

## Appendix A

### RF Test Data for BT V3.0 (Conducted Measurement)

Product Name: Selfie Stick with Removable Fill Light

Trade Mark: ODOYO

Test Model: ZP100

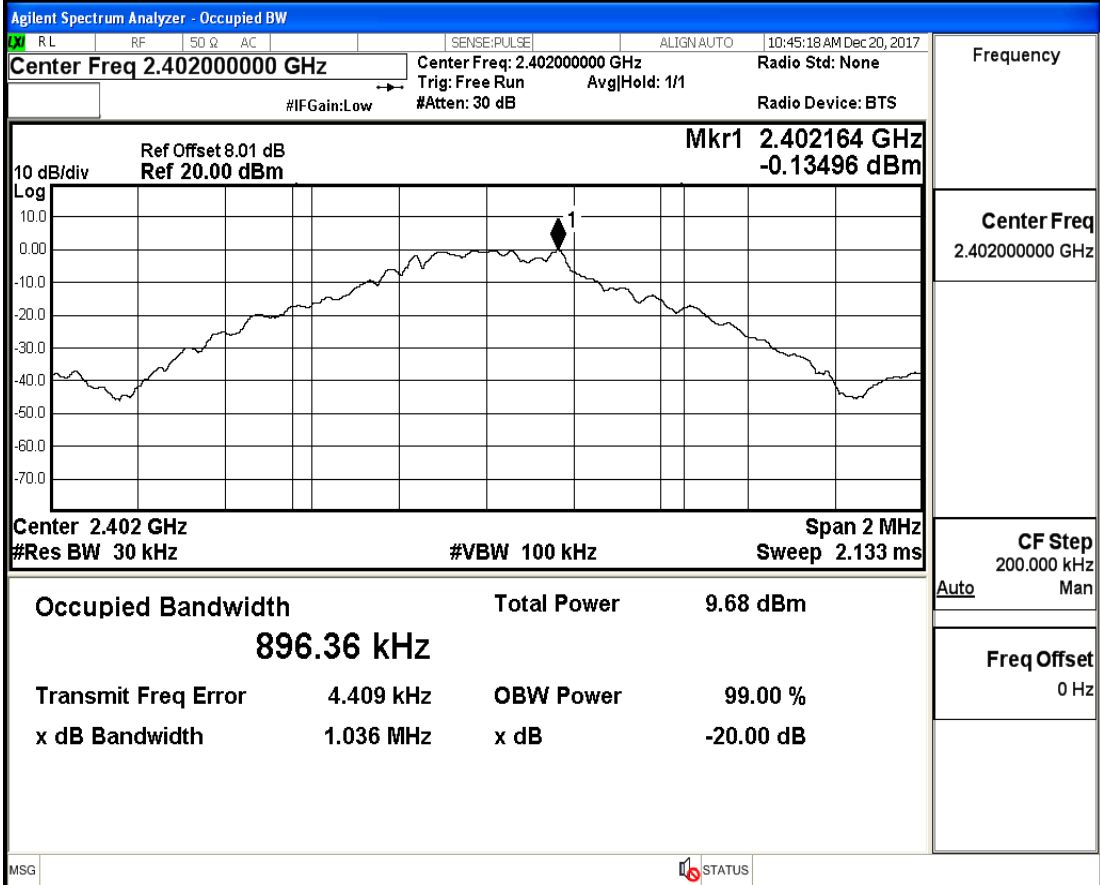
FCC ID: 2AJVVZP100

Temperature	24.0℃	Humidity	53.2%
Test Engineer	Tom Liu	Configurations	BT

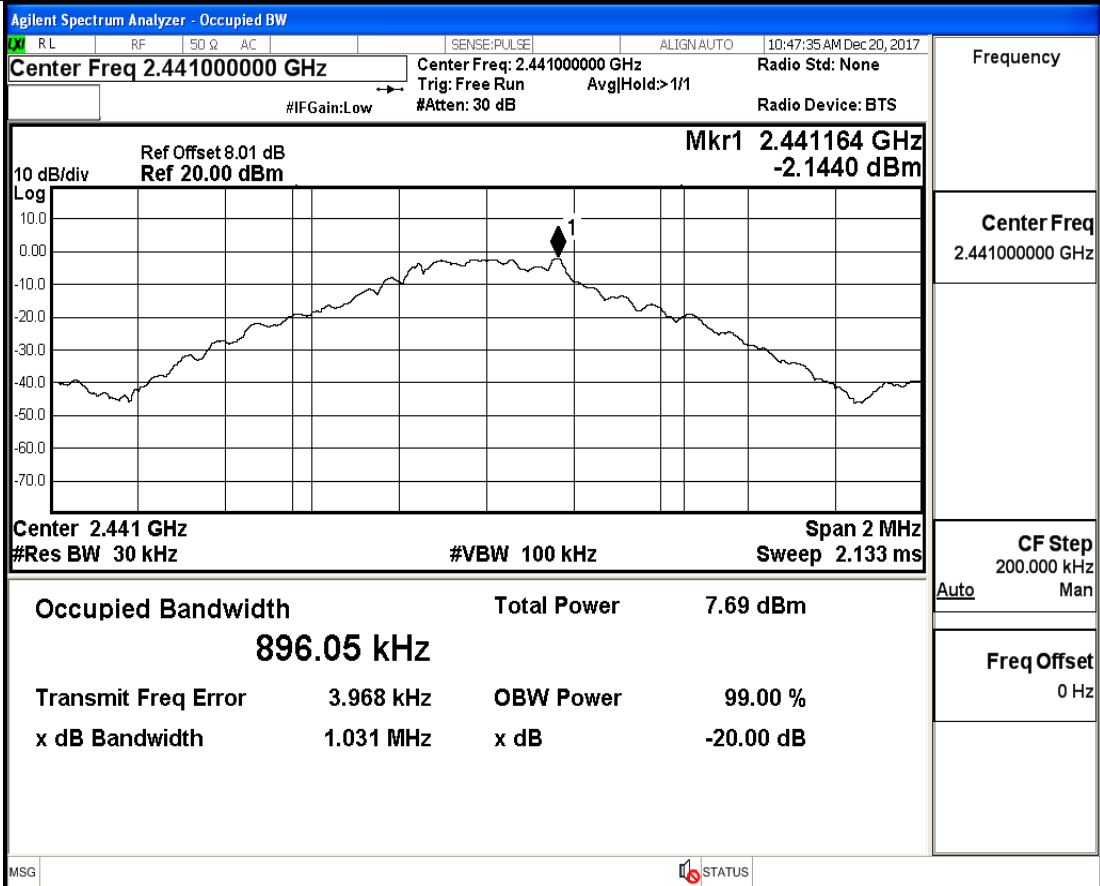
#### A.1.20 dB Bandwidth

Test Mode	Test Channel	EBW[MHz]	Limit[MHz]	Verdict
DH5	2402	1.036	---	PASS
DH5	2441	1.031	---	PASS
DH5	2480	1.037	---	PASS
2DH5	2402	1.289	---	PASS
2DH5	2441	1.318	---	PASS
2DH5	2480	1.314	---	PASS
3DH5	2402	1.309	---	PASS
3DH5	2441	1.299	---	PASS
3DH5	2480	1.299	---	PASS

