

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	8.520	2433.000	2441.520	0.5	PASS
		2462	9.560	2456.960	2466.520	0.5	PASS
11G	Ant1	2412	16.360	2403.800	2420.160	0.5	PASS
		2437	16.400	2428.800	2445.200	0.5	PASS
		2462	16.440	2453.800	2470.240	0.5	PASS
11N20SISO	Ant1	2412	17.600	2403.200	2420.800	0.5	PASS
		2437	17.560	2428.200	2445.760	0.5	PASS
		2462	17.640	2453.160	2470.800	0.5	PASS
11N40SISO	Ant1	2422	32.560	2405.680	2438.240	0.5	PASS
		2437	32.960	2420.680	2453.640	0.5	PASS
		2452	32.480	2436.080	2468.560	0.5	PASS

11B_Ant1_2412

Spectrum Analyzer 1
Sweep SA

KEYSIGHT Input RF: Coupling DC
R/L → Align Auto

Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)

#Atten: 40 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off

#Avg Type: Power (RMS)
Trig: Free Run

Center Frequency: 2.41200000 GHz
Span: 40.000000 MHz
Start Freq: 2.39200000 GHz
Stop Freq: 2.43200000 GHz
AUTO TUNE

CF Step: 4.000000 MHz
Auto Man
Freq Offset: 0 Hz
X Axis Scale: Log Lin
Signal Track (Scan Zoom)

1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 11.92 dB
Ref Level 30.00 dBm
ΔMkr3 9.08 MHz
-1.17 dB
OL1 9.07 dBm

Center 2.41200 GHz
#Res BW 100 kHz
#Video BW 300 kHz
Span 40.00 MHz
Sweep 3.87 ms (1001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.407 48 GHz	6.344 dBm		
2	N	1	f	2.412 52 GHz	10.40 dBm		
3	Δ1	1	f (Δ)	9.08 MHz (Δ)	-1.165 dB		
4	F	1	f	2.412 00 GHz	6.032 dBm		
5							
6							

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11B_Ant1_2437

Spectrum Analyzer 1
Sweep SA

KEYSIGHT Input RF: Coupling DC
R/L → Align Auto

Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)

#Atten: 40 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off

#Avg Type: Power (RMS)
Trig: Free Run

Center Frequency: 2.43700000 GHz
Span: 40.000000 MHz
Start Freq: 2.41700000 GHz
Stop Freq: 2.45700000 GHz
AUTO TUNE

CF Step: 4.000000 MHz
Auto Man
Freq Offset: 0 Hz
X Axis Scale: Log Lin
Signal Track (Scan Zoom)

1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 11.74 dB
Ref Level 30.00 dBm
ΔMkr3 8.52 MHz
-0.72 dB
OL1 9.23 dBm

Center 2.43700 GHz
#Res BW 100 kHz
#Video BW 300 kHz
Span 40.00 MHz
Sweep 3.87 ms (1001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.433 00 GHz	6.490 dBm		
2	N	1	f	2.437 00 GHz	11.23 dBm		
3	Δ1	1	f (Δ)	6.52 MHz (Δ)	-0.7228 dB		
4							
5							
6							

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11B_Ant1_2462

11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



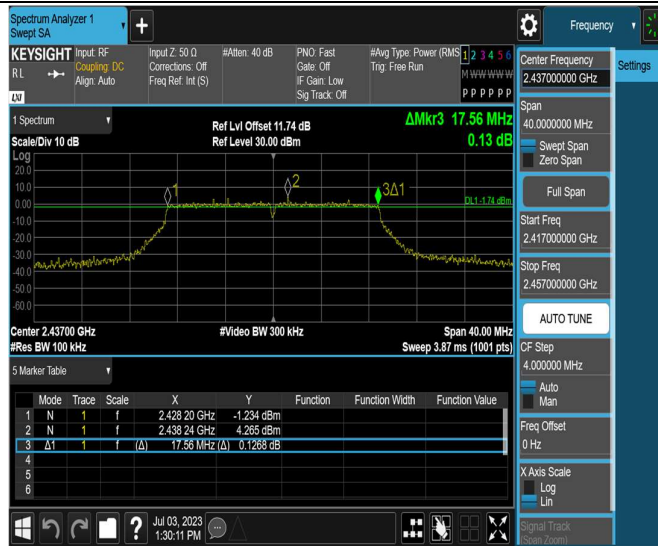
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

