11BE20MIMO_Ant15_2412

Date: 13.SEP.2024 09:03:39

11BE20MIMO_Ant8_2412

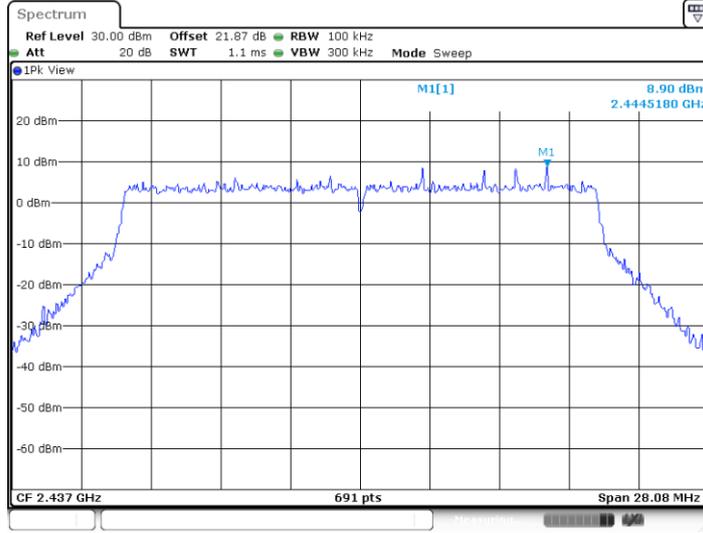Date: 13.SEP.2024 09:04:45

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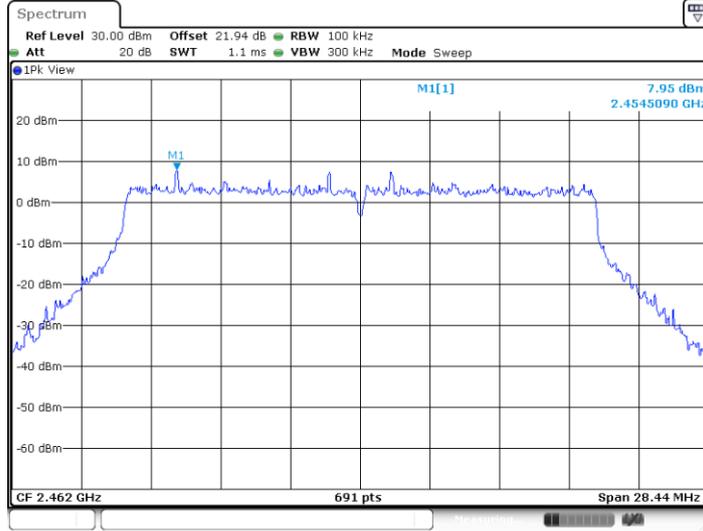
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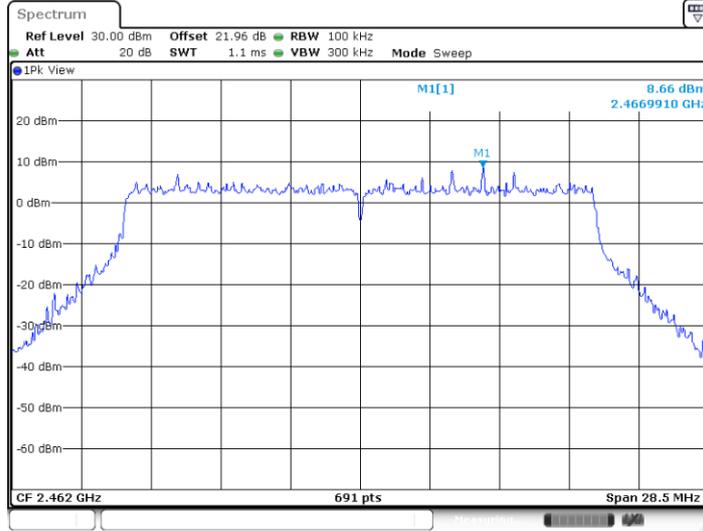
Date: 13.SEP.2024 09:07:11

11BE20MIMO_Ant15_2462

Date: 13.SEP.2024 09:08:58

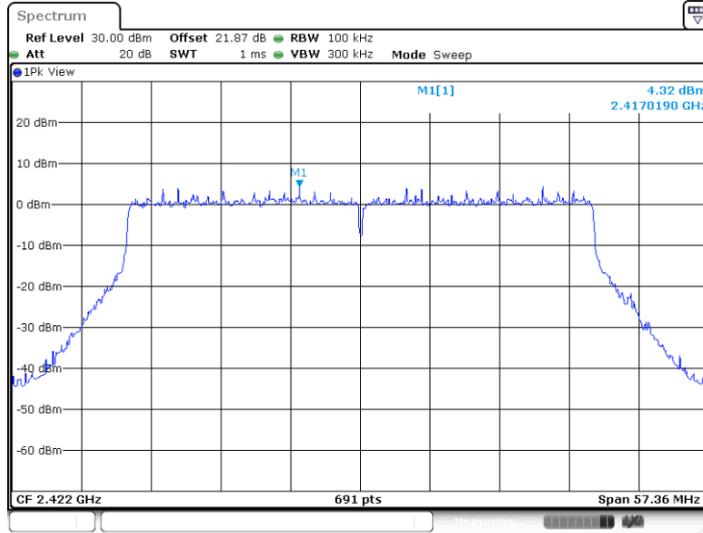| 11BE20MIMO_Ant8_2462 |
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Date: 13.SEP.2024 09:10:04

11BE40MIMO_Ant15_2422

Date: 13.SEP.2024 09:12:22

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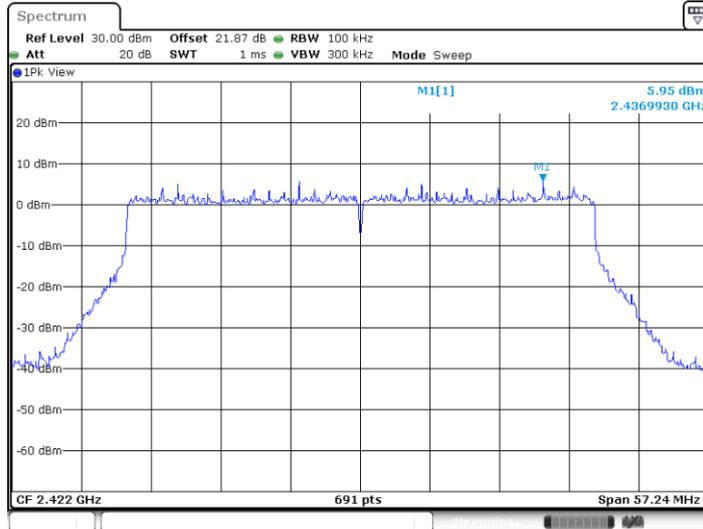
Date: 13.SEP.2024 09:13:28

11BE40MIMO_Ant15_2437

Date: 13.SEP.2024 09:15:06

11BE40MIMO_Ant8_2437

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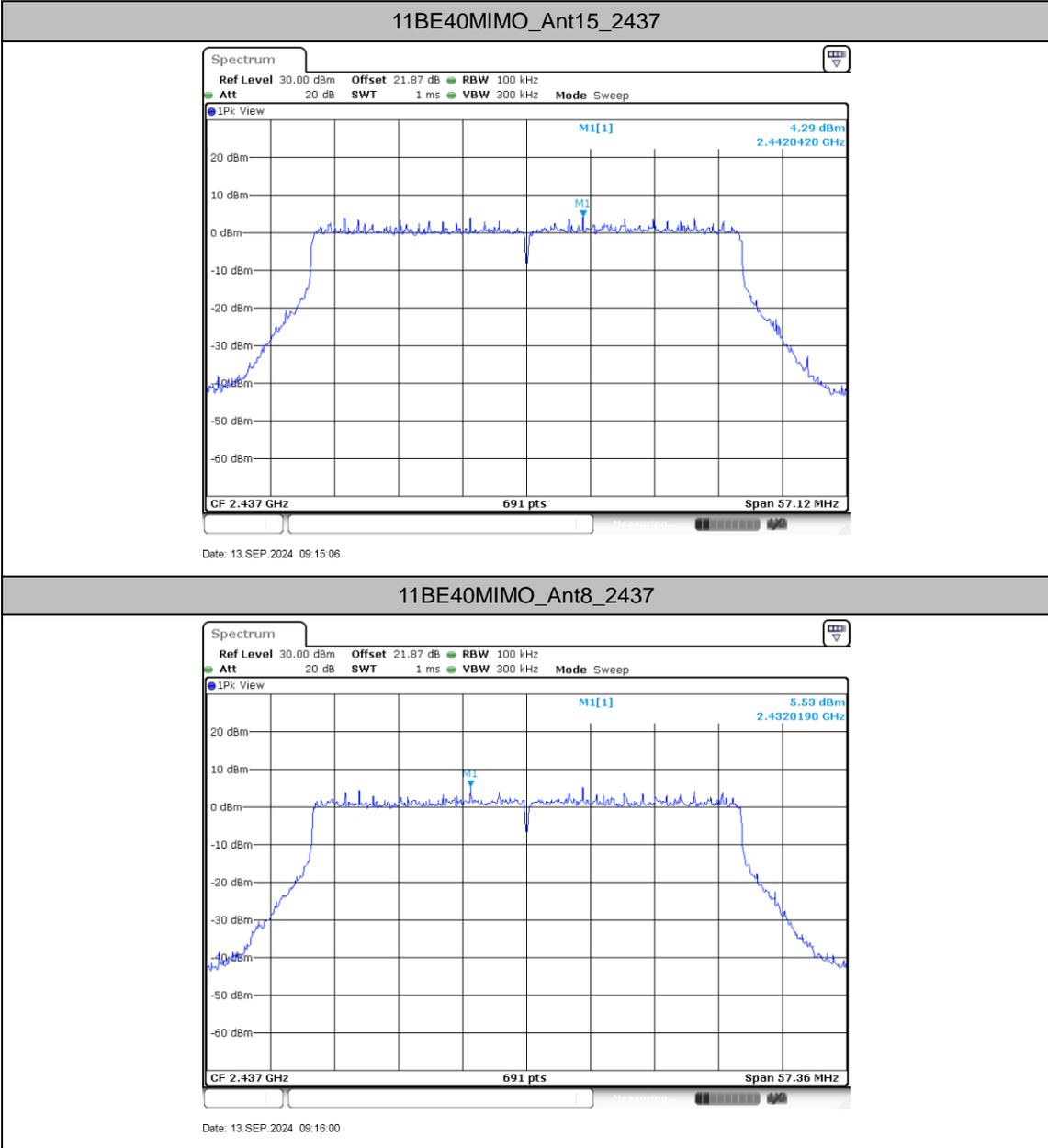
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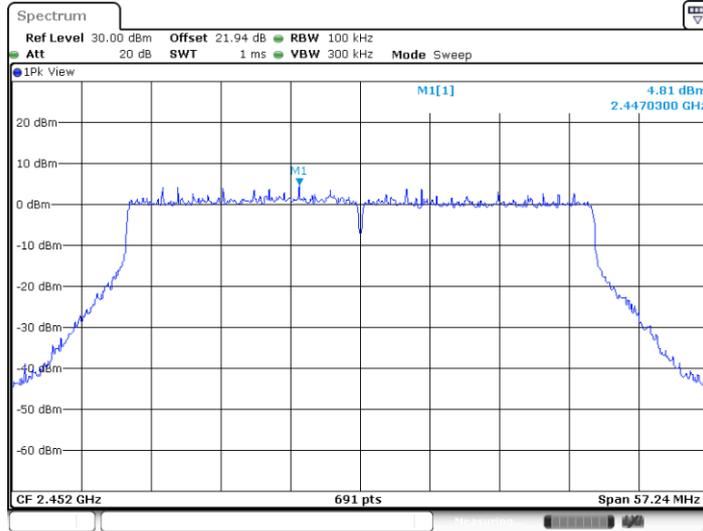
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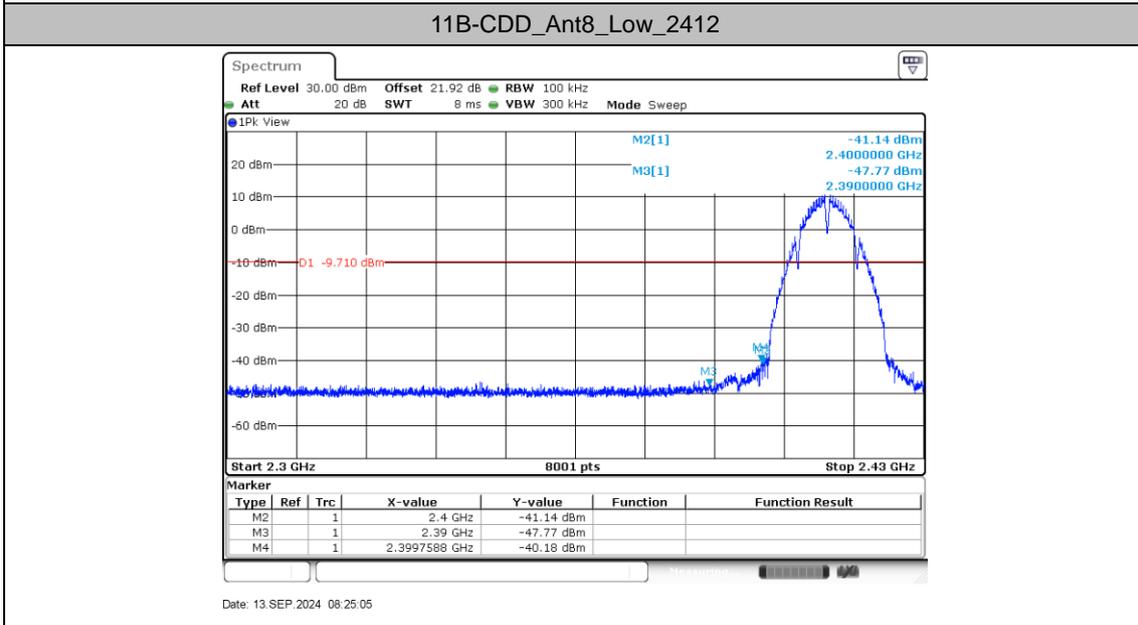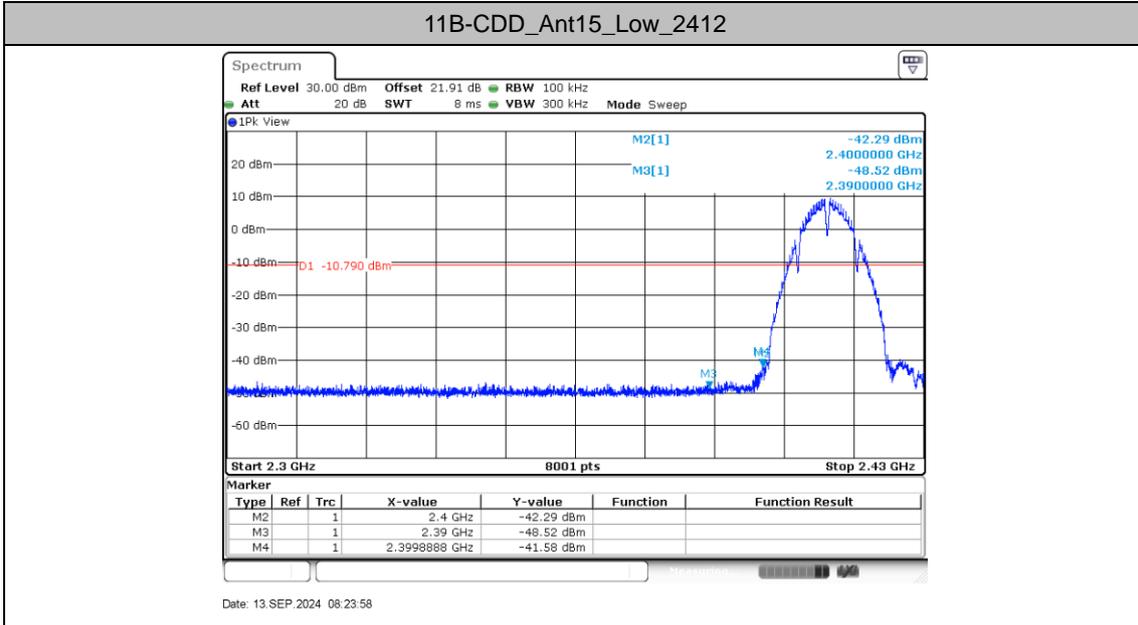| 11BE40MIMO_Ant8_2452 |
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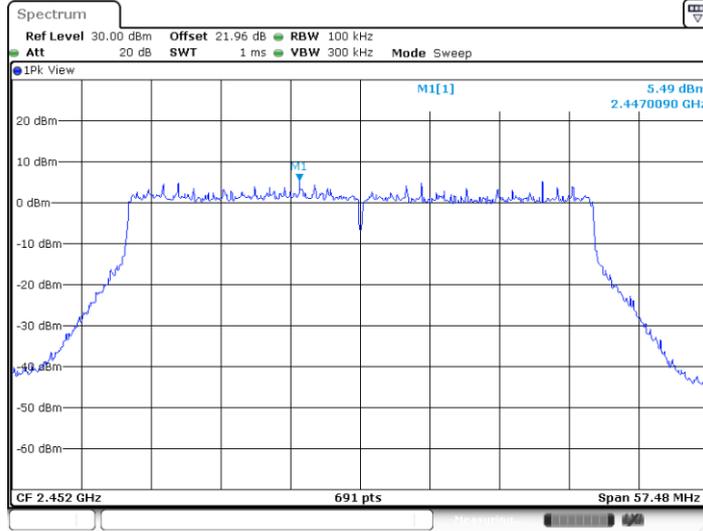
Date: 13.SEP.2024 09:18:26