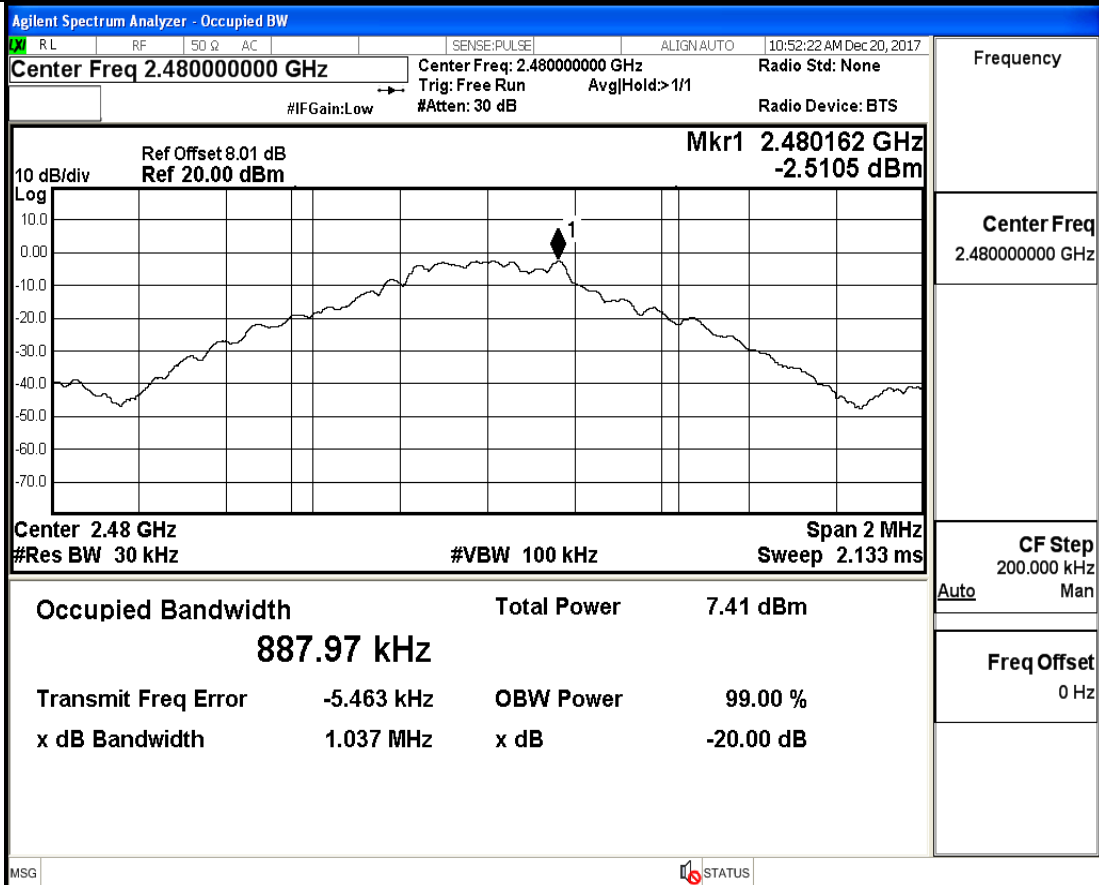
# 20 dB Bandwidth\_DH5\_2402



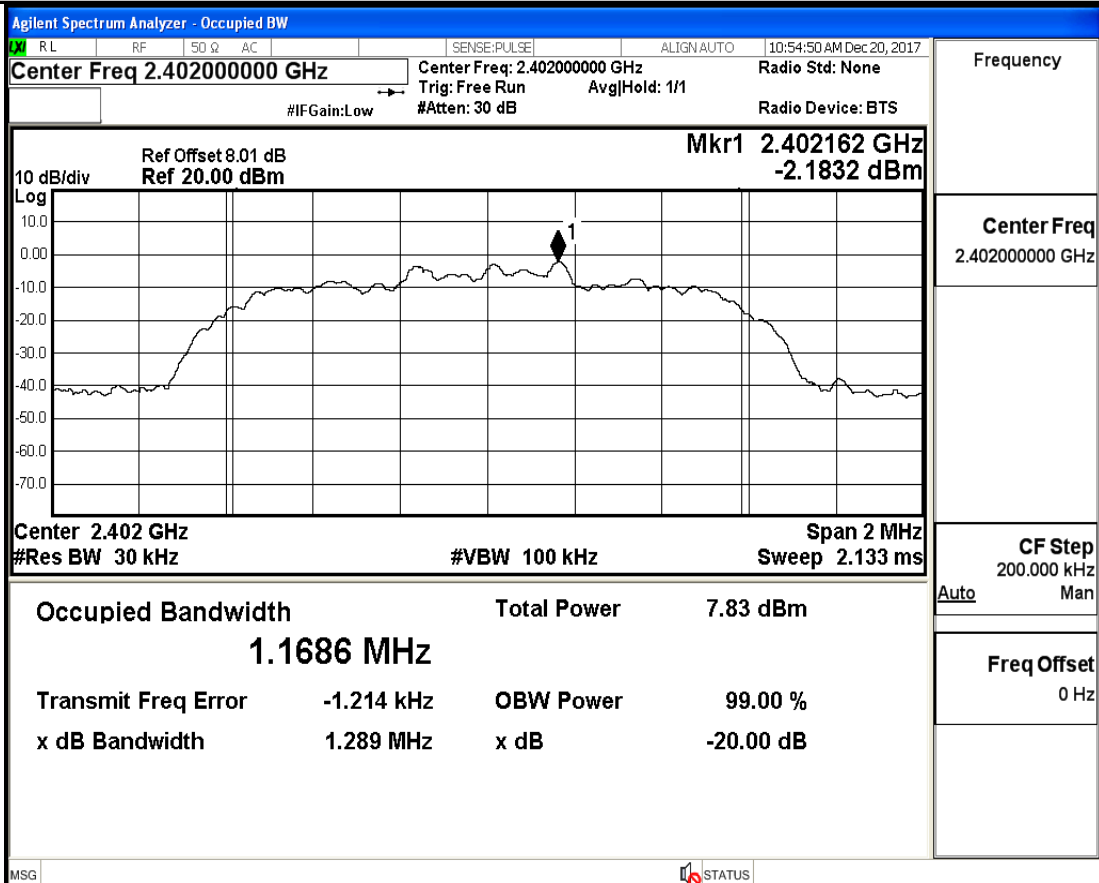
# 20 dB Bandwidth\_DH5\_2441



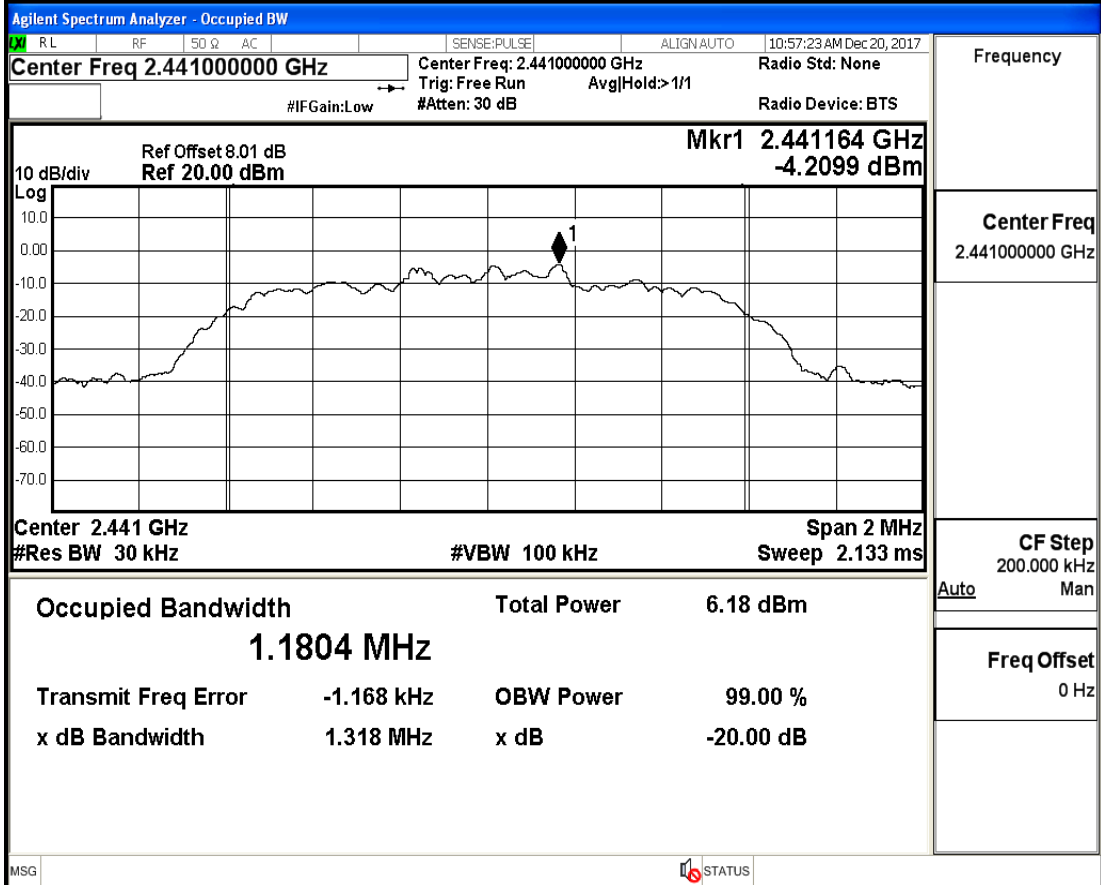
## 20 dB Bandwidth\_DH5\_2480



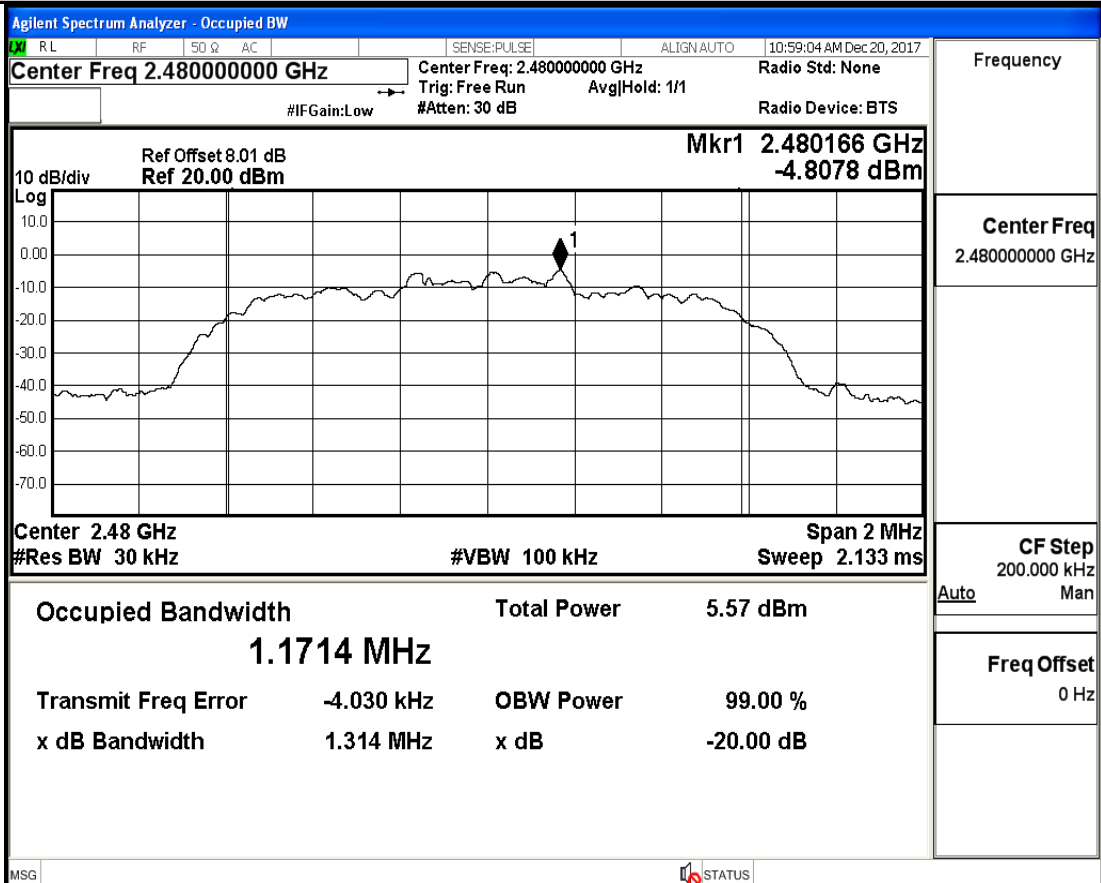
## 20 dB Bandwidth\_2DH5\_2402



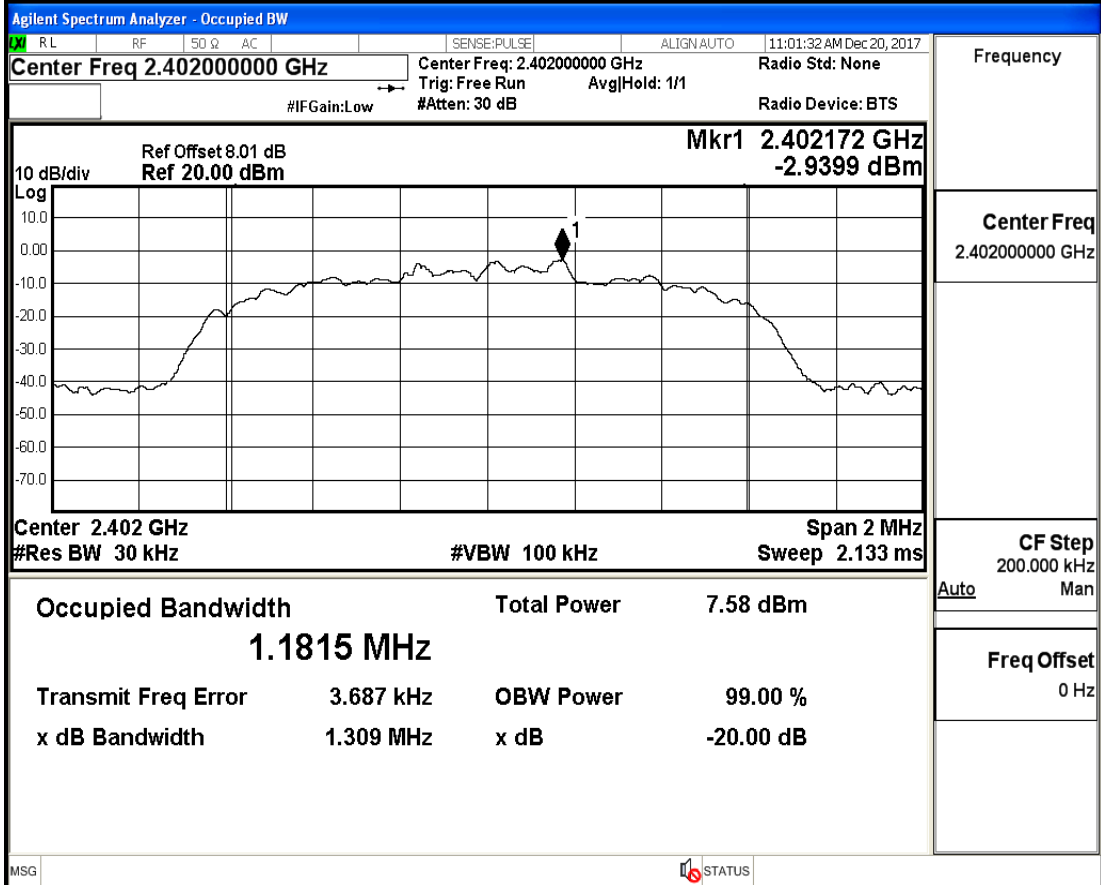
## 20 dB Bandwidth\_2DH5\_2441



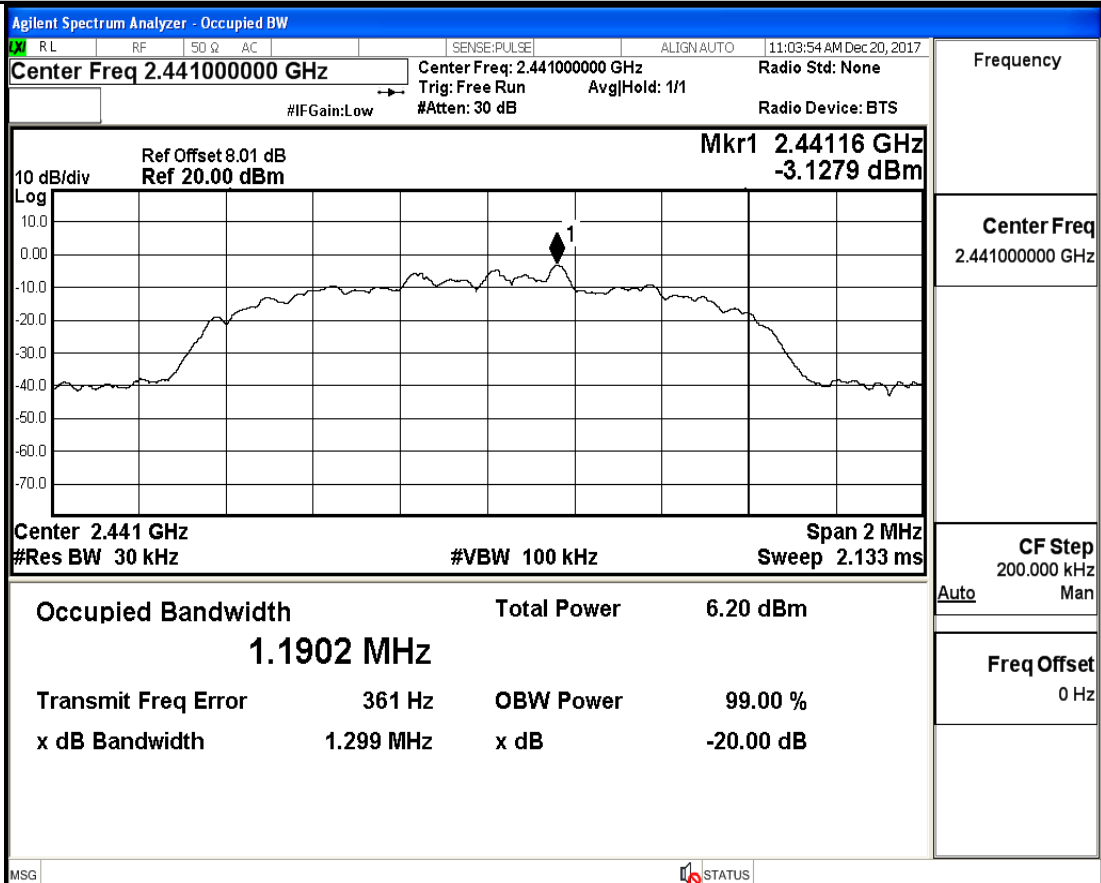
## 20 dB Bandwidth\_2DH5\_2480



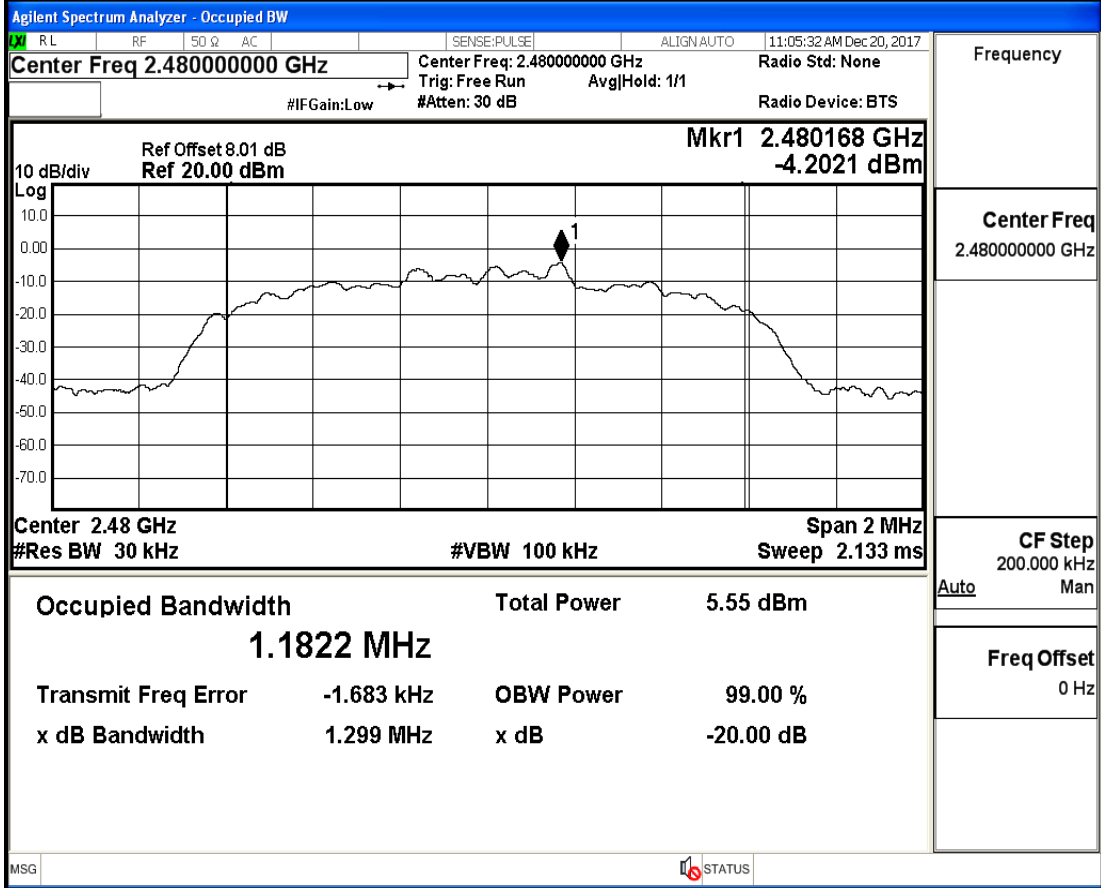
## 20 dB Bandwidth\_3DH5\_2402



## 20 dB Bandwidth\_3DH5\_2441



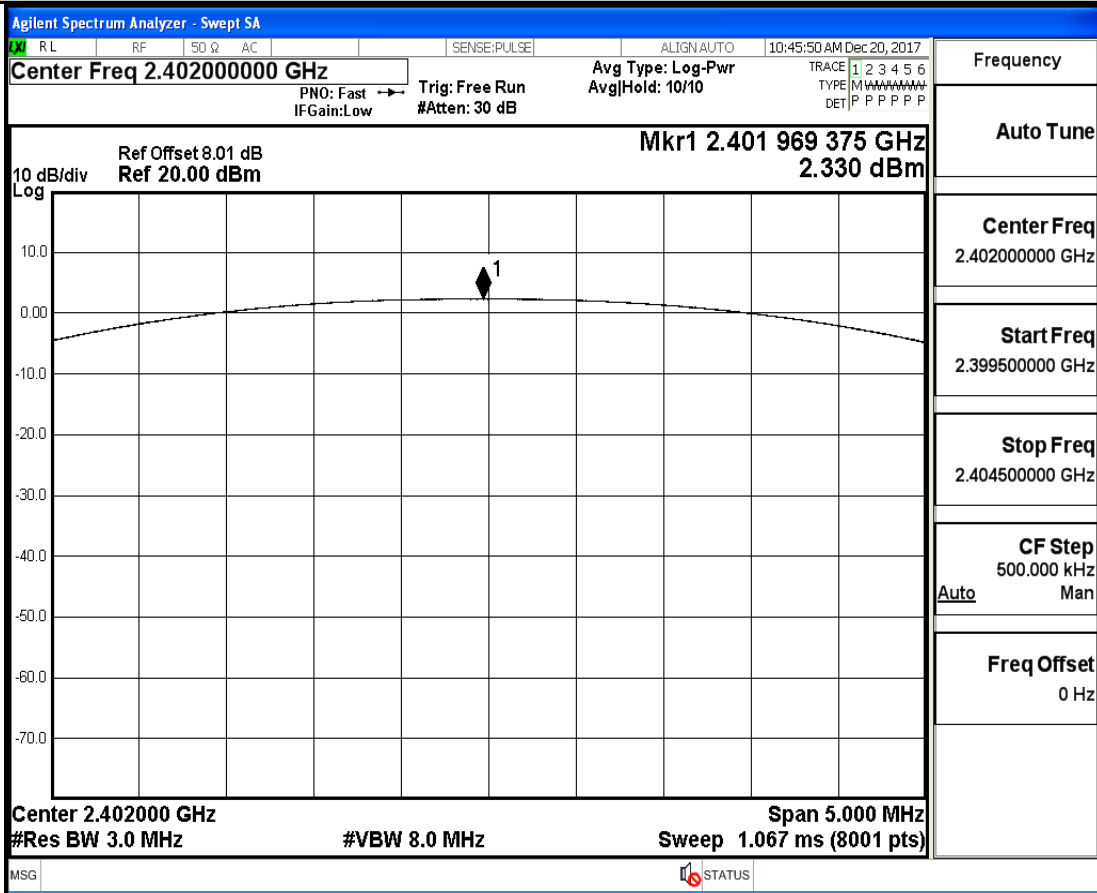
# 20 dB Bandwidth\_3DH5\_2480



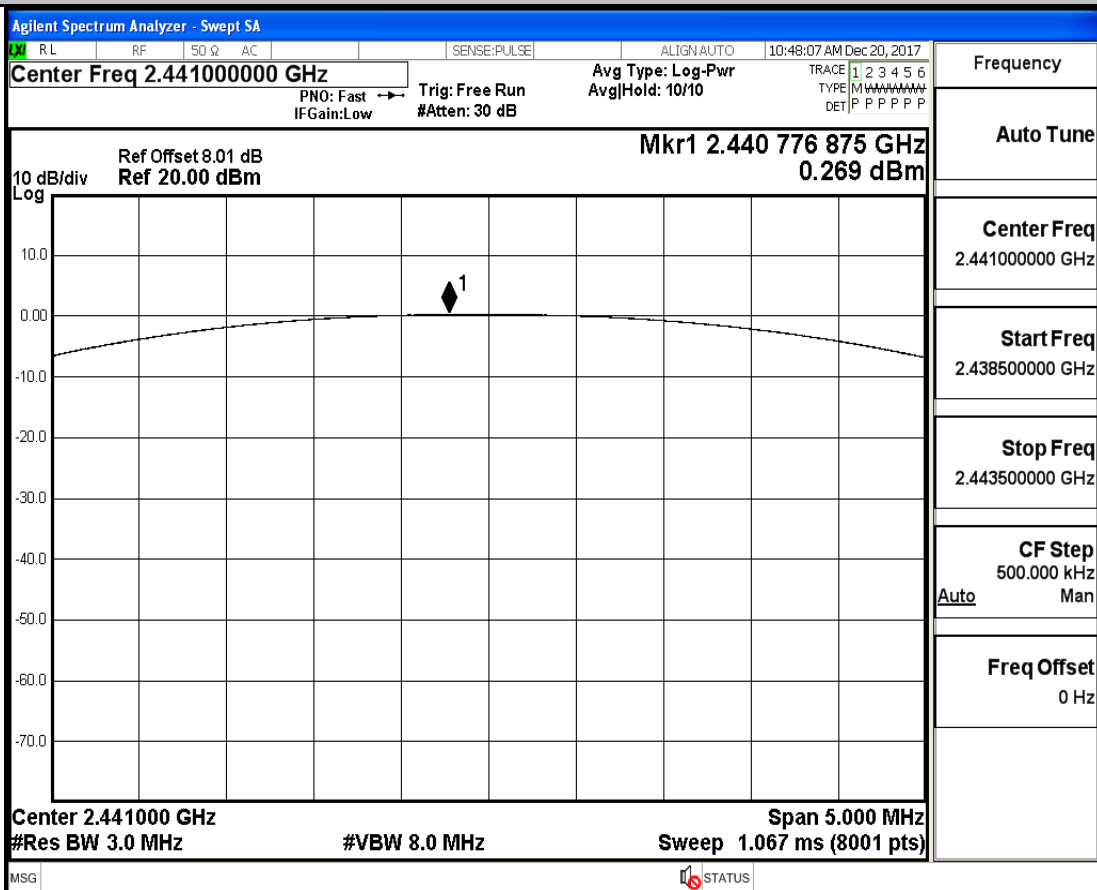
**A.2. Conducted Peak Power**

Test Mode	Test Channel	Peak Conducted Output Power (dBm)	Average Conducted Output Power (dBm)	Limit[dBm]	Verdict
DH5	2402	2.330	2.126	30	PASS
DH5	2441	0.269	0.161	30	PASS
DH5	2480	0.113	0.096	30	PASS
2DH5	2402	1.590	1.502	30	PASS
2DH5	2441	-0.317	-0.403	30	PASS
2DH5	2480	-0.641	-0.710	30	PASS
3DH5	2402	1.706	1.620	30	PASS
3DH5	2441	-0.155	-0.214	30	PASS
3DH5	2480	-0.548	-0.572	30	PASS

# Conducted Peak Output Power\_DH5\_2402

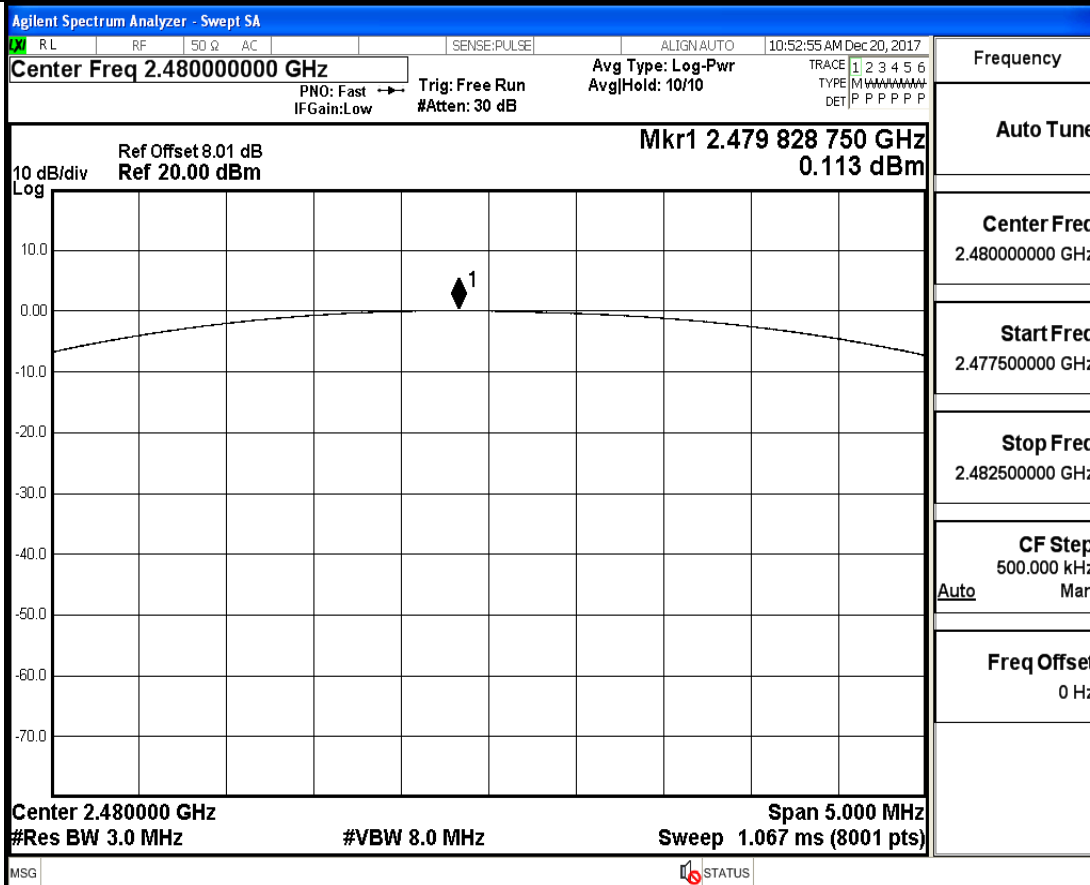


# Conducted Peak Output Power\_DH5\_2441

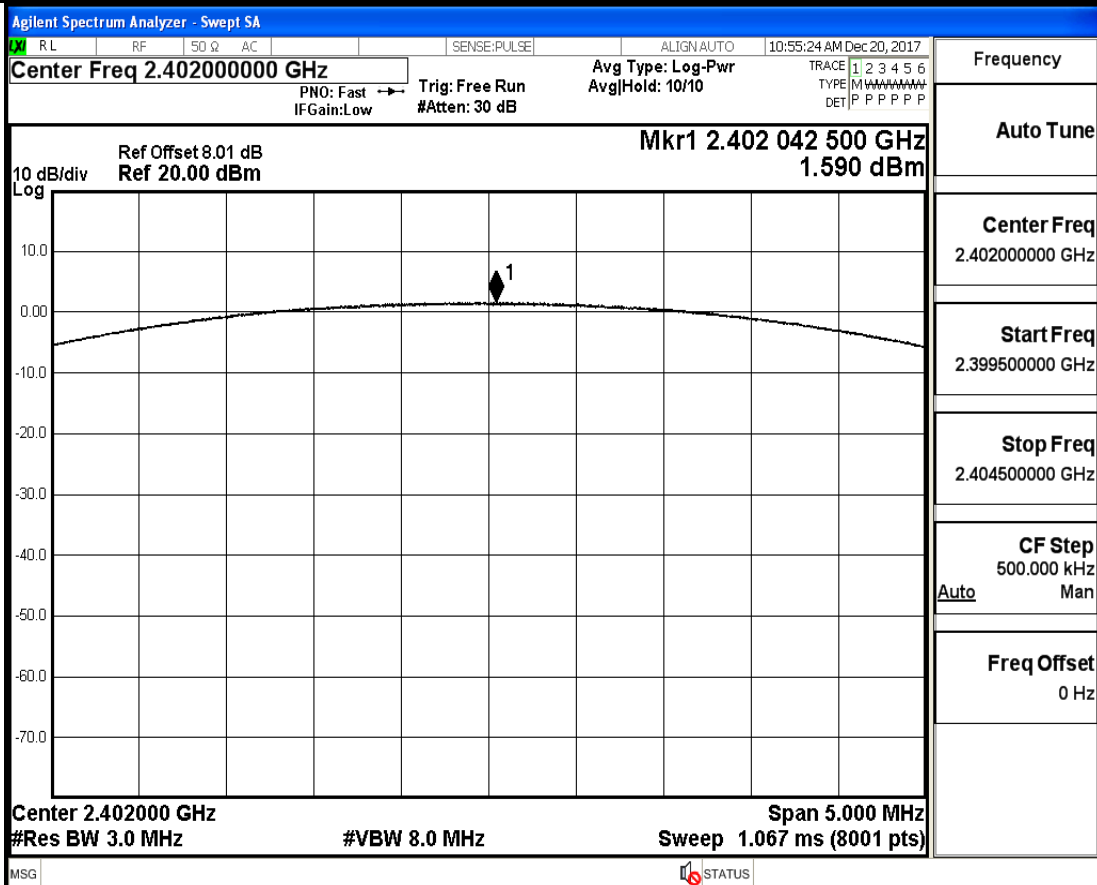




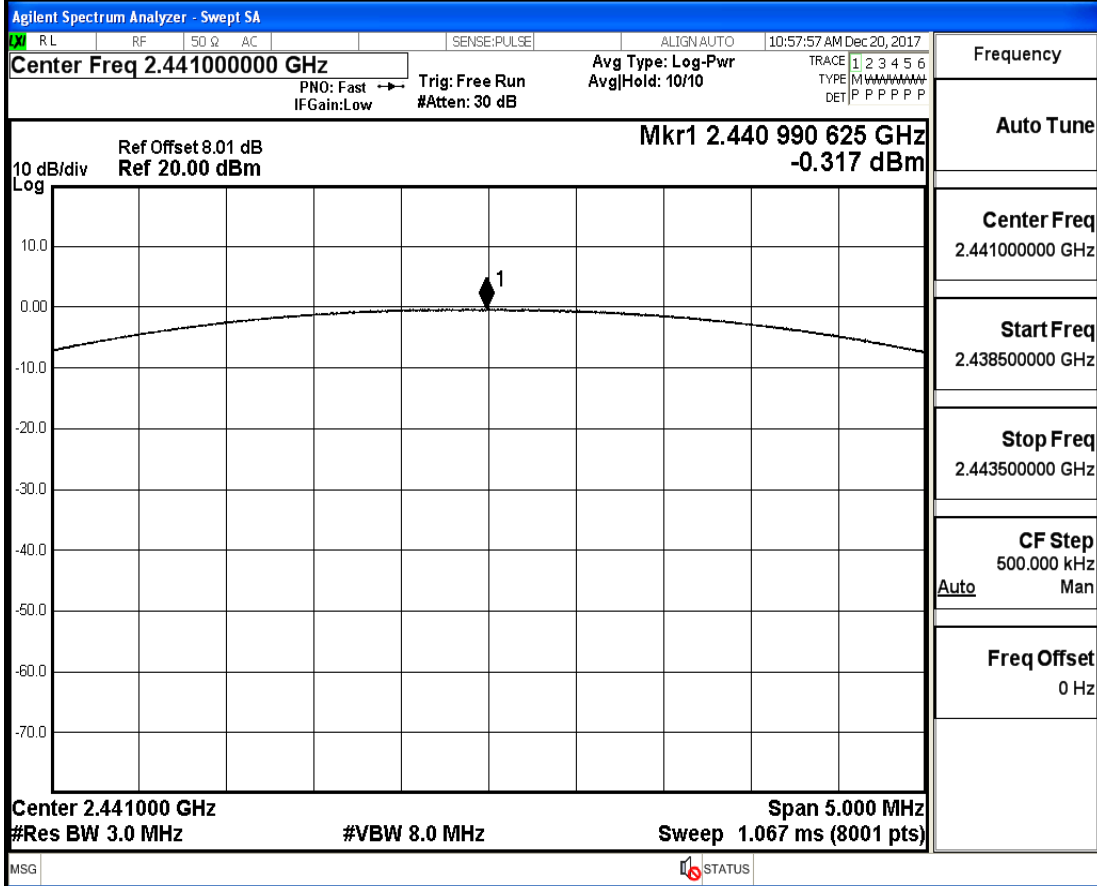
# Conducted Peak Output Power\_DH5\_2480



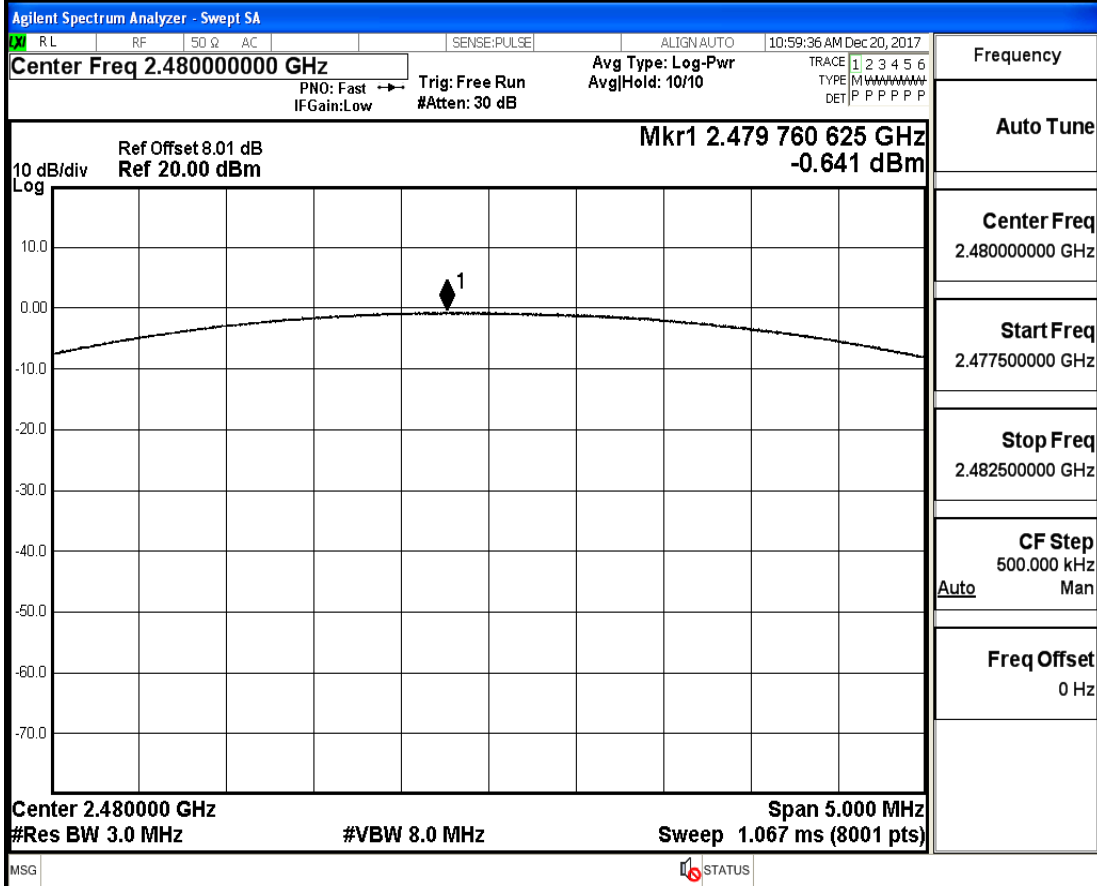
# Conducted Peak Output Power\_2DH5\_2402



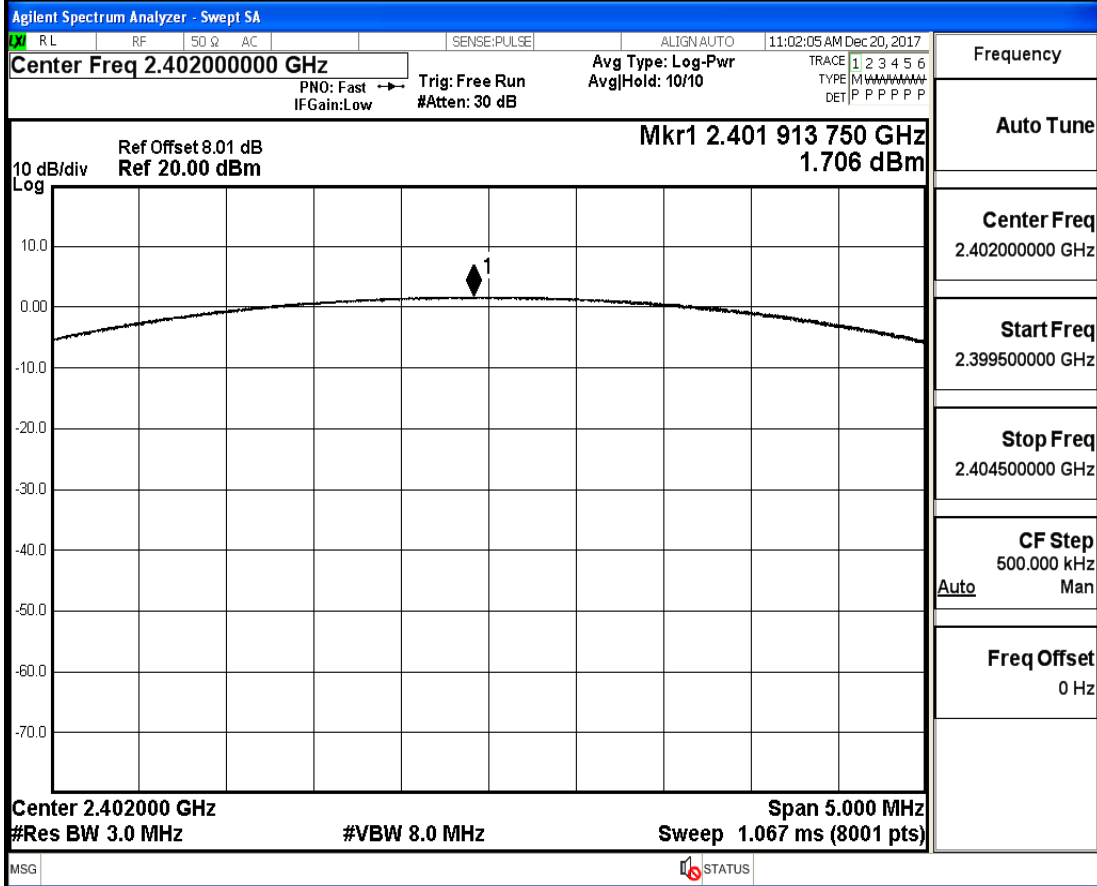
# Conducted Peak Output Power\_2DH5\_2441



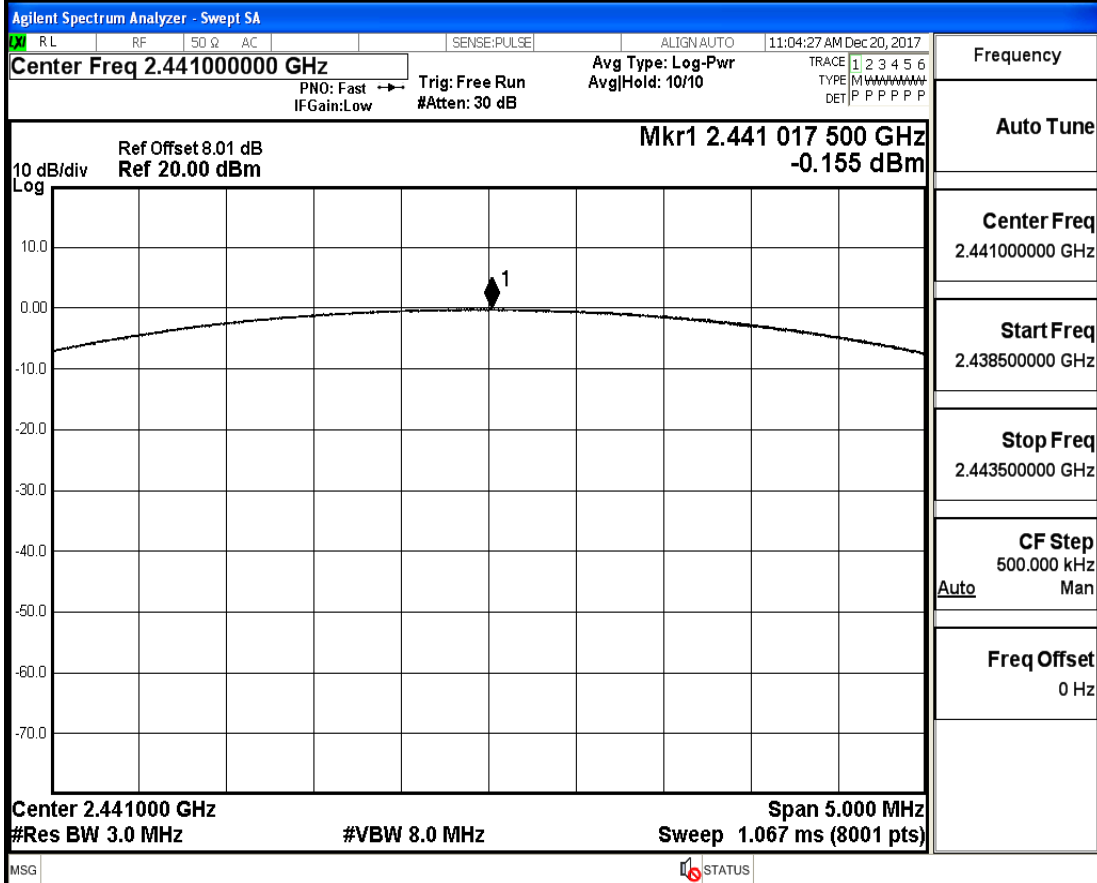
# Conducted Peak Output Power\_2DH5\_2480



# Conducted Peak Output Power\_3DH5\_2402



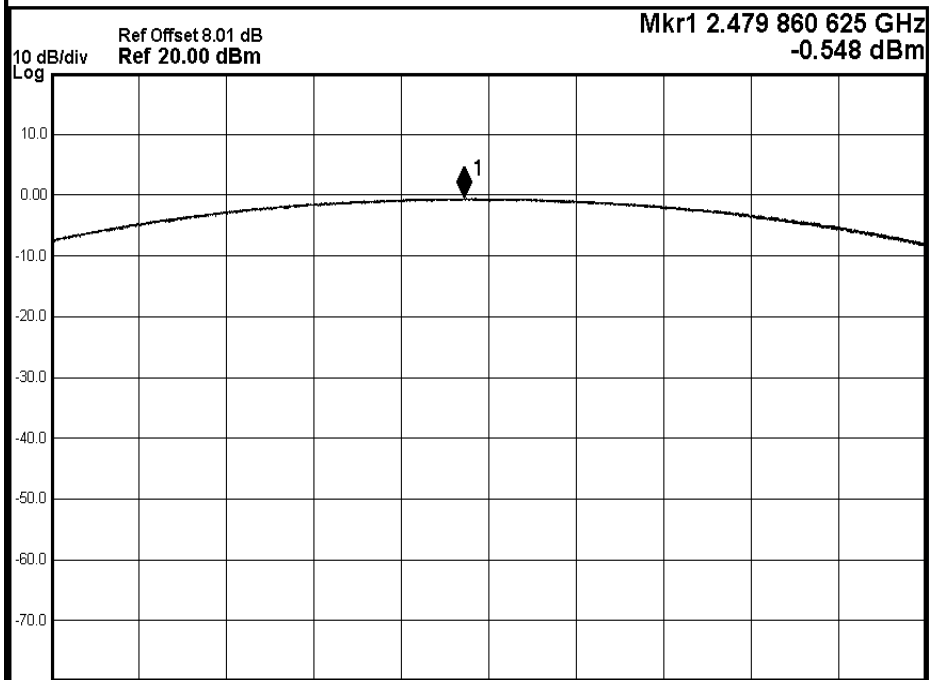
# Conducted Peak Output Power\_3DH5\_2441



# Conducted Peak Output Power\_3DH5\_2480

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.480000000 GHz  
 PNO: Fast → Trig: Free Run  
 IF Gain: Low #Atten: 30 dB  
 Avg Type: Log-Pwr  
 Avg/Hold: 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 P



