



TEST REPORT

Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-70-5008-1021 FAX: 82-505-299-8311 www.kctl.co.kr		Report No.: KR25-SRF0018 Page(1) of (211)	 KCTL
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1. Client

- Name : Samsung Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
- Date of Receipt : 2024-11-11

2. Use of Report : Certification

3. Name of Product / Model : Tablet PC / SM-X356B

4. Manufacturer / Country of Origin : Samsung Electronics Co., Ltd. / Vietnam

5. FCC ID : A3LSMX356B

6. Date of Test : 2024-11-29 to 2025-03-06

7. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing
 (Address:65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea)

8. Test method used : FCC Part 2
 FCC Part 27 Subpart C

9. Test Result : Refer to the test result in the test report

Affirmation	Tested by	Technical Manager
	Name : Kwonse Kim (Signature) 	Name : Harim Lee (Signature) 

2025-03-06

Eurofins KCTL Co.,Ltd.

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REPORT REVISION HISTORY

Date	Revision	Page No
2025-03-06	Originally issued	-

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General remarks for test reports

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

☒ Statement not required by the standard or client used for type testing

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1. General information

Client : Samsung Electronics Co., Ltd.
 Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
 Manufacturer : Samsung Electronics Co., Ltd.
 Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
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 Laboratory : Eurofins KCTL Co.,Ltd.
 Address : 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea
 Accreditations : FCC Site Designation No: KR0040, FCC Site Registration No: 687132
 VCCI Registration No. : R-20080, G-20078, C-20059, T-20056
 CAB Identifier: KR0040
 ISED Number: 8035A
 KOLAS No.: KT231

2. Device information

Equipment under test : Tablet PC
 Model : SM-X356B
 Modulation technique : 5G NR DFT-s OFDM : PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM
 : 5G NR CP OFDM : QPSK, 16QAM, 64QAM, 256QAM
 Power source : DC 3.85 V
 Antenna specification : Main Antenna 2 : LDS Antenna (NR n77/78)
 : Sub Antenna 3 : LDS Antenna (NR n78 SRS Path2)
 : Sub Antenna 4 : LDS Antenna (NR n78 SRS Path3)
 : Sub Antenna 2 : LDS Antenna (NR n78 SRS Path4)
 Antenna gain : Main Antenna 2 (n77 L) : 1.4 dB_i
 : Main Antenna 2 (n77 U) : 1.8 dB_i
 : Main Antenna 2 (n78 L) : 1.4 dB_i
 : Sub Antenna 3 (n78 SRS2) : -6.14 dB_i
 : Sub Antenna 4 (n78 SRS3) : -3.9 dB_i
 : Sub Antenna 2 (n78 SRS4) : 1.1 dB_i
 Power Class 2 : NR n77/78
 5G NR Antenna operation : SA/NSA
 5G NR SCS : 30 kHz
 Frequency range : 5G NR n77 (Lower) : 3 455.01 MHz ~ 3 544.98 MHz
 : 5G NR n77 (Upper) : 3 705.00 MHz ~ 3 975.00 MHz
 : 5G NR n78 (Lower) : 3 455.01 MHz ~ 3 544.98 MHz
 Bandwidth : 5G NR n77 : 10/15/20/30/40/50/60/70/80/90/100 MHz
 : 5G NR n78 : 10/15/20/30/40/50/60/70/80/90/100 MHz
 Software version : X356B.001
 Hardware version : REV1.0
 Test device serial No. : Conducted : R32XB0066LV, R32XB006PFD
 : Radiated : R32Y100QWZF
 Operation Temperature : 0 °C ~ 35 °C

2.1. Frequency/channel operations

This device contains the following capabilities:

NR n77/78(PC2/PC3), SRS n78(PC2/PC3)

5G NR n77 (Lower)

Ch.	Frequency (MHz)
630334	3 455.01
633334	3 500.01
636322	3 544.98

Table 2.1-1. 10M BW

Ch.	Frequency (MHz)
630500	3 457.50
633334	3 500.01
636166	3 542.49

Table 2.1-2. 15M BW

Ch.	Frequency (MHz)
630668	3 460.02
633334	3 500.01
636000	3 540.00

Table 2.1-3. 20M BW

Ch.	Frequency (MHz)
631000	3 465.00
633334	3 500.01
635666	3 534.99

Table 2.1-4. 30M BW

Ch.	Frequency (MHz)
631334	3 470.01
633334	3 500.01
635332	3 529.98

Table 2.1-5. 40M BW

Ch.	Frequency (MHz)
631668	3 475.02
633334	3 500.01
635000	3 525.00

Table 2.1-6. 50M BW

Ch.	Frequency (MHz)
632000	3 480.00
633334	3 500.01
634666	3 519.99

Table 2.1-7. 60M BW

Ch.	Frequency (MHz)
632334	3 485.01
633334	3 500.01
634332	3 514.98

Table 2.1-8. 70M BW

Ch.	Frequency (MHz)
632668	3 490.02
633334	3 500.01
634000	3 510.00

Table 2.1-9. 80M BW

Ch.	Frequency (MHz)
633000	3 495.00
633334	3 500.01
633666	3 504.99

Table 2.1-10. 90M BW

Ch.	Frequency (MHz)
-	-
633334	3 500.01
-	-

Table 2.1-11. 100M BW

5G NR n77 (Upper)

Ch.	Frequency (MHz)
647000	3 705.00
656000	3 840.00
665000	3 975.00

Table 2.1-12. 10M BW

Ch.	Frequency (MHz)
647168	3 707.52
656000	3 840.00
664832	3 972.48

Table 2.1-13. 15M BW

Ch.	Frequency (MHz)
647334	3 710.01
656000	3 840.00
664666	3 969.99

Table 2.1-14. 20M BW

Ch.	Frequency (MHz)
647668	3 715.02
656000	3 840.00
664332	3 964.98

Table 2.1-15. 30M BW

Ch.	Frequency (MHz)
648000	3 720.00
656000	3 840.00
664000	3 960.00

Table 2.1-16. 40M BW

Ch.	Frequency (MHz)
648334	3 725.01
656000	3 840.00
663666	3 954.99

Table 2.1-17. 50M BW

Ch.	Frequency (MHz)
648668	3 730.02
656000	3 840.00
663332	3 949.98

Table 2.1-18. 60M BW

Ch.	Frequency (MHz)
649000	3 735.00
656000	3 840.00
663000	3 945.00

Table 2.1-19. 70M BW

Ch.	Frequency (MHz)
649334	3 740.01
656000	3 840.00
662666	3 939.99

Table 2.1-20. 80M BW

Ch.	Frequency (MHz)
649668	3 745.02
656000	3 840.00
662332	3 934.98

Table 2.1-21. 90M BW

Ch.	Frequency (MHz)
650000	3 750.00
656000	3 840.00
662000	3 930.00

Table 2.1-22. 100M BW

5G NR n78 (Lower)

Ch.	Frequency (MHz)
630334	3 445.01
633334	3 500.01
636322	3 544.98

Table 2.1-23. 10M BW

Ch.	Frequency (MHz)
630500	3 457.50
633334	3 500.01
636166	3 542.49

Table 2.1-24. 15M BW

Ch.	Frequency (MHz)
630668	3 460.02
633334	3 500.01
636000	3 540.00

Table 2.1-25. 20M BW

Ch.	Frequency (MHz)
631000	3 465.00
633334	3 500.01
635666	3 534.99

Table 2.1-26. 25M BW

Ch.	Frequency (MHz)
631334	3 470.01
633334	3 500.01
635332	3 529.98

Table 2.1-27. 30M BW

Ch.	Frequency (MHz)
631668	3 475.02
633334	3 500.01
635000	3 525.00

Table 2.1-28. 40M BW

Ch.	Frequency (MHz)
632000	3 480.00
633334	3 500.01
634666	3 519.99

Table 2.1-29. 50M BW

Ch.	Frequency (MHz)
632334	3 485.01
633334	3 500.01
634332	3 514.98

Table 2.1-30. 60M BW

Ch.	Frequency (MHz)
632668	3 490.02
633334	3 500.01
634000	3 510.00

Table 2.1-31. 70M BW

Ch.	Frequency (MHz)
633000	3 495.00
633334	3 500.01
633666	3 504.99

Table 2.1-32. 80M BW

Ch.	Frequency (MHz)
-	-
633334	3 500.01
-	-

Table 2.1-33. 90M BW

Notes:

- 5G NR n78(3 450 – 3 550 MHz) overlaps the entire frequency range of 5G NR n77(3 450 – 3 550 MHz) and they have same maximum tune-up power. Therefore, NR n77 was tested as a representative and the test data provided in this report covers NR n77 as well as NR n78 subpart to Part27.

3. Maximum ERP/EIRP power

5G NR n77/78 (Lower)(Power Class 2)

Mode	Tx frequency (MHz)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
5G NR n77/78 (Lower)	3 455.01 ~ 3 544.98	8M67G7D	28.10	0.646
		8M67W7D	27.40	0.550
	3 457.50 ~ 3 542.49	13M0G7D	28.34	0.683
		13M0W7D	27.72	0.592
	3 460.02 ~ 3 540.00	18M1G7D	28.25	0.668
		18M0W7D	27.68	0.586
	3 465.00 ~ 3 534.99	27M3G7D	28.19	0.659
		27M2W7D	27.47	0.558
	3 470.01 ~ 3 529.98	36M1G7D	28.28	0.673
		35M9W7D	27.55	0.568
	3 475.02 ~ 3 525.00	46M1G7D	27.98	0.628
		46M1W7D	27.27	0.533
	3 480.00 ~ 3 519.99	58M0G7D	28.09	0.644
		58M1W7D	27.29	0.535
	3 485.01 ~ 3 514.98	64M3G7D	27.85	0.609
		64M5W7D	27.18	0.523
	3 490.02 ~ 3 510.00	77M5G7D	27.98	0.628
		77M3W7D	27.25	0.531
	3 495.00 ~ 3 504.99	86M8G7D	28.22	0.663
		87M0W7D	27.62	0.578
	3 500.01	96M7G7D	28.10	0.645
		96M9W7D	27.55	0.568

5G NR n77 (Upper)(Power Class 2)

Mode	Tx frequency (MHz)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
5G NR n77 (Upper)	3 705.00 ~ 3 975.00	8M62G7D	27.22	0.527
		8M67W7D	26.46	0.443
	3 707.52 ~ 3 972.48	13M0G7D	27.40	0.549
		13M0W7D	26.72	0.470
	3 710.01 ~ 3 969.99	18M0G7D	27.18	0.522
		18M1W7D	26.22	0.419
	3 715.02 ~ 3 964.98	27M3G7D	27.24	0.530
		27M3W7D	26.42	0.438
	3 720.00 ~ 3 960.00	36M1G7D	27.30	0.537
		36M0W7D	26.75	0.473
	3 725.01 ~ 3 954.99	46M1G7D	27.11	0.514
		46M0W7D	26.35	0.431
	3 730.02 ~ 3 949.98	58M0G7D	27.66	0.584
		58M1W7D	26.89	0.488
	3 735.00 ~ 3 945.00	64M5G7D	27.20	0.524
		64M5G7D	26.29	0.425
	3 740.01 ~ 3 939.99	77M5G7D	26.86	0.486
		77M3W7D	26.02	0.400
	3 745.02 ~ 3 934.98	86M8G7D	27.25	0.531
		87M2W7D	26.35	0.431
	3 750.00 ~ 3 930.00	96M7G7D	26.88	0.487
		96M9W7D	25.90	0.389

5G NR n78 (Lower)(Power Class 2)(SRS2)

Mode	Bandwidth (MHz)	Tx frequency (MHz)	EIRP	
			Max. power (dBm)	Max. power (W)
5G NR n78 (Lower)	90	3 495.00 ~ 3 504.99	17.64	0.058

5G NR n78 (Lower)(Power Class 2)(SRS3)

Mode	Bandwidth (MHz)	Tx frequency (MHz)	EIRP	
			Max. power (dBm)	Max. power (W)
5G NR n78 (Lower)	100	3 500.01	16.80	0.048

5G NR n78 (Lower)(Power Class 2)(SRS4)

Mode	Bandwidth (MHz)	Tx frequency (MHz)	EIRP	
			Max. power (dBm)	Max. power (W)
5G NR n78 (Lower)	15	3 457.50 ~ 3 542.49	17.51	0.056

4. Summary of tests

FCC Part section(s)	Parameter	Test Limit	Test Condition	Test results
2.1046	Conducted Output Power	N/A	Conducted	Pass
2.1049	Occupied Bandwidth & 26 dB Bandwidth	N/A		Pass
2.1051 27.53(l)(2) 27.53(n)(2)	Band Edge Emissions at Antenna Terminal	<-13 dBm/MHz		Pass
	Spurious Emissions at Antenna Terminal			Pass
27.50(j)(4) 27.50(k)(4)	Peak to Average Power Ratio	<13 dB		Pass
2.1055 27.54	Frequency stability	Emission must remain in band		Pass
27.50(j)(3) 27.50(k)(3)	Equivalent Isotropic Radiated Power	<1 Watts max. EIRP	Radiated	Pass
2.1053 27.53(l)(2) 27.53(n)(2)	Radiated Spurious Emissions	<-13 dBm/MHz		Pass

Notes:

- The test procedure(s) in this report were performed in accordance as following.
 - ◆ ANSI C63.26-2015
 - ◆ ANSI/TIA-603-E-2016
 - ◆ KDB 971168 D01 v03r01

4.1. Worst case orientation

- All modes of operation were investigated and the worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations in the test data.
- In the case of radiated spurious emissions, only the worst case bandwidth results were reported.
- Output power measurements were measured on all of modulation. All tests except output power was performed with below modulation with highest power.
 - NR: QPSK, 16QAM
 - Waveform: DFT-s OFDM
 - Mode: NSA/SA [Worst case: SA]
- However, the PAPR was evaluated for all wave forms and modulations during pre-test, then all bandwidth was performed for the modulations with the highest result.
 - NR: QPSK, 256QAM
 - Waveform: DFT-s OFDM/CP OFDM [Worst case: CP OFDM]
- In case of EN-DC mode, highest EIRP/ERP for stand-alone test case for LTE or 5GNR was configured then the spurious emissions were evaluated for simultaneous transmissions.

Test case	5GNR Band	NR Antenna	LTE EN-DC Band		
			Main Antenna 1	Main Antenna 2	Sub Antenna 1
1	NR n77	Main Antenna 2	B2, 5, 12, 13, 25, 66*	-	-
2	NR n78	Main Antenna 2	B2, 4, 5, 12, 13*, 26, 66*	B41*	-

*Tested EN-DC combinations for NSA.

- In case of n77 (power class3) and n78, n77 (power class3) covers n78 because of same tune up level. Therefore, output power measurement was performed about all power for n77 and n78, all test items of power class2 and power class3 for n77 were investigated and reported.
- This device supports SRS (sounding reference signal) 2, 3, 4 modes for n78 band. For each SRS 2, 3 and 4, conducted power and radiated measurement were performed through FTM mode provided by the client. The worst-case scenario for all measurements is based on the average conducted output power measurement investigation result. SRS 2, 3, 4 the worst-case scenario was radiated tested and reported.
 - SRS Antenna information: SRS 2 (Sub3 ANT), SRS 3 (Sub4 ANT), SRS 4 (Sub2 ANT)
- All configurations have been performed (Stand-alone, Stand-alone with TA, With accessories).
 - Accessory type: S-Pen, TA, DLC, Protective cover
- The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z and all of the radiated tests have been performed with the accessories as below. It was determined that below orientation was worst case orientation for each band.

Band	Stand-alone			Stand-alone with TA			With accessories		
	X-axis	Y-axis	Z-axis	X-axis	Y-axis	Z-axis	X-axis	Y-axis	Z-axis
NR n77/78 (PC2)	-	-	-	-	-	-	O	-	-
NR n77/78 (PC3)	-	-	-	-	-	-	O	-	-
SRS Path 2 NR n78 (PC2)	-	-	-	-	-	-	O	-	-
SRS Path 3 NR n78 (PC2)	-	-	-	-	-	-	O	-	-
SRS Path 4 NR n78 (PC2)	-	-	-	-	-	-	O	-	-
SRS Path 2 NR n78 (PC3)	-	-	-	-	-	-	O	-	-
SRS Path 3 NR n78 (PC3)	-	-	-	-	-	-	O	-	-
SRS Path 4 NR n78 (PC3)	-	-	-	-	-	-	O	-	-

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10. Test Condition

- The measurement was performed with various configurations then worst results are reported.

1) Radiated measurement

Test Description	Mode	Condition		Test Channel
Radiated power	NR	DFT-s OFDM: QPSK, 16QAM	RB Size: 1	Low, Middle, High
Radiated Spurious Emissions	NR	DFT-s OFDM: QPSK	RB Size: 1	Low, Middle, High

Band	Bandwidth (MHz)	RB size	RB offset
NR n77(Lower) (PC2)	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100	1	Low, Middle, High
NR n77(Upper)(PC2)	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100	1	Low, Middle, High
NR n78 (Lower) (PC2) (SRS2)	90	1	243
NR n78 (Lower) (PC2) (SRS3)	100	1	271
NR n78 (Lower) (PC2) (SRS4)	15	1	36

2) Conducted measurement

Test Description	Mode	Condition		Test Channel
OBW & 26 dB BW	NR	DFT-s OFDM: QPSK, 16QAM	RB Size: Full	Low, Middle, High
PAPR	NR	CP OFDM: QPSK, 256QAM	RB Size: Full	Middle
Stability	NR	DFT-s OFDM: QPSK	RB Size: Full	Middle
Band Edge	NR	DFT-s OFDM: QPSK	RB Size: 1, Full	Low, High
Spurious Emissions	NR	DFT-s OFDM: QPSK	RB Size: 1	Low, Middle, High

Band	Bandwidth (MHz)	RB size	RB offset
NR n77(PC2/PC3), NR n78(PC2/PC3)	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100	1	0, 22, 36, 49, 76, 104, 131, 160, 187, 215, 243, 271
		Full	0

5. Measurement uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014.

All measurement uncertainty values are shown with a coverage factor of $k=2$ to indicated a 95 % level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty ($\pm$)	
Conducted RF power	0.9 dB	
Conducted spurious emissions	2.0 dB	
Radiated spurious emissions	Below 1 000 MHz	2.5 dB
	1 000 MHz to 18 000 MHz	2.5 dB
	Above 18 000 MHz	2.6 dB

6. Measurement results explanation example

Frequency (MHz)	Factor(dB)	Frequency (MHz)	Factor(dB)
30	6.61	16 000	11.01
50	6.55	17 000	10.94
100	6.60	18 000	11.26
200	6.68	19 000	11.01
300	6.82	20 000	10.95
400	6.88	21 000	11.02
500	6.96	22 000	11.87
600	6.97	23 000	11.74
700	7.07	24 000	11.99
800	7.08	25 000	10.86
900	7.21	26 000	12.16
1 000	7.28	26 500	11.83
2 000	7.69	27 000	12.45
3 000	8.04	28 000	13.65
4 000	8.22	29 000	13.81
5 000	8.41	30 000	13.31
6 000	8.56	31 000	11.72
7 000	8.14	32 000	12.07
8 000	8.63	33 000	13.26
9 000	8.94	34 000	14.12
10 000	9.23	35 000	13.89
11 000	9.64	36 000	15.35
12 000	9.76	37 000	12.74
13 000	9.81	38 000	13.60
14 000	10.16	39 000	13.37
15 000	10.43	40 000	15.00

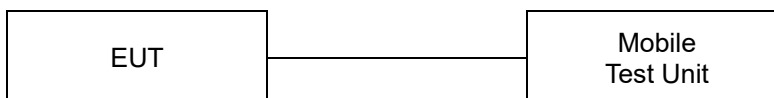
Note.

- Offset(dB) = RF cable loss(dB) + Divider (dB)

7. Test results

7.1. Conducted output power

Test setup



Test procedure

971168 D01 v03r01 – Section 5.2

ANSI C63.26-2015 – Section 5.2.4.2

CFR 47 - Section §2.1046

Test settings

When an average power meter is used to perform RF output power measurements, the fundamental condition that measurement be performed only over durations of active transmissions at maximum output power level applies. Thus, an average power meter can always be used to perform the measurement when the EUT can be configured to transmit continuously.

If the EUT cannot be configured to transmit continuously (i.e., burst duty cycle < 98%), then the following options can be implemented to facilitate measurement of the average power with an average power meter:

- a) A gated average power meter can be used to perform the measurement if the gating parameters can be adjusted such that the power is measured only during active transmission bursts at maximum output power levels.
- b) A conventional average power meter with no signal gating capability can also be used if the measured burst duty cycle is constant (i.e., duty cycle variations are less than or equal to $\pm 2\%$) by performing the measurement over the on/off burst cycles and then correcting (increasing) the measured level by a factor equal to $[10\log (1/\text{duty cycle})]$. See 5.2.4.3.4 for guidance with respect to measuring the transmitter duty cycle.

See item r) of 4.1 for more information regarding power meter functional requirements and limitations, and consult the instrumentation-specific application literature for proper set-up and use.

