



TEST REPORT

Applicant: EP-TEC Solutions Pte Ltd
Address of Applicant: 3023 UBI Road 3, #02-08/#02-09, Ubiplex 1 Singapore 408663
Manufacturer: EP-TEC Solutions Pte Ltd
Address of Manufacturer: 3023 UBI Road 3, #02-08/#02-09, Ubiplex 1 Singapore 408663
Product Name: Smart display
Model No.: Buddy,Buddy Pro,X Series,V Series,C Series,D Series,DS Series,
E Series,L Series,TV Series,T Series, B Series
Trade Mark: InfinityPro
FCC ID: 2A8WI-BUDDY
Applicable standards: CFR Title 47 Part 15.247
Date of Test: Feb.07, 2026-Apr.06, 2026
Date of report issued: Apr.07, 2026

Remark:

The results shown in this test report refer only to the sample(s) tested , this test report cannot be reproduced, except in full without prior written permission of the company.

The report would be invalid without specific stamp of test institute and the signatures of compiler and approver

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Authorized Signature



Report Revision History		
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1 Test Summary

Test Item	Section in CFR 47	Result	Test by
Antenna requirement	47CFR part 15.203	Pass	/
AC Power Line Conducted Emission	47CFR part 15.207	Pass	Jason Huang
Conducted Output Power	47CFR part 15.407 (a)(1)/(a)(3)	Pass	Kara Wu
26dB Bandwidth and 99% Occupied Bandwidth	47CFR part 15.407 (a)(12)	Pass	Kara Wu
6dB Bandwidth	47CFR part 15.407 (e)	Pass	Kara Wu
Power Spectral Density	47CFR part 15.407(a)(1)/(a)(3)	Pass	Kara Wu
Band Edge	47CFR part 15.407(b)(1)/(b)(4)	Pass	Kara Wu
Spurious Emission	47CFR part 15.205/15.209 47CFR part 15.407(b)(1)/(b)(4)/(b)(8)	Pass	Jason Huang

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. Test according to ANSI C63.10-2020+COR.1-2023 KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
3. Note: Compliance determination rules
 - 1).The Compliance determination of test results does not take into account measurement uncertainty. Measurement results are determined based on regulatory limitations or requirements specified by the applicant/manufacturer. If measurement uncertainty is taken into account, the applicant/manufacturer will bear all possible risks of non-compliance.
 - 2).The measurement uncertainty please refer to each test result in the "Measurement Uncertainty"

1.1 Measurement Uncertainty

Test Item	Measurement Uncertainty	Notes
Occupied Channel Bandwidth	0.72%	(1)
RF output power, conducted	±0.67 dB	(1)
Power Spectral Density, conducted	±0.51 dB	(1)
Unwanted Emissions, conducted	±0.64 dB	(1)
AC Power Line Conducted Emission	± 3.38 dB	(1)
Radiated emissions 9K-30MHz	±4.26 dB	(1)
Radiated emissions 30M- 1GHz	±4.88 dB	(1)
Radiated emissions 1GHz-18GHz	± 4.16 dB	(1)
Radiated emissions 18GHz-40GHz	±4.14 dB	(1)
Frequency error	Uc=6X10 ⁻⁷	(1)
Duty Cycle	0.03	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

2 General Information

2.1 General Description of EUT

Product Name:	Smart display
Model No.:	Buddy,Buddy Pro,X Series,V Series,C Series,D Series,DS Series, E Series,L Series,TV Series,T Series, B Series
Difference of model(s)	Except for the model name, color, and sales area, all models have the same circuit and RF module
Test Model:	Buddy
Hardware Version:	N/A
Software Version:	N/A
Sample(s) Status:	Engineer sample
Operation Frequency:	☒ 5180-5240MHz for 802.11a/n(HT20)/ac20(VHT20); 5190-5230MHz for 802.11n(HT40)/ac40(VHT40); 5210MHz for 802.11 ac80(VHT80); ☒ 5745-5825 MHz for 802.11a/n(HT20)/ac20(VHT20); 5755-5795 MHz for 802.11n(HT40)/ac40(VHT40); 5775MHz for 802.11 ac80(VHT80);
Channel numbers:	☒ 4 channels for 802.11a/n20(HT20)/ac20(VHT20) in the 5180-5240MHz band; 2 channels for 802.11 n40(HT40)/ac40(VHT40) in the 5190-5230MHz band ; 1 channels for 802.11 ac80(VHT80) in the 5210MHz band ; ☒ 5 channels for 802.11802.11a/n20(HT20)/ac20(VHT20) in the 5745-5825MHz band ; 2 channels for 802.11 n40(HT40)/ac40(VHT40) in the 5755-5795MHz band ; 1 channels for 802.11 ac80(VHT80) in the 5775MHz band
Channel bandwidth:	802.11a/802.11n(HT20)/ 802.11ac(VHT20): 20MHz 802.11n(HT40)/ 802.11ac(VHT40) : 40MHz 802.11ac(VHT80) : 80MHz
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT/20/40/80):NSS1, MCS0-MCS9
Modulation technology:	Orthogonal Frequency Division Multiplexing (OFDM) with BPSK/QPSK/16QAM/64QAM/256QAM
Antenna Type:	FPC antenna
Antenna gain:	3.1 dBi(Declare by applicant) Note: Antenna information is provided by applicant, Testing lab is not responsible for the accuracy of the information.
Power supply:	DC 19V 3.42A
Battery:	DC 14.4V 10.4Ah
Adapter Model:	Model: HKA06519034-6K Input:100-240V 50/60Hz 1.5A Output: DC 19V 3.42A

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	38	5190MHz	40	5200MHz	42	5210MHz
44	5220MHz	46	5230MHz	48	5240MHz	/	/
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	151	5755MHz	153	5765MHz	155	5775MHz
157	5785MHz	159	5795MHz	161	5805MHz	/	/
165	5825MHz	/					

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	Frequency (MHz)		
	802.11 a /n(HT20)/ac(VHT20)	802.11 n(HT40)/ac(VHT40)	802.11ac(VHT80)
Lowest channel	5180	5190	5210
Middle channel	5200	X	
Highest channel	5240		

Test channel	Frequency (MHz)		
	802.11 a /n(HT20)/ac(VHT20)	802.11 n(HT40)/ac(VHT40)	802.11ac(VHT80)
Lowest channel	5745	5755	5775
Middle channel	5785	X	
Highest channel	5825		

2.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
<i>Remark: For battery operated equipment, the EUT was performed using a new DC 14.4V battery</i>	

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Pretest Mode	Description
Mode 1	802.11a / n 20/ ac 20 CH36/ CH40/ CH 48 802.11a /n 20/ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n 40/ac 40 CH38/ CH 46 802.11n 40/ac 40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	/
Mode 5	Link Mode

Conducted Emission	
Final Test Mode	Description
Mode 5	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11a / n 20/ ac 20 CH36/ CH40/ CH 48 802.11a /n 20/ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n 40/ac 40 CH38/ CH 46 802.11n 40/ac 40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	/

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

2.3 Description of Support Units

No.	Description	Manufacturer	Model	Serial Number
1	Notebook	DELL	Vostro 3520	/
2	KEYBOARD	DELL	KB216T	/
3	MONITOR	SKYWORTH	2BU1	/
4	U DISK	/	/	/
5	earphones	/	/	/

2.4 Test Facility

Test laboratory:	Shenzhen ETR Standard Technology Co., Ltd.
CNAS Registration Number:	L11864
A2LA Certificate Number:	6640.01
FCC Designation Number:	CN1326
FCC Test Firm Registration:	183064
IC Company Number:	28440
IC CAB identifier:	CN0132
Laboratory location:	No.103, No.10, Phase I, Zone 3, Xinxing Industrial Park, Xinhe, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

2.5 Additional Instructions

Test Software	ADB Special Serial Port Commands
Power level setup	Default

3 Test Instruments list

Conducted Emission

Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESCI3	102696	2026.3.05	2027.3.04
2	Artificial power network	schwarabeck	NSLK8127	8127483	2026.3.05	2027.3.04
3	Artificial power network	ETS	3186/2NM	1132	2026.3.05	2027.3.04
4	10dB attenuator	HUBER+SUHNER	10dB	/	2026.3.05	2027.3.04
5	Cable 4	HUBER SUNNER	3M	/	2026.3.05	2027.3.04
6	Absorbing Clamp	schwarabeck	MDS21	D69250	2025.3.06	2026.3.05

Radiated Emission & RF Conducted test:

Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESCI7	101032	2026.3.05	2027.3.04
2	Broadband antenna	schwarabeck	VULB9168	1064	2026.3.11	2028.3.10
3	Horn antenna	schwarabeck	BBHA9120D	9120D-1145	2026.3.08	2028.3.07
4	Amplifier	EMtrace	RP01A	50117	2026.3.05	2027.3.04
5	Amplifier	Space-Dtronics	EWLAN0118G-P40	19113001	2026.3.05	2027.3.04
6	Spectrum analyzer	KEYSIGHT	N9020A	MY55370280	2026.3.05	2027.3.04
7	Power detector meter	MWRFtest	MW100-PSB	MW201020JYT	2026.3.05	2027.3.04
8	Signal generator	Agilent	N5182A	MY49060455	2026.3.05	2027.3.04
9	Spectrum analyzer	Rohde&schwarz	FSV-40N	101321	2026.3.05	2027.3.04
10	Amplifier	SKET	LNPA_1840-50	SK2019040302	2026.3.05	2027.3.04
11	Horn antenna	schwarabeck	BBHA 9170	946	2026.3.08	2028.3.07
12	Loop antenna	schwarabeck	FMZB 1519 B	1519	2026.3.08	2028.3.07
13	Cable 6	HUBER SUNNER	0.5M	/	2026.3.05	2027.3.04
14	Cable7	HUBER SUNNER	2.0M	/	2026.3.05	2027.3.04
15	Cable8	HUBER SUNNER	6.0M	/	2026.3.05	2027.3.04
16	Filter	Xin bo	XBLBQ-GTA29	210410-3-2	2026.3.05	2027.3.04
17	Power Sensor	Keysight	U2021XA	MY54111006	2026.3.05	2027.3.04
18	Temp. & Humidity Chamber	Jiecheng Instrument	QA-LP-80	20160705001	2026/3/06	2027/3/05

Note: the calibration interval of the above test instruments is 12 or 24 months and the calibrations are traceable to international system unit (SI).

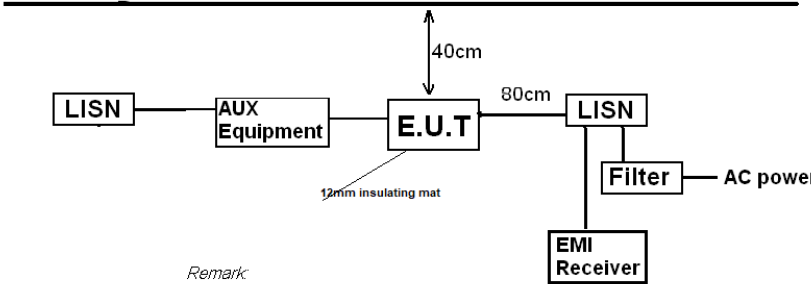
Software Name	Manufacturer	Model	Version
RF test software	MWRFtest	MTS 8310	V2.0.0.0
Conducted test software	EZ-EMC	Farad	Ver.EMC-CON 3A1.1
Radiated test software	EZ-EMC	Farad	Ver.FA-03A2 RE

4 Test results and Measurement Data

4.1 Antenna requirement

Standard requirement:	47CFR Part 15.203
<i>15.203 requirement:</i> <i>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</i>	
E.U.T Antenna:	
The antenna is FPC antenna, the best case gain of the antenna is 3.1 dBi, reference to the ET-26020564IP II for details..	

