



12.6. Appendix D: Frequency Stability 12.6.1. Test Result

Frequency Error vs. Voltage										
802.11a:5200MHz										
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute		
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	
T <sub>N</sub>	VL	5199.9830	-3.26	5199.9995	-0.09	5199.9952	-0.93	5200.0066	1.27	
T <sub>N</sub>	V <sub>N</sub>	5200.0005	0.09	5200.0105	2.03	5199.9956	-0.84	5200.0244	4.69	
T <sub>N</sub>	Vн	5199.9810	-3.66	5200.0099	1.90	5200.0102	1.97	5199.9766	-4.50	
Frequency Error vs. Temperature										
802.11a: 5200 MHz										
_	Volt.	0 Minute		2 Minute		5 Minute		10 Minute		
Temp.		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	
40	VN	5200.0098	1.88	5199.9890	-2.12	5199.9905	-1.84	5199.9769	-4.44	
30	V <sub>N</sub>	5200.0065	1.25	5200.0124	2.39	5199.9938	-1.18	5200.0214	4.12	
20	V <sub>N</sub>	5200.0110	2.12	5200.0061	1.18	5199.9945	-1.07	5199.9959	-0.78	
10	V <sub>N</sub>	5200.0034	0.65	5199.9798	-3.89	5199.9876	-2.38	5200.0069	1.32	
0	V <sub>N</sub>	5200.0169	3.25	5200.0048	0.92	5200.0105	2.02	5200.0060	1.15	

5 5 77 11										
Frequency Error vs. Voltage										
802.11a: 5825 MHz										
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute		
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	
T <sub>N</sub>	VL	5824.9870	-2.23	5824.9835	-2.84	5824.9762	-4.09	5825.0159	2.73	
T <sub>N</sub>	VN	5824.9787	-3.66	5825.0060	1.03	5825.0115	1.98	5825.0186	3.20	
T <sub>N</sub>	Vн	5825.0019	0.32	5825.0163	2.81	5824.9886	-1.95	5824.9828	-2.96	
Frequency Error vs. Temperature										
802.11a:5825MHz										
	Volt.	0 Minute		2 Minute		5 Minute		10 Minute		
Temp.		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	
40	$V_N$	5825.0051	0.87	5824.9867	-2.28	5824.9916	-1.45	5824.9811	-3.24	
30	V <sub>N</sub>	5824.9956	-0.76	5824.9913	-1.49	5824.9808	-3.29	5824.9927	-1.26	
20	V <sub>N</sub>	5825.0227	3.89	5825.0059	1.01	5825.0087	1.50	5824.9840	-2.74	
10	V <sub>N</sub>	5825.0103	1.76	5825.0071	1.22	5824.9893	-1.84	5825.0183	3.13	
0	V <sub>N</sub>	5824.9966	-0.59	5825.0174	2.99	5824.9832	-2.89	5824.9933	-1.16	

Note: All the modes have been tested, only the worst data was recorded in the report.



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## 12.7. Appendix E: Duty Cycle 12.7.1. Test Result

Test Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
11A	2.79	2.81	0.9929	99.29	0.03	0.36	0.01
11N20MIMO	1.32	1.34	0.9851	98.51	0.07	0.76	0.01
11N40MIMO	0.66	0.68	0.9706	97.06	0.13	1.52	2
11AC80MIMO	0.33	0.35	0.9429	94.29	0.26	3.03	4
11AX20MIMO	1.99	2.01	0.9900	99.00	0.04	0.50	0.01
11AX40MIMO	1.03	1.05	0.9810	98.10	0.08	0.97	0.01
11AX80MIMO	0.52	0.54	0.9630	96.30	0.16	1.92	2

Note:

Duty Cycle Correction Factor=10log (1/x).

Where: x is Duty Cycle (Linear)

Where: T is On Time

If that calculated VBW is not available on the analyzer then the next higher value should be

used.

If the EUT is configured to transmit with duty cycle  $\geq$  98%, set VBW  $\leq$  RBW/100 (i.e., 10 kHz) but not less than 10 Hz.



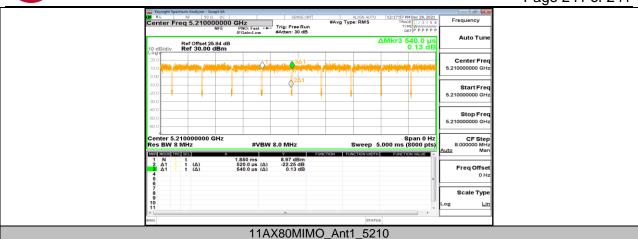
## 12.7.1. Test Graphs











**END OF REPORT**