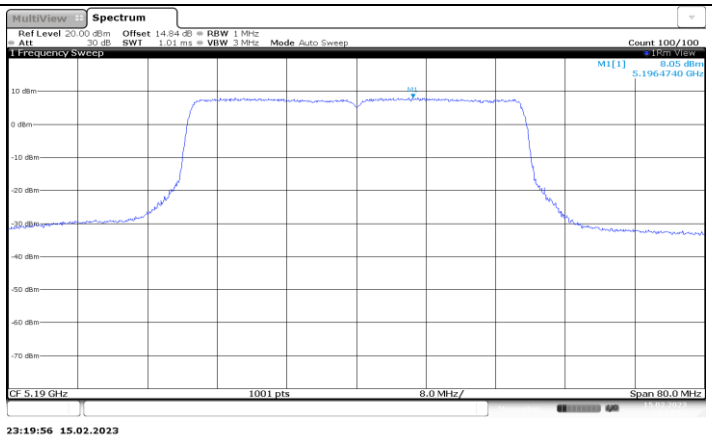
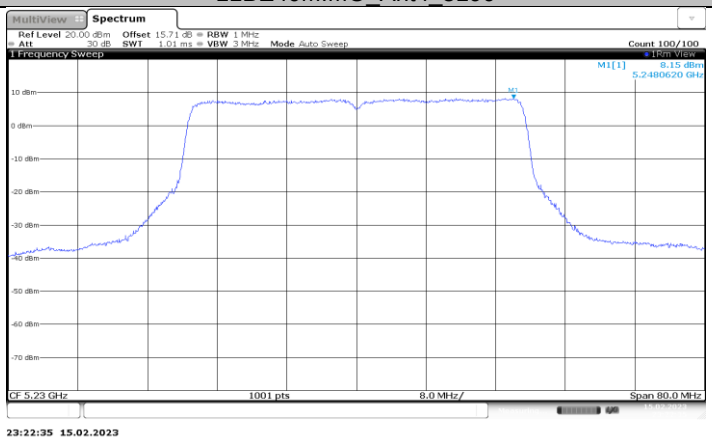
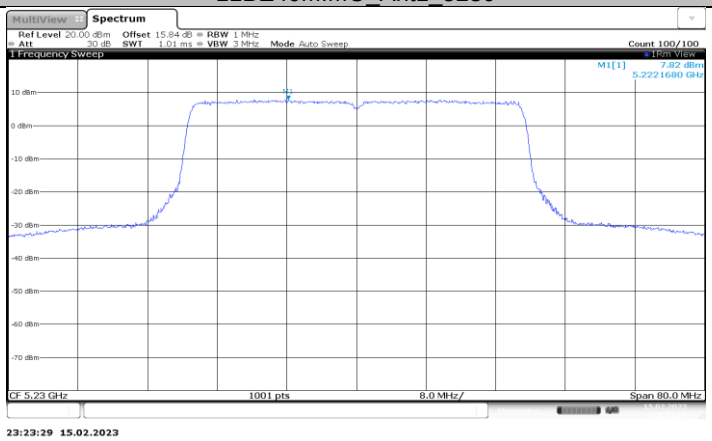


11BE40MIMO_Ant4_5190

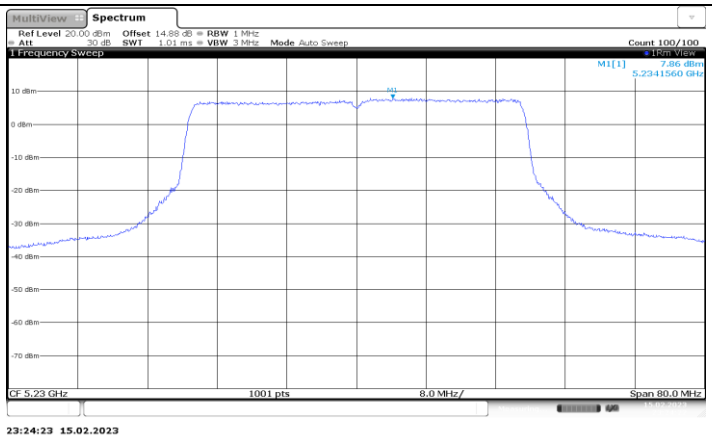


11BE40MIMO_Ant1_5230

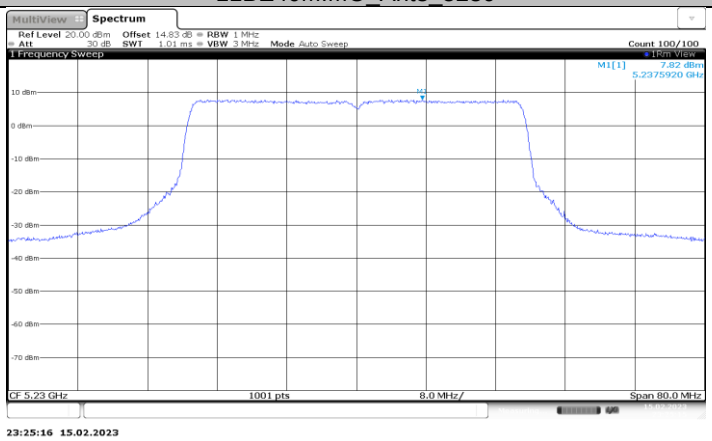


11BE40MIMO_Ant2_5230

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

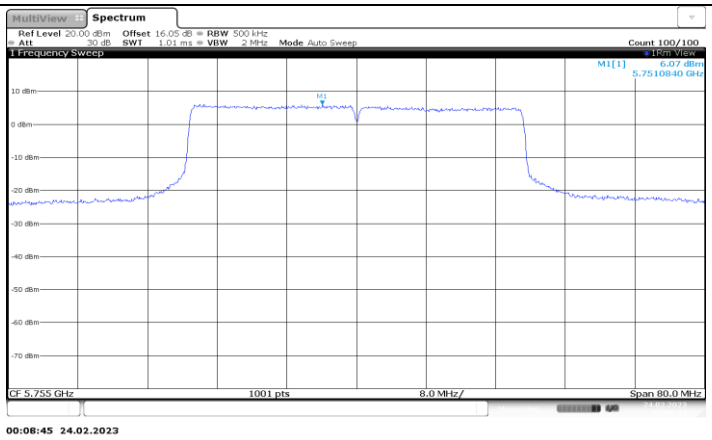


11BE40MIMO_Ant3_5230

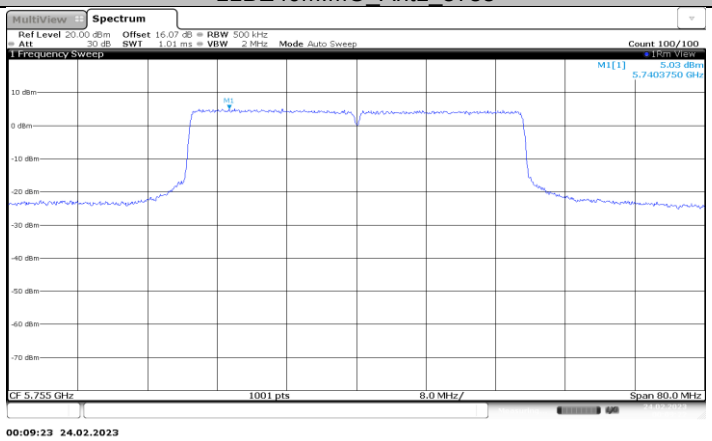


11BE40MIMO_Ant4_5230

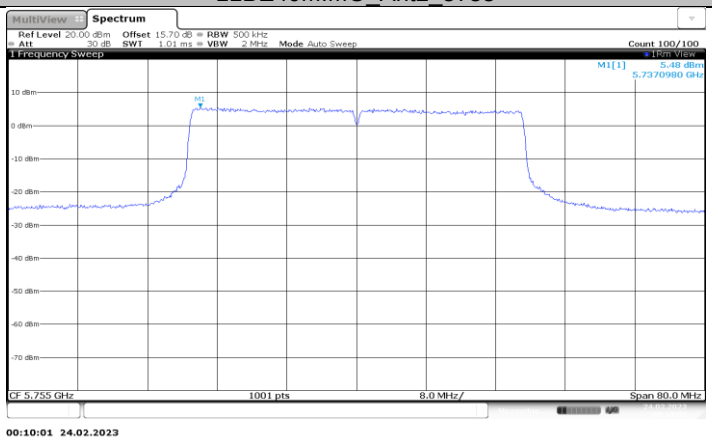
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE40MIMO_Ant1_5755

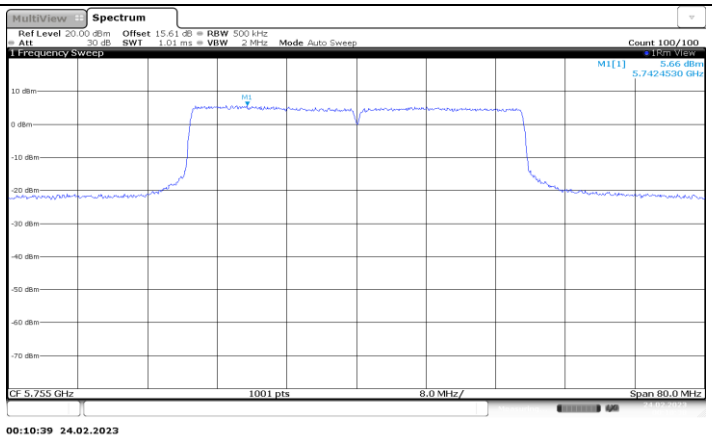


11BE40MIMO_Ant2_5755

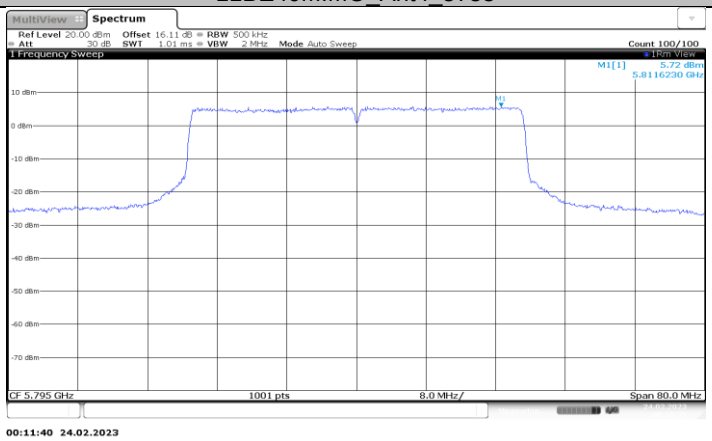


11BE40MIMO_Ant3_5755

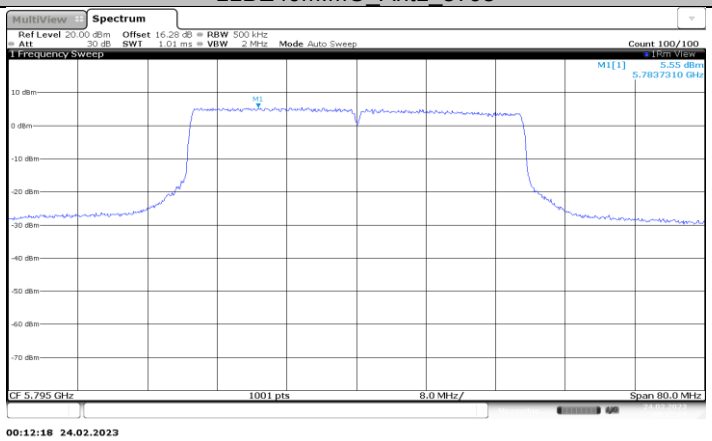
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE40MIMO_Ant4_5755