4.2 Conducted Emissions

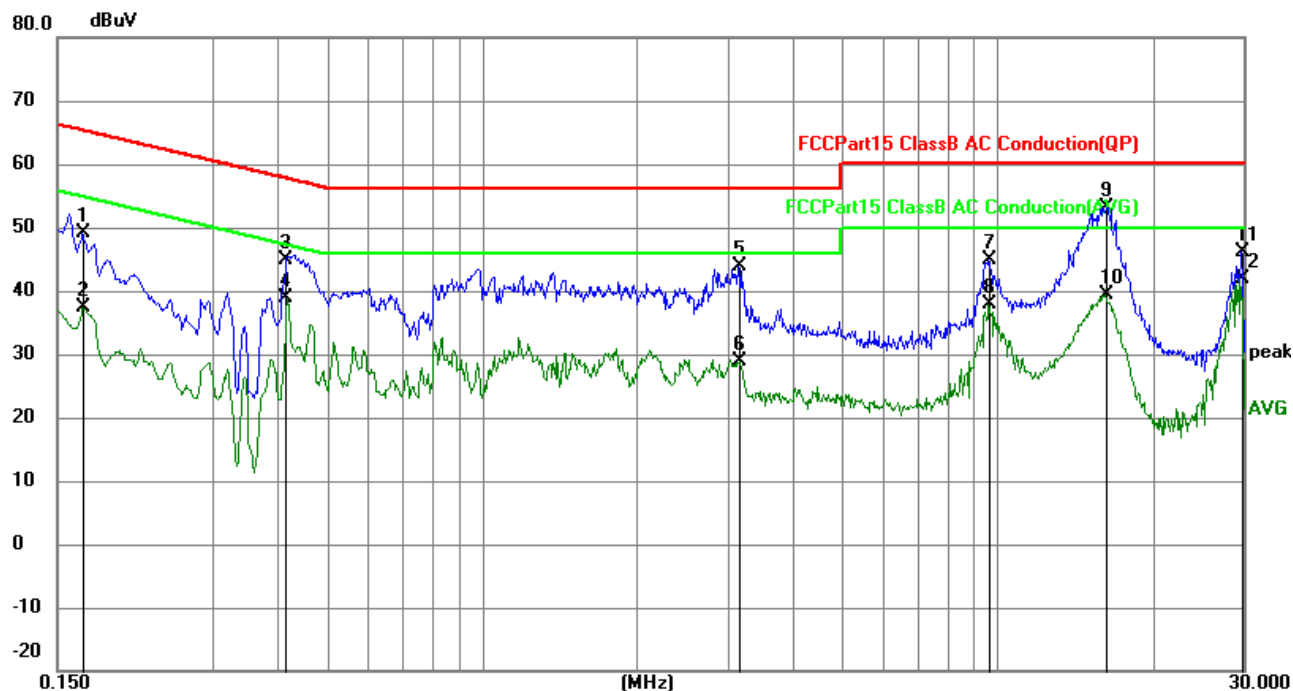
Test Requirement:	47CFR Part 15.207						
Test Method:	ANSI C63.10-2020+COR.1-2023 §6.2						
Test Frequency Range:	150KHz to 30MHz						
Class / Severity:	Class B						
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto						
Limit:	Frequency range (MHz)		Limit (dBuV)				
			Quasi-peak		Average		
	0.15-0.5		66 to 56*		56 to 46*		
	0.5-5		56		46		
	5-30		60		50		
* Decreases with the logarithm of the frequency.							
Test setup:	Reference Plane  Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network						
Test procedure:	1. EUT is placed on a plane 12mm above the ground through an insulated bracket, E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10-2020+COR.1-2023 on conducted measurement.						
Test Instruments:	Refer to section 3.0 for details						
Test mode:	Refer to section 2.2 for details						
Test environment:	Temp.:	23.4°C	Humid.:	53%	Press.:	1012mbar	
Test voltage:	DC 14.4V						
Test results:	Pass						

Remark:

1. Both high voltage and low voltage have been tested, and the report only shows the worst case data with AC 120V/60Hz.
2. All mode have been tested, the report only shows the worst mode (802.11n20 5200MHz)

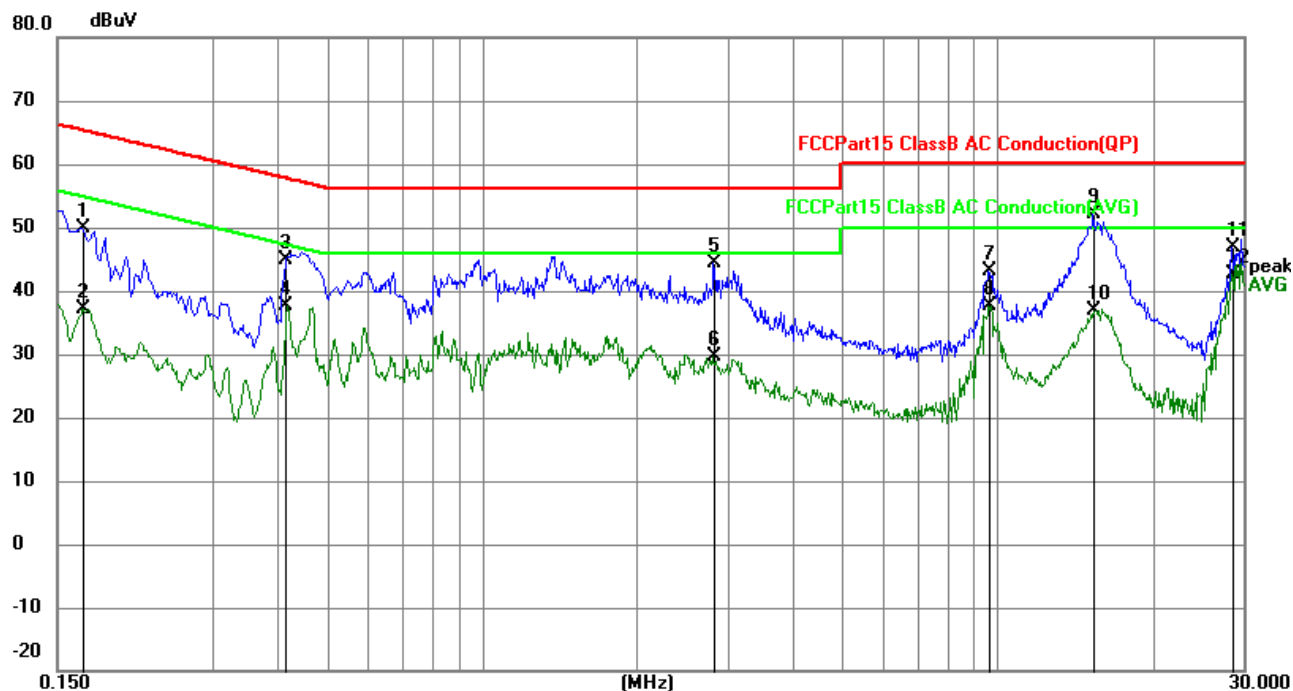
Measurement Result

Line:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1680	39.24	9.81	49.05	65.06	-16.01	QP
2	0.1680	27.56	9.81	37.37	55.06	-17.69	AVG
3	0.4168	34.89	9.90	44.79	57.51	-12.72	QP
4	0.4168	28.92	9.90	38.82	47.51	-8.69	AVG
5	3.1514	34.00	9.84	43.84	56.00	-12.16	QP
6	3.1514	19.03	9.84	28.87	46.00	-17.13	AVG
7	9.6315	34.95	9.84	44.79	60.00	-15.21	QP
8	9.6315	27.93	9.84	37.77	50.00	-12.23	AVG
9	16.2958	43.47	9.73	53.20	60.00	-6.80	QP
10	16.2958	29.76	9.73	39.49	50.00	-10.51	AVG
11	29.7013	36.63	9.50	46.13	60.00	-13.87	QP
12	29.7013	32.32	9.50	41.82	50.00	-8.18	AVG

Neutral:

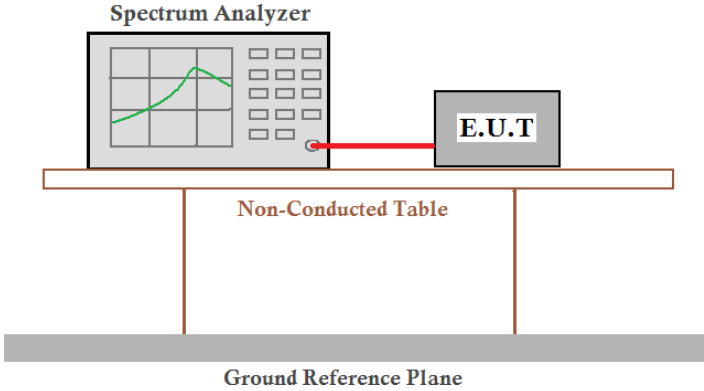


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1680	40.14	9.81	49.95	65.06	-15.11	QP
2	0.1680	27.21	9.81	37.02	55.06	-18.04	AVG
3	0.4168	35.03	9.90	44.93	57.51	-12.58	QP
4	0.4168	27.78	9.90	37.68	47.51	-9.83	AVG
5	2.8229	34.42	9.85	44.27	56.00	-11.73	QP
6	2.8229	19.69	9.85	29.54	46.00	-16.46	AVG
7	9.6357	33.20	9.84	43.04	60.00	-16.96	QP
8	9.6357	27.88	9.84	37.72	50.00	-12.28	AVG
9	15.3465	42.38	9.74	52.12	60.00	-7.88	QP
10	15.3465	27.17	9.74	36.91	50.00	-13.09	AVG
11	28.5045	37.42	9.52	46.94	60.00	-13.06	QP
12	28.5045	33.03	9.52	42.55	50.00	-7.45	AVG

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss
4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.

