

## Dynascan Technology Corp.

# TEST REPORT

**SCOPE OF WORK:**

47 CFR FCC Part 15.407 – Radio Spectrum report

**Model:**

FBP205

**REPORT NUMBER**

220400323THC-001

**ISSUE DATE**

Jun. 08, 2022

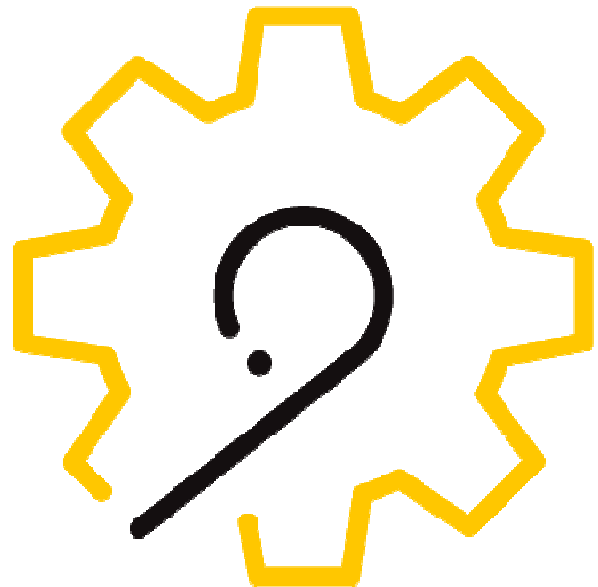
**PAGES**

130

**DOCUMENT CONTROL NUMBER**

GFT-OP-10h (28-Nov-2018)

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# Radio Spectrum TEST REPORT

<b>Applicant:</b>	<b>Dynascan Technology Corp. 6F., No. 88, Wenmao Rd., Leshan Vil., Guishan Dist., Taoyuan City 333001, Taiwan</b>
<b>Product:</b>	<b>Digital Transmission Systems</b>
<b>Model No.:</b>	<b>FBP205</b>
<b>FCC ID:</b>	<b>2AKWYFBP205</b>
<b>Test Method/ Standard:</b>	<b>47 CFR FCC Part 15.407 KDB 789033 D02 v02r01 ANSI C63.10 2013 KDB 662911 D01 v02r01</b>
<b>Test By:</b>	<b>Intertek Testing Services Taiwan Ltd., Hsinchu Laboratory No. 11, Lane 275, Ko-Nan 1 Street, Chia-Tung Li, Shiang-Shan District, Hsinchu City, Taiwan</b>



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**TEST REPORT****Revision History**

<b>Report No.</b>	<b>Issue Date</b>	<b>Revision Summary</b>
220400323THC-001	Jun. 08, 2022	Original report

## Table of Contents

Summary of Test Data .....	5
1. General Information .....	6
1.1 Identification of the EUT .....	6
1.2 Description of the EUT .....	6
1.3 Antenna description .....	7
1.4 Operation mode .....	7
1.5 Peripherals equipment .....	8
2. Maximum Conducted Output Power .....	9
2.1 Limit for maximum output power .....	9
2.2 Measuring instrument setting.....	9
2.3 Test procedure .....	9
2.4 Test diagram .....	9
2.5 Test results.....	10
3. Power Spectrum Density .....	36
3.1 Limit for power spectrum density .....	36
3.2 Measuring instrument setting.....	36
3.3 Test procedure .....	37
3.4 Test diagram .....	37
3.5 Test results.....	38
4. Minimum Bandwidth.....	51
4.1 Limit for minimum emission bandwidth. ....	51
4.2 Measuring instrument setting.....	51
4.3 Test procedure .....	52
4.4 Test diagram .....	52
4.5 Test results.....	53
5. Emissions in Restricted Frequency Bands (Radiated emission measurements) .....	88
5.1 Limit for emission in restricted frequency bands (Radiated emission measurement) ..	88
5.2 Measuring instrument setting.....	89
5.3 Test procedure .....	90
5.4 Test configuration .....	91
5.4.1 Radiated emission from 9 kHz to 30MHz using Loop Antenna .....	91
5.5 Test results.....	93
5.5.1 Measurement results: frequencies from 9 kHz to 30MHz .....	93
5.5.2 Measurement results from 30 MHz to 1GHz .....	97
5.5.3 Measurement results from 1 GHz to 40 GHz .....	99
6. Emission on The Band Edge.....	103
6.1 Measuring instrument setting.....	103
6.2 Test procedure .....	103
6.3 Limit for Band Edge (Radiated emission measurement).....	103
6.4 Test Result.....	104

**TEST REPORT**

7. AC Power Line Conducted Emission ..... 122

    7.1 Measuring instrument setting..... 122

    7.2 Test Procedure..... 122

    7.3 Test Diagram ..... 123

    7.4 Limit..... 123

    7.5 Test Results ..... 124

Appendix A: Test equipment list..... 128

Appendix B: Measurement Uncertainty..... 130

**Summary of Test Data**

Test Requirement	Applicable Rule (Section 15.407)	Result
Maximum Conducted Output Power	15.407 (a)(1)/(2)/(3) KDB 789033 D02 v01r02	Pass
Power Spectrum Density	15.407 (a)(1)/(2)/(3) KDB 789033 D02 v01r02	Pass
Minimum Emission Bandwidth	15.407(a)(5), 15.407(e) KDB 789033 D02 v01r02	Pass
Emissions In Restricted Frequency Bands (Radiated emission measurements)	15.407(b), 15.209	Pass
Emission on The Band Edge	15.407(b), 15.209	Pass
AC Line Conducted Emission	15.407(b)(6) 15.207	Pass
Antenna requirement	15.203	Pass

Note: Please note that the test results with statement of conformity, the decision rules which are based on: Safety Testing: the specification, standard or IEC Guide 115.

Other Testing: the specification, standard and not taking into account the measurement uncertainty.

**TEST REPORT**

**1. General Information**

**1.1 Identification of the EUT**

<b>Product:</b>	Digital Transmission System
<b>Model No.:</b>	FBP205
<b>Operating Frequency:</b>	1. 5180MHz~5240MHz 2. 5745MHz~5825MHz
<b>Channel Number:</b>	1. 7 channels for 5180MHz ~ 5240MHz 2. 8 channels for 5745MHz ~ 5825MHz
<b>Access scheme:</b>	OFDM
<b>Rated Power:</b>	DC 3.3V
<b>Power Cord:</b>	N/A
<b>Sample receiving date:</b>	2022/04/07
<b>Sample condition:</b>	Workable
<b>Test Date(s):</b>	2022/05/04 ~ 2022/05/31

**1.2 Description of the EUT**

Modulation mode	Transmit path	
	Chain 0	Chain 1
802.11 a	V	V
802.11 ac (VHT20)	V	V
802.11 ac (VHT40)	V	V
802.11 ac (VHT80)	V	V

Item	Product name	Model No.	Rated Power
Host 1	Display	67401	100-240V~ 50-60Hz 2A
Host 2	Display	67301	100-240V~ 50-60Hz 3A

**TEST REPORT**

**1.3 Antenna description**

**For antenna 0 (Chain 0)**

Antenna Gain : -2.31 dBi  
 Antenna Type : PIFA antenna  
 Connector Type : I-pex

**For antenna 1 (Chain 1)**

Antenna Gain : -2.31 dBi  
 Antenna Type : PIFA antenna  
 Connector Type : I-pex

**1.4 Operation mode**

Power on, executing “WLAN Test Tool V2.3.0” to select different frequency and modulation.

With individual verifying, the maximum output power were found out 6 Mbps data rate for 802.11a mode, 6.5 Mbps data rate for 802.11ac(VHT20) mode , 13.5 Mbps data rate for 802.11ac(VHT40) mode , 29.3 Mbps data rate for 802.11ac(VHT80) mode , the final tests were executed under these conditions recorded in this report individually.

Mode	Data rate (Mbps)	Signal on time (ms)	signal on+off time (ms)	Duty cycle (%)	Duty Cycle factor
802.11a	6	1.995	2.525	79.01	1.023
802.11ac (VHT20)	6.5	1.880	2.400	78.33	1.061
802.11ac (VHT40)	13.5	0.890	1.440	61.81	2.090
802.11ac (VHT80)	29.3	0.414	0.956	43.31	3.635



**1.5 Peripherals equipment**

<b>Peripherals</b>	<b>Brand</b>	<b>Model No.</b>	<b>Description of Data Cable</b>
Notebook PC	HP	HSTNN-Q96C	Shielded HDMI cable 1.5m x 2
Earphone	i Coby	M80	Unshielded audio 3.5mm cable 2m x 1
USB flash drive	Kingston	DTSE9G2/8GB	N/A
USB flash drive	Kingston	DTSE9G2/8GB	N/A
Wireless AP	BUFFALO	WZR-AGL300NH	N/A

## 2. Maximum Conducted Output Power

### 2.1 Limit for maximum output power

Operating Frequency (MHz)	Conducted output power limit
5150~5725	< 0.25 W (24 dBm)
5725~5850	< 1 W (30 dBm)

Operating Frequency (MHz)	Maximum E.I.R.P. limit
5150~5725	< 1 W (30 dBm)
5725~5850	< 4 W (36 dBm)

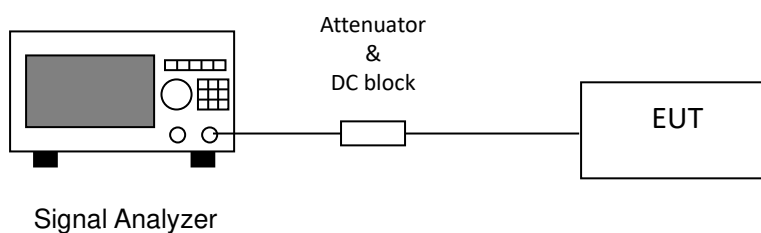
### 2.2 Measuring instrument setting

Spectrum Analyzer function	Setting
RBW	=1 MHz
VBW	$\geq 3$ MHz
Sweep time	Auto couple
Detector	RMS
Trace	Average
Span	Encompass the EBW
Attenuation	Auto
Sweep point	$\geq 2$ Span / RBW

### 2.3 Test procedure

Test procedures refer to clause E) 2) d) Method SA-2 of KDB 789033 D02 v01r02

### 2.4 Test diagram



**TEST REPORT**

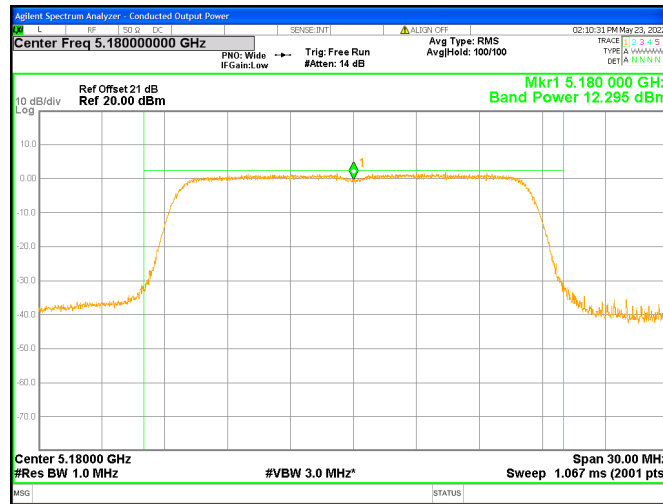
**2.5 Test results**

Temperature (°C) :	24
Relative Humidity (%) :	63
Test date :	2022/05/23
Host 1 :	67401

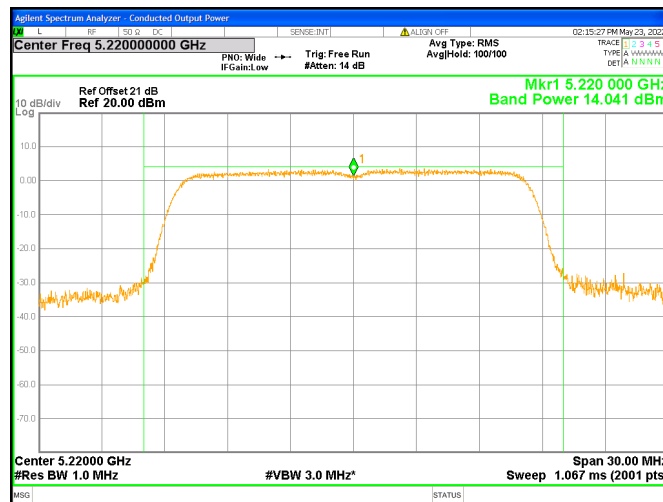
Mode	Ch	Freq (MHz)	Output Power (AV)		Total Power (AV)		Duty Factor	Result dBm	Ant 0 Gain (dBi)	Ant 1 Gain (dBi)	E.I.R.P. (dBm)	Limit of Conducted Power (dBm)	Margin (dB)	Limit of E.I.R.P. (dBm)	Margin (dB)
			Chain 0	Chain 1	mW	dBm									
			dBm	dBm											
802.11a Chain0+1	36	5180	12.30	12.54	34.92	15.43	1.02	16.45	-2.31	-2.31	14.14	24	-7.55	30	-15.86
	44	5220	14.04	12.32	42.42	16.28	1.02	17.30	-2.31	-2.31	14.99	24	-6.70	30	-15.01
	48	5240	17.32	15.34	88.14	19.45	1.02	20.48	-2.31	-2.31	18.17	24	-3.52	30	-11.83
	149	5745	21.46	21.01	266.11	24.25	1.02	25.27	-2.31	-2.31	22.96	30	-4.73	36	-13.04
	157	5785	21.73	20.70	266.45	24.26	1.02	25.28	-2.31	-2.31	22.97	30	-4.72	36	-13.03
	165	5825	21.19	21.27	265.55	24.24	1.02	25.26	-2.31	-2.31	22.95	30	-4.74	36	-13.05
802.11ac (VHT20) Chain0+1	36	5180	9.92	8.89	17.57	12.45	1.06	13.51	-2.31	-2.31	11.20	24	-10.49	30	-18.80
	44	5220	11.36	11.38	27.41	14.38	1.06	15.44	-2.31	-2.31	13.13	24	-8.56	30	-16.87
	48	5240	16.88	16.21	90.57	19.57	1.06	20.63	-2.31	-2.31	18.32	24	-3.37	30	-11.68
	149	5745	21.48	20.81	261.20	24.17	1.06	25.23	-2.31	-2.31	22.92	30	-4.77	36	-13.08
	157	5785	21.40	21.01	264.00	24.22	1.06	25.28	-2.31	-2.31	22.97	30	-4.72	36	-13.03
	165	5825	20.91	20.90	246.42	23.92	1.06	24.98	-2.31	-2.31	22.67	30	-5.02	36	-13.33
802.11ac (VHT40) Chain0+1	38	5190	3.86	2.95	4.40	6.44	2.09	8.53	-2.31	-2.31	6.22	24	-15.47	30	-23.78
	46	5230	15.98	15.24	73.01	18.63	2.09	20.72	-2.31	-2.31	18.41	24	-3.28	30	-11.59
	151	5755	20.41	19.72	203.63	23.09	2.09	25.18	-2.31	-2.31	22.87	30	-4.82	36	-13.13
	159	5795	20.55	20.28	220.06	23.43	2.09	25.52	-2.31	-2.31	23.21	30	-4.48	36	-12.79
802.11ac (VHT80) Chain0+1	42	5210	5.46	4.15	6.12	7.87	3.63	11.50	-2.31	-2.31	9.19	24	-12.50	30	-20.81
	155	5775	18.73	18.49	145.25	21.62	3.63	25.26	-2.31	-2.31	22.95	30	-4.74	36	-13.05

Note: Result=Total Power+Duty Factor

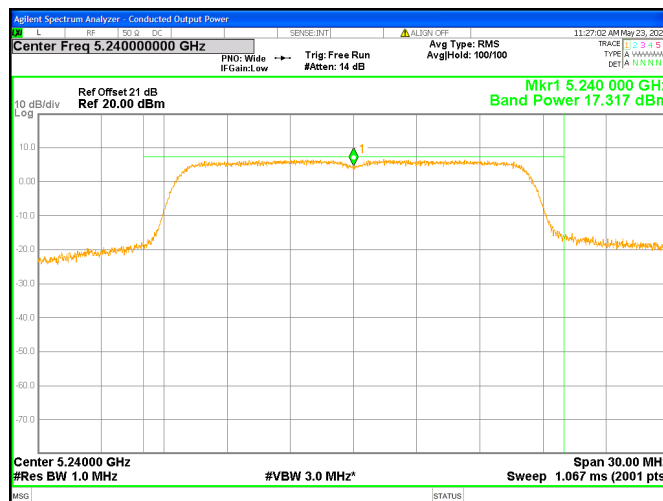
### Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch36



