

# Appendix A

## RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: WIFI Module

Trade Mark: RinLink

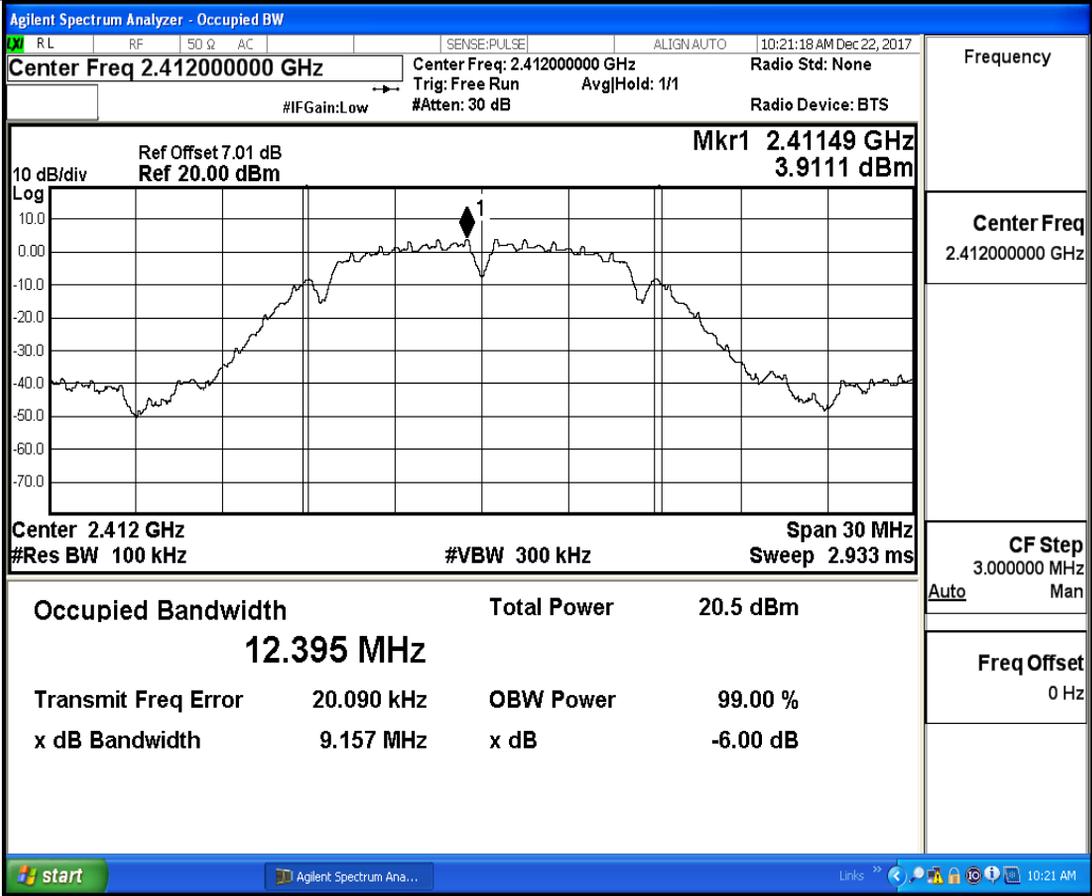
Test Model: G7682

FCC ID: 2AOI5-G7682

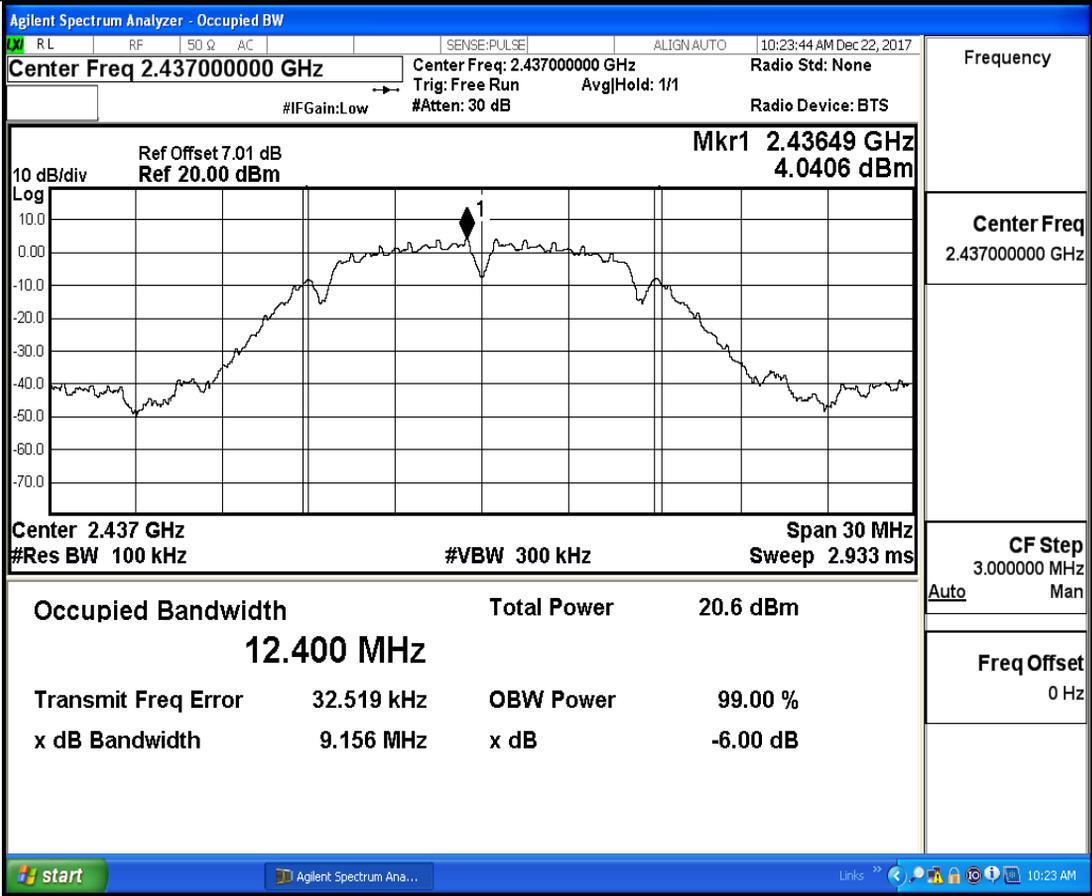
### A.1 6dB Bandwidth

Test Mode	Test Channel	Ant	EBW[MHz]	Limit	Verdict
11B	2412	Ant1	9.157	0.5	PASS
11B	2437	Ant1	9.156	0.5	PASS
11B	2462	Ant1	9.154	0.5	PASS
11G	2412	Ant1	16.62	0.5	PASS
11G	2437	Ant1	16.61	0.5	PASS
11G	2462	Ant1	16.60	0.5	PASS
11N20SISO	2412	Ant1	17.85	0.5	PASS
11N20SISO	2437	Ant1	17.83	0.5	PASS
11N20SISO	2462	Ant1	17.83	0.5	PASS
11N40SISO	2422	Ant1	36.49	0.5	PASS
11N40SISO	2437	Ant1	36.48	0.5	PASS
11N40SISO	2452	Ant1	36.48	0.5	PASS

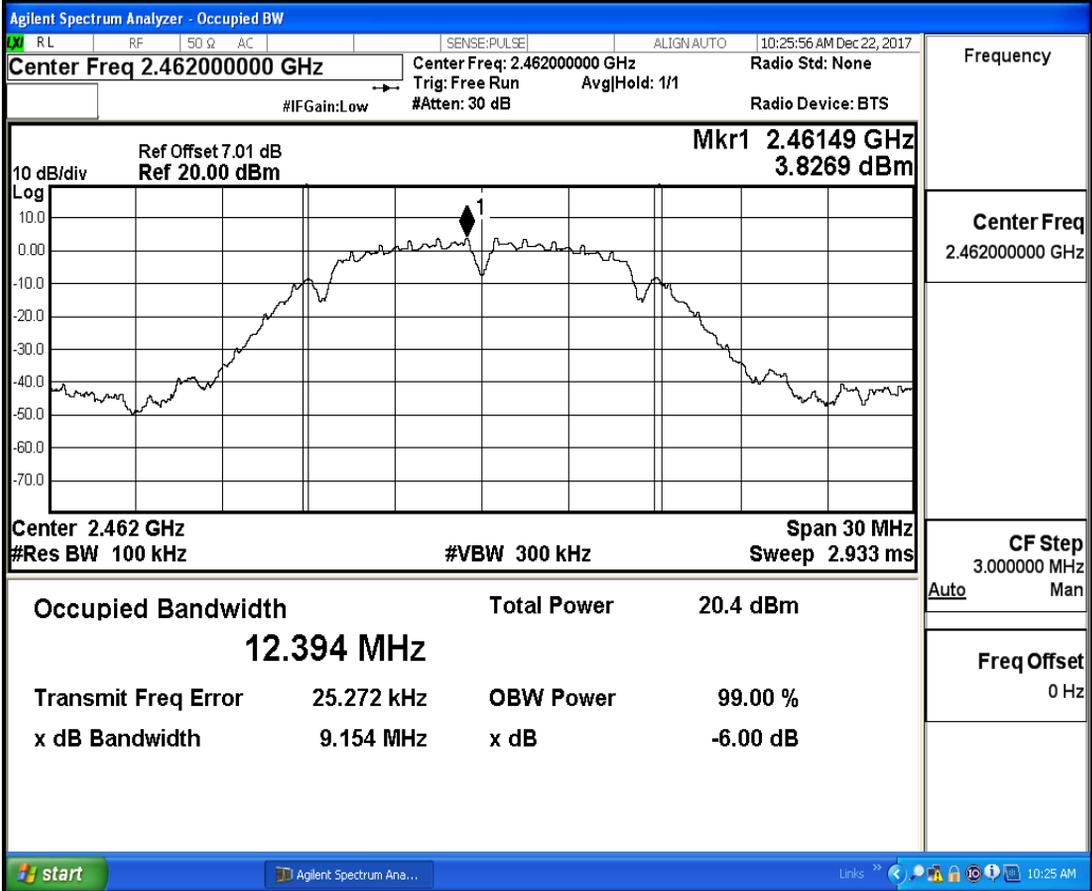
6dB Bandwidth\_11B\_2412\_Ant1



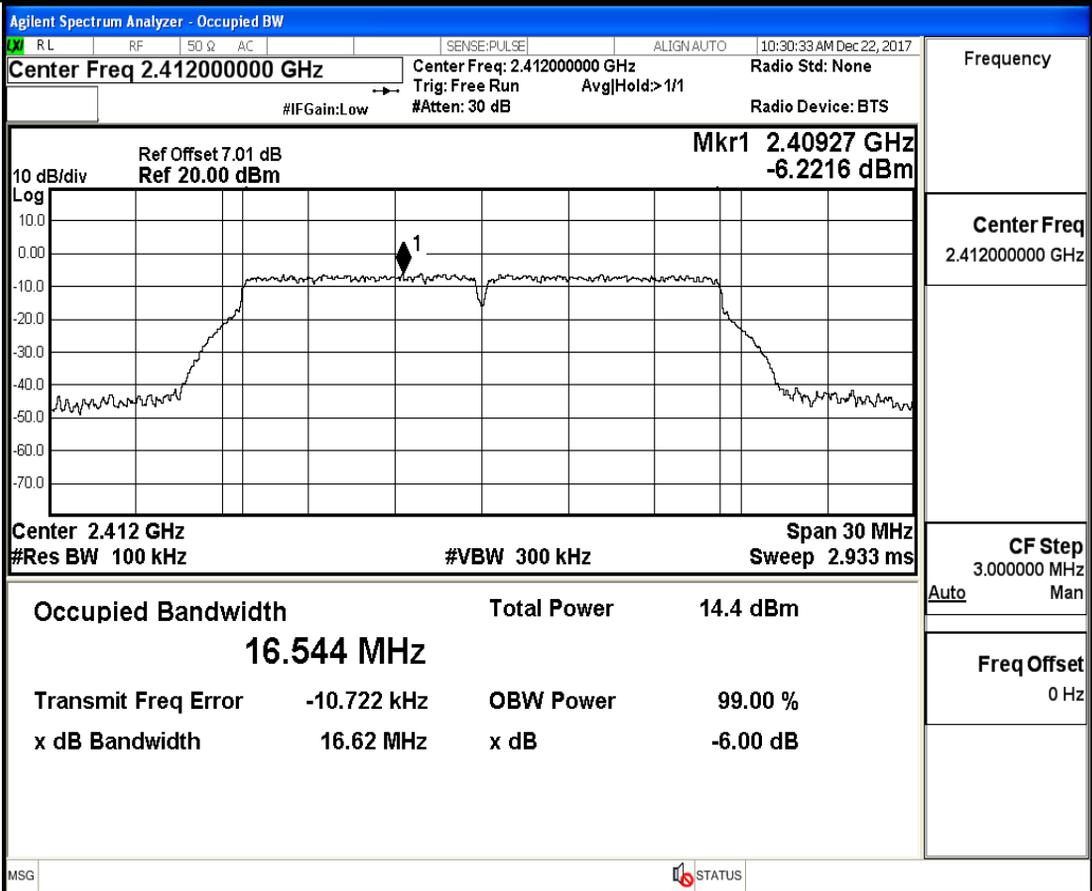
6dB Bandwidth\_11B\_2437\_Ant1



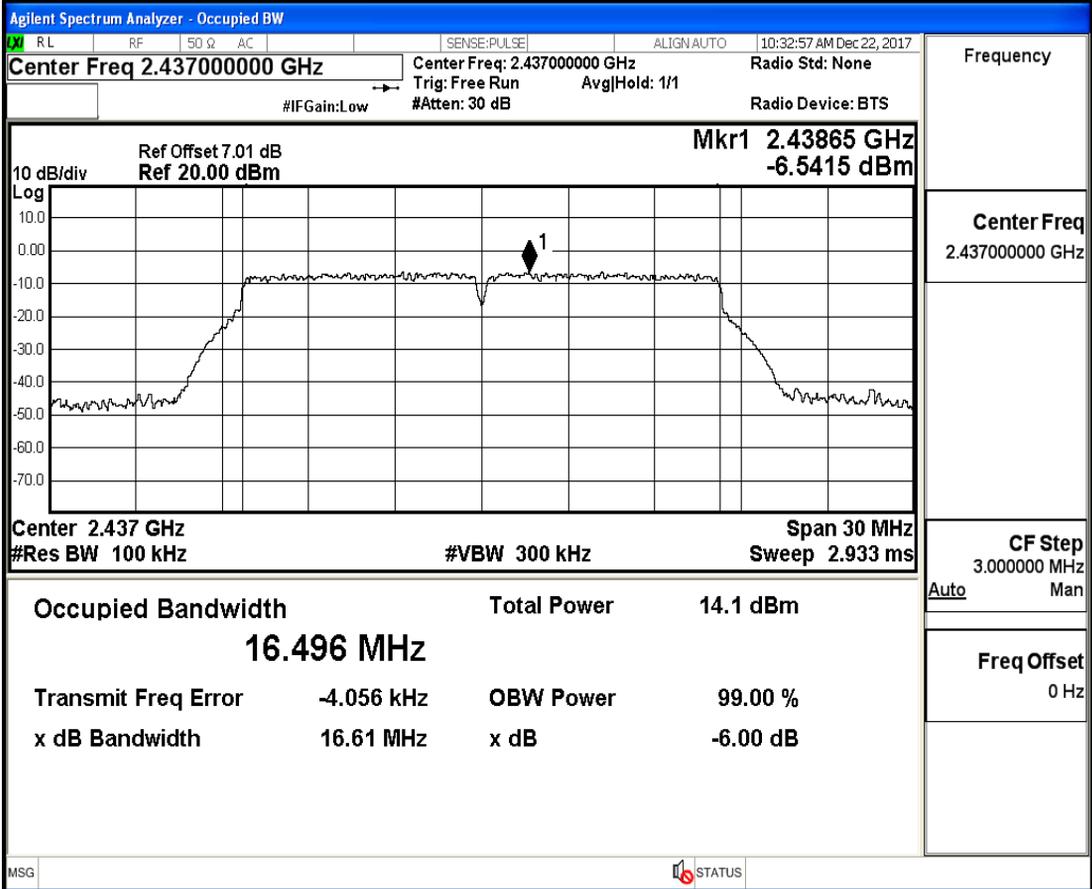
6dB Bandwidth\_11B\_2462\_Ant1



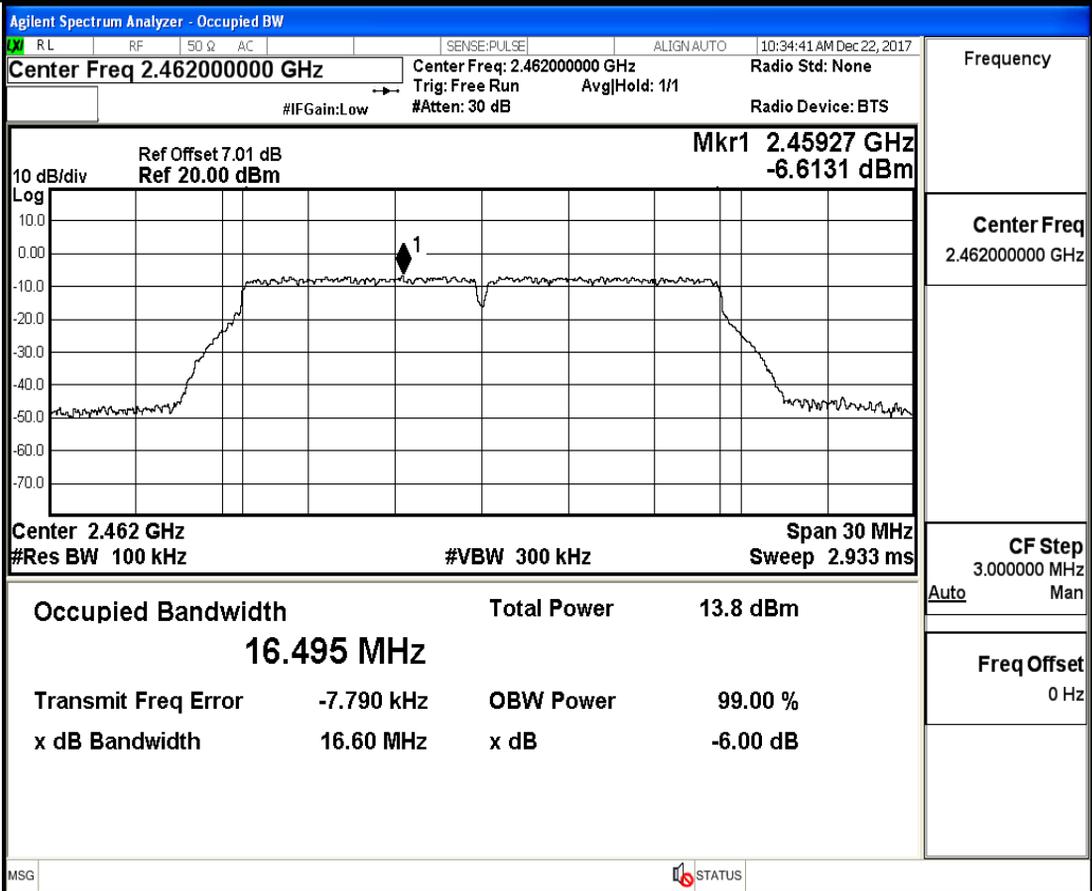
6dB Bandwidth\_11G\_2412\_Ant1



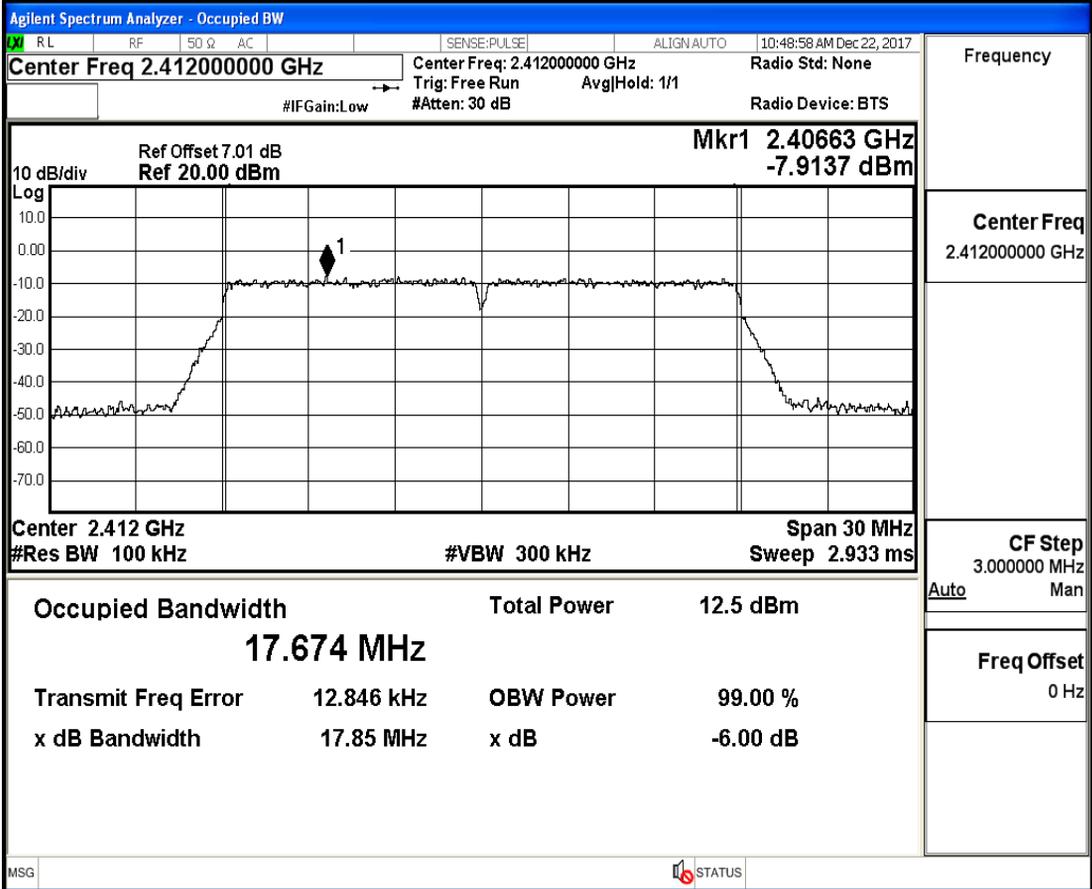
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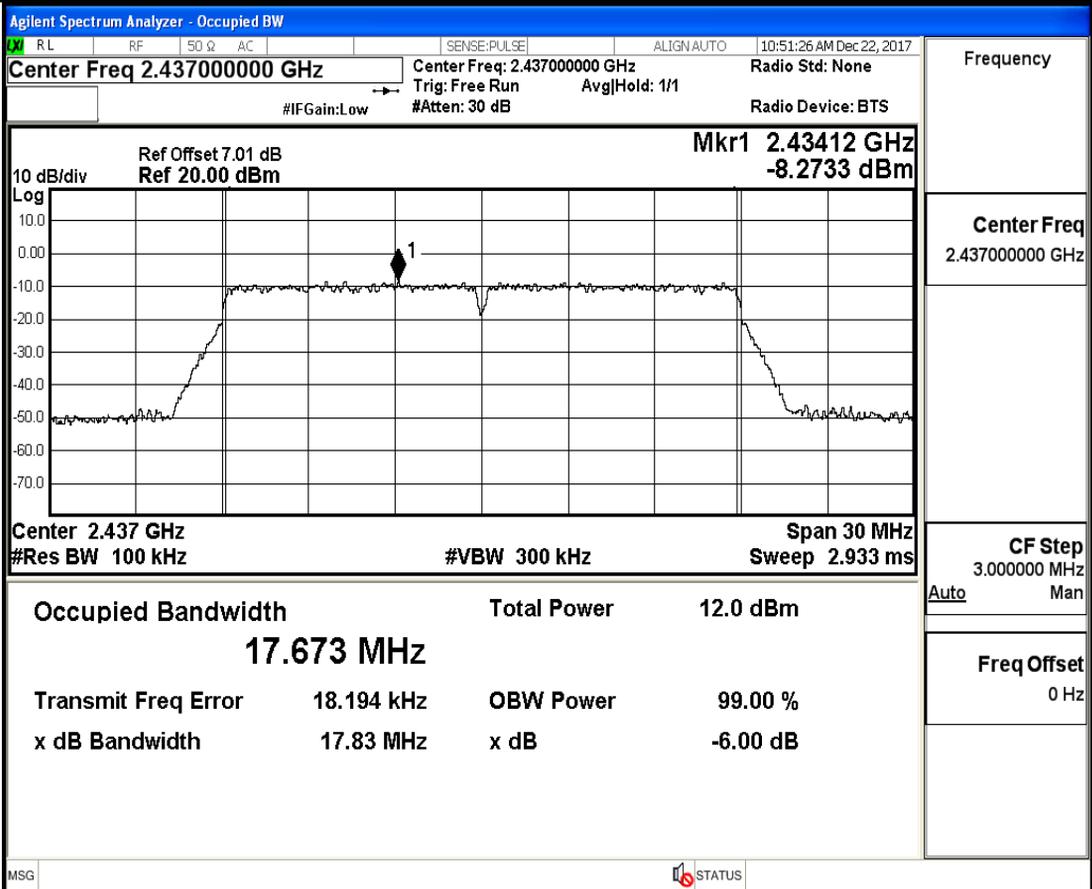
6dB Bandwidth\_11G\_2462\_Ant1



