

Appendix Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: True wireless bluetooth headset

Trade Mark: /

Test Model: DM04

FCC ID: 2BHGK-DM04

Environmental Conditions

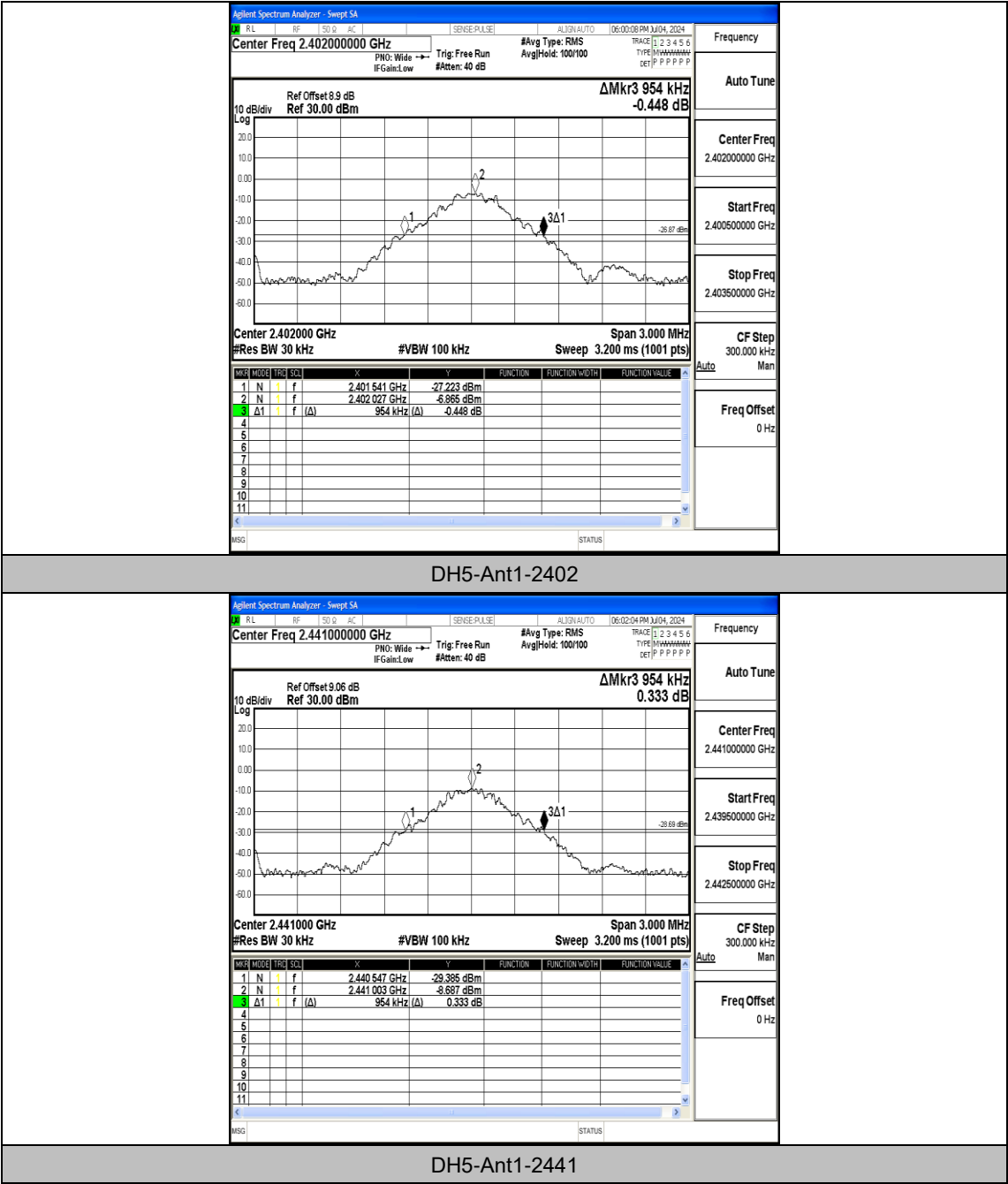
Temperature:	23.8℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: 20dB Emission Bandwidth

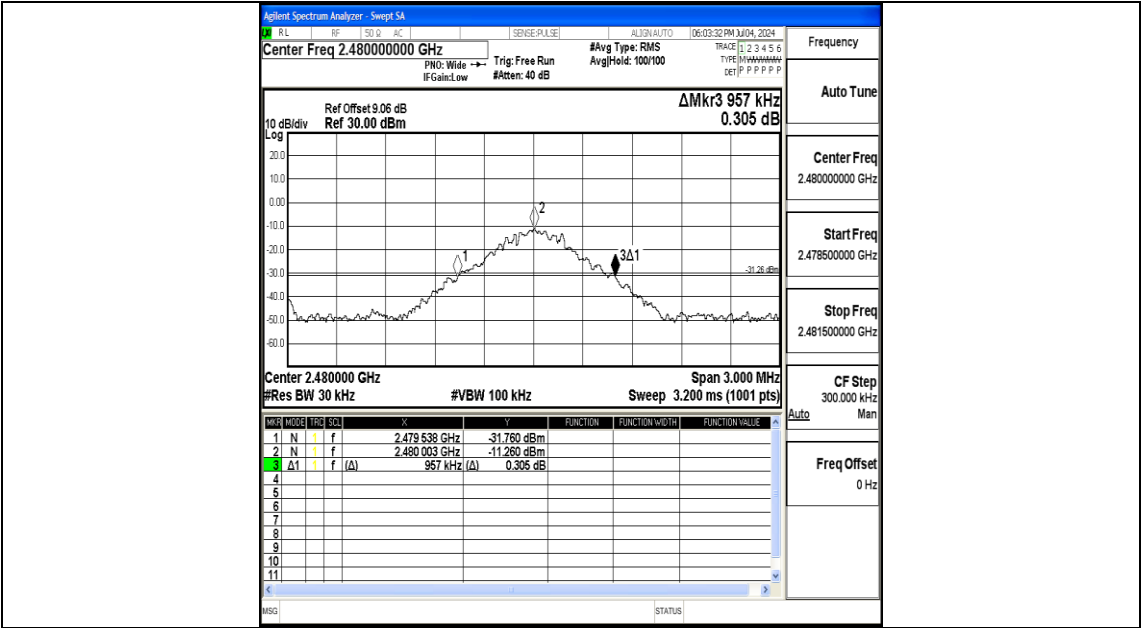
Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.954	2401.541	2402.495	---	---
DH5	Ant1	2441	0.954	2440.547	2441.501	---	---
DH5	Ant1	2480	0.957	2479.538	2480.495	---	---
2DH5	Ant1	2402	1.287	2401.376	2402.663	---	---
2DH5	Ant1	2441	1.284	2440.379	2441.663	---	---
2DH5	Ant1	2480	1.311	2479.352	2480.663	---	---

