



TEST REPORT

No.I22N02501-RF UMTS

for

Honor Device Co., Ltd.

Smart Phone

Model Name: RBN-NX1

FCC ID: 2AYGCRBN-NX1

with

Hardware Version: HN2VNEM

Software Version: 6.1.0.9(C900E9R1P1)

Issued Date: 2023-01-17

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22N02501-RF UMTS	Rev.0	1st edition	2023-01-17

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1. SUMMARY OF TEST REPORT

1.1. Test Items

Description	Smart Phone
Model Name	RBN-NX1
Brand Name	HONOR
Applicant's name	Honor Device Co., Ltd.
Manufacturer's Name	Honor Device Co., Ltd.

1.2. Test Standards

FCC Part 2/22/24	10-1-20 Edition
ANSI C63.26	2015
KDB971168 D01	v03r01

1.3. Test Result

All test items are pass. Please refer to "6 Summary of Test Results" for detail.

1.4. Testing Location

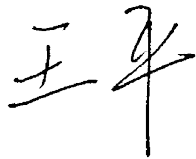
Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000

1.5. Project Data

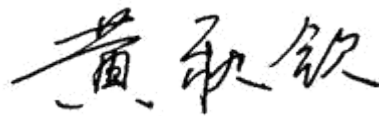
Testing Start Date: 2022-12-02

Testing End Date: 2022-12-28

1.6. Signature



Wang Ping
(Prepared this test report)



Huang Qiuqin
(Reviewed this test report)



Zhang Hao
(Approved this test report)



2. CLIENT INFORMATION

2.1. Applicant Information

Company Name: Honor Device Co., Ltd.
Address /Post: Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, P.R.China
Contact Person: Li Ming
Contact Email liming136@hihonor.com
Telephone: 0755-61886688
Fax: /

2.2. Manufacturer Information

Company Name: Honor Device Co., Ltd.
Address /Post: Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, P.R.China
Contact Person: Li Ming
Contact Email liming136@hihonor.com
Telephone: 0755-61886688
Fax: /

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT

(AE)

3.1. About EUT

Description	Smart Phone
Model Name	RBN-NX1
FCC ID	2AYGCRBN-NX1
Frequency Bands	WCDMA Band 2,5
Antenna	Integrated
Extreme vol. Limits	3.60V to 4.45V (nominal: 3.87V)
Condition of EUT as received	No abnormality in appearance

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of SAICT.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
UT01aa	868648060007462	HN2VNEM	6.1.0.9(C900E9R1P1)	2022-11-29

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description
AE1	Battery
AE2	RF cable

*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

RBN-NX1 is subscriber equipment in the GSM/WCDMA/LTE/5G NR system. The GSM frequency bands include GSM850, GSM900, DCS1800 and PCS1900. The UMTS frequency band includes band I, band II, band V and band VIII. The LTE frequency bands include band 1, band3, band 5, band 7, band 8, band 20, band 28A, band 32, band 38, band 40 and band 41. The 5G NR frequency bands include band 1, band3, band 7, band 8, band 20, band 28A, band 38, band 40, band 41, band 77(3.3GHz-3.8GHz) and band 78. But only GSM850 and GSM1900, UMTS frequency band II and band V, LTE frequency band 5, band 7, band 38, band 41, 5G NR frequency band 7,band 38, band 41, band 78(3450MHz-3550MHz) bands test data included in this report. The Mobile Phone implements such functions as RF signal receiving/transmitting, 5G NR/LTE/UMTS and GSM/GPRS/EDGE protocol processing, voice, video MMS service, GPS, AGPS, Wi-Fi etc. Externally it provides one micro SD card interface, earphone port (to provide voice service), and dual SIM/single SIM card interface.RBN-NX1 is single/dual SIM smart phone. It also provides Bluetooth module to synchronize data between a PC and the phone, or to use the built-in modem of the phone to access the Internet with a PC, or to exchange data with other Bluetooth devices.

4. REFERENCE DOCUMENTS

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-20 Edition
FCC Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	10-1-20 Edition
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-20 Edition
ANSI C63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
KDB971168 D01	Power Meas License Digital Systems	v03r01

5. LABORATORY ENVIRONMENT

Shielded room did not exceed following limits along the RF testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz>60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	>2 MΩ
Ground system resistance	< 4 Ω

Fully-anechoic chamber did not exceed following limits along the EMC testing

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4 Ω
Voltage Standing Wave Ratio (VSWR)	≤ 6 dB, from 1 to 18 GHz, 3 m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	F	Fail
	NA	Not applicable
	NM	Not measured

WCDMA Band II

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/24.232	A.1	P
2	Frequency Stability	2.1055/24.235	A.2	P
3	Occupied Bandwidth	2.1049/24.238	A.3	P
4	Emission Bandwidth	2.1049/24.238	A.4	P
5	Band Edge Compliance	2.1051/24.238	A.5	P
6	Conducted Spurious Emission	2.1051/24.238	A.6	P
7	Peak-to-Average Power Ratio	24.232/KDB971168 D01	A.7	P

WCDMA Band V

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/22.913	A.1	P
2	Frequency Stability	2.1055/22.355	A.2	P
3	Occupied Bandwidth	2.1049/22.917	A.3	P
4	Emission Bandwidth	2.1049/22.917	A.4	P
5	Band Edge Compliance	2.1051/22.917	A.5	P
6	Conducted Spurious Emission	2.1051/22.917	A.6	P
7	Peak-to-Average Power Ratio	KDB971168 D01	A.7	P

7. STATEMENT

Since the information of samples in this report is provided by the client, the laboratory is not responsible for the authenticity of sample information.

This report takes measured values as criterion of test conclusion. The test conclusion meets the limit requirements.

8. TEST EQUIPMENTS UTILIZED

NO.	Description	TYPE	Manufacture	series number	Cal Due Date	Cal.Interval
1	Universal Radio Communication Tester	E7515B	Keysight	MY59322022	2023-04-14	1 year
2	Universal Radio Communication Tester	MT8000A	Anritsu	6261987936	2023-03-29	1 year
3	Universal Radio Communication Tester	CMW500	R&S	129146	2023-04-24	1 year
4	Spectrum Analyzer	FSW26	R&S	102197	2023-11-24	1 year
5	Temperature Chamber	SH-241	ESPEC	92007516	2023-10-15	1 year
6	DC Power Supply	U3606A	Agilent Technologies	MY50450012	2023-11-13	1 year

ANNEX A: MEASUREMENT RESULTS

A.1 OUTPUT POWER

Reference

FCC: CFR Part 2.1046, 22.913, 24.232

A.1.1 Summary

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (CMW500) to ensure max power transmission and proper modulation.

This result contains max output power and EIRP measurements for the EUT. In all cases, output power is within the specified limits.

A.1.2 Conducted

A.1.2.1 Method of Measurements

The EUT was set up for the max output power with pseudo random data modulation.

These measurements were done at 3 frequencies, 1852.4 MHz, 1880.0MHz and 1907.6MHz for WCDMA Band II; 826.4MHz, 836.6MHz and 846.6MHz for WCDMA Band V (bottom, middle and top of operational frequency range).

Limit

According to FCC Part 2.1046

WCDMA Band II

A.1.2.2 Measurement result

QPSK

	CH	Frequency(MHz)	output power(dBm)
WCDMA (Band II)	9262	1852.4	23.18
	9400	1880.0	23.27
	9538	1907.6	23.07

16QAM

	CH	Frequency(MHz)	output power(dBm)
WCDMA (Band II)	9262	1852.4	22.37
	9400	1880.0	22.43
	9538	1907.6	22.21

WCDMA Band V

Measurement result

QPSK

	CH	Frequency(MHz)	output power(dBm)
WCDMA (Band V)	4132	826.4	24.25
	4183	836.6	24.07
	4233	846.6	24.17

16QAM

	CH	Frequency(MHz)	output power(dBm)
WCDMA (Band V)	4132	826.4	23.42
	4183	836.6	23.29
	4233	846.6	23.37

Note: Expanded measurement uncertainty is $U = 0.49\text{dB}$, $k = 1.96$

A.1.3 Radiated**A.1.3.1 Description**

This is the test for the maximum radiated power from the EUT.

Rule Part 24.232(c) specifies, "Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power" and 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage."

Rule Part 22.913(a) specifies "The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts."

A.1.3.2 Method of Measurement

ANSI C63.26 chapter 5.2.5.5: when working in decibels (i.e., logarithmic scale), the ERP and EIRP represent the sum of the transmit antenna gain (in dBd or dBi, respectively) and the conducted RF output power (expressed in dB relative to watts or milliwatts).

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation (1) as follows:

$$\text{ERP or EIRP} = \text{PMea} + \text{GT}$$

Where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as PMea, e.g., dBm or dBW)

PMea measured transmitter output power, in dBm.

GT gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

WCDMA Band II

Limits

	Burst Peak EIRP (dBm)
WCDMA Band II	$\leq 33\text{dBm}$ (2W)

Measurement result

QPSK

Frequency (MHz)	Conducted output power (dBm)	Radiated output power (dBm) $G_T = -0.6\text{dBi}$
1852.4	23.18	22.58
1880.0	23.27	22.67
1907.6	23.07	22.47

16QAM

Frequency (MHz)	Conducted output power (dBm)	Radiated output power (dBm) $G_T = -0.6\text{dBi}$
1852.4	22.37	21.77
1880.0	22.43	21.83
1907.6	22.21	21.61

WCDMA Band V

Limits

	Burst Peak ERP (dBm)
WCDMA Band V	$\leq 38.45\text{dBm}$

Measurement result

QPSK

Frequency (MHz)	Conducted output power (dBm)	Radiated output power (dBm) $G_T = 0.2\text{dBi}$
826.4	24.25	22.30
836.6	24.07	22.12
846.6	24.17	22.22

16QAM

Frequency (MHz)	Conducted output power (dBm)	Radiated output power (dBm) $G_T = 0.2\text{dBi}$
826.4	23.42	21.47
836.6	23.29	21.34
846.6	23.37	21.42

A.2 FREQUENCY STABILITY

Reference

FCC: CFR Part 2.1055, 22.355, 24.235

A.2.1 Method of Measurement

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a "call mode". This is accomplished with the use of R&S CMW500

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -10°C.
3. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on mid channel of each band, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10°C increments from -10°C to +50°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
5. Remeasure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments remeasuring carrier frequency at each voltage. Pause at nominal voltage for 1.5 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50°C.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10°C increments from +50°C to -10°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5°C during the measurement procedure.

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of the lower, higher and nominal voltage. Operation above or below these voltage limits is prohibited by transceiver software in order to prevent improper operation as well as to protect components from overstress.

A.2.2 Measurement results

WCDMA Band II

Frequency Error vs Voltage

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	1850.060	1909.930		
50				1.02	0.0011
40				0.29	0.0003
30				0.65	0.0007
10				0.56	0.0006
0				0.22	0.0002
-10				0.54	0.0006

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	1850.060	1909.930	1.77	0.0019
4.45				2.02	0.0021

WCDMA Band V

Frequency Error vs Voltage-QPSK

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	824.060	848.930		
50				-0.19	0.0004
40				-0.69	0.0017
30				0.04	0.0001
10				-0.56	0.0013
0				-1.17	0.0028
-10				-0.47	0.0011

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.60	20	824.060	848.930	-0.26	0.0006
4.45				-0.04	0.0001

Expanded measurement uncertainty is 10Hz, k = 2

A.3 OCCUPIED BANDWIDTH

Reference

FCC: CFR Part 2.1049, 22.917, 24.238.

A.3.1 Occupied Bandwidth Results

Occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of the US Cellular/PCS frequency bands. The table below lists the measured 99% BW. Spectrum analyzer plots are included on the following pages.