4.3 Duty cycle

Test Method :	ANSI C63.10-2020+COR.1-2023§11.6	
Limit:	/	
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.	
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 22.2°C	Humid.: 65%RH
Test voltage:	DC 14.4V	
Test results:	Pass	

Measurement Result

5180-5240MHz

Mode	Duty cycle (%)	Correction Factor (dB)
TX 802.11a Mode	100.00	0.00
TX 802.11n20 Mode	100.00	0.00
TX 802.11ac20 Mode	100.00	0.00
TX 802.11n40 Mode	100.00	0.00
TX 802.11a40 Mode	100.00	0.00
TX 802.11ac80 Mode	100.00	0.00

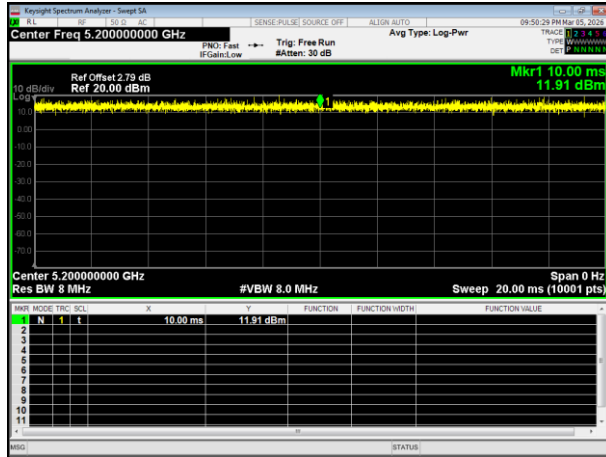
5745-5825 MHz

Mode	Duty cycle (%)	Correction Factor (dB)
TX 802.11a Mode	100.00	0.00
TX 802.11n20 Mode	100.00	0.00
TX 802.11ac20 Mode	100.00	0.00
TX 802.11n40 Mode	100.00	0.00
TX 802.11a40 Mode	100.00	0.00
TX 802.11ac80 Mode	100.00	0.00