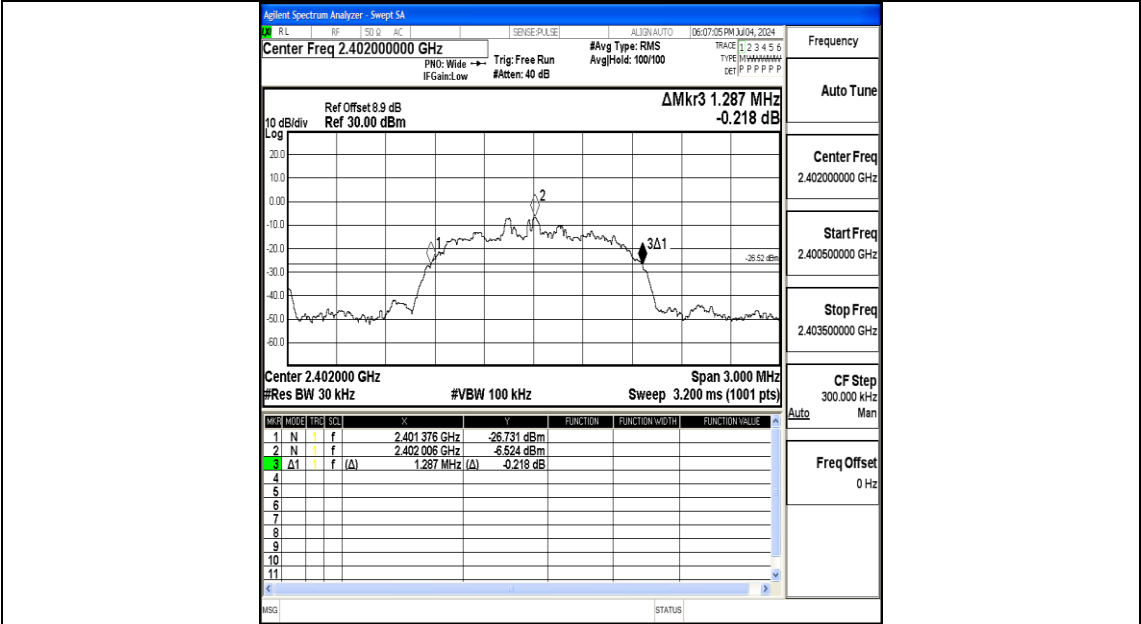
Test Graphs



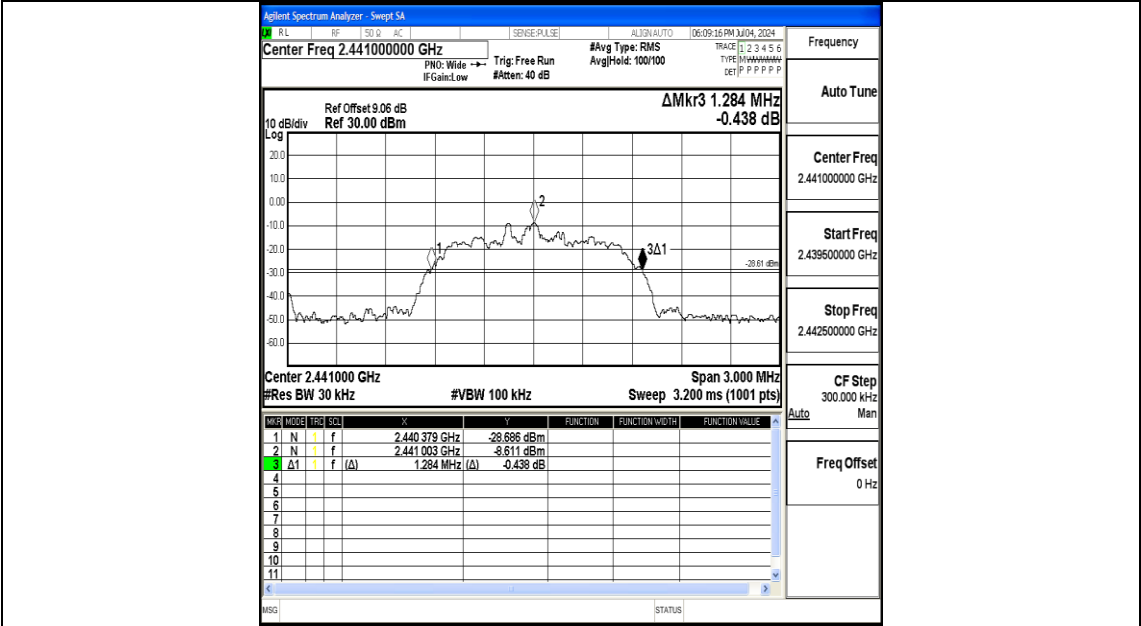
DH5-Ant1-2441



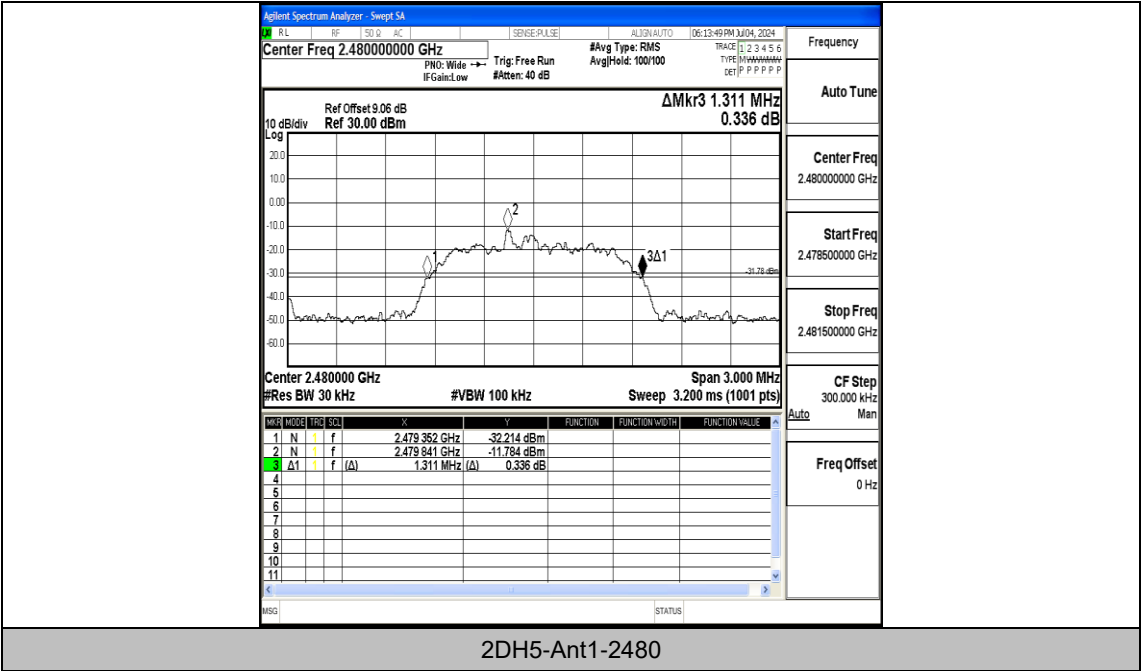
DH5-Ant1-2480



2DH5-Ant1-2402



2DH5-Ant1-2441

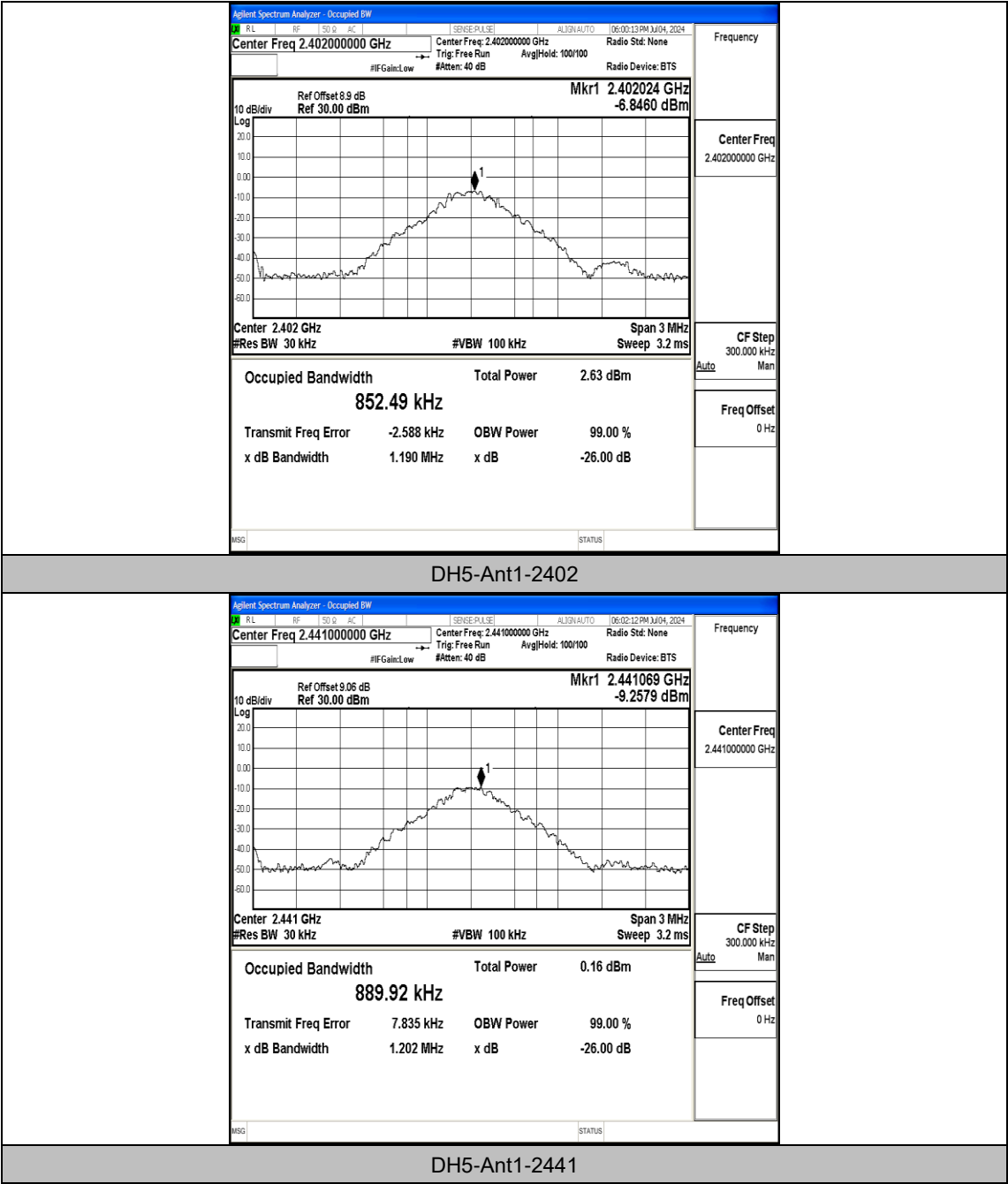


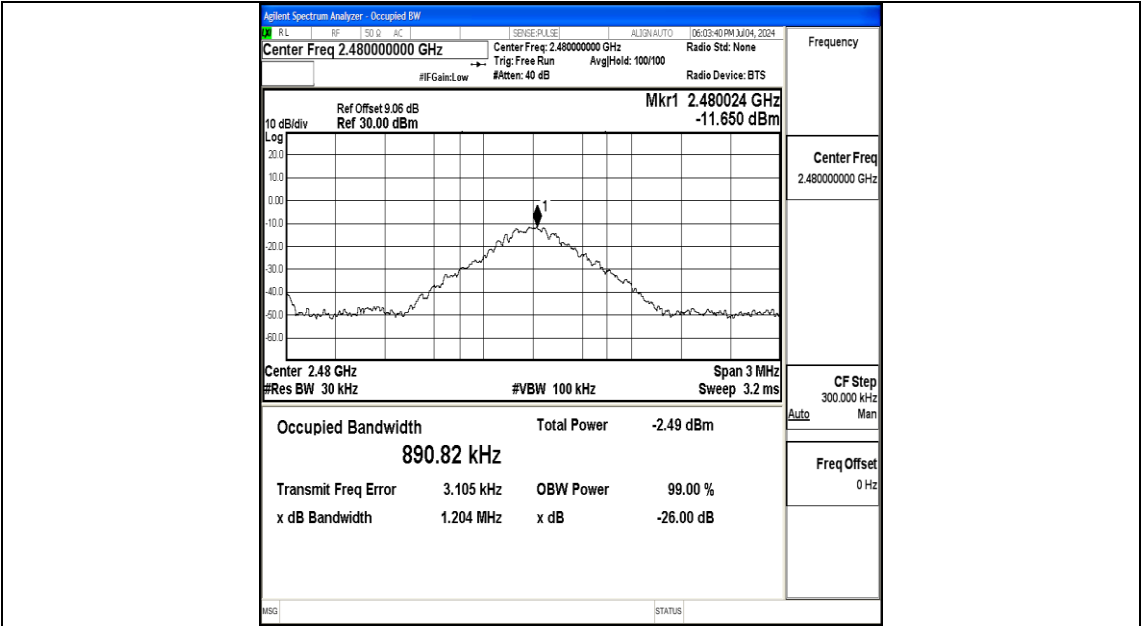
Appendix B: Occupied Channel Bandwidth

Test Result

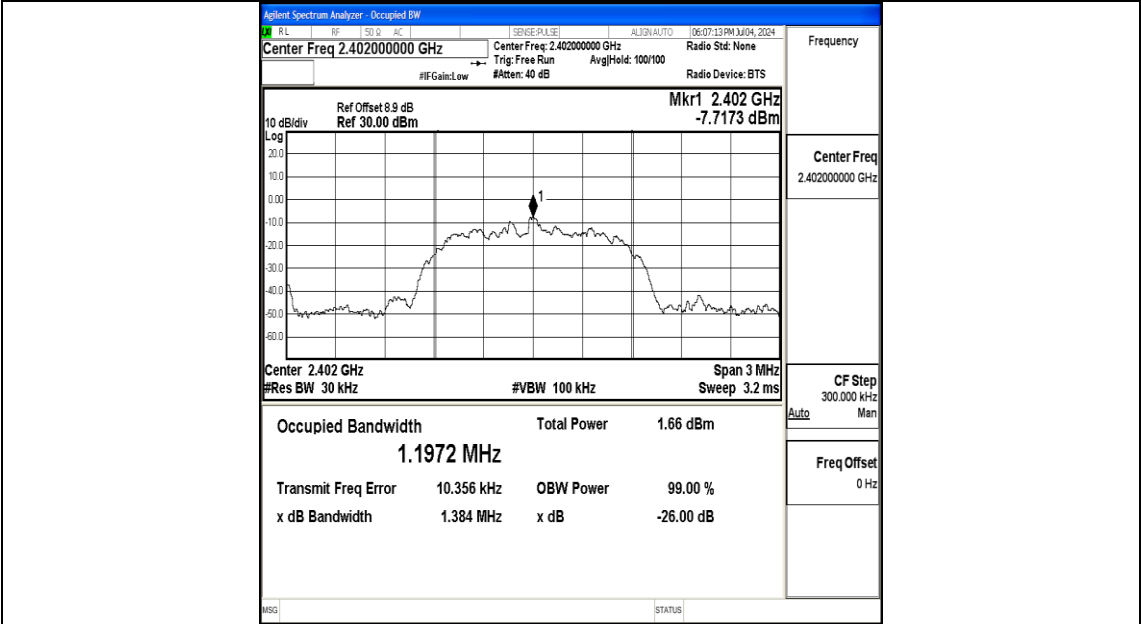
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.85249	2401.5712	2402.4237	---	---
DH5	Ant1	2441	0.88992	2440.5629	2441.4528	---	---
DH5	Ant1	2480	0.89082	2479.5577	2480.4485	---	---
2DH5	Ant1	2402	1.1972	2401.4118	2402.6090	---	---
2DH5	Ant1	2441	1.1828	2440.4158	2441.5986	---	---
2DH5	Ant1	2480	1.1940	2479.4103	2480.6043	---	---

Test Graphs

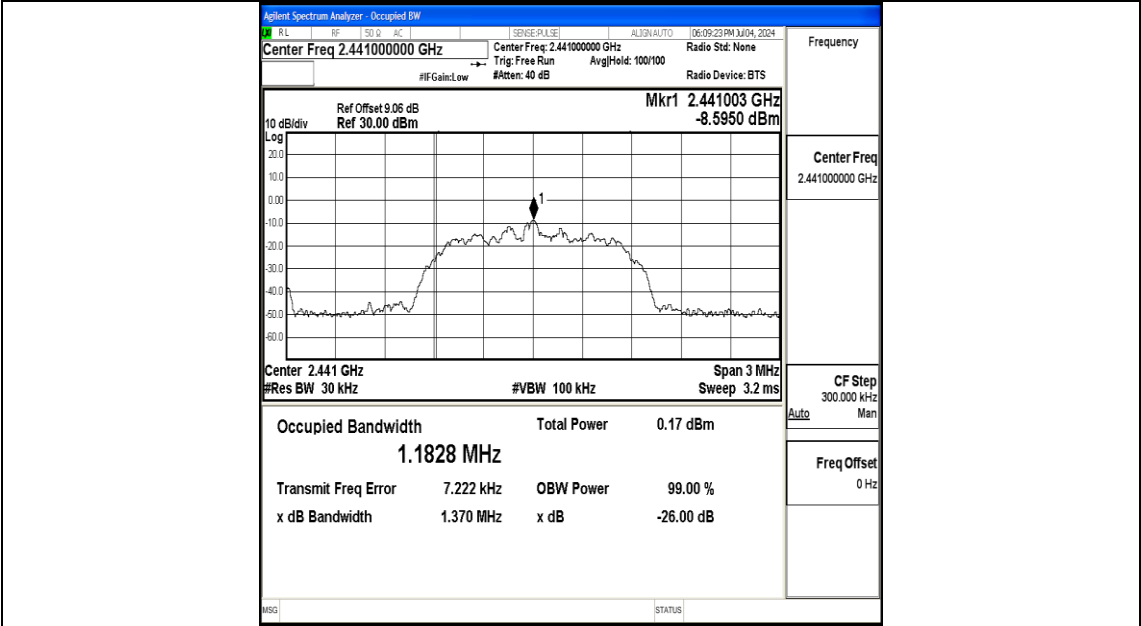




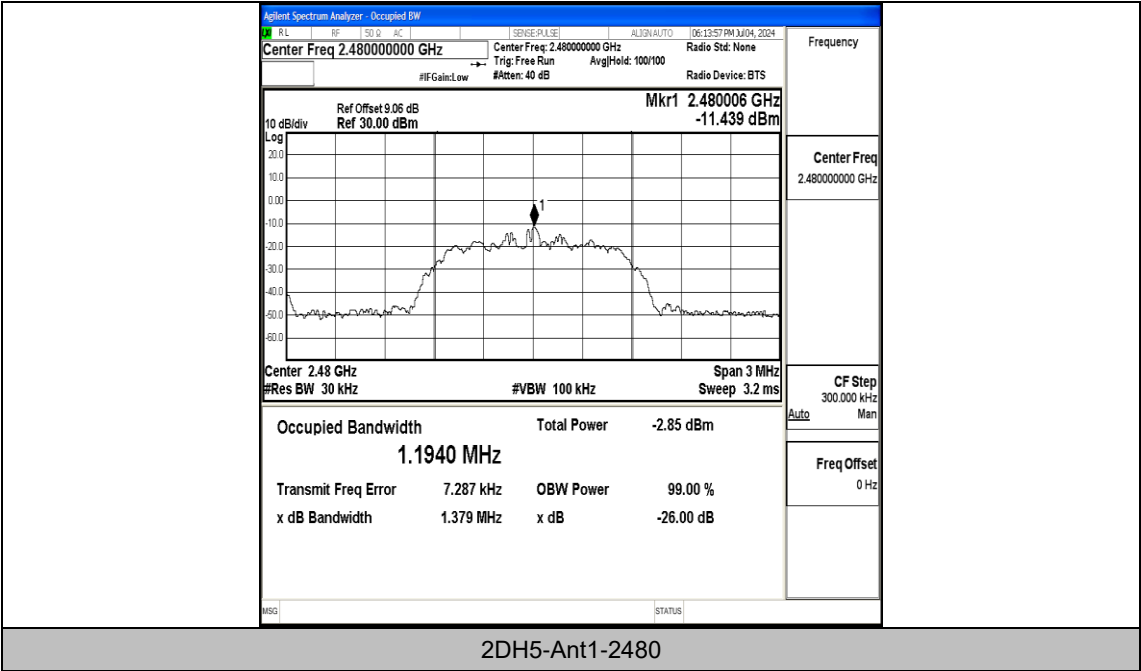
DH5-Ant1-2480



2DH5-Ant1-2402



2DH5-Ant1-2441

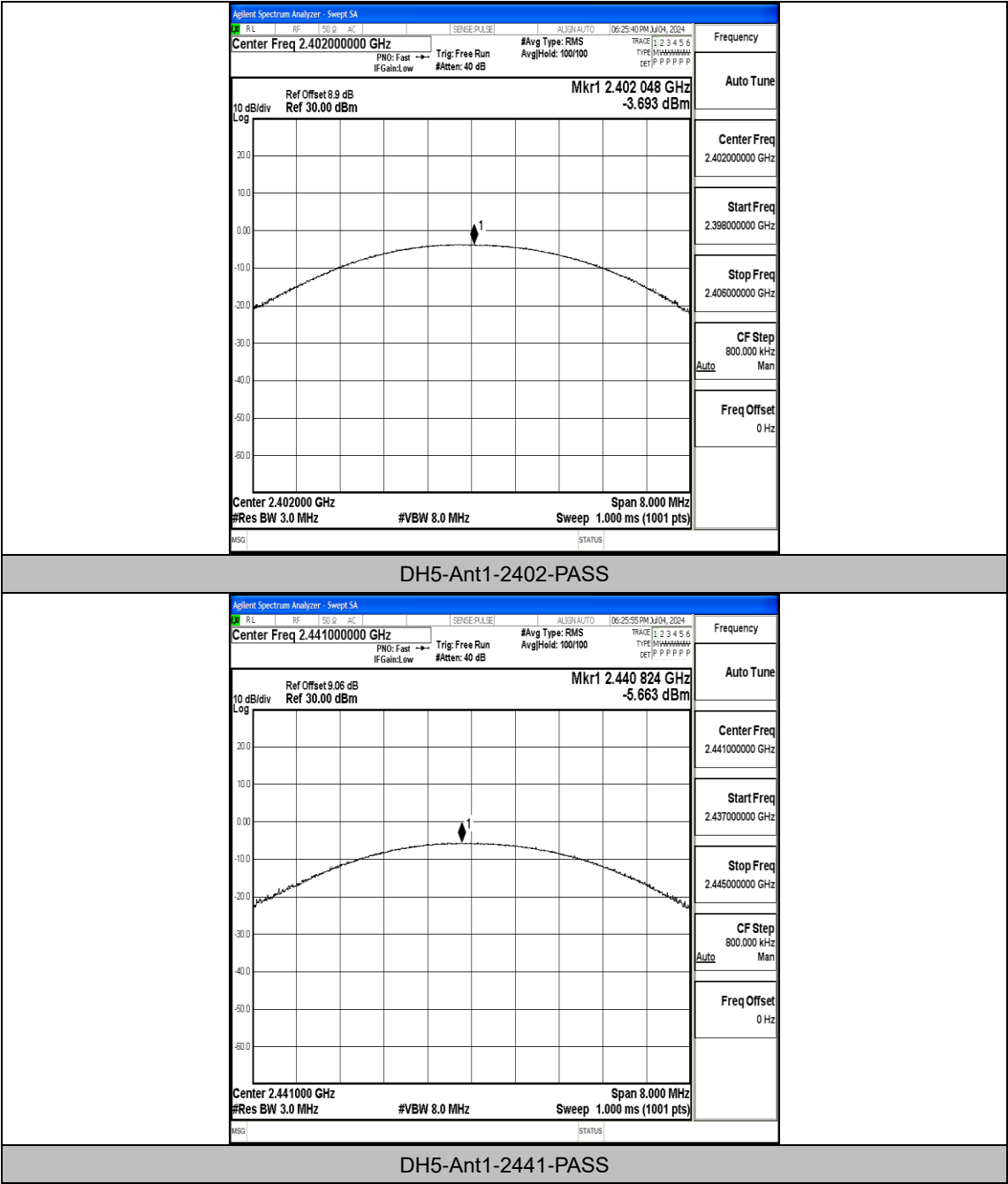


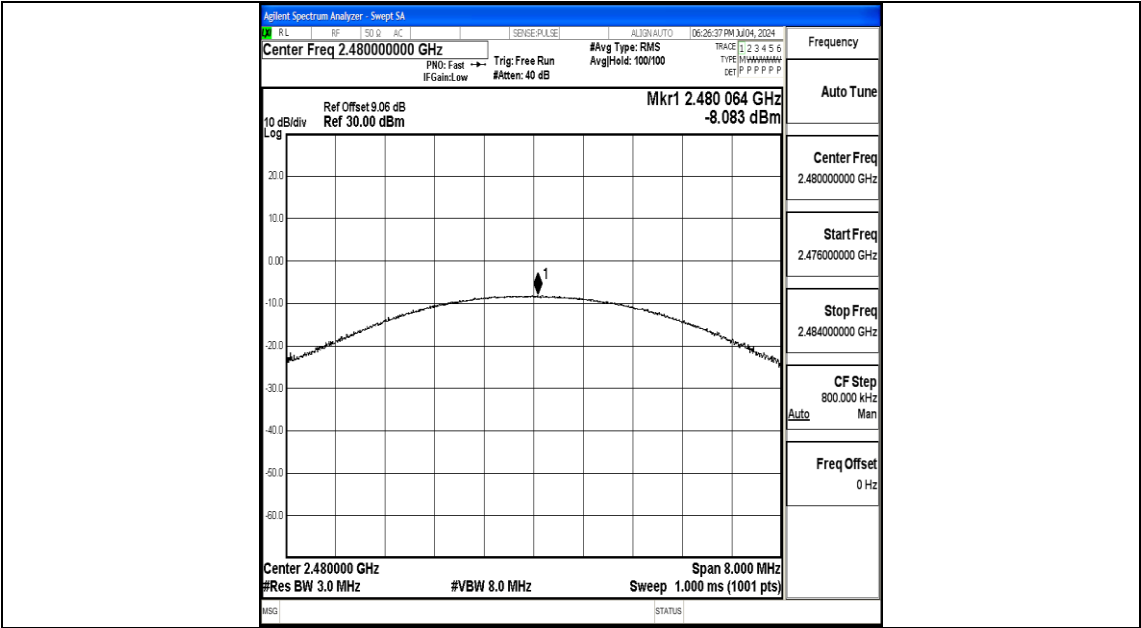
Appendix C: Maximum peak conducted output power