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

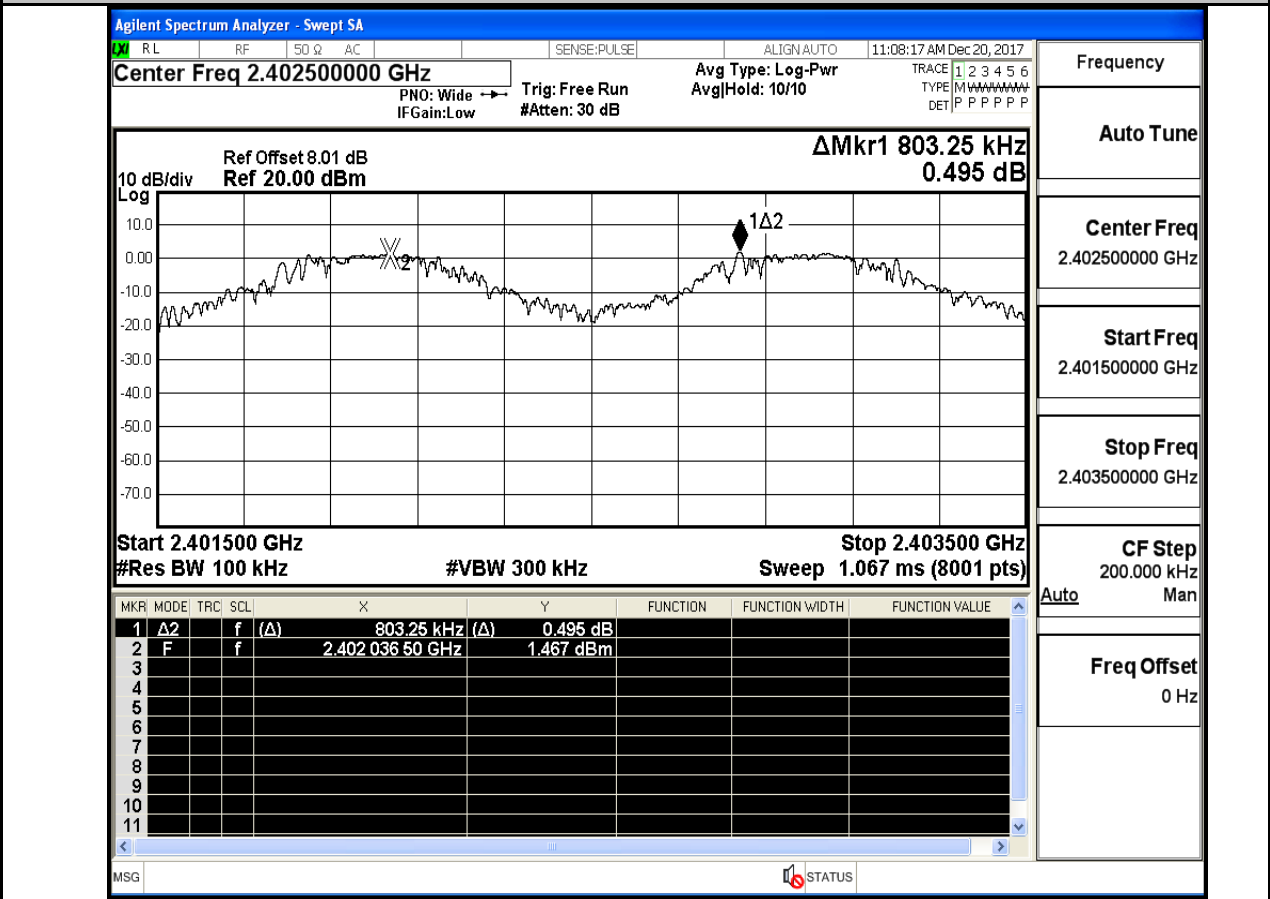
MSG

STATUS

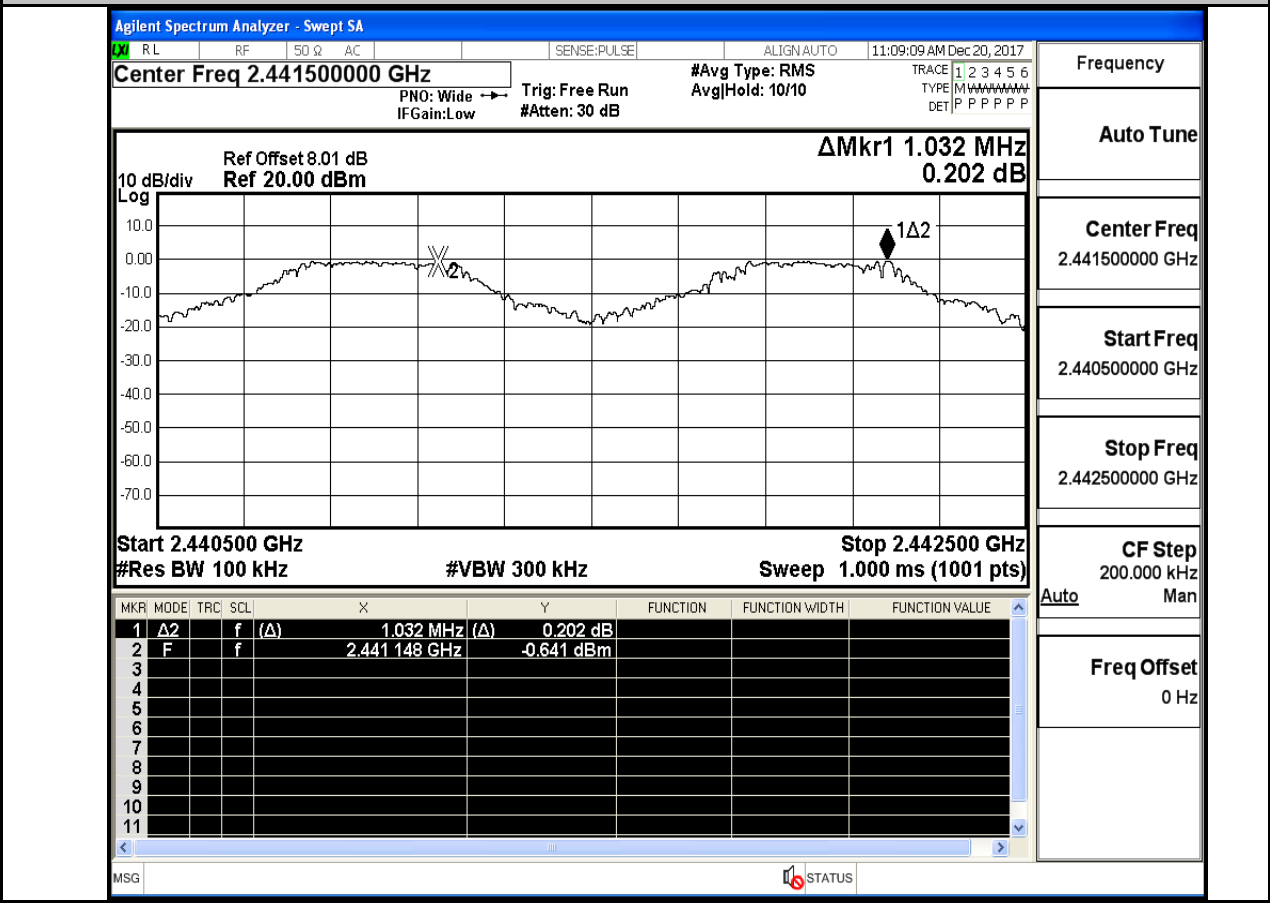
### A.3.Carrier Frequency Separation

Test Mode	Test Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	2402	0.803	0.69	PASS
DH5	2441	1.032	0.69	PASS
DH5	2480	0.954	0.69	PASS
2DH5	2402	1.212	0.86	PASS
2DH5	2441	0.892	0.88	PASS
2DH5	2480	1.012	0.88	PASS
3DH5	2402	0.994	0.87	PASS
3DH5	2441	0.992	0.87	PASS
3DH5	2480	1.150	0.87	PASS

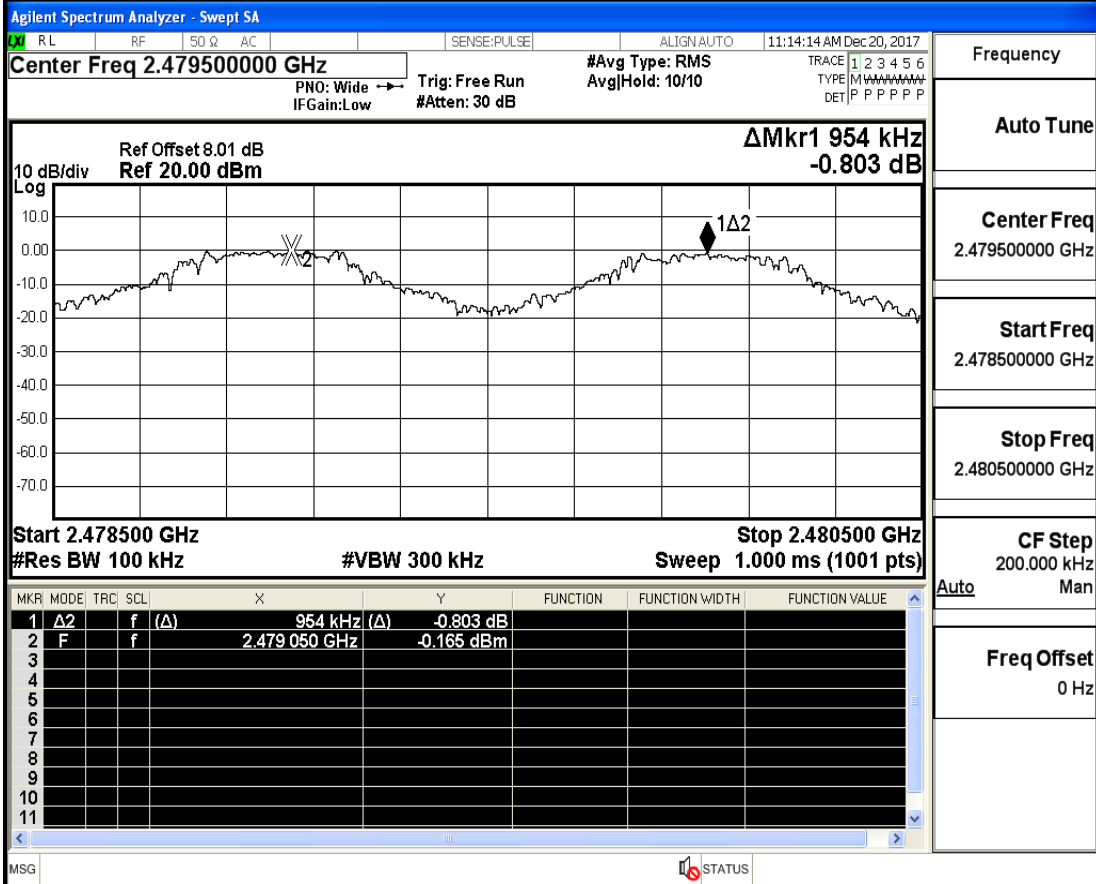
## Carrier Frequency Separation\_DH5\_2402



## Carrier Frequency Separation\_DH5\_2441



## Carrier Frequency Separation\_DH5\_2480

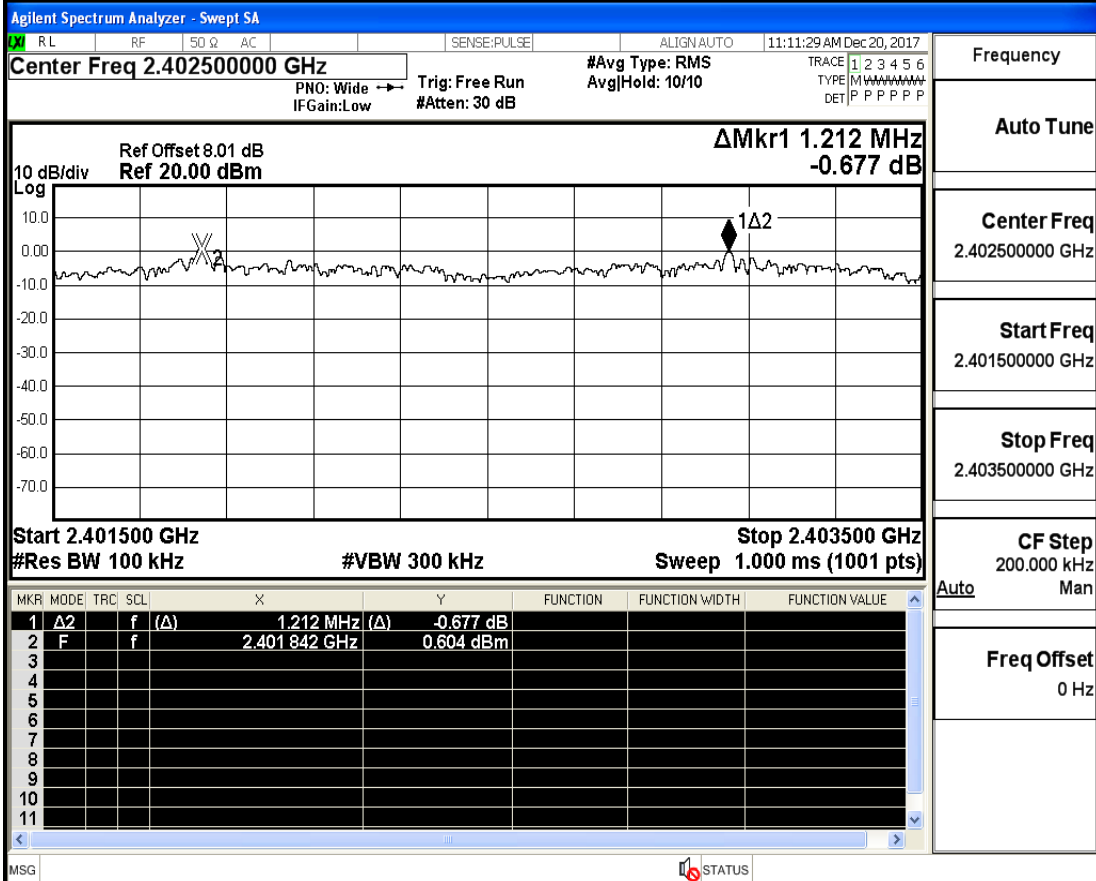


Frequency

Auto Tune

Center Freq  
2.479500000 GHzStart Freq  
2.478500000 GHzStop Freq  
2.480500000 GHzCF Step  
200.000 kHz  
Auto ManFreq Offset  
0 Hz

## Carrier Frequency Separation\_2DH5\_2402



Frequency

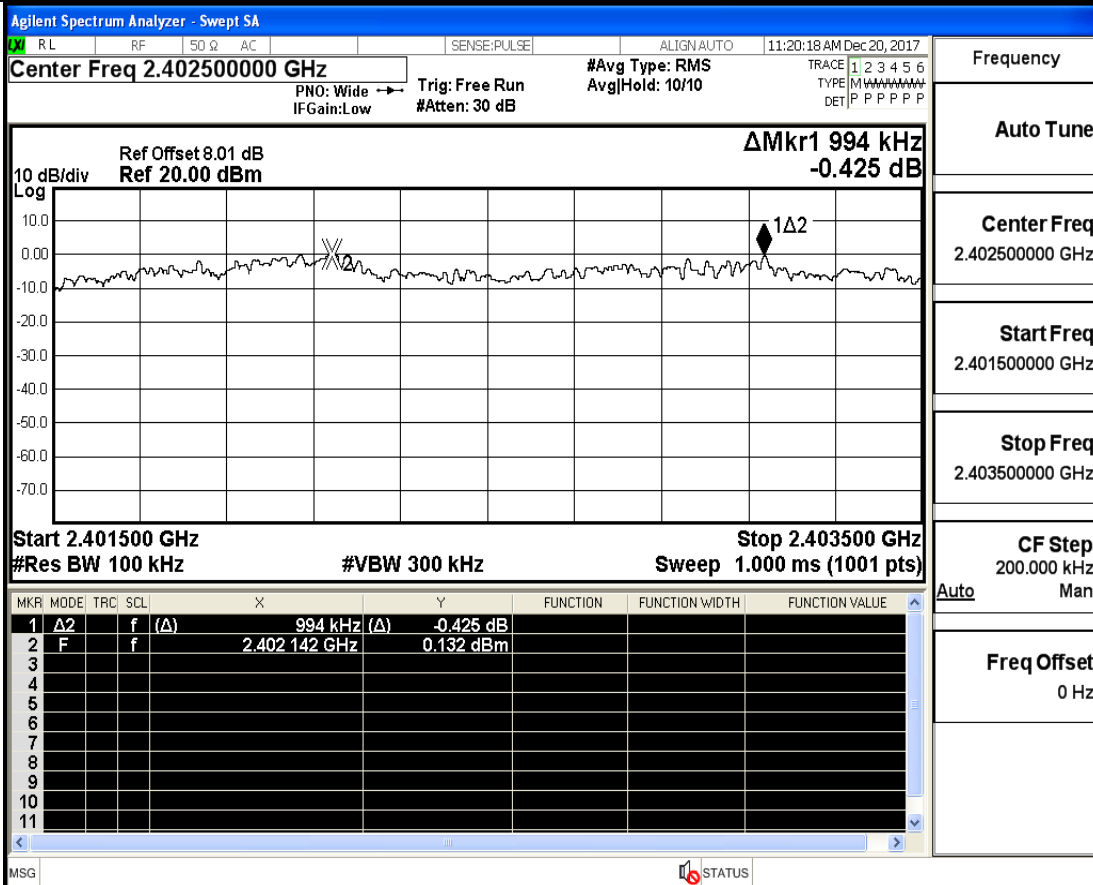
Auto Tune

Center Freq  
2.402500000 GHzStart Freq  
2.401500000 GHzStop Freq  
2.403500000 GHzCF Step  
200.000 kHz  
Auto ManFreq Offset  
0 Hz





## Carrier Frequency Separation\_3DH5\_2402

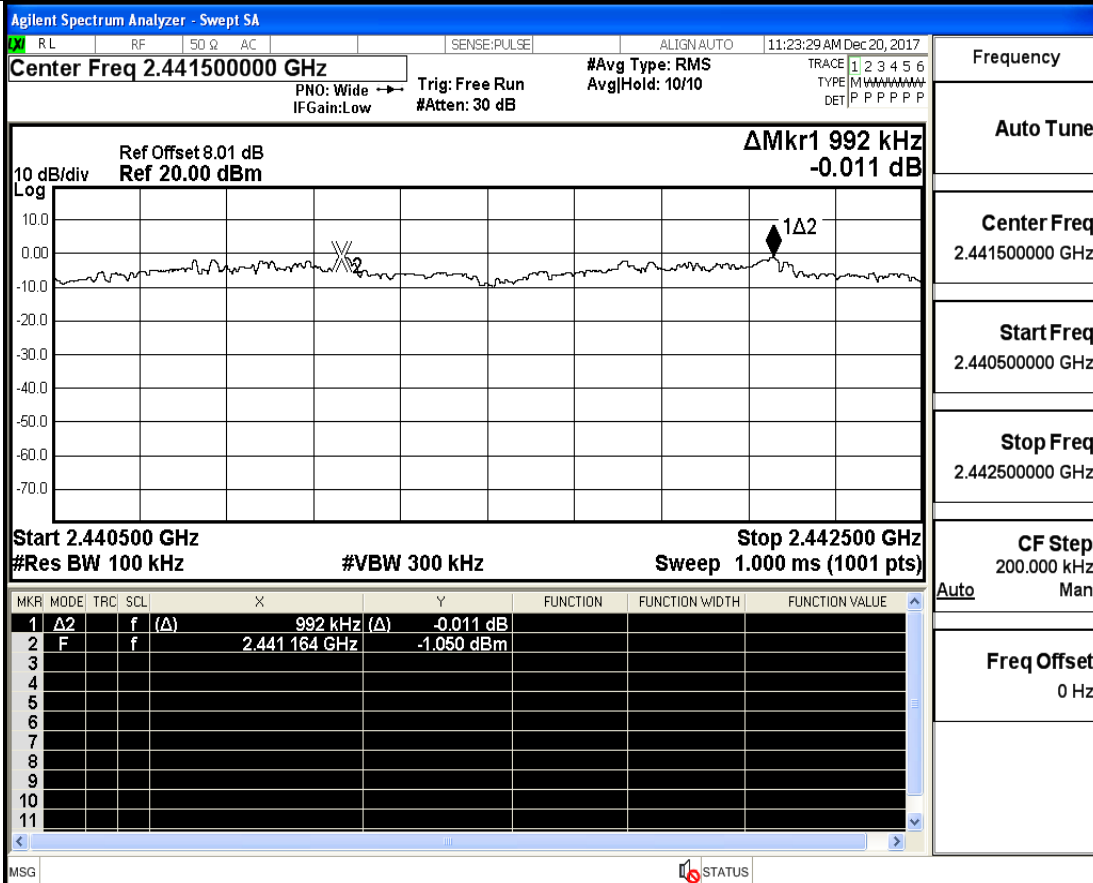


Frequency

Auto Tune

Center Freq  
2.402500000 GHzStart Freq  
2.401500000 GHzStop Freq  
2.403500000 GHzCF Step  
200.000 kHz  
Auto ManFreq Offset  
0 Hz

## Carrier Frequency Separation\_3DH5\_2441

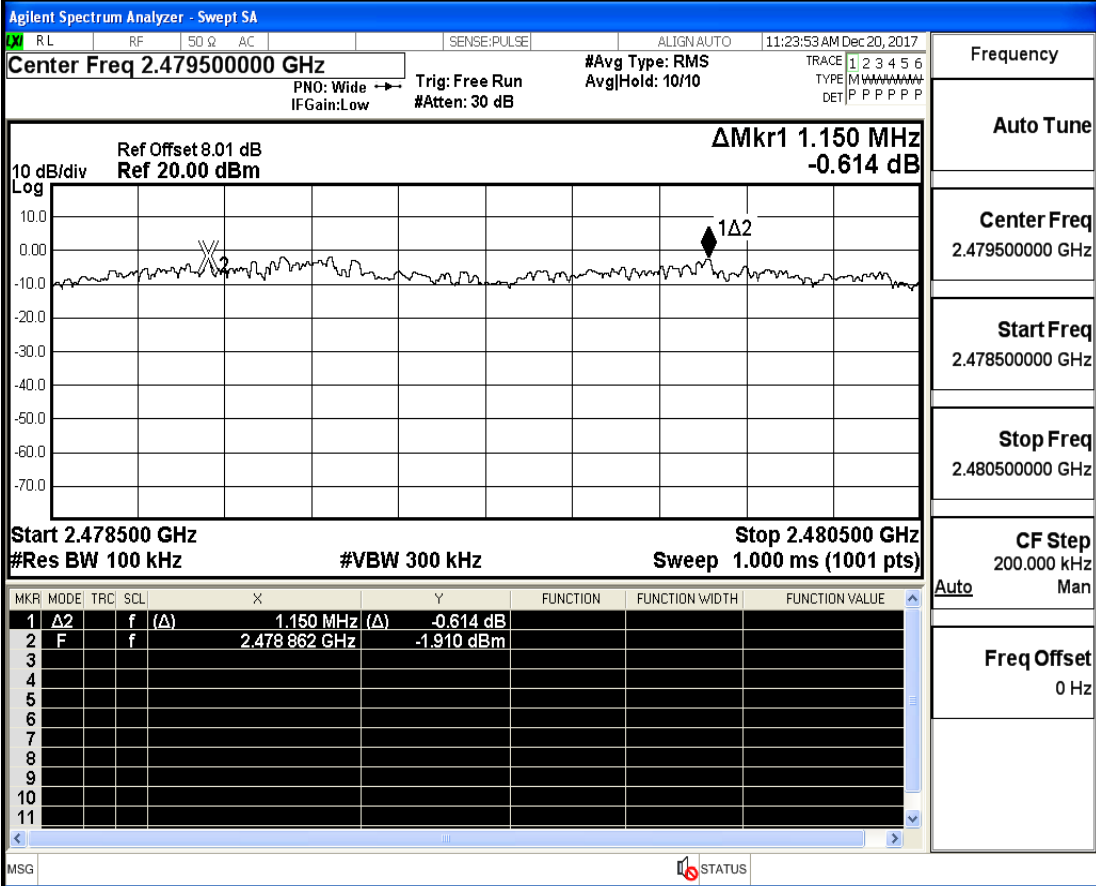


Frequency

Auto Tune

Center Freq  
2.441500000 GHzStart Freq  
2.440500000 GHzStop Freq  
2.442500000 GHzCF Step  
200.000 kHz  
Auto ManFreq Offset  
0 Hz

Carrier Frequency Separation\_3DH5\_2480

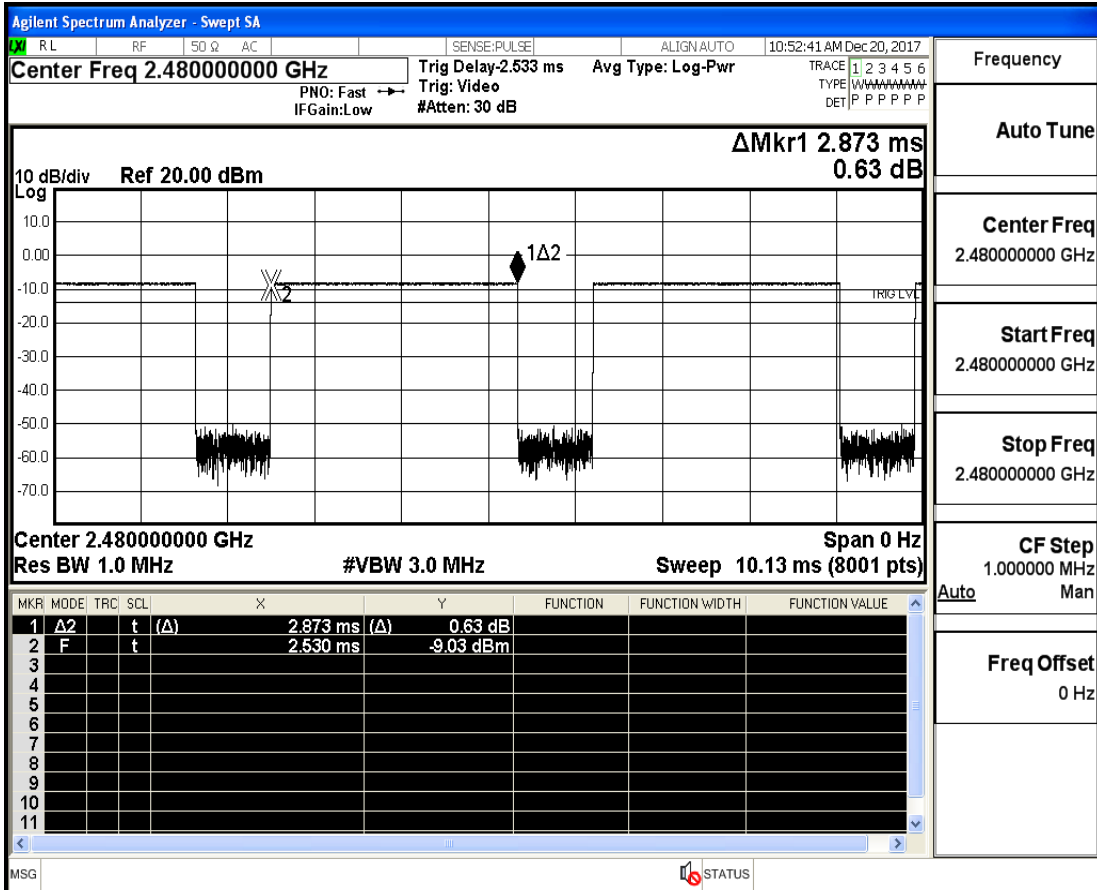


#### A.4.Dwell Time

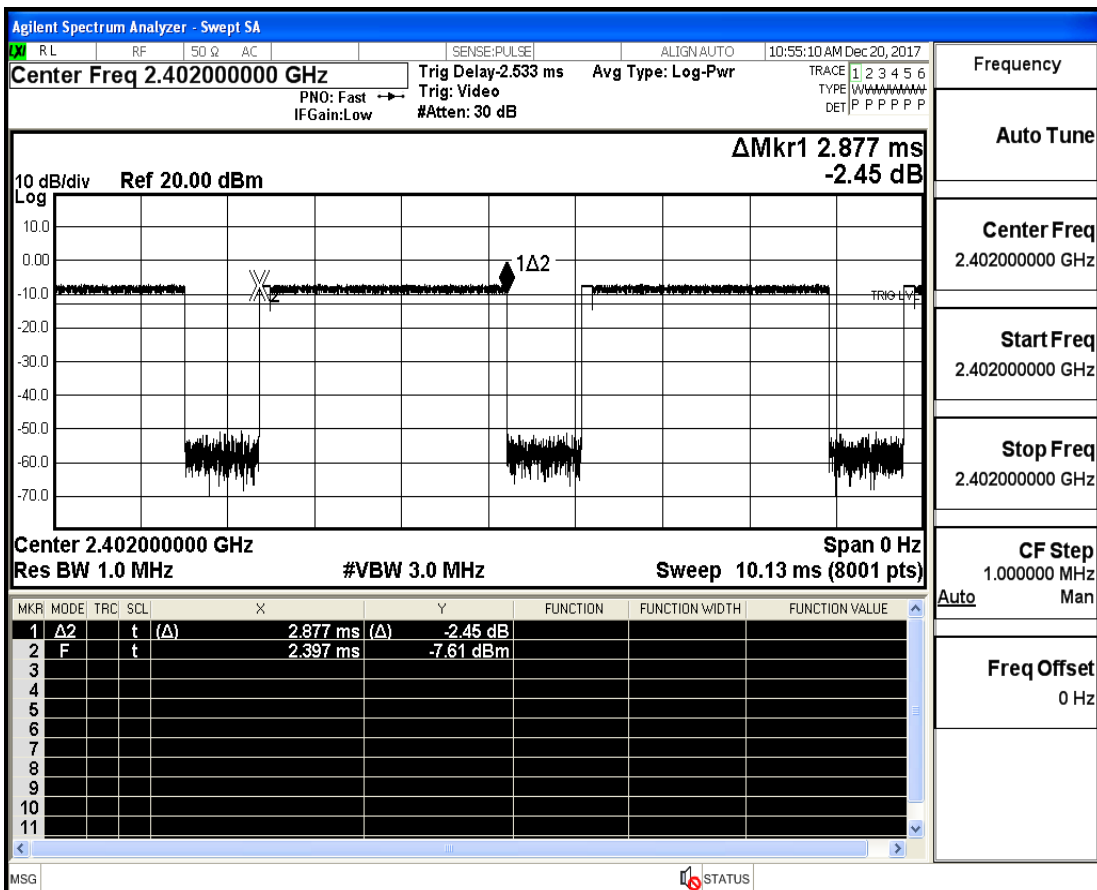
Test Mode	Test Channel	Burst Width[ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit[s]	Verdict
DH5	2402	2.87	106.7	0.306	0.4	PASS
DH5	2441	2.87	106.7	0.306	0.4	PASS
DH5	2480	2.87	106.7	0.306	0.4	PASS
2DH5	2402	2.88	106.7	0.307	0.4	PASS
2DH5	2441	2.88	106.7	0.307	0.4	PASS
2DH5	2480	2.88	106.7	0.307	0.4	PASS
3DH5	2402	2.88	106.7	0.307	0.4	PASS
3DH5	2441	2.88	106.7	0.307	0.4	PASS
3DH5	2480	2.88	106.7	0.307	0.4	PASS