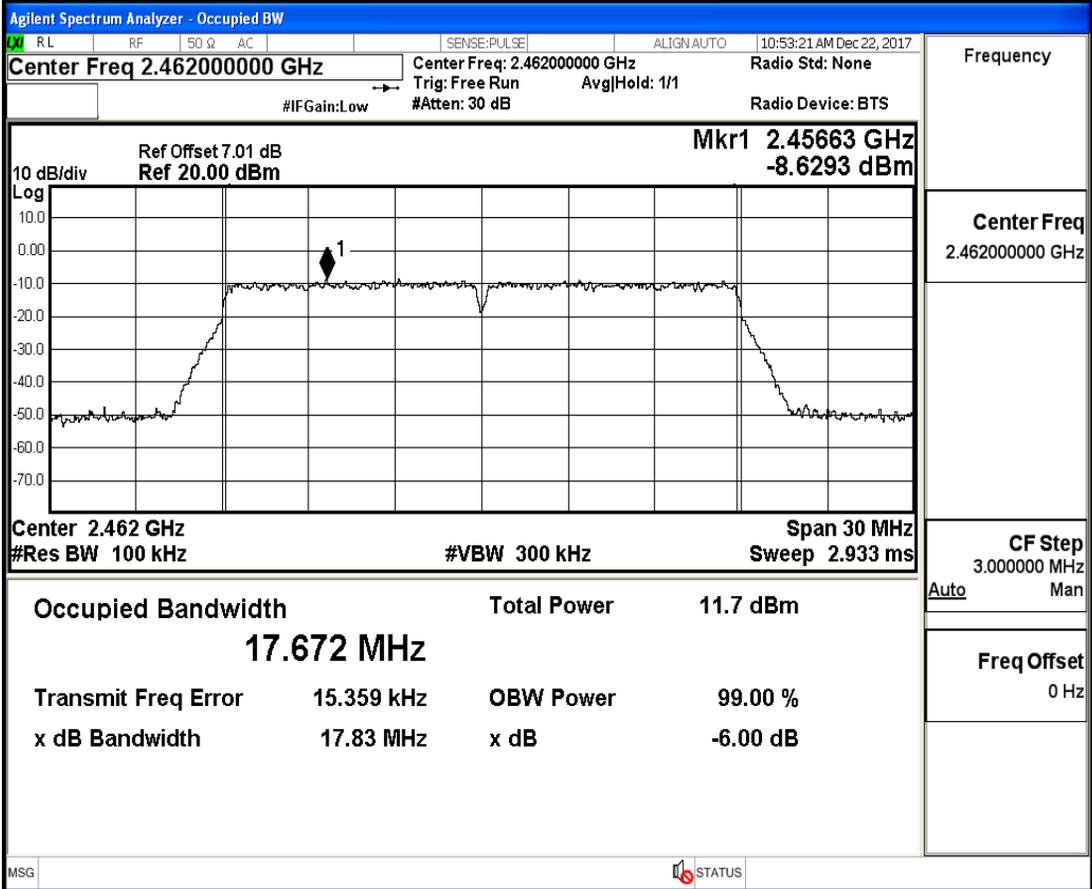
6dB Bandwidth\_11N20SISO\_2412\_Ant1



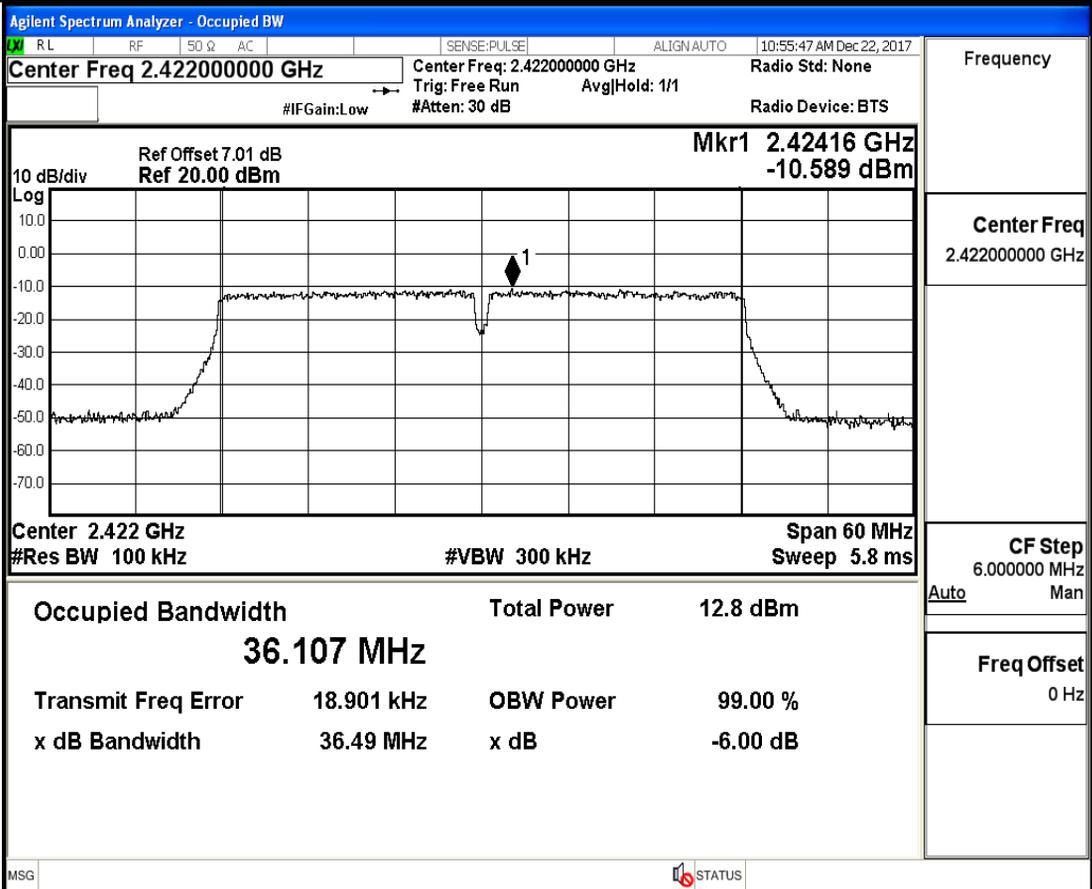
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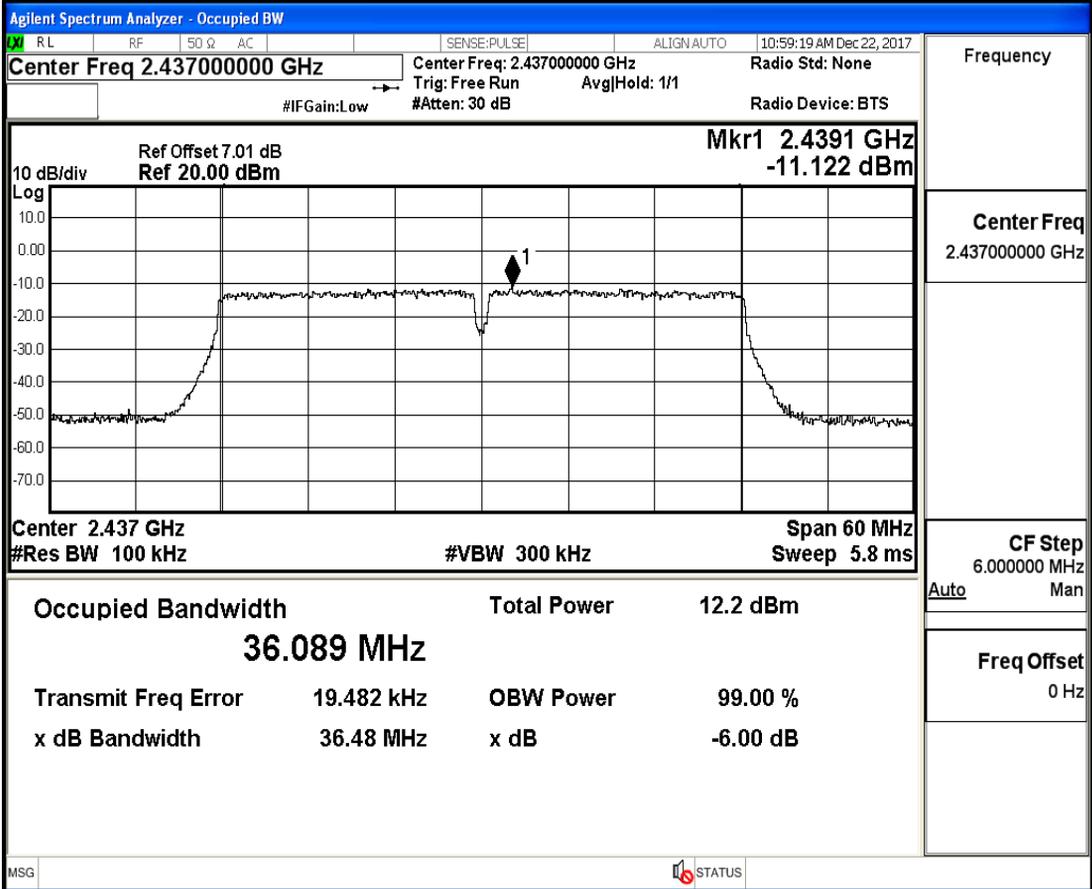
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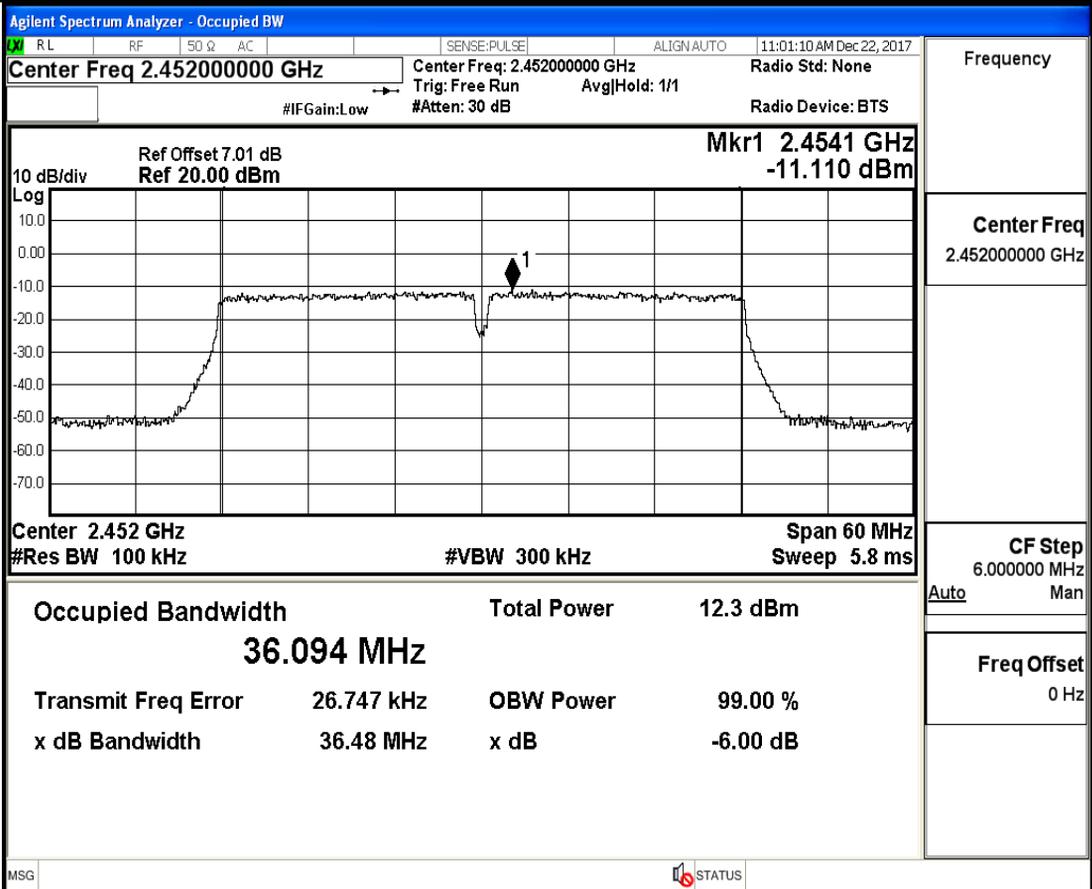
6dB Bandwidth\_11N40SISO\_2422\_Ant1



6dB Bandwidth\_11N40SISO\_2437\_Ant1



6dB Bandwidth\_11N40SISO\_2452\_Ant1



## A.2 Maximum peak conducted output power

Test Mode	Test Channel	Ant	Peak Power (dBm)	Limit[dBm]	Verdict
11B	2412	Ant1	16.51	30	PASS
11B	2437	Ant1	16.65	30	PASS
11B	2462	Ant1	16.42	30	PASS
11G	2412	Ant1	15.72	30	PASS
11G	2437	Ant1	15.44	30	PASS
11G	2462	Ant1	15.13	30	PASS
11N20SISO	2412	Ant1	14.07	30	PASS
11N20SISO	2437	Ant1	13.48	30	PASS
11N20SISO	2462	Ant1	13.21	30	PASS
11N40SISO	2422	Ant1	14.19	30	PASS
11N40SISO	2437	Ant1	13.55	30	PASS
11N40SISO	2452	Ant1	13.68	30	PASS

### A.3 Maximum Peak power spectral density

Test Mode	Test Channel	Ant	PSD[dBm/30KHz]	Limit[dBm/3KHz]	Verdict
11B	2412	Ant1	-1.446	8.00	PASS
11B	2437	Ant1	-1.318	8.00	PASS
11B	2462	Ant1	-1.51	8.00	PASS
11G	2412	Ant1	-9.119	8.00	PASS
11G	2437	Ant1	-9.495	8.00	PASS
11G	2462	Ant1	-9.323	8.00	PASS
11N20SISO	2412	Ant1	-10.384	8.00	PASS
11N20SISO	2437	Ant1	-11.206	8.00	PASS
11N20SISO	2462	Ant1	-11.16	8.00	PASS
11N40SISO	2422	Ant1	-14.05	8.00	PASS
11N40SISO	2437	Ant1	-14.458	8.00	PASS
11N40SISO	2452	Ant1	-14.429	8.00	PASS

Maximum Peak power spectral density\_11B\_2412\_Ant1



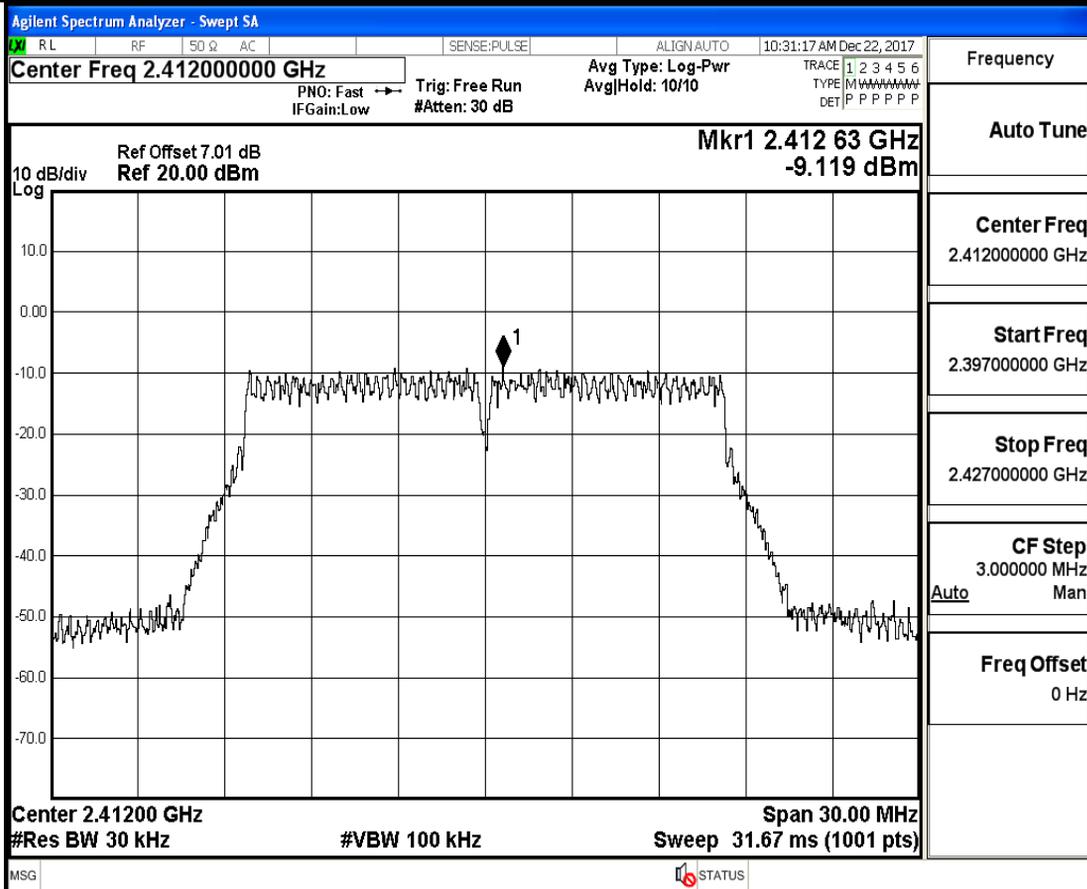
Maximum Peak power spectral density\_11B\_2437\_Ant1



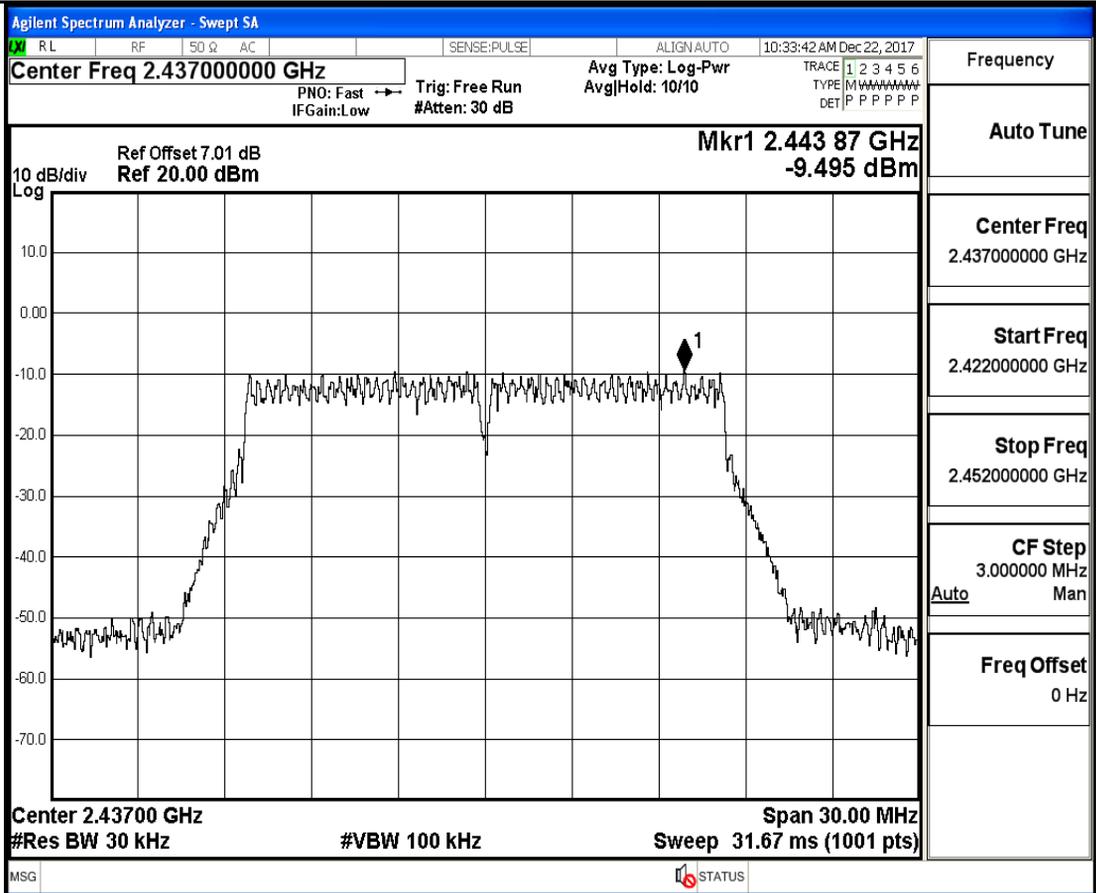
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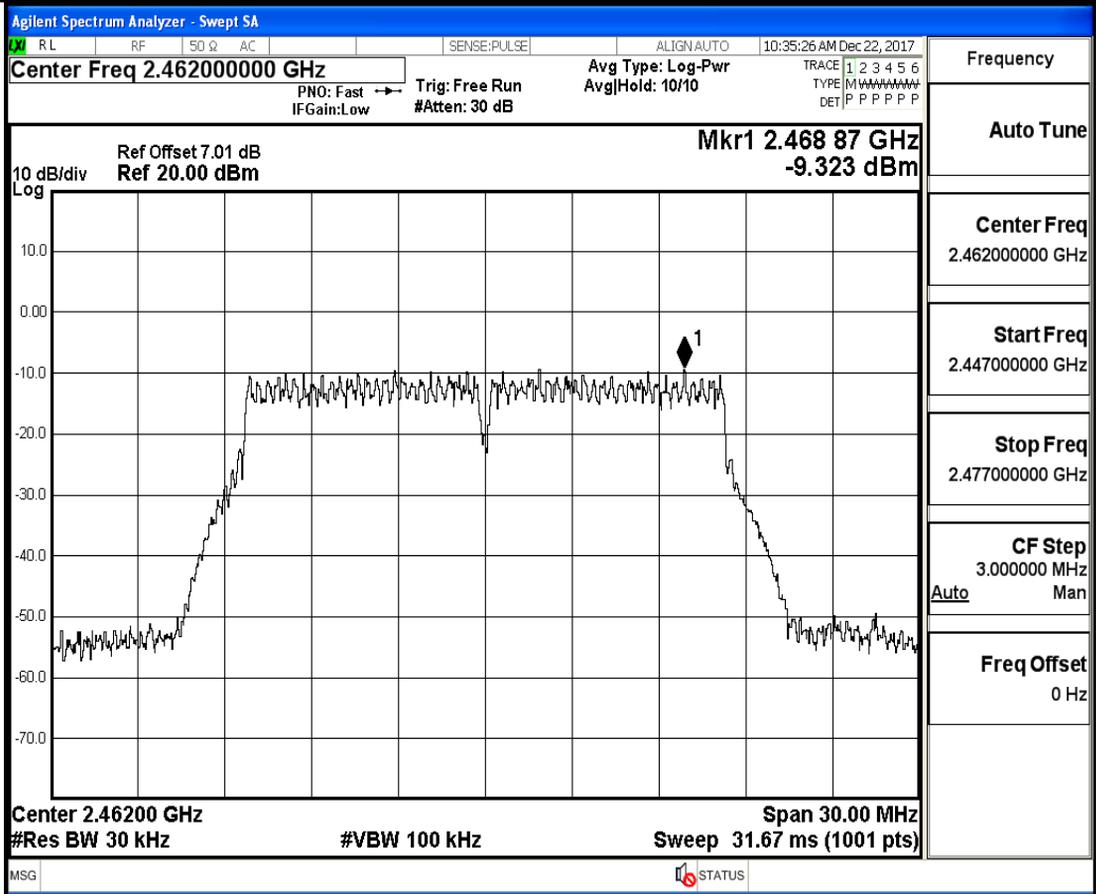
Maximum Peak power spectral density\_11G\_2412\_Ant1



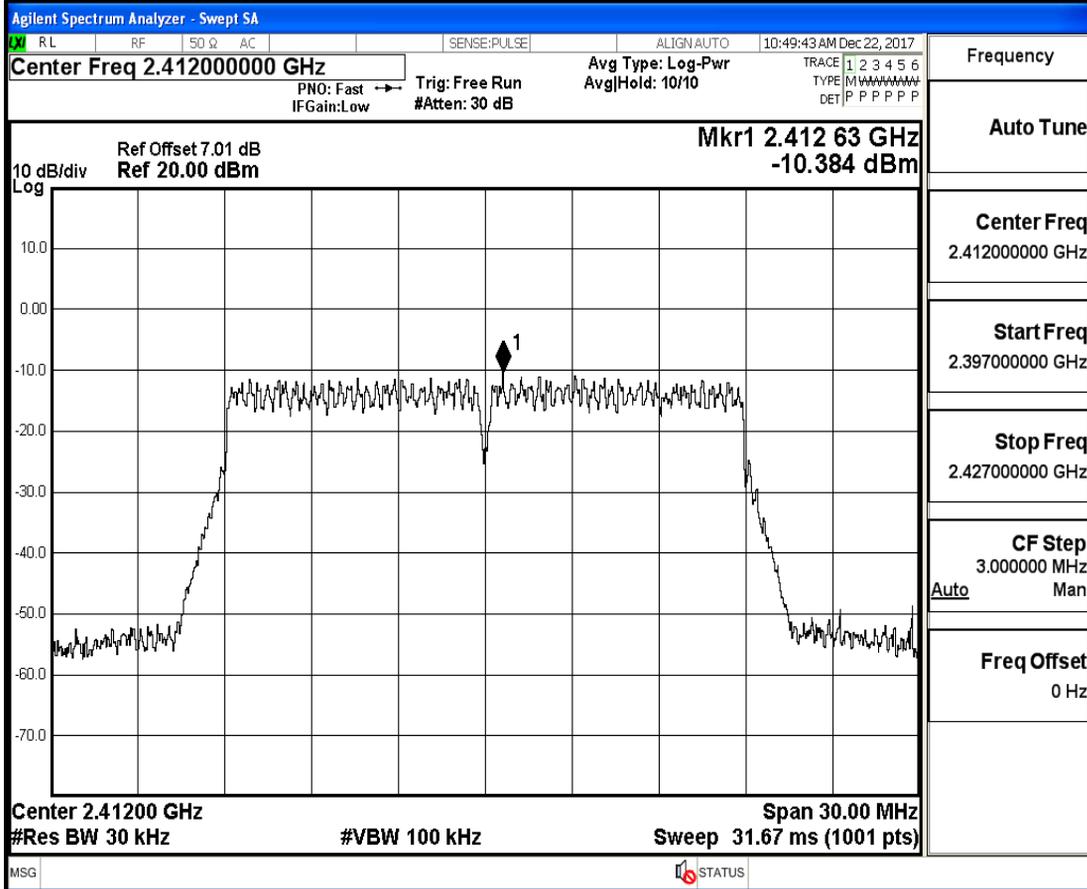
Maximum Peak power spectral density\_11G\_2437\_Ant1