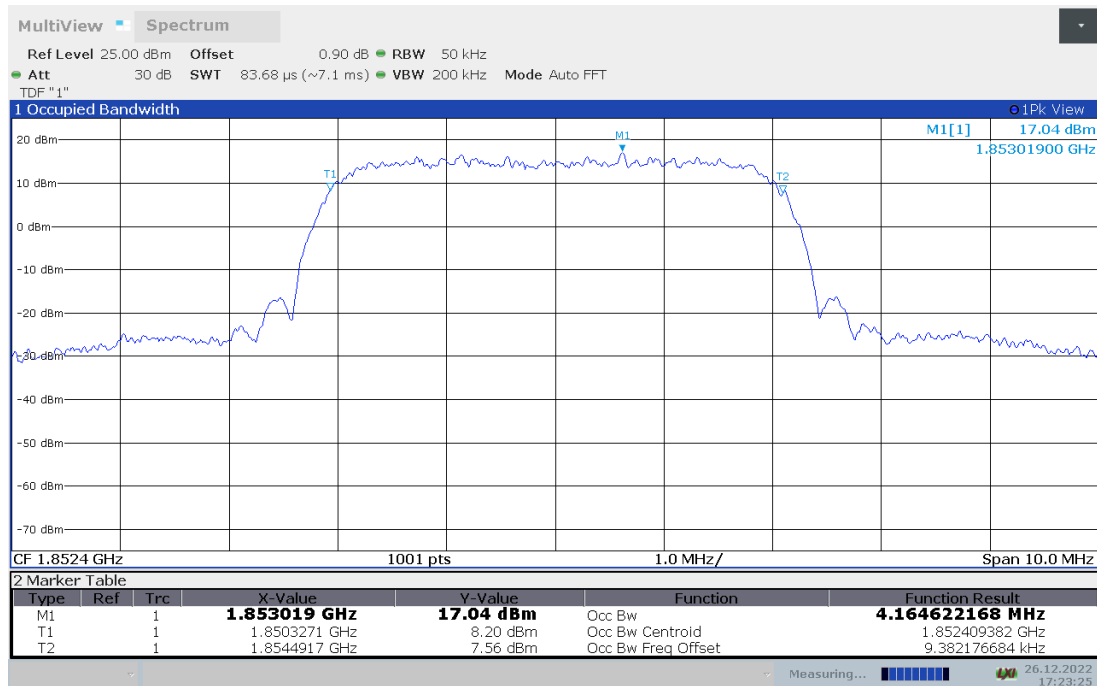
- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).
- b) The nominal IF filter bandwidth (3 dB 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.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least $10\log(\text{OBW} / \text{RBW})$ below the reference level.
- e) Set the detection mode to peak, and the trace mode to max hold.
- d) Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

WCDMA Band 2 (99%)-QPSK

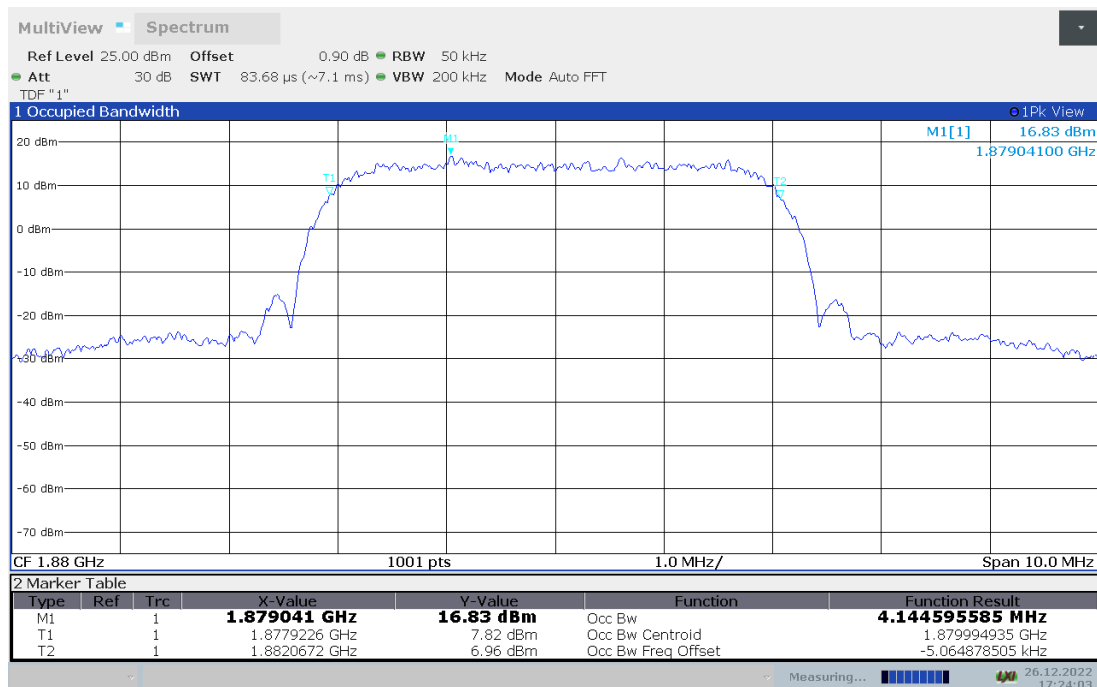
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)
1852.4	4.165
1880	4.145
1907.6	4.158

WCDMA Band 2 (99%)

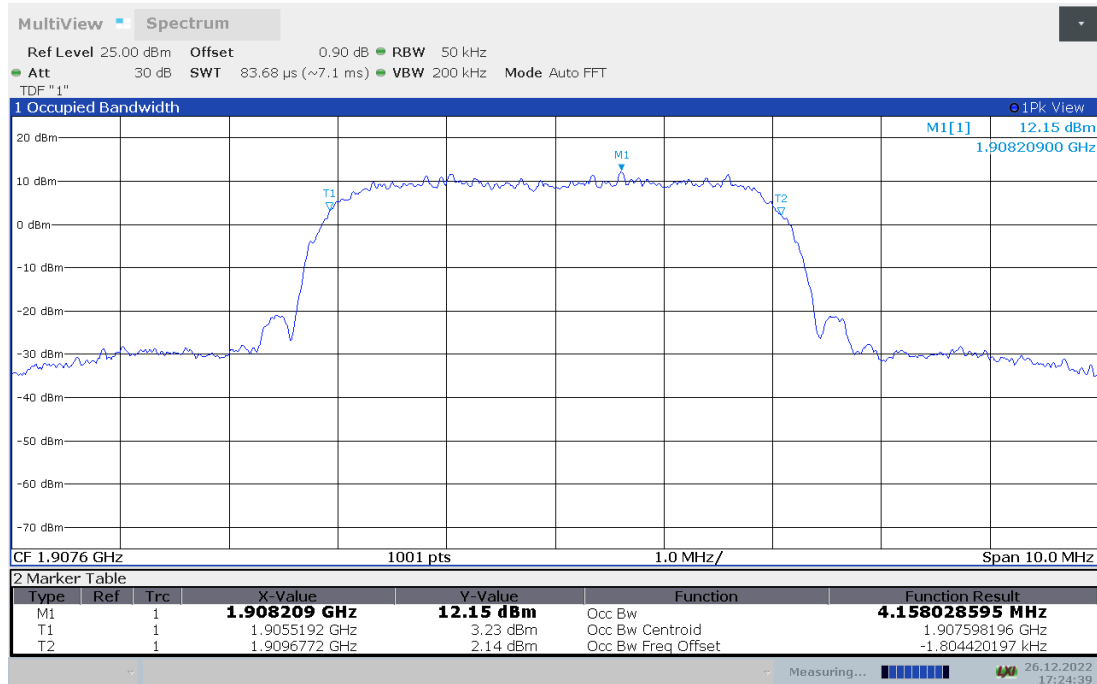
Channel 9262-Occupied Bandwidth (99% BW)



Channel 9400-Occupied Bandwidth (99% BW)



Channel 9538-Occupied Bandwidth (99% BW)

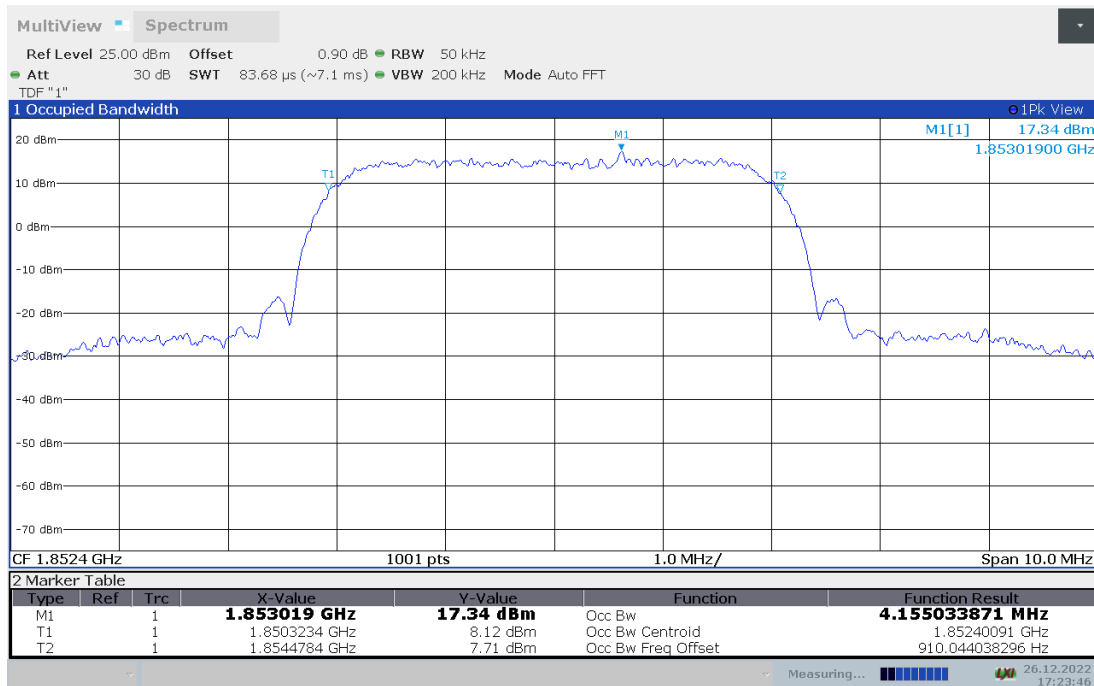


WCDMA Band 2 (99%)-16QAM

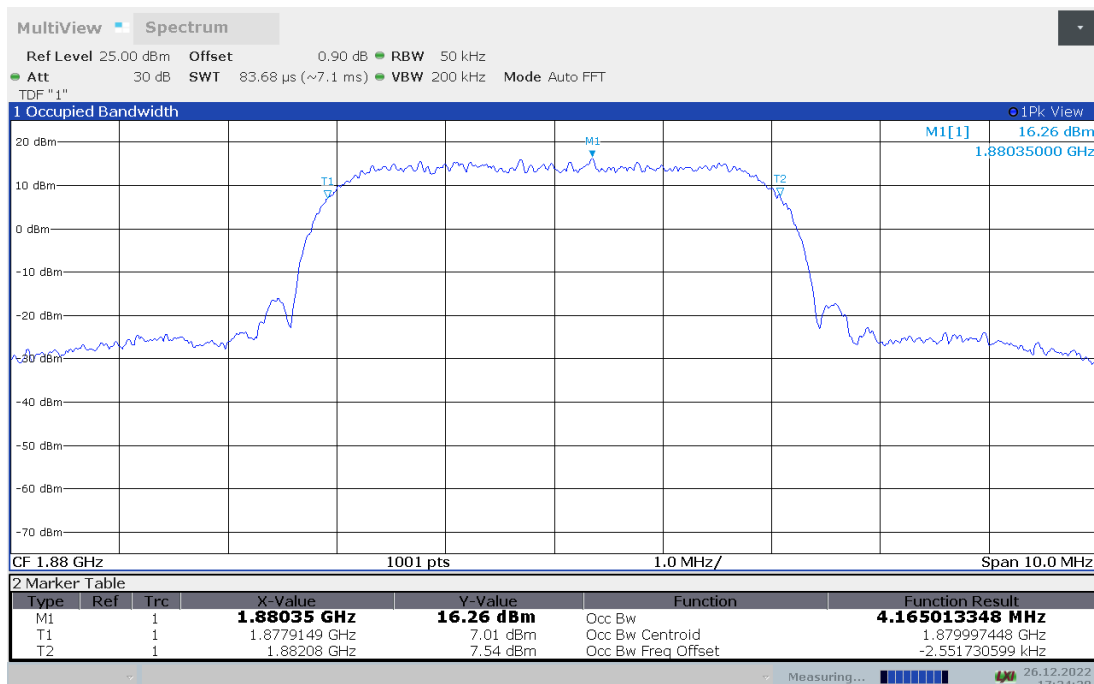
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)
1852.4	4.155
1880	4.165
1907.6	4.167

WCDMA Band 2 (99%)

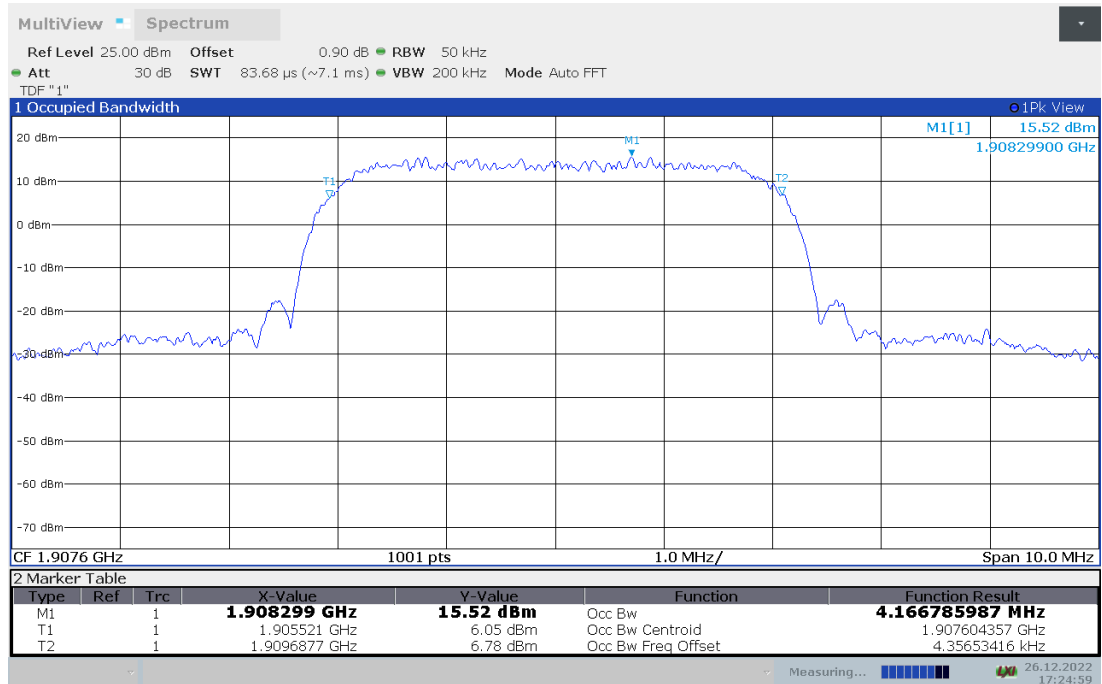
Channel 9262-Occupied Bandwidth (99% BW)



