

FCC Measurement/Technical Report on

SCALANCE MRM85633M

FCC ID: LYHMRM85633M

Test Report Reference: MDE_SIEM_2518_FCC_02_rev1

Test Laboratory:

7layers GmbH
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40880 Ratingen
Germany



Deutsche
Akkreditierungsstelle
D-PL-12140-01-00

Note:

The following test results relate only to the devices specified in this document. This report shall not be reproduced in parts without the written approval of the test laboratory.

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Table of Contents

1	Applied Standards and Test Summary	3
1.1	Applied Standards	3
1.2	FCC MEASUREMENT REQUIREMENTS Table	4
1.3	Measurement Summary	5
2	Revision History / Signatures	8
3	Administrative Data	9
3.1	Testing Laboratory	9
3.2	Project Data	9
3.3	Applicant Data	9
3.4	Manufacturer Data	9
4	Test object Data	10
4.1	General EUT Description	10
4.2	EUT Main components	11
4.3	Ancillary Equipment	12
4.4	Auxiliary Equipment	12
4.5	EUT Setups	12
4.6	Operating Modes / Test Channels	13
4.7	Product labelling	13
5	Test Results	14
5.1	RF Output Power	14
5.2	Maximum Power Spectral Density	53
5.3	Peak to Average Ratio	64
5.4	Spurious emissions at antenna terminals	72
5.5	Field strength of spurious radiation	96
5.6	Emission and occupied bandwidth	121
5.7	Band edge compliance	134
5.8	Frequency stability	208
6	Test Equipment	218
6.1	Test Equipment Hardware	218
6.2	Test Equipment Software	221
7	Antenna Factors, Cable Loss and Sample Calculations	222
7.1	LISN R&S ESH3-Z5 (150 kHz – 30 MHz)	222
7.2	Antenna R&S HFH2-Z2 (9 kHz – 30 MHz)	223
7.3	Antenna R&S HL562 (30 MHz – 1 GHz)	224
7.4	Antenna R&S HF907 (1 GHz – 18 GHz)	225
7.5	Antenna EMCO 3160-09 (18 GHz – 26.5 GHz)	226
7.6	Antenna EMCO 3160-10 (26.5 GHz – 40 GHz)	227
8	Measurement Uncertainties	228
9	Photo Report	230

1 APPLIED STANDARDS AND TEST SUMMARY

1.1 APPLIED STANDARDS

Type of Authorization

Certification for a cellular device.

Applicable FCC Rules

Prepared in accordance with the requirements of FCC Rules and Regulations as listed in 47 CFR Ch.1 Parts 96, (08/28/2025). The following subparts are applicable to the results in this test report.

Part 2, Subpart J - Equipment Authorization Procedures, Certification

Part 96, Subpart E – Technical Rules

§ 96.41 – General radio requirements

The tests were selected and performed with reference to:

- FCC Public Notice 971168 applying "Measurement guidance for certification of licensed digital transmitters" 971168 D01 v02r02,2014-10-17
- FCC Public Notice 662911 applying "Emission Testing of Transmitters with Multiple Outputs in the Same Band" 662911 D01 v02r01,2013-10-31
- FCC Public Notice 940660 applying "Certification and Test Procedures for Citizens Broadband Radio Service Devices authorized under Part 96" D01, v03, 2020-10-29
- ANSI C63.26: 2015

1.2 FCC MEASUREMENT REQUIREMENTS TABLE

Measurement requirements

Measurement	FCC reference
RF Output Power & Maximum Power Spectral Density	§ 2.1046 § 96.41 (b)
Peak-Average-Ratio	§ 96.41 (g)
Emission and Occupied bandwidth	§ 2.1049
Spurious Emission at Antenna Terminals	§ 2.1051 § 96.41 (e)
Band Edge Compliance	§ 2.1051 § 96.41 (e)
Frequency stability	§ 2.1055
Field strength of spurious radiation	§ 2.1053 § 96.41 (e)

1.3 MEASUREMENT SUMMARY

47 CFR CHAPTER I FCC PART 96 Subpart E

§ 2.1046, § 96.41 (b)

RF Output Power

The measurement was performed according to ANSI C63.26: 2015; Wideband Signal: 5.2.4.4

Final Result

OP-Mode Technology, Modulation, Operating Frequency, ChBW, Resource Blocks, Measurement method	Setup	Date	FCC
NR48 QPSK, low channel, 10 MHz, 1, conducted	S01_AA01	2025-10-28	Passed
NR48 QPSK, mid channel, 10 MHz, 1, conducted	S01_AA01	2025-10-28	Passed
NR48 QPSK, high channel, 10 MHz, 1, conducted	S01_AA01	2025-10-28	Passed
NR48 QPSK, low channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 QPSK, mid channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 QPSK, high channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 QPSK, low channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 QPSK, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 QPSK, high channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 16QAM, low channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 16QAM, mid channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 16QAM, high channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 16QAM, low channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 16QAM, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 16QAM, high channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 64QAM, low channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 64QAM, mid channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 64QAM, high channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 64QAM, low channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 64QAM, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 64QAM, high channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 256QAM, low channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 256QAM, mid channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 256QAM, high channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 256QAM, low, channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 256QAM, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 256QAM, high channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed

47 CFR CHAPTER I FCC PART 96 Subpart E

§ 2.1046, § 96.41 (b)

Maximum Power Spectral Density

The measurement was performed according to ANSI C63.26: 2015; Wideband Signal: 5.2.4.4

Final Result

OP-Mode Technology, Modulation, Operating Frequency, ChBW, Resource Blocks, Measurement method	Setup	Date	FCC
NR48 QPSK, low channel, 10 MHz, 50, conducted	S01_AA01	2025-11-07	Passed
NR48 QPSK, mid channel, 10 MHz, 50, conducted	S01_AA01	2025-11-07	Passed
NR48 QPSK, high channel, 10 MHz, 50, conducted	S01_AA01	2025-11-07	Passed
NR48 QPSK, low channel, 20 MHz, 100, conducted	S01_AA01	2025-11-07	Passed
NR48 QPSK, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-11-07	Passed
NR48 QPSK, high channel, 20 MHz, 100, conducted	S01_AA01	2025-11-07	Passed

47 CFR CHAPTER I FCC PART 96 Subpart E §96.41 (g)

Peak to Average Ratio

The measurement was performed according to ANSI C63.26

Final Result

OP-Mode Technology, Modulation, Operating Frequency, ChBW, Ressource Blocks, Measurement method	Setup	Date	FCC
NR48 QPSK, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-29	Passed
NR48 16QAM, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-29	Passed
NR48 64QAM, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-29	Passed
NR48 256QAM, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-29	Passed

47 CFR CHAPTER I FCC PART 96 Subpart E § 2.1051, § 96.41 (e)(1)(i), (e)(2)

Spurious emissions at antenna terminals

The measurement was performed according to ANSI C63.26: 2015; 5.7.4, Part 96 (e)(3)(i)

Final Result

OP-Mode Technology, Modulation, Operating Frequency, ChBW, Ressource Blocks, Measurement method	Setup	Date	FCC
NR48 QPSK, low channel, 10 MHz, 1, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, mid channel, 10 MHz, 1, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, high channel, 10 MHz, 1, conducted	S01_AA02	2026-01-08	Passed

47 CFR CHAPTER I FCC PART 96 Subpart E § 2.1053, § 96.41 (e)(1)(i), (e)(2)

Field strength of spurious radiation

The measurement was performed according to ANSI C63.26: 2015; 5.5.2.3.1

Final Result

OP-Mode Technology, Modulation, Operating Frequency, ChBW, Ressource Blocks, Measurement method	Setup	Date	FCC
NR48 QPSK, low channel, 10 MHz, 50, radiated	S02_AB01	2025-11-06	Passed
NR48 QPSK, mid channel, 10 MHz, 50, radiated	S02_AB01	2025-11-06	Passed
NR48 QPSK, high channel, 10 MHz, 50, radiated	S02_AB01	2025-11-06	Passed
NR48 QPSK, low channel, 10 MHz, 50, radiated	S03_AB01	2025-11-06	Passed
NR48 QPSK, mid channel, 10 MHz, 50, radiated	S03_AB01	2025-11-06	Passed
NR48 QPSK, high channel, 10 MHz, 50, radiated	S03_AB01	2025-11-06	Passed

47 CFR CHAPTER I FCC PART 96 Subpart E § 2.1049

Emission and occupied bandwidth

The measurement was performed according to ANSI C63.26: 2015; 5.4.3 (relative meas. Procedure [26dB]) 5.4.4 (Power bandwidth [99%])

Final Result

OP-Mode Technology, Modulation, Operating Frequency, ChBW, Ressource Blocks, Measurement method	Setup	Date	FCC
NR48 QPSK, mid channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 QPSK, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 16QAM, mid channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 16QAM, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 64QAM, mid channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 64QAM, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed
NR48 256QAM, mid channel, 10 MHz, 50, conducted	S01_AA01	2025-10-28	Passed
NR48 256QAM, mid channel, 20 MHz, 100, conducted	S01_AA01	2025-10-28	Passed

47 CFR CHAPTER I FCC PART 96 Subpart E
§ 2.1051, § 96.41 (e)(1)(i)

Band edge compliance

The measurement was performed according to ANSI C63.26: 2015; 5.7.3

Final Result

OP-Mode Technology, Modulation, Operating Frequency, ChBW, Ressource Blocks, Measurement method	Setup	Date	FCC
NR48 QPSK, low channel, 10 MHz, 1, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, mid channel, 10 MHz, 1, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, high channel, 10 MHz, 1, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, low channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, mid channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, high channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, low channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, mid channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 QPSK, high channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 16QAM, low channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 16QAM, mid channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 16QAM, high channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 16QAM, low channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 16QAM, mid channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 16QAM, high channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 64QAM, low channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 64QAM, mid channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 64QAM, high channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 64QAM, low channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 64QAM, mid channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 64QAM, high channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 256QAM, low channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 256QAM, mid channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 256QAM, high channel, 10 MHz, 50, conducted	S01_AA02	2026-01-08	Passed
NR48 256QAM, low channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 256QAM, mid channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed
NR48 256QAM, high channel, 20 MHz, 100, conducted	S01_AA02	2026-01-08	Passed

47 CFR CHAPTER I FCC PART 96 Subpart E
§2.1055

Frequency stability

The measurement was performed according to ANSI C63.26

Final Result

OP-Mode Technology, Modulation, channel, voltage, Measurement method	Setup	Date	FCC
NR48, CW, mid channel, 24, conducted	S01_AA01	2025-10-30	Passed
NR48, CW, mid channel, 48, conducted	S01_AA01	2025-10-30	Passed

N/A: Not applicable

N/P: Not performed

2 REVISION HISTORY / SIGNATURES

Report version control			
Version	Release date	Change Description	Version validity
initial	2026-01-28	--	invalid
rev1	2026-04-13	- Antenna gain of AN_01 corrected to 10.3 dBi - Power table entries corrected - PSD worst case investigation added and one Plot corrected - BE table entries in the results tables corrected - Test equipment cal status updated	valid

COMMENT: -



(responsible for accreditation scope)
Marco Kullik



(responsible for testing and report)
Robert Machulec



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40880 Ratingen, Germany
Phone +49 (0)2102 749 0

3 ADMINISTRATIVE DATA

3.1 TESTING LABORATORY

Company Name: 7layers GmbH
Address: Borsigstr. 11
40880 Ratingen
Germany

The test facility is accredited by the following accreditation organisation:

Laboratory accreditation no: DAkKS D-PL-12140-01-00
FCC Designation Number: DE0015
FCC Test Firm Registration: 929146
ISED CAB Identifier DE0007; ISED#: 3699A

Responsible for accreditation scope: Marco Kullik

Report Template Version: 2025-10-17

3.2 PROJECT DATA

Responsible for testing and report: Robert Machulec
Employees who performed the tests: documented internally at 7Layers
Date of Report: 2026-04-13
Testing Period: 2025-11-10 to 2026-01-08

3.3 APPLICANT DATA

Company Name: Siemens AG
Address: Östliche Rheinbrückenstraße 50
76187 Karlsruhe
Germany
Contact Person: Mr. Yaron Abuksis

3.4 MANUFACTURER DATA

Company Name: please see Applicant Data
Address:
Contact Person:

4 TEST OBJECT DATA

4.1 GENERAL EUT DESCRIPTION

Kind of Device product description	The SCALANCE MRM85633M is a 5G router (5G Radio Unit, 5G RU) for indoor and outdoor use in the industrial environment.
Product name	SCALANCE MRM85633M
Type	MRM85633M
Declared EUT data by the supplier	
General product description	The device is a Category B CBSD device supporting NR band 48
CBSD Category	B
Voltage Type	DC (external power supply) PoE (external power supply)
Voltage Level	DC: 24.0 V PoE: 48.0 V
Supported Frequency Band(s):	NR48; 3550 MHz – 3700 MHz (TDD)
Supported channel Bandwidth(s):	10 MHz, 20 MHz
SCS	30 kHz
Modulation(s)	QPSK, 16QAM, 64QAM, 256QAM
MIMO capabilities	None
Antenna Port(s):	4
Antenna Type	External
Antenna Gain(s)	Antenna 1 6GK5897-5PN00-0AA0: 8.3dBi Antenna 2 6GK5897-5FF00-0AA0: 10.3dBi

4.2 EUT MAIN COMPONENTS

Sample Name	Sample Code	Description
aa01	DE1039051aa01	Test sample
Sample Parameter	Value	
Serial No.	N/A (Prototype)	
HW Version	01	
SW Version	FR1_FR2_ V4.0_SDK2.4	
Comment	-	

Sample Name	Sample Code	Description
aa01	DE1039051aa01	Test sample
Sample Parameter	Value	
Serial No.	N/A (Prototype)	
HW Version	01	
SW Version	FR1_FR2_ V4.0_SDK2.4	
Comment	-	

Sample Name	Sample Code	Description
aa02	DE1039051aa02	Test sample
Sample Parameter	Value	
Serial No.	N/A (Prototype)	
HW Version	01	
SW Version	FR1_FR2_ V4.0_SDK2.4	
Comment	-	

NOTE: The short description is used to simplify the identification of the EUT in this test report.

4.3 ANCILLARY EQUIPMENT

For the purposes of this test report, ancillary equipment is defined as equipment which is used in conjunction with the EUT to provide operational and control features to the EUT. It is necessary to configure the system in a typical fashion, as a customer would normally use it. But nevertheless Ancillary Equipment can influence the test results.

Device	Details (Manufacturer, Type Model, HW, SW, S/N)	Description
AN_01	Ultra Low Profile MiMo Antenna 6GK5897-5PN00-0AA0	4 port Antenna, gain: 8.3dBi
AN_02	4 x 4 MIMO Richtantenne 5G 6GK5897-5FF00-0AA0	4 port Antenna gain: 10.3dBi

4.4 AUXILIARY EQUIPMENT

For the purposes of this test report, auxiliary equipment is defined as equipment which is used temporarily to enable operational and control features especially used for the tests of the EUT which is not used during normal operation or equipment that is used during the tests in combination with the EUT but is not subject of this test report. It is necessary to configure the system in a typical fashion, as a customer would normally use it. But nevertheless Auxiliary Equipment can influence the test results.

Device	Details (Manufacturer, Type Model, HW, SW, S/N)	Description
-	-	-

4.5 EUT SETUPS

This chapter describes the combination of EUTs and equipment used for testing. The rationale for selecting the EUTs, ancillary and auxiliary equipment and interconnecting cables, is to test a representative configuration meeting the requirements of the referenced standards.

Setup	Combination of EUTs	Description and Rationale
S01_AA01	aa01	Used for conducted measurements
S01_AB01	ab01	Used for conducted measurements
S02_AB01	ab01, AN_01	Used for radiated measurements
S03_AB01	ab01, AN_02	Used for radiated measurements
S01_AA02	aa02	Used for conducted measurements

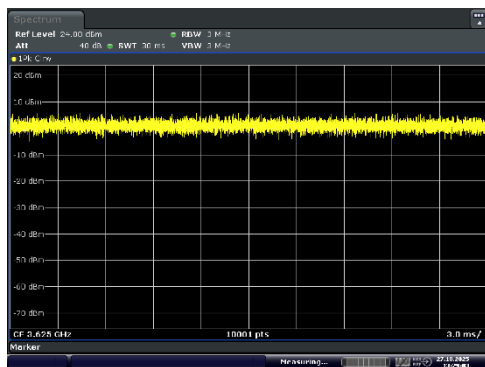
4.6 OPERATING MODES / TEST CHANNELS

This chapter describes the operating modes of the EUTs used for testing.

4.6.1 USED TEST CHANNELS

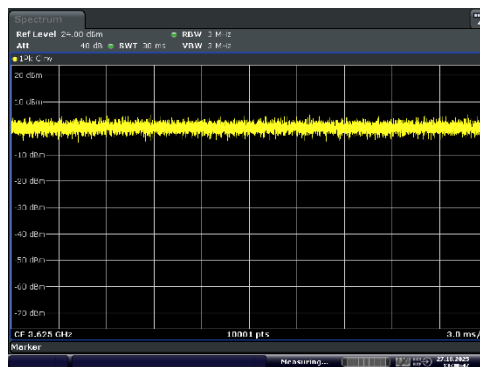
NR TDD 48	LOW	MID	HIGH	LOW	MID	HIGH
Cell BW [MHz]	10	10	10	20	20	20
Channel No.	637000	641666	646333	637333	641666	646000
frequency [MHz]	3555	3625	3695	3560	3625	3690

4.6.2 DUTY CYCLE



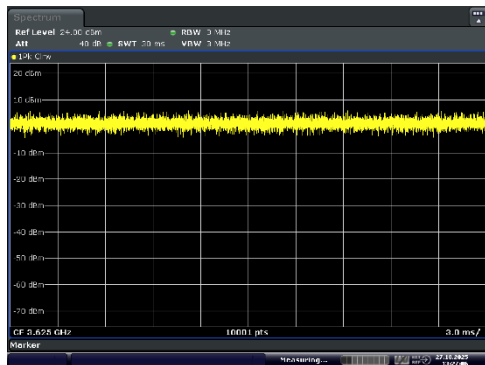
Date: 27 OCT 2020 13:29:03

Antenna Port 0



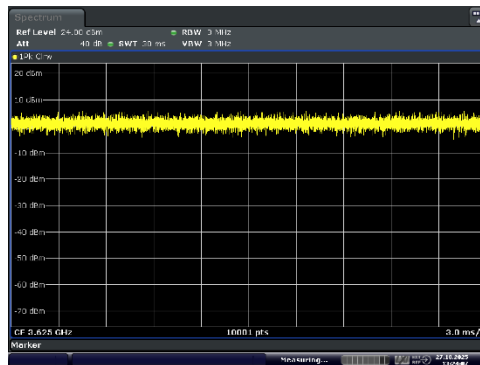
Date: 27 OCT 2020 13:30:47

Antenna Port 1



Date: 27 OCT 2020 13:24:07

Antenna Port 2



Date: 27 OCT 2020 13:24:07

Antenna Port 3

4.7 PRODUCT LABELLING

4.7.1 FCC ID LABEL

Please refer to the documentation of the applicant.

4.7.2 LOCATION OF THE LABEL ON THE EUT

Please refer to the documentation of the applicant.

5 TEST RESULTS

5.1 RF OUTPUT POWER

Standard **FCC PART 96 Subpart E**

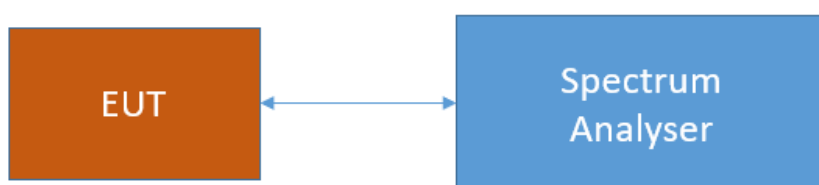
The test was performed according to:

ANSI C63.26: 2015; 5.2.4.1, Output Power: 5.2.4.4.1

5.1.1 TEST DESCRIPTION

This test case is intended to demonstrate compliance to the applicable RF Output power test case per § 2.1046. The limit and the requirements come from the applicable rule part for the operating band of the cellular device.

The EUT was connected to the test setup according to the following diagram:



Test Setup FCC Part 96

The attenuation of the measuring and stimulus path are known for each measured frequency and are considered.

The Spectrum Analyzer settings can be directly found in the measurement diagrams.

5.1.2 TEST REQUIREMENTS / LIMITS

FCC Part 96, § 96.41

(b) Power limits. Unless otherwise specified in this section, the maximum effective isotropic radiated power (EIRP) and maximum Power Spectral Density (PSD) of any CBSD and End User Device must comply with the limits shown in the table in this paragraph (b):

Device	Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
End User Device	23	n/a
Category A CBSD	30	20
Category B CBSD	47	37

5.1.3 TEST PROTOCOL RF OUTPUT POWER

Ambient temperature: 25 °C
Relative humidity: 36 %

ANTENNA AN_02 6GK5897-5FF00-0AA0

Sum table. Values calculated using methods as described in the KDB 662911 D01 v02r01 chapter E 1.

One resource block

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_02 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	1	QPSK	12.73	12.96	12.89	12.87	18.9	8.3	27.2	47.0	19.8
3625	10	1	QPSK	12.73	12.96	12.98	12.94	18.9	8.3	27.2	47.0	19.8
3695	10	1	QPSK	12.97	12.88	12.93	12.86	18.9	8.3	27.2	47.0	19.8

All resource blocks

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_02 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	QPSK	26.89	26.97	26.96	26.88	32.9	8.3	41.2	47.0	5.8
3625	10	50	QPSK	26.87	27.00	26.92	26.97	33.0	8.3	41.3	47.0	5.7
3695	10	50	QPSK	26.70	26.95	26.97	26.98	32.9	8.3	41.2	47.0	5.8
3560	20	100	QPSK	26.90	26.84	26.87	26.97	32.9	8.3	41.2	47.0	5.8
3625	20	100	QPSK	26.93	26.95	27.03	26.92	33.0	8.3	41.3	47.0	5.7
3690	20	100	QPSK	26.98	27.00	26.89	26.91	33.0	8.3	41.3	47.0	5.7

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_02 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	16QAM	27.02	27.02	26.96	26.91	33.0	8.3	41.3	47.0	5.7
3625	10	50	16QAM	26.91	26.91	26.85	27.00	32.9	8.3	41.2	47.0	5.8
3695	10	50	16QAM	26.84	27.01	26.78	27.03	32.9	8.3	41.2	47.0	5.8
3560	20	100	16QAM	26.66	26.73	26.64	26.85	32.7	8.3	41.0	47.0	6.0
3625	20	100	16QAM	26.63	26.68	26.68	26.70	32.7	8.3	41.0	47.0	6.0
3690	20	100	16QAM	26.60	26.31	26.21	26.61	32.5	8.3	40.8	47.0	6.2

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_02 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	64QAM	26.81	26.79	26.77	26.27	32.7	8.3	41.0	47.0	6.0
3625	10	50	64QAM	26.73	26.66	26.62	26.32	32.6	8.3	40.9	47.0	6.1
3695	10	50	64QAM	25.89	26.42	26.39	26.40	32.3	8.3	40.6	47.0	6.4
3560	20	100	64QAM	26.64	26.52	26.56	26.70	32.6	8.3	40.9	47.0	6.1
3625	20	100	64QAM	26.66	26.42	26.49	26.49	32.5	8.3	40.8	47.0	6.2
3690	20	100	64QAM	26.55	26.07	26.26	26.41	32.3	8.3	40.6	47.0	6.4

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_02 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	256QAM	26.18	26.42	25.90	25.95	32.1	8.3	40.4	47.0	6.6
3625	10	50	256QAM	26.00	26.03	25.75	26.04	32.0	8.3	40.3	47.0	6.7
3695	10	50	256QAM	25.84	26.39	26.13	26.05	32.1	8.3	40.4	47.0	6.6
3560	20	100	256QAM	25.93	25.80	26.09	26.07	32.0	8.3	40.3	47.0	6.7
3625	20	100	256QAM	25.85	25.58	25.68	25.67	31.7	8.3	40.0	47.0	7.0
3690	20	100	256QAM	25.75	25.27	25.41	25.60	31.5	8.3	39.8	47.0	7.2

ANTENNA AN_01 6GK5897-5PN00-0AA0

Sum table. Values calculated using methods as described in the KDB 662911 D01 v02r01 chapter E 1.