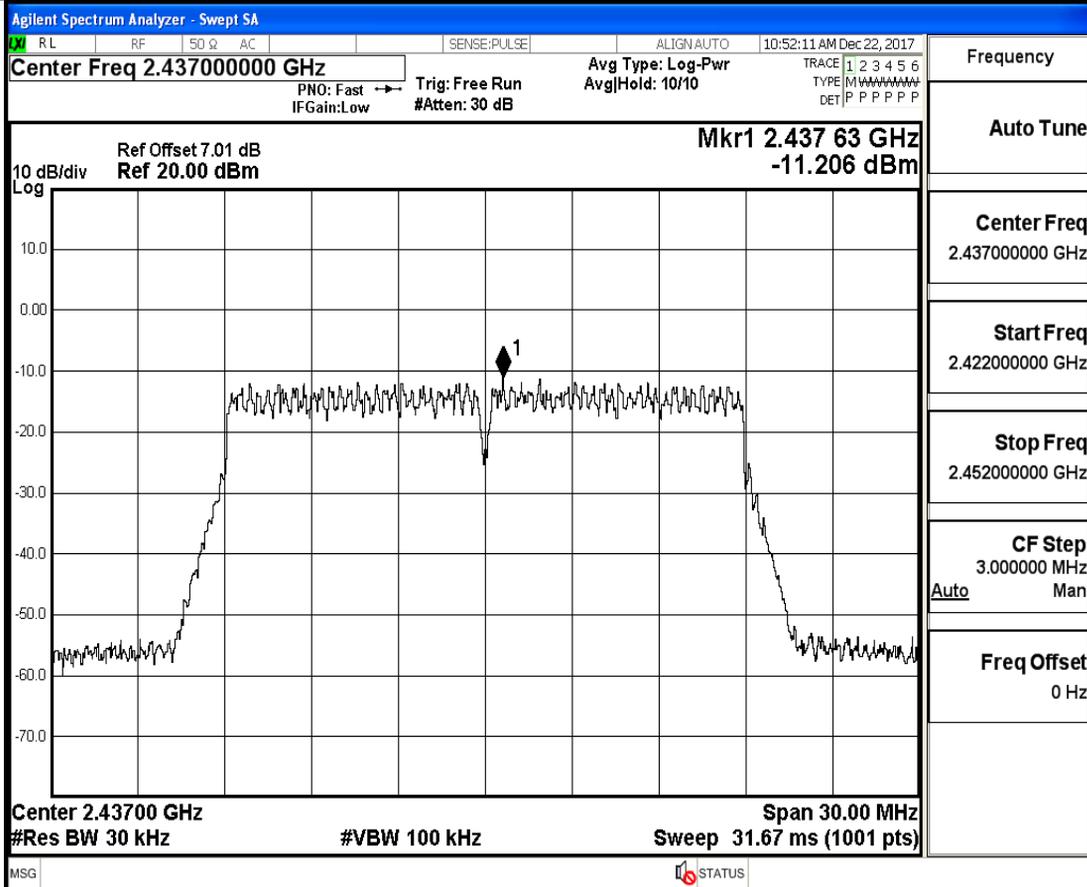
Maximum Peak power spectral density\_11G\_2462\_Ant1



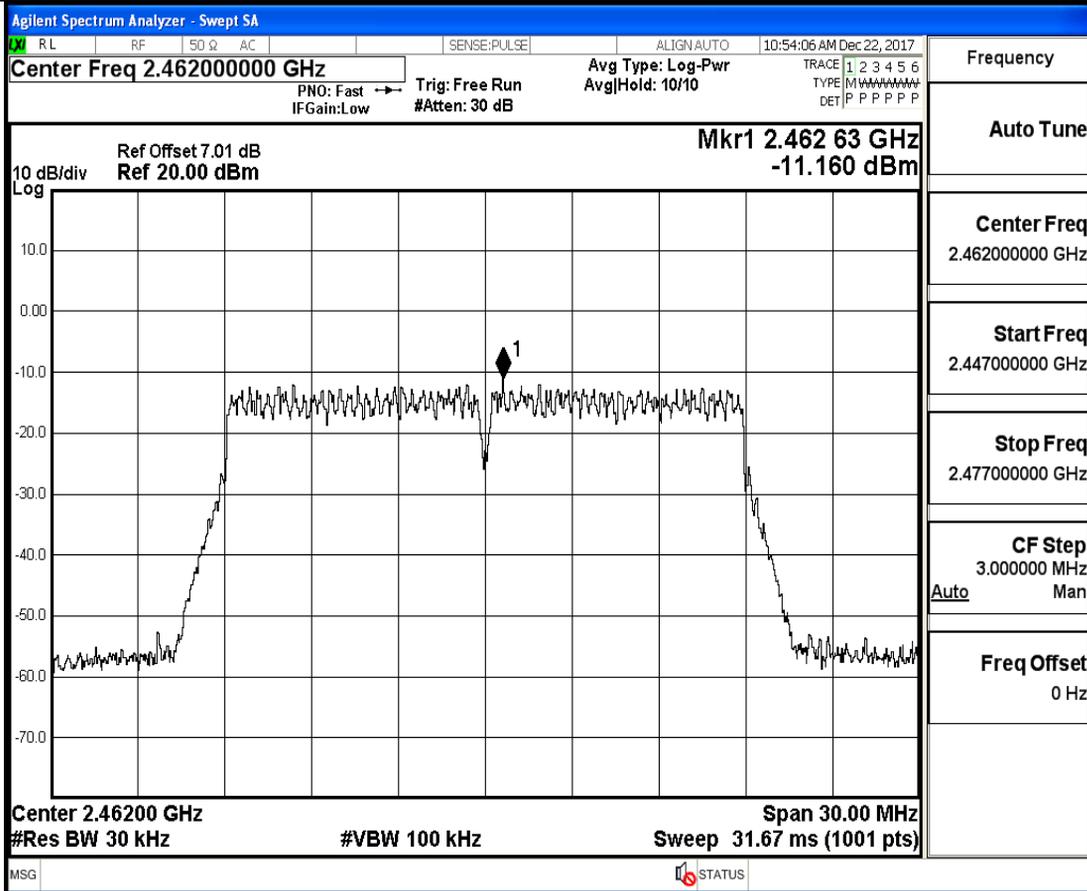
Maximum Peak power spectral density\_11N20SISO\_2412\_Ant1



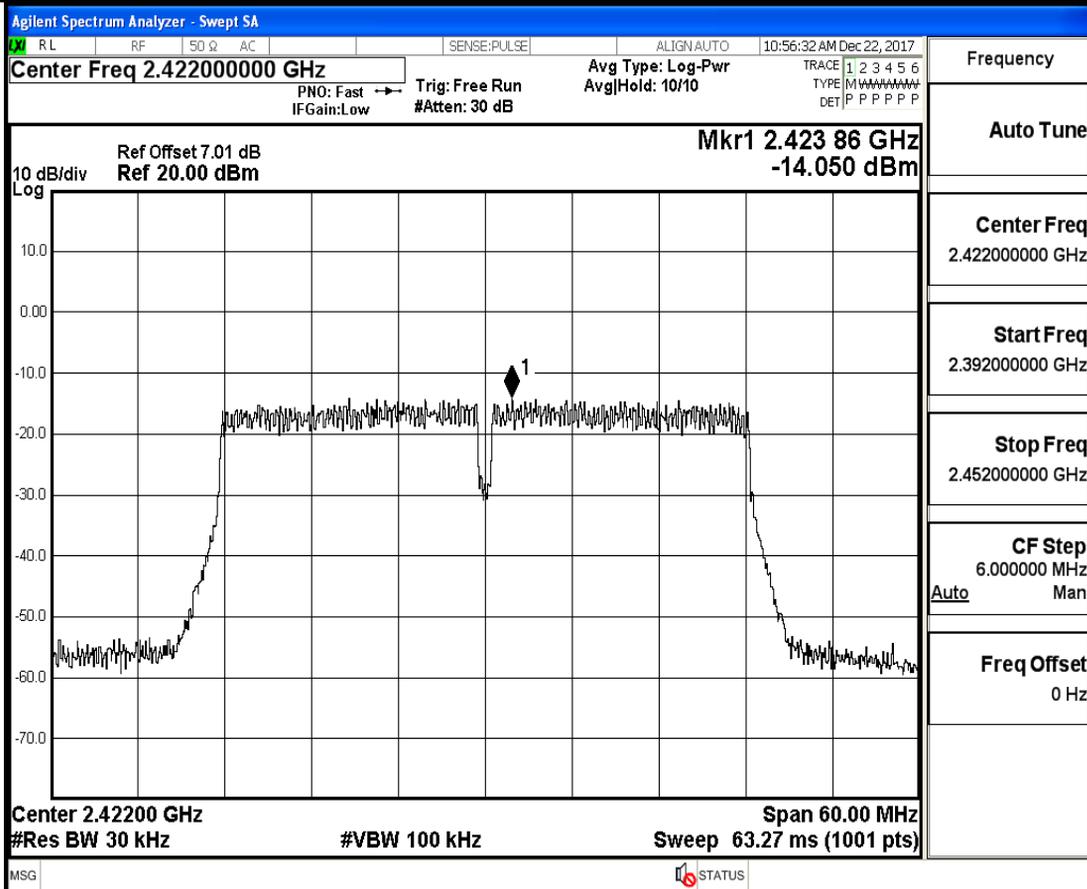
Maximum Peak power spectral density\_11N20SISO\_2437\_Ant1



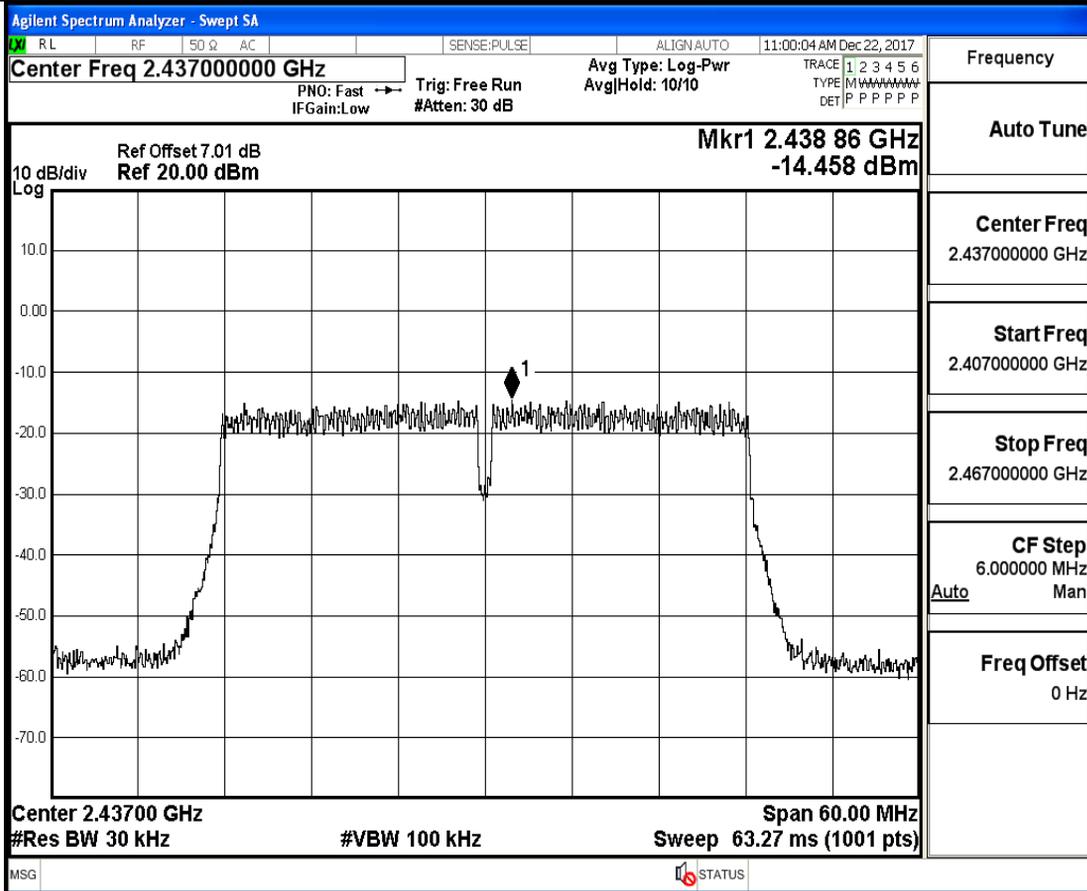
Maximum Peak power spectral density\_11N20SISO\_2462\_Ant1



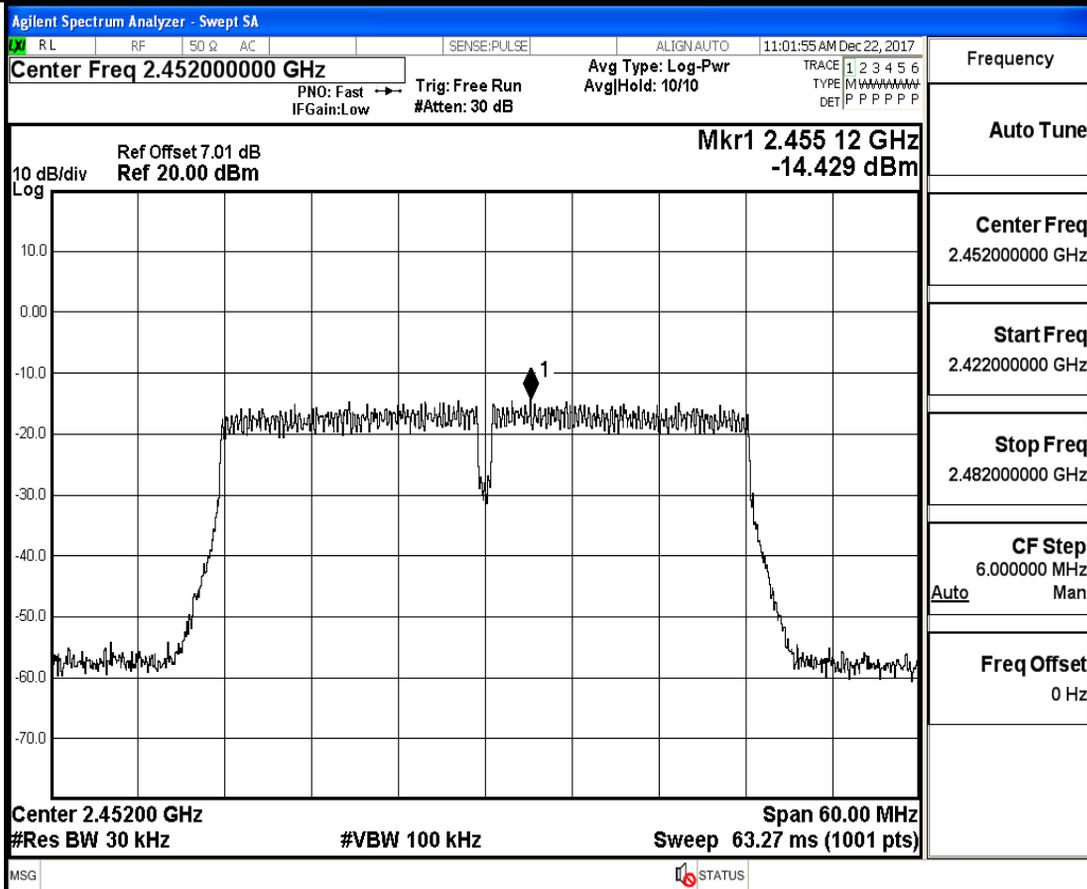
Maximum Peak power spectral density\_11N40SISO\_2422\_Ant1



Maximum Peak power spectral density\_11N40SISO\_2437\_Ant1



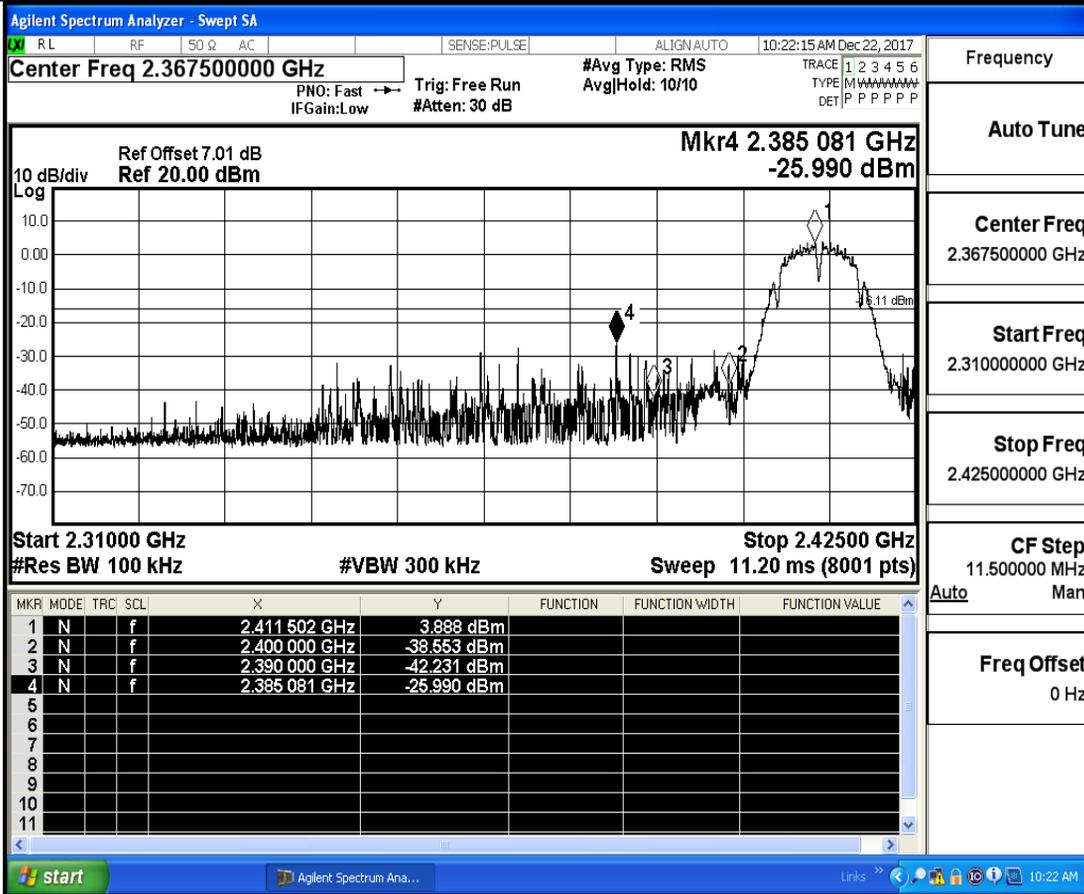
Maximum Peak power spectral density\_11N40SISO\_2452\_Ant1



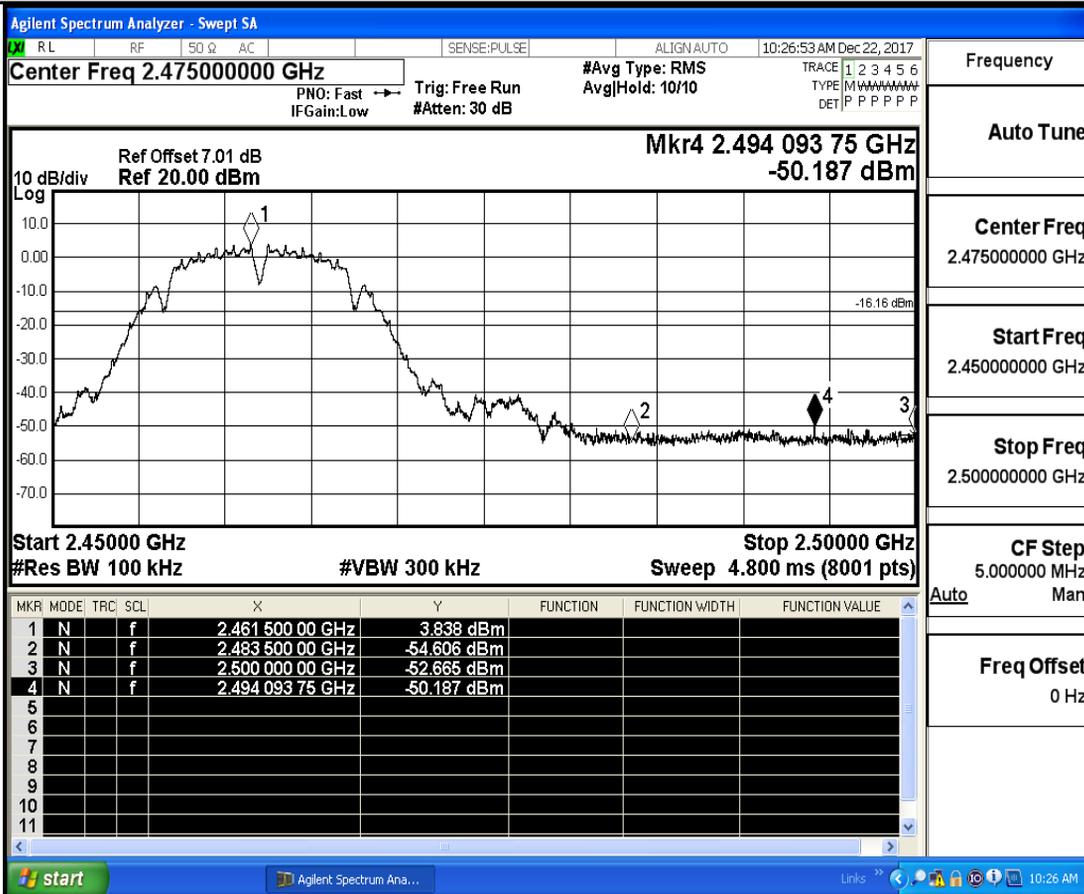
#### A.4 Band-edge for RF Conducted Emissions

Test Mode	Test Channel	Ant	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit [dBm]	Verdict
11B	2412	Ant1	3.888	-25.990	-16.11	PASS
11B	2462	Ant1	3.838	-50.187	-16.16	PASS
11G	2412	Ant1	-6.254	-49.988	-26.25	PASS
11G	2462	Ant1	-6.725	-49.529	-26.73	PASS
11N20SISO	2412	Ant1	-7.980	-50.129	-27.98	PASS
11N20SISO	2462	Ant1	-8.660	-50.845	-28.66	PASS
11N40SISO	2422	Ant1	-11.217	-49.816	-31.22	PASS
11N40SISO	2452	Ant1	-11.103	-51.011	-31.1	PASS

Band-edge for RF Conducted Emissions\_11B\_2412\_Ant1

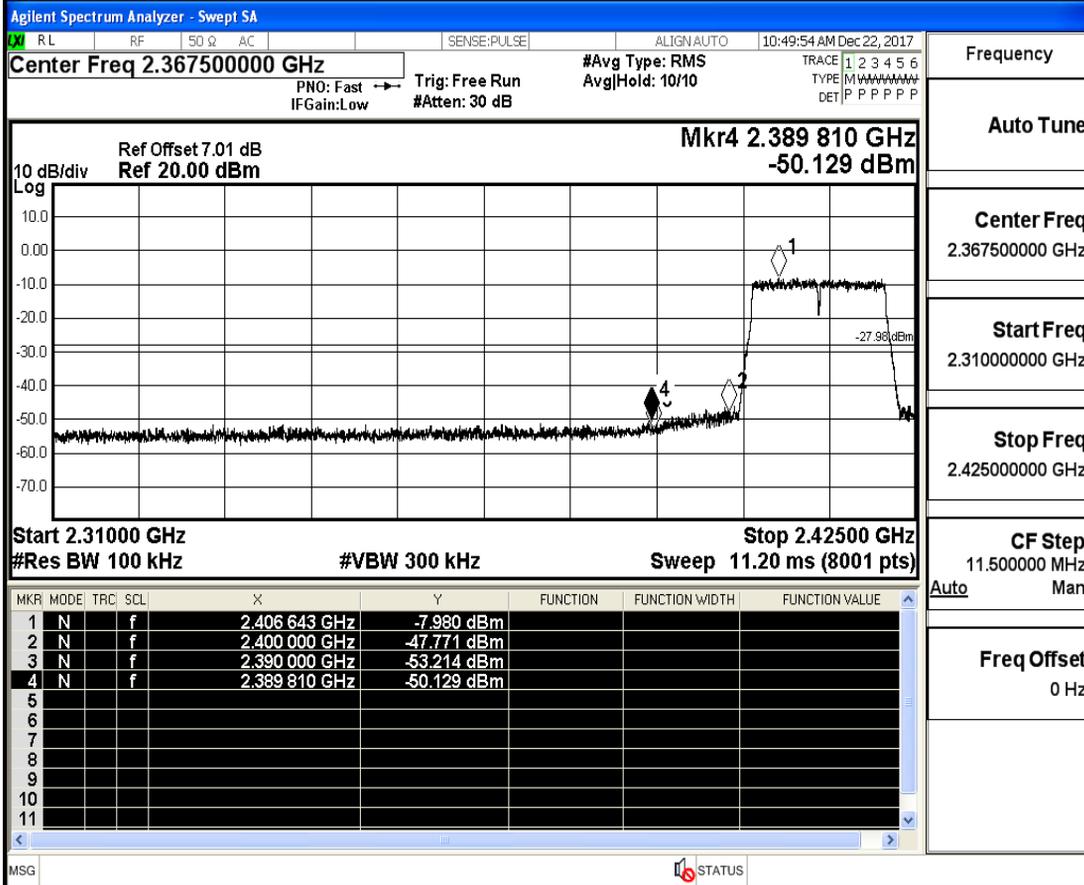


Band-edge for RF Conducted Emissions\_11B\_2462\_Ant1

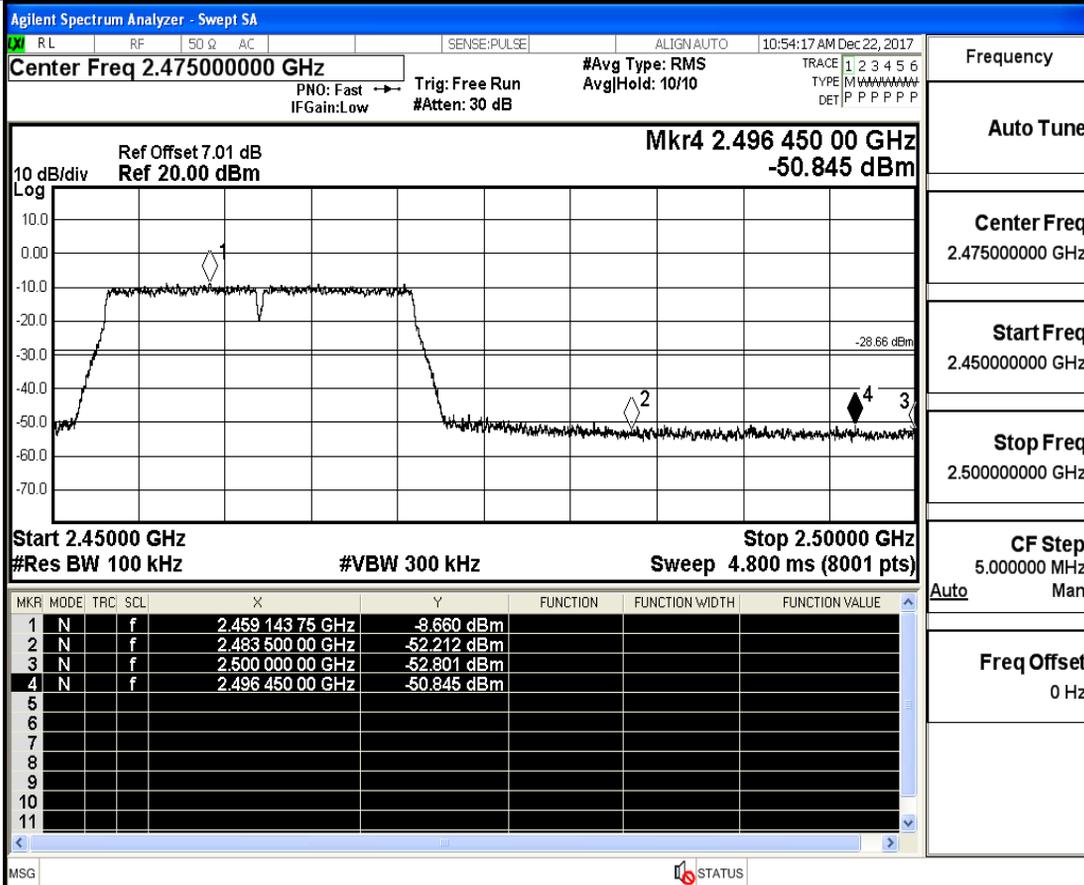




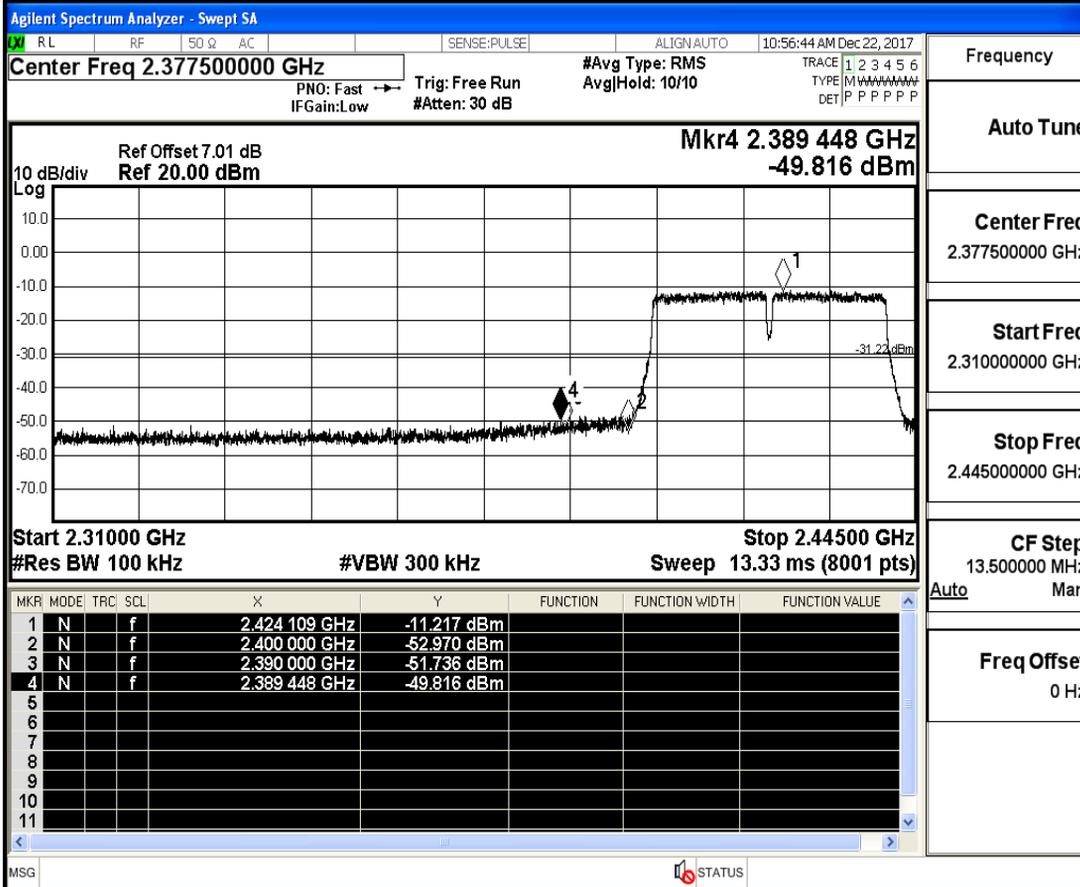
Band-edge for RF Conducted Emissions\_11N20SISO\_2412\_Ant1



