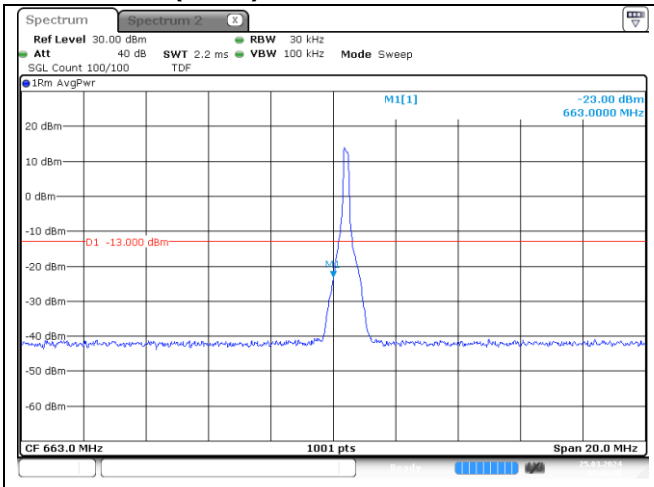
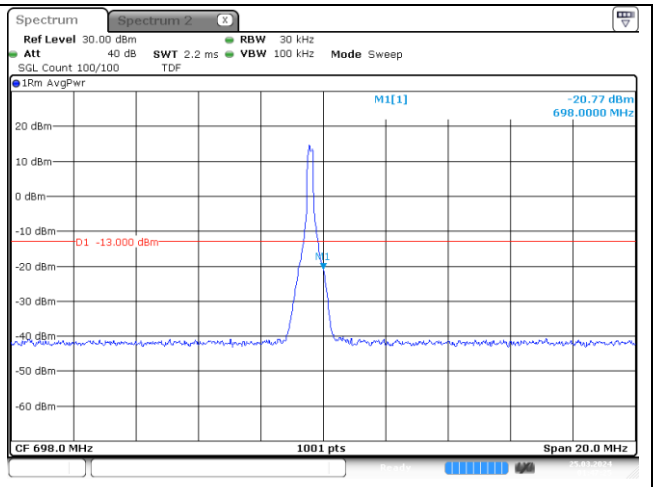
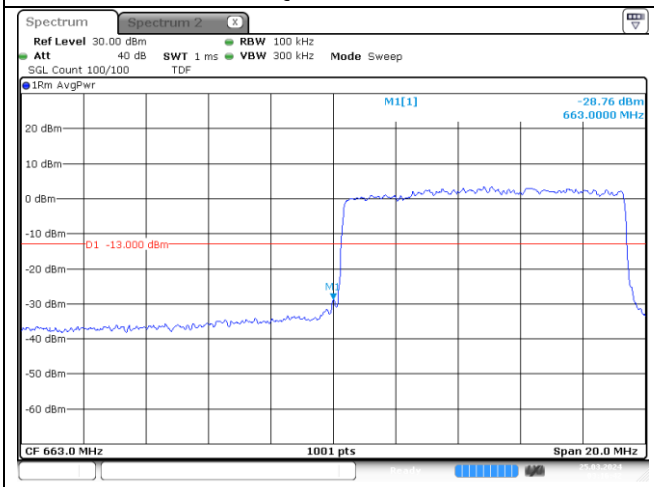
NR band 71 (10 ㎒)



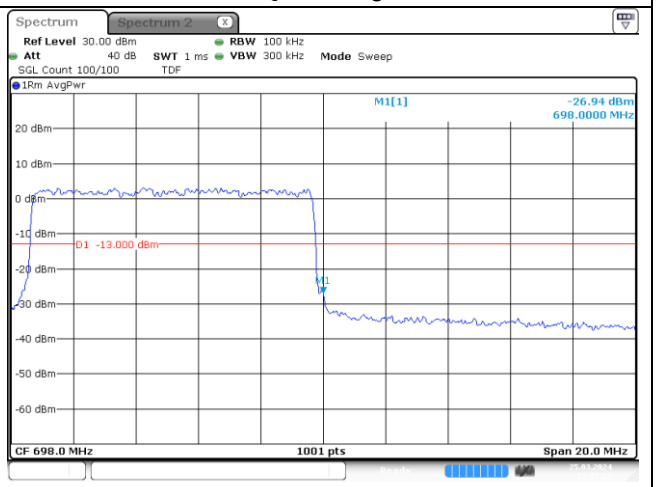
DFT-S-OFDM 16QAM - Low Channel - 1 RB



DFT-S-OFDM 16QAM - High Channel - 1 RB

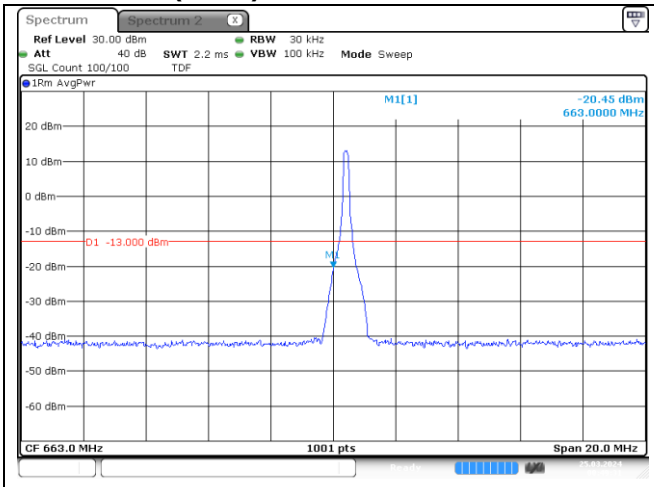


DFT-S-OFDM 16QAM - Low Channel - Full RB

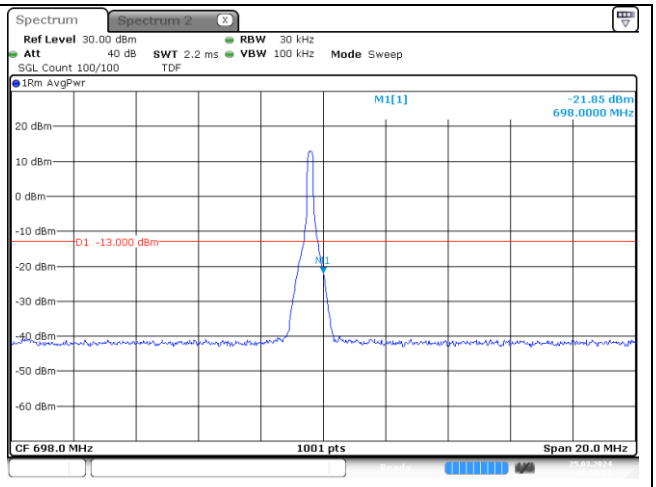


DFT-S-OFDM 16QAM - High Channel - Full RB

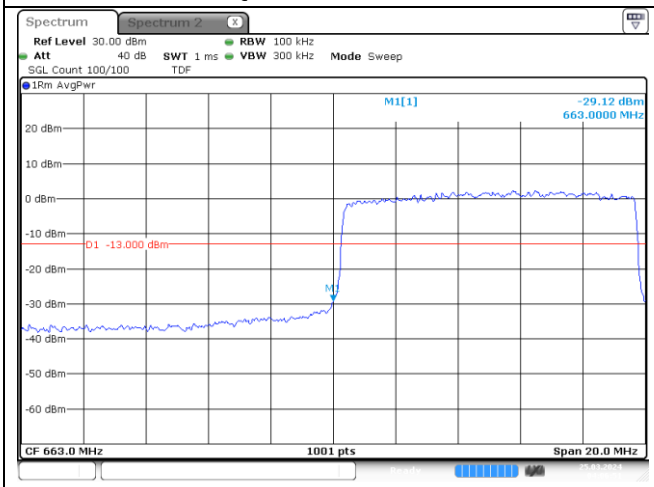
NR band 71 (10 ㎒)



