

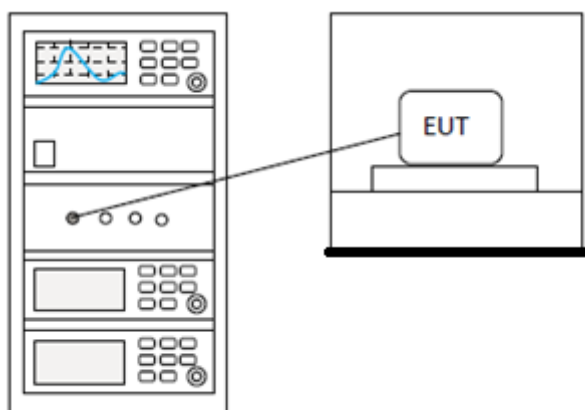
DWELL TIME

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.4
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Eason
Temperature	25℃
Humidity	58%

LIMITS

Frequency(MHz)	Limit
902-928	0.4S within a 20S period(20dB bandwidth<250kHz)
	0.4S within a 10S period(20dB bandwidth≥250kHz)
2400-2483.5	0.4S within a period of 0.4S multiplied by the number of hopping channels
5725-5850	0.4S within a 30S period

BLOCK DIAGRAM OF TEST SETUP



TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

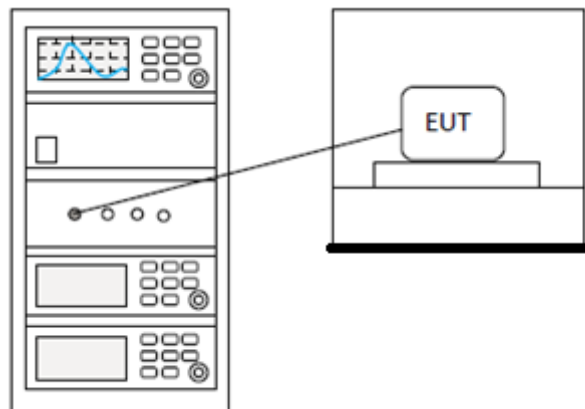
HOPPING CHANNEL NUMBER

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.3
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Eason
Temperature	25℃
Humidity	58%

LIMITS

Frequency range(MHz)	Number of hopping channels (minimum)
902-928	50 for 20dB bandwidth <250kHz
	25 for 20dB bandwidth ≥250kHz
2400-2483.5	15
5725-5850	75

BLOCK DIAGRAM OF TEST SETUP



TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

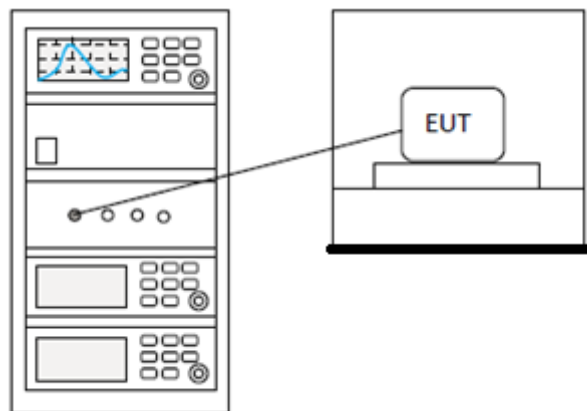
CARRIER FREQUENCIES SEPARATION

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Eason
Temperature	25°C
Humidity	58%

LIMITS

Limit:	2/3 of the 20dB bandwidth base on the transmission power is less than 0.125W
---------------	--

BLOCK DIAGRAM OF TEST SETUP



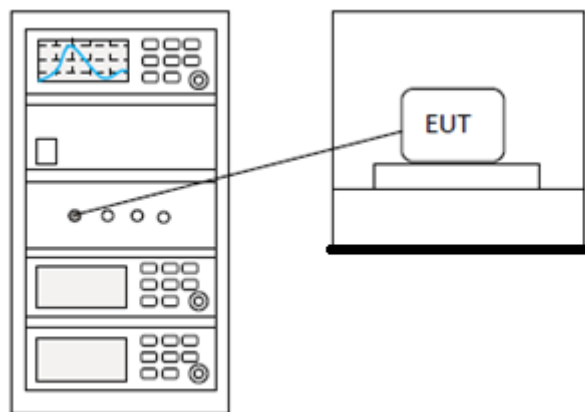
TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

20DB BANDWIDTH

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 6.9
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Eason
Temperature	25℃
Humidity	58%

BLOCK DIAGRAM OF TEST SETUP



TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

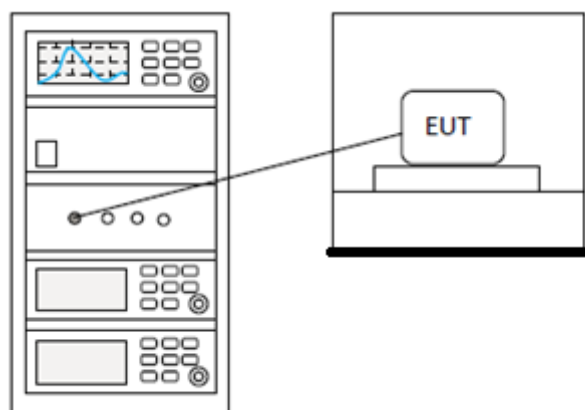
CONDUCTED PEAK OUTPUT POWER

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.5
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Eason
Temperature	25℃
Humidity	58%

LIMITS

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq \text{hopping channels} < 50$
	1 for digital modulation
2400-2483.5	1 for ≥ 75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

BLOCK DIAGRAM OF TEST SETUP



TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

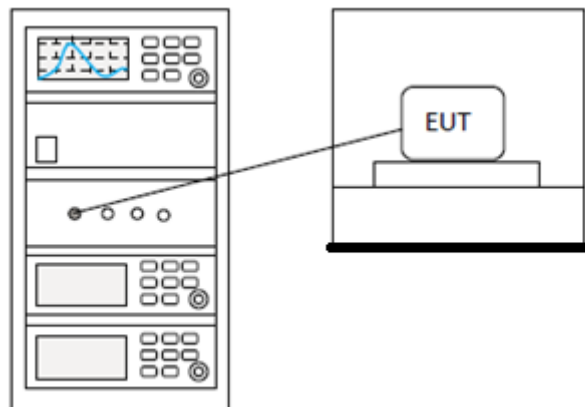
MINIMUM 6DB BANDWIDTH

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.8.1
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Eason
Temperature	25°C
Humidity	58%

