# Appendix B

## RF Test Data for BT (Conducted Measurement)

**Product Name: Soundbar Speaker**

**Test Model: HT800**

**Environmental Conditions**

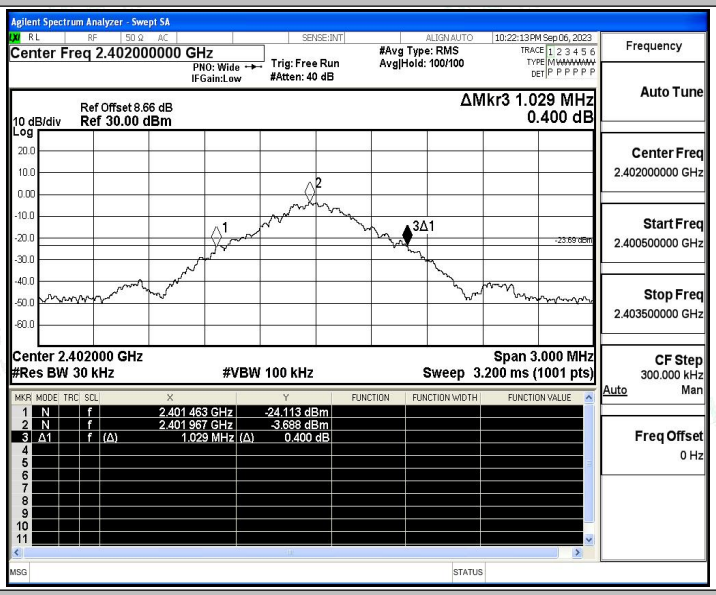
| | |
|---|---|
| Temperature: | 23.5℃ |
| Relative Humidity: | 52.2% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Paddi Chen |
| Supervised by: | Ling Zhu |

# B.1 20dB Bandwidth

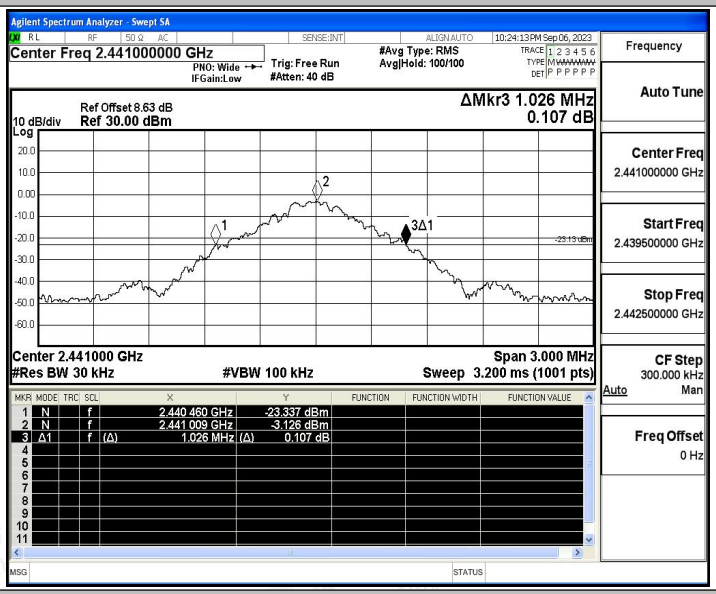
| TestMode | Antenna | Channel | 20db EBW[MHz] | FL[MHz] | FH[MHz] | Verdict |
|---|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | 1.029 | 2401.463 | 2402.492 | --- |
| | | 2441 | 1.026 | 2440.460 | 2441.486 | --- |
| | | 2480 | 1.023 | 2479.460 | 2480.483 | --- |
| 2DH5 | Ant1 | 2402 | 1.293 | 2401.355 | 2402.648 | --- |
| | | 2441 | 1.284 | 2440.364 | 2441.648 | --- |
| | | 2480 | 1.293 | 2479.355 | 2480.648 | --- |
| 3DH5 | Ant1 | 2402 | 1.314 | 2401.337 | 2402.651 | --- |
| | | 2441 | 1.287 | 2440.346 | 2441.633 | --- |
| | | 2480 | 1.320 | 2479.334 | 2480.654 | --- |

