TEST REPORT

Appendix B: Test results

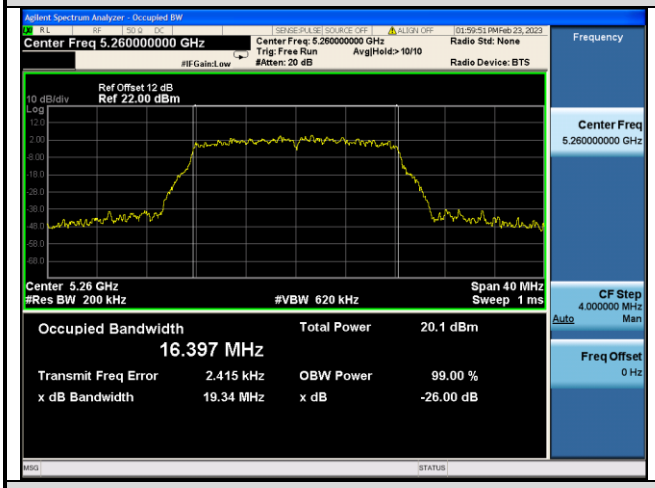
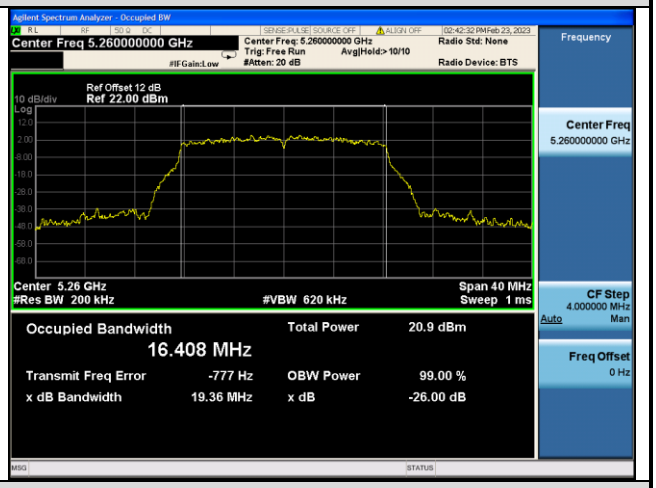
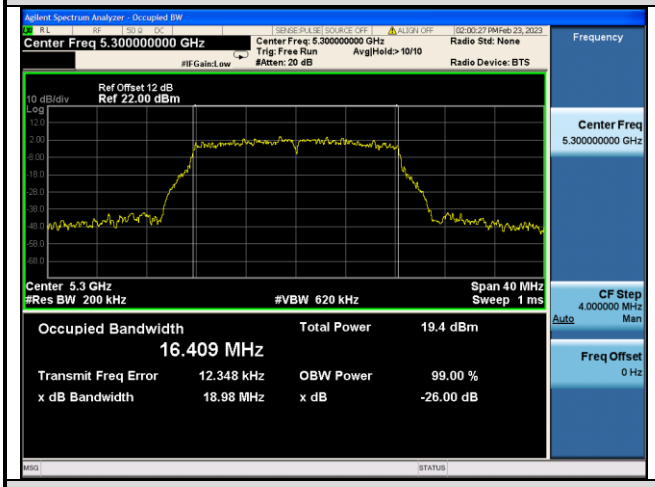
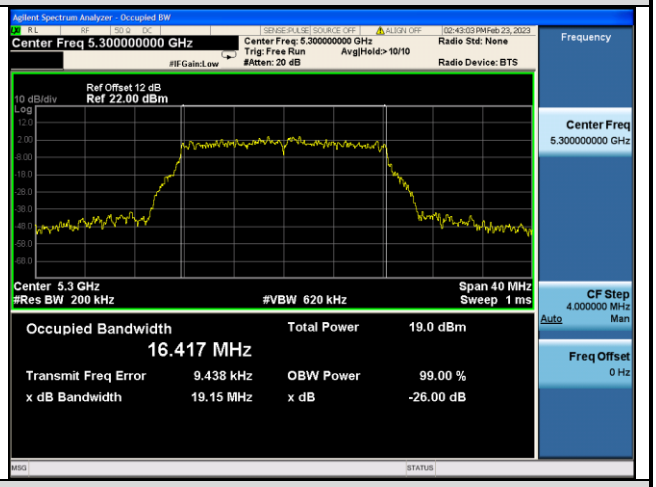
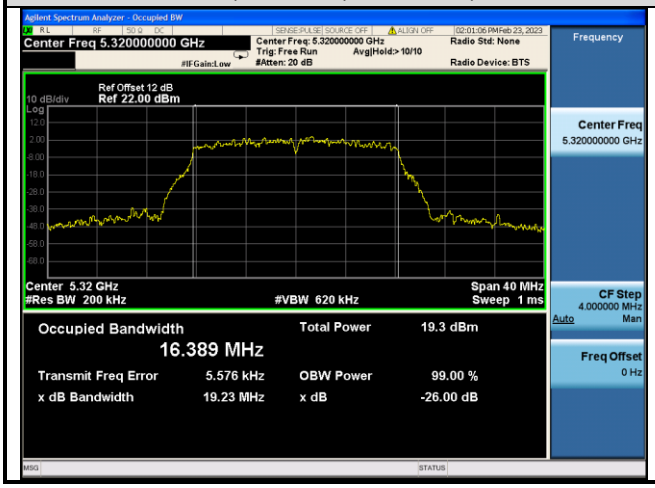
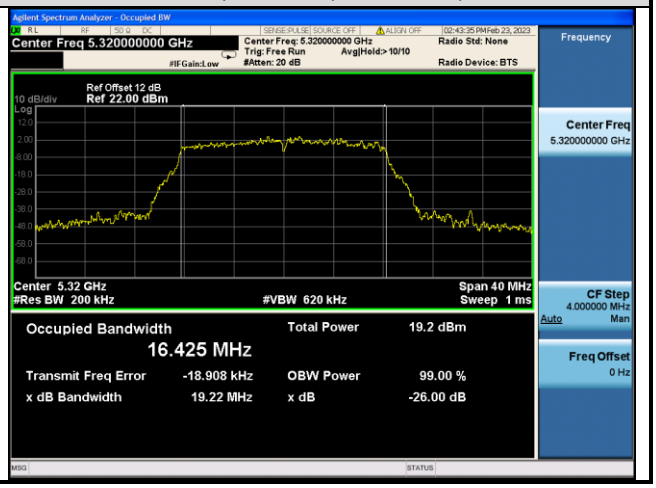
1 26 dB Bandwidth & 99% Occupied Bandwidth