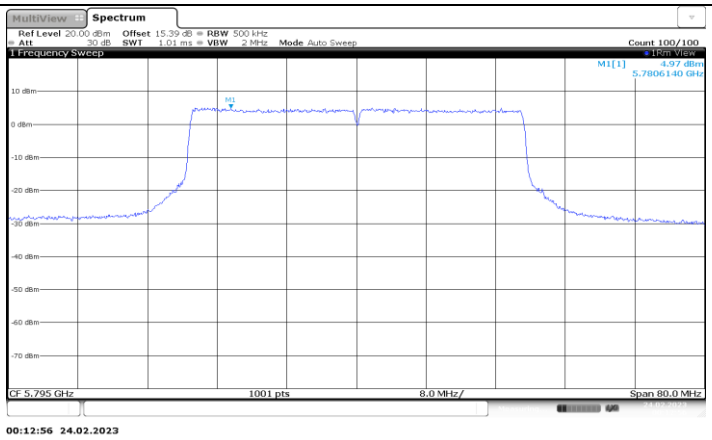


11BE40MIMO_Ant1_5795

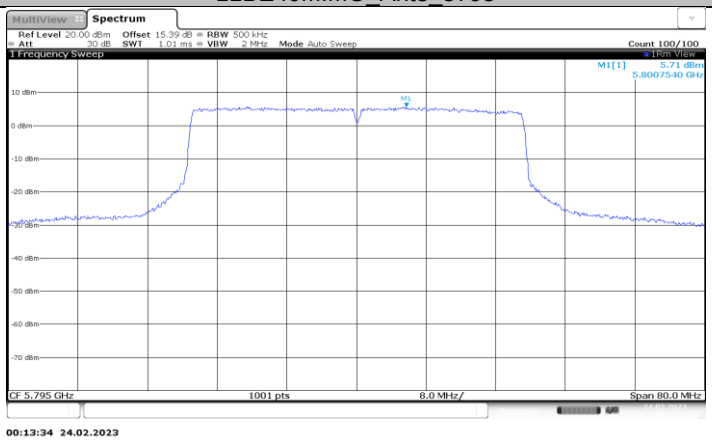


11BE40MIMO_Ant2_5795

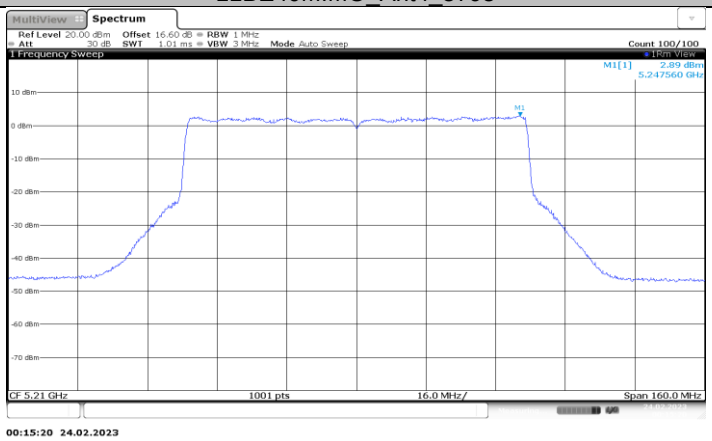
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE40MIMO_Ant3_5795

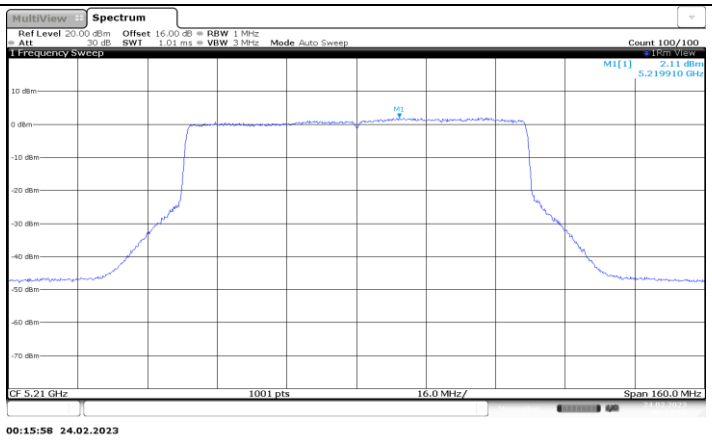


11BE40MIMO_Ant4_5795

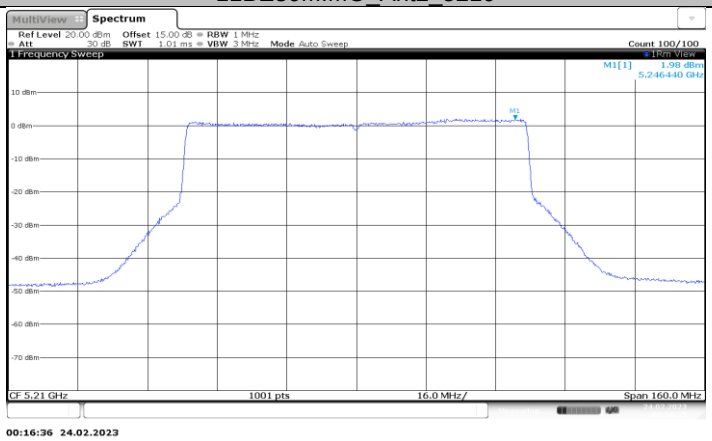


11BE80MIMO_Ant1_5210

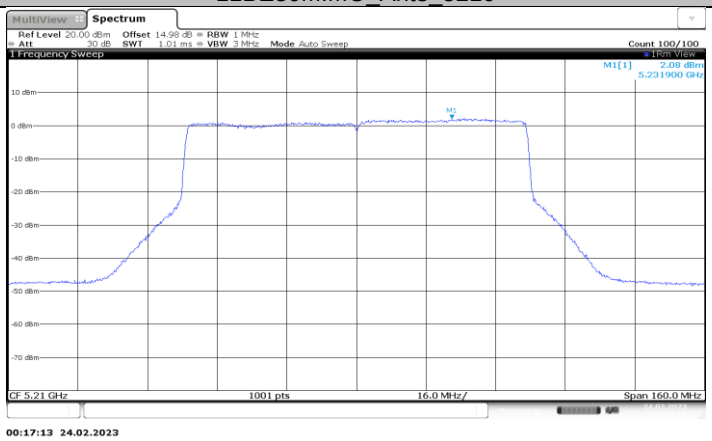
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE80MIMO_Ant2_5210

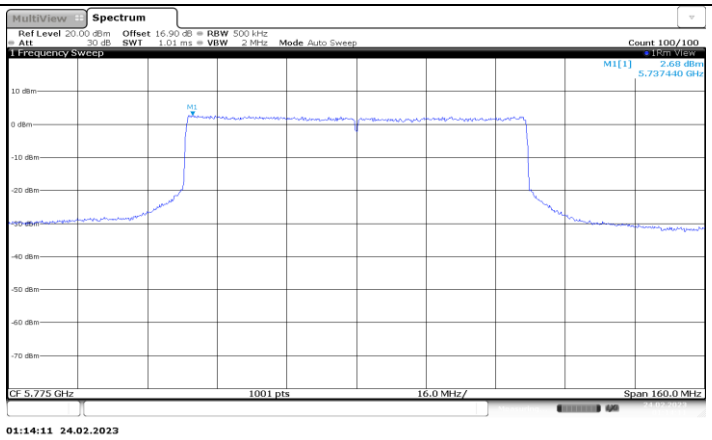


11BE80MIMO_Ant3_5210

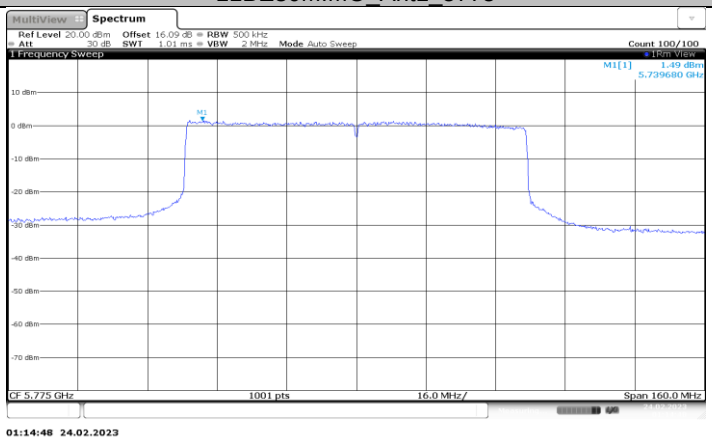


11BE80MIMO_Ant4_5210

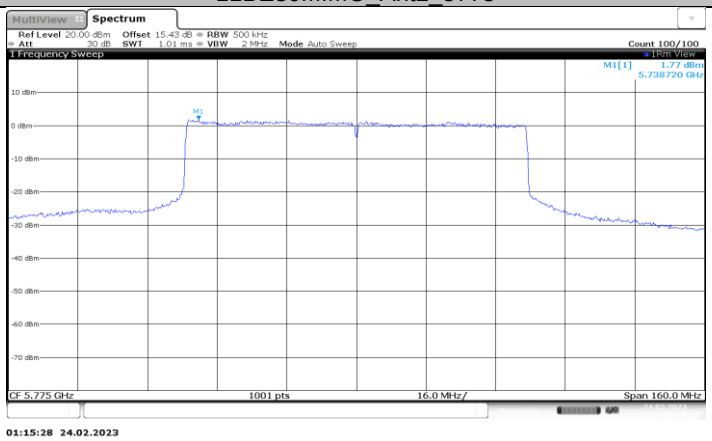
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE80MIMO_Ant1_5775

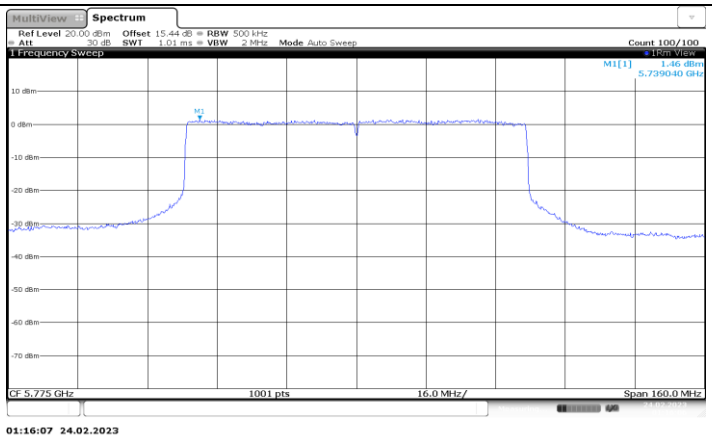


11BE80MIMO_Ant2_5775



11BE80MIMO_Ant3_5775

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

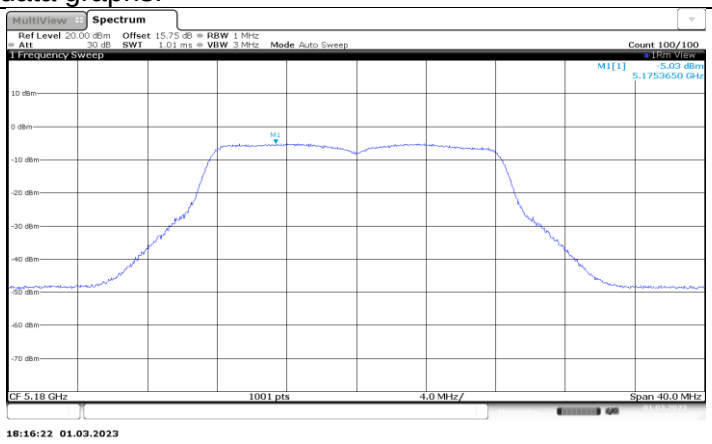


11BE80MIMO_Ant4_5775

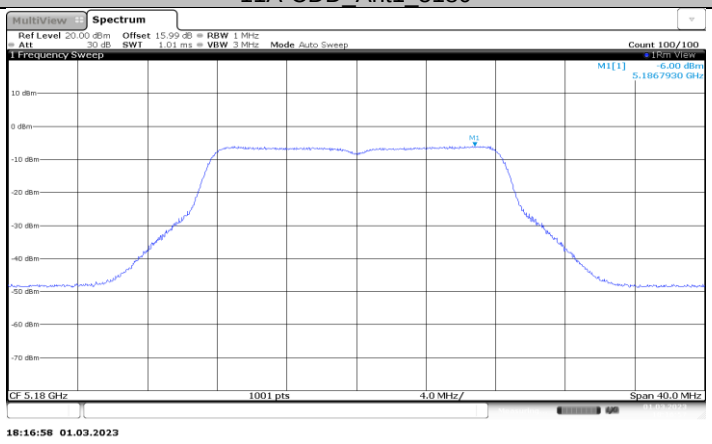
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