LIMITS

Limit:	≥ 500 kHz
--------	----------------

BLOCK DIAGRAM OF TEST SETUP



TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

10 APPENDIX

Appendix1

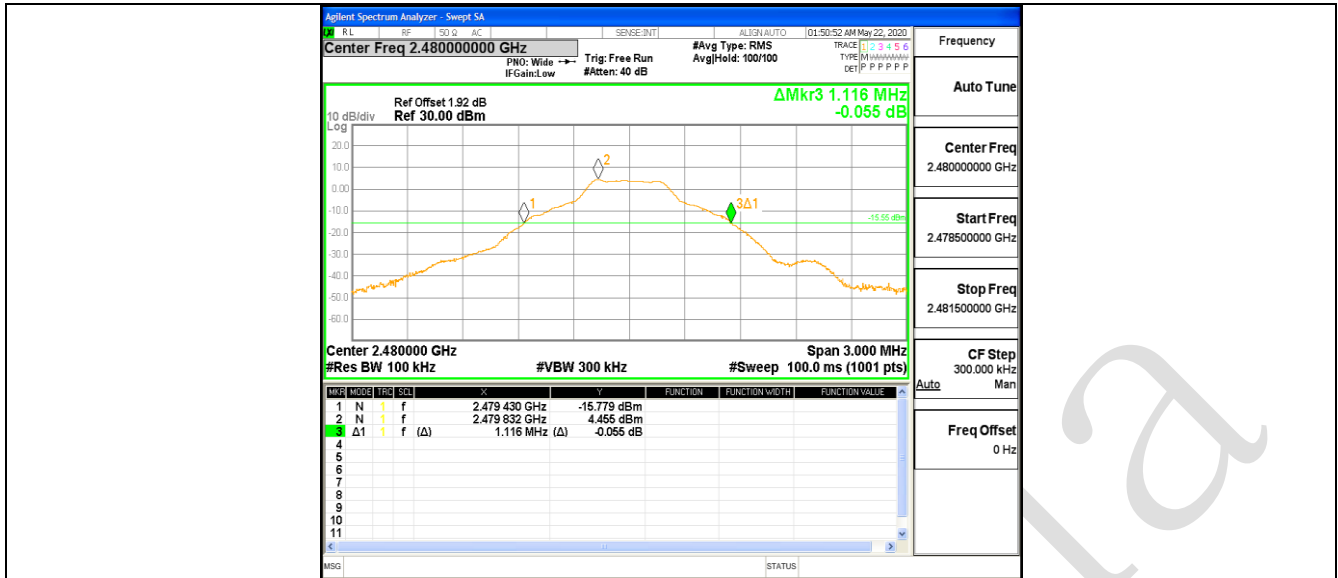
10.1APPENDIX: 20DBEMISSION BANDWIDTH

Test Result

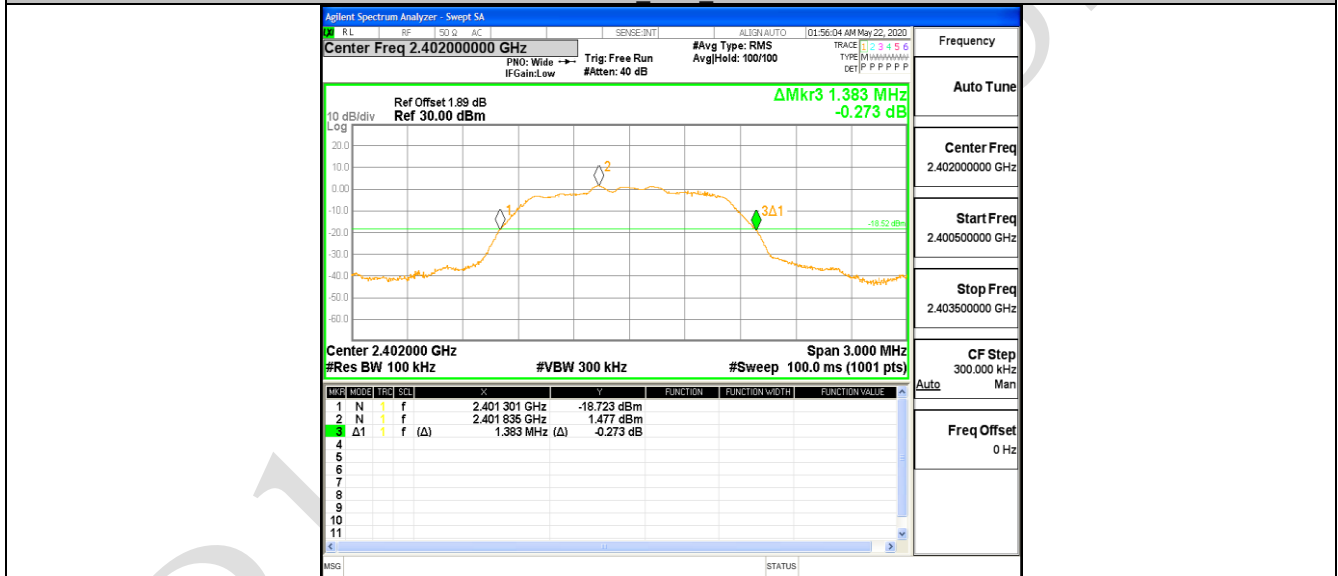
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	1.125	2401.430	2402.555	---	PASS
		2441	1.116	2440.433	2441.549	---	PASS
		2480	1.116	2479.430	2480.546	---	PASS
2DH1	Ant1	2402	1.383	2401.301	2402.684	---	PASS
		2441	1.380	2440.301	2441.681	---	PASS
		2480	1.383	2479.301	2480.684	---	PASS
3DH1	Ant1	2402	1.383	2401.301	2402.684	---	PASS
		2441	1.383	2440.304	2441.687	---	PASS
		2480	1.383	2479.298	2480.681	---	PASS

