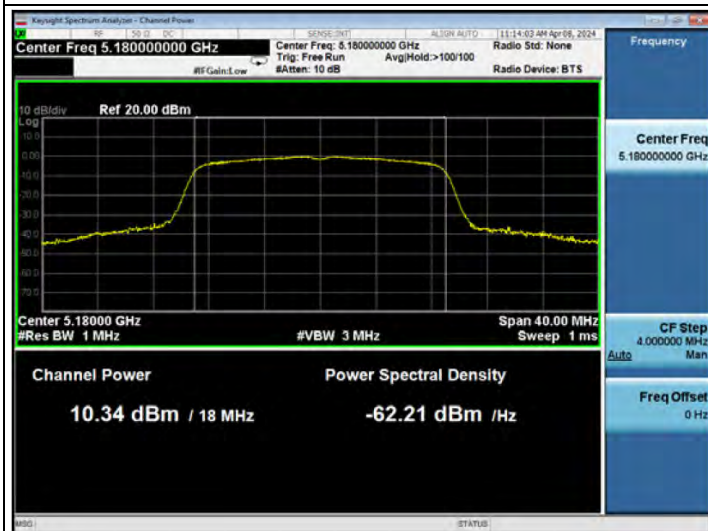


802.11ac20

Band-UNII-1

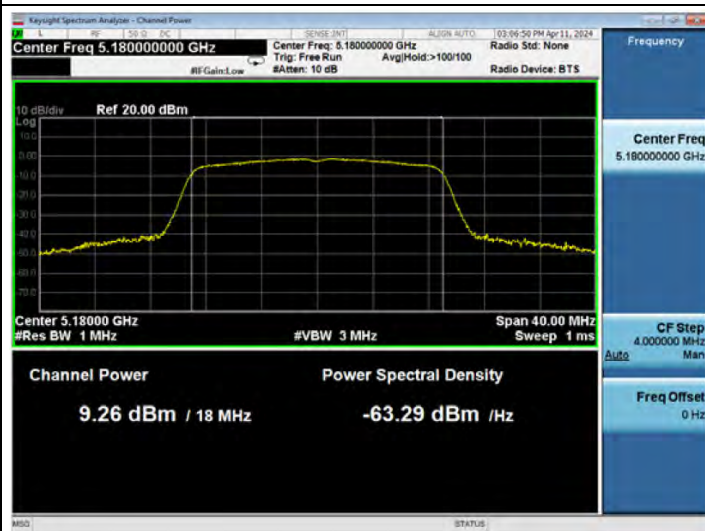
CNF2

CH5180

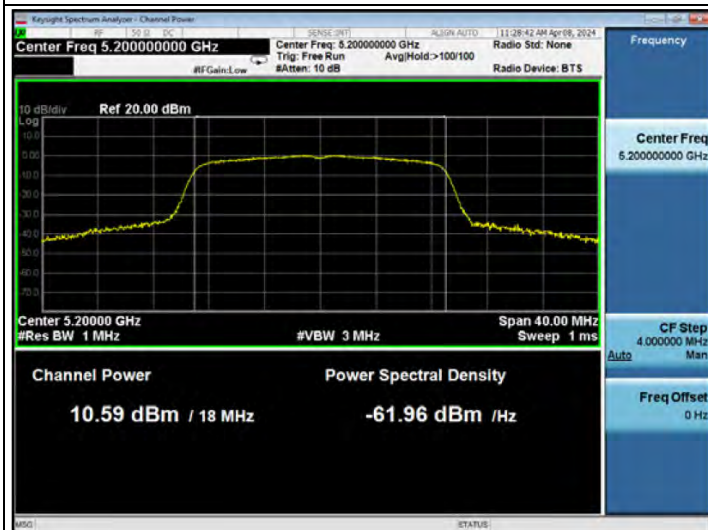


CNF3

CH5180



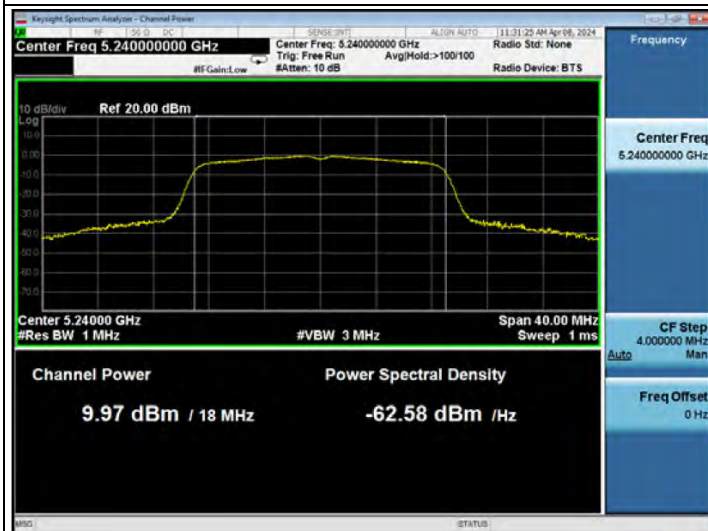
CH5200



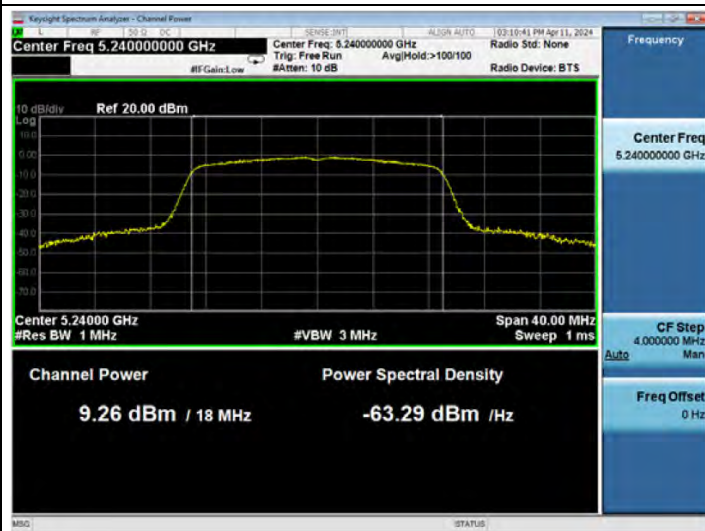
CH5200



CH5240



CH5240

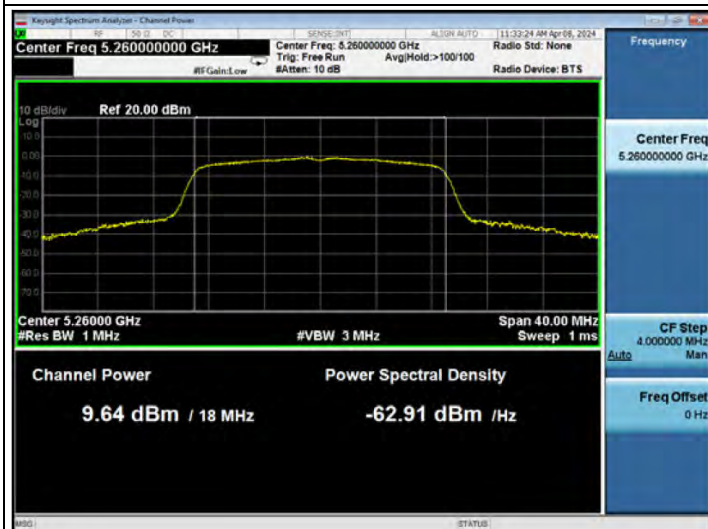


802.11ac20

Band-UNII-2A

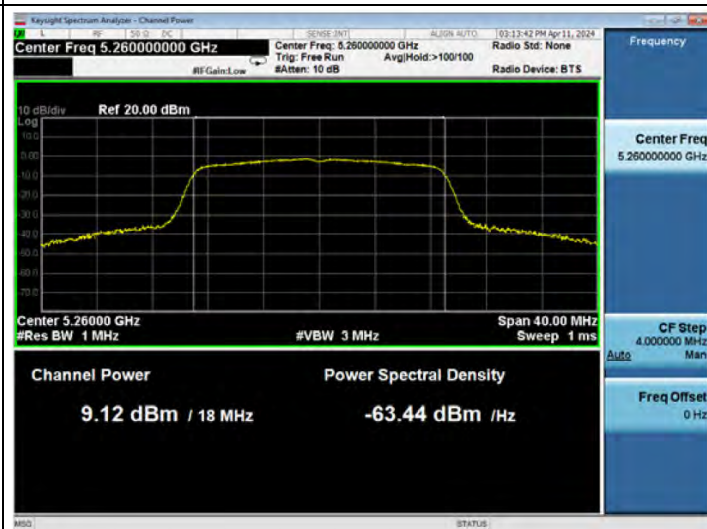
CNF2

CH5260



CNF3

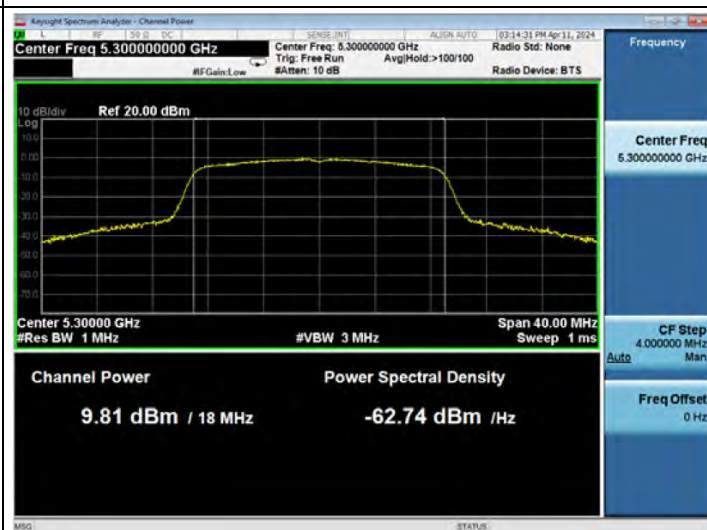
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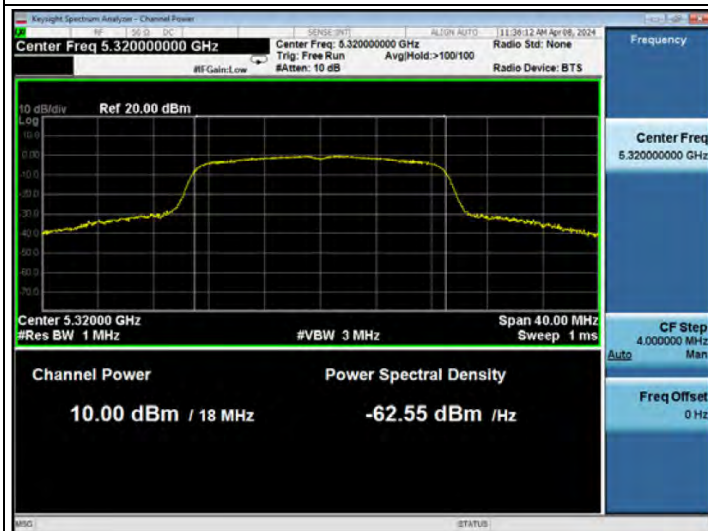
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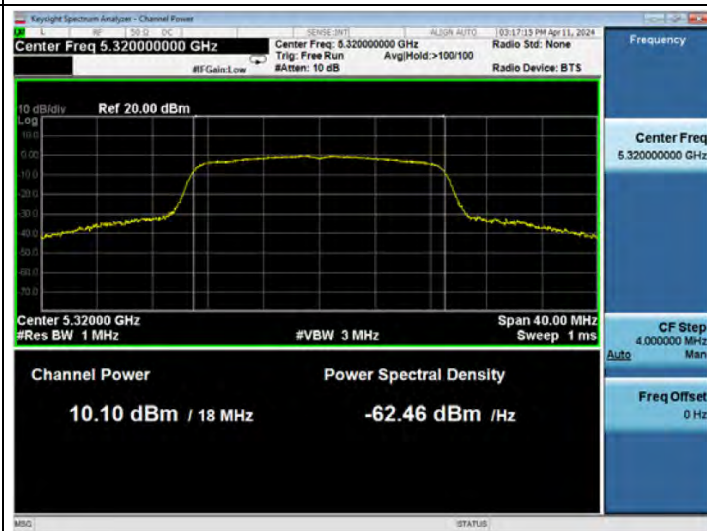
CH5300



CH5320



CH5320



802.11ac20

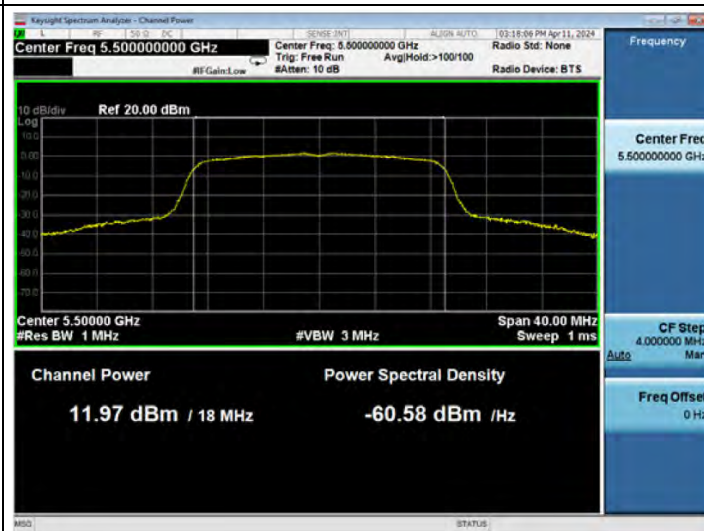
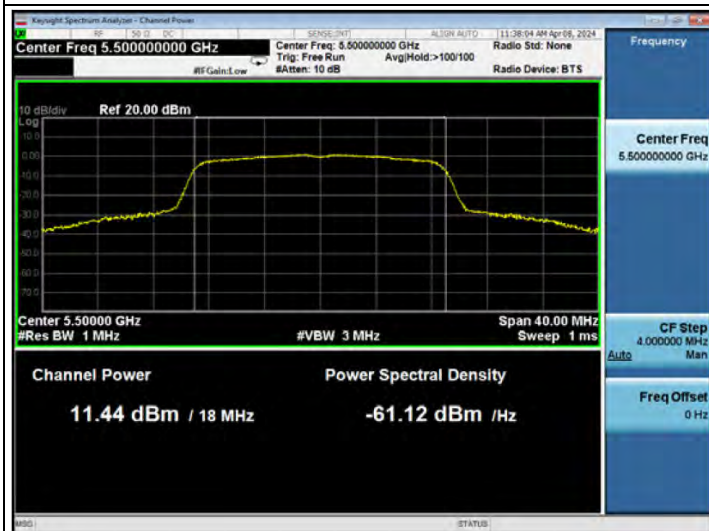
Band-UNII-2C

CNF2

CNF3

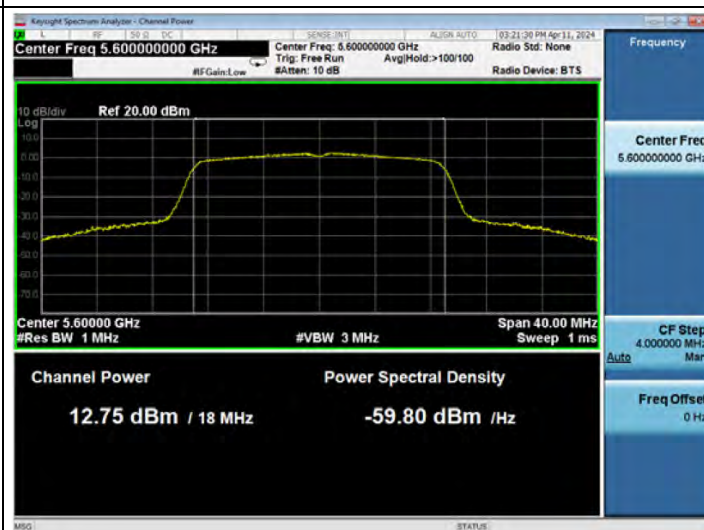
CH5500

CH5500



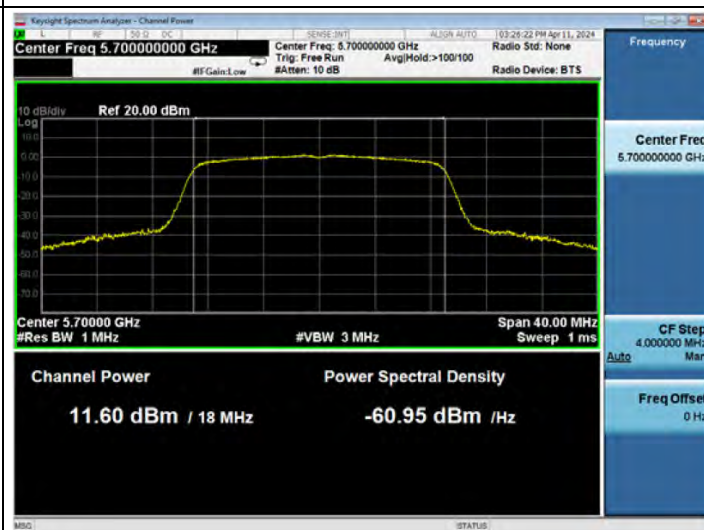
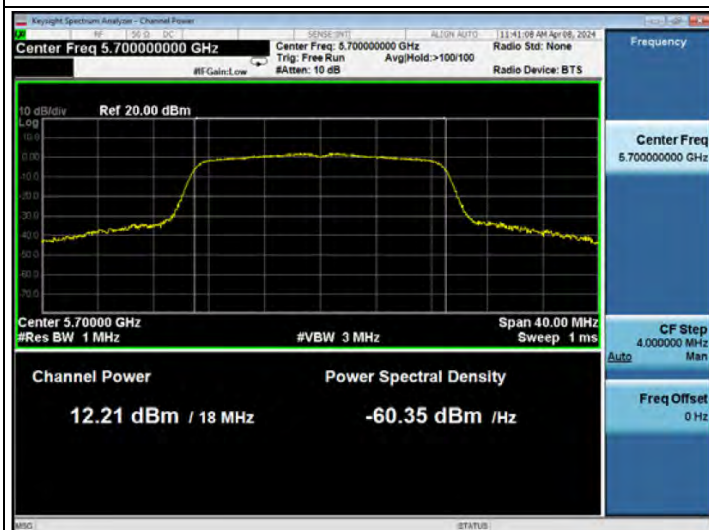
CH5600

CH5600



CH5700

CH5700

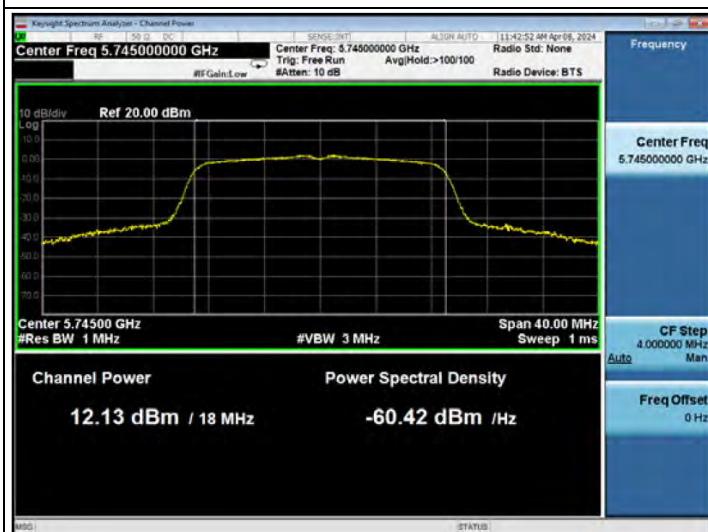


802.11ac20

Band-UNII-3

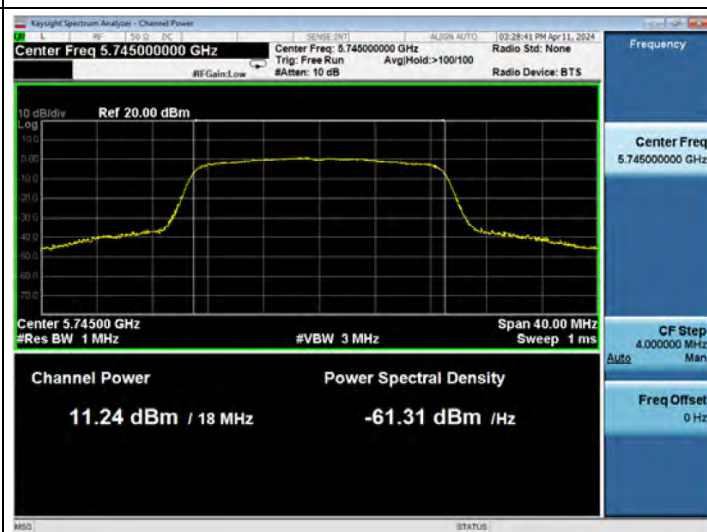
CNF2

CH5745

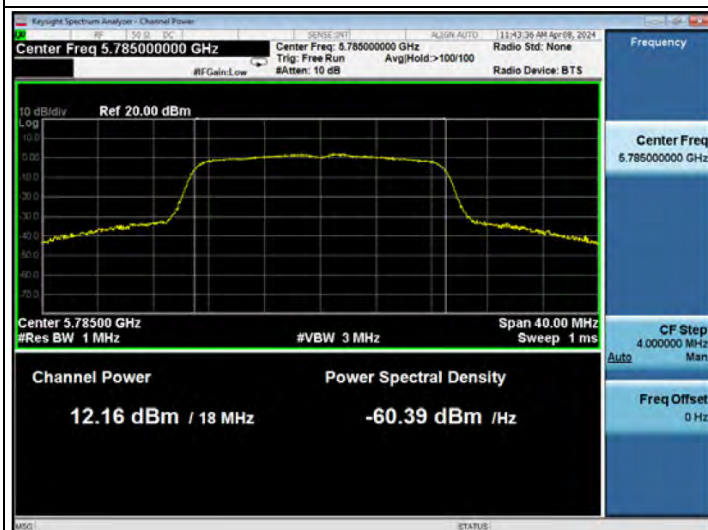


CNF3

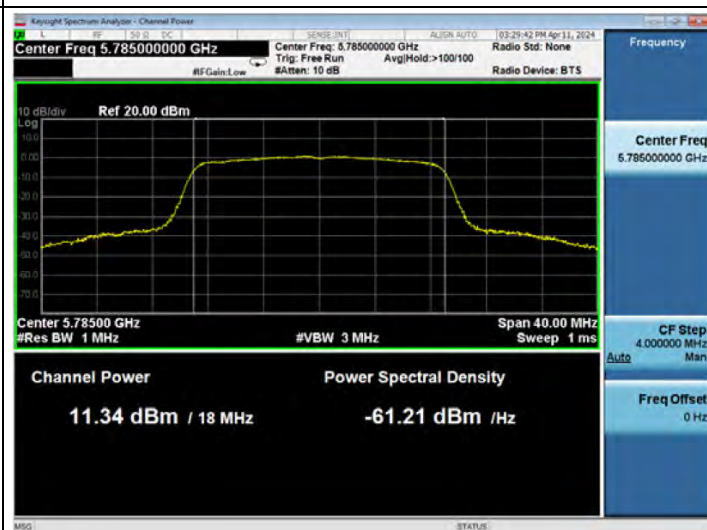
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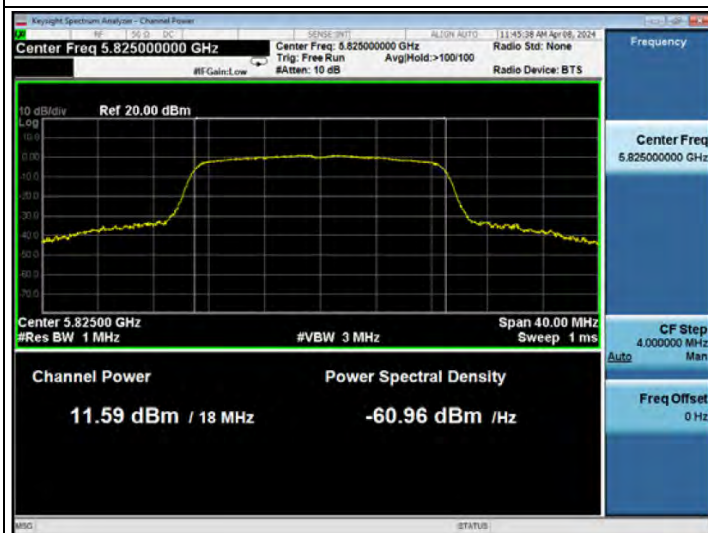
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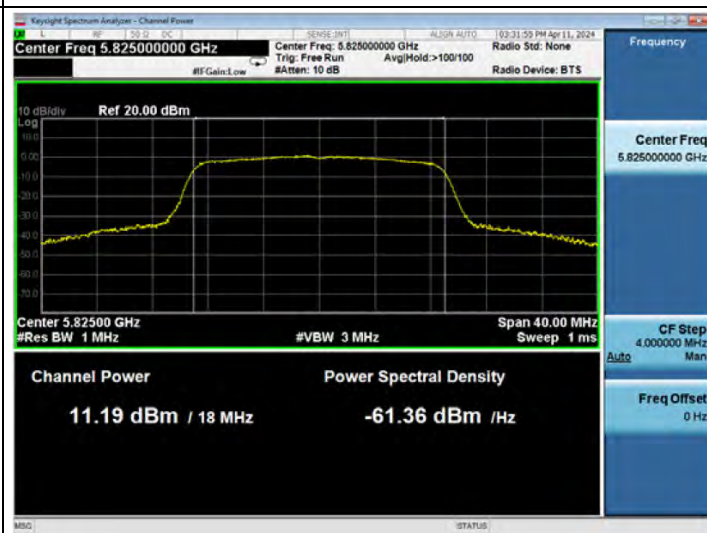
CH5785