Note:

1. Offset(dB) = RF cable loss(dB)

Test results

5G NR n77 Lower (PC2)

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	10	DFT-s OFDM	30	PI/2 BPSK	1	1	24.48	24.59	24.49
					1	12	24.46	24.56	24.40
					1	22	24.60	24.61	24.42
					12	0	24.07	24.16	23.99
					12	6	24.57	24.65	24.50
					12	12	24.13	24.21	23.97
					24	0	24.09	24.18	23.97
				QPSK	1	1	24.59	24.60	24.47
					1	12	24.49	24.58	24.37
					1	22	24.59	24.62	24.46
					12	0	23.63	23.68	23.55
					12	6	24.63	24.70	24.54
					12	12	23.65	23.68	23.50
					24	0	23.67	23.64	23.48
				16QAM	1	1	23.66	23.71	23.51
				64QAM	1	1	22.10	22.30	22.08
				256QAM	1	1	20.09	20.13	19.96
		CP OFDM		QPSK	1	1	23.09	23.13	22.92
	15	DFT-s OFDM		PI/2 BPSK	1	1	24.77	24.80	24.71
					1	19	24.81	24.86	24.70
					1	36	24.93	24.89	24.72
					18	0	24.35	24.39	24.24
					18	10	24.86	24.88	24.73
					18	20	24.39	24.42	24.22
					36	0	24.37	24.40	24.22
				QPSK	1	1	24.81	24.79	24.70
					1	19	24.80	24.82	24.65
					1	36	24.95	24.88	24.75
					18	0	23.87	23.84	23.74
					18	10	24.85	24.89	24.70
					18	20	23.92	23.90	23.73
					36	0	23.90	23.84	23.71
				16QAM	1	1	23.93	23.95	23.80
				64QAM	1	1	22.34	22.50	22.31
				256QAM	1	1	20.29	20.27	20.12
		CP OFDM		QPSK	1	1	23.32	23.33	23.17

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	20	DFT-s OFDM	30	PI/2 BPSK	1	1	24.90	24.93	24.76
					1	26	24.79	24.82	24.64
					1	49	24.96	24.84	24.67
					25	0	24.51	24.41	24.29
					25	13	24.82	24.85	24.67
					25	26	24.40	24.43	24.15
					50	0	24.40	24.37	24.14
				QPSK	1	1	24.88	24.91	24.74
					1	26	24.76	24.82	24.60
					1	49	24.97	24.82	24.66
					25	0	23.87	23.89	23.75
					25	13	24.81	24.86	24.62
		25			26	23.87	23.90	23.64	
		50			0	23.93	23.86	23.70	
		16QAM		1	1	24.07	24.05	23.86	
		64QAM		1	1	22.44	22.49	22.36	
		256QAM		1	1	20.43	20.42	20.19	
		CP OFDM		QPSK	1	1	23.38	23.41	23.25
	30	DFT-s OFDM		PI/2 BPSK	1	1	24.91	24.92	24.89
					1	39	24.82	24.83	24.71
					1	76	25.00	24.82	24.78
					36	0	24.50	24.39	24.40
					36	21	24.91	24.90	24.80
					36	42	24.45	24.43	24.35
					75	0	24.55	24.44	24.39
				QPSK	1	1	24.97	24.91	24.90
					1	39	24.75	24.78	24.78
					1	76	25.03	24.80	24.80
					36	0	23.87	23.90	23.86
					36	21	24.89	24.92	24.82
					36	42	23.96	23.94	23.82
					75	0	24.03	23.90	23.90
				16QAM	1	1	24.09	24.05	23.98
				64QAM	1	1	22.54	22.55	22.46
				256QAM	1	1	20.48	20.43	20.37
		CP OFDM		QPSK	1	1	23.49	23.52	23.45

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	40	DFT-s OFDM	30	PI/2 BPSK	1	1	24.93	24.97	24.83
					1	53	24.84	24.85	24.73
					1	104	25.00	24.87	24.76
					50	0	24.54	24.46	24.34
					50	28	24.94	24.94	24.78
					50	56	24.48	24.49	24.26
					100	0	24.54	24.51	24.31
				QPSK	1	1	24.98	24.99	24.82
					1	53	24.78	24.84	24.64
					1	104	25.02	24.88	24.77
					50	0	23.92	23.95	23.81
					50	28	24.92	24.95	24.75
					50	56	23.95	23.97	23.74
					100	0	24.02	23.96	23.80
				16QAM	1	1	24.08	24.08	23.90
				64QAM	1	1	22.54	22.58	22.50
				256QAM	1	1	20.51	20.50	20.30
		CP OFDM		QPSK	1	1	23.51	23.54	23.42
	50	DFT-s OFDM		PI/2 BPSK	1	1	24.69	24.77	24.56
					1	67	24.54	24.61	24.40
					1	131	24.68	24.58	24.37
					64	0	24.27	24.21	24.03
					64	35	24.57	24.64	24.41
					64	69	24.12	24.16	23.89
					128	0	24.11	24.16	23.90
				QPSK	1	1	24.76	24.82	24.59
					1	67	24.49	24.59	24.34
					1	131	24.65	24.57	24.39
					64	0	23.65	23.74	23.55
					64	35	24.57	24.65	24.35
					64	69	23.56	23.65	23.34
					128	0	23.63	23.64	23.42
				16QAM	1	1	23.83	23.85	23.61
				64QAM	1	1	22.33	22.43	22.29
				256QAM	1	1	20.28	20.30	20.03
		CP OFDM		QPSK	1	1	23.31	23.38	23.20

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	60	DFT-s OFDM	30	PI/2 BPSK	1	1	24.73	24.71	24.69
					1	81	24.80	24.75	24.68
					1	160	24.69	24.46	24.44
					81	0	24.31	24.26	24.25
					81	41	24.84	24.72	24.72
					81	81	24.23	24.22	24.08
					162	0	24.26	24.23	24.24
				QPSK	1	1	24.72	24.76	24.67
					1	81	24.83	24.69	24.73
					1	160	24.69	24.54	24.43
					81	0	23.78	23.77	23.74
					81	41	24.85	24.71	24.68
					81	81	23.73	23.73	23.51
					162	0	23.85	23.75	23.72
				16QAM	1	1	23.76	23.87	23.77
				64QAM	1	1	22.32	22.46	22.34
				256QAM	1	1	20.18	20.26	20.22
				CP OFDM	QPSK	1	1	23.26	23.41
	70	DFT-s OFDM		PI/2 BPSK	1	1	24.56	24.59	24.59
					1	95	24.42	24.47	24.54
					1	187	24.43	24.26	24.30
					90	0	24.04	24.16	24.12
					90	50	24.52	24.49	24.61
					90	99	23.92	24.01	23.98
					180	0	24.05	24.07	24.11
				QPSK	1	1	24.51	24.65	24.62
					1	95	24.50	24.48	24.61
					1	187	24.39	24.33	24.26
					90	0	23.53	23.64	23.64
					90	50	24.52	24.54	24.62
					90	99	23.41	23.50	23.49
					180	0	23.55	23.53	23.64
				16QAM	1	1	23.60	23.59	23.71
				64QAM	1	1	22.02	22.07	22.17
				256QAM	1	1	19.98	20.08	20.13
				CP OFDM	QPSK	1	1	23.11	23.16

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	80	DFT-s OFDM	30	PI/2 BPSK	1	1	24.48	24.53	24.50
					1	109	24.44	24.46	24.46
					1	215	24.35	24.36	24.26
					108	0	24.13	24.20	23.99
					108	55	24.55	24.57	24.54
					108	109	24.09	24.00	23.89
					216	0	24.03	24.07	23.99
				QPSK	1	1	24.48	24.54	24.51
					1	109	24.49	24.49	24.45
					1	215	24.36	24.36	24.27
					108	0	23.59	23.65	23.54
					108	55	24.53	24.56	24.58
					108	109	23.56	23.54	23.41
					216	0	23.54	23.57	23.54
				16QAM	1	1	23.66	23.57	23.54
				64QAM	1	1	22.08	22.08	22.17
				256QAM	1	1	20.07	20.05	20.02
				CP OFDM	QPSK	1	1	23.10	23.20
	90	DFT-s OFDM		PI/2 BPSK	1	1	24.44	24.50	24.46
					1	123	24.28	24.41	24.50
					1	243	24.35	24.33	24.32
					120	0	23.99	24.07	24.18
					120	63	24.40	24.56	24.60
					120	125	23.85	24.00	24.05
					243	0	23.93	23.97	24.08
				QPSK	1	1	24.43	24.51	24.47
					1	123	24.32	24.44	24.49
					1	243	24.35	24.36	24.28
					120	0	23.57	23.61	23.67
					120	63	24.40	24.52	24.61
					120	125	23.40	23.48	23.57
					243	0	23.41	23.50	23.54
				16QAM	1	1	23.61	23.54	23.61
				64QAM	1	1	22.11	22.05	22.07
				256QAM	1	1	19.95	20.02	20.03
				CP OFDM	QPSK	1	1	22.99	23.02

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	100	DFT-s OFDM	30	PI/2 BPSK	1	1	-	24.40	-
					1	137	-	24.40	-
					1	271	-	24.35	-
					135	0	-	24.10	-
					135	69	-	24.50	-
					135	138	-	23.99	-
					270	0	-	24.02	-
				QPSK	1	1	-	24.35	-
					1	137	-	24.41	-
					1	271	-	24.30	-
					135	0	-	23.54	-
					135	69	-	24.52	-
					135	138	-	23.46	-
					270	0	-	23.49	-
				16QAM	1	1	-	23.51	-
				64QAM	1	1	-	22.17	-
				256QAM	1	1	-	19.91	-
		CP OFDM		QPSK	1	1	-	23.01	-

5G NR n77 Upper (PC2)

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	10	DFT-s OFDM	30	PI/2 BPSK	1	1	25.41	25.29	25.36
					1	12	25.46	25.34	25.45
					1	22	25.16	25.29	25.19
					12	0	24.99	24.84	24.86
					12	6	25.39	25.29	25.29
					12	12	24.81	24.80	24.86
					24	0	24.99	24.81	24.88
				QPSK	1	1	25.38	25.25	25.29
					1	12	25.47	25.33	25.35
					1	22	25.16	25.27	25.13
					12	0	24.55	24.36	24.37
					12	6	25.51	25.33	25.41
		12			12	24.42	24.32	24.32	
		24			0	24.42	24.32	24.32	
		16QAM		1	1	24.40	24.31	24.28	
		64QAM		1	1	22.89	22.89	22.79	
		256QAM		1	1	20.97	20.74	20.74	
		CP OFDM		QPSK	1	1	24.01	23.89	23.88
	15	DFT-s OFDM		PI/2 BPSK	1	1	25.72	25.46	25.77
					1	19	25.70	25.38	25.76
					1	36	25.69	25.51	25.79
					18	0	25.19	24.96	25.30
					18	10	25.75	25.50	25.79
					18	20	25.24	25.00	25.31
					36	0	25.22	25.01	25.34
				QPSK	1	1	25.73	25.49	25.80
					1	19	25.66	25.37	25.75
					1	36	25.63	25.49	25.76
					18	0	24.74	24.51	24.85
					18	10	25.73	25.42	25.80
					18	20	24.74	24.50	24.80
					36	0	24.72	24.50	24.81
				16QAM	1	1	24.79	24.63	24.87
				64QAM	1	1	23.34	23.07	23.33
				256QAM	1	1	21.27	20.93	21.29
		CP OFDM		QPSK	1	1	24.26	24.00	24.32

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	20	DFT-s OFDM	30	PI/2 BPSK	1	1	25.76	25.41	25.78
					1	26	25.53	25.25	25.70
					1	49	25.59	25.53	25.80
					25	0	25.27	24.90	25.29
					25	13	25.69	25.41	25.76
					25	26	25.14	24.88	25.32
					50	0	25.21	24.82	25.28
				QPSK	1	1	25.75	25.36	25.77
					1	26	25.60	25.37	25.70
					1	49	25.62	25.61	25.81
					25	0	24.85	24.42	24.82
					25	13	25.72	25.34	25.77
		25			26	24.68	24.43	24.77	
		50			0	24.78	24.45	24.83	
		16QAM		1	1	24.95	24.65	24.96	
		64QAM		1	1	23.36	23.17	23.41	
		256QAM		1	1	21.37	20.90	21.31	
		CP OFDM		QPSK	1	1	24.29	23.95	24.32
	30	DFT-s OFDM		PI/2 BPSK	1	1	25.74	25.42	25.97
					1	39	25.56	25.27	25.91
					1	76	25.40	25.39	25.83
					36	0	25.28	24.96	25.49
					36	21	25.68	25.42	25.90
					36	42	25.13	24.89	25.49
					75	0	25.15	24.87	25.47
				QPSK	1	1	25.70	25.45	25.98
					1	39	25.58	25.36	25.87
					1	76	25.49	25.47	25.86
					36	0	24.71	24.40	24.93
					36	21	25.65	25.37	25.92
					36	42	24.65	24.40	24.93
					75	0	24.69	24.40	24.95
				16QAM	1	1	24.78	24.57	24.99
				64QAM	1	1	23.22	23.12	23.49
				256QAM	1	1	21.33	20.91	21.47
		CP OFDM		QPSK	1	1	24.28	23.99	24.49

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	40	DFT-s OFDM	30	PI/2 BPSK	1	1	25.95	25.56	25.93
					1	53	25.75	25.43	25.88
					1	104	25.73	25.67	25.92
					50	0	25.43	25.09	25.42
					50	28	25.87	25.61	25.94
					50	56	25.32	25.11	25.49
					100	0	25.39	25.05	25.46
				QPSK	1	1	25.96	25.64	25.99
					1	53	25.78	25.51	25.84
					1	104	25.83	25.77	25.95
					50	0	24.96	24.57	24.93
					50	28	25.85	25.51	25.95
					50	56	24.85	24.60	24.94
					100	0	24.88	24.57	24.90
				16QAM	1	1	24.98	24.73	24.99
				64QAM	1	1	23.46	23.28	23.49
				256QAM	1	1	21.45	21.04	21.39
				CP OFDM	QPSK	1	1	24.48	24.18
	50	DFT-s OFDM		PI/2 BPSK	1	1	25.54	25.26	25.74
					1	67	25.24	25.35	25.73
					1	131	25.19	25.53	25.60
					64	0	24.98	24.87	25.43
					64	35	25.19	25.41	25.84
					64	69	24.71	24.95	25.17
					128	0	24.78	24.94	25.35
				QPSK	1	1	25.49	25.21	25.83
					1	67	25.22	25.37	25.85
					1	131	25.10	25.49	25.59
					64	0	24.40	24.44	24.99
					64	35	25.24	25.39	25.87
					64	69	24.13	24.44	24.63
					128	0	24.37	24.41	24.78
				16QAM	1	1	24.45	24.29	24.80
				64QAM	1	1	23.06	22.84	23.39
				256QAM	1	1	20.86	20.68	21.08
				CP OFDM	QPSK	1	1	23.85	23.79

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	60	DFT-s OFDM	30	PI/2 BPSK	1	1	25.48	25.21	25.37
					1	81	25.21	25.36	25.46
					1	160	25.15	25.50	25.28
					81	0	24.81	24.73	24.98
					81	41	25.25	25.43	25.52
					81	81	24.71	24.98	24.93
					162	0	24.81	24.91	24.97
				QPSK	1	1	25.47	25.20	25.51
					1	81	25.24	25.32	25.48
					1	160	25.07	25.44	25.19
					81	0	24.30	24.26	24.49
					81	41	25.31	25.42	25.59
		81			81	24.22	24.53	24.38	
		162			0	24.43	24.45	24.51	
		16QAM		1	1	24.51	24.32	24.55	
		64QAM		1	1	23.14	22.85	23.07	
		256QAM		1	1	20.92	20.70	20.82	
		CP OFDM		QPSK	1	1	23.87	23.78	23.92
	70	DFT-s OFDM		PI/2 BPSK	1	1	25.44	25.12	25.28
					1	95	25.18	25.23	25.26
					1	187	25.11	25.30	25.34
					90	0	24.79	24.74	24.84
					90	50	25.24	25.29	25.30
					90	99	24.73	24.85	24.89
					180	0	24.75	24.78	24.83
				QPSK	1	1	25.45	25.09	25.29
					1	95	25.20	25.22	25.28
					1	187	25.15	25.30	25.35
					90	0	24.35	24.23	24.31
					90	50	25.23	25.28	25.33
		90			99	24.29	24.29	24.41	
		180			0	24.28	24.27	24.30	
		16QAM		1	1	24.47	24.23	24.35	
		64QAM		1	1	22.97	22.77	22.92	
		256QAM		1	1	20.91	20.49	20.78	
		CP OFDM		QPSK	1	1	23.90	23.66	23.96

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	80	DFT-s OFDM	30	PI/2 BPSK	1	1	25.44	25.04	25.37
					1	109	25.35	25.23	25.38
					1	215	25.06	25.32	25.30
					108	0	24.96	24.67	24.93
					108	55	25.42	25.27	25.33
					108	109	24.76	24.80	24.99
					216	0	24.91	24.81	24.88
				QPSK	1	1	25.47	25.03	25.31
					1	109	25.34	25.16	25.33
					1	215	25.08	25.28	25.30
					108	0	24.45	24.11	24.40
					108	55	25.43	25.27	25.40
		108			109	24.25	24.29	24.42	
		216			0	24.36	24.34	24.39	
		16QAM		1	1	24.58	24.14	24.41	
		64QAM		1	1	23.09	22.65	22.88	
		256QAM		1	1	20.95	20.49	20.81	
		CP OFDM		QPSK	1	1	24.05	23.60	23.87
	90	DFT-s OFDM		PI/2 BPSK	1	1	25.44	25.04	25.33
					1	123	25.24	25.22	25.39
					1	243	25.19	25.40	25.26
					120	0	24.85	24.61	24.96
					120	63	25.22	25.26	25.44
					120	125	24.68	24.79	24.81
					243	0	24.78	24.77	24.93
				QPSK	1	1	25.45	25.00	25.38
					1	123	25.20	25.17	25.44
					1	243	25.17	25.40	25.27
					120	0	24.28	24.13	24.49
					120	63	25.21	25.21	25.47
					120	125	24.16	24.30	24.28
					243	0	24.33	24.23	24.40
				16QAM	1	1	24.48	24.14	24.46
				64QAM	1	1	23.01	22.61	22.92
				256QAM	1	1	20.94	20.59	20.79
		CP OFDM		QPSK	1	1	23.92	23.67	23.89

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	100	DFT-s OFDM	30	PI/2 BPSK	1	1	25.40	25.02	25.18
					1	137	25.28	25.25	25.38
					1	271	25.23	25.48	25.39
					135	0	24.92	24.64	24.86
					135	69	25.34	25.25	25.40
					135	138	24.68	24.87	24.87
					270	0	24.79	24.79	24.91
				QPSK	1	1	25.36	25.06	25.19
					1	137	25.20	25.22	25.33
					1	271	25.17	25.49	25.36
					135	0	24.37	24.14	24.44
					135	69	25.28	25.21	25.41
					135	138	24.17	24.34	24.39
					270	0	24.29	24.23	24.35
				16QAM	1	1	24.54	24.10	24.24
				64QAM	1	1	22.99	22.64	22.81
				256QAM	1	1	20.91	20.45	20.66
		CP OFDM		QPSK	1	1	23.94	23.47	23.74

5G NR n77 Lower (PC3)

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	10	DFT-s OFDM	30	PI/2 BPSK	1	1	23.49	23.59	23.49
					1	12	23.45	23.55	23.40
					1	22	23.60	23.58	23.45
					12	0	23.07	23.13	23.01
					12	6	23.57	23.65	23.49
					12	12	23.11	23.20	22.97
					24	0	23.09	23.16	22.95
				QPSK	1	1	23.56	23.61	23.54
					1	12	23.45	23.59	23.46
					1	22	23.56	23.58	23.55
					12	0	22.59	22.65	22.62
					12	6	23.61	23.68	23.64
					12	12	22.60	22.71	22.55
					24	0	22.65	22.65	22.52
				16QAM	1	1	22.65	22.65	22.56
				64QAM	1	1	21.04	21.20	21.11
				256QAM	1	1	19.09	19.07	19.03
				CP OFDM	QPSK	1	1	22.04	22.08
	15	DFT-s OFDM		PI/2 BPSK	1	1	23.73	23.84	23.65
					1	19	23.80	23.89	23.61
					1	36	23.91	23.90	23.69
					18	0	23.28	23.45	23.15
					18	10	23.79	23.89	23.70
					18	20	23.34	23.48	23.16
					36	0	23.31	23.45	23.16
				QPSK	1	1	23.83	23.85	23.70
					1	19	23.81	23.86	23.65
					1	36	23.90	23.97	23.72
					18	0	22.91	22.87	22.71
					18	10	23.87	23.93	23.68
					18	20	22.92	22.95	22.73
					36	0	22.95	22.92	22.72
				16QAM	1	1	22.93	22.88	22.80
				64QAM	1	1	21.34	21.41	21.32
				256QAM	1	1	19.29	19.19	19.08
				CP OFDM	QPSK	1	1	22.28	22.25

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	20	DFT-s OFDM	30	PI/2 BPSK	1	1	23.95	23.91	23.74
					1	26	23.83	23.79	23.65
					1	49	24.01	23.81	23.64
					25	0	23.55	23.41	23.25
					25	13	23.85	23.86	23.68
					25	26	23.45	23.41	23.14
					50	0	23.47	23.34	23.11
				QPSK	1	1	23.97	23.96	23.73
					1	26	23.85	23.87	23.62
					1	49	24.03	23.88	23.63
					25	0	22.98	22.95	22.77
					25	13	23.92	23.92	23.61
					25	26	22.93	22.96	22.60
					50	0	23.02	22.91	22.66
				16QAM	1	1	23.02	22.98	22.89
				64QAM	1	1	21.36	21.44	21.36
				256QAM	1	1	19.40	19.36	19.22
				CP OFDM	QPSK	1	1	22.32	22.33
	30	DFT-s OFDM		PI/2 BPSK	1	1	23.85	23.90	23.89
					1	39	23.74	23.82	23.72
					1	76	23.99	23.78	23.81
					36	0	23.45	23.39	23.40
					36	21	23.88	23.88	23.78
					36	42	23.39	23.38	23.37
					75	0	23.49	23.42	23.40
				QPSK	1	1	23.87	23.94	23.91
					1	39	23.73	23.82	23.80
					1	76	24.00	23.84	23.83
					36	0	22.79	22.92	22.88
					36	21	23.78	23.94	23.85
					36	42	22.86	22.95	22.85
					75	0	22.93	22.94	22.94
				16QAM	1	1	22.96	22.99	22.95
				64QAM	1	1	21.41	21.50	21.45
				256QAM	1	1	19.30	19.42	19.33
				CP OFDM	QPSK	1	1	22.34	22.46

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	40	DFT-s OFDM	30	PI/2 BPSK	1	1	23.91	23.92	23.80
					1	53	23.80	23.81	23.67
					1	104	23.97	23.82	23.74
					50	0	23.54	23.38	23.31
					50	28	23.95	23.94	23.72
					50	56	23.44	23.42	23.25
					100	0	23.51	23.45	23.29
				QPSK	1	1	23.96	23.98	23.82
					1	53	23.74	23.84	23.67
					1	104	23.98	23.90	23.76
					50	0	22.91	22.94	22.82
					50	28	23.96	23.91	23.75
		50			56	22.96	22.99	22.73	
		100			0	23.02	22.97	22.80	
		16QAM		1	1	23.02	23.03	22.96	
		64QAM		1	1	21.54	21.55	21.53	
		256QAM		1	1	19.47	19.44	19.31	
		CP OFDM		QPSK	1	1	22.48	22.49	22.44
	50	DFT-s OFDM		PI/2 BPSK	1	1	23.66	23.82	23.69
					1	67	23.49	23.65	23.56
					1	131	23.68	23.62	23.52
					64	0	23.26	23.23	23.16
					64	35	23.56	23.69	23.54
					64	69	23.10	23.18	23.01
					128	0	23.10	23.22	23.02
				QPSK	1	1	23.69	23.83	23.66
					1	67	23.39	23.63	23.40
					1	131	23.58	23.56	23.45
					64	0	22.59	22.74	22.64
					64	35	23.52	23.70	23.44
		64			69	22.49	22.69	22.42	
		128			0	22.59	22.67	22.51	
		16QAM		1	1	22.69	22.88	22.70	
		64QAM		1	1	21.20	21.43	21.41	
		256QAM		1	1	19.15	19.33	19.13	
		CP OFDM		QPSK	1	1	22.21	22.40	22.29

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	60	DFT-s OFDM	30	PI/2 BPSK	1	1	23.71	23.79	23.67
					1	81	23.86	23.82	23.64
					1	160	23.69	23.51	23.43
					81	0	23.30	23.33	23.22
					81	41	23.84	23.83	23.69
					81	81	23.23	23.32	23.05
					162	0	23.26	23.31	23.23
				QPSK	1	1	23.70	23.77	23.72
					1	81	23.87	23.68	23.79
					1	160	23.67	23.55	23.45
					81	0	22.73	22.75	22.81
					81	41	23.85	23.79	23.71
		81			81	22.69	22.72	22.54	
		162			0	22.86	22.74	22.79	
		16QAM		1	1	22.73	22.81	22.73	
		64QAM		1	1	21.32	21.41	21.27	
		256QAM		1	1	19.17	19.23	19.18	
		CP OFDM		QPSK	1	1	22.24	22.34	22.22
	70	DFT-s OFDM		PI/2 BPSK	1	1	23.52	23.56	23.62
					1	95	23.40	23.41	23.56
					1	187	23.36	23.20	23.31
					90	0	22.97	23.12	23.15
					90	50	23.46	23.43	23.65
					90	99	22.88	23.01	23.03
					180	0	22.99	23.03	23.11
				QPSK	1	1	23.54	23.63	23.68
					1	95	23.50	23.48	23.65
					1	187	23.39	23.32	23.32
					90	0	22.59	22.59	22.70
					90	50	23.54	23.49	23.69
		90			99	22.47	22.47	22.52	
		180			0	22.56	22.51	22.73	
		16QAM		1	1	22.59	22.64	22.68	
		64QAM		1	1	21.01	21.14	21.13	
		256QAM		1	1	19.00	19.18	19.08	
		CP OFDM		QPSK	1	1	22.13	22.27	22.10

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	80	DFT-s OFDM	30	PI/2 BPSK	1	1	23.56	23.55	23.60
					1	109	23.52	23.42	23.53
					1	215	23.43	23.37	23.31
					108	0	23.24	23.19	23.03
					108	55	23.64	23.58	23.62
					108	109	23.20	22.98	22.91
					216	0	23.10	23.07	23.06
				QPSK	1	1	23.59	23.61	23.59
					1	109	23.58	23.54	23.54
					1	215	23.46	23.44	23.34
					108	0	22.72	22.74	22.61
					108	55	23.61	23.61	23.68
		108			109	22.67	22.57	22.51	
		216			0	22.68	22.63	22.61	
		16QAM		1	1	22.54	22.67	22.60	
		64QAM		1	1	20.99	21.18	21.25	
		256QAM		1	1	18.96	19.17	19.07	
		CP OFDM		QPSK	1	1	22.04	22.26	22.21
	90	DFT-s OFDM		PI/2 BPSK	1	1	23.56	23.54	23.52
					1	123	23.41	23.47	23.58
					1	243	23.47	23.38	23.35
					120	0	23.10	23.14	23.26
					120	63	23.53	23.63	23.65
					120	125	22.96	23.03	23.09
					243	0	23.05	22.99	23.13
				QPSK	1	1	23.57	23.59	23.55
					1	123	23.44	23.49	23.54
					1	243	23.46	23.42	23.37
					120	0	22.72	22.68	22.73
					120	63	23.51	23.57	23.66
					120	125	22.51	22.57	22.62
					243	0	22.55	22.57	22.65
				16QAM	1	1	22.61	22.63	22.63
				64QAM	1	1	21.08	21.14	21.12
				256QAM	1	1	18.93	19.14	19.08
		CP OFDM		QPSK	1	1	21.96	22.15	22.07

