Appendix A
RF Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: LTE smartphone
Trade Mark: N/A

Test Model: HEROSP001

FCC ID: 2AVYL-HEROSP001

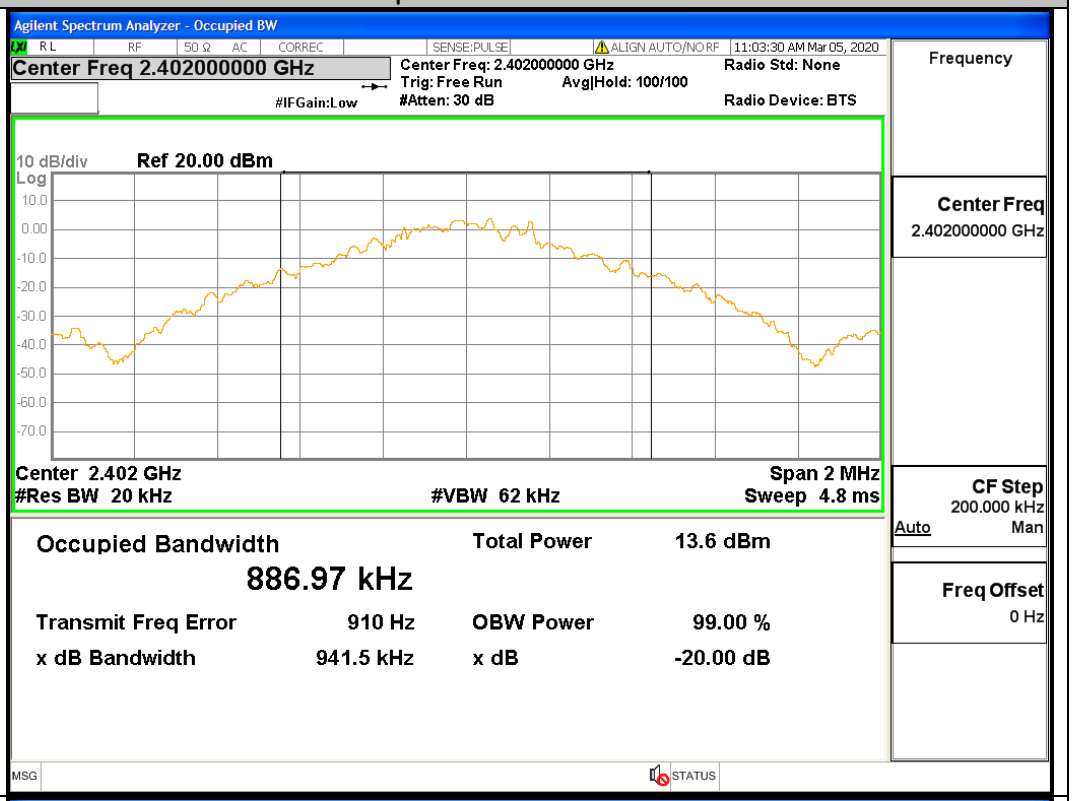
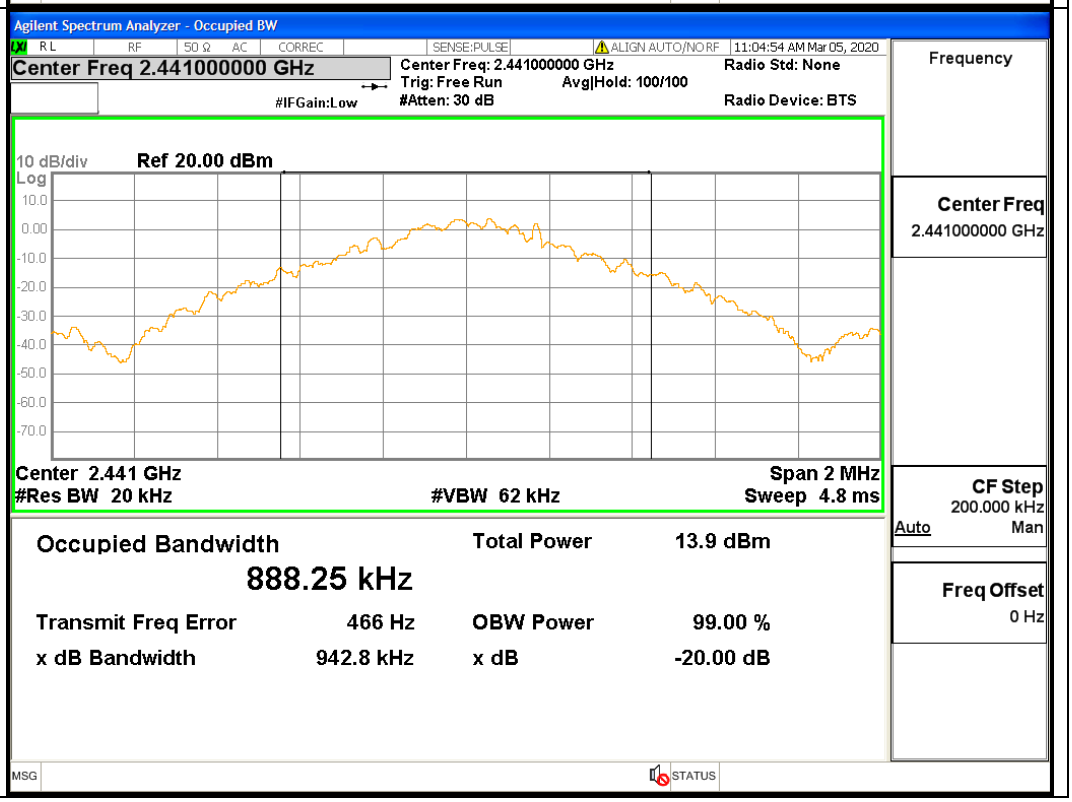
Environmental Conditions

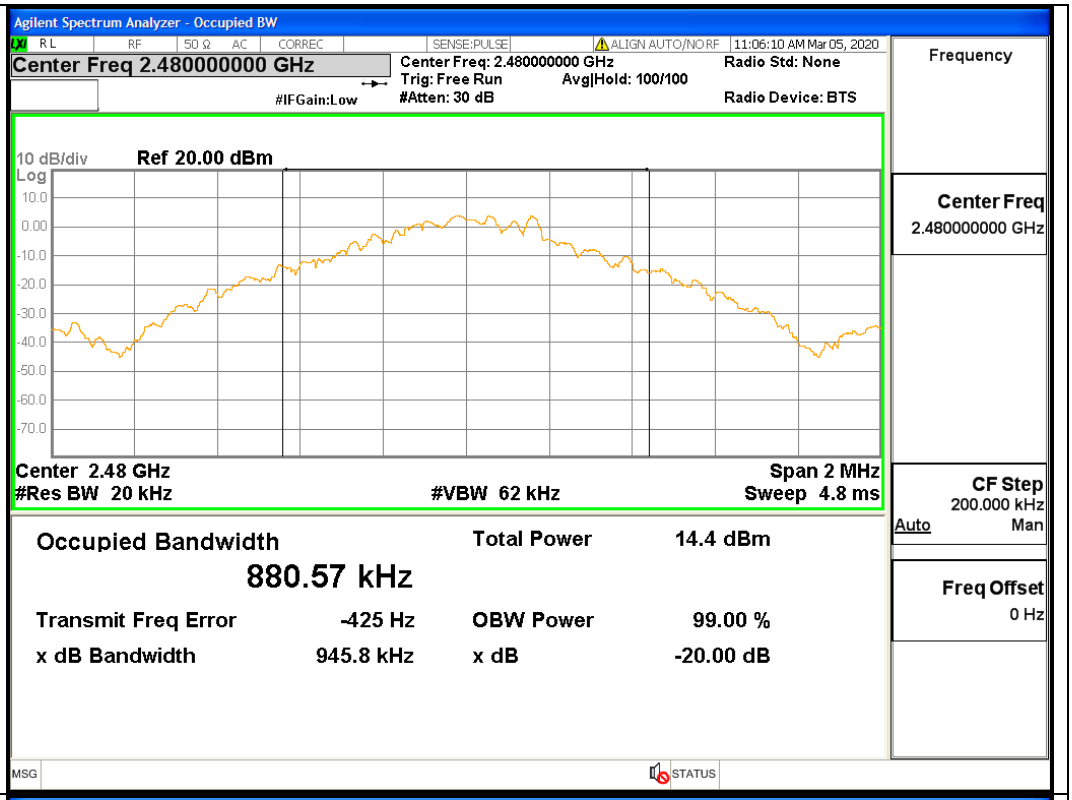
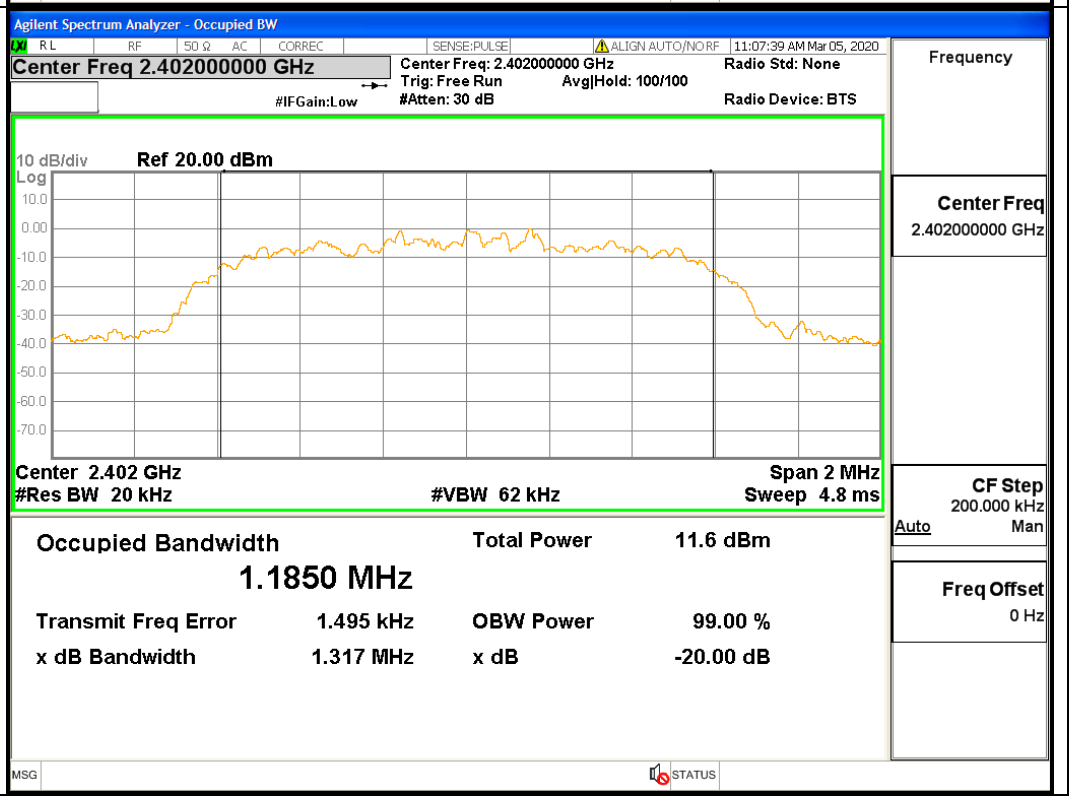
Temperature:	22.8° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

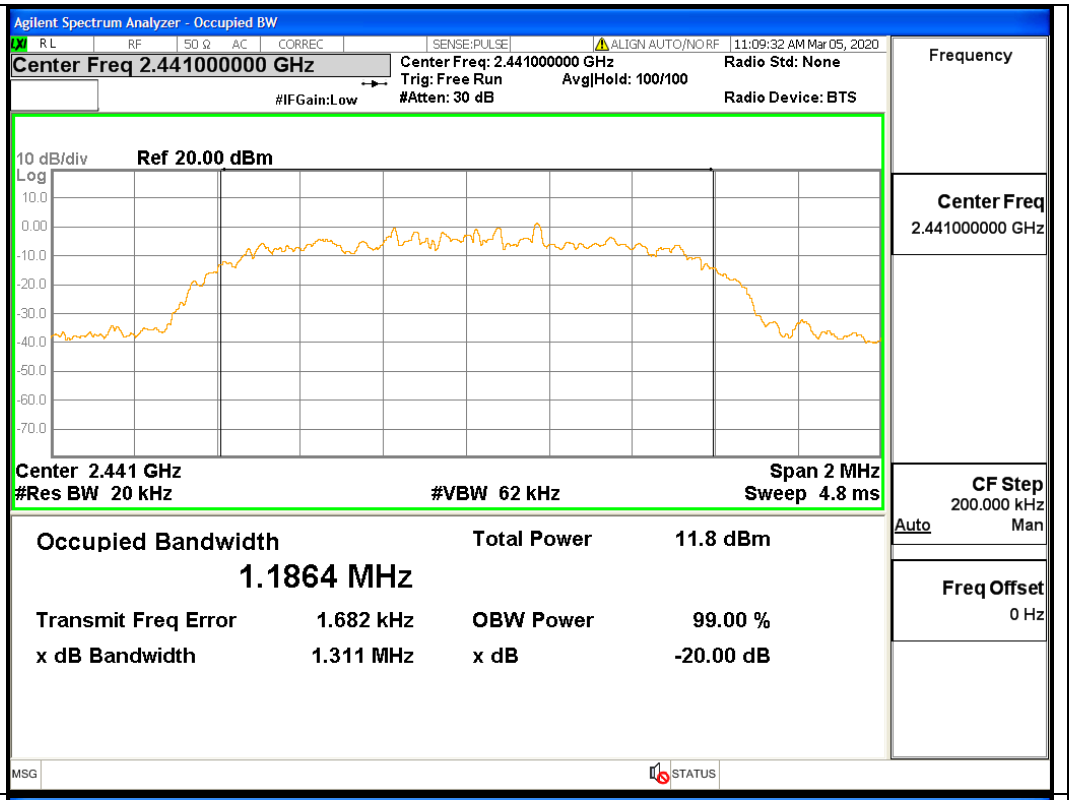
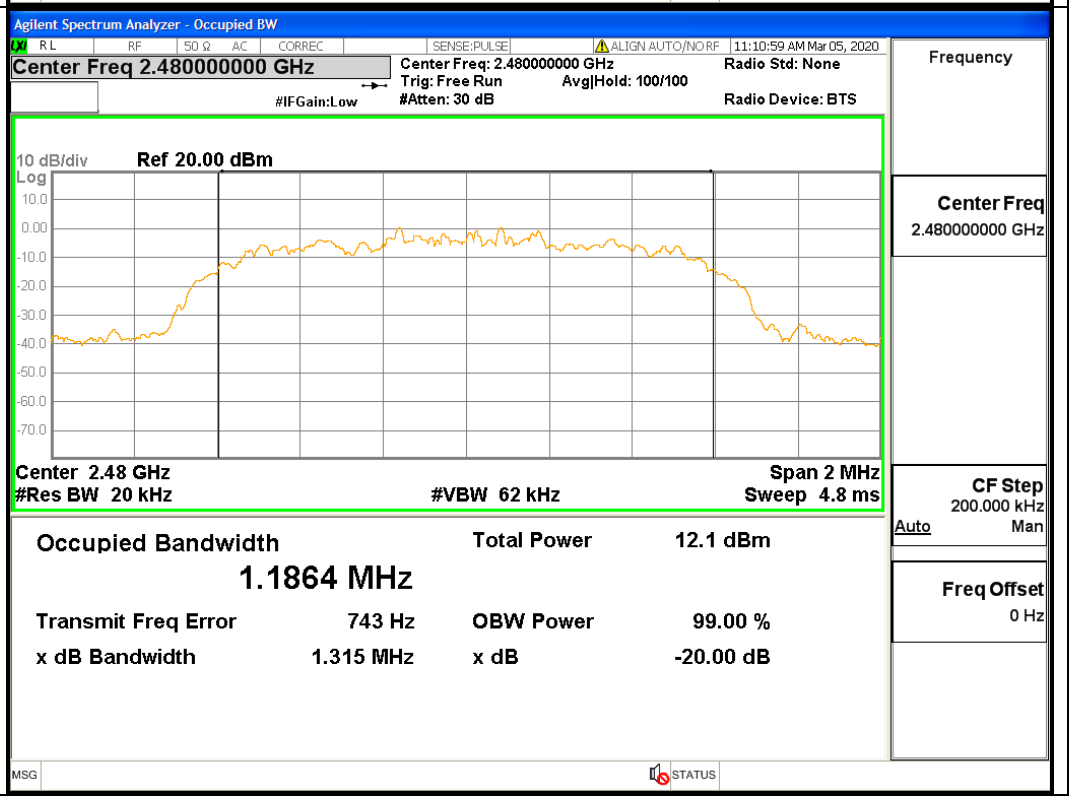
A.1 20 dB Bandwidth

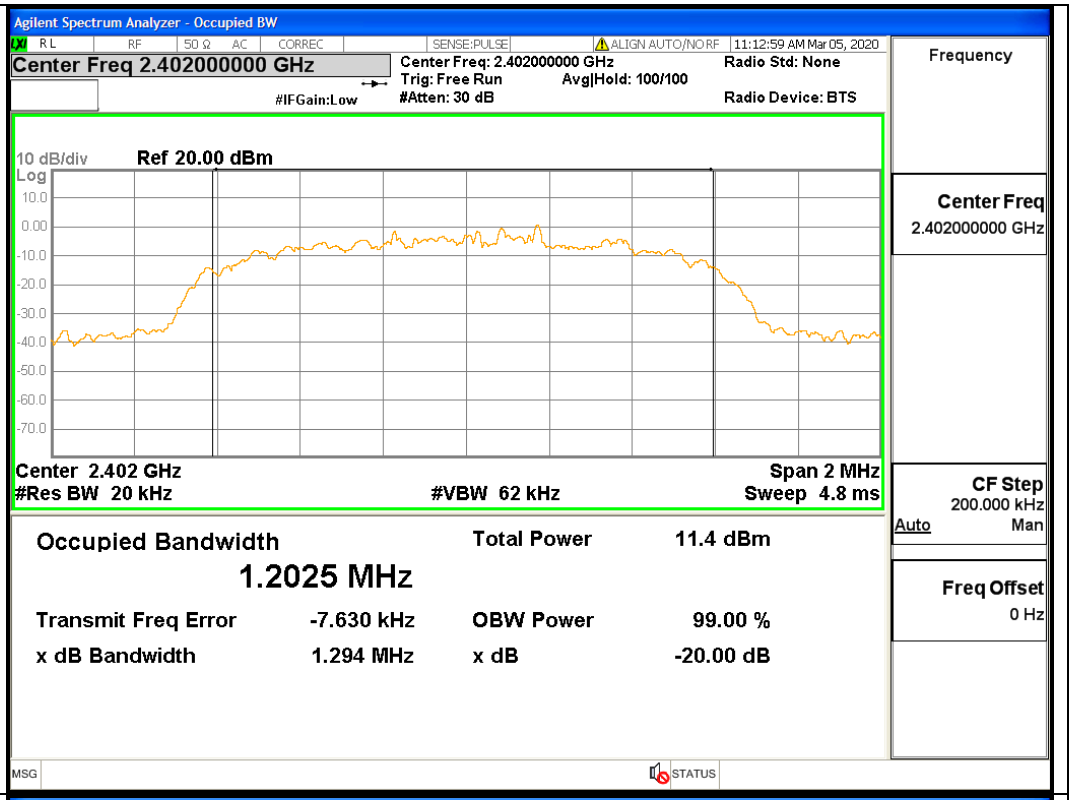
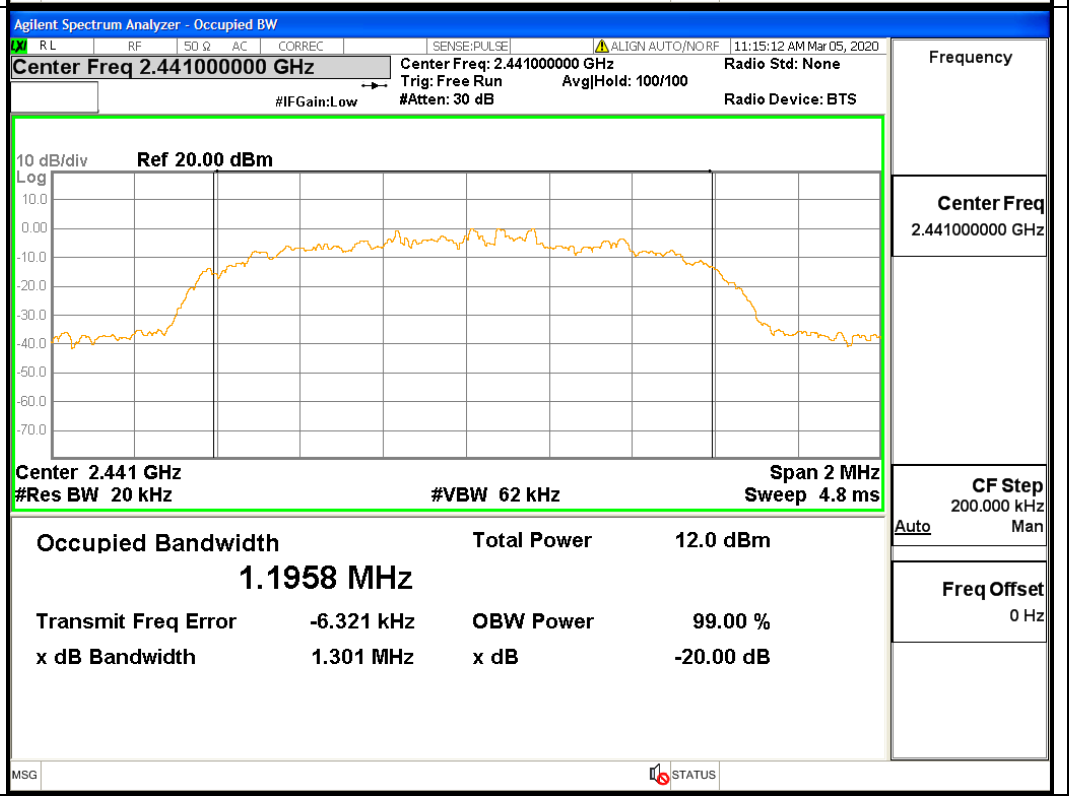
Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.942	Not Specified	PASS
GFSK	MCH	0.943	Not Specified	PASS
GFSK	HCH	0.946	Not Specified	PASS
π/4DQPSK	LCH	1.317	Not Specified	PASS
π/4DQPSK	MCH	1.311	Not Specified	PASS
π/4DQPSK	HCH	1.315	Not Specified	PASS
8DPSK	LCH	1.294	Not Specified	PASS
8DPSK	MCH	1.301	Not Specified	PASS
8DPSK	HCH	1.267	Not Specified	PASS