## Test Graphs

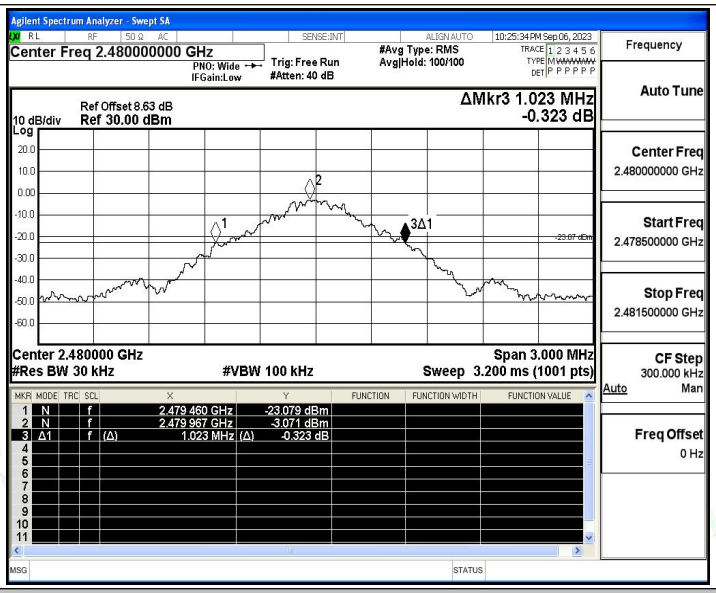
DH5_Ant1_2402



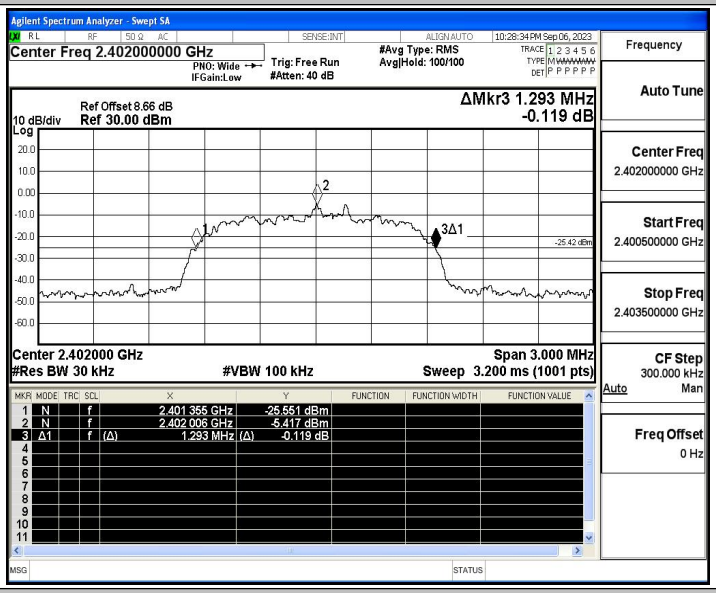

DH5_Ant1_2441



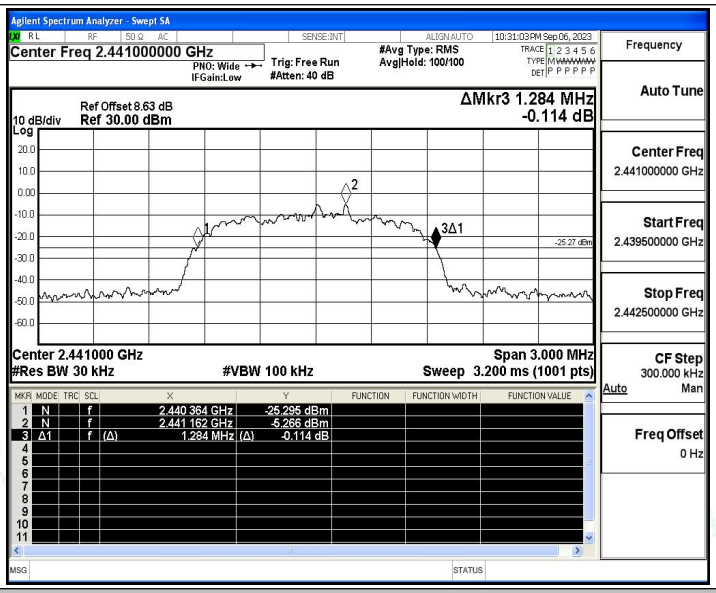

DH5_Ant1_2480



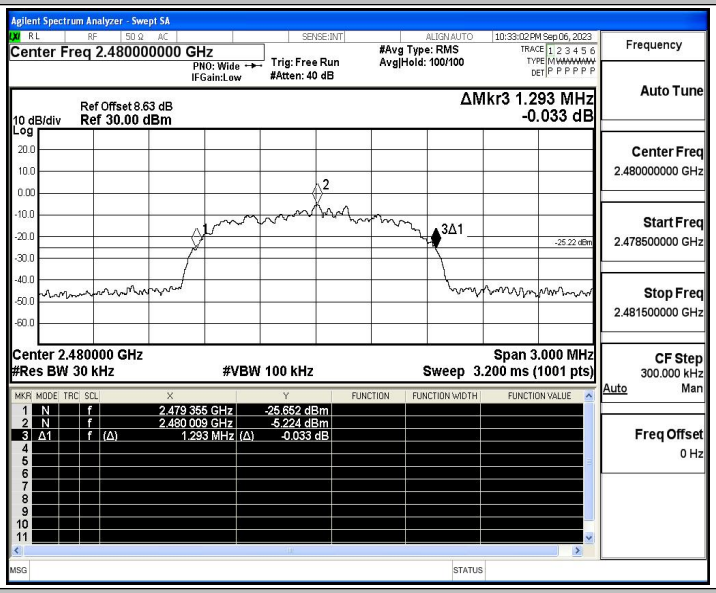

2DH5_Ant1_2402



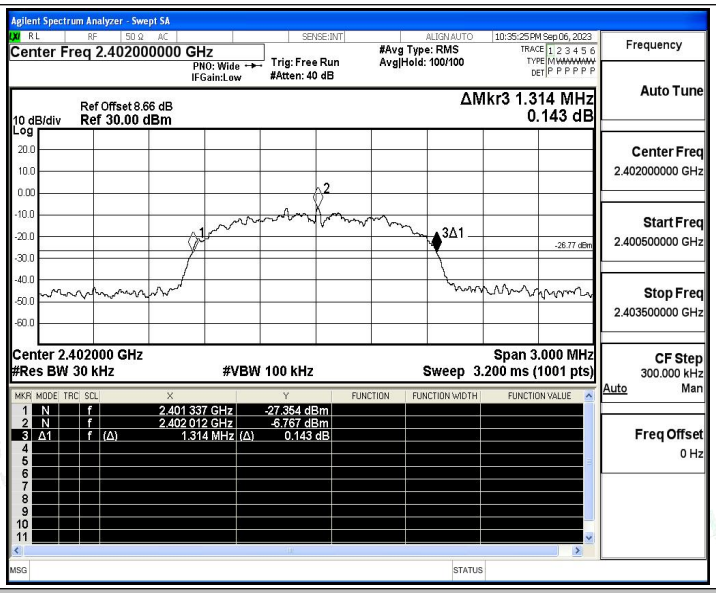

2DH5_Ant1_2441



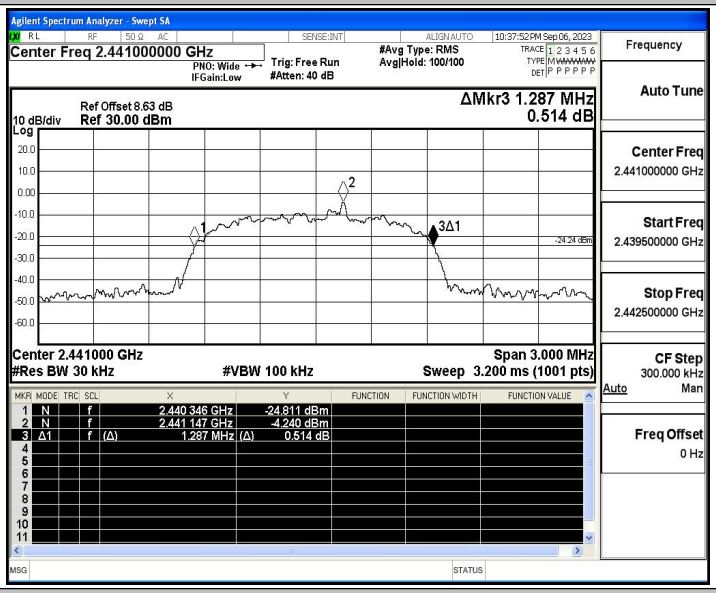

2DH5_Ant1_2480



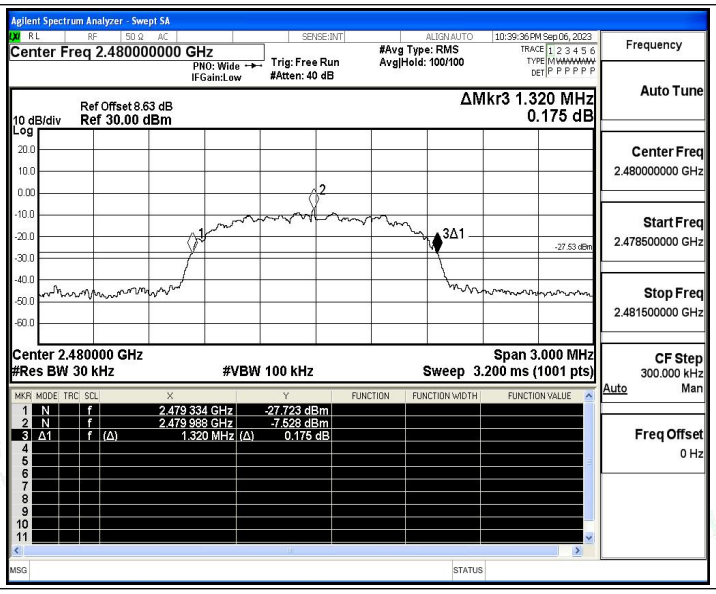

3DH5_Ant1_2402




3DH5_Ant1_2441




3DH5_Ant1_2480

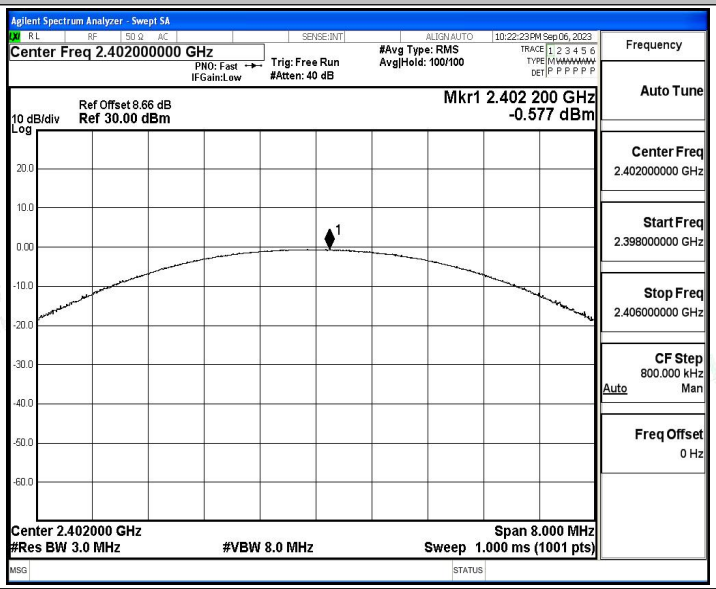

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 100/100
10:39:36 PM Sep 06, 2023
Ref Offset 8.63 dB
10 dB/div Ref 30.00 dBm
Log
ΔMkr3 1.320 MHz
0.175 dB
-27.53 dBm
Center 2.480000 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3.000 MHz
Sweep 3.200 ms (1001 pts)
1 N f 2.479 334 GHz -27.723 dBm
2 N f 2.479 988 GHz -7.528 dBm
3 Δ1 f (Δ) 1.320 MHz (Δ) 0.175 dB
Frequency
Auto Tune
Center Freq 2.480000000 GHz
Start Freq 2.478500000 GHz
Stop Freq 2.481500000 GHz
CF Step 300.000 kHz
Auto Man
Freq Offset 0 Hz