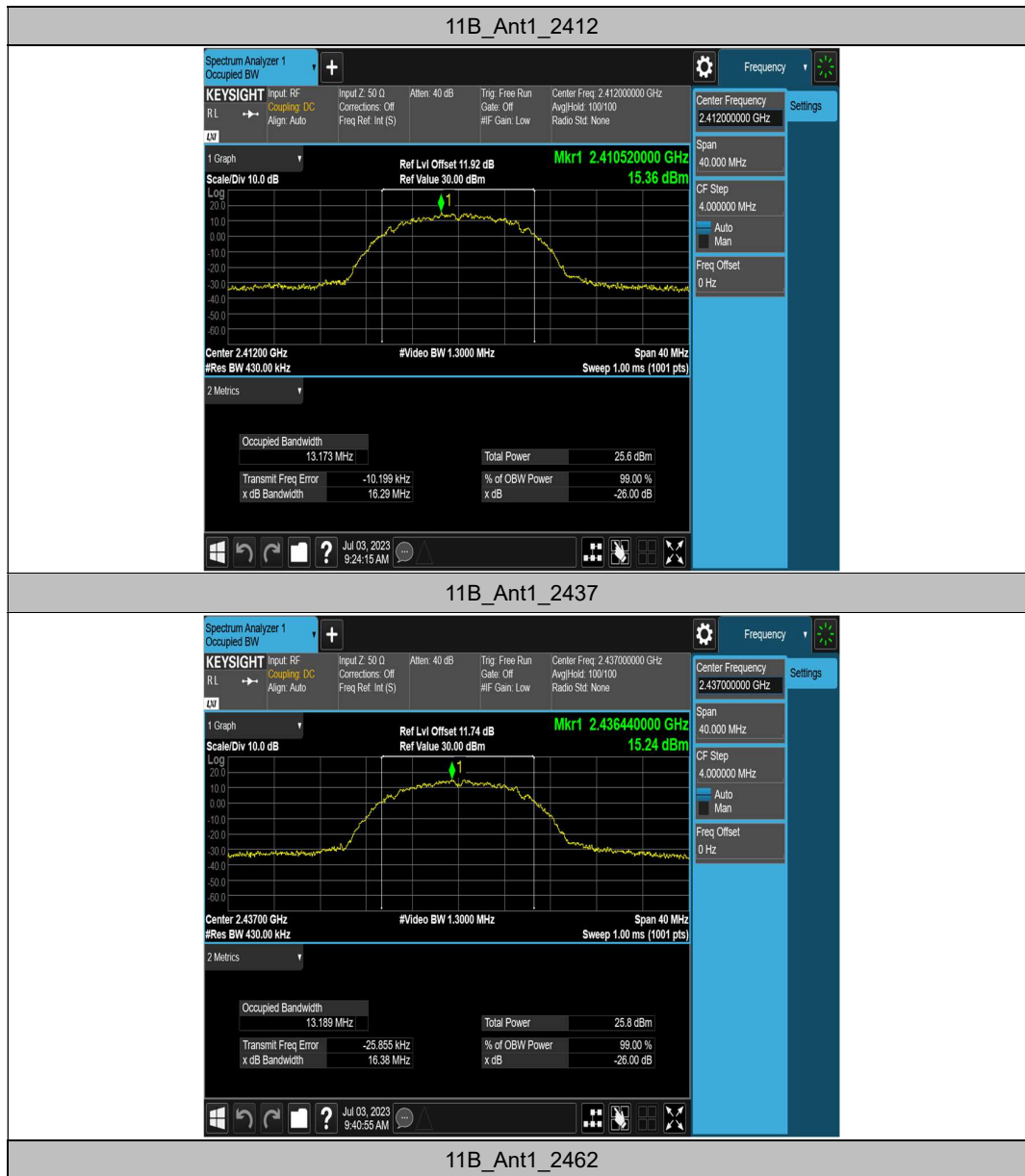


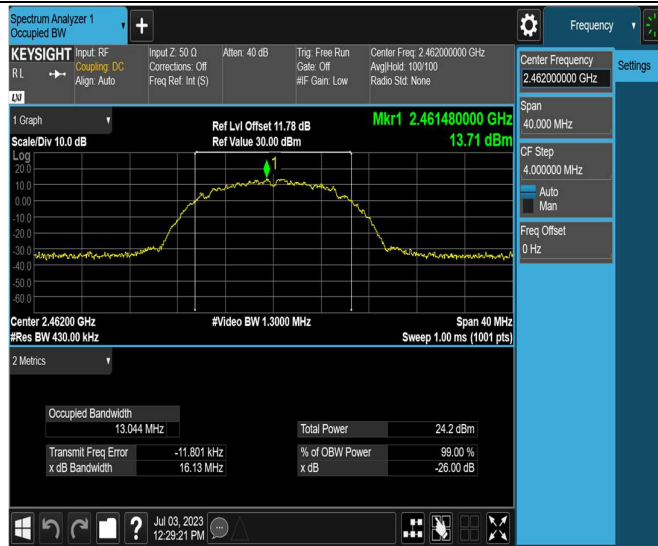
Appendix B: Occupied Channel Bandwidth

Test Result

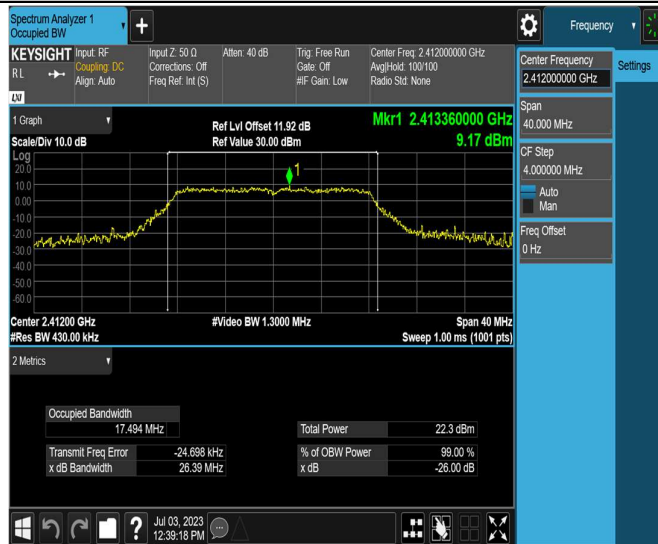
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.173	2405.4033	2418.5763	---	---
		2437	13.189	2430.3796	2443.5686	---	---
		2462	13.044	2455.4662	2468.5102	---	---
11G	Ant1	2412	17.494	2403.2283	2420.7223	---	---
		2437	17.476	2428.2987	2445.7747	---	---
		2462	17.597	2453.3145	2470.9115	---	---
11N20SISO	Ant1	2412	18.349	2402.8258	2421.1748	---	---
		2437	18.453	2427.8087	2446.2617	---	---
		2462	18.328	2452.8386	2471.1666	---	---
11N40SISO	Ant1	2422	34.961	2404.5283	2439.4893	---	---
		2437	34.901	2419.5930	2454.4940	---	---
		2452	34.958	2434.5962	2469.5542	---	---

