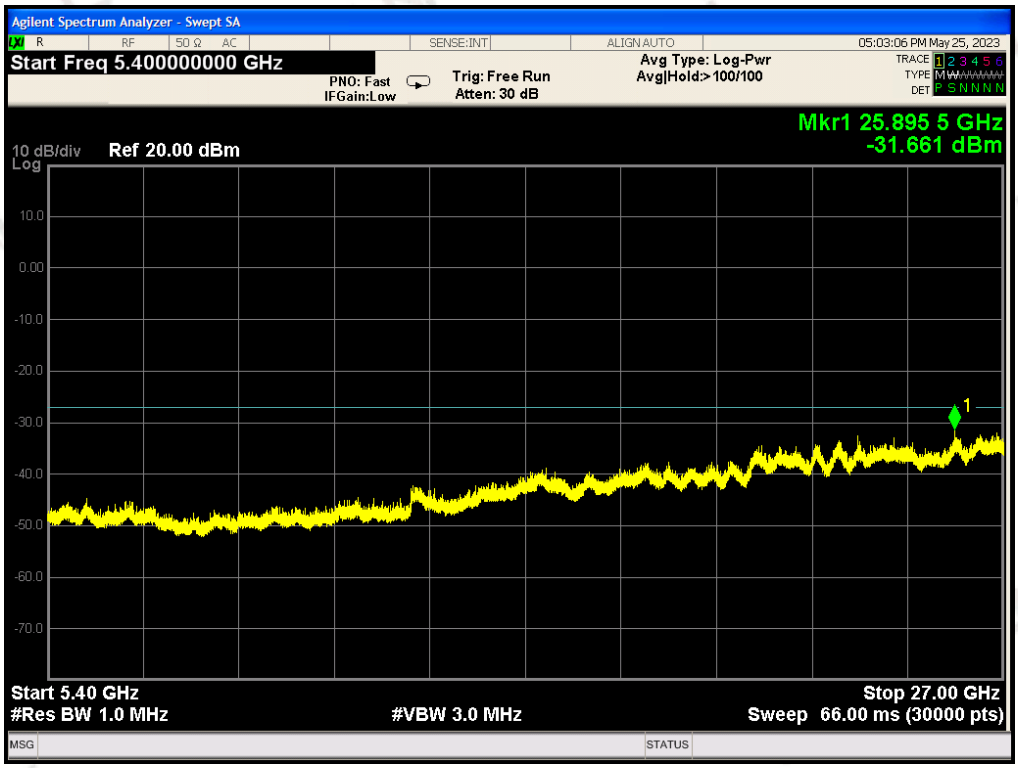
802.11n40_ANT1_5190_MCS0_Frequency Band 1



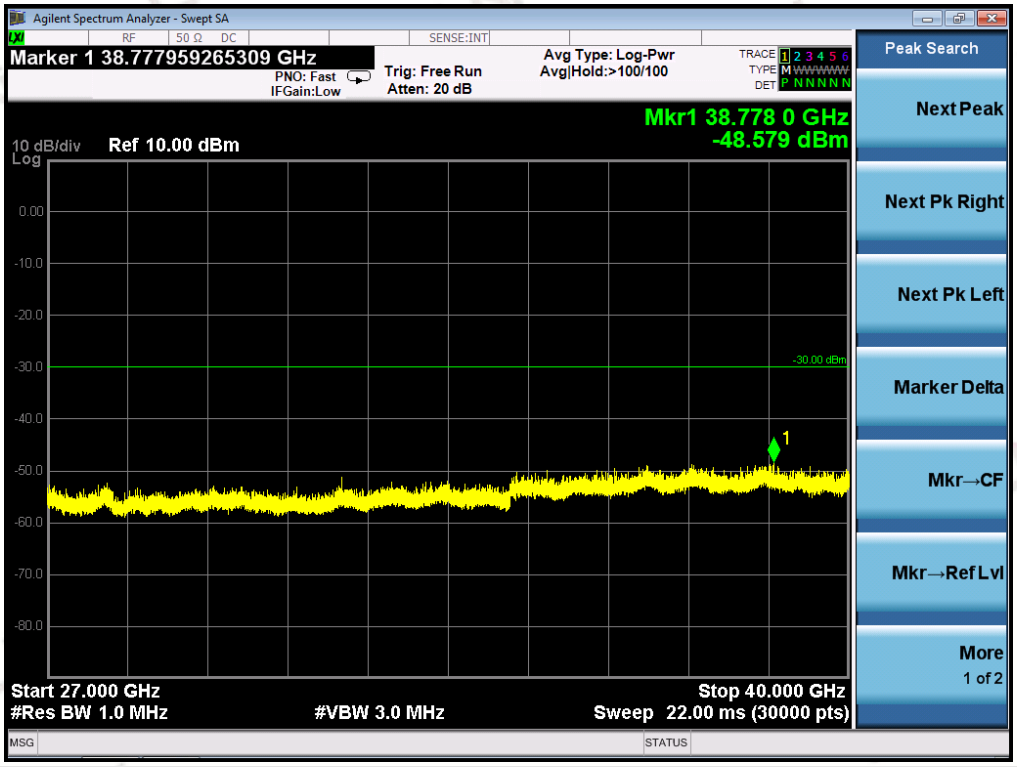
802.11n40_ANT1_5190_MCS0_Frequency Band 2



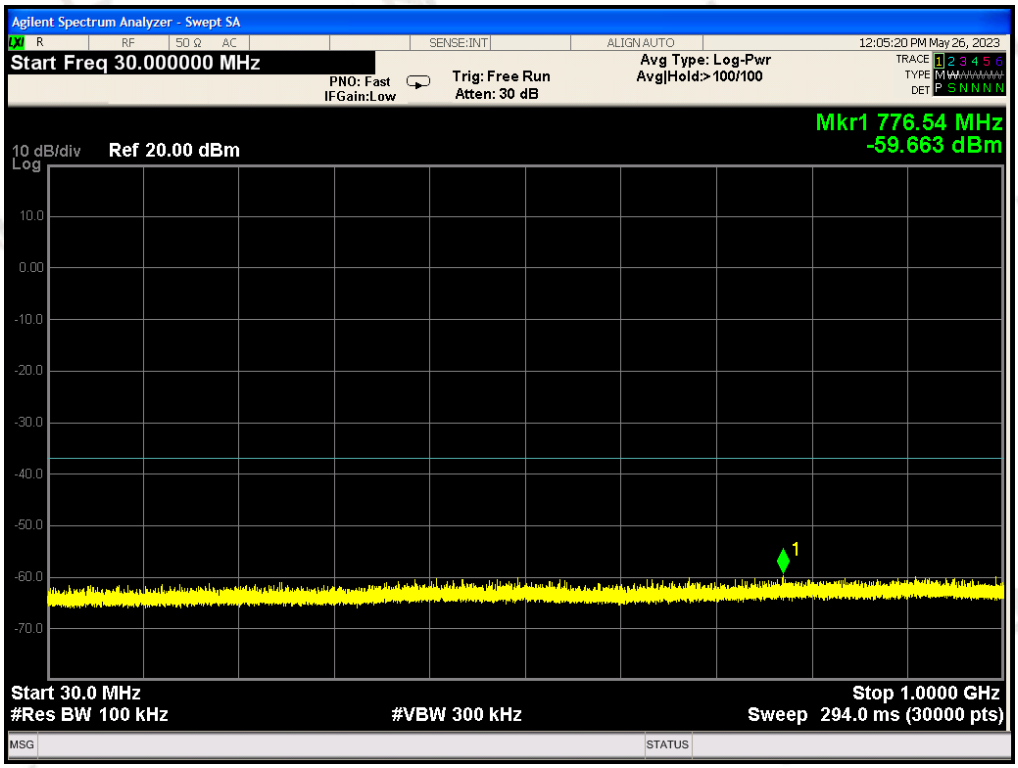
802.11n40_ANT1_5190_MCS0_Frequency Band 3



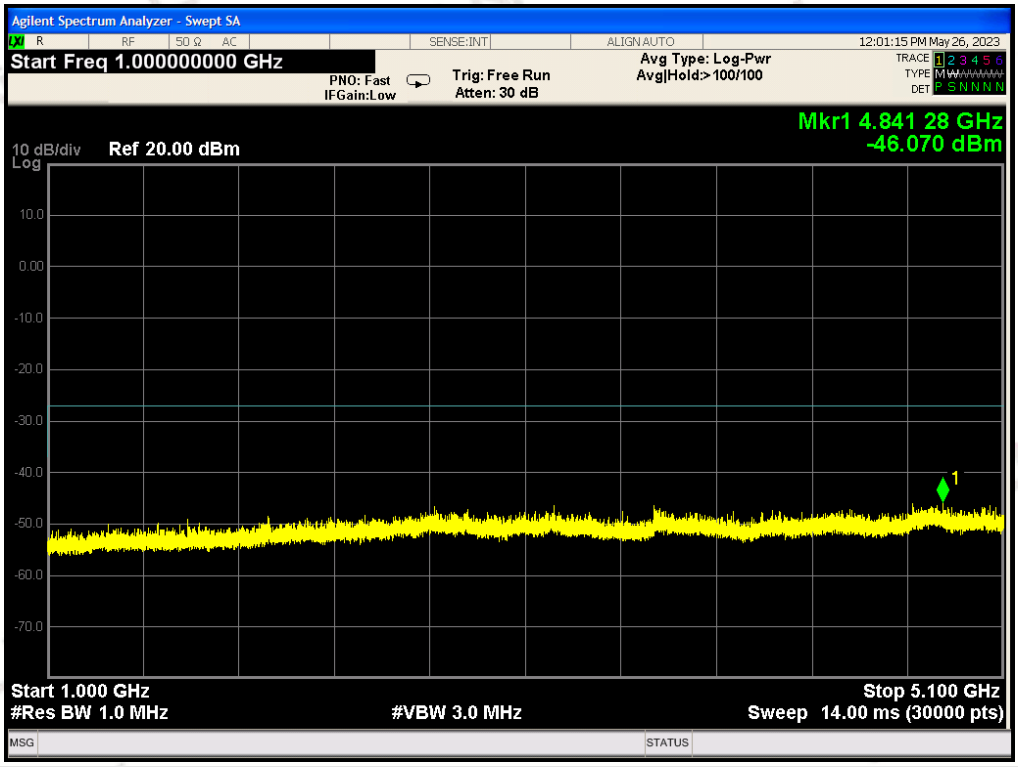
802.11n40_ANT1_5190_MCS0_Frequency Band 4



