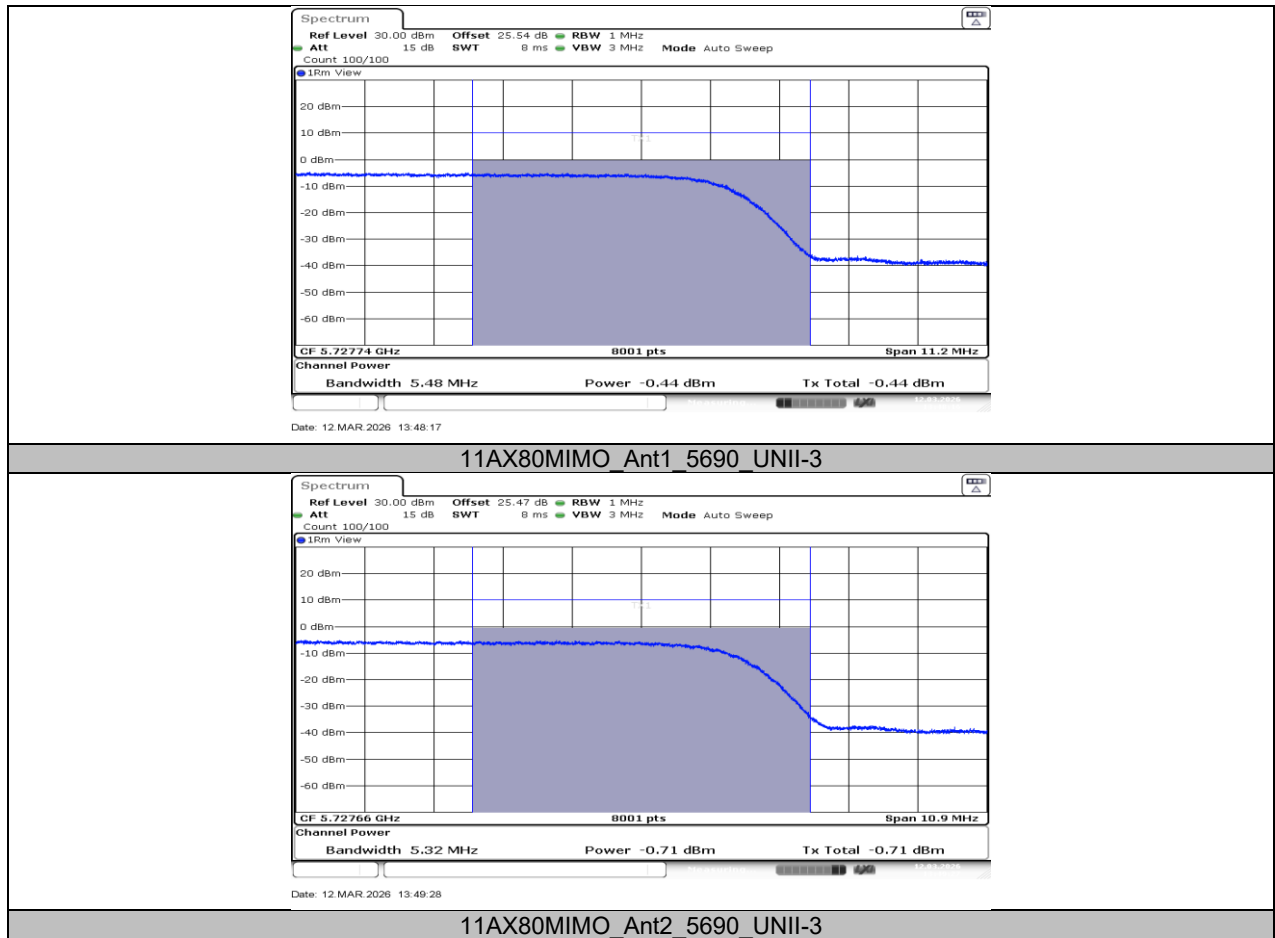




12.5. APPENDIX E: MAXIMUM POWER SPECTRAL DENSITY

12.5.1. Test Result

Test Mode	Antenna	Frequency[MHz]	Power [dBm/MHz]	Limit [dBm/MHz]	EIRP [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A-CDD	Ant1	5180	-0.06	≤17.00	5.83	≤10.00	PASS
	Ant2	5180	-0.65	≤17.00	6.33	≤10.00	PASS
	total	5180	2.67	≤16.80	9.1	≤10.00	PASS
	Ant1	5200	0.09	≤17.00	5.91	≤10.00	PASS
	Ant2	5200	-0.59	≤17.00	5.99	≤10.00	PASS
	total	5200	2.77	≤16.80	8.96	≤10.00	PASS
	Ant1	5240	0.07	≤17.00	6.47	≤10.00	PASS
	Ant2	5240	-0.67	≤17.00	5.5	≤10.00	PASS
	total	5240	2.73	≤16.80	9.02	≤10.00	PASS
	Ant1	5260	5.80	≤11.00	11.34	---	PASS
	Ant2	5260	3.97	≤11.00	9.98	---	PASS
	total	5260	7.99	≤10.90	13.72	---	PASS
	Ant1	5280	5.72	≤11.00	11.03	---	PASS
	Ant2	5280	4.34	≤11.00	10.79	---	PASS
	total	5280	8.09	≤10.90	13.92	---	PASS
	Ant1	5320	5.38	≤11.00	11.49	---	PASS
	Ant2	5320	3.64	≤11.00	10.76	---	PASS
	total	5320	7.61	≤10.90	14.15	---	PASS
	Ant1	5500	4.53	≤11.00	10.9	---	PASS
	Ant2	5500	4.33	≤11.00	10.16	---	PASS
	total	5500	7.44	≤11.00	13.56	---	PASS
	Ant1	5580	5.75	≤11.00	11.47	---	PASS
	Ant2	5580	5.20	≤11.00	11.1	---	PASS
	total	5580	8.49	≤11.00	14.3	---	PASS
	Ant1	5700	5.02	≤11.00	10.82	---	PASS
	Ant2	5700	4.40	≤11.00	10.02	---	PASS
	total	5700	7.73	≤11.00	13.45	---	PASS
	Ant1	5720 UNII-2C	5.67	≤11.00	10.93	---	PASS
	Ant2	5720 UNII-2C	4.75	≤11.00	10.73	---	PASS
	total	5720 UNII-2C	8.24	≤11.00	13.84	---	PASS
	Ant1	5720 UNII-3	1.23	≤30.00	6.45	---	PASS
	Ant2	5720 UNII-3	0.61	≤30.00	6.63	---	PASS
	total	5720 UNII-3	3.94	≤30.00	9.55	---	PASS
	Ant1	5745	6.00	≤30.00	12.25	---	PASS
	Ant2	5745	6.06	≤30.00	12.33	---	PASS
	total	5745	9.04	≤30.00	15.3	---	PASS
	Ant1	5785	5.23	≤30.00	11.7	---	PASS
	Ant2	5785	5.96	≤30.00	11.86	---	PASS
	total	5785	8.62	≤30.00	14.79	---	PASS
	Ant1	5825	5.45	≤30.00	10.98	---	PASS
	Ant2	5825	5.54	≤30.00	11.29	---	PASS
	total	5825	8.51	≤30.00	14.15	---	PASS
11N20MIMO	Ant1	5180	-0.44	≤17.00	5.83	≤10.00	PASS
	Ant2	5180	-0.66	≤17.00	6.33	≤10.00	PASS
	total	5180	2.46	≤16.80	9.1	≤10.00	PASS
	Ant1	5200	-0.12	≤17.00	5.91	≤10.00	PASS
	Ant2	5200	-0.69	≤17.00	5.99	≤10.00	PASS
	total	5200	2.61	≤16.80	8.96	≤10.00	PASS
	Ant1	5240	-0.29	≤17.00	6.47	≤10.00	PASS
	Ant2	5240	-1.04	≤17.00	5.5	≤10.00	PASS
	total	5240	2.36	≤16.80	9.02	≤10.00	PASS
	Ant1	5260	5.42	≤11.00	11.34	---	PASS
	Ant2	5260	3.64	≤11.00	9.98	---	PASS
	total	5260	7.63	≤10.90	13.72	---	PASS
	Ant1	5280	5.38	≤11.00	11.03	---	PASS