Band edge measurements

Test Result

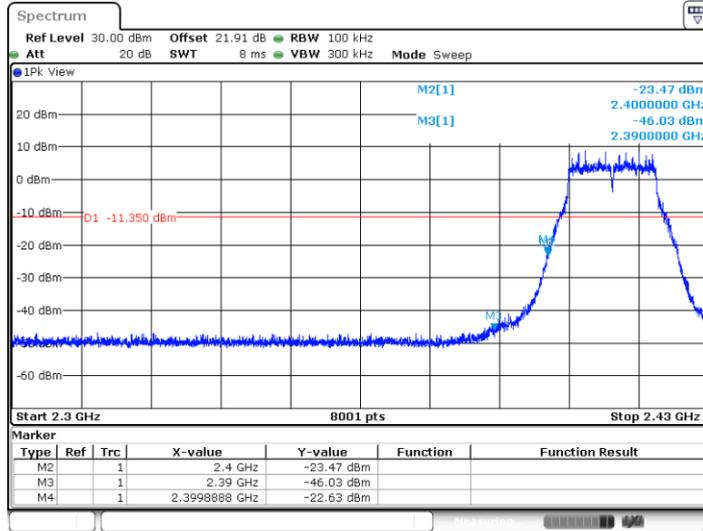| TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm /100KHz]	Result[dBm /100KHz]	Limit[dBm /100KHz]	Verdict
11B-CDD	Ant15	Low	2412	9.21	-41.58	≤-10.79	PASS
	Ant8	Low	2412	10.29	-40.18	≤-9.71	PASS
	Ant15	High	2462	9.26	-45.97	≤-10.74	PASS
	Ant8	High	2462	10.06	-46.07	≤-9.94	PASS
11G-CDD	Ant15	Low	2412	8.65	-22.63	≤-11.35	PASS
	Ant8	Low	2412	10.16	-21.44	≤-9.84	PASS
	Ant15	High	2462	8.49	-45.05	≤-11.51	PASS
	Ant8	High	2462	10.19	-42.57	≤-9.81	PASS
11BE20MIMO	Ant15	Low	2412	7.45	-25.54	≤-12.55	PASS
	Ant8	Low	2412	8.21	-23.31	≤-11.79	PASS
	Ant15	High	2462	7.95	-44.04	≤-12.05	PASS
	Ant8	High	2462	8.66	-40.62	≤-11.34	PASS
11BE40MIMO	Ant15	Low	2422	4.32	-25.13	≤-15.68	PASS
	Ant8	Low	2422	5.95	-25.53	≤-14.05	PASS
	Ant15	High	2452	4.81	-43.52	≤-15.19	PASS
	Ant8	High	2452	5.49	-40.43	≤-14.51	PASS

Test Graphs

11B-CDD_Ant15_Low_2412

Date: 13.SEP.2024 08:23:58

11B-CDD_Ant8_Low_2412

Date: 13.SEP.2024 08:25:05

11B-CDD_Ant15_High_2462

Date: 13.SEP.2024 08:34:21

11B-CDD_Ant8_High_2462

Date: 13.SEP.2024 08:35:27

11G-CDD_Ant15_Low_2412

Spectrum

Ref Level 30.00 dBm   Offset 21.91 dB ● RBW 100 kHz
● Att   20 dB   SWT   8 ms ● VBW 300 kHz   Mode Sweep
● 1Pk View

M2[1]   -23.47 dBm
                         2.4000000 GHz
M3[1]   -46.03 dBm
                         2.3900000 GHz

D1 -11.350 dBm

Start 2.3 GHz   8001 pts   Stop 2.43 GHz

Marker

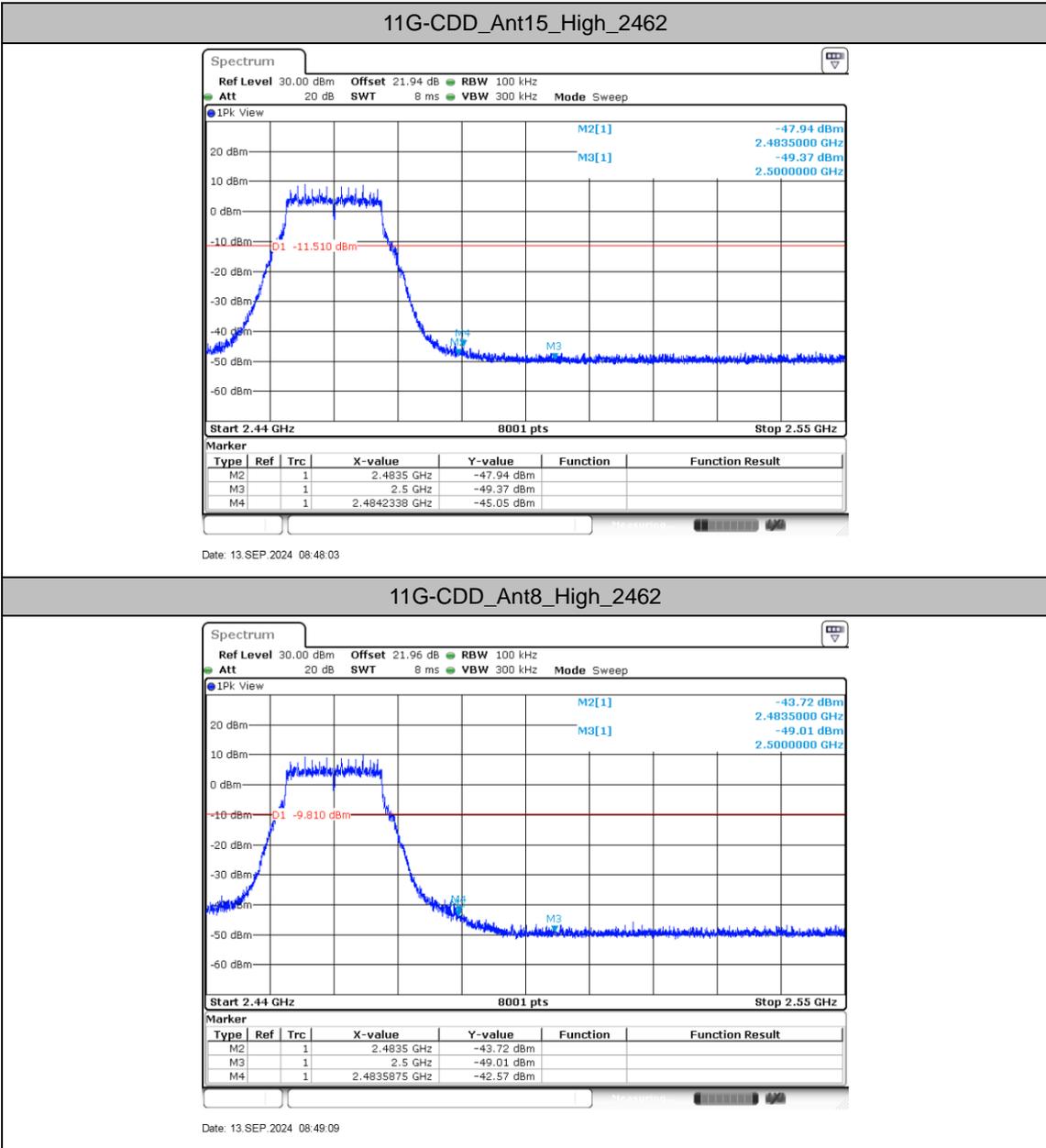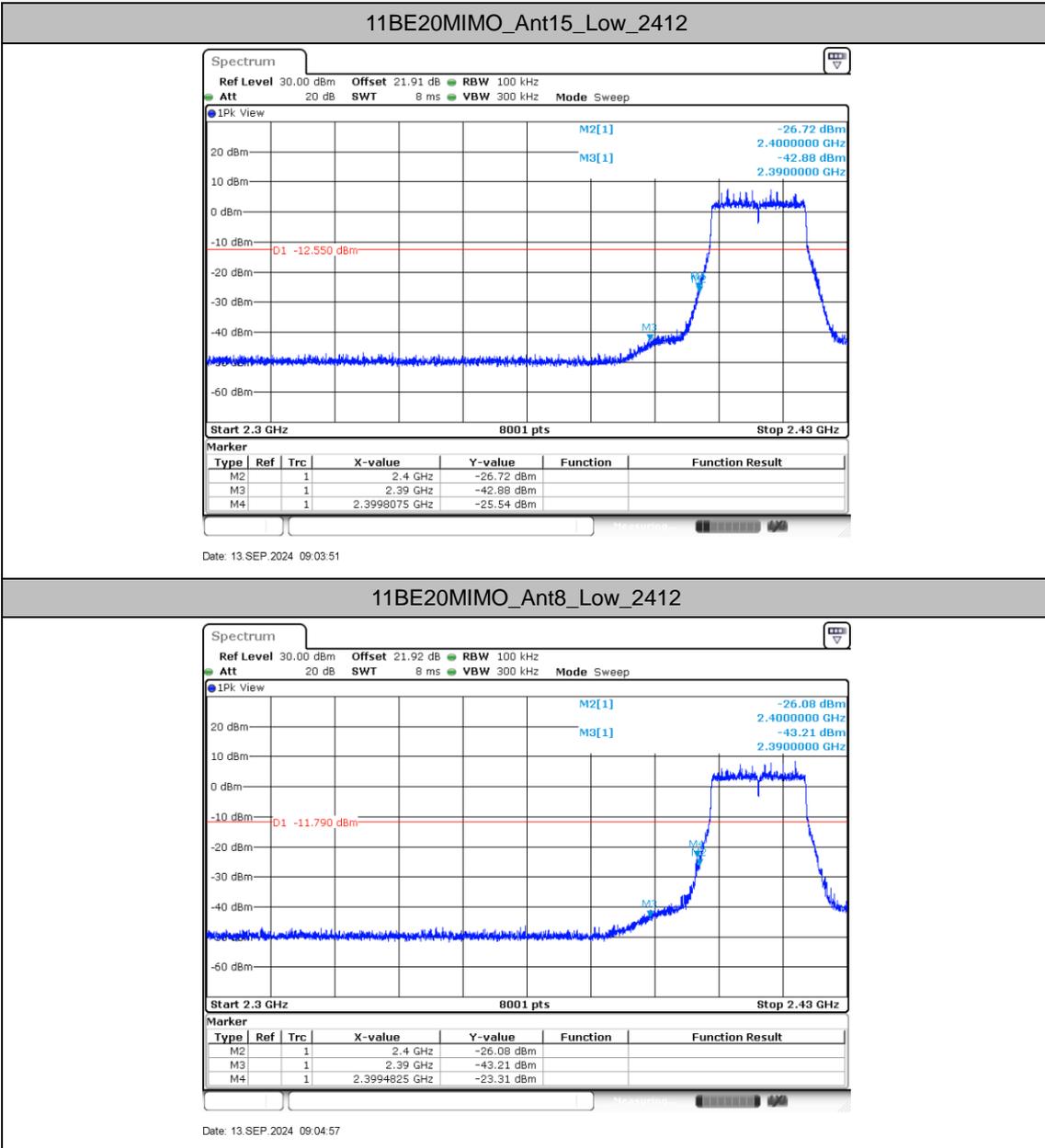| Type	Ref	Trc	X-value	Y-value	Function	Function Result
M2		1	2.4 GHz	-23.47 dBm		
M3		1	2.39 GHz	-46.03 dBm		
M4		1	2.3998888 GHz	-22.63 dBm		

Date: 13.SEP.2024 08:43:18

11G-CDD_Ant8_Low_2412

Spectrum

Ref Level 30.00 dBm   Offset 21.92 dB ● RBW 100 kHz
● Att   20 dB   SWT   8 ms ● VBW 300 kHz   Mode Sweep
● 1Pk View

M2[1]   -23.73 dBm
                         2.4000000 GHz
M3[1]   -44.94 dBm
                         2.3900000 GHz

D1 -9.840 dBm

Start 2.3 GHz   8001 pts   Stop 2.43 GHz

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M2		1	2.4 GHz	-23.73 dBm		
M3		1	2.39 GHz	-44.94 dBm		
M4		1	2.3998725 GHz	-21.44 dBm		

Date: 13.SEP.2024 08:44:24

11G-CDD_Ant15_High_2462

Date: 13.SEP.2024 08:48:03

11G-CDD_Ant8_High_2462

Date: 13.SEP.2024 08:49:09
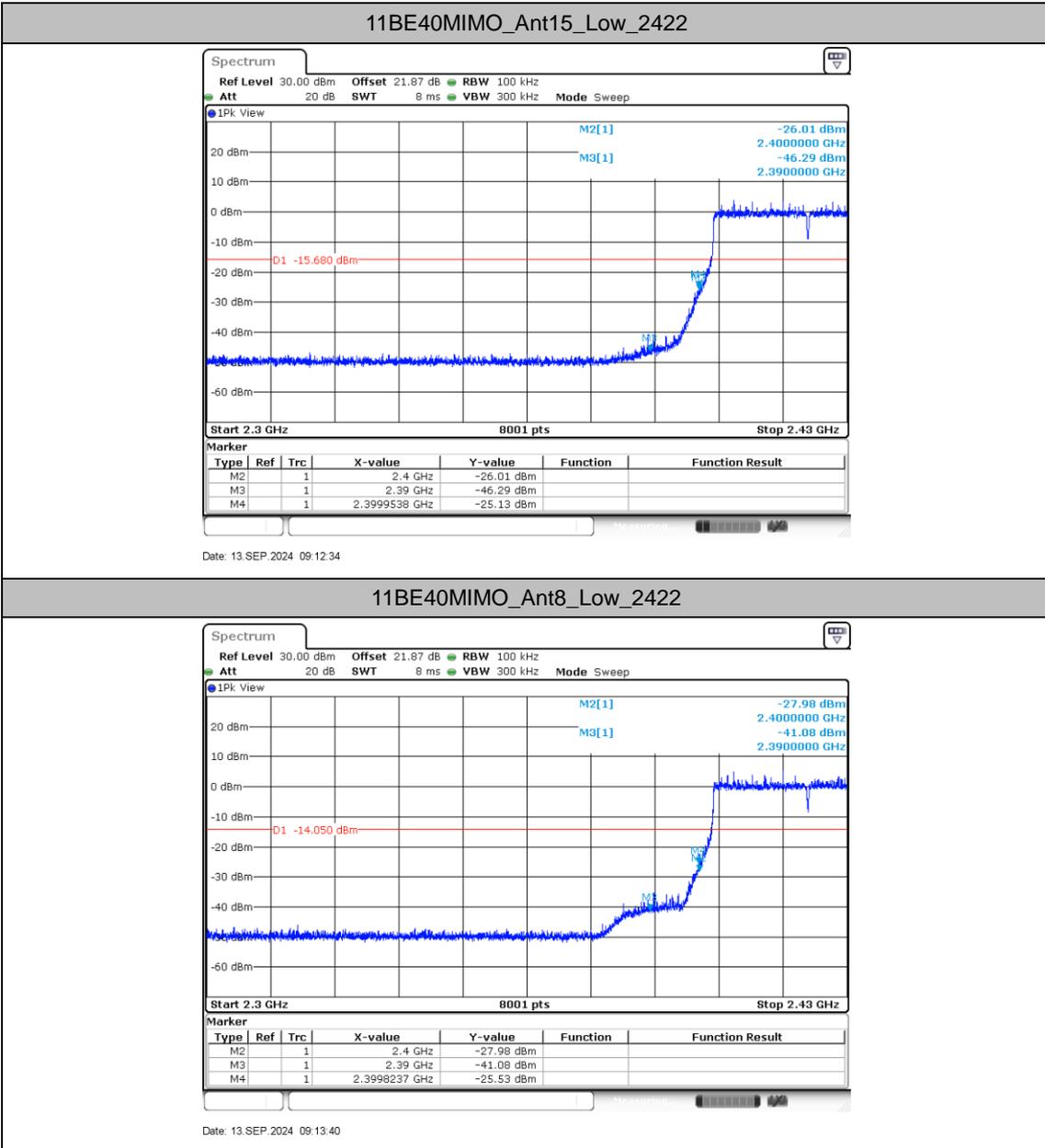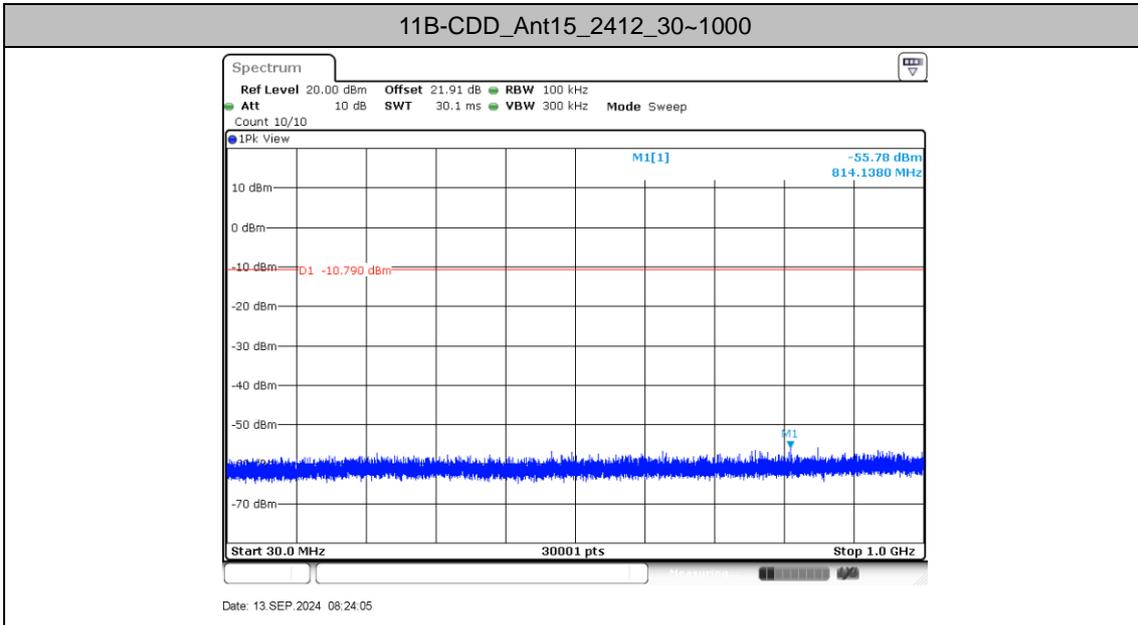
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Date: 13.SEP.2024 09:03:51

11BE20MIMO_Ant8_Low_2412

Date: 13.SEP.2024 09:04:57

11BE20MIMO_Ant15_High_2462

Spectrum

Ref Level 30.00 dBm   Offset 21.94 dB ● RBW 100 kHz
● Att   20 dB   SWT   8 ms ● VBW 300 kHz   Mode Sweep

● 1Pk View

M2[1]   -45.10 dBm
                      2.4835000 GHz
M3[1]   -50.34 dBm
                      2.5000000 GHz