Test Graphs





2DH1 Ant1 2402



2DH1 Ant1 2441





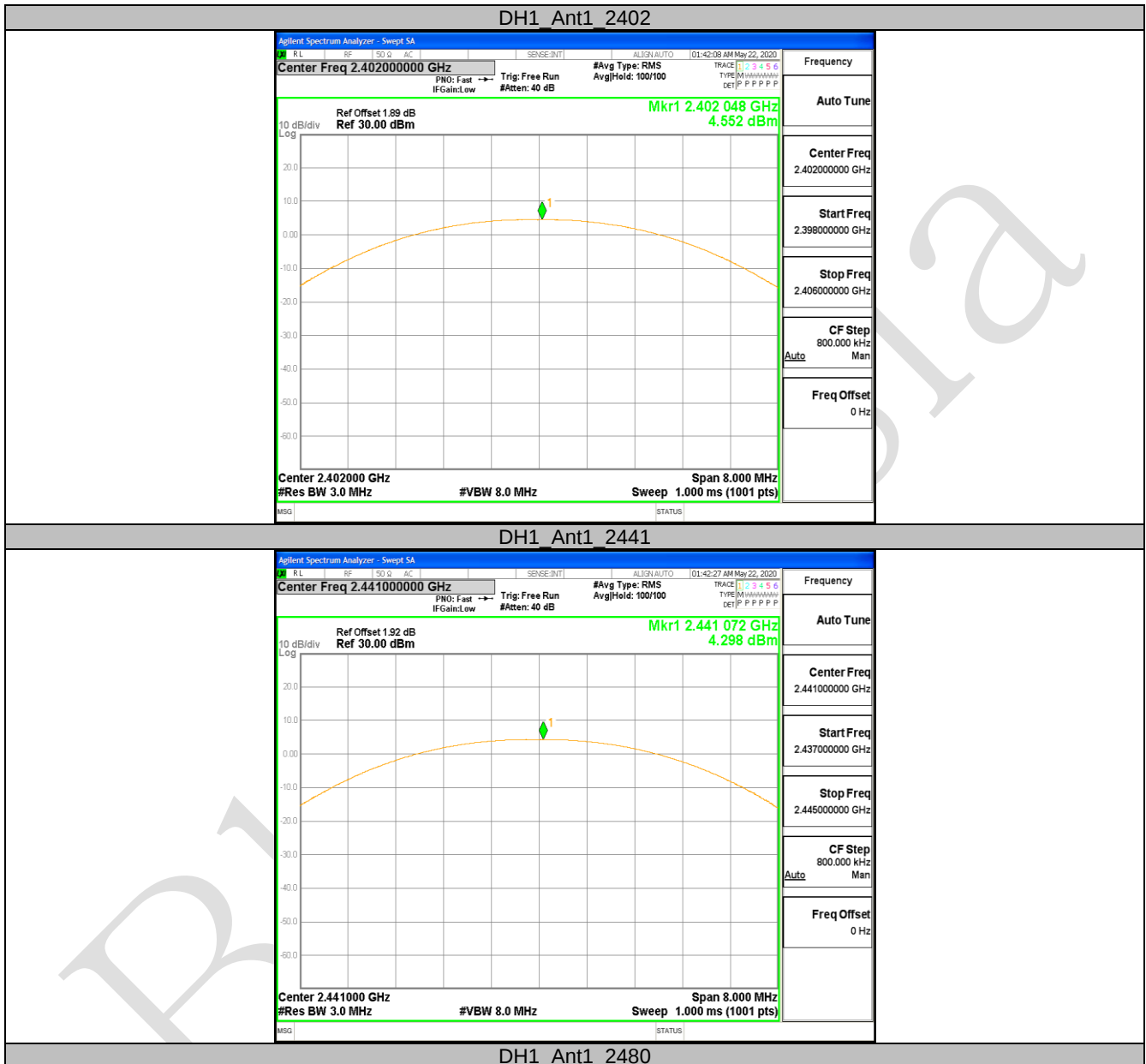


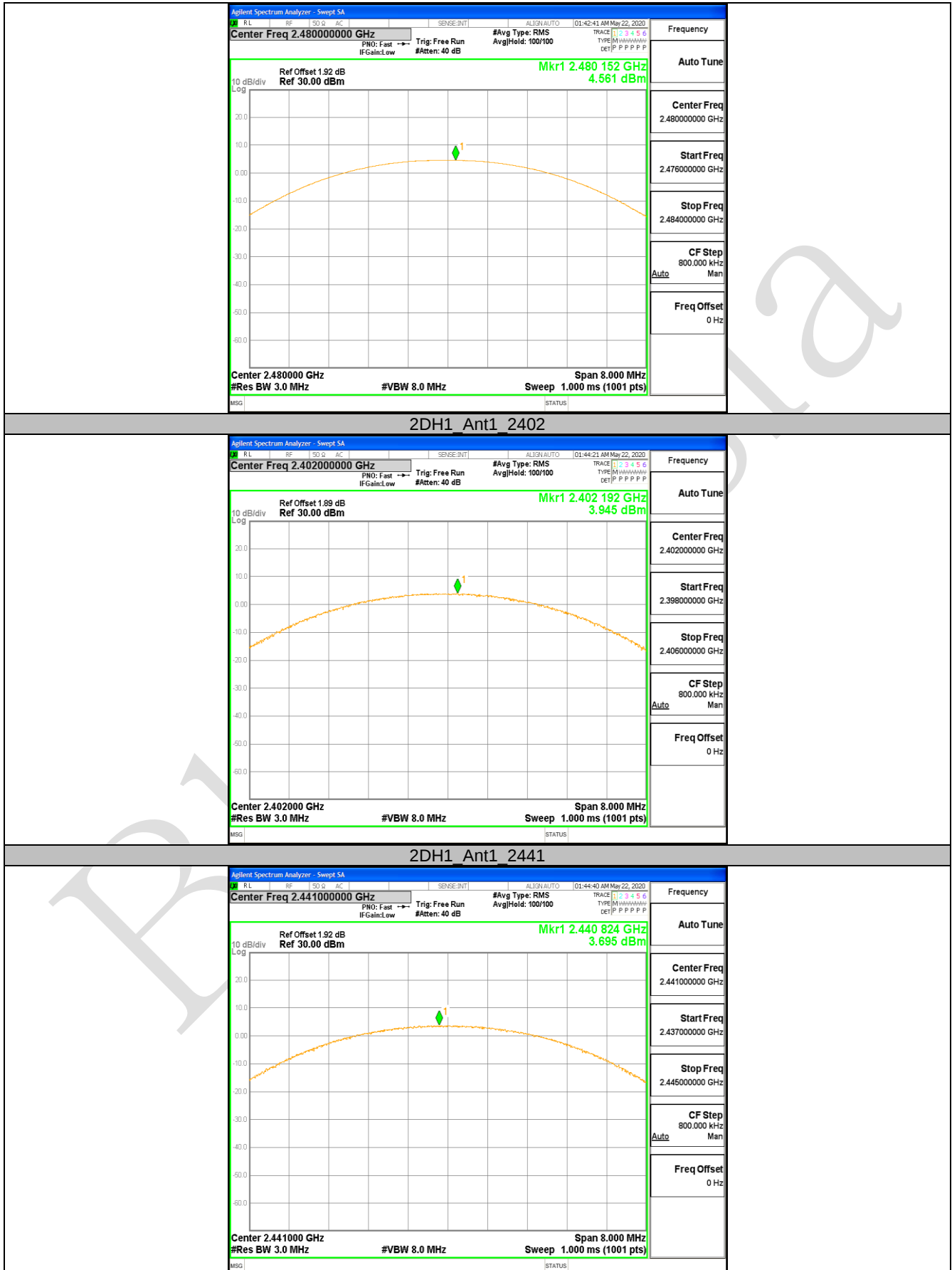
10.2 APPENDIX: MAXIMUM CONDUCTED OUTPUT POWER