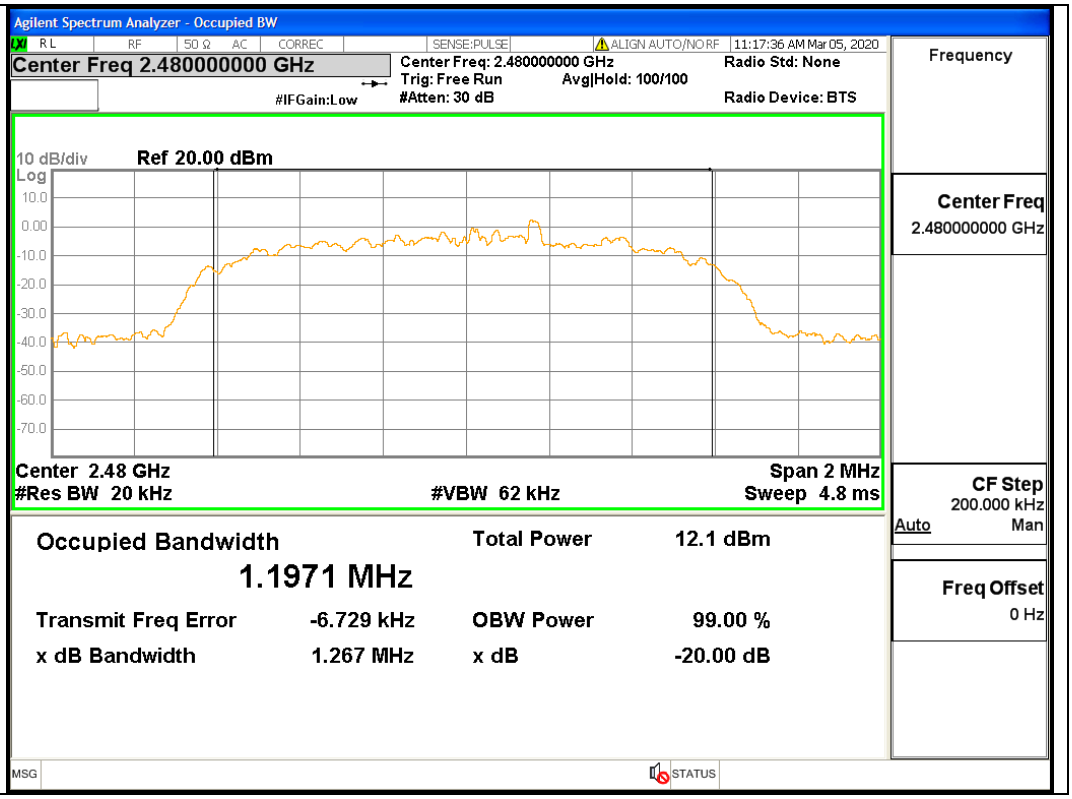
Test Graph

Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

π/4DQPSK/MCH	
π/4DQPSK/HCH	

8DPSK/LCH	
8DPSK/MCH	

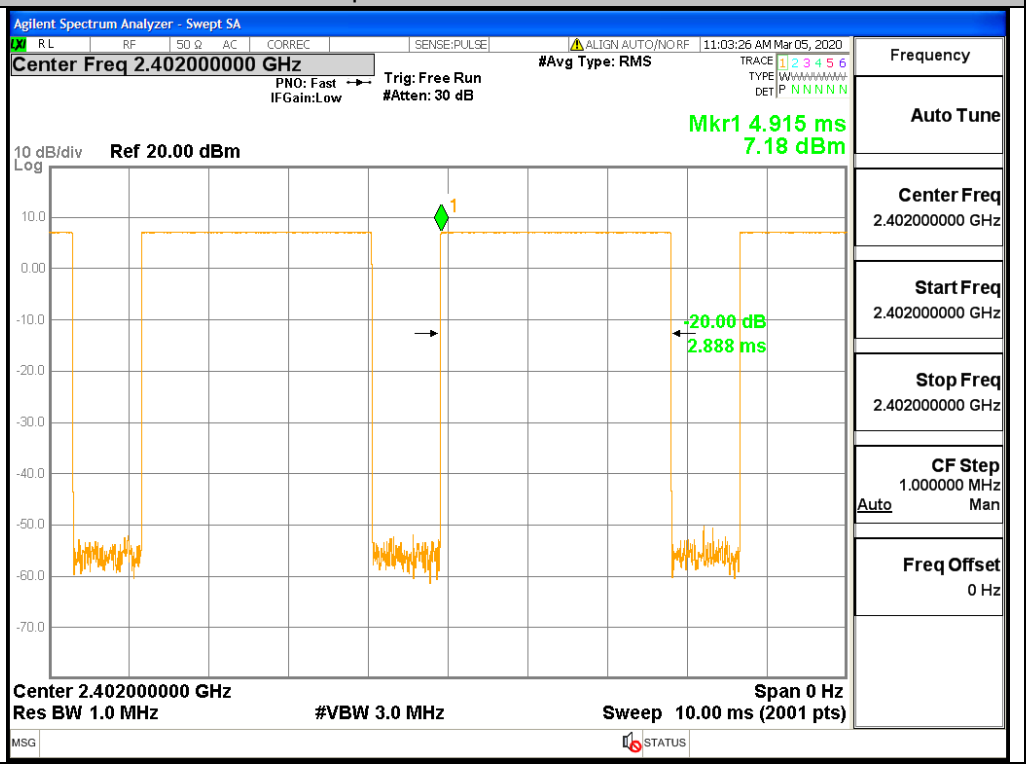
8DPSK/HCH	

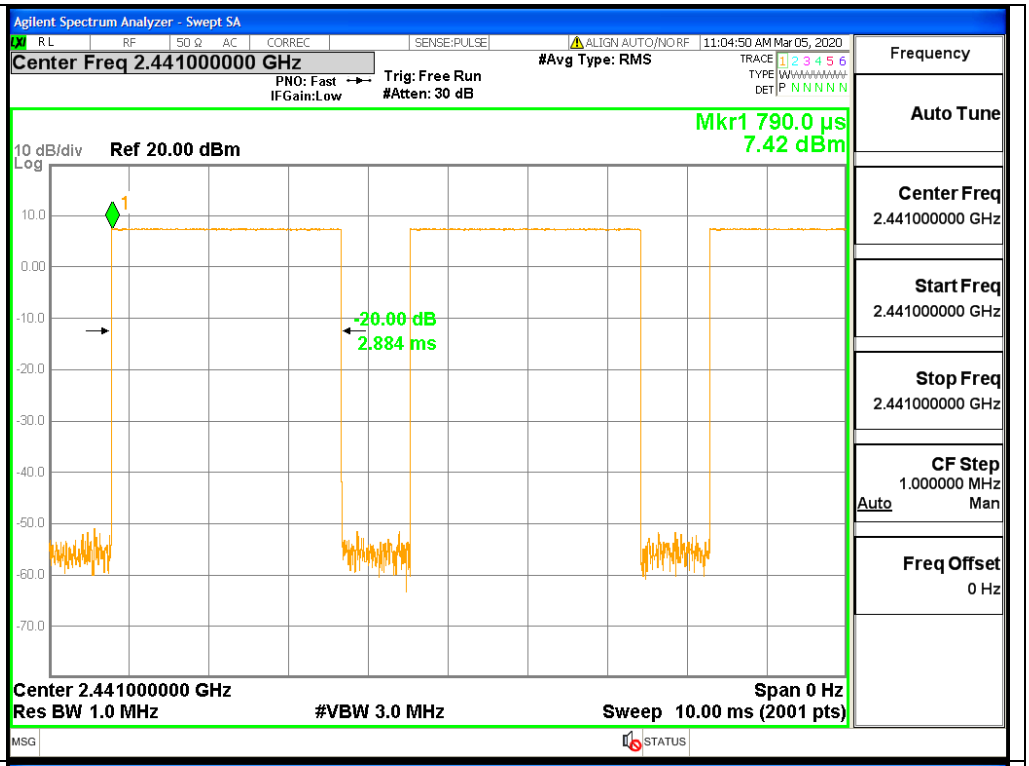
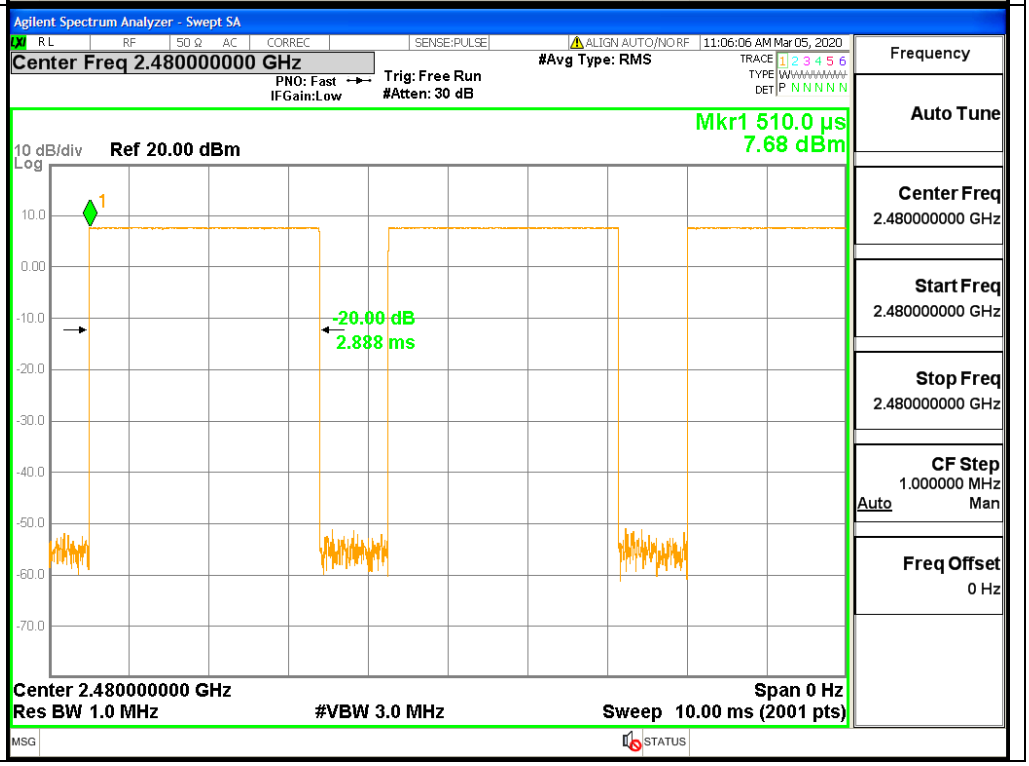
Agilent Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
CORREC
SENSE:PULSE
ALIGN AUTO/NO RF
11:17:36 AM Mar 05, 2020
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center Freq
2.480000000 GHz
Center 2.48 GHz
#Res BW 20 kHz
#VBW 62 kHz
Span 2 MHz
Sweep 4.8 ms
CF Step
200.000 kHz
Auto
Man
Occupied Bandwidth
1.1971 MHz
Total Power
12.1 dBm
Freq Offset
0 Hz
Transmit Freq Error
-6.729 kHz
OBW Power
99.00 %
x dB Bandwidth
1.267 MHz
x dB
-20.00 dB
MSG
STATUS

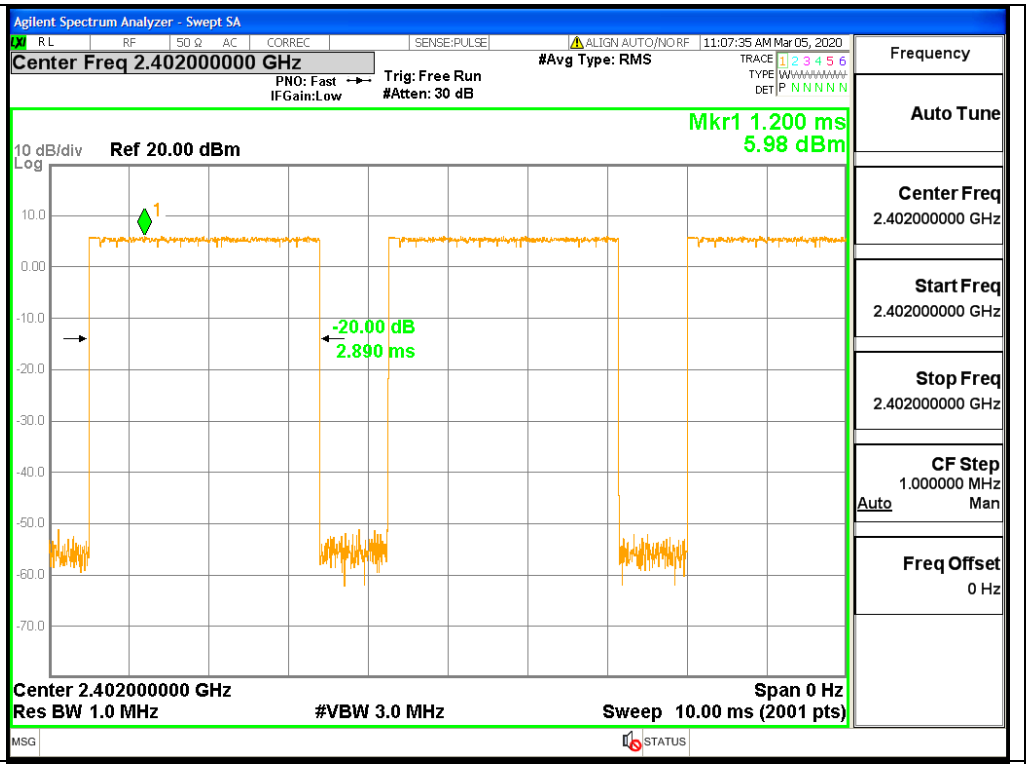
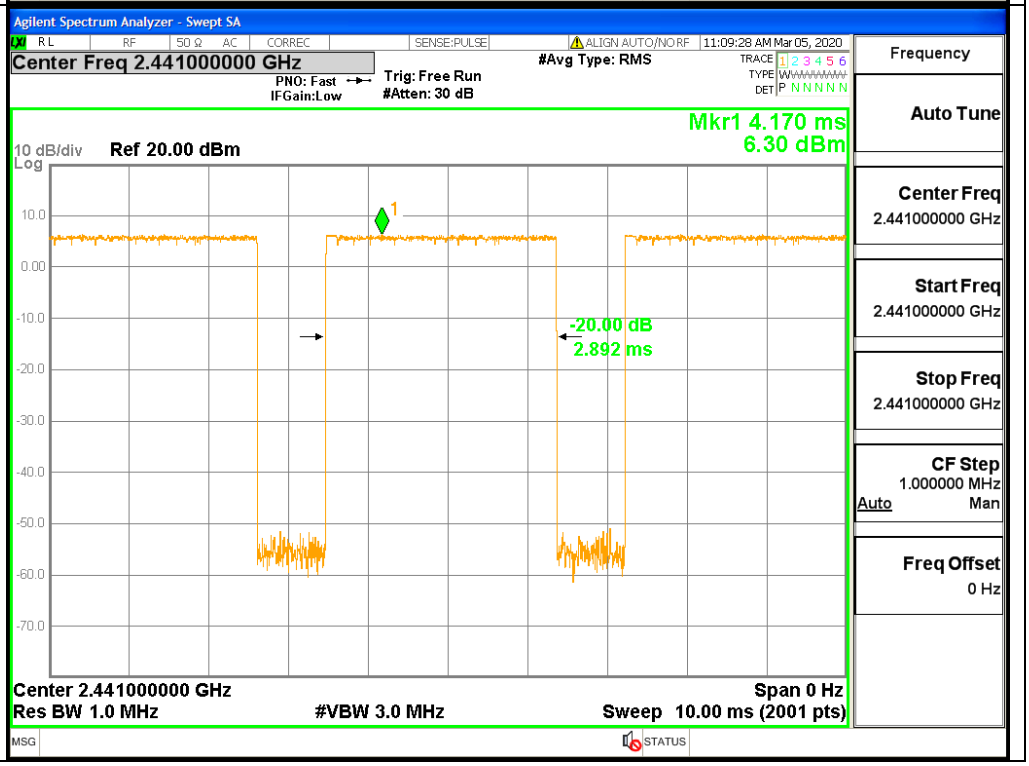
A.2 Dwell Time

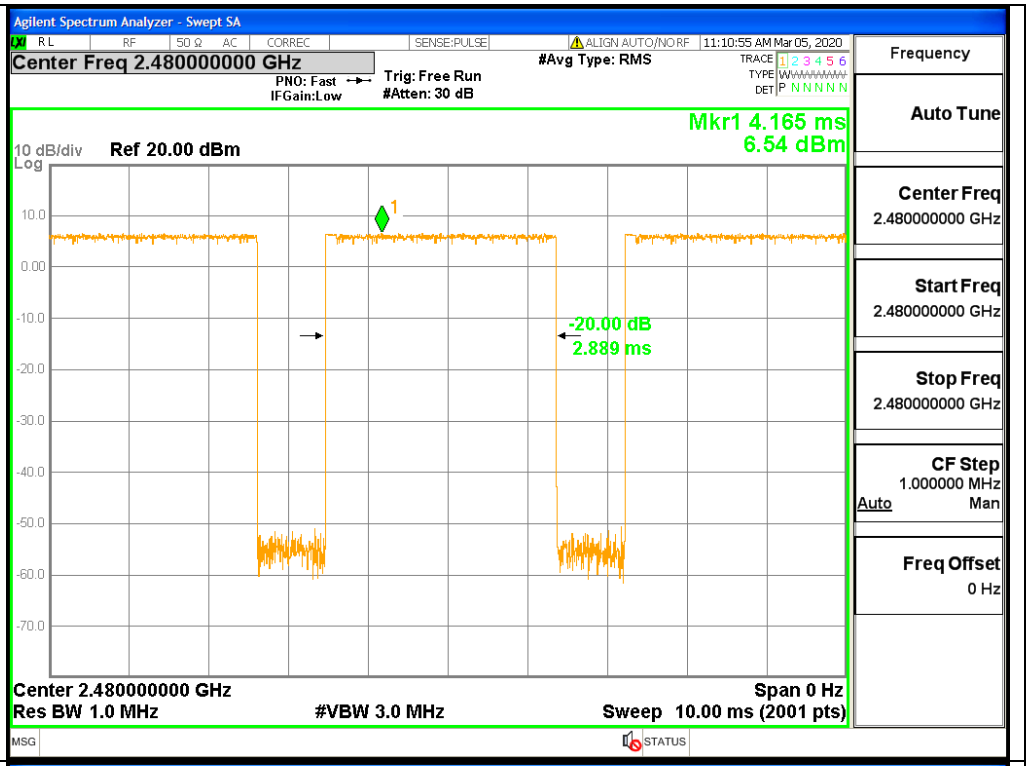
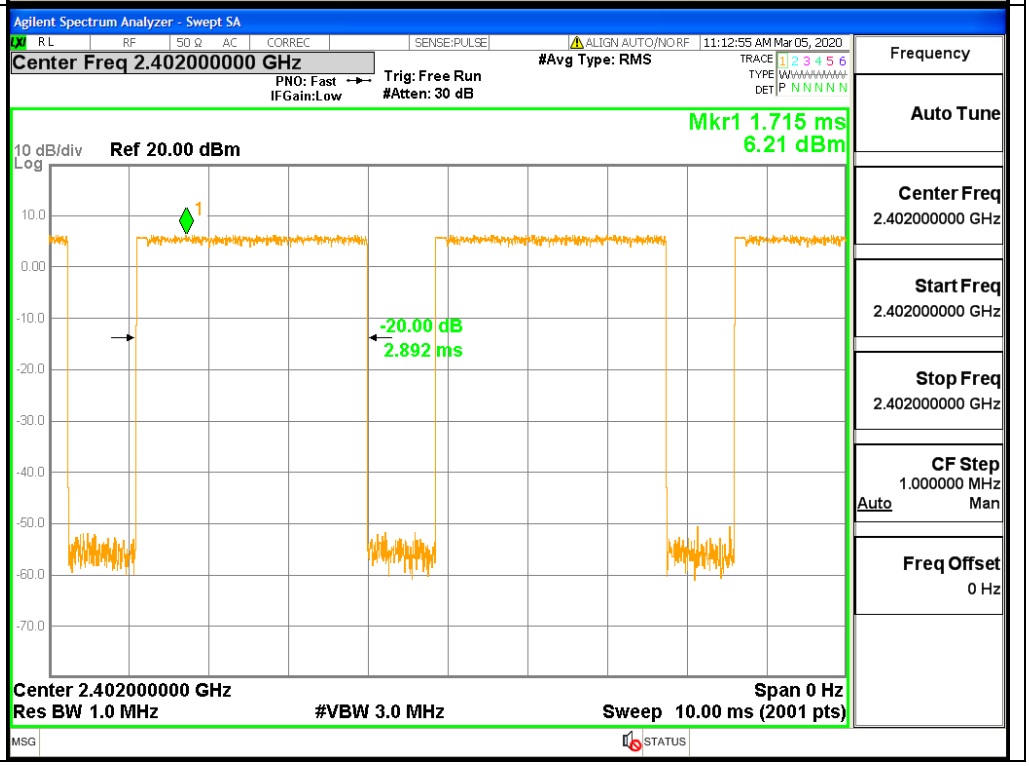
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.888	106.7	0.308	0.4	PASS
GFSK	DH5	MCH	2.884	106.7	0.308	0.4	PASS
GFSK	DH5	HCH	2.888	106.7	0.308	0.4	PASS
π/4DQPSK	2DH5	LCH	2.890	106.7	0.308	0.4	PASS
π/4DQPSK	2DH5	MCH	2.892	106.7	0.309	0.4	PASS
π/4DQPSK	2DH5	HCH	2.889	106.7	0.308	0.4	PASS
8DPSK	3DH5	LCH	2.892	106.7	0.309	0.4	PASS
8DPSK	3DH5	MCH	2.892	106.7	0.309	0.4	PASS
8DPSK	3DH5	HCH	2.892	106.7	0.309	0.4	PASS

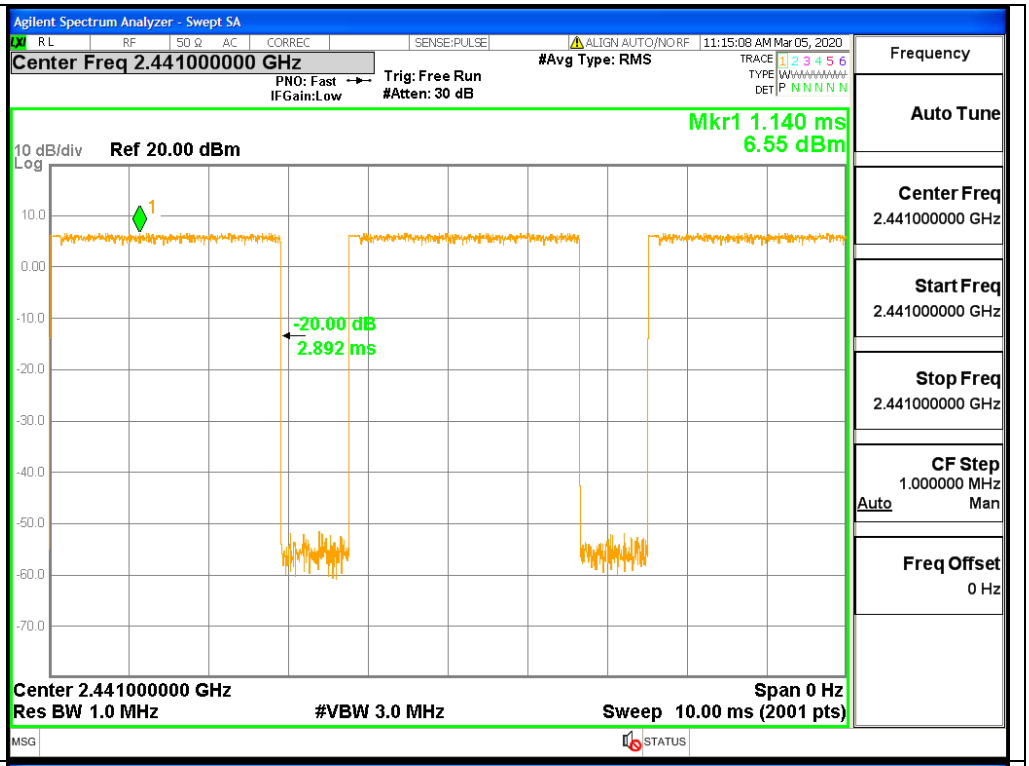
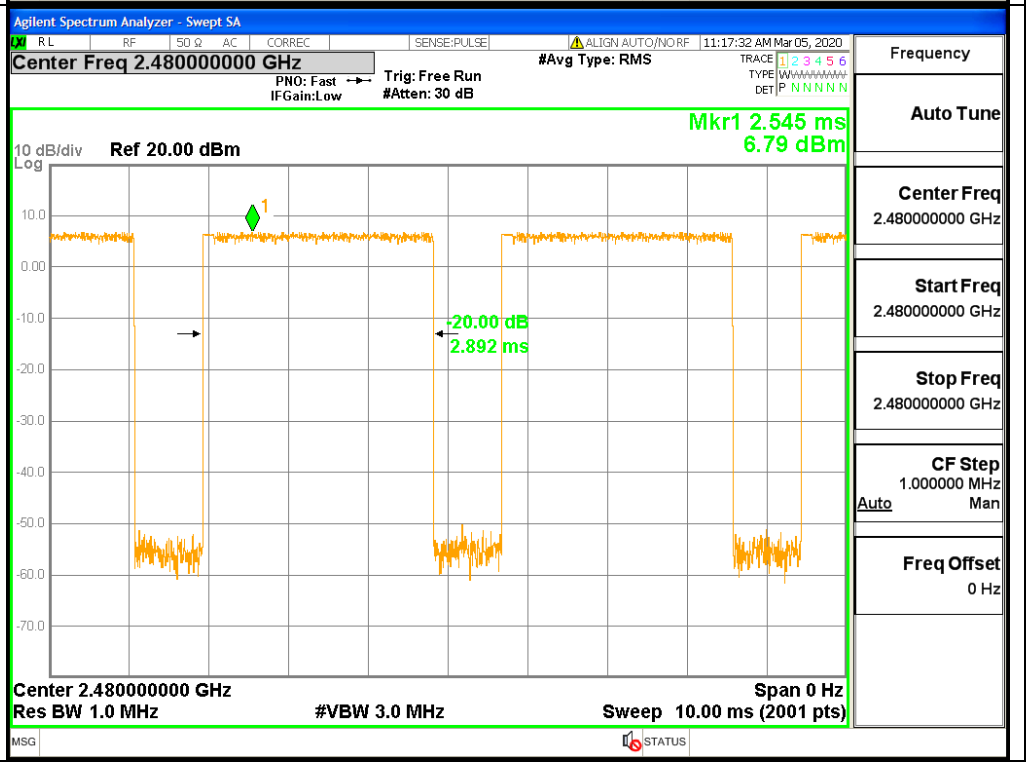
Test Graph

Graphs	
GFSK_DH5/LCH	

GFSK_DH5/MCH	
GFSK_DH5/HCH	

π/4DQPSK _2DH5/LCH	
π/4DQPSK _2DH5/MCH	

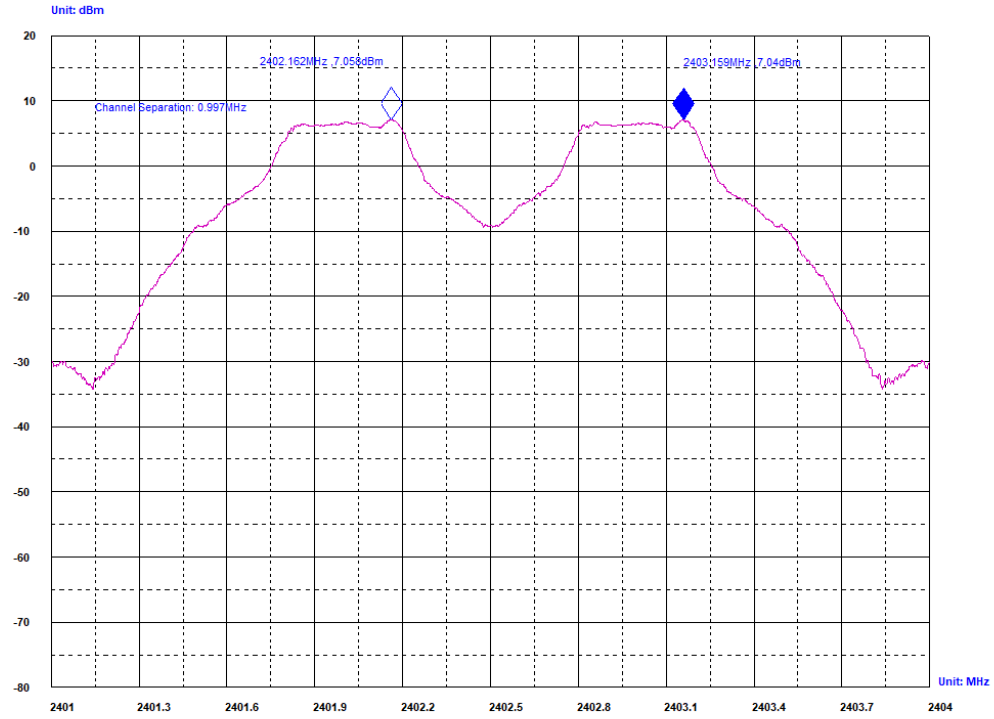
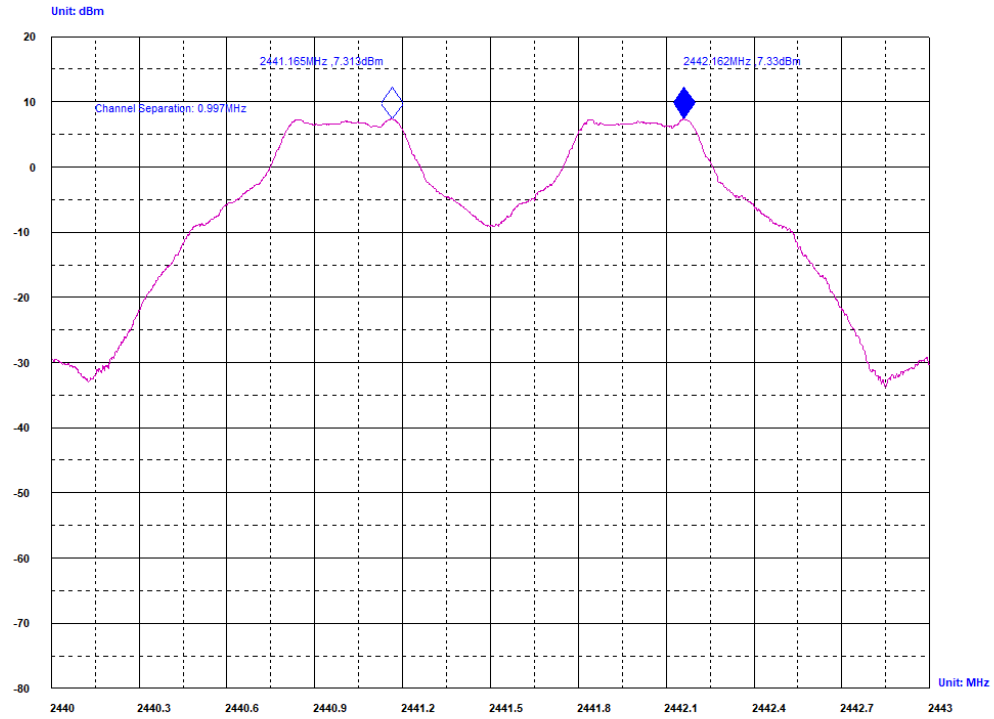
π/4DQPSK _2DH5/HCH	
8DPSK _3DH5/LCH	

