Appendix Test Data

Report No.:	18220WC20203201	Test Sample No.:	1-2-2
Start Test Date:	2022.8.31	Finish Test Date:	2022.9.7
Test Engineer:	Rick Luo	Auditor:	Edward. Pan
Temperature:	27.3℃	Relative Humidity:	47 %
Pressure:	1012 hPa		

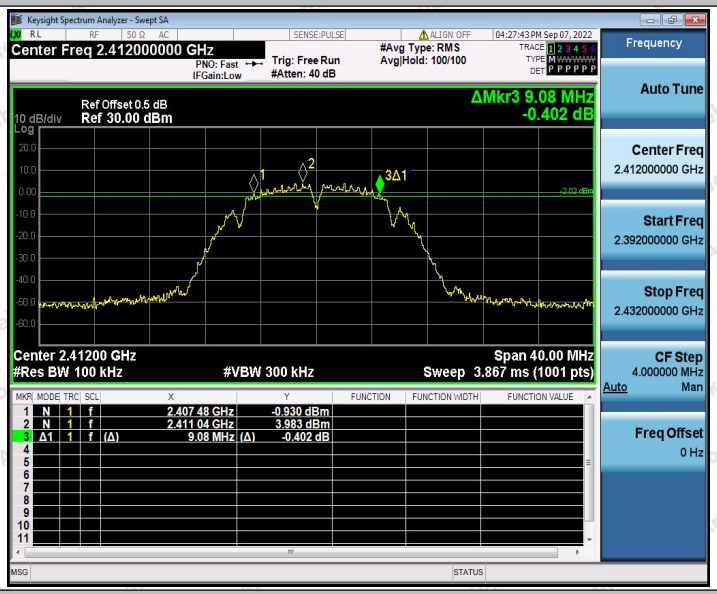
Appendix A: DTS Bandwidth

Test Result

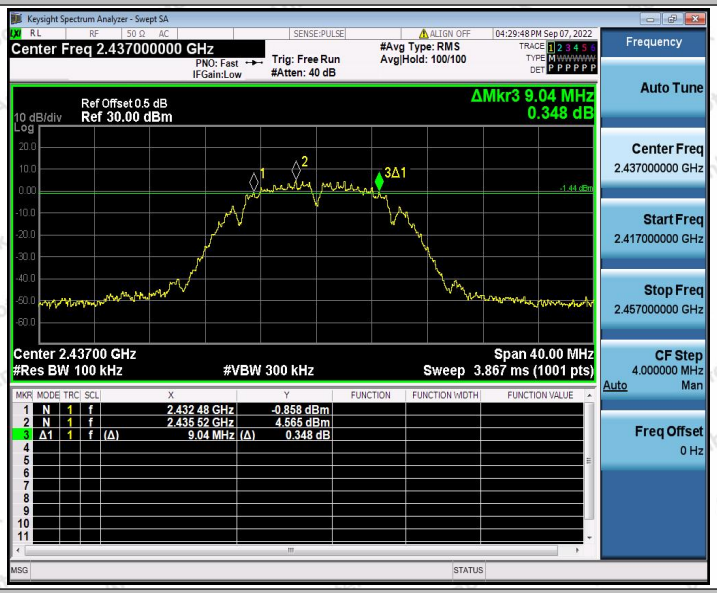
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.080	2407.480	2416.560	0.5	PASS
		2437	9.040	2432.480	2441.520	0.5	PASS
		2462	9.080	2457.480	2466.560	0.5	PASS