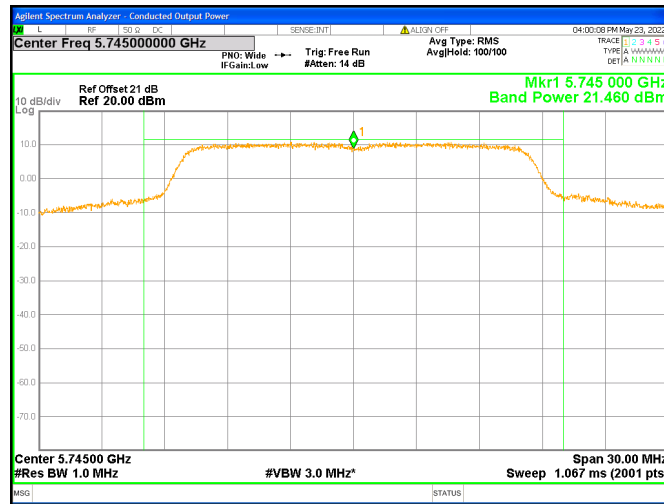
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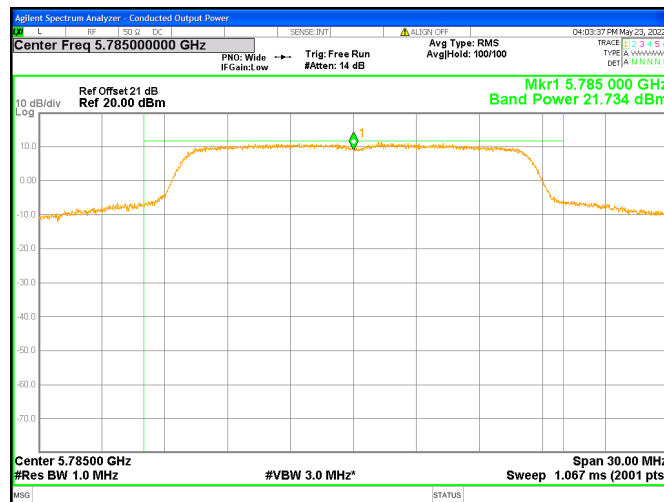
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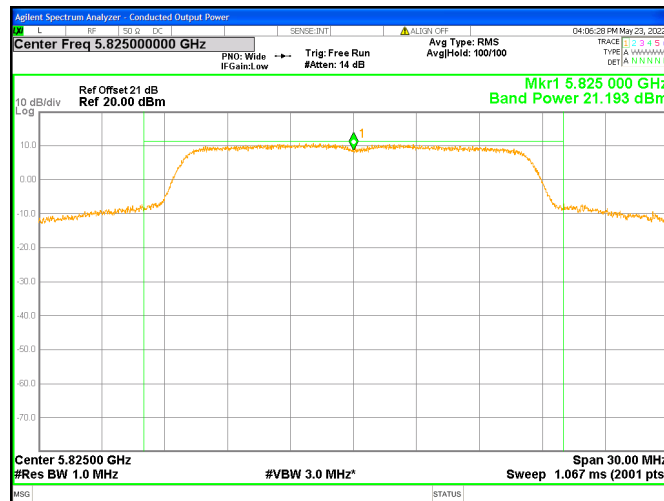
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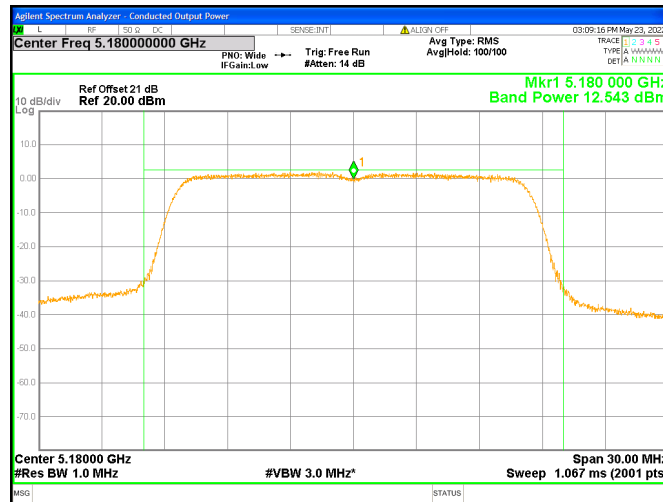
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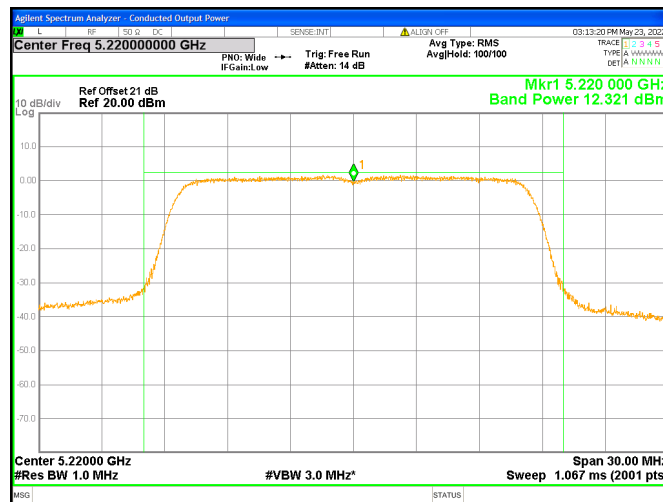
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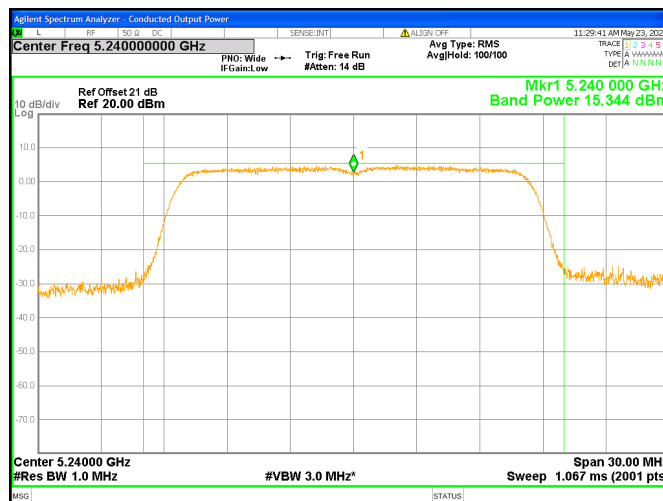
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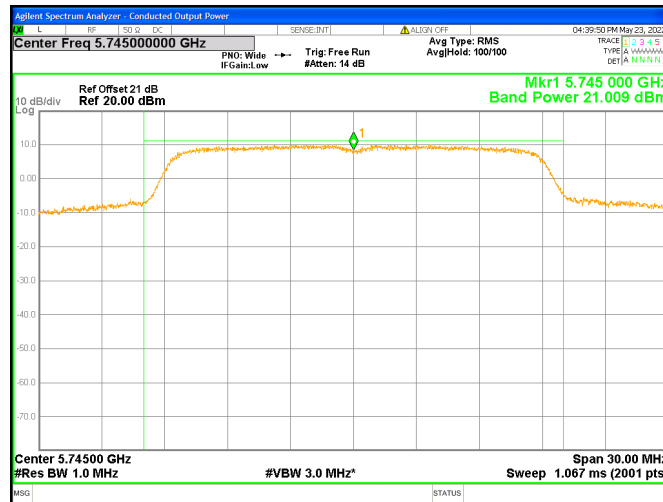
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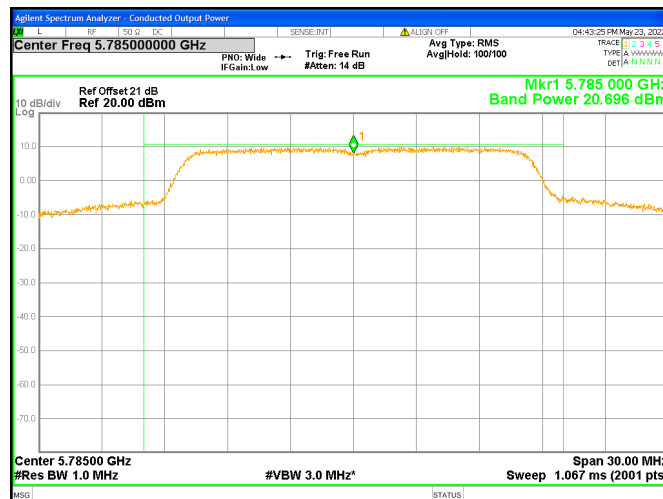
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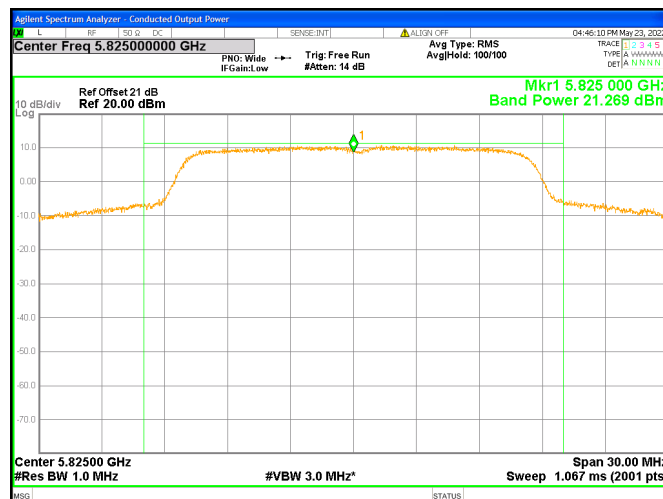
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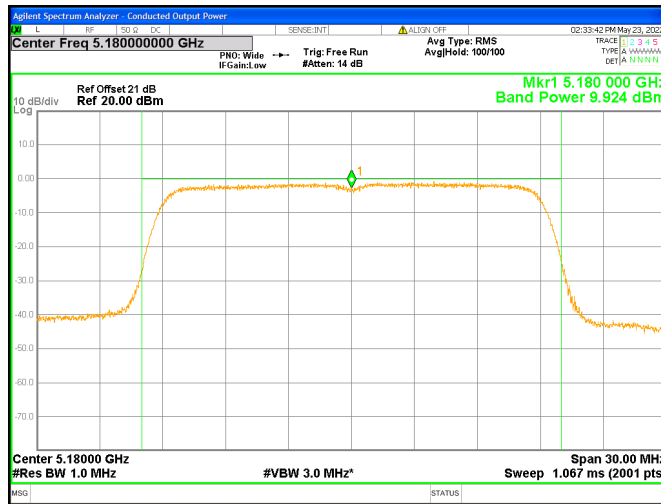
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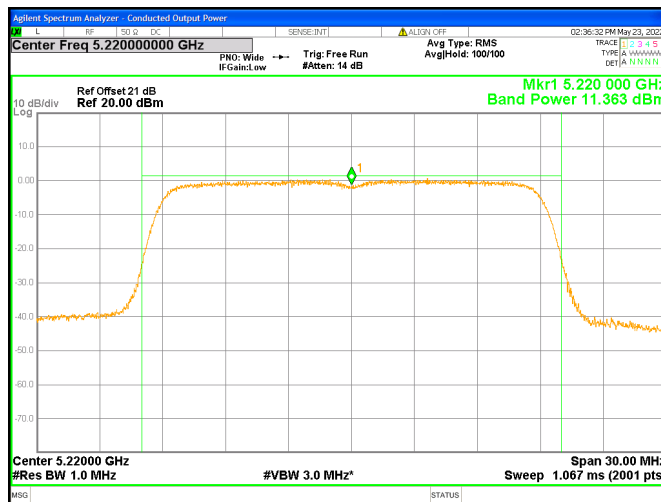
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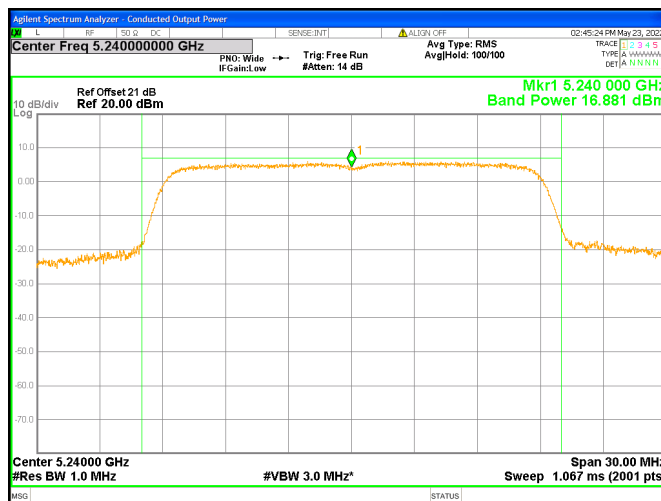
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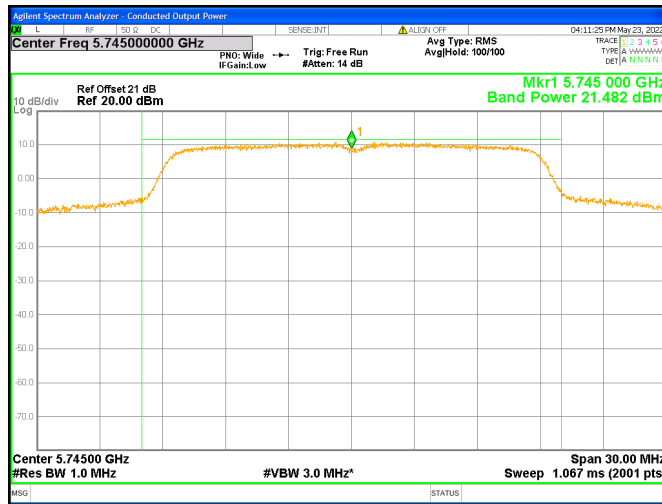


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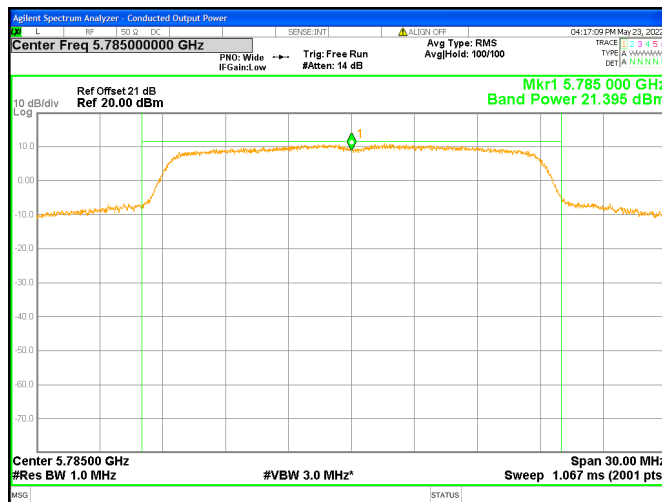