CH5825



CH5825

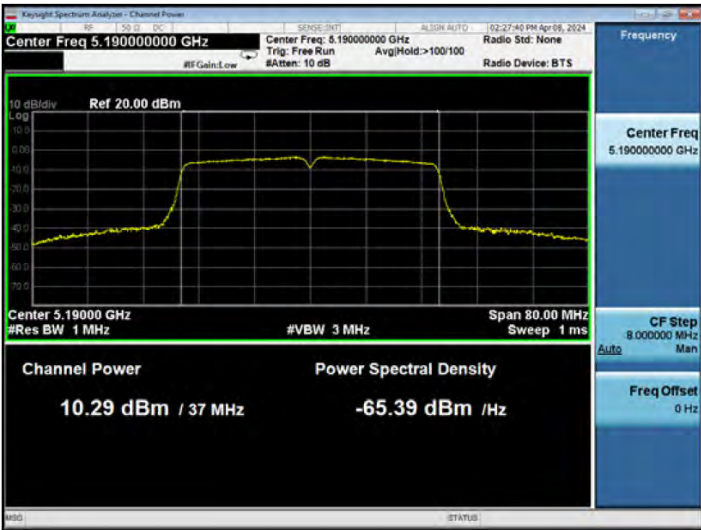


802.11ac40

Band-UNII-1

CNF2

CH5190

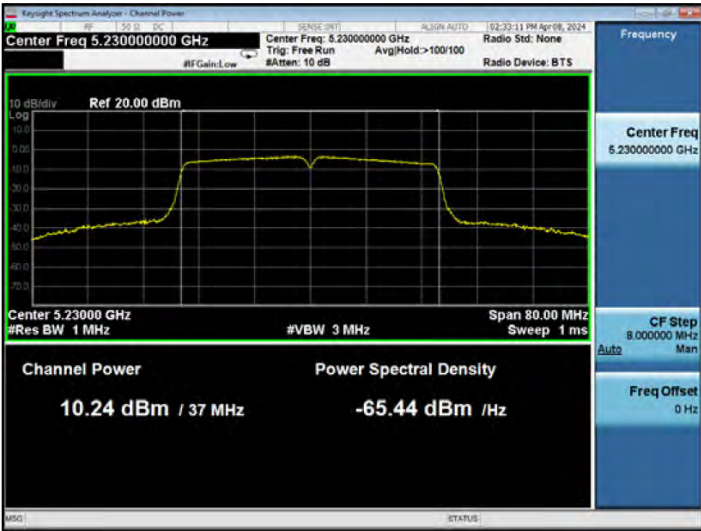


CNF3

CH5190



CH5230



CH5230

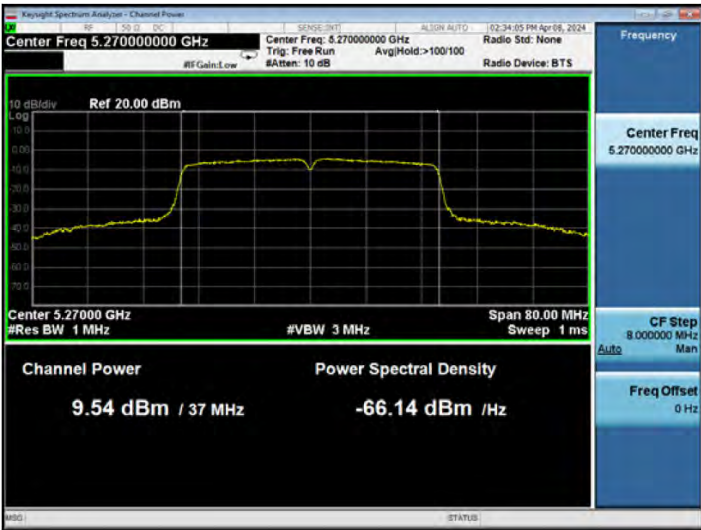


802.11ac40

Band-UNII-2A

CNF2

CH5270

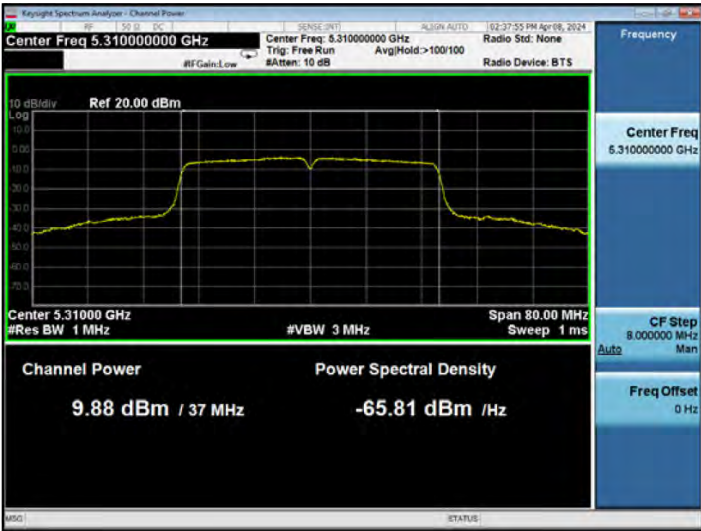


CNF3

CH5270



CH5310



CH5310



802.11ac40

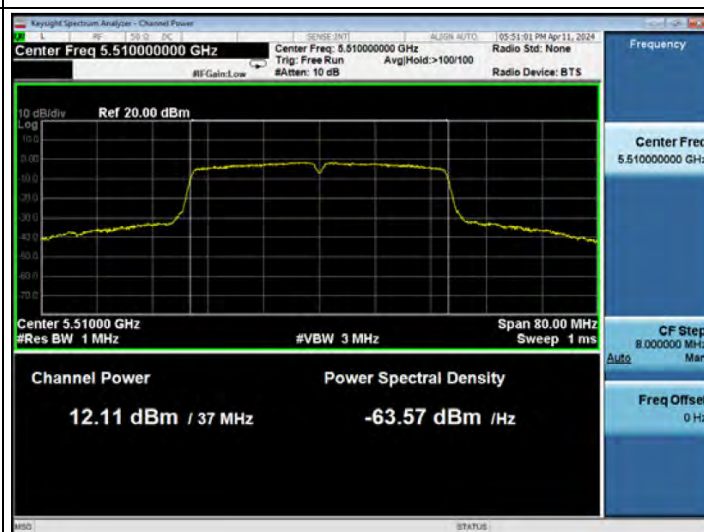
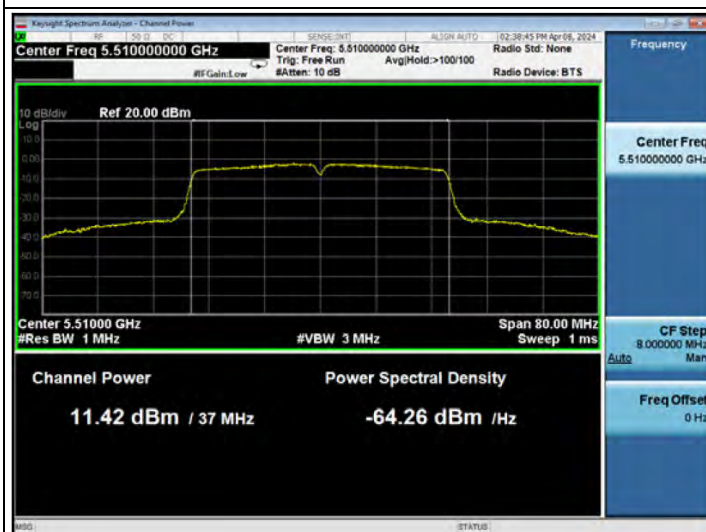
Band-UNII-2C

CNF2

CNF3

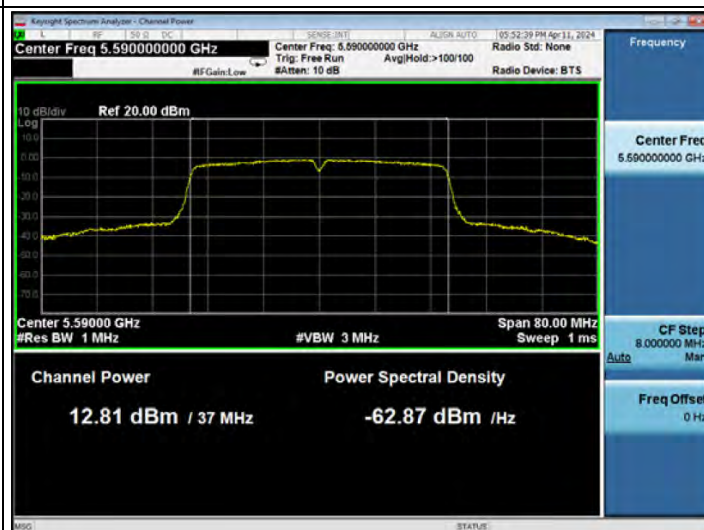
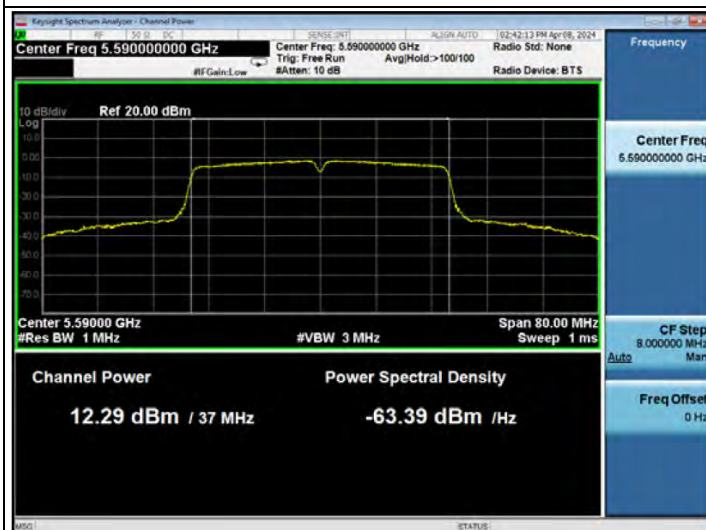
CH5510

CH5510



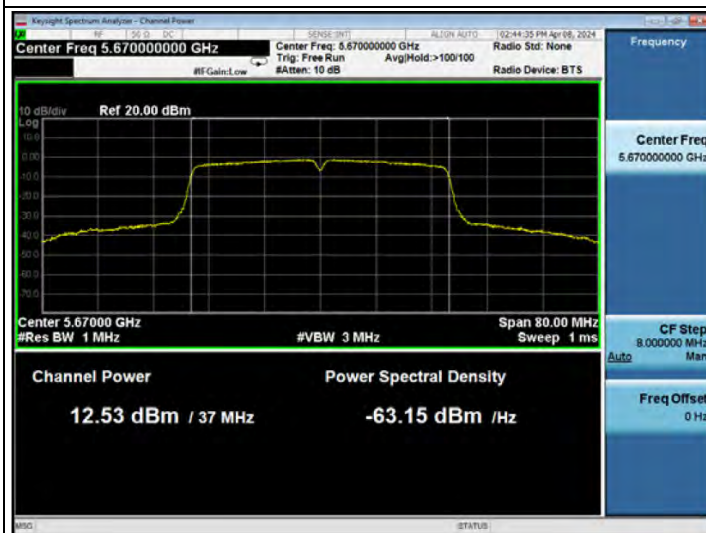
CH5590

CH5590



CH5670

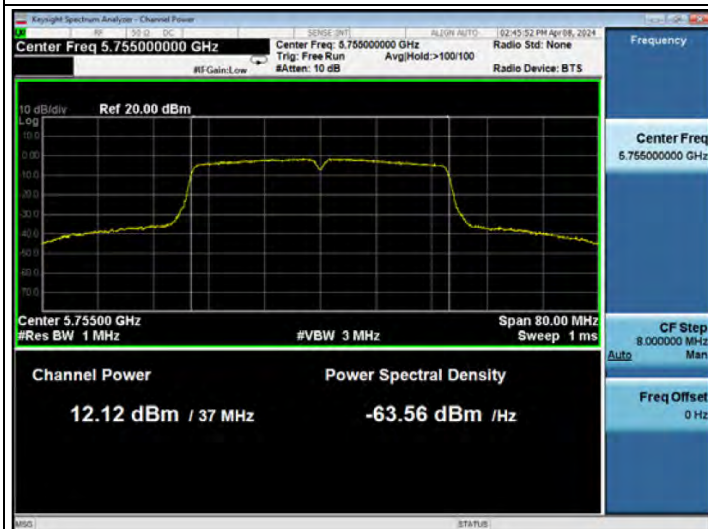
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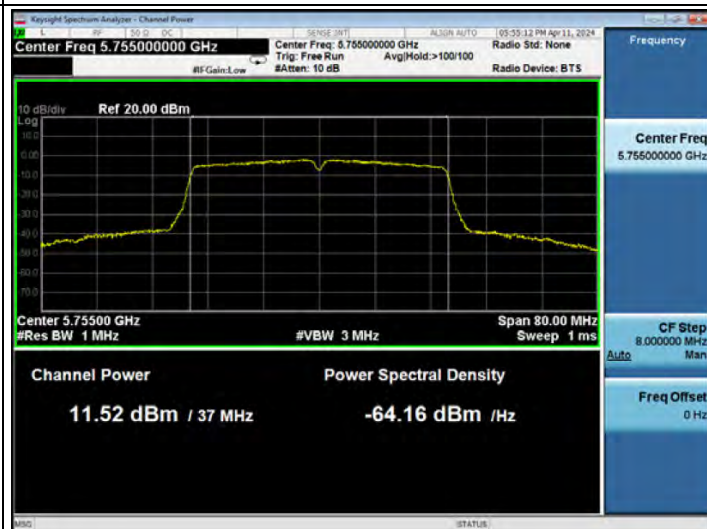
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Band-UNII-3

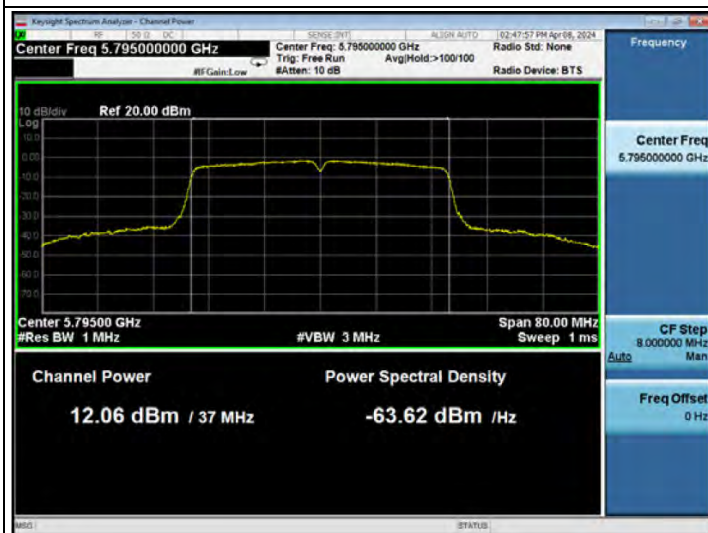
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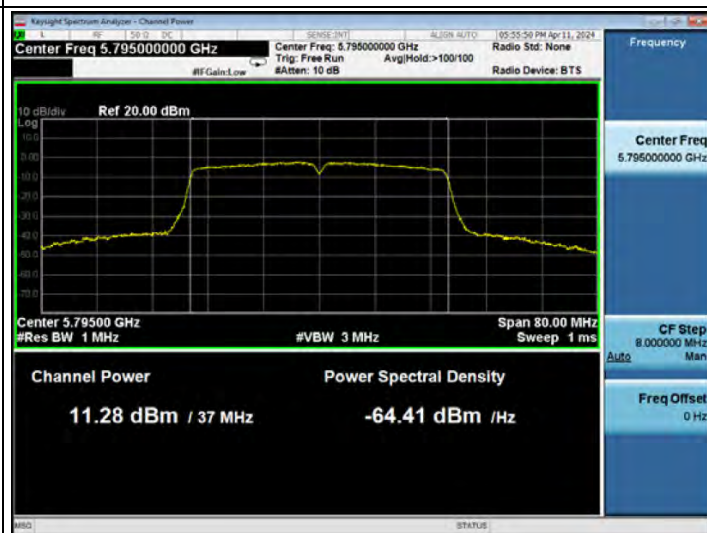
CH5755



CH5795



CH5795



802.11ac80

Band-UNII-1

CNF2

CNF3

CH5210

CH5210



802.11ac80

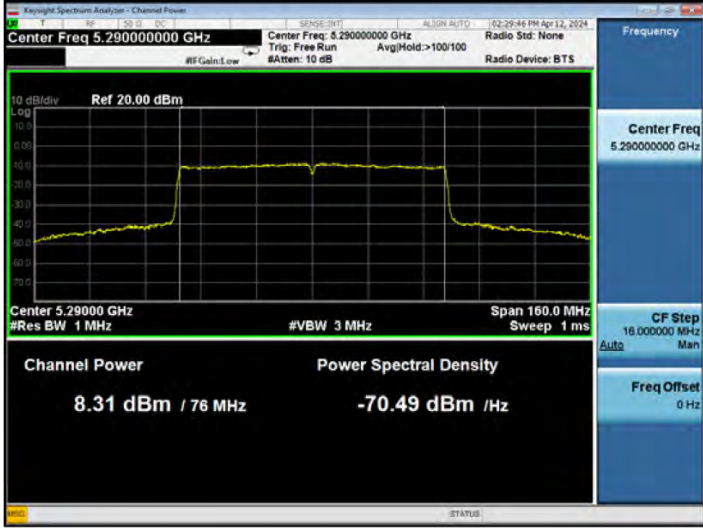
Band-UNII-2A

CNF2

CNF3

CH5290

CH5290

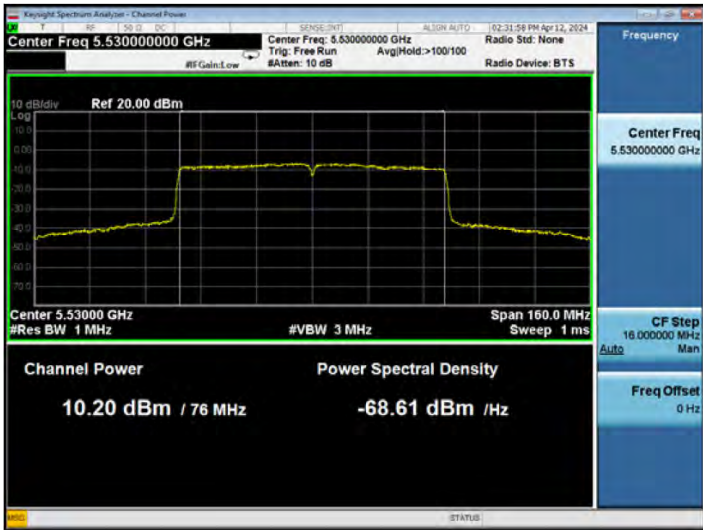


802.11ac80

Band-UNII-2C

CNF2

CH5530

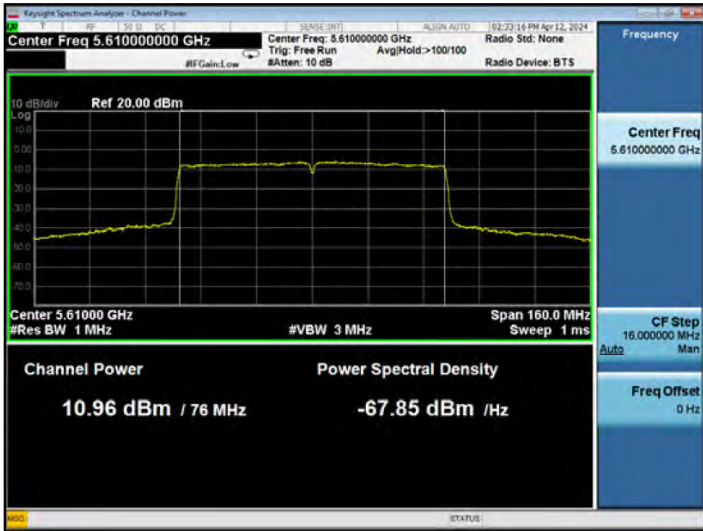


CNF3

CH5530



CH5610



CH5610



802.11ac80

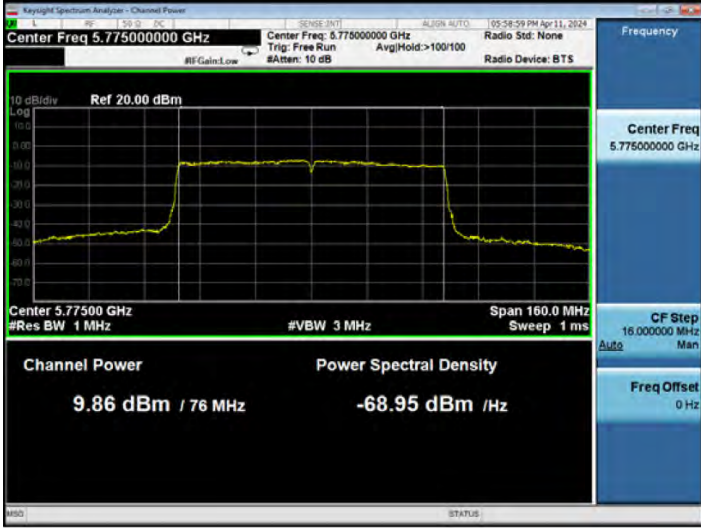
Band-UNII-3

CNF2

CNF3

CH5775

CH5775



9 MAXIMUM POWER SPECTRAL DENSITY

MEASUREMENT

9.1 Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2023.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SM SM+	22022838	2023.08.09	1 Year
3.	20 dB Attenuator	Mini-Circuits	BW-S20W2+	001	2023.09.21	1 Year

9.2 Block Diagram of Test Setup

The Same as section 6.2.

9.3 Specification Limits (§15.407(a))

- (1) For the band 5.15-5.25 GHz.
- (iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.
- (2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.
- (3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

9.4 Operating Condition of EUT

The switch ON/OFF was used to enable the EUT to change the channel one by one.

9.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

- (i) Measure the duty cycle, x , of the transmitter output signal.
- (ii) For the 5.15-5.25 GHz, 5.25-5.35 GHz and 5.47-5.725 GHz bands. set RBW = 1 MHz . For the band 5.725-5.85 GHz set RBW = 300 kHz.
- (iii) Set VBW $\geq 3 \times$ RBW.
- (iv) Number of points in sweep $\geq 2 \times$ span / RBW. (This ensures that bin-to-bin spacing is $\leq$ RBW/2, so that narrowband signals are not lost between frequency bins.)
- (v) Sweep time = auto.
- (vi) Detector = power averaging (rms).
- (vii) Allow the sweep to “free run.”
- (viii) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.

