

TEST REPORT

Test report no.: 1-2152-25-01-03_TR1-R02



Deutsche
Akkreditierungsstelle
D-PL-12047-01-00

Testing laboratory

cetecom advanced GmbH

Untertuerkheimer Strasse 6 – 10

66117 Saarbruecken / Germany

Phone: + 49 681 5 98 - 0

Fax: + 49 681 5 98 - 9075

Internet: <https://cetecomadvanced.com>

e-mail: mail@cetecomadvanced.com

Accredited Testing Laboratory:

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2018-03) by the Deutsche Akkreditierungsstelle GmbH (DAkkS).

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number:

D-PL-12047-01-00.

ISED Testing Laboratory Recognized Listing Number: DE0001

FCC designation number: DE0002

Applicant

Haivision Systems Inc.

2600 Boulevard Alfred Nobel

H4S 0A9 Montreal / CANADA

Phone: -/-

Contact: Vincent Louveau

e-mail: vlouveau@haivision.com

Manufacturer

Haivision Systems Inc.

2600 Boulevard Alfred Nobel

H4S 0A9 Montreal / CANADA

Test standard/s

FCC 47 CFR Part 22 Federal Communications Commission, 47 code of federal regulations, Part 22: Subpart H, Cellular Radiotelephone Service

FCC 47 CFR Part 24 Federal Communications Commission, 47 code of federal regulations, Part 24: Personal Communications Services

FCC 47 CFR Part 27 Federal Communications Commission, 47 code of federal regulations, Part 27: Miscellaneous Wireless Communications Services

For further applied test standards please refer to section 3 of this test report.

Test Item

Kind of test item: Video Transmitters

Model name: Falkon X2

FCC ID: 2BTDD-RM520NGL

ISED certification number: 31632-RM520NGL

Frequency: WCDMA bands 2, 4, 5
LTE bands 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 30, 38, 41, 42, 43, 48, 66, 71
5G NR bands 2, 5, 7, 12, 13, 25, 26, 30, 38, 41, 48, 66, 71, 77, 78

Technology tested: 3G, 4G and 5G

Antenna: Four integrated antennas

Power supply: 10.8 V DC by battery pack

Temperature range: -5°C to +45°C

This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

Test report authorized:



cn=Michael Dorongovski-Kerbusch, o=ou,
email=michael.dorongovski@cetecomadvanced.com, c=DE
2026.09.18 11:46:17 +02'00'

Michael Dorongovski
Lab Manager
Regulatory Services Radio

Test performed:



cn=Steffen Sonntag, o=cetecom advanced
GmbH, ou=SON-240327,
email=steffen.sonntag@cetecomadvanced.com, c=DE
2026.09.18 11:48:22 +02'00'

Steffen Sonntag
Testing Manager
Regulatory Services Radio

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2 General information

2.1 Notes and disclaimer

The test results of this test report relate exclusively to the test item specified in this test report. cetecom advanced GmbH does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item.

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This test report replaces the test report with the number 1-2152-25-01-03_TR1-R01 and dated 2026-07-31.

2.2 Application details

Date of receipt of order:	2026-02-02
Date of receipt of test item:	2026-03-16
Start of test:*	2026-03-16
End of test:*	2026-09-11
Person(s) present during the test:	-/-

*Date of each measurement, if not shown in the plot, can be requested. Dates are stored in the measurement software.

2.3 Test laboratories sub-contracted

None

3 Test standard/s, references and accreditations

Test standard	Date	Description
FCC 47 CFR Part 22	-/-	Federal Communications Commission, 47 code of federal regulations, Part 22: Subpart H, Cellular Radiotelephone Service
FCC 47 CFR Part 24	-/-	Federal Communications Commission, 47 code of federal regulations, Part 24: Personal Communications Services
FCC 47 CFR Part 27	-/-	Federal Communications Commission, 47 code of federal regulations, Part 27: Miscellaneous Wireless Communications Services
FCC 47 CFR Part 90	-/-	FCC - Title 47 of the Code of Federal Regulations; Chapter I; Part 90 - Private Land Mobile Radio Services
FCC 47 CFR Part 96	-/-	CITIZENS BROADBAND RADIO SERVICE
RSS-132:Issue 4 (2023-01)	2023-01-31	Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz
RSS-133:Issue 7 (2024-07)	2024-07-24	Personal Communications Service Equipment Operating in the Bands 1850-1915 MHz and 1930-1995 MHz
RSS - 139 Issue 4	Sep. 29, 2022	Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz
RSS – 130 Issue 2	February 2019	Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz
RSS – 199 Issue 4	July 2023	Broadband Radio Service (BRS) Equipment Operating in the Band 2500-2690 MHz
RSS – 192 Issue 5	July 2023	Flexible Use Broadband Equipment Operating in the Band 3450-3900 MHz
RSS – 195 Issue 3	January 16, 2026	Wireless Communication Service (WCS) Equipment Operating in the Bands 2305-2320 MHz and 2345-2360 MHz
RSS – 140 Issue 1	April, 2018	Equipment Operating in the Public Safety Broadband Frequency Bands 758-768 MHz and 788-798 MHz
RSS – 197 Issue 1	February, 2010	Wireless Broadband Access Equipment Operating in the Band 3650–3700 MHz

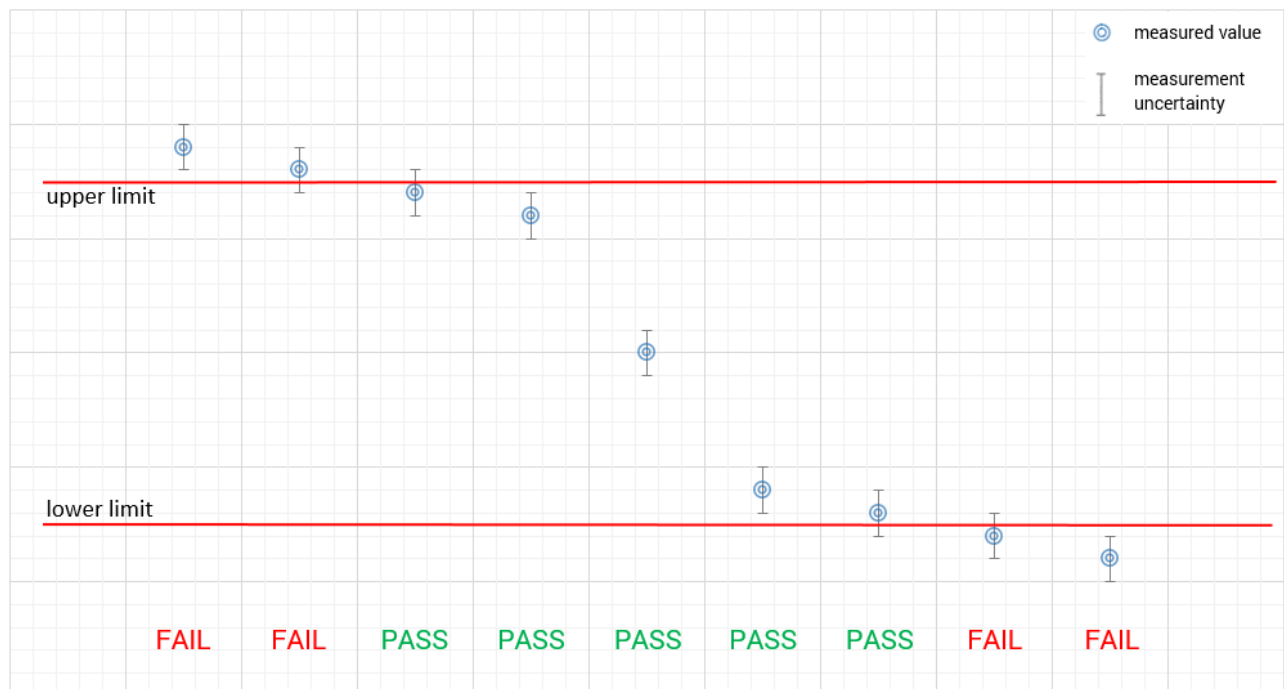
Guidance	Version	Description
ANSI C63.26-2015	-/-	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
KDB 662911 D01	v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band
Power Meas License Systems: KDB 971168 D01	v03r01	Measurement Guidance for Certification of Licensed Digital Transmitters

4 Reporting statements of conformity – decision rule

Only the measured values related to their corresponding limits will be used to decide whether the equipment under test meets the requirements of the test standards listed in chapter 3.

The measurement uncertainty is mentioned in this test report, see chapter 9, but is not taken into account - neither to the limits nor to the measurement results. Measurement results with a smaller margin to the corresponding limits than the measurement uncertainty have a potential risk of more than 5% that the decision might be wrong."

measured value, measurement uncertainty, verdict



5 Test environment

Temperature	:	T_{nom} T_{max} T_{min}	+22 °C during room temperature tests No tests under extreme environmental conditions performed. No tests under extreme environmental conditions performed.
Relative humidity content	:		42 %
Barometric pressure	:		1022 hpa
Power supply	:	V_{nom} V_{max} V_{min}	10.8 V DC by battery pack No tests under extreme environmental conditions required. No tests under extreme environmental conditions required.

6 Test item

6.1 General description

Kind of test item	:	Video Transmitters
Model name	:	Falkon X2
HMN	:	N/A
PMN	:	Quectel RM520N-GL
HVIN	:	RM520N-GL
FVIN	:	N/A
S/N serial number	:	HAIFKX20326011790 (certification 8/FalkonX2-Certif-8) (Radiated Sample)
Hardware status	:	2.0.0-2
Software status	:	DRTU_08119_23.130.0
Firmware status	:	--
Frequency band	:	WCDMA bands 2, 4, 5 LTE bands 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 38, 41, 42, 43, 66, 71 5G NR bands 2, 5, 7, 12, 13, 25, 26, 38, 41, 66, 71, 77, 78
Antenna	:	Four integrated antennas
Power supply	:	10.8 V DC by battery pack
Temperature range	:	-5°C to +45°C

6.2 Additional information

The content of the following annexes is defined in the QA. It may be that not all of the listed annexes are necessary for this report, thus some values in between may be missing.

Test setup and EUT photos are included in test report:

1-2152-25-01-01_TR1-A101-R01
1-2152-25-01-01_TR1-A102-R01
1-2152-25-01-01_TR1-A103-R01

7 Description of the test setup

Typically, the calibrations of the test apparatus are commissioned to and performed by an accredited calibration laboratory. The calibration intervals are determined in accordance with the DIN EN ISO/IEC 17025. In addition to the external calibrations, the laboratory executes comparison measurements with other calibrated test systems or effective verifications. Weekly chamber inspections and range calibrations are performed. Where possible, RF generating and signaling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

In order to simplify the identification of the equipment used at some special tests, some items of test equipment and ancillaries can be provided with an identifier or number in the equipment list below (Lab/Item).

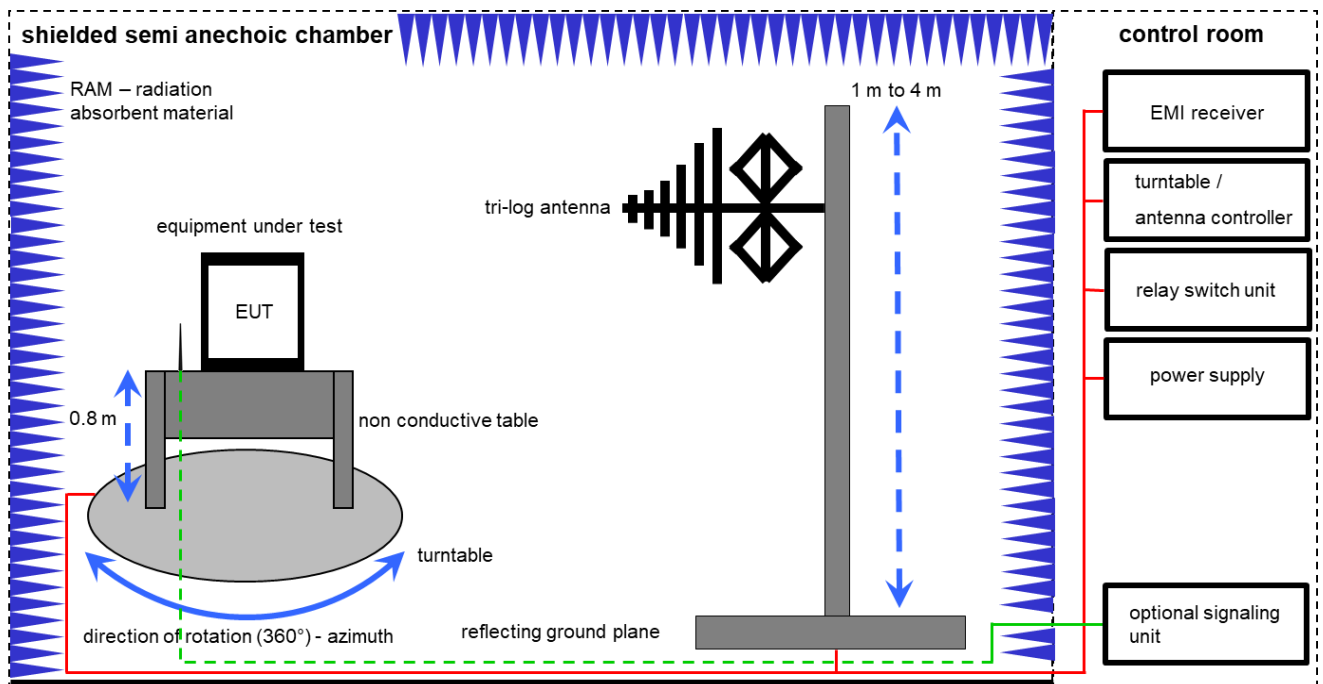
Each block diagram listed can contain several test setup configurations. All devices belonging to a test setup are identified with the same letter syntax. For example: Column Setup and all devices with an A.

Agenda: Kind of Calibration

k/cal	calibration / calibrated	EK	limited calibration
Ne/cnn	not required (k, ev, izw, zw not required)	zw	cyclical maintenance (external cyclical maintenance)
Ev/chk	periodic self verification	izw	internal cyclical maintenance
Ve	long-term stability recognized	g	blocked for accredited testing
vlk!	Attention: extended calibration interval		
NK!	Attention: not calibrated	*)	next calibration ordered / currently in progress
cpu	check prior usage		

7.1 Shielded semi anechoic chamber

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 30 MHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas are conform to specifications ANSI C63. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test setups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received. The wanted and unwanted emissions are received by spectrum analyzers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.



Measurement distance: tri-log antenna 10 meter; EMC32 software version: 10.59.00

$FS = UR + CL + AF$

(FS-field strength; UR-voltage at the receiver; CL-loss of the cable; AF-antenna factor)

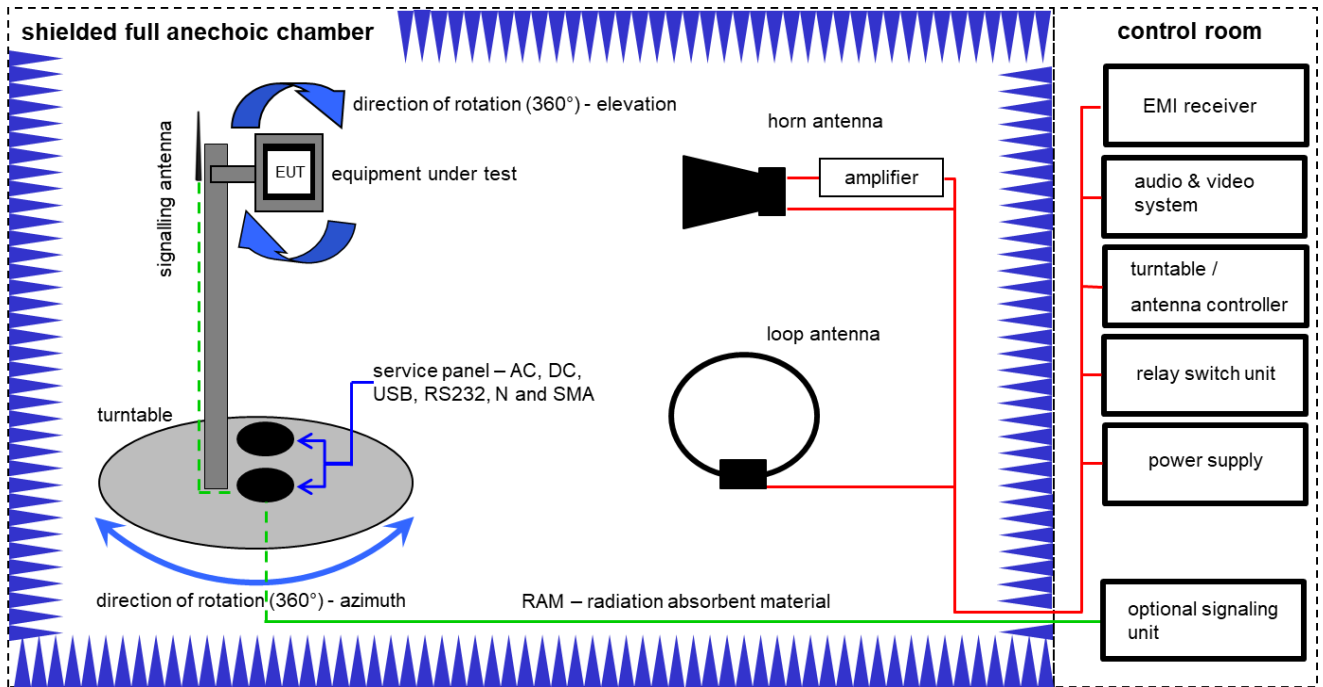
Example calculation:

$FS [dB\mu V/m] = 12.35 [dB\mu V] + 1.90 [dB] + 16.80 [dB/m] = 31.05 [dB\mu V/m] \text{ (} 35.69 \mu V/m \text{) @ distance}$

Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A	Switch-Unit	Switch-Unit 3488A	Hewlett Packard	2719A14505	50160	cpu	-/-	-/-
2	A	Positioning Controller	Positioning Controller 2090	ETS-Lindgren GmbH Taufkirchen	64672	50280	cnr	-/-	-/-
3	A	TRILOG Broadband Antenna	TRILOG Broadband Antenna VULB9163	Schwarzbeck Mess-Elektronik OHG Schönaun	1029	50403	cal	07.11.2025	30.11.2027
4	A	EMI Test Receiver	EMI Test Receiver ESR3 9kHz-3.6GHz	Rohde & Schwarz Messgerätebau GmbH Memmingen	102587	50417	cal	08.12.2025	31.12.2026

7.2 Shielded fully anechoic chamber



Measurement distance: horn antenna 3 meter; loop antenna 3 meter

$$OP = AV + D - G + CA$$

(OP-radiated output power; AV-analyzer value; D-free field attenuation of measurement distance; G-antenna gain+amplifier gain; CA-loss signal path)

Example calculation:

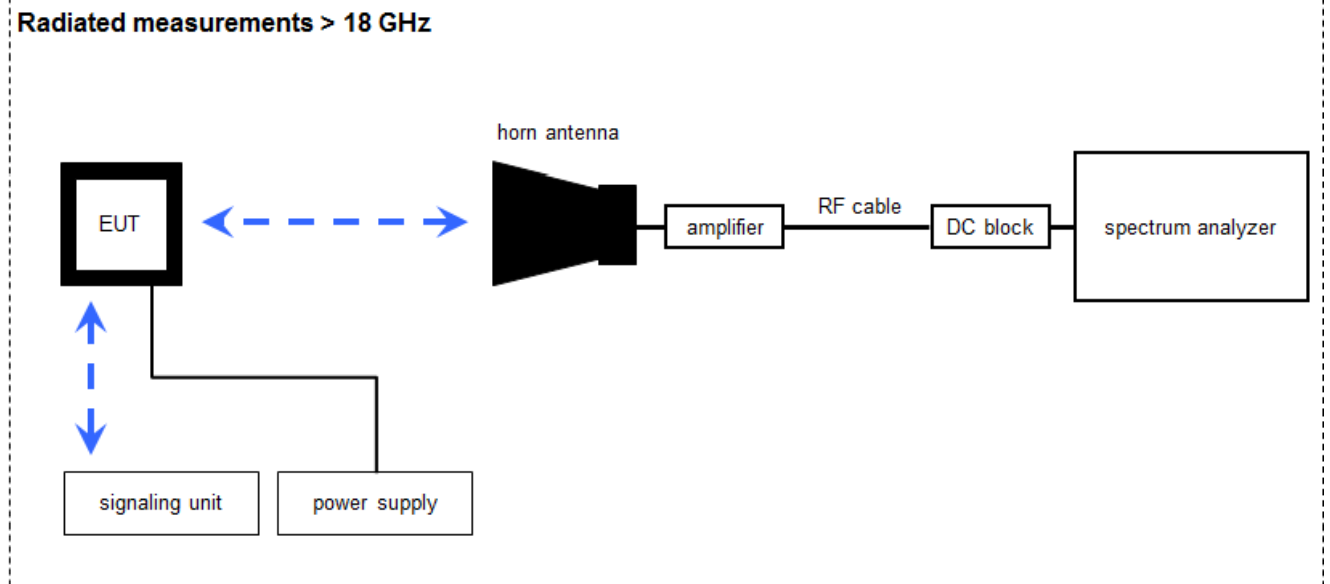
$$OP \text{ [dBm]} = -39.0 \text{ [dBm]} + 57.0 \text{ [dB]} - 12.0 \text{ [dBi]} + (-36.0) \text{ [dB]} = -30 \text{ [dBm]} (1 \mu\text{W})$$

Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1		Double-Ridged Waveguide Horn Antenna	Double-Ridged Waveguide Horn Antenna 3115	EMCO Elektronik GmbH Gilching	8812-3089	40344	cal	09.07.2024	31.07.2026
2		Highpass Filter	Highpass Filter WHK1.1/15G-10SS	Wainwright Instruments GmbH Andechs	37	40362	cnn	-/-	-/-
3		Band Reject Filter	Band Reject Filter WRCG1850/1910-1835/1925-40/8SS	Wainwright Instruments GmbH Andechs	23	40363	cnn	-/-	-/-
4		Highpass Filter	Highpass Filter WHKX7.0/18G-8SS	Wainwright Instruments GmbH Andechs	18	40364	cpu	-/-	-/-
5		Band Reject Filter	Band Reject Filter WRCG824/849-810/863-60/9SS	Wainwright Instruments GmbH Andechs	6	40366	cpu	-/-	-/-
6		Band Reject Filter	Band Reject Filter WRCG1710/1755-1690/1775-90/14SS	Wainwright Instruments GmbH Andechs	7	40368	cpu	-/-	-/-
7		Broadband Amplifier 0.5-18 GHz	Broadband Amplifier 0.5-18 GHz CBLU5184540	MEC Import: CERNEX	22050	40374	cpu	-/-	-/-
8		4U RF Switch Platform	4U RF Switch Platform L4491A	Agilent Technologies Deutschland GmbH Böblingen	MY50000032	40376	cnn	-/-	-/-
9		NEXIO EMV-Software	NEXIO EMV-Software BAT EMC	MEC Import: Nexio		40383	cnn	-/-	-/-

