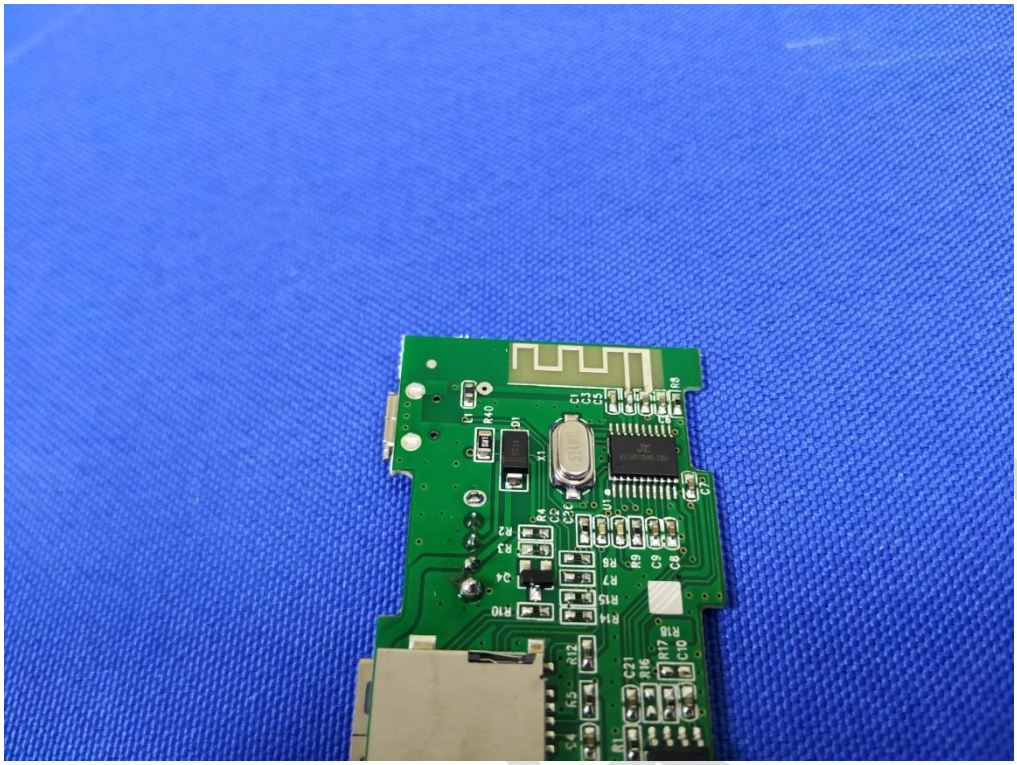

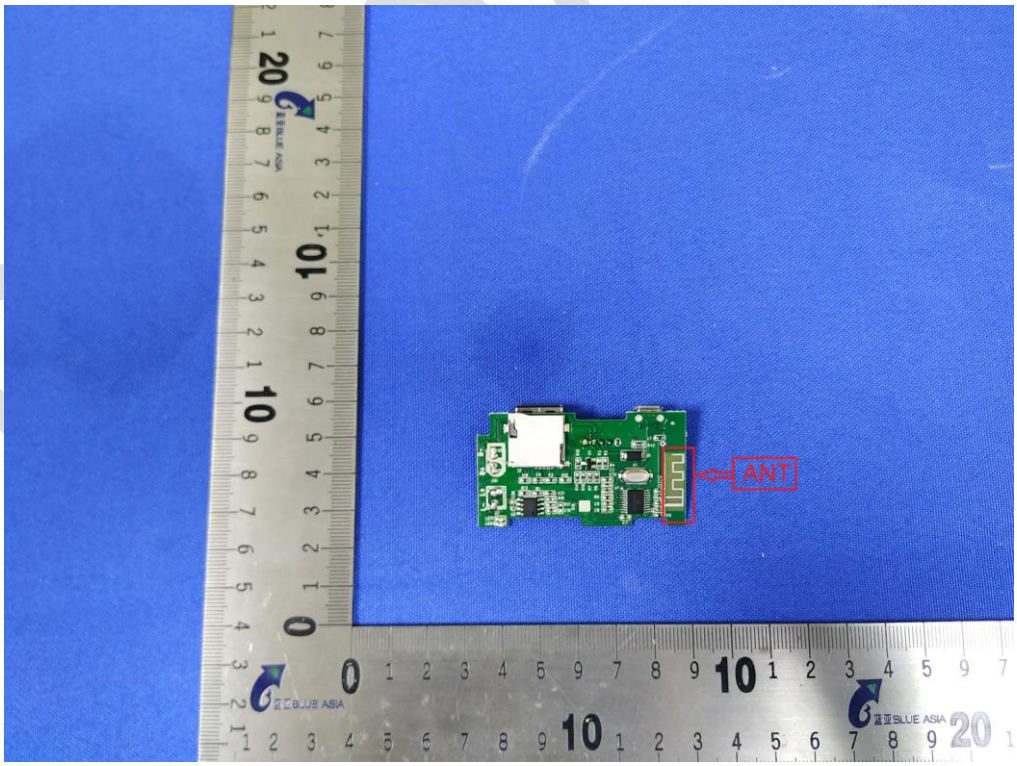
ANT

10 Appendix

Refer to the following attachments.

*** End of Report ***

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of BlueAsia, this report can’t be reproduced except in full.

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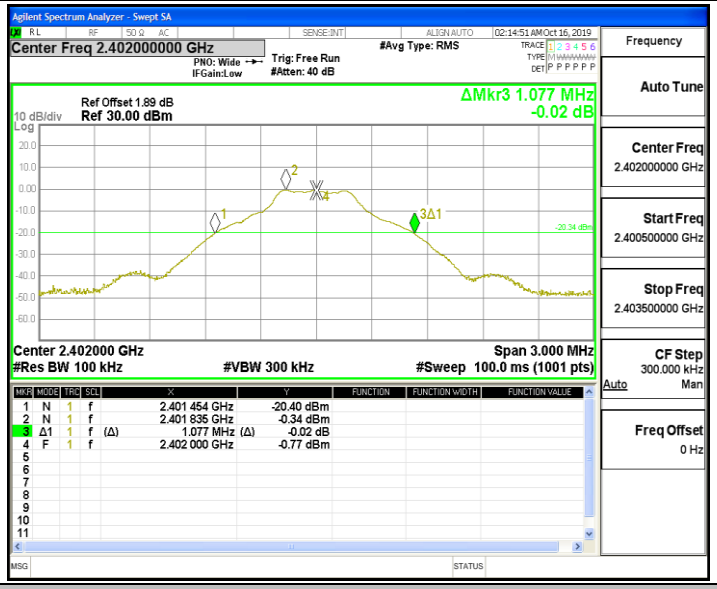
AppendixA: 20dBEmission Bandwidth

Test Result

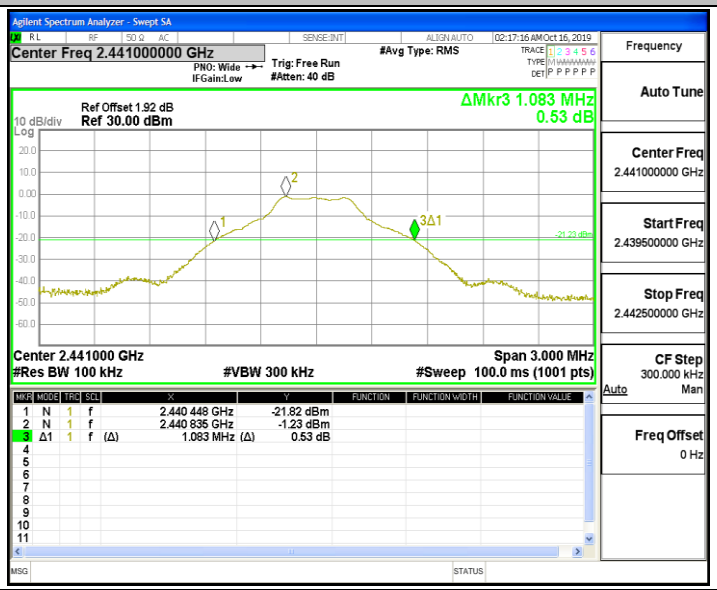
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	1.077	2401.454	2402.531	---	PASS
		2441	1.083	2440.448	2441.531	---	PASS
		2480	1.074	2479.451	2480.525	---	PASS
2DH1	Ant1	2402	1.368	2401.301	2402.669	---	PASS
		2441	1.374	2440.301	2441.675	---	PASS
		2480	1.371	2479.301	2480.672	---	PASS