D1 -12.050 dBm

Start 2.44 GHz   8001 pts   Stop 2.55 GHz

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M2		1	2.4835 GHz	-45.10 dBm		
M3		1	2.5 GHz	-50.34 dBm		
M4		1	2.4840962 GHz	-44.04 dBm		

Date: 13.SEP.2024 09:09:10

11BE20MIMO_Ant8_High_2462

Spectrum

Ref Level 30.00 dBm   Offset 21.96 dB ● RBW 100 kHz
● Att   20 dB   SWT   8 ms ● VBW 300 kHz   Mode Sweep

● 1Pk View

M2[1]   -41.99 dBm
                      2.4835000 GHz
M3[1]   -49.41 dBm
                      2.5000000 GHz

D1 -11.340 dBm

Start 2.44 GHz   8001 pts   Stop 2.55 GHz

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M2		1	2.4835 GHz	-41.99 dBm		
M3		1	2.5 GHz	-49.41 dBm		
M4		1	2.4859525 GHz	-40.62 dBm		

Date: 13.SEP.2024 09:10:16

11BE40MIMO_Ant15_Low_2422

Spectrum

Ref Level 30.00 dBm Offset 21.87 dB RBW 100 kHz
Att 20 dB SWT 8 ms VBW 300 kHz Mode Sweep
1Pk View

M2[1] -26.01 dBm
2.4000000 GHz
M3[1] -46.29 dBm
2.3900000 GHz

20 dBm
10 dBm
0 dBm
-10 dBm
D1 -15.680 dBm
-20 dBm
-30 dBm
-40 dBm
-60 dBm

Start 2.3 GHz 8001 pts Stop 2.43 GHz

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M2		1	2.4 GHz	-26.01 dBm		
M3		1	2.39 GHz	-46.29 dBm		
M4		1	2.3999538 GHz	-25.13 dBm		

Date: 13.SEP.2024 09:12:34

11BE40MIMO_Ant8_Low_2422

Spectrum

Ref Level 30.00 dBm Offset 21.87 dB RBW 100 kHz
Att 20 dB SWT 8 ms VBW 300 kHz Mode Sweep
1Pk View

M2[1] -27.98 dBm
2.4000000 GHz
M3[1] -41.08 dBm
2.3900000 GHz

20 dBm
10 dBm
0 dBm
-10 dBm
D1 -14.050 dBm
-20 dBm
-30 dBm
-40 dBm
-60 dBm

Start 2.3 GHz 8001 pts Stop 2.43 GHz

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M2		1	2.4 GHz	-27.98 dBm		
M3		1	2.39 GHz	-41.08 dBm		
M4		1	2.3998237 GHz	-25.53 dBm		

Date: 13.SEP.2024 09:13:40

11BE40MIMO_Ant15_High_2452

Spectrum

Ref Level 30.00 dBm   Offset 21.94 dB ● RBW 100 kHz
● Att   20 dB   SWT   8 ms ● VBW 300 kHz   Mode Sweep
● 1Pk View

M2[1]   −45.26 dBm
             2.4835000 GHz
M3[1]   −48.78 dBm
             2.5000000 GHz

D1 −15.190 dBm

Start 2.44 GHz   8001 pts   Stop 2.55 GHz

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M2		1	2.4835 GHz	−45.26 dBm		
M3		1	2.5 GHz	−48.78 dBm		
M4		1	2.4840137 GHz	−43.52 dBm		

Date: 13.SEP.2024 09:17:31

11BE40MIMO_Ant8_High_2452

Spectrum

Ref Level 30.00 dBm   Offset 21.96 dB ● RBW 100 kHz
● Att   20 dB   SWT   8 ms ● VBW 300 kHz   Mode Sweep
● 1Pk View

M2[1]   −44.20 dBm
             2.4835000 GHz
M3[1]   −50.09 dBm
             2.5000000 GHz

D1 −14.510 dBm

Start 2.44 GHz   8001 pts   Stop 2.55 GHz

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M2		1	2.4835 GHz	−44.20 dBm		
M3		1	2.5 GHz	−50.09 dBm		
M4		1	2.4857463 GHz	−40.43 dBm		

Date: 13.SEP.2024 09:18:38

Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm/100KHz]	Result [dBm/100KHz]	Limit [dBm/100KHz]	Verdict
11B-CDD	Ant15	2412	30~1000	9.21	-55.78	≤-10.79	PASS
			1000~26500	9.21	-50.55	≤-10.79	PASS
	Ant8	2412	30~1000	10.29	-56.24	≤-9.71	PASS
			1000~26500	10.29	-50.97	≤-9.71	PASS
	Ant15	2437	30~1000	9.27	-56.53	≤-10.73	PASS
			1000~26500	9.27	-50.1	≤-10.73	PASS
	Ant8	2437	30~1000	10.22	-56.29	≤-9.78	PASS
			1000~26500	10.22	-50.88	≤-9.78	PASS
	Ant15	2462	30~1000	9.26	-55.95	≤-10.74	PASS
			1000~26500	9.26	-50.7	≤-10.74	PASS
	Ant8	2462	30~1000	10.06	-55.97	≤-9.94	PASS
			1000~26500	10.06	-51.29	≤-9.94	PASS
11G-CDD	Ant15	2412	30~1000	8.65	-54.91	≤-11.35	PASS
			1000~26500	8.65	-50.82	≤-11.35	PASS
	Ant8	2412	30~1000	10.16	-56.59	≤-9.84	PASS
			1000~26500	10.16	-51.37	≤-9.84	PASS
	Ant15	2437	30~1000	8.70	-54	≤-11.3	PASS
			1000~26500	8.70	-51.51	≤-11.3	PASS
	Ant8	2437	30~1000	8.88	-55.77	≤-11.12	PASS
			1000~26500	8.88	-50.8	≤-11.12	PASS
	Ant15	2462	30~1000	8.49	-55.5	≤-11.51	PASS
			1000~26500	8.49	-51.18	≤-11.51	PASS
	Ant8	2462	30~1000	10.19	-55.35	≤-9.81	PASS
			1000~26500	10.19	-51.07	≤-9.81	PASS
11BE20MIMO	Ant15	2412	30~1000	7.45	-55.6	≤-12.55	PASS
			1000~26500	7.45	-51.14	≤-12.55	PASS
	Ant8	2412	30~1000	8.21	-55.67	≤-11.79	PASS
			1000~26500	8.21	-51.14	≤-11.79	PASS
	Ant15	2437	30~1000	8.52	-55.71	≤-11.48	PASS
			1000~26500	8.52	-51.41	≤-11.48	PASS
	Ant8	2437	30~1000	8.90	-55.58	≤-11.1	PASS
			1000~26500	8.90	-51.41	≤-11.1	PASS
	Ant15	2462	30~1000	7.95	-55.86	≤-12.05	PASS
			1000~26500	7.95	-50.74	≤-12.05	PASS
	Ant8	2462	30~1000	8.66	-56.65	≤-11.34	PASS
			1000~26500	8.66	-51.06	≤-11.34	PASS
11BE40MIMO	Ant15	2422	30~1000	4.32	-56.03	≤-15.68	PASS
			1000~26500	4.32	-50.77	≤-15.68	PASS
	Ant8	2422	30~1000	5.95	-56.02	≤-14.05	PASS
			1000~26500	5.95	-51.71	≤-14.05	PASS
	Ant15	2437	30~1000	4.29	-55.63	≤-15.71	PASS
			1000~26500	4.29	-50.38	≤-15.71	PASS
	Ant8	2437	30~1000	5.53	-56.35	≤-14.47	PASS
			1000~26500	5.53	-51.39	≤-14.47	PASS
	Ant15	2452	30~1000	4.81	-56.19	≤-15.19	PASS
			1000~26500	4.81	-50.34	≤-15.19	PASS
	Ant8	2452	30~1000	5.49	-56.41	≤-14.51	PASS
			1000~26500	5.49	-51.05	≤-14.51	PASS