Test Result

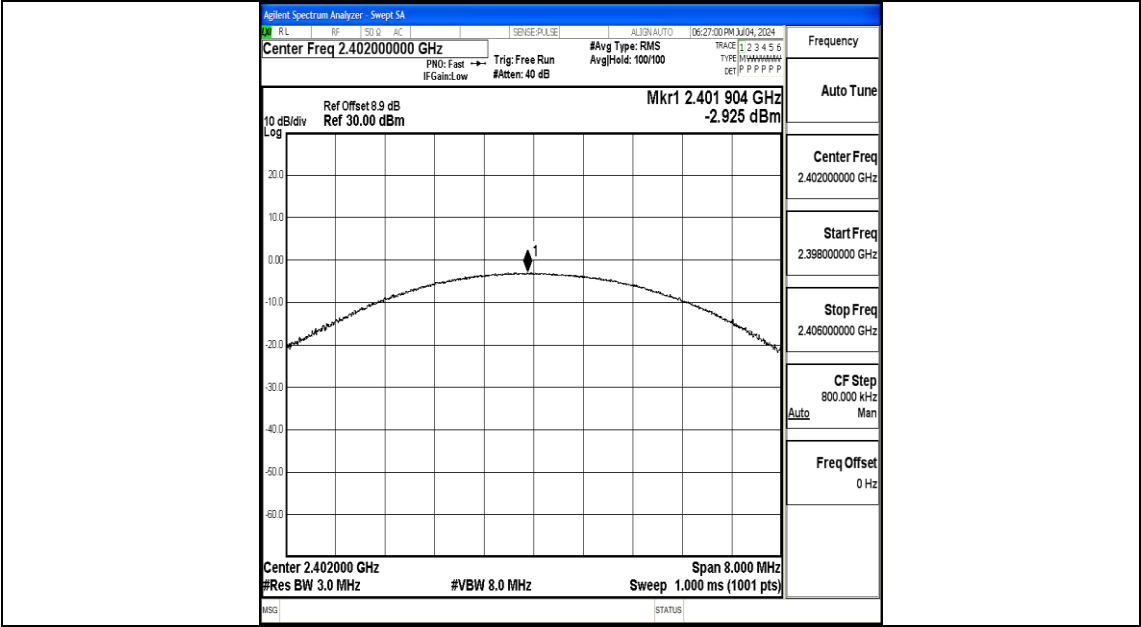
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-3.69	≤30	PASS
DH5	Ant1	2441	-5.66	≤30	PASS
DH5	Ant1	2480	-8.08	≤30	PASS
2DH5	Ant1	2402	-2.93	≤20.97	PASS
2DH5	Ant1	2441	-4.95	≤20.97	PASS
2DH5	Ant1	2480	-7.36	≤20.97	PASS

Test Graphs

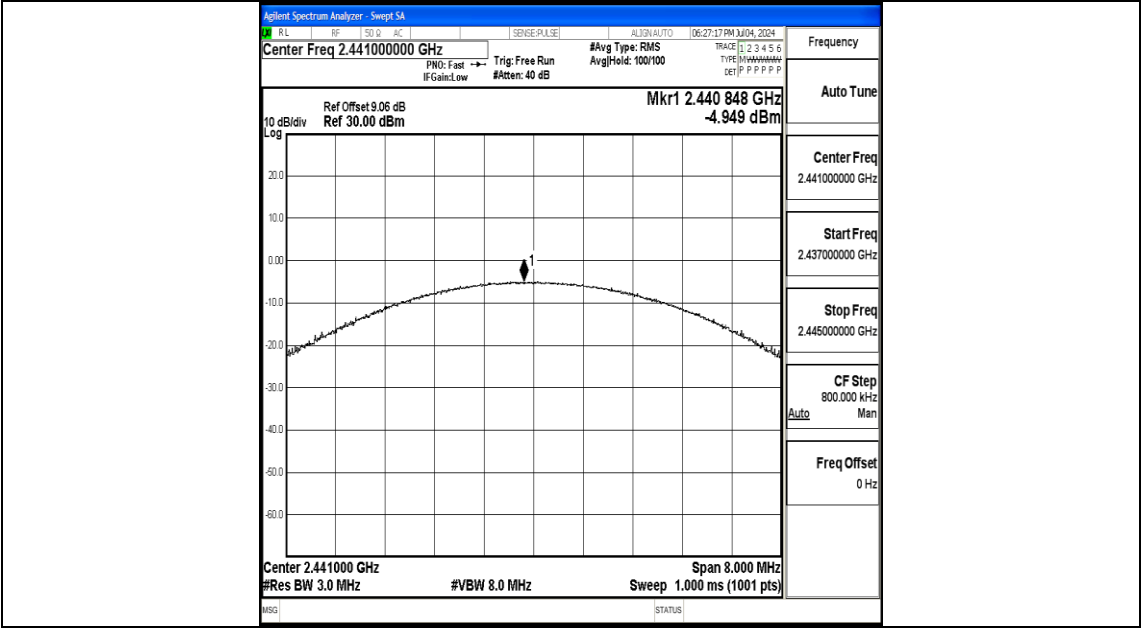




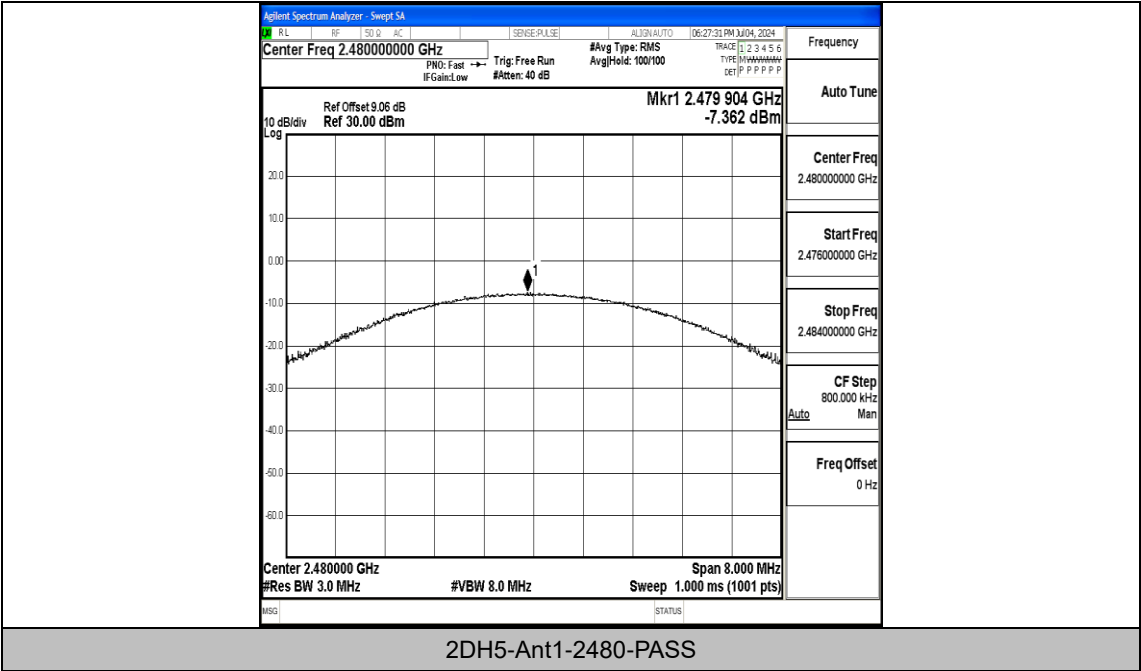
DH5-Ant1-2480-PASS



2DH5-Ant1-2402-PASS



2DH5-Ant1-2441-PASS

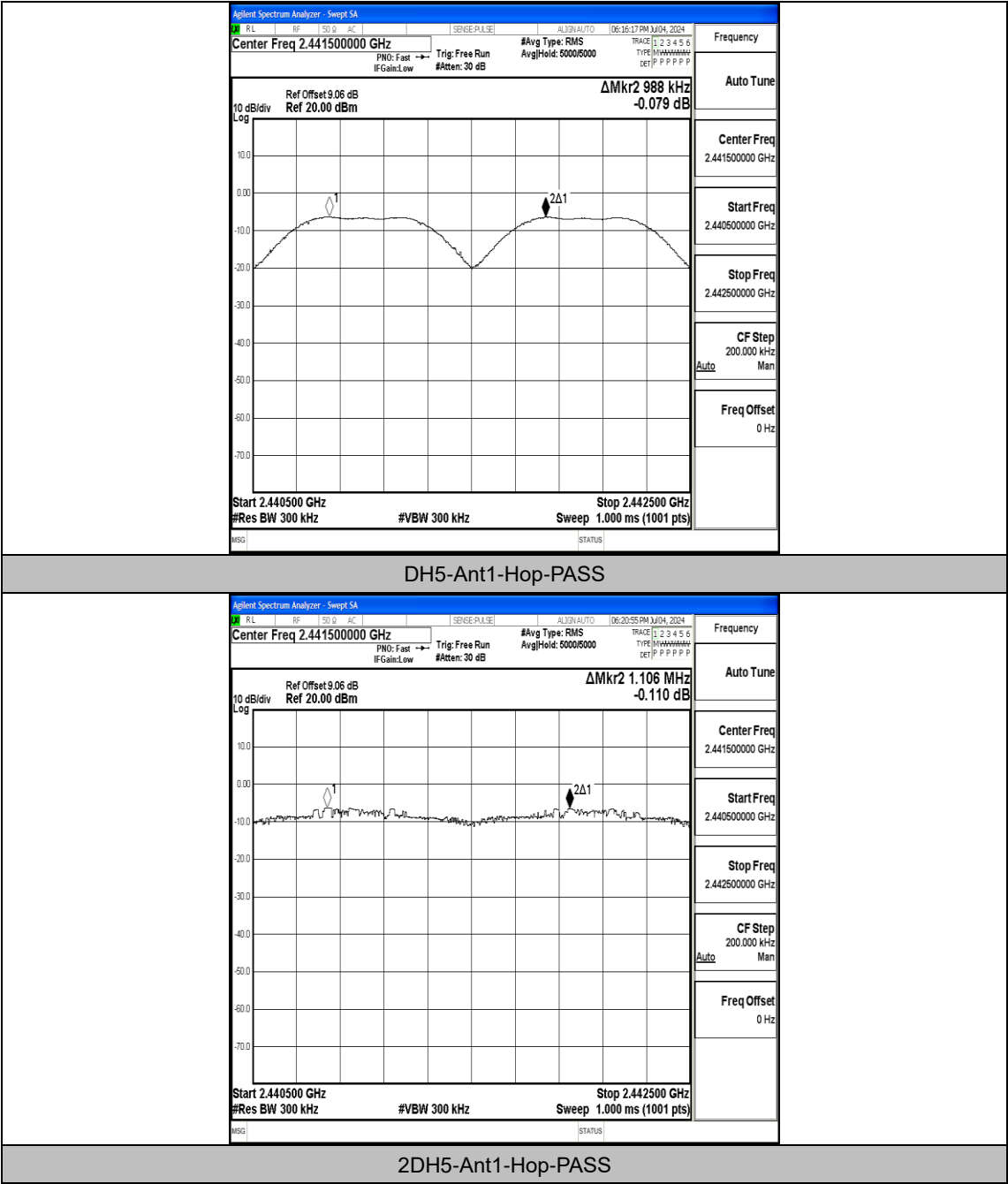


Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.988	≥ 0.957	PASS
2DH5	Ant1	Hop	1.106	≥ 0.874	PASS

Test Graphs



Frequency

Auto Tune

Center Freq 2.441500000 GHz

Start Freq 2.440500000 GHz

Stop Freq 2.442500000 GHz

CF Step 200.000 kHz

Auto

Man

Freq Offset 0 Hz

DH5-Ant1-Hop-PASS

Agilent Spectrum Analyzer - Swept SA

RL

RF

SO

AC

SENSE:PLUSE

ALIGN:AUTO

06:20:55 PM 3/04, 2024

Center Freq 2.441500000 GHz

PNO: Fast

IF Gain: Low

Trig: Free Run

#Atten: 30 dB

#Avg Type: RMS

Avg Hold: 5000/5000

TRACE 1 2 3 4 5 6

TYPE: M W W W W W W W W W

DETP: P P P P P P

Ref Offset 9.06 dB

Ref 20.00 dBm

 Δ Mkr2 1.106 MHz

-0.110 dB

10 dB/div

Log

1

2Δ1

Start 2.440500 GHz

#Res BW 300 kHz

#VBW 300 kHz

Stop 2.442500 GHz

Sweep 1.000 ms (1001 pts)

MSG

STATUS

Frequency

Auto Tune

Center Freq 2.441500000 GHz

Start Freq 2.440500000 GHz

Stop Freq 2.442500000 GHz

CF Step 200.000 kHz

Auto

Man

Freq Offset 0 Hz

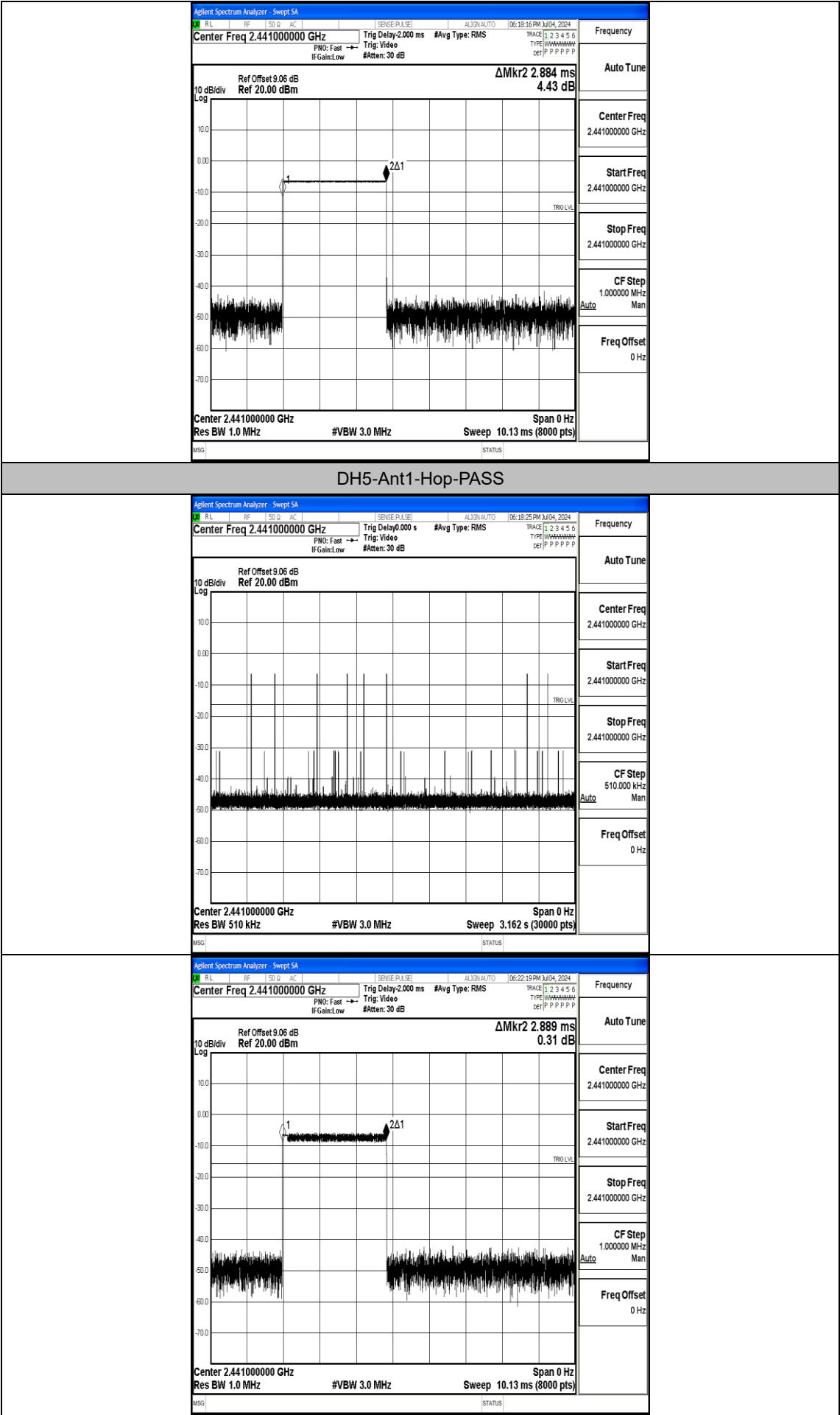
2DH5-Ant1-Hop-PASS

Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.884	90	0.26	≤0.4	PASS
2DH5	Ant1	Hop	2.889	110	0.318	≤0.4	PASS

