

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	50.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.xu
Supervised by:	Tom.Liu

Appendix A): Maximum Conducted Output Power

Result Table

Mode	Channel	Meas.Level [dBm]	Verdict
11B	LCH	12.52	PASS
11B	MCH	12.38	PASS
11B	HCH	12.20	PASS
11G	LCH	12.22	PASS
11G	MCH	12.13	PASS
11G	HCH	12.19	PASS
11N20SISO	LCH	11.67	PASS
11N20SISO	MCH	11.26	PASS
11N20SISO	HCH	11.23	PASS
11N40SISO	LCH	10.80	PASS
11N40SISO	MCH	10.52	PASS
11N40SISO	HCH	10.68	PASS

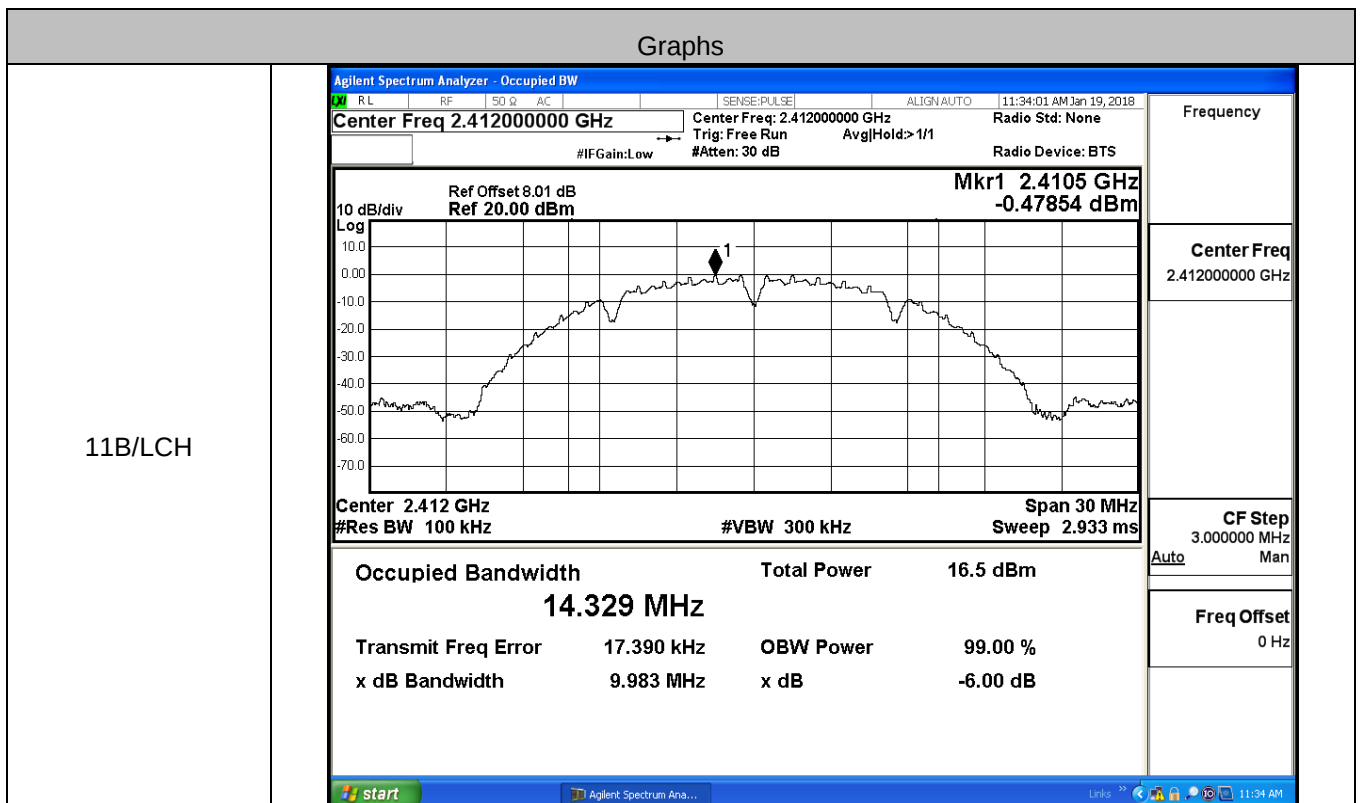
Test Graph

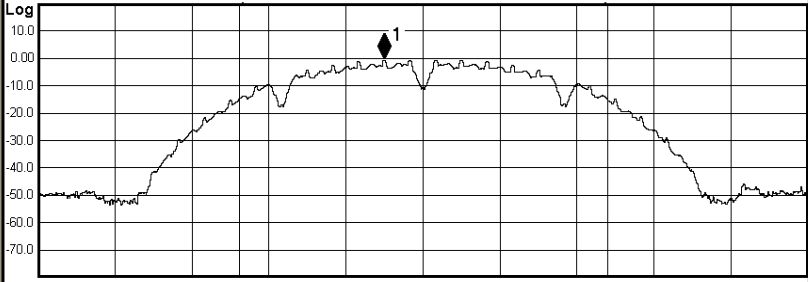
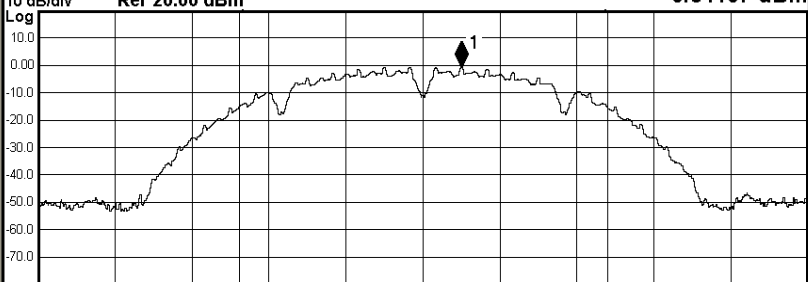
Appendix B): 6dB Bandwidth

Result Table

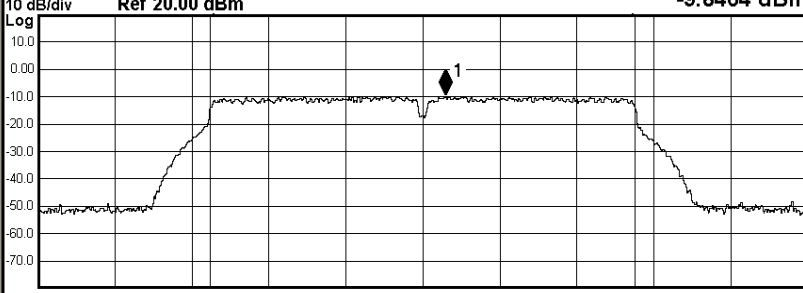
Mode	Channel	6dB Bandwidth [MHz]	Verdict
11B	LCH	9.983	PASS
11B	MCH	9.990	PASS
11B	HCH	9.989	PASS
11G	LCH	16.61	PASS
11G	MCH	16.60	PASS
11G	HCH	16.62	PASS
11N20SISO	LCH	17.82	PASS
11N20SISO	MCH	17.81	PASS
11N20SISO	HCH	17.82	PASS
11N40SISO	LCH	36.49	PASS
11N40SISO	MCH	36.47	PASS
11N40SISO	HCH	36.51	PASS

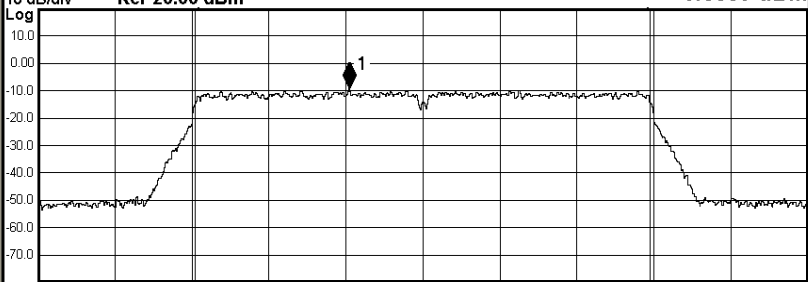
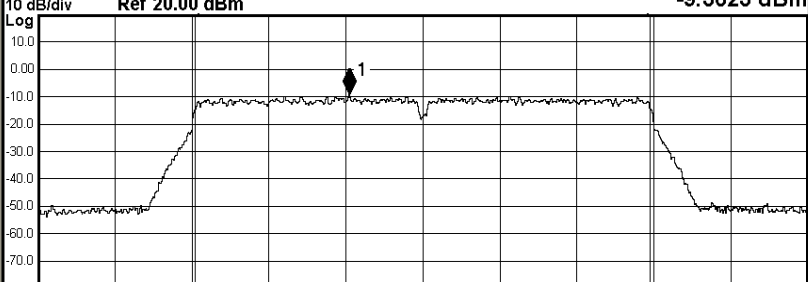
Test Graph

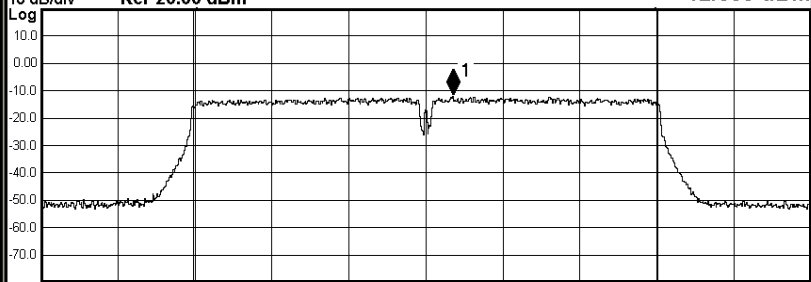
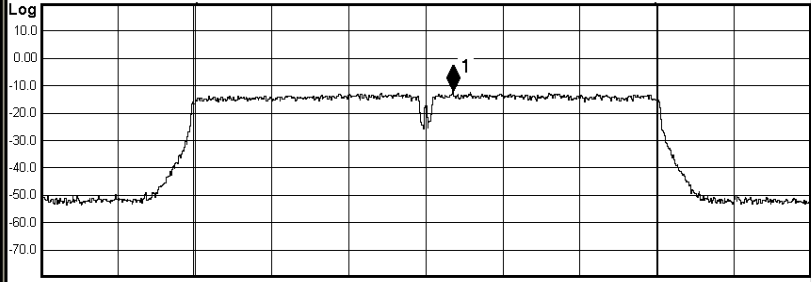


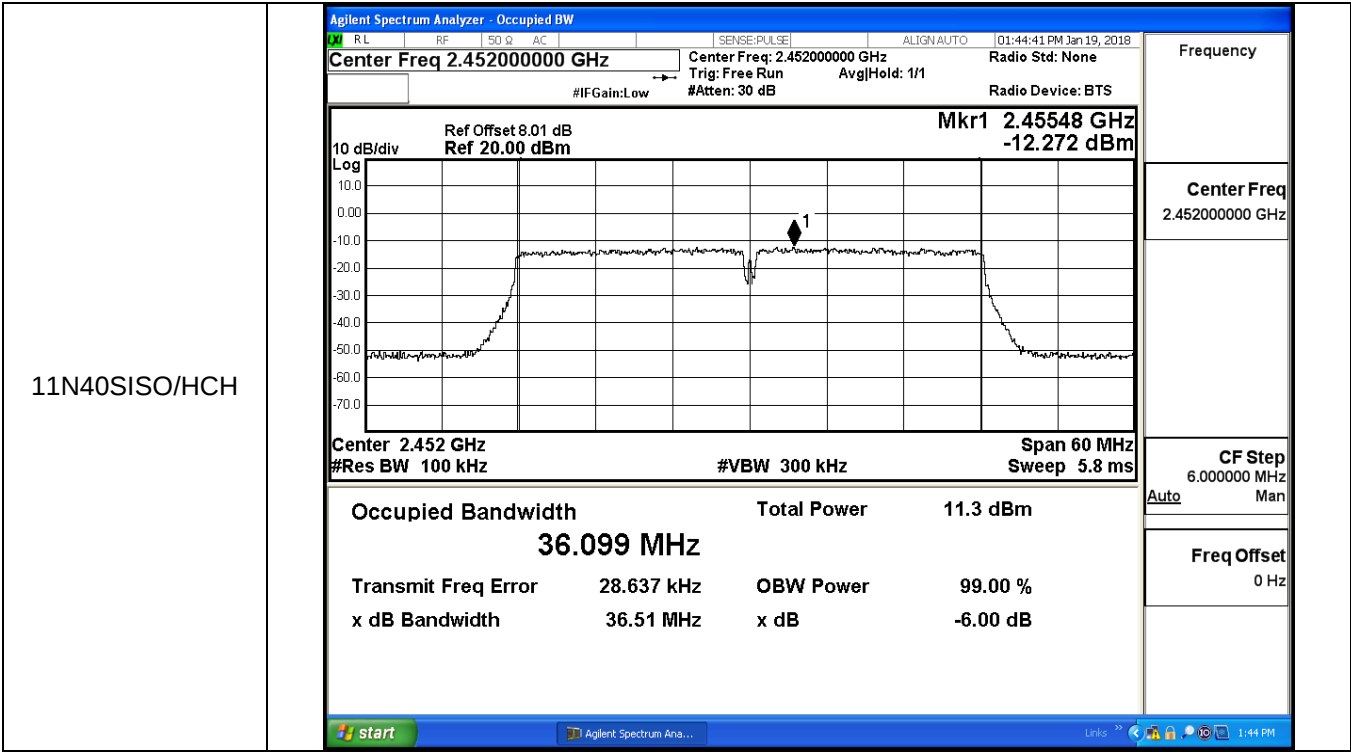
11B/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 11:36:41 AM Jan 19, 2018 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS #IFGain:Low #Atten: 30 dB 10 dB/div Ref Offset 8.01 dB Ref 20.00 dBm Mkr1 2.4355 GHz -0.65145 dBm  Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 16.4 dBm 14.299 MHz Transmit Freq Error 28.536 kHz OBW Power 99.00 % x dB Bandwidth 9.990 MHz x dB -6.00 dB start Agilent Spectrum Ana... Links 11:36 AM Frequency Center Freq 2.437000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11B/HCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 11:38:30 AM Jan 19, 2018 Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS #IFGain:Low #Atten: 30 dB 10 dB/div Ref Offset 8.01 dB Ref 20.00 dBm Mkr1 2.4635 GHz -0.84167 dBm  Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 16.2 dBm 14.293 MHz Transmit Freq Error 24.968 kHz OBW Power 99.00 % x dB Bandwidth 9.989 MHz x dB -6.00 dB start Agilent Spectrum Ana... Links 11:38 AM Frequency Center Freq 2.462000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz

11G/LCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 11:48:06 AM Jan 19, 2018 Center Freq 2.412000000 GHz Center Freq: 2.412000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS #IFGain:Low #Atten: 30 dB 10 dB/div Ref Offset 8.01 dB Ref 20.00 dBm Mkr1 2.41413 GHz -9.3872 dBm Log 10.0 0.00 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0 Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 11.2 dBm 16.497 MHz Transmit Freq Error -6.525 kHz OBW Power 99.00 % x dB Bandwidth 16.61 MHz x dB -6.00 dB start Agilent Spectrum Ana... Links 11:48 AM Frequency 2.412000000 GHz Center Freq 2.412000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11G/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 11:50:32 AM Jan 19, 2018 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS #IFGain:Low #Atten: 30 dB 10 dB/div Ref Offset 8.01 dB Ref 20.00 dBm Mkr1 2.43427 GHz -9.4072 dBm Log 10.0 0.00 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0 Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 11.1 dBm 16.497 MHz Transmit Freq Error -4.726 kHz OBW Power 99.00 % x dB Bandwidth 16.60 MHz x dB -6.00 dB start Agilent Spectrum Ana... Links 11:50 AM Frequency 2.437000000 GHz Center Freq 2.437000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz

11G/HCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 11:53:33 AM Jan 19, 2018 Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS #IFGain:Low #Atten: 30 dB 10 dB/div Ref Offset 8.01 dB Ref 20.00 dBm Mkr1 2.46287 GHz -9.8464 dBm  Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 10.9 dBm 16.541 MHz Transmit Freq Error -8.204 kHz OBW Power 99.00 % x dB Bandwidth 16.62 MHz x dB -6.00 dB Frequency Center Freq 2.462000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
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11N20SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 01:36:00 PM Jan 19, 2018 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None #IFGain:Low Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS 10 dB/div Ref Offset 8.01 dB Mkr1 2.43415 GHz Ref 20.00 dBm -9.3859 dBm  Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 10.7 dBm 17.666 MHz Transmit Freq Error 17.552 kHz OBW Power 99.00 % x dB Bandwidth 17.81 MHz x dB -6.00 dB
11N20SISO/HCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 01:37:54 PM Jan 19, 2018 Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Radio Std: None #IFGain:Low Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS 10 dB/div Ref Offset 8.01 dB Mkr1 2.45915 GHz Ref 20.00 dBm -9.3623 dBm  Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 10.7 dBm 17.670 MHz Transmit Freq Error 15.976 kHz OBW Power 99.00 % x dB Bandwidth 17.82 MHz x dB -6.00 dB

11N40SISO/LCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Q AC SENSE:PULSE ALIGN:AUTO 01:40:19 PM Jan 19, 2018 Center Freq 2.422000000 GHz Center Freq: 2.422000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS #IFGain:Low #Atten: 30 dB Ref Offset 8.01 dB Ref 20.00 dBm Mkr1 2.4241 GHz -12.038 dBm  Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms Occupied Bandwidth Total Power 11.4 dBm 36.100 MHz Transmit Freq Error 23.324 kHz OBW Power 99.00 % x dB Bandwidth 36.49 MHz x dB -6.00 dB Frequency Center Freq 2.422000000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz
11N40SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Q AC SENSE:PULSE ALIGN:AUTO 01:42:58 PM Jan 19, 2018 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS #IFGain:Low #Atten: 30 dB Ref Offset 8.01 dB Ref 20.00 dBm Mkr1 2.4391 GHz -12.060 dBm  Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms Occupied Bandwidth Total Power 11.1 dBm 36.083 MHz Transmit Freq Error 26.376 kHz OBW Power 99.00 % x dB Bandwidth 36.47 MHz x dB -6.00 dB Frequency Center Freq 2.437000000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz

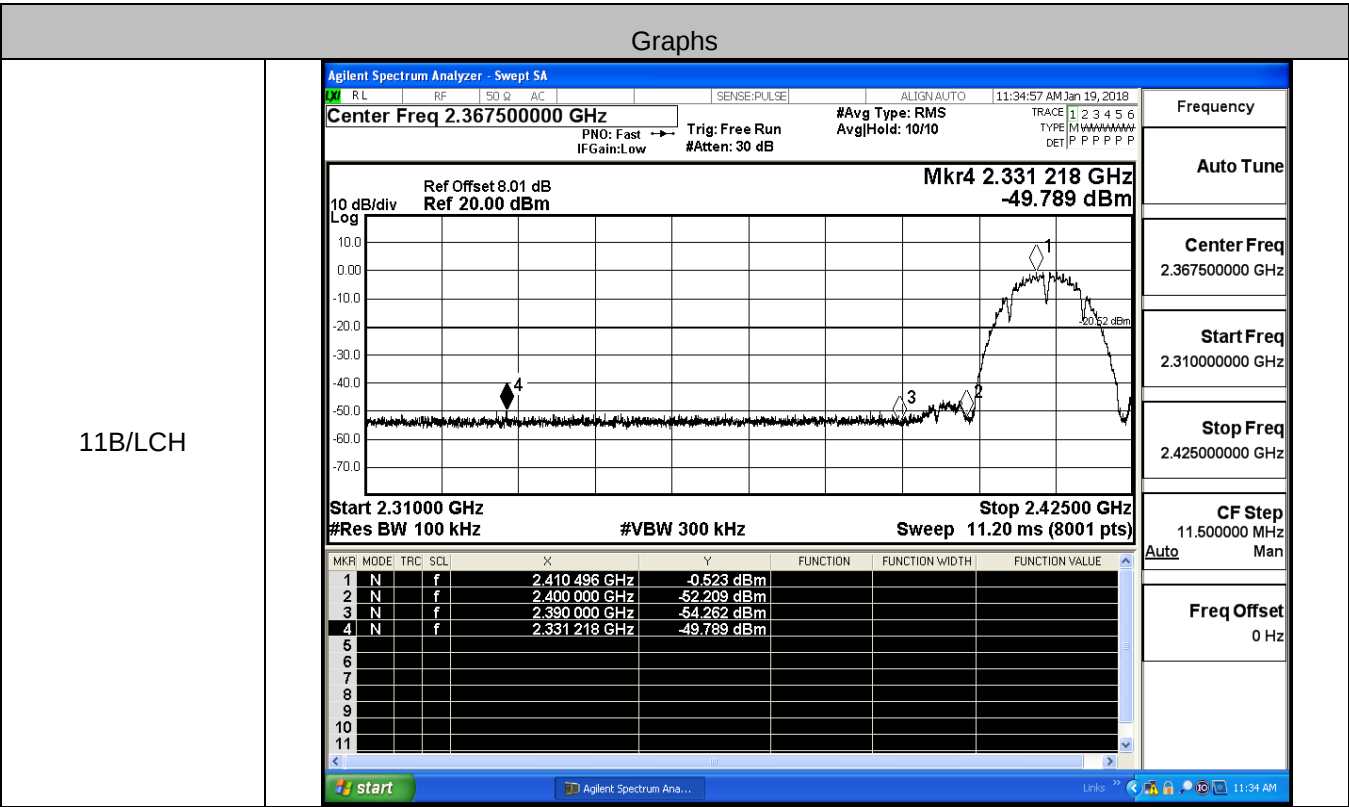


Appendix C): Band-edge for RF Conducted Emissions

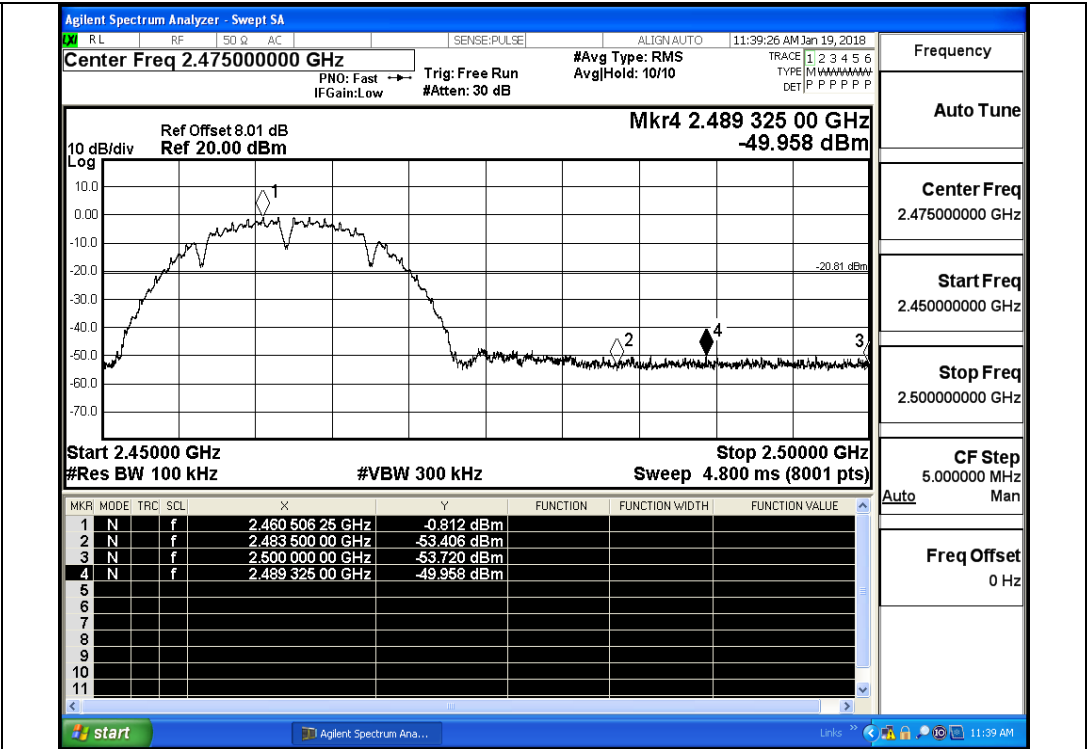
Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.523	-49.789	-20.52	PASS
11B	HCH	-0.812	-49.958	-20.81	PASS
11G	LCH	-9.635	-49.985	-29.64	PASS
11G	HCH	-9.928	-49.029	-29.93	PASS
11N20SISO	LCH	-9.227	-49.974	-29.23	PASS
11N20SISO	HCH	-9.575	-49.728	-29.58	PASS
11N40SISO	LCH	-12.001	-49.093	-32	PASS
11N40SISO	HCH	-12.453	-49.654	-32.45	PASS

