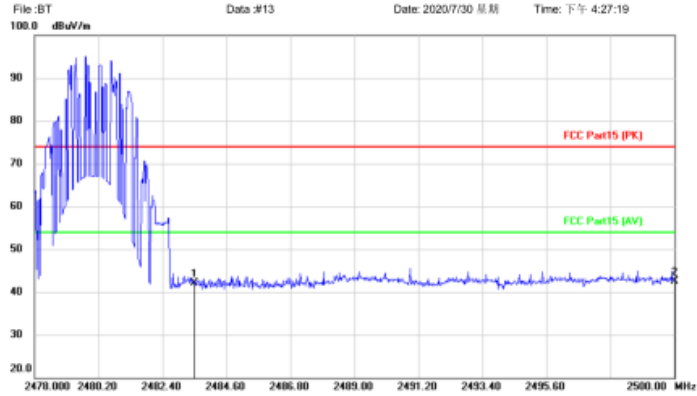


Highest channel Peak Value

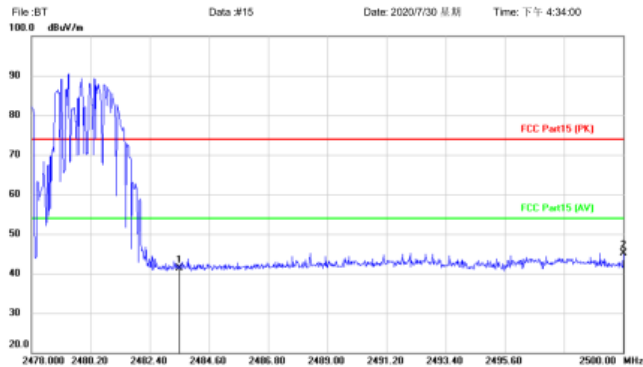
Radiated Emission Measurement



Site: Polarization: **Vertical** Temperature:
 Limit: FCC Part15 (PK) Power: Humidity: %
 EUT: Haylou Wireless Earbuds Distance: 3m
 M/N: Haylou -GT5
 Mode: TX-H mode
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2483.500	55.54	-13.50	42.04	74.00	-31.96	peak	
2	*	2500.000	55.90	-13.42	42.48	74.00	-31.52	peak	

Radiated Emission Measurement



Site: Polarization: **Horizontal** Temperature:
 Limit: FCC Part15 (PK) Power: Humidity: %
 EUT: Haylou Wireless Earbuds Distance: 3m
 M/N: Haylou -GT5
 Mode: TX-H mode
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		2483.500	54.44	-13.11	41.33	74.00	-32.67	peak	
2	*	2500.000	58.11	-13.02	45.09	74.00	-28.91	peak	

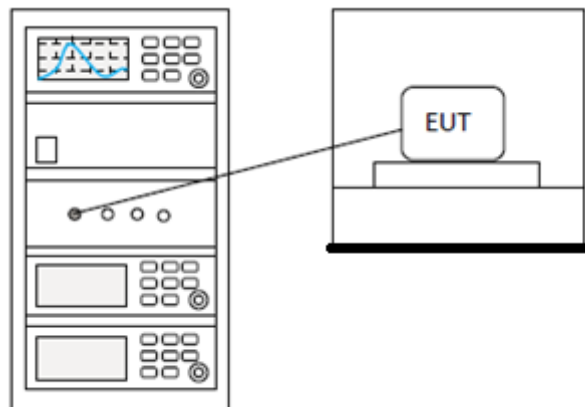
CONDUCTED BAND EDGES MEASUREMENT

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Eason
Temperature	25°C
Humidity	60%

LIMITS

Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).
---------------	--

BLOCK DIAGRAM OF TEST SETUP



TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

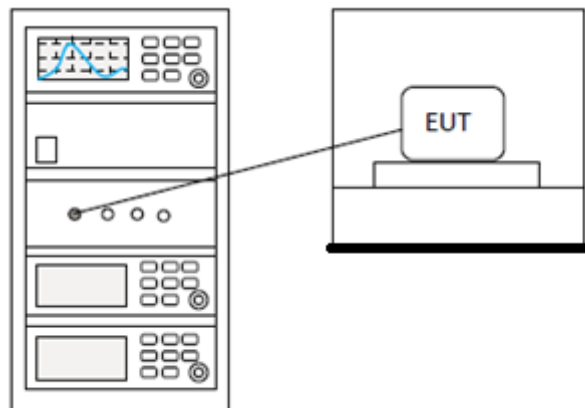
DWELL TIME

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_non-Hop mode
Test Mode (Final Test)	TX_non-Hop mode
Tester	Eason
Temperature	25°C
Humidity	60%

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

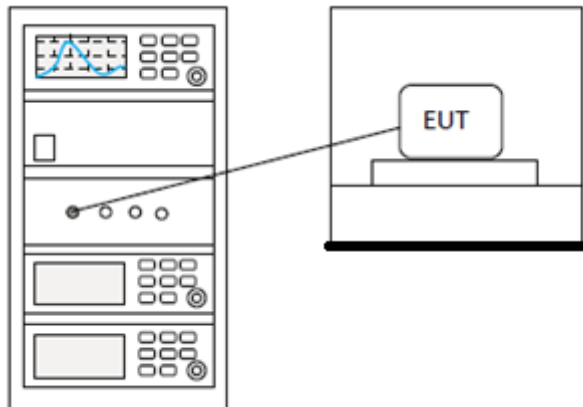
HOPPING CHANNEL NUMBER

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_non-Hop mode
Test Mode (Final Test)	TX_non-Hop mode
Tester	Eason
Temperature	25°C
Humidity	60%

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

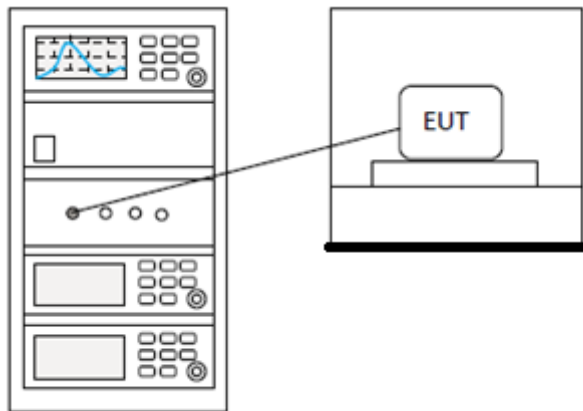
CARRIER FREQUENCIES SEPARATION

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_non-Hop mode
Test Mode (Final Test)	TX_non-Hop mode
Tester	Eason
Temperature	25°C
Humidity	60%

LIMITS

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

BLOCK DIAGRAM OF TEST SETUP



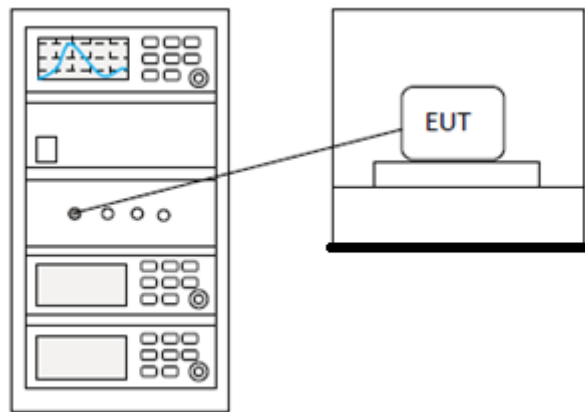
TEST DATA

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 7.8.7
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Eason
Temperature	25°C
Humidity	60%

BLOCK DIAGRAM OF TEST SETUP



TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

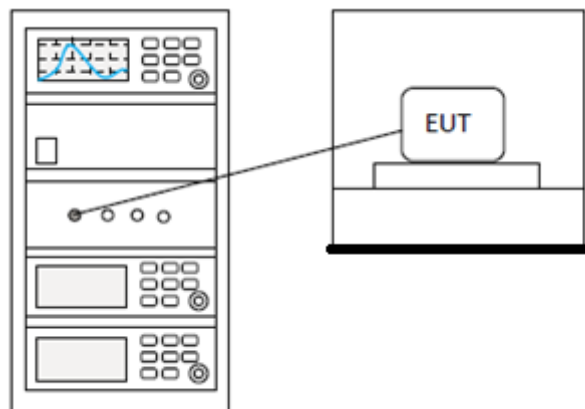
CONDUCTED PEAK OUTPUT POWER

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°C
Humidity	60%

LIMITS

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq$ 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

