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

Product Name: Bluetooth headset

Trade Mark: CDX

Test Model: D42

FCC ID: 2AQK8-D42

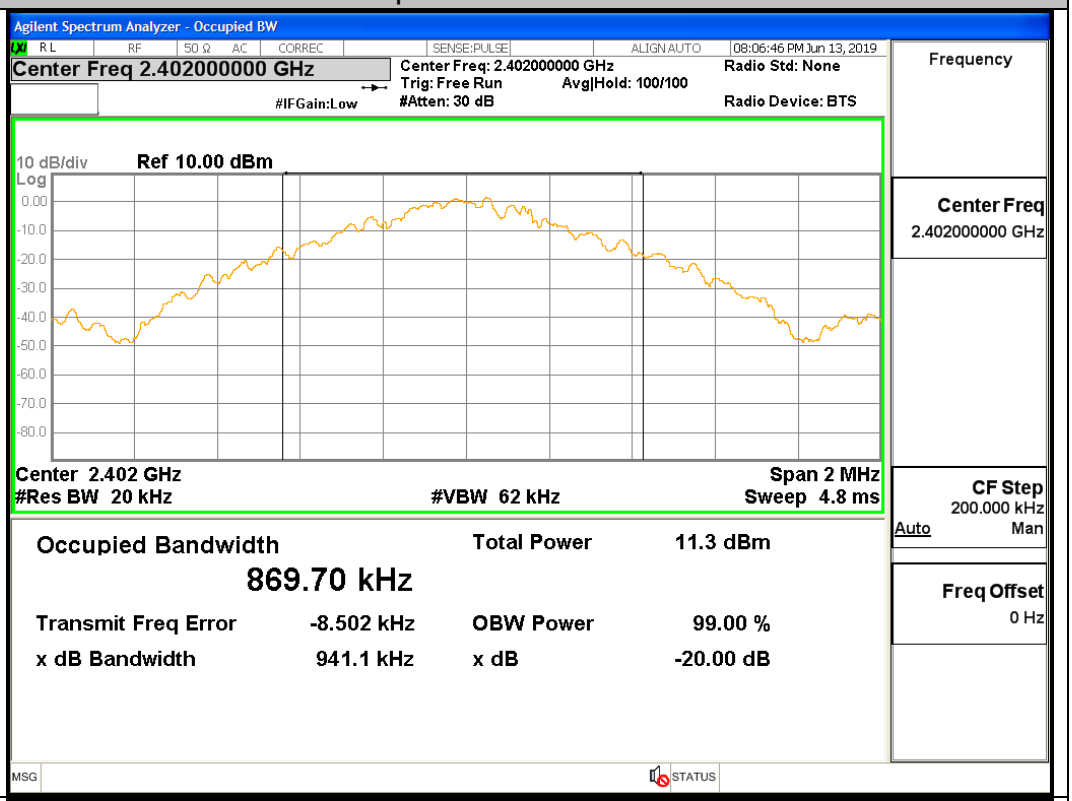
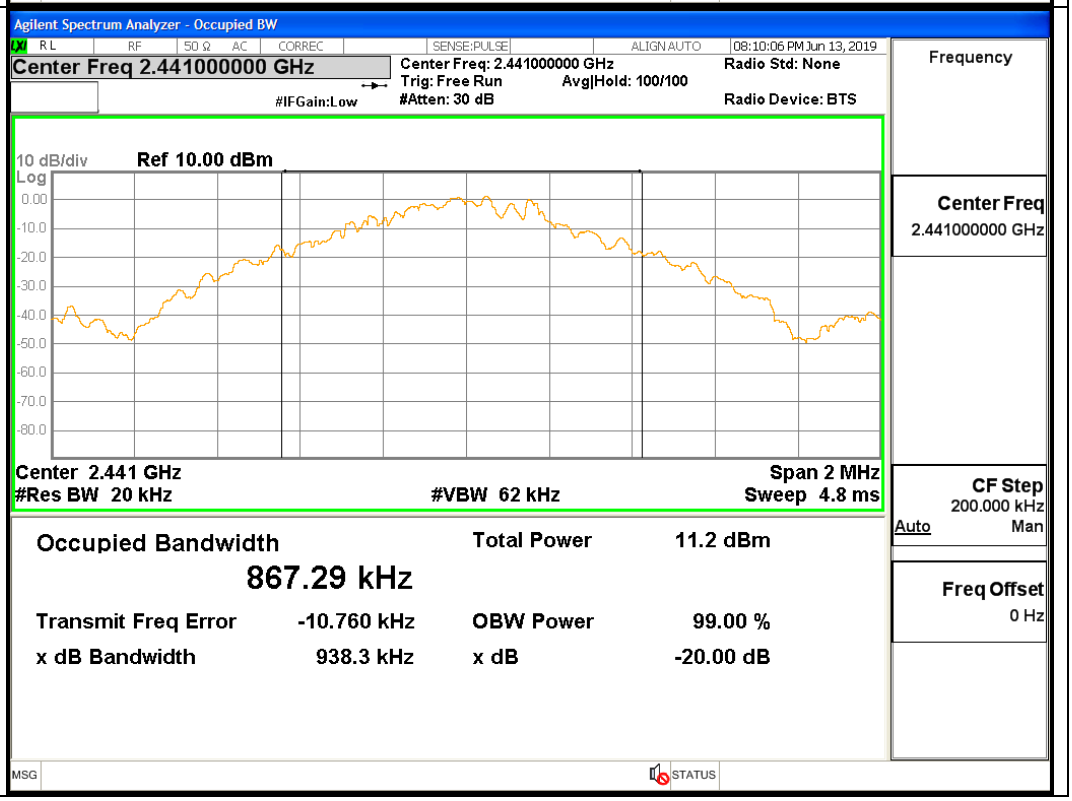
Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

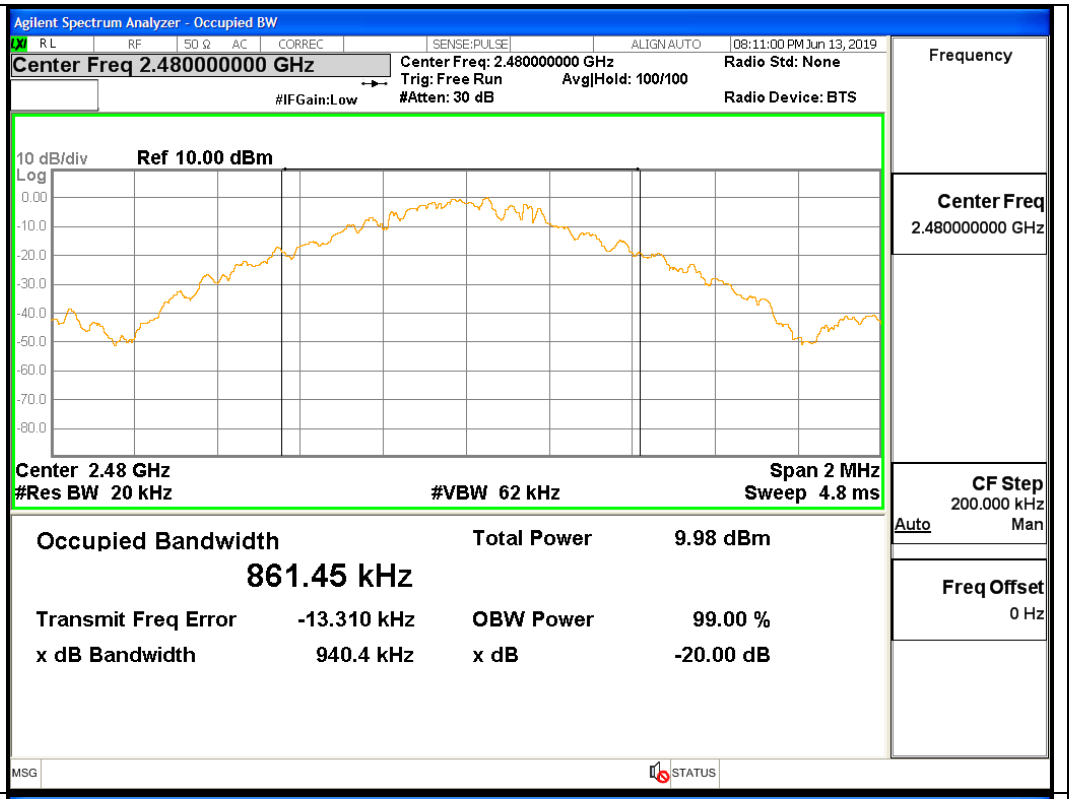
A.1 20 dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.941	Not Specified	PASS
GFSK	MCH	0.938	Not Specified	PASS
GFSK	HCH	0.940	Not Specified	PASS
π/4DQPSK	LCH	1.324	Not Specified	PASS
π/4DQPSK	MCH	1.332	Not Specified	PASS
π/4DQPSK	HCH	1.328	Not Specified	PASS
8DPSK	LCH	1.328	Not Specified	PASS
8DPSK	MCH	1.331	Not Specified	PASS
8DPSK	HCH	1.332	Not Specified	PASS