11.5.4. Test Graphs

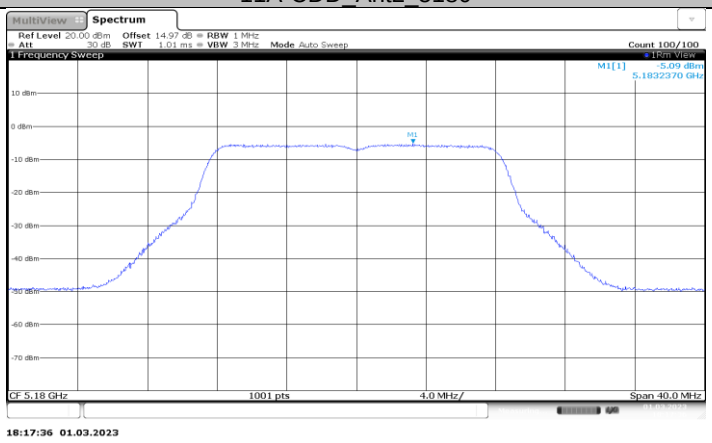
For ISED UNII-1 test data graphs:



11A-CDD_Ant1_5180

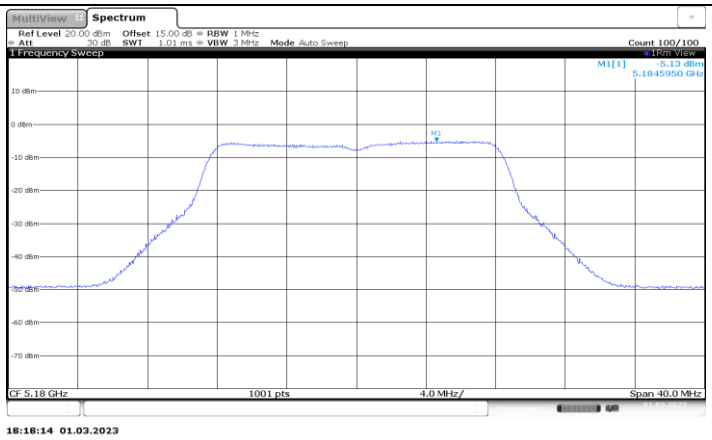


11A-CDD_Ant2_5180

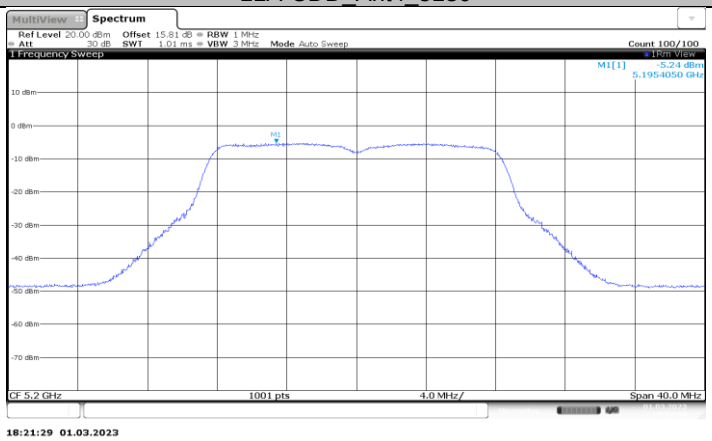


11A-CDD_Ant3_5180

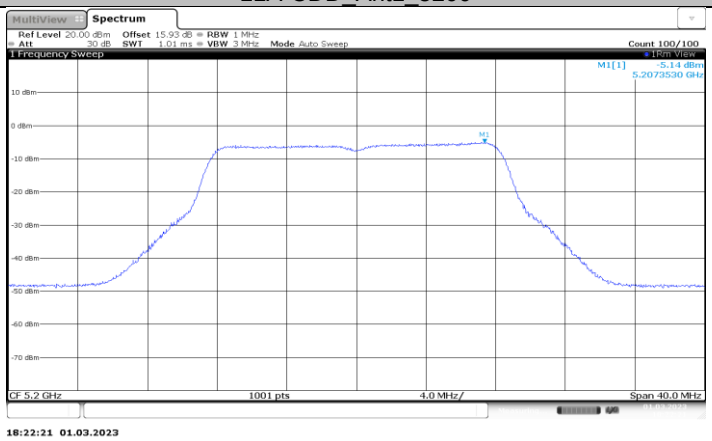
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11A-CDD_Ant4_5180

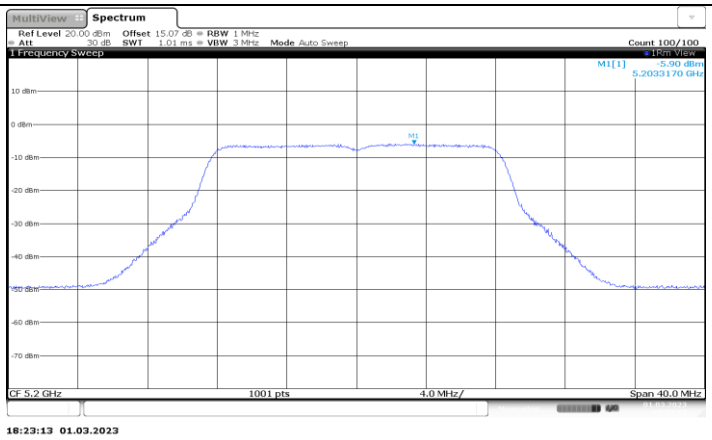


11A-CDD_Ant1_5200

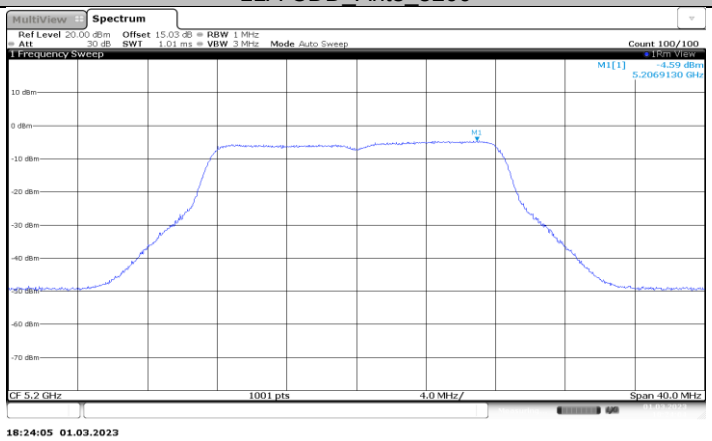


11A-CDD_Ant2_5200

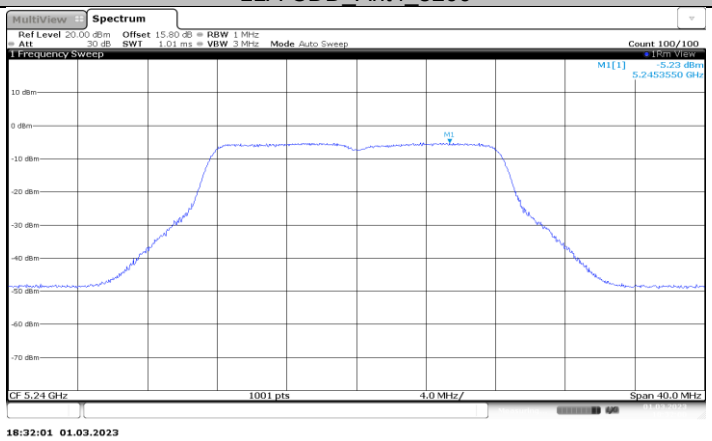
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11A-CDD_Ant3_5200

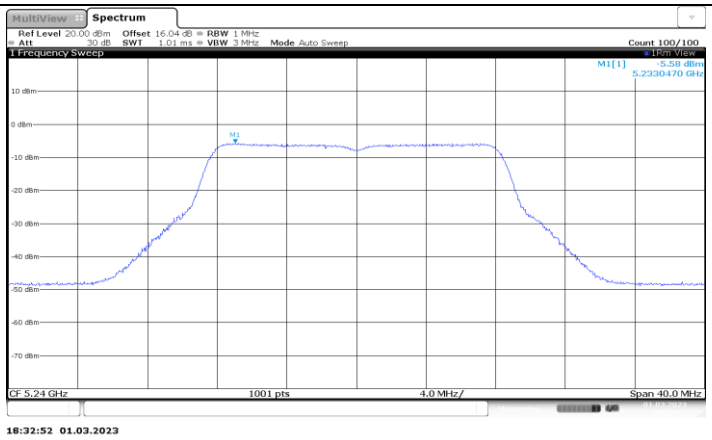


11A-CDD_Ant4_5200

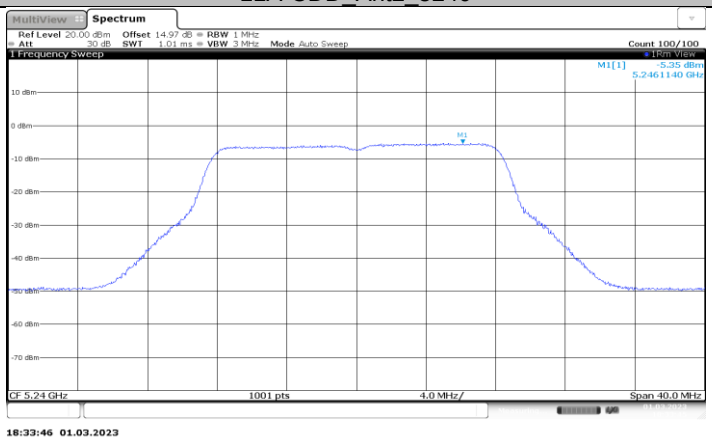


11A-CDD_Ant1_5240

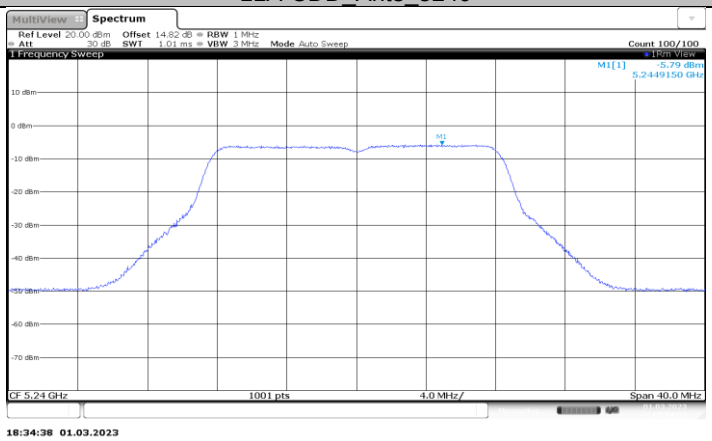
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11A-CDD_Ant2_5240