Test Graphs

11B-CDD_Ant15_2412_30~1000

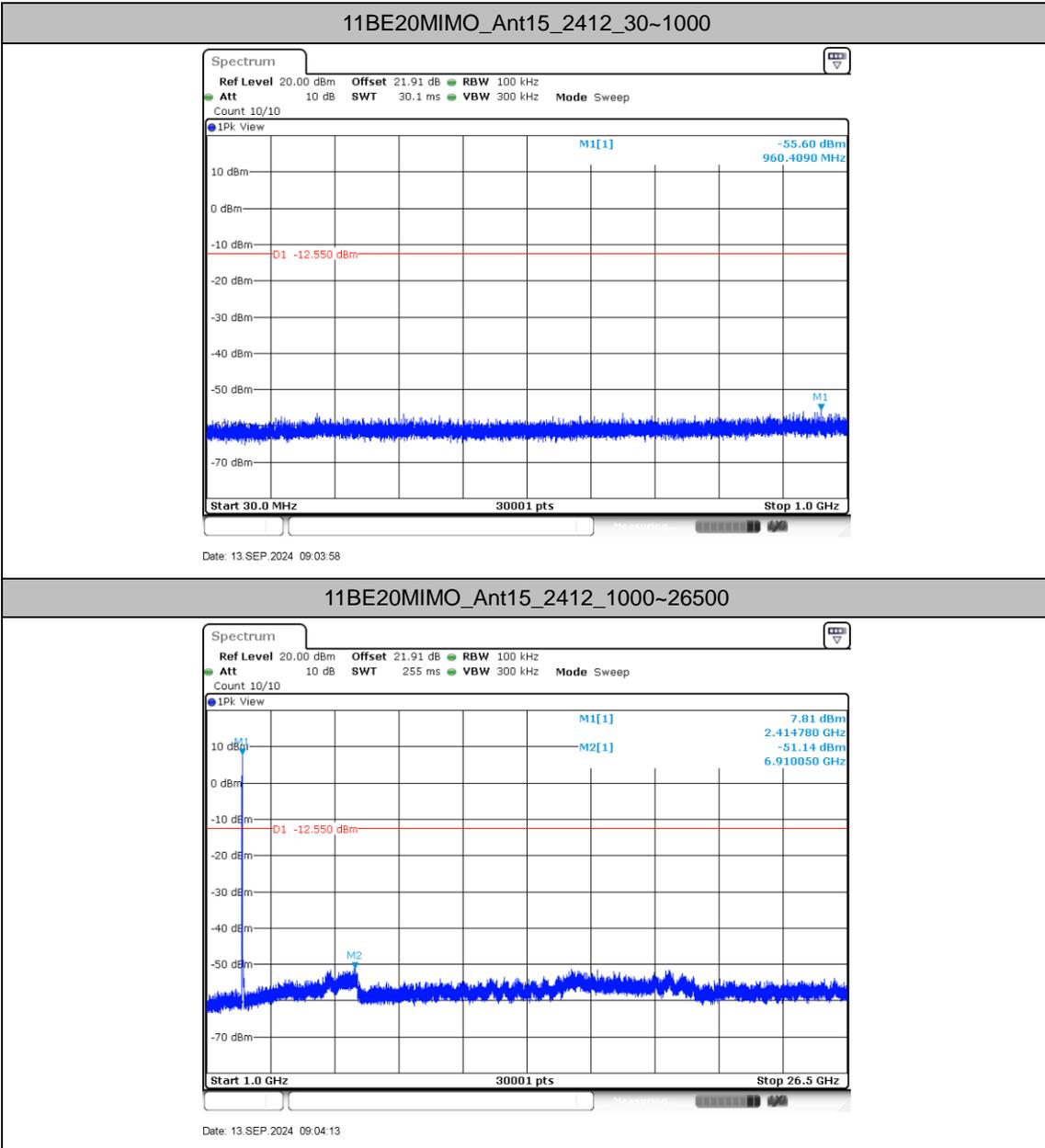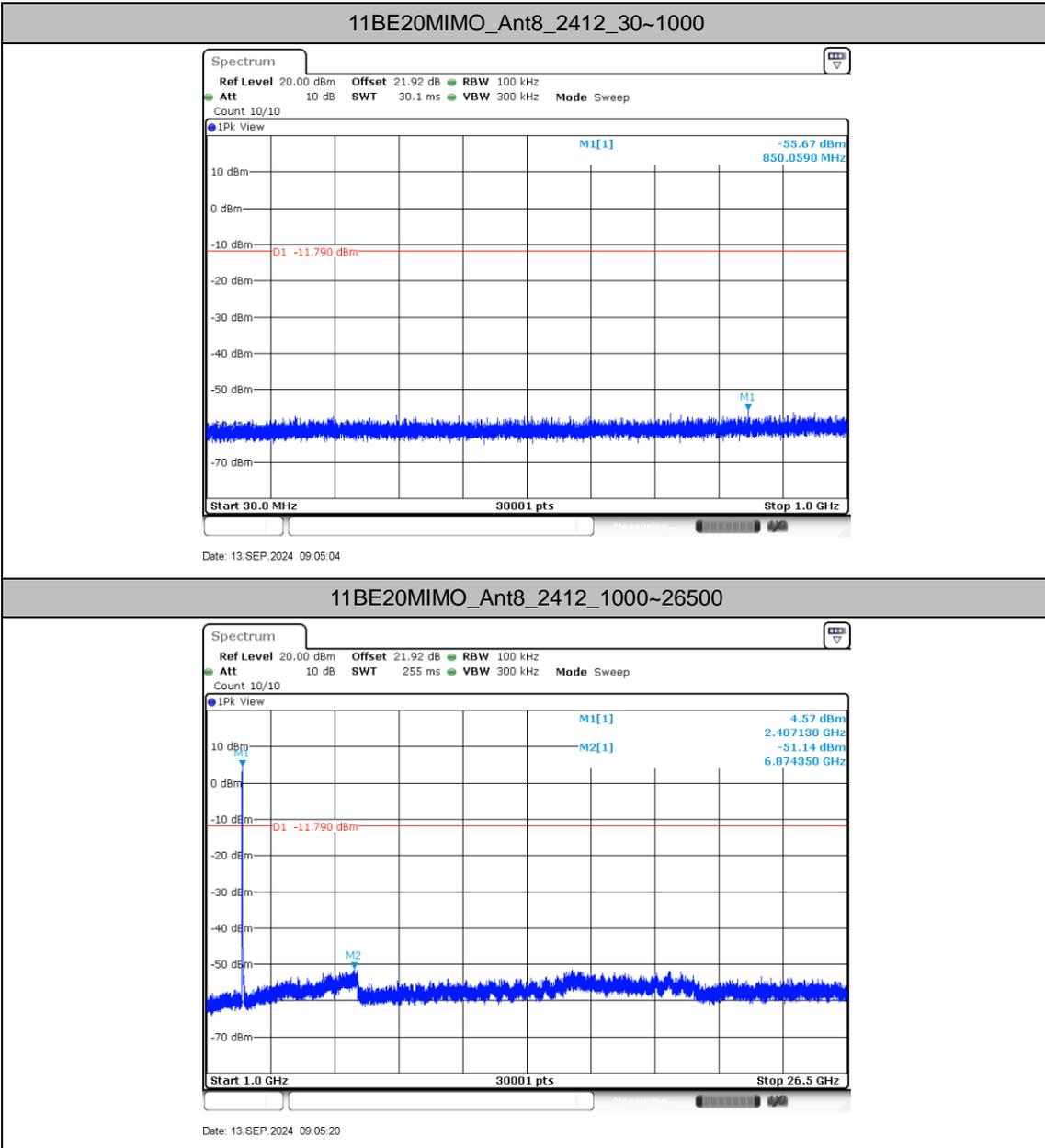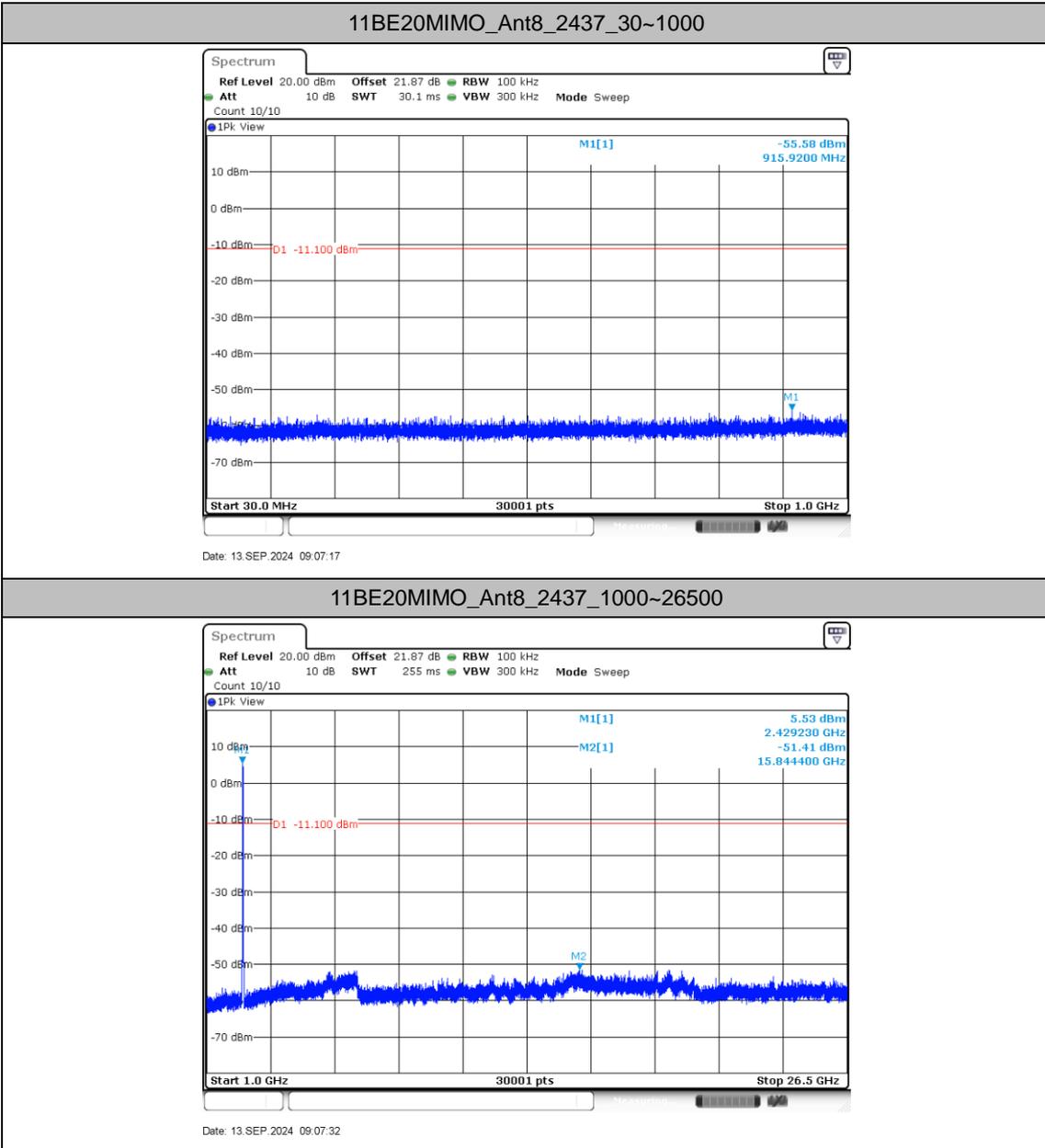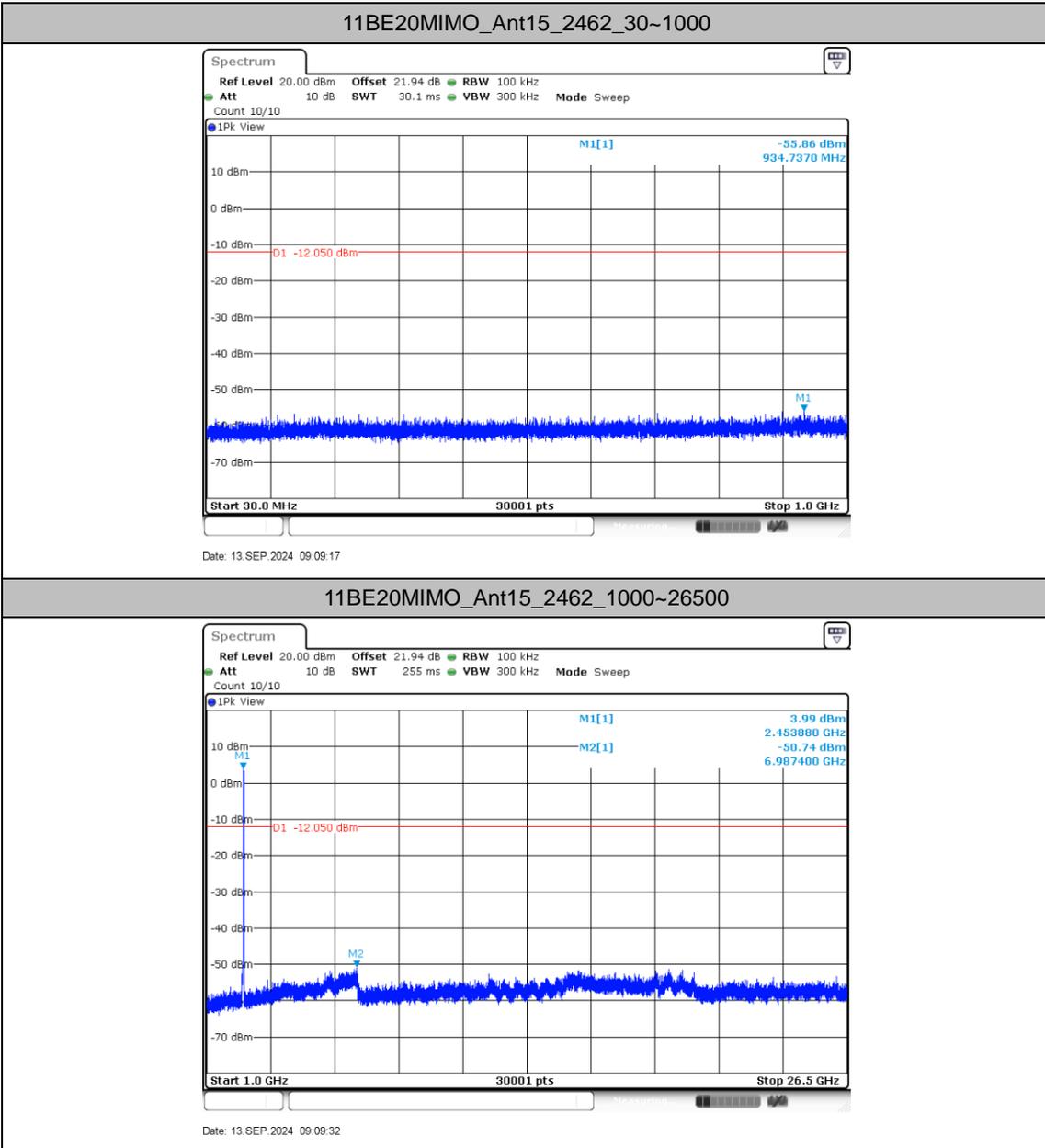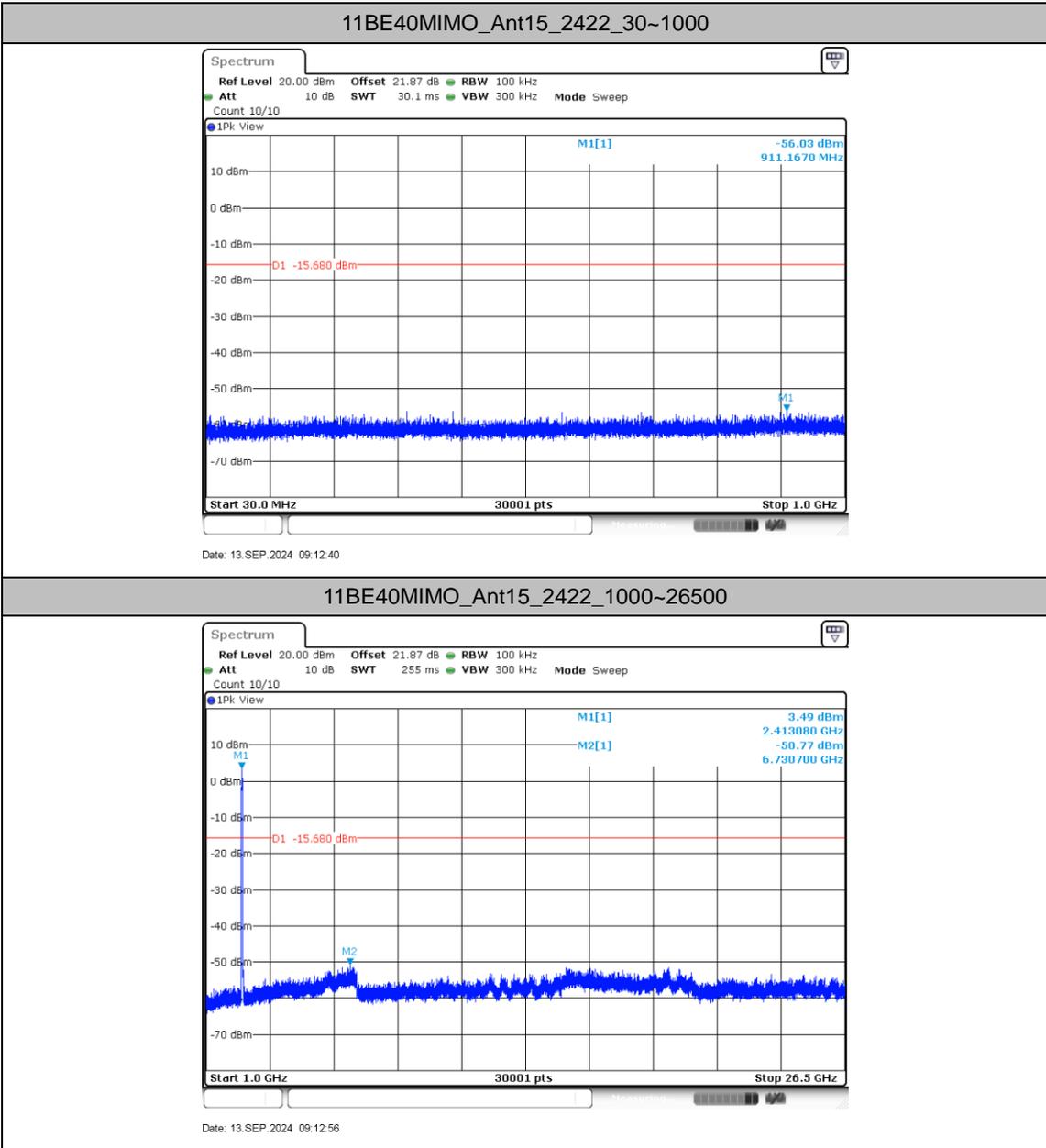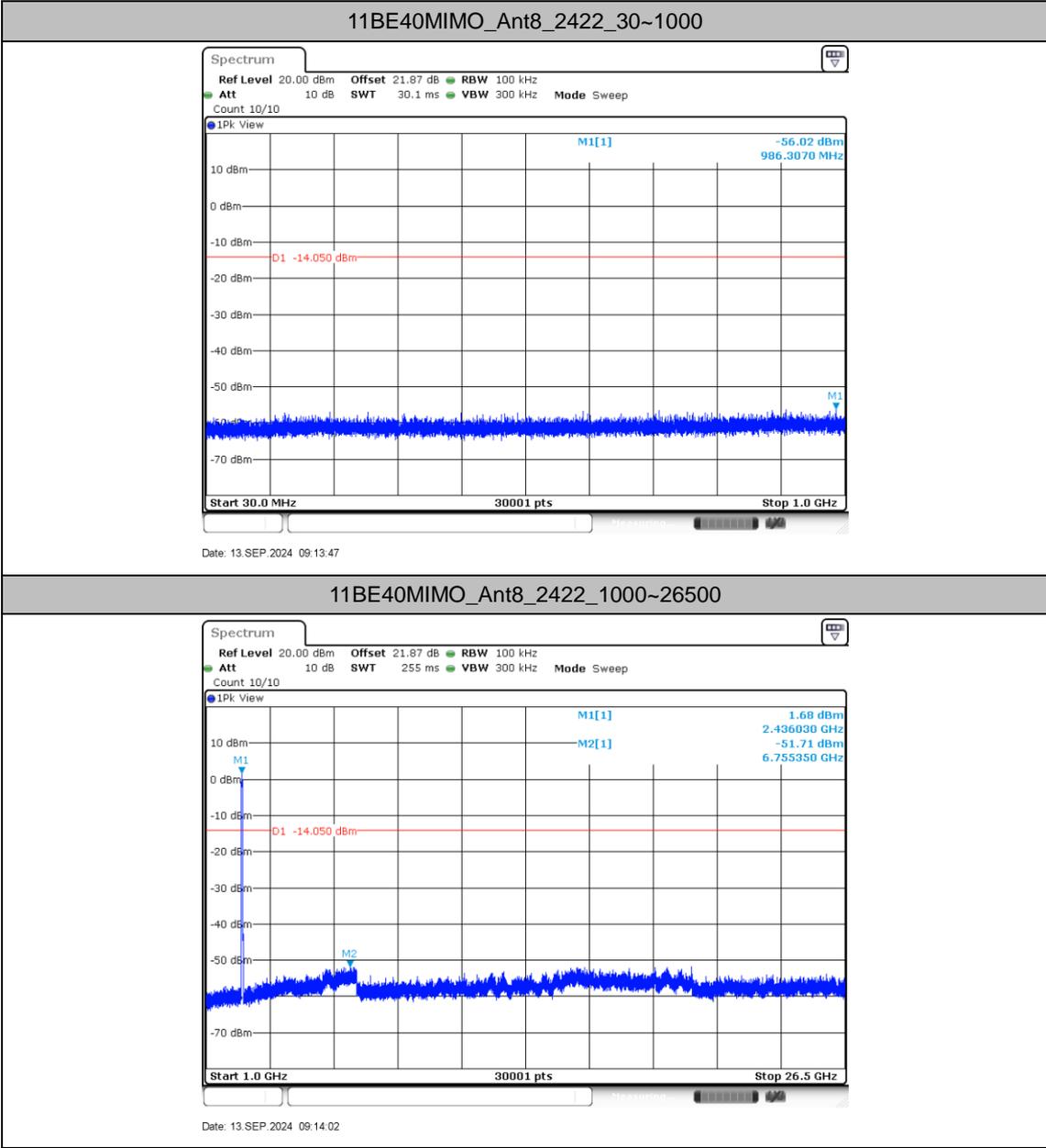| 11B-CDD_Ant15_2412_1000~26500 |
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11B-CDD_Ant8_2412_30~1000