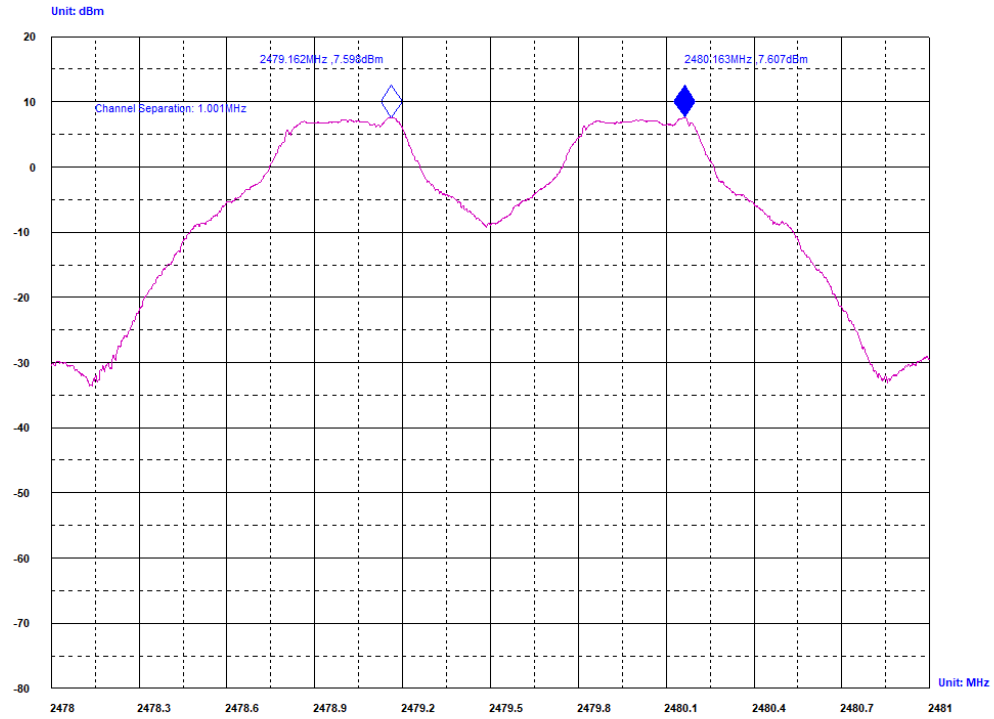
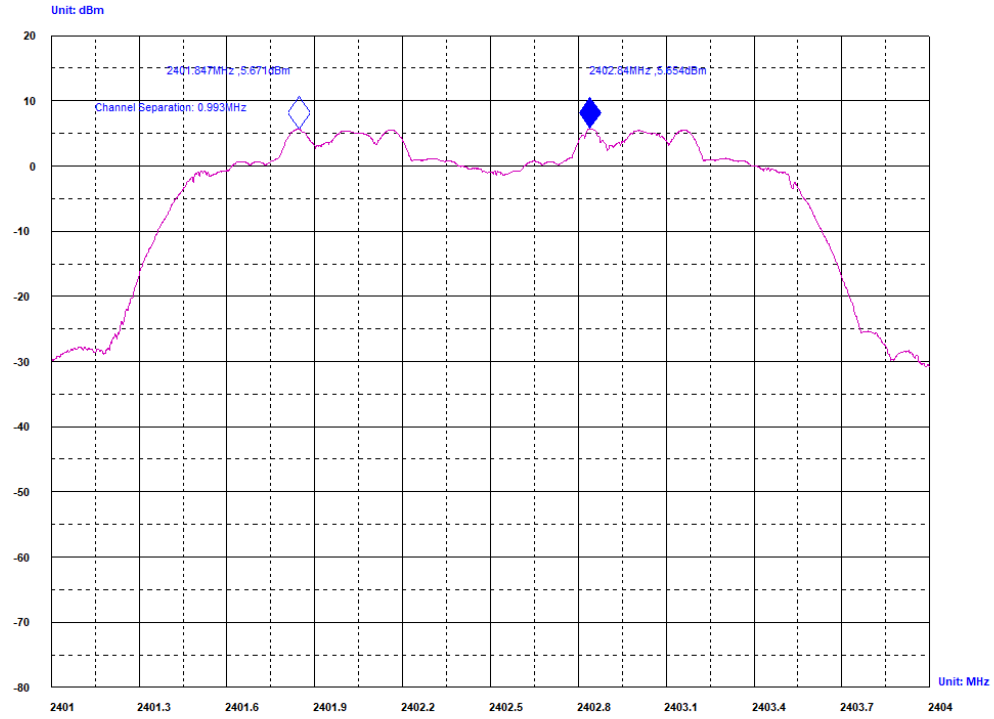
8DPSK _3DH5/MCH	
8DPSK _3DH5/HCH	

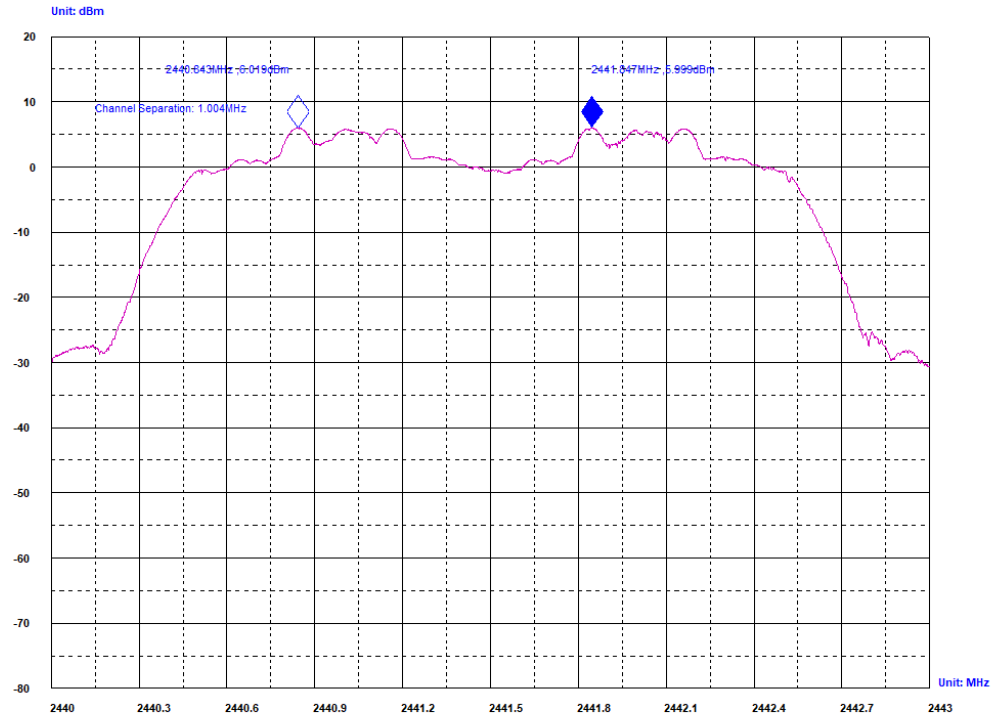
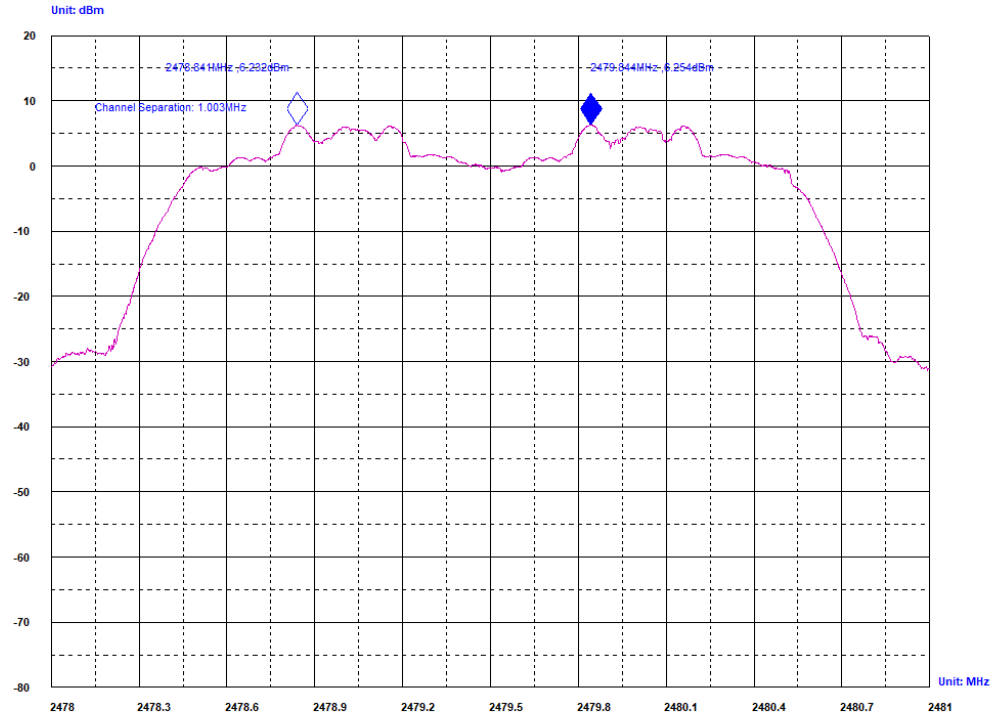
A.3 Carrier Frequency Separation

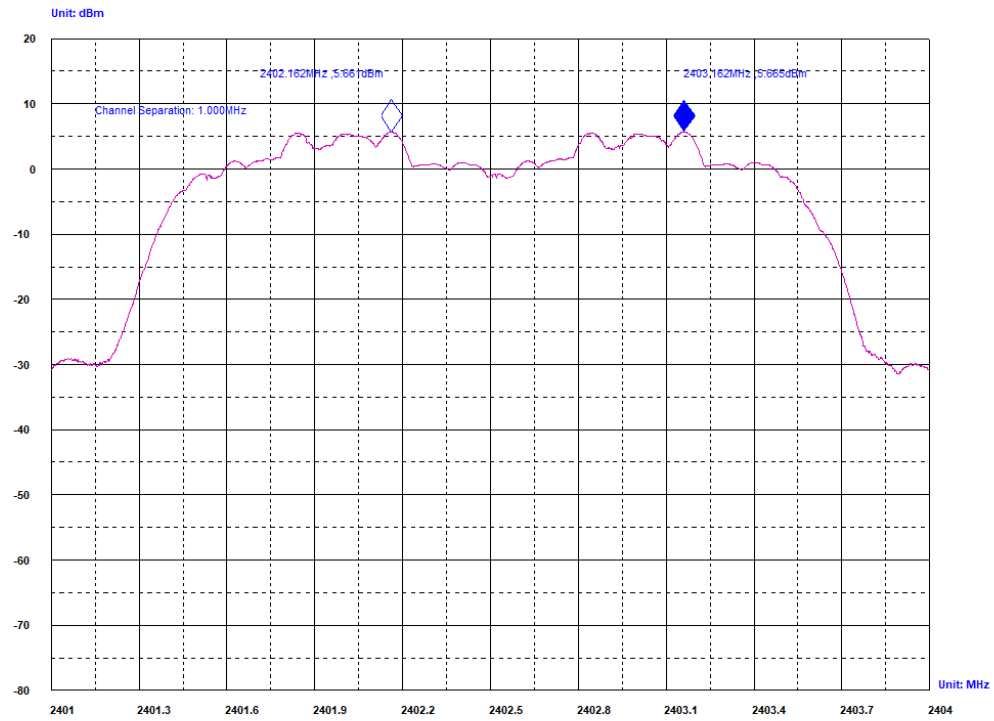
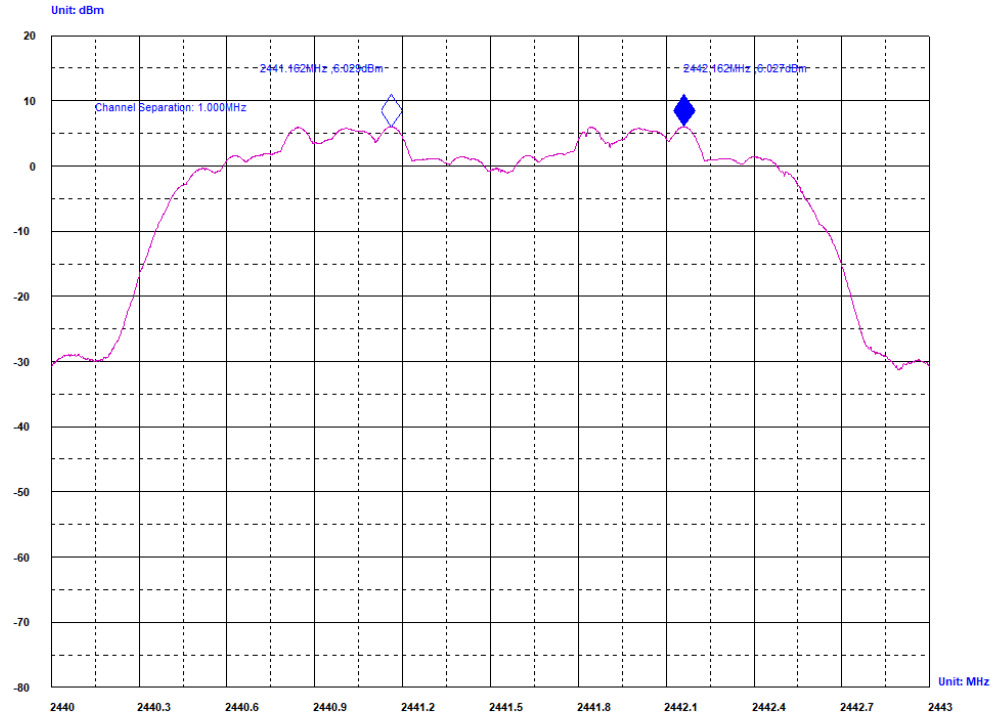
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.997	0.627	PASS
GFSK	MCH	0.997	0.629	PASS
GFSK	HCH	1.001	0.631	PASS
π/4DQPSK	LCH	0.993	0.878	PASS
π/4DQPSK	MCH	1.004	0.874	PASS
π/4DQPSK	HCH	1.003	0.877	PASS
8DPSK	LCH	1.000	0.863	PASS
8DPSK	MCH	1.000	0.867	PASS
8DPSK	HCH	0.999	0.845	PASS

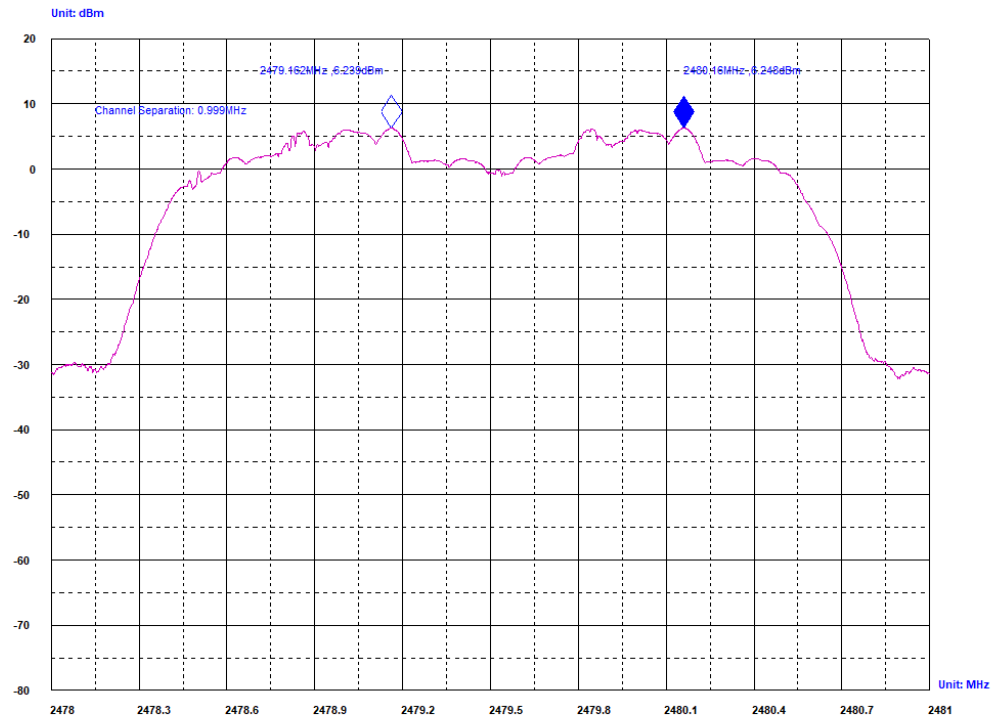
Test Graph

Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

π/4DQPSK/MCH	
π/4DQPSK/HCH	

8DPSK/LCH	
8DPSK/MCH	

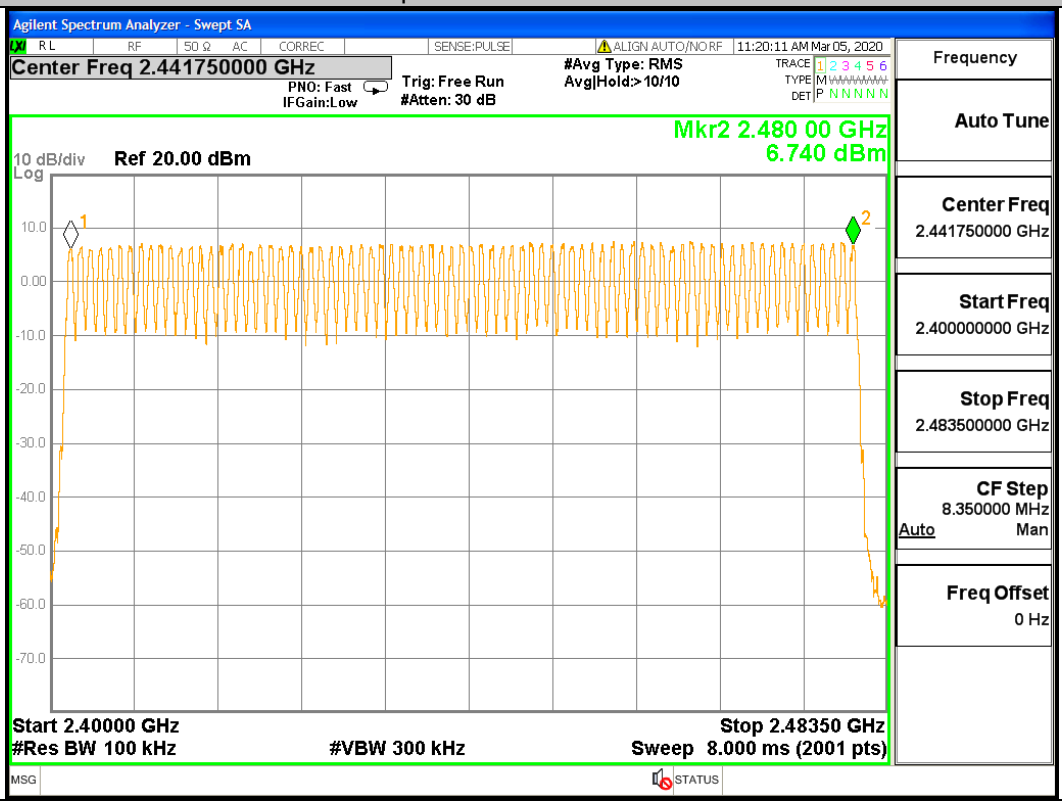
8DPSK/HCH	

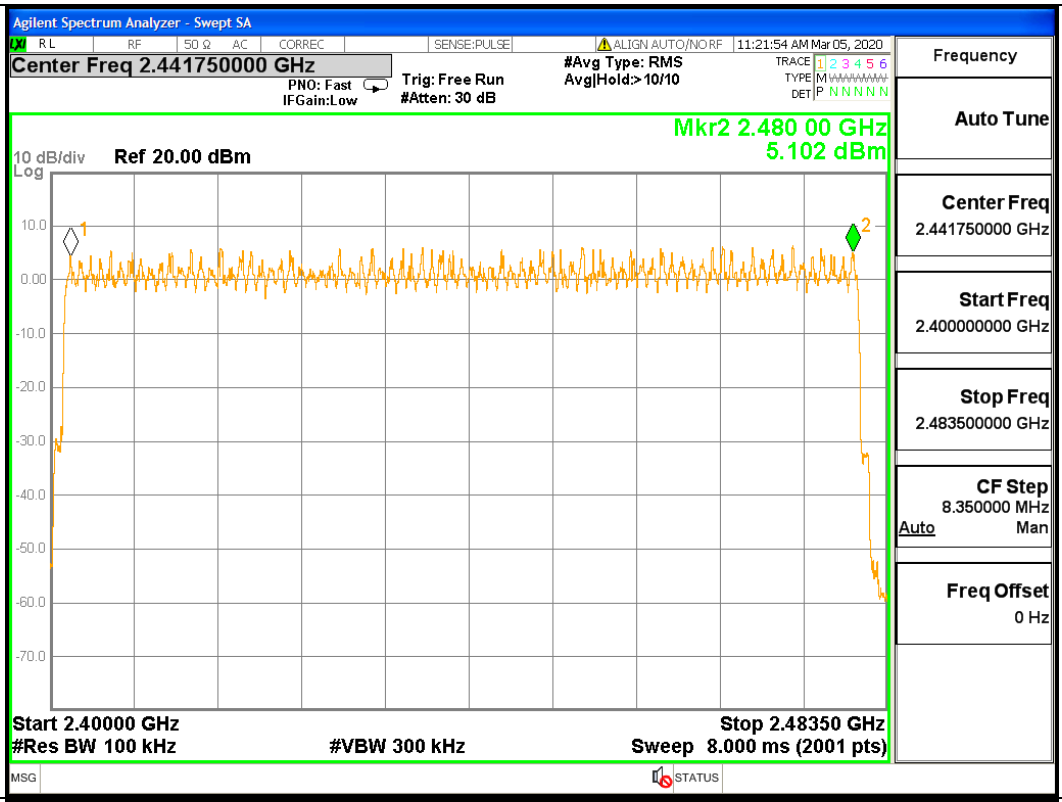
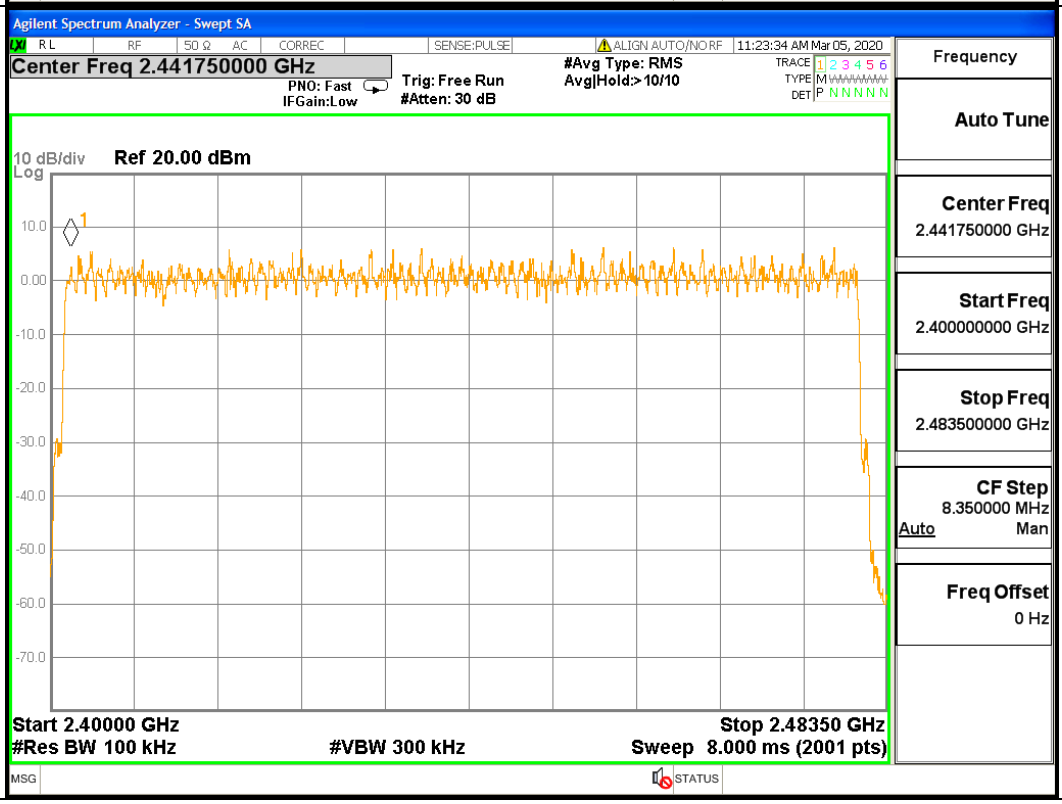
Unit: dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2479.162MHz -6.239dBm
2480.161MHz -6.248dBm
Channel Separation: 0.999MHz
2478
2478.3
2478.6
2478.9
2479.2
2479.5
2479.8
2480.1
2480.4
2480.7
2481
Unit: MHz

A.4 Hopping Channel Number

Mode	Channel.	Number of Hopping Channel[N]	Limit[N]	Verdict
GFSK	Hop	79	>=15	PASS
π/4DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graph

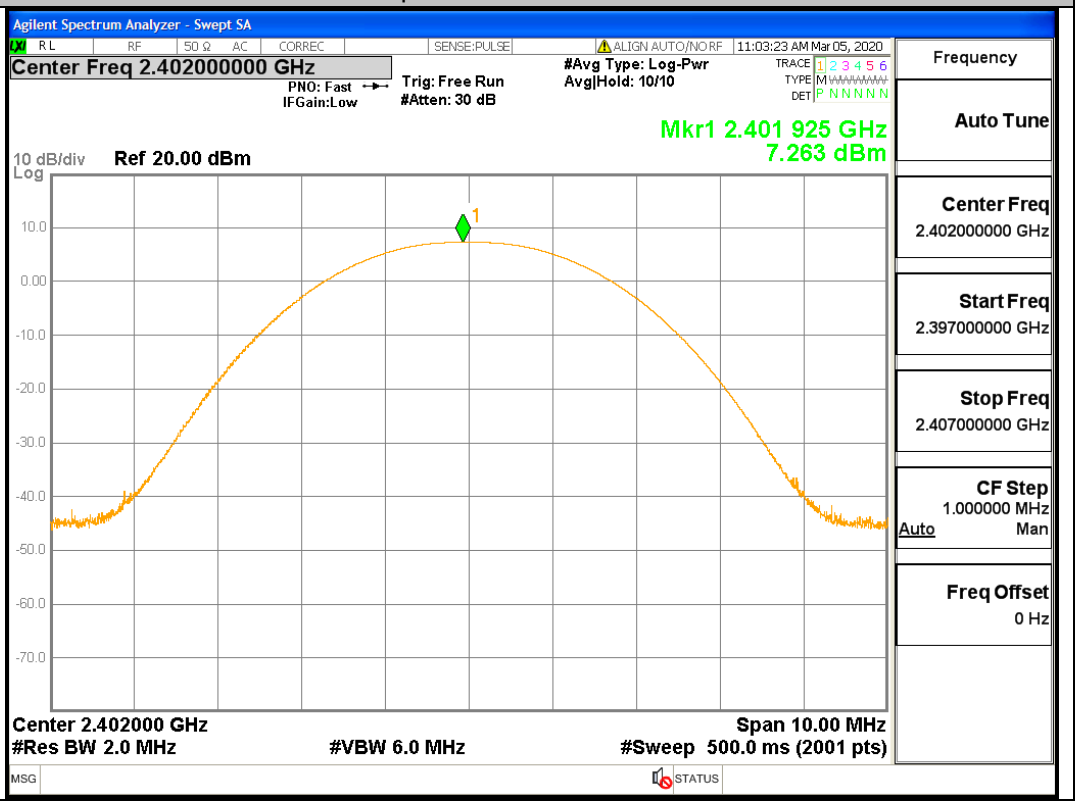
Graphs	
GFSK/Hop	

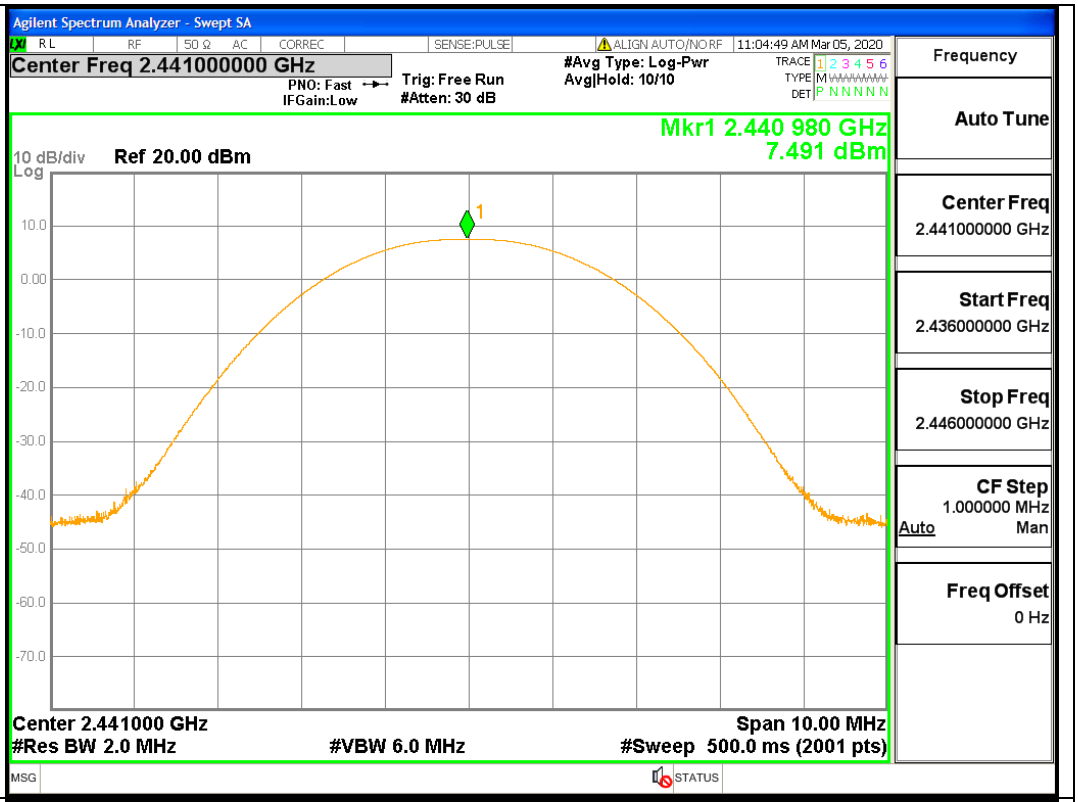
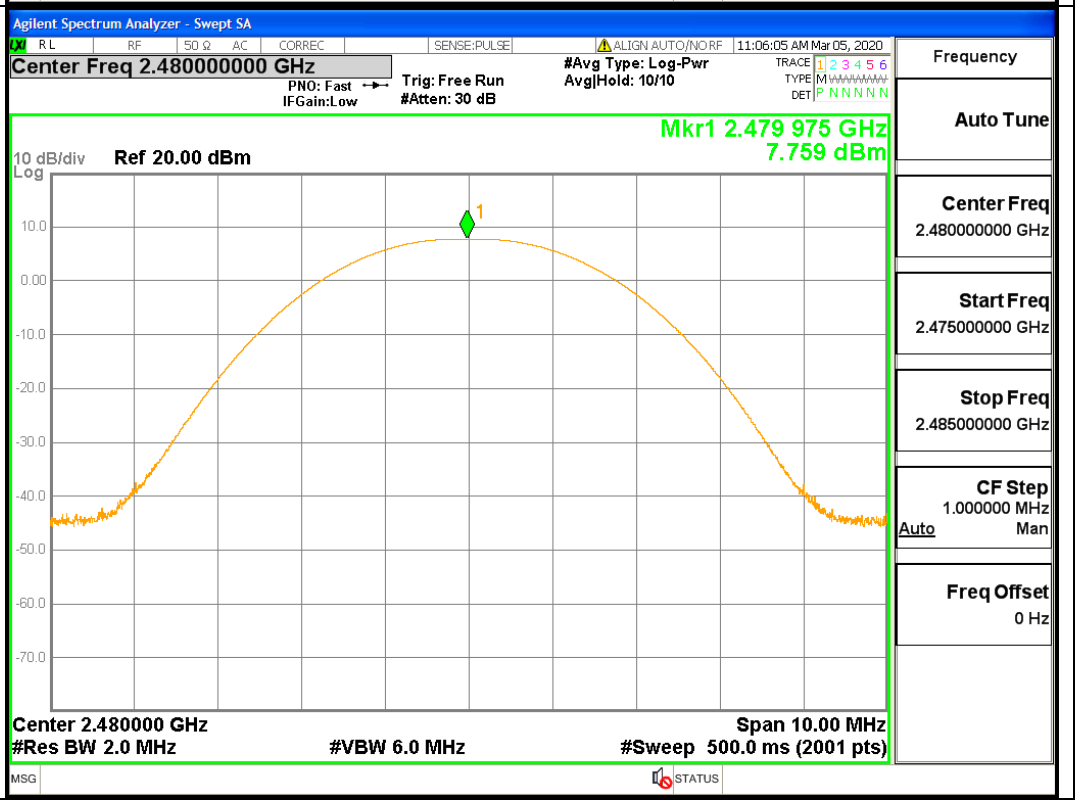
π/4DQPSK/Hop	
8DPSK/Hop	