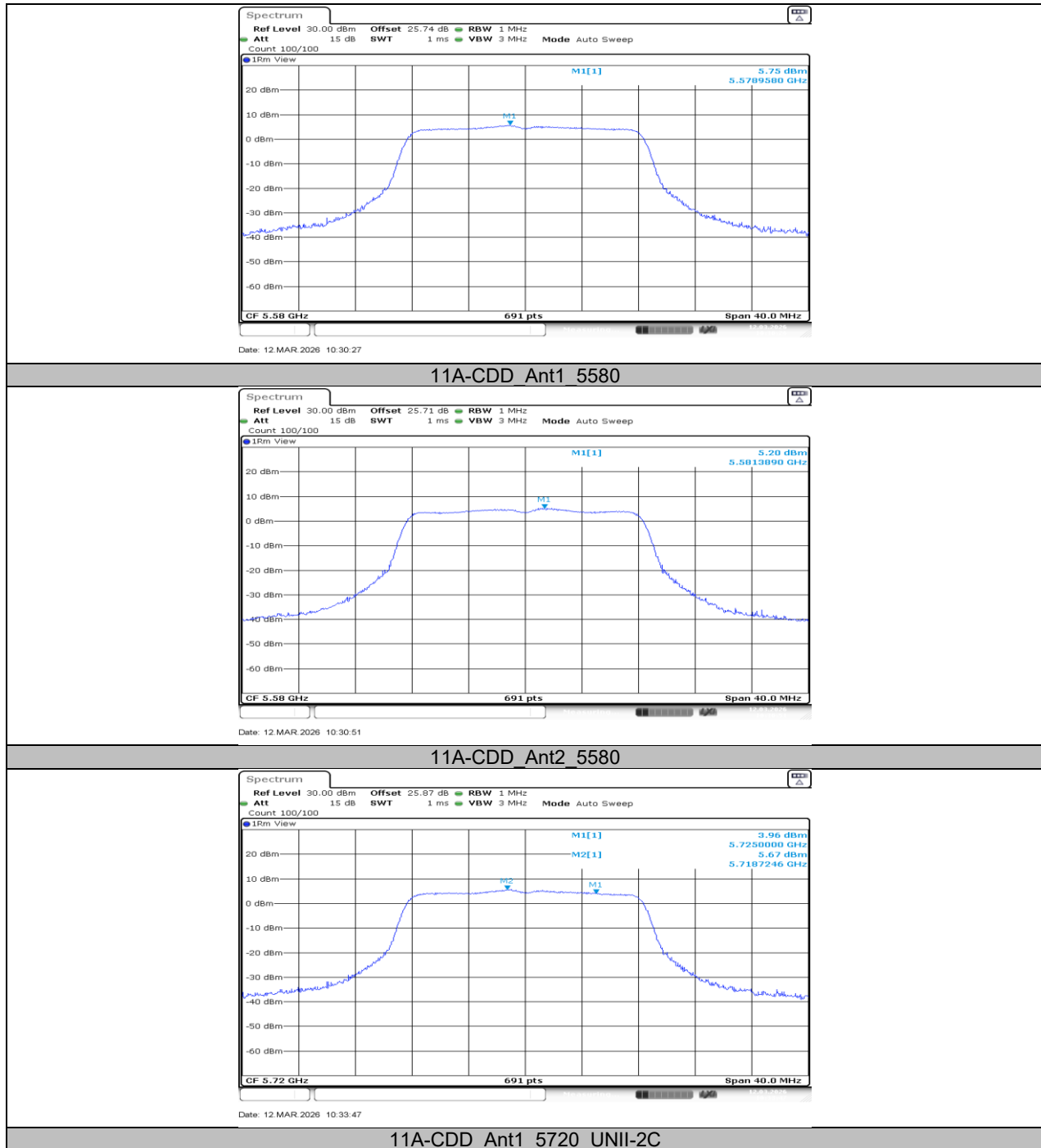
	Ant2	5280	3.79	≤11.00	10.79	---	PASS
	total	5280	7.67	≤10.90	13.92	---	PASS
	Ant1	5320	4.92	≤11.00	11.49	---	PASS
	Ant2	5320	3.29	≤11.00	10.76	---	PASS
	total	5320	7.19	≤10.90	14.15	---	PASS
	Ant1	5500	4.35	≤11.00	10.9	---	PASS
	Ant2	5500	3.75	≤11.00	10.16	---	PASS
	total	5500	7.07	≤11.00	13.56	---	PASS
	Ant1	5580	5.17	≤11.00	11.47	---	PASS
	Ant2	5580	4.96	≤11.00	11.1	---	PASS
	total	5580	8.08	≤11.00	14.3	---	PASS
	Ant1	5700	4.56	≤11.00	10.82	---	PASS
	Ant2	5700	4.14	≤11.00	10.02	---	PASS
	total	5700	7.37	≤11.00	13.45	---	PASS
	Ant1	5720 UNII-2C	5.06	≤11.00	10.93	---	PASS
	Ant2	5720 UNII-2C	4.45	≤11.00	10.73	---	PASS
	total	5720 UNII-2C	7.78	≤11.00	13.84	---	PASS
	Ant1	5720 UNII-3	1.07	≤30.00	6.45	---	PASS
	Ant2	5720 UNII-3	0.13	≤30.00	6.63	---	PASS
	total	5720 UNII-3	3.64	≤30.00	9.55	---	PASS
	Ant1	5745	5.89	≤30.00	12.25	---	PASS
	Ant2	5745	5.85	≤30.00	12.33	---	PASS
	total	5745	8.88	≤30.00	15.3	---	PASS
	Ant1	5785	5.20	≤30.00	11.7	---	PASS
	Ant2	5785	5.29	≤30.00	11.86	---	PASS
	total	5785	8.26	≤30.00	14.79	---	PASS
	Ant1	5825	5.13	≤30.00	10.98	---	PASS
	Ant2	5825	4.85	≤30.00	11.29	---	PASS
	total	5825	8.00	≤30.00	14.15	---	PASS