Date: 13.SEP.2024 08:25:11

11B-CDD_Ant8_2412_1000~26500

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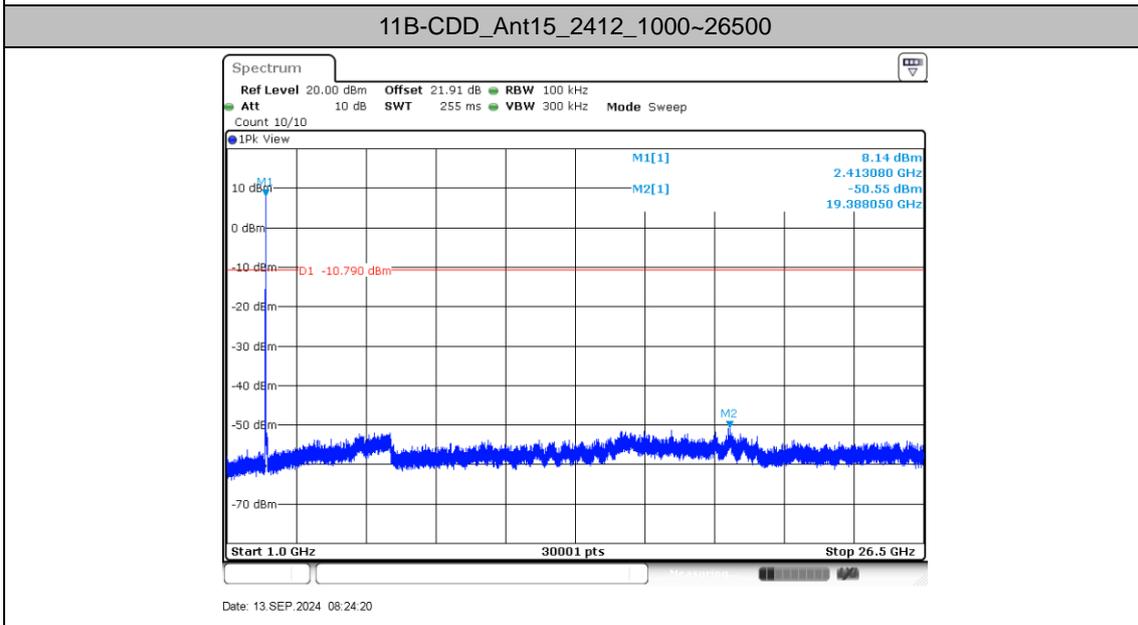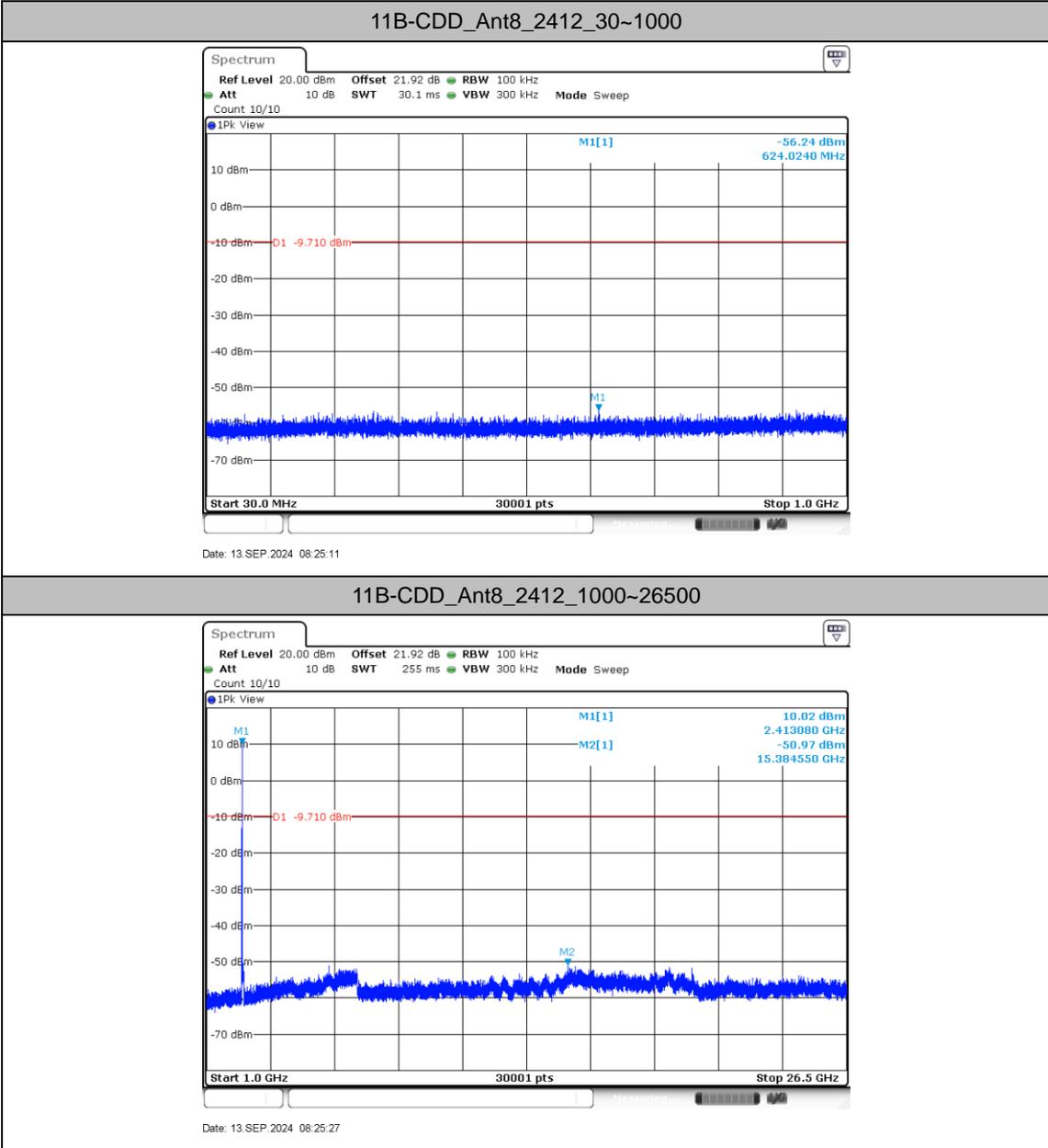
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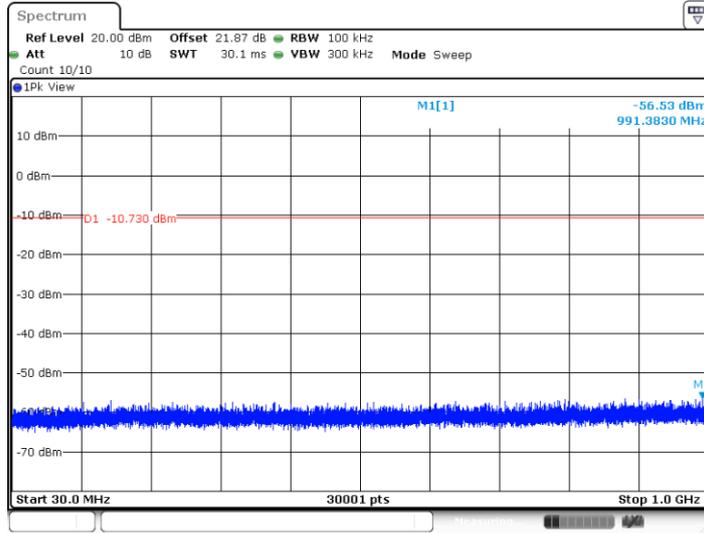
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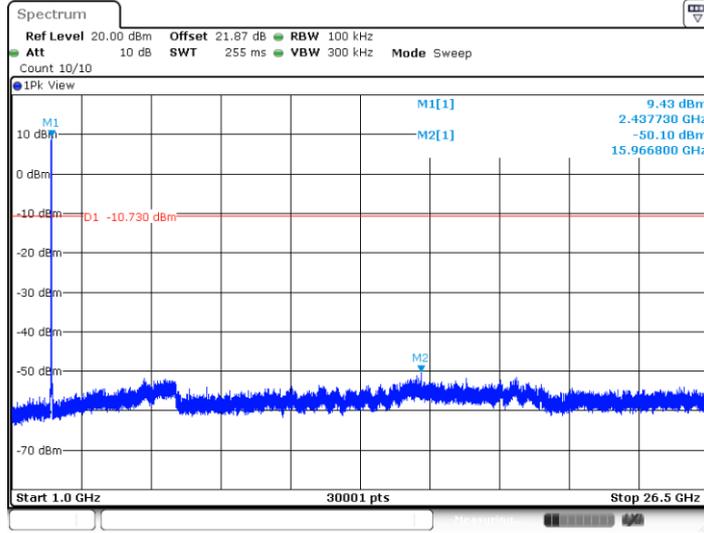
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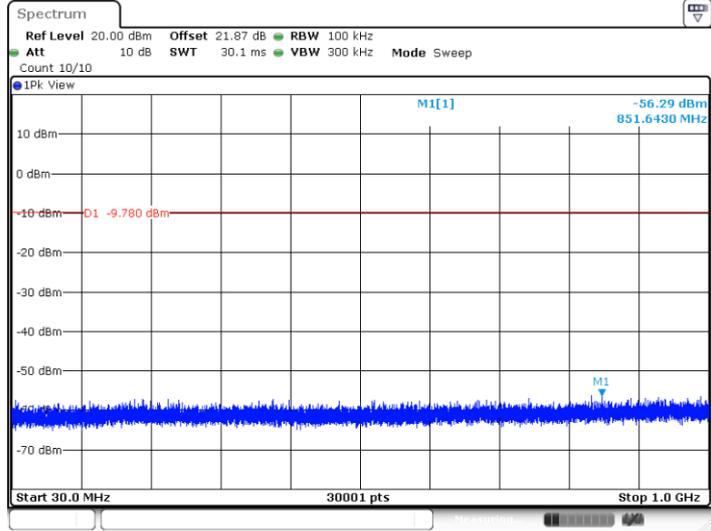
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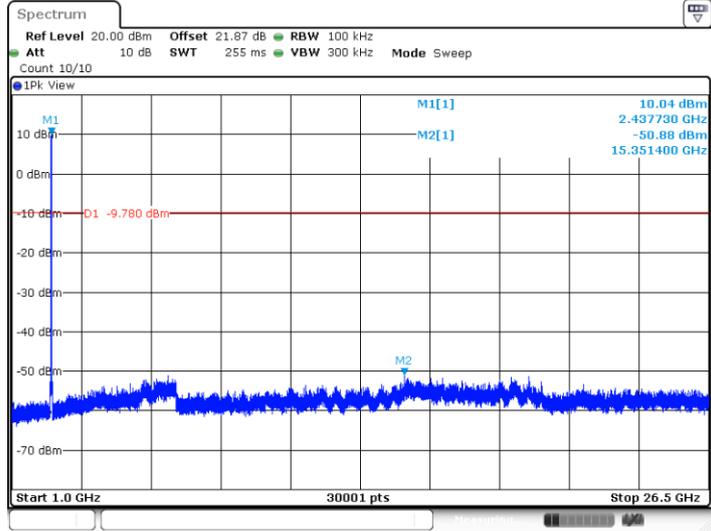
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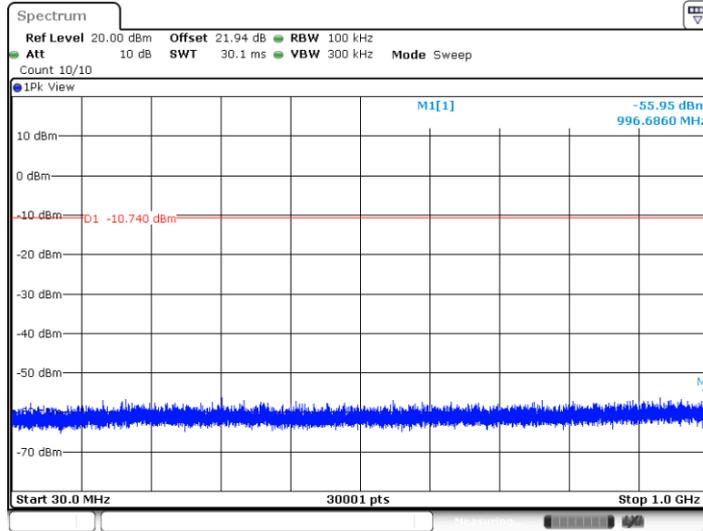
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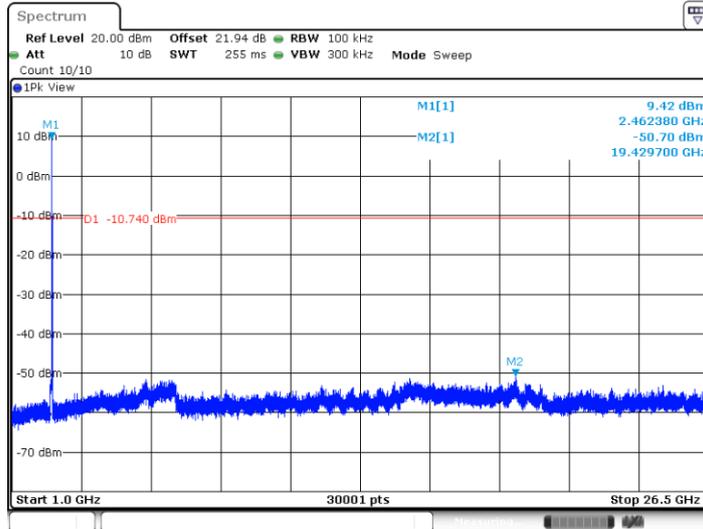
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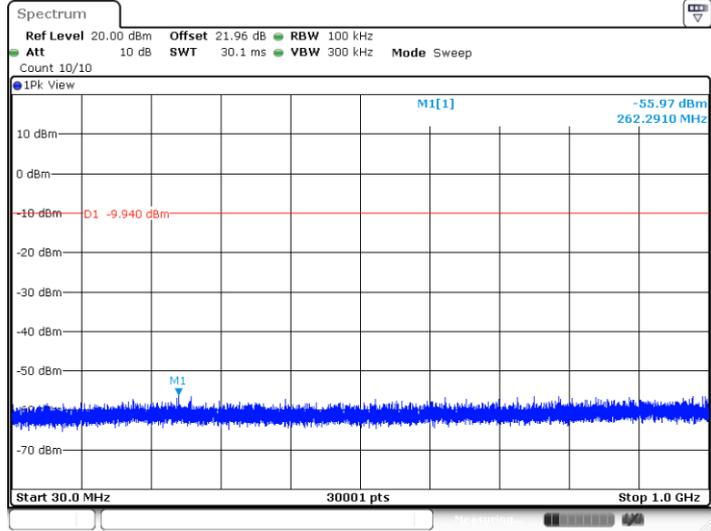
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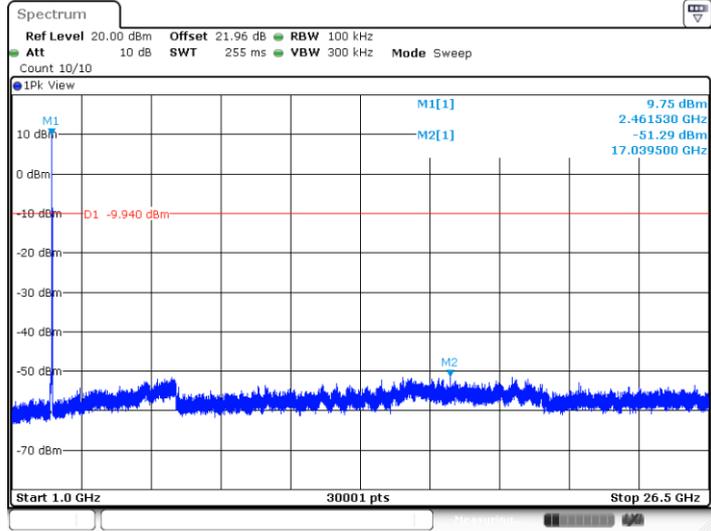
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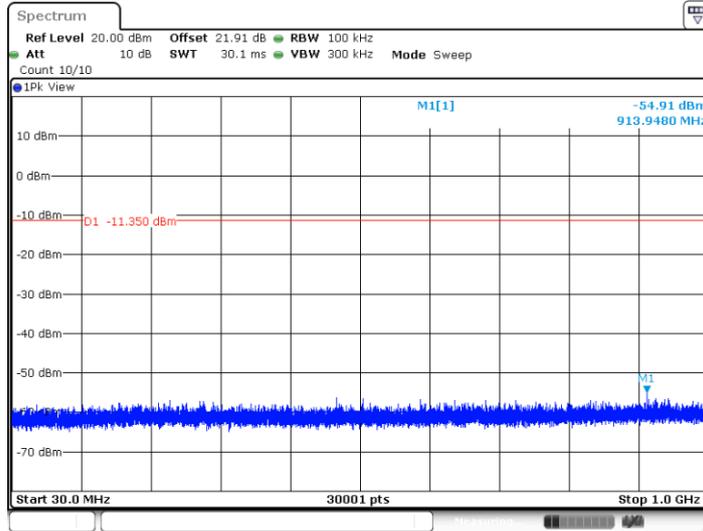
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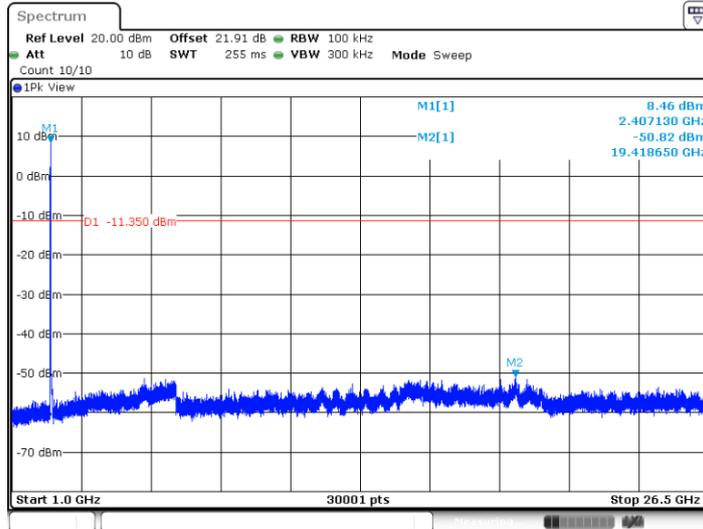
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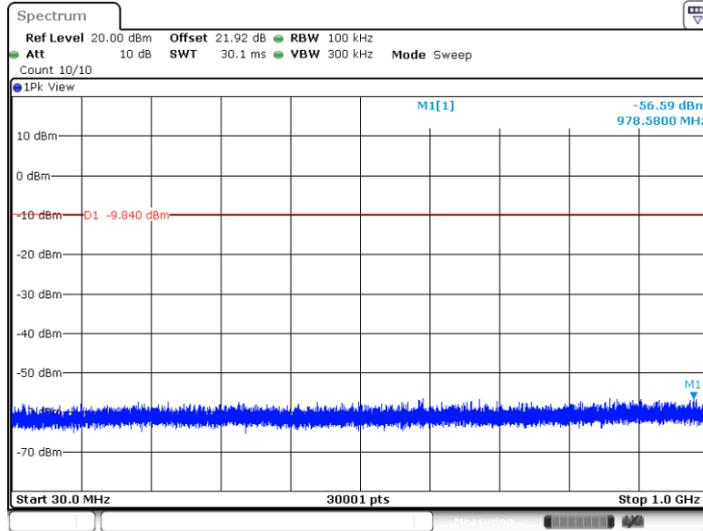
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11G-CDD_Ant8_2412_1000~26500
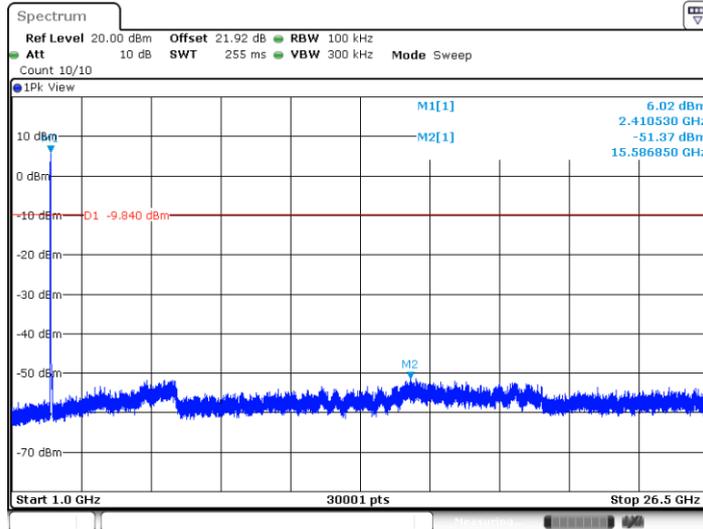
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11G-CDD_Ant15_2437_30~1000

Spectrum

Ref Level 20.00 dBm Offset 21.87 dB ● RBW 100 kHz
● Att   10 dB   SWT   30.1 ms ● VBW 300 kHz   Mode Sweep
Count 10/10
● 1Pk View

M1[1]   -54.00 dBm
                                             913.8830 MHz

10 dBm—

0 dBm—

-10 dBm— D1 -11.300 dBm

-20 dBm—

-30 dBm—

-40 dBm—

-50 dBm—   M1

-70 dBm—

Start 30.0 MHz   30001 pts   Stop 1.0 GHz
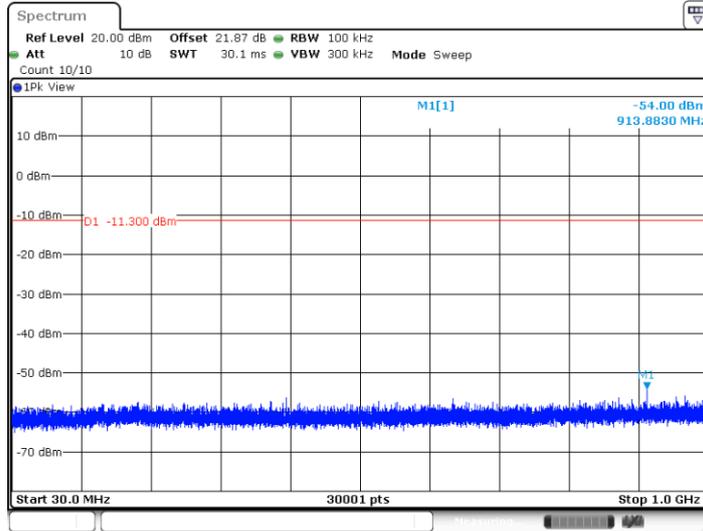
Date: 13.SEP.2024 08:46:01

11G-CDD_Ant15_2437_1000~26500

Spectrum

Ref Level 20.00 dBm Offset 21.87 dB ● RBW 100 kHz
● Att   10 dB   SWT   255 ms ● VBW 300 kHz   Mode Sweep
Count 10/10
● 1Pk View

M1[1]   6.98 dBm
                                             2.430930 GHz
M2[1]   -51.51 dBm
                                             5.863700 GHz

10 dBm—

0 dBm—

-10 dBm— D1 -11.300 dBm

-20 dBm—

-30 dBm—

-40 dBm—

-50 dBm—   M2

-70 dBm—

Start 1.0 GHz   30001 pts   Stop 26.5 GHz
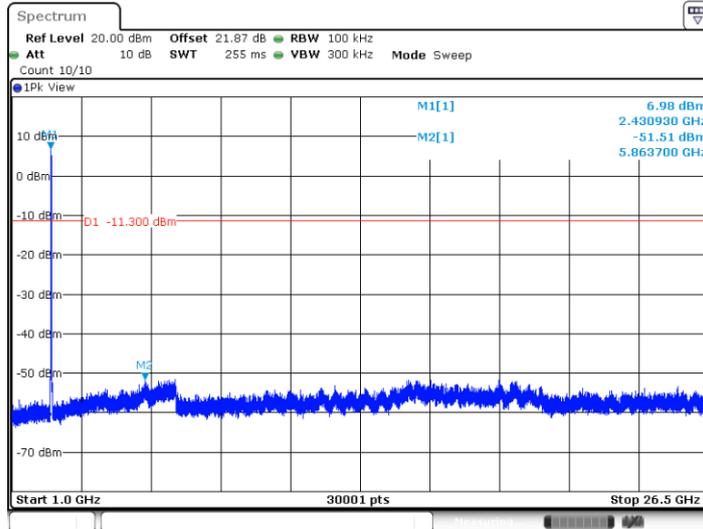
Date: 13.SEP.2024 08:46:16

