

RF Test Data for RLAN(5.2G) (Conducted Measurement)

Product Name: Drone

Trade Mark: /

Test Model: F7MINI 4K

FCC ID: 2A5GP-F7MINI4K

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Max Zhang
NOTE	N/A

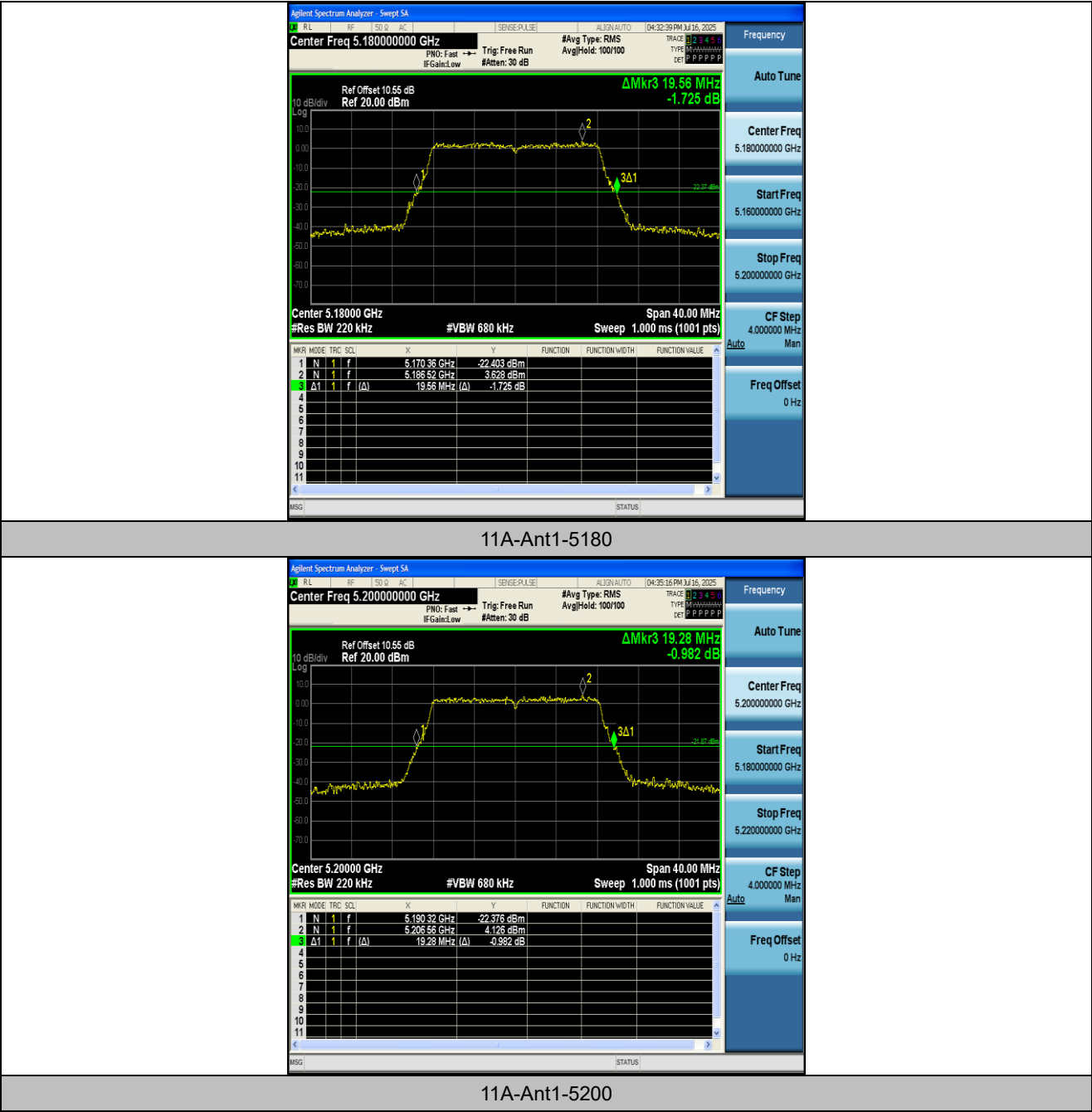
Appendix A1: Emission Bandwidth

Test Result

Test Mode	Antenna	Frequency [MHz]	26db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5180	19.560	5170.360	5189.920	---	---
11A	Ant1	5200	19.280	5190.320	5209.600	---	---
11A	Ant1	5240	19.320	5230.320	5249.640	---	---