Test Graphs

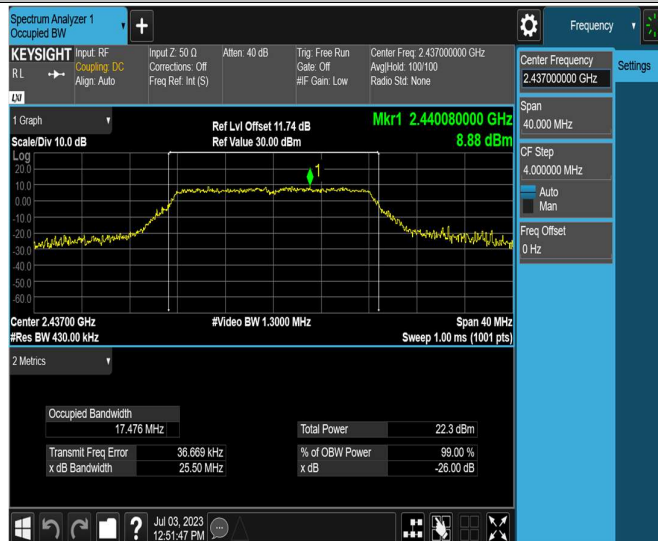




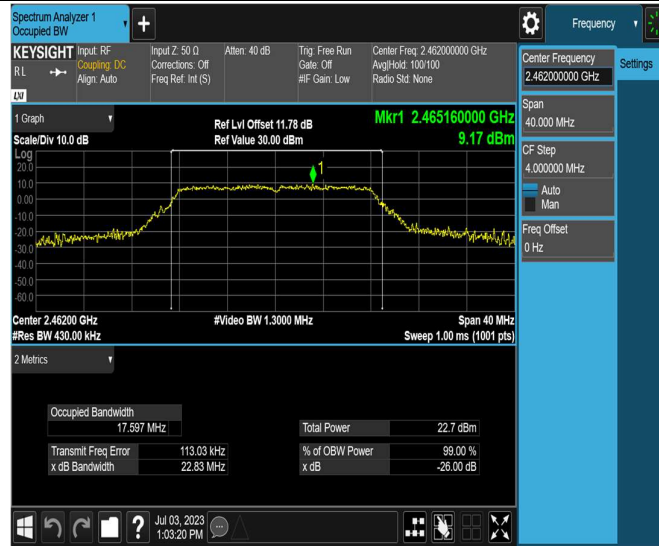
11G_Ant1_2412



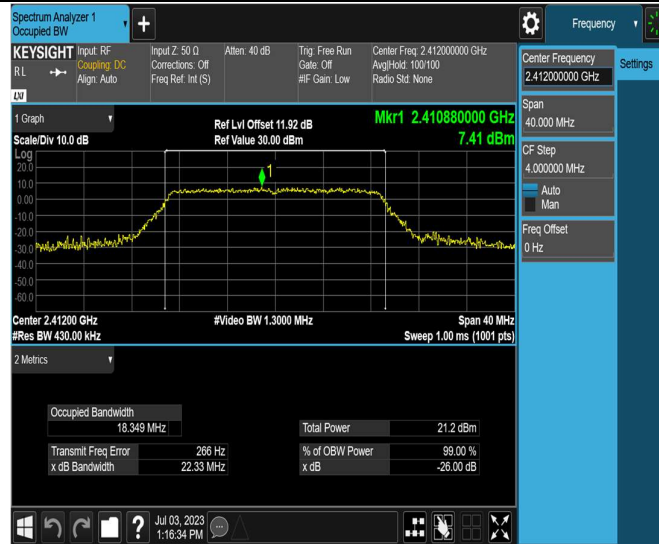
11G_Ant1_2437



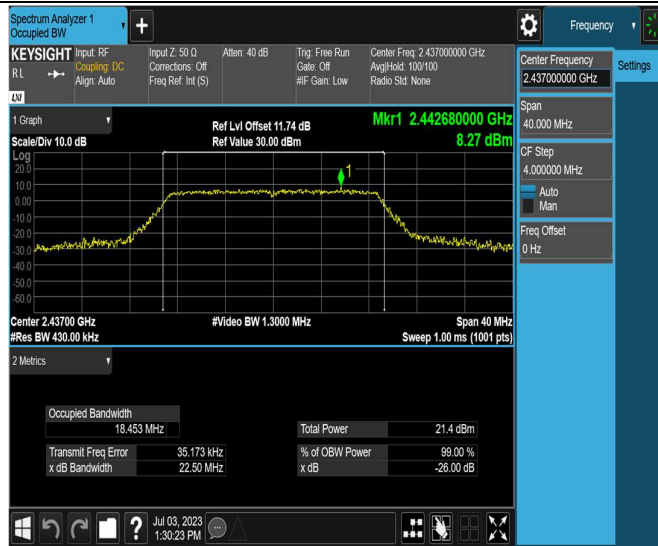
11G_Ant1_2462



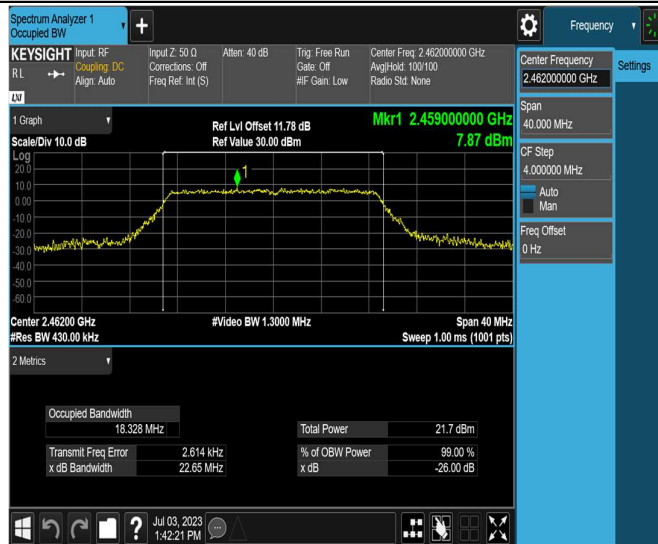
11N20SISO_Ant1_2412