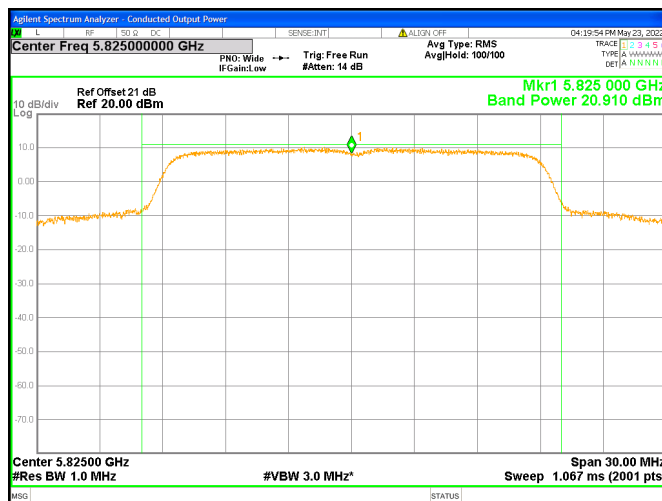
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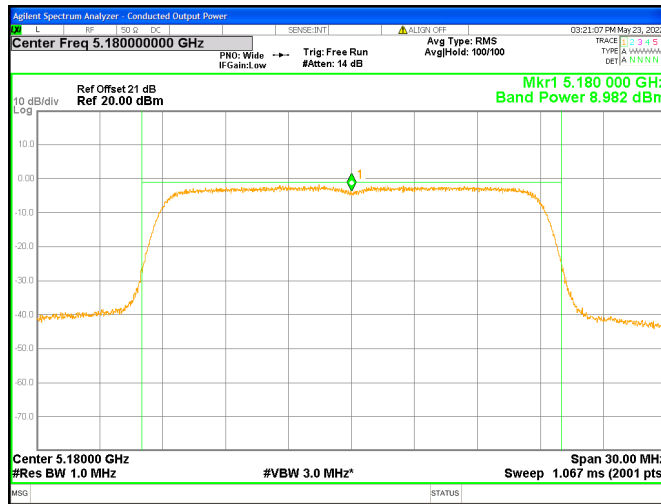
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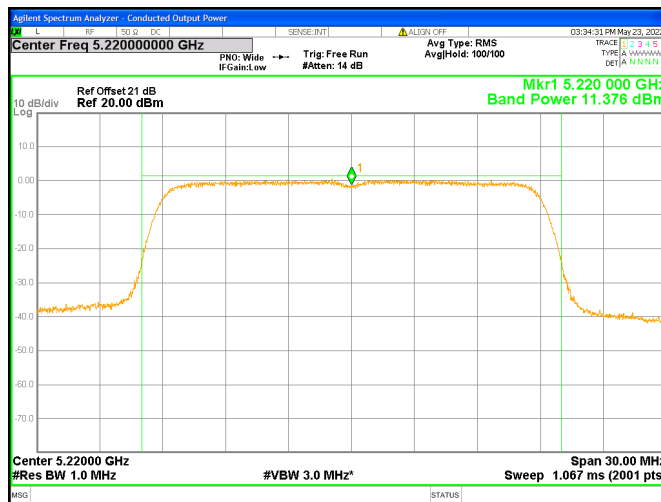
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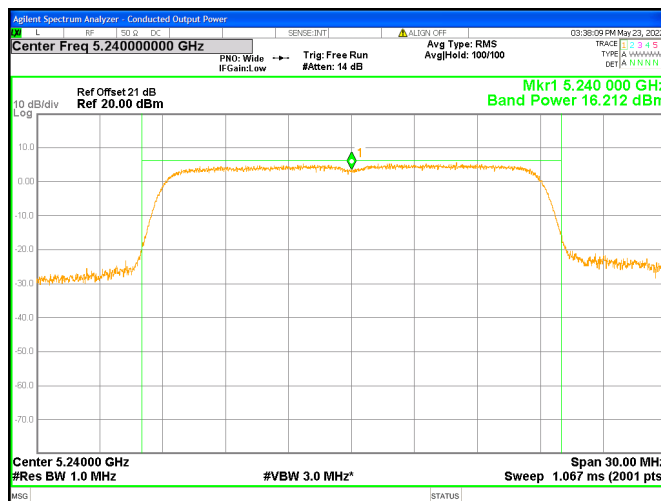
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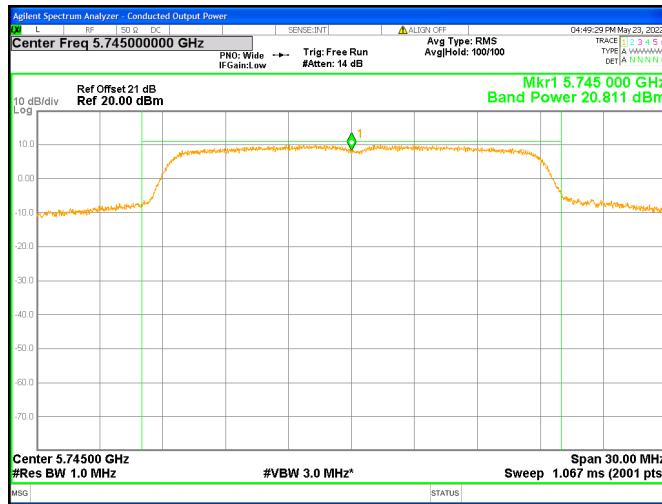
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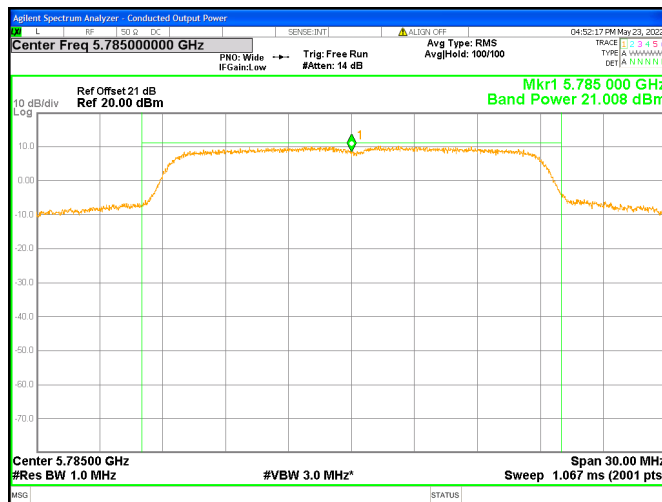
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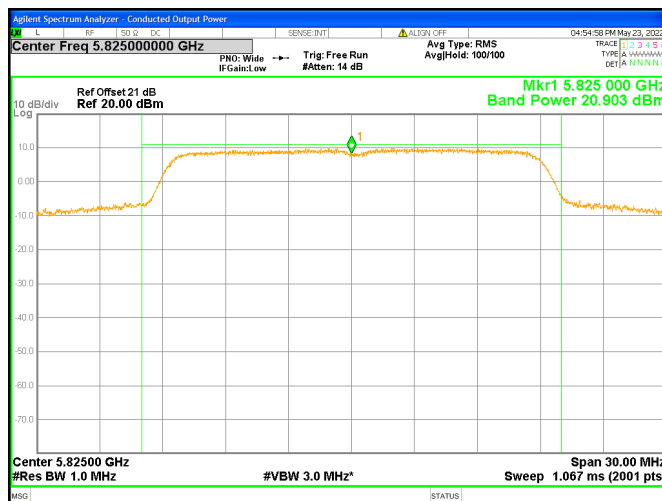
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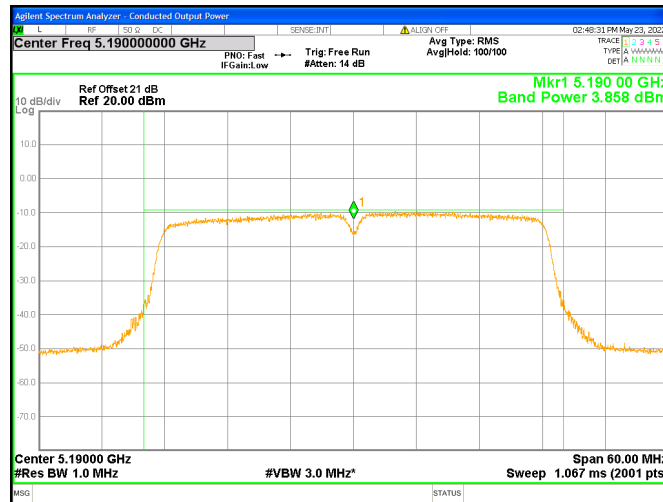
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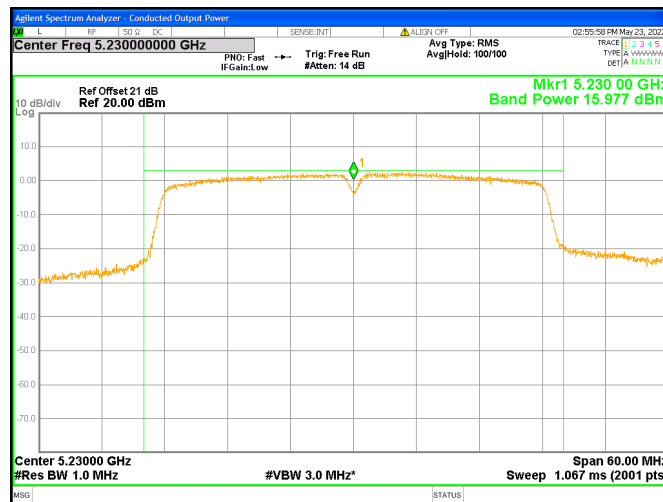
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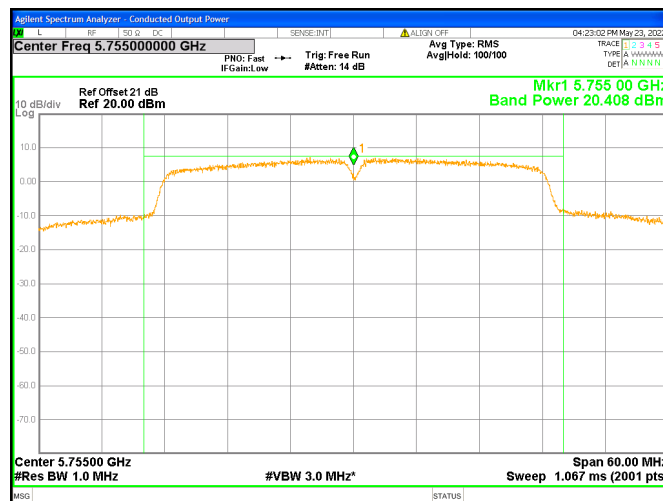
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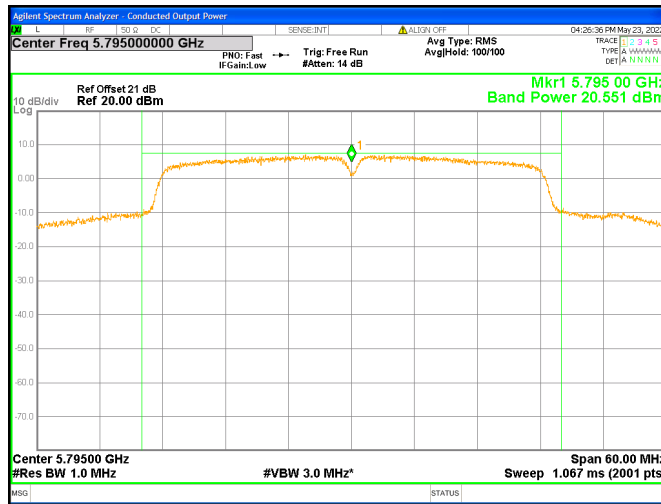
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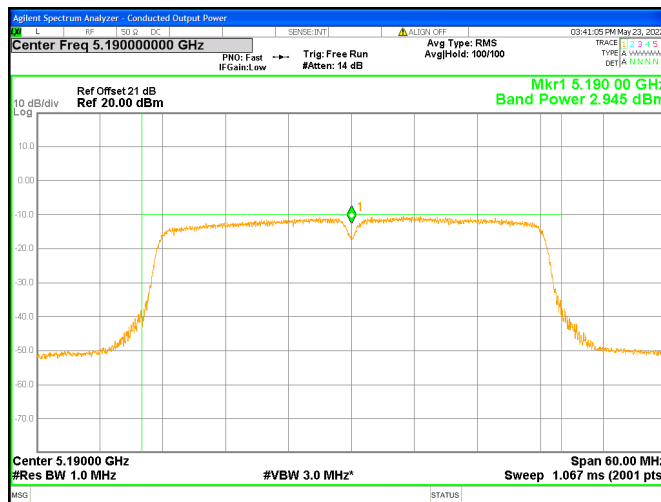
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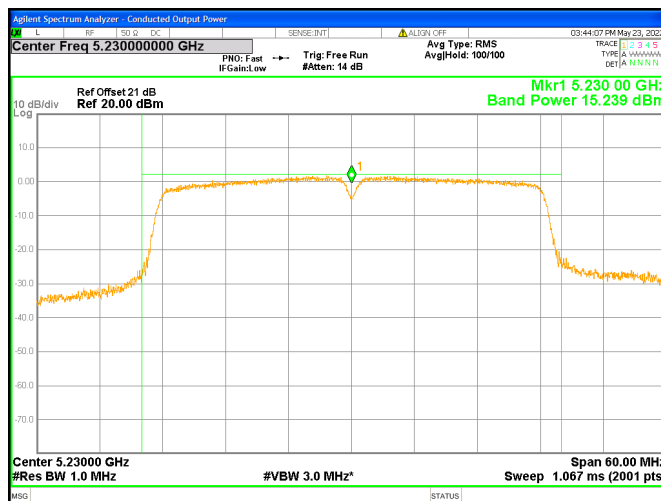
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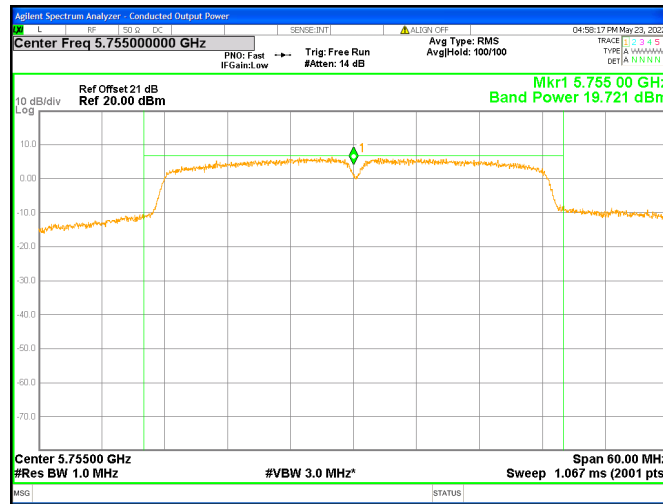
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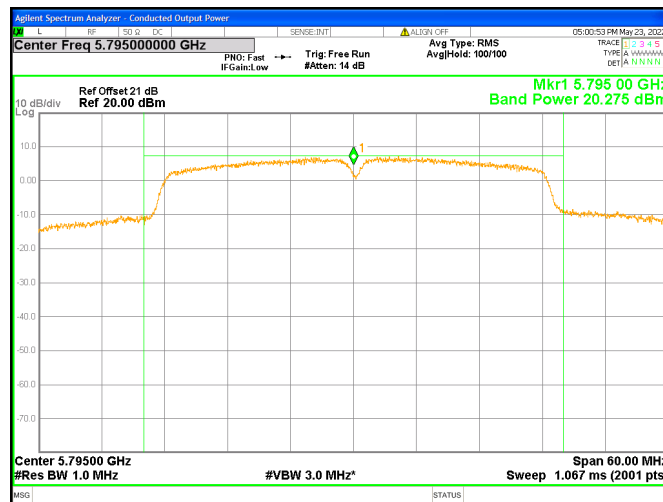
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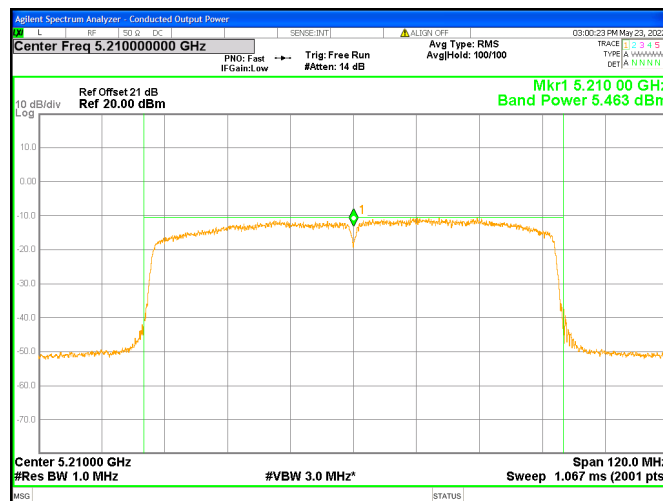
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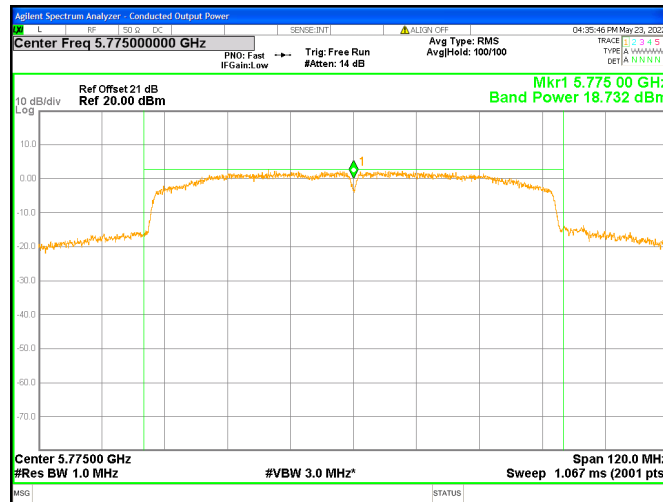
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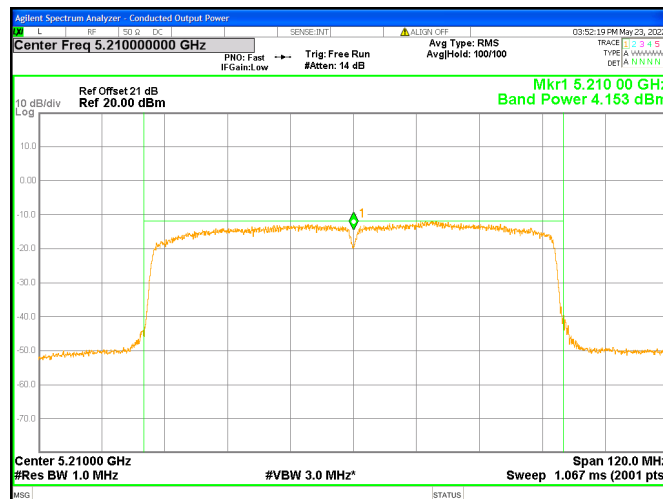
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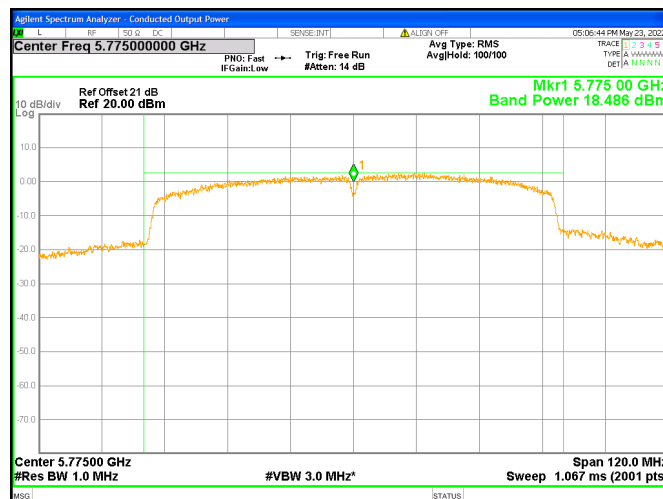
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### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch42



### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch155



## TEST REPORT

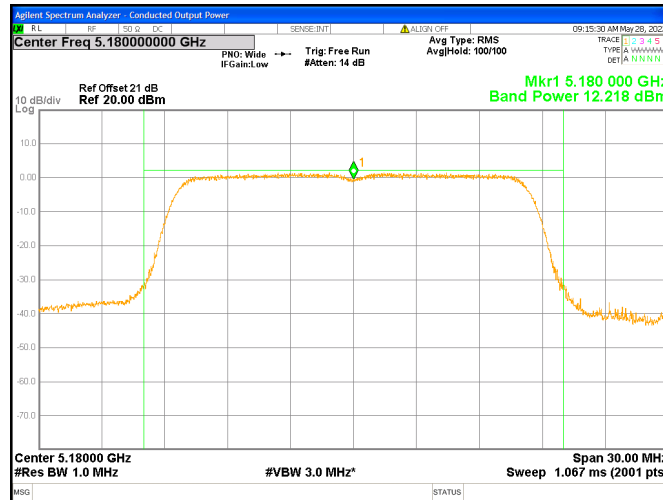
Temperature (°C) :	26
Relative Humidity (%) :	61
Test date :	2022/05/25
Host 2 :	67301

Mode	Ch	Freq (MHz)	Output Power (AV)		Total Power (AV)		Duty Factor	Result dBm	Ant 0 Gain (dBi)	Ant 1 Gain (dBi)	E.I.R.P. (dBm)	Limit of Conducted Power (dBm)	Margin (dB)	Limit of E.I.R.P. (dBm)	Margin (dB)
			Chain 0	Chain 1	mW	dBm									
			dBm	dBm											
802.11a	36	5180	12.22	10.98	29.18	14.65	1.02	15.67	-2.31	-2.31	13.36	24	-8.33	30	-16.64
	44	5220	13.95	12.29	41.80	16.21	1.02	17.24	-2.31	-2.31	14.93	24	-6.76	30	-15.07
	48	5240	17.31	15.11	86.20	19.36	1.02	20.38	-2.31	-2.31	18.07	24	-3.62	30	-11.93
	149	5745	20.52	19.52	202.14	23.06	1.02	24.08	-2.31	-2.31	21.77	30	-5.92	36	-14.23
	157	5785	20.54	19.81	209.07	23.20	1.02	24.23	-2.31	-2.31	21.92	30	-5.77	36	-14.08
	165	5825	20.01	20.17	204.11	23.10	1.02	24.12	-2.31	-2.31	21.81	30	-5.88	36	-14.19
802.11ac (VHT20)	36	5180	9.83	8.86	17.30	12.38	1.06	13.44	-2.31	-2.31	11.13	24	-10.56	30	-18.87
	44	5220	11.32	10.07	23.72	13.75	1.06	14.81	-2.31	-2.31	12.50	24	-9.19	30	-17.50
	48	5240	16.75	15.08	79.53	19.01	1.06	20.07	-2.31	-2.31	17.76	24	-3.93	30	-12.24
	149	5745	19.91	20.12	200.91	23.03	1.06	24.09	-2.31	-2.31	21.78	30	-5.91	36	-14.22
	157	5785	20.20	19.90	202.39	23.06	1.06	24.12	-2.31	-2.31	21.81	30	-5.88	36	-14.19
	165	5825	20.37	19.49	197.76	22.96	1.06	24.02	-2.31	-2.31	21.71	30	-5.98	36	-14.29
802.11ac (VHT40)	38	5190	3.83	2.74	4.30	6.33	2.09	8.42	-2.31	-2.31	6.11	24	-15.58	30	-23.89
	46	5230	15.72	14.09	63.00	17.99	2.09	20.08	-2.31	-2.31	17.77	24	-3.92	30	-12.23
	151	5755	19.07	19.09	161.65	22.09	2.09	24.18	-2.31	-2.31	21.87	30	-5.82	36	-14.13
	159	5795	19.10	18.87	158.36	22.00	2.09	24.09	-2.31	-2.31	21.78	30	-5.91	36	-14.22
802.11ac (VHT80)	42	5210	4.99	4.06	5.70	7.56	3.63	11.19	-2.31	-2.31	8.88	24	-12.81	30	-21.12
	155	5775	18.69	18.23	140.48	21.48	3.63	25.11	-2.31	-2.31	22.80	30	-4.89	36	-13.20

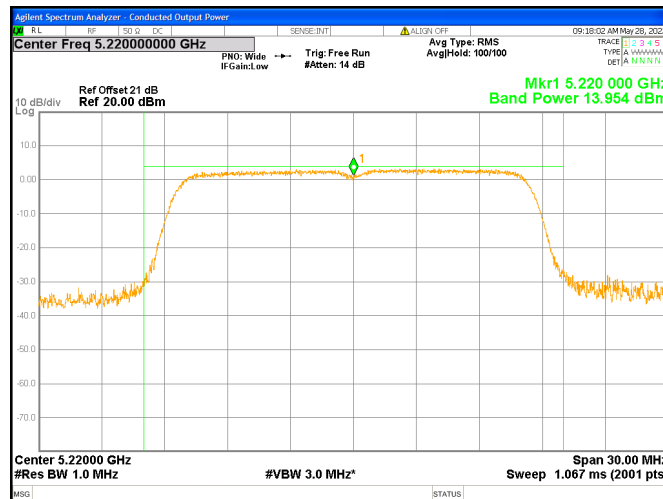
Note: Result=Total Power+Duty Factor



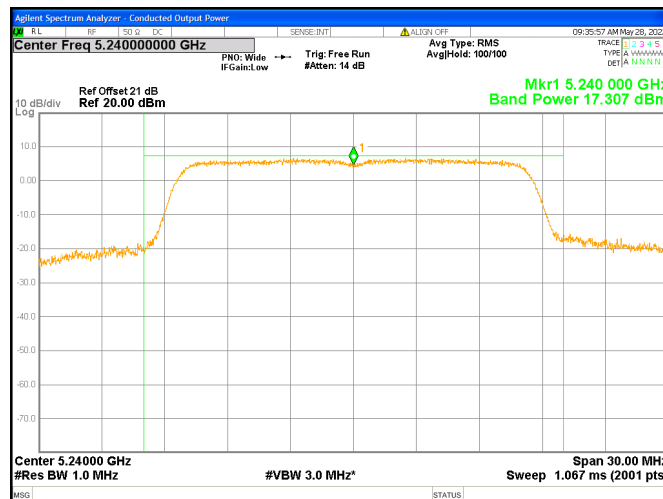
### Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch36