			V2022.0.32.0						
10		Anechoic chamber	Anechoic chamber	MEC Import: TDK		40385	cnn	-/-	-/-
11		RF-Amplifier	RF-Amplifier AMF-6F06001800-30-10P-R	MEC Import: NARDA-MITEQ Inc	2011572	40400	cpu	-/-	-/-
12		Signal- and Spectrum Analyzer	Signal- and Spectrum Analyzer FSW26	Rohde & Schwarz Messgerätebau GmbH Memmingen	104533	41044	cal	20.03.2026	31.03.2027
13		Active Loop Antenna	Active Loop Antenna 6502	EMCO Elektronik GmbH Gilching	2210	50044	cal	07.07.2025	31.07.2027

7.3 Radiated measurements > 18 GHz



Measurement distance: horn antenna 50 cm

$$OP = AV + D - G + CA$$

(OP-radiated output power; AV-analyzer value; D-free field attenuation of measurement distance;
G-antenna gain+amplifier gain; CA-loss signal path)

Example calculation:

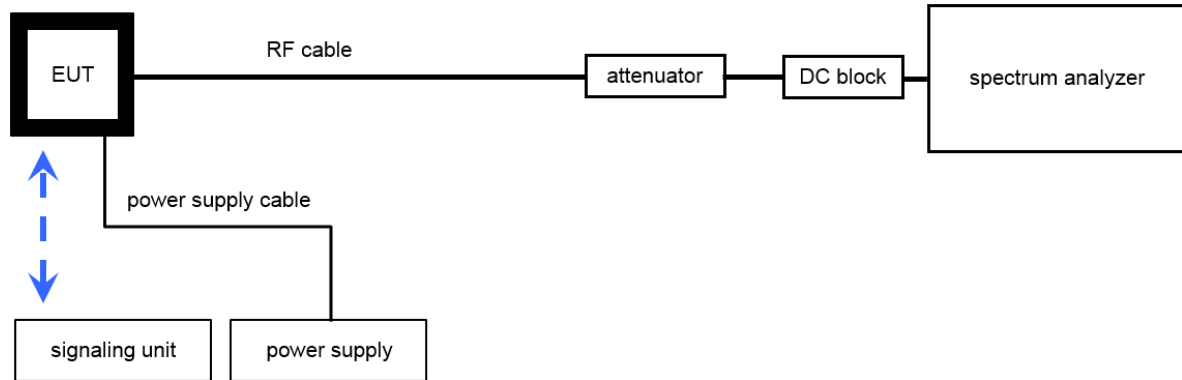
$$OP \text{ [dBm]} = -59.0 \text{ [dBm]} + 44.0 \text{ [dB]} - 20.0 \text{ [dBi]} + 5.0 \text{ [dB]} = -30 \text{ [dBm]} (1 \mu\text{W})$$

Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A, B	Broadband LNA 18-50 GHz	Broadband LNA 18-50 GHz CBL18503070PN	MEC Import: CERNEX	25240	40073	cpu	-/-	-/-
2	A	Std. Gain Horn Antenna 18.0-26.5 GHz	Std. Gain Horn Antenna 18.0-26.5 GHz 638	Narda Microwave	8205	40085	cal	16.01.2026	31.01.2028
3	B	Std. Gain Horn Antenna 26.5-40.0 GHz	Std. Gain Horn Antenna 26.5-40.0 GHz V637	MEC Import: Narda	82-16	40086	cal	16.01.2026	31.01.2028
4	A, B	Signal analyzer	Signal analyzer FSV40	Rohde & Schwarz Messgerätebau GmbH Memmingen	101042	40292	cal	08.01.2026	31.01.2027
5	A, B	RF-Cable	RF-Cable ST18/SMAm/SMAm /72	Huber & Suhner GmbH Unterhaching	Batch no. 699714	40389	cpu	-/-	-/-
6	A, B	DC-Blocker 0.1-40 GHz	DC-Blocker 0.1-40 GHz 8141A	MEC Import: Inmet	-/-	40390	cpu	-/-	-/-

7.4 Conducted measurements

Conducted measurements normal conditions



OP = AV + CA
 (OP-output power; AV-analyzer value; CA-loss signal path)

Example calculation:

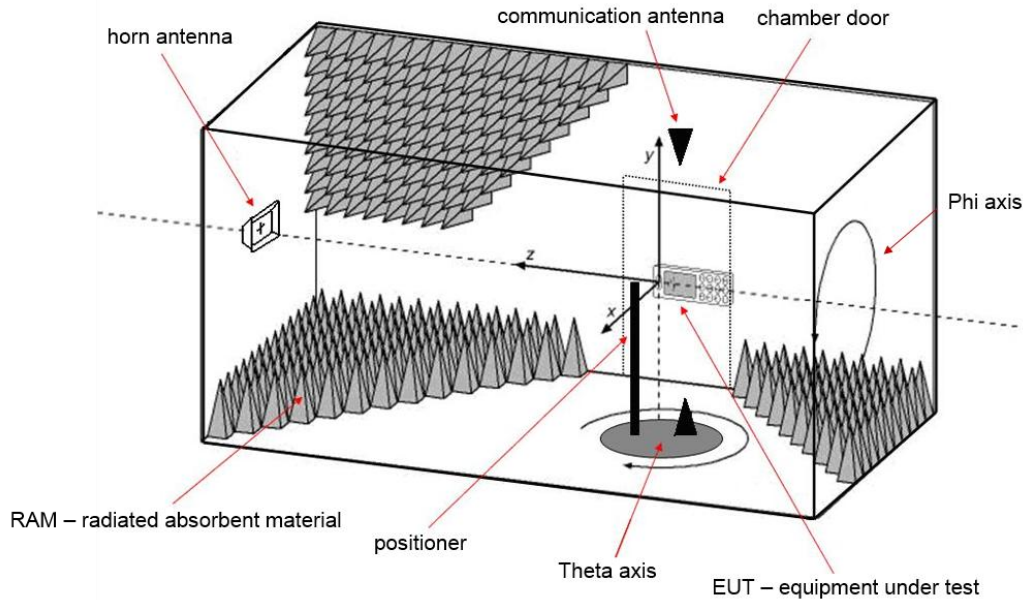
OP [dBm] = 6.0 [dBm] + 11.7 [dB] = 17.7 [dBm] (58.88 mW)

Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A	Wideband radio communication tester	Wideband radio communication tester CMW500	Rohde & Schwarz Messgerätebau GmbH Memmingen	166977	300005718-0000	cal	13.12.2023	31.12.2025
2	B	5G Signalling Unit	MT8000A	Anritsu	6262186399	300006321	cal	17.09.2024	17.09.2026
	B	5G Signalling Unit	MT8000A	Anritsu	6272398166	-/-	cal	10.10.2025	10.10.2026
3	A, B	Relais Matrix	Switch Matrix USM	cetecom advanced GmbH Saarbrücken	C001	-/-	cnn	-/-	-/-
4	A, B	RF-Cable	RF-Cable ST18/SMAm/SMAm /60	Huber & Suhner GmbH Unterhaching	Batch no. 606844	400001181-0000	cpu	-/-	-/-
5	A, B	RF-Cable	RF-Cable ST18/SMAm/SMAm /72	Huber & Suhner GmbH Unterhaching	Batch no. 699714	400001184-0000	cpu	-/-	-/-

7.5 Shielded fully anechoic chamber

OTA – over the air performance



EM Quest software version: 1.0.7.0

$$OP = AV + D - G + CA$$

(OP-radiated output power; AV-analyzer value; D-free field attenuation of measurement distance;
G-antenna gain+amplifier gain; CA-loss signal path)

Example calculation:

$$OP \text{ [dBm]} = -40.0 \text{ [dBm]} + 49.9 \text{ [dB]} - 12.4 \text{ [dBi]} + 9 \text{ [dB]} = 6.5 \text{ [dBm]} (4.47 \text{ mW})$$

Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A	CTIA-Chamber	CTIA-Chamber CTIA-Chamber AMS 8500	ETS-Lindgren GmbH Taufkirchen		40175	cnn	-/-	-/-
2	A	CTIA-Chamber - Positioning Equipment	CTIA-Chamber - Positioning Equipment CTIA-Chamber - Positioning Equipment	EMCO Elektronik GmbH Gilching		40176	cpu	-/-	-/-
3	A	Spectrum Analyzer 9kHz - 30 GHz	Spectrum Analyzer 9kHz - 30 GHz FSP30	Rohde & Schwarz Messgerätebau GmbH Memmingen	100623	40858	cal	05.12.2024	31.12.2026
4	A	Switch Unit	Switch Unit TS-RSP	Rohde & Schwarz Messgerätebau GmbH Memmingen	100155	41018	cpu	-/-	-/-
5	A	CTIA-Chamber - Software	CTIA-Chamber - Software CTIA-Chamber - Software	EMCO Elektronik GmbH Gilching		41019	cnn	-/-	-/-
6	A	CTIA-Chamber - Antenna	CTIA-Chamber - Antenna 3164-04	EMCO Elektronik GmbH Gilching	41915	41020	cnn	-/-	-/-
7	A	Signal generator	Signal generator SMB100A	Rohde & Schwarz Messgerätebau GmbH Memmingen	1406.6000k03/180587	40307	cal	12.12.2023	31.12.2026

8 Sequence of testing

8.1 Sequence of testing radiated spurious 9 kHz to 30 MHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, it is placed on a table with 0.8 m height.
- If the EUT is a floor standing device, it is placed directly on the turn table.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- Measurement distance is 3 m (see ANSI C 63.4) – see test details.
- EUT is set into operation.

Premeasurement*

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna height is 1 m.
- At each turntable position the analyzer sweeps with positive-peak detector to find the maximum of all emissions.

Final measurement

- Identified emissions during the pre-measurement are maximized by the software by rotating the turntable from 0° to 360°.
- Loop antenna is rotated about its vertical axis for maximum response at each azimuth about the EUT. (For certain applications, the loop antenna plane may also need to be positioned horizontally at the specified distance from the EUT)
- The final measurement is done in the position (turntable and elevation) causing the highest emissions with quasi-peak (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. A plot with the graph of the premeasurement and the limit is stored.

*)Note: The sequence will be repeated three times with different EUT orientations.

8.2 Sequence of testing radiated spurious 30 MHz to 1 GHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- Measurement distance is 10 m or 3 m (see ANSI C 63.4) – see test details.
- EUT is set into operation.

Premeasurement

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height changes from 1 m to 3 m.
- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement

- The final measurement is performed for at least six highest peaks according to the requirements of the ANSI C63.4.
- Based on antenna and turntable positions at which the peak values are measured the software maximize the peaks by changing turntable position $\pm 45^\circ$ and antenna height between 1 and 4 m.
- The final measurement is done with quasi-peak detector (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement with marked maximum final results and the limit is stored.

8.3 Sequence of testing radiated spurious 1 GHz to 18 GHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, a 2-axis positioner with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed directly on the turn table.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- Measurement distance is 3 m (see ANSI C 63.4) – see test details.
- EUT is set into operation.

Premeasurement

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height is 1.5 m.
- At each turntable position and antenna polarization the analyzer sweeps with positive peak detector to find the maximum of all emissions.

Final measurement

- The final measurement is performed for at least six highest peaks according to the requirements of the ANSI C63.4.
- Based on antenna and turntable positions at which the peak values are measured the software maximizes the peaks by rotating the turntable from 0° to 360°. This measurement is repeated for different EUT-table positions (0° to 150° in 30°-steps) and for both antenna polarizations.
- The final measurement is done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and RMS detector (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement with marked maximum final results and the limit is stored.

8.4 Sequence of testing radiated spurious above 18 GHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet.
- The measurement distance is as appropriate (e.g. 0.5 m).
- The EUT is set into operation.

Premeasurement

- The test antenna is handheld and moved carefully over the EUT to cover the EUT's whole sphere and different polarizations of the antenna.

Final measurement

- The final measurement is performed at the position and antenna orientation causing the highest emissions with Peak and RMS detector (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement and the limit is stored.

9 Measurement uncertainty

Measurement uncertainty		
Test case	Uncertainty	
Antenna gain	± 3 dB	
99 % bandwidth	$\pm$ RBW	
-26 dB bandwidth	$\pm$ RBW	
Frequency stability	10^{-6}	
Maximum output power conducted	± 1.56 dB	
Block edge compliance	± 1.56 dB	
Spurious emissions conducted	> 3.6 GHz	± 1.56 dB
	> 7 GHz	± 1.56 dB
	> 18 GHz	± 2.31 dB
	≥ 40 GHz	± 2.97 dB
Spurious emissions radiated below 30 MHz	± 3 dB	
Spurious emissions radiated 30 MHz to 1 GHz	± 3 dB	
Spurious emissions radiated 1 GHz to 12.75 GHz	± 3.7 dB	
Spurious emissions radiated above 12.75 GHz	± 4.5 dB	

10 Additional information and comments

Reference documents: None

Special test descriptions: None

Configuration descriptions: For Cabinet radiation tests, the radiated spurious emissions tests were performed on the following frequencies which are representative for the following bands:

- 1880 MHz for Bands 2 and 25
- 1745 MHz for Bands 4, 66
- 832.5 MHz for Bands 5, 26
- 2535 MHz for Band 7
- 707.5 MHz for Bands 12, 17
- 782 MHz for Band 13
- 793 MHz for Band 14
- 2595 MHz for Band 38
- 2680 MHz for Band 41
- 680.5 MHz for Band 71
- 3310 MHz for Band 42, 77, 78
- 3470 MHz for Bands 42, 77, 78
- 3560 MHz for Bands 42, 48, 77, 78
- 3690 MHz for Bands 43, 48, 77, 78
- 3800 MHz for Bands 43, 77, 78
- 3960 MHz for Band 77

EUT selection:

☐ Only one device available

☒ Devices selected by the customer

☐ Devices selected by the laboratory (Randomly)

11 Summary of measurement results

☐	No deviations from the technical specifications were ascertained
☐	There were deviations from the technical specifications ascertained
☒	This test report is only a partial test report. The content and verdict of the performed test cases are listed below.

TC identifier	Description	verdict	date	Remark
RF-Testing	FCC: Part 22 ISED: RSS 132	See table!	2026-09-18	-/-

11.1 Part 22/RSS-132: WCDMA band 5 / LTE band 5

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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12 RF measurements

12.1 Description of test setup

For the spurious measurements, we use the substitution method according TIA/EIA 603.

12.2 Results LTE bands 5, 26

The EUT was set to transmit the maximum power.

12.2.1 Spurious emissions radiated

Description:

The following steps outline the procedure used to measure the radiated emissions from the mobile station. The site is constructed in accordance with ANSI C63.4:2014 requirements and is recognized by the FCC to be in compliance for a 3 and a 10 meter site. The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier that can be as high as 844 MHz. Measurement made up to 9 GHz. The resolution bandwidth is set as outlined in Part 22.917. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to lowest, middle and highest channels of the LTE band V.

Measurement:

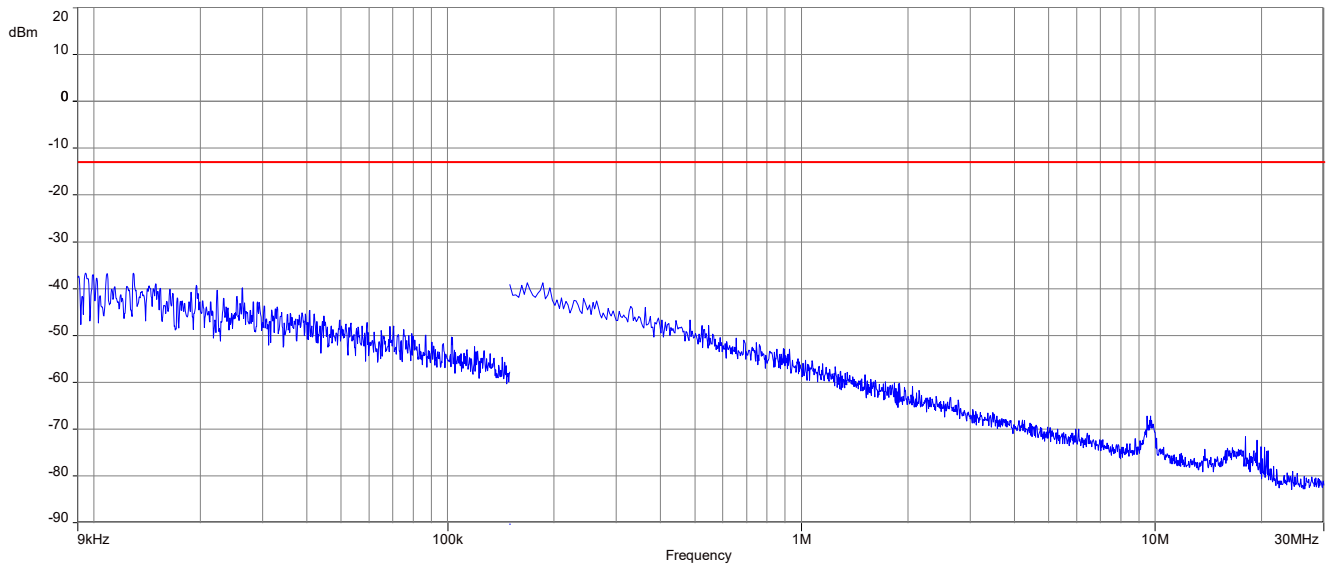
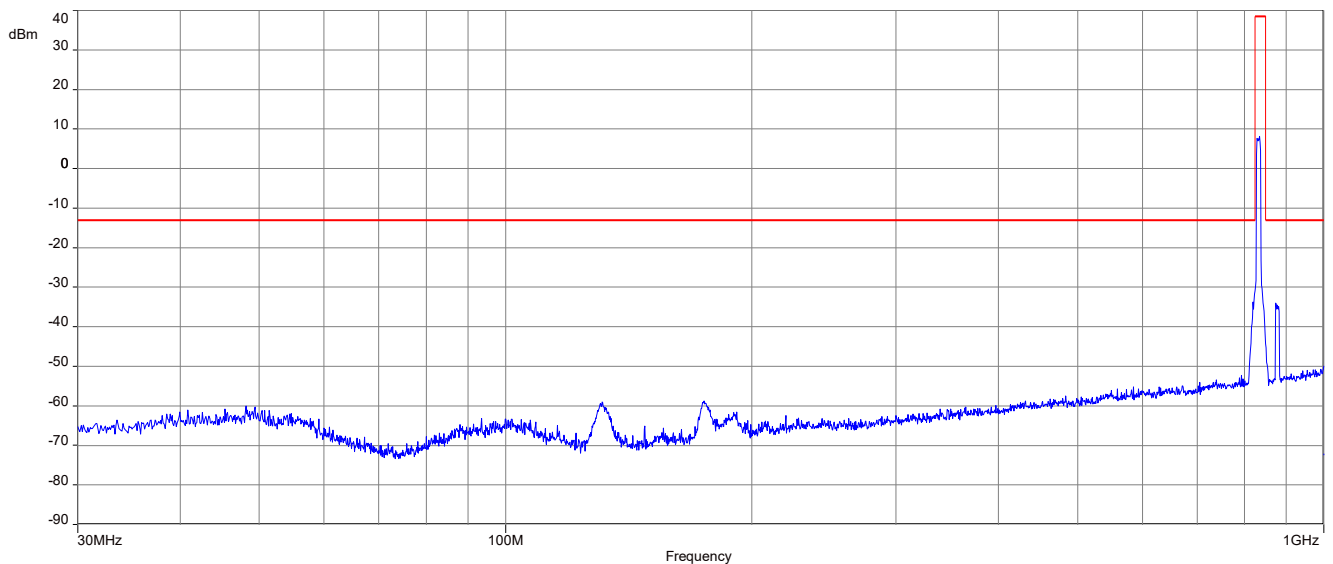
Measurement parameters	
Detector:	Peak
Sweep time:	2 s
Resolution bandwidth:	100 kHz
Video bandwidth:	300 kHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.1 setup A & 7.2 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure:	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

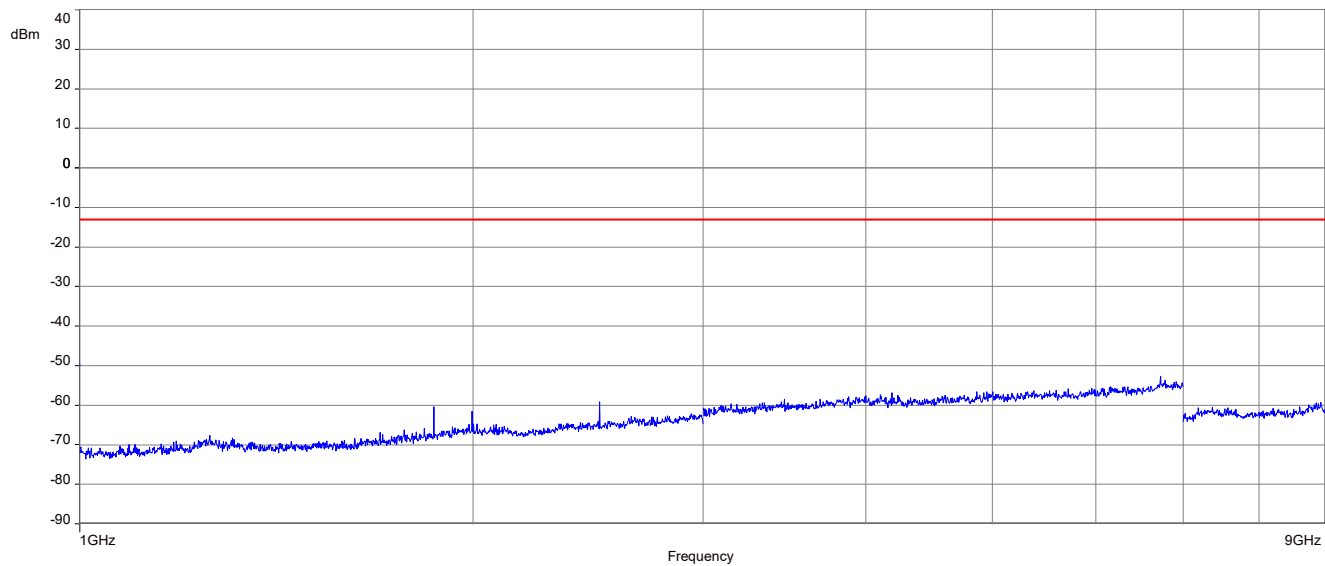
FCC	ISED
§ 22, 90	RSS-132
-13 dBm	

Results:**QPSK:**

Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

Plots:**QPSK - Middle channel (9 kHz - 30 MHz)****QPSK - Middle channel (30 MHz – 1 GHz)**

QPSK - Middle channel (1 GHz – 9 GHz)



13 Summary of measurement results

☒	No deviations from the technical specifications were ascertained
☐	There were deviations from the technical specifications ascertained
☐	This test report is only a partial test report. The content and verdict of the performed test cases are listed below.

TC identifier	Description	verdict	date	Remark
RF-Testing	FCC: Part 24 ISED: RSS 133	See table!	2026-09-18	-/-

13.1 Part 24/RSS-133: WCDMA band 2 / LTE band 2, 25

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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14 RF measurements

14.1 Description of test setup

For the spurious measurements we use the substitution method according TIA/EIA 603.

14.2 Results LTE band 2

The EUT was set to transmit the maximum power.