- (ix) Use the peak search function on the instrument to find the peak of the spectrum.
- (x) As the Method SA-2 was used, add $10 \log (1/x)$, where x is the duty cycle, to the peak of the spectrum. The result is the Peak Power Spectral Density.
- (xi) For the band 5.725-5.85 GHz, additional add $10 \log (500 \text{ kHz}/300 \text{ kHz}) = 2.22 \text{ dB}$ to the measured result, whereas RBW is set to 300 kHz (<500 kHz) during measurement.

The test procedure is defined in KDB789033 D02 (the clause II.F Measurement Procedure “ Maximum Power Spectral Density (PSD)” was used).

For Emissions Testing of Transmitters with Multiple Outputs in the Same Band: Per KDB 662911 D01 Multiple Transmitter Output v02r01, section E).2), When performing measurements for compliance with PSD limits within the band of operation of a transmitter, any of the three techniques below may be used to combine the emission measurements from multiple outputs prior to comparing to the emission limit:

- a) *Measure and sum the spectra across the outputs.*
 - b) *Measure and sum spectral maxima across the outputs.*
 - c) *Measure and add $10 \log(N_{ANT}) \text{ dB}$, where N_{ANT} is the number of outputs.*
- We selected the method b). *Measure and sum spectral maxima across the outputs.* for measure Power Spectral Density.

9.6 Test Results

PASSED.

Note1: [Power Spectral Density] = Maximum of [Average Power Spectral Density] + [DCCF]

Note2: The [DCCF(Duty Cycle Correct Factor)] shows on section 2.4.

All the test results are listed below.

(Test Date: 2024.04.08-14 Temperature: 23°C Humidity: 51 %)

Mode	Channel	Frequency (MHz)	Average Power Spectral Density (dBm/MHz)			Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)
			SISO CNF2	SISO CNF3	MIMO (CNF2 + CNF3)		
802.11a	36	5180	1.144	0.33	-	1.344	11
	40	5200	1.533	0.605	-	1.733	11
	48	5240	1.078	0.425	-	1.278	11
	52	5260	0.572	0.515	-	0.772	11
	60	5300	0.961	0.911	-	1.161	11
	64	5320	1.145	1.232	-	1.432	11
	100	5500	1.922	3.036	-	3.236	11
	120	5600	3.623	3.859	-	4.059	11
	140	5700	3.381	2.693	-	3.581	11

Mode	Channel	Frequency (MHz)	Average Power Spectral Density (dBm/MHz)			Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)
			SISO CNF2	SISO CNF3	MIMO (CNF2 + CNF3)		
802.11n20	36	5180	0.144	-0.729	2.740	5.550	11
	40	5200	0.24	-0.463	2.913	5.723	11
	48	5240	0.194	-0.93	2.679	5.489	11
	52	5260	-0.682	-0.621	2.359	5.169	11
	60	5300	-0.156	-0.259	2.803	5.613	11
	64	5320	0.437	0.07	3.268	6.078	11
	100	5500	1.57	1.692	4.642	7.452	11
	120	5600	2.263	2.511	5.399	8.209	11
	140	5700	2.034	1.568	4.818	7.628	11

Mode	Channel	Frequency (MHz)	Average Power Spectral Density (dBm/MHz)			Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)
			SISO CNF2	SISO CNF3	MIMO (CNF2 + CNF3)		
802.11n40	38	5190	-3.061	-3.708	-0.362	3.848	11
	46	5230	-3.244	-3.969	-0.581	3.629	11
	54	5270	-3.825	-4.034	-0.918	3.292	11
	62	5310	-3.246	-3.573	-0.396	3.814	11
	102	5510	-1.665	-1.593	1.381	5.591	11
	118	5590	-1.525	-0.805	1.860	6.070	11
	134	5670	-1.194	-0.498	2.178	6.388	11

Mode	Channel	Frequency (MHz)	Average Power Spectral Density (dBm/MHz)			Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)
			SISO CNF2	SISO CNF3	MIMO (CNF2 + CNF3)		
802.11ac20	36	5180	0.168	-1.079	2.599	2.809	11
	40	5200	0.218	-0.675	2.805	3.015	11
	48	5240	-0.397	-0.986	2.329	2.539	11
	52	5260	-0.542	-0.985	2.252	2.462	11
	60	5300	-0.3	-0.224	2.748	2.958	11
	64	5320	-0.077	0.044	2.994	3.204	11
	100	5500	1.015	1.365	4.204	4.414	11
	120	5600	2.057	2.735	5.420	5.630	11
	140	5700	1.956	1.622	4.803	5.013	11

Mode	Channel	Frequency (MHz)	Average Power Spectral Density (dBm/MHz)			Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)
			SISO CNF2	SISO CNF3	MIMO (CNF2 + CNF3)		
802.11ac40	38	5190	-3.623	-3.823	-0.712	-0.312	11
	46	5230	-3.358	-3.842	-0.583	-0.183	11
	54	5270	-4.306	-4.211	-1.248	-0.848	11
	62	5310	-3.924	-3.587	-0.742	-0.342	11
	102	5510	-2.224	-1.524	1.150	1.550	11
	118	5590	-1.378	-0.664	2.004	2.404	11
	134	5670	-1.071	-0.335	2.323	2.723	11

Mode	Channel	Frequency (MHz)	Average Power Spectral Density (dBm/MHz)			Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)
			SISO CNF2	SISO CNF3	MIMO (CNF2 + CNF3)		
802.11ac80	42	5210	-7.953	-9.059	-5.461	-0.351	11
	58	5290	-8.269	-8.881	-5.554	-0.444	11
	106	5530	-6.512	-6.249	-3.368	1.742	11
	122	5610	-5.805	-5.299	-2.534	2.576	11

Mode	Channel	Frequency (MHz)	Average Power Spectral Density (dBm/300kHz)			Maximum Power Spectral Density (dBm/500kHz)	Limit (dBm/500kHz)
			SISO CNF2	SISO CNF3	MIMO (CNF2 + CNF3)		
802.11a	149	5745	-2.084	-2.449	0.748	3.168	30
	157	5785	-1.904	-2.508	0.815	3.235	30
	165	5825	-2.353	-2.508	0.580	3.000	30
802.11n20	149	5745	-2.866	-3.945	-0.362	4.668	30
	157	5785	-2.921	-3.695	-0.280	4.750	30
	165	5825	-3.341	-3.823	-0.565	4.465	30
802.11n40	151	5755	-6.6	-7.169	-3.865	2.565	30
	159	5795	-6.775	-6.962	-3.857	2.573	30
802.11ac20	149	5745	-3.055	-3.993	-0.488	1.942	30
	157	5785	-3.207	-3.754	-0.462	1.968	30
	165	5825	-3.728	-4.275	-0.983	1.447	30
802.11ac40	151	5755	-7.046	-7.202	-4.113	-1.493	30
	159	5795	-6.863	-7.642	-4.225	-1.605	30
802.11ac80	155	5775	-11.29	-11.642	-8.452	-1.122	30

802.11a

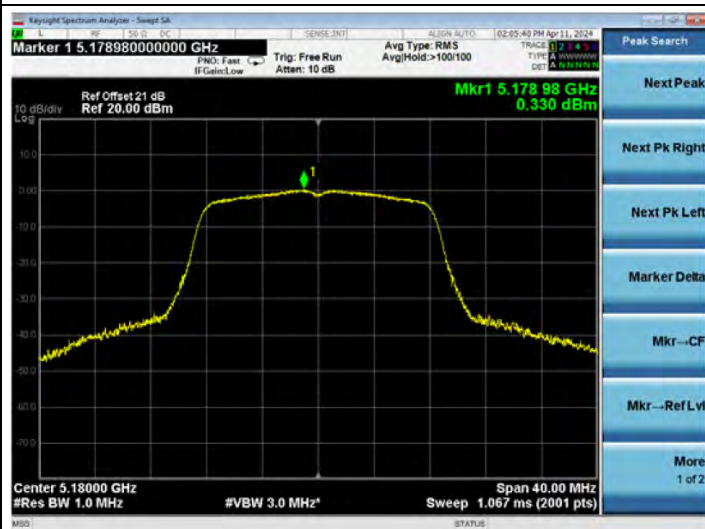
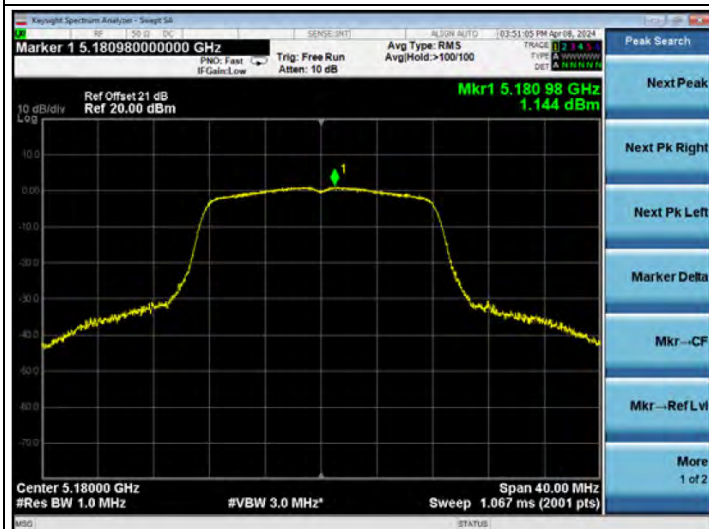
Band-UNII-1

CNF2

CNF3

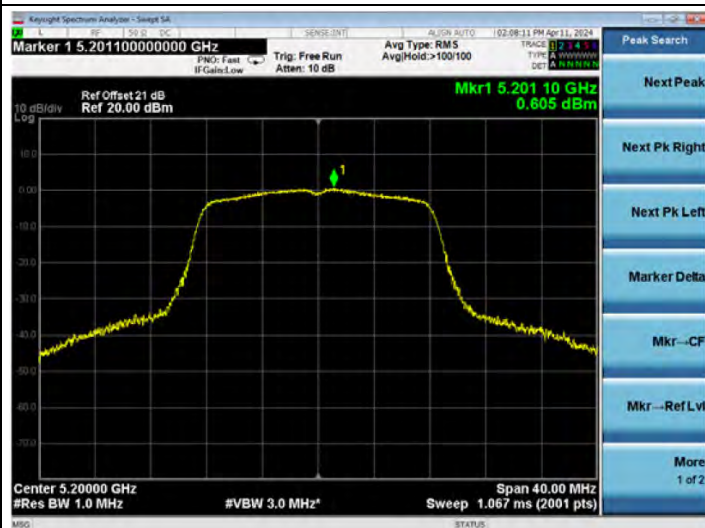
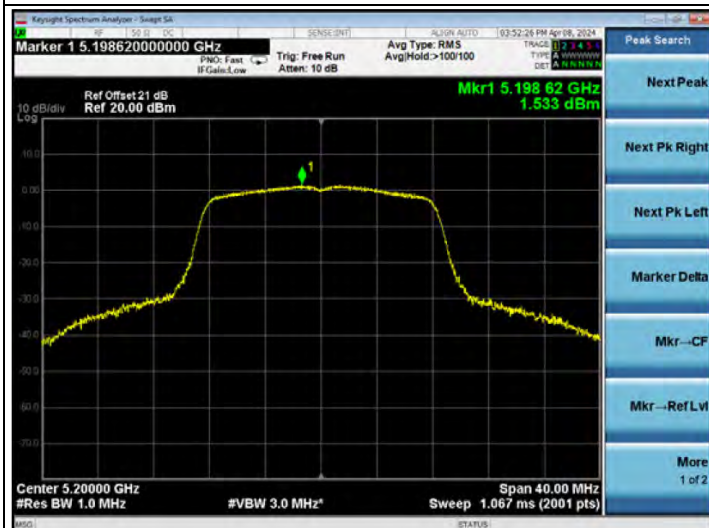
CH5180

CH5180



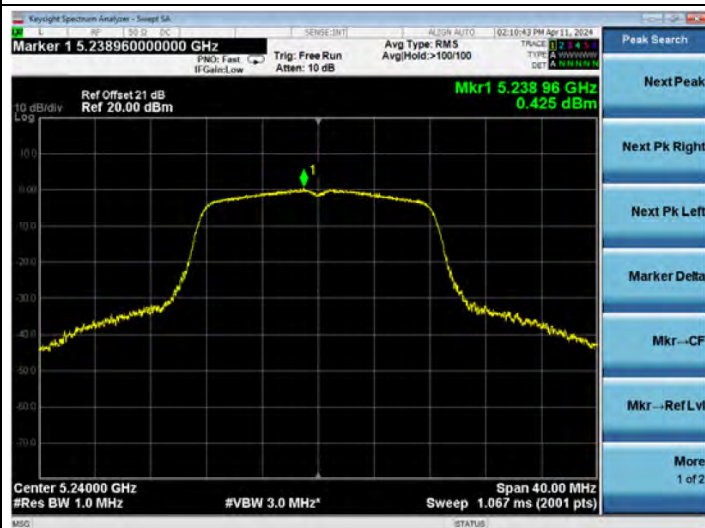
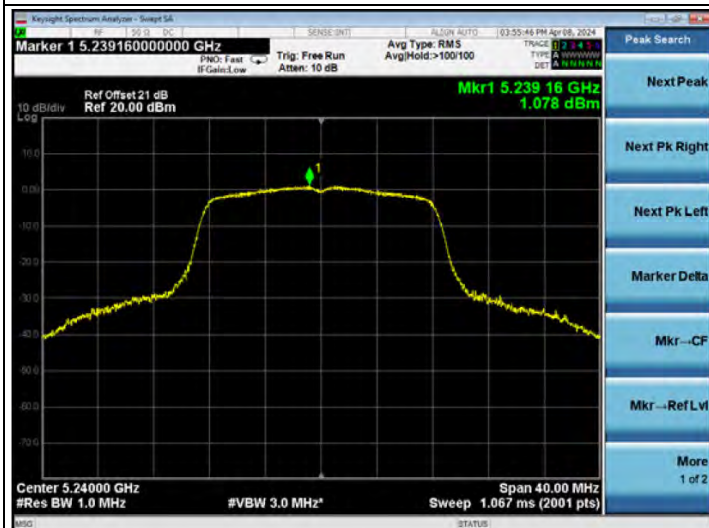
CH5200

CH5200



CH5240

CH5240



802.11a

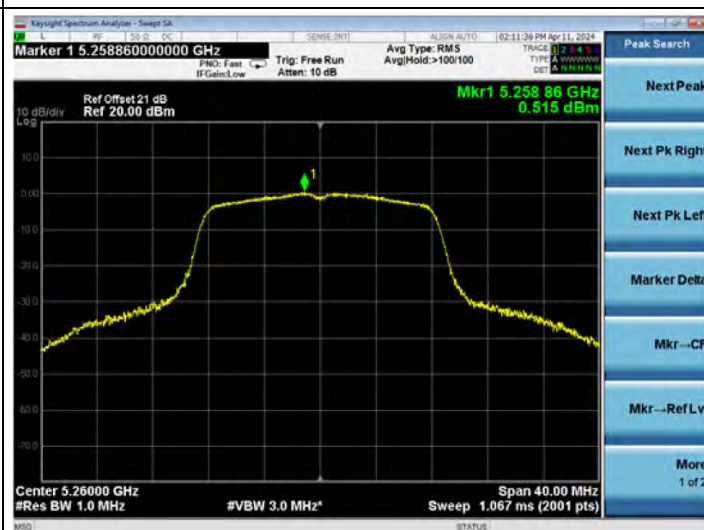
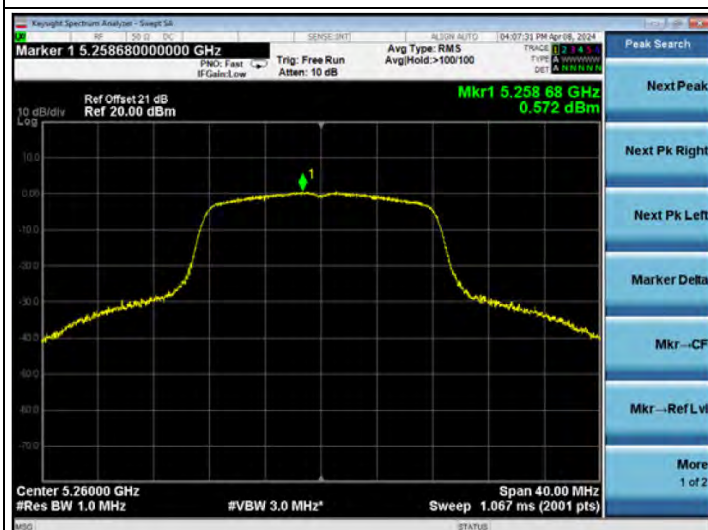
Band-UNII-2A

CNF2

CNF3

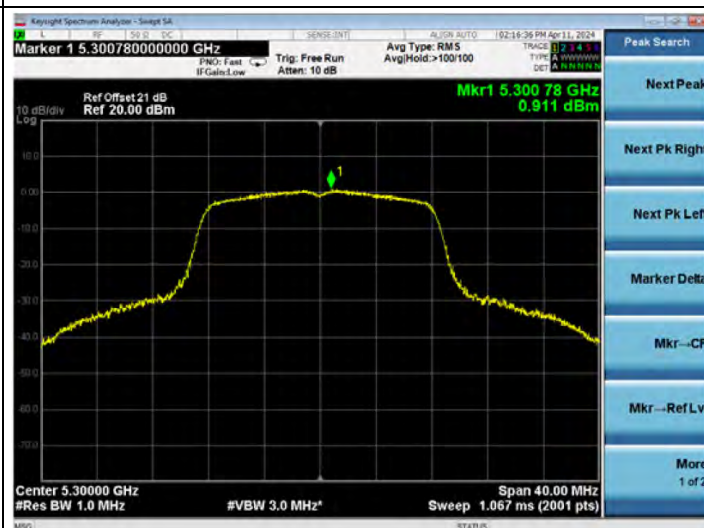
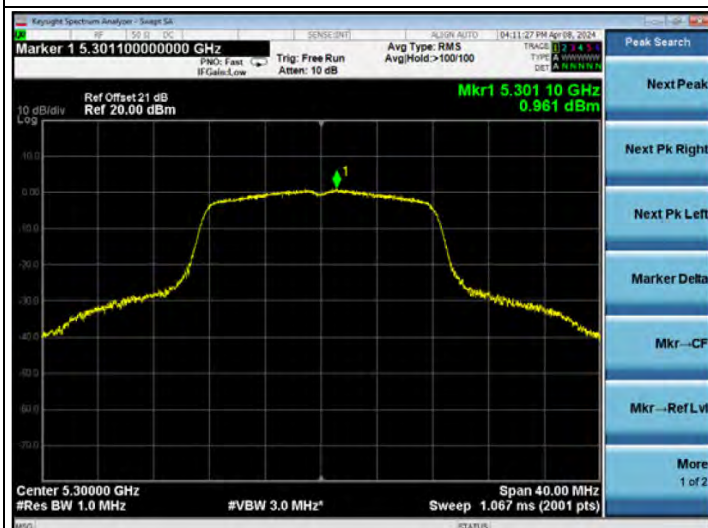
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CH5260



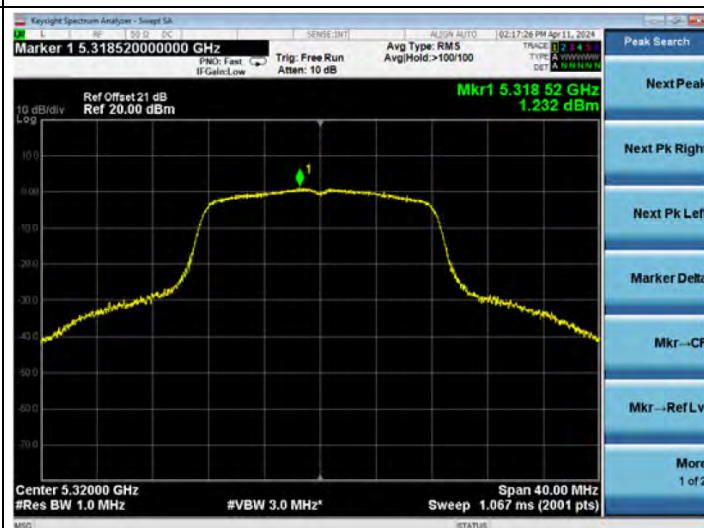
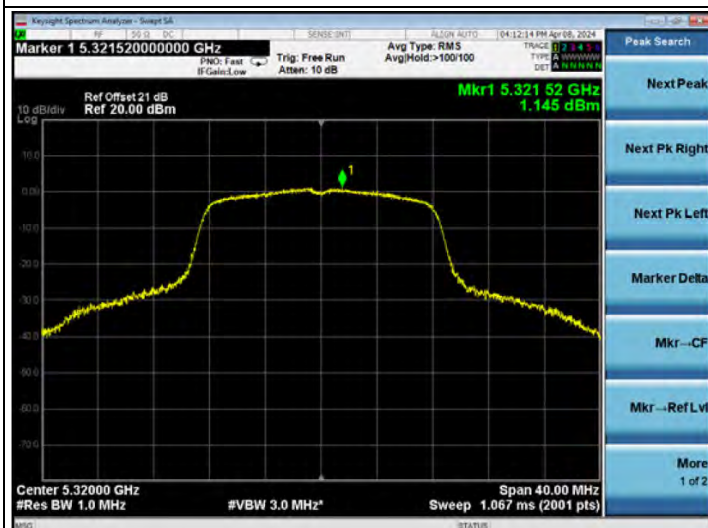
CH5300

CH5300



CH5320

CH5320

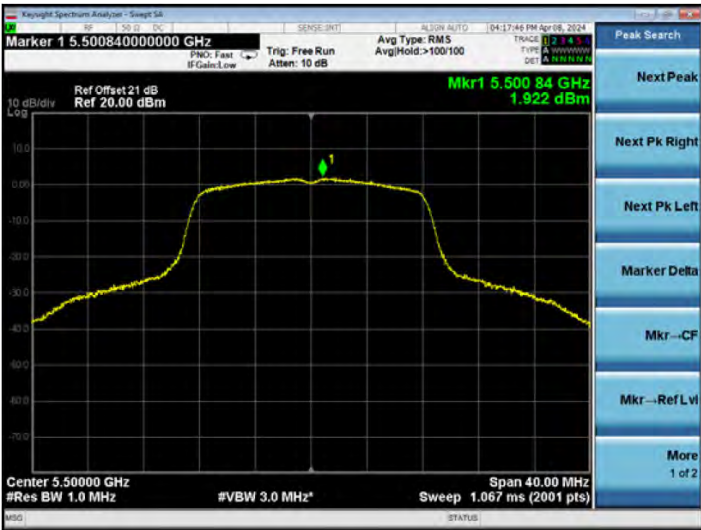


802.11a

Band-UNII-2C

CNF2

CH5500



CNF3

CH5500



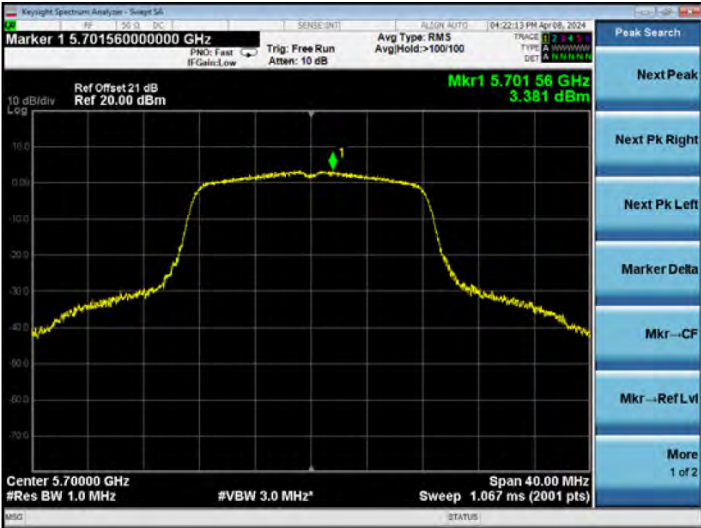
CH5600



CH5600



CH5700



CH5700



802.11n20

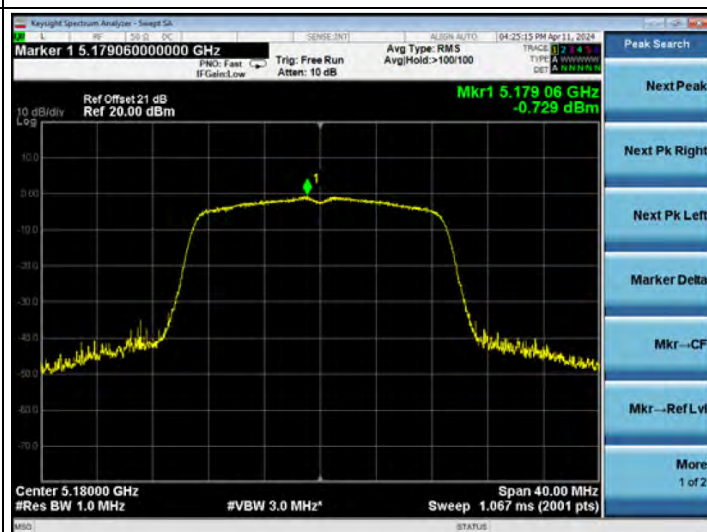
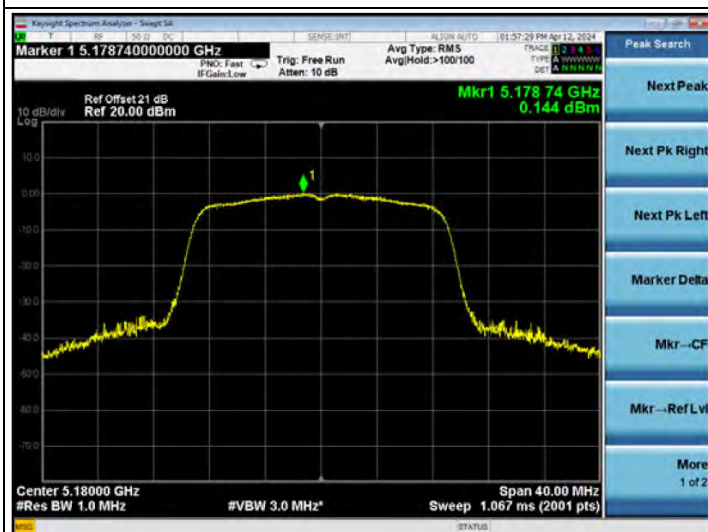
Band-UNII-1