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs





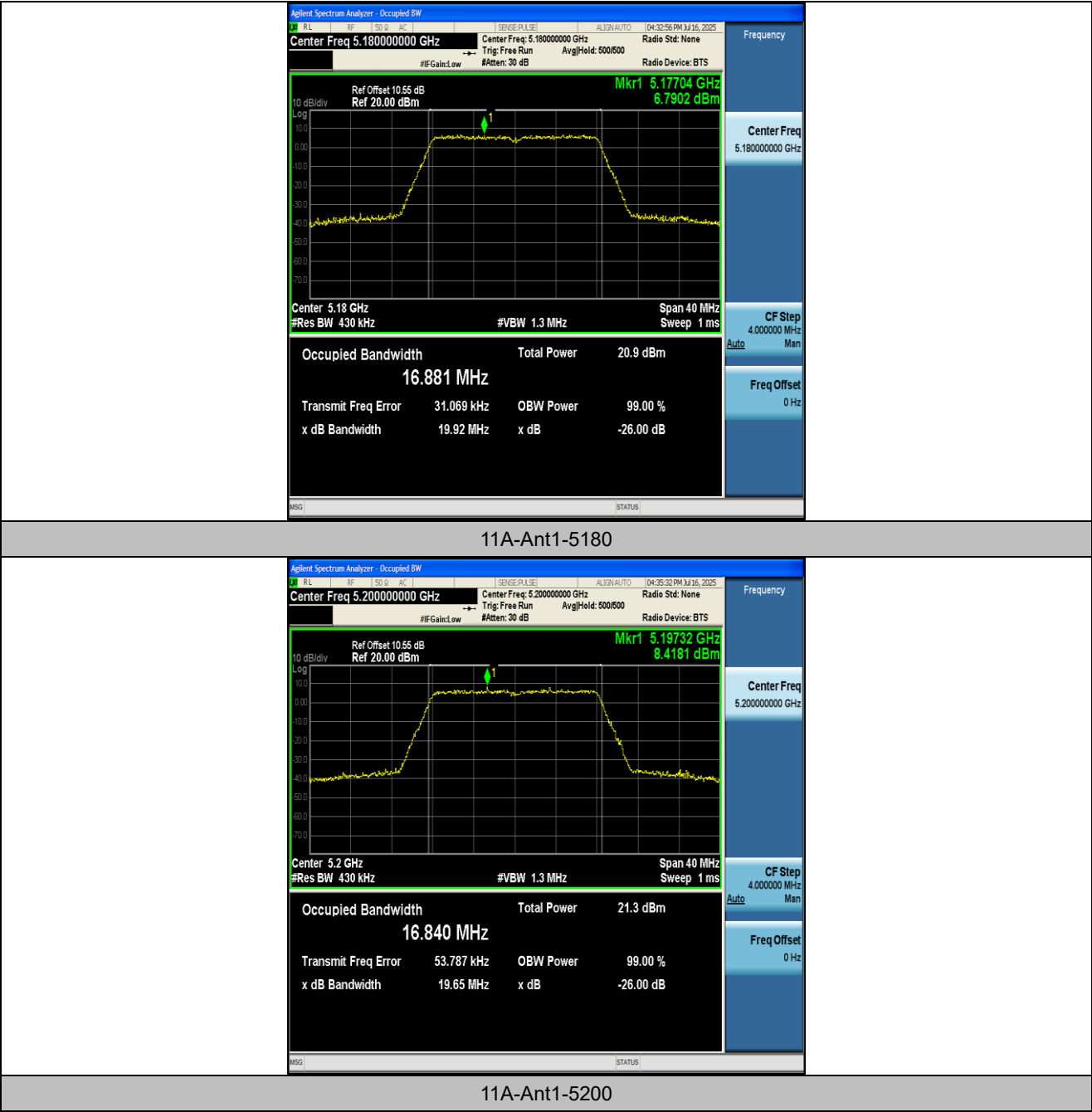
Appendix A2: Occupied channel bandwidth

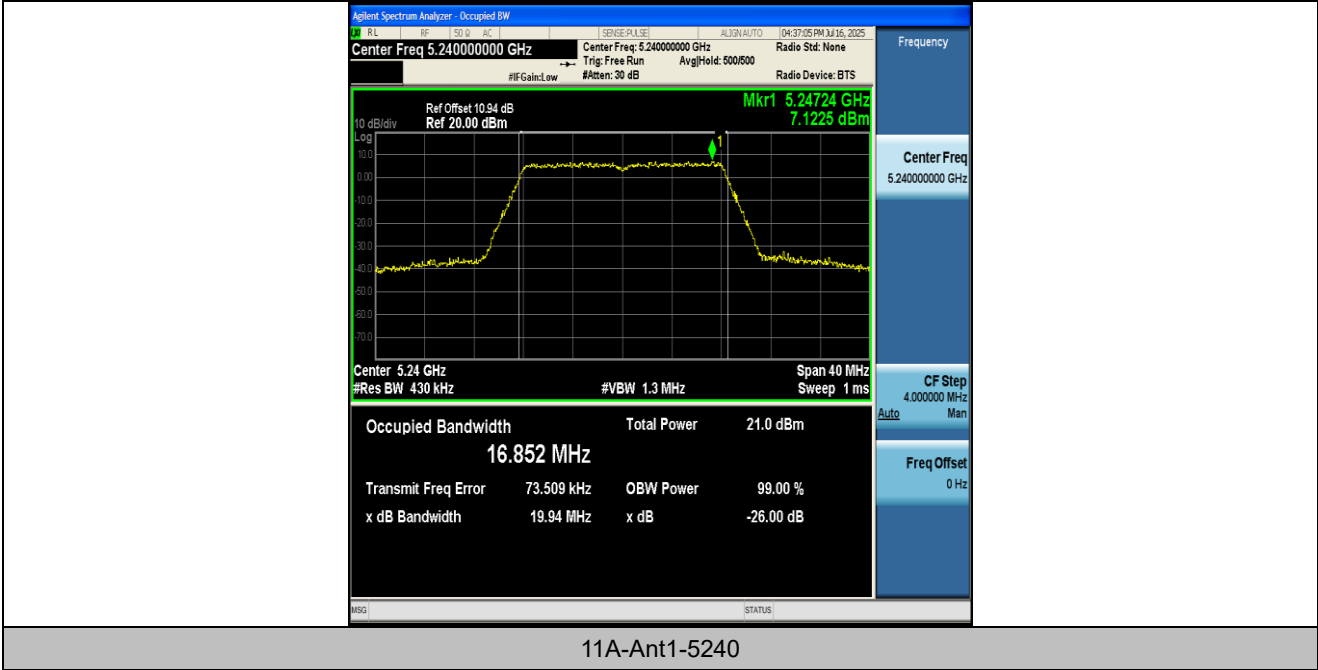
Test Result

Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5180	16.881	5171.5906	5188.4716	---	---
11A	Ant1	5200	16.840	5191.6338	5208.4738	---	---