1.1 Test Data

U-NII-2a 26 dB Bandwidth & 99% Occupied Bandwidth					
Mode	Test Frequency (MHz)	Ant	26 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Result
802.11a	5260	Ant0	19.34	16.529	Pass
		Ant1	19.36	16.502	Pass
	5300	Ant0	18.98	16.507	Pass
		Ant1	19.15	16.447	Pass
	5320	Ant0	19.23	16.520	Pass
		Ant1	19.22	16.523	Pass

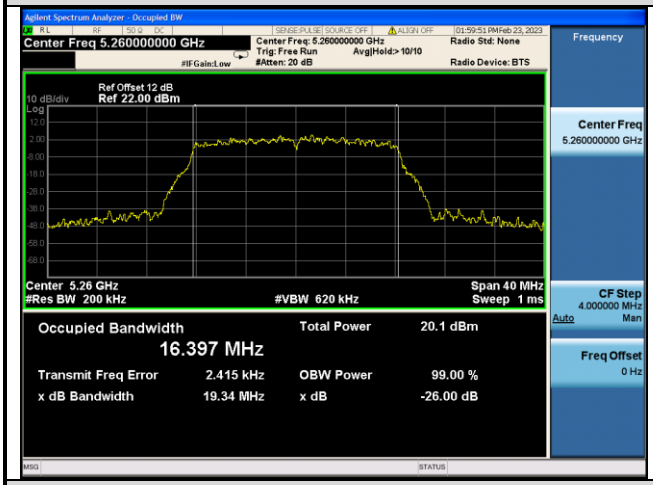
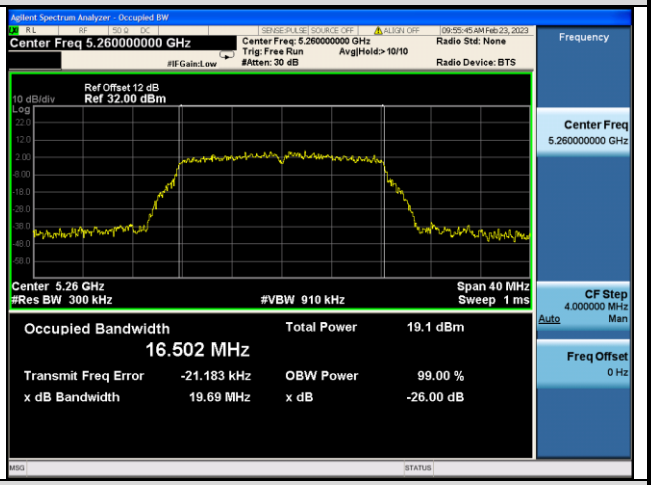
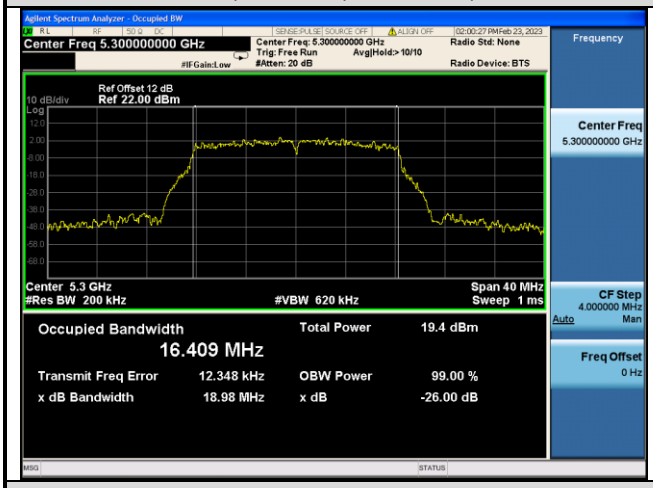
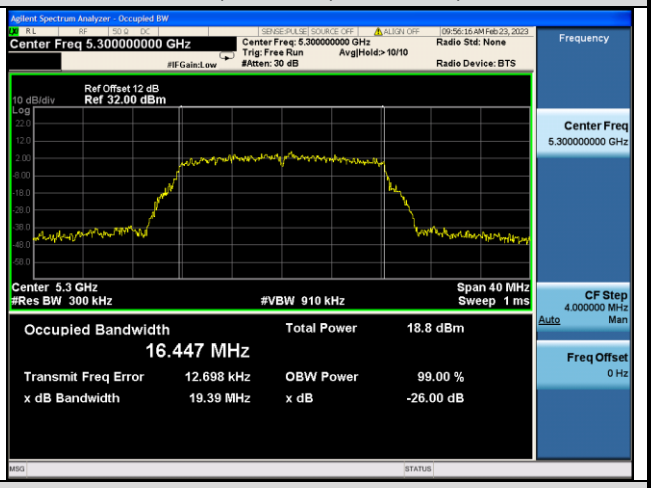
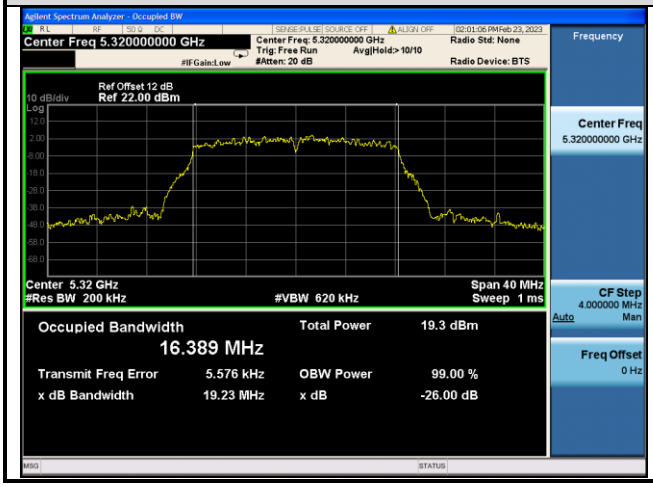
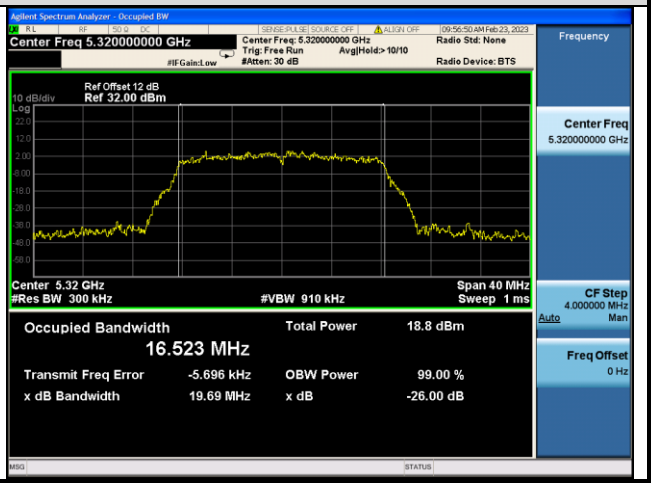
1.2 Test Plots