Channel 9400-Occupied Bandwidth (99% BW)



Channel 9538-Occupied Bandwidth (99% BW)

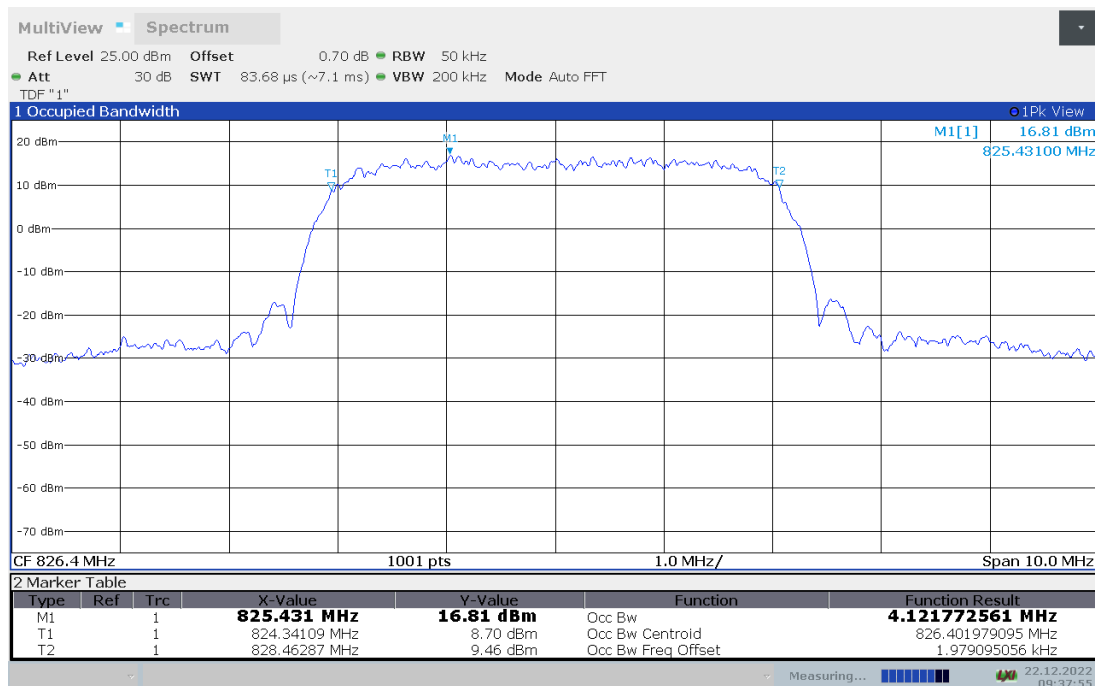


WCDMA Band 5 (99%)-QPSK

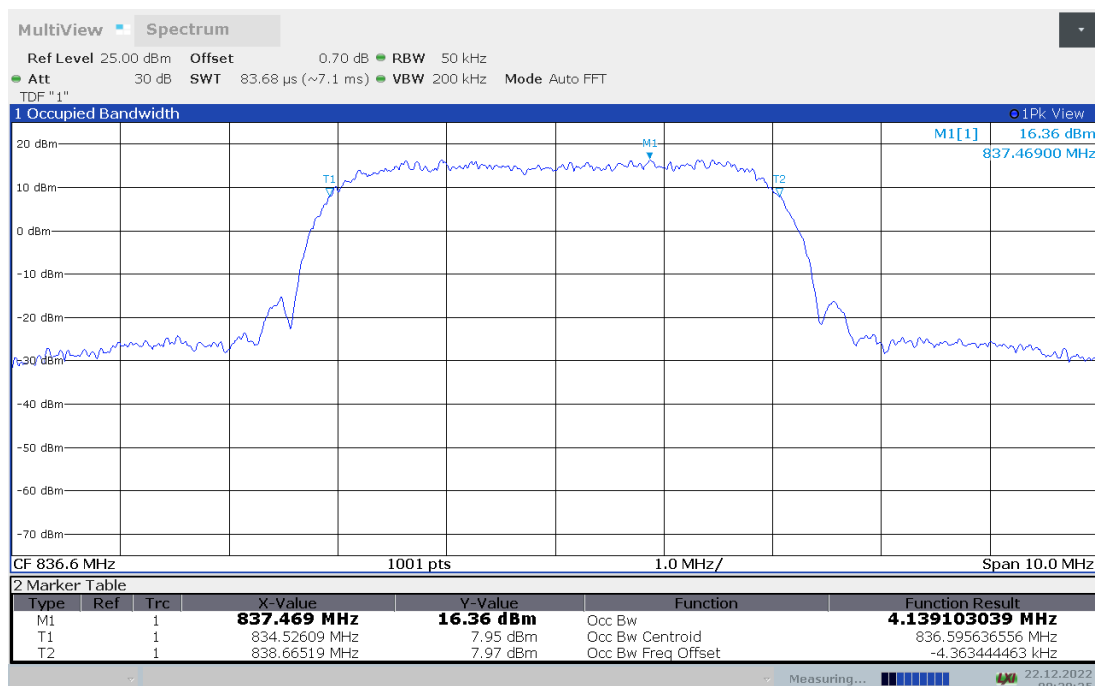
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)
826.4	4.122
836.6	4.139
846.6	4.135

WCDMA Band 5 (99%)

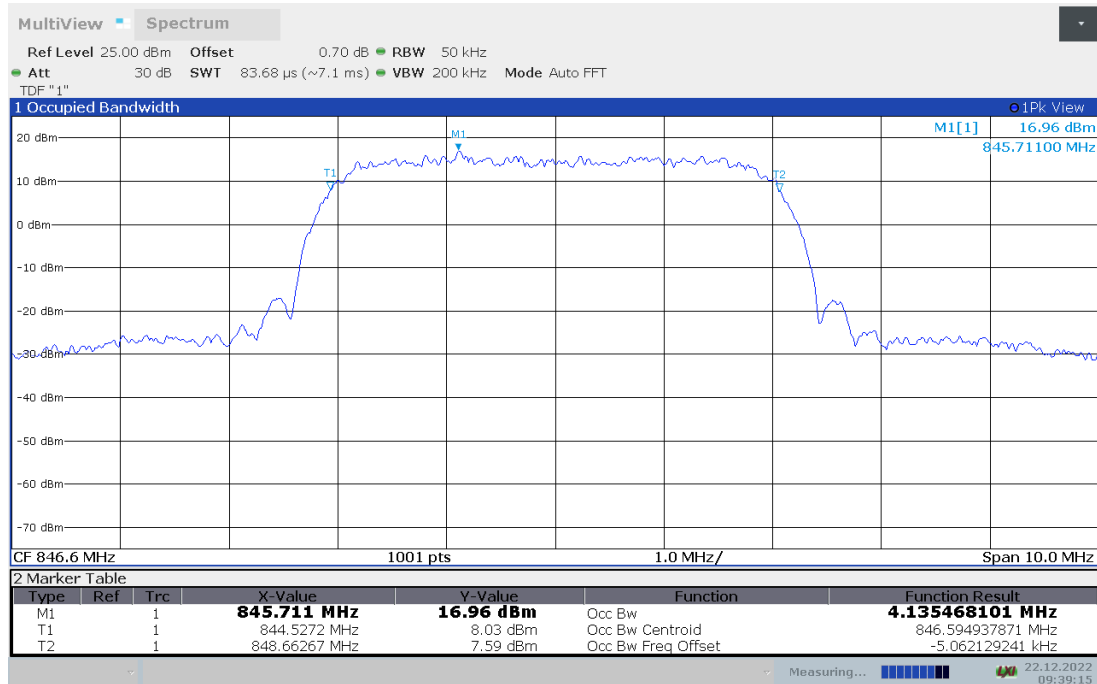
Channel 4132-Occupied Bandwidth (99% BW)



Channel 4183-Occupied Bandwidth (99% BW)



Channel 4233-Occupied Bandwidth (99% BW)

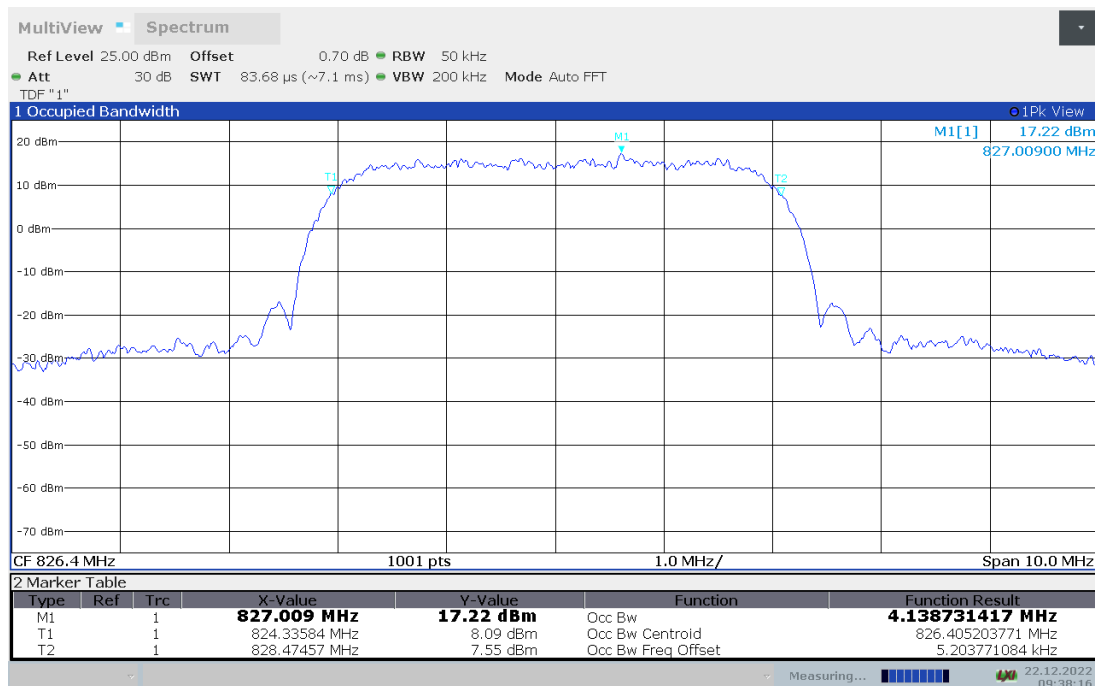


WCDMA Band 5 (99%)-16QAM

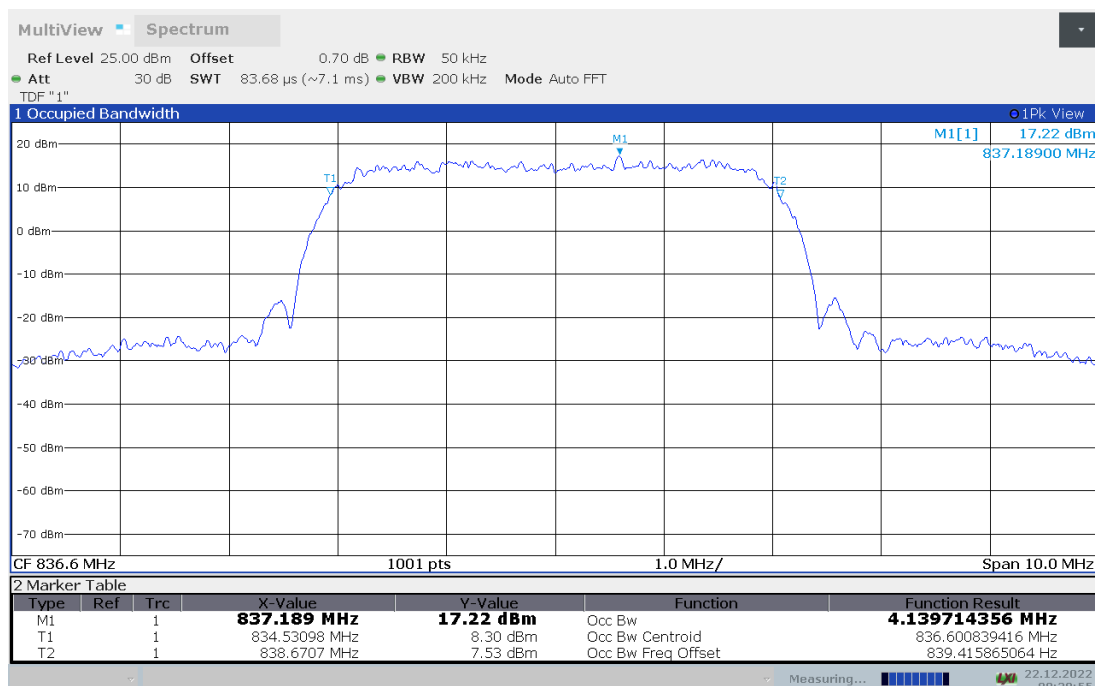
Frequency (MHz)	Occupied Bandwidth (99%) (MHz)
826.4	4.139
836.6	4.140
846.6	4.146

WCDMA Band 5 (99%)