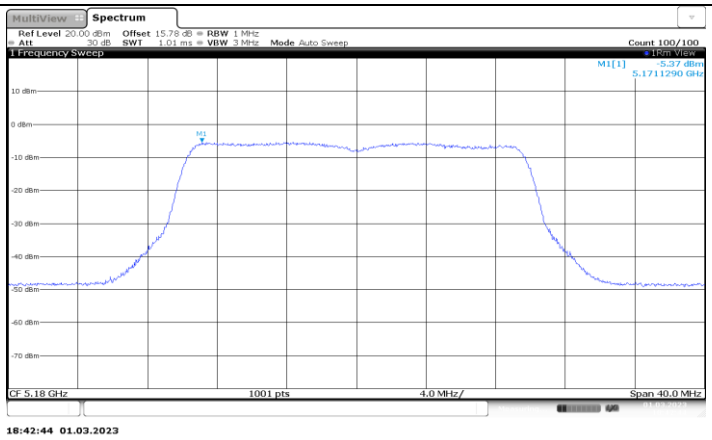


11A-CDD_Ant3_5240

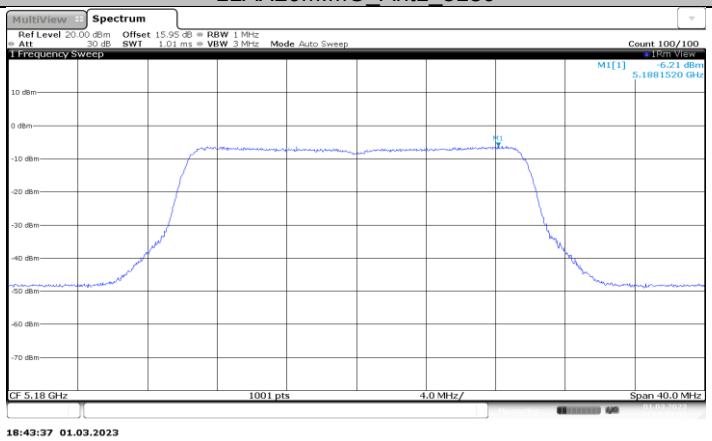


11A-CDD_Ant4_5240

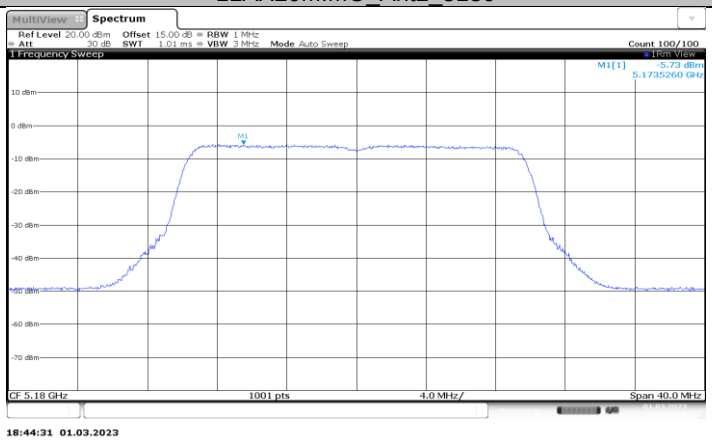
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11AX20MIMO_Ant1_5180

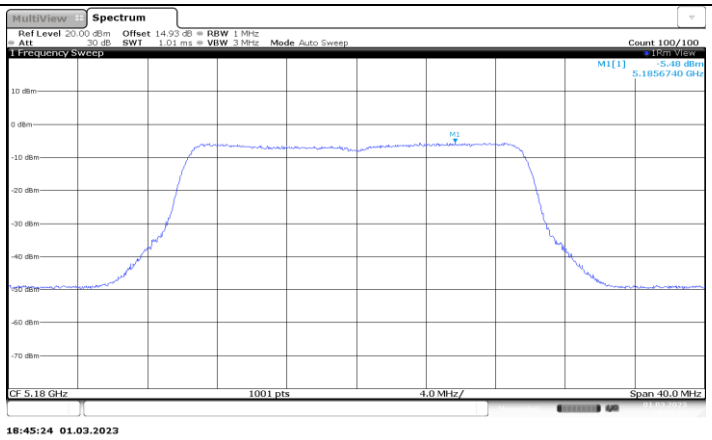


11AX20MIMO_Ant2_5180

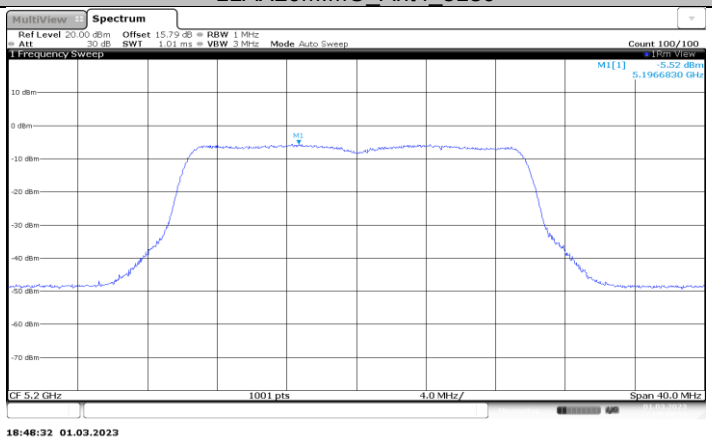


11AX20MIMO_Ant3_5180

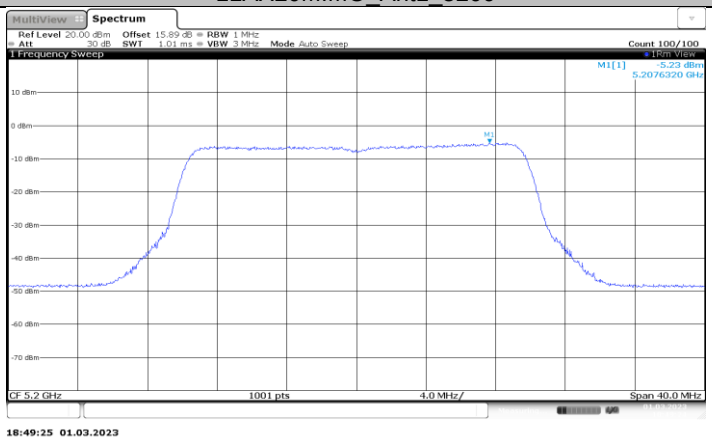
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11AX20MIMO_Ant4_5180

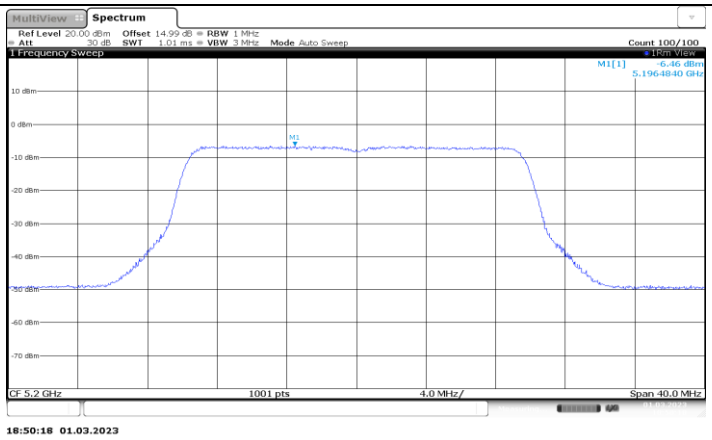


11AX20MIMO_Ant1_5200

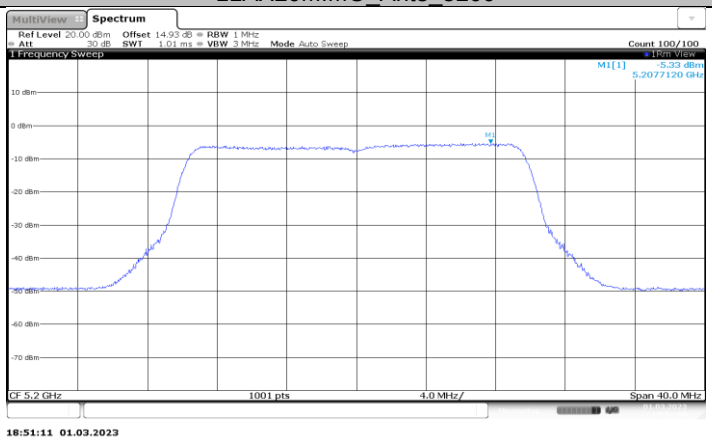


11AX20MIMO_Ant2_5200

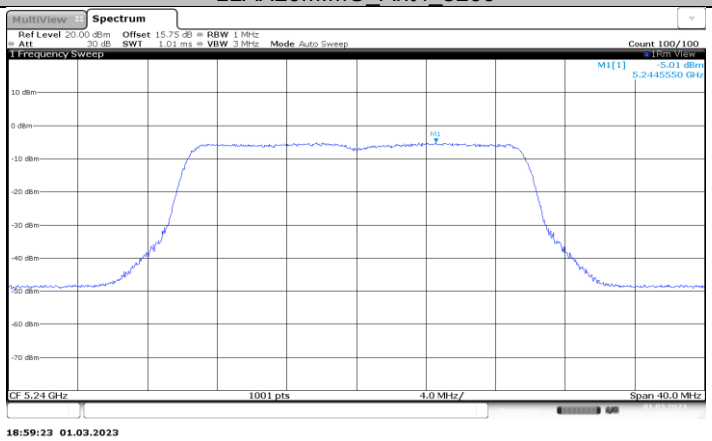
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11AX20MIMO_Ant3_5200

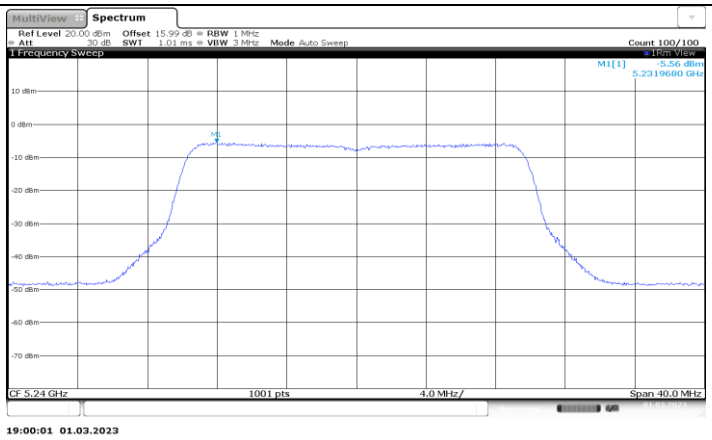


11AX20MIMO_Ant4_5200

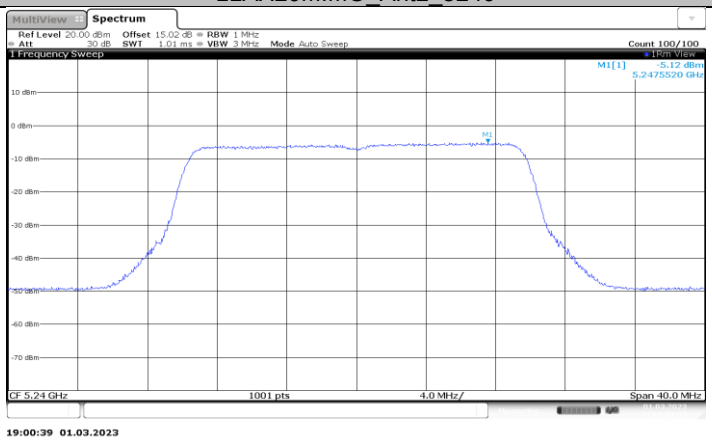


11AX20MIMO_Ant1_5240

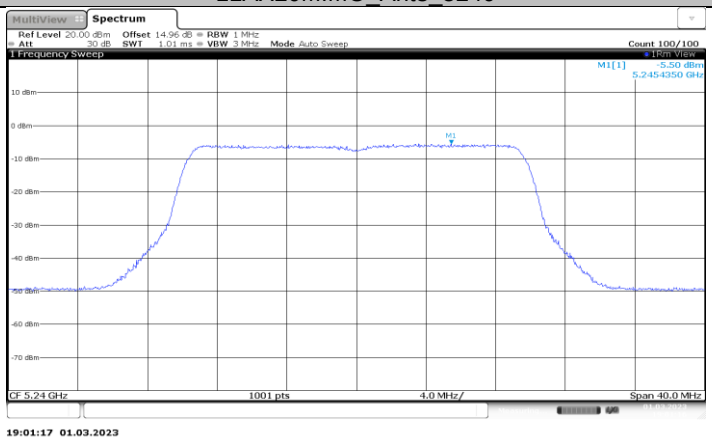
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11AX20MIMO_Ant2_5240