## B.2 Maximum Conducted Output Power

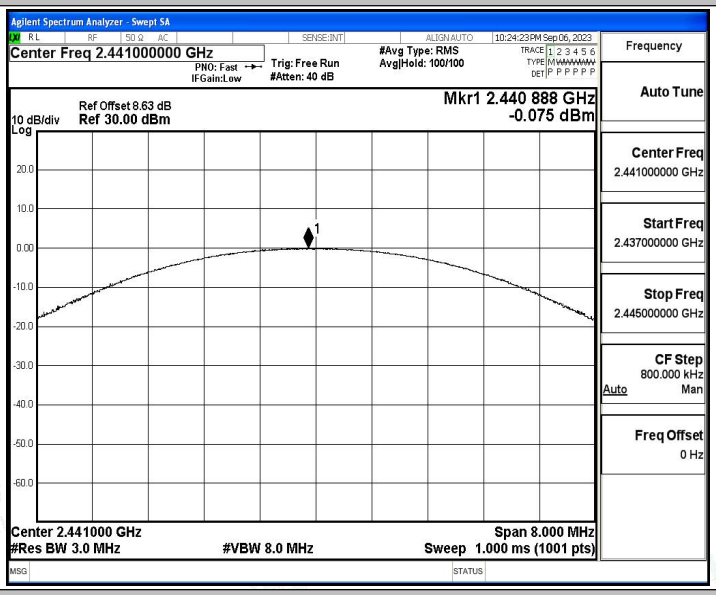
| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | -0.58 | ≤20.97 | PASS |
| | | 2441 | -0.08 | ≤20.97 | PASS |
| | | 2480 | 0.06 | ≤20.97 | PASS |
| 2DH5 | Ant1 | 2402 | -0.63 | ≤20.97 | PASS |
| | | 2441 | -0.43 | ≤20.97 | PASS |
| | | 2480 | -0.29 | ≤20.97 | PASS |
| 3DH5 | Ant1 | 2402 | -0.52 | ≤20.97 | PASS |
| | | 2441 | -0.31 | ≤20.97 | PASS |
| | | 2480 | -0.29 | ≤20.97 | PASS |