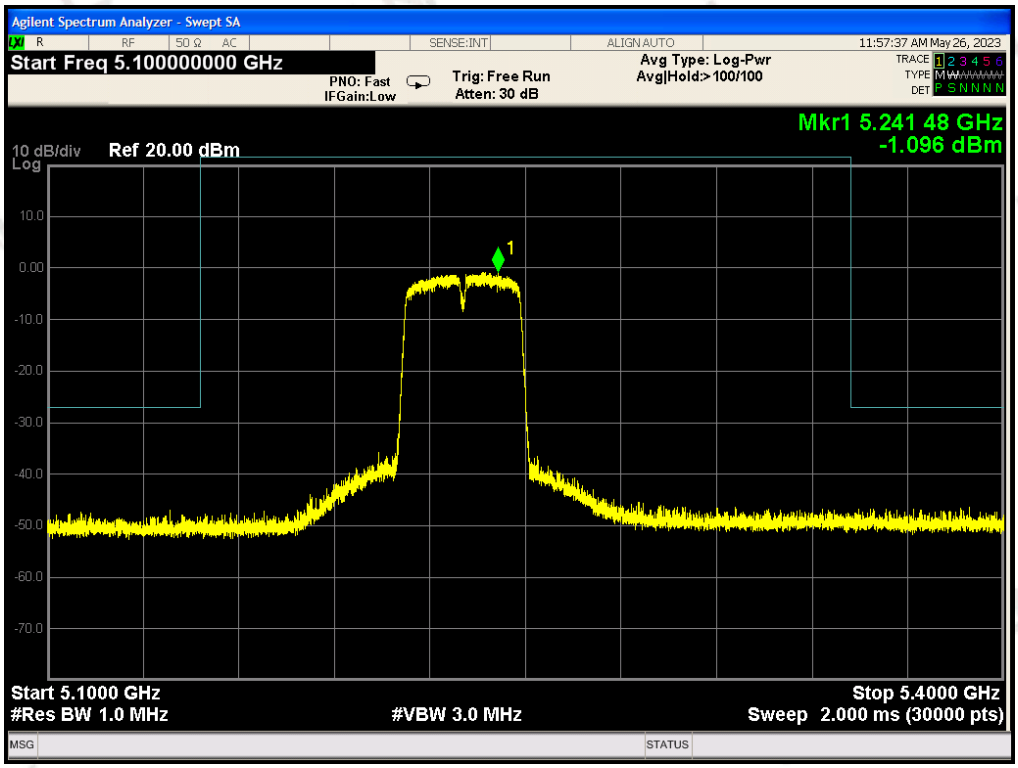
802.11n40_ANT1_5190_MCS0_Frequency Band 5



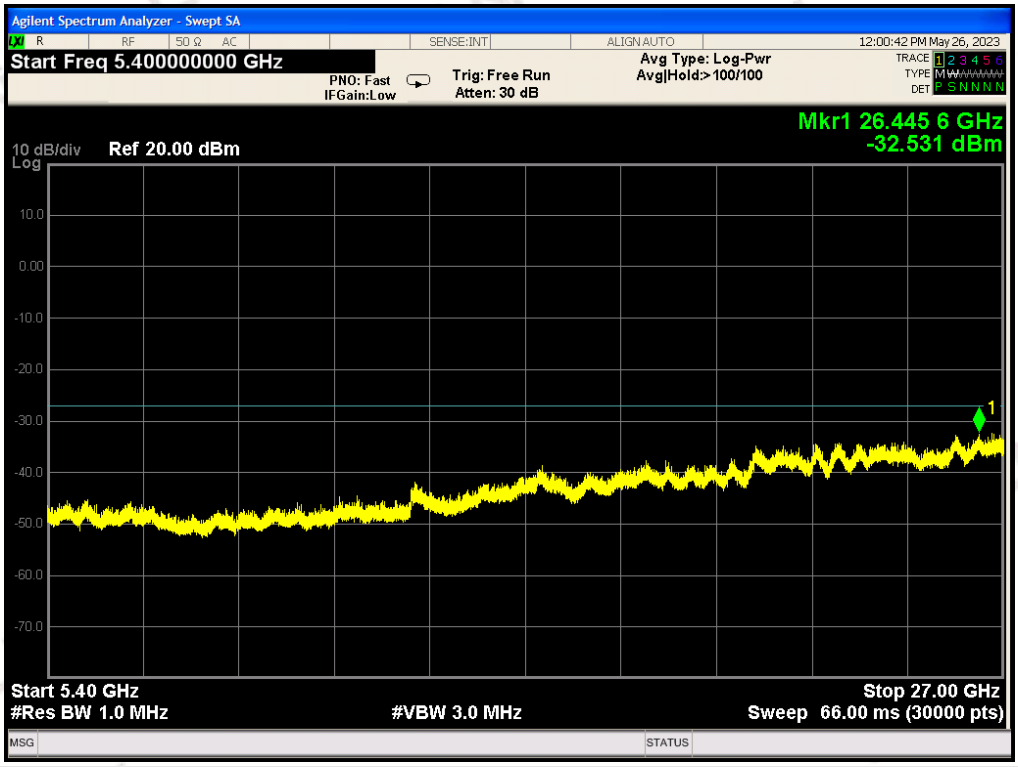
802.11n40_ANT1_5230_MCS0_Frequency Band 1



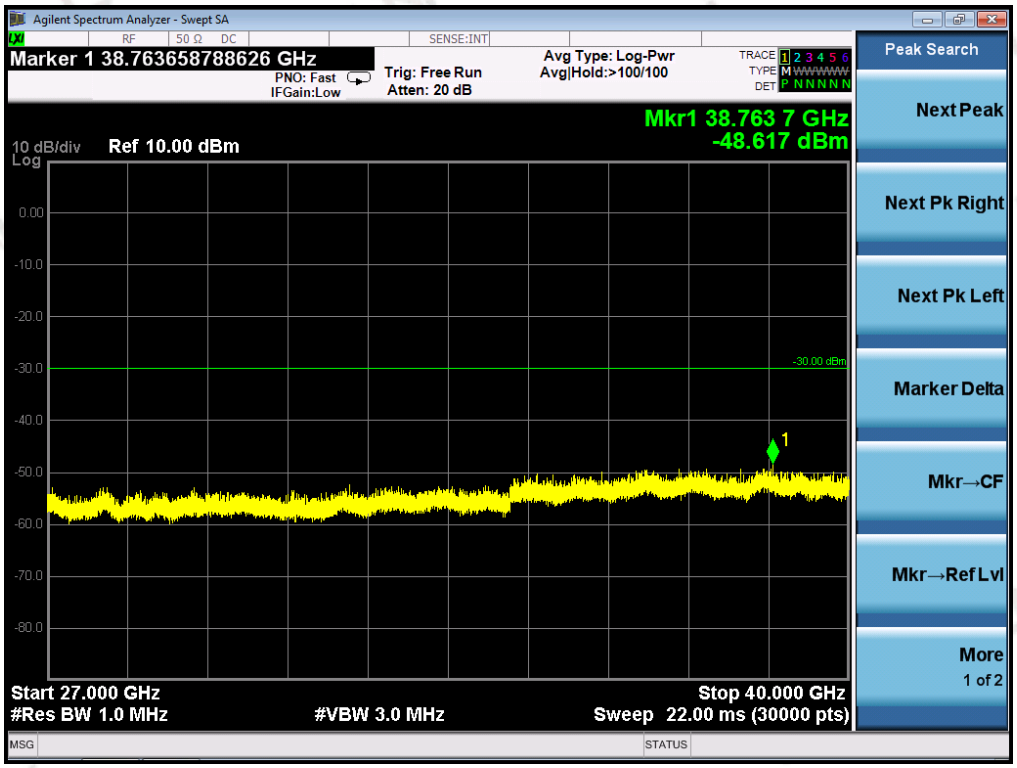
802.11n40_ANT1_5230_MCS0_Frequency Band 2