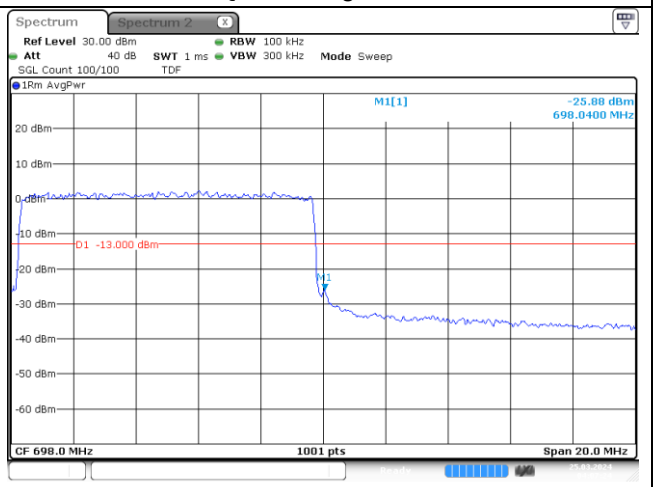
CP-OFDM QPSK - Low Channel - 1 RB



CP-OFDM QPSK - High Channel - 1 RB

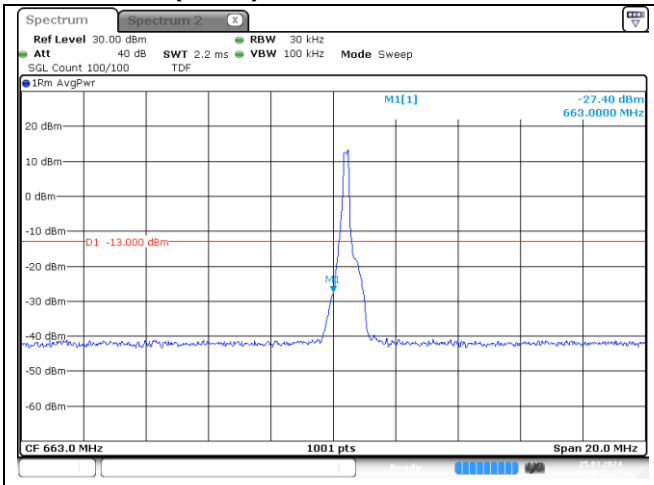


CP-OFDM QPSK - Low Channel - Full RB

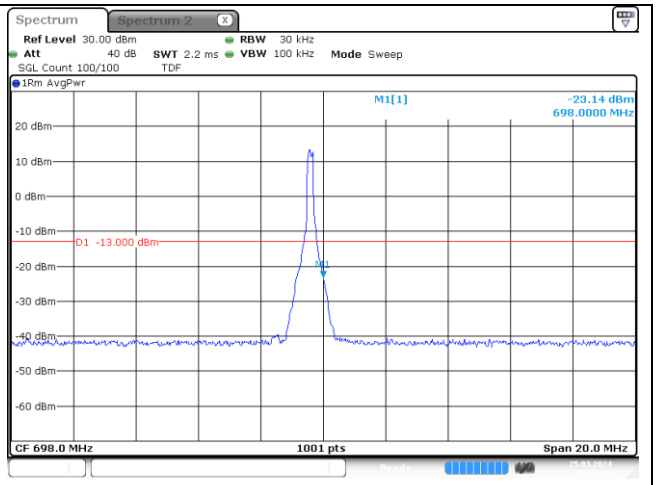


CP-OFDM QPSK - High Channel - Full RB

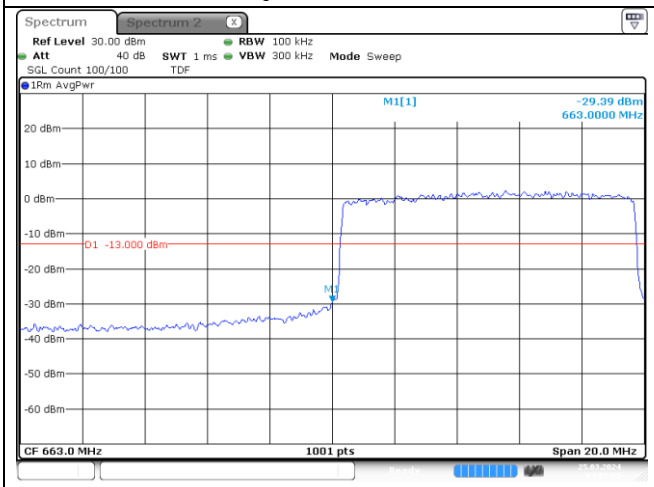
NR band 71 (10 ㎒)