## Test Graphs

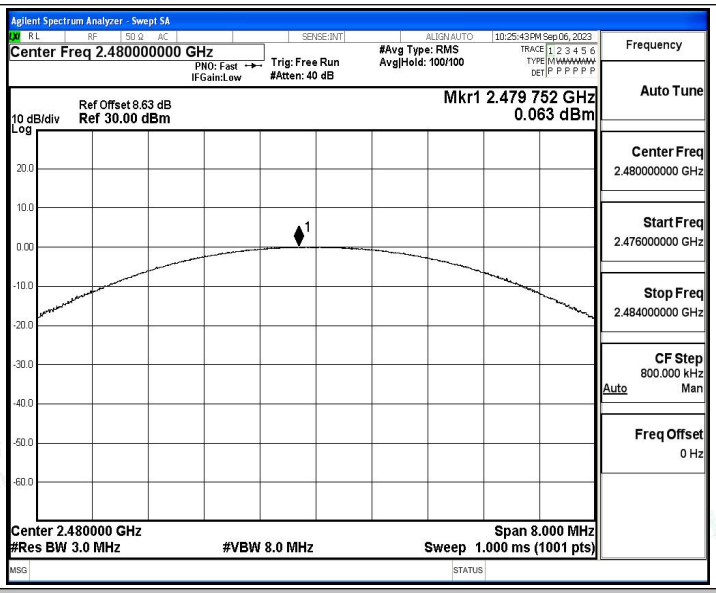
DH5_Ant1_2402



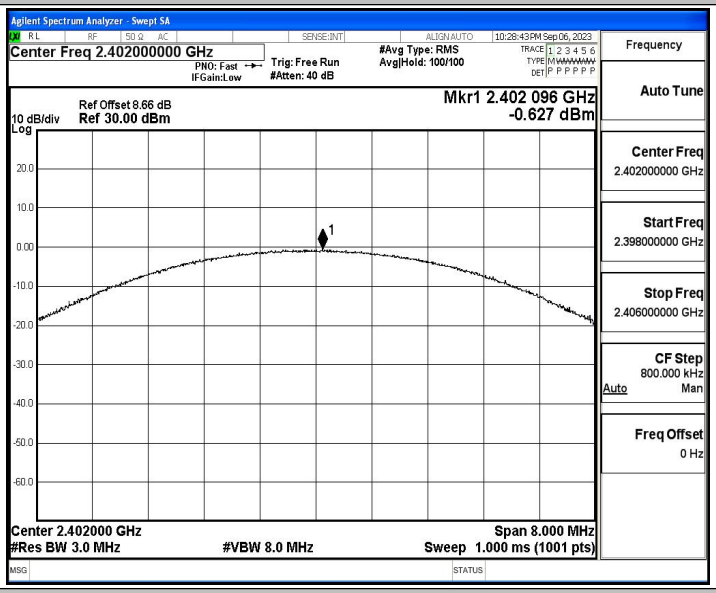

DH5_Ant1_2441



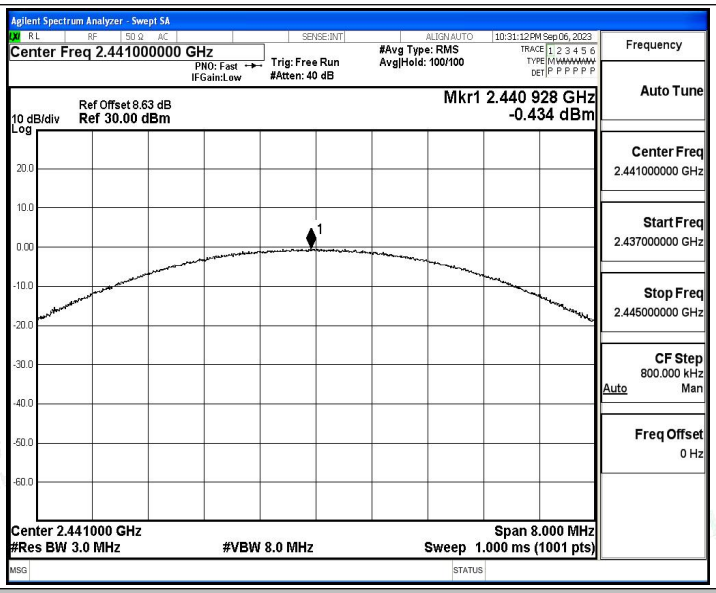

DH5_Ant1_2480



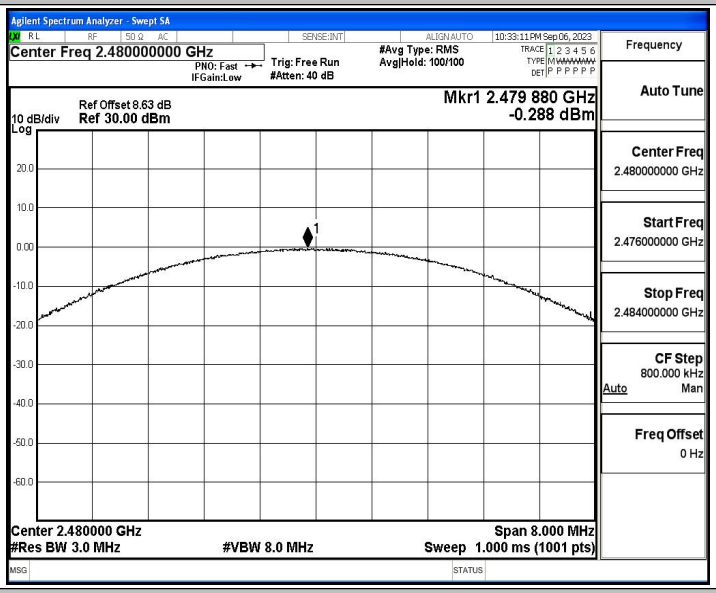

2DH5_Ant1_2402



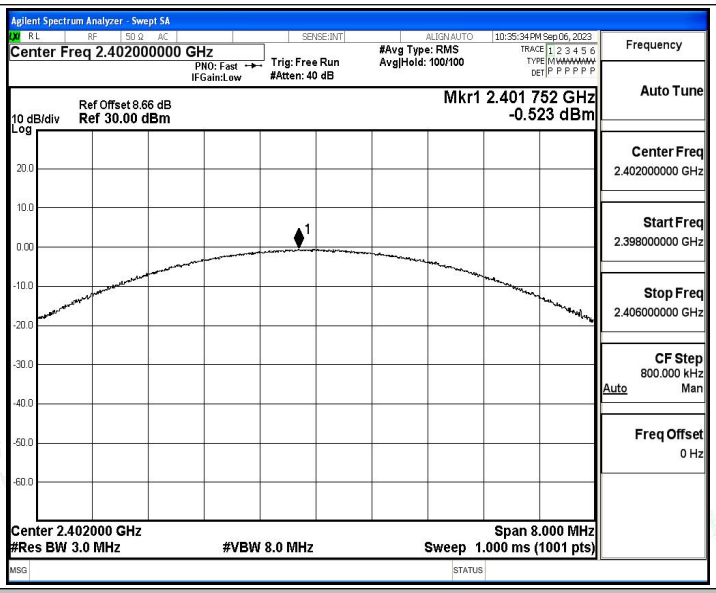

2DH5_Ant1_2441



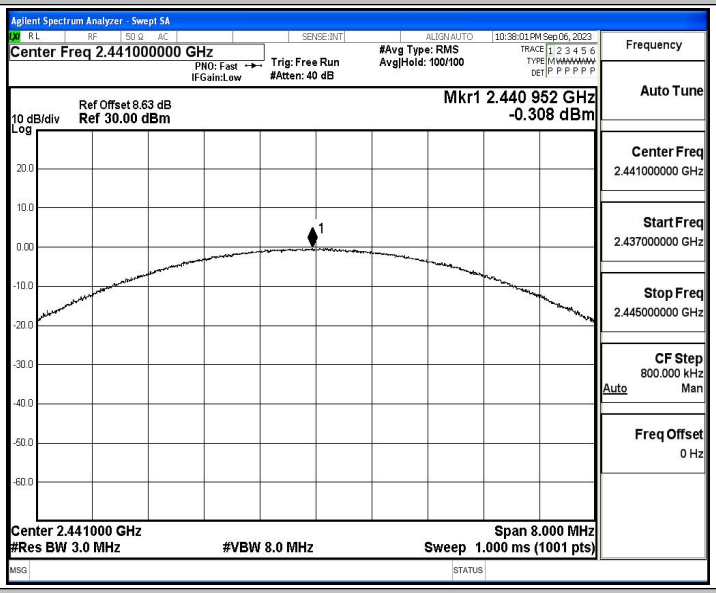

2DH5_Ant1_2480



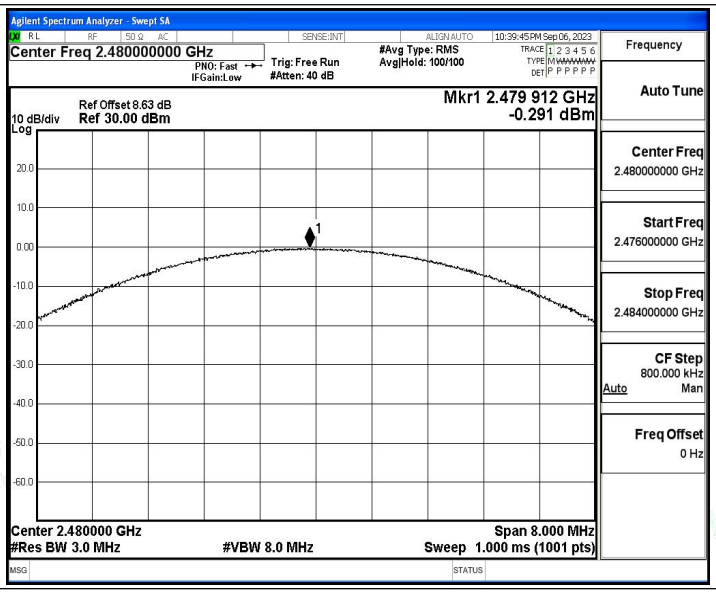

3DH5_Ant1_2402




3DH5_Ant1_2441




3DH5_Ant1_2480

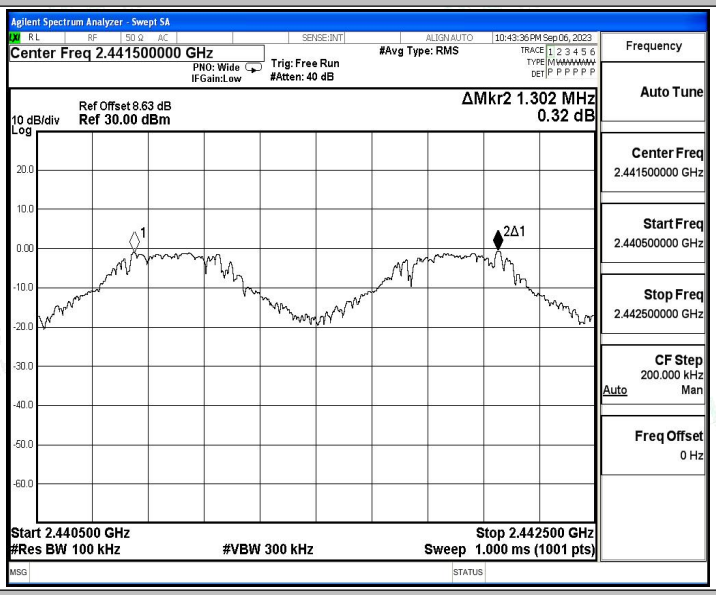

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 100/100
10:39:45 PM Sep 06, 2023
Ref Offset 8.63 dB
10 dB/div Ref 30.00 dBm
Log
Mkr1 2.479 912 GHz
-0.291 dBm
Center 2.480000 GHz
#Res BW 3.0 MHz
#VBW 8.0 MHz
Span 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

## B.3 Carrier Frequencies Separation

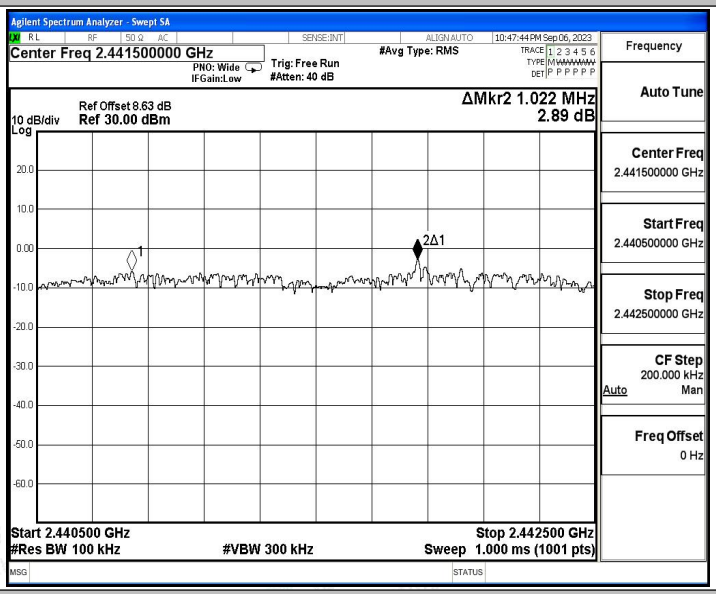
| TestMode | Antenna | Channel | Result[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|
| DH5 | Ant1 | Hop | 1.302 | ≥0.686 | PASS |
| 2DH5 | Ant1 | Hop | 1.022 | ≥0.862 | PASS |
| 3DH5 | Ant1 | Hop | 1.108 | ≥0.880 | PASS |