Test Graphs

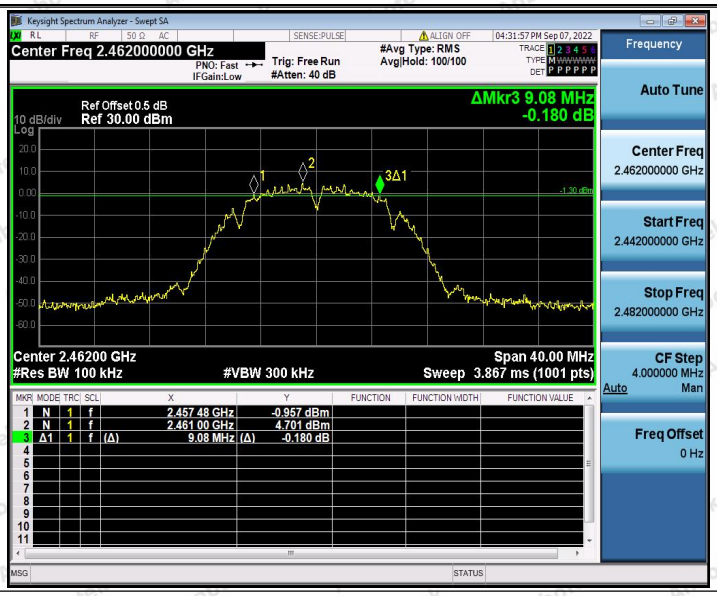
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 100/100
04:31:57 PM Sep 07, 2022
Ref Offset 0.5 dB
10 dB/div
Ref 30.00 dBm
ΔMkr3 9.08 MHz
-0.180 dB
Center 2.46200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40.00 MHz
Sweep 3.867 ms (1001 pts)
1 N 1 f 2.457 48 GHz -0.957 dBm
2 N 1 f 2.461 00 GHz 4.701 dBm
3 Δ1 1 f (Δ) 9.08 MHz (Δ) -0.180 dB
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.442000000 GHz
Stop Freq
2.482000000 GHz
CF Step
4.000000 MHz
Auto Man
Freq Offset
0 Hz

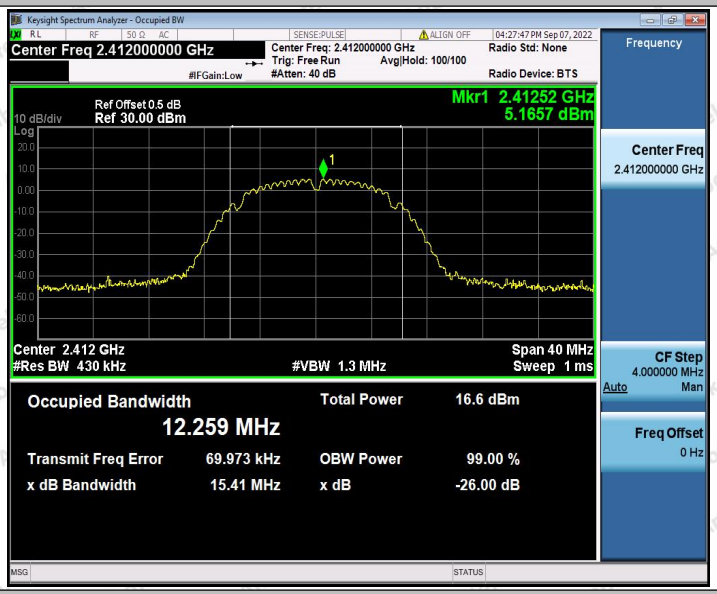
Appendix B: Occupied Channel Bandwidth

Test Result

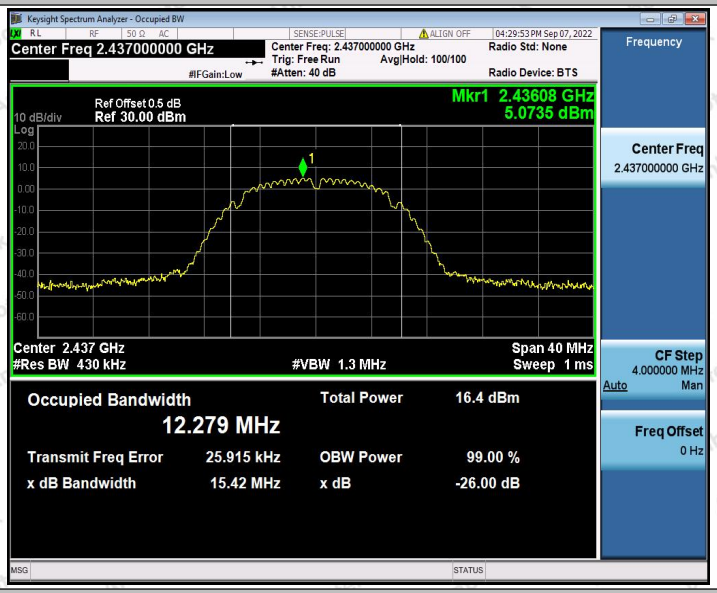
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]
11B	Ant1	2412	12.259	2405.9405	2418.1995
		2437	12.279	2430.8864	2443.1654
		2462	12.303	2455.8565	2468.1595