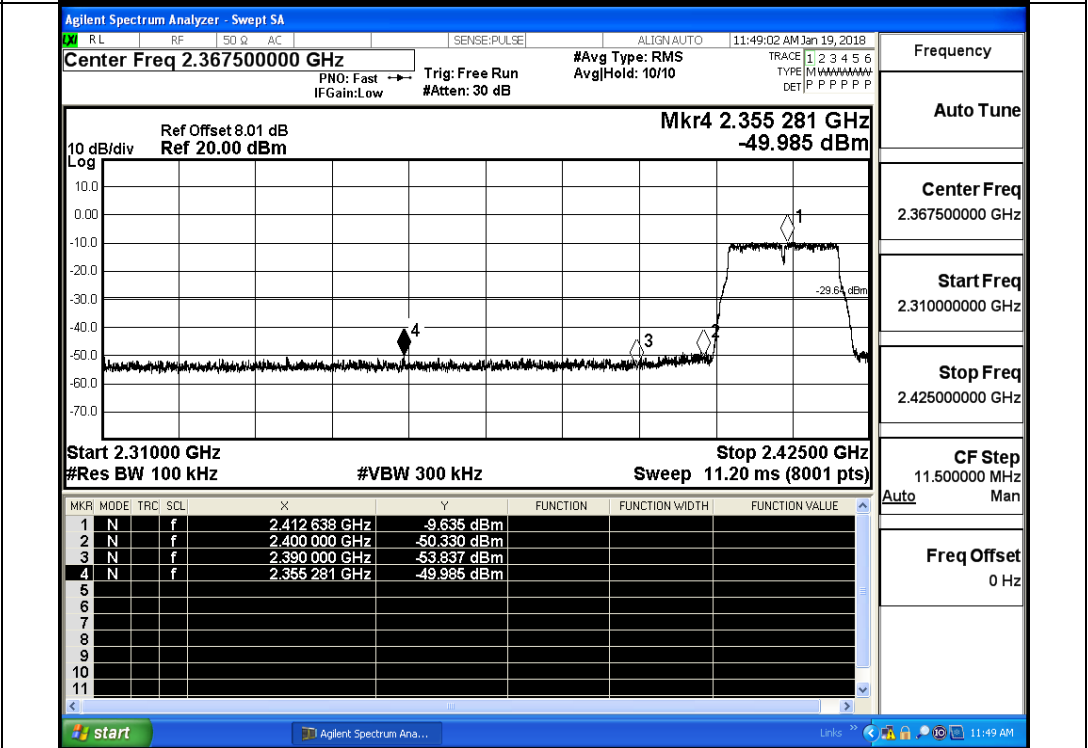
Test Graph



11B/HCH



11G/LCH



11G/HCH

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Q AC SENSE:PULSE ALIGN: AUTO 11:54:29 AM Jan 19, 2018

Center Freq 2.475000000 GHz

PN0: Fast IFGain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS AvgHld: 10/10

TRACE 1 2 3 4 5 6 TYPE M W W W W W W W W DET P P P P P P

Ref Offset 8.01 dB Ref 20.00 dBm

Mkr4 2.499 581 25 GHz -49.029 dBm

10 dB/div Log

Start 2.45000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.50000 GHz Sweep 4.800 ms (8001 pts)

MR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.463 662 50 GHz	-9.928 dBm			
2	N	f		2.483 500 00 GHz	-53.502 dBm			
3	N	f		2.500 000 00 GHz	-52.653 dBm			
4	N	f		2.499 581 25 GHz	-49.029 dBm			
5								
6								
7								
8								
9								
10								
11								

start Agilent Spectrum Ana... 11:54 AM

11N20SISO/LCH

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Q AC SENSE:PULSE ALIGN: AUTO 01:34:31 PM Jan 19, 2018

Center Freq 2.367500000 GHz

PN0: Fast IFGain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS AvgHld: 10/10

TRACE 1 2 3 4 5 6 TYPE M W W W W W W W W DET P P P P P P

Ref Offset 8.01 dB Ref 20.00 dBm

Mkr4 2.376 858 GHz -49.974 dBm

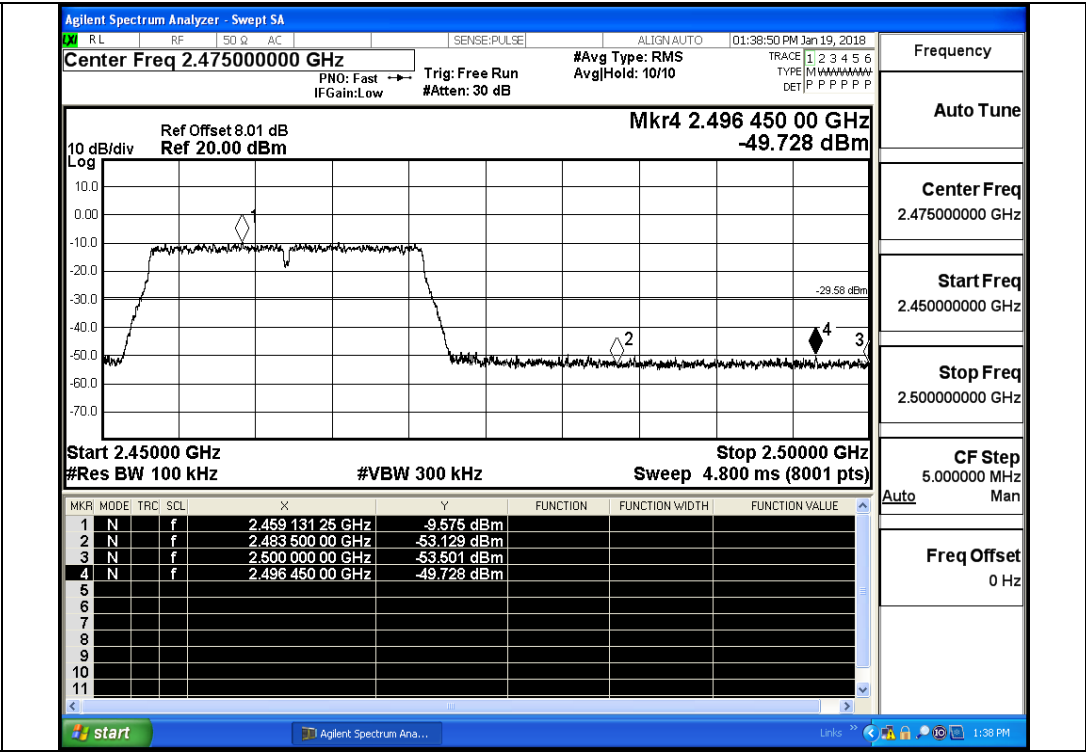
10 dB/div Log

Start 2.31000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.42500 GHz Sweep 11.20 ms (8001 pts)

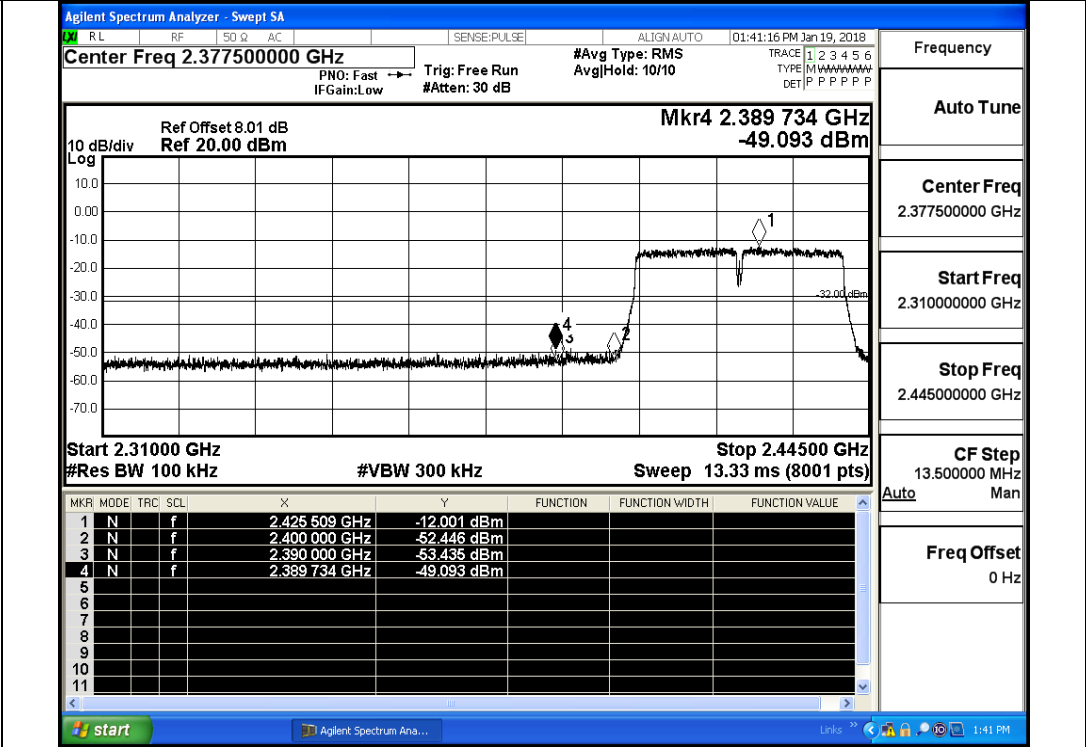
MR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.409 130 GHz	-9.227 dBm			
2	N	f		2.400 000 GHz	-52.691 dBm			
3	N	f		2.390 000 GHz	-52.370 dBm			
4	N	f		2.376 858 GHz	-49.974 dBm			
5								
6								
7								
8								
9								
10								
11								

start Agilent Spectrum Ana... 1:34 PM

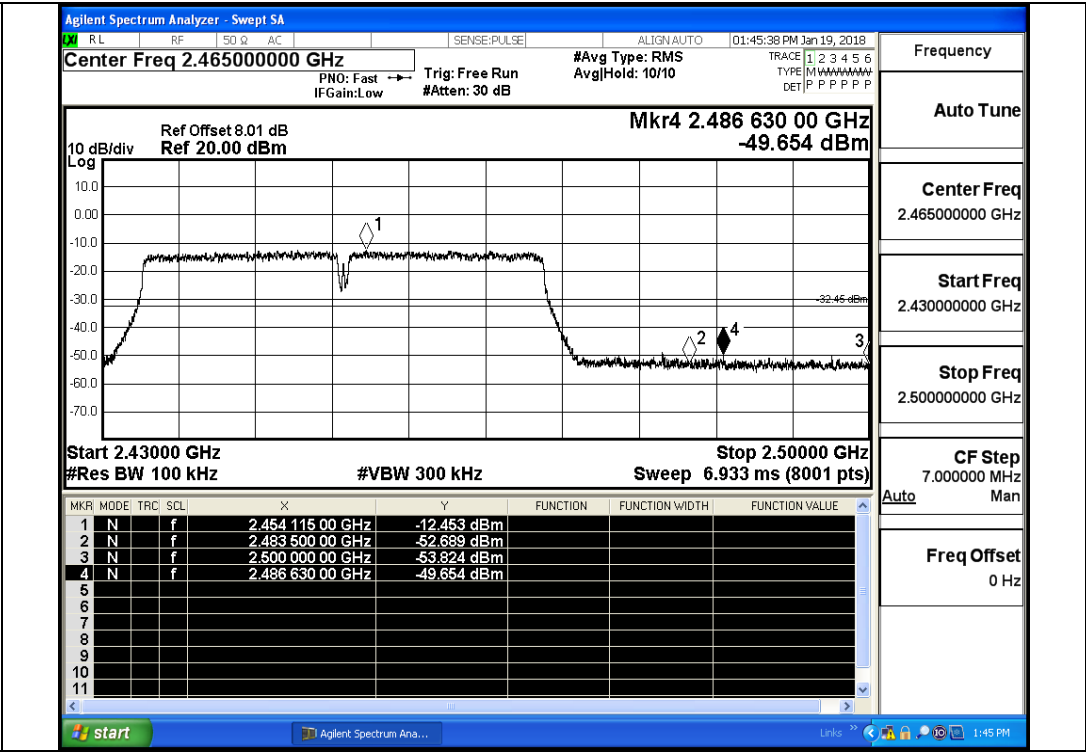
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH

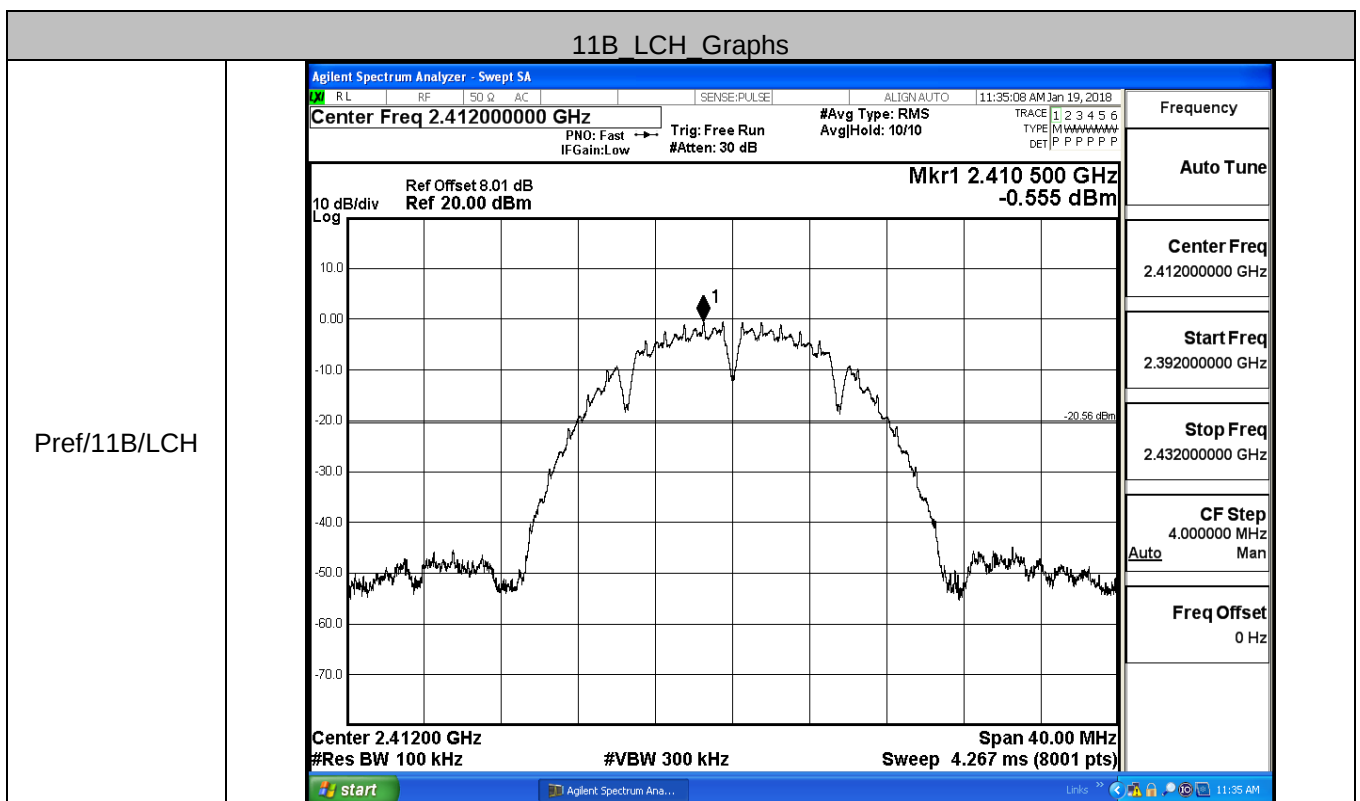


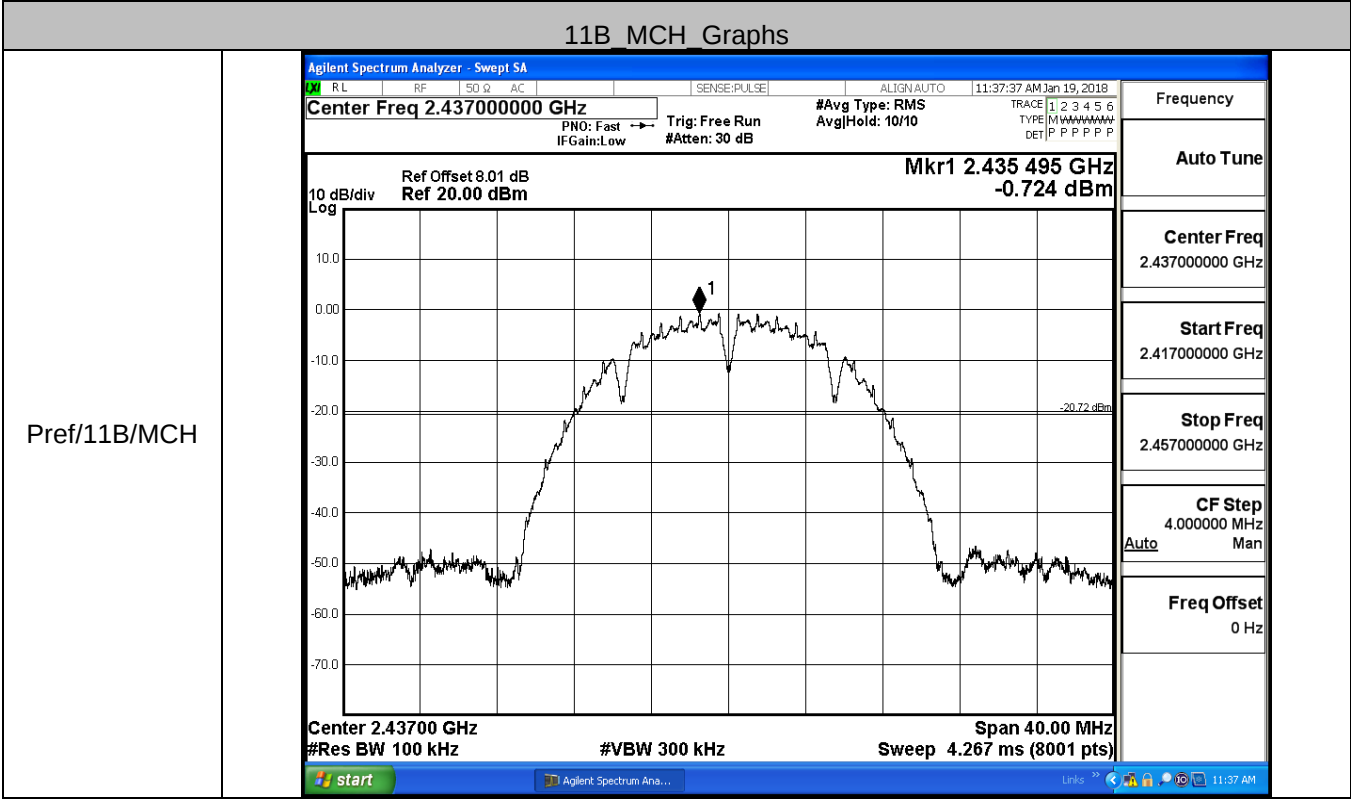
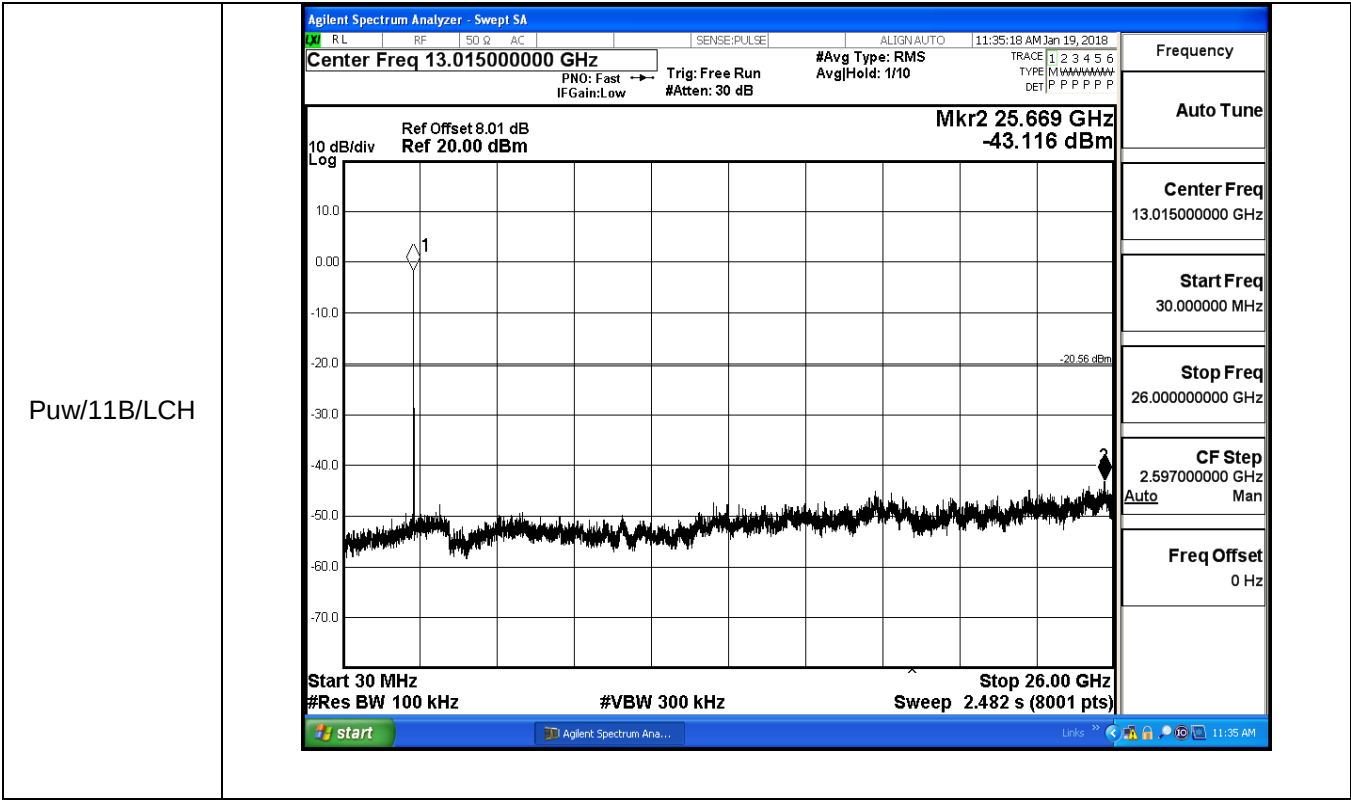
Appendix D): RF Conducted Spurious Emissions