802.11n40_ANT1_5230_MCS0_Frequency Band 3

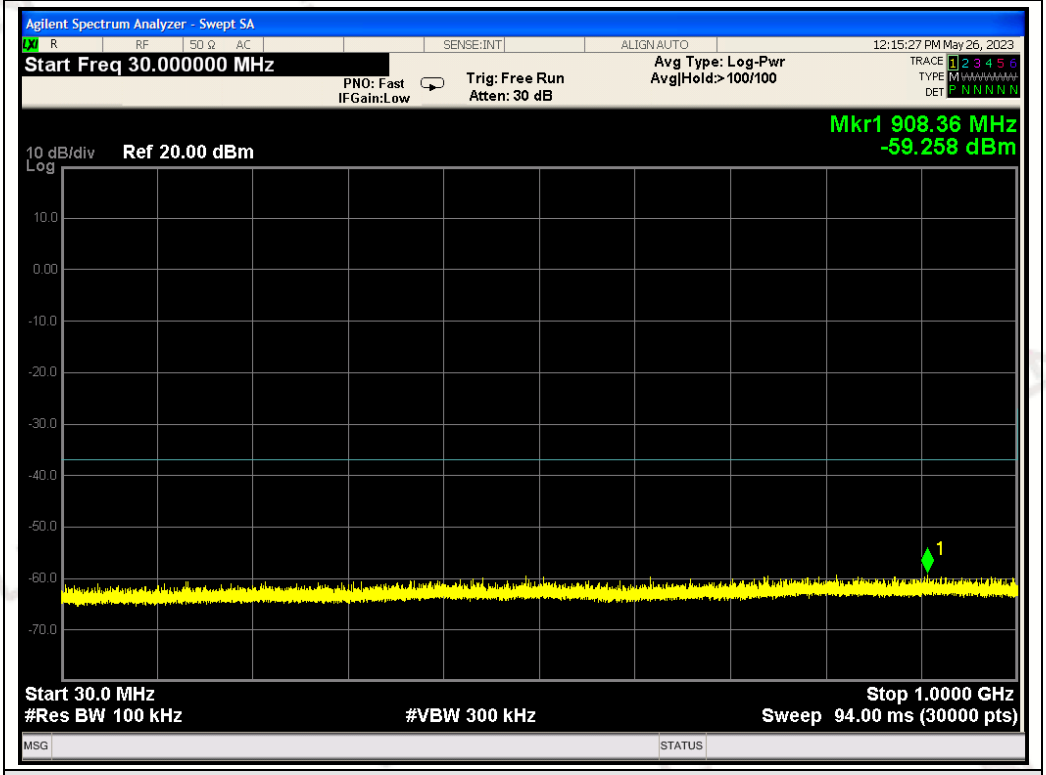


802.11n40_ANT1_5230_MCS0_Frequency Band 4

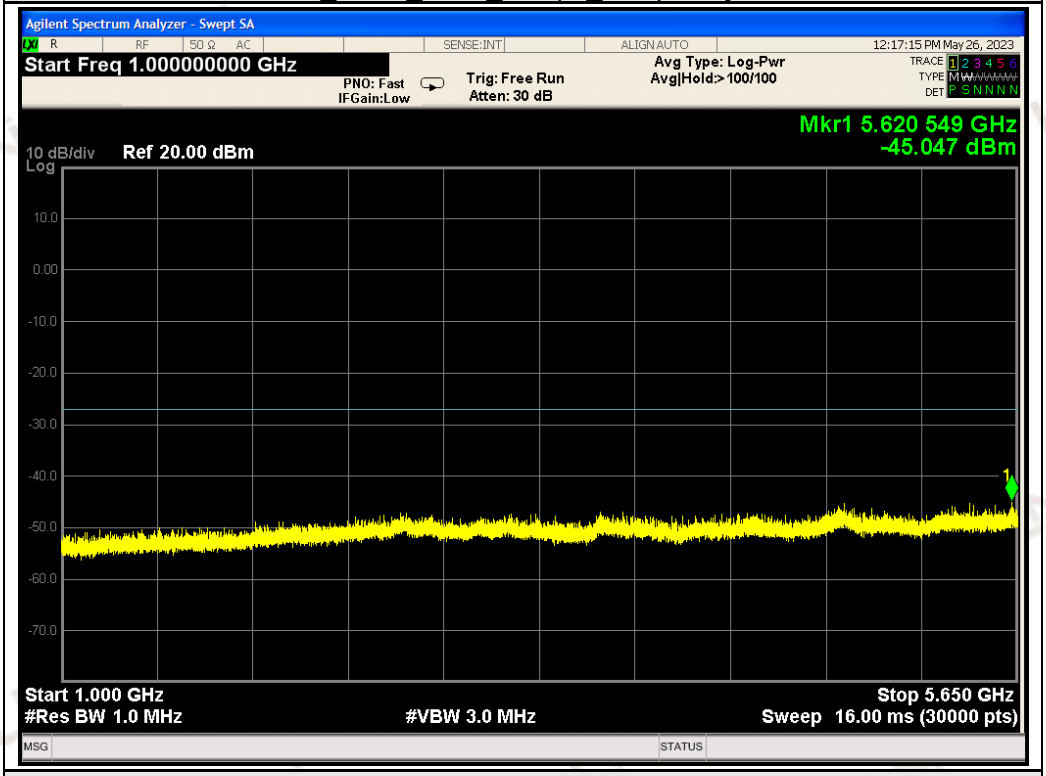


802.11n40_ANT1_5230_MCS0_Frequency Band 5

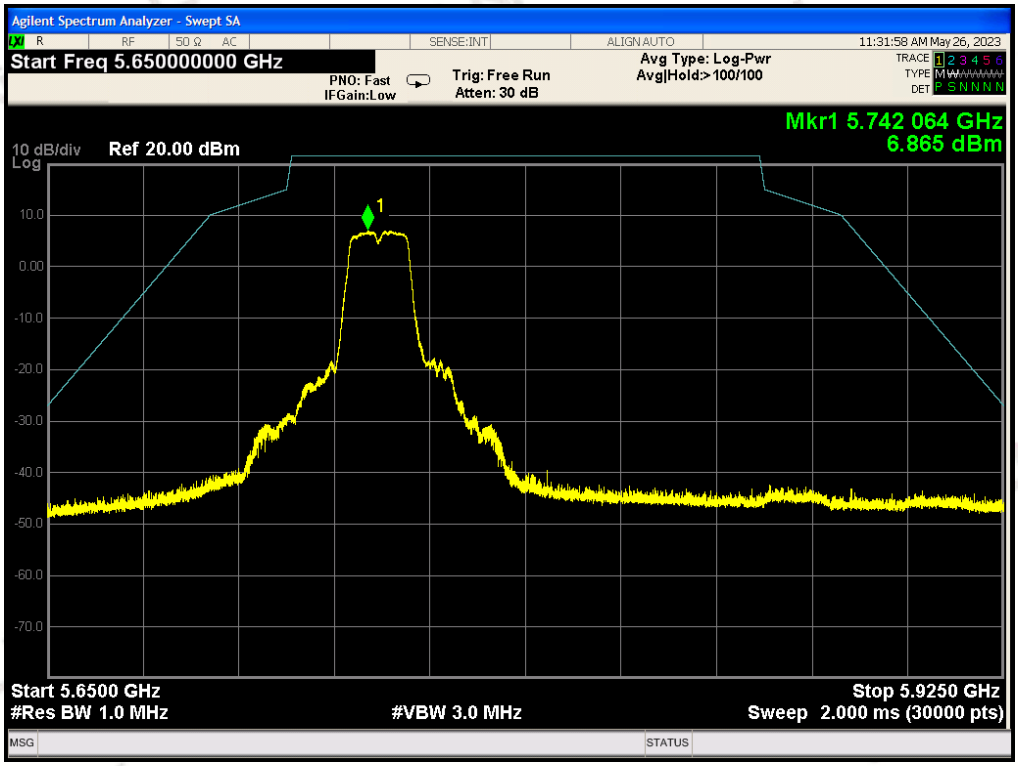
Test Graphs of Spurious Emissions outside of the 5.725-5.85 GHz band for transmitters operating in the 5.725-5.85 GHz band