Test Graphs

DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480

2DH1_Ant1_2402

2DH1_Ant1_2441

2DH1_Ant1_2480

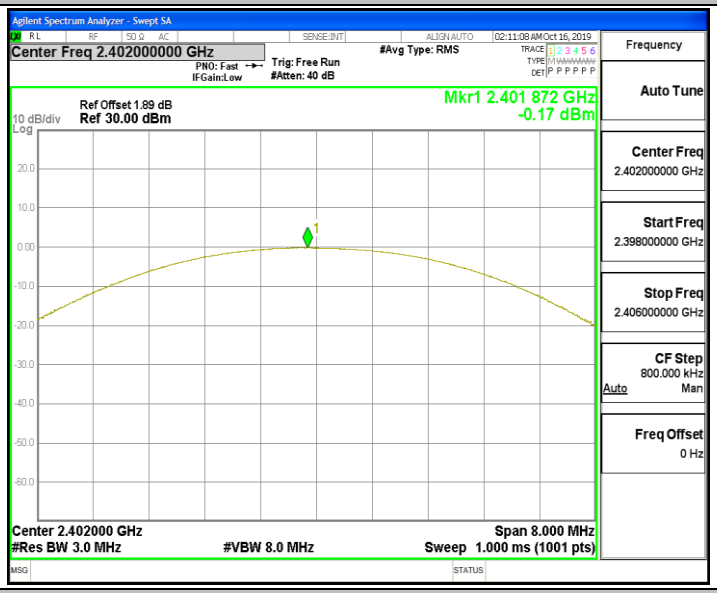
AppendixC: Maximum conducted output power

Test Result

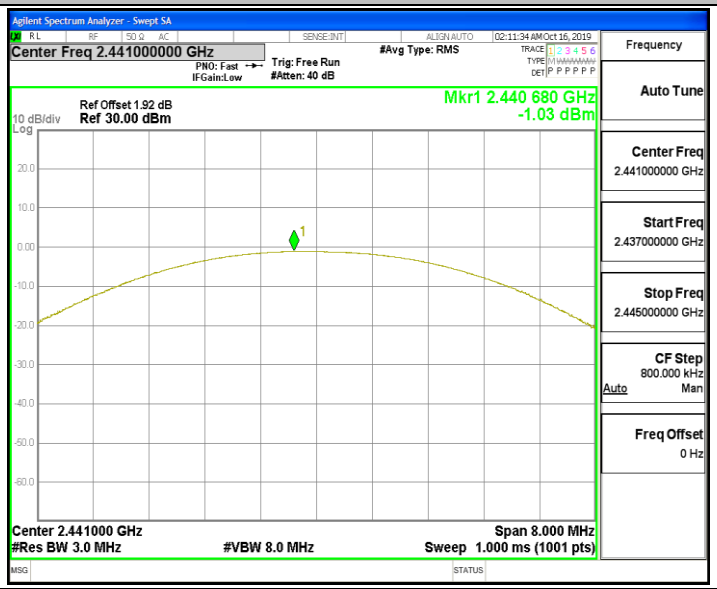
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH1	Ant1	2402	-0.17	<=21	PASS
		2441	-1.03	<=21	PASS
		2480	-1.68	<=21	PASS
2DH1	Ant1	2402	0.41	<=21	PASS
		2441	-0.46	<=21	PASS
		2480	-1.04	<=21	PASS

