APPENDIX 1

RF TEST DATA

1.1 APPENDIX A: 20DB EMISSION BANDWIDTH

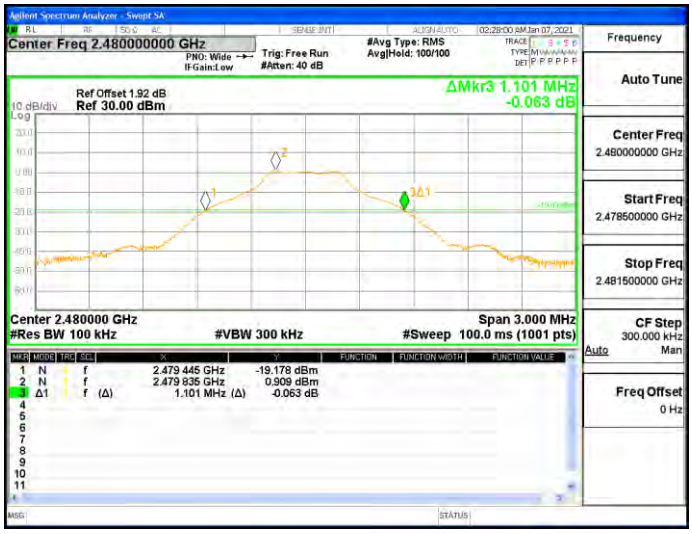
Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	1.107	2401.442	2402.549	---	PASS
		2441	1.101	2440.448	2441.549	---	PASS
		2480	1.101	2479.445	2480.546	---	PASS
2DH1	Ant1	2402	1.377	2401.304	2402.681	---	PASS
		2441	1.380	2440.304	2441.684	---	PASS
		2480	1.380	2479.304	2480.684	---	PASS
3DH1	Ant1	2402	1.362	2401.313	2402.675	---	PASS
		2441	1.365	2440.313	2441.678	---	PASS
		2480	1.368	2479.310	2480.678	---	PASS

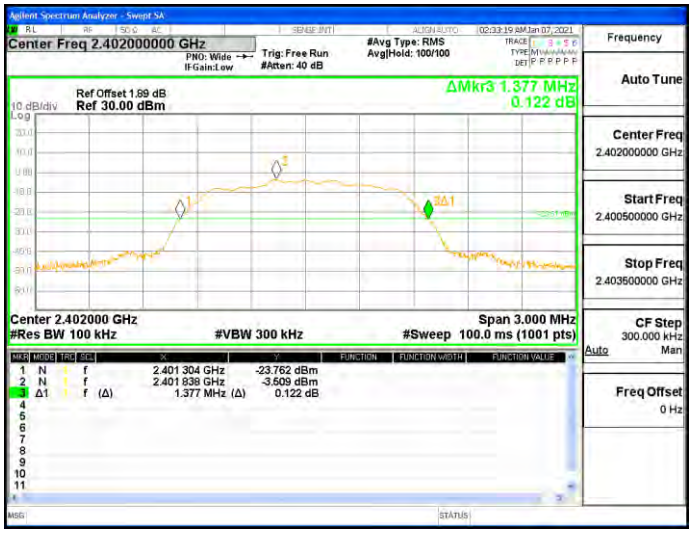
Test Graphs

DH1_Ant1_2402

DH1_Ant1_2441

DH1_Ant1_2480


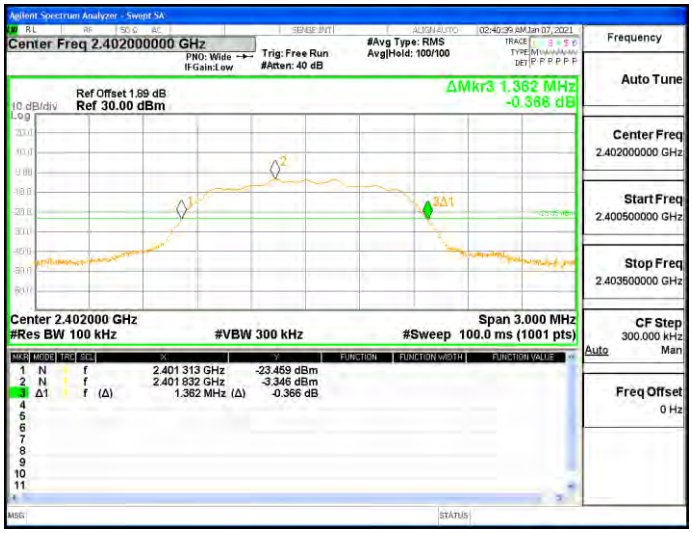
2DH1_Ant1_2402



2DH1_Ant1_2441

2DH1_Ant1_2480

3DH1_Ant1_2402



3DH1_Ant1_2441

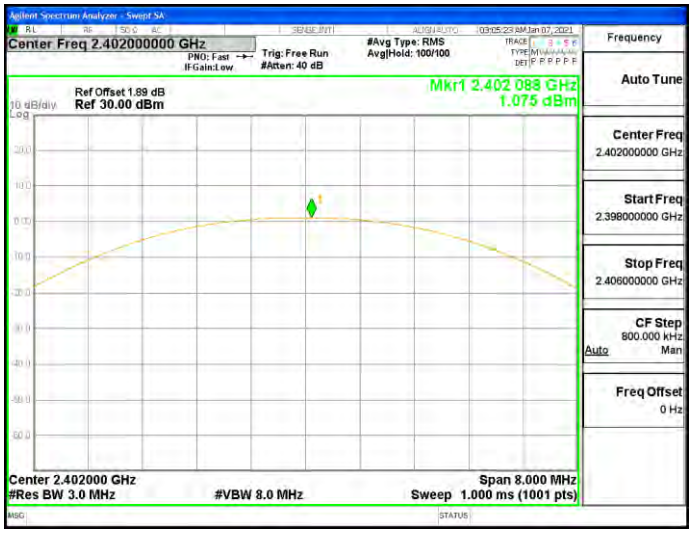
3DH1_Ant1_2480

1.2 APPENDIX C: MAXIMUM CONDUCTED OUTPUT POWER

Test Result

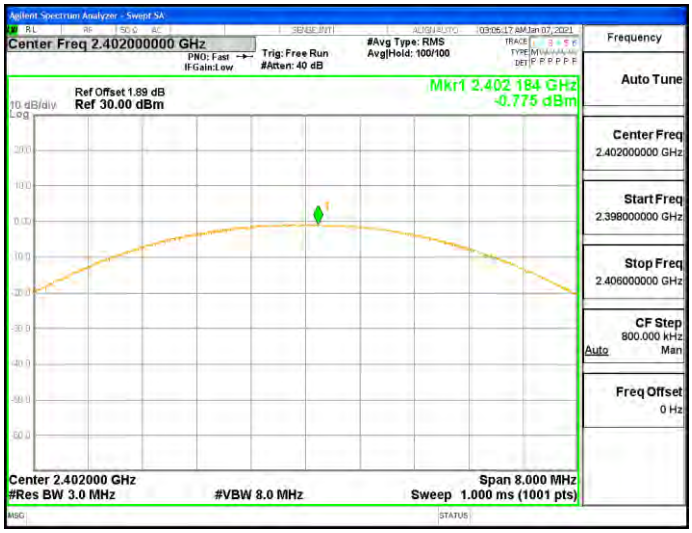
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH1	Ant1	2402	1.08	<=20.97	PASS
		2441	0.9	<=20.97	PASS
		2480	1.13	<=20.97	PASS
2DH1	Ant1	2402	-0.78	<=20.97	PASS
		2441	-1.05	<=20.97	PASS
		2480	-0.82	<=20.97	PASS
3DH1	Ant1	2402	-0.3	<=20.97	PASS
		2441	-0.43	<=20.97	PASS
		2480	-0.26	<=20.97	PASS