11N40MIMO	Ant1	5190	0.23	≤17.00	5.66	≤10.00	PASS
	Ant2	5190	-0.61	≤17.00	6.48	≤10.00	PASS
	total	5190	2.84	≤16.80	9.1	≤10.00	PASS
	Ant1	5230	0.14	≤17.00	5.59	≤10.00	PASS
	Ant2	5230	-0.73	≤17.00	5.35	≤10.00	PASS
	total	5230	2.74	≤16.80	8.48	≤10.00	PASS
	Ant1	5270	2.93	≤11.00	8.87	---	PASS
	Ant2	5270	0.94	≤11.00	8.42	---	PASS
	total	5270	5.06	≤10.90	11.66	---	PASS
	Ant1	5310	2.49	≤11.00	8.05	---	PASS
	Ant2	5310	1.08	≤11.00	7.71	---	PASS
	total	5310	4.85	≤10.90	10.89	---	PASS
	Ant1	5510	2.00	≤11.00	5.15	---	PASS
	Ant2	5510	1.46	≤11.00	5.56	---	PASS
	total	5510	4.75	≤11.00	8.37	---	PASS
	Ant1	5550	2.91	≤11.00	9.01	---	PASS
	Ant2	5550	2.76	≤11.00	8.54	---	PASS
	total	5550	5.85	≤11.00	11.79	---	PASS
	Ant1	5670	2.28	≤11.00	8.65	---	PASS
	Ant2	5670	2.42	≤11.00	9.17	---	PASS
	total	5670	5.36	≤11.00	11.93	---	PASS
	Ant1	5710 UNII-2C	2.45	≤11.00	8.41	---	PASS
	Ant2	5710 UNII-2C	1.82	≤11.00	8.84	---	PASS
	total	5710 UNII-2C	5.16	≤11.00	11.64	---	PASS
	Ant1	5710 UNII-3	-3.53	≤30.00	1.9	---	PASS
	Ant2	5710 UNII-3	-4.55	≤30.00	2.45	---	PASS
	total	5710 UNII-3	-1.00	≤30.00	5.19	---	PASS
	Ant1	5755	3.74	≤30.00	9.03	---	PASS
	Ant2	5755	3.85	≤30.00	9.46	---	PASS
	total	5755	6.81	≤30.00	12.26	---	PASS
	Ant1	5795	2.80	≤30.00	8.86	---	PASS

