

**Appendix A**  
**RF Test Data for BT V4.0(BDR/EDR) (Conducted Measurement)**

Product Name: Mishiko Collar

Trade Mark: MISHIKO

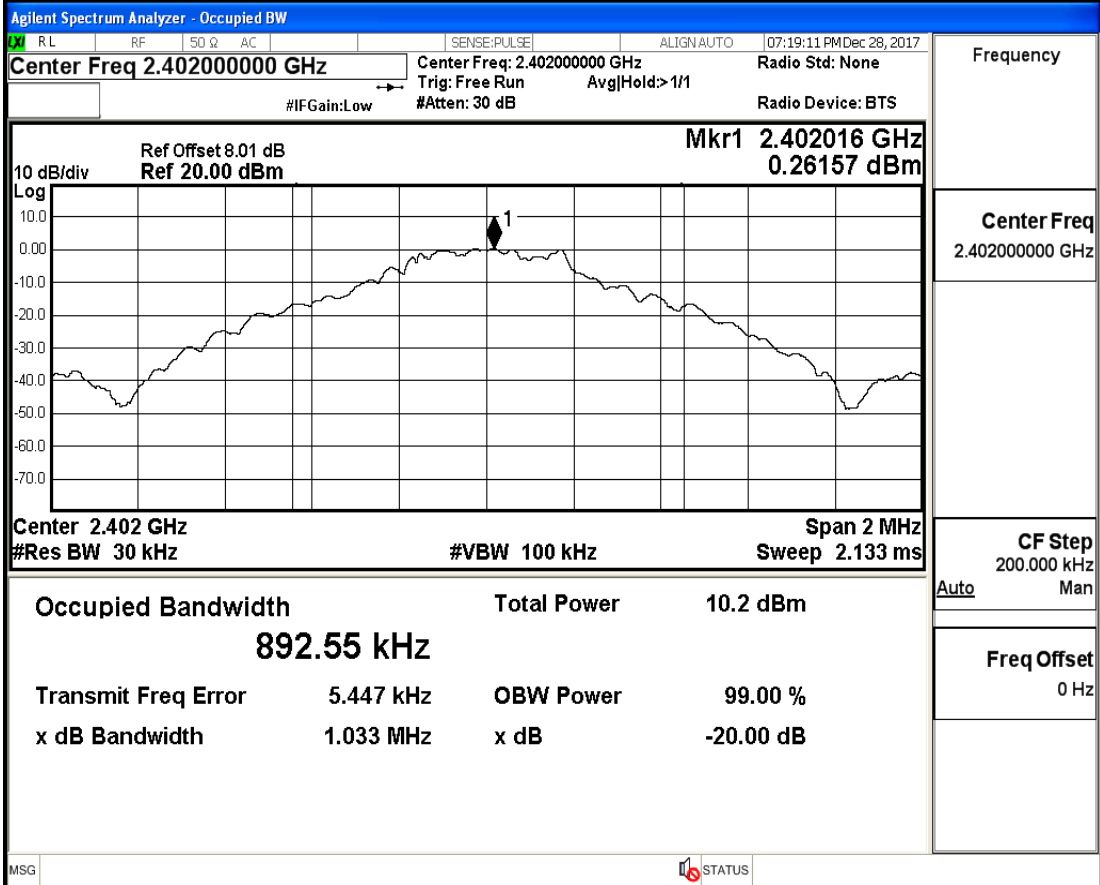
Test Model: M103

FCC ID: 2AID9M103

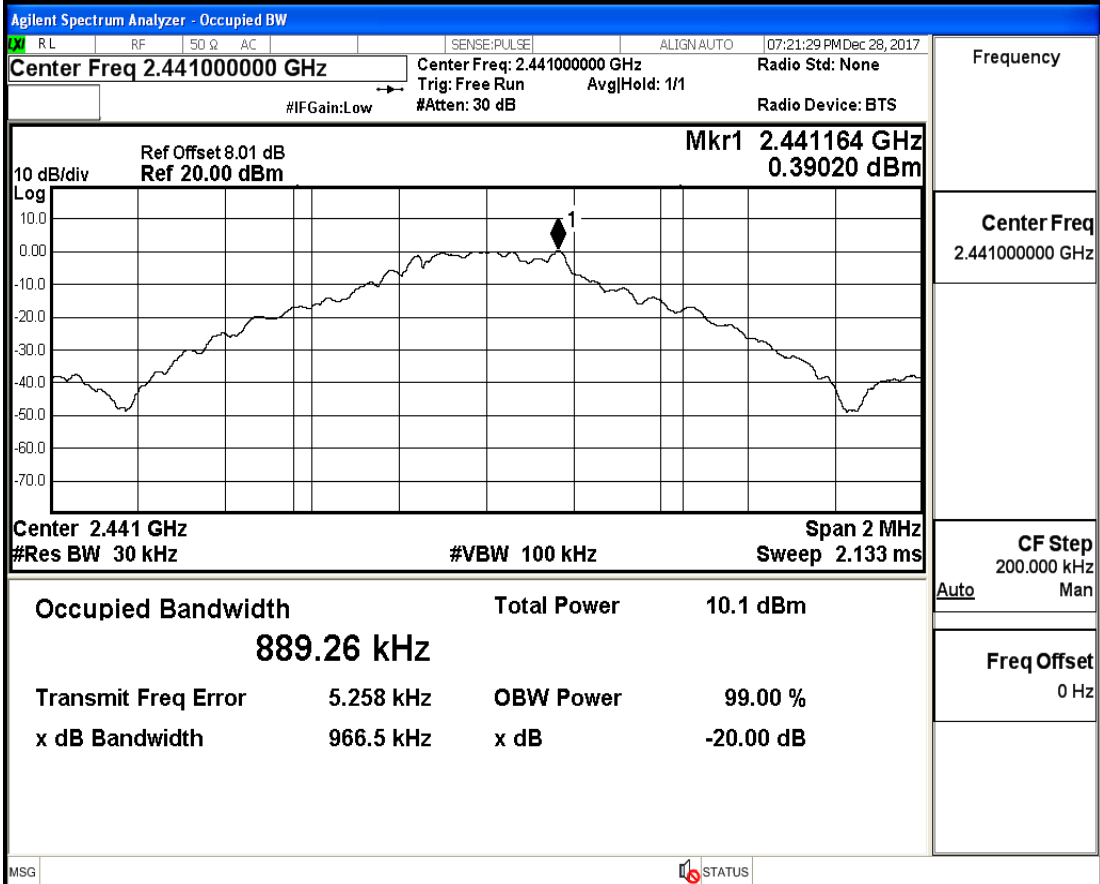
**A.1 20 dB Bandwidth**

Test Mode	Test Channel	EBW[MHz]	Limit[MHz]	Verdict
GFSK	2402	1.033	---	PASS
	2441	0.9665	---	PASS
	2480	1.032	---	PASS
$\pi/4$ -DQPSK	2402	1.289	---	PASS
	2441	1.288	---	PASS
	2480	1.288	---	PASS
8-DPSK	2402	1.290	---	PASS
	2441	1.298	---	PASS
	2480	1.296	---	PASS

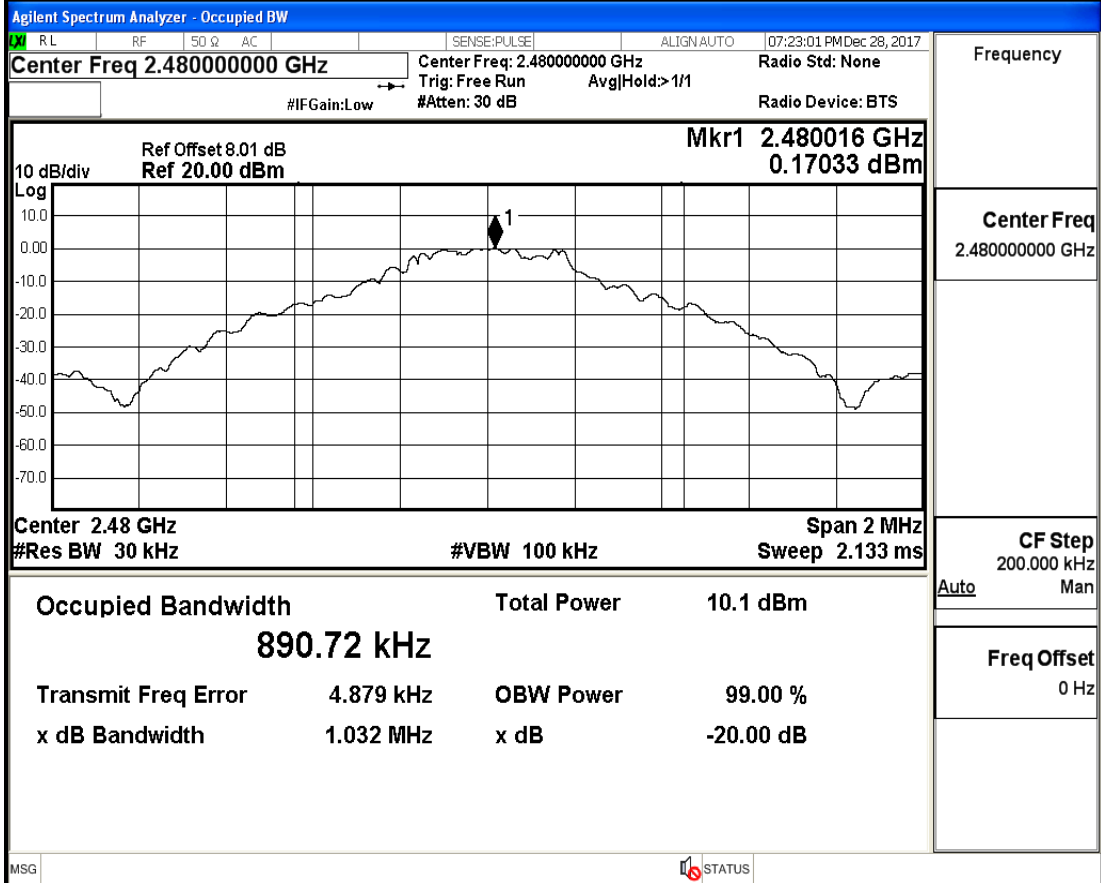
# 20 dB Bandwidth\_GFSK\_2402



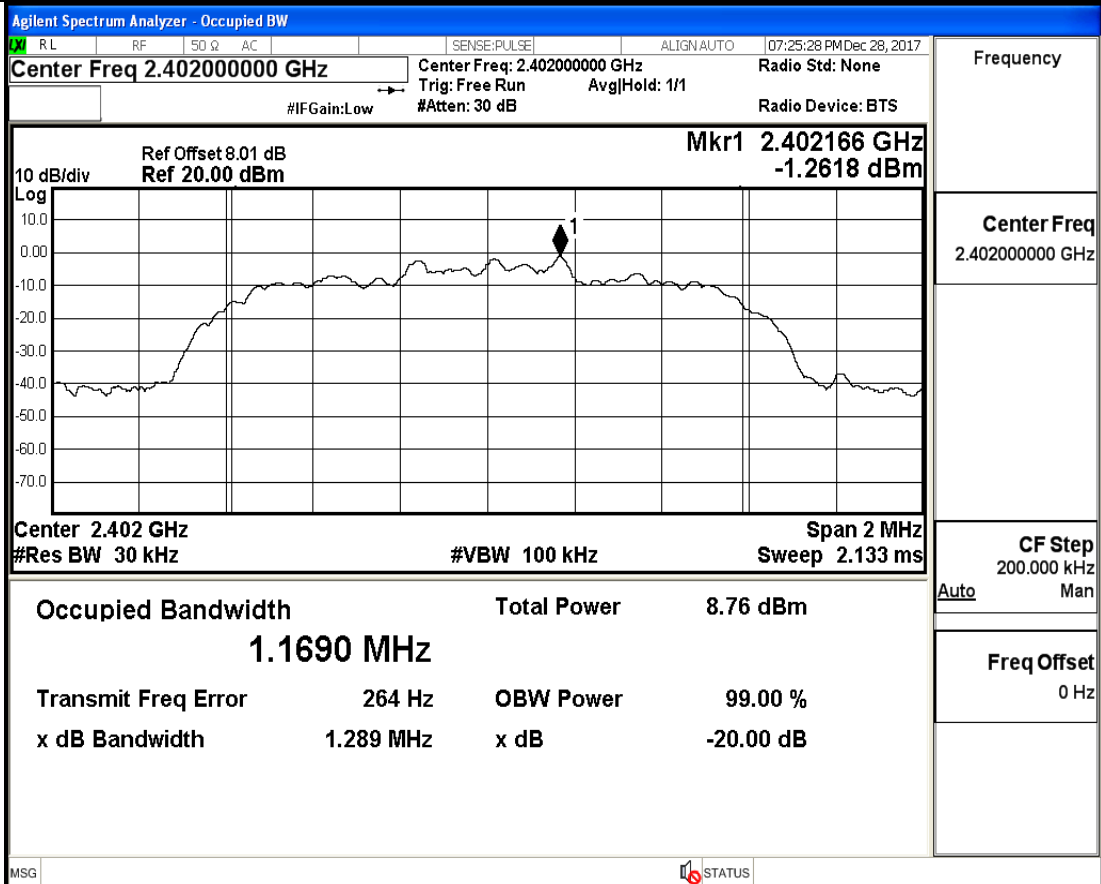
# 20 dB Bandwidth\_GFSK\_2441



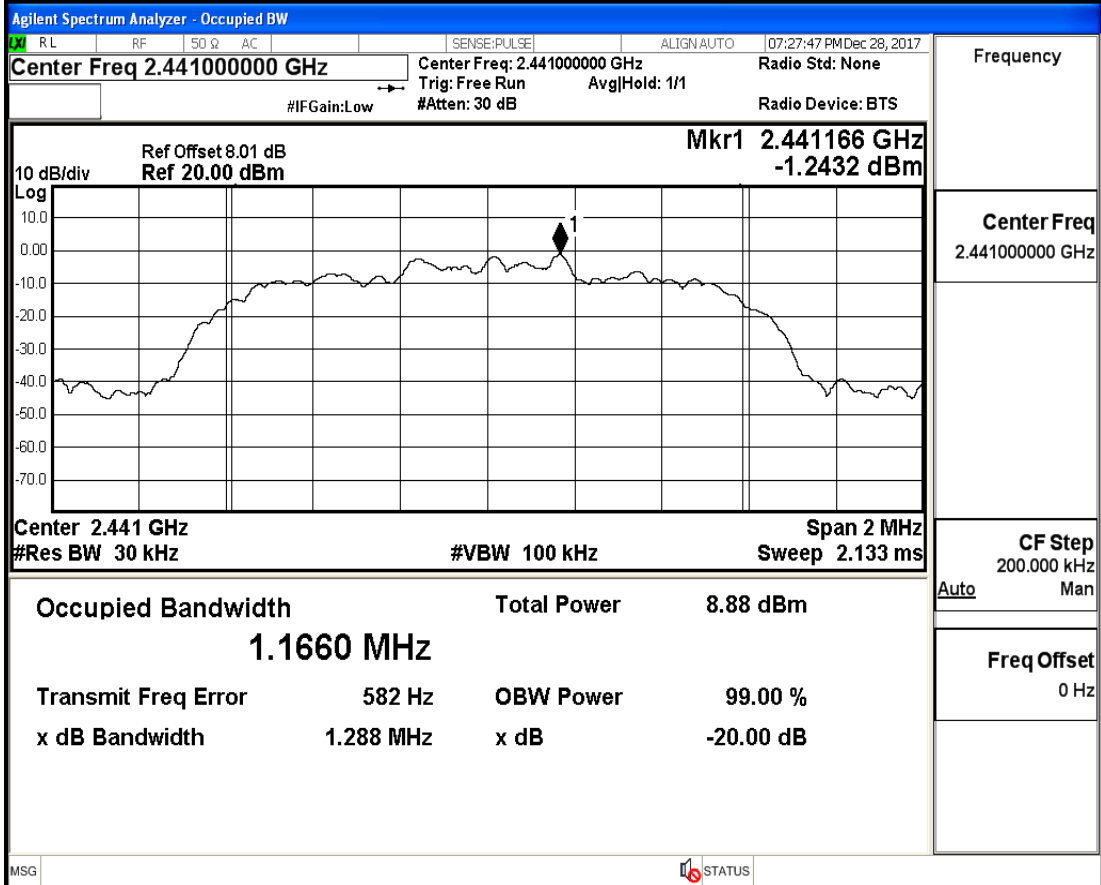
# 20 dB Bandwidth\_GFSK\_2480



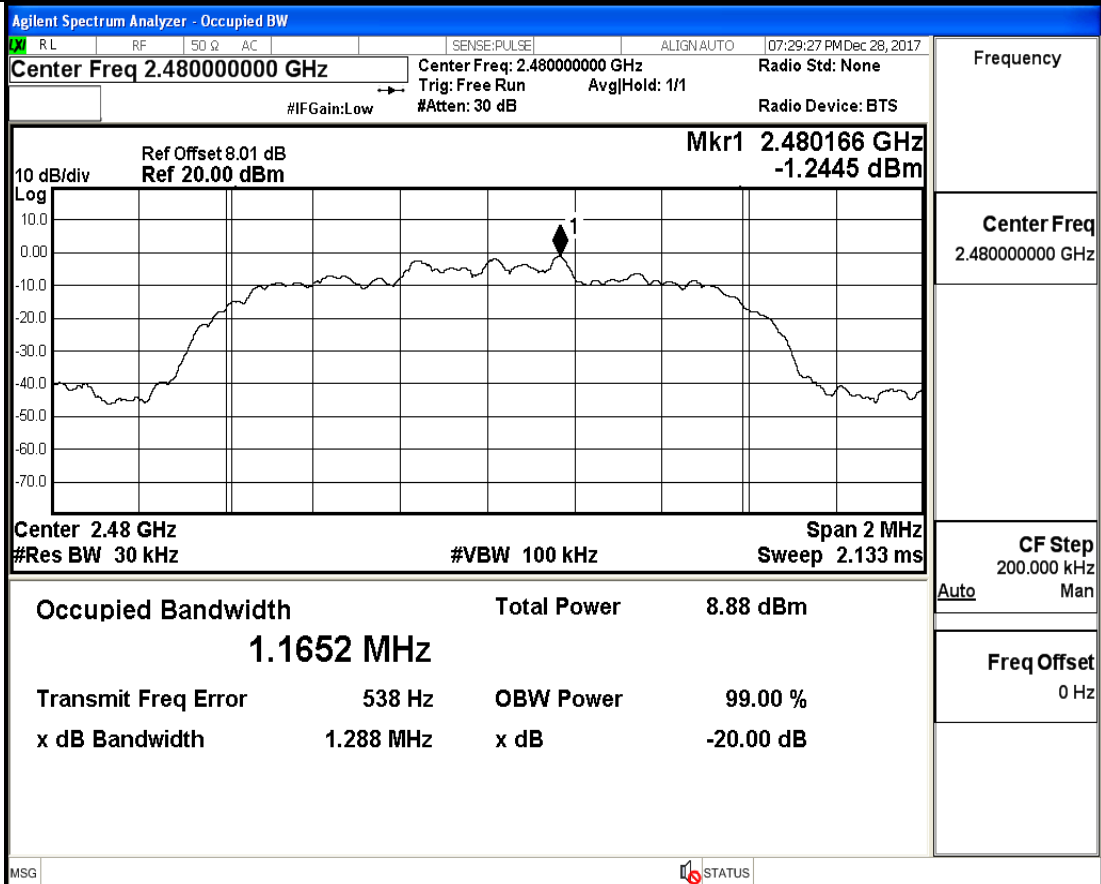
# 20 dB Bandwidth\_π/4-DQPSK\_2402



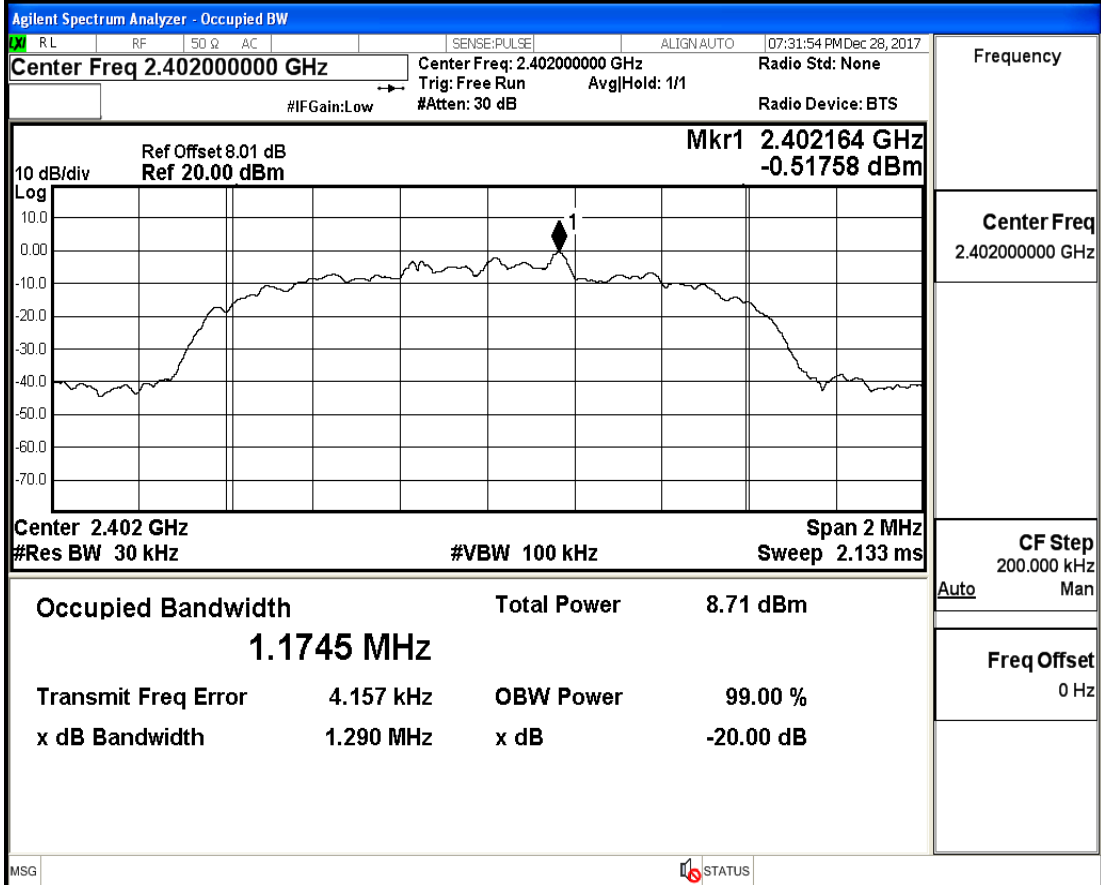
## 20 dB Bandwidth\_π/4-DQPSK\_2441



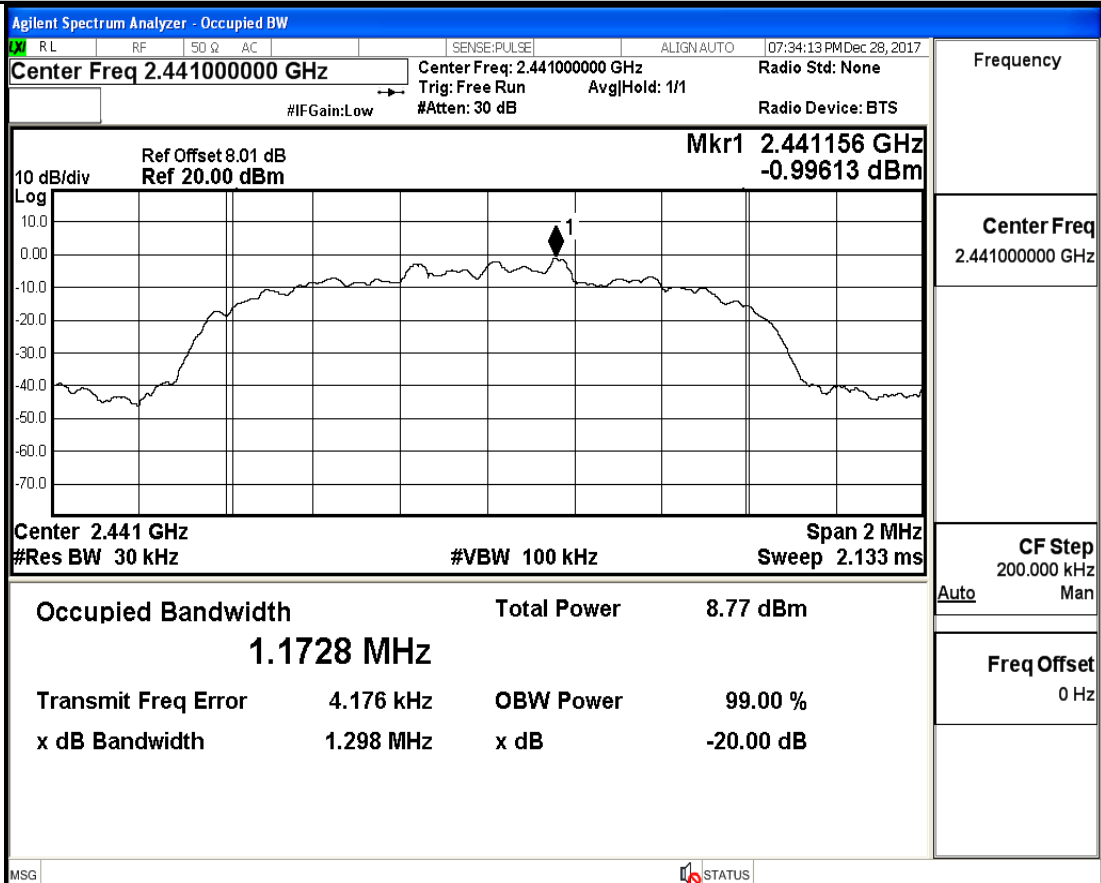
## 20 dB Bandwidth\_π/4-DQPSK\_2480



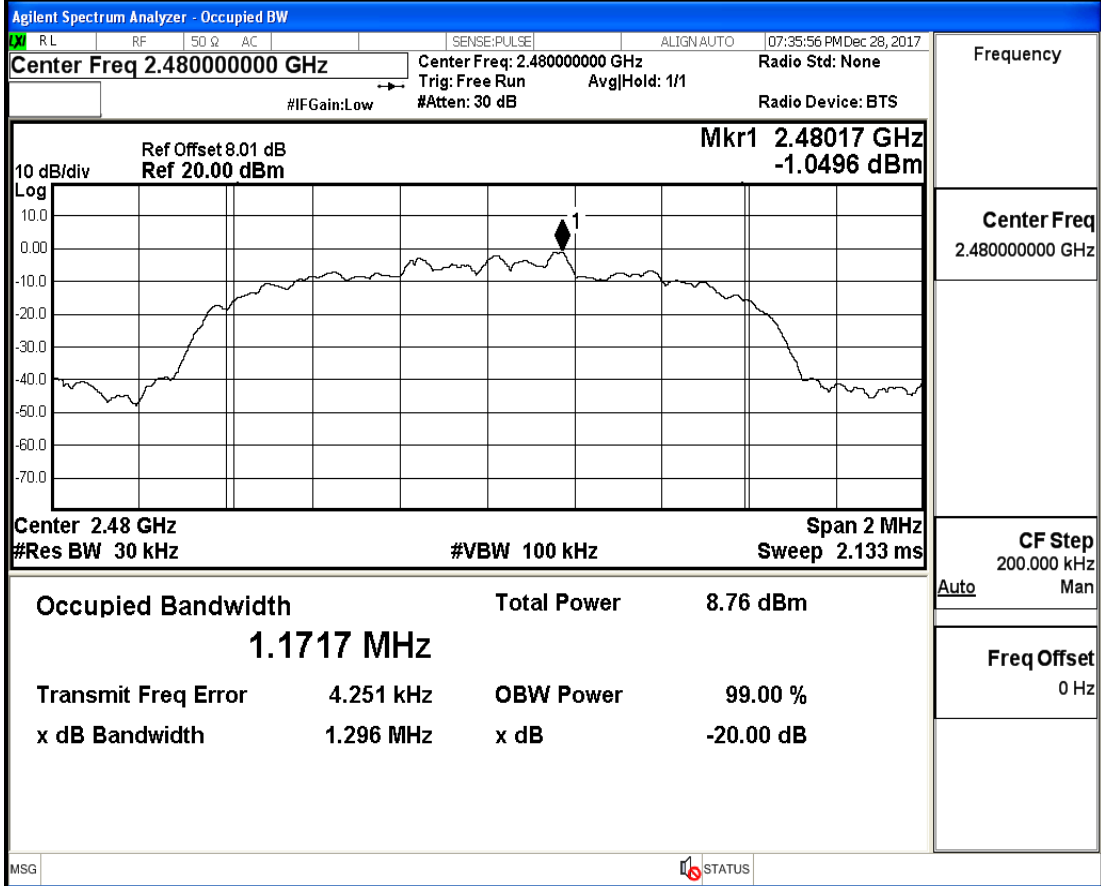
## 20 dB Bandwidth\_8-DPSK\_2402



## 20 dB Bandwidth\_8-DPSK\_2441



# 20 dB Bandwidth\_8-DPSK\_2480



## A.2 Conducted Peak Output Power

Test Mode	Test Channel	Power[dBm]	Limit[dBm]	Verdict
GFSK	2402	2.952	21	PASS
	2441	2.729	21	PASS
	2480	2.813	21	PASS
$\pi/4$ -DQPSK	2402	2.459	21	PASS
	2441	2.563	21	PASS
	2480	2.642	21	PASS
8-DPSK	2402	2.688	21	PASS
	2441	2.817	21	PASS
	2480	2.876	21	PASS