Test Graphs

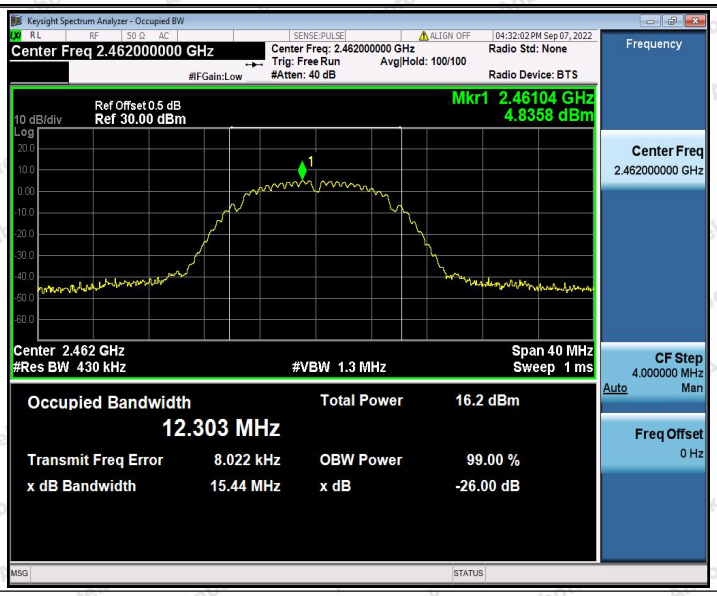
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462


Keysight Spectrum Analyzer - Occupied BW
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 40 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 0.5 dB
10 dB/div
Ref 30.00 dBm
Mkr1 2.46104 GHz
4.8358 dBm
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 430 kHz
#VBW 1.3 MHz
Span 40 MHz
Sweep 1 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
12.303 MHz
Total Power
16.2 dBm
Transmit Freq Error
8.022 kHz
OBW Power
99.00 %
x dB Bandwidth
15.44 MHz
x dB
-26.00 dB
Freq Offset
0 Hz

Appendix C: Maximum conducted output power

Test Result Peak

TestMode	Antenna	Frequency[MHz]	Peak Powert[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	8.12	≤30.00	PASS
		2437	8.35	≤30.00	PASS
		2462	8.53	≤30.00	PASS

Appendix D: Maximum power spectral density

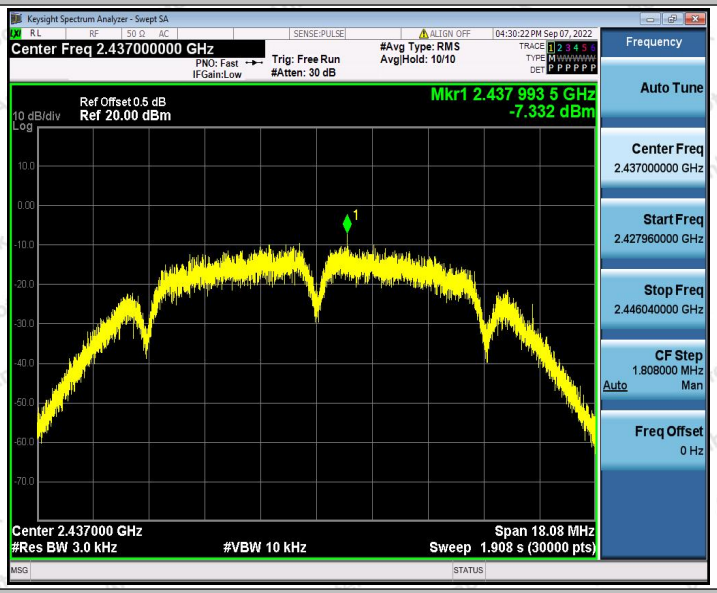
Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-8.62	≤8.00	PASS
		2437	-7.33	≤8.00	PASS
		2462	-9.71	≤8.00	PASS