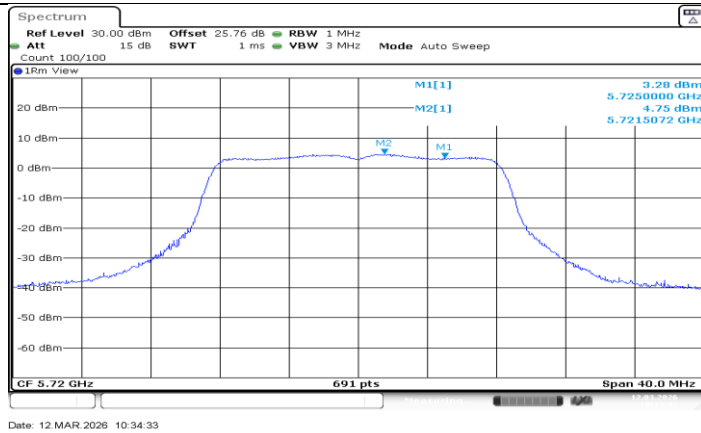
	Ant2	5795	3.19	≤30.00	9.57	---	PASS
	total	5795	6.01	≤30.00	12.24	---	PASS
11AC80MIMO	Ant1	5210	-4.03	≤17.00	5.78	≤10.00	PASS
	Ant2	5210	-3.26	≤17.00	5.43	≤10.00	PASS
	total	5210	-0.62	≤16.80	8.62	≤10.00	PASS
	Ant1	5290	-0.32	≤11.00	6.45	---	PASS
	Ant2	5290	-1.90	≤11.00	6.47	---	PASS
	total	5290	1.97	≤10.90	9.47	---	PASS
	Ant1	5530	-1.80	≤11.00	4.14	---	PASS
	Ant2	5530	-2.18	≤11.00	4.25	---	PASS
	total	5530	1.02	≤11.00	7.21	---	PASS
	Ant1	5610	-1.13	≤11.00	7	---	PASS
	Ant2	5610	-1.55	≤11.00	6.27	---	PASS
	total	5610	1.68	≤11.00	9.66	---	PASS
	Ant1	5690 UNII-2C	-1.54	≤11.00	5.63	---	PASS
	Ant2	5690 UNII-2C	-1.62	≤11.00	5.84	---	PASS
	total	5690 UNII-2C	1.43	≤11.00	8.75	---	PASS
	Ant1	5690 UNII-3	-7.89	≤30.00	-1.78	---	PASS
	Ant2	5690 UNII-3	-8.41	≤30.00	-0.67	---	PASS
	total	5690 UNII-3	-5.13	≤30.00	1.82	---	PASS
	Ant1	5775	-0.93	≤30.00	3.62	---	PASS
	Ant2	5775	-1.34	≤30.00	3.64	---	PASS
	total	5775	1.88	≤30.00	6.64	---	PASS
11AX20MIMO	Ant1	5180	-0.51	≤17.00	5.83	≤10.00	PASS
	Ant2	5180	-0.76	≤17.00	6.33	≤10.00	PASS
	total	5180	2.38	≤16.80	9.1	≤10.00	PASS
	Ant1	5200	-0.11	≤17.00	5.91	≤10.00	PASS
	Ant2	5200	-0.95	≤17.00	5.99	≤10.00	PASS
	total	5200	2.50	≤16.80	8.96	≤10.00	PASS
	Ant1	5240	-0.05	≤17.00	6.47	≤10.00	PASS
	Ant2	5240	-0.91	≤17.00	5.5	≤10.00	PASS
	total	5240	2.55	≤16.80	9.02	≤10.00	PASS
	Ant1	5260	5.13	≤11.00	11.34	---	PASS
	Ant2	5260	3.21	≤11.00	9.98	---	PASS
	total	5260	7.29	≤10.90	13.72	---	PASS
	Ant1	5280	4.97	≤11.00	11.03	---	PASS
	Ant2	5280	3.27	≤11.00	10.79	---	PASS
	total	5280	7.21	≤10.90	13.92	---	PASS
	Ant1	5320	4.45	≤11.00	11.49	---	PASS
	Ant2	5320	2.56	≤11.00	10.76	---	PASS
	total	5320	6.62	≤10.90	14.15	---	PASS
	Ant1	5500	3.65	≤11.00	10.9	---	PASS
	Ant2	5500	3.11	≤11.00	10.16	---	PASS
	total	5500	6.40	≤11.00	13.56	---	PASS
	Ant1	5580	4.08	≤11.00	11.47	---	PASS
	Ant2	5580	3.56	≤11.00	11.1	---	PASS
	total	5580	6.84	≤11.00	14.3	---	PASS
	Ant1	5700	3.90	≤11.00	10.82	---	PASS
	Ant2	5700	3.07	≤11.00	10.02	---	PASS
	total	5700	6.52	≤11.00	13.45	---	PASS
	Ant1	5720 UNII-2C	3.98	≤11.00	10.93	---	PASS
	Ant2	5720 UNII-2C	3.27	≤11.00	10.73	---	PASS
	total	5720 UNII-2C	6.65	≤11.00	13.84	---	PASS
	Ant1	5720 UNII-3	0.57	≤30.00	6.45	---	PASS
	Ant2	5720 UNII-3	-0.60	≤30.00	6.63	---	PASS
	total	5720 UNII-3	3.03	≤30.00	9.55	---	PASS
	Ant1	5745	5.70	≤30.00	12.25	---	PASS
	Ant2	5745	5.55	≤30.00	12.33	---	PASS
	total	5745	8.64	≤30.00	15.3	---	PASS
	Ant1	5785	5.00	≤30.00	11.7	---	PASS