CNF2

CNF3

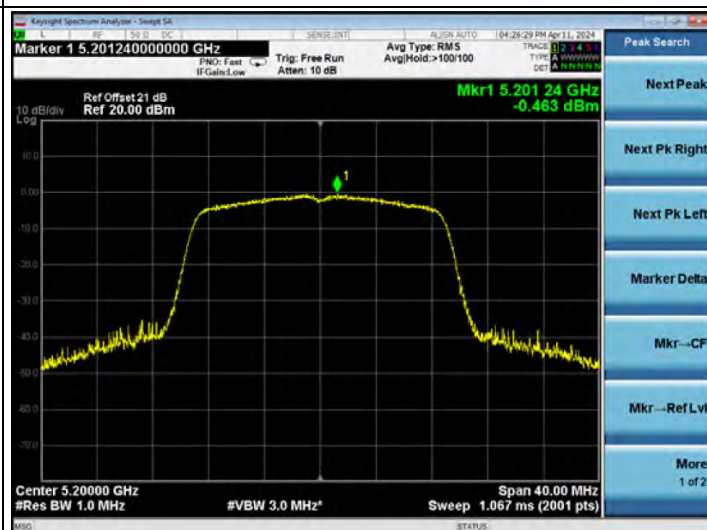
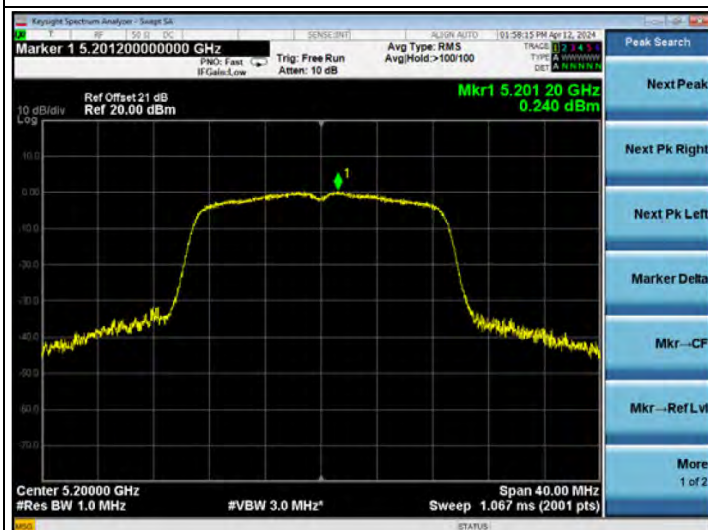
CH5180

CH5180



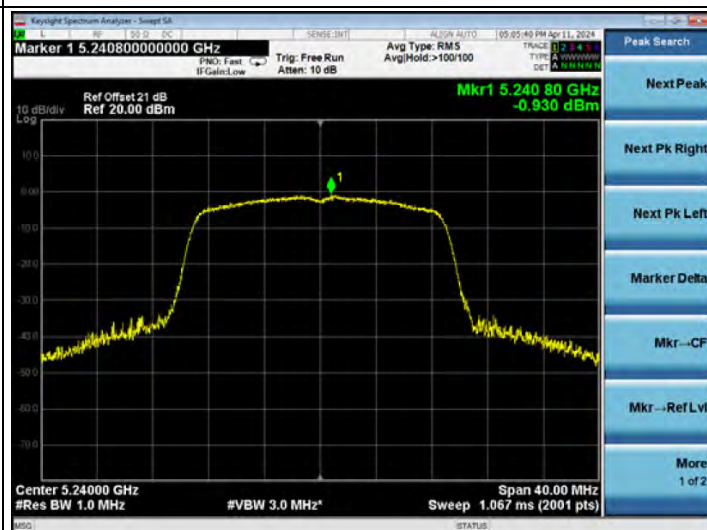
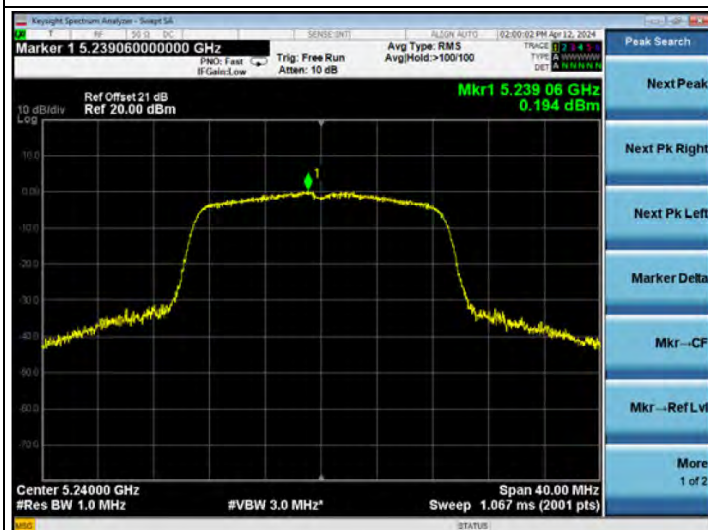
CH5200

CH5200



CH5240

CH5240



802.11n20

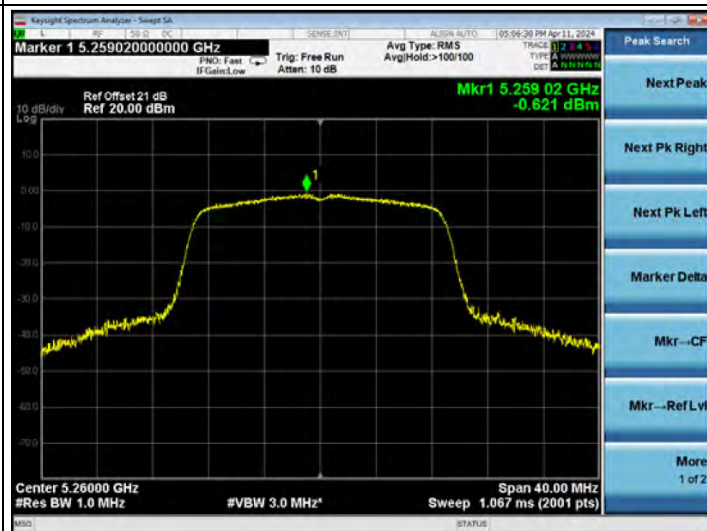
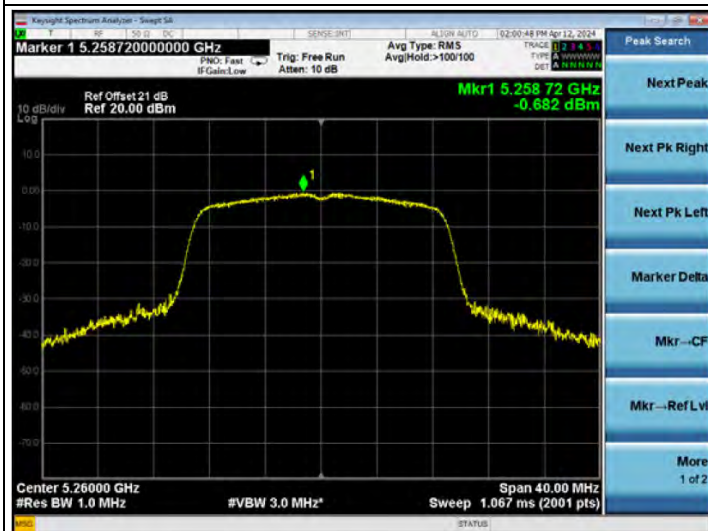
Band-UNII-2A

CNF2

CNF3

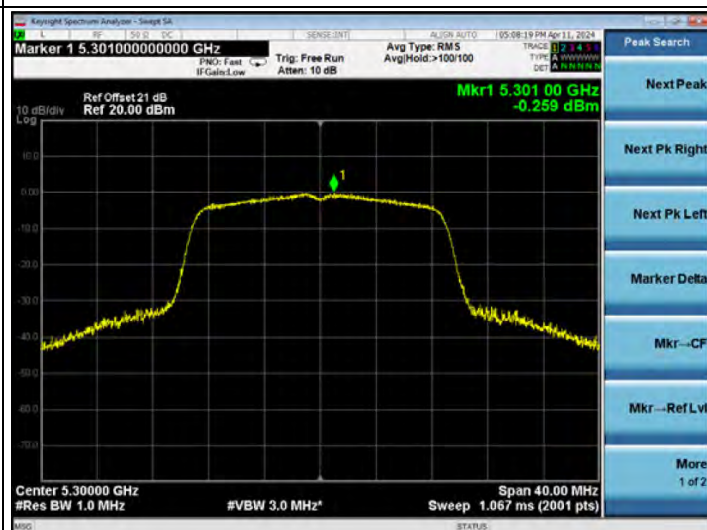
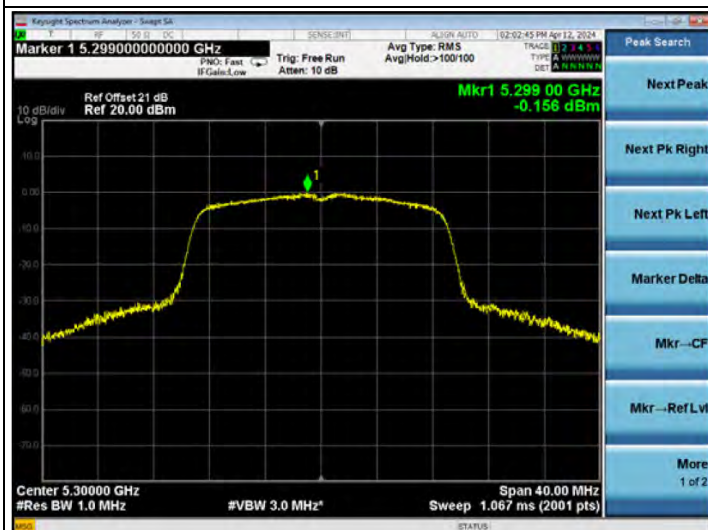
CH5260

CH5260



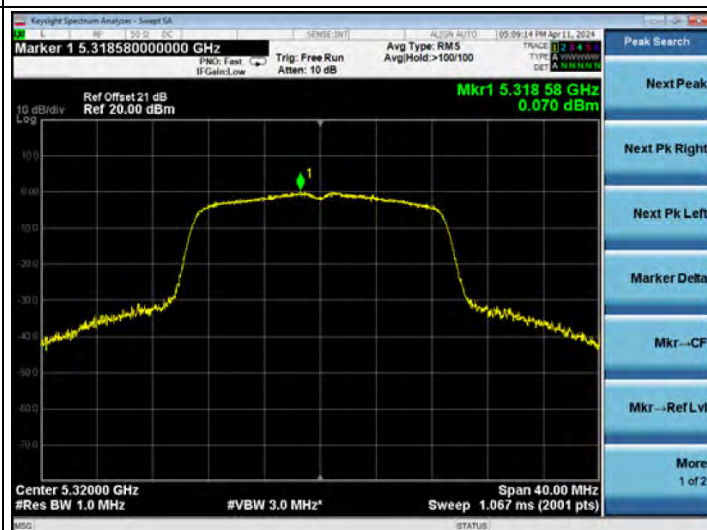
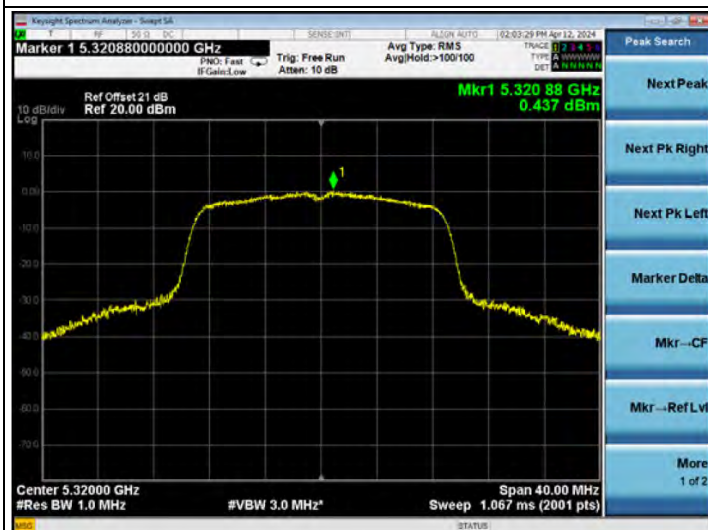
CH5300

CH5300



CH5320

CH5320



802.11n20

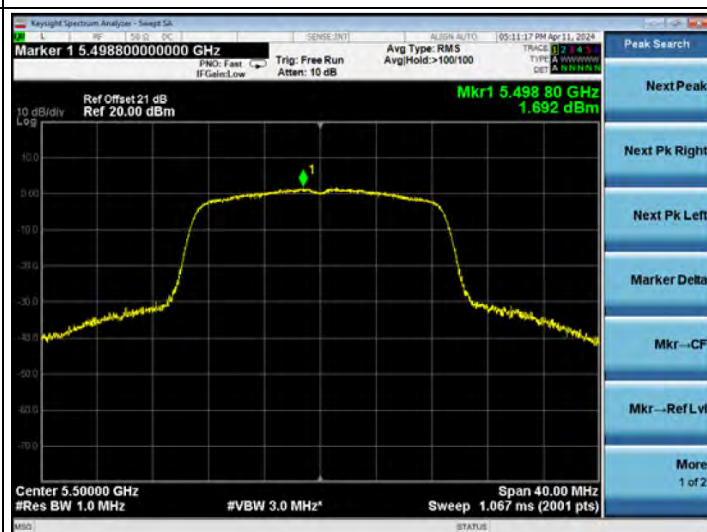
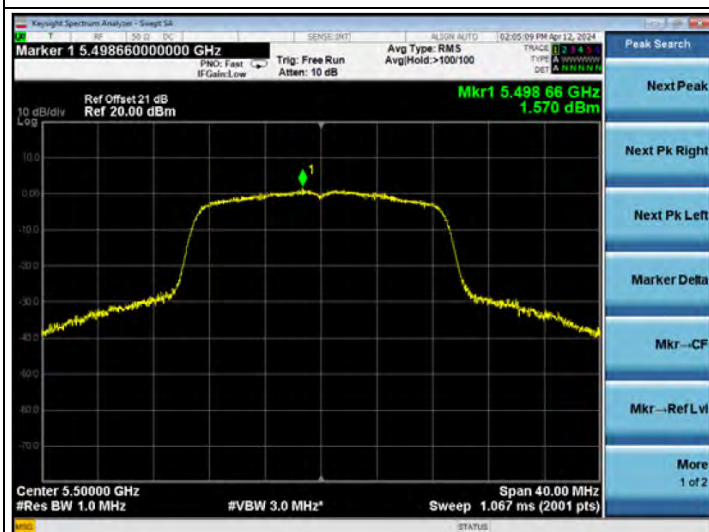
Band-UNII-2C

CNF2

CNF3

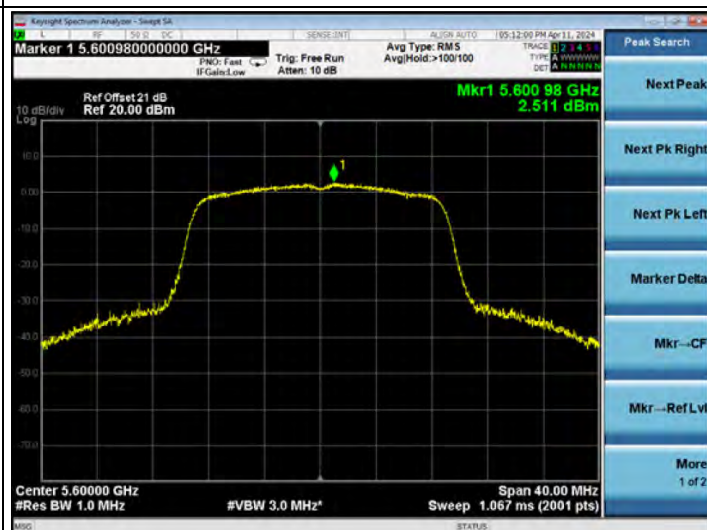
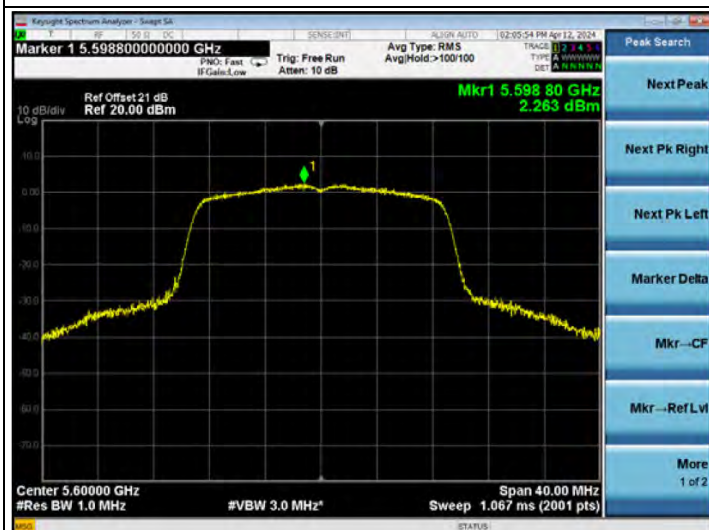
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CH5500



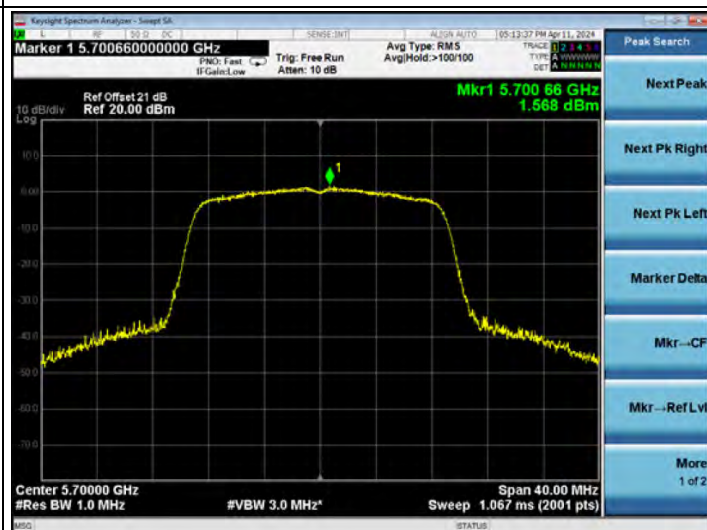
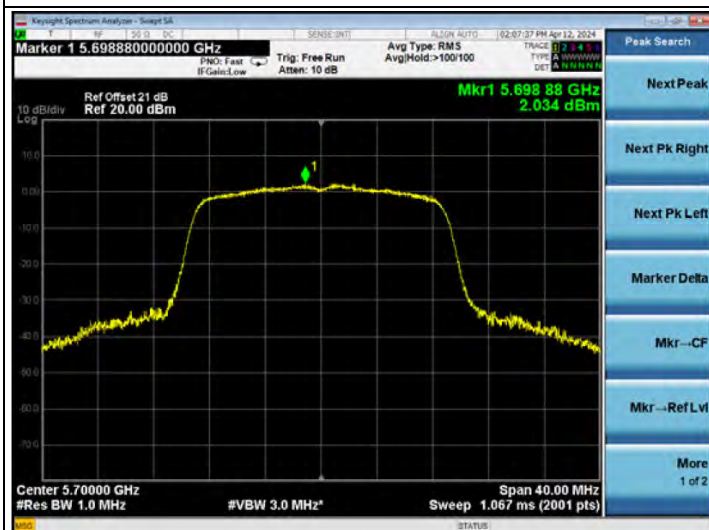
CH5600

CH5600



CH5700

CH5700



802.11n40

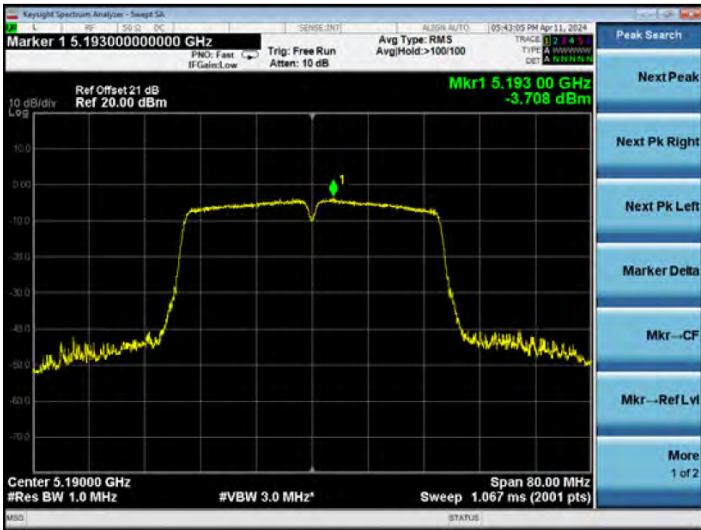
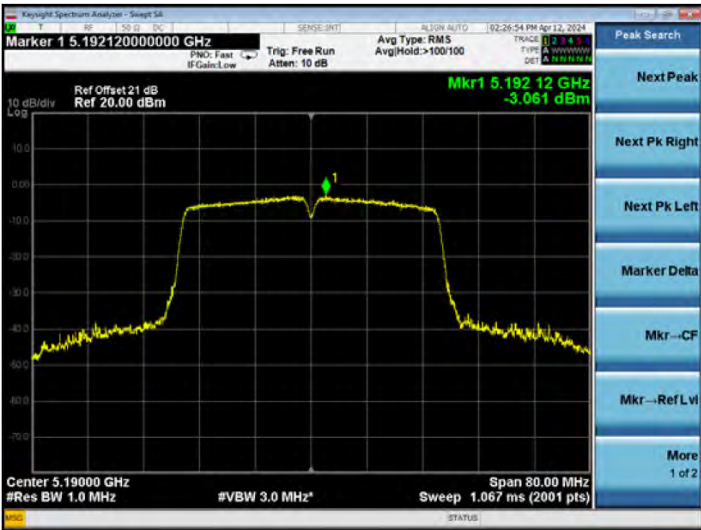
Band-UNII-1