Test Graphs

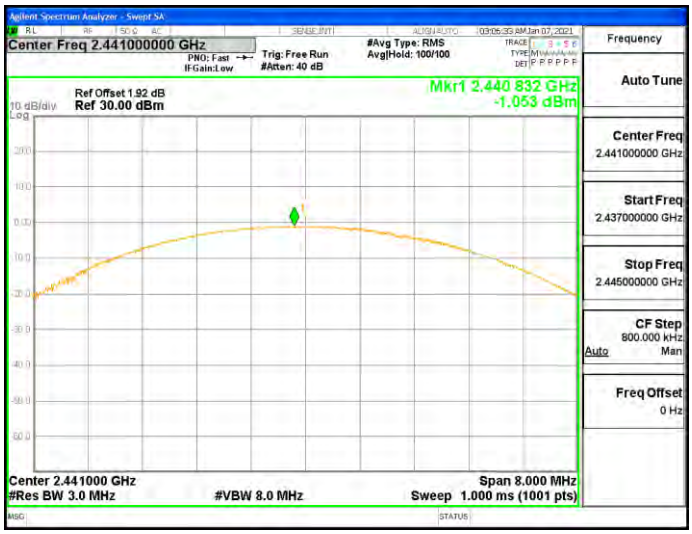
DH1_Ant1_2402

DH1_Ant1_2441

DH1_Ant1_2480

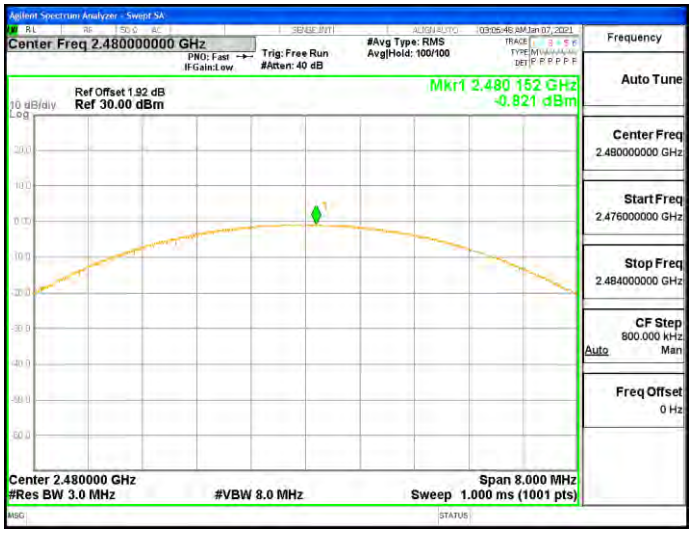
2DH1_Ant1_2402



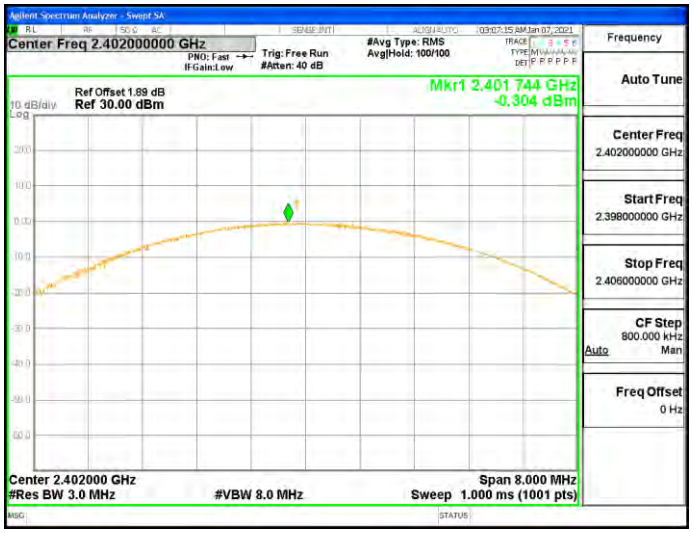
2DH1_Ant1_2441



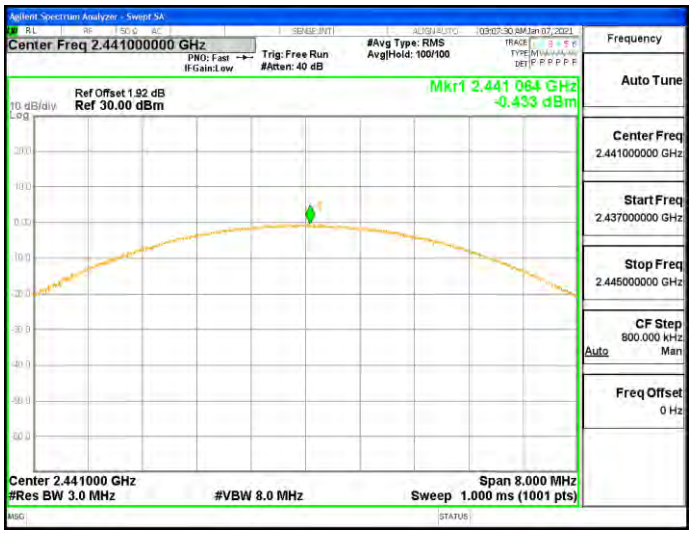
2DH1_Ant1_2480



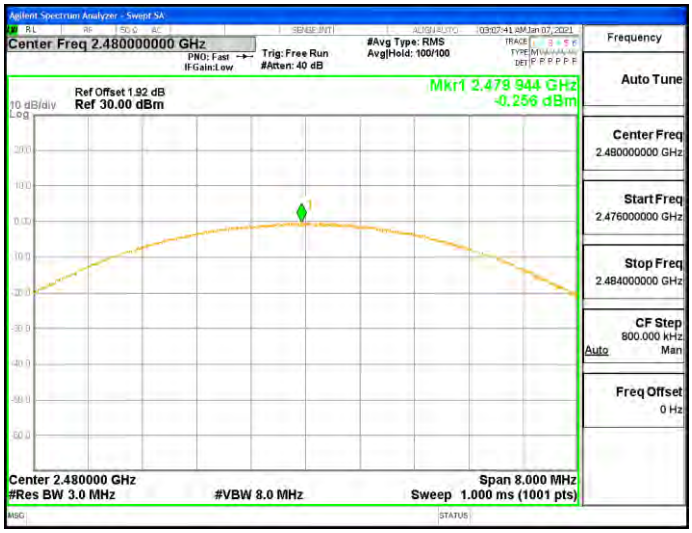
3DH1_Ant1_2402



3DH1_Ant1_2441



3DH1_Ant1_2480

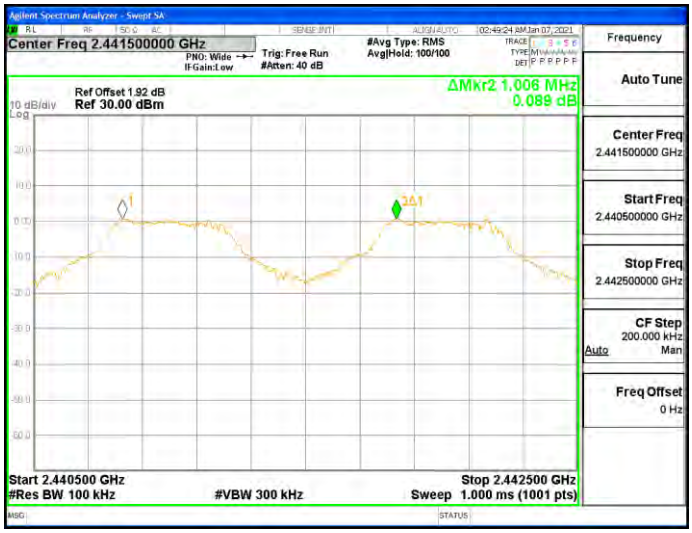
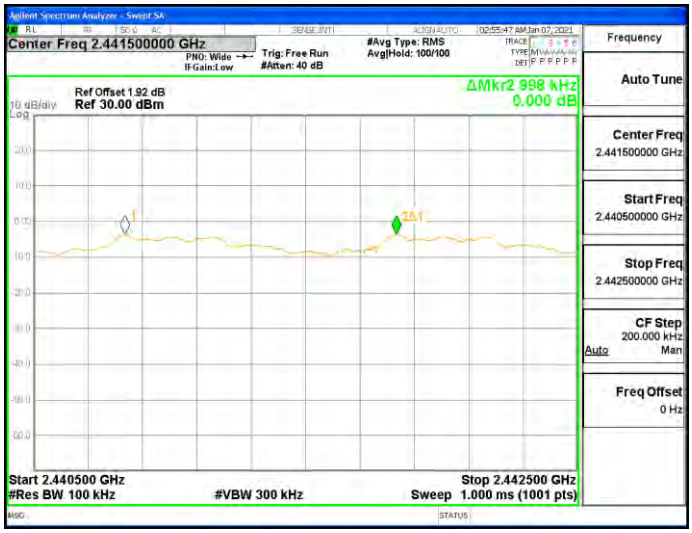
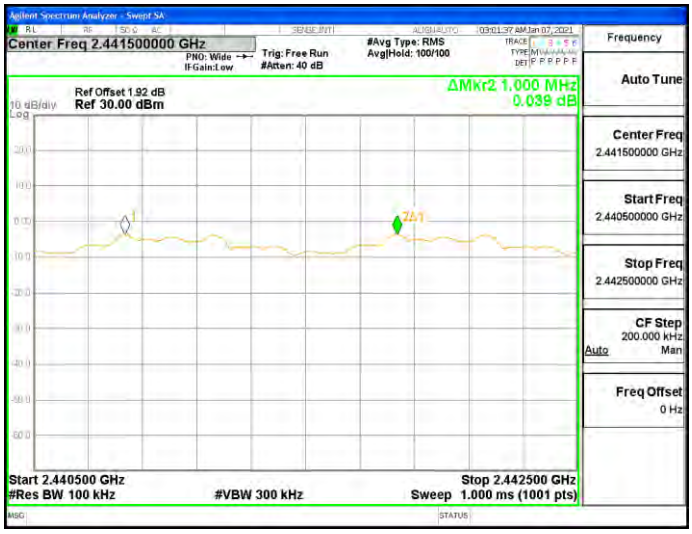

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 100/100
03:07:41 AM Jan 07, 2021
Ref Offset 1.92 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr1 2.479 944 GHz
-0.256 dBm
Center 2.480000 GHz
#Res BW 3.0 MHz
#VBW 8.0 MHz
Span 8.000 MHz
Sweep 1.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.476000000 GHz
Stop Freq
2.484000000 GHz
CF Step
800.000 kHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

1.3 APPENDIX D: CARRIER FREQUENCY SEPARATION

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop	1.006	>=0.738	PASS
2DH1	Ant1	Hop	0.998	>=0.920	PASS
3DH1	Ant1	Hop	1	>=0.912	PASS

Test Graphs

DH1_Ant1_Hop

2DH1_Ant1_Hop

3DH1_Ant1_Hop


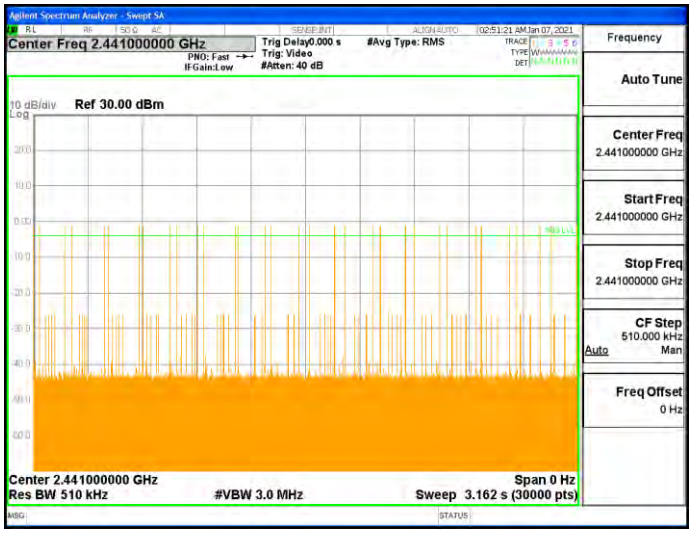
1.4 APPENDIX E: TIME OF OCCUPANCY

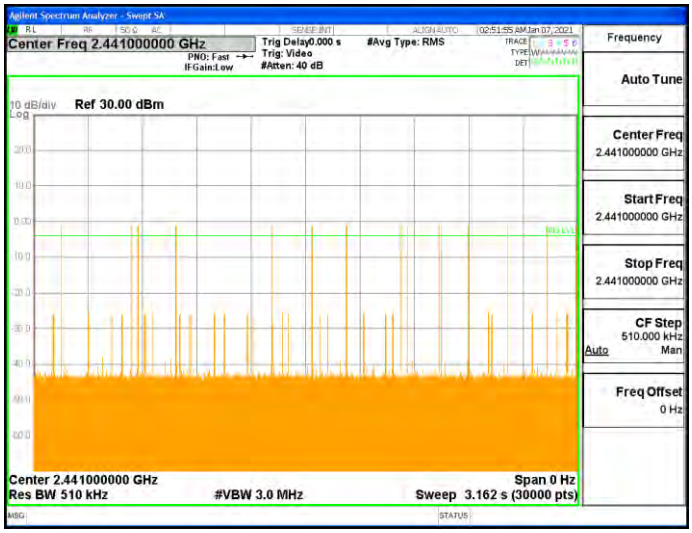
Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.38	330	0.126	<=0.4	PASS
DH3	Ant1	Hop	1.64	160	0.262	<=0.4	PASS
DH5	Ant1	Hop	2.89	60	0.173	<=0.4	PASS

Test Graphs

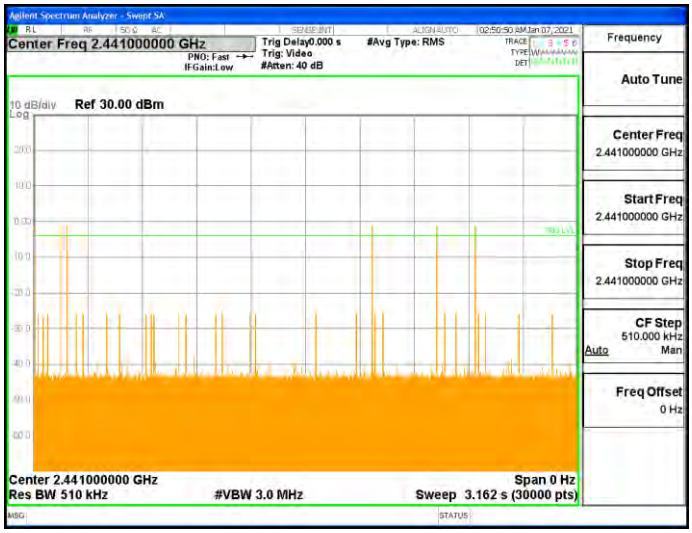
DH1_Ant1_Hop


DH3_Ant1_Hop



Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay 0.000 s
Trig: Video
#Avg Type: RMS
#Atten: 40 dB
02:51:55 AM Jan 07, 2021
Frequency
Auto Tune
10 dB/div
Log
Ref 30.00 dBm
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
Center 2.441000000 GHz
Res BW 510 kHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 3.162 s (30000 pts)
MSG
STATUS

DH5_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay-200.0 µs
Trig: Video
#Avg Type: RMS
#Atten: 40 dB
02:50:42 AM Jan 07, 2021
Frequency
Auto Tune
ΔMkr2 2.888 ms
7.31 dB
10 dB/div
Log
Ref 30.00 dBm
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
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.13 ms (8000 pts)
MSG
STATUS