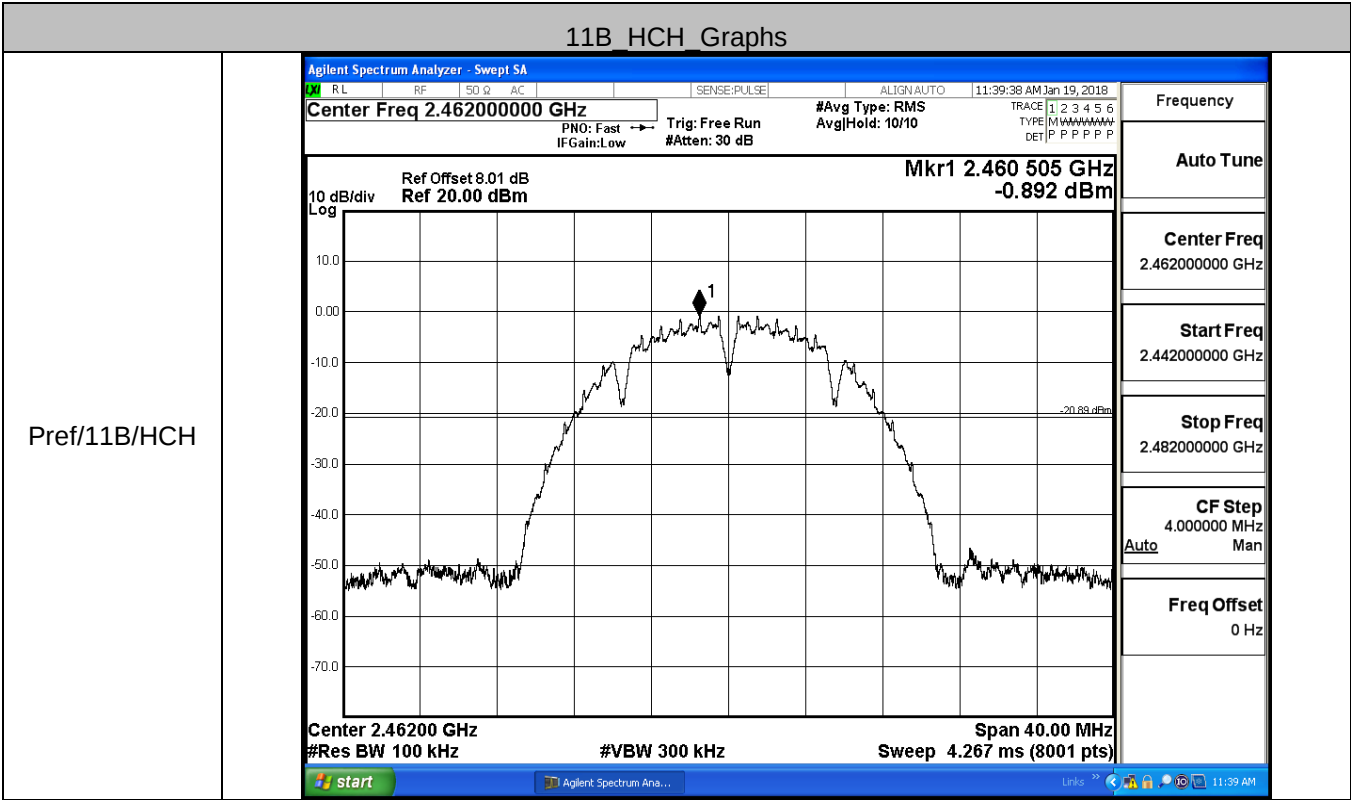
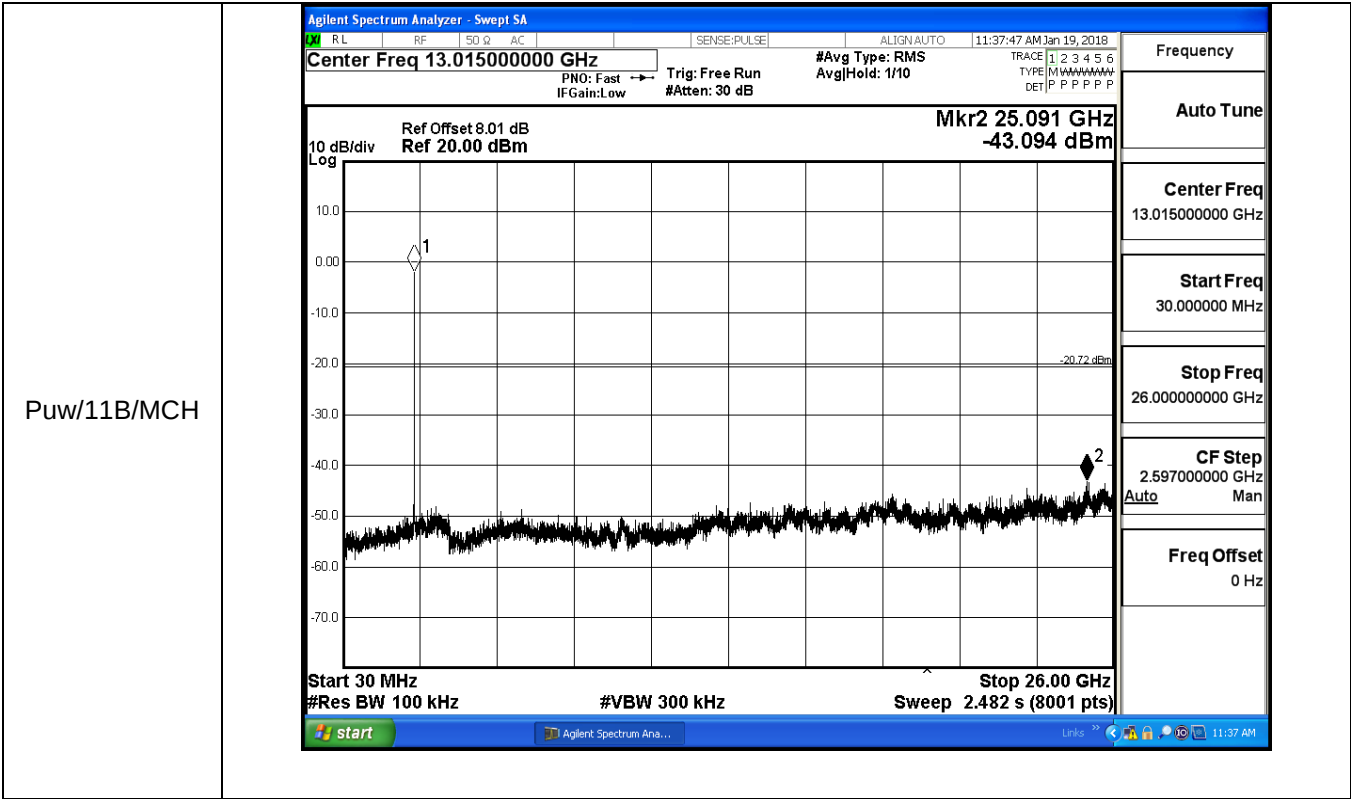
Result Table

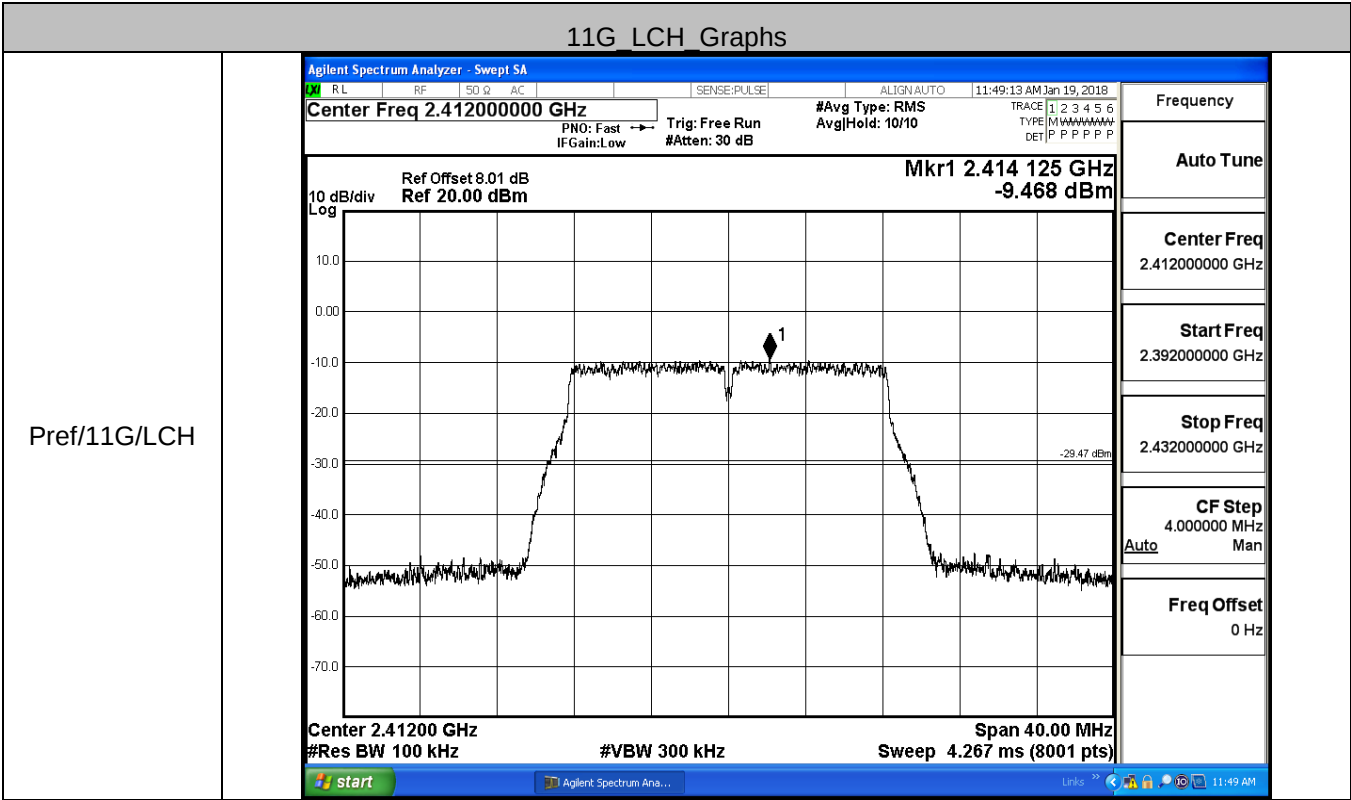
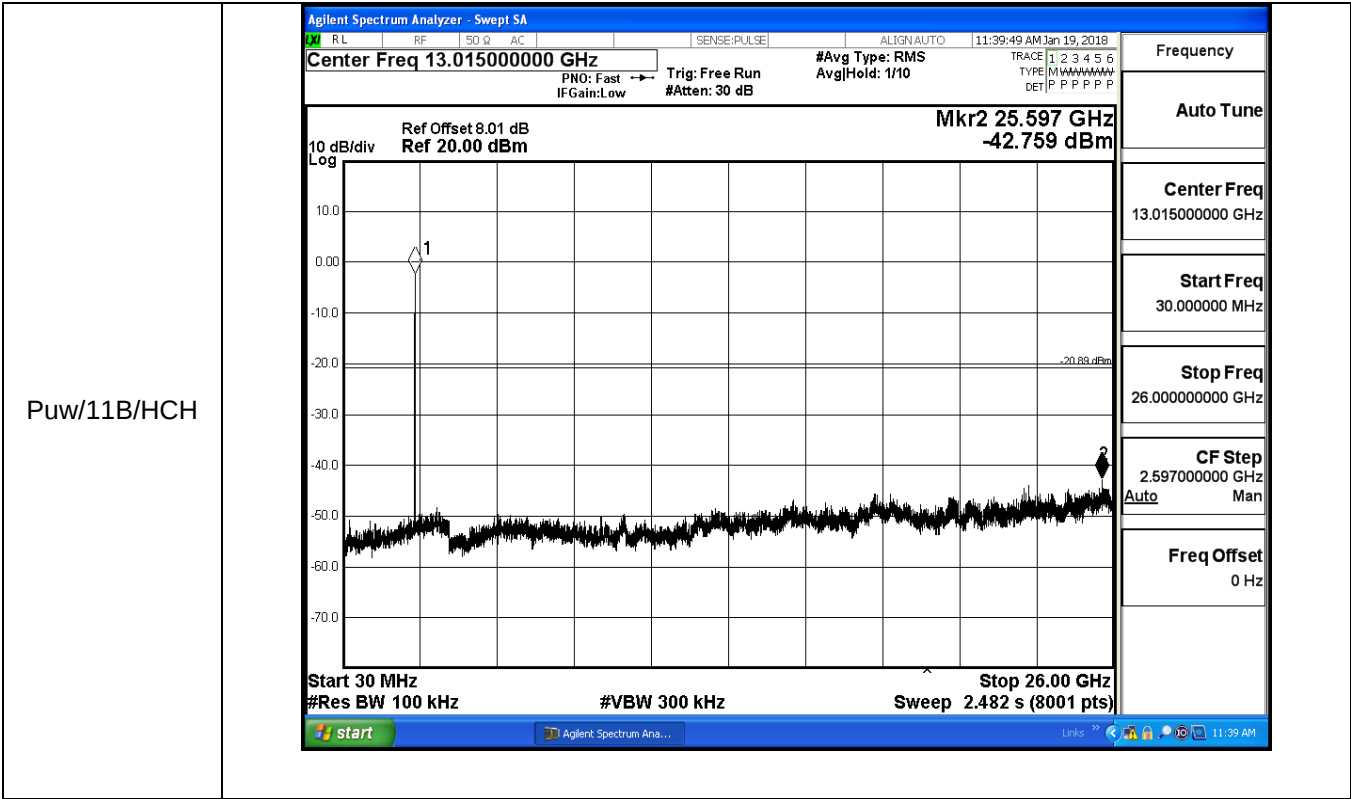
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	-0.555	<Limit	PASS
11B	MCH	-0.724	<Limit	PASS
11B	HCH	-0.892	<Limit	PASS
11G	LCH	-9.468	<Limit	PASS
11G	MCH	-9.551	<Limit	PASS
11G	HCH	-10.007	<Limit	PASS
11N20SISO	LCH	-9.024	<Limit	PASS
11N20SISO	MCH	-9.685	<Limit	PASS
11N20SISO	HCH	-9.456	<Limit	PASS
11N40SISO	LCH	-12.368	<Limit	PASS
11N40SISO	MCH	-12.566	<Limit	PASS
11N40SISO	HCH	-12.386	<Limit	PASS

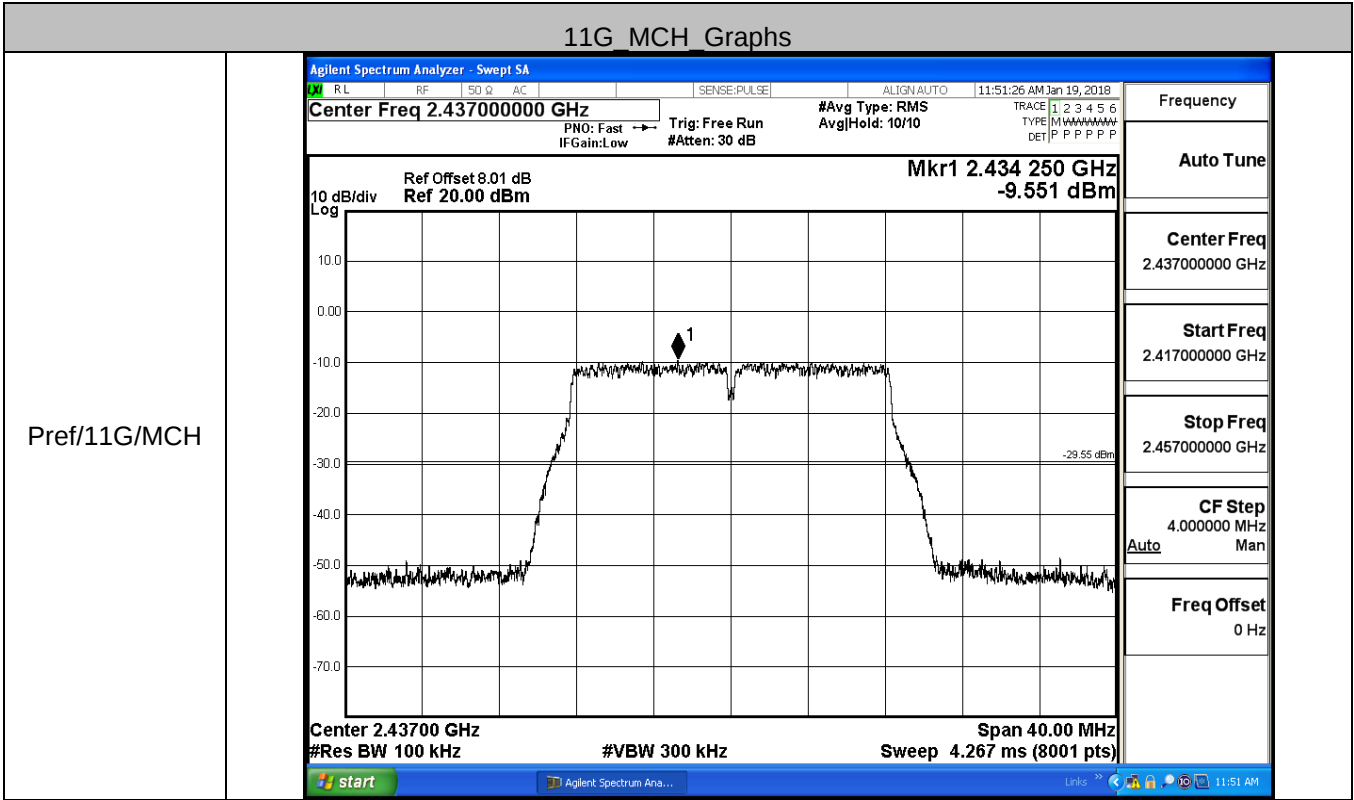
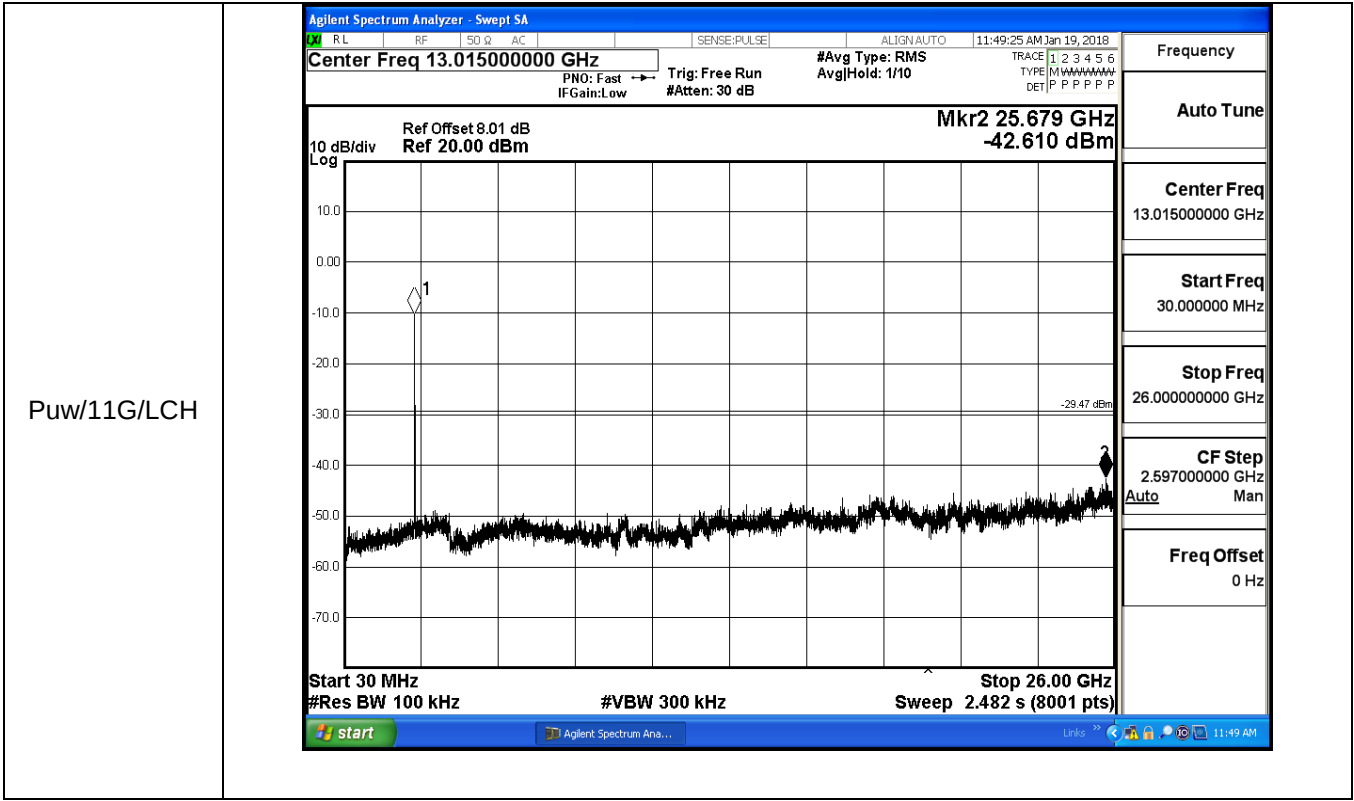
Test Graph