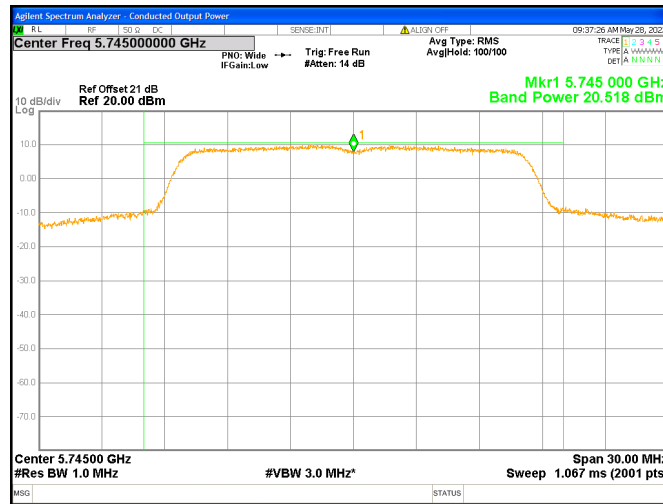
### Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch44



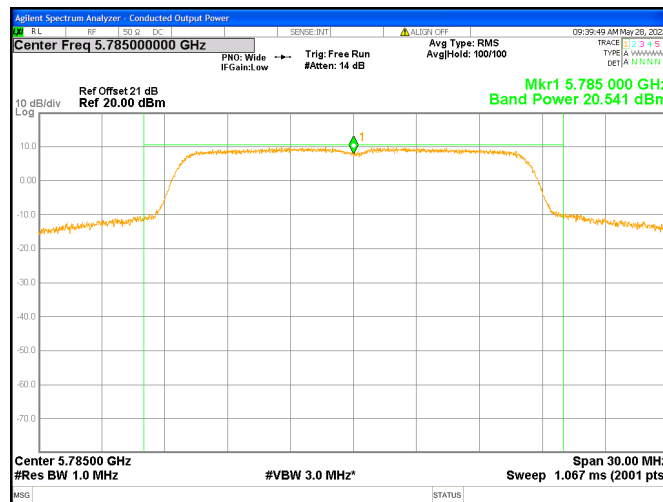
### Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch48



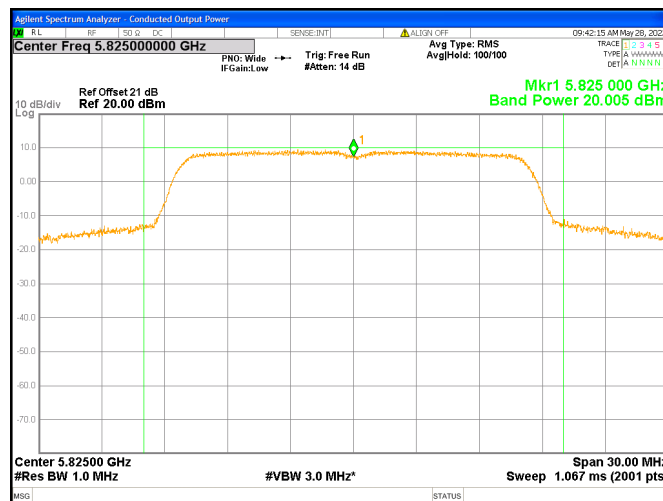
### Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch149



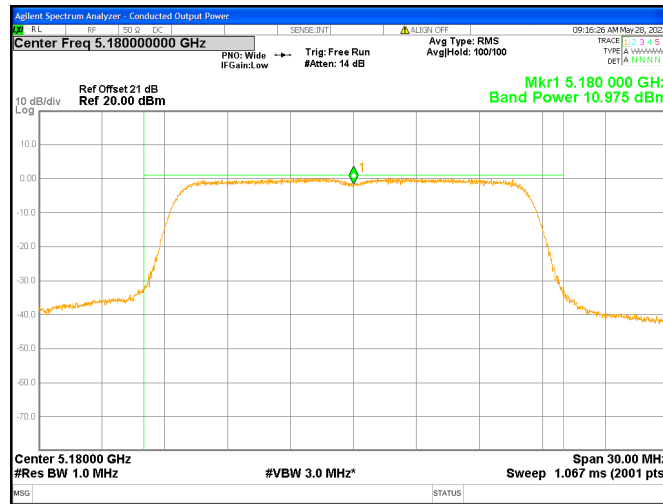
### Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch157



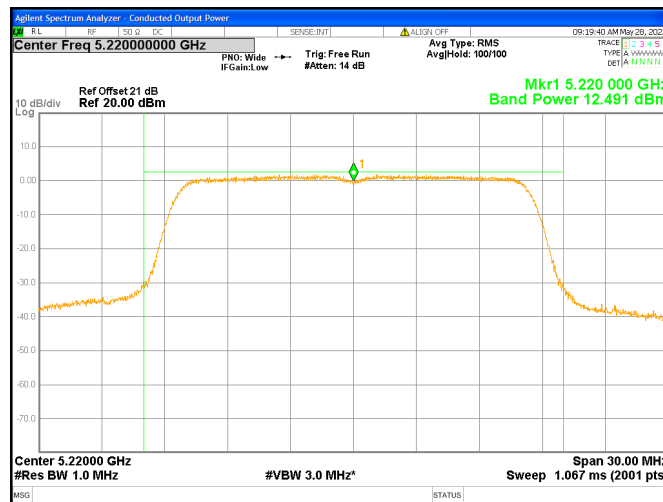
### Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch165



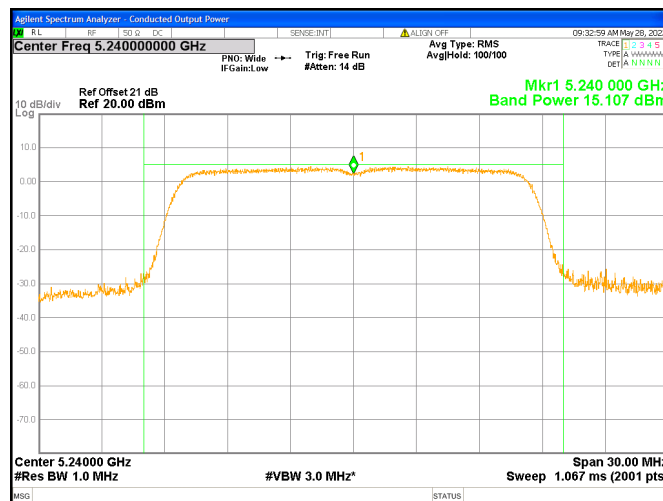
### Chain1 : Conducted Power & EIRP @ 802.11a Mode Ch36



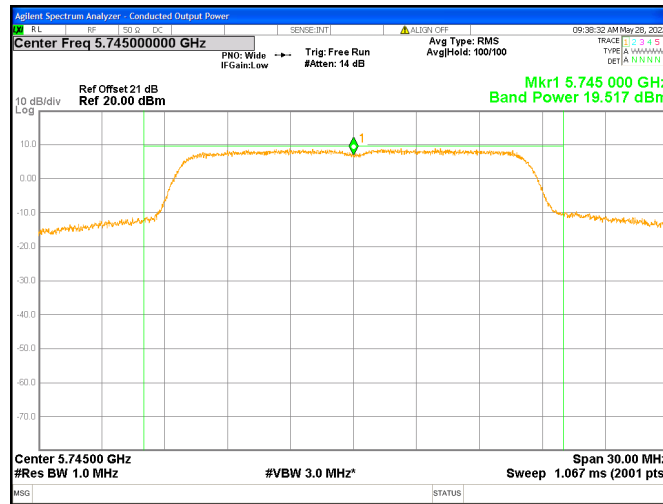
### Chain1 : Conducted Power & EIRP @ 802.11a Mode Ch44



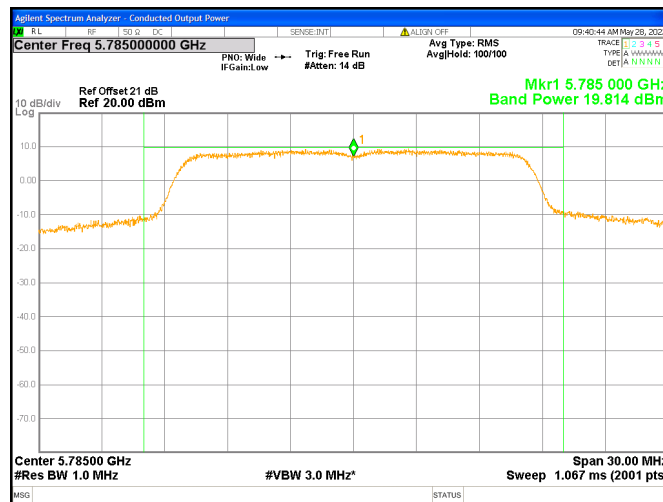
### Chain1 : Conducted Power & EIRP @ 802.11a Mode Ch48



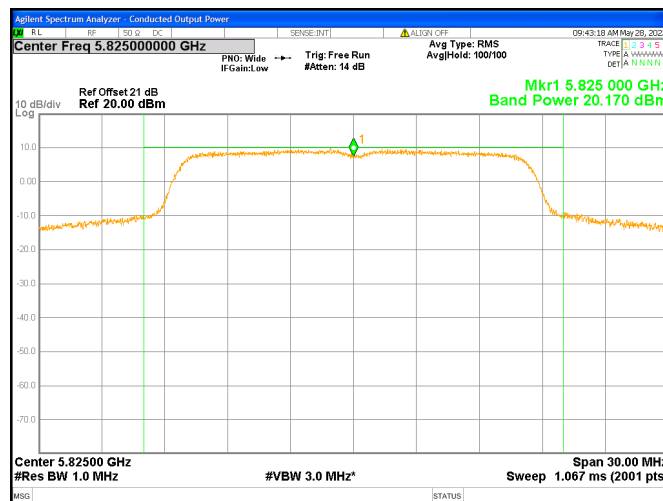
### Chain1 : Conducted Power & EIRP @ 802.11a Mode Ch149



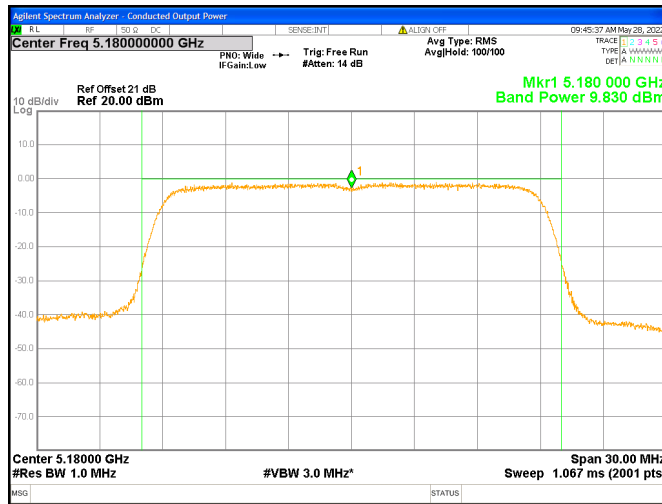
### Chain1 : Conducted Power & EIRP @ 802.11a Mode Ch157



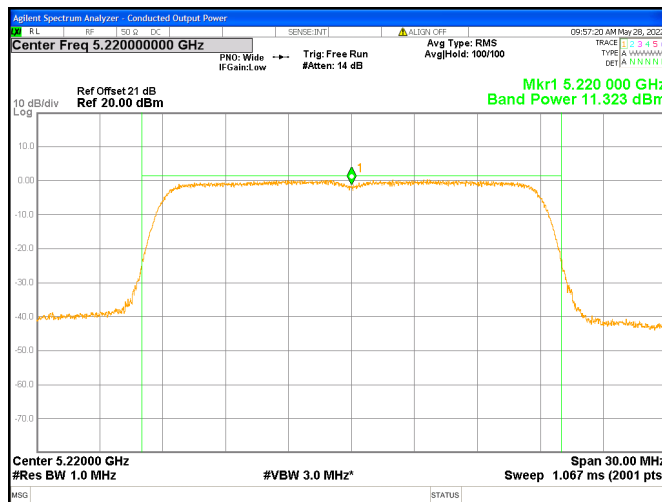
### Chain1 : Conducted Power & EIRP @ 802.11a Mode Ch165



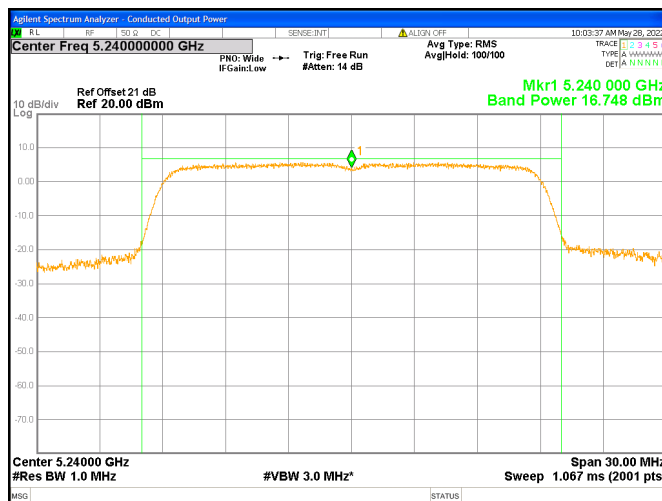
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch36



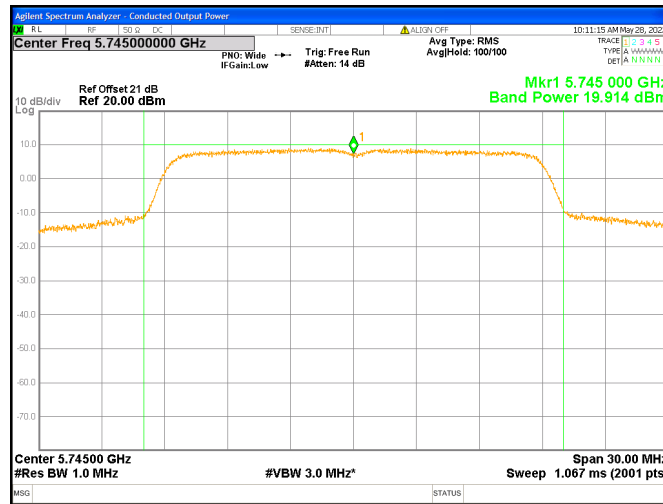
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch44



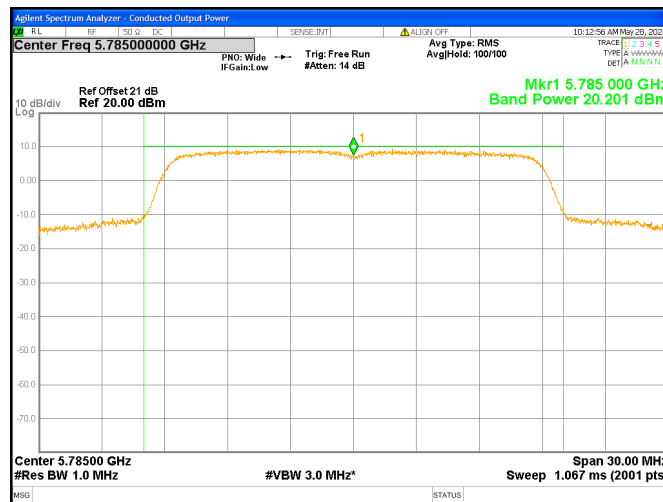
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch48



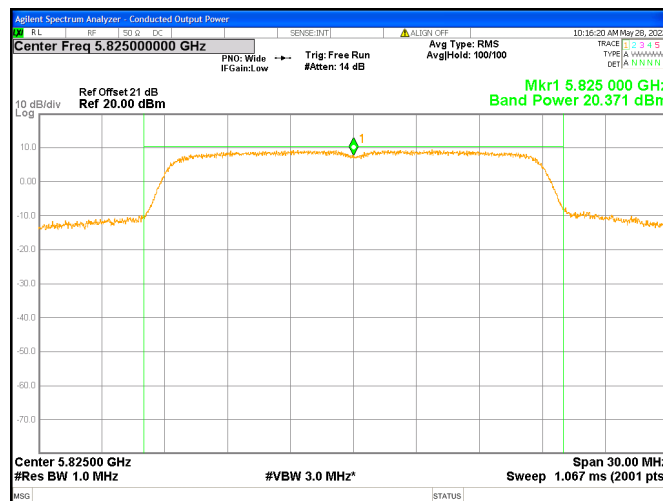
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch149



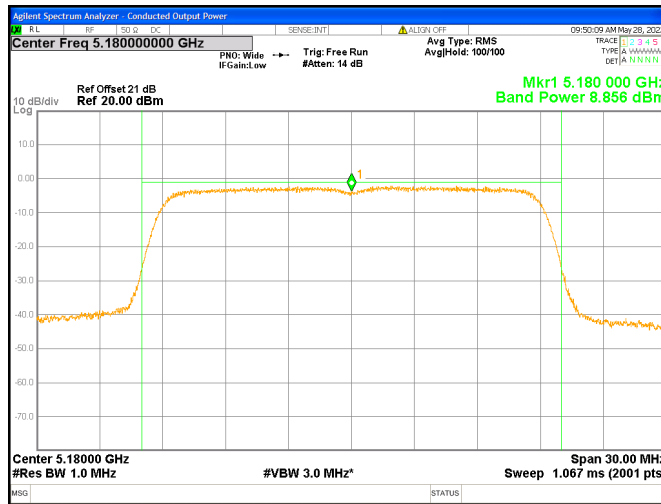
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch157



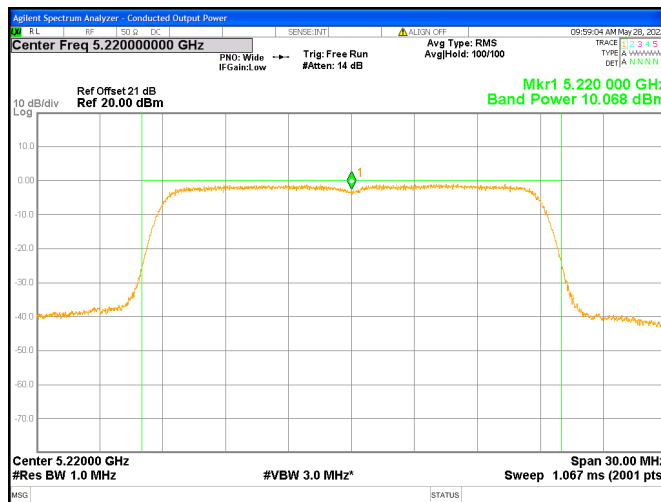
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch165