Test Graphs

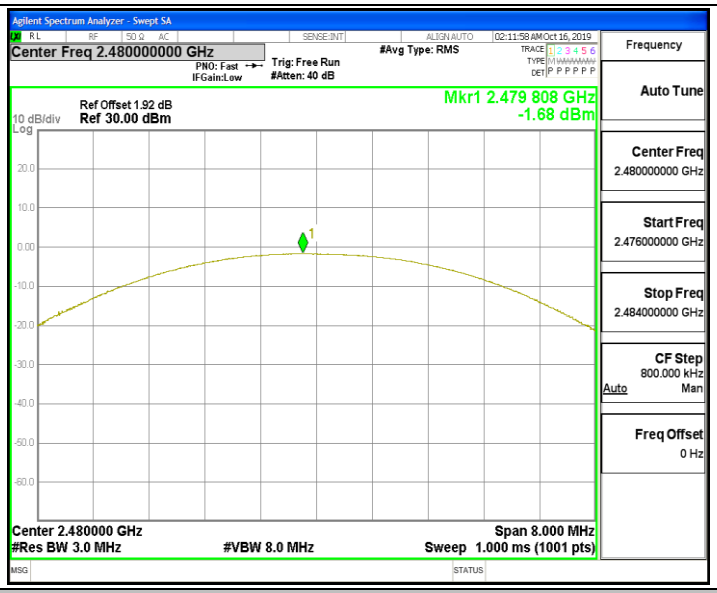
DH1_Ant1_2402



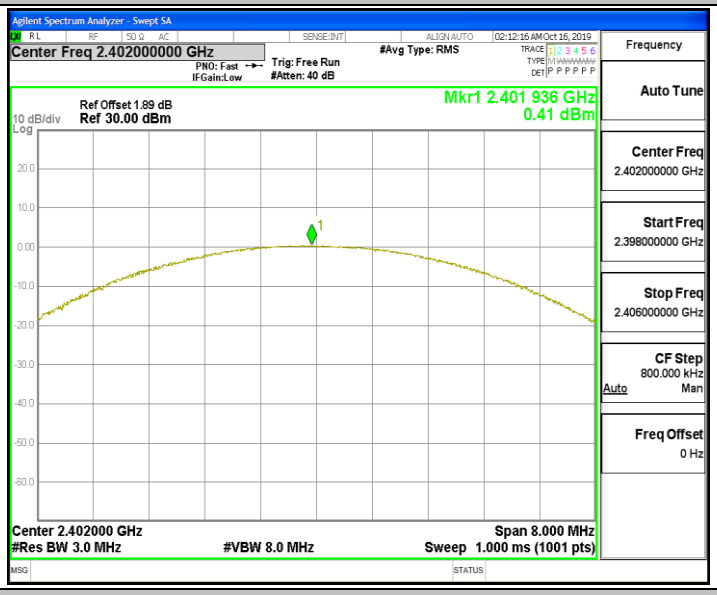
DH1_Ant1_2441



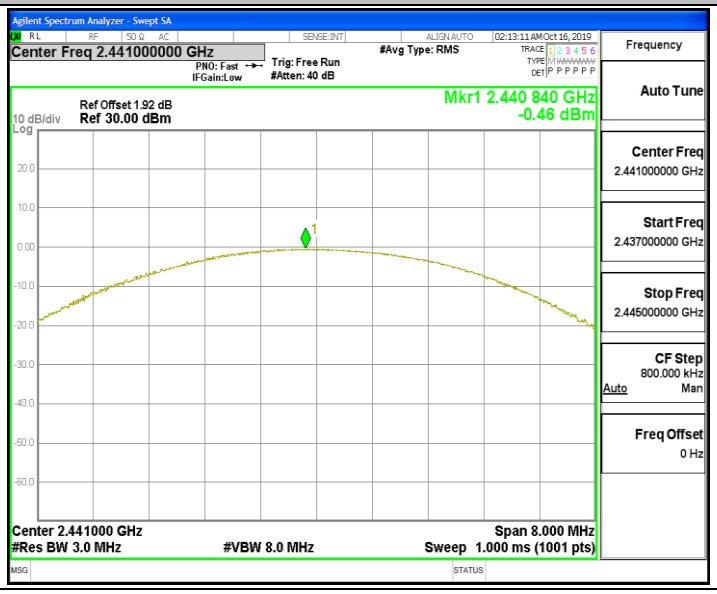
DH1_Ant1_2480

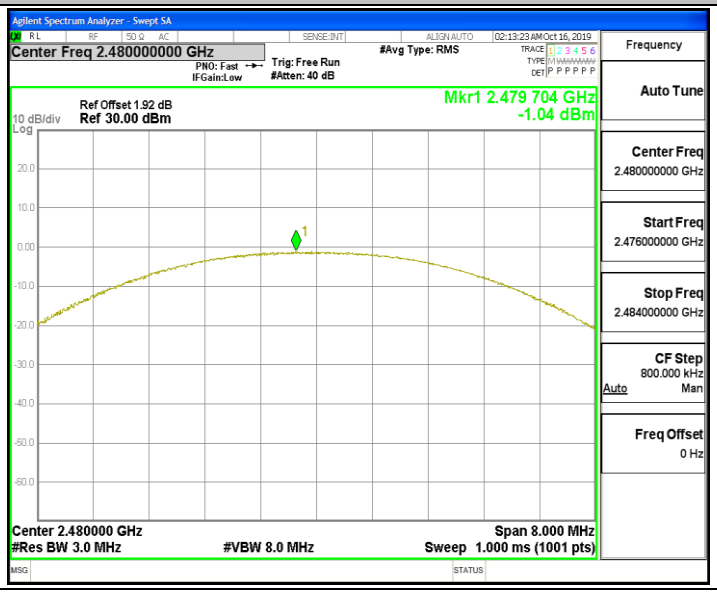


2DH1_Ant1_2402



2DH1_Ant1_2441



2DH1_Ant1_2480


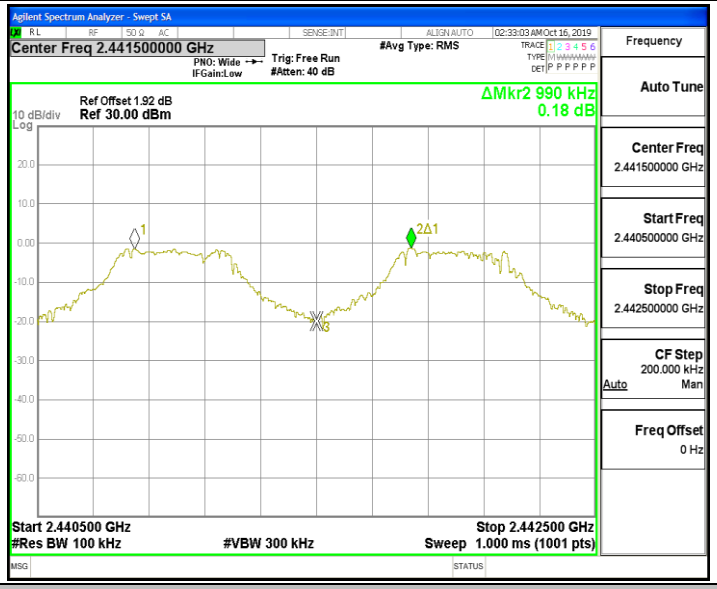
AppendixD: Carrier frequency separation

Test Result

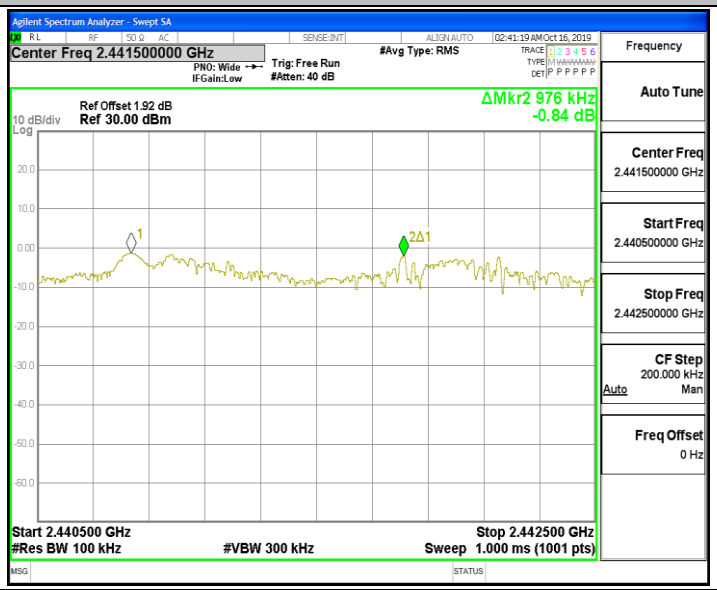
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop	0.990	=>0.722	PASS
2DH1	Ant1	Hop	0.976	=>0.916	PASS

Test Graphs

DH1_Ant1_Hop



2DH1_Ant1_Hop

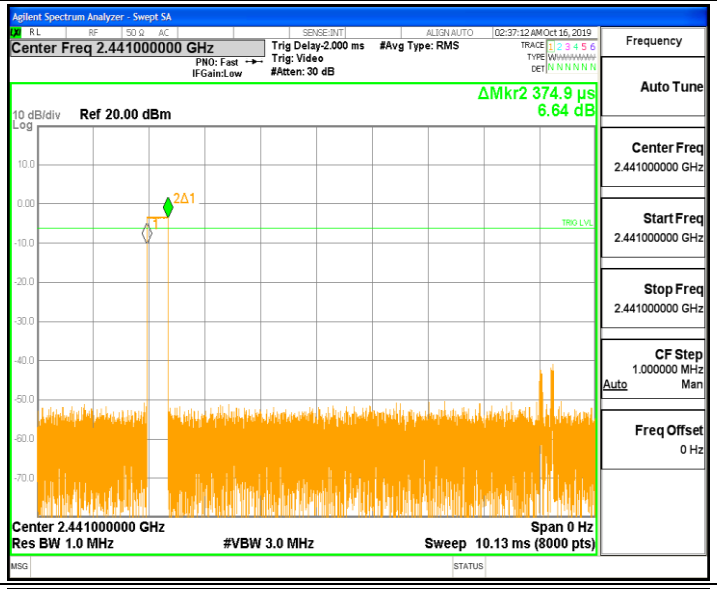
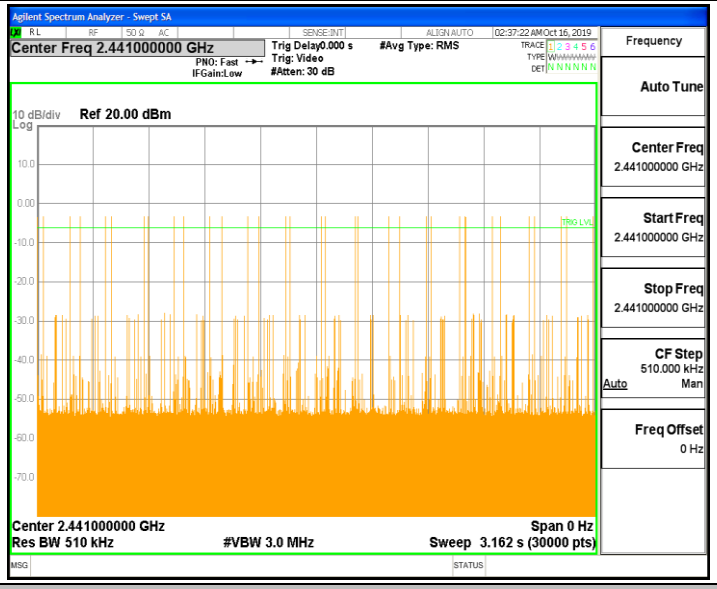


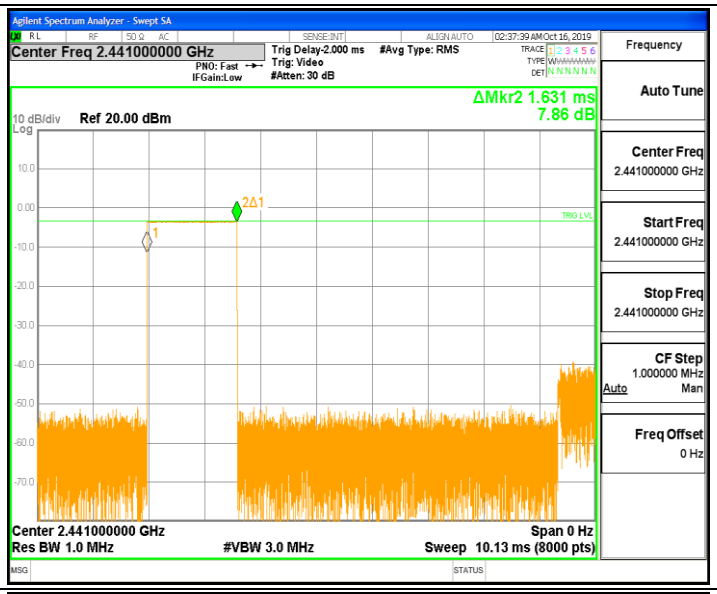
AppendixE: Time of occupancy

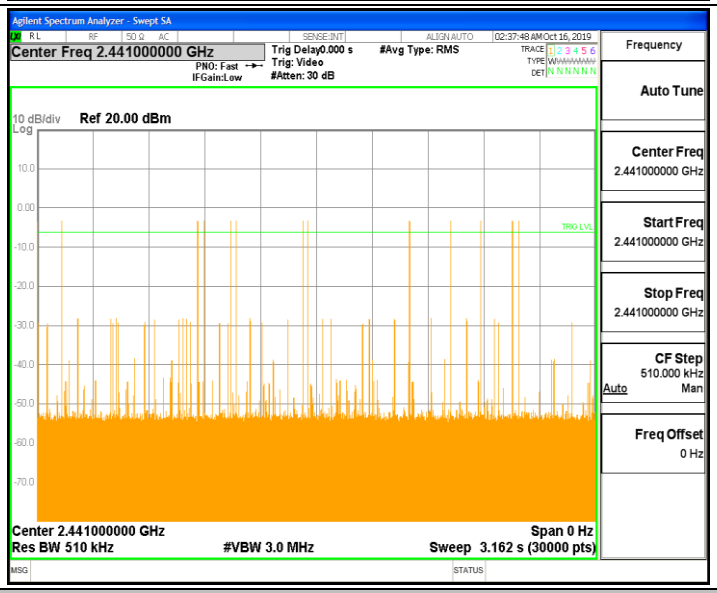
Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.37	330	0.122	<=0.4	PASS
DH3	Ant1	Hop	1.63	130	0.212	<=0.4	PASS
DH5	Ant1	Hop	2.88	100	0.288	<=0.4	PASS