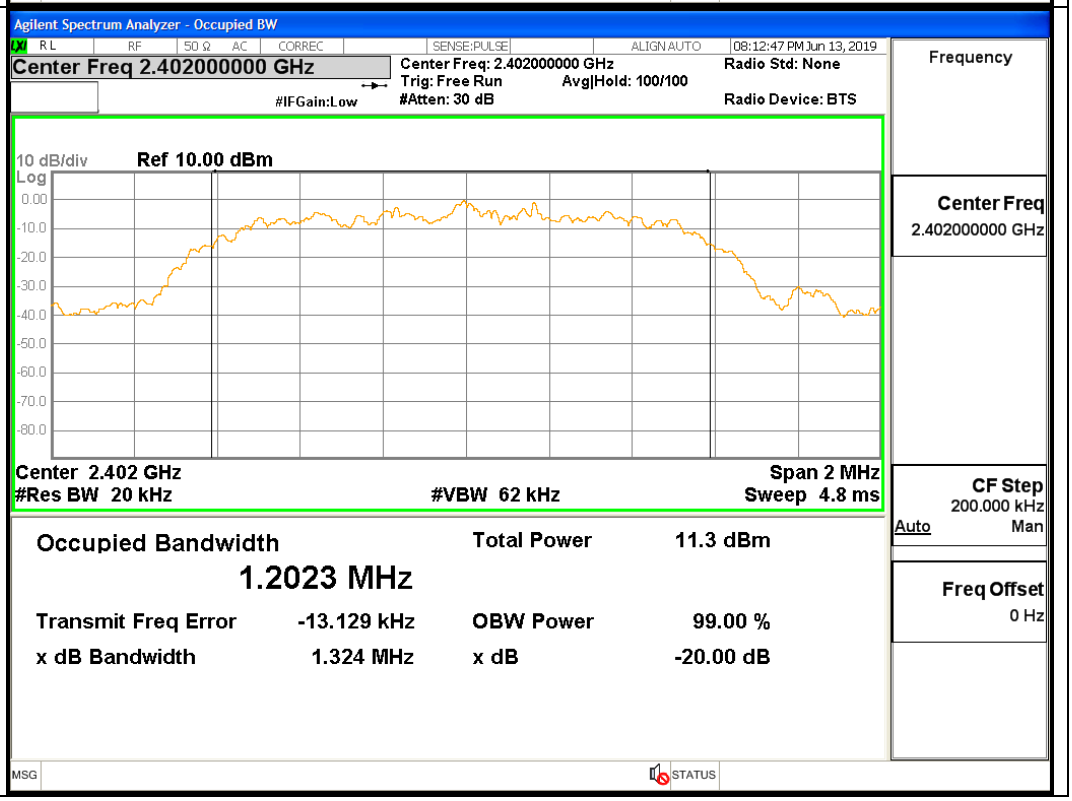
Test Graph

Graphs	
GFSK/LCH	
GFSK/MCH	

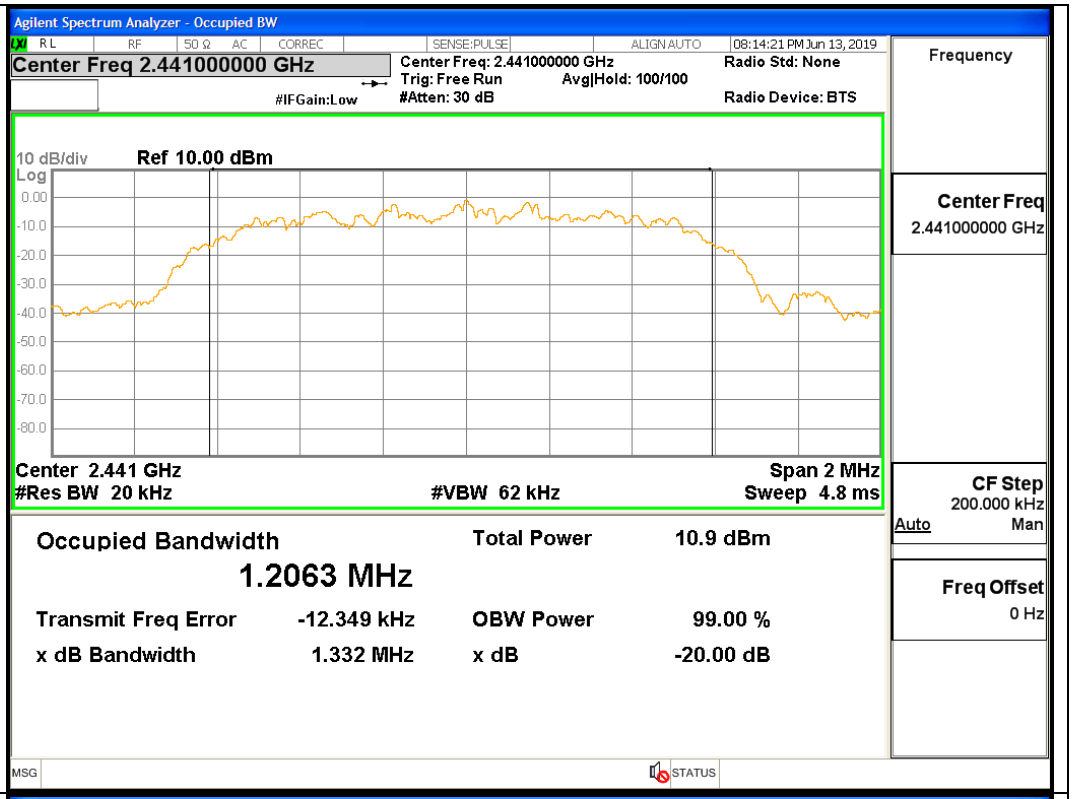
GFSK/HCH



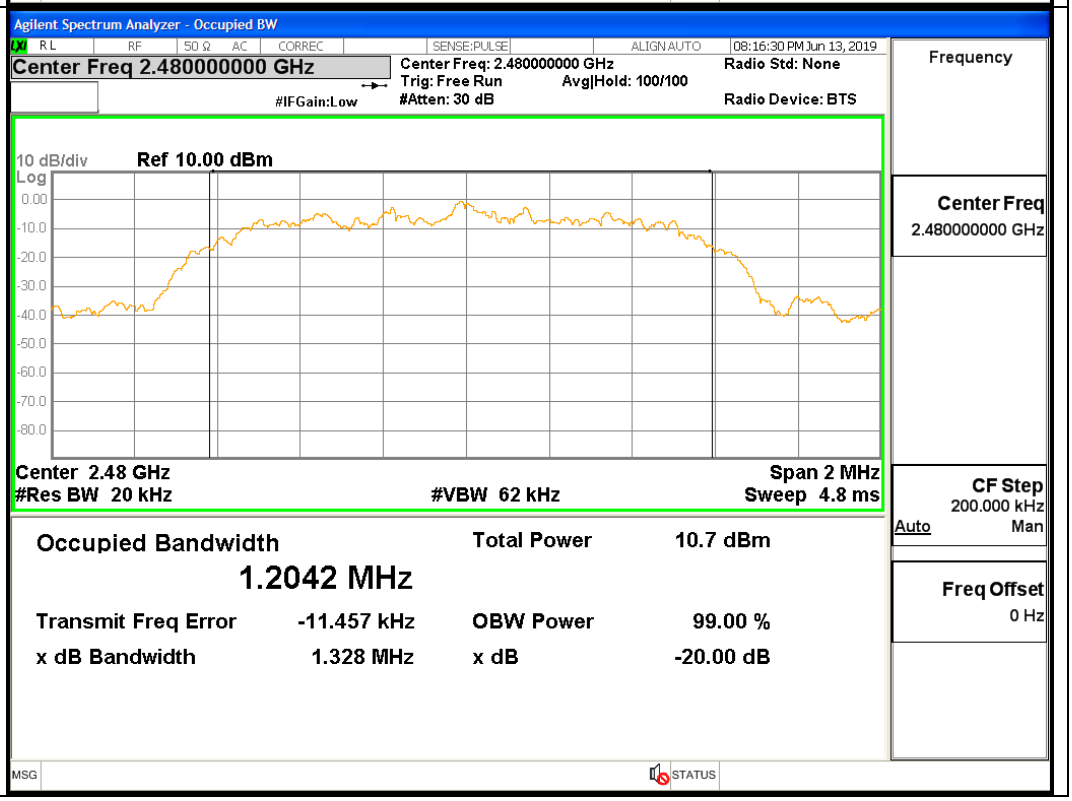
π/4DQPSK/LCH



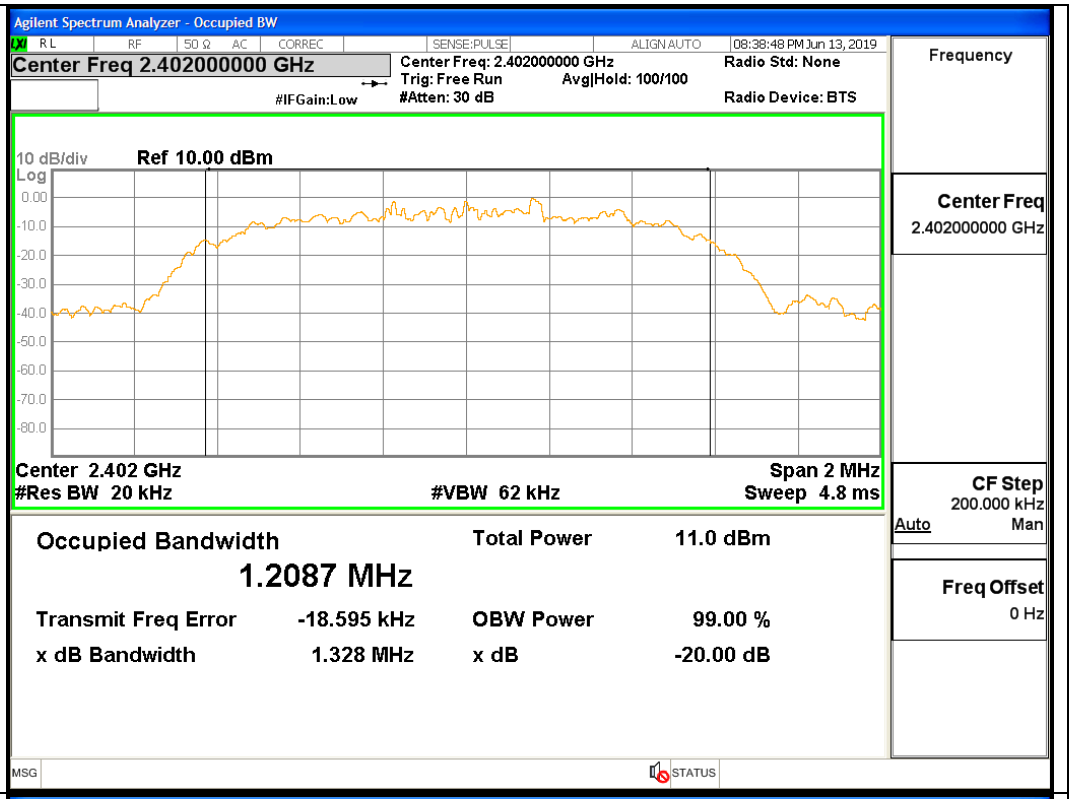
π/4DQPSK/MCH



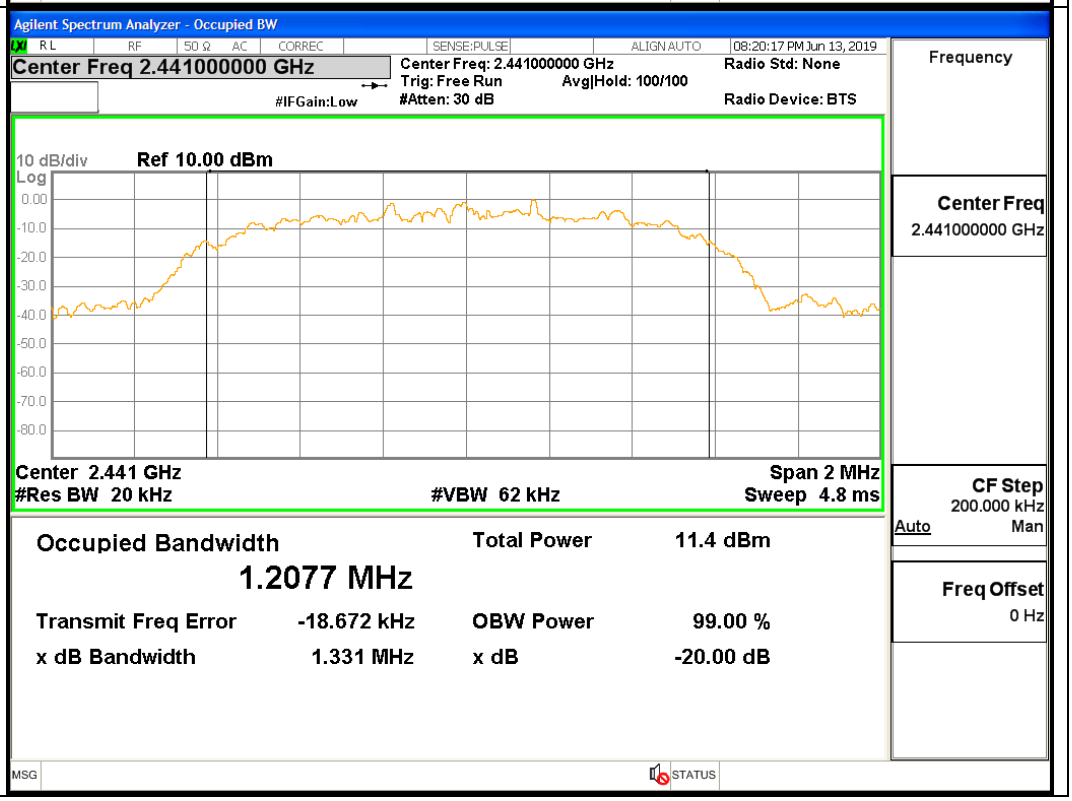
π/4DQPSK/HCH

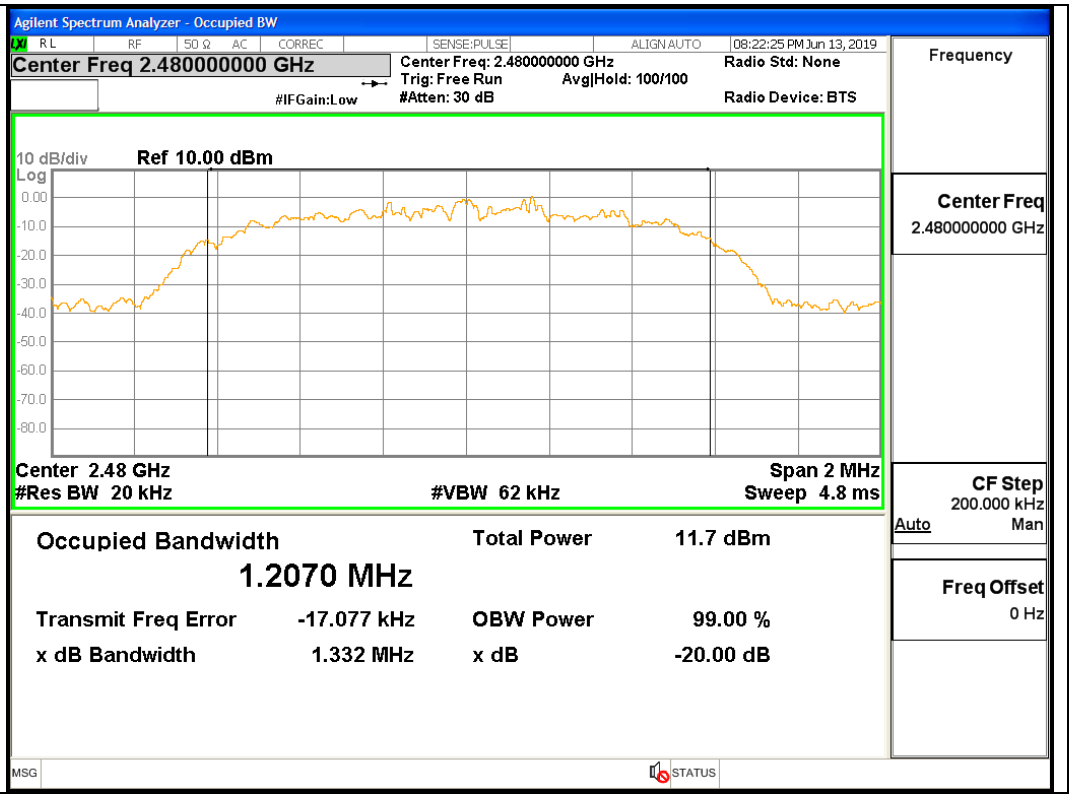


8DPSK/LCH



8DPSK/MCH



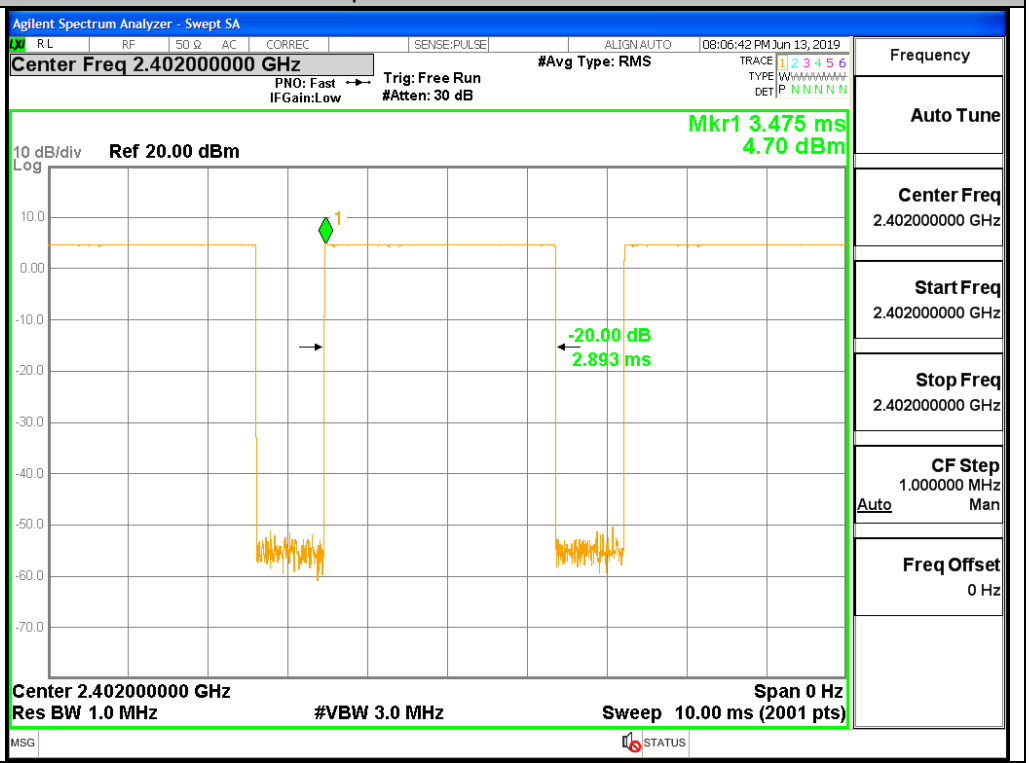
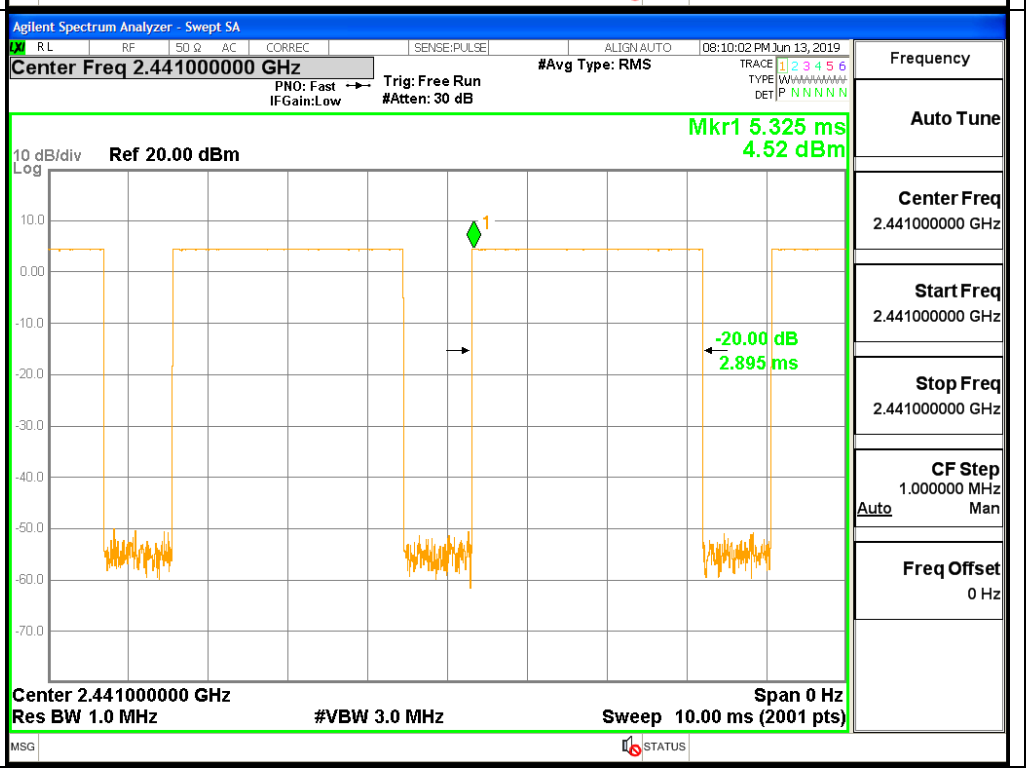
8DPSK/HCH	

Agilent Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
CORREC
SENSE:PULSE
ALIGN AUTO
08:22:25 PM Jun 13, 2019
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 30 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Ref 10.00 dBm
Log
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
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
1.2070 MHz
Total Power
11.7 dBm
Freq Offset
0 Hz
Transmit Freq Error
-17.077 kHz
OBW Power
99.00 %
x dB Bandwidth
1.332 MHz
x dB
-20.00 dB
MSG
STATUS

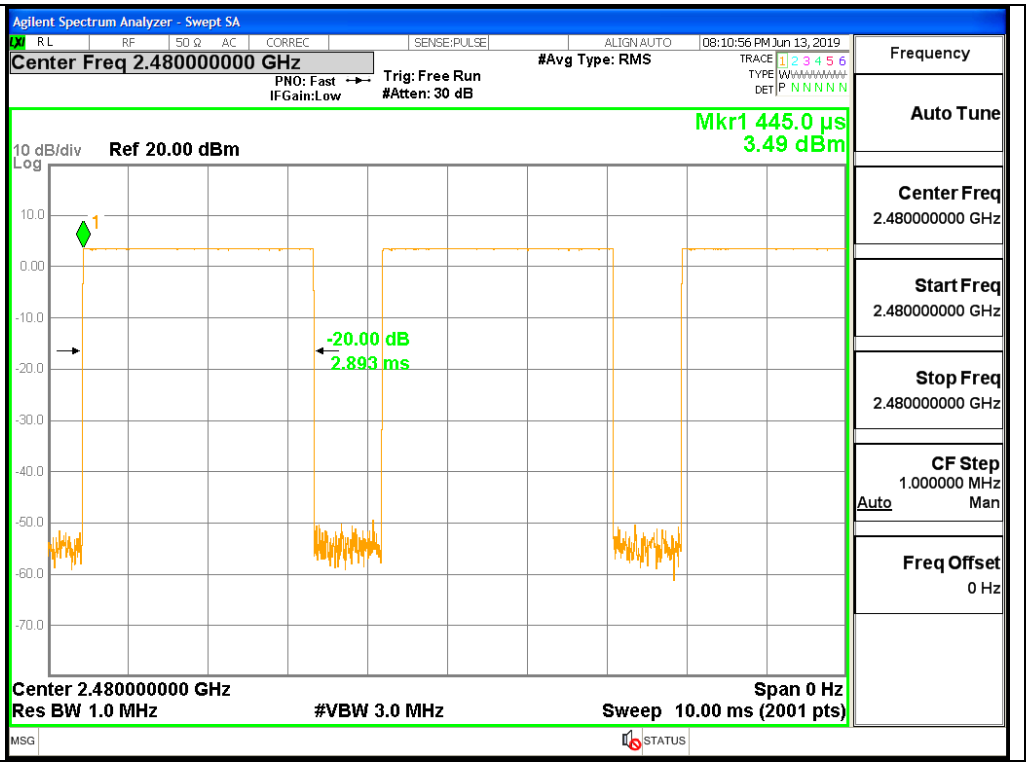
A.2 Dwell Time

Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002893	106.7	0.308717	0.4	PASS
GFSK	DH5	MCH	0.002895	106.7	0.308929	0.4	PASS
GFSK	DH5	HCH	0.002893	106.7	0.308730	0.4	PASS
π/4DQPSK	2DH5	LCH	0.002901	106.7	0.309542	0.4	PASS
π/4DQPSK	2DH5	MCH	0.002899	106.7	0.309274	0.4	PASS
π/4DQPSK	2DH5	HCH	0.002899	106.7	0.309291	0.4	PASS
8DPSK	3DH5	LCH	0.002892	106.7	0.308606	0.4	PASS
8DPSK	3DH5	MCH	0.002900	106.7	0.309444	0.4	PASS
8DPSK	3DH5	HCH	0.002902	106.7	0.309614	0.4	PASS

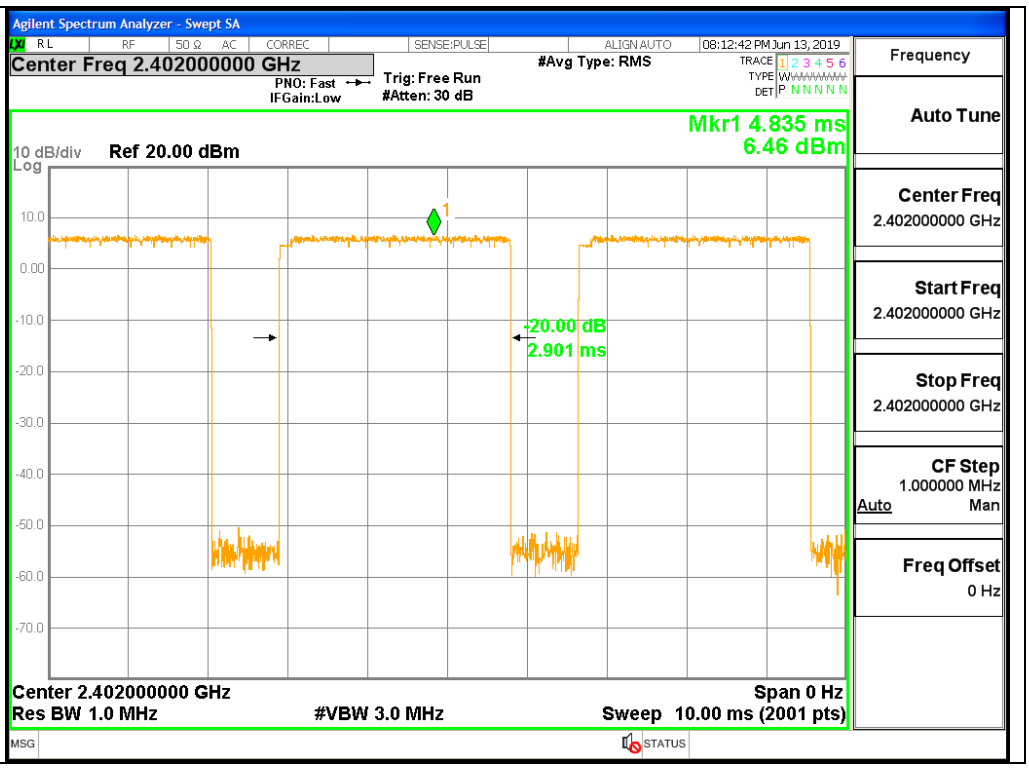
Test Graph

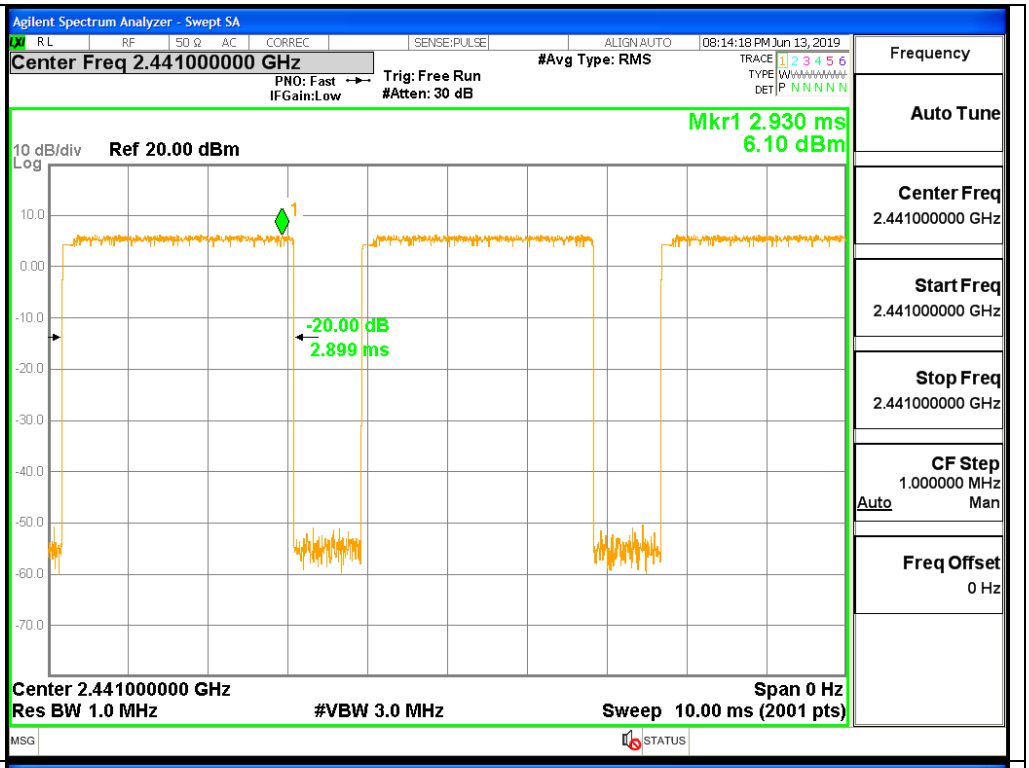
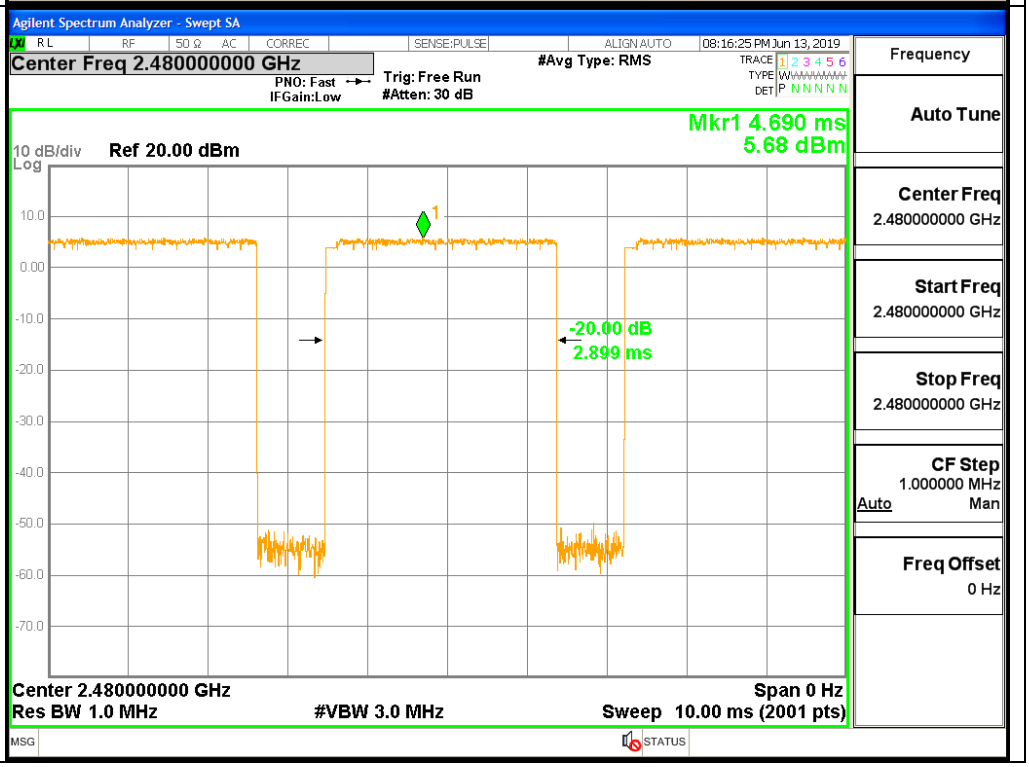
Graphs	
GFSK_DH5/LCH	
GFSK_DH5/MCH	

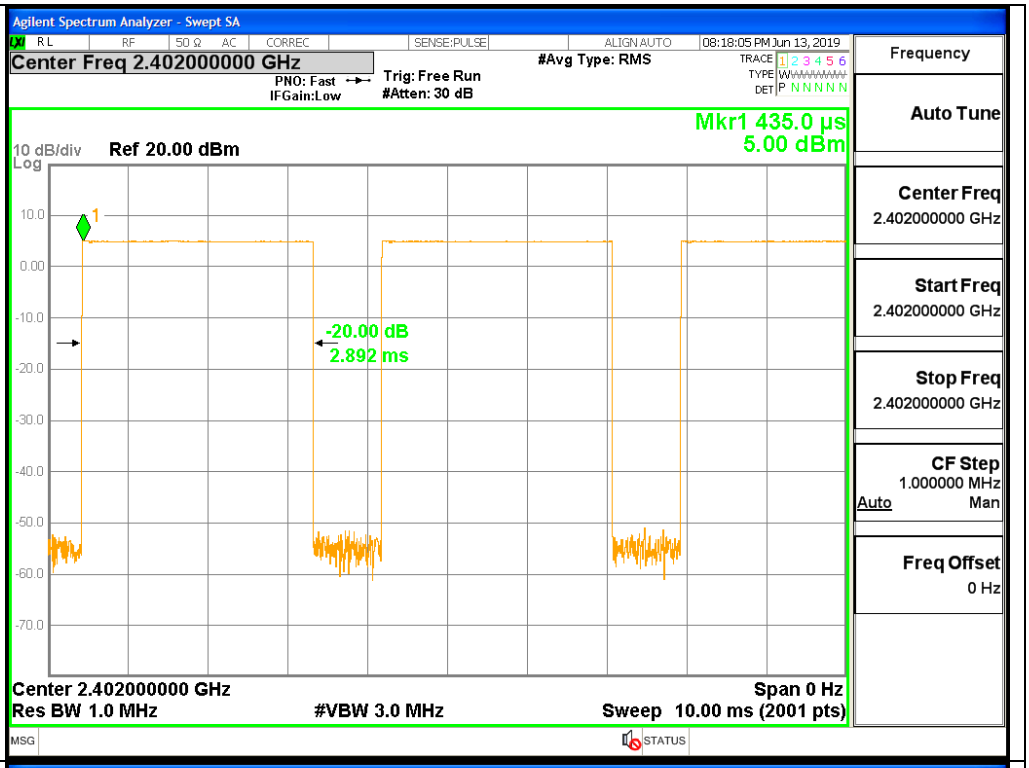
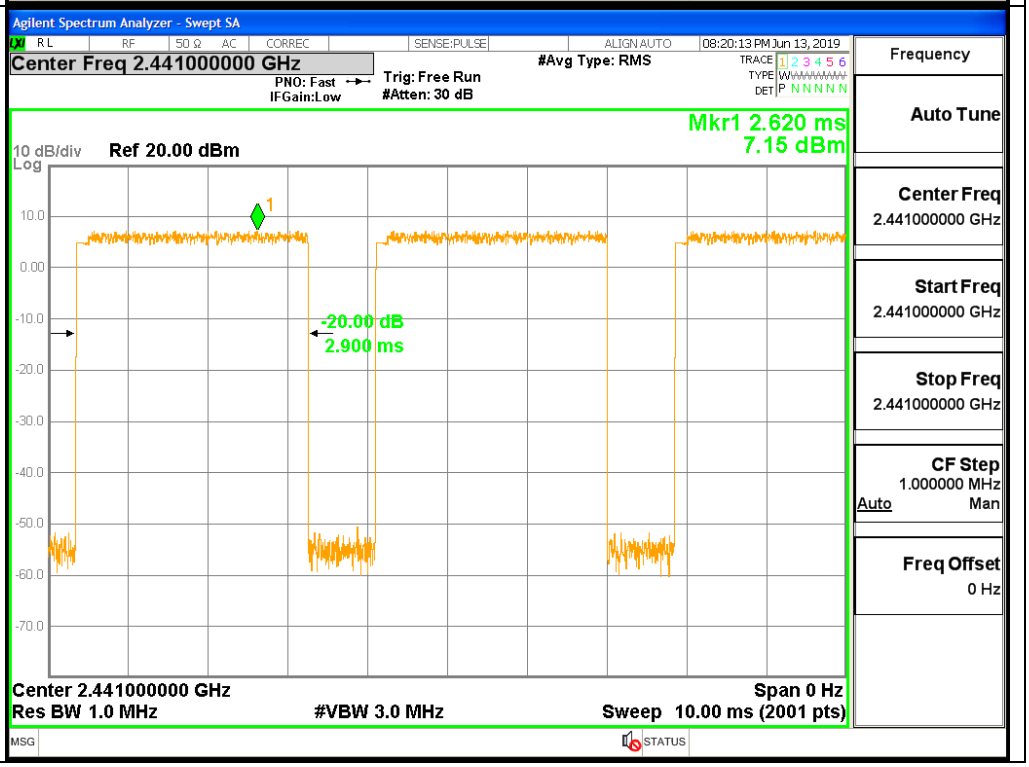
GFSK_DH5/HCH

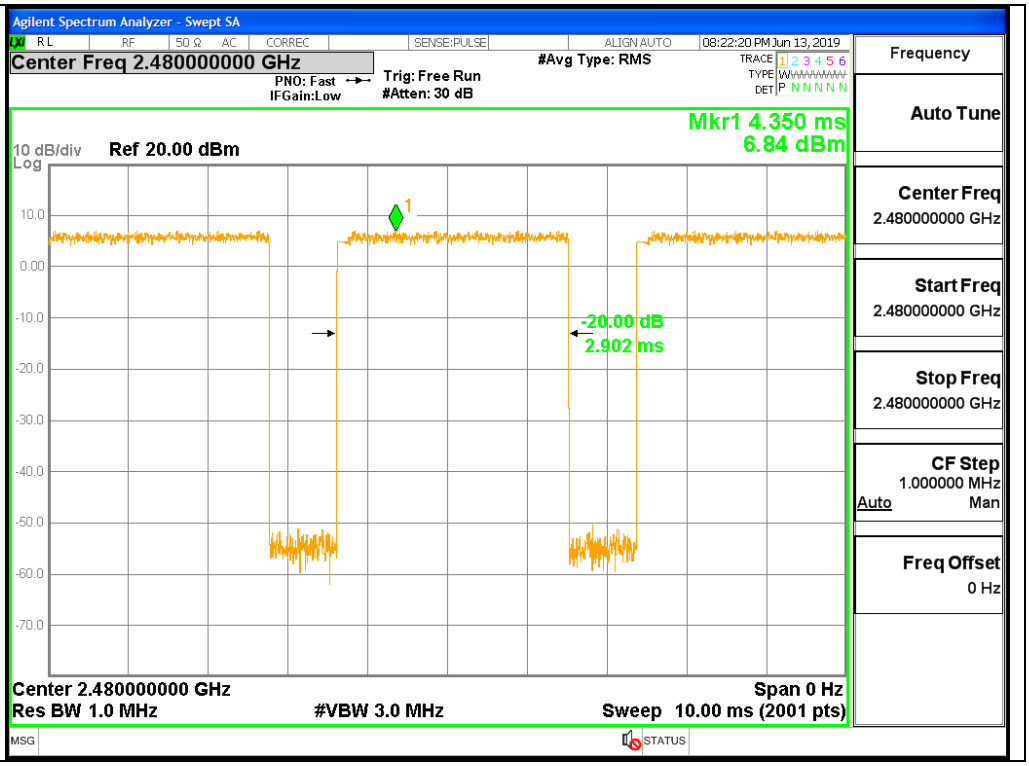


π/4DQPSK
_2DH5/LCH



π/4DQPSK _2DH5/MCH	
π/4DQPSK _2DH5/HCH	

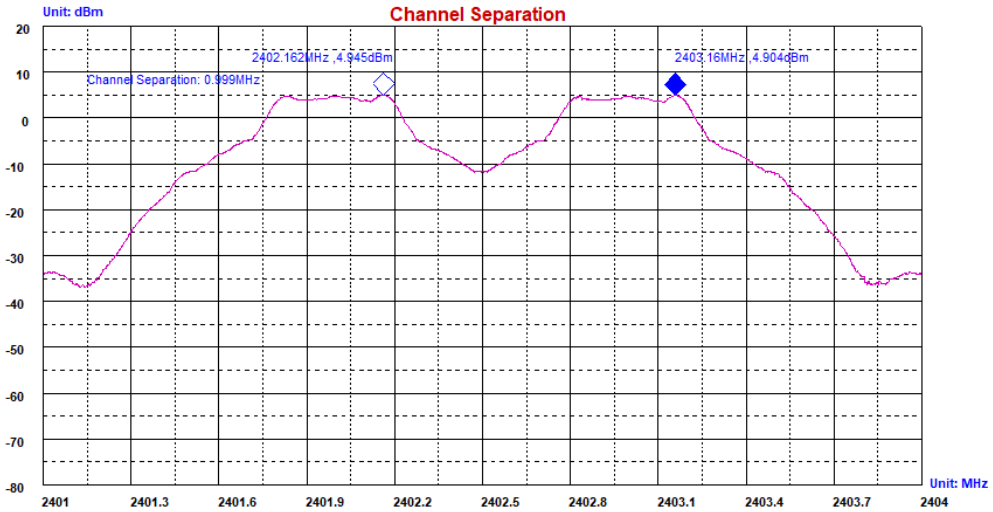
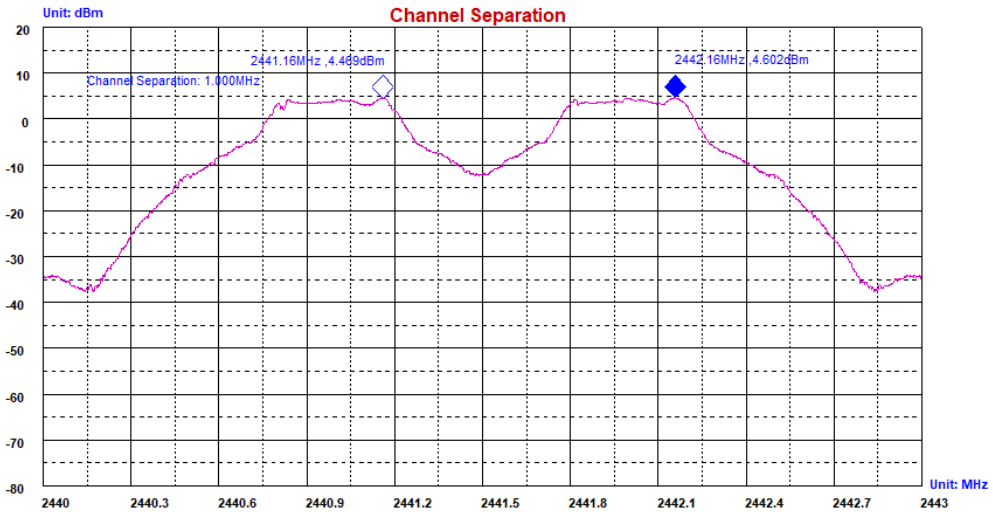
8DPSK _3DH5/LCH	
8DPSK _3DH5/MCH	