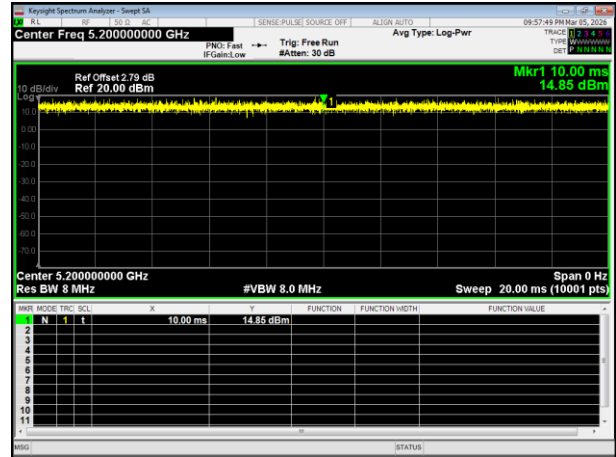
Test plot

5180-5240MHz

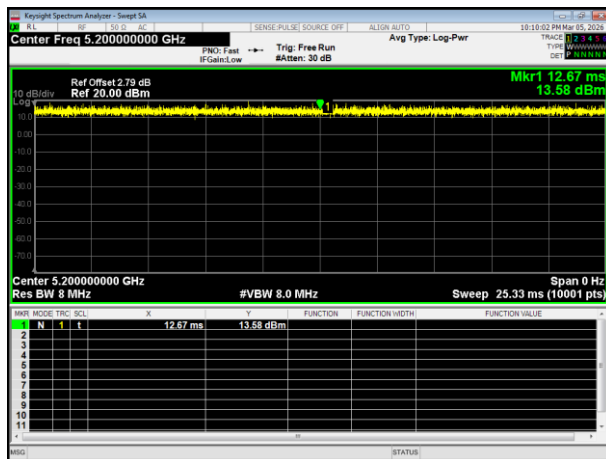
(802.11a) plot



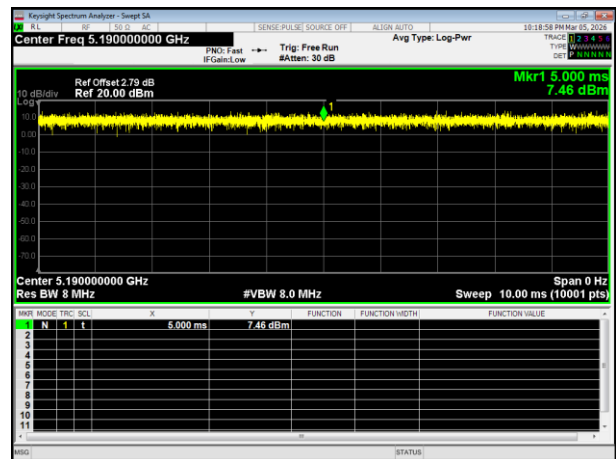
(802.11 n20) plot



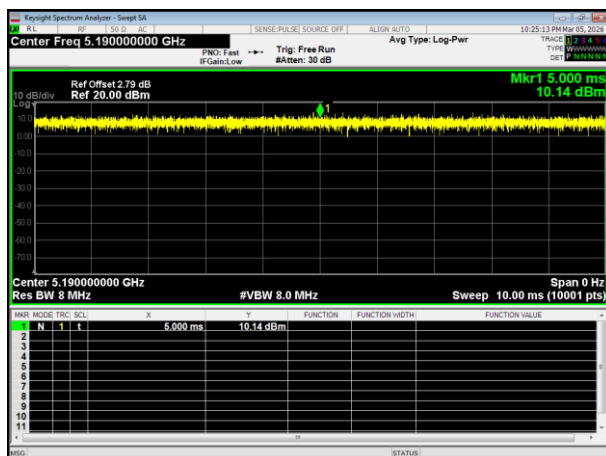
(802.11ac20) plot



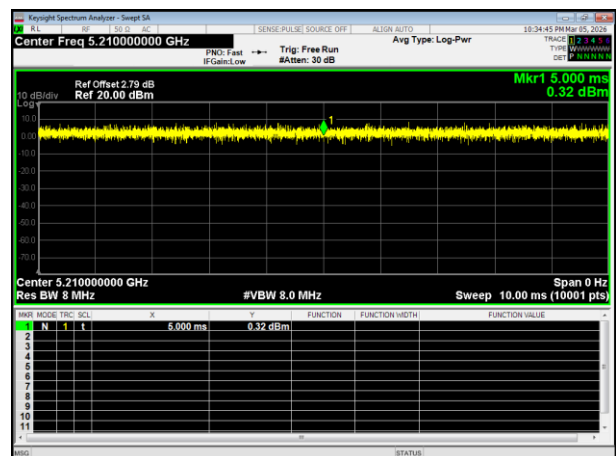
(802.11 n40) plot



(802.11ac40) plot

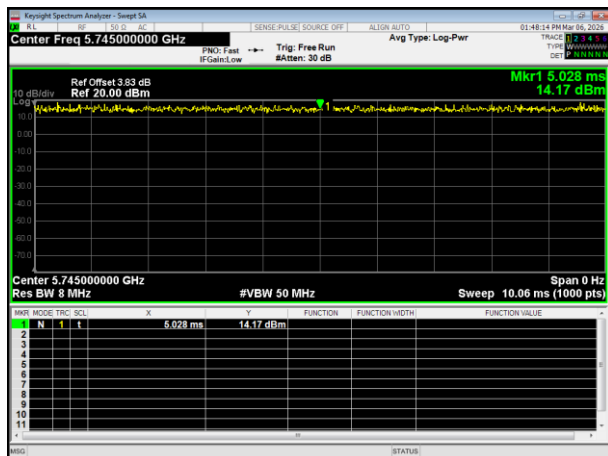


(802.11ac80) plot

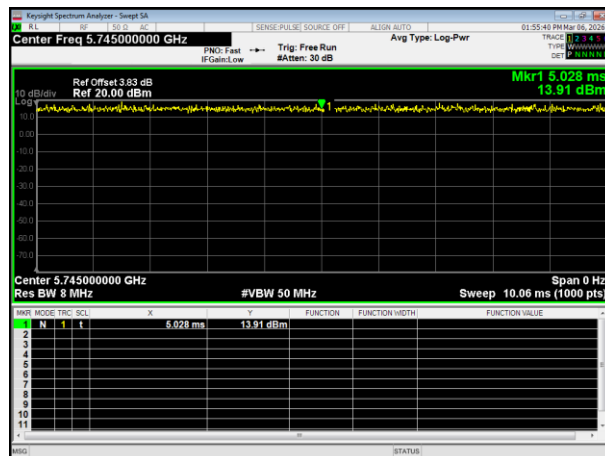


5745-5825 MHz

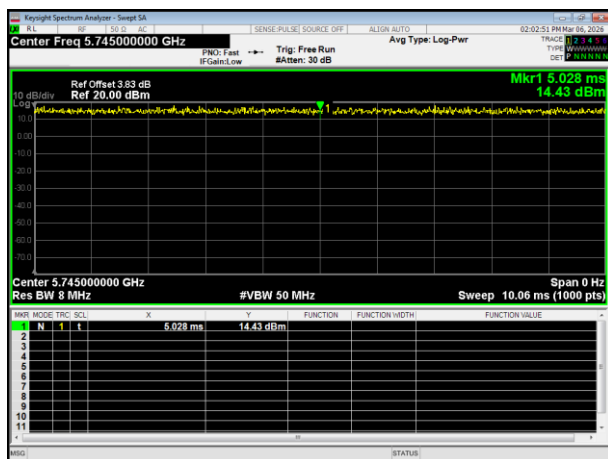
(802.11a) plot



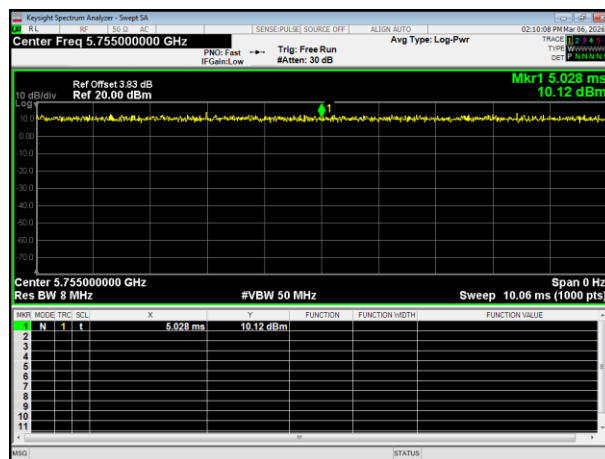
(802.11 n20) plot



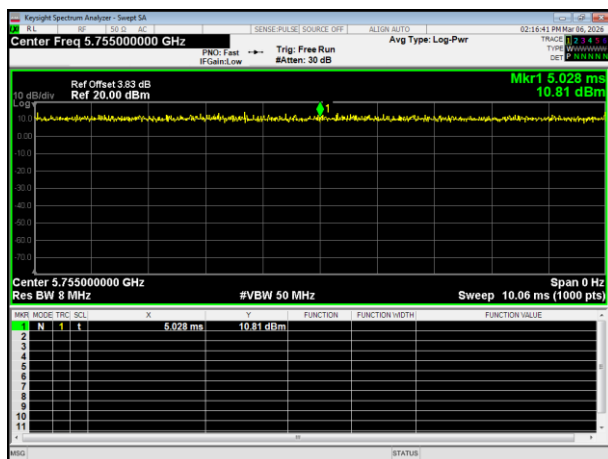
(802.11ac20) plot



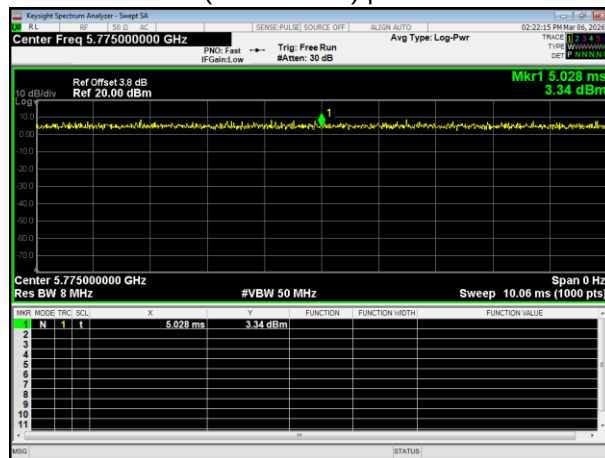
(802.11 n40) plot



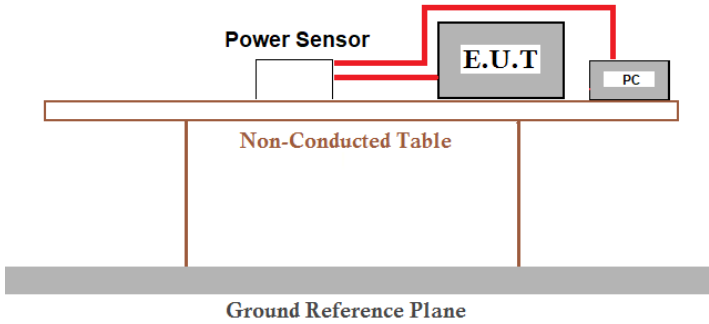
(802.11ac40) plot



(802.11ac80) plot



4.4 Conducted Output Power

Test Requirement:	47CFR Part 15.407 (a)(1)/(a)(3)	
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 ANSI C63.10-2020+COR.1-2023 § 12.4	
Limit:	5150-5250MHz : 250mW 5725~5850MHz : 1W	
Test setup:	 The diagram illustrates the test setup. A 'Power Sensor' is connected via red lines to an 'E.U.T.' (Equipment Under Test) and a 'PC'. Both the E.U.T. and the PC are placed on a 'Non-Conducted Table'. This table is supported by two vertical legs and sits on a 'Ground Reference Plane', which is represented by a thick grey bar at the bottom.	
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 22.2°C	Humid.: 65%RH
Test voltage:	DC 14.4V	
Test results:	Pass	

Measurement Result

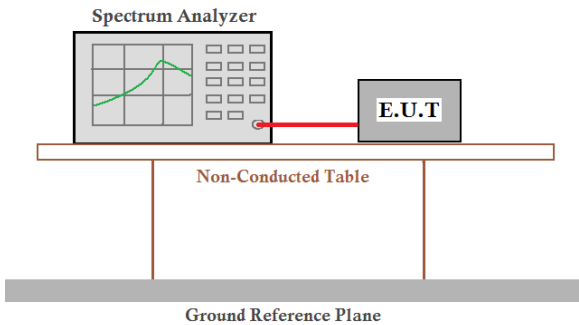
5180-5240MHz

Test Channel	Frequency	Correction Factor	Maximum output power	Total Power	LIMIT	Result
	(MHz)	(dB)	(dBm)	(dBm)	dBm	
TX 802.11a Mode						
CH36	5180	0.00	14.35	14.35	24	Pass
CH40	5200	0.00	14.35	14.35	24	Pass
CH48	5240	0.00	13.93	13.93	24	Pass
TX 802.11 n20 Mode						
CH36	5180	0.00	14.17	14.17	24	Pass
CH40	5200	0.00	14.46	14.46	24	Pass
CH48	5240	0.00	14.09	14.09	24	Pass
TX 802.11 ac20 Mode						
CH36	5180	0.00	14.04	14.04	24	Pass
CH40	5200	0.00	14.50	14.50	24	Pass
CH48	5240	0.00	14.05	14.05	24	Pass
TX 802.11 n40 Mode						
CH38	5190	0.00	13.24	13.24	24	Pass
CH46	5230	0.00	13.47	13.47	24	Pass
TX 802.11 ac40 Mode						
CH38	5190	0.00	13.25	13.25	24	Pass
CH46	5230	0.00	13.28	13.28	24	Pass
TX 802.11 ac80 Mode						
CH42	5210	0.00	12.61	12.61	24	Pass

5745-5825 MHz

Test Channel	Frequency	Correction Factor	Maximum output power	Total Power	LIMIT	Result
	(MHz)	(dB)	(dBm)	(dBm)	dBm	
TX 802.11a Mode						
CH149	5745	0.00	14.40	14.40	30	Pass
CH157	5785	0.00	14.49	14.49	30	Pass
CH165	5825	0.00	14.38	14.38	30	Pass
TX 802.11 n20 Mode						
CH149	5745	0.00	14.56	14.56	30	Pass
CH157	5785	0.00	14.65	14.65	30	Pass
CH165	5825	0.00	14.18	14.18	30	Pass
TX 802.11 ac20 Mode						
CH149	5745	0.00	14.42	14.42	30	Pass
CH157	5785	0.00	14.08	14.08	30	Pass
CH165	5825	0.00	14.33	14.33	30	Pass
TX 802.11 n40 Mode						
CH151	5755	0.00	13.00	13.00	30	Pass
CH159	5795	0.00	13.42	13.42	30	Pass
TX 802.11 ac40 Mode						
CH151	5755	0.00	13.10	13.10	30	Pass
CH159	5795	0.00	13.35	13.35	30	Pass
TX 802.11 ac80 Mode						
CH155	5775	0.00	12.05	12.05	30	Pass

4.5 Bandwidth &99% Occupy Bandwidth

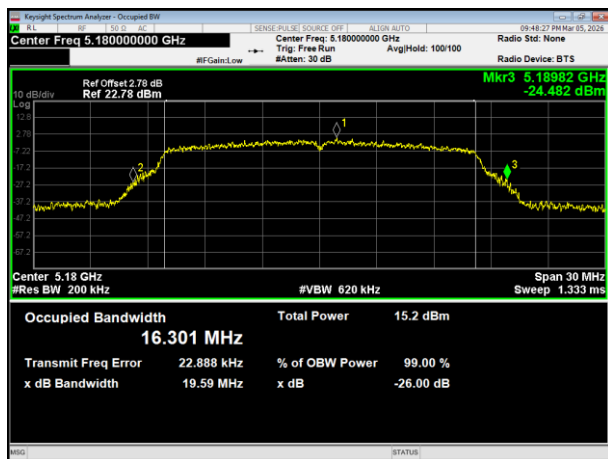
Test Requirement:	47CFR Part 15.407(a)(12)&15.407(e),	
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01, ANSI C63.10-2020+COR.1-2023§12.5	
Limit:	Measurements in the 5.725-5.85 GHz band, the minimum bandwidth 6 dB bandwidth of U-NII devices shall be at least 500KHz. Measurements 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.	
Test setup:		
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 22.2°C	Humid.: 65%RH
Test voltage:	DC 14.4V	
Test results:	Pass	

Measurement Result

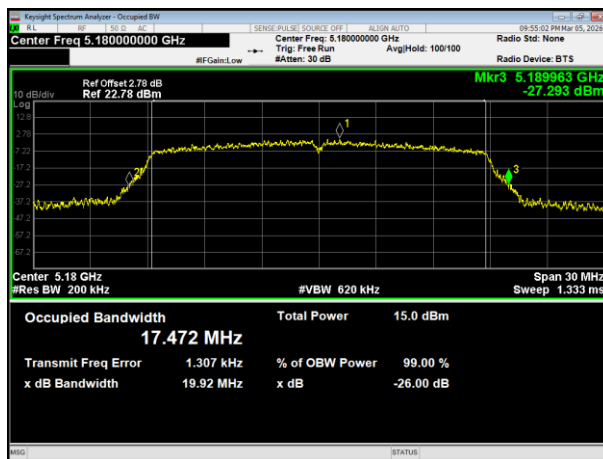
5180-5240MHz

Test CH	-26dB Channel Bandwidth (MHz)						Result
	802.11a	802.11n (HT20)	802.11ac (VHT20)	802.11n (HT40)	802.11ac (VHT40)	802.11ac (VHT80)	
Lowest	19.594	19.924	19.898	39.829	40.078	--	Pass
Middle	19.45	19.955	20.011	--	--	79.416	
Highest	19.773	19.995	19.869	40.385	40.329	--	