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	100	DFT-s OFDM	30	PI/2 BPSK	1	1	-	23.49	-
					1	137	-	23.38	-
					1	271	-	23.36	-
					135	0	-	23.07	-
					135	69	-	23.55	-
					135	138	-	23.02	-
					270	0	-	23.04	-
				QPSK	1	1	-	23.51	-
					1	137	-	23.48	-
					1	271	-	23.38	-
					135	0	-	22.66	-
					135	69	-	23.56	-
					135	138	-	22.52	-
					270	0	-	22.52	-
				16QAM	1	1	-	22.55	-
				64QAM	1	1	-	21.10	-
				256QAM	1	1	-	18.95	-
		CP OFDM		QPSK	1	1	-	22.11	-

5G NR n77 Upper (PC3)

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	10	DFT-s OFDM	30	PI/2 BPSK	1	1	24.49	24.29	24.34
					1	12	24.46	24.34	24.41
					1	22	24.14	24.30	24.16
					12	0	23.96	23.81	23.84
					12	6	24.34	24.27	24.27
					12	12	23.82	23.79	23.82
					24	0	23.99	23.82	23.88
				QPSK	1	1	24.51	24.24	24.34
					1	12	24.54	24.30	24.41
					1	22	24.26	24.28	24.21
					12	0	23.66	23.38	23.41
					12	6	24.63	24.33	24.47
		12			12	23.53	23.33	23.36	
		24			0	23.55	23.33	23.36	
		16QAM		1	1	23.57	23.44	23.41	
		64QAM		1	1	22.07	21.98	21.95	
		256QAM		1	1	20.19	19.85	19.85	
		CP OFDM		QPSK	1	1	23.21	23.02	23.00
	15	DFT-s OFDM		PI/2 BPSK	1	1	24.68	24.45	24.79
					1	19	24.69	24.36	24.80
					1	36	24.68	24.51	24.81
					18	0	24.14	23.97	24.34
					18	10	24.72	24.47	24.79
					18	20	24.22	23.98	24.35
					36	0	24.16	24.01	24.33
				QPSK	1	1	24.70	24.42	24.82
					1	19	24.64	24.28	24.74
					1	36	24.62	24.43	24.79
					18	0	23.69	23.41	23.87
					18	10	24.73	24.38	24.80
					18	20	23.69	23.42	23.79
					36	0	23.66	23.46	23.85
				16QAM	1	1	23.69	23.58	23.89
				64QAM	1	1	22.30	22.02	22.32
				256QAM	1	1	20.20	19.82	20.29
		CP OFDM		QPSK	1	1	23.16	22.95	23.31

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	20	DFT-s OFDM	30	PI/2 BPSK	1	1	24.76	24.37	24.79
					1	26	24.52	24.23	24.72
					1	49	24.61	24.51	24.83
					25	0	24.28	23.84	24.31
					25	13	24.72	24.40	24.78
					25	26	24.12	23.83	24.32
					50	0	24.21	23.75	24.27
				QPSK	1	1	24.78	24.39	24.79
					1	26	24.63	24.37	24.74
					1	49	24.68	24.64	24.84
					25	0	23.87	23.44	23.83
					25	13	24.73	24.34	24.80
		25			26	23.72	23.47	23.77	
		50			0	23.81	23.48	23.83	
		16QAM		1	1	23.81	23.46	23.84	
		64QAM		1	1	22.23	22.02	22.28	
		256QAM		1	1	20.23	19.74	20.14	
		CP OFDM		QPSK	1	1	23.17	22.81	23.20
	30	DFT-s OFDM		PI/2 BPSK	1	1	24.69	24.42	24.95
					1	39	24.53	24.30	24.90
					1	76	24.38	24.38	24.83
					36	0	24.21	23.95	24.49
					36	21	24.61	24.43	24.87
					36	42	24.07	23.86	24.47
					75	0	24.08	23.84	24.47
				QPSK	1	1	24.71	24.43	24.96
					1	39	24.61	24.35	24.84
					1	76	24.51	24.47	24.81
					36	0	23.75	23.37	23.85
					36	21	24.66	24.37	24.90
		36			42	23.67	23.39	23.86	
		75			0	23.67	23.41	23.93	
		16QAM		1	1	23.80	23.53	23.96	
		64QAM		1	1	22.21	22.07	22.46	
		256QAM		1	1	20.30	19.85	20.44	
		CP OFDM		QPSK	1	1	23.28	22.92	23.49

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	40	DFT-s OFDM	30	PI/2 BPSK	1	1	24.92	24.53	24.92
					1	53	24.69	24.43	24.84
					1	104	24.67	24.63	24.93
					50	0	24.43	24.07	24.43
					50	28	24.81	24.60	24.80
					50	56	24.30	24.05	24.45
					100	0	24.34	24.01	24.44
				QPSK	1	1	24.94	24.52	24.89
					1	53	24.77	24.42	24.77
					1	104	24.83	24.67	24.84
					50	0	23.91	23.46	23.86
					50	28	24.84	24.40	24.79
		50			56	23.82	23.49	23.85	
		100			0	23.88	23.46	23.78	
		16QAM		1	1	23.99	23.63	23.99	
		64QAM		1	1	22.48	22.18	22.49	
		256QAM		1	1	20.49	19.99	20.39	
		CP OFDM		QPSK	1	1	23.49	23.13	23.48
	50	DFT-s OFDM		PI/2 BPSK	1	1	24.49	24.23	24.70
					1	67	24.22	24.30	24.72
					1	131	24.16	24.48	24.56
					64	0	23.92	23.84	24.39
					64	35	24.12	24.35	24.74
					64	69	23.69	23.93	24.10
					128	0	23.73	23.88	24.29
				QPSK	1	1	24.45	24.18	24.68
					1	67	24.19	24.32	24.73
					1	131	24.05	24.43	24.47
					64	0	23.39	23.39	23.81
					64	35	24.18	24.37	24.75
					64	69	23.10	23.39	23.46
					128	0	23.36	23.40	23.62
				16QAM	1	1	23.59	23.38	23.78
				64QAM	1	1	22.21	21.90	22.40
				256QAM	1	1	20.01	19.73	20.10
		CP OFDM		QPSK	1	1	22.96	22.90	23.25

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	60	DFT-s OFDM	30	PI/2 BPSK	1	1	24.56	24.17	24.37
					1	81	24.35	24.35	24.43
					1	160	24.24	24.46	24.29
					81	0	23.95	23.69	24.01
					81	41	24.34	24.42	24.54
					81	81	23.80	23.95	23.96
					162	0	23.94	23.87	23.97
				QPSK	1	1	24.58	24.18	24.39
					1	81	24.30	24.27	24.37
					1	160	24.16	24.44	24.10
					81	0	23.41	23.21	23.39
					81	41	24.38	24.43	24.55
		81			81	23.28	23.51	23.26	
		162			0	23.48	23.40	23.38	
		16QAM		1	1	23.61	23.26	23.70	
		64QAM		1	1	22.22	21.85	22.18	
		256QAM		1	1	20.01	19.66	19.97	
		CP OFDM		QPSK	1	1	22.98	22.77	23.07
	70	DFT-s OFDM		PI/2 BPSK	1	1	24.38	24.11	24.33
					1	95	24.09	24.22	24.33
					1	187	24.04	24.28	24.39
					90	0	23.73	23.71	23.92
					90	50	24.15	24.29	24.38
					90	99	23.66	23.87	23.92
					180	0	23.67	23.74	23.88
				QPSK	1	1	24.42	24.06	24.31
					1	95	24.20	24.16	24.29
					1	187	24.13	24.30	24.34
					90	0	23.34	23.17	23.36
					90	50	24.22	24.28	24.39
		90			99	23.28	23.25	23.46	
		180			0	23.23	23.26	23.34	
		16QAM		1	1	23.56	23.30	23.51	
		64QAM		1	1	22.08	21.86	22.09	
		256QAM		1	1	20.05	19.57	19.97	
		CP OFDM		QPSK	1	1	23.04	22.71	23.12

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	80	DFT-s OFDM	30	PI/2 BPSK	1	1	24.50	24.05	24.33
					1	109	24.38	24.23	24.31
					1	215	24.09	24.36	24.27
					108	0	24.00	23.70	23.86
					108	55	24.46	24.25	24.26
					108	109	23.84	23.80	23.93
					216	0	23.99	23.82	23.87
				QPSK	1	1	24.51	24.06	24.35
					1	109	24.40	24.18	24.36
					1	215	24.09	24.31	24.31
					108	0	23.45	23.15	23.44
					108	55	24.48	24.30	24.42
					108	109	23.31	23.31	23.43
					216	0	23.37	23.40	23.46
				16QAM	1	1	23.68	23.22	23.47
				64QAM	1	1	22.18	21.72	21.93
				256QAM	1	1	20.05	19.51	19.86
				CP OFDM	QPSK	1	1	23.13	22.68
	90	DFT-s OFDM		PI/2 BPSK	1	1	24.48	24.06	24.38
					1	123	24.24	24.27	24.47
					1	243	24.18	24.45	24.33
					120	0	23.86	23.64	24.00
					120	63	24.20	24.30	24.50
					120	125	23.70	23.78	23.89
					243	0	23.77	23.81	23.98
				QPSK	1	1	24.43	24.04	24.41
					1	123	24.20	24.18	24.45
					1	243	24.15	24.50	24.28
					120	0	23.27	23.14	23.51
					120	63	24.23	24.26	24.51
					120	125	23.16	23.32	23.31
					243	0	23.35	23.26	23.45
				16QAM	1	1	23.54	23.05	23.63
				64QAM	1	1	22.07	21.52	22.12
				256QAM	1	1	20.02	19.56	20.00
				CP OFDM	QPSK	1	1	22.98	22.58

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n77	100	DFT-s OFDM	30	PI/2 BPSK	1	1	24.38	24.05	24.21
					1	137	24.23	24.23	24.39
					1	271	24.19	24.51	24.44
					135	0	23.90	23.60	23.93
					135	69	24.31	24.32	24.43
					135	138	23.66	23.79	23.89
					270	0	23.82	23.78	23.90
				QPSK	1	1	24.45	24.05	24.23
					1	137	24.25	24.22	24.46
					1	271	24.22	24.53	24.51
					135	0	23.41	23.13	23.50
					135	69	24.38	24.28	24.45
					135	138	23.21	23.36	23.37
					270	0	23.32	23.26	23.42
				16QAM	1	1	23.58	23.10	23.47
				64QAM	1	1	22.04	21.61	21.84
				256QAM	1	1	20.03	19.51	19.62
		CP OFDM		QPSK	1	1	23.04	22.62	22.82

5G NR n78 Lower (PC2)

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n78	10	DFT-s OFDM	30	PI/2 BPSK	1	1	24.51	24.60	24.51
					1	12	24.49	24.56	24.41
					1	22	24.65	24.59	24.45
					12	0	24.07	24.18	23.98
					12	6	24.60	24.68	24.50
					12	12	24.13	24.24	23.97
					24	0	24.15	24.16	23.97
				QPSK	1	1	24.57	24.63	24.48
					1	12	24.49	24.59	24.40
					1	22	24.58	24.66	24.45
					12	0	23.62	23.70	23.58
					12	6	24.61	24.73	24.54
		12			12	23.61	23.70	23.48	
		24			0	23.62	23.69	23.48	
		16QAM		1	1	23.65	23.71	23.53	
		64QAM		1	1	22.05	22.33	22.06	
		256QAM		1	1	20.04	20.14	19.99	
		CP OFDM		QPSK	1	1	23.06	23.14	22.96
	15	DFT-s OFDM		PI/2 BPSK	1	1	24.75	24.79	24.64
					1	19	24.80	24.82	24.65
					1	36	24.82	24.89	24.66
					18	0	24.35	24.37	24.15
					18	10	24.85	24.84	24.63
					18	20	24.38	24.38	24.15
					36	0	24.38	24.42	24.15
				QPSK	1	1	24.71	24.80	24.71
					1	19	24.68	24.80	24.68
					1	36	24.82	24.90	24.79
					18	0	23.77	23.88	23.76
					18	10	24.77	24.87	24.73
					18	20	23.82	23.91	23.77
					36	0	23.78	23.83	23.75
				16QAM	1	1	23.85	23.94	23.82
				64QAM	1	1	22.26	22.52	22.32
				256QAM	1	1	20.22	20.27	20.14
		CP OFDM		QPSK	1	1	23.20	23.31	23.20

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n78	20	DFT-s OFDM	30	PI/2 BPSK	1	1	24.88	24.80	24.75
					1	26	24.74	24.72	24.61
					1	49	24.91	24.68	24.63
					25	0	24.50	24.25	24.31
					25	13	24.79	24.74	24.68
					25	26	24.41	24.30	24.16
					50	0	24.39	24.21	24.12
				QPSK	1	1	24.89	24.83	24.70
					1	26	24.79	24.73	24.55
					1	49	24.96	24.73	24.63
					25	0	23.90	23.80	23.70
					25	13	24.85	24.81	24.60
					25	26	23.87	23.85	23.59
					50	0	23.96	23.79	23.67
				16QAM	1	1	24.08	23.99	23.81
				64QAM	1	1	22.48	22.39	22.33
				256QAM	1	1	20.47	20.37	20.16
		CP OFDM		QPSK	1	1	23.38	23.35	23.18
	30	DFT-s OFDM		PI/2 BPSK	1	1	24.84	24.89	24.84
					1	39	24.76	24.83	24.64
					1	76	24.97	24.80	24.71
					36	0	24.45	24.38	24.35
					36	21	24.77	24.86	24.76
					36	42	24.35	24.38	24.28
					75	0	24.45	24.41	24.31
				QPSK	1	1	24.86	24.85	24.85
					1	39	24.65	24.71	24.74
					1	76	24.98	24.75	24.78
					36	0	23.77	23.87	23.78
					36	21	24.77	24.87	24.77
					36	42	23.82	23.91	23.77
					75	0	23.89	23.85	23.82
				16QAM	1	1	23.96	23.96	23.90
				64QAM	1	1	22.46	22.47	22.43
				256QAM	1	1	20.38	20.34	20.34
		CP OFDM		QPSK	1	1	23.38	23.46	23.42

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n78	40	DFT-s OFDM	30	PI/2 BPSK	1	1	24.99	24.96	24.90
					1	53	24.87	24.87	24.80
					1	104	24.95	24.88	24.86
					50	0	24.58	24.45	24.41
					50	28	25.00	24.93	24.84
					50	56	24.55	24.46	24.34
					100	0	24.63	24.51	24.35
				QPSK	1	1	24.94	24.97	24.92
					1	53	24.71	24.83	24.72
					1	104	25.00	24.87	24.90
					50	0	23.90	23.90	23.89
					50	28	25.01	24.93	24.84
		50			56	23.93	23.96	23.82	
		100			0	23.99	23.92	23.89	
		16QAM		1	1	24.04	24.07	24.03	
		64QAM		1	1	22.50	22.59	22.63	
		256QAM		1	1	20.50	20.51	20.41	
		CP OFDM		QPSK	1	1	23.49	23.53	23.53
	50	DFT-s OFDM		PI/2 BPSK	1	1	24.51	24.65	24.49
					1	67	24.39	24.49	24.36
					1	131	24.50	24.47	24.27
					64	0	24.07	24.06	23.93
					64	35	24.42	24.44	24.32
					64	69	23.97	24.05	23.83
					128	0	23.93	24.07	23.85
				QPSK	1	1	24.56	24.66	24.53
					1	67	24.31	24.44	24.29
					1	131	24.46	24.41	24.36
					64	0	23.46	23.58	23.47
					64	35	24.39	24.49	24.26
					64	69	23.34	23.51	23.28
					128	0	23.46	23.47	23.33
				16QAM	1	1	23.64	23.67	23.56
				64QAM	1	1	22.14	22.25	22.23
				256QAM	1	1	20.09	20.11	19.95
		CP OFDM		QPSK	1	1	23.09	23.25	23.14

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n78	60	DFT-s OFDM	30	PI/2 BPSK	1	1	24.70	24.75	24.67
					1	81	24.81	24.76	24.63
					1	160	24.67	24.48	24.45
					81	0	24.25	24.30	24.25
					81	41	24.81	24.77	24.73
					81	81	24.21	24.26	24.05
					162	0	24.25	24.28	24.23
				QPSK	1	1	24.74	24.75	24.65
					1	81	24.87	24.71	24.72
					1	160	24.68	24.52	24.42
					81	0	23.81	23.73	23.71
					81	41	24.84	24.71	24.63
		81			81	23.73	23.71	23.49	
		162			0	23.90	23.71	23.71	
		16QAM		1	1	23.75	23.88	23.74	
		64QAM		1	1	22.32	22.44	22.35	
		256QAM		1	1	20.21	20.25	20.22	
		CP OFDM		QPSK	1	1	23.26	23.41	23.24
	70	DFT-s OFDM		PI/2 BPSK	1	1	24.54	24.57	24.64
					1	95	24.42	24.45	24.60
					1	187	24.42	24.23	24.38
					90	0	23.99	24.16	24.18
					90	50	24.52	24.45	24.67
					90	99	23.87	23.98	24.02
					180	0	24.03	24.08	24.18
				QPSK	1	1	24.52	24.58	24.67
					1	95	24.52	24.42	24.66
					1	187	24.39	24.29	24.32
					90	0	23.54	23.56	23.71
					90	50	24.56	24.46	24.68
					90	99	23.41	23.44	23.57
					180	0	23.53	23.49	23.71
				16QAM	1	1	23.59	23.49	23.73
				64QAM	1	1	22.06	21.99	22.19
				256QAM	1	1	19.97	20.02	20.15
		CP OFDM		QPSK	1	1	23.14	23.07	23.18

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	80	DFT-s OFDM	30	PI/2 BPSK	1	1	24.57	24.52	24.53
					1	109	24.54	24.41	24.47
					1	215	24.46	24.34	24.21
					108	0	24.23	24.13	23.97
					108	55	24.60	24.56	24.55
					108	109	24.20	23.97	23.84
					216	0	24.15	24.03	23.98
				QPSK	1	1	24.54	24.58	24.54
					1	109	24.55	24.54	24.49
					1	215	24.41	24.38	24.32
					108	0	23.65	23.68	23.60
					108	55	24.62	24.63	24.58
		108			109	23.60	23.58	23.46	
		216			0	23.61	23.62	23.58	
		16QAM		1	1	23.74	23.64	23.54	
		64QAM		1	1	22.16	22.11	22.21	
		256QAM		1	1	20.10	20.06	20.04	
		CP OFDM		QPSK	1	1	23.14	23.22	23.17
	90	DFT-s OFDM		PI/2 BPSK	1	1	24.48	24.43	24.50
					1	123	24.35	24.36	24.50
					1	243	24.36	24.25	24.40
					120	0	24.02	23.99	24.27
					120	63	24.41	24.50	24.64
					120	125	23.86	23.90	24.12
					243	0	23.97	23.87	24.11
				QPSK	1	1	24.51	24.47	24.45
					1	123	24.38	24.38	24.47
					1	243	24.44	24.33	24.23
					120	0	23.66	23.58	23.67
					120	63	24.46	24.49	24.68
					120	125	23.46	23.42	23.52
					243	0	23.51	23.49	23.55
				16QAM	1	1	23.66	23.47	23.59
				64QAM	1	1	22.16	22.01	22.03
				256QAM	1	1	20.02	19.96	20.04
		CP OFDM		QPSK	1	1	23.07	22.97	23.06

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	100	DFT-s OFDM	30	PI/2 BPSK	1	1	-	24.39	-
					1	137	-	24.43	-
					1	271	-	24.29	-
					135	0	-	24.07	-
					135	69	-	24.49	-
					135	138	-	23.94	-
					270	0	-	23.96	-
				QPSK	1	1	-	24.42	-
					1	137	-	24.47	-
					1	271	-	24.28	-
					135	0	-	23.53	-
					135	69	-	24.50	-
					135	138	-	23.43	-
					270	0	-	23.46	-
				16QAM	1	1	-	23.54	-
				64QAM	1	1	-	22.13	-
				256QAM	1	1	-	19.87	-
		CP OFDM		QPSK	1	1	-	22.90	-

5G NR n78 Lower (PC3)

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n78	10	DFT-s OFDM	30	PI/2 BPSK	1	1	23.56	23.58	23.48
					1	12	23.51	23.57	23.40
					1	22	23.68	23.55	23.43
					12	0	23.11	23.14	22.97
					12	6	23.68	23.66	23.45
					12	12	23.19	23.20	22.97
					24	0	23.20	23.14	22.94
				QPSK	1	1	23.52	23.64	23.52
					1	12	23.43	23.58	23.47
					1	22	23.55	23.69	23.49
					12	0	22.59	22.73	22.60
					12	6	23.53	23.74	23.57
					12	12	22.53	22.68	22.54
					24	0	22.56	22.72	22.54
				16QAM	1	1	22.61	22.67	22.57
				64QAM	1	1	21.06	21.30	21.10
				256QAM	1	1	19.01	19.09	19.00
		CP OFDM		QPSK	1	1	22.01	22.06	21.99
	15	DFT-s OFDM		PI/2 BPSK	1	1	23.79	23.84	23.69
					1	19	23.83	23.90	23.67
					1	36	23.93	23.94	23.69
					18	0	23.40	23.40	23.22
					18	10	23.86	23.87	23.66
					18	20	23.39	23.41	23.18
					36	0	23.44	23.47	23.18
				QPSK	1	1	23.79	23.85	23.71
					1	19	23.76	23.84	23.70
					1	36	23.95	23.91	23.76
					18	0	22.83	22.94	22.78
					18	10	23.83	23.91	23.73
					18	20	22.92	22.96	22.75
					36	0	22.86	22.85	22.78
				16QAM	1	1	22.94	22.94	22.83
				64QAM	1	1	21.30	21.49	21.30
				256QAM	1	1	19.26	19.23	19.18
		CP OFDM		QPSK	1	1	22.30	22.28	22.24

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n78	20	DFT-s OFDM	30	PI/2 BPSK	1	1	23.87	23.85	23.68
					1	26	23.73	23.74	23.53
					1	49	23.92	23.72	23.54
					25	0	23.47	23.30	23.21
					25	13	23.78	23.76	23.62
					25	26	23.42	23.32	23.10
					50	0	23.35	23.27	23.05
				QPSK	1	1	23.89	23.86	23.71
					1	26	23.82	23.76	23.59
					1	49	23.93	23.75	23.64
					25	0	22.93	22.82	22.73
					25	13	23.82	23.84	23.60
					25	26	22.85	22.87	22.60
					50	0	22.98	22.81	22.70
				16QAM	1	1	22.94	22.88	22.85
				64QAM	1	1	21.33	21.28	21.32
				256QAM	1	1	19.33	19.25	19.19
				CP OFDM	QPSK	1	1	22.24	22.28
	30	DFT-s OFDM		PI/2 BPSK	1	1	23.83	23.87	23.83
					1	39	23.78	23.78	23.61
					1	76	23.94	23.81	23.73
					36	0	23.45	23.37	23.31
					36	21	23.88	23.84	23.78
					36	42	23.35	23.37	23.29
					75	0	23.42	23.42	23.30
				QPSK	1	1	23.81	23.89	23.83
					1	39	23.58	23.72	23.69
					1	76	23.95	23.80	23.78
					36	0	22.75	22.91	22.74
					36	21	23.72	23.91	23.73
					36	42	22.78	22.94	22.76
					75	0	22.85	22.86	22.80
				16QAM	1	1	22.93	22.93	23.00
				64QAM	1	1	21.39	21.46	21.51
				256QAM	1	1	19.32	19.30	19.44
				CP OFDM	QPSK	1	1	22.33	22.41