Band-edge for RF Conducted Emissions\_11N20SISO\_2462\_Ant1

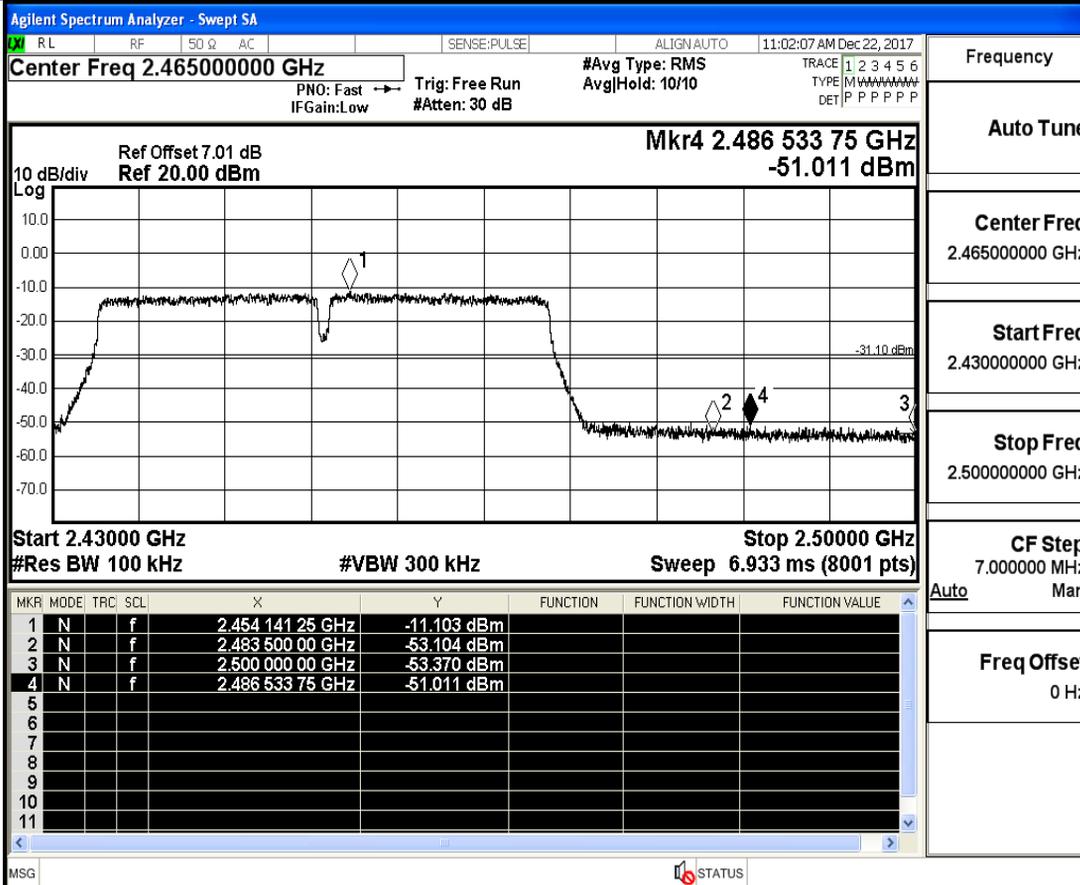


Band-edge for RF Conducted Emissions\_11N40SISO\_2422\_Ant1



Frequency	
Auto Tune	
Center Freq	2.377500000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.445000000 GHz
CF Step	13.500000 MHz
Auto	Man
Freq Offset	0 Hz

Band-edge for RF Conducted Emissions\_11N40SISO\_2452\_Ant1

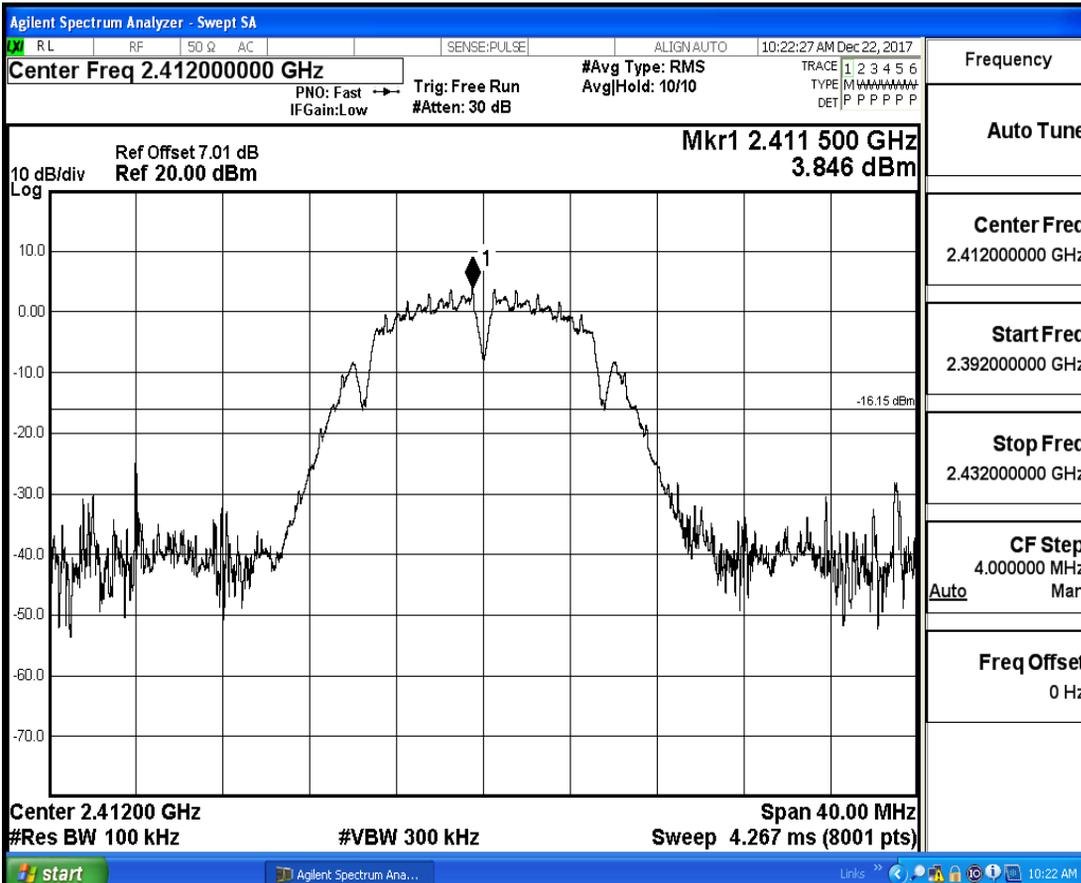


Frequency	
Auto Tune	
Center Freq	2.465000000 GHz
Start Freq	2.430000000 GHz
Stop Freq	2.500000000 GHz
CF Step	7.000000 MHz
Auto	Man
Freq Offset	0 Hz

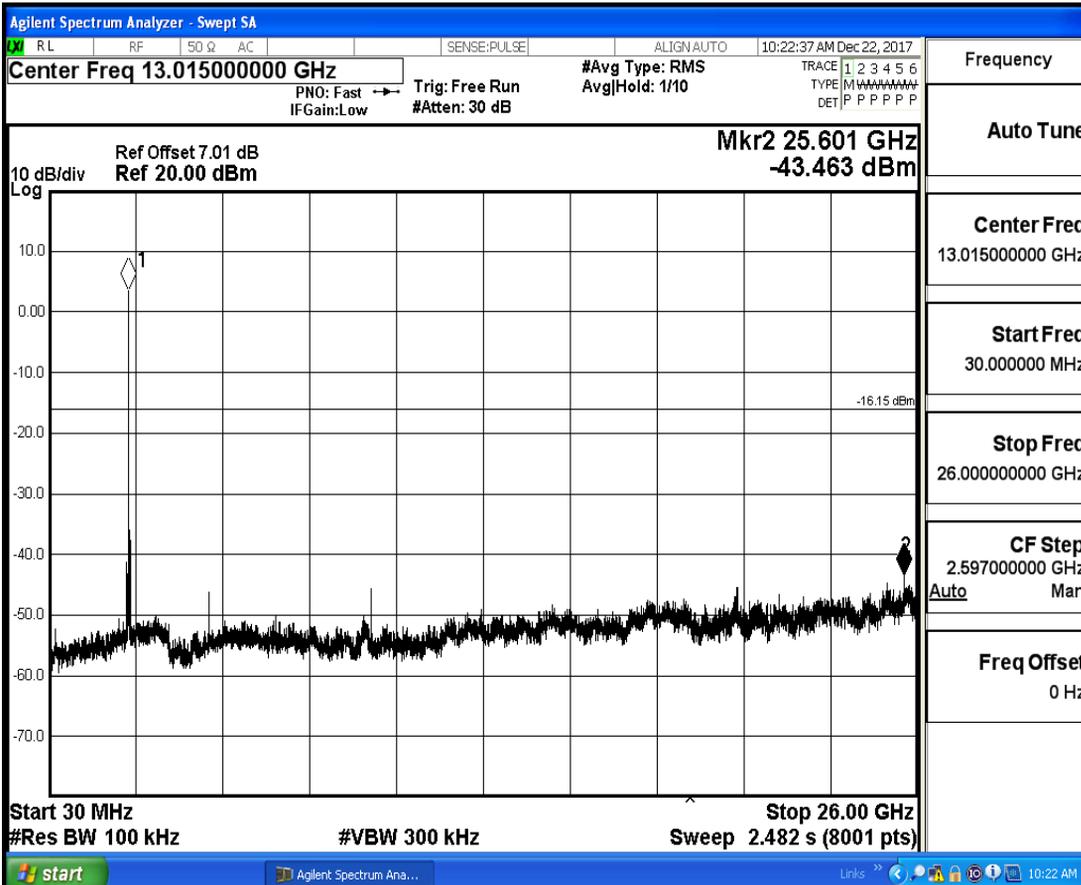
### A.5 RF Conducted Spurious Emissions

Test Mode	Test Channel	Ant	StartFre [MHz]	StopFre [MHz]	RBW [kHz]	VBW [kHz]	Pref[dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	2412	Ant1	30	26000	100	300	3.846	-43.463	<- 16.154	PASS
11B	2437	Ant1	30	26000	100	300	3.955	-43.583	<- 16.045	PASS
11B	2462	Ant1	30	26000	100	300	3.738	-44.979	<- 16.262	PASS
11G	2412	Ant1	30	26000	100	300	-6.294	-44.143	<- 26.294	PASS
11G	2437	Ant1	30	26000	100	300	-6.622	-43.654	<- 26.622	PASS
11G	2462	Ant1	30	26000	100	300	-6.937	-44.658	<- 26.937	PASS
11N20SISO	2412	Ant1	30	26000	100	300	-8.129	-45.367	<- 28.129	PASS
11N20SISO	2437	Ant1	30	26000	100	300	-8.455	-44.388	<- 28.455	PASS
11N20SISO	2462	Ant1	30	26000	100	300	-8.62	-44.200	<-28.62	PASS
11N40SISO	2422	Ant1	30	26000	100	300	-10.734	-44.857	<- 30.734	PASS
11N40SISO	2437	Ant1	30	26000	100	300	-11.384	-44.450	<- 31.384	PASS
11N40SISO	2452	Ant1	30	26000	100	300	-11.151	-44.905	<- 31.151	PASS

RF Conducted Spurious Emissions\_11B\_2412\_Ant1

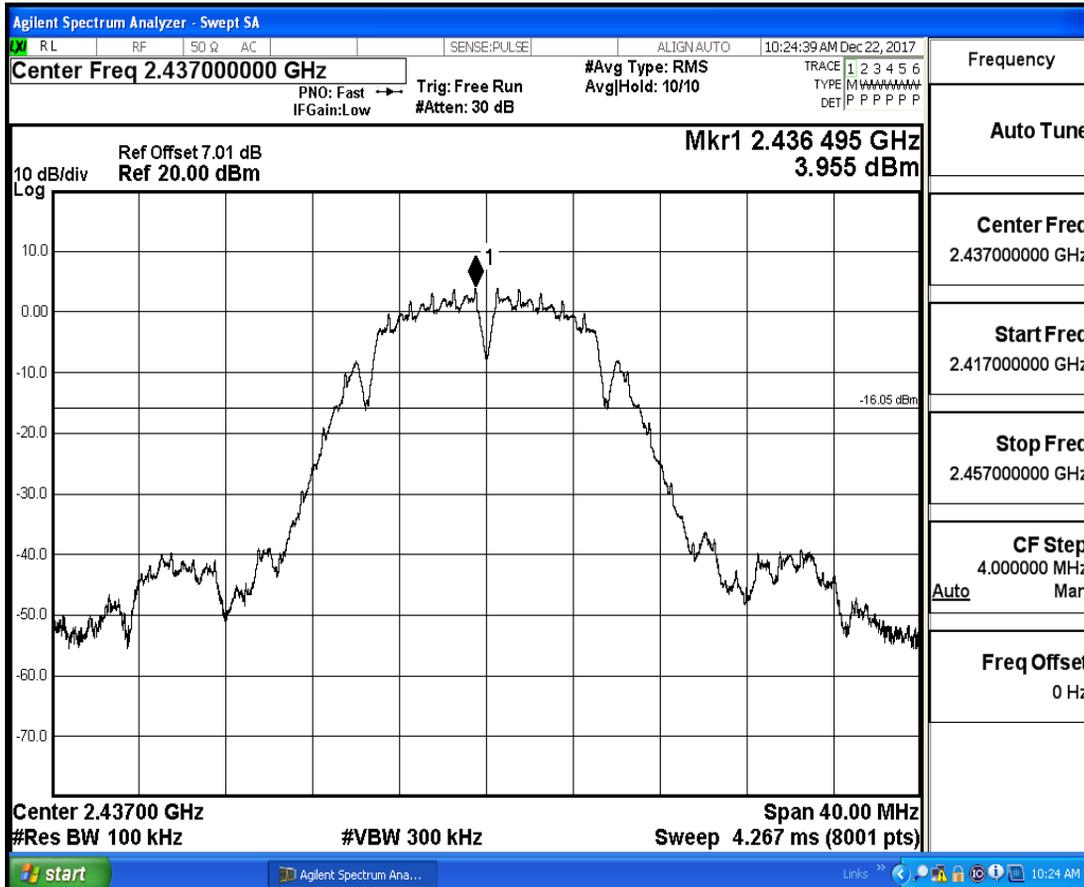


Frequency	
Auto Tune	
Center Freq	2.41200000 GHz
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Stop Freq	2.43200000 GHz
CF Step	4.000000 MHz
Auto	Man
Freq Offset	0 Hz

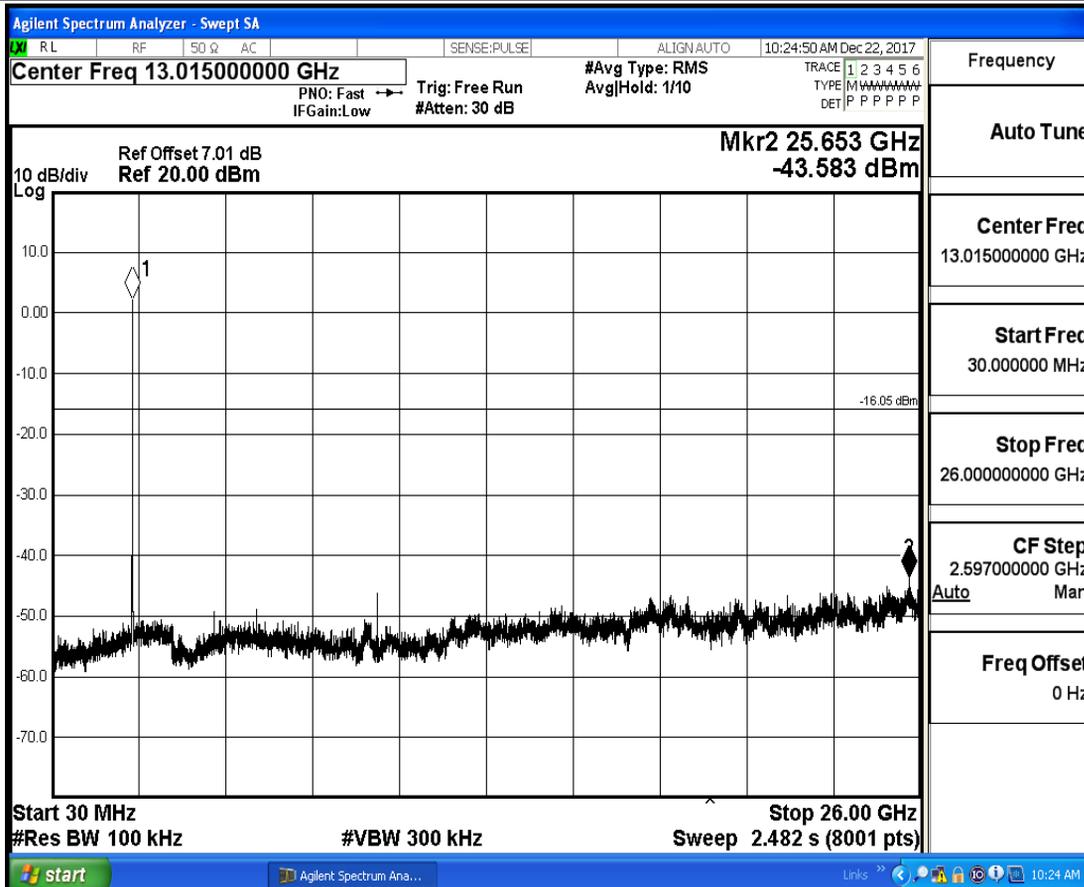


Frequency	
Auto Tune	
Center Freq	13.01500000 GHz
Start Freq	30.000000 MHz
Stop Freq	26.00000000 GHz
CF Step	2.59700000 GHz
Auto	Man
Freq Offset	0 Hz

RF Conducted Spurious Emissions\_11B\_2437\_Ant1

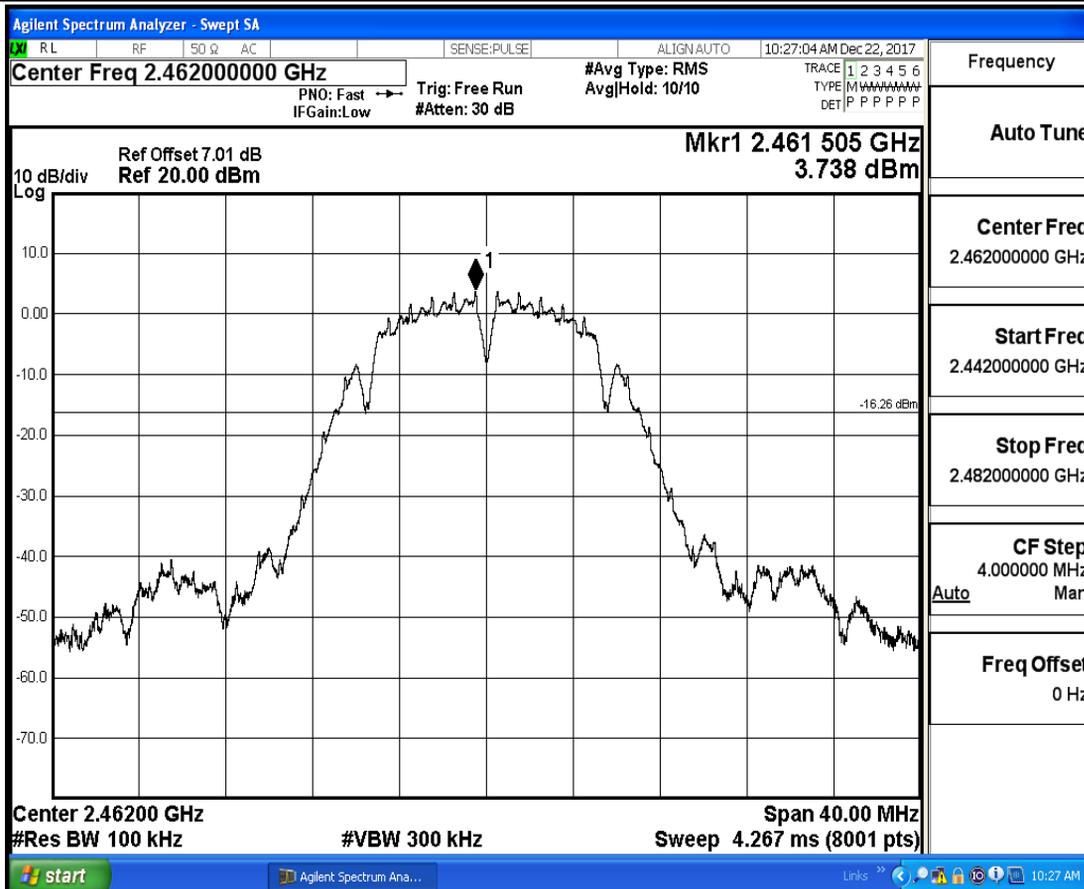


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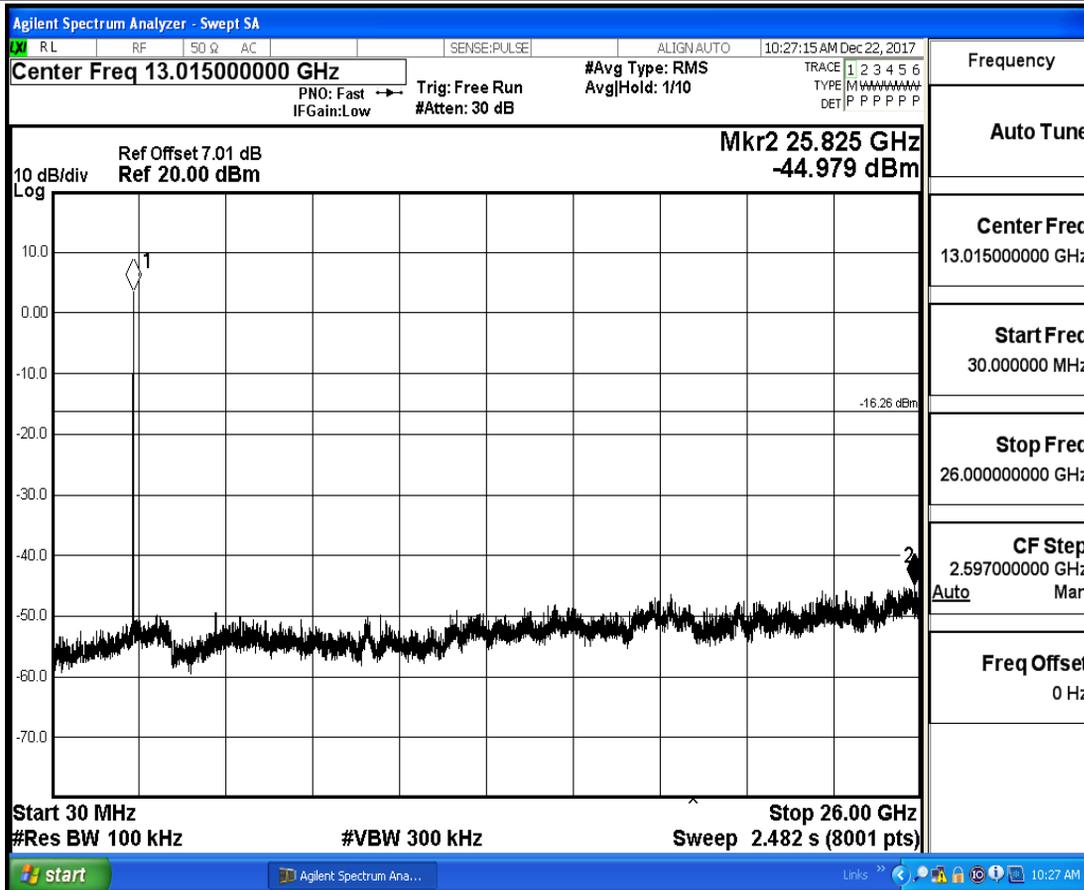