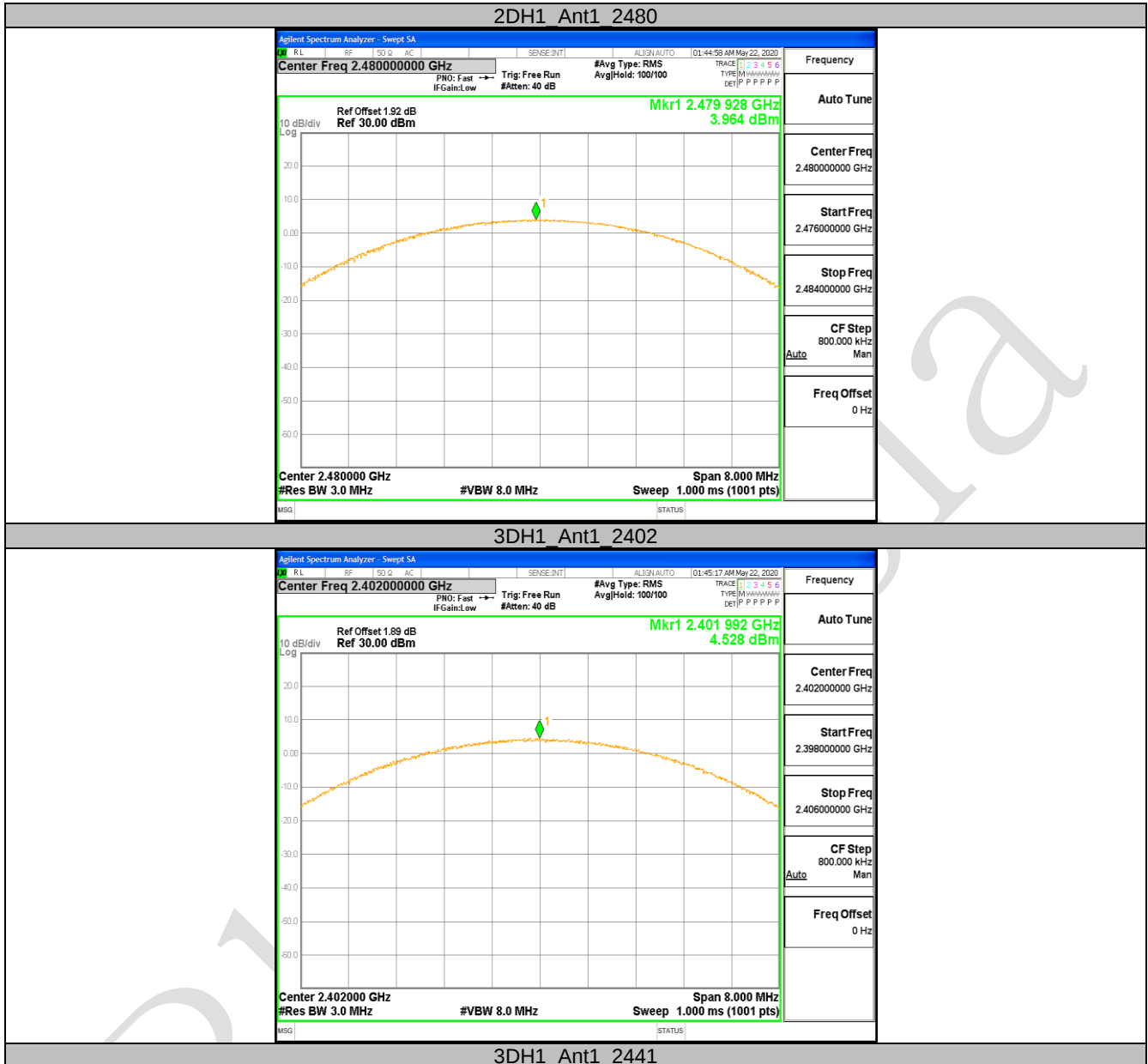
Test Result

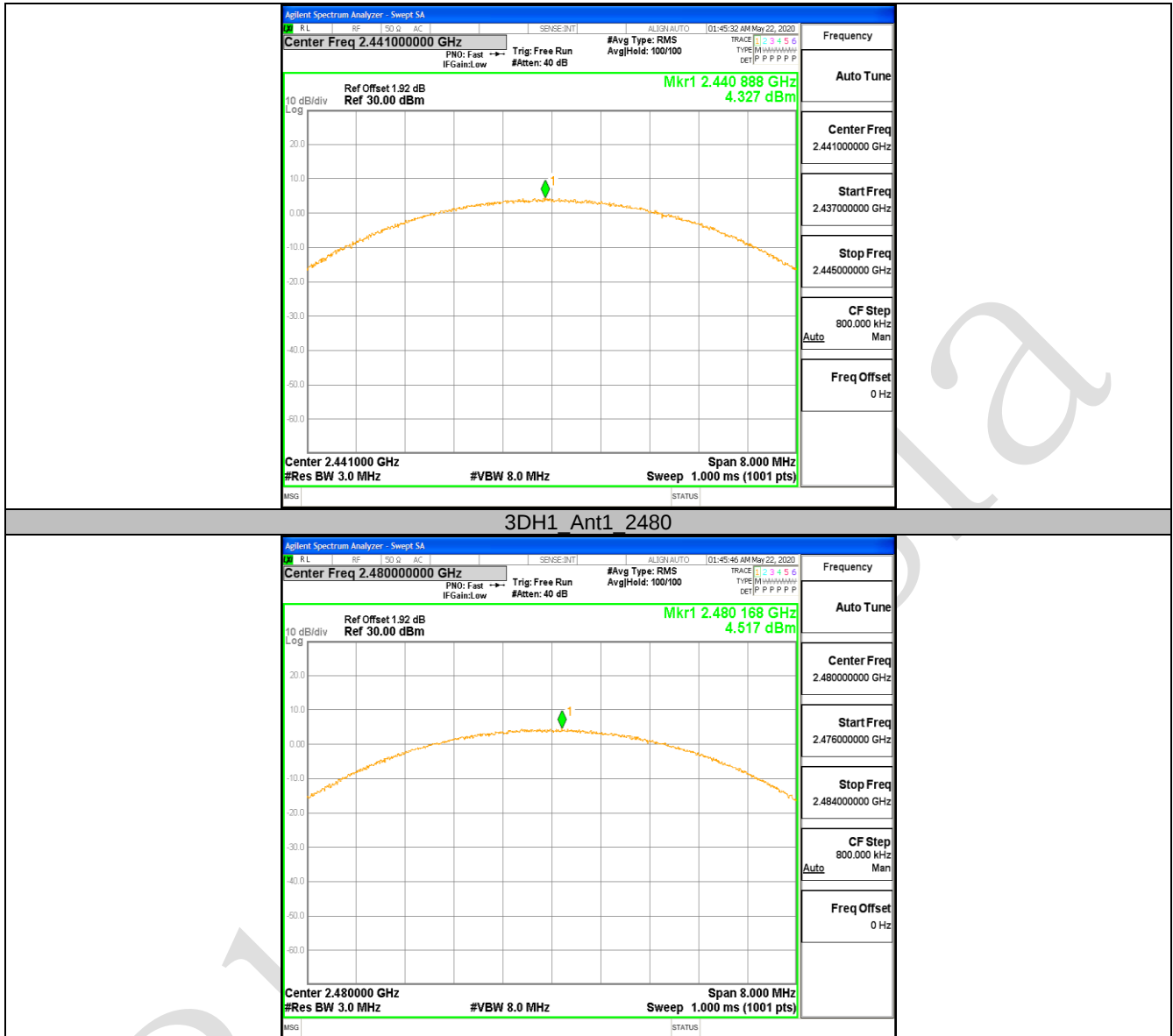
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH1	Ant1	2402	5.99	<=30	PASS
		2441	4.3	<=30	PASS
		2480	4.56	<=30	PASS
2DH1	Ant1	2402	3.95	<=30	PASS
		2441	3.7	<=30	PASS
		2480	3.96	<=30	PASS
3DH1	Ant1	2402	4.53	<=30	PASS
		2441	4.33	<=30	PASS
		2480	4.52	<=30	PASS

Test Graphs









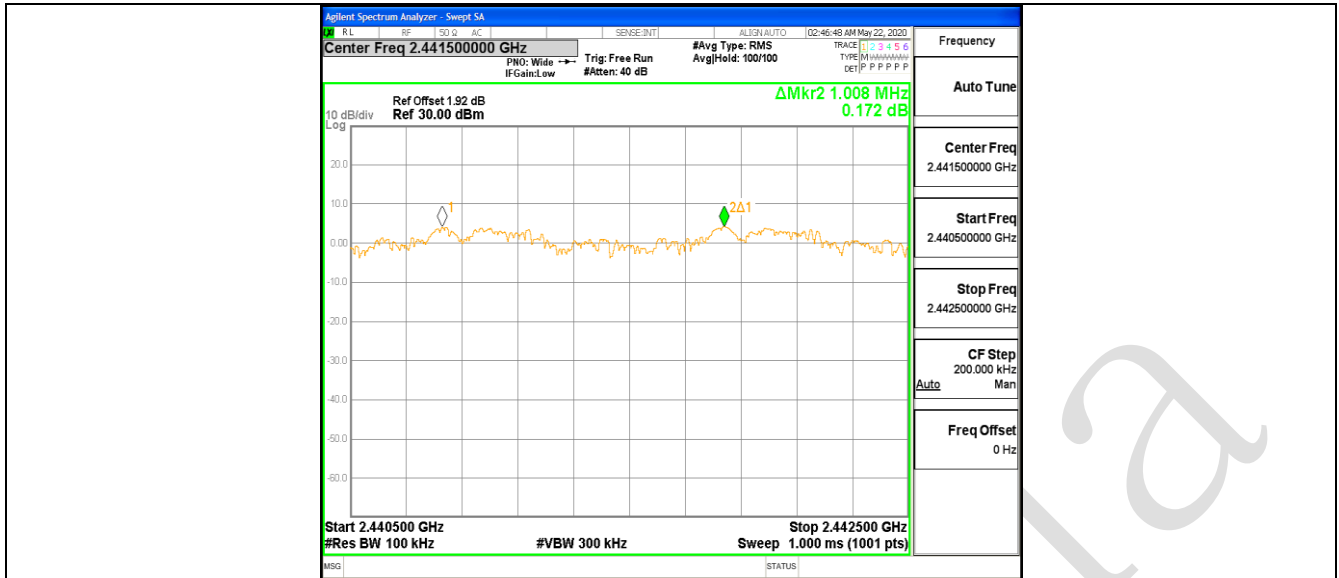
10.3 APPENDIX: CARRIER FREQUENCY SEPARATION