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n78	40	DFT-s OFDM	30	PI/2 BPSK	1	1	23.91	23.92	23.85
					1	53	23.80	23.86	23.75
					1	104	23.93	23.81	23.82
					50	0	23.48	23.43	23.35
					50	28	23.91	23.92	23.80
					50	56	23.50	23.44	23.31
					100	0	23.53	23.44	23.31
				QPSK	1	1	23.89	23.94	23.91
					1	53	23.65	23.79	23.72
					1	104	23.94	23.85	23.91
					50	0	22.84	22.84	22.88
					50	28	23.85	23.93	23.83
		50			56	22.91	22.93	22.79	
		100			0	22.91	22.88	22.89	
		16QAM		1	1	23.02	22.99	22.96	
		64QAM		1	1	21.45	21.53	21.57	
		256QAM		1	1	19.45	19.43	19.33	
		CP OFDM		QPSK	1	1	22.45	22.48	22.44
	50	DFT-s OFDM		PI/2 BPSK	1	1	23.48	23.63	23.44
					1	67	23.34	23.44	23.29
					1	131	23.47	23.48	23.23
					64	0	23.07	23.05	22.90
					64	35	23.42	23.51	23.26
					64	69	22.96	23.05	22.76
					128	0	22.88	23.05	22.82
				QPSK	1	1	23.53	23.67	23.49
					1	67	23.25	23.43	23.27
					1	131	23.46	23.44	23.30
					64	0	22.41	22.56	22.40
					64	35	23.33	23.52	23.23
					64	69	22.33	22.50	22.26
					128	0	22.42	22.49	22.32
				16QAM	1	1	22.60	22.74	22.56
				64QAM	1	1	21.04	21.33	21.22
				256QAM	1	1	18.99	19.17	18.92
		CP OFDM		QPSK	1	1	22.01	22.32	22.10

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum Average Power (dBm)		
							Channel		
							Low	Middle	High
5G NR n78	60	DFT-s OFDM	30	PI/2 BPSK	1	1	23.67	23.68	23.58
					1	81	23.75	23.66	23.56
					1	160	23.61	23.42	23.34
					81	0	23.25	23.24	23.15
					81	41	23.73	23.68	23.65
					81	81	23.17	23.16	22.98
					162	0	23.20	23.21	23.11
				QPSK	1	1	23.65	23.67	23.59
					1	81	23.78	23.60	23.67
					1	160	23.61	23.45	23.34
					81	0	22.75	22.62	22.63
					81	41	23.75	23.61	23.57
		81			81	22.63	22.61	22.43	
		162			0	22.81	22.61	22.62	
		16QAM		1	1	22.72	22.76	22.69	
		64QAM		1	1	21.26	21.28	21.34	
		256QAM		1	1	19.18	19.09	19.19	
		CP OFDM		QPSK	1	1	22.23	22.25	22.19
	70	DFT-s OFDM		PI/2 BPSK	1	1	23.50	23.52	23.60
					1	95	23.40	23.41	23.55
					1	187	23.37	23.21	23.35
					90	0	22.98	23.09	23.14
					90	50	23.51	23.38	23.60
					90	99	22.83	22.91	22.96
					180	0	22.99	23.01	23.17
				QPSK	1	1	23.51	23.54	23.63
					1	95	23.54	23.37	23.63
					1	187	23.35	23.24	23.31
					90	0	22.51	22.49	22.70
					90	50	23.58	23.41	23.61
					90	99	22.41	22.40	22.56
					180	0	22.55	22.43	22.70
				16QAM	1	1	22.56	22.64	22.63
				64QAM	1	1	21.01	21.14	21.08
				256QAM	1	1	18.91	19.18	19.06
		CP OFDM		QPSK	1	1	22.08	22.22	22.08

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	80	DFT-s OFDM	30	PI/2 BPSK	1	1	23.51	23.48	23.50
					1	109	23.50	23.39	23.46
					1	215	23.43	23.31	23.21
					108	0	23.19	23.11	22.96
					108	55	23.59	23.50	23.53
					108	109	23.16	22.90	22.83
					216	0	23.12	22.97	22.96
				QPSK	1	1	23.53	23.51	23.48
					1	109	23.52	23.45	23.41
					1	215	23.37	23.31	23.25
					108	0	22.61	22.61	22.57
					108	55	23.64	23.57	23.53
		108			109	22.58	22.51	22.39	
		216			0	22.61	22.58	22.53	
		16QAM		1	1	22.63	22.58	22.57	
		64QAM		1	1	21.02	21.05	21.27	
		256QAM		1	1	19.01	18.97	19.07	
		CP OFDM		QPSK	1	1	22.01	22.15	22.23
	90	DFT-s OFDM		PI/2 BPSK	1	1	23.44	23.47	23.48
					1	123	23.31	23.41	23.50
					1	243	23.35	23.29	23.35
					120	0	22.96	23.01	23.26
					120	63	23.37	23.56	23.60
					120	125	22.84	22.95	23.07
					243	0	22.93	22.93	23.05
				QPSK	1	1	23.51	23.48	23.49
					1	123	23.42	23.40	23.51
					1	243	23.45	23.33	23.25
					120	0	22.64	22.56	22.68
					120	63	23.50	23.50	23.61
					120	125	22.46	22.42	22.59
					243	0	22.51	22.52	22.59
				16QAM	1	1	22.49	22.57	22.53
				64QAM	1	1	21.00	21.13	21.03
				256QAM	1	1	18.86	19.09	18.99
		CP OFDM		QPSK	1	1	21.91	22.08	22.06

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	100	DFT-s OFDM	30	PI/2 BPSK	1	1	-	23.34	-
					1	137	-	23.43	-
					1	271	-	23.28	-
					135	0	-	23.04	-
					135	69	-	23.49	-
					135	138	-	22.95	-
					270	0	-	22.95	-
				QPSK	1	1	-	23.37	-
					1	137	-	23.45	-
					1	271	-	23.34	-
					135	0	-	22.57	-
					135	69	-	23.50	-
					135	138	-	22.44	-
					270	0	-	22.48	-
				16QAM	1	1	-	22.52	-
				64QAM	1	1	-	21.04	-
				256QAM	1	1	-	18.89	-
		CP OFDM		QPSK	1	1	-	21.96	-

5G NR n78 Lower (SRS2)

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	10	DFT-s OFDM	30	PI/2 BPSK	1	1	21.05	21.28	21.46
					1	12	20.99	21.19	21.40
					1	22	21.13	21.33	21.54
					12	0	20.84	21.04	21.25
					12	6	21.08	21.28	21.49
					12	12	20.87	21.07	21.28
					24	0	20.74	20.94	21.15
				QPSK	1	1	21.14	21.35	21.62
					1	12	21.05	21.23	21.53
					1	22	21.19	21.37	21.67
					12	0	20.98	21.16	21.26
					12	6	21.12	21.30	21.54
		12			12	20.87	21.18	21.28	
		24			0	20.67	20.85	21.15	
		16QAM		1	1	20.20	20.38	20.68	
		64QAM		1	1	18.99	19.17	19.47	
		256QAM		1	1	16.97	17.15	17.45	
		CP OFDM		QPSK	1	1	19.58	19.76	20.06
	15	DFT-s OFDM		PI/2 BPSK	1	1	21.06	21.25	21.44
					1	19	21.04	21.20	21.42
					1	36	21.19	21.35	21.57
					18	0	20.86	21.02	21.24
					18	10	21.11	21.27	21.49
					18	20	20.91	21.07	21.29
					36	0	20.79	20.95	21.17
				QPSK	1	1	21.16	21.19	21.60
					1	19	21.11	21.11	21.55
					1	36	21.25	21.25	21.69
					18	0	21.02	21.02	21.26
					18	10	21.26	21.26	21.50
					18	20	21.06	21.06	21.24
					36	0	20.76	20.76	21.20
				16QAM	1	1	20.34	20.34	20.78
				64QAM	1	1	19.21	19.21	19.65
				256QAM	1	1	17.11	17.11	17.55
		CP OFDM		QPSK	1	1	19.88	19.88	20.32

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	20	DFT-s OFDM	30	PI/2 BPSK	1	1	21.03	21.17	21.35
					1	26	21.10	21.21	21.42
					1	49	21.19	21.30	21.45
					25	0	20.96	21.07	21.28
					25	13	21.15	21.26	21.47
					25	26	20.93	21.04	21.25
					50	0	20.92	21.03	21.24
				QPSK	1	1	21.07	21.15	21.35
					1	26	21.11	21.16	21.39
					1	49	21.20	21.25	21.48
					25	0	21.02	21.07	21.30
					25	13	21.21	21.26	21.49
					25	26	20.98	21.03	21.26
					50	0	20.88	20.93	21.16
				16QAM	1	1	20.20	20.25	20.48
				64QAM	1	1	19.17	19.22	19.45
				256QAM	1	1	16.85	16.90	17.13
				CP OFDM	QPSK	1	1	19.62	19.67
	30	DFT-s OFDM		PI/2 BPSK	1	1	21.01	21.16	21.30
					1	39	21.10	21.22	21.39
					1	76	21.24	21.36	21.53
					36	0	20.87	20.99	21.16
					36	21	21.08	21.20	21.37
					36	42	20.88	21.00	21.17
					75	0	20.81	20.93	21.10
				QPSK	1	1	21.06	21.26	21.49
					1	39	21.11	21.28	21.54
					1	76	21.25	21.42	21.68
					36	0	20.84	21.01	21.27
					36	21	21.05	21.22	21.48
					36	42	20.85	21.02	21.28
					75	0	20.66	20.83	21.09
				16QAM	1	1	19.93	20.10	20.36
				64QAM	1	1	19.02	19.19	19.45
				256QAM	1	1	16.83	17.00	17.26
				CP OFDM	QPSK	1	1	19.61	19.78

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	40	DFT-s OFDM	30	PI/2 BPSK	1	1	21.00	21.06	21.17
					1	53	21.15	21.18	21.32
					1	104	21.32	21.35	21.49
					50	0	21.03	21.06	21.20
					50	28	21.25	21.28	21.30
					50	56	21.08	21.11	21.25
					100	0	21.00	21.03	21.17
				QPSK	1	1	20.98	21.20	21.26
					1	53	21.09	21.28	21.37
					1	104	21.24	21.43	21.52
					50	0	20.88	21.07	21.16
					50	28	21.09	21.28	21.37
		50			56	20.92	21.11	21.20	
		100			0	20.75	20.94	21.03	
		16QAM		1	1	20.10	20.29	20.38	
		64QAM		1	1	18.87	19.06	19.15	
		256QAM		1	1	16.48	16.67	16.76	
		CP OFDM		QPSK	1	1	19.52	19.71	19.80
	50	DFT-s OFDM		PI/2 BPSK	1	1	21.06	21.11	21.13
					1	67	21.25	21.27	21.32
					1	131	21.43	21.45	21.50
					64	0	21.02	21.04	21.09
					64	35	21.27	21.29	21.34
					64	69	21.09	21.11	21.16
					128	0	20.98	21.04	21.02
				QPSK	1	1	21.18	21.15	21.19
					1	67	21.33	21.27	21.34
					1	131	21.50	21.44	21.51
					64	0	21.12	21.06	21.13
					64	35	21.36	21.30	21.37
					64	69	21.19	21.13	21.20
					128	0	20.98	20.92	20.99
				16QAM	1	1	20.24	20.18	20.25
				64QAM	1	1	18.98	18.92	18.99
				256QAM	1	1	16.83	16.77	16.84
		CP OFDM		QPSK	1	1	19.57	19.51	19.58

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	60	DFT-s OFDM	30	PI/2 BPSK	1	1	21.03	21.04	21.12
					1	81	21.26	21.24	21.35
					1	160	21.47	21.45	21.50
					81	0	21.01	20.99	21.10
					81	41	21.28	21.26	21.30
					81	81	21.12	21.10	21.21
					162	0	21.04	21.02	21.13
				QPSK	1	1	21.06	21.08	21.12
					1	81	21.27	21.26	21.33
					1	160	21.48	21.47	21.54
					81	0	21.01	21.00	21.07
					81	41	21.27	21.26	21.33
		81			81	21.11	21.10	21.17	
		162			0	20.83	20.82	20.89	
		16QAM		1	1	20.20	20.19	20.26	
		64QAM		1	1	19.01	19.00	19.07	
		256QAM		1	1	16.76	16.75	16.82	
		CP OFDM		QPSK	1	1	19.47	19.46	19.53
	70	DFT-s OFDM		PI/2 BPSK	1	1	21.02	21.09	21.09
					1	95	21.19	21.23	21.26
					1	187	21.52	21.56	21.59
					90	0	20.91	20.95	20.98
					90	50	21.16	21.20	21.23
					90	99	21.06	21.10	21.13
					180	0	21.00	21.04	21.07
				QPSK	1	1	21.18	21.14	21.13
					1	95	21.31	21.24	21.26
					1	187	21.65	21.58	21.60
					90	0	21.03	20.96	20.98
					90	50	21.28	21.21	21.23
		90			99	21.17	21.10	21.12	
		180			0	20.92	20.85	20.87	
		16QAM		1	1	20.16	20.09	20.11	
		64QAM		1	1	19.18	19.11	19.13	
		256QAM		1	1	17.02	16.95	16.97	
		CP OFDM		QPSK	1	1	19.73	19.66	19.68

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	80	DFT-s OFDM	30	PI/2 BPSK	1	1	21.03	20.97	21.11
					1	109	21.23	21.14	21.31
					1	215	21.58	21.49	21.66
					108	0	21.04	20.95	21.12
					108	55	21.30	21.21	21.38
					108	109	21.21	21.12	21.29
					216	0	21.13	21.14	21.21
				QPSK	1	1	21.11	21.04	21.23
					1	109	21.22	21.12	21.34
					1	215	21.57	21.47	21.69
					108	0	21.05	20.95	21.17
					108	55	21.31	21.21	21.43
					108	109	21.22	21.12	21.34
					216	0	21.06	20.96	21.18
				16QAM	1	1	20.28	20.18	20.40
				64QAM	1	1	19.25	19.15	19.37
				256QAM	1	1	17.04	16.94	17.16
		CP OFDM		QPSK	1	1	19.78	19.68	19.90
	90	DFT-s OFDM	30	PI/2 BPSK	1	1	21.16	21.14	21.08
					1	123	21.29	21.27	21.24
					1	243	21.65	21.68	21.63
					120	0	21.06	21.07	21.08
					120	63	21.32	21.33	21.30
					120	125	21.26	21.26	21.28
					243	0	21.12	21.12	21.14
				QPSK	1	1	21.12	20.99	21.08
					1	123	21.28	21.16	21.26
					1	243	21.70	21.57	21.66
					120	0	20.85	20.85	20.86
					120	63	21.30	21.31	21.34
					120	125	21.14	21.13	21.15
					243	0	20.92	20.91	20.93
				16QAM	1	1	20.27	20.26	20.31
				64QAM	1	1	18.99	19.00	19.08
				256QAM	1	1	17.11	16.89	17.03
		CP OFDM		QPSK	1	1	19.50	19.58	19.55

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	100	DFT-s OFDM	30	PI/2 BPSK	1	1	-	21.05	-
					1	137	-	21.26	-
					1	271	-	21.60	-
					135	0	-	21.08	-
					135	69	-	21.32	-
					135	138	-	21.21	-
					270	0	-	21.13	-
				QPSK	1	1	-	21.00	-
					1	137	-	21.20	-
					1	271	-	21.62	-
					135	0	-	21.05	-
					135	69	-	21.34	-
					135	138	-	21.30	-
					270	0	-	20.91	-
				16QAM	1	1	-	20.07	-
				64QAM	1	1	-	18.85	-
				256QAM	1	1	-	16.86	-
		CP OFDM		QPSK	1	1	-	19.57	-

5G NR n78 Lower (SRS3)

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	10	DFT-s OFDM	30	PI/2 BPSK	1	1	18.90	18.90	18.87
					1	12	18.56	18.56	18.54
					1	22	18.91	18.89	18.90
					12	0	18.26	18.24	18.22
					12	6	18.63	18.62	18.60
					12	12	18.26	18.28	18.26
					24	0	18.21	18.22	18.19
				QPSK	1	1	18.89	18.89	18.86
					1	12	18.50	18.55	18.52
					1	22	18.85	18.92	18.87
					12	0	17.71	17.70	17.67
					12	6	18.69	18.68	18.65
		12			12	17.72	17.72	17.69	
		24			0	17.73	17.73	17.68	
		16QAM		1	1	17.88	17.87	17.89	
		64QAM		1	1	16.23	16.56	16.73	
		256QAM		1	1	14.44	14.40	14.45	
		CP OFDM		QPSK	1	1	17.24	17.27	17.27
	15	DFT-s OFDM		PI/2 BPSK	1	1	18.93	18.69	18.76
					1	19	18.72	18.45	18.55
					1	36	19.04	18.77	18.87
					18	0	18.50	18.23	18.33
					18	10	18.78	18.61	18.71
					18	20	18.53	18.26	18.36
					36	0	18.46	18.19	18.29
				QPSK	1	1	18.97	18.86	18.88
					1	19	18.73	18.59	18.64
					1	36	19.05	18.89	18.94
					18	0	17.81	17.67	17.72
					18	10	18.79	18.65	18.70
		18			20	17.84	17.70	17.75	
		36			0	17.82	17.68	17.73	
		16QAM		1	1	17.57	17.43	17.48	
		64QAM		1	1	16.45	16.31	16.36	
		256QAM		1	1	14.55	14.41	14.46	
		CP OFDM		QPSK	1	1	17.42	17.28	17.33

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	20	DFT-s OFDM	30	PI/2 BPSK	1	1	18.70	18.54	18.60
					1	26	18.71	18.52	18.61
					1	49	18.81	18.62	18.71
					25	0	18.30	18.11	18.20
					25	13	18.70	18.56	18.65
					25	26	18.32	18.13	18.22
					50	0	18.31	18.12	18.21
				QPSK	1	1	18.77	18.60	18.61
					1	26	18.75	18.55	18.59
					1	49	18.85	18.65	18.69
					25	0	17.63	17.53	17.57
					25	13	18.71	18.61	18.65
		25			26	17.67	17.57	17.61	
		50			0	17.71	17.61	17.65	
		16QAM		1	1	17.84	17.74	17.78	
		64QAM		1	1	16.12	16.02	16.06	
		256QAM		1	1	14.29	14.19	14.23	
		CP OFDM		QPSK	1	1	16.93	16.83	16.87
	30	DFT-s OFDM		PI/2 BPSK	1	1	18.72	18.59	18.78
					1	39	18.70	18.54	18.76
					1	76	18.88	18.72	18.90
					36	0	18.22	18.06	18.28
					36	21	18.57	18.41	18.63
					36	42	18.29	18.13	18.35
					75	0	18.26	18.10	18.32
				QPSK	1	1	18.68	18.68	18.80
					1	39	18.64	18.61	18.76
					1	76	18.82	18.79	18.94
					36	0	17.52	17.49	17.64
					36	21	18.49	18.46	18.65
		36			42	17.59	17.56	17.71	
		75			0	17.60	17.57	17.72	
		16QAM		1	1	17.70	17.67	17.82	
		64QAM		1	1	16.55	16.52	16.67	
		256QAM		1	1	14.10	14.07	14.22	
		CP OFDM		QPSK	1	1	16.96	16.93	17.08

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	40	DFT-s OFDM	30	PI/2 BPSK	1	1	18.65	18.49	18.64
					1	53	18.74	18.55	18.73
					1	104	18.85	18.66	18.84
					50	0	18.27	18.08	18.26
					50	28	18.78	18.59	18.77
					50	56	18.37	18.18	18.36
					100	0	18.31	18.12	18.30
				QPSK	1	1	18.69	18.46	18.67
					1	53	18.76	18.50	18.74
					1	104	18.87	18.61	18.85
					50	0	17.80	17.54	17.78
					50	28	18.79	18.53	18.77
					50	56	17.90	17.64	17.88
					100	0	17.87	17.61	17.85
				16QAM	1	1	17.61	17.35	17.59
				64QAM	1	1	16.25	15.99	16.23
				256QAM	1	1	14.30	14.04	14.28
		CP OFDM		QPSK	1	1	17.12	16.86	17.10
	50	DFT-s OFDM	30	PI/2 BPSK	1	1	18.59	18.43	18.48
					1	67	18.73	18.54	18.62
					1	131	18.80	18.63	18.71
					64	0	18.18	17.99	18.07
					64	35	18.62	18.43	18.51
					64	69	18.29	18.10	18.18
					128	0	18.22	18.03	18.11
				QPSK	1	1	18.64	18.50	18.54
					1	67	18.73	18.56	18.63
					1	131	18.81	18.64	18.71
					64	0	17.63	17.46	17.53
					64	35	18.65	18.48	18.55
					64	69	17.74	17.57	17.64
					128	0	17.71	17.54	17.61
				16QAM	1	1	17.31	17.14	17.21
				64QAM	1	1	16.54	16.37	16.44
				256QAM	1	1	13.78	13.61	13.68
		CP OFDM		QPSK	1	1	17.00	16.83	16.90

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	60	DFT-s OFDM	30	PI/2 BPSK	1	1	18.45	18.26	18.47
					1	81	18.55	18.43	18.67
					1	160	18.64	18.52	18.69
					81	0	18.10	17.88	18.12
					81	41	18.53	18.31	18.55
					81	81	18.23	18.01	18.25
					162	0	18.15	17.93	18.17
				QPSK	1	1	18.44	18.21	18.43
					1	81	18.61	18.35	18.60
					1	160	18.70	18.44	18.69
					81	0	17.59	17.33	17.58
					81	41	18.64	18.38	18.63
					81	81	17.71	17.45	17.70
					162	0	17.68	17.42	17.67
				16QAM	1	1	17.64	17.38	17.63
				64QAM	1	1	15.78	15.52	15.77
				256QAM	1	1	14.15	13.89	14.14
				CP OFDM	QPSK	1	1	16.89	16.63
	70	DFT-s OFDM		PI/2 BPSK	1	1	18.70	18.50	18.69
					1	95	18.67	18.44	18.66
					1	187	18.92	18.79	18.91
					90	0	18.24	18.01	18.23
					90	50	18.61	18.48	18.60
					90	99	18.40	18.17	18.39
					180	0	18.30	18.07	18.29
				QPSK	1	1	18.69	18.56	18.70
					1	95	18.63	18.47	18.64
					1	187	18.96	18.80	18.97
					90	0	17.64	17.48	17.65
					90	50	18.61	18.45	18.62
					90	99	17.77	17.61	17.78
					180	0	17.72	17.56	17.73
				16QAM	1	1	17.51	17.35	17.52
				64QAM	1	1	16.29	16.13	16.30
				256QAM	1	1	13.97	13.81	13.98
				CP OFDM	QPSK	1	1	17.07	16.91

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	80	DFT-s OFDM	30	PI/2 BPSK	1	1	18.64	18.59	18.74
					1	109	18.65	18.57	18.75
					1	215	18.96	18.88	19.06
					108	0	18.14	18.06	18.24
					108	55	18.64	18.56	18.74
					108	109	18.30	18.22	18.40
					216	0	18.21	18.13	18.31
				QPSK	1	1	18.61	18.55	18.80
					1	109	18.64	18.55	18.83
					1	215	18.95	18.86	19.14
					108	0	17.66	17.57	17.85
					108	55	18.65	18.56	18.84
					108	109	17.84	17.75	18.03
					216	0	17.80	17.71	17.99
				16QAM	1	1	17.48	17.39	17.67
				64QAM	1	1	16.03	15.94	16.22
				256QAM	1	1	13.89	13.80	14.08
				CP OFDM	QPSK	1	1	17.00	16.91
	90	DFT-s OFDM		PI/2 BPSK	1	1	18.72	18.81	18.66
					1	123	18.67	18.75	18.59
					1	243	19.05	19.13	18.96
					120	0	18.19	18.28	18.12
					120	63	18.63	18.71	18.55
					120	125	18.38	18.46	18.30
					243	0	18.25	18.34	18.19
				QPSK	1	1	18.71	18.78	18.68
					1	123	18.68	18.74	18.64
					1	243	19.09	19.15	19.03
					120	0	17.65	17.75	17.61
					120	63	18.63	18.74	18.59
					120	125	17.85	17.94	17.79
					243	0	17.72	17.83	17.70
				16QAM	1	1	17.46	17.68	17.71
				64QAM	1	1	16.08	16.32	16.40
				256QAM	1	1	14.16	14.24	14.09
				CP OFDM	QPSK	1	1	16.95	17.08

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	100	DFT-s OFDM	30	PI/2 BPSK	1	1	-	18.69	-
					1	137	-	18.76	-
					1	271	-	19.14	-
					135	0	-	18.36	-
					135	69	-	18.86	-
					135	138	-	18.62	-
					270	0	-	18.47	-
				QPSK	1	1	-	18.73	-
					1	137	-	18.79	-
					1	271	-	19.17	-
					135	0	-	17.82	-
					135	69	-	18.90	-
					135	138	-	18.05	-
					270	0	-	17.95	-
				16QAM	1	1	-	17.51	-
				64QAM	1	1	-	16.23	-
				256QAM	1	1	-	14.27	-
		CP OFDM		QPSK	1	1	-	17.04	-

5G NR n78 Lower (SRS4)