Frequency	
Auto Tune	
Center Freq	13.015000000 GHz
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Auto	Man
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RF Conducted Spurious Emissions\_11B\_2462\_Ant1

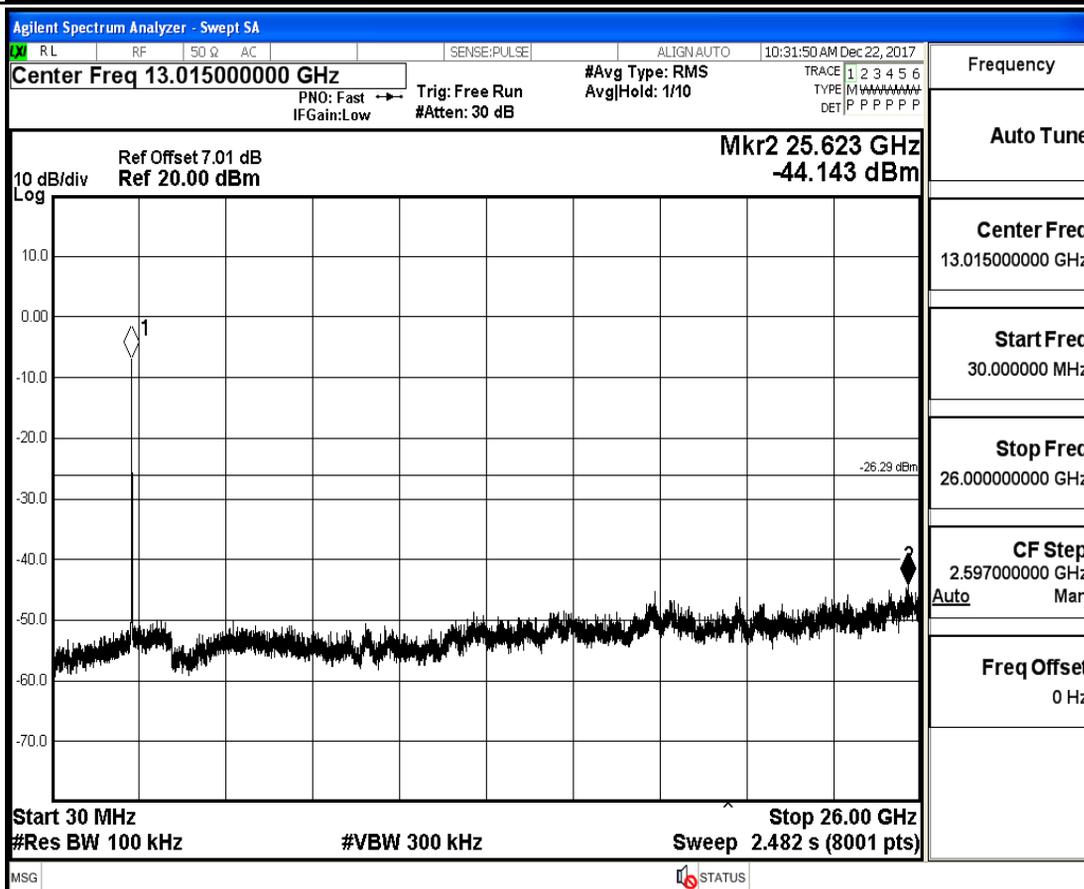
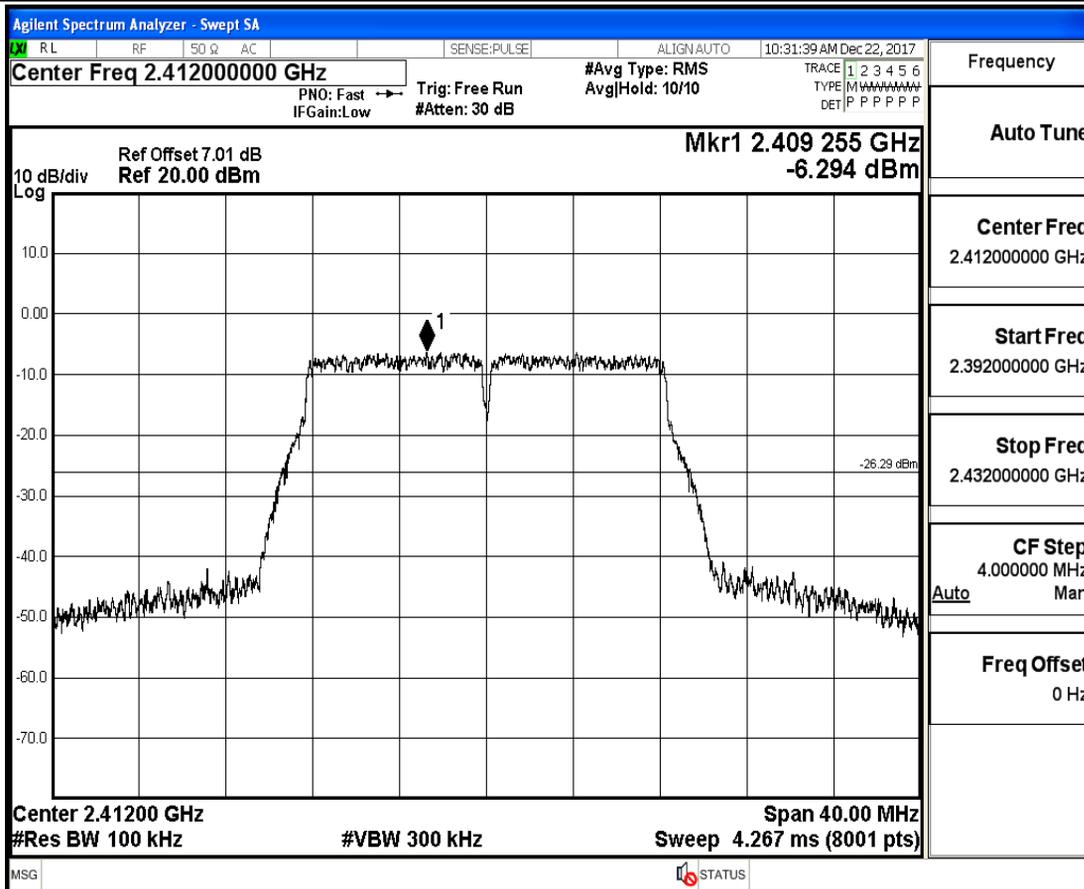


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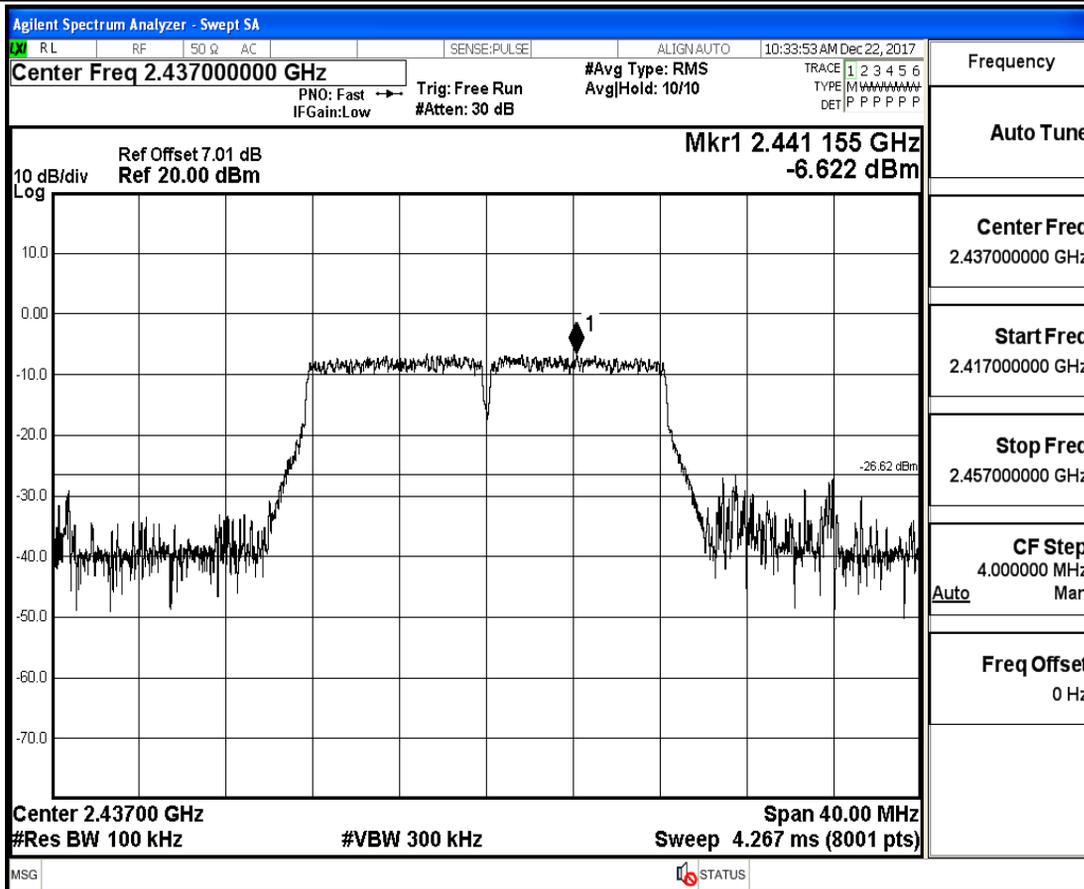


Frequency	
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Start Freq	30.000000 MHz
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Auto	Man
Freq Offset	0 Hz

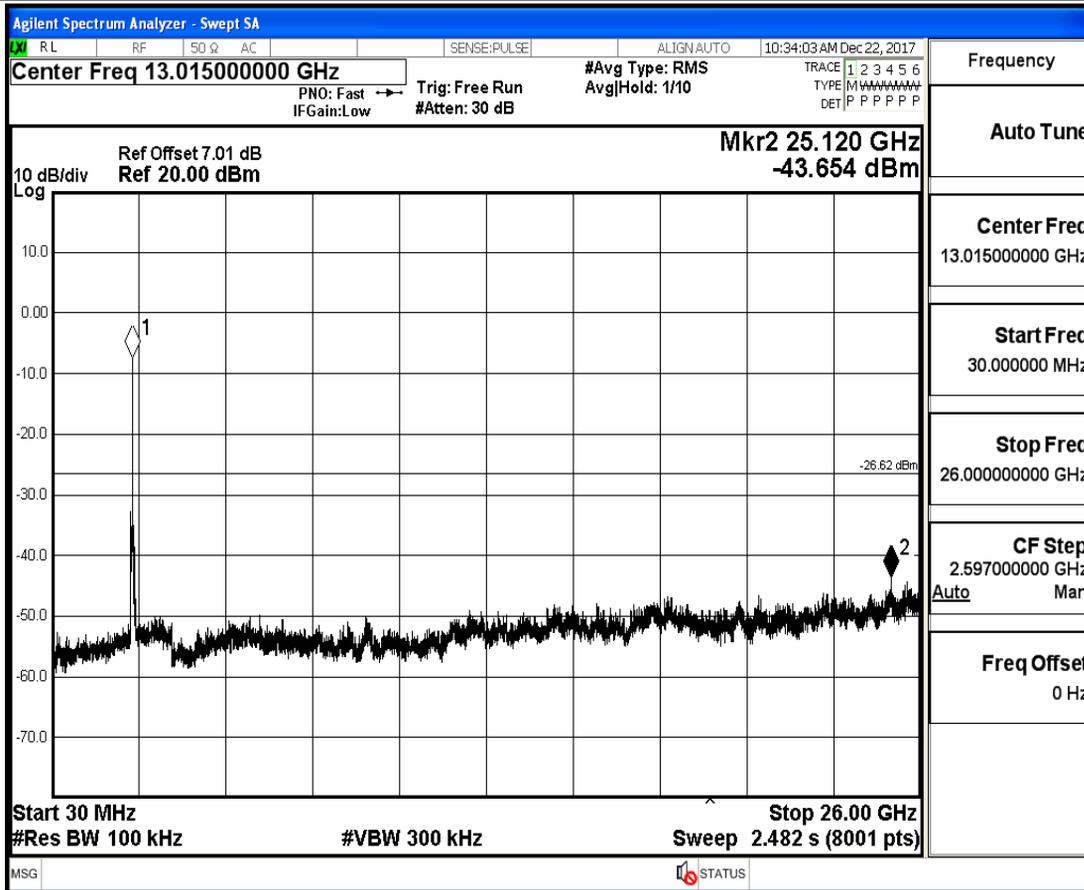
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RF Conducted Spurious Emissions\_11G\_2437\_Ant1

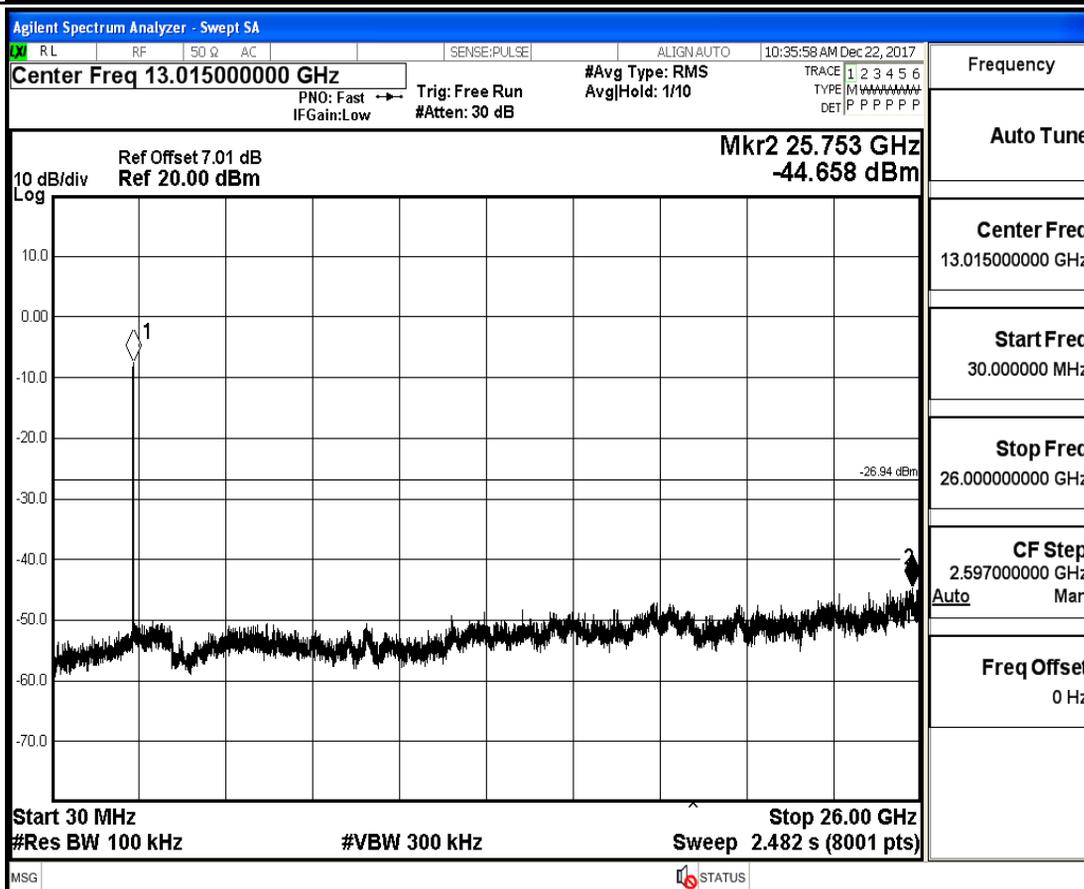
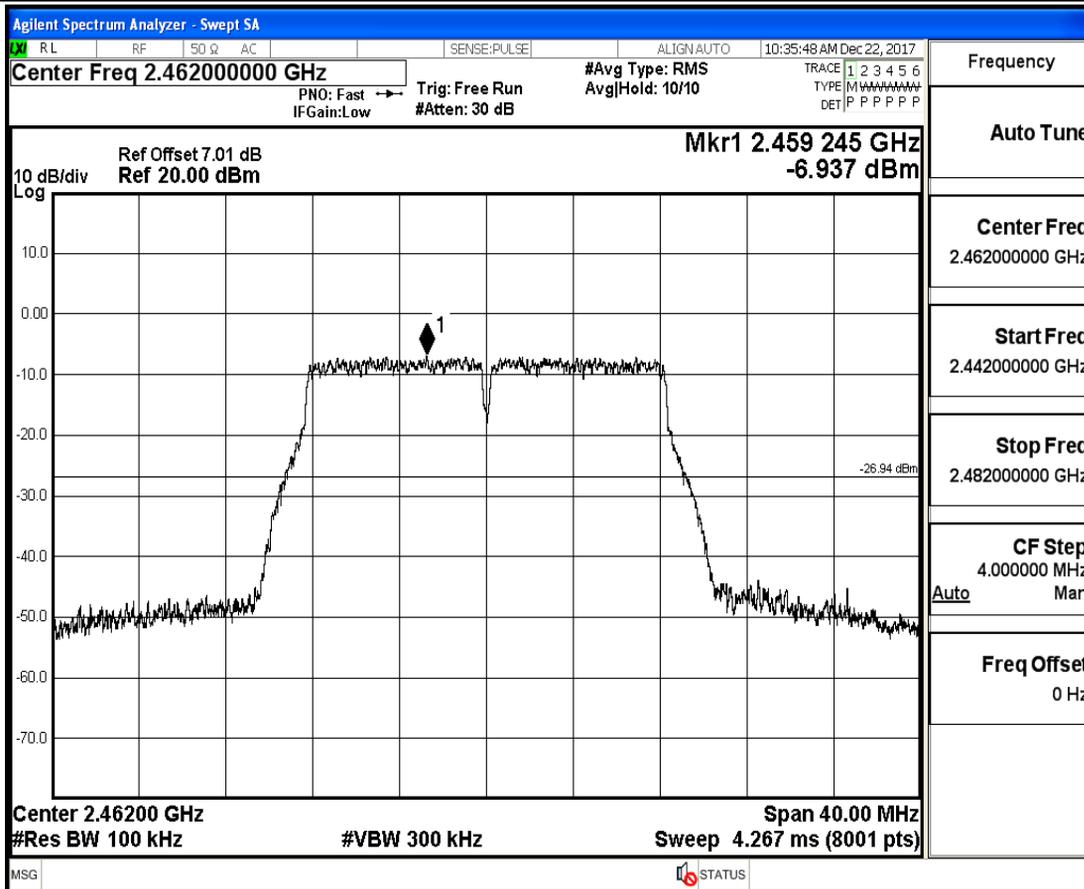


Frequency	
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Stop Freq	2.45700000 GHz
CF Step	4.000000 MHz
Auto	Man
Freq Offset	0 Hz

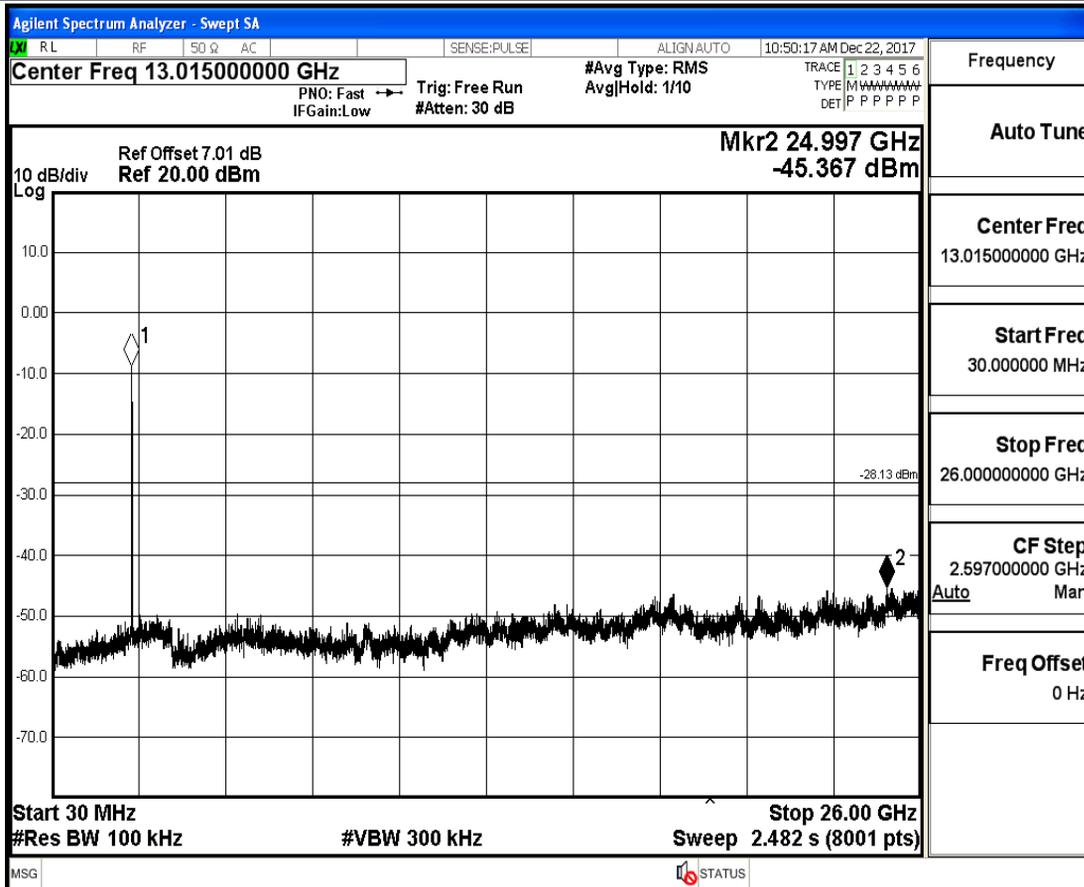
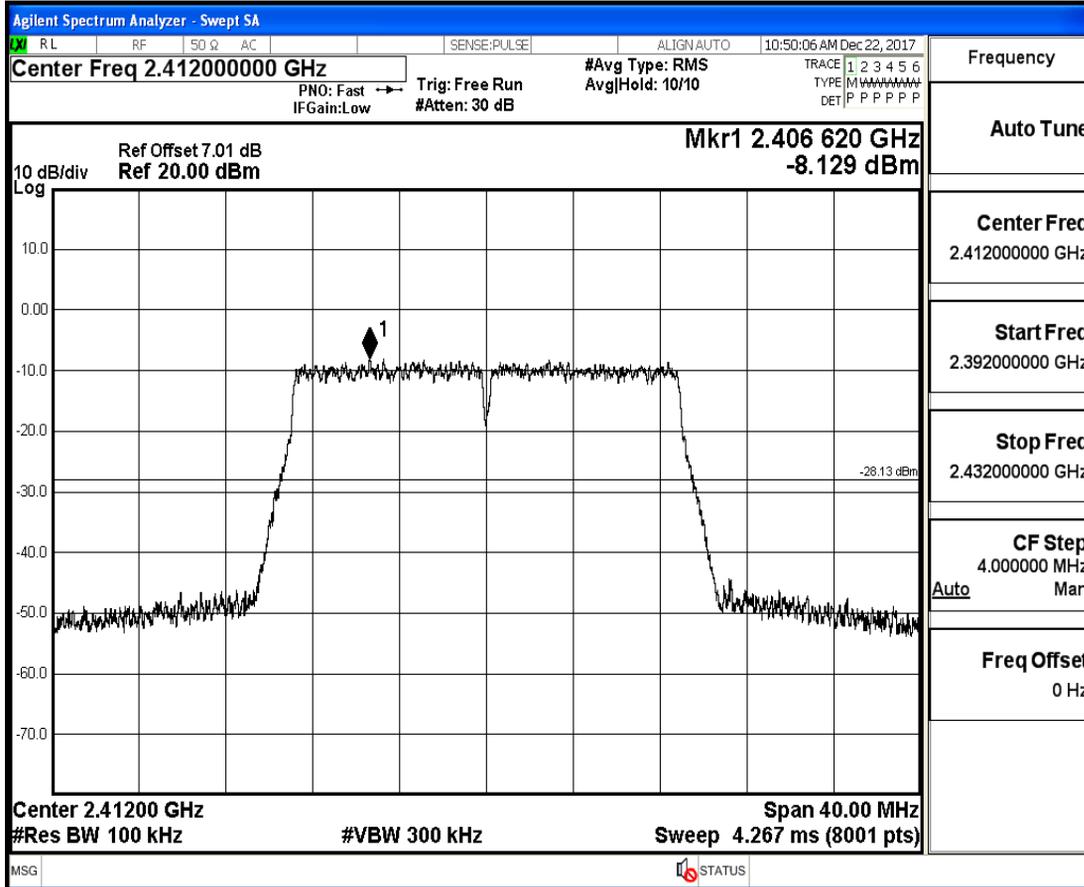


Frequency	
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Start Freq	30.000000 MHz
Stop Freq	26.00000000 GHz
CF Step	2.597000000 GHz
Auto	Man
Freq Offset	0 Hz