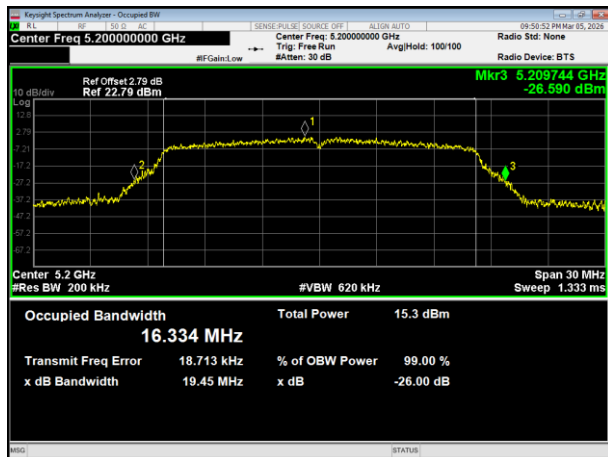
(802.11a) plot on channel 36



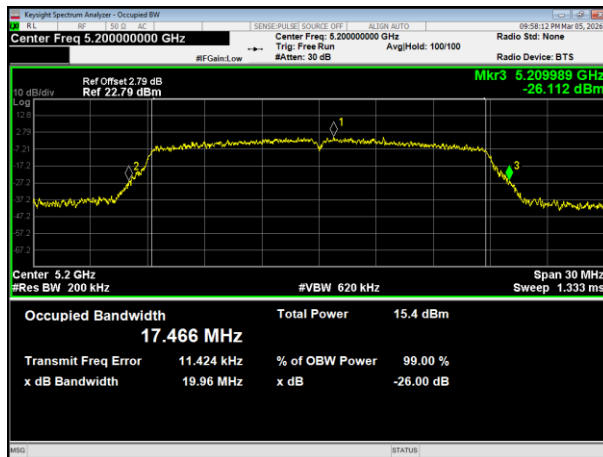
(802.11 n20) plot on channel 36



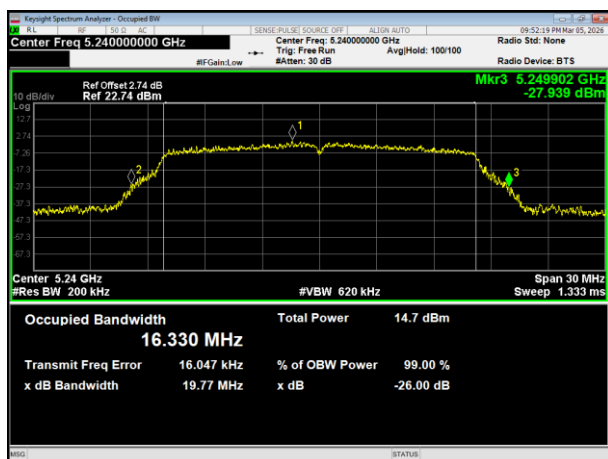
(802.11a) plot on channel 40



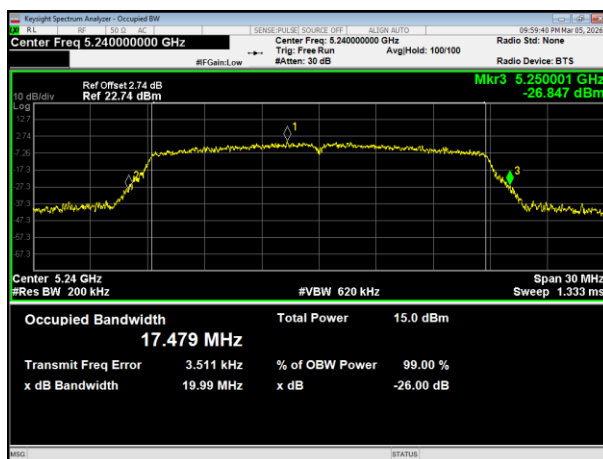
(802.11 n20) plot on channel 40



(802.11a) plot on channel 48

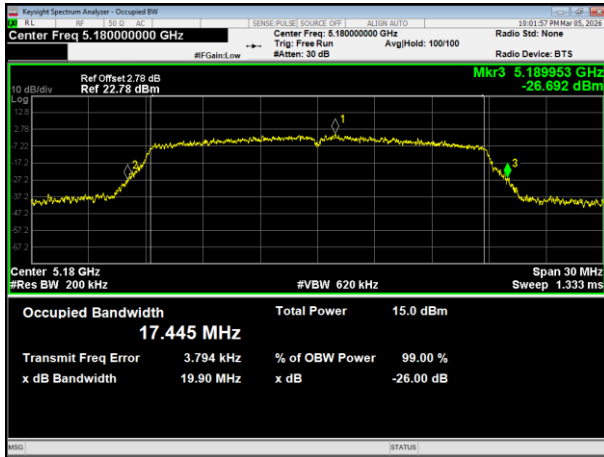


(802.11 n20) plot on channel 48

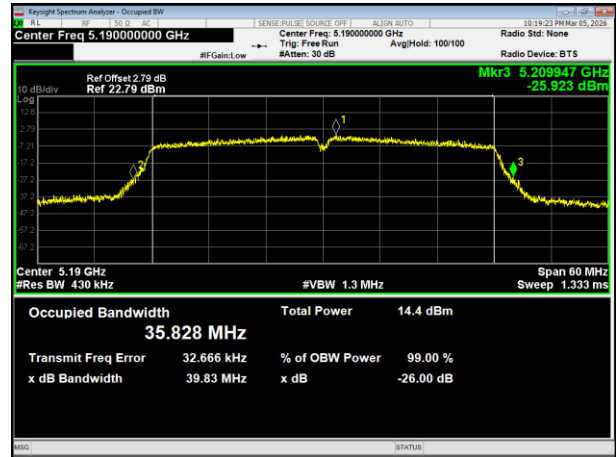


Test plot

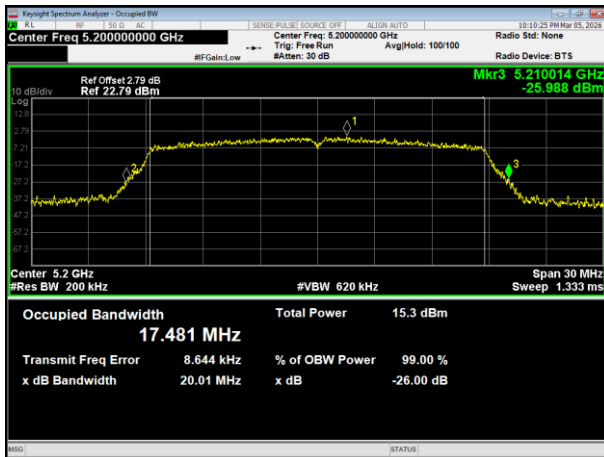
(802.11ac20) plot on channel 36



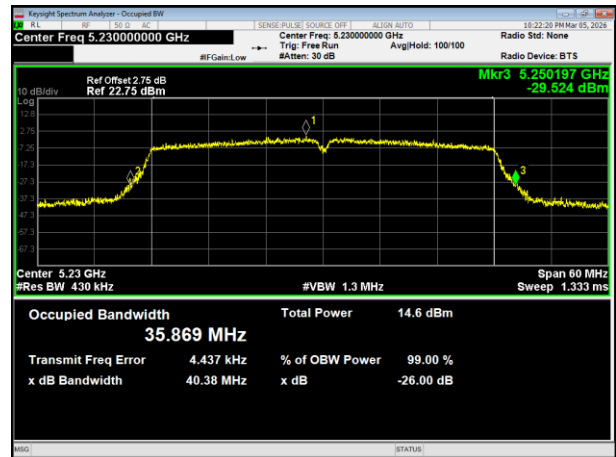
(802.11 n40) plot on channel 38



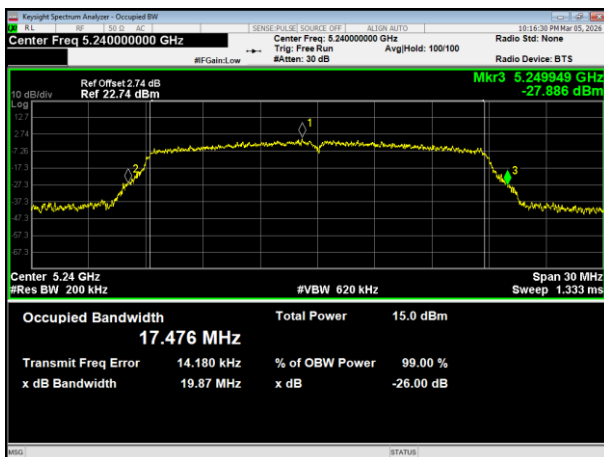
(802.11ac20) plot on channel 40



(802.11 n40) plot on channel 46

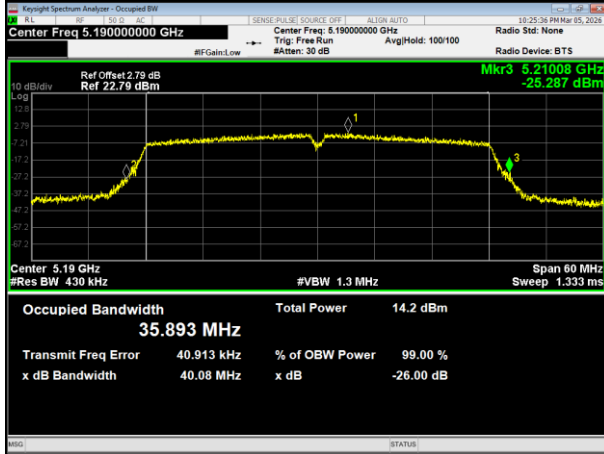


(802.11ac20) plot on channel 48

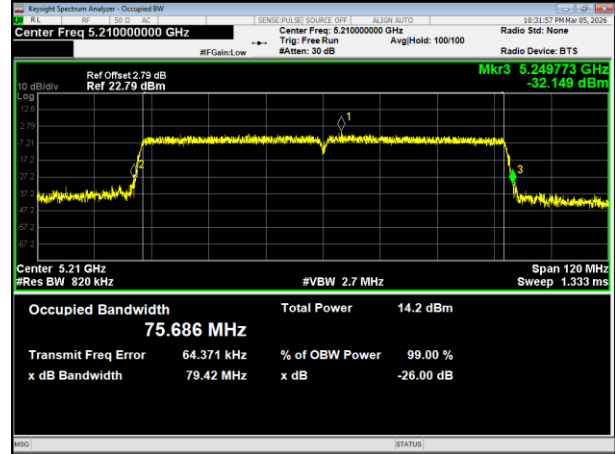


Test plot

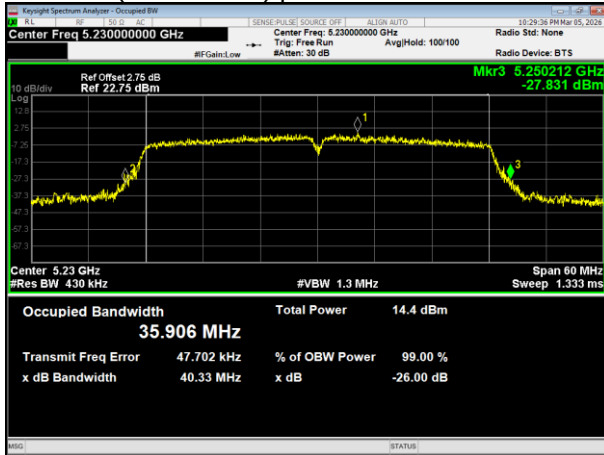
(802.11ac40) plot on channel 38



(802.11ac80) plot on channel 42



(802.11ac40) plot on channel 46



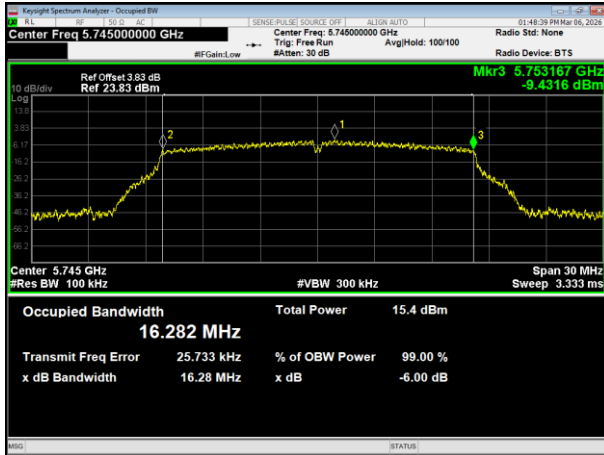
5745-5825MHz

Test CH	-6dB Channel Bandwidth (MHz)						Limit (KHz)	Result
	802.11a	802.11n (HT20)	802.11ac (VHT20)	802.11n (HT40)	802.11ac (VHT40)	802.11ac (VHT80)		
Lowest	16.283	16.884	16.617	35.114	35.386	--	>500	Pass
Middle	15.59	17.038	16.843	--	--	76.409		
Highest	15.426	16.91	17.106	35.539	35.299	--		