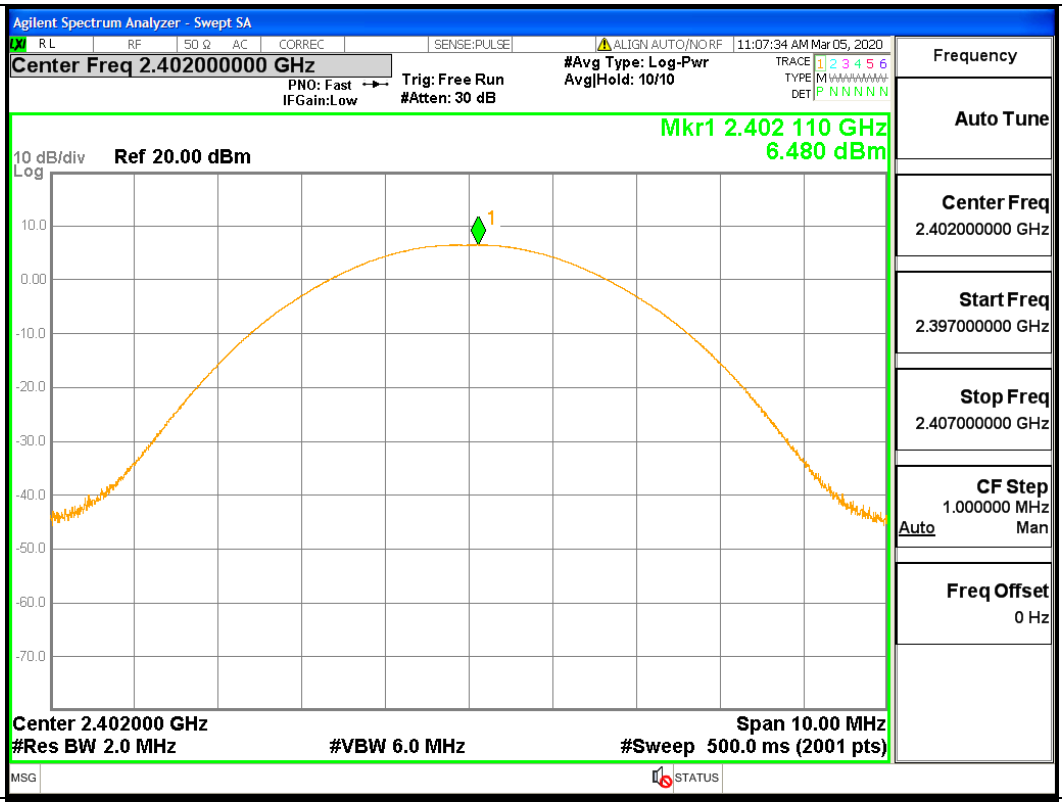
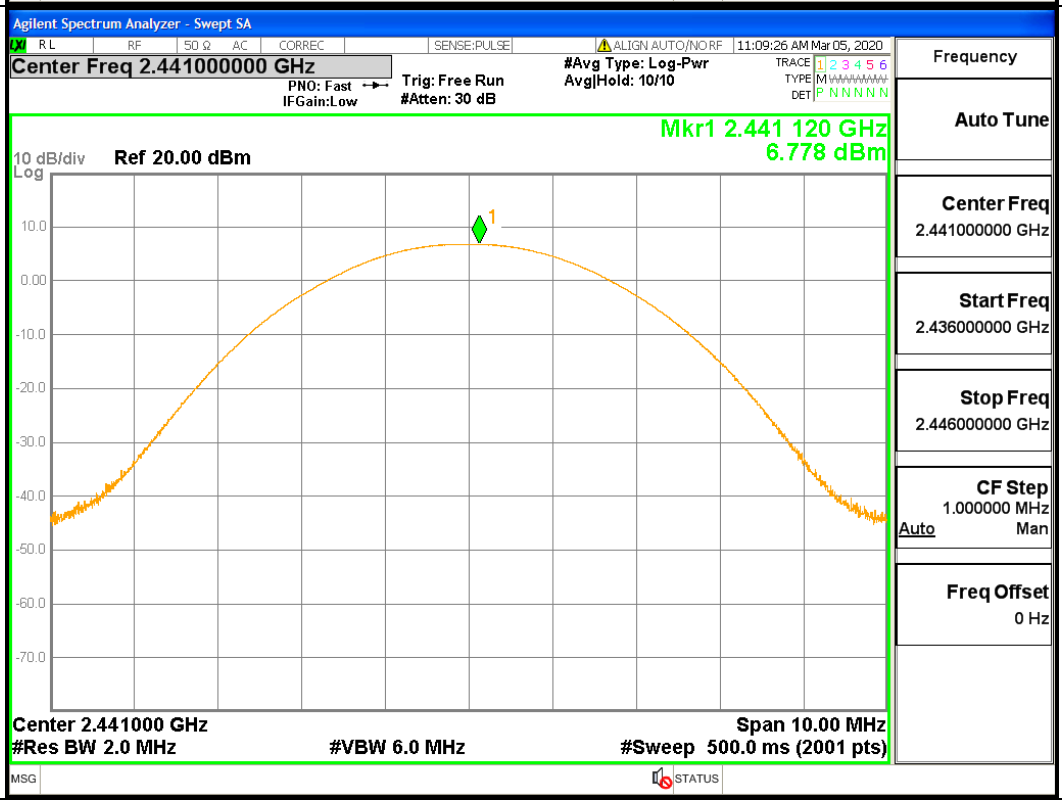
A.5 Conducted Peak Output Power

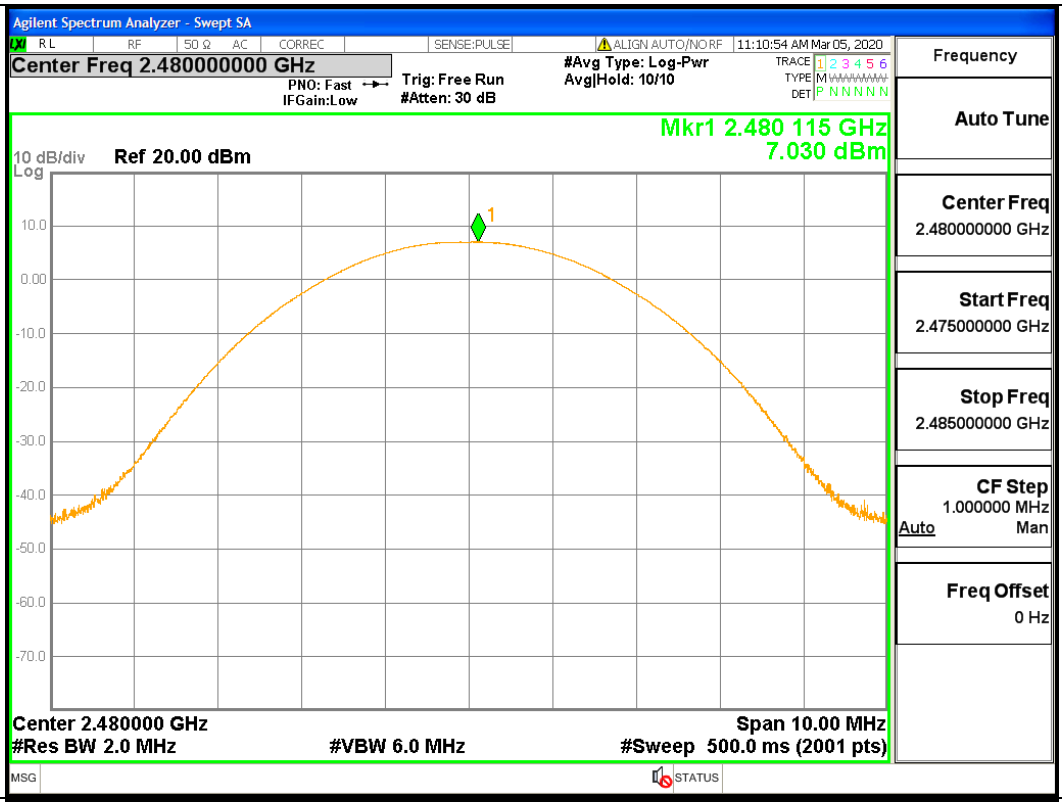
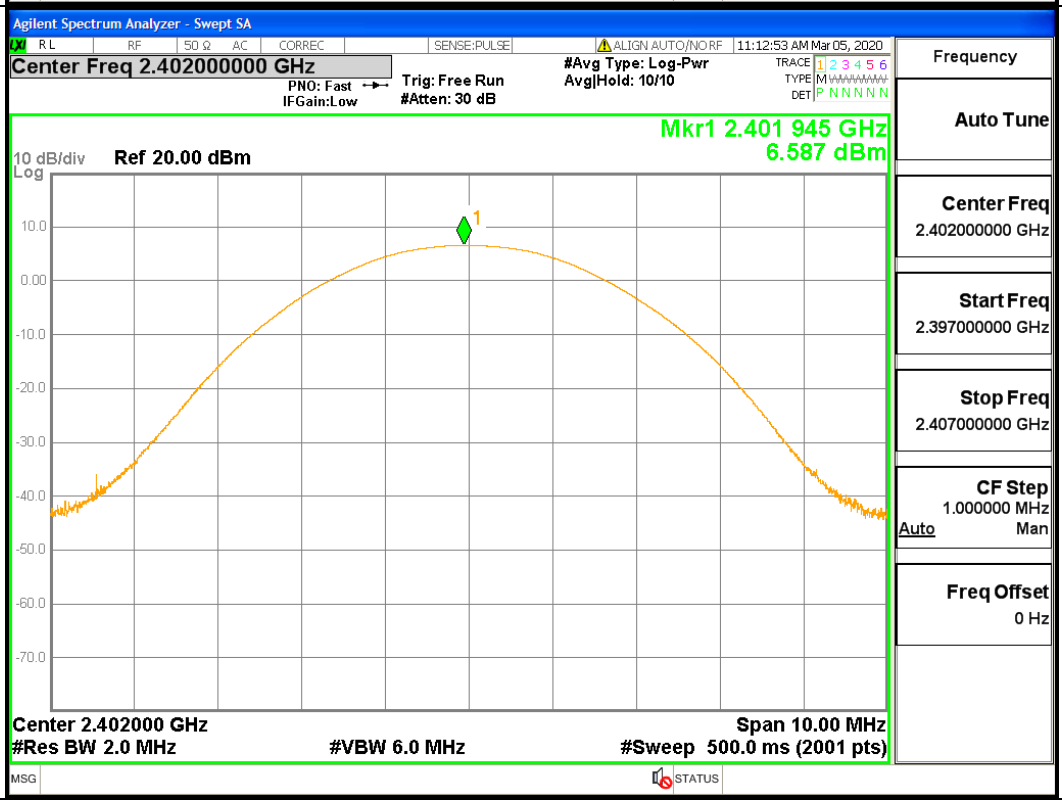
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	7.263	21	PASS
GFSK	MCH	7.491	21	PASS
GFSK	HCH	7.759	21	PASS
π/4DQPSK	LCH	6.480	21	PASS
π/4DQPSK	MCH	6.778	21	PASS
π/4DQPSK	HCH	7.030	21	PASS
8DPSK	LCH	6.587	21	PASS
8DPSK	MCH	6.900	21	PASS
8DPSK	HCH	7.156	21	PASS

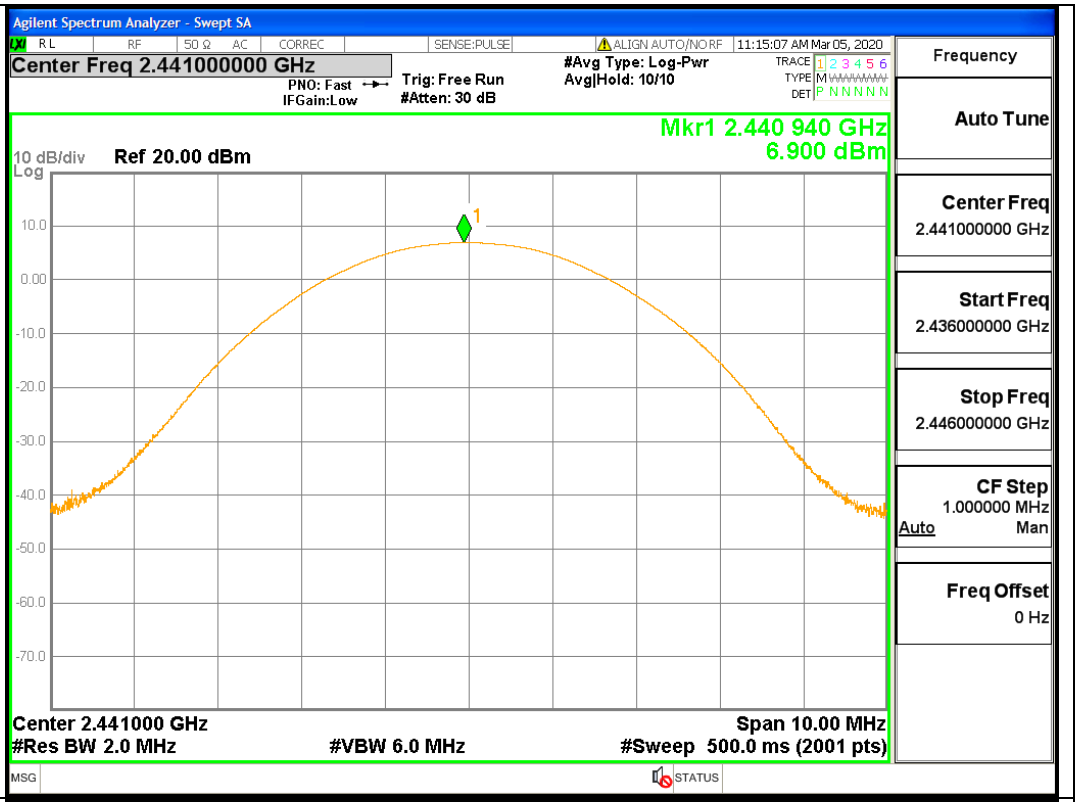
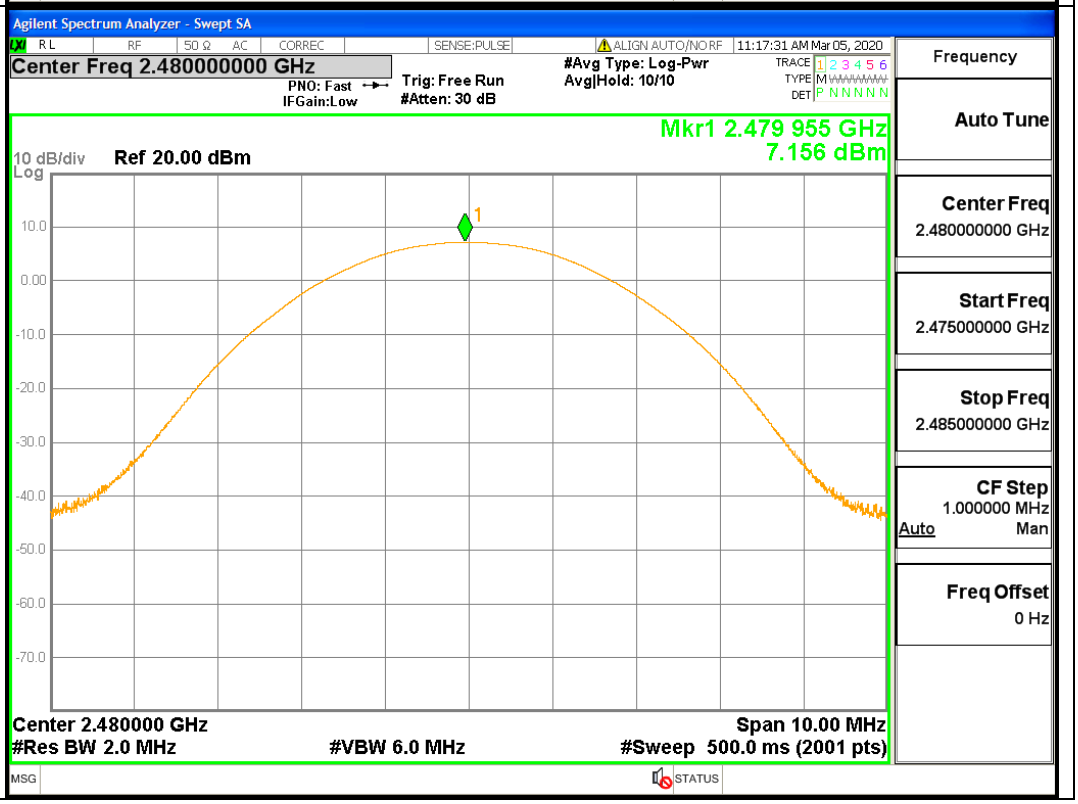
Test Graph

Graphs	
GFSK/LCH	

GFSK/MCH	
GFSK/HCH	

π/4DQPSK/LCH	
π/4DQPSK/MCH	

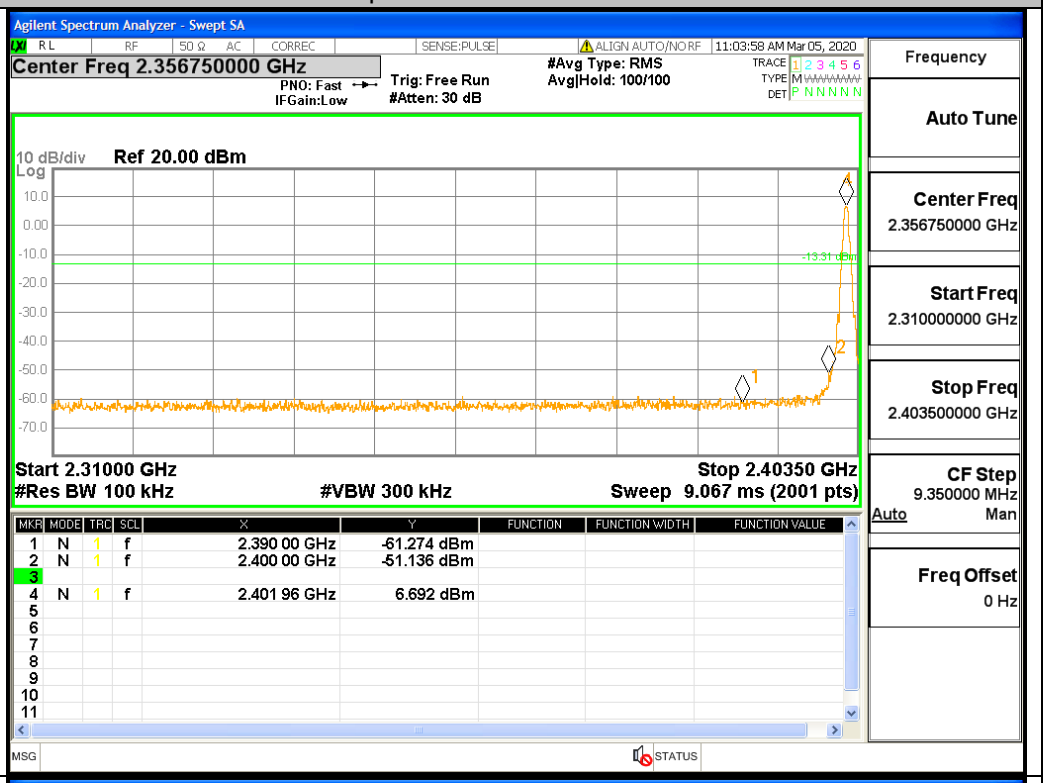
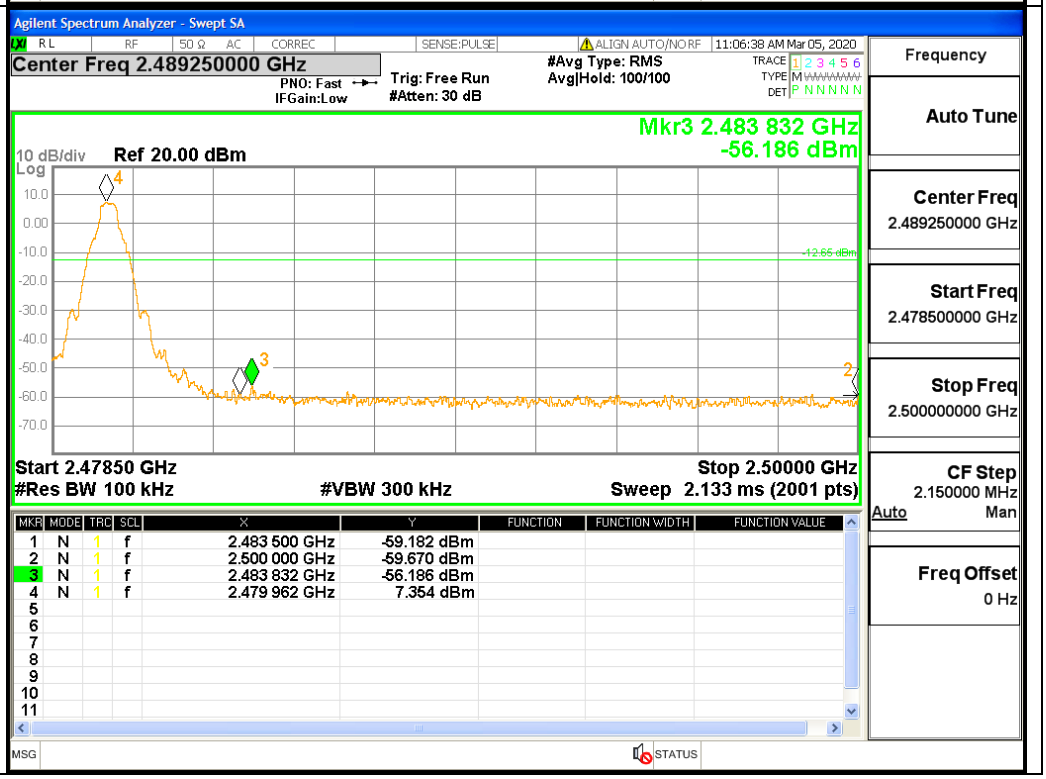
π/4DQPSK/HCH	
8DPSK/LCH	