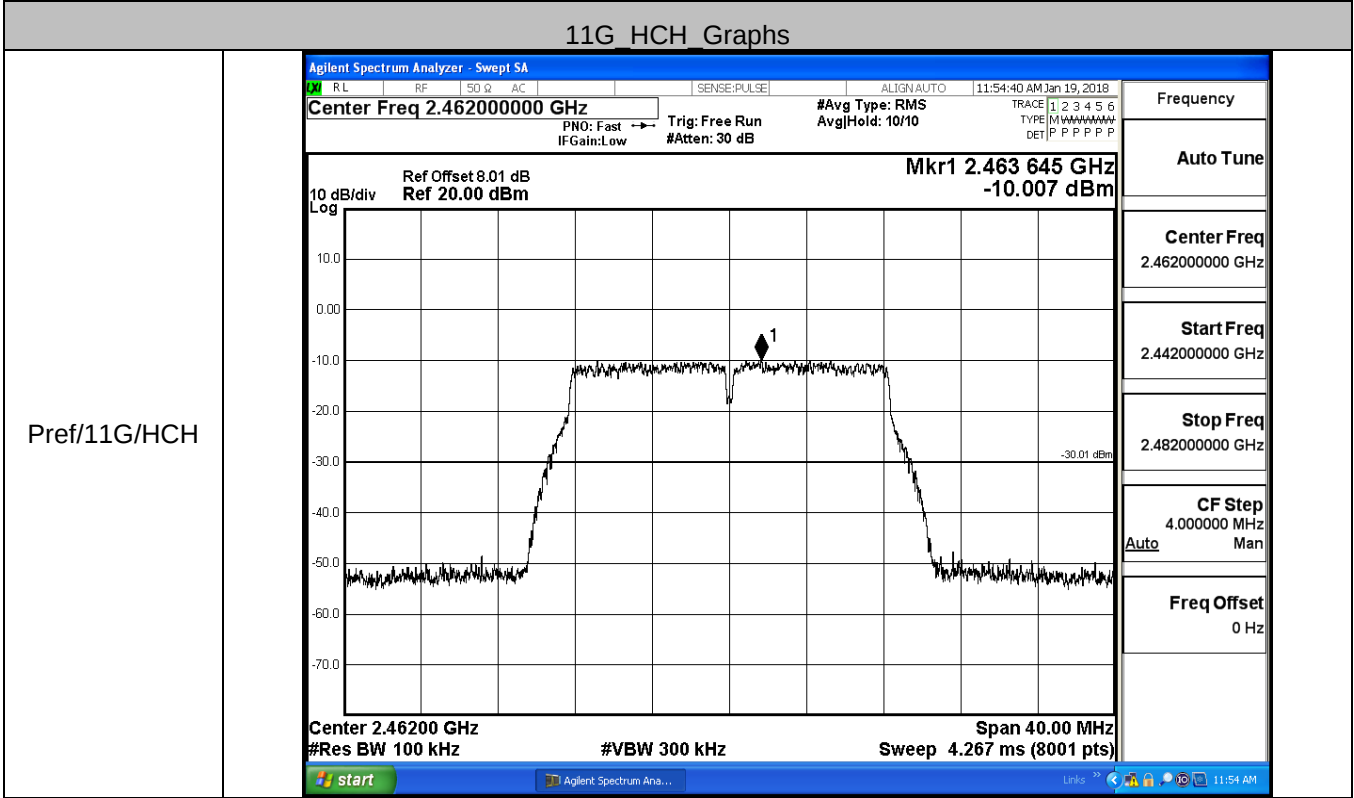
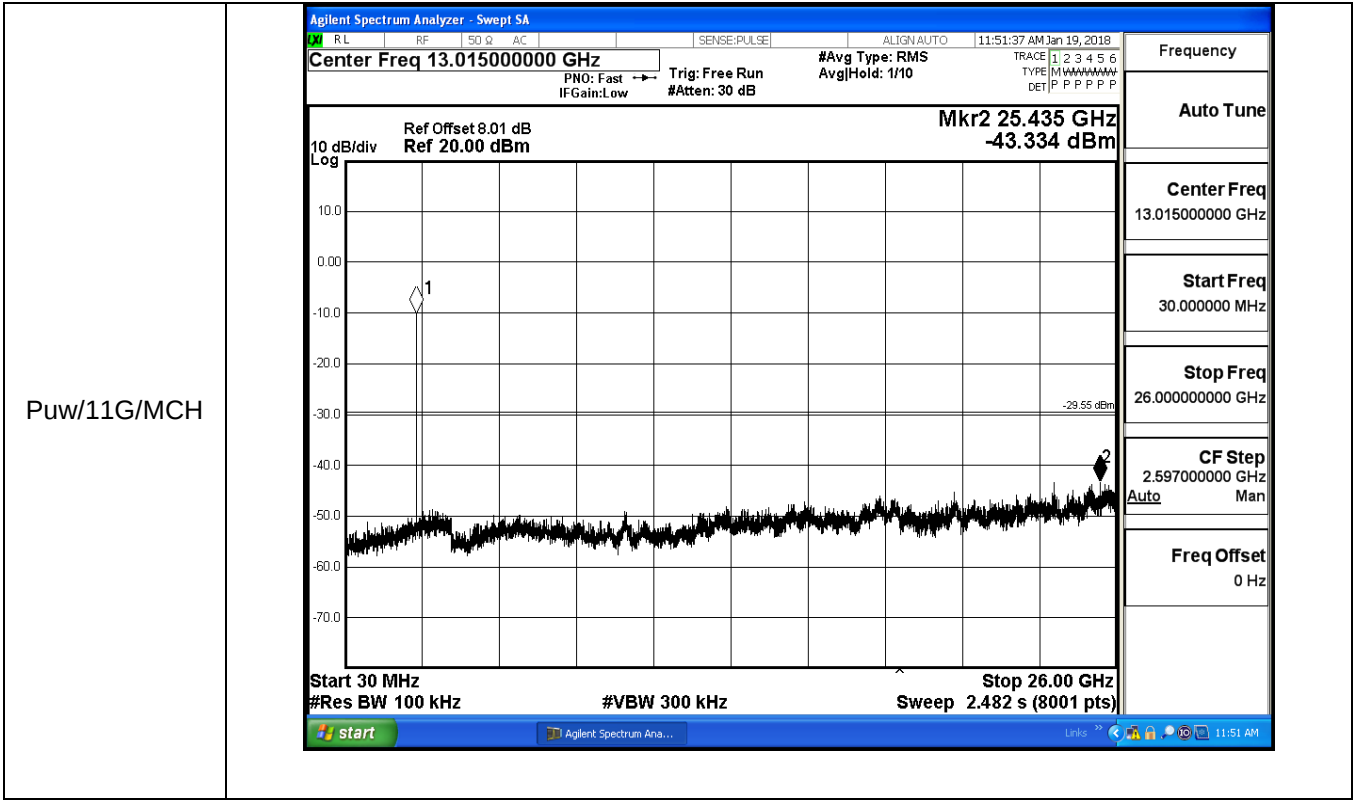


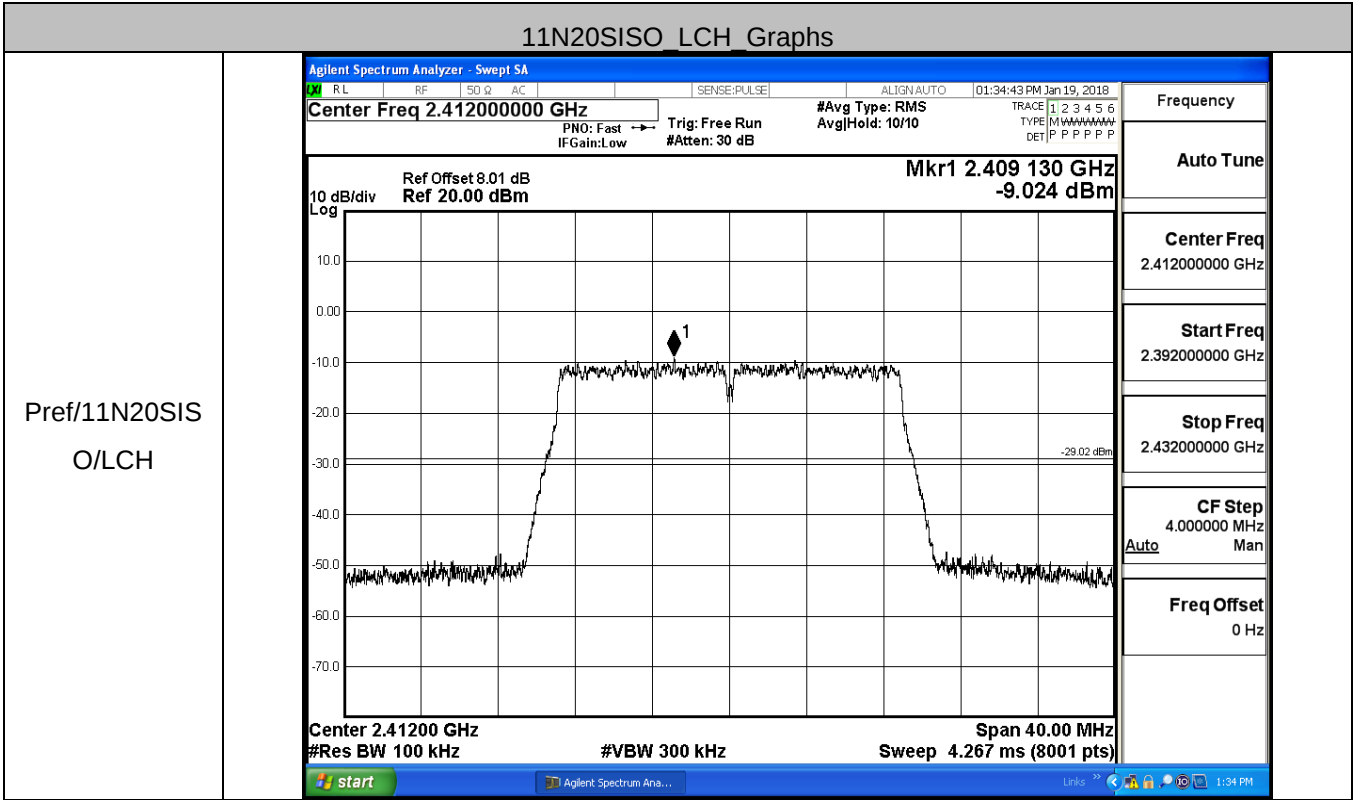
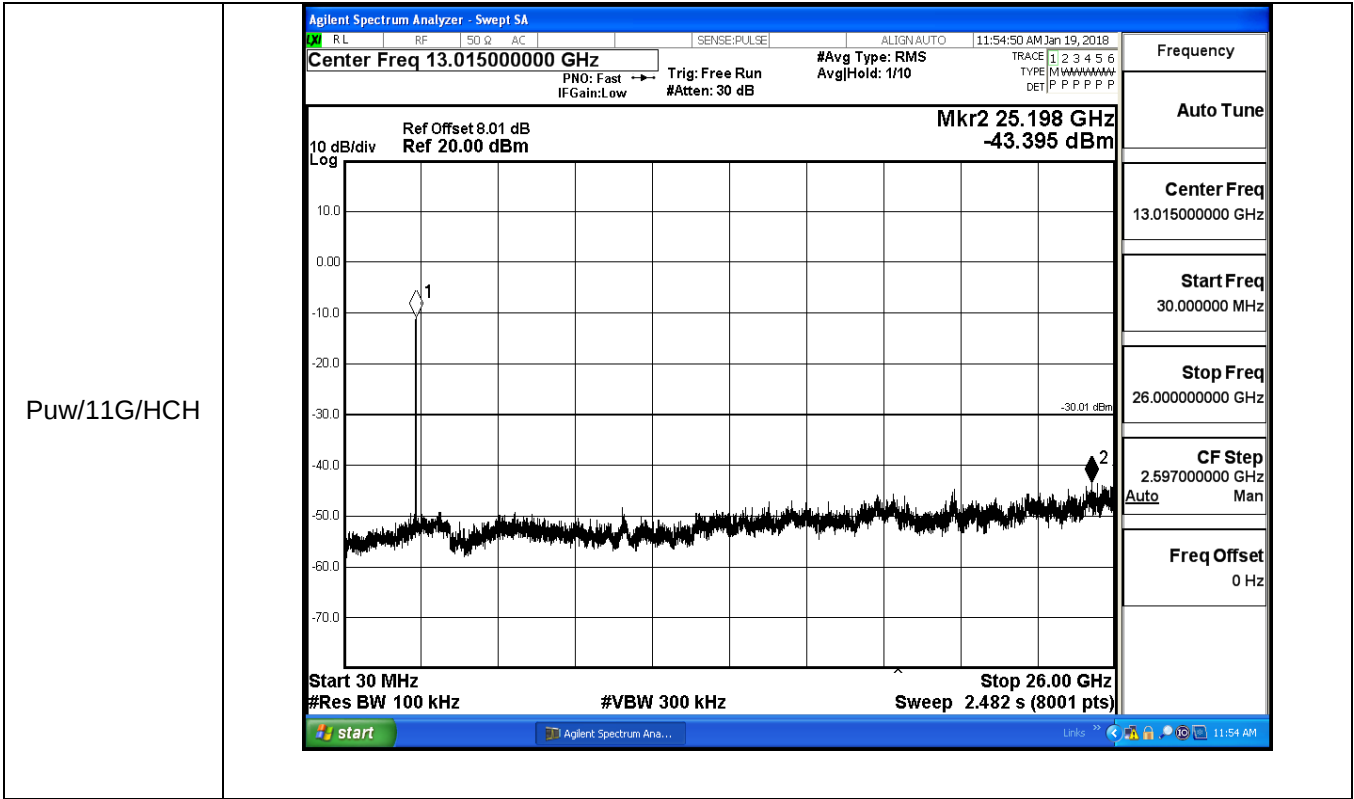


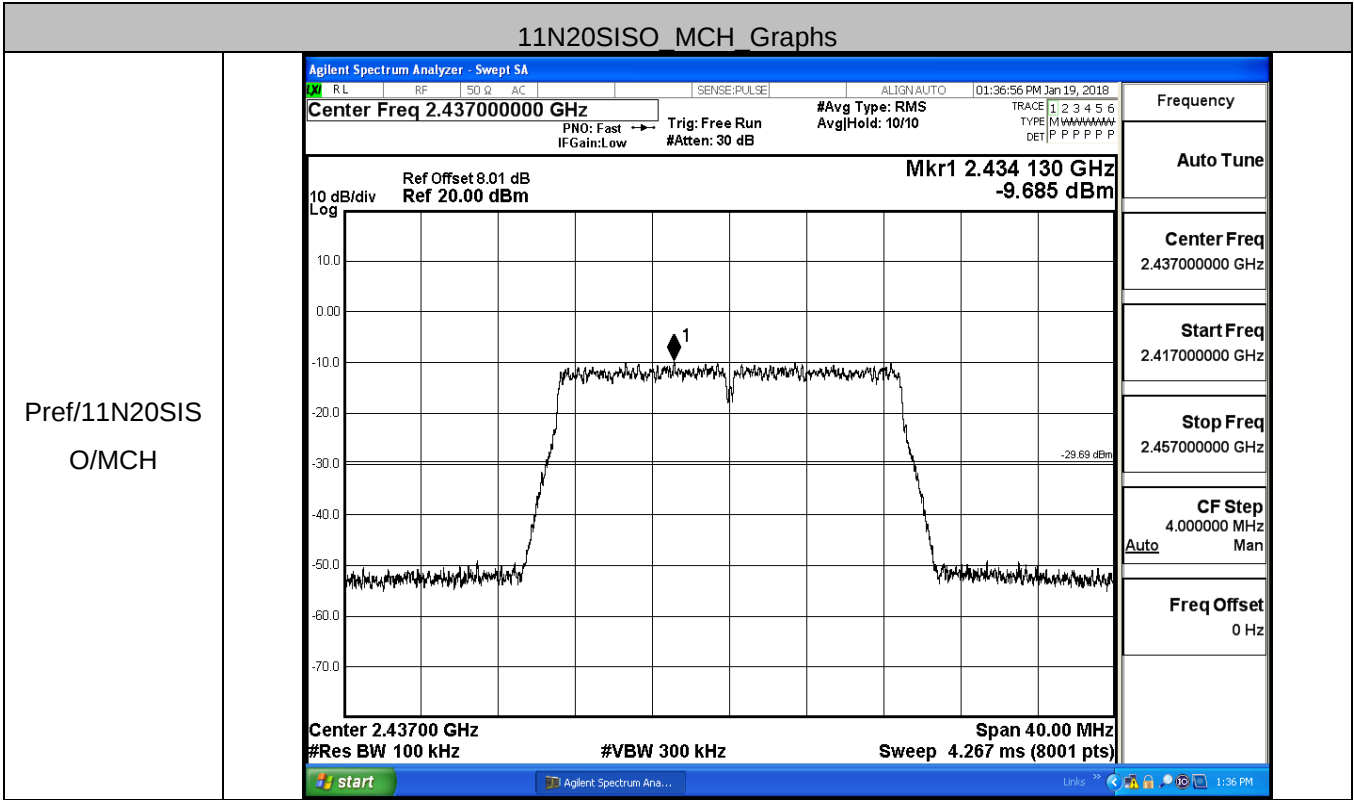
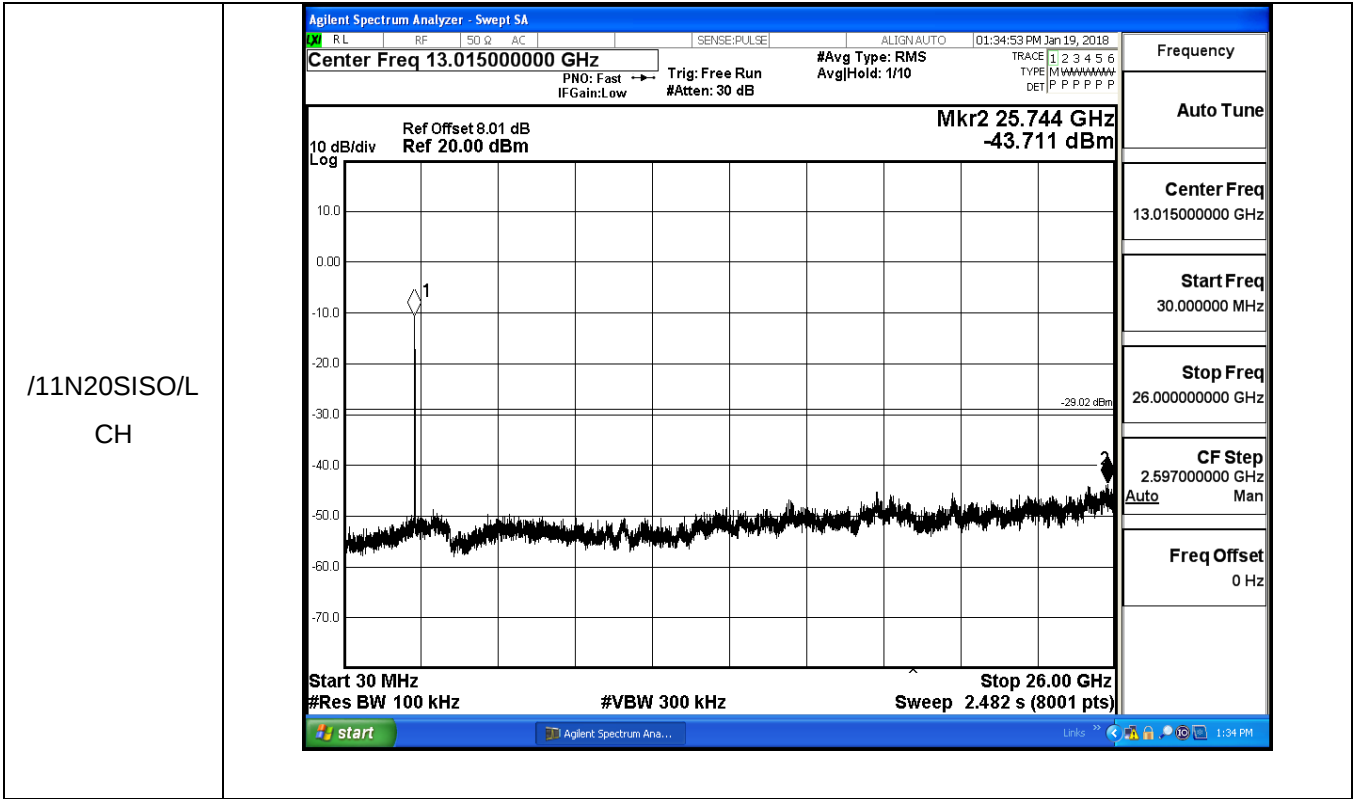


