



FCC RF Test Report

APPLICANT : Fibocom Wireless Inc.
EQUIPMENT : 5G Module
BRAND NAME : Fibocom
MODEL NAME : FG370-NA
FCC ID : ZMOFG370NA
STANDARD : 47 CFR Part 2, 27(M)
CLASSIFICATION : PCS Licensed Transmitter (PCB)
TEST DATE(S) : Jan. 21, 2024 ~ Apr. 28, 2024

We, Sporton International Inc. (ShenZhen), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (ShenZhen), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China



TABLE OF CONTENTS

REVISION HISTORY	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant	5
1.2 Manufacturer	5
1.3 Product Feature of Equipment Under Test	5
1.4 Product Specification of Equipment Under Test	5
1.5 Modification of EUT	6
1.6 Maximum Conducted Power and Emission Designator	7
1.7 Testing Location	12
1.8 Test Software	12
1.9 Applicable Standards	12
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	13
2.1 Test Mode	13
2.2 Connection Diagram of Test System	15
2.3 Support Unit used in test configuration and system	15
2.4 Measurement Results Explanation Example	16
2.5 Frequency List of Low/Middle/High Channels	16
3 CONDUCTED TEST ITEMS	19
3.1 Measuring Instruments	19
3.2 Test Setup	19
3.3 Test Result of Conducted Test	19
3.4 Conducted Output Power and EIRP	20
3.5 Peak-to-Average Ratio	21
3.6 Occupied Bandwidth	22
3.7 Conducted Band Edge	23
3.8 Conducted Spurious Emission	24
3.9 Frequency Stability	25
4 RADIATED TEST ITEMS	26
4.1 Measuring Instruments	26
4.2 Test Setup	26
4.3 Test Result of Radiated Test	27
4.4 Radiated Spurious Emission	28
5 LIST OF MEASURING EQUIPMENT	29
6 MEASUREMENT UNCERTAINTY	30
APPENDIX A. TEST RESULTS OF CONDUCTED TEST	
APPENDIX B. TEST RESULTS OF RADIATED TEST	
APPENDIX C. TEST SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG3D1101K	Rev. 01	Initial issue of report	May 13, 2024



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (5G NR n7, n41, n38)	EIRP < 2Watt		
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§27.53(m)(4)	Conducted Band Edge Measurement (5G NR n7, n41, n38)	§27.53(m)(4)	PASS	-
3.8	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (5G NR n7, n41, n38)	< 55+10log ₁₀ (P[Watts])	PASS	-
3.9	§27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n7, n41, n38)	< 55+10log ₁₀ (P[Watts])	PASS	Under limit 20.98 dB at 10178.00 MHz

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.



1 General Description

1.1 Applicant

Fibocom Wireless Inc.

1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan,,Shenzhen, China

1.2 Manufacturer

Fibocom Wireless Inc.

1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan,,Shenzhen, China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	5G Module
Brand Name	Fibocom
Model Name	FG370-NA
FCC ID	ZMOFG370NA
IMEI Code	Conducted : 864952060076756 Radiation : 864952060020580
HW Version	V1.0
SW Version	81140.7000.00.11.01.14
EUT Stage	Production Unit

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz
Rx Frequency	5G NR n7 : 2620 MHz ~ 2690 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz
Bandwidth	SCS 15kHz: n7: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 35MHz / 40MHz / 50MHz n38: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz n41 : 10MHz / 15MHz / 20MHz / 30MHz / 40MHz / 50MHz SCS 30kHz: n7: 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 35MHz / 40MHz / 50MHz n38: 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz n41 : 10MHz / 15MHz / 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 70MHz / 80MHz / 90MHz / 100MHz

SCS	15kHz, 30kHz
Antenna Gain	<Ant. 3>: n7: 1.05 dBi n38: -0.5 dBi n41: -0.5 dBi <Ant. 8>: n38: -0.5 dBi n41: -0.5 dBi <Ant. 1>: n41: -0.5 dBi <Ant. 6>: n41: -0.5 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum EIRP is calculated from max output power and max antenna gain, only the maximum EIRP are shown in the report, 5G NR n7/n38/n41 for Ant. 3 and n38/n41_UL MIMO for Ant.(3+8).
2. The device supports n41(1T4R) SRS resources on Ant.1/3/6/8, only the test data of worst Ant.3 is showed in the report according to the maximum power.
3. 5G NR n7/n38/n41 support SA and NSA mode. According to the maximum power between SA and NSA mode, SA covers NSA mode.
4. All the supported ENDC combinations are verified conducted power, only the ENDC combination with highest power are shown in the report.
5. 5G NR n38/n41 supports UL MIMO mode.
6. 5G NR bands support SCS 15kHz and SCS 30kHz, for n7/n38 only full test SCS 15kHz to cover SCS 30kHz by referring to the maximum output power, for n41/n41AA full test SCS 15kHz & SCS 30kHz, CA_n41C only supports SCS 30kHz.
7. The device supports HPUE mode for 5G NR n41 and PC1.5 for UL MIMO_n41.
8. 5G NR n38/n41 supports UL MIMO mode is correlated, the MIMO Antenna gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2]$. The conducted BE/Spurious are tested at single antenna port and add $10 \cdot \log(N_{ANT})$ according to KDB 662911 D01.
9. The EN-DC mode combination could be referred to the product spec.
10. For 5G NR n38/n41, there are two paths, one path for SA and other path for NSA, the two paths are same RF components thus RF only verify the power for two paths, and full test the path with maximum power.

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Maximum Conducted Power and Emission Designator

5G NR n7 _ SCS 15kHz		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	2502.5 ~ 2567.5	0.2307	4M46G7D	0.1995	4M47W7D
10	2505.0 ~ 2565.0	0.2339	9M29G7D	0.1941	9M30W7D
15	2507.5 ~ 2562.5	0.2259	14M1G7D	0.1977	14M1W7D
20	2510.0 ~ 2560.0	0.2203	19M0G7D	0.1750	18M9W7D
25	2512.5 ~ 2557.5	0.2254	23M7G7D	0.1897	23M8W7D
30	2515.0 ~ 2535.0	0.2280	28M5G7D	0.1928	28M5W7D
35	2517.5 ~ 2552.5	0.2280	33M5G7D	0.1910	33M5W7D
40	2520.0 ~ 2550.0	0.2265	38M5G7D	0.1905	38M6W7D
50	2525.0 ~ 2545.0	0.2355	48M2G7D	0.1959	48M2W7D

5G NR n38 _ SCS 15kHz		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	2572.5 ~ 2617.5	0.2259	4M48G7D	0.1832	4M46W7D
10	2575.0 ~ 2615.0	0.2123	9M28G7D	0.1706	9M29W7D
15	2577.5 ~ 2612.5	0.2138	14M1G7D	0.1730	14M1W7D
20	2580.0 ~ 2610.0	0.2133	18M9G7D	0.1750	19M0W7D
25	2582.5 ~ 2607.5	0.2148	23M7G7D	0.1641	23M8W7D
30	2585.0 ~ 2605.0	0.2173	28M5G7D	0.1667	28M6W7D
40	2590.0 ~ 2600.0	0.2275	38M6G7D	0.1991	38M6W7D

5G NR n41 – SCS 15k		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
10	2501.01 ~ 2685.00	0.4699	9M28G7D	0.3373	9M29W7D
15	2503.50 ~ 2682.495	0.4236	14M1G7D	0.3141	14M1W7D
20	2506.005 ~ 2679.99	0.4477	18M9G7D	0.3289	19M0W7D
30	2511.00 ~ 2674.995	0.4416	28M5G7D	0.3251	28M6W7D
40	2516.01 ~ 2670.00	0.4550	38M6G7D	0.3334	38M6W7D
50	2521.005 ~ 2664.99	0.4764	48M2G7D	0.3589	48M1W7D



5G NR n41 – SCS 30k		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
10	2501.01 ~ 2685.00	0.4498	8M55G7D	0.3556	8M59W7D
15	2503.50 ~ 2682.48	0.4140	13M5G7D	0.3388	13M6W7D
20	2506.02 ~ 2679.99	0.4375	18M2G7D	0.3491	18M2W7D
30	2511.00 ~ 2674.98	0.4188	27M8G7D	0.3428	27M9W7D
40	2516.01 ~ 2670.00	0.4285	37M8G7D	0.3357	37M8W7D
50	2521.02 ~ 2664.99	0.4375	47M4G7D	0.3412	47M5W7D
60	2526.00 ~ 2659.98	0.4457	57M8G7D	0.3491	57M9W7D
70	2531.01 ~ 2655.00	0.4325	67M4G7D	0.3350	67M6W7D
80	2536.02 ~ 2649.99	0.4256	77M5G7D	0.3304	77M4W7D
90	2541.00 ~ 2644.98	0.4207	87M3G7D	0.3365	87M4W7D
100	2546.01 ~ 2640.00	0.4571	97M3G7D	0.3508	97M3W7D

5G NR n38 UL MIMO – SCS 15k		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	2572.5 ~ 2617.5	0.2897	4M47G7D	0.2404	4M48W7D
10	2575.0 ~ 2615.0	0.2767	9M29G7D	0.2213	9M29W7D
15	2577.5 ~ 2612.5	0.2831	14M1G7D	0.2254	14M1W7D
20	2580.0 ~ 2610.0	0.2844	18M9G7D	0.2249	18M9W7D
25	2582.5 ~ 2607.5	0.2780	23M7G7D	0.2301	23M8W7D
30	2585.0 ~ 2605.0	0.2679	28M6G7D	0.2138	28M5W7D
40	2590.0 ~ 2600.0	0.2904	38M5G7D	0.2183	38M6W7D

5G NR n41 UL MIMO – SCS 15k		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
10	2501.01 ~ 2685.00	0.5164	9M29G7D	0.4111	9M29W7D
15	2503.50 ~ 2682.495	0.5000	14M1G7D	0.4046	14M1W7D
20	2506.005 ~ 2679.99	0.5117	18M9G7D	0.4074	18M9W7D
30	2511.00 ~ 2674.995	0.5117	28M6G7D	0.3990	28M5W7D
40	2516.01 ~ 2670.00	0.4742	38M5G7D	0.3681	38M6W7D
50	2521.005 ~ 2664.99	0.5212	48M2G7D	0.3954	48M2W7D



5G NR n41 UL MIMO– SCS 30k		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
10	2501.01 ~ 2685.00	0.4853	8M57G7D	0.3999	8M58W7D
15	2503.05 ~ 2682.48	0.4819	13M5G7D	0.4093	13M6W7D
20	2506.02 ~ 2679.99	0.4898	18M3G7D	0.3963	18M2W7D
30	2511.00 ~ 2674.98	0.4943	27M8G7D	0.3890	27M9W7D
40	2516.01 ~ 2670.00	0.4498	37M8G7D	0.3639	37M9W7D
50	2521.02 ~ 2664.99	0.4467	47M5G7D	0.3673	47M6W7D
60	2526.00 ~ 2659.98	0.4634	57M7G7D	0.3656	57M9W7D
70	2531.01 ~ 2655.00	0.4732	67M4G7D	0.3963	67M5W7D
80	2536.02 ~ 2649.99	0.4487	77M4G7D	0.3573	77M5W7D
90	2541.00 ~ 2644.98	0.4457	87M6G7D	0.3516	87M6W7D
100	2546.01 ~ 2640.00	0.5164	97M3G7D	0.4064	97M4W7D

NRCA_n41C – SCS 30k		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)		Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
NR BW 100MHz+90MHz		0.1656	186MG7D	0.1660	186MW7D
NR BW 90MHz+100MHz		0.1510	185MG7D	0.1517	186MW7D
NR BW 100MHz+80MHz		0.1507	176MG7D	0.1524	176MW7D
NR BW 80MHz+100MHz		0.1517	174MG7D	0.1517	175MW7D
NR BW 90MHz+90MHz		0.1538	175MG7D	0.1535	176MW7D
NR BW 90MHz+80MHz		0.1545	165MG7D	0.1556	167MW7D
NR BW 80MHz+90MHz		0.1528	167MG7D	0.1521	167MW7D
NR BW 100MHz+60MHz		0.1521	156MG7D	0.1524	156MW7D
NR BW 60MHz+100MHz		0.1429	157MG7D	0.1429	156MW7D
NR BW 80MHz+80MHz		0.1570	156MG7D	0.1581	157MW7D
NR BW 100MHz+50MHz		0.1503	147MG7D	0.1517	147MW7D
NR BW 50MHz+100MHz		0.1413	144MG7D	0.1413	146MW7D
NR BW 90MHz+60MHz		0.1493	147MG7D	0.1489	146MW7D
NR BW 60MHz+90MHz		0.1413	146MG7D	0.1406	146MW7D
NR BW 100MHz+40MHz		0.1503	137MG7D	0.1496	137MW7D
NR BW 40MHz+100MHz		0.1469	136MG7D	0.1500	136MW7D
NR BW 100MHz+30MHz		0.1524	126MG7D	0.1524	128MW7D
NR BW 30MHz+100MHz		0.1542	126MG7D	0.1500	128MW7D