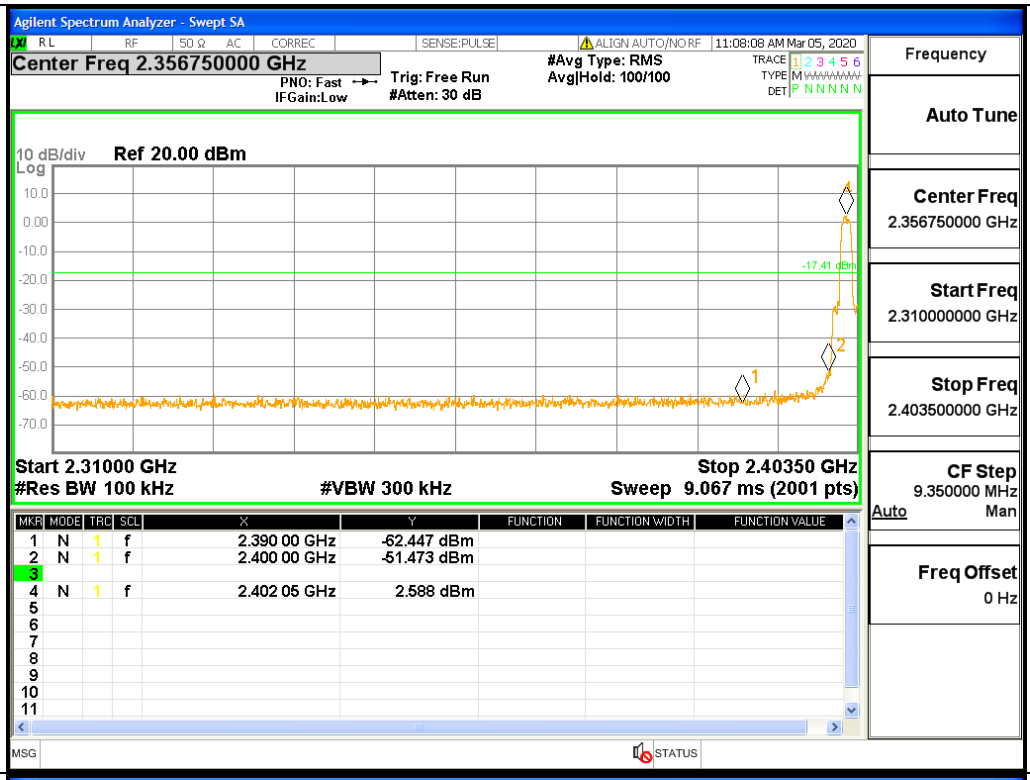
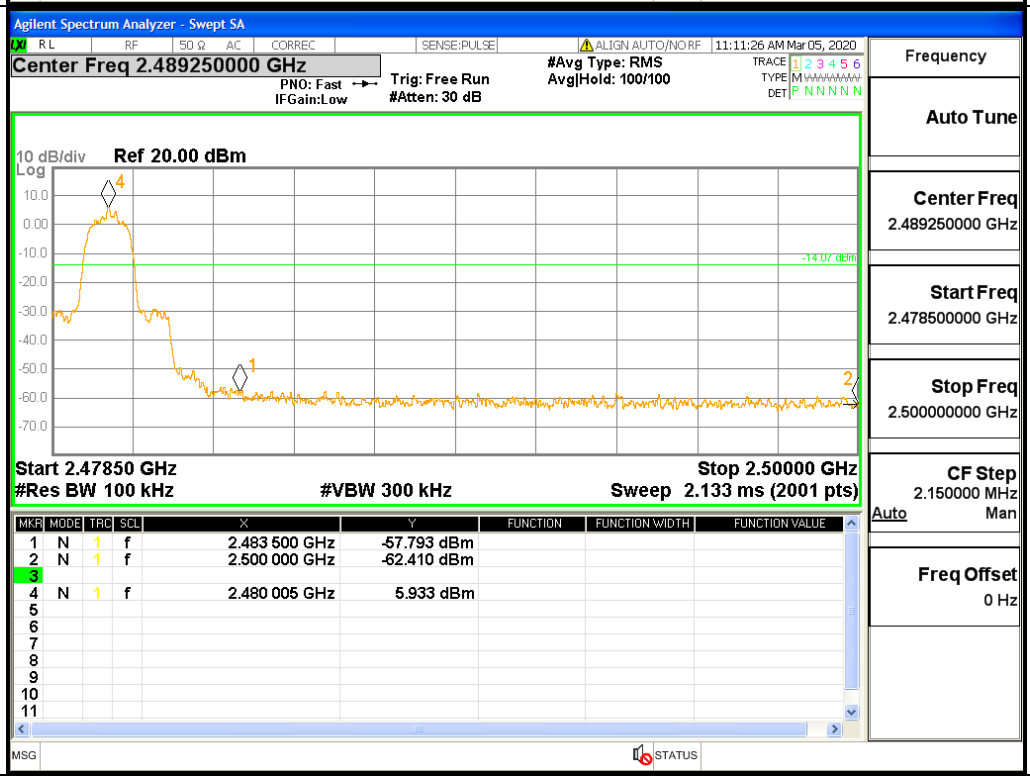
8DPSK/MCH	
8DPSK/HCH	

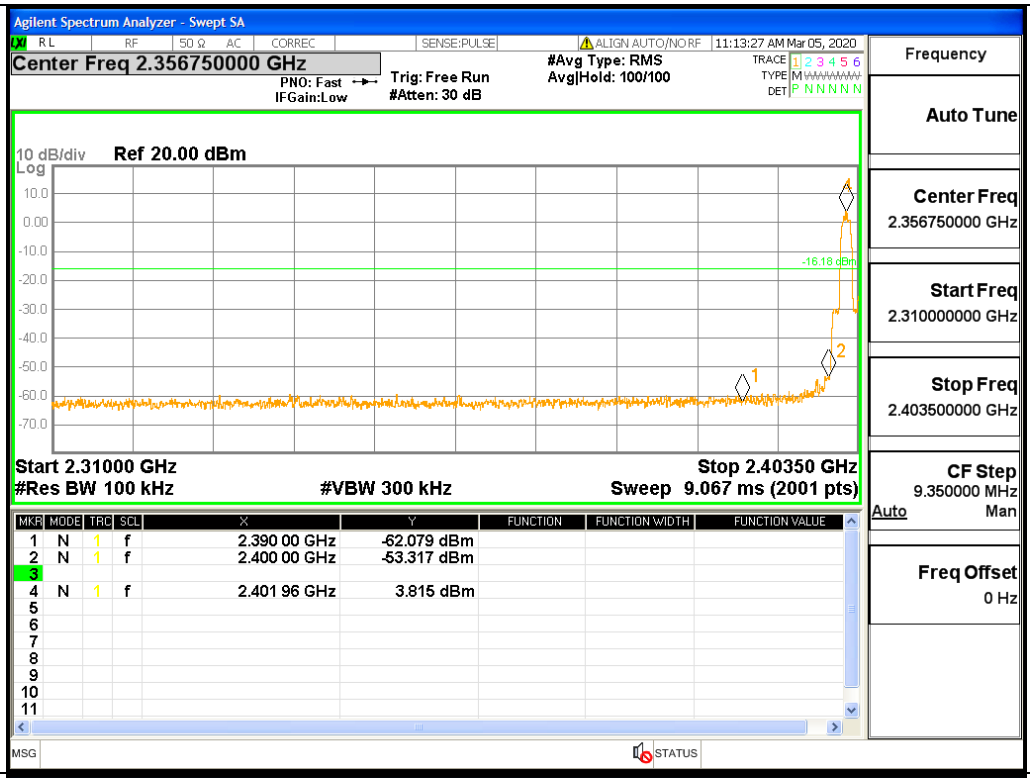
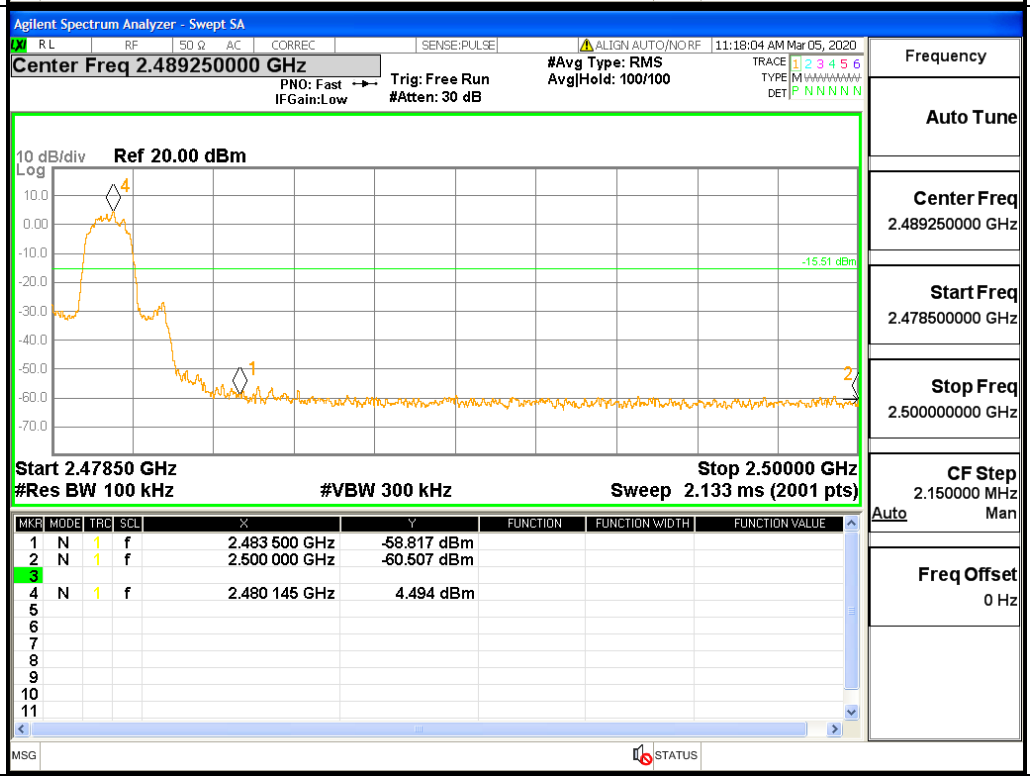
A.6 Band-edge for RF Conducted Emissions

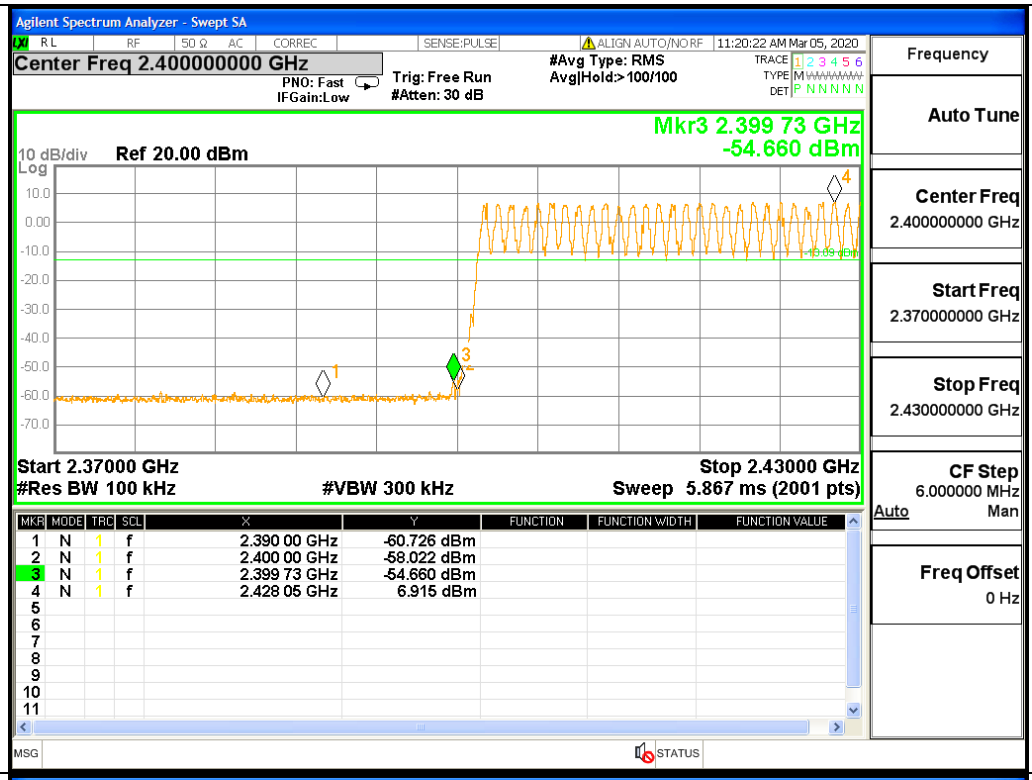
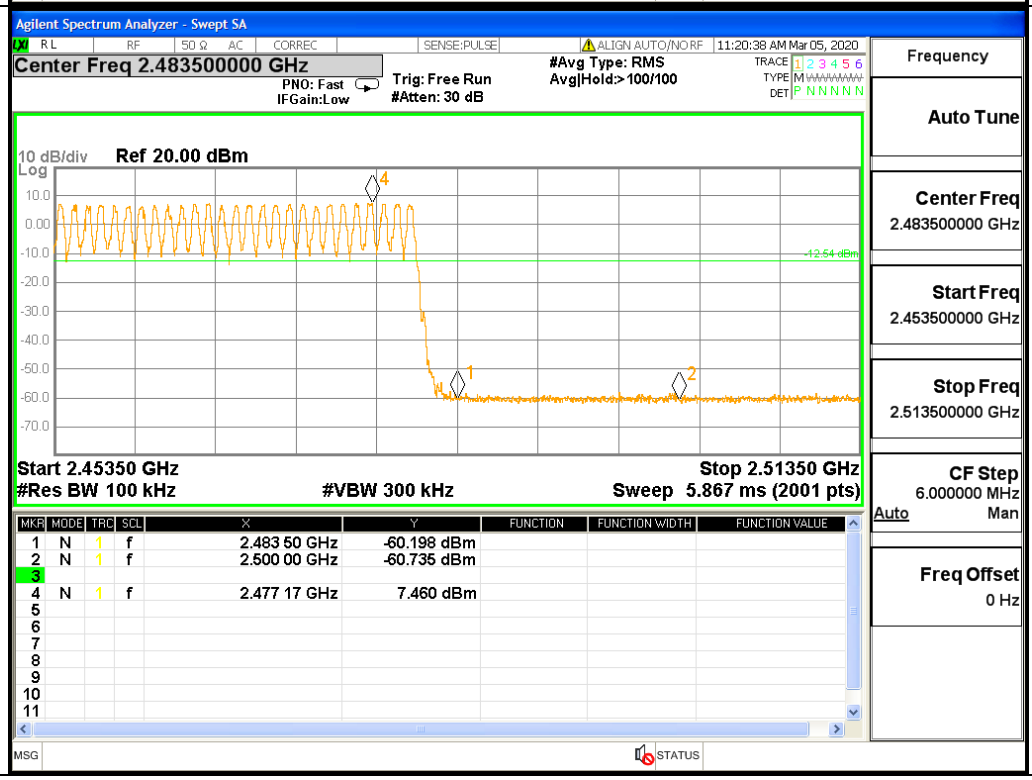
Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2400	6.692	-51.14	-13.308	Pass
1DH5	2480	2483.832	7.354	-56.186	-12.646	Pass
2DH5	2402	2400	2.588	-51.47	-17.412	Pass
2DH5	2480	2483.5	5.933	-57.79	-14.067	Pass
3DH5	2402	2400	3.815	-53.32	-16.185	Pass
3DH5	2480	2483.5	4.494	-58.82	-15.506	Pass
1DH5-Hopping	2402	2399.73	6.915	-54.66	-13.085	Pass
1DH5-Hopping	2480	2483.5	7.46	-60.2	-12.54	Pass
2DH5-Hopping	2402	2400	5.283	-51.73	-14.717	Pass
2DH5-Hopping	2480	2483.5	6.194	-60.74	-13.806	Pass
3DH5-Hopping	2402	2400	5.576	-55.27	-14.424	Pass
3DH5-Hopping	2480	2483.5	6.165	-58.15	-13.835	Pass

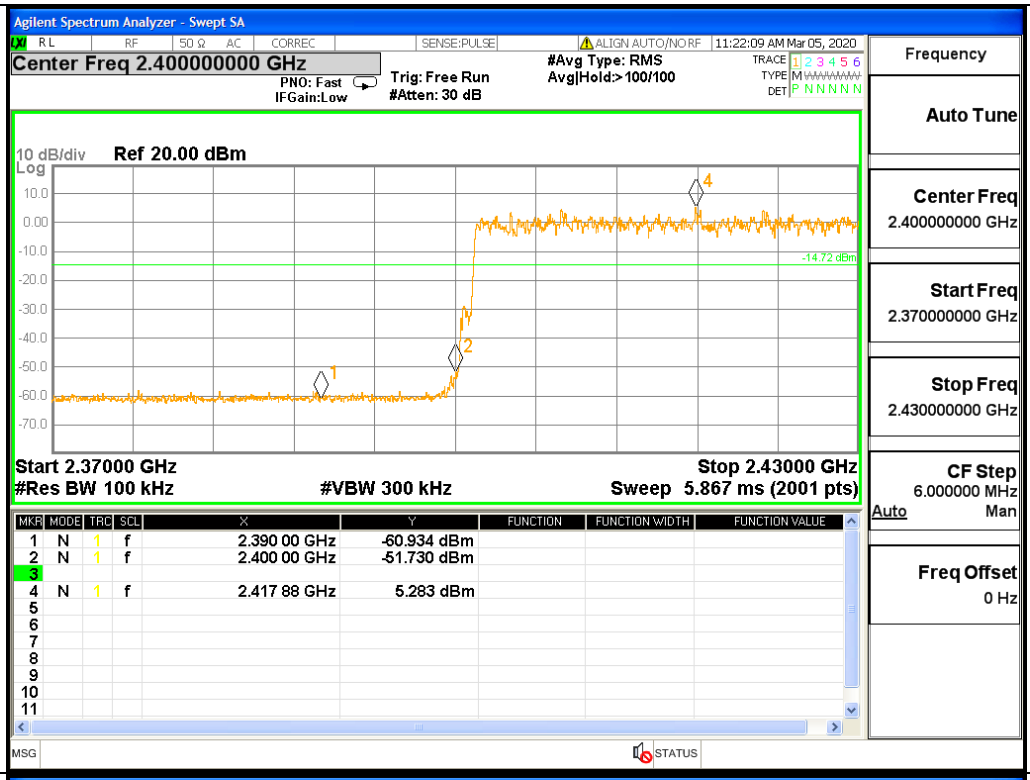
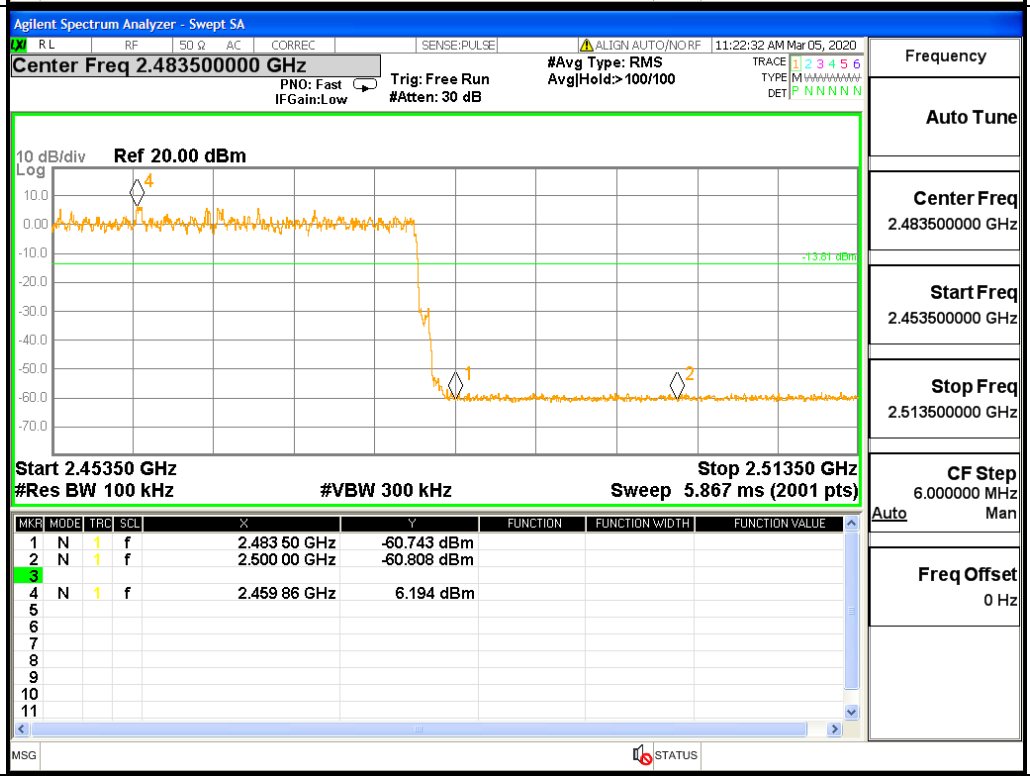
Test Graph

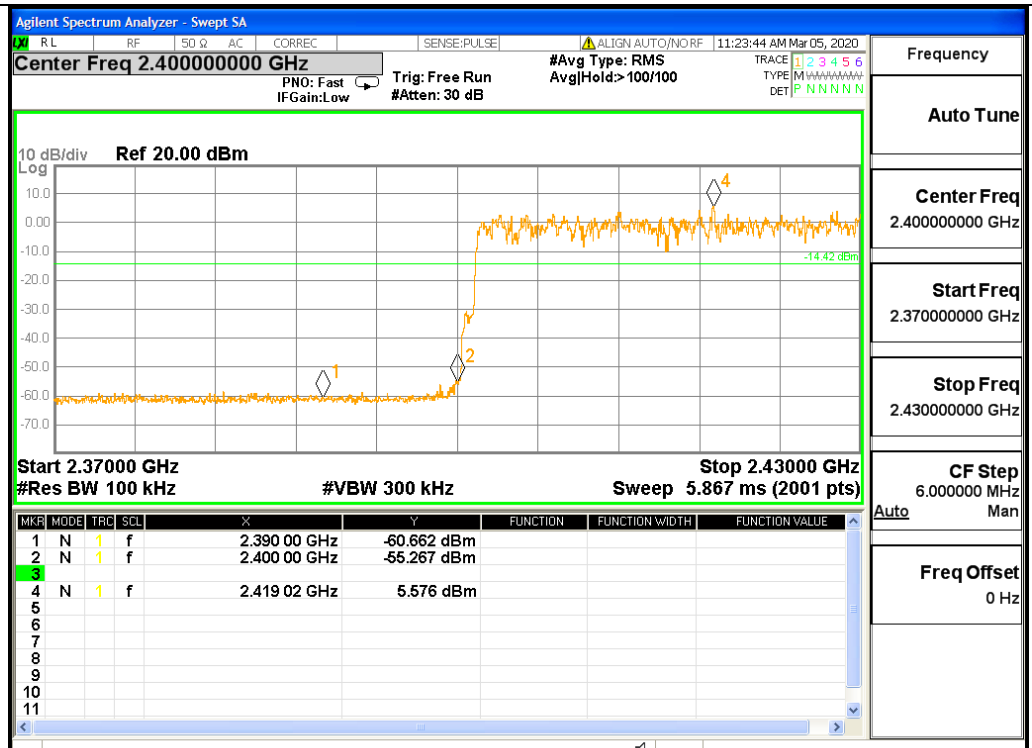
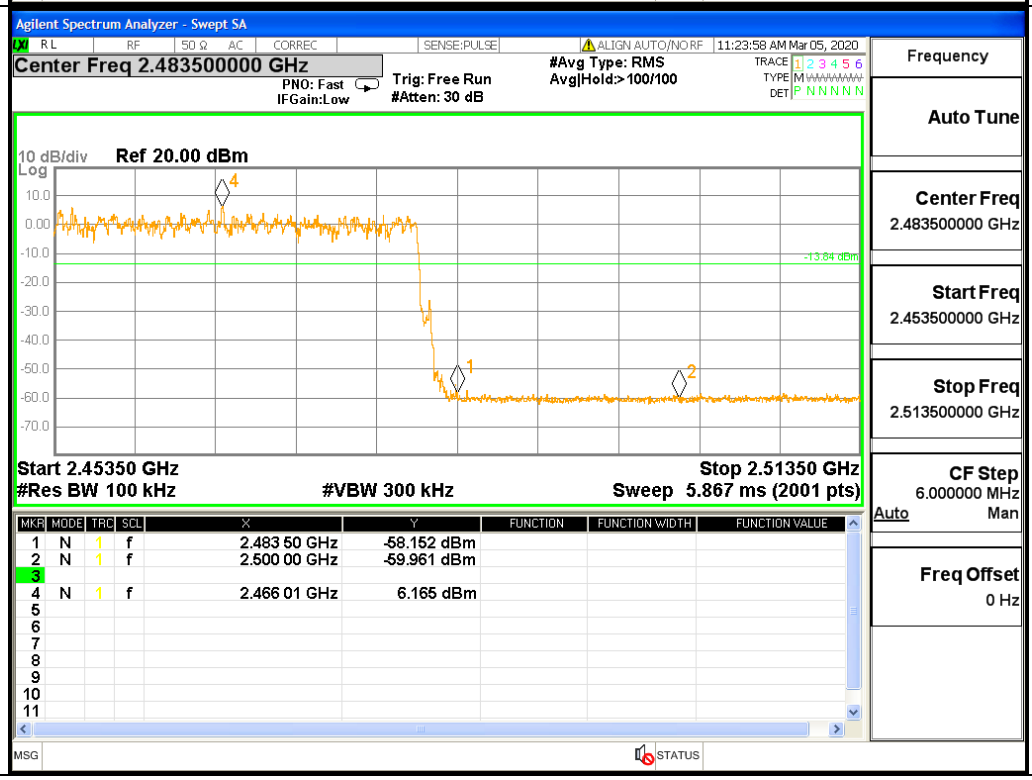
Graphs	
GFSK/LCH/No Hop	
GFSK/HCH/No Hop	

π/4DQPSK/LCH/No Hop	
π/4DQPSK/HCH/No Hop	

8DPSK/LCH/No Hop	
8DPSK/HCH/No Hop	

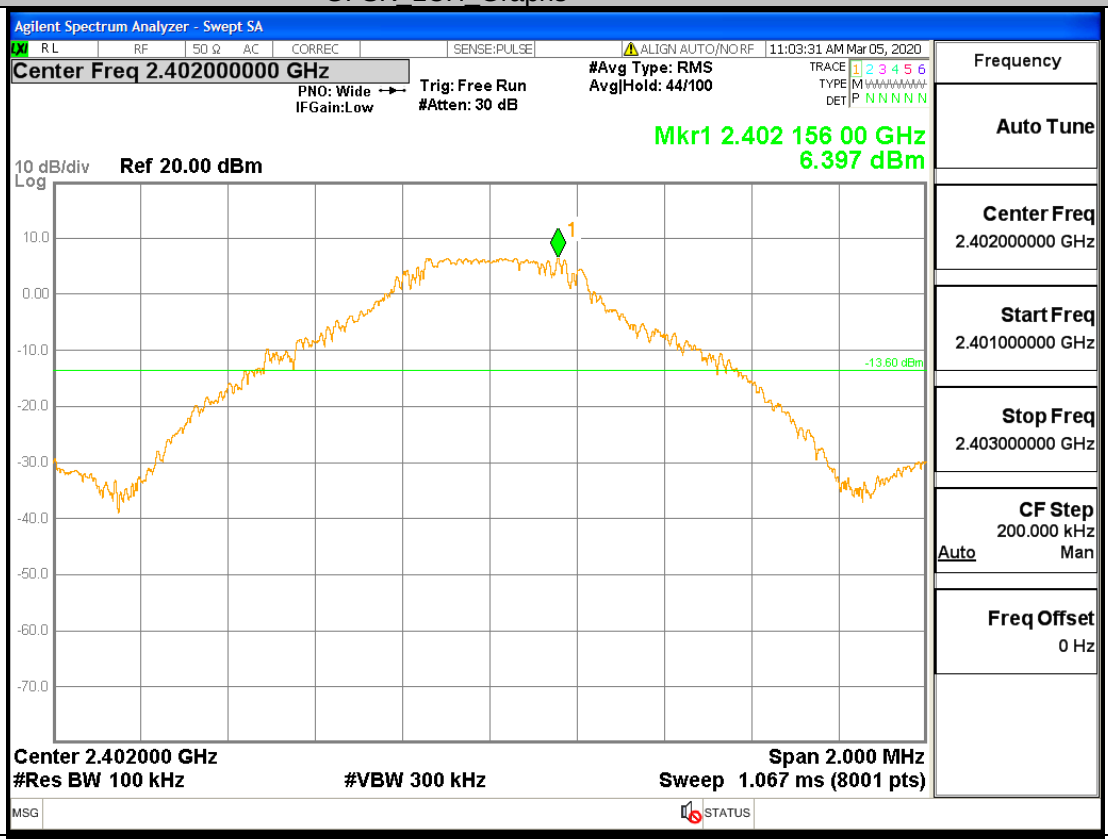
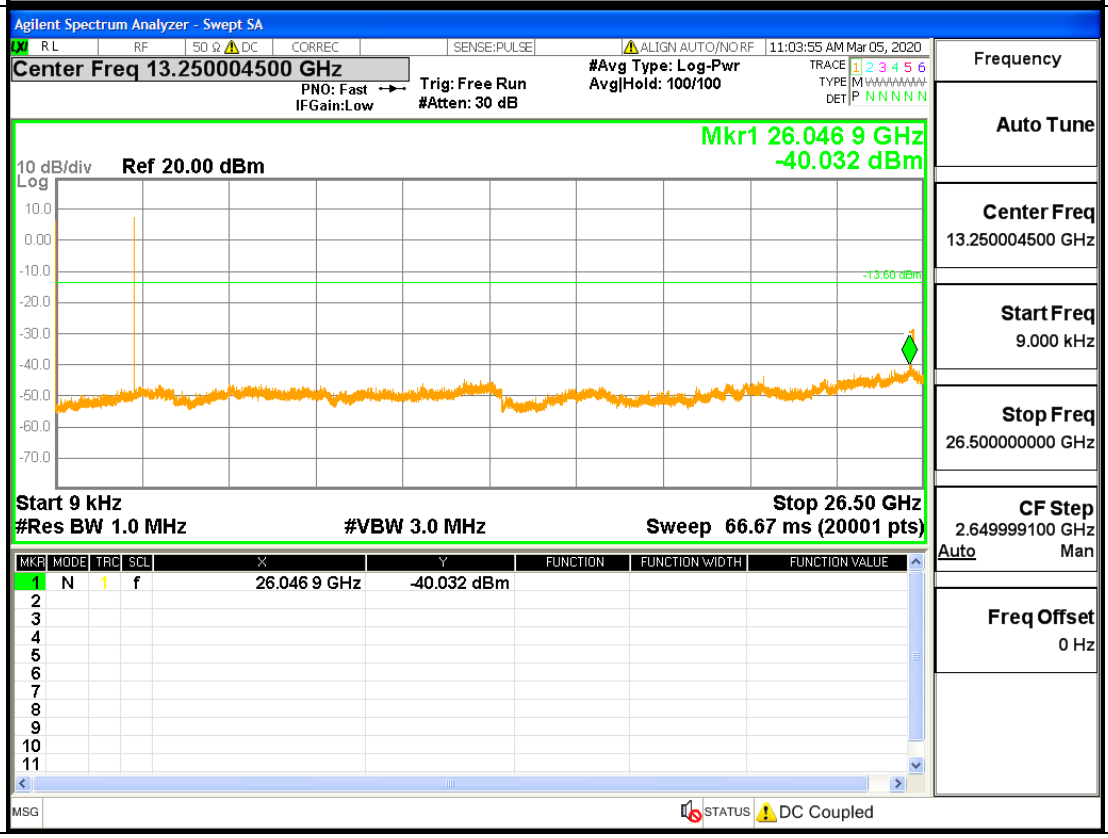
GFSK/LCH/Hop	
GFSK/HCH/Hop	