Test Graphs



DH5-Ant1-Hop-PASS

Agilent Spectrum Analyzer - Swept SA

RL

RF

SO

AC

SENSE PLUSE

ALIGN AUTO

06:18:25 PM 3/04/2024

Center Freq 2.441000000 GHz

Trig Delay: 0.000 s

#Avg Type: RMS

Trig: Video

TYPE: WWWWAAA

DEF: P P P P P

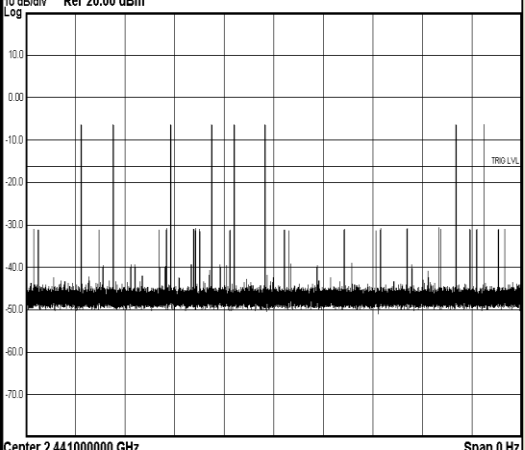
PNO: Fast

IF Gain: Low

#Atten: 30 dB

Ref Offset 9.06 dB

Ref 20.00 dBm



Center 2.441000000 GHz

Res BW 510 kHz

#VBW 3.0 MHz

Sweep 3.162 s (30000 pts)

Span 0 Hz

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

Agilent Spectrum Analyzer - Swept SA

RL

RF

SO

AC

SENSE PLUSE

ALIGN AUTO

06:22:19 PM 3/04/2024

Center Freq 2.441000000 GHz

Trig Delay: 2.000 ms

#Avg Type: RMS

Trig: Video

TYPE: WWWWAAA

DEF: P P P P P

PNO: Fast

IF Gain: Low

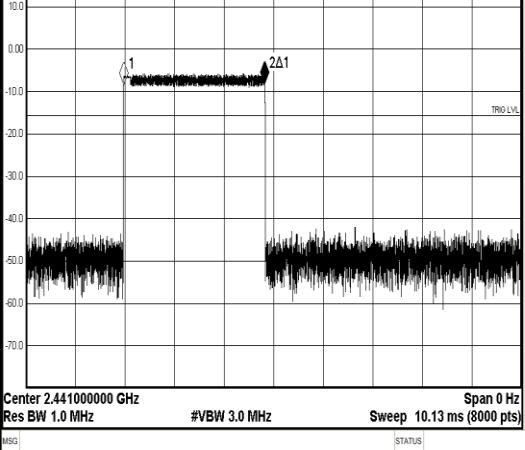
#Atten: 30 dB

Ref Offset 9.06 dB

Ref 20.00 dBm

ΔMkr2 2.889 ms

0.31 dB



Center 2.441000000 GHz

Res BW 1.0 MHz

#VBW 3.0 MHz

Sweep 10.13 ms (8000 pts)

Span 0 Hz

MSG

STATUS

Frequency

Auto Tune

Center Freq 2.441000000 GHz

Start Freq 2.441000000 GHz

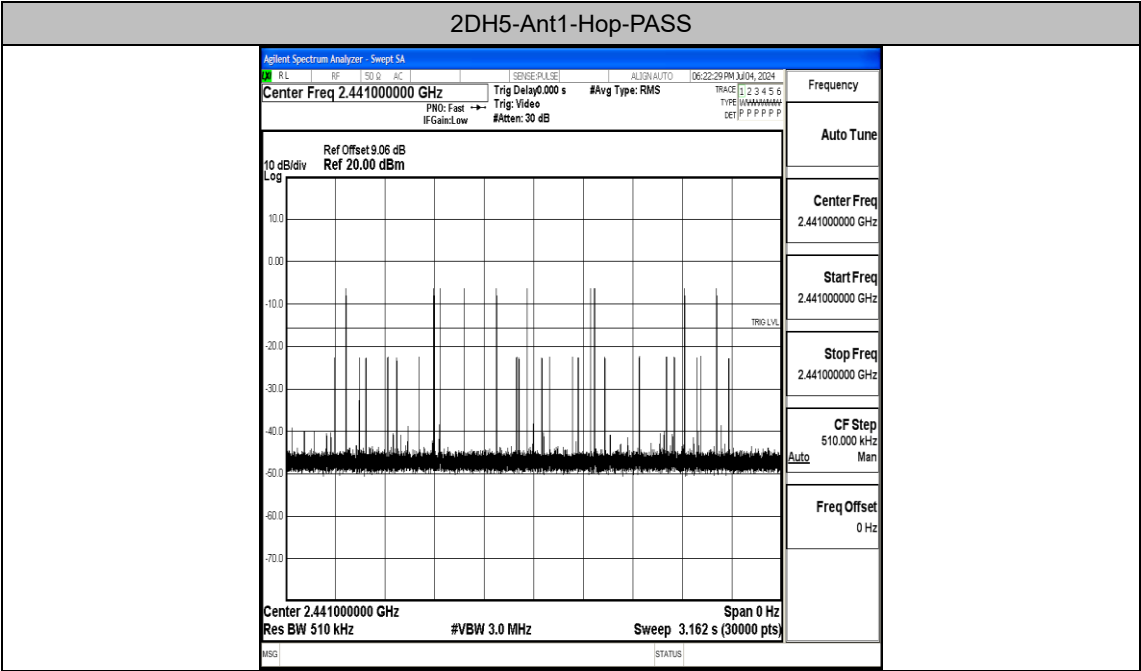
Stop Freq 2.441000000 GHz

CF Step 1.000000 MHz

Auto

Man

Freq Offset 0 Hz

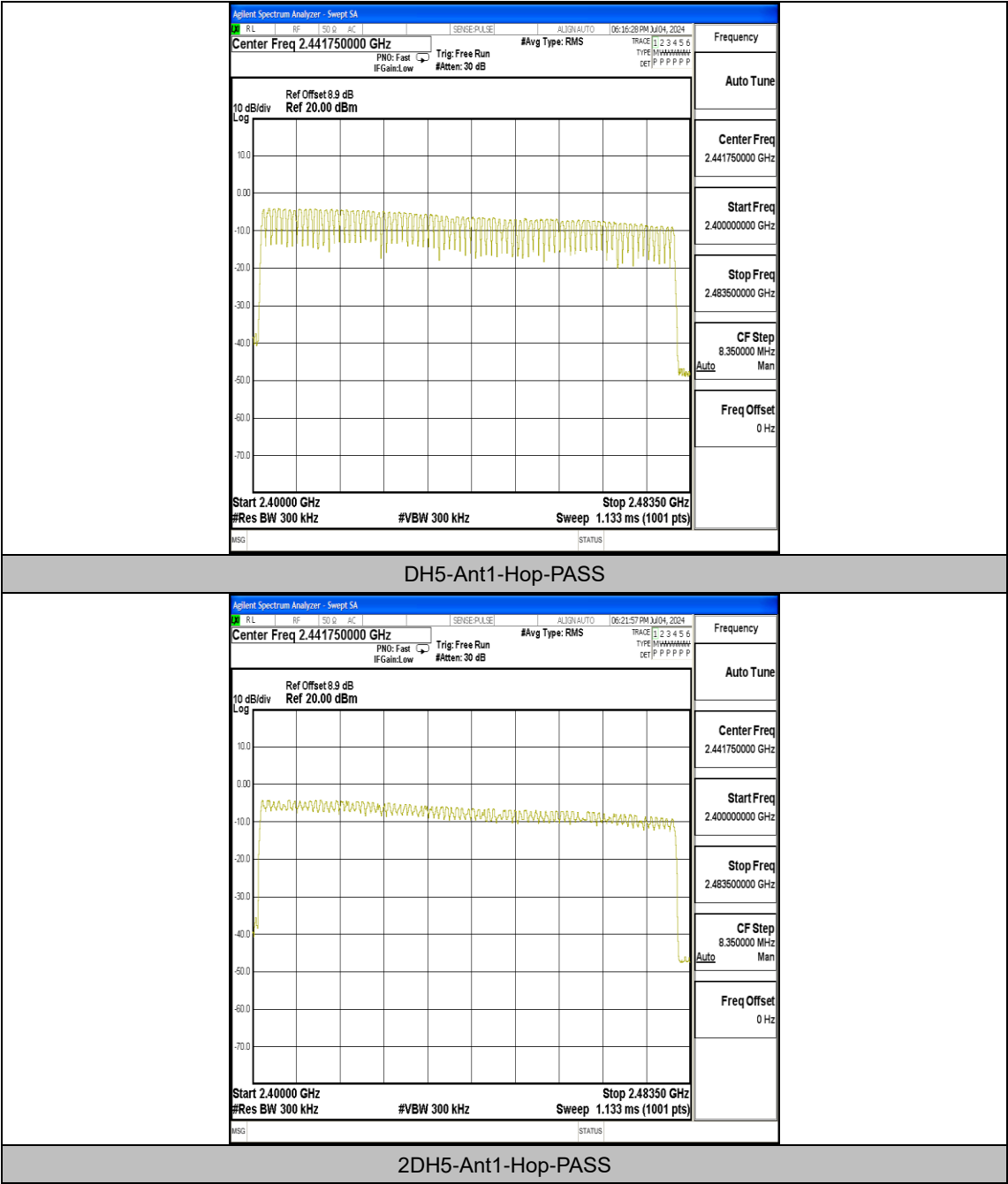


Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

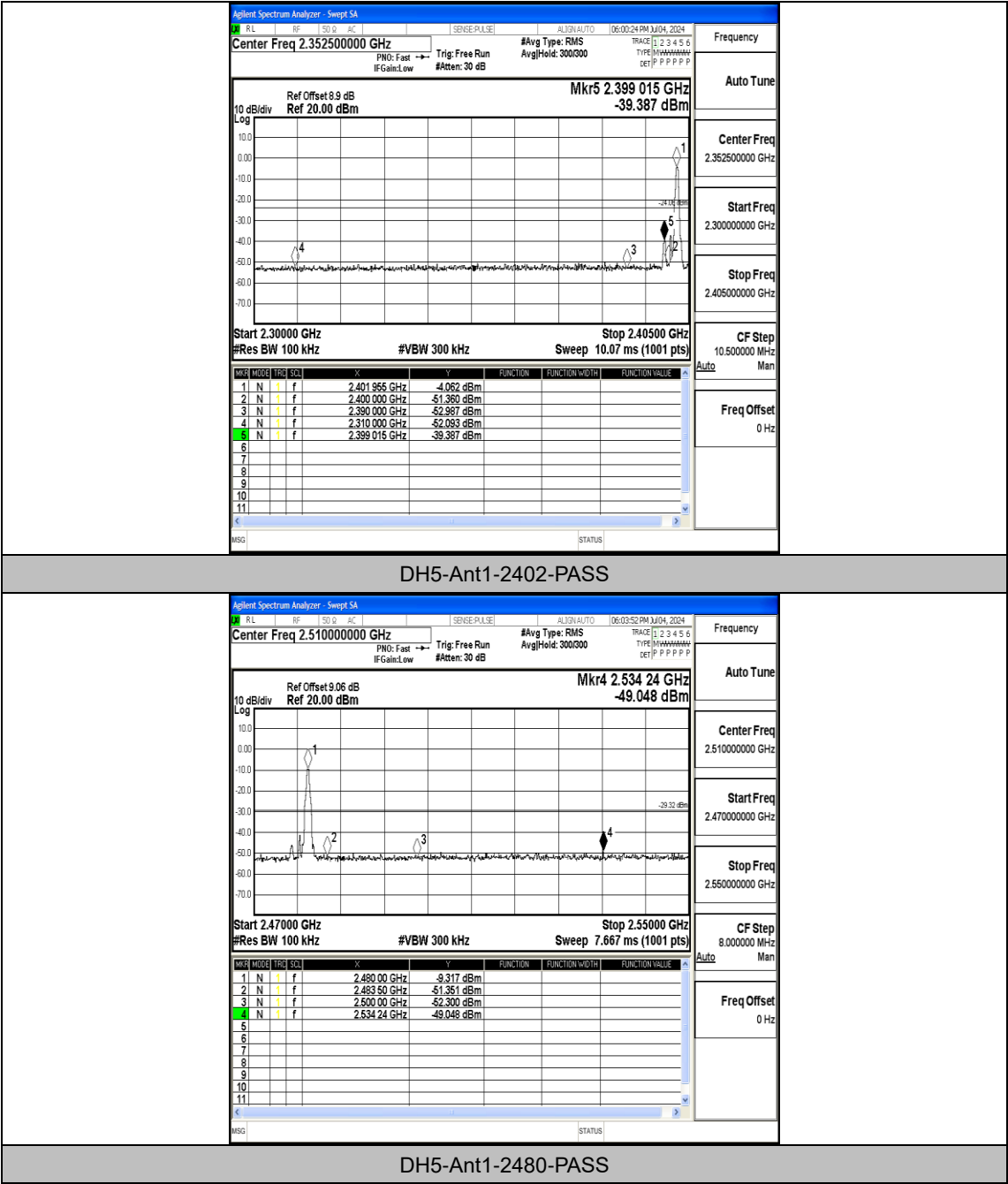


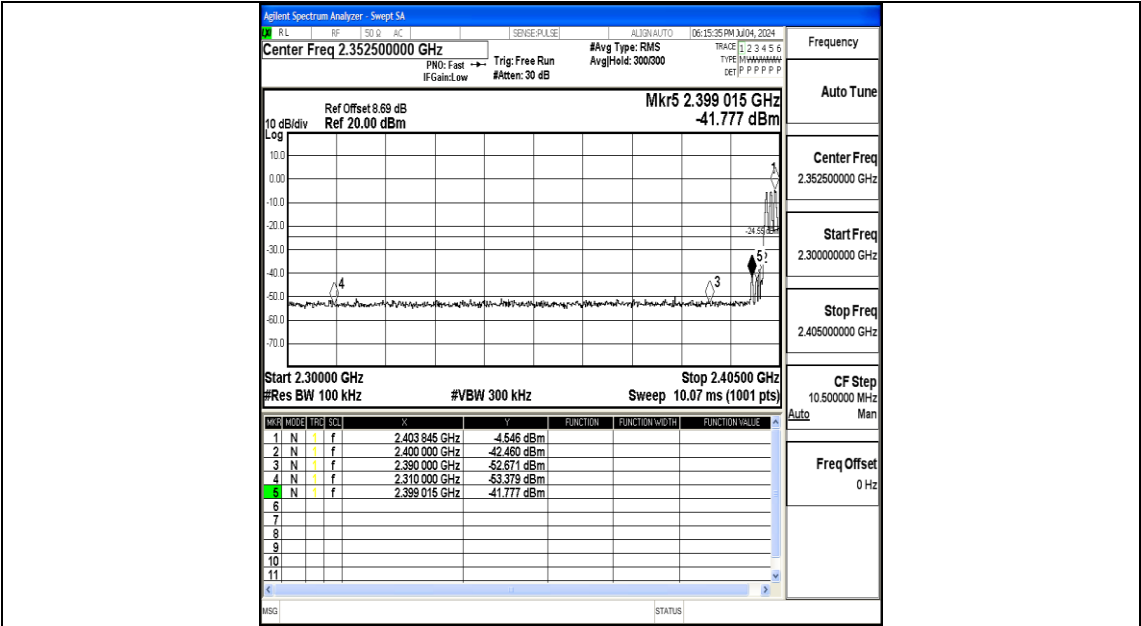
Appendix G: Band edge measurements

Test Result

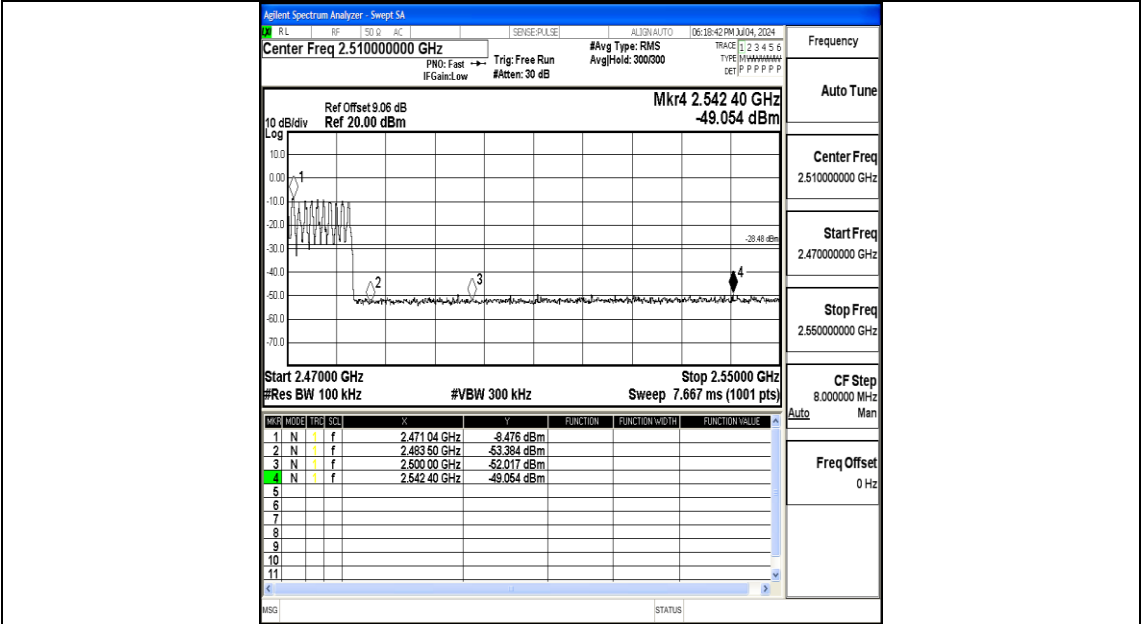
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-4.06	-39.39	≤-24.06	PASS
DH5	Ant1	High	2480	-9.32	-49.05	≤-29.32	PASS
DH5	Ant1	Low	Hop_2402	-4.55	-41.78	≤-24.55	PASS
DH5	Ant1	High	Hop_2480	-8.48	-49.05	≤-28.48	PASS
2DH5	Ant1	Low	2402	-4.35	-40.15	≤-24.35	PASS
2DH5	Ant1	High	2480	-9.08	-49.3	≤-29.08	PASS
2DH5	Ant1	Low	Hop_2402	-4.76	-39.96	≤-24.76	PASS
2DH5	Ant1	High	Hop_2480	-9.20	-48.76	≤-29.2	PASS