11A	Ant1	5240	16.852	5231.6475	5248.4995	---	---

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs





11A-Ant1-5240

Appendix B: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11A	Ant1	5180	13.99	≤23.98	PASS
11A	Ant1	5200	14.51	≤23.98	PASS
11A	Ant1	5240	14.12	≤23.98	PASS

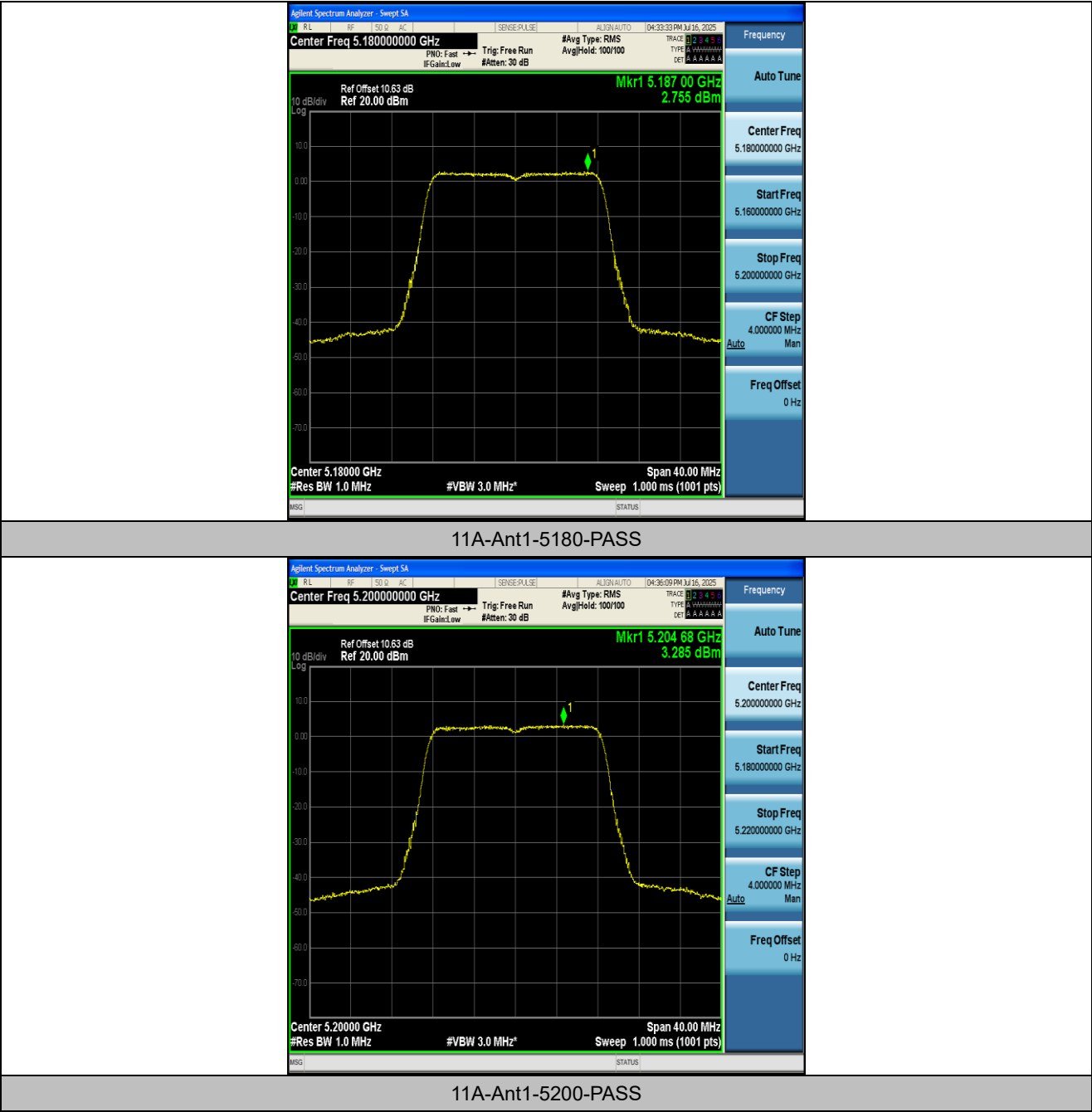
Appendix C: Maximum power spectral density