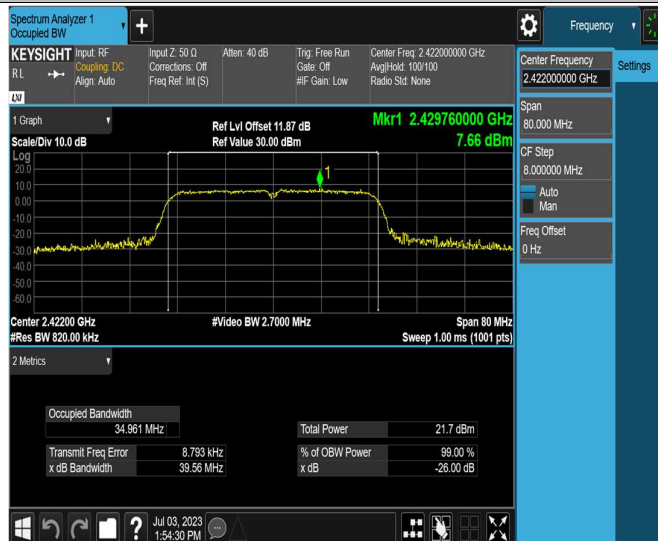
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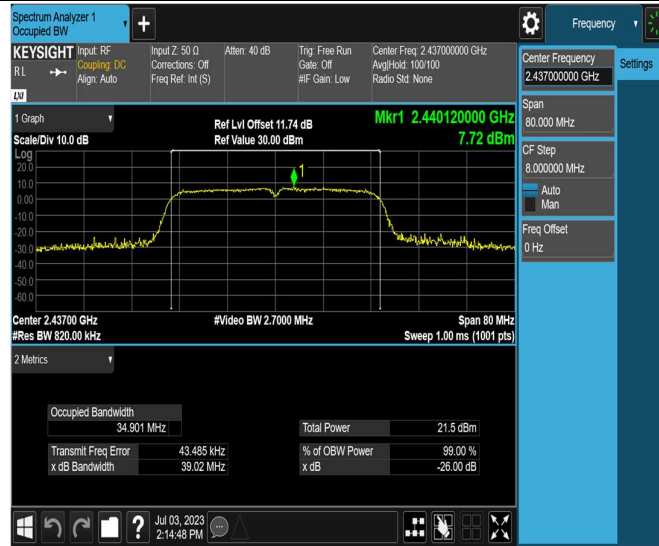
11N20SISO_Ant1_2462



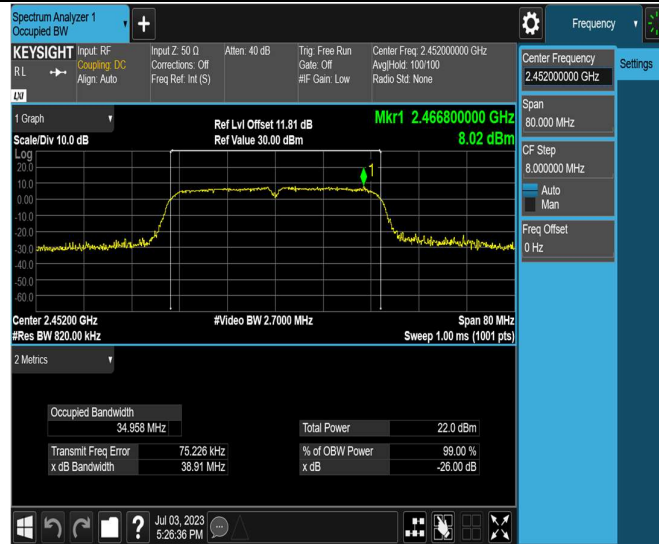
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix C: Maximum conducted output power