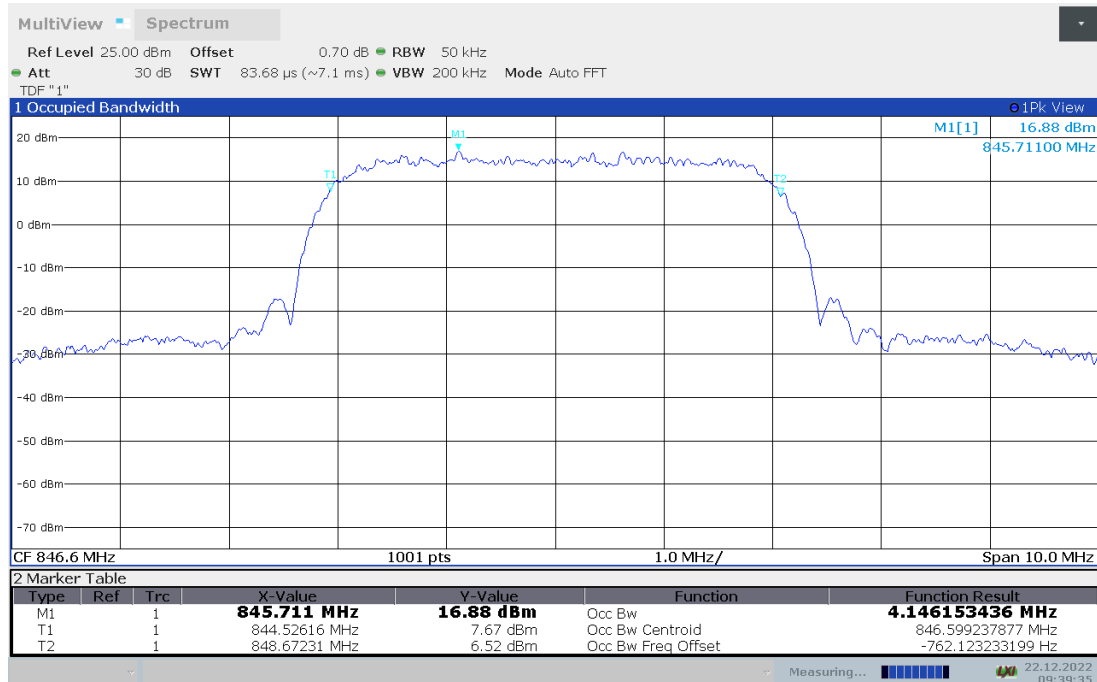
Channel 4132-Occupied Bandwidth (99% BW)



Channel 4183-Occupied Bandwidth (99% BW)



Channel 4233-Occupied Bandwidth (99% BW)



Note: Expanded measurement uncertainty is $U = 3428\text{Hz}$, $k = 2$

A.4 EMISSION BANDWIDTH

Reference

FCC: CFR Part 2.1049, 22.917, 24.238.

A.4.1 Emission Bandwidth Results

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

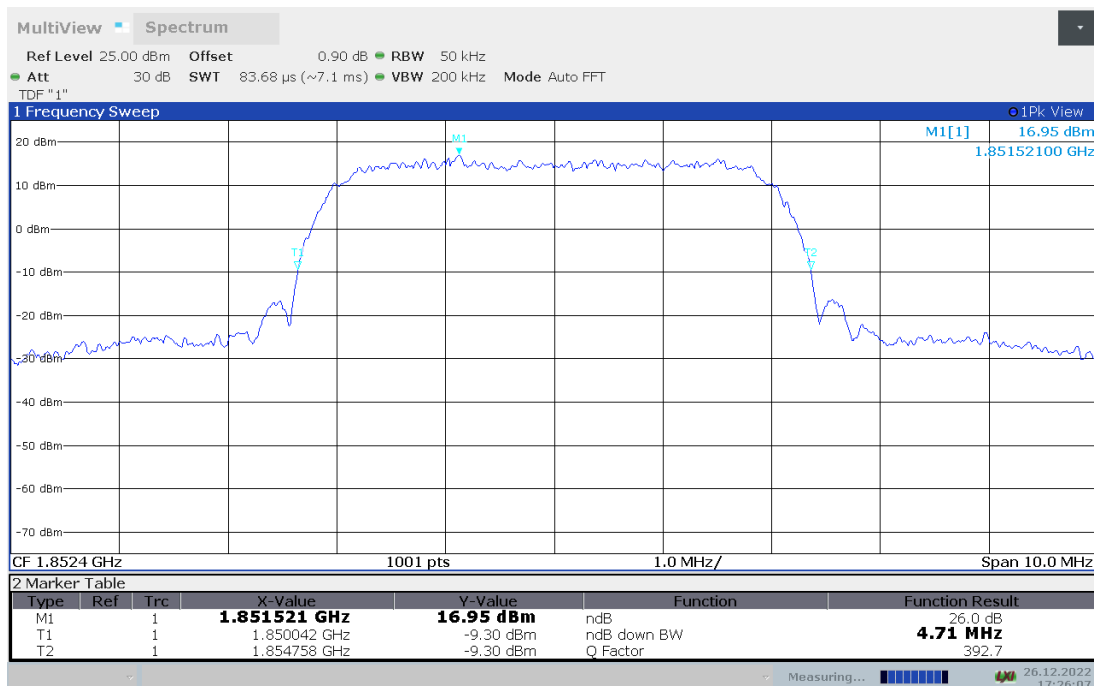
Similar to conducted emissions; Emission bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies. Table below lists the measured -26dBc BW. Spectrum analyzer plots are included on the following pages.

WCDMA Band 2 (-26dBc)-QPSK

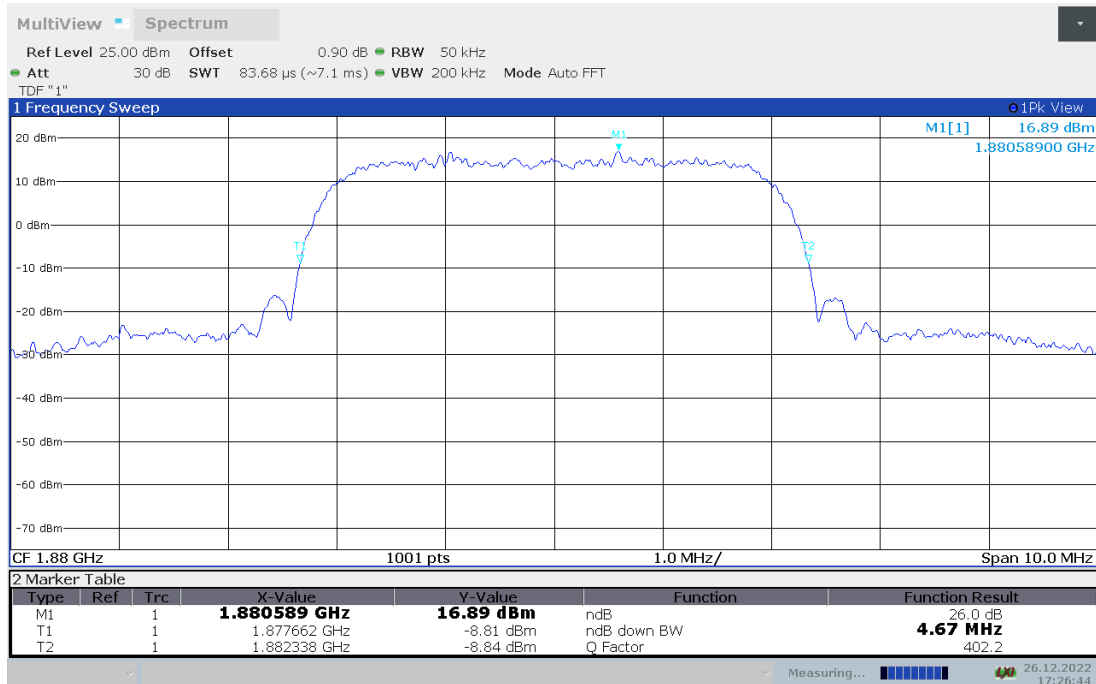
Frequency (MHz)	Emission Bandwidth (-26dBc)(MHz)
1852.4	4.715
1880	4.675
1907.6	4.695

WCDMA Band 2 (-26dBc)

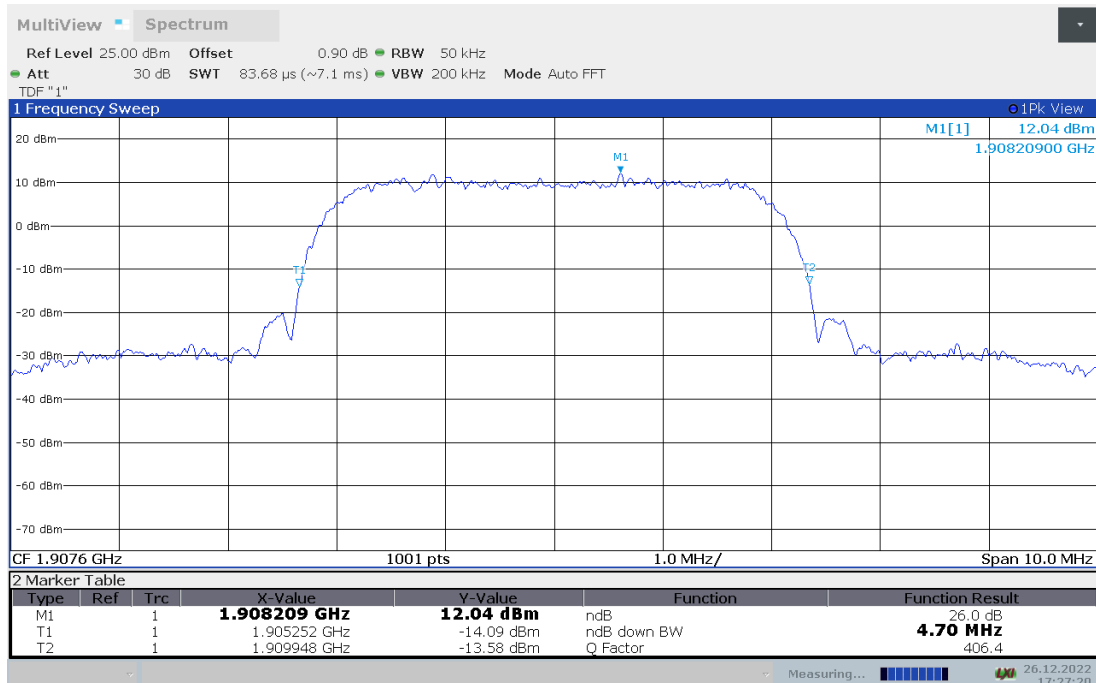
Channel 9262-Emission Bandwidth (-26dBc BW)



Channel 9400-Emission Bandwidth (-26dBc BW)



Channel 9538-Emission Bandwidth (-26dBc BW)

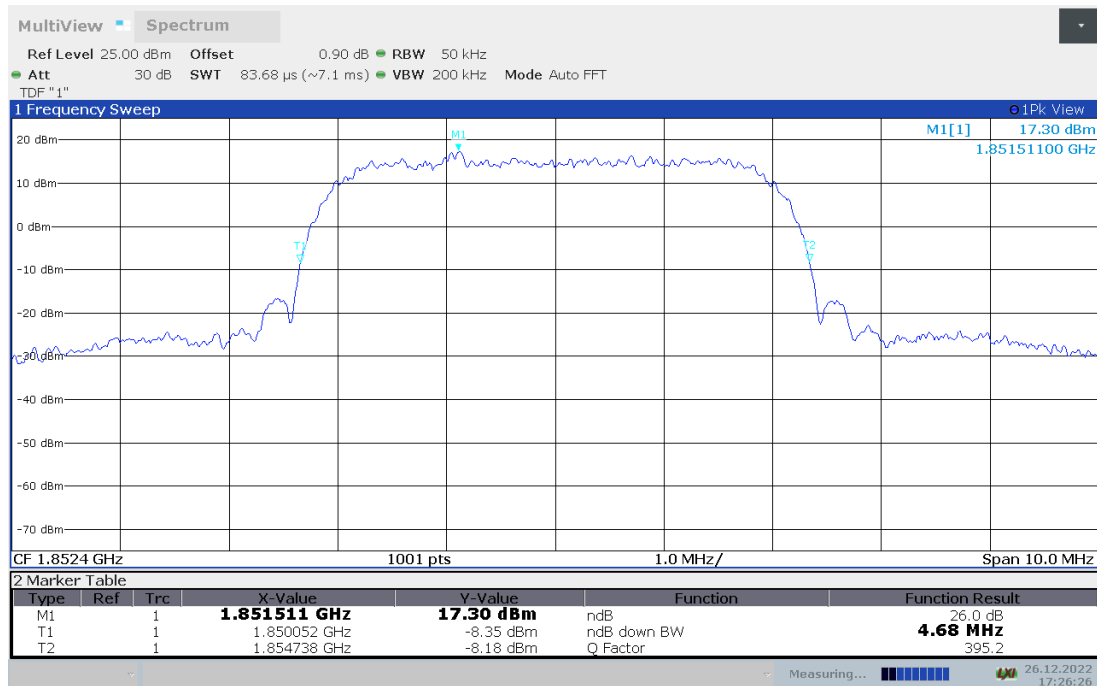


WCDMA Band 2 (-26dBc)-16QAM

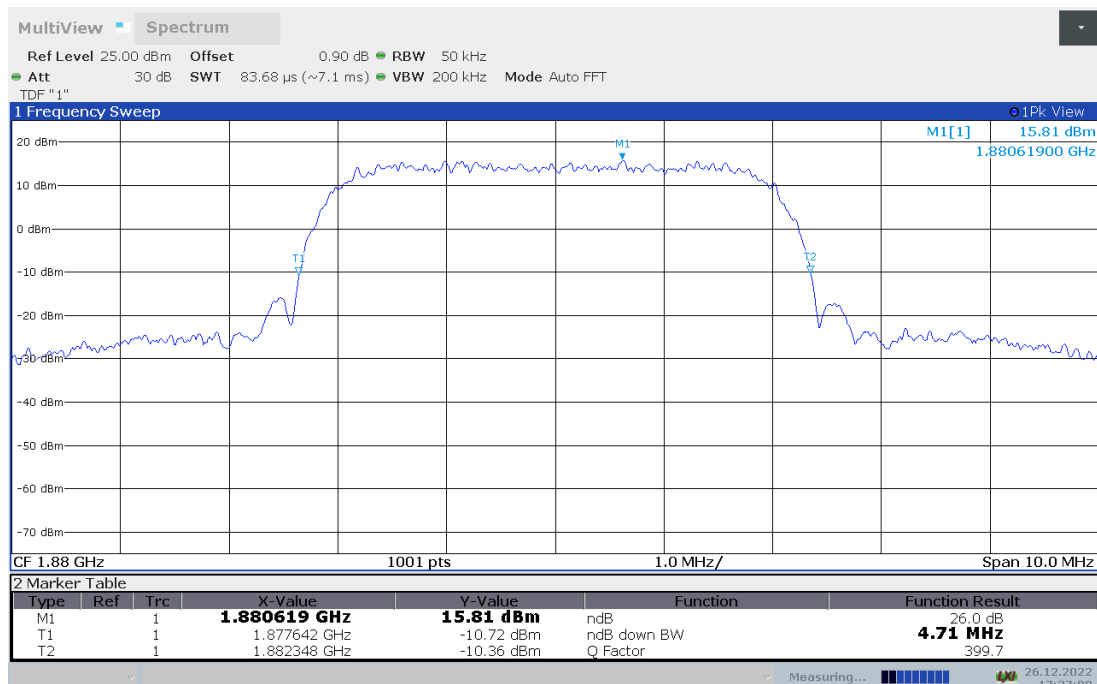
Frequency (MHz)	Emission Bandwidth (-26dBc)(MHz)
1852.4	4.685
1880	4.705
1907.6	4.705