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	10	DFT-s OFDM	30	PI/2 BPSK	1	1	19.83	19.69	19.51
					1	12	19.55	19.36	19.21
					1	22	19.80	19.71	19.56
					12	0	19.26	19.07	18.92
					12	6	19.56	19.37	19.22
					12	12	19.26	19.07	18.92
					24	0	19.19	19.00	18.85
				QPSK	1	1	19.80	19.61	19.40
					1	12	19.48	19.26	19.08
					1	22	19.85	19.58	19.40
					12	0	18.66	18.44	18.26
					12	6	19.59	19.37	19.19
		12			12	18.66	18.44	18.26	
		24			0	18.74	18.52	18.34	
		16QAM		1	1	18.88	18.56	18.57	
		64QAM		1	1	17.47	17.31	17.14	
		256QAM		1	1	15.32	15.10	15.01	
		CP OFDM		QPSK	1	1	18.27	18.06	17.88
	15	DFT-s OFDM		PI/2 BPSK	1	1	19.78	19.59	19.40
					1	19	19.55	19.33	19.17
					1	36	19.84	19.61	19.45
					18	0	19.27	19.05	18.89
					18	10	19.63	19.41	19.25
					18	20	19.29	19.07	18.91
					36	0	19.22	19.00	18.84
				QPSK	1	1	19.86	19.58	19.32
					1	19	19.61	19.30	19.07
					1	36	19.88	19.57	19.34
					18	0	18.75	18.44	18.21
					18	10	19.67	19.36	19.13
					18	20	18.76	18.45	18.22
					36	0	18.82	18.51	18.28
				16QAM	1	1	18.82	18.75	18.52
				64QAM	1	1	17.49	17.32	17.09
				256QAM	1	1	15.09	15.19	14.96
		CP OFDM		QPSK	1	1	18.20	18.06	17.83

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	20	DFT-s OFDM	30	PI/2 BPSK	1	1	19.55	19.38	19.27
					1	26	19.54	19.34	19.26
					1	49	19.60	19.43	19.35
					25	0	19.15	18.95	18.87
					25	13	19.53	19.33	19.25
					25	26	19.16	18.96	18.88
					50	0	19.16	18.96	18.88
				QPSK	1	1	19.56	19.33	19.19
					1	26	19.53	19.27	19.16
					1	49	19.61	19.35	19.24
					25	0	18.55	18.29	18.18
					25	13	19.57	19.31	19.20
		25			26	18.56	18.30	18.19	
		50			0	18.72	18.46	18.35	
		16QAM		1	1	18.48	18.22	18.11	
		64QAM		1	1	17.25	16.99	16.88	
		256QAM		1	1	15.35	15.09	14.98	
		CP OFDM		QPSK	1	1	18.01	17.75	17.64
	30	DFT-s OFDM		PI/2 BPSK	1	1	19.48	19.41	19.31
					1	39	19.43	19.33	19.26
					1	76	19.57	19.47	19.40
					36	0	18.99	18.89	18.82
					36	21	19.31	19.21	19.14
					36	42	19.03	18.93	18.86
					75	0	19.01	18.91	18.84
				QPSK	1	1	19.53	19.50	19.32
					1	39	19.43	19.37	19.22
					1	76	19.58	19.51	19.36
					36	0	18.33	18.27	18.12
					36	21	19.32	19.26	19.11
		36			42	18.35	18.29	18.14	
		75			0	18.46	18.40	18.25	
		16QAM		1	1	18.75	18.69	18.54	
		64QAM		1	1	17.22	17.16	17.01	
		256QAM		1	1	15.14	15.08	14.93	
		CP OFDM		QPSK	1	1	17.84	17.78	17.63

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	40	DFT-s OFDM	30	PI/2 BPSK	1	1	19.53	19.33	19.24
					1	53	19.56	19.33	19.27
					1	104	19.60	19.41	19.35
					50	0	19.14	18.91	18.85
					50	28	19.49	19.26	19.20
					50	56	19.18	18.95	18.89
					100	0	19.16	18.93	18.87
				QPSK	1	1	19.55	19.40	19.27
					1	53	19.53	19.35	19.25
					1	104	19.61	19.42	19.32
					50	0	18.47	18.29	18.19
					50	28	19.50	19.30	19.20
		50			56	18.51	18.33	18.23	
		100			0	18.61	18.43	18.33	
		16QAM		1	1	18.38	18.20	18.10	
		64QAM		1	1	17.08	16.90	16.80	
		256QAM		1	1	15.02	14.84	14.74	
		CP OFDM		QPSK	1	1	17.90	17.72	17.62
	50	DFT-s OFDM		PI/2 BPSK	1	1	19.33	19.25	19.13
					1	67	19.39	19.28	19.19
					1	131	19.41	19.30	19.21
					64	0	18.96	18.80	18.71
					64	35	19.36	19.20	19.11
					64	69	19.00	18.84	18.75
					128	0	18.97	18.81	18.72
				QPSK	1	1	19.38	19.26	19.09
					1	67	19.38	19.23	19.09
					1	131	19.42	19.27	19.13
					64	0	18.43	18.28	18.14
					64	35	19.38	19.23	19.09
		64			69	18.48	18.33	18.19	
		128			0	18.43	18.28	18.14	
		16QAM		1	1	18.57	18.42	18.28	
		64QAM		1	1	17.31	17.16	17.02	
		256QAM		1	1	14.96	14.81	14.67	
		CP OFDM		QPSK	1	1	17.64	17.49	17.35

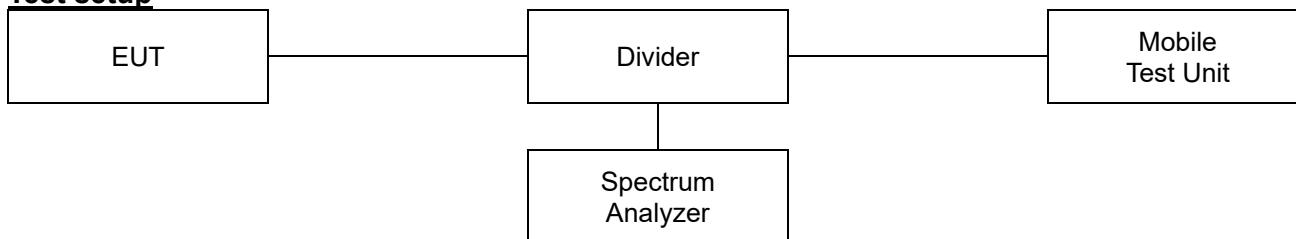
Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	60	DFT-s OFDM	30	PI/2 BPSK	1	1	19.25	19.13	19.14
					1	81	19.29	19.19	19.23
					1	160	19.30	19.21	19.25
					81	0	18.87	18.72	18.76
					81	41	19.33	19.18	19.22
					81	81	18.92	18.77	18.81
					162	0	18.85	18.70	18.74
				QPSK	1	1	19.28	19.14	19.12
					1	81	19.31	19.14	19.15
					1	160	19.32	19.15	19.16
					81	0	18.39	18.22	18.23
					81	41	19.35	19.18	19.19
		81			81	18.43	18.26	18.27	
		162			0	18.38	18.21	18.22	
		16QAM		1	1	18.20	18.03	18.04	
		64QAM		1	1	17.16	16.99	17.00	
		256QAM		1	1	14.65	14.48	14.49	
		CP OFDM		QPSK	1	1	17.52	17.35	17.36
	70	DFT-s OFDM		PI/2 BPSK	1	1	19.47	19.34	19.32
					1	95	19.34	19.18	19.19
					1	187	19.49	19.43	19.44
					90	0	19.00	18.84	18.85
					90	50	19.27	19.21	19.22
					90	99	19.04	18.88	18.89
					180	0	19.00	18.84	18.85
				QPSK	1	1	19.46	19.39	19.24
					1	95	19.28	19.18	19.06
					1	187	19.52	19.42	19.30
					90	0	18.43	18.33	18.21
					90	50	19.33	19.23	19.21
		90			99	18.48	18.38	18.26	
		180			0	18.43	18.33	18.21	
		16QAM		1	1	18.37	18.27	18.15	
		64QAM		1	1	17.23	17.13	17.01	
		256QAM		1	1	15.31	15.21	15.09	
		CP OFDM		QPSK	1	1	17.69	17.59	17.47

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	80	DFT-s OFDM	30	PI/2 BPSK	1	1	19.46	19.32	19.48
					1	109	19.37	19.20	19.39
					1	215	19.47	19.40	19.49
					108	0	19.01	18.84	19.03
					108	55	19.30	19.23	19.32
					108	109	19.07	18.90	19.09
					216	0	19.06	18.89	19.08
				QPSK	1	1	19.42	19.39	19.44
					1	109	19.25	19.19	19.27
					1	215	19.46	19.40	19.50
					108	0	18.40	18.34	18.42
					108	55	19.28	19.22	19.33
		108			109	18.46	18.40	18.48	
		216			0	18.43	18.37	18.45	
		16QAM		1	1	18.17	18.11	18.19	
		64QAM		1	1	17.04	16.98	17.06	
		256QAM		1	1	15.21	15.15	15.23	
		CP OFDM		QPSK	1	1	17.59	17.53	17.61
	90	DFT-s OFDM		PI/2 BPSK	1	1	19.39	19.43	19.38
					1	123	19.25	19.25	19.21
					1	243	19.50	19.48	19.43
					120	0	18.92	18.91	18.86
					120	63	19.29	19.26	19.20
					120	125	18.98	18.96	18.89
					243	0	18.91	18.89	18.84
				QPSK	1	1	19.46	19.24	19.26
					1	123	19.29	19.03	19.04
					1	243	19.53	19.32	19.28
					120	0	18.42	18.36	18.35
					120	63	19.30	19.23	19.22
					120	125	18.49	18.42	18.39
					243	0	18.42	18.36	18.35
				16QAM	1	1	18.42	18.63	18.77
				64QAM	1	1	17.10	17.06	17.07
				256QAM	1	1	14.98	14.91	15.01
		CP OFDM		QPSK	1	1	17.67	17.70	17.76

Test Band	Bandwidth (MHz)	Waveform	SCS (kHz)	Modulation	RB size	RB offset	Maximum power		
							Frequency (MHz)		
							Low	Middle	High
5G NR n78	100	DFT-s OFDM	30	PI/2 BPSK	1	1	-	19.27	-
					1	137	-	19.13	-
					1	271	-	19.33	-
					135	0	-	18.80	-
					135	69	-	19.22	-
					135	138	-	18.87	-
					270	0	-	18.77	-
				QPSK	1	1	-	19.36	-
					1	137	-	19.22	-
					1	271	-	19.42	-
					135	0	-	18.44	-
					135	69	-	19.24	-
					135	138	-	18.49	-
					270	0	-	18.41	-
				16QAM	1	1	-	18.15	-
				64QAM	1	1	-	17.07	-
				256QAM	1	1	-	14.93	-
		CP OFDM		QPSK	1	1	-	17.74	-

7.2. 99% Occupied Bandwidth & 26dB Bandwidth

Test setup



Limit

According to §2.1049,

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured.

Test procedure

971168 D01 v03r01 – Section 4.2 and 4.3

ANSI C63.26-2015 – Section 5.4.3 and 5.4.4

Test settings

◆ 26dB Bandwidth

- The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times \text{RBW}$.
- Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
- Determine the reference value by either of the following:
 - Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
 - Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.
- Determine the “-X dB amplitude” as equal to (Reference Value - X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
- If the reference value was determined using an unmodulated carrier, turn the EUT modulation on, then either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise the trace from step f) shall be used for step i).

- i) Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB amplitude” determined in step f). If a marker is below this “-X dB amplitude” value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers.
- j) The spectral envelope can cross the “-X dB amplitude” at multiple points. The lowest or highest frequency shall be selected as the frequencies that are the farthest away from the center frequency at which the spectral envelope crosses the “-X dB amplitude.”
- k) The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

◆ 99% Occupied Bandwidth

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (typically a span of $1.5 \times \text{OBW}$ is sufficient).
- b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times \text{RBW}$.
- c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- d) Set the detection mode to peak, and the trace mode to max-hold.
- e) If the instrument does not have a 99% OBW function, recover the trace data points and sum directly in linear power terms. Place the recovered amplitude data points, beginning at the lowest frequency, in a running sum until 0.5% of the total is reached. Record that frequency as the lower OBW frequency. Repeat the process until 99.5% of the total is reached and record that frequency as the upper OBW frequency. The 99% power OBW can be determined by computing the difference these two frequencies.
- f) The OBW shall be reported and plot(s) of the measuring instrument display shall be provided with the test report. The frequency and amplitude axis and scale shall be clearly labeled. Tabular data can be reported in addition to the plot(s).

Notes:

1. The EUT was setup to maximum output power with all bandwidth and modulation.

Test results

Test Band	Bandwidth (MHz)	Channel	Waveform	SCS (kHz)	Modulation	26dB Bandwidth (MHz)	99 % Bandwidth (MHz)
5G NR n77/78 (Lower) PC2	10	Low	DFT-s OFDM	30	QPSK	10.21	8.64
		16QAM			9.92	8.62	
		QPSK			10.09	8.62	
		16QAM			10.24	8.64	
		QPSK			10.04	8.67	
		16QAM			10.06	8.67	
	15	Low	DFT-s OFDM		QPSK	14.65	12.96
		16QAM			14.84	13.00	
		QPSK			14.46	13.00	
		16QAM			14.54	12.96	
		QPSK			14.61	12.96	
		16QAM			14.61	13.04	
	20	Low	DFT-s OFDM		QPSK	20.18	18.03
		16QAM			19.93	18.03	
		QPSK			19.93	17.98	
		16QAM			20.08	18.03	
		QPSK			20.08	18.08	
		16QAM			19.93	18.03	
	30	Low	DFT-s OFDM		QPSK	29.97	27.20
		16QAM			29.82	27.12	
		QPSK			29.97	27.27	
		16QAM			29.75	27.20	
		QPSK			29.82	27.20	
		16QAM			29.75	27.12	
	40	Low	DFT-s OFDM		QPSK	38.96	35.96
		16QAM			38.46	35.86	
		QPSK			38.66	36.06	
		16QAM			38.86	35.86	
		QPSK			38.66	36.06	
		16QAM			38.96	35.86	
	50	Low	DFT-s OFDM		QPSK	48.70	45.83
		16QAM			48.83	45.95	
		QPSK			48.70	45.95	
		16QAM			48.70	45.95	
		QPSK			49.08	46.08	
		16QAM			48.83	46.08	
	60	Low	DFT-s OFDM		QPSK	61.14	57.84
		16QAM			60.99	57.84	
		QPSK			61.29	57.99	
		16QAM			60.84	57.99	
		QPSK			61.29	57.84	
		16QAM			61.14	58.14	

Test Band	Bandwidth (MHz)	Channel	Waveform	SCS (kHz)	Modulation	26dB Bandwidth (MHz)	99 % Bandwidth (MHz)
5G NR n77/78 (Lower) PC2	70	Low	DFT-s OFDM	30	QPSK	67.48	64.34
		16QAM			67.48	64.16	
		Middle			QPSK	67.83	64.34
		16QAM			67.83	64.51	
		High			QPSK	67.66	64.34
		16QAM			67.48	64.34	
	80	Low	DFT-s OFDM		QPSK	80.72	77.32
		16QAM			80.52	77.12	
		Middle			QPSK	80.52	77.32
		16QAM			80.92	77.32	
		High			QPSK	80.72	77.52
		16QAM			80.52	77.32	
	90	Low	DFT-s OFDM		QPSK	90.36	86.54
		16QAM			90.36	86.99	
		Middle			QPSK	90.58	86.76
		16QAM			90.36	86.99	
		High			QPSK	90.14	86.76
		16QAM			90.36	86.99	
	100	Middle	DFT-s OFDM		QPSK	101.90	96.65
		16QAM	101.90		96.90		

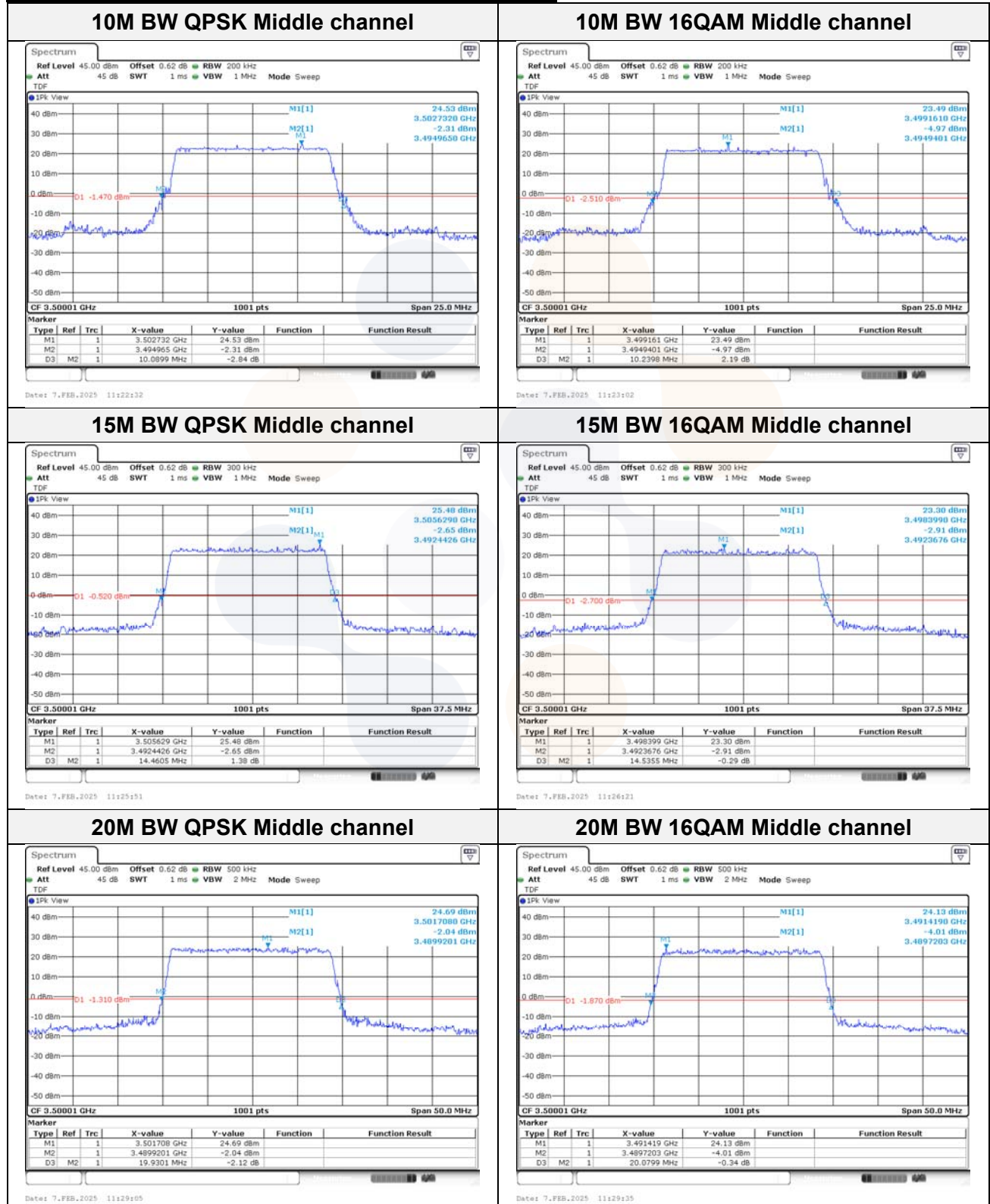
Test Band	Bandwidth (MHz)	Channel	Waveform	SCS (kHz)	Modulation	26dB Bandwidth (MHz)	99 % Bandwidth (MHz)
5G NR n77 (Upper) PC2	10	Low	DFT-s OFDM	30	QPSK	10.29	8.62
		16QAM			10.09	8.62	
		QPSK			9.82	8.59	
		16QAM			10.19	8.64	
		QPSK			9.97	8.62	
		16QAM			9.99	8.67	
	15	Low	DFT-s OFDM		QPSK	14.69	13.00
		16QAM			14.54	12.96	
		QPSK			14.57	12.96	
		16QAM			14.54	13.04	
		QPSK			14.84	12.96	
		16QAM			14.65	13.00	
	20	Low	DFT-s OFDM		QPSK	20.13	18.03
		16QAM			20.03	18.03	
		QPSK			19.98	18.03	
		16QAM			19.93	18.08	
		QPSK			19.83	17.98	
		16QAM			19.78	17.98	
	30	Low	DFT-s OFDM		QPSK	29.90	27.27
		16QAM			29.82	27.27	
		QPSK			29.67	27.20	
		16QAM			29.90	27.27	
		QPSK			29.75	27.20	
		16QAM			29.67	27.20	
	40	Low	DFT-s OFDM		QPSK	38.96	36.06
		16QAM			38.66	35.86	
		QPSK			38.86	35.96	
		16QAM			38.76	35.96	
		QPSK			38.86	36.06	
		16QAM			38.66	35.76	
	50	Low	DFT-s OFDM		QPSK	48.95	45.95
		16QAM			48.83	45.95	
		QPSK			48.83	46.08	
		16QAM			48.83	45.95	
		QPSK			48.83	45.95	
		16QAM			48.83	45.95	
	60	Low	DFT-s OFDM		QPSK	61.29	57.99
		16QAM			60.99	58.14	
		QPSK			60.99	57.84	
		16QAM			60.99	57.99	
		QPSK			60.99	57.84	
		16QAM			60.99	57.84	

Test Band	Bandwidth (MHz)	Channel	Waveform	SCS (kHz)	Modulation	26dB Bandwidth (MHz)	99 % Bandwidth (MHz)
5G NR n77 (Upper) PC2	70	Low	DFT-s OFDM	30	QPSK	67.66	64.51
		16QAM			67.66	64.34	
		Middle			QPSK	67.48	64.34
					16QAM	67.48	64.51
		High			QPSK	67.66	64.51
					16QAM	67.48	64.34
	80	Low	DFT-s OFDM		QPSK	80.92	77.52
		16QAM			80.32	77.12	
		Middle			QPSK	80.52	77.12
					16QAM	80.52	77.32
		High			QPSK	80.92	76.92
					16QAM	80.12	77.32
	90	Low	DFT-s OFDM		QPSK	90.14	86.76
		16QAM			90.36	86.99	
		Middle			QPSK	90.58	86.54
					16QAM	90.14	87.21
		High			QPSK	90.36	86.76
					16QAM	90.14	86.99
	100	Low	DFT-s OFDM		QPSK	102.40	96.65
		16QAM			101.90	96.65	
		Middle			QPSK	101.90	96.65
					16QAM	101.90	96.90
		High			QPSK	102.15	96.65
					16QAM	101.90	96.65

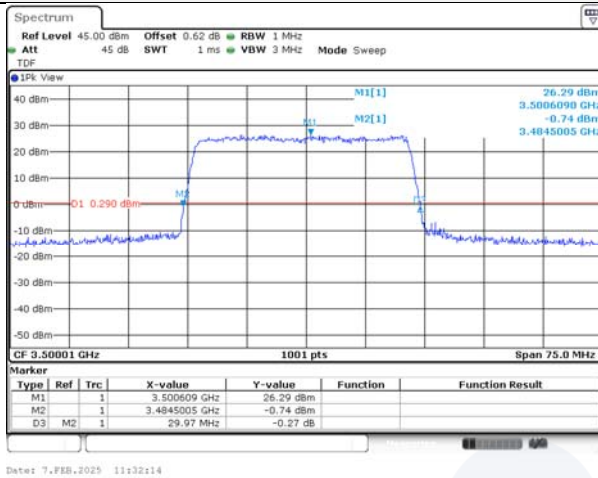
In order to simplify the report, only Middle channel test plots are attached

26dB Bandwidth

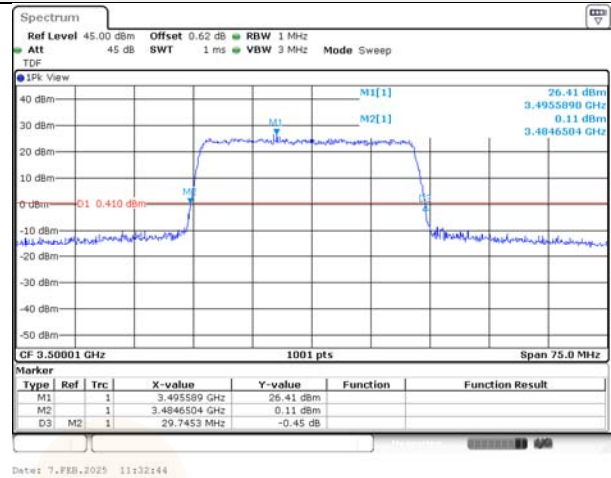
Test mode: 5G NR n77/78 (Lower)(PC2) DFT-s OFDM