14.2.1 Spurious emissions radiated

Measurement:

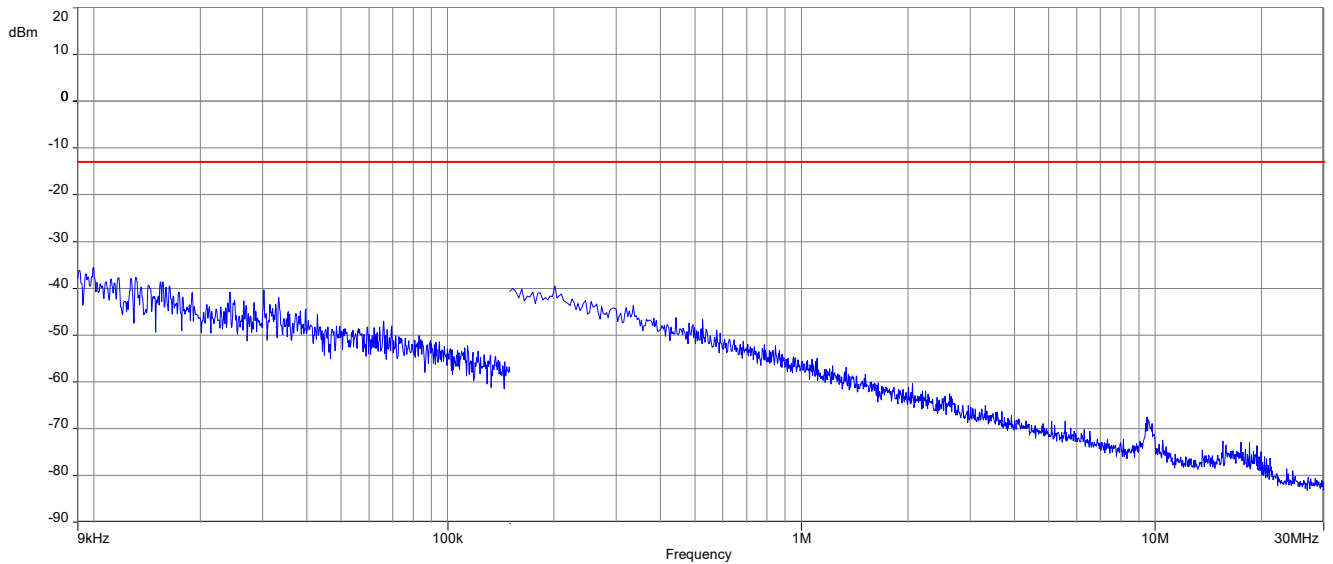
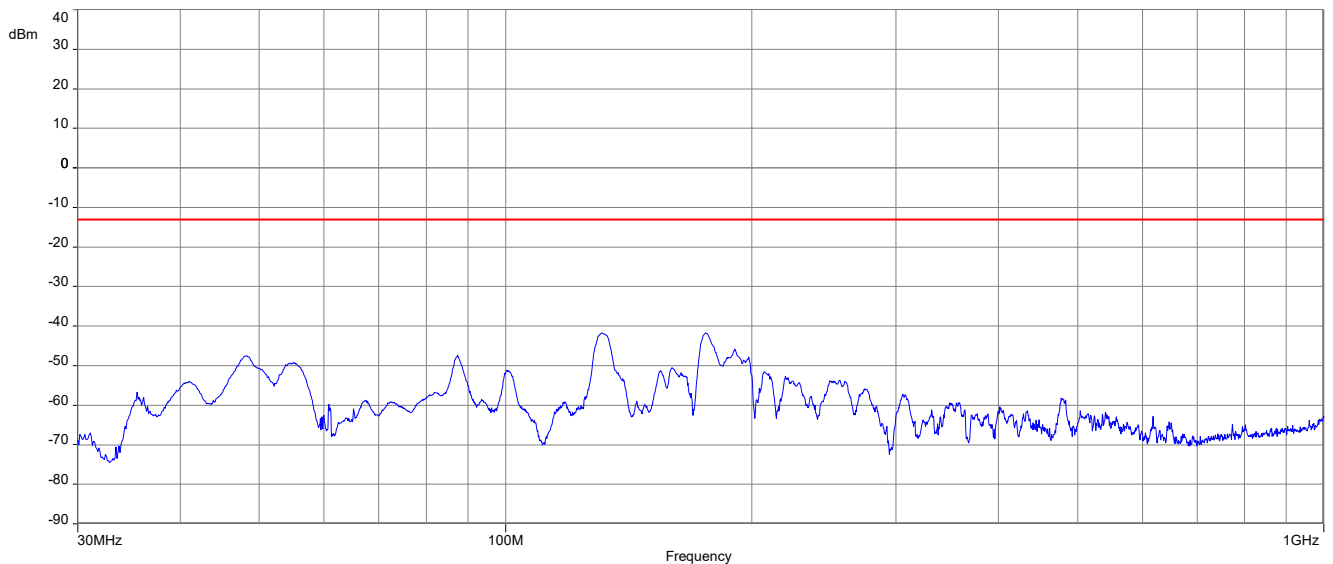
Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.1 setup A & 7.2 setup B
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

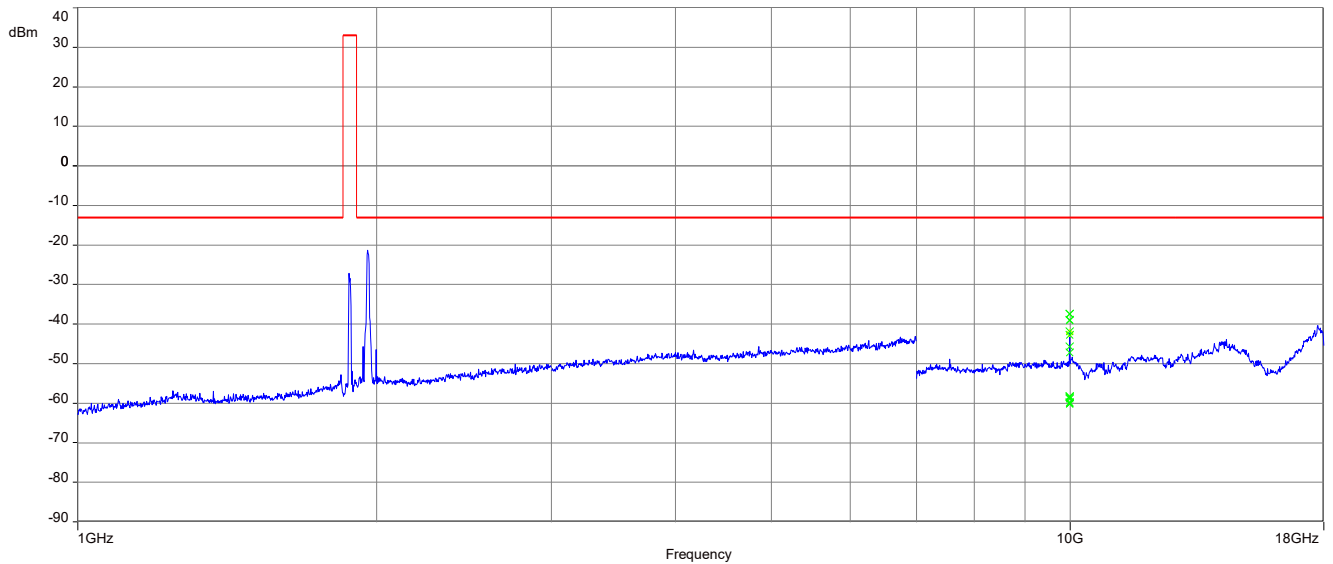
FCC	ISED
§ 24	RSS-133
-13 dBm	

Results:**QPSK:**

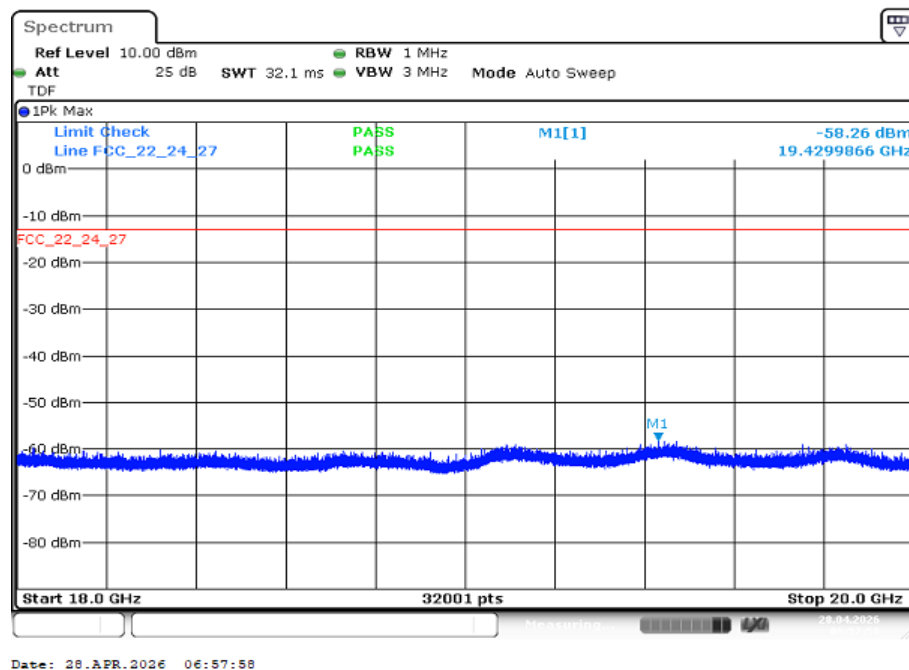
Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		All detected emissions are more than 20 dB below the limit.		NP	

Plots:**QPSK - Middle channel (9 kHz - 30 MHz)****QPSK - Middle channel (30 MHz – 1 GHz)**

QPSK - Middle channel (1 GHz – 18 GHz)

*Carrier notched with 1.9 GHz rejection filter*

QPSK - Middle channel (18 GHz – 20 GHz)



15 Summary of measurement results

☒	No deviations from the technical specifications were ascertained
☐	There were deviations from the technical specifications ascertained
☐	This test report is only a partial test report. The content and verdict of the performed test cases are listed below.

TC identifier	Description	verdict	date	Remark
RF-Testing	FCC: CFR Part 27 ISED: RSS-130; RSS-139, RSS-195, RSS-196	See table!	2026-09-18	-/-

15.1 Part 27/RSS-139: WCDMA band 4 / LTE bands 4, 66

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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15.2 Part 27/RSS-199: LTE band 7

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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15.3 Part 27/RSS-130: LTE band 12

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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15.4 Part 27/RSS-130: LTE band 13

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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15.5 Part 90/RSS-140: LTE band 14

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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15.6 Part 27/RSS-199: LTE band 38

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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15.7 Part 27/RSS-199: LTE band 41

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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15.8 Part 27/RSS-130: LTE band 71

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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16 RF measurements

16.1 Description of test setup

For the spurious measurements we use the substitution method according TIA/EIA 603.

16.2 Results LTE band 4

The EUT was set to transmit the maximum power.

16.2.1 Spurious emissions radiated

Description:

The following steps outline the procedure used to measure the radiated emissions from the mobile station. The site is constructed in accordance with ANSI C63.4:2014 requirements and is recognized by the FCC to be in compliance for a 3 and a 10 meter site. The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier that can be as high as 1750 MHz. Measurement made up to 18 GHz. The resolution bandwidth is set as outlined in Part 27.53. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the LTE band 4.

Measurement:

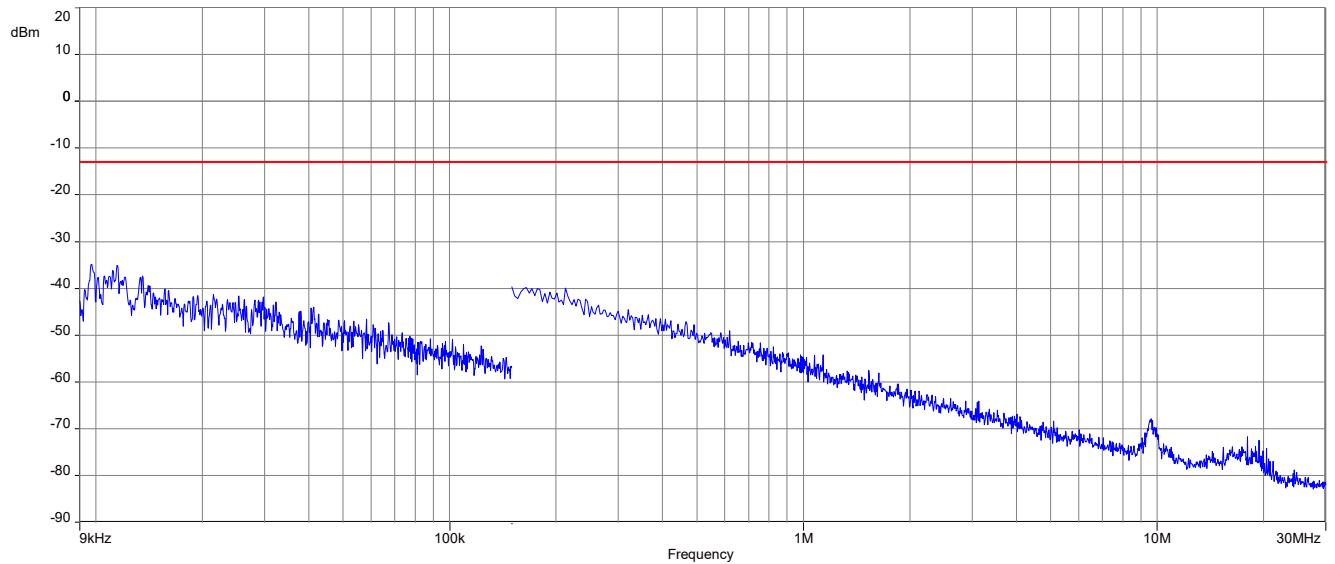
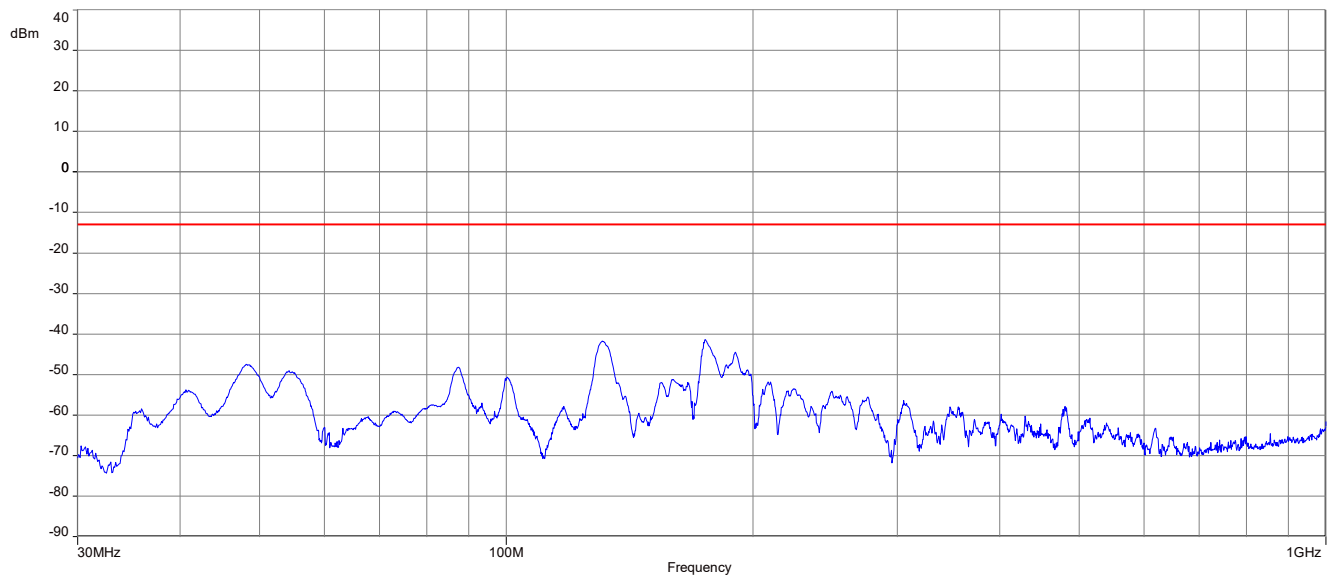
Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A & 7.3 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

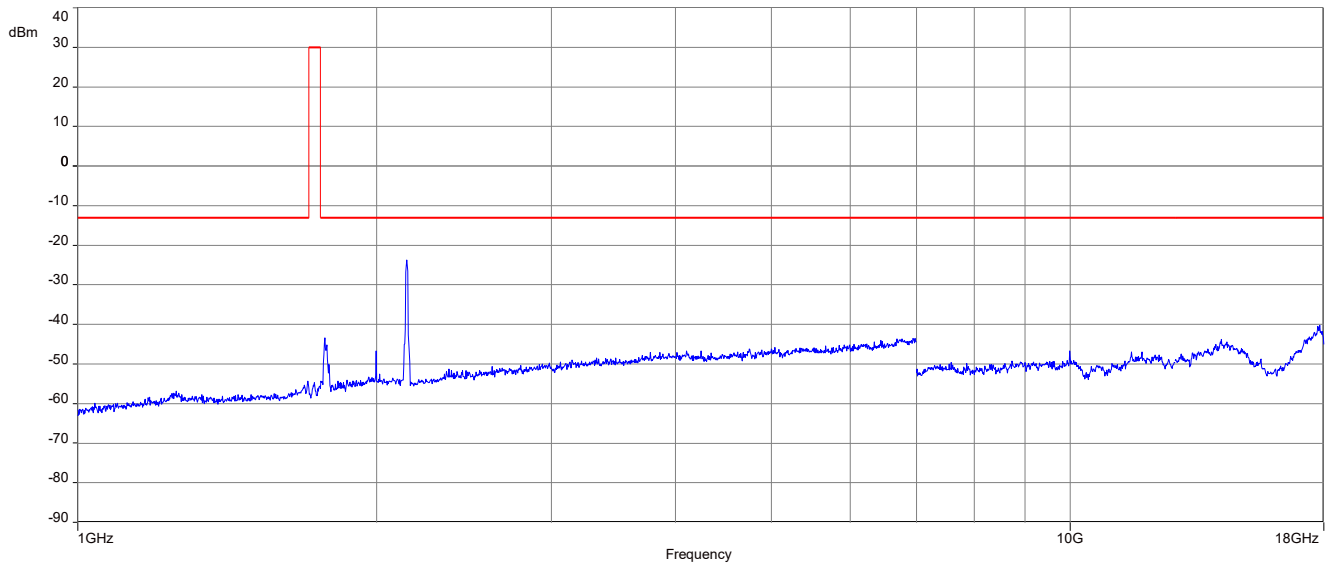
FCC	ISED
§ 27.53(h)(1) & (3)	RSS-139, 6.6
-13 dBm	

Results:**QPSK:**

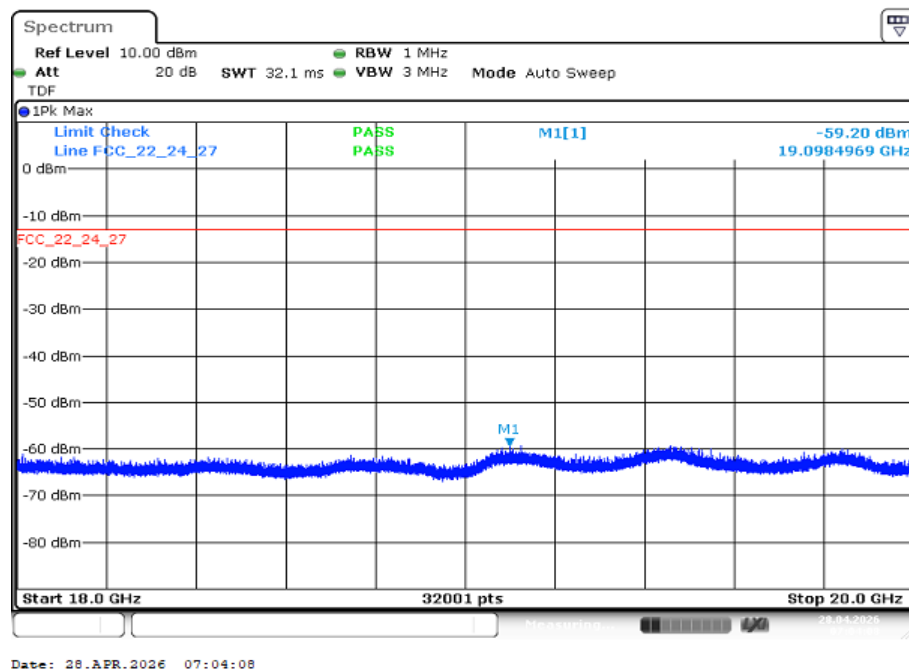
Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

Plots:**QPSK - Middle channel (9 kHz - 30 MHz)****QPSK - Middle channel (30 MHz – 1 GHz)**

QPSK - Middle channel (1 GHz – 18 GHz)

*Carrier notched with 1.73 GHz rejection filter*

QPSK - Middle channel (18 GHz – 20 GHz)



16.3 Results LTE band 7

The EUT was set to transmit the maximum power.