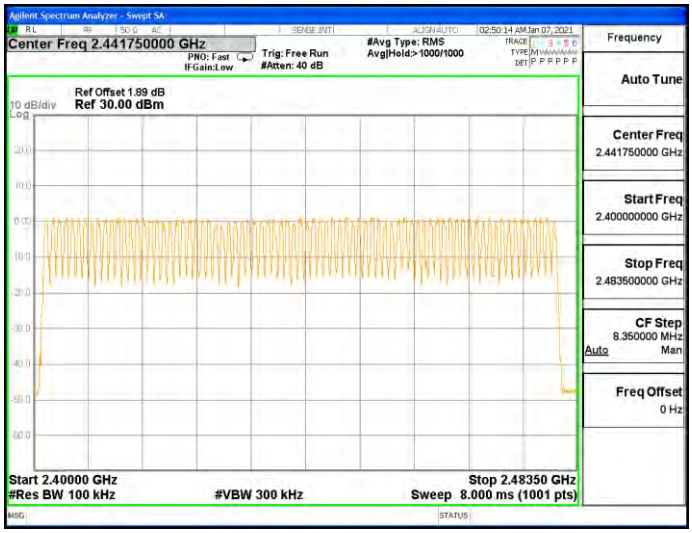
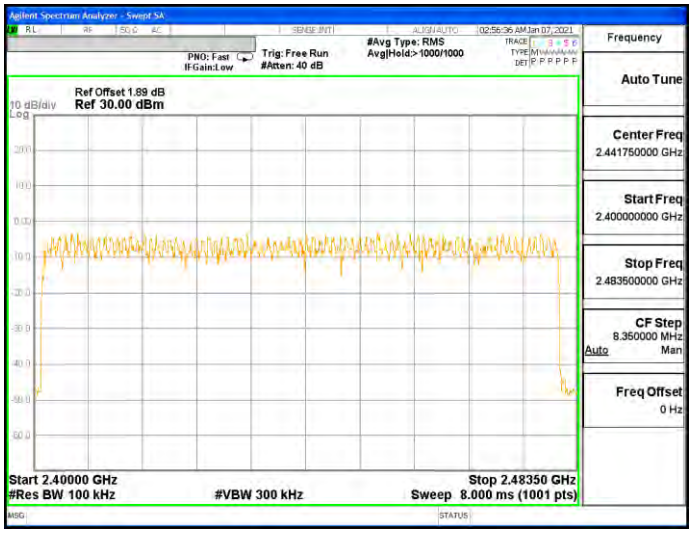
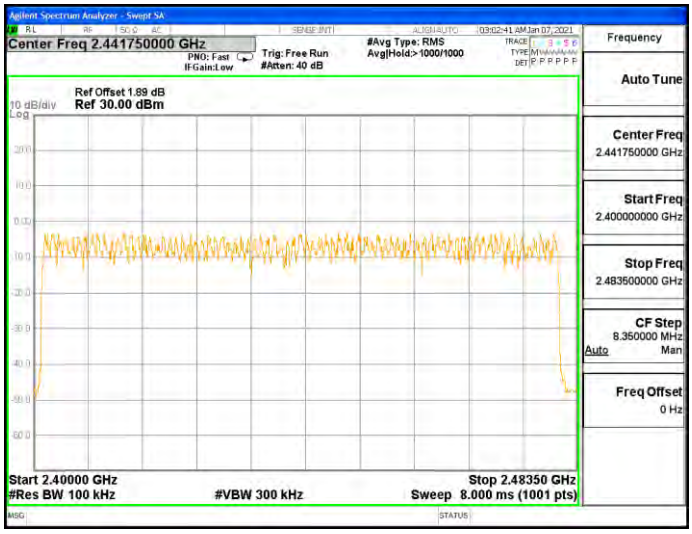

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay 0.000 s
Trig: Video
#Avg Type: RMS
#Atten: 40 dB
02:50:50 AM Jan 07, 2021
Frequency
Auto Tune
10 dB/div
Log
Ref 30.00 dBm
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
510.000 kHz
Auto
Man
Freq Offset
0 Hz
Center 2.441000000 GHz
Res BW 510 kHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 3.162 s (30000 pts)
MSG
STATUS

1.5 APPENDIX F: 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
3DH1	Ant1	Hop	79	>=15	PASS

Test Graphs

DH1_Ant1_Hop

2DH1_Ant1_Hop

3DH1_Ant1_Hop


1.6 APPENDIX G: BAND EDGE MEASUREMENTS

Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	0.69	-56	<=-19.32	PASS
		High	2480	0.86	-55.58	<=-19.14	PASS
		Low	Hop_2402	0.54	-56.41	-19.46	PASS
		High	Hop_2480	0.96	-55.61	-19.04	PASS
2DH1	Ant1	Low	2402	-3.59	-56.23	<=-23.59	PASS
		High	2480	-3.64	-55.03	<=-23.64	PASS
		Low	Hop_2402	-3.76	-55.95	-23.76	PASS
		High	Hop_2480	-3.64	-55.46	-23.64	PASS
3DH1	Ant1	Low	2402	-3.43	-55.14	<=-23.43	PASS
		High	2480	-3.47	-55.57	<=-23.47	PASS
		Low	Hop_2402	-3.68	-56.52	-23.68	PASS
		High	Hop_2480	-3.52	-55.49	-23.52	PASS

Test Graphs

DH1_Ant1_Low_2402

DH1_Ant1_High_2480

DH1_Ant1_Low_Hop_2402

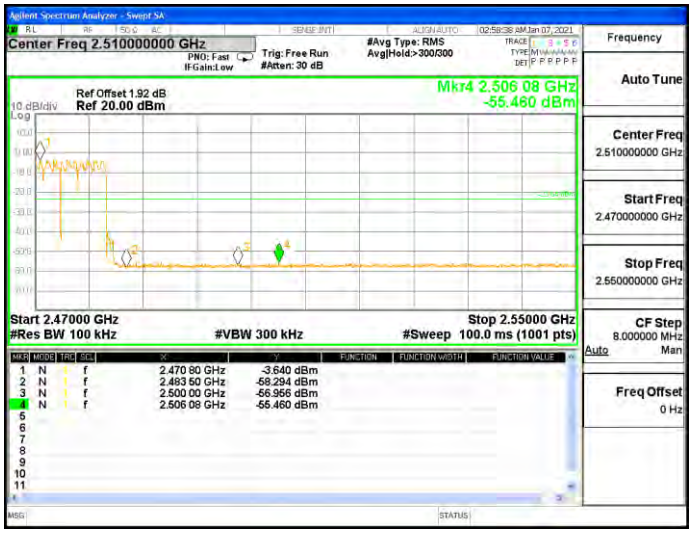
DH1_Ant1_High_Hop_2480

2DH1_Ant1_Low_2402

2DH1_Ant1_High_2480

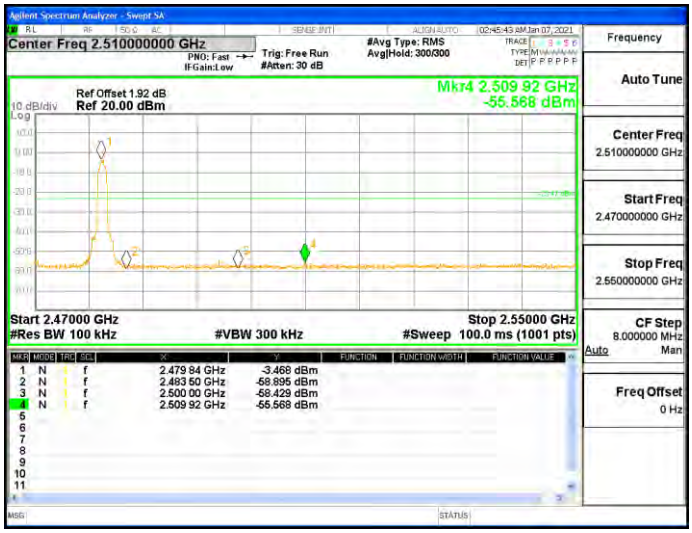
2DH1_Ant1_Low_Hop_2402

2DH1_Ant1_High_Hop_2480



3DH1_Ant1_Low_2402

3DH1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402

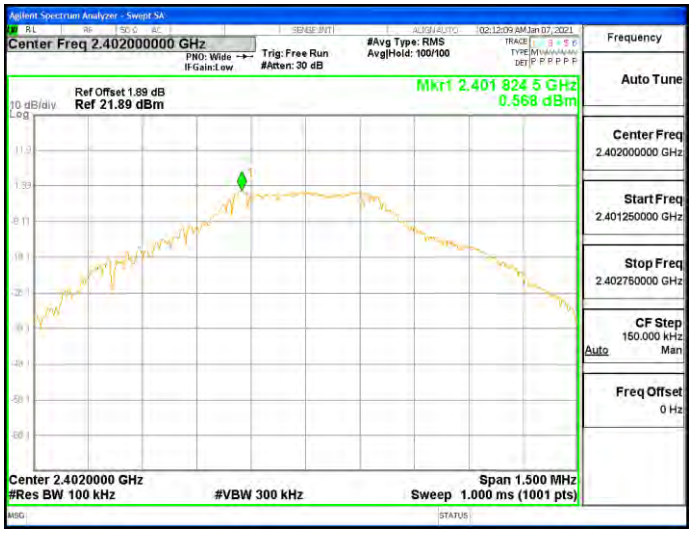
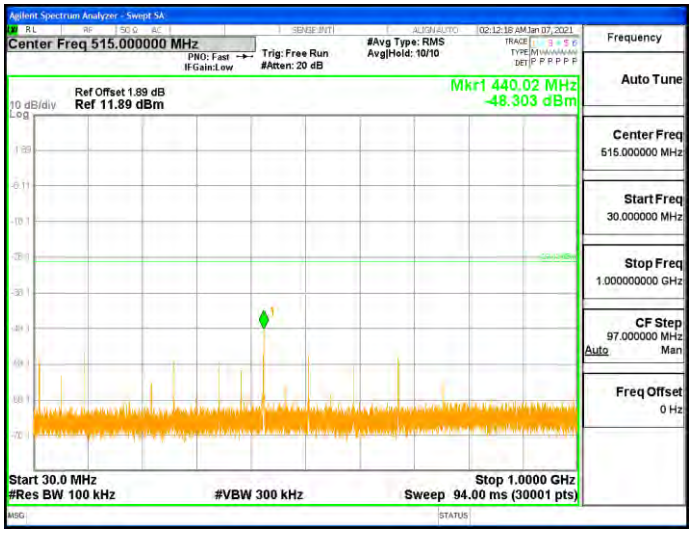
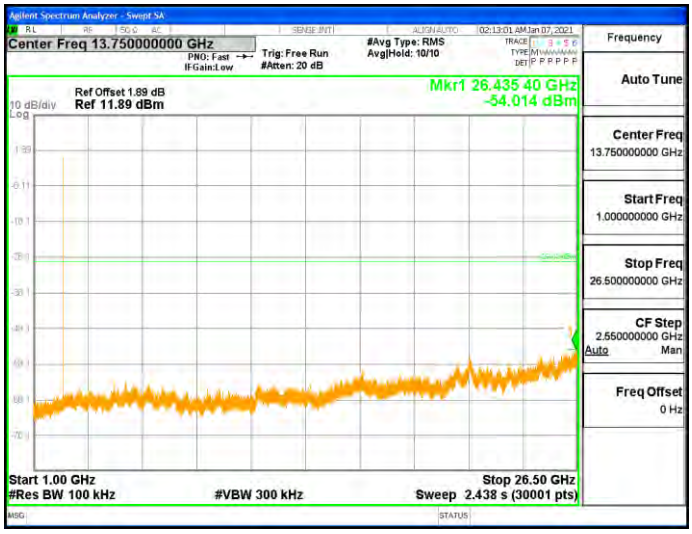
3DH1_Ant1_High_Hop_2480

1.7 APPENDIX H: CONDUCTED SPURIOUS EMISSION

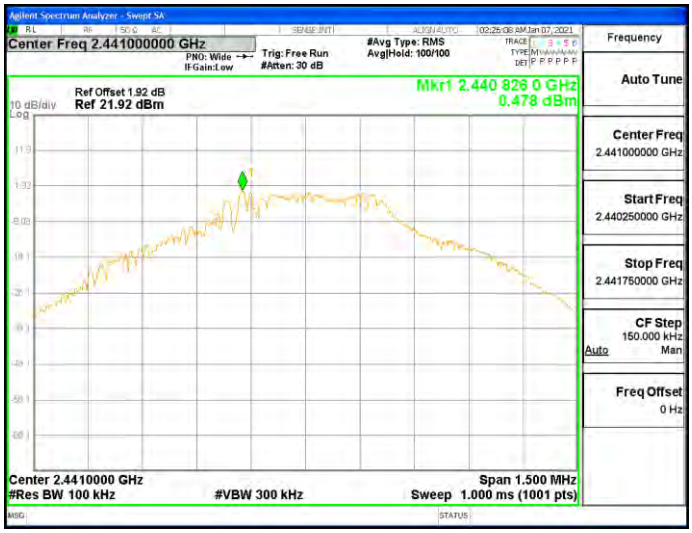
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	0.57	0.57	---	PASS
			30~1000	30~1000	-48.303	<=-29.432	PASS
			1000~26500	1000~26500	-54.014	<=-29.432	PASS
		2441	Reference	0.48	0.48	---	PASS
			30~1000	30~1000	-49.505	<=-29.522	PASS
			1000~26500	1000~26500	-53.678	<=-29.522	PASS
		2480	Reference	0.77	0.77	---	PASS
			30~1000	30~1000	-49.869	<=-29.231	PASS
			1000~26500	1000~26500	-54.264	<=-29.231	PASS
2DH1	Ant1	2402	Reference	-3.60	-3.60	---	PASS
			30~1000	30~1000	-49.958	<=-33.595	PASS
			1000~26500	1000~26500	-53.65	<=-33.595	PASS
		2441	Reference	-4.14	-4.14	---	PASS
			30~1000	30~1000	-50.001	<=-34.135	PASS
			1000~26500	1000~26500	-54.172	<=-34.135	PASS
		2480	Reference	-3.68	-3.68	---	PASS
			30~1000	30~1000	-50.037	<=-33.676	PASS
			1000~26500	1000~26500	-53.022	<=-33.676	PASS
3DH1	Ant1	2402	Reference	-3.63	-3.63	---	PASS
			30~1000	30~1000	-49.88	<=-33.633	PASS
			1000~26500	1000~26500	-53.666	<=-33.633	PASS
		2441	Reference	-3.77	-3.77	---	PASS
			30~1000	30~1000	-49.886	<=-33.766	PASS
			1000~26500	1000~26500	-53.802	<=-33.766	PASS
		2480	Reference	-3.52	-3.52	---	PASS
			30~1000	30~1000	-49.96	<=-33.524	PASS
			1000~26500	1000~26500	-53.625	<=-33.524	PASS