10 APPENDIX

Appendix1

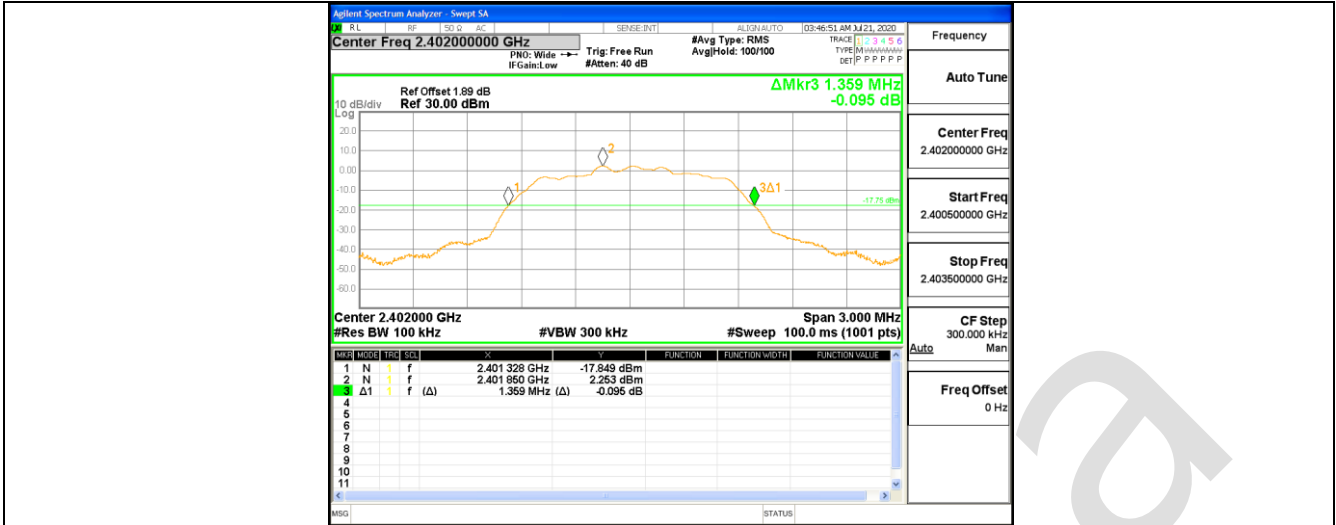
10.1 APPENDIX: 20DBEMISSION BANDWIDTH

Test Result

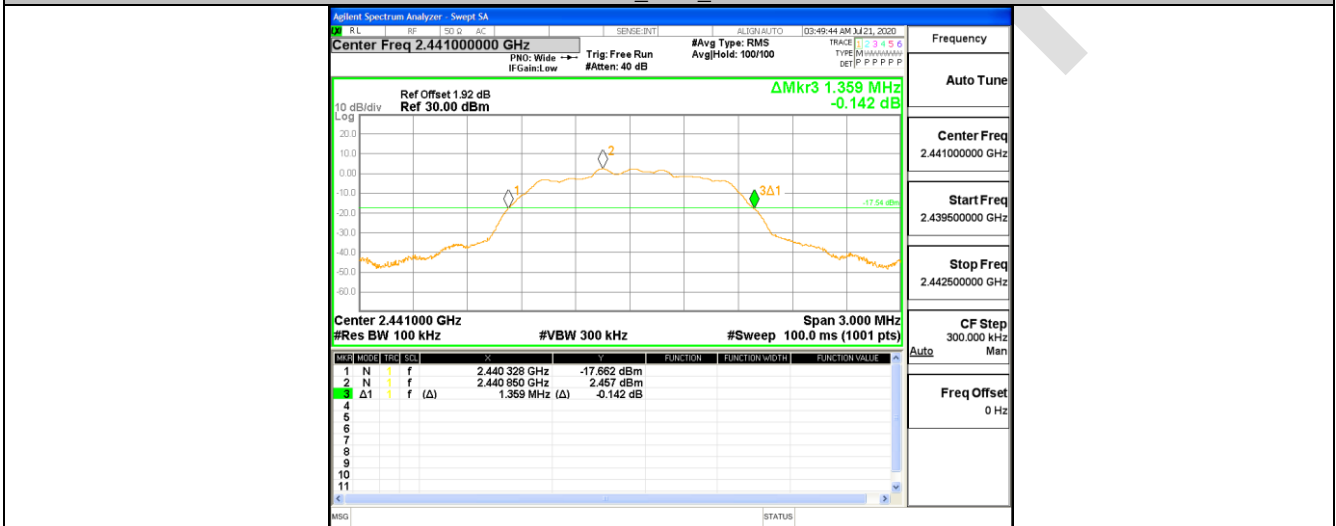
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	1.095	2401.469	2402.564	---	PASS
		2441	1.098	2440.466	2441.564	---	PASS
		2480	1.098	2479.466	2480.564	---	PASS
2DH1	Ant1	2402	1.359	2401.328	2402.687	---	PASS
		2441	1.359	2440.328	2441.687	---	PASS
		2480	1.356	2479.328	2480.684	---	PASS
3DH1	Ant1	2402	1.329	2401.355	2402.684	---	PASS
		2441	1.332	2440.352	2441.684	---	PASS
		2480	1.332	2479.352	2480.684	---	PASS