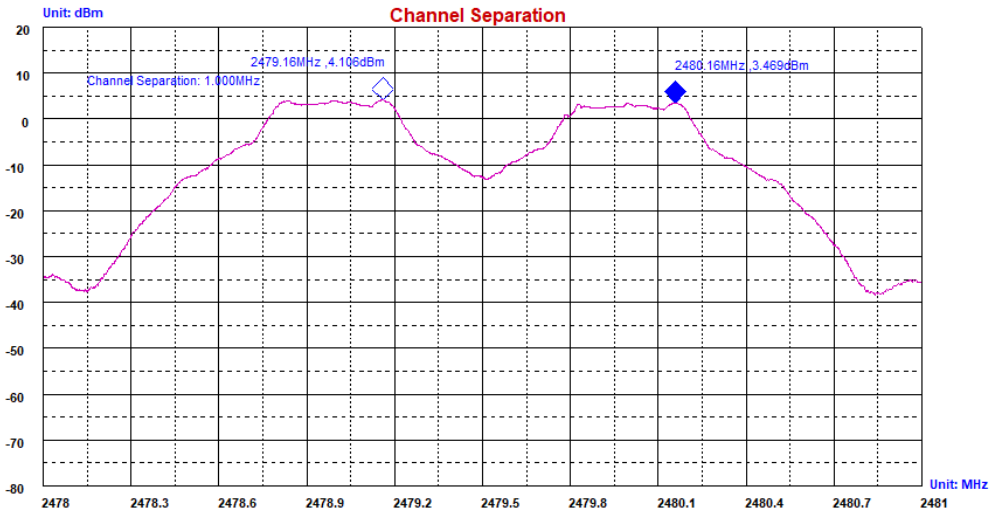
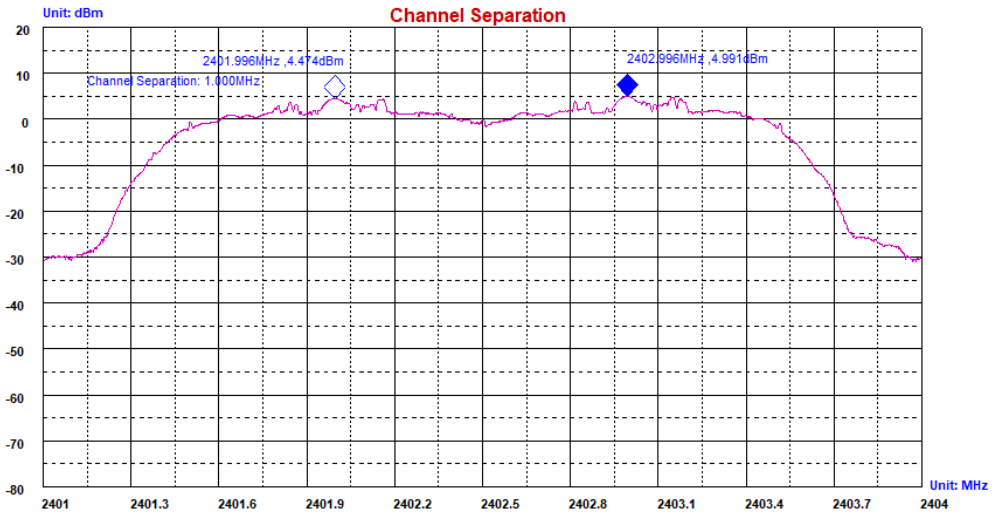
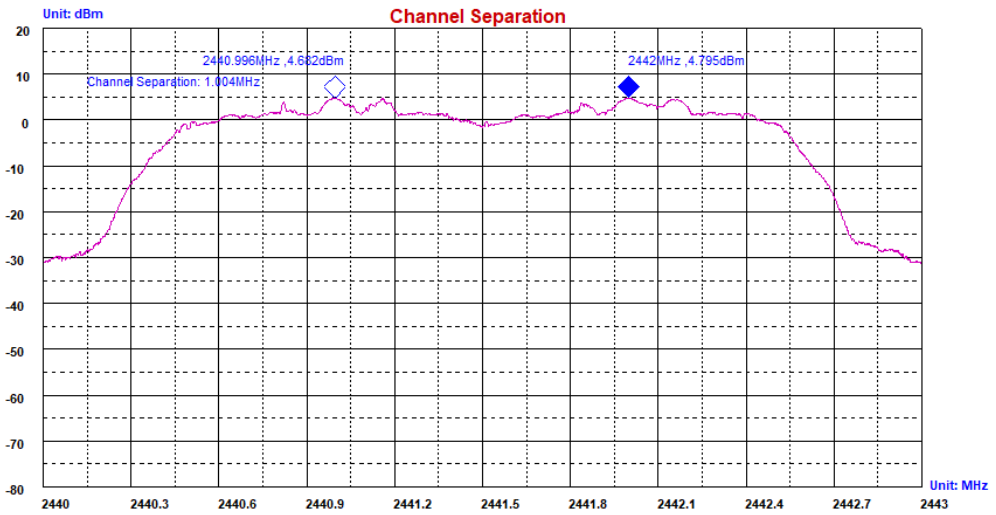
8DPSK _3DH5/HCH	

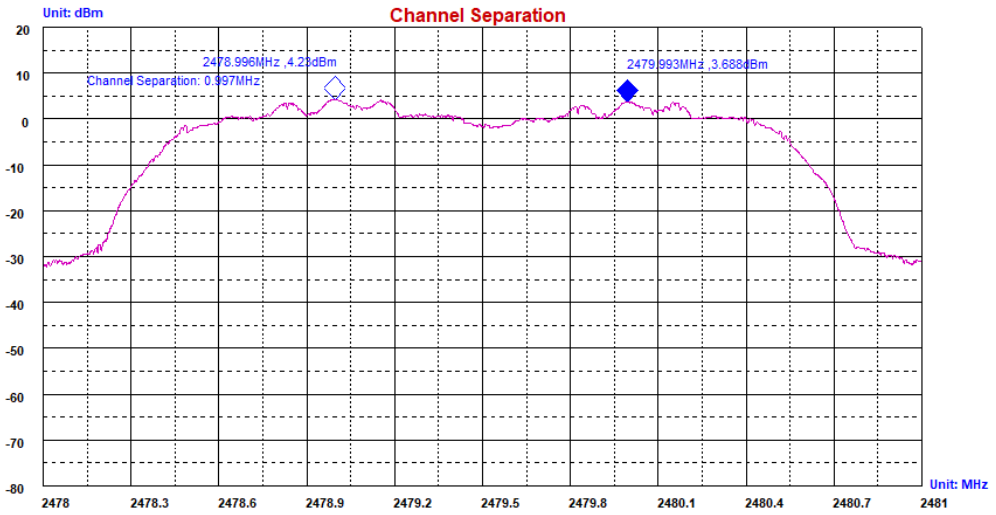
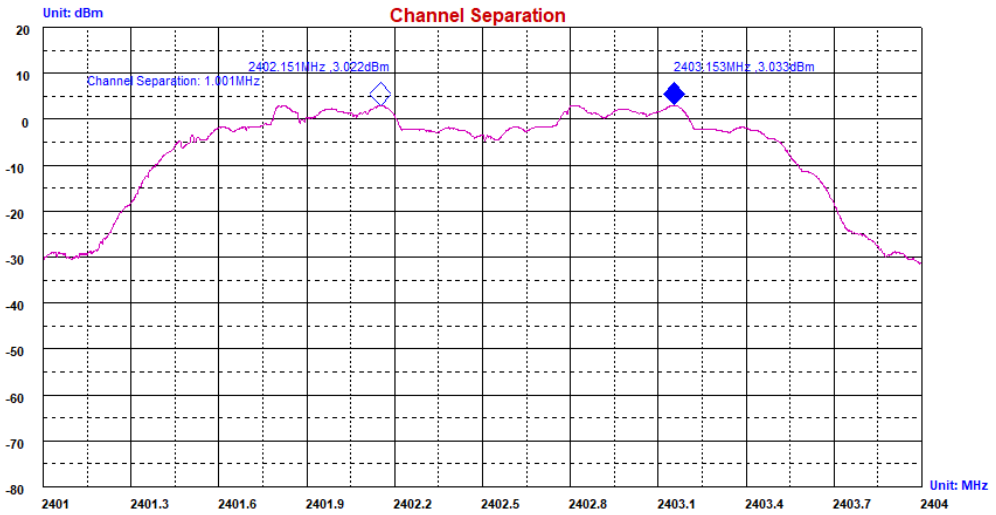
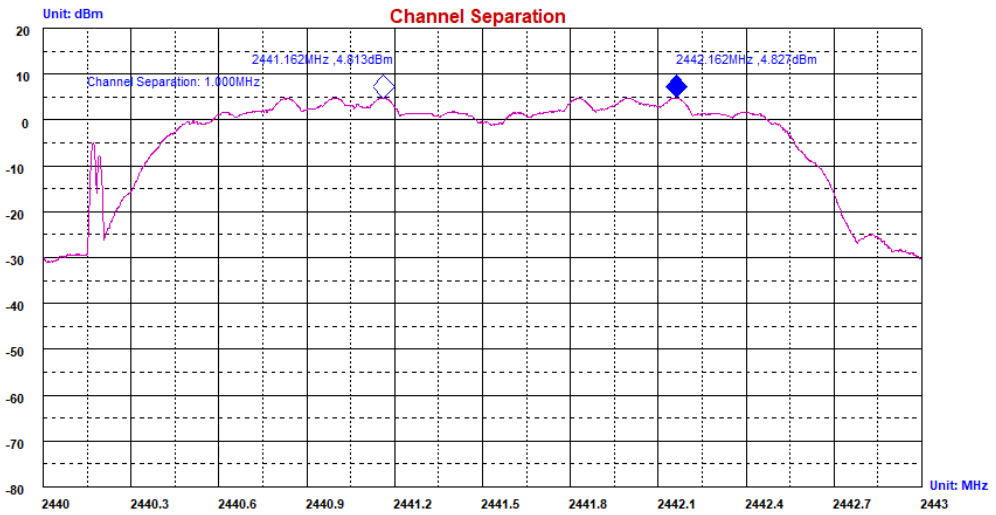
A.3 Carrier Frequency Separation

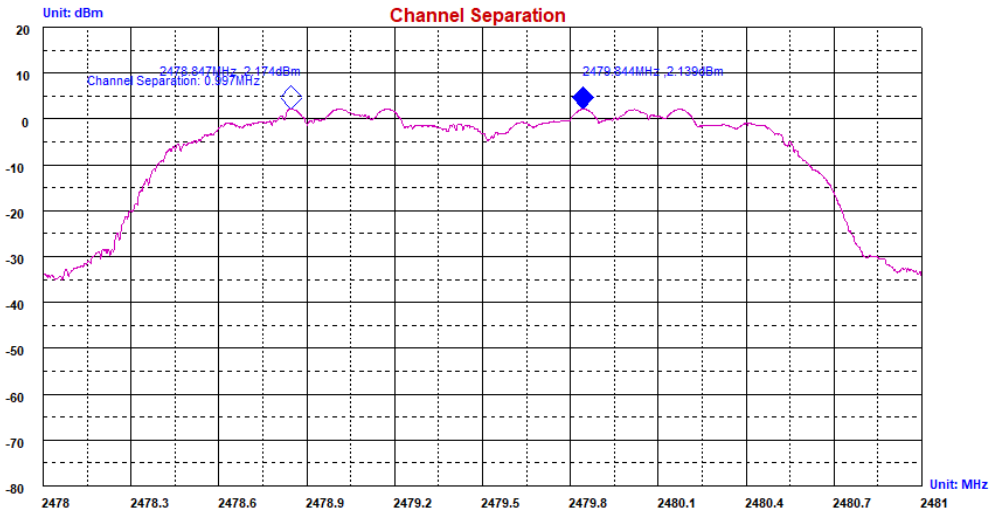
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.999	0.627	PASS
GFSK	MCH	1.000	0.625	PASS
GFSK	HCH	1.000	0.627	PASS
π/4DQPSK	LCH	1.000	0.883	PASS
π/4DQPSK	MCH	1.004	0.888	PASS
π/4DQPSK	HCH	0.997	0.885	PASS
8DPSK	LCH	1.001	0.853	PASS
8DPSK	MCH	1.000	0.887	PASS
8DPSK	HCH	0.997	0.888	PASS

Test Graph

Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	
π/4DQPSK/MCH	

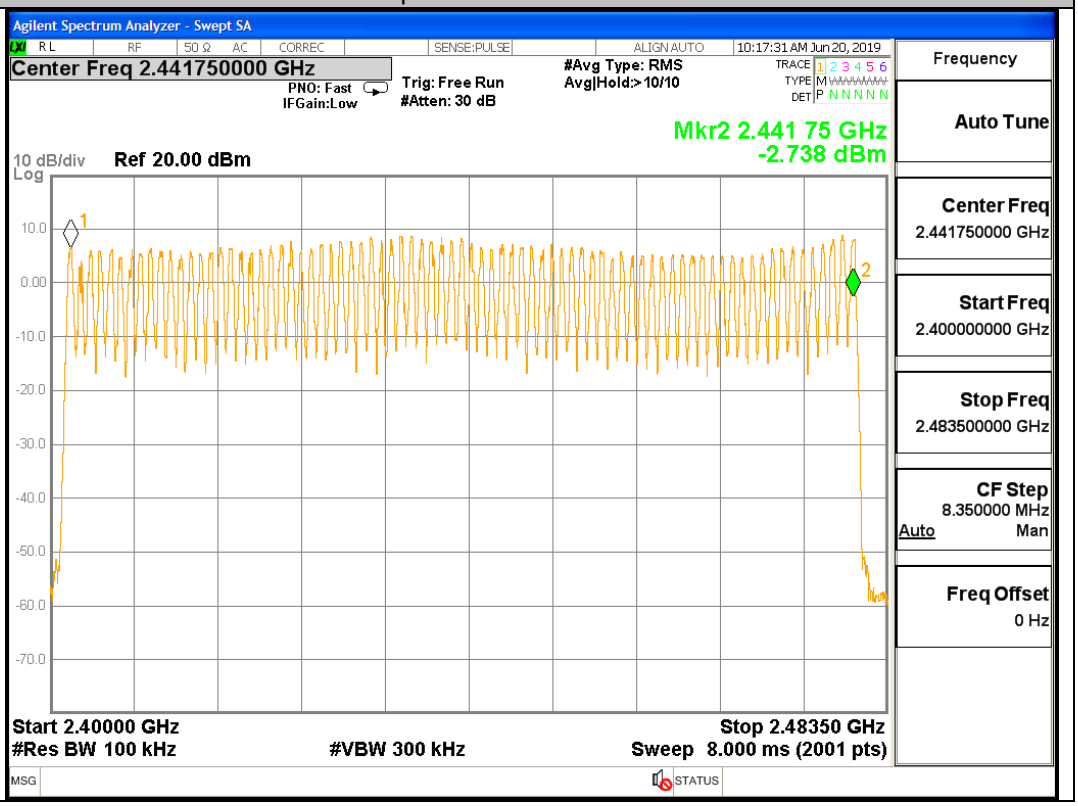
π/4DQPSK/HCH	
8DPSK/LCH	
8DPSK/MCH	

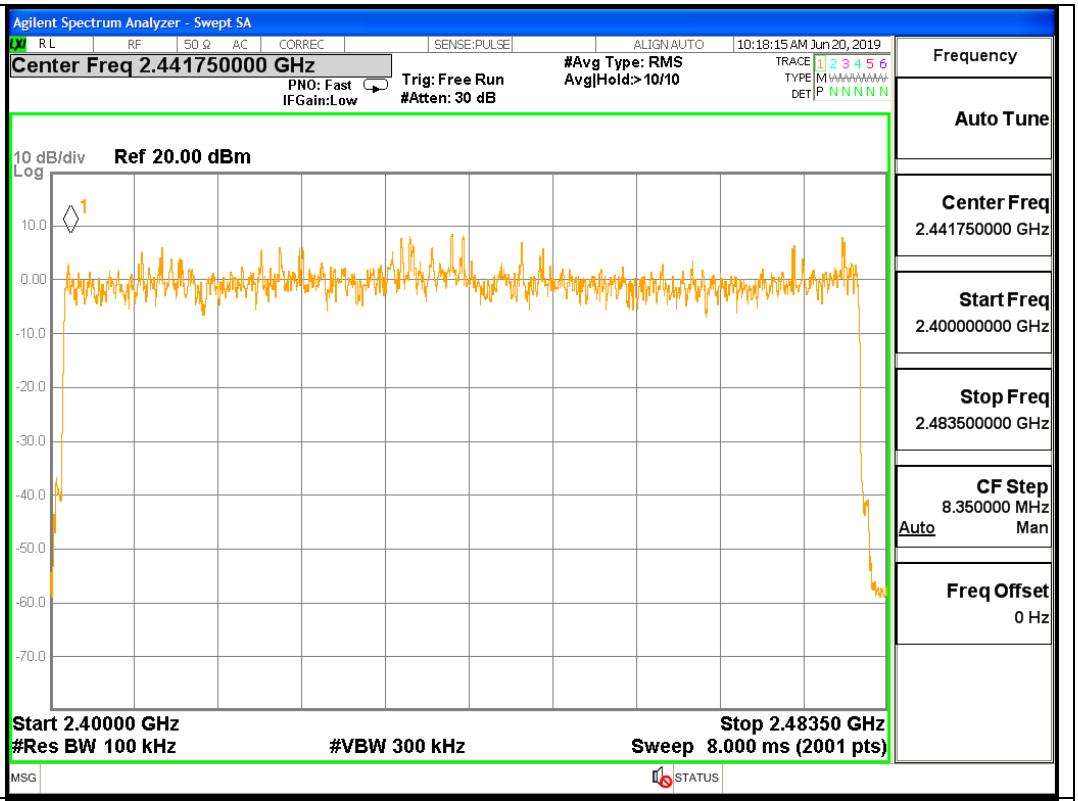
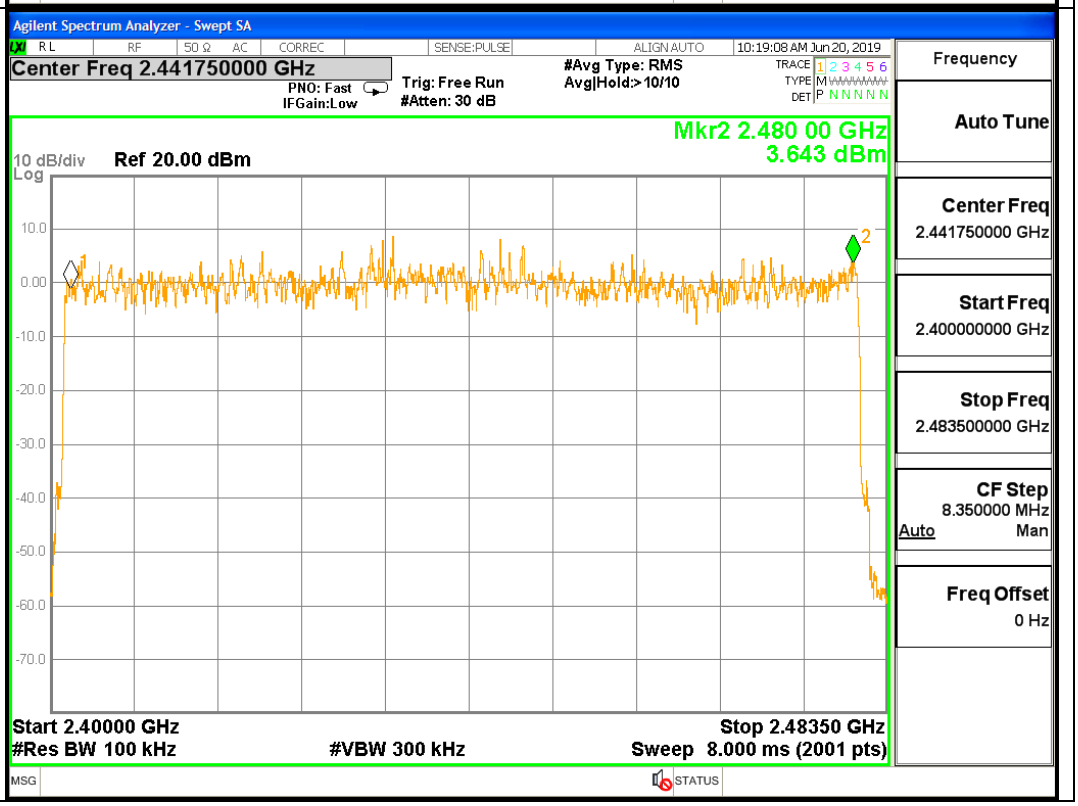
8DPSK/HCH	 Channel Separation Unit: dBm Unit: MHz 2478.847MHz -2.174dBm 2479.844MHz -2.139dBm Channel Separation: 0.997MHz 20 10 0 -10 -20 -30 -40 -50 -60 -70 -80 2478 2478.3 2478.6 2478.9 2479.2 2479.5 2479.8 2480.1 2480.4 2480.7 2481

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

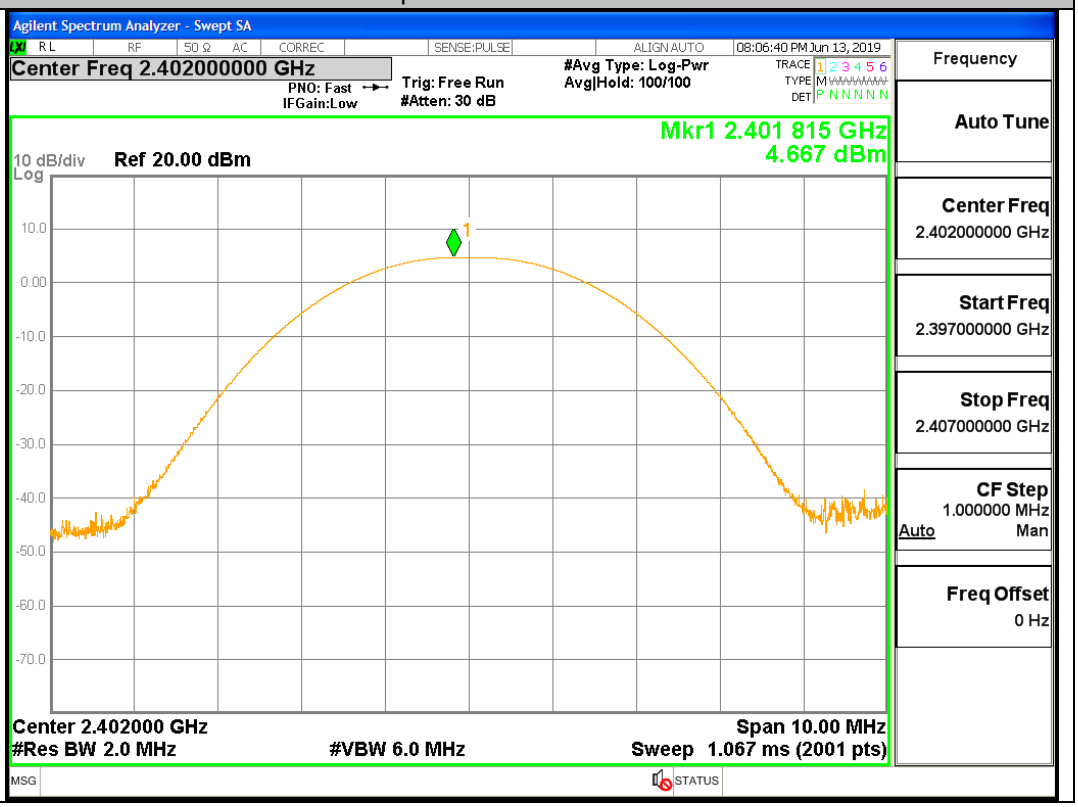
Graphs	
GFSK/Hop	

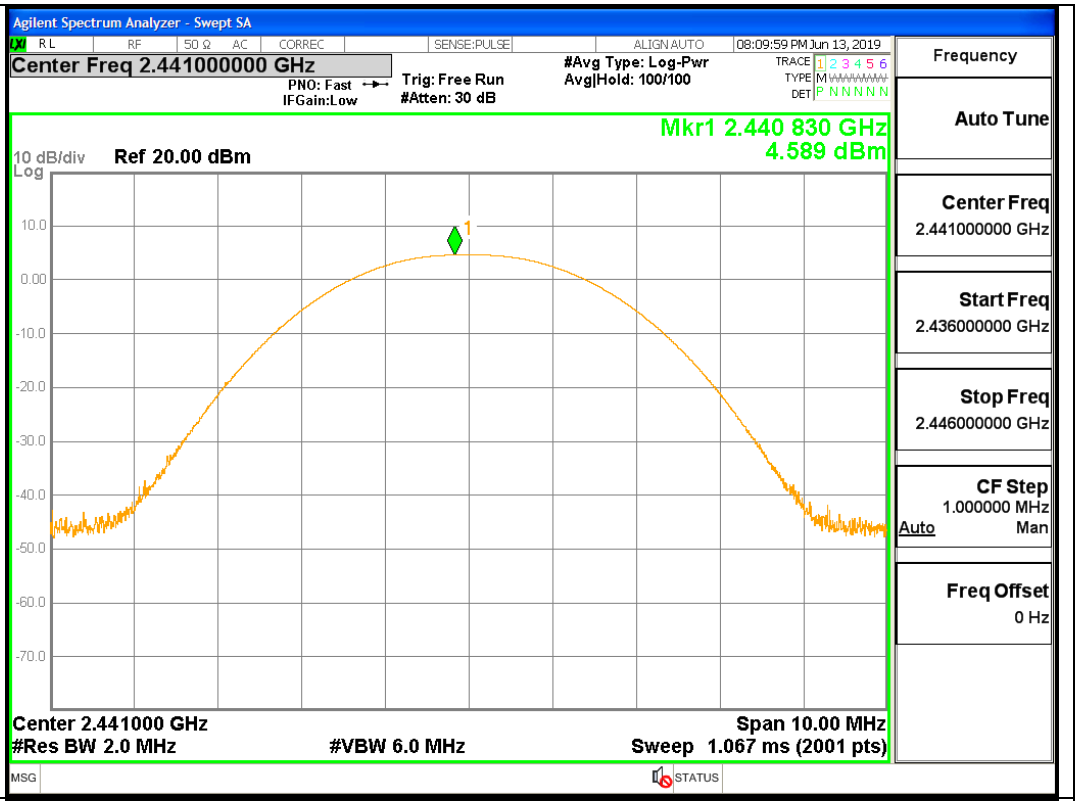
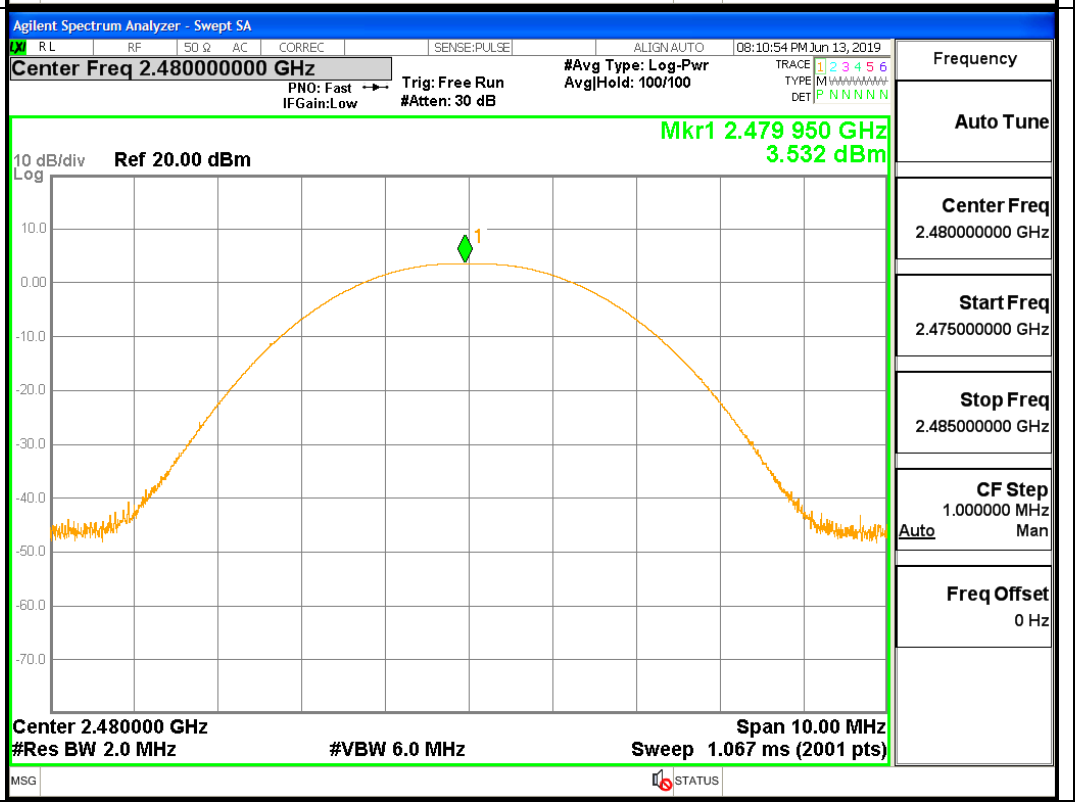
π/4DQPSK/Hop	
8DPSK/Hop	