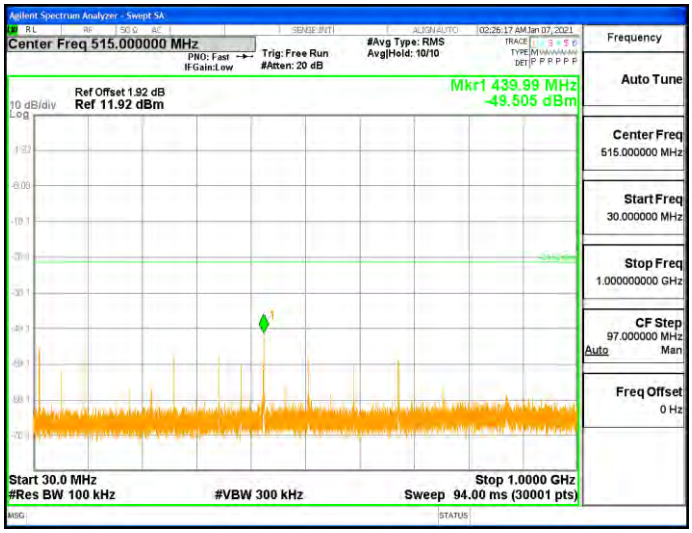
Test Graphs

DH1_Ant1_2402_0~Reference

DH1_Ant1_2402_30~1000

DH1_Ant1_2402_1000~26500


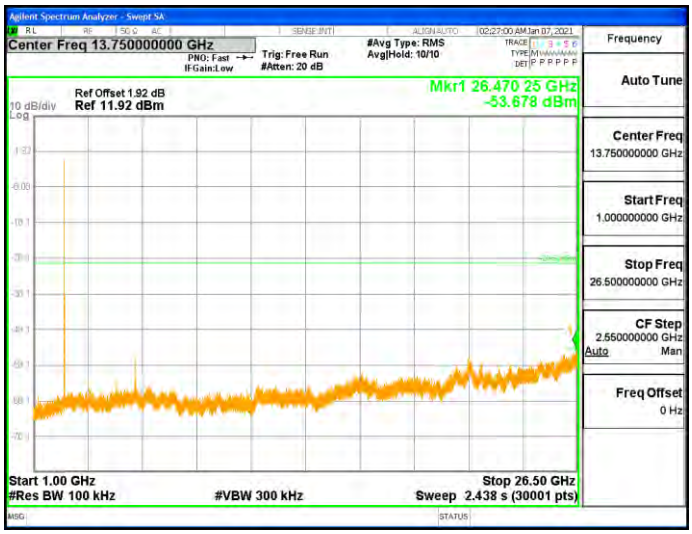
DH1_Ant1_2441_0~Reference



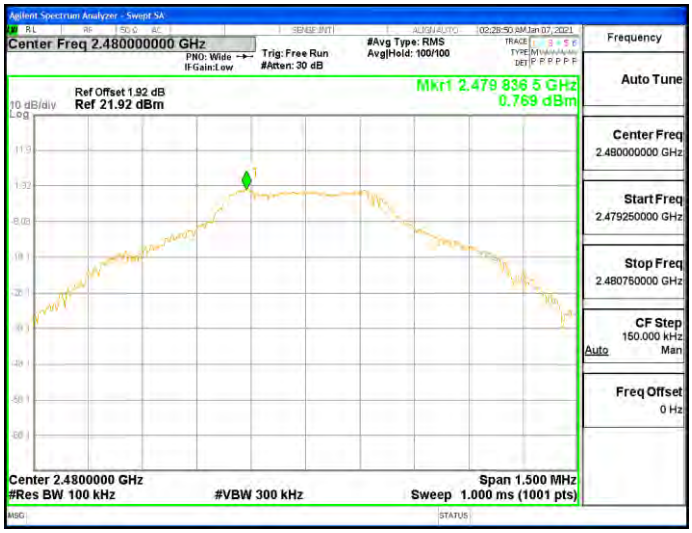
DH1_Ant1_2441_30~1000



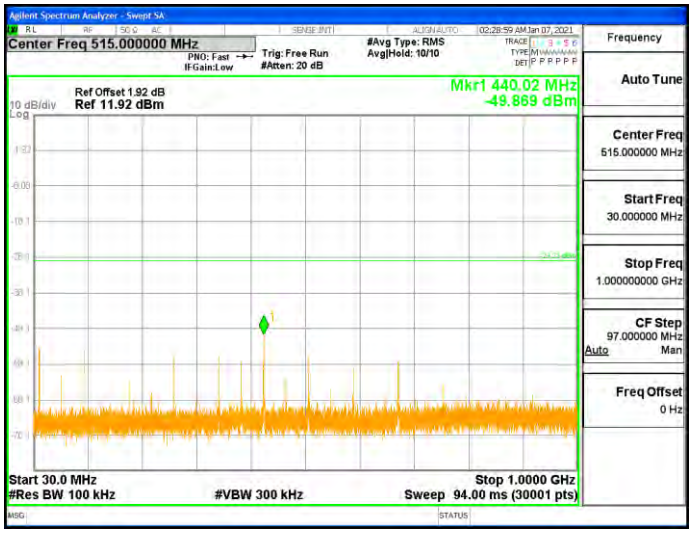
DH1_Ant1_2441_1000~26500



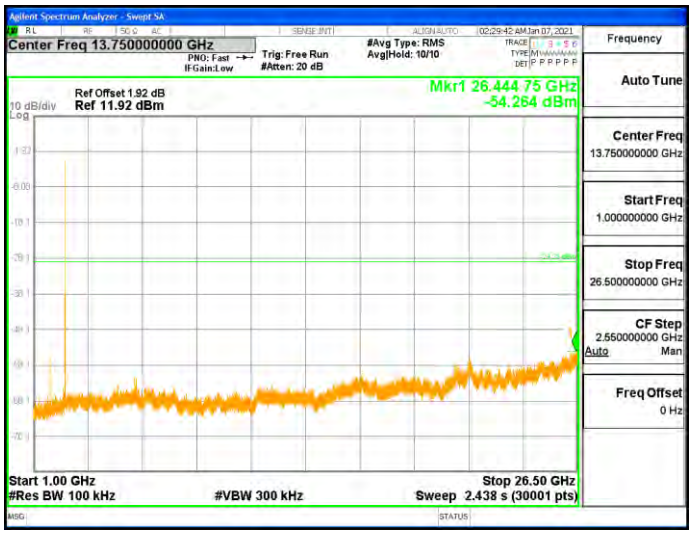
DH1_Ant1_2480_0~Reference



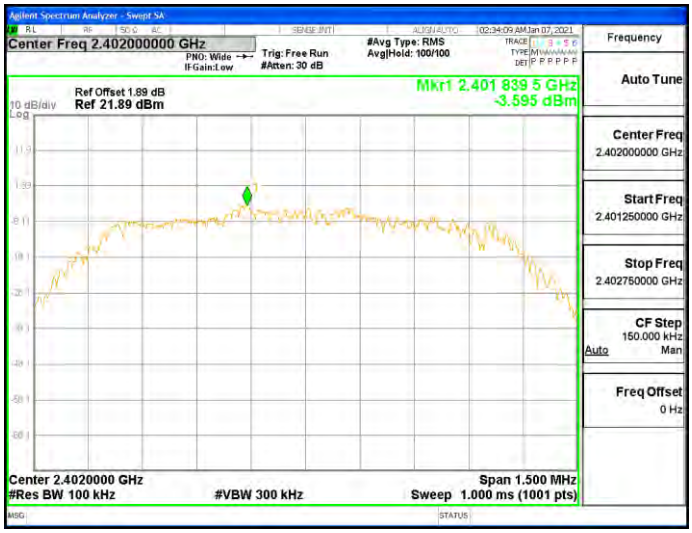
DH1_Ant1_2480_30~1000



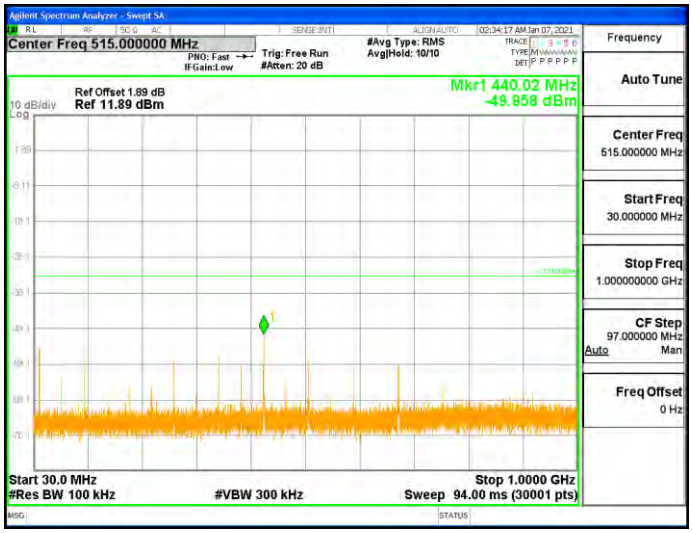
DH1_Ant1_2480_1000~26500



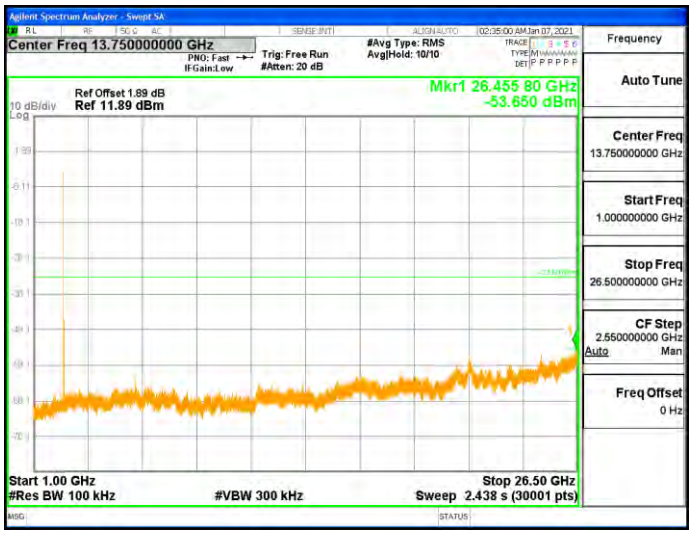
2DH1_Ant1_2402_0~Reference



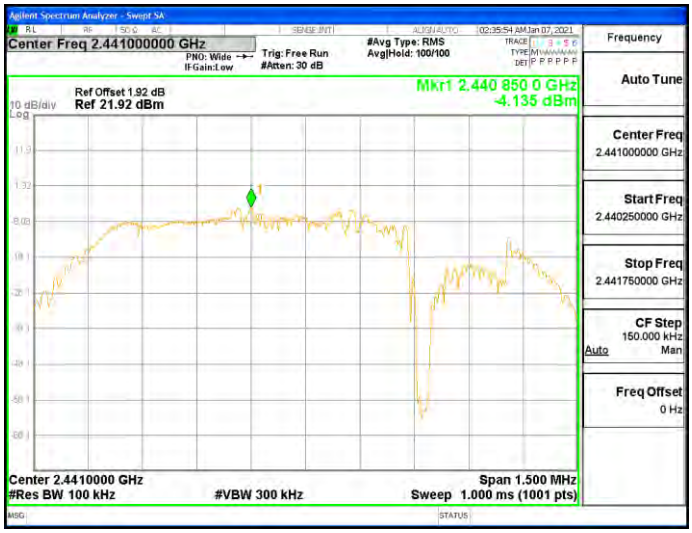