	Ant2	5785	5.55	≤30.00	11.86	---	PASS
	total	5785	8.29	≤30.00	14.79	---	PASS
	Ant1	5825	4.83	≤30.00	10.98	---	PASS
	Ant2	5825	4.75	≤30.00	11.29	---	PASS
	total	5825	7.80	≤30.00	14.15	---	PASS
11AX40MIMO	Ant1	5190	0.32	≤17.00	5.66	≤10.00	PASS
	Ant2	5190	-0.71	≤17.00	6.48	≤10.00	PASS
	total	5190	2.85	≤16.80	9.1	≤10.00	PASS
	Ant1	5230	-0.08	≤17.00	5.59	≤10.00	PASS
	Ant2	5230	-1.17	≤17.00	5.35	≤10.00	PASS
	total	5230	2.42	≤16.80	8.48	≤10.00	PASS
	Ant1	5270	2.95	≤11.00	8.87	---	PASS
	Ant2	5270	0.88	≤11.00	8.42	---	PASS
	total	5270	5.05	≤10.90	11.66	---	PASS
	Ant1	5310	2.56	≤11.00	8.05	---	PASS
	Ant2	5310	0.91	≤11.00	7.71	---	PASS
	total	5310	4.82	≤10.90	10.89	---	PASS
	Ant1	5510	2.07	≤11.00	5.15	---	PASS
	Ant2	5510	1.35	≤11.00	5.56	---	PASS
	total	5510	4.74	≤11.00	8.37	---	PASS
	Ant1	5550	3.09	≤11.00	9.01	---	PASS
	Ant2	5550	2.73	≤11.00	8.54	---	PASS
	total	5550	5.92	≤11.00	11.79	---	PASS
	Ant1	5670	2.36	≤11.00	8.65	---	PASS
	Ant2	5670	2.42	≤11.00	9.17	---	PASS
	total	5670	5.40	≤11.00	11.93	---	PASS
	Ant1	5710 UNII-2C	2.38	≤11.00	8.41	---	PASS
	Ant2	5710 UNII-2C	2.05	≤11.00	8.84	---	PASS
	total	5710 UNII-2C	5.23	≤11.00	11.64	---	PASS
	Ant1	5710 UNII-3	-3.15	≤30.00	1.9	---	PASS
	Ant2	5710 UNII-3	-4.65	≤30.00	2.45	---	PASS
	total	5710 UNII-3	-0.83	≤30.00	5.19	---	PASS
	Ant1	5755	3.90	≤30.00	9.03	---	PASS
	Ant2	5755	3.44	≤30.00	9.46	---	PASS
	total	5755	6.69	≤30.00	12.26	---	PASS
	Ant1	5795	2.75	≤30.00	8.86	---	PASS
	Ant2	5795	3.26	≤30.00	9.57	---	PASS
	total	5795	6.02	≤30.00	12.24	---	PASS
11AX80MIMO	Ant1	5210	-2.62	≤17.00	5.78	≤10.00	PASS
	Ant2	5210	-1.80	≤17.00	5.43	≤10.00	PASS
	total	5210	0.82	≤16.80	8.62	≤10.00	PASS
	Ant1	5290	-2.42	≤11.00	6.45	---	PASS
	Ant2	5290	-1.67	≤11.00	6.47	---	PASS
	total	5290	0.98	≤10.90	9.47	---	PASS
	Ant1	5530	-2.35	≤11.00	4.14	---	PASS
	Ant2	5530	-2.63	≤11.00	4.25	---	PASS
	total	5530	0.52	≤11.00	7.21	---	PASS
	Ant1	5610	-0.52	≤11.00	7	---	PASS
	Ant2	5610	-0.59	≤11.00	6.27	---	PASS
	total	5610	2.46	≤11.00	9.66	---	PASS
	Ant1	5690 UNII-2C	-0.54	≤11.00	5.63	---	PASS
	Ant2	5690 UNII-2C	-0.63	≤11.00	5.84	---	PASS
	total	5690 UNII-2C	2.43	≤11.00	8.75	---	PASS
	Ant1	5690 UNII-3	-7.66	≤30.00	-1.78	---	PASS
	Ant2	5690 UNII-3	-6.62	≤30.00	-0.67	---	PASS
	total	5690 UNII-3	-4.10	≤30.00	1.82	---	PASS
	Ant1	5775	-1.25	≤30.00	3.62	---	PASS
	Ant2	5775	-1.95	≤30.00	3.64	---	PASS
	total	5775	1.42	≤30.00	6.64	---	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