NR BW 90MHz+50MHz	0.1517	136MG7D	0.1469	137MW7D
NR BW 50MHz+90MHz	0.1489	136MG7D	0.1449	136MW7D
NR BW 80MHz+60MHz	0.1493	136MG7D	0.1462	137MW7D
NR BW 60MHz+80MHz	0.1449	135MG7D	0.1409	137MW7D
NR BW 90MHz+40MHz	0.1507	126MG7D	0.1476	127MW7D
NR BW 40MHz+90MHz	0.1469	126MG7D	0.1432	126MW7D
NR BW 80MHz+50MHz	0.1510	126MG7D	0.1466	127MW7D
NR BW 50MHz+80MHz	0.1455	126MG7D	0.1422	126MW7D
NR BW 80MHz+30MHz	0.1507	106MG7D	0.1459	108MW7D
NR BW 30MHz+80MHz	0.0962	106MG7D	0.0625	107MW7D
NR BW 100MHz+20MHz	0.1531	118MG7D	0.1496	118MW7D
NR BW 20MHz+100MHz	0.1517	117MG7D	0.1489	117MW7D
NR BW 80MHz+40MHz	0.1486	116MG7D	0.1466	117MW7D
NR BW 40MHz+80MHz	0.1455	117MG7D	0.1432	118MW7D
NR BW 60MHz+60MHz	0.1426	117MG7D	0.1393	118MW7D
NR BW 100MHz+15MHz	0.0762	113MG7D	0.0752	113MW7D
NR BW 15MHz+100MHz	0.1507	111MG7D	0.1483	112MW7D
NR BW 100MHz+10MHz	0.1503	109MG7D	0.1472	108MW7D
NR BW 10MHz+100MHz	0.1510	107MG7D	0.1459	107MW7D
NR BW 90MHz+20MHz	0.1510	108MG7D	0.1466	108MW7D
NR BW 20MHz+90MHz	0.1510	107MG7D	0.1479	106MW7D
NR BW 90MHz+30MHz	0.1521	117MG7D	0.1486	117MW7D
NR BW 30MHz+90MHz	0.1489	117MG7D	0.1517	117MW7D
NR BW 60MHz+50MHz	0.1435	106MG7D	0.1419	107MW7D
NR BW 50MHz+60MHz	0.1435	107MG7D	0.1396	107MW7D
NR BW 90MHz+15MHz	0.1489	102MG7D	0.1466	103MW7D
NR BW 15MHz+90MHz	0.1496	102MG7D	0.1476	102MW7D

EN_DC_(n)41AA – SCS 15k		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)		Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
NR BW10MHz	LTE BW20MHz	0.3864	28M8G7D	0.3221	29M0W7D
NR BW 15MHz	LTE BW20MHz	0.3793	33M6G7D	0.3273	33M6W7D
NR BW 20MHz	LTE BW20MHz	0.3936	38M1G7D	0.2965	38M6W7D
NR BW 30MHz	LTE BW20MHz	0.4036	48M3G7D	0.3020	48M7W7D
NR BW 40MHz	LTE BW20MHz	0.4121	58M1G7D	0.3221	58M1W7D
NR BW 50MHz	LTE BW20MHz	0.4188	67M6G7D	0.3357	68M1W7D



EN_DC_(n)41AA – SCS 30k		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)		Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
NR BW10MHz	LTE BW20MHz	0.3334	28M4G7D	0.2735	28M8W7D
NR BW 15MHz	LTE BW20MHz	0.3614	32M9G7D	0.2812	32M9W7D
NR BW 20MHz	LTE BW20MHz	0.3524	38M0G7D	0.3404	38M2W7D
NR BW 30MHz	LTE BW20MHz	0.3499	47M8G7D	0.3357	47M7W7D
NR BW 40MHz	LTE BW20MHz	0.3819	57M5G7D	0.3436	57M8W7D
NR BW 50MHz	LTE BW20MHz	0.3614	67M4G7D	0.3412	67M7W7D
NR BW 60MHz	LTE BW20MHz	0.3639	77M7G7D	0.3443	77M5W7D
NR BW 80MHz	LTE BW20MHz	0.3758	97M3G7D	0.3069	97M7W7D
NR BW 90MHz	LTE BW20MHz	0.3846	108MG7D	0.3013	107MW7D
NR BW 100MHz	LTE BW20MHz	0.4121	118MG7D	0.4064	118MW7D

Note:

1. 5G NR Band n41 overlaps the entire frequency range of Band n38. Therefore, the conducted test results provided in this report covers Band n41 as well as Band n38, and 5G NR n38 additional test BW 5/25MHz for SCS 15kHz.
2. All modulations have been tested, only the worst test results of PSK & QAM are shown in the report.
3. 5G NR n41AA / n41C supported bandwidth combinations and frequency are followed 3GPP 38.508-1.

1.7 Testing Location

Sporton International Inc. (ShenZhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH01-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24

1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2, 27(M)
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane

Test Items	5G NR	Bandwidth (MHz)														Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16 QAM	64 QAM	256 QAM	1	Full	L	M	H
Max. Output Power	n7	v	v	v	v	v	v	v	v	v	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n38	v	v	v	v	v	v	-	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n41	-	v	v	v	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to- Average Ratio	n7				v						-	-	-	-	-	v	v					v		v	
	n41	-			v	-	-	-								v	v					v		v	
26dB and 99% Bandwidth	n7	v	v	v	v	v	v	v	v	v	-	-	-	-	-		v	v	v	v		v		v	
	n38	v				v		-		-	-	-	-	-	-		v	v	v	v		v		v	
	n41	-	v	v	v	-	v	-	v	v	v	v	v	v	v		v	v	v	v		v		v	
Conducted Band Edge	n7	v				v				v	-	-	-	-	-	v	v				v	v	v		v
	n38	v				v		-		-	-	-	-	-	-	v	v				v	v	v		v
	n41	-	v			-		-		v						v	v				v	v	v		v
Conducted Spurious Emission	n7	v				v				v	-	-	-	-	-	v	v				v		v	v	v
	n38	v				v		-		-	-	-	-	-	-	v	v				v		v	v	v
	n41	-	v			-		-		v						v	v				v		v	v	v
Frequency Stability	n7				v						-	-	-	-	-		v					v		v	
	n41	-			v	-		-									v					v		v	
E.R.P / E.I.R.P	n7	v	v	v	v	v	v	v	v	v	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n38	v	v	v	v	v	v	-	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n41	-	v	v	v	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	n7	Worst Case																						v	
	n38	Worst Case																						v	
	n41	Worst Case																						v	
Note	1.	The mark "v" means that this configuration is chosen for testing																							
	2.	The mark "-" means that this bandwidth is not supported.																							
	3.	The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.																							
	4.	Frequency Stability : Normal Voltage = 3.80V ; Low Voltage =3.30V. ; High Voltage =4.40V																							



Test Cases	Band	Bandwidth (MHz)	Modulation	RB #	Test Channel
		eg. 10+20M, 15+20M, 20+20, 30+20M, 35+20M, 40+20M, 50+20M, 60+20M, 70+20M, 80+20M, 90+20M, 100+20M	eg. PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L/M/H
Max. Output Power	n41AA	All supported Bandwidth	All Modulation	1RB, Full RB	L, M, H
Peak-to-Average Ratio	n41AA	20+20M	PI/2 BPSK, QPSK	Full RB	M
26dB and 99% Bandwidth	n41AA	All supported Bandwidth	QPSK, 16QAM, 64QAM, 256QAM	Full RB	M
Conducted Band Edge	n41AA	10+20M, 20+20M, 50+20M, 100+20M	PI/2 BPSK, QPSK	1RB, Full RB	L, H
Conducted Spurious Emission	n41AA	10+20M, 20+20M, 50+20M, 100+20M	PI/2 BPSK, QPSK	1RB	L, M, H
Radiated Spurious Emission	n41AA	Worst case from maximum power			M

Note:

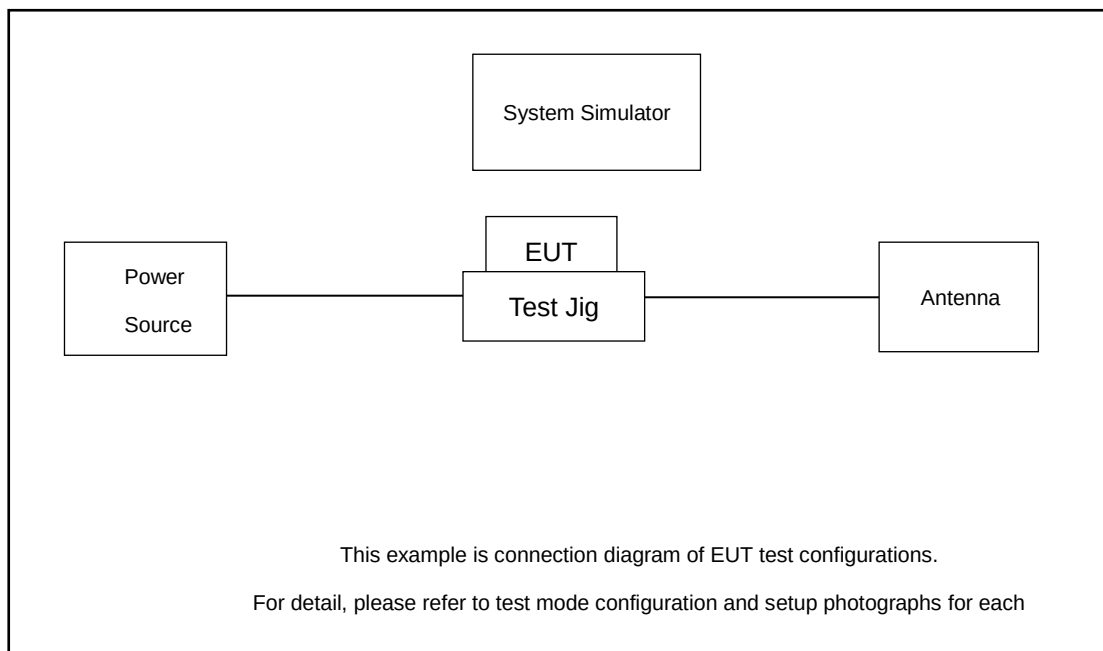
- The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.
- All test items are based on engineering evaluation.
- Frequency Stability: Normal Voltage = 3.8V ; Low Voltage =3.3V. ; High Voltage =4.4V

Test Cases	Band	Bandwidth (MHz)	Modulation	RB #	Test Channel
		eg. 10+100M, 15+90M, 15+100, 20+90M, 20+100M, 30+80M, 30+90M, 30+100M, 40+80M, 40+90M, 40+100M, 50+60M, 50+80M, 50+90M, 50+100M, 60+50M, 60+60M, 60+80M, 60+90M, 60+100M, 80+30M, 80+40M, 80+50M, 80+60M, 80+80M, 80+90M, 80+100M, 90+15M, 90+20M, 90+30M, 90+40M, 90+50M, 90+60M, 90+80M, 90+90M, 90+100M, 100+10M, 100+15M, 100+20M, 100+30M, 100+40M, 100+50M, 100+60M, 100+80M, 100+90M	eg. PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L/M/H
Max. Output Power	n41C	All supported Bandwidth	All Modulation	1RB, Full RB	L, M, H
26dB and 99% Bandwidth	n41C	All supported Bandwidth	QPSK, 16QAM, 64QAM, 256QAM	Full RB	M
Conducted Band Edge	n41C	15+90M, 100+40M, 100+90M	PI/2 BPSK, QPSK	1RB, Full RB	L, H
Conducted Spurious Emission	n41C	15+90M, 100+40M, 100+90M	PI/2 BPSK, QPSK	1RB, Full RB	L, M, H
Radiated Spurious Emission	n41C	Worst case from maximum power			M

Note:

- The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.
- All test items are based on engineering evaluation.
- Frequency Stability: Normal Voltage = 3.8V ; Low Voltage =3.3V. ; High Voltage =4.4V

2.2 Connection Diagram of Test System



The EUT has been configuration operated in a manner tended to maximize its emission characteristics in a typical application.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
4.	Antenna	N/A	N/A	N/A	N/A	N/A
5.	Adapter	N/A	N/A	N/A	N/A	N/A
6.	Test Jig	N/A	N/A	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss

Following shows an offset computation example with cable loss 8.60 dB

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} \\ &= 8.60(\text{dB}) \end{aligned}$$

2.5 Frequency List of Low/Middle/High Channels

5G NR n7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
50	Channel	505000	507000	509000
	Frequency	2525	2535	2545
40	Channel	504000	507000	510000
	Frequency	2520	2535	2550
35	Channel	503500	507000	510500
	Frequency	2517.5	2535	2552.5
30	Channel	503000	507000	511000
	Frequency	2515	2535	2555
25	Channel	502500	507000	511500
	Frequency	2512.5	2535	2557.5
20	Channel	502000	507000	512000
	Frequency	2510	2535	2560
15	Channel	501500	507000	512500
	Frequency	2507.5	2535	2562.5
10	Channel	501000	507000	513000
	Frequency	2505	2535	2565
5	Channel	500500	507000	513500
	Frequency	2502.5	2535	2567.5



5G NR n38 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	518000	519000	520000
	Frequency	2590	2595	2600
30	Channel	517000	519000	521000
	Frequency	2585	2595	2605
25	Channel	516500	519000	521500
	Frequency	2582.5	2595	2607.5
20	Channel	516000	519000	522000
	Frequency	2580	2595	2610
15	Channel	515500	519000	522500
	Frequency	2577.5	2595	2612.5
10	Channel	515000	519000	523000
	Frequency	2575	2595	2615
5	Channel	514500	519000	523500
	Frequency	2572.5	2595	2617.5

5G NR n41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
90	Channel	508200	518598	528996
	Frequency	2541	2592.99	2644.98
80	Channel	507204	518598	529998
	Frequency	2536.02	2592.99	2649.99
70	Channel	506202	518598	531000
	Frequency	2531.01	2592.99	2655
60	Channel	505200	518598	531996
	Frequency	2526	2592.99	2659.98
50	Channel	504204	518598	532998
	Frequency	2521.02	2592.99	2664.99
40	Channel	503202	518598	534000
	Frequency	2516.01	2592.99	2670
30	Channel	502200	518598	534996
	Frequency	2511	2592.99	2674.98
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99



15	Channel	500700	518598	536496
	Frequency	2503.5	2592.99	2682.48
10	Channel	500202	518598	537000
	Frequency	2501.01	2592.99	2685

Note:

For 5G NR n7/38, SCS 15kHz Covers SCS 30kHz for Bandwidths.