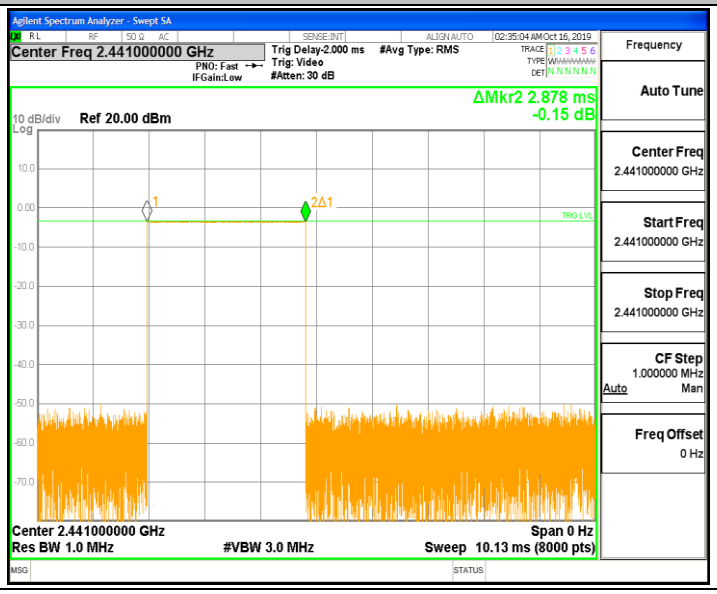
Test Graphs

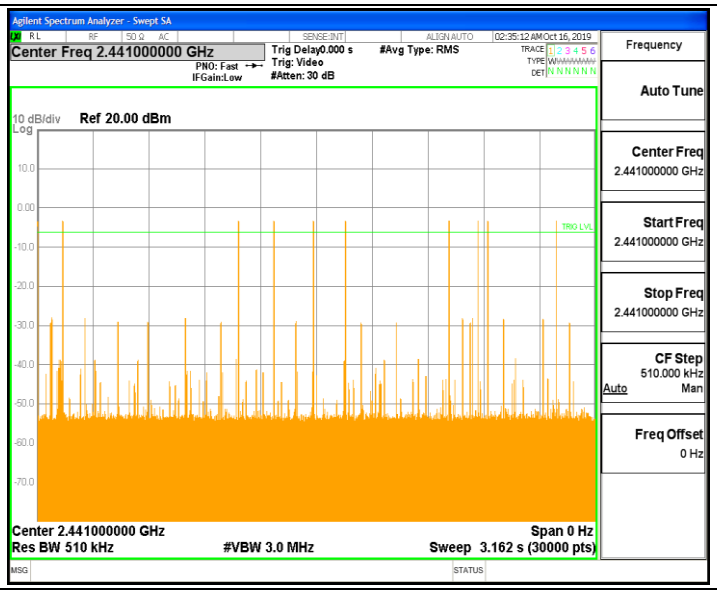
DH1_Ant1_Hop


DH3_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay-2.000 ms
Trig: Video
#Avg Type: RMS
#Atten: 30 dB
02:37:39 AM Oct 16, 2019
ΔMkr2 1.631 ms
7.86 dB
10 dB/div
Log
Ref 20.00 dBm
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.13 ms (8000 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay0.000 s
Trig: Video
#Avg Type: RMS
#Atten: 30 dB
02:37:48 AM Oct 16, 2019
10 dB/div
Log
Ref 20.00 dBm
Center 2.441000000 GHz
Res BW 510 kHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 3.162 s (30000 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
510.000 kHz
Auto
Man
Freq Offset
0 Hz

DH5_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay-2.000 ms
Trig: Video
#Avg Type: RMS
#Atten: 30 dB
02:35:04 AM Oct 16, 2019
ΔMkr2 2.878 ms
-0.15 dB
10 dB/div
Log
Ref 20.00 dBm
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.13 ms (8000 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
02:35:12 AM Oct 16, 2019
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay 0.000 s
Trig: Video
#Avg Type: RMS
#Atten: 30 dB
TRACE 1 2 3 4 5 6
TYPE WWWWW
DET N N N N N
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
TRIG LVL
Center 2.441000000 GHz
Res BW 510 kHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 3.162 s (30000 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
510.000 kHz
Auto
Man
Freq Offset
0 Hz

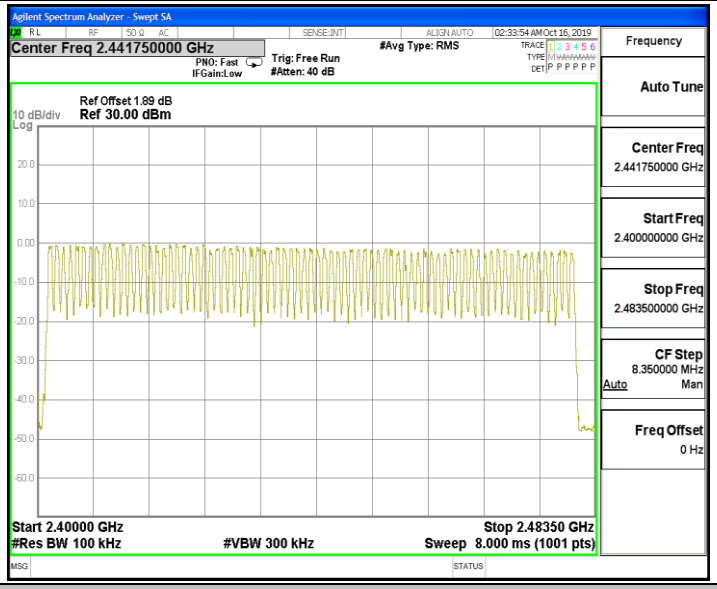
AppendixF: Number of hopping channels

Test Result

TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Hop	79	>=15	PASS
2DH1	Ant1	Hop	79	>=15	PASS

Test Graphs

DH1_Ant1_Hop



2DH1_Ant1_Hop

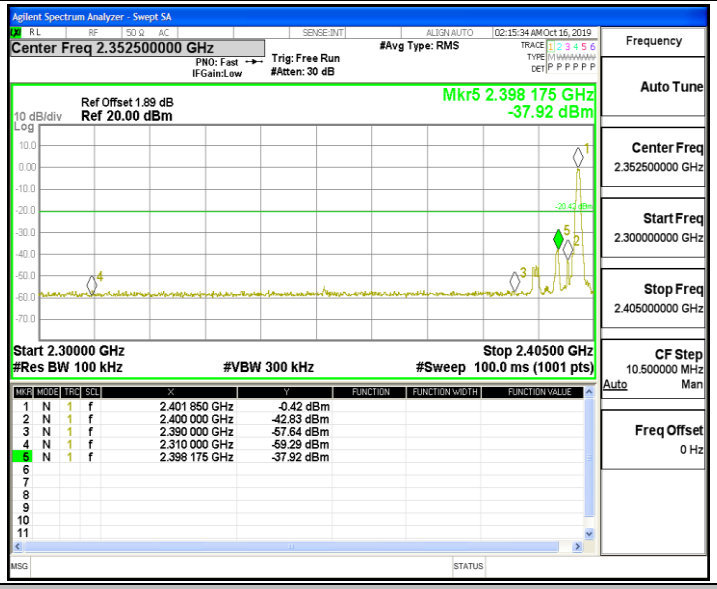
AppendixG:Band edge measurements

Test Result

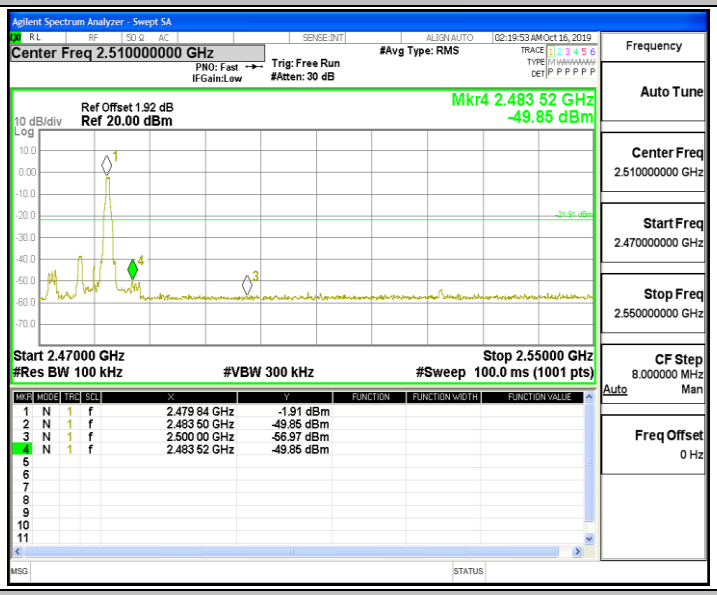
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	-0.42	-37.92	<=-20.42	PASS
		High	2480	-1.91	-49.85	<=-21.91	PASS
		Low	Hop_2402	-0.46	-38.8	-20.46	PASS
		High	Hop_2480	-1.67	-53.4	-21.67	PASS
2DH1	Ant1	Low	2402	-0.41	-38.17	<=-20.41	PASS
		High	2480	-1.94	-50.35	<=-21.94	PASS
		Low	Hop_2402	-0.68	-40.37	-20.68	PASS
		High	Hop_2480	-1.97	-54.11	-21.97	PASS