2DH1_Ant1_2402_30~1000



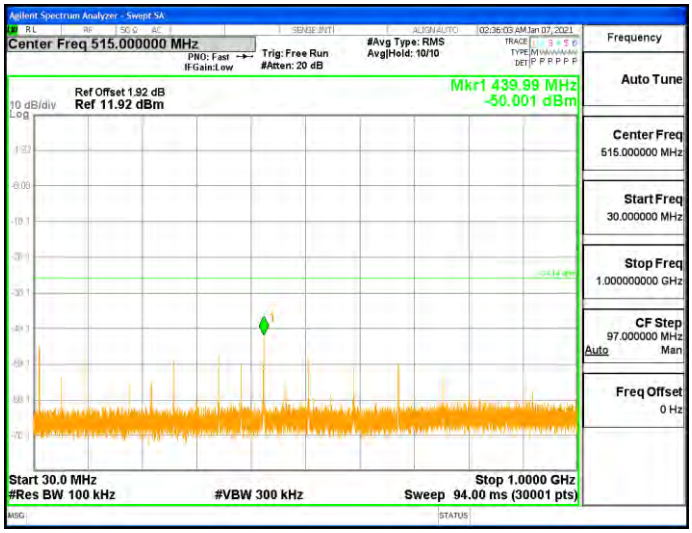
2DH1_Ant1_2402_1000~26500



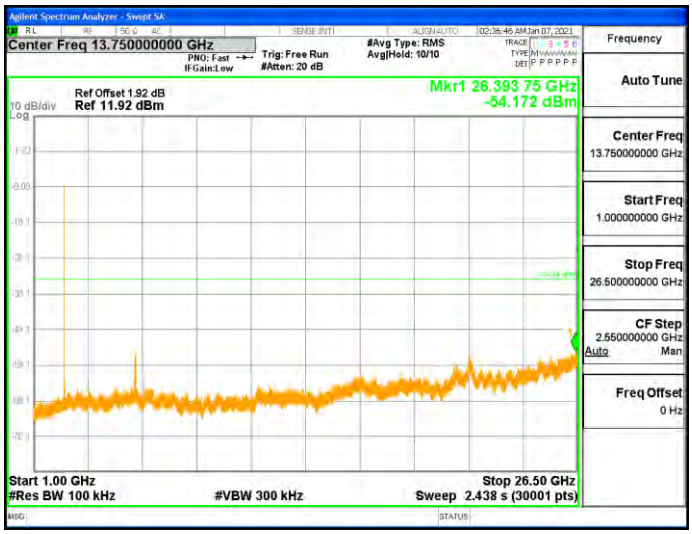
2DH1_Ant1_2441_0~Reference



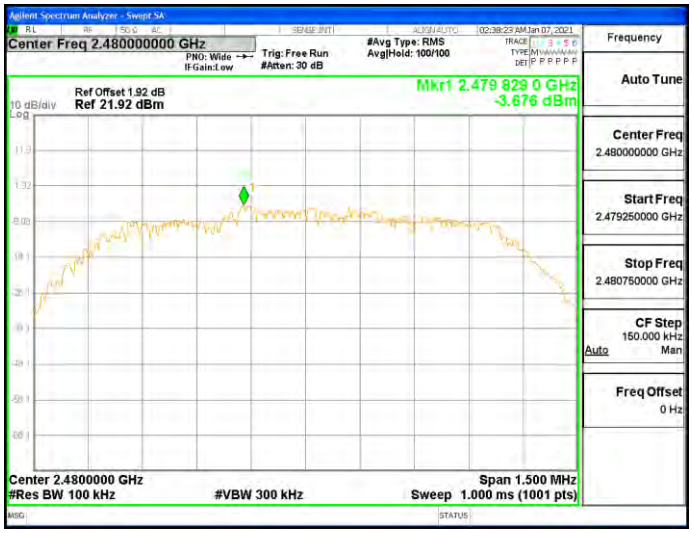
2DH1_Ant1_2441_30~1000



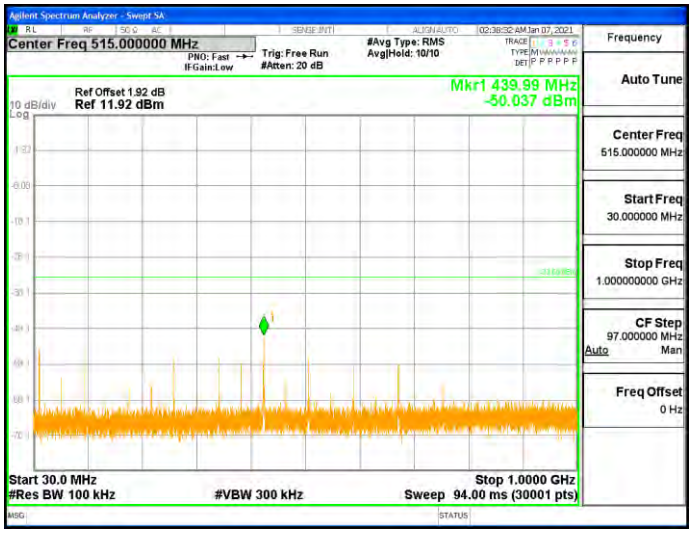
2DH1_Ant1_2441_1000~26500



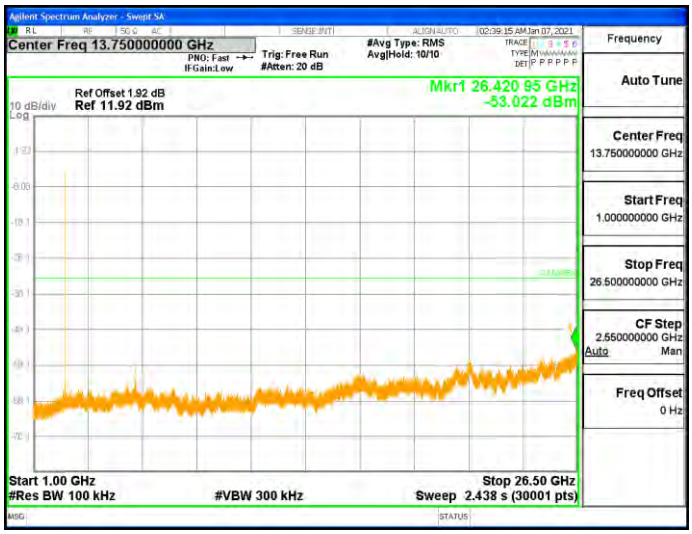
2DH1_Ant1_2480_0~Reference



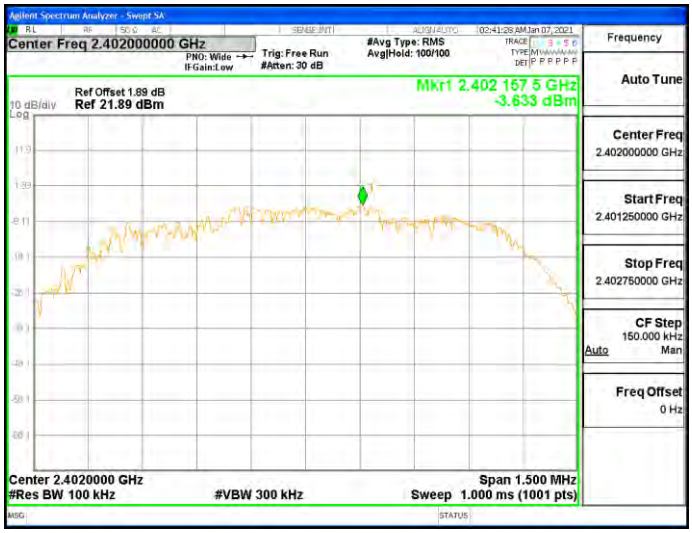
2DH1_Ant1_2480_30~1000



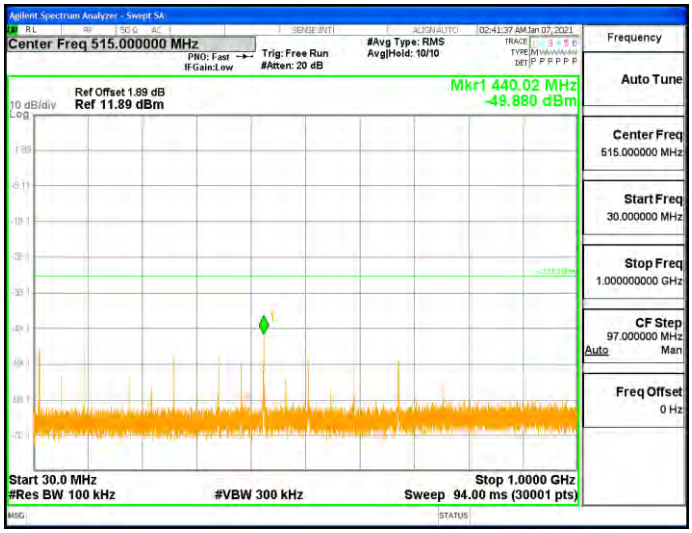
2DH1_Ant1_2480_1000~26500



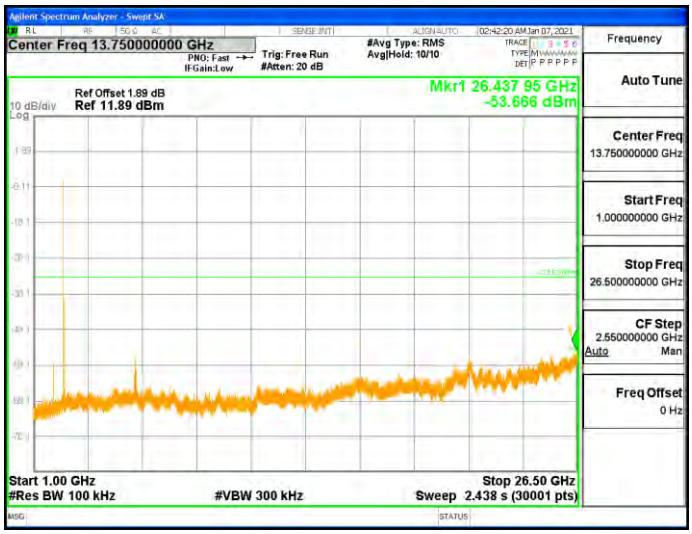
3DH1_Ant1_2402_0~Reference



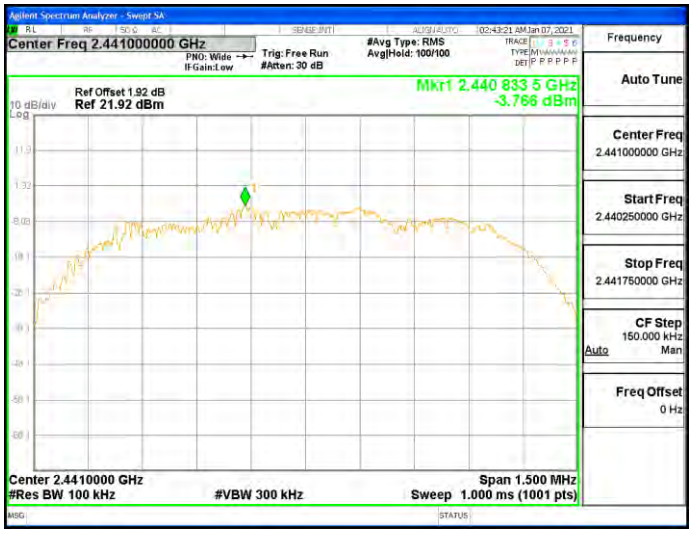