## Dwell Time\_DH5\_2480



## Dwell Time\_2DH5\_2402



Dwell Time\_2DH5\_2441

Agilent Spectrum Analyzer - Swept SA									
RL	RF	50 Ω	AC		SENSE:PULSE	ALIGN AUTO	10:57:43 AM Dec 20, 2017		
<b>Center Freq 2.441000000 GHz</b>					Trig Delay-2.533 ms	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE WWWWWWWW DET P P P P P P		
PNO: Fast → IFGain:Low					Trig: Video	#Atten: 30 dB			
<b>10 dB/div Ref 20.00 dBm</b> <span style="float: right;"><b>ΔMkr1 2.877 ms -2.42 dB</b></span>									
<b>Center 2.441000000 GHz Span 0 Hz</b> <b>Res BW 1.0 MHz #VBW 3.0 MHz Sweep 10.13 ms (8001 pts)</b>									
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	
1	Δ2	t	(Δ)	2.877 ms	(Δ) -2.42 dB				
2	F	t		1.293 ms	-9.17 dBm				
3									
4									
5									
6									
7									
8									
9									
10									
11									
MSG STATUS									

**Frequency**

---

**Auto Tune**

---

**Center Freq**  
2.441000000 GHz

---

**Start Freq**  
2.441000000 GHz

---

**Stop Freq**  
2.441000000 GHz

---

**CF Step**  
1.000000 MHz  
**Man**

---

**Freq Offset**  
0 Hz

---

Dwell Time\_2DH5\_2480

Agilent Spectrum Analyzer - Swept SA									
RL	RF	50 Ω	AC		SENSE:PULSE	ALIGN AUTO	10:59:23 AM Dec 20, 2017		
<b>Center Freq 2.480000000 GHz</b>					Trig Delay-2.533 ms	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE WWWWWWWW DET P P P P P P		
PNO: Fast → IFGain:Low					Trig: Video	#Atten: 30 dB			
<b>10 dB/div Ref 20.00 dBm</b> <span style="float: right;"><b>ΔMkr1 2.877 ms -2.52 dB</b></span>									
<b>Center 2.480000000 GHz Span 0 Hz</b> <b>Res BW 1.0 MHz #VBW 3.0 MHz Sweep 10.13 ms (8001 pts)</b>									
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	
1	Δ2	t	(Δ)	2.877 ms	(Δ) -2.52 dB				
2	F	t		83.60 μs	-9.75 dBm				
3									
4									
5									
6									
7									
8									
9									
10									
11									
MSG STATUS									

**Frequency**

---

**Auto Tune**

---

**Center Freq**  
2.480000000 GHz

---

**Start Freq**  
2.480000000 GHz

---

**Stop Freq**  
2.480000000 GHz

---

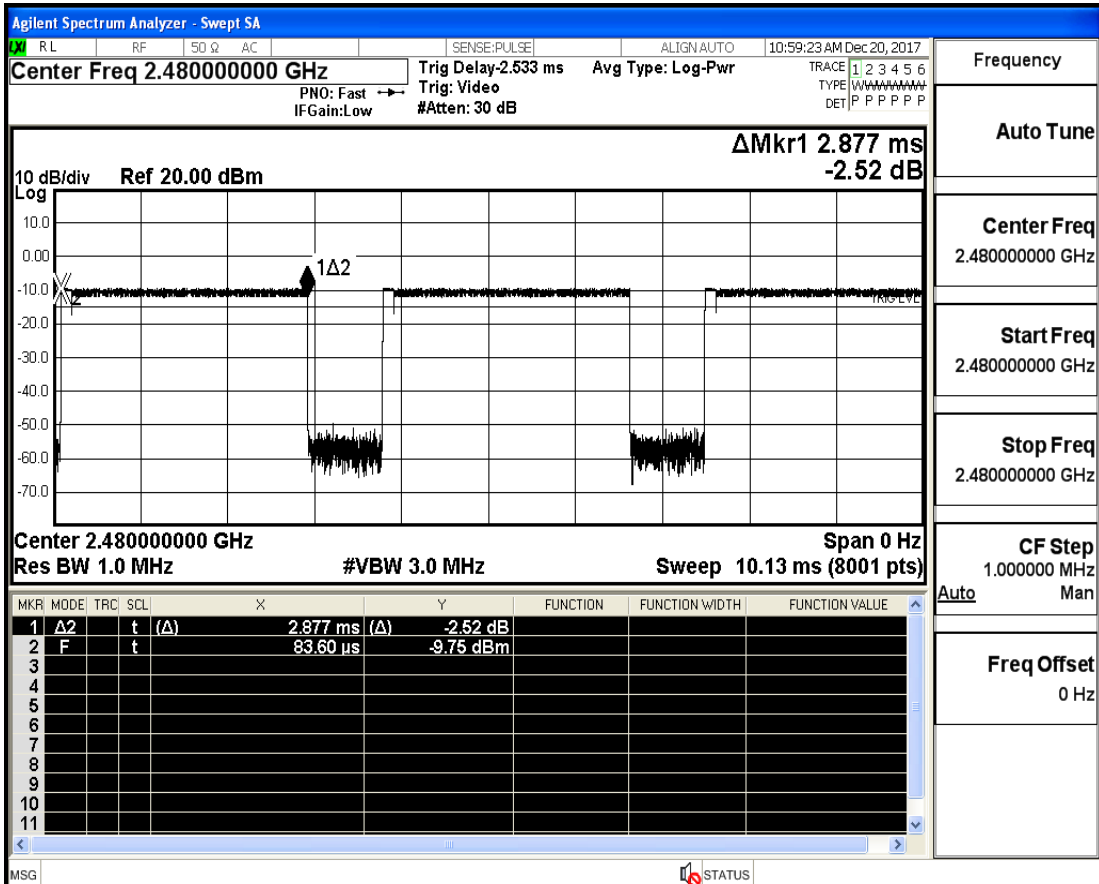
**CF Step**  
1.000000 MHz  
**Man**

---

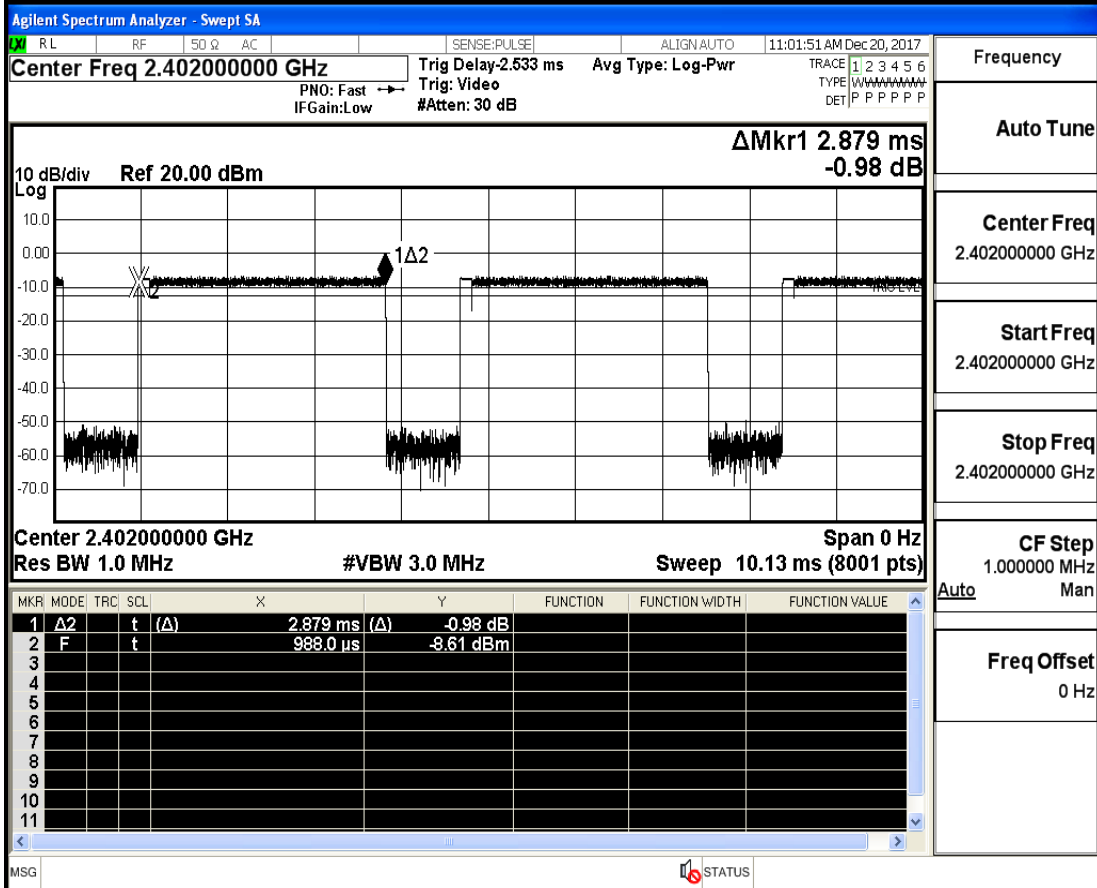
**Freq Offset**  
0 Hz

---

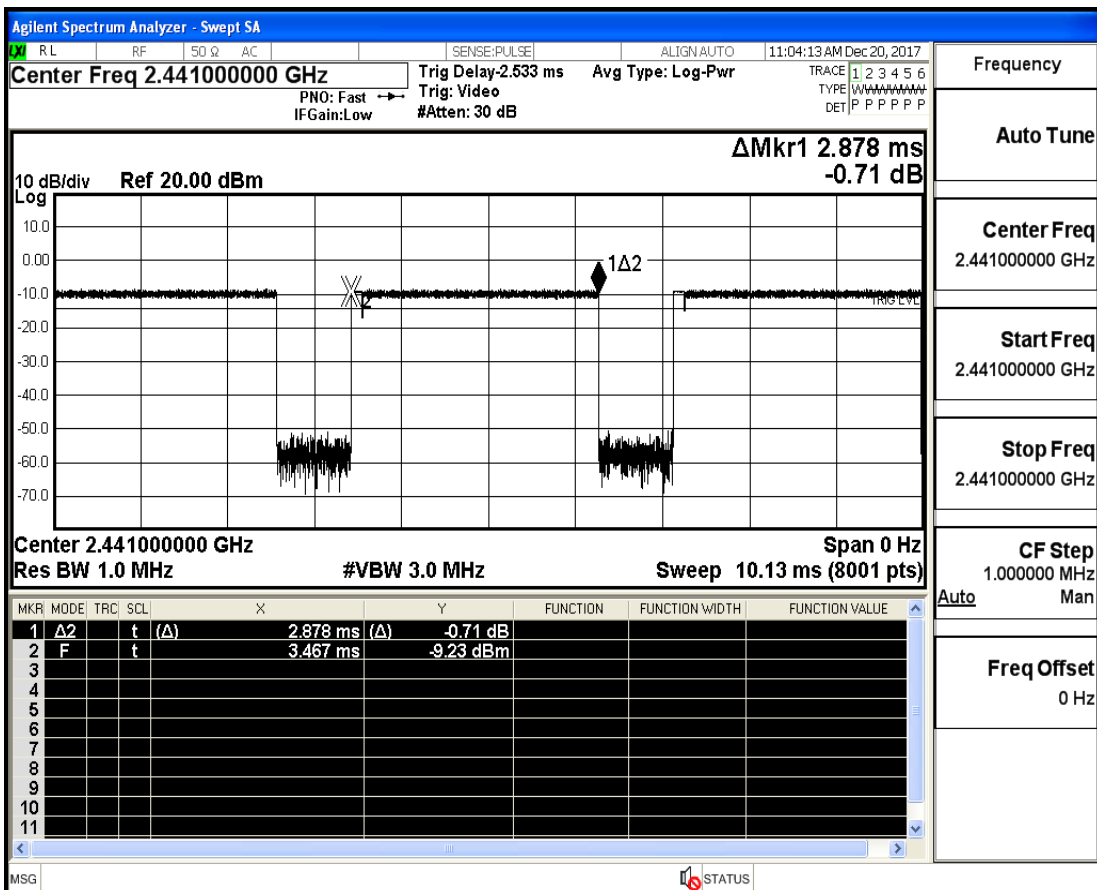
Dwell Time\_2DH5\_2480



## Dwell Time\_3DH5\_2402



## Dwell Time\_3DH5\_2441



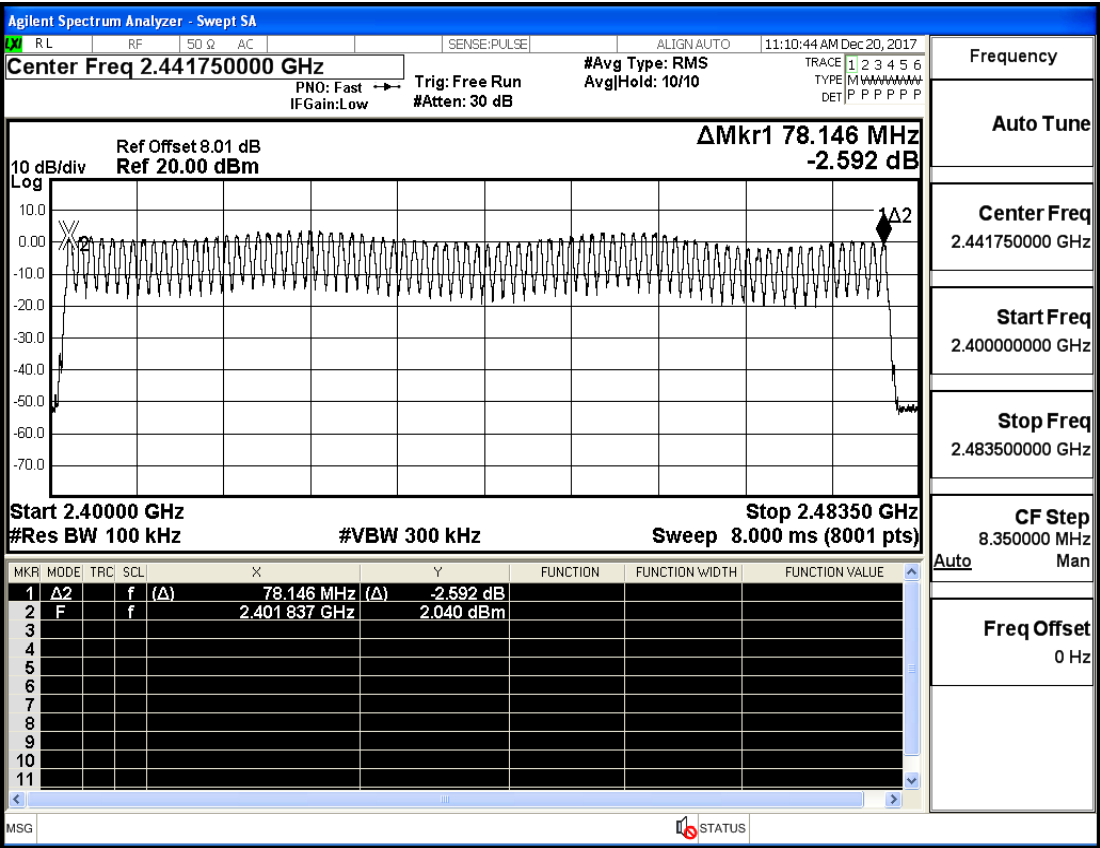




#### A.5.Hopping Channel Number

Test Mode	Test Channel	Number of Hopping Channel[N]	Limit[N]	Verdict
DH5	2402	79	$\geq 15$	PASS
2DH5	2402	79	$\geq 15$	PASS
3DH5	2402	79	$\geq 15$	PASS

Hopping Channel Number\_DH5\_2402



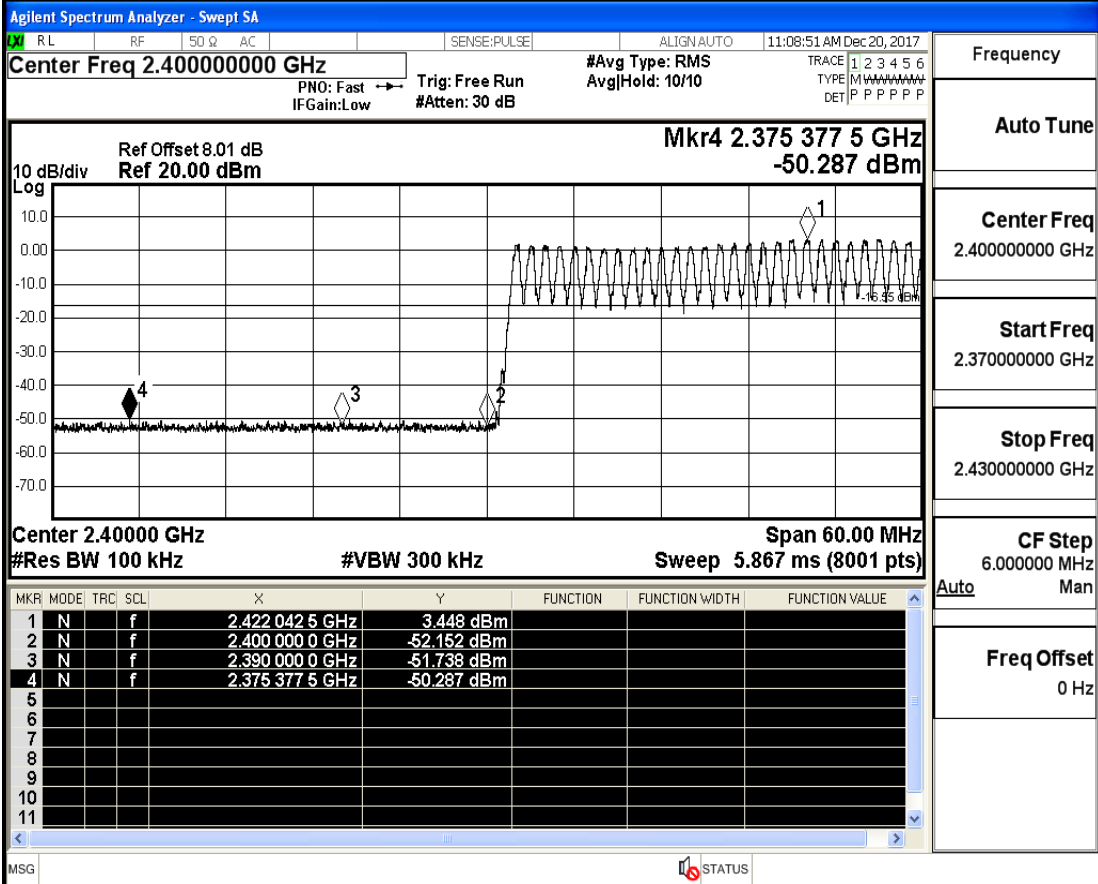
Hopping Channel Number\_2DH5\_2402



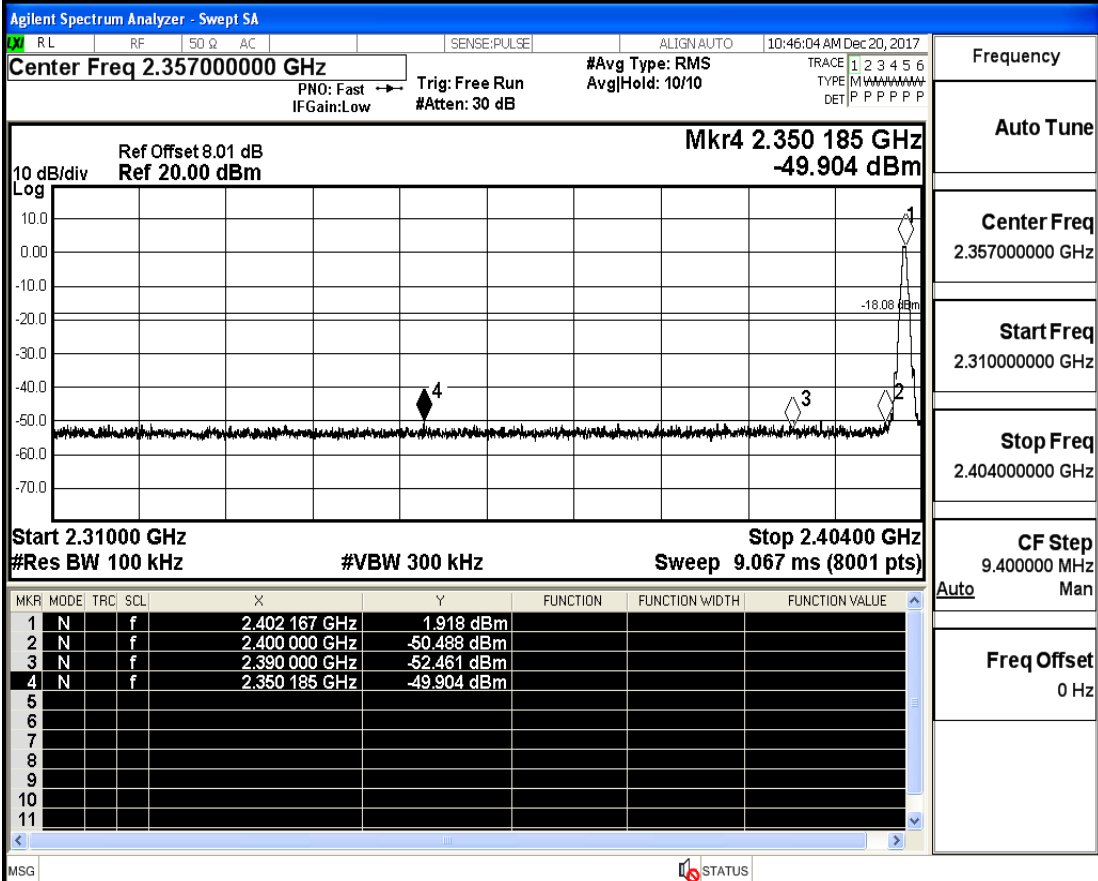
**A.6.Band-edge for RF Conducted Emissions**

Test Mode	Test Channel	Hopping	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit[dBm]	Verdict
DH5	2402	On	3.448	-50.287	-16.55	PASS
DH5	2402	Off	1.918	-49.904	-18.08	PASS
DH5	2480	On	3.091	-49.576	-16.91	PASS
DH5	2480	Off	-0.449	-50.483	-20.45	PASS
2DH5	2402	On	2.195	-49.942	-17.81	PASS
2DH5	2402	Off	0.670	-49.729	-19.33	PASS
2DH5	2480	On	1.259	-49.919	-18.74	PASS
2DH5	2480	Off	-1.479	-49.549	-21.48	PASS
3DH5	2402	On	2.154	-49.884	-17.85	PASS
3DH5	2402	Off	0.417	-49.727	-19.58	PASS
3DH5	2480	On	1.667	-49.682	-18.33	PASS
3DH5	2480	Off	-1.818	-50.159	-21.82	PASS

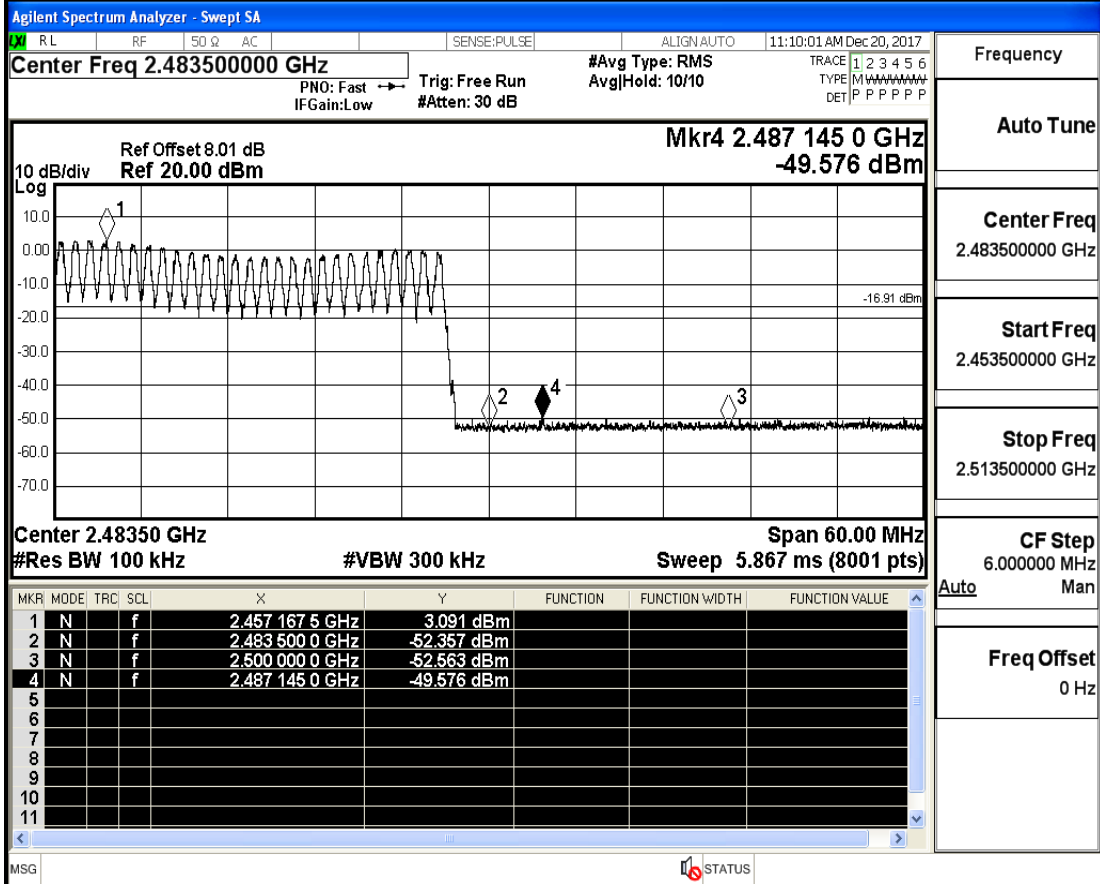
# Band-edge for RF Conducted Emissions\_DH5\_2402\_Hopping On



# Band-edge for RF Conducted Emissions\_DH5\_2402\_Hopping Off



# Band-edge for RF Conducted Emissions\_DH5\_2480\_Hopping On



Frequency

Auto Tune

Center Freq  
2.483500000 GHz

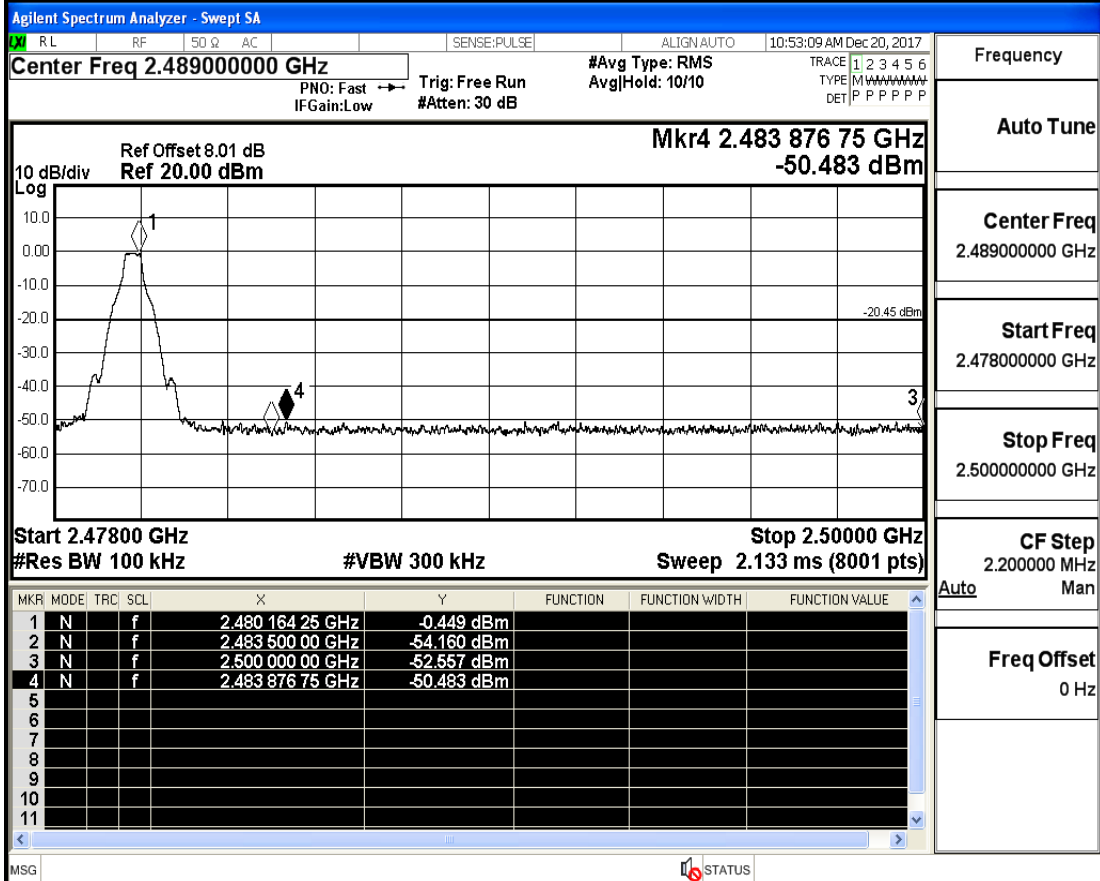
Start Freq  
2.453500000 GHz

Stop Freq  
2.513500000 GHz

CF Step  
6.000000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_DH5\_2480\_Hopping Off