Test Result

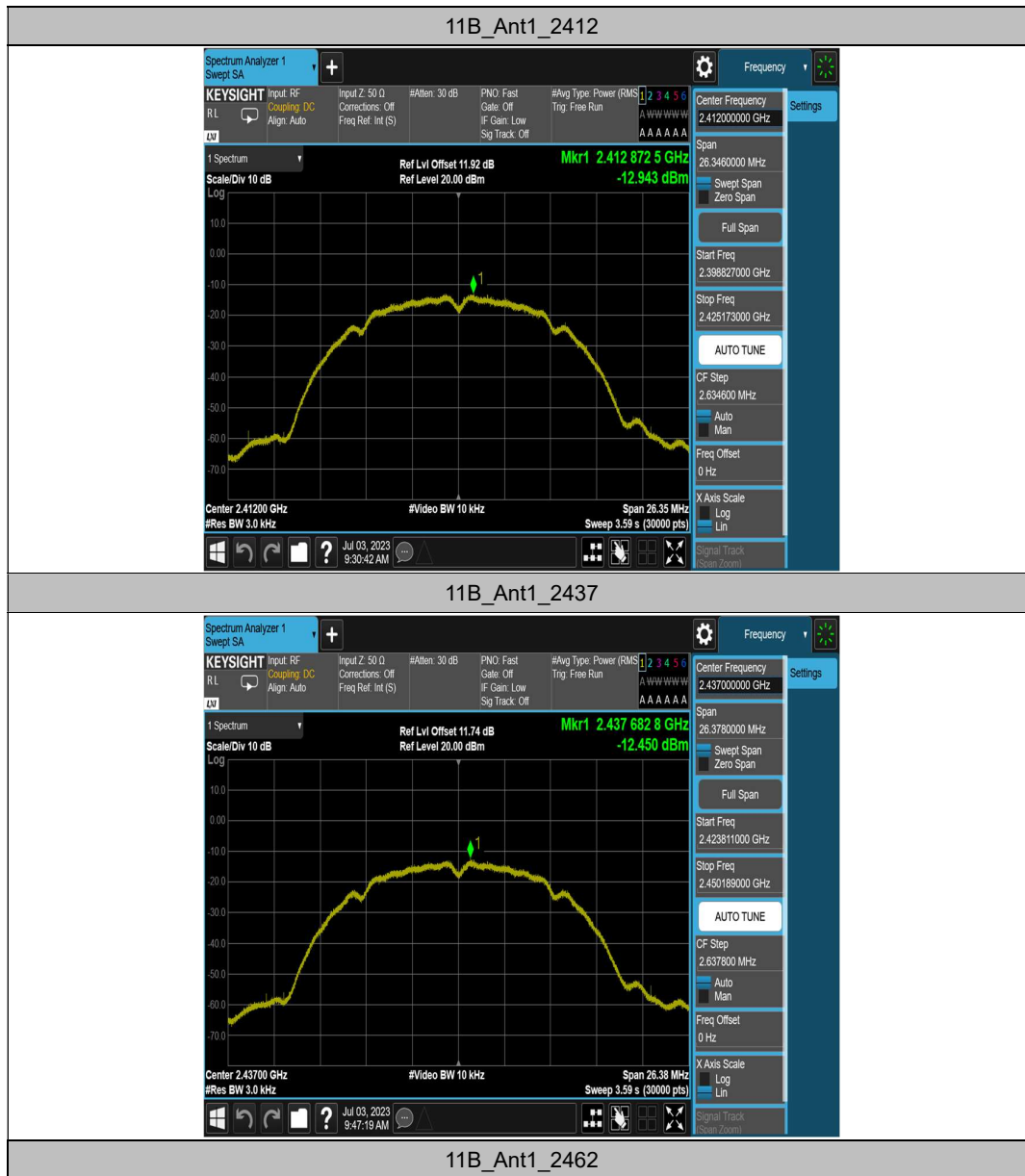
TestMode	Antenna	Frequency[MHz]	Conducted Power[dBm]	Conducted Limit[dBm]	EIRP [dBm]	EIRP Limit[dBm]	Verdict
11B	Ant1	2412	18.85	≤30.00	22.81	≤36.00	PASS
		2437	19.14	≤30.00	23.10	≤36.00	PASS
		2462	17.29	≤30.00	21.25	≤36.00	PASS
11G	Ant1	2412	16.12	≤30.00	20.08	≤36.00	PASS
		2437	16.44	≤30.00	20.40	≤36.00	PASS
		2462	16.50	≤30.00	20.46	≤36.00	PASS
11N20SISO	Ant1	2412	15.43	≤30.00	19.39	≤36.00	PASS
		2437	15.37	≤30.00	19.33	≤36.00	PASS
		2462	15.64	≤30.00	19.60	≤36.00	PASS
11N40SISO	Ant1	2422	14.86	≤30.00	18.82	≤36.00	PASS
		2437	14.56	≤30.00	18.52	≤36.00	PASS
		2452	15.14	≤30.00	19.10	≤36.00	PASS

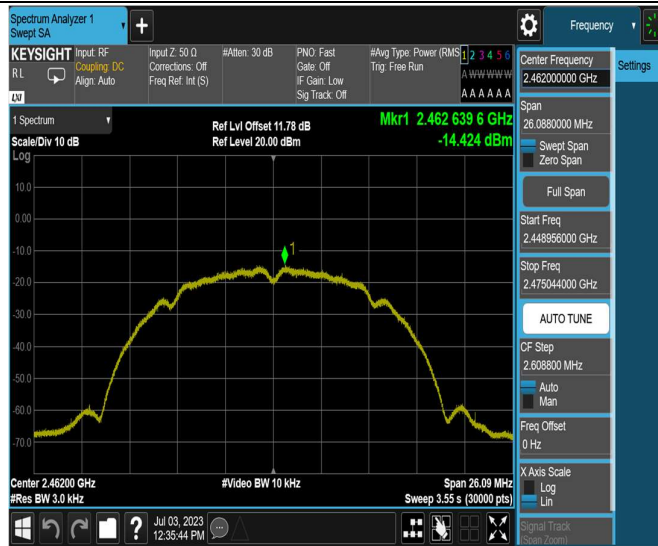
Appendix D: Maximum power spectral density

Test Result

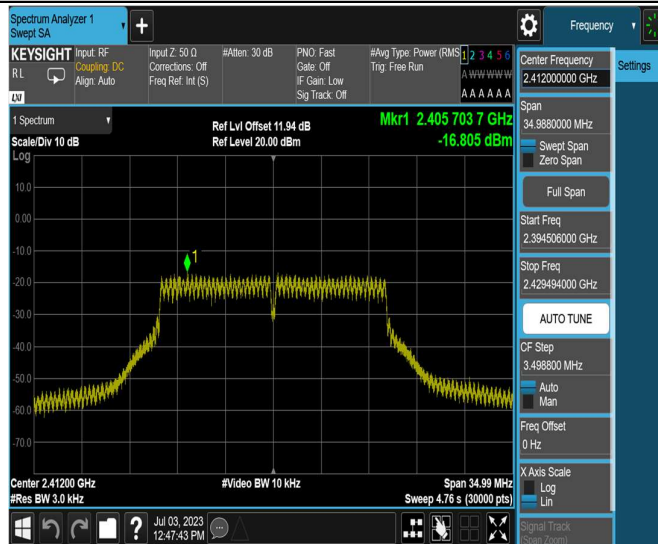
TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-12.94	≤8.00	PASS
		2437	-12.45	≤8.00	PASS
		2462	-14.42	≤8.00	PASS
11G	Ant1	2412	-16.81	≤8.00	PASS
		2437	-16.65	≤8.00	PASS
		2462	-16.06	≤8.00	PASS
11N20SISO	Ant1	2412	-17.6	≤8.00	PASS
		2437	-17.54	≤8.00	PASS
		2462	-17.65	≤8.00	PASS
11N40SISO	Ant1	2422	-19.24	≤8.00	PASS
		2437	-19.72	≤8.00	PASS
		2452	-19.58	≤8.00	PASS