Test Graphs

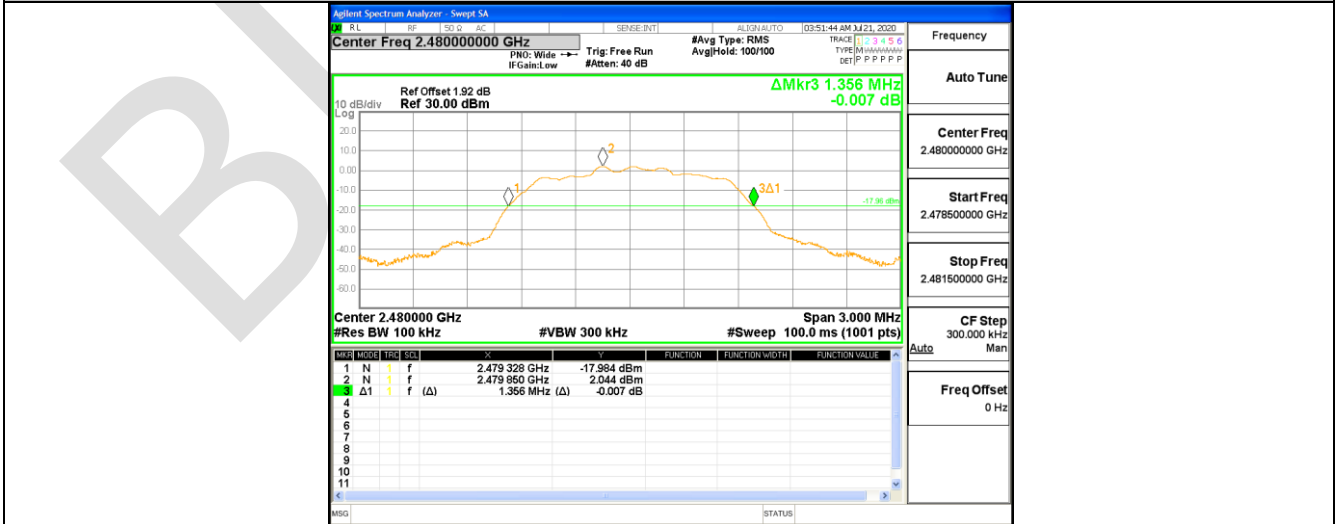




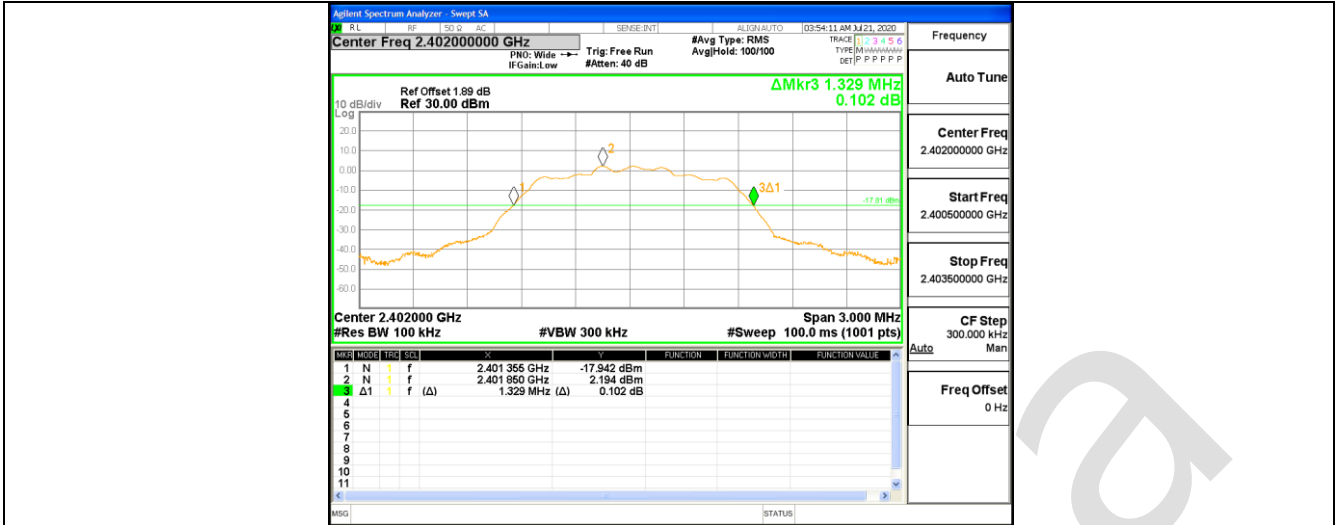
2DH1_Ant1_2441



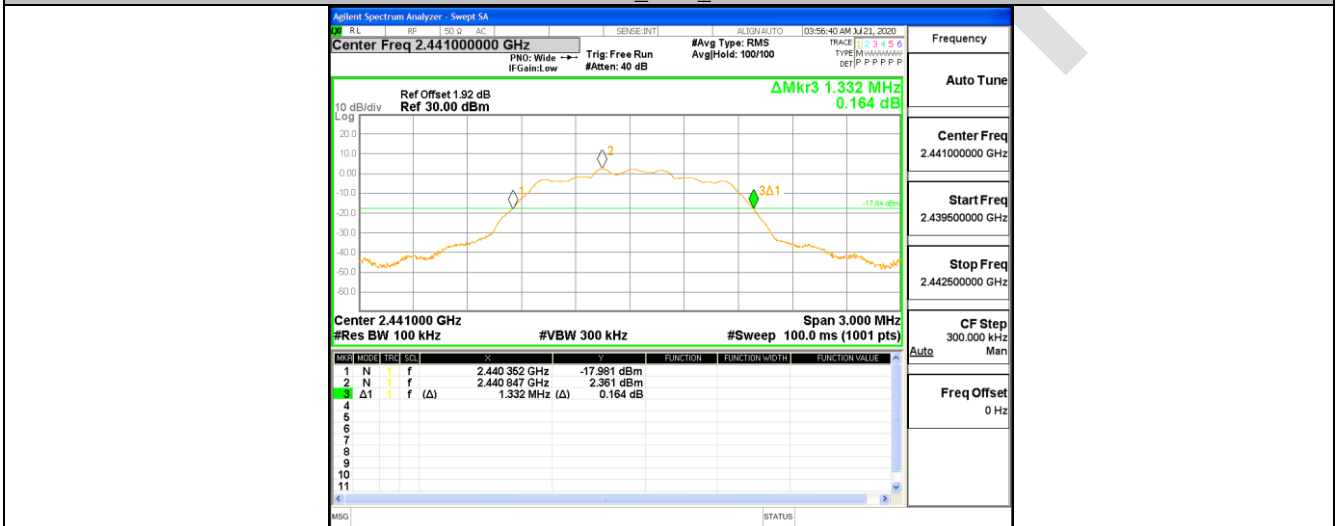
2DH1_Ant1_2480



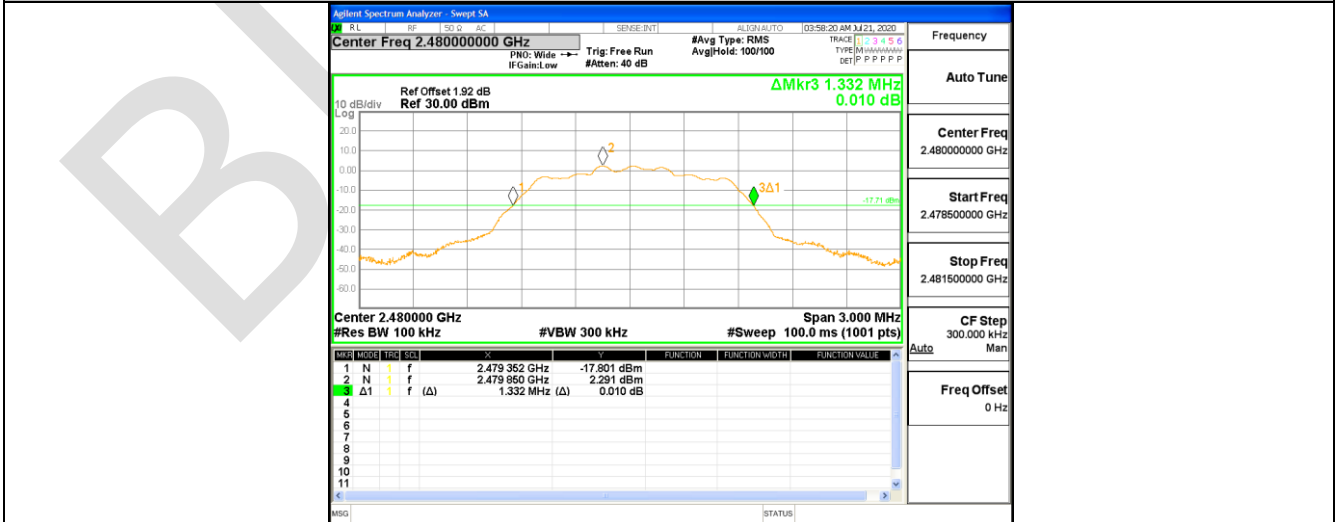
3DH1_Ant1_2402



3DH1_Ant1_2441



3DH1_Ant1_2480

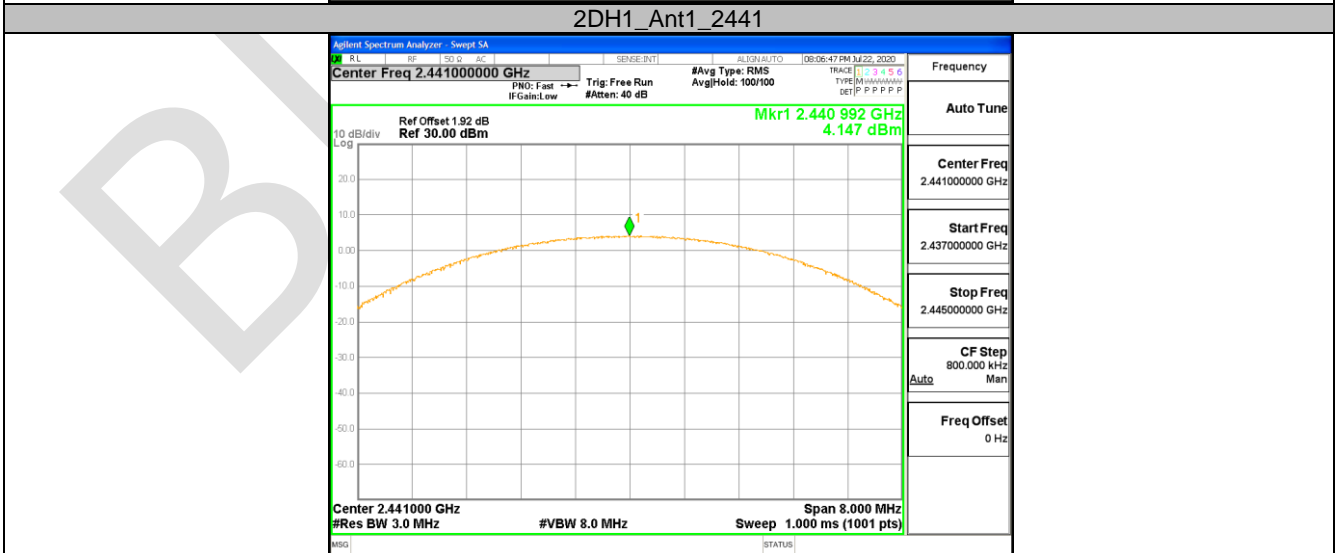
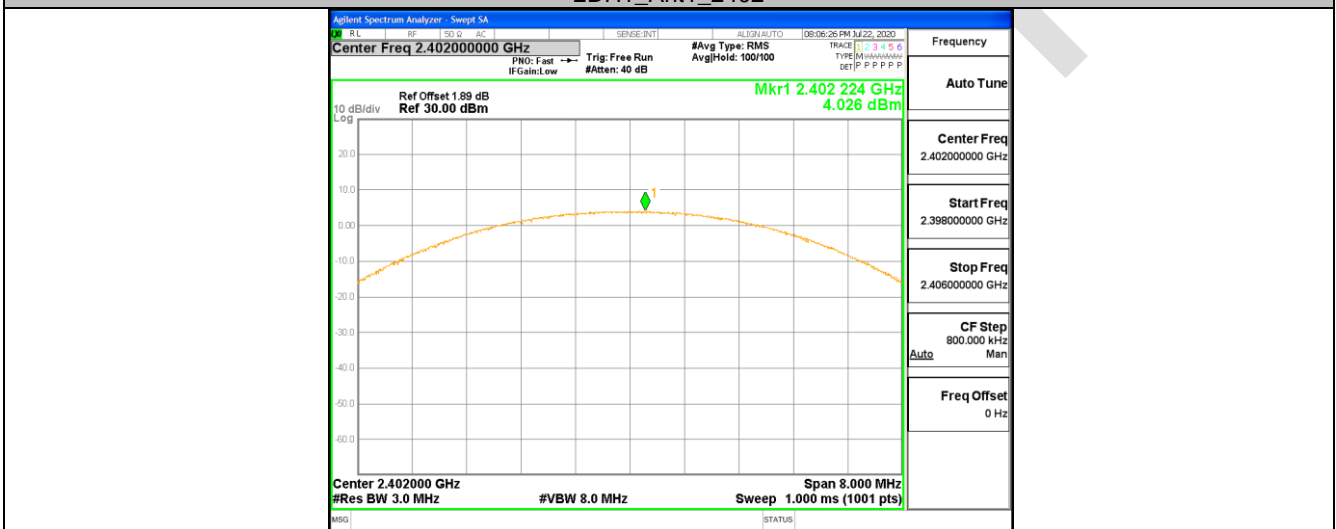
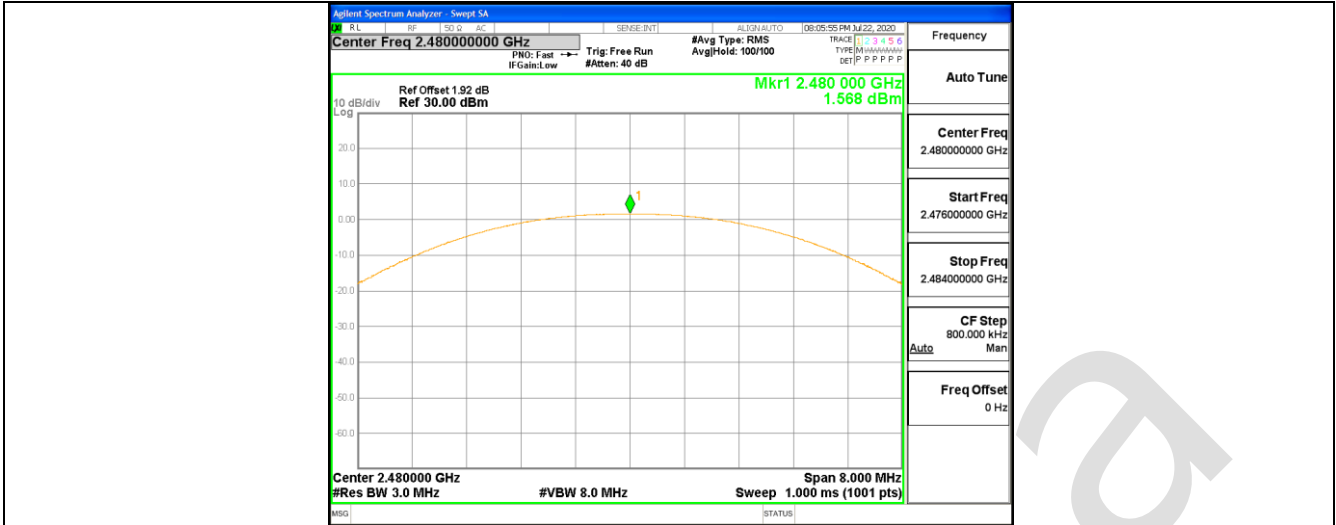