WCDMA Band 2 (-26dBc)

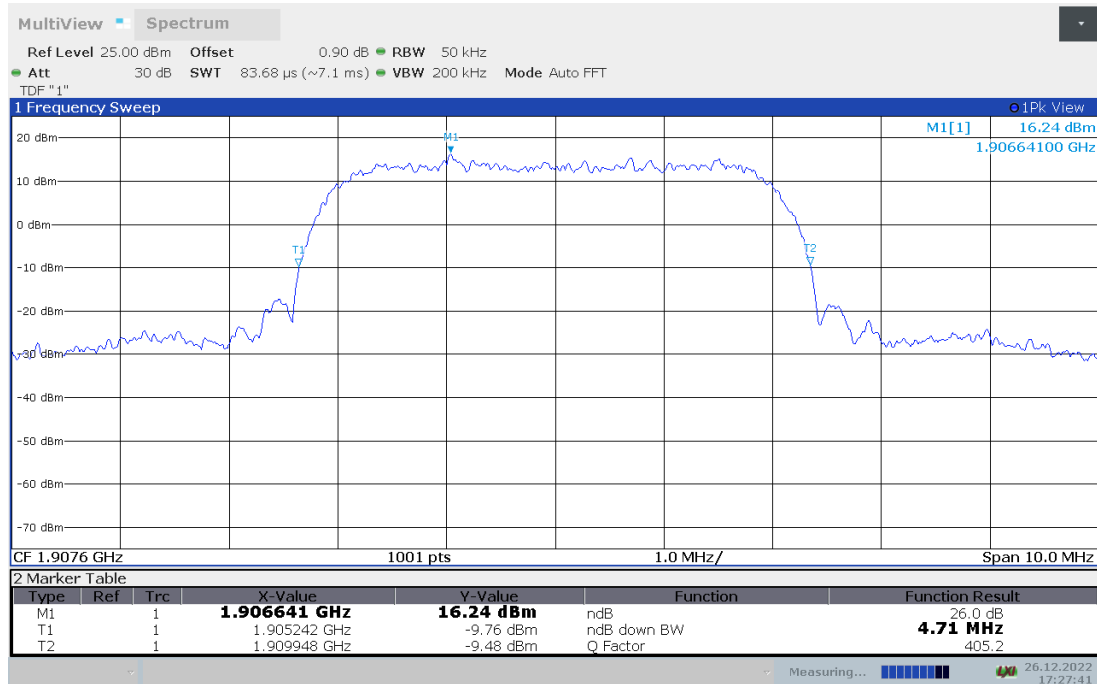
Channel 9262-Emission Bandwidth (-26dBc BW)



Channel 9400-Emission Bandwidth (-26dBc BW)



Channel 9538-Emission Bandwidth (-26dBc BW)

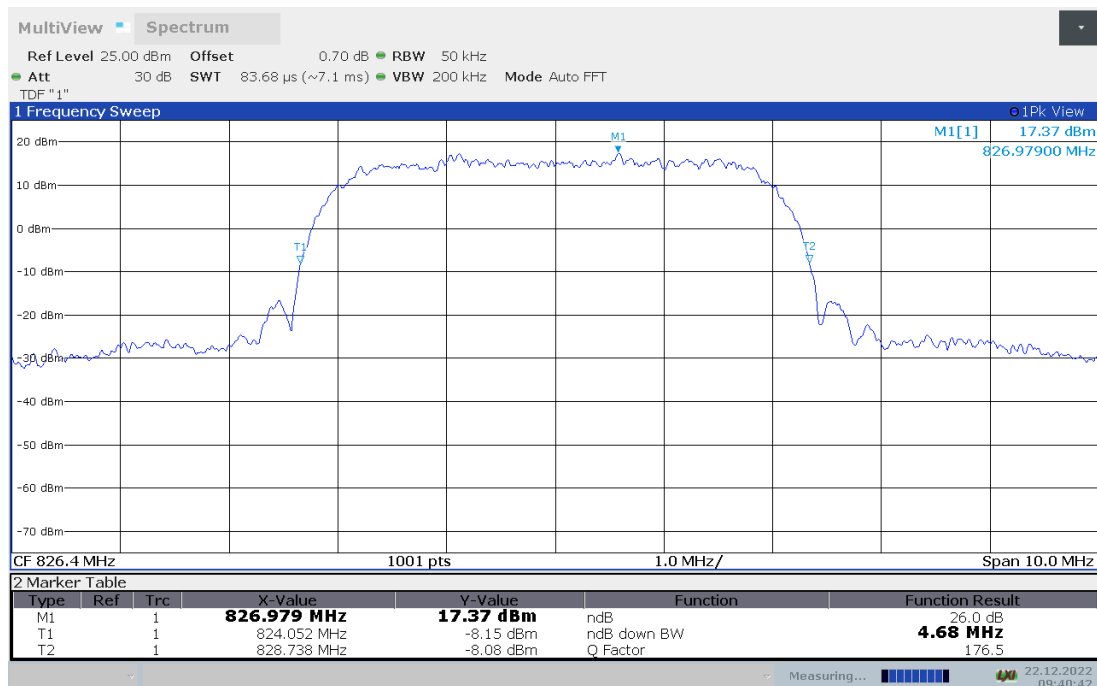


WCDMA Band 5 (-26dBc)-QPSK

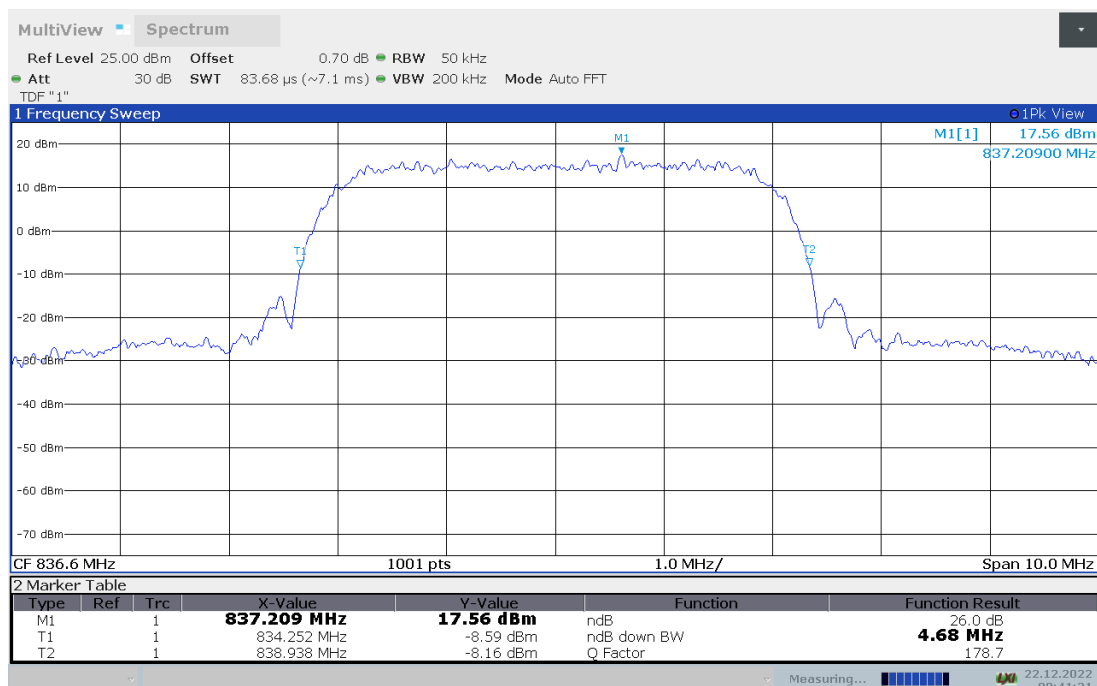
Frequency (MHz)	Emission Bandwidth (-26dBc)(MHz)
826.4	4.685
836.6	4.685
846.6	4.675

WCDMA Band 5 (-26dBc)

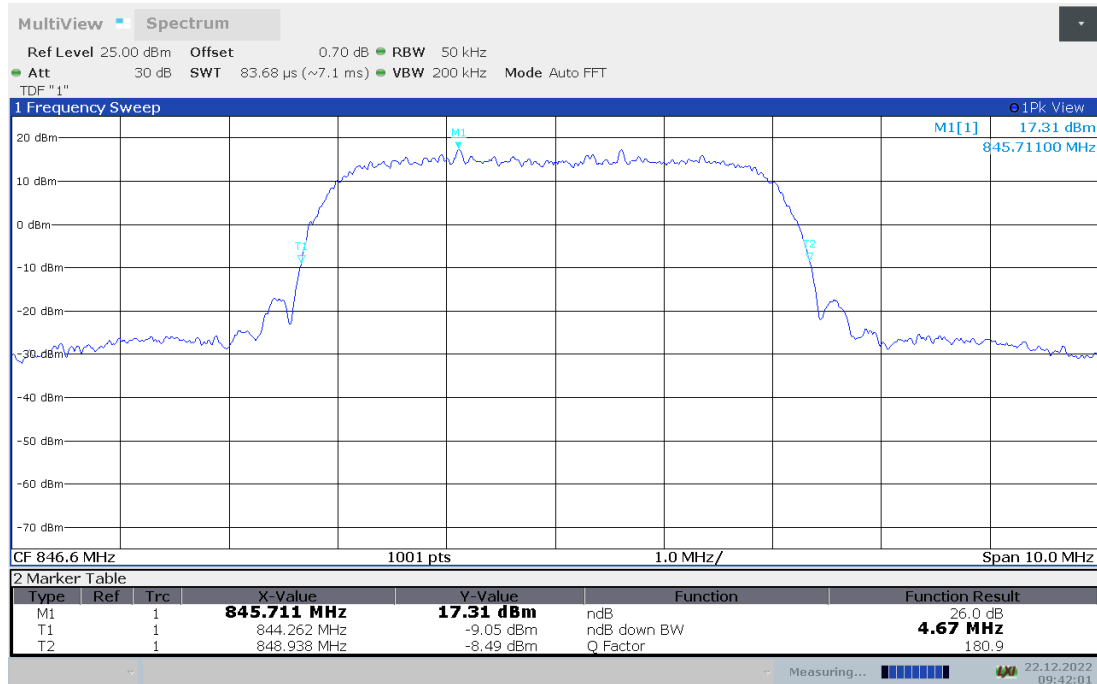
Channel 4132-Emission Bandwidth (-26dBc BW)



Channel 4183-Emission Bandwidth (-26dBc BW)



Channel 4233-Emission Bandwidth (-26dBc BW)