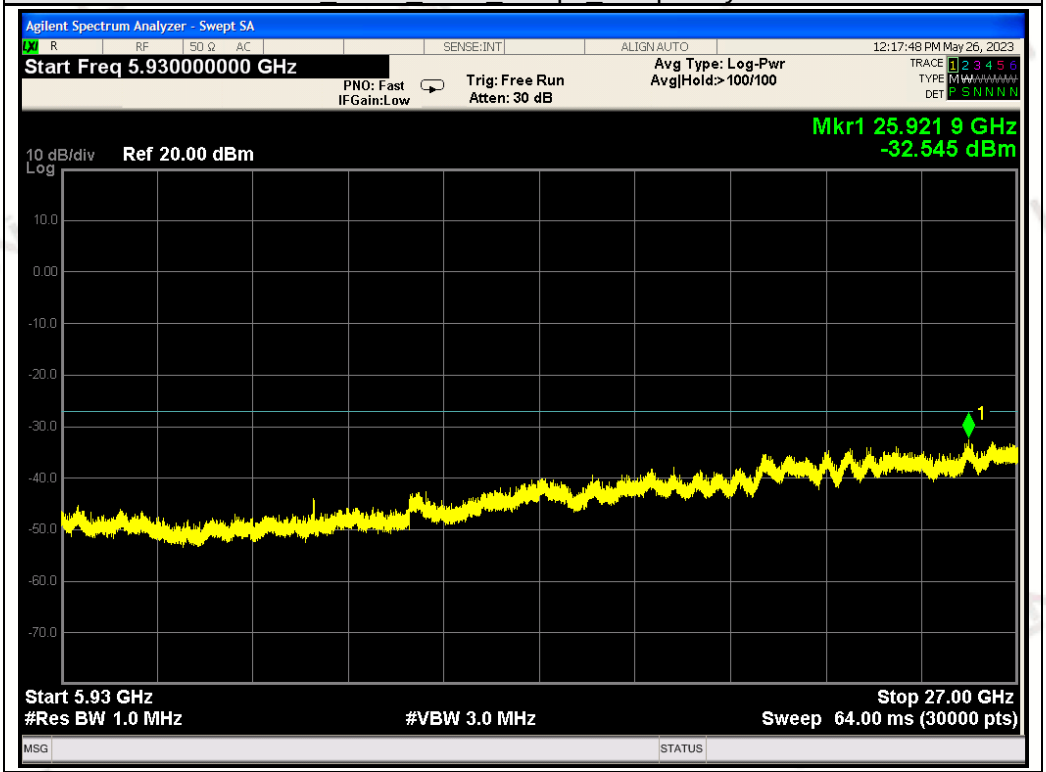
802.11a_ANT1_5745_6Mbps_Frequency Band1



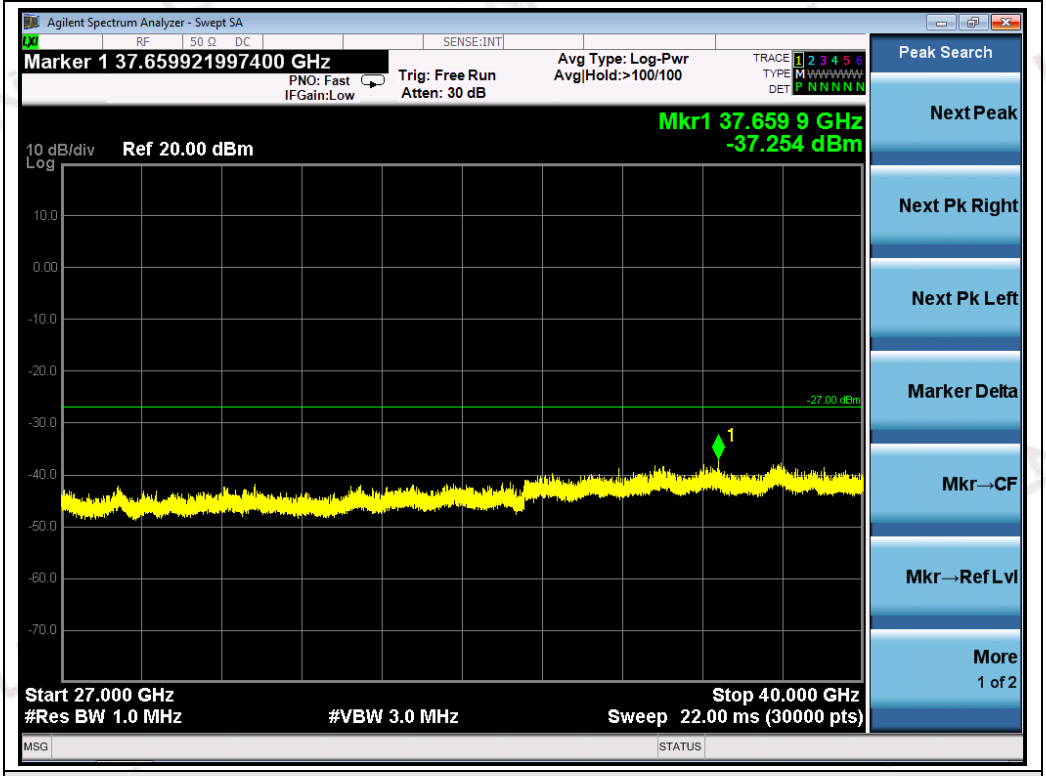
802.11a_ANT1_5745_6Mbps_Frequency Band2



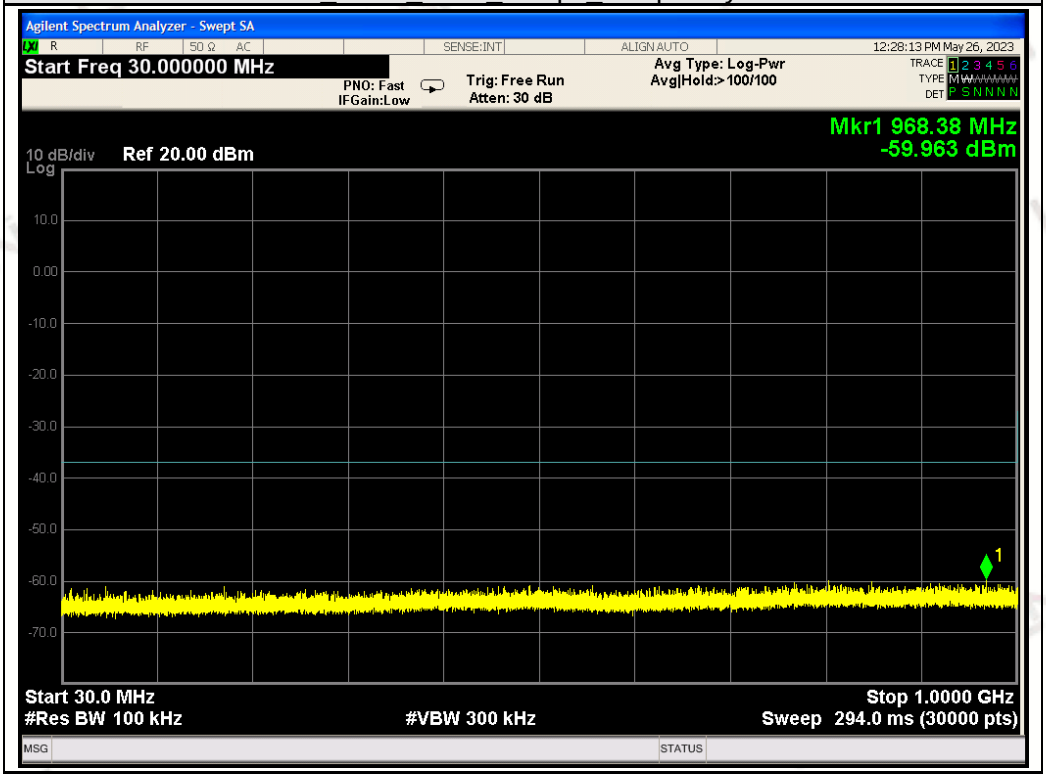
802.11a_ANT1_5745_6Mbps_Frequency Band3



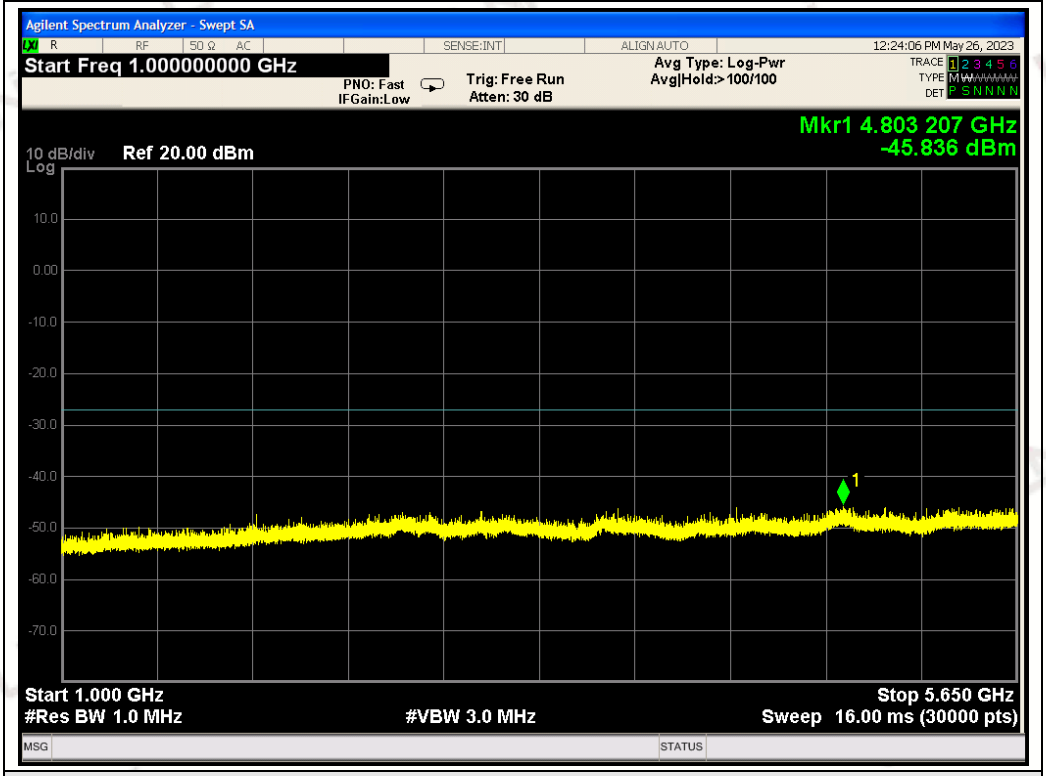
802.11a_ANT1_5745_6Mbps_Frequency Band4



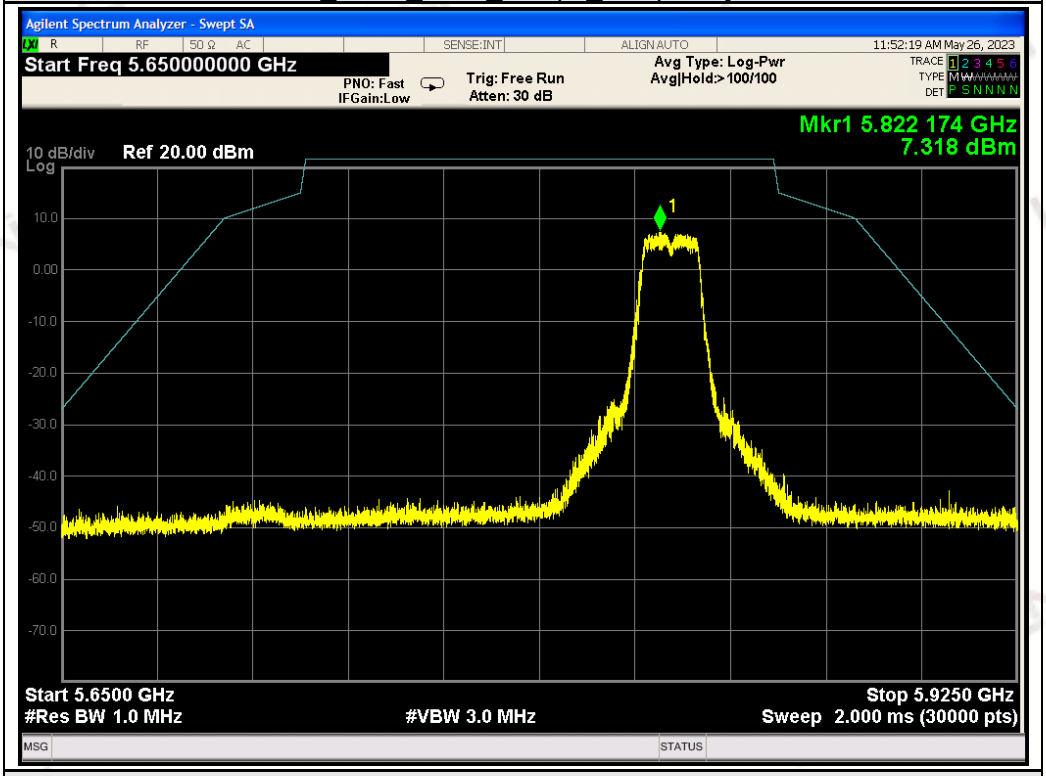