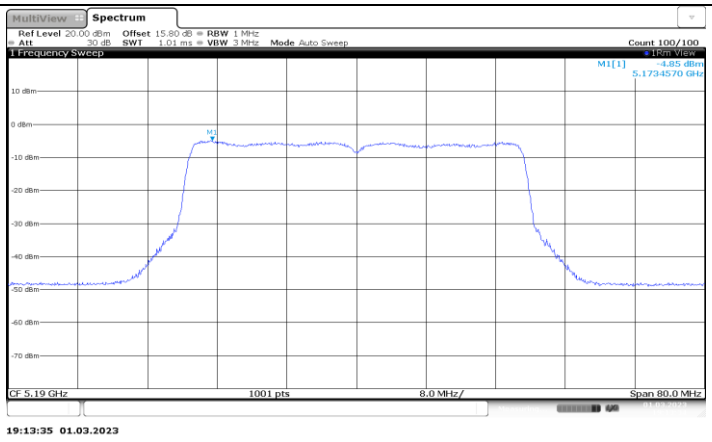


11AX20MIMO_Ant3_5240

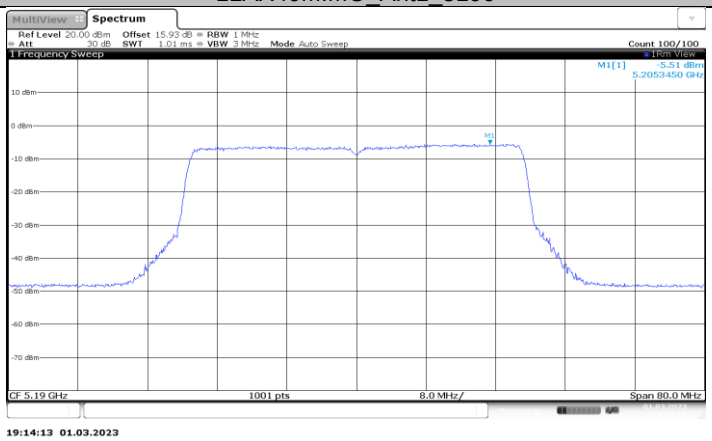


11AX20MIMO_Ant4_5240

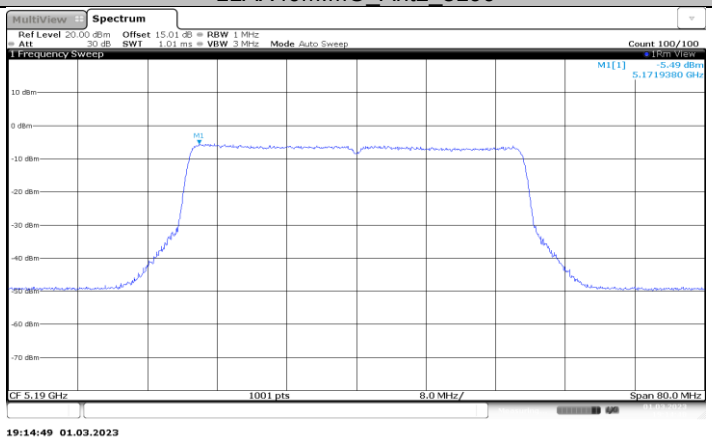
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11AX40MIMO_Ant1_5190

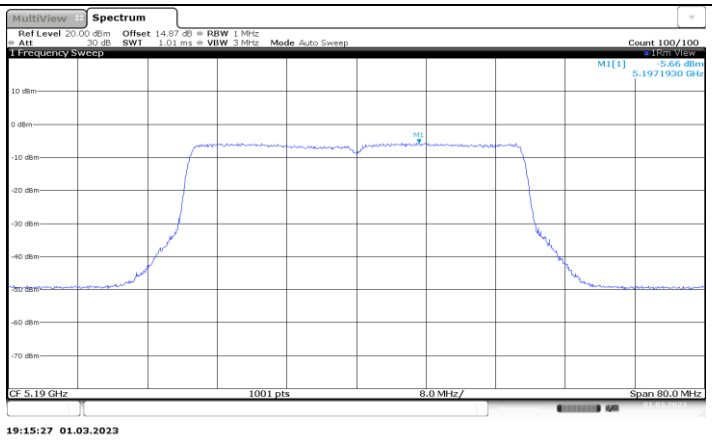


11AX40MIMO_Ant2_5190

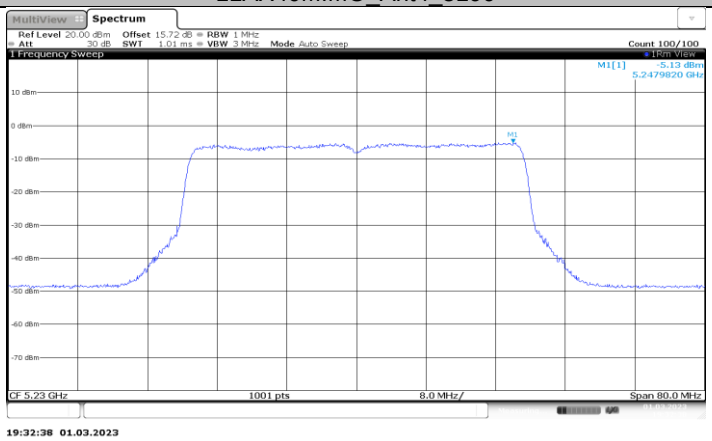


11AX40MIMO_Ant3_5190

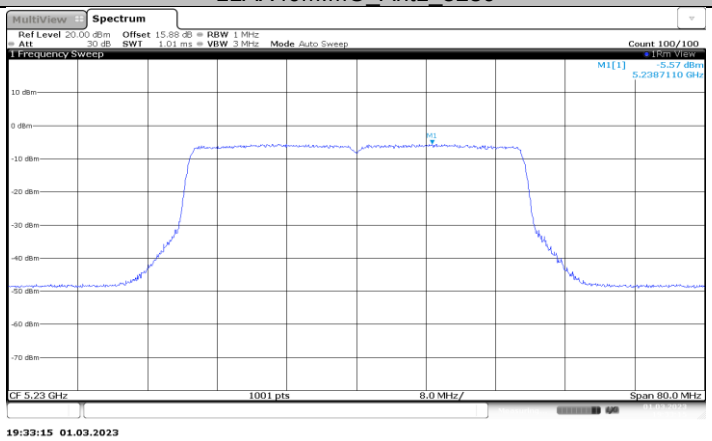
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11AX40MIMO_Ant4_5190

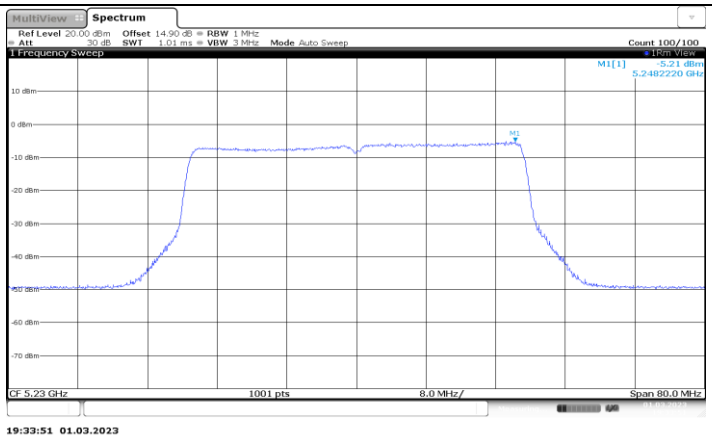


11AX40MIMO_Ant1_5230

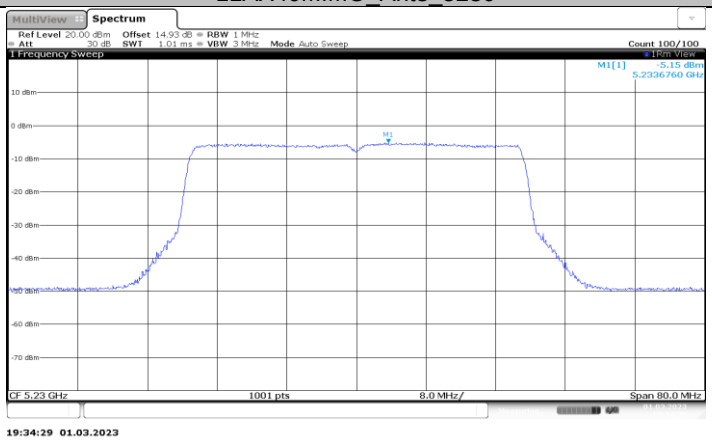


11AX40MIMO_Ant2_5230

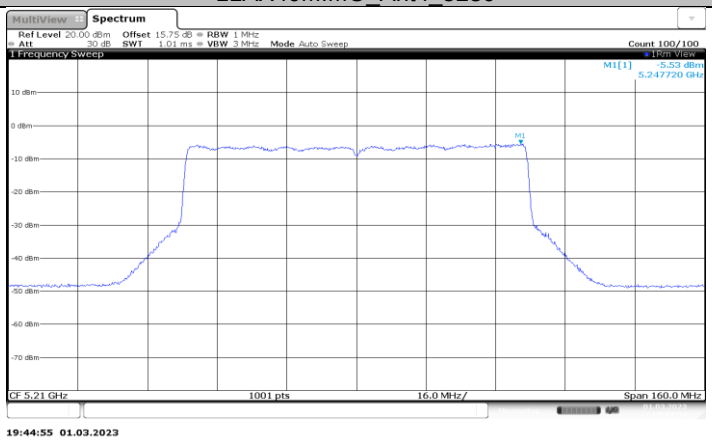
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11AX40MIMO_Ant3_5230

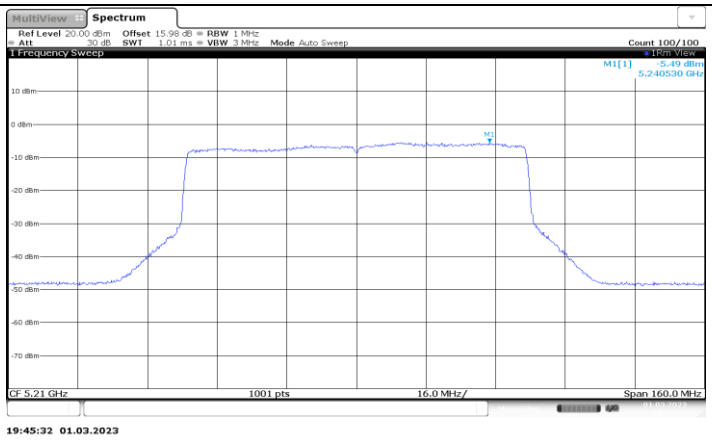


11AX40MIMO_Ant4_5230

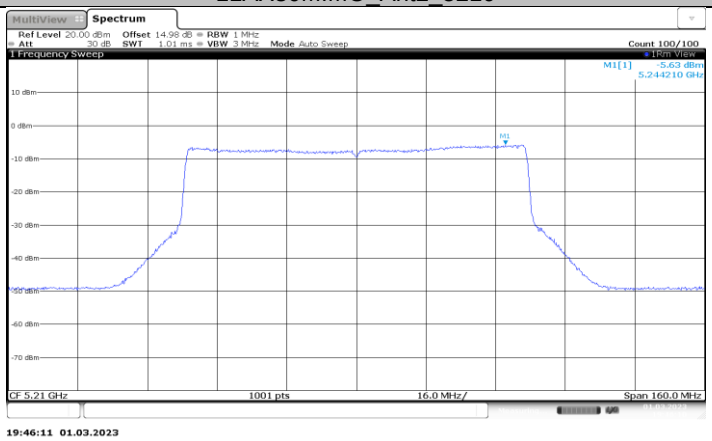


11AX80MIMO_Ant1_5210

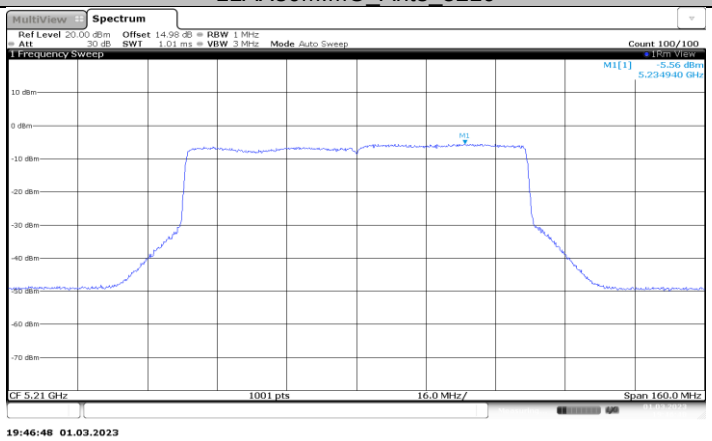
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11AX80MIMO_Ant2_5210