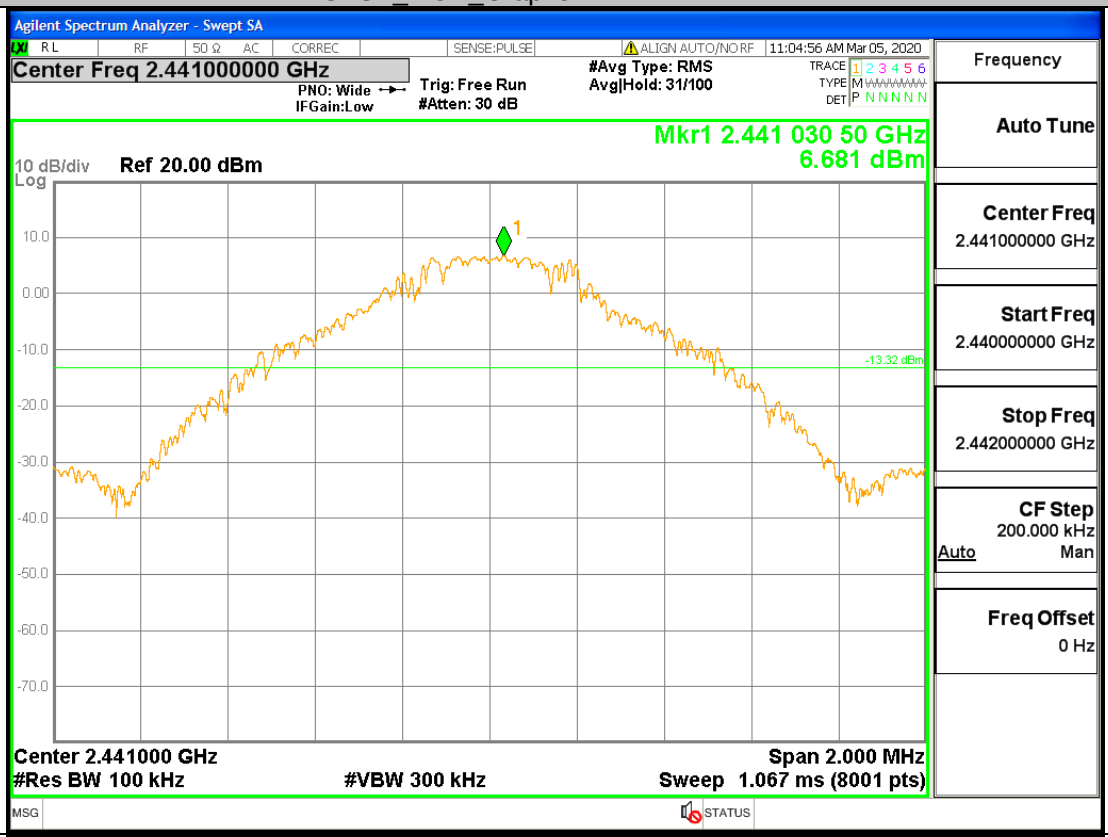
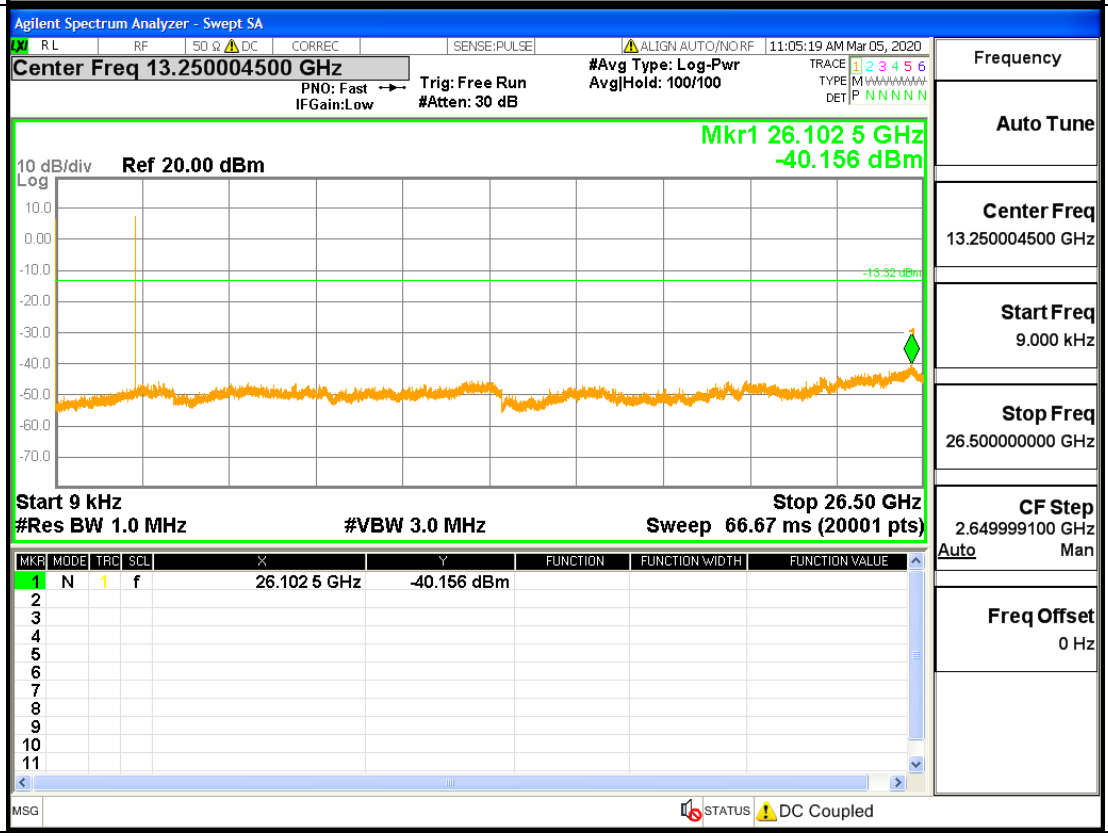
π/4DQPSK/LCH/Hop	
π /4DQPSK/HCH/Hop	

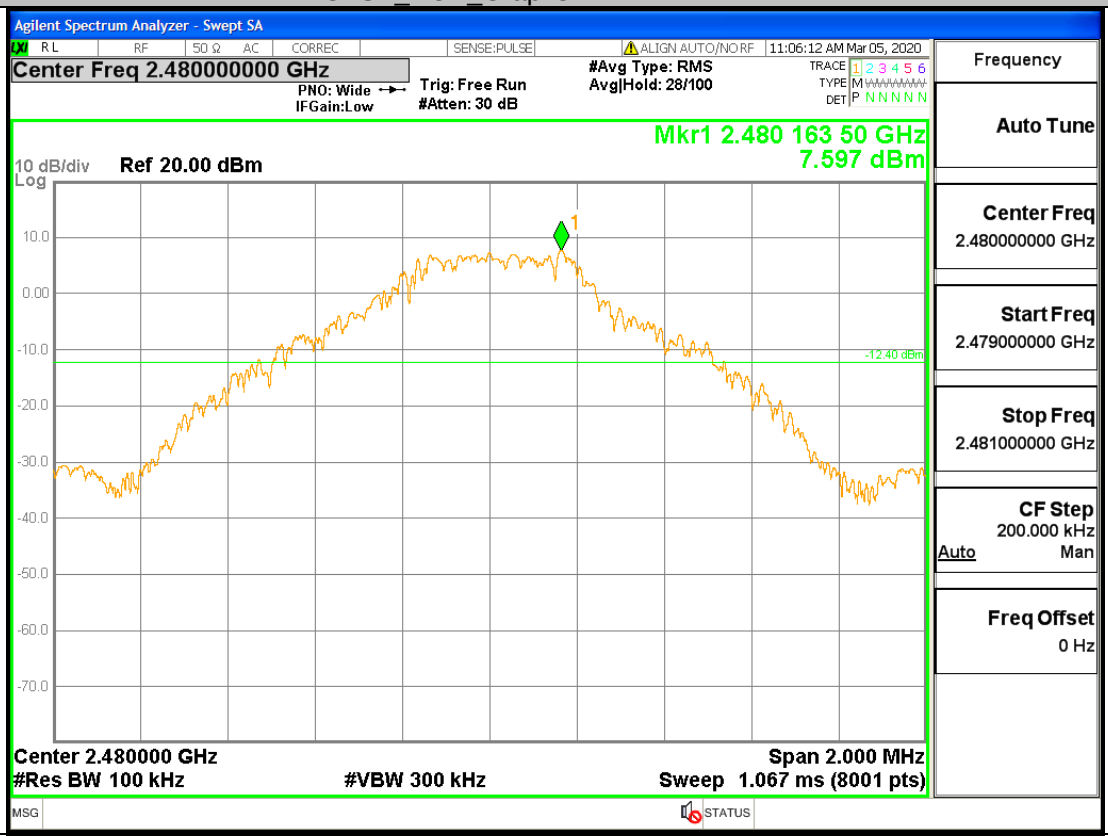
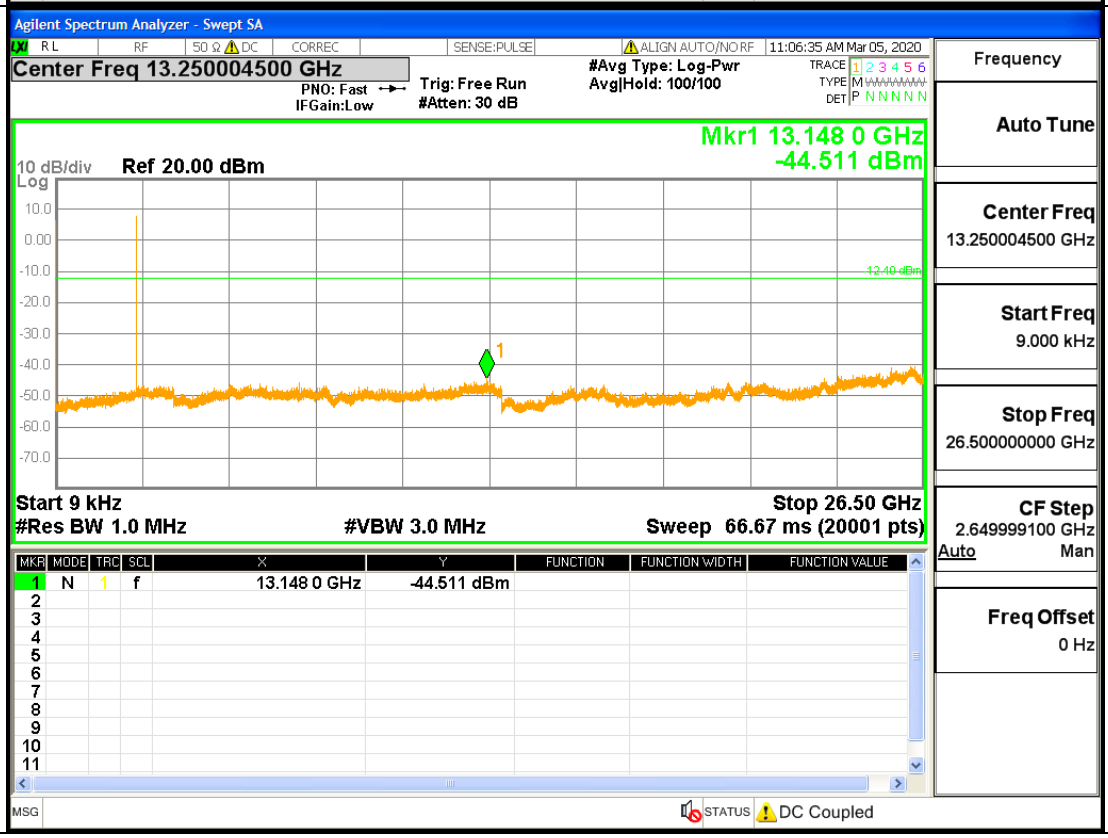
8DPSK/LCH/Hop	
8DPSK/HCH/Hop	

A.7 RF Conducted Spurious Emissions

Test Graph

GFSK_LCH_Graphs	
Pref	
Puw	

GFSK_MCH_Graphs	
Pref	
Puw	

GFSK_HCH_Graphs	
Pref	
Puw	

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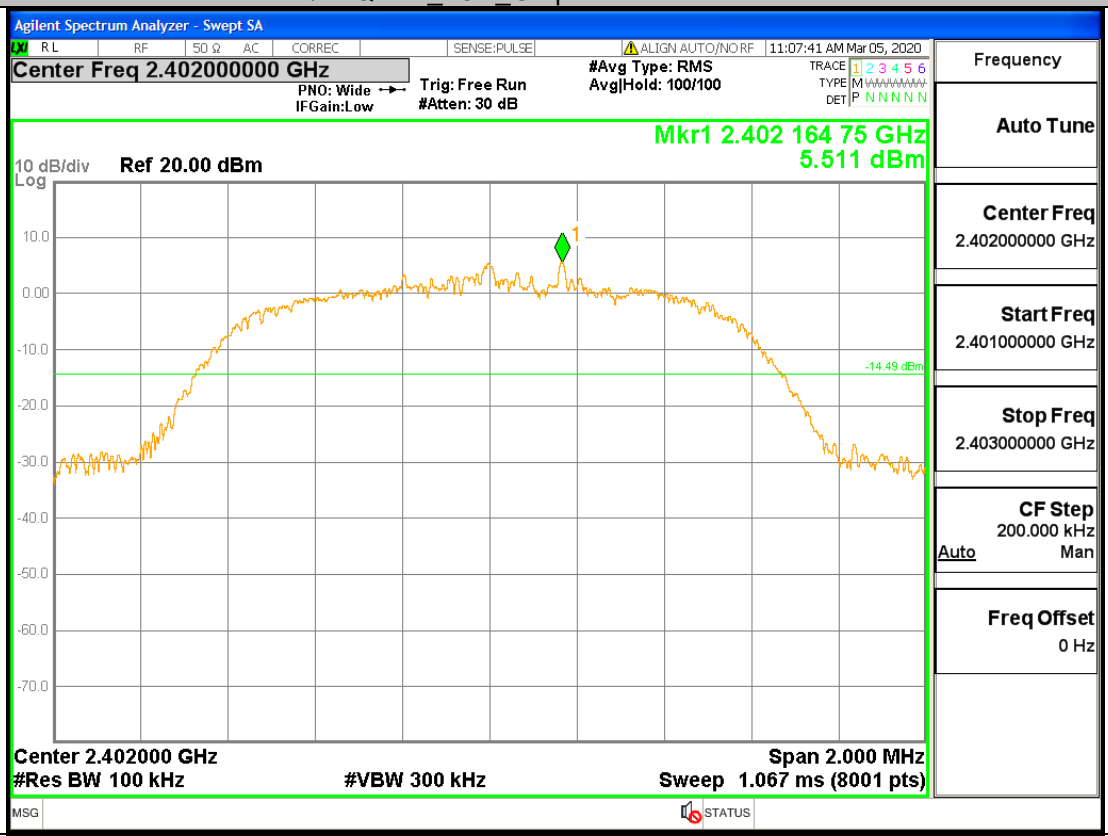
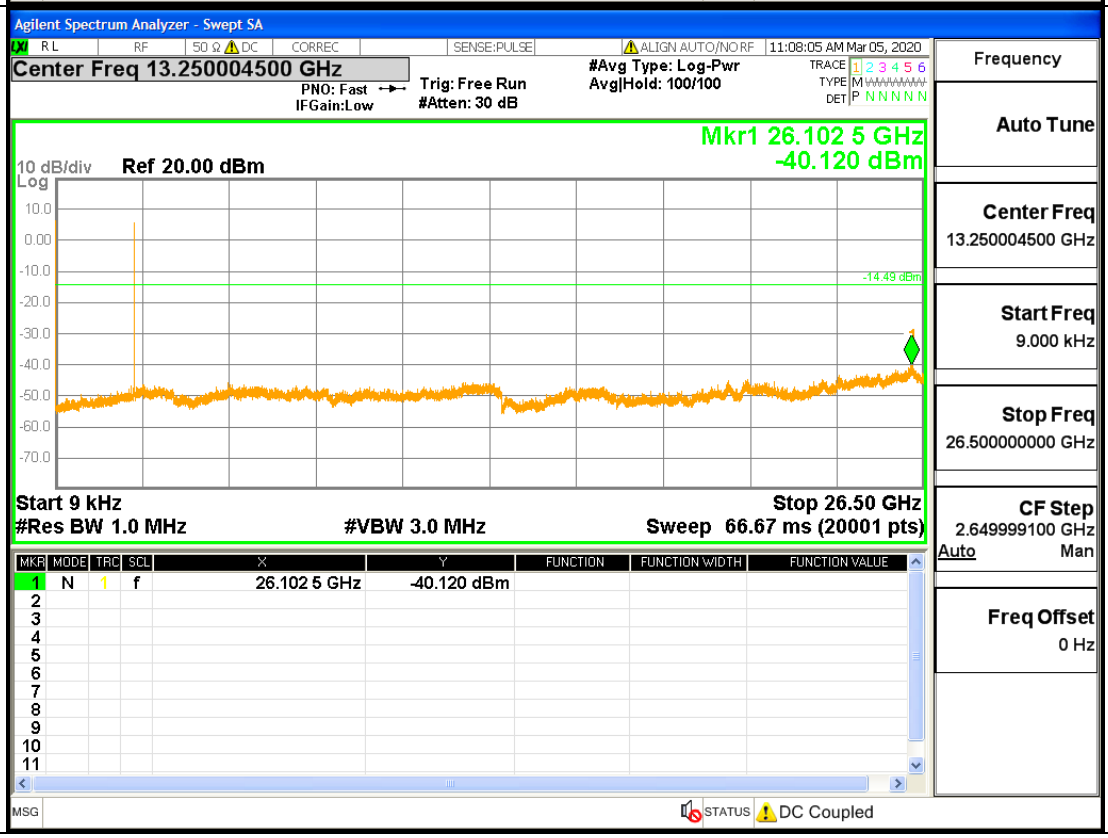
Pref	
Puw	

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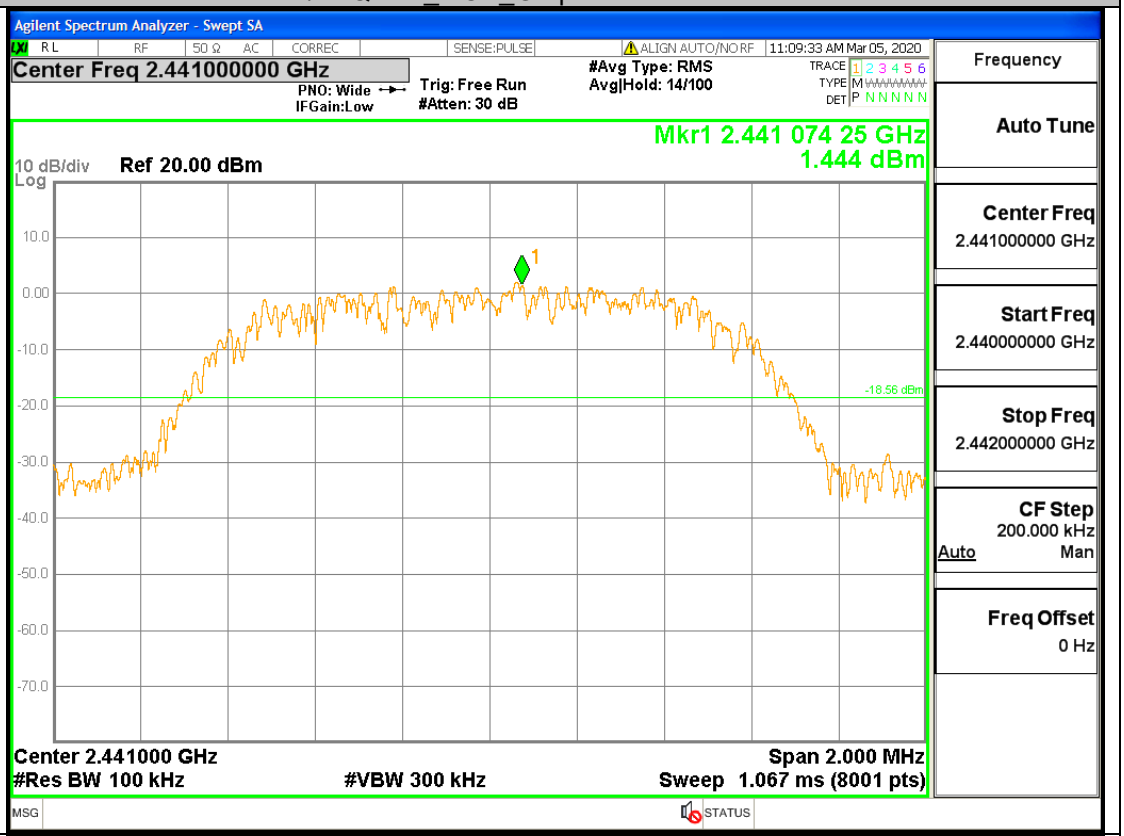
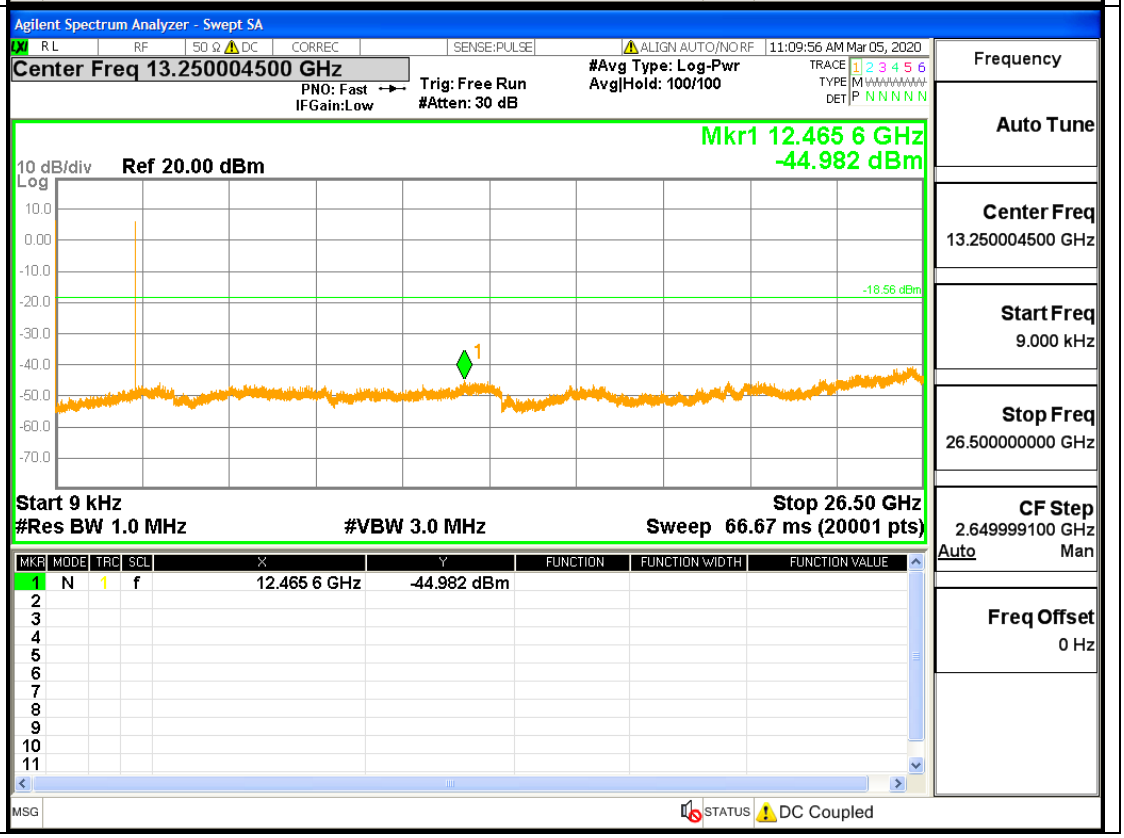
Pref	
Puw	