11G-CDD_Ant8_2437_30~1000

Date: 13.SEP.2024 08:46:54

11G-CDD_Ant8_2437_1000~26500

Date: 13.SEP.2024 08:47:09

11G-CDD_Ant15_2462_30~1000

Date: 13.SEP.2024 08:48:09

11G-CDD_Ant15_2462_1000~26500

Date: 13.SEP.2024 08:48:25

11G-CDD_Ant8_2462_30~1000

Date: 13.SEP.2024 08:49:16

11G-CDD_Ant8_2462_1000~26500

Date: 13.SEP.2024 08:49:31

11BE20MIMO_Ant15_2412_30~1000

Date: 13.SEP.2024 09:03:58

11BE20MIMO_Ant15_2412_1000~26500

Date: 13.SEP.2024 09:04:13

11BE20MIMO_Ant8_2412_30~1000

Date: 13.SEP.2024 09:05:04

11BE20MIMO_Ant8_2412_1000~26500

Date: 13.SEP.2024 09:05:20

11BE20MIMO_Ant15_2437_30~1000

Date: 13.SEP.2024 09:06:24

11BE20MIMO_Ant15_2437_1000~26500

Date: 13.SEP.2024 09:06:40

11BE20MIMO_Ant8_2437_30~1000

Spectrum

Ref Level 20.00 dBm   Offset 21.87 dB   RBW 100 kHz
Att   10 dB   SWT   30.1 ms   VBW 300 kHz   Mode Sweep
Count 10/10

● 1Pk View

                                                   M1[1]   -55.58 dBm
                                                           915.9200 MHz

10 dBm

0 dBm

-10 dBm   D1 -11.100 dBm

-20 dBm

-30 dBm

-40 dBm

-50 dBm   M1

-70 dBm

Start 30.0 MHz   30001 pts   Stop 1.0 GHz

Date: 13.SEP.2024 09:07:17

11BE20MIMO_Ant8_2437_1000~26500

Spectrum

Ref Level 20.00 dBm   Offset 21.87 dB   RBW 100 kHz
Att   10 dB   SWT   255 ms   VBW 300 kHz   Mode Sweep
Count 10/10

● 1Pk View

                                                 M1[1]   5.53 dBm
                                                       2.429230 GHz
                                                 M2[1]   -51.41 dBm
                                                           15.844400 GHz

10 dBm

0 dBm

-10 dBm   D1 -11.100 dBm

-20 dBm

-30 dBm

-40 dBm

-50 dBm   M2

-70 dBm

Start 1.0 GHz   30001 pts   Stop 26.5 GHz

Date: 13.SEP.2024 09:07:32

11BE20MIMO_Ant15_2462_30~1000

Date: 13.SEP.2024 09:09:17

11BE20MIMO_Ant15_2462_1000~26500

Date: 13.SEP.2024 09:09:32

11BE20MIMO_Ant8_2462_30~1000

Date: 13.SEP.2024 09:10:23

11BE20MIMO_Ant8_2462_1000~26500

Date: 13.SEP.2024 09:10:38

11BE40MIMO_Ant15_2422_30~1000

Date: 13.SEP.2024 09:12:40

11BE40MIMO_Ant15_2422_1000~26500

Date: 13.SEP.2024 09:12:56

11BE40MIMO_Ant8_2422_30~1000

Spectrum

Ref Level 20.00 dBm   Offset 21.87 dB ● RBW 100 kHz
● Att   10 dB   SWT   30.1 ms ● VBW 300 kHz   Mode Sweep
Count 10/10
● 1Pk View

M1[1]   -56.02 dBm
                          986.3070 MHz

10 dBm

0 dBm

-10 dBm
D1 -14.050 dBm
-20 dBm

-30 dBm

-40 dBm

-50 dBm   M1

-70 dBm

Start 30.0 MHz   30001 pts   Stop 1.0 GHz

Date: 13.SEP.2024 09:13:47

11BE40MIMO_Ant8_2422_1000~26500

Spectrum

Ref Level 20.00 dBm   Offset 21.87 dB ● RBW 100 kHz
● Att   10 dB   SWT   255 ms ● VBW 300 kHz   Mode Sweep
Count 10/10
● 1Pk View

M1[1]   1.68 dBm
                          2.436030 GHz
M2[1]   -51.71 dBm
                          6.755350 GHz

10 dBm
M1
0 dBm

-10 dBm
D1 -14.050 dBm
-20 dBm

-30 dBm

-40 dBm

-50 dBm
        M2

-70 dBm

Start 1.0 GHz   30001 pts   Stop 26.5 GHz

Date: 13.SEP.2024 09:14:02

11BE40MIMO_Ant15_2437_30~1000

Date: 13.SEP.2024 09:15:12

11BE40MIMO_Ant15_2437_1000~26500

Date: 13.SEP.2024 09:15:27

11BE40MIMO_Ant8_2437_30~1000

Spectrum

Ref Level 20.00 dBm   Offset 21.87 dB ● RBW 100 kHz
● Att   10 dB   SWT   30.1 ms ● VBW 300 kHz   Mode Sweep
Count 10/10
● 1Pk View

M1[1]   -56.35 dBm
                                         972.0490 MHz

10 dBm

0 dBm

-10 dBm
D1 -14.470 dBm
-20 dBm

-30 dBm

-40 dBm

-50 dBm   M1

-70 dBm

Start 30.0 MHz   30001 pts   Stop 1.0 GHz

Date: 13.SEP.2024 09:16:05

11BE40MIMO_Ant8_2437_1000~26500

Spectrum

Ref Level 20.00 dBm   Offset 21.87 dB ● RBW 100 kHz
● Att   10 dB   SWT   255 ms ● VBW 300 kHz   Mode Sweep
Count 10/10
● 1Pk View

M1[1]   2.70 dBm
                                         2.426680 GHz
10 dBm   M2[1]   -51.39 dBm
M1   6.809750 GHz
0 dBm

-10 dBm
D1 -14.470 dBm
-20 dBm

-30 dBm

-40 dBm

-50 dBm   M2

-70 dBm

Start 1.0 GHz   30001 pts   Stop 26.5 GHz

Date: 13.SEP.2024 09:16:21

11BE40MIMO_Ant15_2452_30~1000

Date: 13.SEP.2024 09:17:38

11BE40MIMO_Ant15_2452_1000~26500

Date: 13.SEP.2024 09:17:53

11BE40MIMO_Ant8_2452_30~1000

Date: 13.SEP.2024 09:18:45

11BE40MIMO_Ant8_2452_1000~26500

Date: 13.SEP.2024 09:19:00

<Partial Single RU>

Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	RuSize	RuIndex	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11BE20MIMO	Ant15	2412	26Tone	RU0	-8.52	≤8.00	PASS
			52Tone	RU37	-8.57	≤8.00	PASS
			106Tone	RU53	-8.22	≤8.00	PASS
	Ant8	2412	26Tone	RU0	-8.19	≤8.00	PASS
			52Tone	RU37	-8.05	≤8.00	PASS
			106Tone	RU53	-8.08	≤8.00	PASS
	total	2412	26Tone	RU0	-5.34	≤8.00	PASS
			52Tone	RU37	-5.29	≤8.00	PASS
			106Tone	RU53	-5.14	≤8.00	PASS
	Ant15	2462	26Tone	RU8	-8.59	≤8.00	PASS
			52Tone	RU40	-8.62	≤8.00	PASS
			106Tone	RU54	-8.48	≤8.00	PASS
	Ant8	2462	26Tone	RU8	-7.8	≤8.00	PASS
			52Tone	RU40	-7.97	≤8.00	PASS
			106Tone	RU54	-7.87	≤8.00	PASS
	total	2462	26Tone	RU8	-5.17	≤8.00	PASS
			52Tone	RU40	-5.27	≤8.00	PASS
			106Tone	RU54	-5.15	≤8.00	PASS

Test Graphs

11BE20MIMO_Ant15_2412_26Tone_RU0

Date: 13.SEP.2024 09:41:45

11BE20MIMO_Ant15_2412_52Tone_RU37

Date: 13.SEP.2024 09:45:00
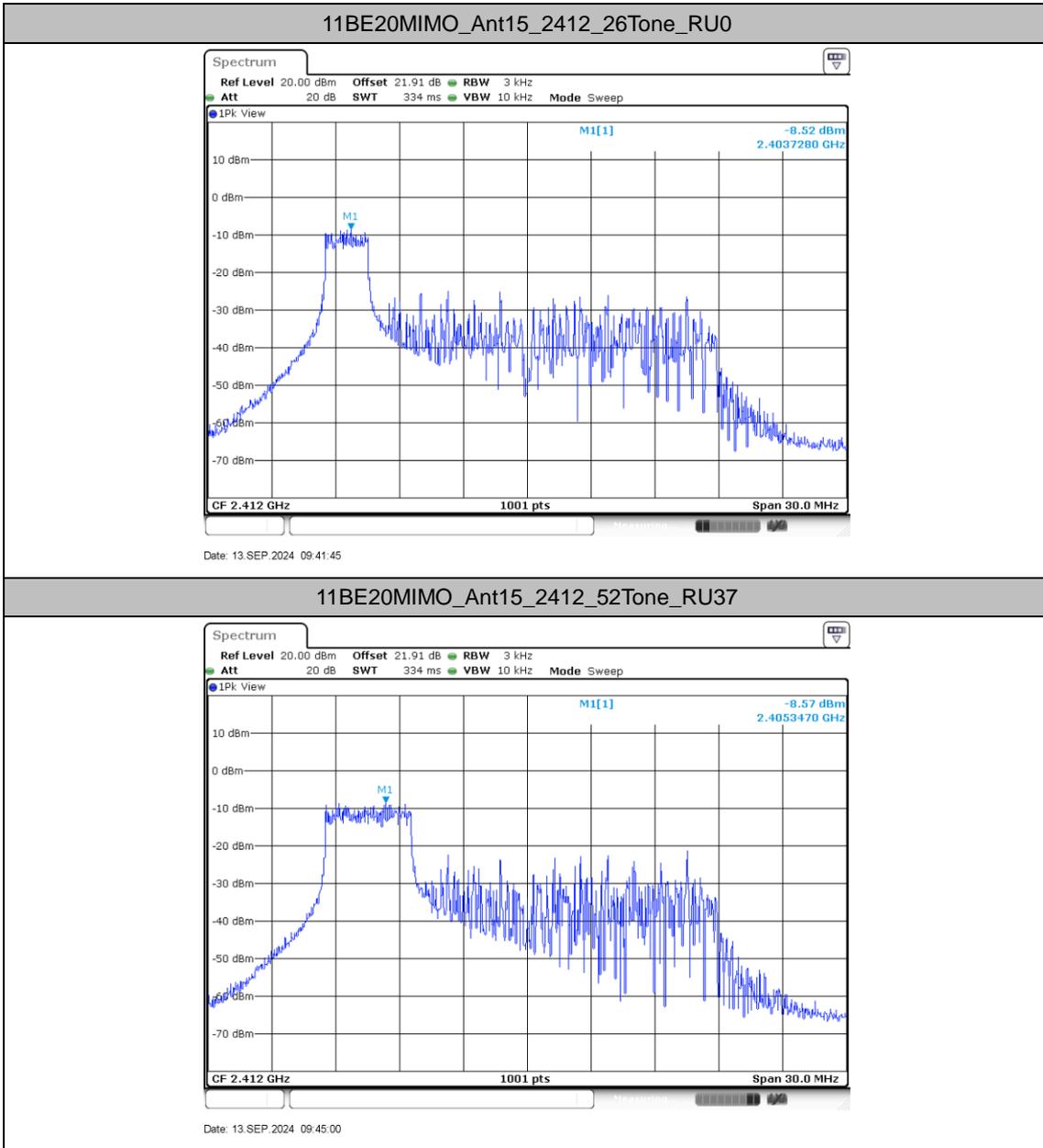
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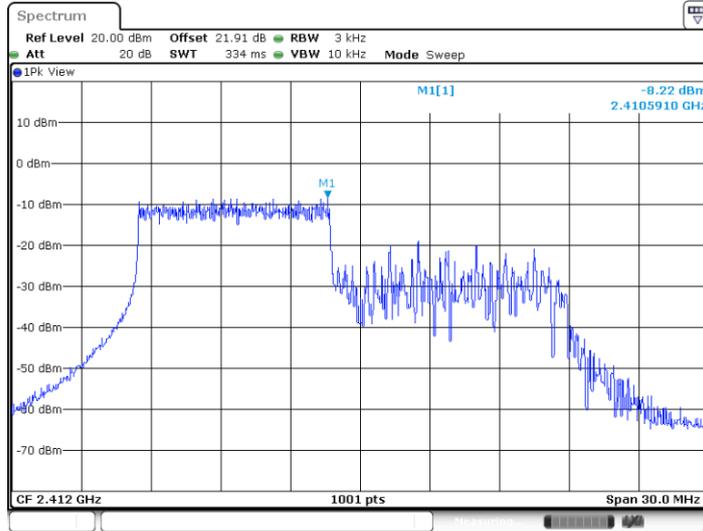
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11BE20MIMO_Ant8_2412_26Tone_RU0
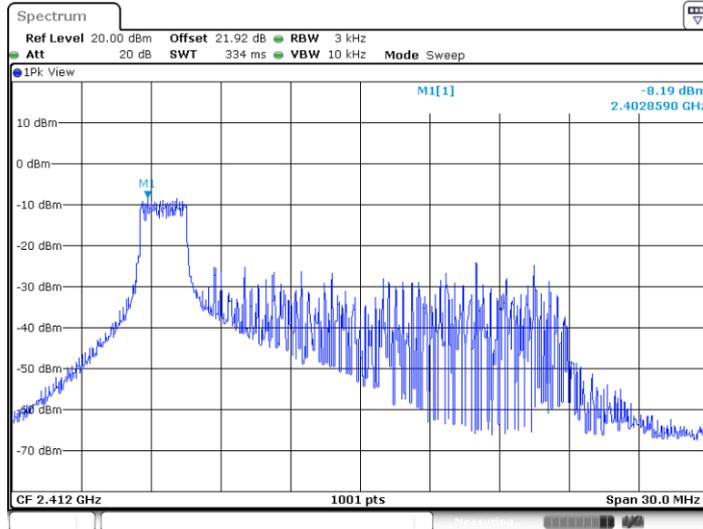
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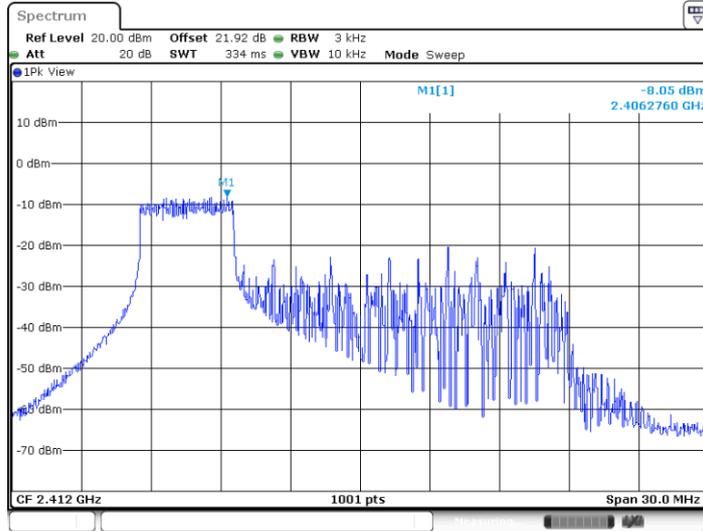
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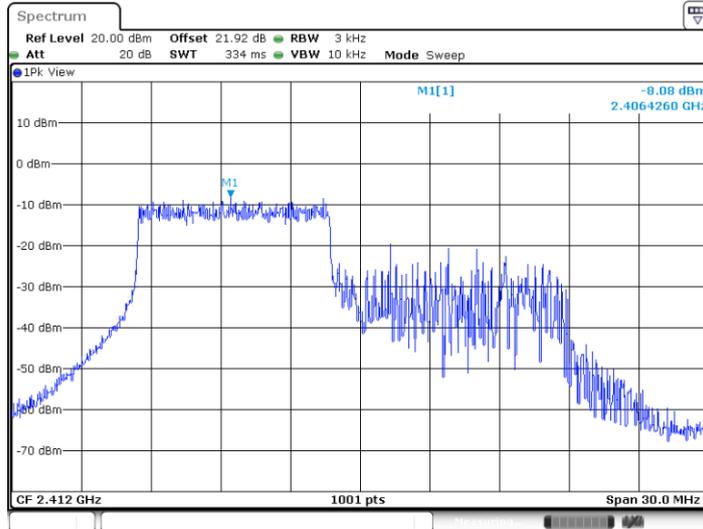
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11BE20MIMO_Ant15_2462_26Tone_RU8

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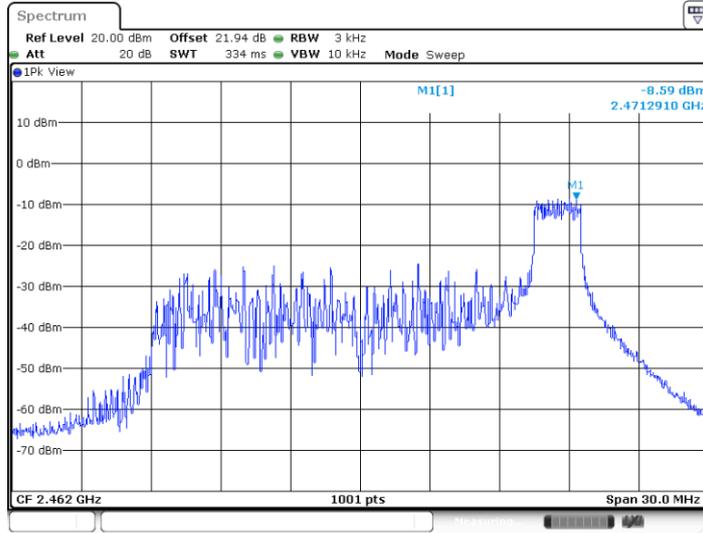
11BE20MIMO_Ant15_2462_52Tone_RU40