## Test Graphs

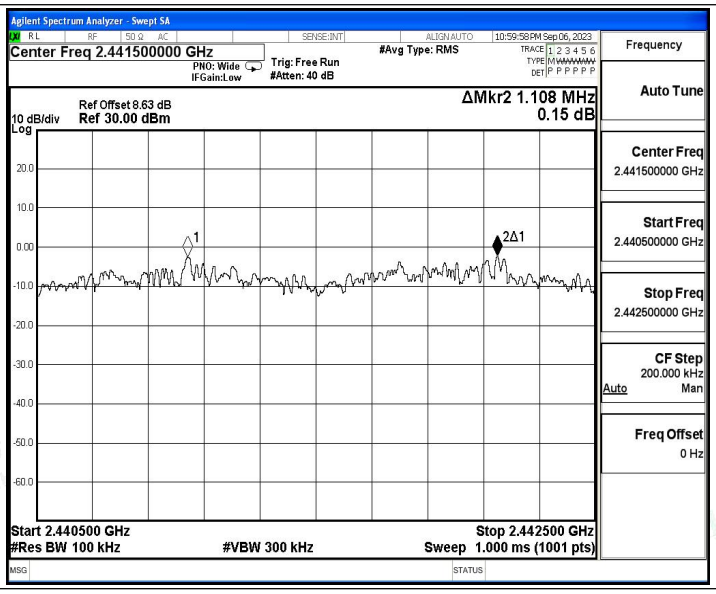
DH5_Ant1_Hop




2DH5_Ant1_Hop




3DH5_Ant1_Hop

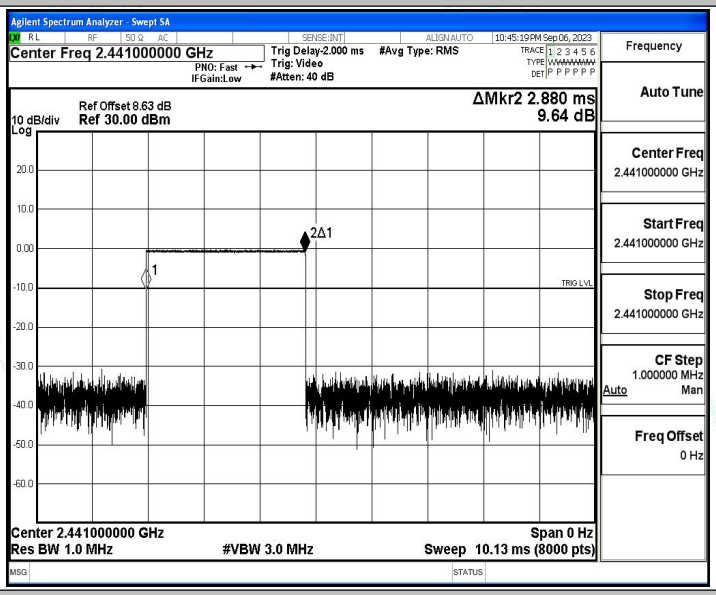

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441500000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
10:59:58 PM Sep 06, 2023
Frequency
Auto Tune
Ref Offset 8.63 dB
10 dB/div Ref 30.00 dBm
Log
ΔMkr2 1.108 MHz
0.15 dB
Center Freq
2.441500000 GHz
Start Freq
2.440500000 GHz
Stop Freq
2.442500000 GHz
CF Step
200.000 kHz
Auto Man
Freq Offset
0 Hz
Start 2.440500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.442500 GHz
Sweep 1.000 ms (1001 pts)

## B.4 Dwell Time

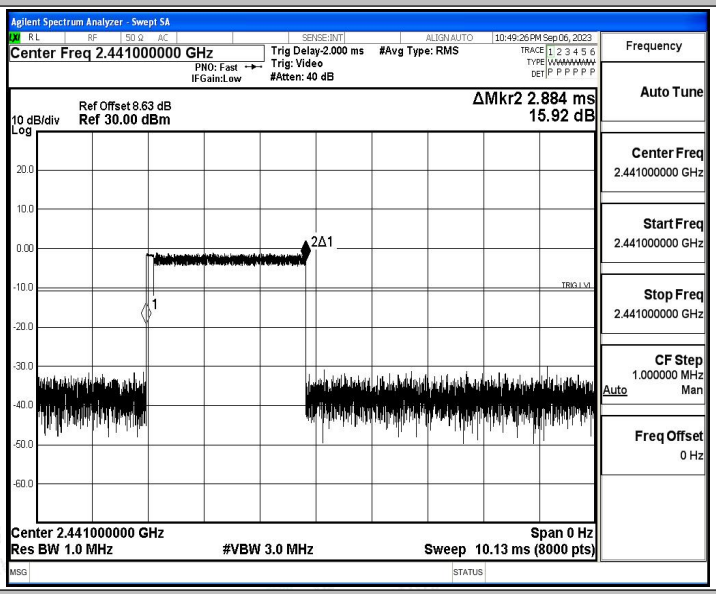
| TestMode | Antenna | Channel | BurstWidth [ms] | TotalHops [Num] | Result[s] | Limit[s] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | Hop | 2.880 | 106.67 | 0.307 | ≤0.4 | PASS |
| 2DH5 | Ant1 | Hop | 2.884 | 106.67 | 0.308 | ≤0.4 | PASS |
| 3DH5 | Ant1 | Hop | 2.885 | 106.67 | 0.308 | ≤0.4 | PASS |

## Test Graphs

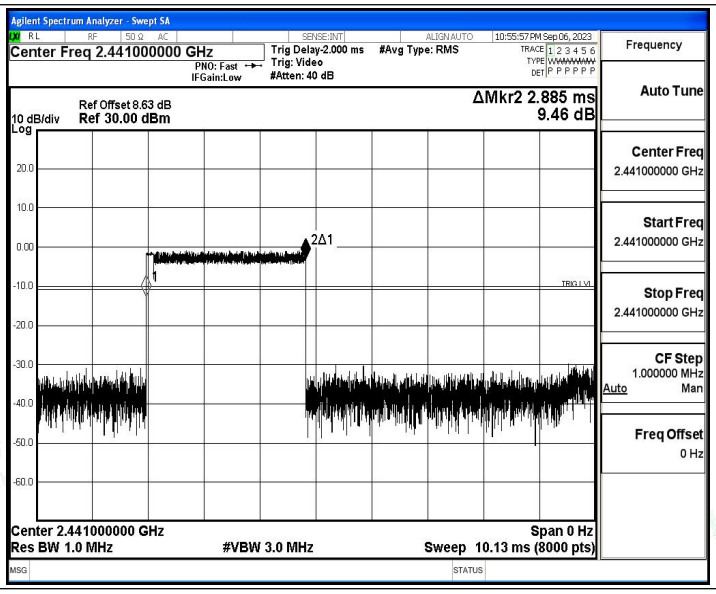
DH5_Ant1_Hop




2DH5_Ant1_Hop




3DH5_Ant1_Hop

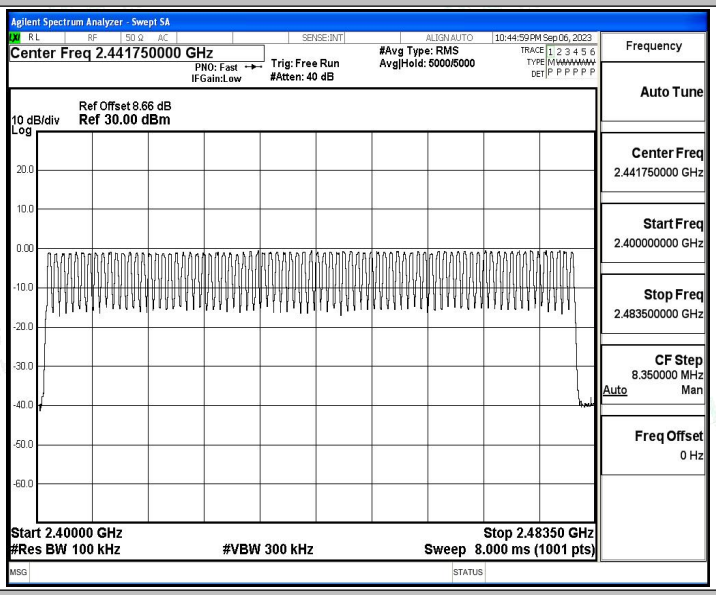

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay-2.000 ms
#Avg Type: RMS
PNO: Fast
IFGain:Low
Trig: Video
#Atten: 40 dB
10:55:57 PM Sep 06, 2023
Ref Offset 8.63 dB
10 dB/div
Ref 30.00 dBm
Log
ΔMkr2 2.885 ms
9.46 dB
2Δ1
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 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