12.5.2. Test Graphs

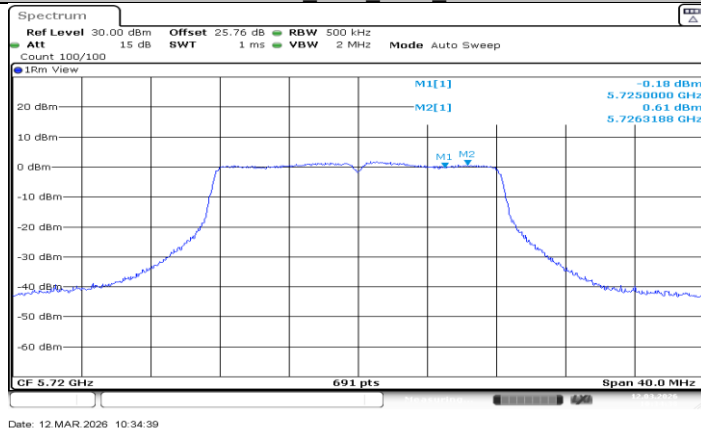




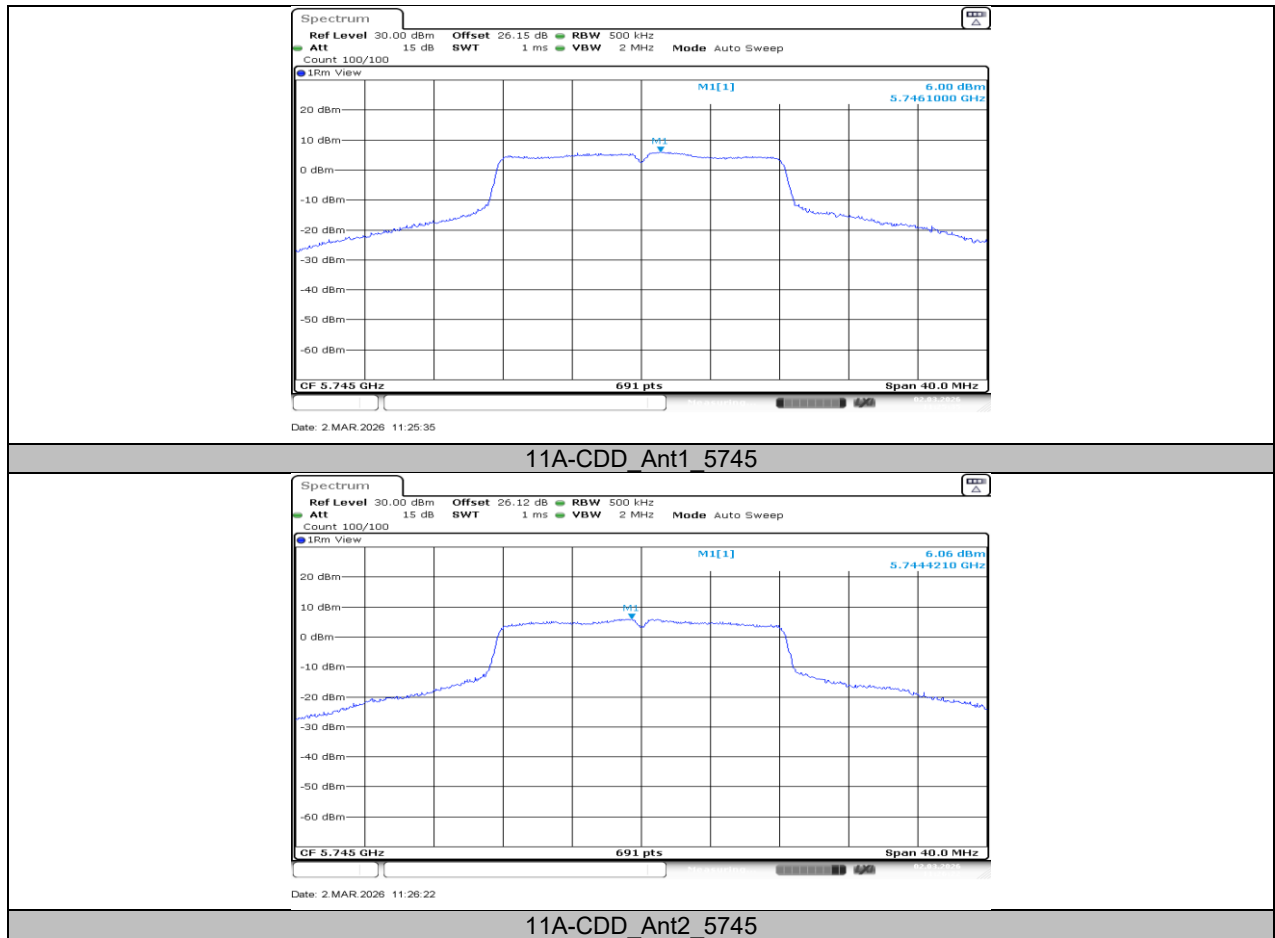
11A-CDD_Ant2_5720_UNII-2C



11A-CDD_Ant1_5720_UNII-3



11A-CDD_Ant2_5720_UNII-3



Note:

1. Only the worst data plot is reported to show setting parameter compliance with testing method/procedure.
2. For all modes, RBW setting to 1MHz is used on PSD measurement in UNII-1/UNII-2A/UNII-2C.
3. For all modes, RBW setting to 500kHz is used on PSD measurement in UNII-3.