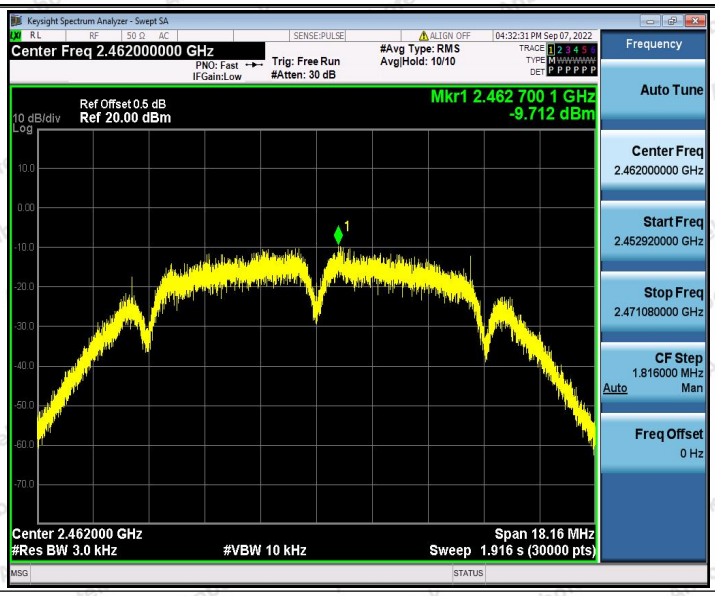
Test Graphs

11B_Ant1_2412

11B_Ant1_2437



11B_Ant1_2462


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 10/10
04:32:31 PM Sep 07, 2022
Ref Offset 0.5 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 2.462 700 1 GHz
-9.712 dBm
Center 2.462000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 18.16 MHz
Sweep 1.916 s (30000 pts)
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.452920000 GHz
Stop Freq
2.471080000 GHz
CF Step
1.816000 MHz
Auto
Man
Freq Offset
0 Hz

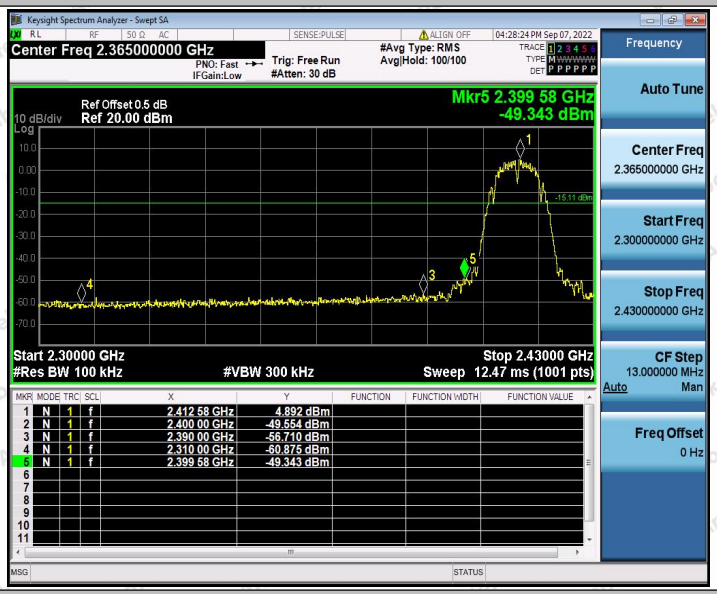
Appendix E: Band edge measurements

Test Result

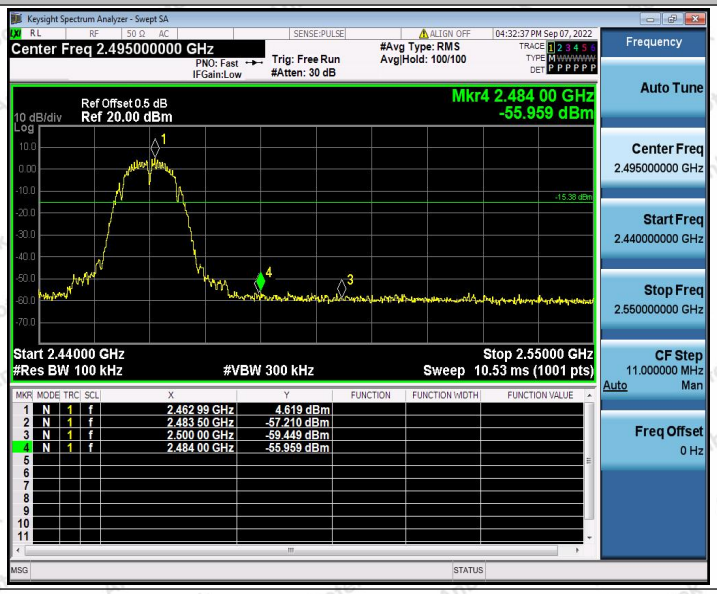
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.89	-49.34	≤-15.11	PASS
		High	2462	4.62	-55.96	≤-15.38	PASS