Test Graphs

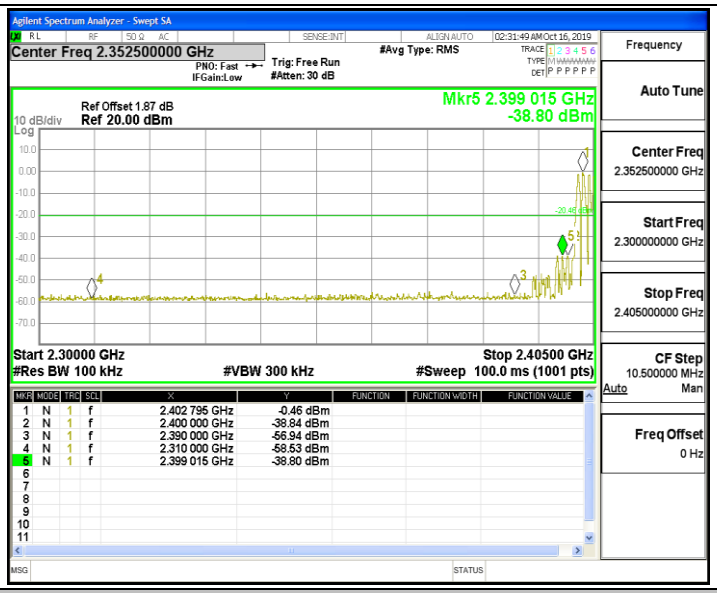
DH1_Ant1_Low_2402



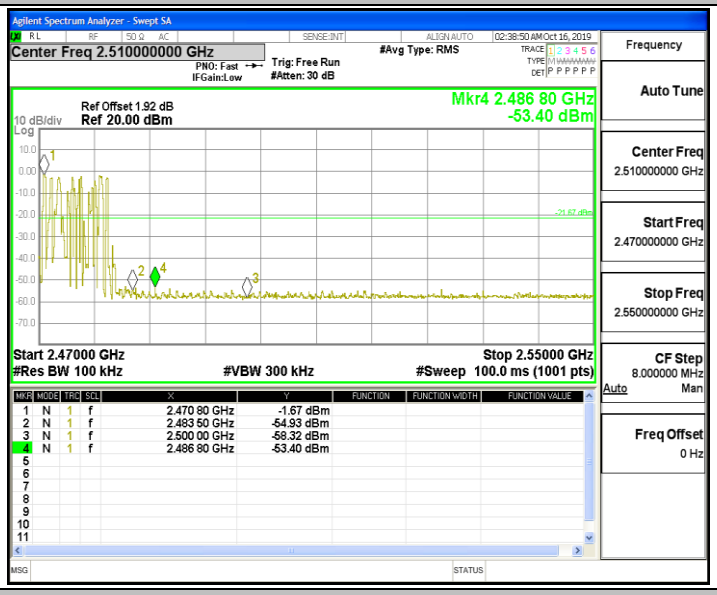
DH1_Ant1_High_2480



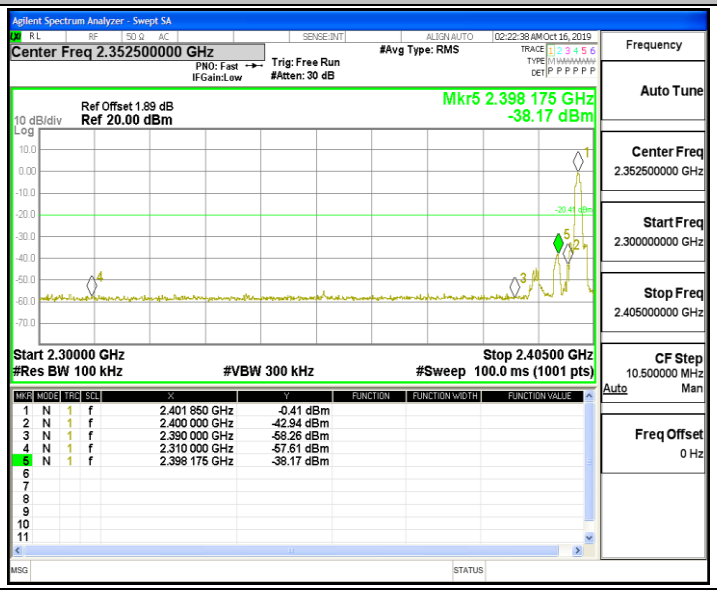
DH1_Ant1_Low_Hop_2402



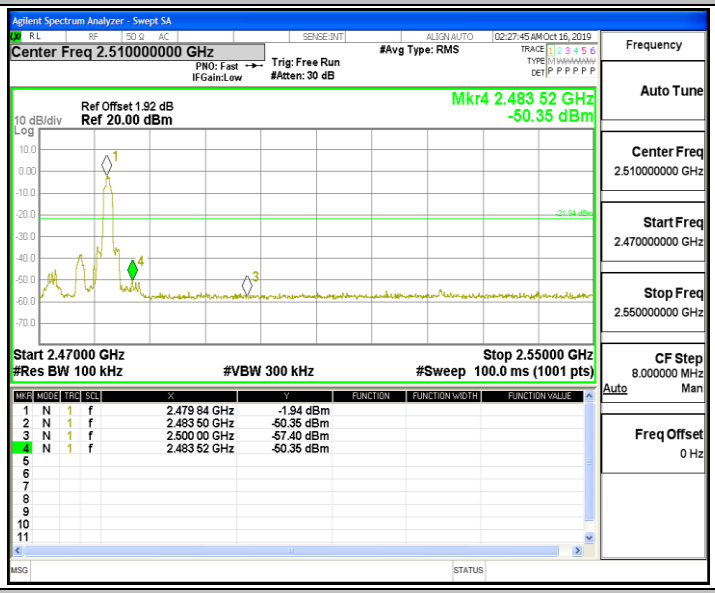
DH1_Ant1_High_Hop_2480



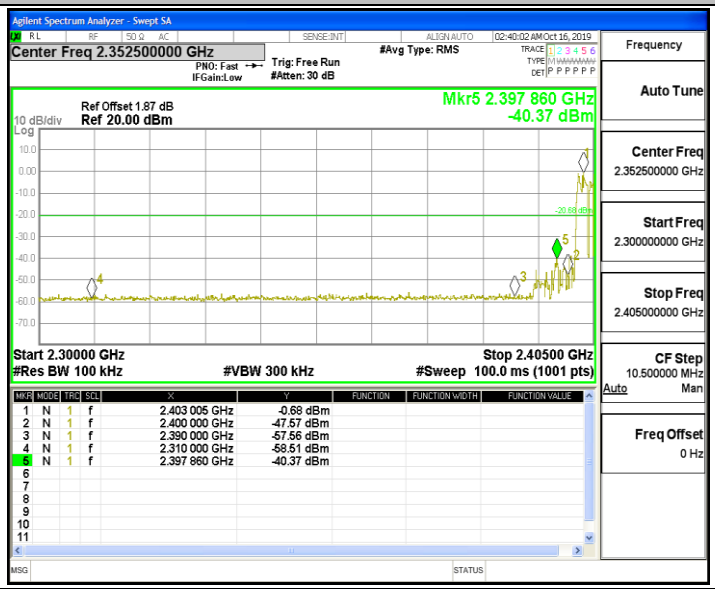
2DH1_Ant1_Low_2402



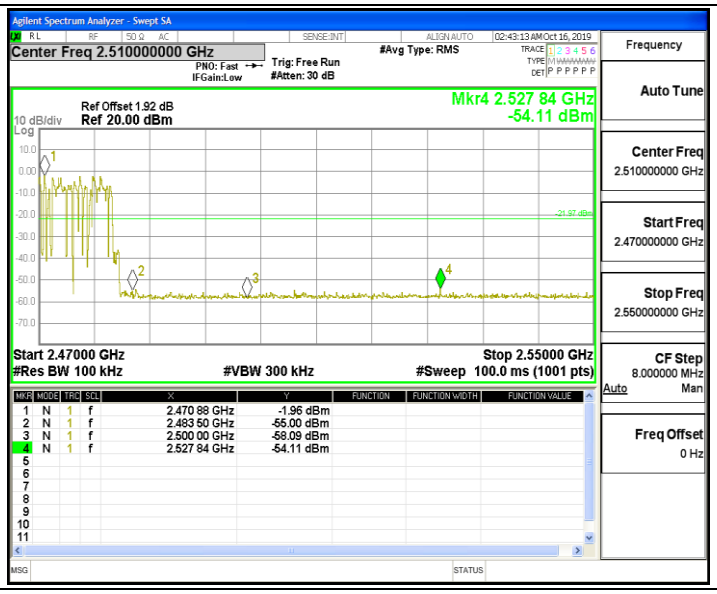
2DH1_Ant1_High_2480



2DH1_Ant1_Low_Hop_2402



2DH1_Ant1_High_Hop_2480

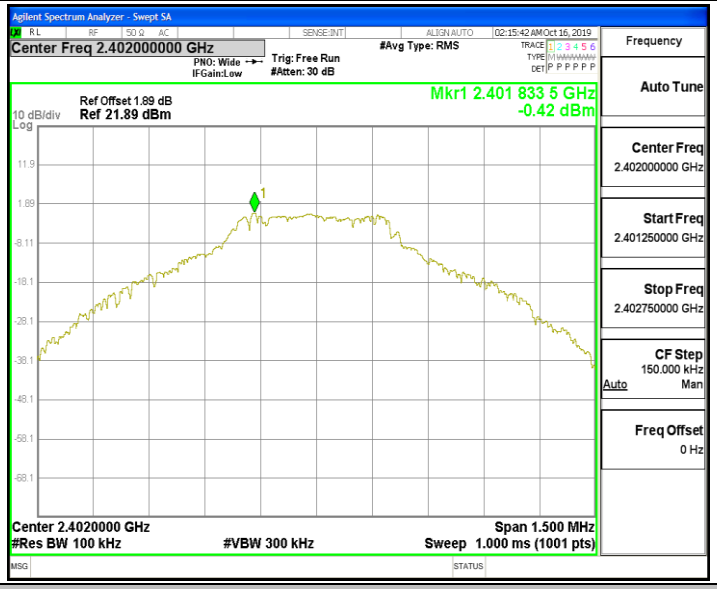
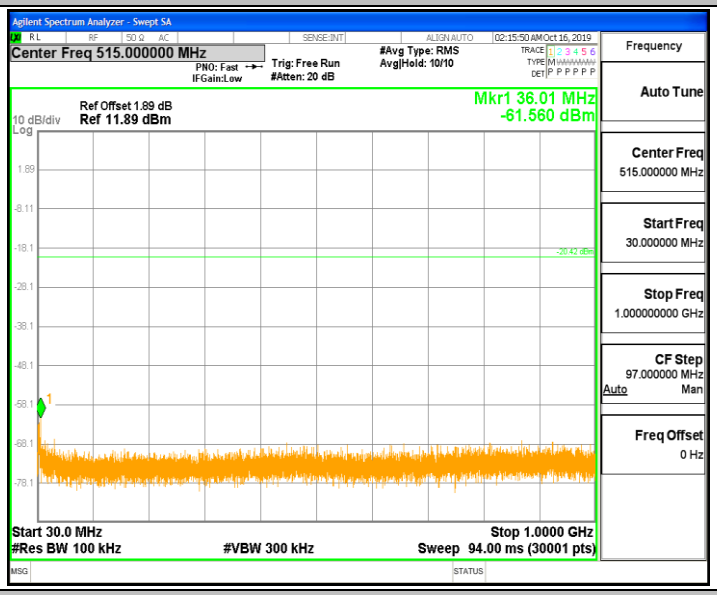

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.510000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
02:43:13 AM Oct 16, 2019
Ref Offset 1.92 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr4 2.527 84 GHz
-54.11 dBm
-21.97 dBm
Start 2.47000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.55000 GHz
#Sweep 100.0 ms (1001 pts)
1 N 1 f 2.470 88 GHz -1.96 dBm
2 N 1 f 2.483 50 GHz -55.00 dBm
3 N 1 f 2.500 00 GHz -58.09 dBm
4 N 1 f 2.527 84 GHz -54.11 dBm
Frequency
Auto Tune
Center Freq
2.510000000 GHz