# B.5 Number of Hopping Channel

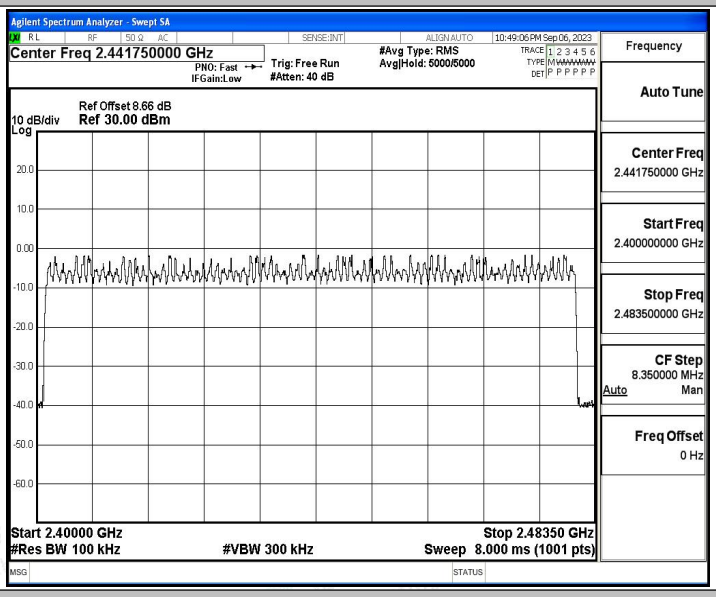
| TestMode | Antenna | Channel | Result[Num] | Limit[Num] | Verdict |
|---|---|---|---|---|---|
| DH5 | Ant1 | Hop | 79 | ≥15 | PASS |
| 2DH5 | Ant1 | Hop | 79 | ≥15 | PASS |
| 3DH5 | Ant1 | Hop | 79 | ≥15 | PASS |

## Test Graphs

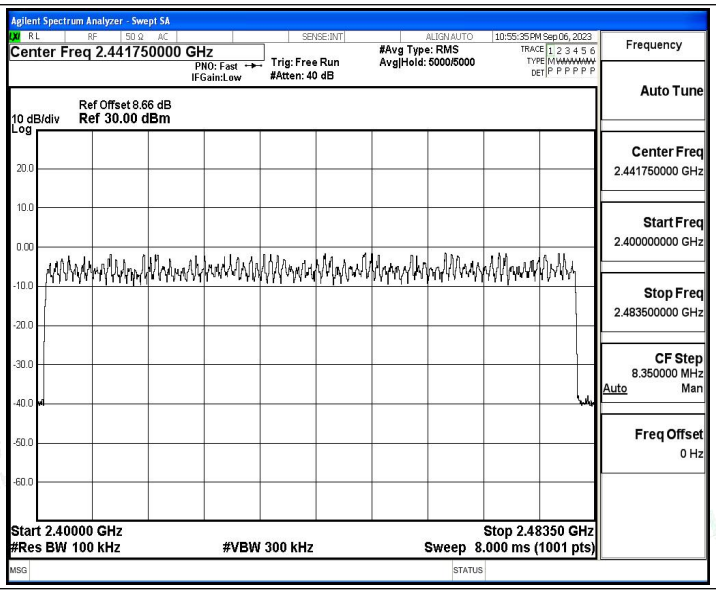
DH5_Ant1_Hop




2DH5_Ant1_Hop




3DH5_Ant1_Hop

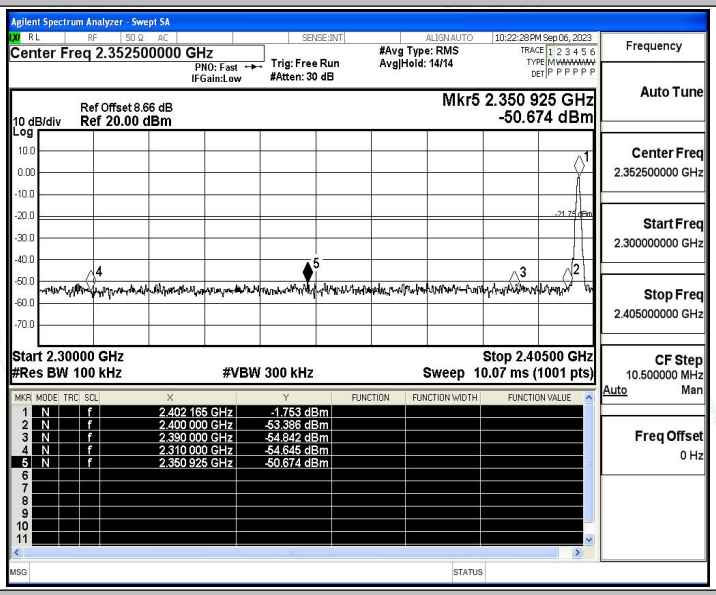

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441750000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 5000/5000
10:55:35 PM Sep 06, 2023
Ref Offset 8.66 dB
10 dB/div
Ref 30.00 dBm
Log
Start 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.48350 GHz
Sweep 8.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.441750000 GHz
Start Freq
2.400000000 GHz
Stop Freq
2.483500000 GHz
CF Step
8.350000 MHz
Auto
Man
Freq Offset
0 Hz

## B.6 Band Edge

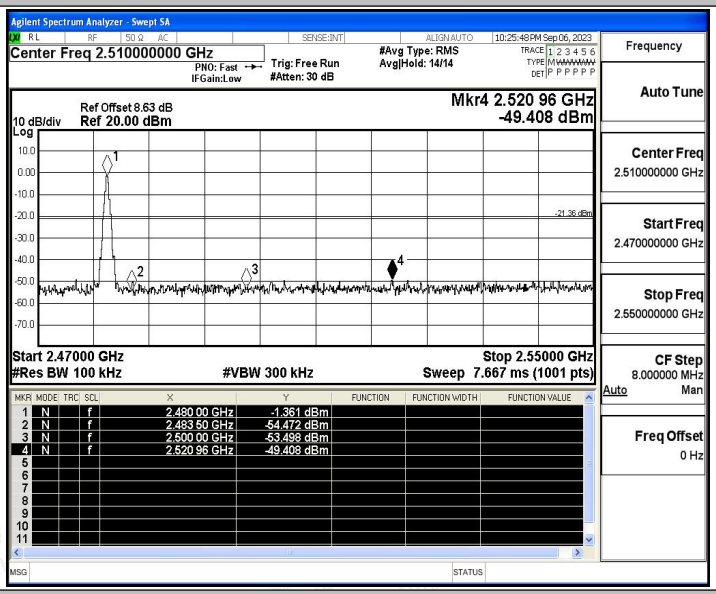
| TestMode | Antenna | ChName | Channel | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | Low | 2402 | -1.75 | -50.67 | ≤-21.75 | PASS |
| | | High | 2480 | -1.36 | -49.41 | ≤-21.36 | PASS |
| | | Low | Hop_2402 | -1.63 | -48.56 | ≤-21.63 | PASS |
| | | High | Hop_2480 | -0.86 | -47.56 | ≤-20.86 | PASS |
| 2DH5 | Ant1 | Low | 2402 | -6.19 | -50.44 | ≤-26.19 | PASS |
| | | High | 2480 | -1.58 | -48.11 | ≤-21.58 | PASS |
| | | Low | Hop_2402 | -6.02 | -48.71 | ≤-26.02 | PASS |
| | | High | Hop_2480 | -5.04 | -47.6 | ≤-25.04 | PASS |
| 3DH5 | Ant1 | Low | 2402 | -5.54 | -50.27 | ≤-25.54 | PASS |
| | | High | 2480 | -4.59 | -48.62 | ≤-24.59 | PASS |
| | | Low | Hop_2402 | -5.48 | -48.85 | ≤-25.48 | PASS |
| | | High | Hop_2480 | -2.69 | -47.17 | ≤-22.69 | PASS |