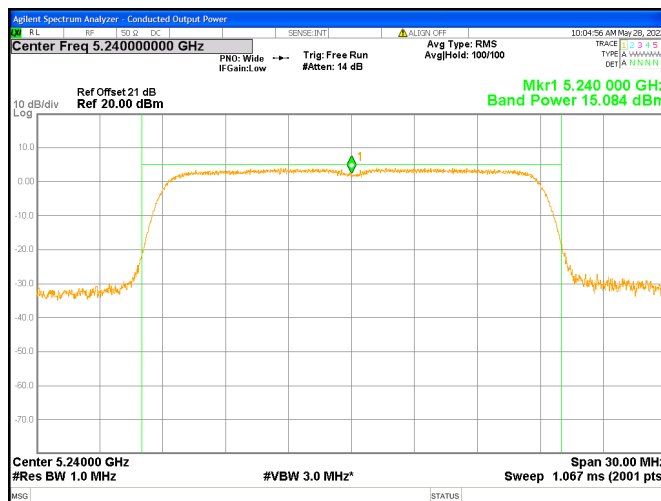
### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch36



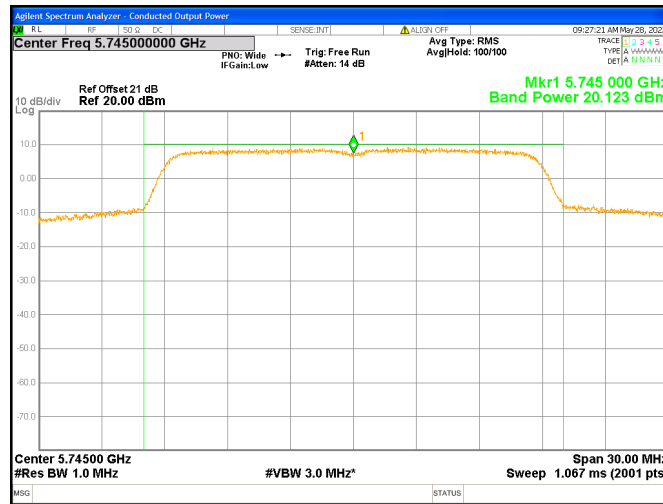
### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch44



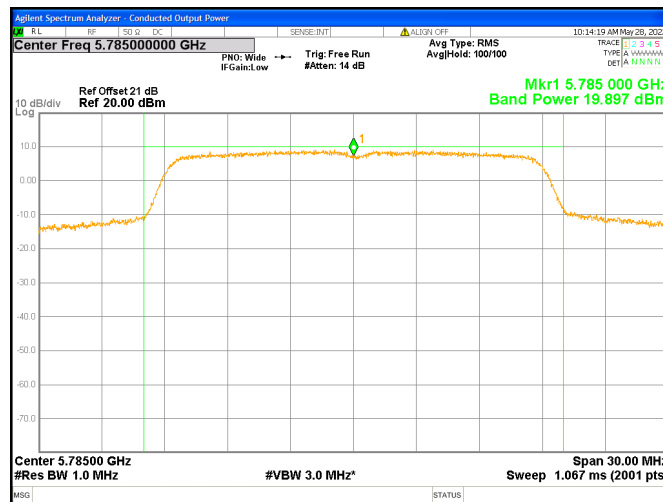
### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch48



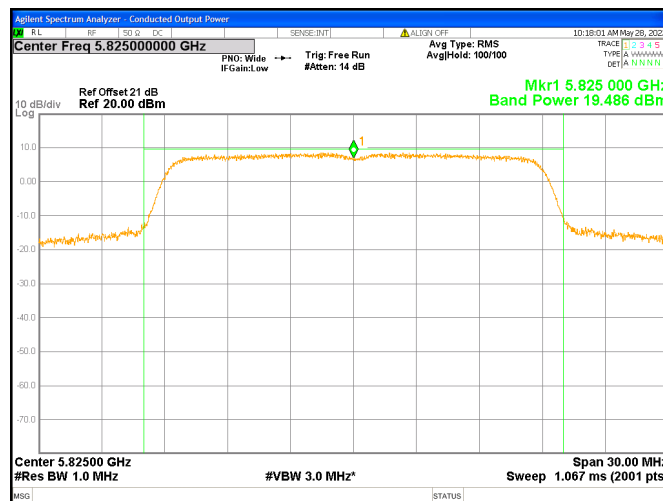
## Chain1 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch149



## Chain1 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch157

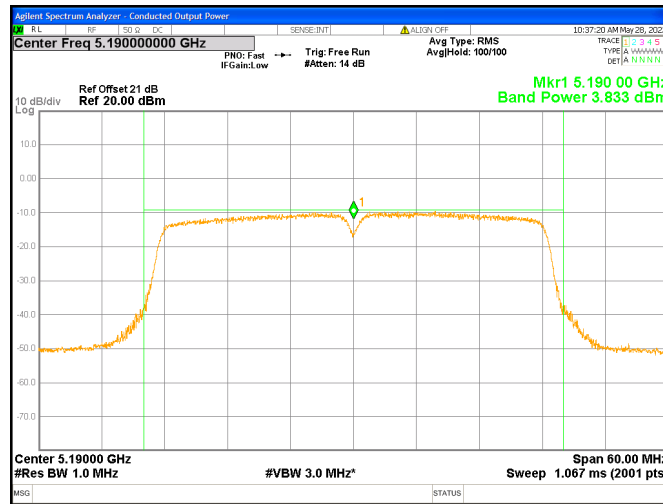


## Chain1 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch165

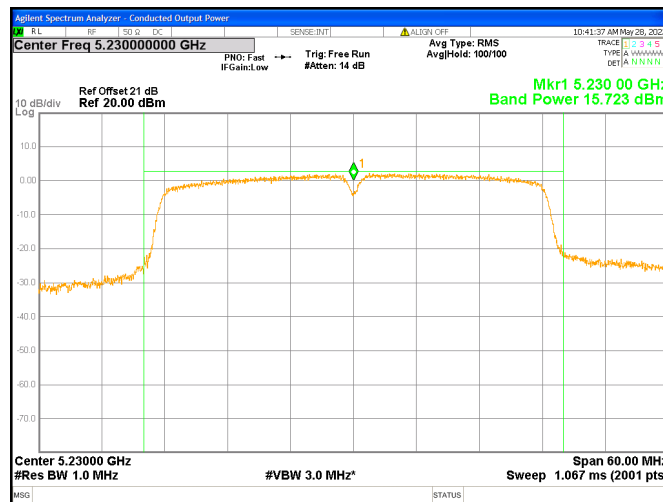




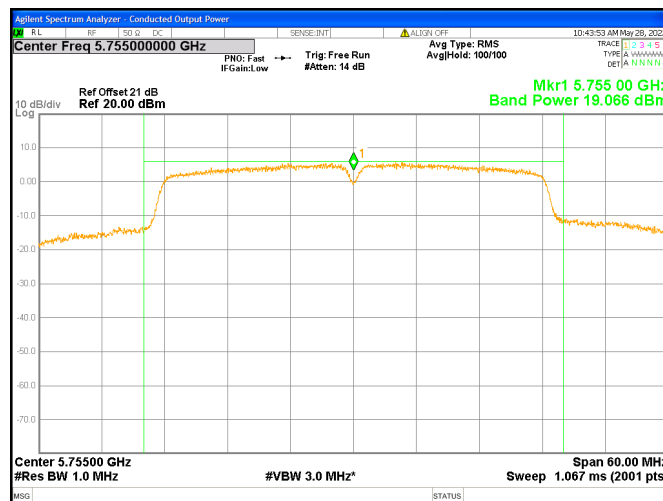
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch38



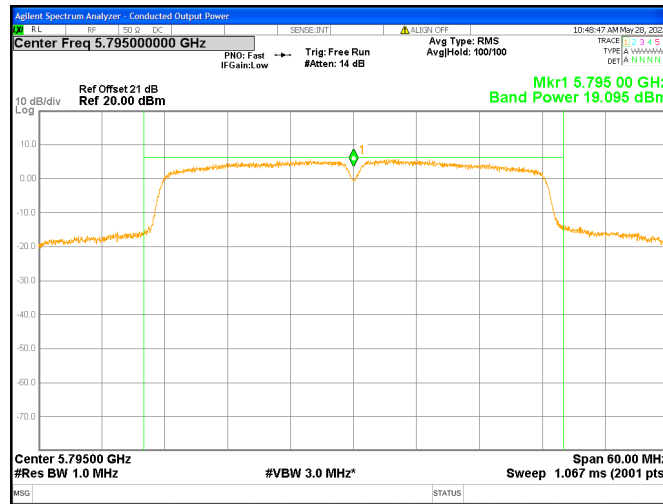
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch46



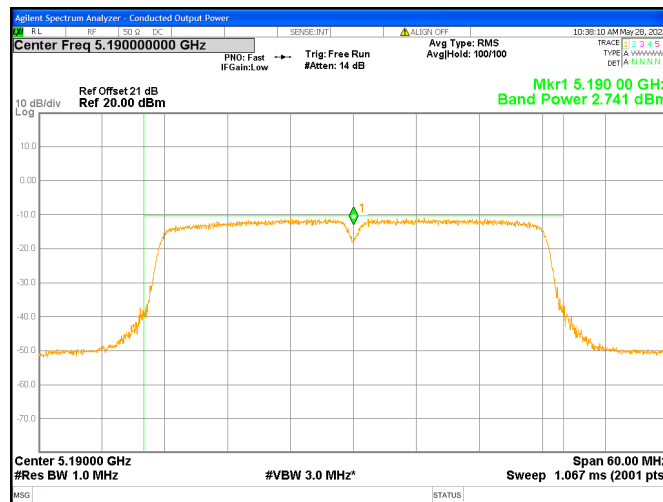
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch151



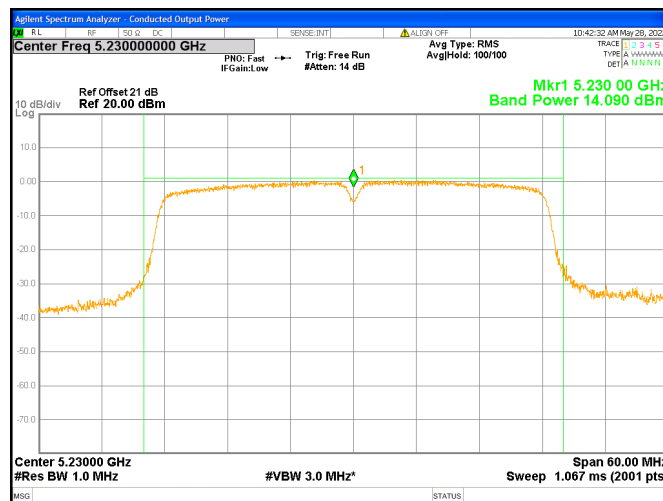
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch159



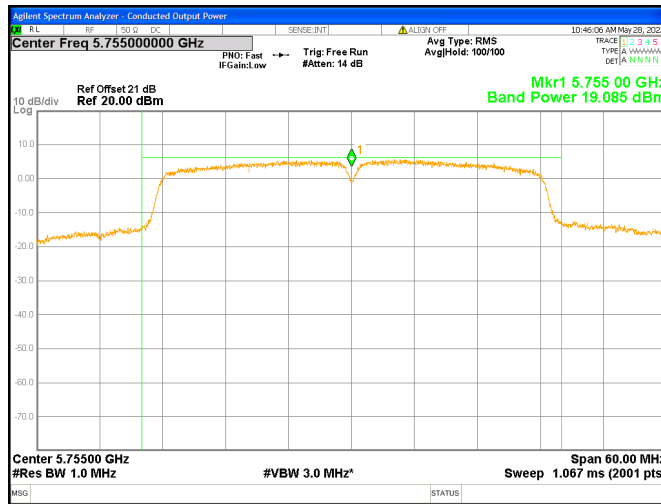
### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch38



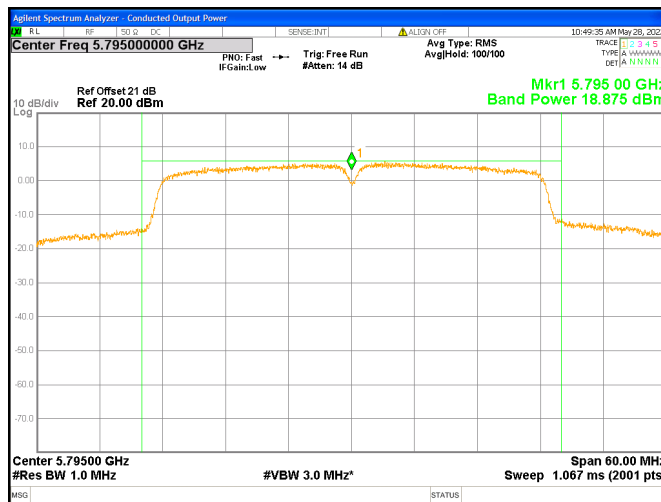
### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch46



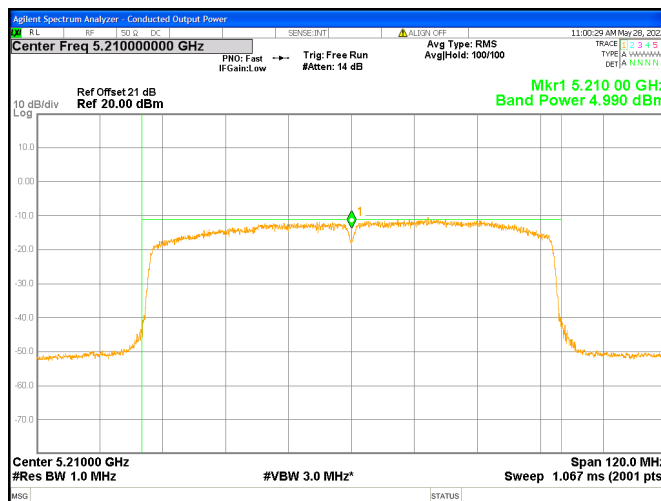
### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch151



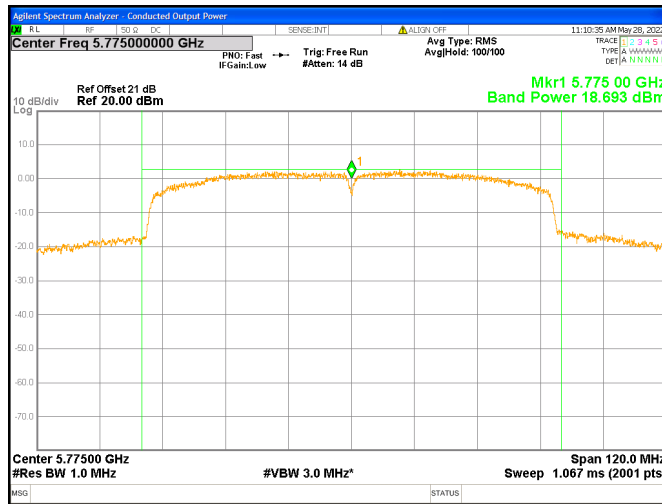
### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch159



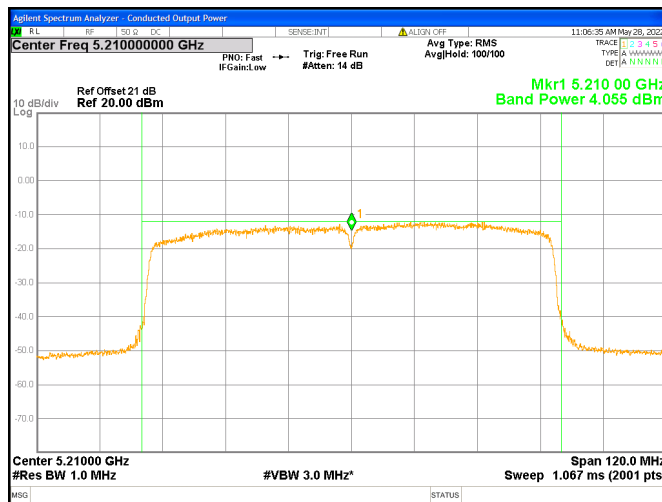
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch42



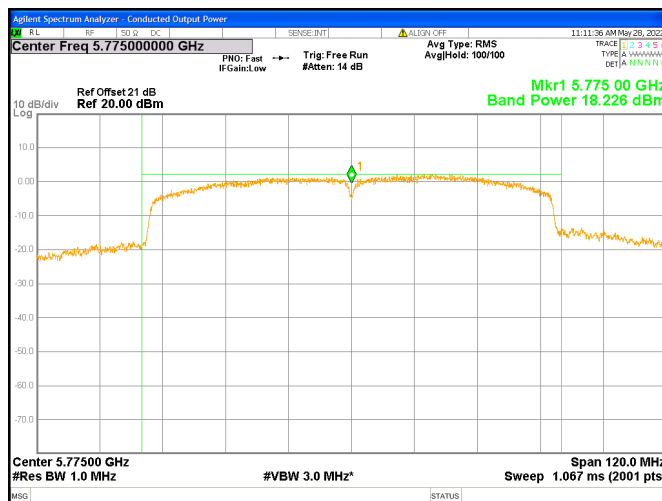
### Chain0 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch155



### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch42



### Chain1 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch155



### 3. Power Spectrum Density

#### 3.1 Limit for power spectrum density

Operating Frequency (MHz)	Power density limit
5150~5725	< 11 dBm/1MHz
5725~5850	< 30 dBm/500kHz

#### 3.2 Measuring instrument setting

Spectrum analyzer settings (5150~5725MHz)	
Spectrum Analyzer function	Setting
Detector	RMS
RBW	=1MHz
VBW	$\geq 3$ MHz
Sweep	Auto couple
Trace	Average
Span	Encompass the 26 dB EBW
Attenuation	Auto
Sweep point	$\geq 2$ Span / RBW

Spectrum analyzer settings (5725~5850MHz)	
Spectrum Analyzer function	Setting
Detector	RMS
RBW	=100kHz
VBW	$\geq 300$ kHz
Sweep	Auto couple
Trace	Average
Span	Encompass the 26 dB EBW
Attenuation	Auto
Sweep point	$\geq 2$ Span / RBW

### 3.3 Test procedure

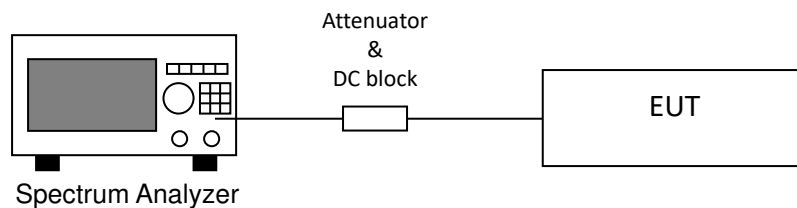
Set relevant parameter according to clause 4.3.

Trace average at least 100 traces in power averaging mode.

Compute power by integrating the spectrum across the 26 dB or 6dB EBW of the signal using the instrument's band power measurement function with band limits set equal to the EBW band edges.