Start Freq
2.470000000 GHz
Stop Freq
2.550000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

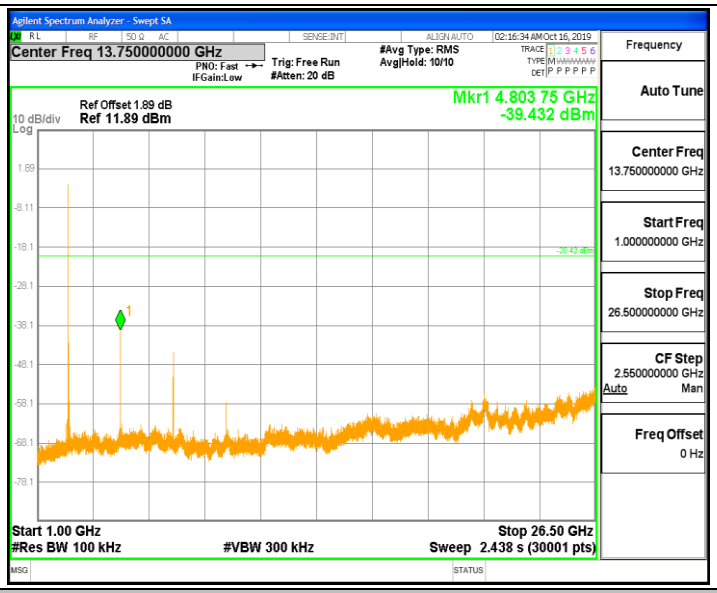
AppendixH:Conducted SpuriousEmission

Test Result

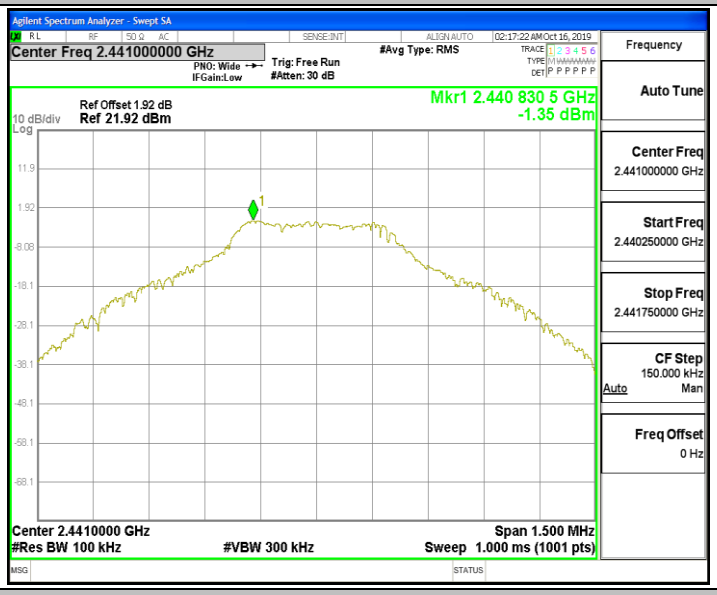
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	-0.42	-0.42	---	PASS
			30~1000	30~1000	-61.56	<=-20.416	PASS
			1000~26500	1000~26500	-39.432	<=-20.416	PASS
		2441	Reference	-1.35	-1.35	---	PASS
			30~1000	30~1000	-62.204	<=-21.347	PASS
			1000~26500	1000~26500	-38.325	<=-21.347	PASS
		2480	Reference	-1.94	-1.94	---	PASS
			30~1000	30~1000	-51.64	<=-21.94	PASS
			1000~26500	1000~26500	-42.318	<=-21.94	PASS
2DH1	Ant1	2402	Reference	-0.89	-0.89	---	PASS
			30~1000	30~1000	-50.23	<=-20.891	PASS
			1000~26500	1000~26500	-42.981	<=-20.891	PASS
		2441	Reference	-1.35	-1.35	---	PASS
			30~1000	30~1000	-51.057	<=-21.352	PASS
			1000~26500	1000~26500	-42.674	<=-21.352	PASS
		2480	Reference	-1.95	-1.95	---	PASS
			30~1000	30~1000	-60.497	<=-21.954	PASS
			1000~26500	1000~26500	-40.926	<=-21.954	PASS