10.2 APPENDIX: MAXIMUM CONDUCTED OUTPUT POWER
Test Result

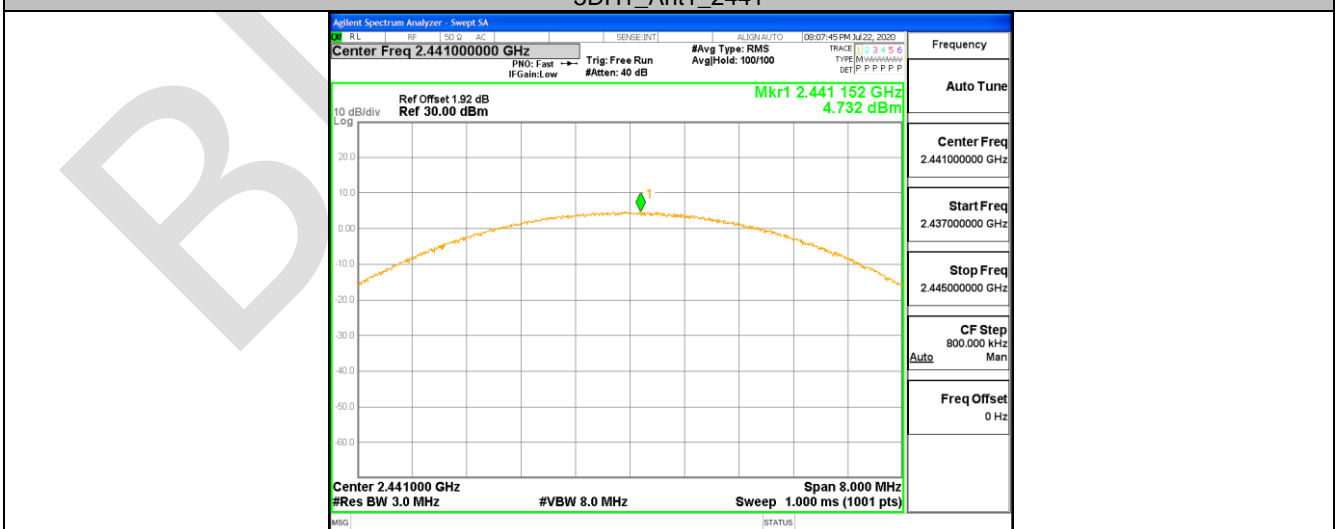
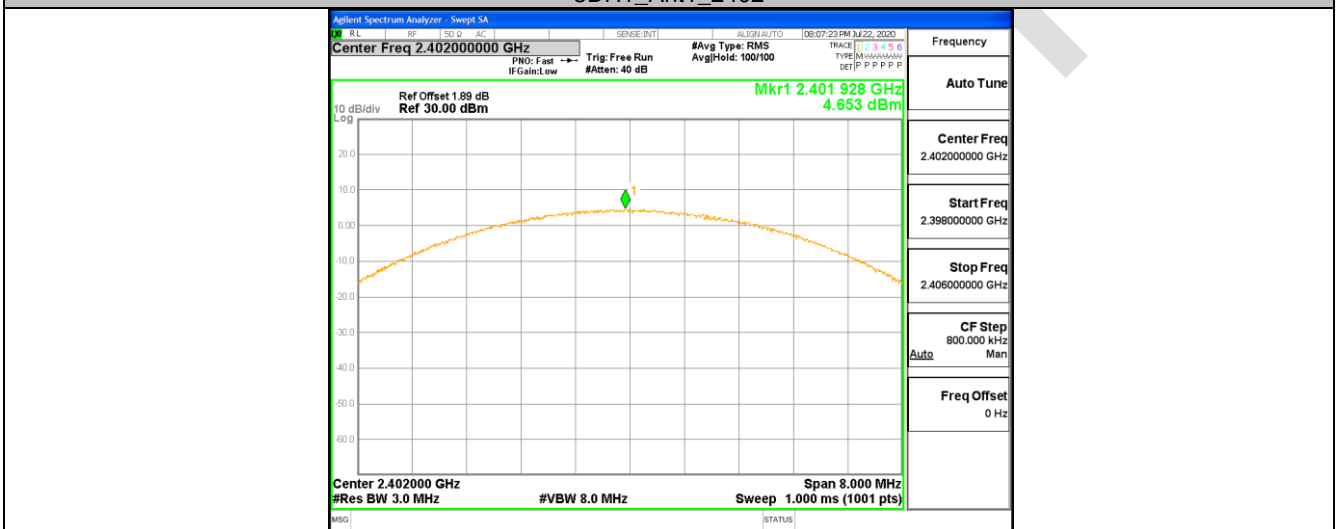
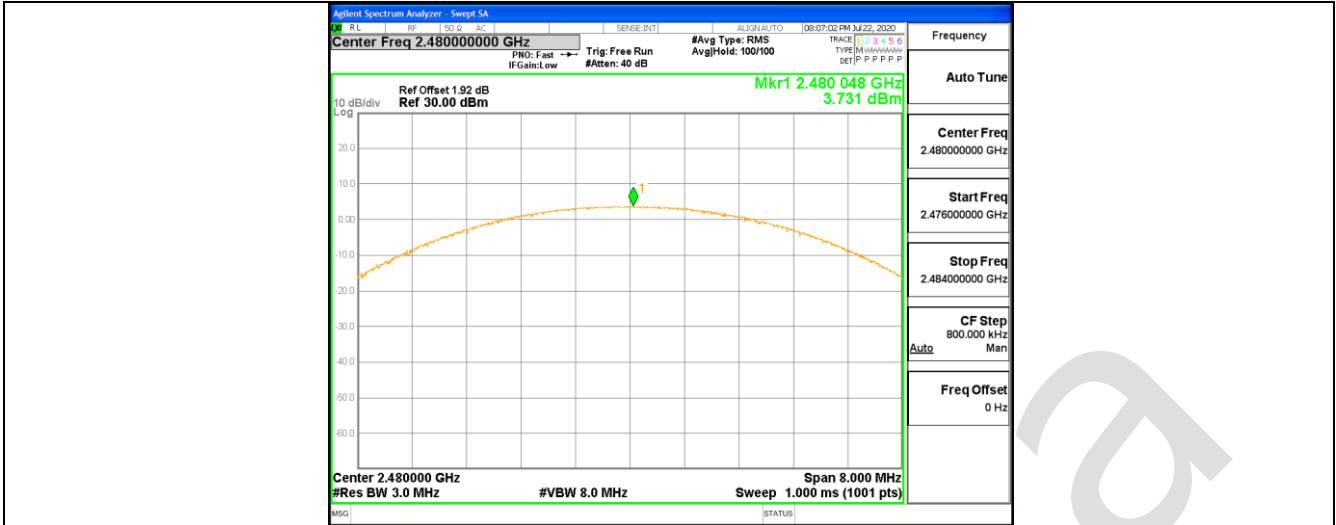
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH1	Ant1	2402	1.77	<=20.97	PASS
		2441	1.89	<=20.97	PASS
		2480	1.57	<=20.97	PASS
2DH1	Ant1	2402	4.03	<=20.97	PASS
		2441	4.15	<=20.97	PASS
		2480	3.73	<=20.97	PASS
3DH1	Ant1	2402	4.65	<=20.97	PASS
		2441	4.73	<=20.97	PASS
		2480	4.33	<=20.97	PASS

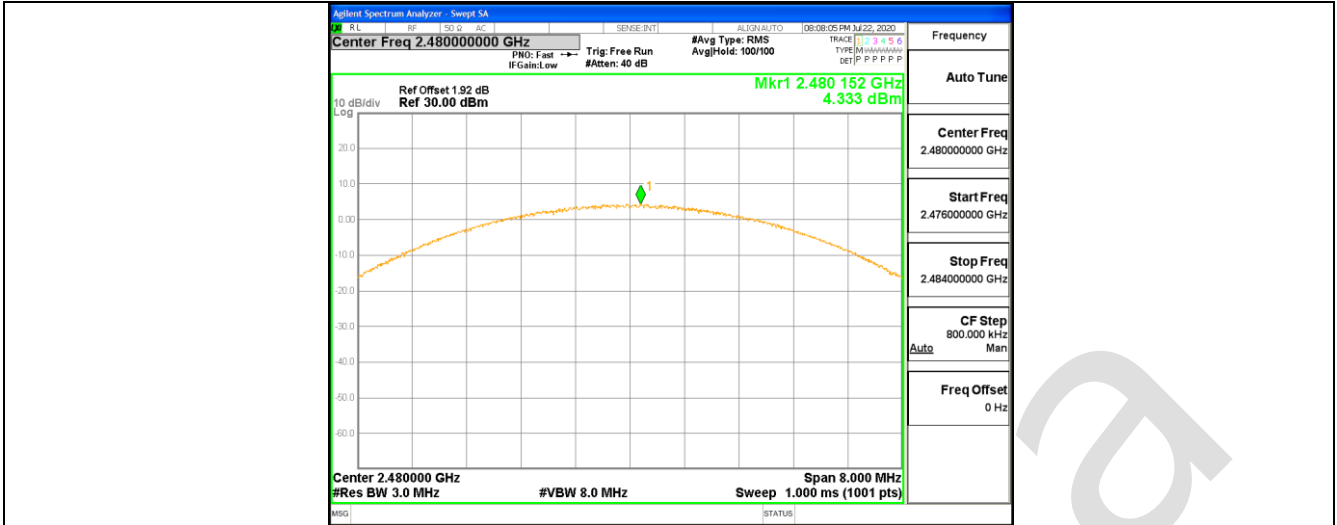
Test Graphs





2DH1_Ant1_2480





10.3 APPENDIX: CARRIER FREQUENCY SEPARATION

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop	1.008	≥ 0.732	PASS
2DH1	Ant1	Hop	1	≥ 0.906	PASS
3DH1	Ant1	Hop	1.33	≥ 0.888	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	124.80	400	Pass
2441MHz	DH3/2-DH3/3-DH3	265.92	400	Pass
2441MHz	DH5/2-DH5/3-DH5	310.61	400	Pass