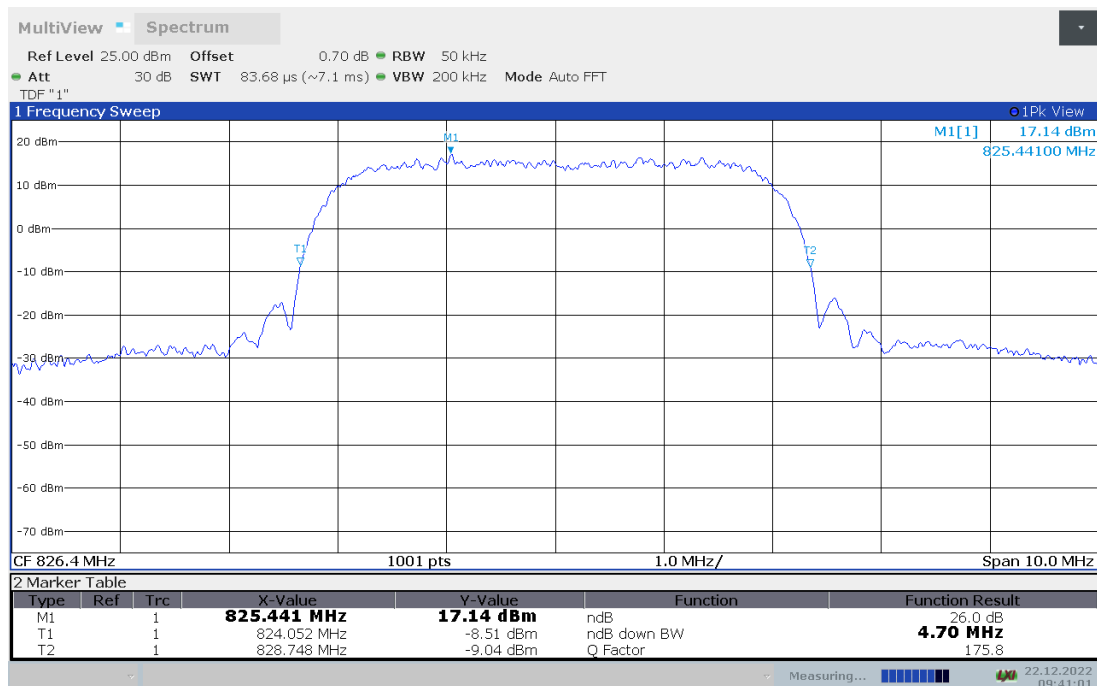


WCDMA Band 5 (-26dBc)-16QAM

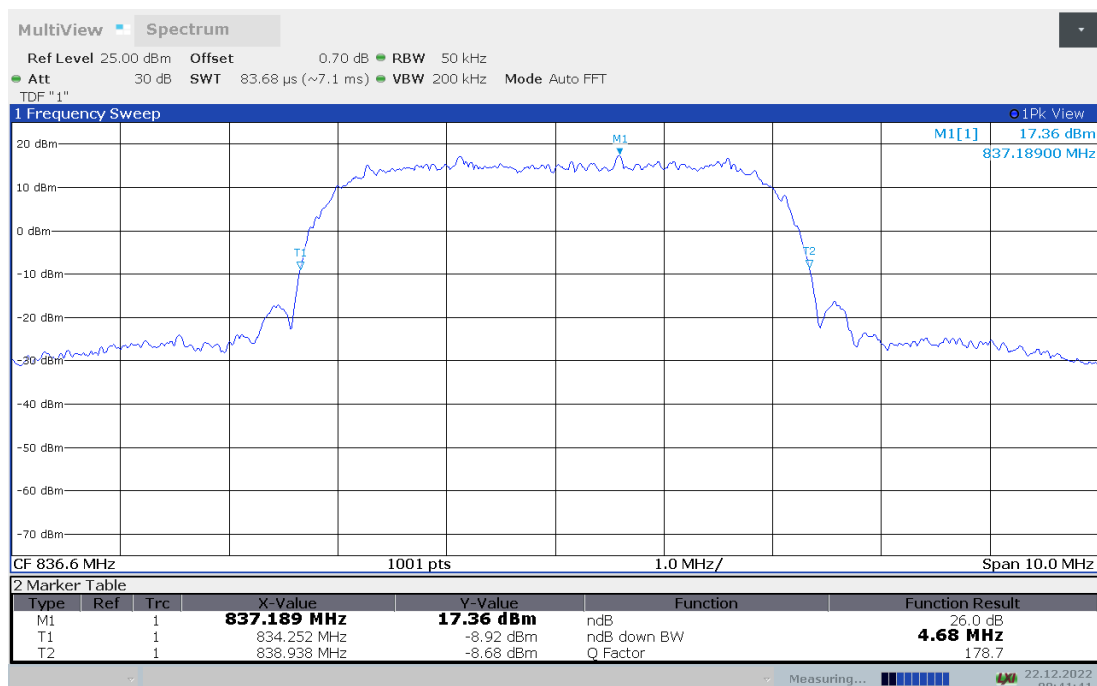
Frequency (MHz)	Emission Bandwidth (-26dBc)(MHz)
826.4	4.695
836.6	4.685
846.6	4.685

WCDMA Band 5 (-26dBc)

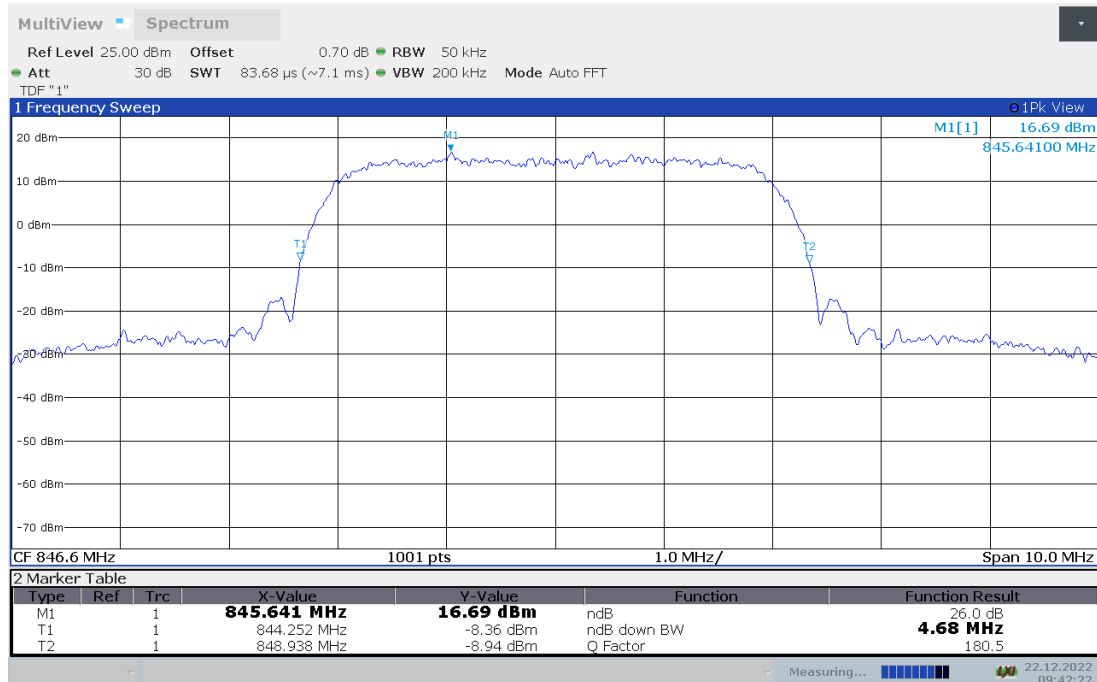
Channel 4132-Emission Bandwidth (-26dBc BW)



Channel 4183-Emission Bandwidth (-26dBc BW)



Channel 4233-Emission Bandwidth (-26dBc BW)



Note: Expanded measurement uncertainty is $U = 3428\text{Hz}$, $k = 2$

A.5 BAND EDGE COMPLIANCE

Reference

FCC: CFR Part 2.1051, 22.917, 24.238.

A.5.1 Measurement limit

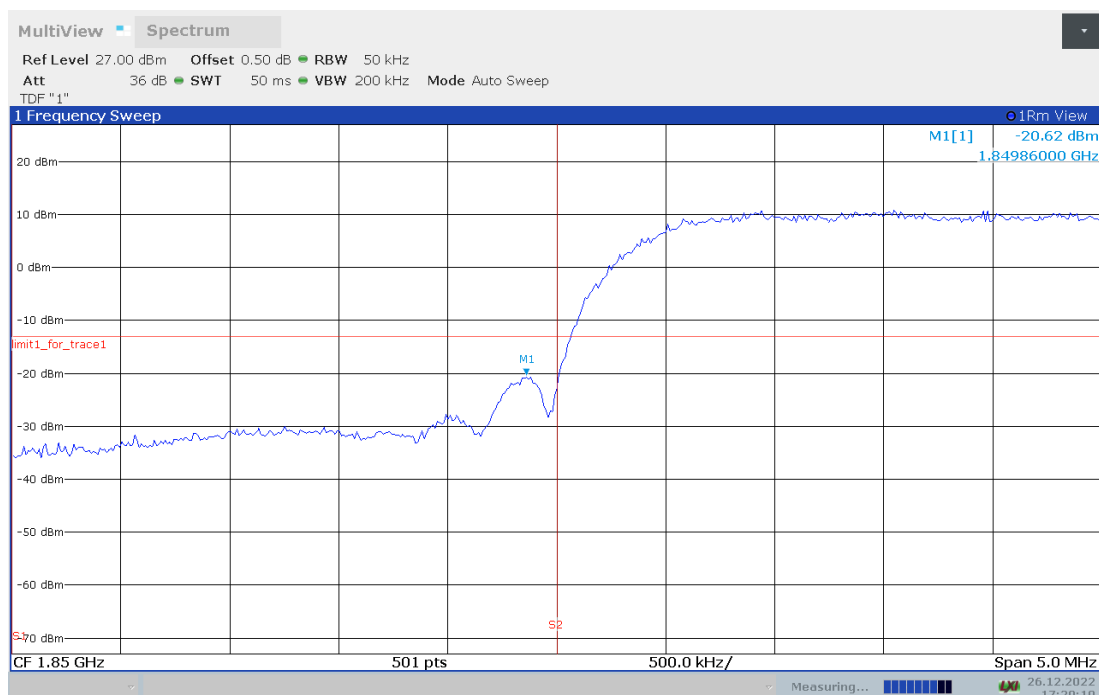
On any frequency outside frequency band of the US Cellular/PCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least $43+10\log(P)$ dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm. A relaxation of the reference bandwidth is often provided for measurements within a specified frequency range at the edge of the authorized frequency block/band. This is often implemented by permitting the use of a narrower RBW (typically limited to a minimum RBW of 1% of the OBW) for measuring the out-of-band emissions without a requirement to integrate the result over the full reference bandwidth.