Test Graphs

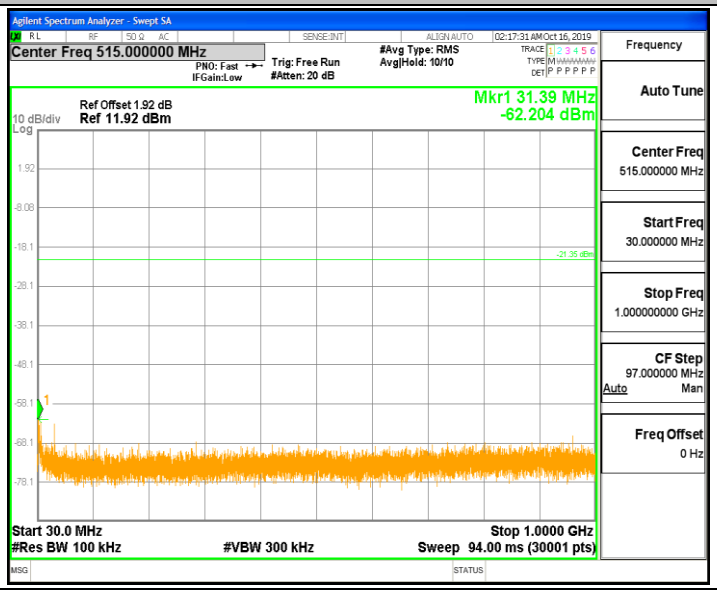
DH1_Ant1_2402_0~Reference

DH1_Ant1_2402_30~1000

DH1_Ant1_2402_1000~26500

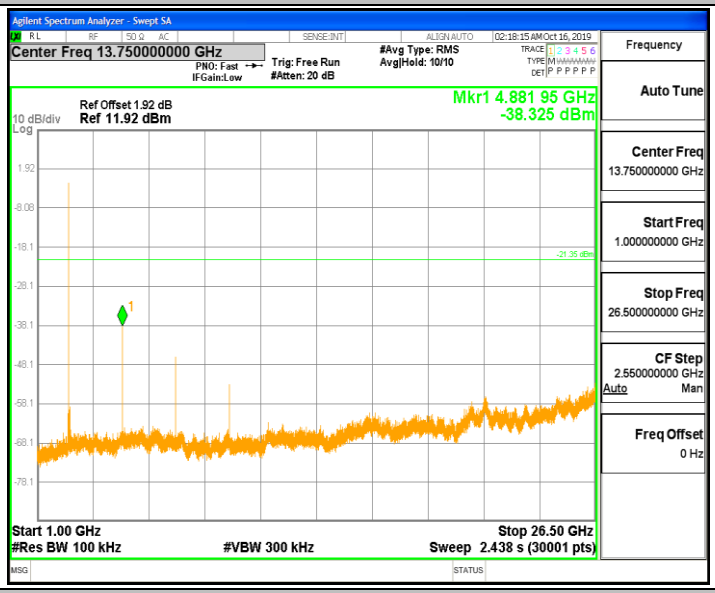
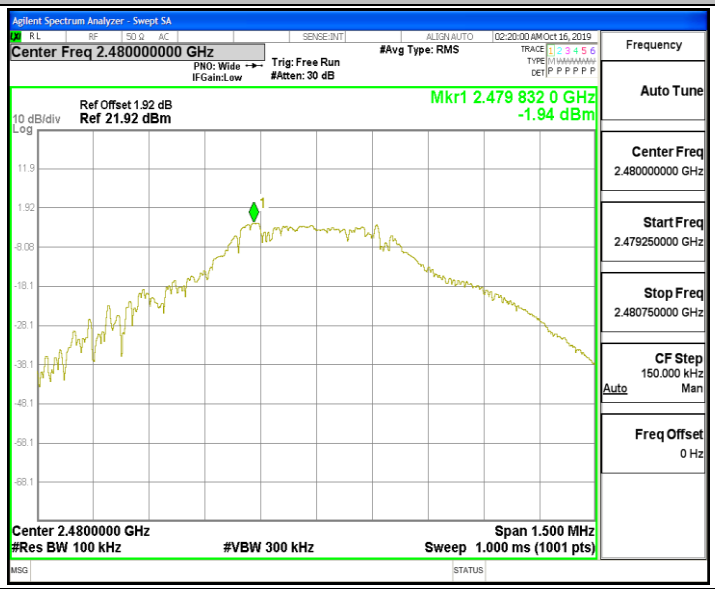


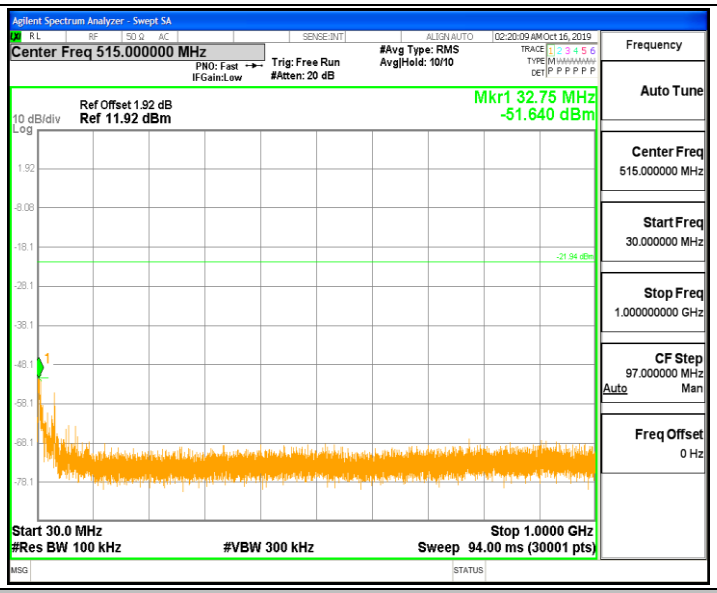
DH1_Ant1_2441_0~Reference



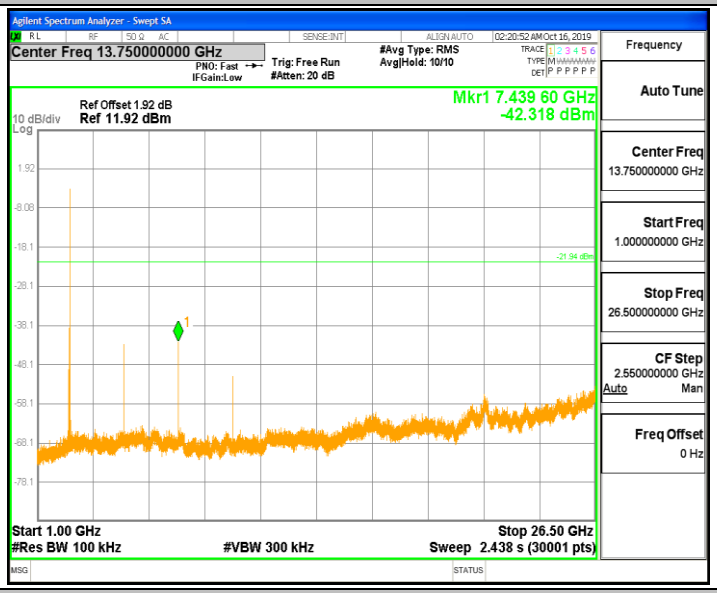
DH1_Ant1_2441_30~1000



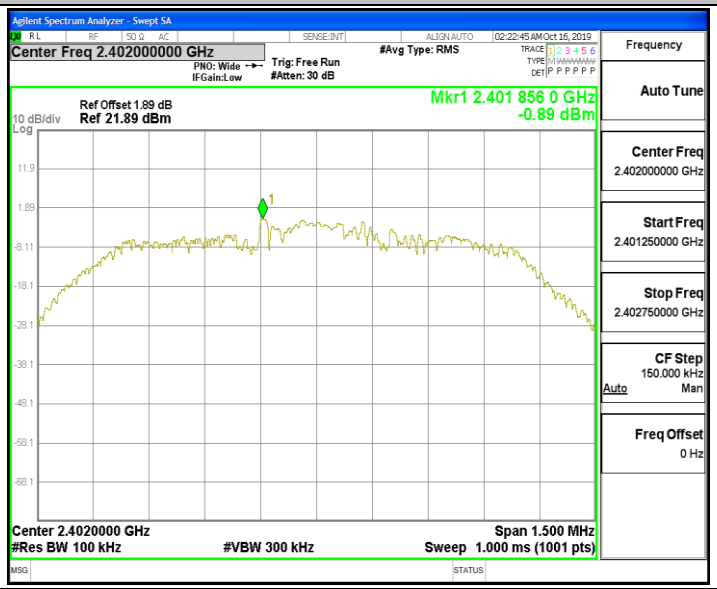
DH1_Ant1_2441_1000~26500

DH1_Ant1_2480_0~Reference

DH1_Ant1_2480_30~1000



DH1_Ant1_2480_1000~26500



2DH1_Ant1_2402_0~Reference



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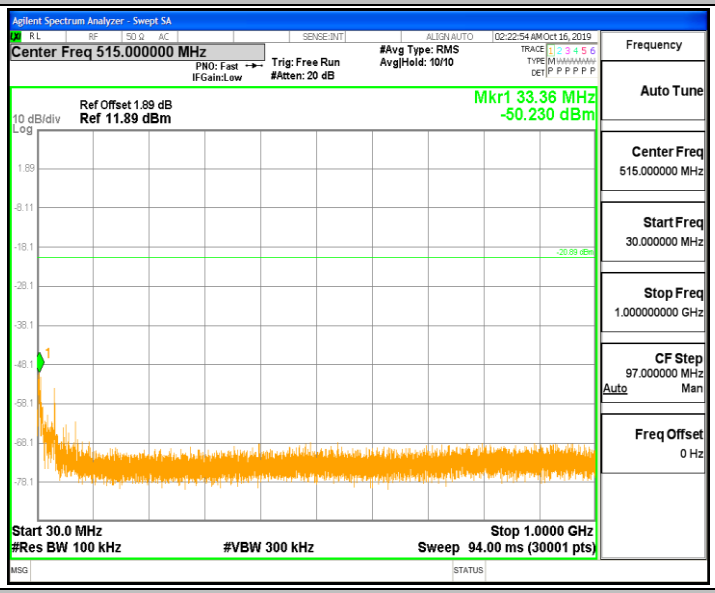

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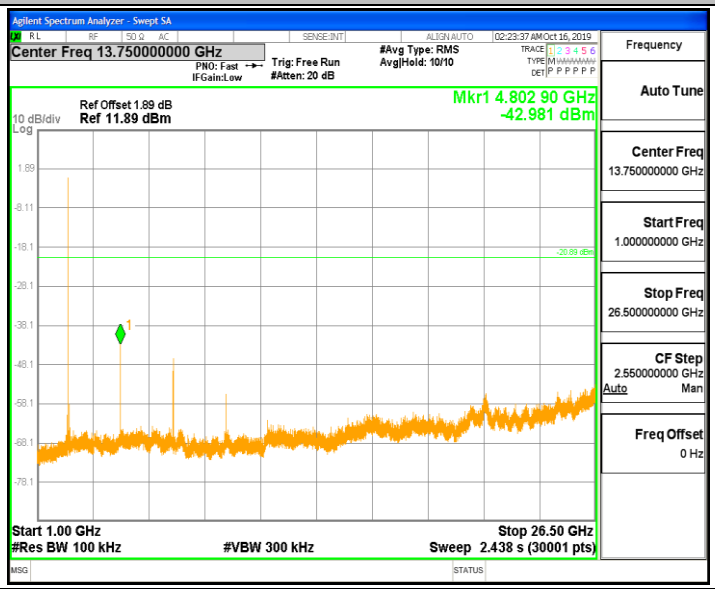