If measurement bandwidth of Maximum PSD is specified in 500 kHz, add  $10\log(500\text{kHz}/\text{RBW})$  to the measured result, whereas RBW ( $< 500 \text{ KHz}$ ) is the reduced resolution bandwidth of the spectrum analyzer set during measurement. The RBW is 100 kHz. So, we will add 6.989 to the results.

### 3.4 Test diagram



## TEST REPORT

### 3.5 Test results

Temperature (°C) :	24
Relative Humidity (%) :	63
Test date :	2022/05/23
Host 1 :	67401

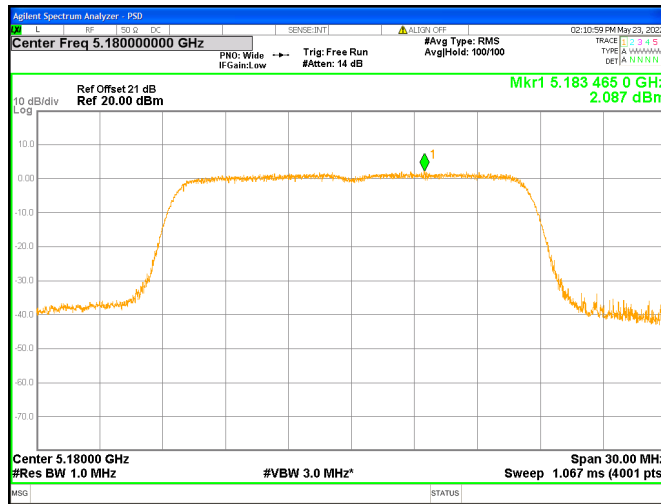
Mode	Ch	Freq (MHz)	PSD (dBm)		Total PSD		RBW Correction	Duty Factor	Result (dBm)	Limit (dBm)	Margin (dB)
			Chain 0	Chain 1	mW	dBm					
802.11a Chain0+1	36	5180	2.087	1.678	3.089	4.898		1.02	5.921	11.00	-5.079
	44	5220	3.506	2.016	3.833	5.835		1.02	6.858	11.00	-4.142
	48	5240	6.950	4.789	7.967	9.013		1.02	10.036	11.00	-0.964
	149	5745	1.005	0.338	2.341	3.695	6.99	1.02	11.707	30.00	-18.293
	157	5785	1.056	1.039	2.546	4.058	6.99	1.02	12.071	30.00	-17.929
	165	5825	1.321	0.994	2.613	4.171	6.99	1.02	12.184	30.00	-17.816
802.11ac (VHT20) Chain0+1	36	5180	-0.831	-1.668	1.507	1.781		1.06	2.841	11.00	-8.159
	44	5220	0.525	0.174	2.169	3.363		1.06	4.424	11.00	-6.576
	48	5240	6.294	5.637	7.922	8.988		1.06	10.049	11.00	-0.951
	149	5745	1.052	-0.231	2.222	3.468	6.99	1.06	11.518	30.00	-18.482
	157	5785	0.656	0.279	2.229	3.482	6.99	1.06	11.532	30.00	-18.468
	165	5825	0.384	1.369	2.463	3.915	6.99	1.06	11.965	30.00	-18.035
802.11ac (VHT40) Chain0+1	38	5190	-8.884	-9.817	0.234	-6.315		2.09	-4.225	11.00	-15.225
	46	5230	3.290	2.342	3.848	5.852		2.09	7.942	11.00	-3.058
	151	5755	-2.133	-2.601	1.161	0.650	6.99	2.09	9.729	30.00	-20.271
	159	5795	-1.364	-2.366	1.310	1.174	6.99	2.09	10.254	30.00	-19.746
802.11ac (VHT80) Chain0+1	42	5210	-9.403	-11.080	0.193	-7.151		3.63	-3.516	11.00	-14.516
	155	5775	-6.137	-6.750	0.455	-3.422	6.99	3.63	7.202	30.00	-22.798

Note : RBW Correction in 5725~5850MHz :

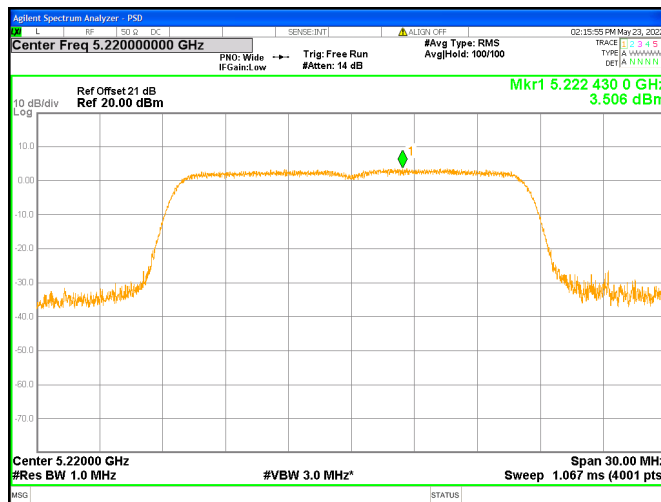
$$10\log(500\text{kHz}/100\text{kHz})$$

$$\text{Result}=\text{Total Power}+\text{Duty Factor}$$

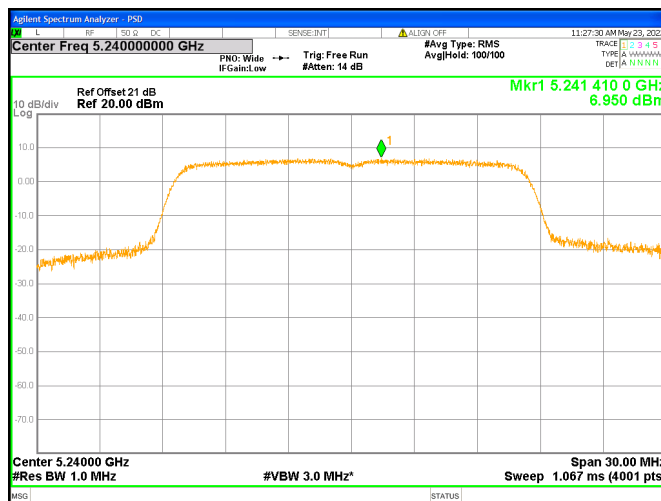
### Chain0 : Power Spectral Density @ 802.11a Mode Ch36



### Chain0 : Power Spectral Density @ 802.11a Mode Ch44

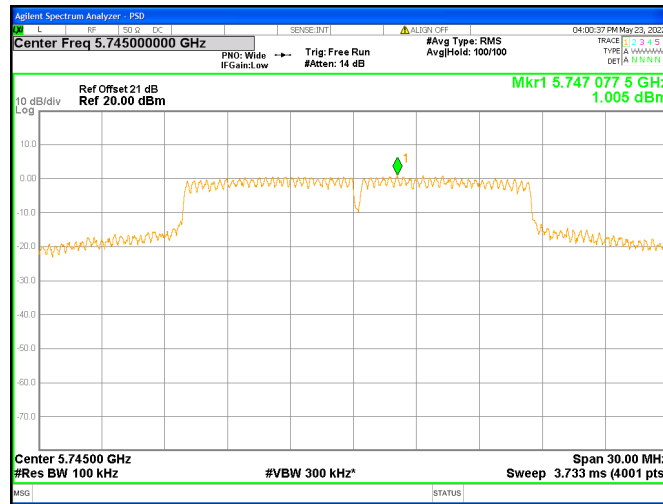


### Chain0 : Power Spectral Density @ 802.11a Mode Ch48

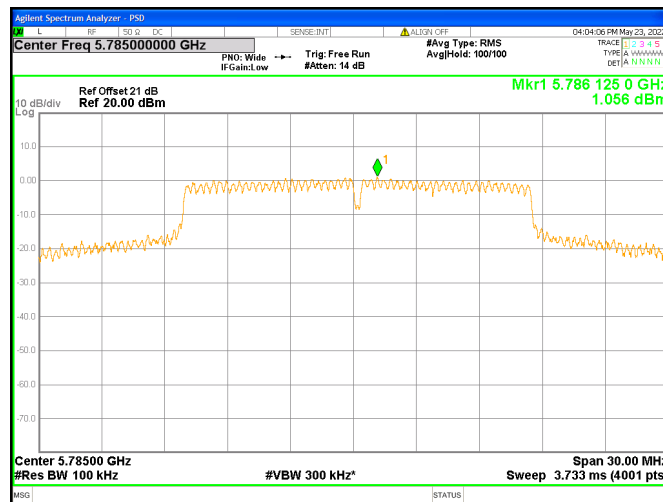




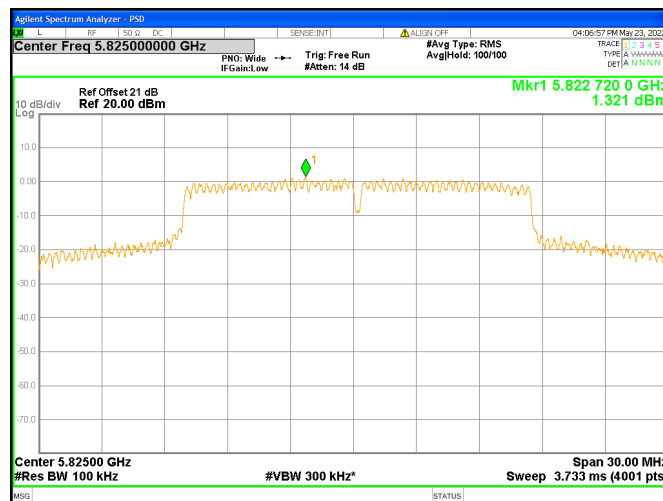
### Chain0 : Power Spectral Density @ 802.11a Mode Ch149



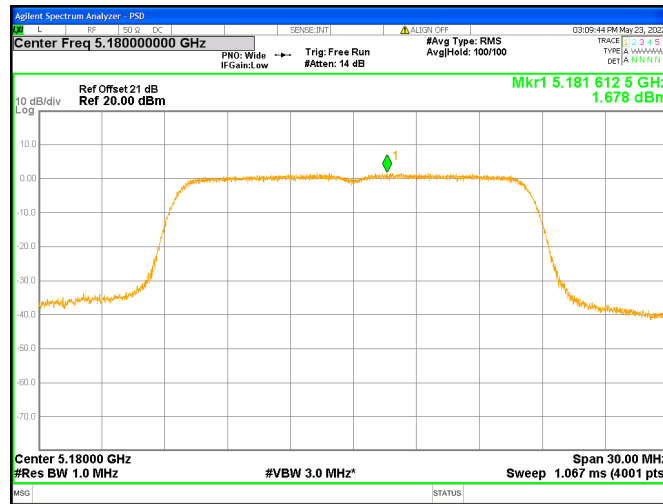
### Chain0 : Power Spectral Density @ 802.11a Mode Ch157



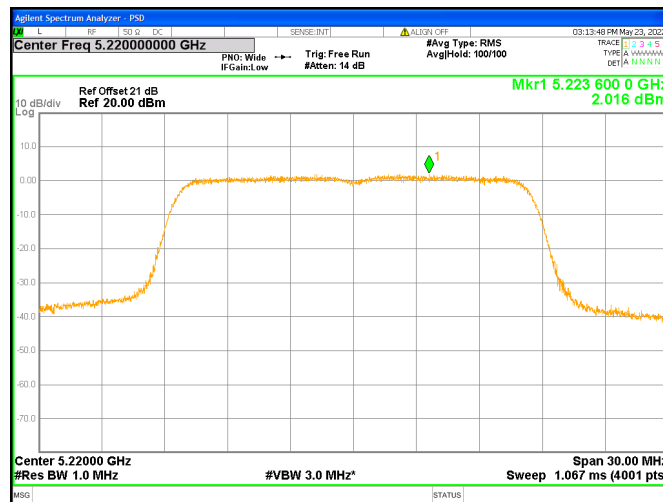
### Chain0 : Power Spectral Density @ 802.11a Mode Ch165



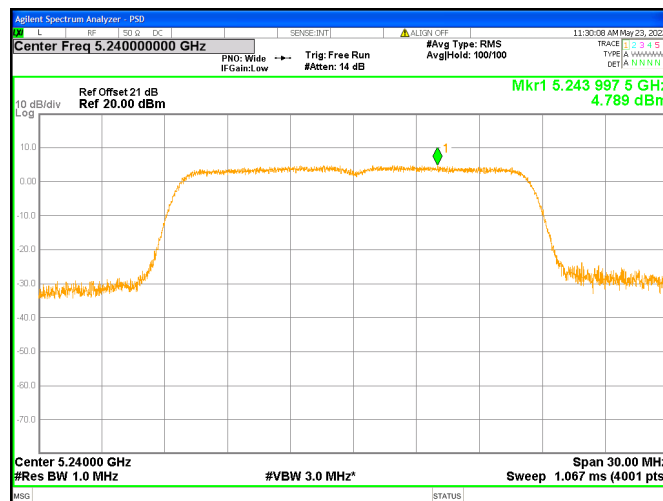
### Chain1 : Power Spectral Density @ 802.11a Mode Ch36



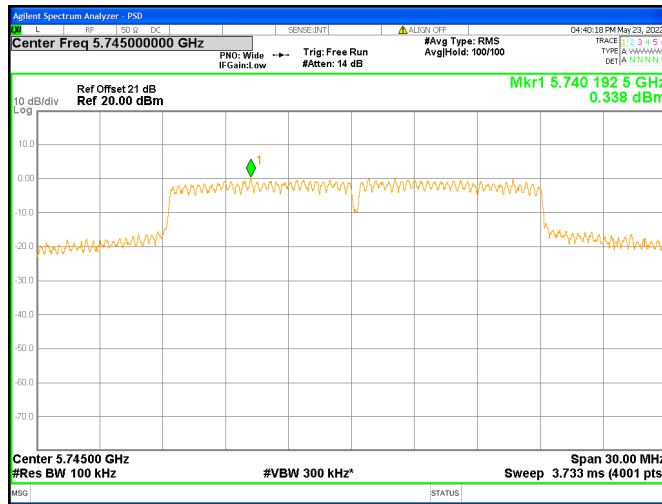
### Chain1 : Power Spectral Density @ 802.11a Mode Ch44



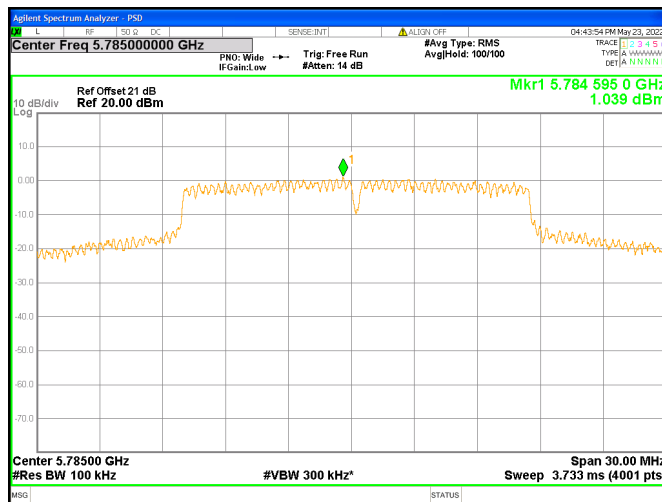
### Chain1 : Power Spectral Density @ 802.11a Mode Ch48



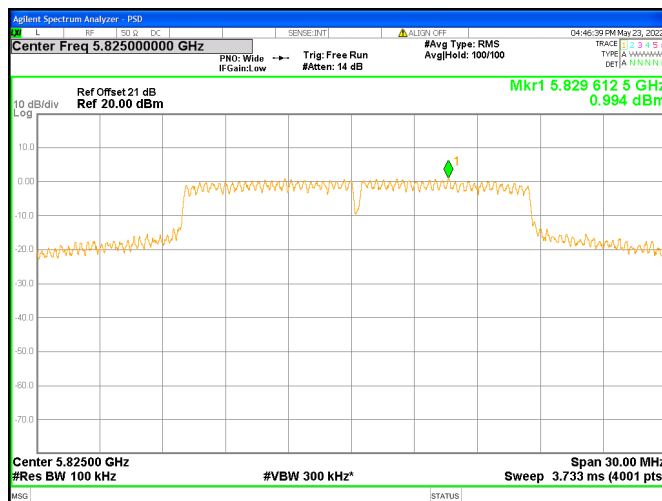
### Chain1 : Power Spectral Density @ 802.11a Mode Ch149



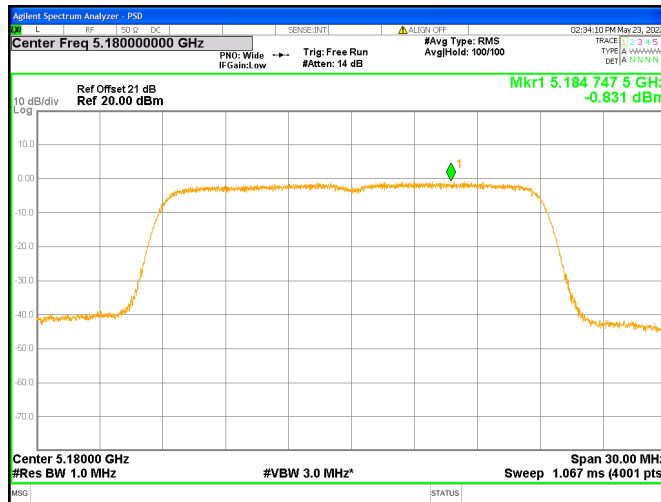
### Chain1 : Power Spectral Density @ 802.11a Mode Ch157



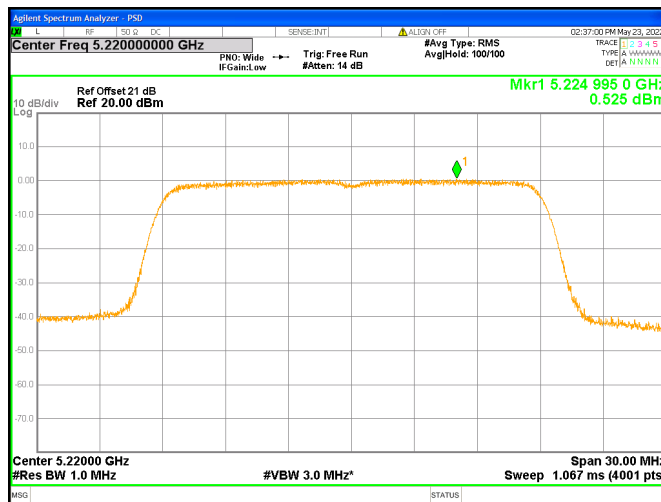
### Chain1 : Power Spectral Density @ 802.11a Mode Ch165