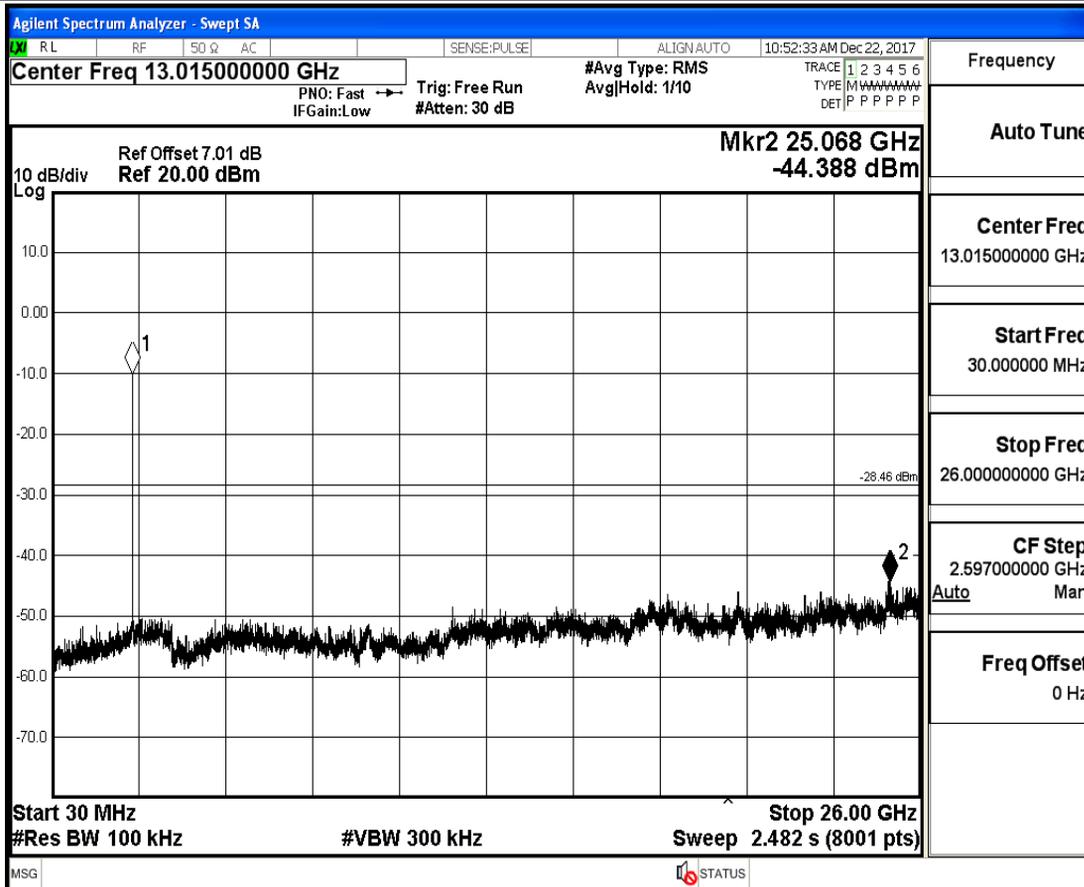
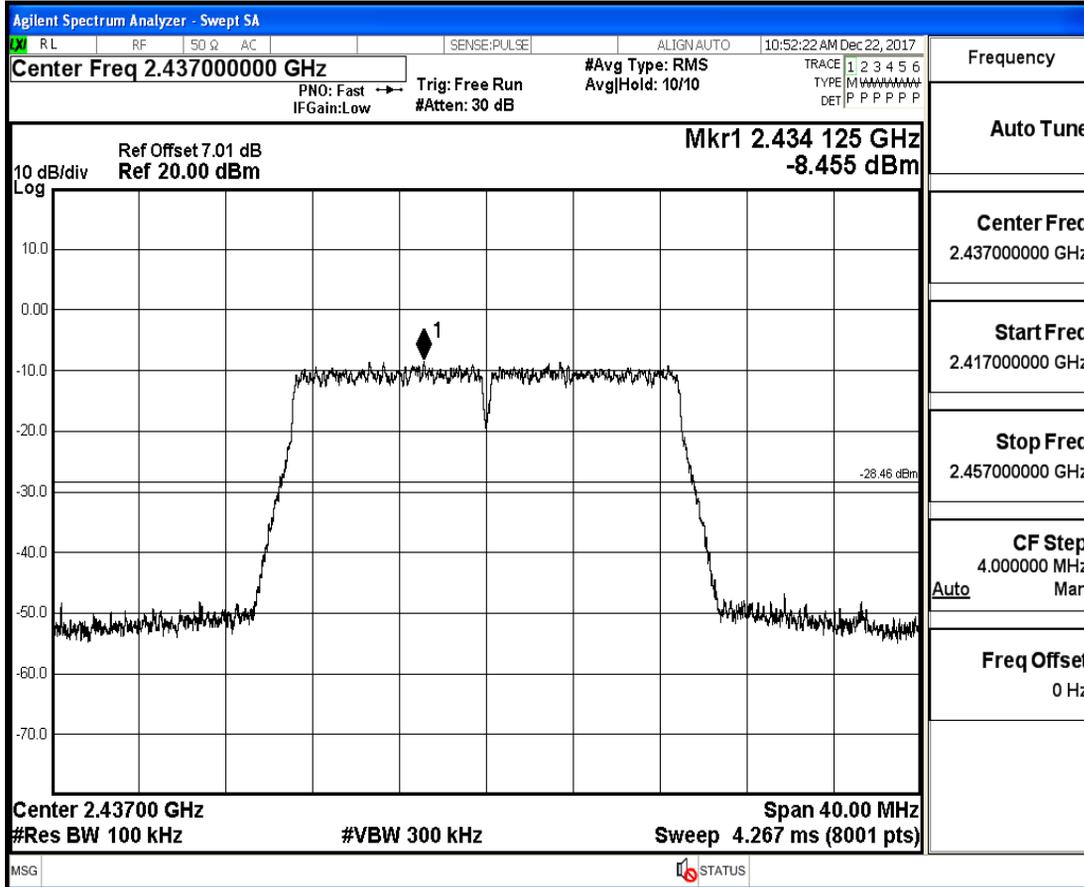
RF Conducted Spurious Emissions\_11G\_2462\_Ant1



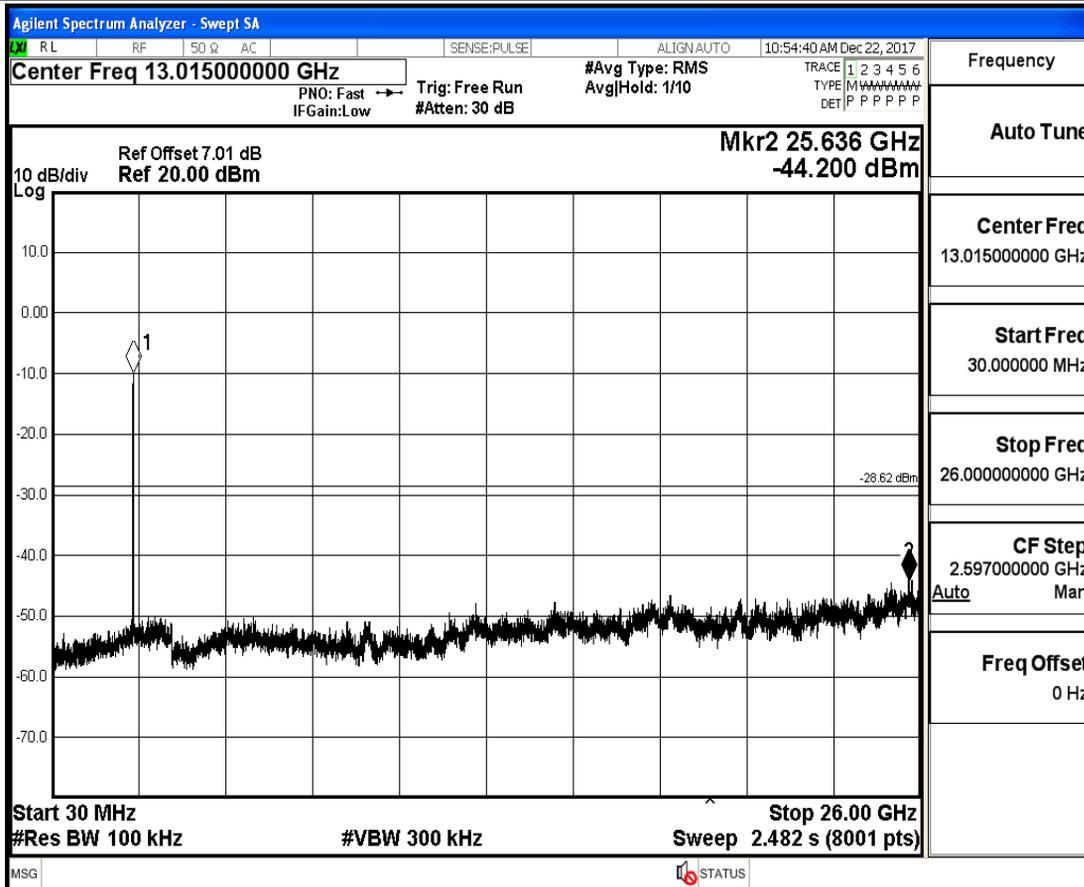
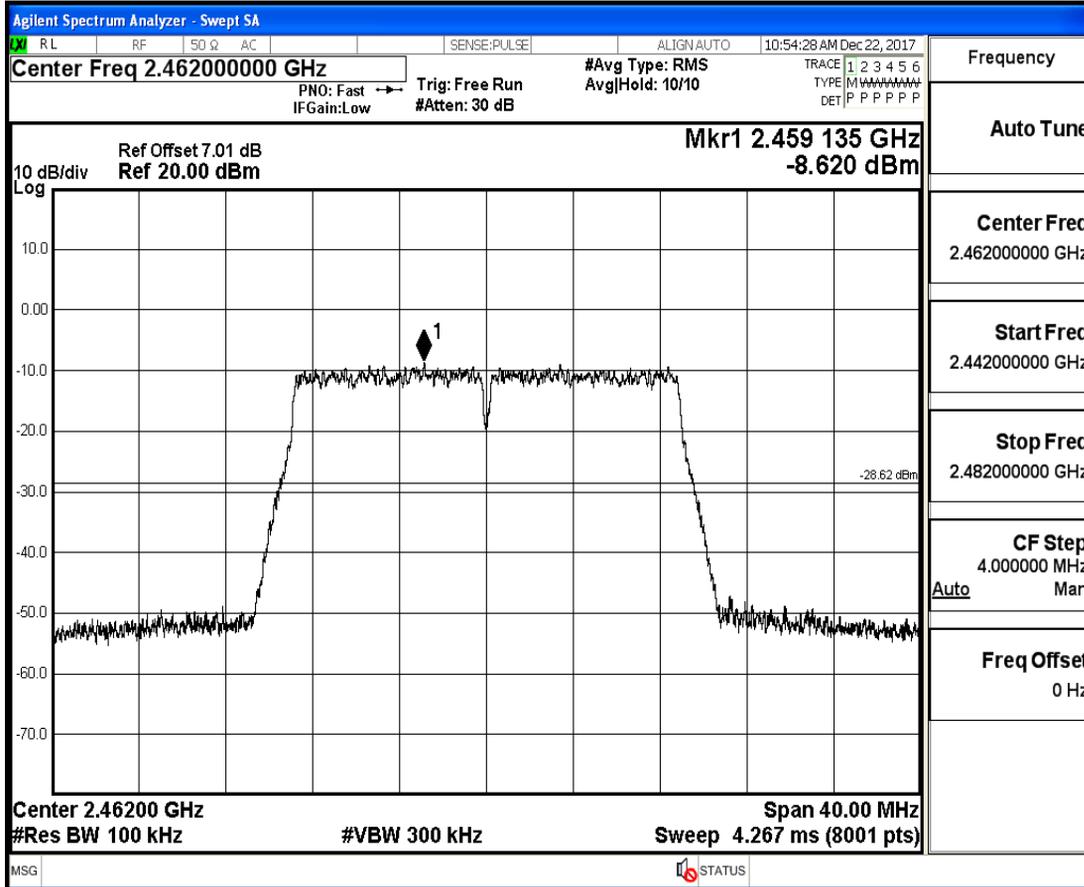
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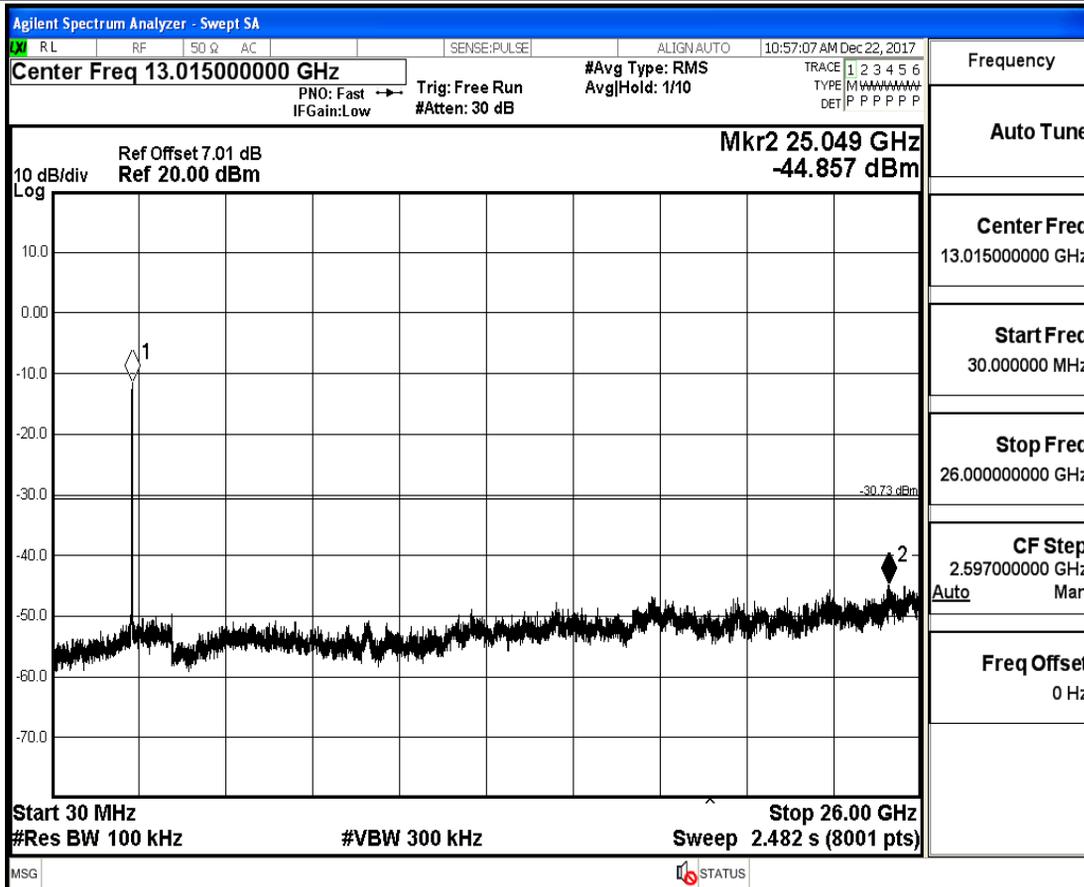
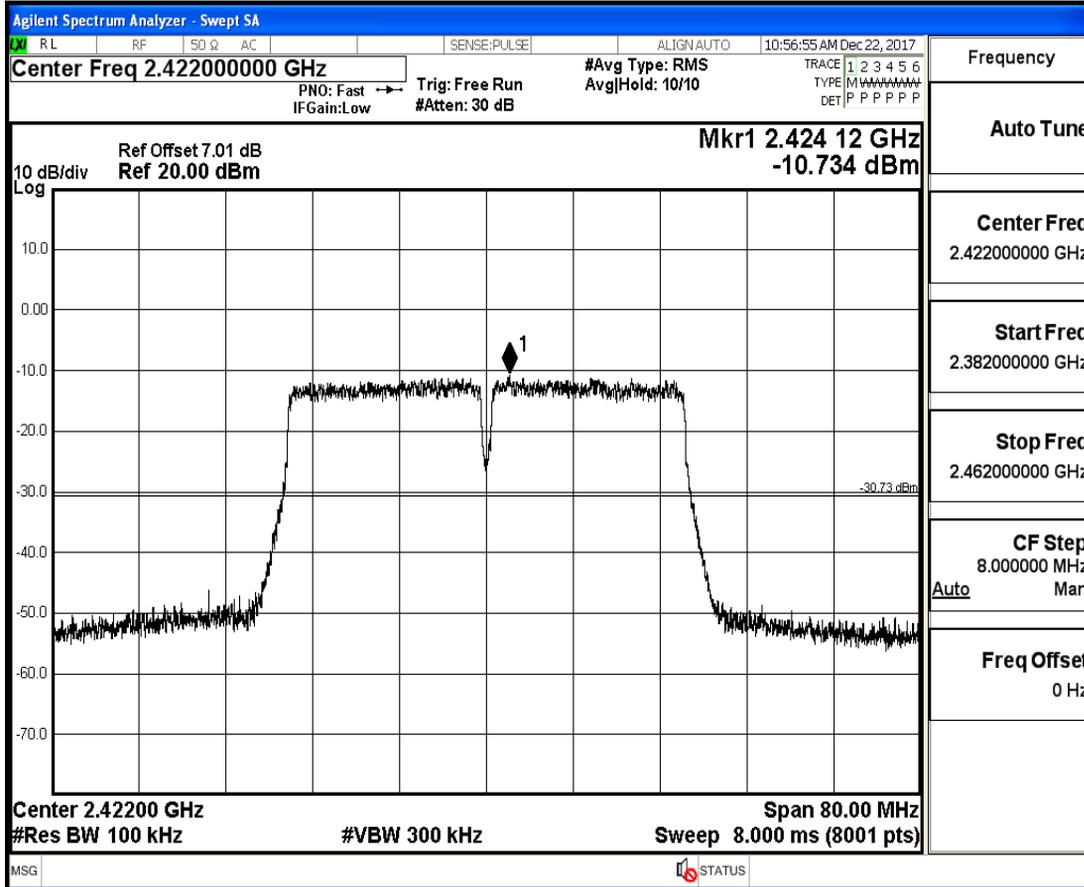
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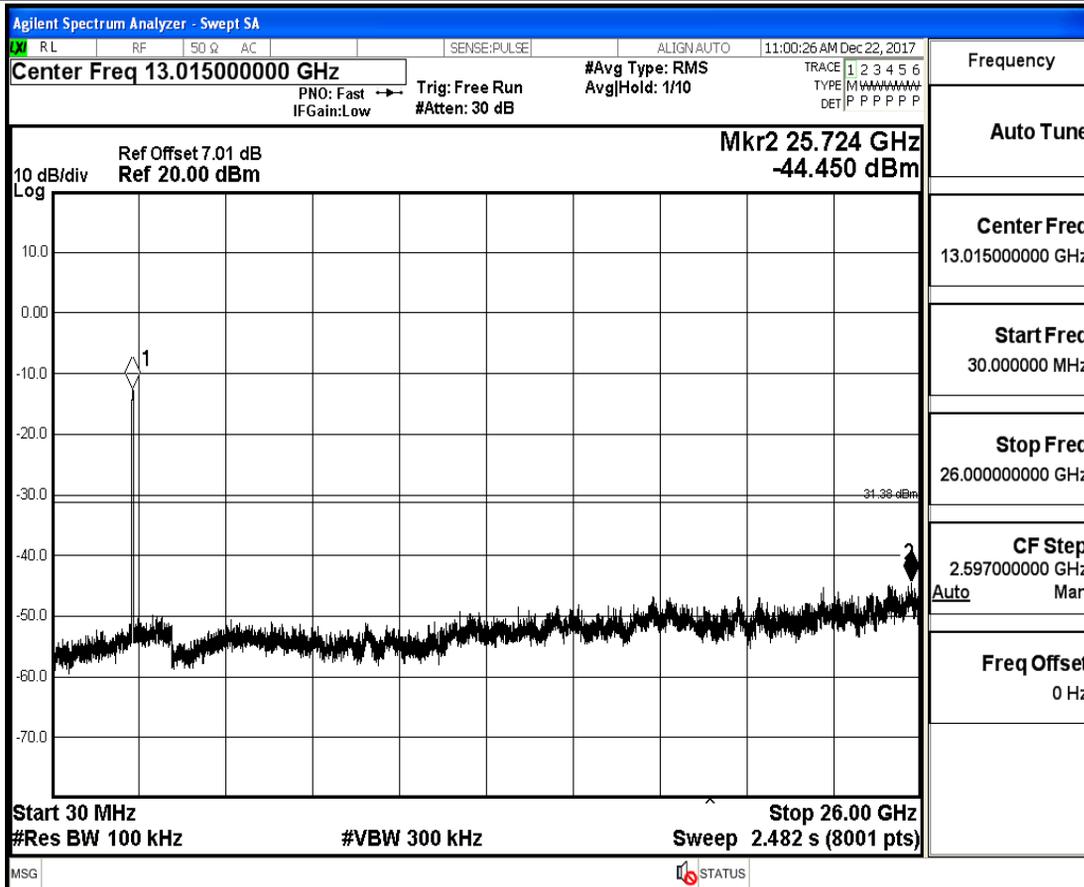
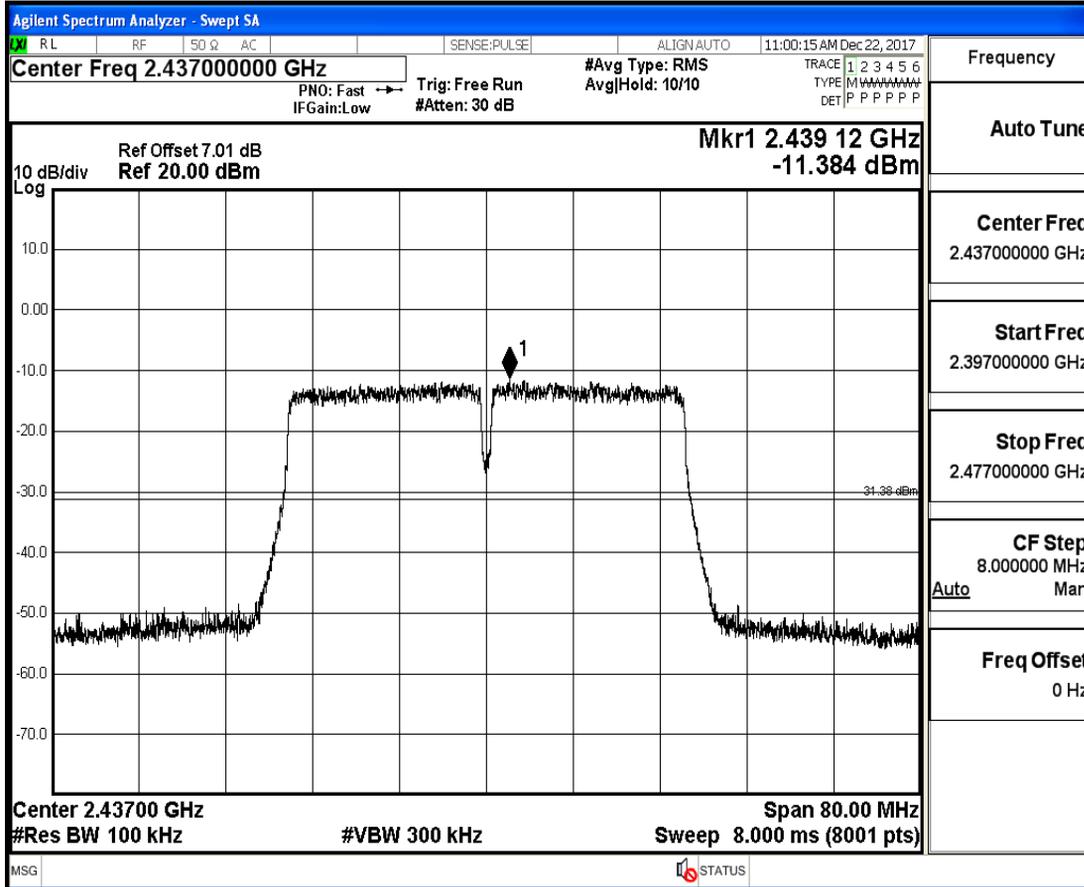
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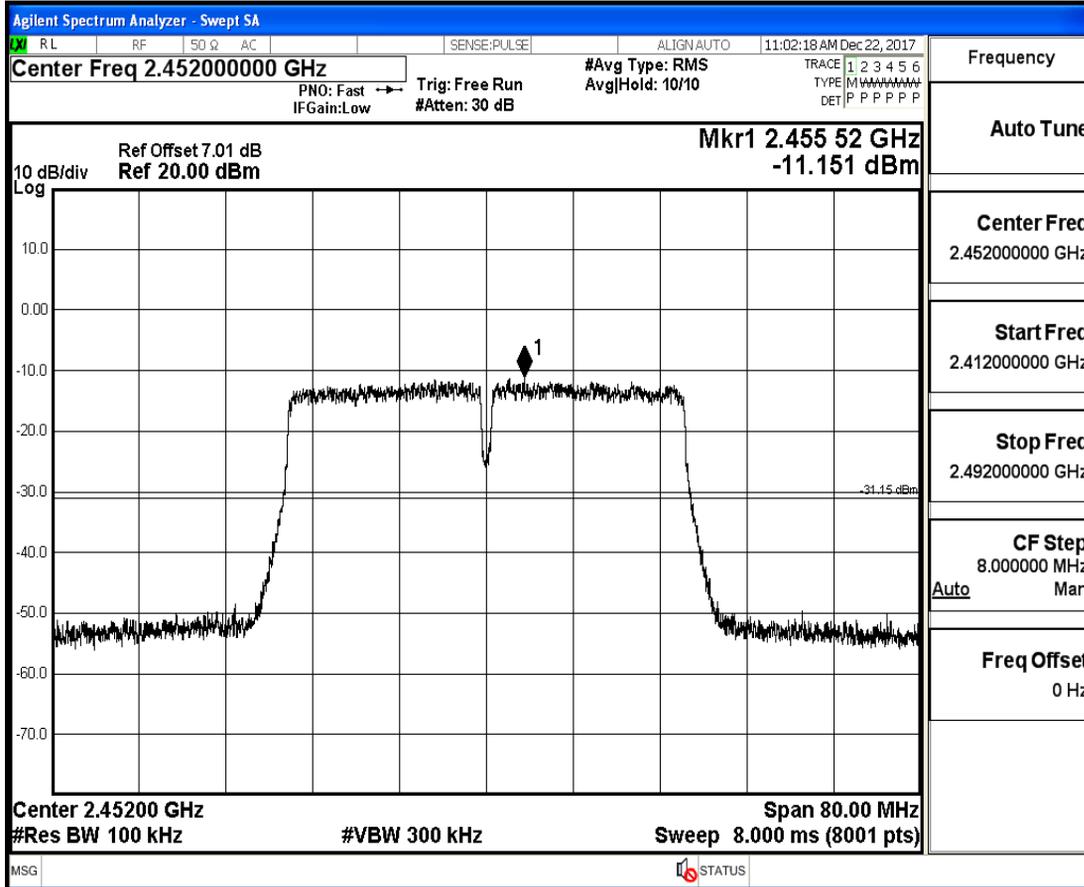
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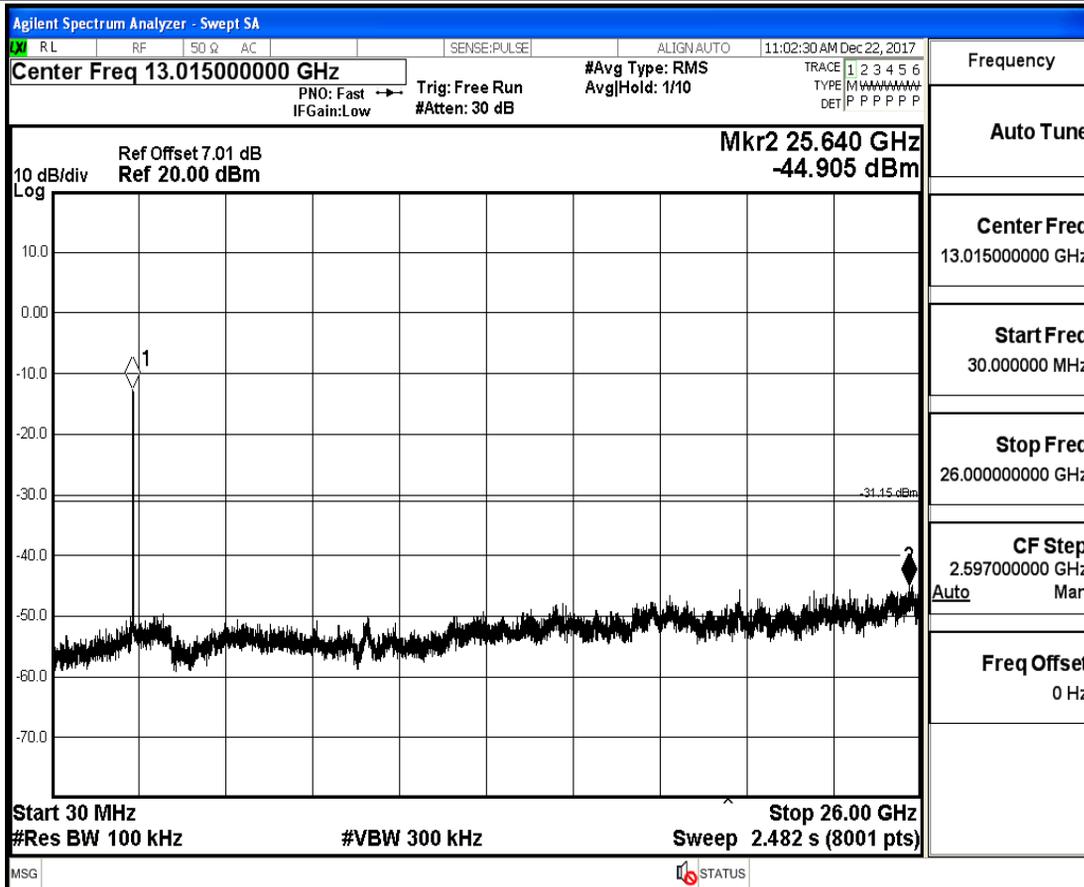
RF Conducted Spurious Emissions\_11N40SISO\_2437\_Ant1