802.11a_ANT1_5745_6Mbps_Frequency Band5



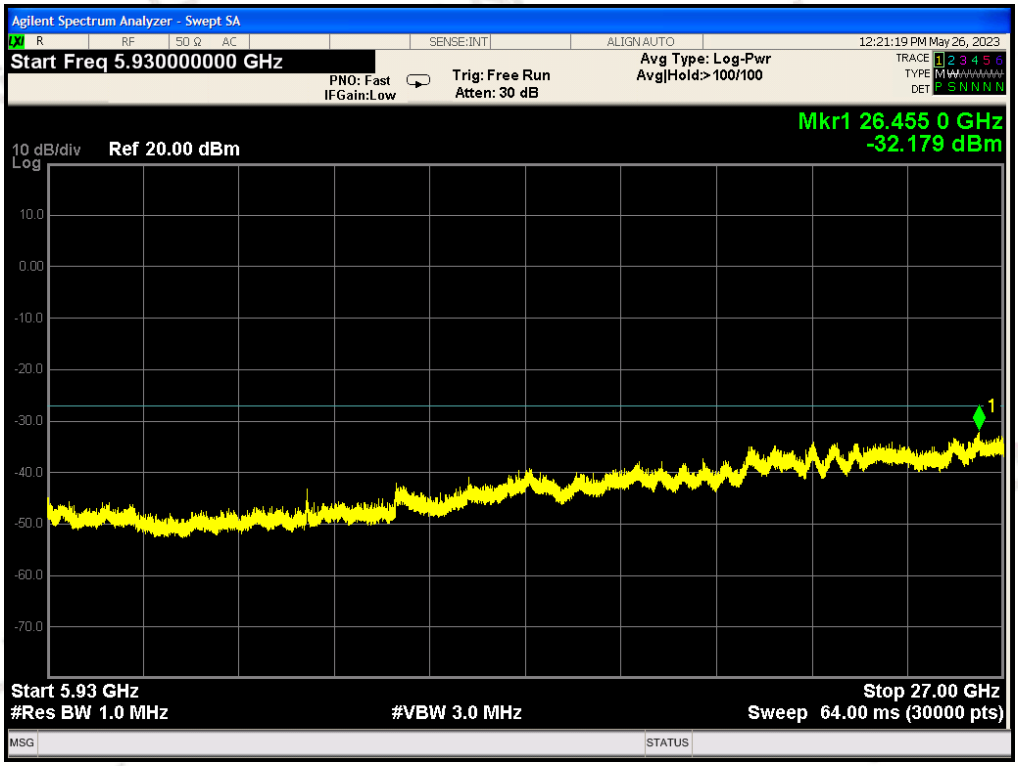
802.11a_ANT1_5825_6Mbps_Frequency Band1



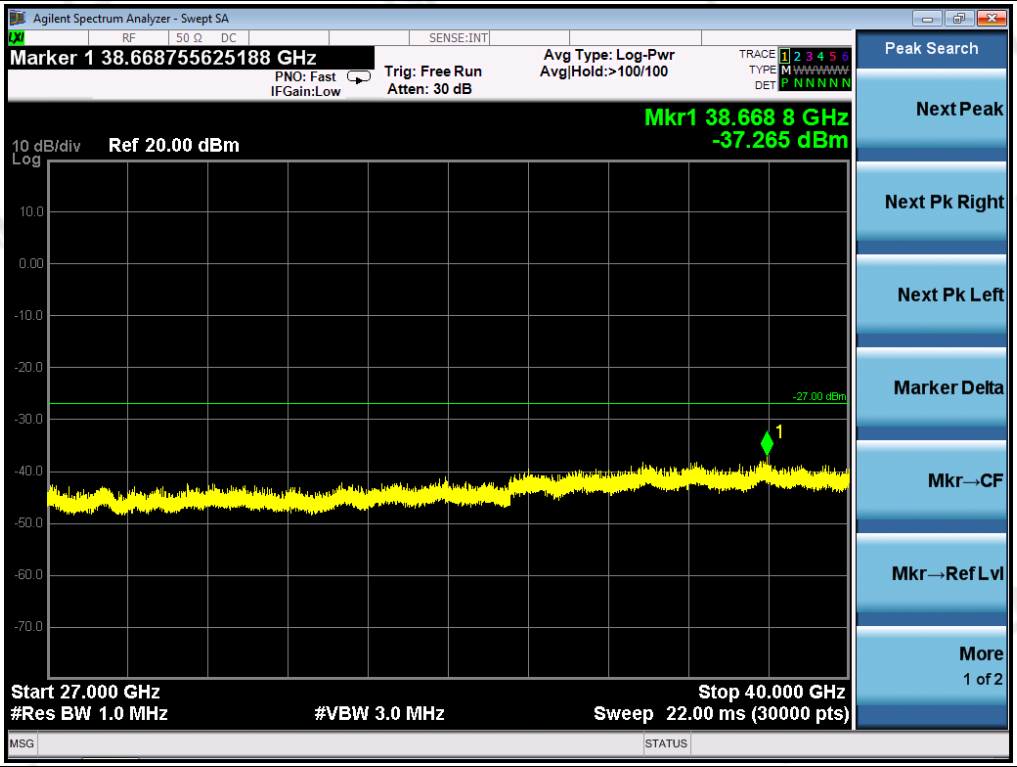
802.11a_ANT1_5825_6Mbps_Frequency Band2



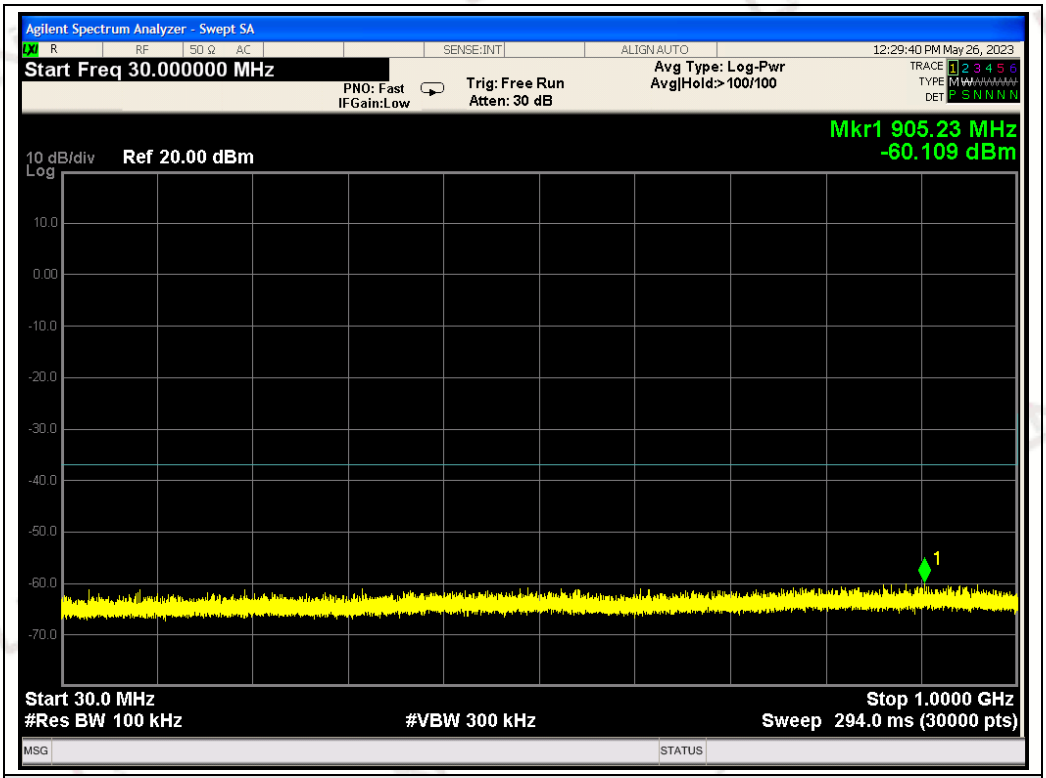
802.11a_ANT1_5825_6Mbps_Frequency Band3



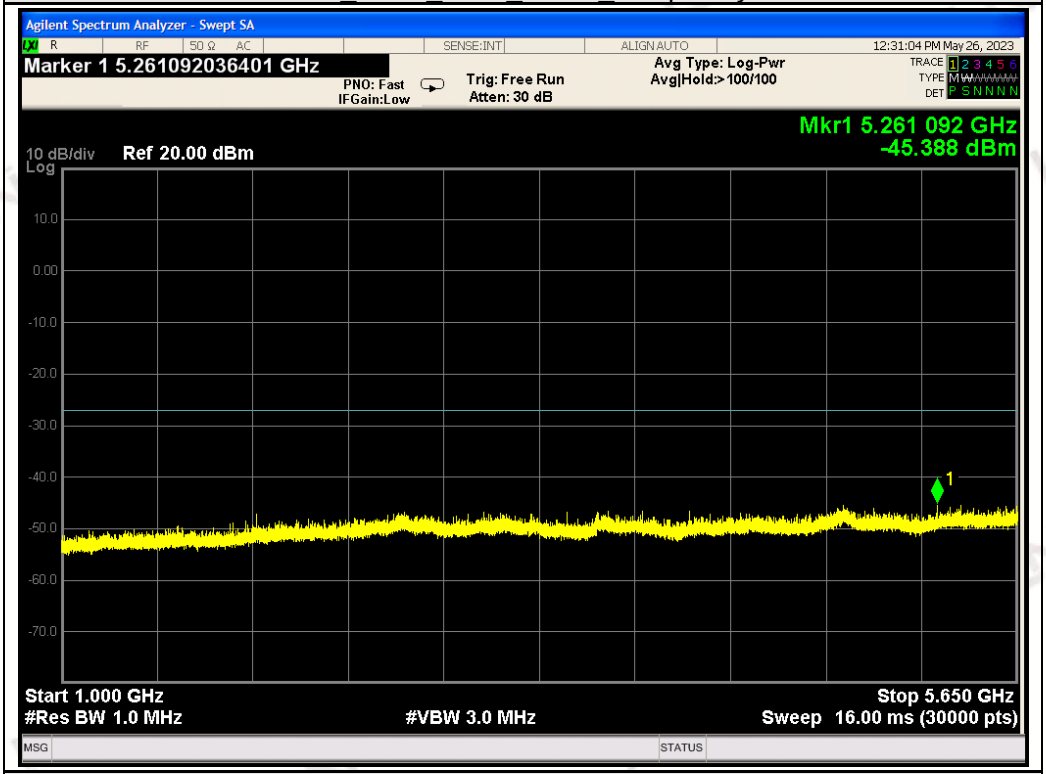