One resource block

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_01 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	1	QPSK	12.73	12.96	12.89	12.87	18.9	10.3	29.2	47.0	17.8
3625	10	1	QPSK	12.73	12.96	12.98	12.94	18.9	10.3	29.2	47.0	17.8
3695	10	1	QPSK	12.97	12.88	12.93	12.86	18.9	10.3	29.2	47.0	17.8

All resource blocks

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_01 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	QPSK	26.89	26.97	26.96	26.88	32.9	10.3	43.2	47.0	3.8
3625	10	50	QPSK	26.87	27.00	26.92	26.97	33.0	10.3	43.3	47.0	3.7
3695	10	50	QPSK	26.70	26.95	26.97	26.98	32.9	10.3	43.2	47.0	3.8
3560	20	100	QPSK	26.90	26.84	26.87	26.97	32.9	10.3	43.2	47.0	3.8
3625	20	100	QPSK	26.93	26.95	27.03	26.92	33.0	10.3	43.3	47.0	3.7
3690	20	100	QPSK	26.98	27.00	26.89	26.91	33.0	10.3	43.3	47.0	3.7

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_01 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	16QAM	27.02	27.02	26.96	26.91	33.0	10.3	43.3	47.0	3.7
3625	10	50	16QAM	26.91	26.91	26.85	27.00	32.9	10.3	43.2	47.0	3.8
3695	10	50	16QAM	26.84	27.01	26.78	27.03	32.9	10.3	43.2	47.0	3.8
3560	20	100	16QAM	26.66	26.73	26.64	26.85	32.7	10.3	43.0	47.0	4.0
3625	20	100	16QAM	26.63	26.68	26.68	26.70	32.7	10.3	43.0	47.0	4.0
3690	20	100	16QAM	26.60	26.31	26.21	26.61	32.5	10.3	42.8	47.0	4.2

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_01 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	64QAM	26.81	26.79	26.77	26.27	32.7	10.3	43.0	47.0	4.0
3625	10	50	64QAM	26.73	26.66	26.62	26.32	32.6	10.3	42.9	47.0	4.1
3695	10	50	64QAM	25.89	26.42	26.39	26.40	32.3	10.3	42.6	47.0	4.4
3560	20	100	64QAM	26.64	26.52	26.56	26.70	32.6	10.3	42.9	47.0	4.1
3625	20	100	64QAM	26.66	26.42	26.49	26.49	32.5	10.3	42.8	47.0	4.2
3690	20	100	64QAM	26.55	26.07	26.26	26.41	32.3	10.3	42.6	47.0	4.4

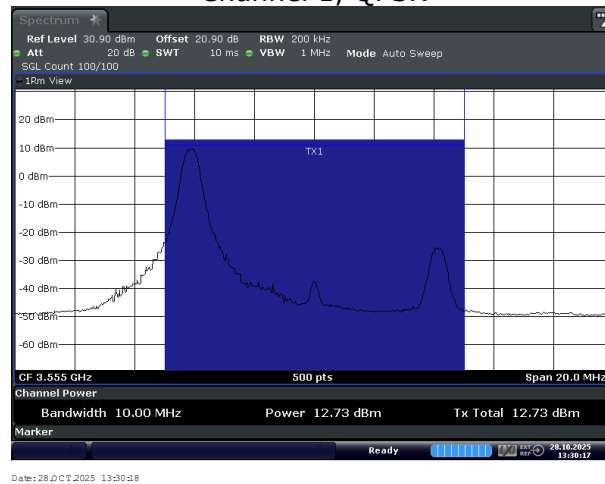
TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_01 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	256QAM	26.18	26.42	25.90	25.95	32.1	10.3	42.4	47.0	4.6
3625	10	50	256QAM	26.00	26.03	25.75	26.04	32.0	10.3	42.3	47.0	4.7
3695	10	50	256QAM	25.84	26.39	26.13	26.05	32.1	10.3	42.4	47.0	4.6
3560	20	100	256QAM	25.93	25.80	26.09	26.07	32.0	10.3	42.3	47.0	4.7
3625	20	100	256QAM	25.85	25.58	25.68	25.67	31.7	10.3	42.0	47.0	5.0
3690	20	100	256QAM	25.75	25.27	25.41	25.60	31.5	10.3	41.8	47.0	5.2

Remark: Please see next sub-clause for the measurement plot.