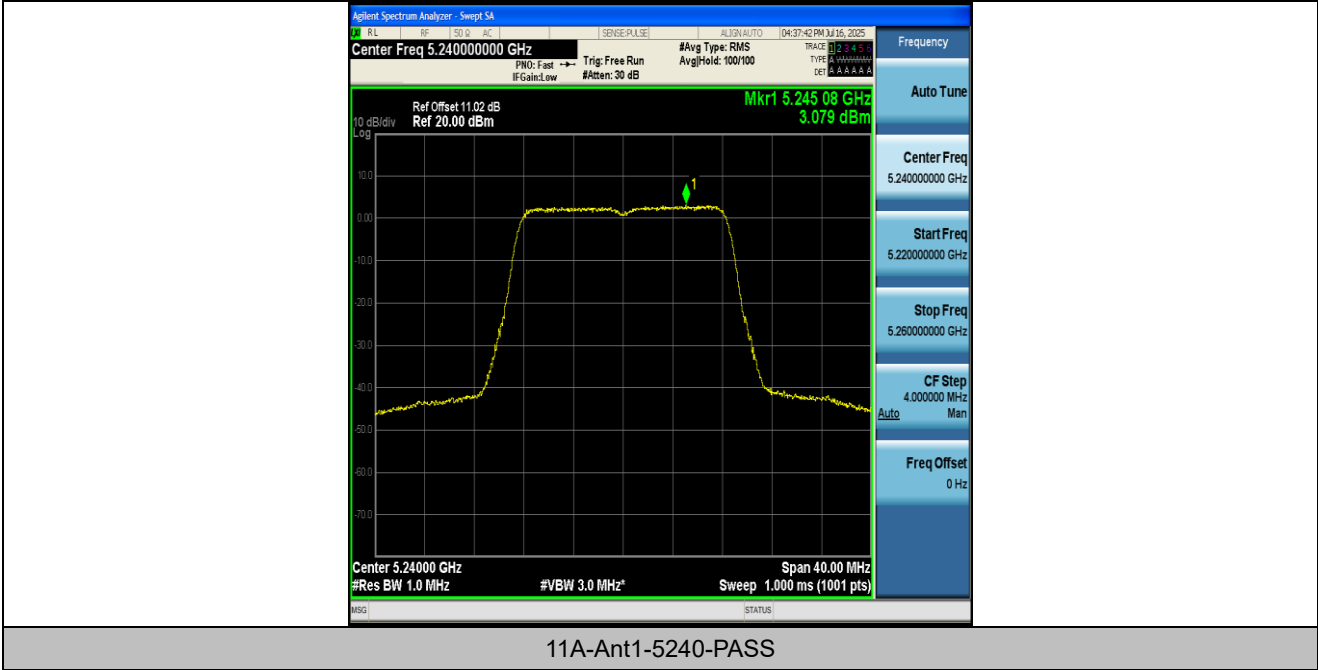
Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	2.76	≤11.00	PASS
11A	Ant1	5200	3.29	≤11.00	PASS
11A	Ant1	5240	3.08	≤11.00	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB) + Duty Cycle Factor(dB)