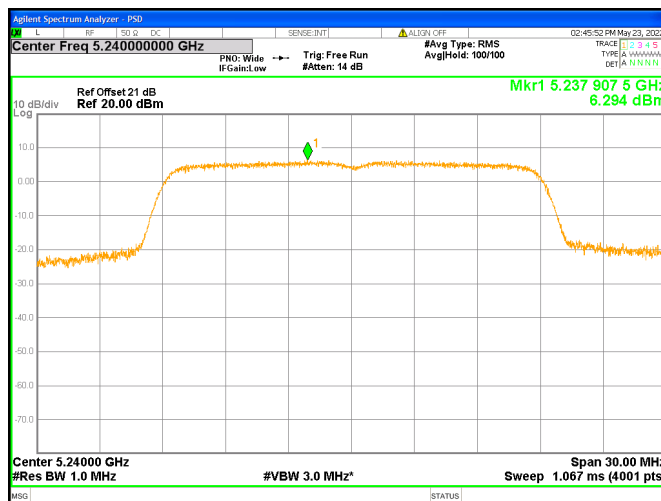
### Chain0 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch36



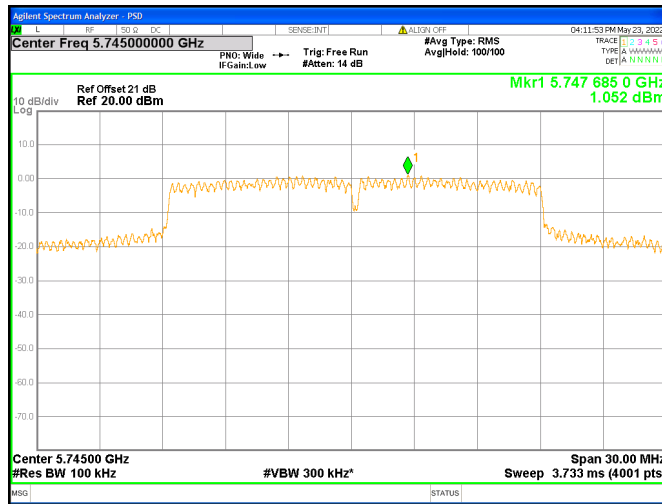
### Chain0 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch44



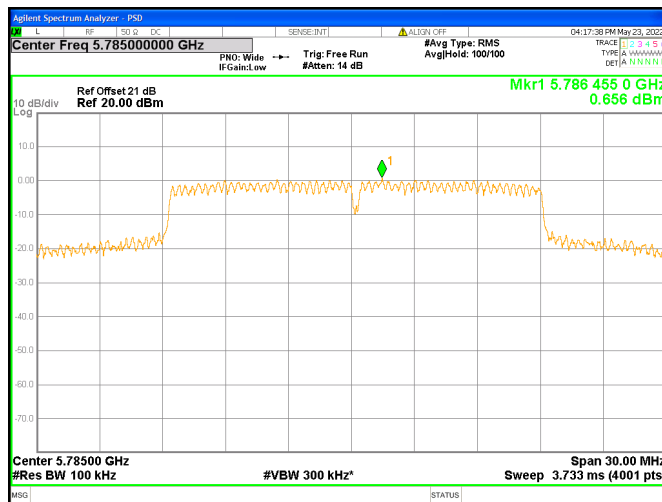
### Chain0 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch48



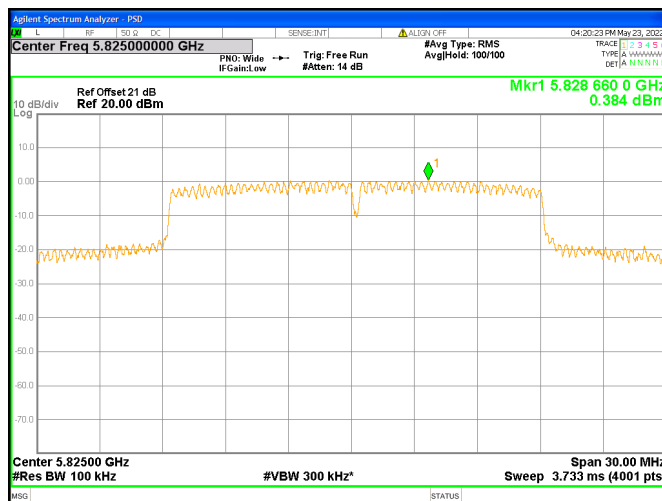
### Chain0 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch149



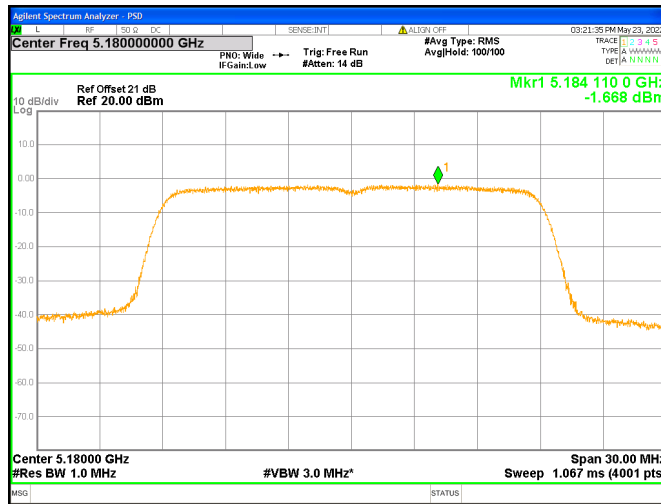
### Chain0 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch157



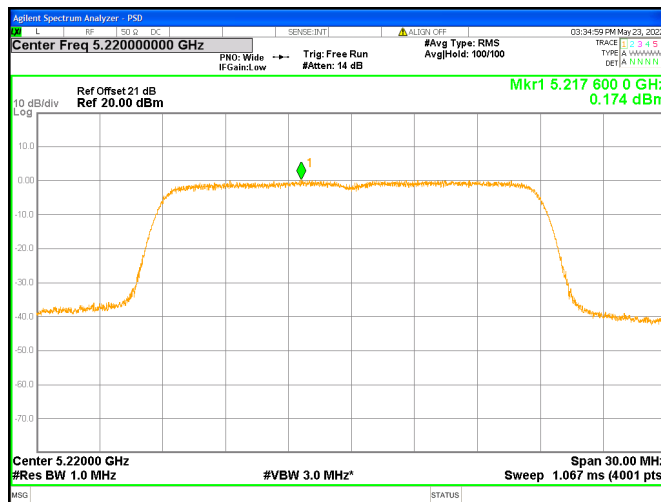
### Chain0 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch165



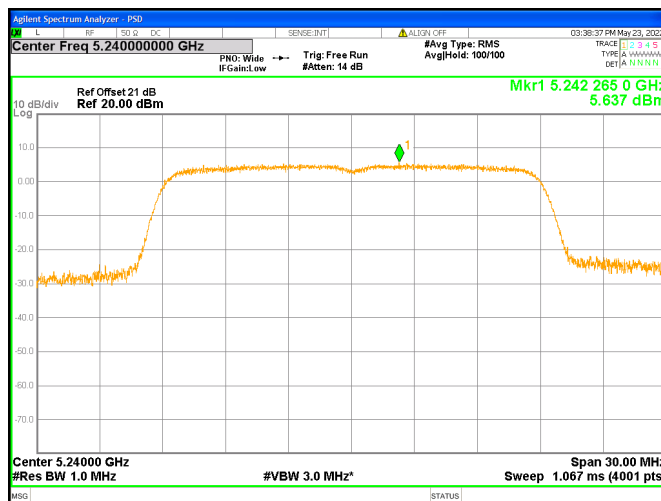
### Chain1 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch36



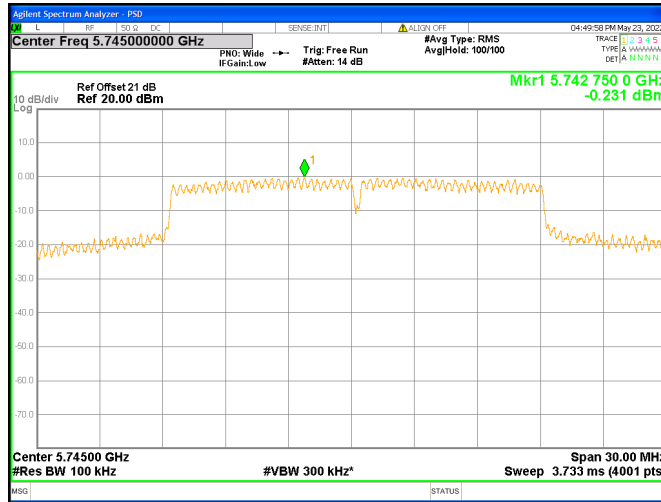
### Chain1 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch44



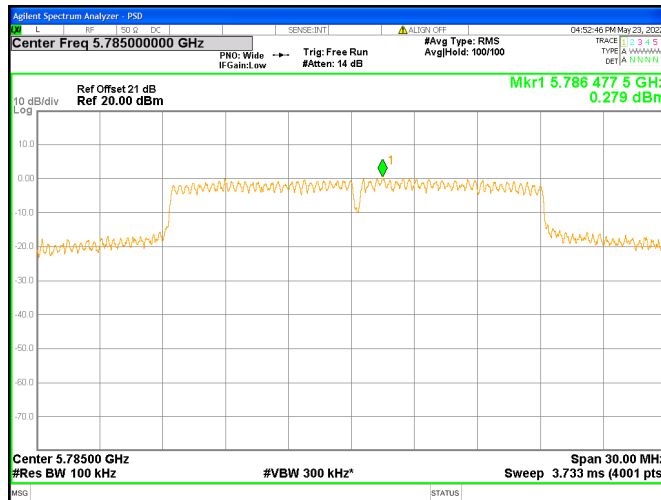
### Chain1 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch48



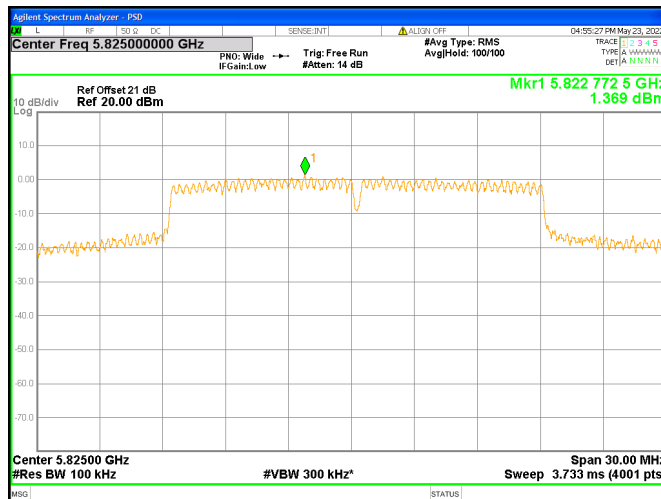
### Chain1 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch149



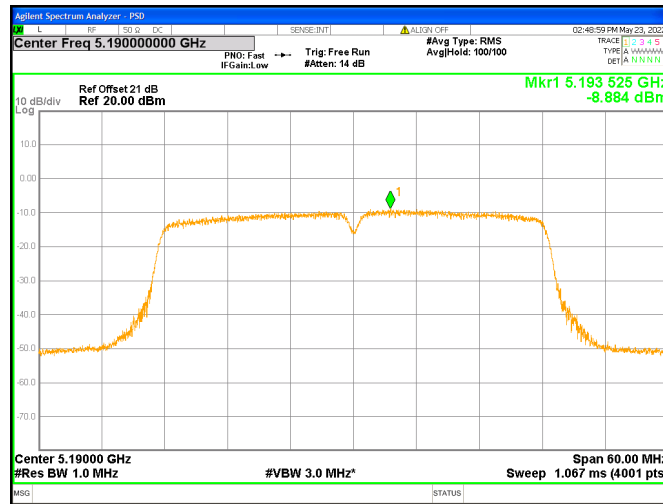
### Chain1 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch157



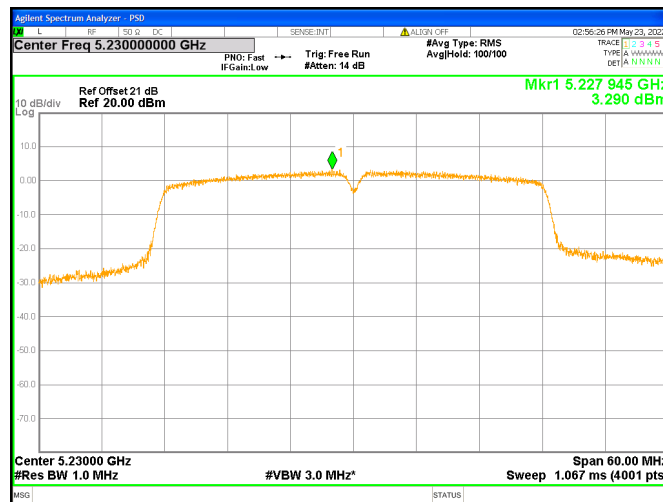
### Chain1 : Power Spectral Density @ 802.11ac(VHT20) Mode Ch165



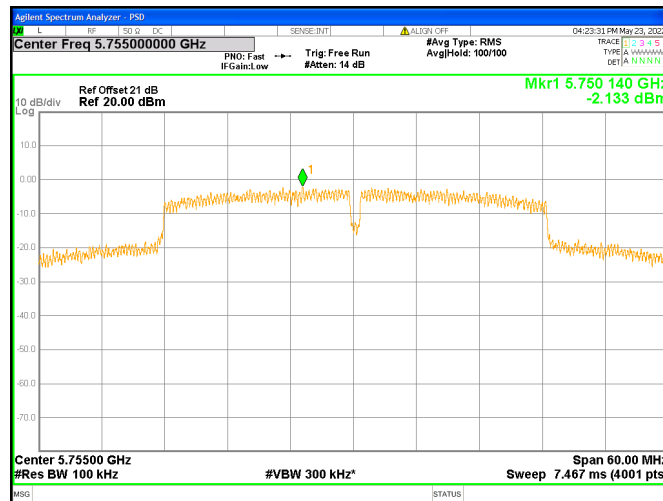
### Chain0 : Power Spectral Density @ 802.11ac(VHT40) Mode Ch38



### Chain0 : Power Spectral Density @ 802.11ac(VHT40) Mode Ch46

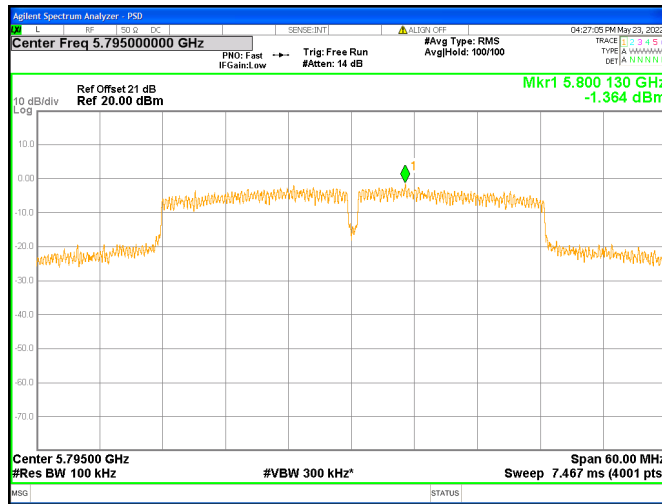


### Chain0 : Power Spectral Density @ 802.11ac(VHT40) Mode Ch151

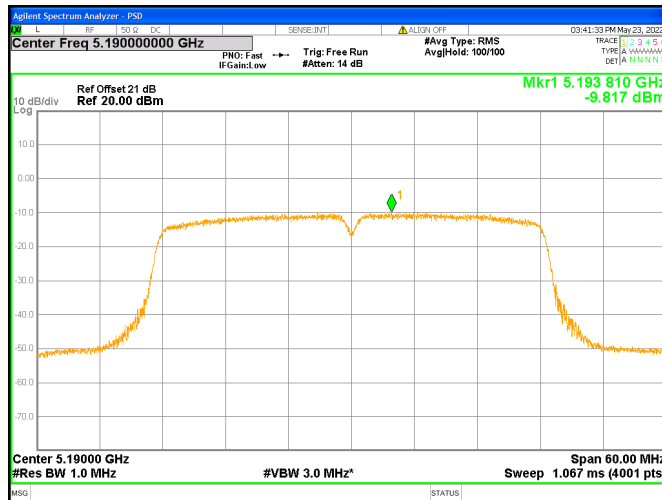




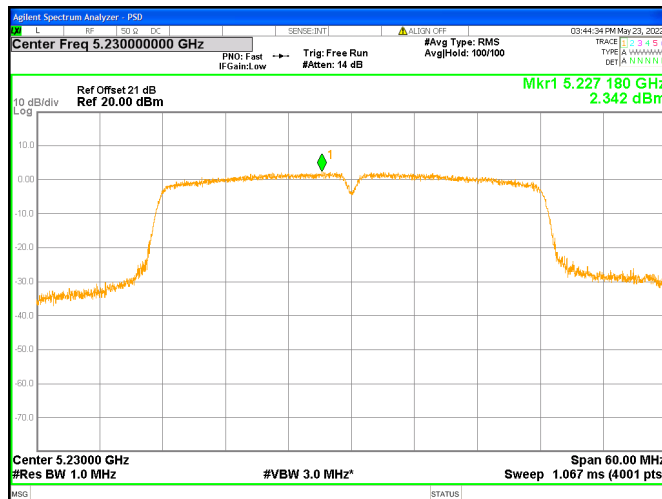
### Chain0 : Power Spectral Density @ 802.11ac(VHT40) Mode Ch159



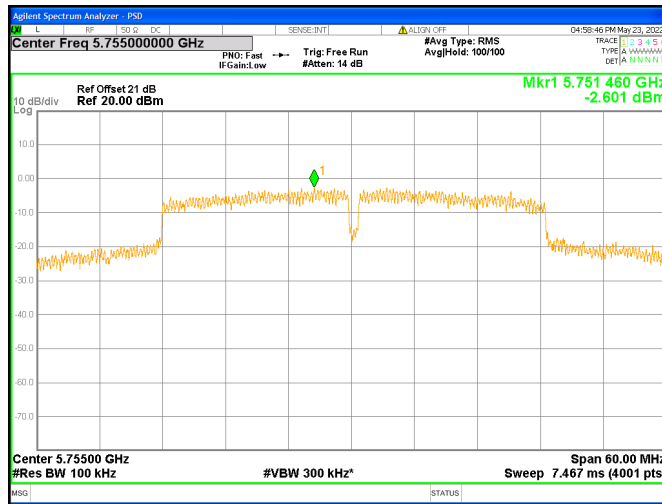
### Chain1 : Power Spectral Density @ 802.11ac(VHT40) Mode Ch38



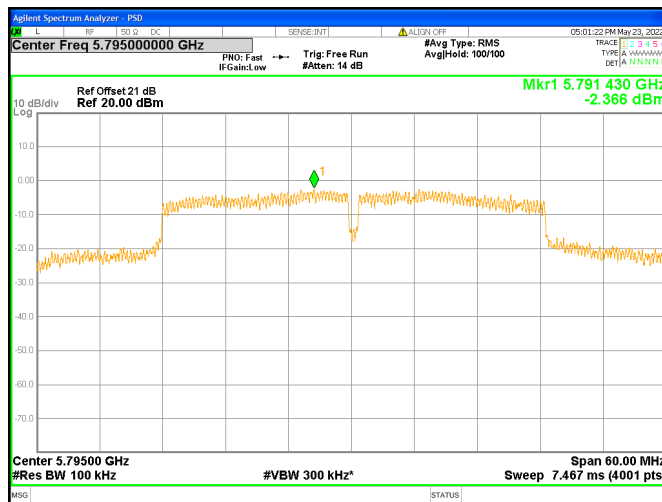
### Chain1 : Power Spectral Density @ 802.11ac(VHT40) Mode Ch46