Test Graphs

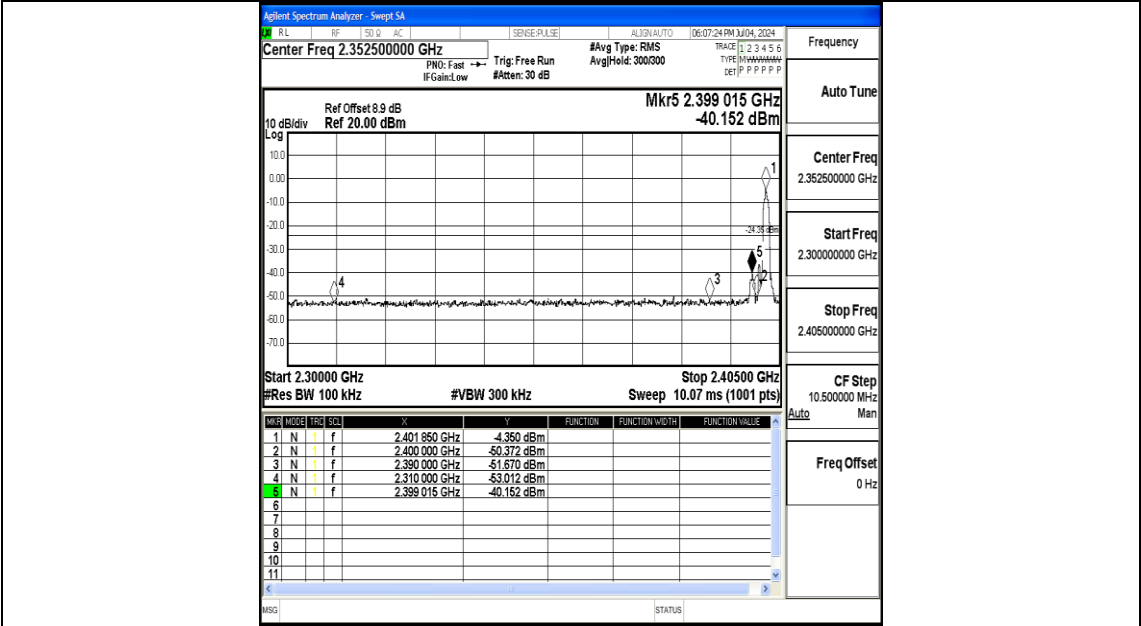




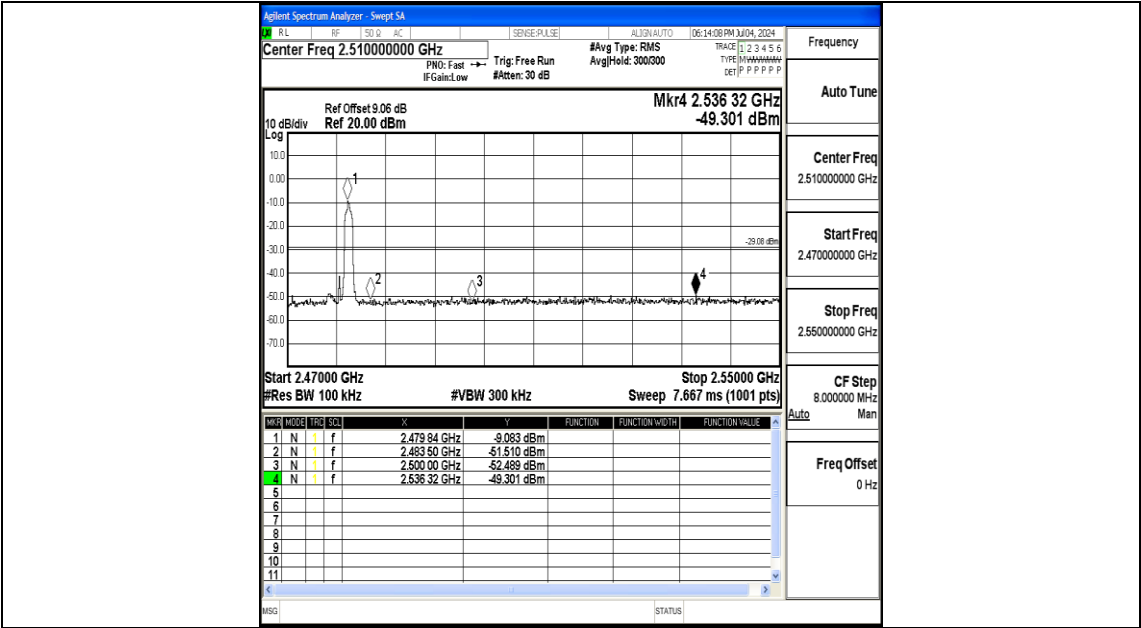
DH5-Ant1-Hop_2402-PASS



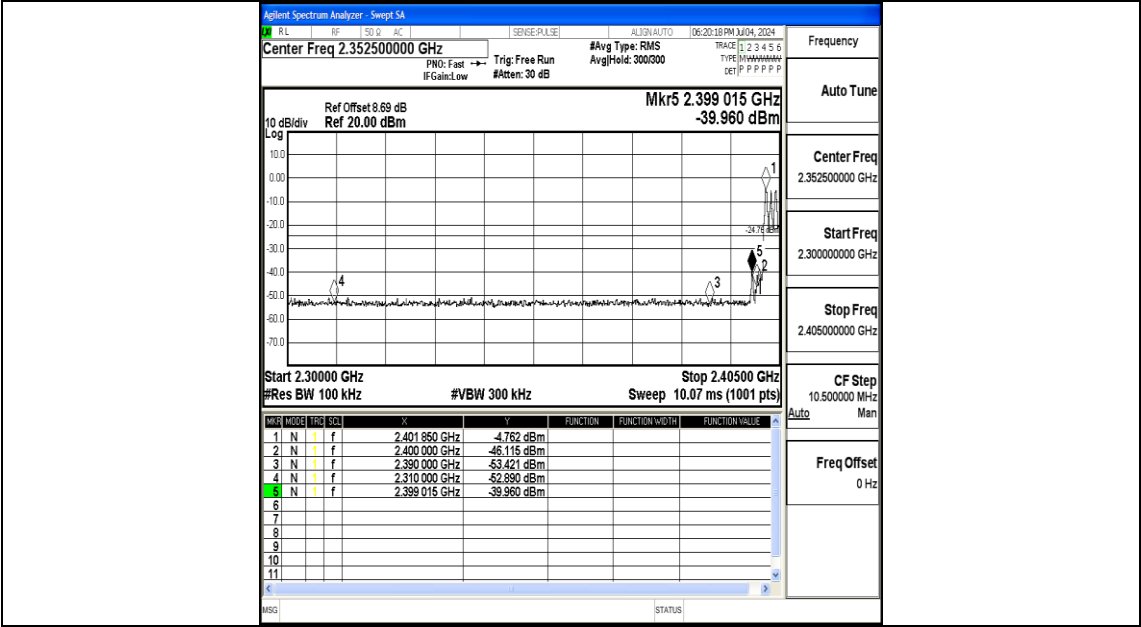
DH5-Ant1-Hop_2480-PASS



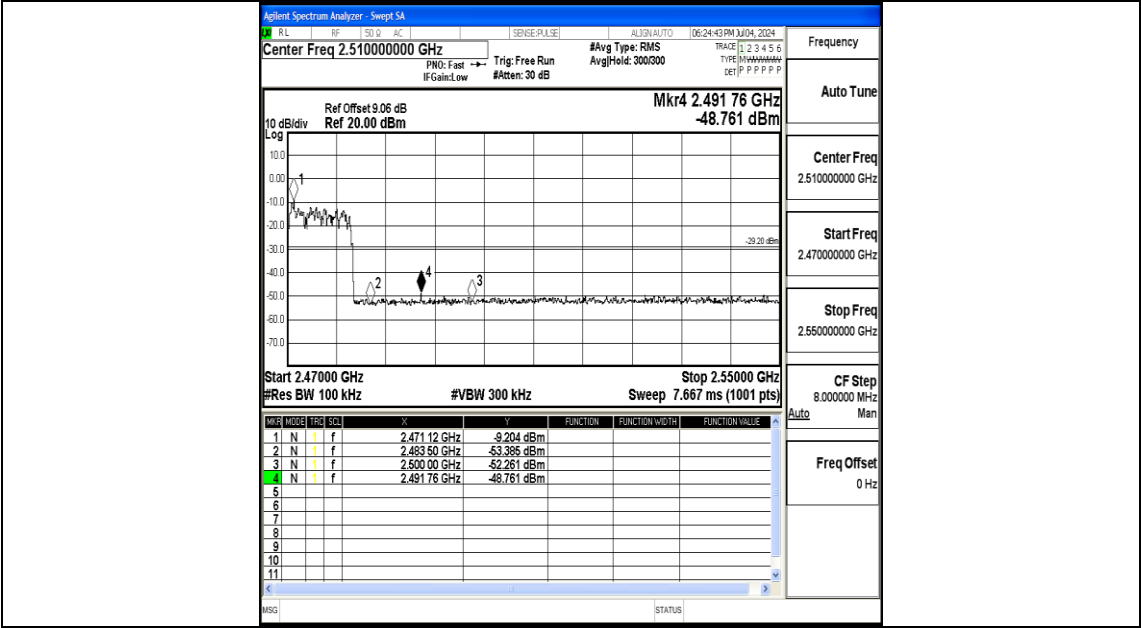
2DH5-Ant1-2402-PASS



2DH5-Ant1-2480-PASS



2DH5-Ant1-Hop_2402-PASS



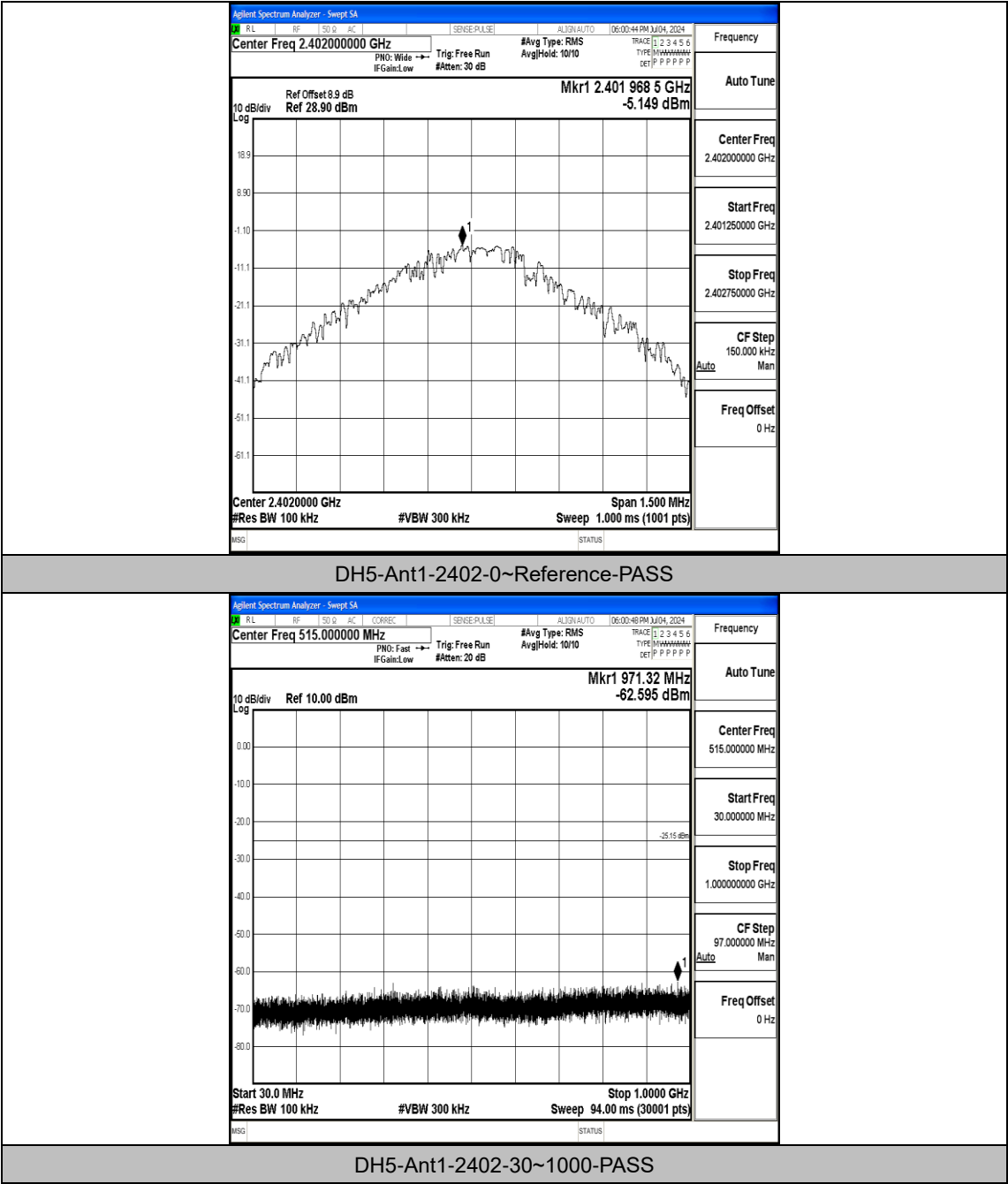
2DH5-Ant1-Hop_2480-PASS

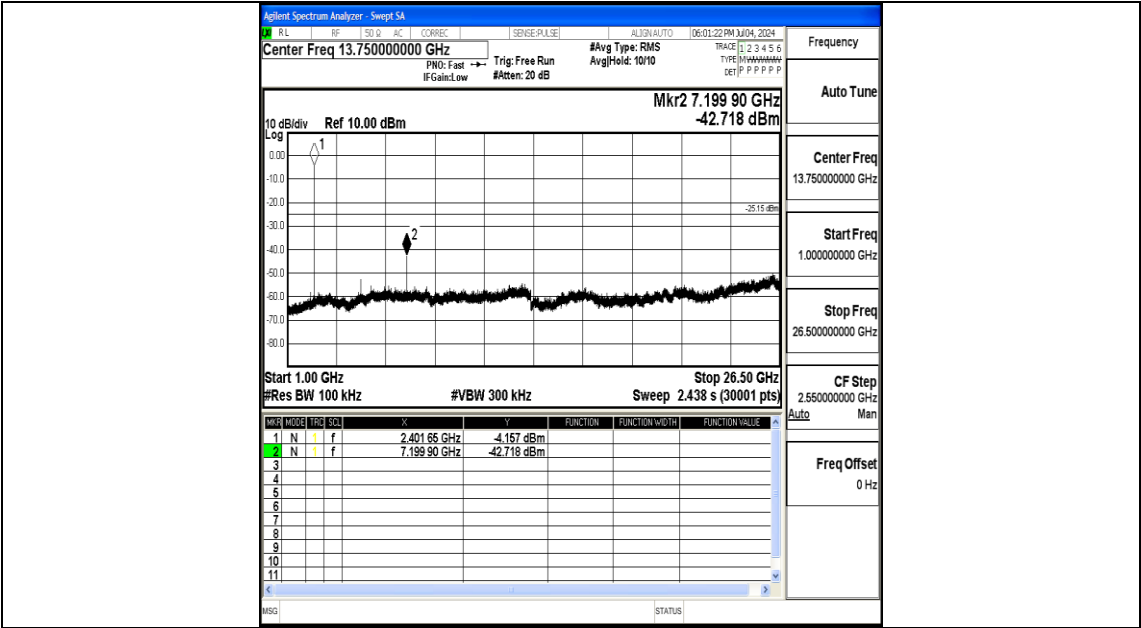
Appendix H: Conducted Spurious Emission

Test Result

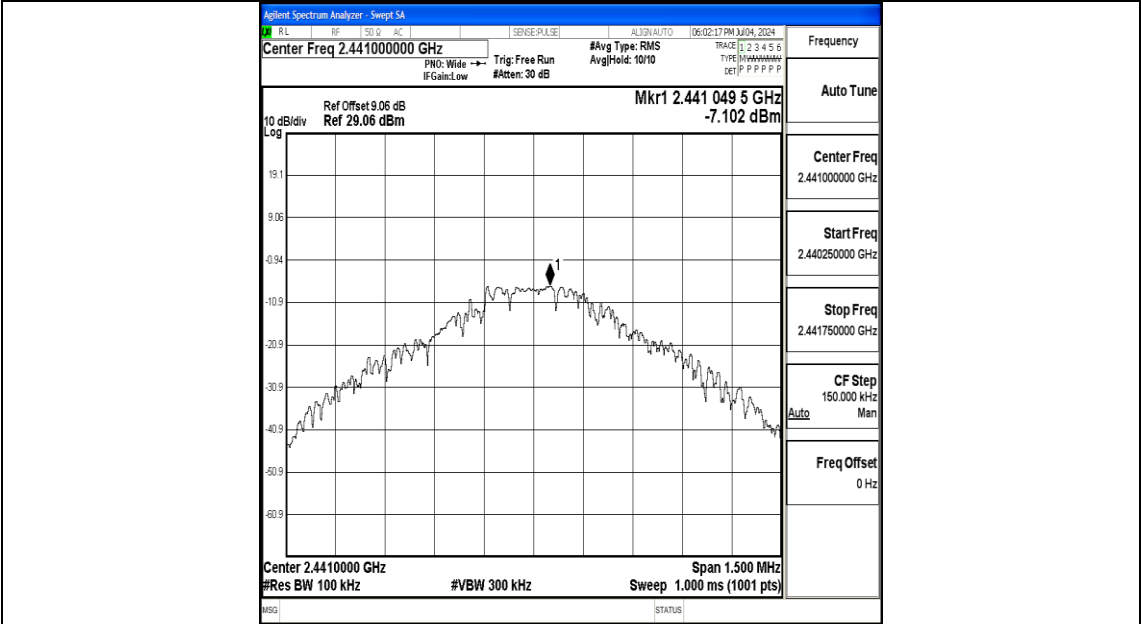
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-5.15	-5.15	---	PASS
DH5	Ant1	2402	30~1000	-5.15	-62.6	≤-25.15	PASS
DH5	Ant1	2402	1000~26500	-5.15	-42.72	≤-25.15	PASS
DH5	Ant1	2441	0~Reference	-7.10	-7.10	---	PASS
DH5	Ant1	2441	30~1000	-7.10	-62.2	≤-27.1	PASS
DH5	Ant1	2441	1000~26500	-7.10	-43.94	≤-27.1	PASS
DH5	Ant1	2480	0~Reference	-9.30	-9.30	---	PASS
DH5	Ant1	2480	30~1000	-9.30	-61.9	≤-29.3	PASS
DH5	Ant1	2480	1000~26500	-9.30	-46.14	≤-29.3	PASS
2DH5	Ant1	2402	0~Reference	-4.69	-4.69	---	PASS
2DH5	Ant1	2402	30~1000	-4.69	-63.04	≤-24.69	PASS
2DH5	Ant1	2402	1000~26500	-4.69	-45.59	≤-24.69	PASS
2DH5	Ant1	2441	0~Reference	-9.66	-9.66	---	PASS
2DH5	Ant1	2441	30~1000	-9.66	-62.67	≤-29.66	PASS
2DH5	Ant1	2441	1000~26500	-9.66	-37.56	≤-29.66	PASS
2DH5	Ant1	2480	0~Reference	-12.49	-12.49	---	PASS
2DH5	Ant1	2480	30~1000	-12.49	-63.06	≤-32.49	PASS
2DH5	Ant1	2480	1000~26500	-12.49	-48.53	≤-32.49	PASS