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[[MHz]	Verdict
DH1	Ant1	Hop	1.146	≥ 1.125	PASS
2DH1	Ant1	Hop	1.008	≥ 0.922	PASS
3DH1	Ant1	Hop	1.008	≥ 0.922	PASS

Test Graphs





10.4 APPENDIX: TIME OF OCCUPANCY

Test Result

Frequency	Packet	Dwell time(ms)	Limit(ms)	Result
2441MHz	DH1/2-DH1/3-DH1	128.000	400	Pass
2441MHz	DH3/2-DH3/3-DH3	267.200	400	Pass
2441MHz	DH5/2-DH5/3-DH5	308.267	400	Pass

The test period: $T = 0.4 \text{ Second/Channel} \times 79 \text{ Channel} = 31.6 \text{ s}$

Test channel: 2441MHz as blow

DH1/2-DH1/3-DH1 time slot = $0.40 \text{ (ms)} \times (1600 / (2 \times 79)) \times 31.6 = 128.000 \text{ ms}$

DH3/2-DH3/3-DH3 time slot = $1.67 \text{ (ms)} \times (1600 / (4 \times 79)) \times 31.6 = 267.200 \text{ ms}$

DH5/2-DH5/3-DH5 time slot = $2.89 \text{ (ms)} \times (1600 / (6 \times 79)) \times 31.6 = 308.267 \text{ ms}$