RF Conducted Spurious Emissions\_11N40SISO\_2452\_Ant1



Frequency	
Auto Tune	
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Start Freq	2.41200000 GHz
Stop Freq	2.49200000 GHz
CF Step	8.000000 MHz
Auto	Man
Freq Offset	0 Hz



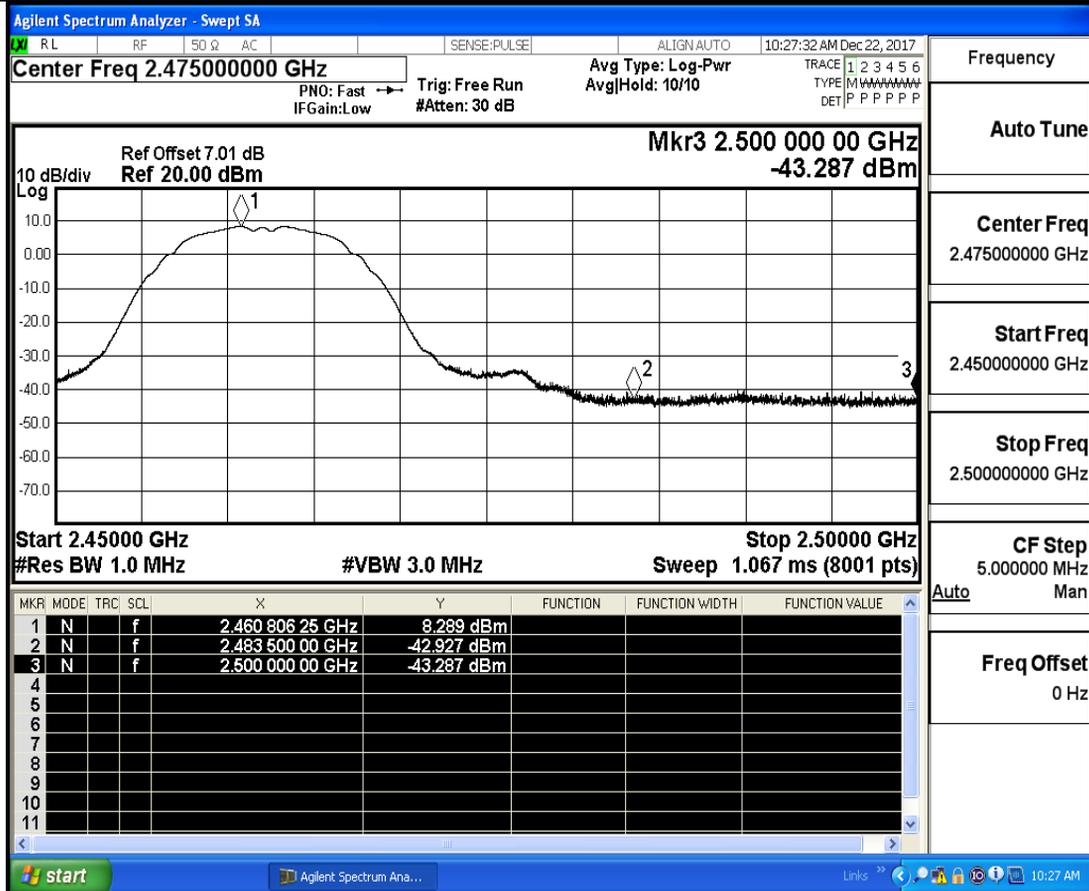
Frequency	
Auto Tune	
Center Freq	13.01500000 GHz
Start Freq	30.000000 MHz
Stop Freq	26.00000000 GHz
CF Step	2.597000000 GHz
Auto	Man
Freq Offset	0 Hz

### A.6 Restrict-band band-edge measurements

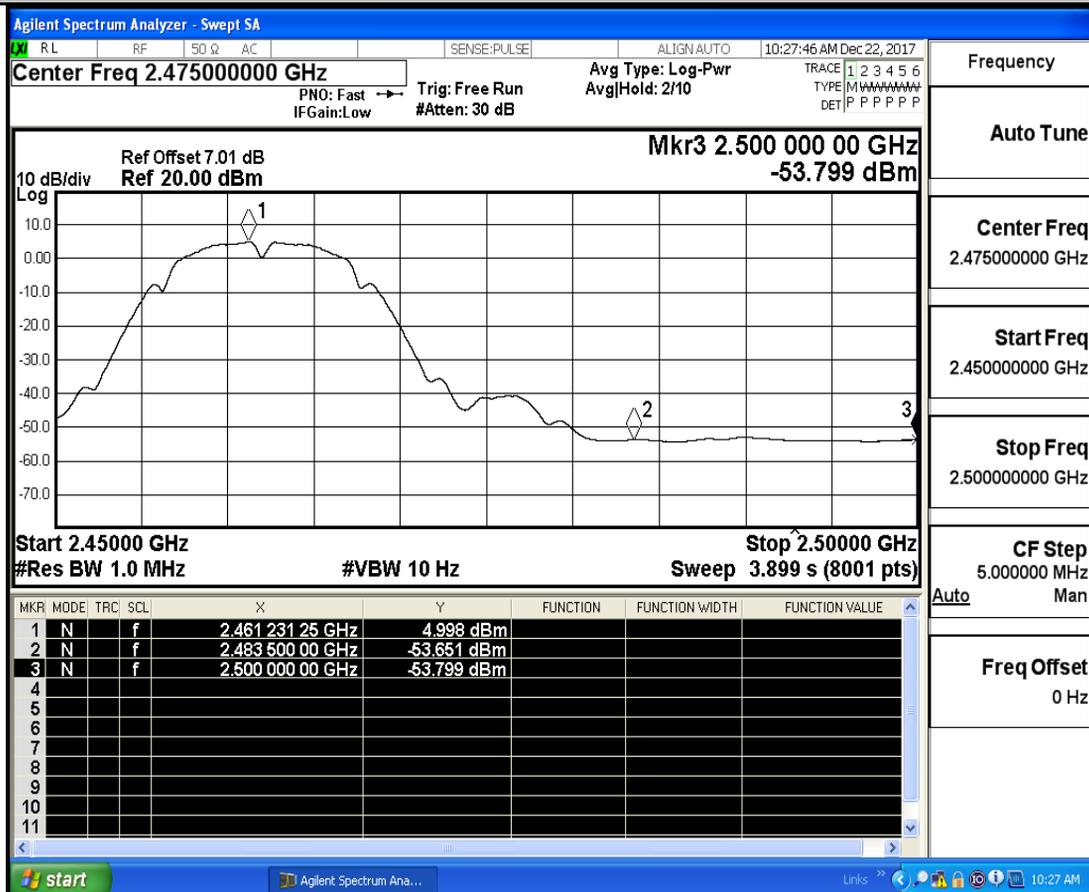
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.631	2.0	0	54.597	PEAK	74	PASS
11B	2412	Ant1	2310.0	-55.062	2.0	0	42.166	AV	54	PASS
11B	2412	Ant1	2390.0	-30.037	2.0	0	67.191	PEAK	74	PASS
11B	2412	Ant1	2390.0	-52.253	2.0	0	44.975	AV	54	PASS
11B	2462	Ant1	2483.5	-42.927	2.0	0	54.301	PEAK	74	PASS
11B	2462	Ant1	2483.5	-53.651	2.0	0	43.577	AV	54	PASS
11B	2462	Ant1	2500.0	-43.287	2.0	0	53.941	PEAK	74	PASS
11B	2462	Ant1	2500.0	-53.799	2.0	0	43.429	AV	54	PASS
11G	2412	Ant1	2310.0	-45.020	2.0	0	52.208	PEAK	74	PASS
11G	2412	Ant1	2310.0	-55.049	2.0	0	42.179	AV	54	PASS
11G	2412	Ant1	2390.0	-40.424	2.0	0	56.804	PEAK	74	PASS
11G	2412	Ant1	2390.0	-52.214	2.0	0	45.014	AV	54	PASS
11G	2462	Ant1	2483.5	-39.565	2.0	0	57.663	PEAK	74	PASS
11G	2462	Ant1	2483.5	-52.656	2.0	0	44.572	AV	54	PASS
11G	2462	Ant1	2500.0	-43.202	2.0	0	54.026	PEAK	74	PASS
11G	2462	Ant1	2500.0	-53.599	2.0	0	43.629	AV	54	PASS
11N20SISO	2412	Ant1	2310.0	-44.516	2.0	0	52.712	PEAK	74	PASS
11N20SISO	2412	Ant1	2310.0	-55.098	2.0	0	42.130	AV	54	PASS
11N20SISO	2412	Ant1	2390.0	-42.562	2.0	0	54.666	PEAK	74	PASS
11N20SISO	2412	Ant1	2390.0	-53.034	2.0	0	44.194	AV	54	PASS
11N20SISO	2462	Ant1	2483.5	-44.038	2.0	0	53.190	PEAK	74	PASS
11N20SISO	2462	Ant1	2483.5	-53.441	2.0	0	43.787	AV	54	PASS
11N20SISO	2462	Ant1	2500.0	-43.125	2.0	0	54.103	PEAK	74	PASS
11N20SISO	2462	Ant1	2500.0	-53.919	2.0	0	43.309	AV	54	PASS
11N40SISO	2422	Ant1	2310.0	-45.046	2.0	0	52.182	PEAK	74	PASS
11N40SISO	2422	Ant1	2310.0	-55.126	2.0	0	42.102	AV	54	PASS
11N40SISO	2422	Ant1	2390.0	-40.763	2.0	0	56.465	PEAK	74	PASS
11N40SISO	2422	Ant1	2390.0	-51.918	2.0	0	45.310	AV	54	PASS
11N40SISO	2452	Ant1	2483.5	-43.518	2.0	0	53.710	PEAK	74	PASS
11N40SISO	2452	Ant1	2483.5	-53.357	2.0	0	43.871	AV	54	PASS
11N40SISO	2452	Ant1	2500.0	-44.609	2.0	0	52.619	PEAK	74	PASS
11N40SISO	2452	Ant1	2500.0	-54.022	2.0	0	43.206	AV	54	PASS



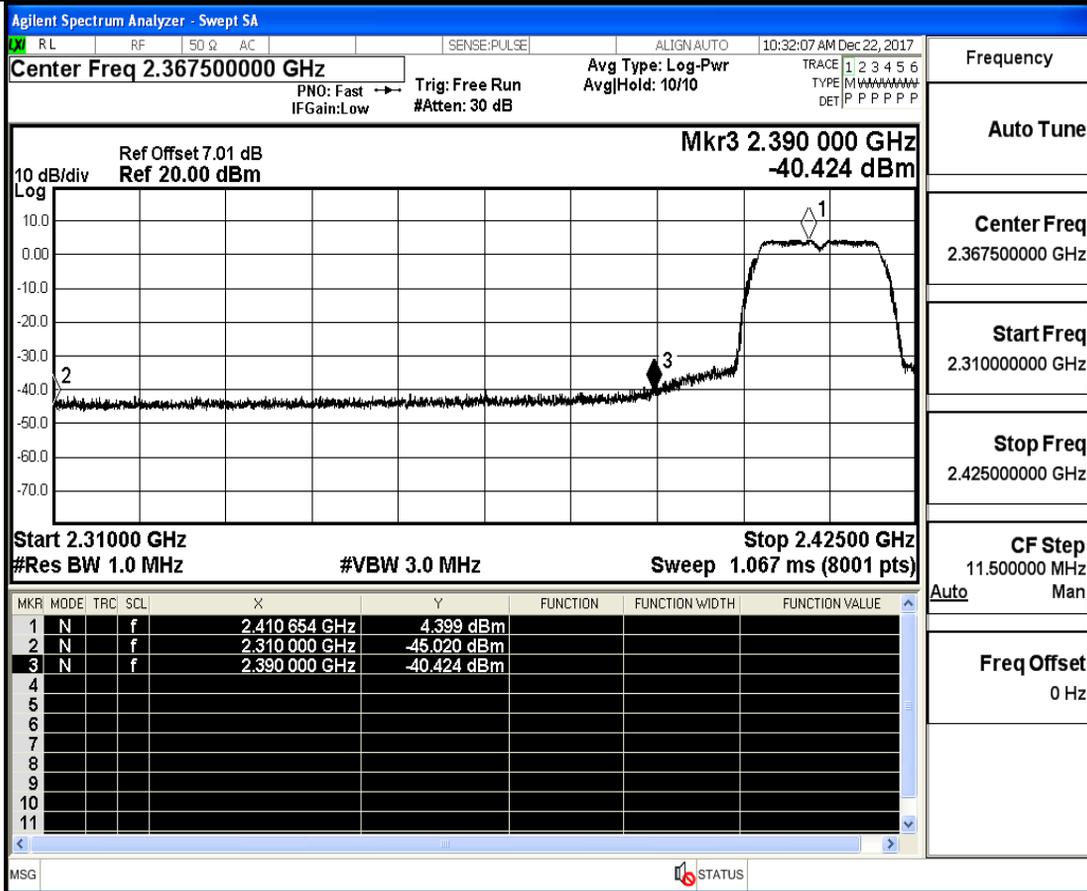
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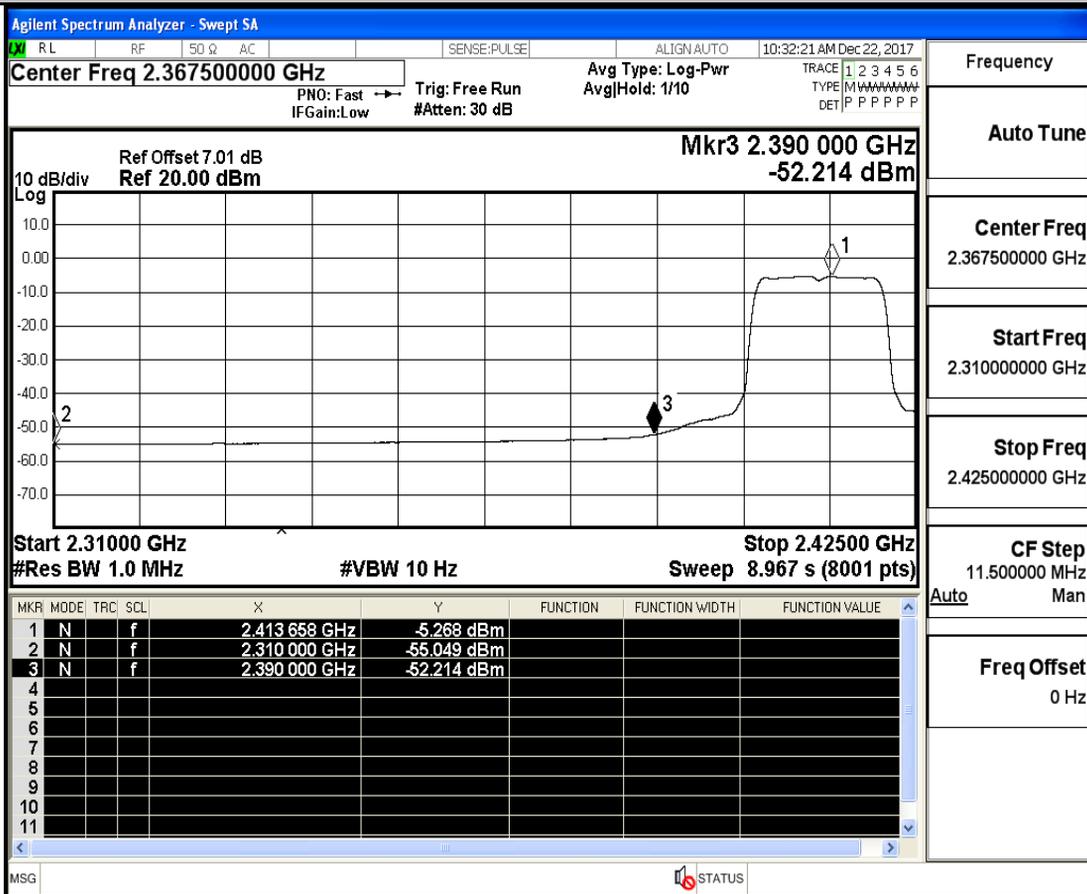
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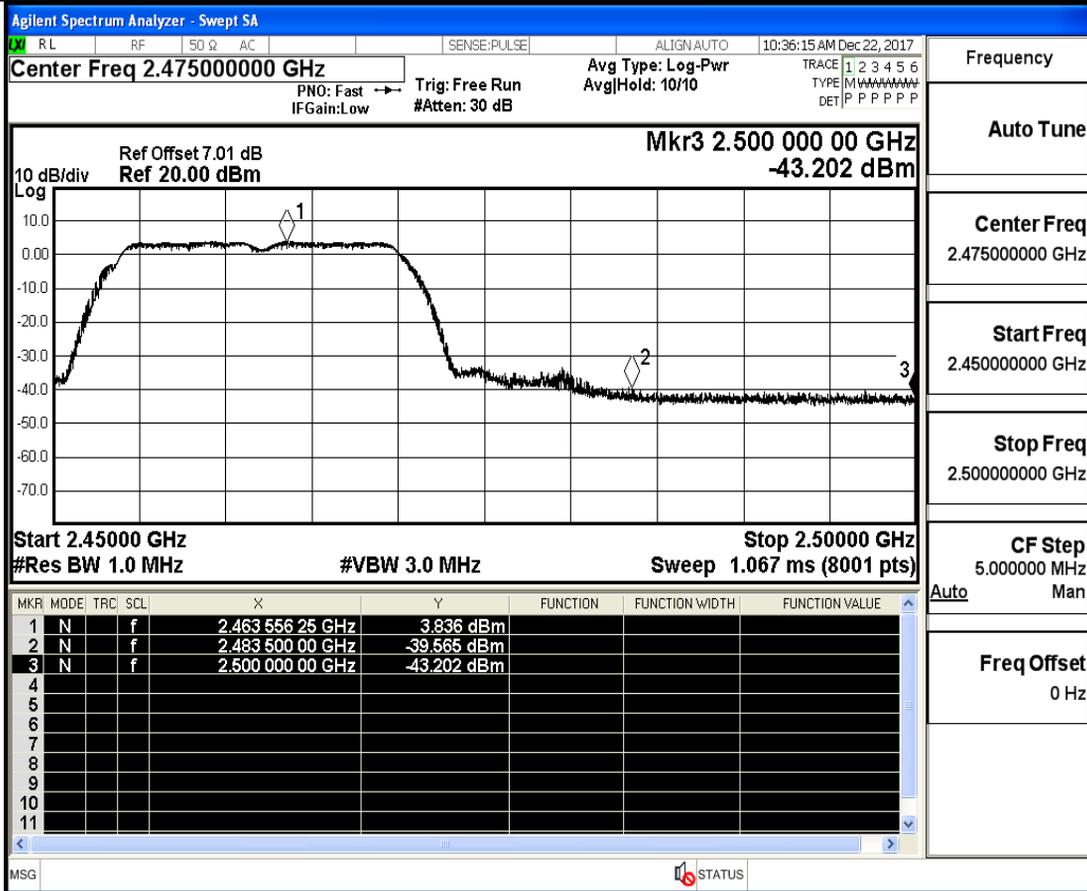
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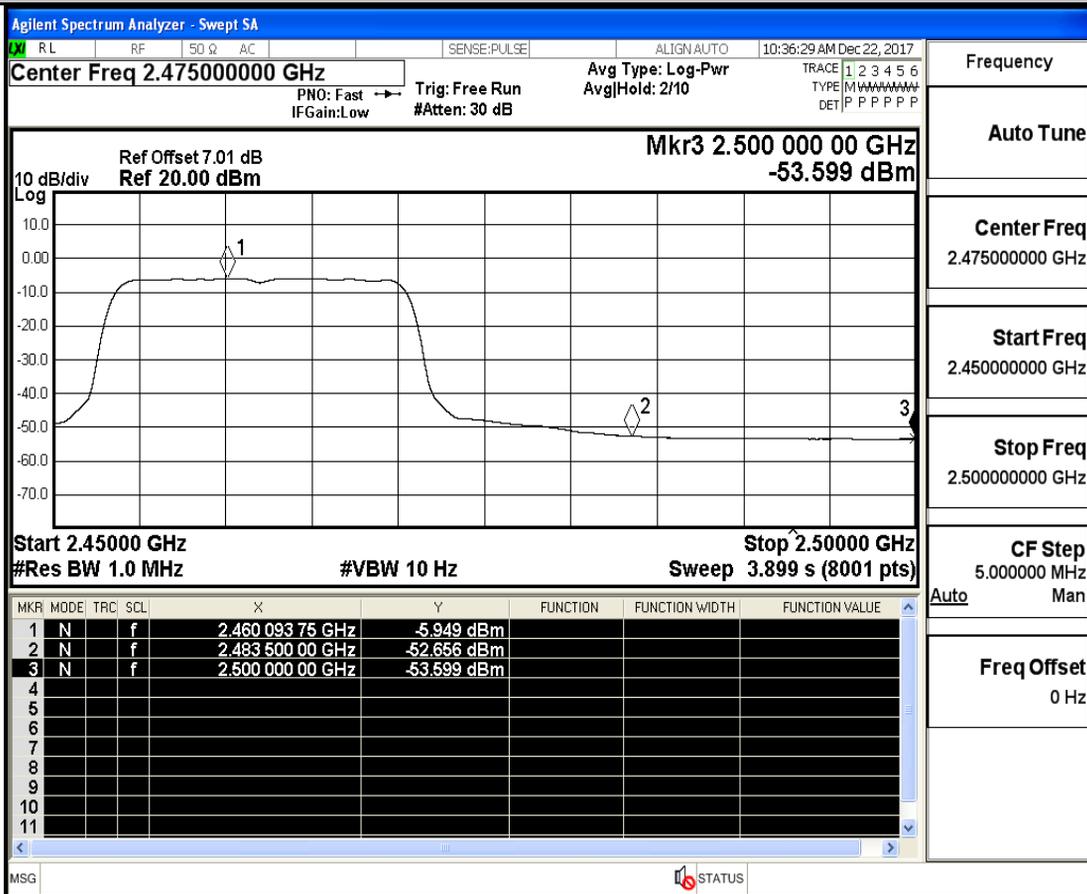
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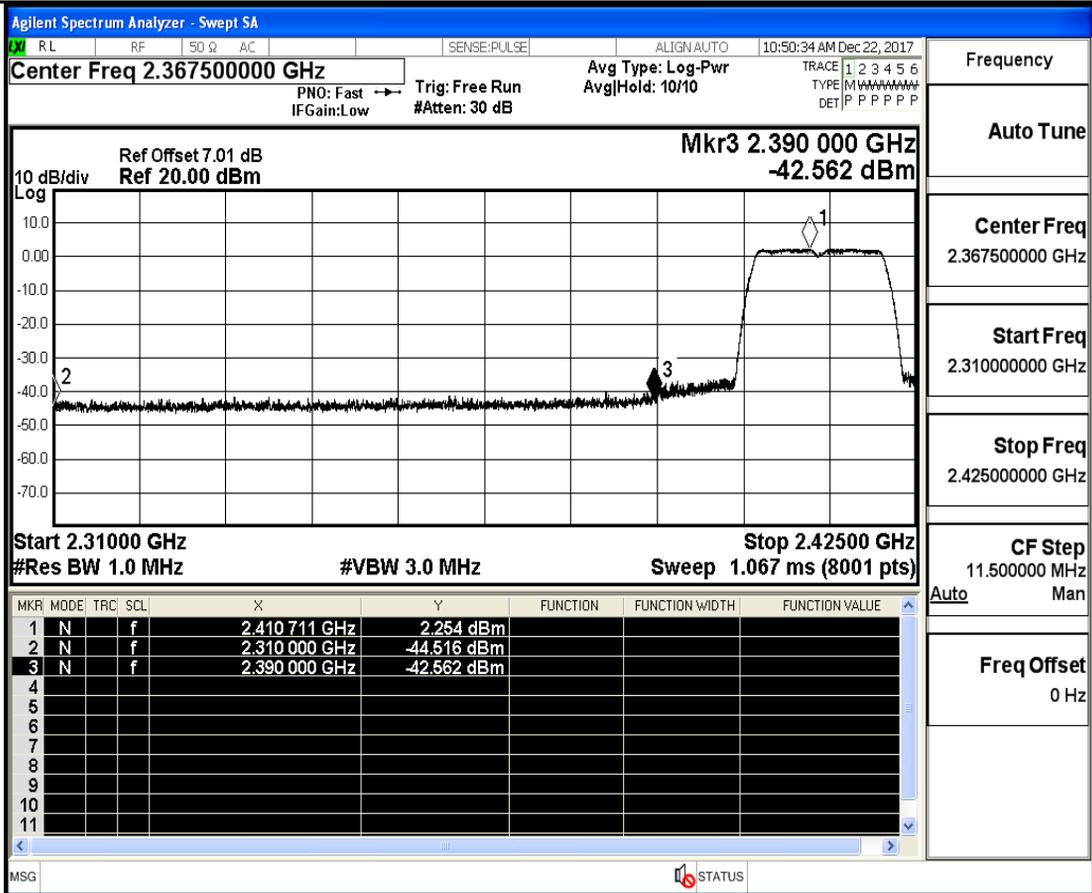
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Restrict-band band-edge measurements\_11G\_2462\_Ant1\_AV