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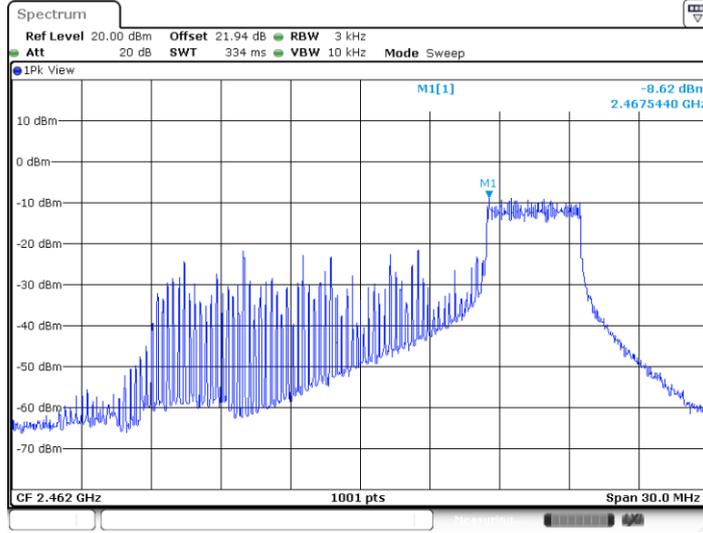
11BE20MIMO_Ant15_2462_106Tone_RU54
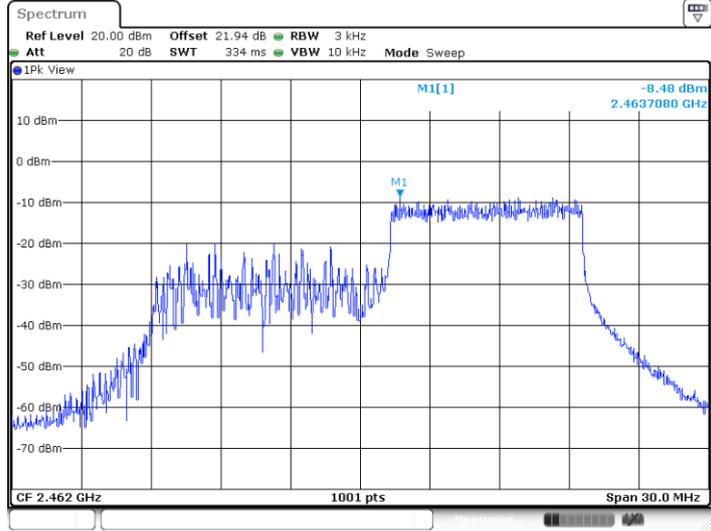
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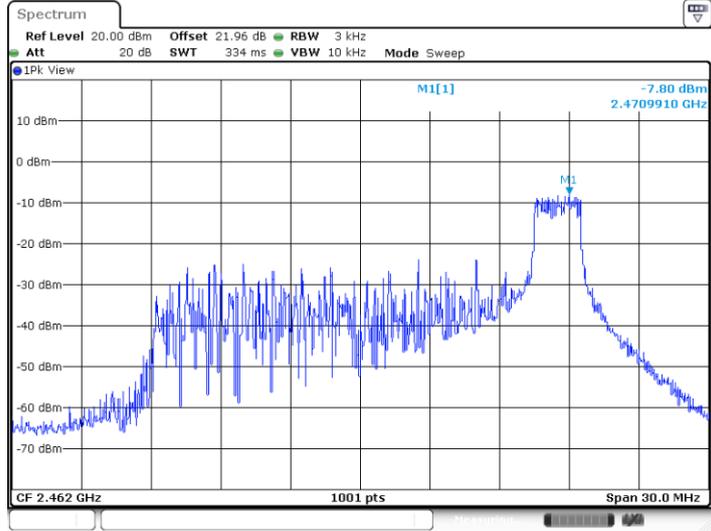
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11BE20MIMO_Ant8_2462_52Tone_RU40

Date: 13.SEP.2024 09:54:51
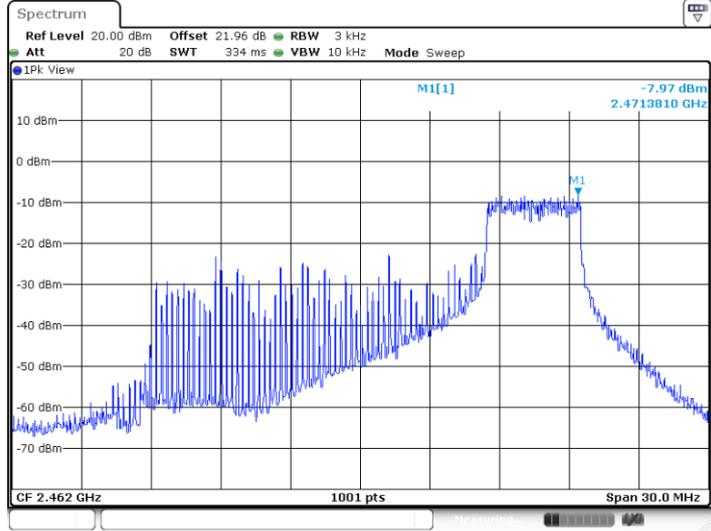
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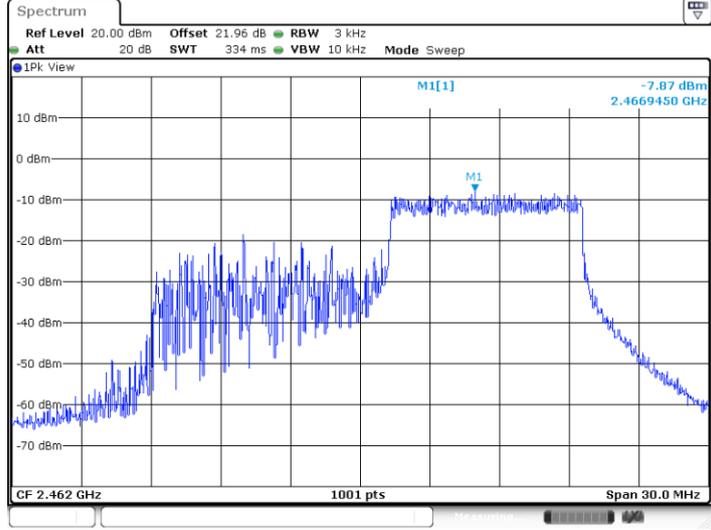
Date: 13.SEP.2024 09:56:24

<Small RU>

Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	RuSize	RuIndex	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11BE20MIMO	Ant16	2412	52Tone+26Tone	RU38+RU1	-10.65	≤8.00	PASS
			106Tone+26Tone	RU53+RU4	-9.54	≤8.00	PASS
	Ant10	2412	52Tone+26Tone	RU38+RU1	-9.32	≤8.00	PASS
			106Tone+26Tone	RU53+RU4	-8.88	≤8.00	PASS
	total	2412	52Tone+26Tone	RU38+RU1	-6.92	≤8.00	PASS
			106Tone+26Tone	RU53+RU4	-6.19	≤8.00	PASS
	Ant16	2462	52Tone+26Tone	RU39+RU7	-10.49	≤8.00	PASS
			106Tone+26Tone	RU54+RU4	-10.05	≤8.00	PASS
	Ant10	2462	52Tone+26Tone	RU39+RU7	-9.12	≤8.00	PASS
			106Tone+26Tone	RU54+RU4	-8.79	≤8.00	PASS
	total	2462	52Tone+26Tone	RU39+RU7	-6.74	≤8.00	PASS
			106Tone+26Tone	RU54+RU4	-6.36	≤8.00	PASS

Test Graphs

11BE20MIMO_Ant16_2412_52Tone+26Tone_RU38+RU1

Date: 13.SEP.2024 09:59:36

11BE20MIMO_Ant16_2412_106Tone+26Tone_RU53+RU4

Date: 13.SEP.2024 09:58:49
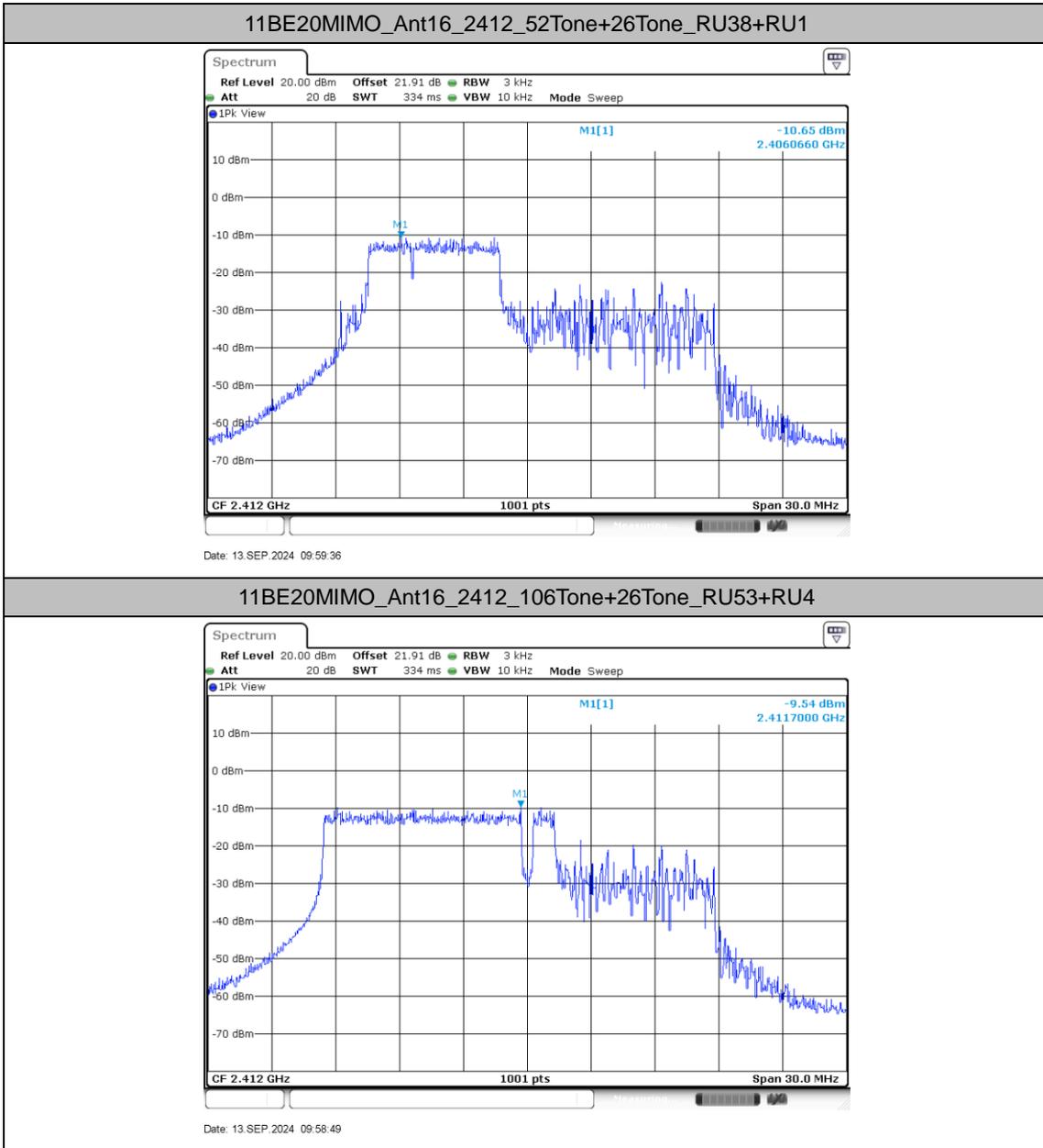
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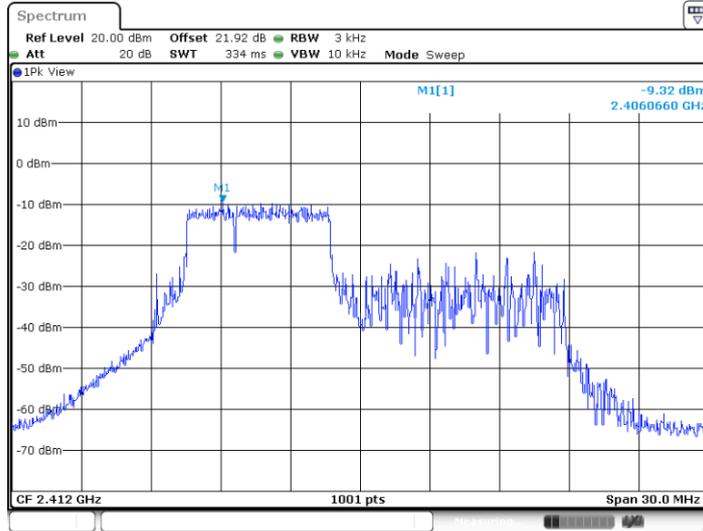
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11BE20MIMO_Ant10_2412_106Tone+26Tone_RU53+RU4
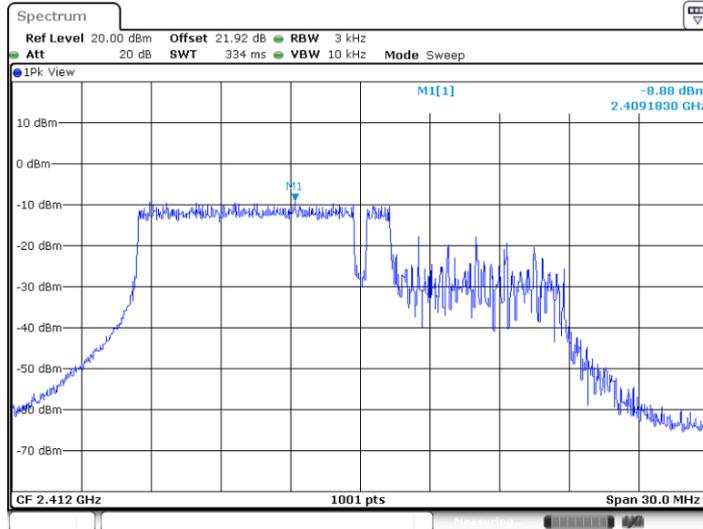
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11BE20MIMO_Ant16_2462_52Tone+26Tone_RU39+RU7
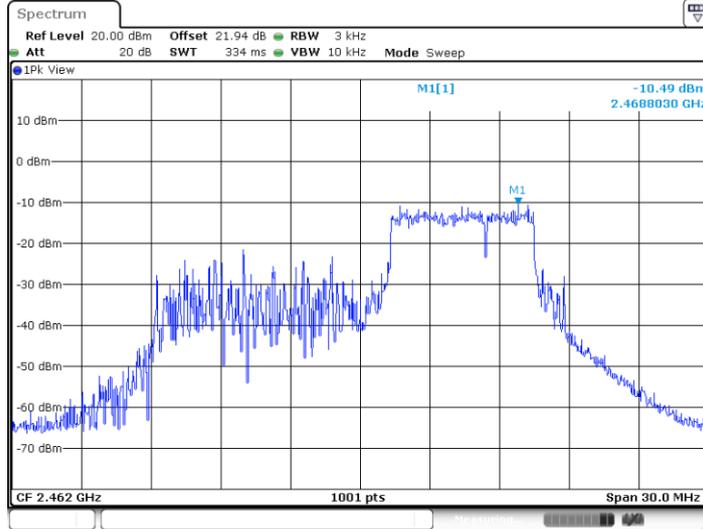
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11BE20MIMO_Ant16_2462_106Tone+26Tone_RU54+RU4
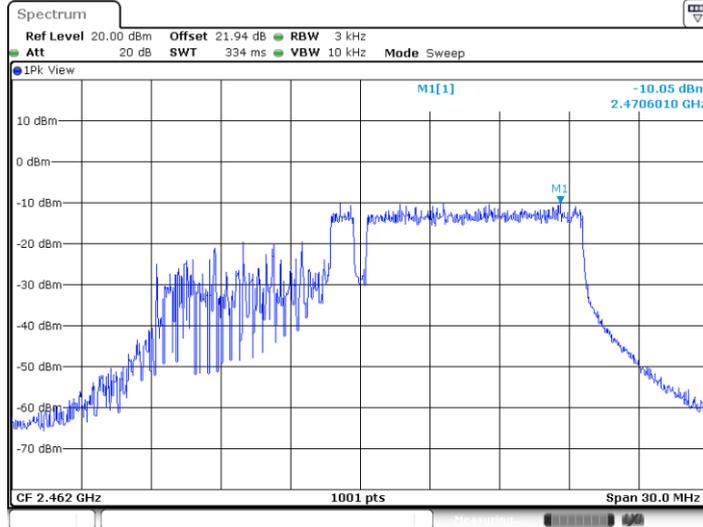
Date: 13.SEP.2024 10:01:22

11BE20MIMO_Ant10_2462_52Tone+26Tone_RU39+RU7

Date: 13.SEP.2024 10:00:58
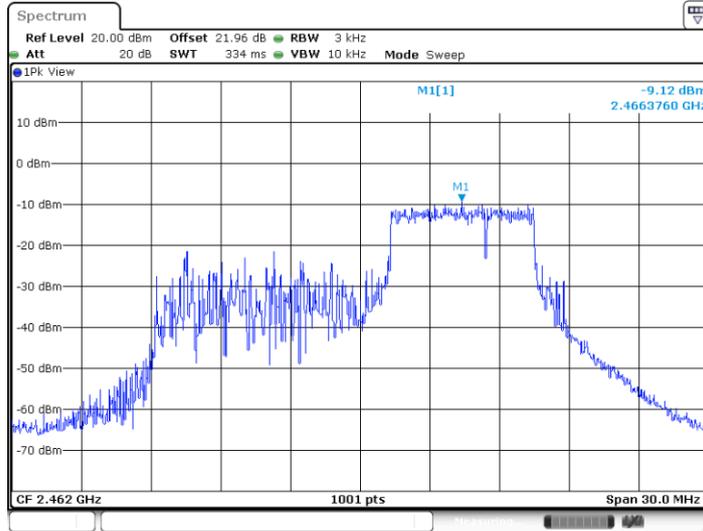
11BE20MIMO_Ant10_2462_106Tone+26Tone_RU54+RU4