802.11a_ANT1_5825_6Mbps_Frequency Band4



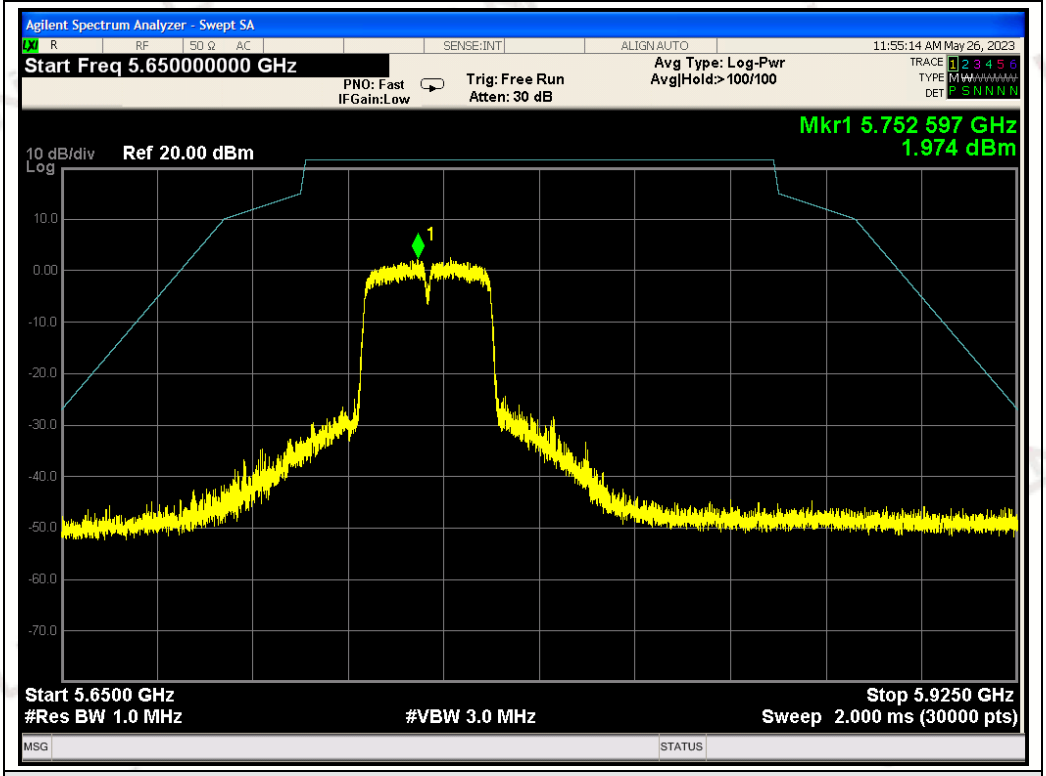
802.11a_ANT1_5825_6Mbps_Frequency Band5



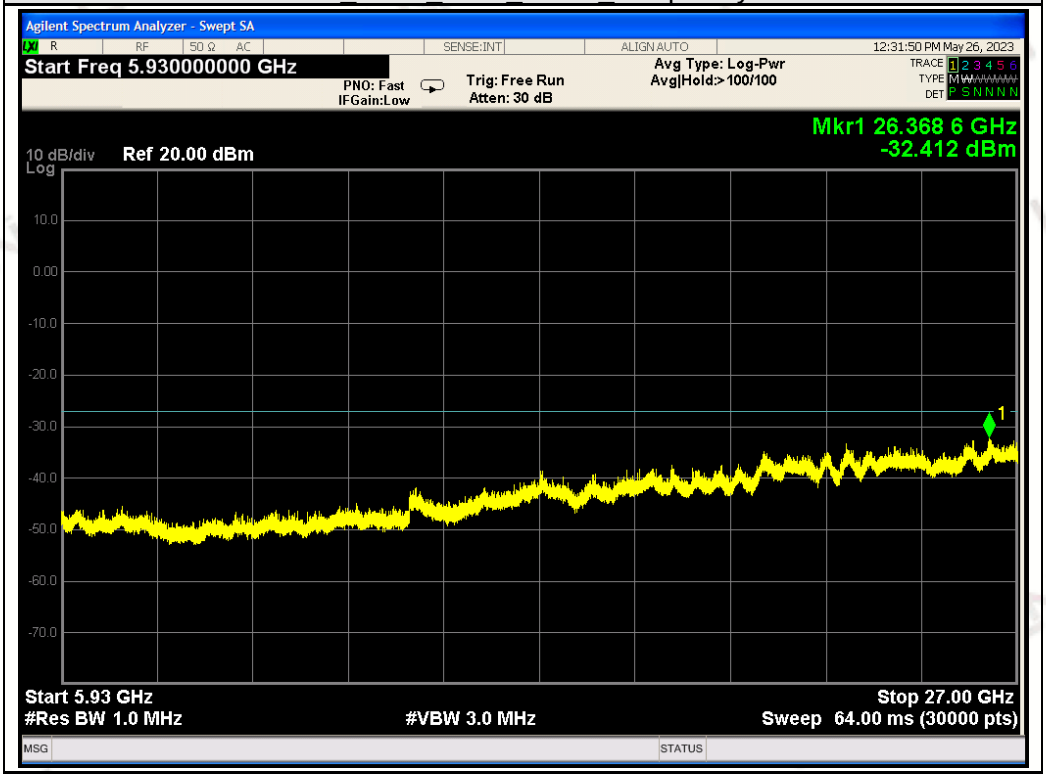
802.11n40_ANT1_5755_MCS0_Frequency Band1



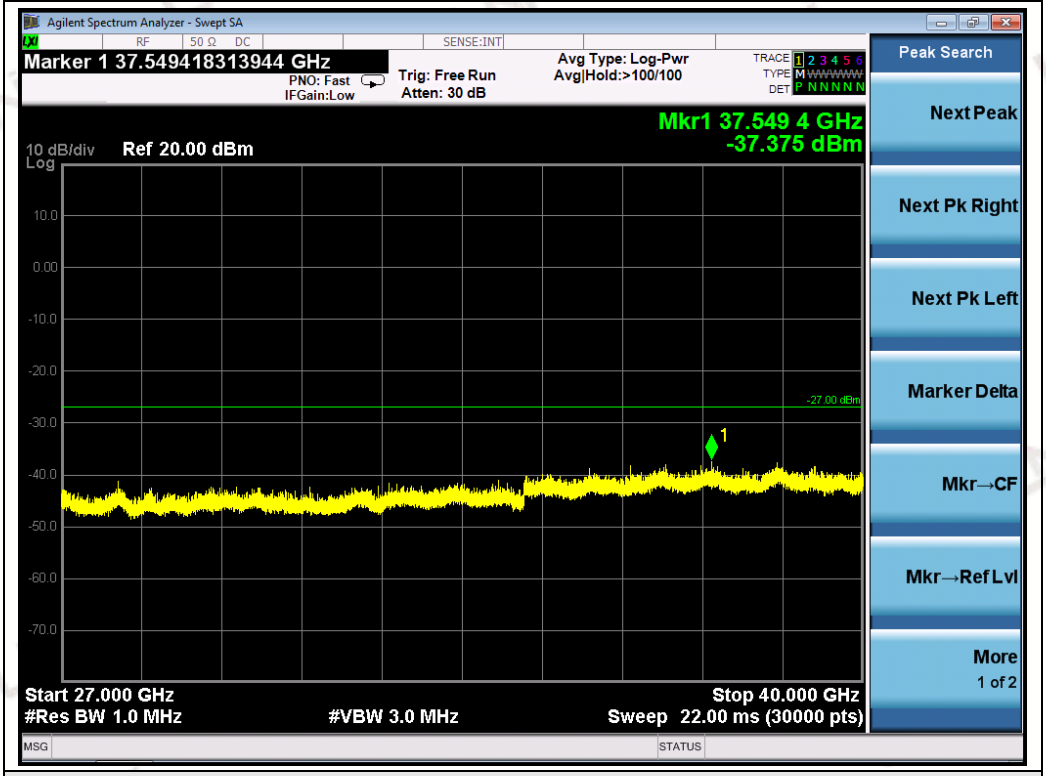
802.11n40_ANT1_5755_MCS0_Frequency Band2



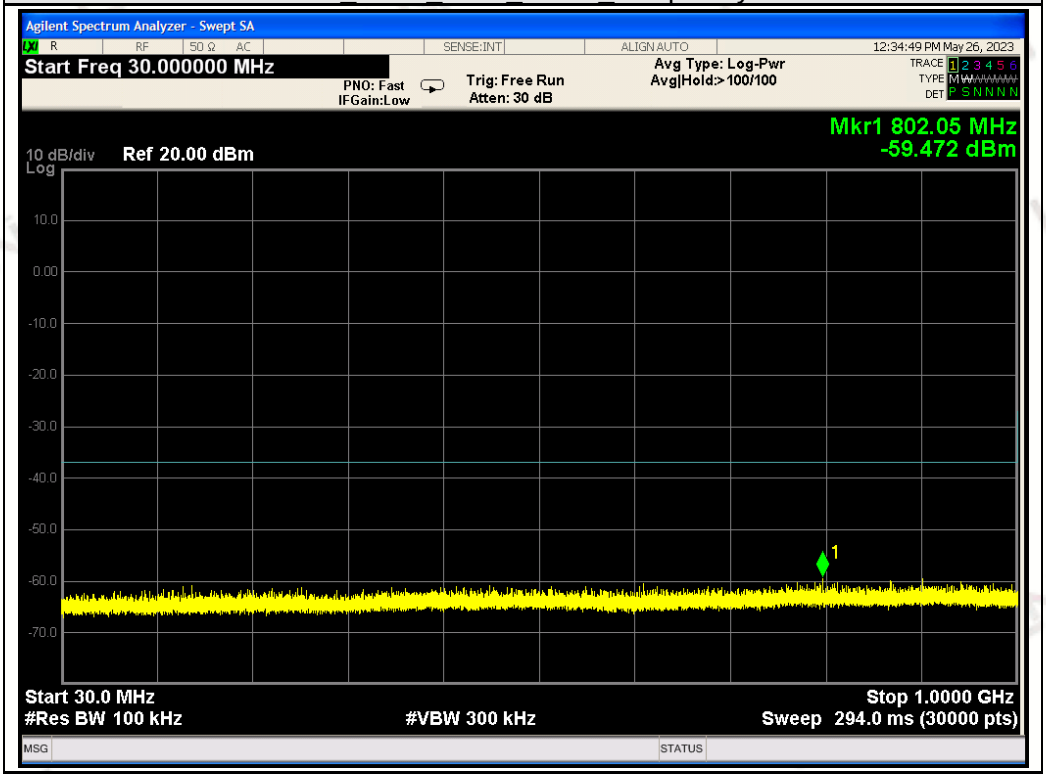
802.11n40_ANT1_5755_MCS0_Frequency Band3