CNF2

CNF3

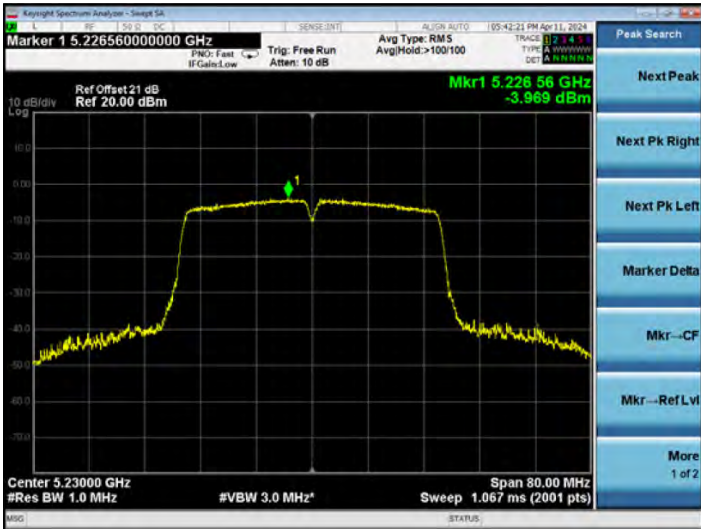
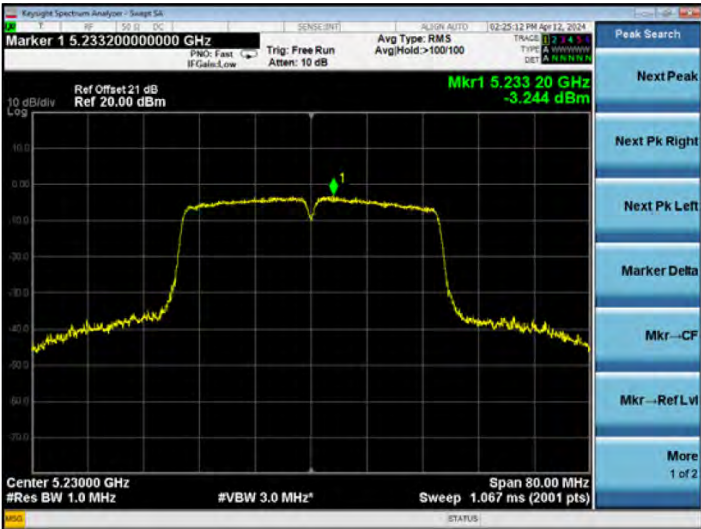
CH5190

CH5190



CH5230

CH5230

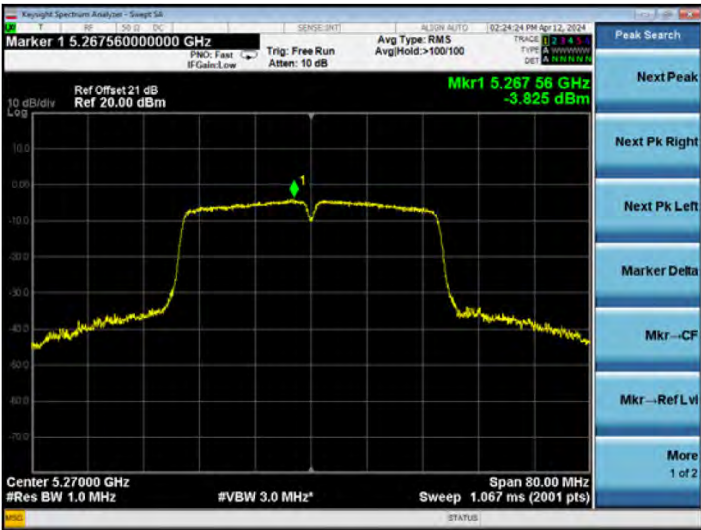


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Band-UNII-2A

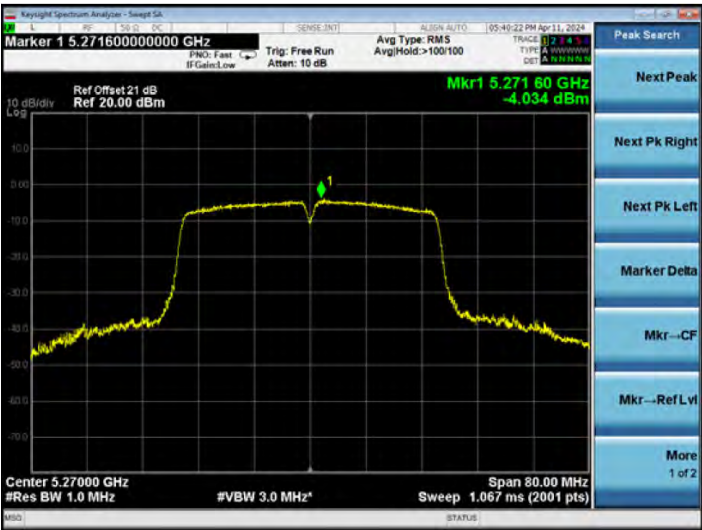
CNF2

CH5270

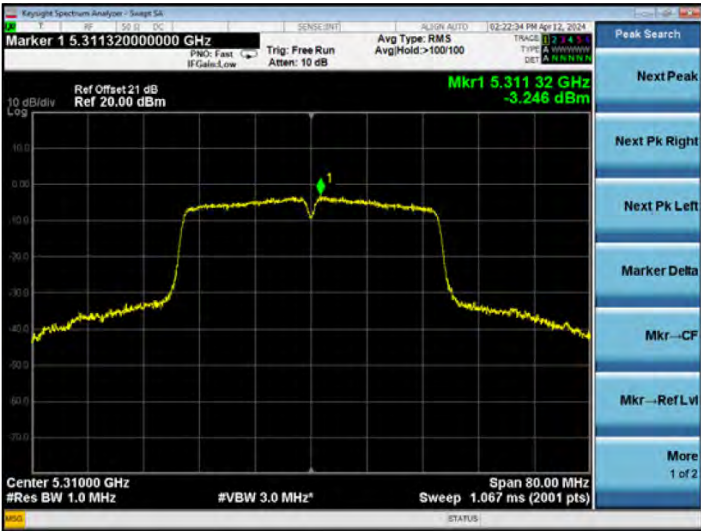


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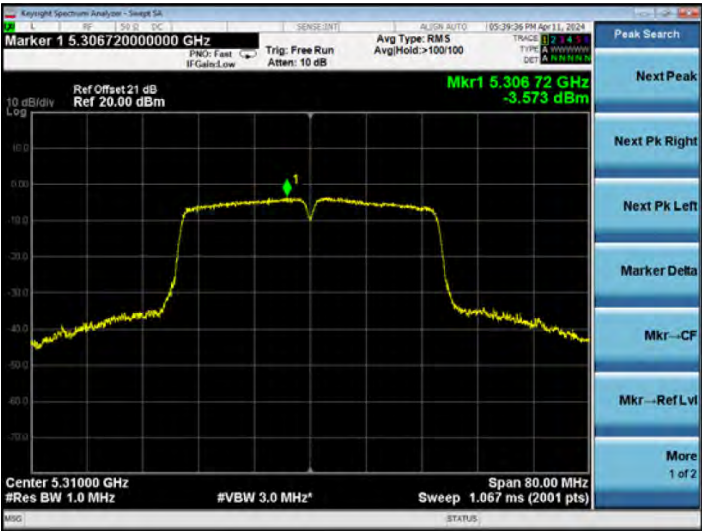
CH5270



CH5310



CH5310



802.11n40

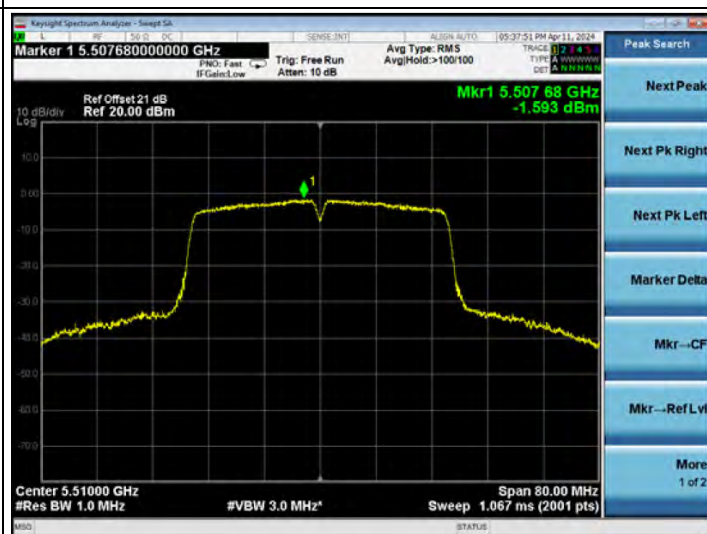
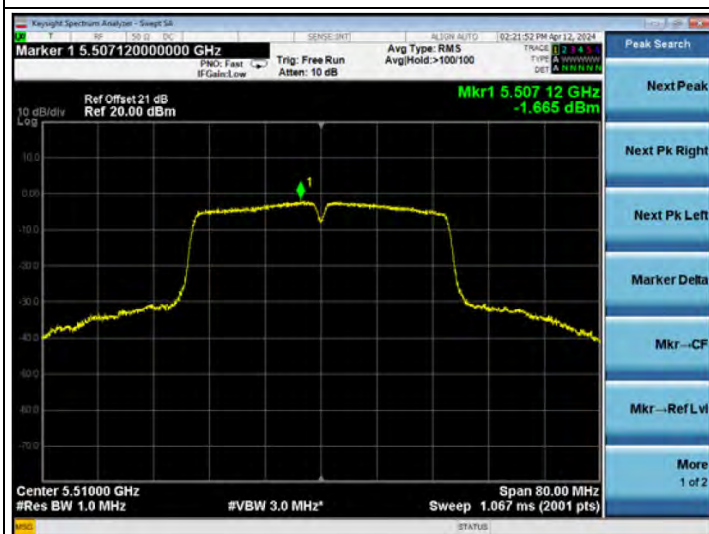
Band-UNII-2C

CNF2

CNF3

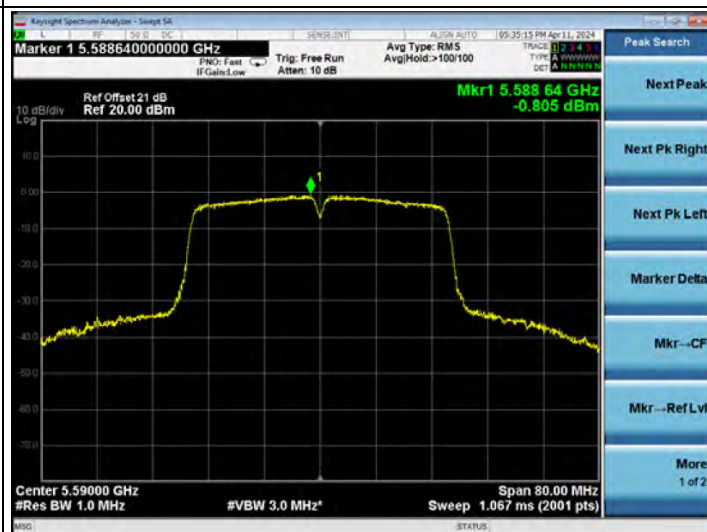
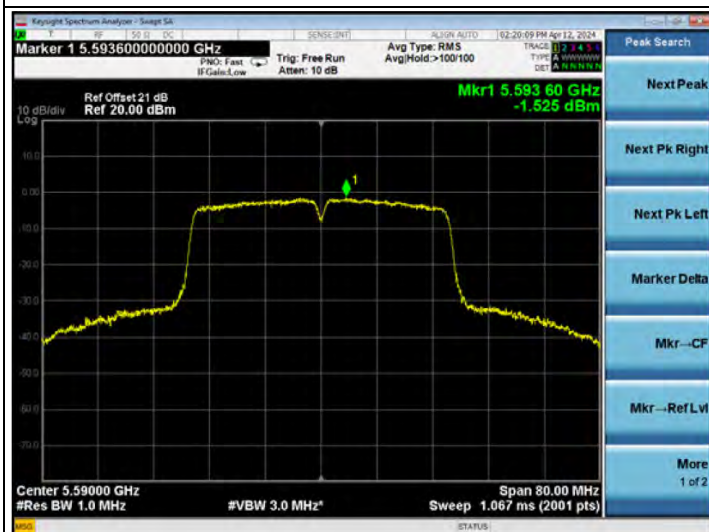
CH5510

CH5510



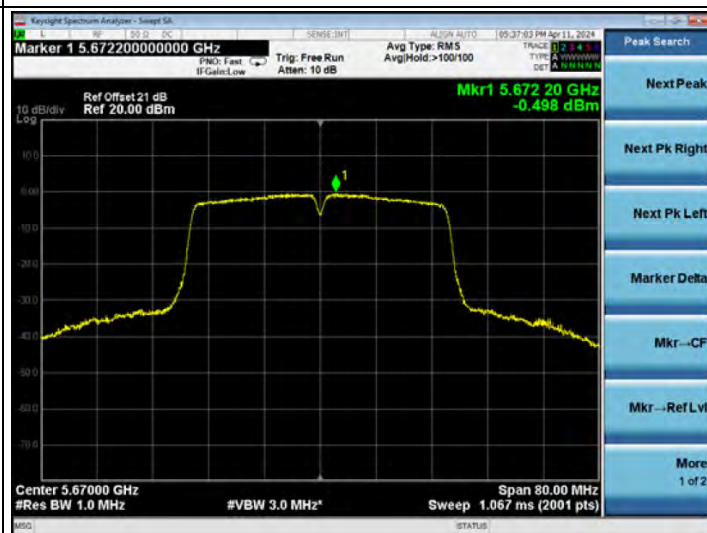
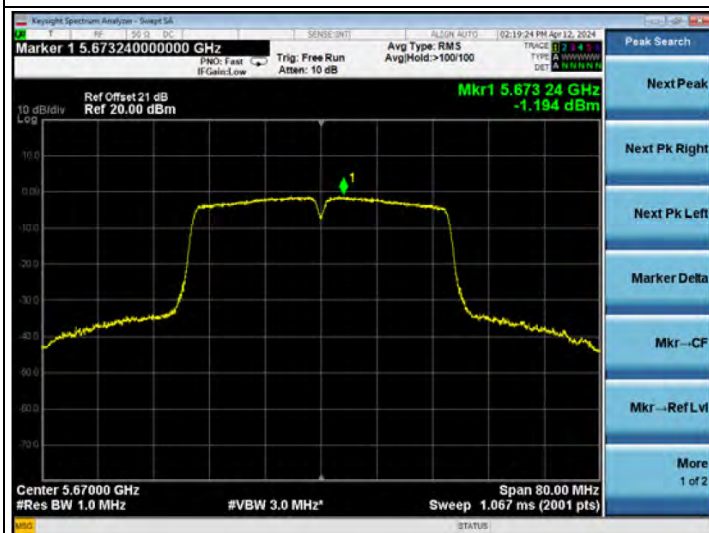
CH5590

CH5590



CH5670

CH5670

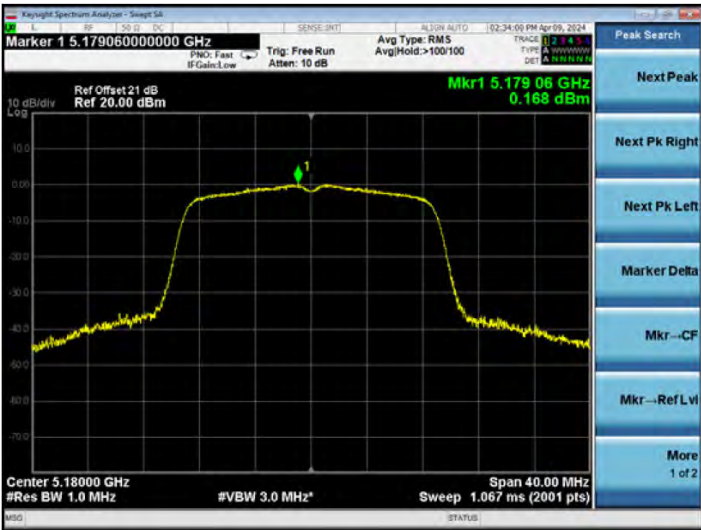


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Band-UNII-1

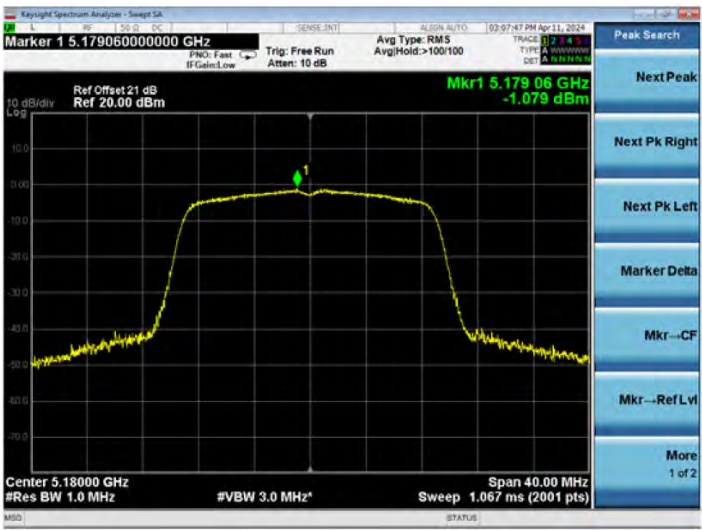
CNF2

CH5180

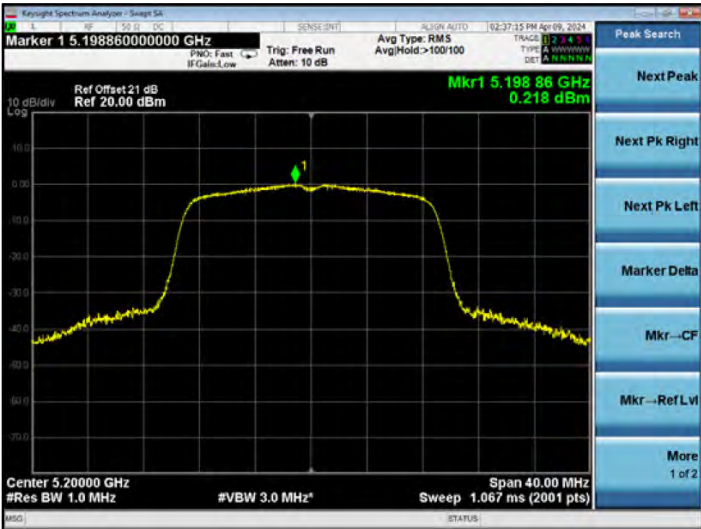


CNF3

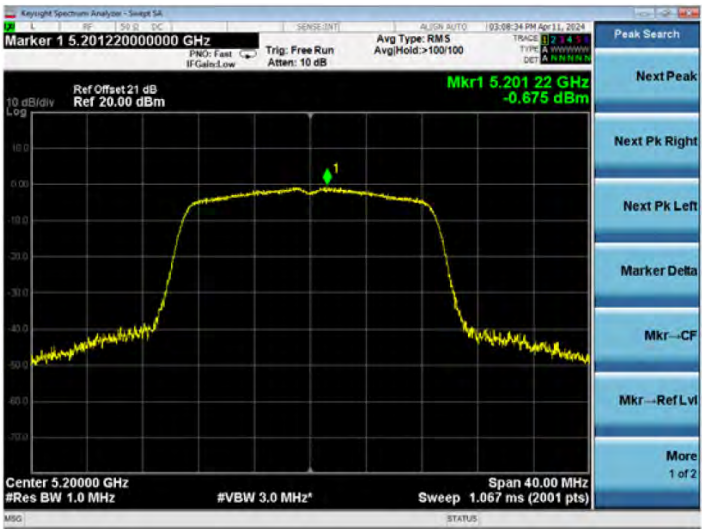
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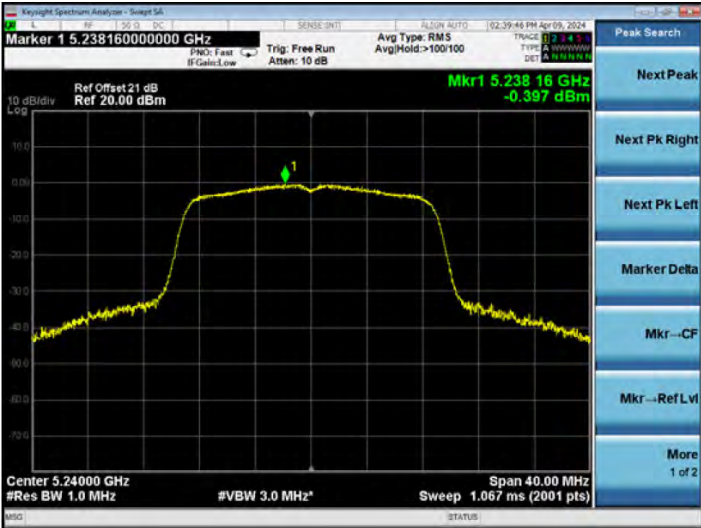
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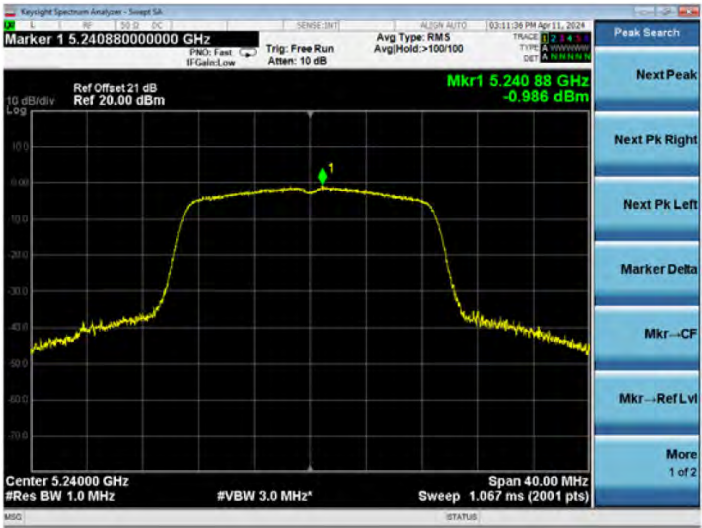
CH5200