16.3.1 Spurious emissions radiated

Measurement:

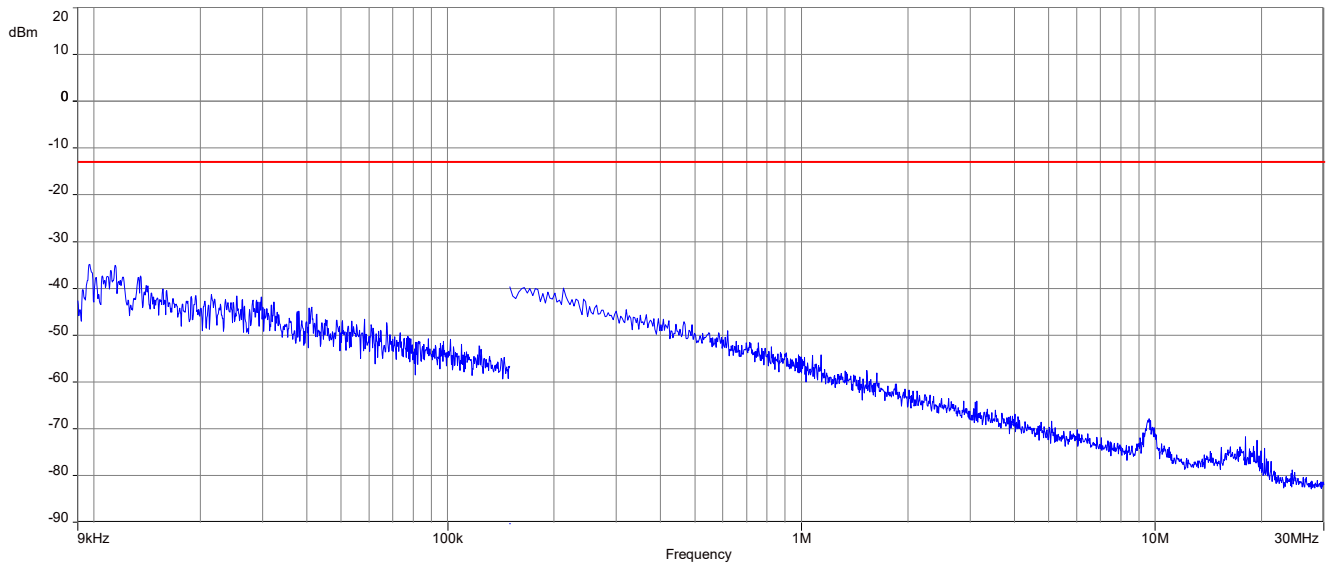
Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A & 7.3 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

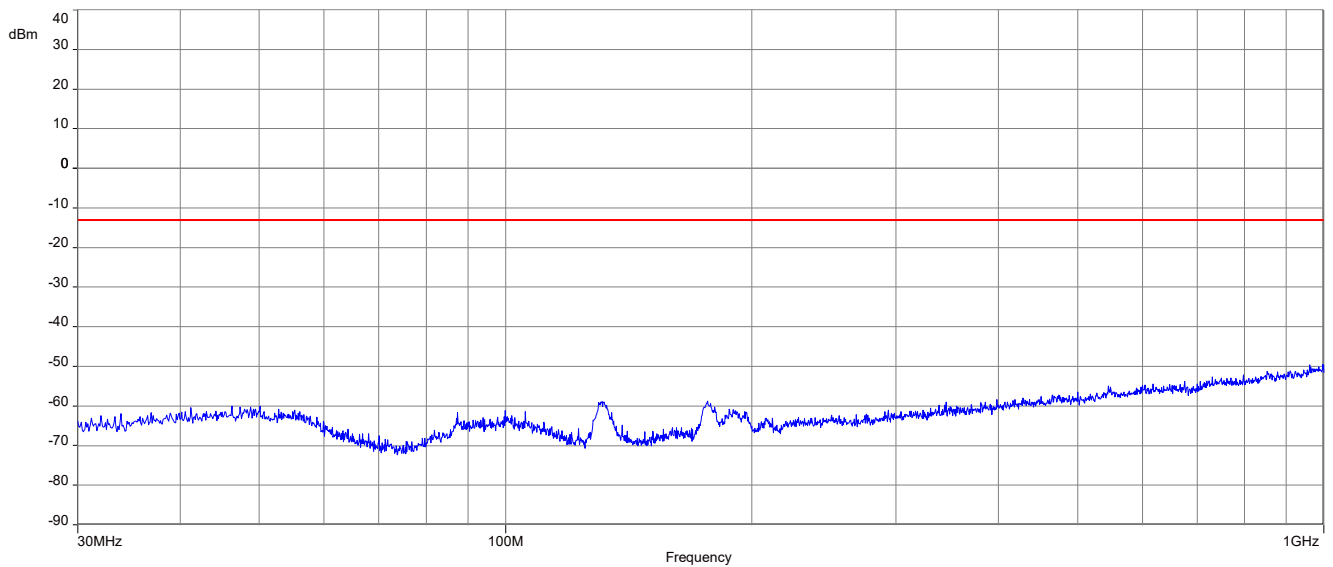
FCC	ISED
§ 27	RSS-199
-25 dBm	

Results:**QPSK:**

Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

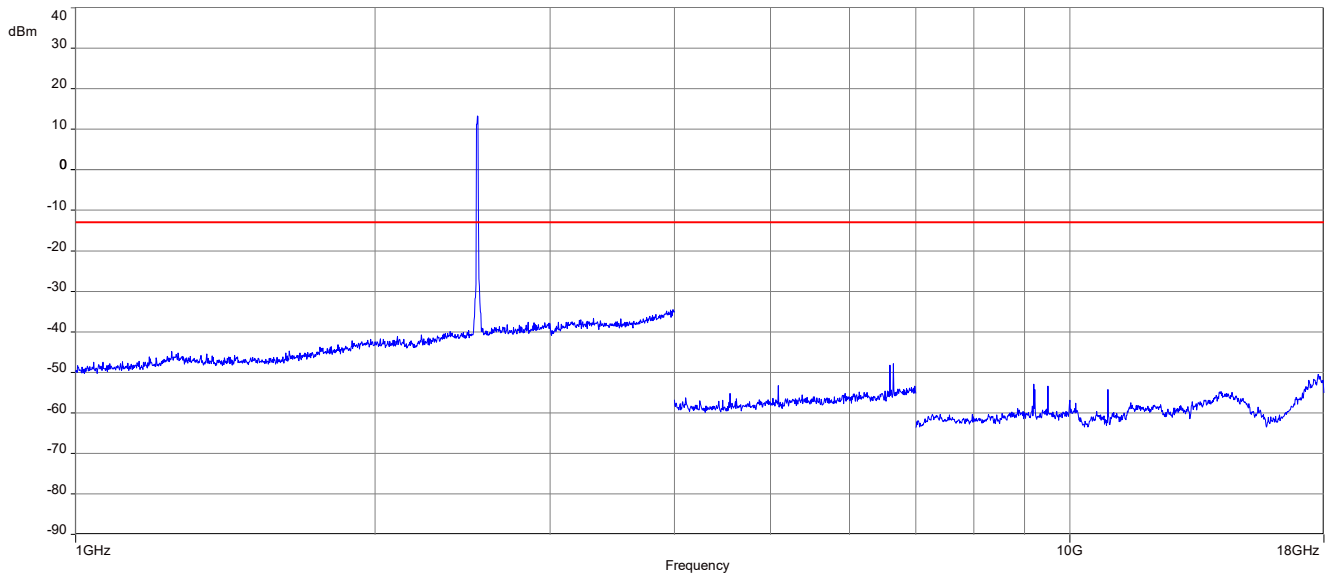
Plots:**QPSK - Middle channel (9 kHz - 30 MHz)**

NOTE: Does also comply with the limit of -25 dBm.

QPSK - Middle channel (30 MHz – 1 GHz)

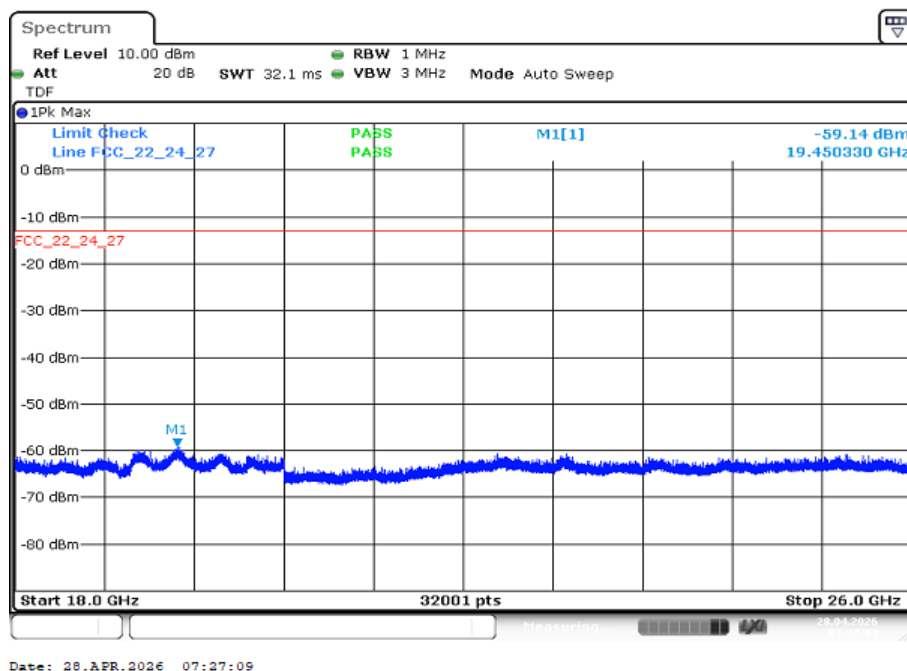
NOTE: Does also comply with the limit of -25 dBm.

QPSK - Middle channel (1 GHz – 18 GHz)



Carrier notched with 1.73 GHz rejection filter
NOTE: Does also comply with the limit of -25 dBm.

QPSK - Middle channel (18 GHz – 26 GHz)



NOTE: Does also comply with the limit of -25 dBm.

16.4 Results LTE band 12

The EUT was set to transmit the maximum power.

16.4.1 Spurious emissions radiated

Description:

The following steps outline the procedure used to measure the radiated emissions from the mobile station. The site is constructed in accordance with ANSI C63.4:2014 requirements and is recognized by the FCC to be in compliance for a 3 and a 10 meter site. The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier that can be as high as 711 MHz. Measured up to 8 GHz. The resolution bandwidth is set as outlined in Part 27.53. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the LTE band 12.

Measurement:

Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

FCC	ISED
§ 27	RSS-130
-13 dBm	

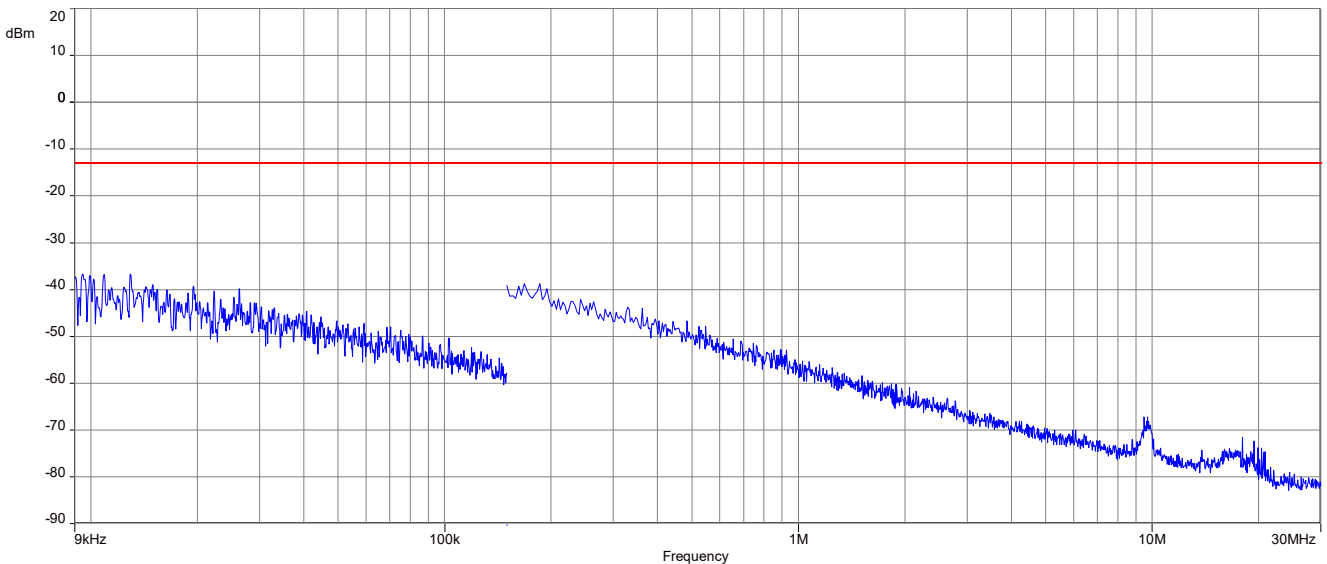
Results:

QPSK:

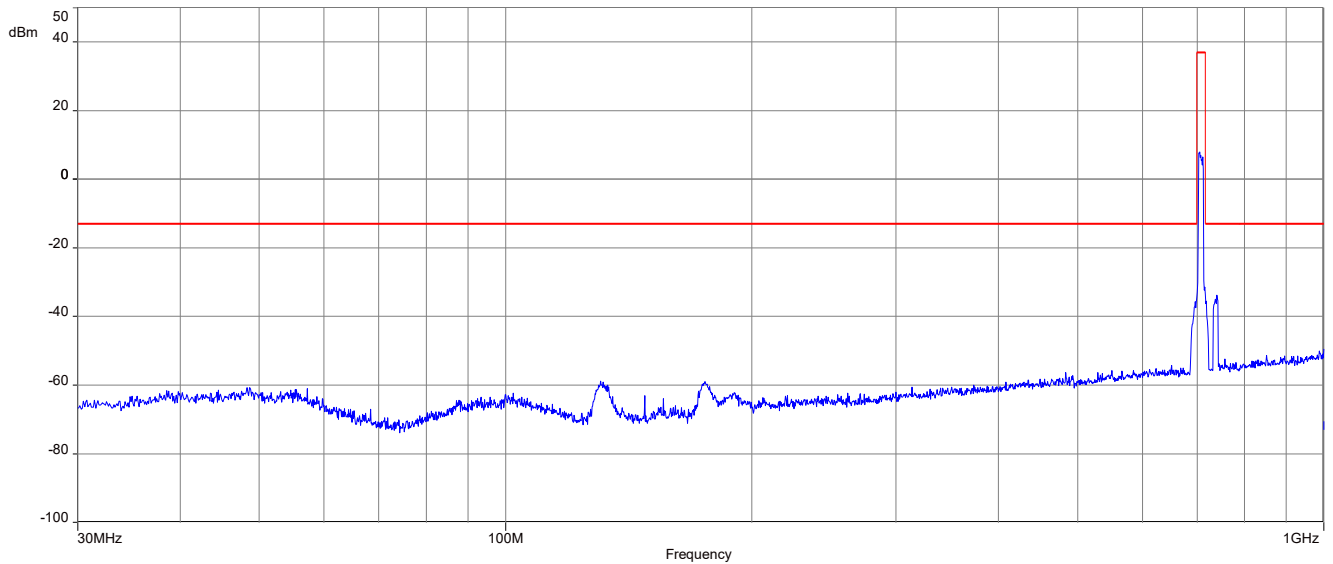
Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

Plots:

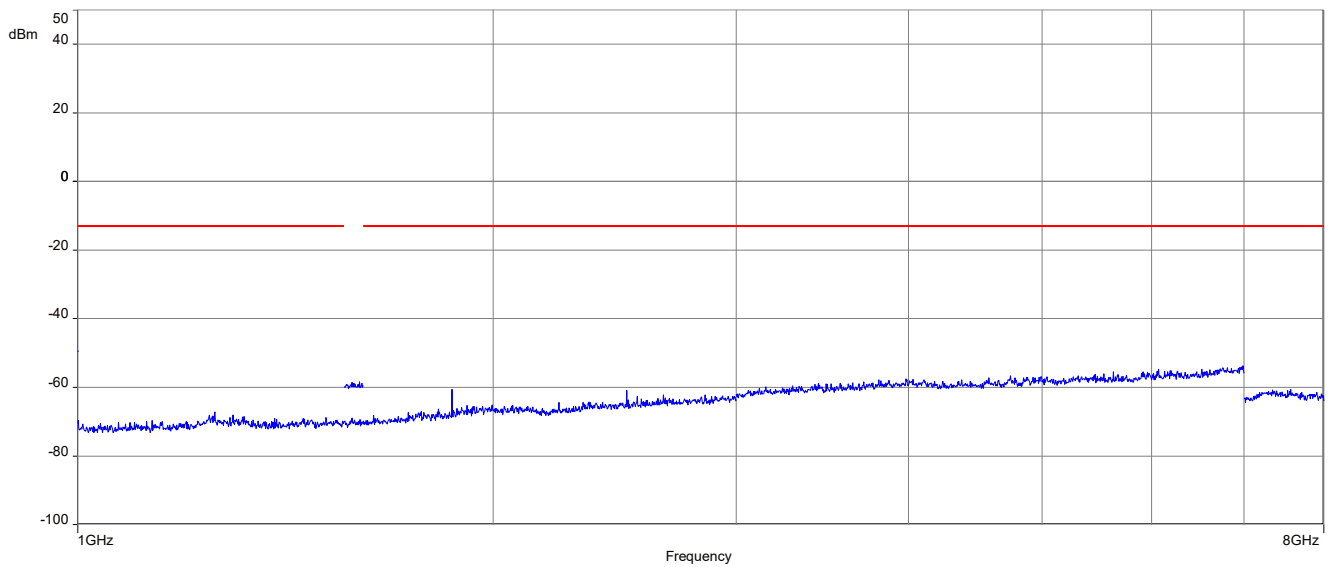
QPSK - Middle channel (9 kHz - 30 MHz)



QPSK - Middle channel (30 MHz – 1 GHz)



QPSK - Middle channel (1 GHz – 8 GHz)



16.5 Results LTE band 13

The EUT was set to transmit the maximum power.

16.5.1 Spurious emissions radiated

Description:

The following steps outline the procedure used to measure the radiated emissions from the mobile station. The site is constructed in accordance with ANSI C63.4:2014 requirements and is recognized by the FCC to be in compliance for a 3 and a 10 meter site. The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier that can be as high as 782 MHz. Measured up to 8 GHz. The resolution bandwidth is set as outlined in Part 27.53. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the LTE band 13.

Measurement:

Measurement parameters	
Detector:	Peak / RMS
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

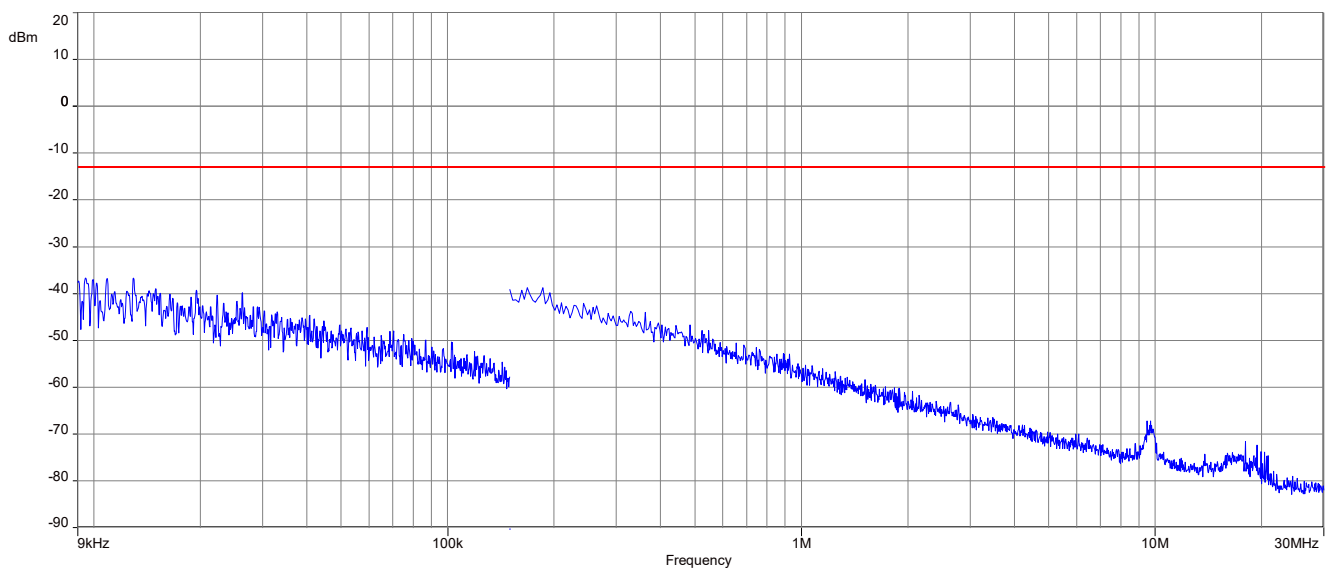
FCC	ISED
§ 27.53	RSS-130
-13 dBm -40 dBm in 1559-1610 MHz	

Results:**QPSK:**

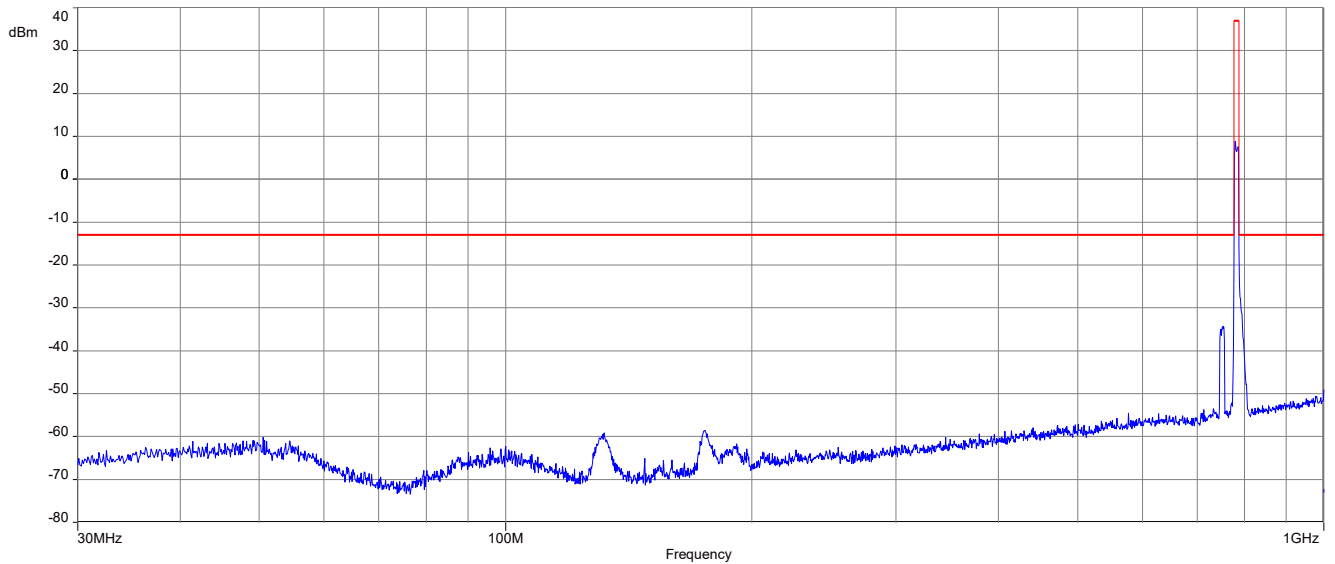
Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

Plots:

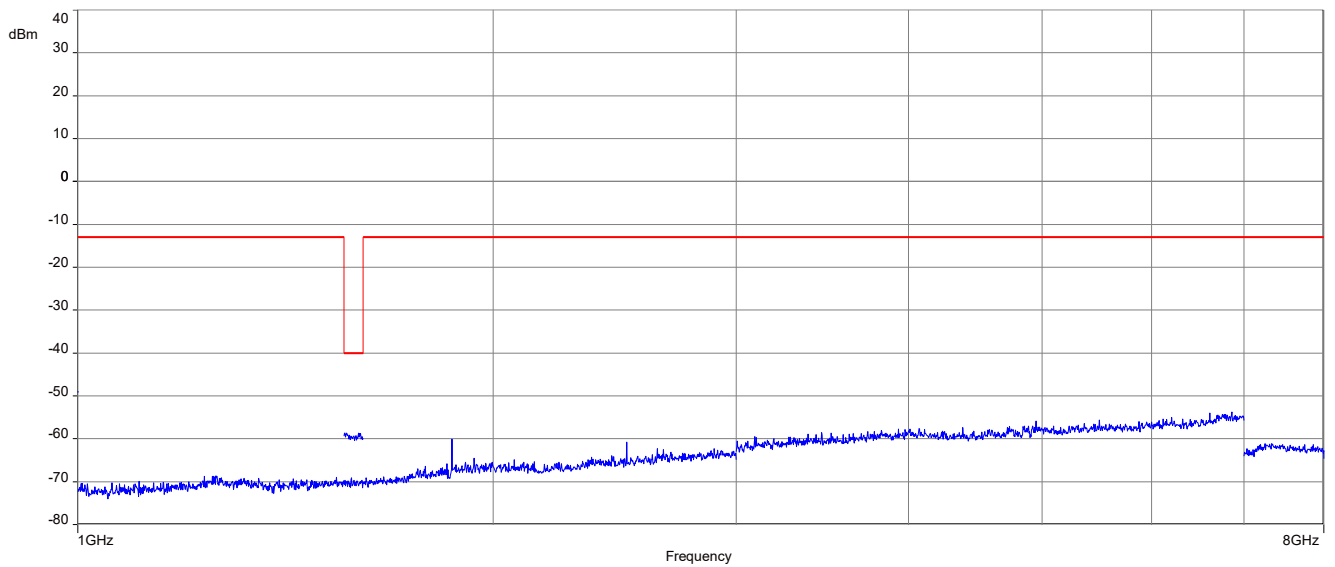
QPSK - Middle channel (9 kHz - 30 MHz)



QPSK - Middle channel (30 MHz – 1 GHz)



QPSK - Middle channel (1 GHz – 8 GHz)



16.6 Results LTE band 14

The EUT was set to transmit the maximum power.