Test Graphs

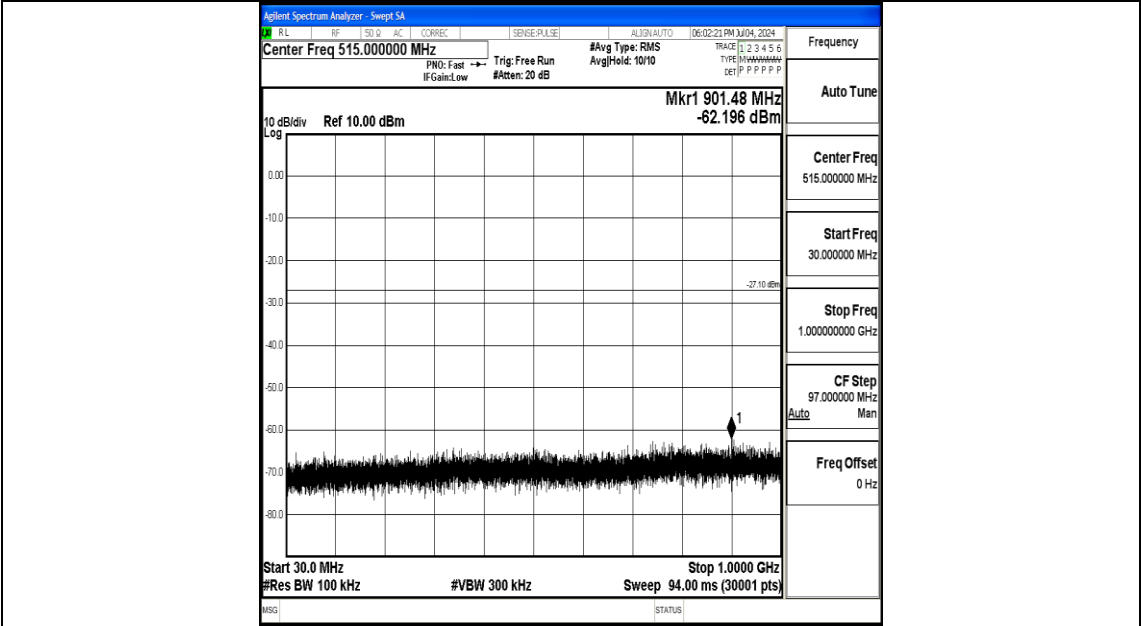




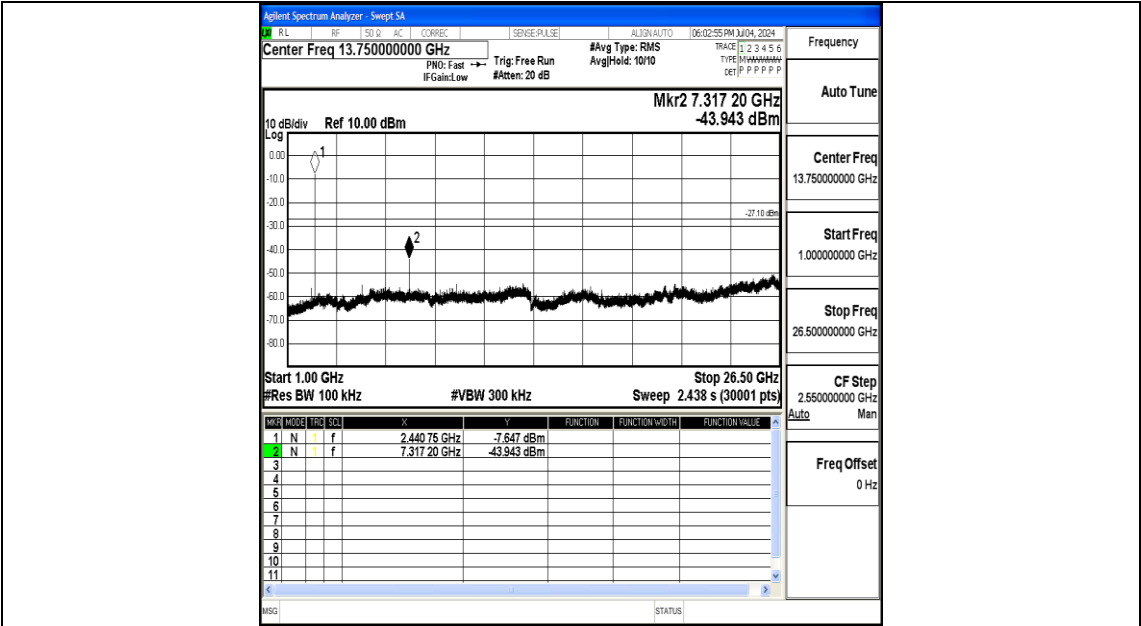
DH5-Ant1-2402-1000~26500-PASS



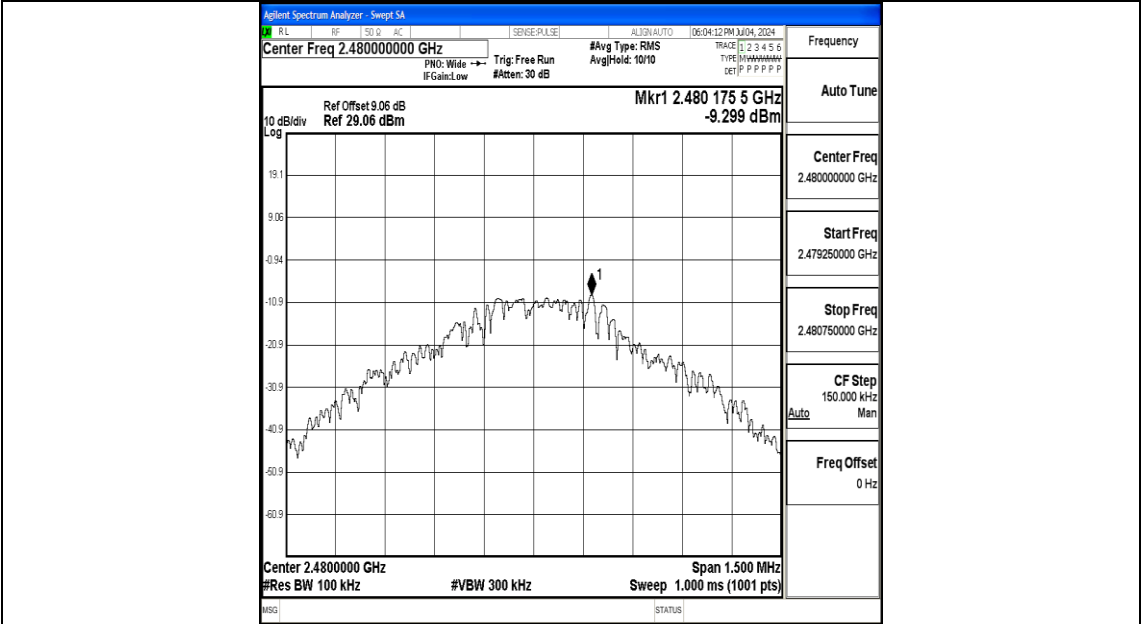
DH5-Ant1-2441-0~Reference-PASS



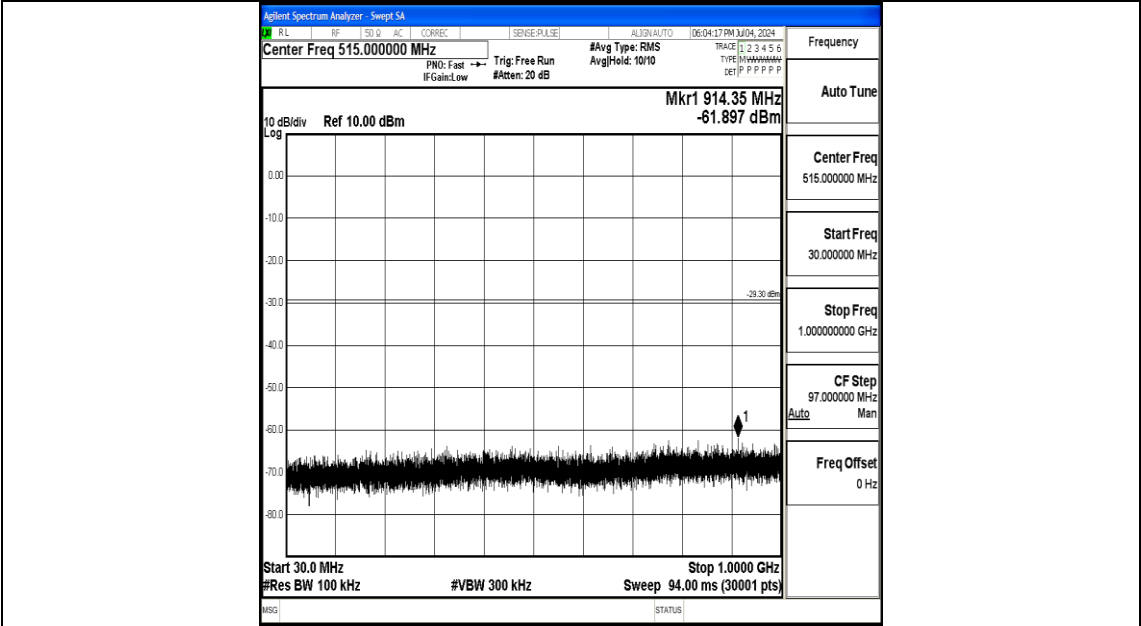
DH5-Ant1-2441-30~1000-PASS



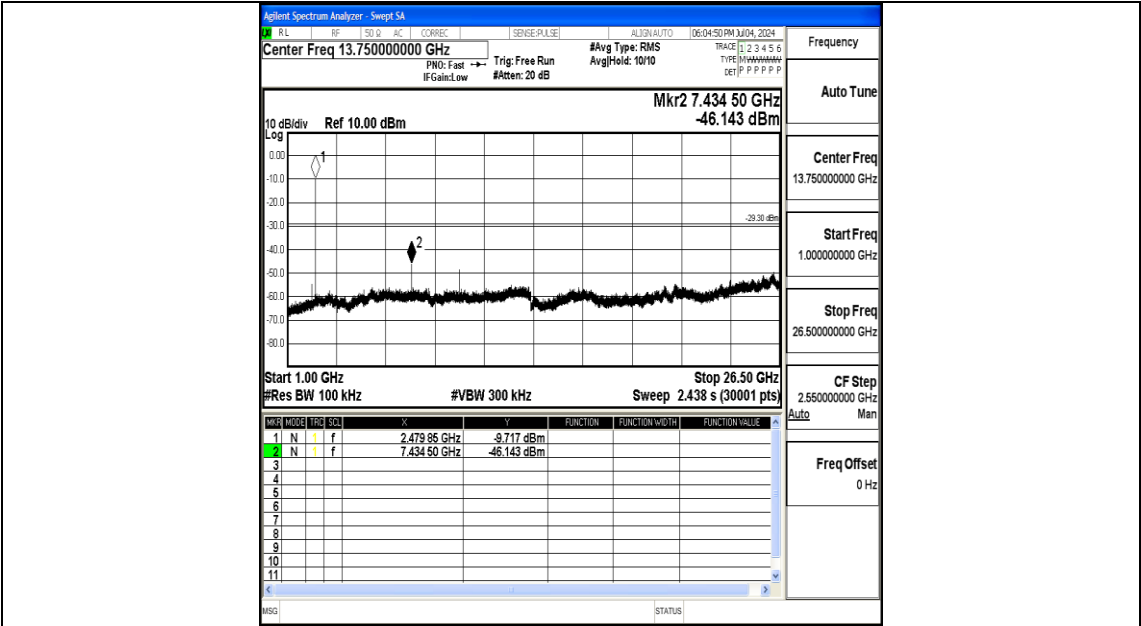
DH5-Ant1-2441-1000~26500-PASS



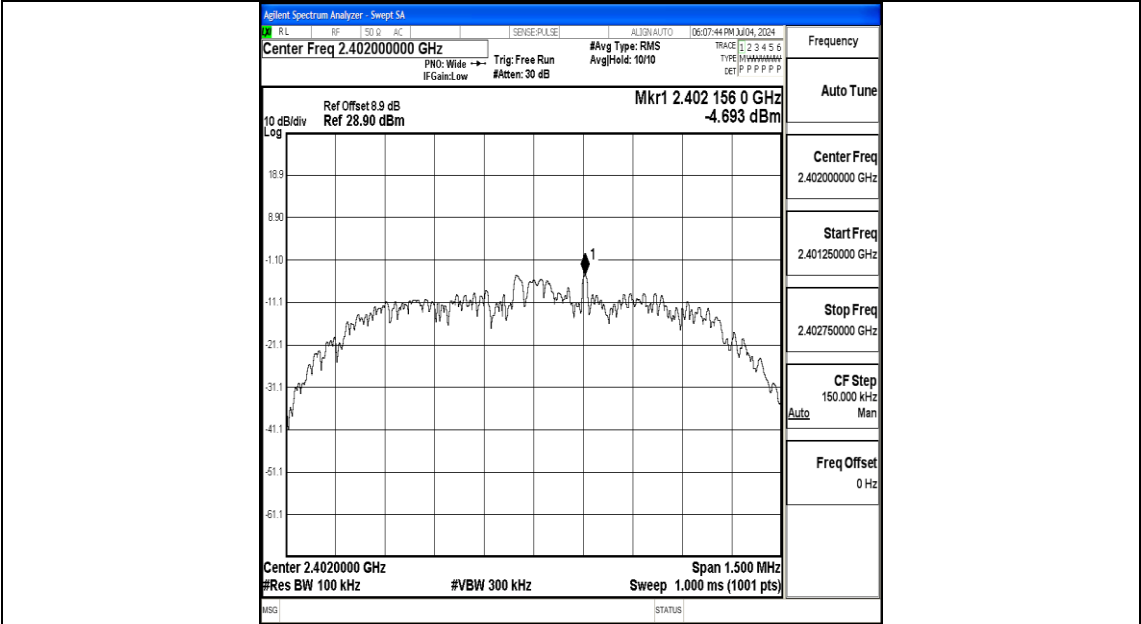
DH5-Ant1-2480-0~Reference-PASS



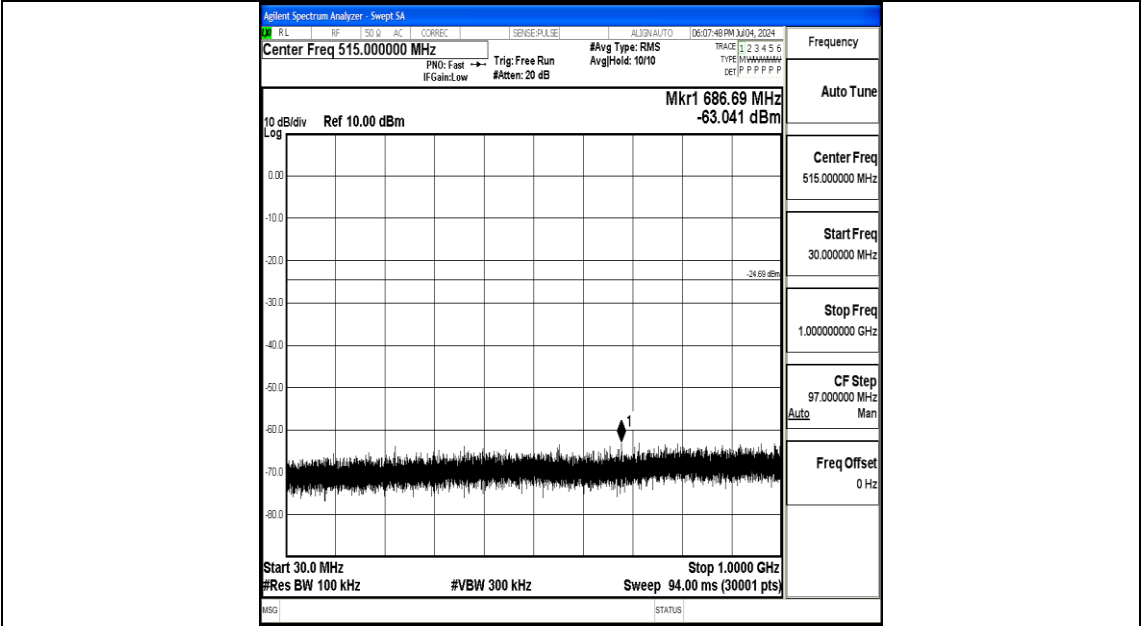
DH5-Ant1-2480-30~1000-PASS



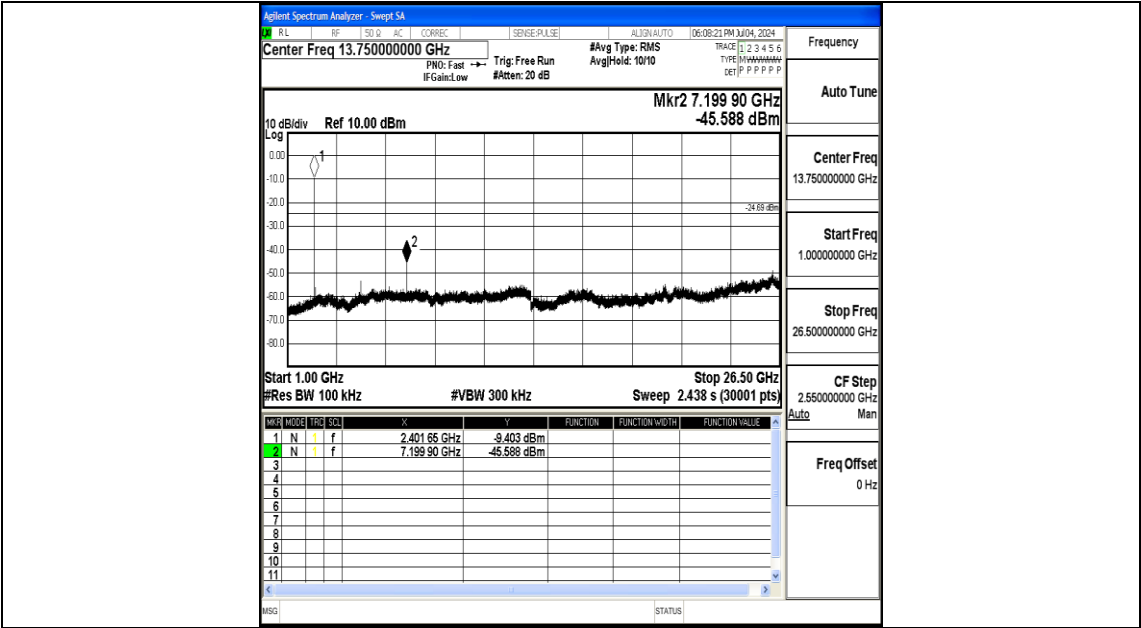