12.6. APPENDIX F: 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)
TN	VL	5200.0006	0.12	5199.9754	-4.72	5200.0090	1.73	5199.9758	-4.65
TN	VN	5200.0232	4.47	5199.9959	-0.79	5200.0226	4.34	5200.0007	0.14
TN	VH	5199.9757	-4.67	5199.9818	-3.50	5199.9796	-3.93	5200.0094	1.81
Frequency Error vs. Temperature									
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)
40	VN	5200.0221	4.25	5200.0074	1.43	5199.9791	-4.02	5199.9939	-1.17
30	VN	5200.0038	0.74	5200.0028	0.54	5200.0140	2.69	5200.0066	1.27
20	VN	5200.0242	4.65	5199.9887	-2.17	5200.0181	3.48	5200.0086	1.66
10	VN	5200.0137	2.64	5199.9784	-4.15	5199.9829	-3.28	5200.0055	1.06
0	VN	5200.0111	2.14	5200.0089	1.72	5200.0218	4.20	5200.0063	1.21

Note:

1. All antennas, test modes and test channels have been tested, only the worst data record in the report.
2. For the detail Test Conditions, please refer to section 7.5 TEST ENVIRONMENT.

12.7. APPENDIX G: 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-CDD	1.39	1.45	0.9586	95.86	0.18	0.72	1
11N20MIMO	1.17	1.23	0.9512	95.12	0.22	0.85	1
11N40MIMO	0.32	0.38	0.8421	84.21	0.75	3.13	4
11AC80MIMO	0.30	0.35	0.8571	85.71	0.67	3.33	4
11AX20MIMO	1.01	1.07	0.9439	94.39	0.25	0.99	1
11AX40MIMO	0.30	0.36	0.8333	83.33	0.79	3.33	4
11AX80MIMO	0.18	0.24	0.7500	75.00	1.25	5.56	6

Note:

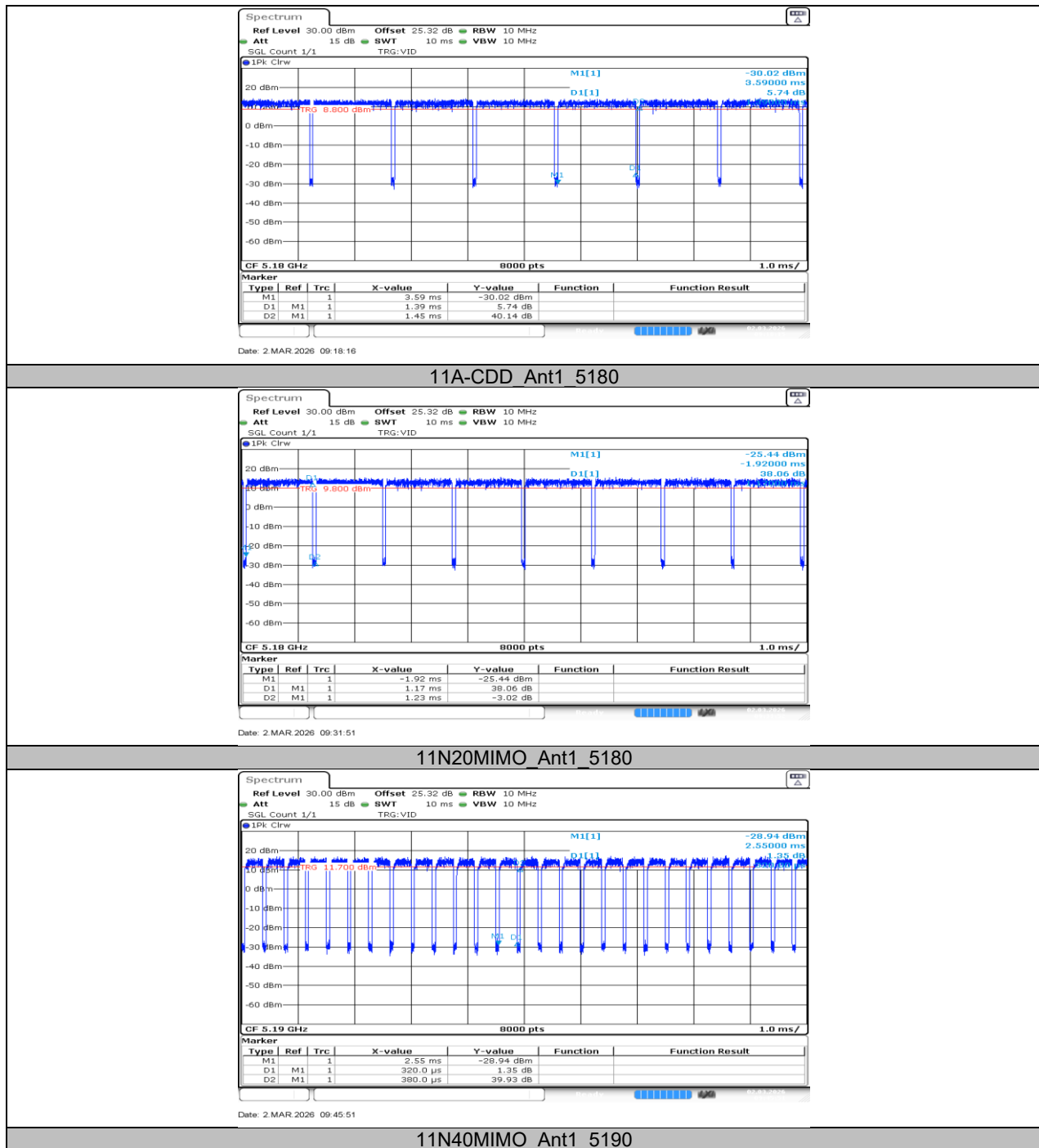
Duty Cycle Correction Factor= $10\log(1/x)$.