Conducted Peak Output Power\_GFSK\_2402

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.402000000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

Mkr1 2.401 889 375 GHz  
2.952 dBm

10 dB/div  
Log

Center 2.402000 GHz  
#Res BW 3.0 MHz  
#VBW 8.0 MHz

Span 5.000 MHz  
Sweep 1.067 ms (8001 pts)

Frequency

Auto Tune

Center Freq  
2.402000000 GHz

Start Freq  
2.399500000 GHz

Stop Freq  
2.404500000 GHz

CF Step  
500.000 kHz  
Auto Man

Freq Offset  
0 Hz

Conducted Peak Output Power\_GFSK\_2441

**Agilent Spectrum Analyzer - Swept SA**

☒ R.L.    RF    50 Ω    AC    SENSE:PULSE    ALIGN:AUTO    07:22:01 PM Dec 28, 2017

**Center Freq 2.44100000 GHz**    Avg Type: Log-Pwr    TRACE 1 2 3 4 5 6  
 PNO: Fast → Trig: Free Run    Avg|Hold: 10/10    TYPE: M W W W W W W W  
 IFGain: Low    #Atten: 30 dB    DET: P P P P P P

Ref Offset 8.01 dB    Mkr1 2.441 011 875 GHz  
 Ref 20.00 dBm    2.729 dBm

10 dB/div  
Log

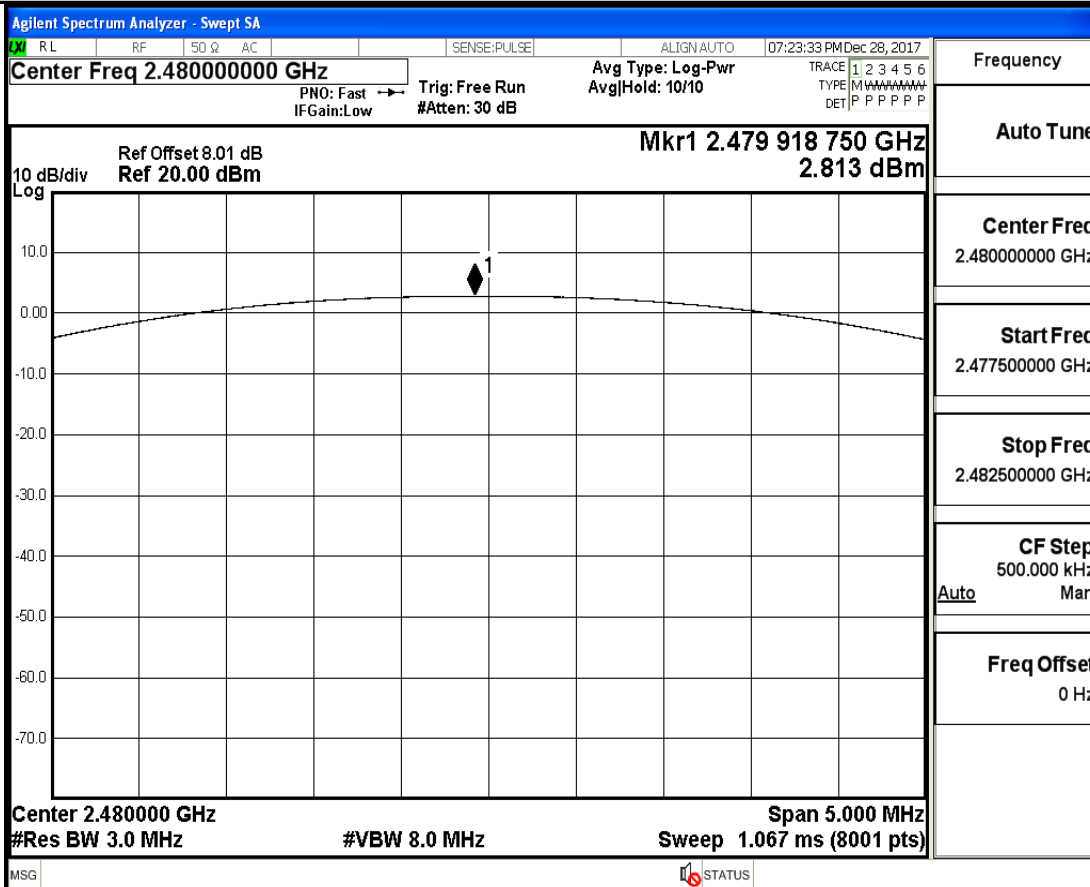
Center 2.441000 GHz    Span 5.000 MHz  
 #Res BW 3.0 MHz    #VBW 8.0 MHz    Sweep 1.067 ms (8001 pts)

Frequency: 2.441000000 GHz  
 Auto Tune  
 Center Freq: 2.441000000 GHz  
 Start Freq: 2.438500000 GHz  
 Stop Freq: 2.443500000 GHz  
 CF Step: 500.000 kHz  
 Auto Man  
 Freq Offset: 0 Hz

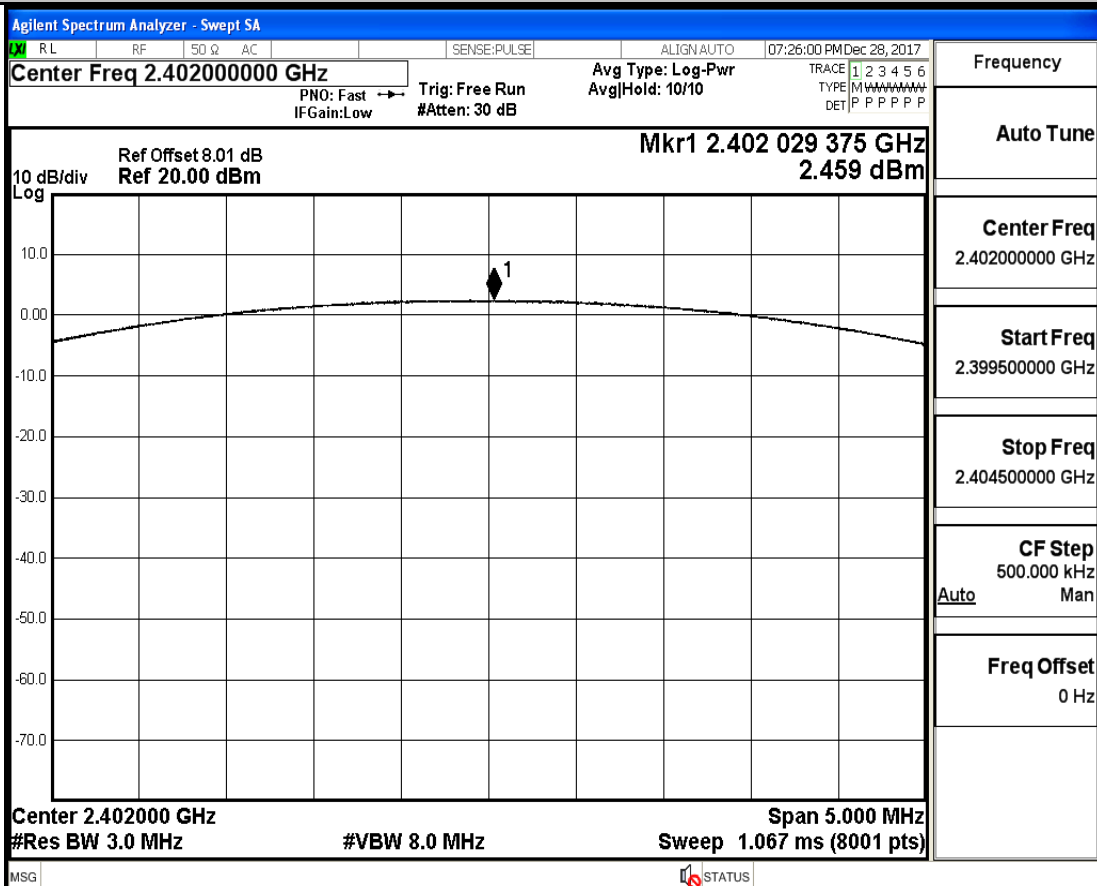
MSG    STATUS



# Conducted Peak Output Power\_GFSK\_2480



# Conducted Peak Output Power\_ $\pi$ /4-DQPSK\_2402



Conducted Peak Output Power\_π/4-DQPSK\_2441

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.441000000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

Mkr1 2.441 016 875 GHz  
2.563 dBm

10 dB/div  
Log

Center 2.441000 GHz  
#Res BW 3.0 MHz  
#VBW 8.0 MHz  
Sweep 1.067 ms (8001 pts)

Frequency

Auto Tune

Center Freq  
2.441000000 GHz

Start Freq  
2.438500000 GHz

Stop Freq  
2.443500000 GHz

CF Step  
500.000 kHz  
Auto Man

Freq Offset  
0 Hz

Conducted Peak Output Power\_π/4-DQPSK\_2480

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.480000000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

Mkr1 2.479 973 125 GHz  
2.642 dBm

10 dB/div  
Log

Center 2.480000 GHz  
#Res BW 3.0 MHz  
#VBW 8.0 MHz  
Sweep 1.067 ms (8001 pts)

Frequency

Auto Tune

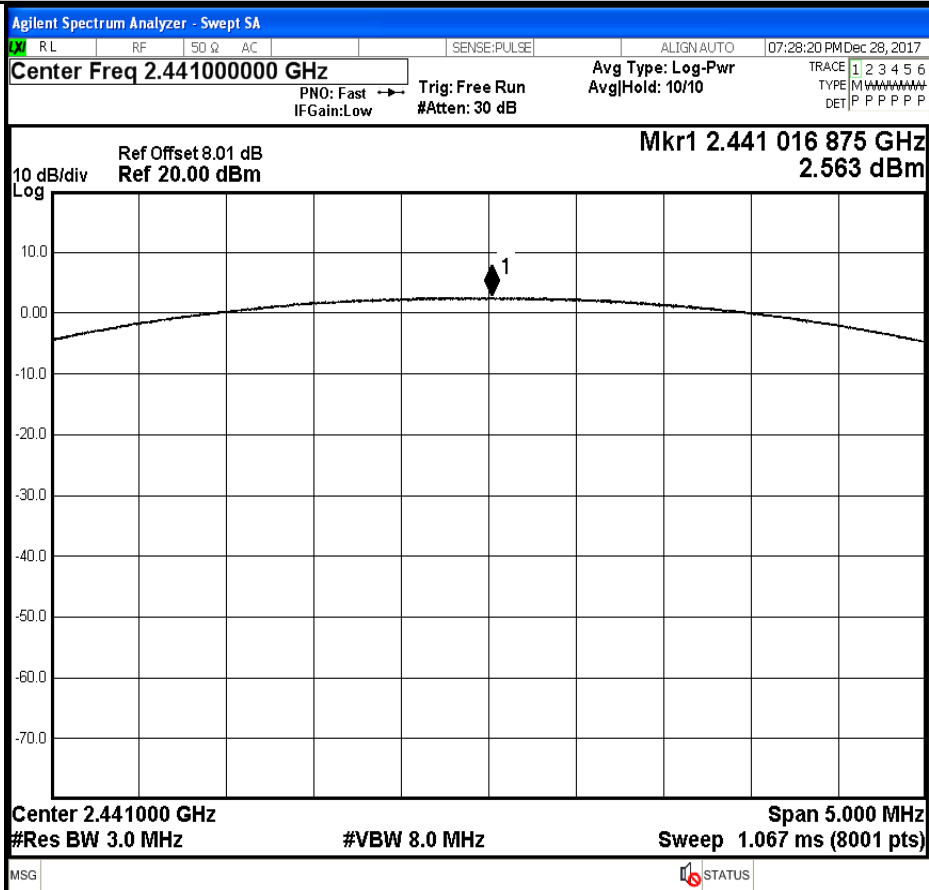
Center Freq  
2.480000000 GHz

Start Freq  
2.477500000 GHz

Stop Freq  
2.482500000 GHz

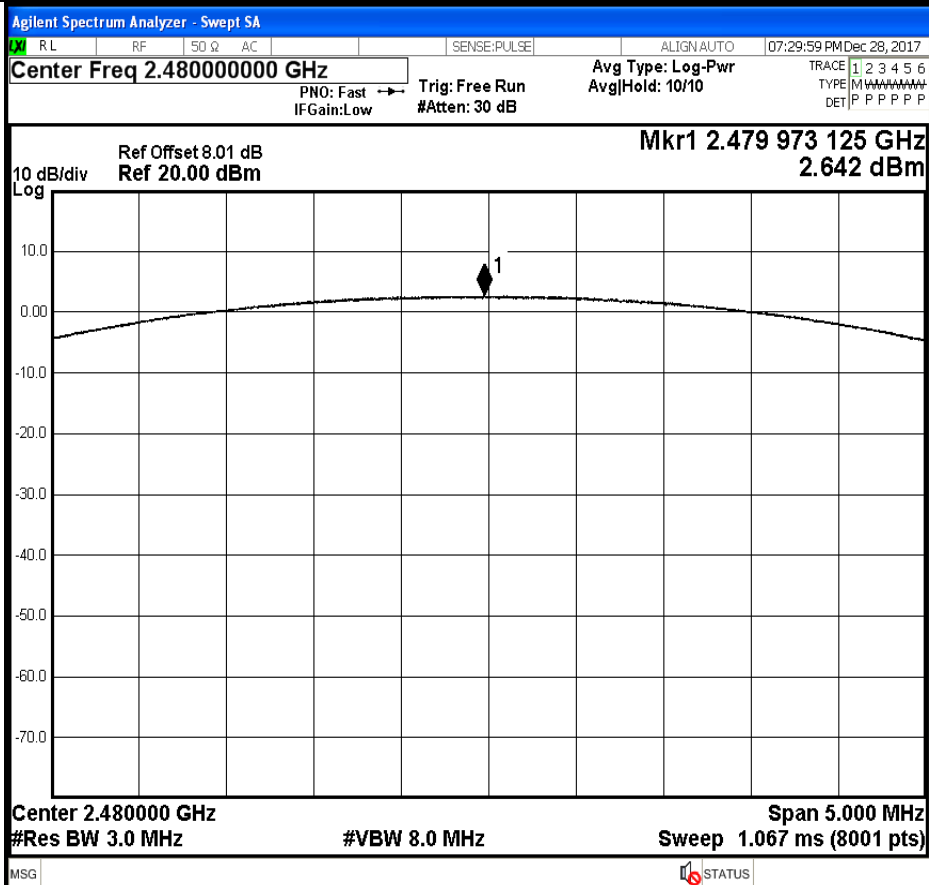
CF Step  
500.000 kHz  
Auto Man

Freq Offset  
0 Hz



Frequency	
Auto Tune	
Center Freq	2.441000000 GHz
Start Freq	2.438500000 GHz
Stop Freq	2.443500000 GHz
CF Step	500.000 kHz
Auto	Man
Freq Offset	0 Hz

Conducted Peak Output Power_π/4-DQPSK_2480
--



Frequency	
Auto Tune	
Center Freq	2.480000000 GHz
Start Freq	2.477500000 GHz
Stop Freq	2.482500000 GHz
CF Step	500.000 kHz
Auto	Man
Freq Offset	0 Hz

Conducted Peak Output Power\_8-DPSK\_2402

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.40200000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

Mkr1 2.401 995 625 GHz  
2.688 dBm

10 dB/div  
Log

Center 2.402000 GHz  
#Res BW 3.0 MHz  
#VBW 8.0 MHz  
Sweep 1.067 ms (8001 pts)

MSG STATUS

Frequency
Auto Tune
Center Freq 2.402000000 GHz
Start Freq 2.399500000 GHz
Stop Freq 2.404500000 GHz
CF Step 500.000 kHz Auto Man
Freq Offset 0 Hz

Conducted Peak Output Power\_8-DPSK\_2441

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.441000000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

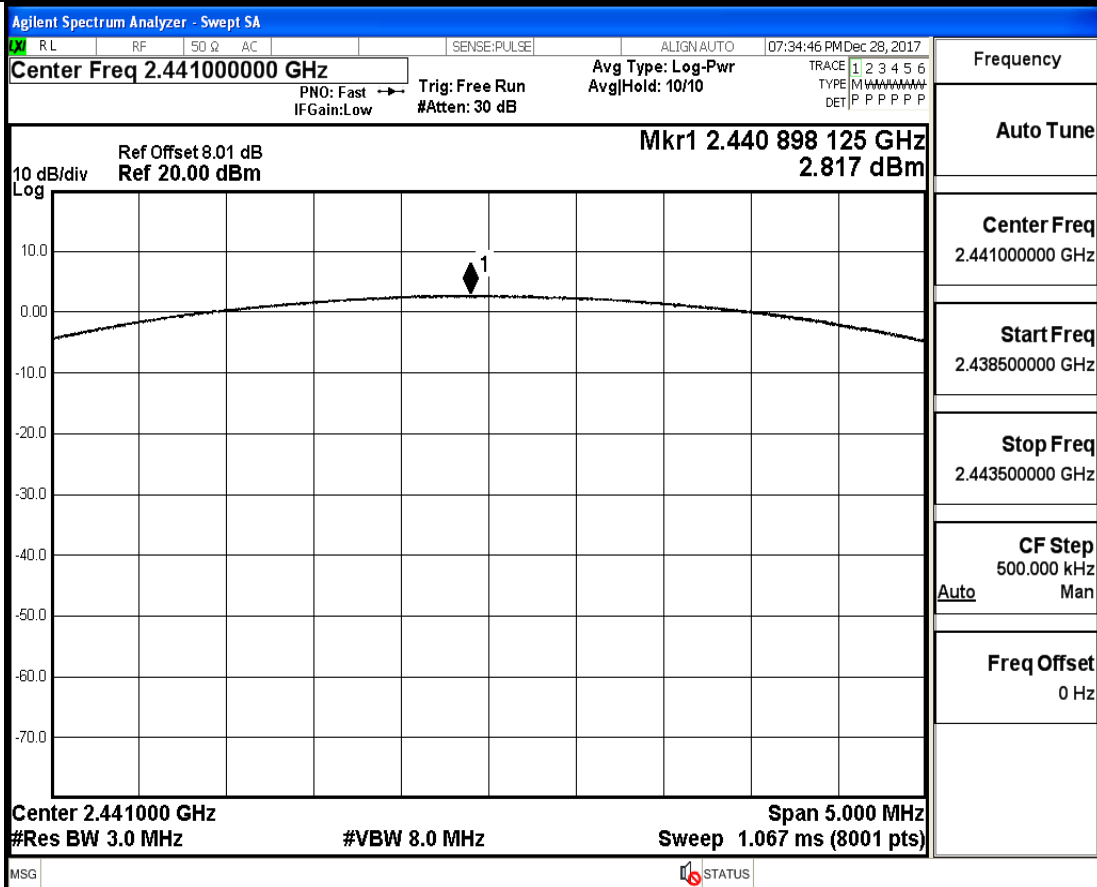
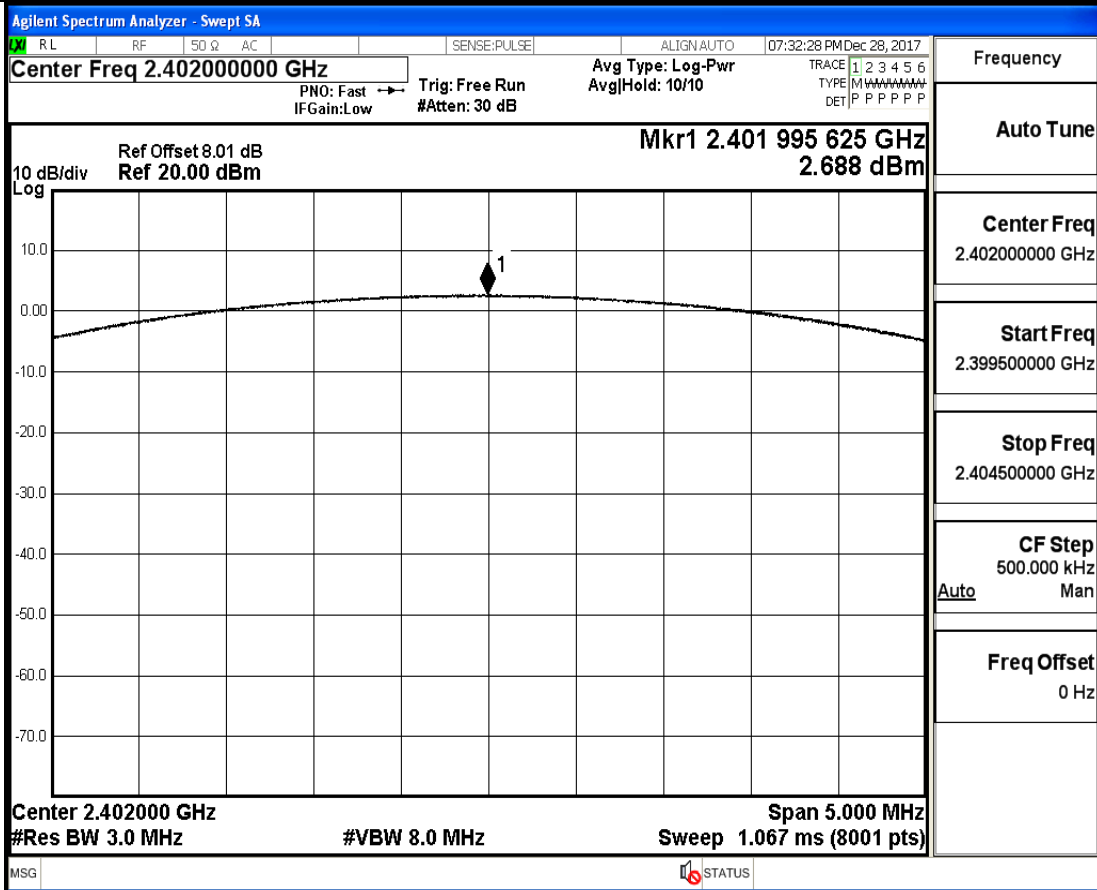
Mkr1 2.440 898 125 GHz  
2.817 dBm

10 dB/div  
Log

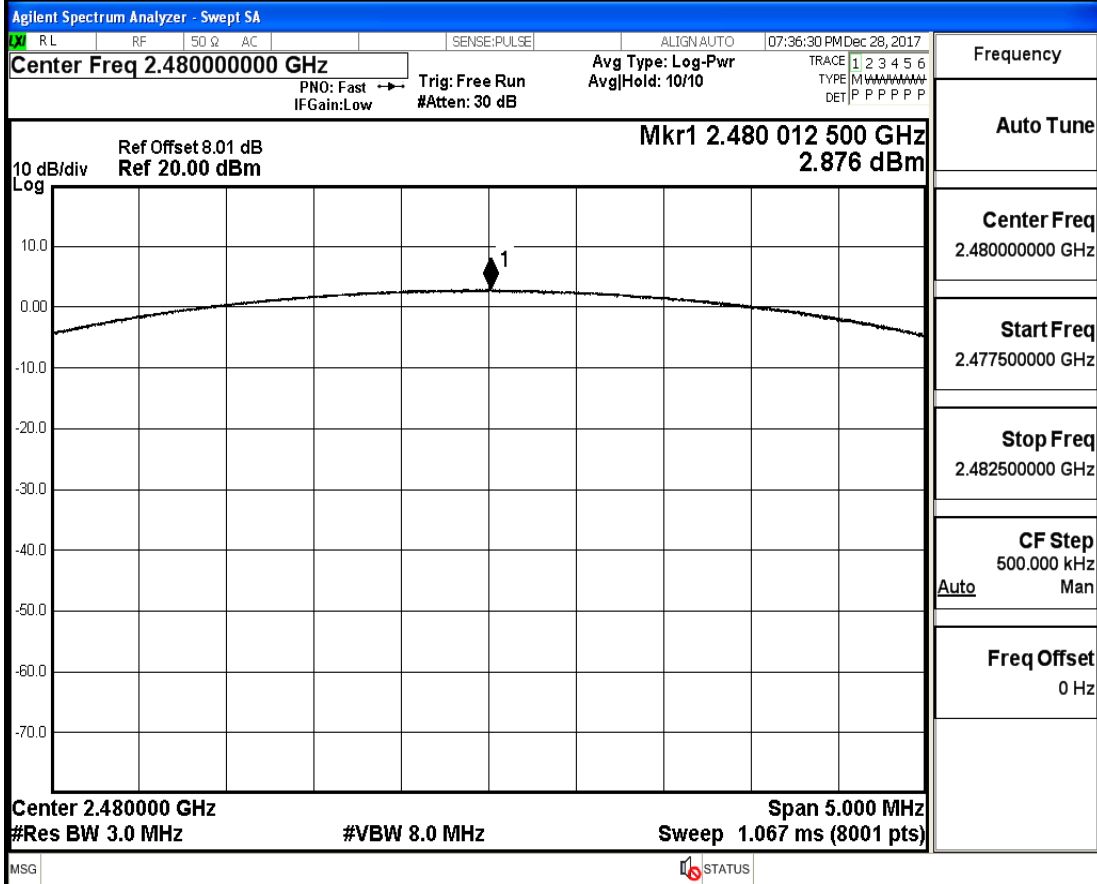
Center 2.441000 GHz  
#Res BW 3.0 MHz  
#VBW 8.0 MHz  
Sweep 1.067 ms (8001 pts)