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

Test channel: 2441MHz as blow

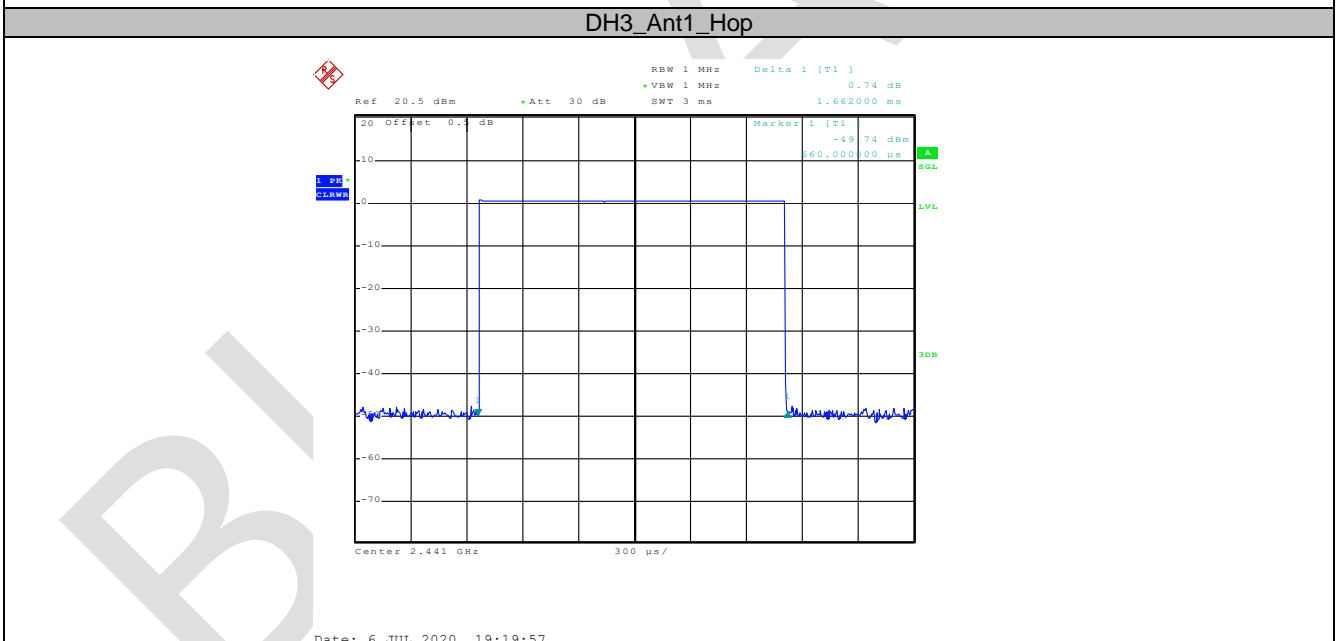
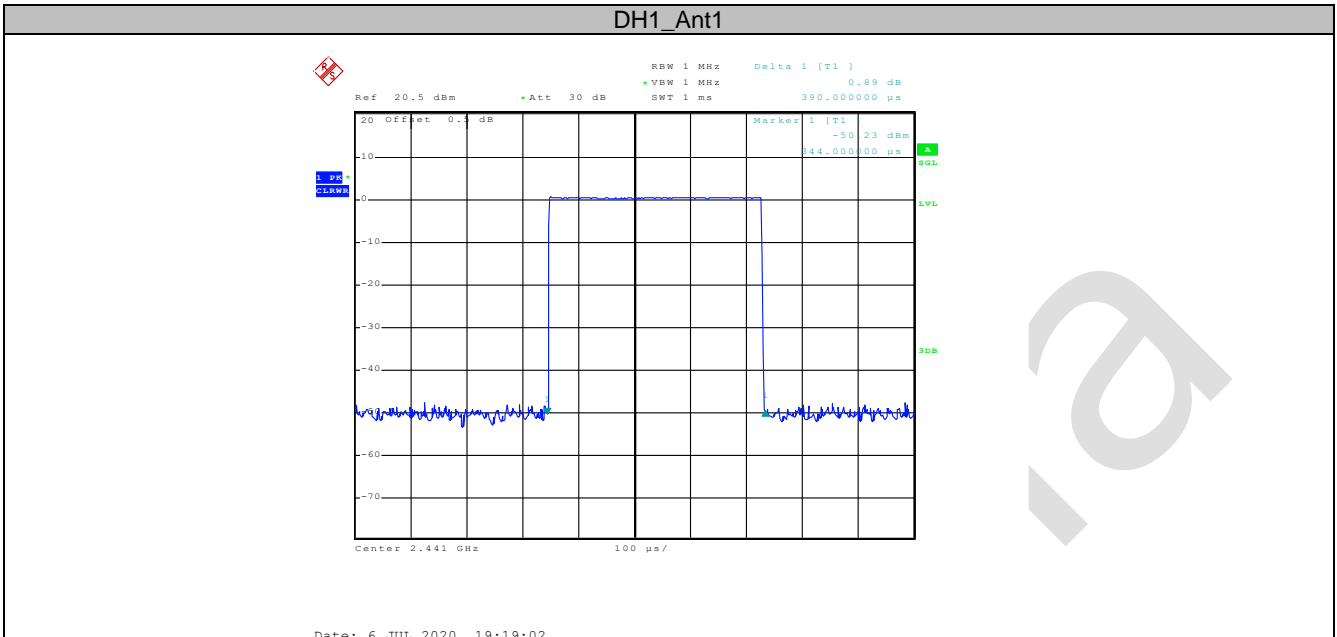
DH1/2-DH1/3-DH1 time slot = $0.390(\text{ms}) \times (1600 / (2 \times 79)) \times 31.6 = 124.80\text{ms}$

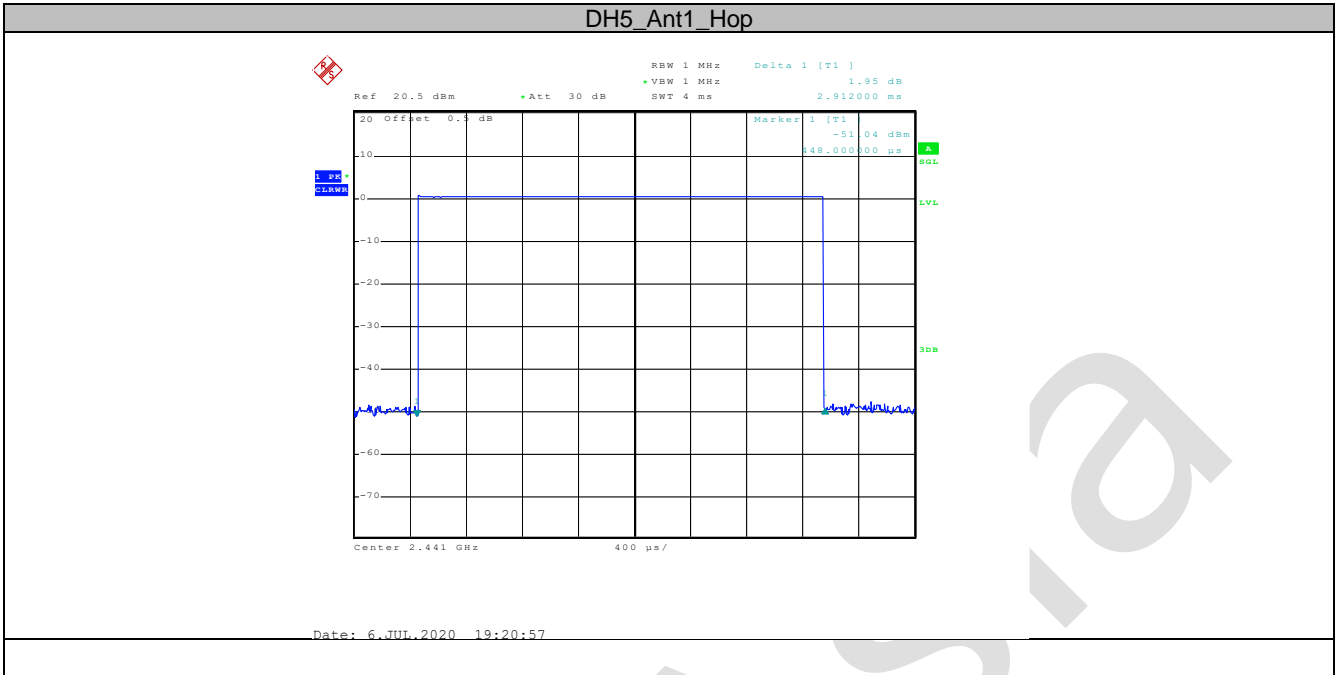
DH3/2-DH3/3-DH3 time slot = $1.662(\text{ms}) \times (1600 / (4 \times 79)) \times 31.6 = 265.92\text{ms}$

DH5/2-DH5/3-DH5 time slot = $2.912(\text{ms}) \times (1600 / (6 \times 79)) \times 31.6 = 310.61\text{ms}$

Test plot as follows:

Test Graphs





BlueAsia

10.5 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
3DH1	Ant1	Hop	79	≥ 15	PASS