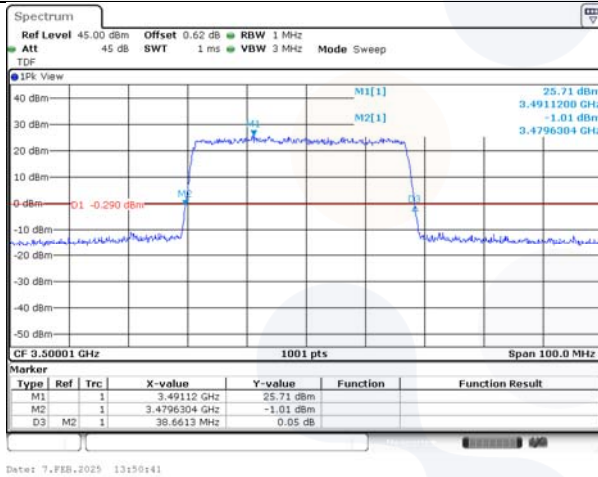
30M BW QPSK Middle channel



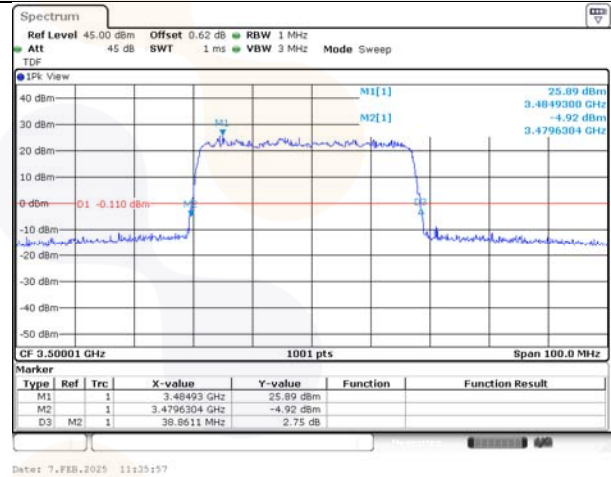
30M BW 16QAM Middle channel



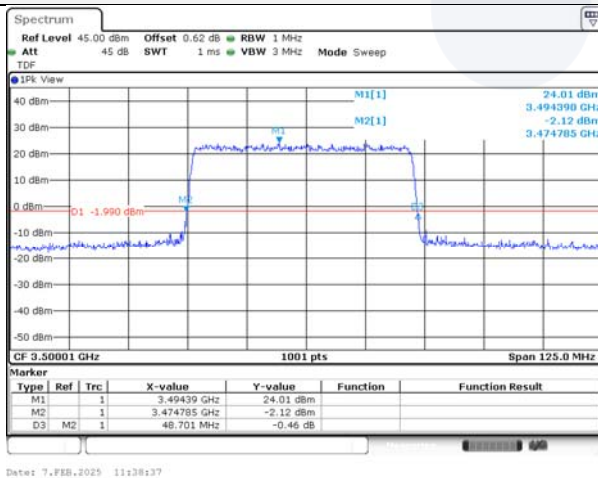
40M BW QPSK Middle channel



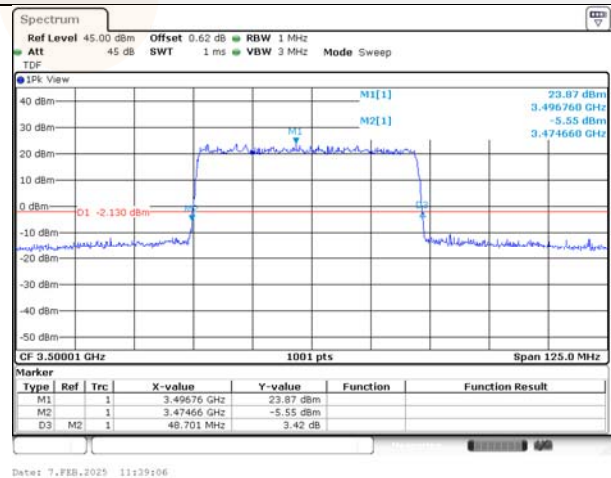
40M BW 16QAM Middle channel



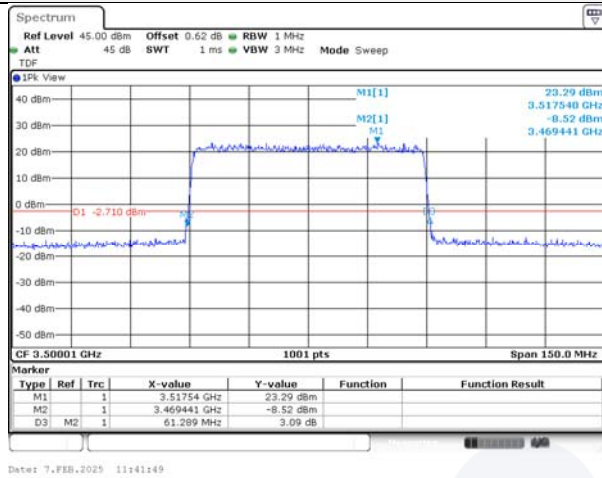
50M BW QPSK Middle channel



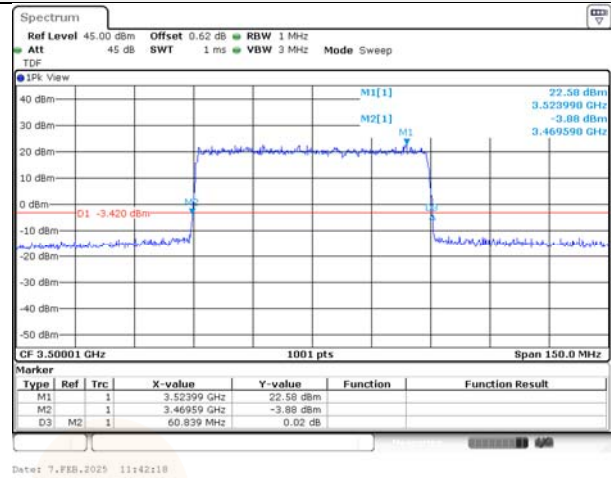
50M BW 16QAM Middle channel



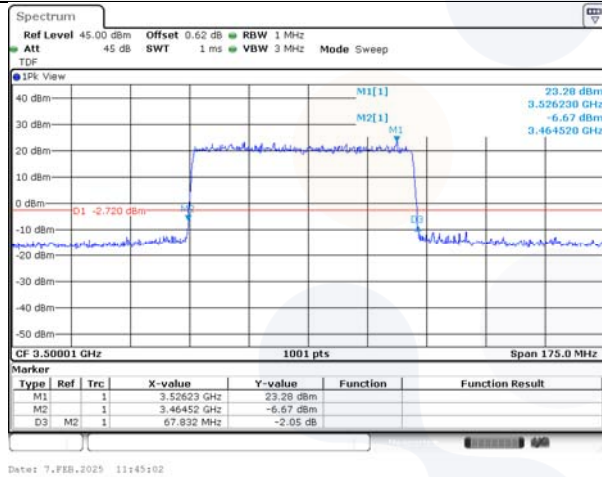
60M BW QPSK Middle channel



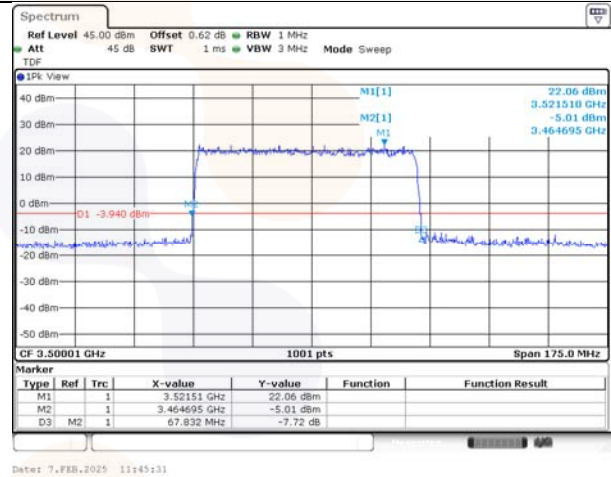
60M BW 16QAM Middle channel



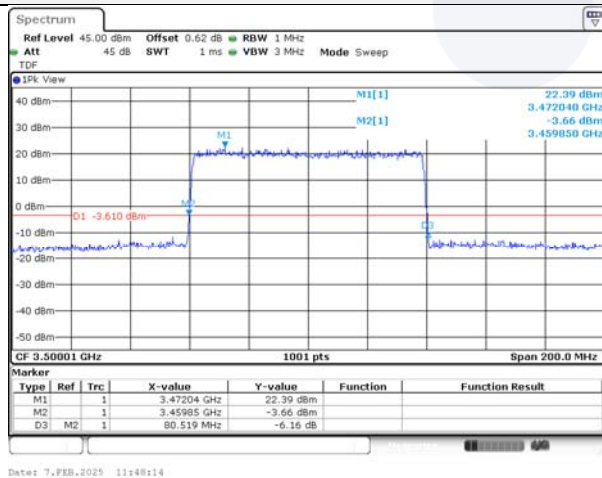
70M BW QPSK Middle channel



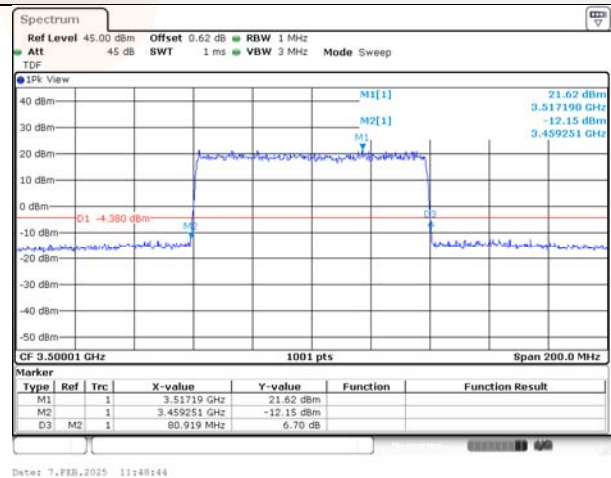
70M BW 16QAM Middle channel



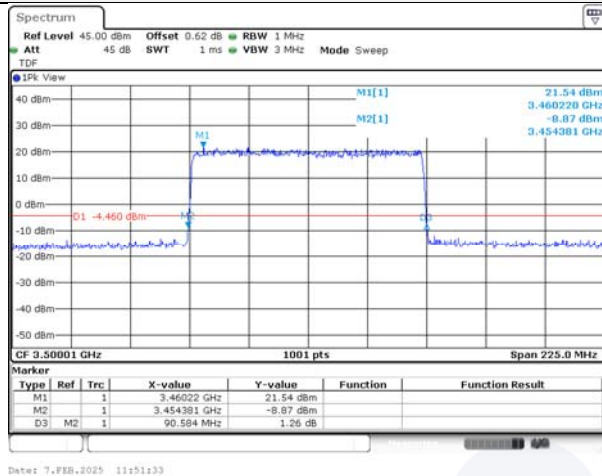
80M BW QPSK Middle channel



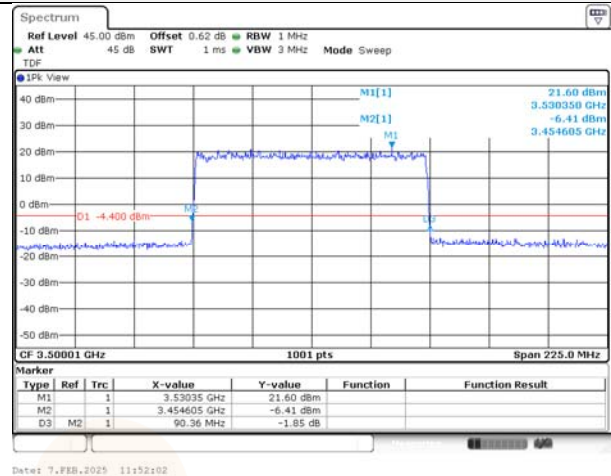
80M BW 16QAM Middle channel



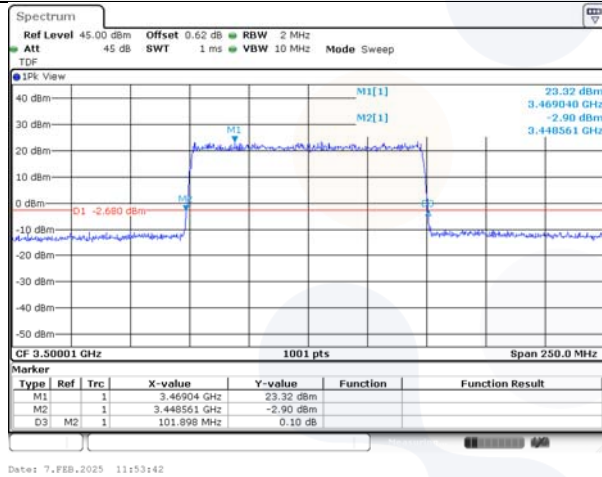
90M BW QPSK Middle channel



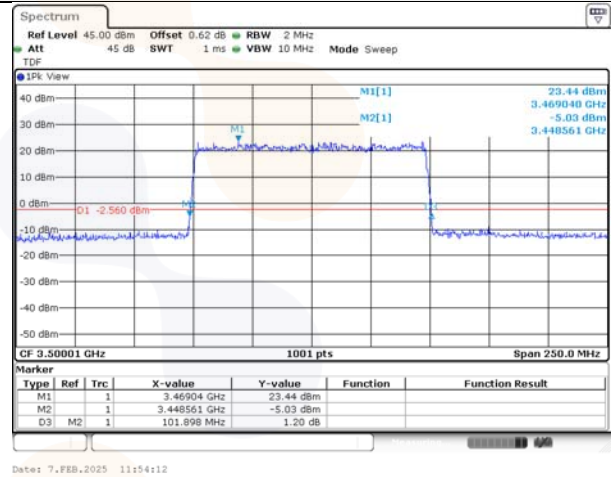
90M BW 16QAM Middle channel



100M BW QPSK Middle channel

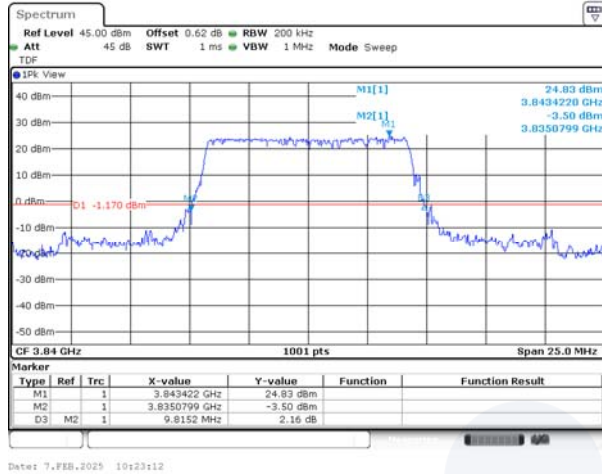


100M BW 16QAM Middle channel

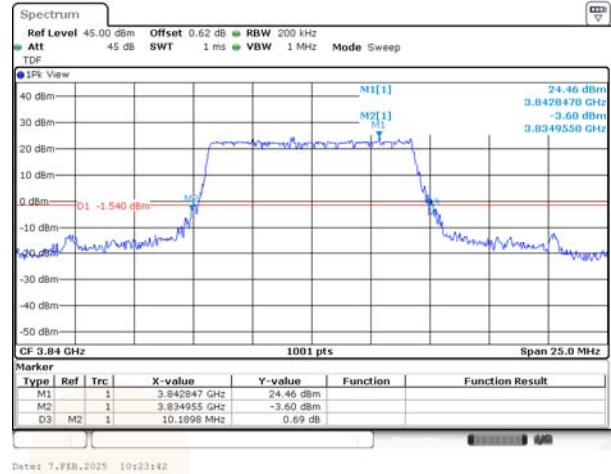


Test mode: 5G NR n77 (Upper)(PC2) DFT-s OFDM

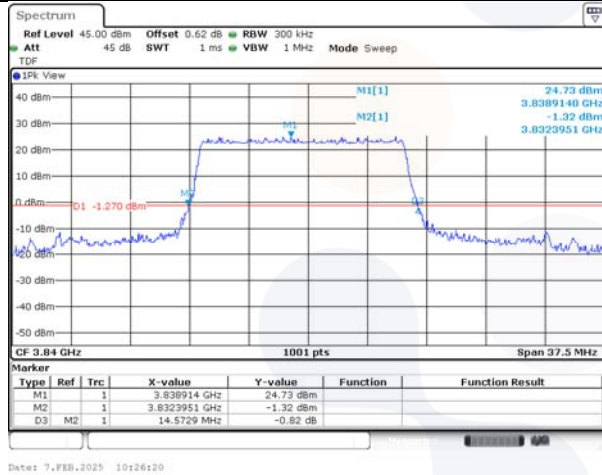
10M BW QPSK Middle channel



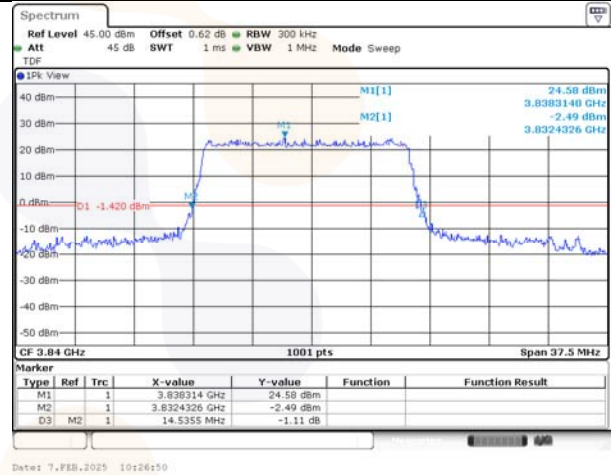
10M BW 16QAM Middle channel



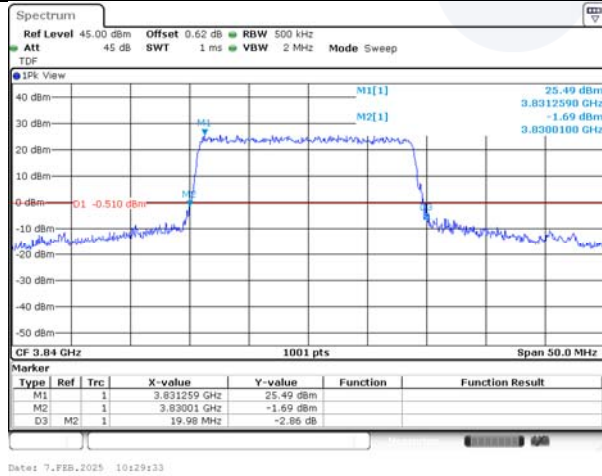
15M BW QPSK Middle channel



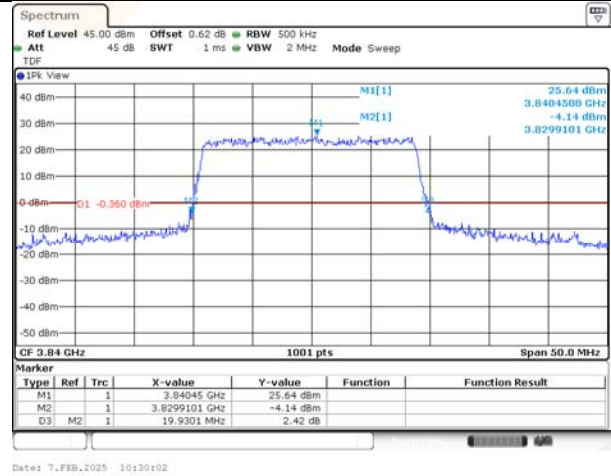
15M BW 16QAM Middle channel



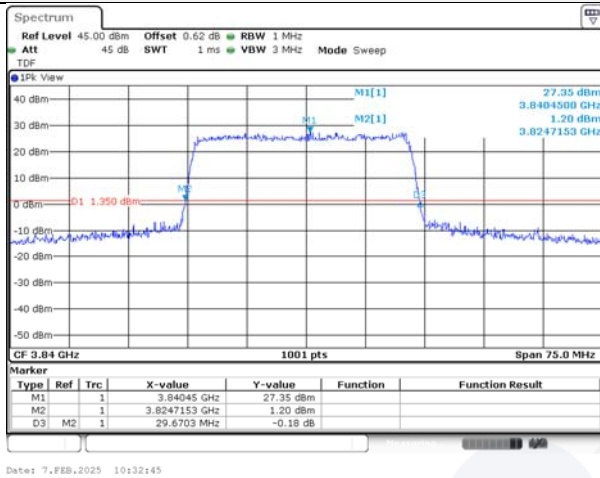
20M BW QPSK Middle channel



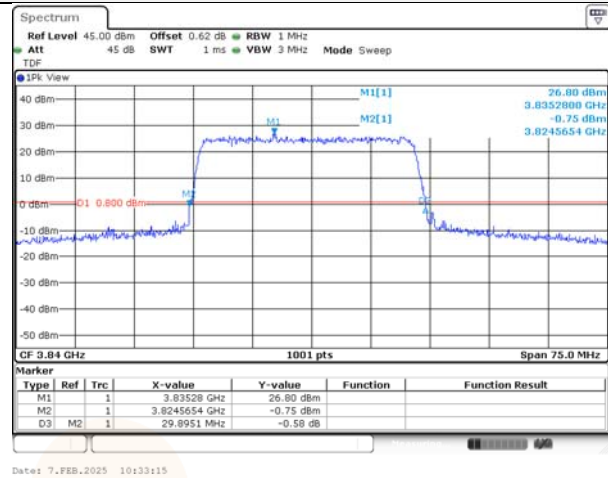
20M BW 16QAM Middle channel



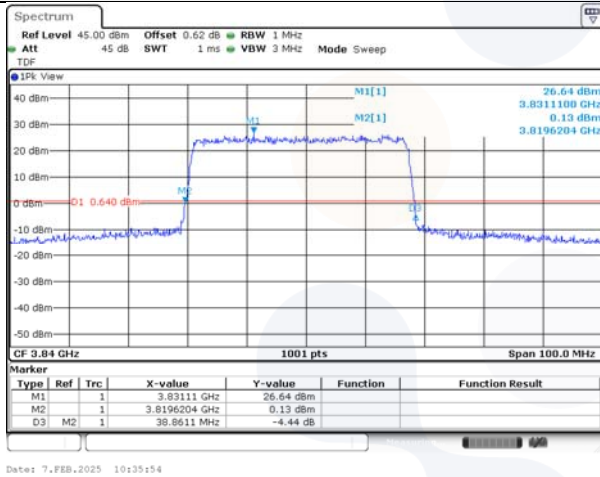
30M BW QPSK Middle channel



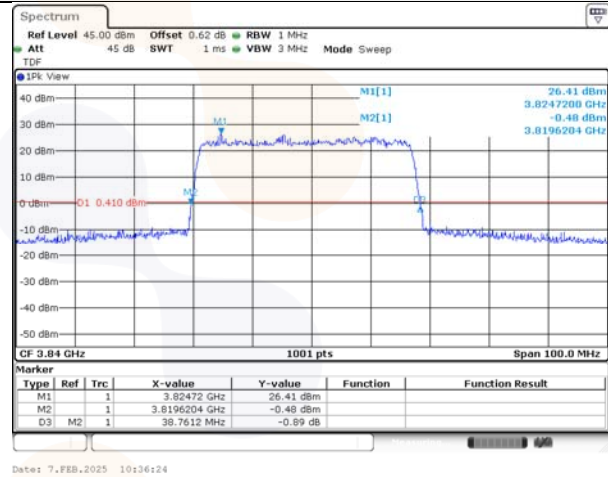
30M BW 16QAM Middle channel



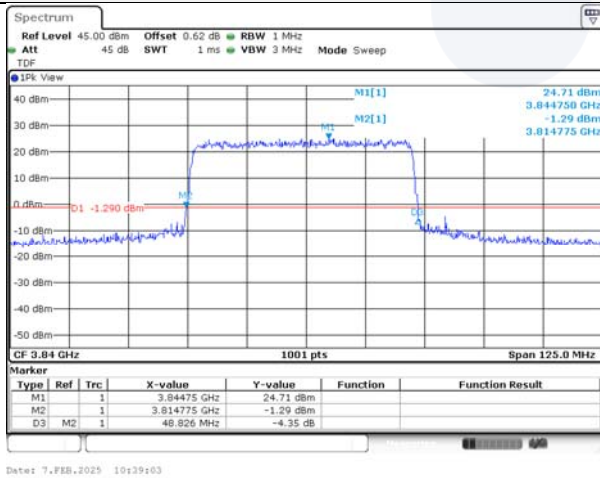
40M BW QPSK Middle channel



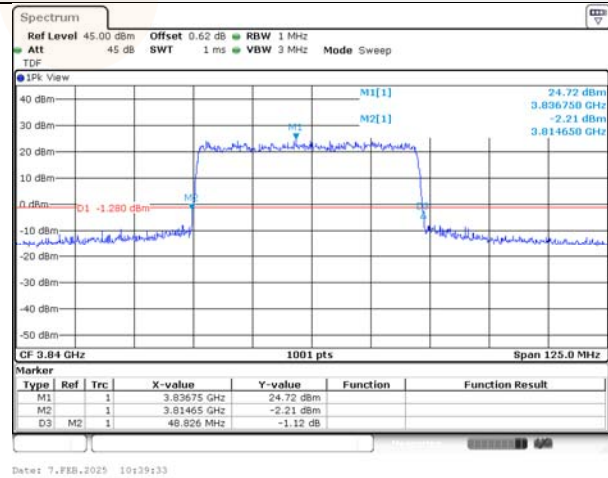