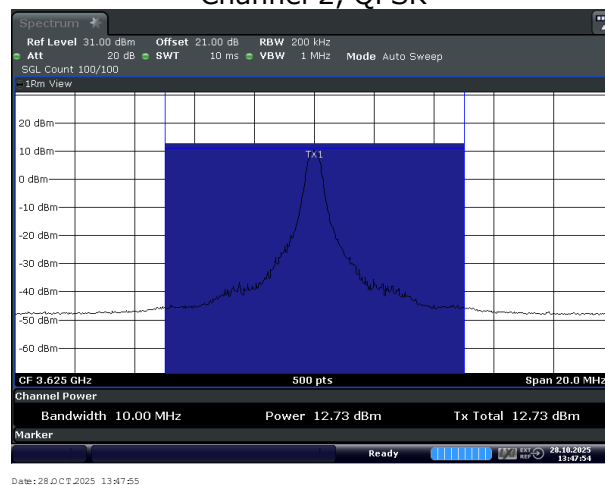
5.1.4 MEASUREMENT PLOT OUTPUT POWER

Antenna port 0; 1 RB

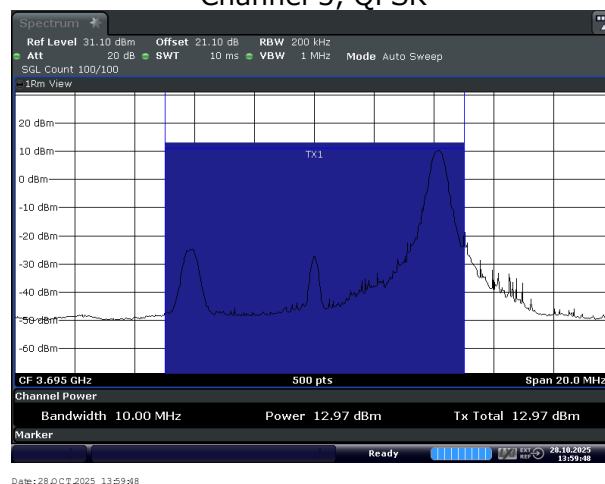
Channel 1, QPSK



Channel 2, QPSK

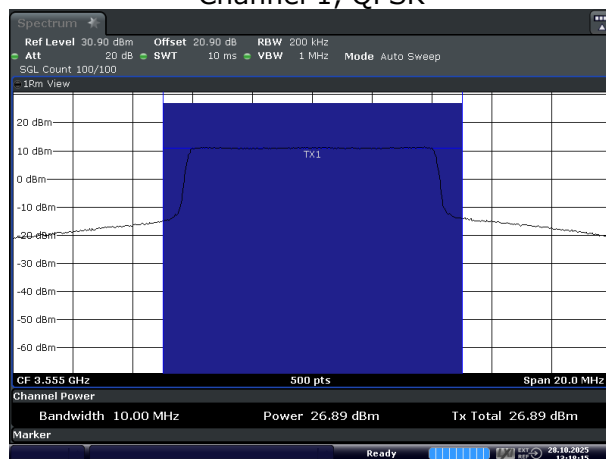


Channel 3, QPSK



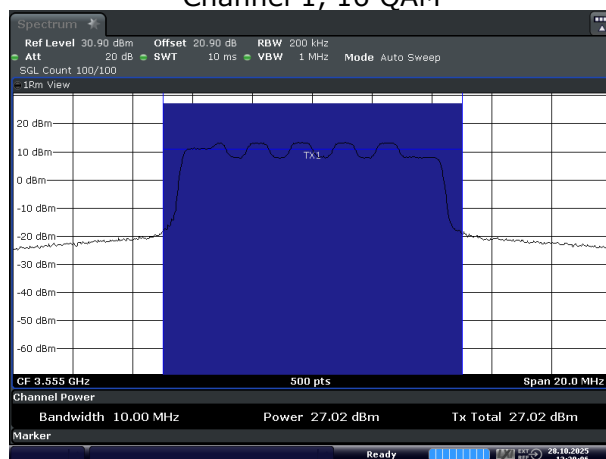
Antenna port 0; BW 10 MHz

Channel 1, QPSK



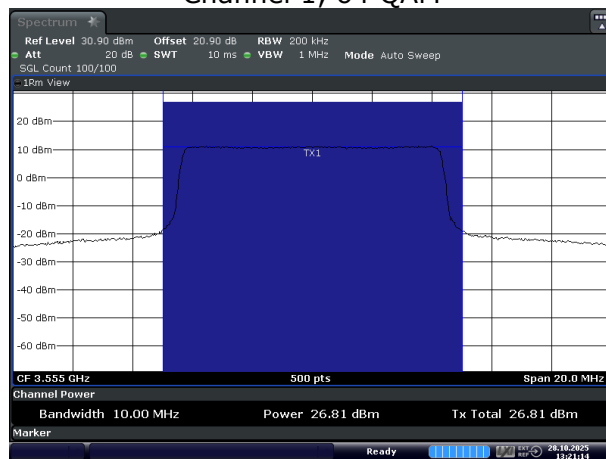
Date: 28 OCT 2025 13:18:15

Channel 1, 16 QAM



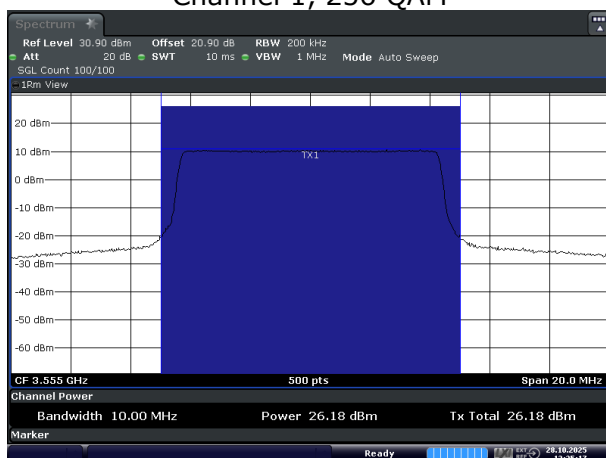
Date: 28 OCT 2025 13:20:06

Channel 1, 64 QAM

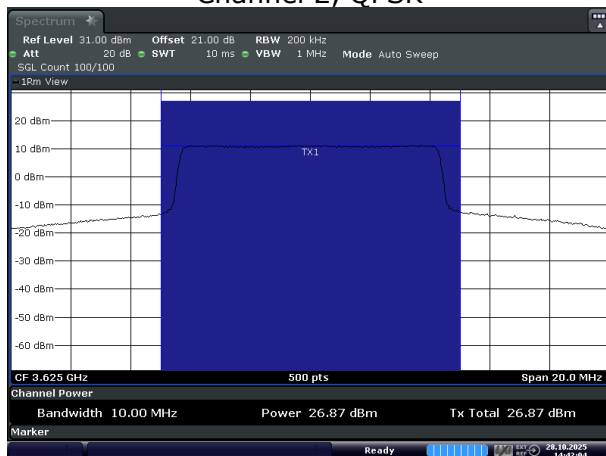


Date: 28 OCT 2025 13:21:14

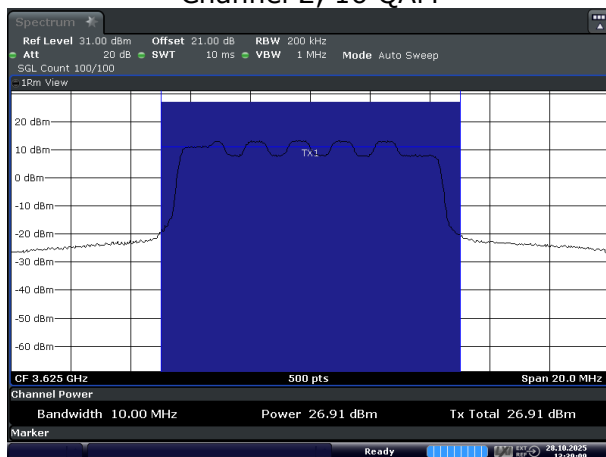
Channel 1, 256 QAM



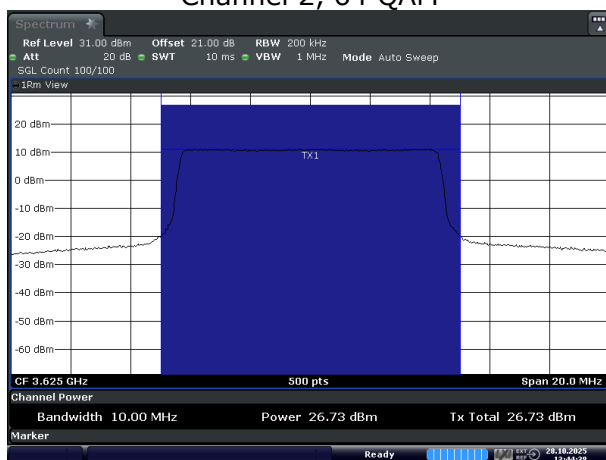
Channel 2, QPSK



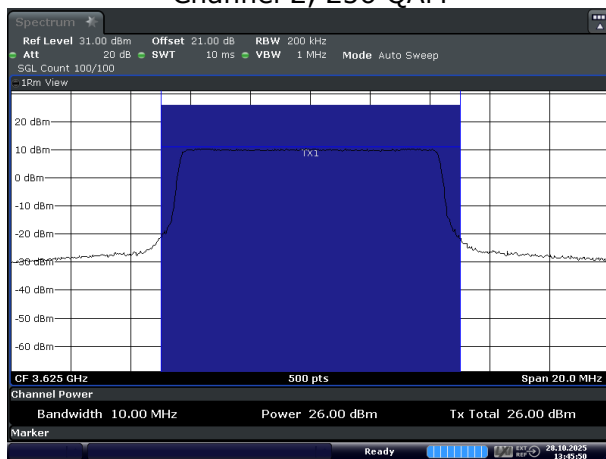
Channel 2, 16 QAM



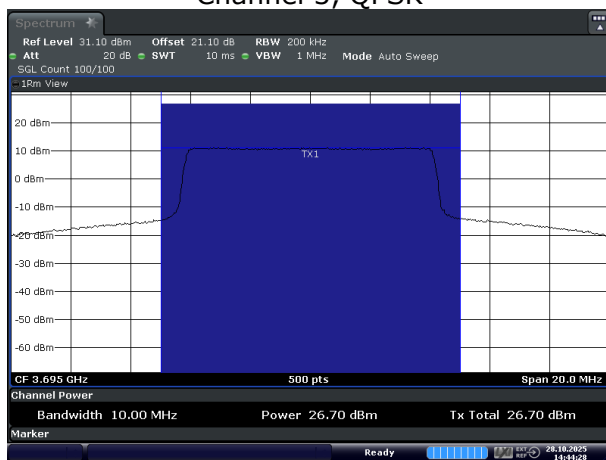
Channel 2, 64 QAM



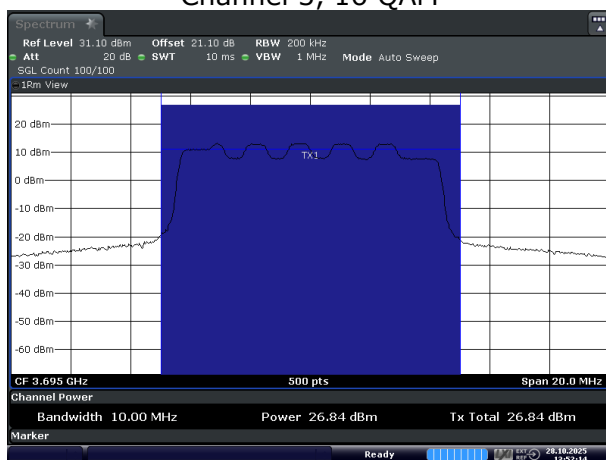
Channel 2, 256 QAM



Channel 3, QPSK

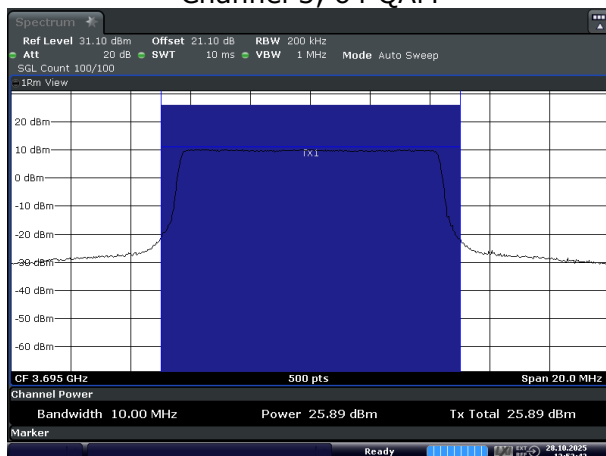


Channel 3, 16 QAM



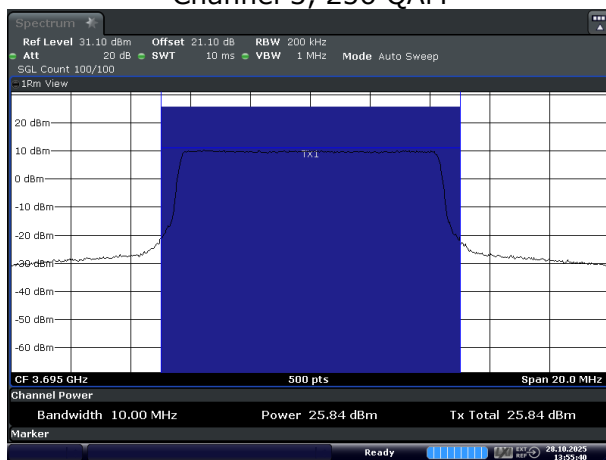
Date: 28/07/2025 13:52:14

Channel 3, 64 QAM



Date: 28/07/2025 13:53:42

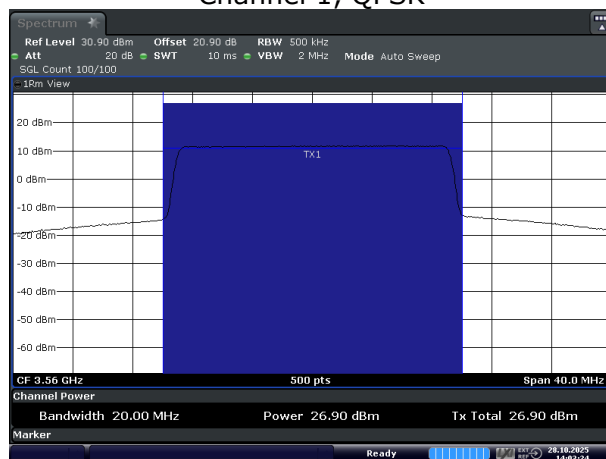
Channel 3, 256 QAM



Date: 28/07/2025 13:55:41

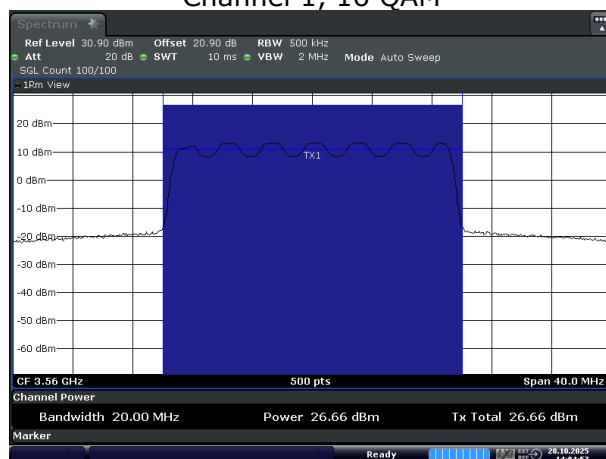
Antenna port 0; BW 20 MHz

Channel 1, QPSK



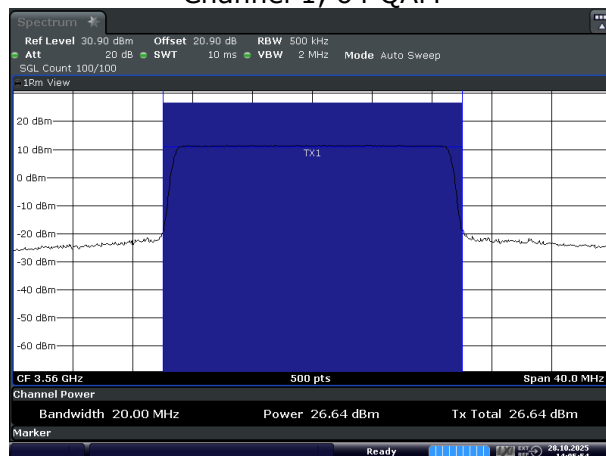
Date: 28 OCT 2025 14:03:24

Channel 1, 16 QAM



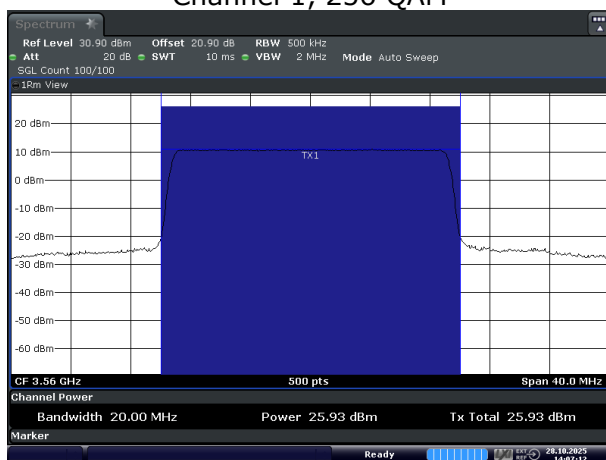
Date: 28 OCT 2025 14:04:57

Channel 1, 64 QAM



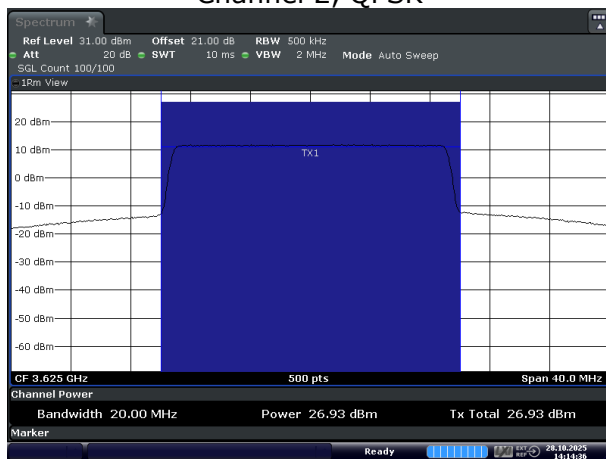
Date: 28 OCT 2025 14:05:55

Channel 1, 256 QAM



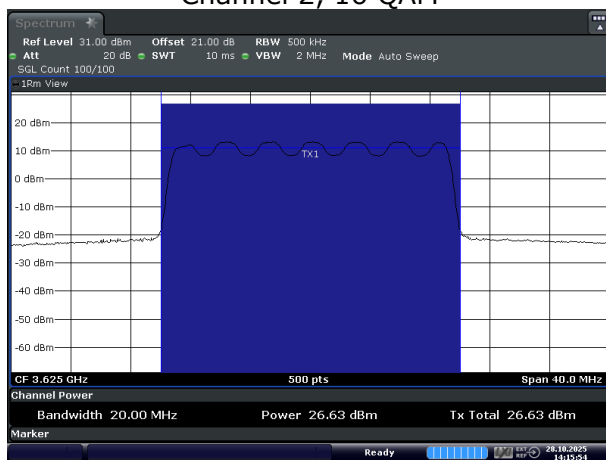
Date: 28 OCT 2025 14:57:12

Channel 2, QPSK



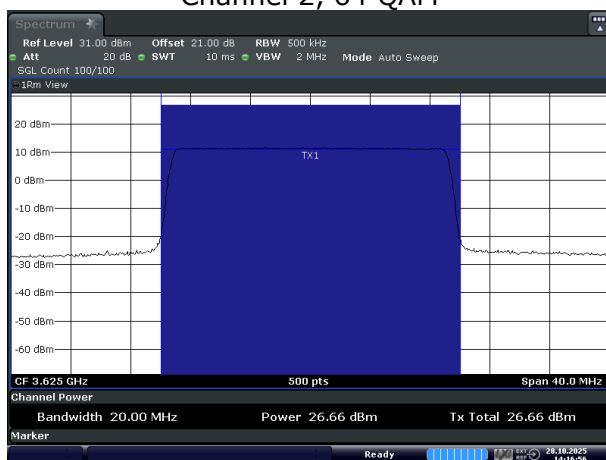
Date: 28 OCT 2025 14:14:36

Channel 2, 16 QAM



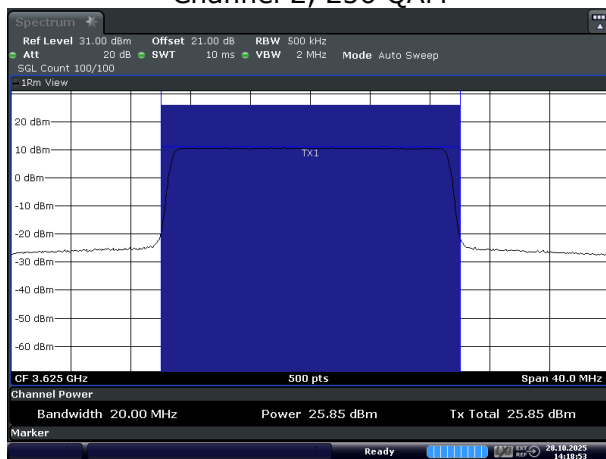
Date: 28 OCT 2025 14:15:54

Channel 2, 64 QAM



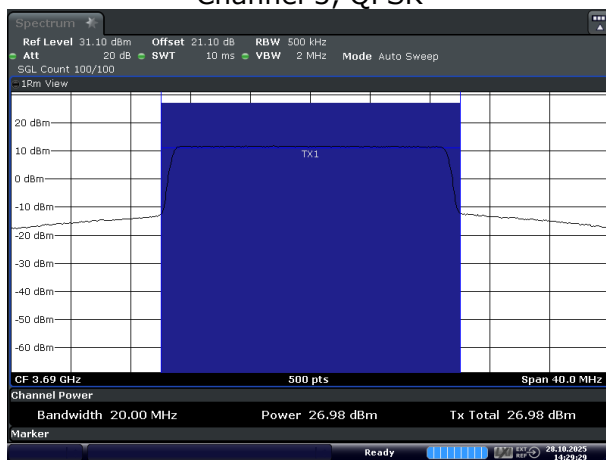
Date: 28 OCT 2025 14:16:57

Channel 2, 256 QAM



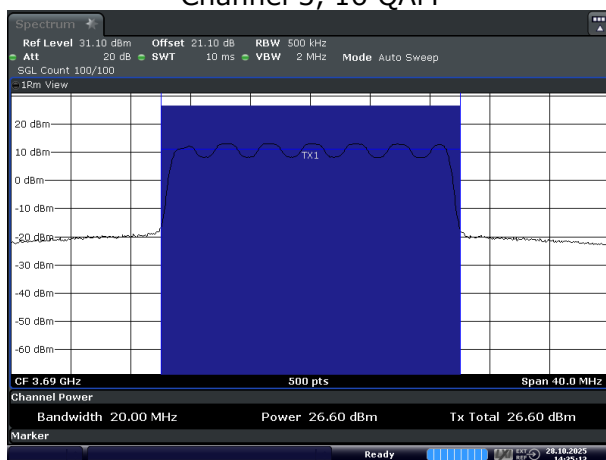
Date: 28 OCT 2025 14:18:53

Channel 3, QPSK

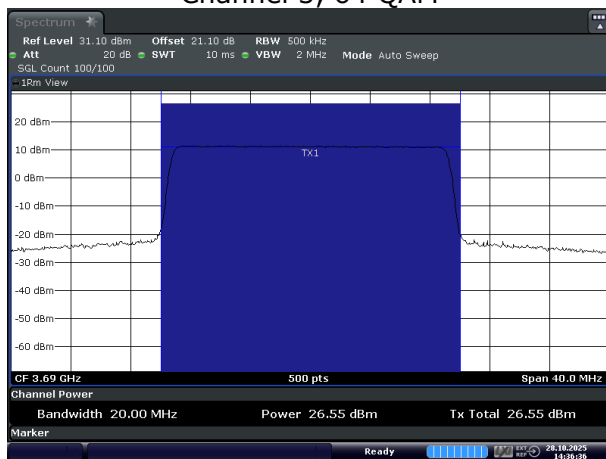


Date: 28 OCT 2025 14:29:30

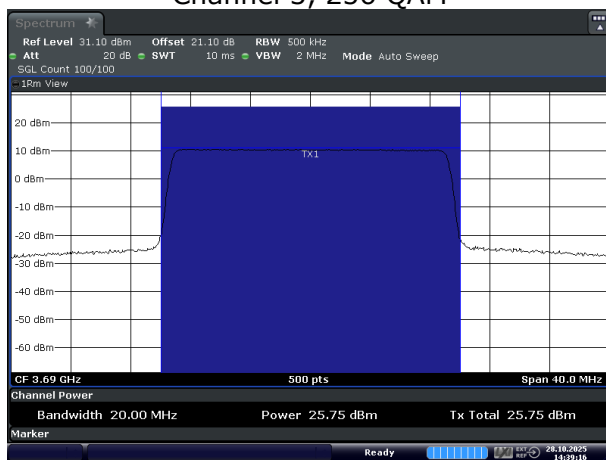
Channel 3, 16 QAM



Channel 3, 64 QAM

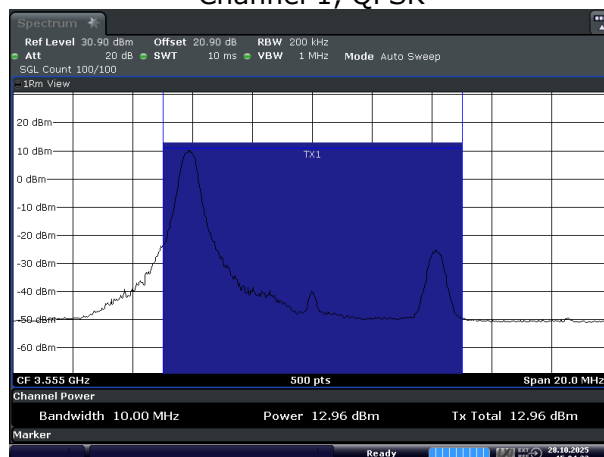


Channel 3, 256 QAM



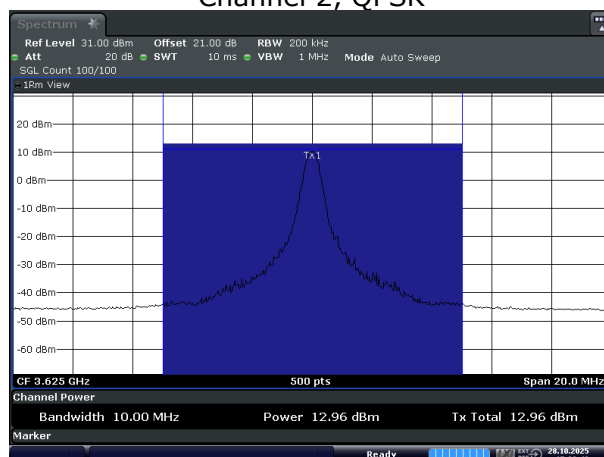
Antenna port 1; 1 RB

Channel 1, QPSK



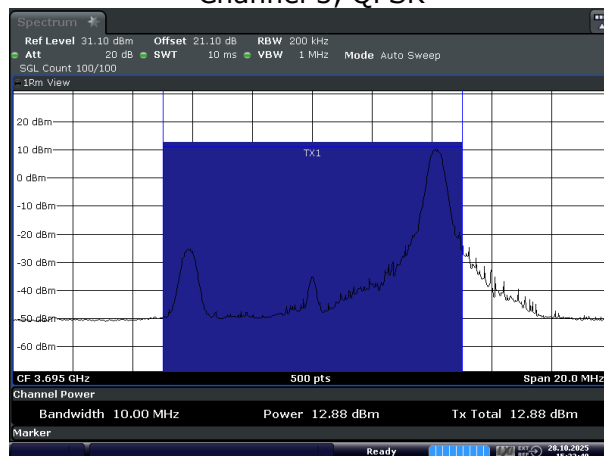
Date: 28 OCT 2025 15:04:23

Channel 2, QPSK



Date: 28 OCT 2025 15:20:43

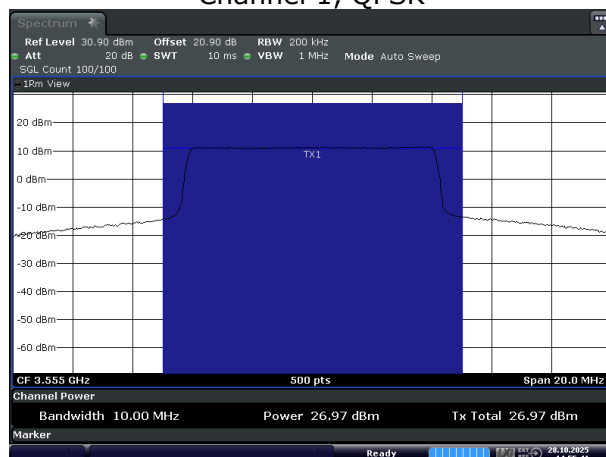
Channel 3, QPSK



Date: 28 OCT 2025 15:33:49

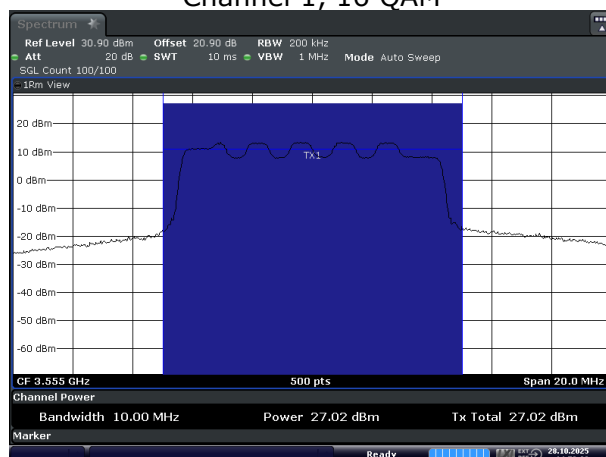
Antenna port 1; BW 10 MHz

Channel 1, QPSK



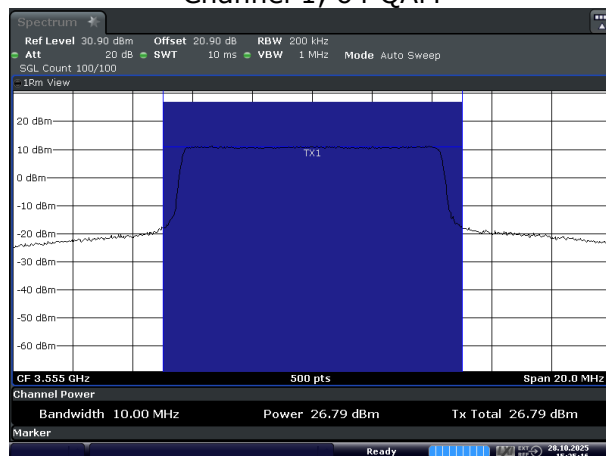
Date: 28.OCT.2025 14:55:41

Channel 1, 16 QAM