3DH1_Ant1_2402_30~1000



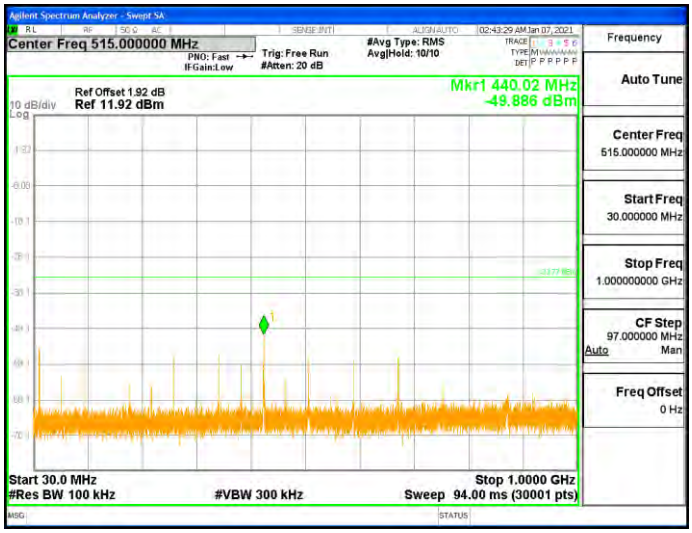
3DH1_Ant1_2402_1000~26500



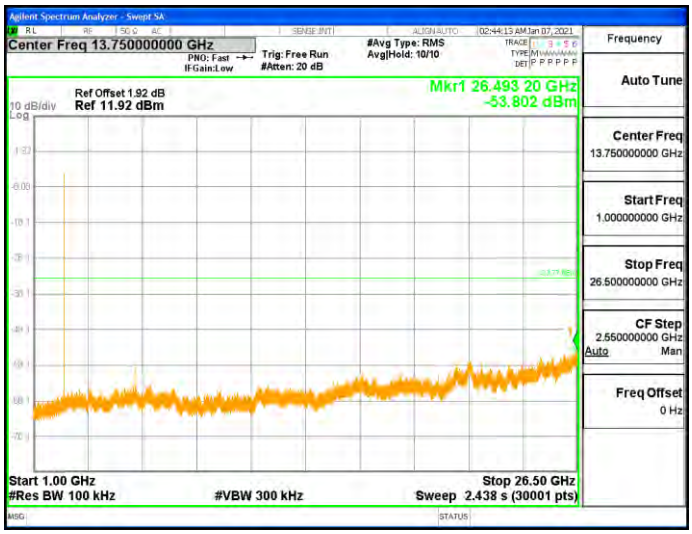
3DH1_Ant1_2441_0~Reference



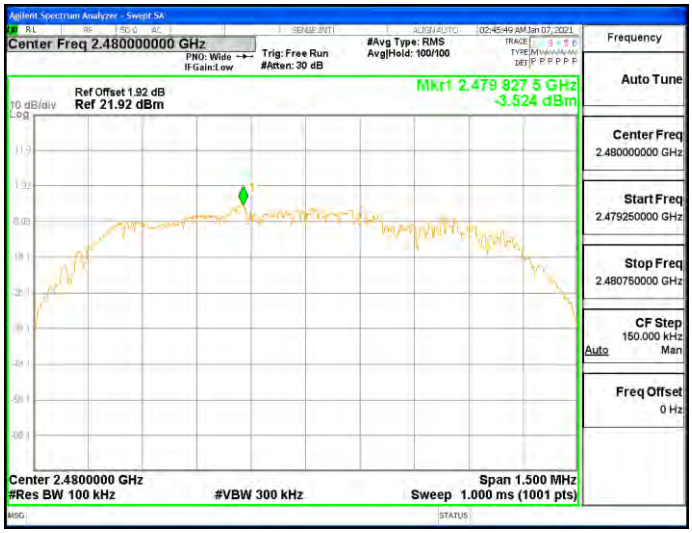
3DH1_Ant1_2441_30~1000



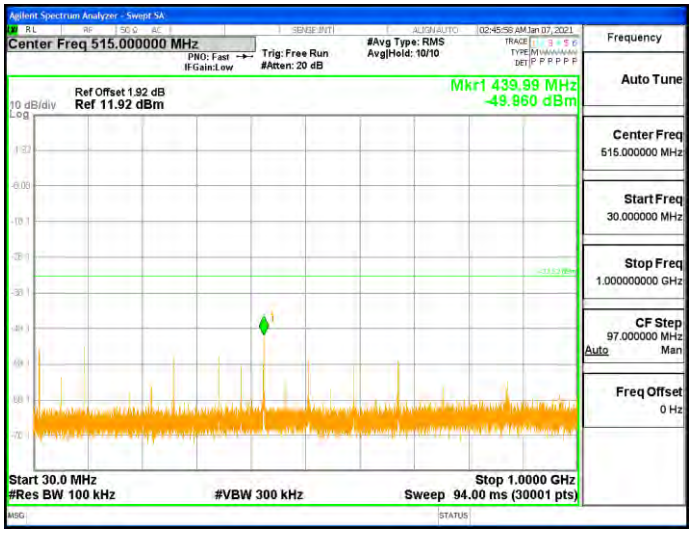
3DH1_Ant1_2441_1000~26500



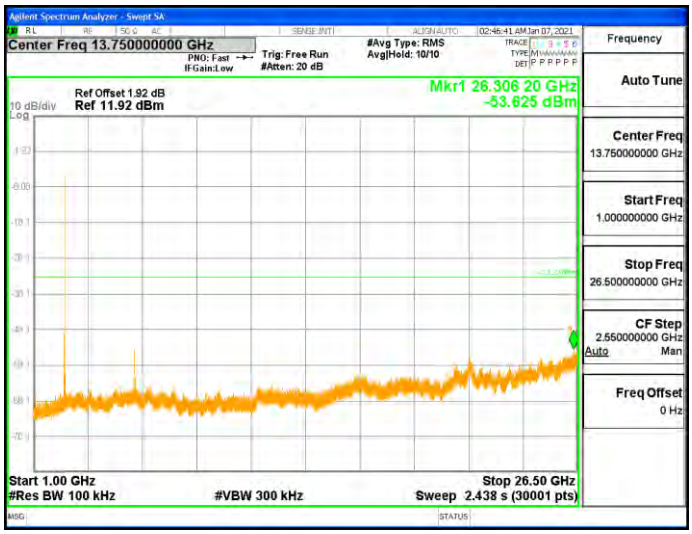
3DH1_Ant1_2480_0~Reference



3DH1_Ant1_2480_30~1000

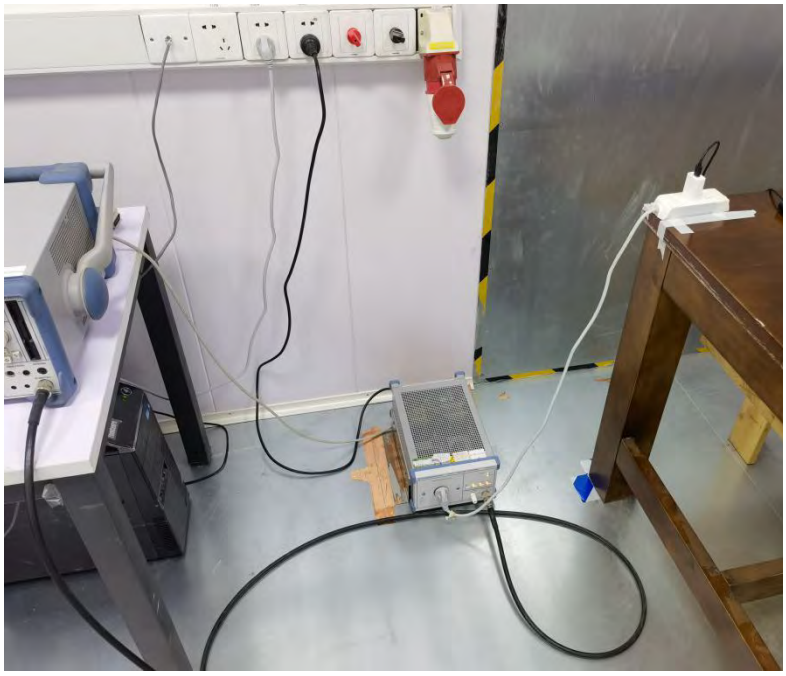


3DH1_Ant1_2480_1000~26500

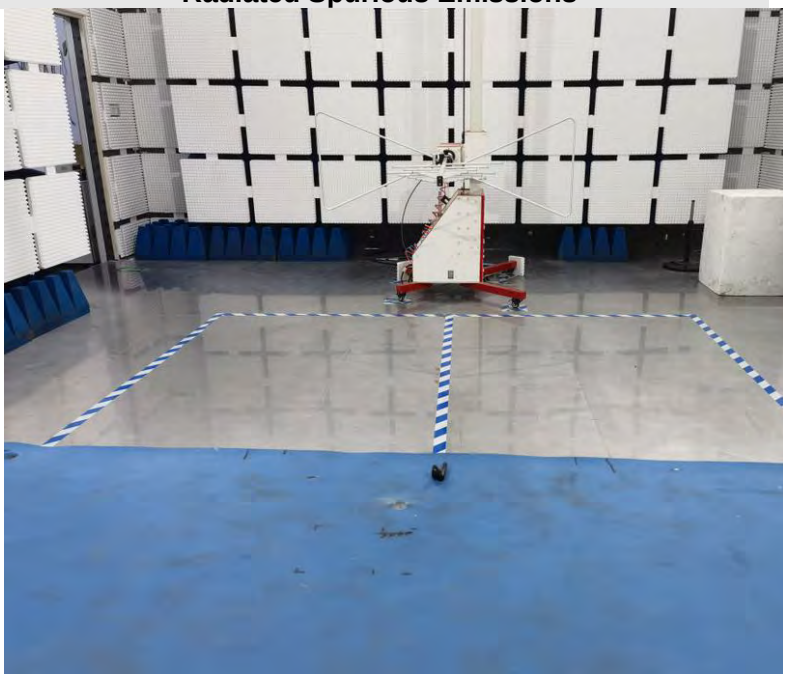


APPENDIX A: PHOTOGRAPHS OF TEST SETUP

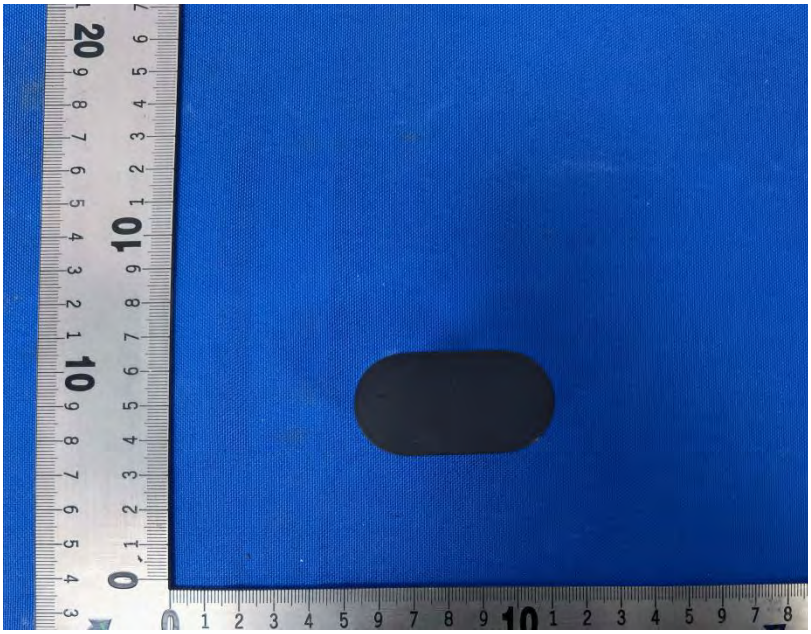
Conducted Emissions at AC Power Line (150kHz-30MHz)