BlueAsia

Test Graphs

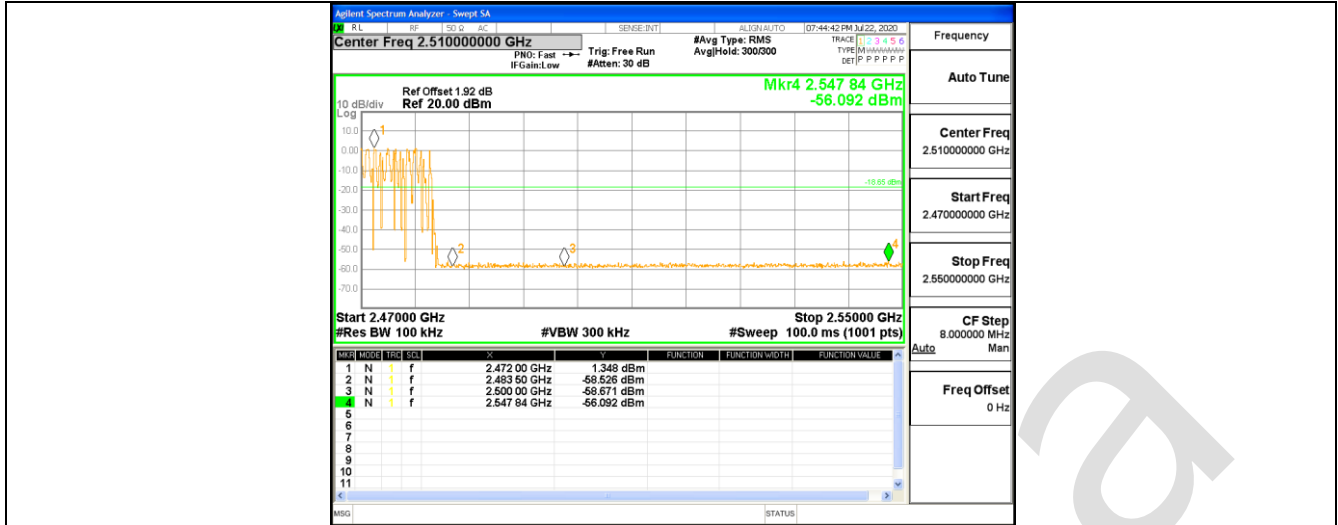


10.6 APPENDIX: BAND EDGE MEASUREMENTS
Test Result

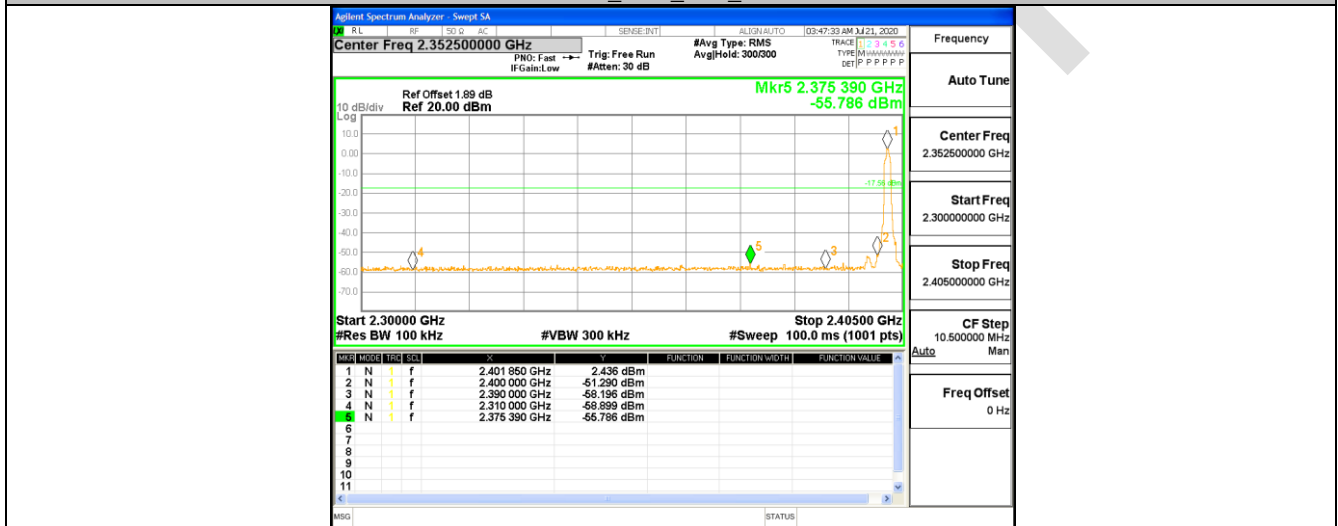
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	1.28	-56.19	<=-18.72	PASS
		High	2480	1.18	-55.41	<=-18.82	PASS
		Low	Hop_2402	1.29	-56.25	-18.71	PASS
		High	Hop_2480	1.35	-56.09	-18.65	PASS
2DH1	Ant1	Low	2402	2.44	-55.79	<=-17.56	PASS
		High	2480	2.21	-55.5	<=-17.79	PASS
		Low	Hop_2402	2.53	-56.09	-17.47	PASS
		High	Hop_2480	2.44	-54.94	-17.56	PASS
3DH1	Ant1	Low	2402	2.44	-56.26	<=-17.56	PASS
		High	2480	2.23	-55.11	<=-17.77	PASS
		Low	Hop_2402	2.68	-56.46	-17.32	PASS
		High	Hop_2480	2.00	-55.85	-18	PASS