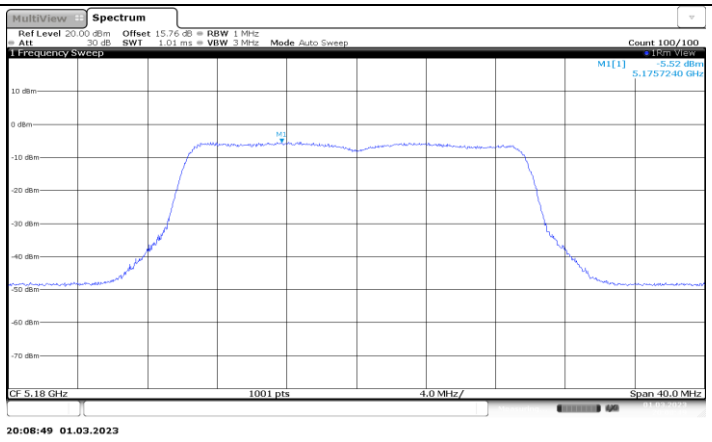


11AX80MIMO_Ant3_5210

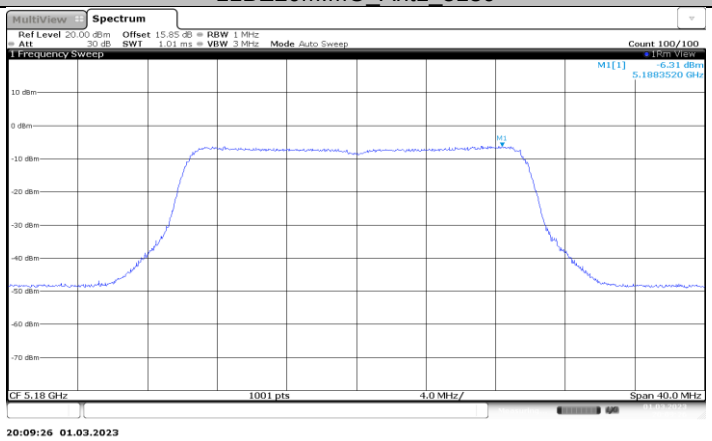


11AX80MIMO_Ant4_5210

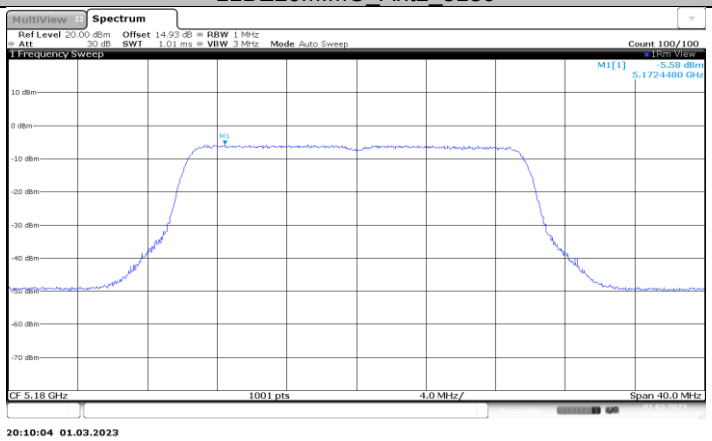
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE20MIMO_Ant1_5180

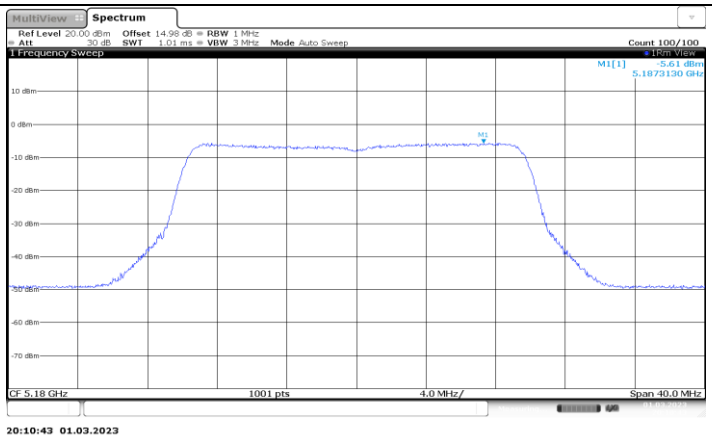


11BE20MIMO_Ant2_5180

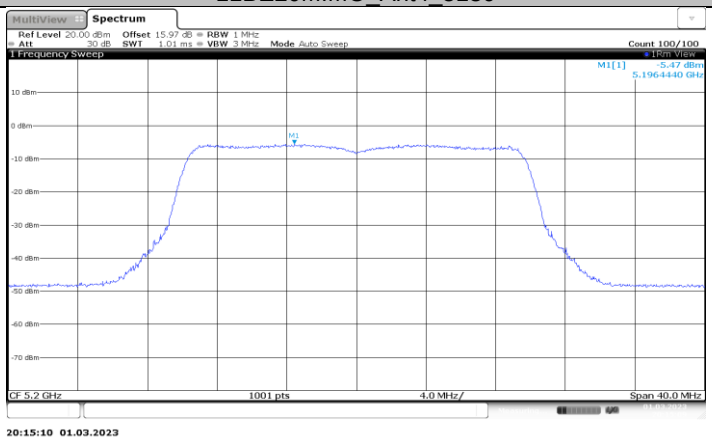


11BE20MIMO_Ant3_5180

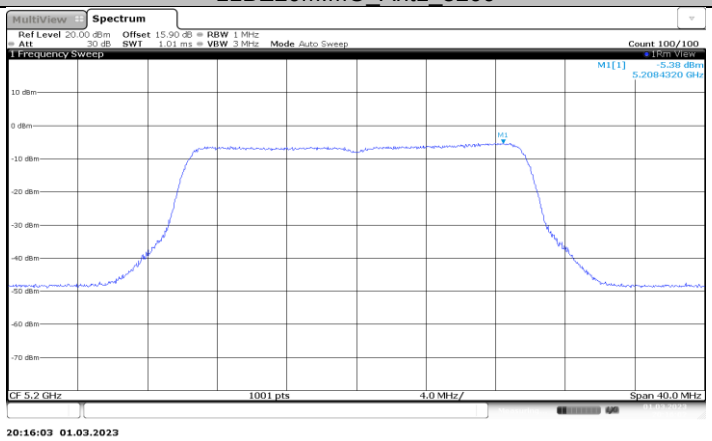
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE20MIMO_Ant4_5180

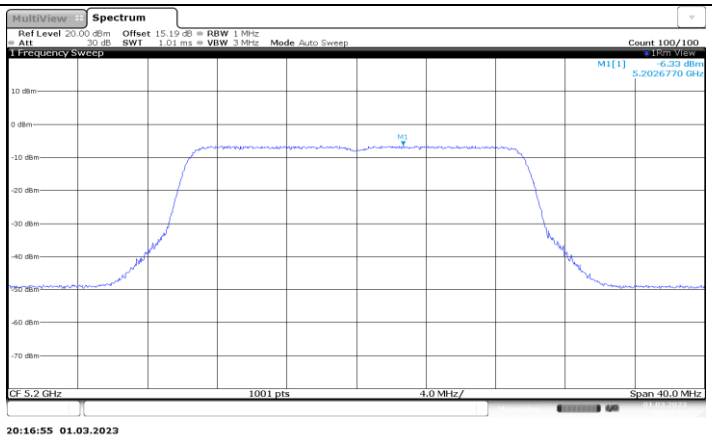


11BE20MIMO_Ant1_5200

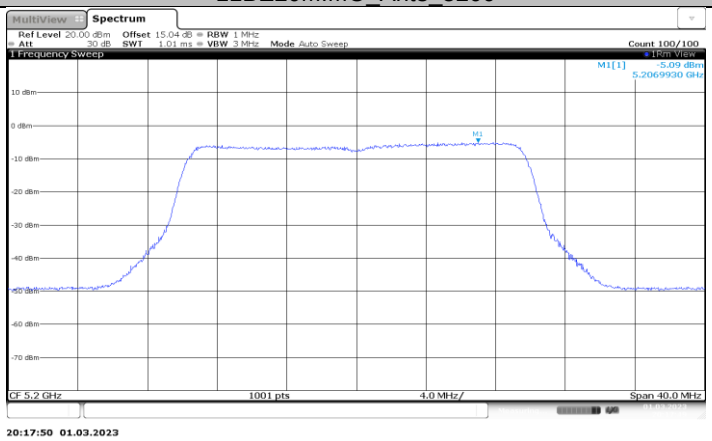


11BE20MIMO_Ant2_5200

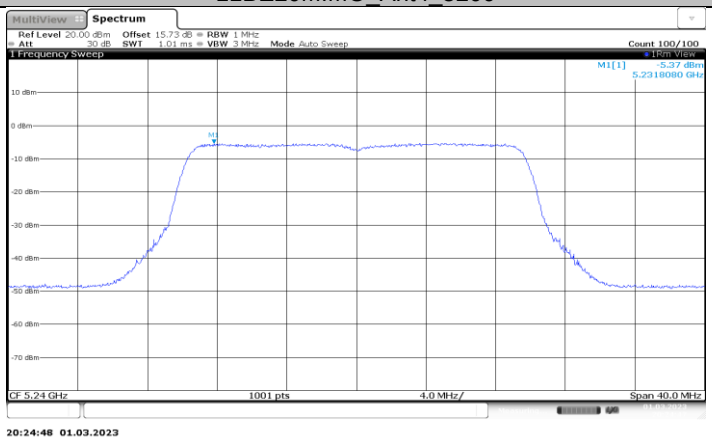
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE20MIMO_Ant3_5200