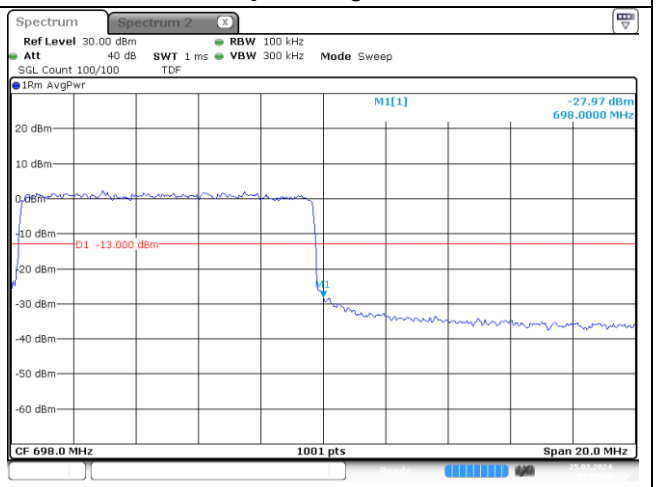
CP-OFDM 16QAM - Low Channel - 1 RB



CP-OFDM 16QAM - High Channel - 1 RB

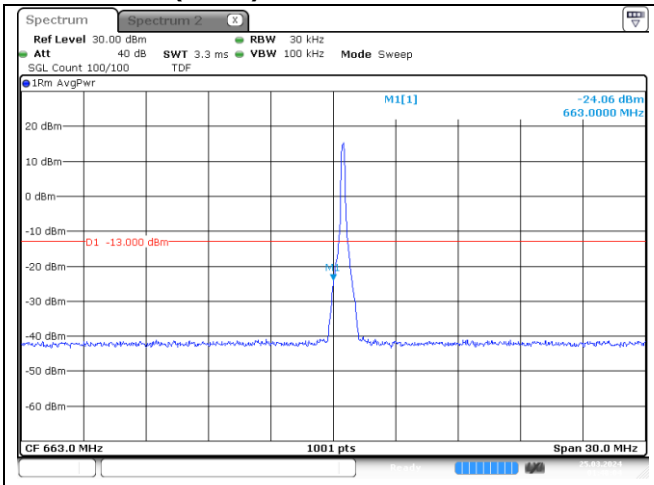


CP-OFDM 16QAM - Low Channel - Full RB

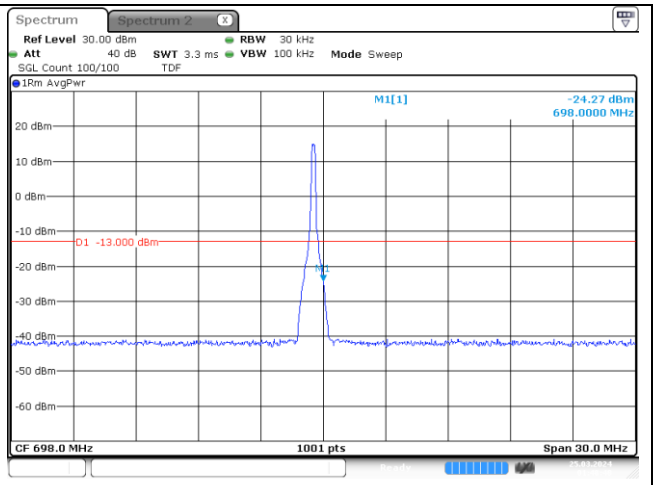


CP-OFDM 16QAM - High Channel - Full RB

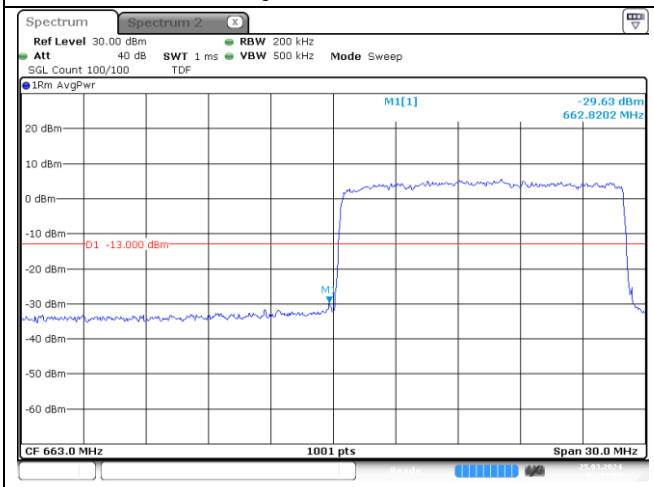
NR band 71 (15 ㎒)



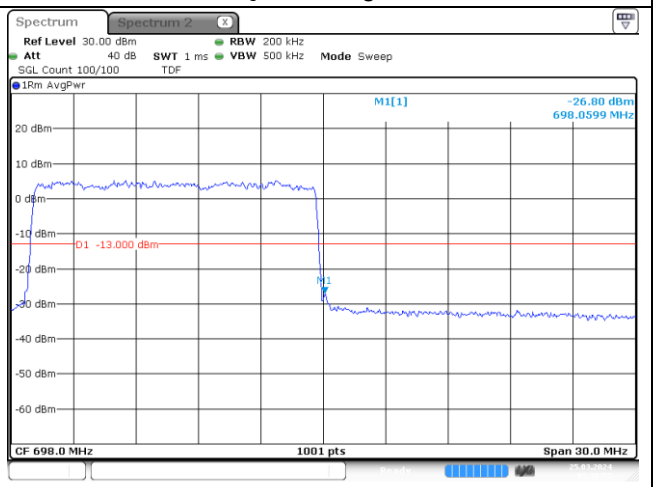
DFT-S-OFDM QPSK - Low Channel - 1 RB



DFT-S-OFDM QPSK - High Channel - 1 RB

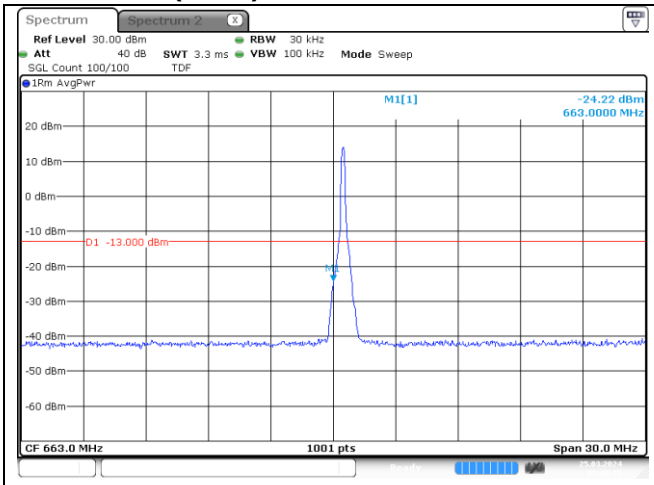


DFT-S-OFDM QPSK - Low Channel - Full RB

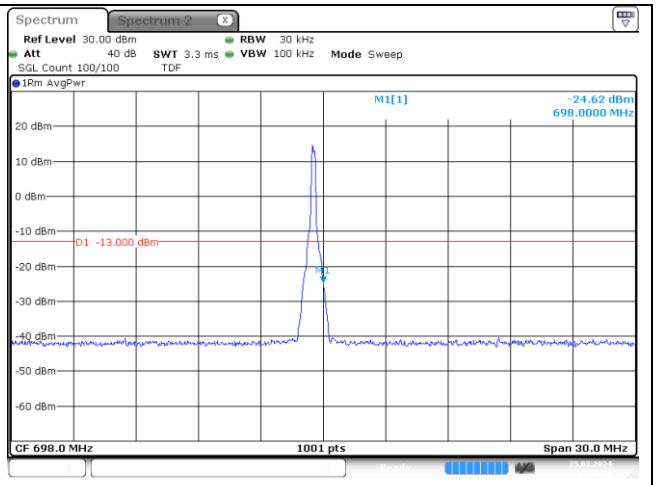


DFT-S-OFDM QPSK - High Channel - Full RB

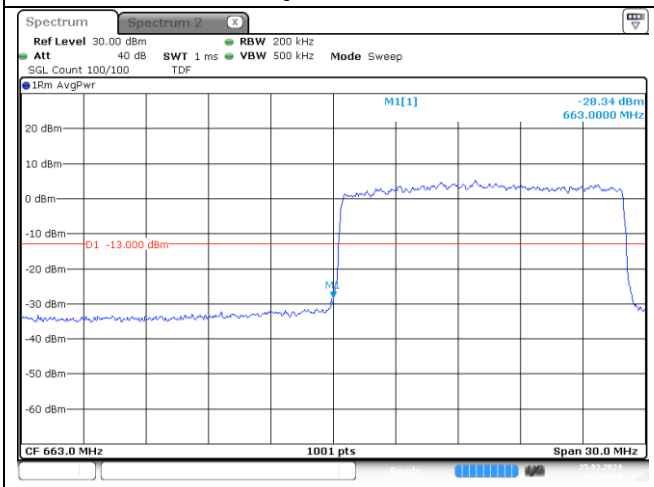
NR band 71 (15 ㎒)