For 5G NR n41, SCS 30kHz Covers SCS 15kHz for Bandwidths.

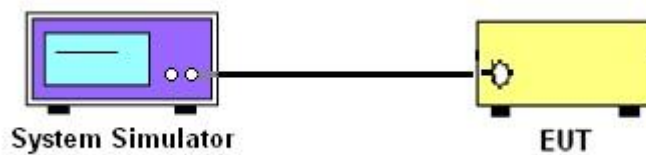
3 Conducted Test Items

3.1 Measuring Instruments

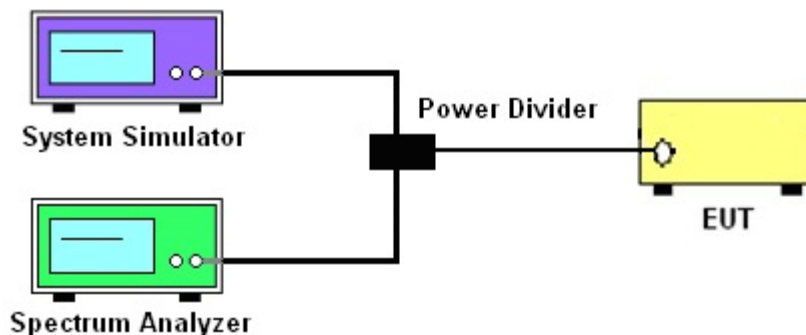
See list of measuring instruments of this test report.

3.2 Test Setup

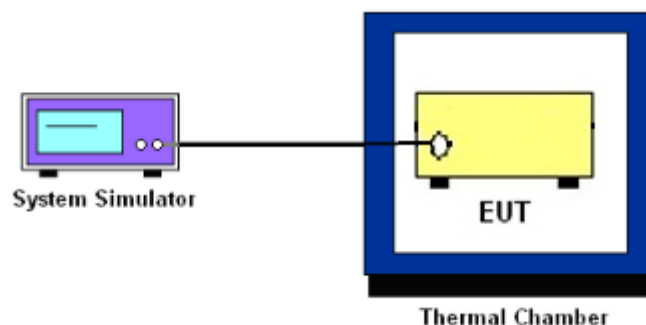
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and EIRP

3.4.1 Description of the Conducted Output Power Measurement and EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n7, n38, n41.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: 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)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. 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 down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW $\geq 1\%/2\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used or a narrower RBW was used (generally limited to no less than 1% of the OBW) and the measured power was integrated over the full required measurement bandwidth.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

Example:

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}.$$

9. For 5G NR n7/n38/n41, the other 40 dB, and 55 dB have additionally applied same calculation above.
10. When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For 5G NR n7/n38/n41:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.
11. For 5G NR n7/n38/n41
The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at 20±5°C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

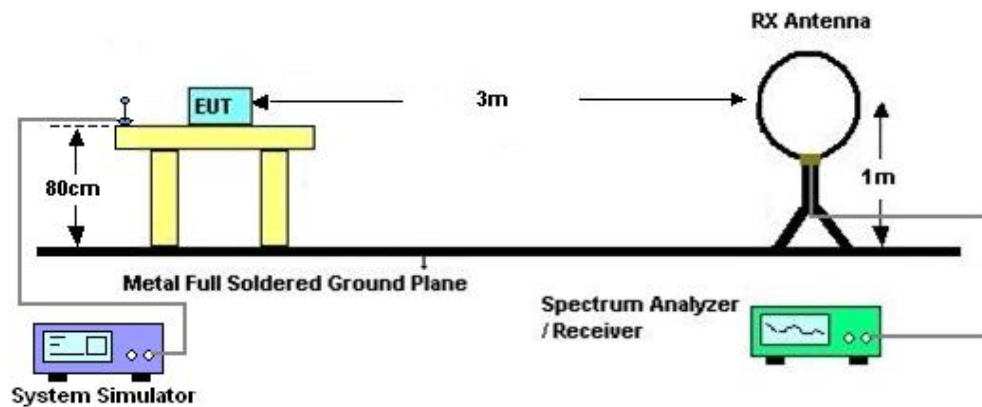
4 Radiated Test Items

4.1 Measuring Instruments

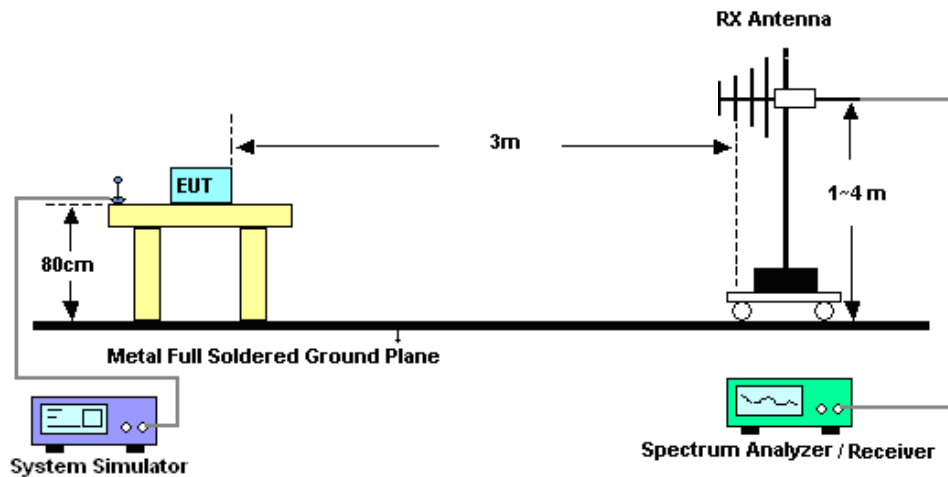
See list of measuring instruments of this test report.

4.2 Test Setup

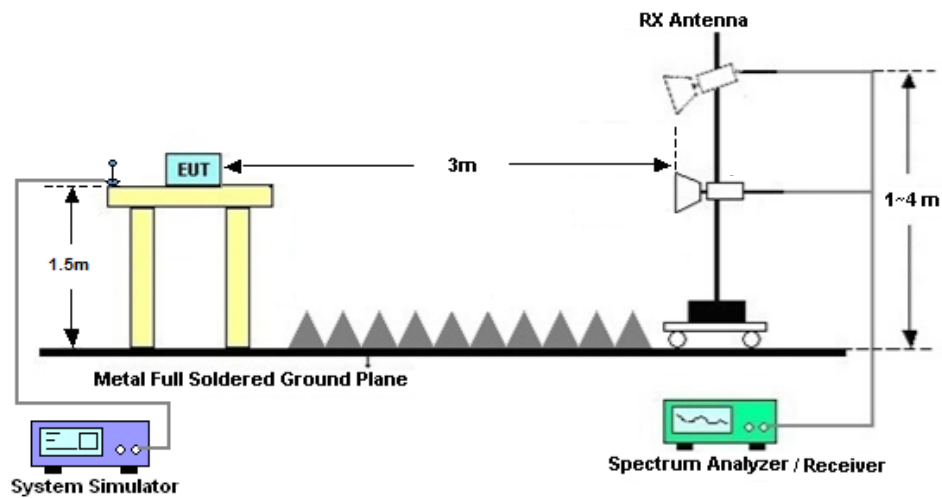
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For 5G NR n7/n38/n41

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

13. For 5G NR n7/n38/n41:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 05, 2023	Jan. 27, 2024~ Apr. 26, 2024	Apr. 04, 2024	Conducted (TH01-SZ)
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 04, 2024		Apr. 03, 2025	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 07, 2023	Jan. 27, 2024~ Apr. 26, 2024	Jul. 06, 2024	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2023	Jan. 27, 2024~ Apr. 26, 2024	Dec. 24, 2024	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 05, 2023	Jan. 27, 2024~ Apr. 26, 2024	Jul. 04, 2024	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 27, 2023	Jan. 21, 2024~ Apr. 28, 2024	Dec. 26, 2024	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul. 28, 2022	Jan. 21, 2024~ Apr. 28, 2024	Jul. 27, 2024	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 18, 2023	Jan. 21, 2024~ Apr. 28, 2024	Oct. 17, 2024	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Jan. 21, 2024~ Apr. 28, 2024	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 08, 2023	Jan. 21, 2024~ Apr. 28, 2024	Jul. 07, 2024	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 08, 2023	Jan. 21, 2024~ Apr. 28, 2024	Apr. 07, 2024	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 07, 2024		Apr. 06, 2025	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 04, 2023	Jan. 21, 2024~ Apr. 28, 2024	Apr. 03, 2024	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 03, 2024		Apr. 02, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 18, 2023	Jan. 21, 2024~ Apr. 28, 2024	Oct. 17, 2024	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 07, 2023	Jan. 21, 2024~ Apr. 28, 2024	Jul. 06, 2024	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Oct. 18, 2023	Jan. 21, 2024~ Apr. 28, 2024	Oct. 17, 2024	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jan. 21, 2024~ Apr. 28, 2024	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jan. 21, 2024~ Apr. 28, 2024	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required

6 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	± 1.34 dB
Occupied Channel Bandwidth	± 0.012 MHz
Conducted Power	± 1.34 dB
Peak to Average Ratio	± 1.34 dB
Frequency Stability	± 1.3 Hz

Uncertainty of Radiated Emission Measurement (9 KHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.80dB
--	--------

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.48dB
--	--------

Uncertainty of Radiated Emission Measurement (1GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.53dB
--	--------

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.02dB
--	--------

----- THE END -----



Appendix A. Test Results of Conducted Test

Test Engineer :	Hank Lin	Temperature :	24~26°C
		Relative Humidity :	50~53%

FR1 N7(ANT3) – SCS 15k

Transmitter Conducted Output Power and EIRP, ($G_T - L_C$)=1.05 dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
7	15	5	500500	2502.5	DFT-s-OFDM QPSK	1@1	23.56	24.61	0.2891
7	15	5	500500	2502.5	DFT-s-OFDM 16 QAM	1@1	22.67	23.72	0.2355
7	15	5	507000	2535	DFT-s-OFDM QPSK	1@1	23.63	24.68	0.2938
7	15	5	507000	2535	DFT-s-OFDM 16 QAM	1@1	23	24.05	0.2541
7	15	5	513500	2567.5	DFT-s-OFDM QPSK	1@1	22.86	23.91	0.2460
7	15	5	513500	2567.5	DFT-s-OFDM 16 QAM	1@1	22.25	23.3	0.2138
7	15	10	501000	2505	DFT-s-OFDM QPSK	1@1	23.31	24.36	0.2729
7	15	10	501000	2505	DFT-s-OFDM 16 QAM	1@1	22.53	23.58	0.2280
7	15	10	507000	2535	DFT-s-OFDM QPSK	1@1	23.69	24.74	0.2979
7	15	10	507000	2535	DFT-s-OFDM 16 QAM	1@1	22.88	23.93	0.2472
7	15	10	513000	2565	DFT-s-OFDM QPSK	1@1	23.57	24.62	0.2897
7	15	10	513000	2565	DFT-s-OFDM 16 QAM	1@1	22.66	23.71	0.2350
7	15	15	501500	2507.5	DFT-s-OFDM QPSK	1@1	23.37	24.42	0.2767
7	15	15	501500	2507.5	DFT-s-OFDM 16 QAM	1@1	22.56	23.61	0.2296
7	15	15	507000	2535	DFT-s-OFDM QPSK	1@1	23.54	24.59	0.2877
7	15	15	507000	2535	DFT-s-OFDM 16 QAM	1@1	22.96	24.01	0.2518
7	15	15	512500	2562.5	DFT-s-OFDM QPSK	1@1	23.4	24.45	0.2786
7	15	15	512500	2562.5	DFT-s-OFDM 16 QAM	1@1	22.48	23.53	0.2254
7	15	20	502000	2510	DFT-s-OFDM QPSK	1@1	23.17	24.22	0.2642
7	15	20	502000	2510	DFT-s-OFDM 16 QAM	1@1	22.26	23.31	0.2143
7	15	20	507000	2535	DFT-s-OFDM QPSK	1@1	23.4	24.45	0.2786
7	15	20	507000	2535	DFT-s-OFDM 16 QAM	1@1	22.43	23.48	0.2228
7	15	20	512000	2560	DFT-s-OFDM QPSK	1@1	23.43	24.48	0.2805
7	15	20	512000	2560	DFT-s-OFDM 16 QAM	1@1	22.29	23.34	0.2158
7	15	25	502500	2512.5	DFT-s-OFDM QPSK	1@1	23.53	24.58	0.2871