MSG STATUS

Frequency
Auto Tune
Center Freq 2.441000000 GHz
Start Freq 2.438500000 GHz
Stop Freq 2.443500000 GHz
CF Step 500.000 kHz Auto Man
Freq Offset 0 Hz



# Conducted Peak Output Power\_8-DPSK\_2480



### A.3 Carrier Frequency Separation

Test Mode	Test Channel	Result[MHz]	Limit[MHz]	Verdict
GFSK	2402	1.026	0.69	PASS
	2441	1.306	0.64	PASS
	2480	1.106	0.69	PASS
$\pi/4$ -DQPSK	2402	1.142	0.86	PASS
	2441	0.98	0.86	PASS
	2480	0.86	0.86	PASS
8-DPSK	2402	0.944	0.86	PASS
	2441	1.21	0.87	PASS
	2480	0.976	0.86	PASS

**Carrier Frequency Separation\_GFSK\_2402**

**Agilent Spectrum Analyzer - Swept SA**

RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 07:38:26 PM Dec 28, 2017

**Center Freq 2.402500000 GHz**

PNO: Wide → Trig: Free Run Avg Type: Log-Pwr  
IF Gain: Low #Atten: 30 dB Avg Hold: 10/10

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

**Ref Offset 8.01 dB**  
**Ref 20.00 dBm**

**ΔMkr1 1.025 75 MHz**  
**0.203 dB**

10 dB/div  
Log

Start 2.401500 GHz Stop 2.403500 GHz  
#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms (8001 pts)

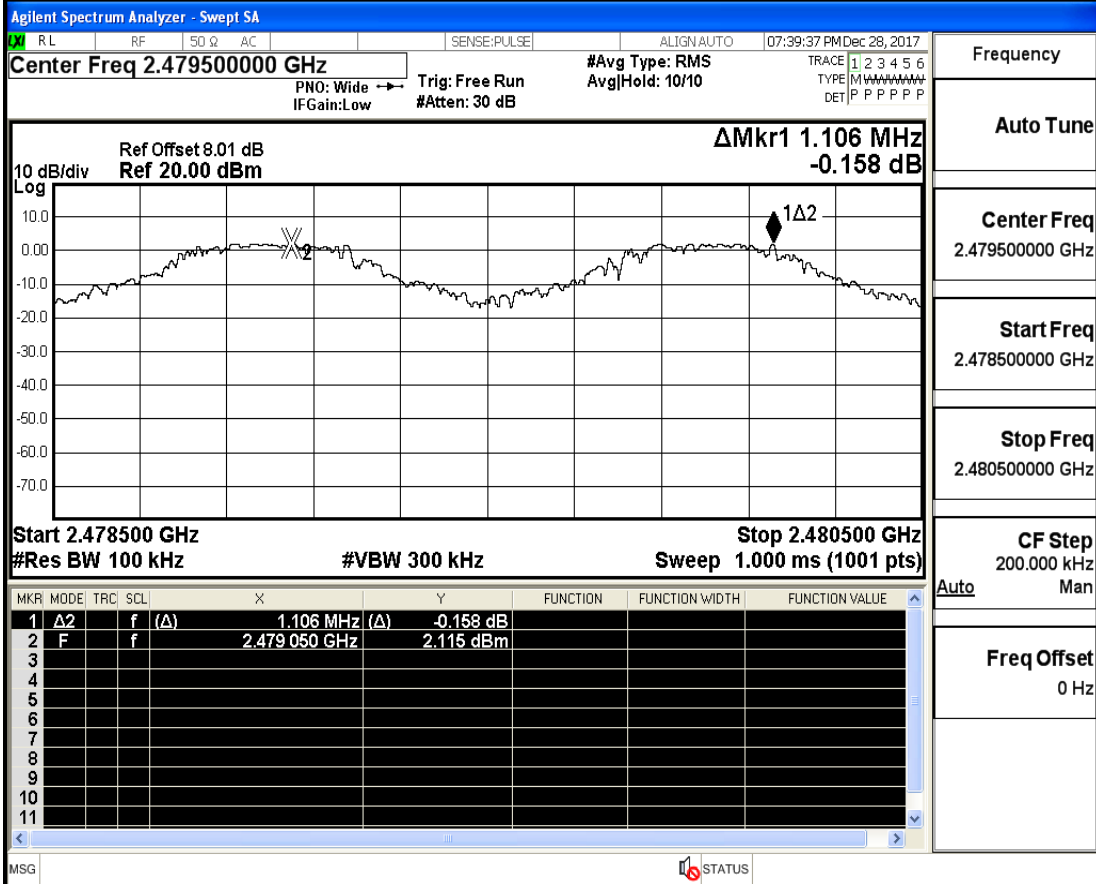
MRK	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	f	(Δ)	1.025 75 MHz (Δ)	0.203 dB			
2	F	f		2.402 028 50 GHz	1.690 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

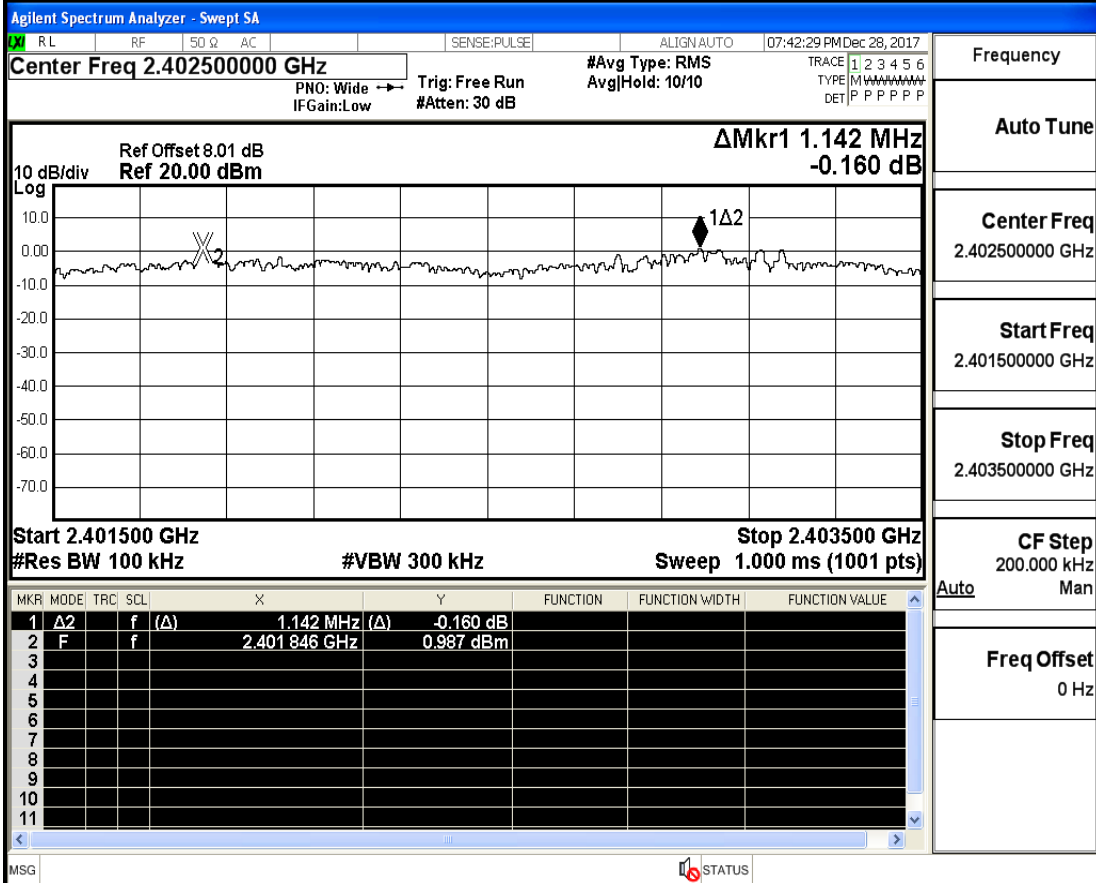
**Frequency**  
Auto Tune  
Center Freq 2.402500000 GHz  
Start Freq 2.401500000 GHz  
Stop Freq 2.403500000 GHz  
CF Step 200.000 kHz  
Man  
Freq Offset 0 Hz

[illegible]

# Carrier Frequency Separation\_GFSK\_2480



# Carrier Frequency Separation\_π/4-DQPSK\_2402



Carrier Frequency Separation\_π/4-DQPSK\_2441

Agilent Spectrum Analyzer - Swept SA

R L RF 50 Ω AC SENSE:PULSE ALIGN AUTO 07:46:42 PM Dec 28, 2017

Center Freq 2.441500000 GHz #Avg Type: RMS AvgHold: 10/10 PNO: Wide → Trig: Free Run #Atten: 30 dB TYPE M W A V I J K L DET P P P P P P

Ref Offset 8.01 dB ΔMkr1 980 kHz  
Ref 20.00 dBm -0.617 dB

10 dB/div Log

Start 2.440500 GHz Stop 2.442500 GHz  
#Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	f	(Δ)	980 kHz (Δ)	-0.617 dB			
2	F	f		2.441 166 GHz	1.630 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency Auto Tune Center Freq 2.441500000 GHz Start Freq 2.440500000 GHz Stop Freq 2.442500000 GHz CF Step 200.000 kHz Man Freq Offset 0 Hz

Carrier Frequency Separation\_π/4-DQPSK\_2480

Agilent Spectrum Analyzer - Swept SA

R L RF 50 Ω AC SENSE:PULSE ALIGN AUTO 07:47:05 PM Dec 28, 2017

Center Freq 2.479500000 GHz #Avg Type: RMS AvgHold: 10/10 PNO: Wide → Trig: Free Run #Atten: 30 dB TYPE M W A V I J K L DET P P P P P P

Ref Offset 8.01 dB ΔMkr1 860 kHz  
Ref 20.00 dBm -3.570 dB

10 dB/div Log

Start 2.478500 GHz Stop 2.480500 GHz  
#Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	f	(Δ)	860 kHz (Δ)	-3.570 dB			
2	F	f		2.479 150 GHz	1.558 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency Auto Tune Center Freq 2.479500000 GHz Start Freq 2.478500000 GHz Stop Freq 2.480500000 GHz CF Step 200.000 kHz Man Freq Offset 0 Hz

Agilent Spectrum Analyzer - Swept SA

RL RF 50  $\Omega$  AC SENSE:PULSE ALIGN:AUTO 07:47:05 PM Dec 28, 2017

Center Freq 2.479500000 GHz PNO: Wide Trig: Free Run #Avg Type: RMS Avg/Hold: 10/10 TYPE: MAAAAAA DET: P P P P P

Ref Offset 8.01 dB  $\Delta$ Mkr1 860 kHz  
Ref 20.00 dBm -3.570 dB

10 dB/div Log

Start 2.478500 GHz Stop 2.480500 GHz  
#Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	$\Delta$ 2	f	( $\Delta$ )	860 kHz ( $\Delta$ )	-3.570 dB			
2	F	f		2.479150 GHz	1.568 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq  
2.479500000 GHz

Start Freq  
2.478500000 GHz

Stop Freq  
2.480500000 GHz

CF Step  
200.000 kHz  
Man

Freq Offset  
0 Hz

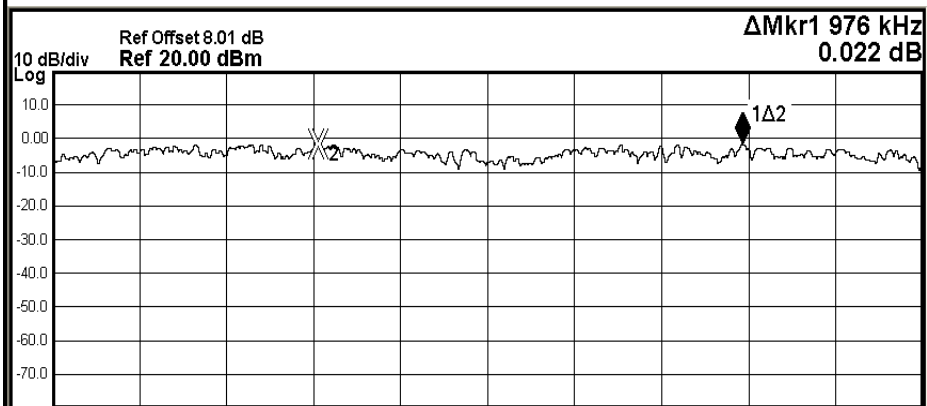




# Carrier Frequency Separation\_8-DPSK\_2480

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.479500000 GHz  
 PNO: Wide → Trig: Free Run  
 IFGain: Low #Atten: 30 dB  
 #Avg Type: RMS  
 AvgHold: 10/10  
 TRACE 1 2 3 4 5 6  
 TYPE M W W W W W W W  
 DET P P P P P P



Start 2.478500 GHz Stop 2.480500 GHz  
 #Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)

MR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	f	(Δ)	976 kHz (Δ)	0.022 dB			
2	F	f		2.479 110 GHz	-1.752 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq  
 2.479500000 GHz

Start Freq  
 2.478500000 GHz

Stop Freq  
 2.480500000 GHz

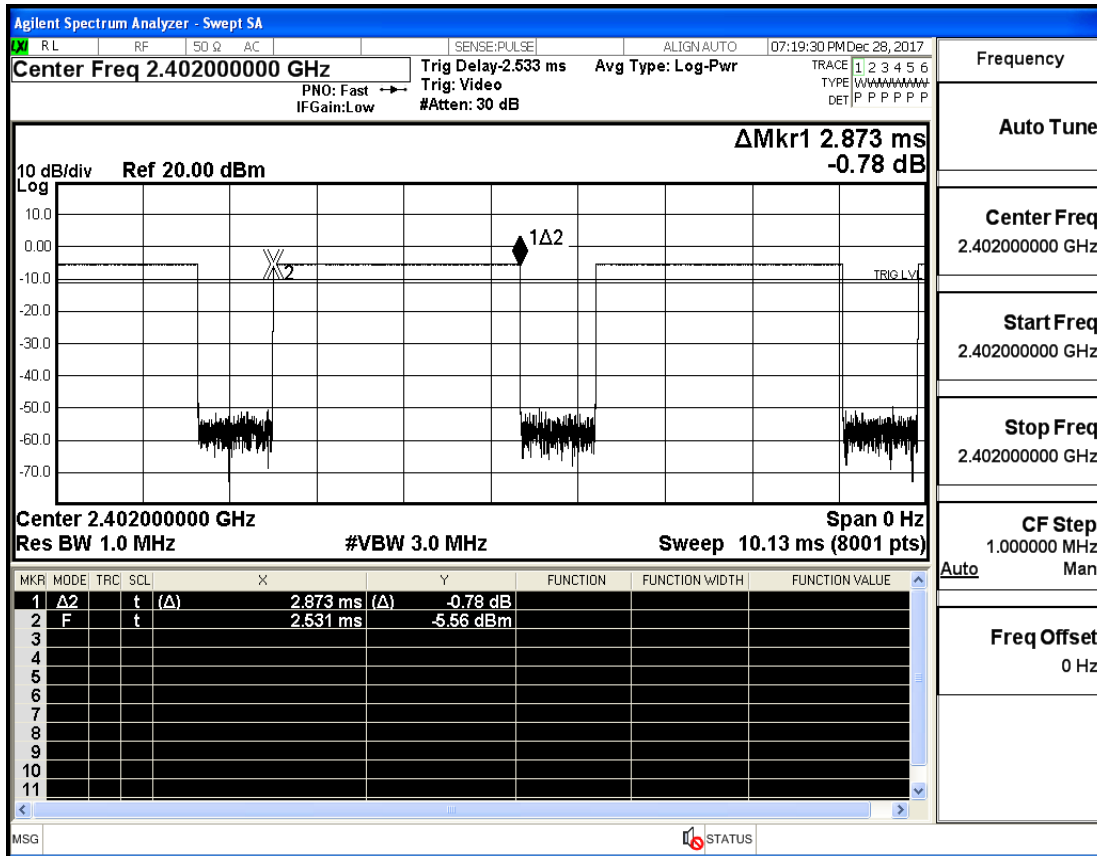
CF Step  
 200.000 kHz  
 Auto Man

Freq Offset  
 0 Hz

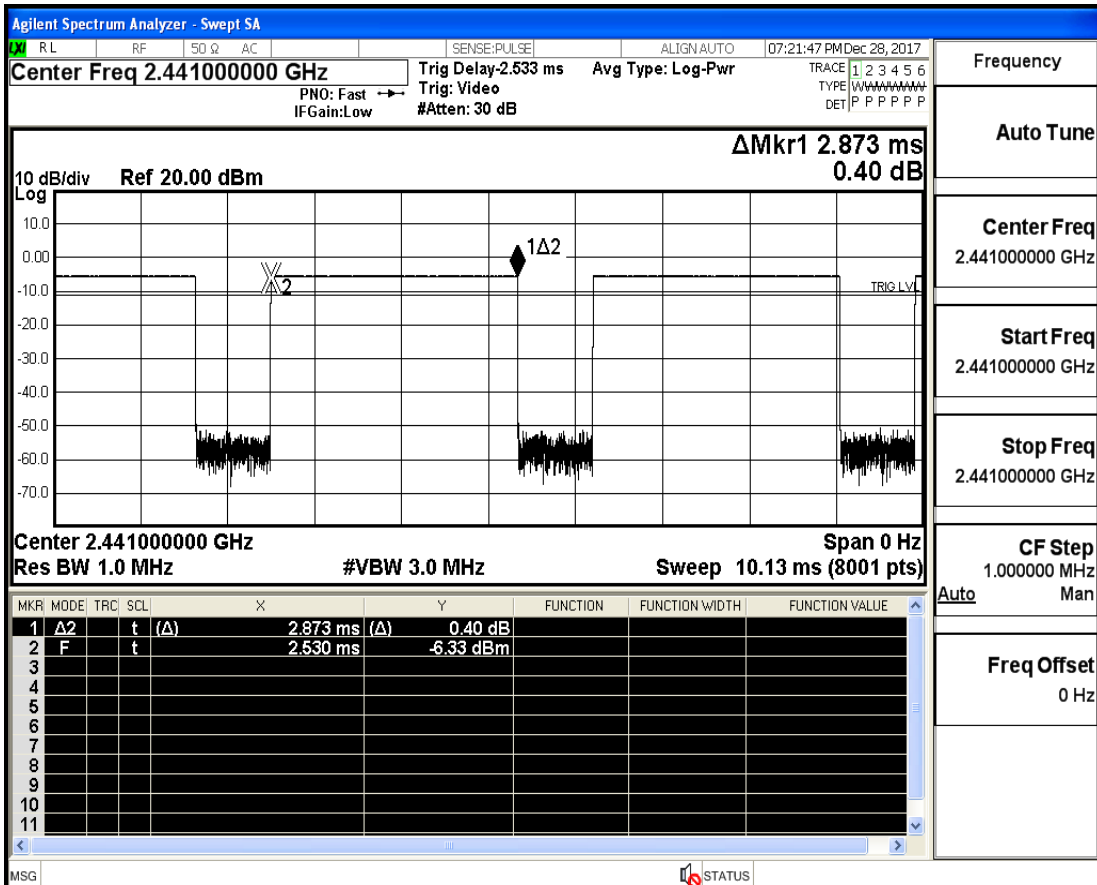
#### A.4 Dwell Time

Test Mode	Test Channel	Burst Width[ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit[s]	Verdict
GFSK	2402	2.873	106.7	0.306	0.4	PASS
	2441	2.873	106.7	0.306	0.4	PASS
	2480	2.874	106.7	0.306	0.4	PASS
$\pi/4$ -DQPSK	2402	2.877	106.7	0.307	0.4	PASS
	2441	2.877	106.7	0.307	0.4	PASS
	2480	2.877	106.7	0.307	0.4	PASS
8-DPSK	2402	2.878	106.7	0.307	0.4	PASS
	2441	2.879	106.7	0.307	0.4	PASS
	2480	2.879	106.7	0.307	0.4	PASS

# Dwell Time\_GFSK\_2402



# Dwell Time\_GFSK\_2441



Dwell Time\_GFSK\_2480

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.480000000 GHz

Trig Delay: 2.533 ms, Avg Type: Log-Pwr

Trig: Video, #Atten: 30 dB

Ref 20.00 dBm, 10 dB/div

$\Delta$ Mkr1 2.874 ms, 0.44 dB

Center 2.480000000 GHz, Res BW 1.0 MHz, #VBW 3.0 MHz, Sweep 10.13 ms (8001 pts), Span 0 Hz

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	A2	t	(Δ)	2.874 ms	(Δ)	0.44 dB		
2	F	t		2.530 ms		-7.86 dBm		

MSG STATUS

Frequency

Auto Tune

Center Freq 2.480000000 GHz

Start Freq 2.480000000 GHz

Stop Freq 2.480000000 GHz

CF Step 1.0000000 MHz

Freq Offset 0 Hz

Dwell Time\_π/4-DQPSK\_2402

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.402000000 GHz

Trig Delay: 2.533 ms, Avg Type: Log-Pwr

Trig: Video, #Atten: 30 dB

Ref 20.00 dBm, 10 dB/div

$\Delta$ Mkr1 2.877 ms, 1.21 dB

Center 2.402000000 GHz, Res BW 1.0 MHz, #VBW 3.0 MHz, Sweep 10.13 ms (8001 pts), Span 0 Hz

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	A2	t	(Δ)	2.877 ms	(Δ)	1.21 dB		
2	F	t		2.530 ms		-8.27 dBm		

MSG STATUS

Frequency

Auto Tune

Center Freq 2.402000000 GHz

Start Freq 2.402000000 GHz

Stop Freq 2.402000000 GHz

CF Step 1.0000000 MHz

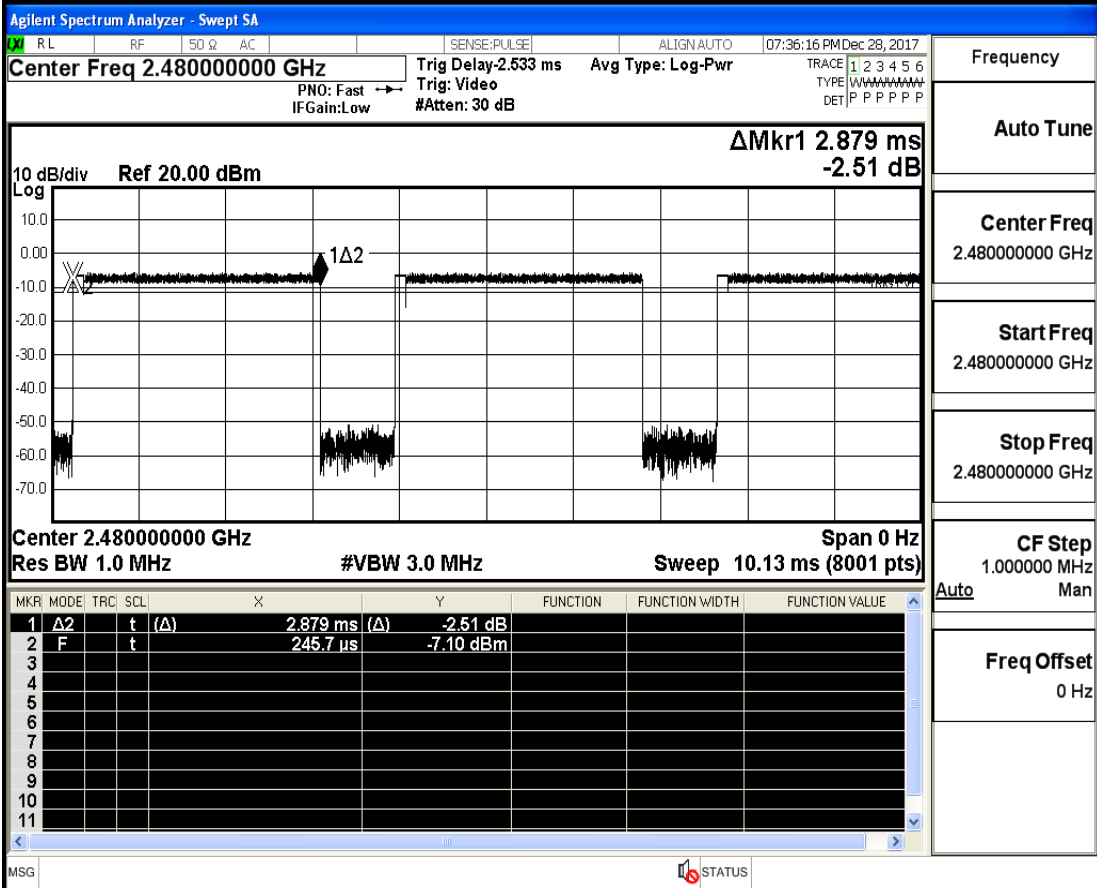
Freq Offset 0 Hz

## Dwell Time\_π/4-DQPSK\_2402





Dwell Time\_8-DPSK\_2480

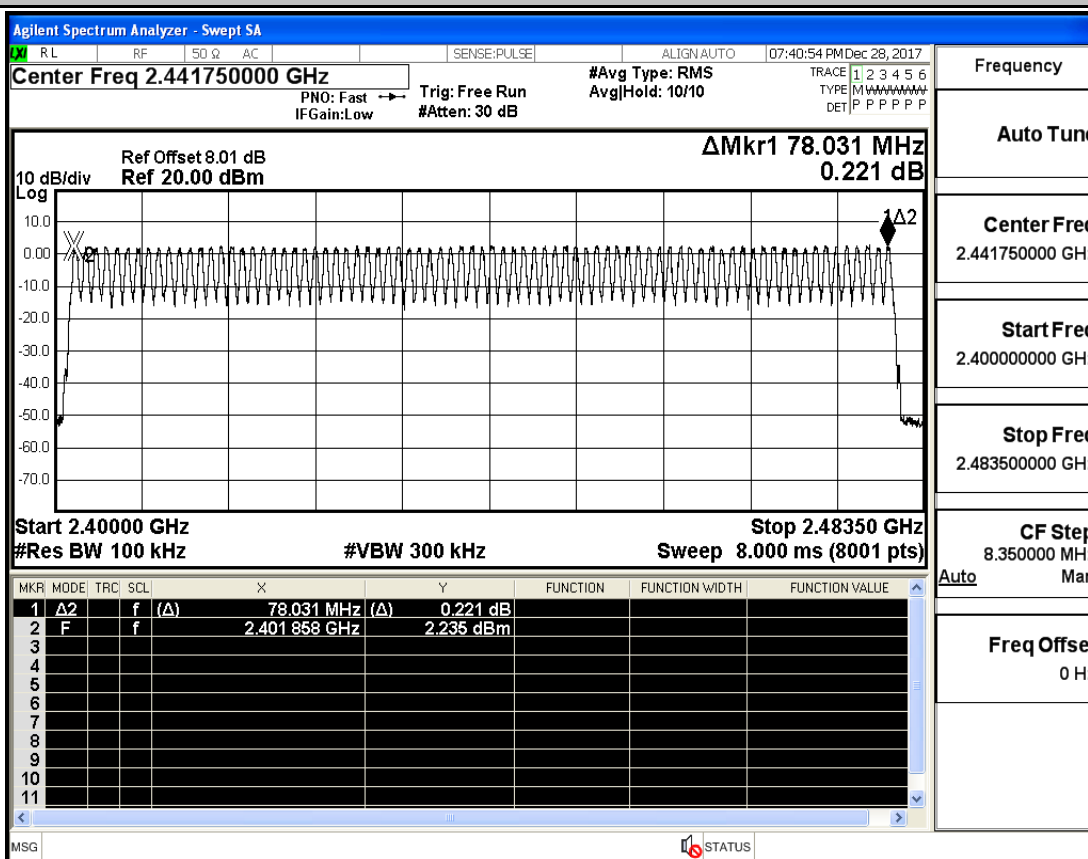




### A.5 Hopping Channel Number

Test Mode	Test Channel	Number of Hopping Channel[N]	Limit[N]	Verdict
GFSK	2402	79	$\geq 15$	PASS
$\pi/4$ -DQPSK	2402	79	$\geq 15$	PASS
8-DPSK	2402	79	$\geq 15$	PASS