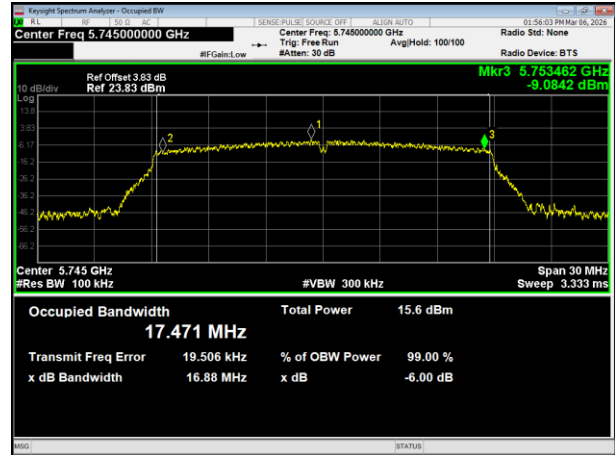
Remark: "---"is not applicable

Test plot

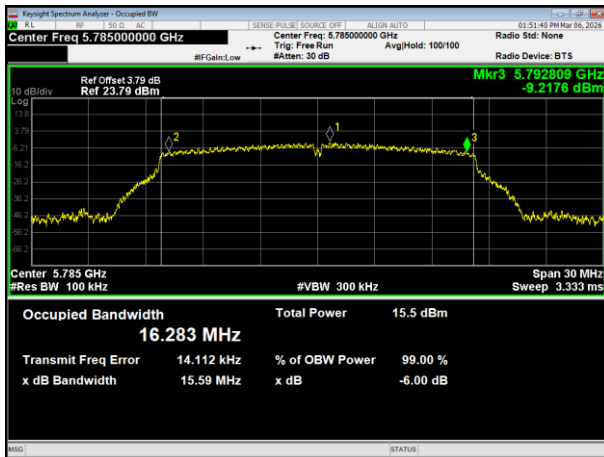
(802.11a) plot on channel 149



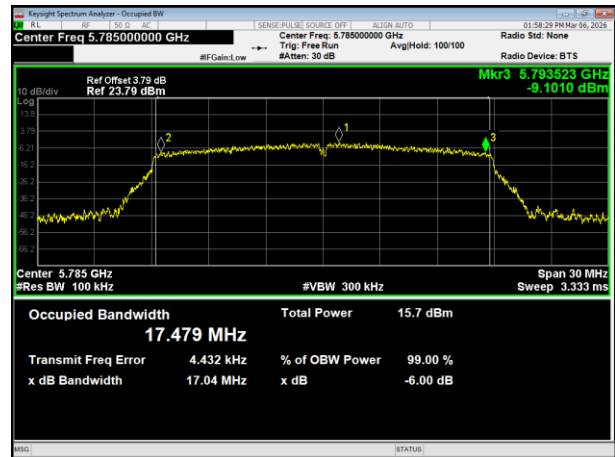
(802.11 n20) plot on channel 149



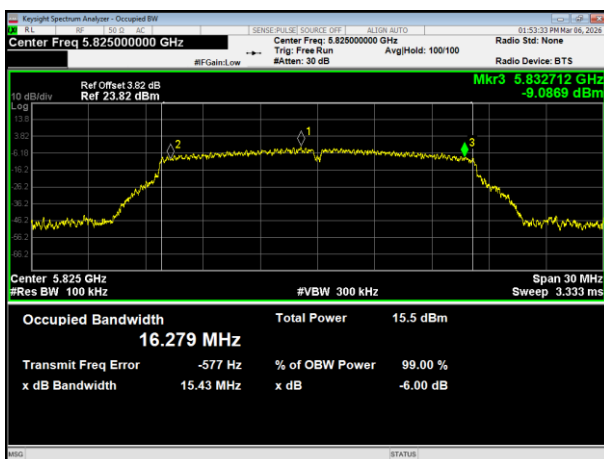
(802.11a) plot on channel 157



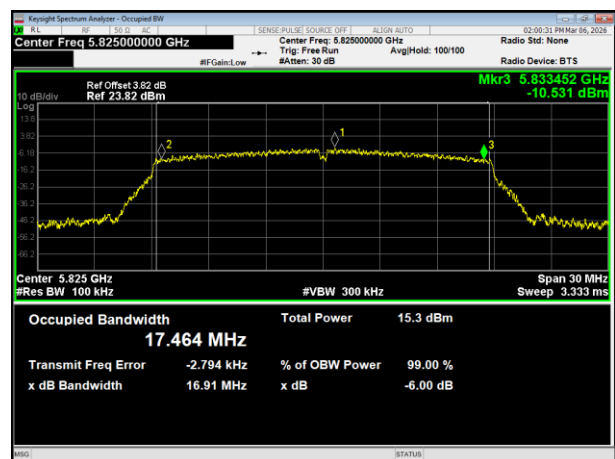
(802.11 n20) plot on channel 157



(802.11a) plot on channel 165

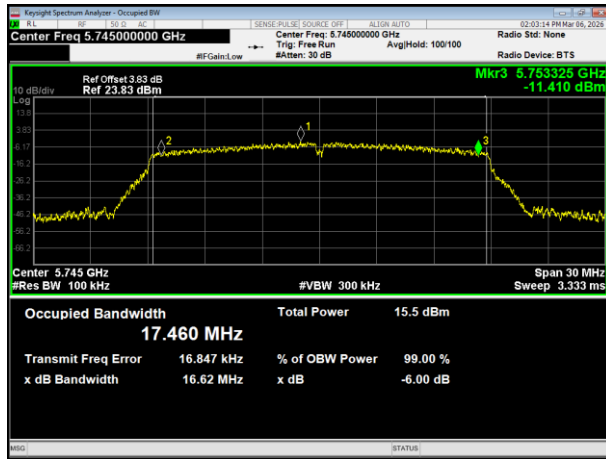


(802.11 n20) plot on channel 165

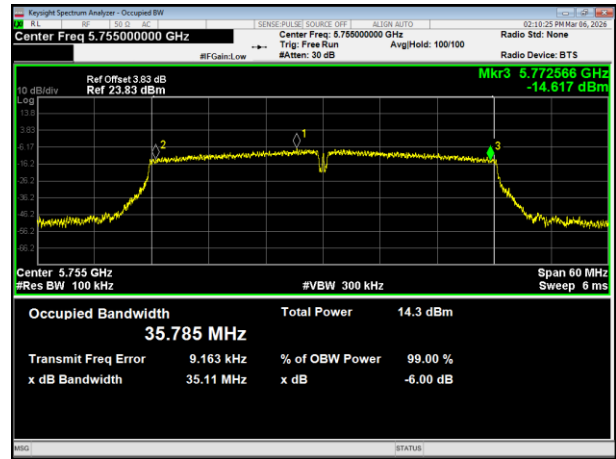


Test plot

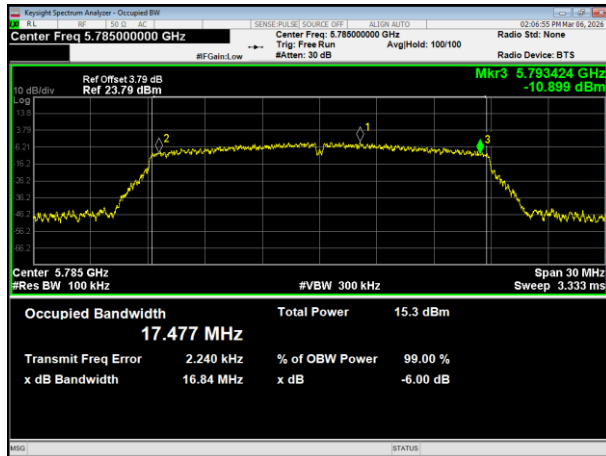
(802.11ac20) plot on channel 149



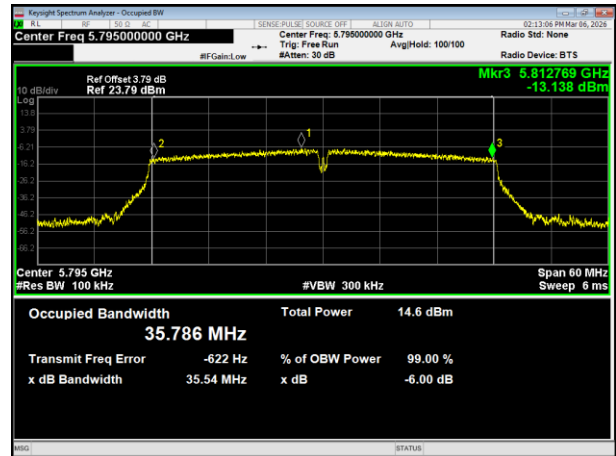
(802.11 n40) plot on channel 151



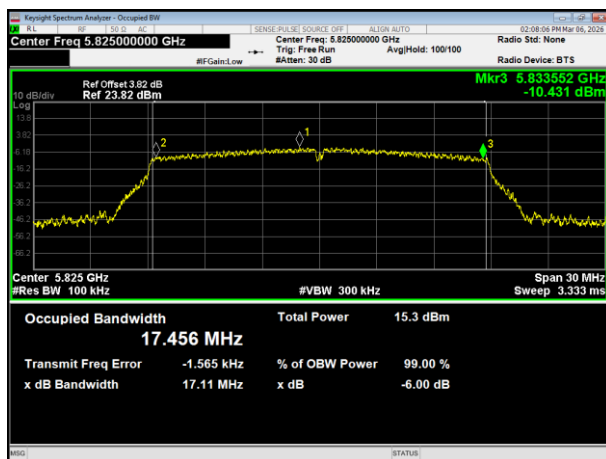
(802.11ac20) plot on channel 157



(802.11 n40) plot on channel 159

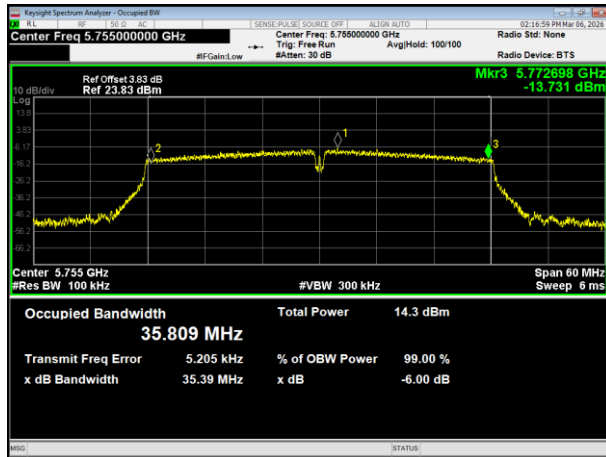


(802.11ac20) plot on channel 165

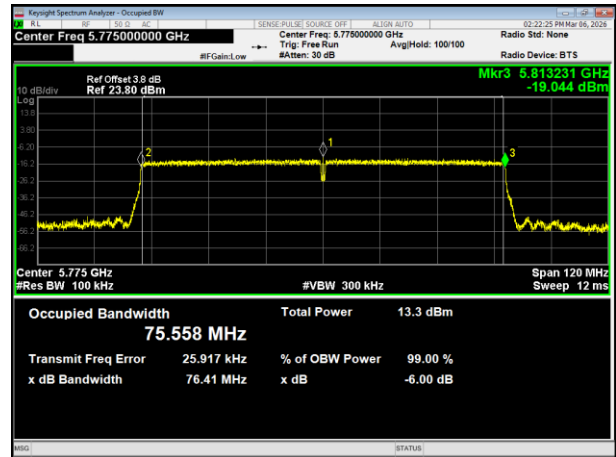


Test plot

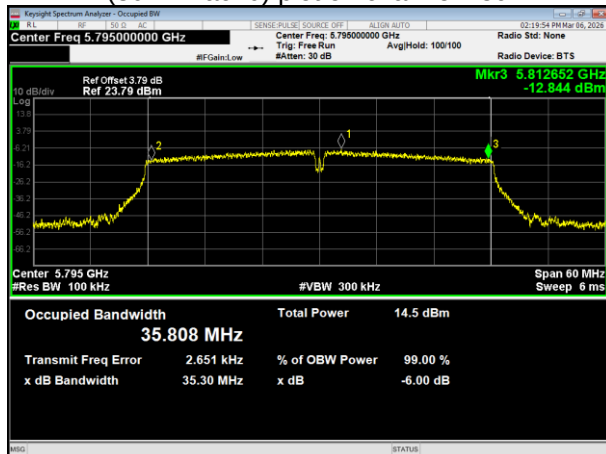
(802.11 ac40) plot on channel 151



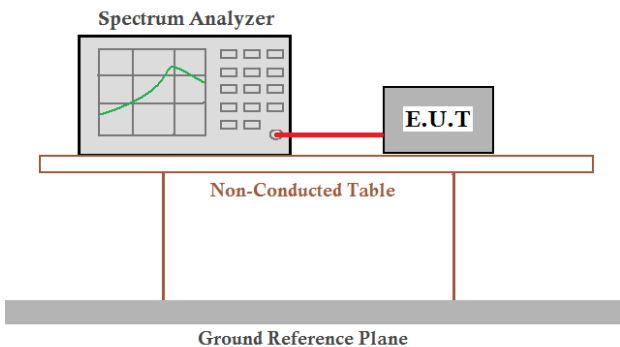
(802.11 ac80) plot on channel 155



(802.11 ac40) plot on channel 159



4.6 Power Spectral Density

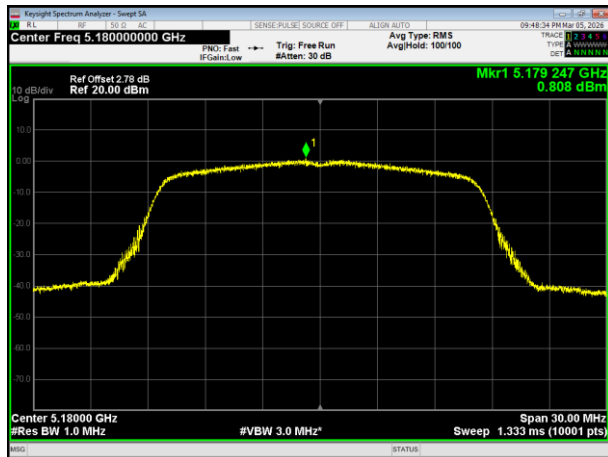
Test Requirement:	47CFR Part 15.407(a)(1)/ (a)(3)	
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01, ANSI C63.10-2020+COR.1-2023§12.6	
Limit:	Frequency band (MHz)	Limit
	5150-5250	≤17dBm/1MHz for master device
		≤11dBm/1MHz for client device
	5250-5350	≤11dBm/1MHz for client device
	5470-5725	≤11dBm/1MHz for client device
	5725-5850	≤30dBm/500kHz
Test setup:		
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 22.2°C	Humid.: 65%RH
Test voltage:	DC 14.4V	
Test results:	Pass	

Measurement Result

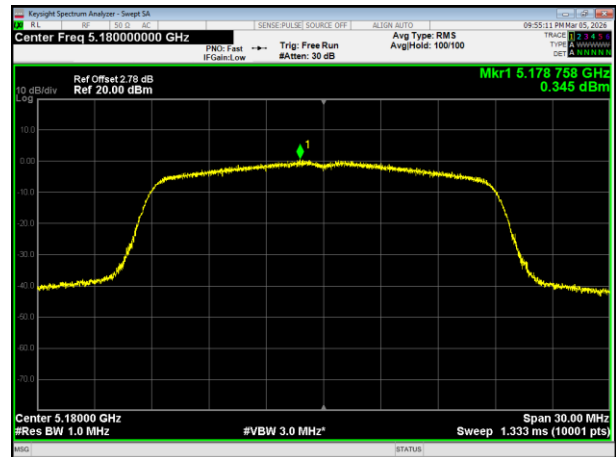
5180-5240MHz

Mode	Frequency	Measured Power Density (dBm/MHz)	Correction Factor (dB)	Total Measured Power Density (dBm/MHz)	Limit (dBm/MHz)
802.11 a	5180 MHz	0.808	0.00	0.808	11
	5200 MHz	0.317	0.00	0.317	11
	5240 MHz	0.294	0.00	0.294	11
802.11 n20	5180 MHz	0.345	0.00	0.345	11
	5200 MHz	0.602	0.00	0.602	11
	5240 MHz	0.106	0.00	0.106	11
802.11 ac20	5180 MHz	0.067	0.00	0.067	11
	5200 MHz	0.438	0.00	0.438	11
	5240 MHz	0.211	0.00	0.211	11
802.11 n40	5190 MHz	-3.812	0.00	-3.812	11
	5230 MHz	-3.154	0.00	-3.154	11
802.11 ac40	5190 MHz	-3.975	0.00	-3.975	11
	5230 MHz	-6.103	0.00	-6.103	11
802.11 ac80	5210 MHz	-13.213	0.00	-13.213	11