Test Graphs

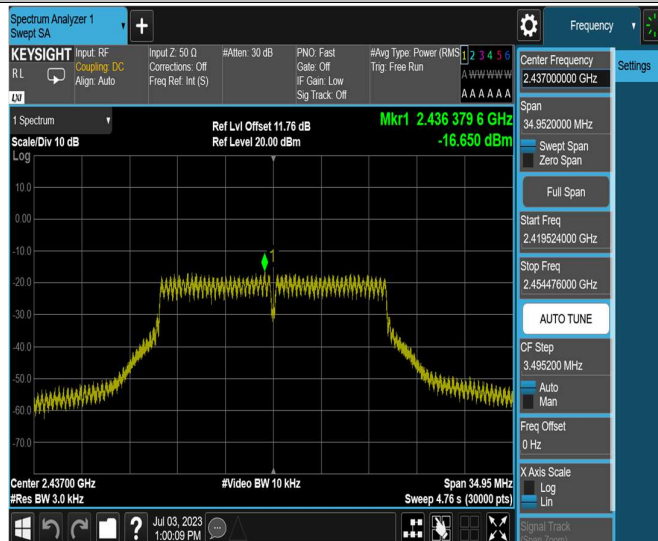




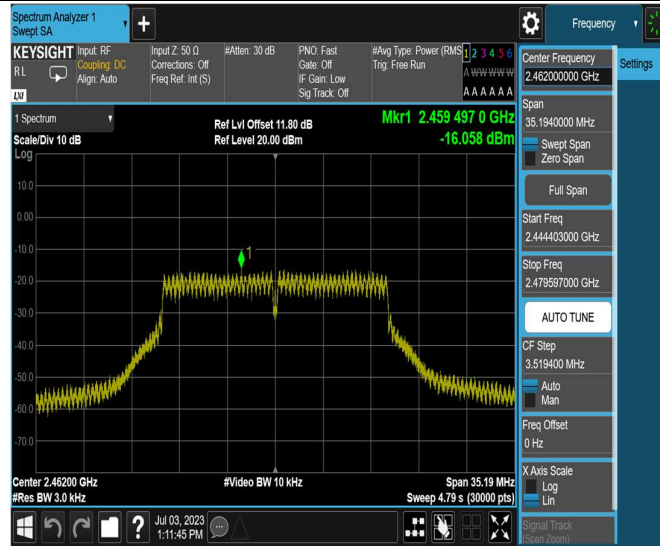
11G_Ant1_2412



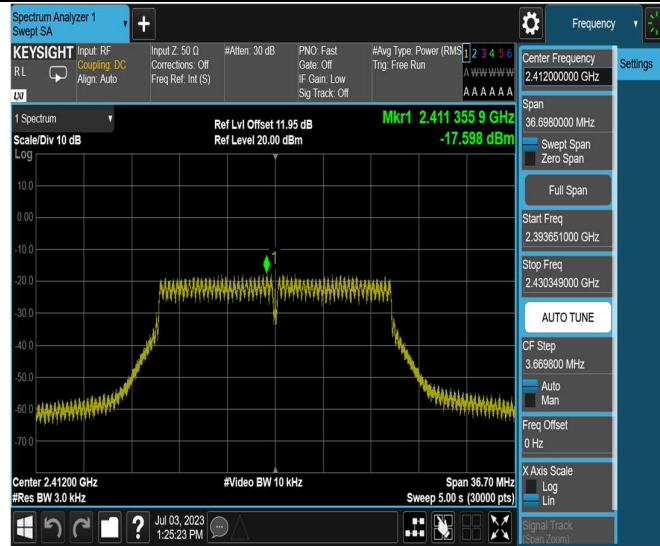
11G_Ant1_2437



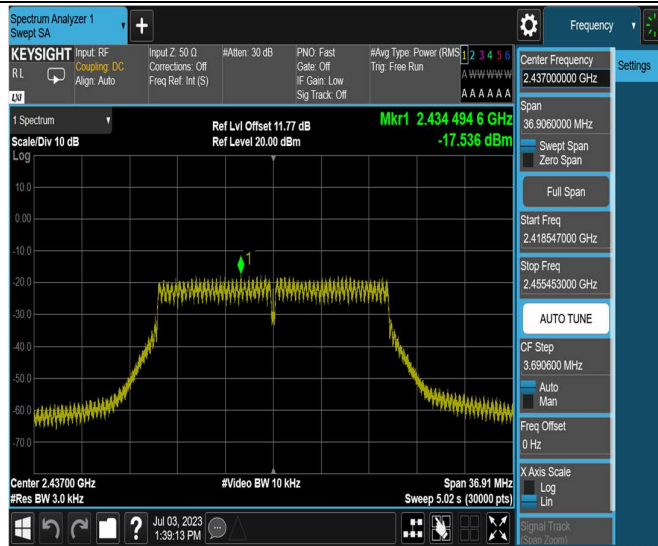
11G_Ant1_2462



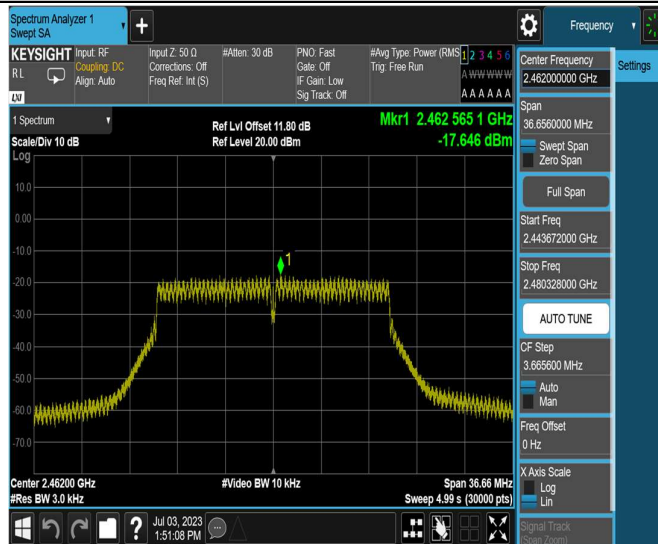
11N20SISO_Ant1_2412



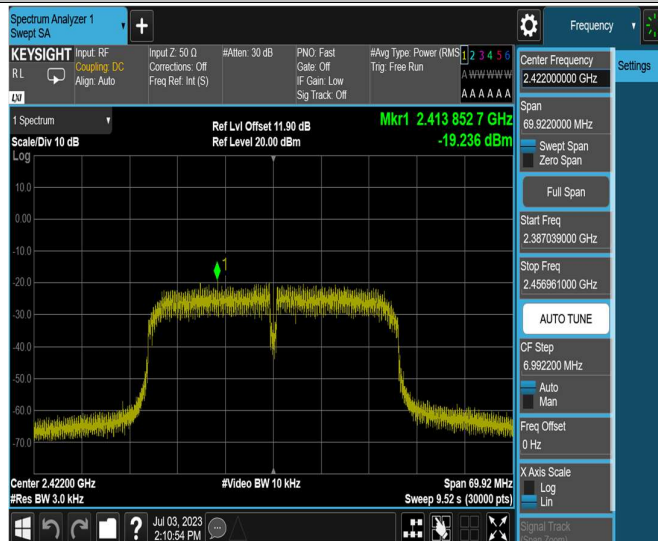
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

Spectrum Analyzer 1
Swept SA

KEYSIGHT Input RF
RL Coupling DC
 Align Auto

Input Z 50 Ω #Att: 30 dB PNO: Fast Gate: Off #Avg Type: Power (RMS) 1 2 3 4 5 6
Freq Ref: Int (S) IF Gain: Low Trg: Free Run A A W W W W W A A A A A A A

Center Frequency 2.437000000 GHz Settings

Span 69.8020000 MHz
Sweep Span Zero Span Full Span

Start Freq 2.402099000 GHz
Stop Freq 2.471901000 GHz
AUTO TUNE

CF Step 6.9802000 MHz
Auto Man
Freq Offset 0 Hz
X Axis Scale Log Lin

Signal Track (Real Zoom)

1 Spectrum