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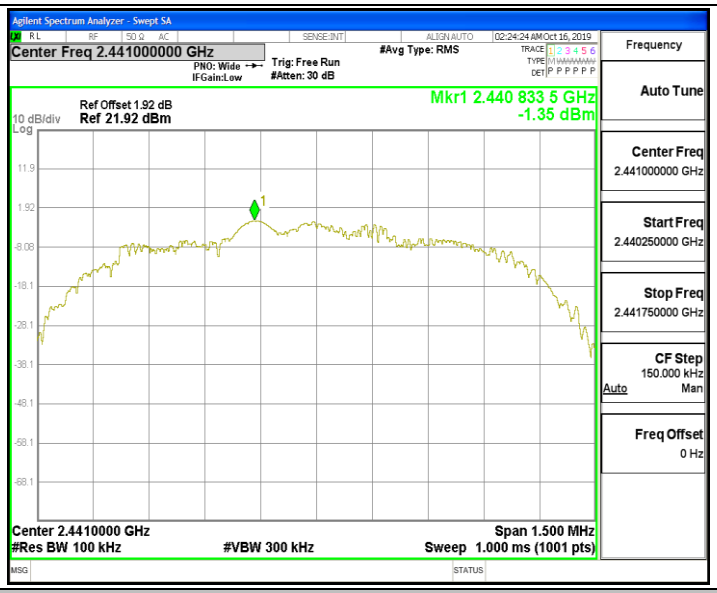

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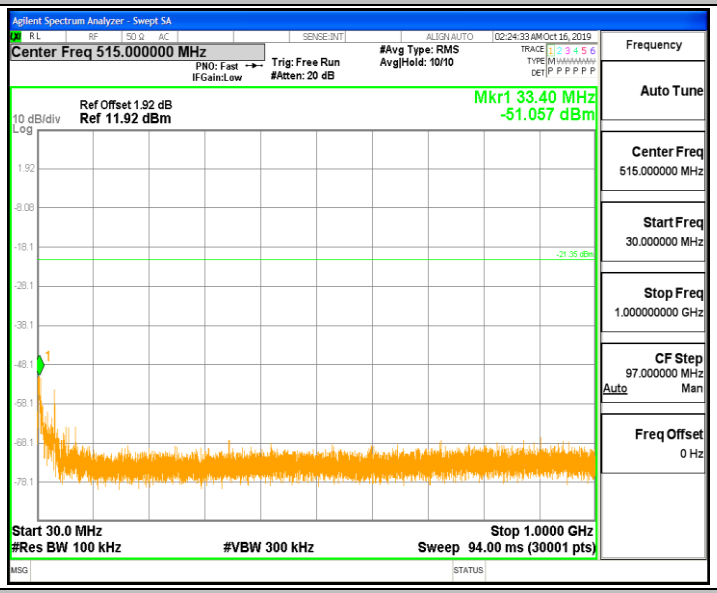
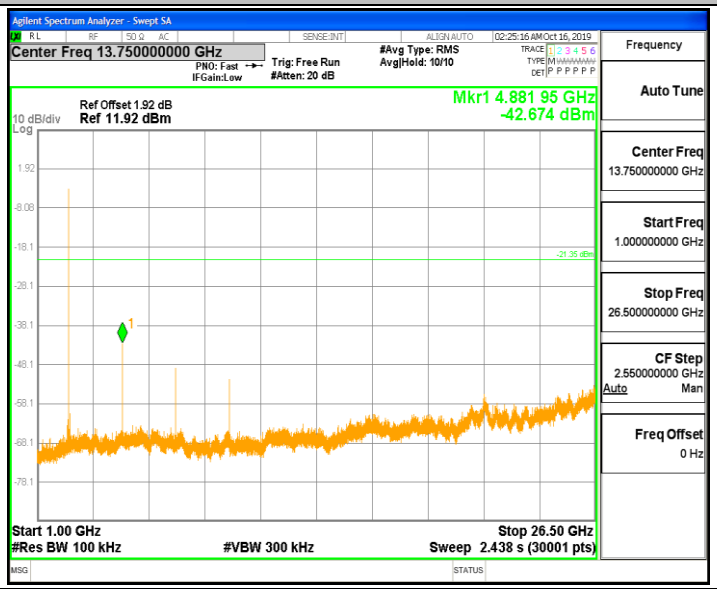


2DH1_Ant1_2441_1000~26500



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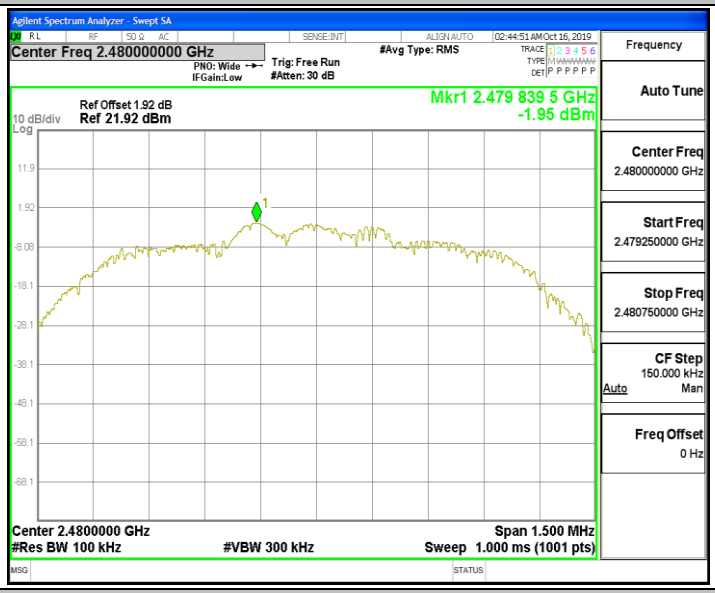

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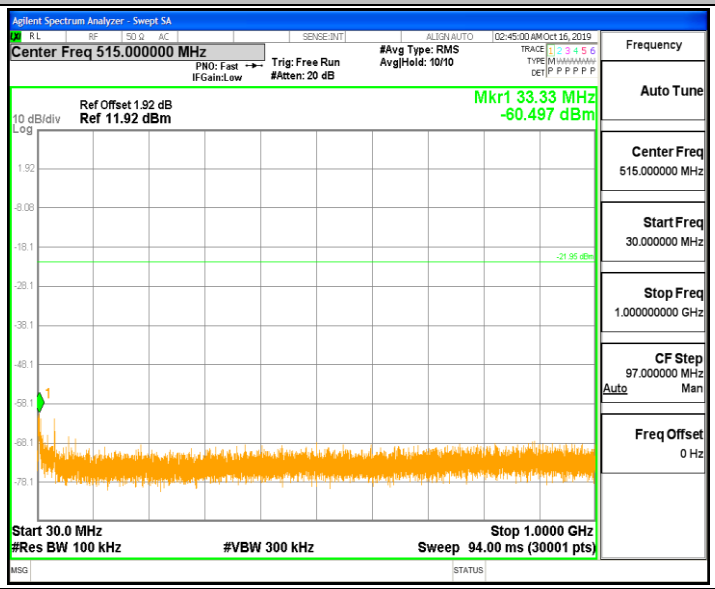
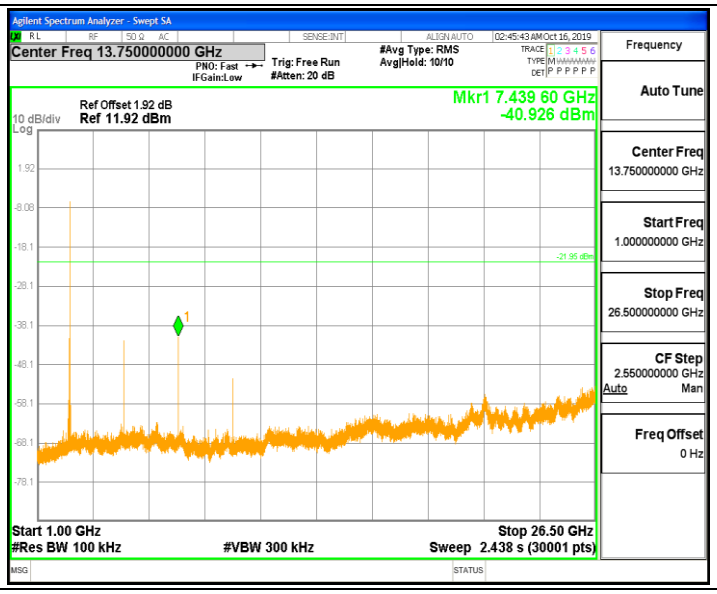


2DH1_Ant1_2480_1000~26500


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 10/10
02:45:43 AM Oct 16, 2019
Ref Offset 1.92 dB
10 dB/div
Log
Ref 11.92 dBm
Mkr1 7.439 60 GHz
-40.926 dBm
1.92
-8.08
-18.1
-28.1
-38.1
-48.1
-58.1
-68.1
-78.1
-21.95 dBm
Start 1.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.50 GHz
Sweep 2.438 s (30001 pts)
Frequency
Auto Tune
Center Freq
13.750000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
2.550000000 GHz
Auto
Man
Freq Offset
0 Hz