A.5.2 Measurement result

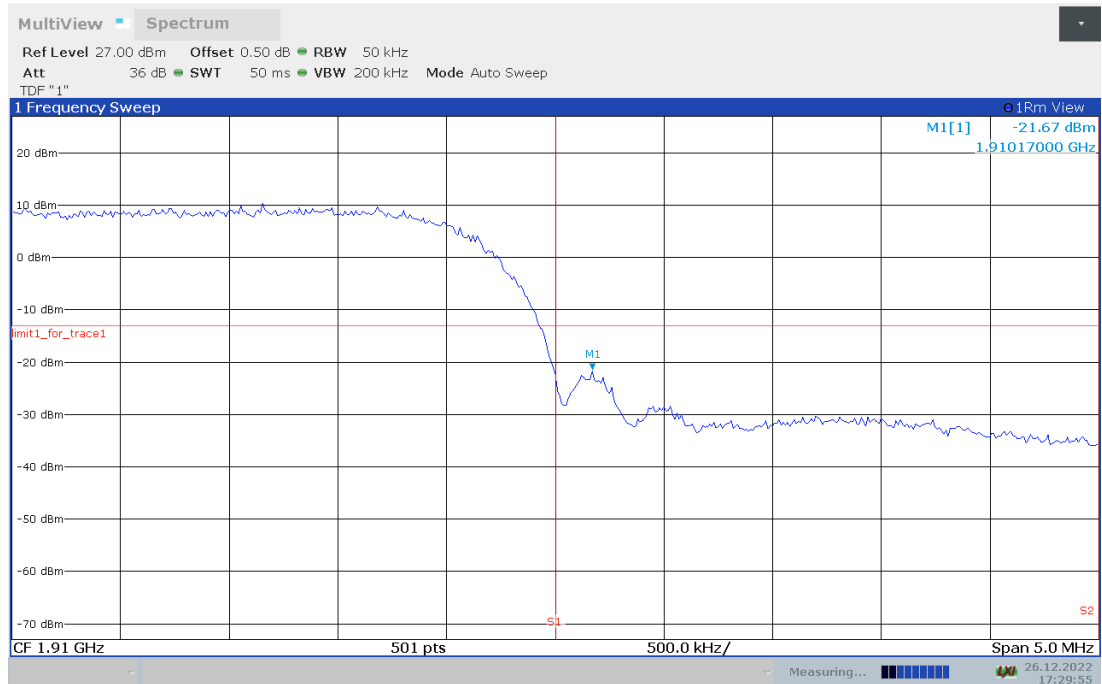
Only worst case result is given below

WCDMA BandII

LOW BAND EDGE BLOCK-A-Channel 9262

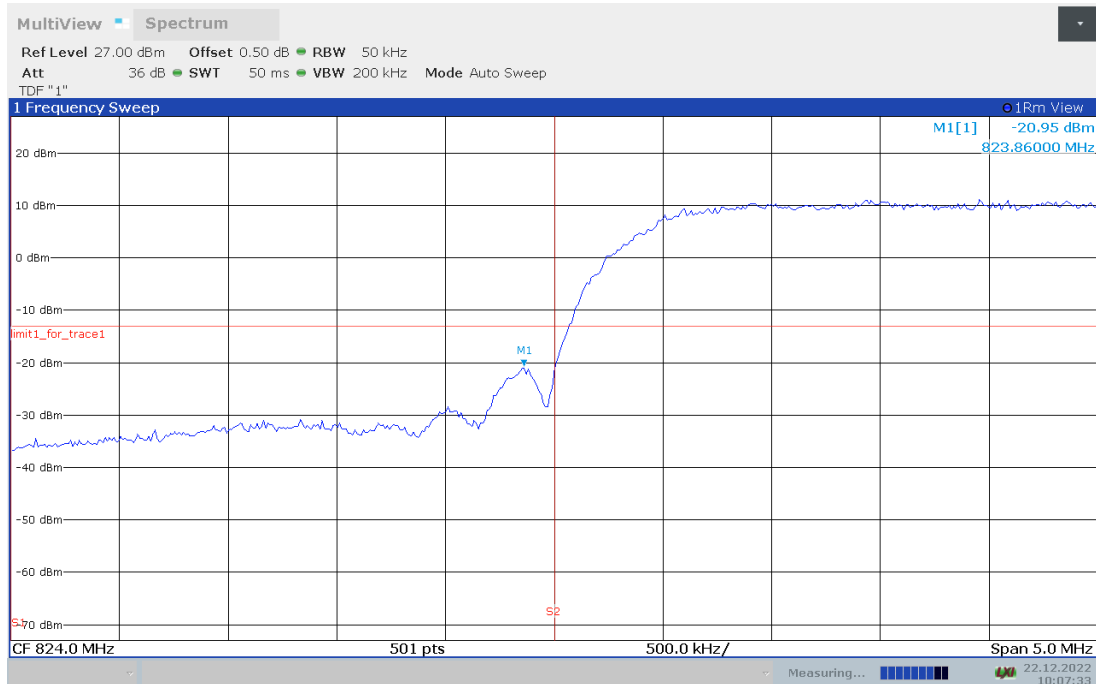


HIGH BAND EDGE BLOCK-C-Channel 9538

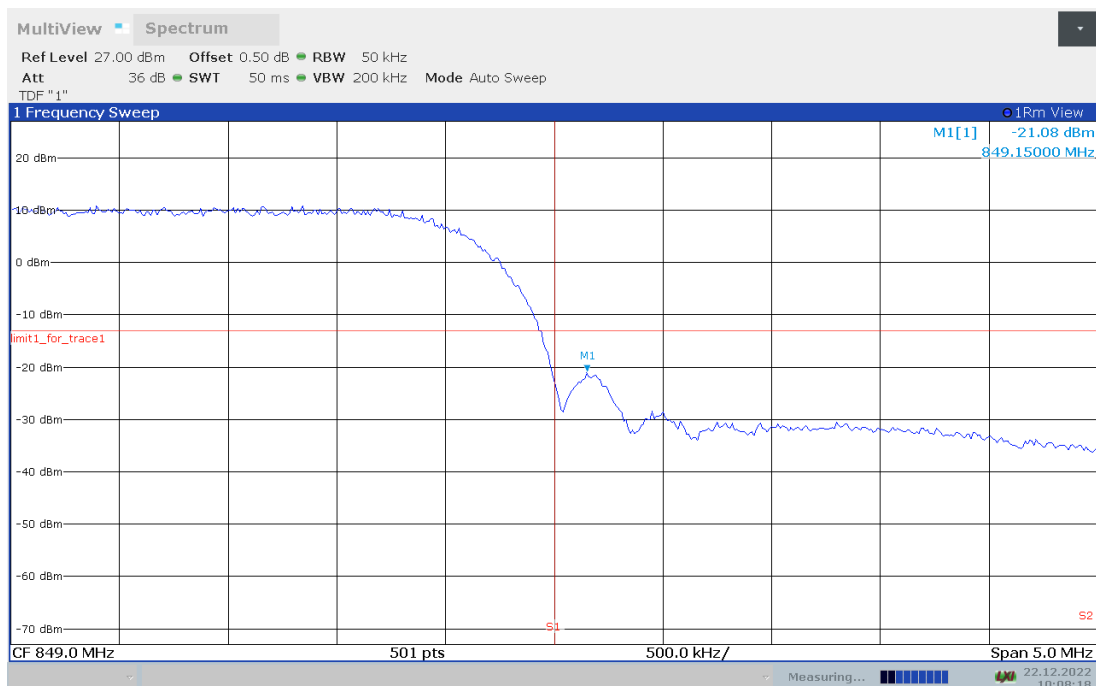


WCDMA Band V

LOW BAND EDGE BLOCK-A-Channel 4132



HIGH BAND EDGE BLOCK-C-Channel 4233



Note: Expanded measurement uncertainty is $U = 0.49 \text{ dB}(100\text{KHz}-2\text{GHz})/1.21 \text{ dB}(2\text{GHz}-26.5\text{GHz})$, $k = 1.96$

A.6 CONDUCTED SPURIOUS EMISSION

Reference

FCC: CFR Part 2.1051, 22.917, 24.238.

A.6.1 Measurement Method

The following steps outline the procedure used to measure the conducted emissions from the EUT.

1. Determine frequency range for measurements: From CFR 2.1051 the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency. For the mobile station equipment tested, this equates to a frequency range of 13 MHz to 9 GHz, data taken from 10 MHz to 25 GHz.
2. Determine EUT transmit frequencies: below outlines the band edge frequencies pertinent to conducted emissions testing.

WCDMA Band II Transmitter

Channel	Frequency (MHz)
9262	1852.4
9400	1880.0
9538	1907.6

WCDMA Band V Transmitter

Channel	Frequency (MHz)
4132	826.4
4183	836.6
4233	846.6

A.6.2 Measurement Limit

Part 24.238, Part 22.917 and Part 27.53(h) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

A.6.3 Measurement result

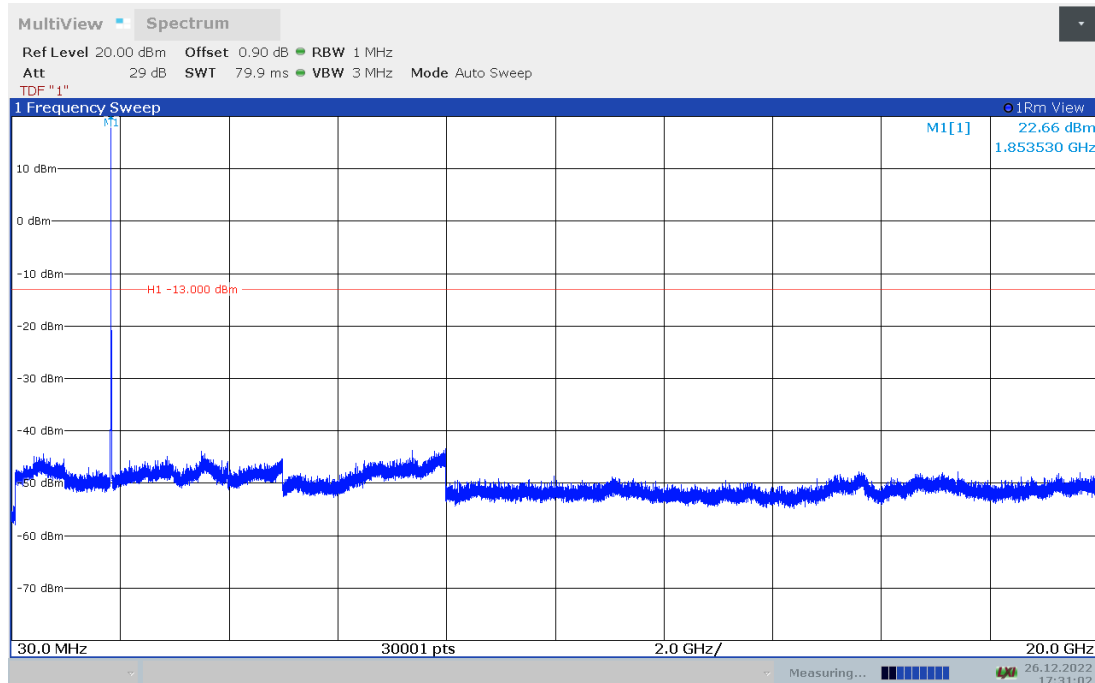
Only worst case result is given below

WCDMA Band II

Channel 9262: 30MHz –19.1GHz

Spurious emission limit –13dBm.

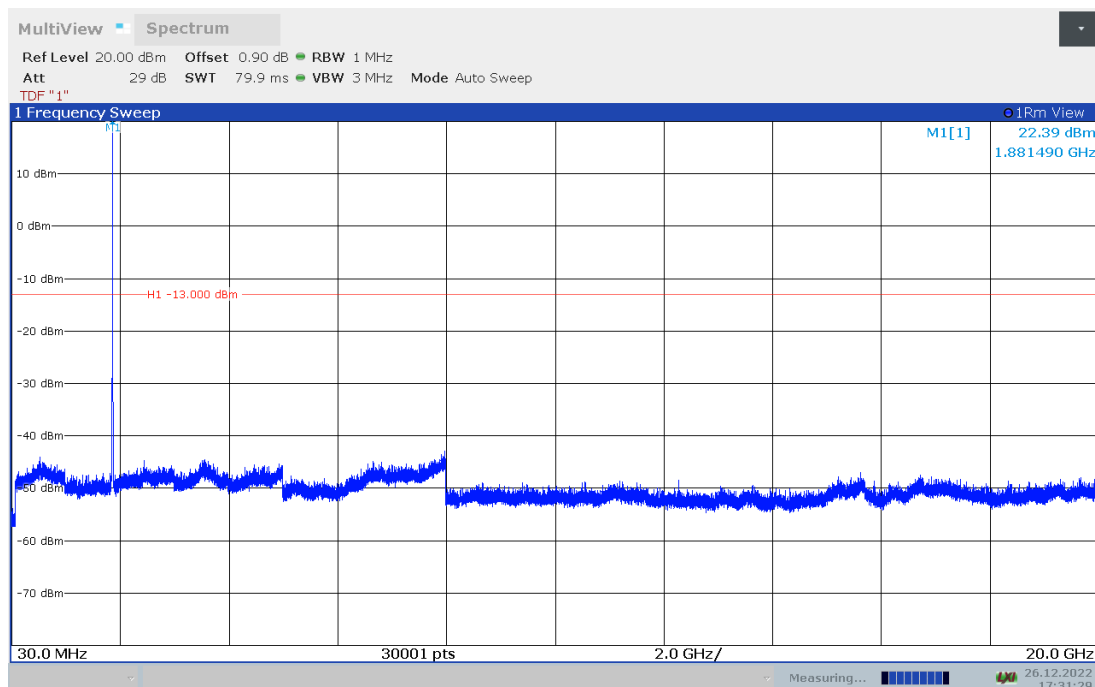
NOTE: peak above the limit line is the carrier frequency.



Channel 9400: 30MHz –19.1GHz

Spurious emission limit –13dBm.

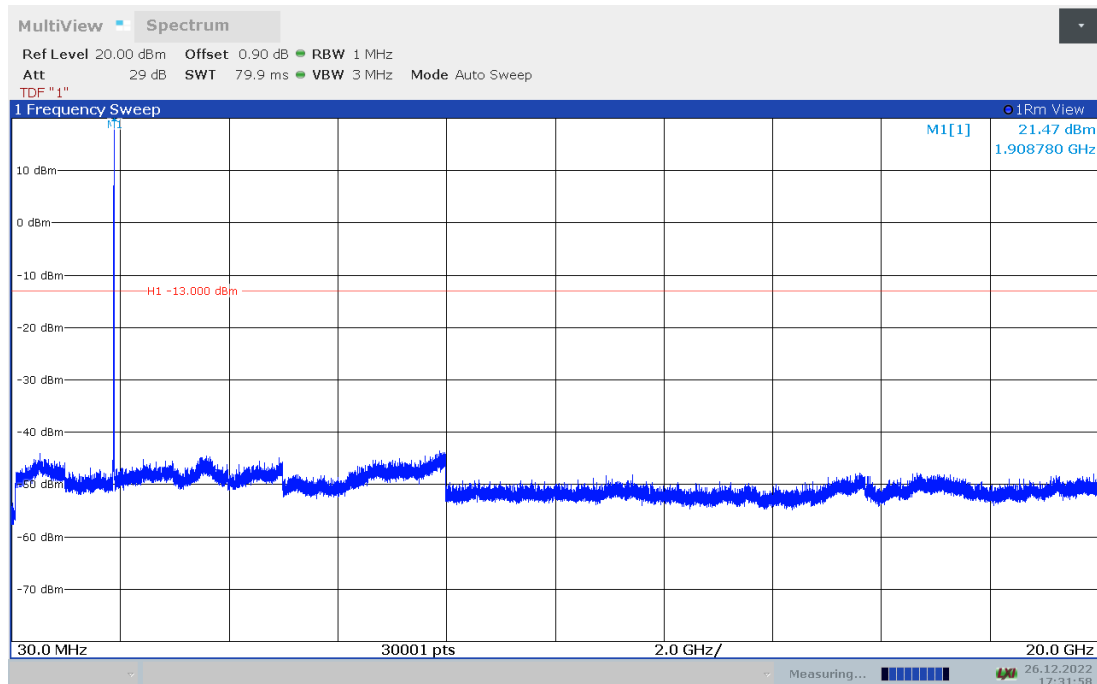
NOTE: peak above the limit line is the carrier frequency.



Channel 9538: 30MHz –19.1GHz

Spurious emission limit –13dBm.

NOTE: peak above the limit line is the carrier frequency.