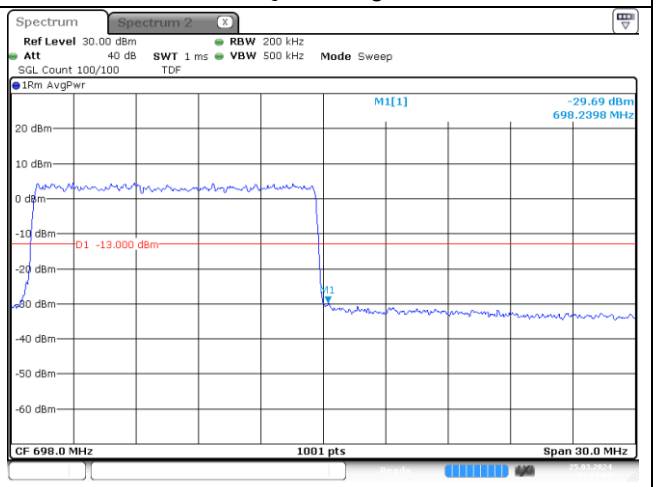
DFT-S-OFDM 16QAM - Low Channel - 1 RB



DFT-S-OFDM 16QAM - High Channel - 1 RB

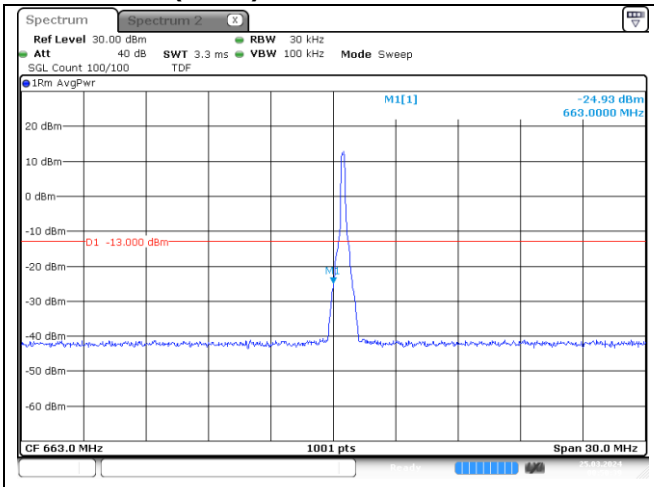


DFT-S-OFDM 16QAM - Low Channel - Full RB

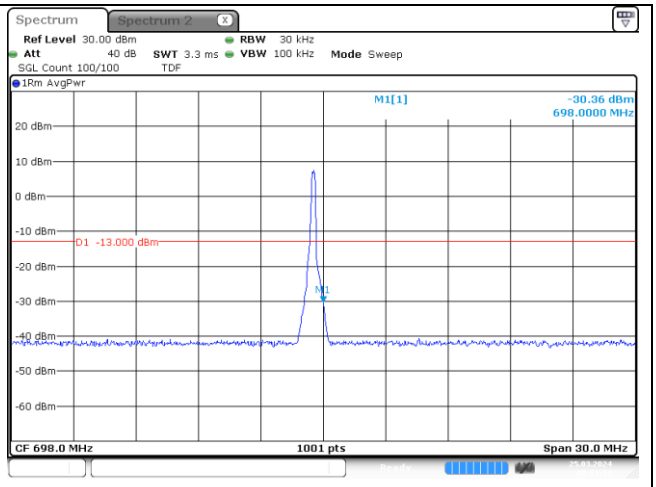


DFT-S-OFDM 16QAM - High Channel - Full RB

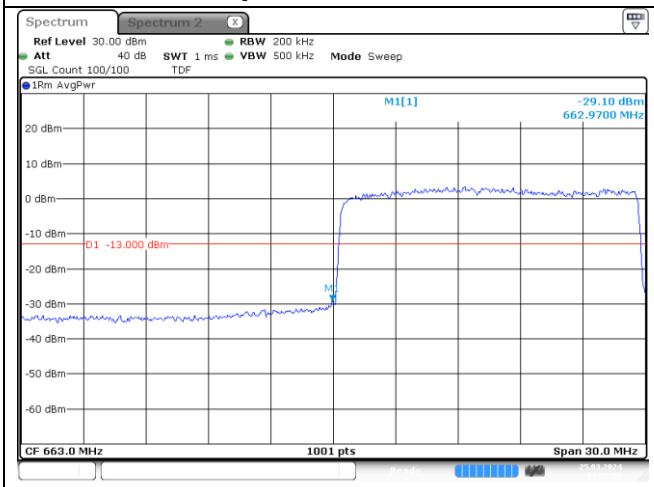
NR band 71 (15 ㎒)