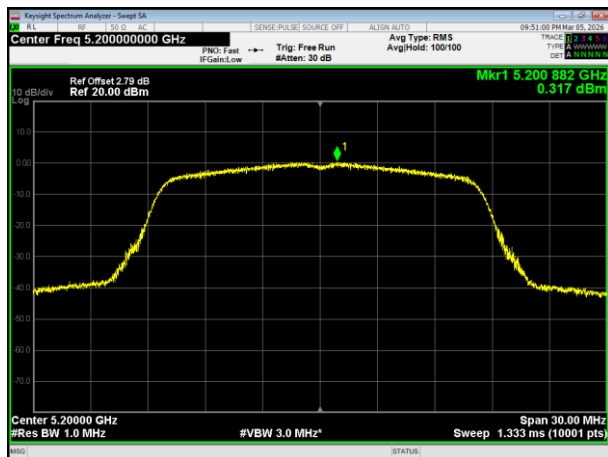
(802.11a) PSD plot on channel 36



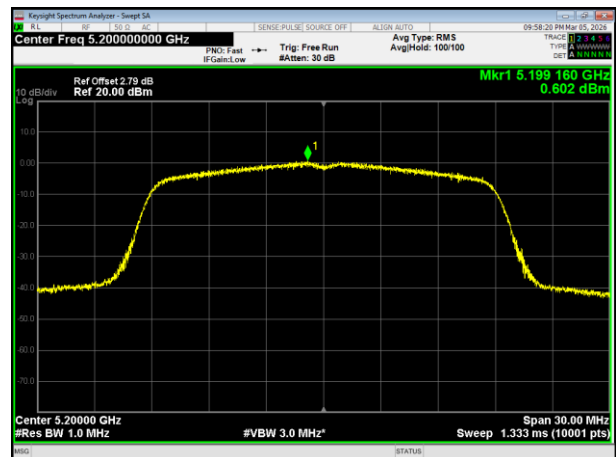
(802.11n20) PSD plot on channel 36



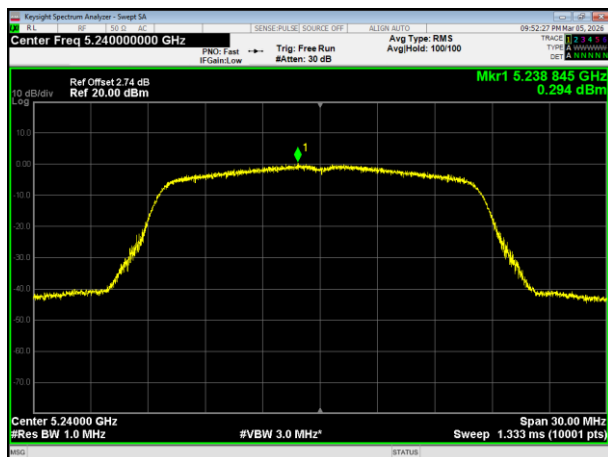
(802.11a) PSD plot on channel 40



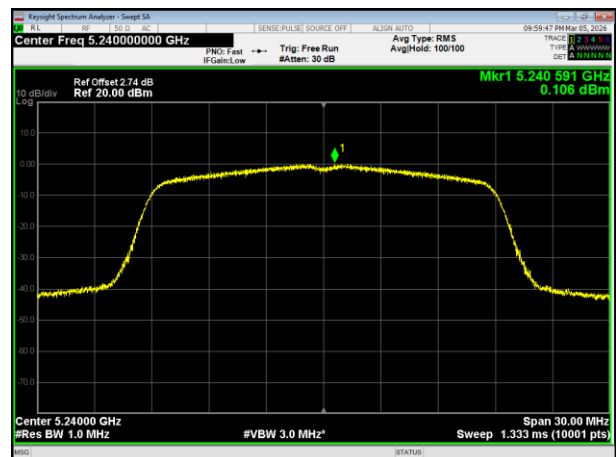
(802.11n20) PSD plot on channel 40



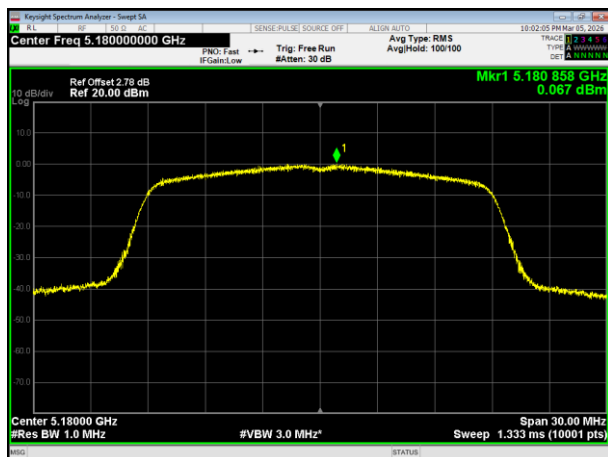
(802.11a) PSD plot on channel 48



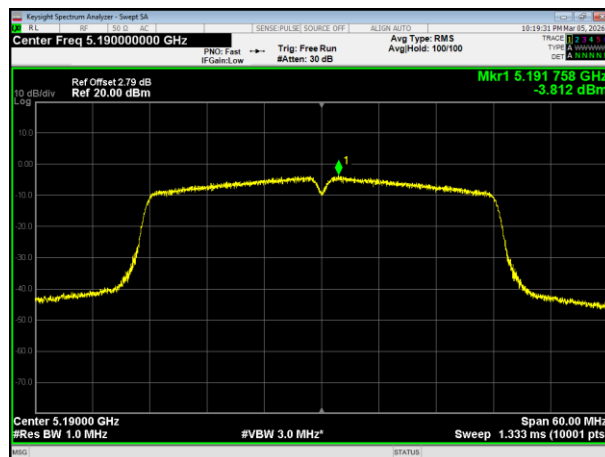
(802.11n20) PSD plot on channel 48



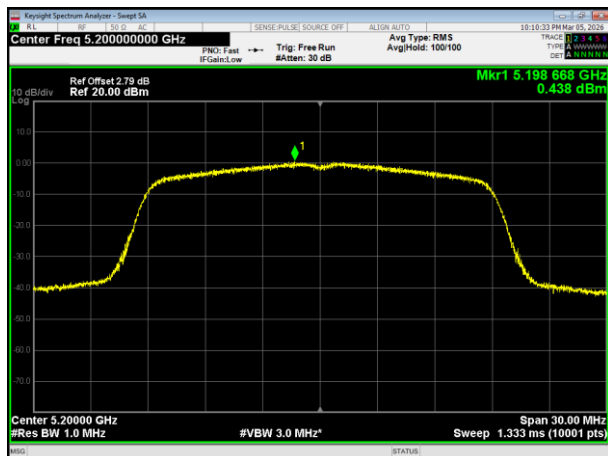
(802.11ac20) PSD plot on channel 36



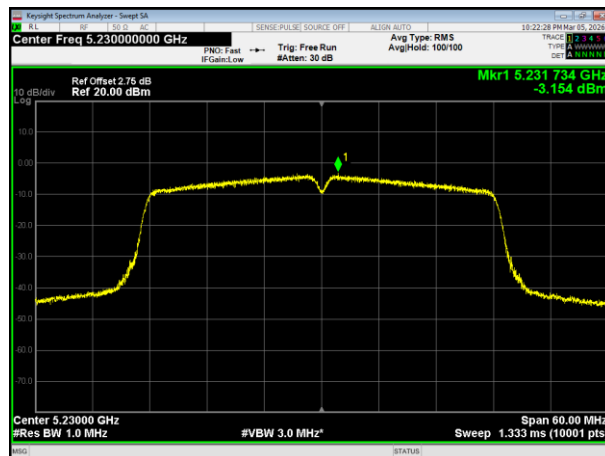
(802.11n40) PSD plot on channel 38



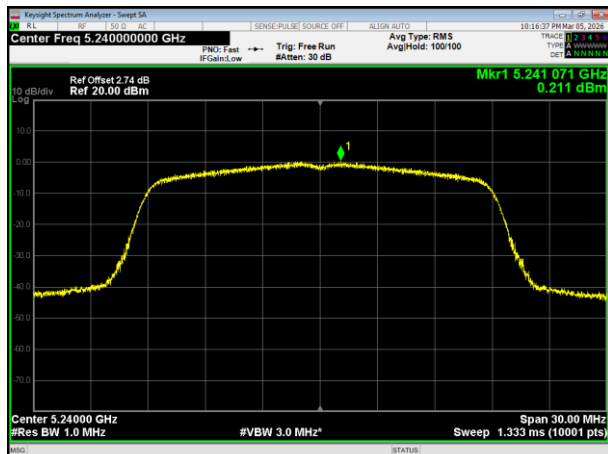
(802.11ac20) PSD plot on channel 40



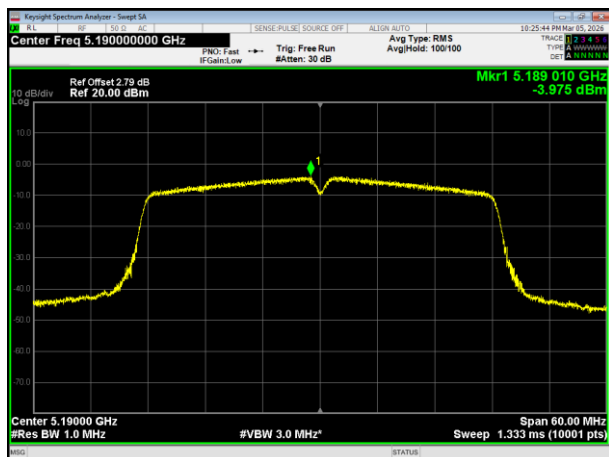
(802.11n40) PSD plot on channel 46



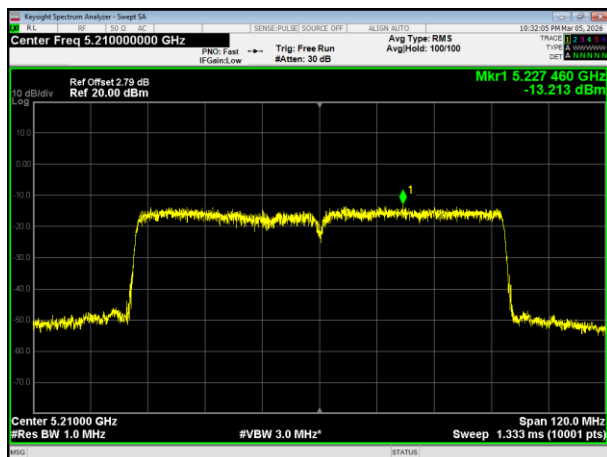
(802.11ac20) PSD plot on channel 48



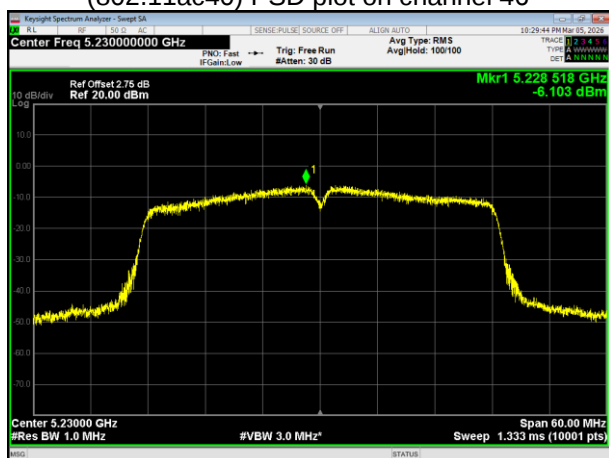
(802.11ac40) PSD plot on channel 38



(802.11ac80) PSD plot on channel 42



(802.11ac40) PSD plot on channel 46

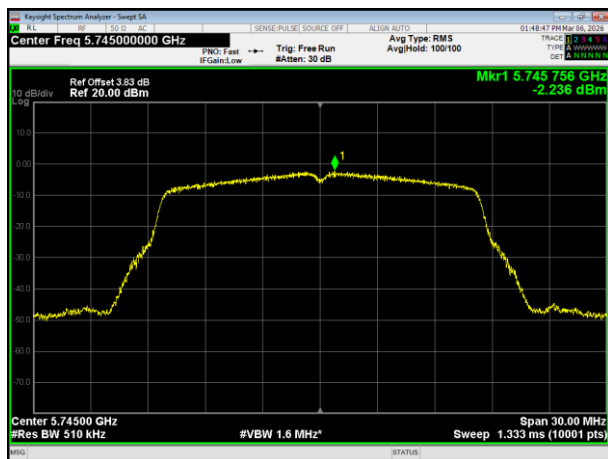


Mode	Frequency	Measured Power Density (dBm/510KHz)	Measured Power Density (dBm/500KHz)	Correction Factor (dB)	Total Measured Power Density (dBm/500KHz)	Limit (dBm/500kHz)