Test Graphs





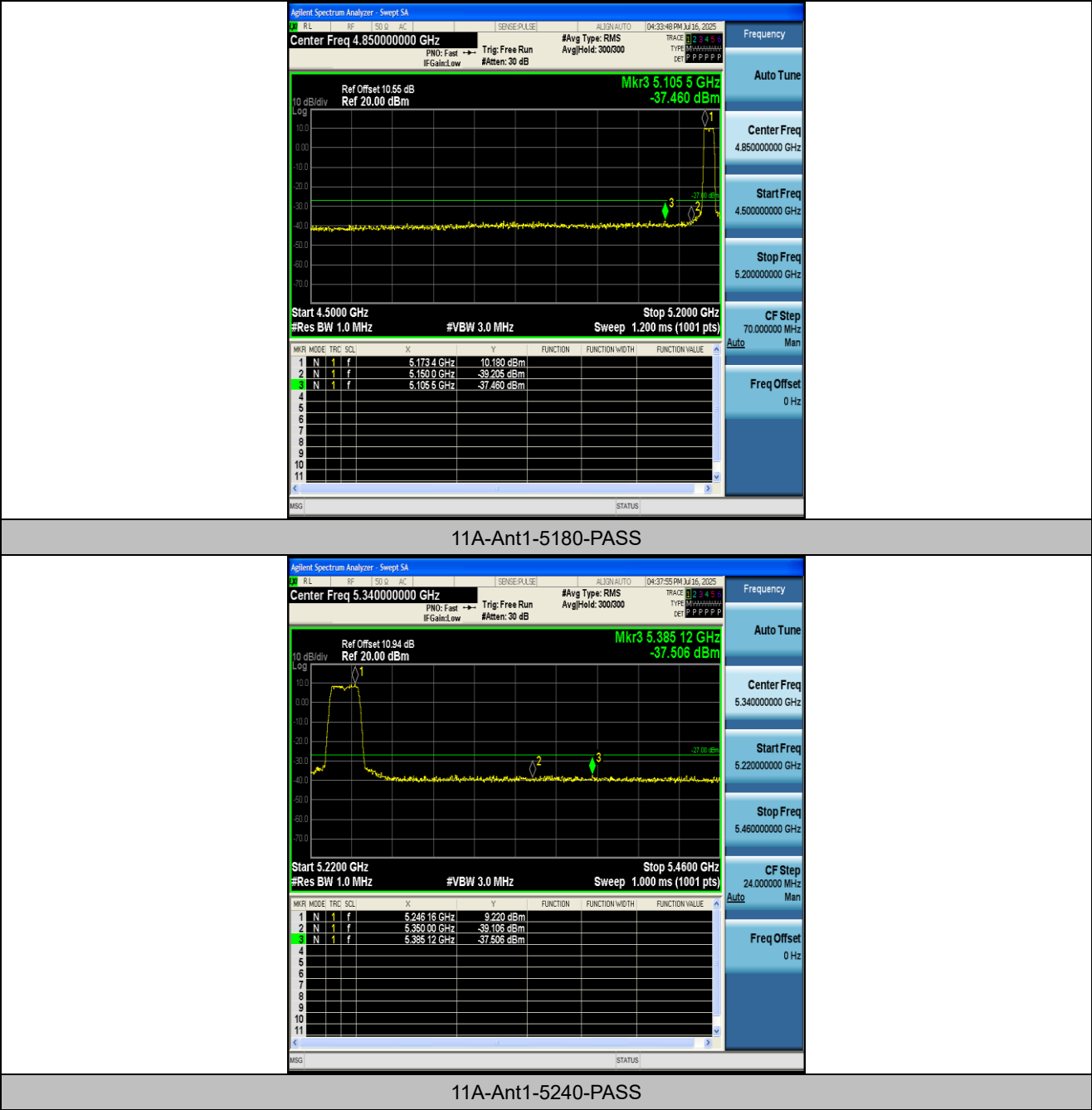
Appendix D: Band edge measurements

Test Result

Test Mode	Antenna	Ch. Name	Frequency [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5180	-37.46	≤-27	PASS
11A	Ant1	High	5240	-37.51	≤-27	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs



Appendix E: Frequency Stability

Test Result

Ant1

Frequency (MHz)	Enviroment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5180	20	8.14	5180.005129	5150 – 5250	PASS
5180	20	6.66	5179.969335	5150 – 5250	PASS
5180	50	7.40	5180.034933	5150 – 5250	PASS
5180	40	7.40	5179.961207	5150 – 5250	PASS
5180	30	7.40	5179.944016	5150 – 5250	PASS
5180	20	7.40	5179.953366	5150 – 5250	PASS
5180	10	7.40	5179.926704	5150 – 5250	PASS
5180	0	7.40	5179.968161	5150 – 5250	PASS
5180	-10	7.40	5180.093015	5150 – 5250	PASS
5180	-20	7.40	5179.977630	5150 – 5250	PASS
5180	-30	7.40	5179.939434	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5200	20	8.14	5199.946412	5150 – 5250	PASS
5200	20	6.66	5200.094176	5150 – 5250	PASS
5200	50	7.40	5200.039637	5150 – 5250	PASS
5200	40	7.40	5199.934464	5150 – 5250	PASS
5200	30	7.40	5200.037124	5150 – 5250	PASS
5200	20	7.40	5200.046432	5150 – 5250	PASS
5200	10	7.40	5199.944760	5150 – 5250	PASS
5200	0	7.40	5199.947695	5150 – 5250	PASS
5200	-10	7.40	5199.921535	5150 – 5250	PASS
5200	-20	7.40	5200.068697	5150 – 5250	PASS
5200	-30	7.40	5200.019136	5150 – 5250	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5240	20	8.14	5240.022422	5150 – 5250	PASS
5240	20	6.66	5239.979973	5150 – 5250	PASS
5240	50	7.40	5239.911140	5150 – 5250	PASS
5240	40	7.40	5240.011221	5150 – 5250	PASS
5240	30	7.40	5240.076001	5150 – 5250	PASS
5240	20	7.40	5240.097196	5150 – 5250	PASS
5240	10	7.40	5239.964981	5150 – 5250	PASS
5240	0	7.40	5239.934266	5150 – 5250	PASS
5240	-10	7.40	5239.964559	5150 – 5250	PASS
5240	-20	7.40	5240.005501	5150 – 5250	PASS
5240	-30	7.40	5239.949387	5150 – 5250	PASS