## Test Graphs

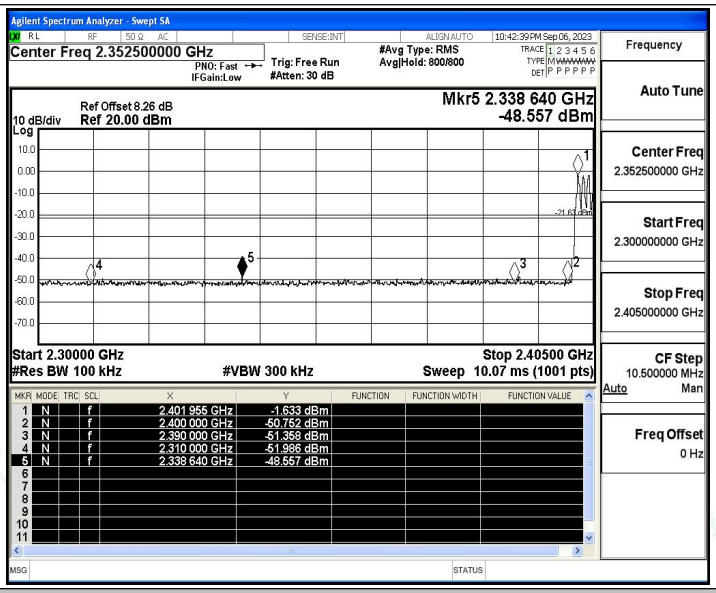
DH5_Ant1_Low_2402



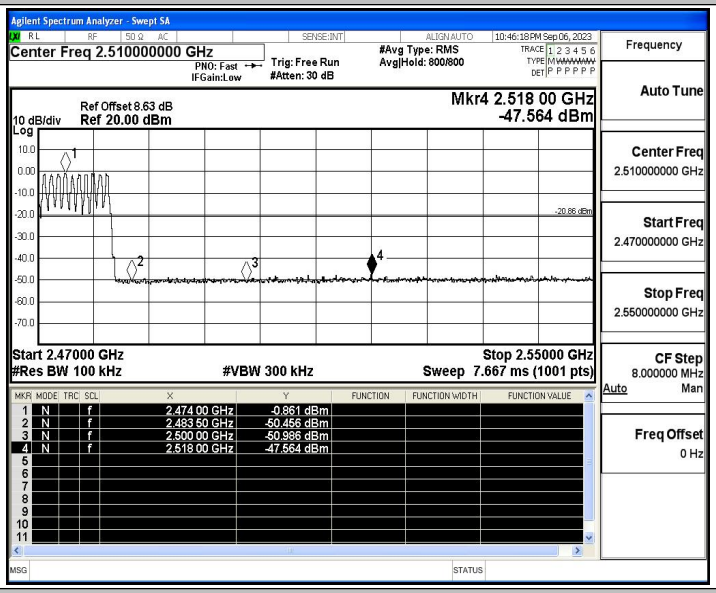

DH5_Ant1_High_2480



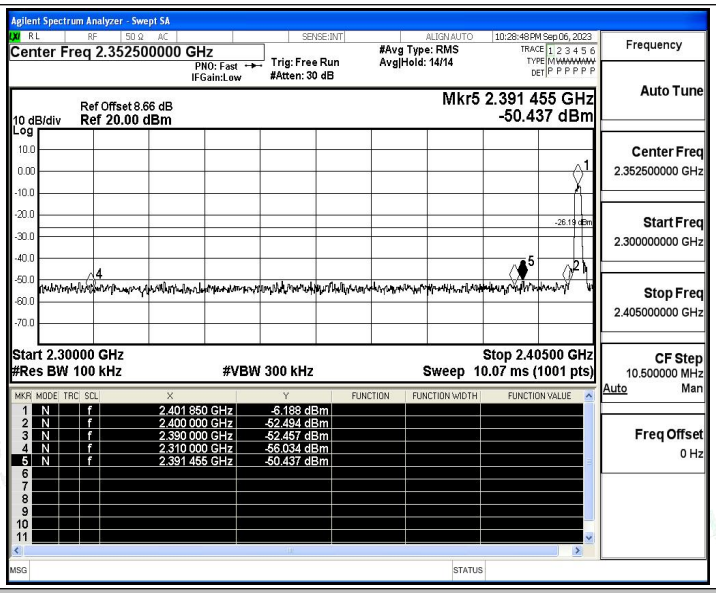

DH5_Ant1_Low_Hop_2402



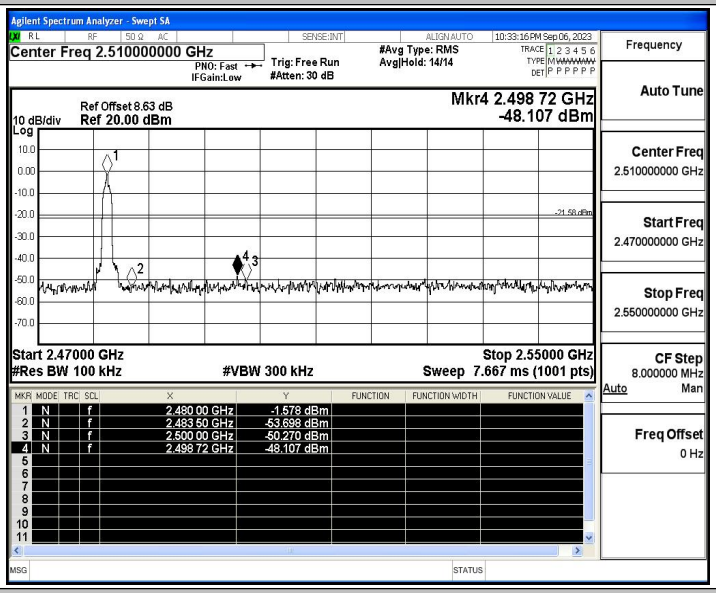

DH5_Ant1_High_Hop_2480



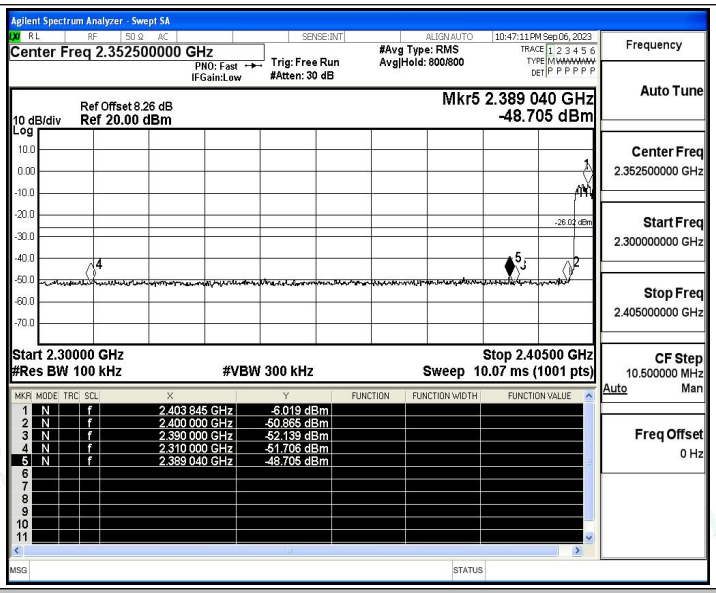

2DH5_Ant1_Low_2402



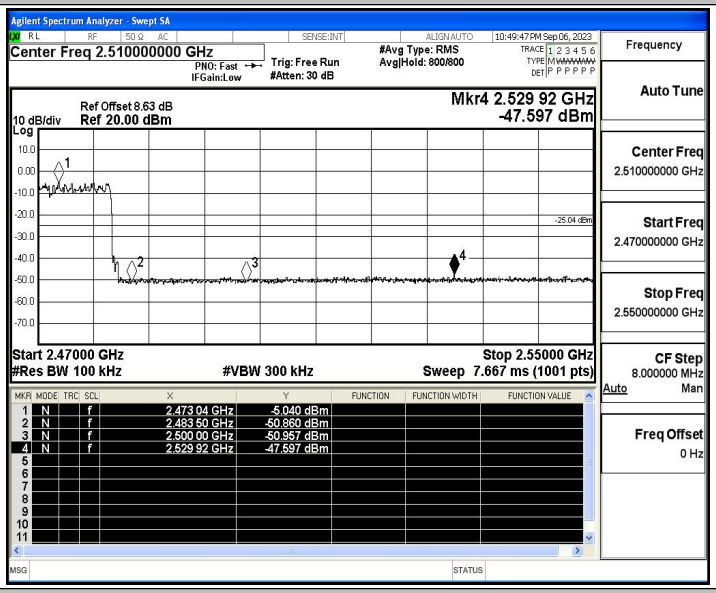

2DH5_Ant1_High_2480



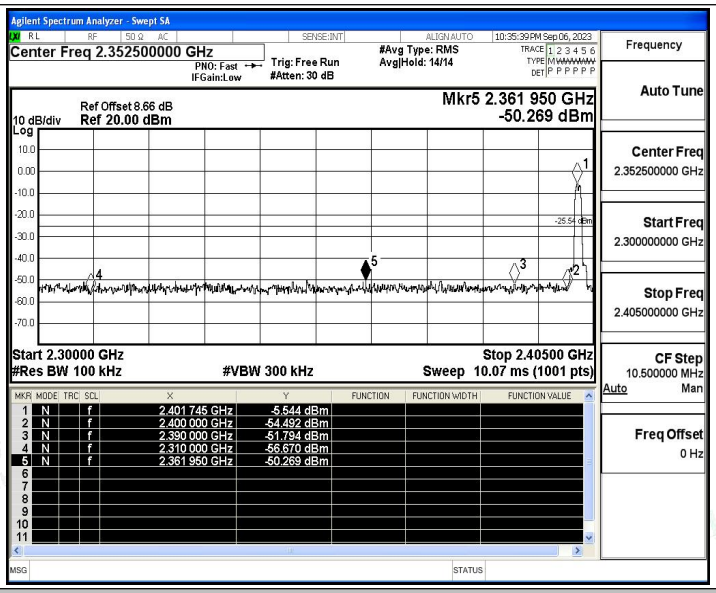

2DH5_Ant1_Low_Hop_2402



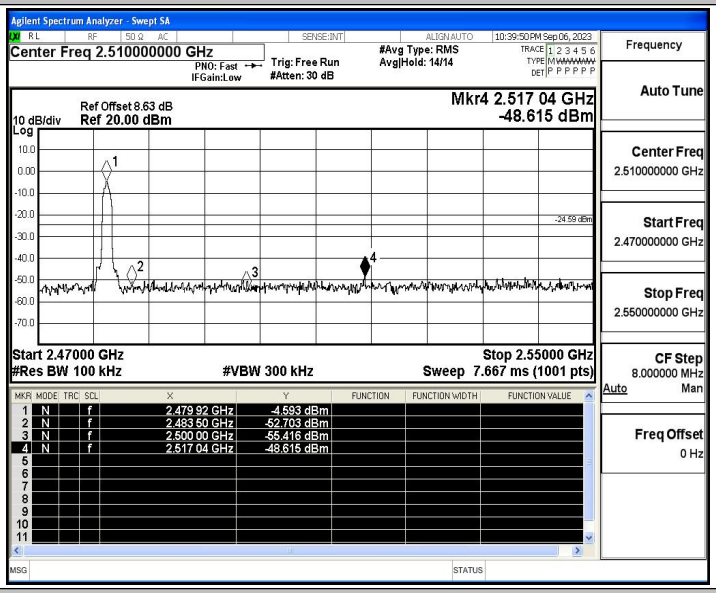

2DH5_Ant1_High_Hop_2480



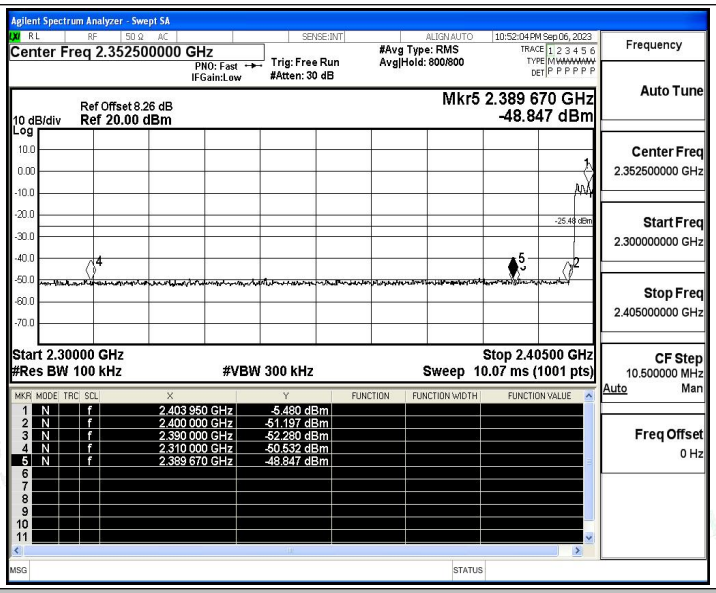

3DH5_Ant1_Low_2402



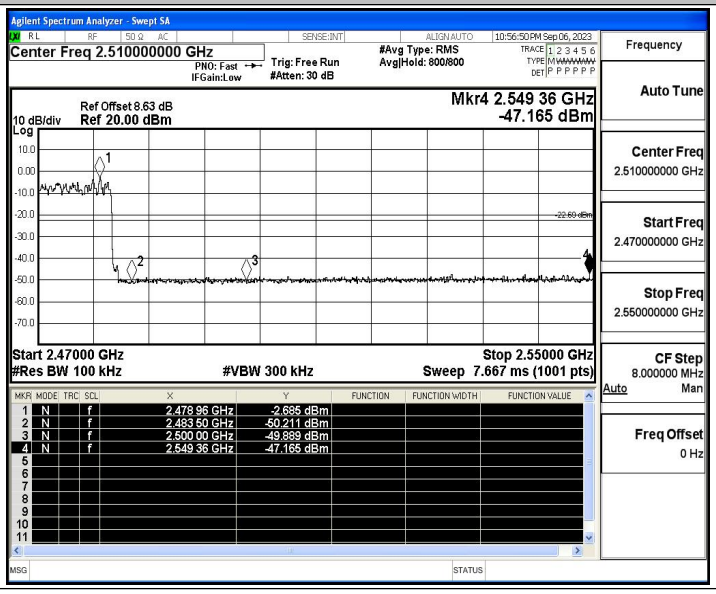

3DH5_Ant1_High_2480




3DH5_Ant1_Low_Hop_2402




3DH5_Ant1_High_Hop_2480



# B.7 Conducted RF Spurious Emission

| TestMode | Antenna | Channel | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | Reference | -1.75 | -1.75 | --- | PASS |
| | | | 30~1000 | -1.75 | -60.6 | ≤-21.75 | PASS |
| | | | 1000~26500 | -1.75 | -46.13 | ≤-21.75 | PASS |
| | | 2441 | Reference | -0.86 | -0.86 | --- | PASS |
| | | | 30~1000 | -0.86 | -60.64 | ≤-20.86 | PASS |
| | | | 1000~26500 | -0.86 | -46.19 | ≤-20.86 | PASS |