26 dB Bandwidth:

U-NII-2a,802.11a,5260MHz, Ant0	U-NII-2a,802.11a,5260MHz, Ant1
	
U-NII-2a,802.11a,5300MHz, Ant0	U-NII-2a,802.11a,5300MHz, Ant1
	
U-NII-2a,802.11a,5320MHz, Ant0	U-NII-2a,802.11a,5320MHz, Ant1
	

TEST REPORT

99% Occupied Bandwidth:

U-NII-2a,802.11a,5260MHz, Ant0	U-NII-2a,802.11a,5260MHz, Ant1
	
U-NII-2a,802.11a,5300MHz, Ant0	U-NII-2a,802.11a,5300MHz, Ant1
	
U-NII-2a,802.11a,5320MHz, Ant0	U-NII-2a,802.11a,5320MHz, Ant1
	

2 AVGSA Output Power

2.1 Test Data

U-NII-2a AVGSA Output Power						
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	Max Power (dBm)	FCC Limit (dBm)	Result
802.11a	5260	Ant0	1.19	13.60	23.78	Pass
		Ant1		13.42		
	5300	Ant0		13.53	23.78	Pass
		Ant1		13.46		
	5320	Ant0		13.31	23.78	Pass
		Ant1		13.33		

Note: The Duty Cycle Factor is compensated in the Max Power.

Frequency Band	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Completely uncorrelated chains directional	Power Limits (dBm)
U-NII-1	4.39	4.39	4.39	24
U-NII-2A	4.39	4.39	4.39	24
U-NII-2C	4.39	4.39	4.39	24
U-NII-3	4.39	4.39	4.39	30
Basic methodology with N_{ANT} transmit antennas, each with the same directional gain G_{ANT} dBi, being driven by N_{ANT} transmitter outputs of equal power. Directional gain is to be computed as follows:				
If all transmit signals are completely uncorrelated with each other,				
Directional gain = G_{ANT}				