7	15	25	502500	2512.5	DFT-s-OFDM 16 QAM	1@1	22.78	23.83	0.2415
7	15	25	507000	2535	DFT-s-OFDM QPSK	1@1	23.37	24.42	0.2767
7	15	25	507000	2535	DFT-s-OFDM 16 QAM	1@1	22.49	23.54	0.2259
7	15	25	511500	2557.5	DFT-s-OFDM QPSK	1@1	23.19	24.24	0.2655
7	15	25	511500	2557.5	DFT-s-OFDM 16 QAM	1@1	22.24	23.29	0.2133
7	15	30	503000	2515	DFT-s-OFDM QPSK	1@1	23.58	24.63	0.2904
7	15	30	503000	2515	DFT-s-OFDM 16 QAM	1@1	22.85	23.9	0.2455
7	15	30	507000	2535	DFT-s-OFDM QPSK	1@1	23.4	24.45	0.2786
7	15	30	507000	2535	DFT-s-OFDM 16 QAM	1@1	22.49	23.54	0.2259
7	15	30	511000	2555	DFT-s-OFDM QPSK	1@1	23.32	24.37	0.2735
7	15	30	511000	2555	DFT-s-OFDM 16 QAM	1@1	22.38	23.43	0.2203
7	15	35	503500	2517.5	DFT-s-OFDM QPSK	1@1	23.58	24.63	0.2904
7	15	35	503500	2517.5	DFT-s-OFDM 16 QAM	1@1	22.81	23.86	0.2432
7	15	35	507000	2535	DFT-s-OFDM QPSK	1@1	23.43	24.48	0.2805
7	15	35	507000	2535	DFT-s-OFDM 16 QAM	1@1	22.55	23.6	0.2291
7	15	35	510500	2552.5	DFT-s-OFDM QPSK	1@1	23.28	24.33	0.2710
7	15	35	510500	2552.5	DFT-s-OFDM 16 QAM	1@1	22.36	23.41	0.2193
7	15	40	504000	2520	DFT-s-OFDM QPSK	1@1	23.55	24.6	0.2884
7	15	40	504000	2520	DFT-s-OFDM 16 QAM	1@1	22.8	23.85	0.2427
7	15	40	507000	2535	DFT-s-OFDM QPSK	1@1	23.5	24.55	0.2851
7	15	40	507000	2535	DFT-s-OFDM 16 QAM	1@1	22.69	23.74	0.2366
7	15	40	510000	2550	DFT-s-OFDM QPSK	1@1	23.34	24.39	0.2748
7	15	40	510000	2550	DFT-s-OFDM 16 QAM	1@1	22.36	23.41	0.2193
7	15	50	505000	2525	DFT-s-OFDM PI/2 BPSK	135@67	23.59	24.64	0.2911
7	15	50	505000	2525	DFT-s-OFDM PI/2 BPSK	1@1	23.6	24.65	0.2917
7	15	50	505000	2525	DFT-s-OFDM PI/2 BPSK	1@268	23.61	24.66	0.2924
7	15	50	505000	2525	DFT-s-OFDM QPSK	135@67	23.62	24.67	0.2931
7	15	50	505000	2525	DFT-s-OFDM QPSK	1@1	23.49	24.54	0.2844
7	15	50	505000	2525	DFT-s-OFDM QPSK	1@268	23.45	24.5	0.2818
7	15	50	505000	2525	DFT-s-OFDM 16 QAM	135@67	22.65	23.7	0.2344
7	15	50	505000	2525	DFT-s-OFDM 16 QAM	1@1	22.6	23.65	0.2317

7	15	50	505000	2525	DFT-s-OFDM 16 QAM	1@268	22.59	23.64	0.2312
7	15	50	505000	2525	DFT-s-OFDM 64 QAM	135@67	21.19	22.24	0.1675
7	15	50	505000	2525	DFT-s-OFDM 64 QAM	1@1	21.27	22.32	0.1706
7	15	50	505000	2525	DFT-s-OFDM 64 QAM	1@268	21.26	22.31	0.1702
7	15	50	505000	2525	DFT-s-OFDM 256 QAM	135@67	19.1	20.15	0.1035
7	15	50	505000	2525	DFT-s-OFDM 256 QAM	1@1	19.05	20.1	0.1023
7	15	50	505000	2525	DFT-s-OFDM 256 QAM	1@268	19.04	20.09	0.1021
7	15	50	505000	2525	CP-OFDM QPSK	135@67	22.1	23.15	0.2065
7	15	50	505000	2525	CP-OFDM QPSK	1@1	22	23.05	0.2018
7	15	50	505000	2525	CP-OFDM QPSK	1@268	22.24	23.29	0.2133
7	15	50	507000	2535	DFT-s-OFDM PI/2 BPSK	135@67	23.61	24.66	0.2924
7	15	50	507000	2535	DFT-s-OFDM PI/2 BPSK	1@1	23.44	24.49	0.2812
7	15	50	507000	2535	DFT-s-OFDM PI/2 BPSK	1@268	23.59	24.64	0.2911
7	15	50	507000	2535	DFT-s-OFDM QPSK	135@67	23.72	24.77	0.2999
7	15	50	507000	2535	DFT-s-OFDM QPSK	1@1	23.4	24.45	0.2786
7	15	50	507000	2535	DFT-s-OFDM QPSK	1@268	23.42	24.47	0.2799
7	15	50	507000	2535	DFT-s-OFDM 16 QAM	135@67	22.65	23.7	0.2344
7	15	50	507000	2535	DFT-s-OFDM 16 QAM	1@1	22.54	23.59	0.2286
7	15	50	507000	2535	DFT-s-OFDM 16 QAM	1@268	22.68	23.73	0.2360
7	15	50	507000	2535	DFT-s-OFDM 64 QAM	135@67	21.18	22.23	0.1671
7	15	50	507000	2535	DFT-s-OFDM 64 QAM	1@1	21.22	22.27	0.1687
7	15	50	507000	2535	DFT-s-OFDM 64 QAM	1@268	21.31	22.36	0.1722
7	15	50	507000	2535	DFT-s-OFDM 256 QAM	135@67	19.16	20.21	0.1050
7	15	50	507000	2535	DFT-s-OFDM 256 QAM	1@1	18.97	20.02	0.1005
7	15	50	507000	2535	DFT-s-OFDM 256 QAM	1@268	19.02	20.07	0.1016
7	15	50	507000	2535	CP-OFDM QPSK	135@67	22.15	23.2	0.2089
7	15	50	507000	2535	CP-OFDM QPSK	1@1	21.91	22.96	0.1977
7	15	50	507000	2535	CP-OFDM QPSK	1@268	21.94	22.99	0.1991
7	15	50	509000	2545	DFT-s-OFDM PI/2 BPSK	135@67	23.6	24.65	0.2917
7	15	50	509000	2545	DFT-s-OFDM PI/2 BPSK	1@1	23.48	24.53	0.2838
7	15	50	509000	2545	DFT-s-OFDM PI/2 BPSK	1@268	23.53	24.58	0.2871

7	15	50	509000	2545	DFT-s-OFDM QPSK	135@67	23.65	24.7	0.2951
7	15	50	509000	2545	DFT-s-OFDM QPSK	1@1	23.41	24.46	0.2793
7	15	50	509000	2545	DFT-s-OFDM QPSK	1@268	23.42	24.47	0.2799
7	15	50	509000	2545	DFT-s-OFDM 16 QAM	135@67	22.69	23.74	0.2366
7	15	50	509000	2545	DFT-s-OFDM 16 QAM	1@1	22.53	23.58	0.2280
7	15	50	509000	2545	DFT-s-OFDM 16 QAM	1@268	22.92	23.97	0.2495
7	15	50	509000	2545	DFT-s-OFDM 64 QAM	135@67	21.23	22.28	0.1690
7	15	50	509000	2545	DFT-s-OFDM 64 QAM	1@1	21.17	22.22	0.1667
7	15	50	509000	2545	DFT-s-OFDM 64 QAM	1@268	21.41	22.46	0.1762
7	15	50	509000	2545	DFT-s-OFDM 256 QAM	135@67	19.16	20.21	0.1050
7	15	50	509000	2545	DFT-s-OFDM 256 QAM	1@1	18.97	20.02	0.1005
7	15	50	509000	2545	DFT-s-OFDM 256 QAM	1@268	19.08	20.13	0.1030
7	15	50	509000	2545	CP-OFDM QPSK	135@67	22.23	23.28	0.2128
7	15	50	509000	2545	CP-OFDM QPSK	1@1	22.05	23.1	0.2042
7	15	50	509000	2545	CP-OFDM QPSK	1@268	22.25	23.3	0.2138

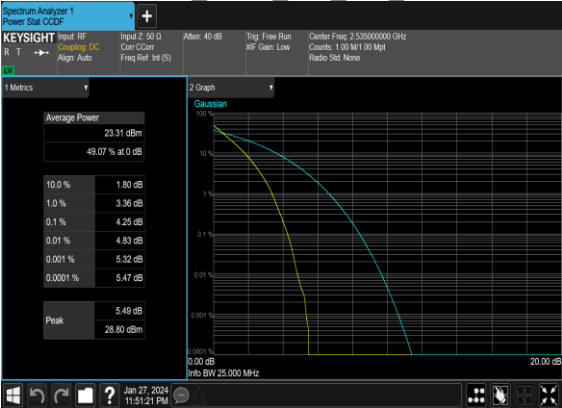
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0069	PASS	NV
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0028	PASS	LV
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0039	PASS	HV
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0025	PASS	-30°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0031	PASS	-20°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0055	PASS	-10°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0041	PASS	0°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0022	PASS	10°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0069	PASS	20°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0057	PASS	30°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0024	PASS	40°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0037	PASS	50°C

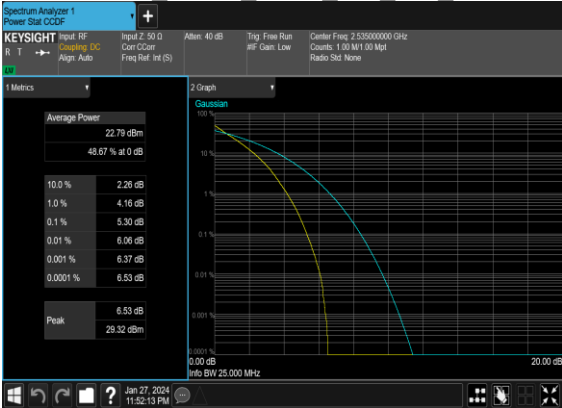
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
7	15	20	507000	2535.0	DFT-s-OFDM PI/2 BPSK	100@0	4.25	13	PASS
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	5.3	13	PASS

N7(20M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Mid_CH



N7(20M)_DFT-s-
OFDM_QPSK_Outer_Full_Mid_CH

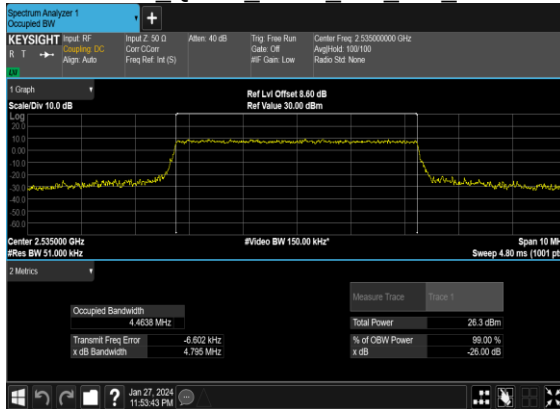


Occupied Bandwidth

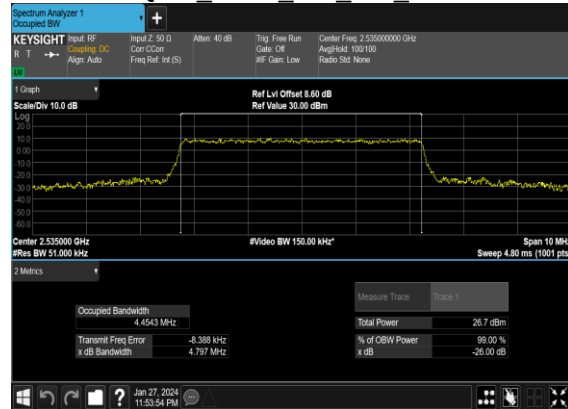
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
7	15	5	507000	2535.0	CP-OFDM QPSK	25@0	4.4638	4.795
7	15	5	507000	2535.0	CP-OFDM 16 QAM	25@0	4.4543	4.797
7	15	5	507000	2535.0	CP-OFDM 64 QAM	25@0	4.4624	4.788
7	15	5	507000	2535.0	CP-OFDM 256 QAM	25@0	4.4664	4.83
7	15	10	507000	2535.0	CP-OFDM QPSK	52@0	9.285	9.736
7	15	10	507000	2535.0	CP-OFDM 16 QAM	52@0	9.2719	9.689
7	15	10	507000	2535.0	CP-OFDM 64 QAM	52@0	9.2917	9.727
7	15	10	507000	2535.0	CP-OFDM 256 QAM	52@0	9.2996	9.738
7	15	15	507000	2535.0	CP-OFDM QPSK	79@0	14.09	14.7
7	15	15	507000	2535.0	CP-OFDM 16 QAM	79@0	14.108	14.63
7	15	15	507000	2535.0	CP-OFDM 64 QAM	79@0	14.101	14.65
7	15	15	507000	2535.0	CP-OFDM 256 QAM	79@0	14.08	14.7
7	15	20	507000	2535.0	CP-OFDM QPSK	106@0	18.95	19.7
7	15	20	507000	2535.0	CP-OFDM 16 QAM	106@0	18.924	19.69
7	15	20	507000	2535.0	CP-OFDM 64 QAM	106@0	18.948	19.63
7	15	20	507000	2535.0	CP-OFDM 256 QAM	106@0	18.896	19.66
7	15	25	507000	2535.0	CP-OFDM QPSK	133@0	23.704	24.61
7	15	25	507000	2535.0	CP-OFDM 16 QAM	133@0	23.746	24.74
7	15	25	507000	2535.0	CP-OFDM 64 QAM	133@0	23.783	24.67
7	15	25	507000	2535.0	CP-OFDM 256 QAM	133@0	23.778	24.69
7	15	30	507000	2535.0	CP-OFDM QPSK	160@0	28.52	29.74
7	15	30	507000	2535.0	CP-OFDM 16 QAM	160@0	28.528	29.63
7	15	30	507000	2535.0	CP-OFDM 64 QAM	160@0	28.518	29.56
7	15	30	507000	2535.0	CP-OFDM 256 QAM	160@0	28.499	29.62
7	15	35	507000	2535.0	CP-OFDM QPSK	188@0	33.499	34.78