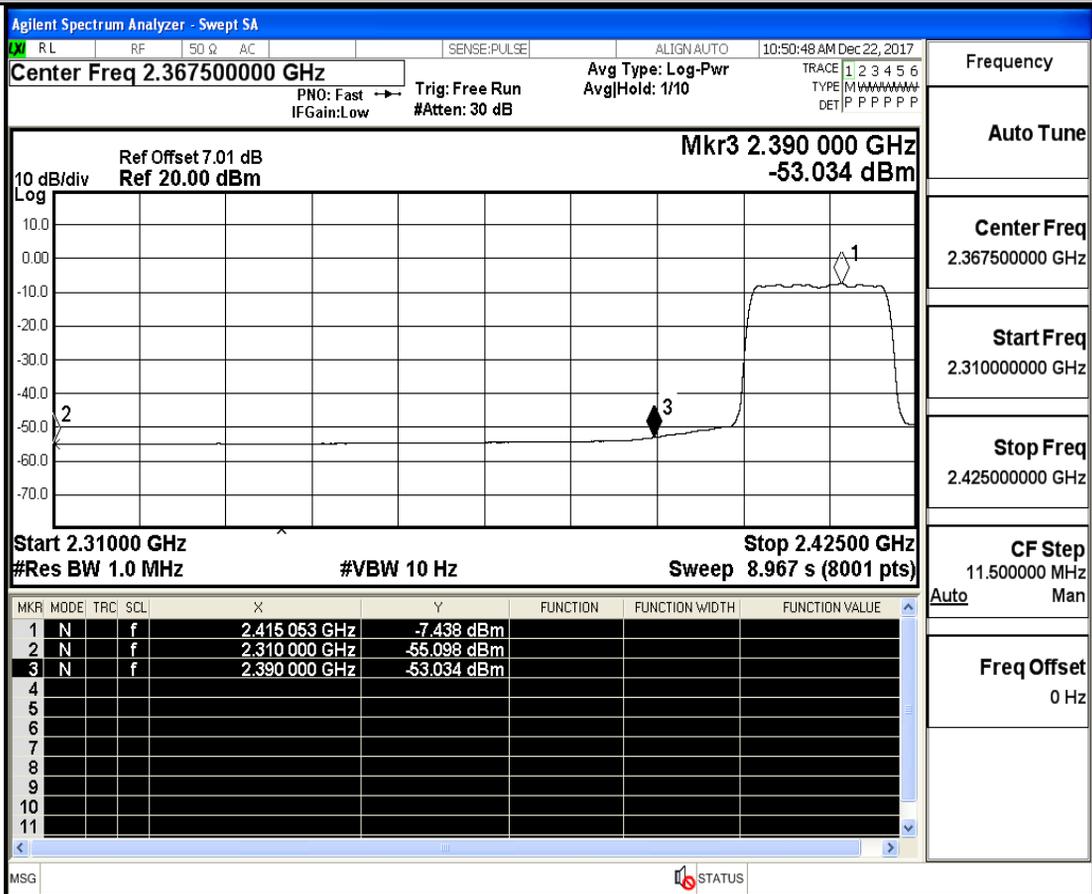


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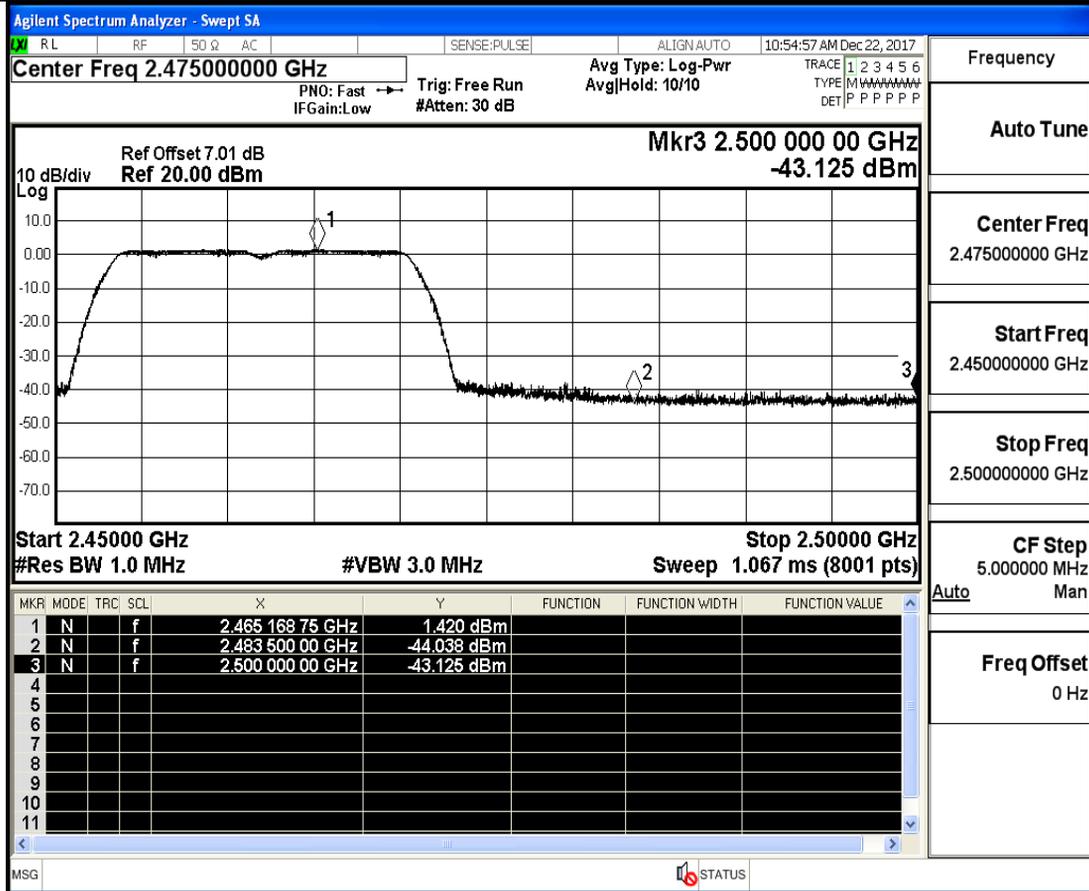
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Start Freq 2.310000000 GHz
Stop Freq 2.425000000 GHz
CF Step 11.500000 MHz Auto Man
Freq Offset 0 Hz

Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_AV

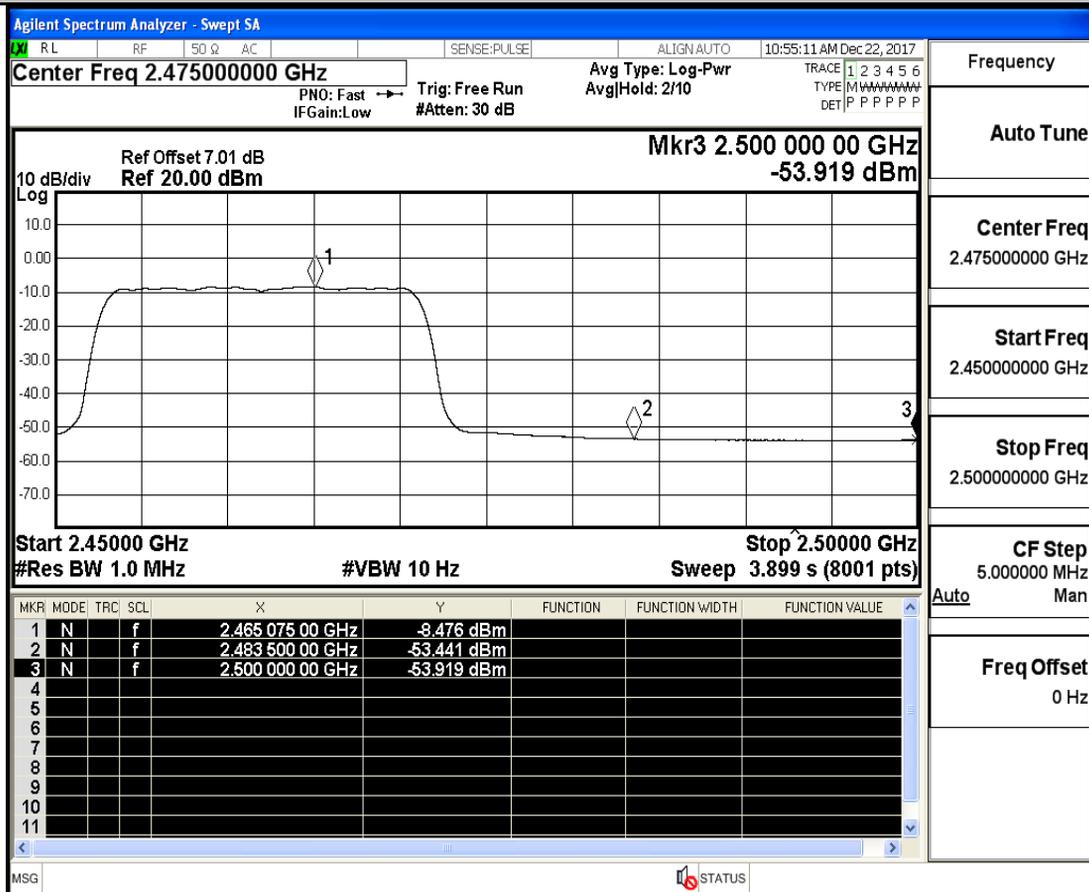


Frequency
Auto Tune
Center Freq 2.367500000 GHz
Start Freq 2.310000000 GHz
Stop Freq 2.425000000 GHz
CF Step 11.500000 MHz Auto Man
Freq Offset 0 Hz

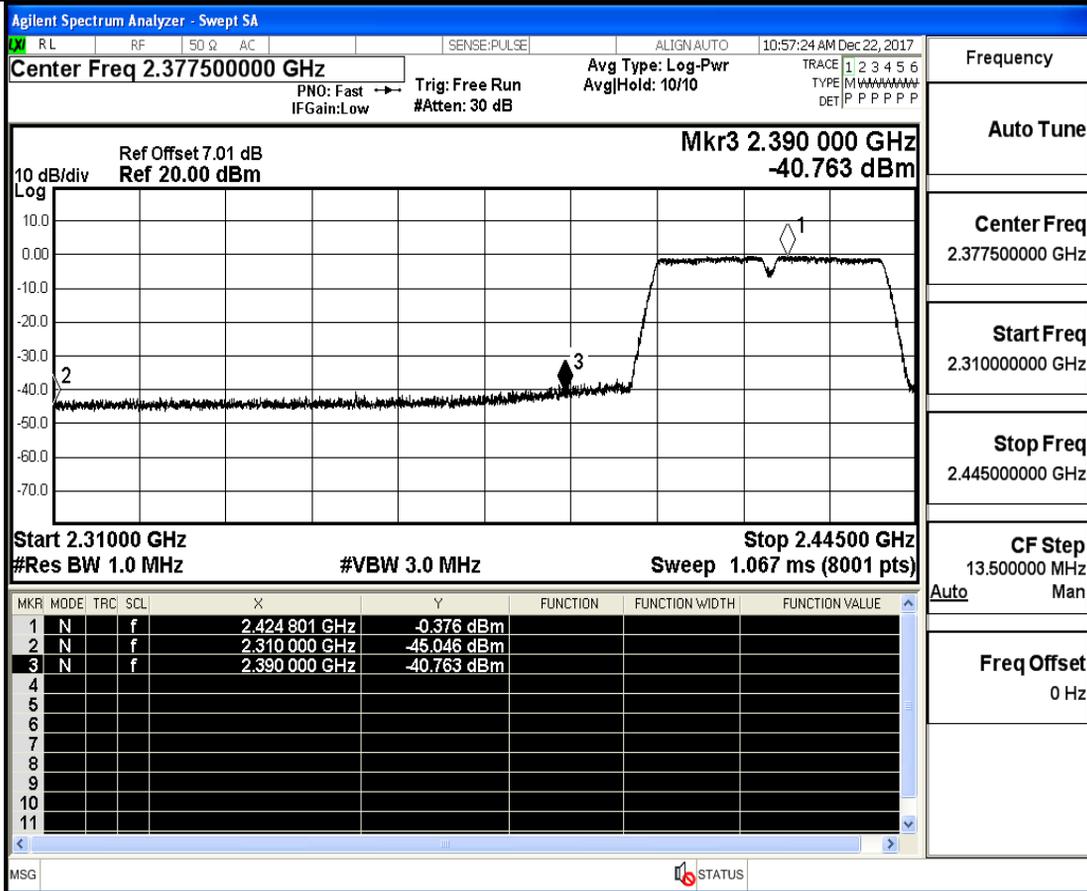
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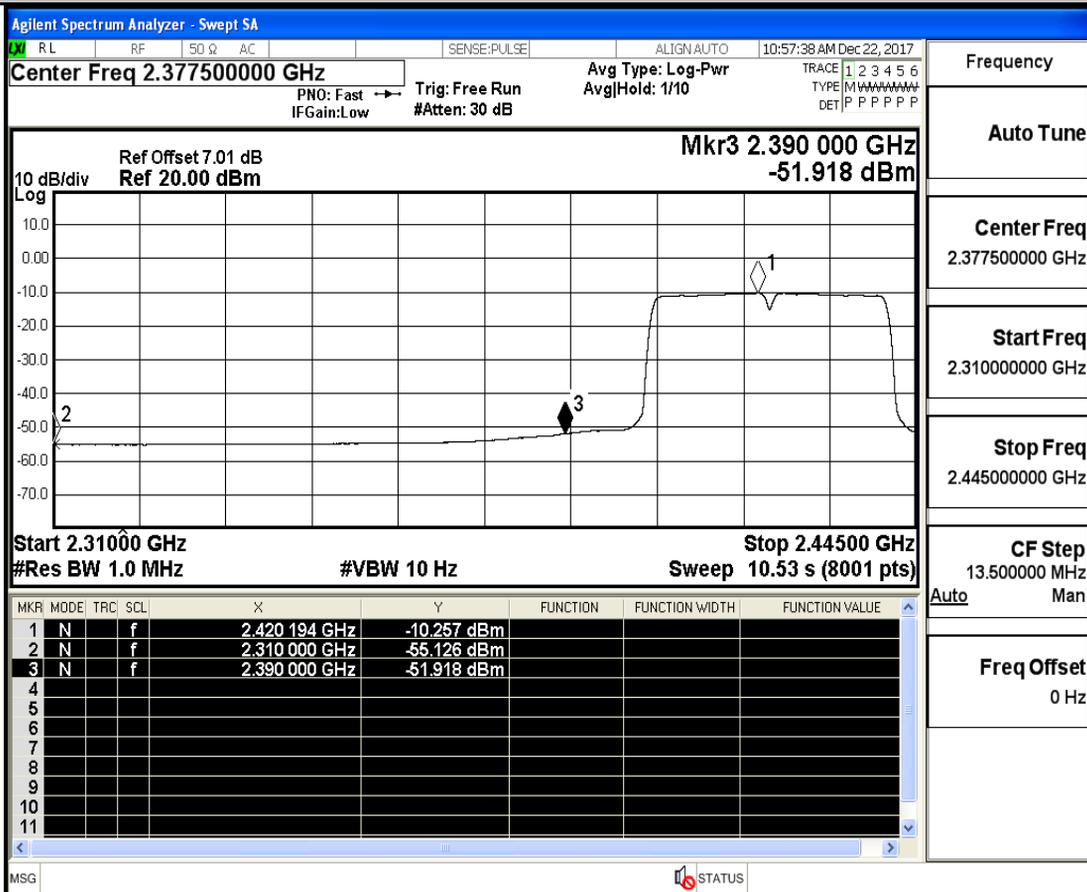
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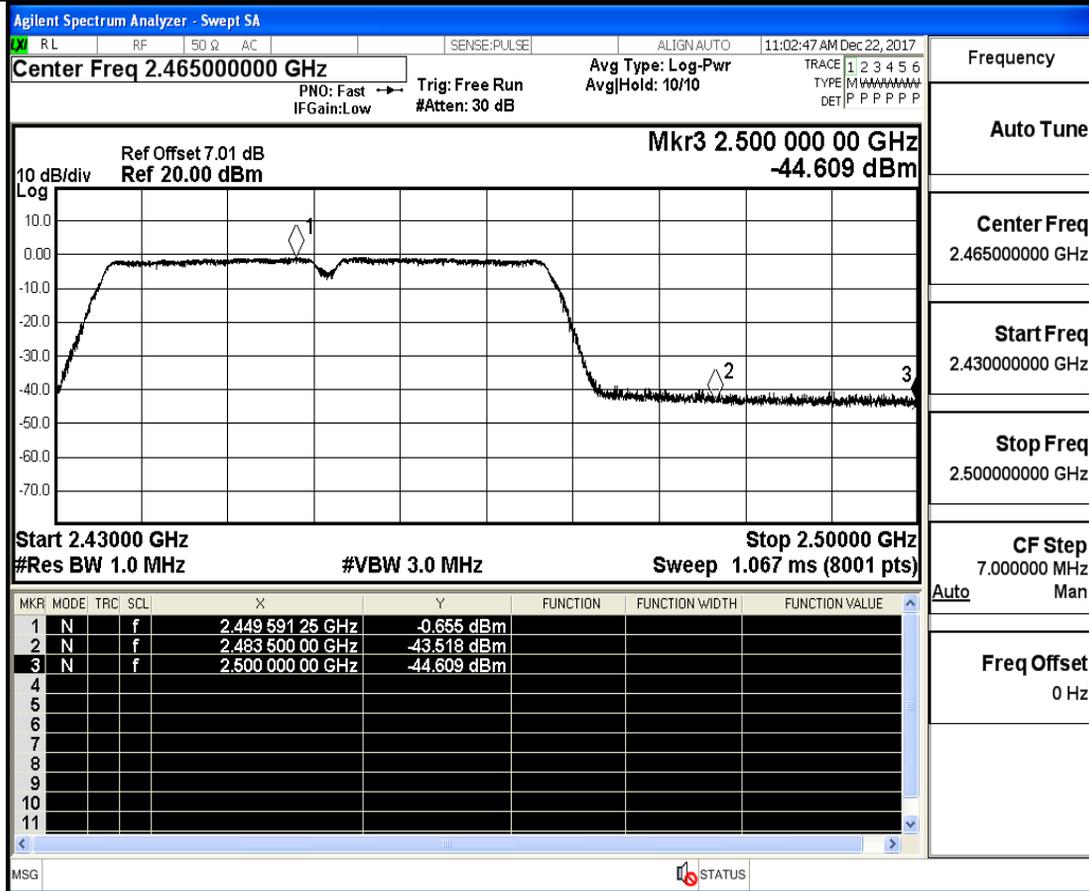
Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_PEAK



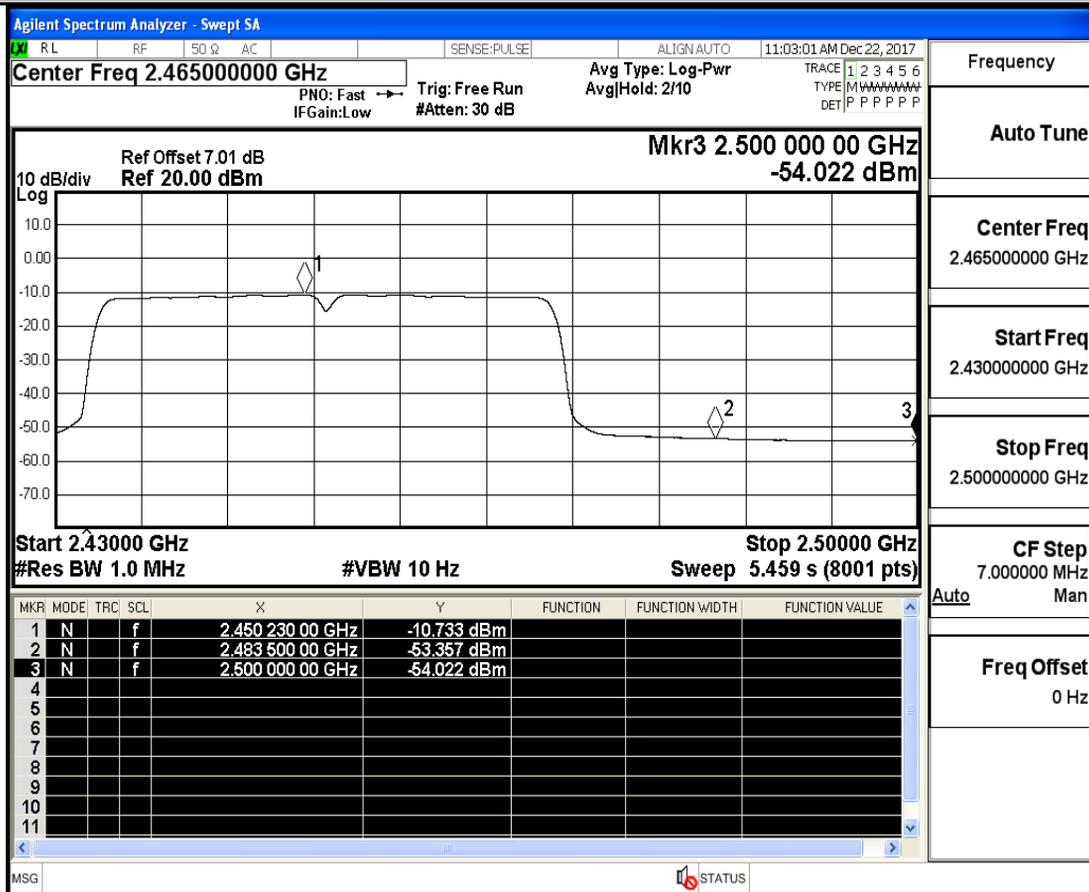
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### Restrict-band band-edge measurements\_11N40SISO\_2452\_Ant1\_PEAK



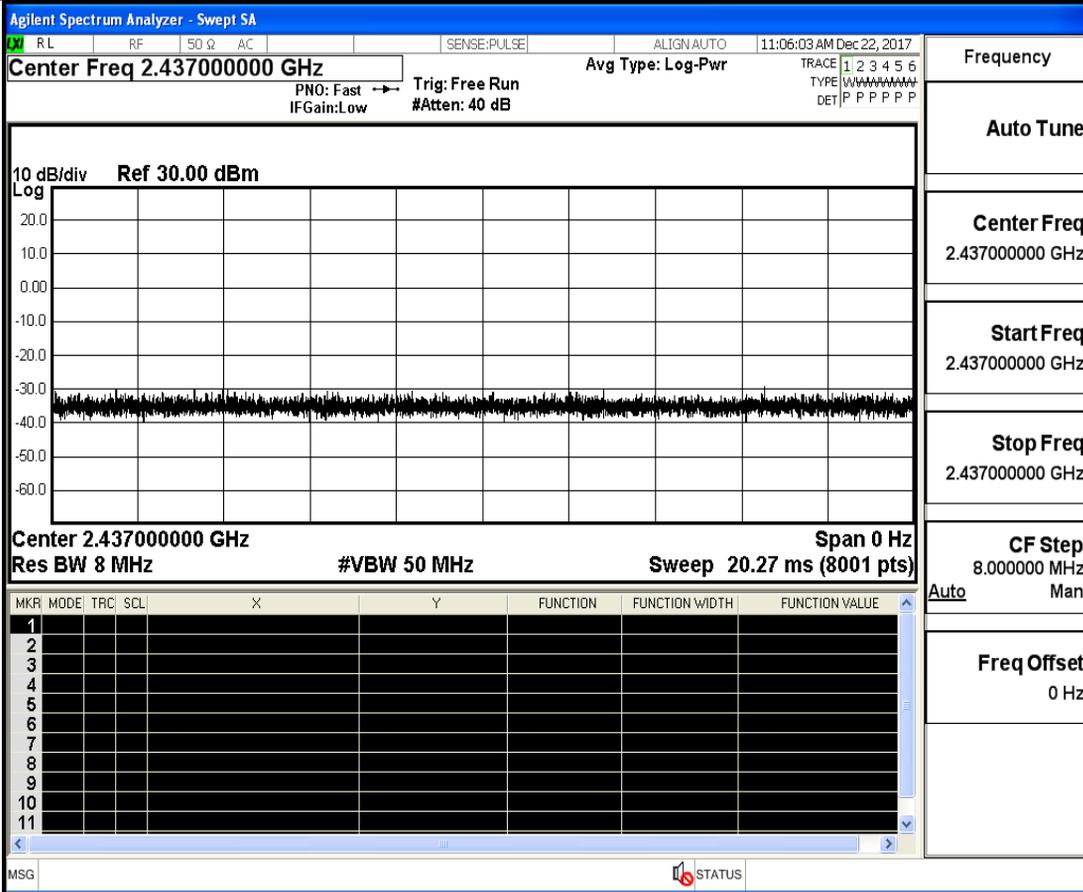
### Restrict-band band-edge measurements\_11N40SISO\_2452\_Ant1\_AV



### A.7 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS

Duty Cycle\_11B\_2437\_Ant1



Duty Cycle\_11G\_2437\_Ant1