# Hopping Channel Number\_GFSK\_2402



Frequency

Auto Tune

Center Freq  
2.441750000 GHz

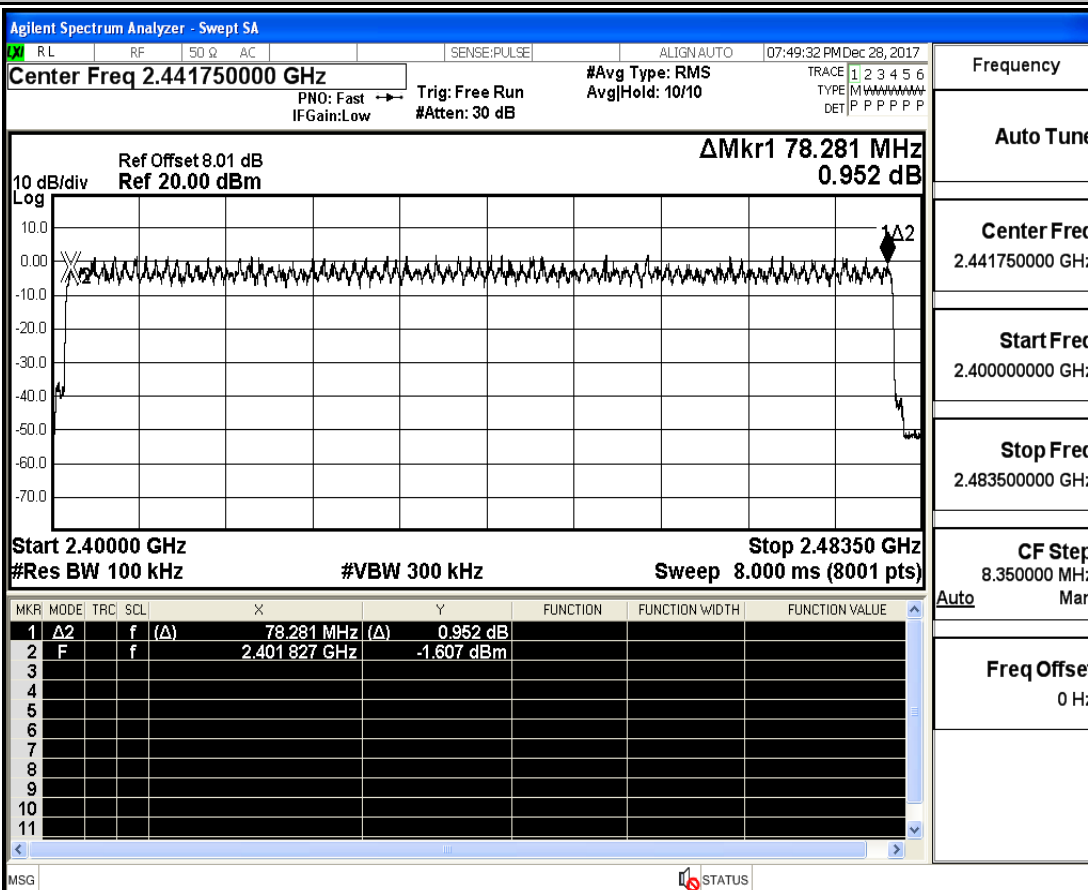
Start Freq  
2.400000000 GHz

Stop Freq  
2.483500000 GHz

CF Step  
8.350000 MHz  
Man

Freq Offset  
0 Hz

# Hopping Channel Number\_π/4-DQPSK\_2402



Frequency

Auto Tune

Center Freq  
2.441750000 GHz

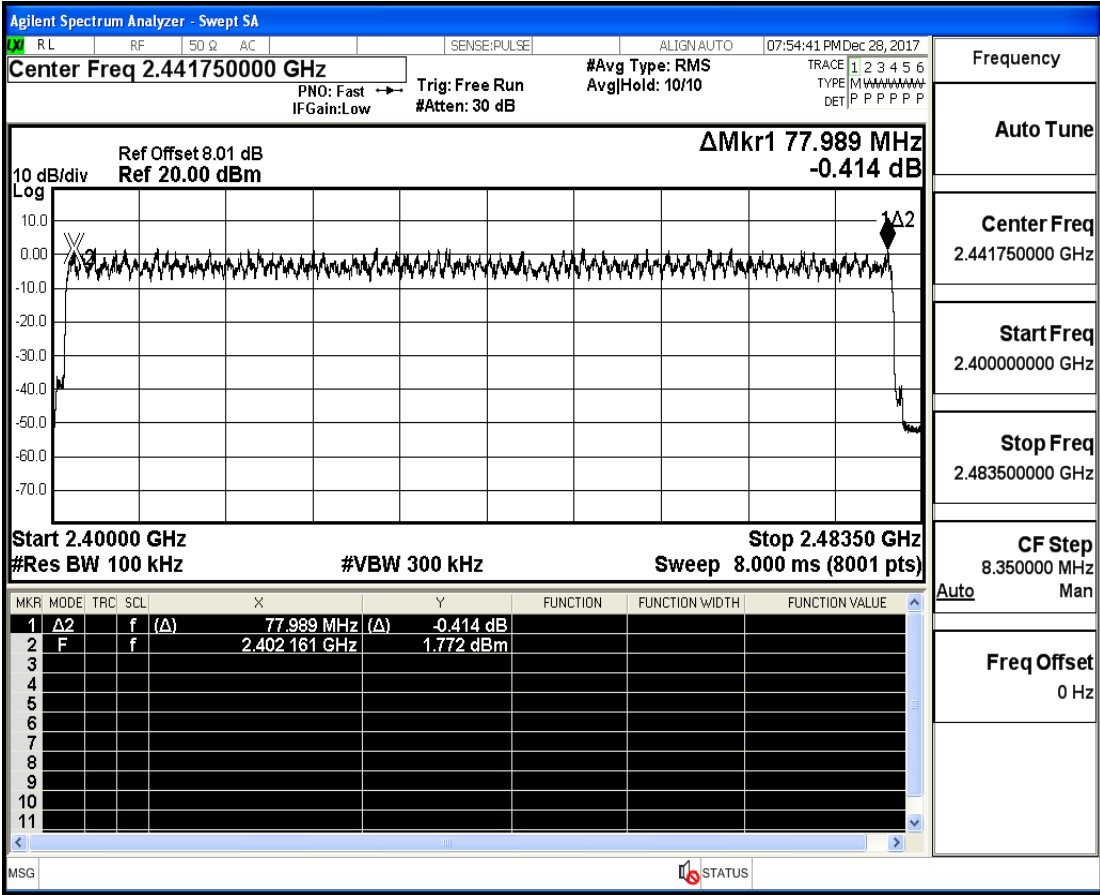
Start Freq  
2.400000000 GHz

Stop Freq  
2.483500000 GHz

CF Step  
8.350000 MHz  
Man

Freq Offset  
0 Hz

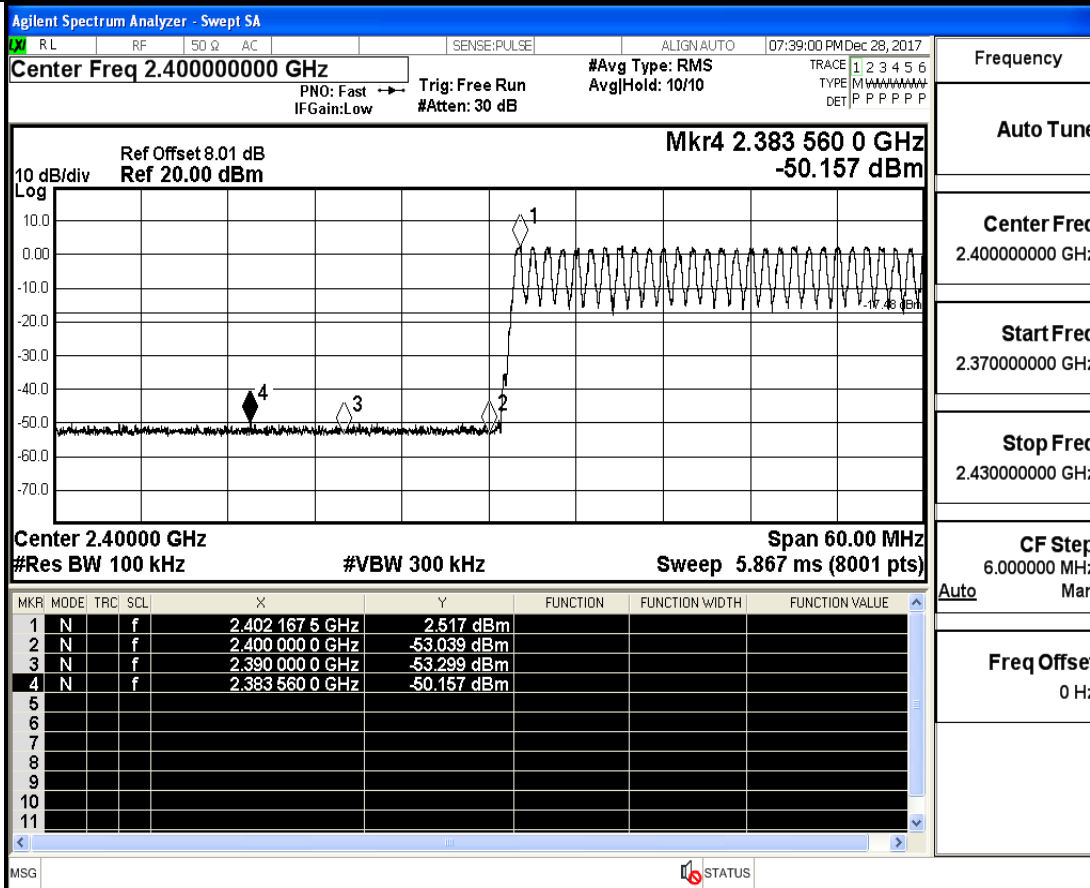
Hopping Channel Number\_8-DPSK\_2402



**A.6 Band-edge for RF Conducted Emissions**

Test Mode	Test Channel	Hopping	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit[dBm]	Verdict
GFSK	2402	On	2.517	-50.157	-17.48	PASS
	2402	Off	2.127	-50.247	-17.87	PASS
	2480	On	2.659	-50.073	-17.34	PASS
	2480	Off	2.641	-50.050	-17.36	PASS
$\pi/4$ -DQPSK	2402	On	1.643	-49.384	-18.36	PASS
	2402	Off	0.933	-49.992	-19.07	PASS
	2480	On	1.613	-49.023	-18.39	PASS
	2480	Off	1.117	-49.011	-18.88	PASS
8-DPSK	2402	On	1.615	-49.244	-18.39	PASS
	2402	Off	1.652	-49.432	-18.35	PASS
	2480	On	1.755	-49.016	-18.25	PASS
	2480	Off	1.757	-48.970	-18.24	PASS

# Band-edge for RF Conducted Emissions\_GFSK\_2402\_Hopping On



Frequency

Auto Tune

Center Freq  
2.40000000 GHz

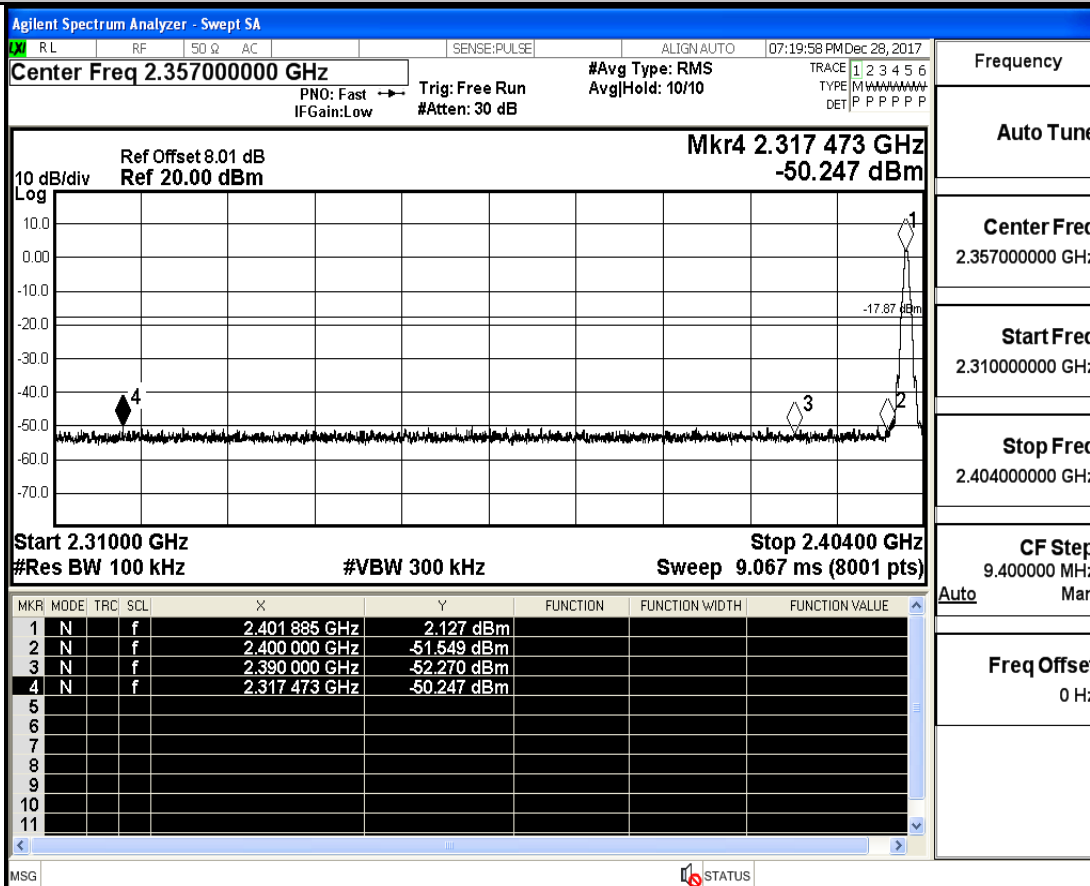
Start Freq  
2.37000000 GHz

Stop Freq  
2.43000000 GHz

CF Step  
6.000000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_GFSK\_2402\_Hopping Off



Frequency

Auto Tune

Center Freq  
2.35700000 GHz

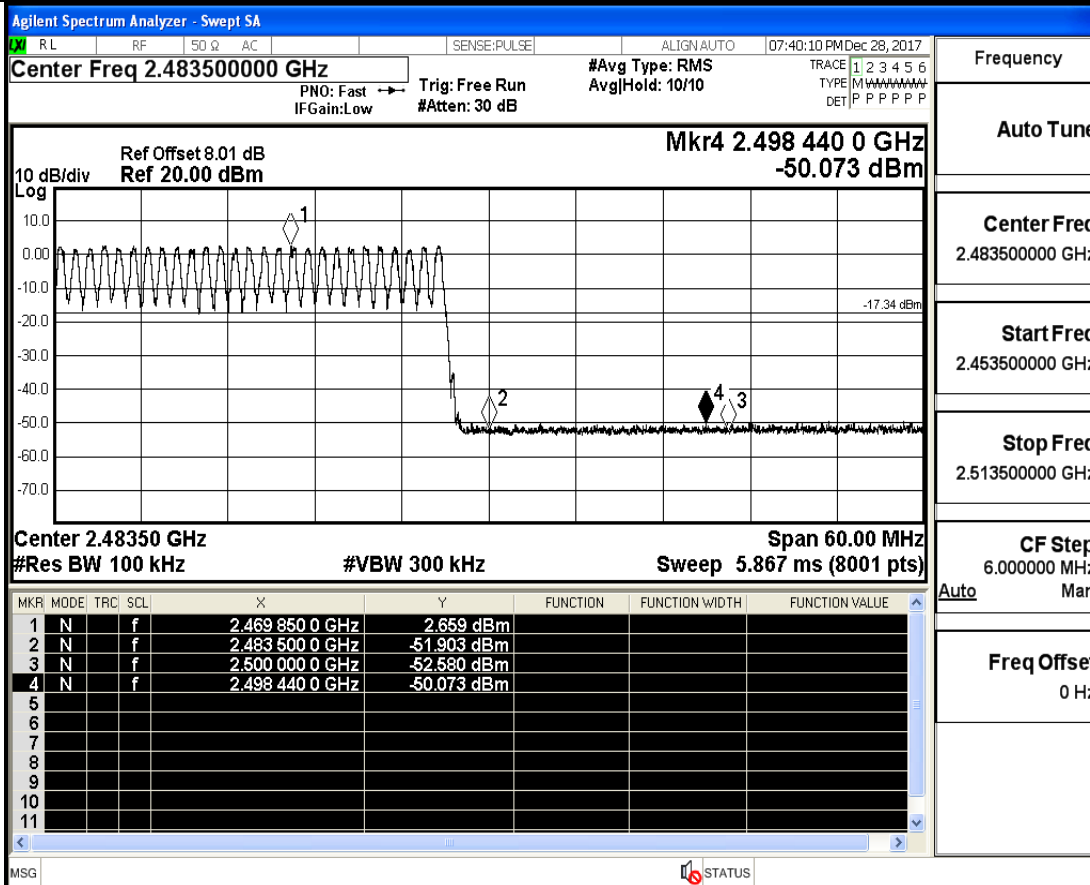
Start Freq  
2.31000000 GHz

Stop Freq  
2.40400000 GHz

CF Step  
9.400000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_GFSK\_2480\_Hopping On



Frequency

Auto Tune

Center Freq  
2.483500000 GHz

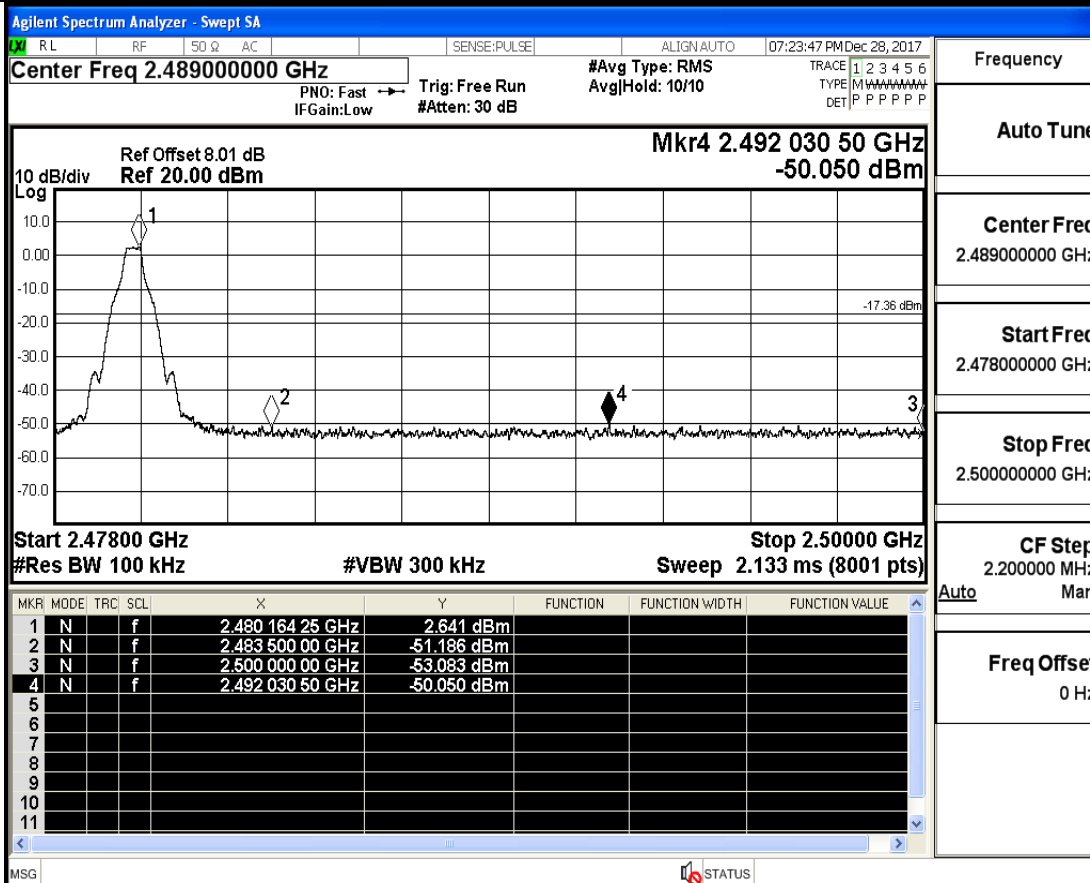
Start Freq  
2.453500000 GHz

Stop Freq  
2.513500000 GHz

CF Step  
6.000000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_GFSK\_2480\_Hopping Off