Date: 13.SEP.2024 10:02:12
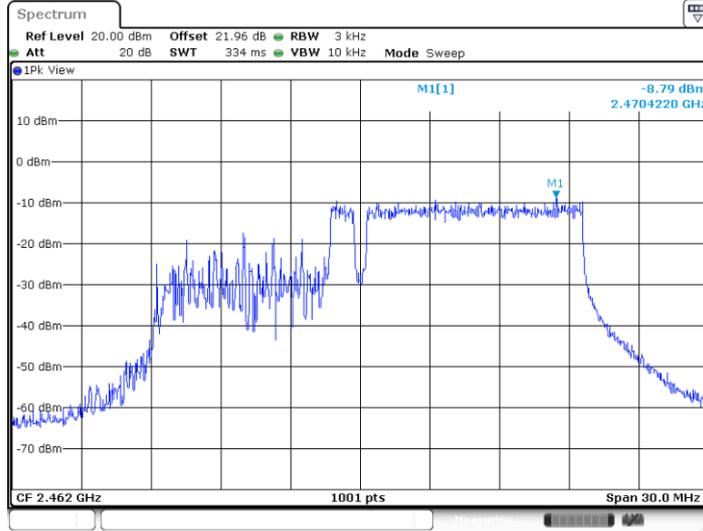
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Amos	Temperature :	25.3~26.2℃
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		
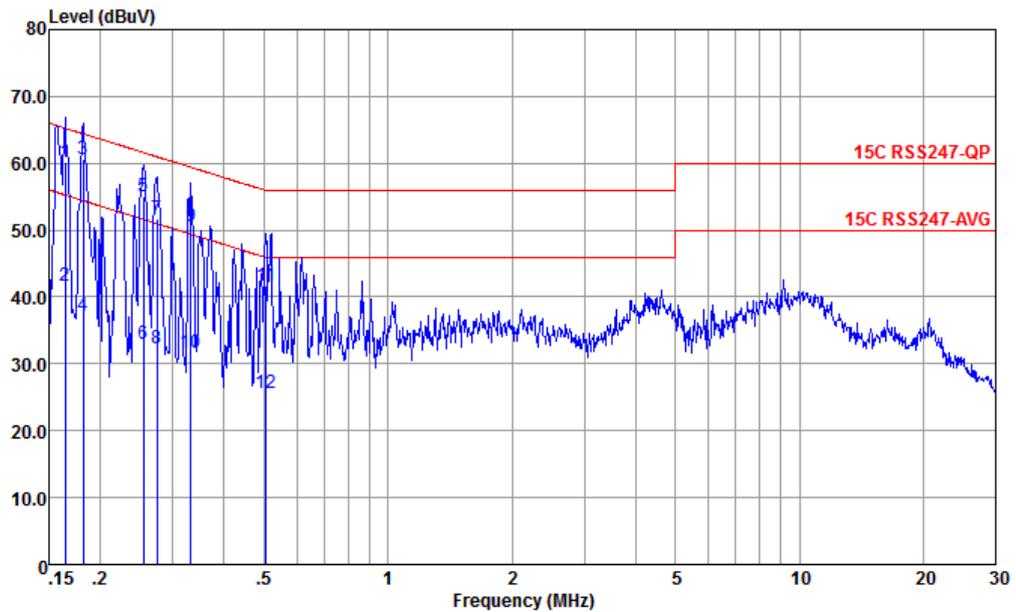
Site   : CO01-KS
Condition   : 15C RSS247-QP LISN-060105-L 2024 LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.164	60.12	-5.13	65.25	49.59	0.11	10.42	QP
2		0.164	41.72	-13.53	55.25	31.19	0.11	10.42	Average
3	*	0.182	60.71	-3.71	64.42	50.21	0.09	10.41	QP
4		0.182	37.11	-17.31	54.42	26.61	0.09	10.41	Average
5		0.255	54.95	-6.65	61.60	44.50	0.09	10.36	QP
6		0.255	33.05	-18.55	51.60	22.60	0.09	10.36	Average
7		0.274	51.64	-9.34	60.98	41.20	0.09	10.35	QP
8		0.274	32.34	-18.64	50.98	21.90	0.09	10.35	Average
9		0.332	50.56	-8.84	59.40	40.20	0.05	10.31	QP
10		0.332	31.56	-17.84	49.40	21.20	0.05	10.31	Average
11		0.505	41.61	-14.39	56.00	31.50	-0.11	10.22	QP
12		0.505	25.61	-20.39	46.00	15.50	-0.11	10.22	Average

Test Engineer :	Amos		Temperature :	25.3~26.2℃
			Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz		Phase :	Neutral
Remark :		All emissions not reported here are more than 10 dB below the prescribed limit.		
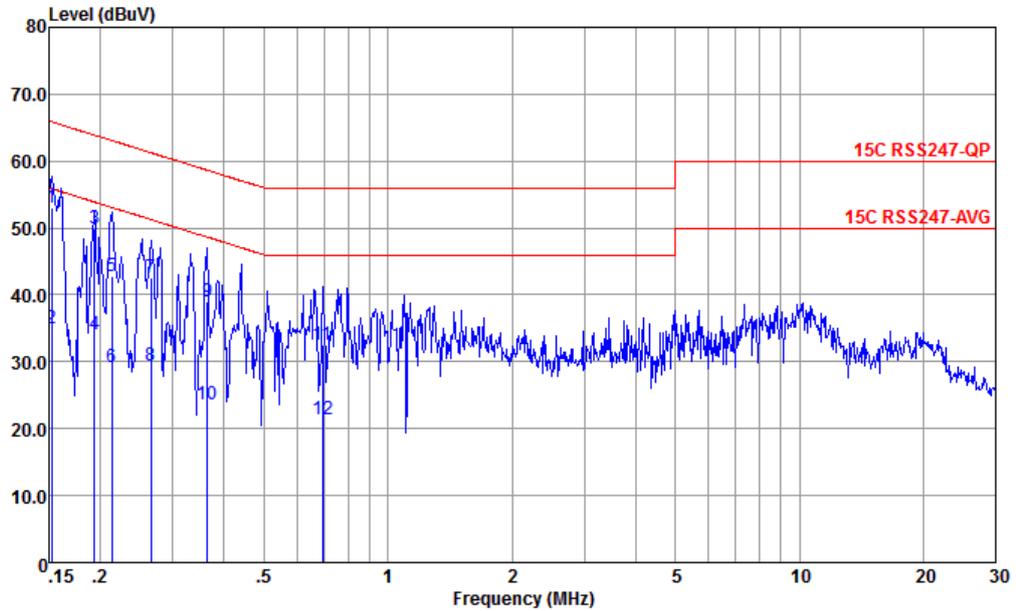

```
Site       : CO01-KS
Condition  : 15C RSS247-QP LISN-060105-N 2024 NEUTRAL
```

```
                    Over   Limit  Read   LISN   Cable
         Freq Level Limit  Line   Level  Factor Loss  Remark
         ────  ────  ────  ────  ────  ────  ────  ──────────
         MHz   dBuV   dB   dBuV   dBuV   dB    dB
   1 *  0.152 53.04 -12.83 65.87 42.50  0.12 10.42 QP
   2    0.152 35.04 -20.83 55.87 24.50  0.12 10.42 Average
   3    0.193 49.84 -14.05 63.89 39.30  0.13 10.41 QP
   4    0.193 34.14 -19.75 53.89 23.60  0.13 10.41 Average
   5    0.213 42.69 -20.41 63.10 32.20  0.09 10.40 QP
   6    0.213 29.29 -23.81 53.10 18.80  0.09 10.40 Average
   7    0.266 42.51 -18.74 61.25 32.20 -0.05 10.36 QP
   8    0.266 29.51 -21.74 51.25 19.20 -0.05 10.36 Average
   9    0.363 38.97 -19.68 58.65 28.80 -0.13 10.30 QP
  10    0.363 23.67 -24.98 48.65 13.50 -0.13 10.30 Average
  11    0.694 32.58 -23.42 56.00 22.60 -0.16 10.14 QP
  12    0.694 21.48 -24.52 46.00 11.50 -0.16 10.14 Average
```

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)

2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)

Appendix C. Radiated Spurious Emission

Test Engineer :	Bernie Liu	**Relative Humidity :**	41~42%
		Temperature :	22~23℃

Radiated Spurious Emission Test Modes

Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	CDD 8+15	802.11b	01	2412	1Mbps	-	-
Mode 2	2400-2483.5	CDD 8+15	802.11b	06	2437	1Mbps	-	-
Mode 3	2400-2483.5	CDD 8+15	802.11b	11	2462	1Mbps	-	-
Mode 4	2400-2483.5	CDD 8+15	802.11g	01	2412	6Mbps	-	-
Mode 5	2400-2483.5	CDD 8+15	802.11g	06	2437	6Mbps	-	-
Mode 6	2400-2483.5	CDD 8+15	802.11g	11	2462	6Mbps	-	-
Mode 7	2400-2483.5	CDD 8+15	802.11BE EHT20	01	2412	MCS0	Full	-
Mode 8	2400-2483.5	CDD 8+15	802.11BE EHT20	06	2437	MCS0	Full	-
Mode 9	2400-2483.5	CDD 8+15	802.11BE EHT20	11	2462	MCS0	Full	-
Mode 10	2400-2483.5	CDD 8+15	802.11BE EHT40	03	2422	MCS0	Full	-
Mode 11	2400-2483.5	CDD 8+15	802.11BE EHT40	06	2437	MCS0	Full	-
Mode 12	2400-2483.5	CDD 8+15	802.11BE EHT40	09	2452	MCS0	Full	-
Mode 13	2400-2483.5	CDD 8+15	802.11BE EHT20	01	2412	MCS0	Single RU 106/53	-
Mode 14	2400-2483.5	CDD 8+15	802.11BE EHT20	11	2462	MCS0	Single RU 106/54	-
Mode 15	2400-2483.5	CDD 8+15	802.11BE EHT20	01	2412	MCS0	Small RU 106+26	-
Mode 16	2400-2483.5	CDD 8+15	802.11BE EHT20	11	2462	MCS0	Small RU 106+26	-

Summary of each worse mode

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	Remark
1	802.11b	01	2388.26	42.41	54.00	-11.59	V	AVERAGE	Pass	Band Edge
1	802.11b	01	4824.00	41.22	74.00	-32.78	H	PEAK	Pass	Harmonic
2	802.11b	06	-	-	-	-	-	-	-	Band Edge
2	802.11b	06	4874.00	41.94	74.00	-32.06	H	PEAK	Pass	Harmonic
3	802.11b	11	2488.84	42.66	54.00	-11.34	V	AVERAGE	Pass	Band Edge
3	802.11b	11	7386.00	43.46	74.00	-30.54	V	PEAK	Pass	Harmonic
4	802.11g	01	2389.95	50.27	54.00	-3.73	V	AVERAGE	Pass	Band Edge
4	802.11g	01	4824.00	41.61	74.00	-32.39	H	PEAK	Pass	Harmonic
5	802.11g	06	-	-	-	-	-	-	-	Band Edge
5	802.11g	06	4874.00	42.40	74.00	-31.60	H	PEAK	Pass	Harmonic
6	802.11g	11	2483.50	48.56	54.00	-5.44	H	AVERAGE	Pass	Band Edge
6	802.11g	11	7386.00	43.05	74.00	-30.95	V	PEAK	Pass	Harmonic
7	802.11BE EHT20	01	2389.95	50.11	54.00	-3.89	V	AVERAGE	Pass	Band Edge
7	802.11BE EHT20	01	4824.00	41.13	74.00	-32.87	V	PEAK	Pass	Harmonic
8	802.11BE EHT20	06	-	-	-	-	-	-	-	Band Edge
8	802.11BE EHT20	06	7311.00	41.84	74.00	-32.16	H	PEAK	Pass	Harmonic
9	802.11BE EHT20	11	2483.50	49.75	54.00	-4.25	H	AVERAGE	Pass	Band Edge
9	802.11BE EHT20	11	7386.00	43.54	74.00	-30.46	H	PEAK	Pass	Harmonic
10	802.11BE EHT40	03	2389.82	50.65	54.00	-3.35	V	AVERAGE	Pass	Band Edge
10	802.11BE EHT40	03	7266.00	42.33	74.00	-31.67	V	PEAK	Pass	Harmonic
11	802.11BE EHT40	06	2389.82	46.44	54.00	-7.56	V	AVERAGE	Pass	Band Edge
11	802.11BE EHT40	06	7311.00	42.09	74.00	-31.91	H	PEAK	Pass	Harmonic
12	802.11BE EHT40	09	2486.14	50.47	54.00	-3.53	V	AVERAGE	Pass	Band Edge
12	802.11BE EHT40	09	7356.00	42.94	74.00	-31.06	V	PEAK	Pass	Harmonic
13	802.11BE EHT20	01	2389.95	45.91	54.00	-8.09	H	AVERAGE	Pass	Band Edge
13	802.11BE EHT20	01	-	-	-	-	-	-	-	Harmonic
14	802.11BE EHT20	11	2483.50	45.00	54.00	-9.00	H	AVERAGE	Pass	Band Edge
14	802.11BE EHT20	11	-	-	-	-	-	-	-	Harmonic
15	802.11BE EHT20	01	2389.95	44.20	54.00	-9.80	V	AVERAGE	Pass	Band Edge
15	802.11BE EHT20	01	-	-	-	-	-	-	-	Harmonic
16	802.11BE EHT20	11	2484.52	67.47	74.00	-6.53	H	PEAK	Pass	Band Edge
16	802.11BE EHT20	11	-	-	-	-	-	-	-	Harmonic

Mode	1
	Band Edge
	2400-2483.5_802.11b_CH01_2412MHz
ANT	**CDD 8+15**

Pol.	**Horizontal**	**Fundamental**
Peak		
Avg		

Horizontal / Peak:

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2389.04	50.76	74.00	-23.24	42.53	31.93	7.16	36.86	6.00	302	21	PEAK

Fundamental / Peak:

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2412.00	109.26	------	------	100.78	32.14	7.20	36.86	6.00	302	21	PEAK

Horizontal / Avg:

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2388.00	39.91	54.00	-14.09	31.68	31.93	7.16	36.86	6.00	302	21	AVERAGE

Fundamental / Avg:

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2412.00	104.99	------	------	96.51	32.14	7.20	36.86	6.00	302	21	AVERAGE

Mode	1
	Band Edge
	2400-2483.5_802.11b_CH01_2412MHz
ANT	**CDD 8+15**
Pol.	**Vertical** / **Fundamental**

Pol.	Vertical	Fundamental
Peak		
Avg		

Peak Vertical:

	Freq MHz	Level dBuV/m	Limit Line dBuV/m	Margin dB	Read Level dBuV	Ant Factor dB/m	Cable Loss dB	Preamp Factor dB	Aux Factor dB	APos cm	TPos deg	Remark
1	2389.17	53.49	74.00	-20.51	45.25	31.94	7.16	36.86	6.00	260	97	PEAK

Peak Fundamental:

	Freq MHz	Level dBuV/m	Limit Line dBuV/m	Margin dB	Read Level dBuV	Ant Factor dB/m	Cable Loss dB	Preamp Factor dB	Aux Factor dB	APos cm	TPos deg	Remark
1	2412.00	111.59	------	------	103.11	32.14	7.20	36.86	6.00	260	97	PEAK

Avg Vertical:

	Freq MHz	Level dBuV/m	Limit Line dBuV/m	Margin dB	Read Level dBuV	Ant Factor dB/m	Cable Loss dB	Preamp Factor dB	Aux Factor dB	APos cm	TPos deg	Remark
1	2388.26	42.41	54.00	-11.59	34.18	31.93	7.16	36.86	6.00	260	97	AVERAGE

Avg Fundamental:

	Freq MHz	Level dBuV/m	Limit Line dBuV/m	Margin dB	Read Level dBuV	Ant Factor dB/m	Cable Loss dB	Preamp Factor dB	Aux Factor dB	APos cm	TPos deg	Remark
1	2412.00	107.15	------	------	98.67	32.14	7.20	36.86	6.00	260	97	AVERAGE

Mode	1
	Harmonic
	2400-2483.5_802.11b_CH01_2412MHz
ANT	CDD 8+15

Pol.	Horizontal	Vertical
Peak Avg		

Horizontal:

	Freq	Level	Limit Line	Over Limit	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	4824.00	41.22	74.00	-32.78	61.77	34.40	10.29	65.24	0.00	---	---	PEAK

Vertical:

	Freq	Level	Limit Line	Over Limit	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	4824.00	41.07	74.00	-32.93	61.62	34.40	10.29	65.24	0.00	---	---	PEAK

Mode	**2**		
	Harmonic		
	2400-2483.5_802.11b_CH06_2437MHz		
ANT	**CDD 8+15**		
Pol.	**Horizontal**		**Vertical**
Peak **Avg**			

Horizontal graph:

Level (dBuV/m) vs Frequency (MHz)

	Freq	Level	Limit Line	Over Limit	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	4874.00	41.94	74.00	-32.06	62.23	34.60	10.34	65.23	0.00	---	---	PEAK
2	7311.00	41.03	74.00	-32.97	59.87	35.81	12.78	67.43	0.00	---	---	PEAK

Vertical graph:

Level (dBuV/m) vs Frequency (MHz)

	Freq	Level	Limit Line	Over Limit	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	4874.00	41.17	74.00	-32.83	61.46	34.60	10.34	65.23	0.00	---	---	PEAK
2	7311.00	40.85	74.00	-33.15	59.69	35.81	12.78	67.43	0.00	---	---	PEAK

	3
Mode	**Band Edge**
	2400-2483.5_802.11b_CH11_2462MHz
ANT	**CDD 8+15**
Pol.	**Horizontal** / **Fundamental**

Peak

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2487.64	52.77	74.00	-21.23	43.68	32.60	7.34	36.85	6.00	125	33	PEAK

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2462.00	110.30	------	------	101.26	32.60	7.29	36.85	6.00	125	33	PEAK

Avg

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2483.62	41.59	54.00	-12.41	32.51	32.60	7.33	36.85	6.00	125	33	AVERAGE

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2462.00	105.78	------	------	96.74	32.60	7.29	36.85	6.00	125	33	AVERAGE

Mode	3
	Band Edge
	2400-2483.5_802.11b_CH11_2462MHz
ANT	**CDD 8+15**

Pol.	Vertical	Fundamental

Peak

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2486.68	52.66	74.00	-21.34	43.57	32.60	7.34	36.85	6.00	248	93	PEAK

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2462.00	112.72	------	------	103.68	32.60	7.29	36.85	6.00	248	93	PEAK

Avg

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2488.84	42.66	54.00	-11.34	33.57	32.60	7.34	36.85	6.00	248	93	AVERAGE

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2462.00	108.28	------	------	99.24	32.60	7.29	36.85	6.00	248	93	AVERAGE