16.6.1 Spurious emissions radiated

Measurement:

Measurement parameters	
Detector:	Peak / RMS
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

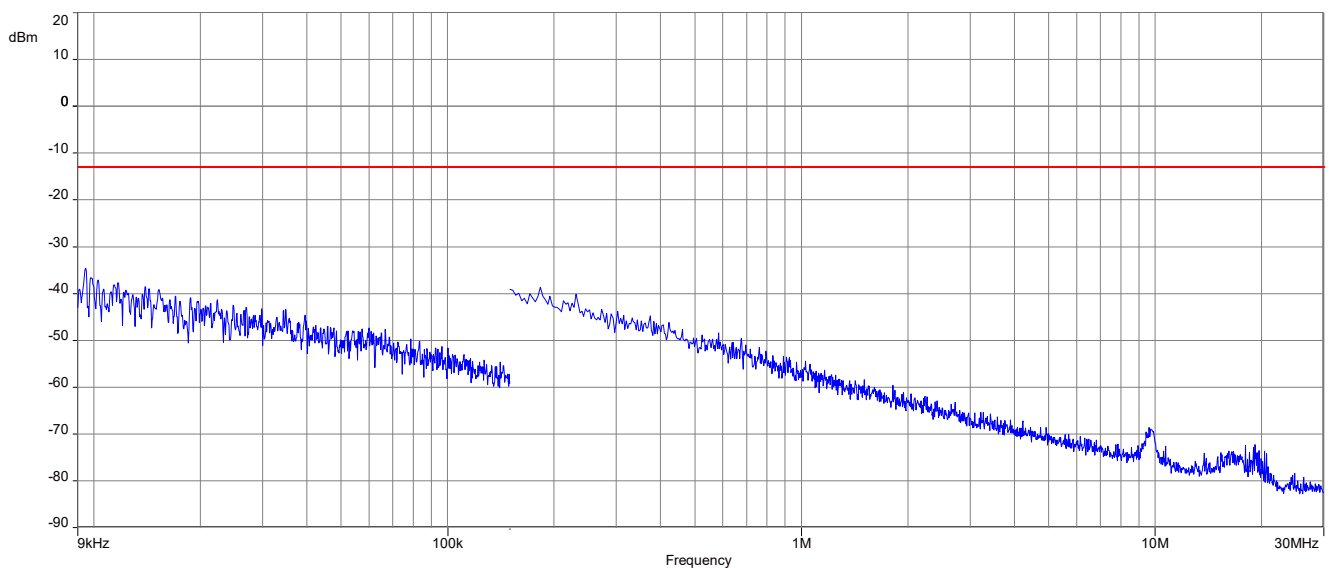
FCC	ISED
\$ 90	RSS-140
-13 dBm -40 dBm in 1559-1610 MHz	

Results:**QPSK:**

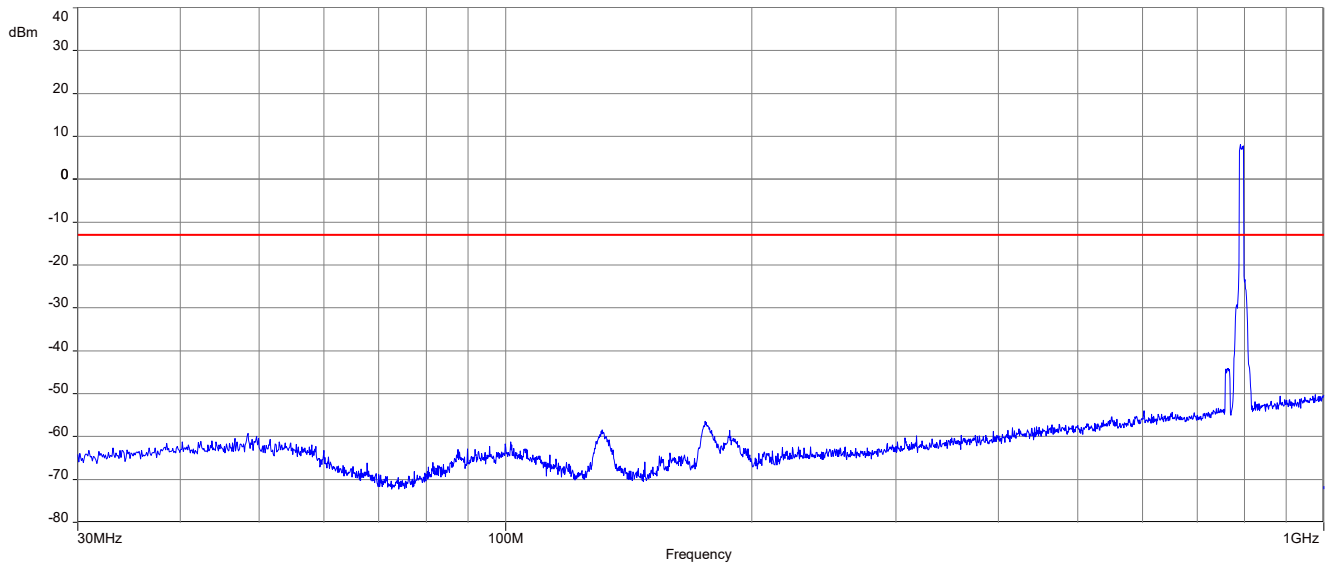
Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		All detected emissions are more than 20 dB below the limit.		NP	

Plots:

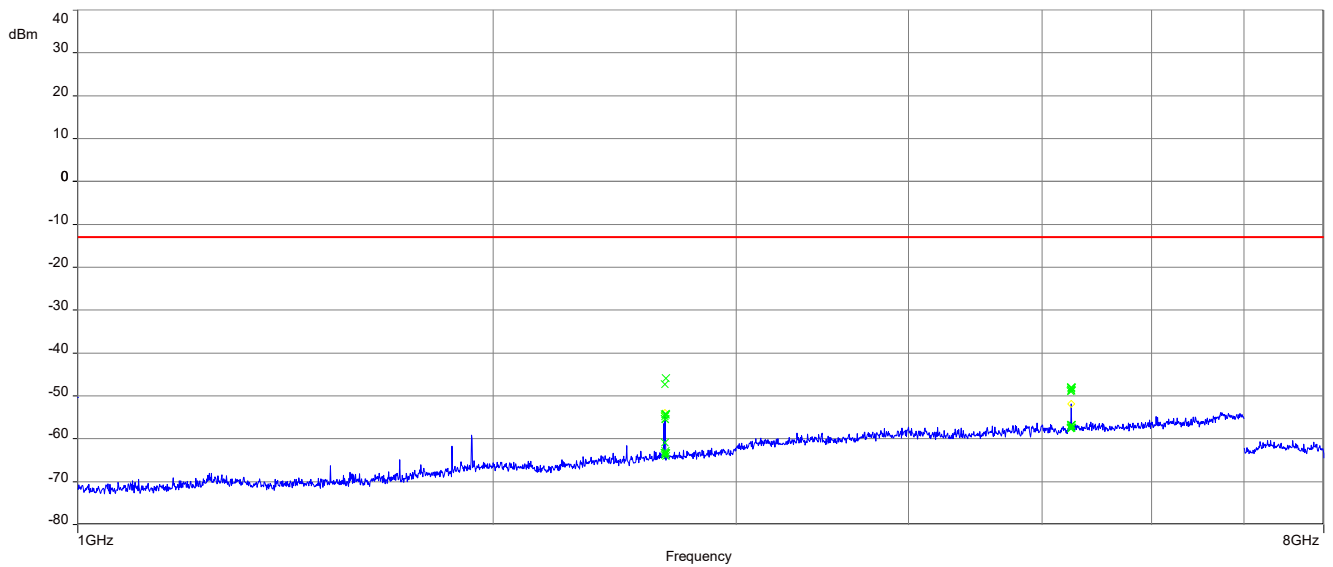
QPSK - Middle channel (9 kHz - 30 MHz)



QPSK - Middle channel (30 MHz – 1 GHz)



QPSK - Middle channel (1 GHz – 8 GHz)



16.7 Results LTE band 38

The EUT was set to transmit the maximum power.

16.7.1 Spurious emissions radiated

Measurement:

Measurement parameters	
Detector:	Peak / RMS
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

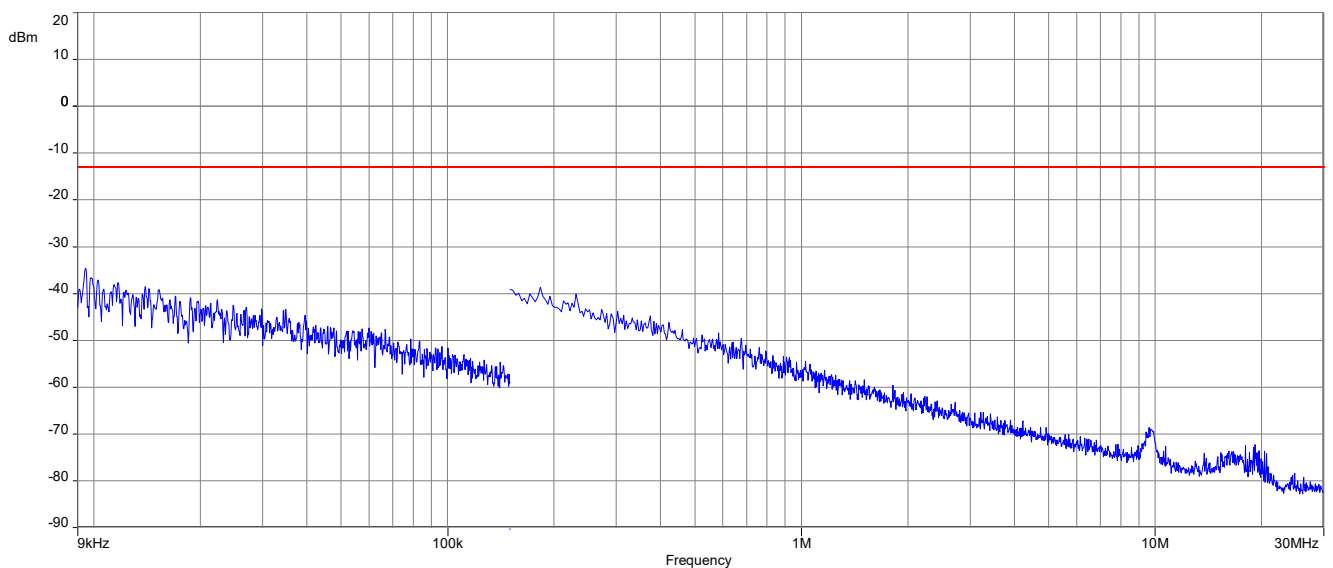
FCC	ISED
§ 27	RSS-199
-25 dBm	

Results:**QPSK:**

Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		All detected emissions are more than 20 dB below the limit.		NP	

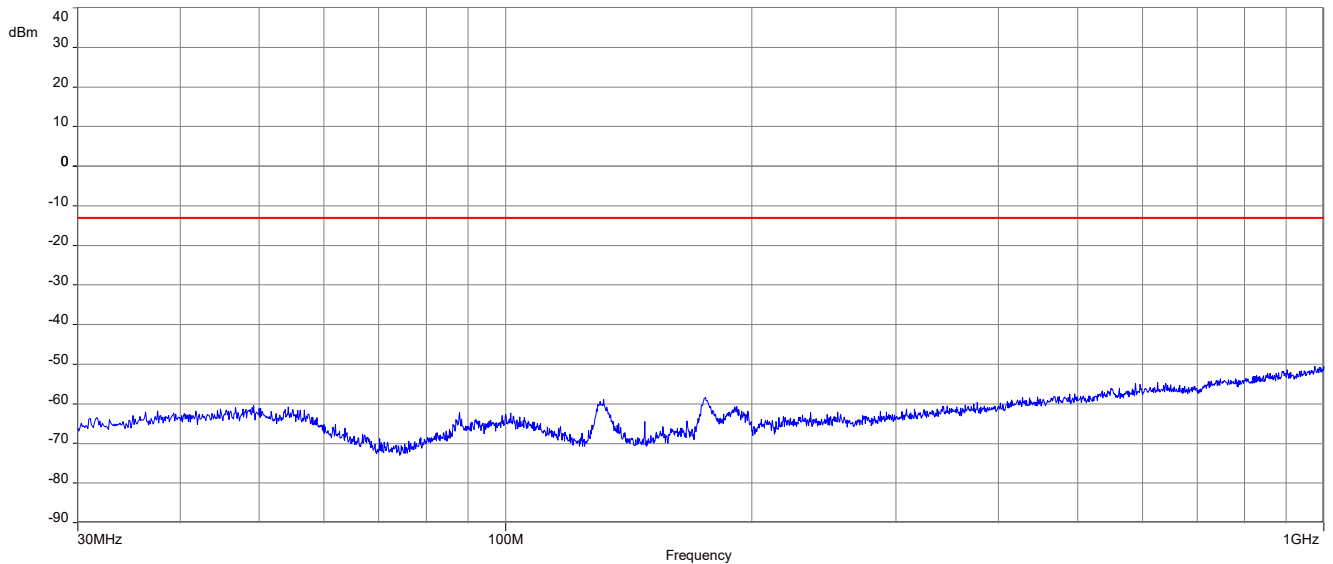
Plots:

QPSK - Middle channel (9 kHz - 30 MHz)



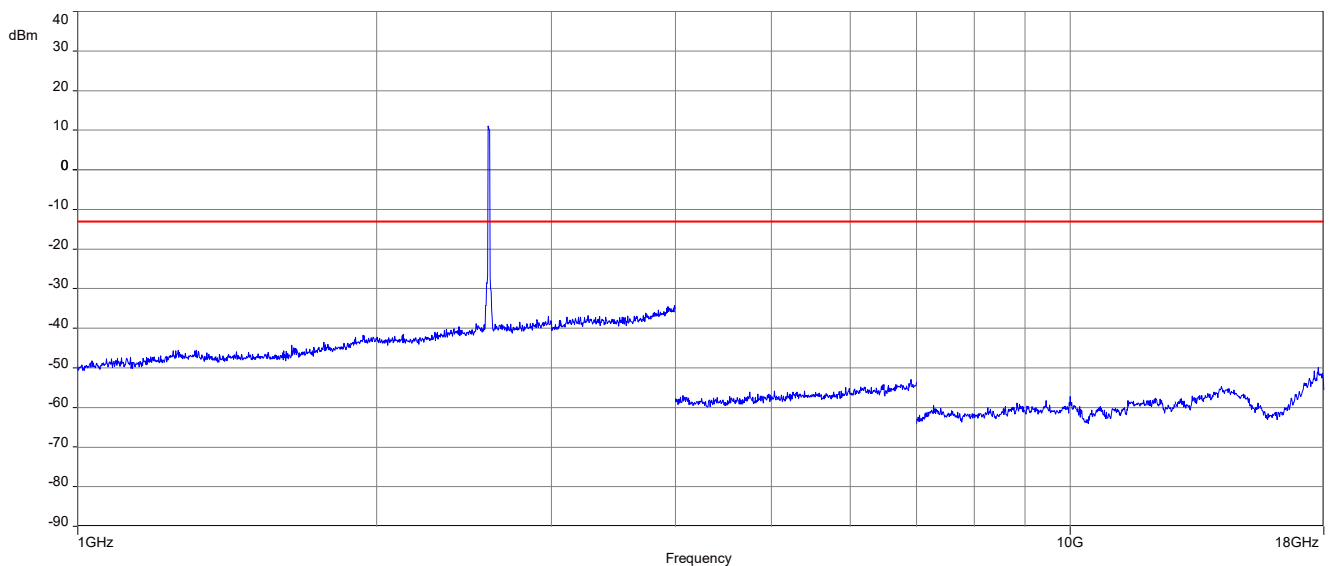
NOTE: Does also comply with the limit of -25 dBm.

QPSK - Middle channel (30 MHz – 1 GHz)



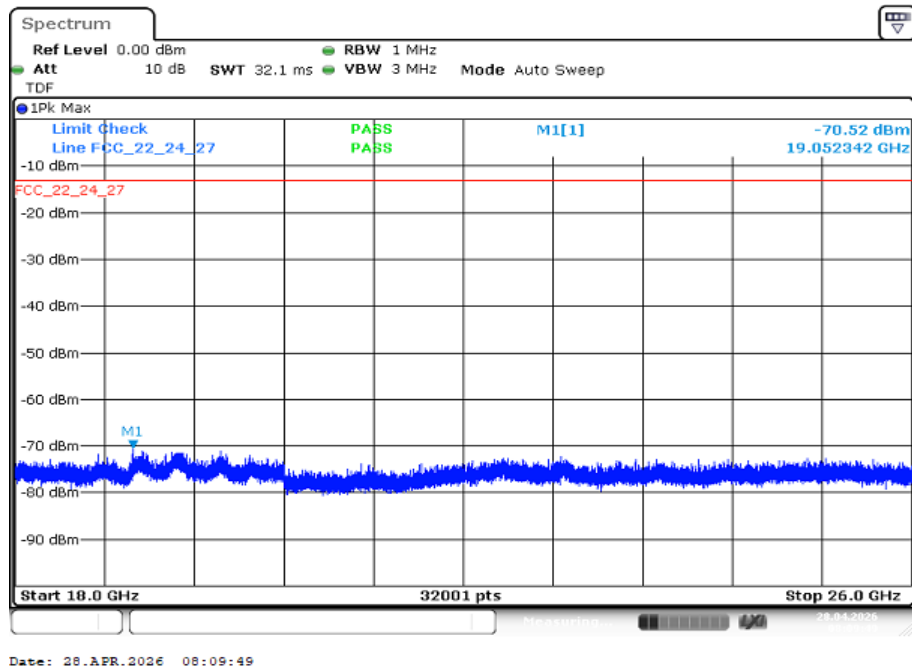
NOTE: Does also comply with the limit of -25 dBm.

QPSK - Middle channel (1 GHz – 18 GHz)



NOTE: Does also comply with the limit of -25 dBm.

QPSK - Middle channel (18 GHz – 26 GHz)



NOTE: Does also comply with the limit of -25 dBm.

16.8 Results LTE band 41

The EUT was set to transmit the maximum power.

16.8.1 Spurious emissions radiated

Measurement:

Measurement parameters	
Detector:	Peak / RMS
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

FCC	ISED
§ 27	RSS-199
-25 dBm	

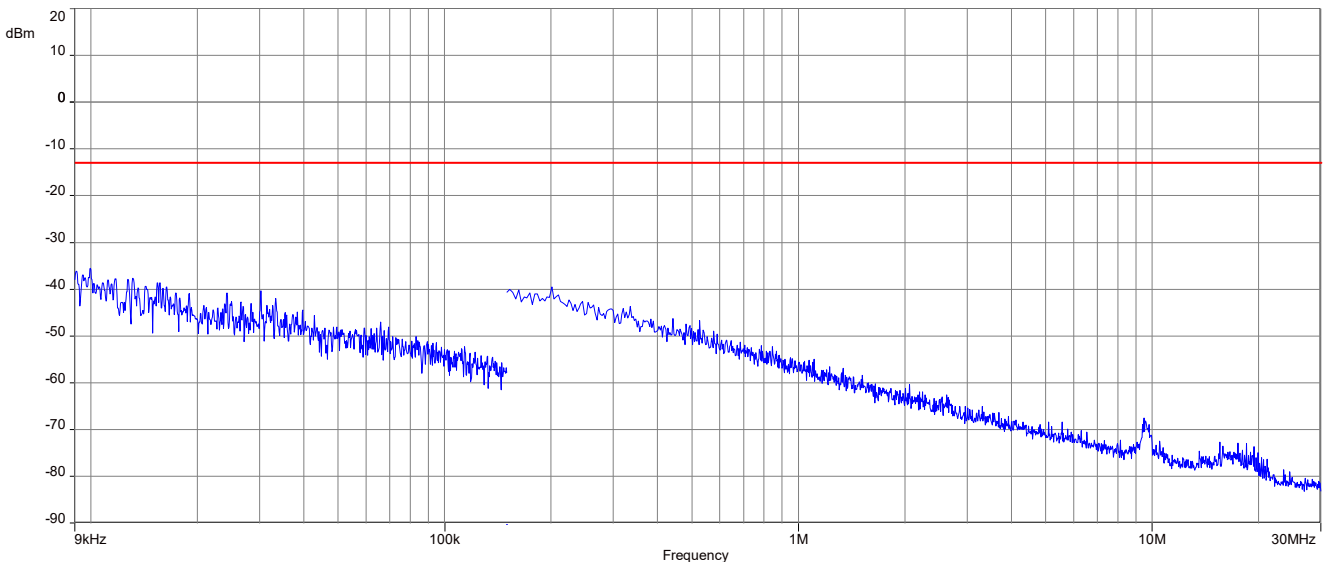
Results:

QPSK:

Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		All detected emissions are more than 20 dB below the limit.		NP	

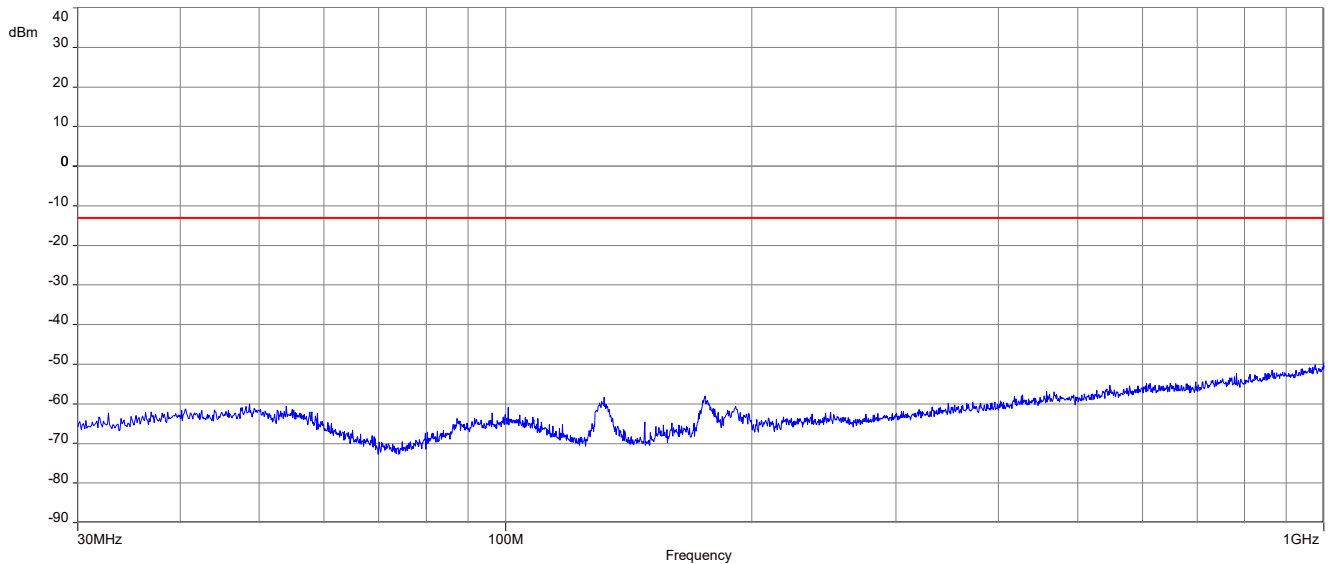
Plots:

QPSK - Middle channel (9 kHz - 30 MHz)



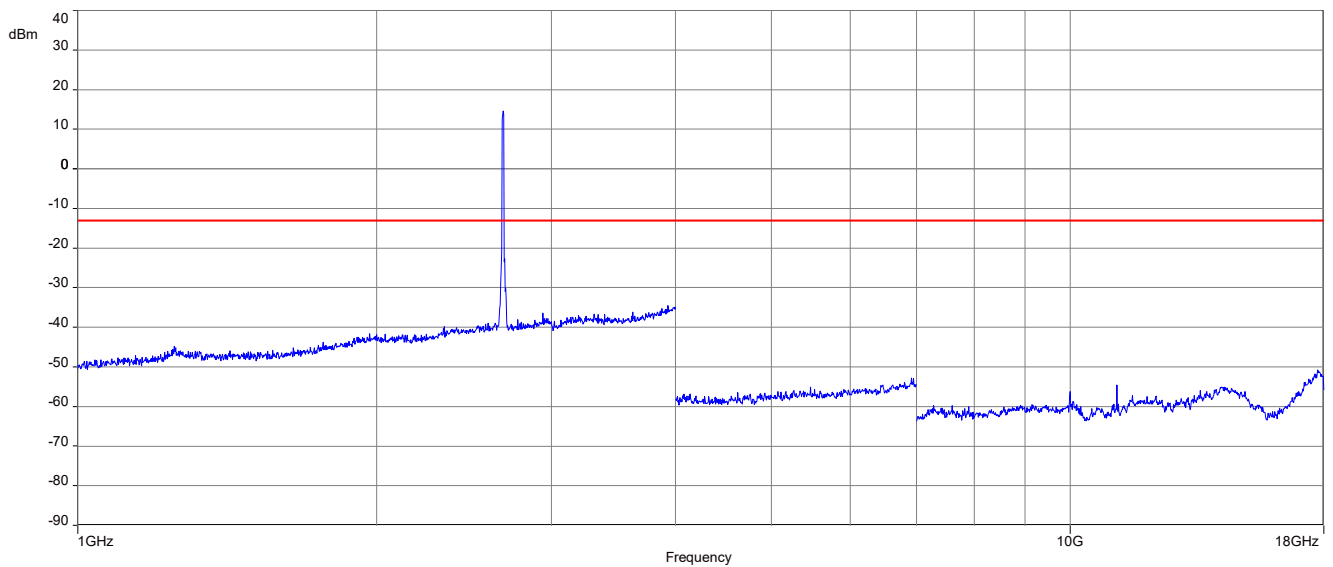
NOTE: Does also comply with the limit of -25 dBm.