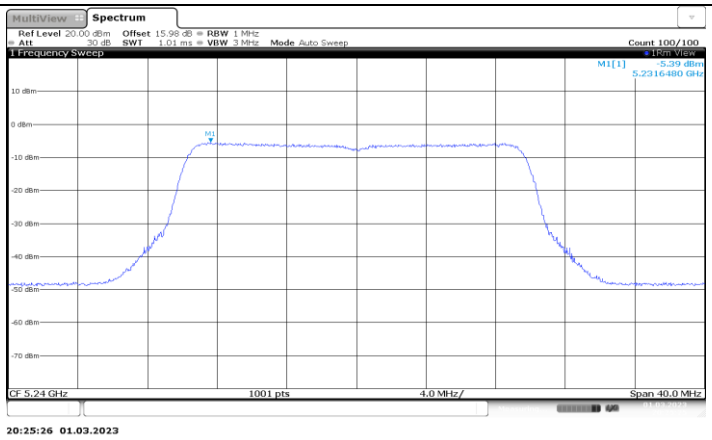


11BE20MIMO_Ant4_5200

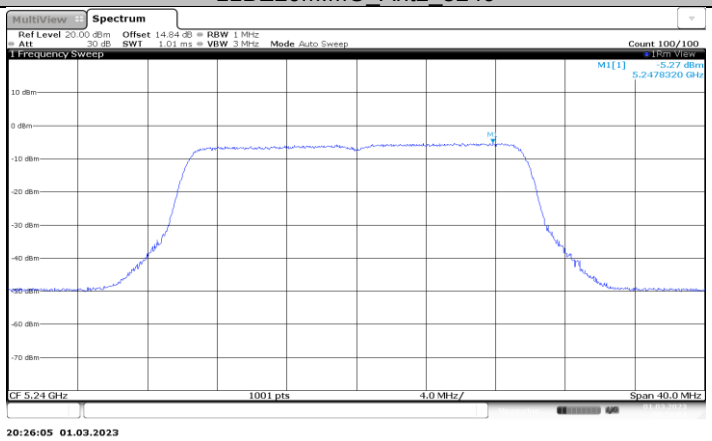


11BE20MIMO_Ant1_5240

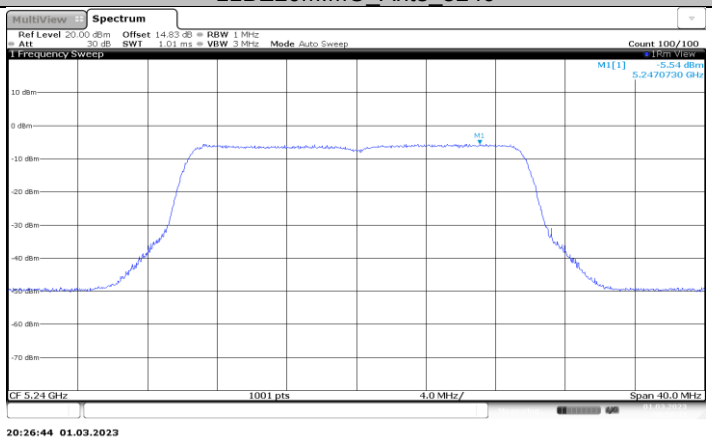
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE20MIMO_Ant2_5240

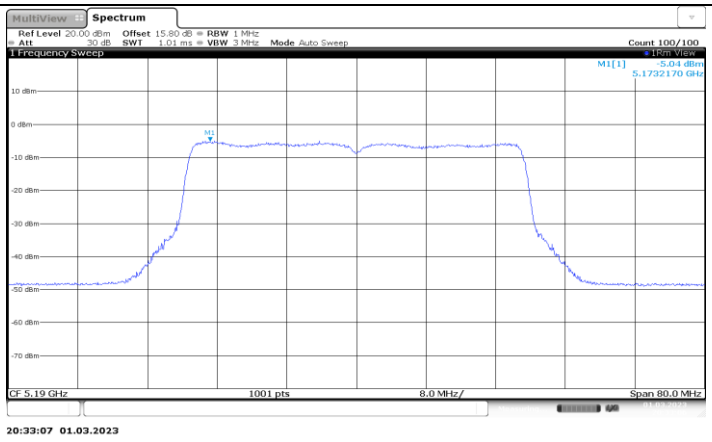


11BE20MIMO_Ant3_5240

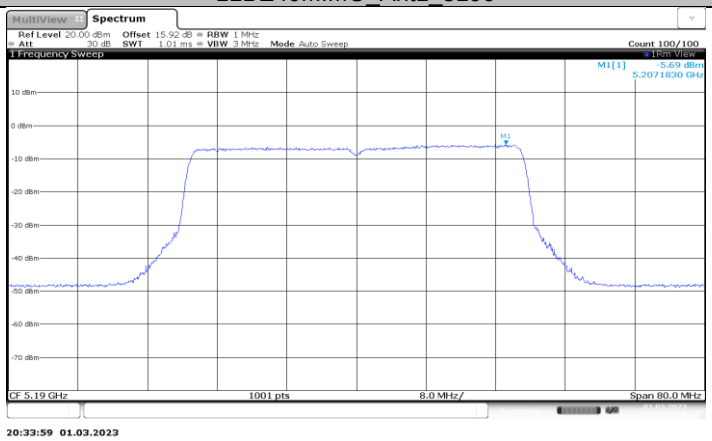


11BE20MIMO_Ant4_5240

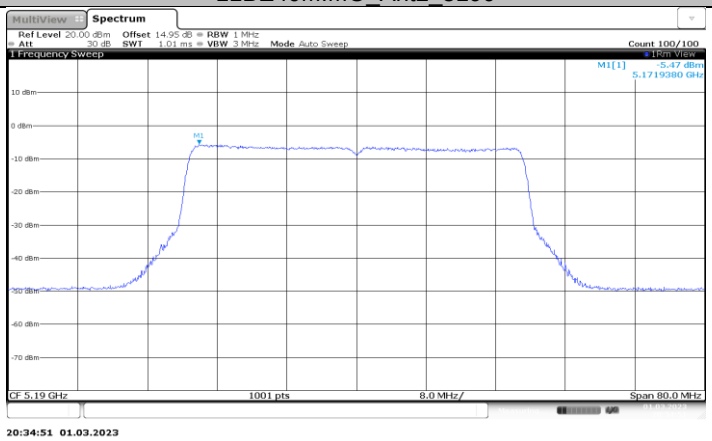
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE40MIMO_Ant1_5190

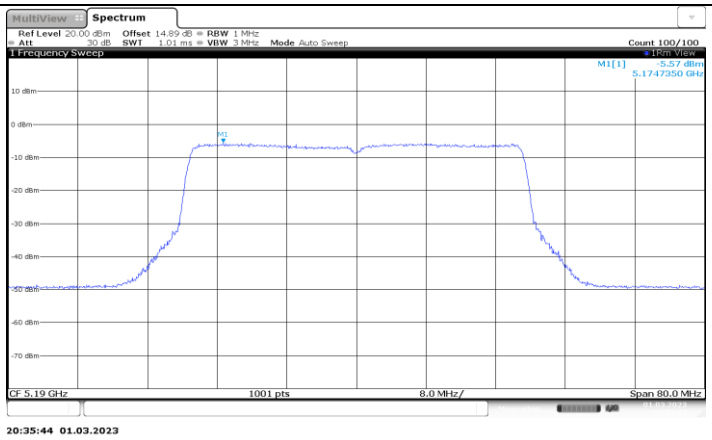


11BE40MIMO_Ant2_5190

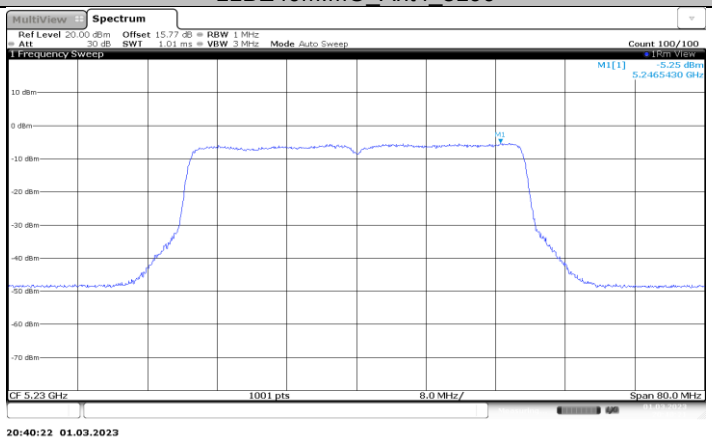


11BE40MIMO_Ant3_5190

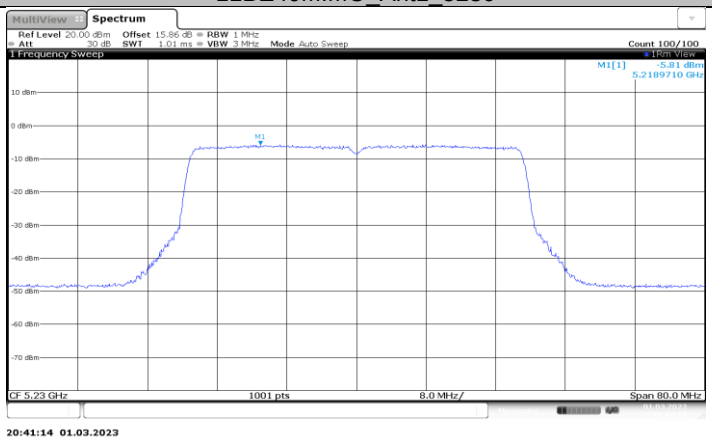
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE40MIMO_Ant4_5190

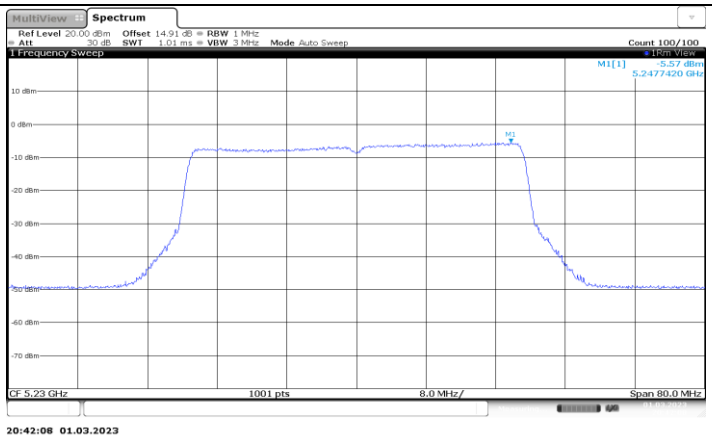


11BE40MIMO_Ant1_5230

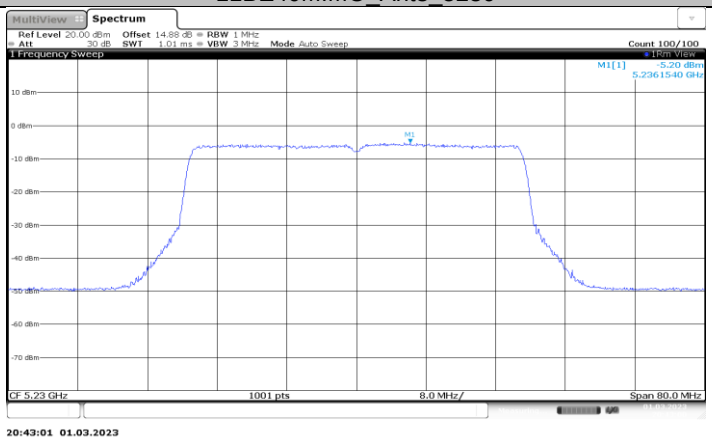


11BE40MIMO_Ant2_5230

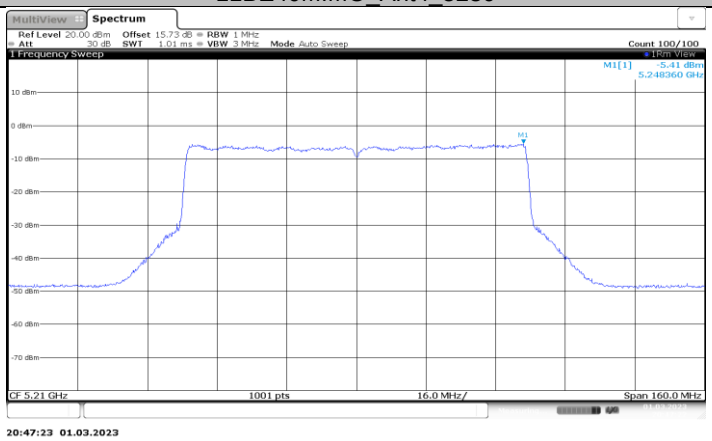
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE40MIMO_Ant3_5230