Test Graphs

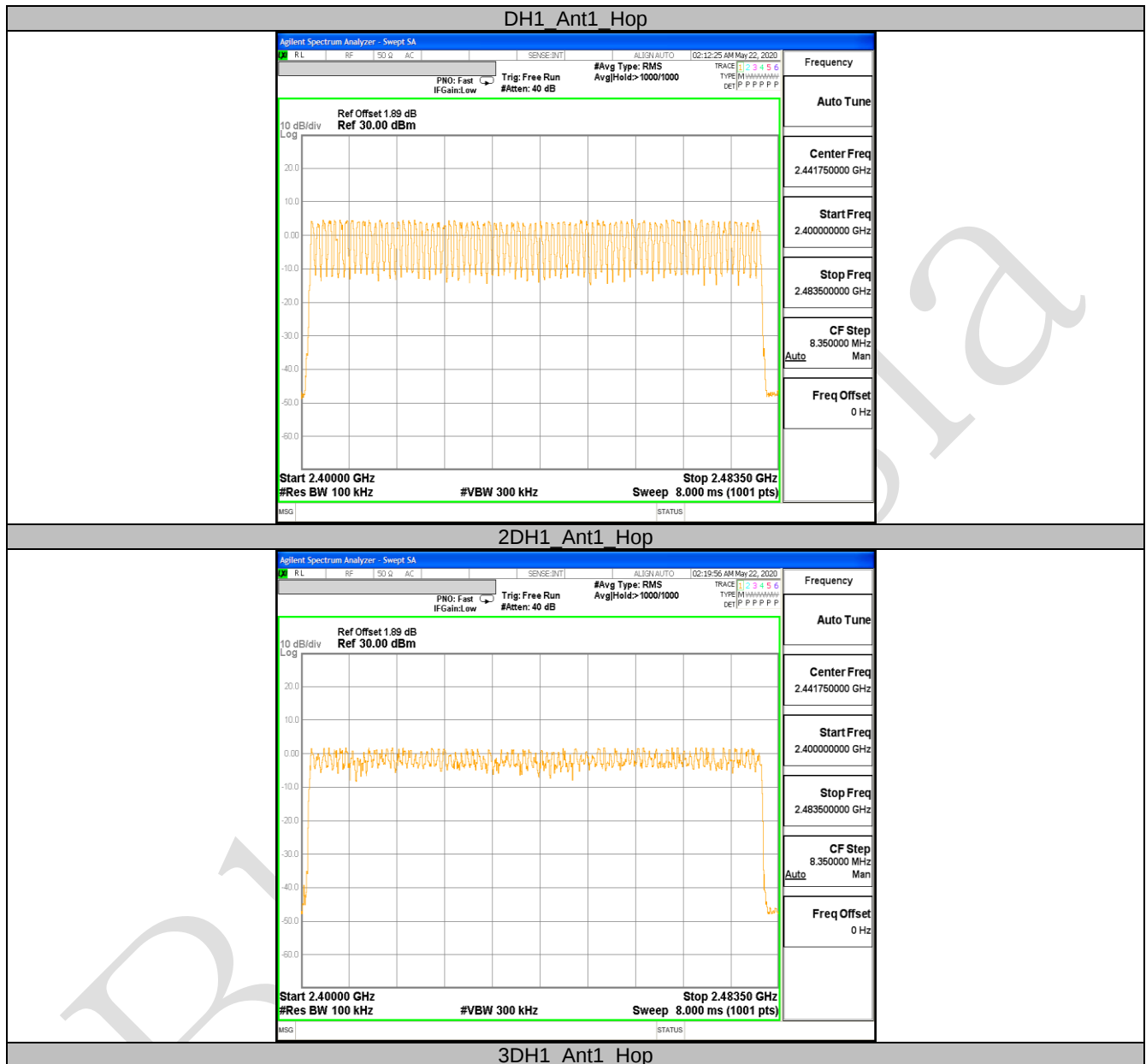


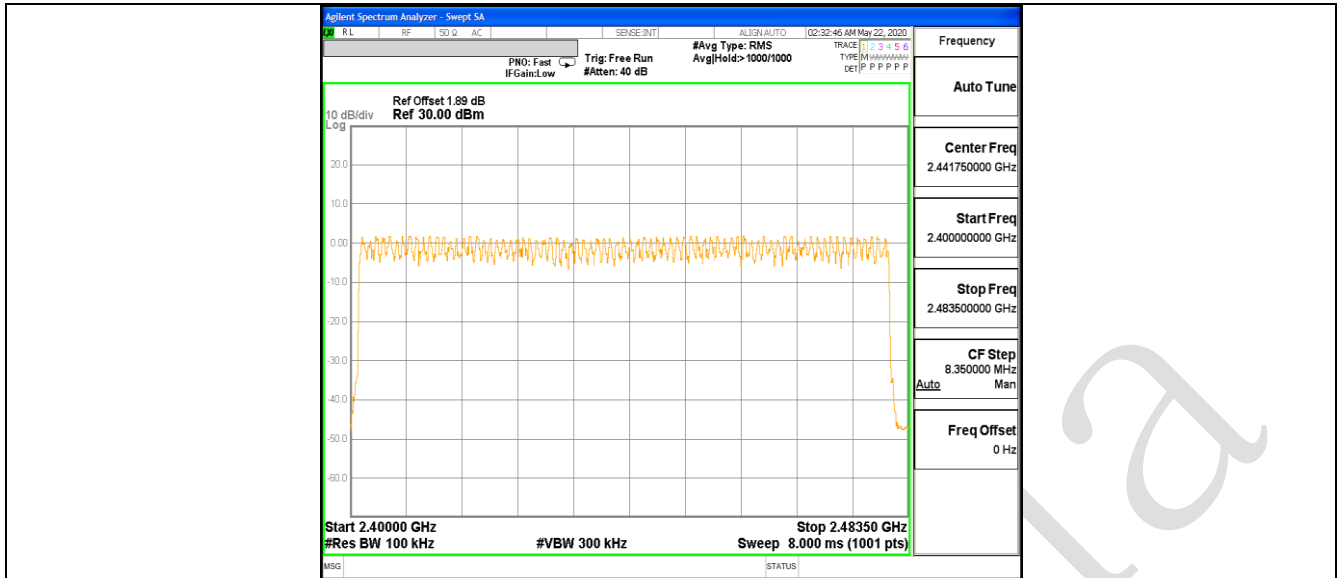


10.5 APPENDIX: NUMBER OF HOPPING CHANNELS**Test Result**

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





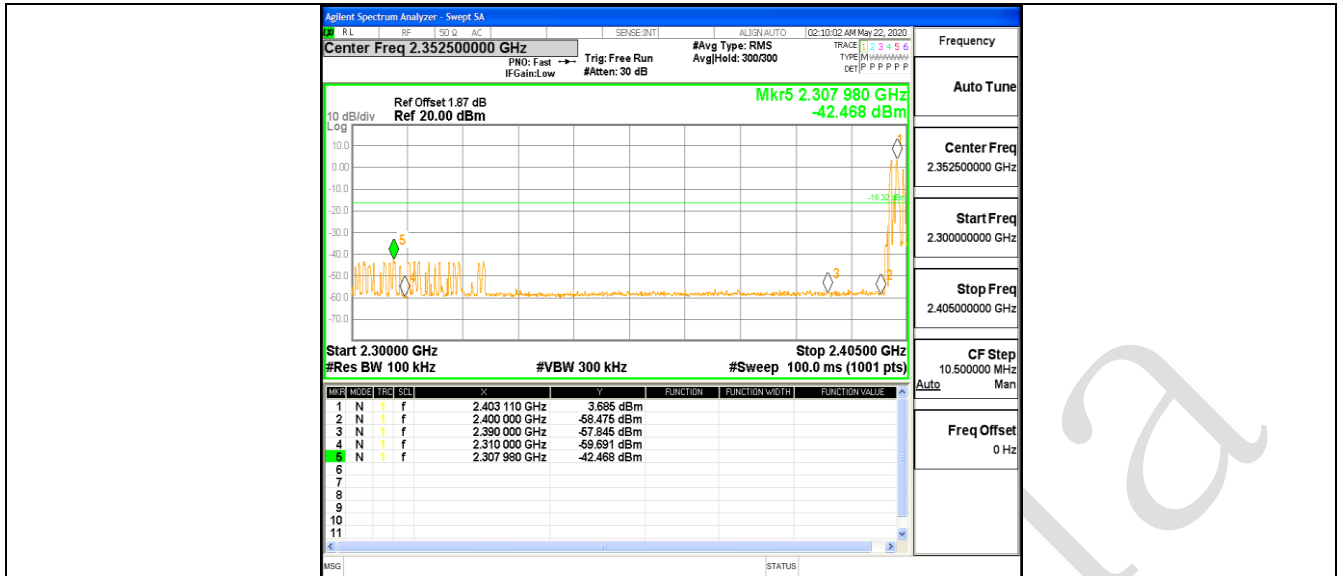
10.6 APPENDIX: BAND EDGE MEASUREMENTS

Test Result

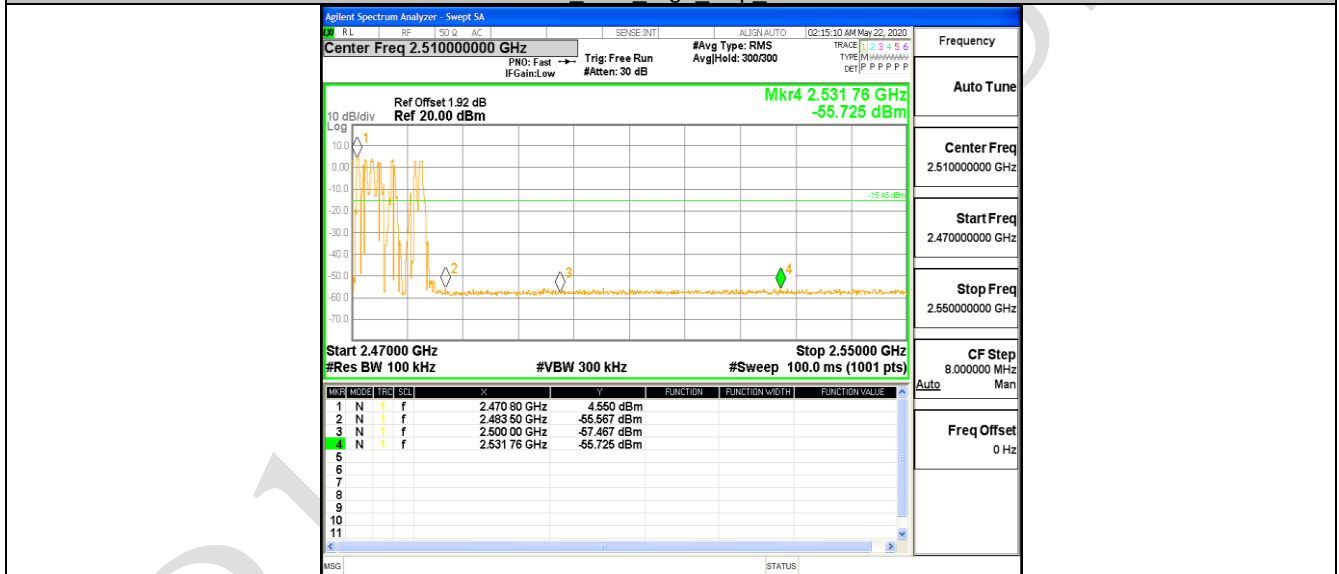
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	4.34	-55.81	<=-15.66	PASS
		High	2480	4.43	-55	<=-15.57	PASS
		Low	Hop 2402	3.69	-42.47	-16.32	PASS
		High	Hop 2480	4.55	-55.73	-15.45	PASS
2DH1	Ant1	Low	2402	1.40	-55.19	<=-18.6	PASS
		High	2480	1.52	-54.47	<=-18.49	PASS
		Low	Hop 2402	1.49	-54.55	-18.51	PASS
		High	Hop 2480	1.19	-54.73	-18.81	PASS
3DH1	Ant1	Low	2402	1.42	-54.61	<=-18.58	PASS
		High	2480	1.52	-53.79	<=-18.48	PASS
		Low	Hop 2402	1.01	-55.11	-18.99	PASS
		High	Hop 2480	3.98	-53.5	-16.02	PASS