DH5-Ant1-2480-1000~26500-PASS



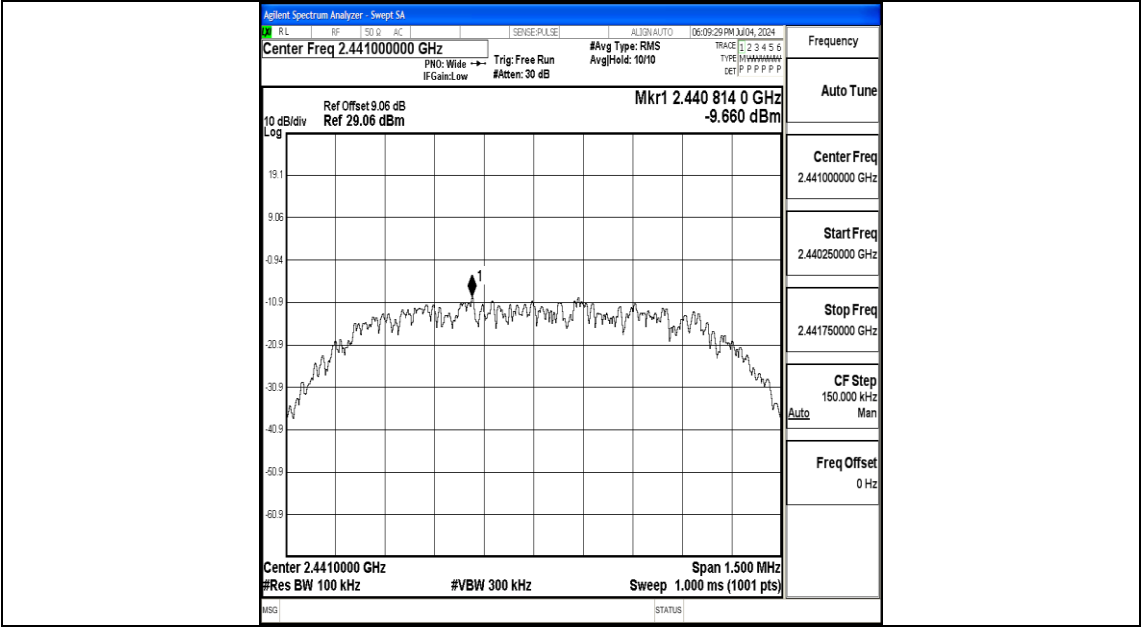
2DH5-Ant1-2402-0~Reference-PASS



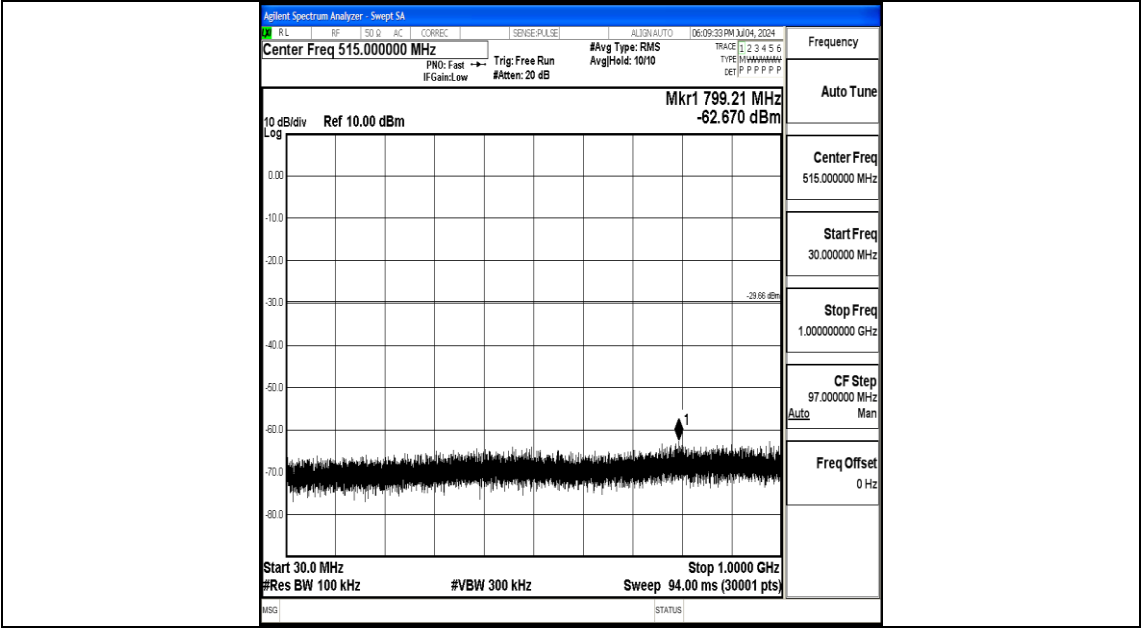
2DH5-Ant1-2402-30~1000-PASS



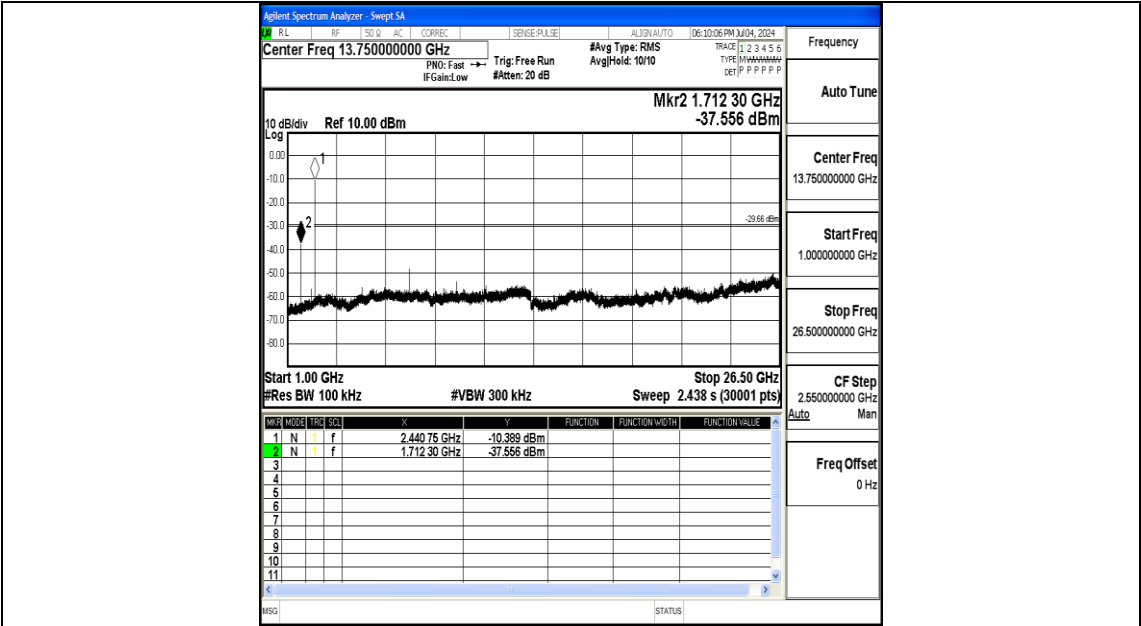
2DH5-Ant1-2402-1000~26500-PASS



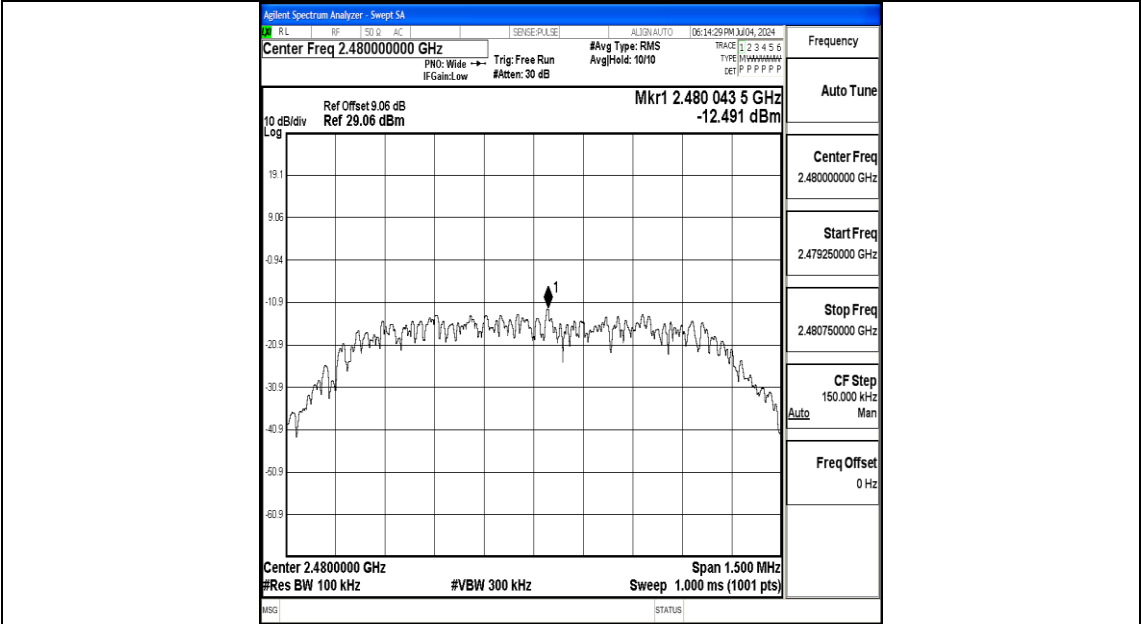
2DH5-Ant1-2441-0~Reference-PASS



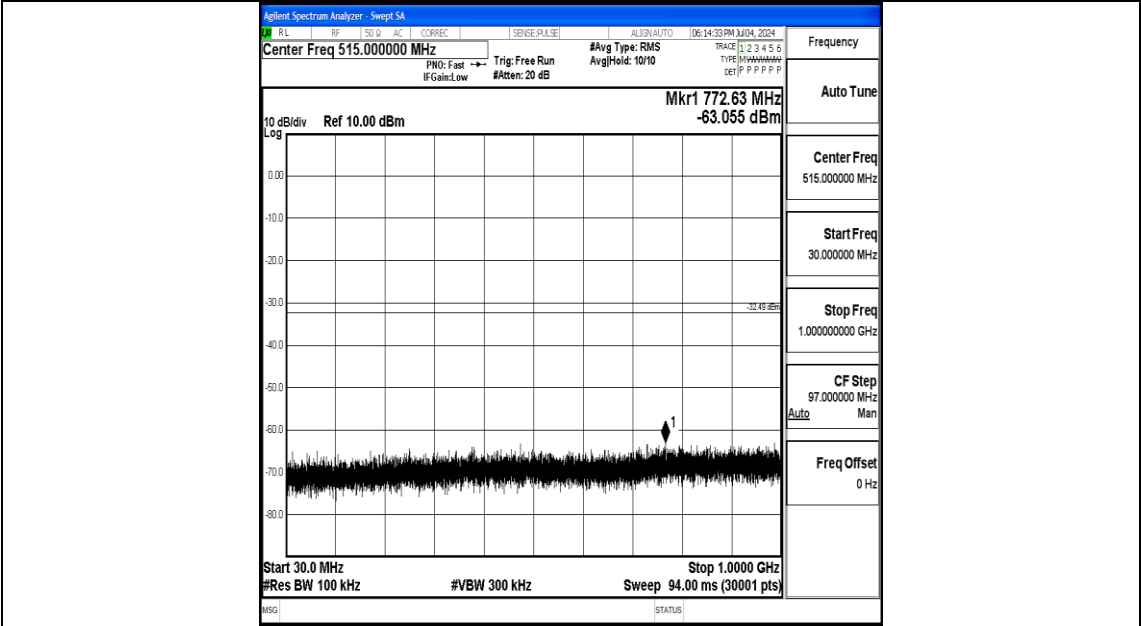
2DH5-Ant1-2441-30~1000-PASS



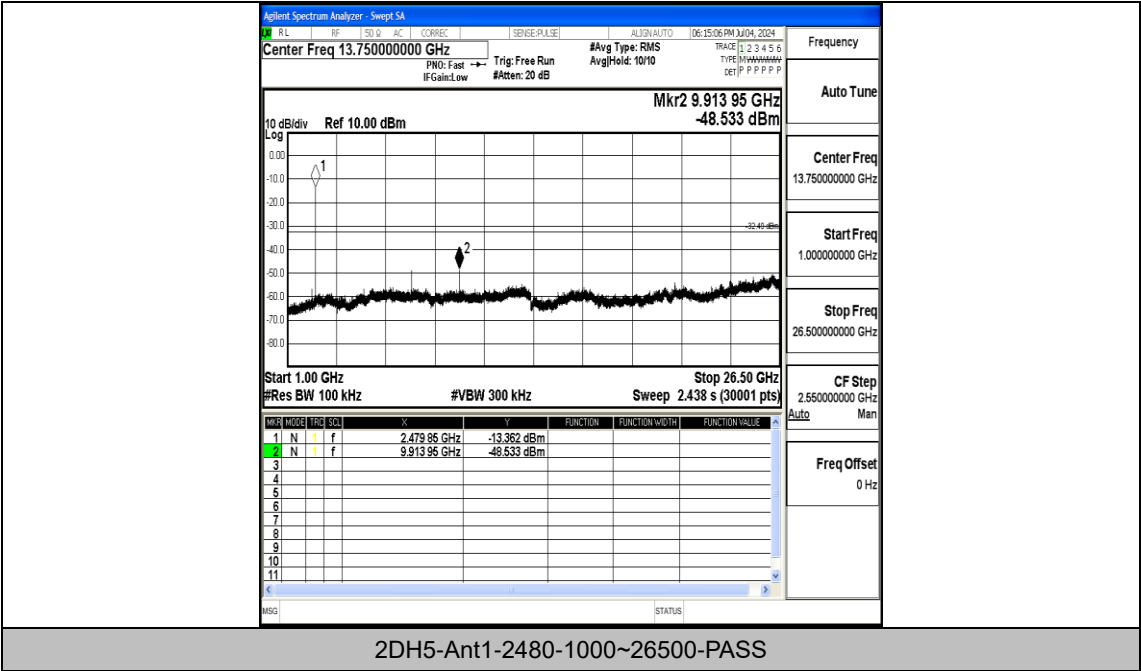
2DH5-Ant1-2441-1000~26500-PASS



2DH5-Ant1-2480-0~Reference-PASS



2DH5-Ant1-2480-30~1000-PASS

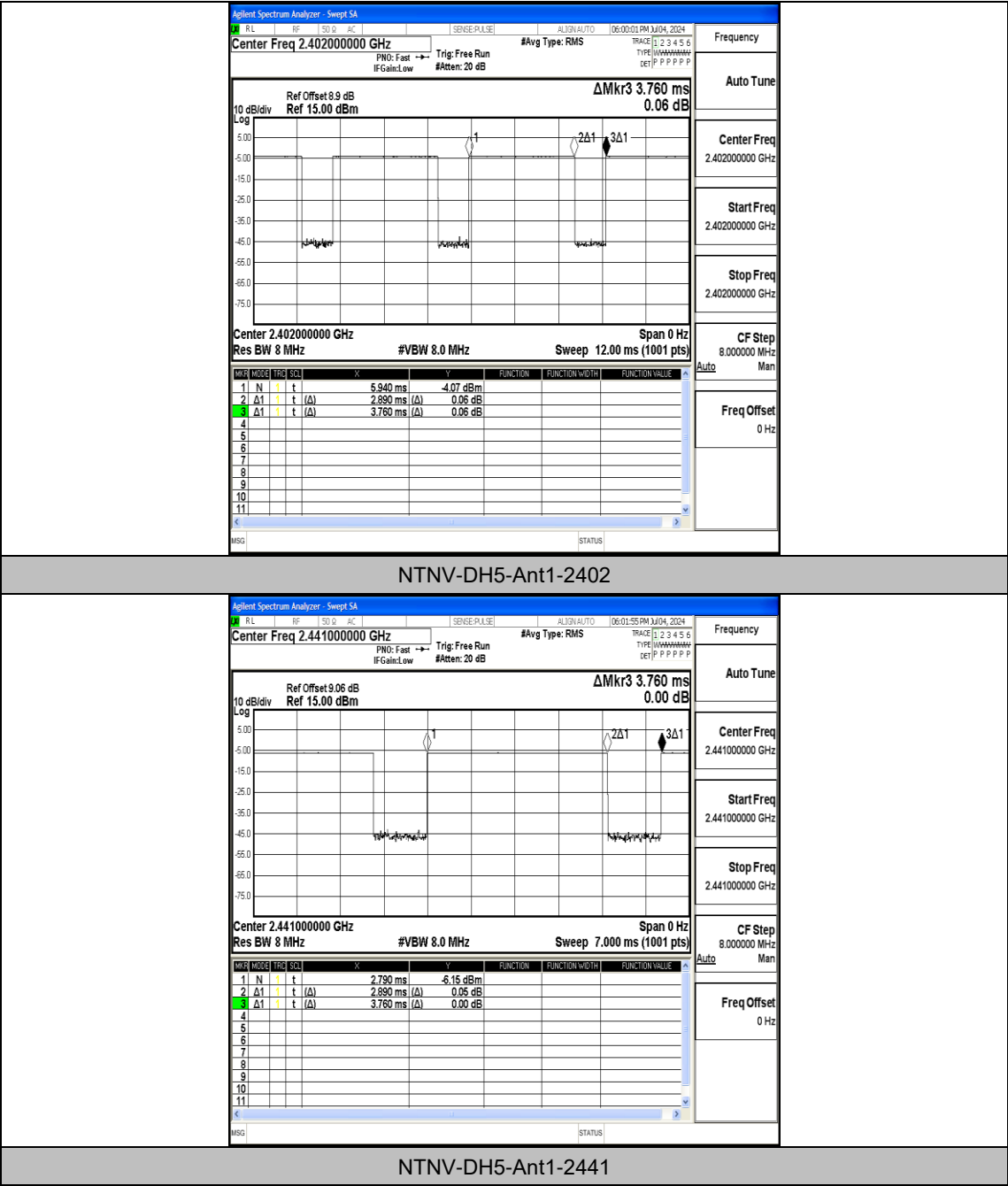