Test Graphs

11B_Ant1_Low_2412



11B_Ant1_High_2462



Appendix F: Conducted Spurious Emission

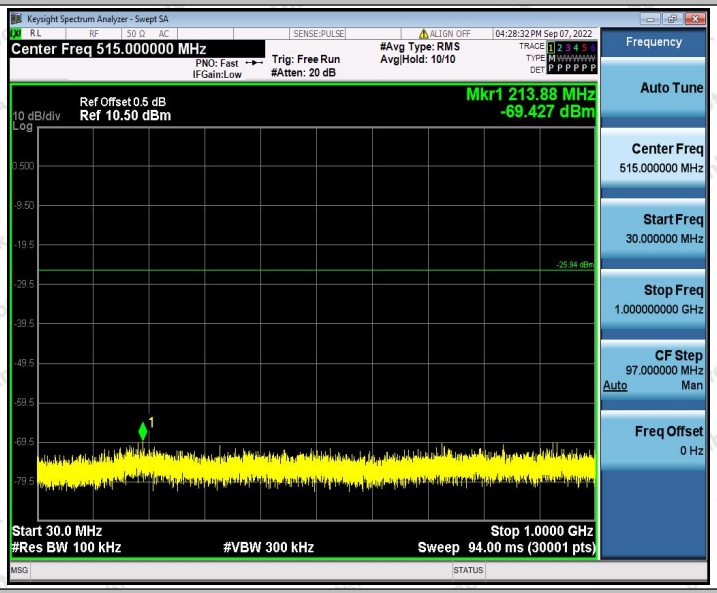
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	4.06	4.06	---	PASS
			30~1000	4.06	-69.43	≤-25.94	PASS
			1000~26500	4.06	-54.13	≤-25.94	PASS
		2437	Reference	3.18	3.18	---	PASS
			30~1000	3.18	-69.64	≤-26.82	PASS
			1000~26500	3.18	-53.67	≤-26.82	PASS
		2462	Reference	4.41	4.41	---	PASS
			30~1000	4.41	-70.05	≤-25.59	PASS
			1000~26500	4.41	-54.15	≤-25.59	PASS