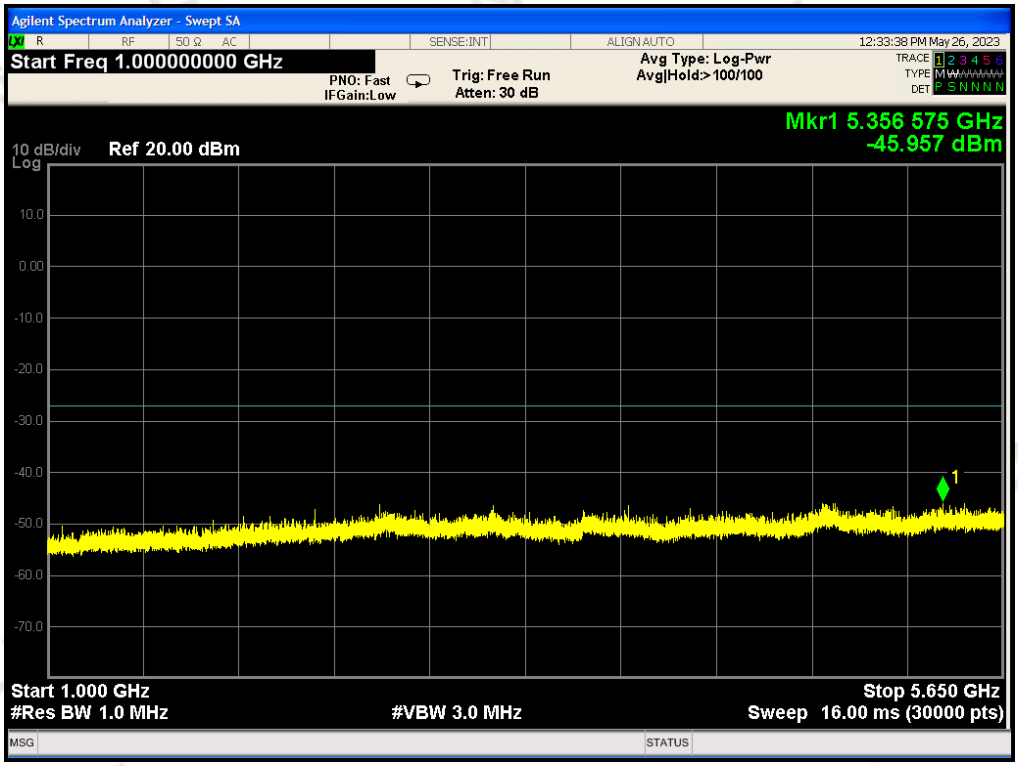
802.11n40_ANT1_5755_MCS0_Frequency Band4



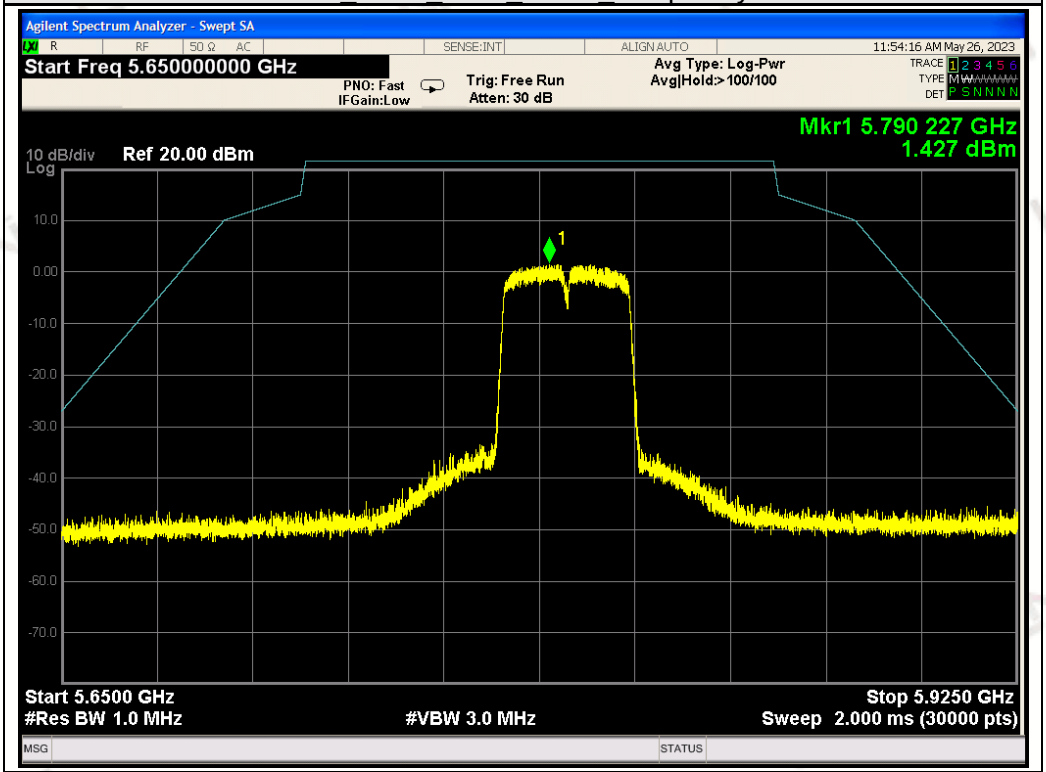
802.11n40_ANT1_5755_MCS0_Frequency Band5



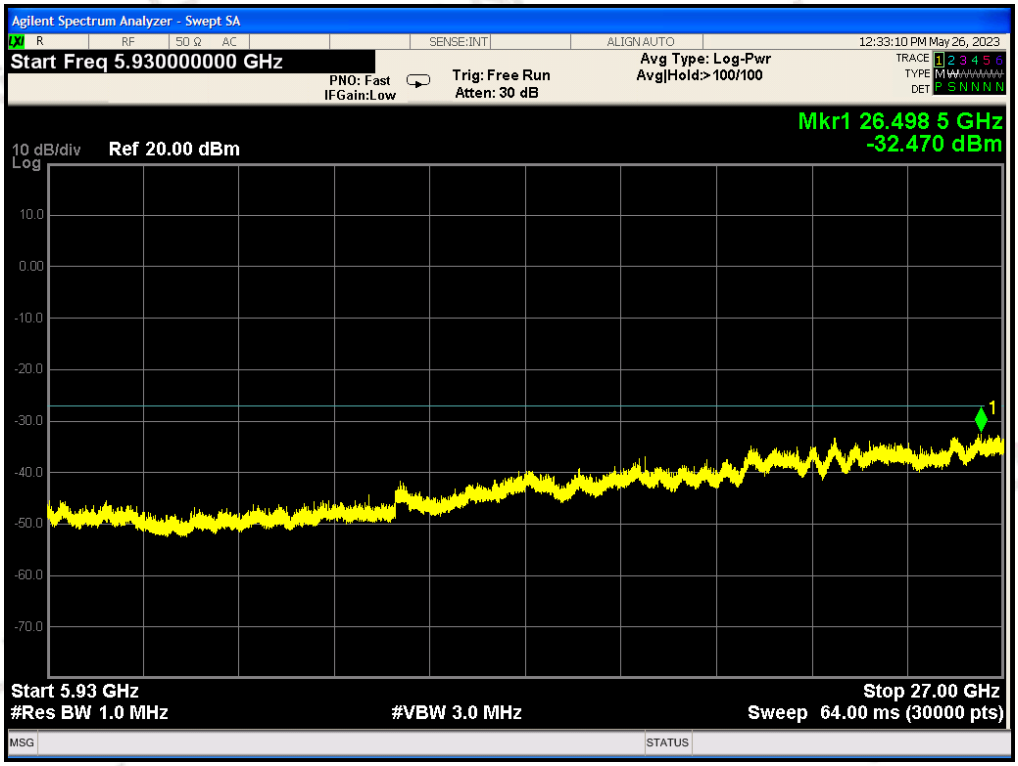
802.11n40_ANT1_5795_MCS0_Frequency Band1



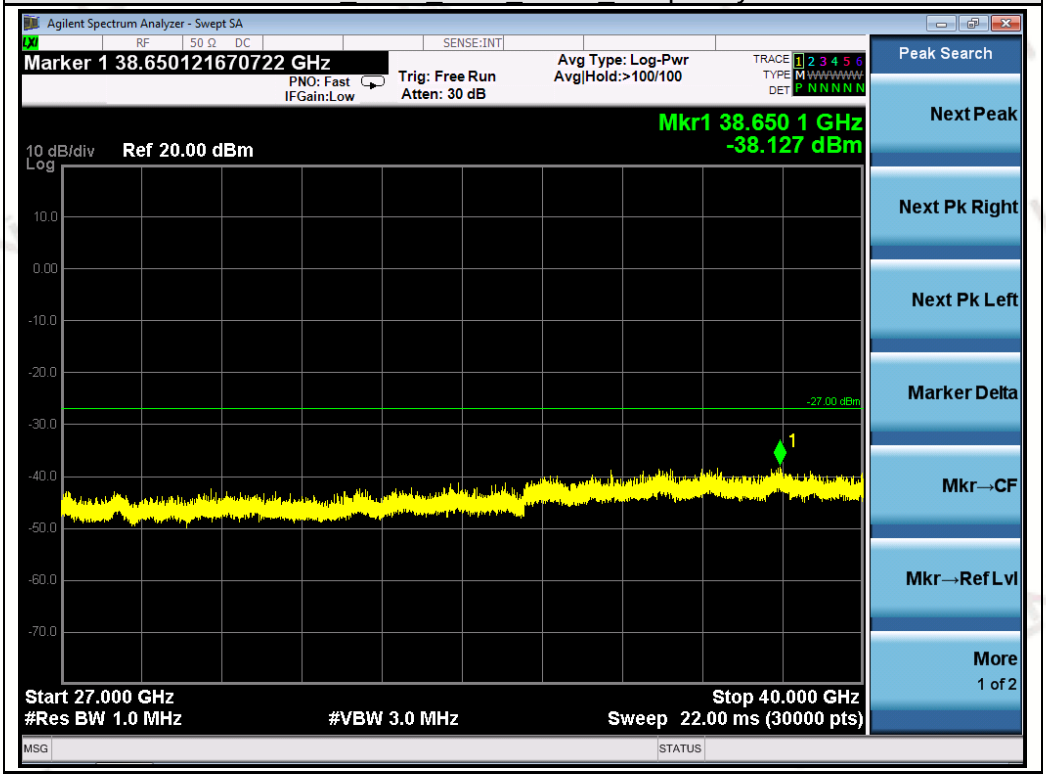
802.11n40_ANT1_5795_MCS0_Frequency Band2