Frequency

Auto Tune

Center Freq  
2.489000000 GHz

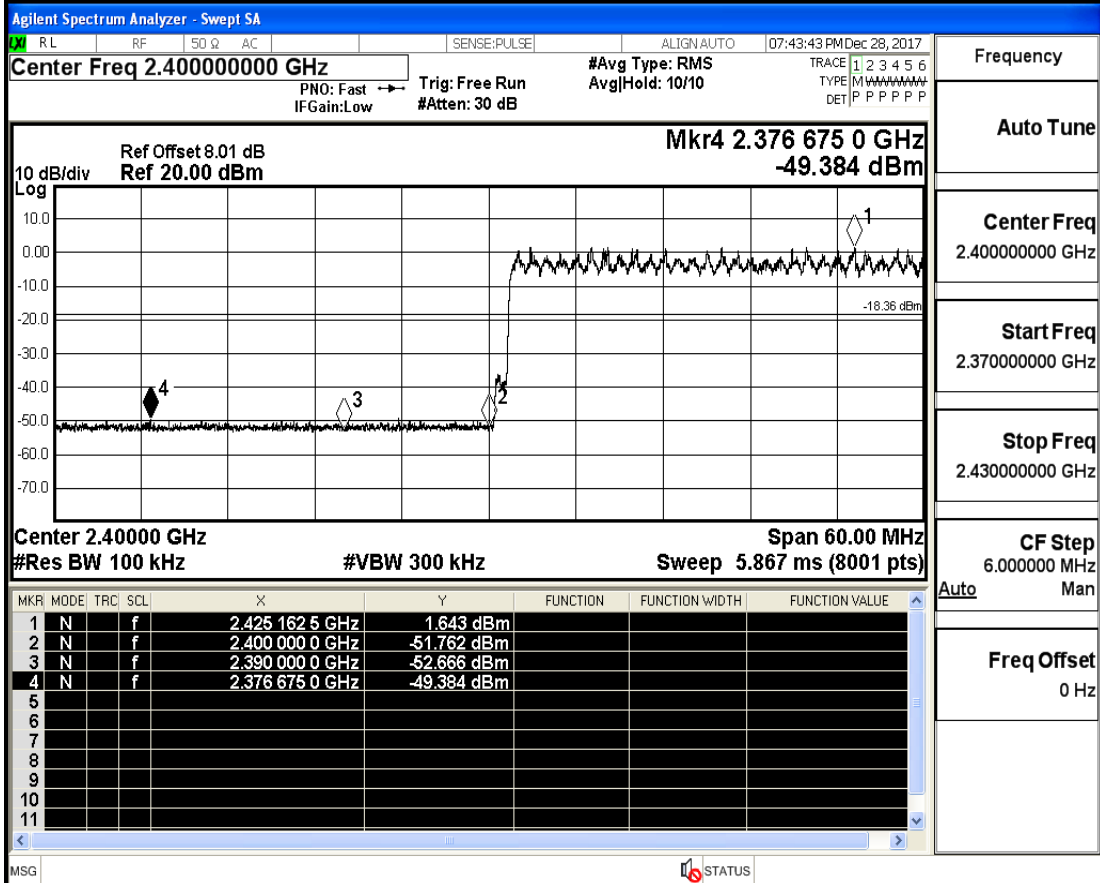
Start Freq  
2.478000000 GHz

Stop Freq  
2.500000000 GHz

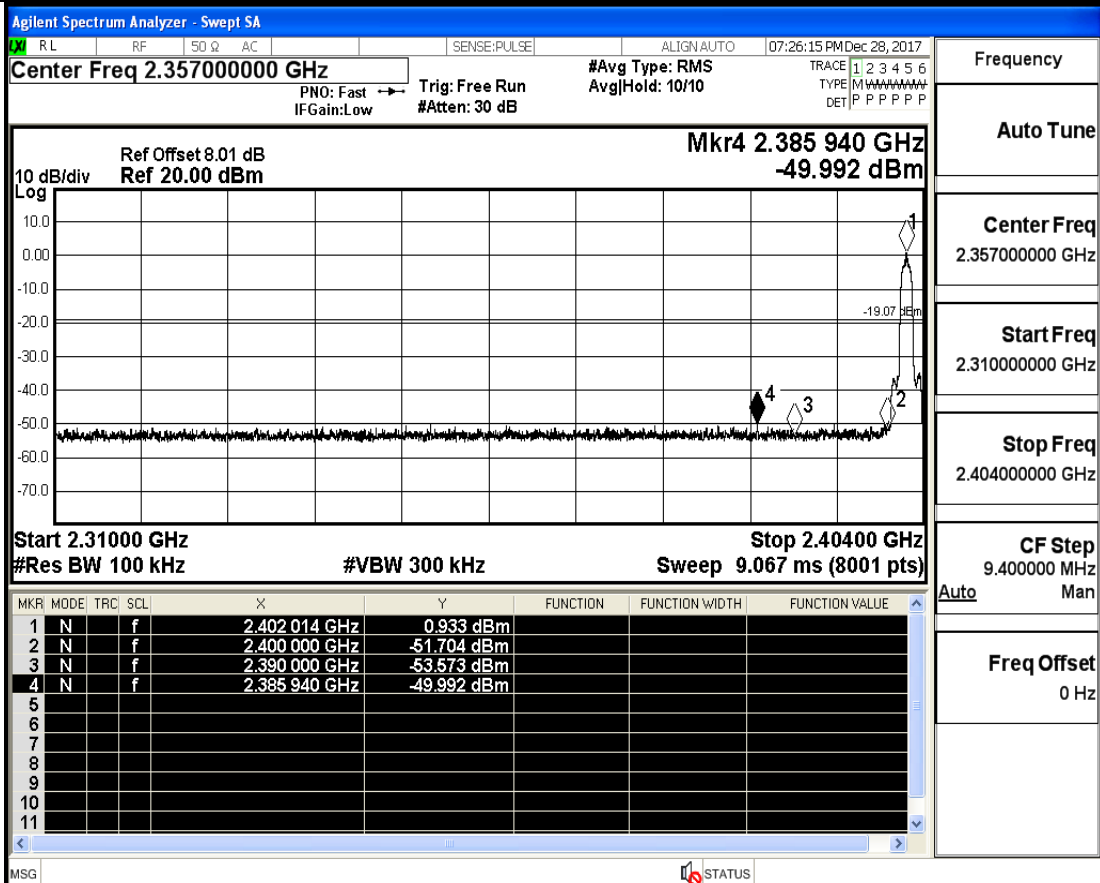
CF Step  
2.200000 MHz  
Auto Man

Freq Offset  
0 Hz

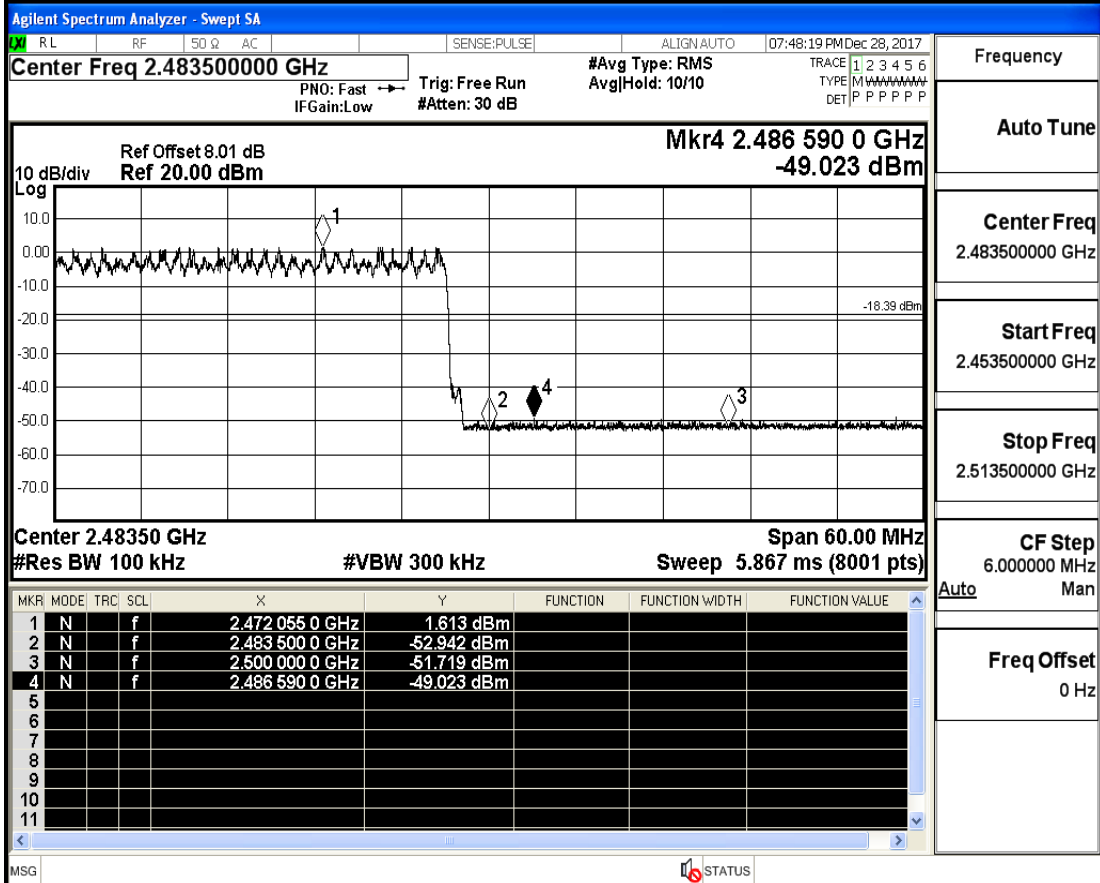
# Band-edge for RF Conducted Emissions\_π/4-DQPSK\_2402\_Hopping On



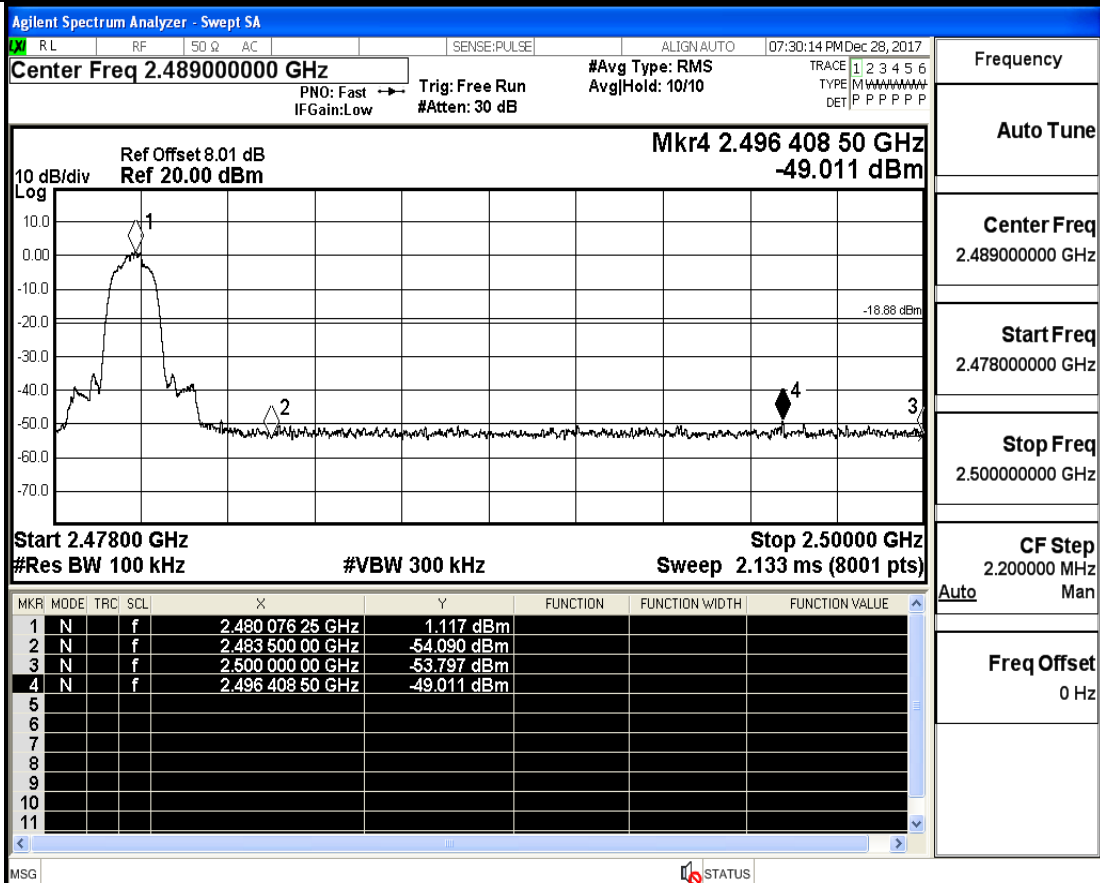
# Band-edge for RF Conducted Emissions\_π/4-DQPSK\_2402\_Hopping Off



# Band-edge for RF Conducted Emissions\_π/4-DQPSK\_2480\_Hopping On

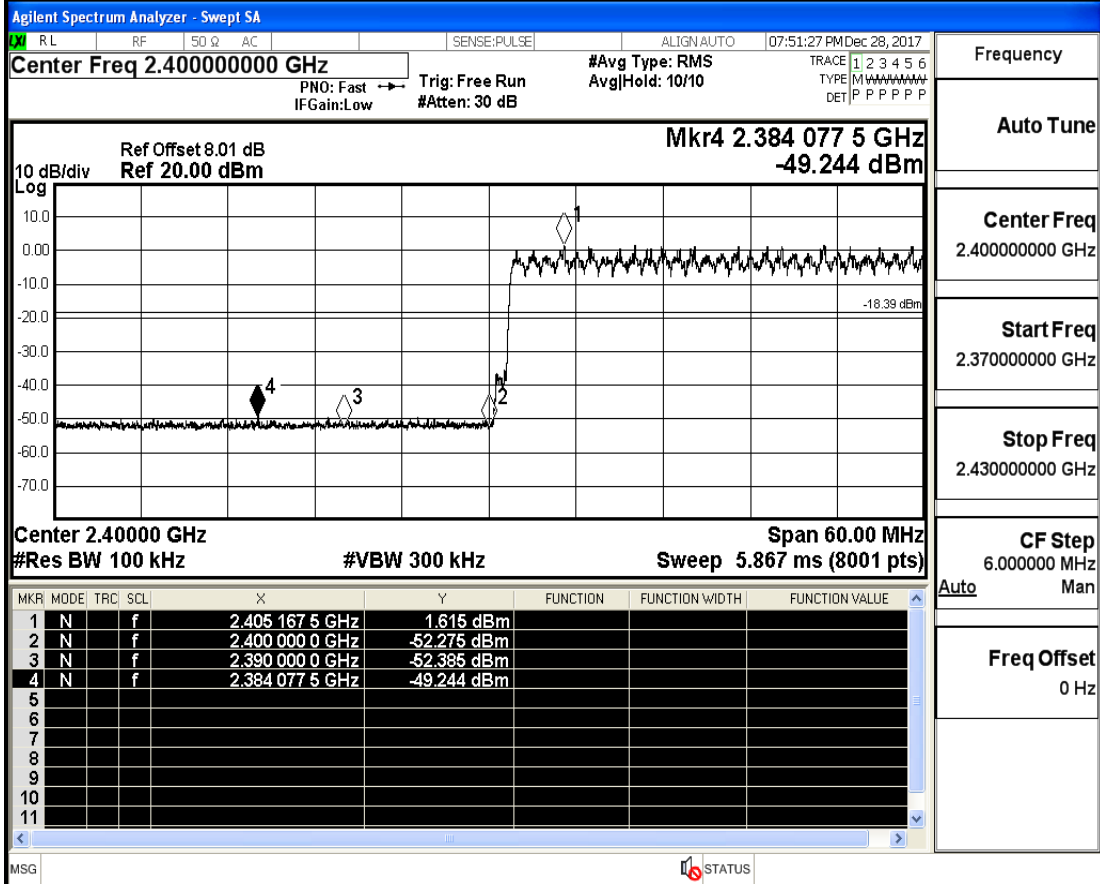


# Band-edge for RF Conducted Emissions\_π/4-DQPSK\_2480\_Hopping Off

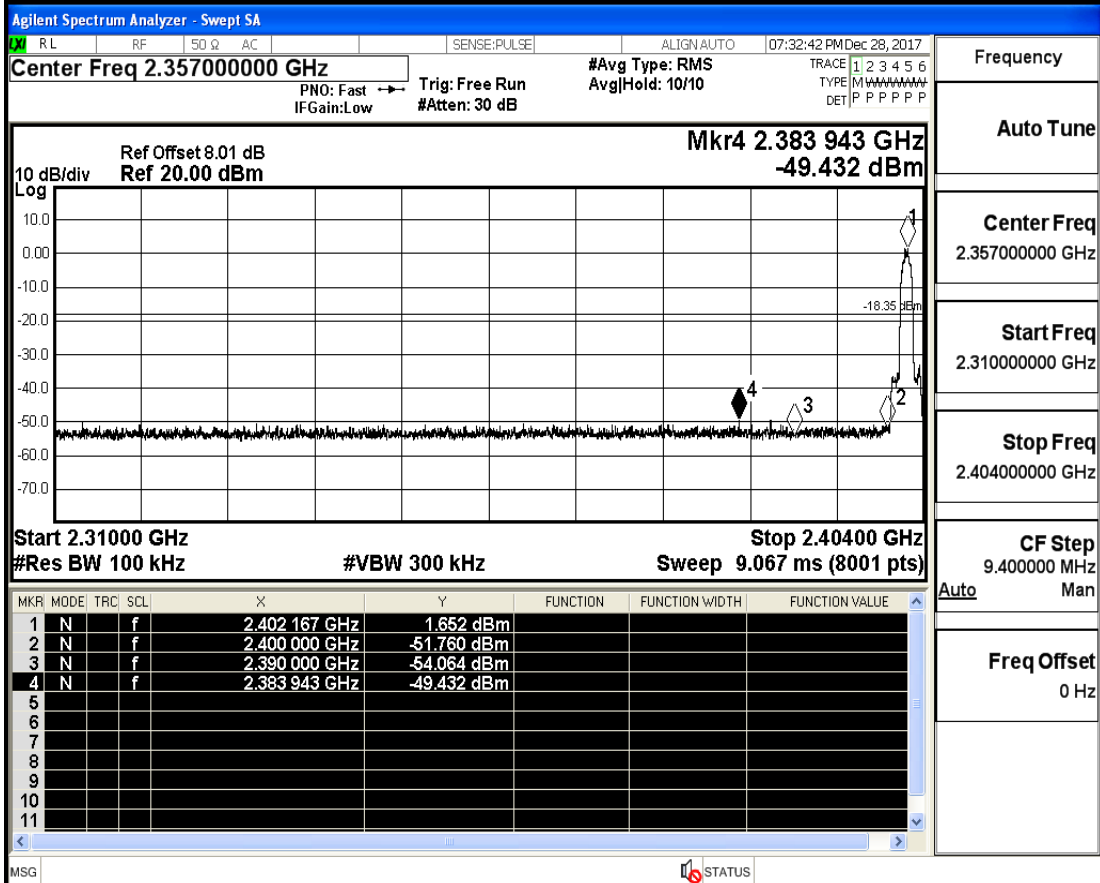




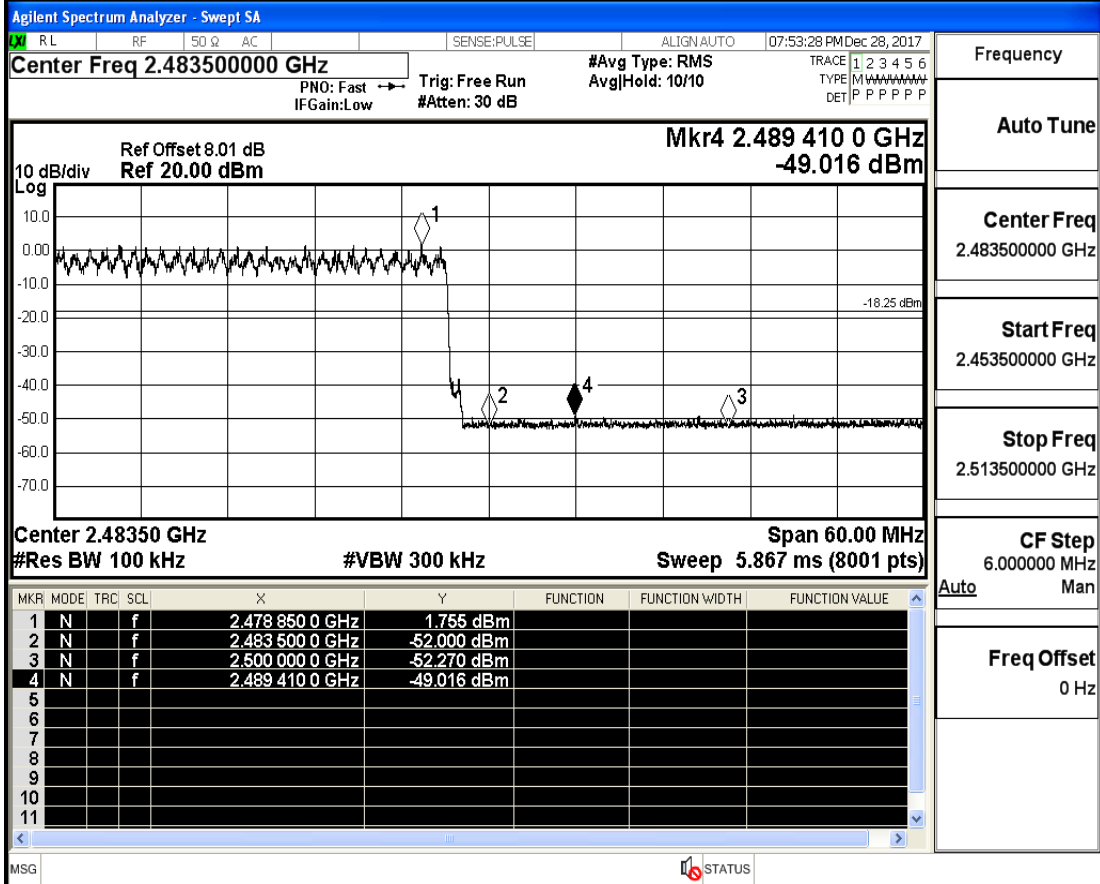
# Band-edge for RF Conducted Emissions\_8-DPSK\_2402\_Hopping On



# Band-edge for RF Conducted Emissions\_8-DPSK\_2402\_Hopping Off



# Band-edge for RF Conducted Emissions\_8-DPSK\_2480\_Hopping On



Frequency

Auto Tune

Center Freq  
2.483500000 GHz

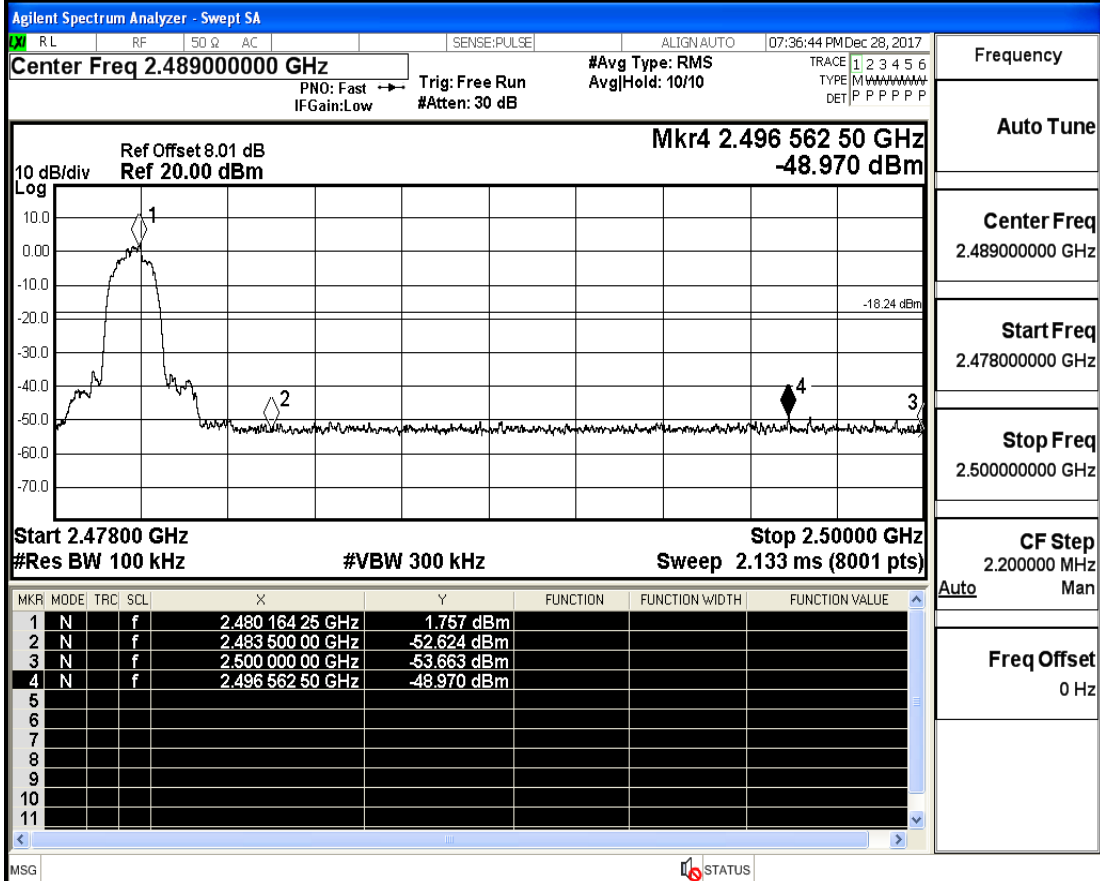
Start Freq  
2.453500000 GHz

Stop Freq  
2.513500000 GHz

CF Step  
6.000000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_8-DPSK\_2480\_Hopping Off



Frequency

Auto Tune

Center Freq  
2.489000000 GHz

Start Freq  
2.478000000 GHz

Stop Freq  
2.500000000 GHz

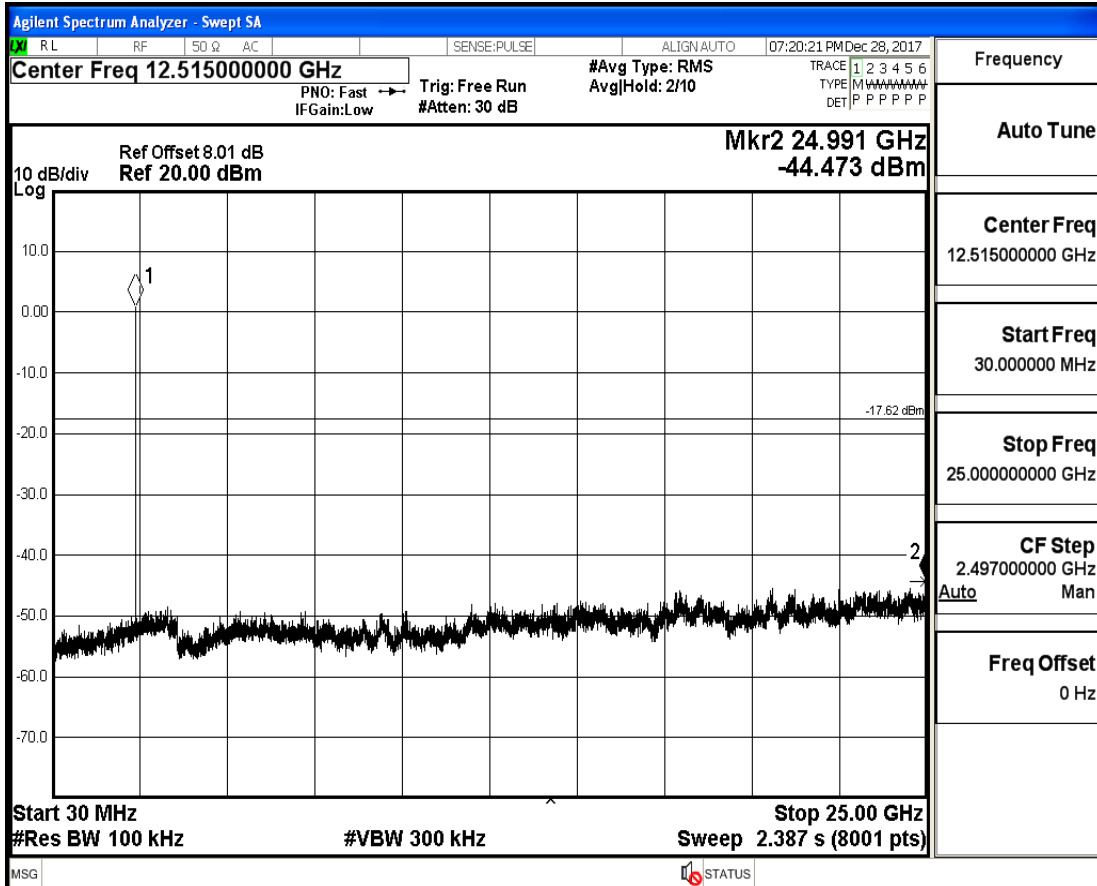
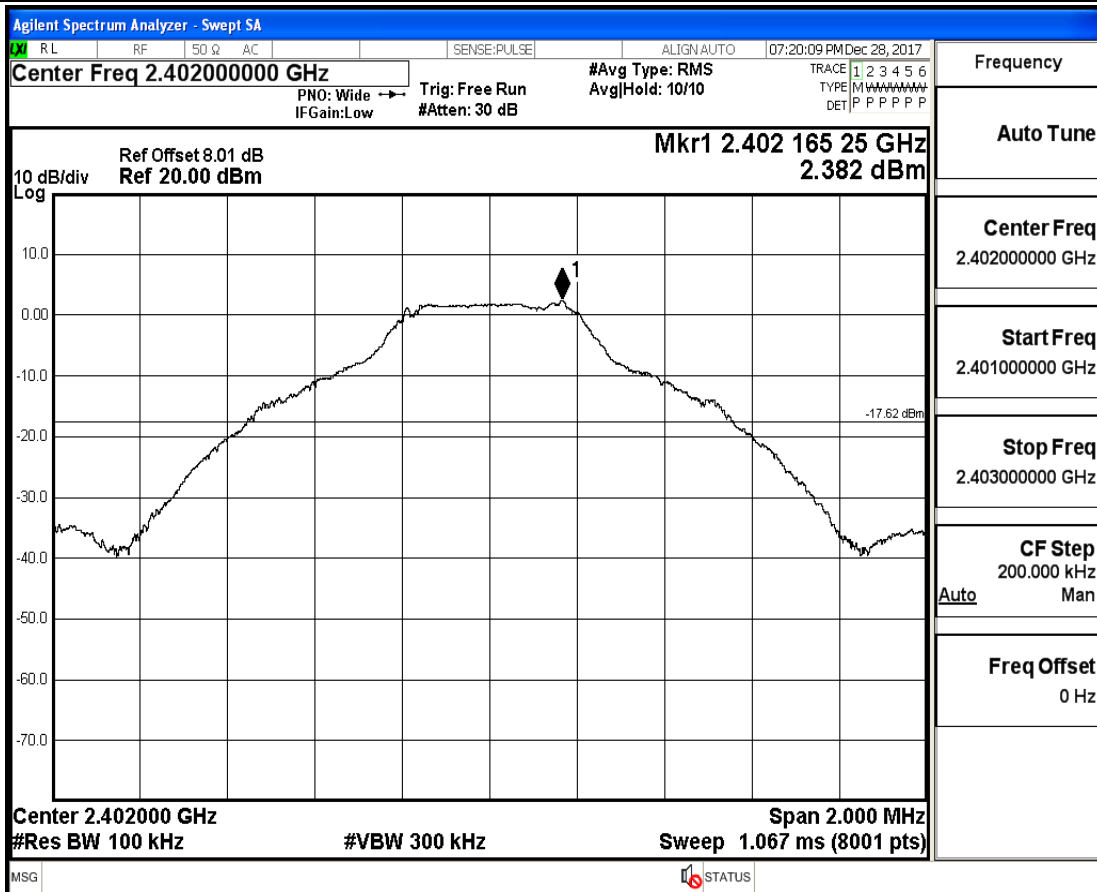
CF Step  
2.200000 MHz  
Auto Man