QPSK - Middle channel (30 MHz – 1 GHz)



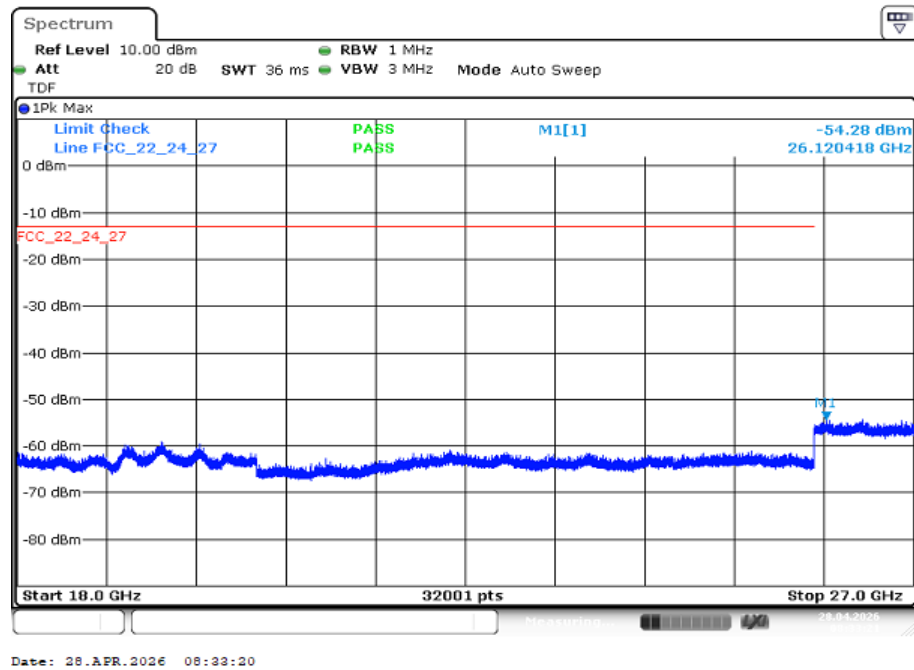
NOTE: Does also comply with the limit of -25 dBm.

QPSK - Middle channel (1 GHz – 18 GHz)



NOTE: Does also comply with the limit of -25 dBm.

QPSK - Middle channel (18 GHz – 27 GHz)



NOTE: Does also comply with the limit of -25 dBm.

16.9 Results LTE band 71

The EUT was set to transmit the maximum power.

16.9.1 Spurious emissions radiated

Measurement:

Measurement parameters	
Detector:	Peak / RMS
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

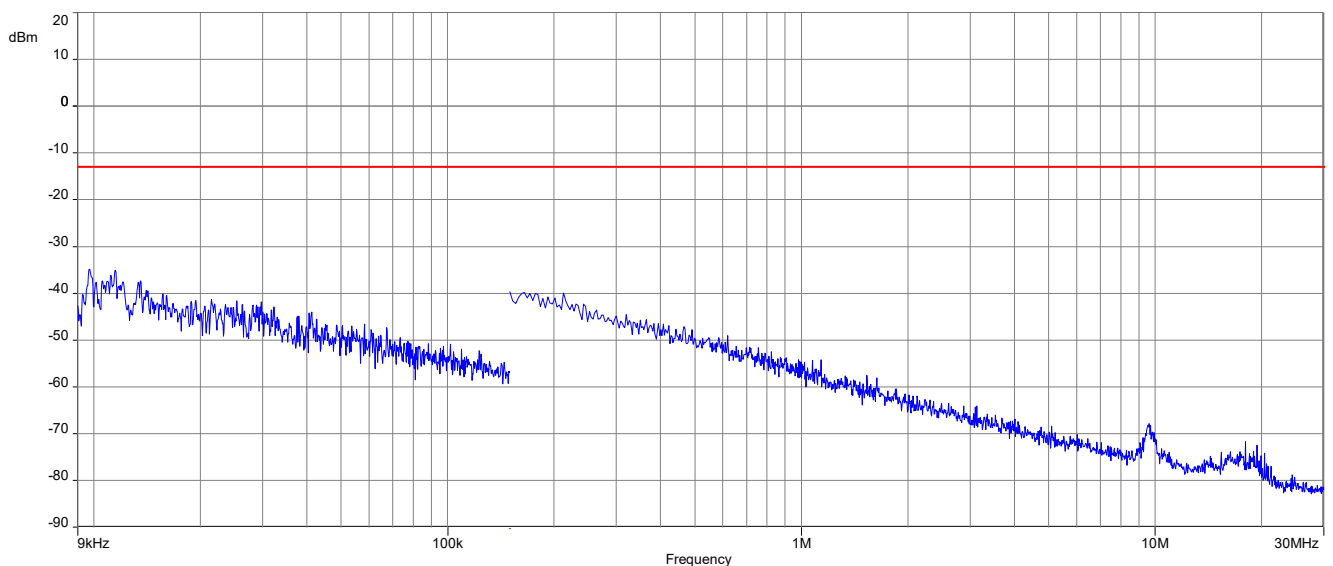
FCC	ISED
§ 27	RSS-130
-13 dBm	

Results:**QPSK:**

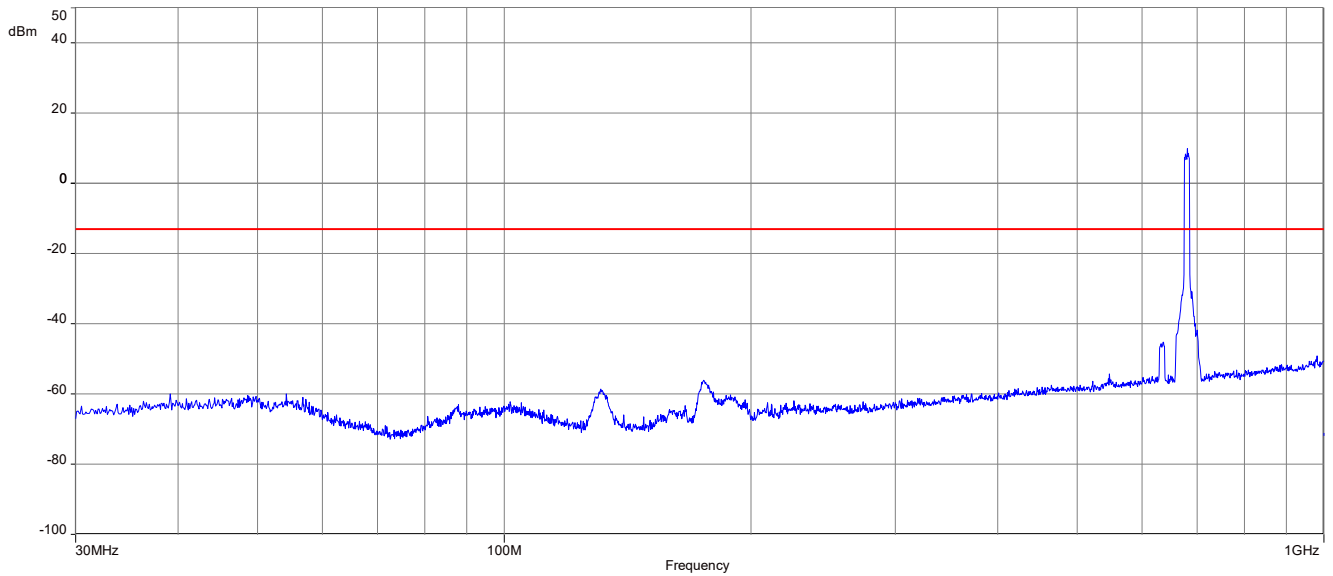
Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		All detected emissions are more than 20 dB below the limit.		NP	

Plots:

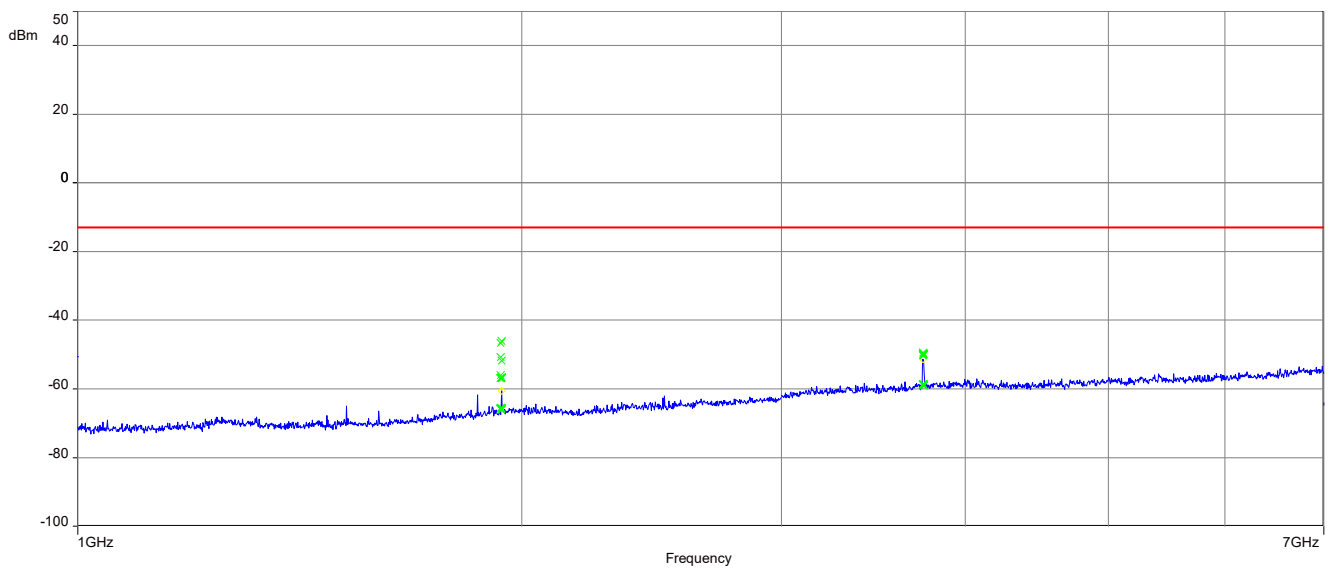
QPSK - Middle channel (9 kHz - 30 MHz)



QPSK - Middle channel (30 MHz – 1 GHz)



QPSK - Middle channel (1 GHz – 7 GHz)



17 Summary of measurement results

☒	No deviations from the technical specifications were ascertained
☐	There were deviations from the technical specifications ascertained
☐	This test report is only a partial test report. The content and verdict of the performed test cases are listed below.

TC identifier	Description	verdict	date	Remark
RF-Testing	FCC: CFR Part 27 RSS-192	See table!	2026-09-18	-/-

17.1 Part 27/RSS-192 : LTE band 42

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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17.2 Part 27/RSS-192, RSS-197: LTE band 43

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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17.3 Part 96/RSS-192, RSS-197: LTE band 48

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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18 RF measurements

18.1 Description of test setup

For the spurious measurements we use the substitution method according TIA/EIA 603.

18.2 Results LTE band 42

The EUT was set to transmit the maximum power.

18.2.1 Spurious emissions radiated

Measurement:

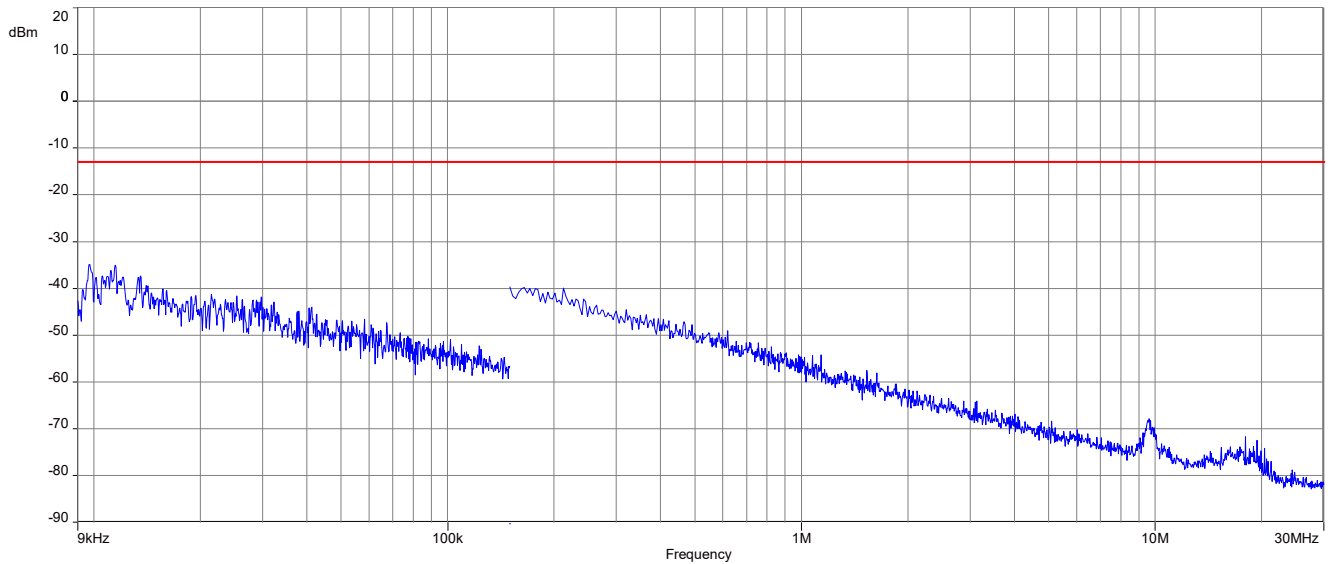
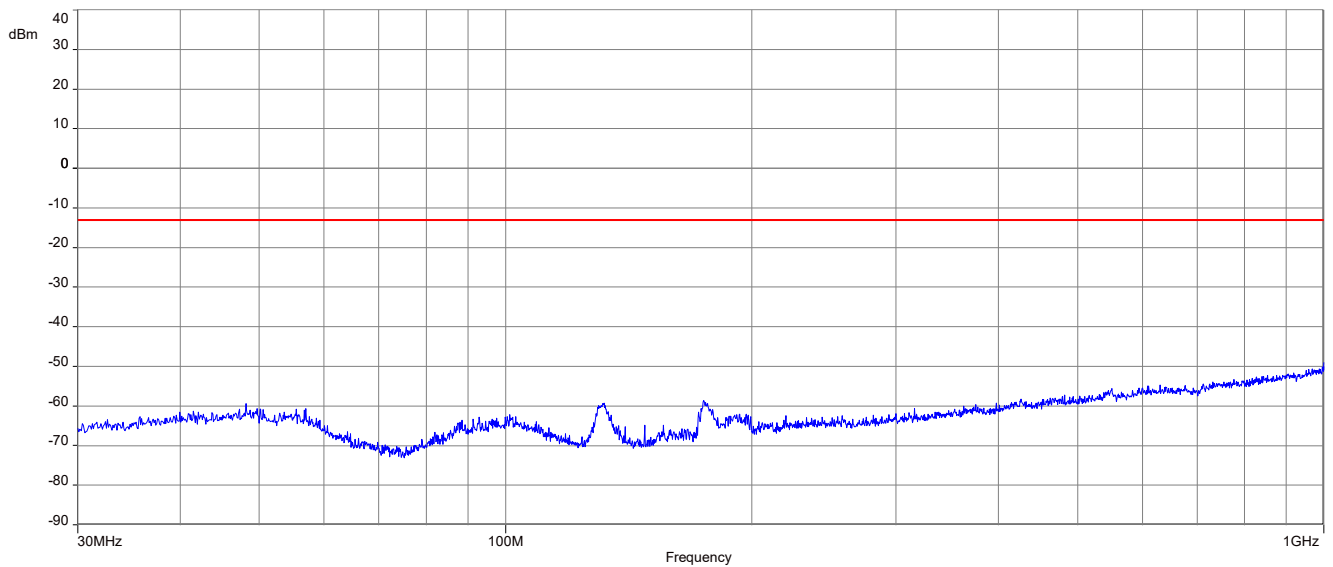
Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A & 7.3 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

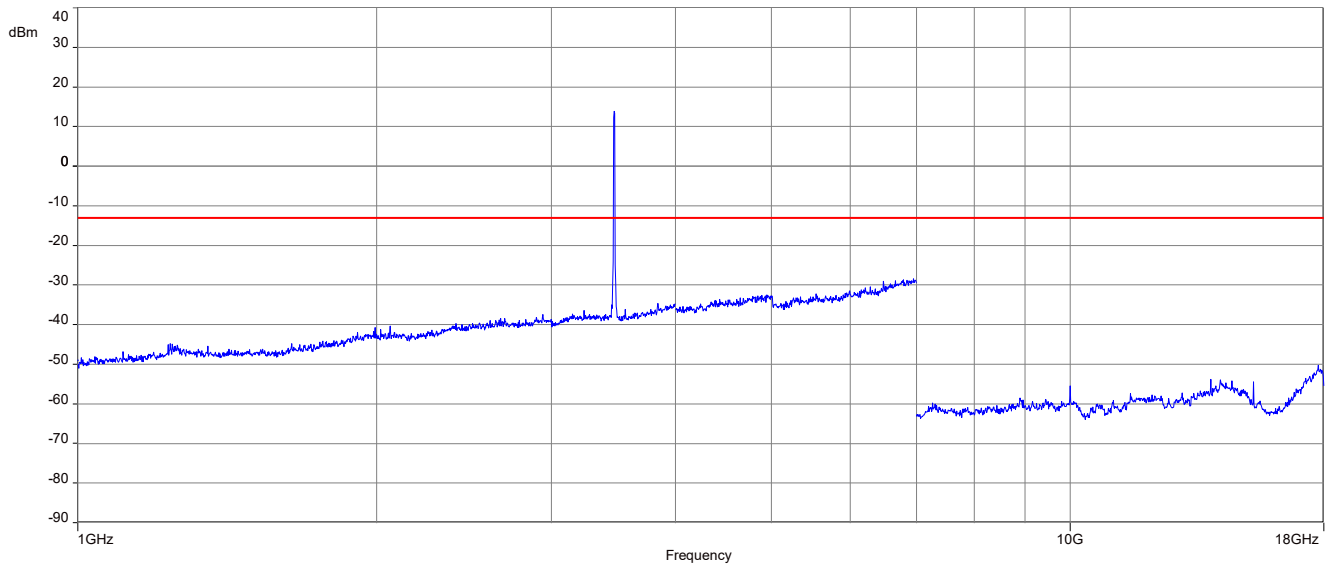
FCC	ISED
§ 27	RSS-192
-13 dBm	

Results:**QPSK:**

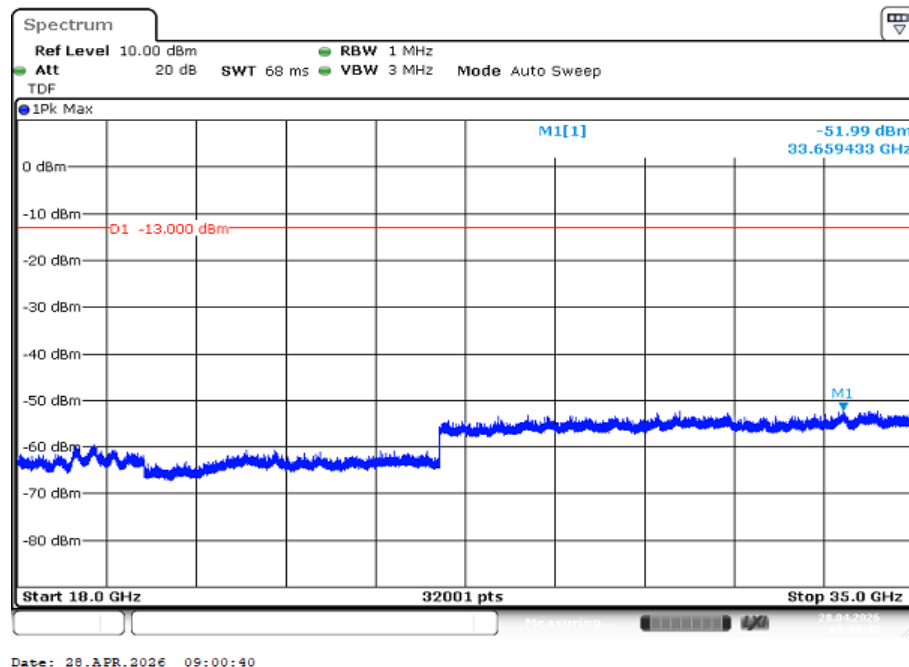
Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

Plots:**QPSK - Middle channel (9 kHz - 30 MHz)****QPSK - Middle channel (30 MHz – 1 GHz)**

QPSK - Middle channel (1 GHz – 18 GHz)



QPSK - Middle channel (18 GHz – 35 GHz)



18.3 Results LTE band 43

The EUT was set to transmit the maximum power.