802.11n40_ANT1_5795_MCS0_Frequency Band3



802.11n40_ANT1_5795_MCS0_Frequency Band4



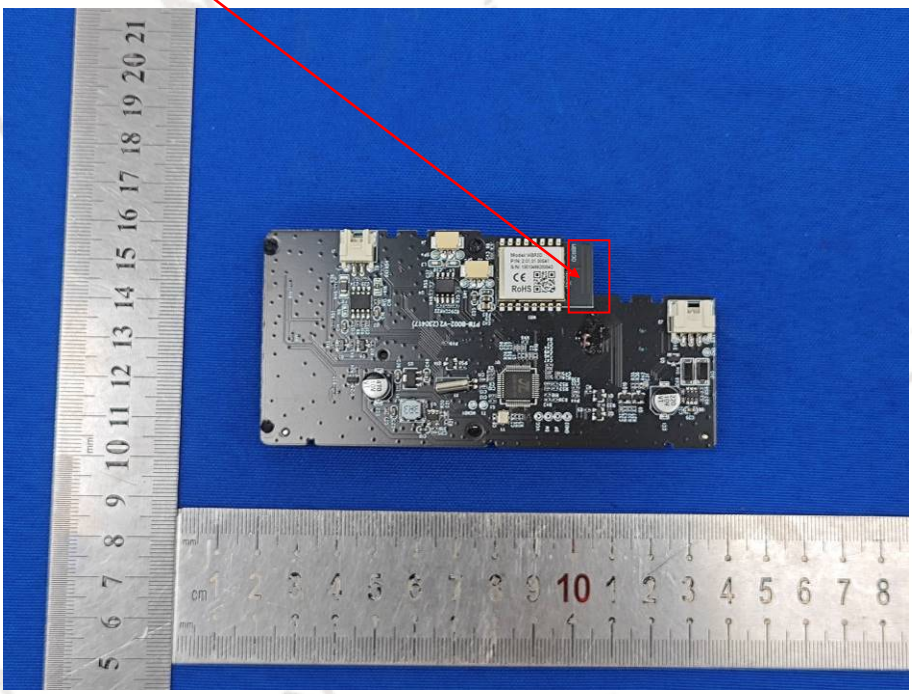
802.11n40_ANT1_5795_MCS0_Frequency Band5

9 ANTENNA REQUIREMENT

Standard Applicable:
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

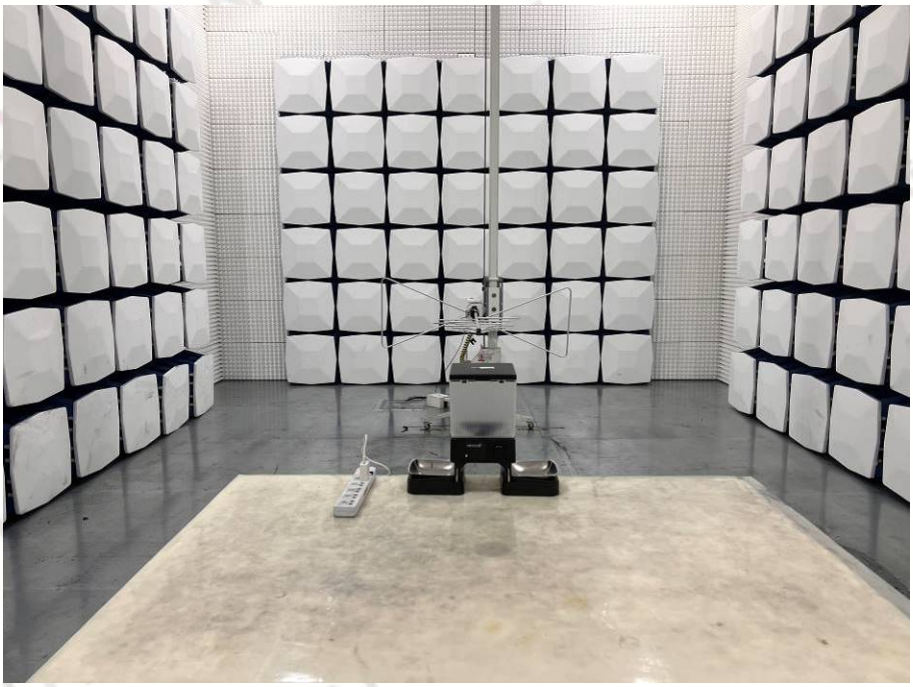
Antenna Connected Construction
The antenna used in this product is a PCB Antenna.

ANTENNA:

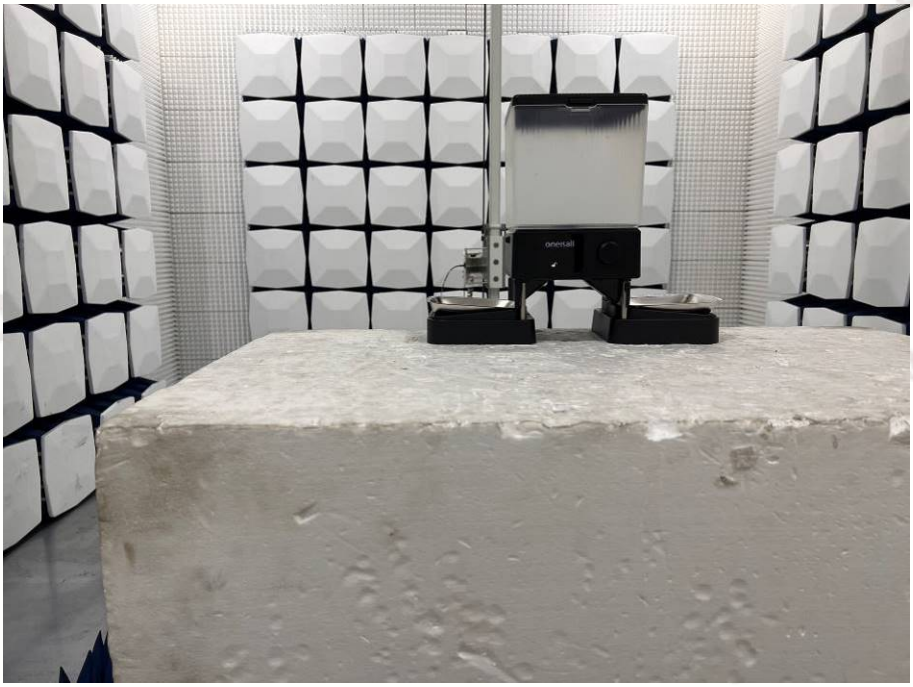


10 PHOTO OF TEST

RADIATED EMISSION

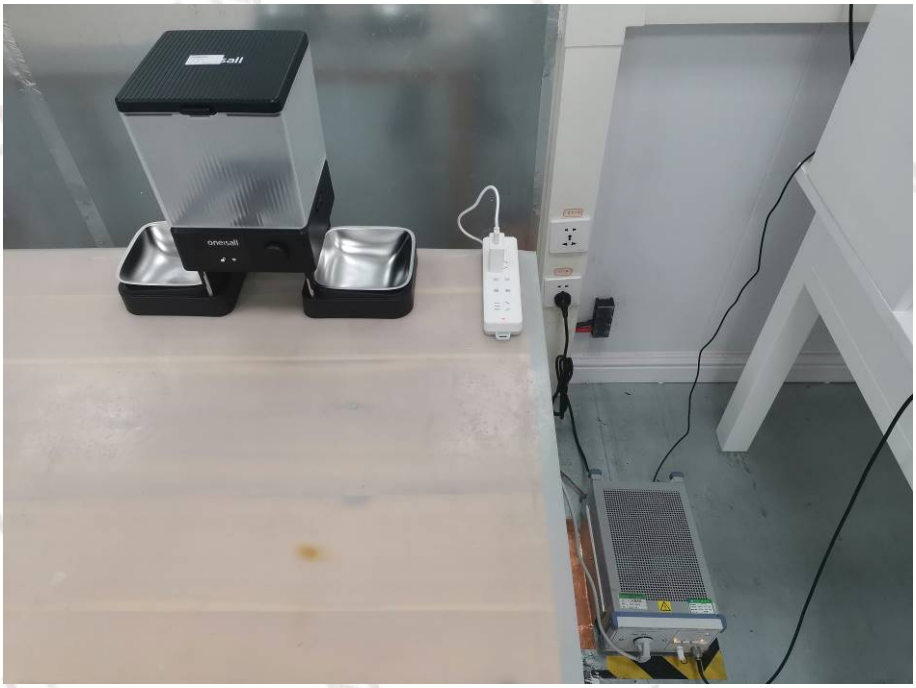


30MHz-1000MHz

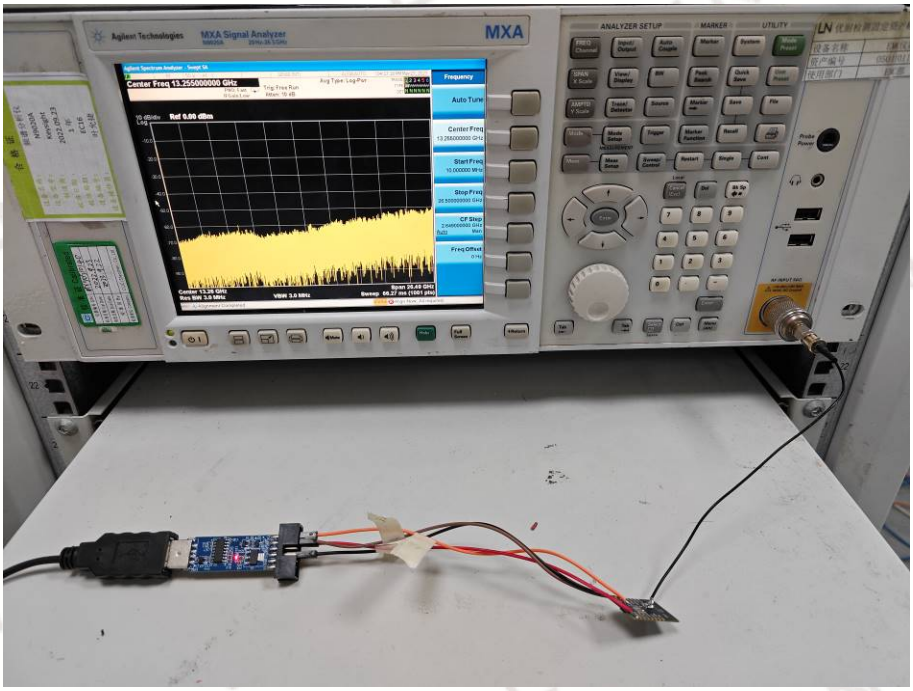


Above 1GHz

CONDUCTED EMISSION



RF CONDUCTED



End of Report