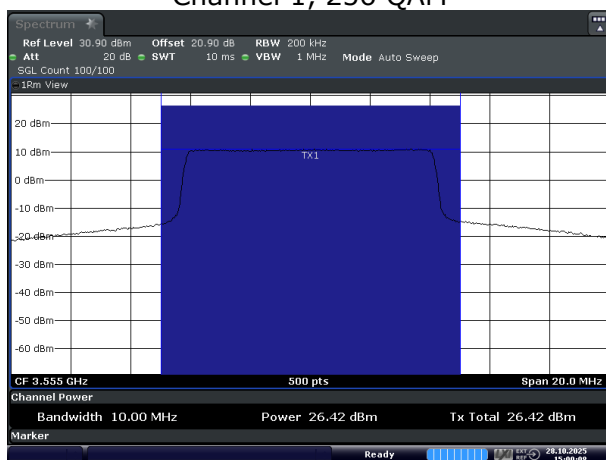
Date: 28.OCT.2025 14:56:37

Channel 1, 64 QAM

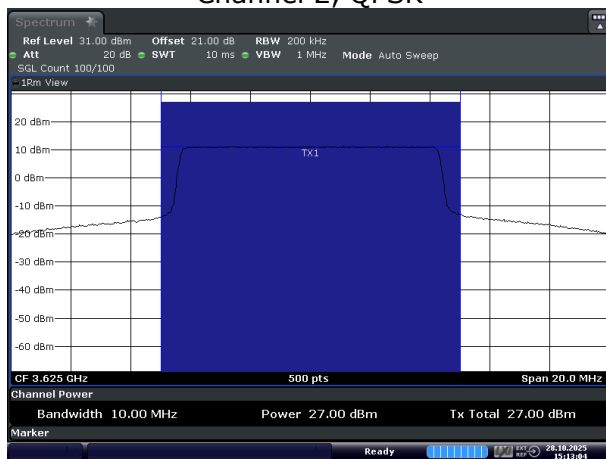


Date: 28.OCT.2025 15:25:16

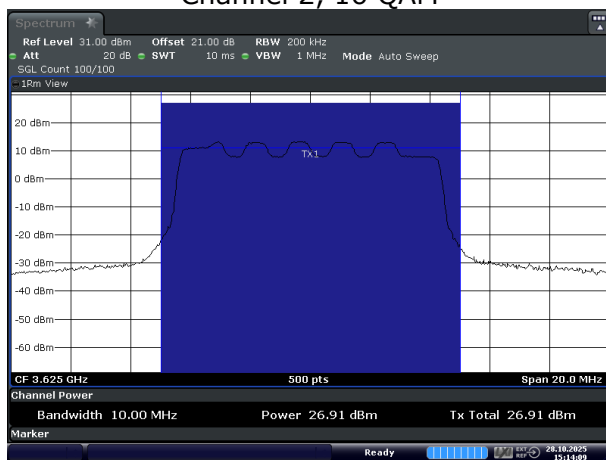
Channel 1, 256 QAM



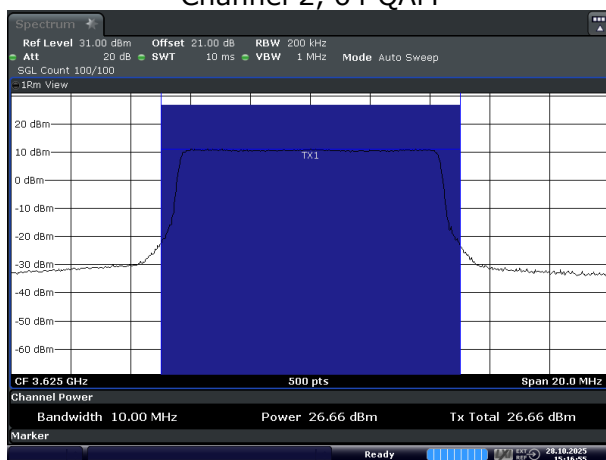
Channel 2, QPSK



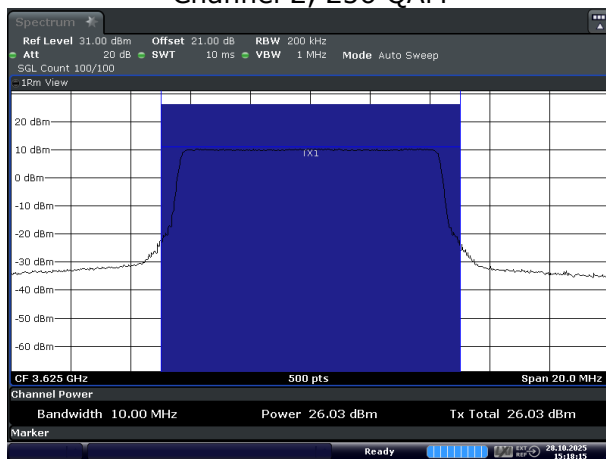
Channel 2, 16 QAM



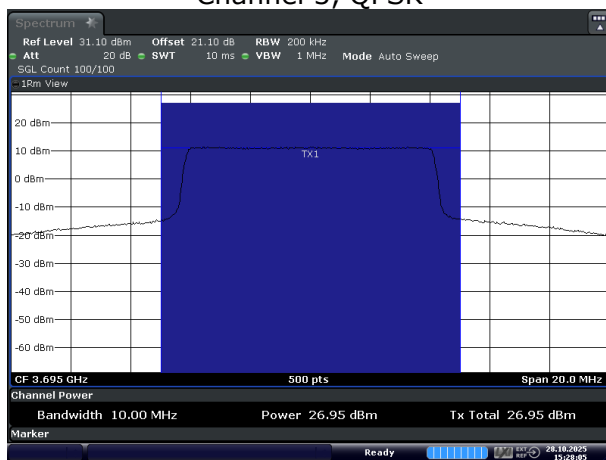
Channel 2, 64 QAM



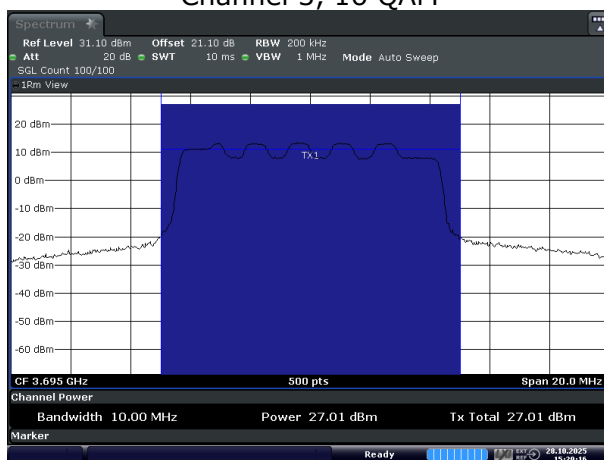
Channel 2, 256 QAM



Channel 3, QPSK

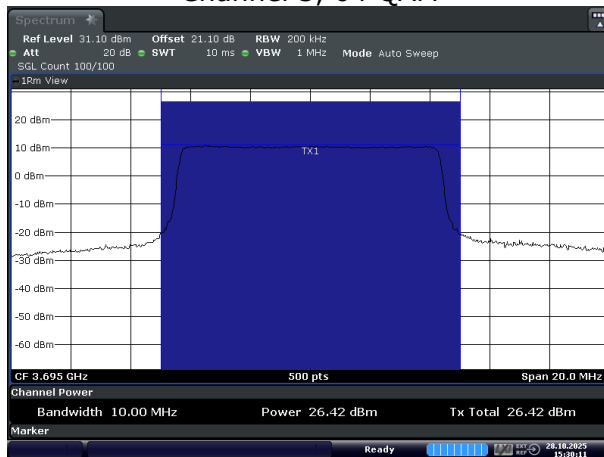


Channel 3, 16 QAM



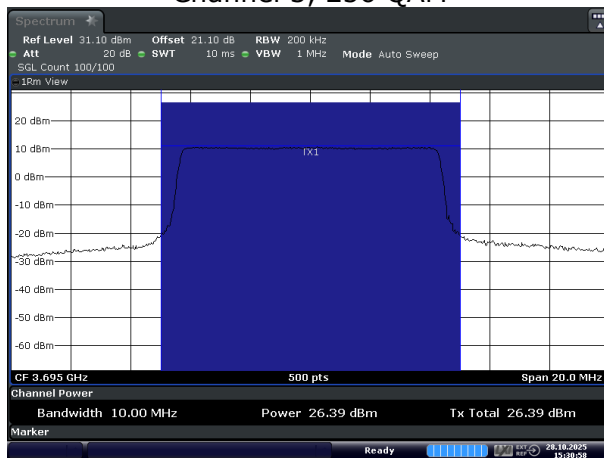
Date: 28/07/2025 15:29:17

Channel 3, 64 QAM



Date: 28/07/2025 15:30:11

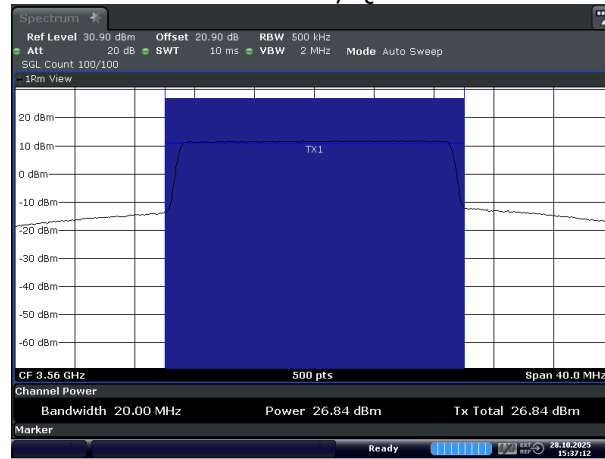
Channel 3, 256 QAM



Date: 28/07/2025 15:30:59

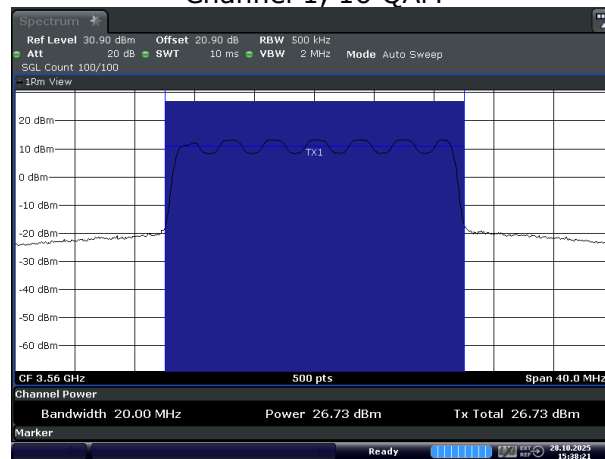
Antenna port 1; BW 20 MHz

Channel 1, QPSK



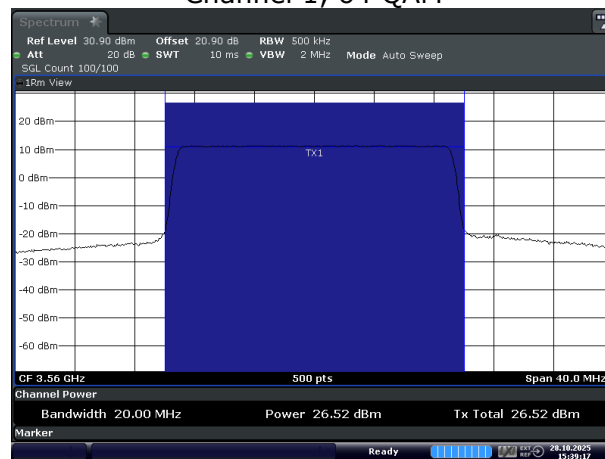
Date: 28 OCT 2025 15:37:12

Channel 1, 16 QAM



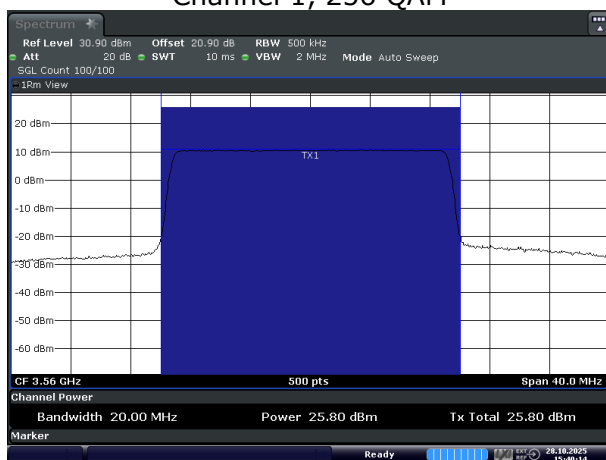
Date: 28 OCT 2025 15:38:21

Channel 1, 64 QAM



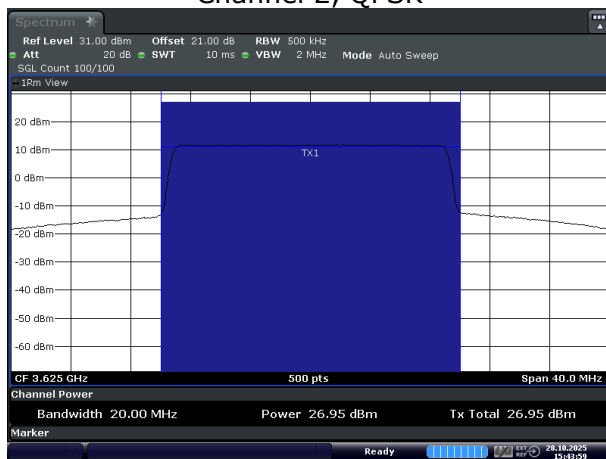
Date: 28 OCT 2025 15:39:18

Channel 1, 256 QAM



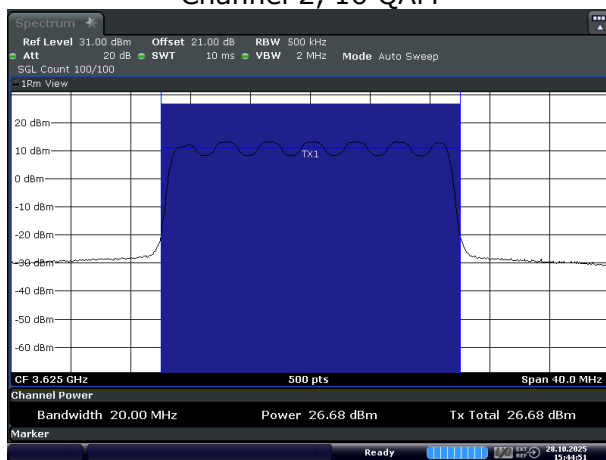
Date: 28/07/2025 15:40:14

Channel 2, QPSK



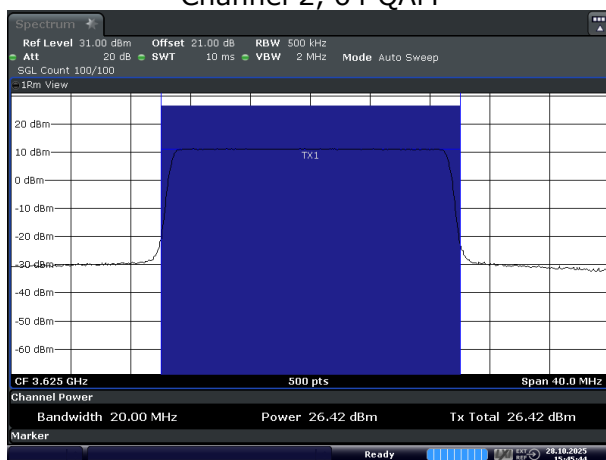
Date: 28/07/2025 15:44:00

Channel 2, 16 QAM

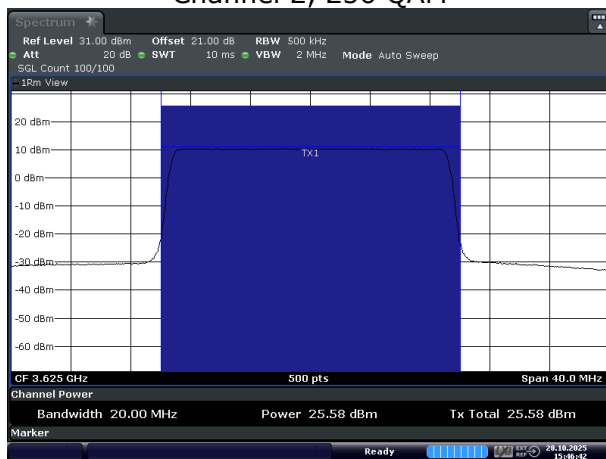


Date: 28/07/2025 15:44:52

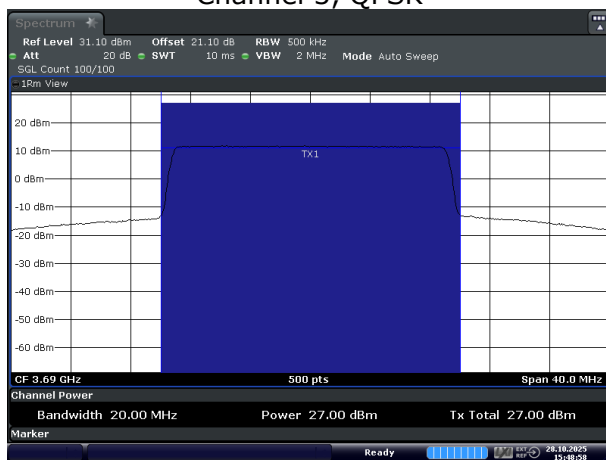
Channel 2, 64 QAM



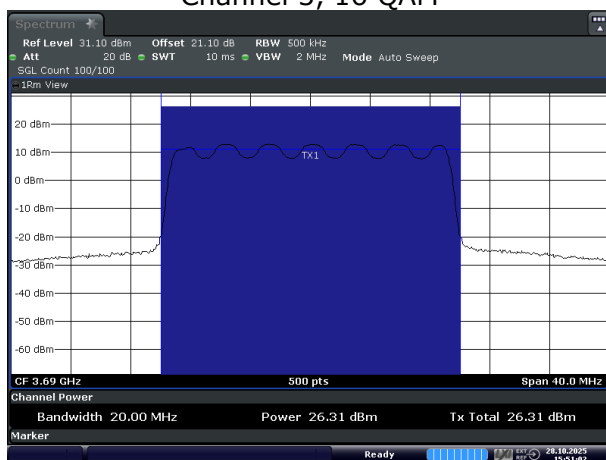
Channel 2, 256 QAM



Channel 3, QPSK

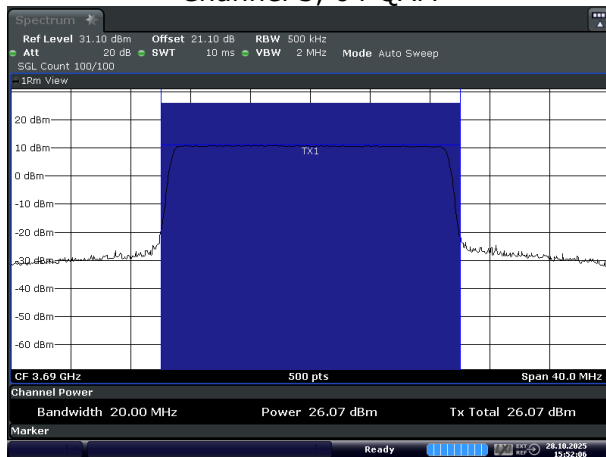


Channel 3, 16 QAM



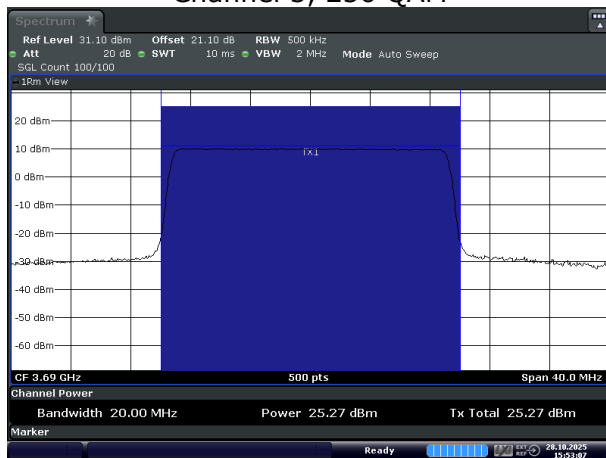
Date: 28/10/2025 15:51:02

Channel 3, 64 QAM



Date: 28/10/2025 15:52:06

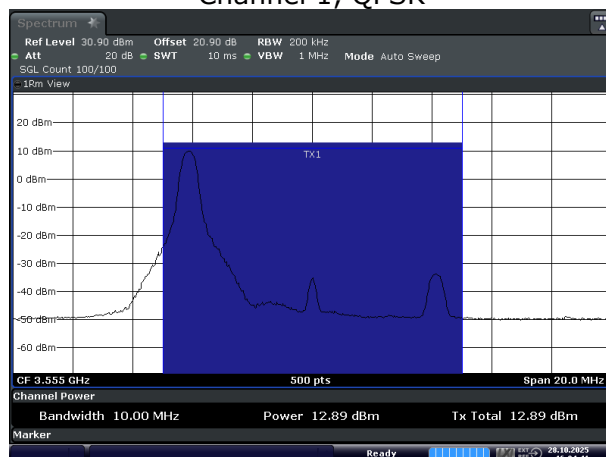
Channel 3, 256 QAM



Date: 28/10/2025 15:53:07

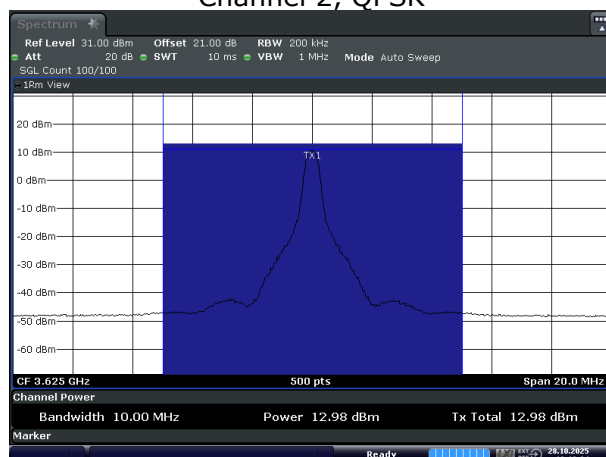
Antenna port 2; 1 RB

Channel 1, QPSK



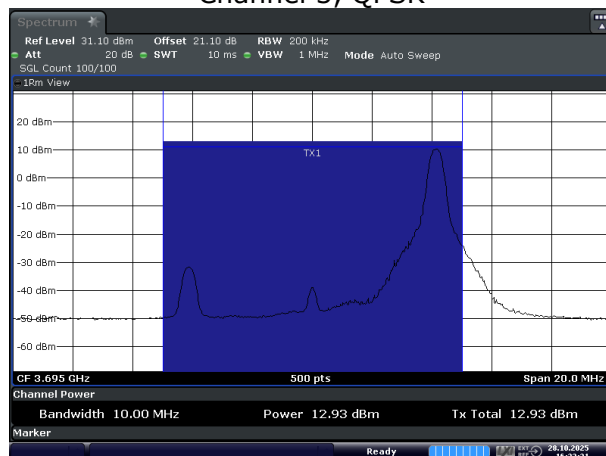
Date: 28 OCT 2025 16:04:42

Channel 2, QPSK



Date: 28 OCT 2025 16:39:24

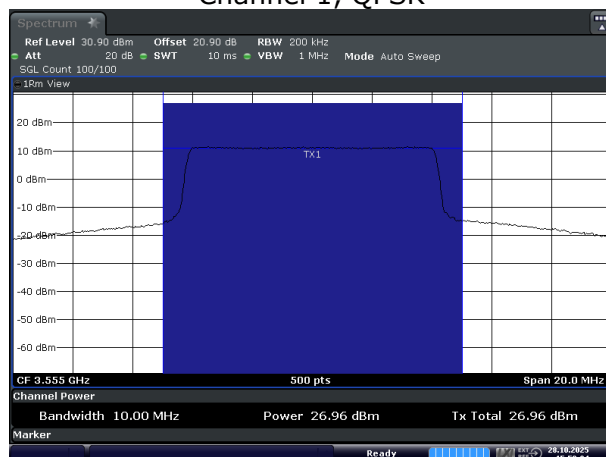
Channel 3, QPSK



Date: 28 OCT 2025 16:32:32

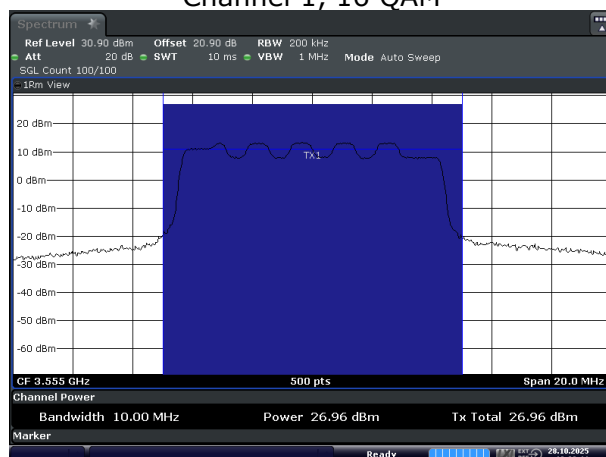
Antenna port 2; BW 10 MHz

Channel 1, QPSK



Date: 28 OCT 2025 15:59:04

Channel 1, 16 QAM



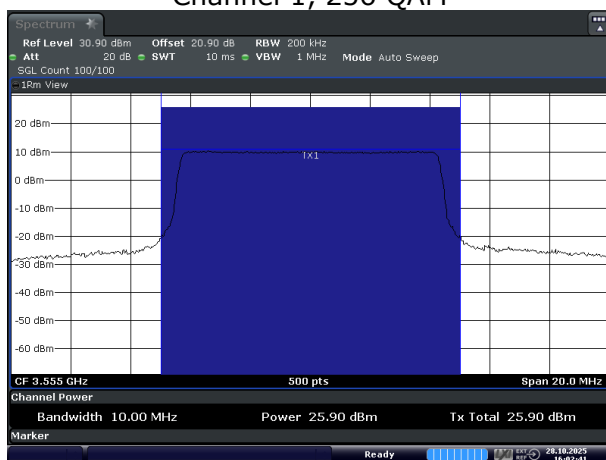
Date: 28 OCT 2025 16:00:11

Channel 1, 64 QAM



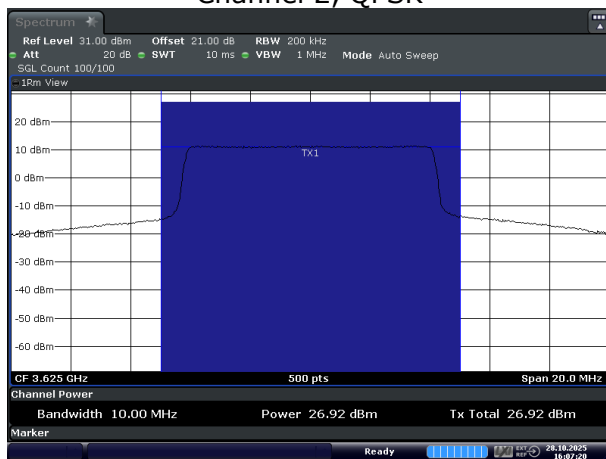
Date: 28 OCT 2025 16:01:00

Channel 1, 256 QAM



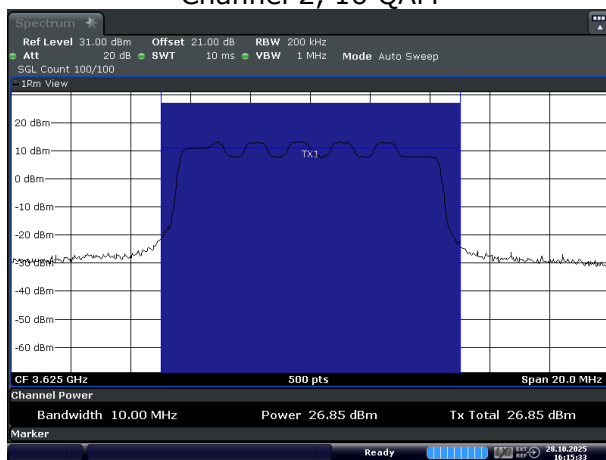
Date: 28/10/2025 16:02:41

Channel 2, QPSK



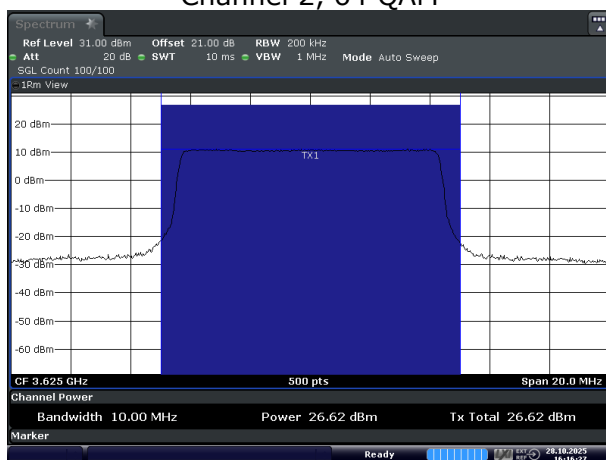
Date: 28/10/2025 16:07:20

Channel 2, 16 QAM



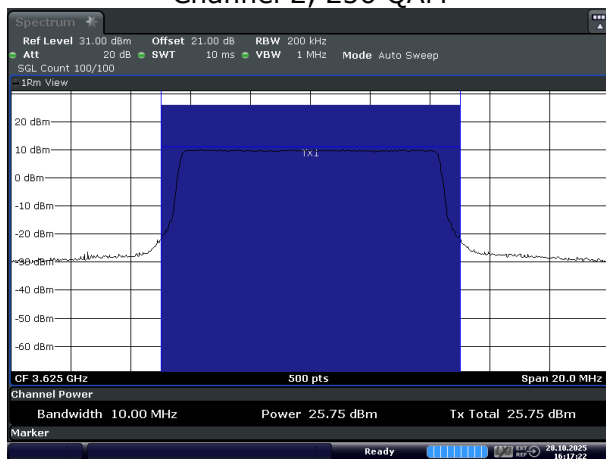
Date: 28/10/2025 16:15:34

Channel 2, 64 QAM