Frequency

Auto Tune

Center Freq  
2.489000000 GHz

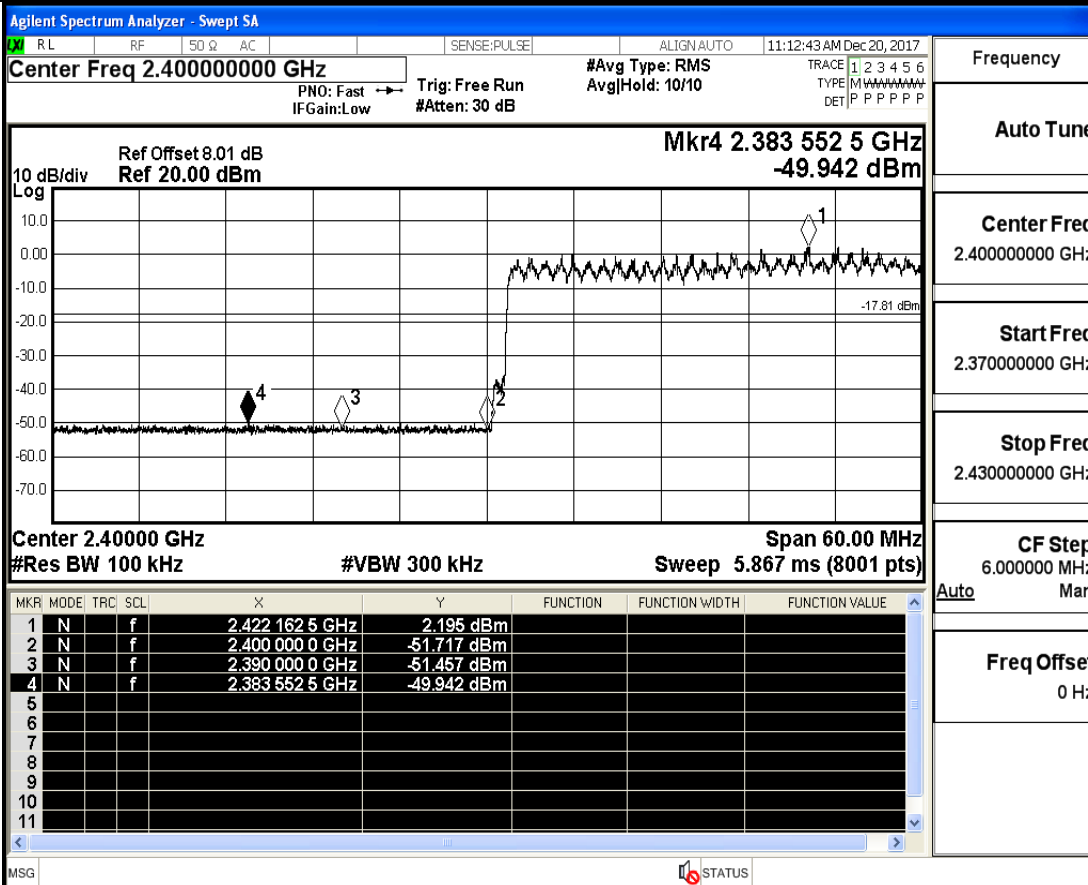
Start Freq  
2.478000000 GHz

Stop Freq  
2.500000000 GHz

CF Step  
2.200000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_2DH5\_2402\_Hopping On



Frequency

Auto Tune

Center Freq  
2.40000000 GHz

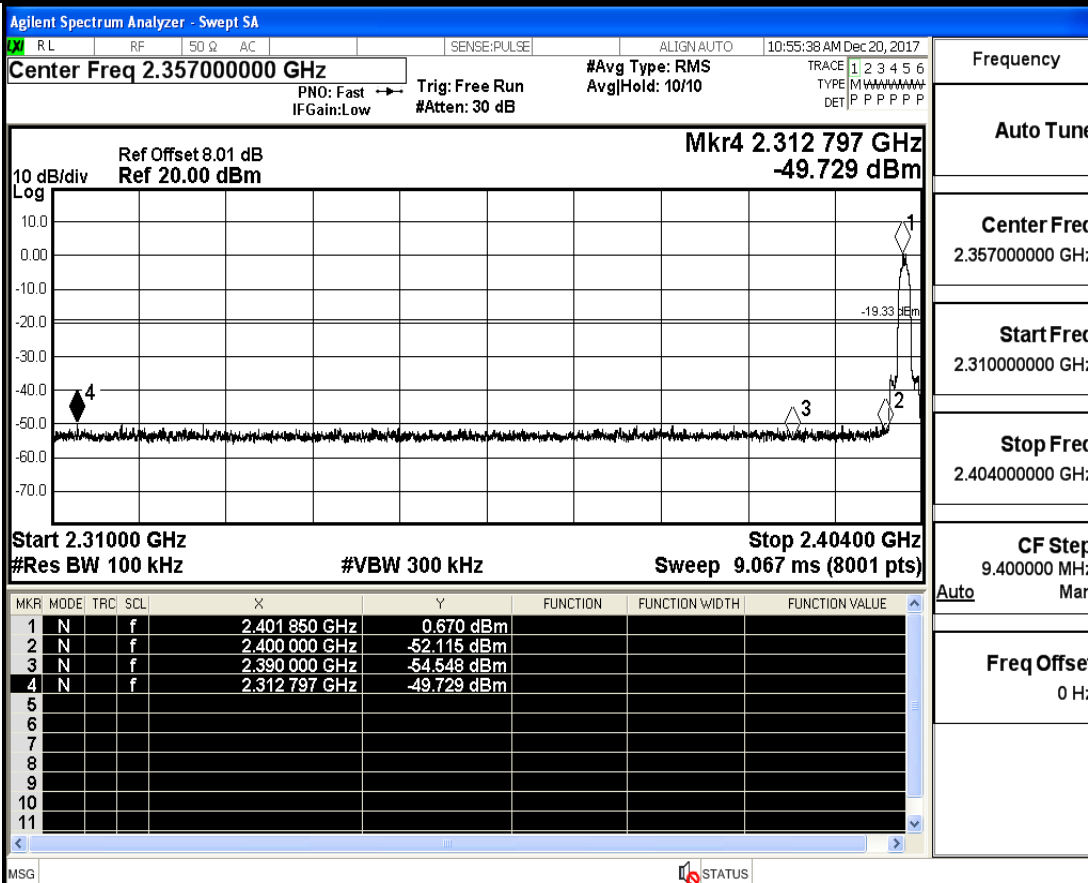
Start Freq  
2.37000000 GHz

Stop Freq  
2.43000000 GHz

CF Step  
6.000000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_2DH5\_2402\_Hopping Off



Frequency

Auto Tune

Center Freq  
2.35700000 GHz

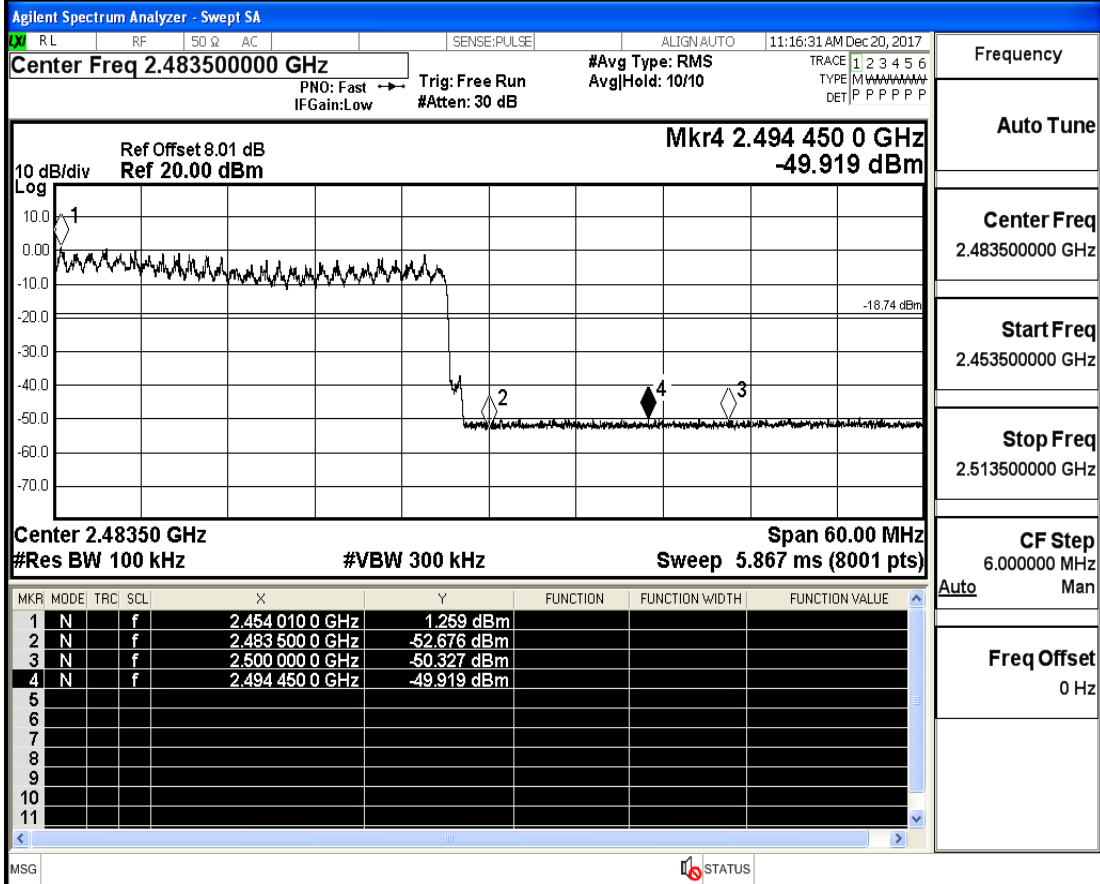
Start Freq  
2.31000000 GHz

Stop Freq  
2.40400000 GHz

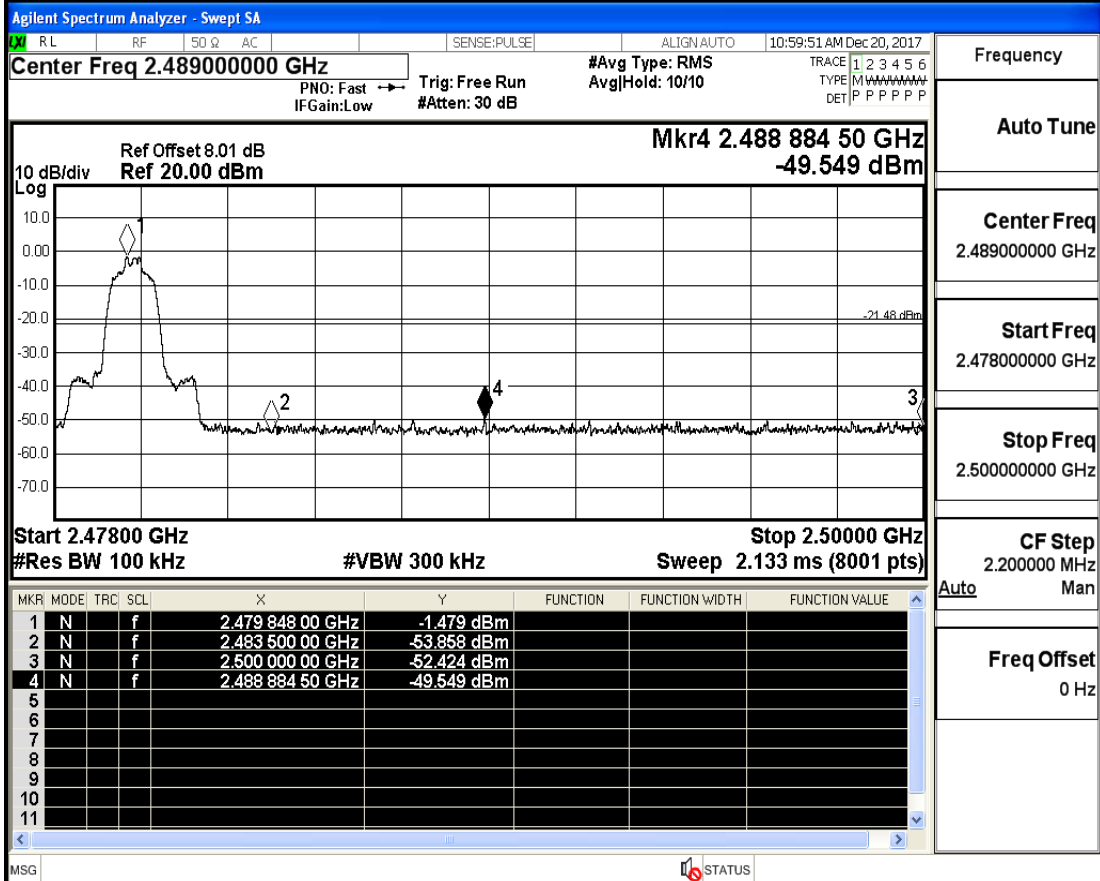
CF Step  
9.400000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_2DH5\_2480\_Hopping On

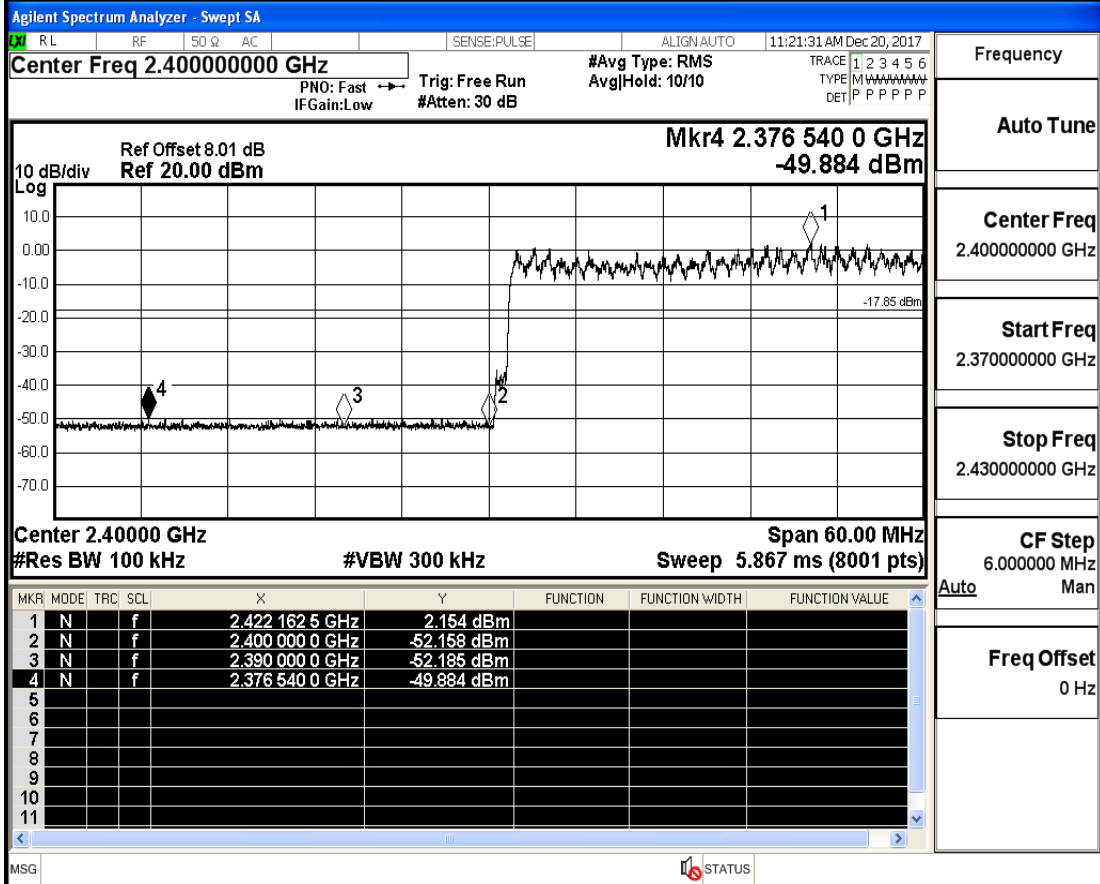


# Band-edge for RF Conducted Emissions\_2DH5\_2480\_Hopping Off





# Band-edge for RF Conducted Emissions\_3DH5\_2402\_Hopping On



Frequency

Auto Tune

Center Freq  
2.40000000 GHz

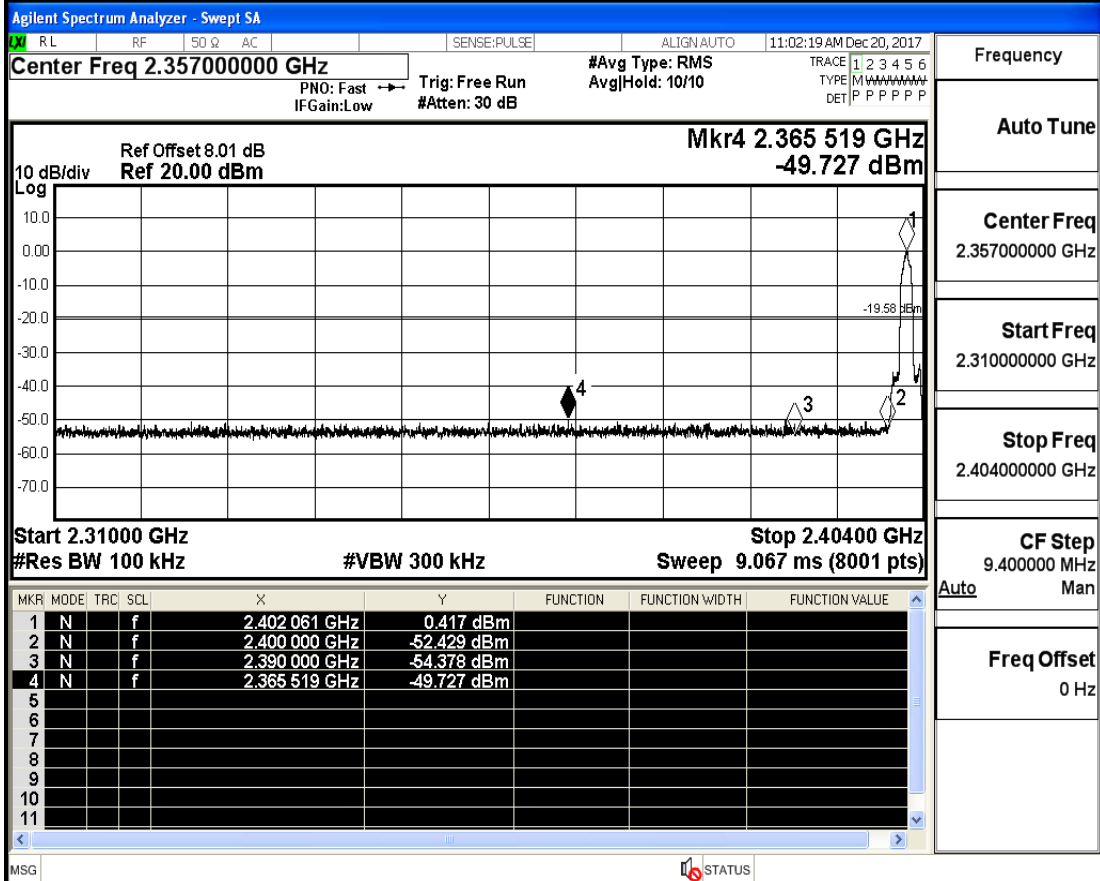
Start Freq  
2.37000000 GHz

Stop Freq  
2.43000000 GHz

CF Step  
6.000000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_3DH5\_2402\_Hopping Off



Frequency

Auto Tune

Center Freq  
2.35700000 GHz

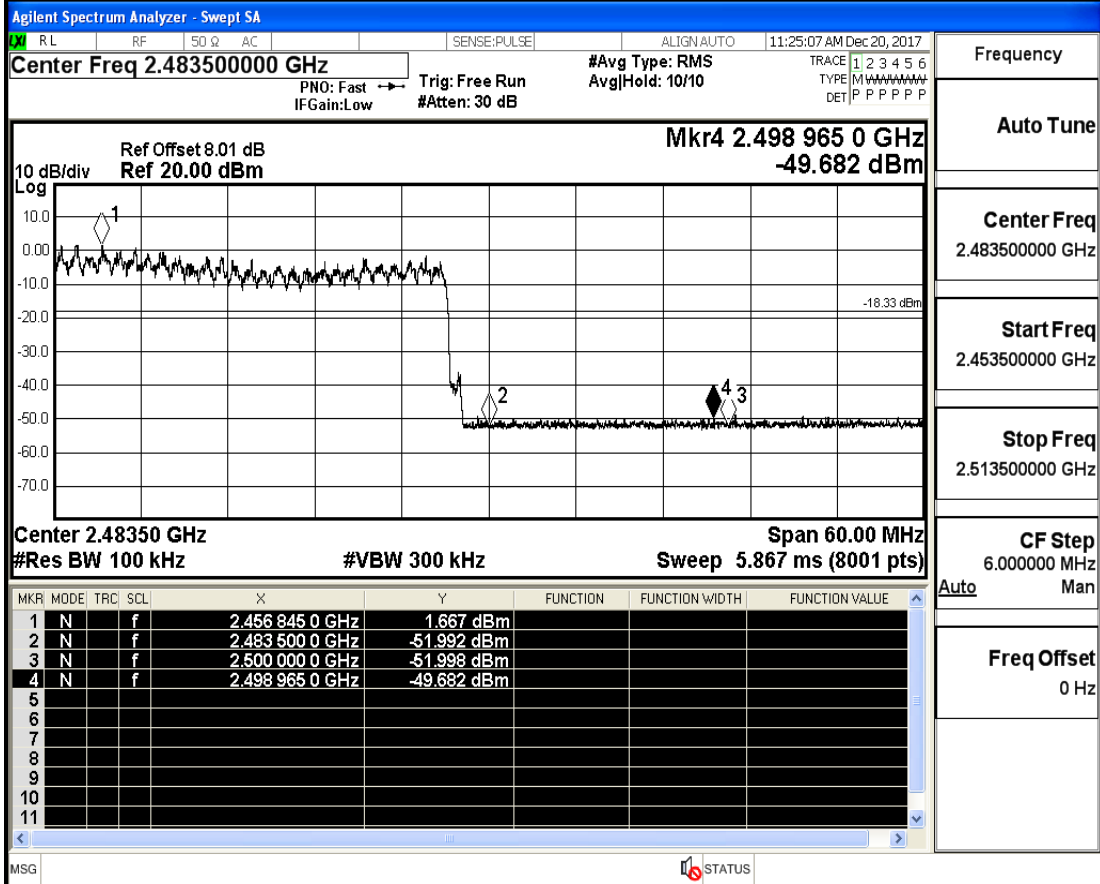
Start Freq  
2.31000000 GHz

Stop Freq  
2.40400000 GHz

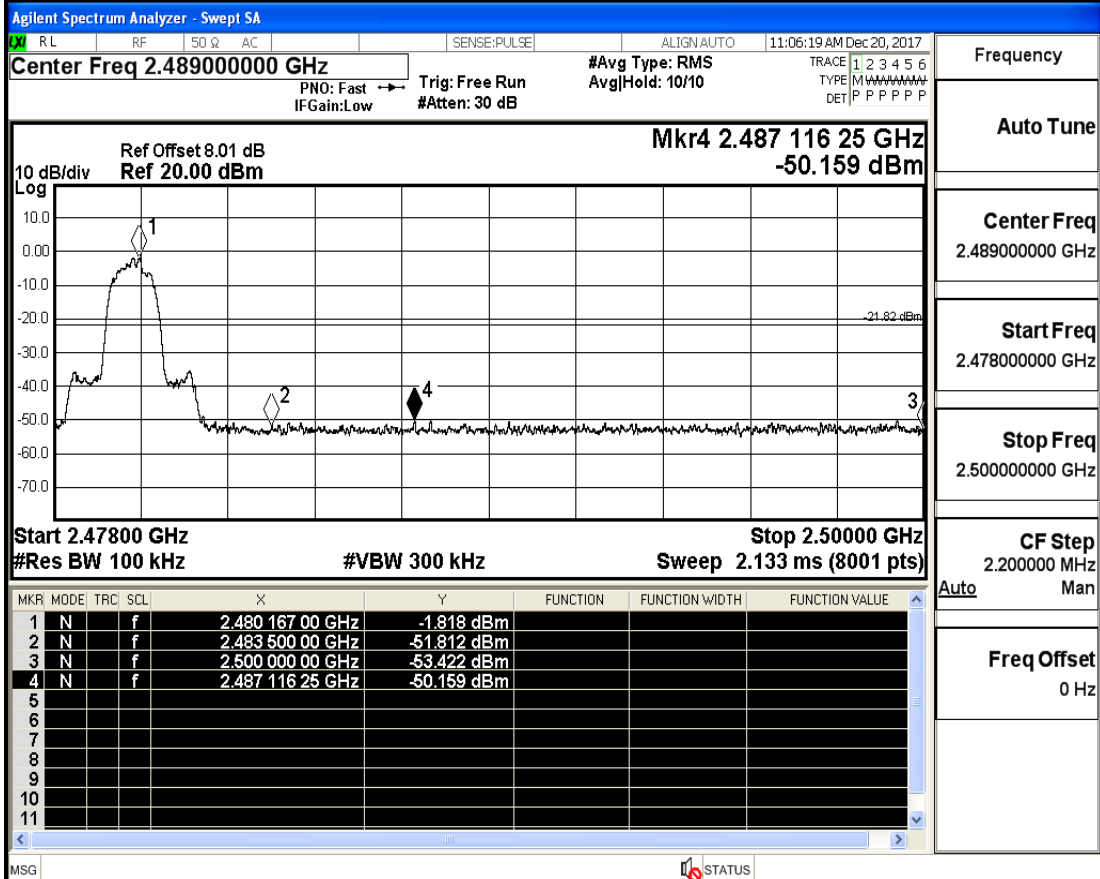
CF Step  
9.400000 MHz  
Auto Man

Freq Offset  
0 Hz

# Band-edge for RF Conducted Emissions\_3DH5\_2480\_Hopping On



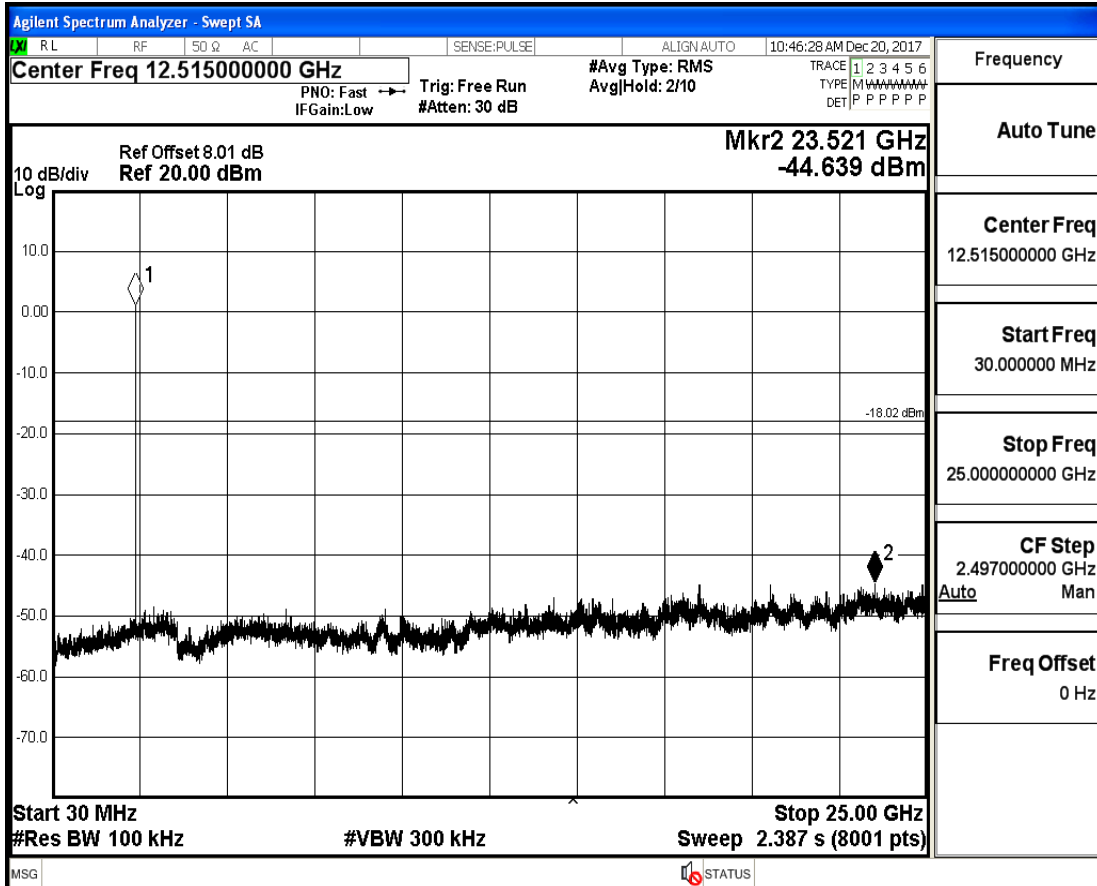
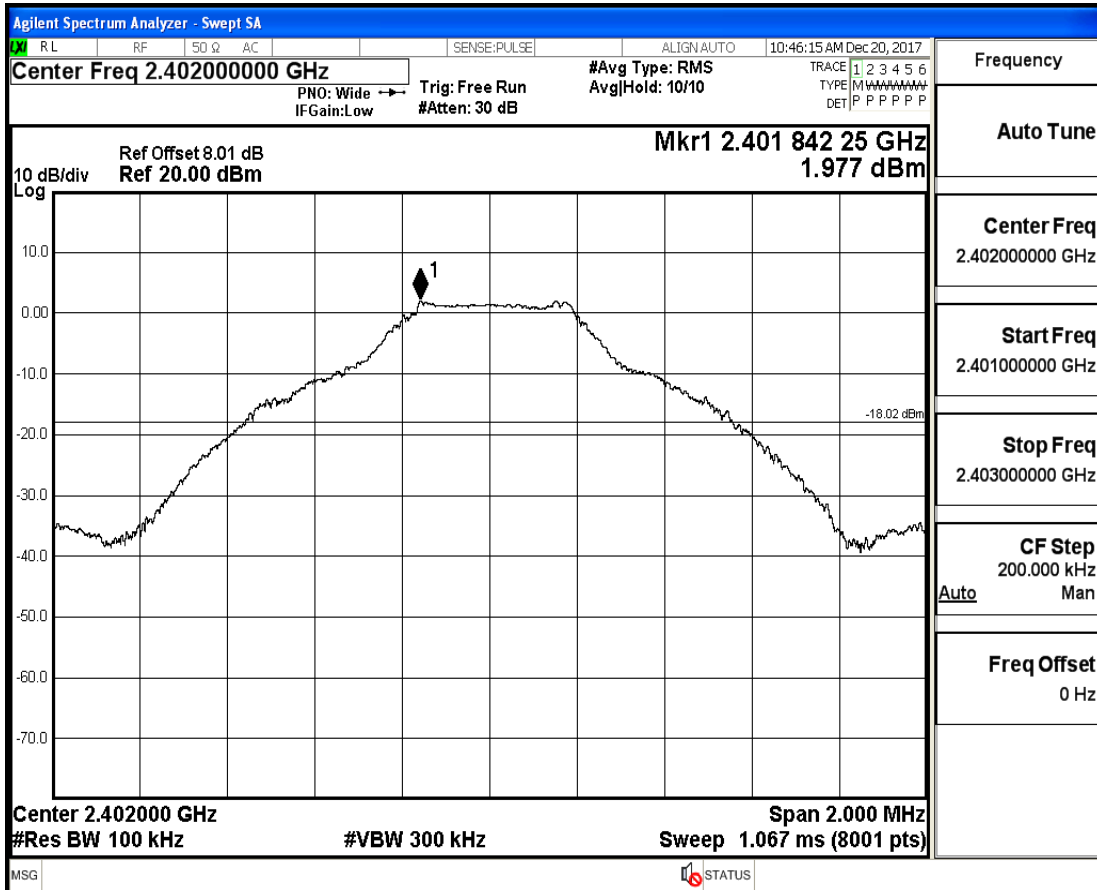
# Band-edge for RF Conducted Emissions\_3DH5\_2480\_Hopping Off