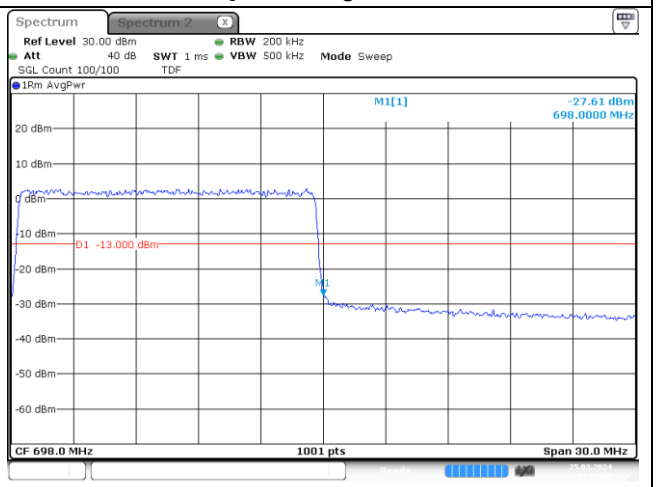
CP-OFDM QPSK - Low Channel - 1 RB



CP-OFDM QPSK - High Channel - 1 RB

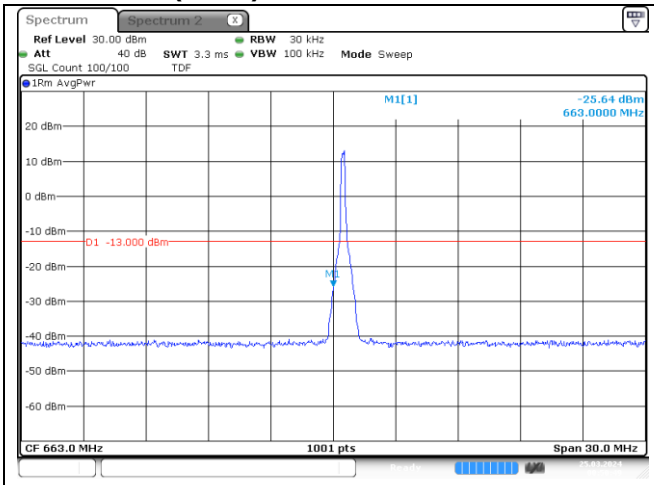


CP-OFDM QPSK - Low Channel - Full RB

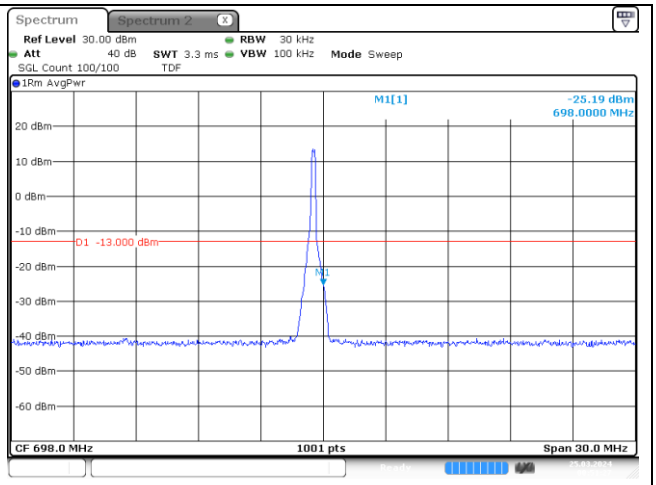


CP-OFDM QPSK - High Channel - Full RB

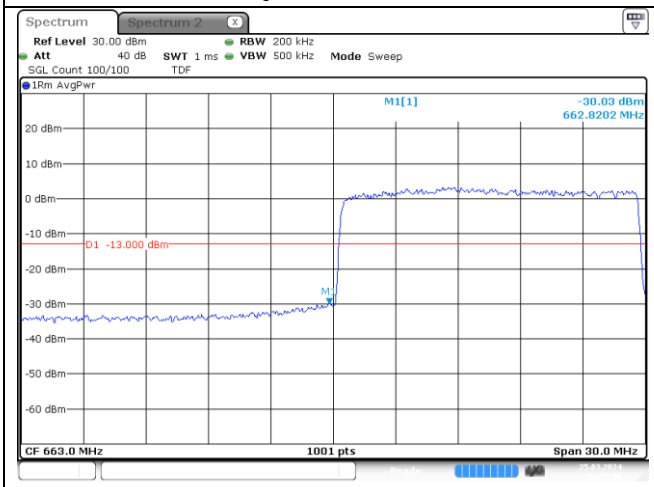
NR band 71 (15 ㎒)



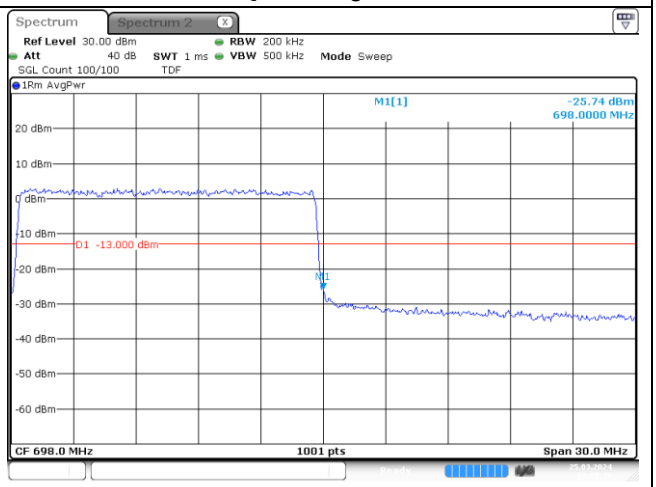
CP-OFDM 16QAM - Low Channel - 1 RB



CP-OFDM 16QAM - High Channel - 1 RB

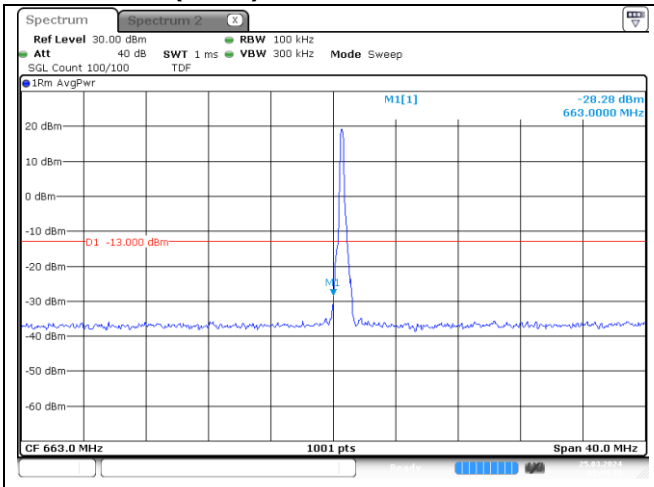


CP-OFDM 16QAM - Low Channel - Full RB

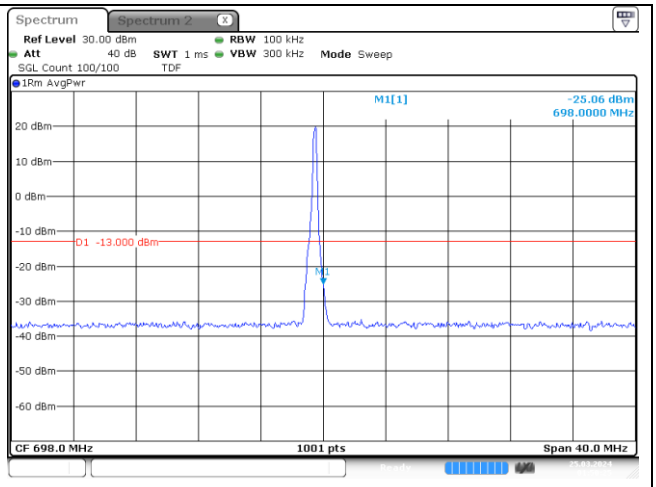


CP-OFDM 16QAM - High Channel - Full RB

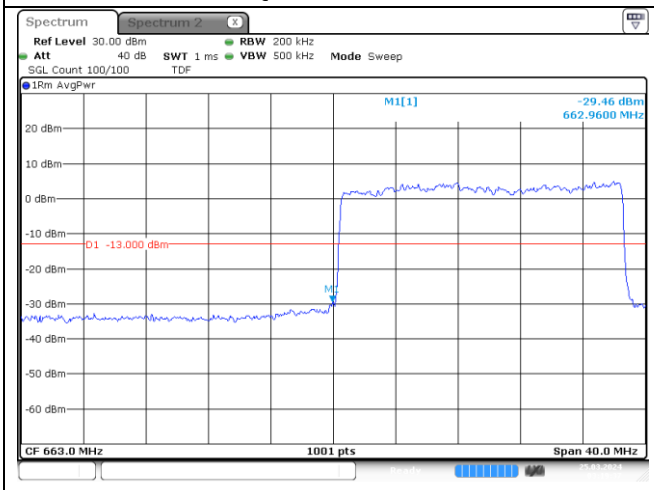
NR band 71 (20 ㎒)