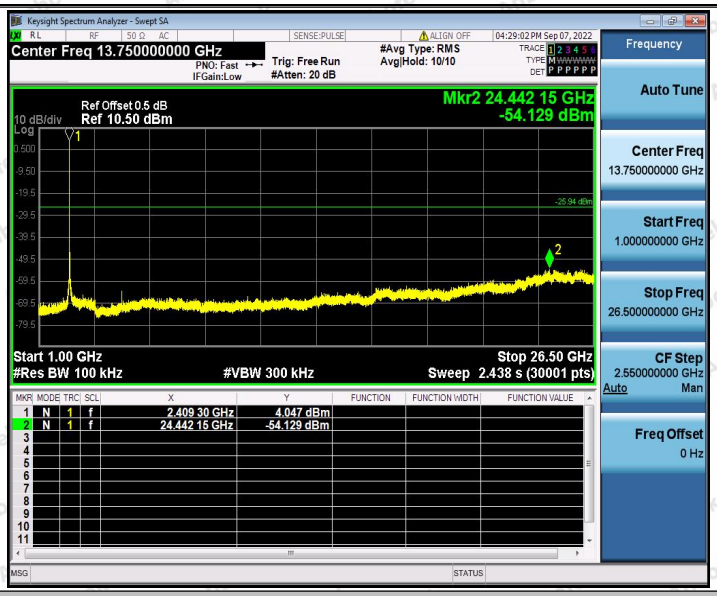
Test Graphs

11B_Ant1_2412_0~Reference

11B_Ant1_2412_30~1000

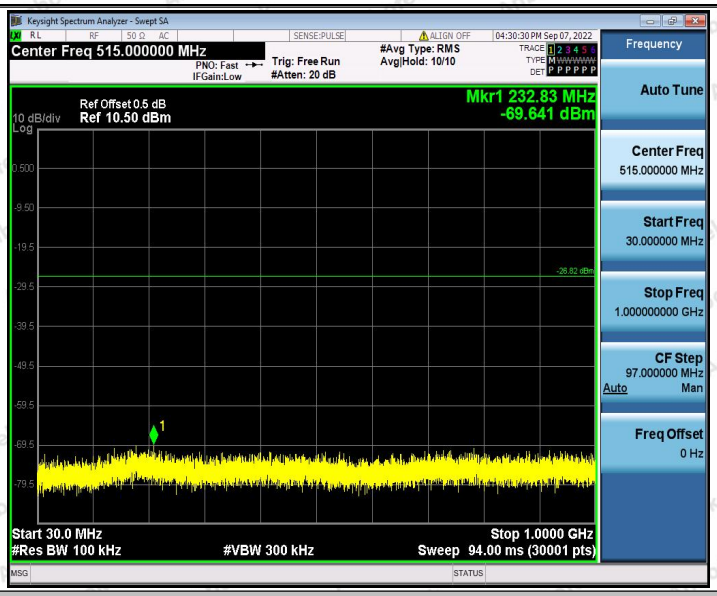


11B_Ant1_2412_1000~26500

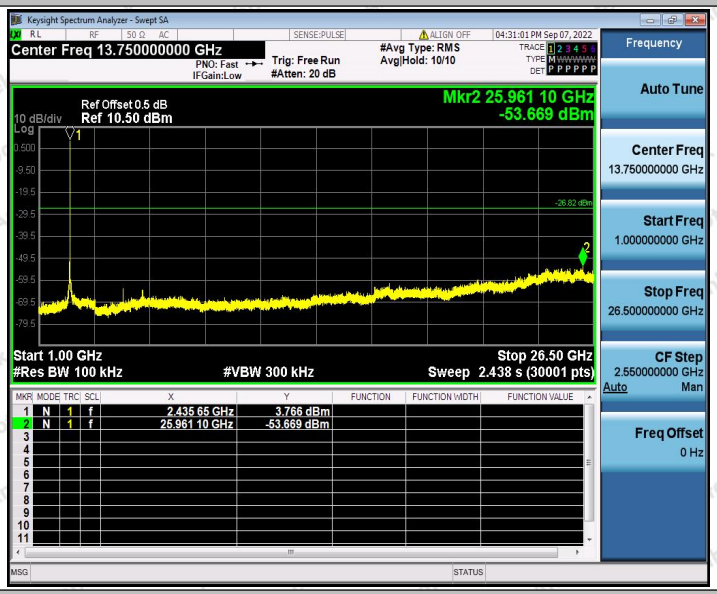


11B_Ant1_2437_0~Reference

11B_Ant1_2437_30~1000

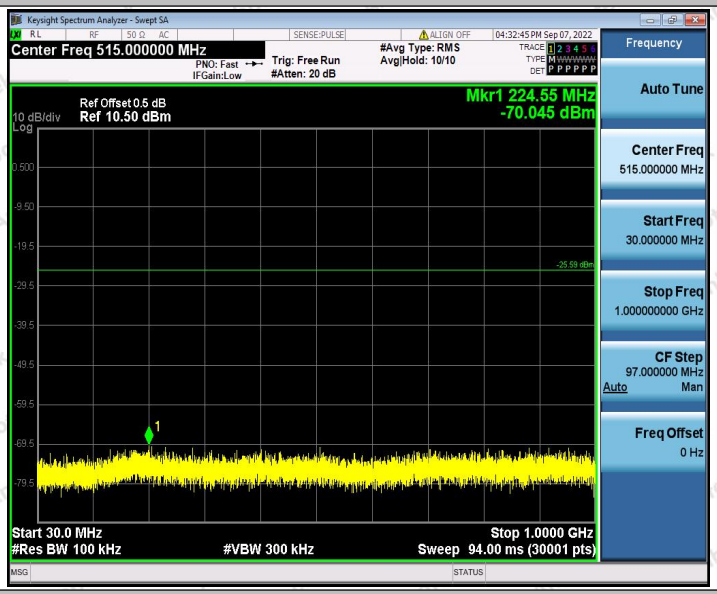


11B_Ant1_2437_1000~26500

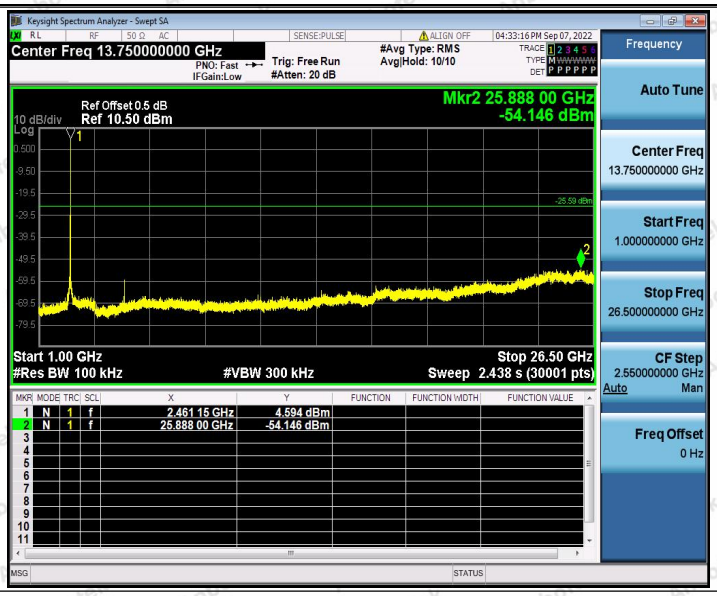


11B_Ant1_2462_0~Reference

11B_Ant1_2462_30~1000



11B_Ant1_2462_1000~26500


Keysight Spectrum Analyzer - Swept SA
Center Freq 13.750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 10/10
04:33:16 PM Sep 07, 2022
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
Log
Mkr2 25.888 00 GHz
-54.146 dBm
Start 1.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.50 GHz
Sweep 2.438 s (30001 pts)
1 N 1 f 2.461 15 GHz 4.594 dBm
2 N 1 f 25.888 00 GHz -54.146 dBm
Frequency
Auto Tune
Center Freq
13.750000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
2.550000000 GHz
Auto Man
Freq Offset
0 Hz