802.11 a	5745 MHz	-2.236	-2.322	0.00	-2.322	30
	5785 MHz	-2.300	-2.386	0.00	-2.386	30
	5825 MHz	-2.435	-2.521	0.00	-2.521	30
802.11 n20	5745 MHz	-2.332	-2.418	0.00	-2.418	30
	5785 MHz	-1.934	-2.020	0.00	-2.020	30
	5825 MHz	-2.511	-2.597	0.00	-2.597	30
802.11ac20	5745 MHz	-2.382	-2.468	0.00	-2.468	30
	5785 MHz	-2.589	-2.675	0.00	-2.675	30
	5825 MHz	-2.538	-2.624	0.00	-2.624	30
802.11 n40	5755 MHz	-7.136	-7.222	0.00	-7.222	30
	5795 MHz	-6.549	-6.635	0.00	-6.635	30
802.11ac40	5755 MHz	-6.764	-6.850	0.00	-6.850	30
	5795 MHz	-6.772	-6.858	0.00	-6.858	30
802.11ac80	5775 MHz	-12.589	-12.675	0.00	-12.675	30

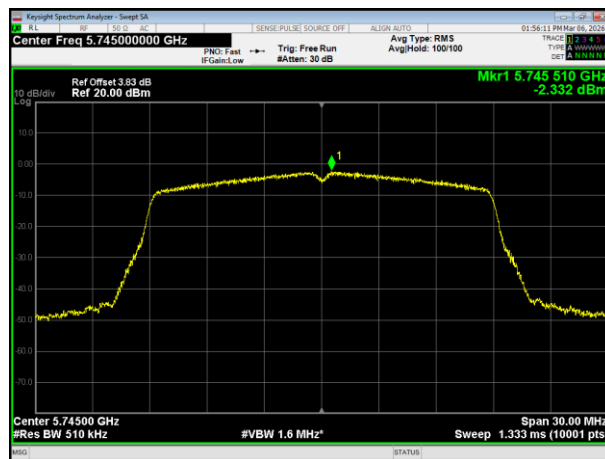
Note:

1. Correction Factor (dB) = duty cycle factor
2. RBW Factor (dB) = $10 \cdot \log(500/510) = -0.086$
3. Measured PSD (dBm/500kHz) = Measured PSD (dBm/510kHz) + RBW Factor (dB)
4. Total Measured Power Density (dBm/500KHz) = Measured PSD (dBm/500kHz) + Correction Factor (dB)

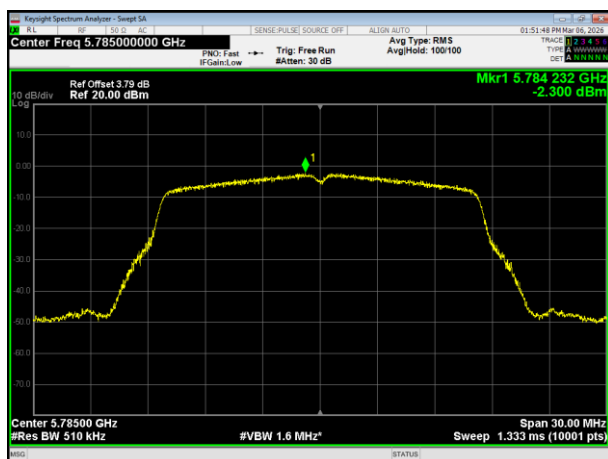
(802.11a) PSD plot on channel 149



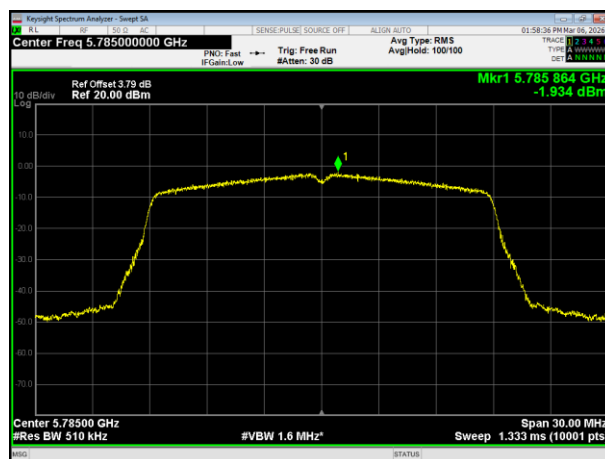
(802.11n20) PSD plot on channel 149



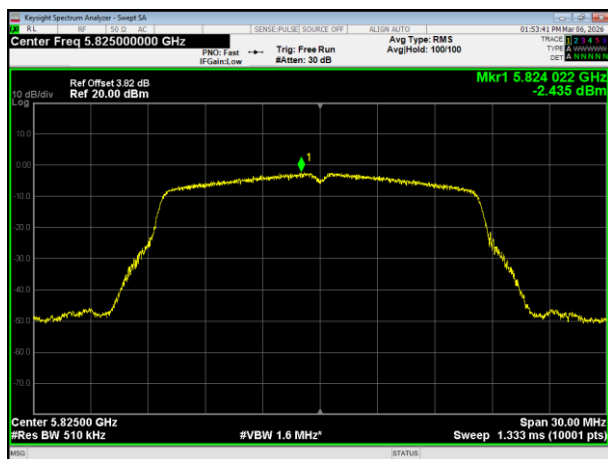
(802.11a) PSD plot on channel 157



(802.11n20) PSD plot on channel 157



(802.11a) PSD plot on channel 165



(802.11n20) PSD plot on channel 165