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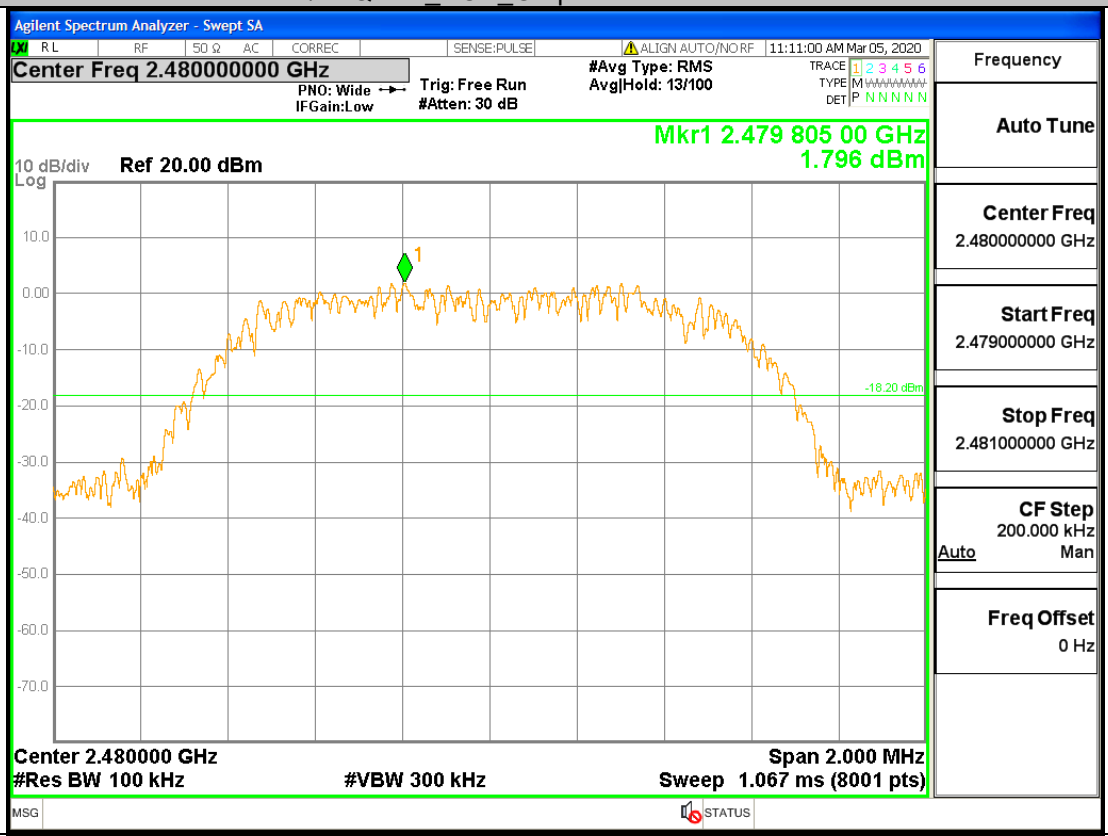
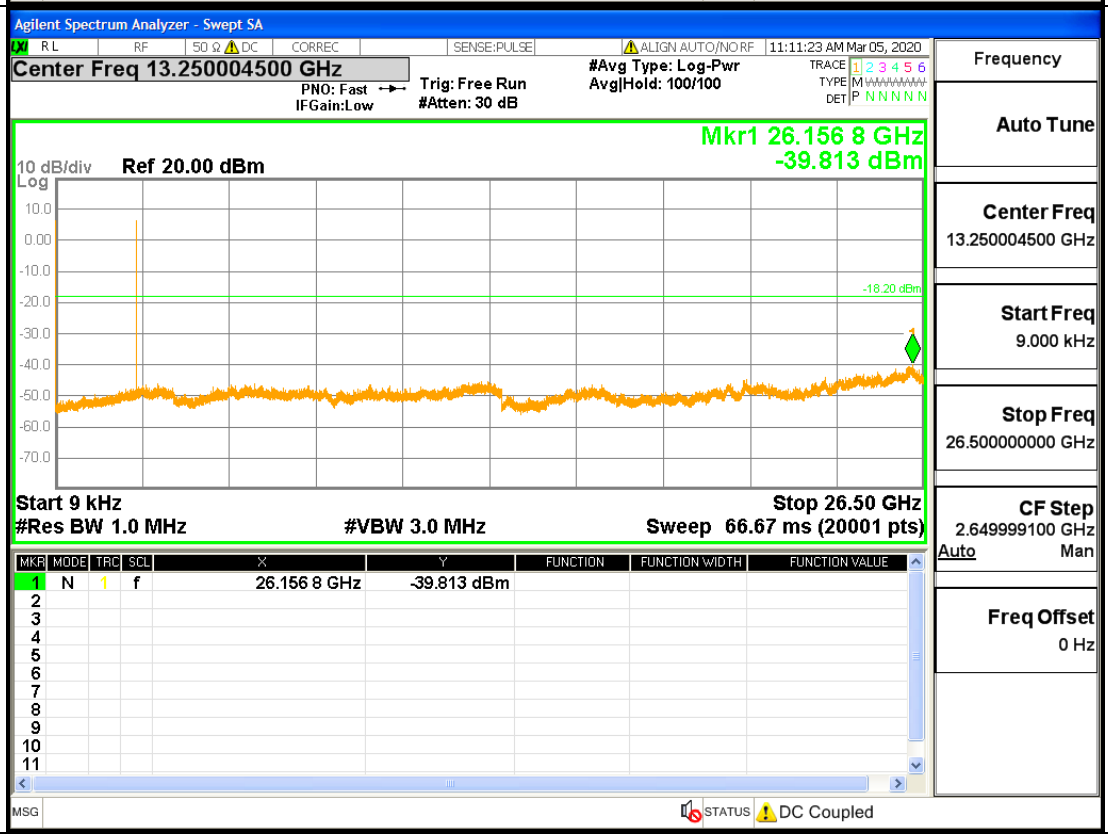
Pref	
Puw	

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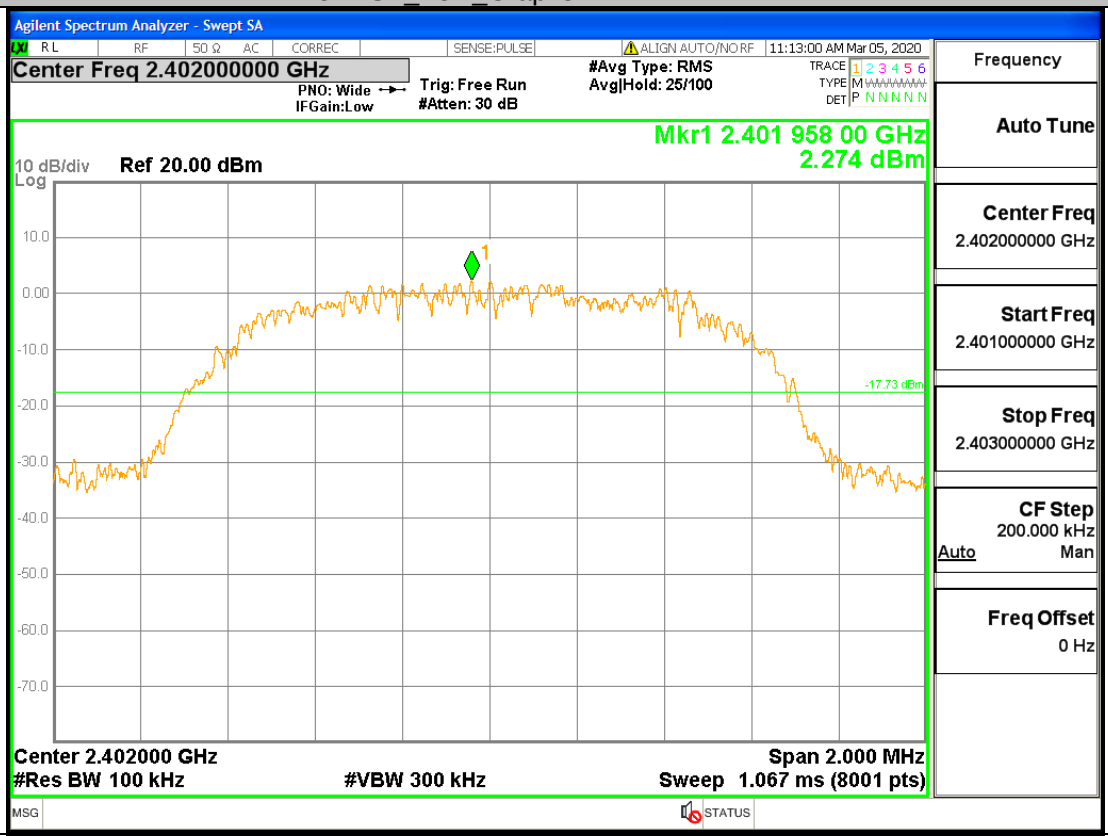
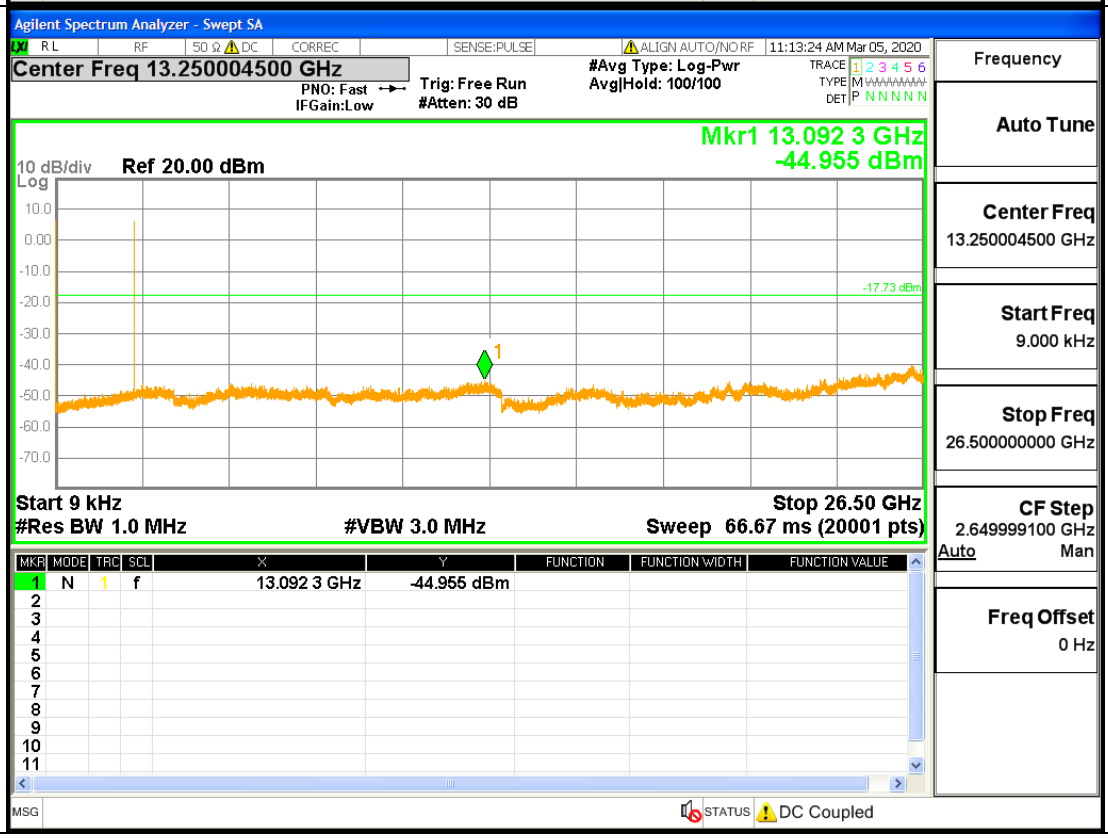
Pref	
Puw	

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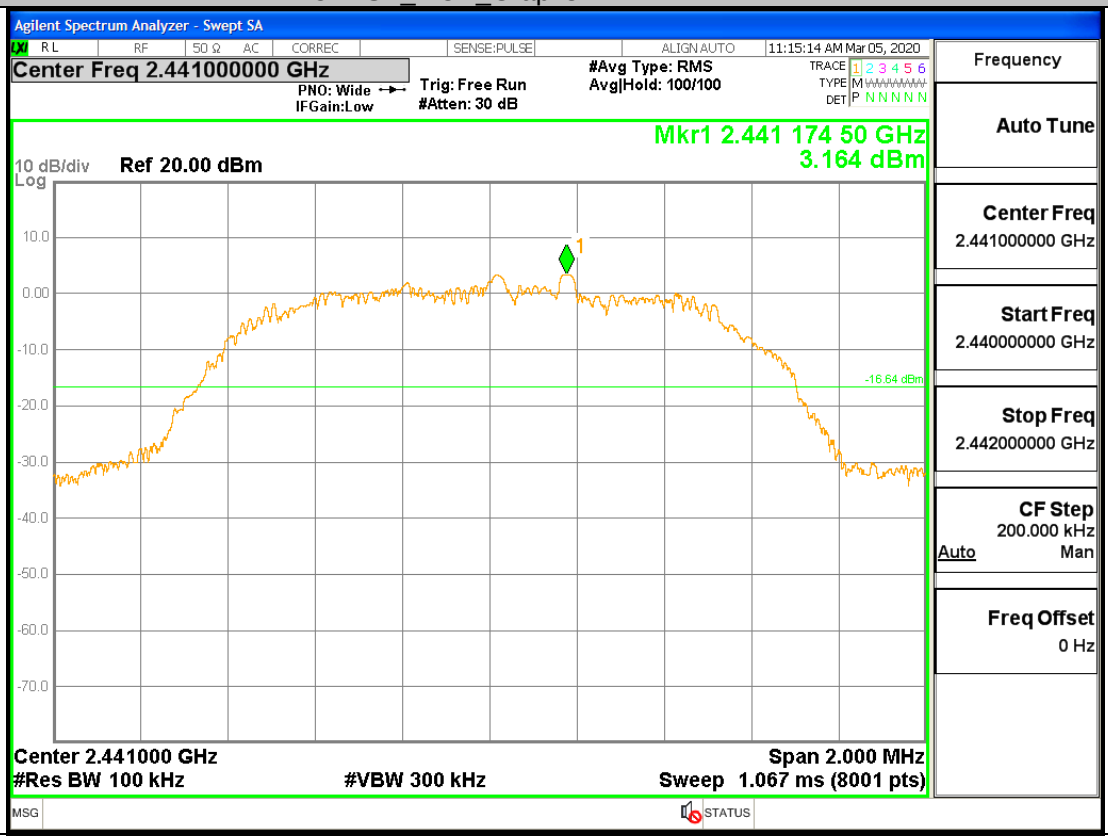
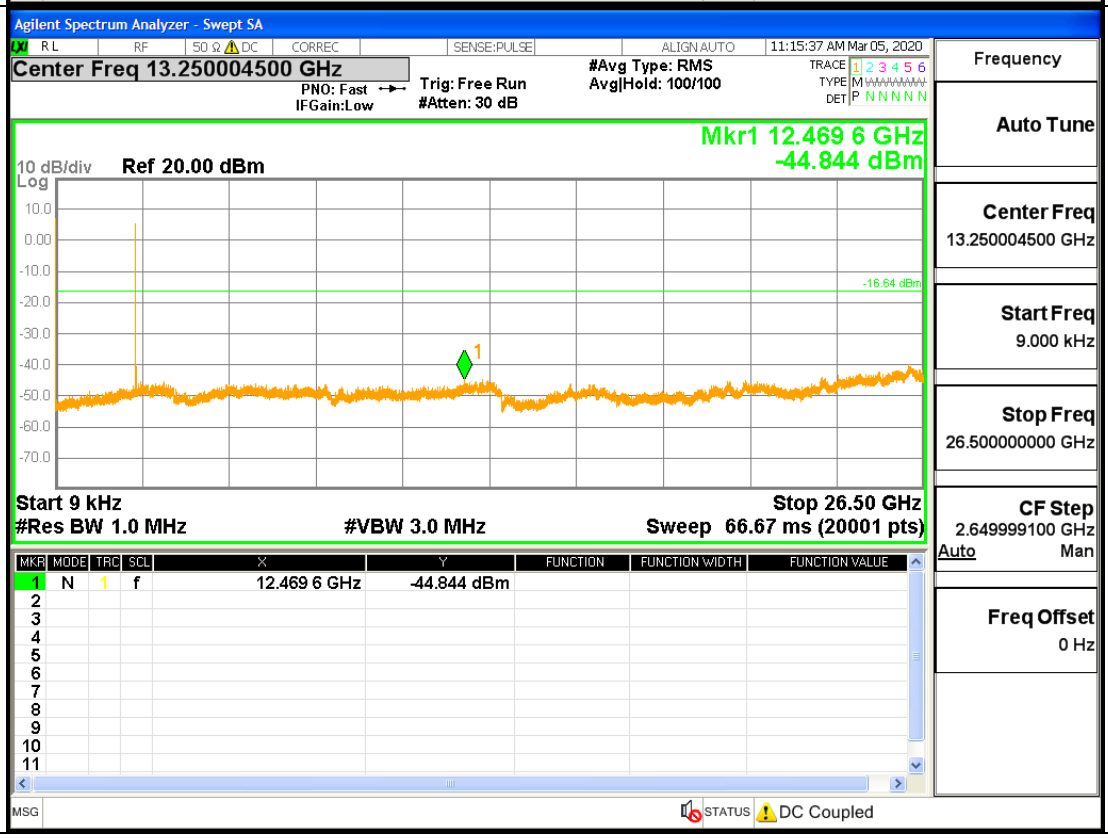
Pref	
Puw	

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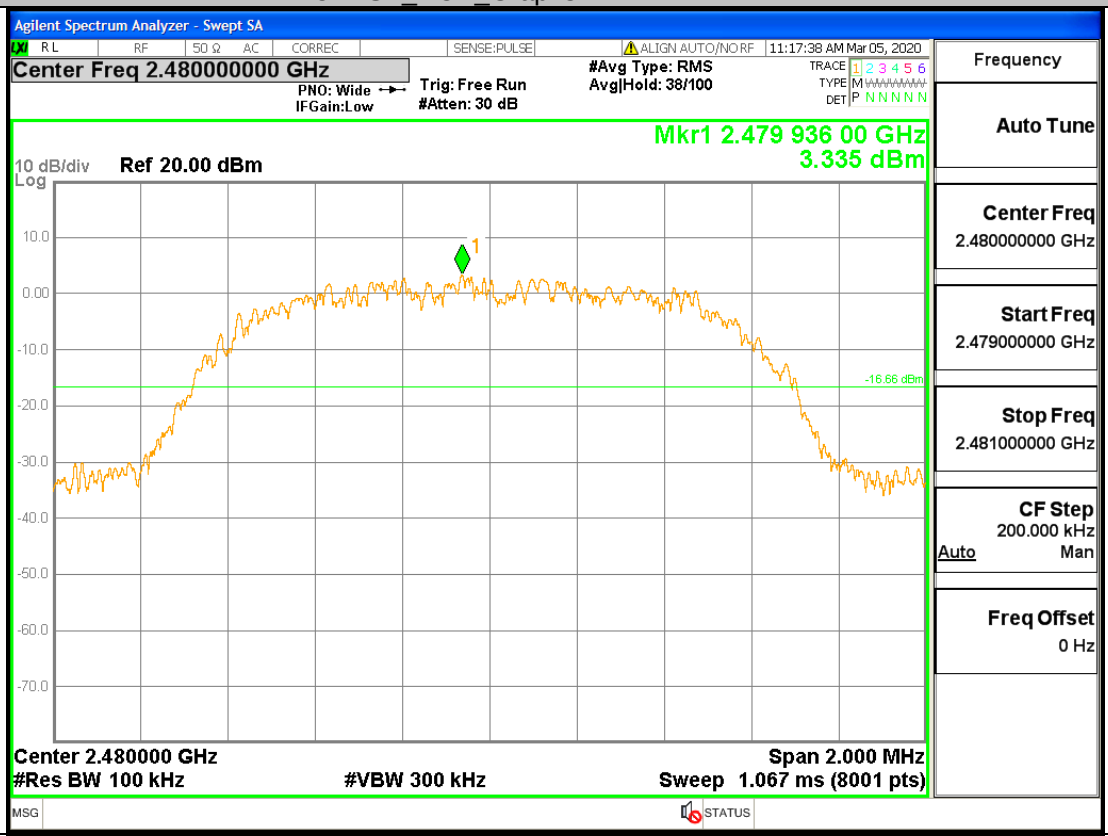
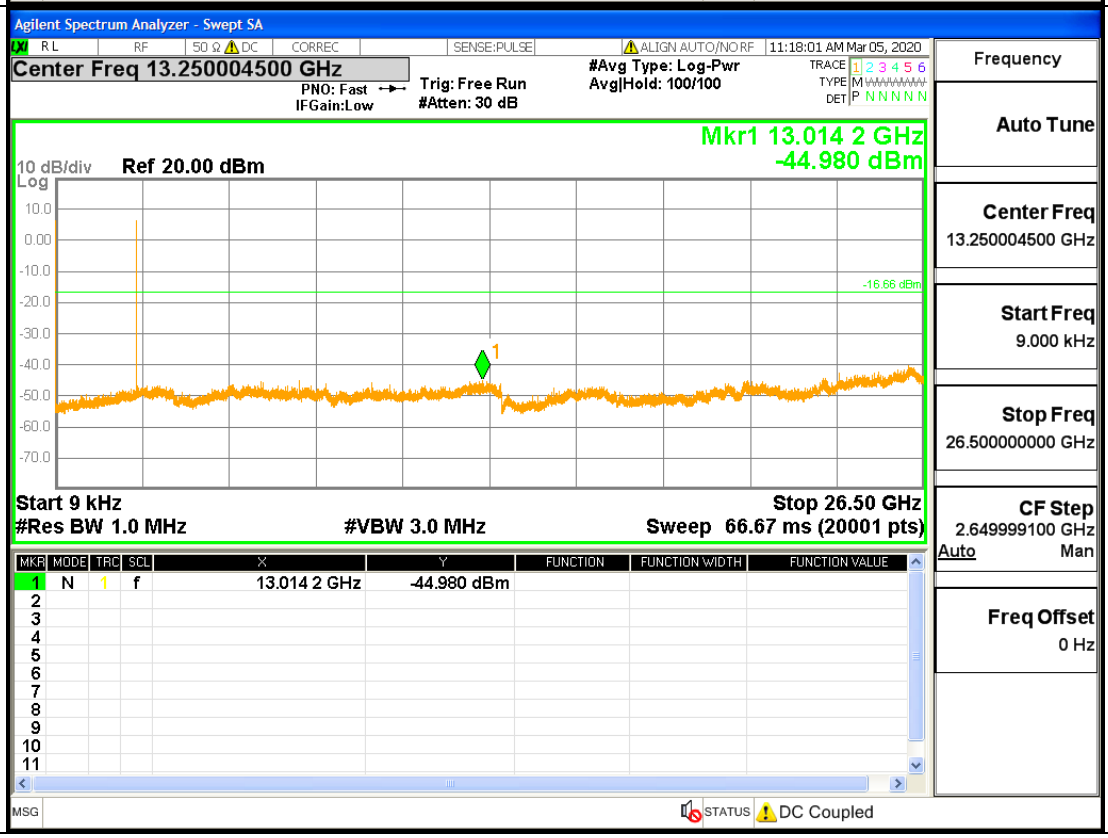
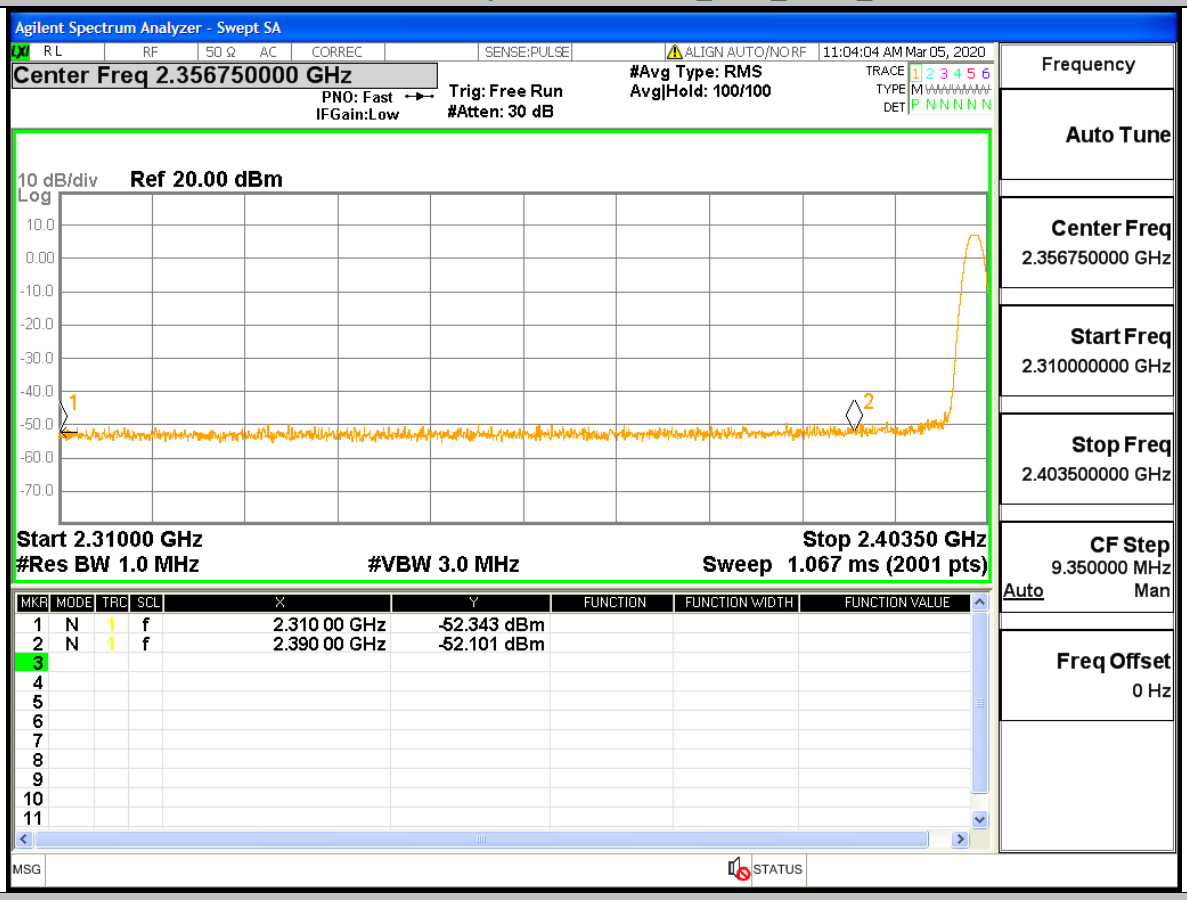
Pref	
Puw	

A.8 Restrict-band band-edge measurements

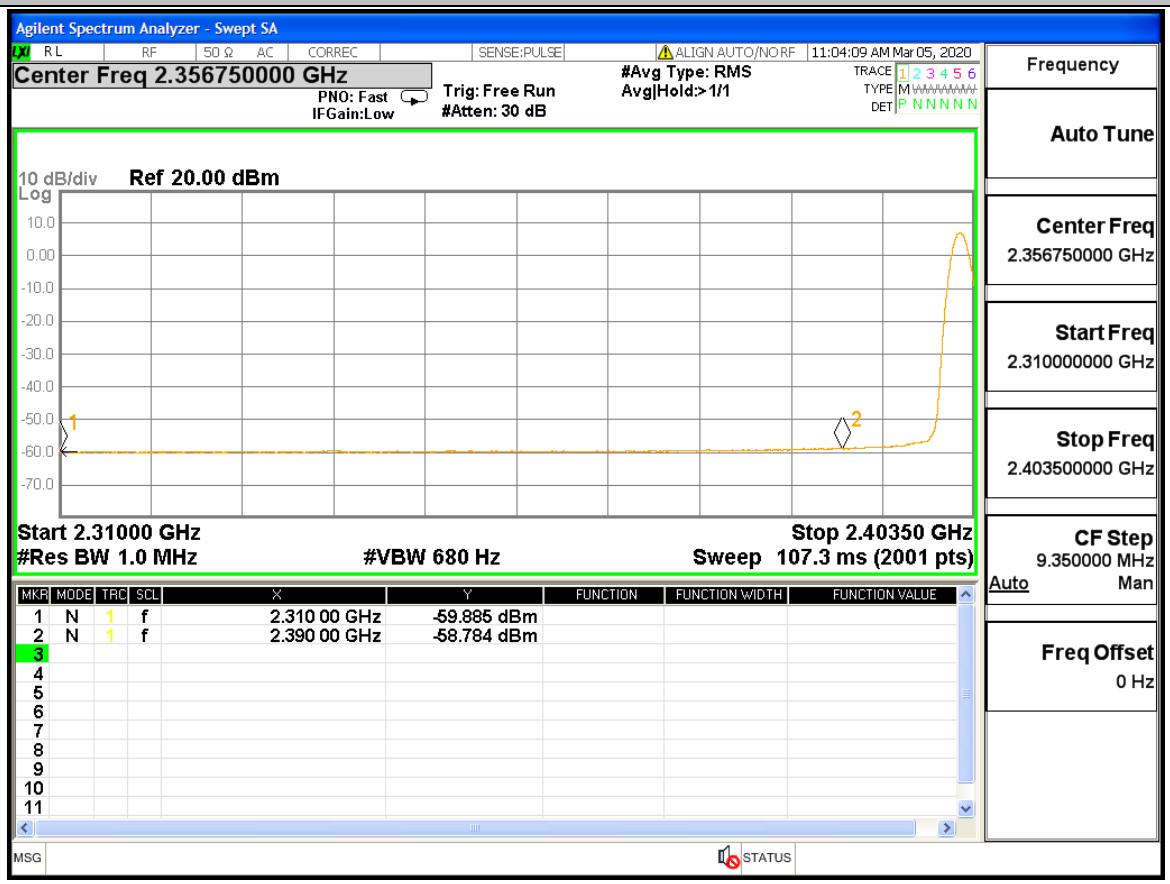
Type	Carrier Frequency (MHz)	Frequency(MHz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390	2.84	0.00	-52.101	45.939	74	Pass
1DH5	2480	2483.5	2.84	0.00	-50.053	47.987	74	Pass
2DH5	2402	2390	2.84	0.00	-52.386	45.654	74	Pass
2DH5	2480	2483.5	2.84	0.00	-47.076	50.964	74	Pass
3DH5	2402	2335.946	2.84	0.00	-49.382	48.658	74	Pass
3DH5	2480	2497.334	2.84	0.00	-47.811	50.229	74	Pass