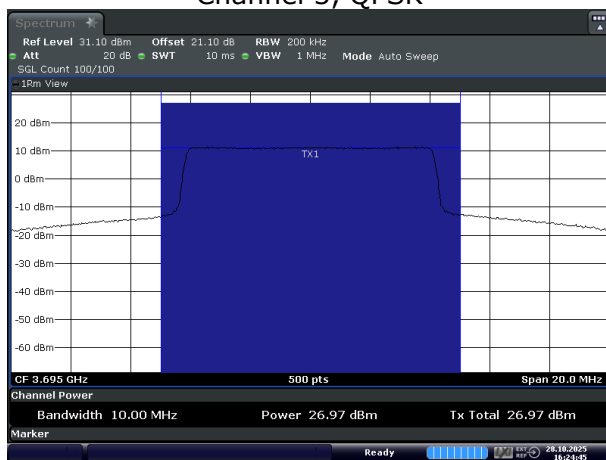
Date: 28/07/2025 16:21:27

Channel 2, 256 QAM



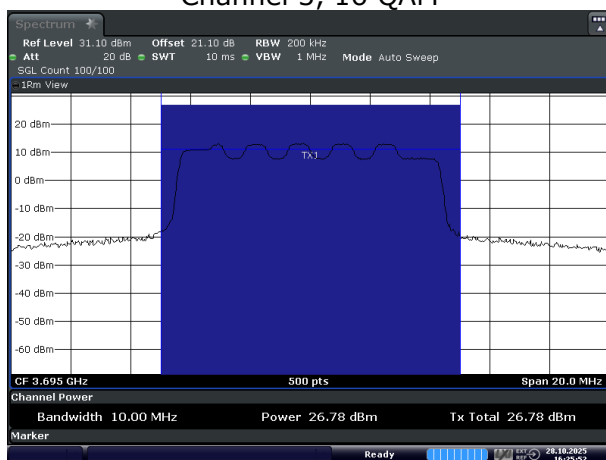
Date: 28/07/2025 16:21:22

Channel 3, QPSK



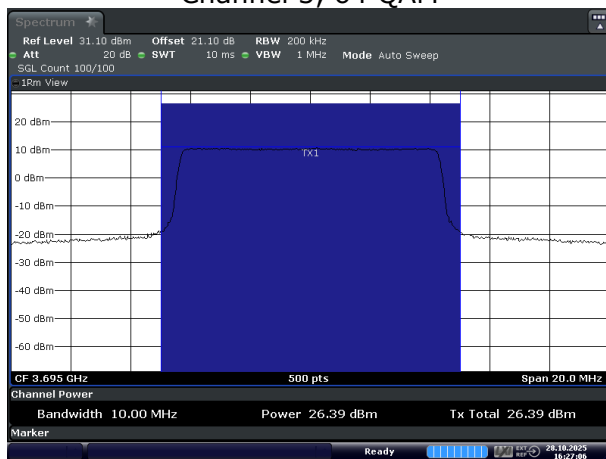
Date: 28/07/2025 16:24:45

Channel 3, 16 QAM



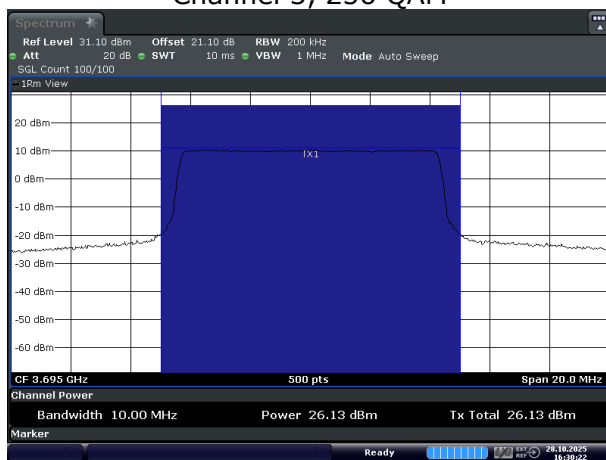
Date: 28/07/2025 16:25:52

Channel 3, 64 QAM



Date: 28/07/2025 16:27:06

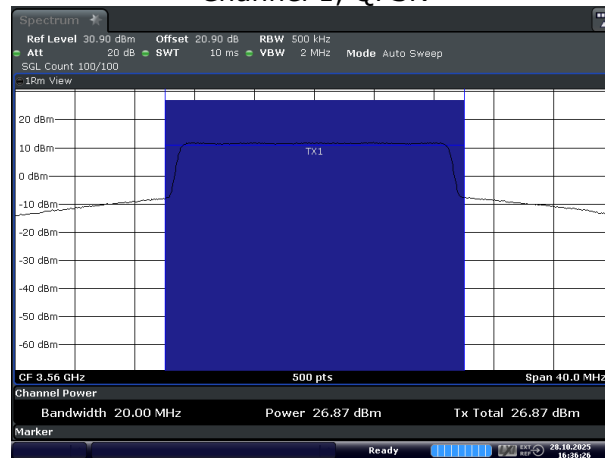
Channel 3, 256 QAM



Date: 28/07/2025 16:30:22

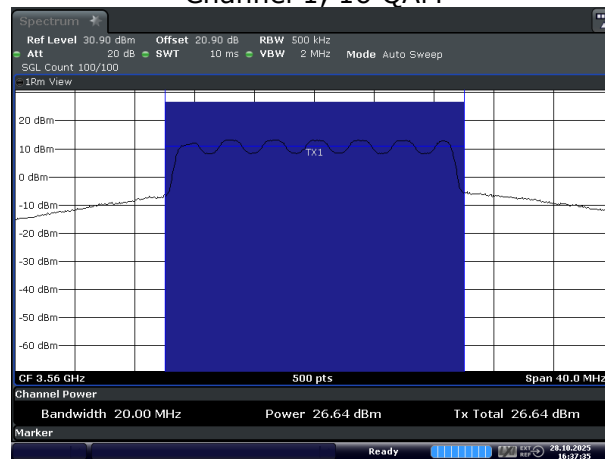
Antenna port 2; BW 20 MHz

Channel 1, QPSK



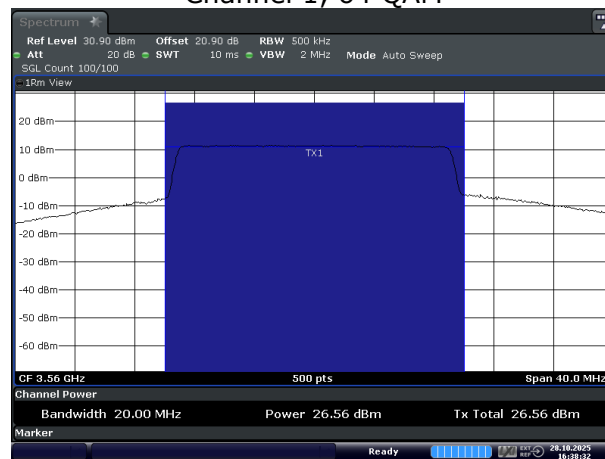
Date: 28 OCT 2025 16:36:26

Channel 1, 16 QAM



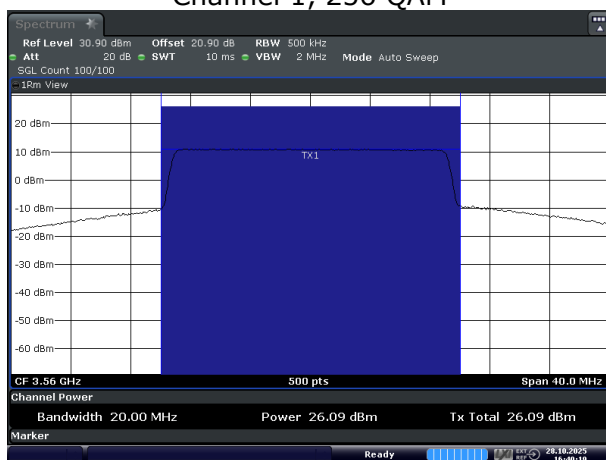
Date: 28 OCT 2025 16:37:35

Channel 1, 64 QAM

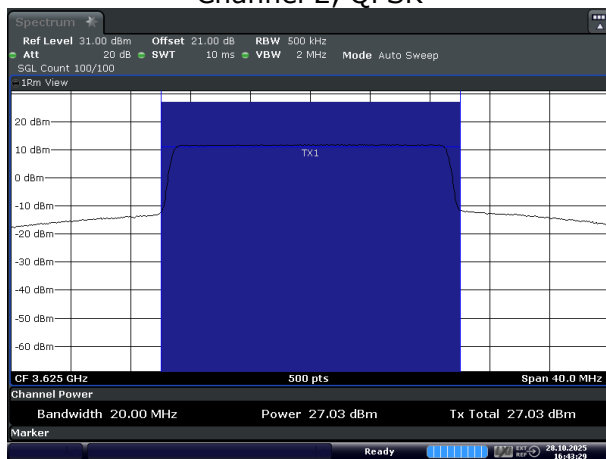


Date: 28 OCT 2025 16:38:33

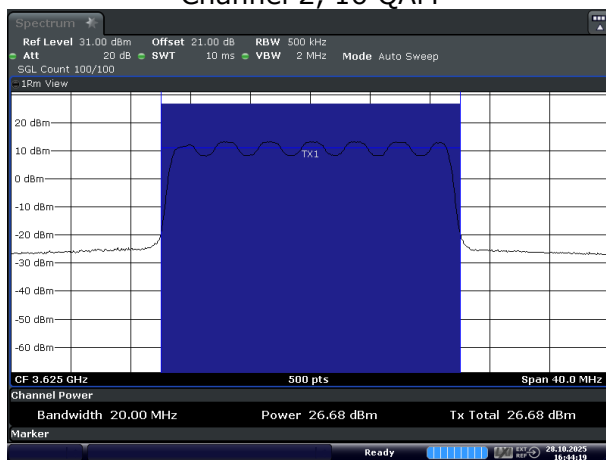
Channel 1, 256 QAM



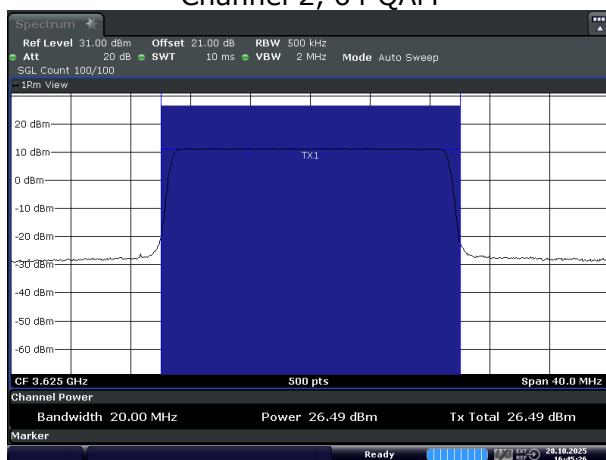
Channel 2, QPSK



Channel 2, 16 QAM

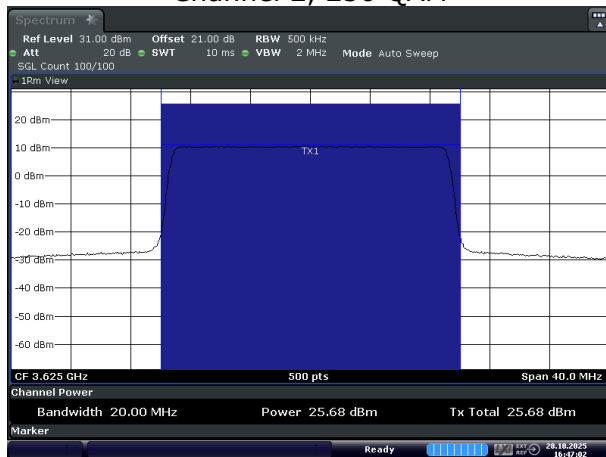


Channel 2, 64 QAM



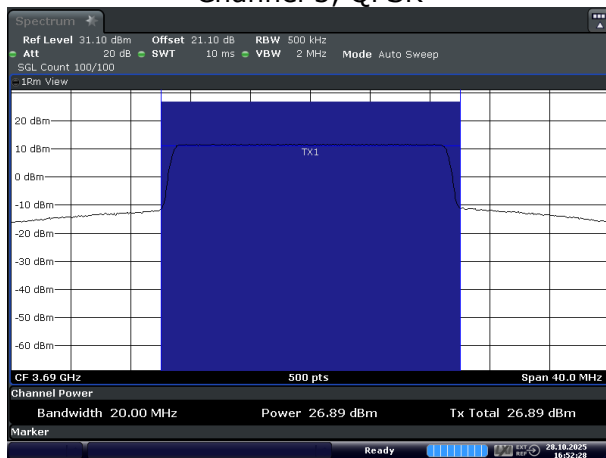
Date: 28/07/2025 16:45:26

Channel 2, 256 QAM



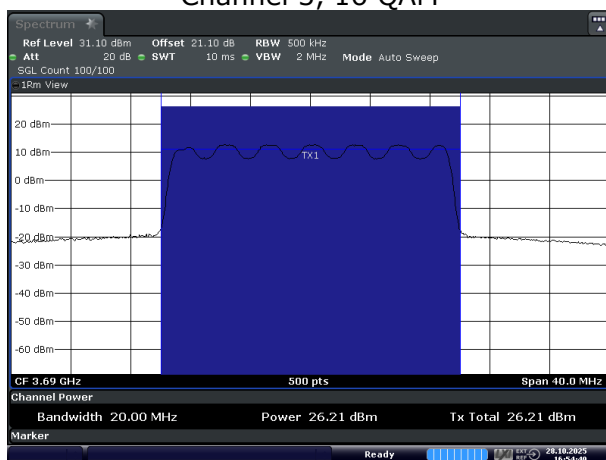
Date: 28/07/2025 16:47:02

Channel 3, QPSK

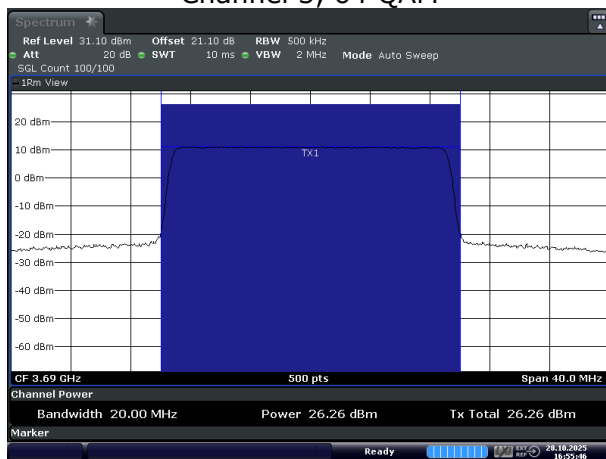


Date: 28/07/2025 16:52:28

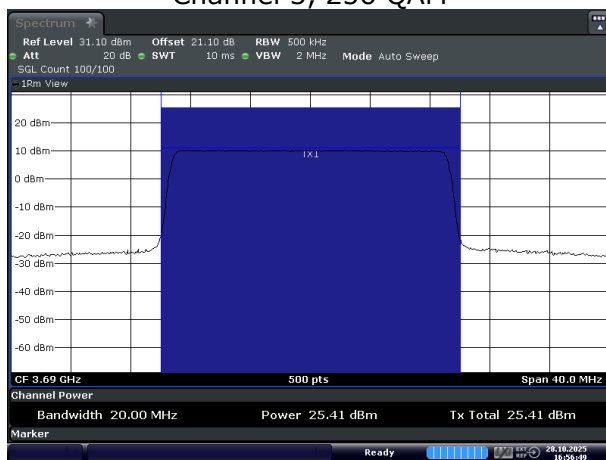
Channel 3, 16 QAM



Channel 3, 64 QAM

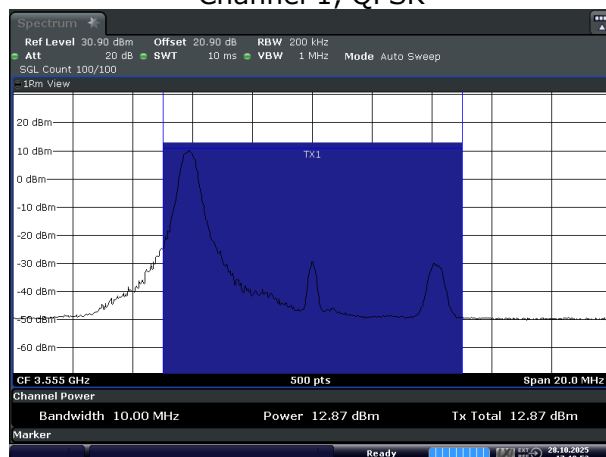


Channel 3, 256 QAM



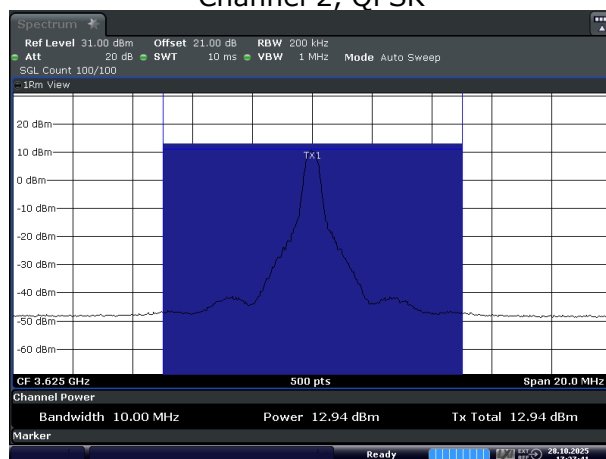
Antenna port 3; 1 RB

Channel 1, QPSK



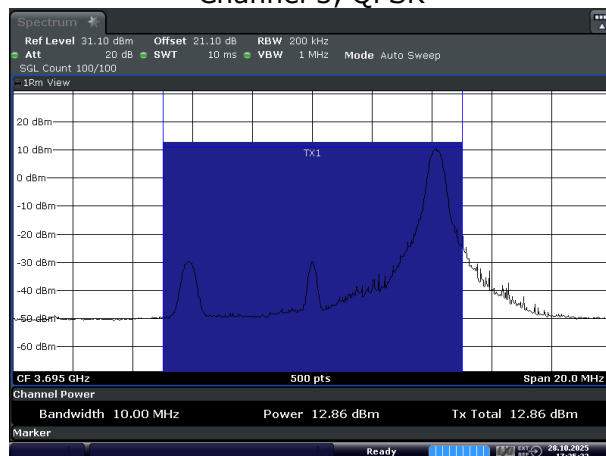
Date: 28 OCT 2025 17:50:54

Channel 2, QPSK



Date: 28 OCT 2025 17:27:41

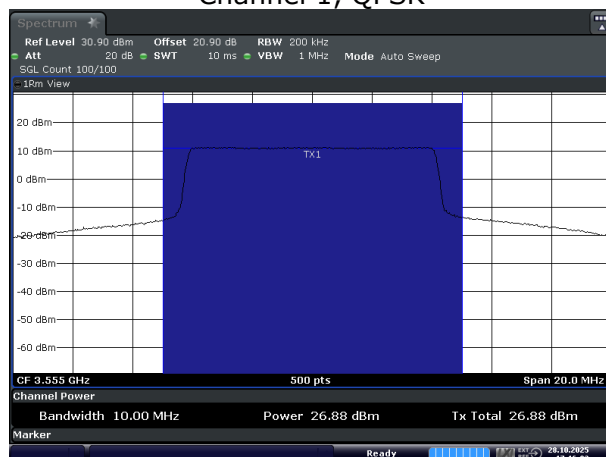
Channel 3, QPSK



Date: 28 OCT 2025 17:25:33

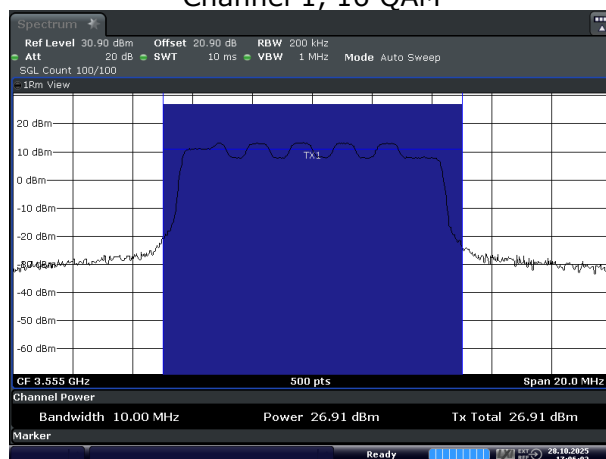
Antenna port 3; BW 10 MHz

Channel 1, QPSK



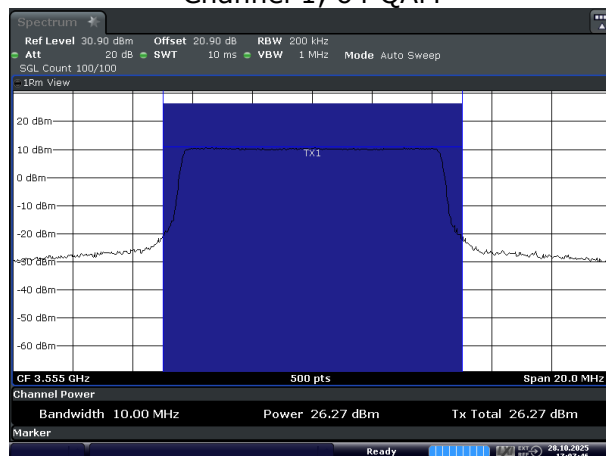
Date: 28 OCT 2025 17:16:02

Channel 1, 16 QAM



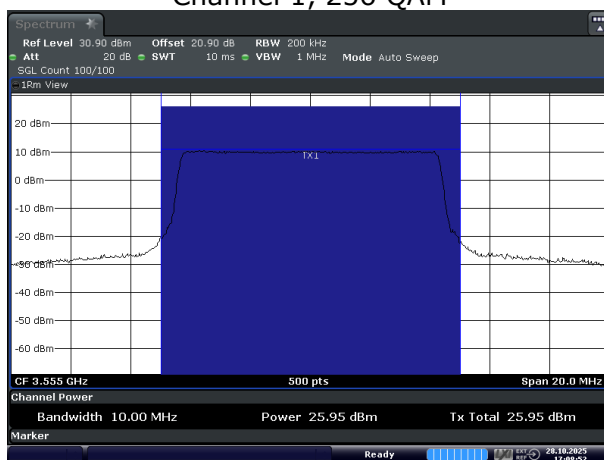
Date: 28 OCT 2025 17:06:02

Channel 1, 64 QAM

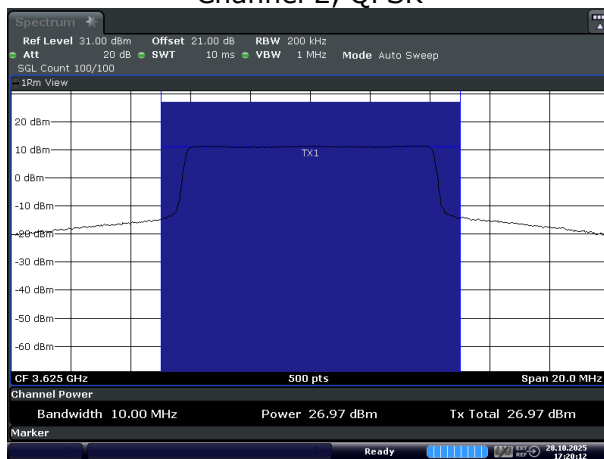


Date: 28 OCT 2025 17:07:46

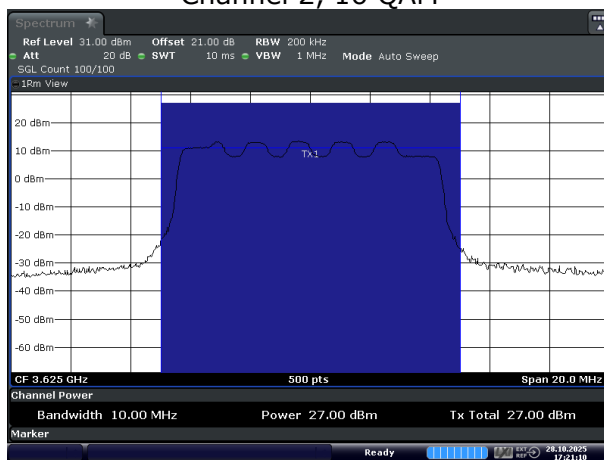
Channel 1, 256 QAM



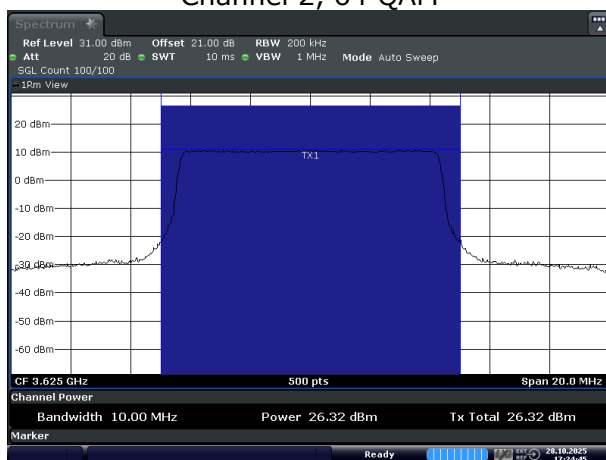
Channel 2, QPSK



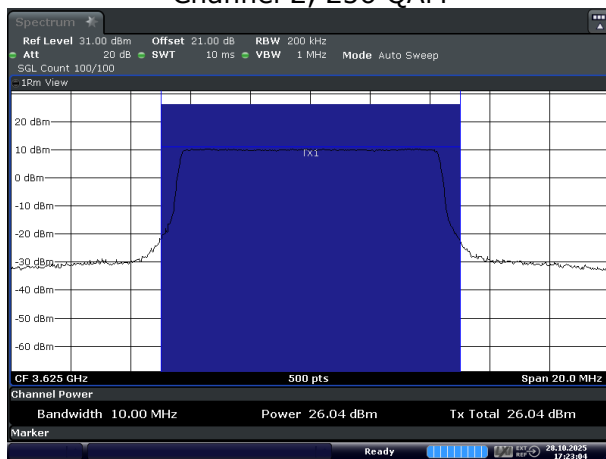
Channel 2, 16 QAM



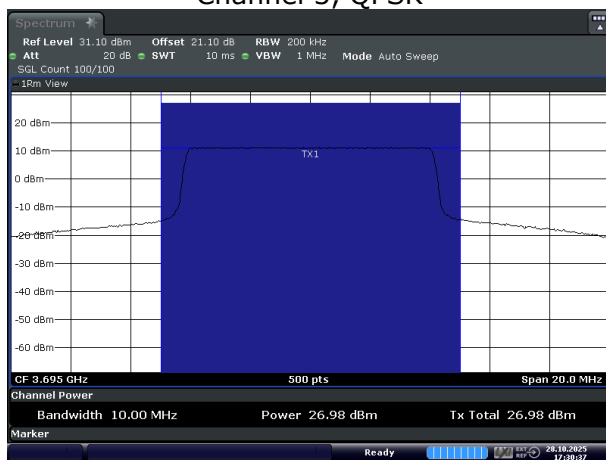
Channel 2, 64 QAM



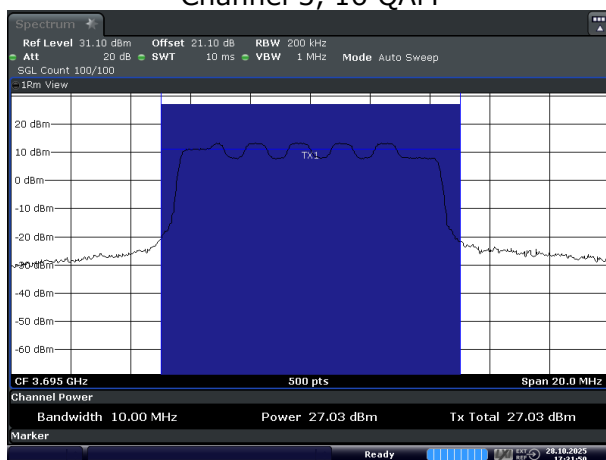
Channel 2, 256 QAM



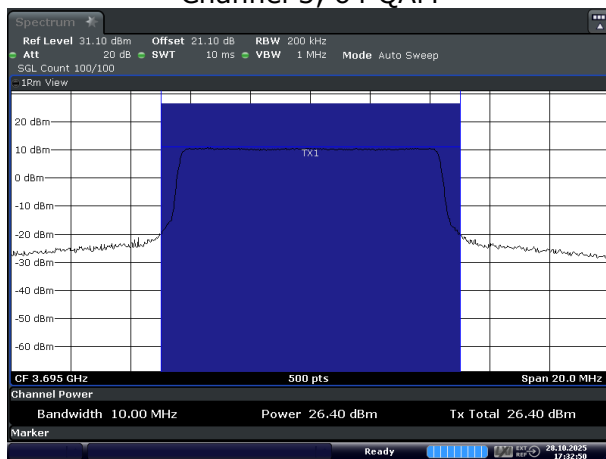
Channel 3, QPSK



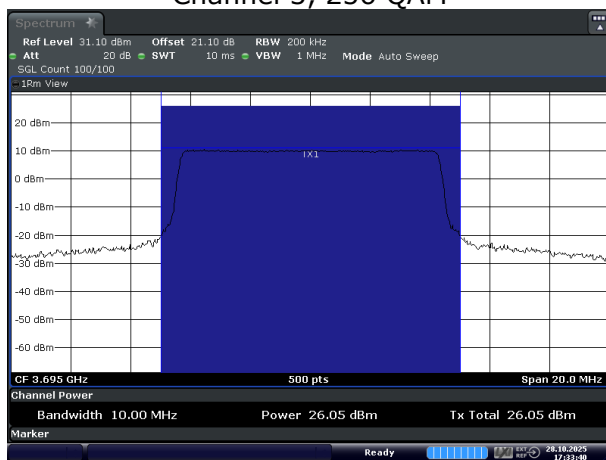
Channel 3, 16 QAM



Channel 3, 64 QAM

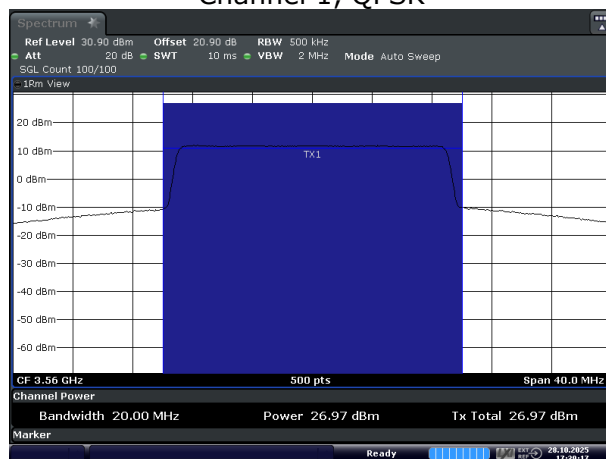


Channel 3, 256 QAM



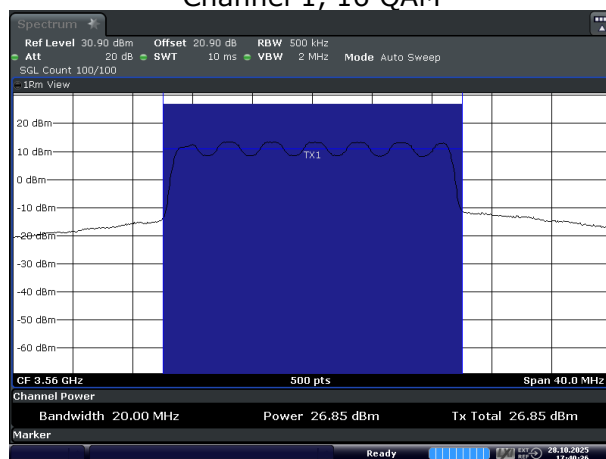
Antenna port 3; BW 20 MHz

Channel 1, QPSK



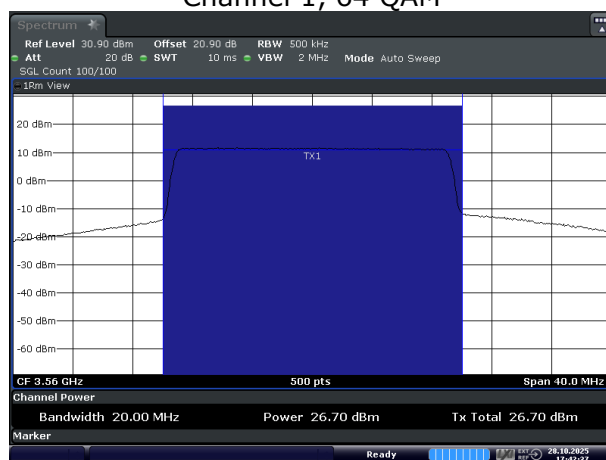