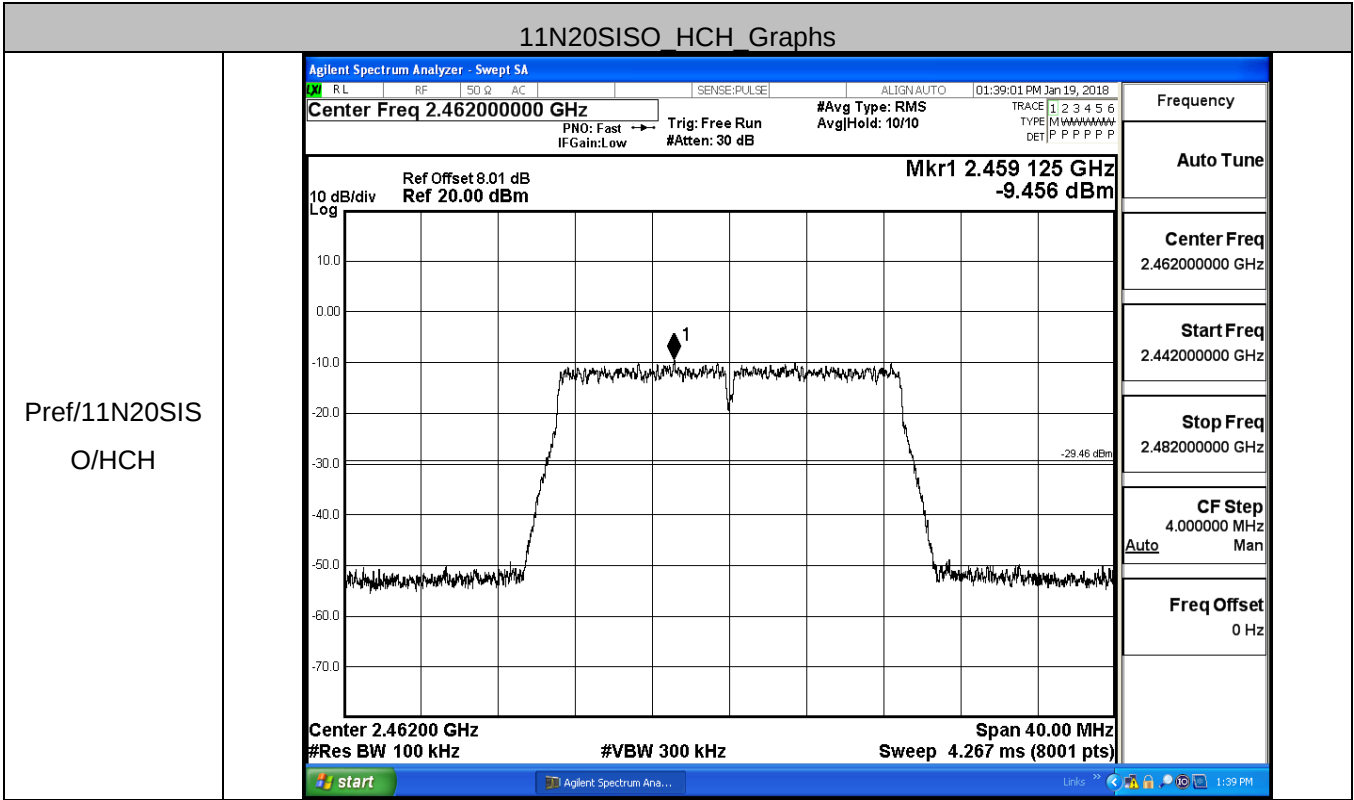
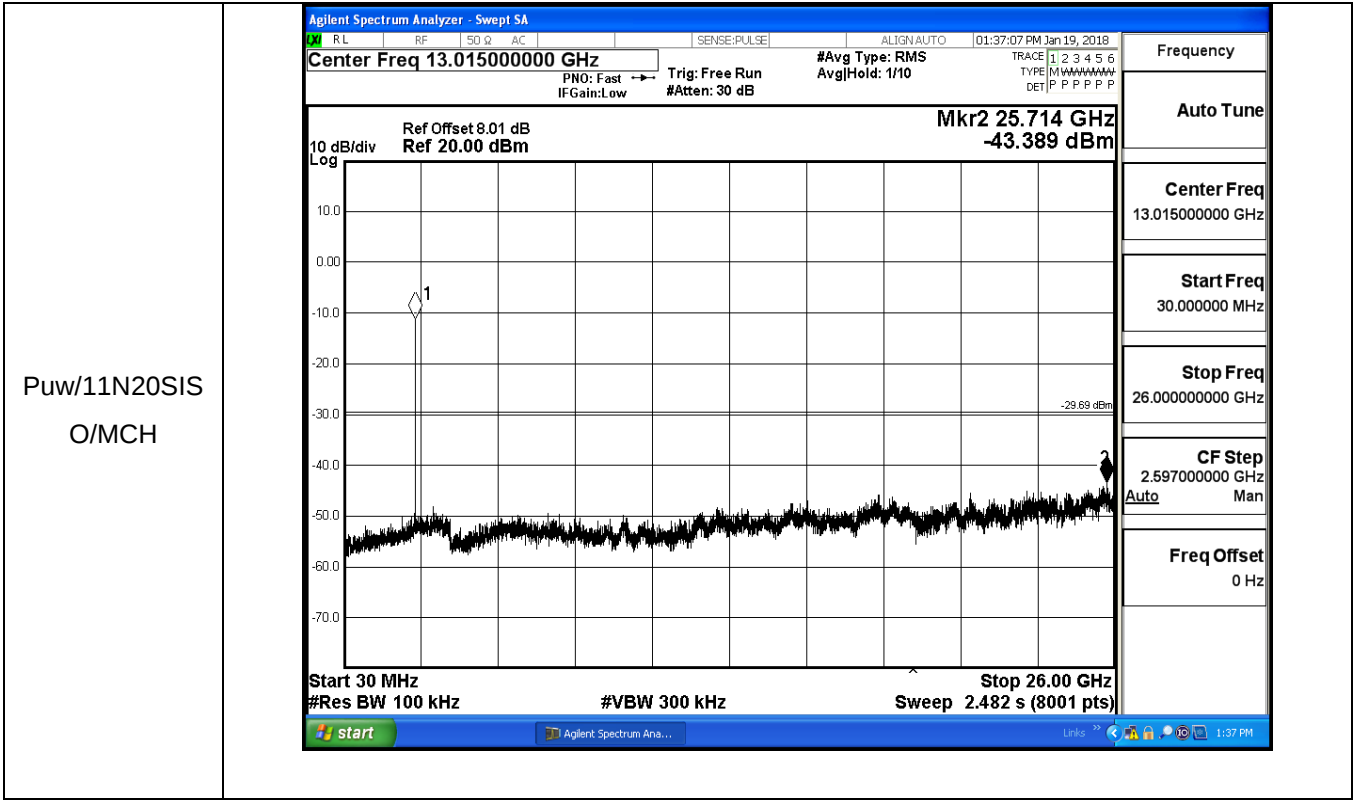


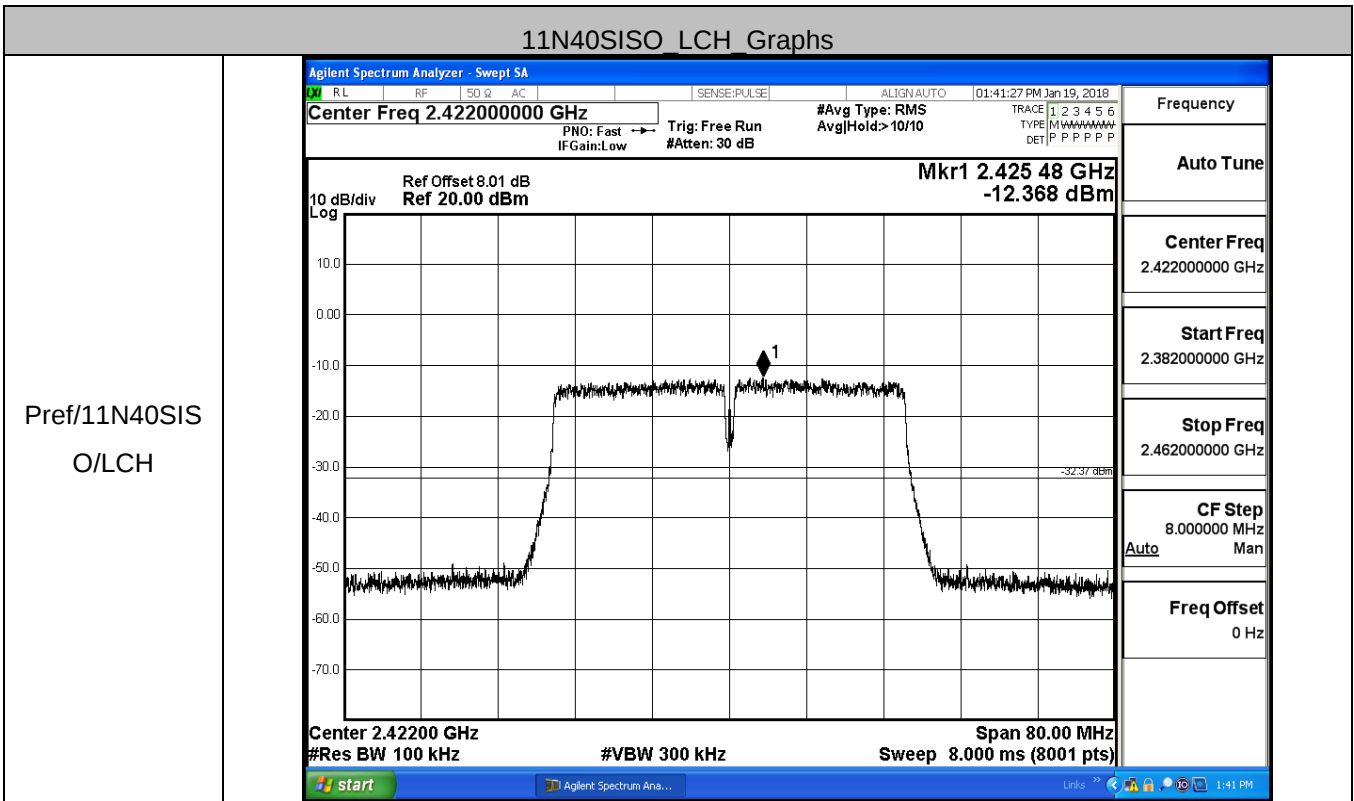
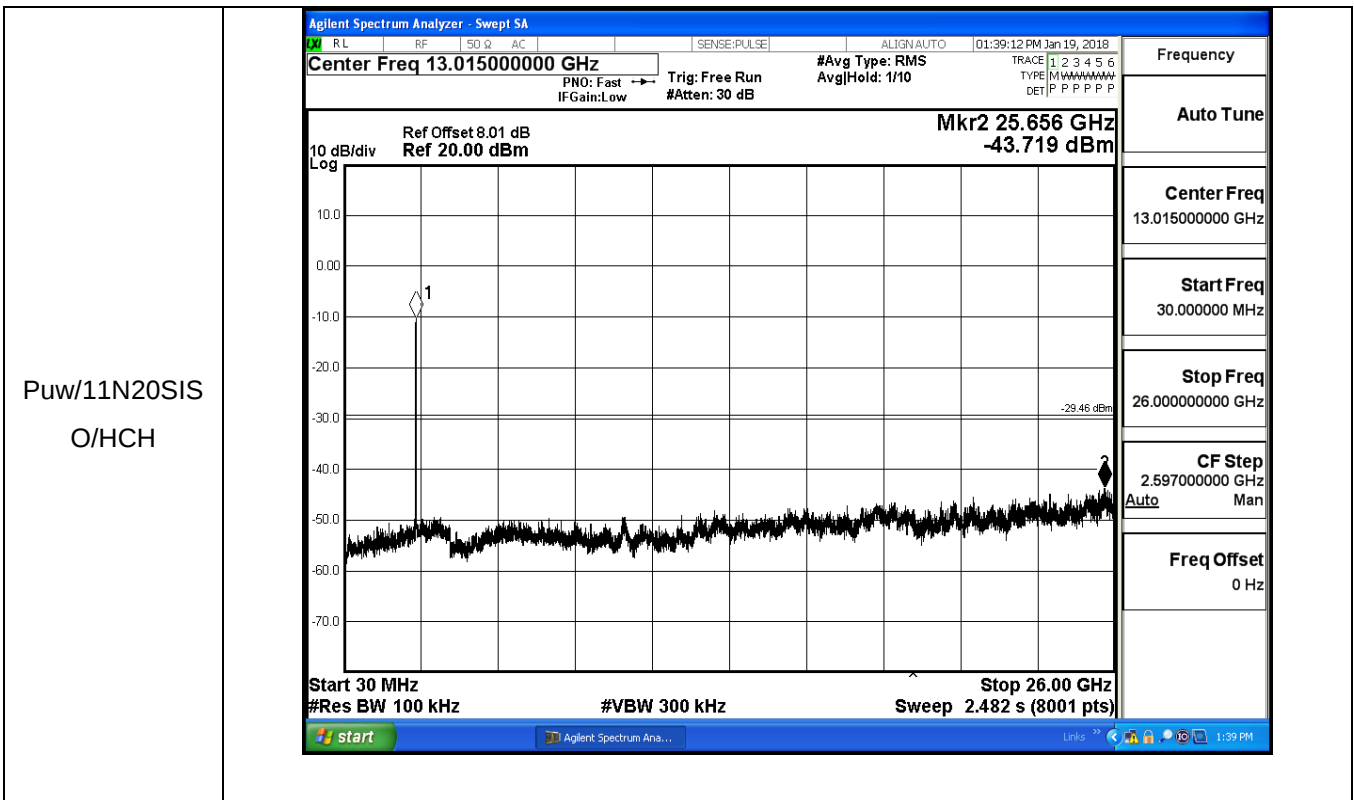


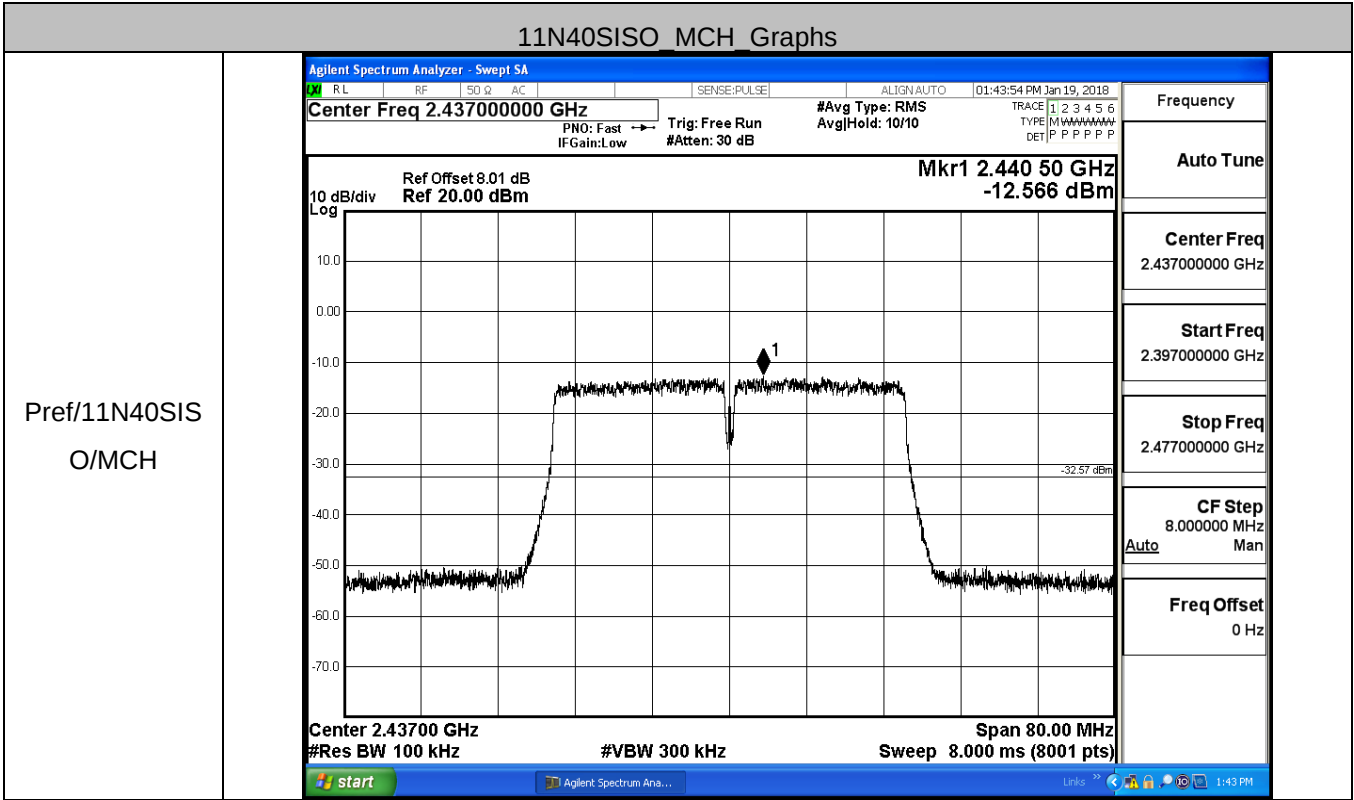
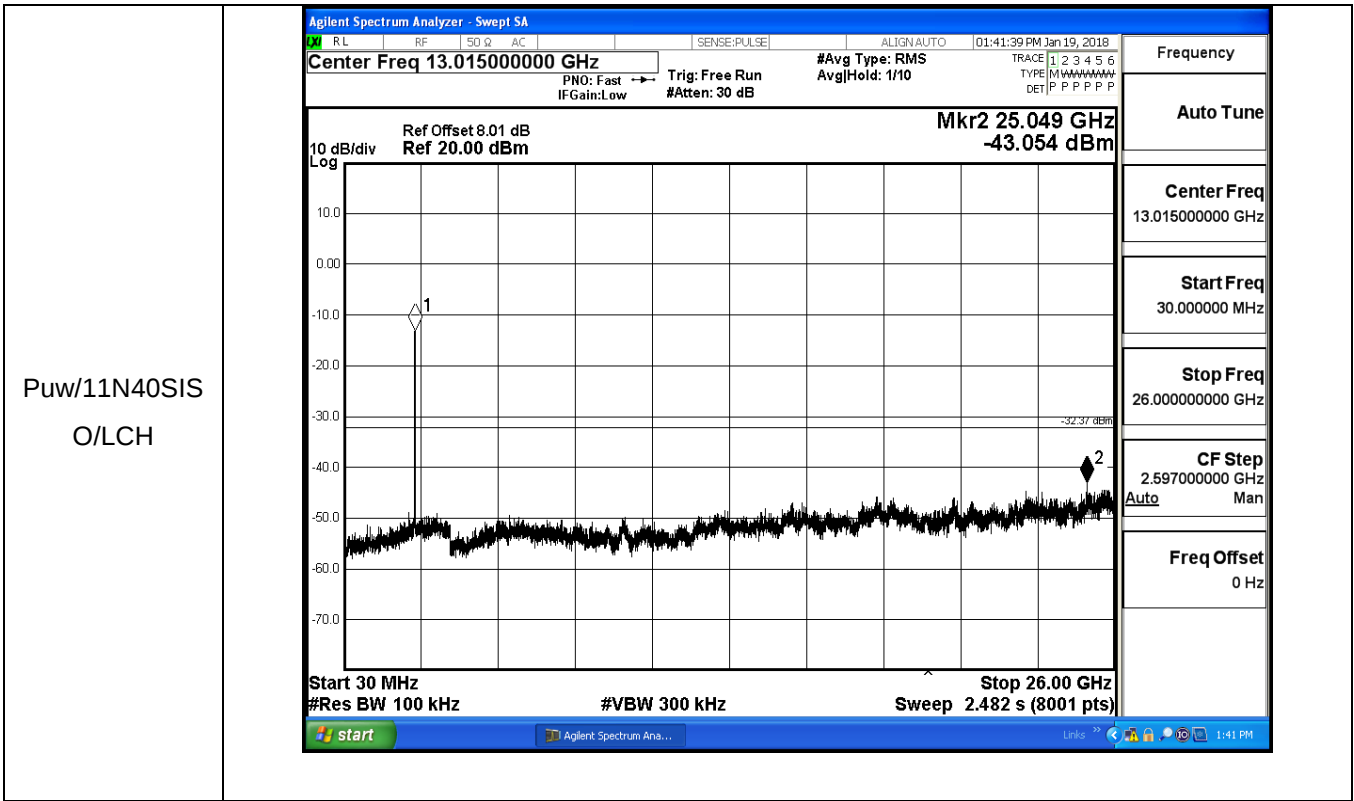


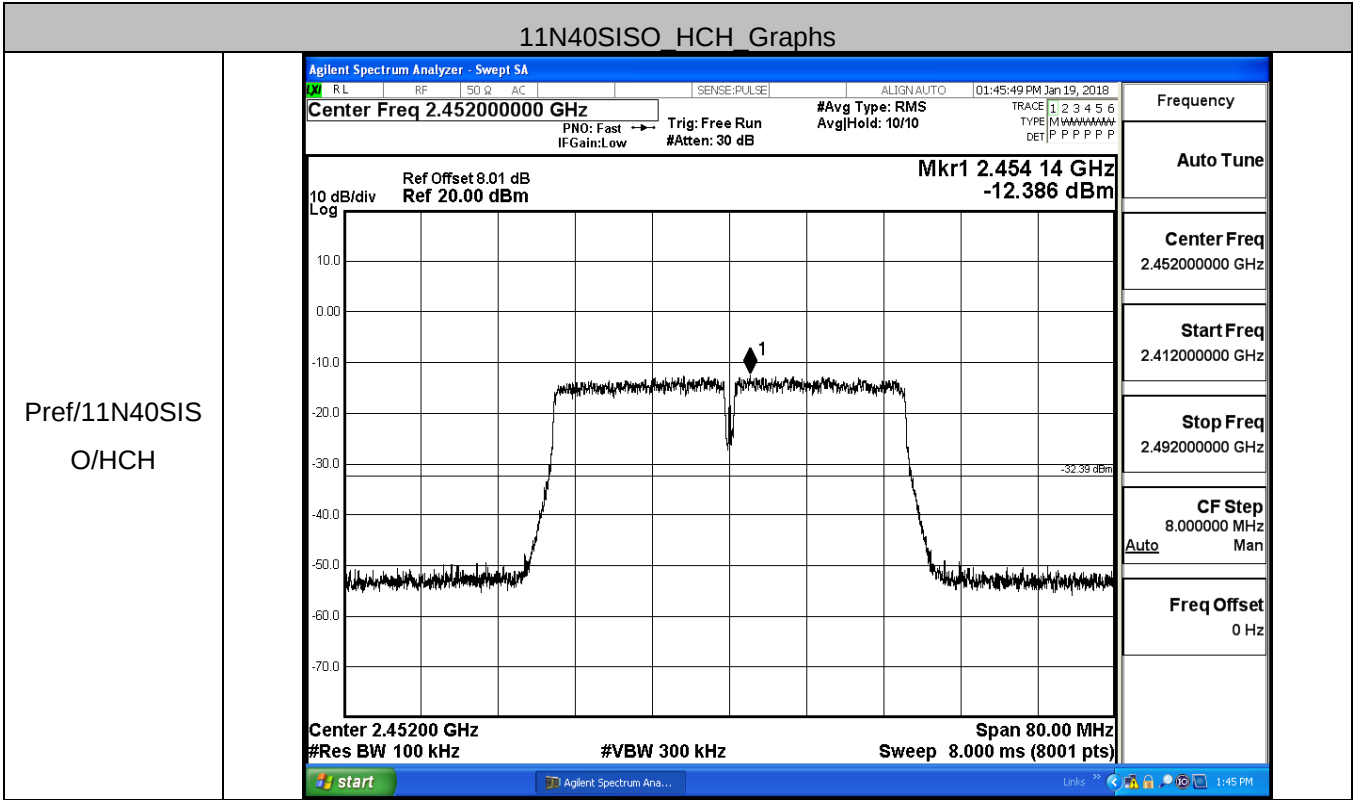
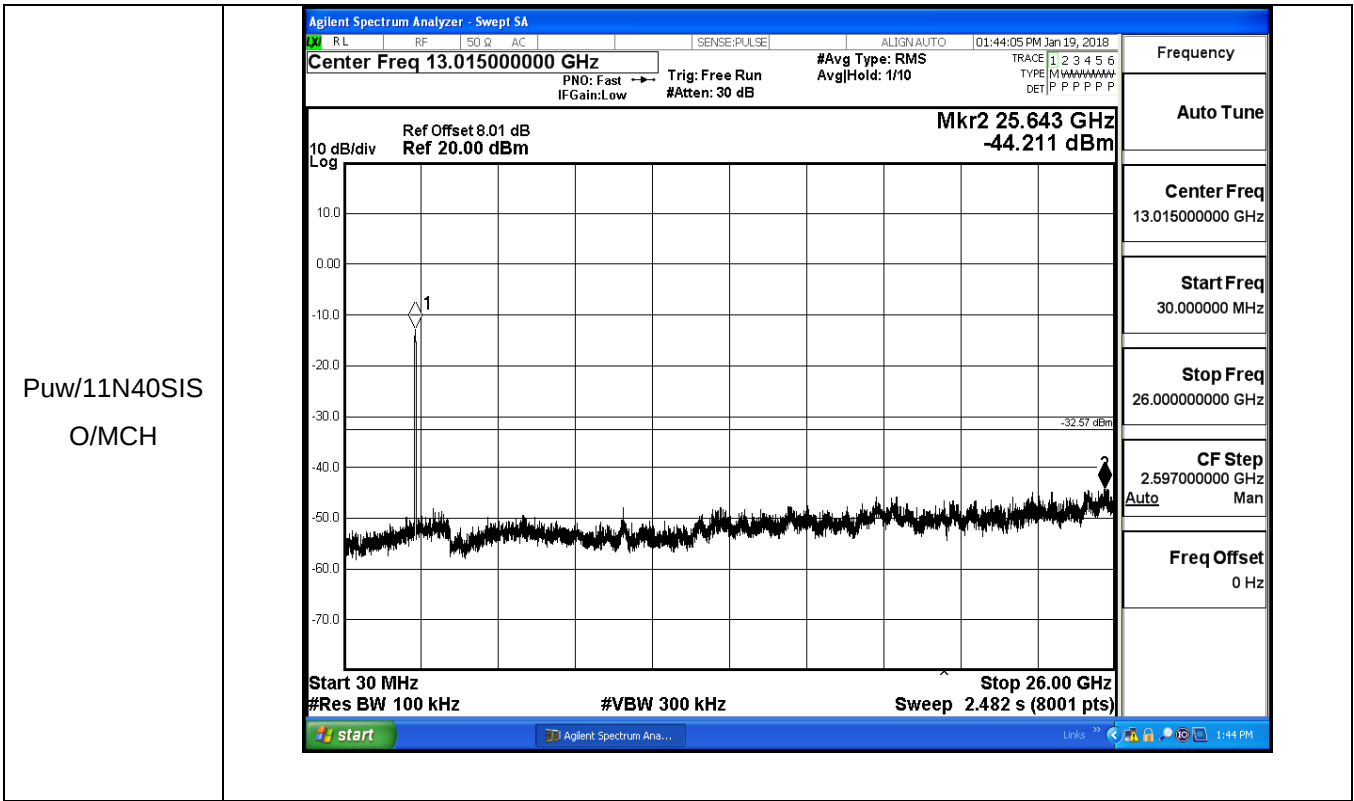