Test Graphs

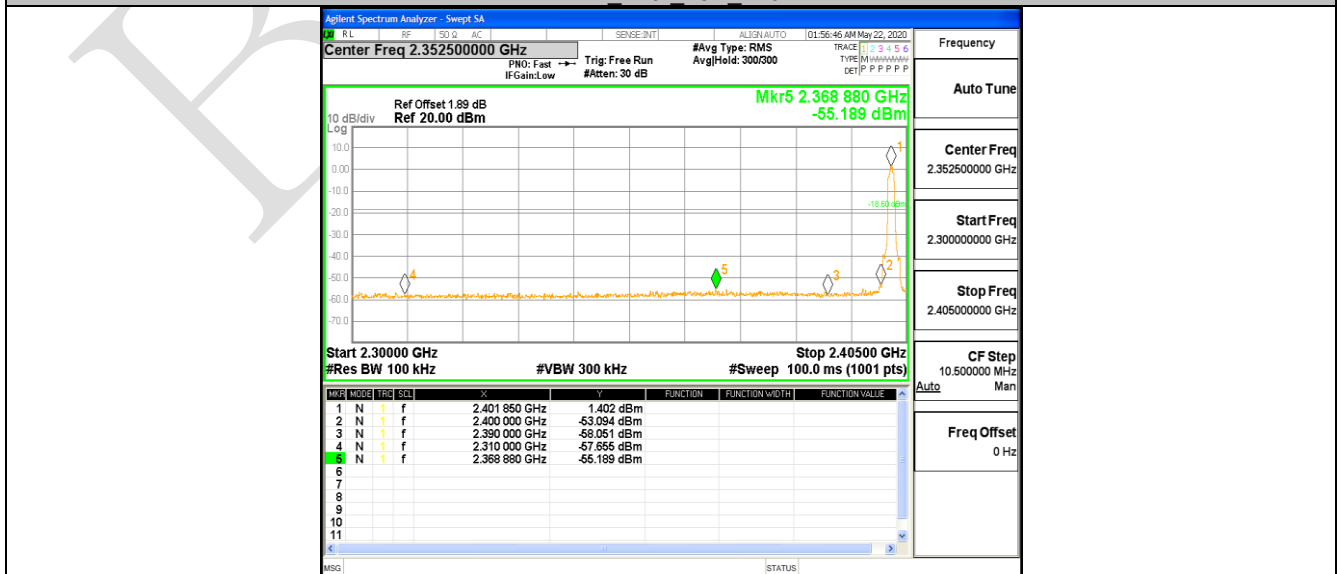




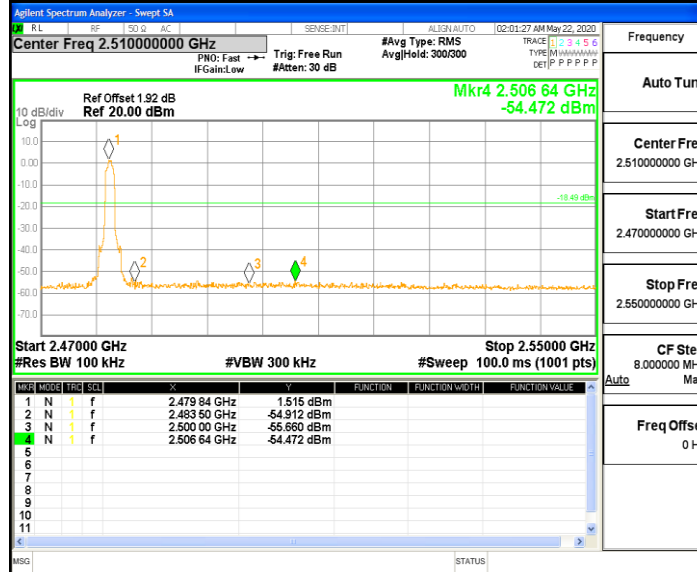
DH1 Ant1 High Hop 2480



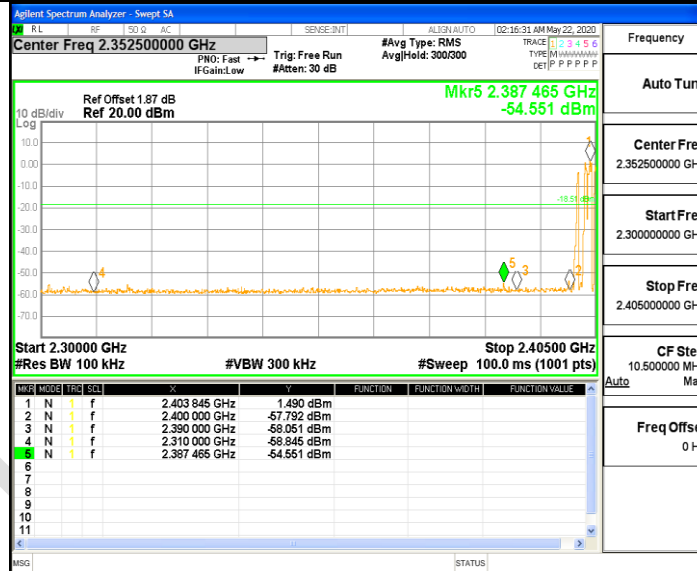
2DH1 Ant1 Low 2402



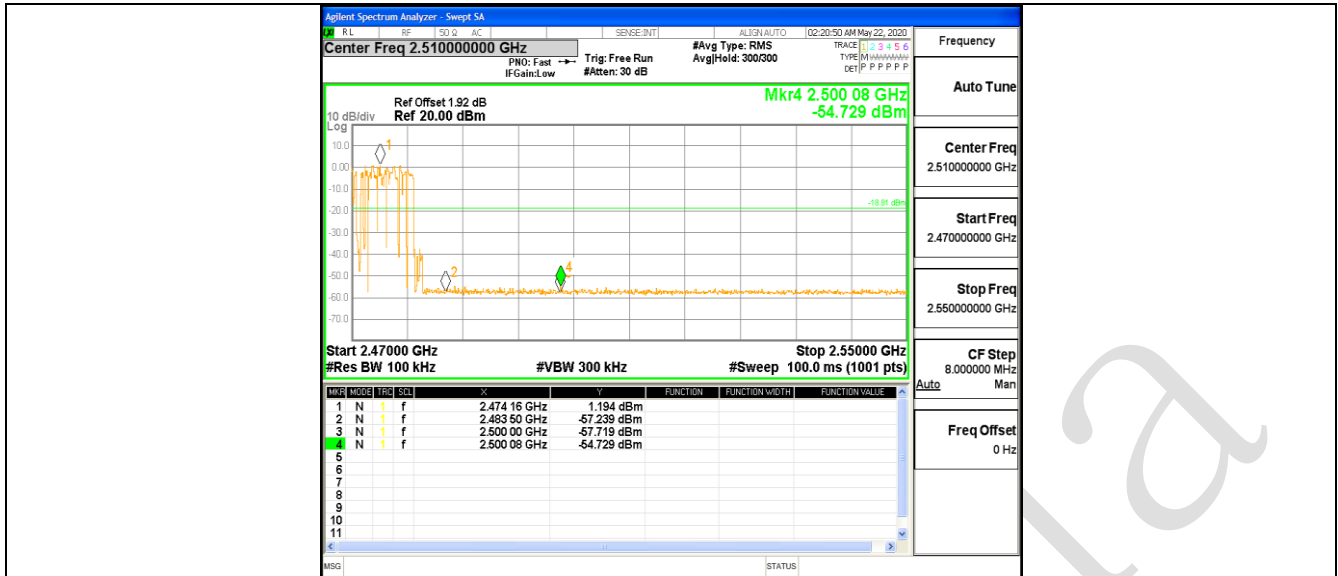
2DH1 Ant1 High 2480



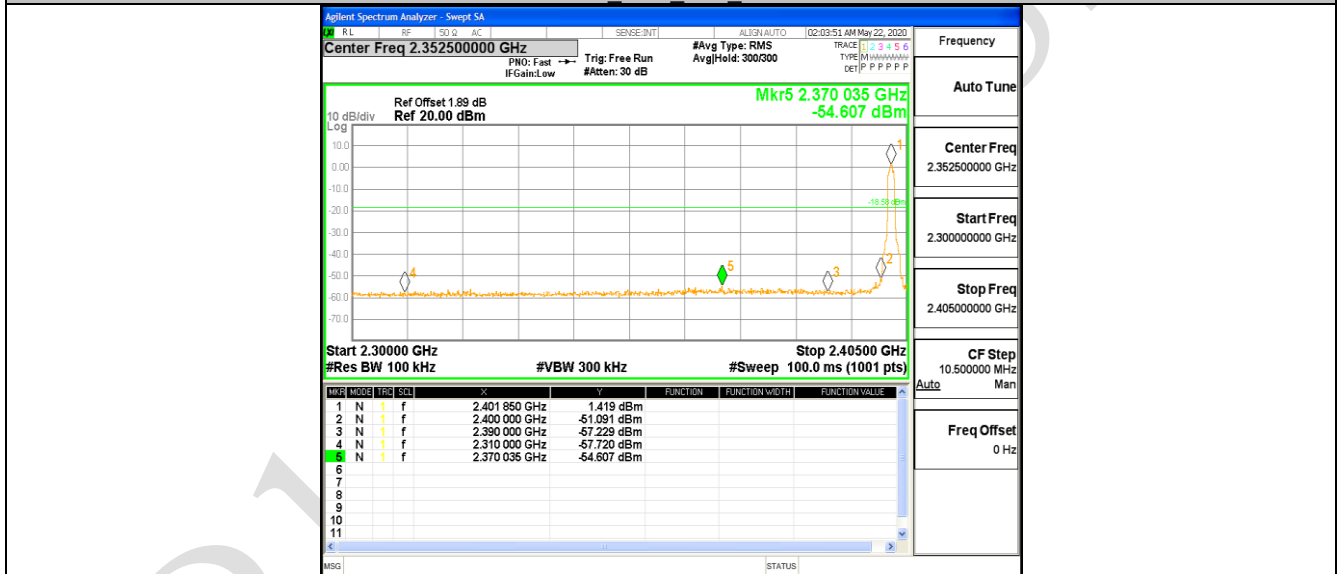
2DH1 Ant1 Low Hop 2402



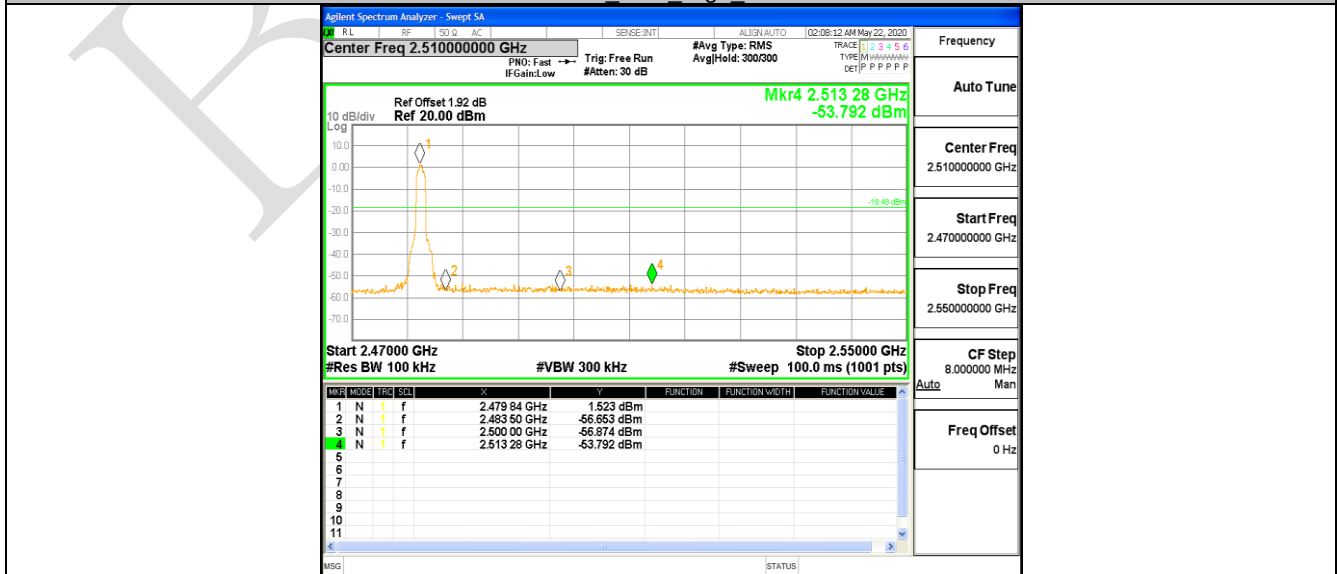
2DH1 Ant1 High Hop 2480



3DH1 Ant1 Low 2402



3DH1 Ant1 High 2480





10.7 APPENDIX: CONDUCTED SPURIOUS EMISSION

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	4.17	4.17	---	PASS
			30~1000	30~1000	-58.026	<=-15.828	PASS
			1000~26500	1000~26500	-38.833	<=-15.828	PASS
		2441	Reference	4.07	4.07	---	PASS
			30~1000	30~1000	-57.042	<=-15.929	PASS
			1000~26500	1000~26500	-41.218	<=-15.929	PASS
		2480	Reference	3.75	3.75	---	PASS
			30~1000	30~1000	-57.316	<=-16.247	PASS