Date: 28 OCT 2025 17:39:18

Channel 1, 16 QAM



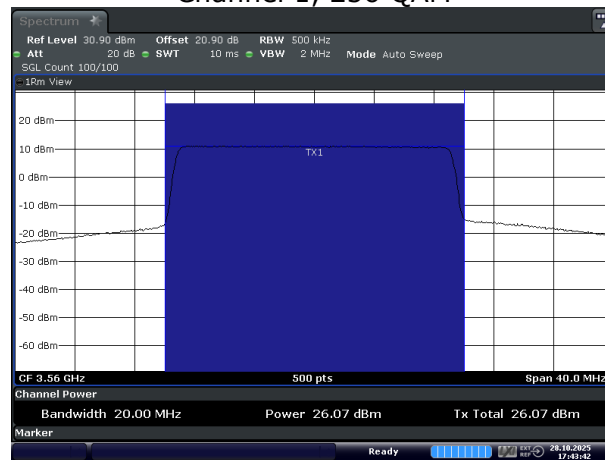
Date: 28 OCT 2025 17:40:36

Channel 1, 64 QAM



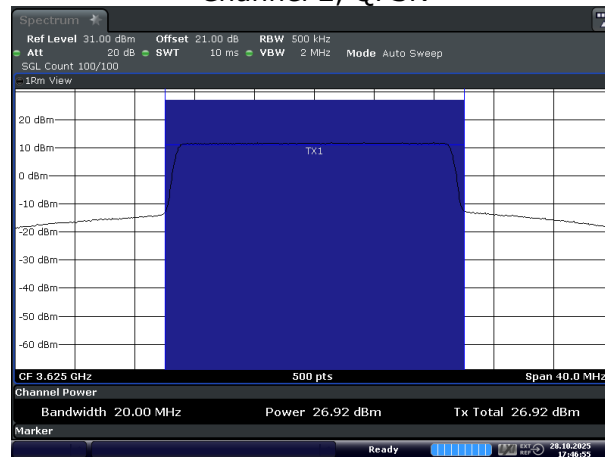
Date: 28 OCT 2025 17:42:36

Channel 1, 256 QAM



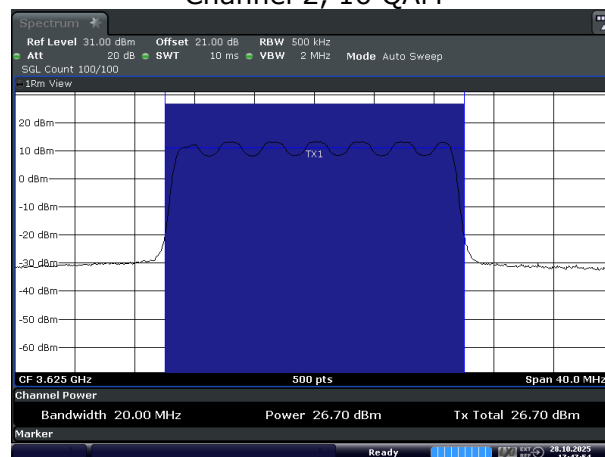
Date: 28/07/2025 17:43:43

Channel 2, QPSK



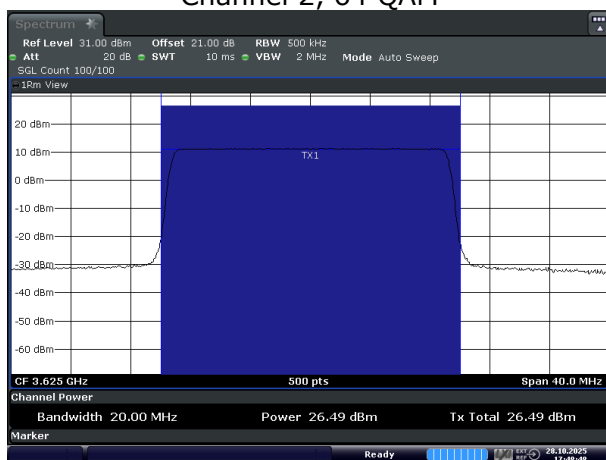
Date: 28/07/2025 17:46:56

Channel 2, 16 QAM

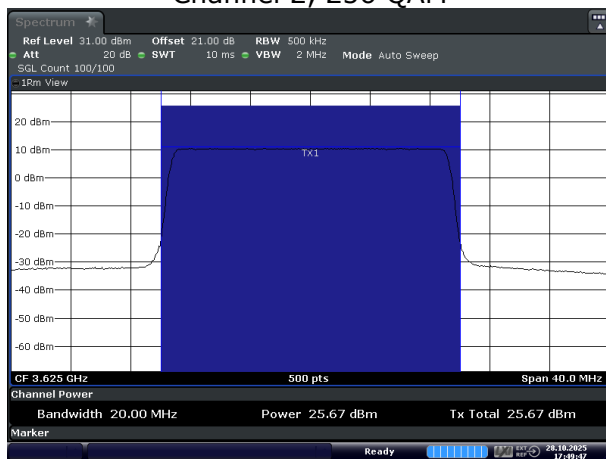


Date: 28/07/2025 17:47:54

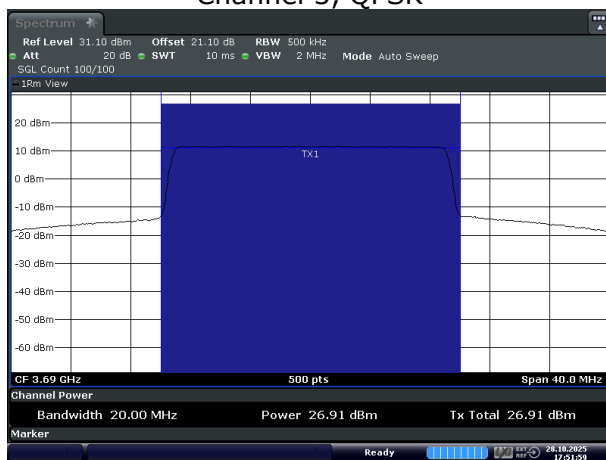
Channel 2, 64 QAM



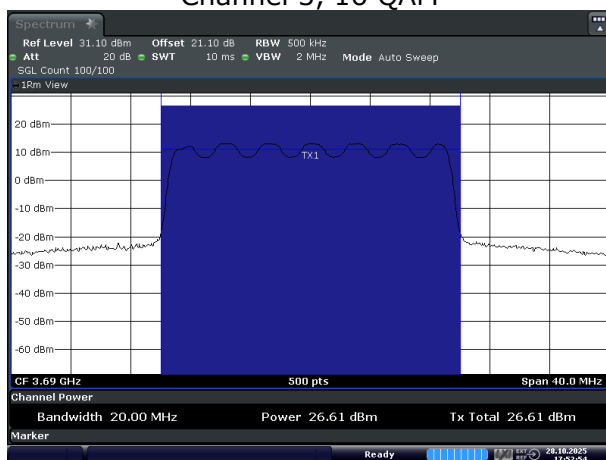
Channel 2, 256 QAM



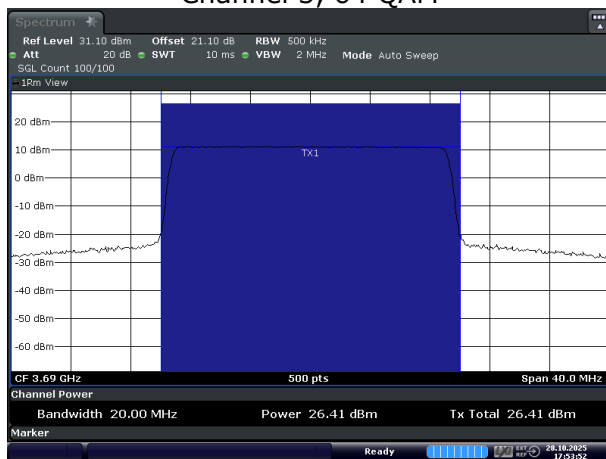
Channel 3, QPSK



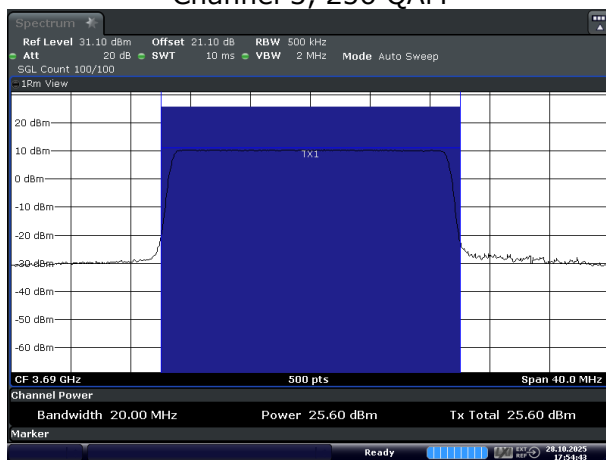
Channel 3, 16 QAM



Channel 3, 64 QAM



Channel 3, 256 QAM



5.2 MAXIMUM POWER SPECTRAL DENSITY

Standard **FCC PART 96 Subpart E**

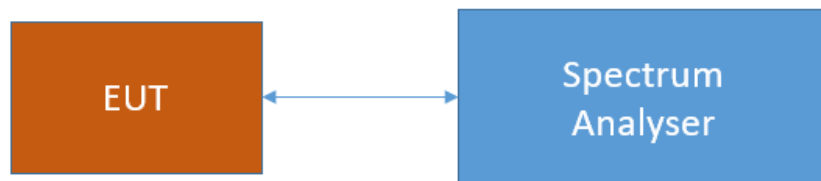
The test was performed according to:

ANSI C63.26: 2015; 5.2.4.1, Power Spectral Density: 5.2.4.5

5.2.1 TEST DESCRIPTION

This test case is intended to demonstrate compliance to the applicable RF Output power test case per § 2.1046. The limit and the requirements come from the applicable rule part for the operating band of the cellular device.

The EUT was connected to the test setup according to the following diagram:



Test Setup FCC Part 96

The attenuation of the measuring and stimulus path are known for each measured frequency and are considered.

The Spectrum Analyzer settings can be directly found in the measurement diagrams.

5.2.2 TEST REQUIREMENTS / LIMITS

FCC Part 96, § 96.41

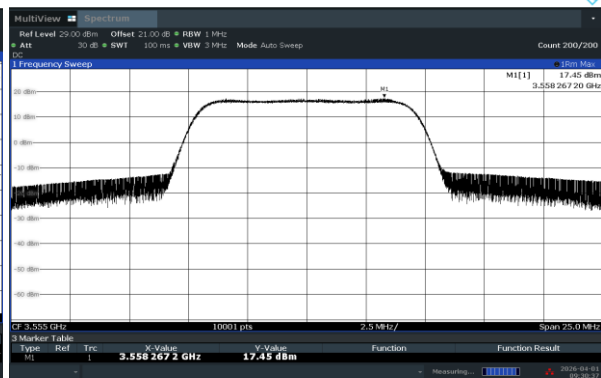
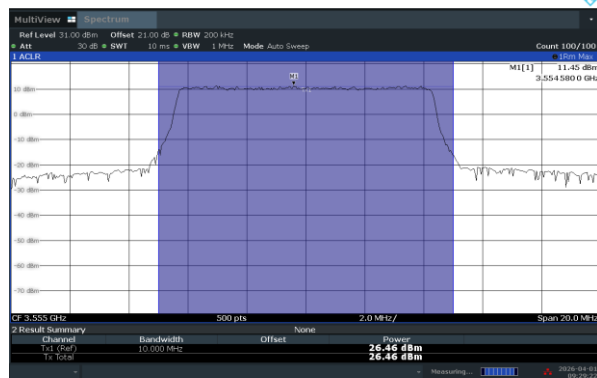
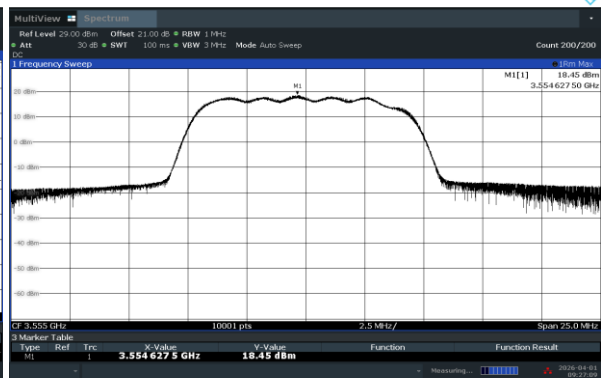
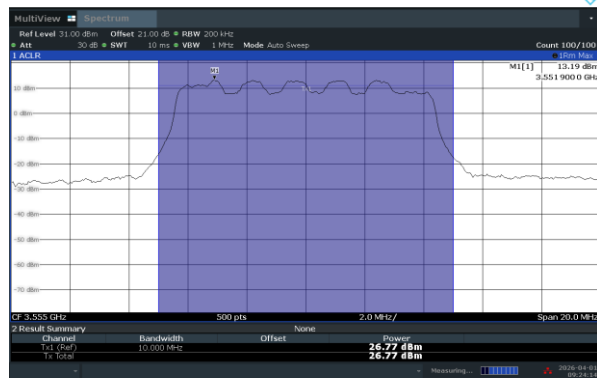
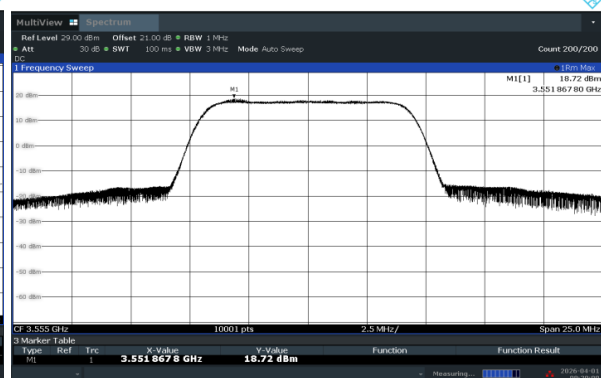
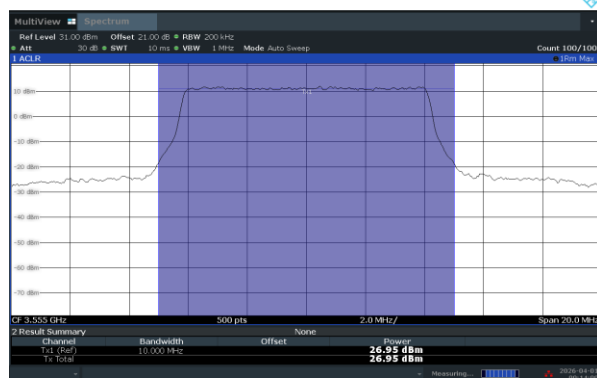
(b) Power limits. Unless otherwise specified in this section, the maximum effective isotropic radiated power (EIRP) and maximum Power Spectral Density (PSD) of any CBSD and End User Device must comply with the limits shown in the table in this paragraph (b):

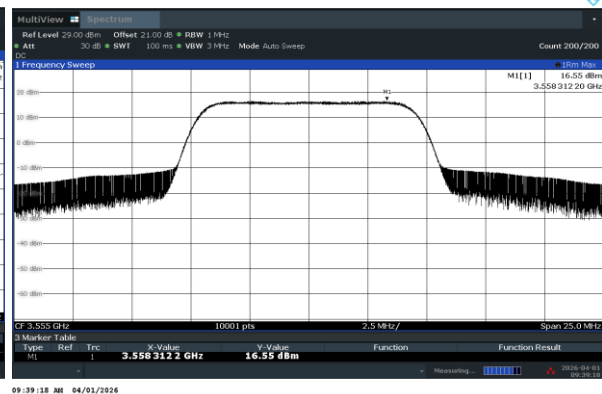
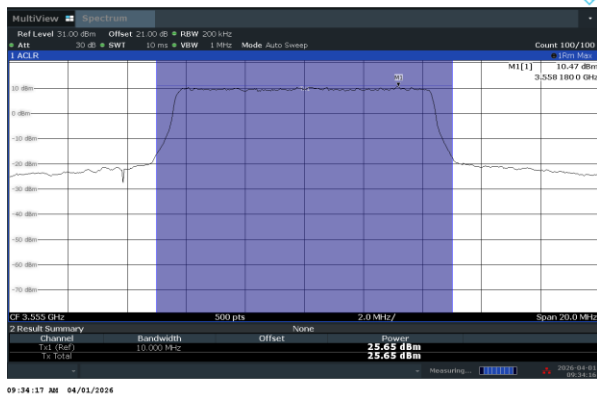
Device	Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
End User Device	23	n/a
Category A CBSD	30	20
Category B CBSD	47	37

5.2.3 TEST PROTOCOL MAXIMUM POWER SPECTRAL DENSITY

The results recorded were measured with the modulation which produces the worst case (highest) power density. Based on the measurement RF output power and preliminary investigation carried out as an example at port 3 with all modulation types the QPSK modulation was chosen as worst case for this test case.