18.3.1 Spurious emissions radiated

Measurement:

Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A & 7.3 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

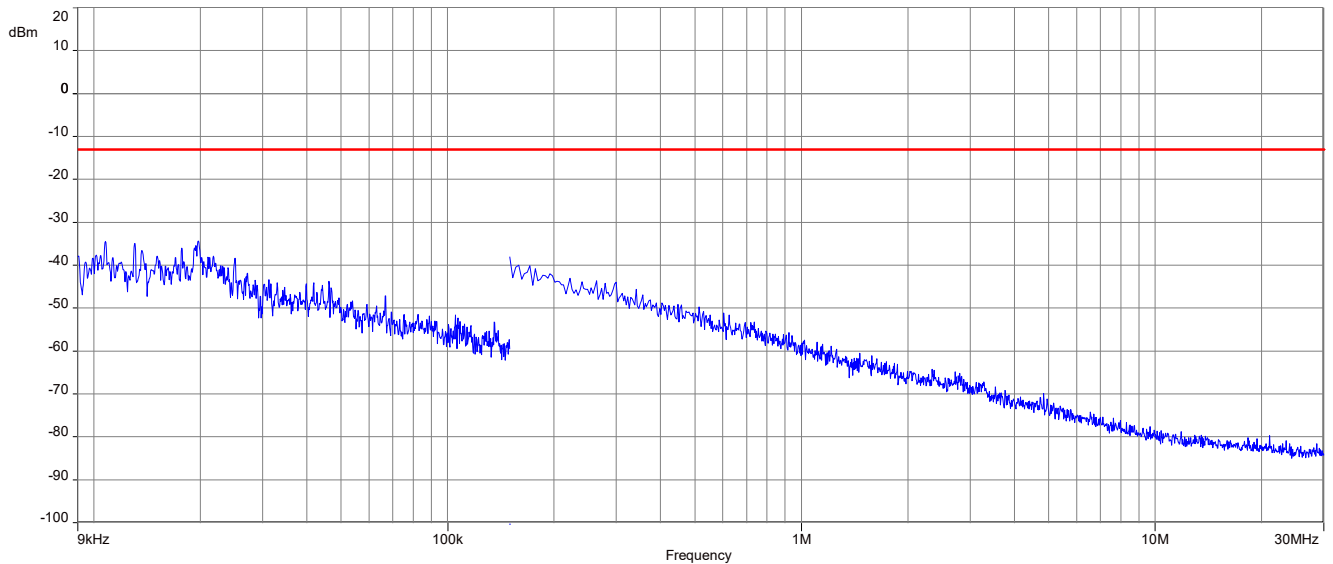
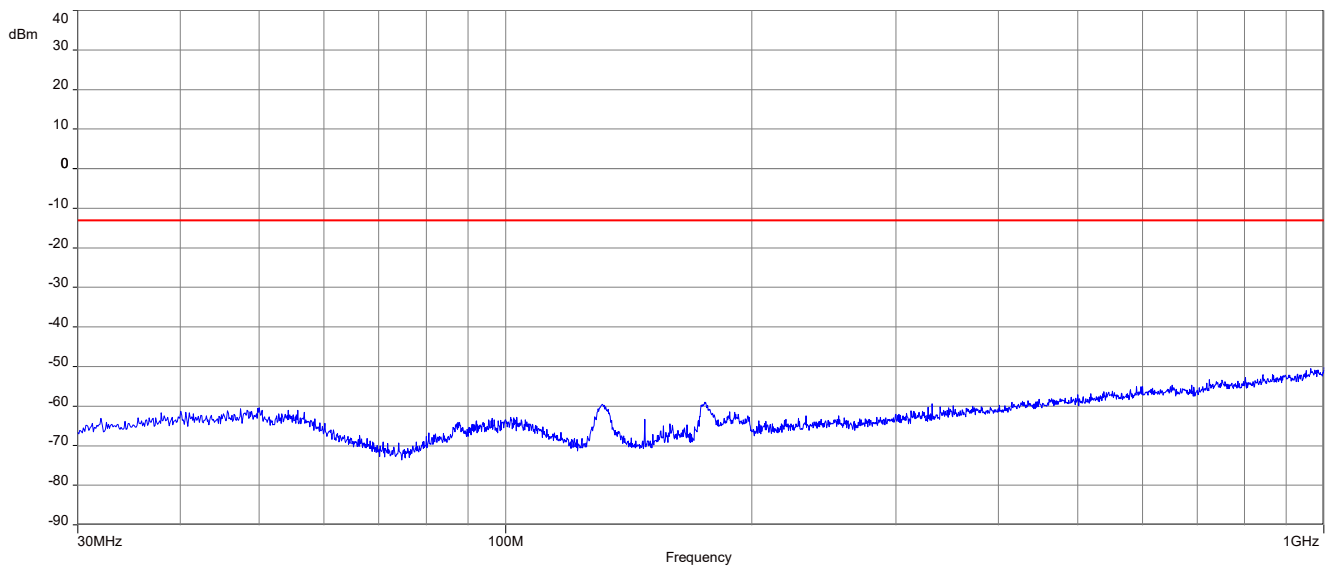
Limits:

FCC	ISED
§ 27	RSS-192, RSS-197
-13 dBm	

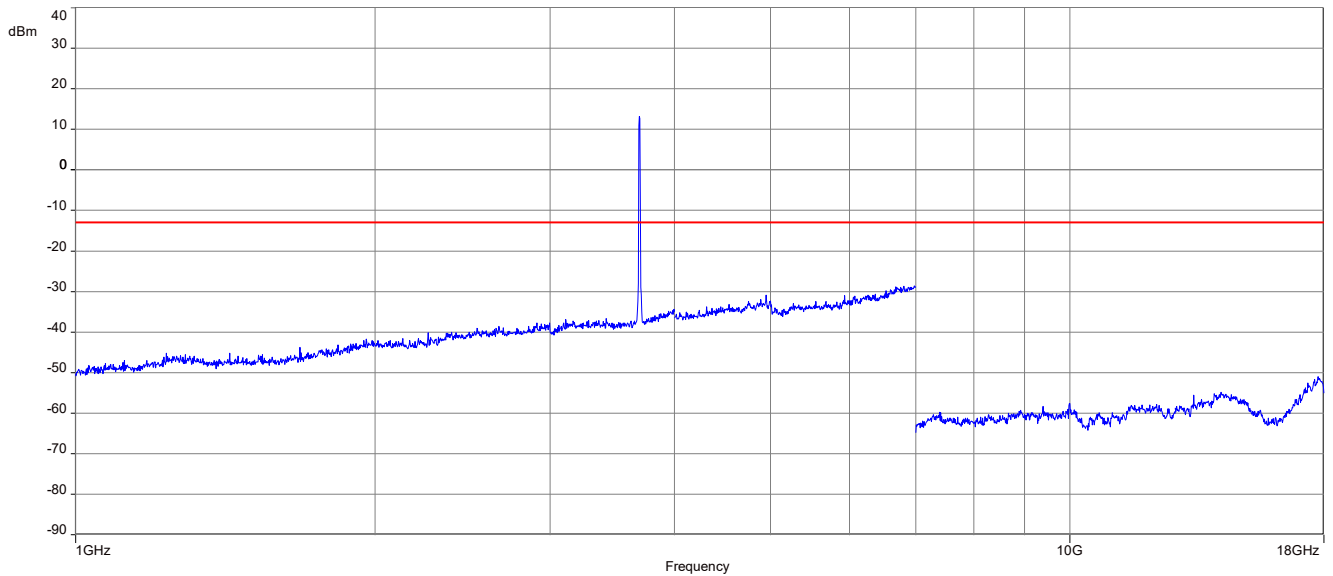
Results:

QPSK:

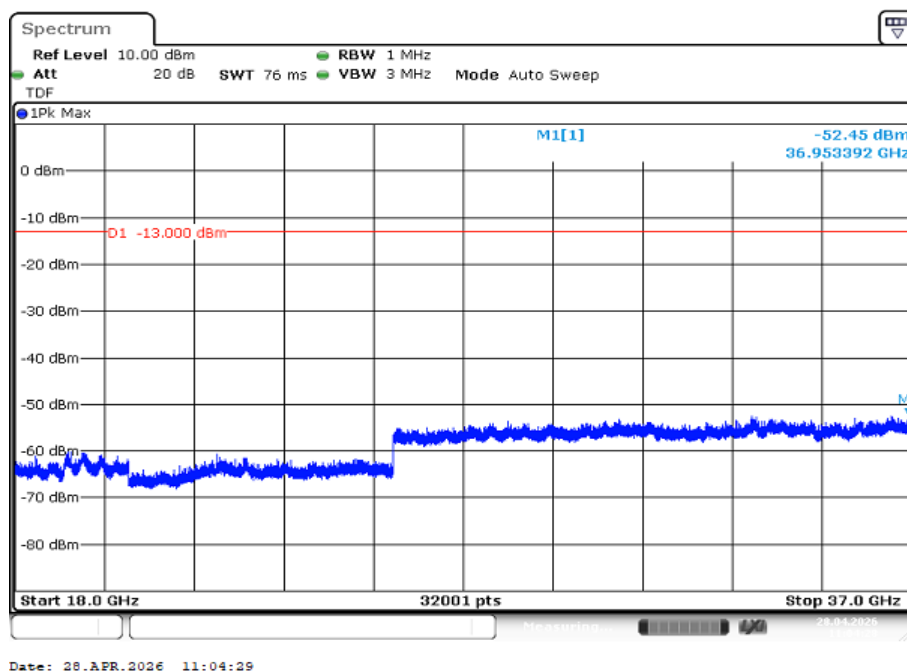
Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

Plots:**QPSK - Middle channel (9 kHz - 30 MHz)****QPSK - Middle channel (30 MHz – 1 GHz)**

QPSK - Middle channel (1 GHz – 18 GHz)



QPSK - Middle channel (18 GHz – 37 GHz)



18.4 Results LTE band 48

The EUT was set to transmit the maximum power.

18.4.1 Spurious emissions radiated

Measurement:

Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A & 7.3 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

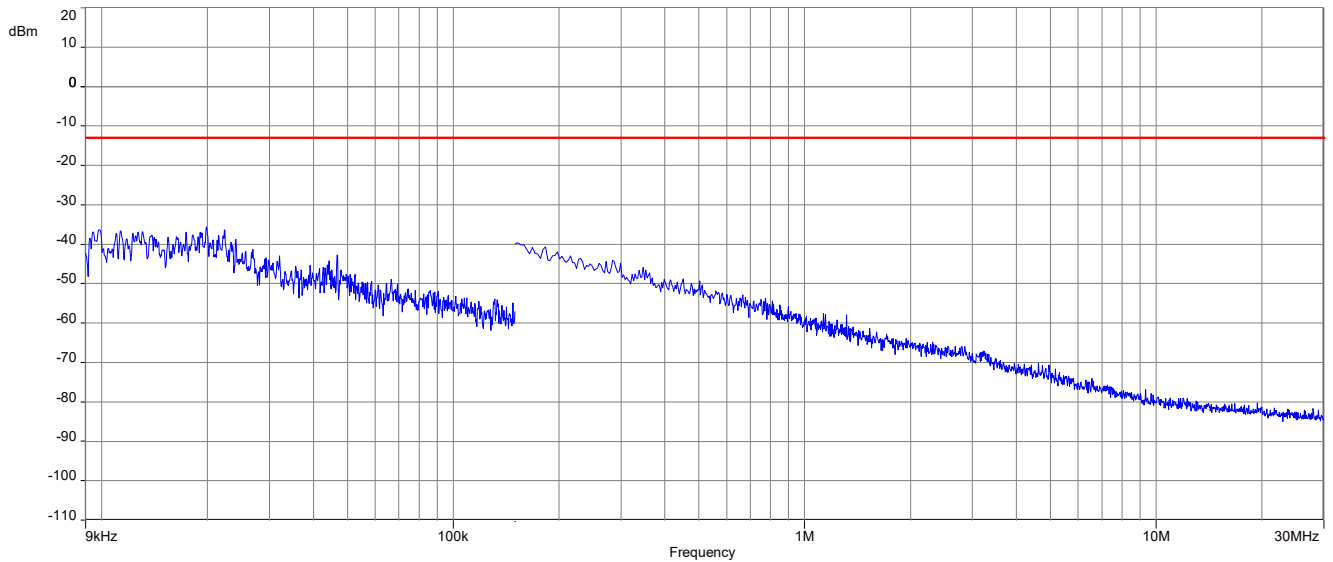
Limits:

FCC	ISED
§ 96	RSS-192
-13 dBm, -25 dBm, -40 dBm	

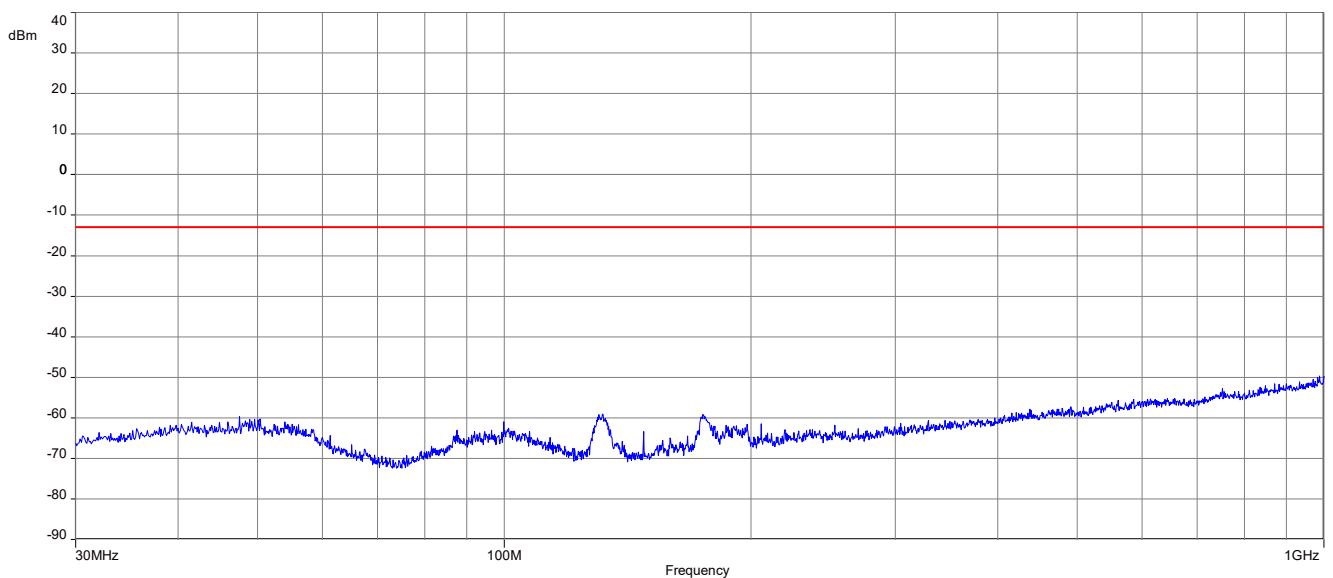
Results:

QPSK:

Spurious Emission Level					
Lowest channel		Middle channel		Highest channel	
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

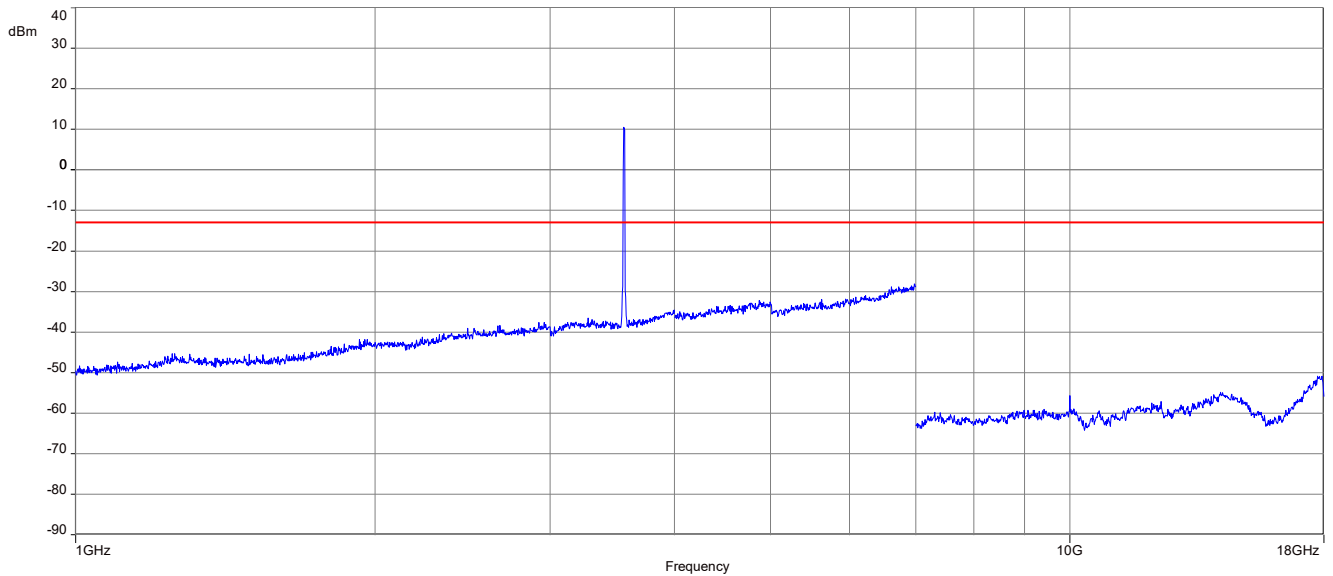
Plots:**QPSK - Middle channel (9 kHz - 30 MHz)**

NOTE: Pre-tests with smaller RBW showed that there are no critical emissions from the device which might not comply with the -40 dBm limit.

QPSK - Middle channel (30 MHz – 1 GHz)

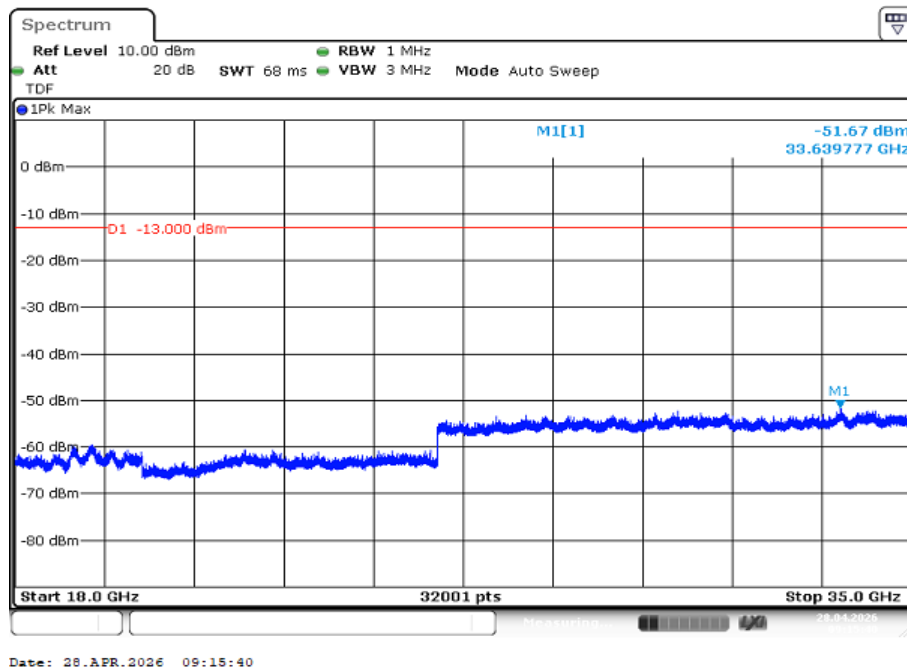
NOTE: Pre-tests with smaller RBW showed that there are no critical emissions from the device which might not comply with the -40 dBm limit.

QPSK - Middle channel (1 GHz – 18 GHz)



NOTE: Pre-tests with smaller RBW showed that there are no critical emissions from the device which might not comply with the -40 dBm limit.

QPSK - Middle channel (18 GHz – 35 GHz)



NOTE: Pre-tests with smaller RBW showed that there are no critical emissions from the device which might not comply with the -40 dBm limit.

19 Summary of measurement results NR 5G

☒	No deviations from the technical specifications were ascertained
☐	There were deviations from the technical specifications ascertained
☐	This test report is only a partial test report. The content and verdict of the performed test cases are listed below.

TC identifier	Description	verdict	date	Remark
RF-Testing	FCC: CFR Part 27 RSS-195; RSS-192	See table!	2026-09-18	-/-

19.1 Part 27/RSS-195: band n30

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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19.2 Part 27/RSS-192: band n77 (3300 MHz - 3800 MHz)

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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19.3 Part 27/RSS-192: band n77 (3300 MHz – 3960 MHz)

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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19.4 Part 27/RSS-192: band n78

Test Case	temperature conditions	power source voltages	C	NC	NA	NP	Remark
RF Output Power	Nominal	Nominal	☒	☐	☐	☐	See chapter 20
Frequency Stability	Extreme	Extreme	☐	☐	☐	☒	-/-
Spurious Emissions Radiated	Nominal	Nominal	☒	☐	☐	☐	-/-
Spurious Emissions Conducted	Nominal	Nominal	☐	☐	☐	☒	-/-
Block Edge Compliance	Nominal	Nominal	☐	☐	☐	☒	-/-
Occupied Bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-

Notes:

C	Compliant	NC	Not compliant	NA	Not applicable	NP	Not performed
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19.5 Results band n77 @ 3800 MHz

The EUT was set to transmit the maximum power.