40M BW 16QAM Middle channel



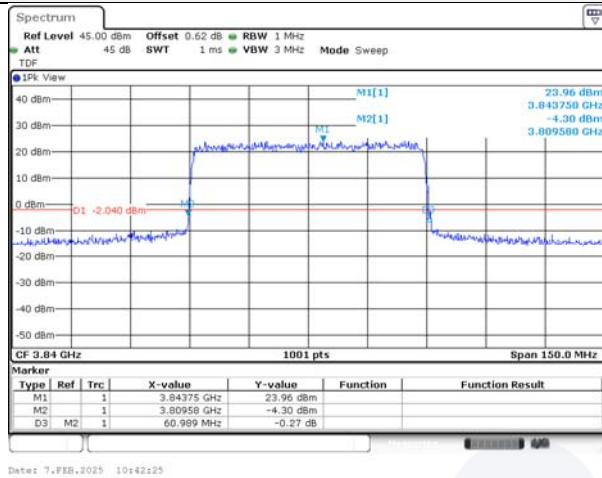
50M BW QPSK Middle channel



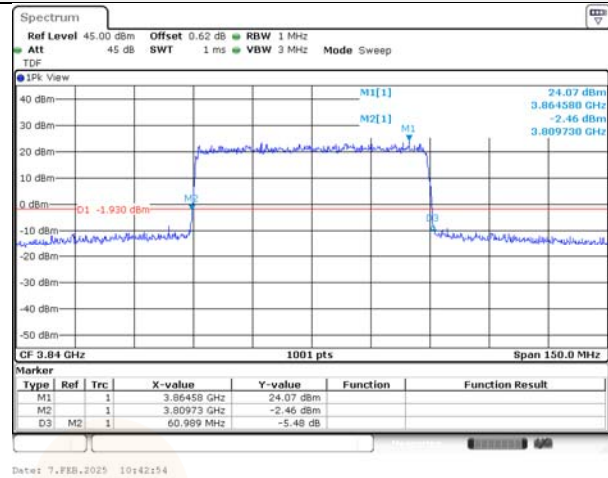
50M BW 16QAM Middle channel



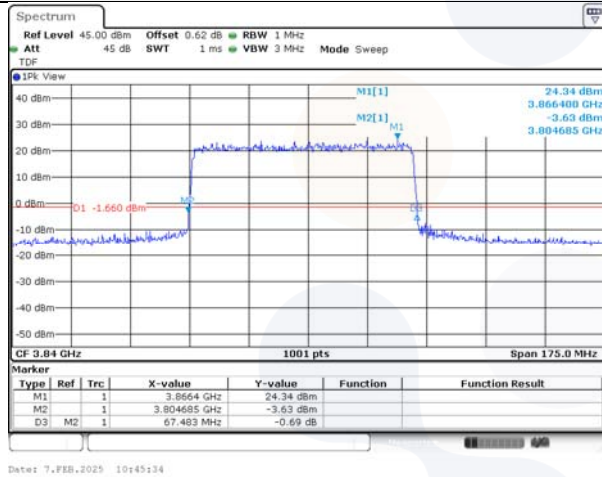
60M BW QPSK Middle channel



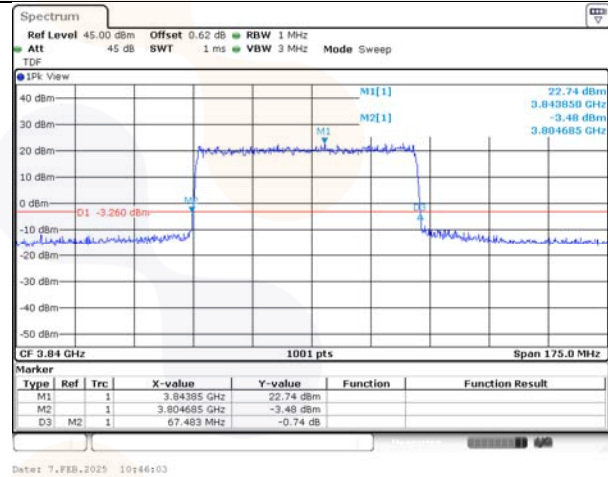
60M BW 16QAM Middle channel



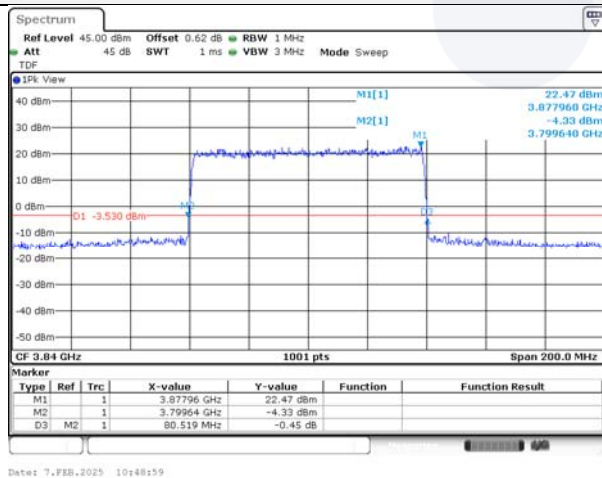
70M BW QPSK Middle channel



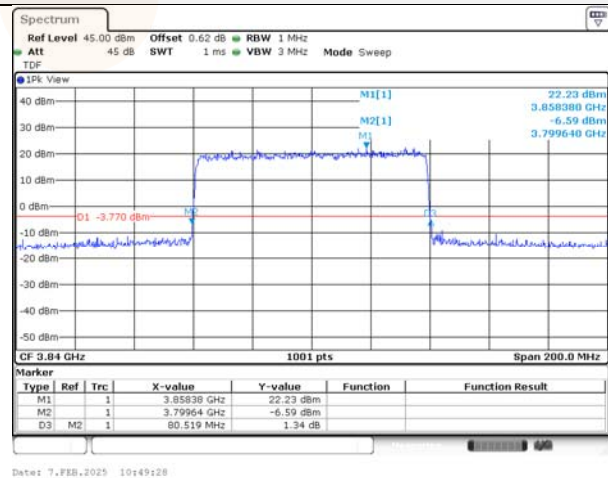
70M BW 16QAM Middle channel



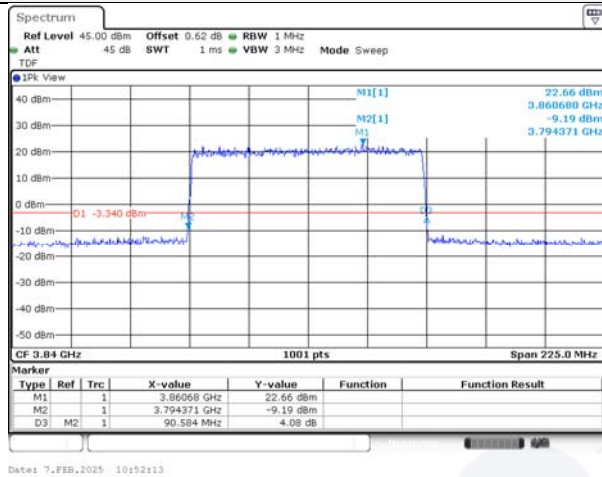
80M BW QPSK Middle channel



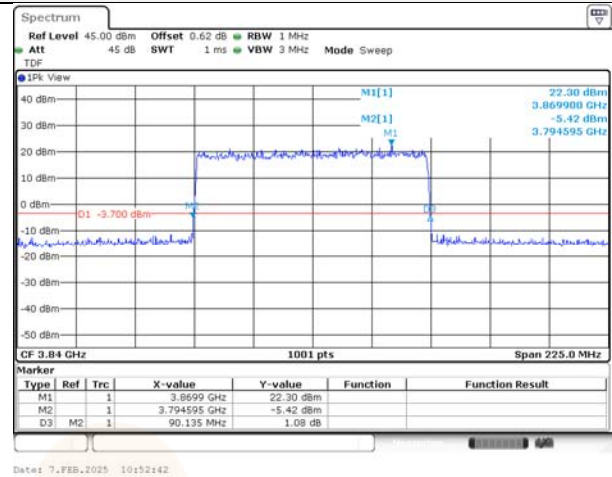
80M BW 16QAM Middle channel



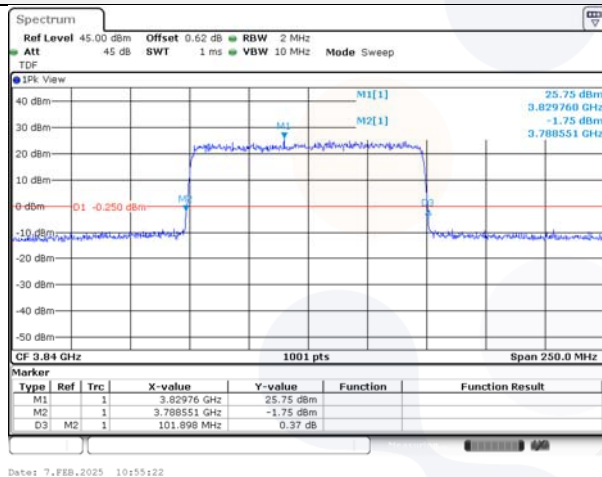
90M BW QPSK Middle channel



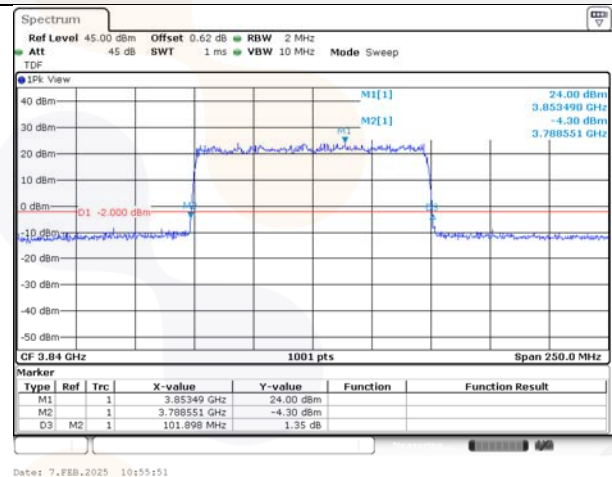
90M BW 16QAM Middle channel



100M BW QPSK Middle channel



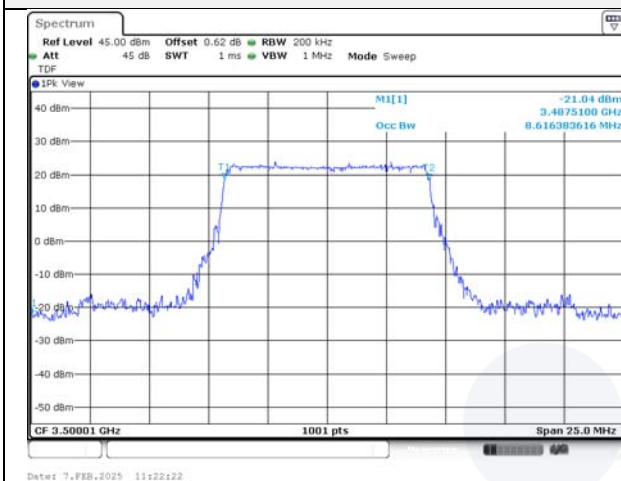
100M BW 16QAM Middle channel



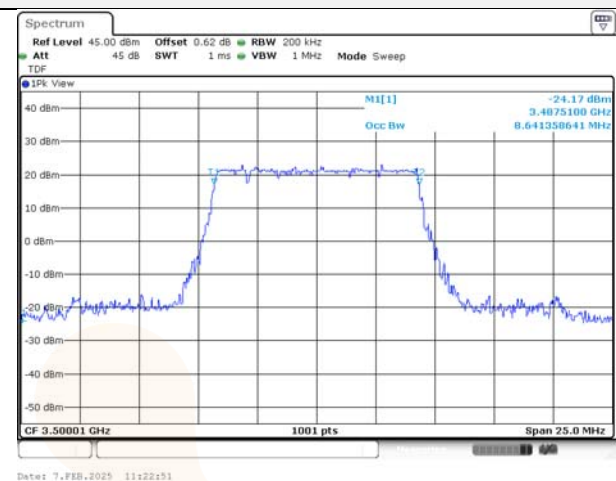
99% Occupied Bandwidth

Test mode: 5G NR n77 (Lower)(PC2) DFT-s OFDM

10M BW QPSK Middle channel



10M BW 16QAM Middle channel



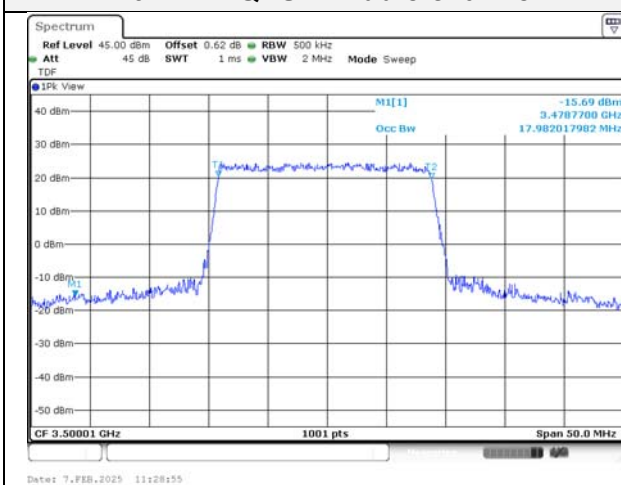
15M BW QPSK Middle channel



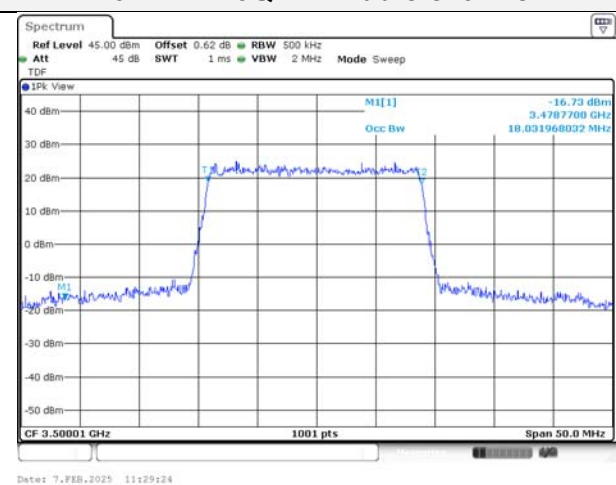
15M BW 16QAM Middle channel



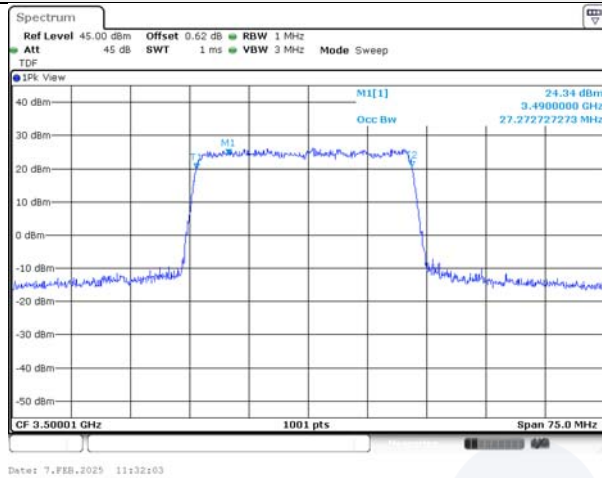
20M BW QPSK Middle channel



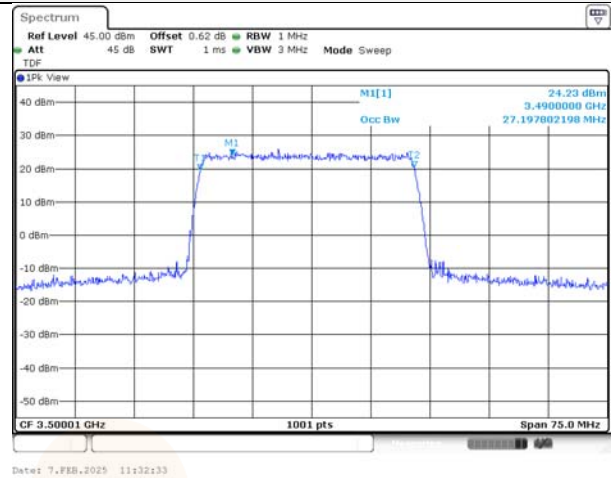
20M BW 16QAM Middle channel



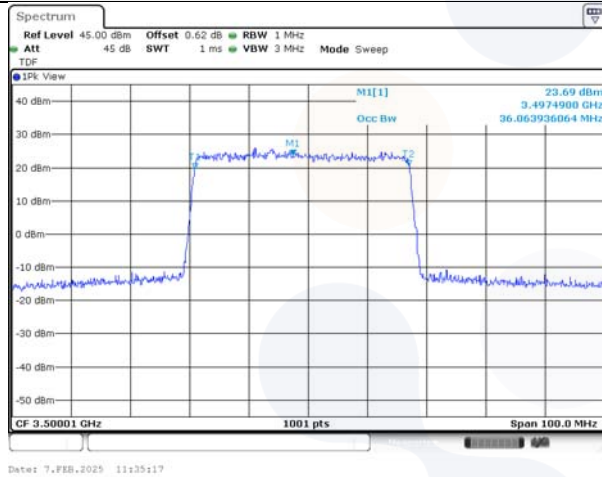
30M BW QPSK Middle channel



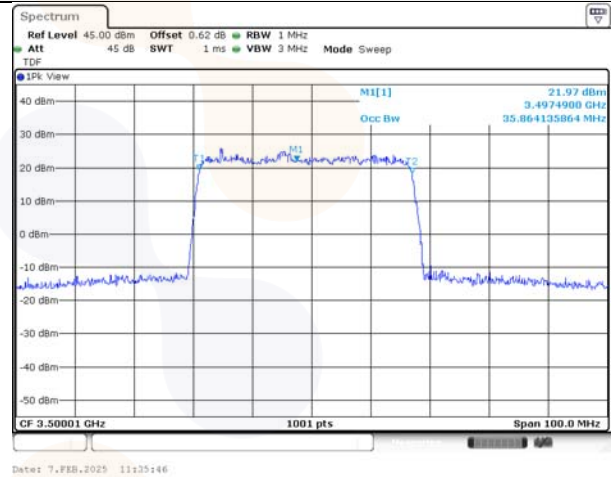
30M BW 16QAM Middle channel



40M BW QPSK Middle channel



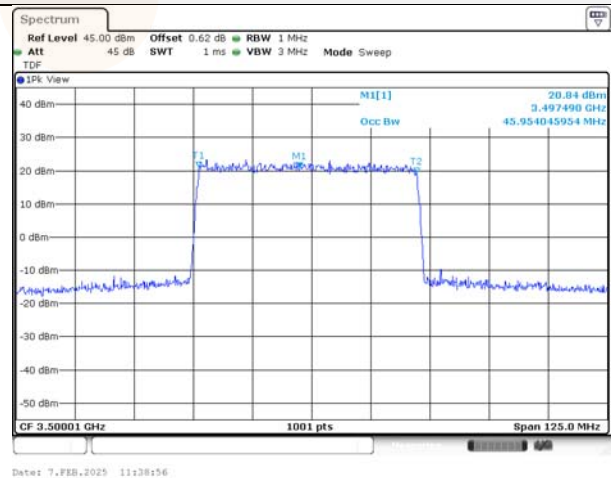
40M BW 16QAM Middle channel



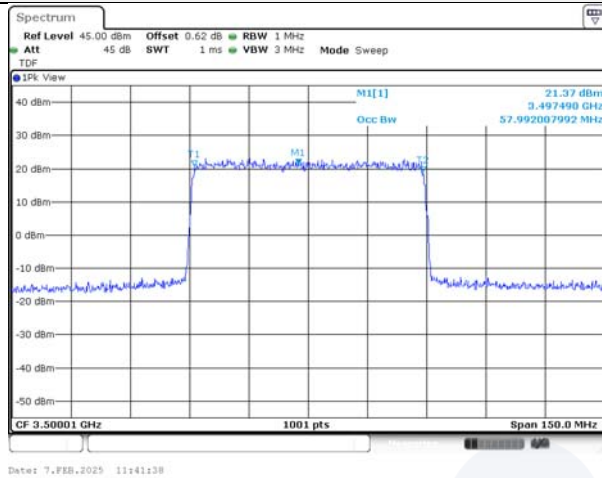
50M BW QPSK Middle channel



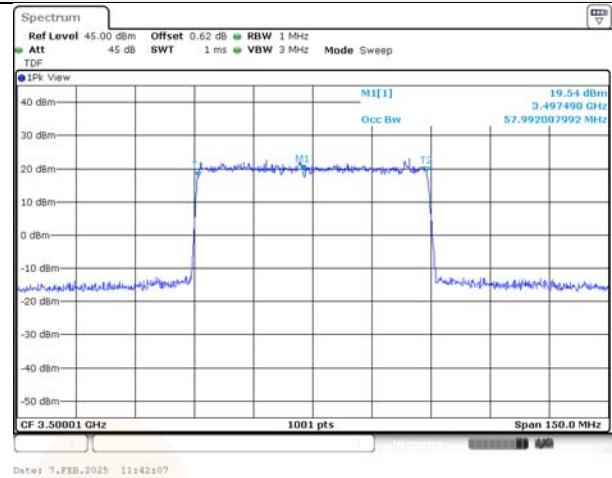
50M BW 16QAM Middle channel



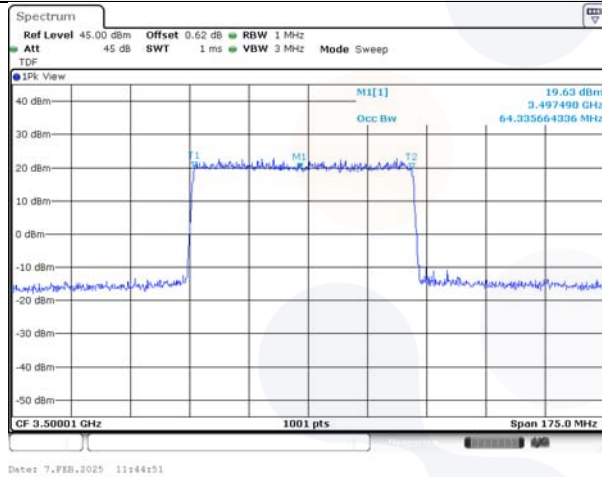
60M BW QPSK Middle channel



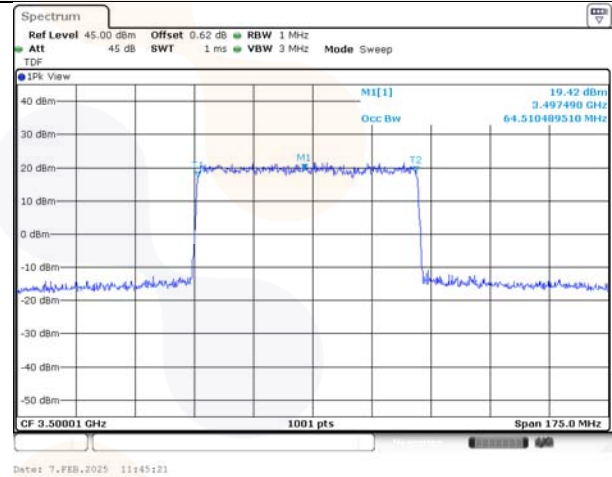
60M BW 16QAM Middle channel



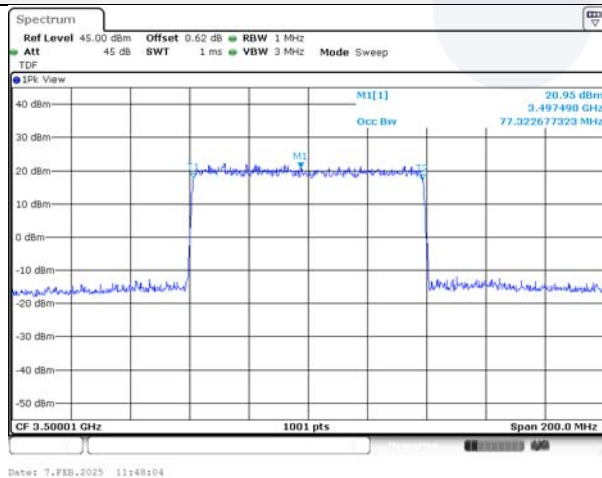
70M BW QPSK Middle channel