CH5240



CH5240

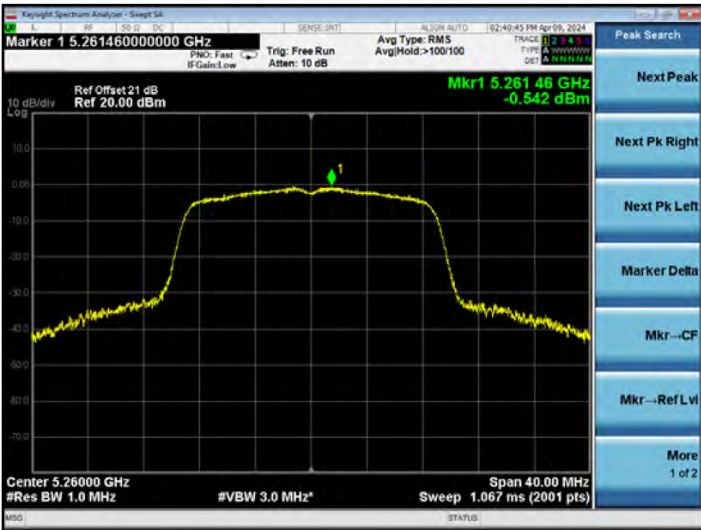


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Band-UNII-2A

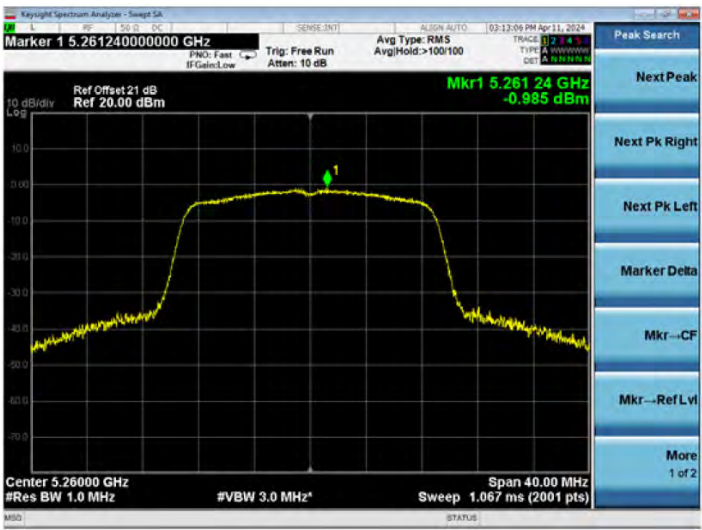
CNF2

CH5260



CNF3

CH5260



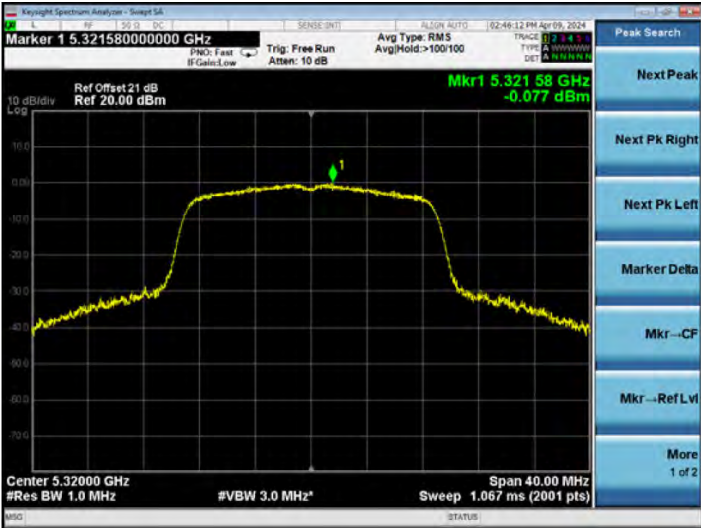
CH5300



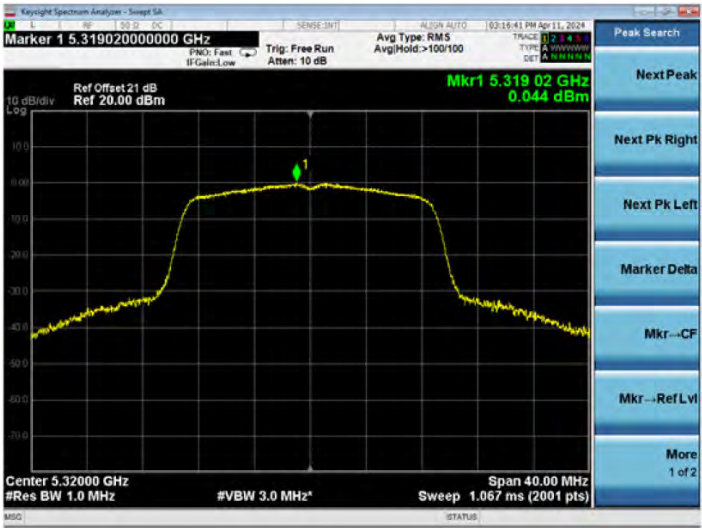
CH5300



CH5320



CH5320

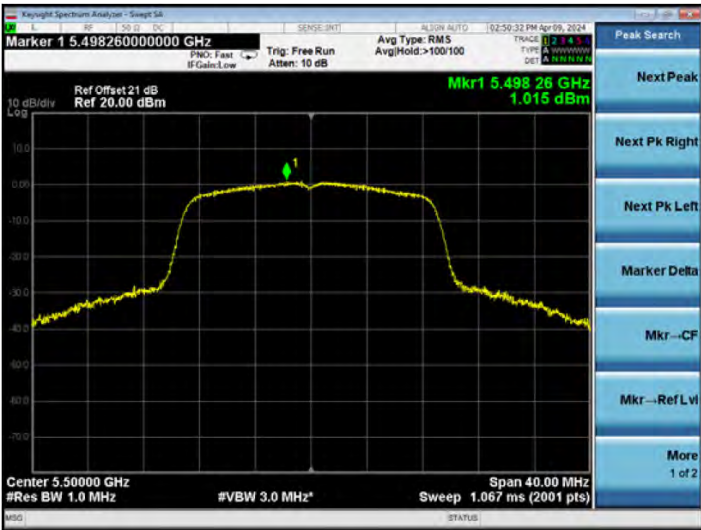


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Band-UNII-2C

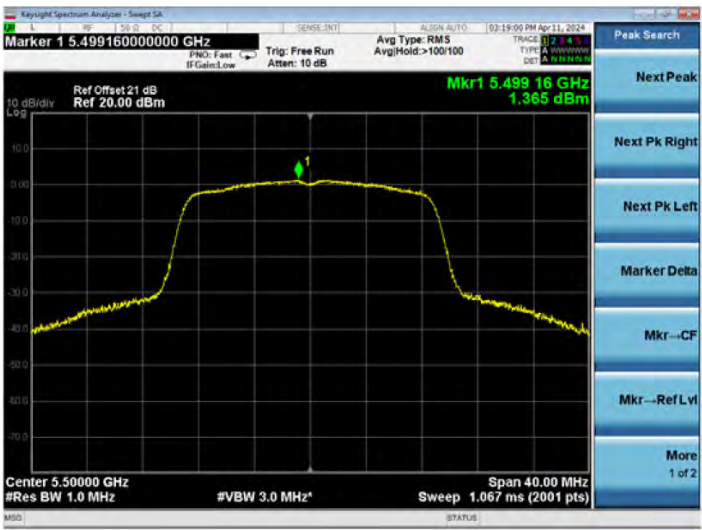
CNF2

CH5500



CNF3

CH5500



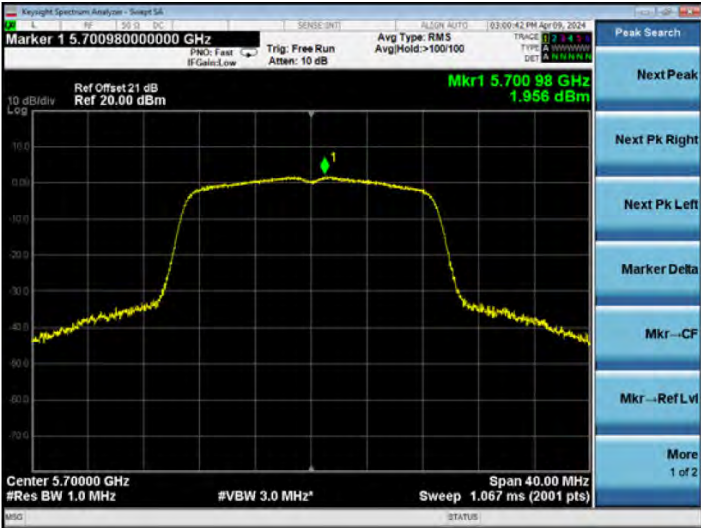
CH5600



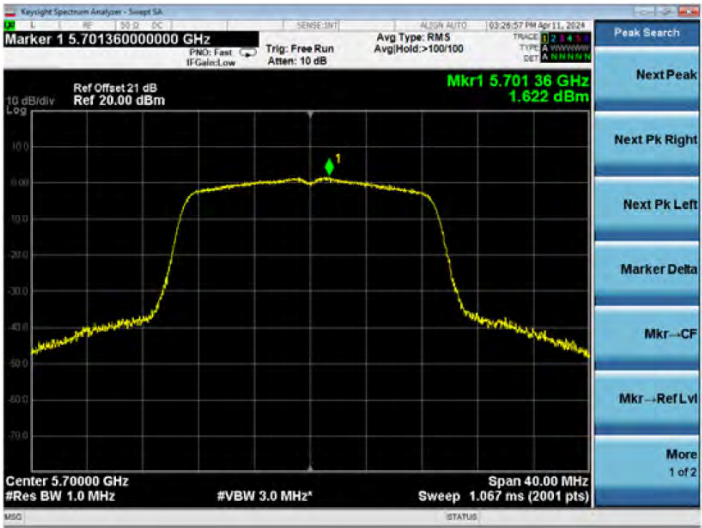
CH5600



CH5700



CH5700

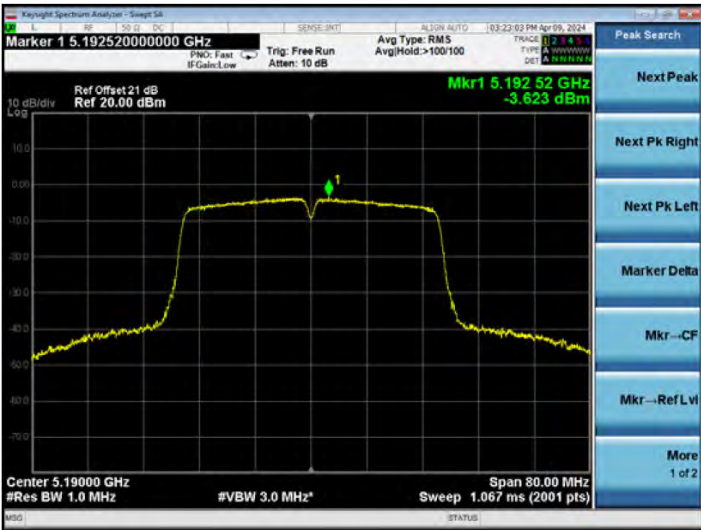


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Band-UNII-1

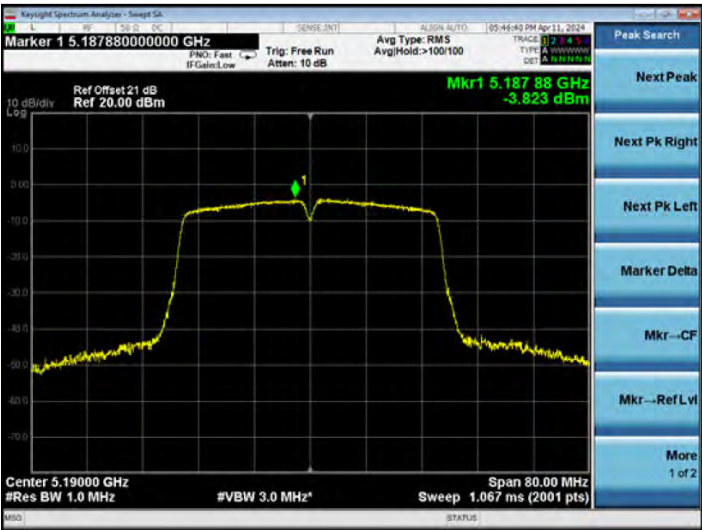
CNF2

CH5190

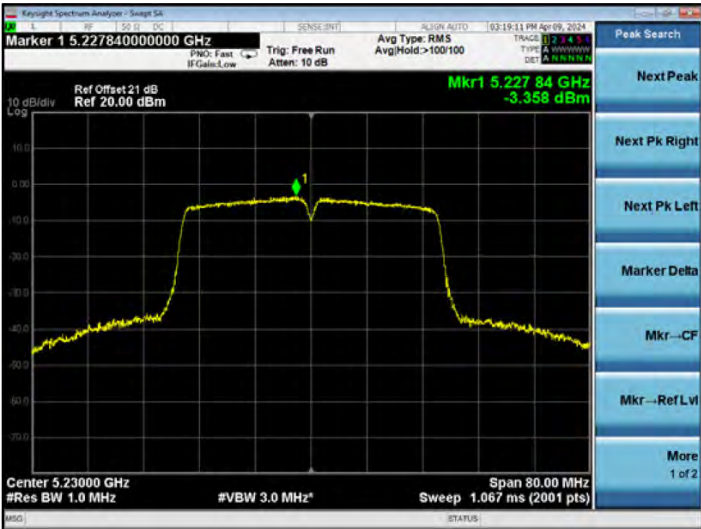


CNF3

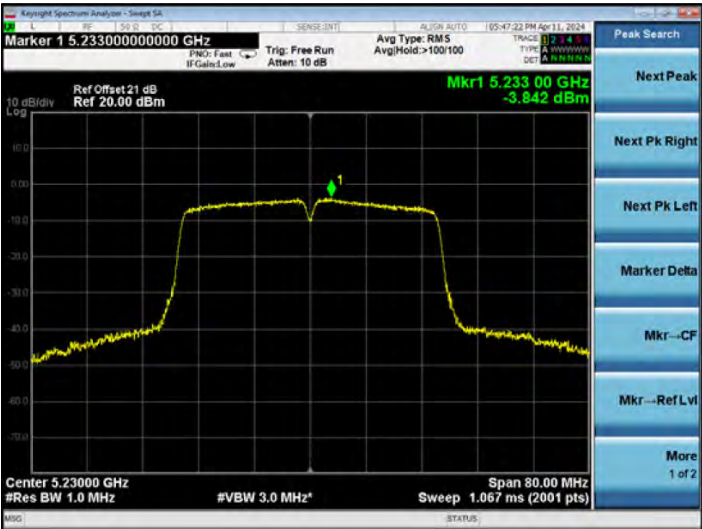
CH5190



CH5230



CH5230

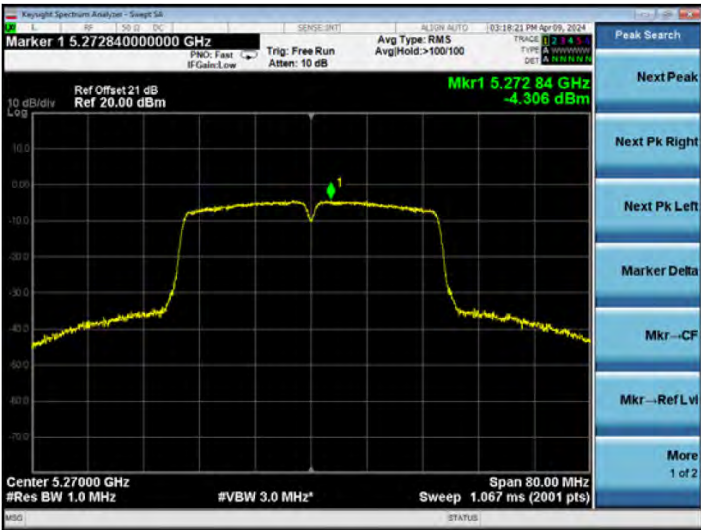


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Band-UNII-2A

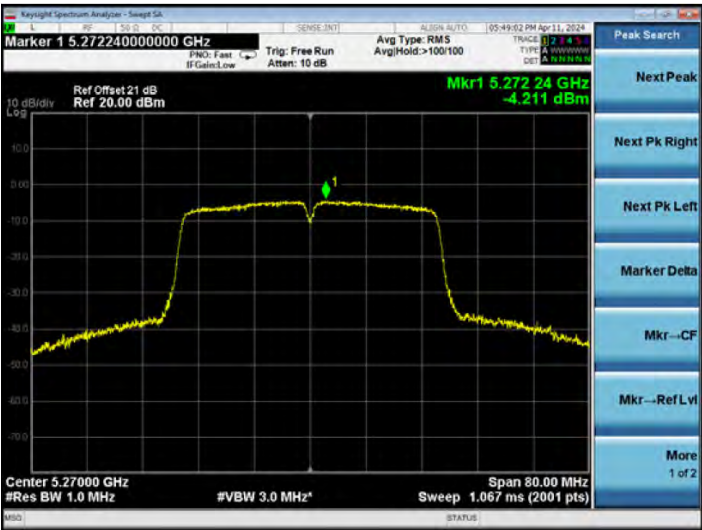
CNF2

CH5270



CNF3

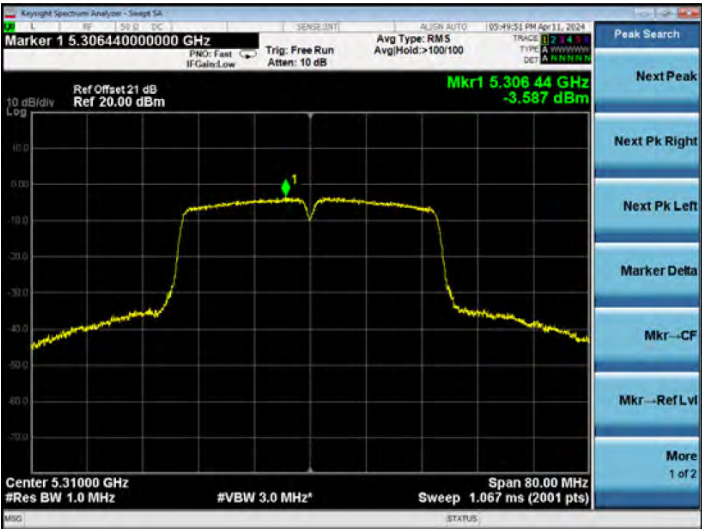
CH5270



CH5310



CH5310

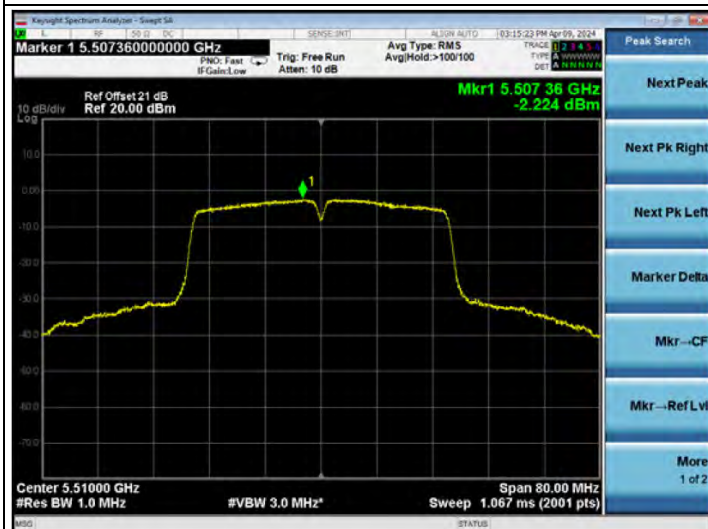


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Band-UNII-2C

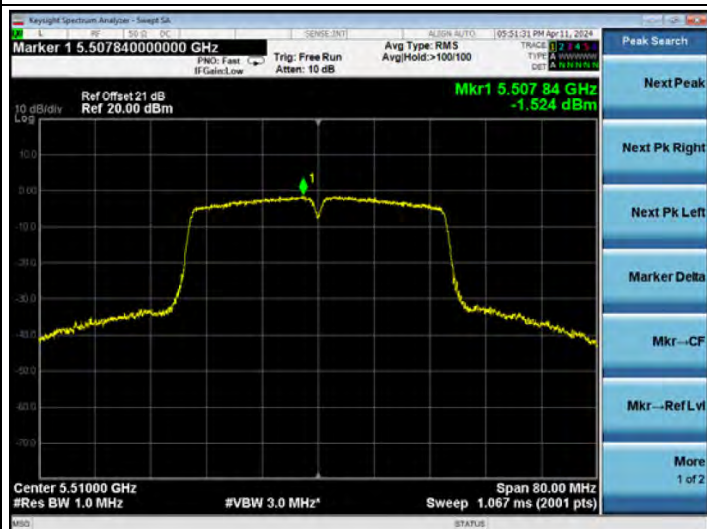
CNF2

CH5510

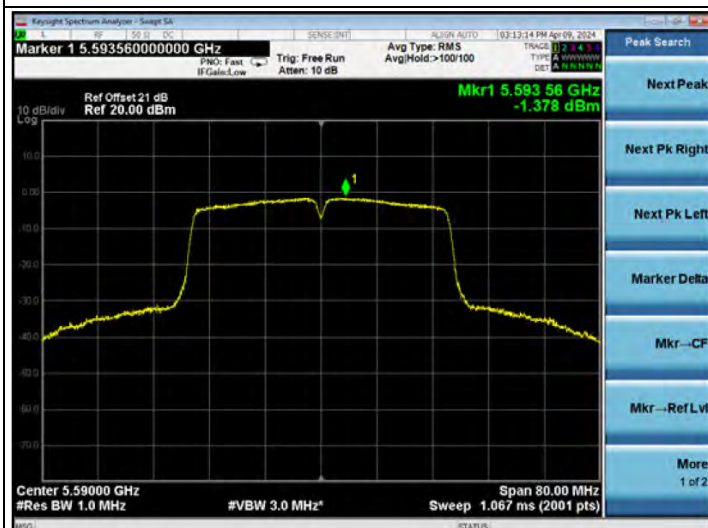


CNF3

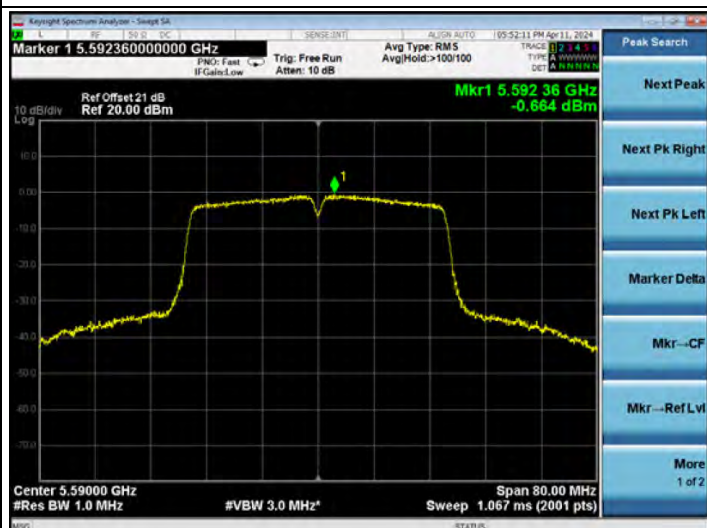
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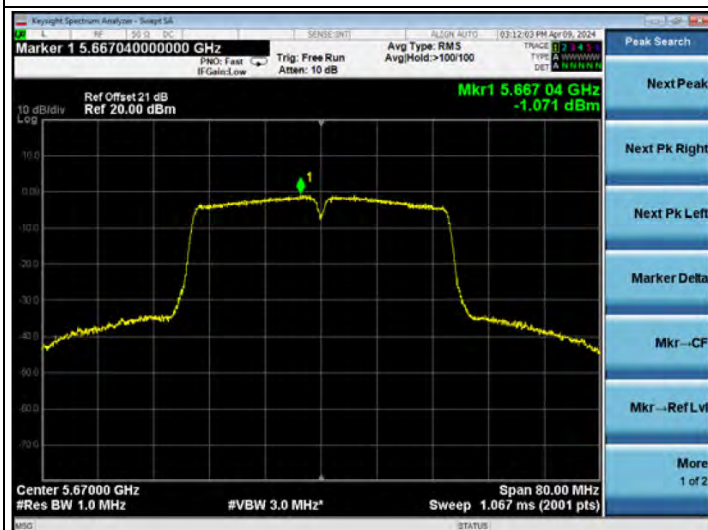
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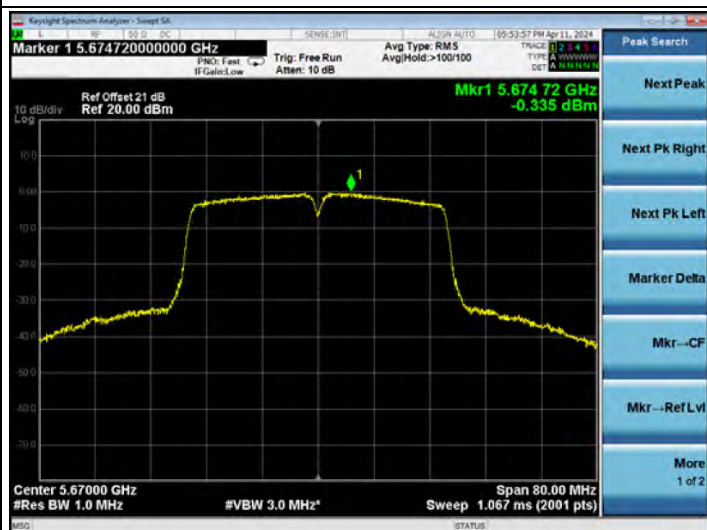
CH5590