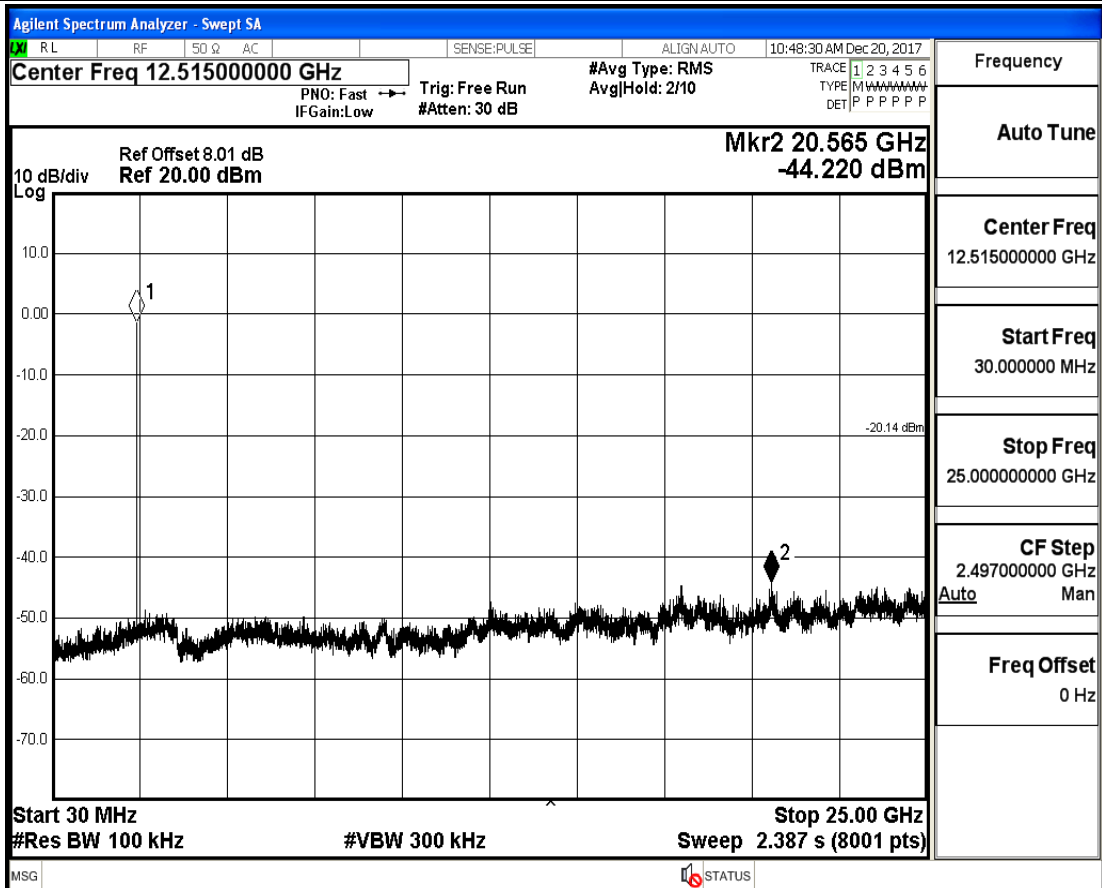
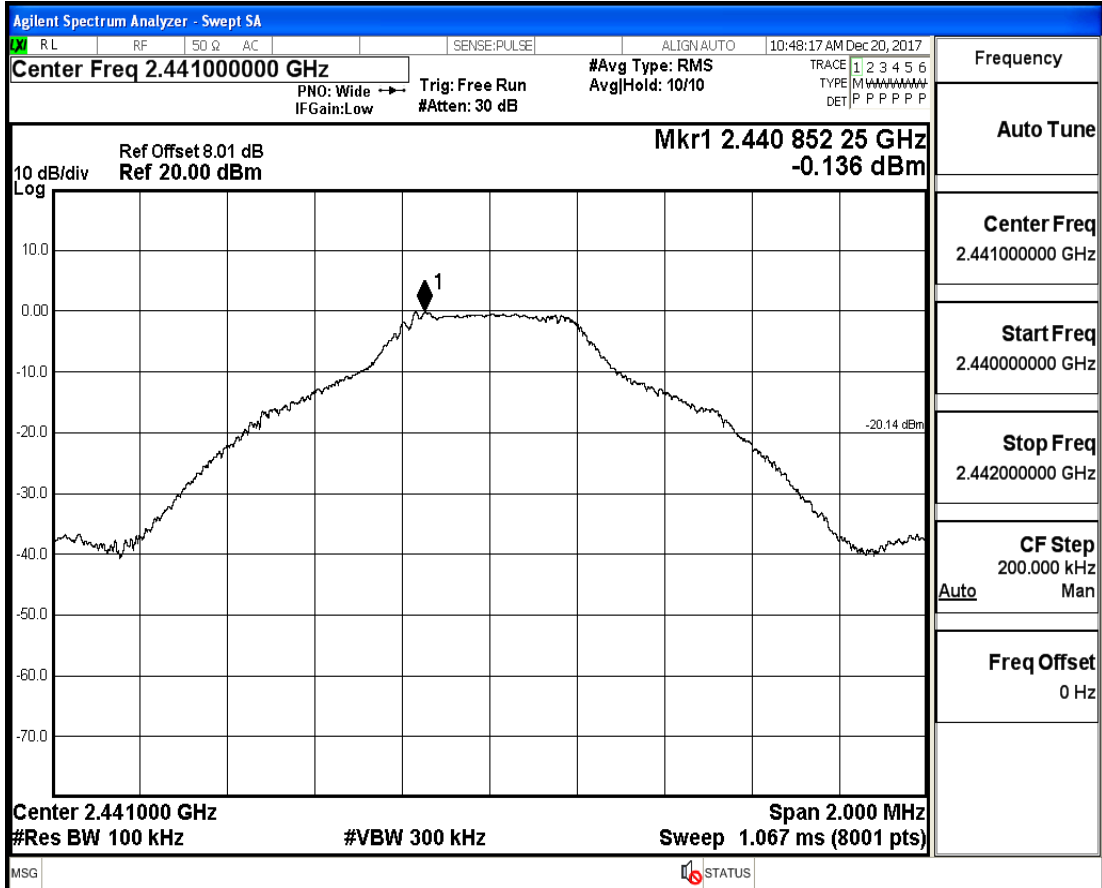
**A.7.RF Conducted Spurious Emissions**

Test Mode	Test Channel	StartFre [MHz]	StopFre [MHz]	RBW [kHz]	VBW [kHz]	Pref[dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
DH5	2402	30	25000	100	300	1.977	-44.639	<- 18.023	PASS
DH5	2441	30	25000	100	300	-0.136	-44.220	<- 20.136	PASS
DH5	2480	30	25000	100	300	-0.264	-45.150	<- 20.264	PASS
2DH5	2402	30	25000	100	300	0.49	-44.334	<-19.51	PASS
2DH5	2441	30	25000	100	300	-1.325	-44.829	<- 21.325	PASS
2DH5	2480	30	25000	100	300	-1.552	-44.323	<- 21.552	PASS
3DH5	2402	30	25000	100	300	0.632	-45.358	<- 19.368	PASS
3DH5	2441	30	25000	100	300	-1.26	-44.789	<-21.26	PASS
3DH5	2480	30	25000	100	300	-1.73	-44.439	<-21.73	PASS

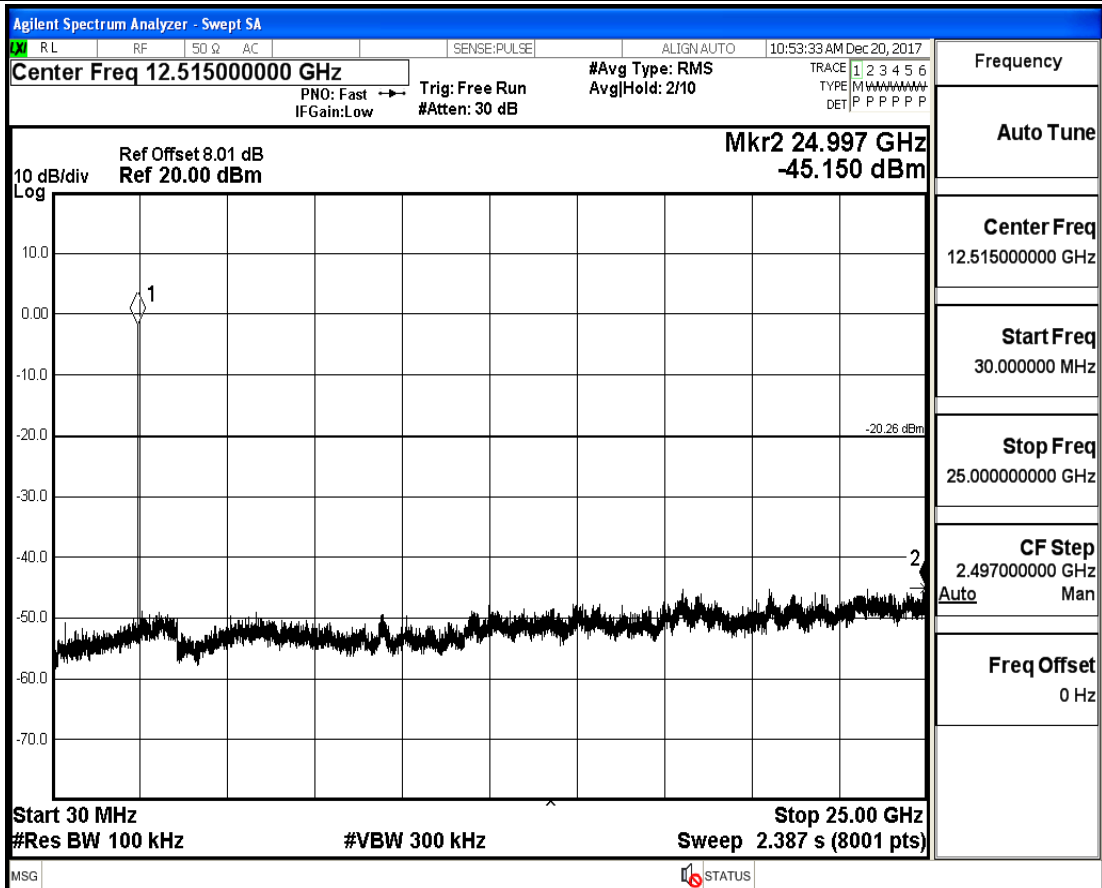
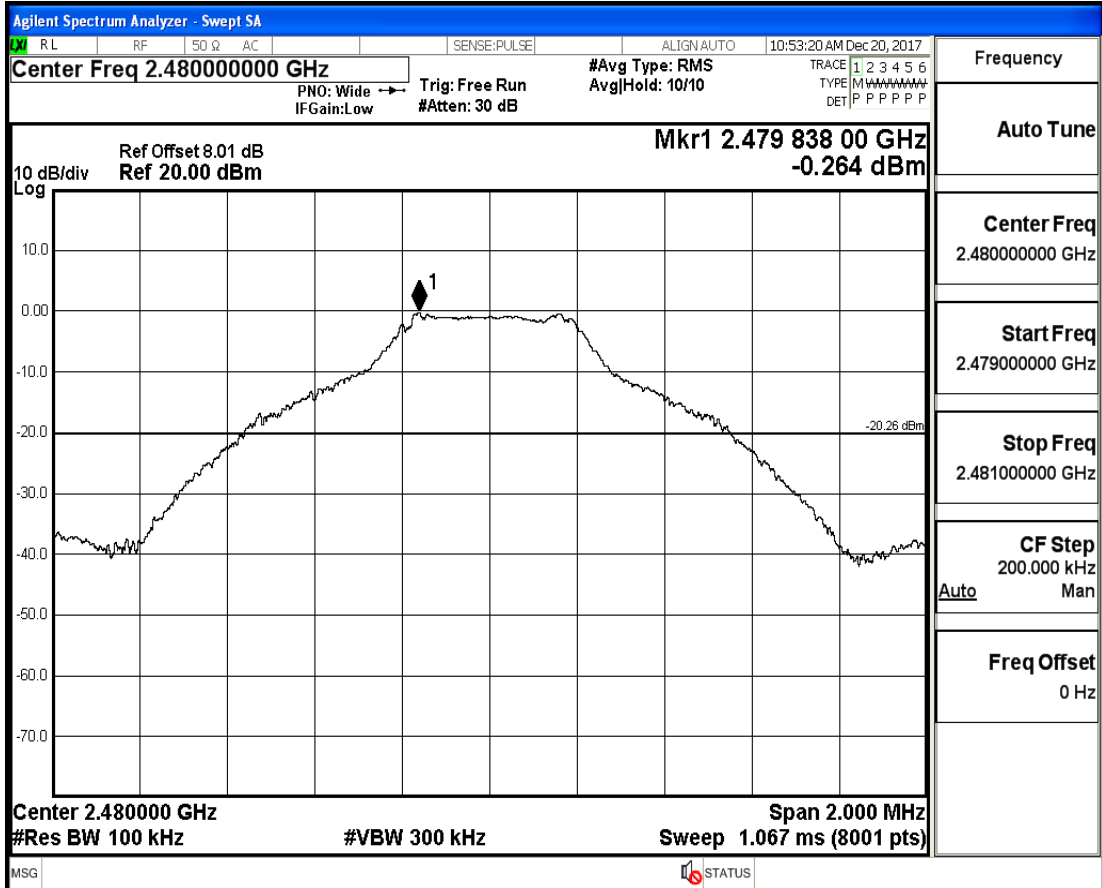
# RF Conducted Spurious Emissions\_DH5\_2402



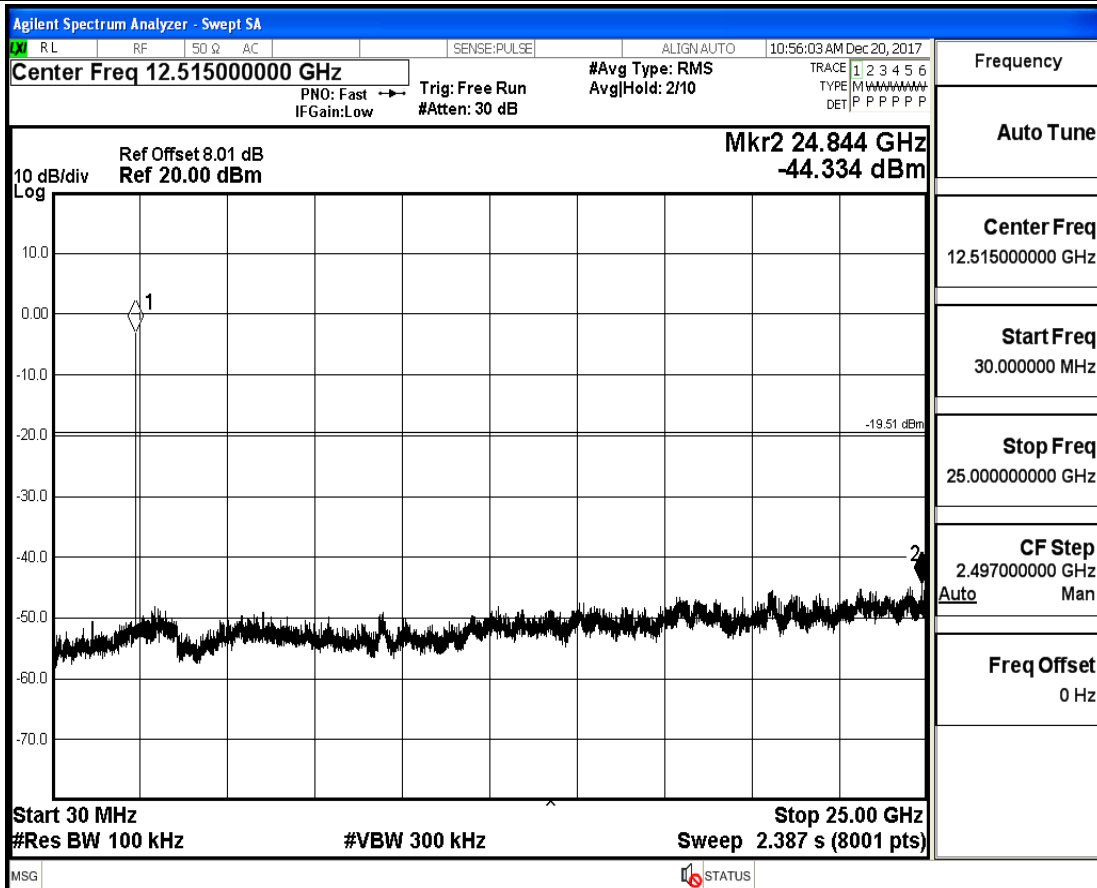
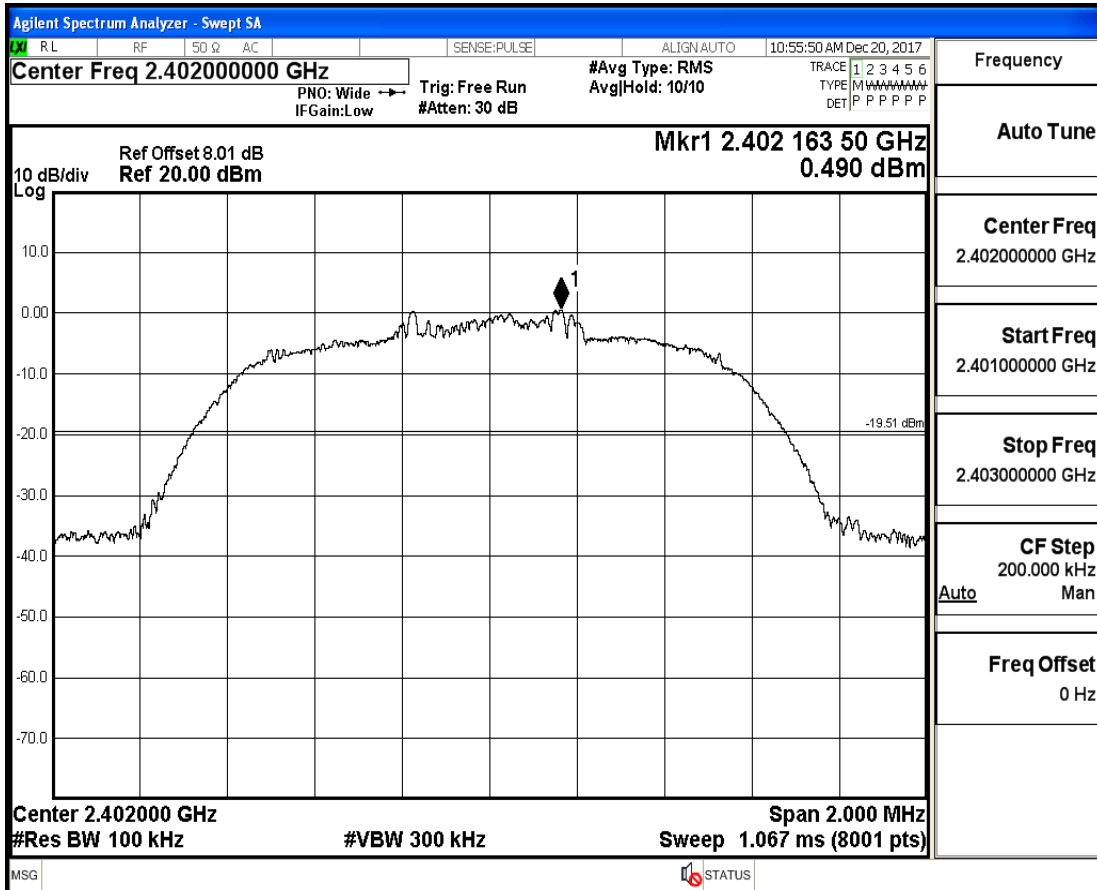
# RF Conducted Spurious Emissions\_DH5\_2441



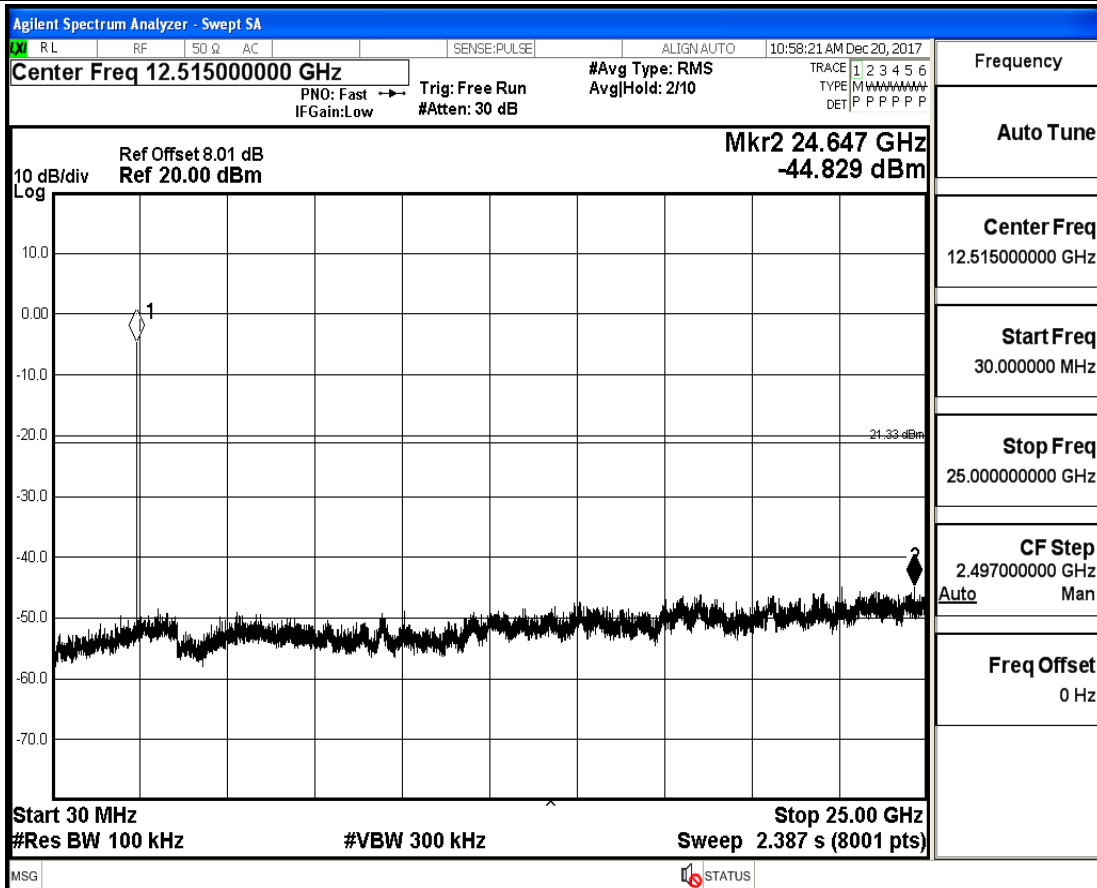
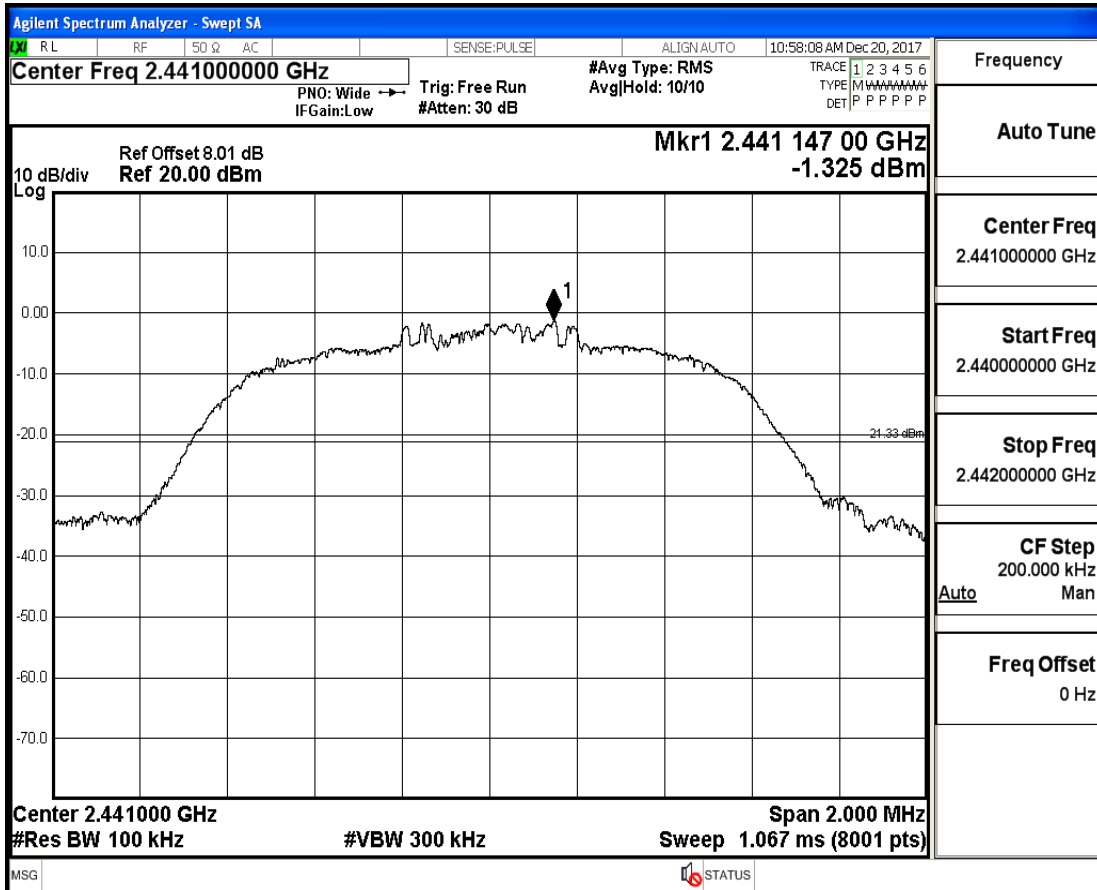
# RF Conducted Spurious Emissions\_DH5\_2480