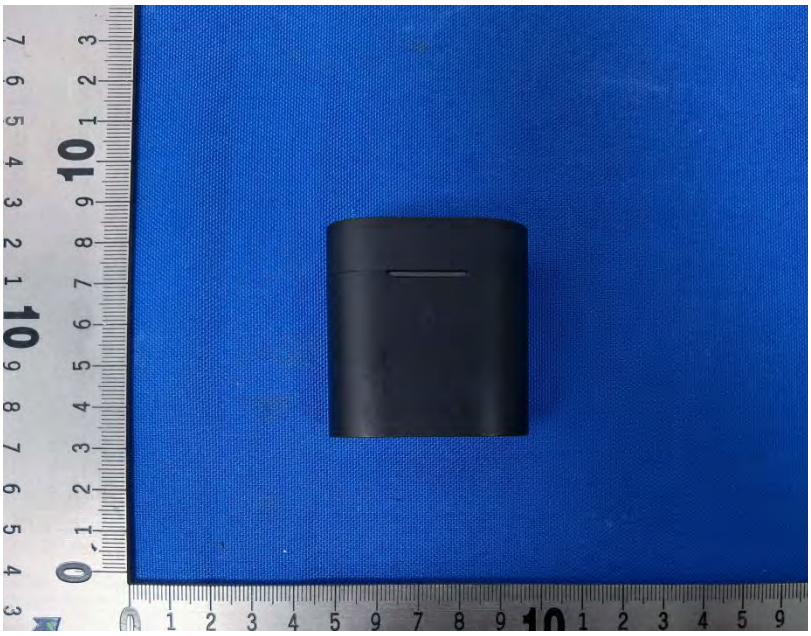


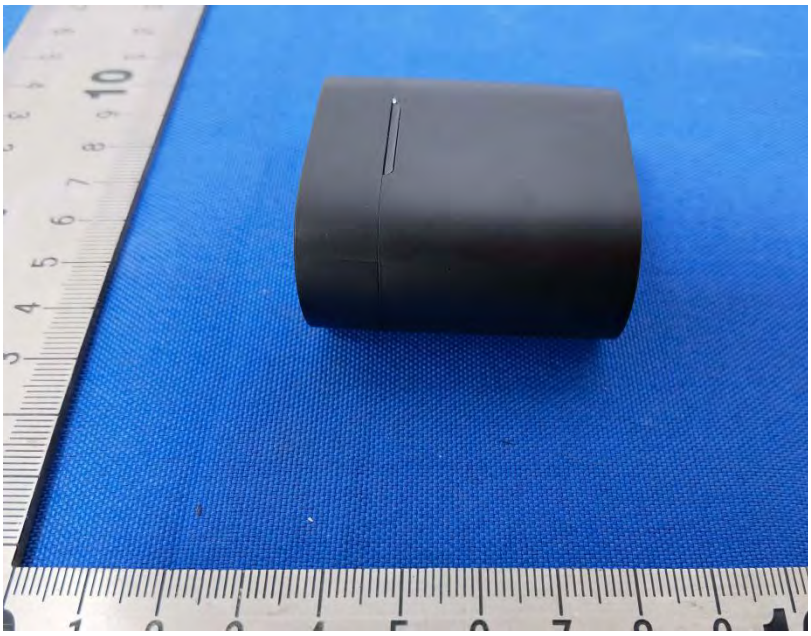
Radiated Spurious Emissions

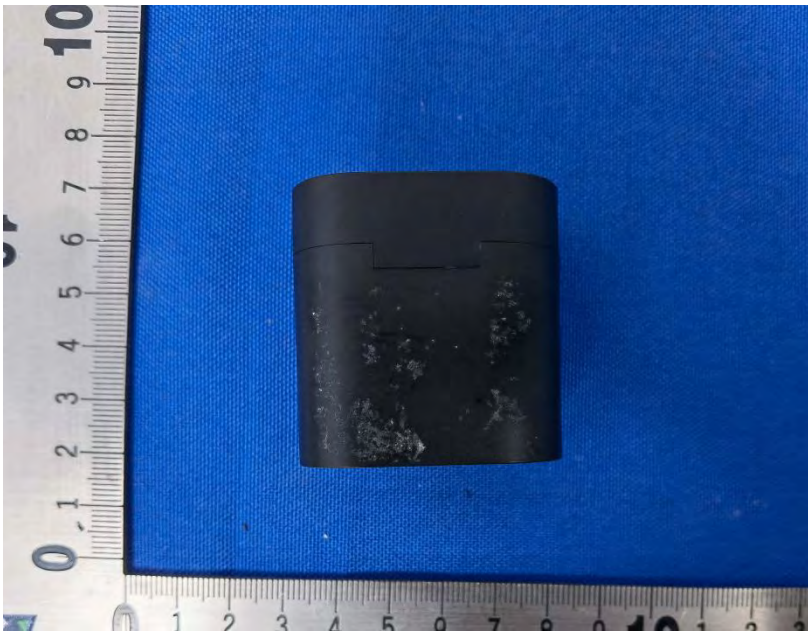


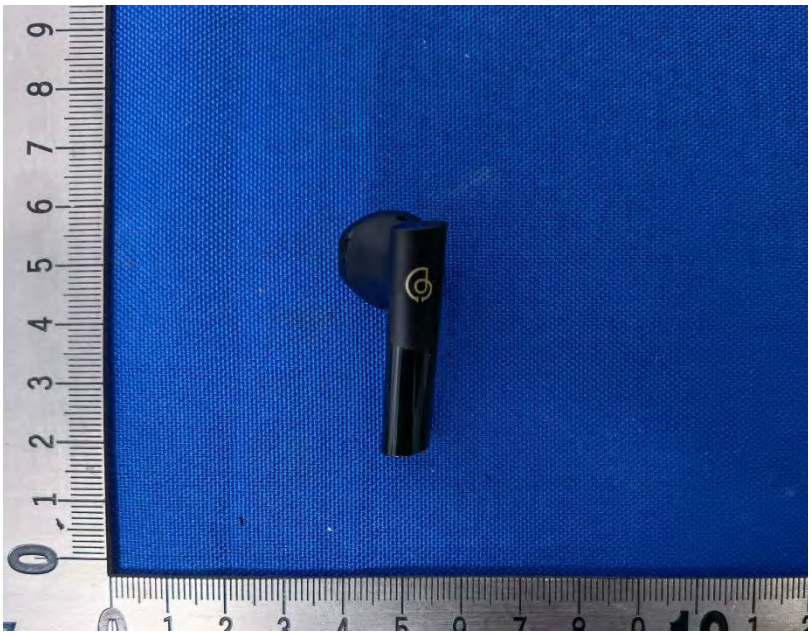
APPENDIX B: PHOTOGRAPHS OF EUT

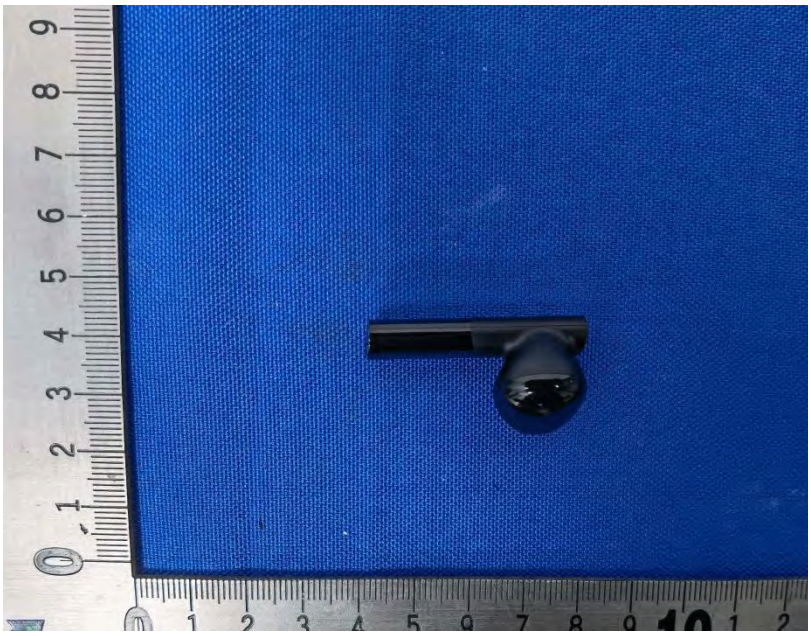


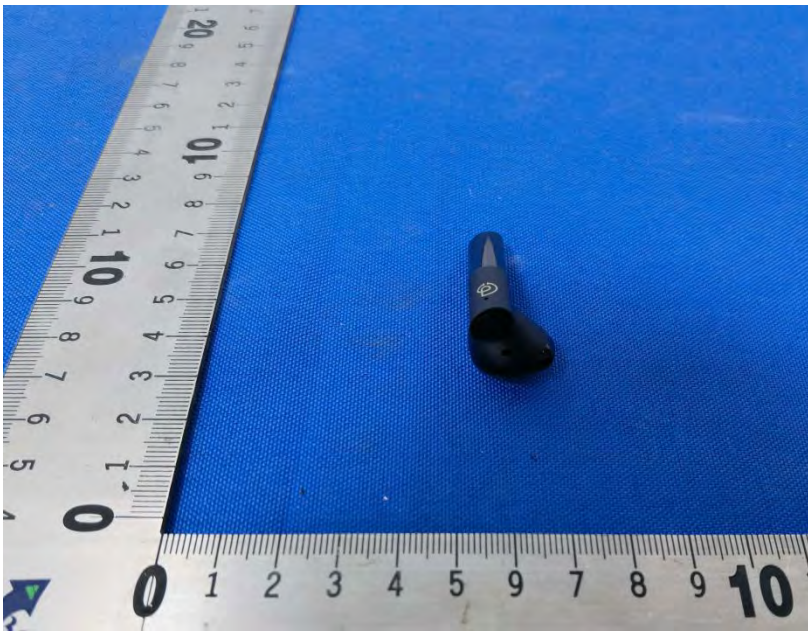






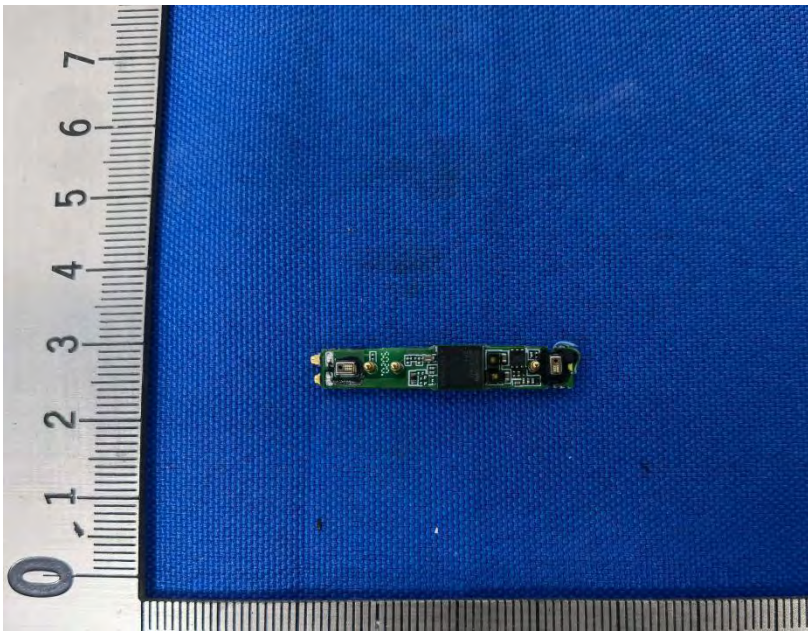


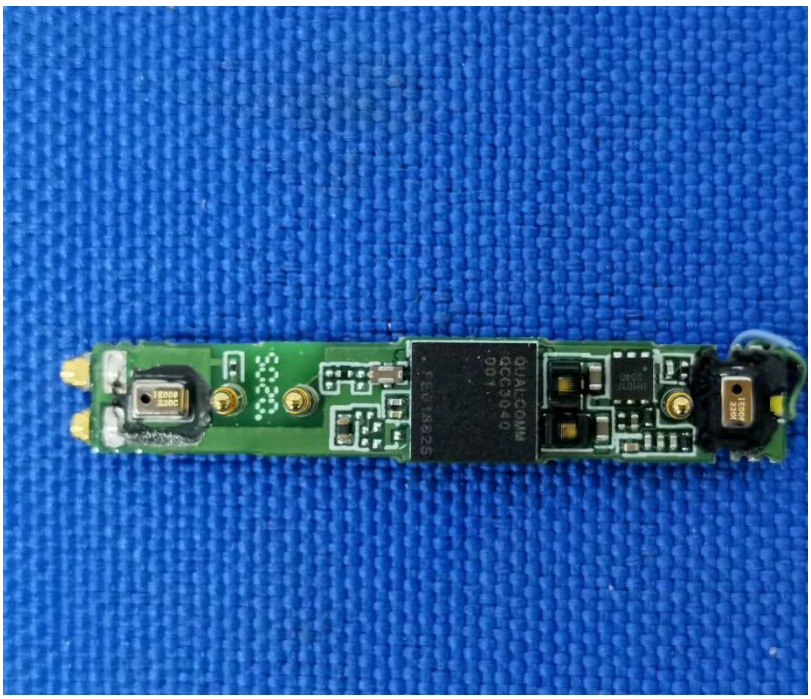


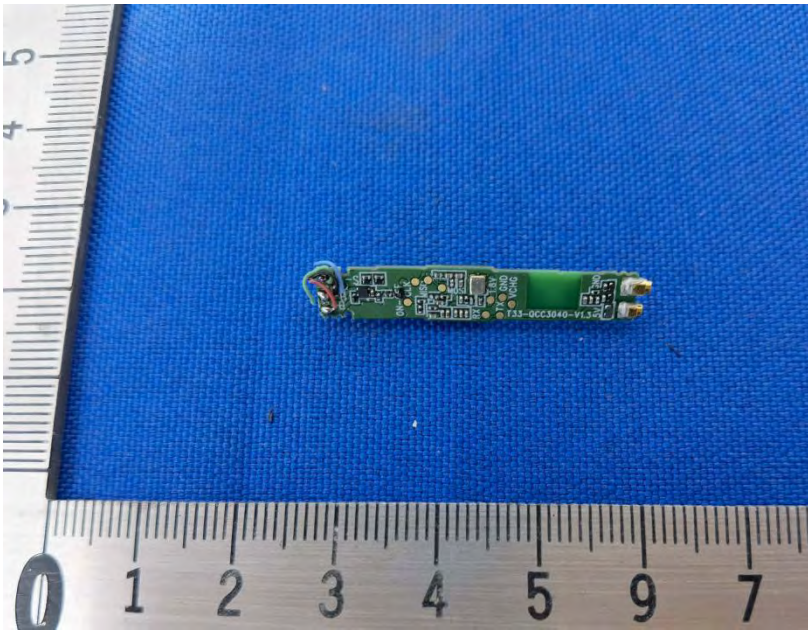