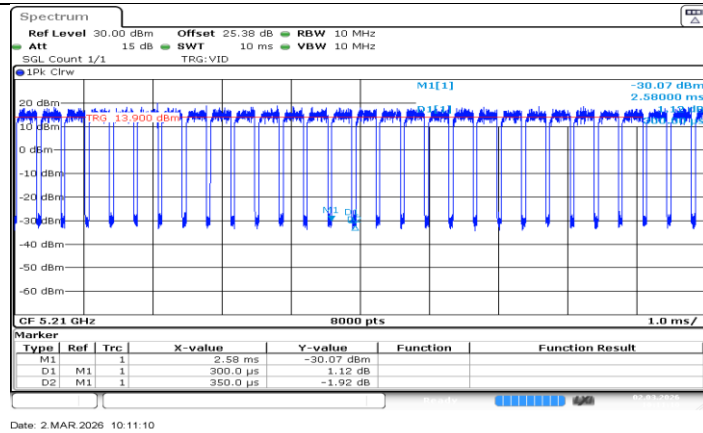
Where: x is Duty Cycle (Linear)

Where: T is On Time

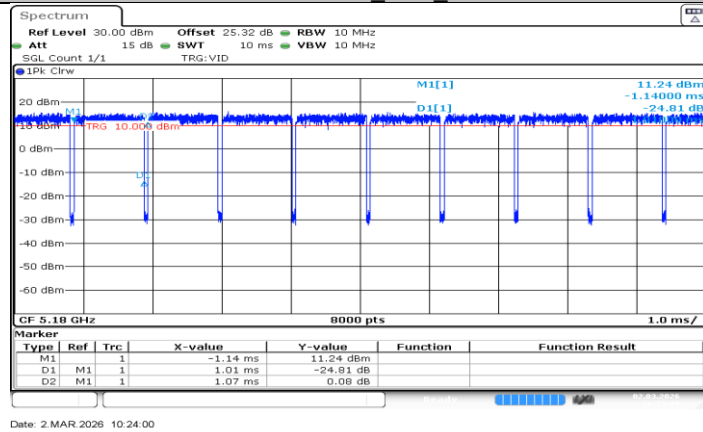
If that calculated VBW is not available on the analyzer then the next higher value should be used.

12.7.2. Test Graphs

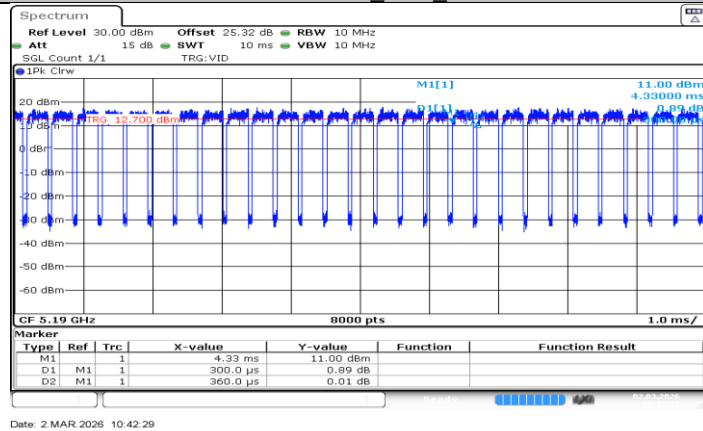




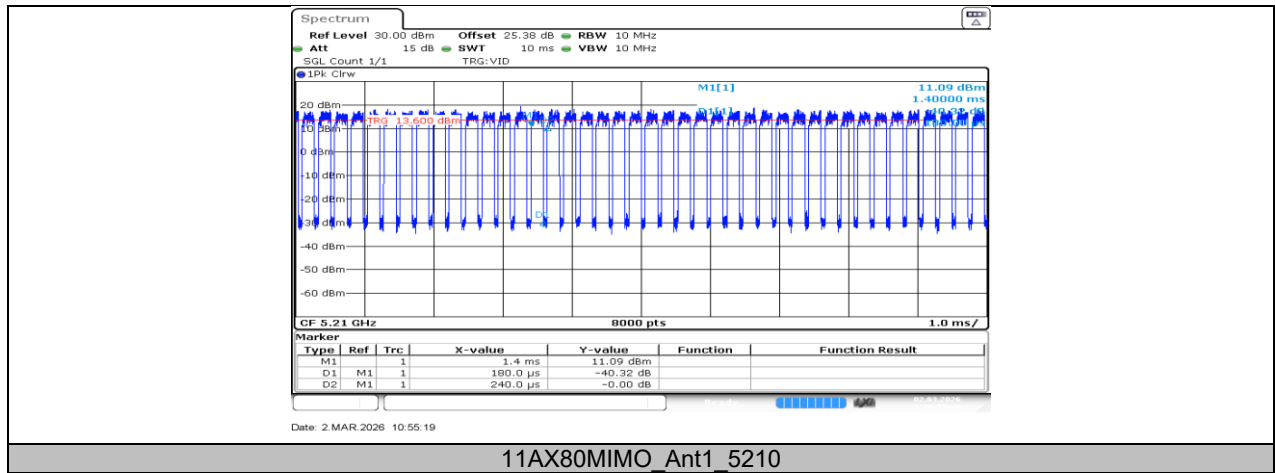
11AC80MIMO_Ant1_5210



11AX20MIMO_Ant1_5180



11AX40MIMO_Ant1_5190



END OF REPORT