# RF Conducted Spurious Emissions\_2DH5\_2402

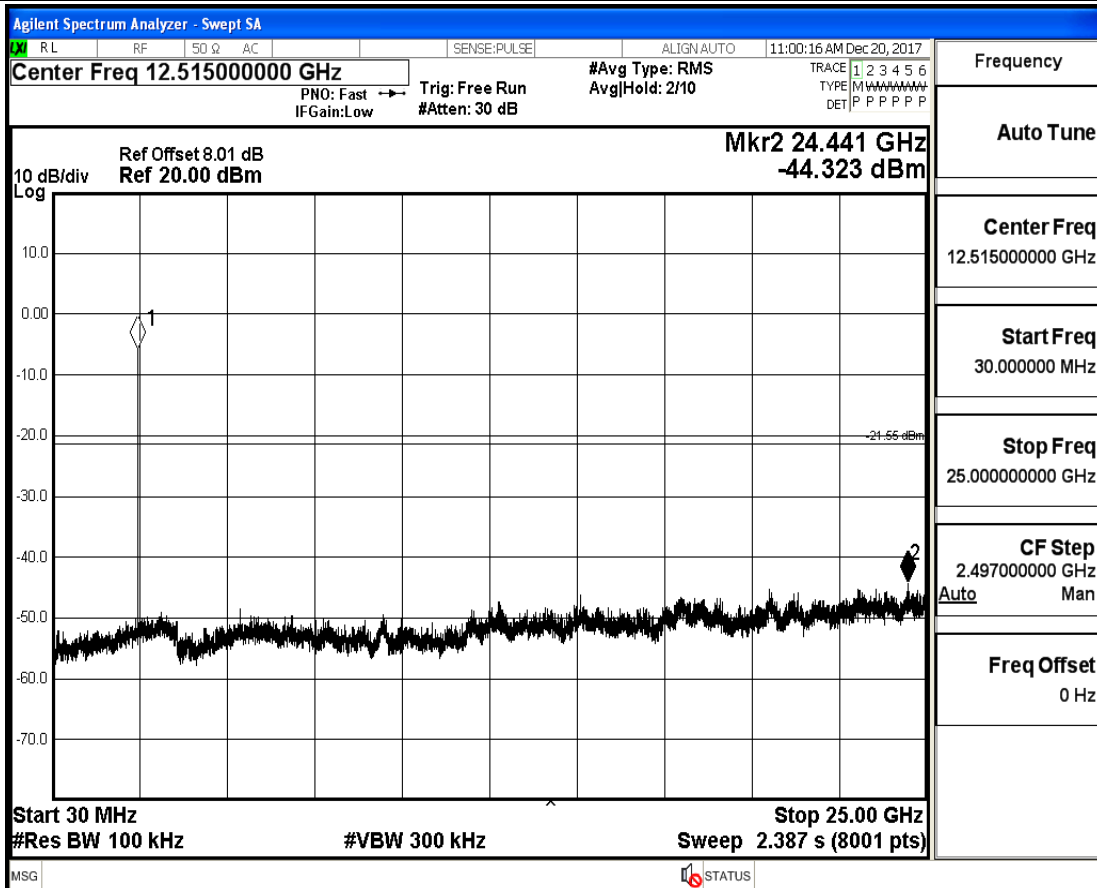
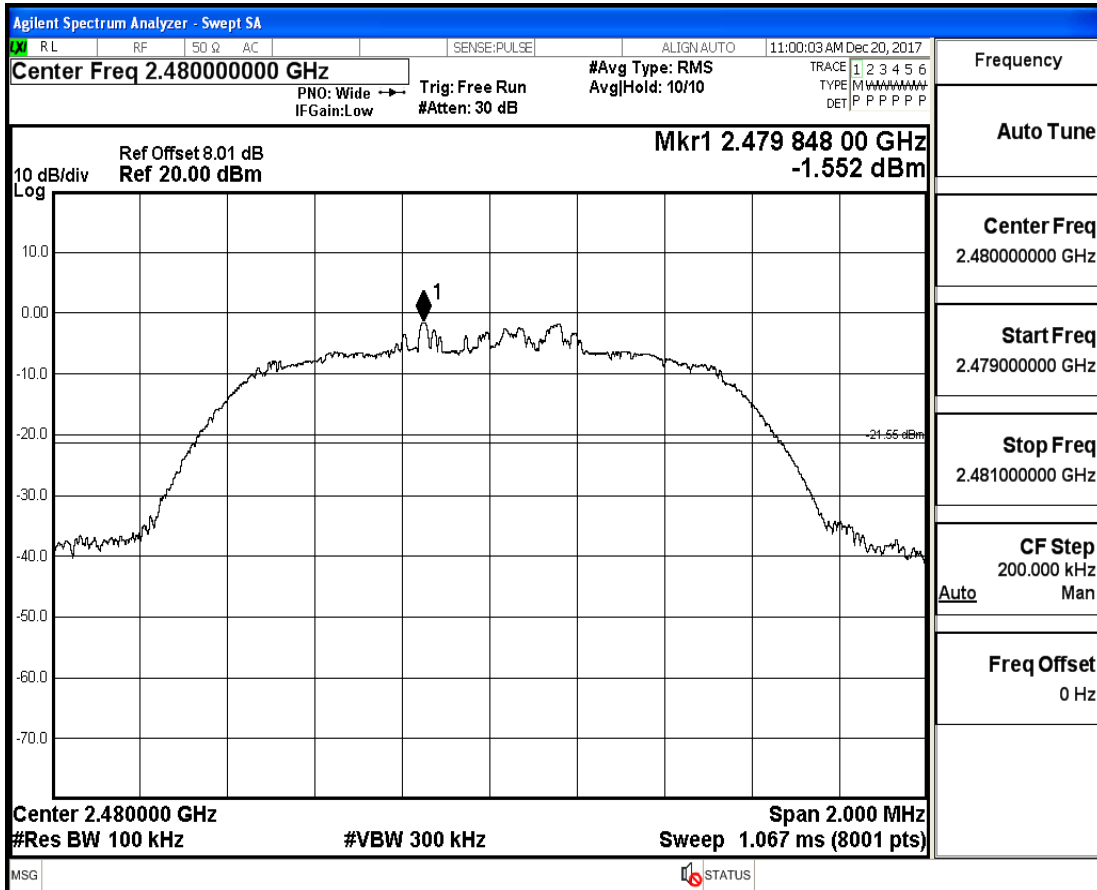


# RF Conducted Spurious Emissions\_2DH5\_2441

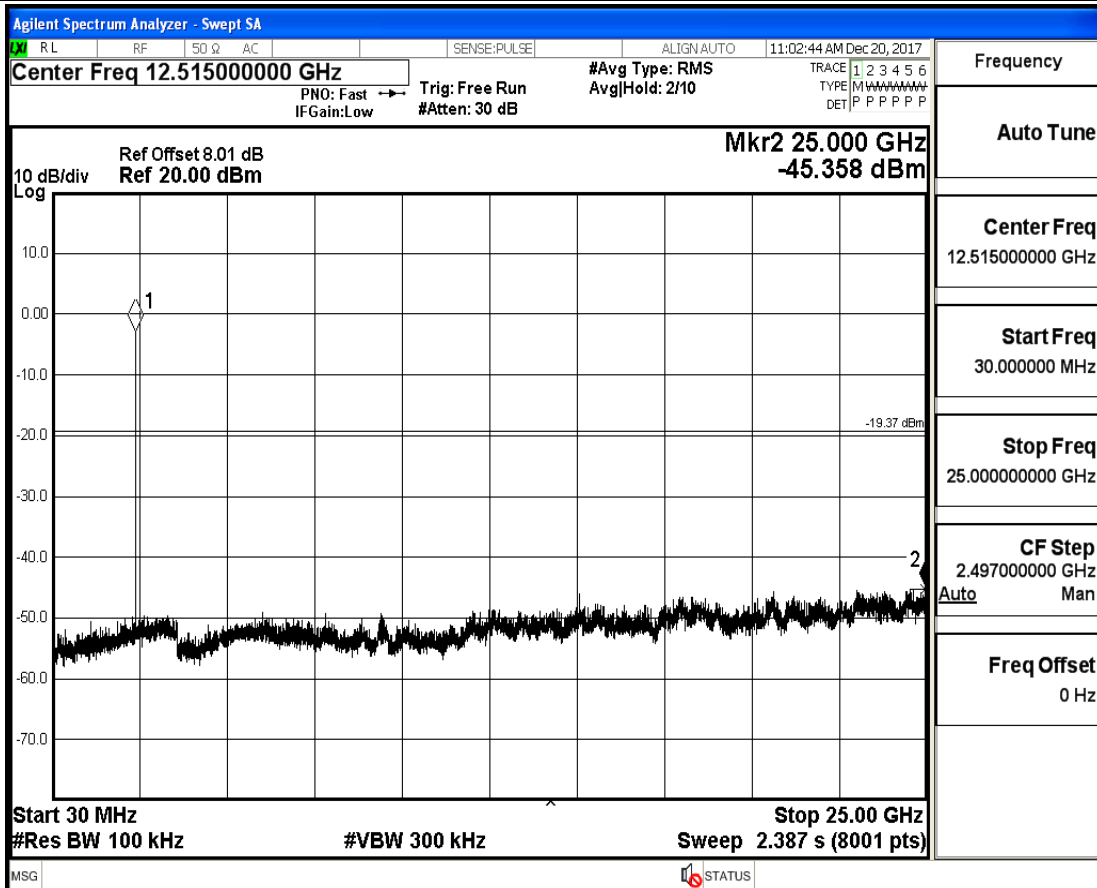
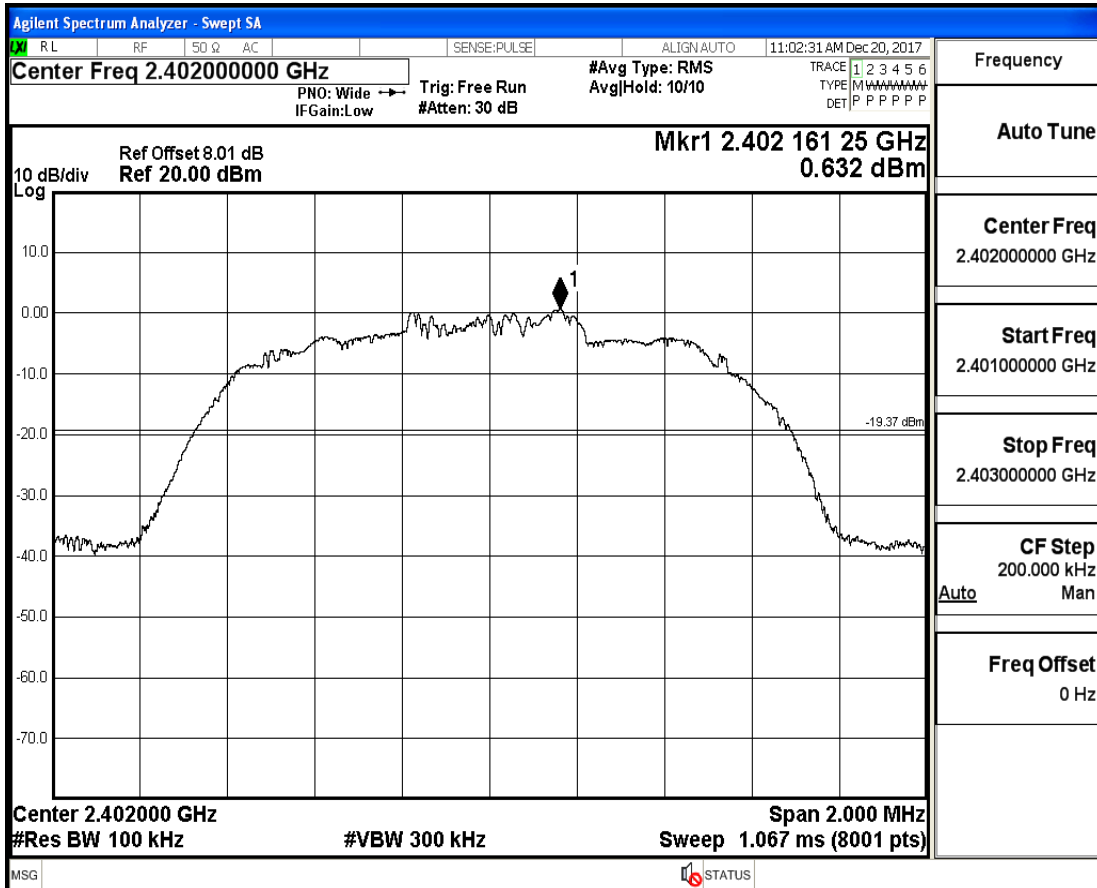




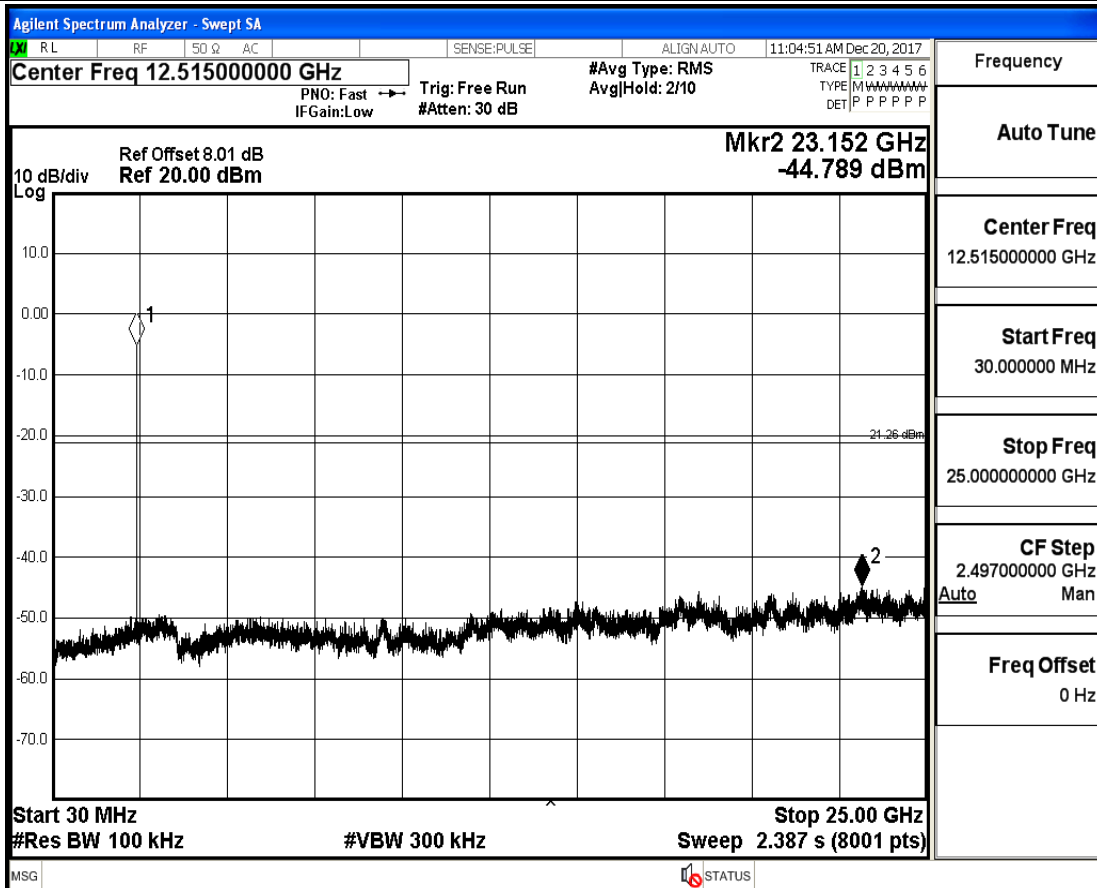
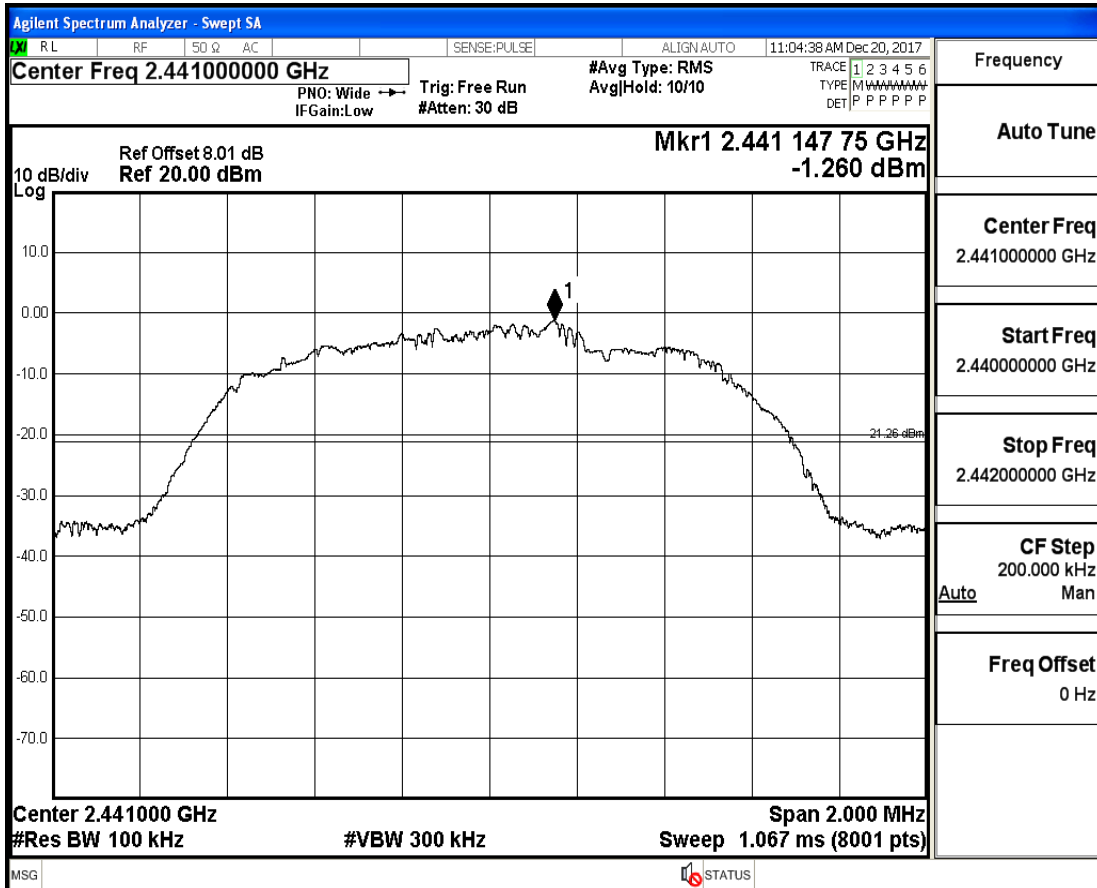
# RF Conducted Spurious Emissions\_2DH5\_2480



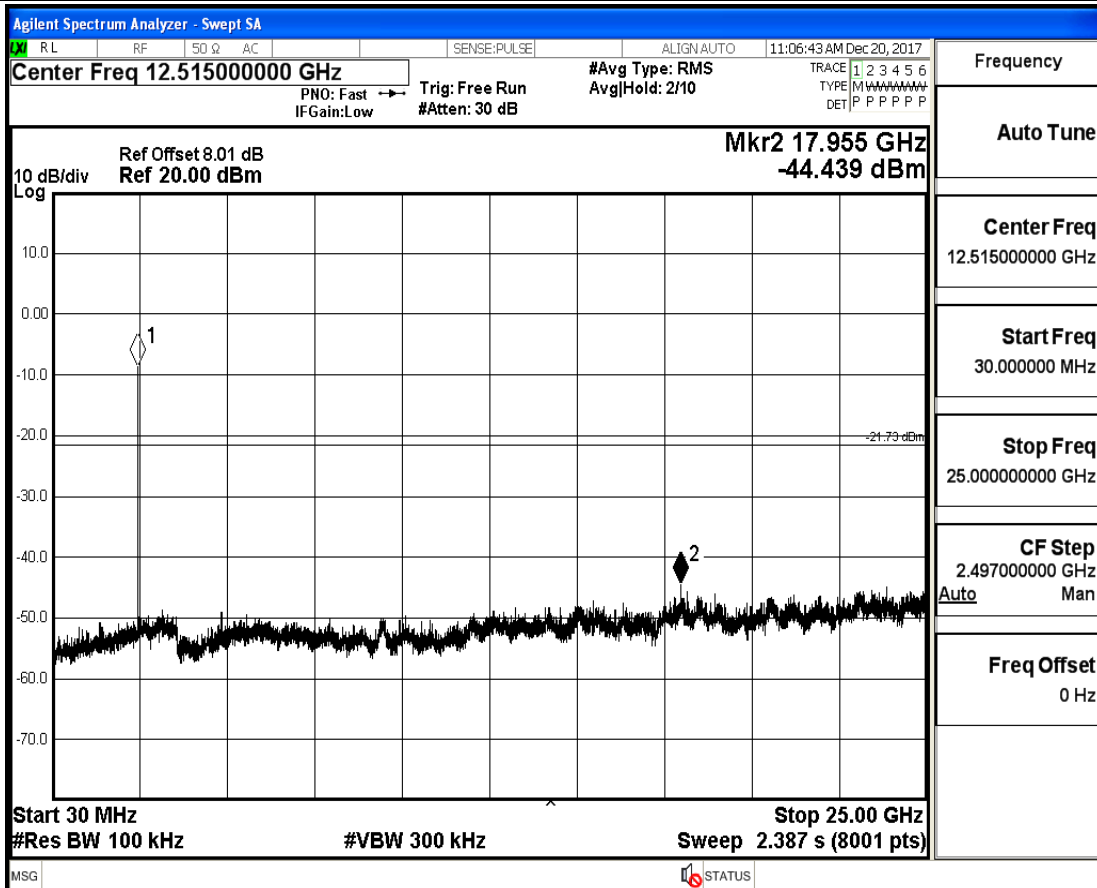
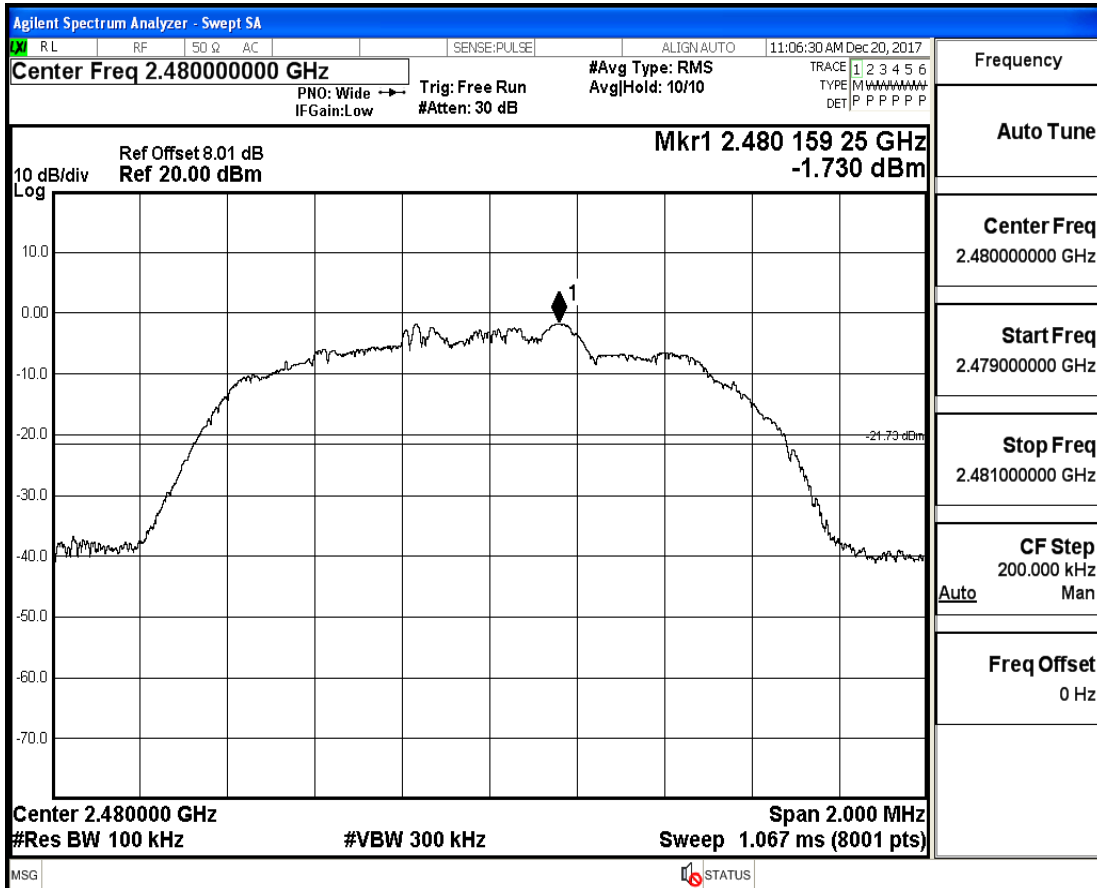
# RF Conducted Spurious Emissions\_3DH5\_2402



# RF Conducted Spurious Emissions\_3DH5\_2441



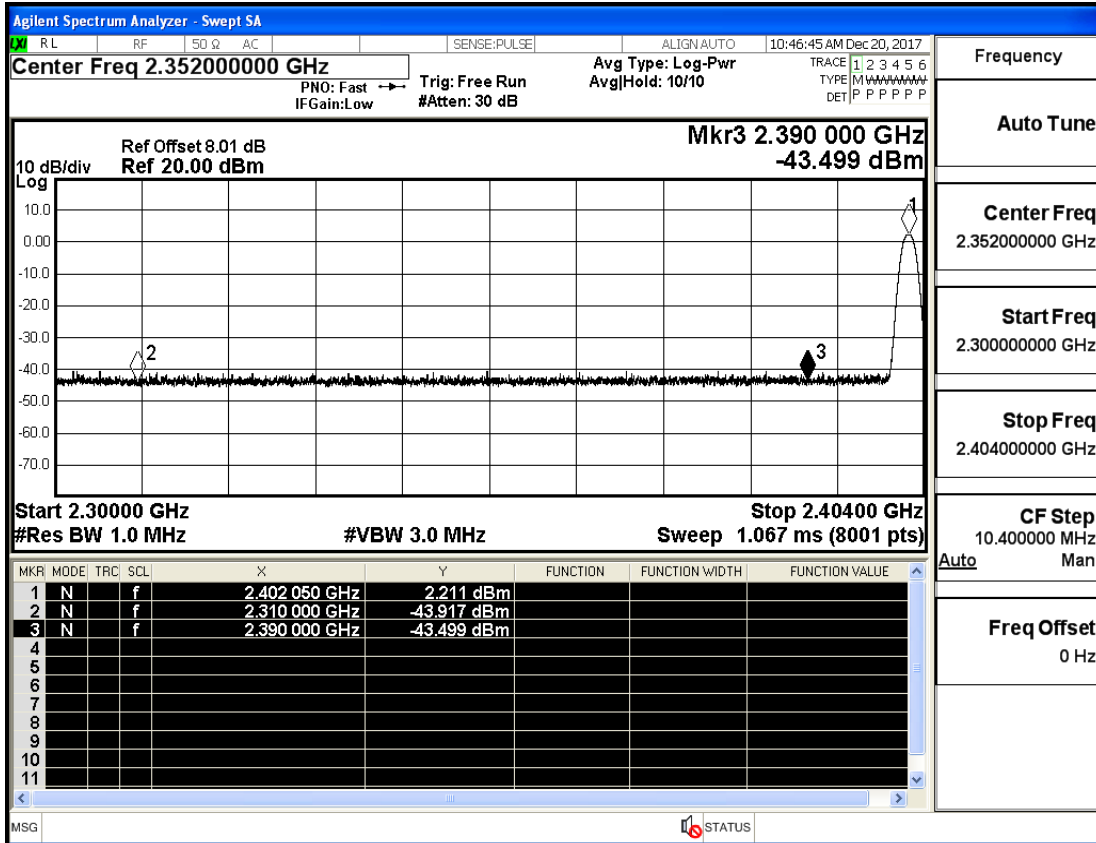
# RF Conducted Spurious Emissions\_3DH5\_2480



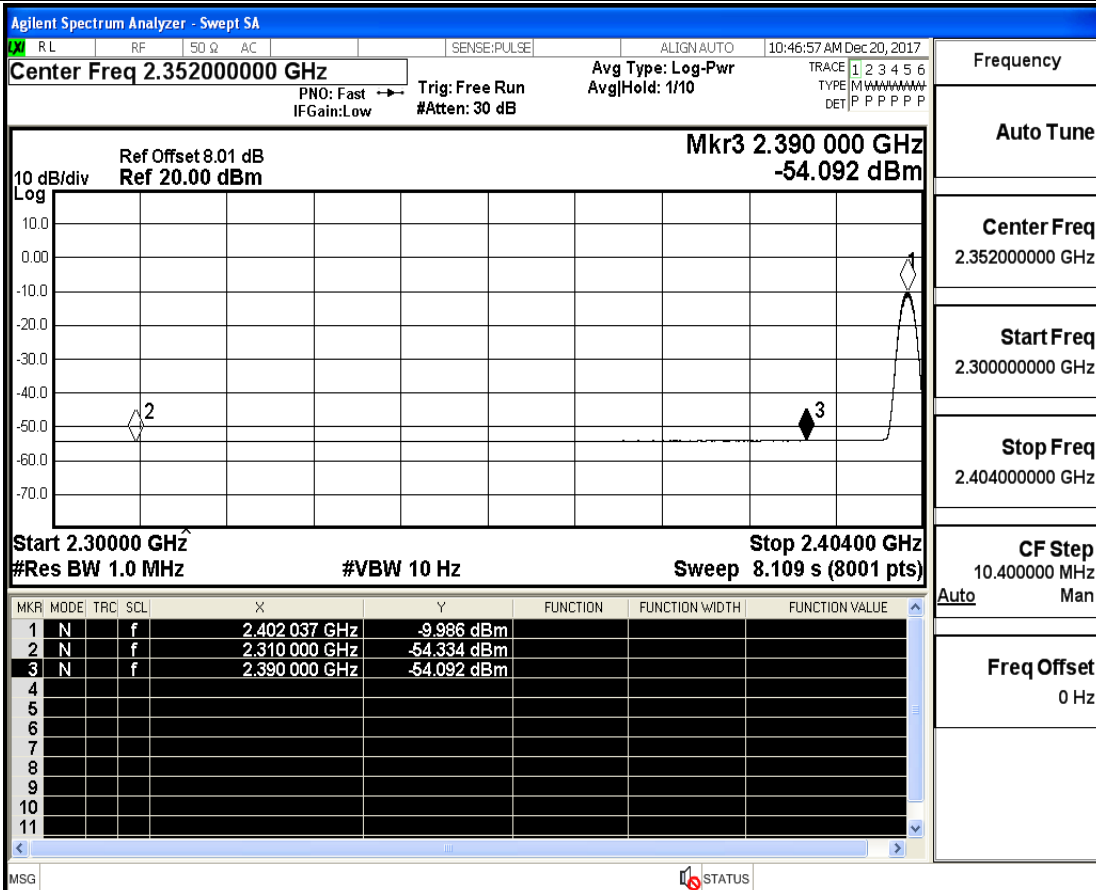
**A.8.Restrict-band band-edge measurements**