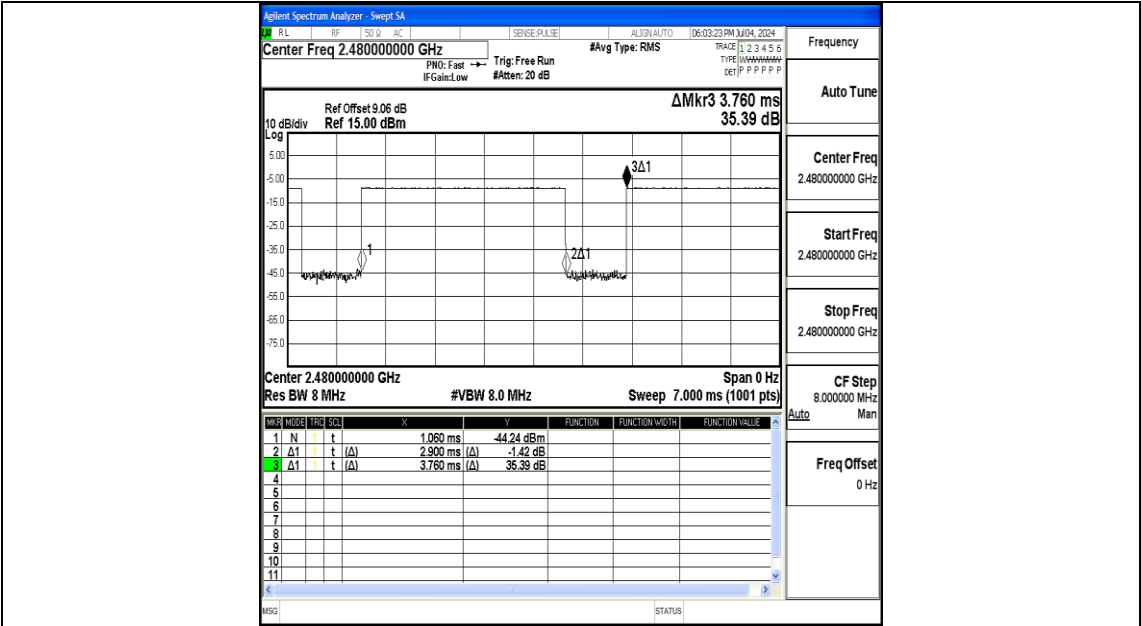
Appendix I: Duty Cycle

Test Result

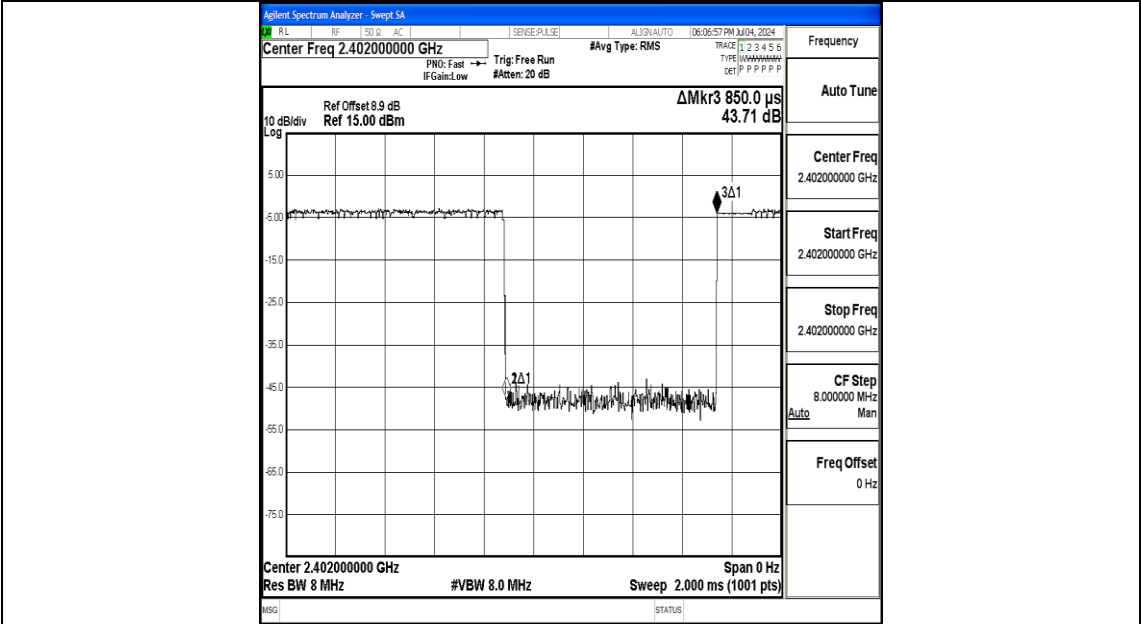
TestMode	Antenna	Frequency[MHz]	ON Time[ms]	Period[ms]	Duty Cycle[%]	Duty Cycle Factor[dB]
DH5	Ant1	2402	2.89	3.76	76.86	1.14
DH5	Ant1	2441	2.89	3.76	76.86	1.14
DH5	Ant1	2480	2.90	3.76	77.13	1.13
2DH5	Ant1	2402	0.00	0.85	100	∞
2DH5	Ant1	2441	0.00	0.85	100	∞
2DH5	Ant1	2480	2.89	3.74	77.27	1.12

Test Graphs

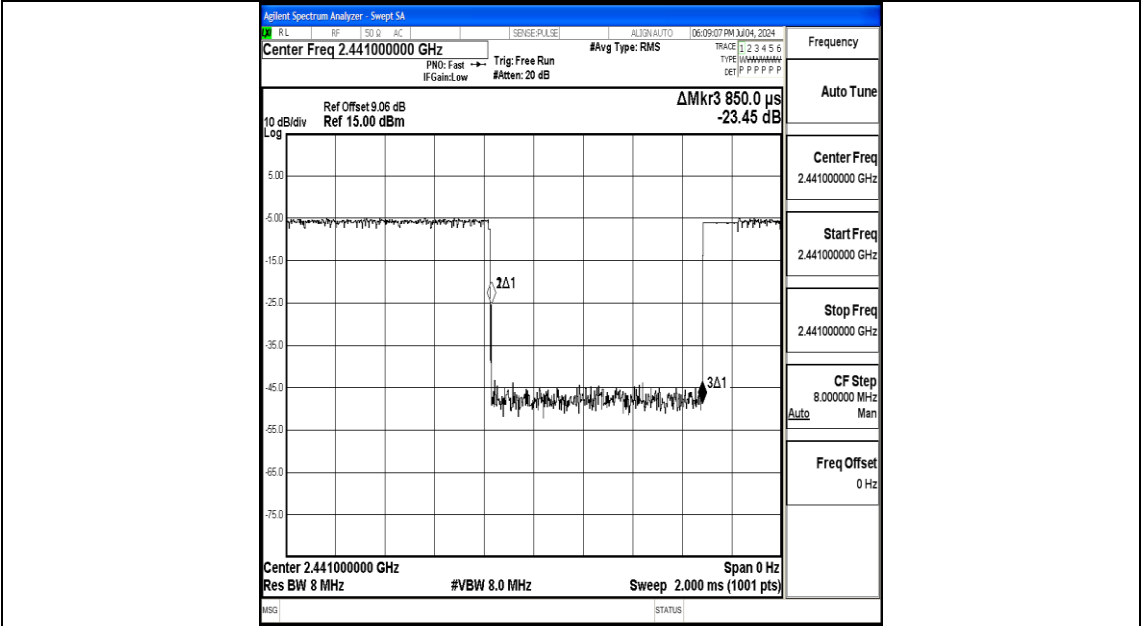




NTNV-DH5-Ant1-2480



NTNV-2DH5-Ant1-2402



NTNV-2DH5-Ant1-2441