IEEE 802.11a: the minimum 26 dB emission bandwidth is 18.98 MHz

11 dBm + $10\log_{10}(18.98)$ = 23.78 dBm

<23.78 dBm < 24 dBm

So the 23.78 dBm limit applicable

3 AVGSA Power Spectral Density

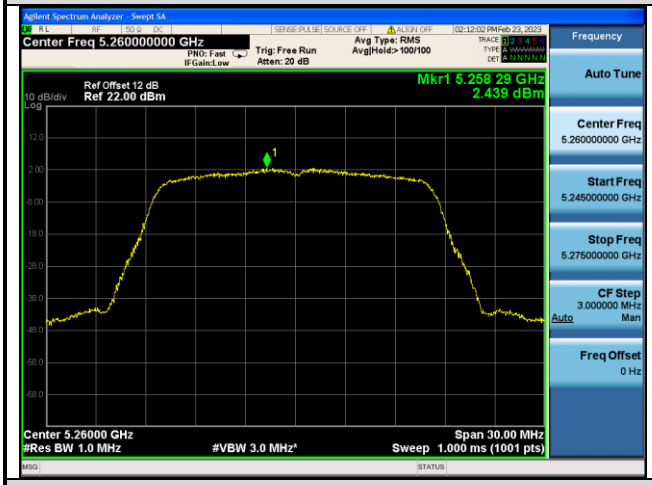
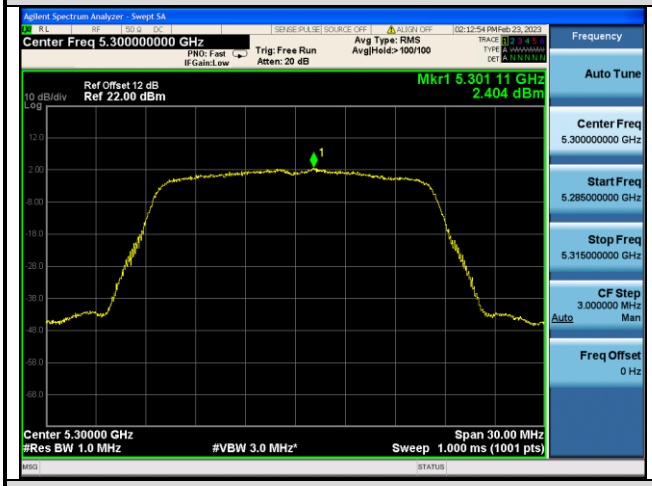
3.1 Test Data

U-NII-2a AVGSA Power Spectral Density							
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	PSD (dBm)	RBW (kHz)	FCC Limit (dBm)	Result
802.11a	5260	Ant0	1.19	3.629	1000	11	Pass
		Ant1		3.475			
	5300	Ant0		3.594	1000	11	Pass
		Ant1		4.054			
	5320	Ant0		3.328	1000	11	Pass
		Ant1		3.515			

Note: The Duty Cycle Factor is compensated in the PSD.

Frequency Band	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Completely uncorrelated chains directional	PSD Limits (dBm/MHz or dBm/500kHz)
U-NII-1	4.39	4.39	4.39	11
U-NII-2A	4.39	4.39	4.39	11
U-NII-2C	4.39	4.39	4.39	11
U-NII-3	4.39	4.39	4.39	30
Basic methodology with N_{ANT} transmit antennas, each with the same directional gain G_{ANT} dBi, being driven by N_{ANT} transmitter outputs of equal power. Directional gain is to be computed as follows:				
If all transmit signals are completely uncorrelated with each other,				
Directional gain = G_{ANT}				

3.2 Test Plots

U-NII-2a,802.11a,5260MHz, Ant0	U-NII-2a,802.11a,5260MHz, Ant1
	
U-NII-2a,802.11a,5300MHz, Ant0	U-NII-2a,802.11a,5300MHz, Ant1
	
U-NII-2a,802.11a,5320MHz, Ant0	U-NII-2a,802.11a,5320MHz, Ant1