Test Graphs

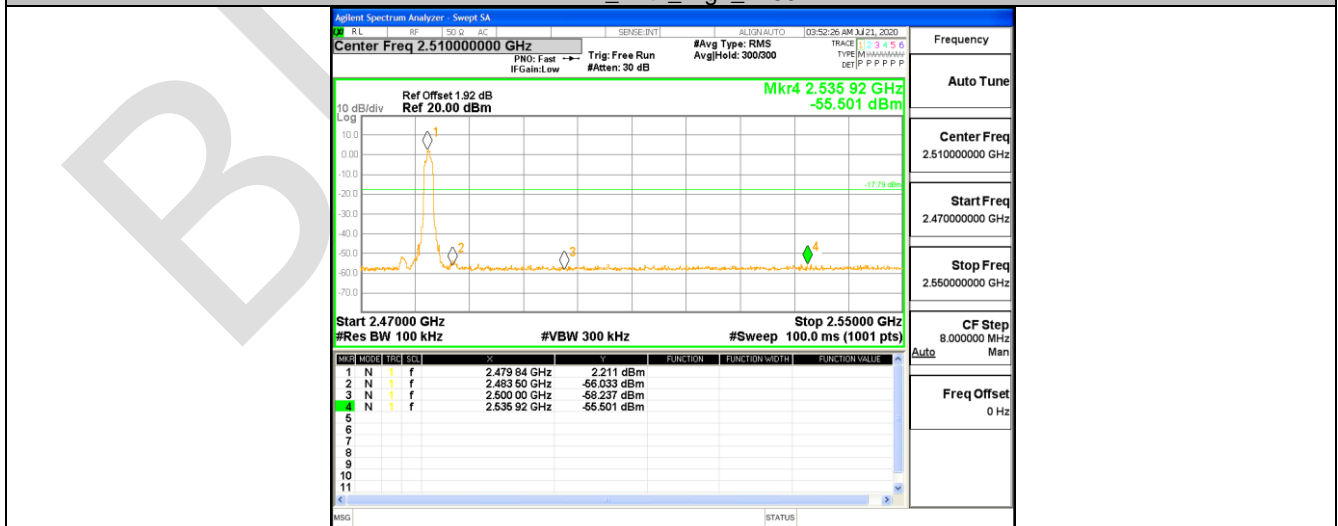




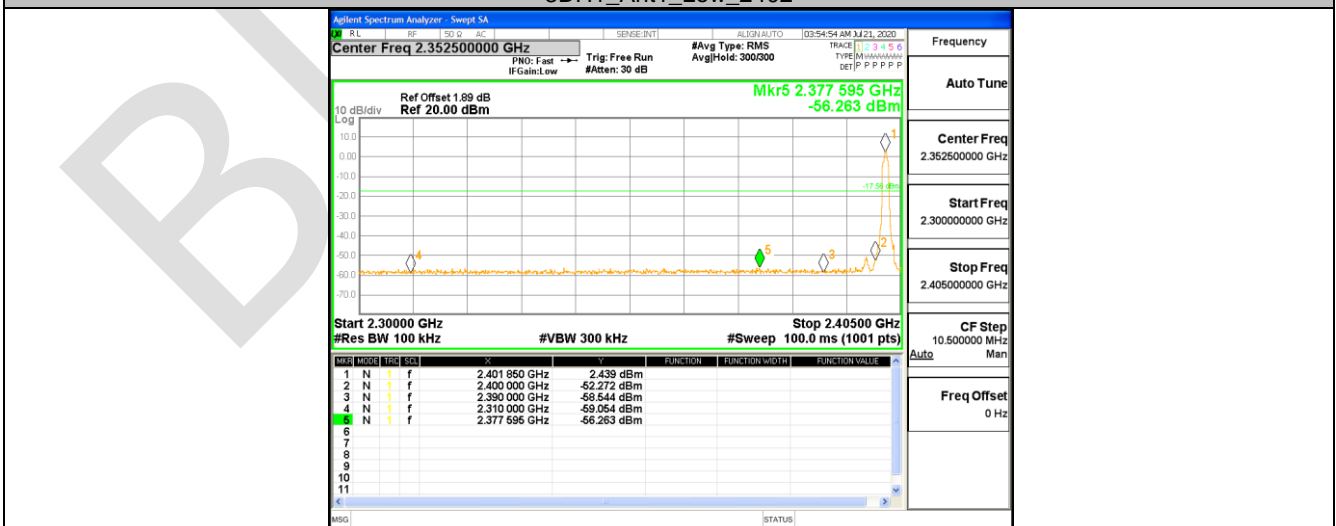
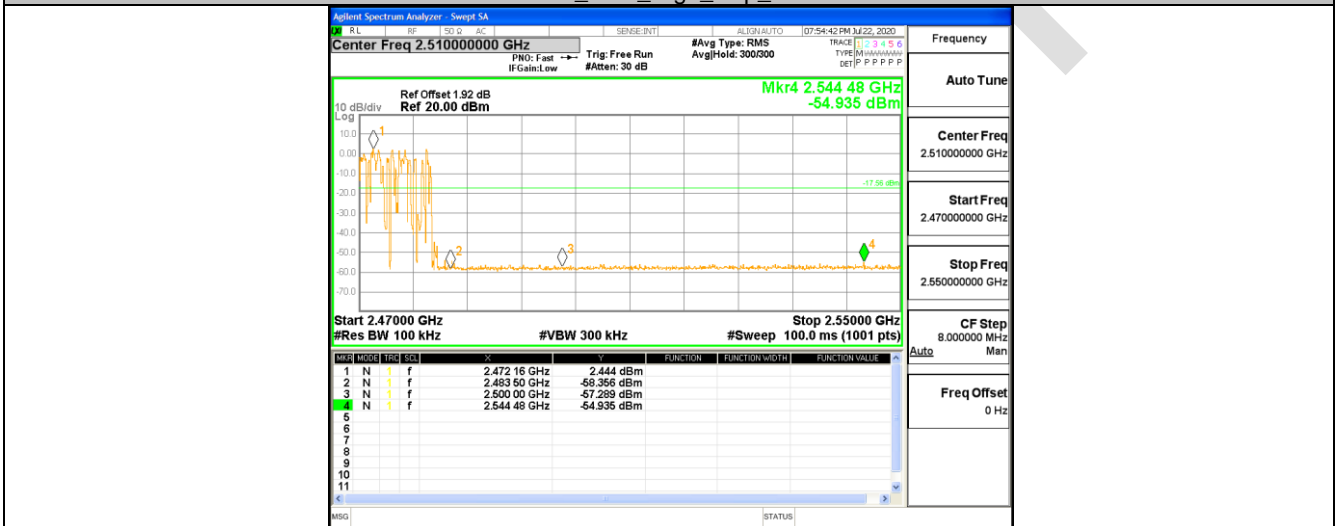
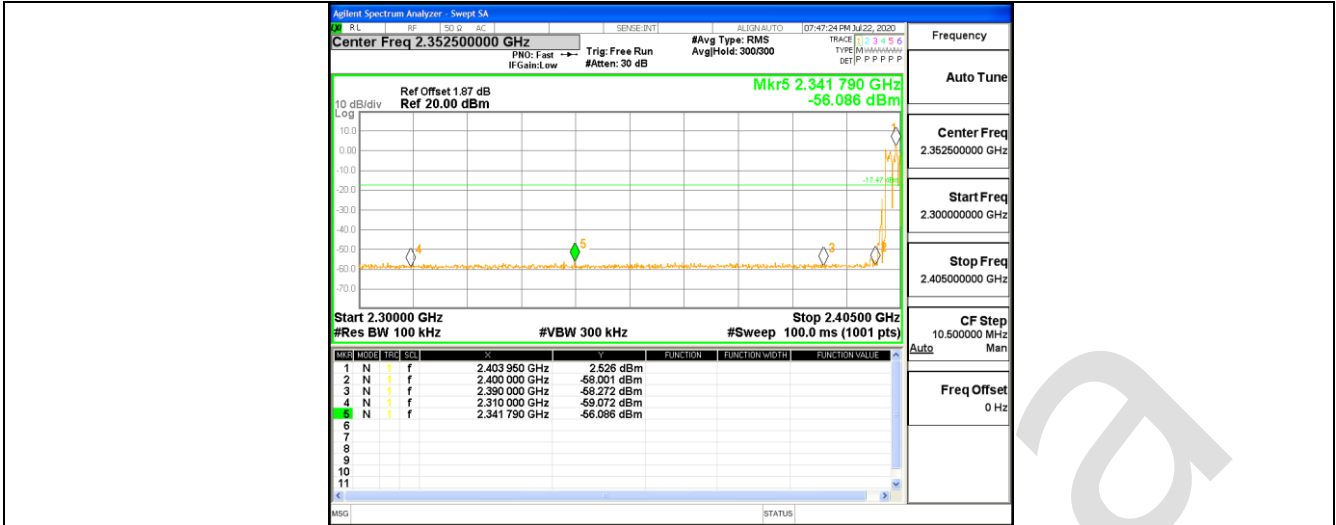
2DH1_Ant1_Low_2402