Type	Carrier Frequency (MHz)	Frequency(MHz)	Gain	Ground Factor	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390	2.84	0.00	-58.784	39.256	54	Pass
1DH5	2480	2483.5	2.84	0.00	-49.655	48.385	54	Pass
2DH5	2402	2390	2.84	0.00	-58.779	39.261	54	Pass
2DH5	2480	2483.5	2.84	0.00	-49.436	48.604	54	Pass
3DH5	2402	2335.946	2.84	0.00	-58.432	39.608	54	Pass
3DH5	2480	2497.334	2.84	0.00	-49.316	48.724	54	Pass

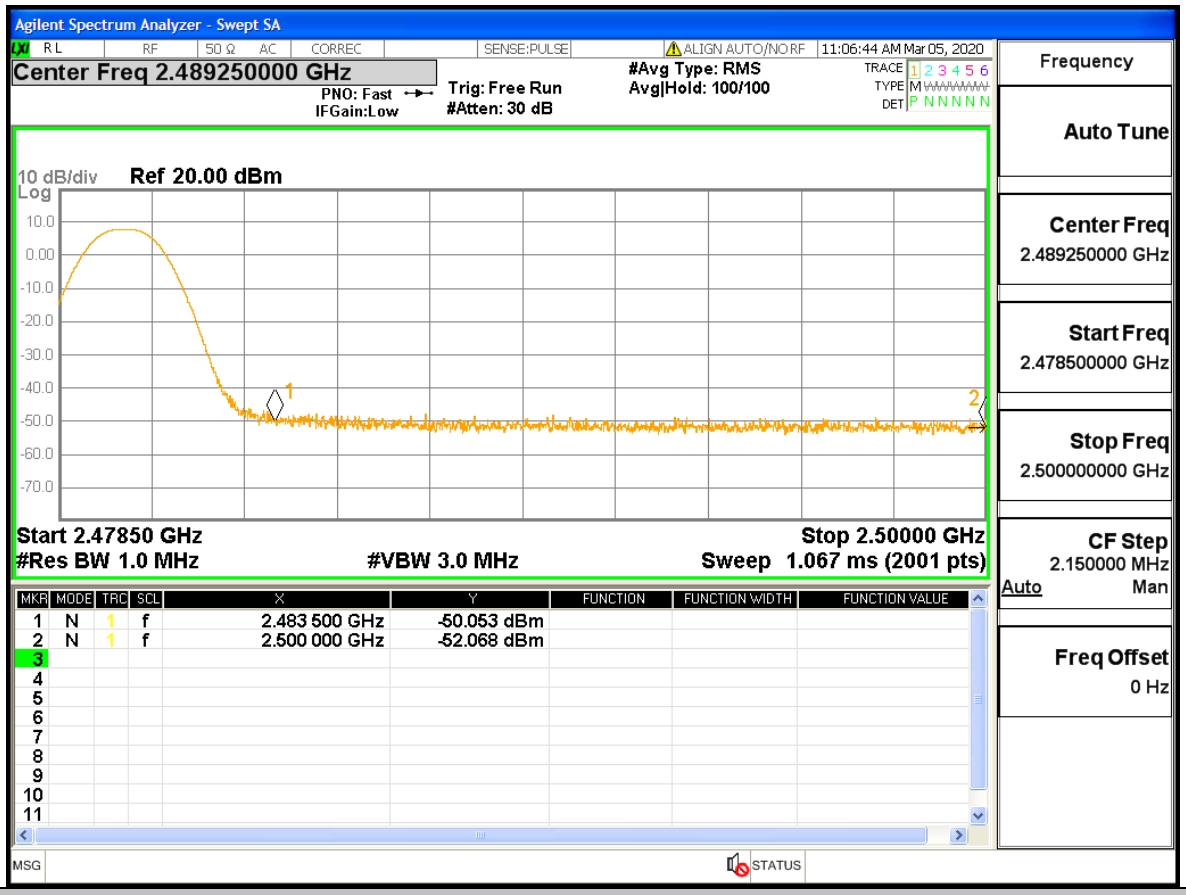
Restrict-band band-edge measurements_2402_PEAK_DH5



Restrict-band band-edge measurements_2402_AV_DH5

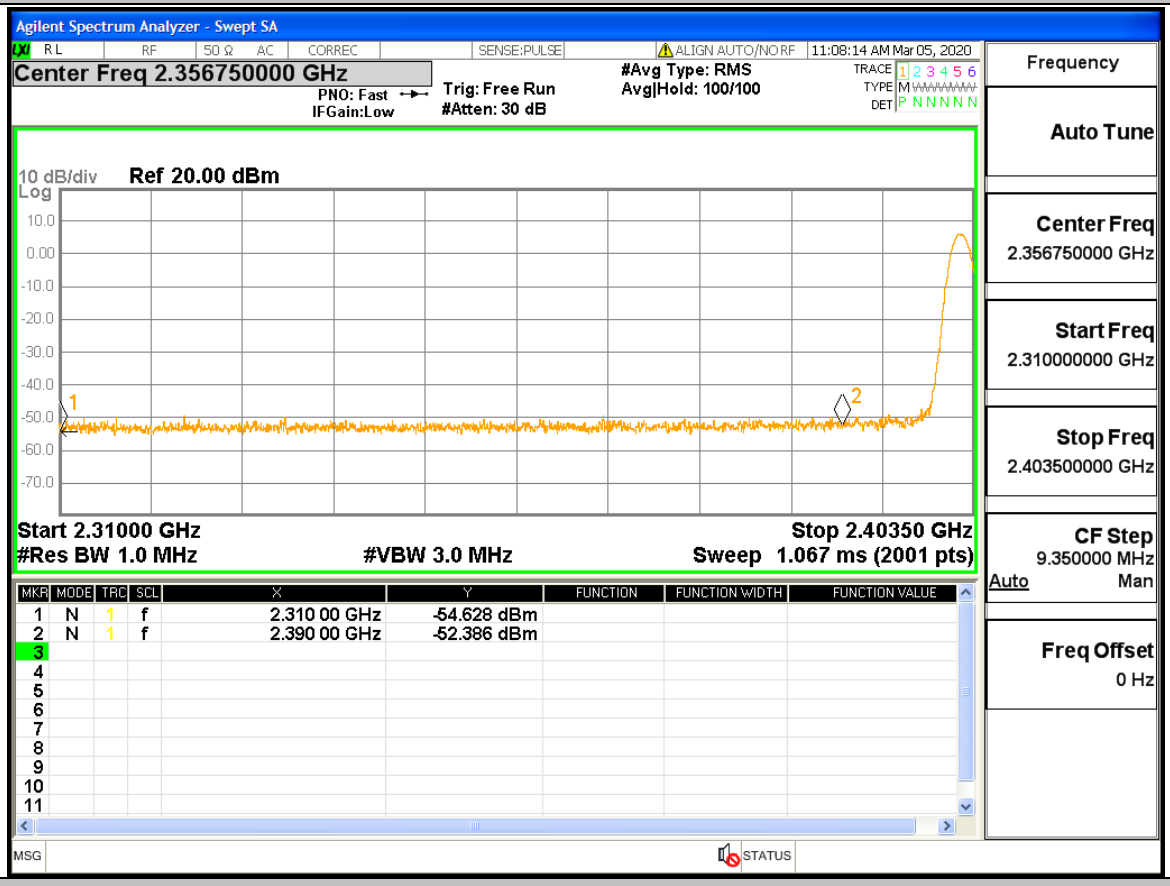


Restrict-band band-edge measurements_2480_PEAK_DH5

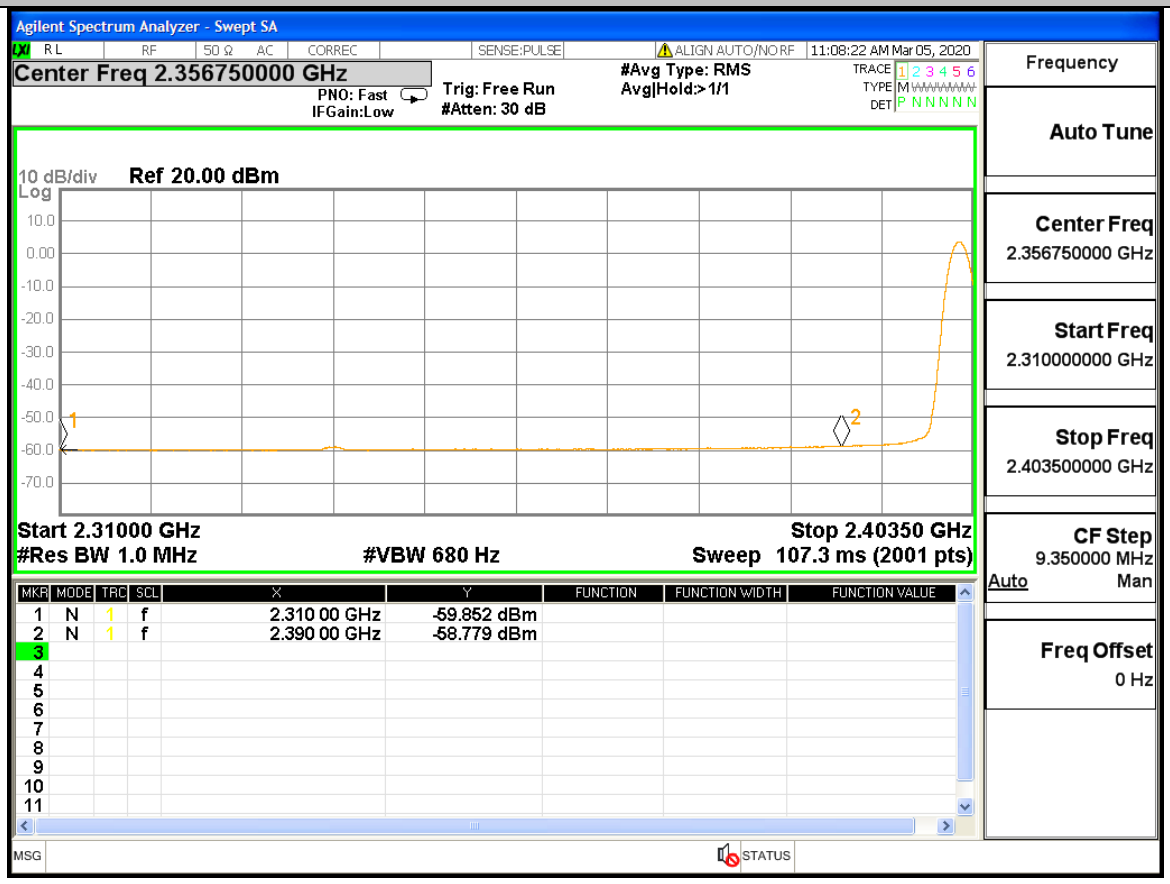


Restrict-band band-edge measurements_2480_AV_DH5

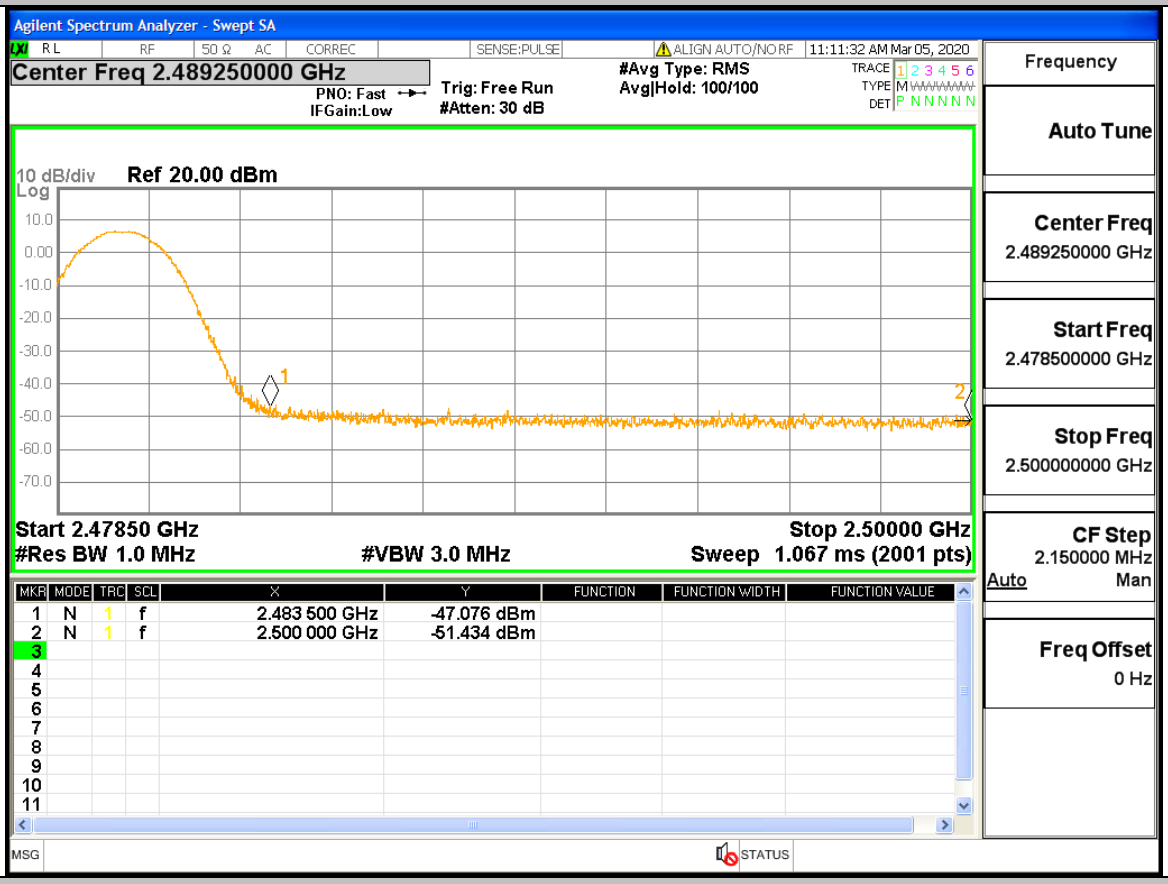
Restrict-band band-edge measurements_2402_PEAK_2DH5



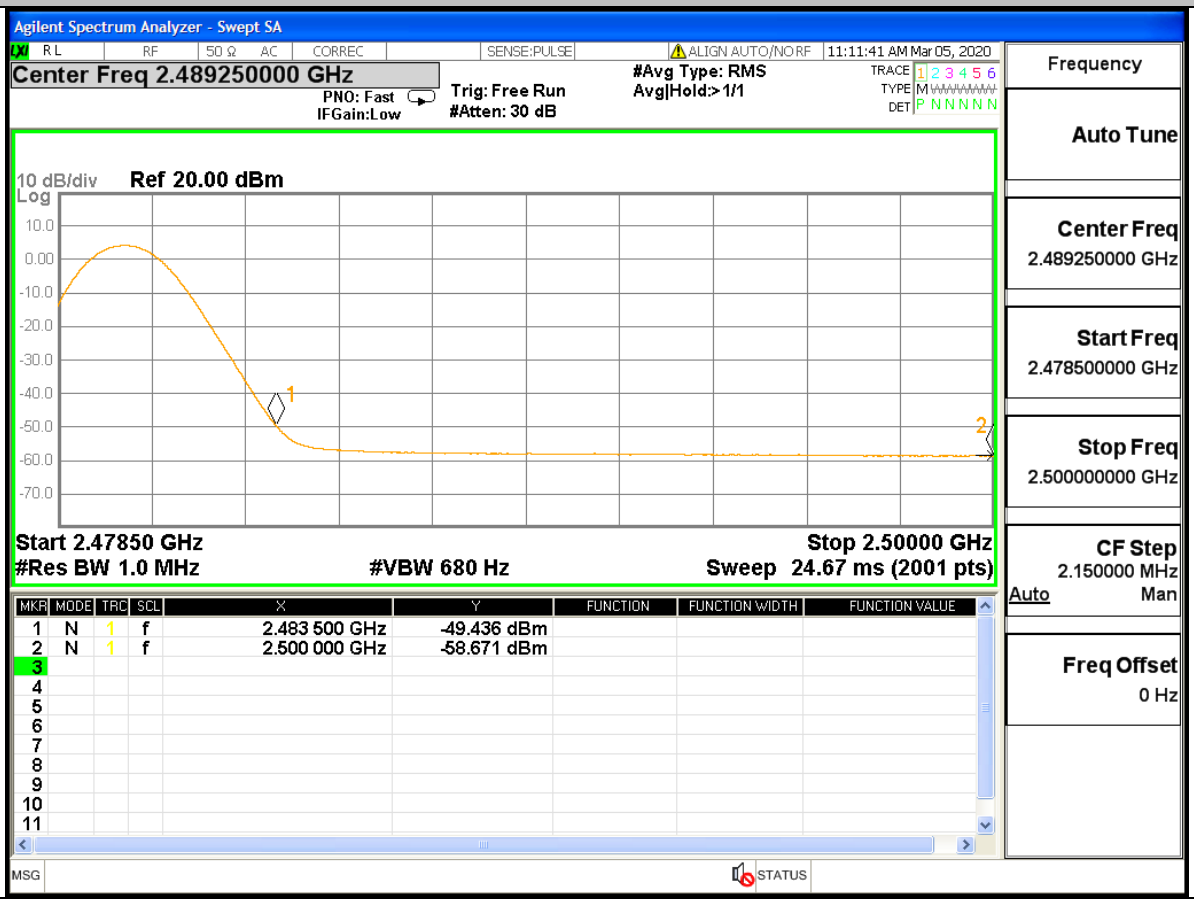
Restrict-band band-edge measurements_2402_AV_2DH5



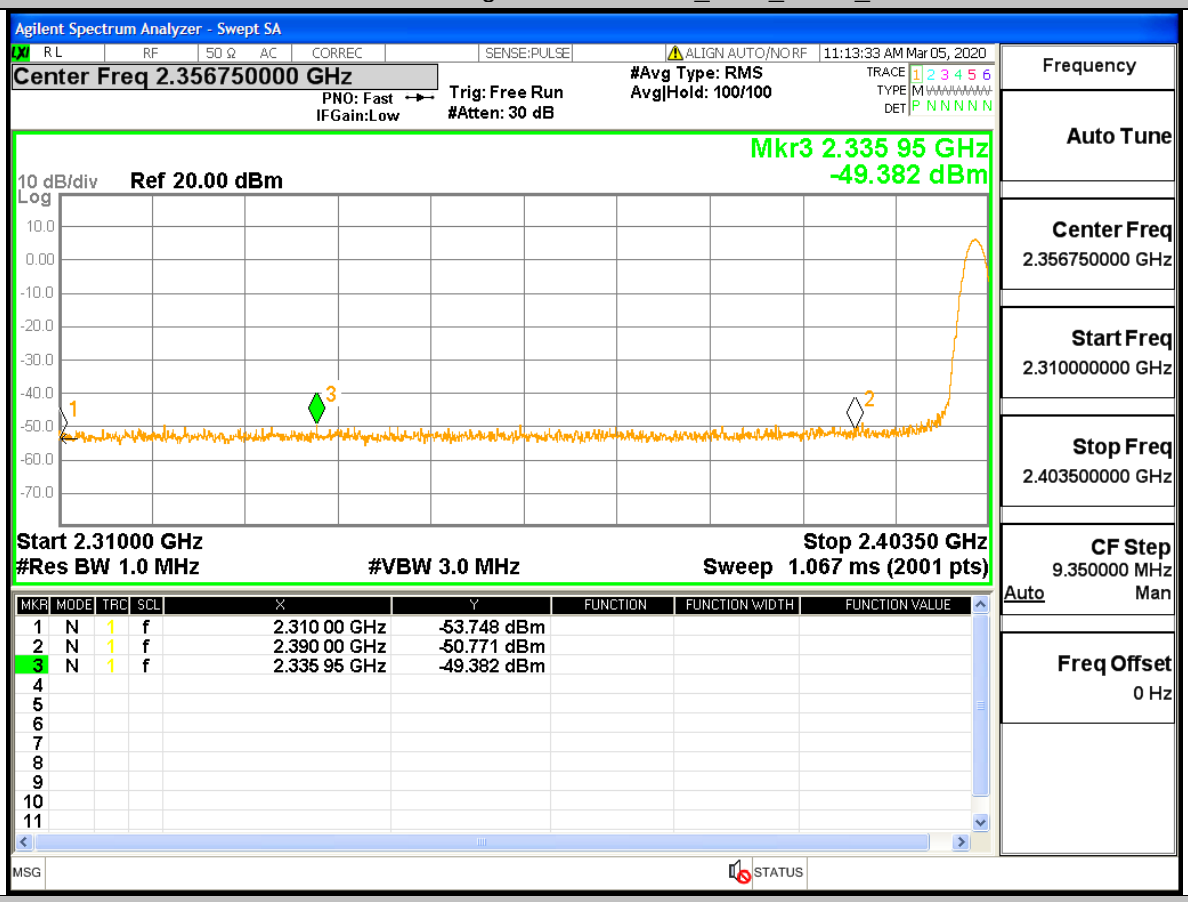
Restrict-band band-edge measurements_2480_PEAK_2DH5



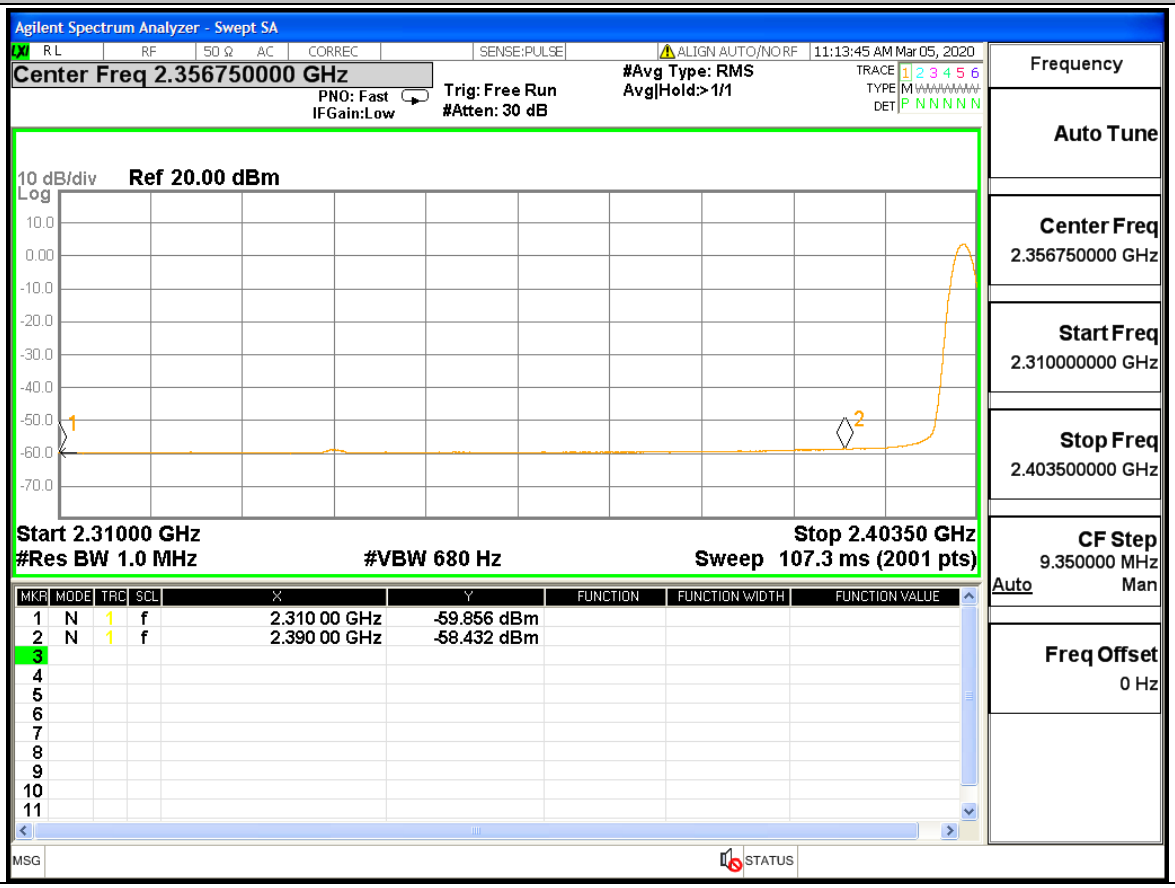
Restrict-band band-edge measurements_2480_AV_2DH5



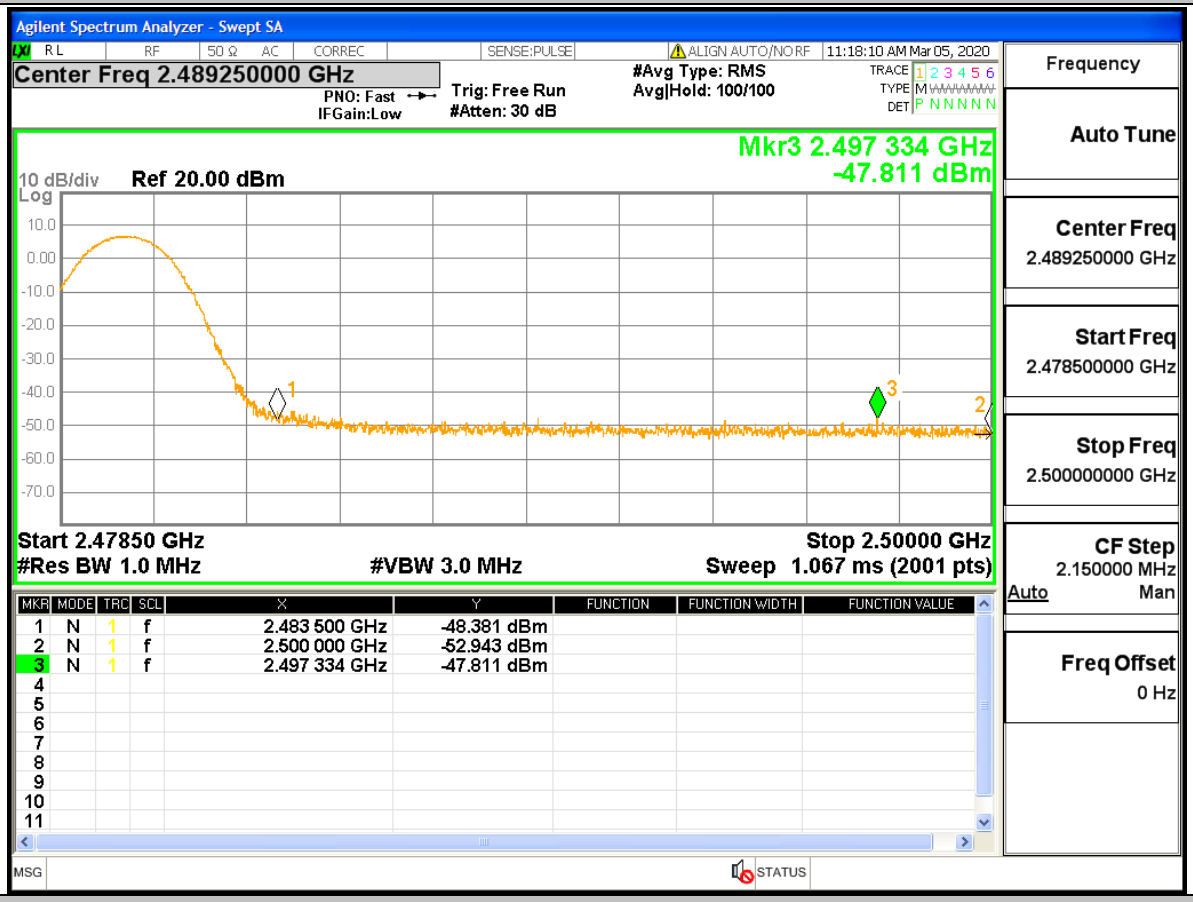
Restrict-band band-edge measurements_2402_PEAK_3DH5



Restrict-band band-edge measurements_2402_AV_3DH5



Restrict-band band-edge measurements_2480_PEAK_3DH5



Restrict-band band-edge measurements_2480_AV_3DH5