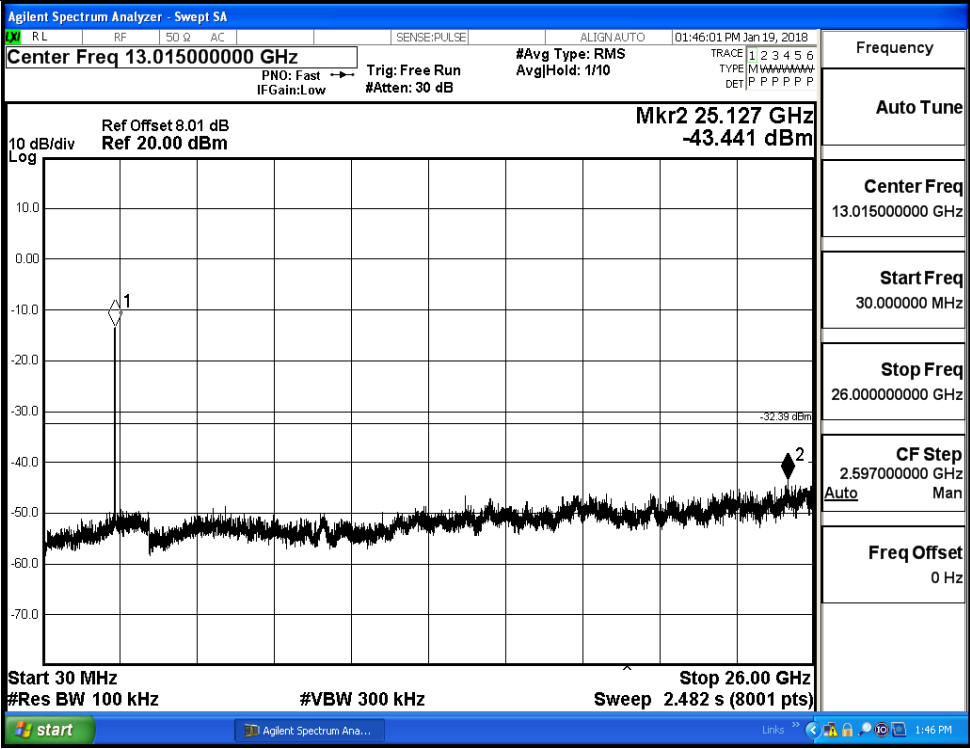








Puw/11N40SIS
O/HCH

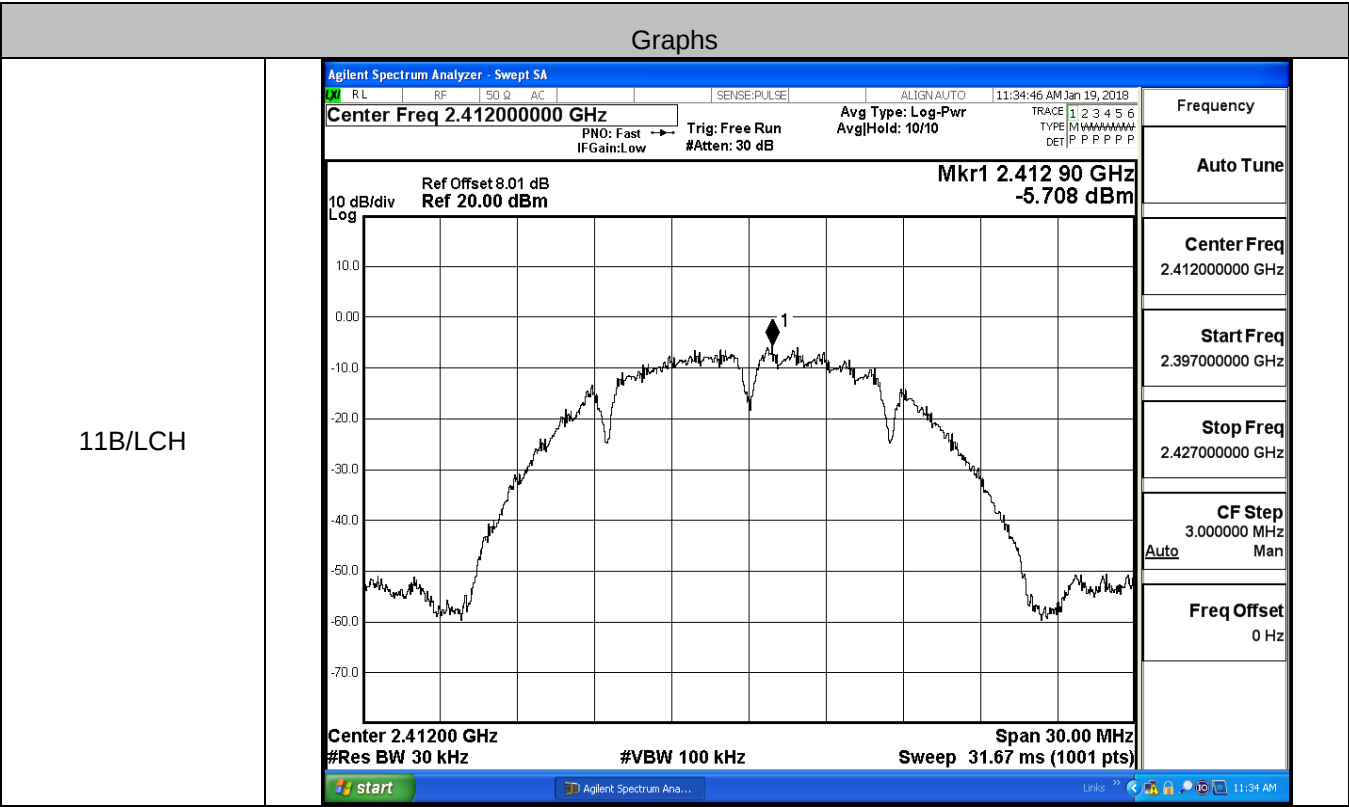


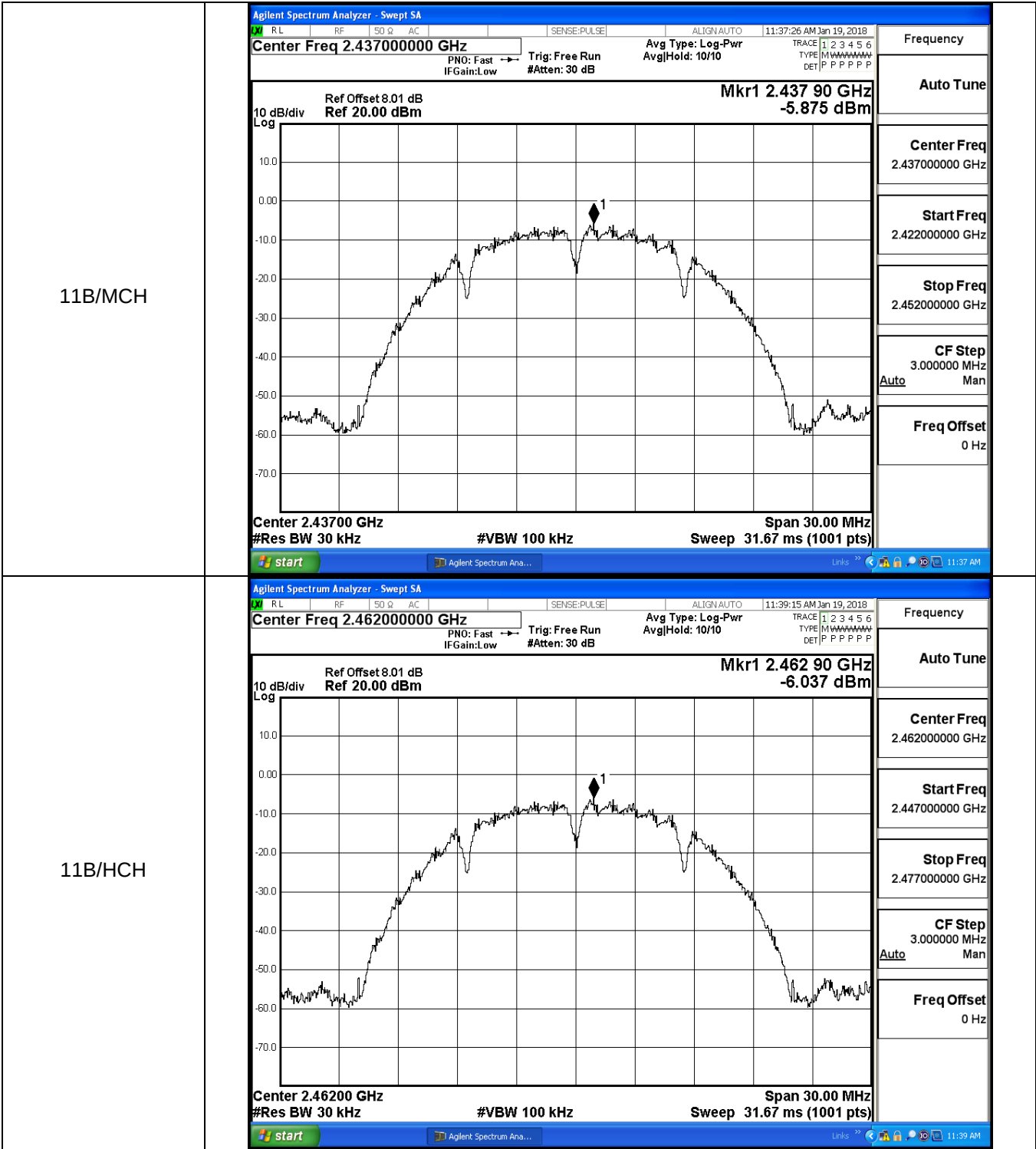
Appendix F): Maximum Power Spectral Density

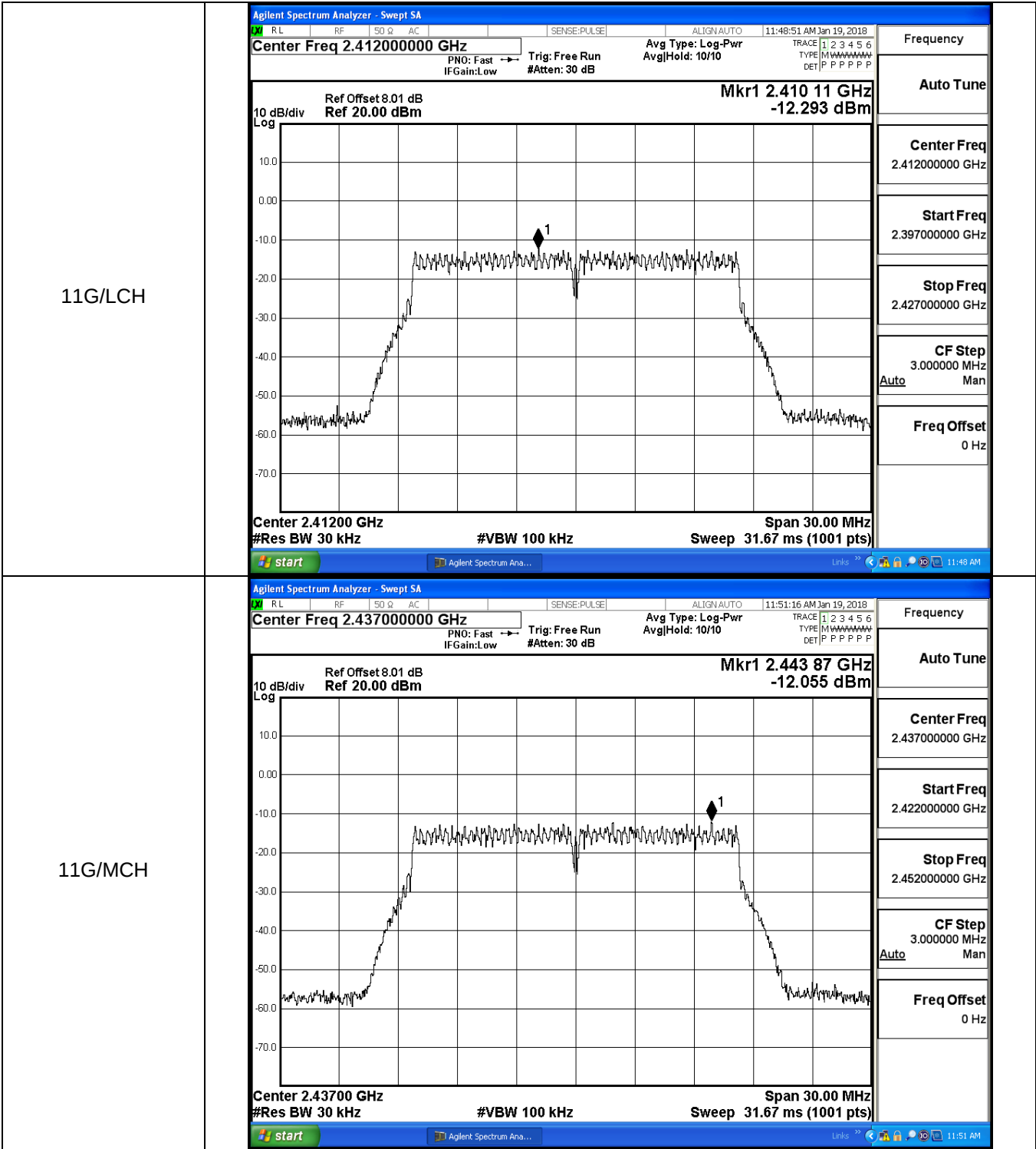
Result Table

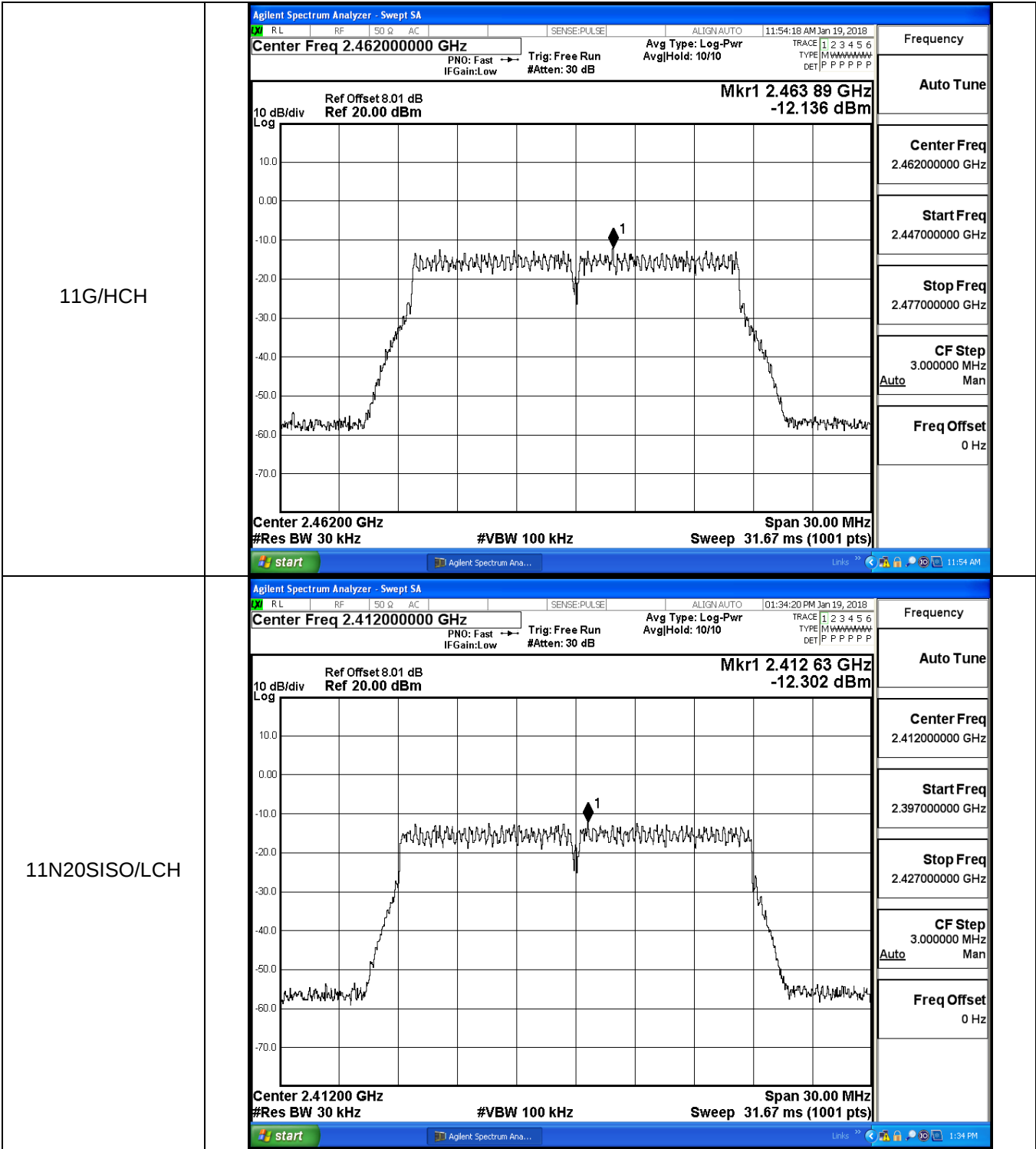
Mode	Channel	Meas.Level [dBm]	Verdict
11B	LCH	-5.708	PASS
11B	MCH	-5.875	PASS
11B	HCH	-6.037	PASS
11G	LCH	-12.293	PASS
11G	MCH	-12.055	PASS
11G	HCH	-12.136	PASS
11N20SISO	LCH	-12.302	PASS
11N20SISO	MCH	-12.649	PASS
11N20SISO	HCH	-12.393	PASS
11N40SISO	LCH	-15.434	PASS
11N40SISO	MCH	-15.427	PASS
11N40SISO	HCH	-15.610	PASS

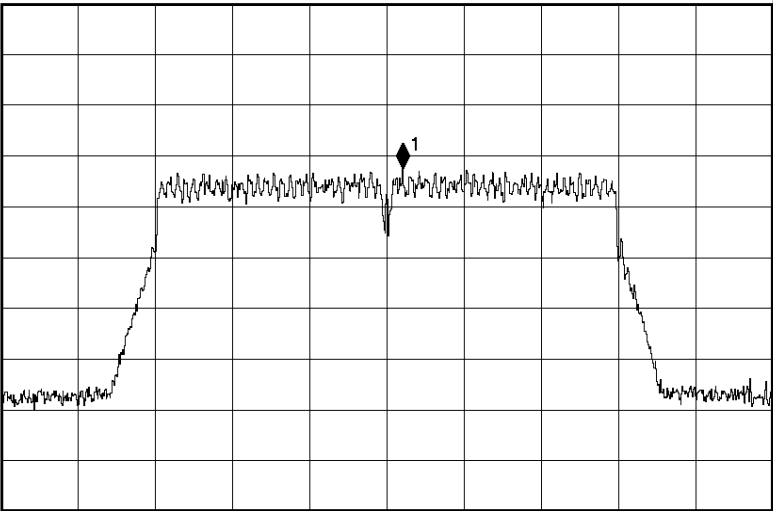
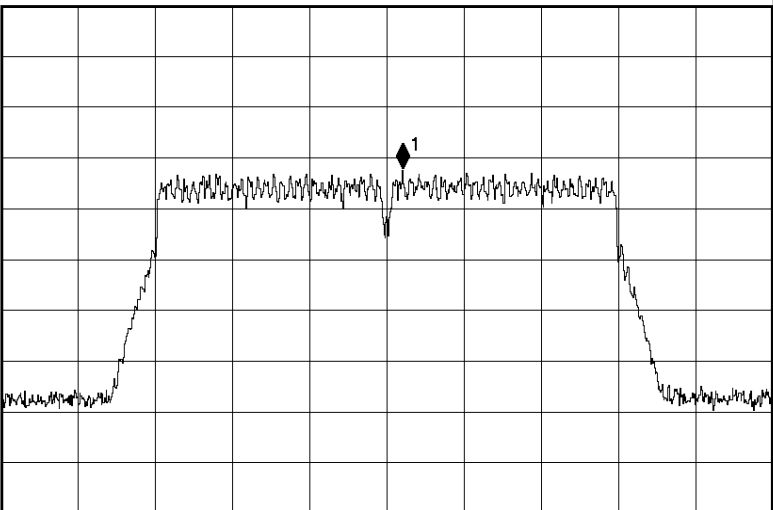
Test Graph