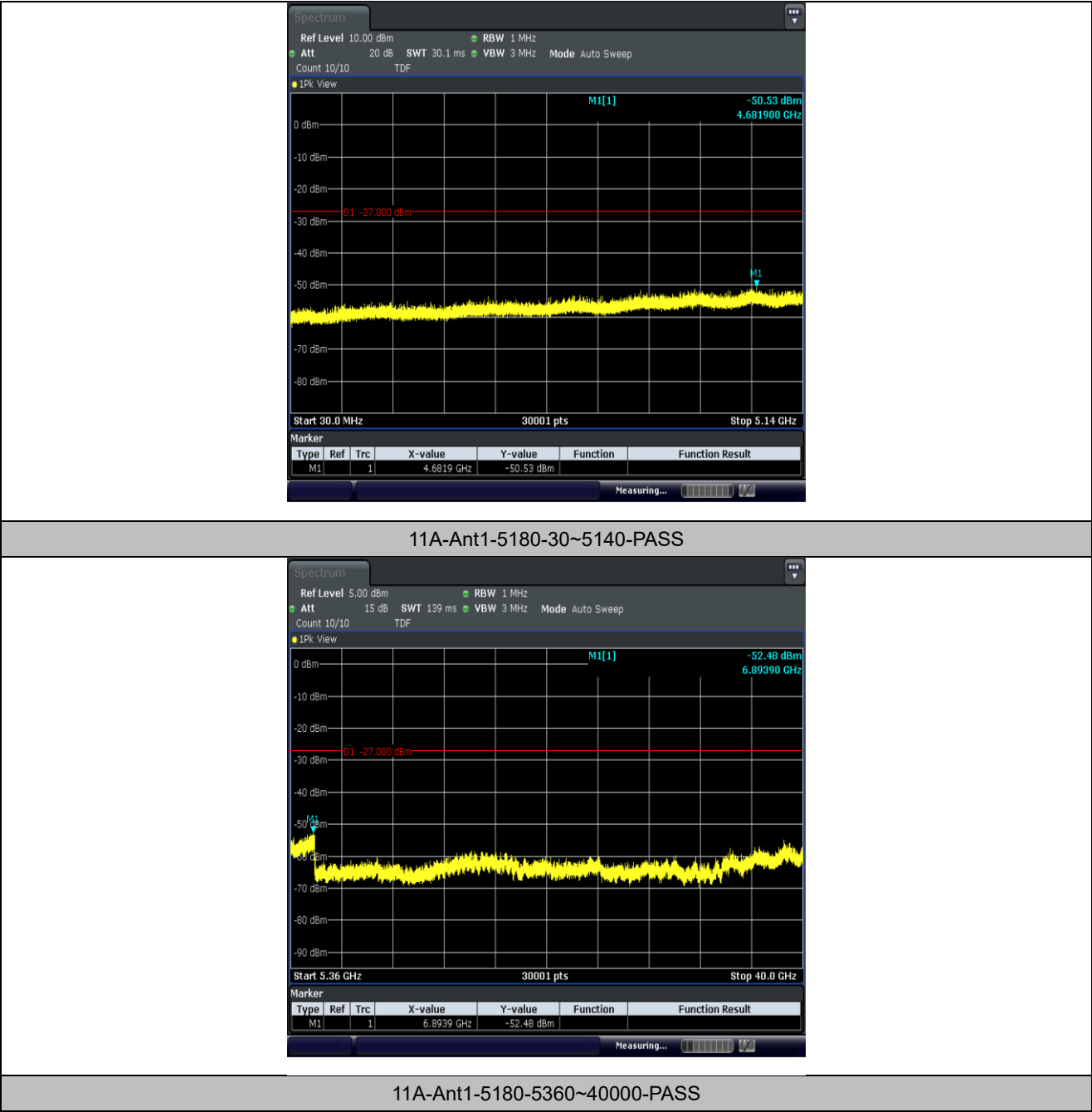
Appendix F: Conducted Spurious Emission

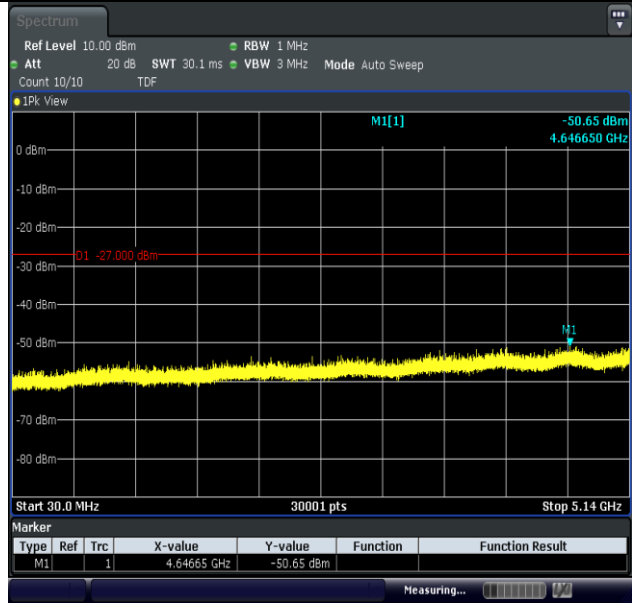
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	4681.9	-50.53	≤-27	PASS
11A	Ant1	5180	5360~40000	6893.9	-52.48	≤-27	PASS
11A	Ant1	5200	30~5140	4646.65	-50.65	≤-27	PASS
11A	Ant1	5200	5360~40000	6793.5	-52.93	≤-27	PASS
11A	Ant1	5240	30~5140	4723.29	-50.85	≤-27	PASS
11A	Ant1	5240	5360~40000	6854.7	-52.45	≤-27	PASS

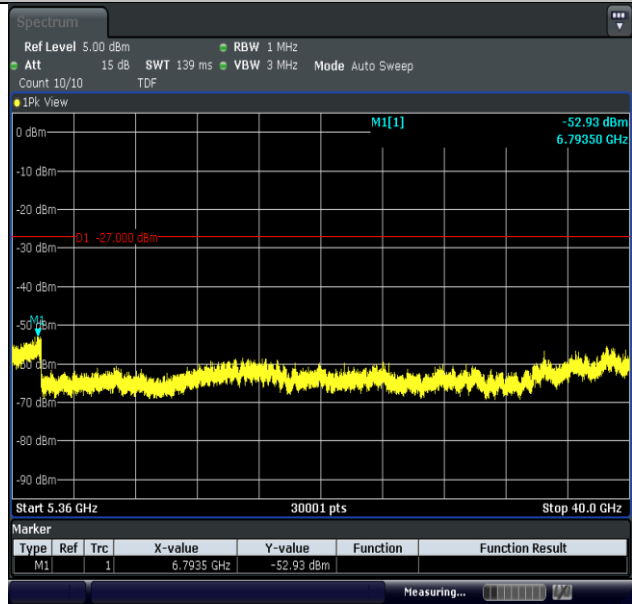
Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 40 GHz, the cable loss and attenuator factors have been set in the 'TDF' of the Spectrum Analyzer during the test.