Scale/Div 10 dB Ref Lvl Offset 11.77 dB Mkr1 2.428 852 7 GHz -19.724 dBm
Ref Level 20.00 dBm

Log

Center 2.43700 GHz #Video BW 10 kHz Span 69.80 MHz
#Res BW 3.0 kHz Sweep 9.50 s (30000 pts)

11N40SISO_Ant1_2452

Keysight Spectrum Analyzer 1
Swept SA

Input: RF
Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)

Attenuation: 30 dB

PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off

Avg Type: Power (RMS)
Trig: Free Run

Center Frequency: 2.452000000 GHz

Span: 69.91600000 MHz

Sweep Span: Zero Span

Full Span

Start Freq: 2.417042000 GHz

Stop Freq: 2.486958000 GHz

AUTO TUNE

CF Step: 6.9916000 MHz

Auto Man

Freq Offset: 0 Hz

X Axis Scale: Log

Log Lin

Signal Track: (Real Zoom)

1 Spectrum
Scale/Div: 10 dB
Log

Ref Lvl Offset: 11.84 dB
Ref Level: 20.00 dBm

Mkr1: 2.4438510 GHz
-19.584 dBm

Center: 2.452000 GHz
#Res: BW 3.0 kHz

#Video: BW 10 kHz

Span: 69.92 MHz
Sweep: 9.52 s (30000 pts)