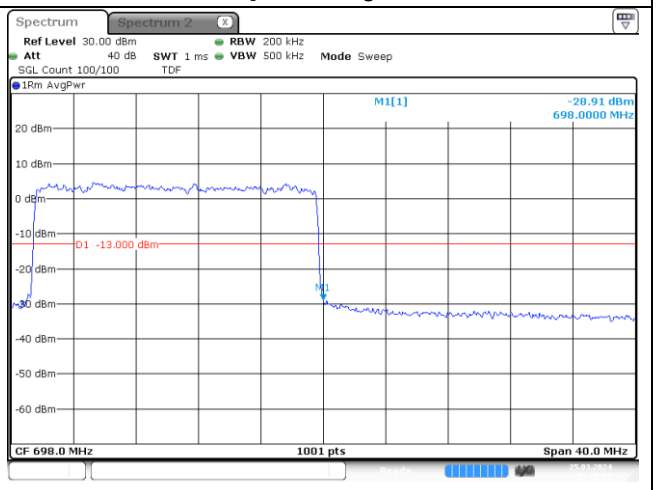
DFT-S-OFDM QPSK - Low Channel - 1 RB



DFT-S-OFDM QPSK - High Channel - 1 RB

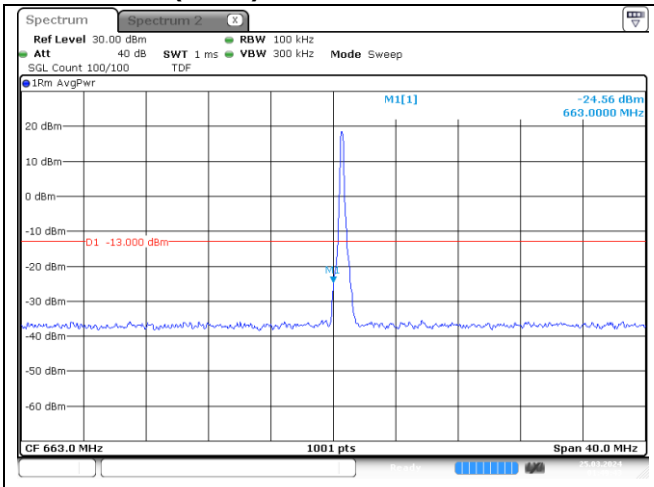


DFT-S-OFDM QPSK - Low Channel - Full RB

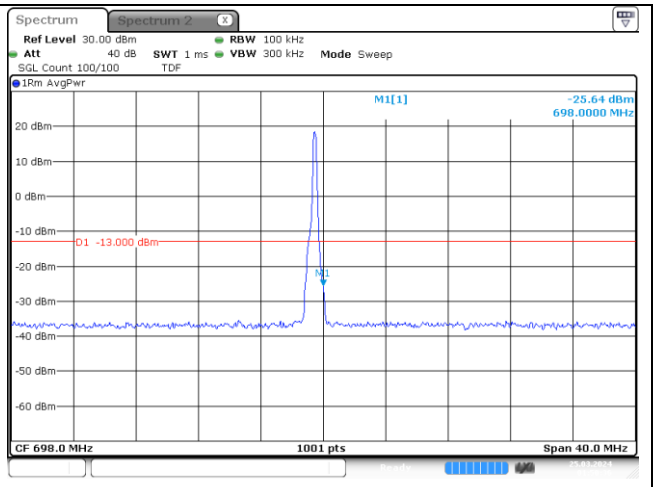


DFT-S-OFDM QPSK - High Channel - Full RB

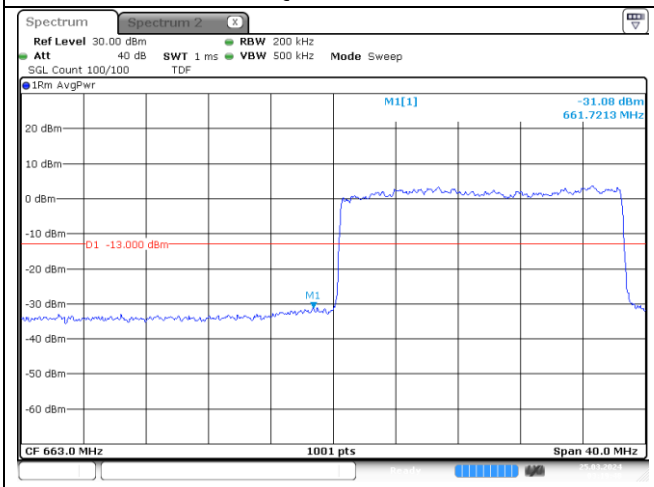
NR band 71 (20 ㎒)