A.5 Conducted Peak Output Power

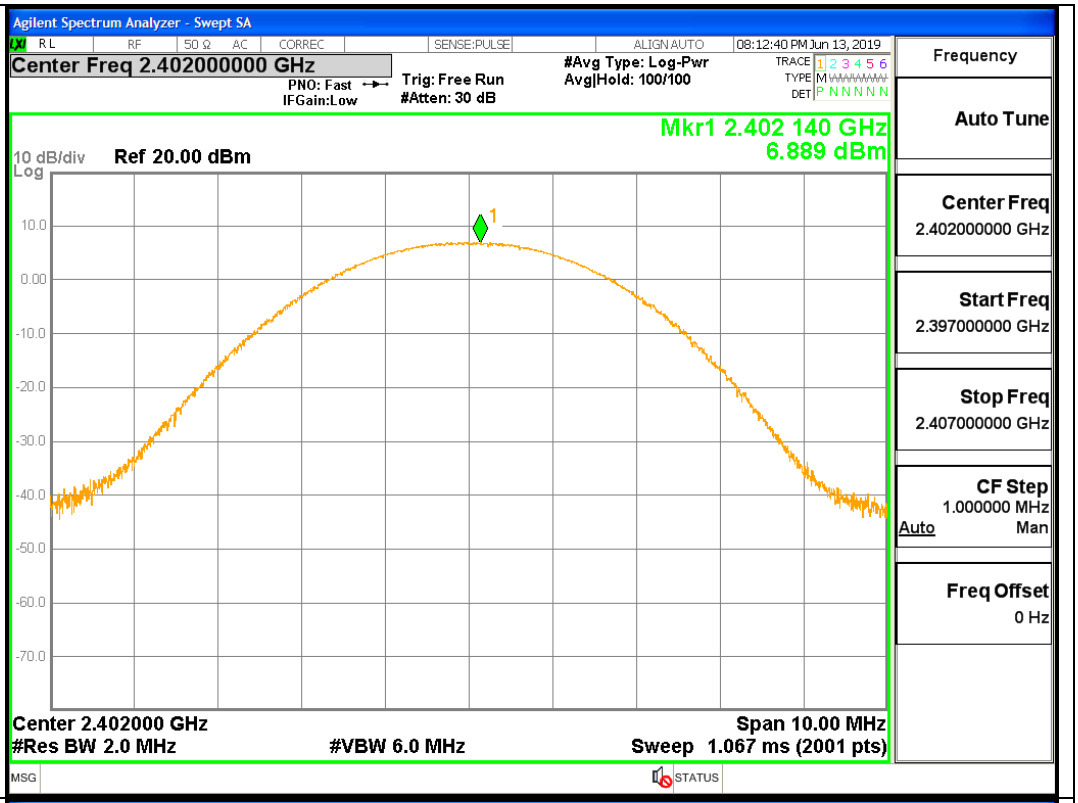
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	4.667	21	PASS
GFSK	MCH	4.589	21	PASS
GFSK	HCH	3.532	21	PASS
π/4DQPSK	LCH	6.889	21	PASS
π/4DQPSK	MCH	6.765	21	PASS
π/4DQPSK	HCH	6.079	21	PASS
8DPSK	LCH	4.789	21	PASS
8DPSK	MCH	7.334	21	PASS
8DPSK	HCH	7.273	21	PASS

Test Graph

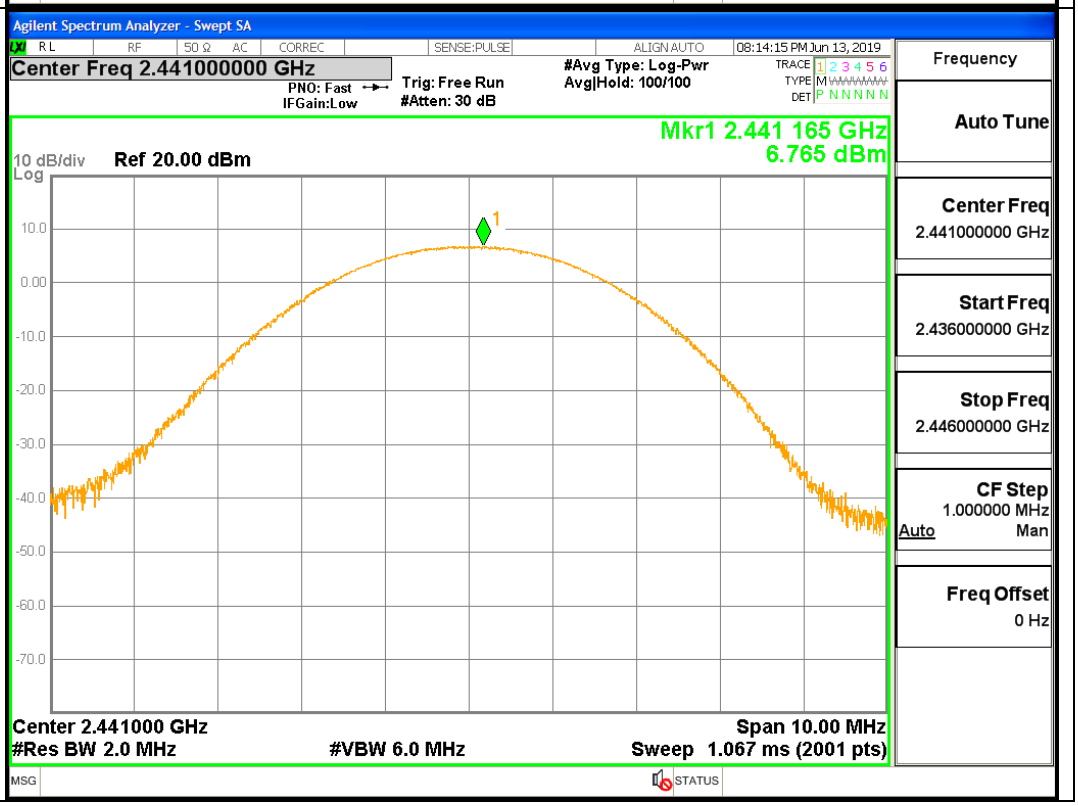
Graphs	
GFSK/LCH	

GFSK/MCH	
GFSK/HCH	

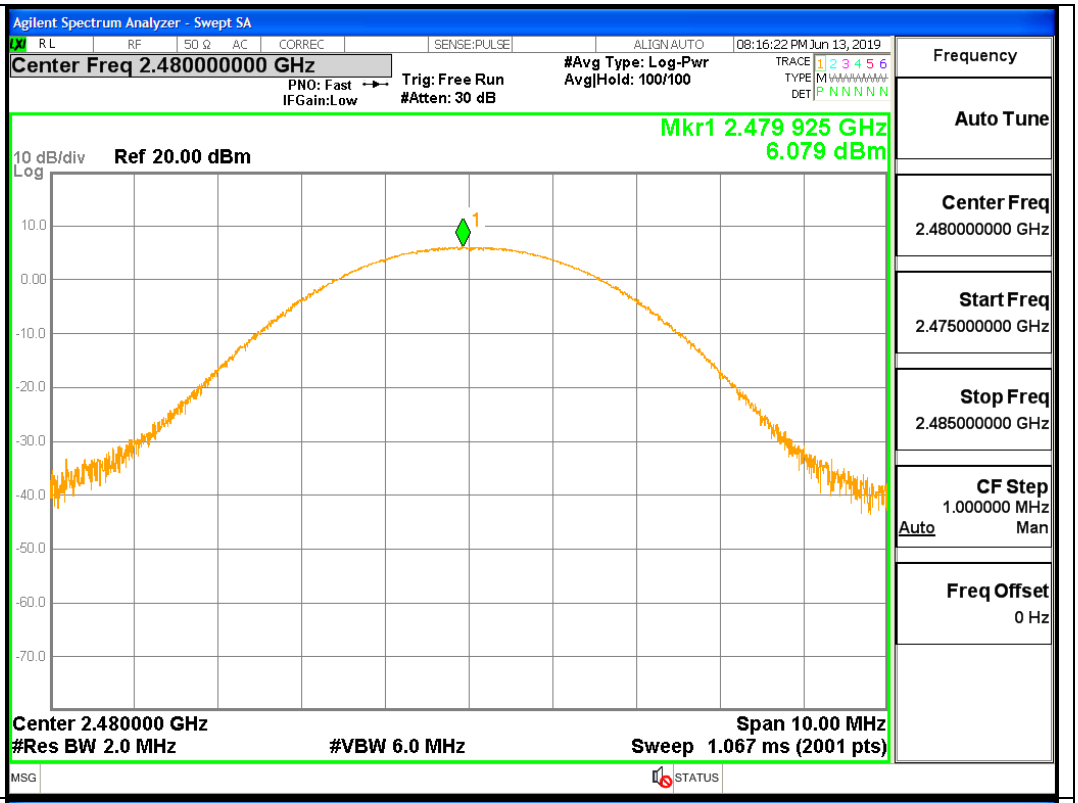
π/4DQPSK/LCH



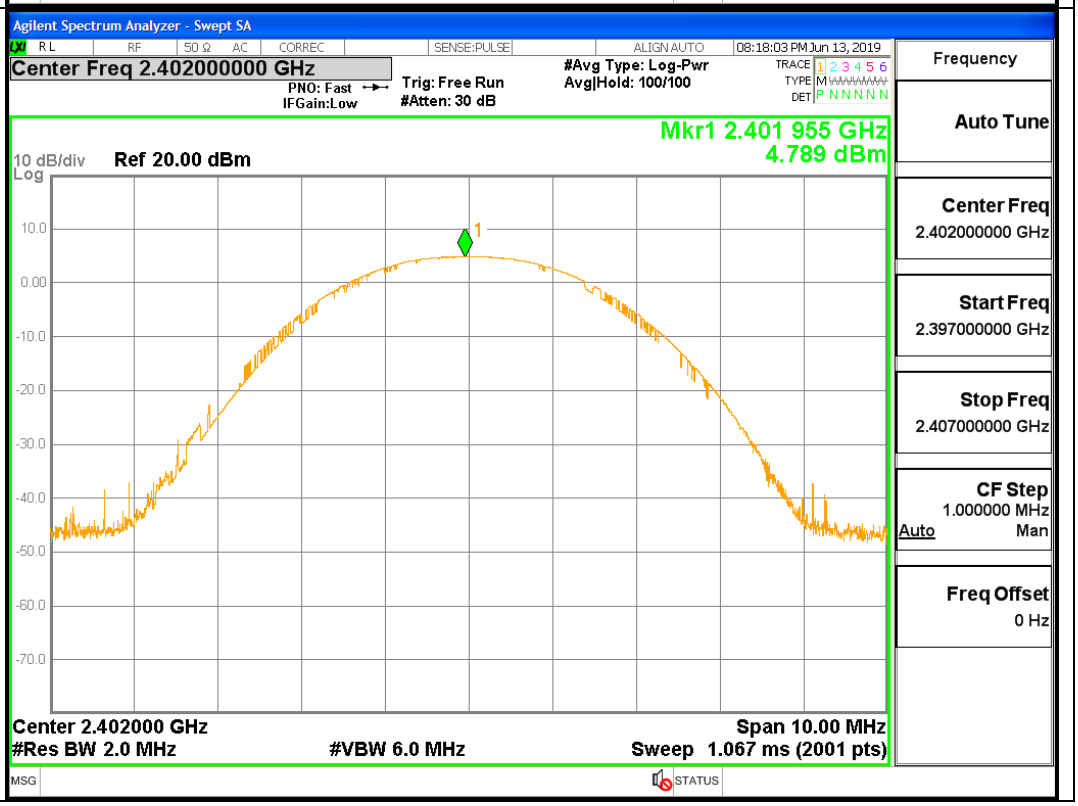
π/4DQPSK/MCH

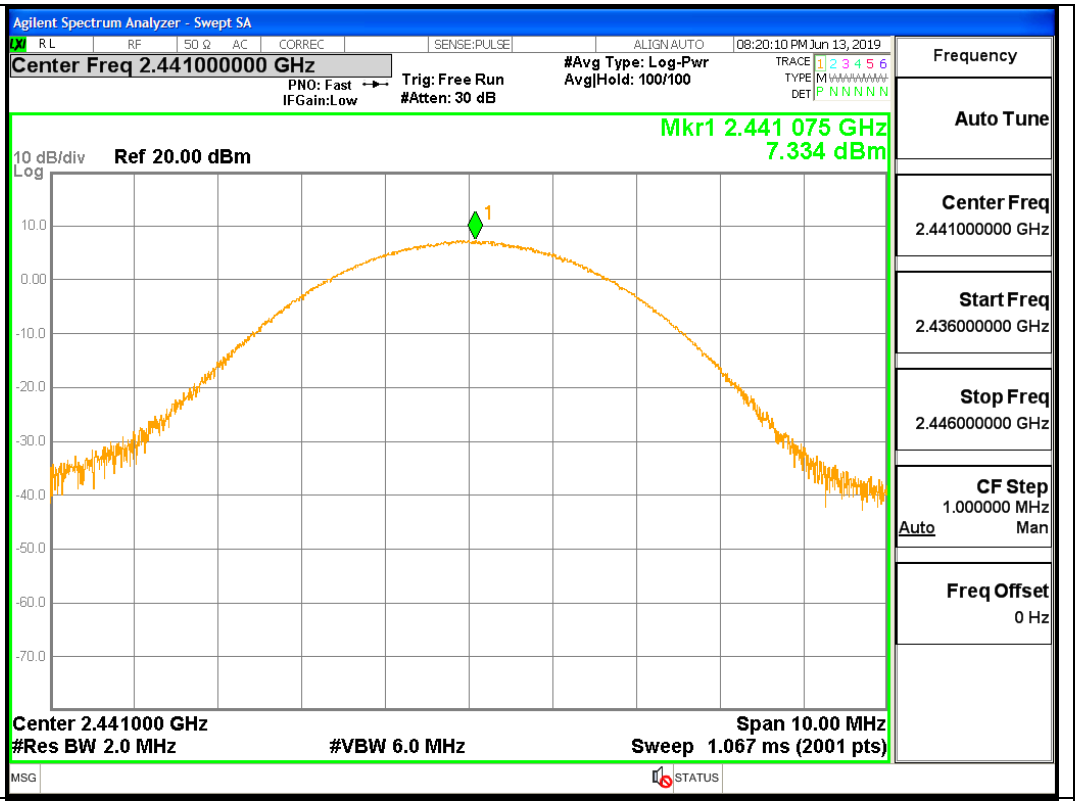
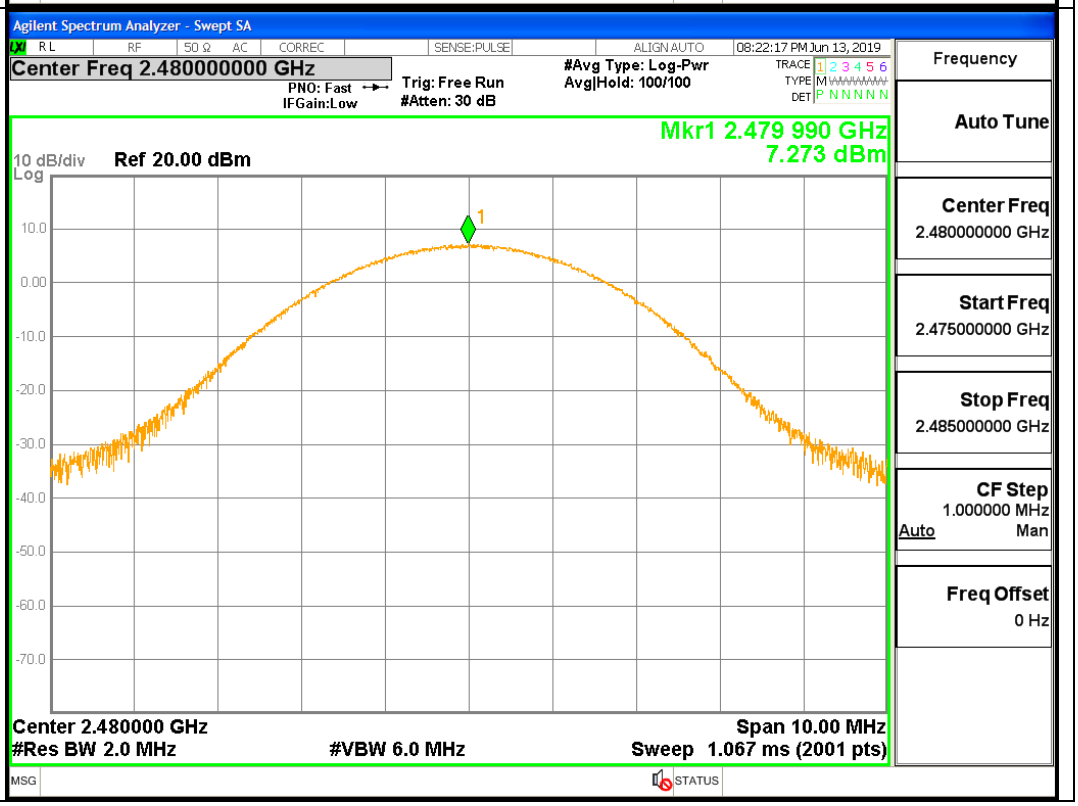


π/4DQPSK/HCH



8DPSK/LCH

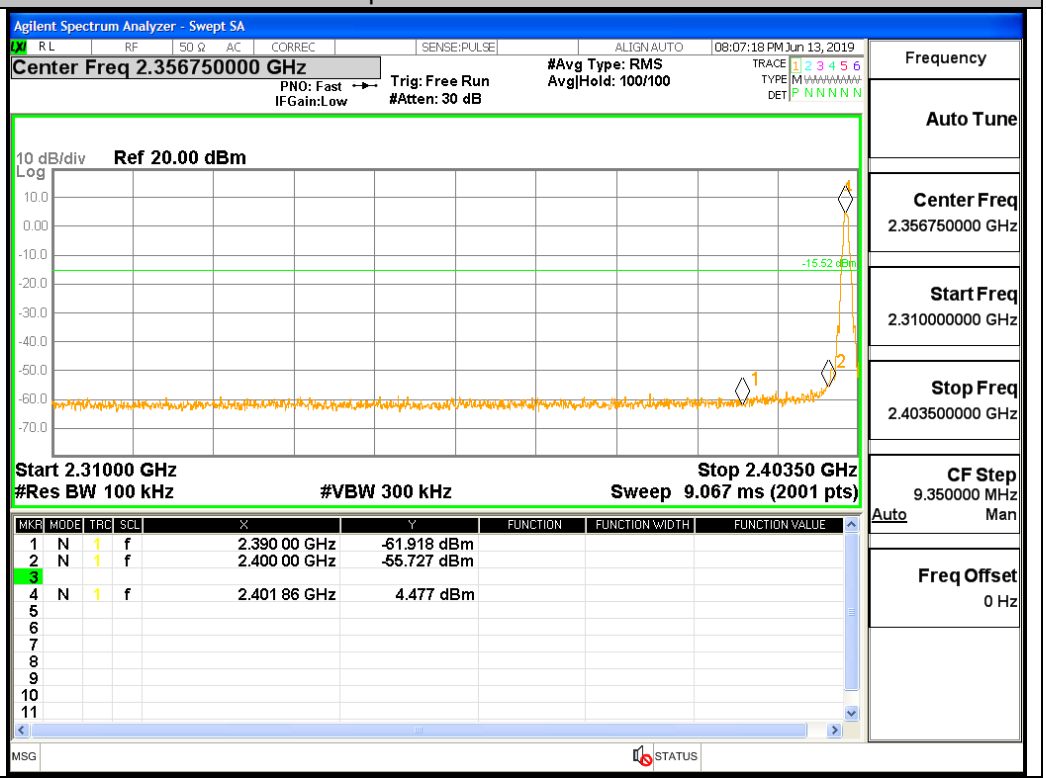
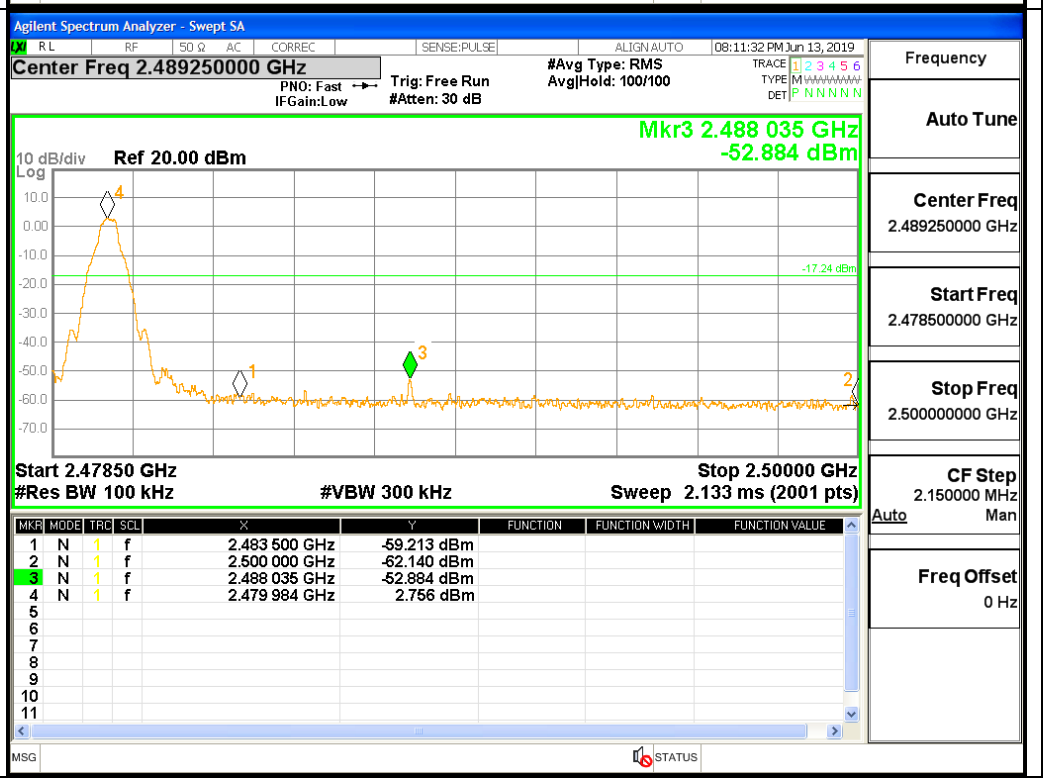