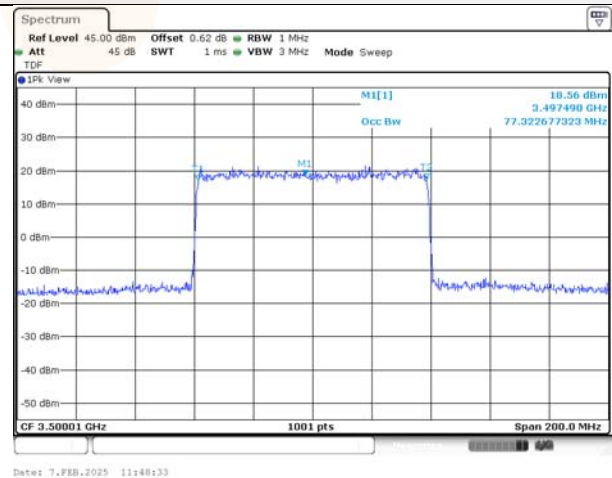
70M BW 16QAM Middle channel



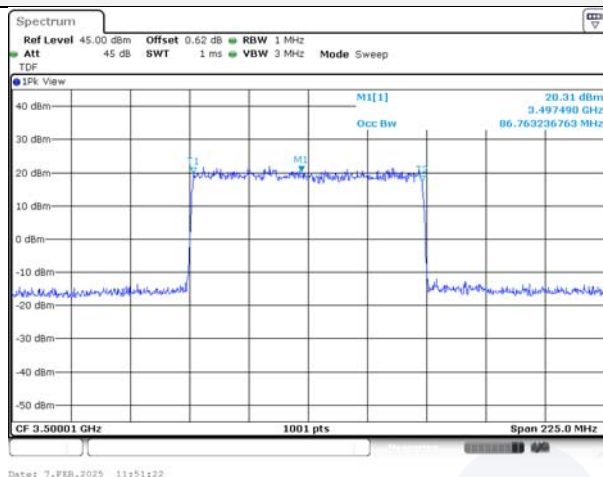
80M BW QPSK Middle channel



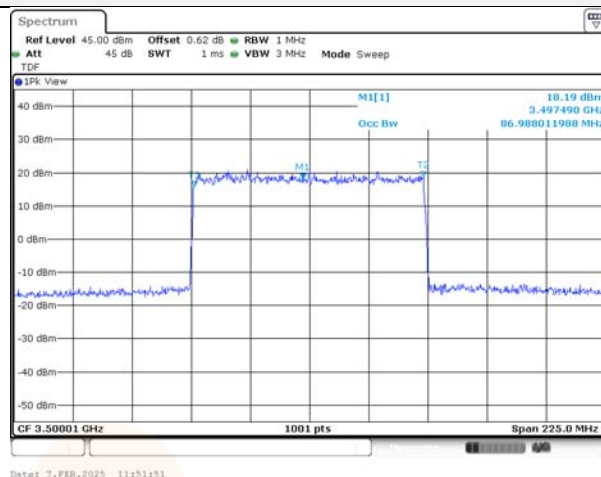
80M BW 16QAM Middle channel



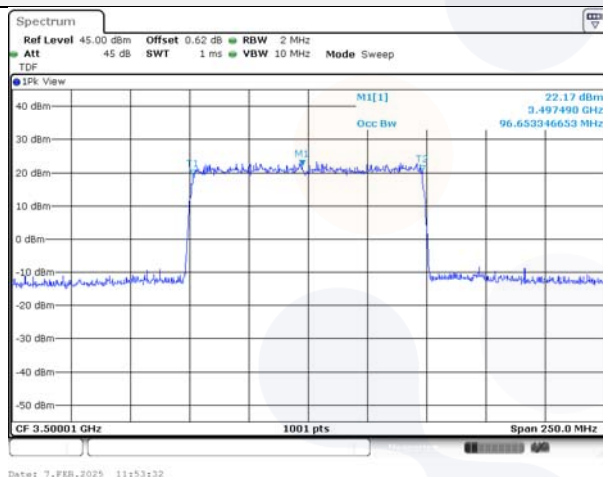
90M BW QPSK Middle channel



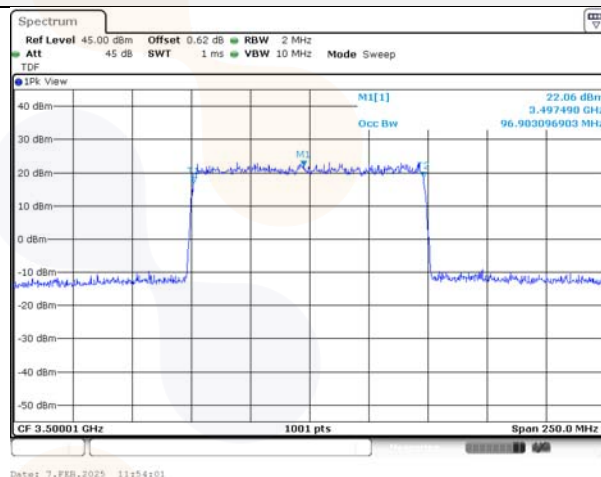
90M BW 16QAM Middle channel



100M BW QPSK Middle channel

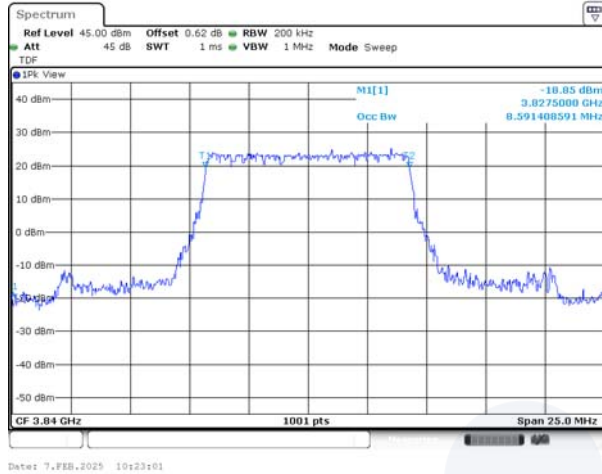


100M BW 16QAM Middle channel

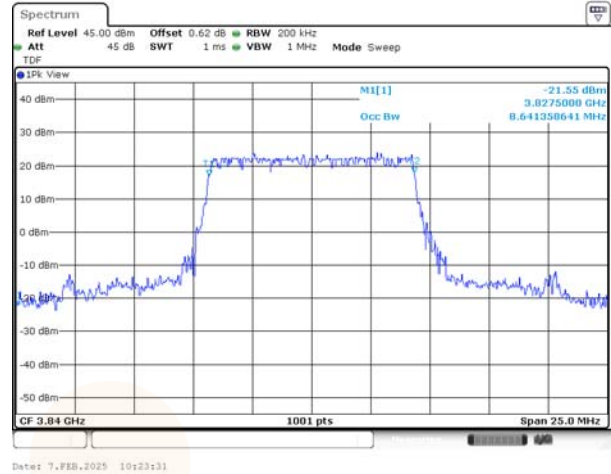


Test mode: 5G NR n77 (Upper)(PC2) DFT-s OFDM

10M BW QPSK Middle channel



10M BW 16QAM Middle channel



15M BW QPSK Middle channel



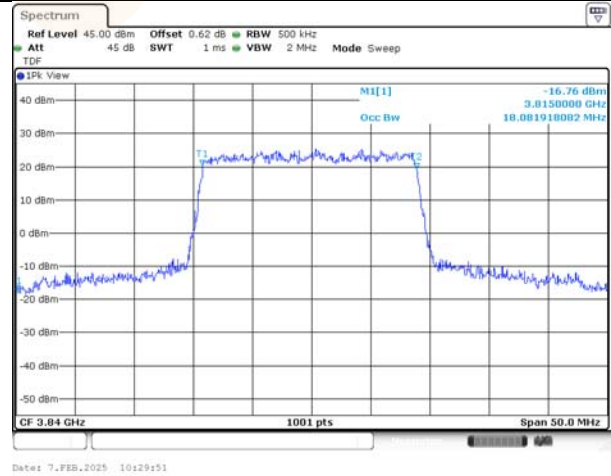
15M BW 16QAM Middle channel



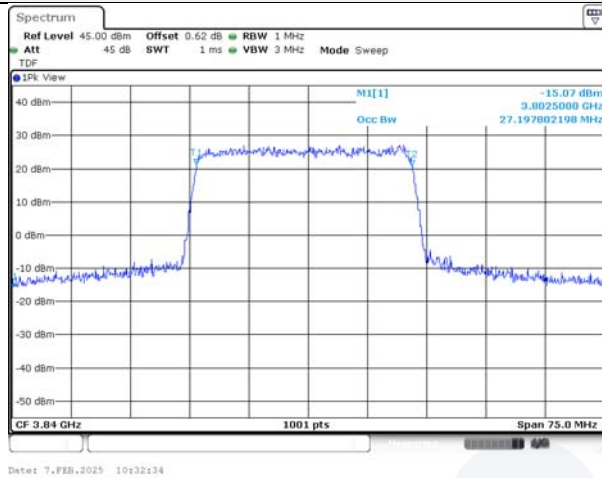
20M BW QPSK Middle channel



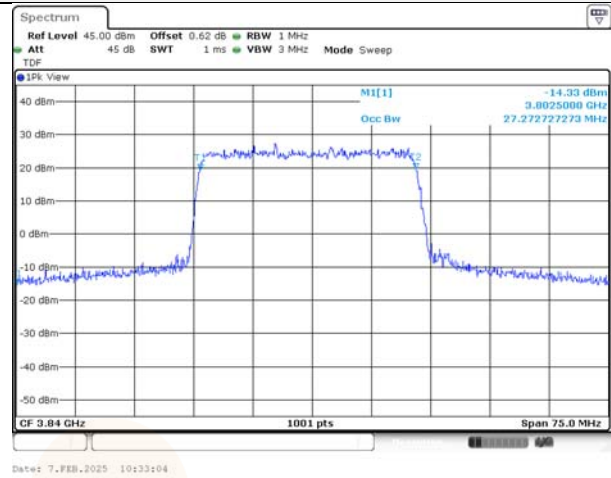
20M BW 16QAM Middle channel



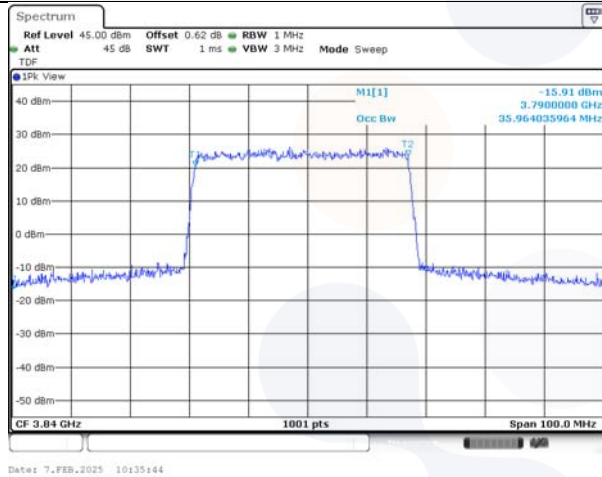
30M BW QPSK Middle channel



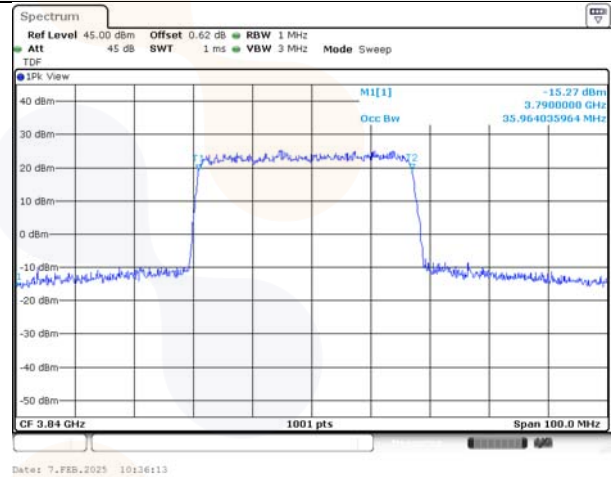
30M BW 16QAM Middle channel



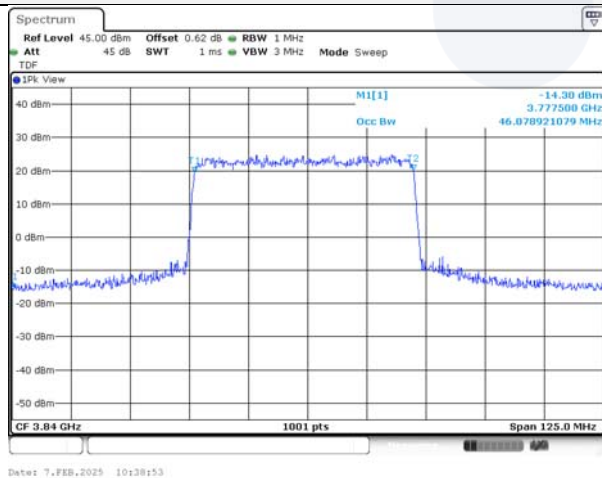
40M BW QPSK Middle channel



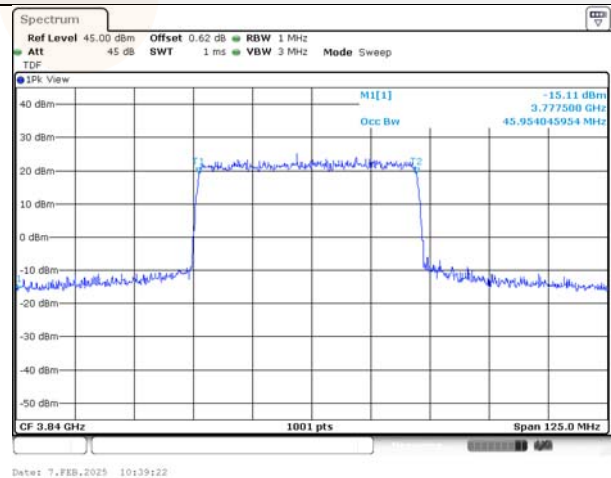
40M BW 16QAM Middle channel



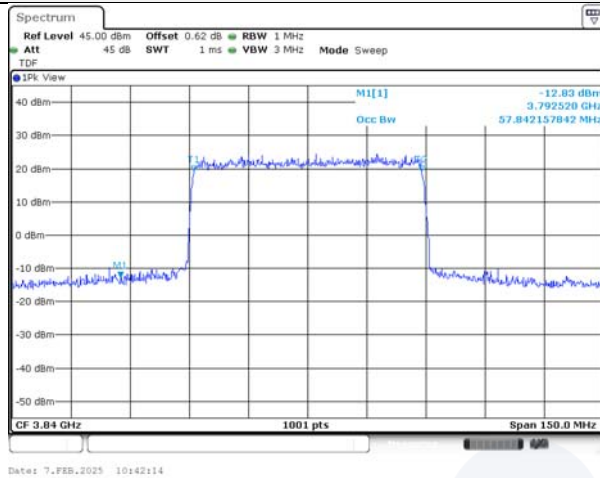
50M BW QPSK Middle channel



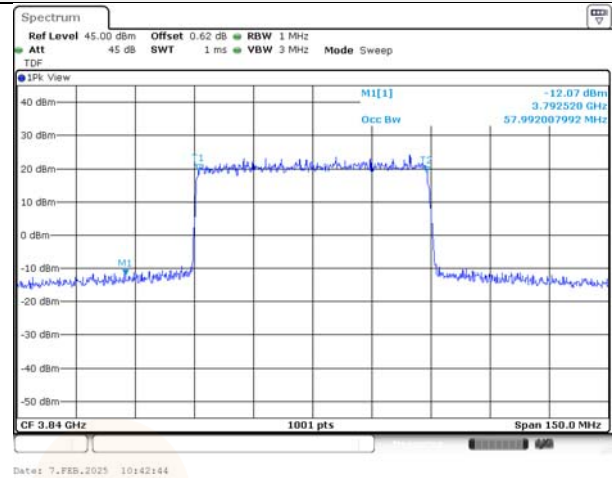
50M BW 16QAM Middle channel



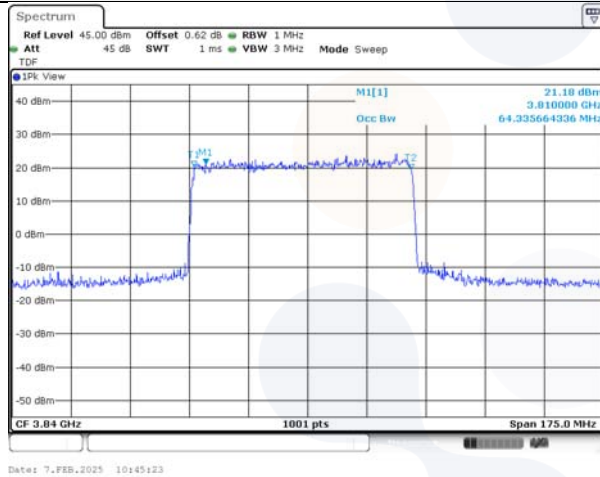
60M BW QPSK Middle channel



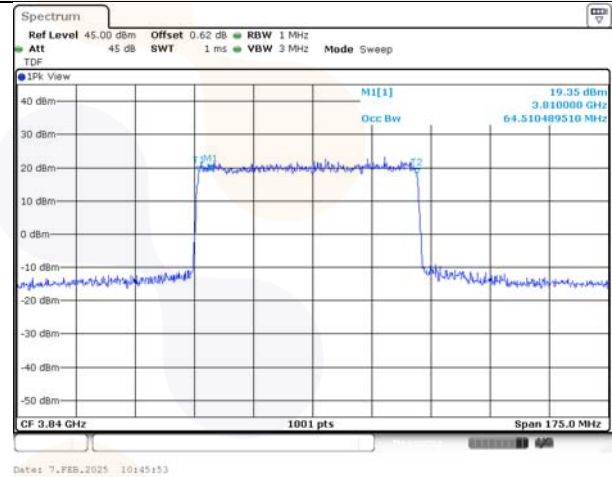
60M BW 16QAM Middle channel



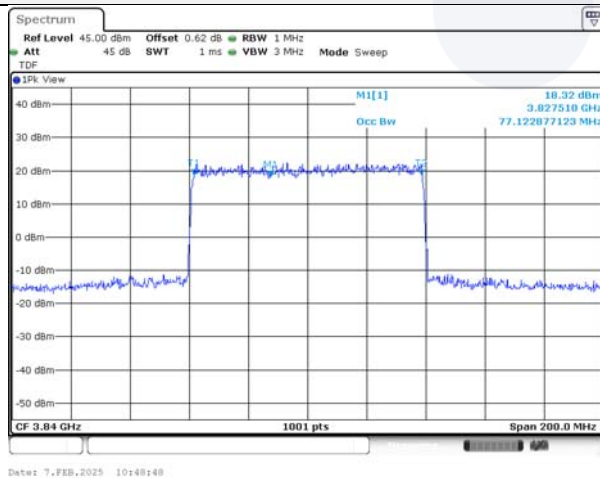
70M BW QPSK Middle channel



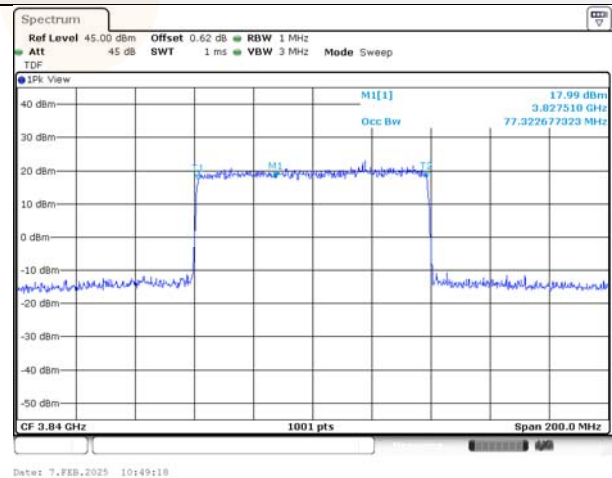
70M BW 16QAM Middle channel



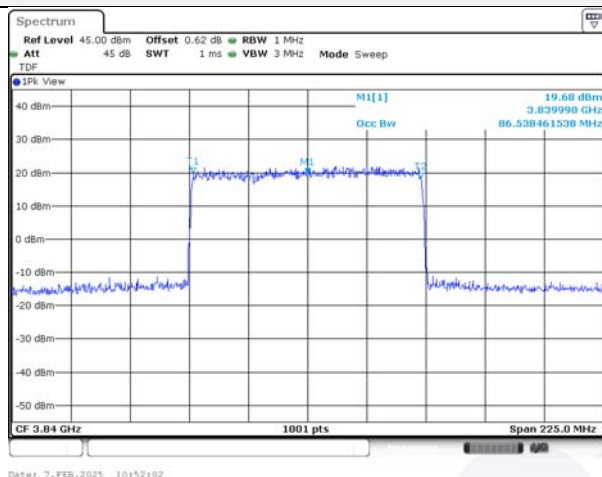
80M BW QPSK Middle channel



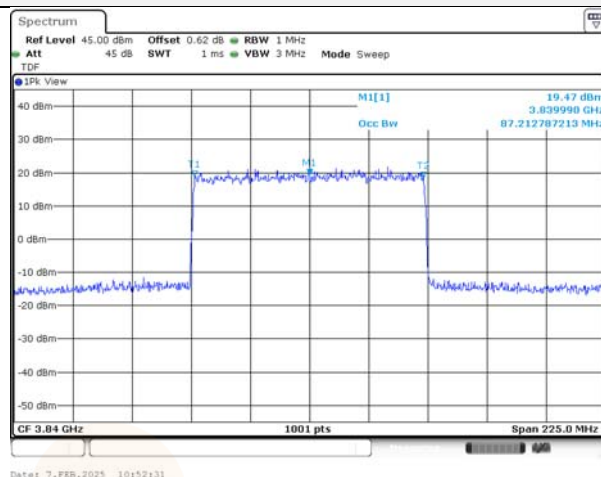
80M BW 16QAM Middle channel



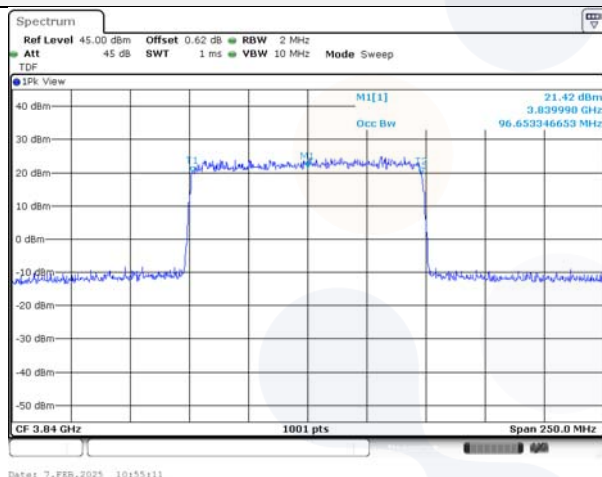
90M BW QPSK Middle channel



90M BW 16QAM Middle channel



100M BW QPSK Middle channel



100M BW 16QAM Middle channel