Test Graphs

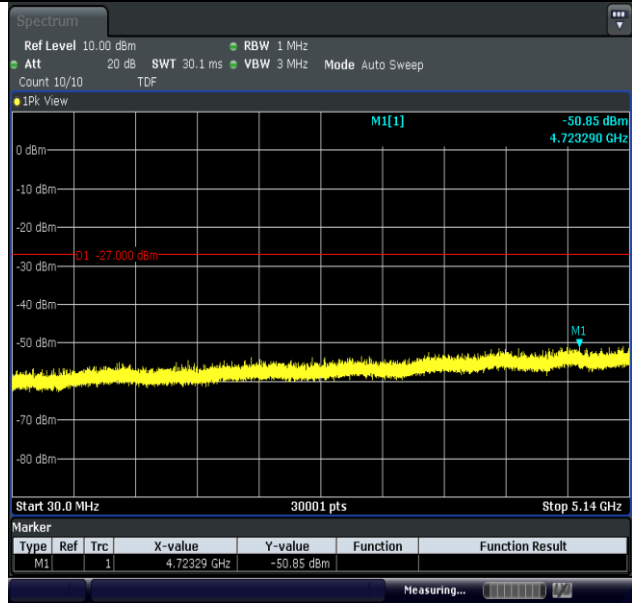




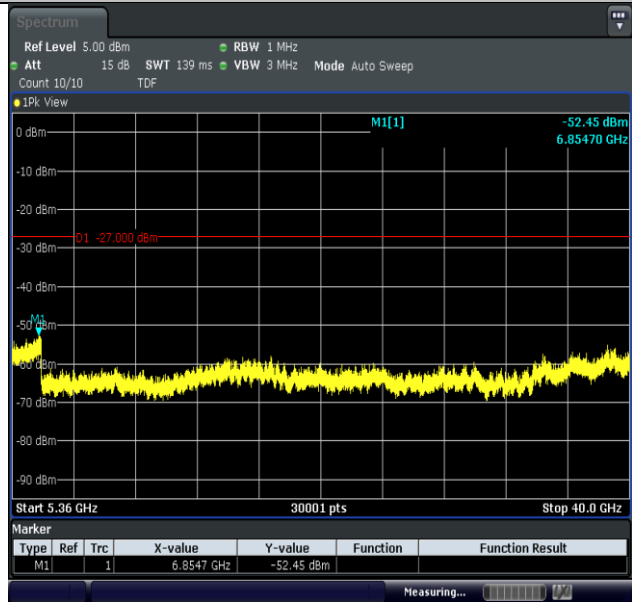
11A-Ant1-5200-30~5140-PASS



11A-Ant1-5200-5360~40000-PASS



11A-Ant1-5240-30~5140-PASS



11A-Ant1-5240-5360~40000-PASS

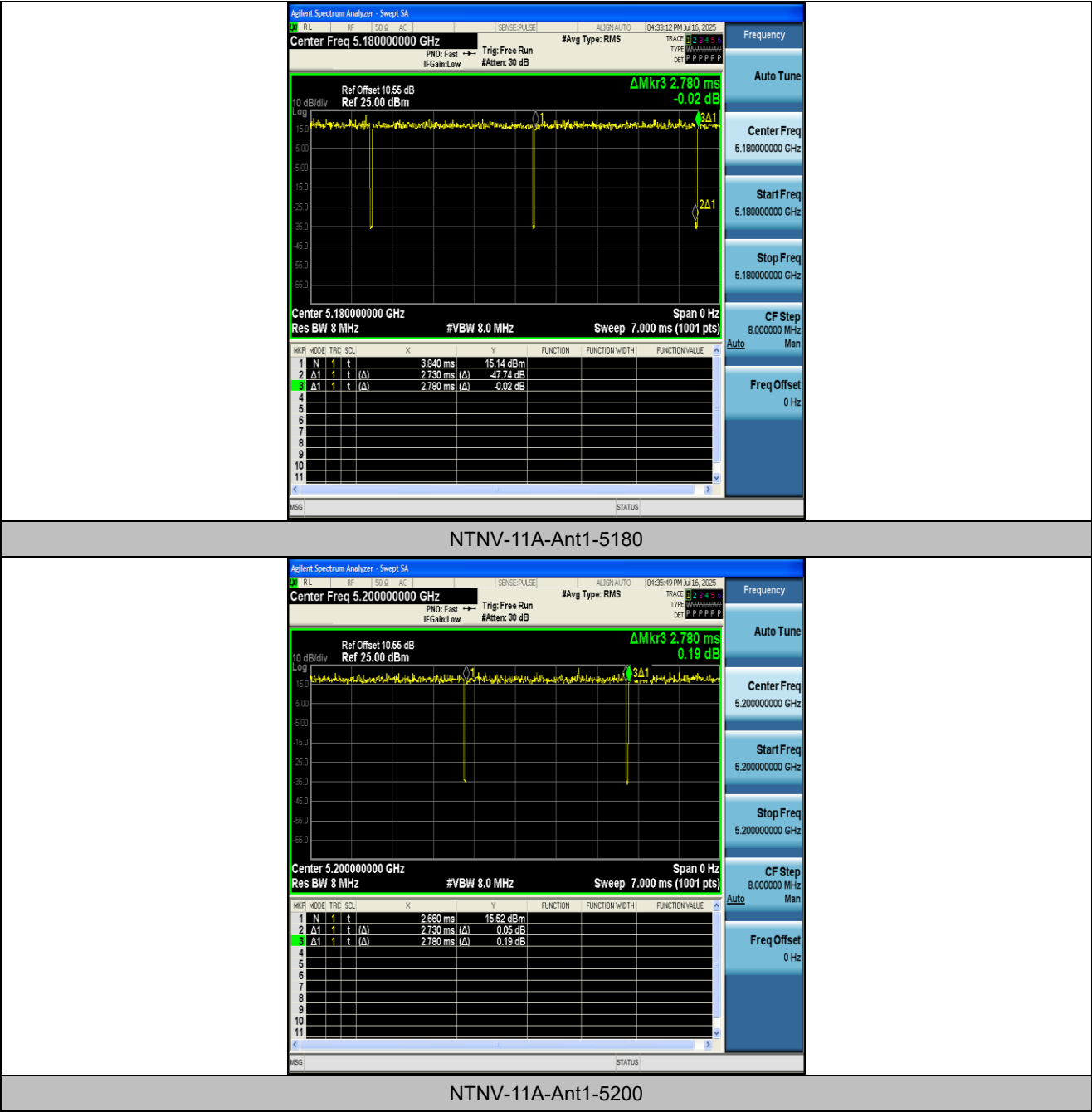
Appendix G: Duty Cycle

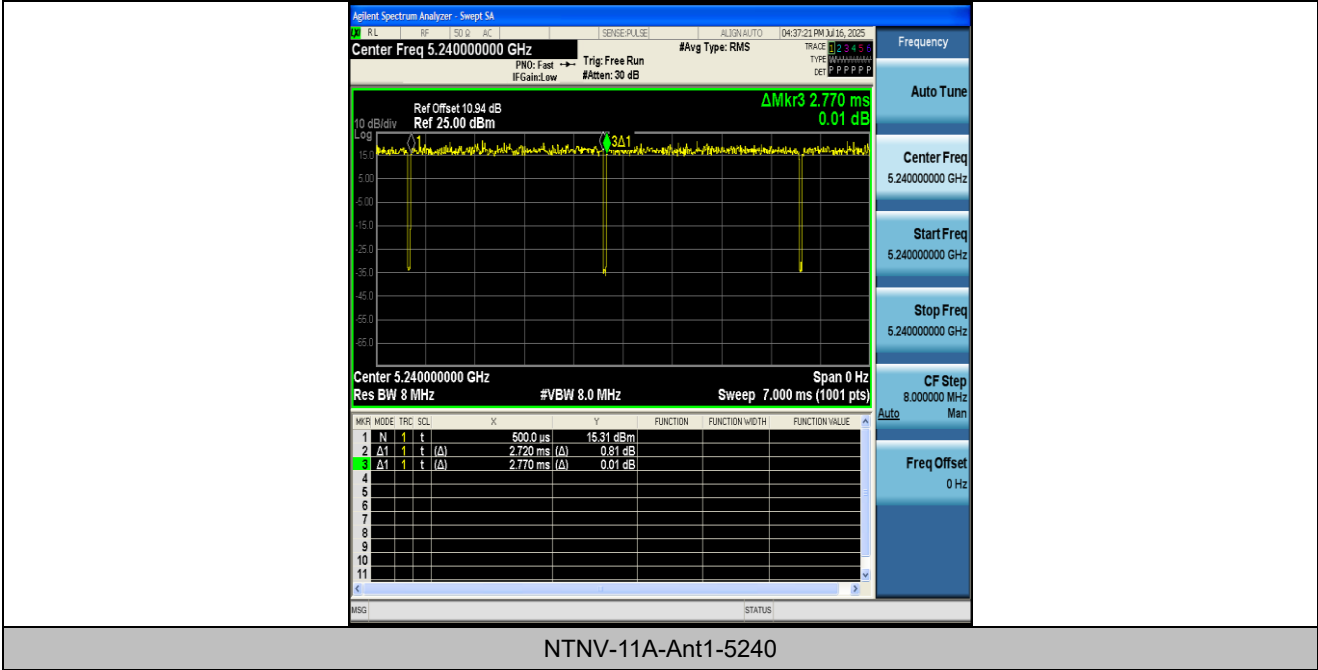
Test Result

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Dc. Factor [%]	1/T [kHz]
11A	Ant1	5180	2.73	2.78	98.20	0.08	0.37
11A	Ant1	5200	2.73	2.78	98.20	0.08	0.37
11A	Ant1	5240	2.72	2.77	98.19	0.08	0.37

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs





NTNV-11A-Ant1-5240