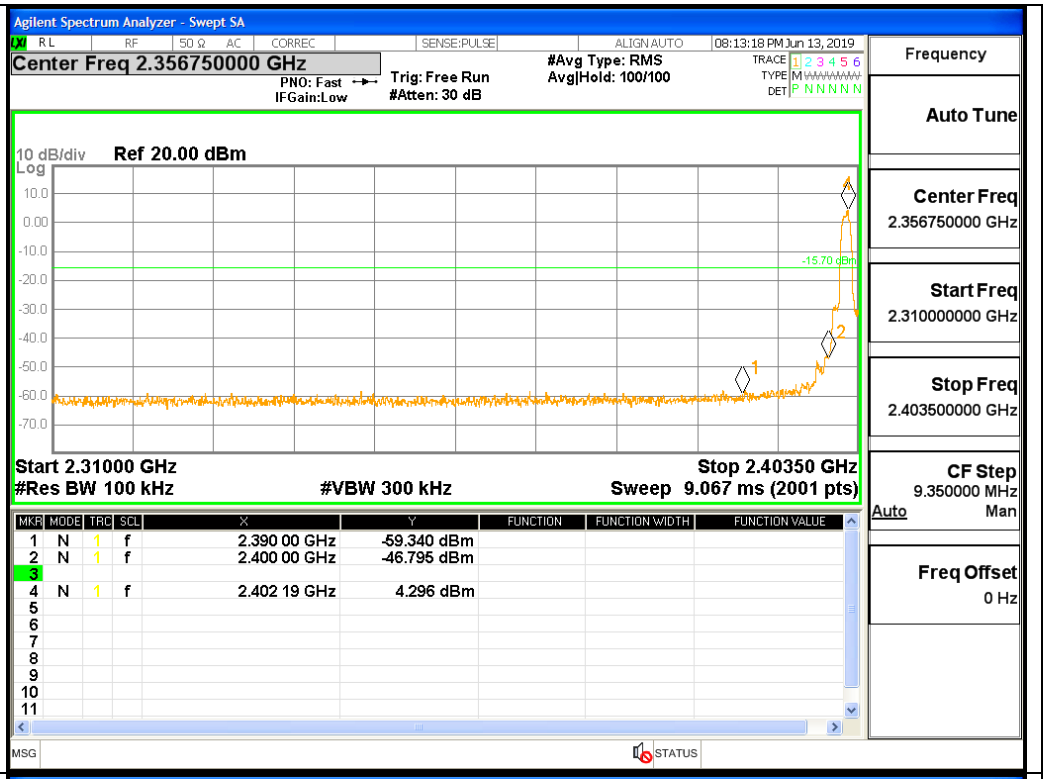
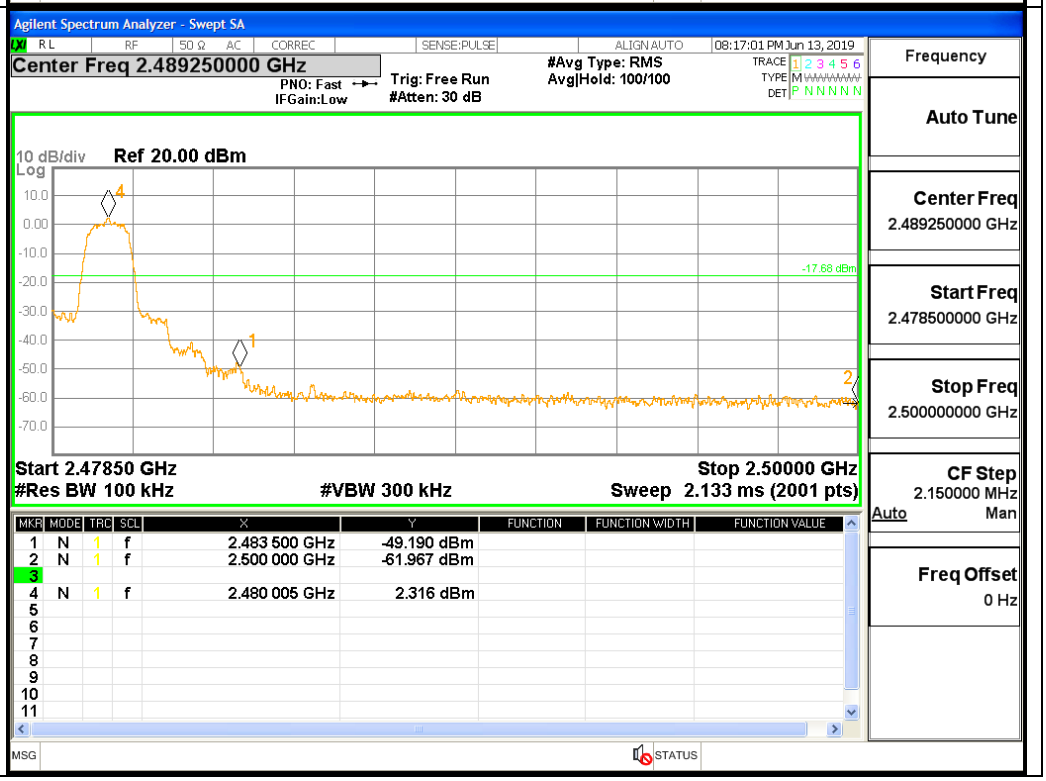
8DPSK/MCH	
8DPSK/HCH	

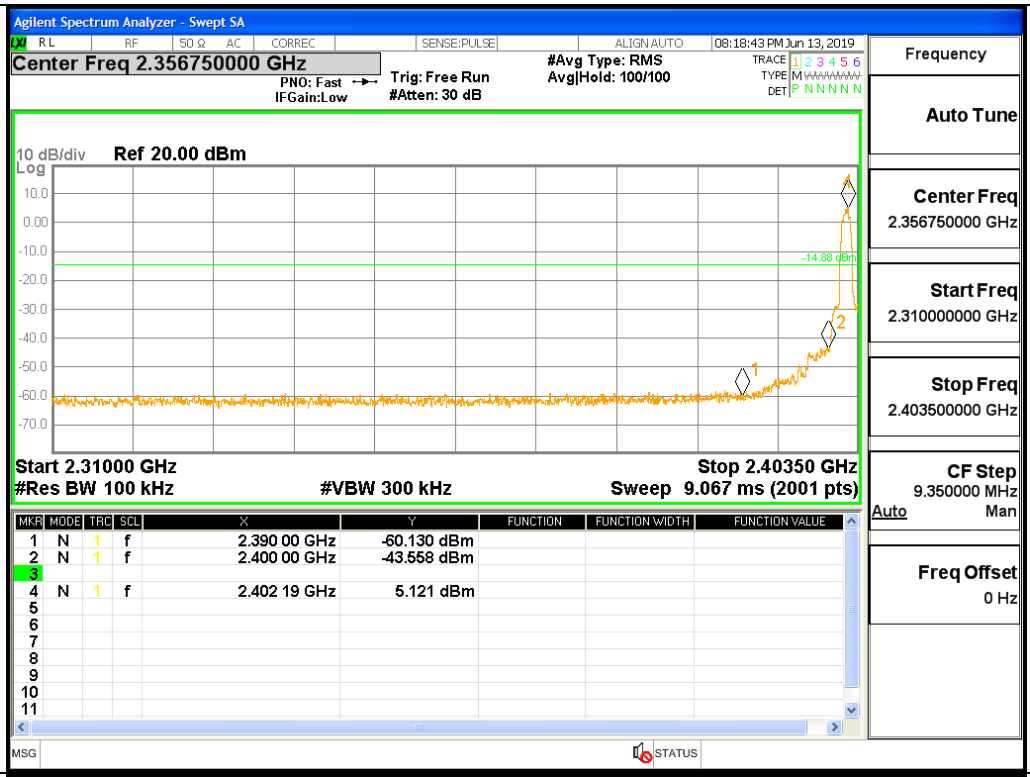
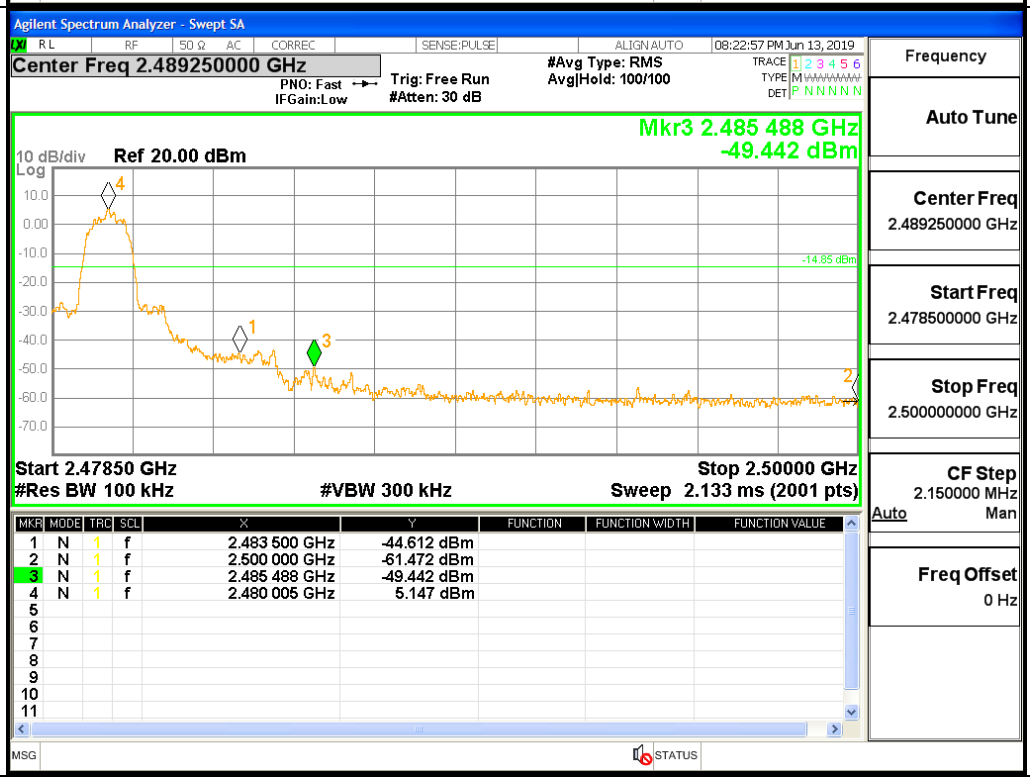
A.6 Band-edge for RF Conducted Emissions

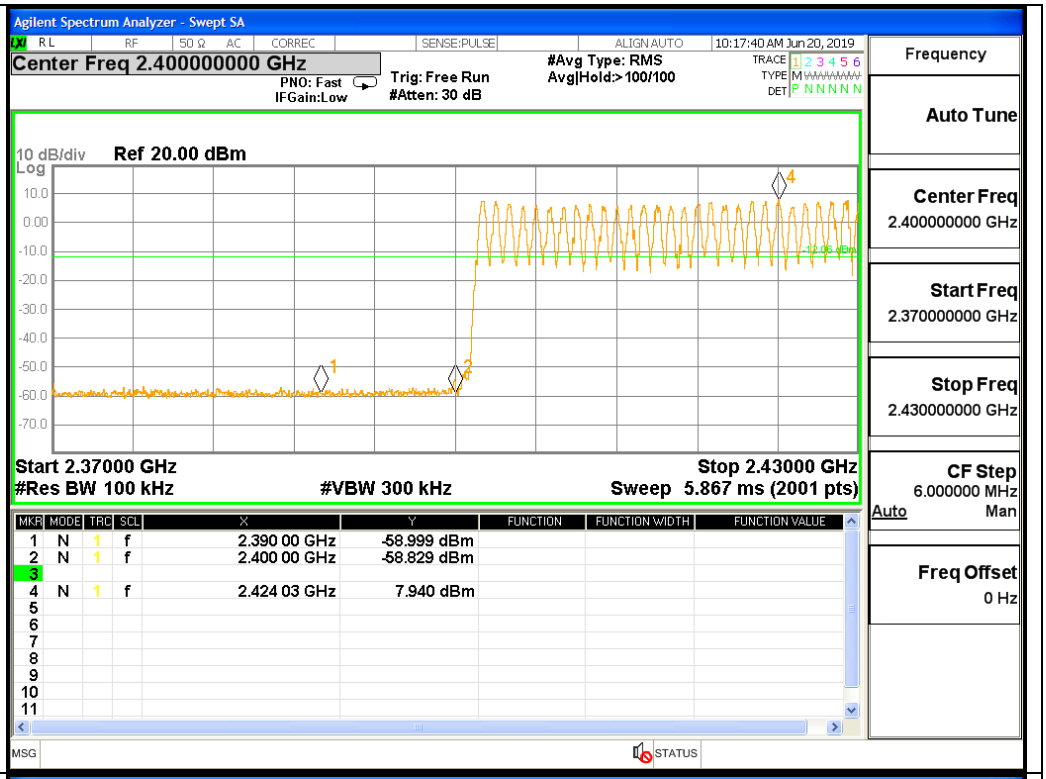
Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2400	4.477	-55.73	-15.523	Pass
1DH5	2480	2488.035	2.756	-52.884	-17.244	Pass
2DH5	2402	2400	4.296	-46.8	-15.704	Pass
2DH5	2480	2483.5	2.316	-49.19	-17.684	Pass
3DH5	2402	2400	5.121	-43.56	-14.879	Pass
3DH5	2480	2483.5	5.147	-44.61	-14.853	Pass
1DH5-Hopping	2402	2400	7.94	-58.83	-12.06	Pass
1DH5-Hopping	2480	2483.5	8.718	-59.1	-11.282	Pass
2DH5-Hopping	2402	2400	4.943	-58.23	-15.057	Pass
2DH5-Hopping	2480	2483.5	5.819	-58.11	-14.181	Pass
3DH5-Hopping	2402	2400	4.118	-57.82	-15.882	Pass
3DH5-Hopping	2480	2483.5	5.731	-58.1	-14.269	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	
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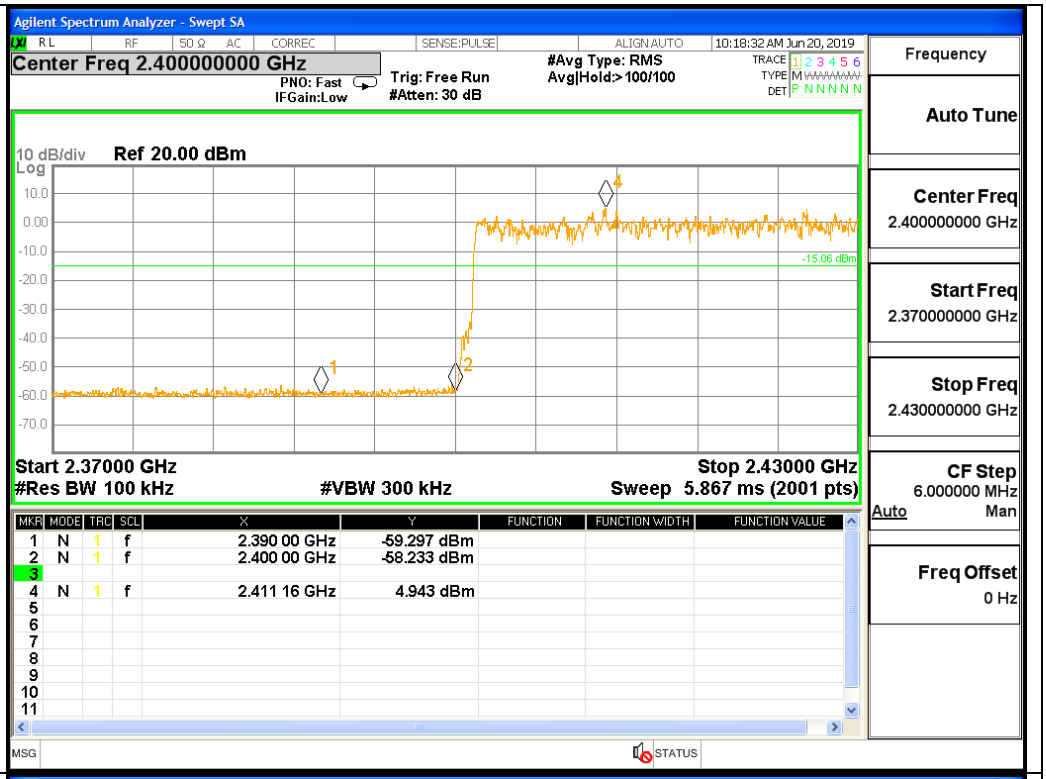
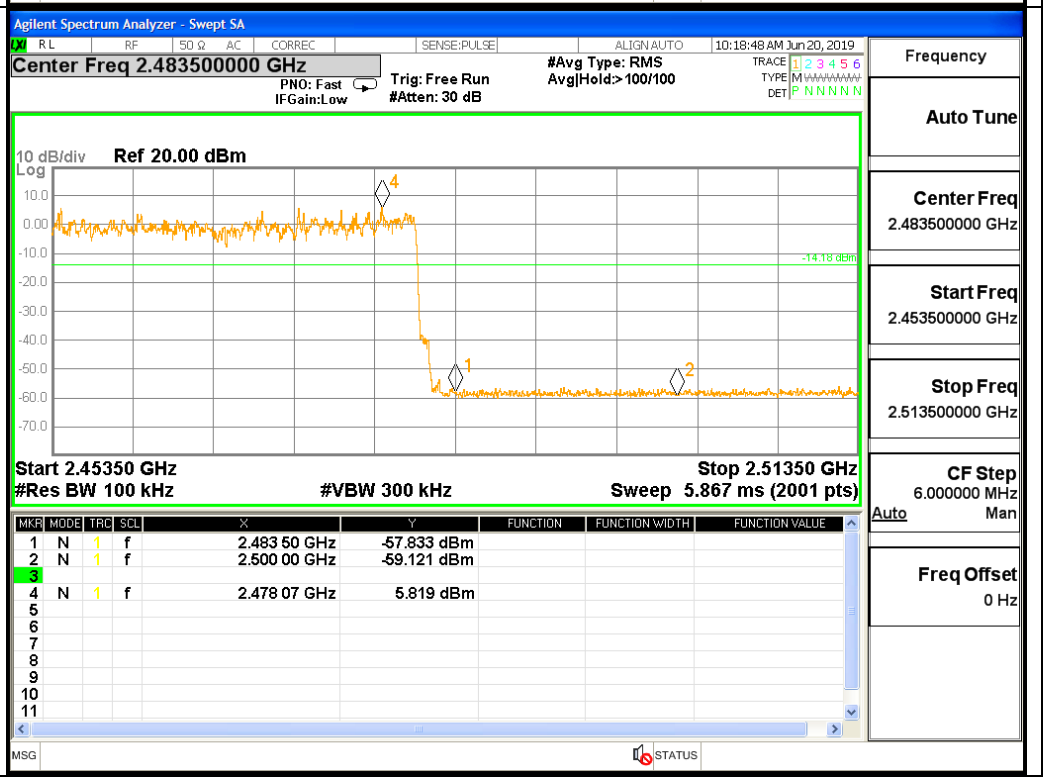
π /4DQPSK/LCH/Hop	
π /4DQPSK/HCH/Hop	

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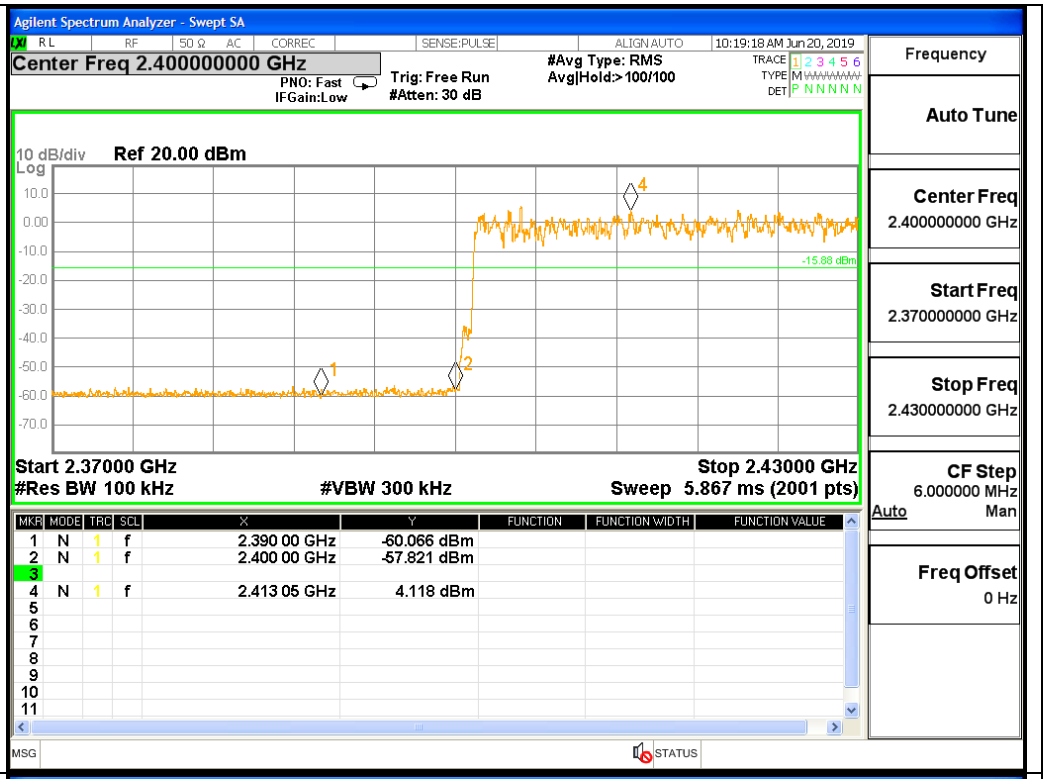

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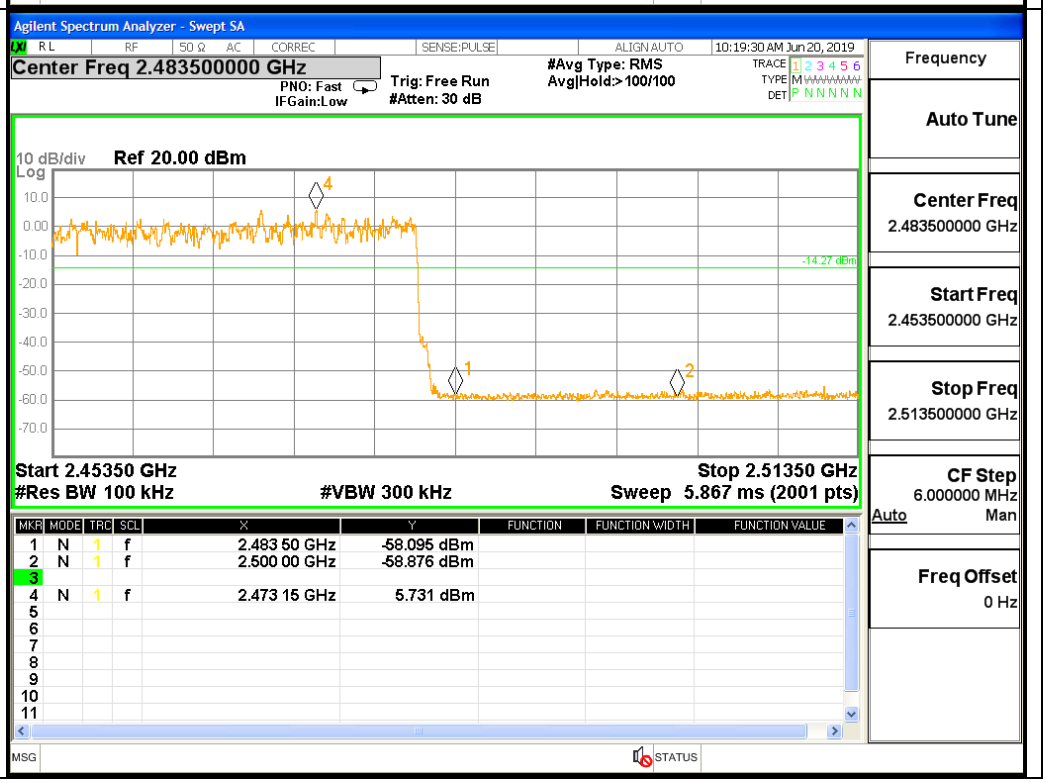