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
DH5	On	2310.0	-43.92	3	0	54.28	PEAK	74	PASS
DH5	On	2310.0	-54.33	3	0	43.87	AV	54	PASS
DH5	On	2390.0	-43.50	3	0	54.70	PEAK	74	PASS
DH5	On	2390.0	-54.09	3	0	44.11	AV	54	PASS
DH5	On	2483.5	-44.15	3	0	54.05	PEAK	74	PASS
DH5	On	2483.5	-53.86	3	0	44.34	AV	54	PASS
DH5	On	2500.0	-43.43	3	0	54.77	PEAK	74	PASS
DH5	On	2500.0	-53.74	3	0	44.46	AV	54	PASS
2DH5	On	2310.0	-44.52	3	0	53.68	PEAK	74	PASS
2DH5	On	2310.0	-54.32	3	0	43.88	AV	54	PASS
2DH5	On	2390.0	-44.74	3	0	53.46	PEAK	74	PASS
2DH5	On	2390.0	-54.05	3	0	44.15	AV	54	PASS
2DH5	On	2483.5	-42.82	3	0	55.38	PEAK	74	PASS
2DH5	On	2483.5	-53.80	3	0	44.40	AV	54	PASS
2DH5	On	2500.0	-42.38	3	0	55.82	PEAK	74	PASS
2DH5	On	2500.0	-53.73	3	0	44.47	AV	54	PASS
3DH5	On	2310.0	-43.19	3	0	55.01	PEAK	74	PASS
3DH5	On	2310.0	-54.34	3	0	43.86	AV	54	PASS
3DH5	On	2390.0	-43.90	3	0	54.30	PEAK	74	PASS
3DH5	On	2390.0	-54.08	3	0	44.12	AV	54	PASS
3DH5	On	2483.5	-43.27	3	0	54.93	PEAK	74	PASS
3DH5	On	2483.5	-53.80	3	0	44.40	AV	54	PASS
3DH5	On	2500.0	-43.79	3	0	54.41	PEAK	74	PASS
3DH5	On	2500.0	-53.72	3	0	44.48	AV	54	PASS

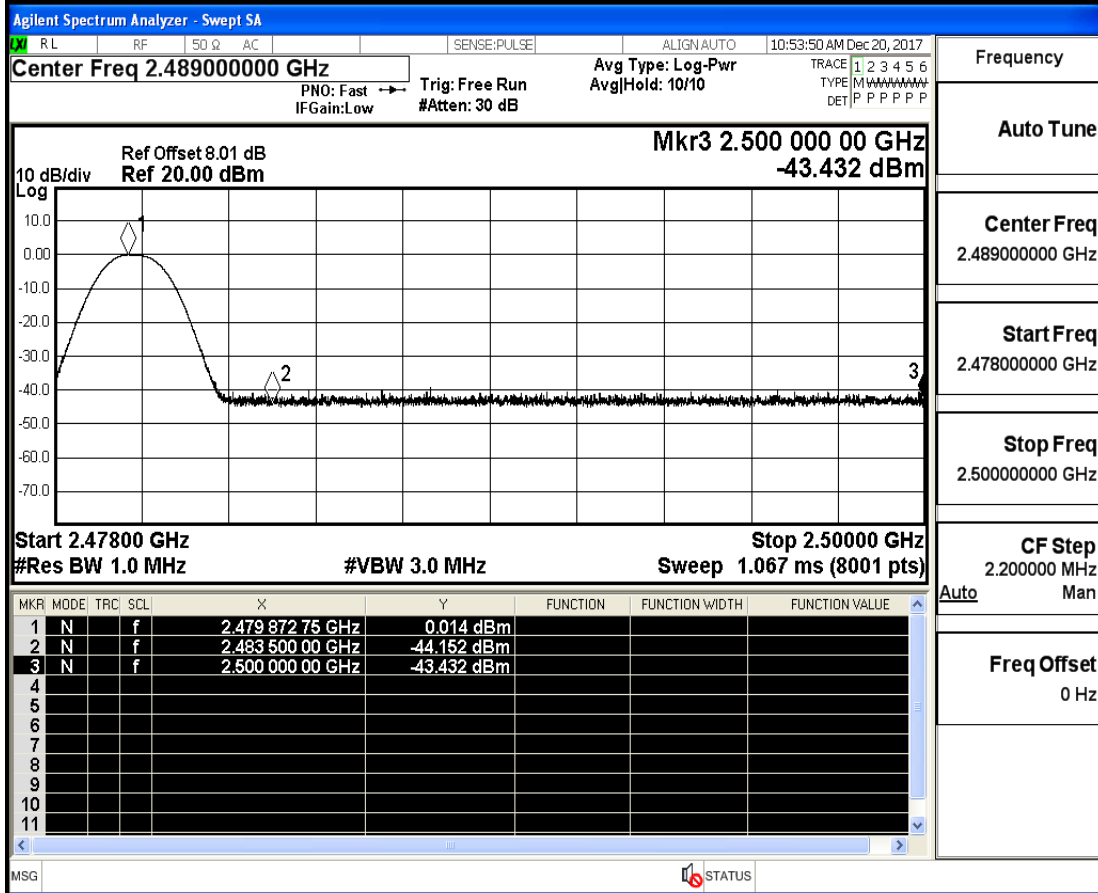
# Restrict-band band-edge measurements\_2402\_PEAK



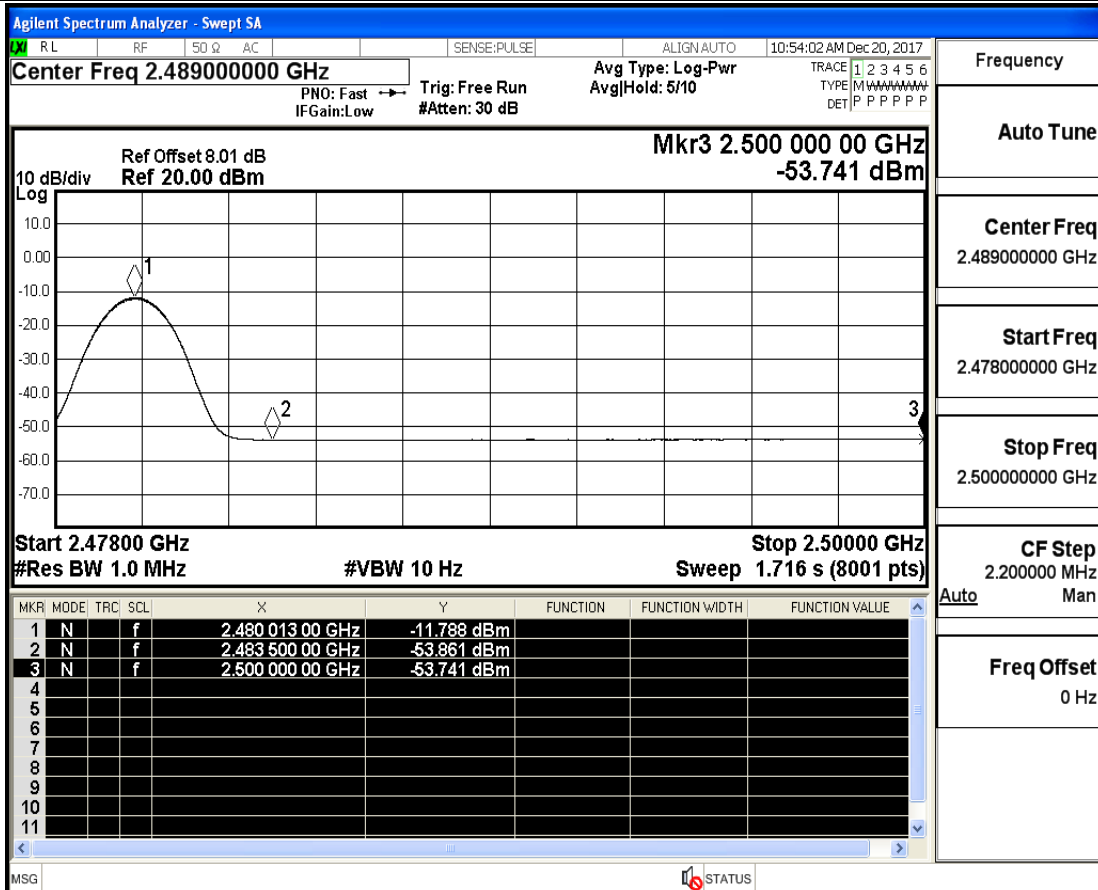
# Restrict-band band-edge measurements\_2402\_AV



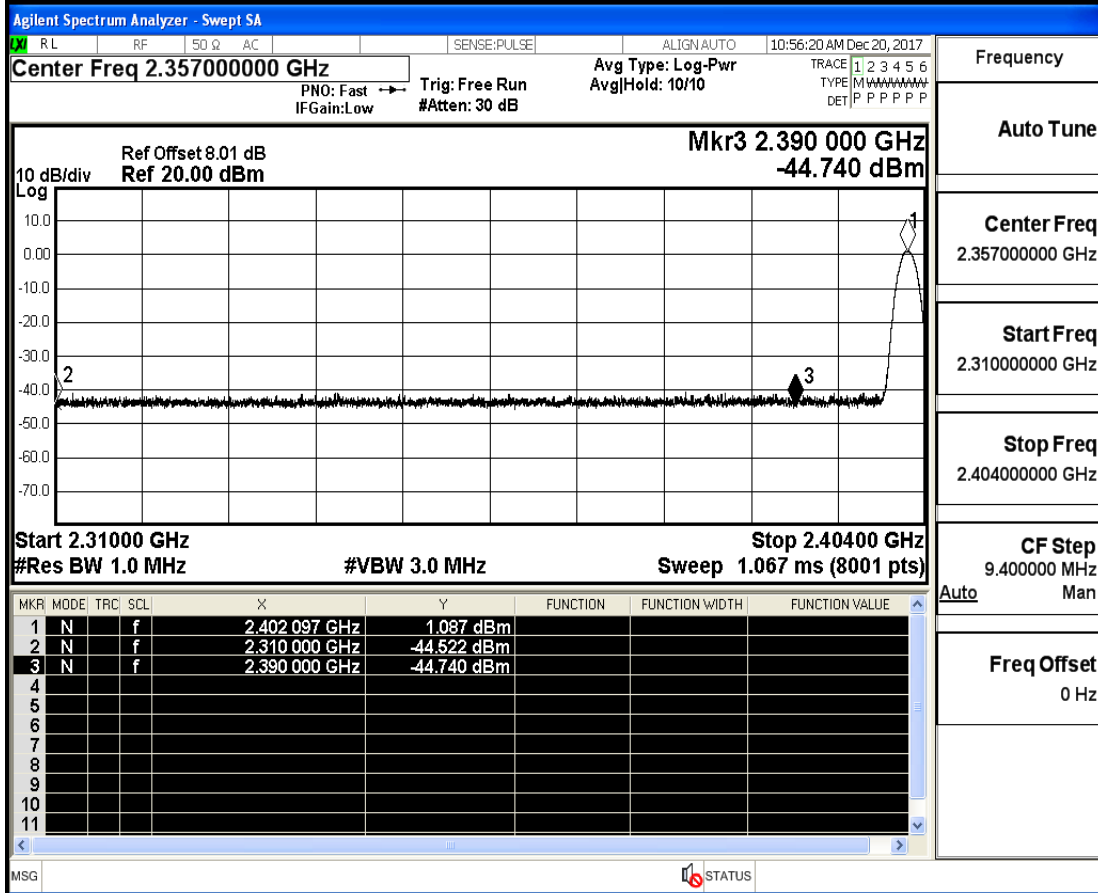
# Restrict-band band-edge measurements\_2480\_PEAK



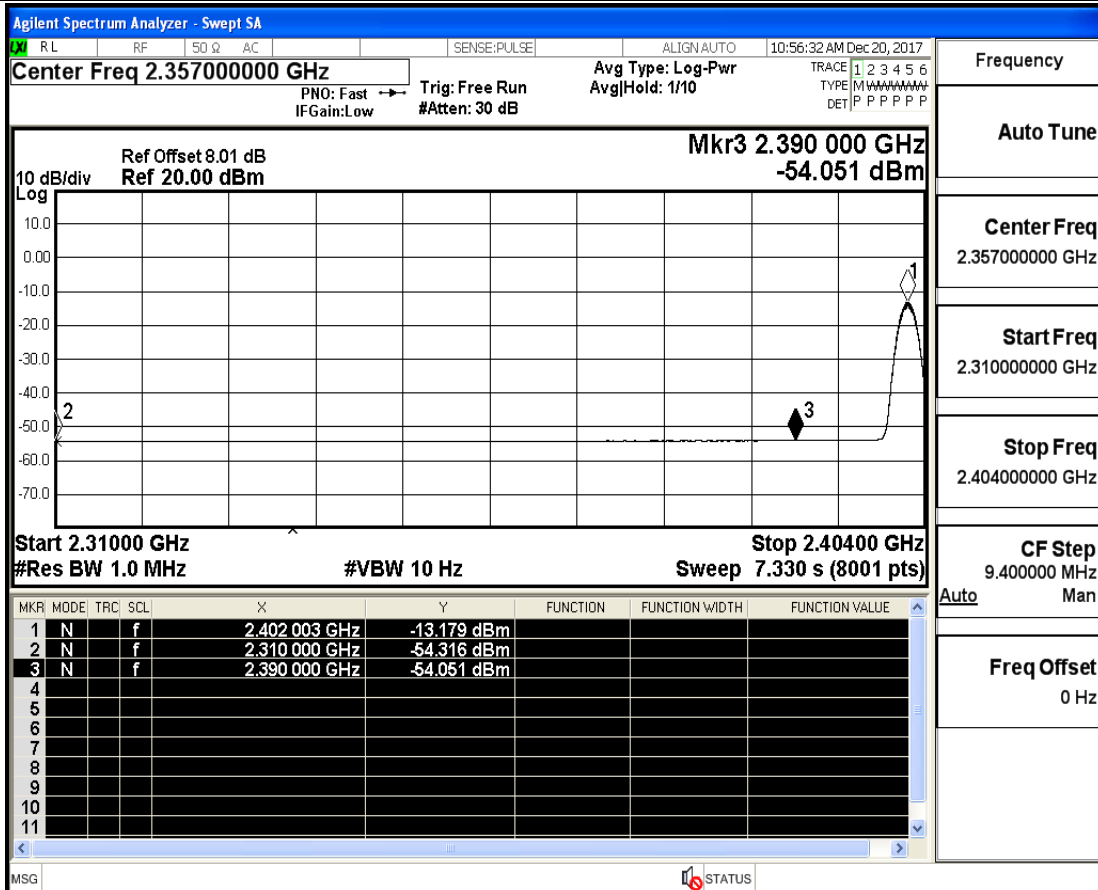
# Restrict-band band-edge measurements\_2480\_AV



# Restrict-band band-edge measurements\_2402\_PEAK

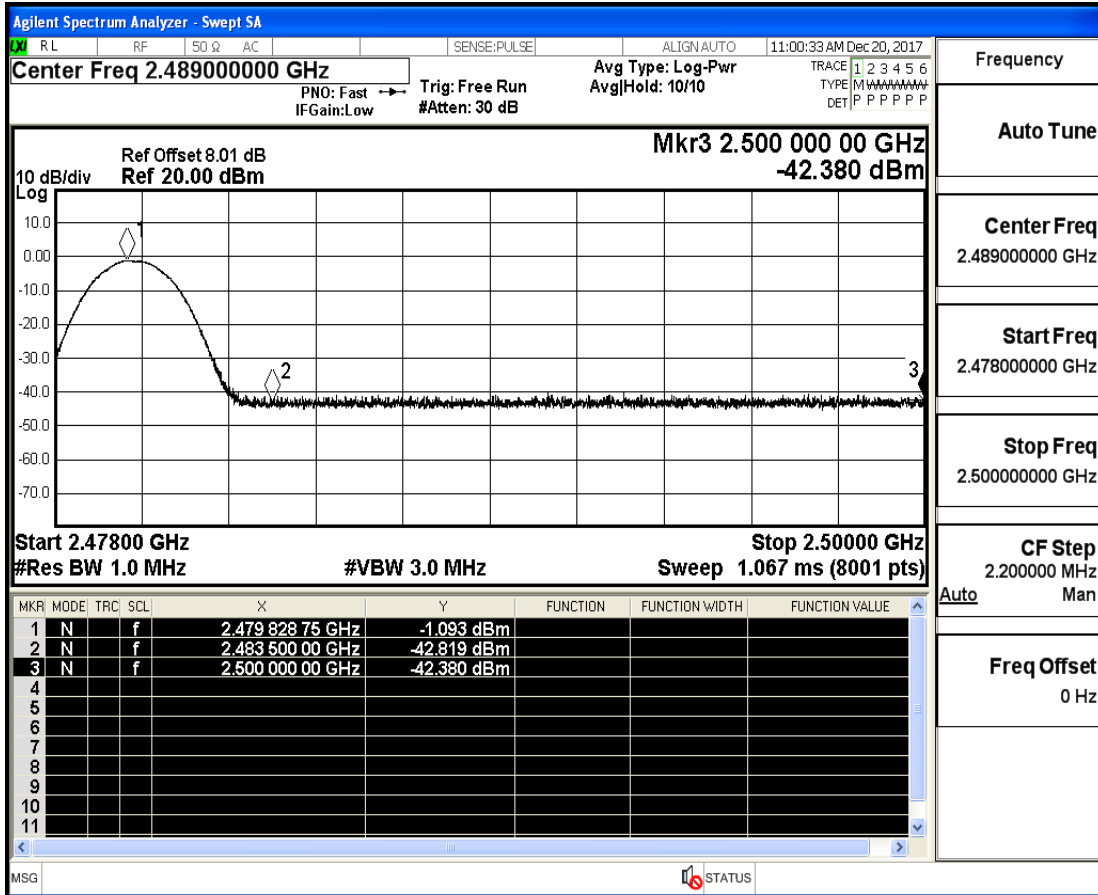


# Restrict-band band-edge measurements\_2402\_AV

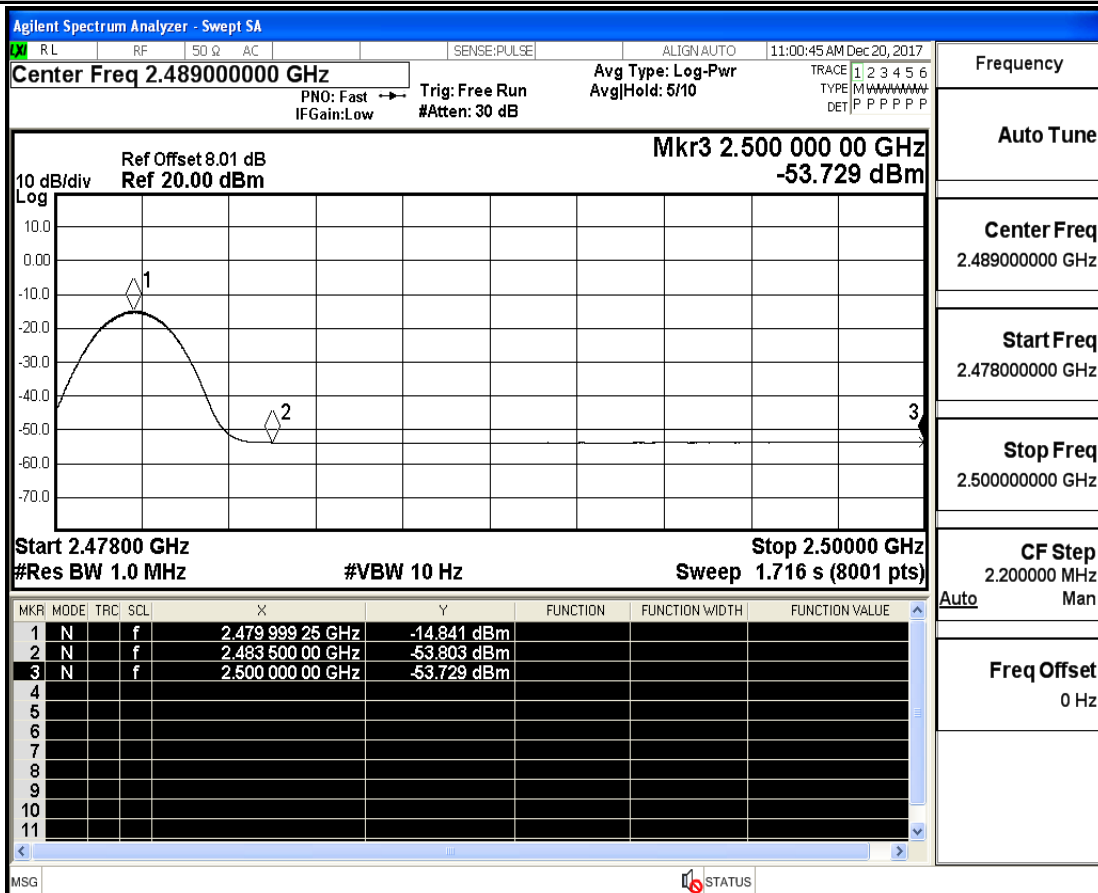




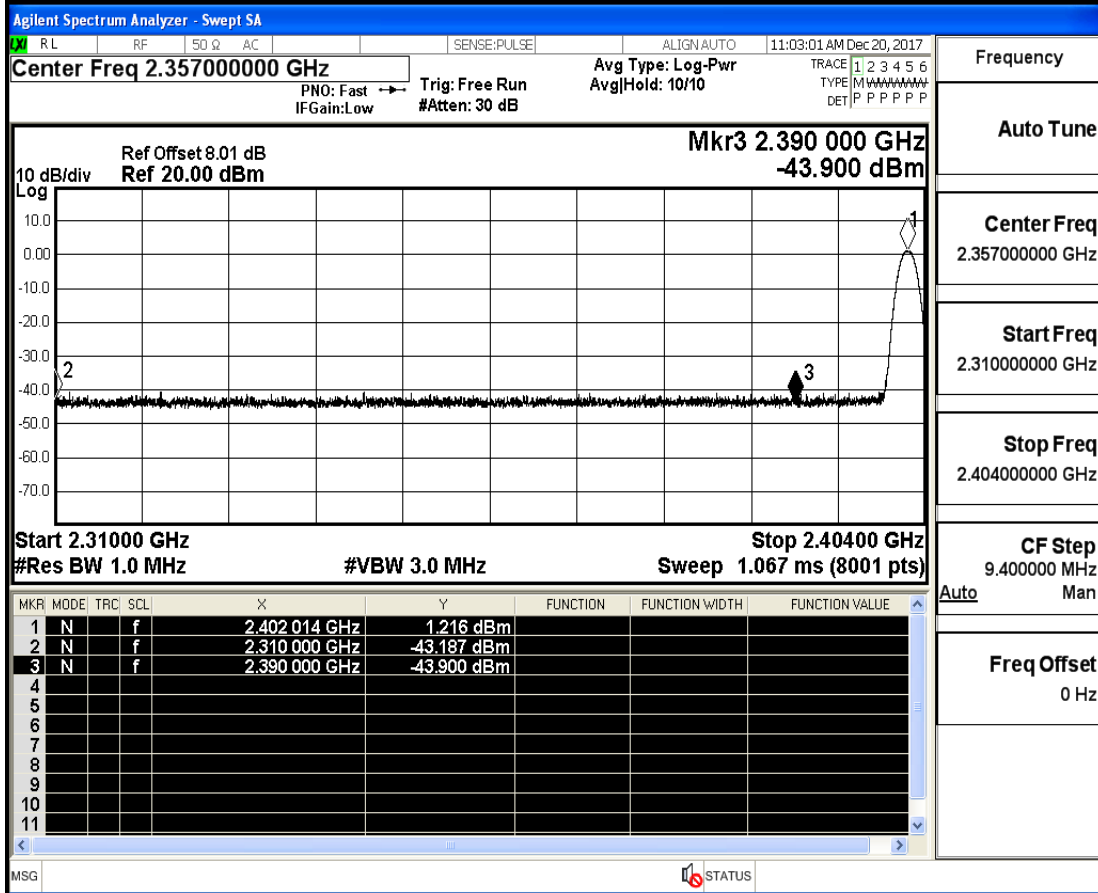
# Restrict-band band-edge measurements\_2480\_PEAK



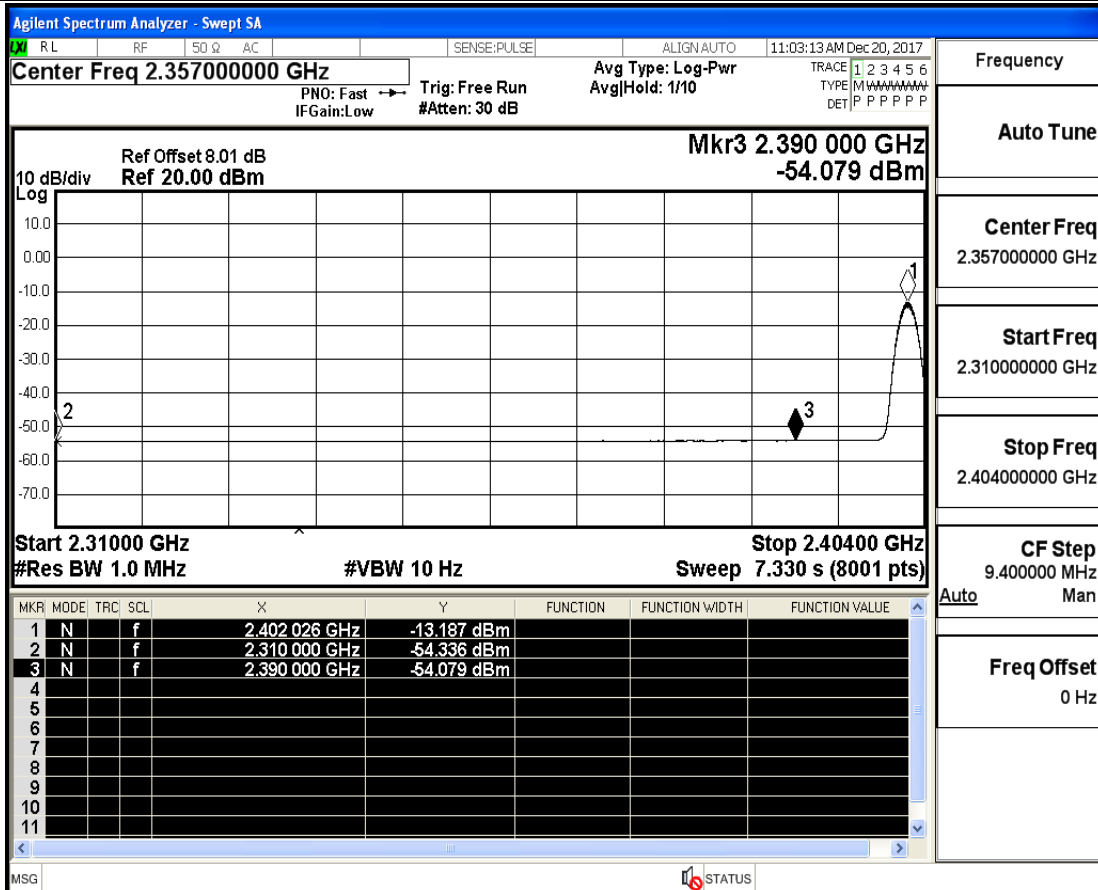
# Restrict-band band-edge measurements\_2480\_AV



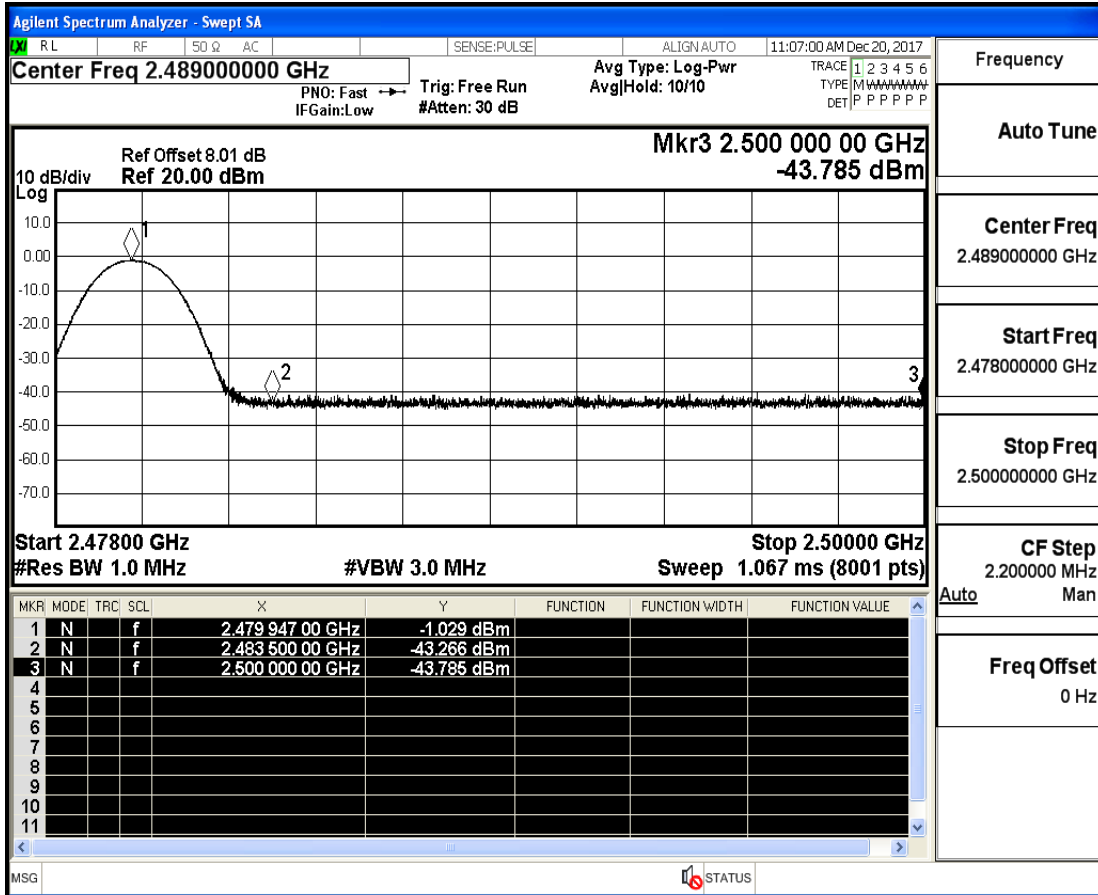
# Restrict-band band-edge measurements\_2402\_PEAK



# Restrict-band band-edge measurements\_2402\_AV



# Restrict-band band-edge measurements\_2480\_PEAK



# Restrict-band band-edge measurements\_2480\_AV