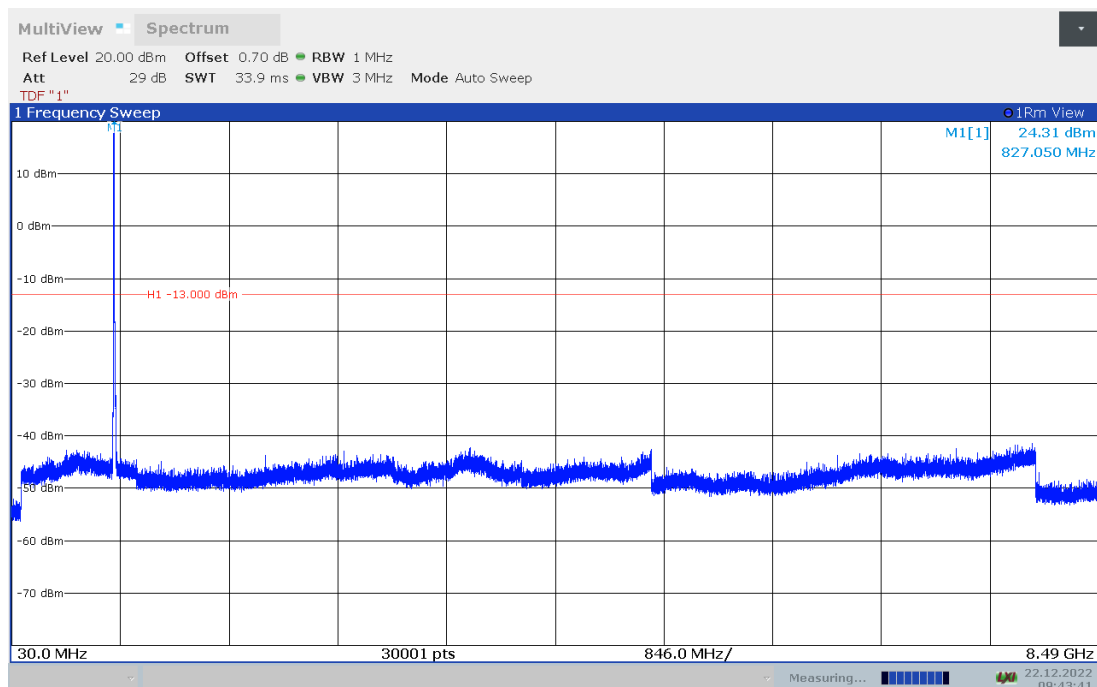


WCDMA Band V

Channel 4132: 30MHz –8.49GHz

Spurious emission limit –13dBm.

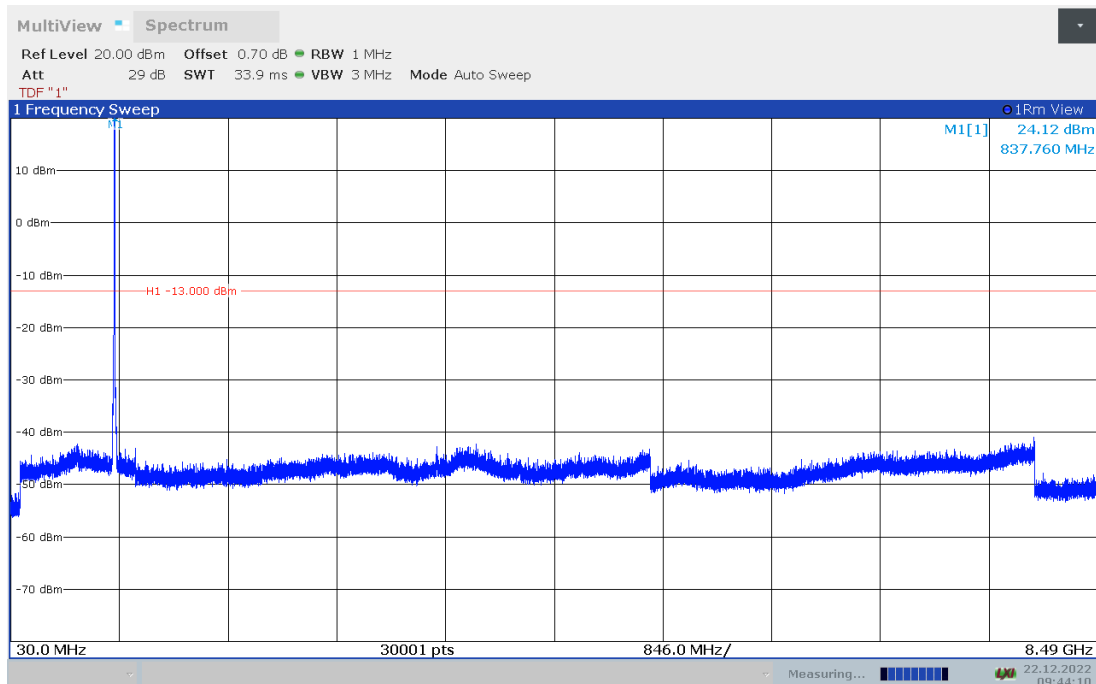
NOTE: peak above the limit line is the carrier frequency.



Channel 4183: 30MHz –8.49GHz

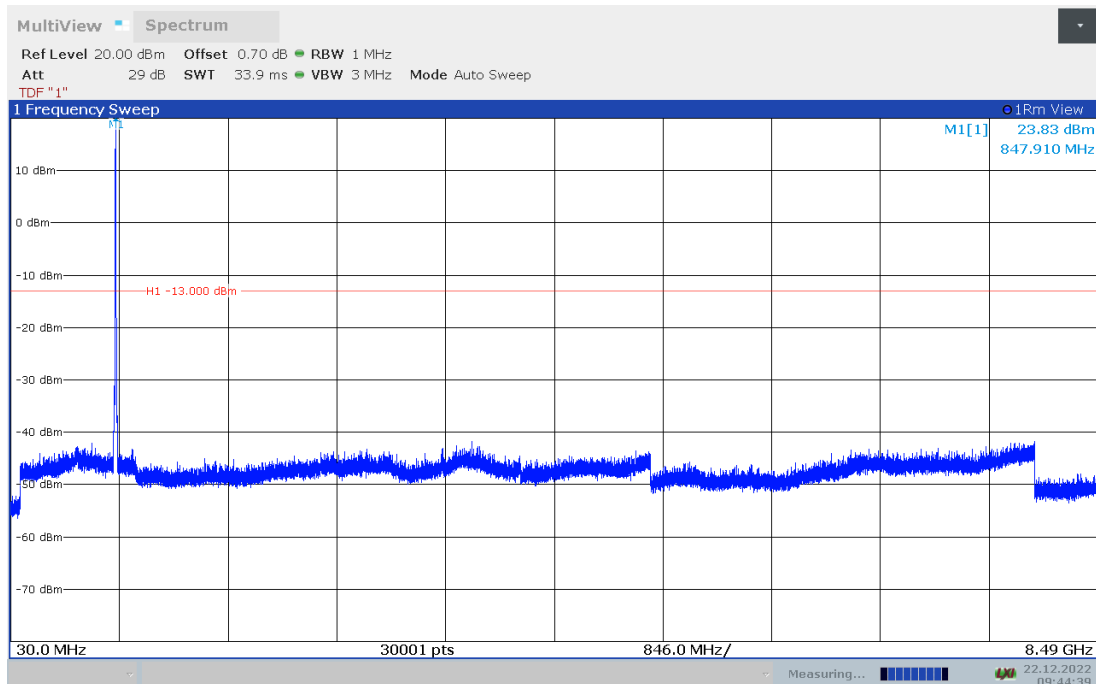
Spurious emission limit –13dBm.

NOTE: peak above the limit line is the carrier frequency.


Channel 4233: 30MHz –8.49GHz

Spurious emission limit –13dBm.

NOTE: peak above the limit line is the carrier frequency.



Note: Expanded measurement uncertainty is $U = 0.49 \text{ dB}(100\text{KHz}-2\text{GHz})/1.21 \text{ dB}(2\text{GHz}-26.5\text{GHz})$, $k = 1.96$

A.7 PEAK-TO-AVERAGE POWER RATIO

Reference

FCC: CFR Part 24.232, KDB971168 D01.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

- Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
- Set the number of counts to a value that stabilizes the measured CCDF curve;
- Set the measurement interval to 1 ms
- Record the maximum PAPR level associated with a probability of 0.1%

A.7.1 Measurement limit

not exceed 13 dB

A.7.2 Measurement results

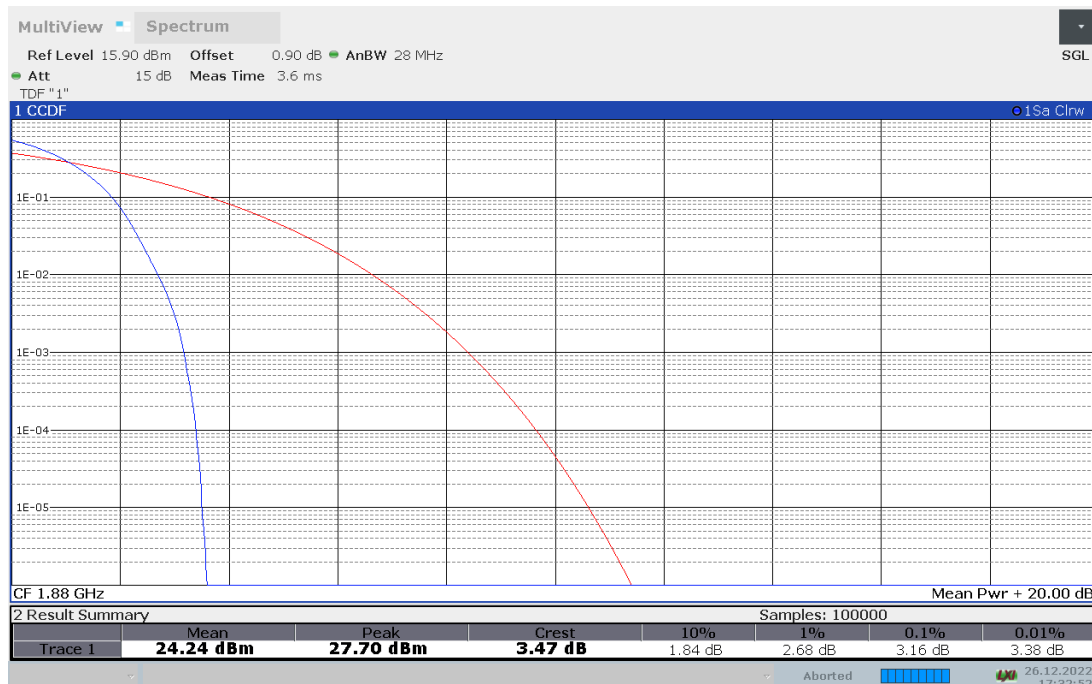
Only worst case result is given below

WCDMA Band II (PAPR)-QPSK

Frequency(MHz)	Peak-To-Average Power Ratio(PAPR)(dB)
1880.0	3.16

WCDMA Band II

Channel 9400- Peak-To-Average Power Ratio(PAPR)-QPSK



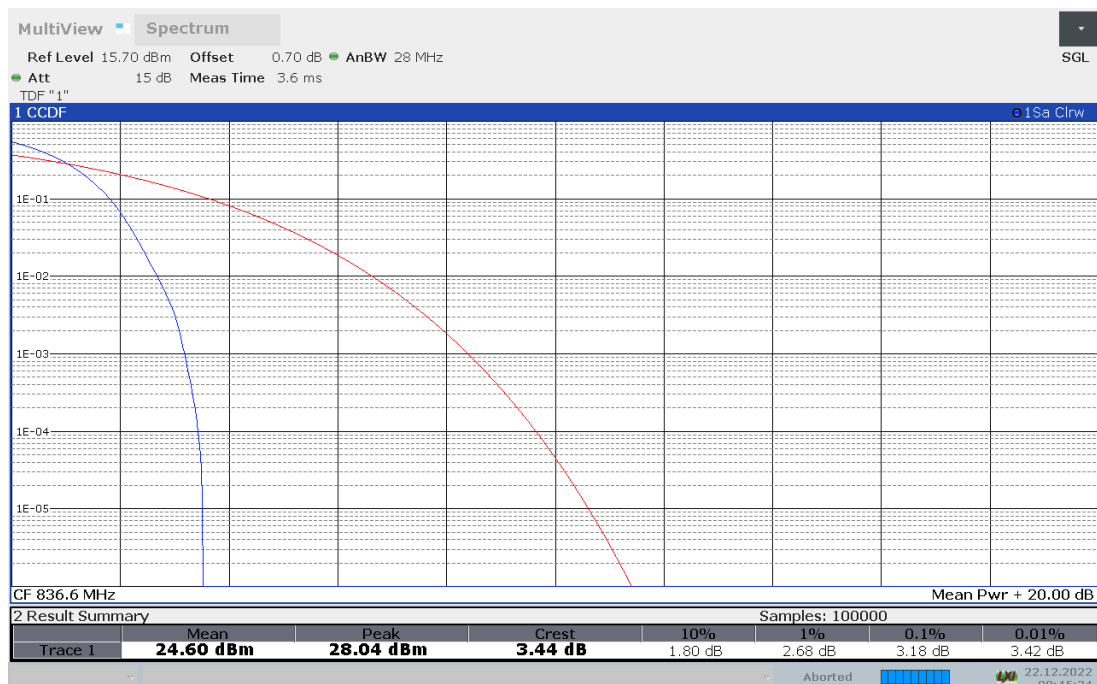
WCDMA Band II (PAPR)-16QAM

Frequency(MHz)	Peak-To-Average Power Ratio(PAPR)(dB)
1880.0	4.96

WCDMA Band II
Channel 9400- Peak-To-Average Power Ratio(PAPR)-16QAM

WCDMA Band V (PAPR)-QPSK

Frequency(MHz)	Peak-To-Average Power Ratio(PAPR)(dB)
836.6	3.18

WCDMA Band V
Channel 4183- Peak-To-Average Power Ratio(PAPR)-QPSK


WCDMA Band V (PAPR)-16QAM

Frequency(MHz)	Peak-To-Average Power Ratio(PAPR)(dB)
836.6	4.34

WCDMA Band V
Channel 4183- Peak-To-Average Power Ratio(PAPR)-16QAM


Note: Expanded measurement uncertainty is $U = 0.48$ dB, $k = 2$

END OF REPORT