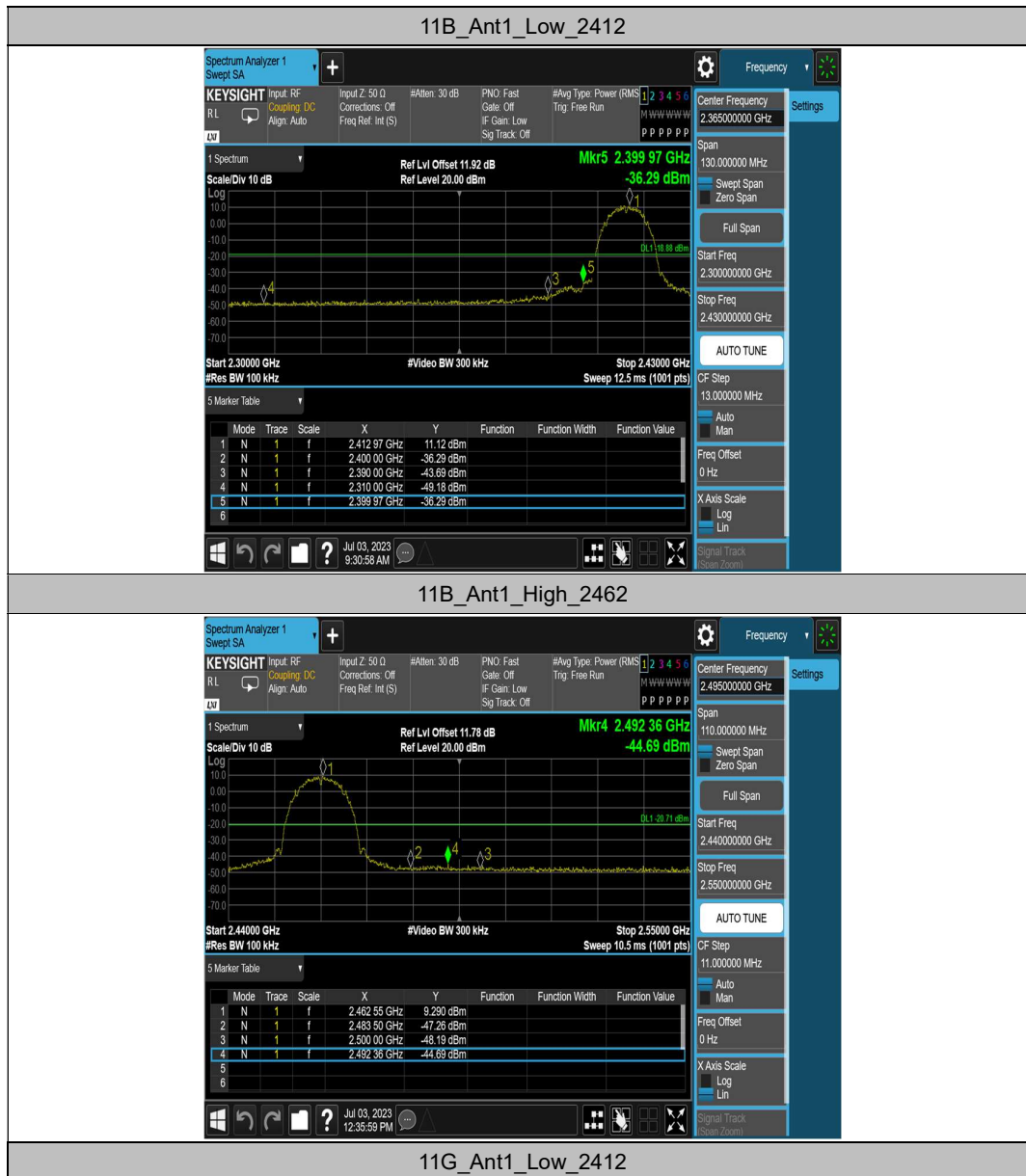
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Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel Name	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	11.12	-36.29	≤-18.88	PASS
		High	2462	9.29	-44.69	≤-20.71	PASS
11G	Ant1	Low	2412	4.34	-27.25	≤-25.66	PASS
		High	2462	5.02	-34.66	≤-24.98	PASS
11N20SISO	Ant1	Low	2412	3.76	-29.2	≤-26.24	PASS
		High	2462	4.52	-35.78	≤-25.48	PASS
11N40SISO	Ant1	Low	2422	1.09	-33.67	≤-28.91	PASS
		High	2452	0.76	-35.56	≤-29.24	PASS

Test Graphs





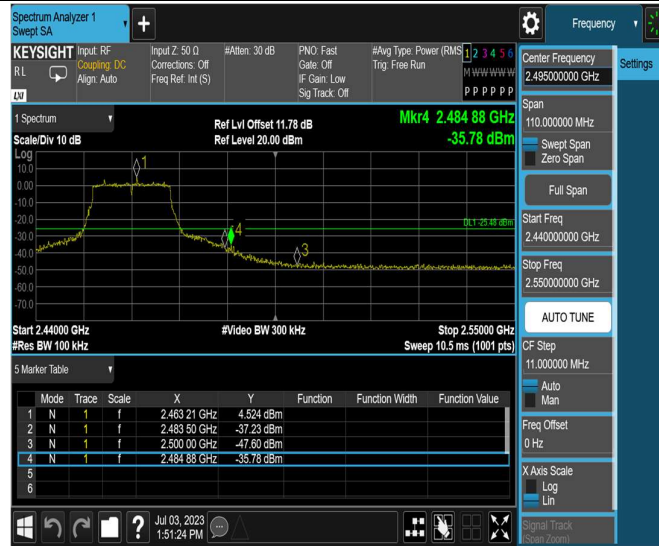
11G_Ant1_High_2462



11N20ISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	11.23	11.23	---	PASS
			30~1000	11.23	-57.56	≤-18.77	PASS
			1000~26500	11.23	-49.79	≤-18.77	PASS
		2437	Reference	11.57	11.57	---	PASS
			30~1000	11.57	-58.54	≤-18.43	PASS
			1000~26500	11.57	-50.18	≤-18.43	PASS
		2462	Reference	10.22	10.22	---	PASS
			30~1000	10.22	-58.29	≤-19.78	PASS
			1000~26500	10.22	-50.09	≤-19.78	PASS
11G	Ant1	2412	Reference	5.21	5.21	---	PASS
			30~1000	5.21	-57.58	≤-24.79	PASS
			1000~26500	5.21	-49.95	≤-24.79	PASS
		2437	Reference	5.55	5.55	---	PASS
			30~1000	5.55	-58.39	≤-24.45	PASS
			1000~26500	5.55	-49.92	≤-24.45	PASS
		2462	Reference	4.66	4.66	---	PASS
			30~1000	4.66	-58.34	≤-25.34	PASS
			1000~26500	4.66	-50.07	≤-25.34	PASS
11N20SISO	Ant1	2412	Reference	4.05	4.05	---	PASS
			30~1000	4.05	-58.19	≤-25.95	PASS
			1000~26500	4.05	-49.76	≤-25.95	PASS
		2437	Reference	4.21	4.21	---	PASS
			30~1000	4.21	-58.33	≤-25.79	PASS
			1000~26500	4.21	-50.32	≤-25.79	PASS
		2462	Reference	4.31	4.31	---	PASS
			30~1000	4.31	-58.45	≤-25.69	PASS
			1000~26500	4.31	-50.03	≤-25.69	PASS
11N40SISO	Ant1	2422	Reference	0.98	0.98	---	PASS
			30~1000	0.98	-53.74	≤-29.02	PASS
			1000~26500	0.98	-49.98	≤-29.02	PASS
		2437	Reference	0.98	0.98	---	PASS
			30~1000	0.98	-55.05	≤-29.02	PASS
			1000~26500	0.98	-42.24	≤-29.02	PASS
		2452	Reference	0.91	0.91	---	PASS
			30~1000	0.91	-55.06	≤-29.09	PASS
			1000~26500	0.91	-49.94	≤-29.09	PASS