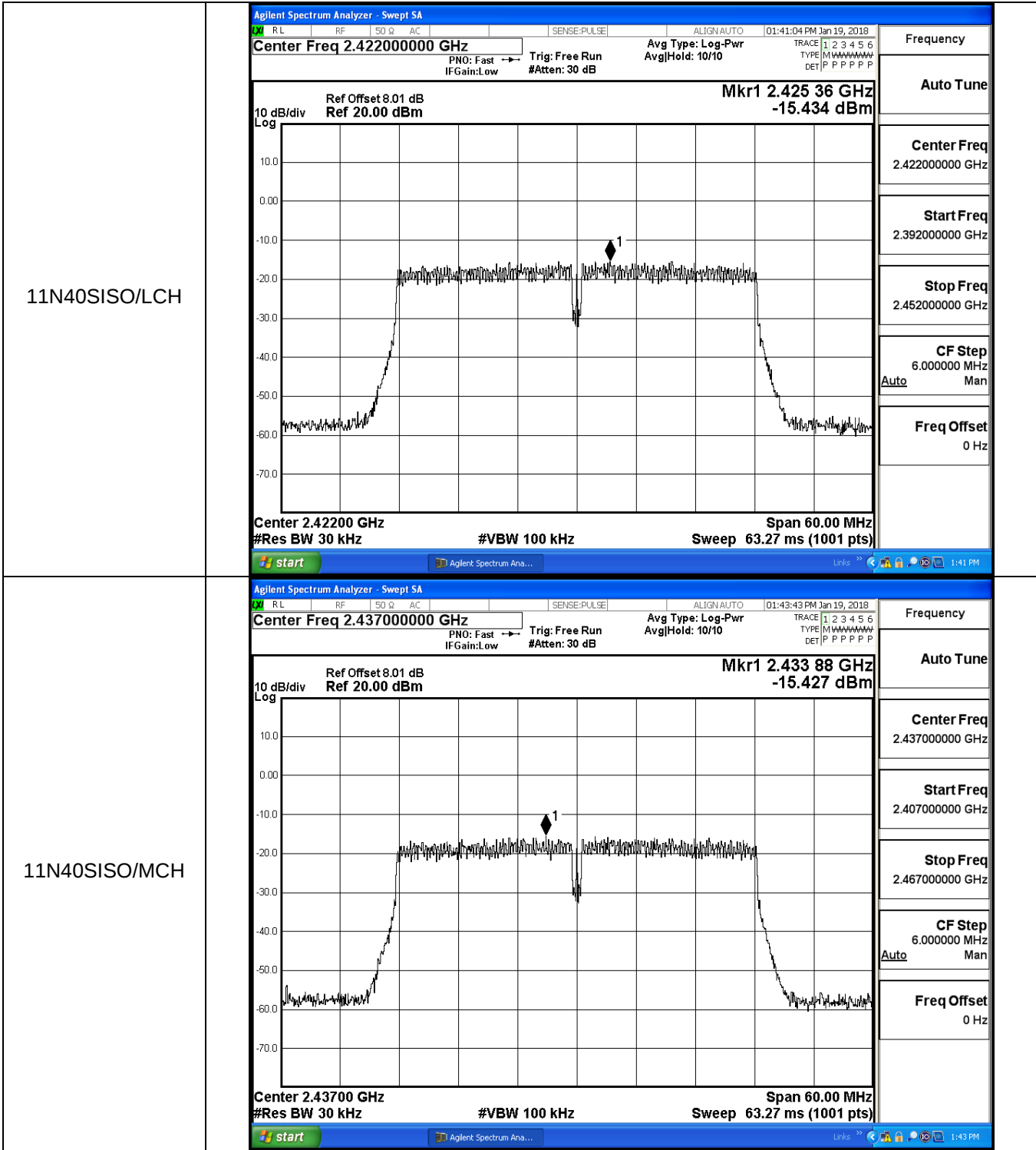


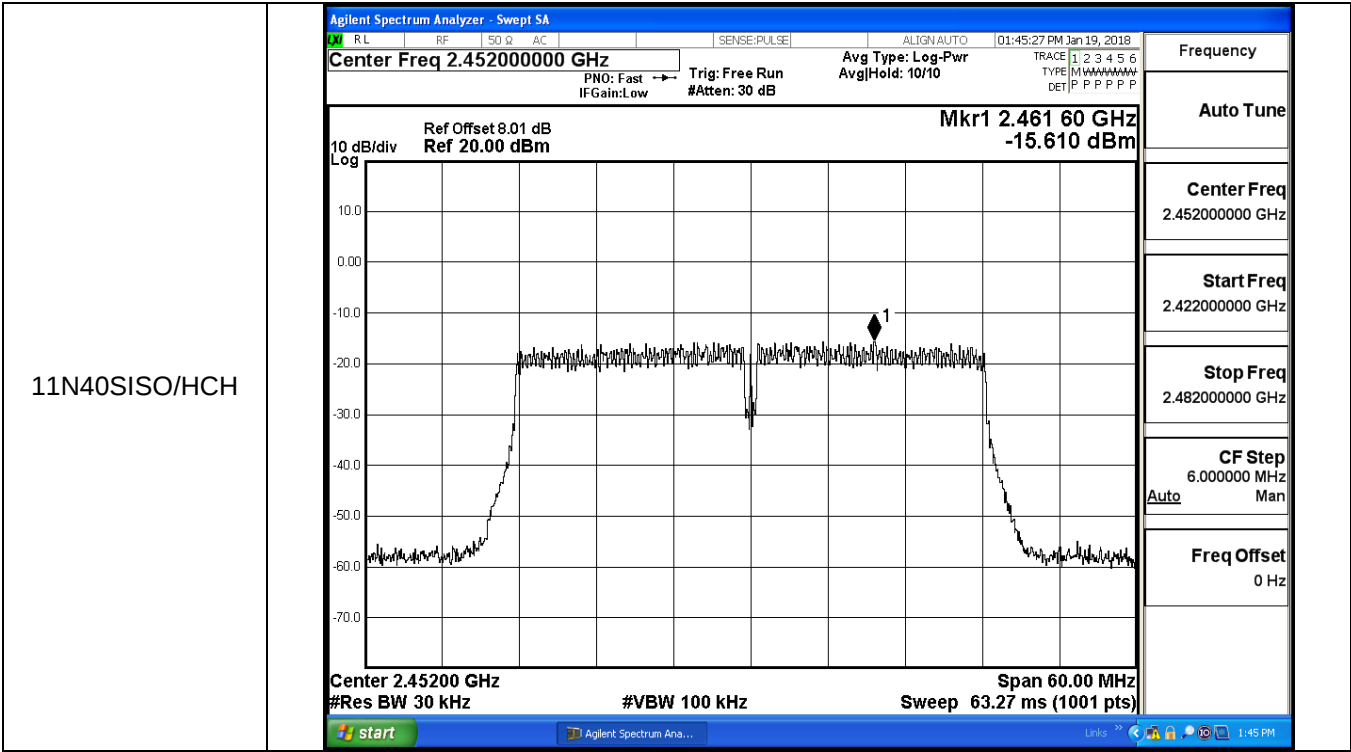






11N20SISO/MCH	Agilent Spectrum Analyzer - Swept SA RLRF50 QACSENSE:PULSEALIGN: AUTO01:36:45 PM Jan 19, 2018 Center Freq 2.43700000 GHz PN0: FastIFGain: LowTrig: Free Run#Atten: 30 dB Avg Type: Log-PwrAveHld: 10/10 TRACE 1 2 3 4 5 6TYPE M W W W W W W W WDET P P P P P P P Ref Offset 8.01 dB Ref 20.00 dBm Mkr1 2.437 63 GHz-12.649 dBm 10 dB/div Log  Center 2.43700 GHz #Res BW 30 kHz #VBW 100 kHz Span 30.00 MHz Sweep 31.67 ms (1001 pts) start Agilent Spectrum Ana... Links1:36 PM Frequency Auto Tune Center Freq2.437000000 GHz Start Freq2.422000000 GHz Stop Freq2.452000000 GHz CF Step3.000000 MHzAutoMan Freq Offset0 Hz
11N20SISO/HCH	Agilent Spectrum Analyzer - Swept SA RLRF50 QACSENSE:PULSEALIGN: AUTO01:38:38 PM Jan 19, 2018 Center Freq 2.462000000 GHz PN0: FastIFGain: LowTrig: Free Run#Atten: 30 dB Avg Type: Log-PwrAveHld: 10/10 TRACE 1 2 3 4 5 6TYPE M W W W W W W W WDET P P P P P P P Ref Offset 8.01 dB Ref 20.00 dBm Mkr1 2.462 63 GHz-12.393 dBm 10 dB/div Log  Center 2.46200 GHz #Res BW 30 kHz #VBW 100 kHz Span 30.00 MHz Sweep 31.67 ms (1001 pts) start Agilent Spectrum Ana... Links1:38 PM Frequency Auto Tune Center Freq2.462000000 GHz Start Freq2.447000000 GHz Stop Freq2.477000000 GHz CF Step3.000000 MHzAutoMan Freq Offset0 Hz





Appendix G):Restrict-band band-edge measurements

Result Table

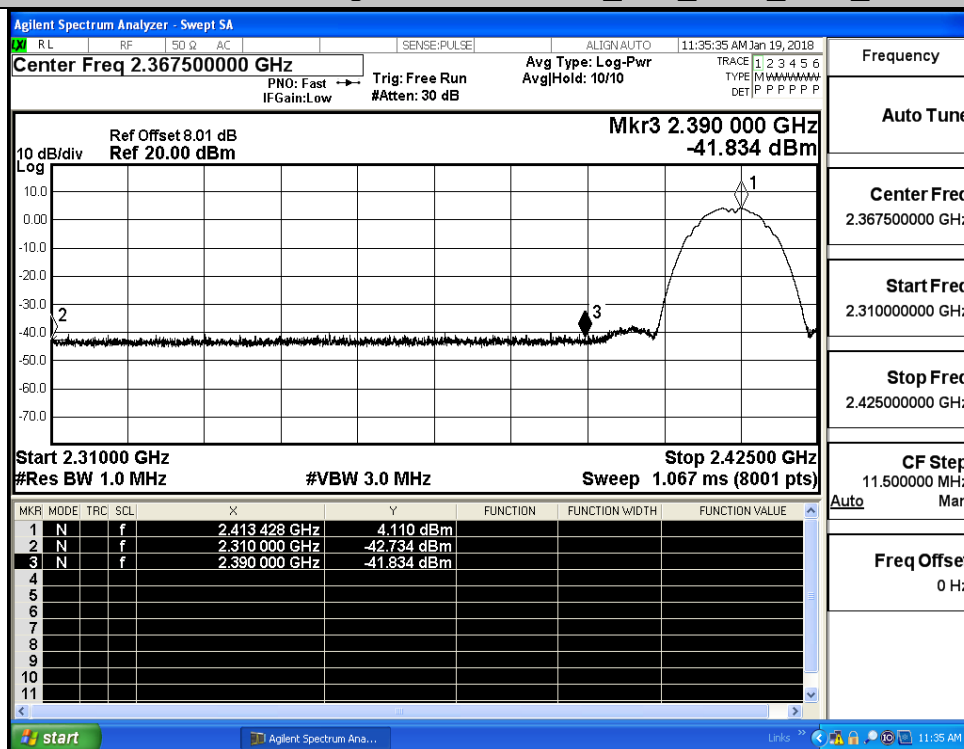
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant 1	2310.00	-42.73	2	0	52.52	PEAK	74	PASS
11B	2412	Ant 1	2310.00	-54.06	2	0	41.20	AV	54	PASS
11B	2412	Ant 1	2390.00	-41.83	2	0	53.42	PEAK	74	PASS
11B	2412	Ant 1	2390.00	-53.69	2	0	41.57	AV	54	PASS
11B	2462	Ant 1	2483.50	-44.39	2	0	50.87	PEAK	74	PASS
11B	2462	Ant 1	2483.50	-53.48	2	0	41.78	AV	54	PASS
11B	2462	Ant 1	2500.00	-43.19	2	0	52.07	PEAK	74	PASS
11B	2462	Ant 1	2500.00	-53.39	2	0	41.87	AV	54	PASS
11G	2412	Ant 1	2310.00	-43.42	2	0	51.83	PEAK	74	PASS

11G	241 2	A nt 1	23 10. 0	-54.11	2	0	41.15	AV	54	PA SS
11G	241 2	A nt 1	23 90. 0	-43.31	2	0	51.95	PE AK	74	PA SS
11G	241 2	A nt 1	23 90. 0	-53.32	2	0	41.94	AV	54	PA SS
11G	246 2	A nt 1	24 83. 5	-43.78	2	0	51.48	PE AK	74	PA SS
11G	246 2	A nt 1	24 83. 5	-53.23	2	0	42.03	AV	54	PA SS
11G	246 2	A nt 1	25 00. 0	-39.71	2	0	55.55	PE AK	74	PA SS
11G	246 2	A nt 1	25 00. 0	-53.24	2	0	42.02	AV	54	PA SS
11N2 OSIS O	241 2	A nt 1	23 10. 0	-44.69	2	0	50.57	PE AK	74	PA SS
11N2 OSIS O	241 2	A nt 1	23 10. 0	-54.18	2	0	41.08	AV	54	PA SS
11N2 OSIS O	241 2	A nt 1	23 90. 0	-42.89	2	0	52.36	PE AK	74	PA SS
11N2 OSIS O	241 2	A nt 1	23 90. 0	-53.15	2	0	42.11	AV	54	PA SS
11N2 OSIS O	246 2	A nt 1	24 83. 5	-41.51	2	0	53.75	PE AK	74	PA SS
11N2	246	A	24	-53.21	2	0	42.04	AV	54	PA

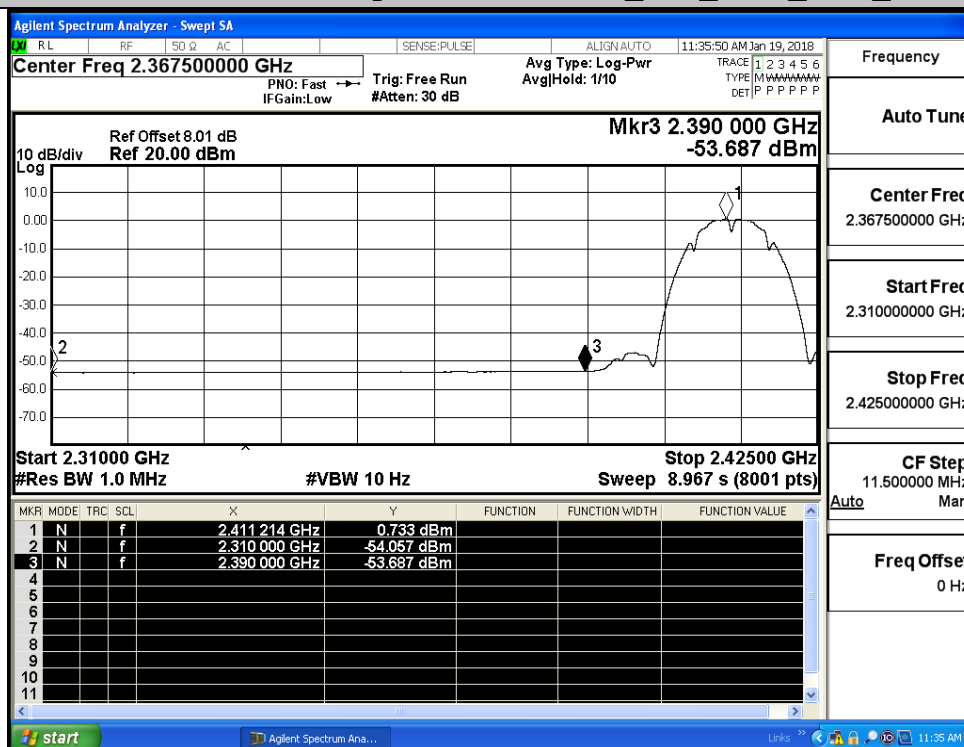
OSIS O	2	nt 1	83. 5		2					SS
11N2 OSIS O	246 2	A nt 1	25 00. 0	-43.41	2	0	51.85	PE AK	74	PA SS
11N2 OSIS O	246 2	A nt 1	25 00. 0	-53.31	2	0	41.95	AV	54	PA SS
11N4 OSIS O	242 2	A nt 1	23 10. 0	-42.12	2	0	53.14	PE AK	74	PA SS
11N4 OSIS O	242 2	A nt 1	23 10. 0	-54.19	2	0	41.06	AV	54	PA SS
11N4 OSIS O	242 2	A nt 1	23 90. 0	-43.50	2	0	51.76	PE AK	74	PA SS
11N4 OSIS O	242 2	A nt 1	23 90. 0	-52.80	2	0	42.46	AV	54	PA SS
11N4 OSIS O	245 2	A nt 1	24 83. 5	-42.67	2	0	52.58	PE AK	74	PA SS
11N4 OSIS O	245 2	A nt 1	24 83. 5	-53.08	2	0	42.17	AV	54	PA SS
11N4 OSIS O	245 2	A nt 1	25 00. 0	-42.82	2	0	52.44	PE AK	74	PA SS
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Test Graph

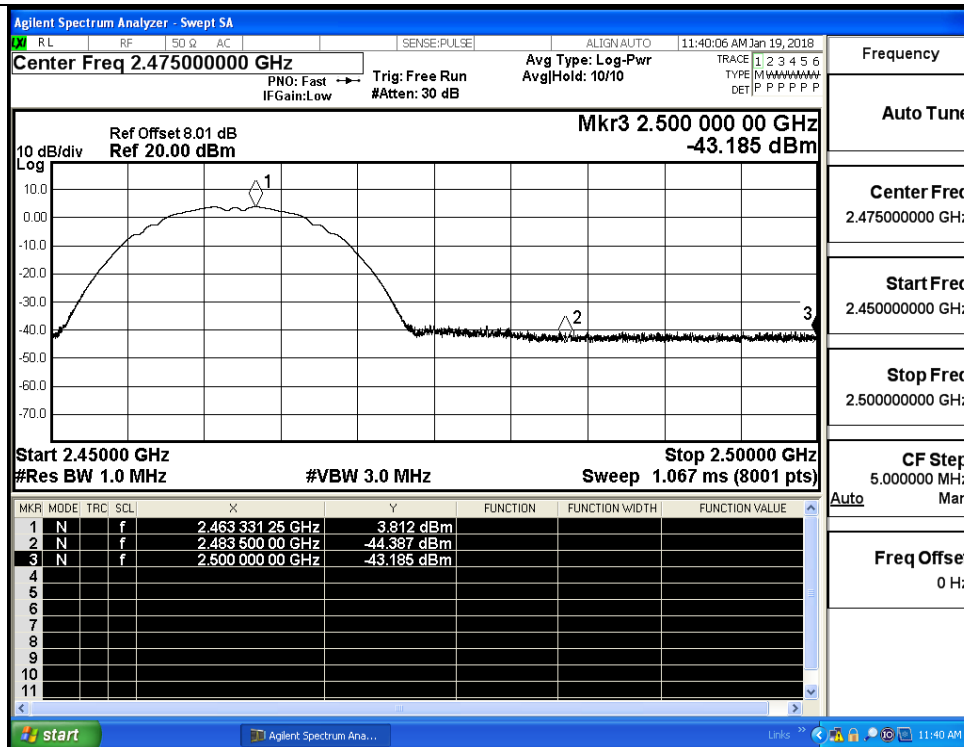
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



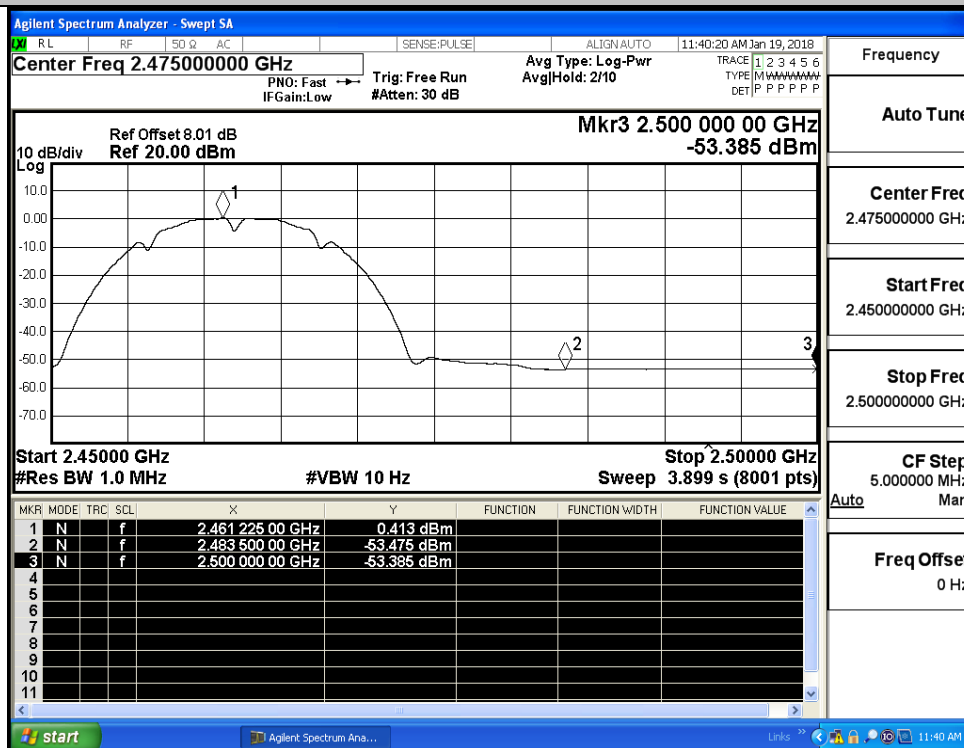
Restrict-band band-edge measurements_11B_2412_Ant1_AV