CH5670



CH5670



802.11ac80

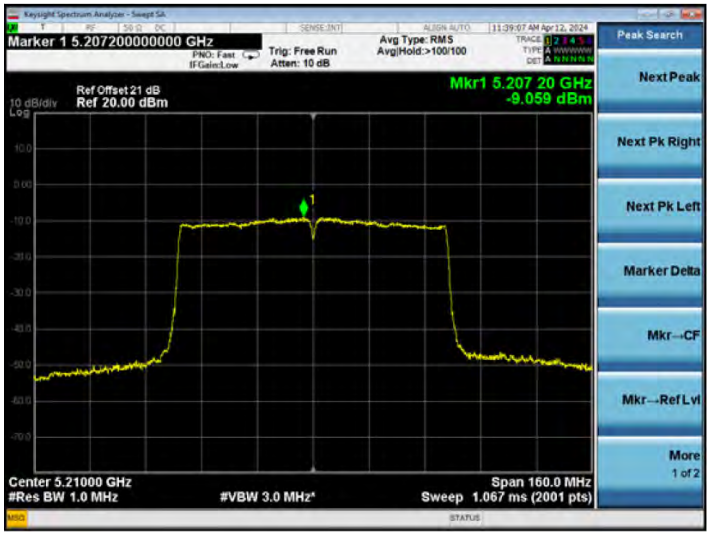
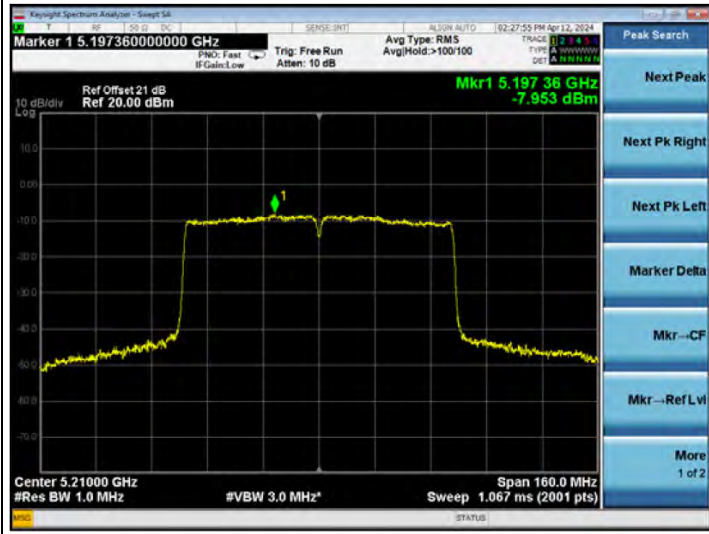
Band-UNII-1

CNF2

CNF3

CH5210

CH5210

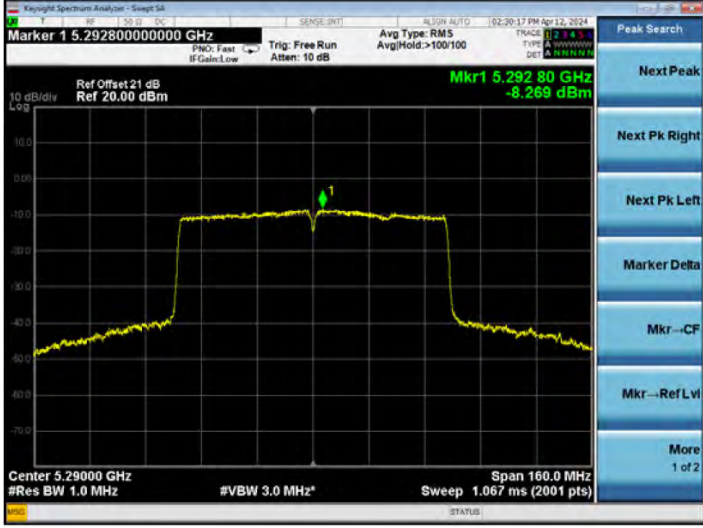


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Band-UNII-2A

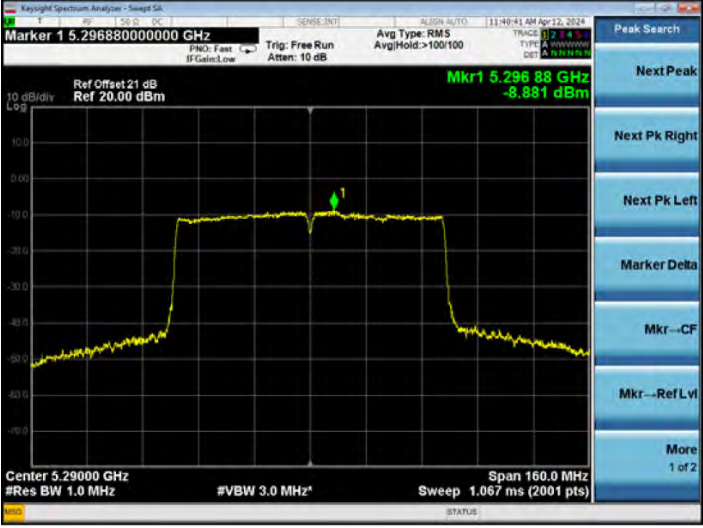
CNF2

CH5290



CNF3

CH5290

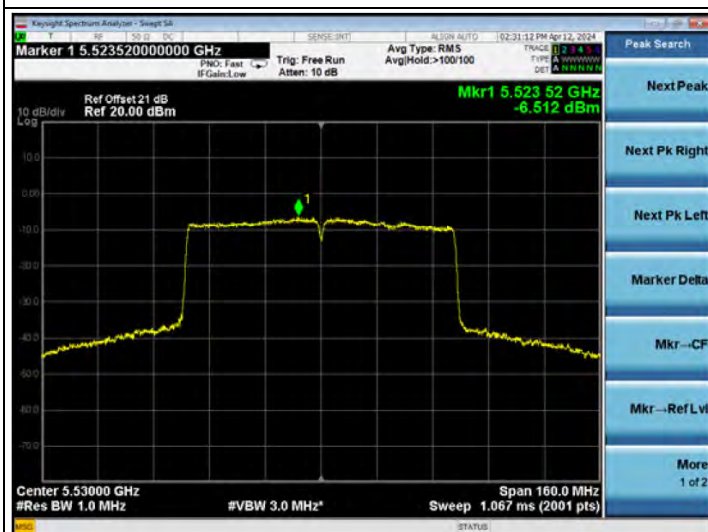


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Band-UNII-2C

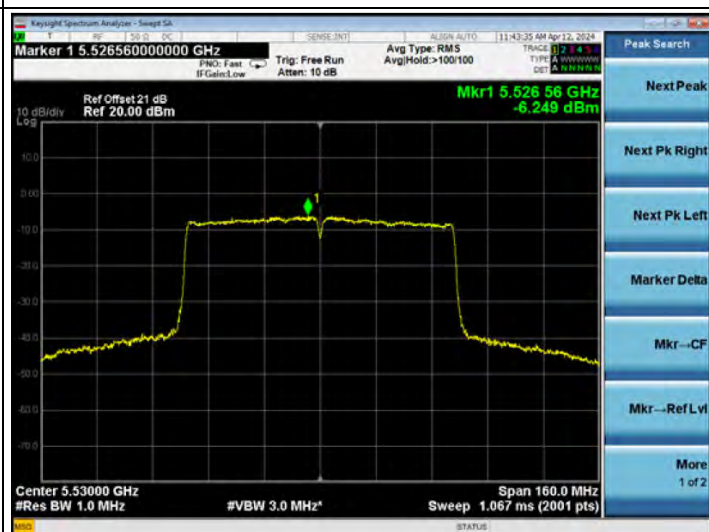
CNF2

CH5530

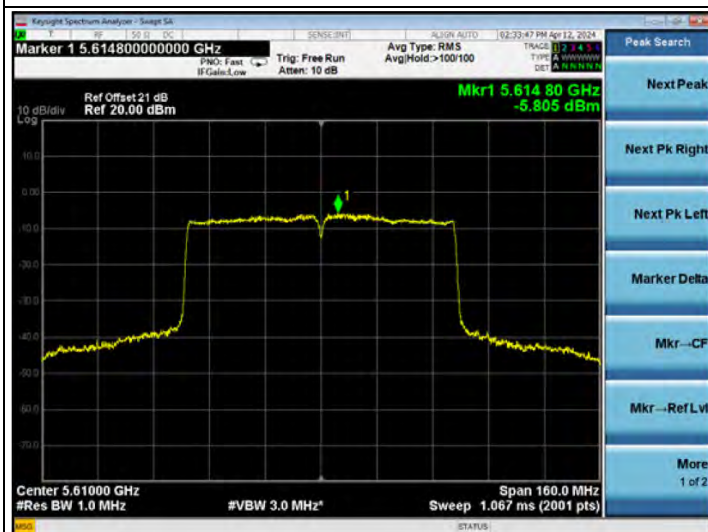


CNF3

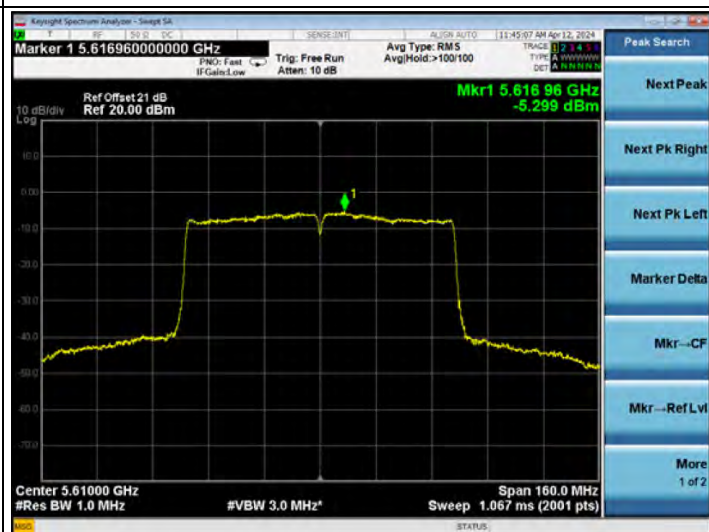
CH5530



CH5610



CH5610



802.11a

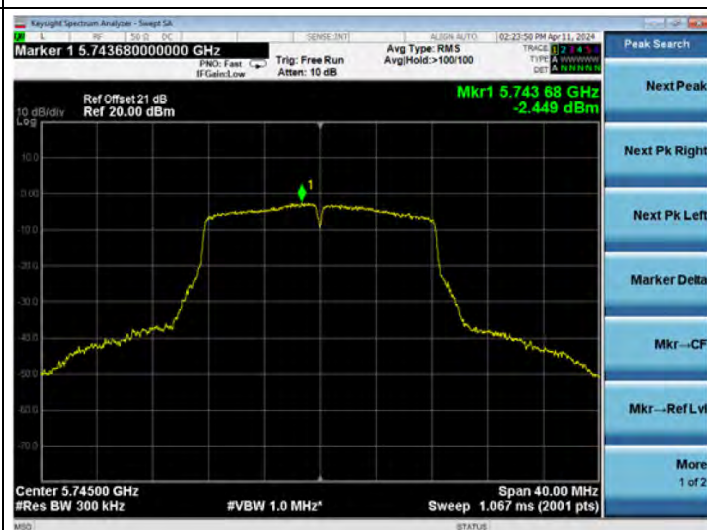
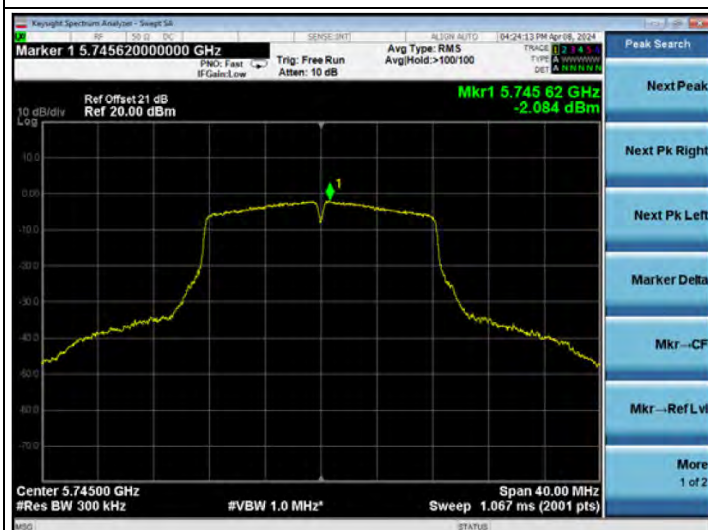
Band-UNII-3

CNF2

CNF3

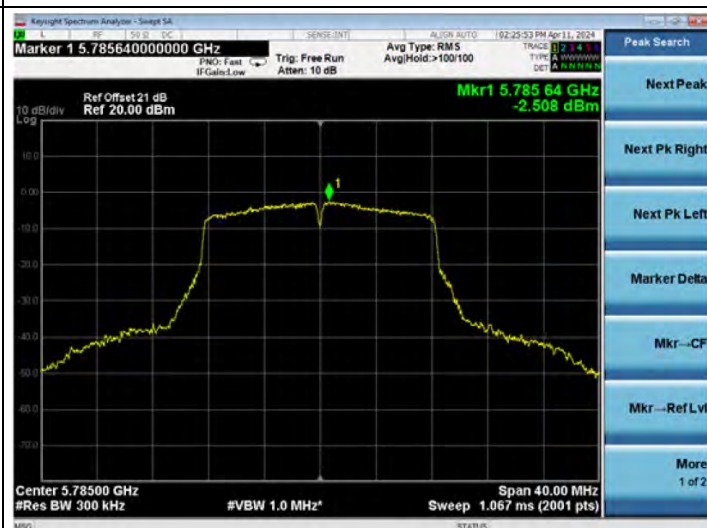
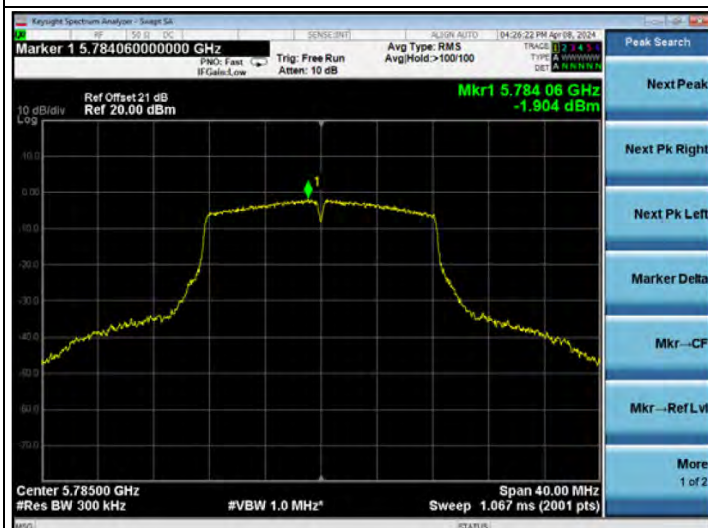
CH5745

CH5745



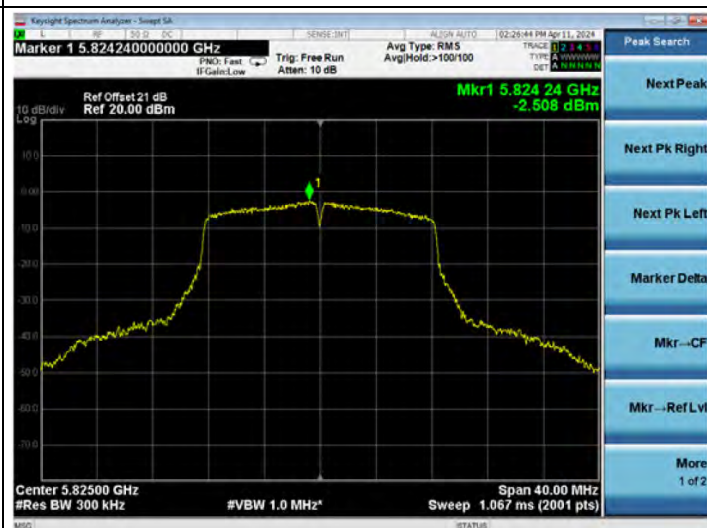
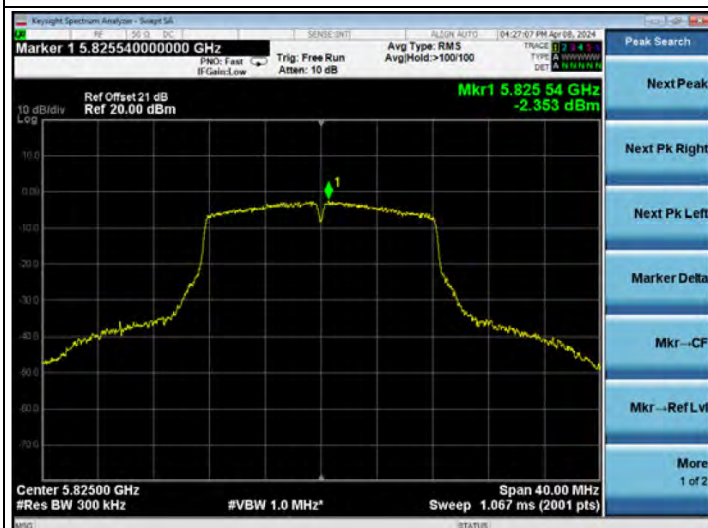
CH5785

CH5785



CH5825

CH5825



802.11n20

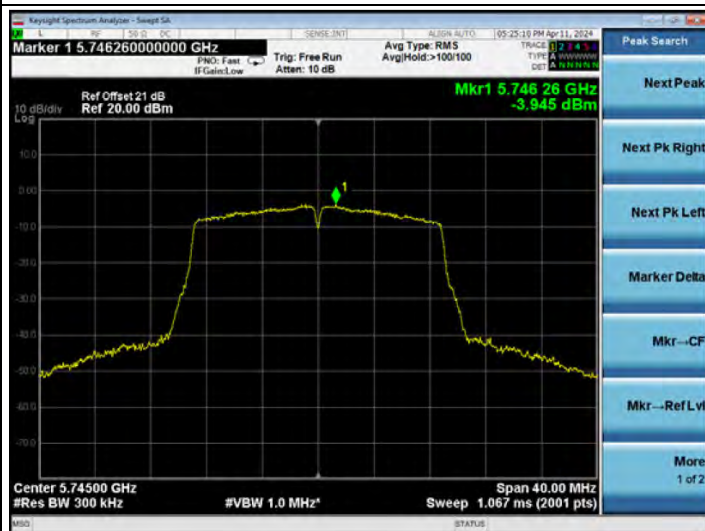
Band-UNII-3

CNF2

CNF3

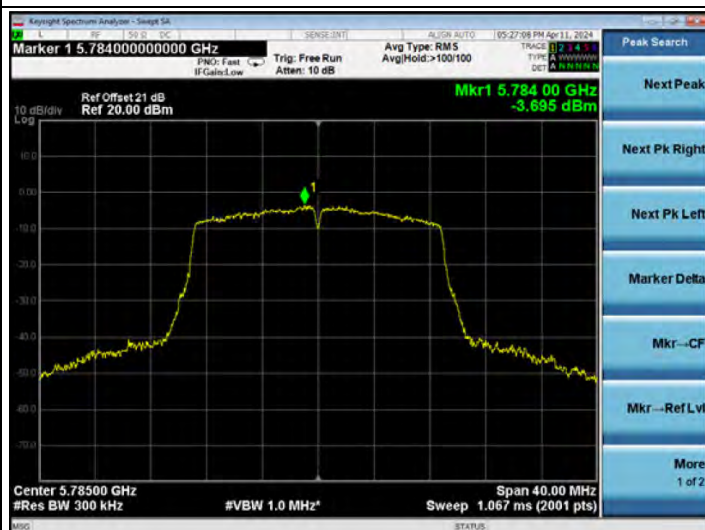
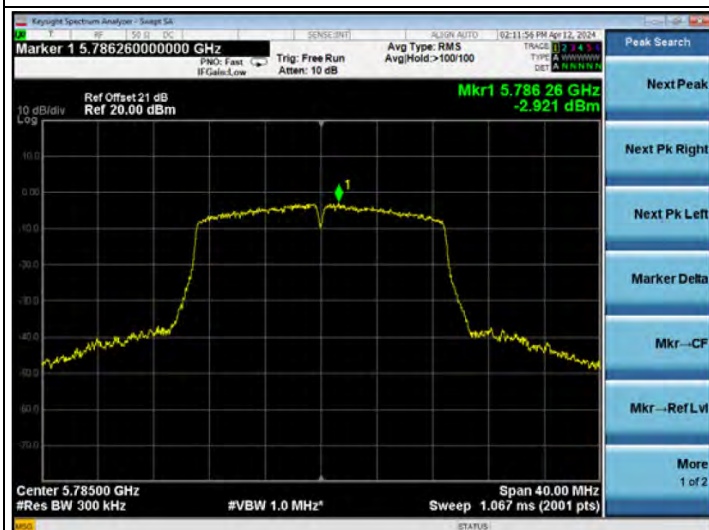
CH5745

CH5745



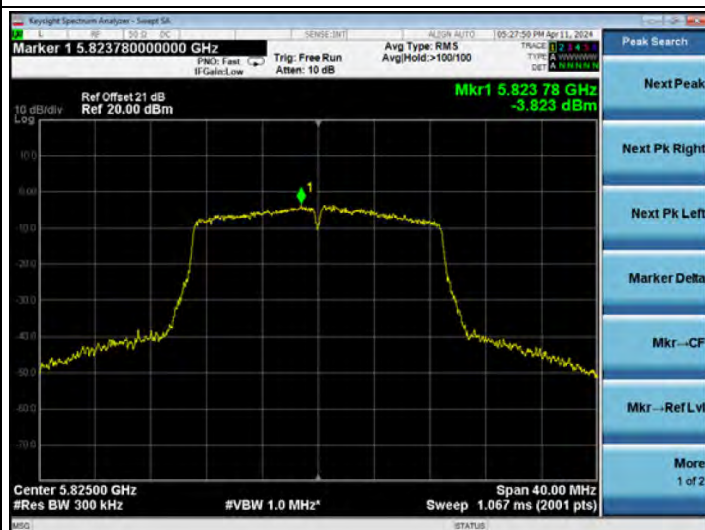
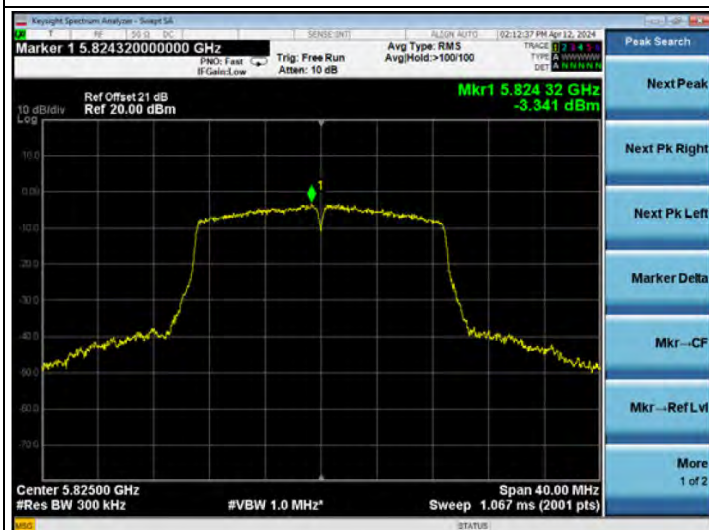
CH5785