| | | 2480 | Reference | -1.15 | -1.15 | --- | PASS |
| | | | 30~1000 | -1.15 | -61.12 | ≤-21.15 | PASS |
| | | | 1000~26500 | -1.15 | -45.46 | ≤-21.15 | PASS |
| 2DH5 | Ant1 | 2402 | Reference | -2.04 | -2.04 | --- | PASS |
| | | | 30~1000 | -2.04 | -61.03 | ≤-22.04 | PASS |
| | | | 1000~26500 | -2.04 | -46.53 | ≤-22.04 | PASS |
| | | 2441 | Reference | -2.50 | -2.50 | --- | PASS |
| | | | 30~1000 | -2.50 | -61.02 | ≤-22.5 | PASS |
| | | | 1000~26500 | -2.50 | -46.33 | ≤-22.5 | PASS |
| | | 2480 | Reference | -2.54 | -2.54 | --- | PASS |
| | | | 30~1000 | -2.54 | -61.27 | ≤-22.54 | PASS |
| | | | 1000~26500 | -2.54 | -45.53 | ≤-22.54 | PASS |
| 3DH5 | Ant1 | 2402 | Reference | -2.93 | -2.93 | --- | PASS |
| | | | 30~1000 | -2.93 | -61.06 | ≤-22.93 | PASS |
| | | | 1000~26500 | -2.93 | -46.44 | ≤-22.93 | PASS |
| | | 2441 | Reference | -2.47 | -2.47 | --- | PASS |
| | | | 30~1000 | -2.47 | -61.12 | ≤-22.47 | PASS |
| | | | 1000~26500 | -2.47 | -46.05 | ≤-22.47 | PASS |
| | | 2480 | Reference | -1.92 | -1.92 | --- | PASS |
| | | | 30~1000 | -1.92 | -60.83 | ≤-21.92 | PASS |
| | | | 1000~26500 | -1.92 | -46.29 | ≤-21.92 | PASS |