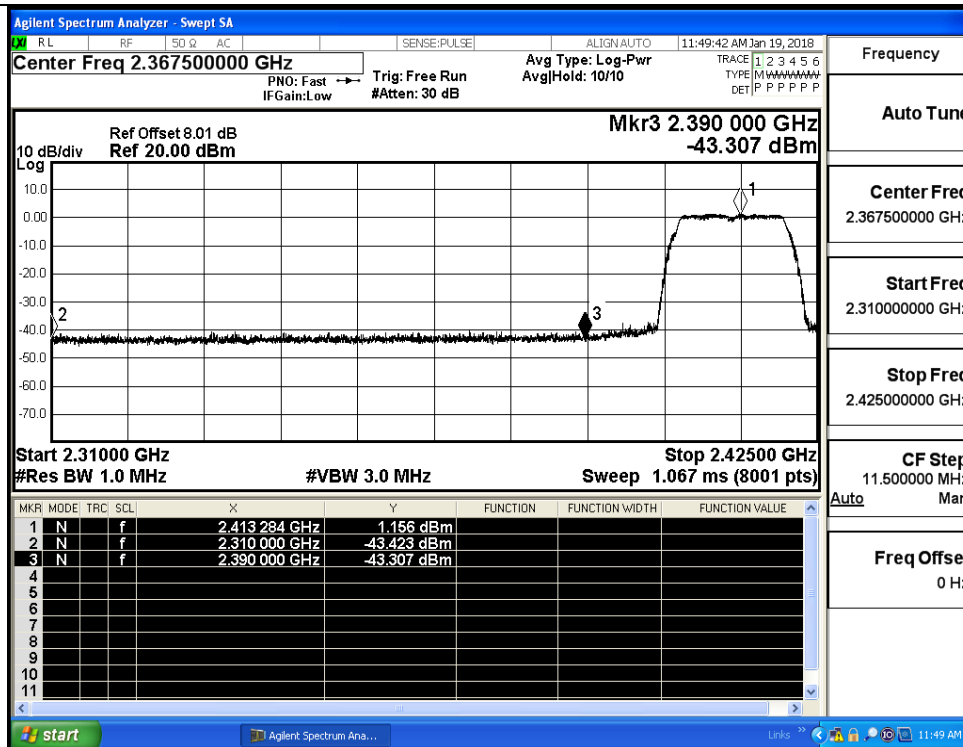
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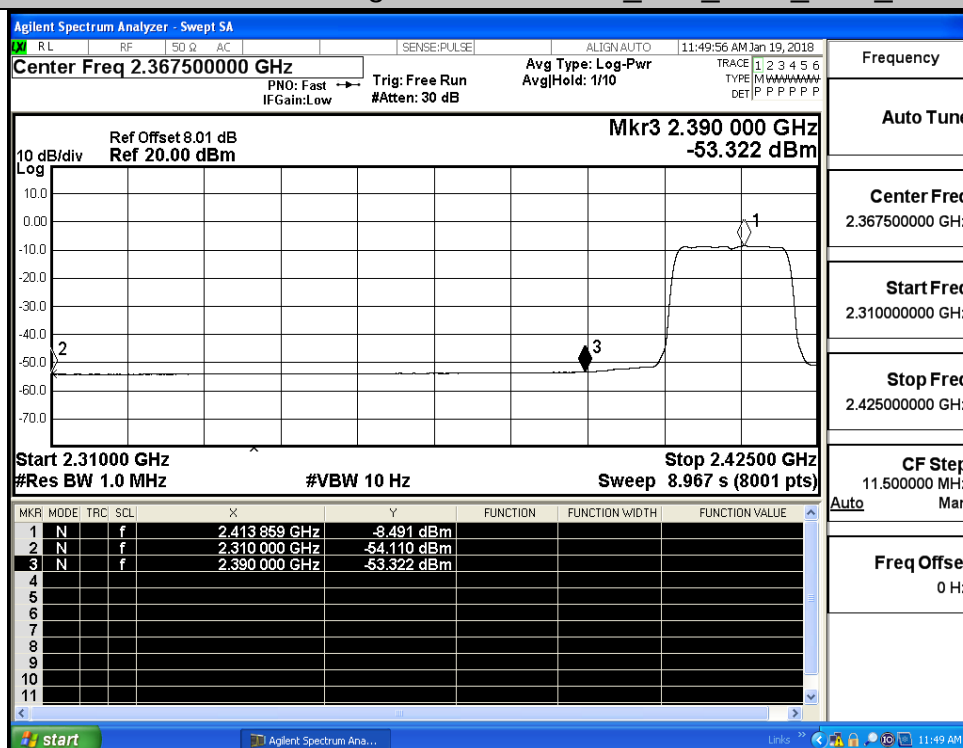
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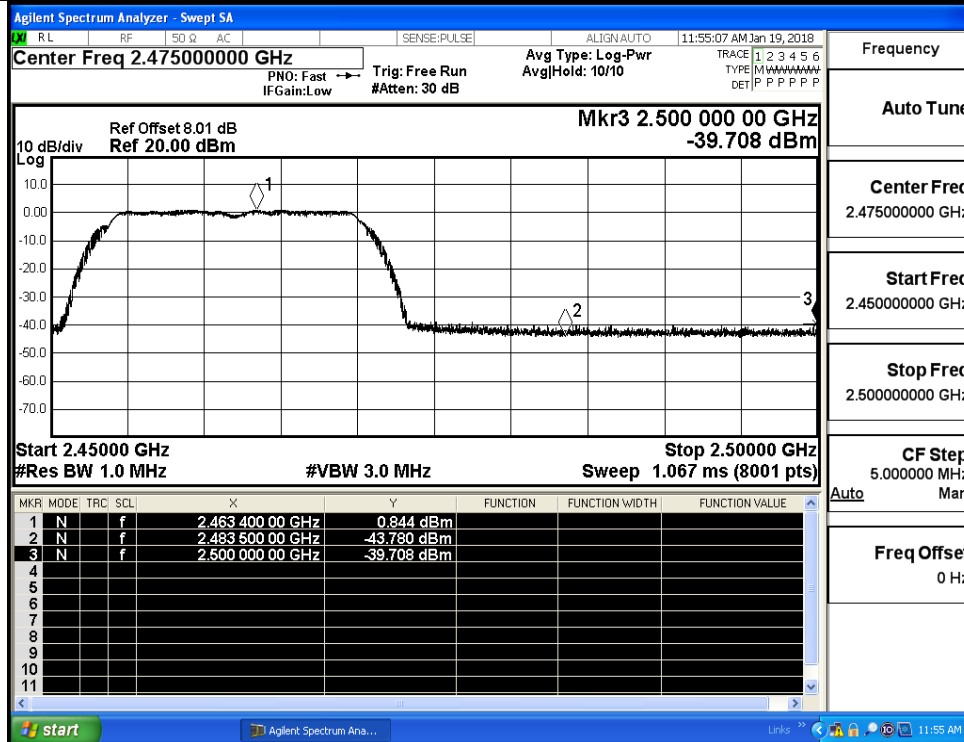
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



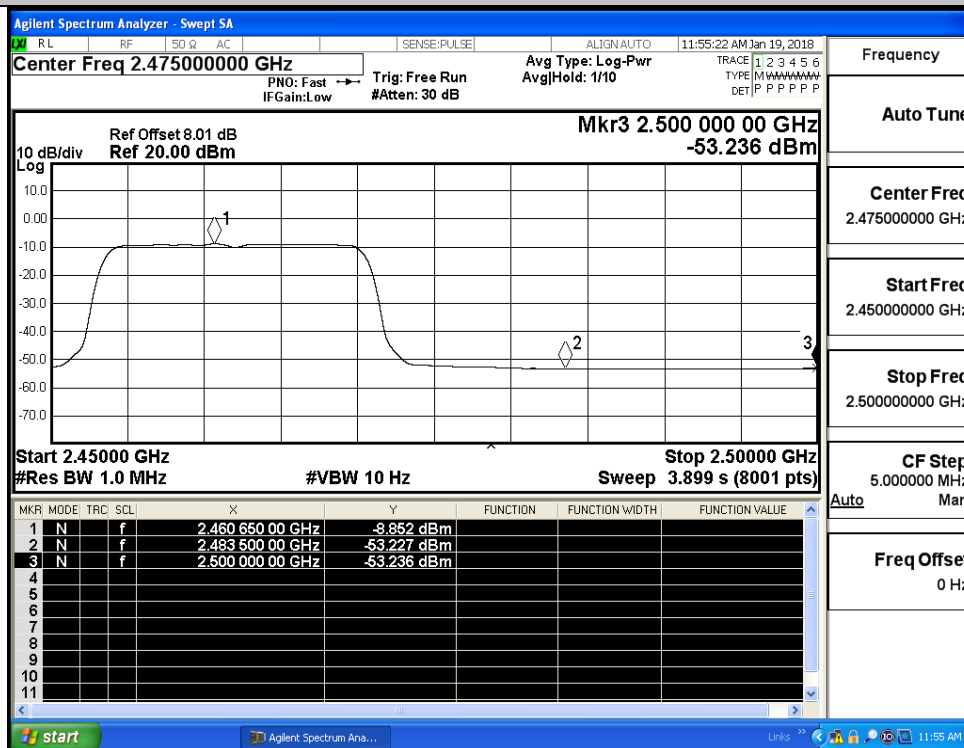
Restrict-band band-edge measurements_11G_2412_Ant1_AV



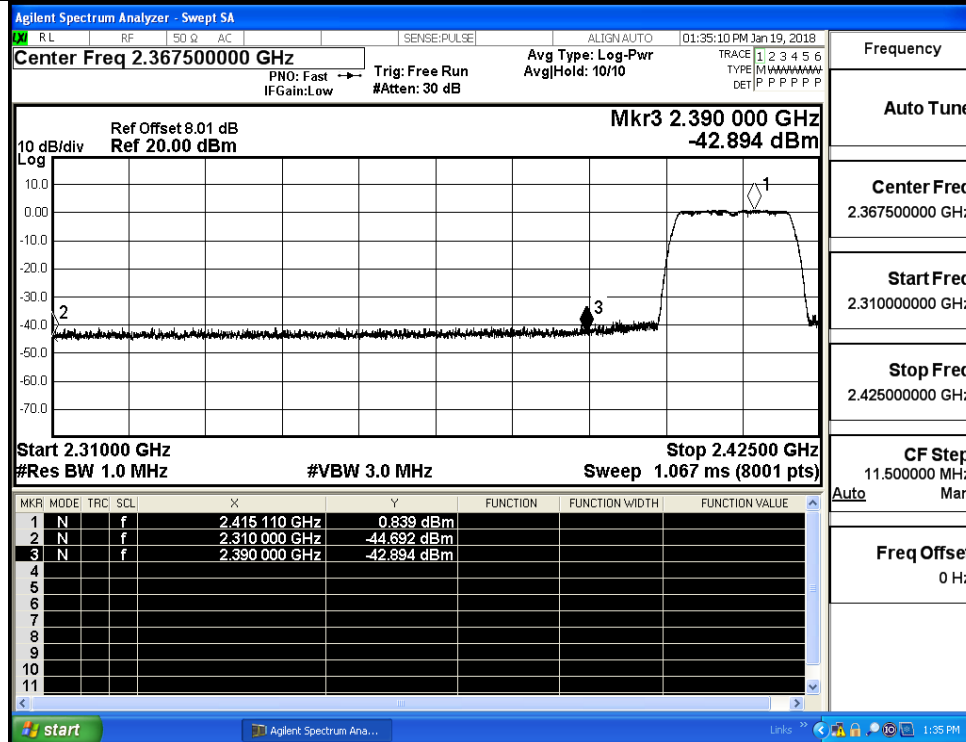
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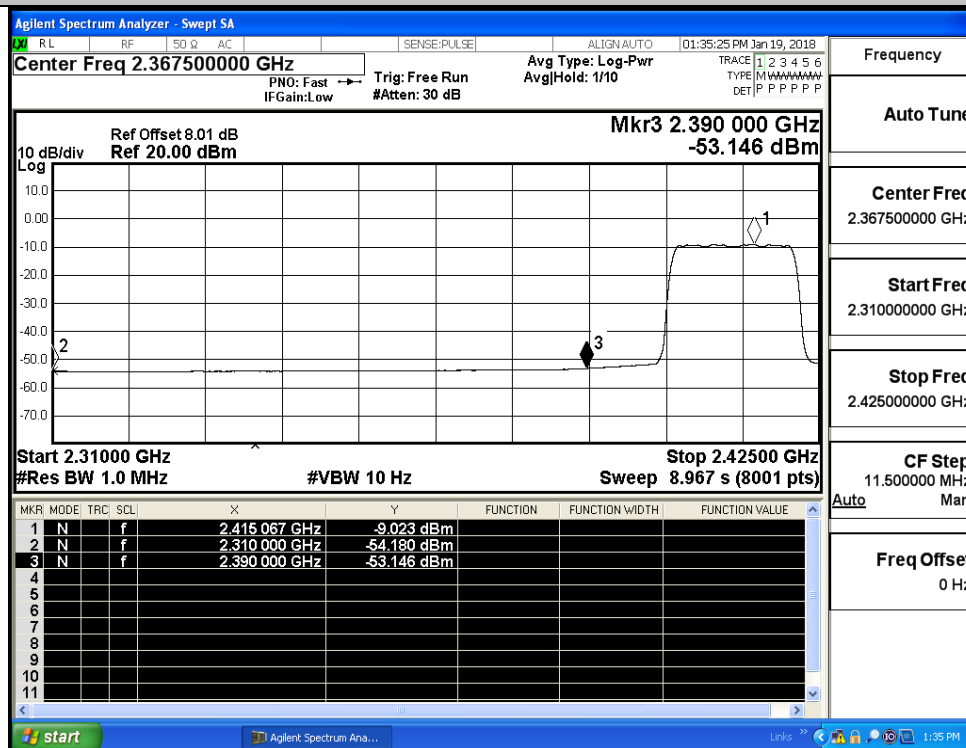
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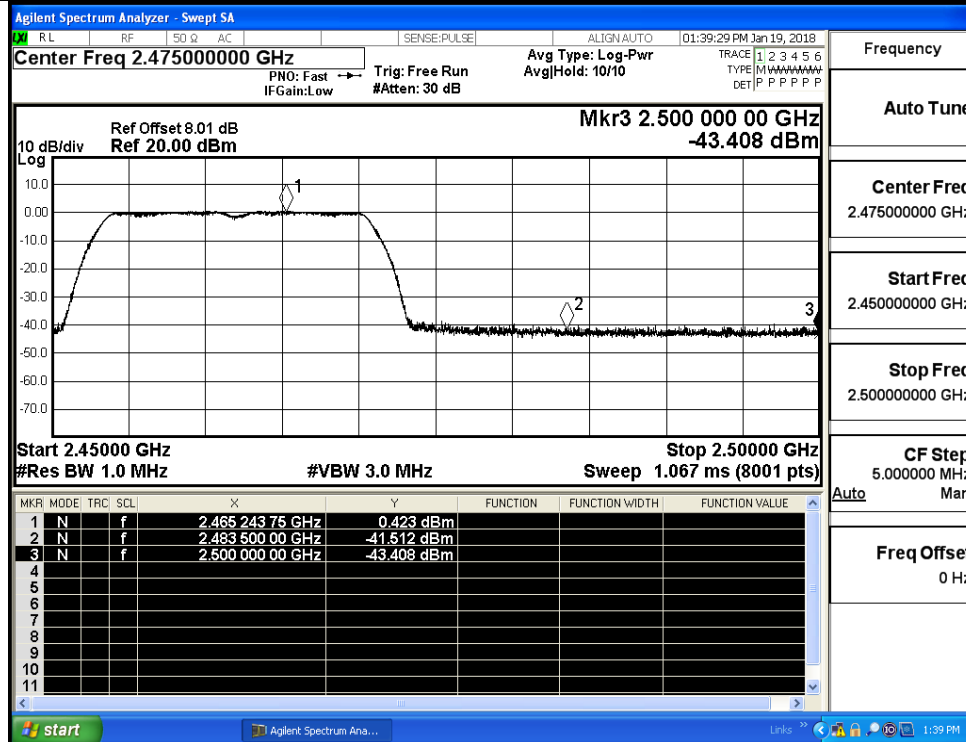
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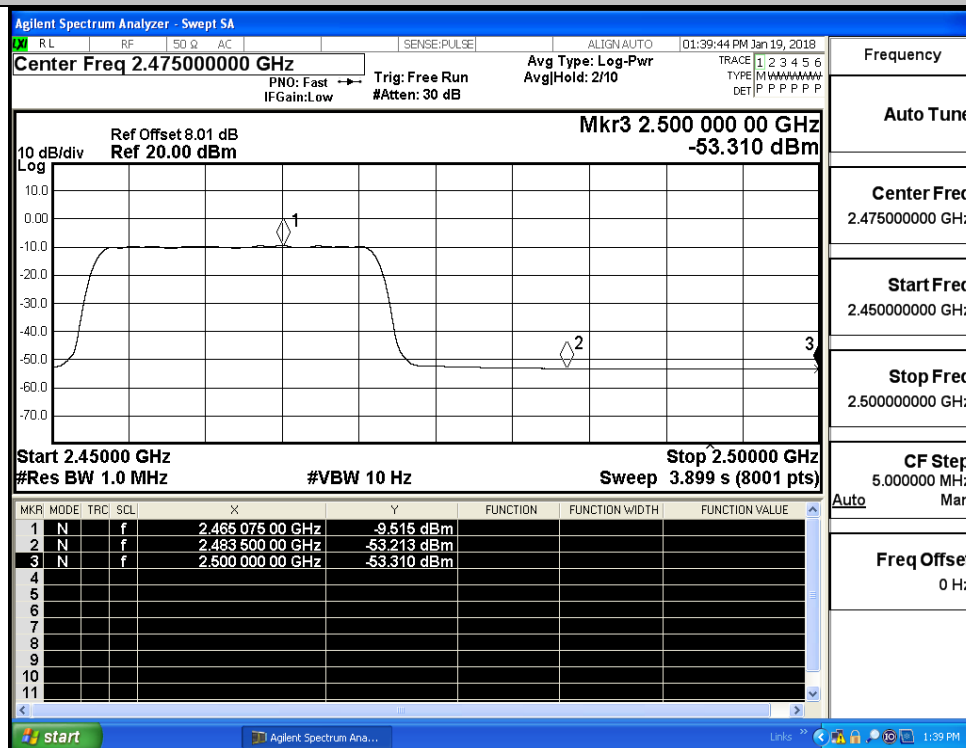
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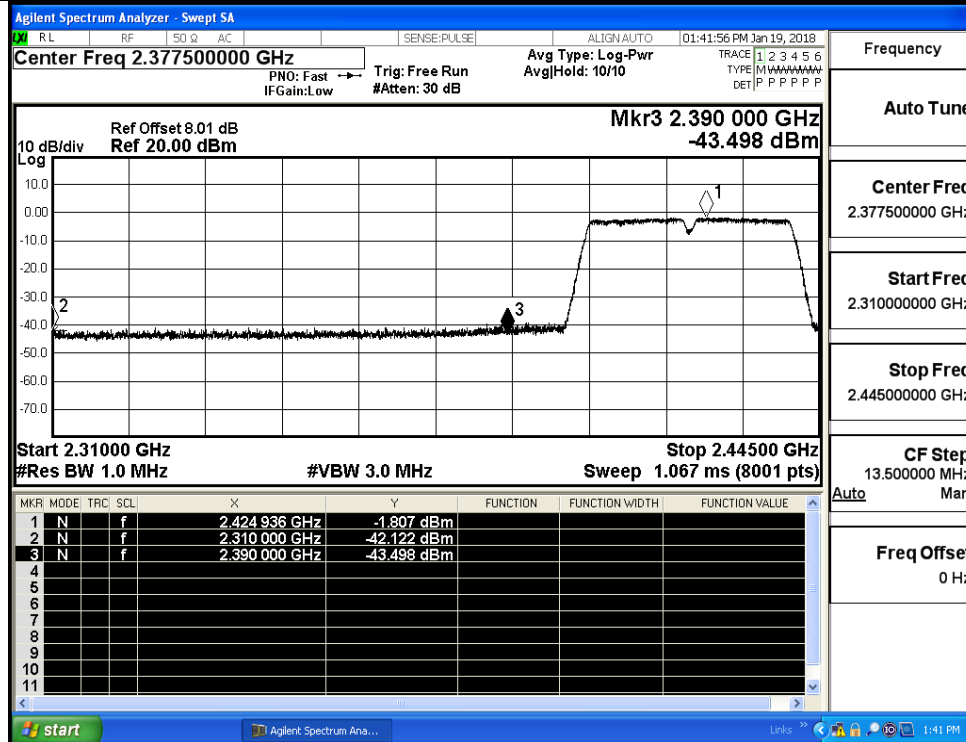
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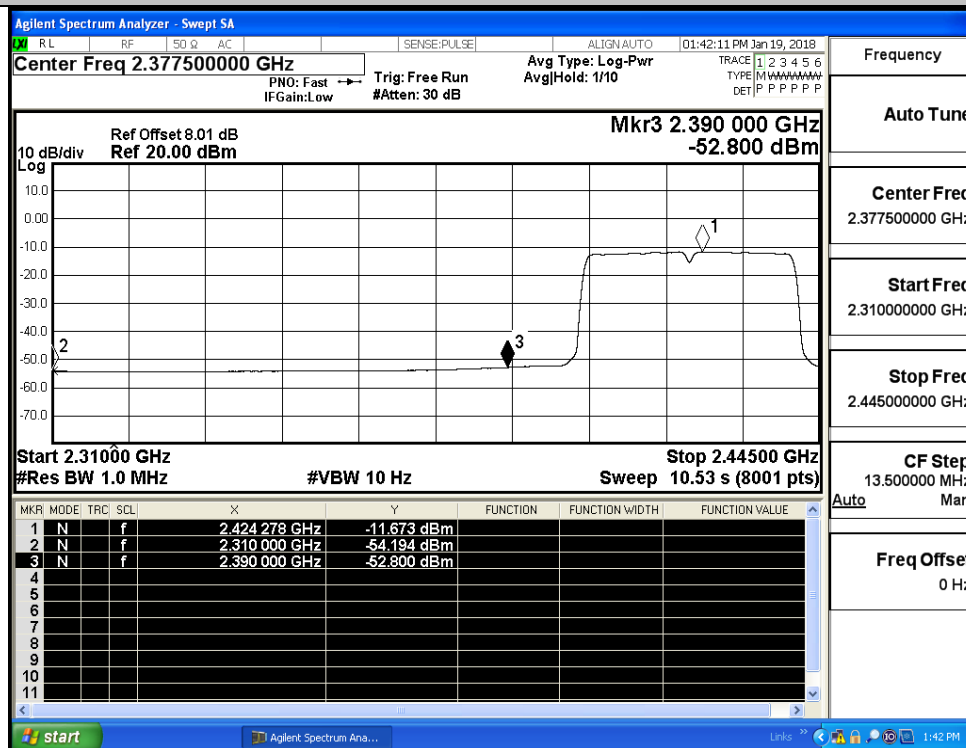
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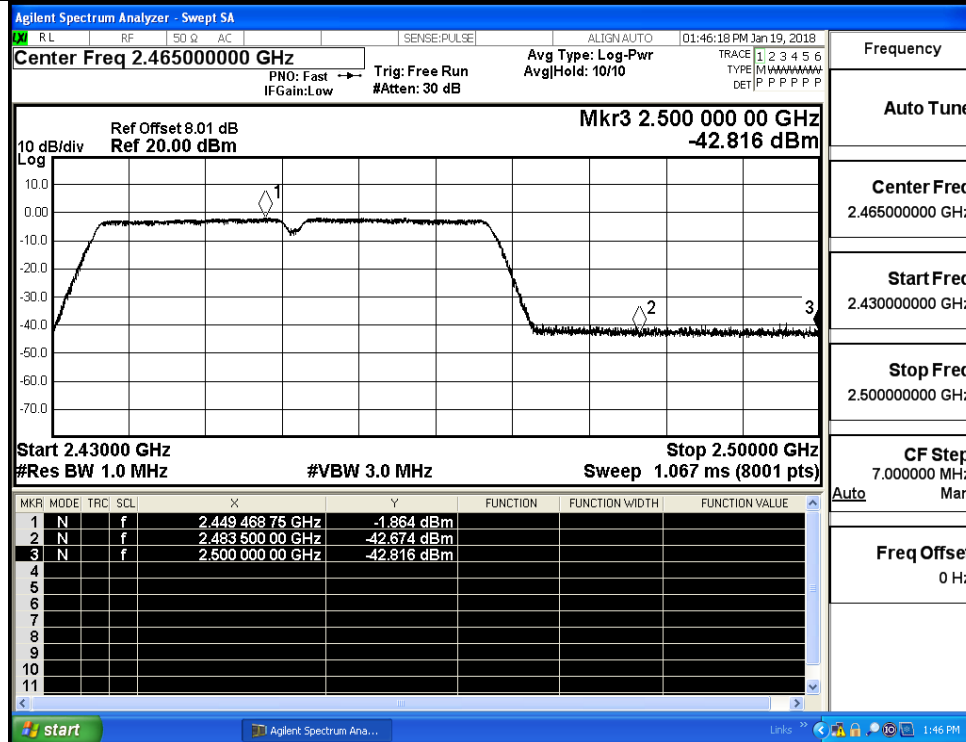
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Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV