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_3 [dBm/10MHz]	Cond. Power Port_3 [dBm/1MHz]
3555	10	50	QPSK	26.95	18.72
3555	10	50	16 QAM	26.77	18.45
3555	10	50	64 QAM	26.46	17.45
3555	10	50	256 QAM	25.65	16.55





Ambient temperature: 25 °C
Relative humidity: 38 %

PSD

ANTENNA AN_02 6GK5897-5FF00-0AA0

Sum table. Values calculated using methods "Measure and sum the spectra across the outputs." as described in the KDB 662911 D01 v02r01 chapter E 2 a.

TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_02 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	QPSK	19.16	18.55	18.25	18.72	24.7	8.3	33.0	37.0	4.0
3625	10	50	QPSK	19.04	18.35	18.66	18.17	24.6	8.3	32.9	37.0	4.1
3695	10	50	QPSK	18.95	19.01	18.67	19.11	25.0	8.3	33.3	37.0	3.7
3560	20	100	QPSK	16.33	16.36	15.66	15.87	22.1	8.3	30.4	37.0	6.6
3625	20	100	QPSK	16.34	16.32	16.29	15.89	22.2	8.3	30.5	37.0	6.5
3690	20	100	QPSK	16.31	16.30	15.98	16.04	22.2	8.3	30.5	37.0	6.5

ANTENNA AN_01 6GK5897-5PN00-0AA0

Sum table. Values calculated using methods "Measure and sum the spectra across the outputs." as described in the KDB 662911 D01 v02r01 chapter E 2 a.

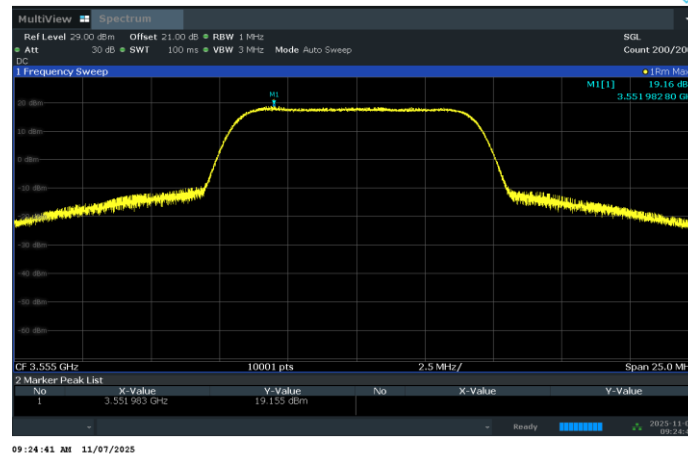
TX Freq. [MHz]	Band width [MHz]	Resource Block(s)	Modulation	Cond. Power Port_0 [dBm]	Cond. Power Port_1 [dBm]	Cond. Power Port_2 [dBm]	Cond. Power Port_3 [dBm]	Cond. Power sum [dBm]	Antenna AN_01 gain [dBi]	EIRP [dBm]	FCC EIRP Limit [dBm]	Margin to Limit [dB]
3555	10	50	QPSK	19.16	18.55	18.25	18.72	24.7	10.3	35.0	37.0	2.0
3625	10	50	QPSK	19.04	18.35	18.66	18.17	24.6	10.3	34.9	37.0	2.1
3695	10	50	QPSK	18.95	19.01	18.67	19.11	25.0	10.3	35.3	37.0	1.7
3560	20	100	QPSK	16.33	16.36	15.66	15.87	22.1	10.3	32.4	37.0	4.6
3625	20	100	QPSK	16.34	16.32	16.29	15.89	22.2	10.3	32.5	37.0	4.5
3690	20	100	QPSK	16.31	16.30	15.98	16.04	22.2	10.3	32.5	37.0	4.5

Remark: Please see next sub-clause for the measurement plot.