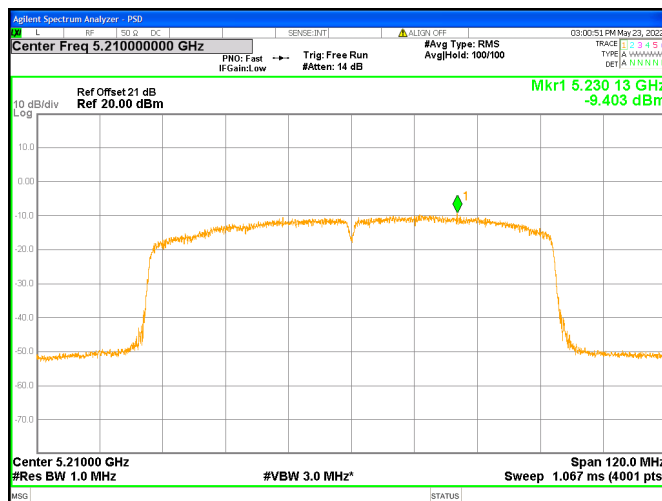
### Chain1 : Power Spectral Density @ 802.11ac(VHT40) Mode Ch151



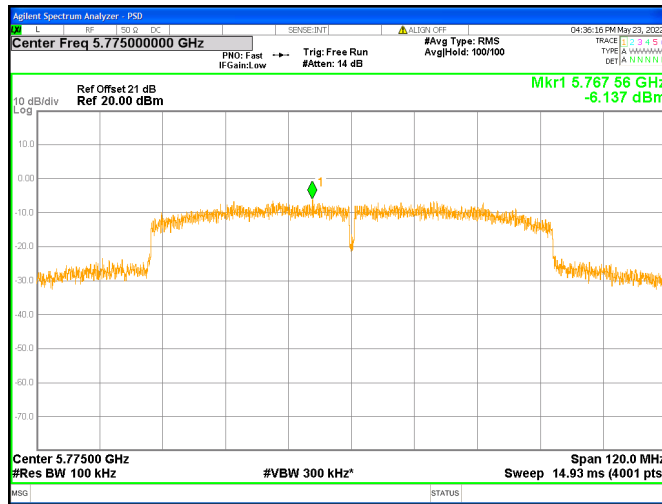
### Chain1 : Power Spectral Density @ 802.11ac(VHT40) Mode Ch159



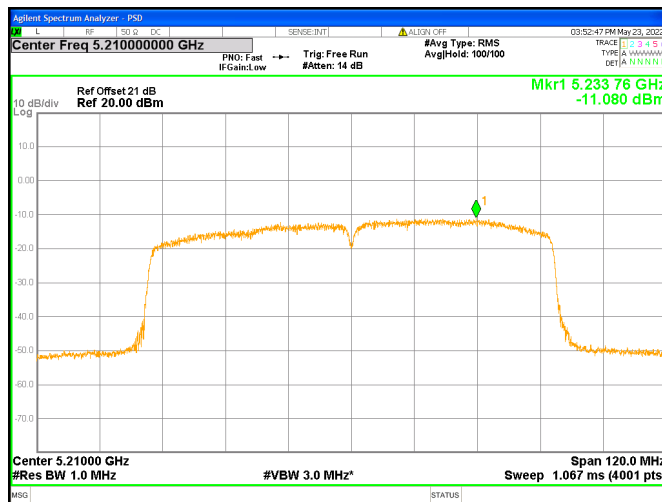
### Chain0 : Power Spectral Density @ 802.11ac(VHT80) Mode Ch42



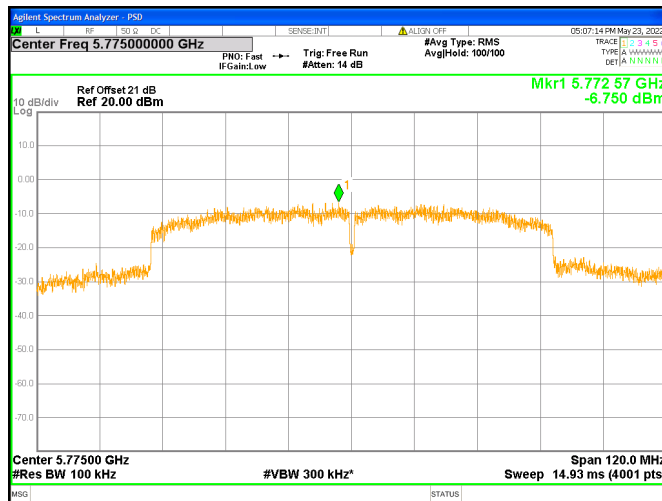
### Chain0 : Power Spectral Density @ 802.11ac(VHT80) Mode Ch155



### Chain1 : Power Spectral Density @ 802.11ac(VHT80) Mode Ch42



### Chain1 : Power Spectral Density @ 802.11ac(VHT80) Mode Ch155



#### 4. Minimum Bandwidth

##### 4.1 Limit for minimum emission bandwidth.

Within the 5.15-5.25 GHz, the 26 dB bandwidth is for reporting purpose only.

Within the 5.725-5.85 GHz, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz..

##### 4.2 Measuring instrument setting

###### Emission Bandwidth for 5.15-5.25 GHz

Spectrum analyzer settings	
Spectrum Analyzer function	Setting
Detector	Peak
RBW	Approximately 1% of the EBW
VBW	> RBW
Trace mode	Max hold

###### Minimum Emission Bandwidth for 5.725-5.85 GHz

Spectrum analyzer settings	
Spectrum Analyzer function	Setting
Detector	Peak
RBW	100kHz
VBW	$\geq 3 \times \text{RBW}$
Sweep	Auto couple
Trace mode	Max hold

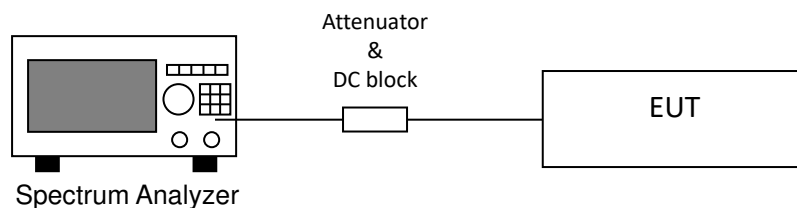
###### 99% Occupied Bandwidth

Spectrum analyzer settings	
Spectrum Analyzer function	Setting
Span	1.5 times to 5.0 times the OBW
RBW	1% to 5% of the OBW
VBW	$\geq 3 \times \text{RBW}$
Trace mode	Max hold

### 4.3 Test procedure

1. The transmitter output was connected to the spectrum analyzer.
2. Test was performed in accordance with section C&D of KDB 789033 D02 v01r02.
3. For the 5.725-5.85 GHz, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
4. For the 5.15-5.25 GHz and 5.725-5.85 GHz, measure the maximum width of the emission that is 26 dB down from the maximum of the emission.

### 4.4 Test diagram



**TEST REPORT**

**4.5 Test results**

Temperature (°C) :	24
Relative Humidity (%) :	63
Test date :	2022/05/23
Host 1 :	67401

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
802.11a Chain0	36	5180	18.180
	44	5220	21.200
	48	5240	39.040
	149	5745	39.980
	157	5785	39.940
	165	5825	39.560
802.11a Chain1	36	5180	18.220
	44	5220	18.220
	48	5240	19.600
	149	5745	40.000
	157	5785	39.860
	165	5825	39.980
802.11ac (VHT20) Chain0	36	5180	19.260
	44	5220	19.080
	48	5240	34.260
	149	5745	39.980
	157	5785	39.980
	165	5825	39.920
802.11ac (VHT20) Chain1	36	5180	19.280
	44	5220	19.180
	48	5240	33.720
	149	5745	39.900
	157	5785	40.000
	165	5825	40.000
802.11ac (VHT40) Chain0	38	5190	40.800
	46	5230	66.000
	151	5755	80.000
	159	5795	79.920

**TEST REPORT**

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
802.11ac (VHT40) Chain1	38	5190	40.800
	46	5230	55.120
	151	5755	79.920
	159	5795	79.480
802.11ac (VHT80) Chain0	42	5210	80.160
	155	5775	155.600
802.11ac (VHT80) Chain1	42	5210	79.920
	155	5775	154.640

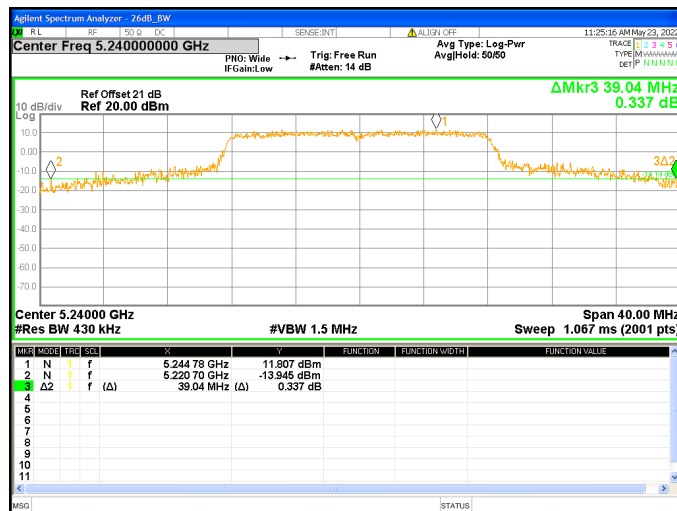
## Chain0 : Emission Bandwidth-26dB @ 802.11a Mode Ch36



## Chain0 : Emission Bandwidth-26dB @ 802.11a Mode Ch44

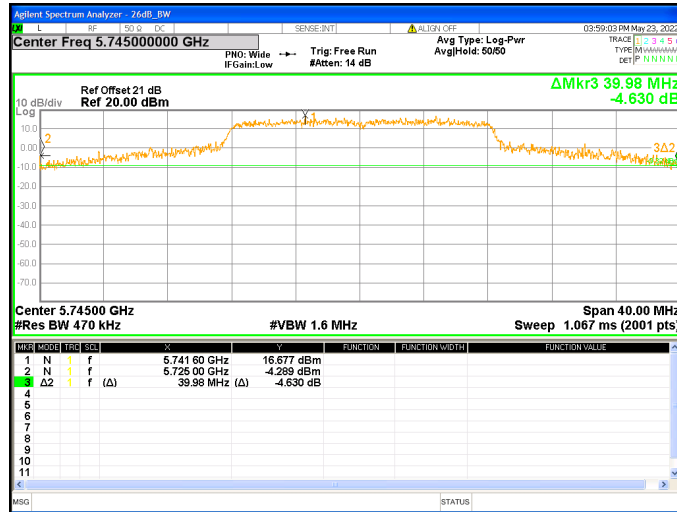


## Chain0 : Emission Bandwidth-26dB @ 802.11a Mode Ch48





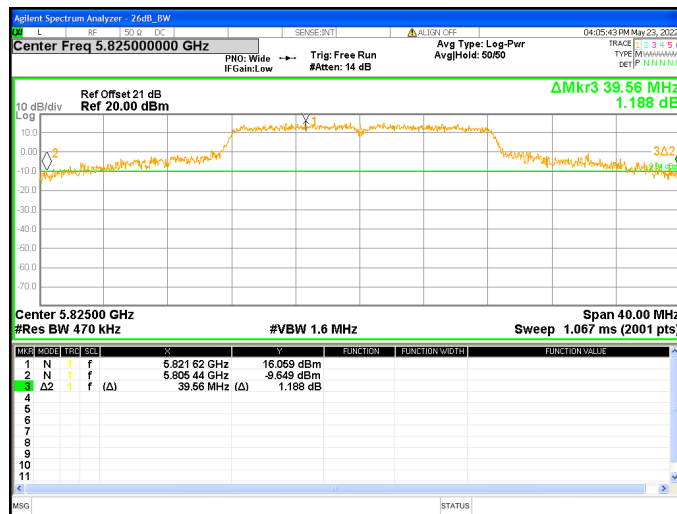
## Chain0 : Emission Bandwidth-26dB @ 802.11a Mode Ch149



## Chain0 : Emission Bandwidth-26dB @ 802.11a Mode Ch157



## Chain0 : Emission Bandwidth-26dB @ 802.11a Mode Ch165



### Chain1 : Emission Bandwidth-26dB @ 802.11a Mode Ch36



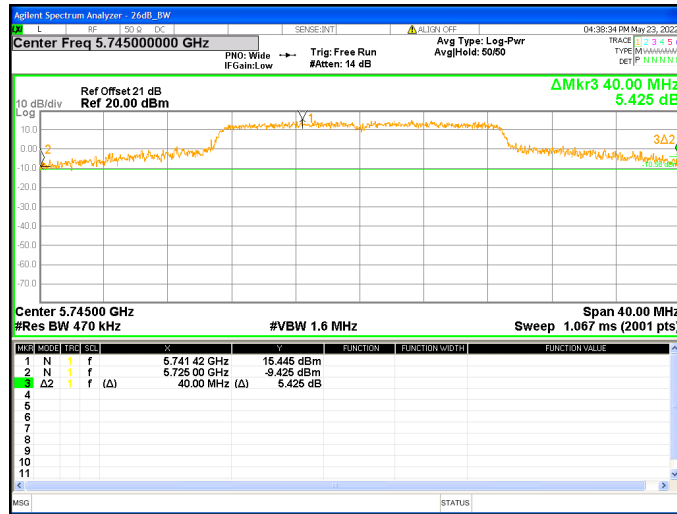
### Chain1 : Emission Bandwidth-26dB @ 802.11a Mode Ch44



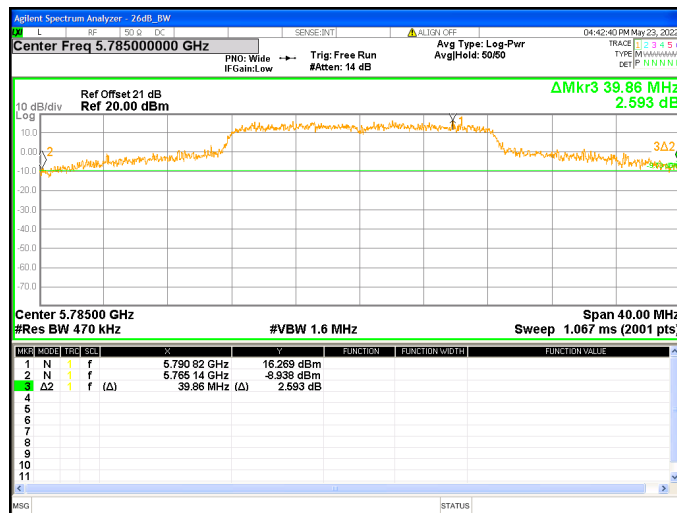
### Chain1 : Emission Bandwidth-26dB @ 802.11a Mode Ch48



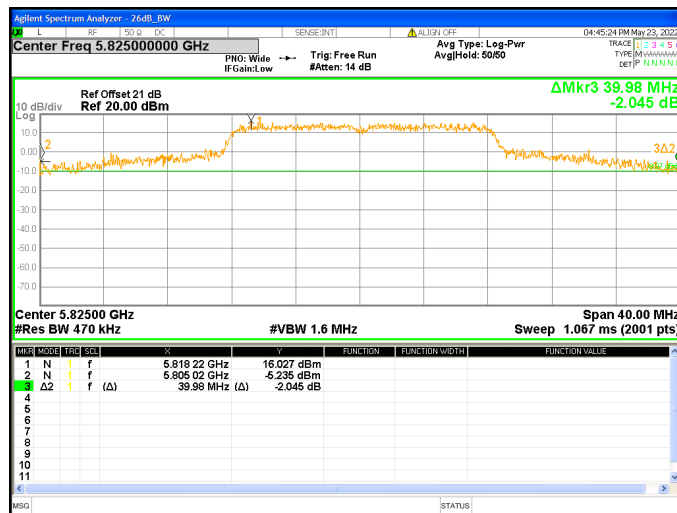
## Chain1 : Emission Bandwidth-26dB @ 802.11a Mode Ch149



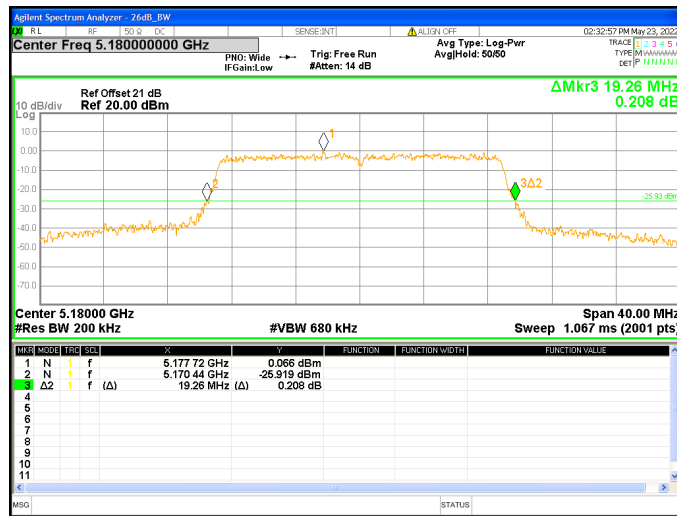
## Chain1 : Emission Bandwidth-26dB @ 802.11a Mode Ch157



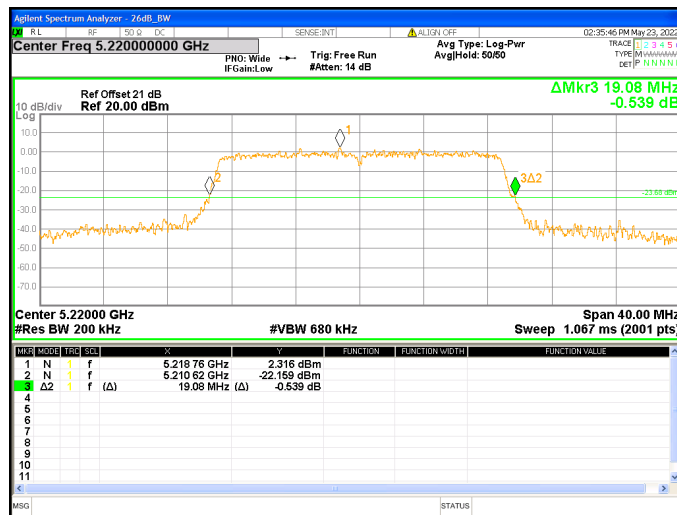
## Chain1 : Emission Bandwidth-26dB @ 802.11a Mode Ch165



### Chain0 : Emission Bandwidth-26dB @ 802.11ac(VHT20) Mode Ch36



### Chain0 : Emission Bandwidth-26dB @ 802.11ac(VHT20) Mode Ch44



### Chain0 : Emission Bandwidth-26dB @ 802.11ac(VHT20) Mode Ch48