A.7 RF Conducted Spurious Emissions

Test Graph

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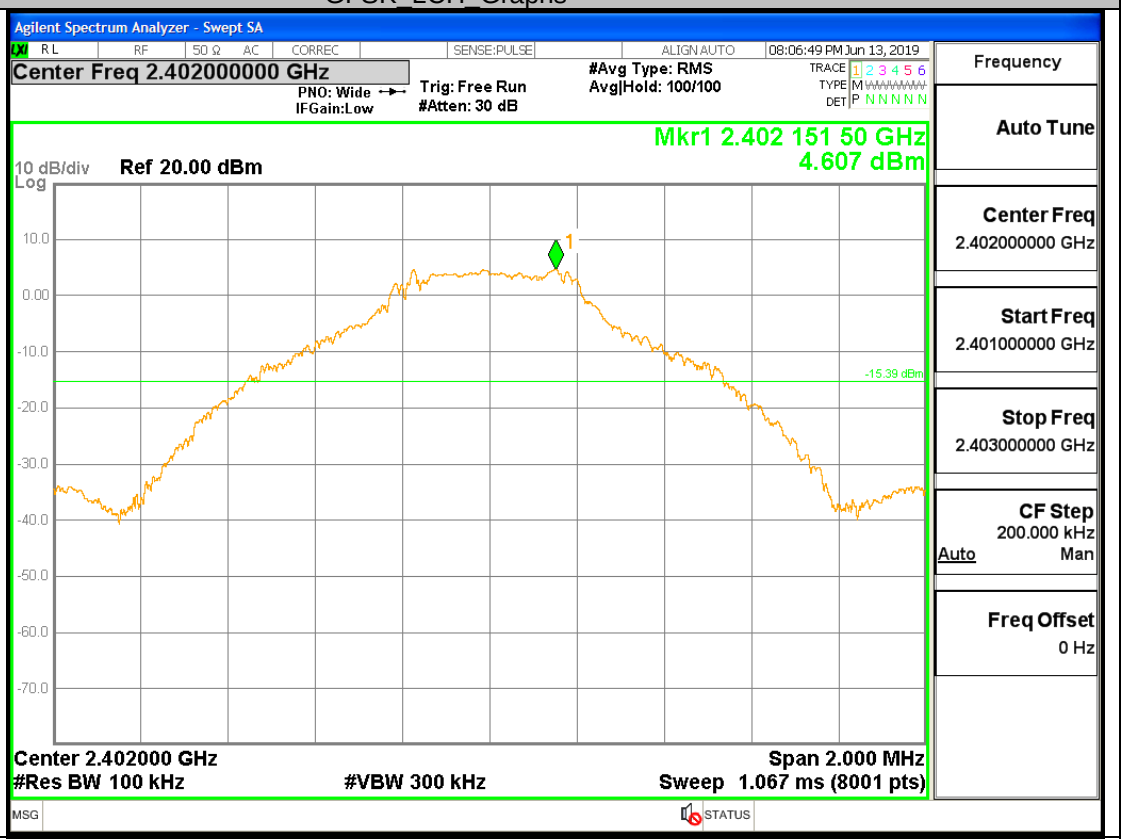
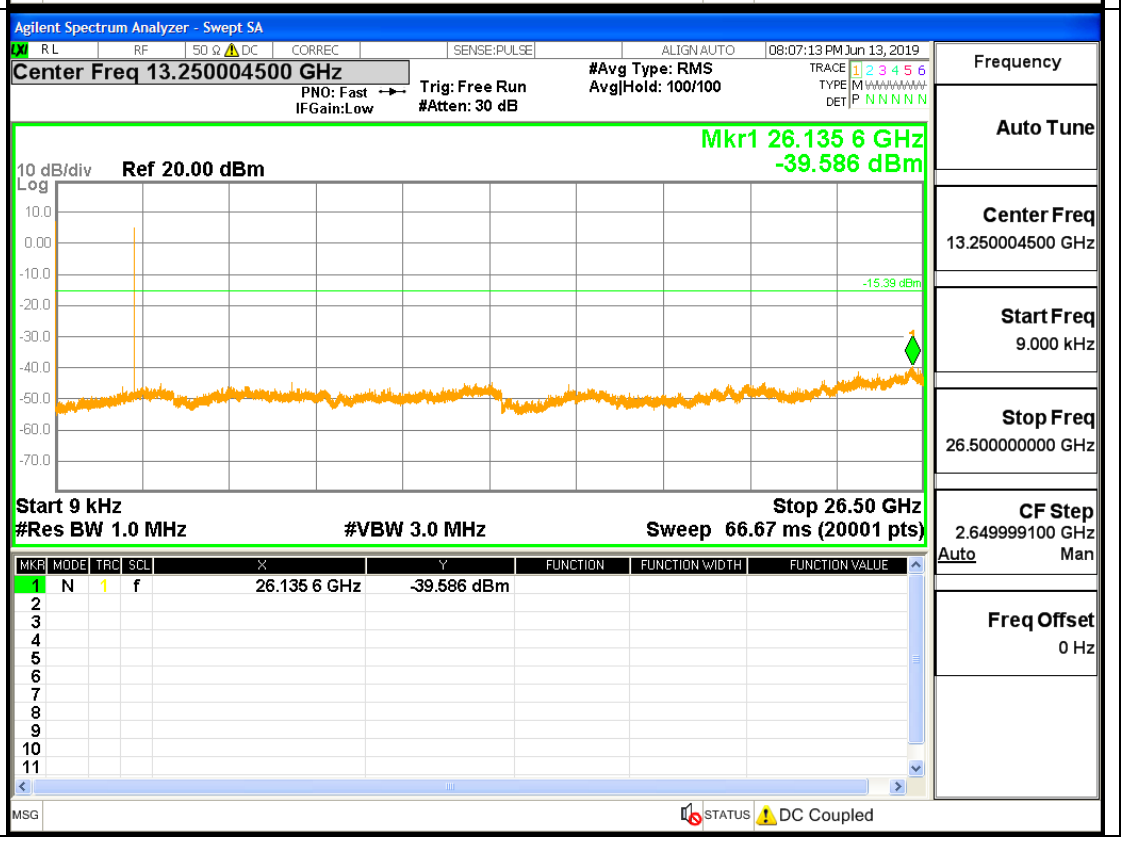
Pref	
Puw	

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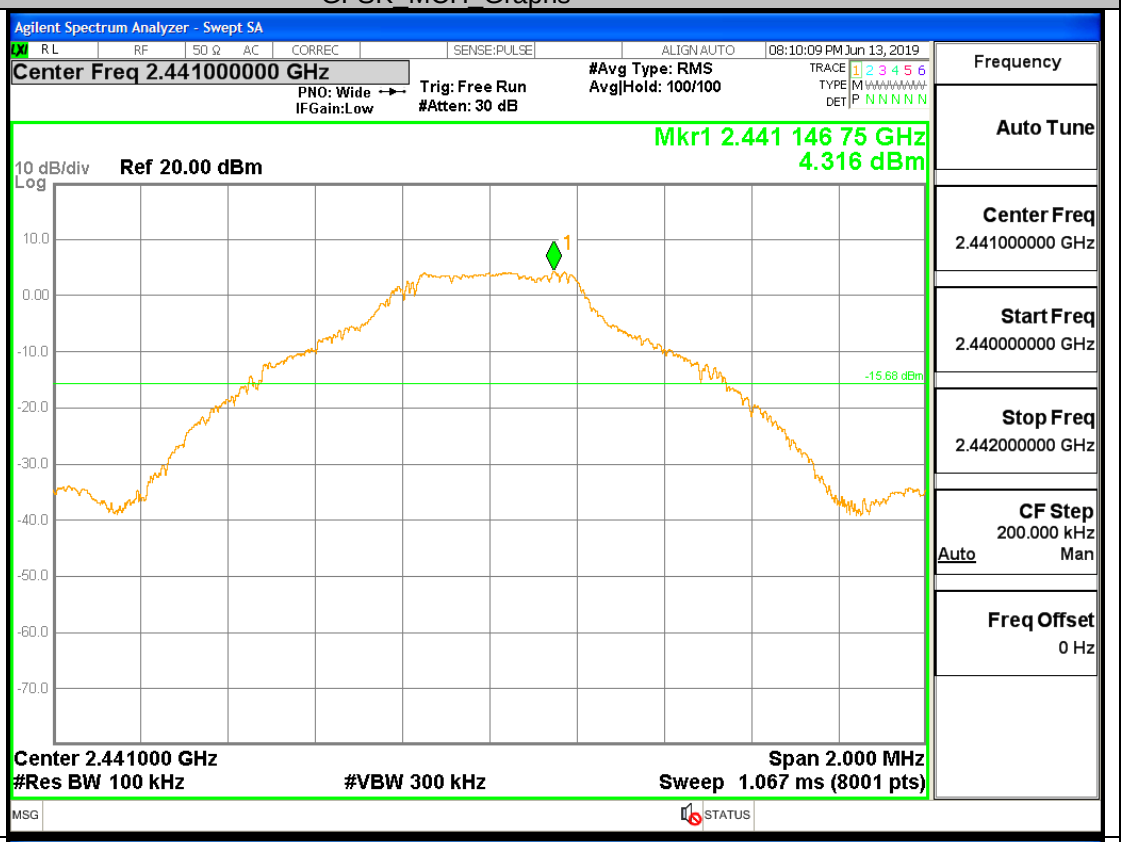
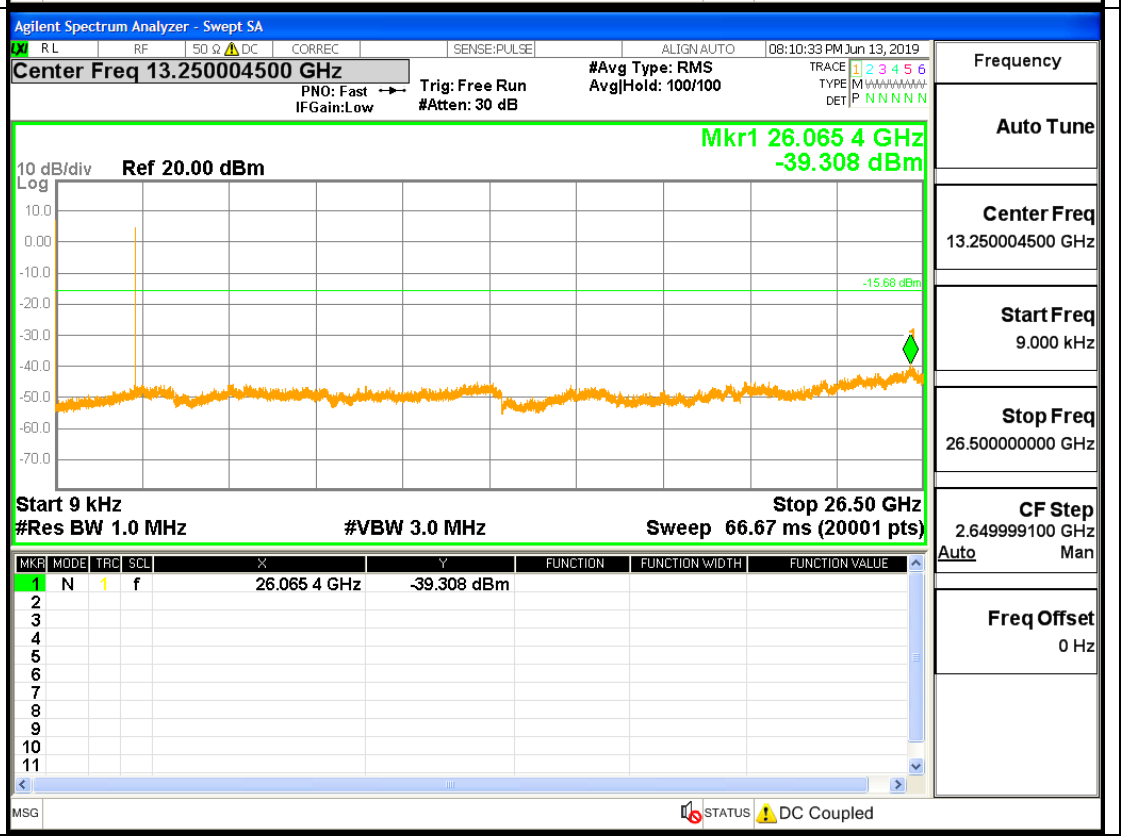
Pref	
Puw	

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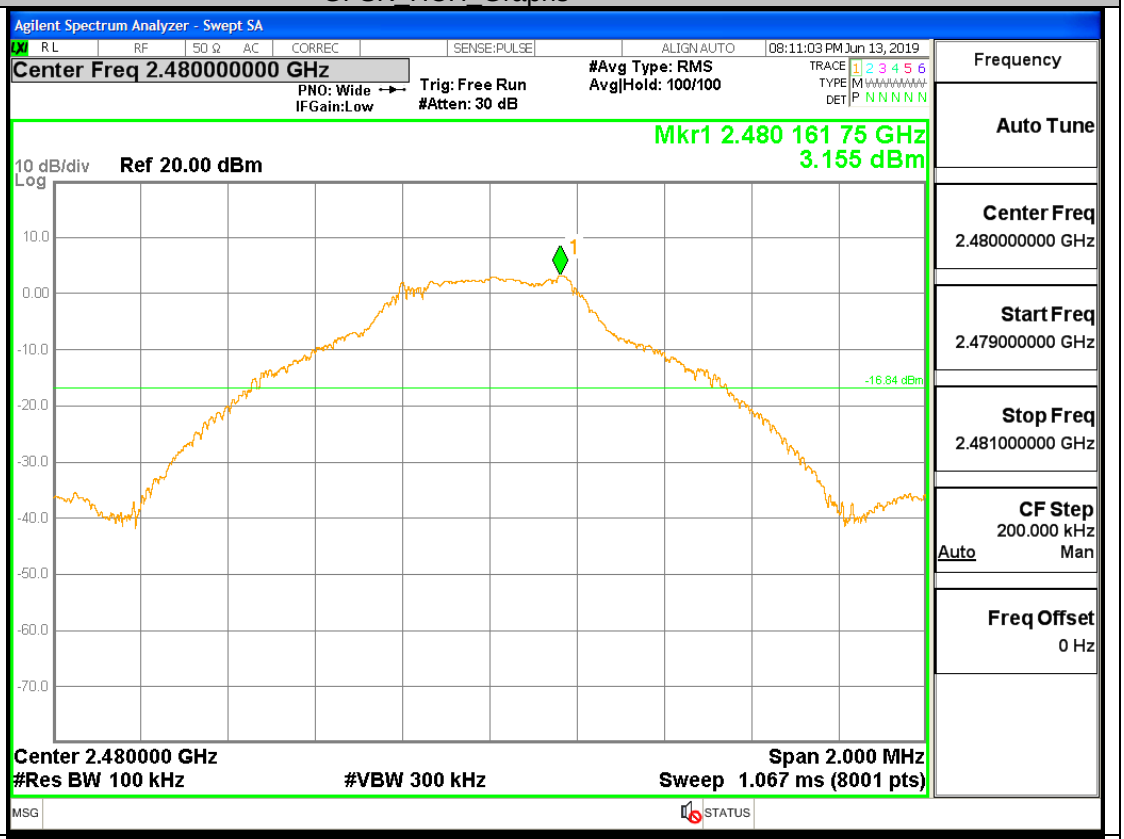
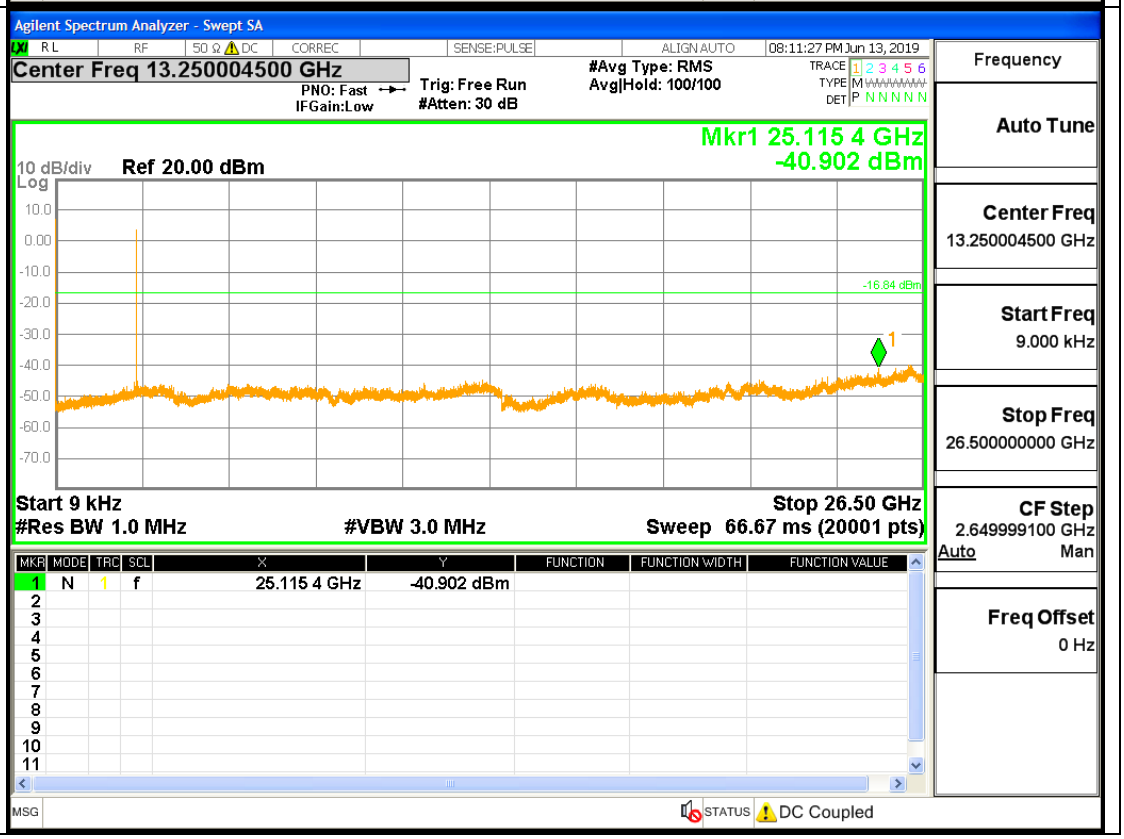
Pref	
Puw	

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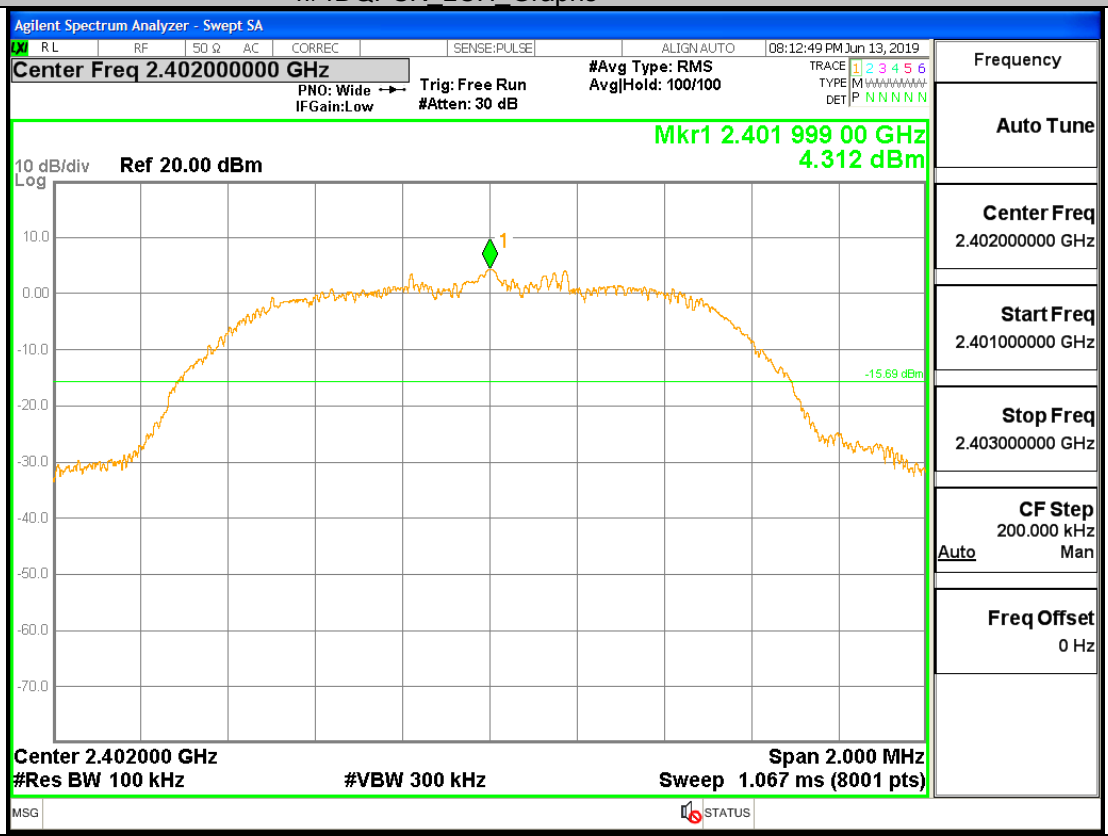
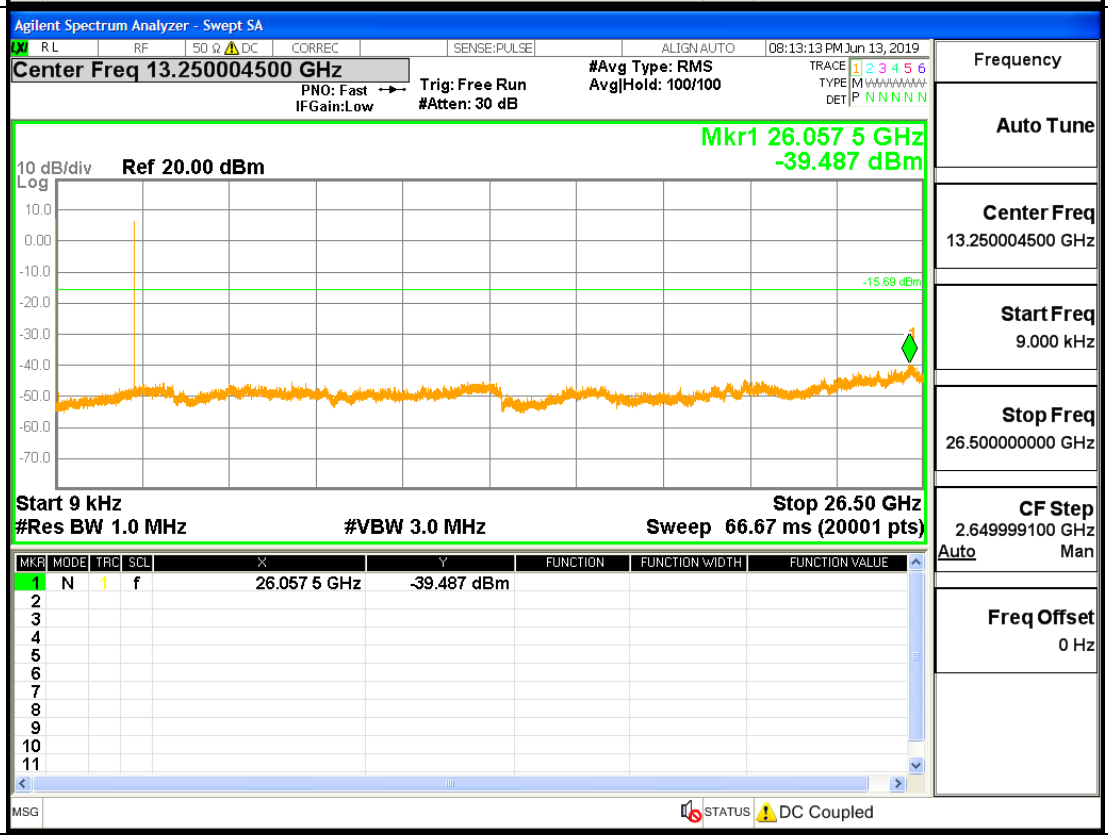
Pref	
Puw	

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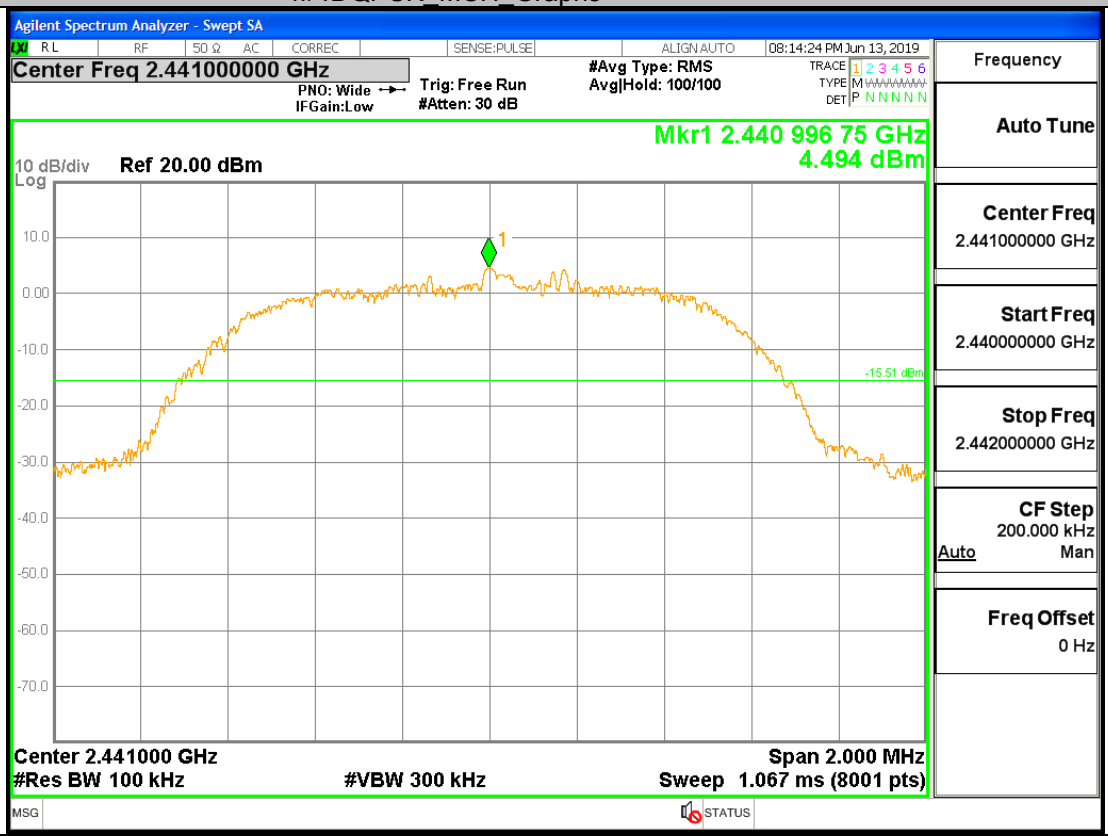
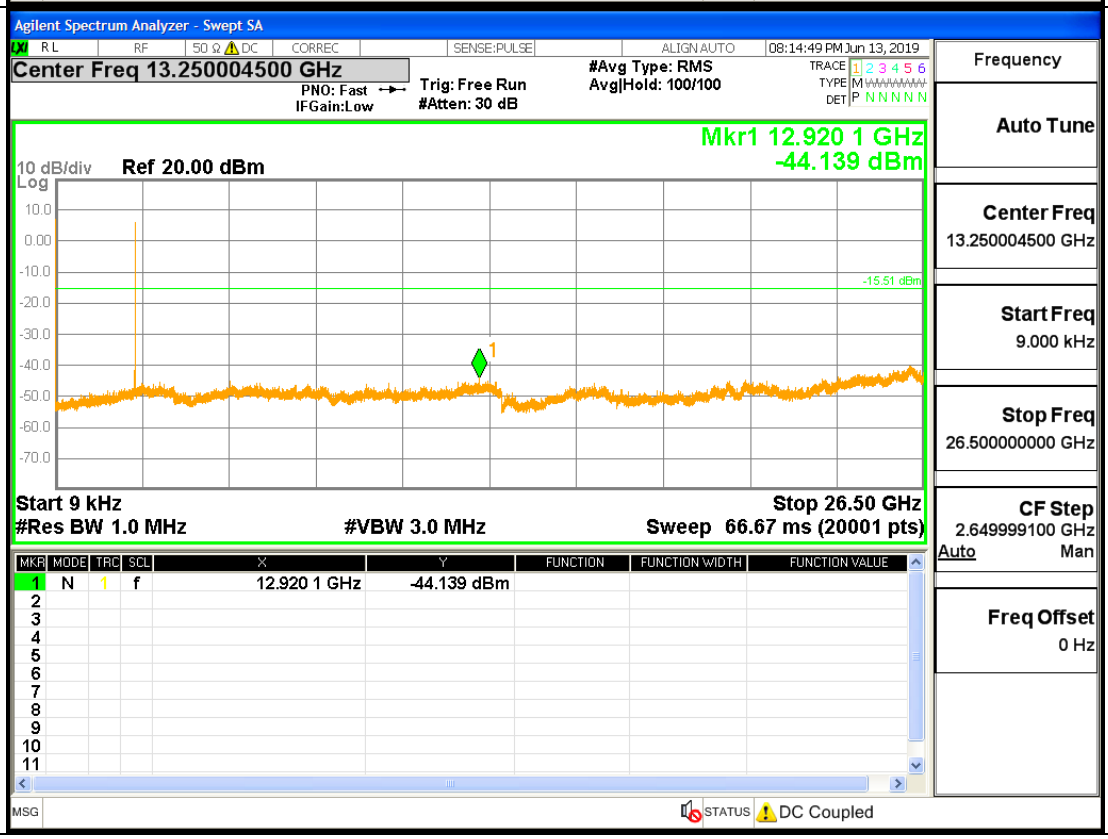
Pref	
Puw	