Freq Offset  
0 Hz

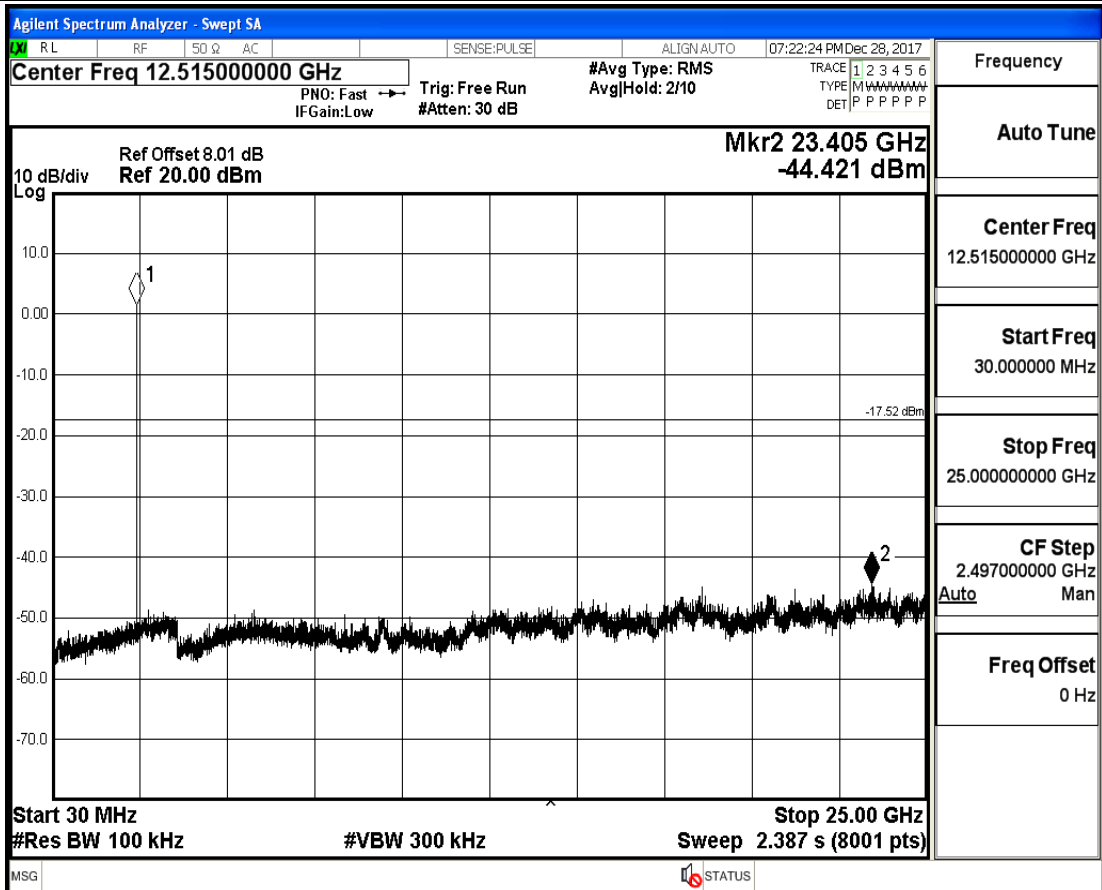
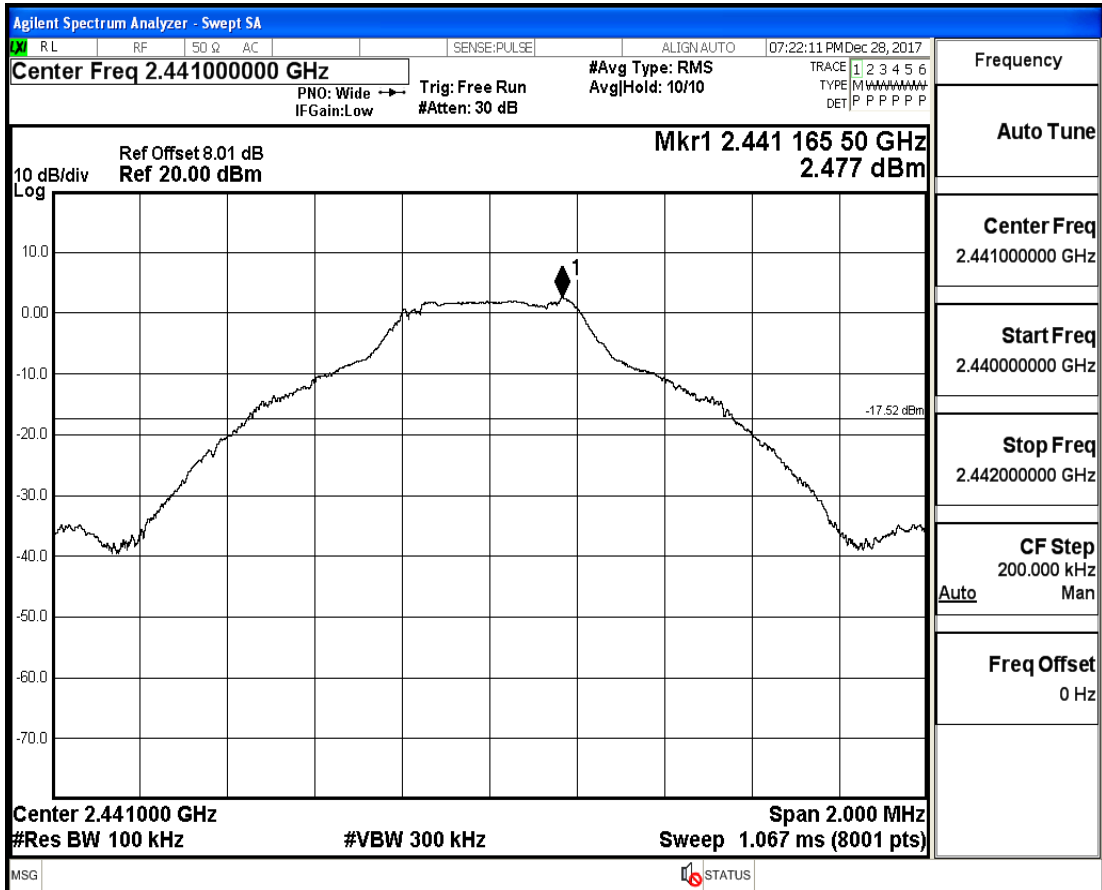
### A.7 RF Conducted Spurious Emissions

Test Mode	Test Channel	StartFre [MHz]	StopFre [MHz]	RBW [kHz]	VBW [kHz]	Pref[dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	2402	30	25000	100	300	2.382	-44.473	<- 17.618	PASS
	2441	30	25000	100	300	2.477	-44.421	<- 17.523	PASS
	2480	30	25000	100	300	2.567	-45.031	<- 17.433	PASS
$\pi/4$ -DQPSK	2402	30	25000	100	300	1.497	-44.261	<- 18.503	PASS
	2441	30	25000	100	300	0.98	-45.016	<-19.02	PASS
	2480	30	25000	100	300	1.587	-43.900	<- 18.413	PASS
8-DPSK	2402	30	25000	100	300	1.569	-44.288	<- 18.431	PASS
	2441	30	25000	100	300	1.586	-45.158	<- 18.414	PASS
	2480	30	25000	100	300	1.631	-44.970	<- 18.369	PASS

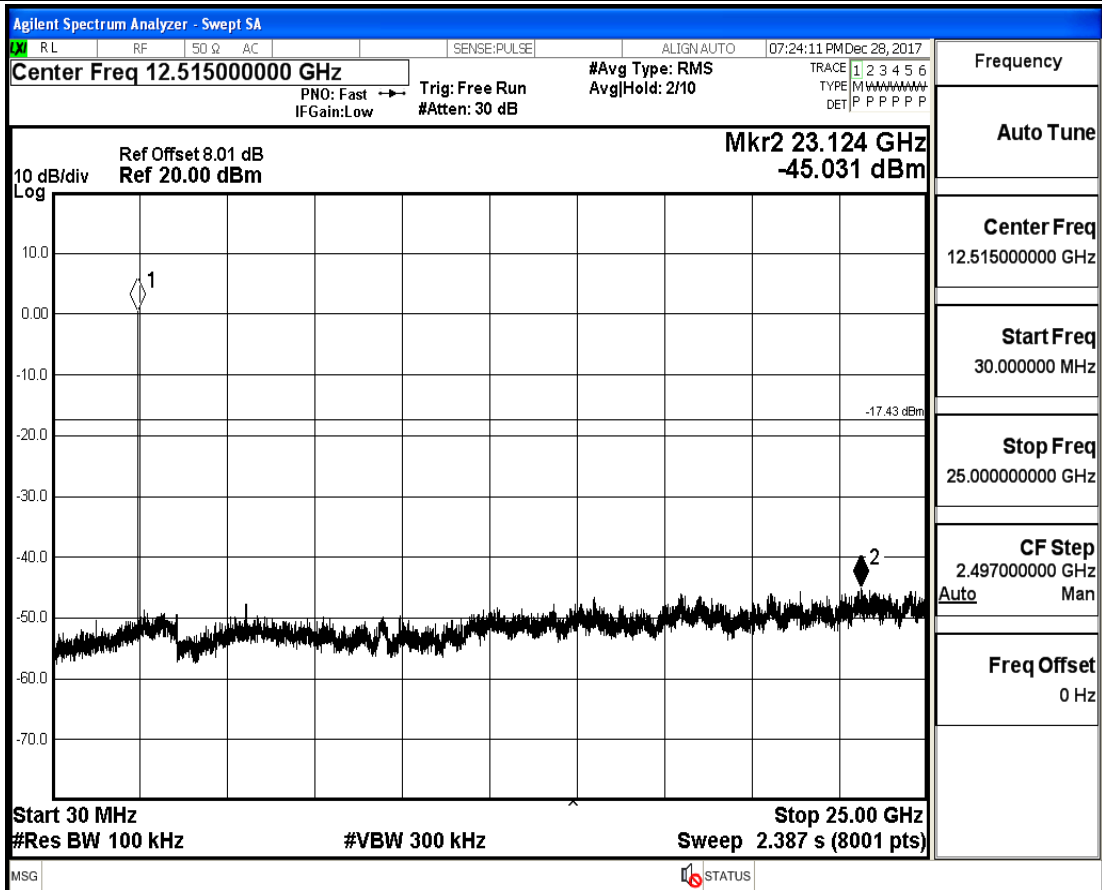
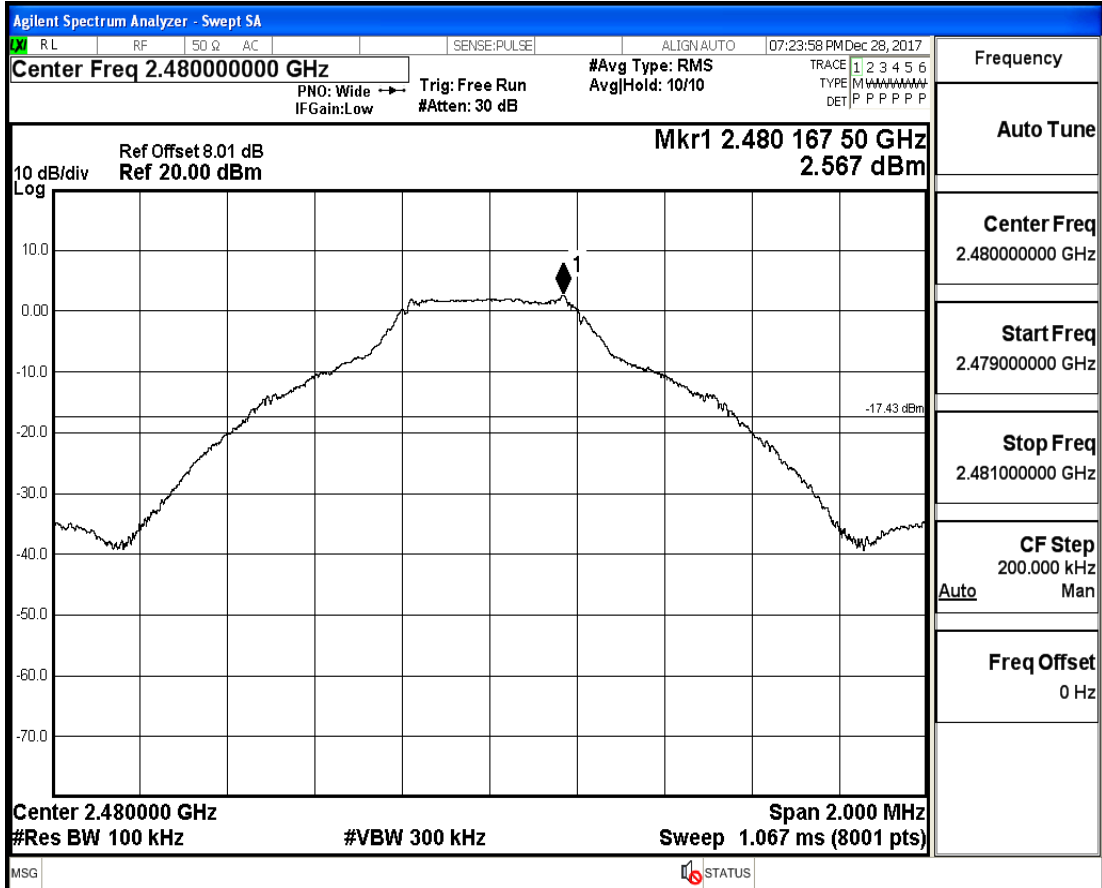
# RF Conducted Spurious Emissions\_GFSK\_2402



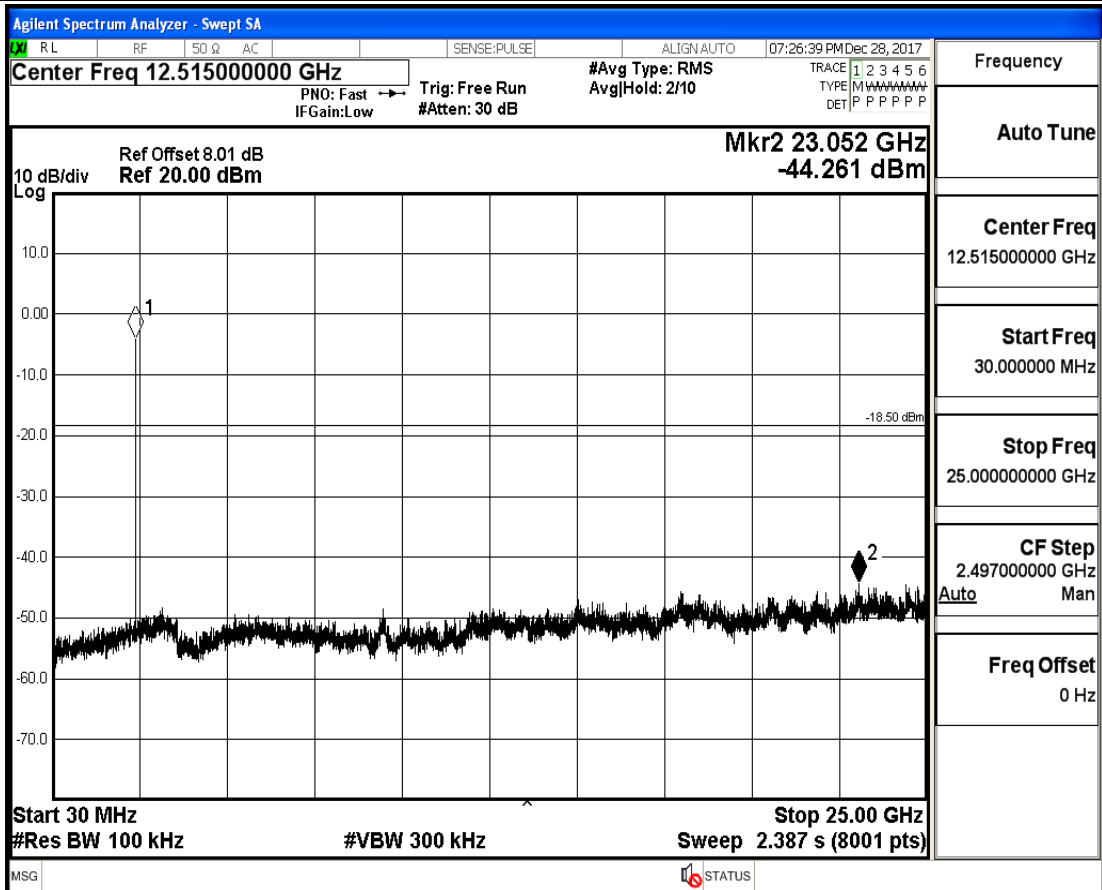
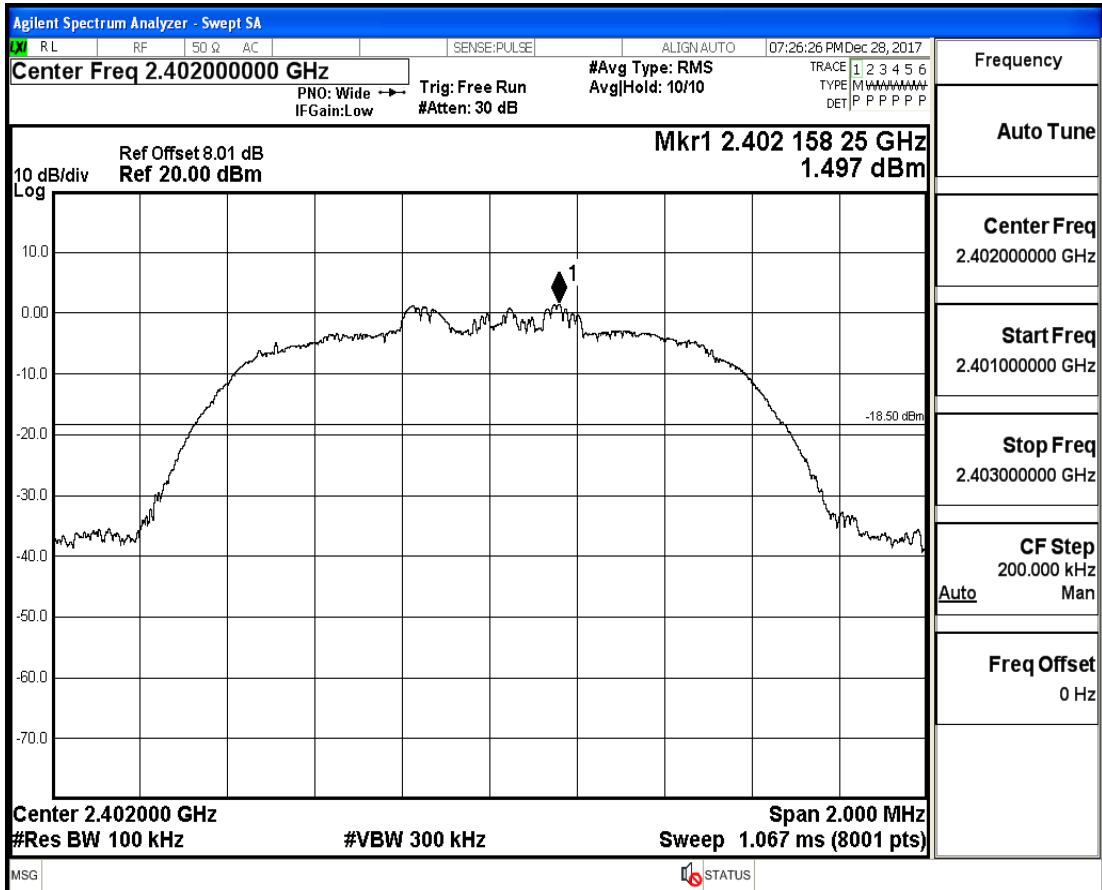
# RF Conducted Spurious Emissions\_GFSK\_2441



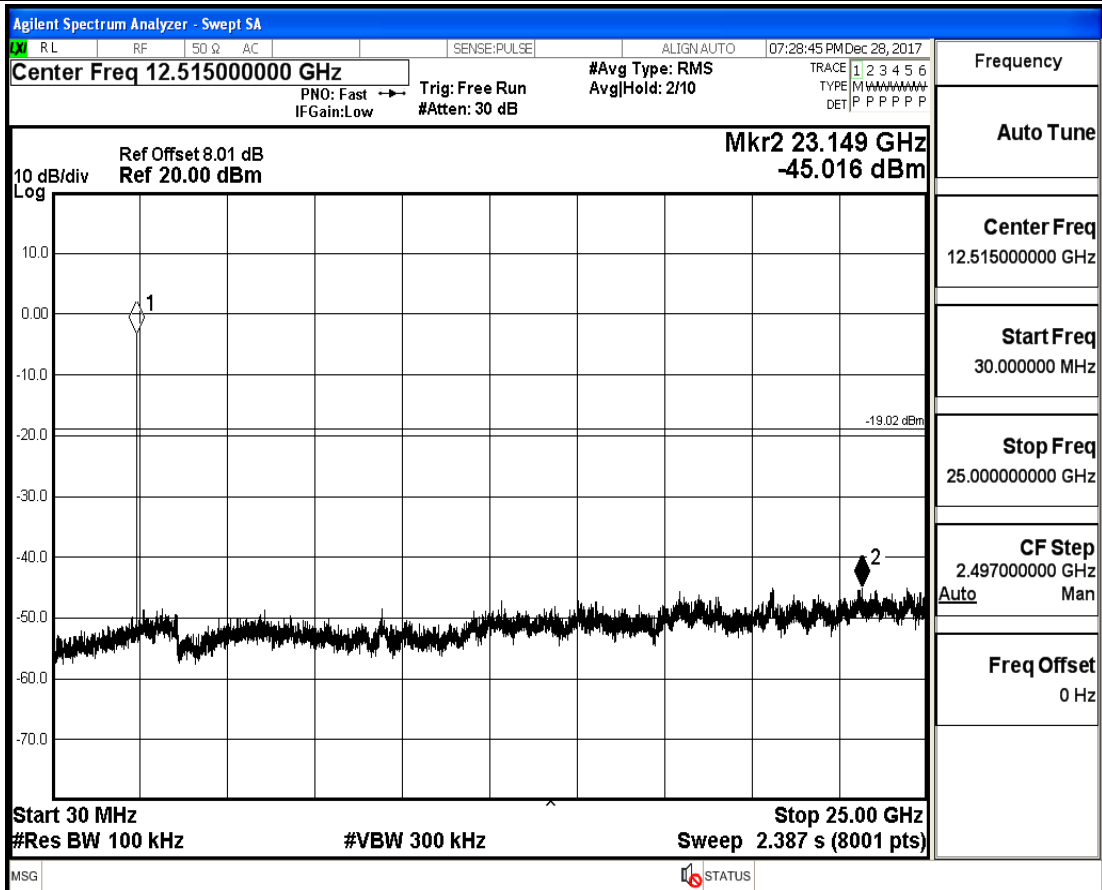
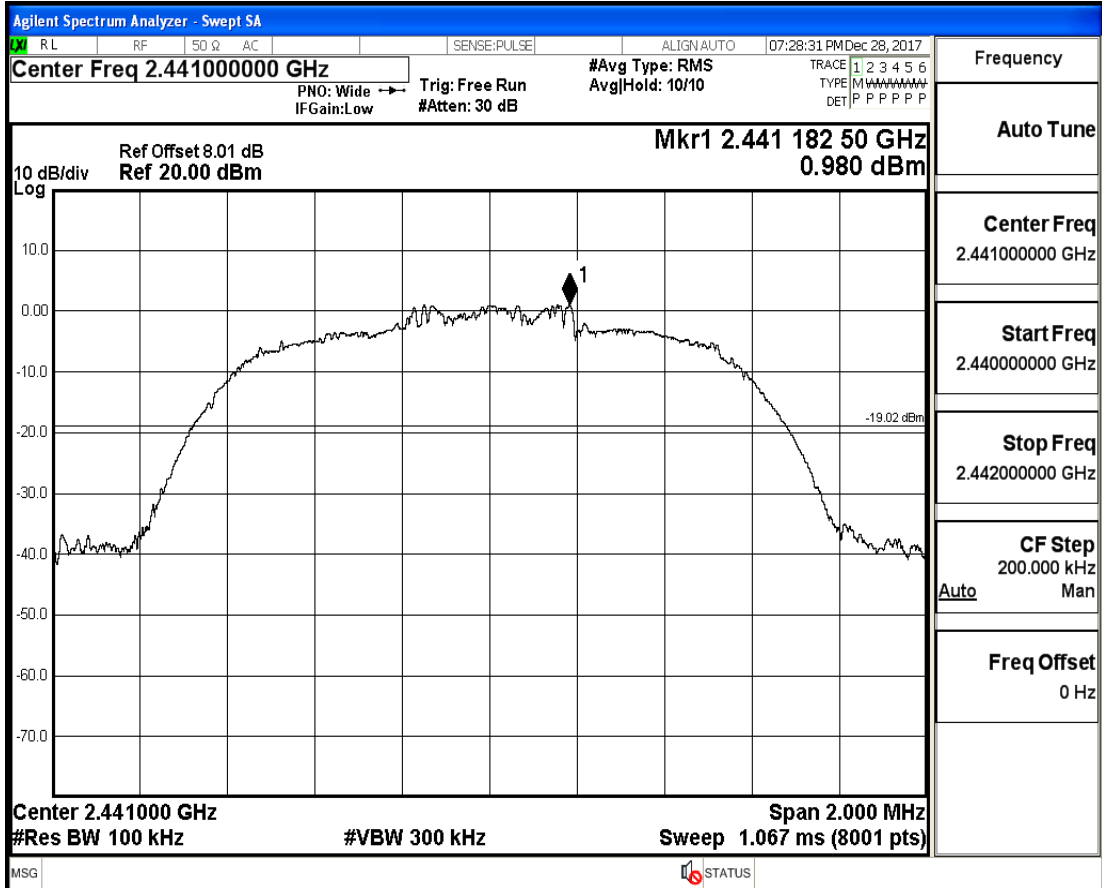
# RF Conducted Spurious Emissions\_GFSK\_2480