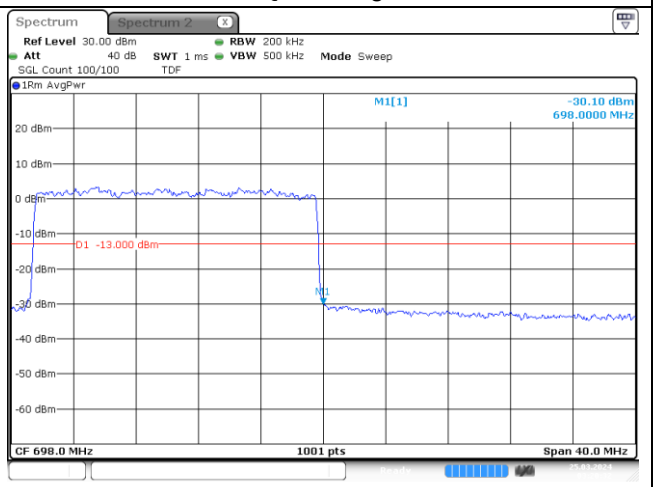
DFT-S-OFDM 16QAM - Low Channel - 1 RB



DFT-S-OFDM 16QAM - High Channel - 1 RB

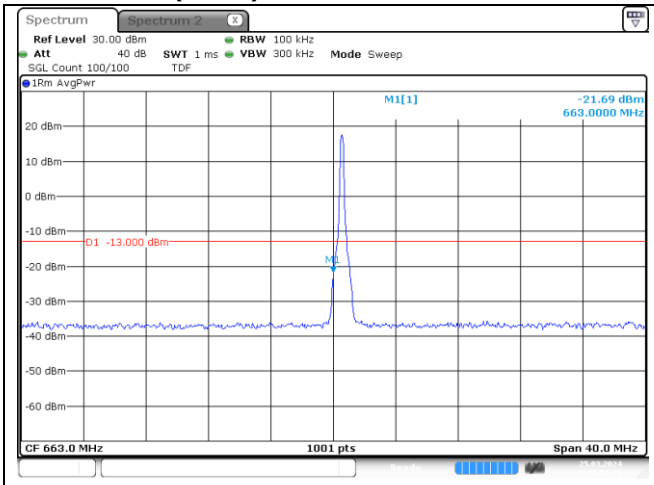


DFT-S-OFDM 16QAM - Low Channel - Full RB

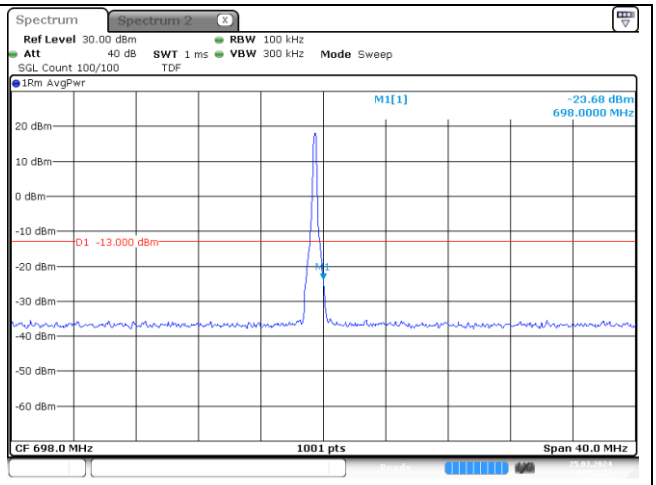


DFT-S-OFDM 16QAM - High Channel - Full RB

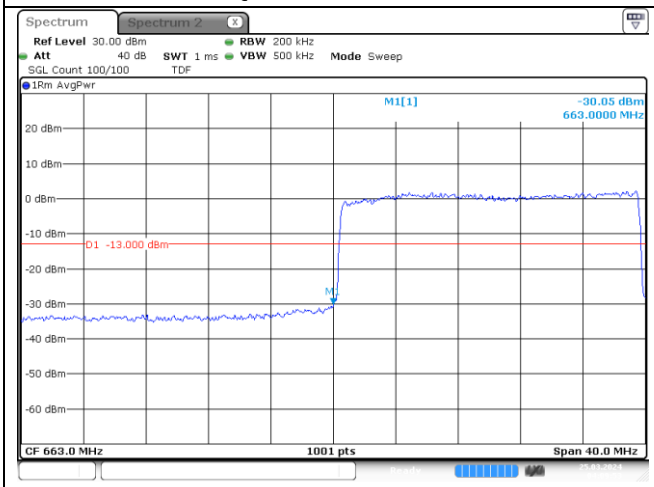
NR band 71 (20 ㎒)



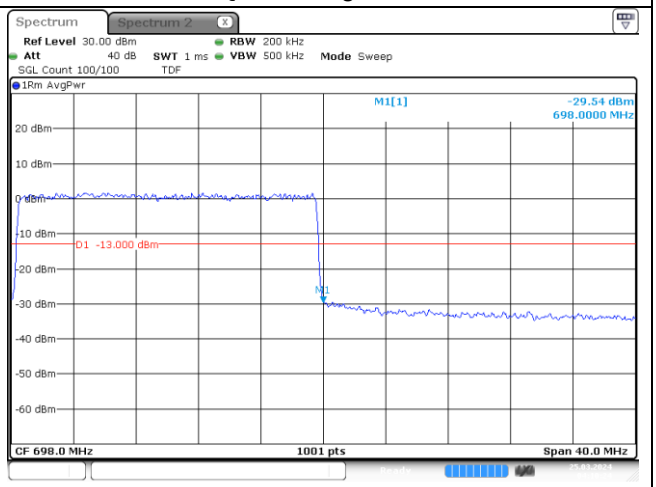
CP-OFDM QPSK - Low Channel - 1 RB



CP-OFDM QPSK - High Channel - 1 RB

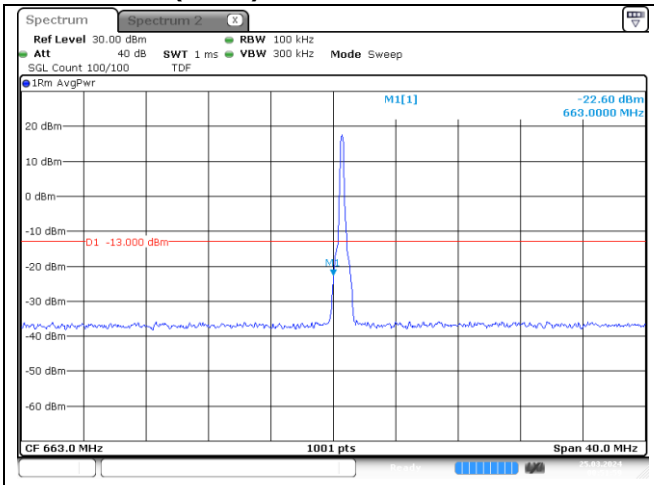


CP-OFDM QPSK - Low Channel - Full RB

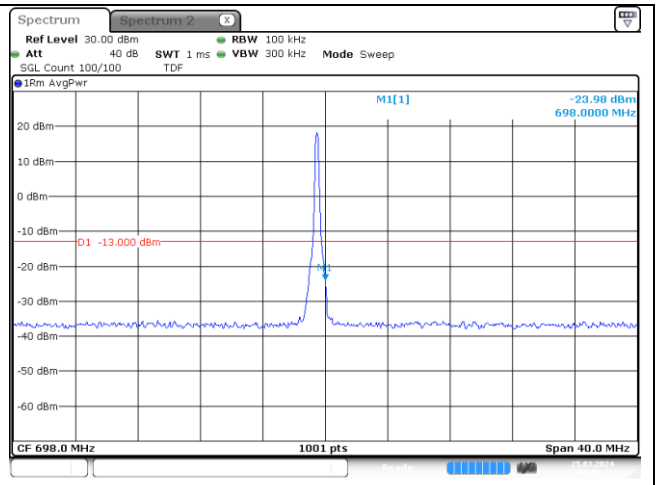


CP-OFDM QPSK - High Channel - Full RB

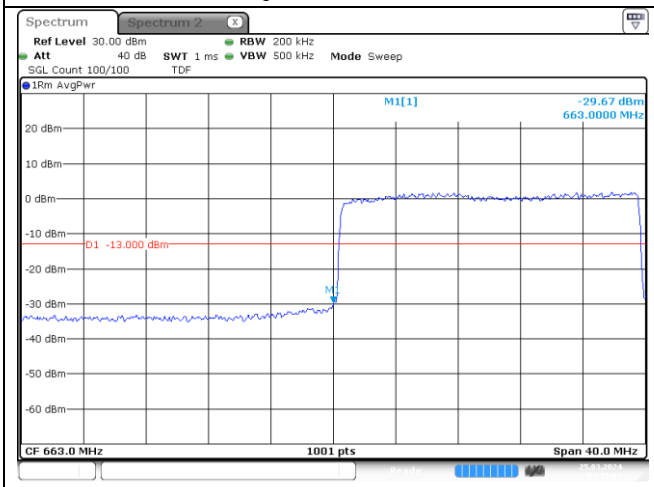
NR band 71 (20 ㎒)