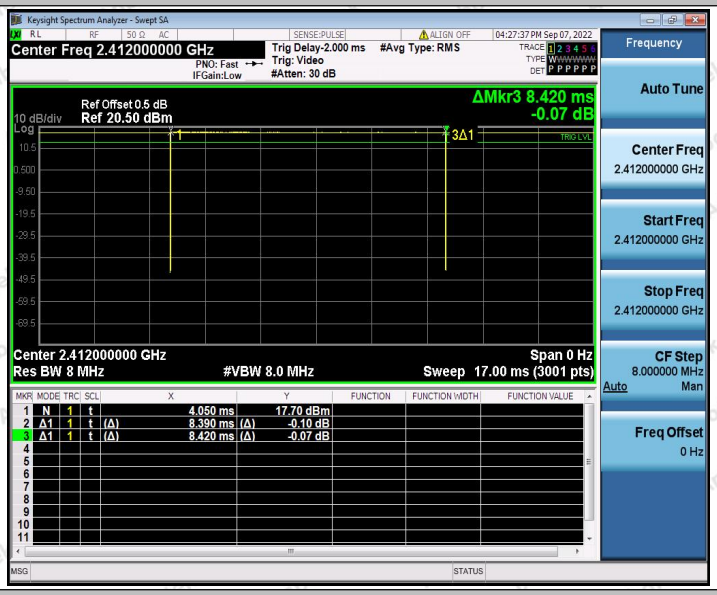
Appendix G: Duty Cycle

Test Result

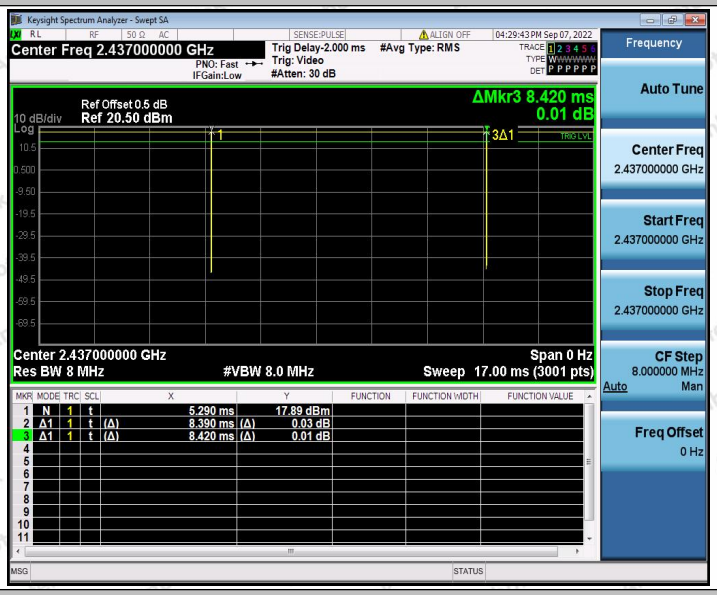
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	8.39	8.42	99.64	0.02
		2437	8.39	8.42	99.64	0.02
		2462	8.38	8.41	99.64	0.02

Test Graphs

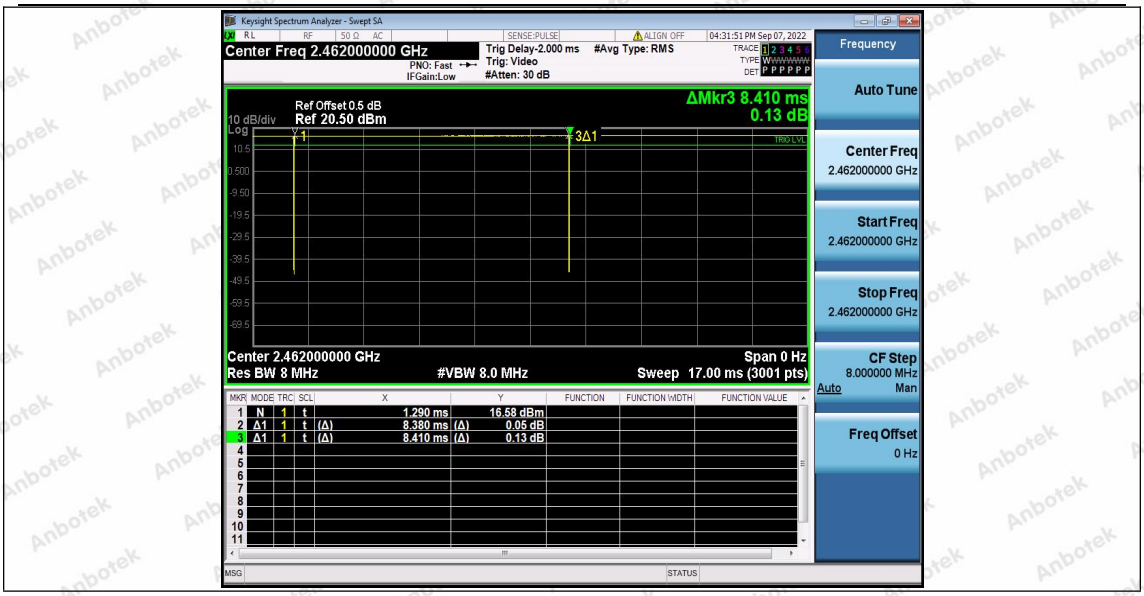
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
Trig Delay-2.000 ms
Trig: Video
#Atten: 30 dB
#Avg Type: RMS
Ref Offset 0.5 dB
10 dB/div
Ref 20.50 dBm
ΔMkr3 8.410 ms
0.13 dB
Center 2.462000000 GHz
Span 0 Hz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 17.00 ms (3001 pts)
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.462000000 GHz
Stop Freq
2.462000000 GHz
CF Step
8.000000 MHz
Freq Offset
0 Hz
1 N 1 t 1.290 ms 16.58 dBm
2 Δ1 1 t (Δ) 8.380 ms (Δ) 0.05 dB
3 Δ1 1 t (Δ) 8.410 ms (Δ) 0.13 dB

---End---