7	15	35	507000	2535.0	CP-OFDM 16 QAM	188@0	33.531	34.7
7	15	35	507000	2535.0	CP-OFDM 64 QAM	188@0	33.534	34.86
7	15	35	507000	2535.0	CP-OFDM 256 QAM	188@0	33.501	34.82
7	15	40	507000	2535.0	CP-OFDM QPSK	216@0	38.482	39.85
7	15	40	507000	2535.0	CP-OFDM 16 QAM	216@0	38.523	39.83
7	15	40	507000	2535.0	CP-OFDM 64 QAM	216@0	38.647	39.98
7	15	40	507000	2535.0	CP-OFDM 256 QAM	216@0	38.542	39.96
7	15	50	507000	2535.0	CP-OFDM QPSK	270@0	48.183	49.83
7	15	50	507000	2535.0	CP-OFDM 16 QAM	270@0	48.119	49.74
7	15	50	507000	2535.0	CP-OFDM 64 QAM	270@0	48.155	49.77
7	15	50	507000	2535.0	CP-OFDM 256 QAM	270@0	48.178	49.79

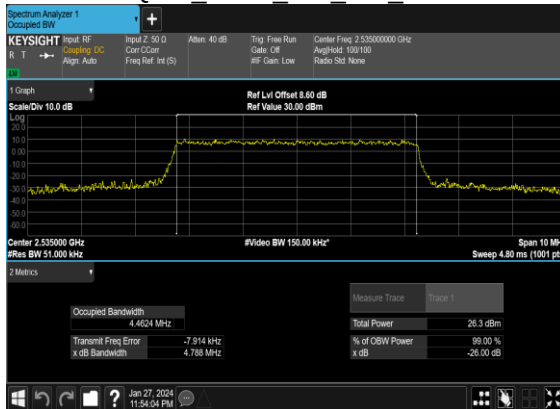
N7(5M)_CP-OFDM_QPSK Outer Full Mid CH



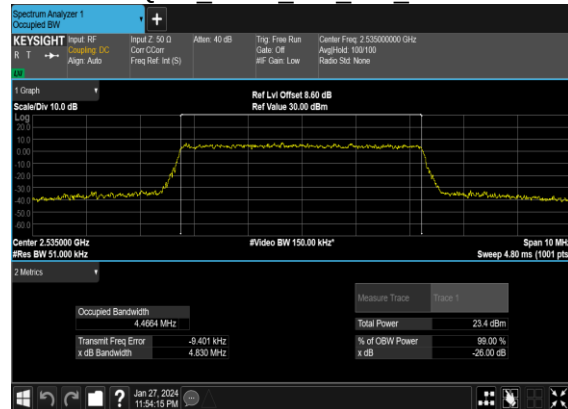
N7(5M)_CP-OFDM_16QAM Outer Full Mid CH



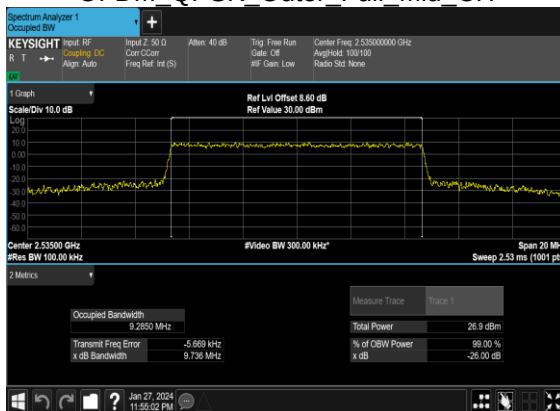
N7(5M)_CP-OFDM_64QAM Outer Full Mid CH



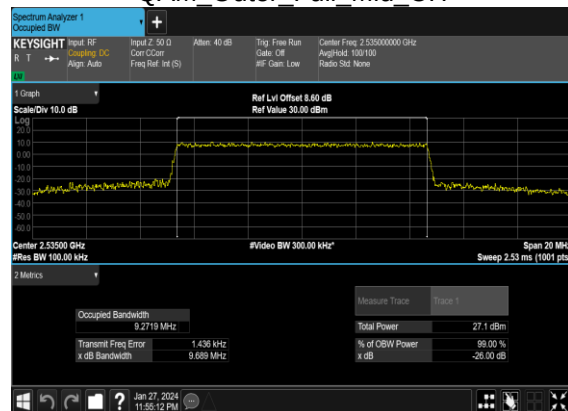
N7(5M)_CP-OFDM_256QAM Outer Full Mid CH



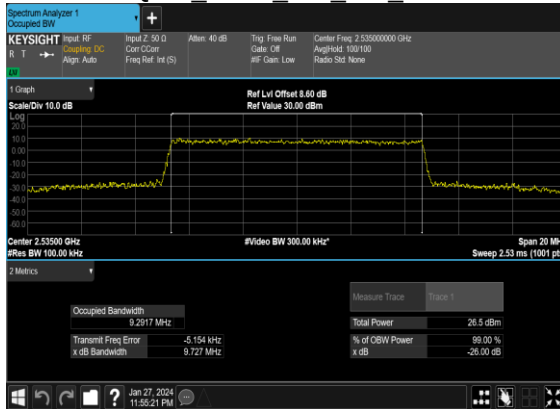
N7(10M)_CP-OFDM_QPSK Outer Full Mid CH



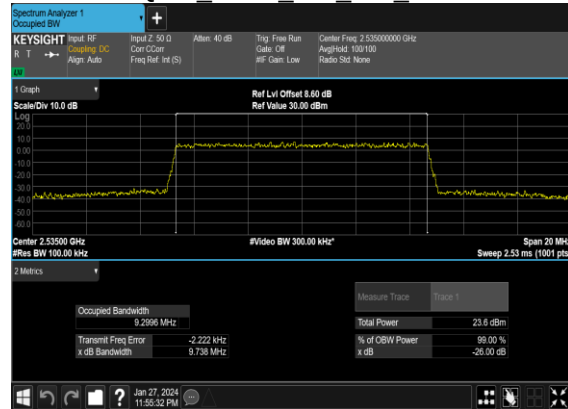
N7(10M)_CP-OFDM_16QAM Outer Full Mid CH



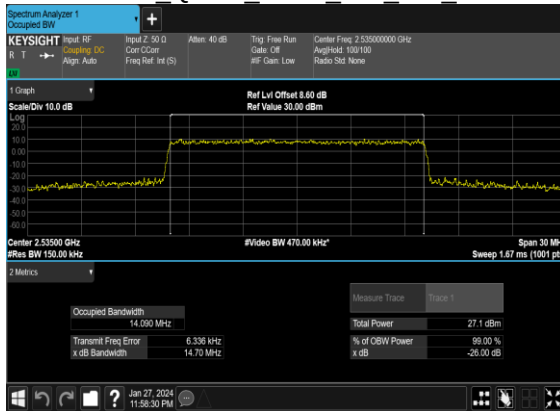
N7(10M)_CP-OFDM_64
QAM Outer Full Mid CH



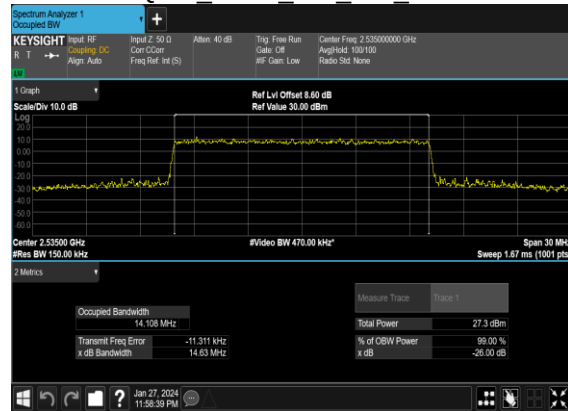
N7(10M)_CP-OFDM_256
QAM Outer Full Mid CH



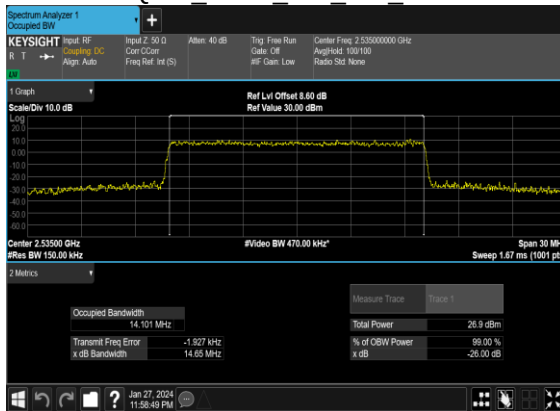
N7(15M)_CP-OFDM_QPSK Outer Full Mid CH



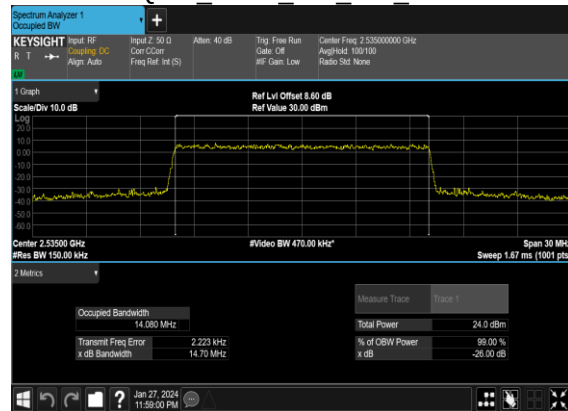
N7(15M)_CP-OFDM_16
QAM Outer Full Mid CH



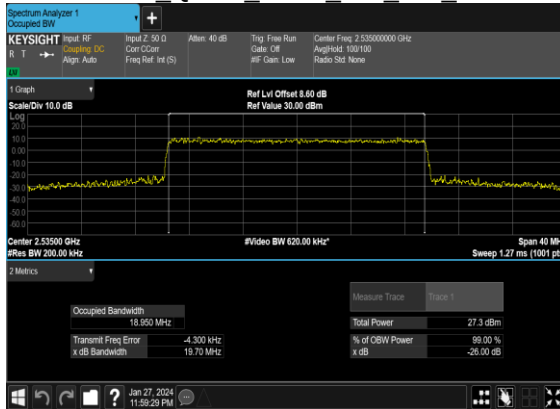
N7(15M)_CP-OFDM_64
QAM Outer Full Mid CH



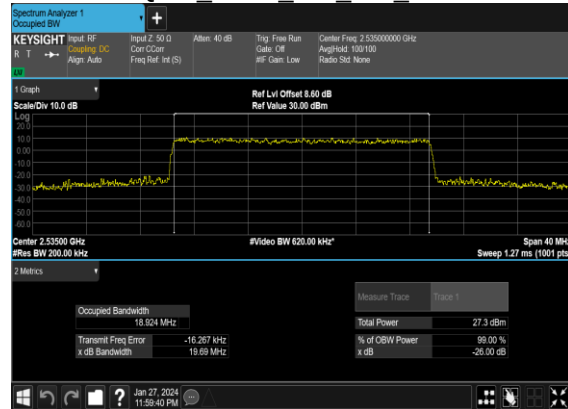
N7(15M)_CP-OFDM_256
QAM Outer Full Mid CH