			1000~26500	1000~26500	-40.777	<=-16.247	PASS
2DH1	Ant1	2402	Reference	1.40	1.40	---	PASS
			30~1000	30~1000	-63.488	<=-18.596	PASS
			1000~26500	1000~26500	-41.793	<=-18.596	PASS
		2441	Reference	1.09	1.09	---	PASS
			30~1000	30~1000	-62.953	<=-18.908	PASS
			1000~26500	1000~26500	-41.676	<=-18.908	PASS
		2480	Reference	1.42	1.42	---	PASS
			30~1000	30~1000	-63.028	<=-18.577	PASS
			1000~26500	1000~26500	-44.05	<=-18.577	PASS
3DH1	Ant1	2402	Reference	1.30	1.30	---	PASS
			30~1000	30~1000	-63.057	<=-18.696	PASS
			1000~26500	1000~26500	-44.675	<=-18.696	PASS
		2441	Reference	0.96	0.96	---	PASS
			30~1000	30~1000	-63.96	<=-19.043	PASS
			1000~26500	1000~26500	-43.898	<=-19.043	PASS
		2480	Reference	1.40	1.40	---	PASS
			30~1000	30~1000	-61.969	<=-18.6	PASS
			1000~26500	1000~26500	-46.539	<=-18.6	PASS