CH5785



CH5825

CH5825



802.11n40

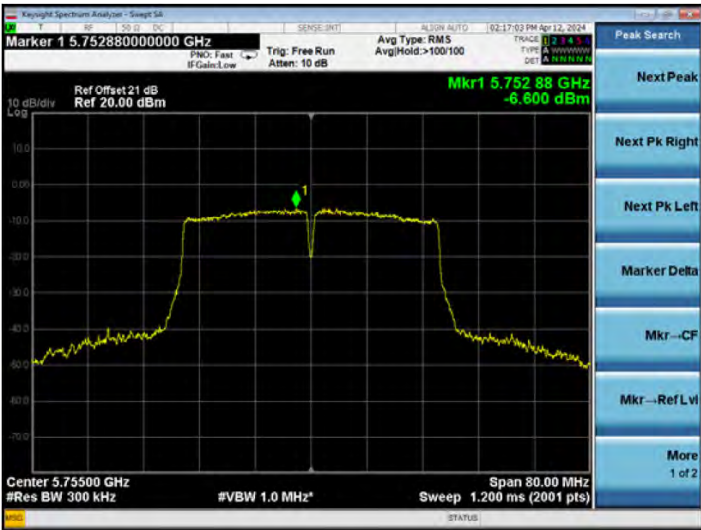
Band-UNII-3

CNF2

CNF3

CH5755

CH5755



CH5795

CH5795



802.11ac20

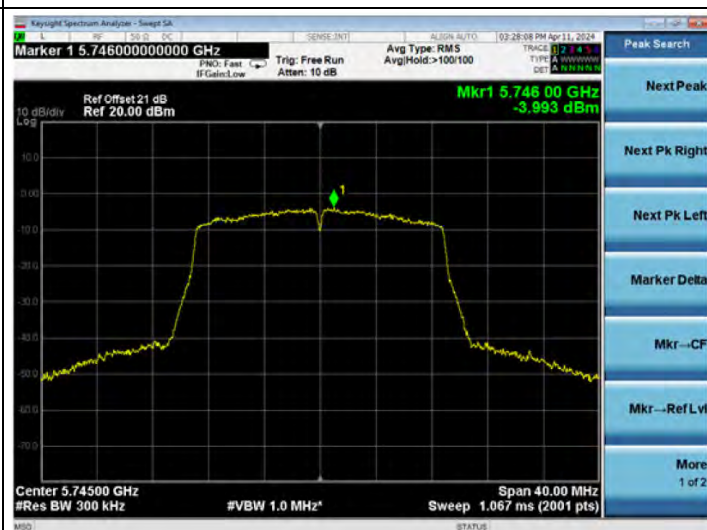
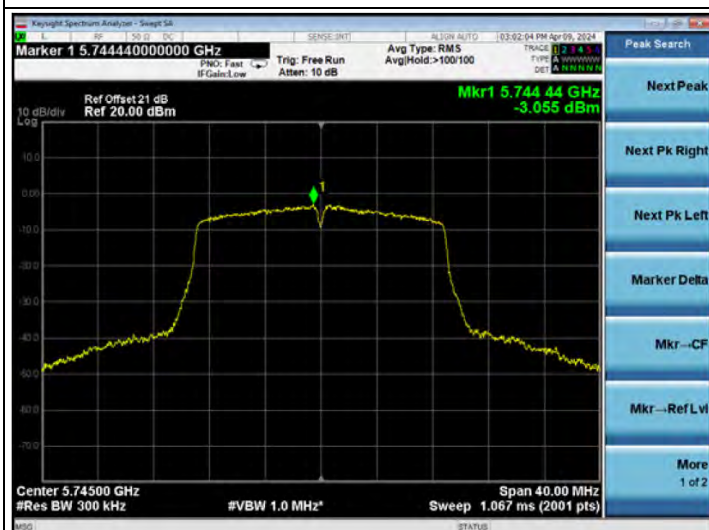
Band-UNII-3

CNF2

CNF3

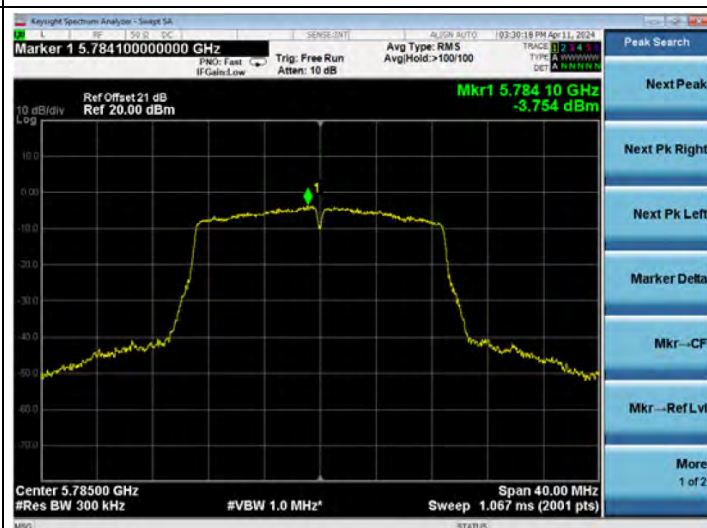
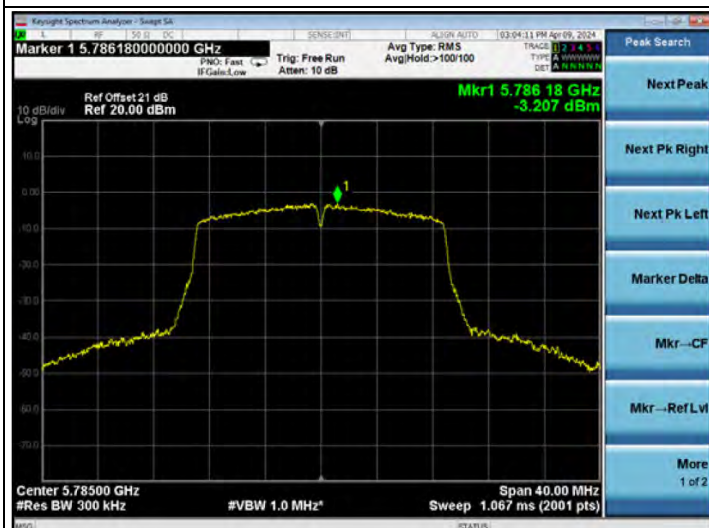
CH5745

CH5745



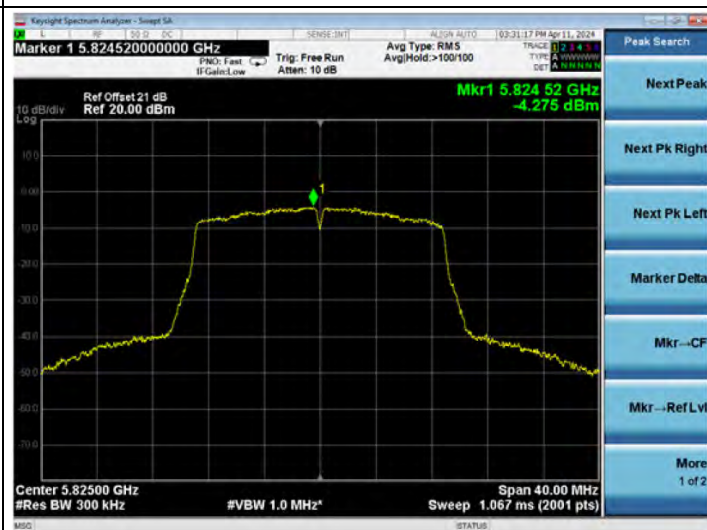
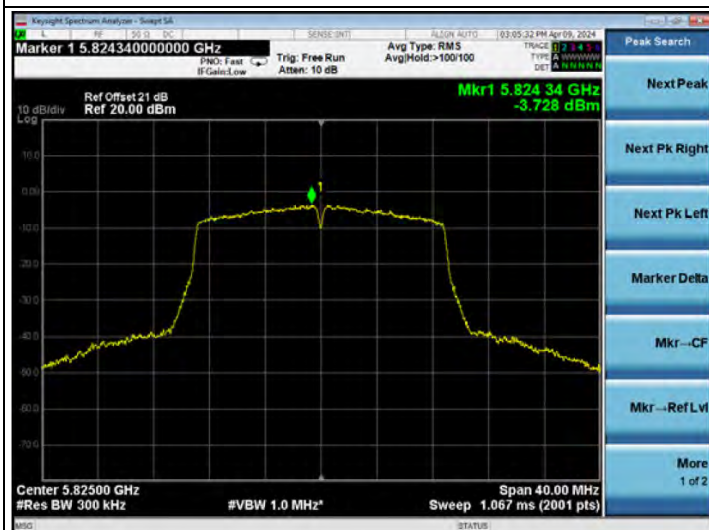
CH5785

CH5785



CH5825

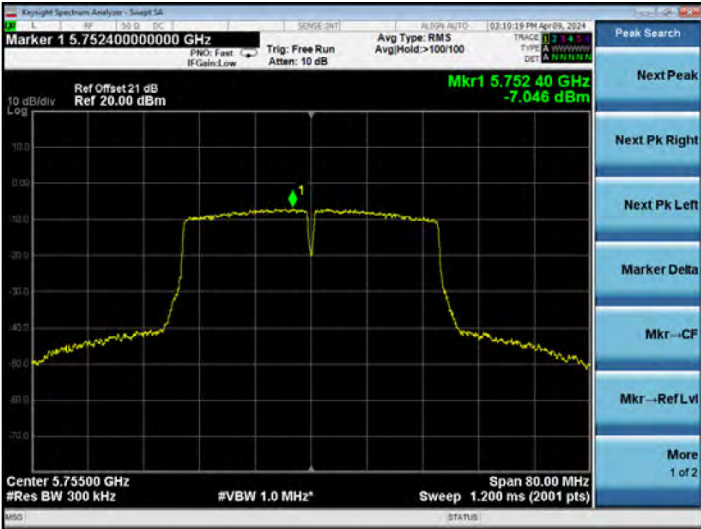
CH5825



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Band-UNII-3

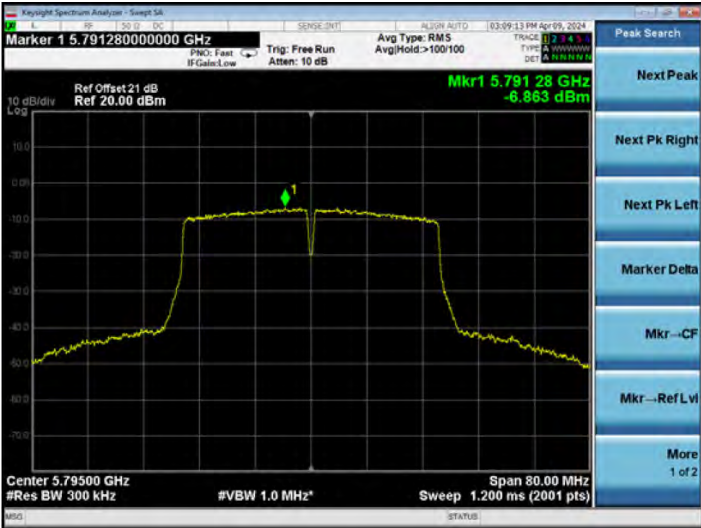
CH5755



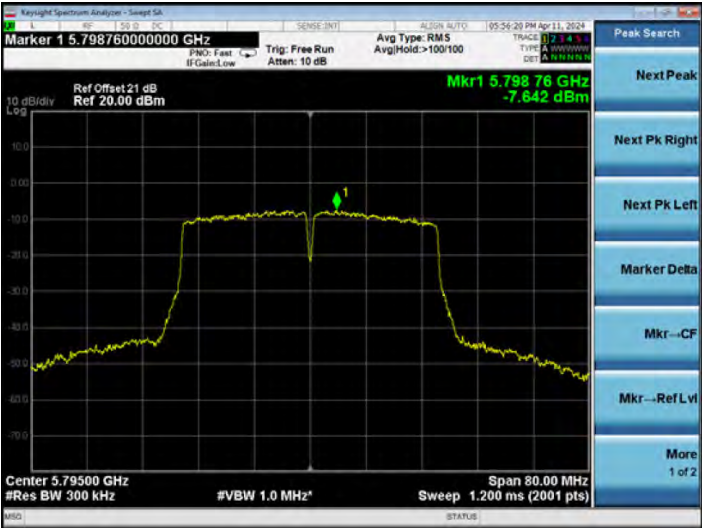
CH5755



CH5795



CH5795



802.11ac80

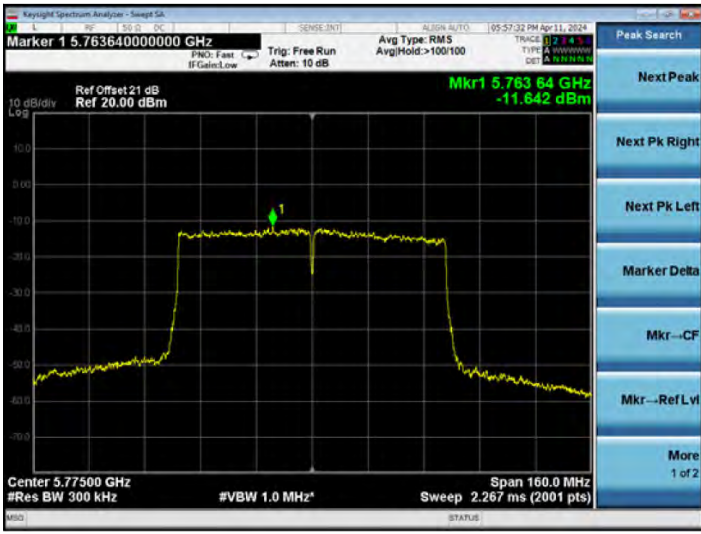
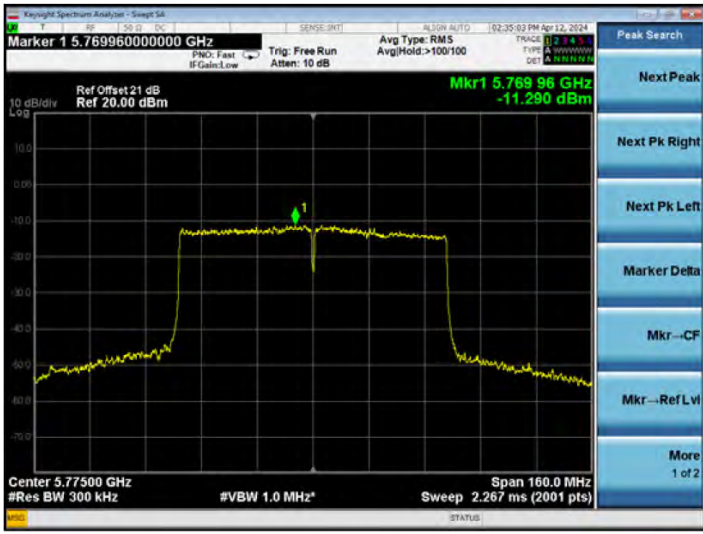
Band-UNII-3

CNF2

CNF3

CH5775

CH5775



10 FREQUENCY STABILITY MEASUREMENT

10.1 Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2023.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SM SM+	22022838	2023.08.09	1 Year
3.	20 dB Attenuator	Mini-Circuits	BW-S20W2+	001	2023.09.21	1 Year

10.2 Block Diagram of Test Setup

The Same as section 6.2.

10.3 Specification Limits (§15.407(g))

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual or ± 20 ppm.

10.4 Operating Condition of EUT

The switch ON/OFF was used to enable the EUT to change the channel one by one.

10.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

- (i) Set RBW = 10 kHz
- (ii) Set VBW = 10 kHz.
- (iii) Detector = Positive Peak.
- (iv) Trace = Max Hold.
- (v) Use the peak search function of the spectrum analyzer to mark the max peak value. The frequency as f_c .
- (vi) The frequency error is $(f_c - f)/f \times 10^6$ ppm and must less than ± 20 ppm.
- (vii) All condition of normal operation as specified in the user's manual should be considered.

10.6 Test Results

PASSED.

All the test results are listed below.

(Test Date: 2024.04.09 Temperature: 23°C Humidity: 51 %)

Test Voltage (V)	Temperature (°C)	Channel	Frequency (MHz)	Measured Frequency (f _c) (MHz)	Frequency Error (ppm)	Limit (ppm)
AC 120V	25	36	5180	5179.967	-6.4	±20
		40	5200	5199.9655	-6.6	±20
		44	5220	5219.9661	-6.5	±20
		48	5240	5239.9665	-6.4	±20
		52	5260	5259.9671	-6.3	±20
		56	5280	5279.9675	-6.2	±20
		60	5300	5299.9676	-6.1	±20
		64	5320	5319.9631	-6.9	±20
		100	5500	5499.9664	-6.1	±20
		104	5520	5519.9678	-5.8	±20
		108	5540	5539.9682	-5.7	±20
		112	5560	5559.9693	-5.5	±20
		116	5580	5579.9694	-5.5	±20
		120	5600	5599.9673	-5.8	±20
		124	5620	5619.9678	-5.7	±20
		128	5640	5639.9688	-5.5	±20
		132	5660	5659.9688	-5.5	±20
		136	5680	5679.9703	-5.2	±20
		140	5700	5699.9763	-4.2	±20
		149	5745	5744.972	-4.9	±20
		153	5765	5764.9739	-4.5	±20
		157	5785	5784.9746	-4.4	±20
		161	5805	5804.9744	-4.4	±20
		165	5825	5824.9762	-4.1	±20

Test Voltage (V)	Temperature (°C)	Channel	Frequency (MHz)	Measured Frequency (f _c) (MHz)	Frequency Error (ppm)	Limit (ppm)
AC 108V	25	36	5180	5179.9672	-6.3	±20
		40	5200	5199.9657	-6.6	±20
		44	5220	5219.9663	-6.5	±20
		48	5240	5239.9667	-6.4	±20
		52	5260	5259.9672	-6.2	±20
		56	5280	5279.9677	-6.1	±20
		60	5300	5299.9679	-6.1	±20
		64	5320	5319.9634	-6.9	±20
		100	5500	5499.9667	-6.1	±20
		104	5520	5519.968	-5.8	±20
		108	5540	5539.9685	-5.7	±20
		112	5560	5559.9695	-5.5	±20
		116	5580	5579.9696	-5.4	±20
		120	5600	5599.9677	-5.8	±20
		124	5620	5619.9681	-5.7	±20
		128	5640	5639.9691	-5.5	±20
		132	5660	5659.9691	-5.5	±20
		136	5680	5679.9706	-5.2	±20
		140	5700	5699.9766	-4.1	±20
		149	5745	5744.9723	-4.8	±20
		153	5765	5764.9742	-4.5	±20
		157	5785	5784.9749	-4.3	±20
		161	5805	5804.9746	-4.4	±20
		165	5825	5824.9765	-4	±20

Test Voltage (V)	Temperature (°C)	Channel	Frequency (MHz)	Measured Frequency (f _c) (MHz)	Frequency Error (ppm)	Limit (ppm)
AC 132V	25	36	5180	5179.9672	-6.3	±20
		40	5200	5199.9658	-6.6	±20
		44	5220	5219.9665	-6.4	±20
		48	5240	5239.9667	-6.4	±20
		52	5260	5259.9674	-6.2	±20
		56	5280	5279.9679	-6.1	±20
		60	5300	5299.9679	-6.1	±20
		64	5320	5319.9635	-6.9	±20
		100	5500	5499.9668	-6	±20
		104	5520	5519.9683	-5.7	±20
		108	5540	5539.9686	-5.7	±20
		112	5560	5559.9698	-5.4	±20
		116	5580	5579.9699	-5.4	±20
		120	5600	5599.9677	-5.8	±20
		124	5620	5619.9681	-5.7	±20
		128	5640	5639.9692	-5.5	±20
		132	5660	5659.9692	-5.4	±20
		136	5680	5679.9706	-5.2	±20
		140	5700	5699.9767	-4.1	±20
		149	5745	5744.9725	-4.8	±20
		153	5765	5764.9742	-4.5	±20
		157	5785	5784.9749	-4.3	±20
		161	5805	5804.9746	-4.4	±20
		165	5825	5824.9763	-4.1	±20

Test Voltage (V)	Temperature (°C)	Channel	Frequency (MHz)	Measured Frequency (f _c) (MHz)	Frequency Error (ppm)	Limit (ppm)
AC 120V	0	36	5180	5179.9671	-6.4	±20
		40	5200	5199.9652	-6.7	±20
		44	5220	5219.9663	-6.5	±20
		48	5240	5239.9662	-6.5	±20
		52	5260	5259.967	-6.3	±20
		56	5280	5279.9674	-6.2	±20
		60	5300	5299.9672	-6.2	±20
		64	5320	5319.9629	-7	±20
		100	5500	5499.9661	-6.2	±20
		104	5520	5519.9676	-5.9	±20
		108	5540	5539.9681	-5.8	±20
		112	5560	5559.9691	-5.6	±20
		116	5580	5579.9691	-5.5	±20
		120	5600	5599.967	-5.9	±20
		124	5620	5619.9677	-5.7	±20
		128	5640	5639.9686	-5.6	±20
		132	5660	5659.9686	-5.5	±20
		136	5680	5679.9701	-5.3	±20
		140	5700	5699.9761	-4.2	±20
		149	5745	5744.9718	-4.9	±20
		153	5765	5764.9737	-4.6	±20
		157	5785	5784.9745	-4.4	±20
		161	5805	5804.9741	-4.5	±20
		165	5825	5824.9758	-4.2	±20

Test Voltage (V)	Temperature (°C)	Channel	Frequency (MHz)	Measured Frequency (f _c) (MHz)	Frequency Error (ppm)	Limit (ppm)
AC 120V	50	36	5180	5179.967	-6.4	±20
		40	5200	5199.9653	-6.7	±20
		44	5220	5219.9662	-6.5	±20
		48	5240	5239.9664	-6.4	±20
		52	5260	5259.967	-6.3	±20
		56	5280	5279.9676	-6.1	±20
		60	5300	5299.9677	-6.1	±20
		64	5320	5319.9633	-6.9	±20
		100	5500	5499.9666	-6.1	±20
		104	5520	5519.9677	-5.9	±20
		108	5540	5539.9681	-5.8	±20
		112	5560	5559.9692	-5.5	±20
		116	5580	5579.9691	-5.5	±20
		120	5600	5599.9675	-5.8	±20
		124	5620	5619.9677	-5.7	±20
		128	5640	5639.9686	-5.6	±20
		132	5660	5659.9686	-5.5	±20
		136	5680	5679.9705	-5.2	±20
		140	5700	5699.9764	-4.1	±20
		149	5745	5744.9723	-4.8	±20
		153	5765	5764.9737	-4.6	±20
		157	5785	5784.9744	-4.4	±20
		161	5805	5804.9742	-4.4	±20
		165	5825	5824.9763	-4.1	±20

11 ANTENNA REQUIREMENT

11.1 Specification Limits (§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.

11.2 Result

According to KDB 353028 D1, the following describes the three ways that can be used to demonstrate compliance to Section 15.203:

- a) Antenna permanently attached.
- b) Unique (non-standard) antenna connector.
- c) Professional installation.

For this product, the antenna is:

- ☐ Antenna permanently attached
- ☒ Unique (non-standard) antenna connector
- ☐ Professional installation
- ☐ not meet any of ways list above

that

- ☒ compliant
- ☐ not compliant

with the requirement of Section 15.203.

12 DEVIATION TO TEST SPECIFICATIONS

None.

13 MEASUREMENT UNCERTAINTY LIST

The measurement uncertainty was estimated for test on the EUT according to CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage of K=2.

The uncertainties value is not used in determining the PASS/FAIL results.

Test Items/Facilities	Frequency/Equipment/Unit	Uncertainty
Conducted Emission No.1 Shielded Room	9kHz~150kHz	±3.1 dB
	150kHz~30MHz	±2.6 dB
Conducted Emission No.3 Shielded Room	9kHz~150kHz	±3.1 dB
	150kHz~30MHz	±2.6 dB
Radiated Emission	30MHz~200MHz, Horizontal	±3.8 dB
	30MHz~200MHz, Vertical	±4.1 dB
	200MHz~1000MHz, Horizontal	±3.6 dB
	200MHz~1000MHz, Vertical	±5.1 dB
	1GHz~6GHz	±5.3 dB
	6GHz~18GHz	±5.3 dB
	18GHz~40GHz	±3.5 dB
Output Power Test	50MHz~18GHz	0.77 dB
Power Density Test	9kHz~6GHz	1.08 dB
RF Frequency Test	9kHz~40GHz	6×10^{-4}
Bandwidth Test	9kHz~6GHz	1.5×10^{-3}
RF Radiated Power Test	30MHz~1000MHz	3.06 dB
Conducted Output Power Test	50MHz~18GHz	0.83 dB
AC Voltage(<10kHz) Test	120V~230V	0.04 %
DC Power Test	0V~30V	0.4 %
Temperature	-40°C~+100°C	0.52 °C
Humidity	30%~95%	2.6 %