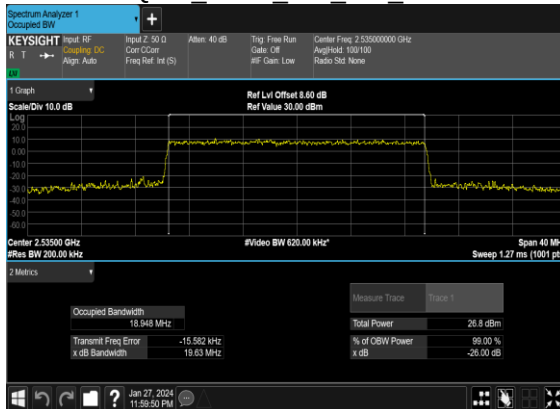
N7(20M)_CP-OFDM_QPSK Outer Full Mid CH



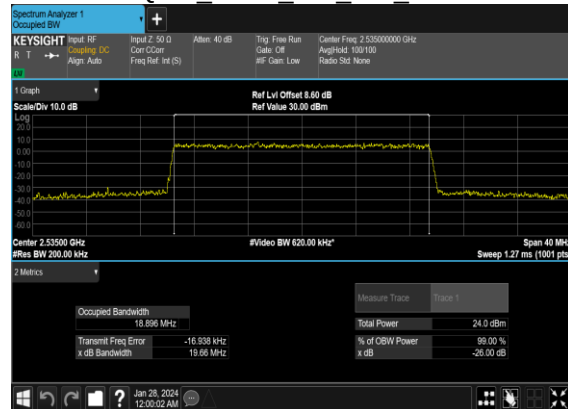
N7(20M)_CP-OFDM_16QAM Outer Full Mid CH



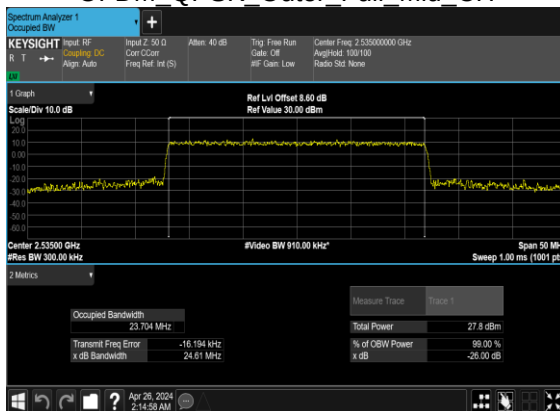
N7(20M)_CP-OFDM_64QAM Outer Full Mid CH



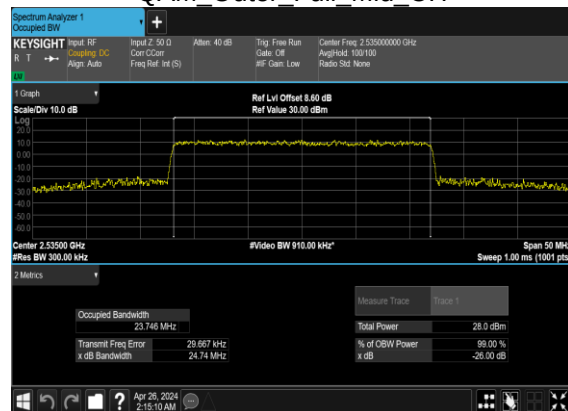
N7(20M)_CP-OFDM_256QAM Outer Full Mid CH



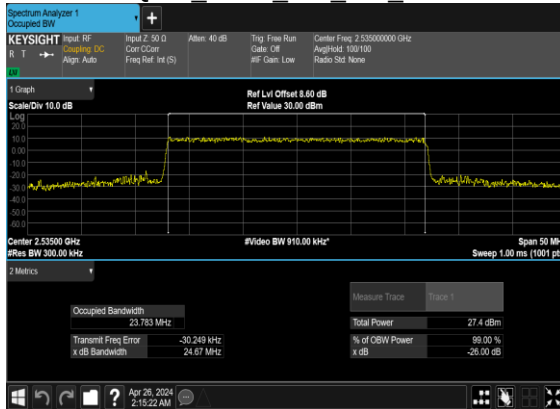
N7(25M)_CP-OFDM_QPSK Outer Full Mid CH



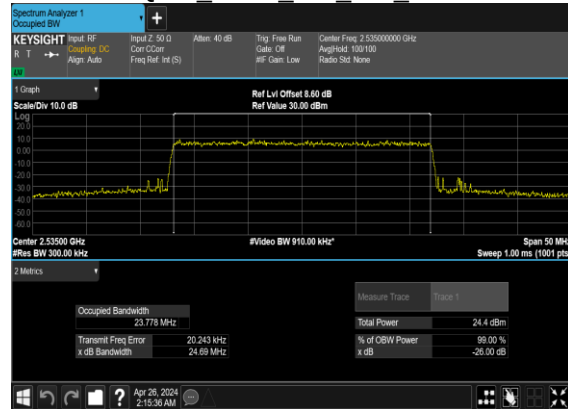
N7(25M)_CP-OFDM_16QAM Outer Full Mid CH



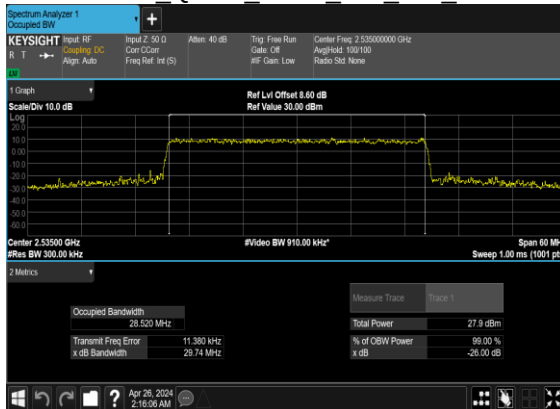
N7(25M)_CP-OFDM_64
QAM Outer Full Mid CH



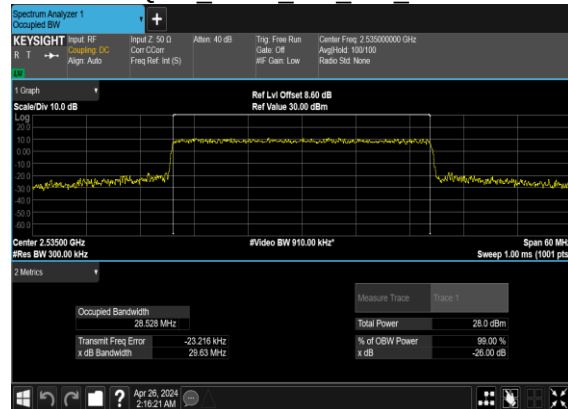
N7(25M)_CP-OFDM_256
QAM Outer Full Mid CH



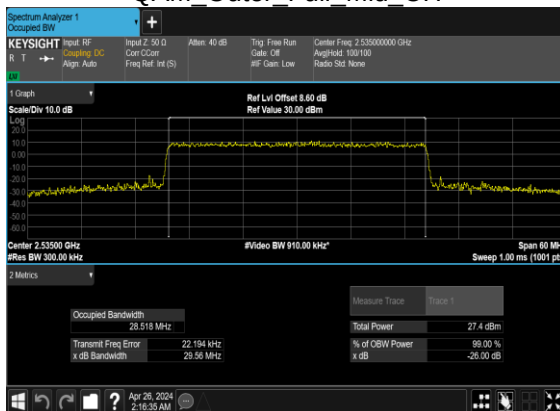
N7(30M)_CP-OFDM_QPSK Outer Full Mid CH



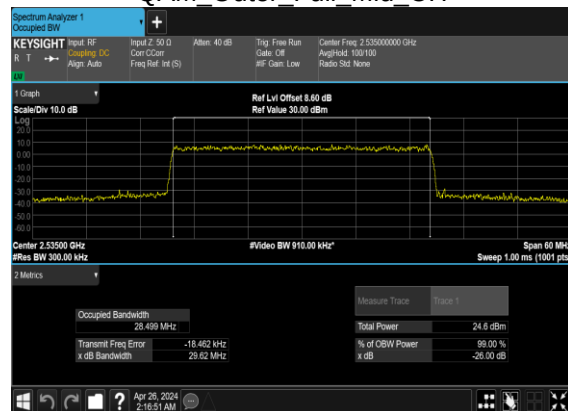
N7(30M)_CP-OFDM_16
QAM Outer Full Mid CH



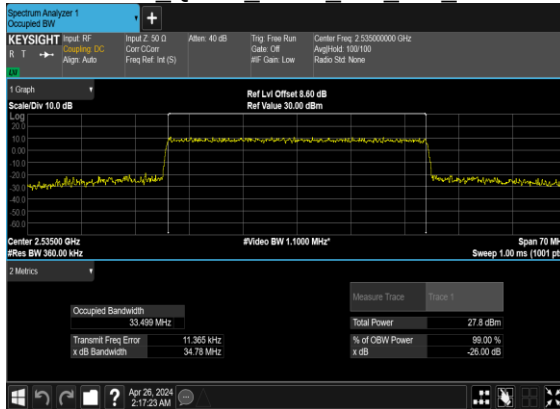
N7(30M)_CP-OFDM_64
QAM Outer Full Mid CH



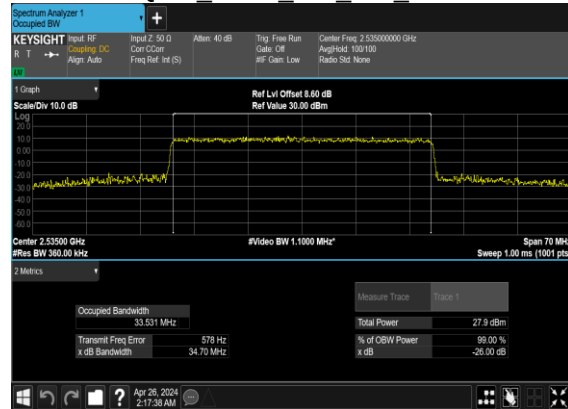
N7(30M)_CP-OFDM_256
QAM Outer Full Mid CH



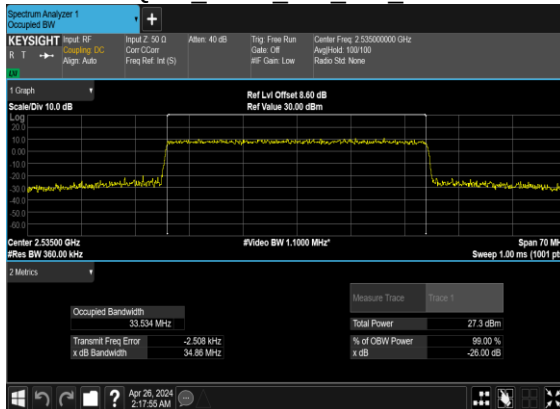
N7(35M)_CP- OFDM_QPSK Outer Full Mid CH



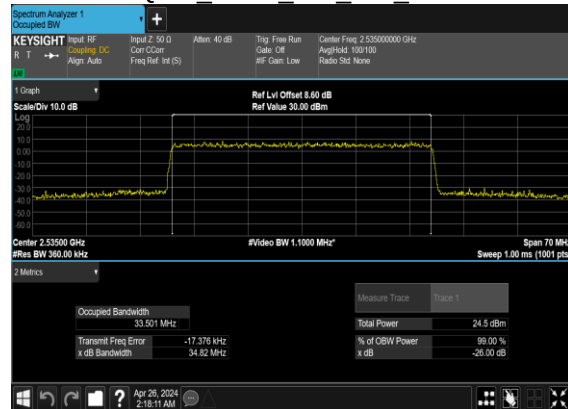
N7(35M)_CP-OFDM_16 QAM Outer Full Mid CH



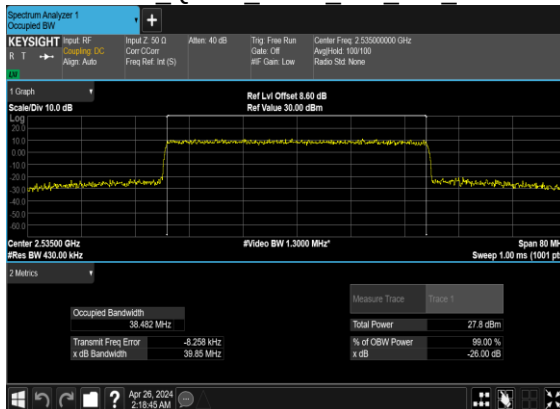
N7(35M)_CP-OFDM_64 QAM Outer Full Mid CH



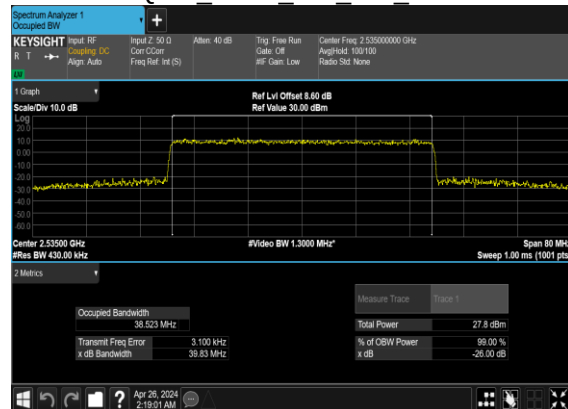
N7(35M)_CP-OFDM_256 QAM Outer Full Mid CH