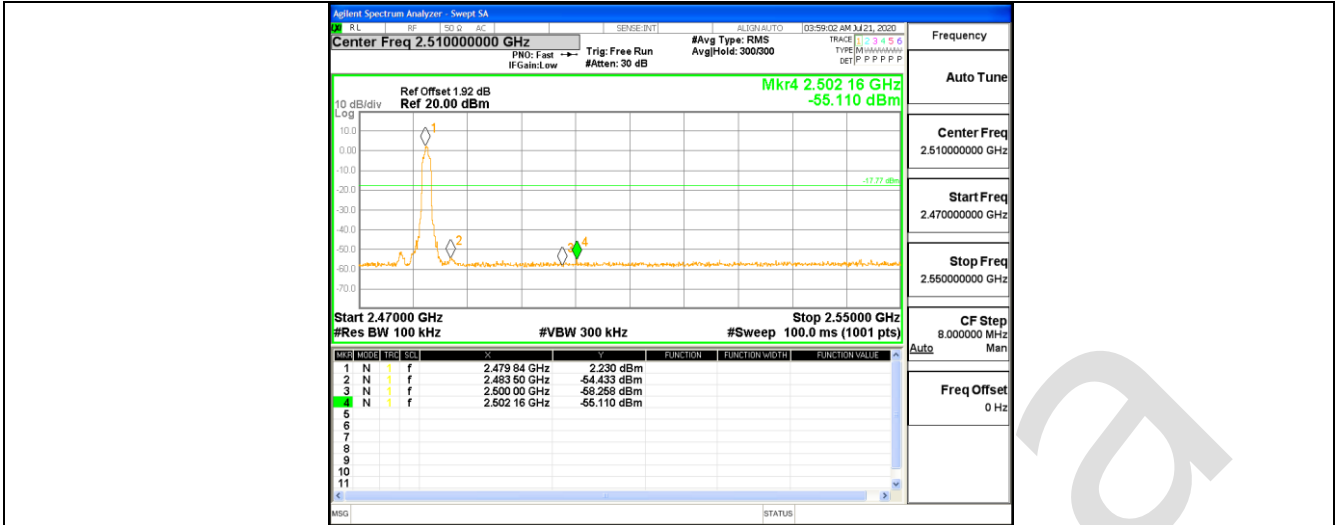


2DH1_Ant1_High_2480

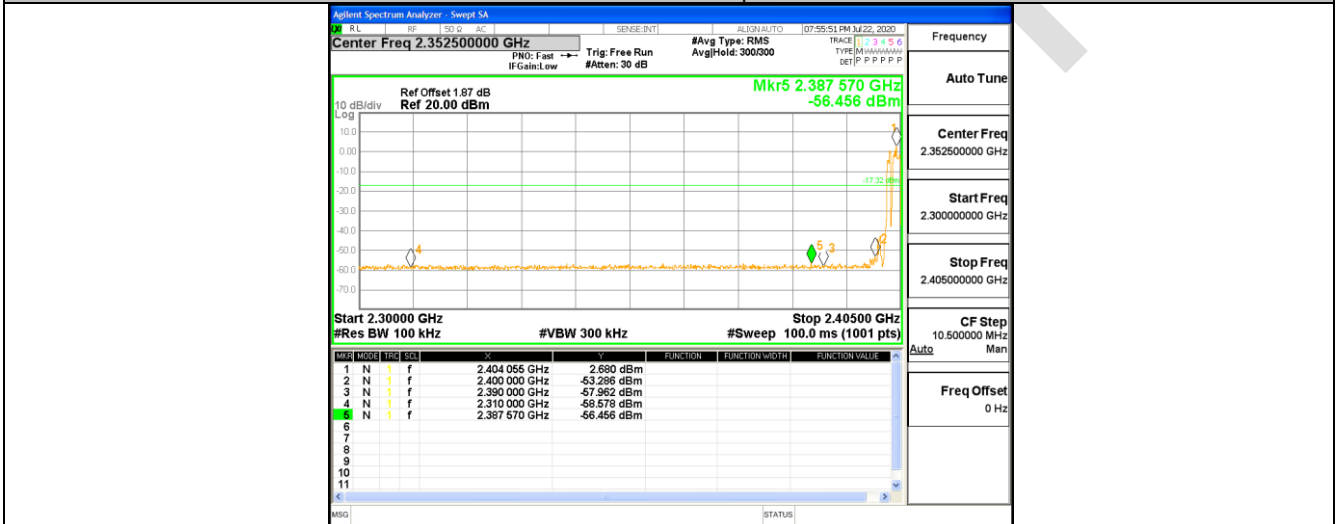


2DH1_Ant1_Low_Hop_2402

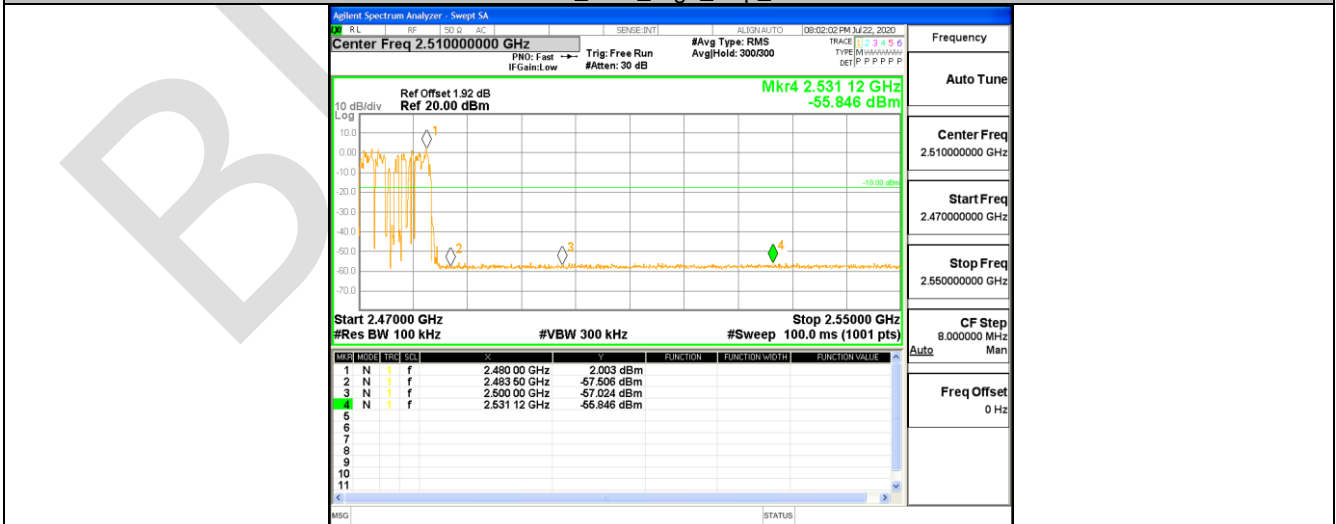




3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2402

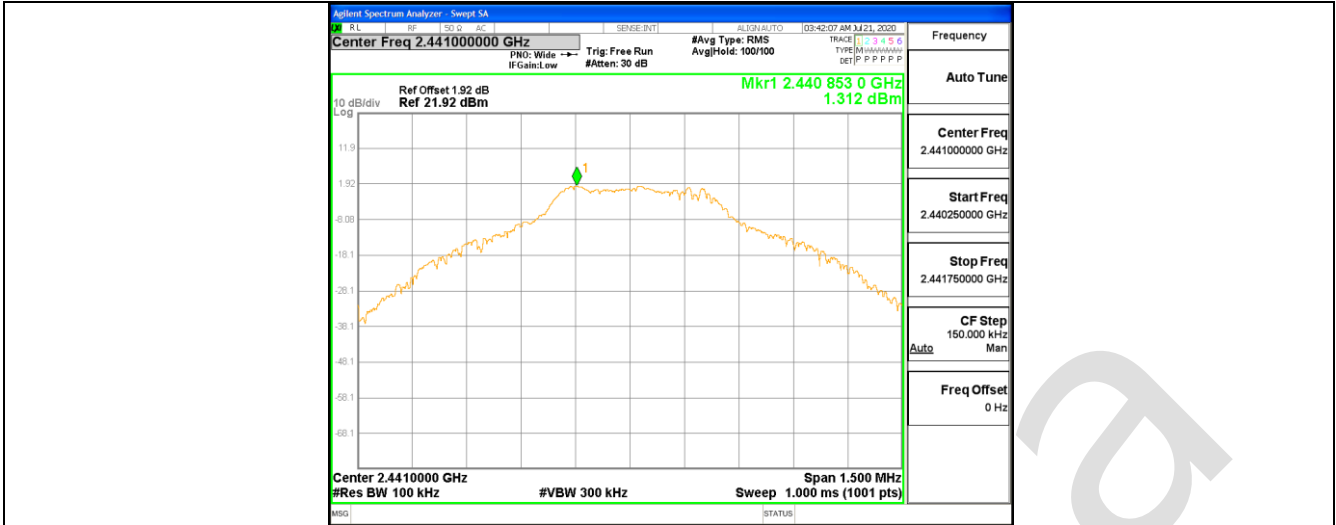


10.7 APPENDIX: CONDUCTED SPURIOUS EMISSION
Test Result

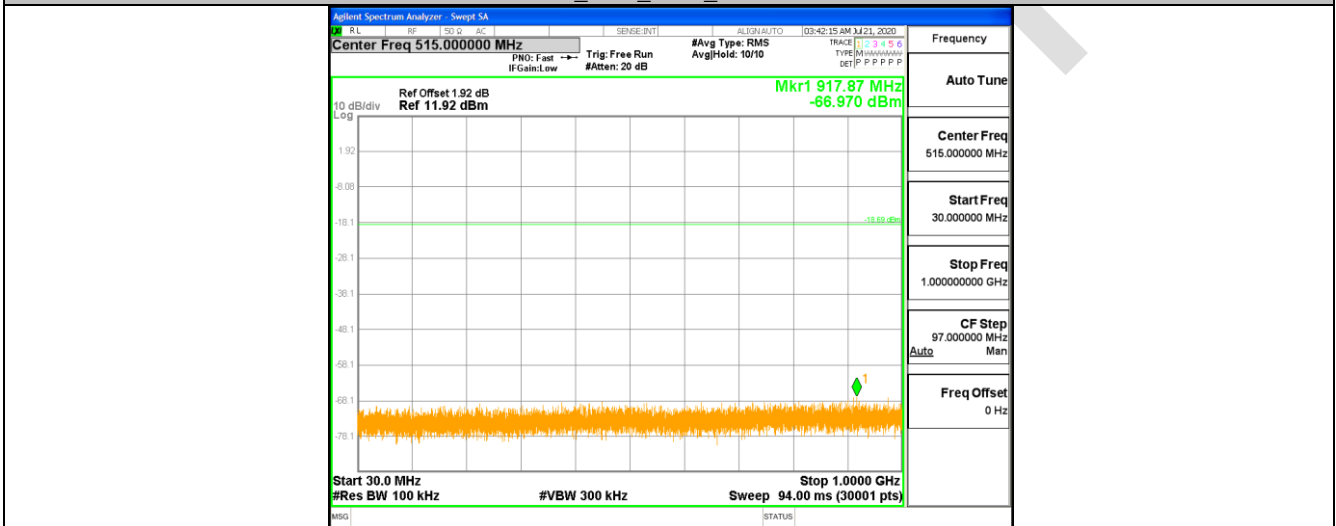
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	1.27	1.27	---	PASS
			30~1000	30~1000	-68.239	<=-18.726	PASS
			1000~26500	1000~26500	-51.858	<=-18.726	PASS
		2441	Reference	1.31	1.31	---	PASS
			30~1000	30~1000	-66.97	<=-18.688	PASS
			1000~26500	1000~26500	-53.745	<=-18.688	PASS
		2480	Reference	1.10	1.10	---	PASS
			30~1000	30~1000	-67.646	<=-18.901	PASS
			1000~26500	1000~26500	-53.587	<=-18.901	PASS
2DH1	Ant1	2402	Reference	2.43	2.43	---	PASS
			30~1000	30~1000	-66.855	<=-17.566	PASS
			1000~26500	1000~26500	-53.491	<=-17.566	PASS
		2441	Reference	2.27	2.27	---	PASS
			30~1000	30~1000	-67.175	<=-17.727	PASS
			1000~26500	1000~26500	-53.161	<=-17.727	PASS
		2480	Reference	2.16	2.16	---	PASS
			30~1000	30~1000	-67.021	<=-17.839	PASS
			1000~26500	1000~26500	-53.27	<=-17.839	PASS
3DH1	Ant1	2402	Reference	2.05	2.05	---	PASS
			30~1000	30~1000	-67.498	<=-17.954	PASS
			1000~26500	1000~26500	-53.227	<=-17.954	PASS
		2441	Reference	2.24	2.24	---	PASS
			30~1000	30~1000	-67.575	<=-17.761	PASS
			1000~26500	1000~26500	-53.429	<=-17.761	PASS
		2480	Reference	2.11	2.11	---	PASS
			30~1000	30~1000	-67.599	<=-17.891	PASS
			1000~26500	1000~26500	-52.974	<=-17.891	PASS

Test Graphs

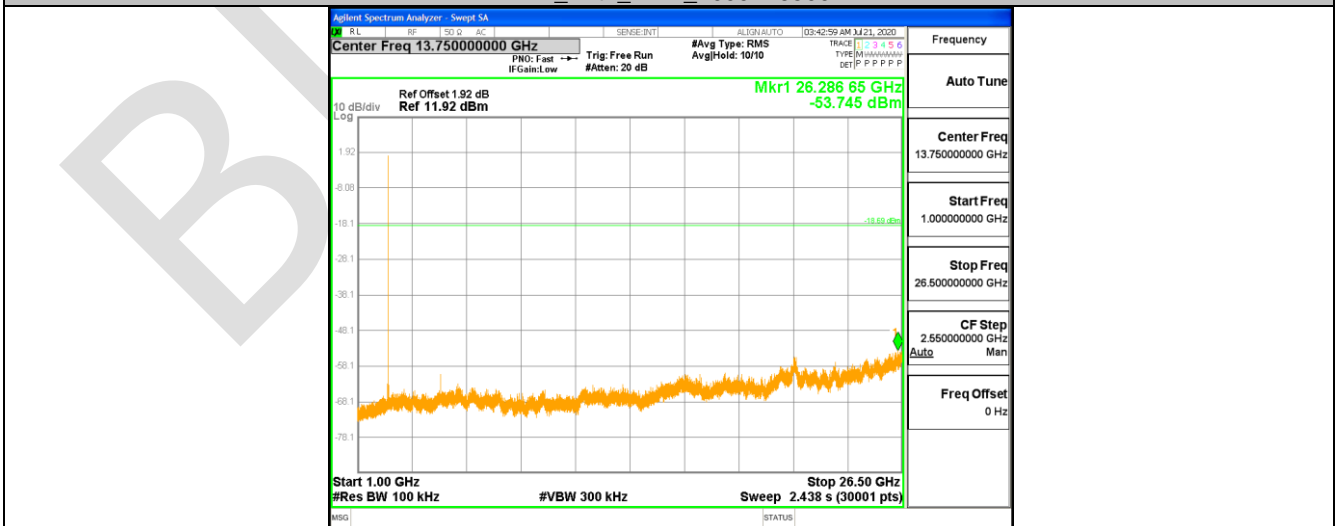




DH1_Ant1_2441_30~1000



DH1_Ant1_2441_1000~26500



DH1_Ant1_2480_0~Reference