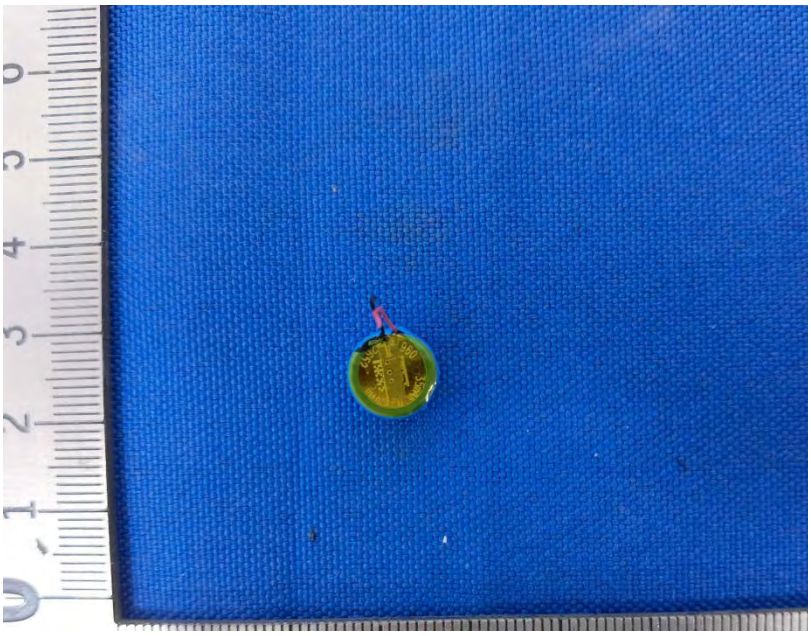

藍亞BLUE ASIA

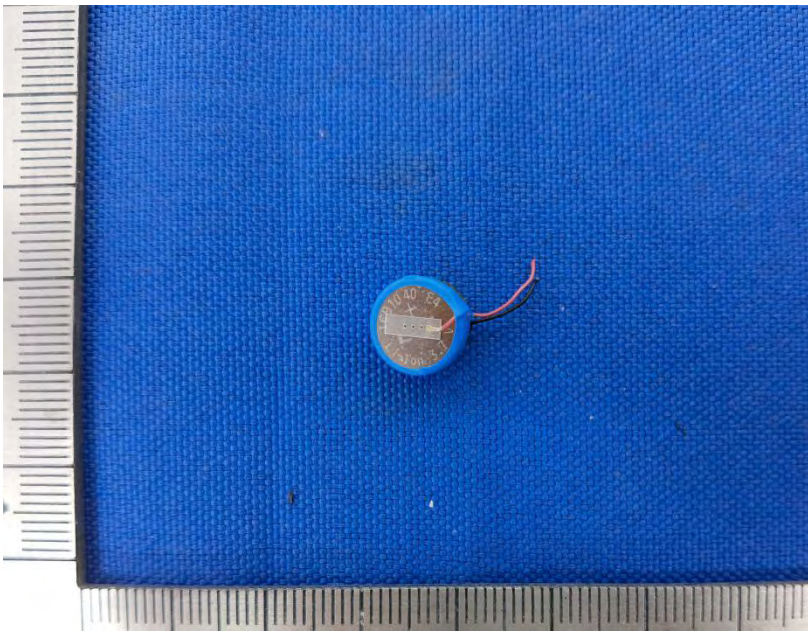

藍亞BLUE ASIA

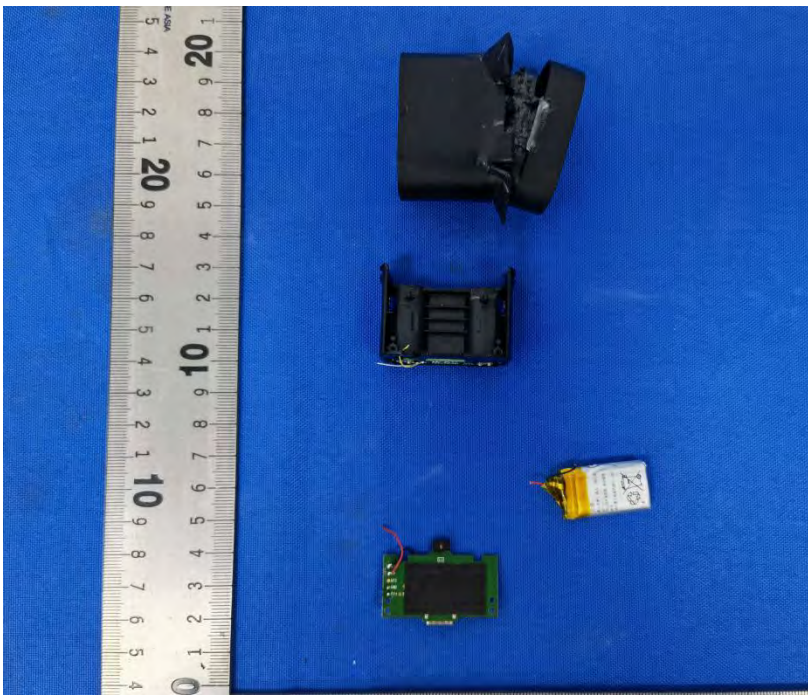


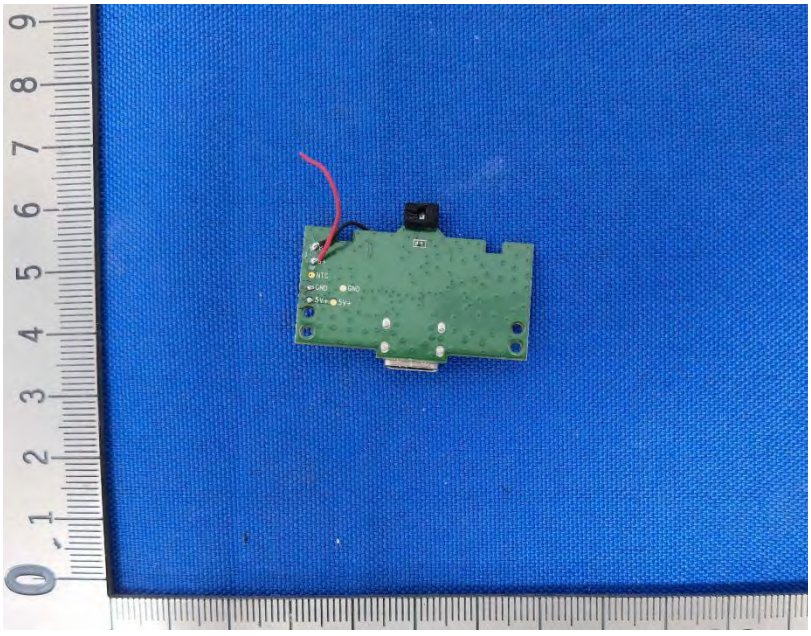

QUALCOMM
QCC3040
001

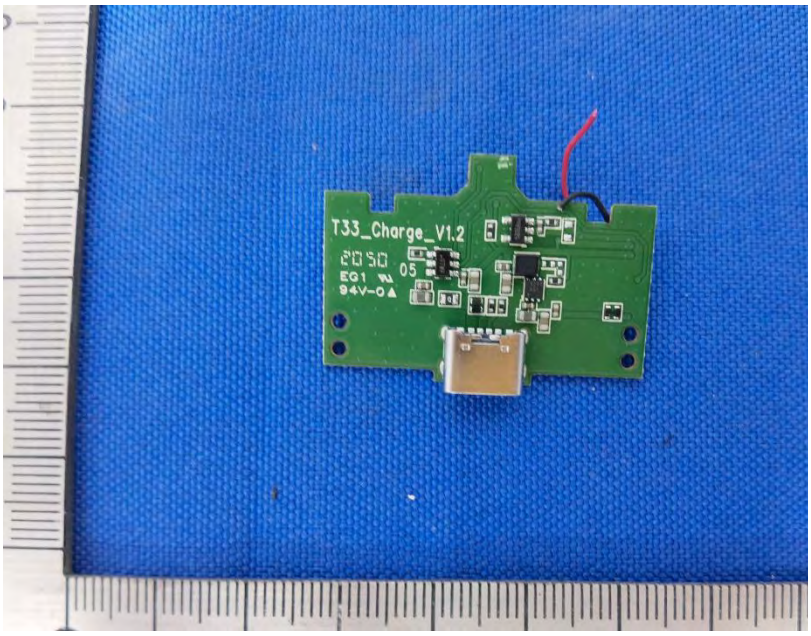

T33-QCC3040-V1.3
0
1
2
3
4
5
9
7

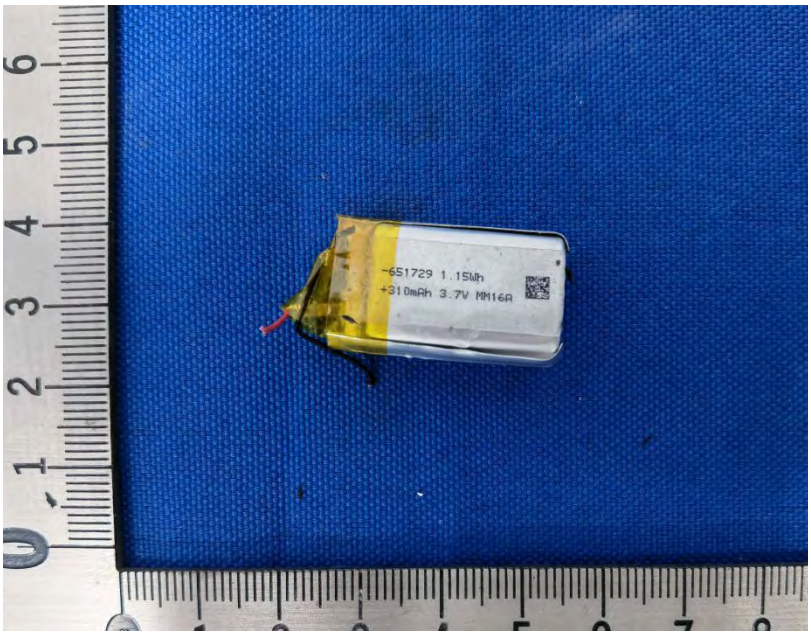







NTC
GND
GND
5V+
5V+


T33_Charge_V1.2
2050 05
EG1
94V-0


-651729 1.15Wh
+310mAh 3.7V MM16A