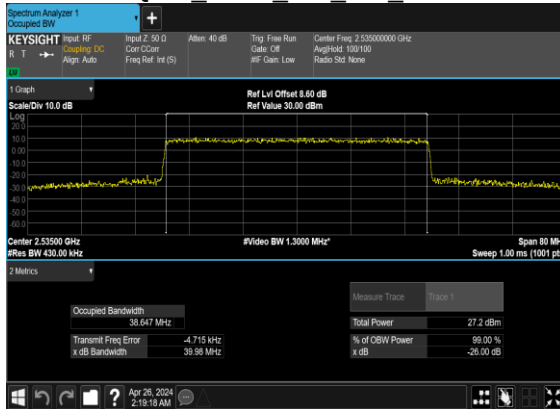
N7(40M)_CP- OFDM_QPSK Outer Full Mid CH



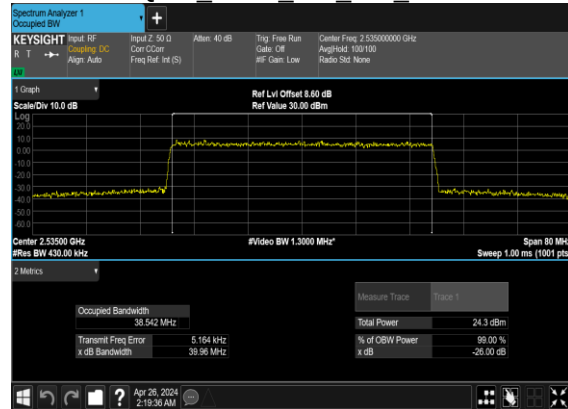
N7(40M)_CP-OFDM_16 QAM Outer Full Mid CH



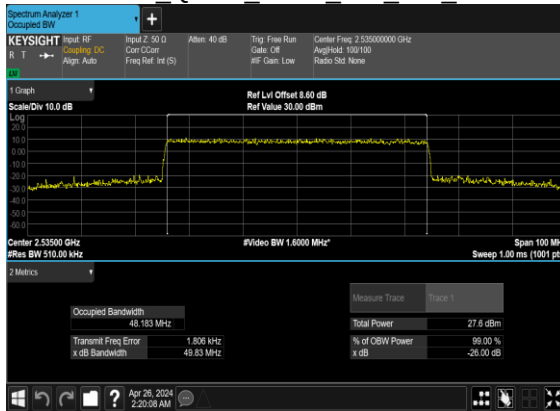
N7(40M)_CP-OFDM_64
QAM Outer Full Mid CH



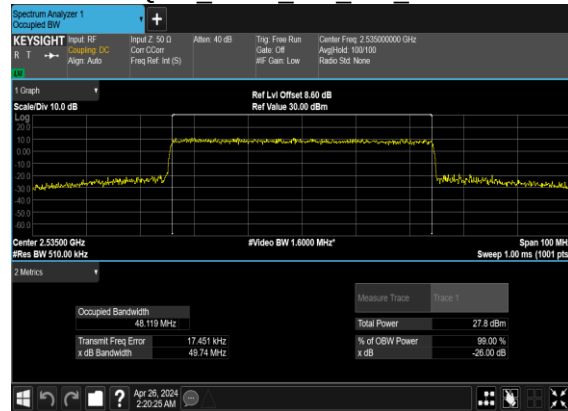
N7(40M)_CP-OFDM_256
QAM Outer Full Mid CH



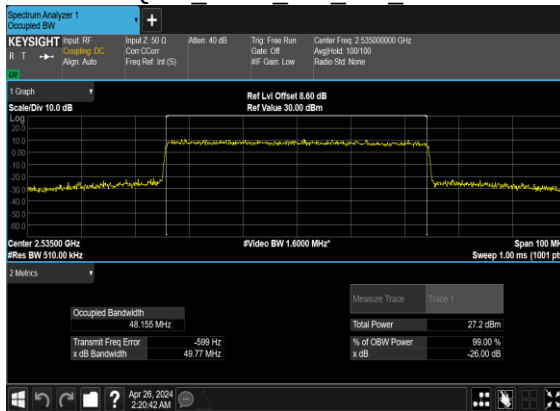
N7(50M)_CP-OFDM_QPSK Outer Full Mid CH



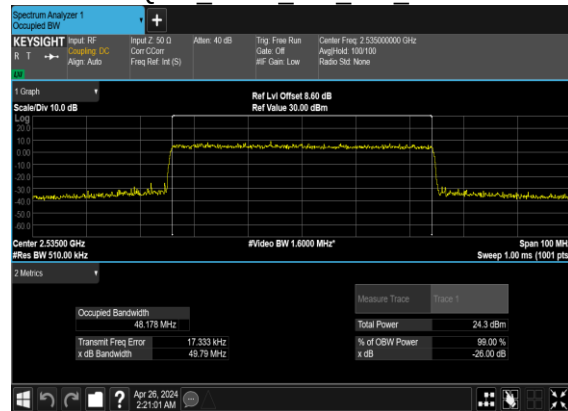
N7(50M)_CP-OFDM_16
QAM Outer Full Mid CH



N7(50M)_CP-OFDM_64
QAM Outer Full Mid CH



N7(50M)_CP-OFDM_256
QAM Outer Full Mid CH



Conducted Spurious Emissions

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
7	15	5	500500	2502.5	DFT-s-OFDM BPSK	1@0	see graph	---
7	15	5	500500	2502.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	5	500500	2502.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	5	500500	2502.5	DFT-s-OFDM QPSK	1@0	see graph	---
7	15	5	500500	2502.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	5	500500	2502.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	5	507000	2535.0	DFT-s-OFDM BPSK	1@0	see graph	---
7	15	5	507000	2535.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	5	507000	2535.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	5	507000	2535.0	DFT-s-OFDM QPSK	1@0	see graph	---
7	15	5	507000	2535.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	5	507000	2535.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	5	513500	2567.5	DFT-s-OFDM BPSK	1@0	see graph	---
7	15	5	513500	2567.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	5	513500	2567.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	5	513500	2567.5	DFT-s-OFDM QPSK	1@0	see graph	---
7	15	5	513500	2567.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	5	513500	2567.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	25	502500	2512.5	DFT-s-OFDM BPSK	1@0	see graph	---
7	15	25	502500	2512.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	25	502500	2512.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	25	502500	2512.5	DFT-s-OFDM QPSK	1@0	see graph	---

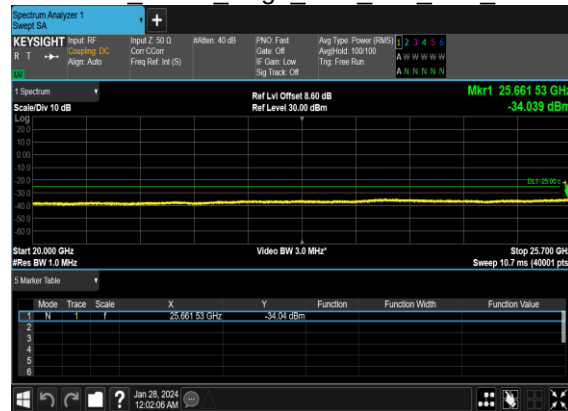
7	15	25	502500	2512.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	25	502500	2512.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	25	507000	2535.0	DFT-s-OFDM BPSK	1@0	see graph	---
7	15	25	507000	2535.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	25	507000	2535.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	25	507000	2535.0	DFT-s-OFDM QPSK	1@0	see graph	---
7	15	25	507000	2535.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	25	507000	2535.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	25	511500	2557.5	DFT-s-OFDM BPSK	1@0	see graph	---
7	15	25	511500	2557.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	25	511500	2557.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	25	511500	2557.5	DFT-s-OFDM QPSK	1@0	see graph	---
7	15	25	511500	2557.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	25	511500	2557.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	50	505000	2525.0	DFT-s-OFDM BPSK	1@0	see graph	---
7	15	50	505000	2525.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	50	505000	2525.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	50	505000	2525.0	DFT-s-OFDM QPSK	1@0	see graph	---
7	15	50	505000	2525.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	50	505000	2525.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	50	507000	2535.0	DFT-s-OFDM BPSK	1@0	see graph	---
7	15	50	507000	2535.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	50	507000	2535.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	50	507000	2535.0	DFT-s-OFDM QPSK	1@0	see graph	---

7	15	50	507000	2535.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	50	507000	2535.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	50	509000	2545.0	DFT-s-OFDM BPSK	1@0	see graph	---
7	15	50	509000	2545.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	50	509000	2545.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	50	509000	2545.0	DFT-s-OFDM QPSK	1@0	see graph	---
7	15	50	509000	2545.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	50	509000	2545.0	DFT-s-OFDM QPSK	1@0	see graph	PASS

N7(5M)_DFT-s-
OFDM BPSK Edge 1RB Left Low CH



N7(5M)_DFT-s-
OFDM BPSK Edge 1RB Left Low CH



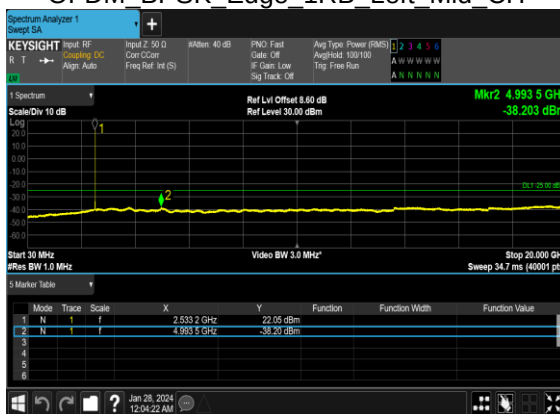
N7(5M)_DFT-s-
OFDM QPSK Edge 1RB Left Low CH



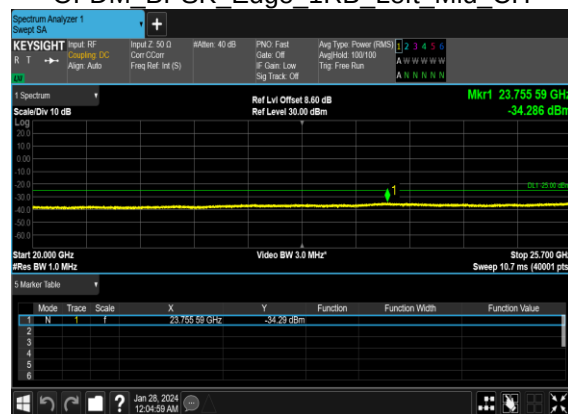
N7(5M)_DFT-s-
OFDM QPSK Edge 1RB Left Low CH



N7(5M)_DFT-s-
OFDM BPSK Edge 1RB Left Mid CH



N7(5M)_DFT-s-
OFDM BPSK Edge 1RB Left Mid CH



N7(5M)_DFT-s-
OFDM QPSK Edge 1RB Left Mid CH



N7(5M)_DFT-s-
OFDM QPSK Edge 1RB Left Mid CH



N7(5M)_DFT-s-
OFDM BPSK Edge 1RB Left High CH



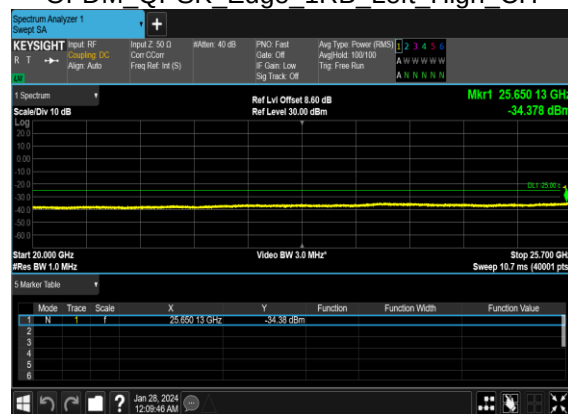
N7(5M)_DFT-s-
OFDM BPSK Edge 1RB Left High CH



N7(5M)_DFT-s-
OFDM QPSK Edge 1RB Left High CH



N7(5M)_DFT-s-
OFDM QPSK Edge 1RB Left High CH



N7(25M)_DFT-s-OFDM BPSK Edge 1RB Left Low CH



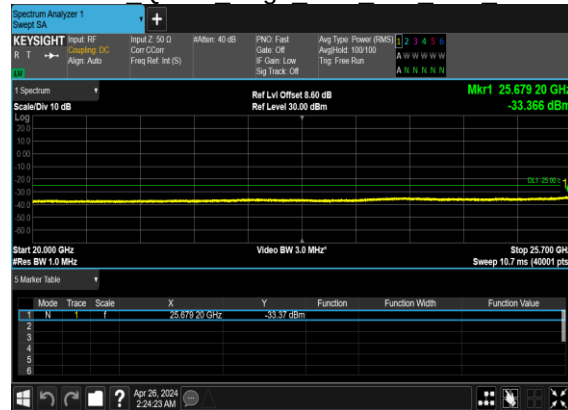
N7(25M)_DFT-s-OFDM BPSK Edge 1RB Left Low CH



N7(25M)_DFT-s-OFDM QPSK Edge 1RB Left Low CH



N7(25M)_DFT-s-OFDM QPSK Edge 1RB Left Low CH



N7(25M)_DFT-s-OFDM BPSK Edge 1RB Left Mid CH



N7(25M)_DFT-s-OFDM BPSK Edge 1RB Left Mid CH



N7(25M)_DFT-s- OFDM QPSK Edge 1RB Left Mid CH



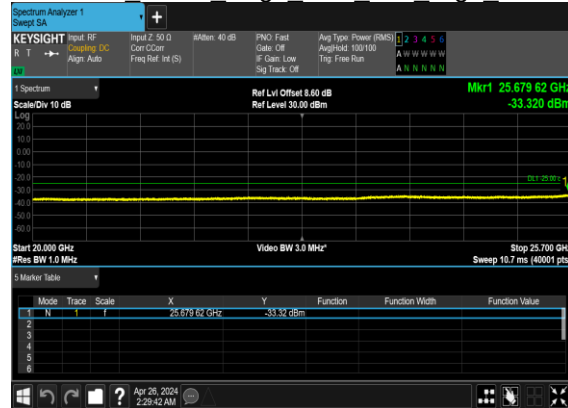
N7(25M)_DFT-s- OFDM QPSK Edge 1RB Left Mid CH