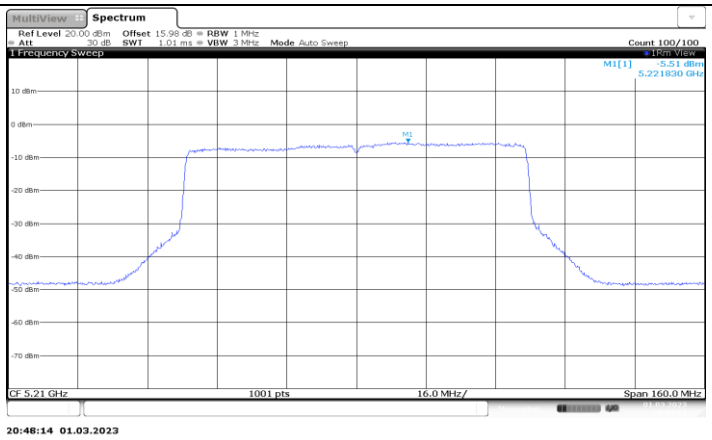


11BE40MIMO_Ant4_5230

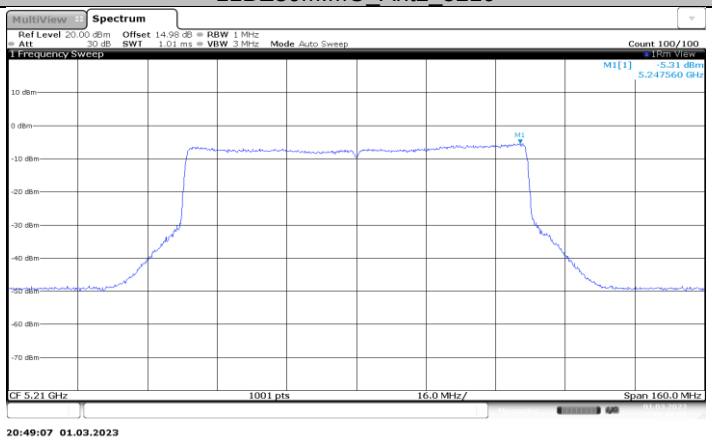


11BE80MIMO_Ant1_5210

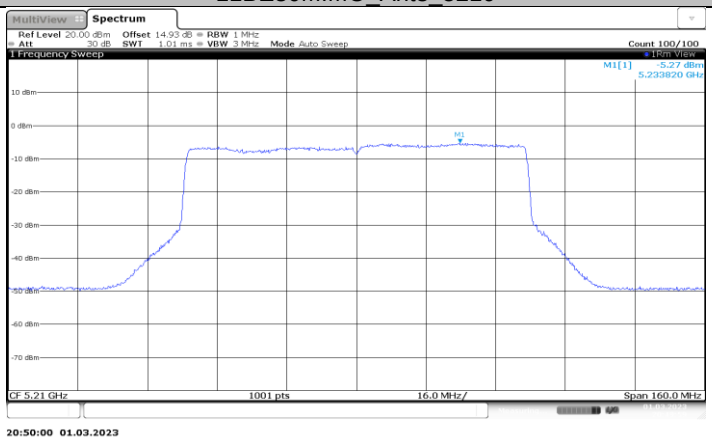
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE80MIMO_Ant2_5210



11BE80MIMO_Ant3_5210



11BE80MIMO_Ant4_5210

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

11.6. APPENDIX F: DUTY CYCLE

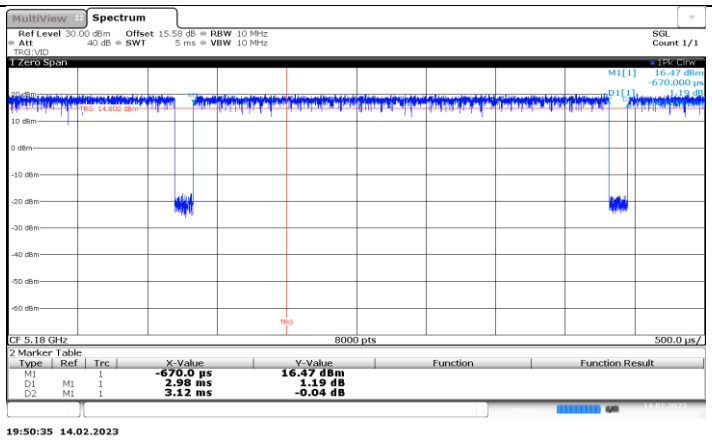
11.6.1. Test Result

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	2.98	3.12	0.9551	95.51	0.20	0.34	0.5
11AX20MIMO	3.91	4.07	0.9607	96.07	0.17	0.26	0.5
11AX40MIMO	5.44	6.79	0.8012	80.12	0.96	0.18	0.5
11AX80MIMO	5.29	5.4	0.9796	97.96	0.09	0.19	0.5
11BE20MIMO	5.42	5.68	0.9542	95.42	0.20	0.18	0.5
11BE40MIMO	5.36	5.52	0.9710	97.10	0.13	0.19	0.5
11BE80MIMO	5.45	6.81	0.8003	80.03	0.97	0.18	0.5

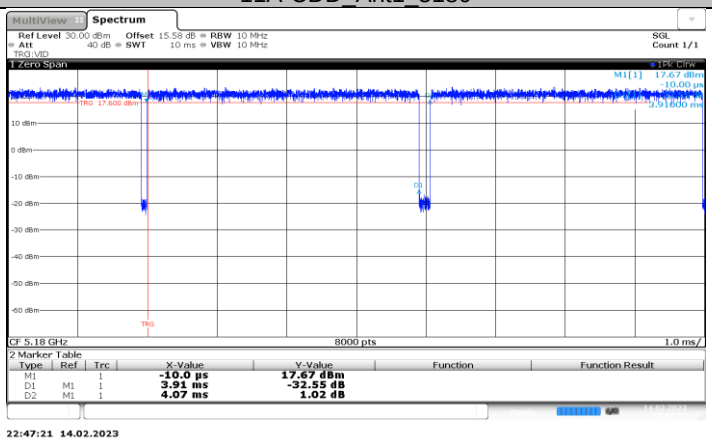
Note:
Duty Cycle Correction Factor=10log (1/x).
Where: x is Duty Cycle (Linear)
Where: T is On Time
If that calculated VBW is not available on the analyzer then the next higher value should be used.

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

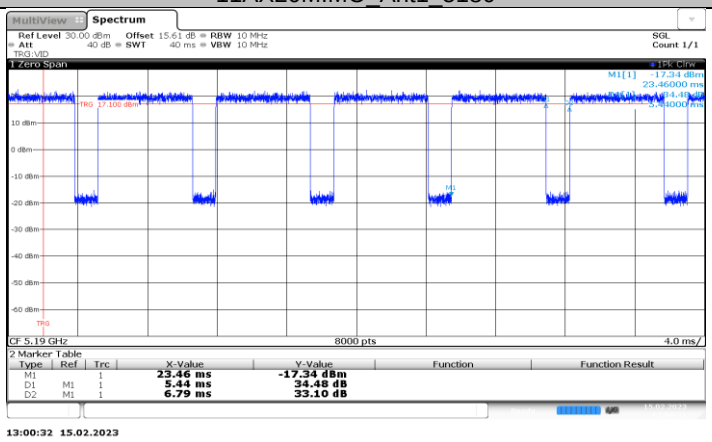
11.6.2. Test Graphs



11A-CDD_Ant1_5180

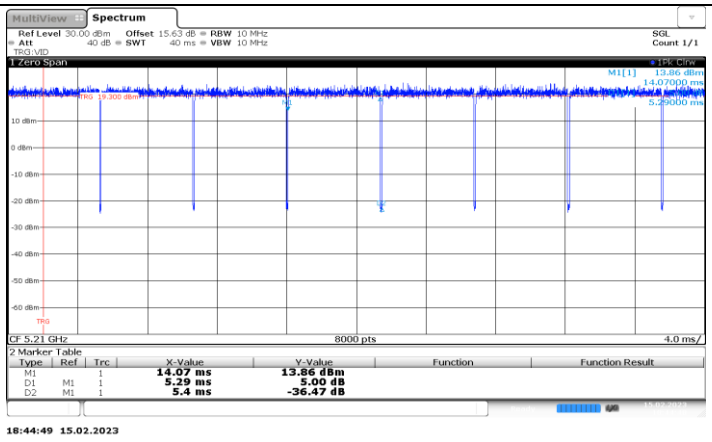


11AX20MIMO_Ant1_5180

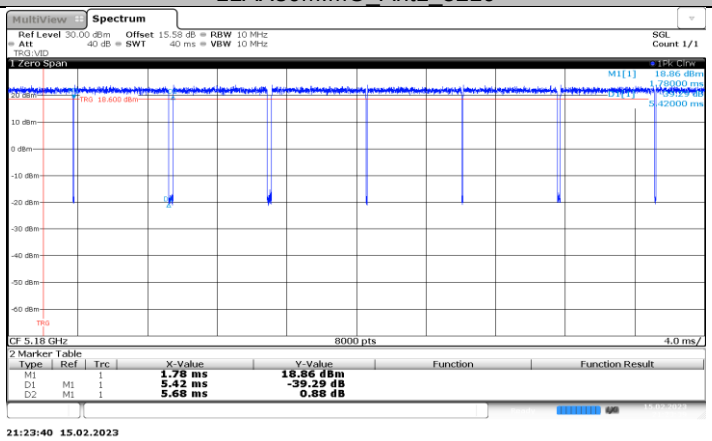


11AX40MIMO_Ant1_5190

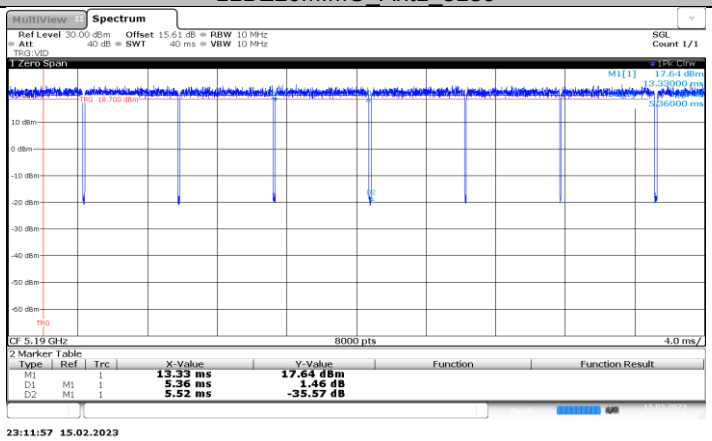
This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11AX80MIMO_Ant1_5210

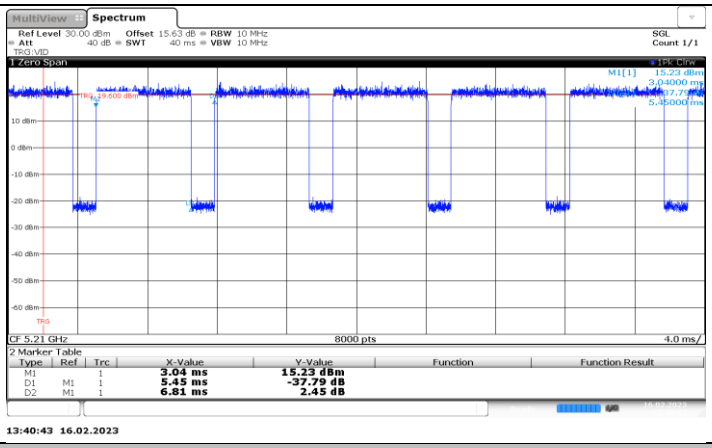


11BE20MIMO_Ant1_5180



11BE40MIMO_Ant1_5190

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



11BE80MIMO_Ant1_5210

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.

11.7. APPENDIX G: FREQUENCY STABILITY

11.7.1. 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	5199.9899	-1.94	5199.9795	-3.94	5200.0144	2.77	5199.9894	-2.03
TN	VN	5199.9949	-0.98	5200.0103	1.99	5200.0067	1.28	5199.9844	-3.01
TN	VH	5200.0244	4.68	5200.0151	2.91	5199.9912	-1.70	5199.9971	-0.56

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	5200.0055	1.06	5200.0004	0.08	5200.0027	0.52	5200.0020	0.38
30	VN	5200.0116	2.23	5199.9974	-0.49	5199.9904	-1.85	5200.0115	2.21
20	VN	5199.9793	-3.98	5200.0096	1.85	5199.9966	-0.66	5199.9889	-2.13
10	VN	5200.0032	0.61	5199.9923	-1.47	5200.0115	2.21	5200.0229	4.40
0	VN	5200.0144	2.77	5199.9822	-3.41	5199.9896	-1.99	5199.9754	-4.73

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.

END OF REPORT

This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.