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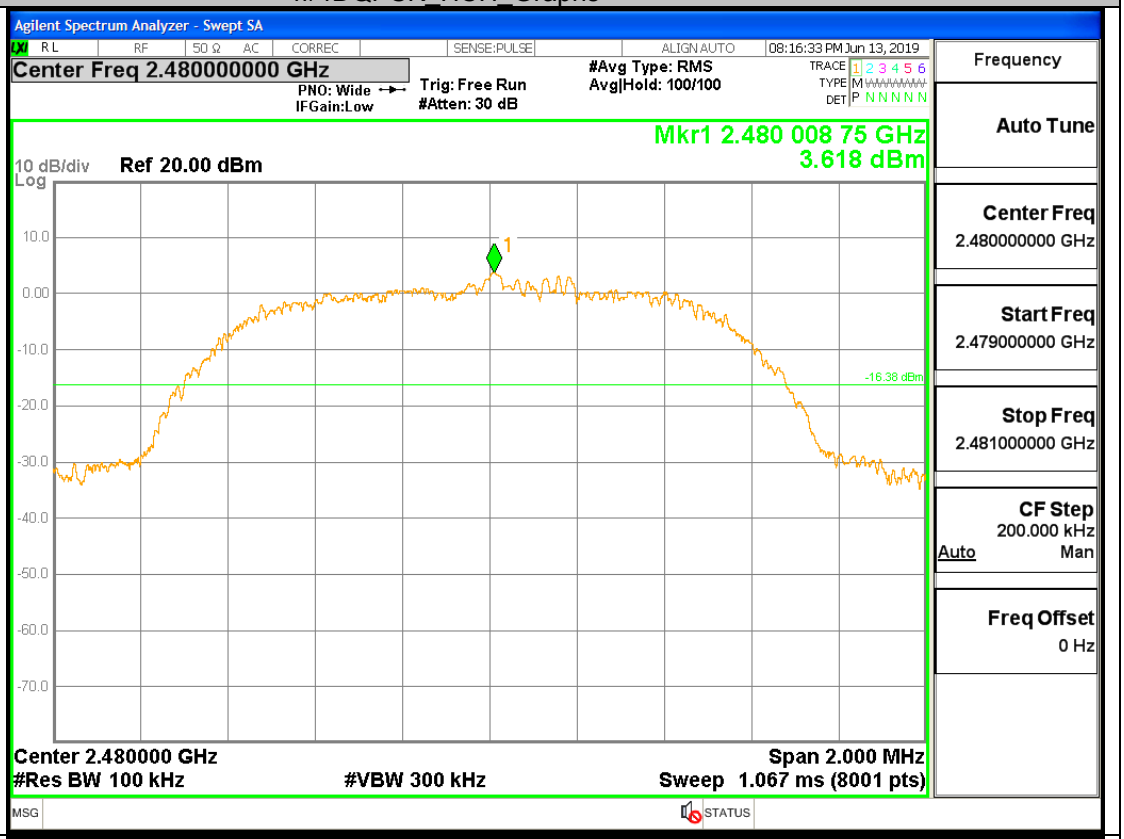
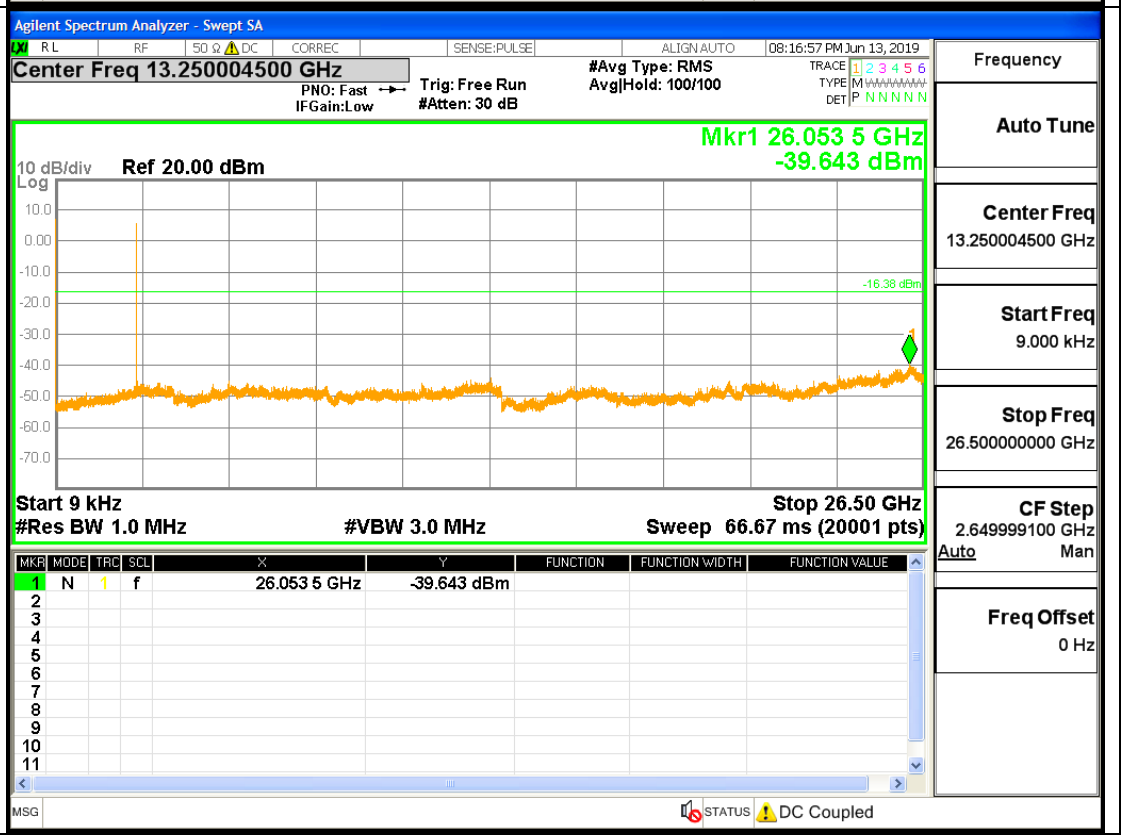
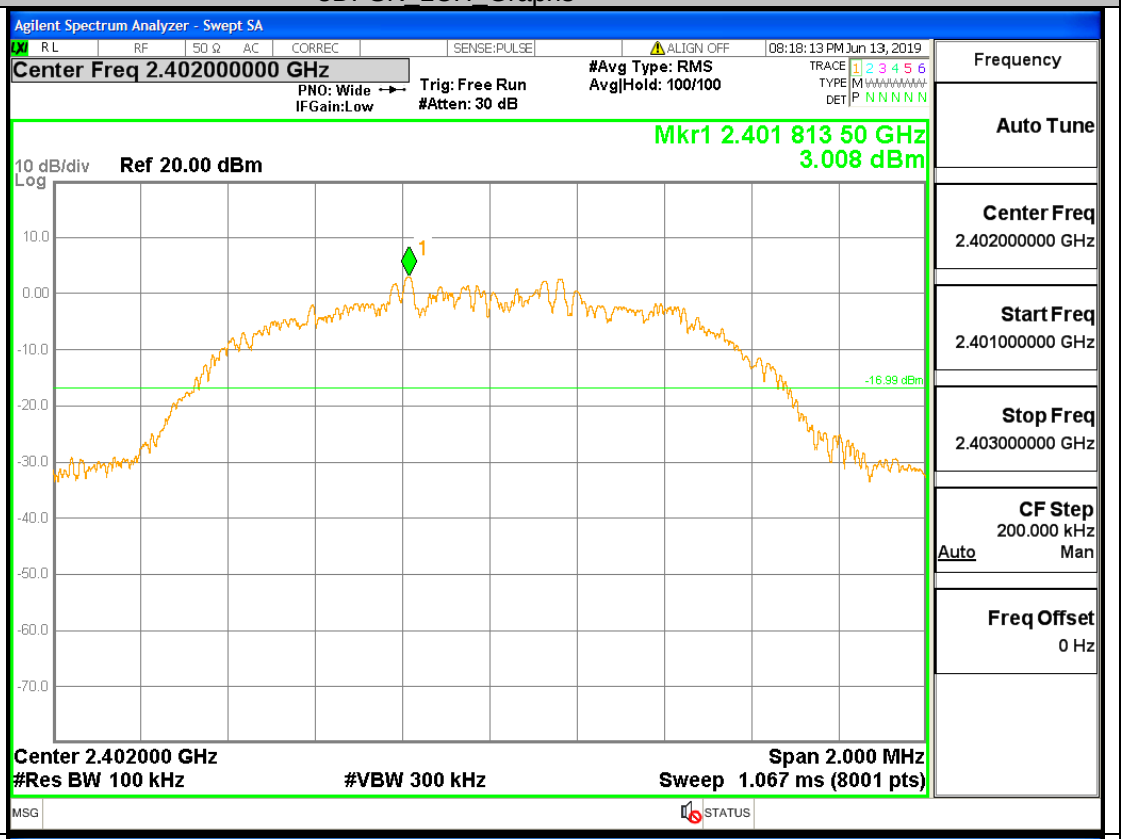
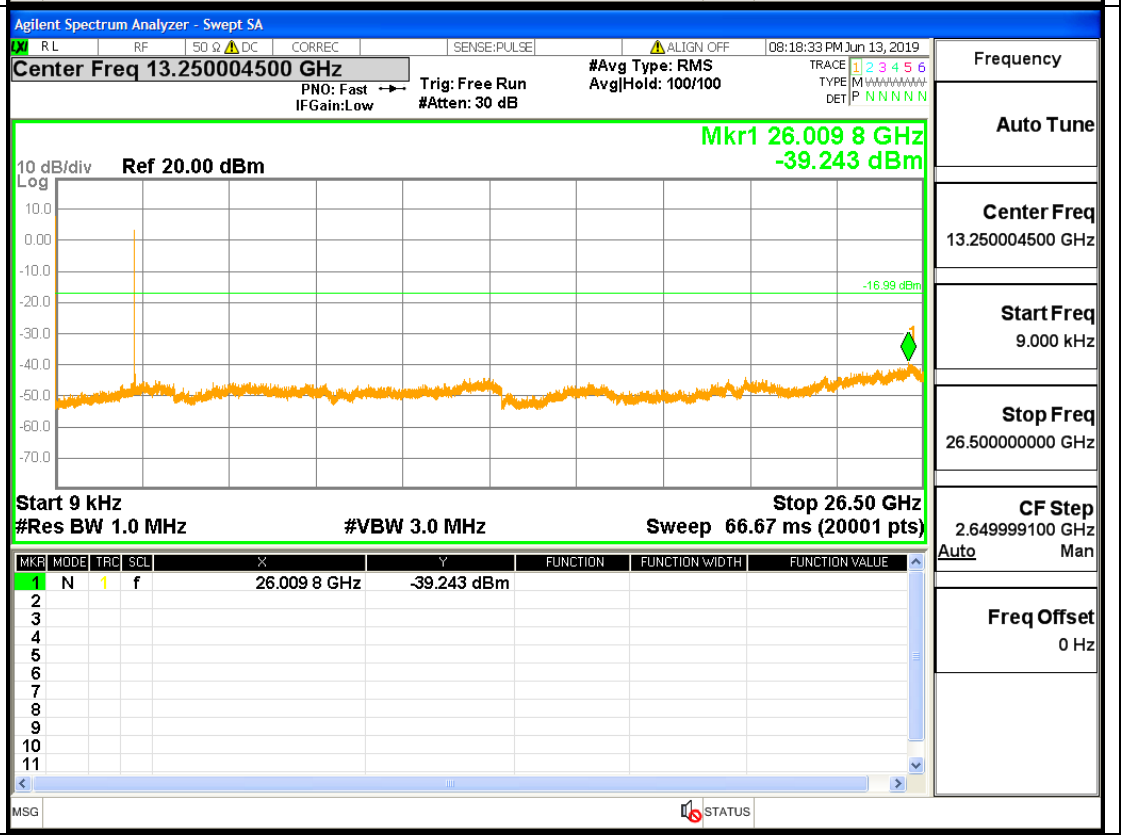
Pref	
Puw	

8DPSK_LCH_Graphs	
Pref	
Puw	

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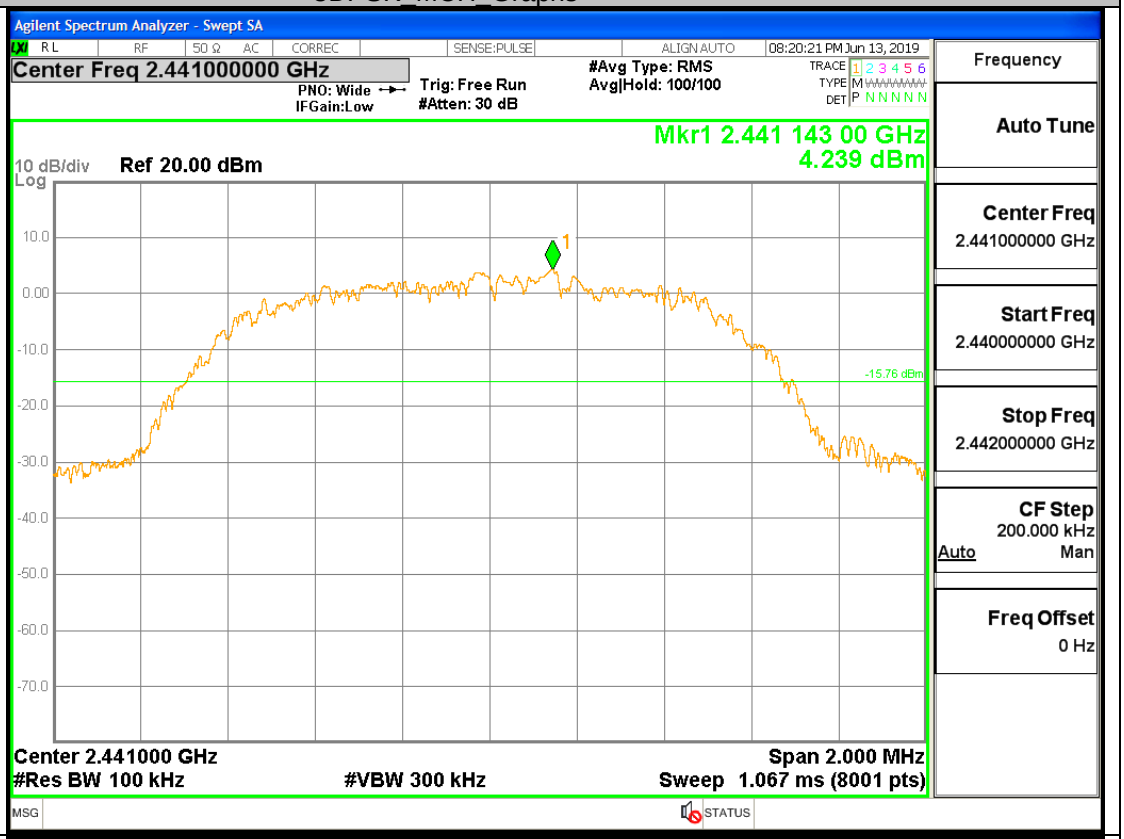
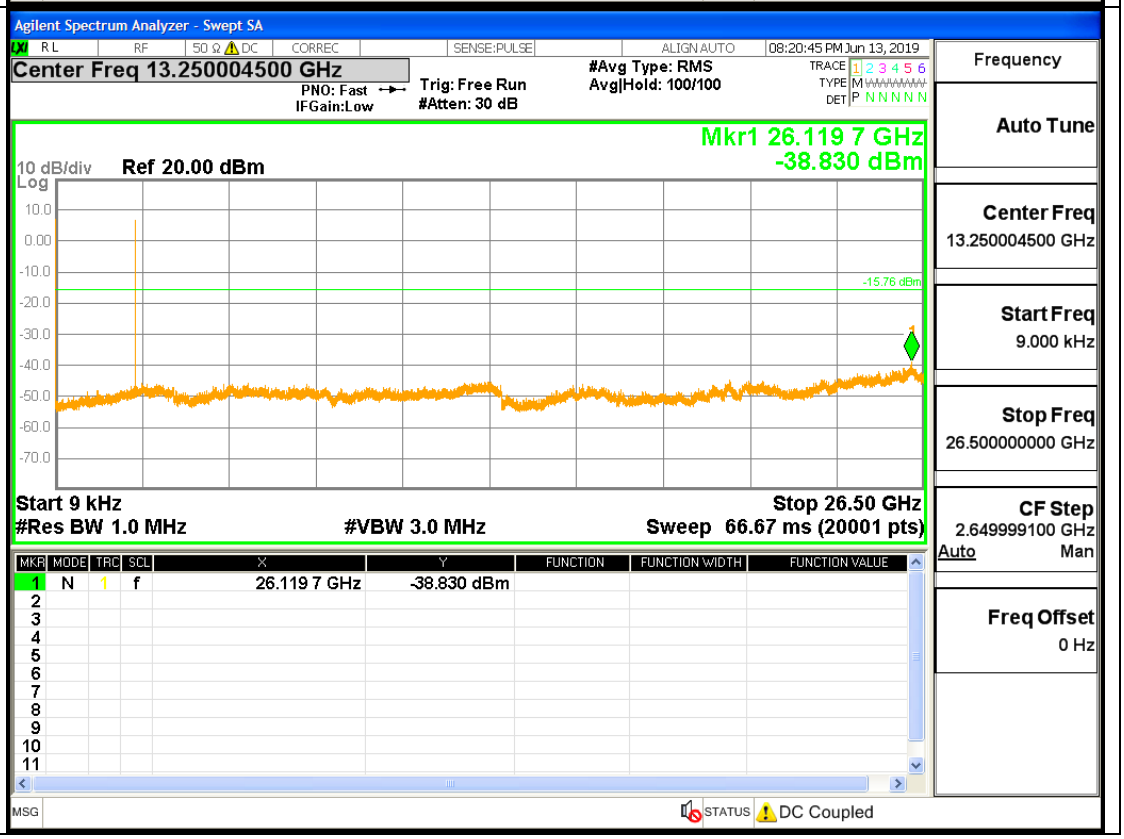
Pref	
Puw	

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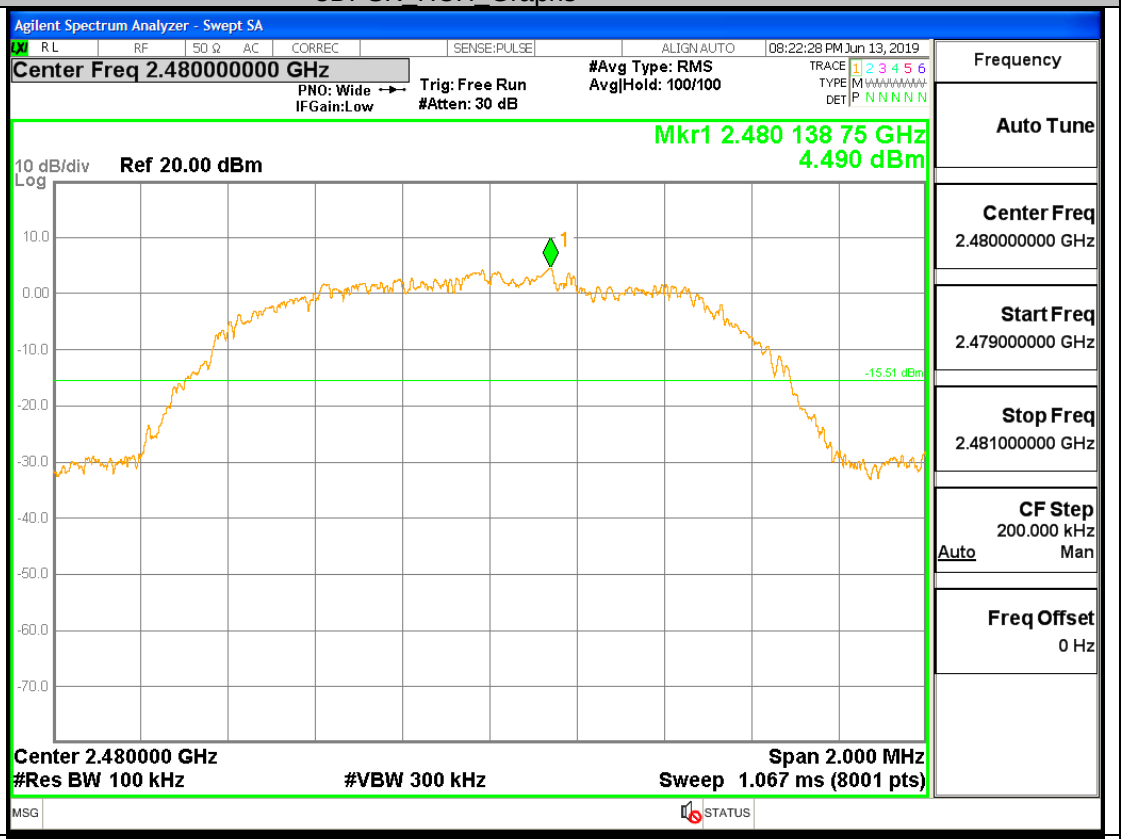
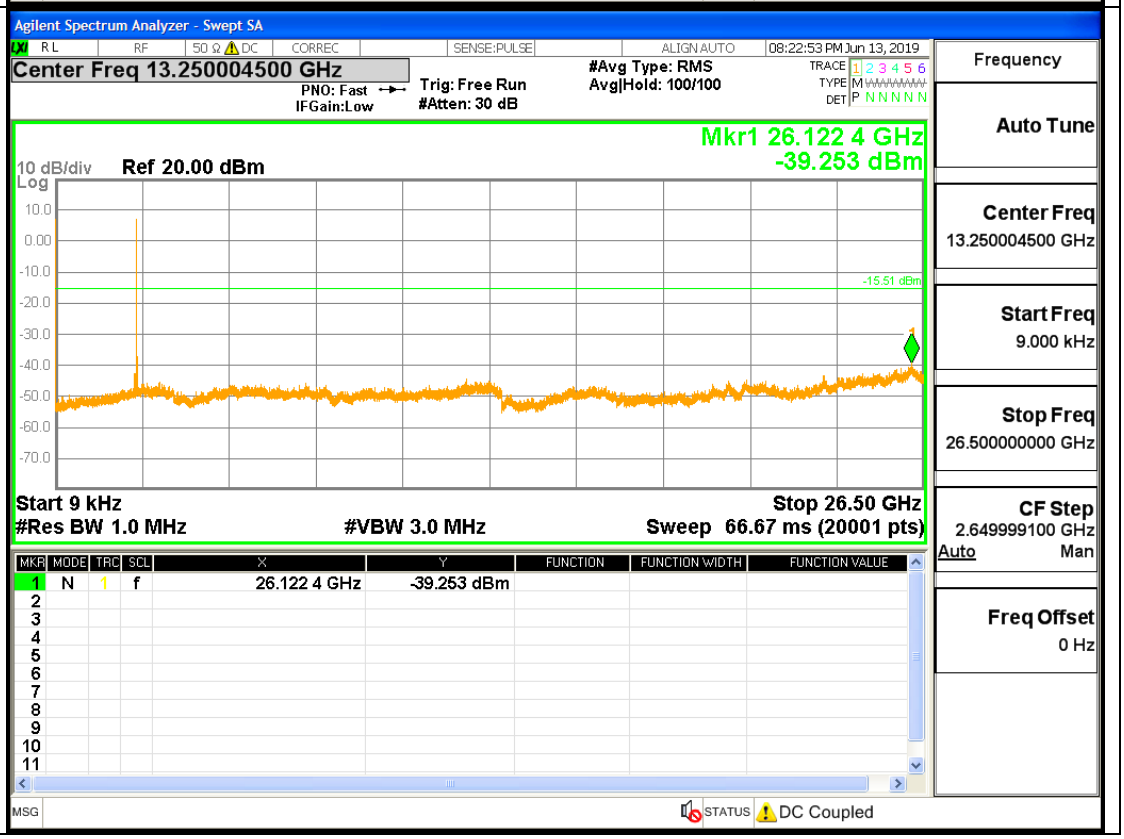
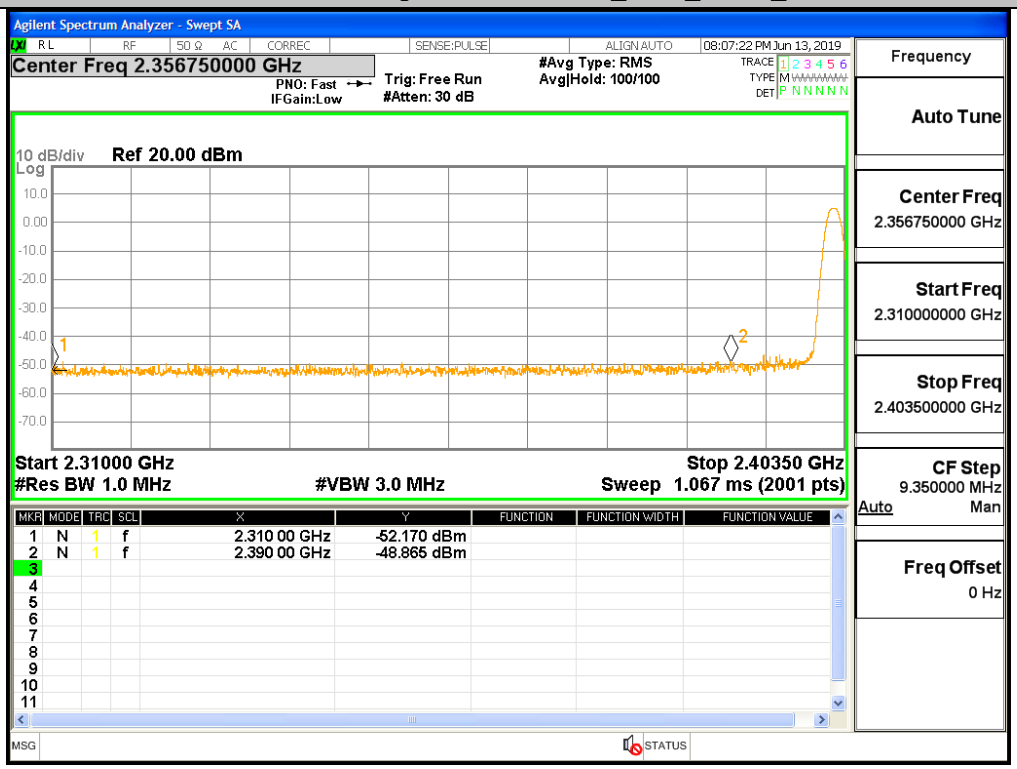
Pref	
Puw	