N7(25M)_DFT-s- OFDM BPSK Edge 1RB Left High CH



N7(25M)_DFT-s- OFDM BPSK Edge 1RB Left High CH



N7(25M)_DFT-s- OFDM QPSK Edge 1RB Left High CH



N7(25M)_DFT-s- OFDM QPSK Edge 1RB Left High CH



N7(50M)_DFT-s-OFDM BPSK Edge 1RB Left Low CH



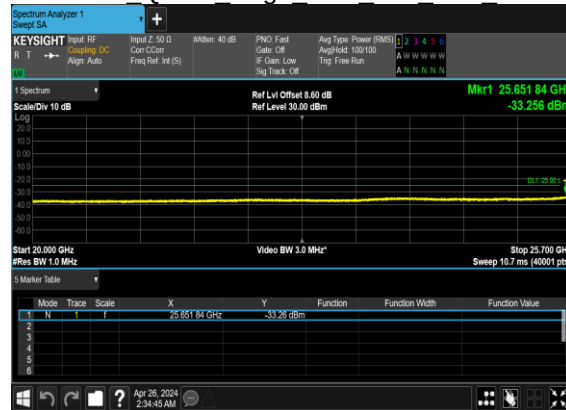
N7(50M)_DFT-s-OFDM BPSK Edge 1RB Left Low CH



N7(50M)_DFT-s-OFDM QPSK Edge 1RB Left Low CH



N7(50M)_DFT-s-OFDM QPSK Edge 1RB Left Low CH



N7(50M)_DFT-s-OFDM BPSK Edge 1RB Left Mid CH



N7(50M)_DFT-s-OFDM BPSK Edge 1RB Left Mid CH



N7(50M)_DFT-s-OFDM QPSK Edge 1RB Left Mid CH



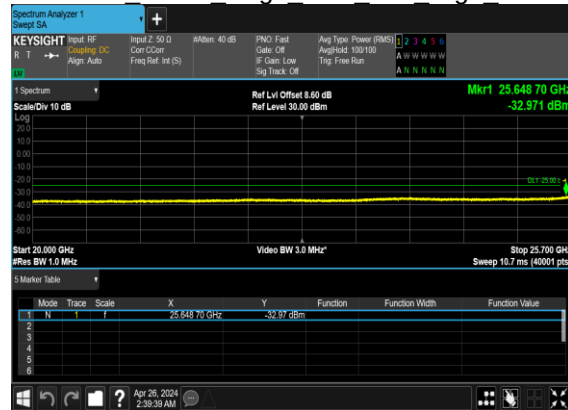
N7(50M)_DFT-s-OFDM QPSK Edge 1RB Left Mid CH



N7(50M)_DFT-s-OFDM BPSK Edge 1RB Left High CH



N7(50M)_DFT-s-OFDM BPSK Edge 1RB Left High CH



N7(50M)_DFT-s-OFDM QPSK Edge 1RB Left High CH



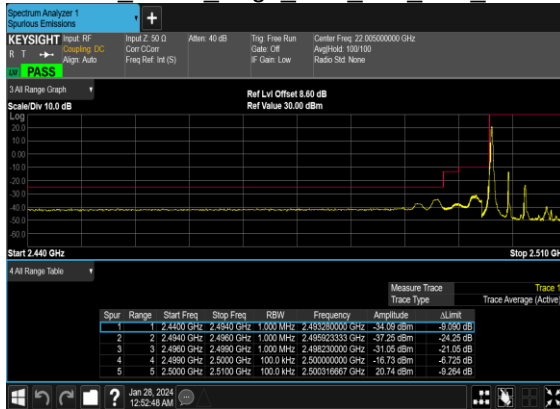
N7(50M)_DFT-s-OFDM QPSK Edge 1RB Left High CH



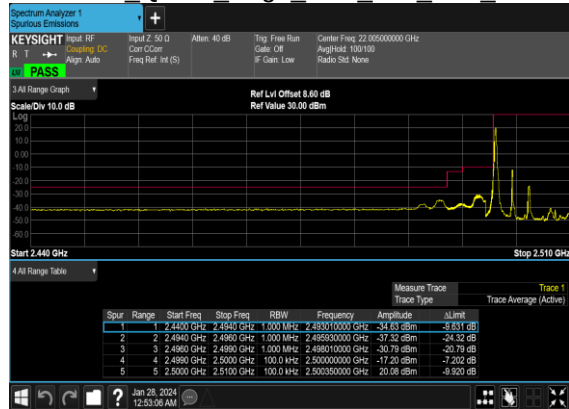
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
7	15	5	500500	2502.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	5	500500	2502.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	5	500500	2502.5	DFT-s-OFDM BPSK	25@0	see graph	PASS
7	15	5	500500	2502.5	DFT-s-OFDM QPSK	25@0	see graph	PASS
7	15	5	513500	2567.5	DFT-s-OFDM BPSK	1@24	see graph	PASS
7	15	5	513500	2567.5	DFT-s-OFDM QPSK	1@24	see graph	PASS
7	15	5	513500	2567.5	DFT-s-OFDM BPSK	25@0	see graph	PASS
7	15	5	513500	2567.5	DFT-s-OFDM QPSK	25@0	see graph	PASS
7	15	25	502500	2512.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	25	502500	2512.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	25	502500	2512.5	DFT-s-OFDM BPSK	128@0	see graph	PASS
7	15	25	502500	2512.5	DFT-s-OFDM QPSK	128@0	see graph	PASS
7	15	25	511500	2557.5	DFT-s-OFDM BPSK	1@132	see graph	PASS
7	15	25	511500	2557.5	DFT-s-OFDM QPSK	1@132	see graph	PASS
7	15	25	511500	2557.5	DFT-s-OFDM BPSK	128@0	see graph	PASS
7	15	25	511500	2557.5	DFT-s-OFDM QPSK	128@0	see graph	PASS
7	15	50	505000	2525.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
7	15	50	505000	2525.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
7	15	50	505000	2525.0	DFT-s-OFDM BPSK	270@0	see graph	PASS
7	15	50	505000	2525.0	DFT-s-OFDM QPSK	270@0	see graph	PASS
7	15	50	509000	2545.0	DFT-s-OFDM BPSK	1@269	see graph	PASS
7	15	50	509000	2545.0	DFT-s-OFDM QPSK	1@269	see graph	PASS
7	15	50	509000	2545.0	DFT-s-OFDM BPSK	270@0	see graph	PASS
7	15	50	509000	2545.0	DFT-s-OFDM QPSK	270@0	see graph	PASS

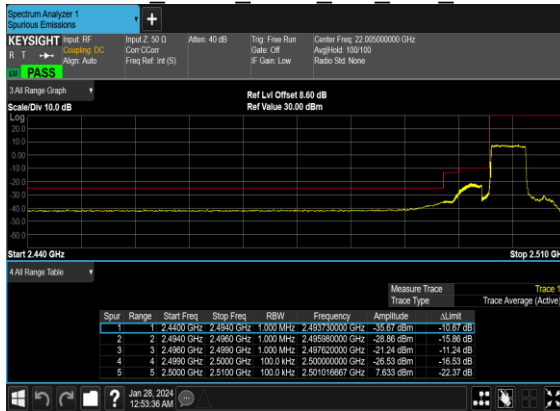
N7(5M)_DFT-s-OFDM BPSK Edge 1RB Left Low CH



N7(5M)_DFT-s-OFDM QPSK Edge 1RB Left Low CH



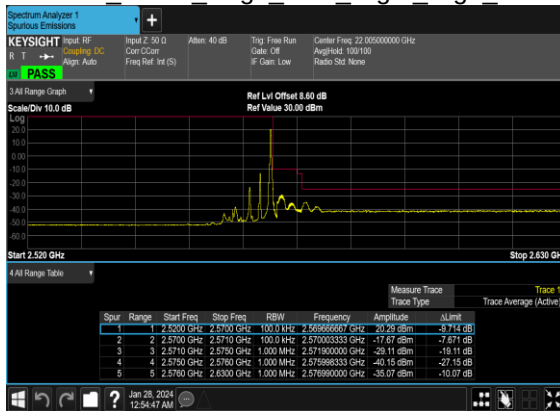
N7(5M)_DFT-s-OFDM BPSK Outer Full Low CH



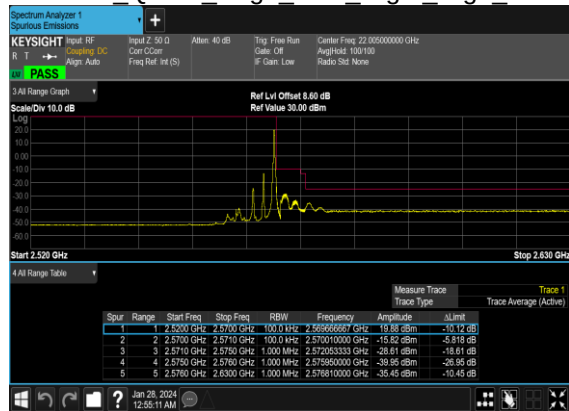
N7(5M)_DFT-s-OFDM QPSK Outer Full Low CH



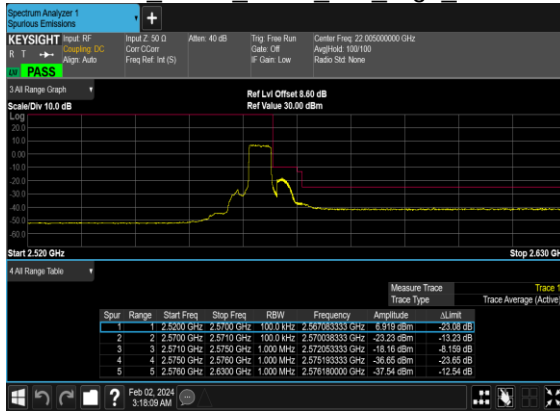
N7(5M)_DFT-s-OFDM BPSK Edge 1RB Right High CH



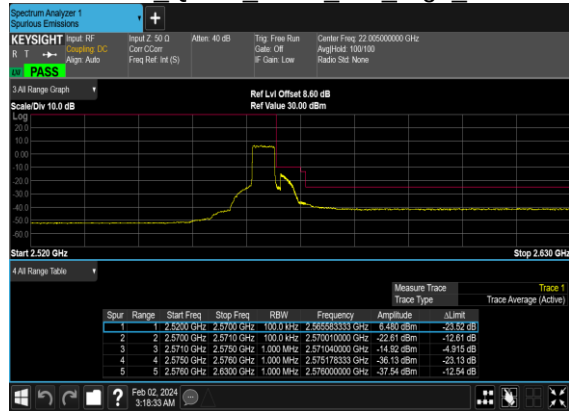
N7(5M)_DFT-s-OFDM QPSK Edge 1RB Right High CH



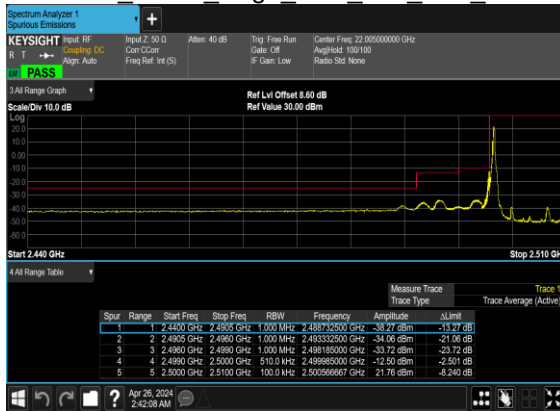
N7(5M)_DFT-s-OFDM BPSK Outer Full High CH



N7(5M)_DFT-s-OFDM QPSK Outer Full High CH



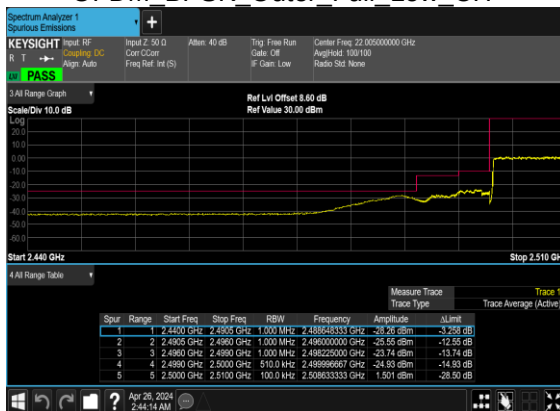
N7(25M)_DFT-s-OFDM BPSK Edge 1RB Left Low CH



N7(25M)_DFT-s-OFDM QPSK Edge 1RB Left Low CH



N7(25M)_DFT-s-OFDM BPSK Outer Full Low CH



N7(25M)_DFT-s-OFDM QPSK Outer Full Low CH