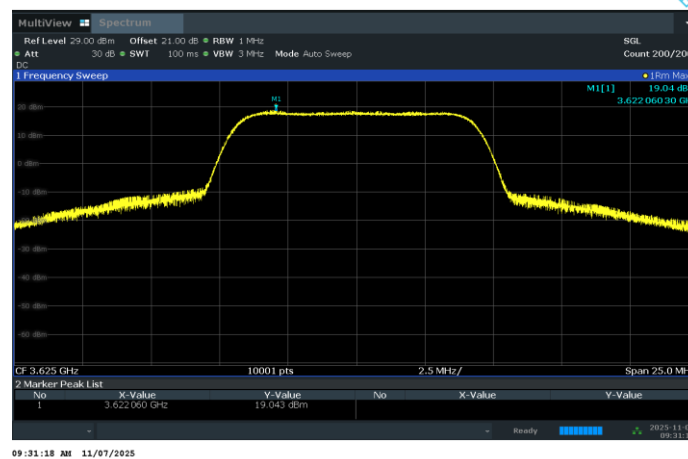
5.2.4 MEASUREMENT PLOT PSD

Antenna port 0; 10MHz

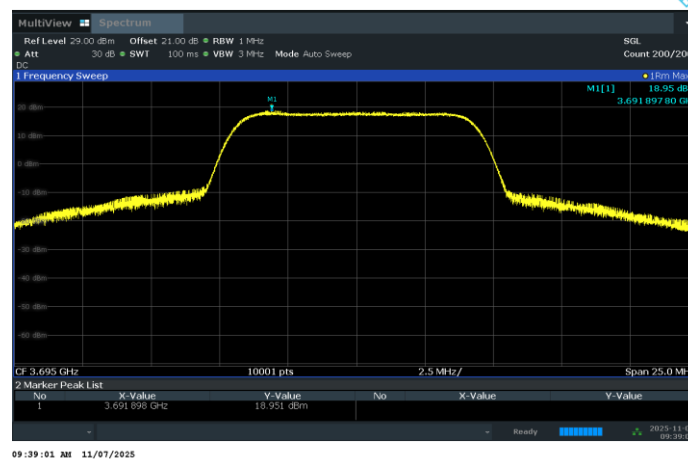
Channel 1, QPSK



Channel 2, QPSK

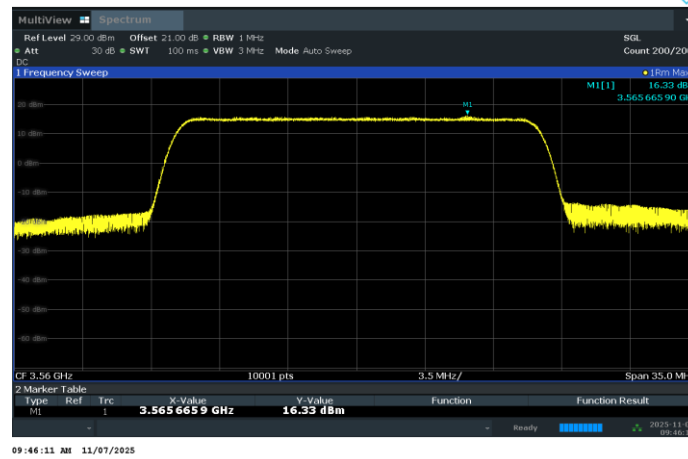


Channel 3, QPSK

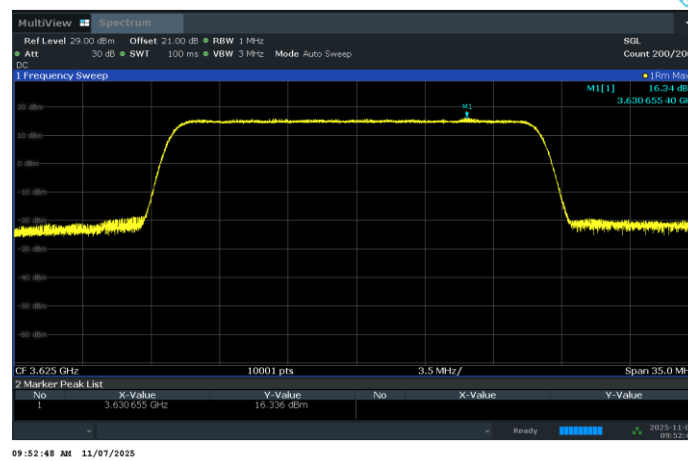


Antenna port 0; 20MHz

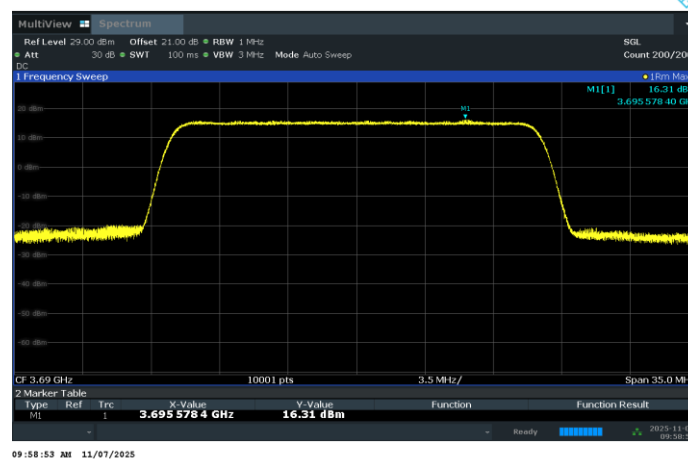
Channel 1, QPSK



Channel 2, QPSK

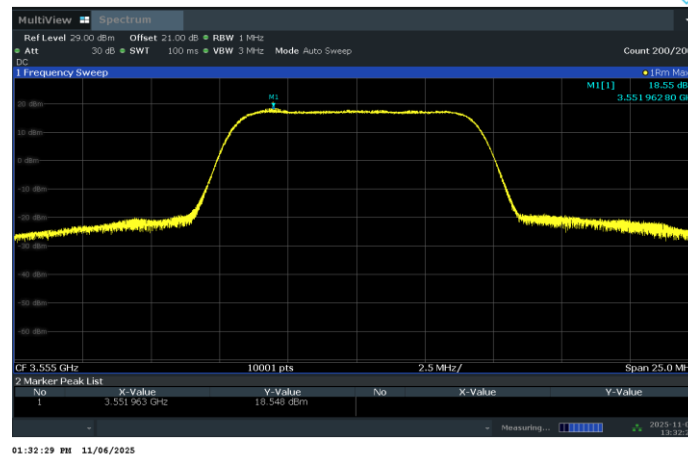


Channel 3, QPSK

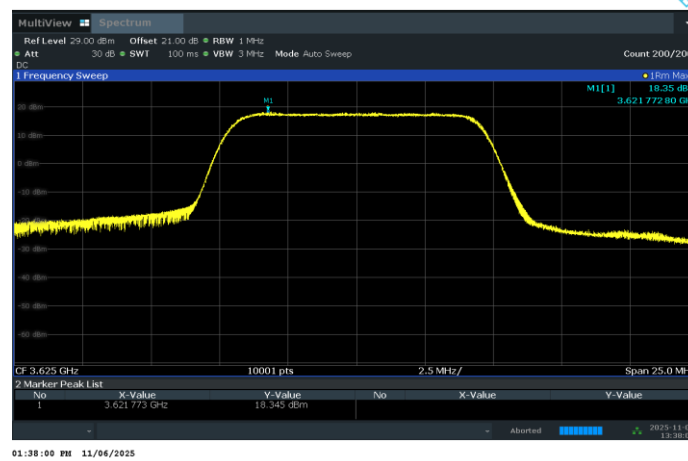


Antenna port 1; 10MHz

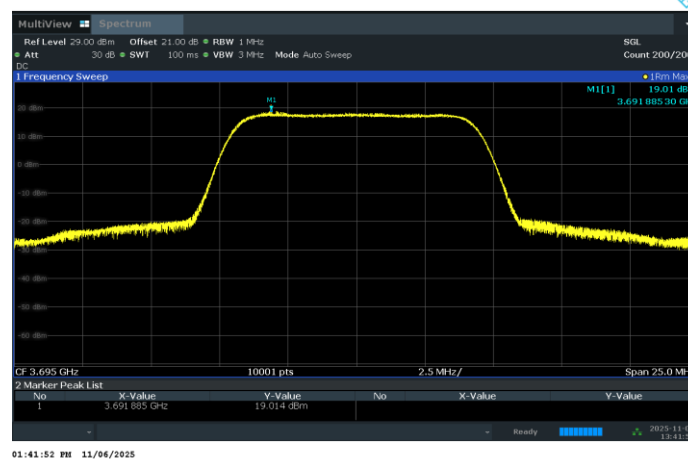
Channel 1, QPSK



Channel 2, QPSK

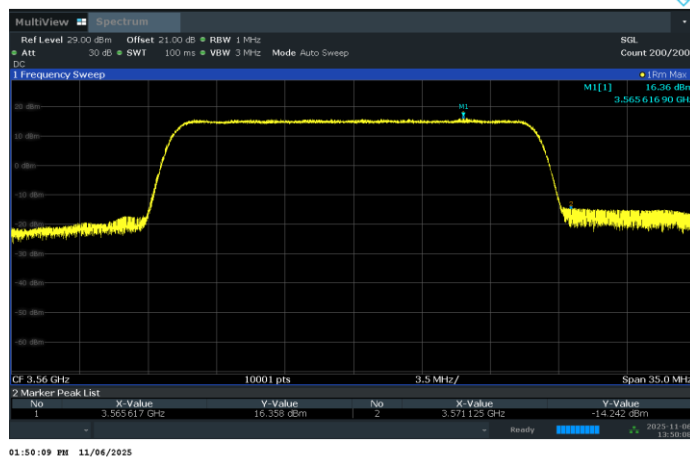


Channel 3, QPSK

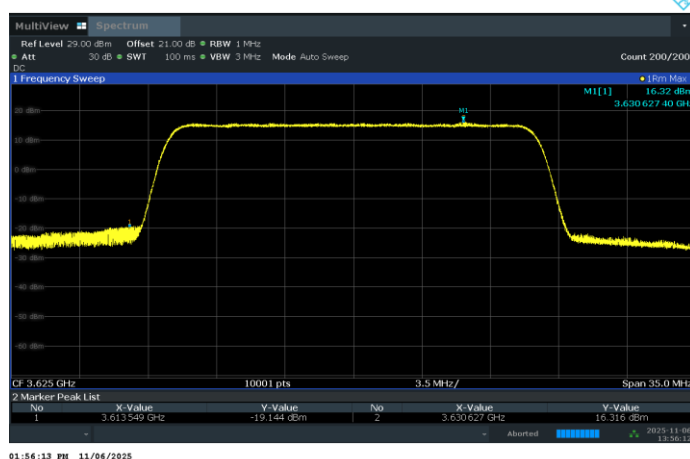


Antenna port 1; 20MHz

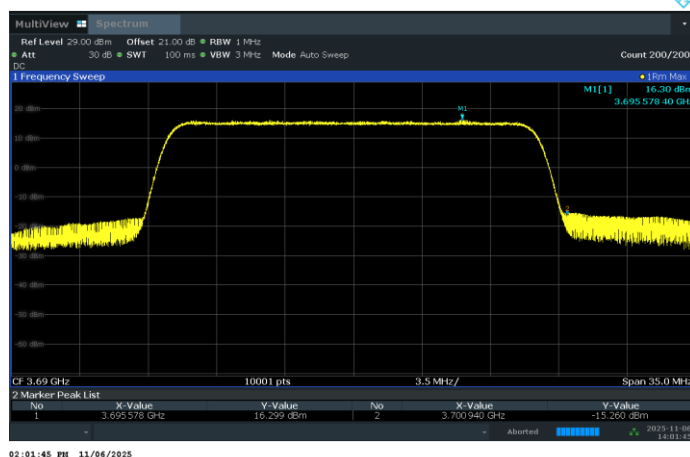
Channel 1, QPSK



Channel 2, QPSK

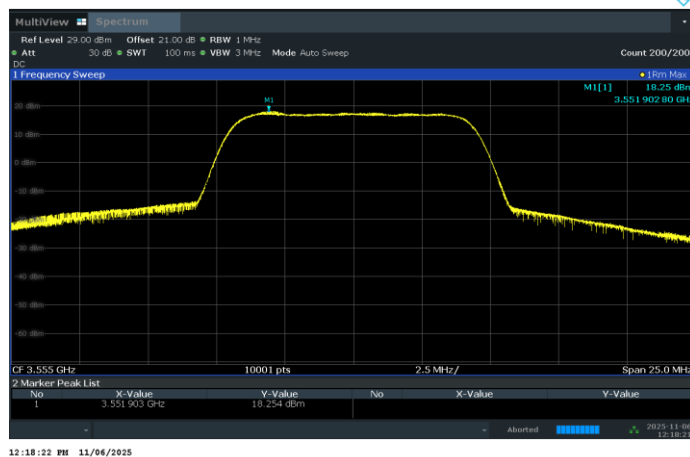


Channel 3, QPSK

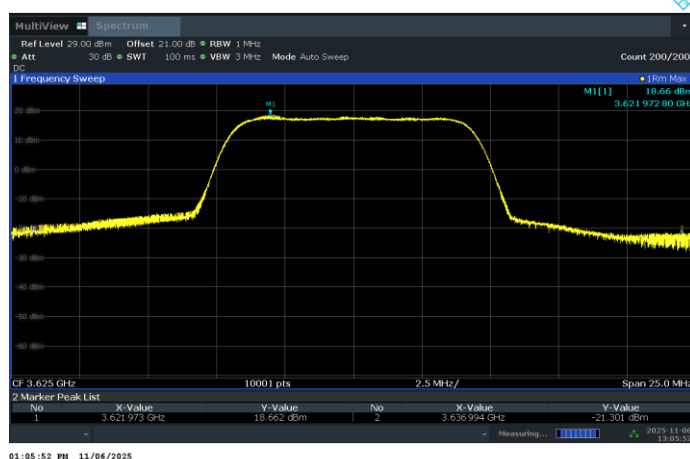


Antenna port 2; 10MHz

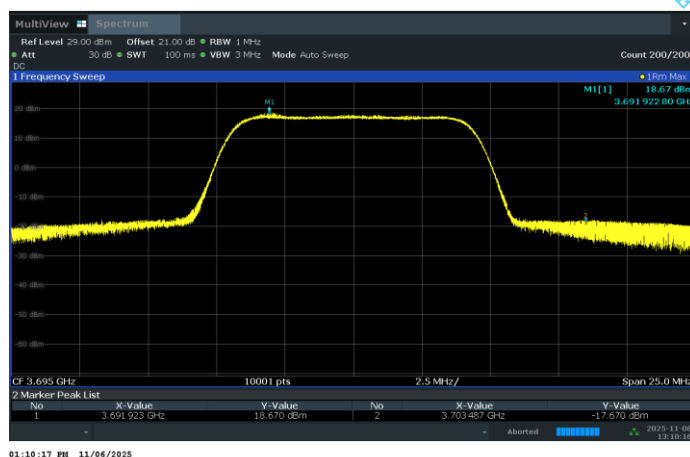
Channel 1, QPSK



Channel 2, QPSK

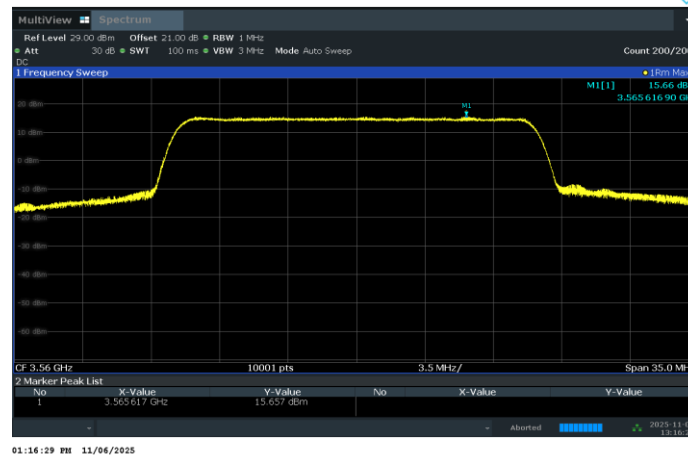


Channel 3, QPSK

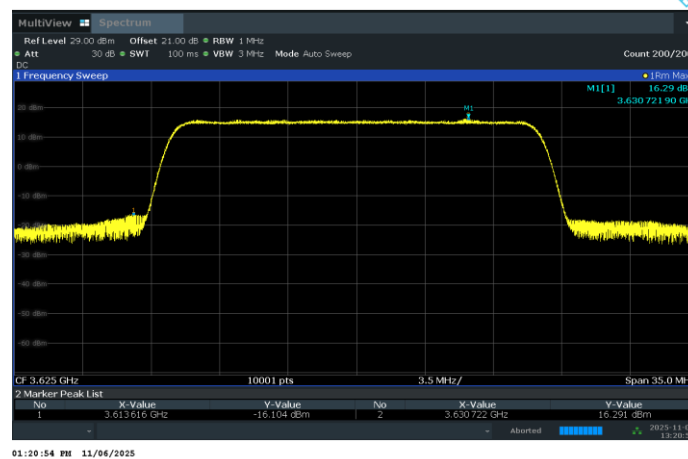


Antenna port 2; 20MHz

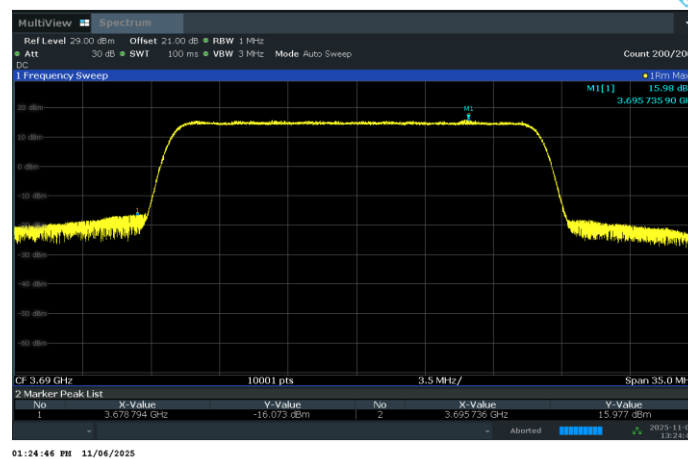
Channel 1, QPSK



Channel 2, QPSK

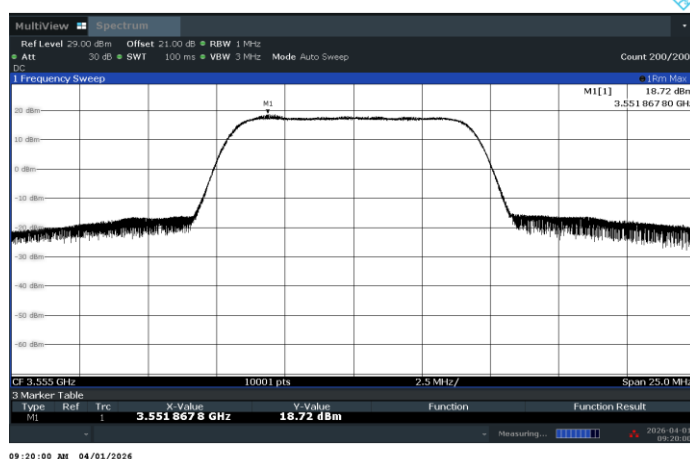


Channel 3, QPSK

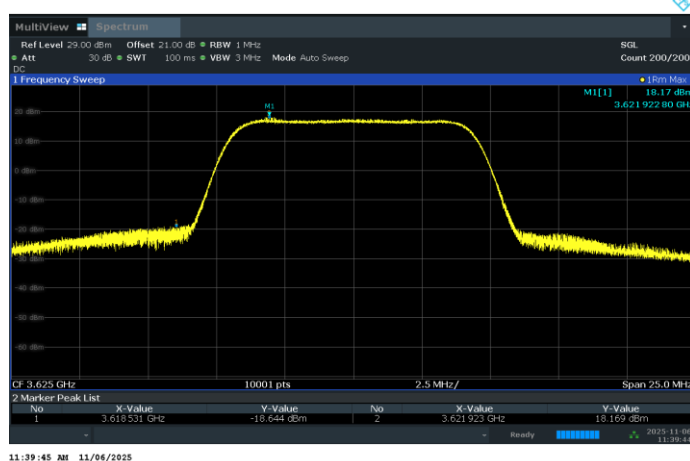


Antenna port 3; 10MHz

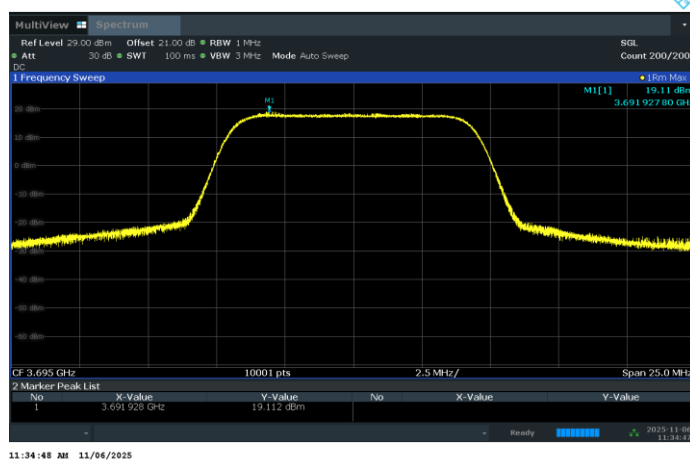
Channel 1, QPSK



Channel 2, QPSK

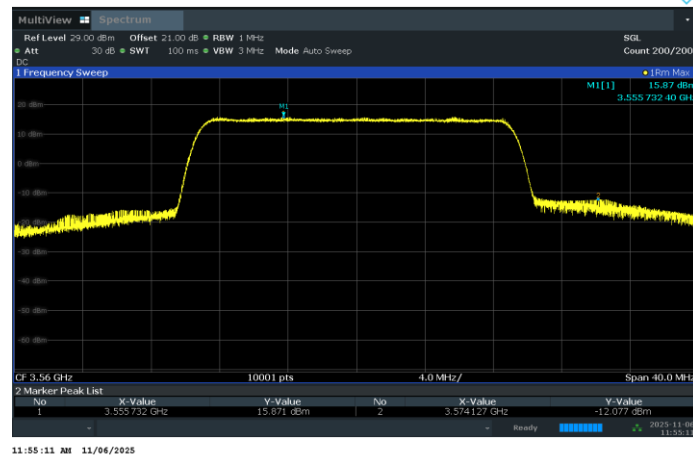


Channel 3, QPSK

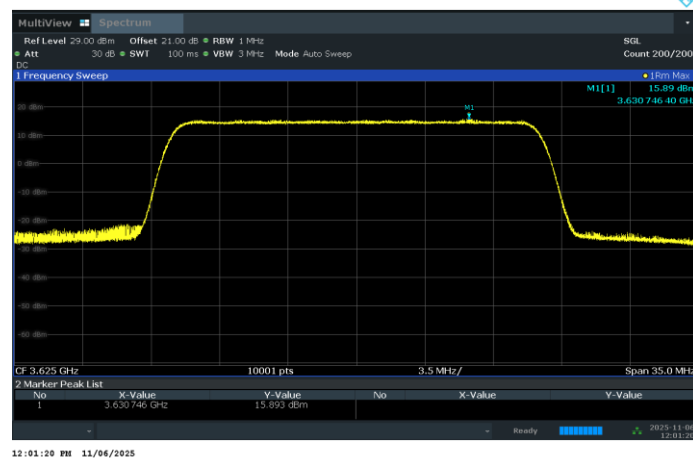


Antenna port 3; 20MHz

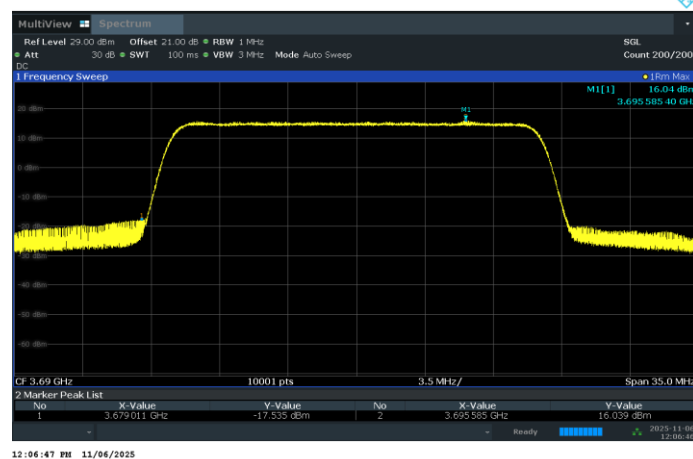
Channel 1, QPSK



Channel 2, QPSK



Channel 3, QPSK



5.2.5 TEST EQUIPMENT USED

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5.3 PEAK TO AVERAGE RATIO

Standard **FCC PART 96 Subpart E**

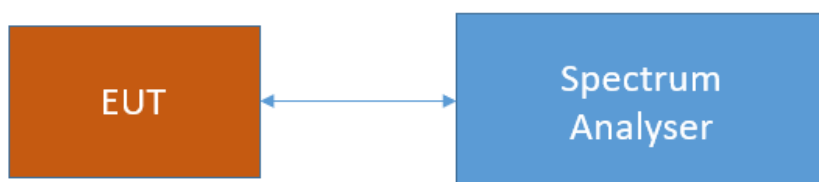
The test was performed according to:

ANSI C63.26, chapter 5.2.3.4

5.3.1 TEST DESCRIPTION

This test case is intended to demonstrate compliance to the applicable RF Output power PAPR limits and requirements for CBSD transmitters.

The EUT was connected to the test setup according to the following diagram:



Test Setup FCC Part 96

The attenuation of the measuring and stimulus path are known for each measured frequency and are considered.

The Spectrum Analyzer settings can be directly found in the measurement diagrams.

5.3.2 TEST REQUIREMENTS / LIMITS

FCC Part 96, § 96.41 (g)

(g) Power measurement. The peak-to-average power ratio (PAPR) of any CBSD transmitter output power must not exceed 13 dB. PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities or another Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

5.3.3 TEST PROTOCOL

Ambient temperature: 24 °C
 Relative humidity: 36 %

Antenna port No	Frequency [MHz]	Bandwidth [MHz]	Modulation [MHz]	Peak to Average Ratio [dB]	limit [dB]	Margin to Limit [dB]
0	3625	20	16QAM	8.49	13.00	4.51
1	3625	20	16QAM	8.52	13.00	4.48
2	3625	20	16QAM	8.46	13.00	4.54
3	3625	20	16QAM	8.52	13.00	4.48

Antenna port No	Frequency [MHz]	Bandwidth [MHz]	Modulation [MHz]	Peak to Average Ratio [dB]	limit [dB]	Margin to Limit [dB]
0	3625	20	256QAM	8.32	13.00	4.68
1	3625	20	256QAM	8.35	13.00	4.65
2	3625	20	256QAM	8.32	13.00	4.68
3	3625	20	256QAM	8.35	13.00	4.65

Antenna port No	Frequency [MHz]	Bandwidth [MHz]	Modulation [MHz]	Peak to Average Ratio [dB]	limit [dB]	Margin to Limit [dB]
0	3625	20	64QAM	8.41	13.00	4.59
1	3625	20	64QAM	8.44	13.00	4.57
2	3625	20	64QAM	8.41	13.00	4.59
3	3625	20	64QAM	8.44	13.00	4.57

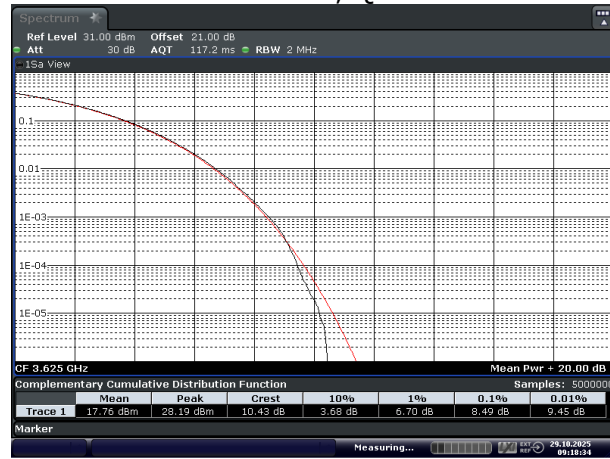
Antenna port No	Frequency [MHz]	Bandwidth [MHz]	Modulation [MHz]	Peak to Average Ratio [dB]	limit [dB]	Margin to Limit [dB]
0	3625	20	QPSK	8.49	13.00	4.51
1	3625	20	QPSK	8.55	13.00	4.45
2	3625	20	QPSK	8.52	13.00	4.48
3	3625	20	QPSK	8.58	13.00	4.42

Remark: Please see next sub-clause for the measurement plot.

5.3.4 MEASUREMENT PLOT

Antenna port 0; BW 20 MHz

Channel 2, QPSK



Date: 29.OCT.2025 09:28:34

Channel 2, 16 QAM



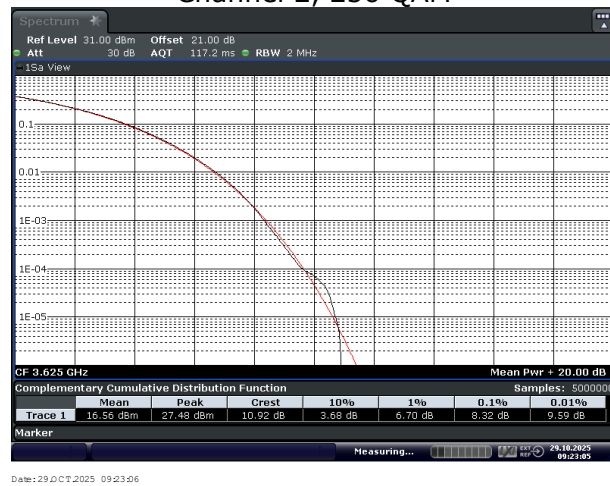
Date: 29.OCT.2025 09:21:14

Channel 2, 64 QAM



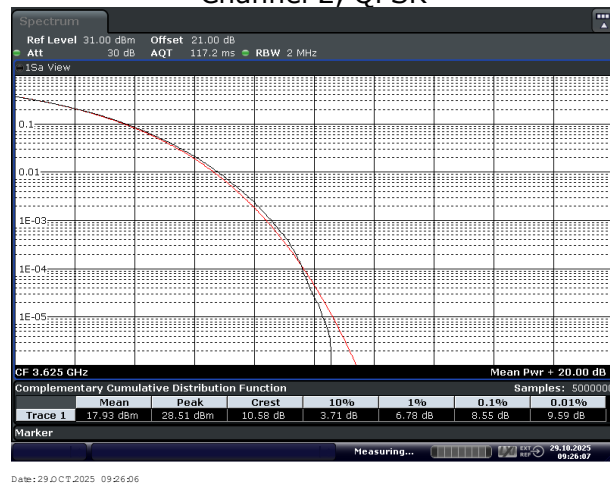
Date: 29.OCT.2025 09:22:10

Channel 2, 256 QAM

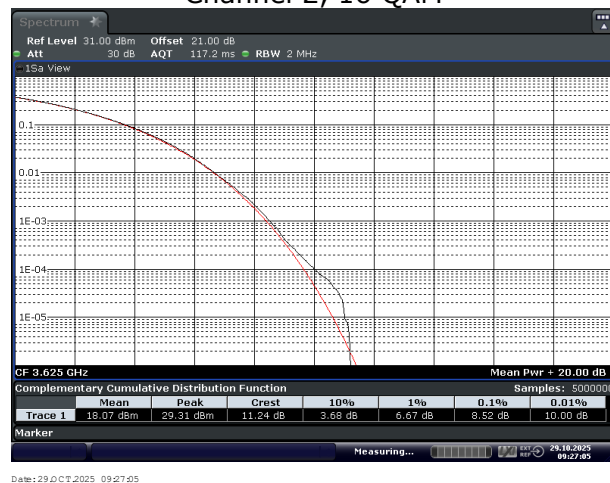


Antenna port 1; BW 20 MHz

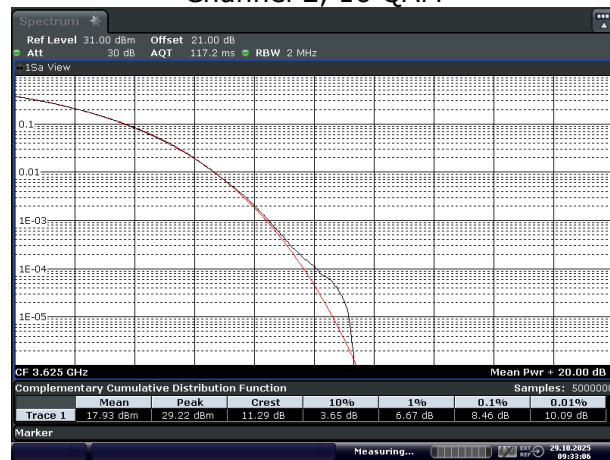
Channel 2, QPSK



Channel 2, 16 QAM

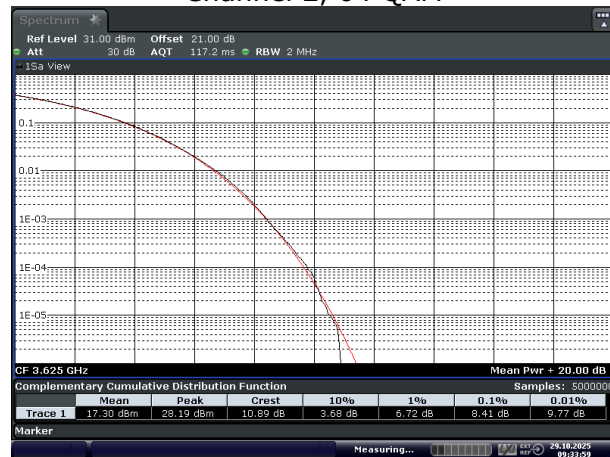


Channel 2, 16 QAM



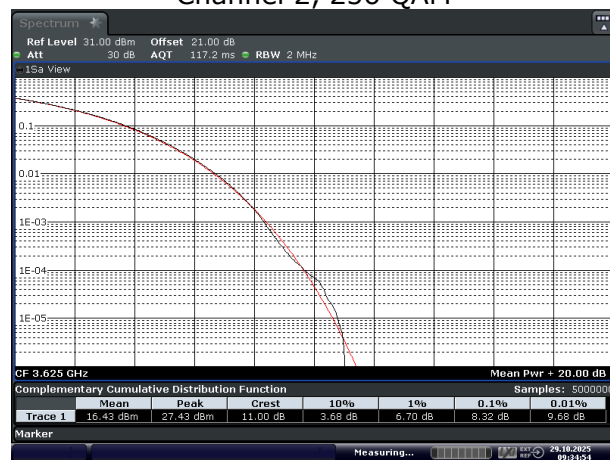
Date: 29/07/2025 09:33:07

Channel 2, 64 QAM



Date: 29/07/2025 09:34:00

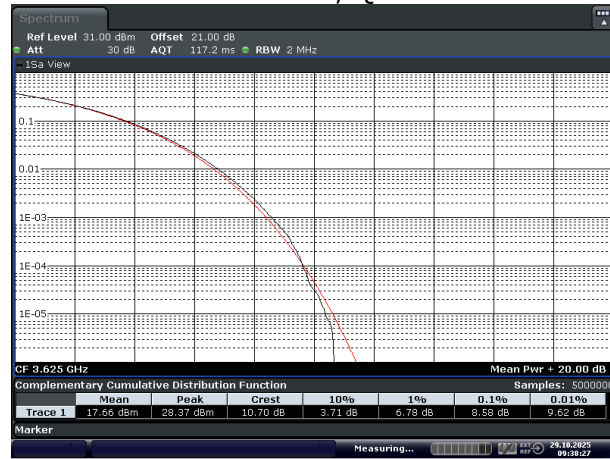
Channel 2, 256 QAM



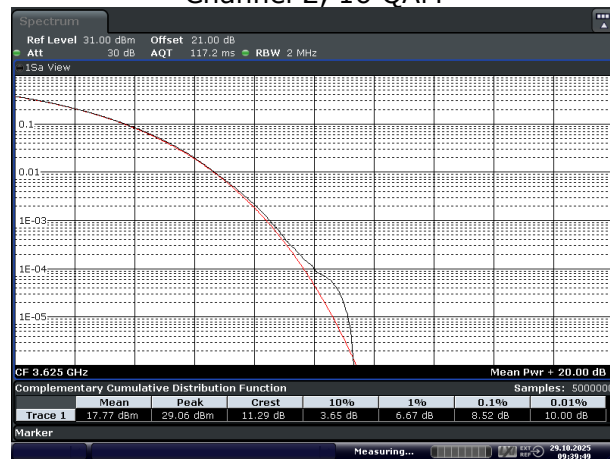
Date: 29/07/2025 09:34:54

antenna port 3; BW 20 MHz

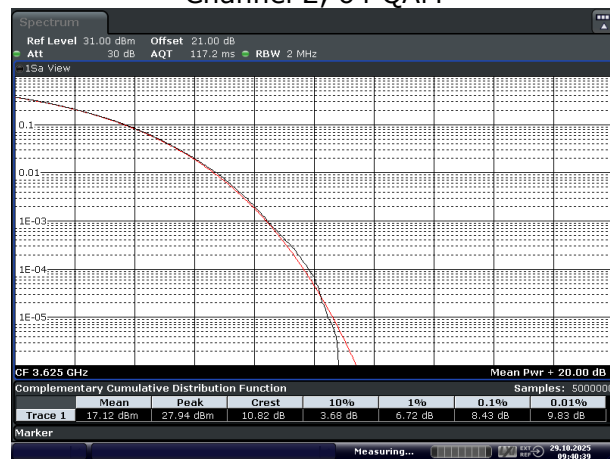
Channel 2, QPSK



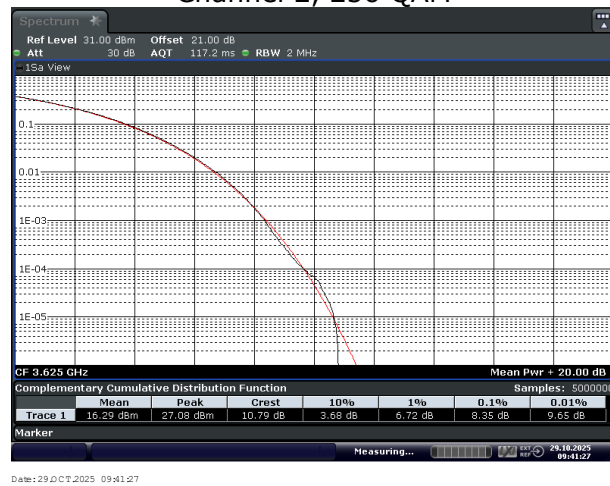
Channel 2, 16 QAM



Channel 2, 64 QAM



Channel 2, 256 QAM



5.3.5 TEST EQUIPMENT USED

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