A.8 Restrict-band band-edge measurements

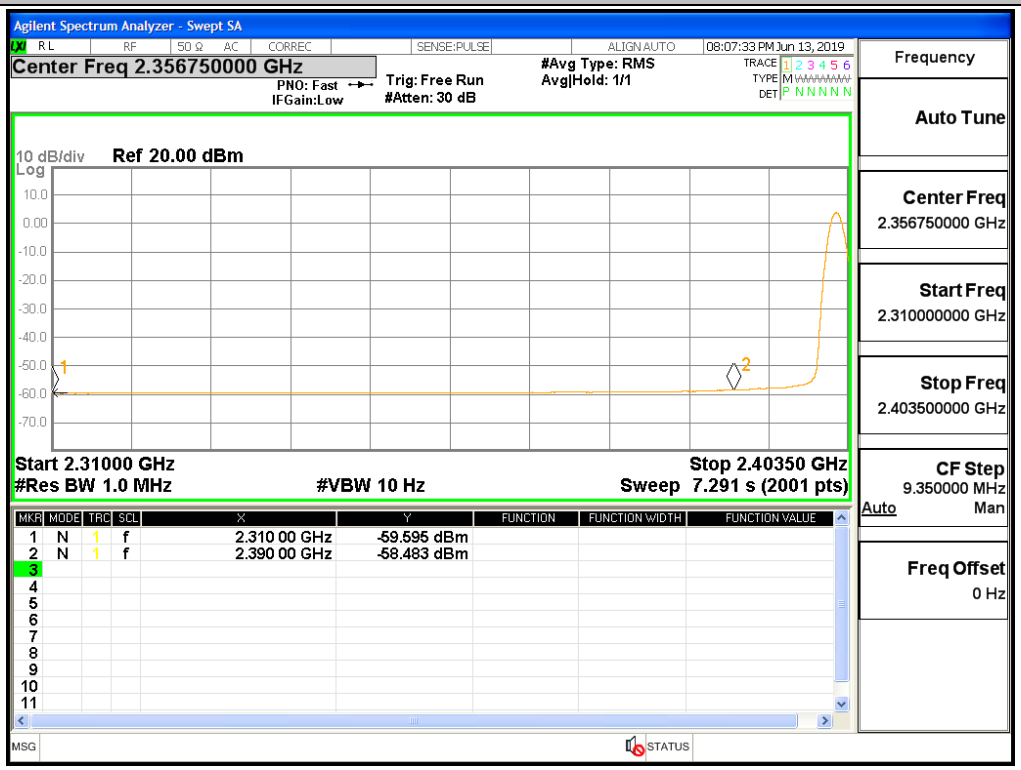
Type	Carrier Frequency (MHz)	Frequency(MHz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390.00	2.00	0.00	-48.86	48.34	74	Pass
1DH5	2480	2492.48	2.00	0.00	-46.91	50.29	74	Pass
2DH5	2402	2390.00	2.00	0.00	-50.69	46.51	74	Pass
2DH5	2480	2483.50	2.00	0.00	-36.79	60.41	74	Pass
3DH5	2402	2390.00	2.00	0.00	-50.81	46.39	74	Pass
3DH5	2480	2487.79	2.00	0.00	-45.60	51.61	74	Pass

Type	Carrier Frequency (MHz)	Frequency(MHz)	Gain	Ground Factor	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390.00	2.00	0.00	-58.48	38.72	54	Pass
1DH5	2480	2483.50	2.00	0.00	-54.77	42.43	54	Pass
2DH5	2402	2390.00	2.00	0.00	-58.00	39.20	54	Pass
2DH5	2480	2483.50	2.00	0.00	-49.40	47.80	54	Pass
3DH5	2402	2390.00	2.00	0.00	-57.87	39.33	54	Pass
3DH5	2480	2483.50	2.00	0.00	-54.85	42.35	54	Pass

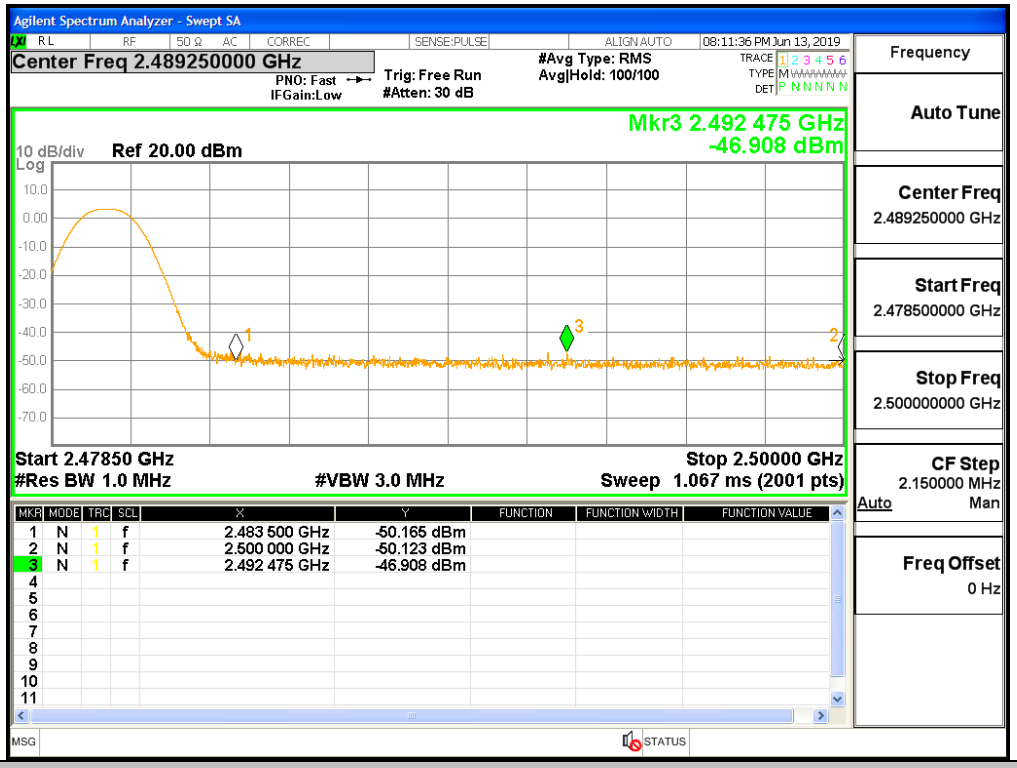
Restrict-band band-edge measurements_2402_PEAK_DH5



Restrict-band band-edge measurements_2402_AV_DH5

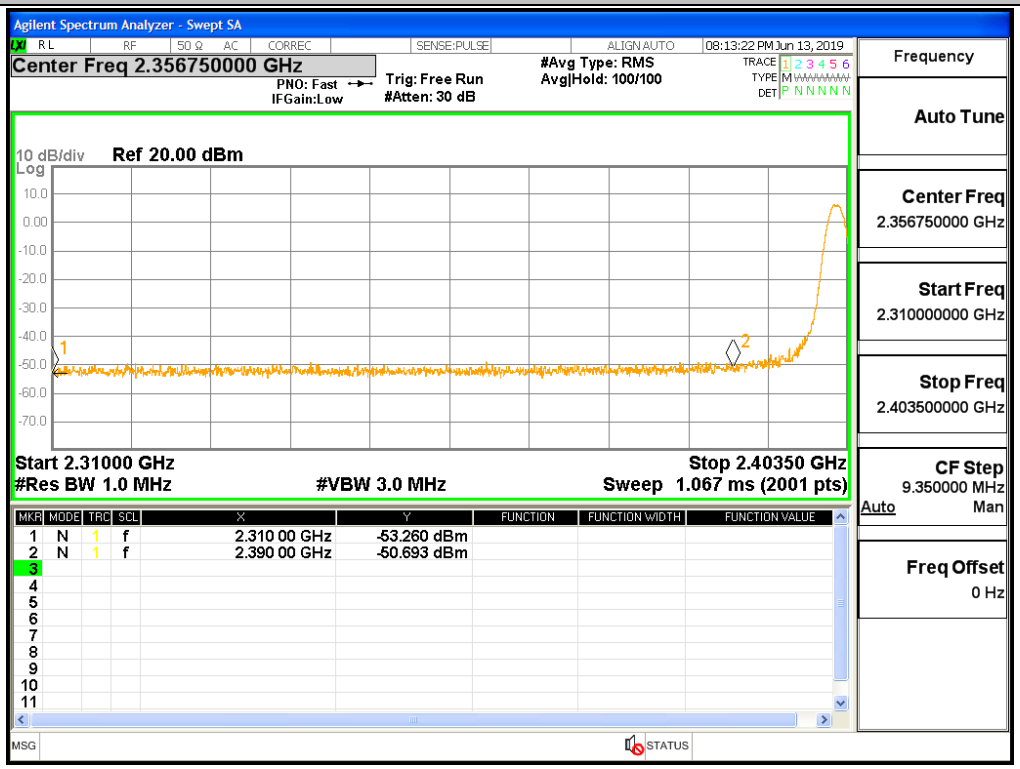


Restrict-band band-edge measurements_2480_PEAK_DH5

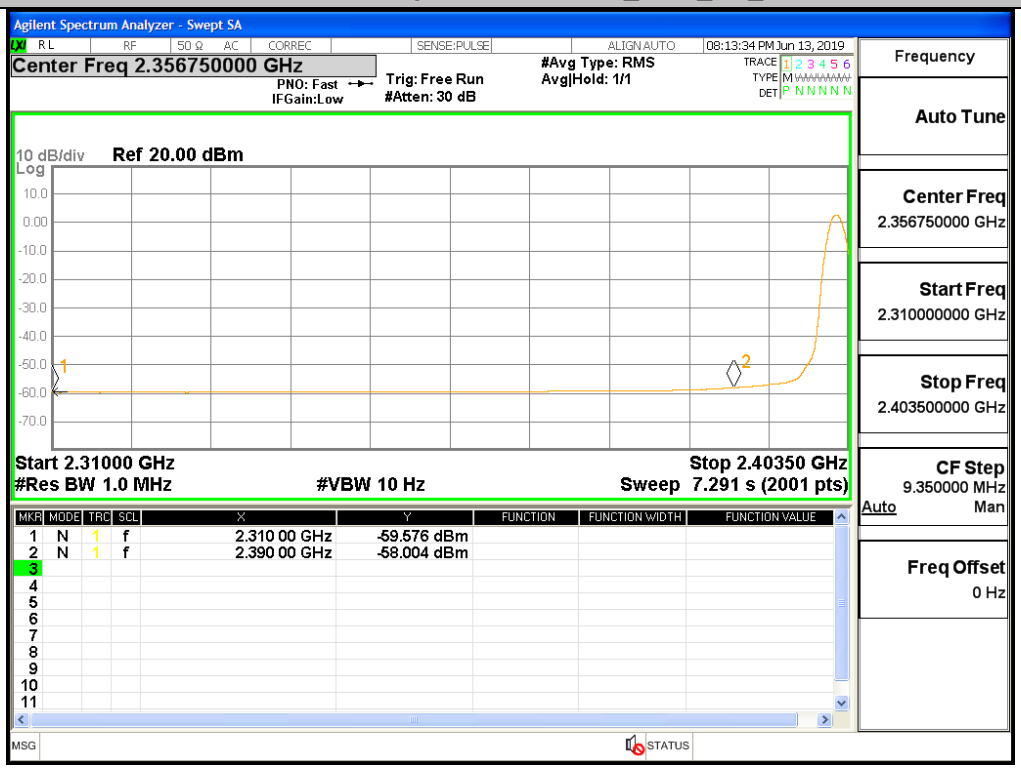


Restrict-band band-edge measurements_2480_AV_DH5

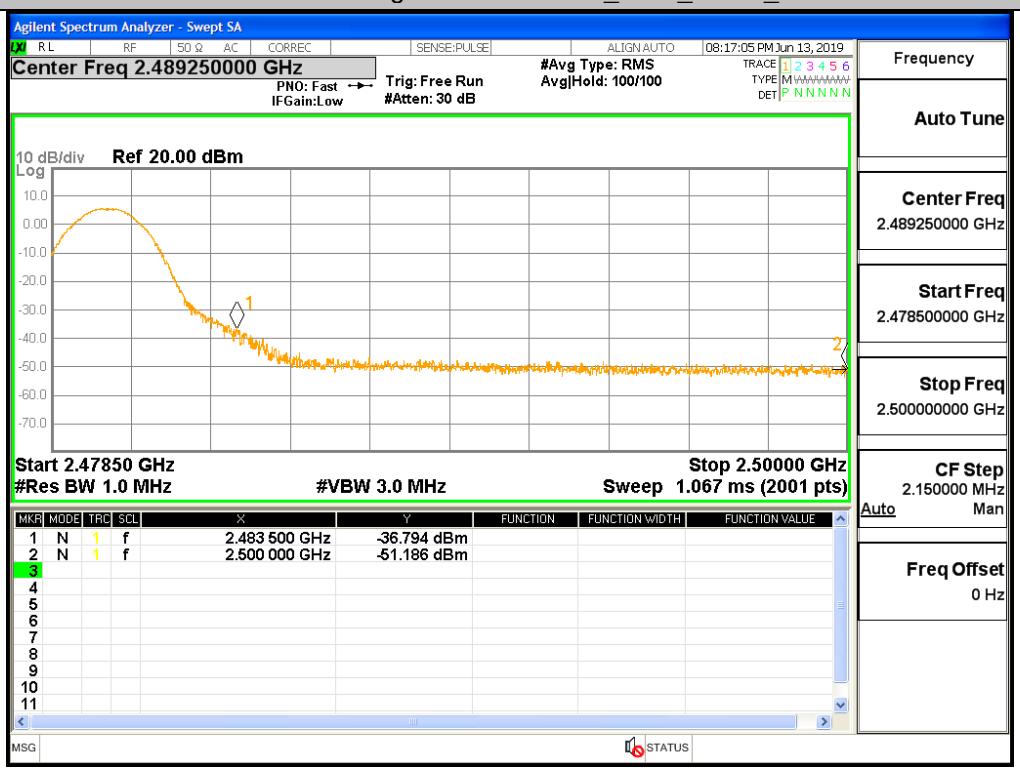
Restrict-band band-edge measurements_2402_PEAK_2DH5



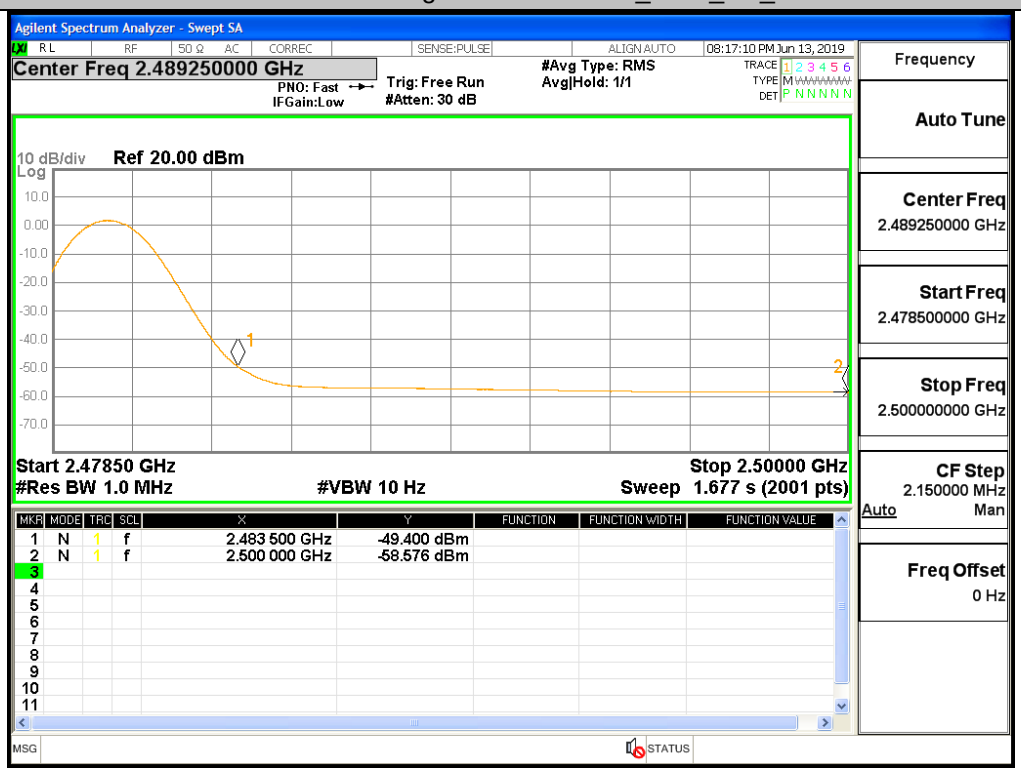
Restrict-band band-edge measurements_2402_AV_2DH5



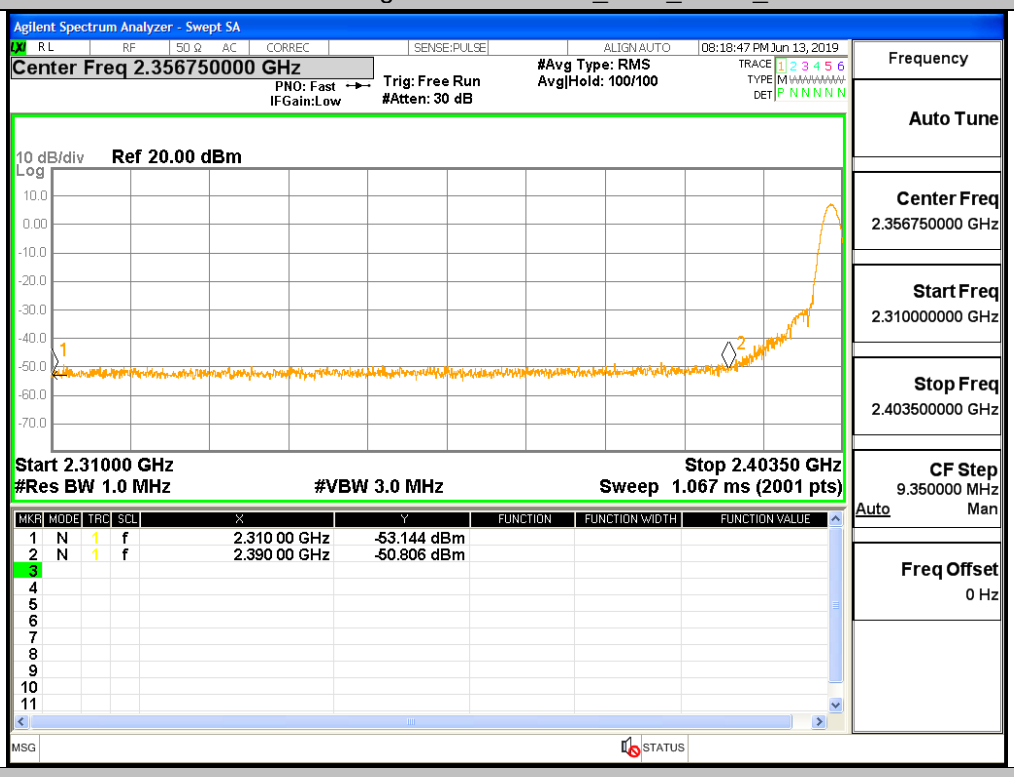
Restrict-band band-edge measurements_2480_PEAK_2DH5



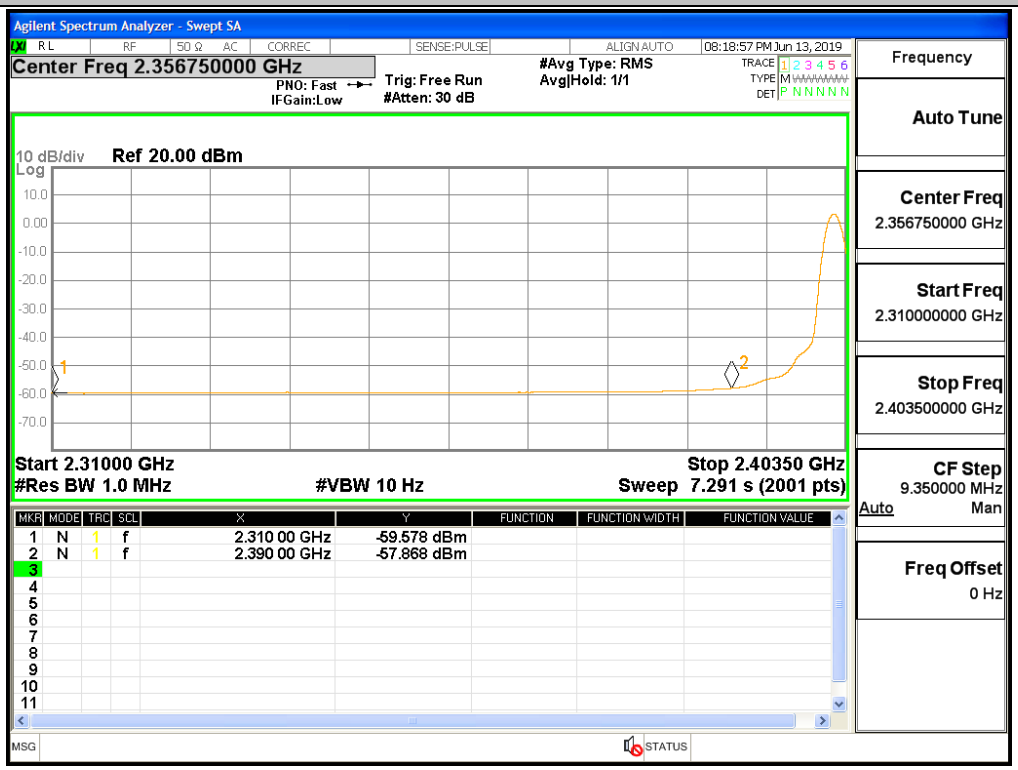
Restrict-band band-edge measurements_2480_AV_2DH5



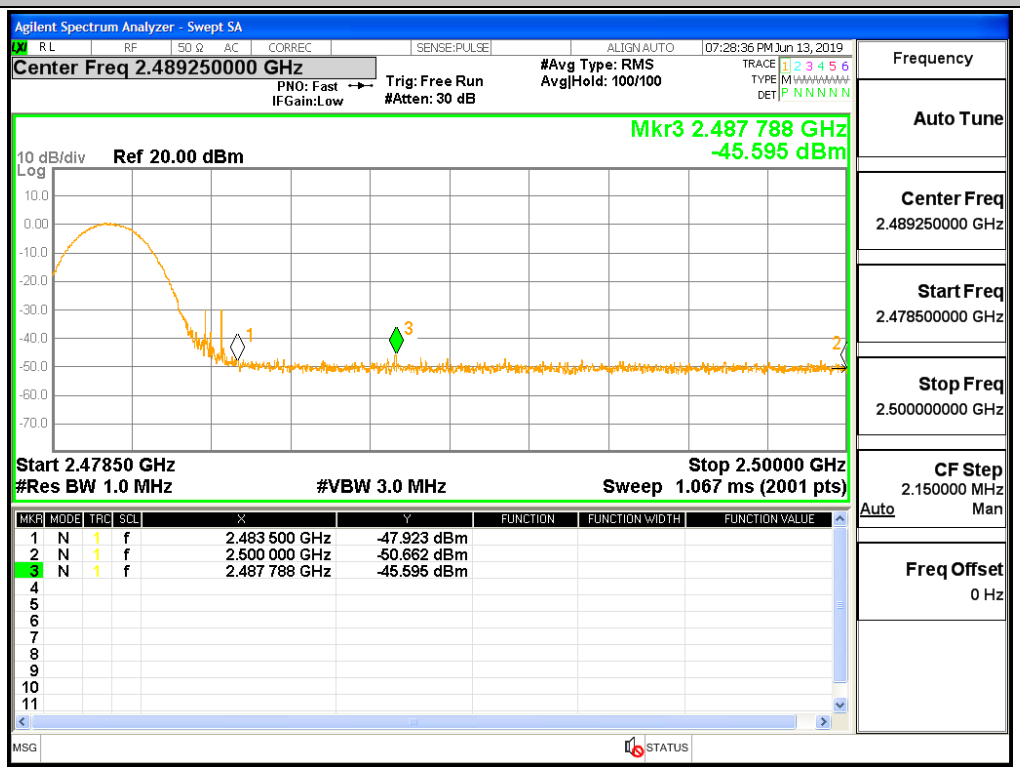
Restrict-band band-edge measurements_2402_PEAK_3DH5



Restrict-band band-edge measurements_2402_AV_3DH5



Restrict-band band-edge measurements_2480_PEAK_3DH5



Restrict-band band-edge measurements_2480_AV_3DH5