# RF Conducted Spurious Emissions\_π/4-DQPSK\_2402

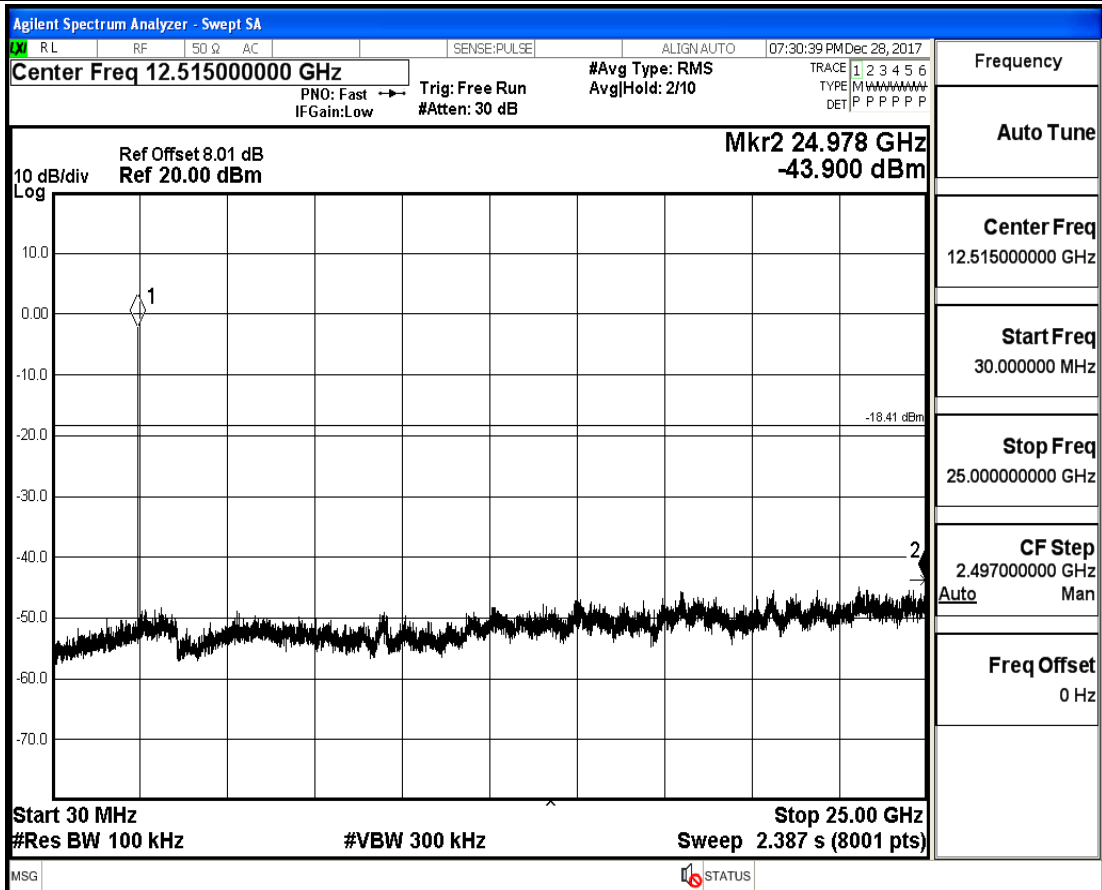
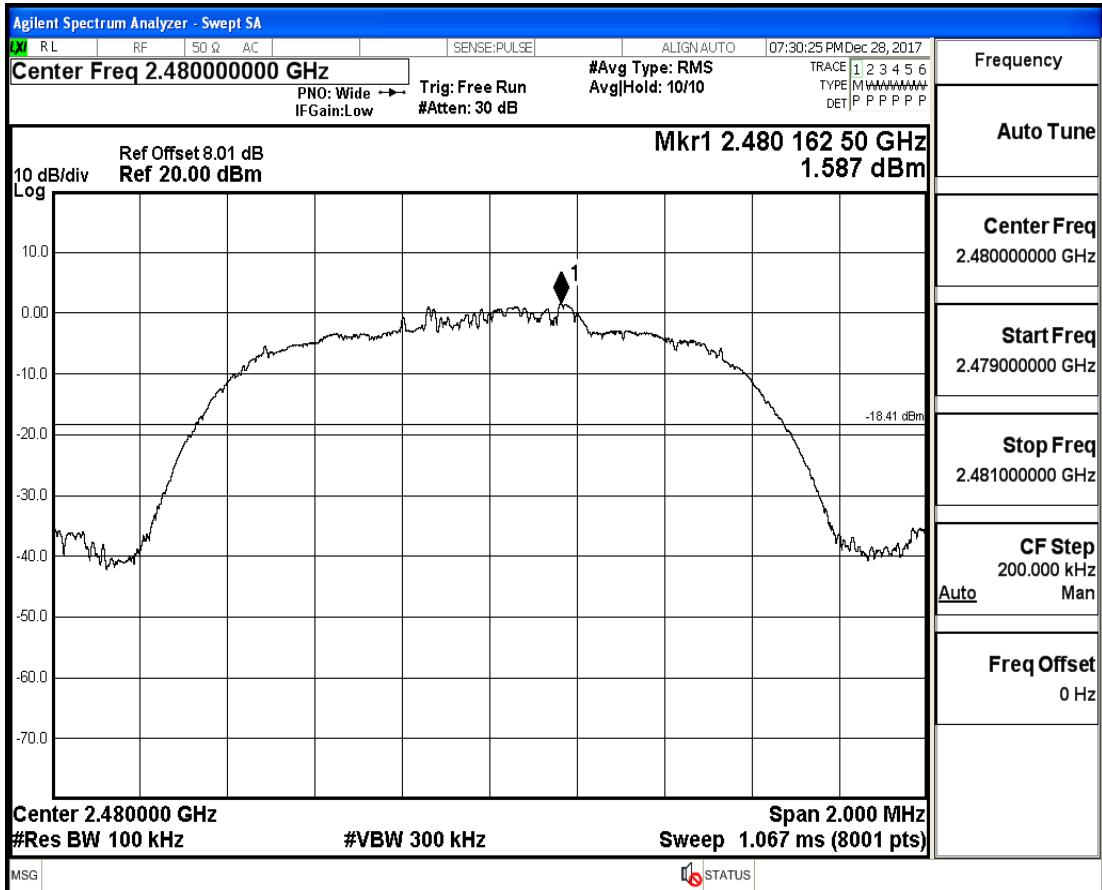


# RF Conducted Spurious Emissions\_π/4-DQPSK\_2441

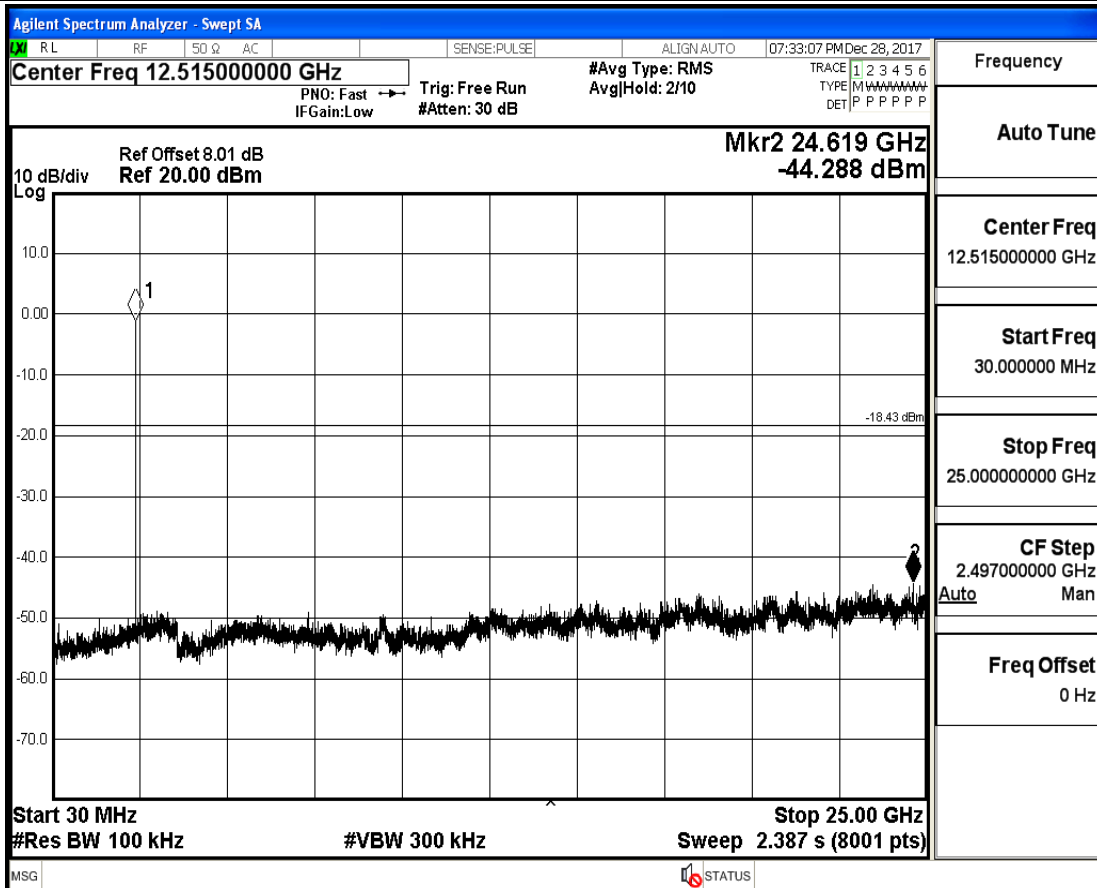
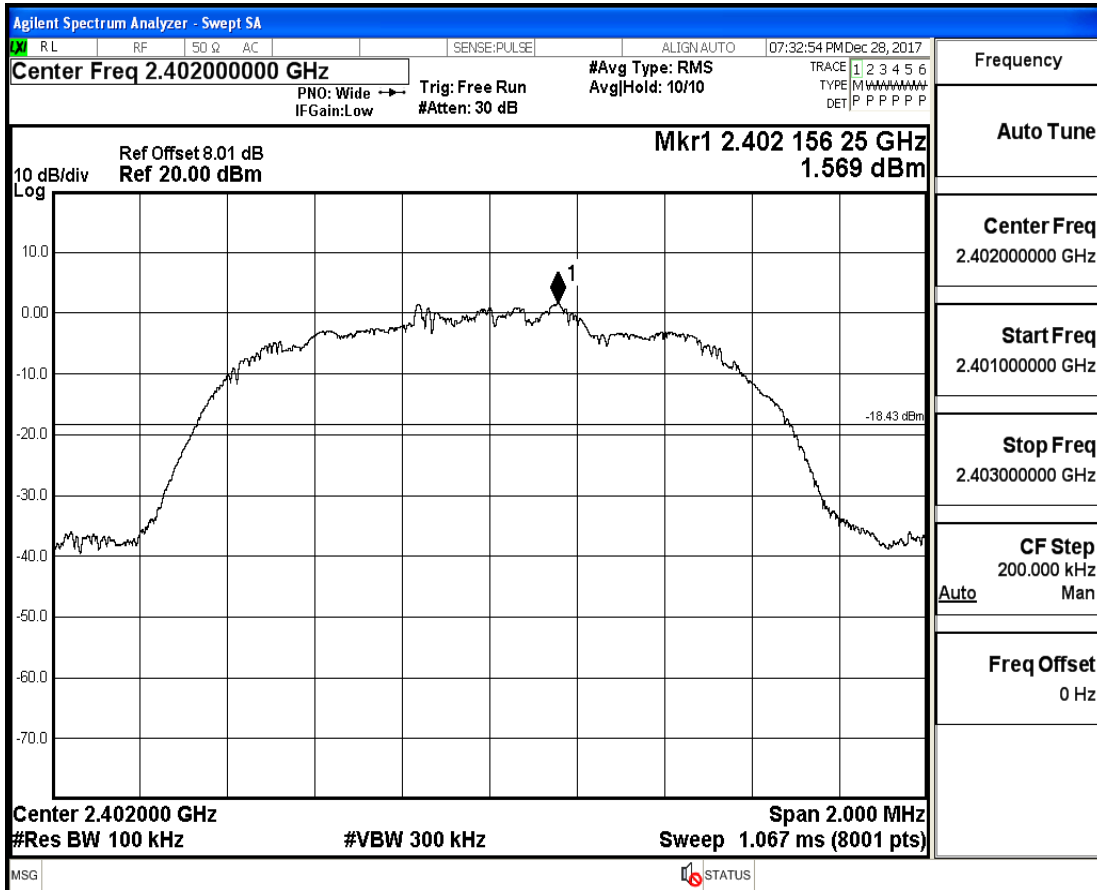




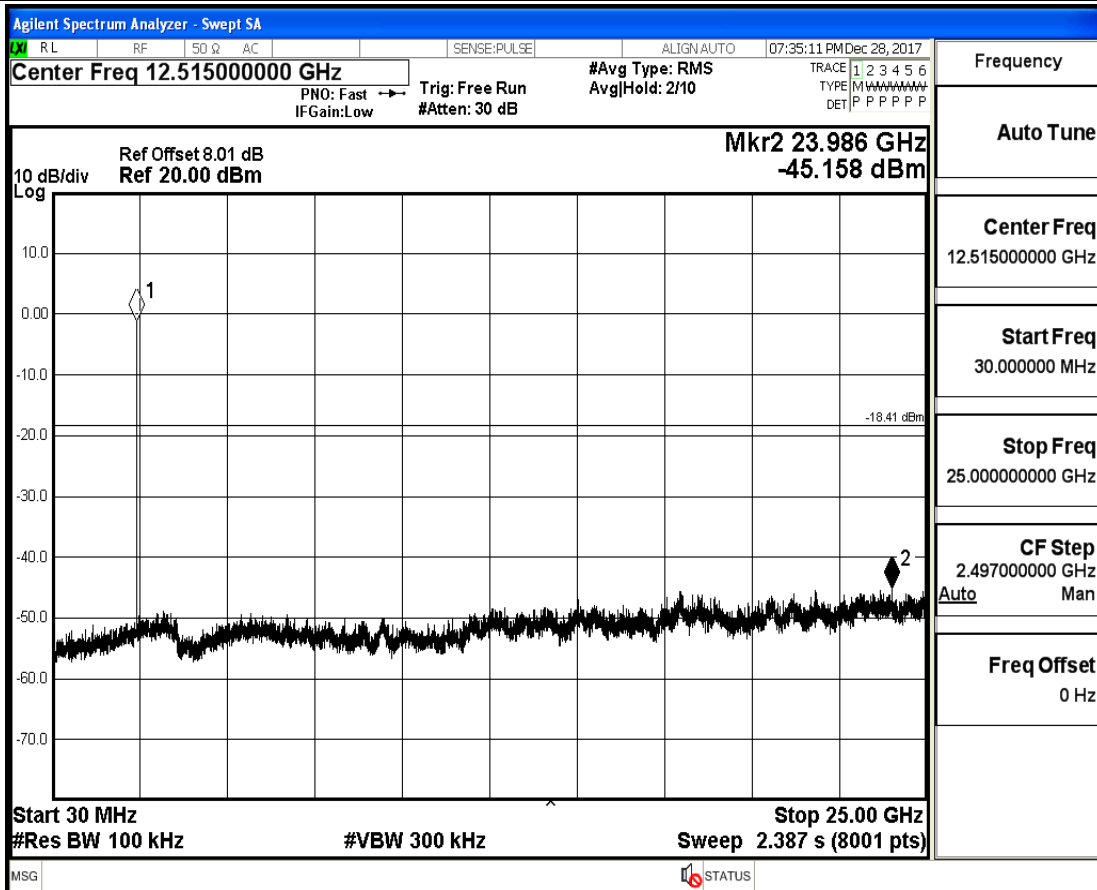
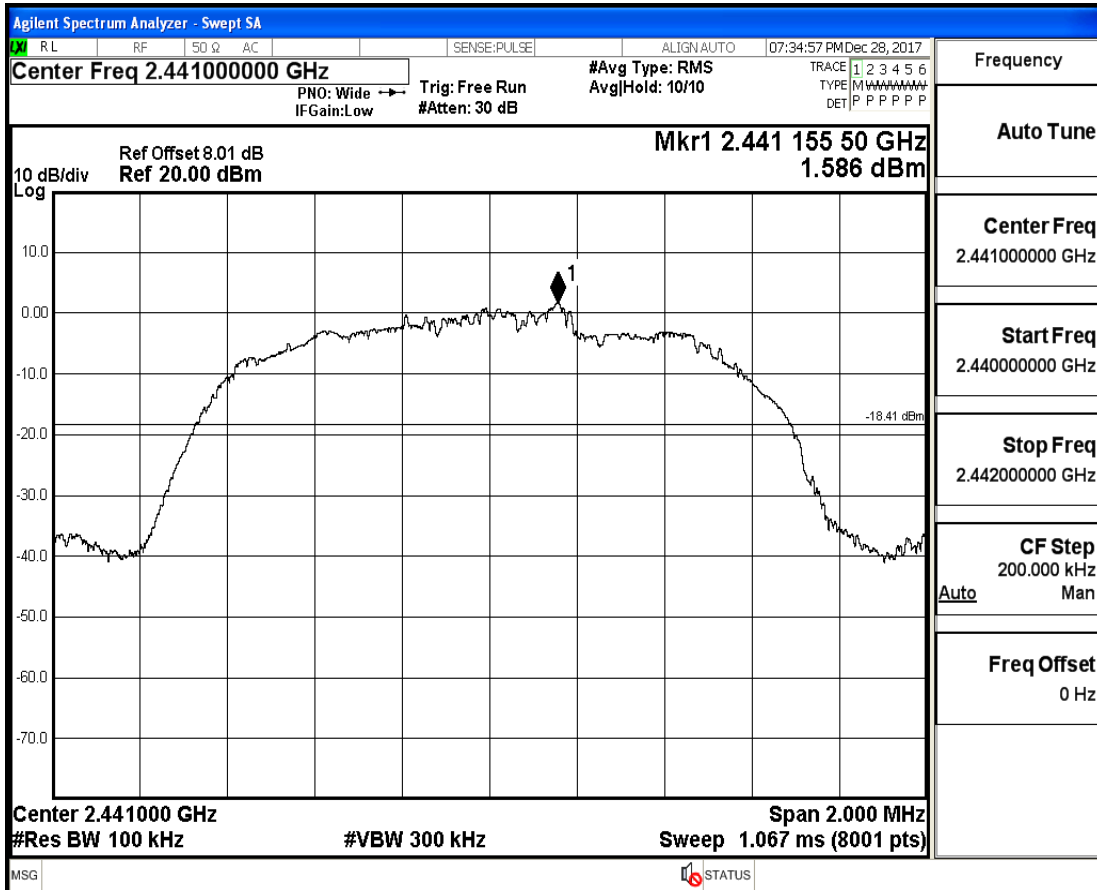
# RF Conducted Spurious Emissions\_π/4-DQPSK\_2480



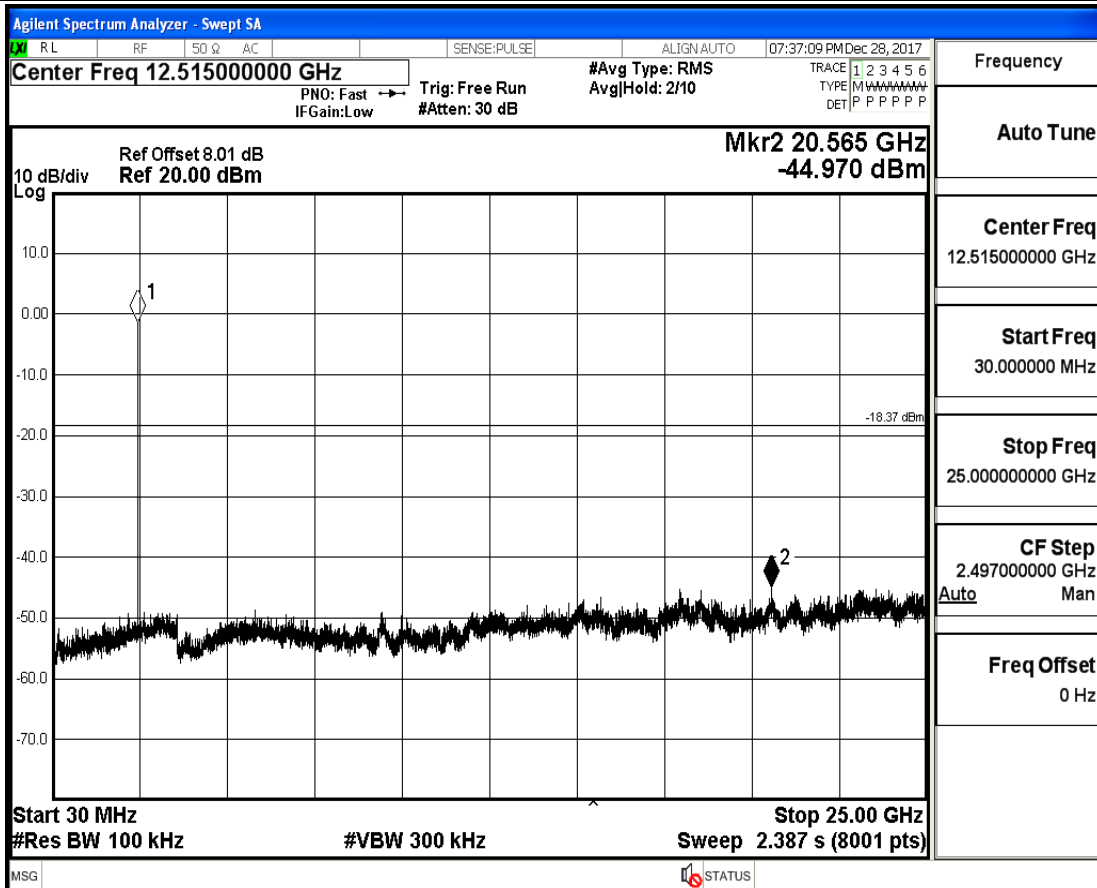
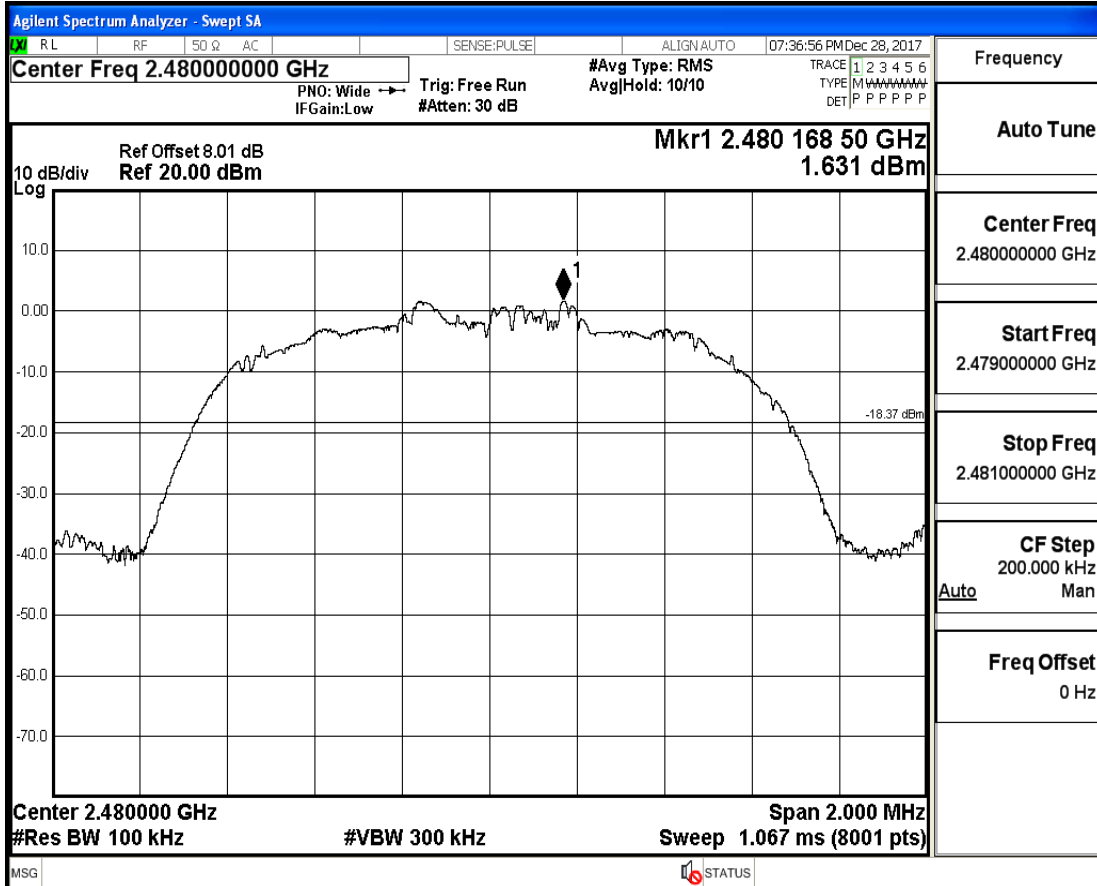
# RF Conducted Spurious Emissions\_8-DPSK\_2402