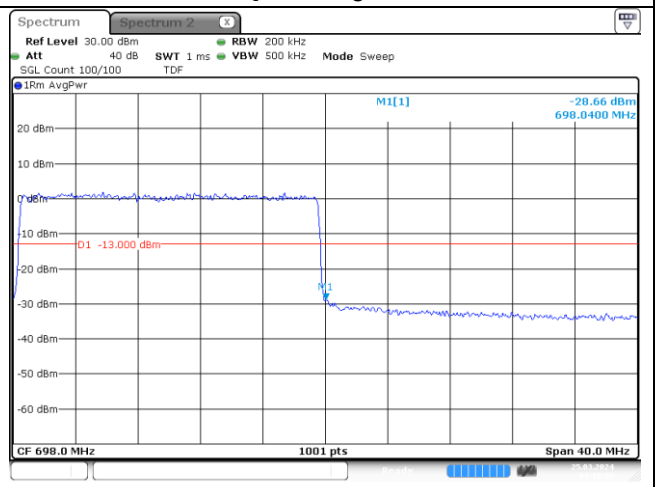
CP-OFDM 16QAM - Low Channel - 1 RB



CP-OFDM 16QAM - High Channel - 1 RB



CP-OFDM 16QAM - Low Channel - Full RB



CP-OFDM 16QAM - High Channel - Full RB

8. Frequency Stability

8.1. Limit

- § 2.1055 (a), § 2.1055 (d) & following:

- §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table of this section.
For Mobile devices operating in the 824 to 849 ㎒ band at a power level less than or equal to 3 Watts, the limit specified in Table C-1 is +/- 2.5 ppm.

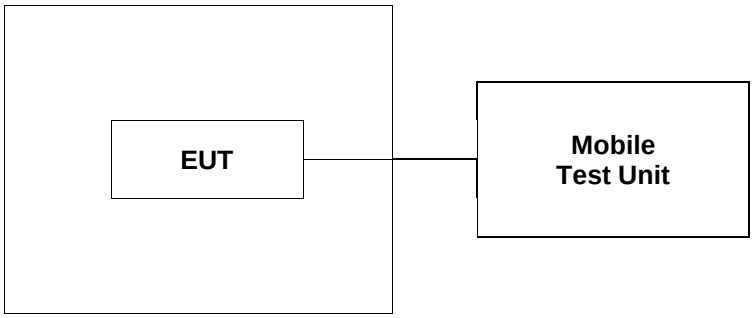
- §24.235, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

- §27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

- §90.213, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table.
For Mobile devices operating in the 809 to 824 ㎒ band at a power level 2 Watts or less, the limit specified in Table is +/- 2.5 ppm.

8.2. Test Procedure

1. Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a Mobile Test Unit via feed-through attenuators.
2. The EUT was placed inside the temperature chamber.
3. After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from Mobile Test Unit.



Temperature Chamber

8.3. Test Results

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

NR band 7 at middle channel

Reference Frequency: 2 535 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	4.00	9.27	0.000 23
40		13.25	0.001 80
30		8.23	-0.000 18
20(Ref.)		8.69	-
10		7.07	-0.000 64
0		7.95	-0.000 29
-10		12.01	0.001 31
-20		14.15	0.002 15
-30		3.82	-0.001 92
Frequency Stability versus Power Supply			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	3.40 (85%)	11.75	0.001 21
	4.60 (115%)	6.17	-0.000 99

NR band 12 at middle channel

Reference Frequency: 707.5 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	4.00	8.19	0.000 28
40		11.75	0.005 31
30		6.16	-0.002 59
20(Ref.)		7.99	-
10		4.42	-0.005 05
0		6.85	-0.001 61
-10		8.95	0.001 36
-20		14.27	0.008 88
-30		4.88	-0.004 40
Frequency Stability versus Power Supply			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	3.40 (85%)	12.13	0.005 85
	4.60 (115%)	7.37	-0.000 88

NR band 13 at middle channel

Reference Frequency: 782 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	4.00	6.13	-0.003 25
40		10.03	0.001 74
30		4.60	-0.005 20
20(Ref.)		8.67	-
10		1.31	-0.009 41
0		4.27	-0.005 63
-10		9.72	0.001 34
-20		12.74	0.005 20
-30		6.29	-0.003 04
Frequency Stability versus Power Supply			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	3.40 (85%)	12.06	0.004 34
	4.60 (115%)	6.87	-0.002 30

NR band 14 at middle channel

Reference Frequency: 793 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	4.00	8.02	0.001 83
40		10.65	0.005 15
30		12.77	0.007 82
20(Ref.)		6.57	-
10		8.03	0.001 84
0		9.49	0.003 68
-10		12.77	0.007 82
-20		11.63	0.006 38
-30		6.85	0.000 35
Frequency Stability versus Power Supply			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	3.40 (85%)	9.09	0.003 18
	4.60 (115%)	8.70	0.002 69

NR band 25/2 at middle channel

Reference Frequency: 1 882.5 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	4.00	7.90	0.000 74
40		8.60	0.001 12
30		12.20	0.003 03
20(Ref.)		6.50	-
10		5.25	-0.000 66
0		9.92	0.001 82
-10		15.20	0.004 62
-20		8.90	0.001 27
-30		3.80	-0.001 43
Frequency Stability versus Power Supply			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	3.40 (85%)	8.78	0.001 21
	4.60 (115%)	9.16	0.001 41

NR band 26/5_Part22 at middle channel

Reference Frequency: 836.5 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	4.00	8.50	0.001 79
40		7.80	0.000 96
30		12.50	0.006 58
20(Ref.)		7.00	-
10		3.15	-0.004 60
0		7.22	0.000 26
-10		13.10	0.007 29
-20		8.10	0.001 32
-30		4.00	-0.003 59
Frequency Stability versus Power Supply			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	3.40 (85%)	5.67	-0.001 59
	4.60 (115%)	7.87	0.001 04

NR band 26_Part90 at middle channel

Reference Frequency: 819 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	4.00	6.70	0.002 81
40		7.00	0.003 17
30		9.40	0.006 11
20(Ref.)		4.40	-
10		4.45	0.000 06
0		7.92	0.004 30
-10		14.50	0.012 33
-20		5.80	0.001 71
-30		1.20	-0.003 91
Frequency Stability versus Power Supply			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	3.40 (85%)	5.26	0.001 05
	4.60 (115%)	8.91	0.005 51

NR band 66 at middle channel

Reference Frequency: 1 745.0 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	4.00	6.83	0.001 20
40		8.32	0.002 06
30		12.41	0.004 40
20(Ref.)		4.73	-
10		8.03	0.001 89
0		8.28	0.002 03
-10		9.21	0.002 57
-20		5.17	0.000 25
-30		8.65	0.002 25
Frequency Stability versus Power Supply			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	3.40 (85%)	10.84	0.003 50
	4.60 (115%)	9.97	0.003 00

NR band 71 at middle channel

Reference Frequency: 680.5 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	4.00	9.29	0.007 01
40		8.88	0.006 41
30		14.34	0.014 43
20(Ref.)		4.52	-
10		8.88	0.006 41
0		7.88	0.004 94
-10		9.34	0.007 08
-20		9.41	0.007 19
-30		7.90	0.004 97
Frequency Stability versus Power Supply			
Environment Temperature (℃)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	3.40 (85%)	10.41	0.008 66
	4.60 (115%)	11.00	0.009 52

- End of the Test Report -