# RF Conducted Spurious Emissions\_8-DPSK\_2441



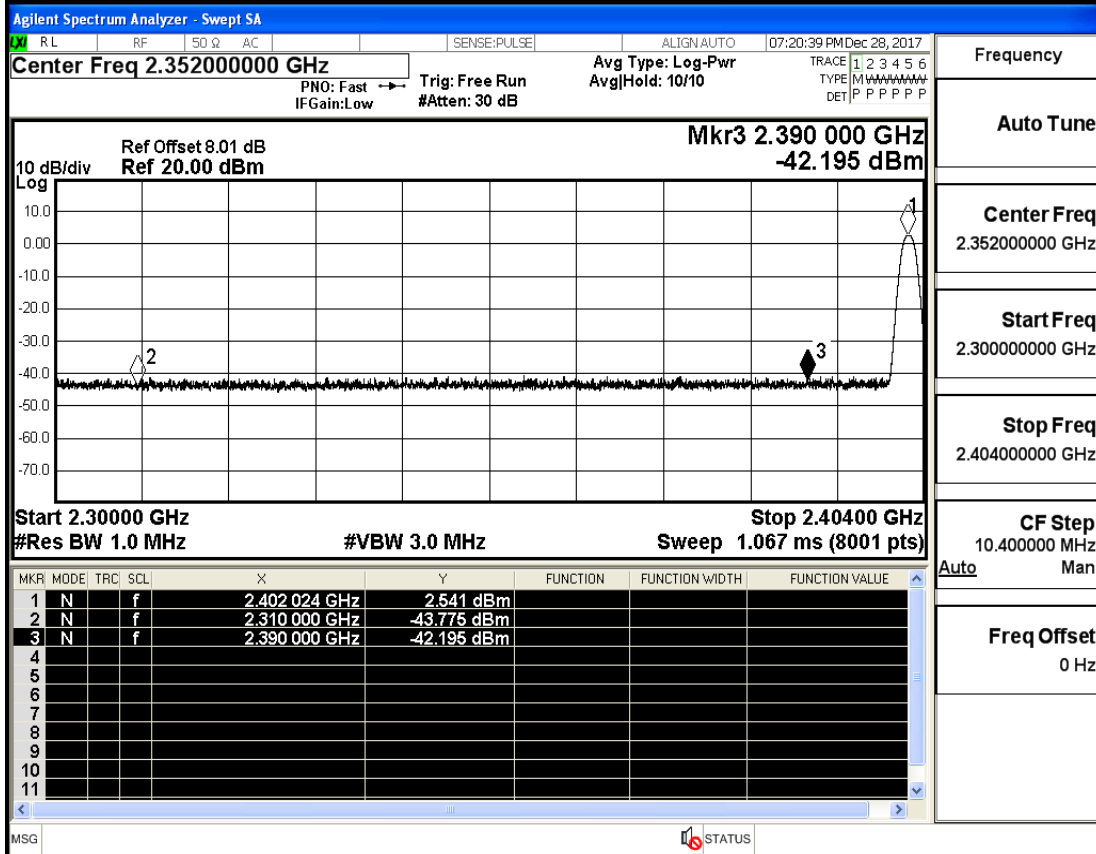
# RF Conducted Spurious Emissions\_8-DPSK\_2480



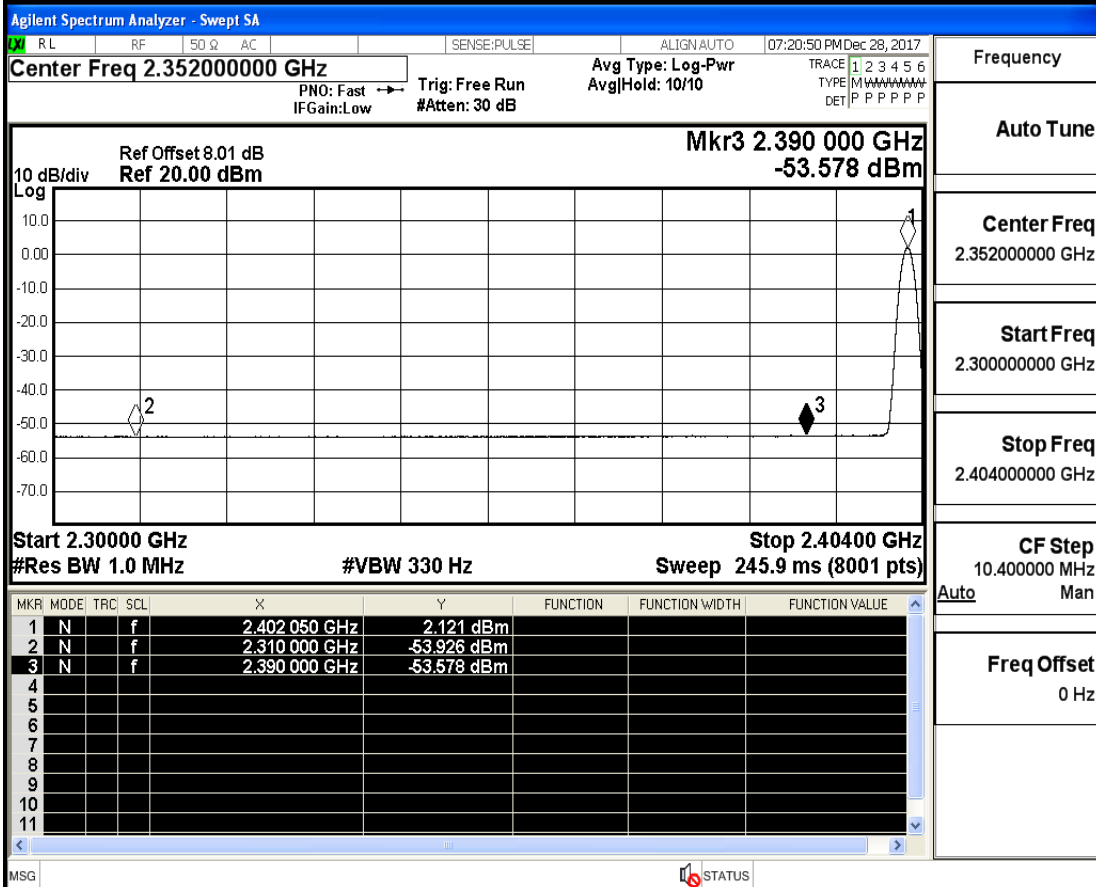
### A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.78	2	0	53.48	PEAK	74	PASS
	Off	2310.0	-53.93	2	0	43.33	AV	54	PASS
	Off	2390.0	-42.20	2	0	55.06	PEAK	74	PASS
	Off	2390.0	-53.58	2	0	43.68	AV	54	PASS
	Off	2483.5	-43.35	2	0	53.91	PEAK	74	PASS
	Off	2483.5	-53.33	2	0	43.93	AV	54	PASS
	Off	2500.0	-42.85	2	0	54.41	PEAK	74	PASS
	Off	2500.0	-53.10	2	0	44.16	AV	54	PASS
$\pi/4$ -DQPSK	Off	2310.0	-44.60	2	0	52.66	PEAK	74	PASS
	Off	2310.0	-53.98	2	0	43.28	AV	54	PASS
	Off	2390.0	-43.76	2	0	53.50	PEAK	74	PASS
	Off	2390.0	-53.63	2	0	43.62	AV	54	PASS
	Off	2483.5	-43.83	2	0	53.43	PEAK	74	PASS
	Off	2483.5	-53.21	2	0	44.04	AV	54	PASS
	Off	2500.0	-44.77	2	0	52.49	PEAK	74	PASS
	Off	2500.0	-53.27	2	0	43.99	AV	54	PASS
8-DPSK	Off	2310.0	-42.44	2	0	54.82	PEAK	74	PASS
	Off	2310.0	-54.00	2	0	43.26	AV	54	PASS
	Off	2390.0	-43.86	2	0	53.39	PEAK	74	PASS
	Off	2390.0	-53.76	2	0	43.50	AV	54	PASS
	Off	2483.5	-43.03	2	0	54.23	PEAK	74	PASS
	Off	2483.5	-53.31	2	0	43.95	AV	54	PASS
	Off	2500.0	-43.40	2	0	53.86	PEAK	74	PASS
	Off	2500.0	-53.22	2	0	44.04	AV	54	PASS

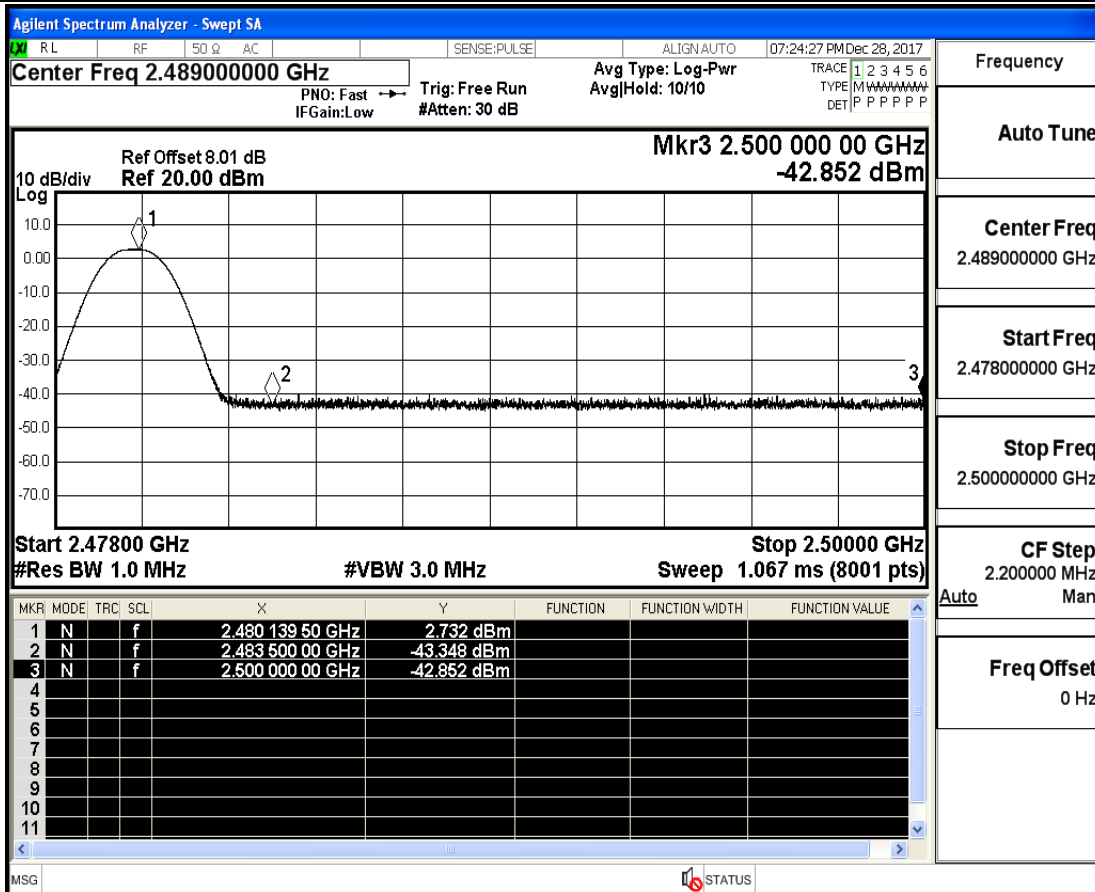
# Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_PEAK



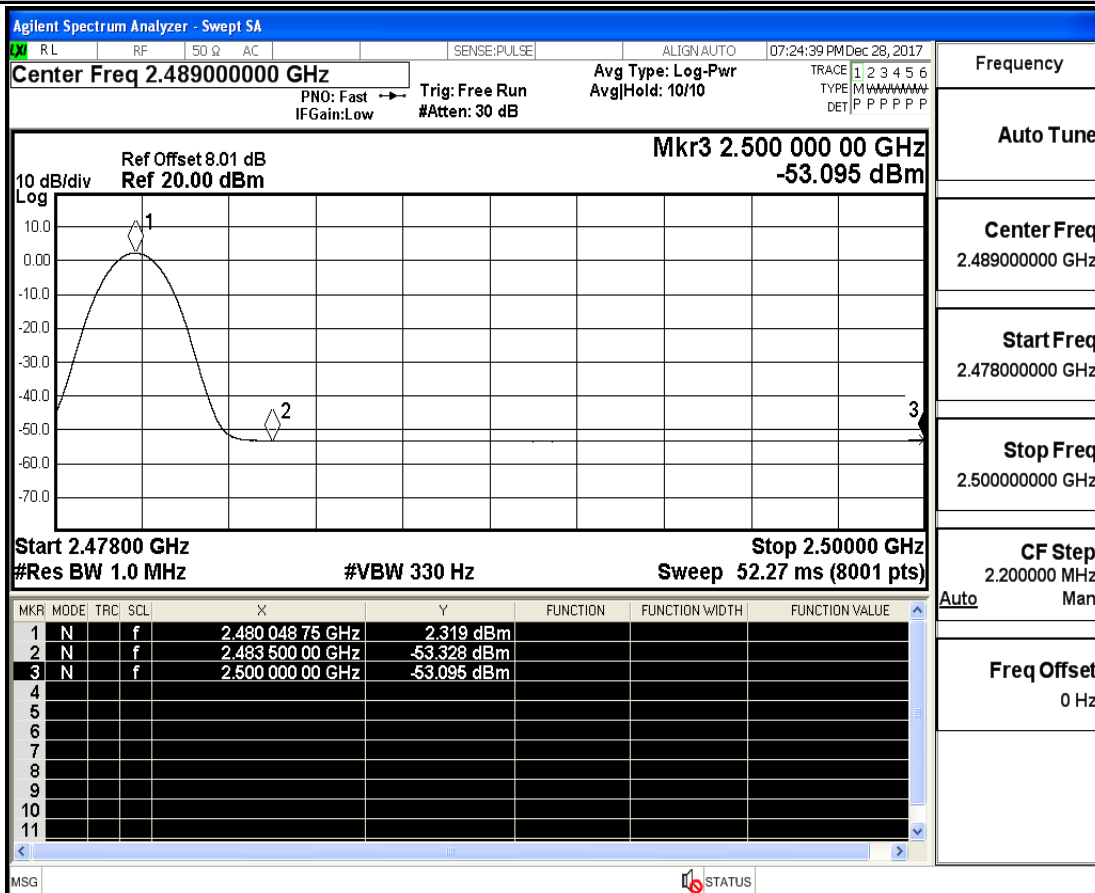
# Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_Average



# Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_PEAK



# Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_Average



Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.357000000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

Mkr3 2.390 000 GHz  
-43.758 dBm

10 dB/div  
Log

Start 2.31000 GHz  
#Res BW 1.0 MHz

Stop 2.40400 GHz  
#VBW 3.0 MHz  
Sweep 1.067 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.401 838 GHz	2.006 dBm			
2	N	f		2.310 000 GHz	-44.600 dBm			
3	N	f		2.390 000 GHz	-43.758 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq  
2.357000000 GHz

Start Freq  
2.310000000 GHz

Stop Freq  
2.404000000 GHz

CF Step  
9.400000 MHz

Freq Offset  
0 Hz

Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.357000000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

Mkr3 2.390 000 GHz  
-53.633 dBm

10 dB/div  
Log

Start 2.31000 GHz  
#Res BW 1.0 MHz

Stop 2.40400 GHz  
#VBW 330 Hz  
Sweep 222.4 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.402 026 GHz	-1.374 dBm			
2	N	f		2.310 000 GHz	-53.978 dBm			
3	N	f		2.390 000 GHz	-53.633 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq  
2.357000000 GHz

Start Freq  
2.310000000 GHz

Stop Freq  
2.404000000 GHz

CF Step  
9.400000 MHz

Freq Offset  
0 Hz

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.35700000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

10 dB/div  
Log

Start 2.31000 GHz  
#Res BW 1.0 MHz

Stop 2.40400 GHz  
Sweep 222.4 ms (8001 pts)

VBW 330 Hz

Mkr3 2.390 000 GHz  
-53.633 dBm

Frequency

Auto Tune

Center Freq  
2.35700000 GHz

Start Freq  
2.31000000 GHz

Stop Freq  
2.40400000 GHz

CF Step  
9.400000 MHz  
Auto Man

Freq Offset  
0 Hz

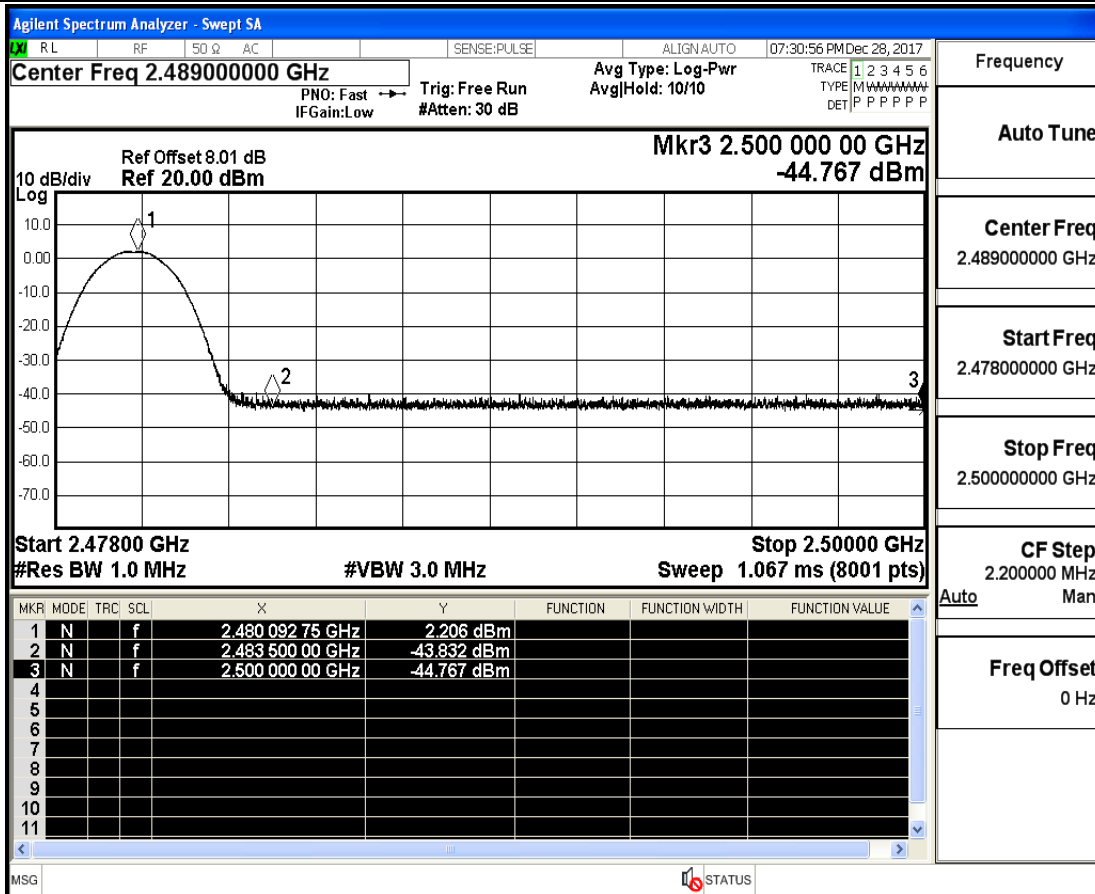
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	2.402 026 GHz	-1.374 dBm			
2	N		f	2.310 000 GHz	-53.978 dBm			
3	N		f	2.390 000 GHz	-53.633 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG

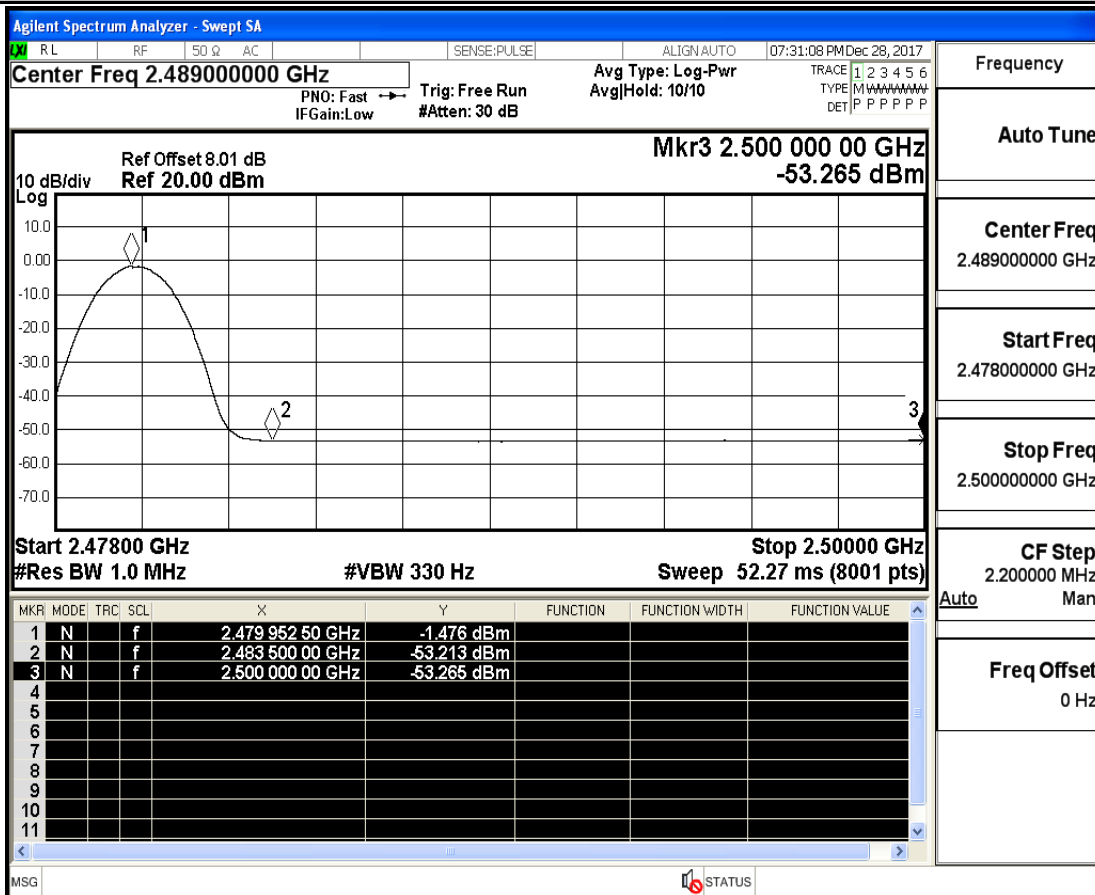
STATUS



# Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK



# Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average



Restrict-band band-edge measurements\_Hopping Off\_8-DPSK\_PEAK

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.357000000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

Mkr3 2.390 000 GHz  
-43.863 dBm

10 dB/div  
Log

Start 2.31000 GHz  
#Res BW 1.0 MHz

Stop 2.40400 GHz  
#VBW 3.0 MHz  
Sweep 1.067 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.401920 GHz	2.161 dBm			
2	N	f		2.310 000 GHz	-42.440 dBm			
3	N	f		2.390 000 GHz	-43.863 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq  
2.357000000 GHz

Start Freq  
2.310000000 GHz

Stop Freq  
2.404000000 GHz

CF Step  
9.400000 MHz  
Auto Man

Freq Offset  
0 Hz

Restrict-band band-edge measurements\_Hopping Off\_8-DPSK\_Average

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.357000000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

Mkr3 2.390 000 GHz  
-53.758 dBm

10 dB/div  
Log

Start 2.31000 GHz  
#Res BW 1.0 MHz

Stop 2.40400 GHz  
#VBW 330 Hz  
Sweep 222.4 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.402038 GHz	-1.509 dBm			
2	N	f		2.310 000 GHz	-54.002 dBm			
3	N	f		2.390 000 GHz	-53.758 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq  
2.357000000 GHz

Start Freq  
2.310000000 GHz

Stop Freq  
2.404000000 GHz

CF Step  
9.400000 MHz  
Auto Man

Freq Offset  
0 Hz

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.35700000 GHz

Ref Offset 8.01 dB  
Ref 20.00 dBm

10 dB/div

Log

Start 2.31000 GHz  
#Res BW 1.0 MHz

Stop 2.40400 GHz  
Sweep 222.4 ms (8001 pts)

VBW 330 Hz

Mkr3 2.390 000 GHz  
-53.758 dBm

Frequency

Auto Tune

Center Freq  
2.35700000 GHz

Start Freq  
2.31000000 GHz

Stop Freq  
2.40400000 GHz

CF Step  
9.400000 MHz  
Auto Man

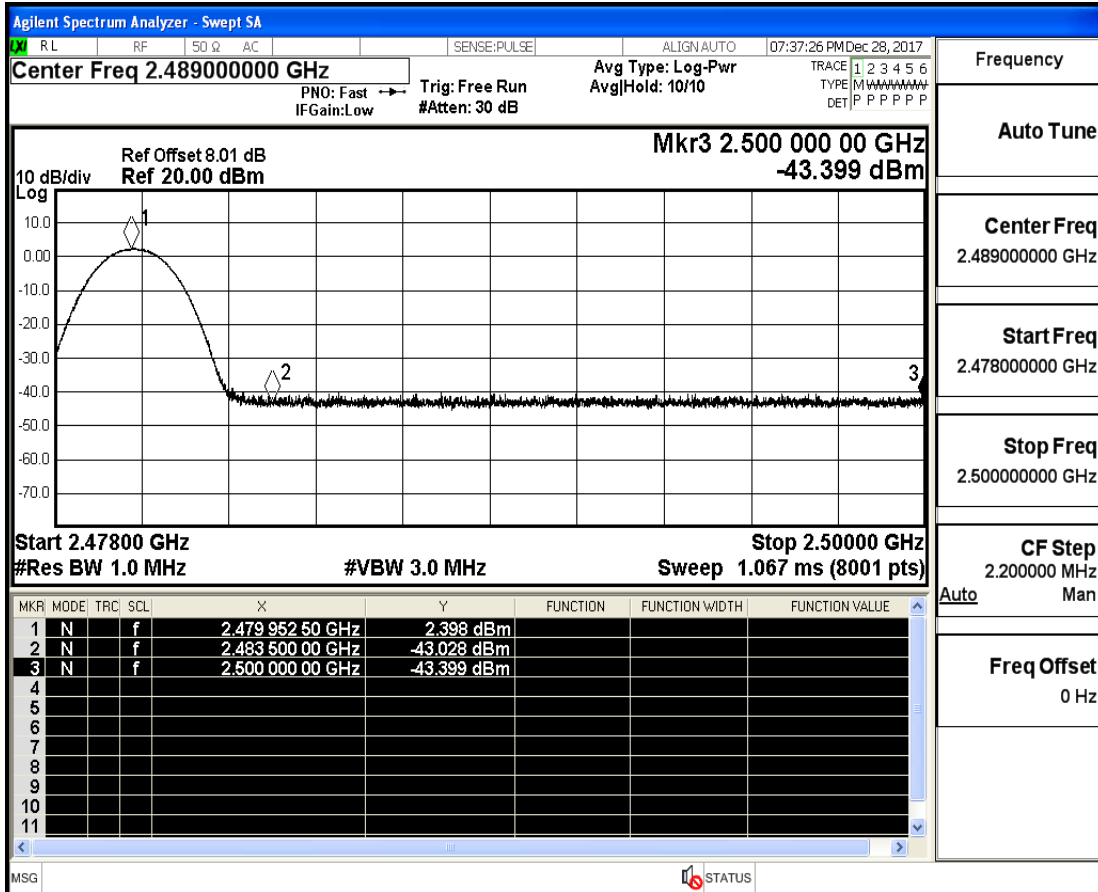
Freq Offset  
0 Hz

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	2.402 038 GHz	-1.509 dBm			
2	N		f	2.310 000 GHz	-54.002 dBm			
3	N		f	2.390 000 GHz	-53.758 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG

STATUS

# Restrict-band band-edge measurements\_Hopping Off\_8-DPSK\_PEAK



# Restrict-band band-edge measurements\_Hopping Off\_8-DPSK\_Average