19.5.1 Spurious emissions radiated

Measurement:

Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A & 7.3 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

FCC	ISED
§ 27	RSS-192
-13 dBm	

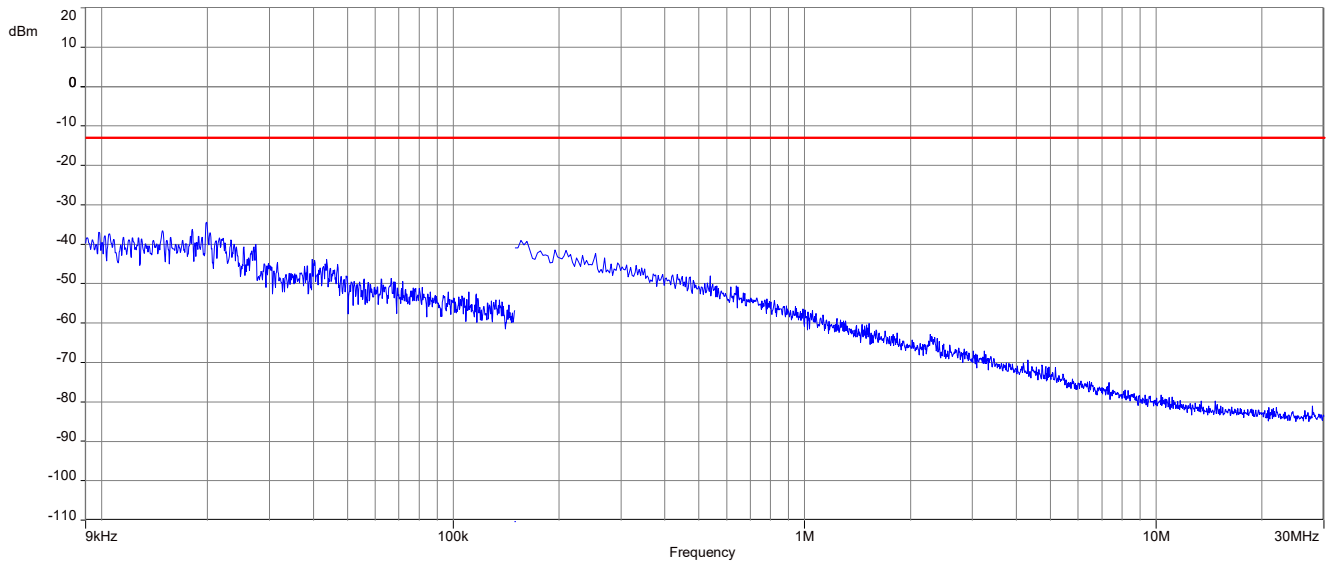
Results:

QPSK:

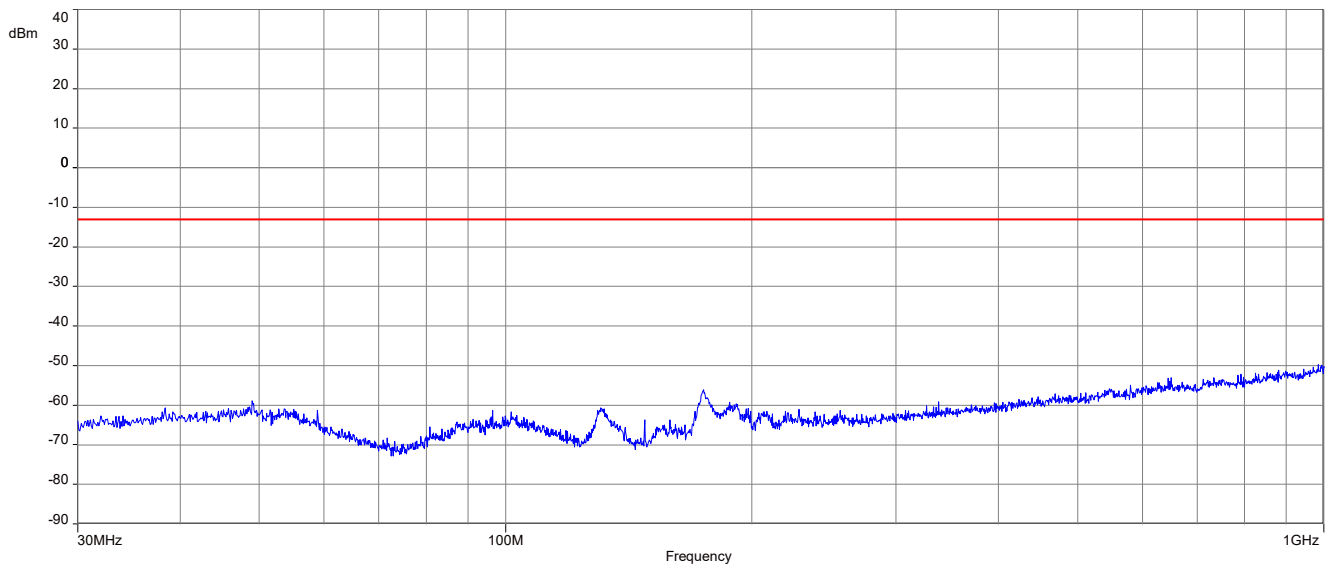
Spurious Emission Level					
		3800 MHz			
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

Plots:

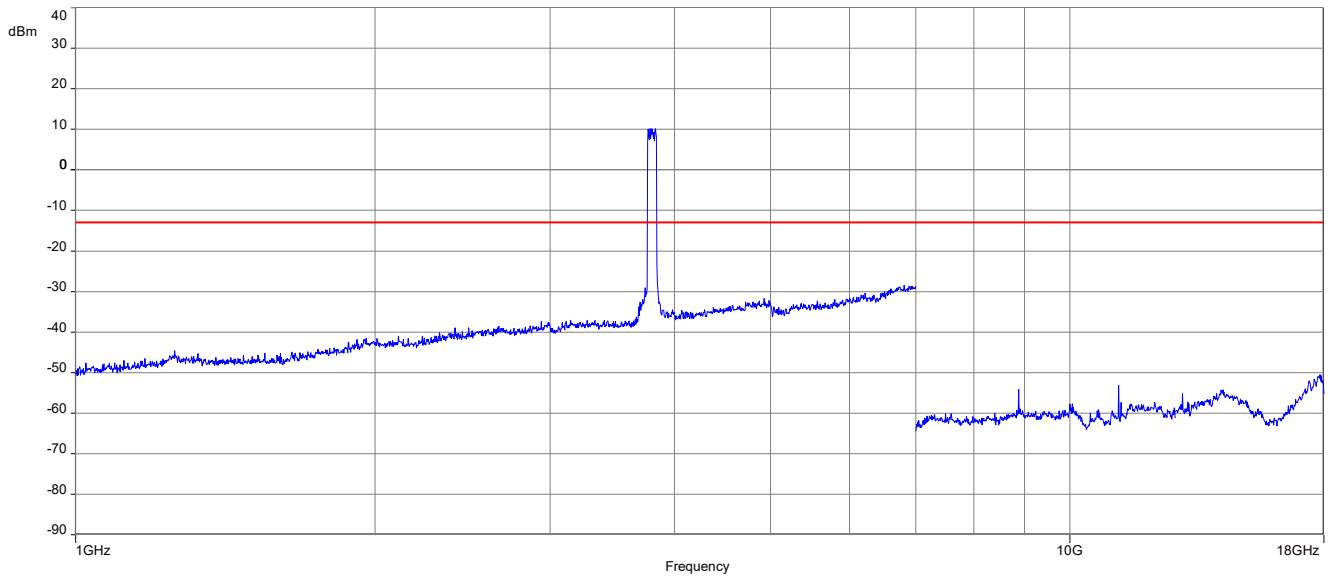
Middle channel (9 kHz - 30 MHz)



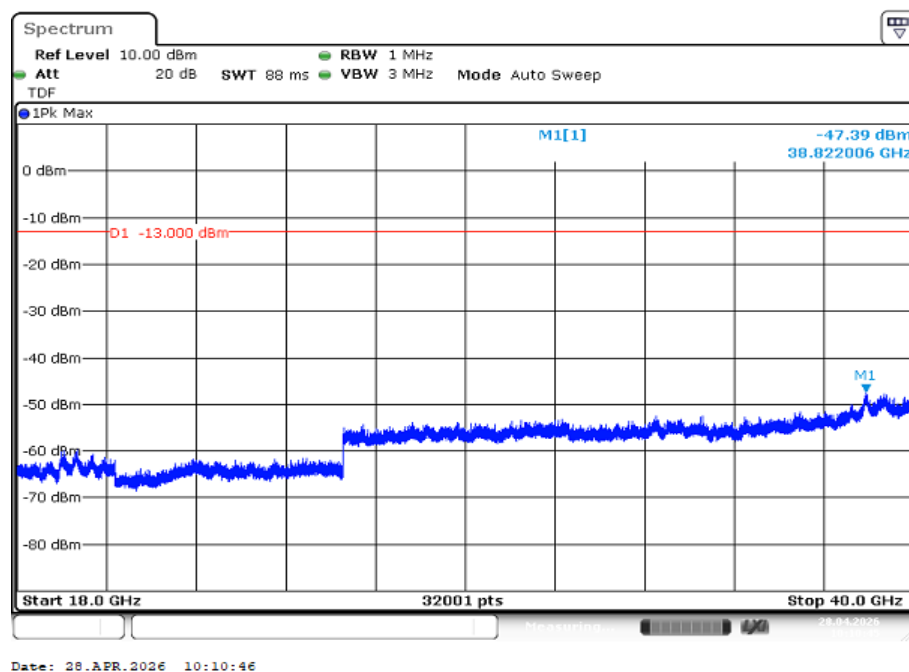
Middle channel (30 MHz – 1 GHz)



Middle channel (1 GHz – 18 GHz)



Middle channel (18 GHz – 40 GHz)



19.6 Results band n77 @ 3960 MHz

The EUT was set to transmit the maximum power.

19.6.1 Spurious emissions radiated

Measurement:

Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A & 7.3 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

FCC	ISED
§ 27	RSS-192
-13 dBm	

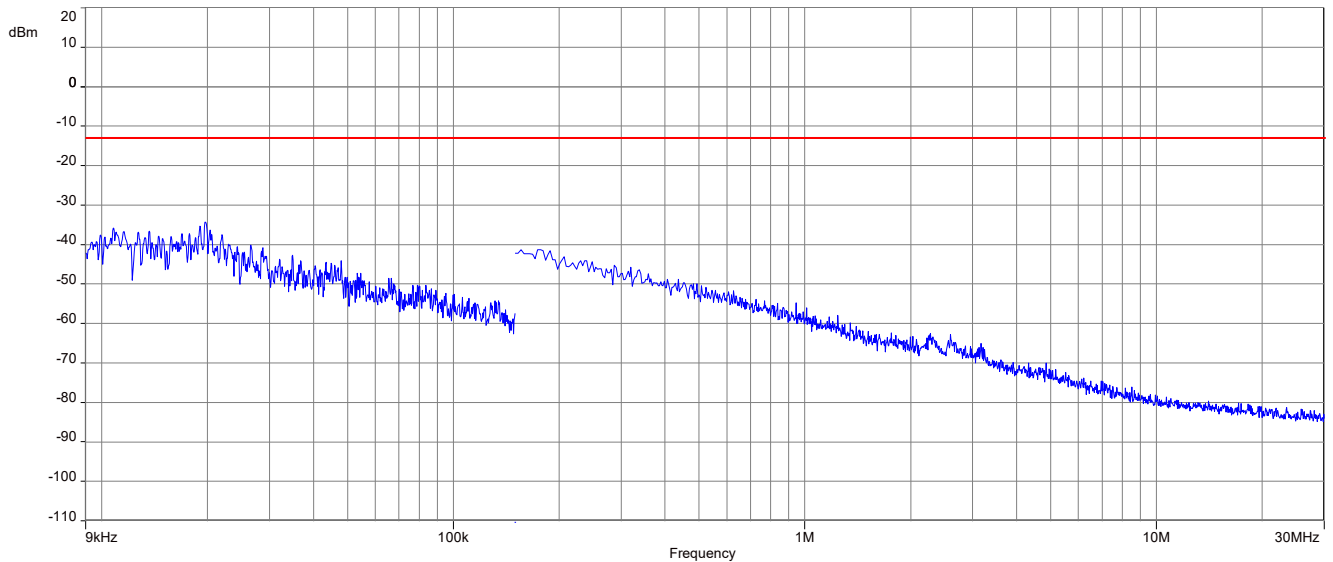
Results:

QPSK:

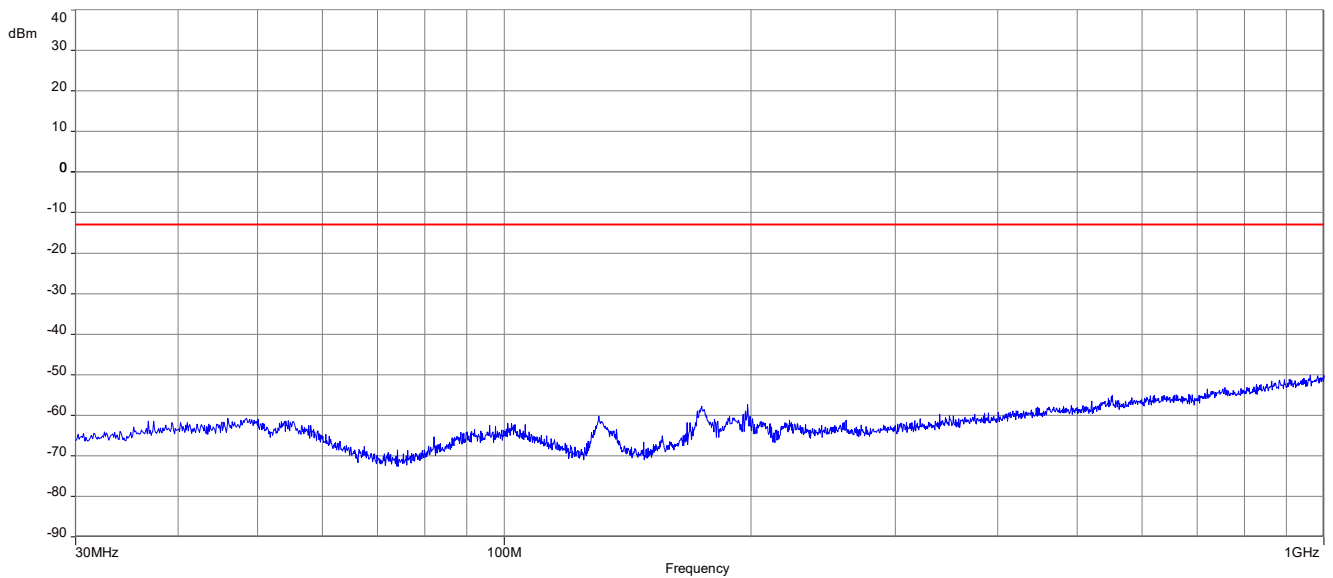
Spurious Emission Level					
		3960 MHz			
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

Plots:

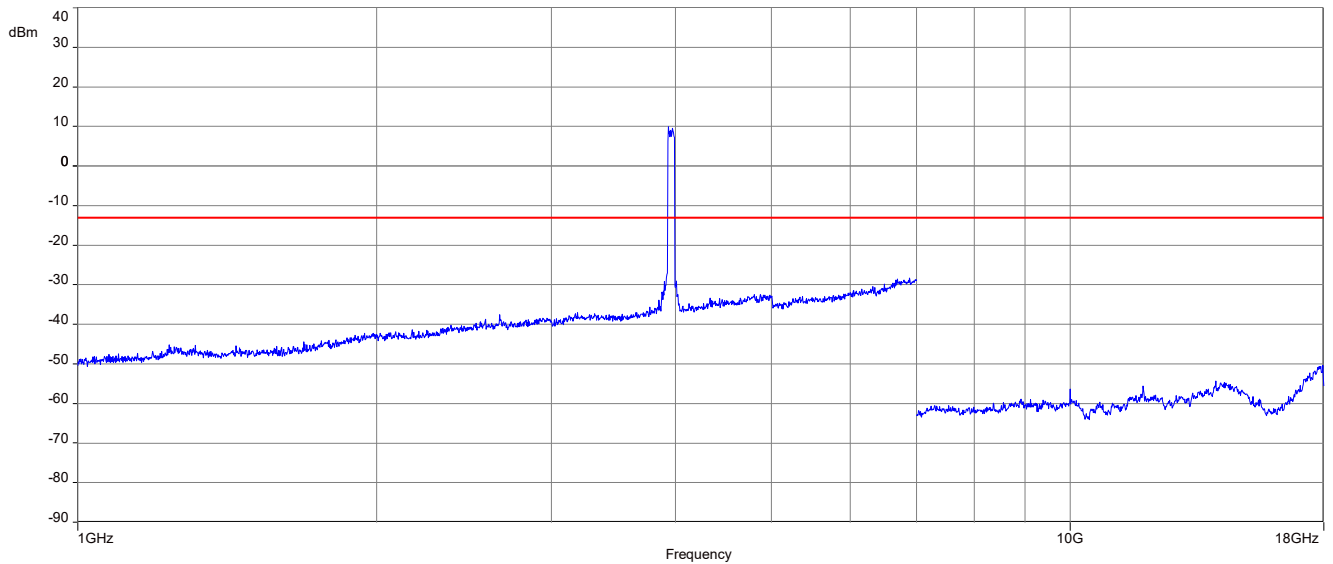
Middle channel (9 kHz - 30 MHz)



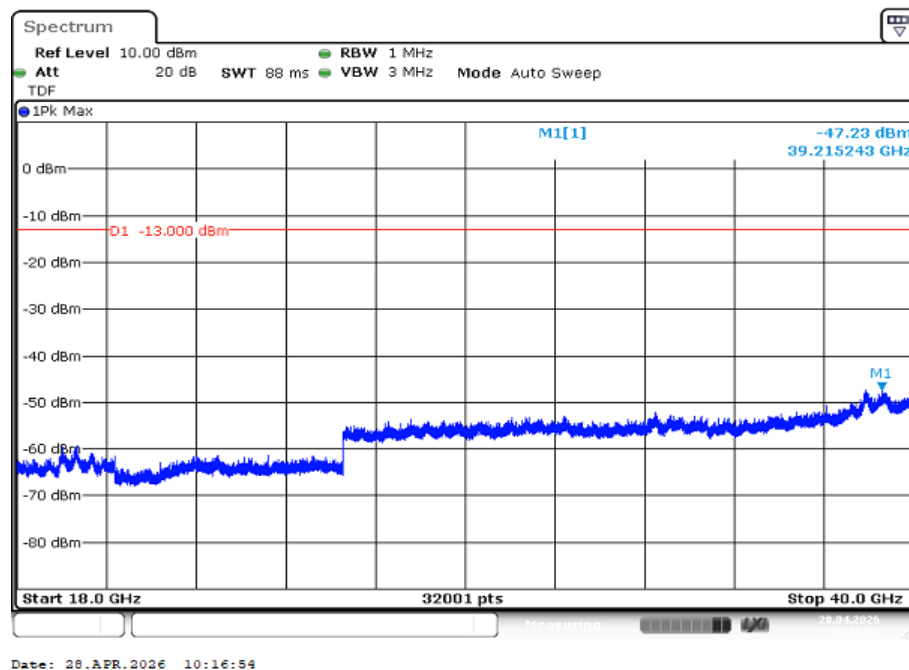
Middle channel (30 MHz – 1 GHz)



Middle channel (1 GHz – 18 GHz)



Middle channel (18 GHz – 40 GHz)



19.7 Results band n78

The EUT was set to transmit the maximum power.

19.7.1 Spurious emissions radiated

Measurement:

Measurement parameters	
Detector:	Peak
Sweep time:	2 sec.
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	100 MHz Steps
Trace mode:	Max Hold
Used equipment:	See chapter 7.2 setup A & 7.3 setup A
Measurement uncertainty:	See chapter 9
Measurement procedure	FCC: § 2.1053 ISED: RSS-Gen, 6.13

Limits:

FCC	ISED
§ 27	RSS-192
-13 dBm	

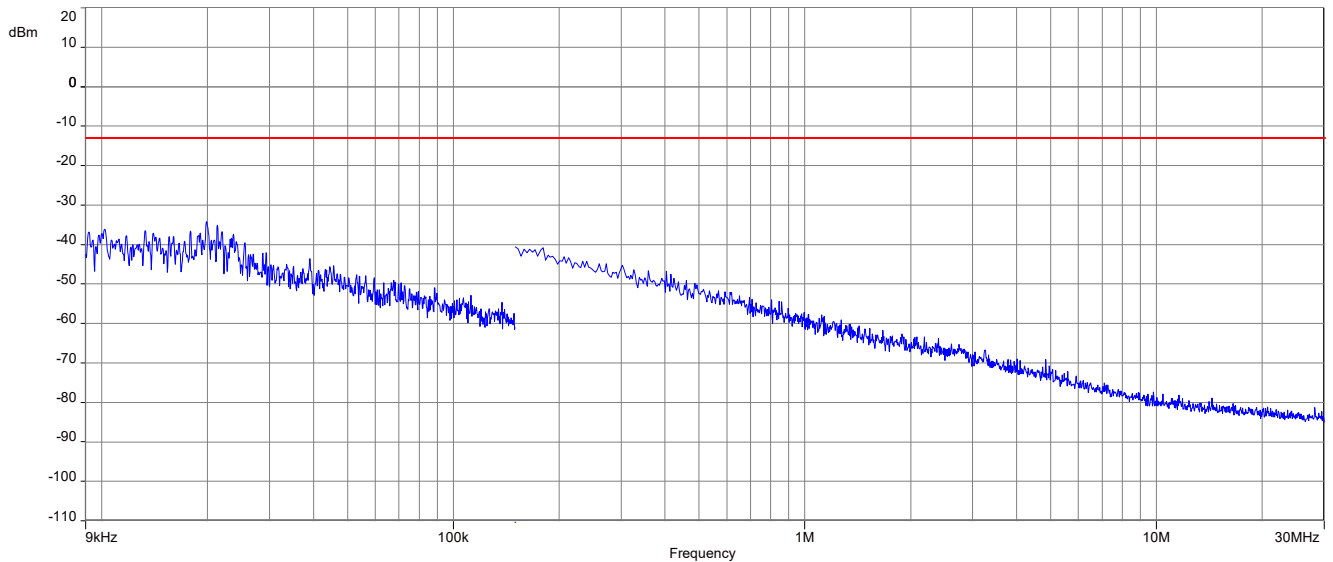
Results:

QPSK:

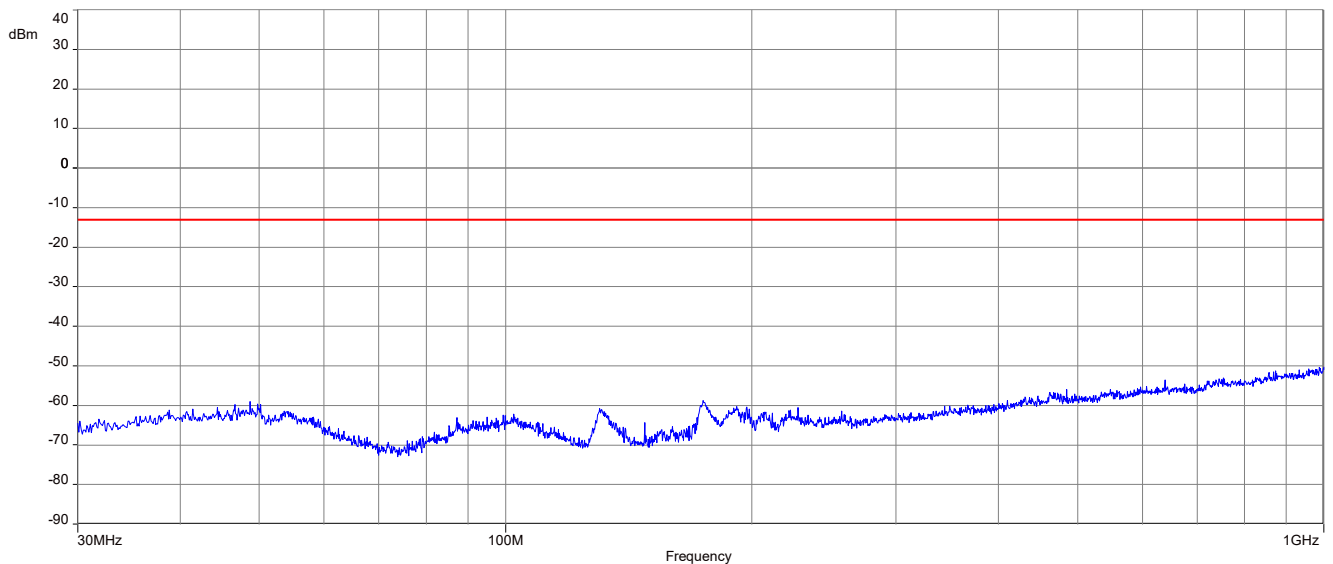
Spurious Emission Level					
		3310 MHz			
Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]	Spurious emissions	Level [dBm]
NP		-/-		NP	

Plots:

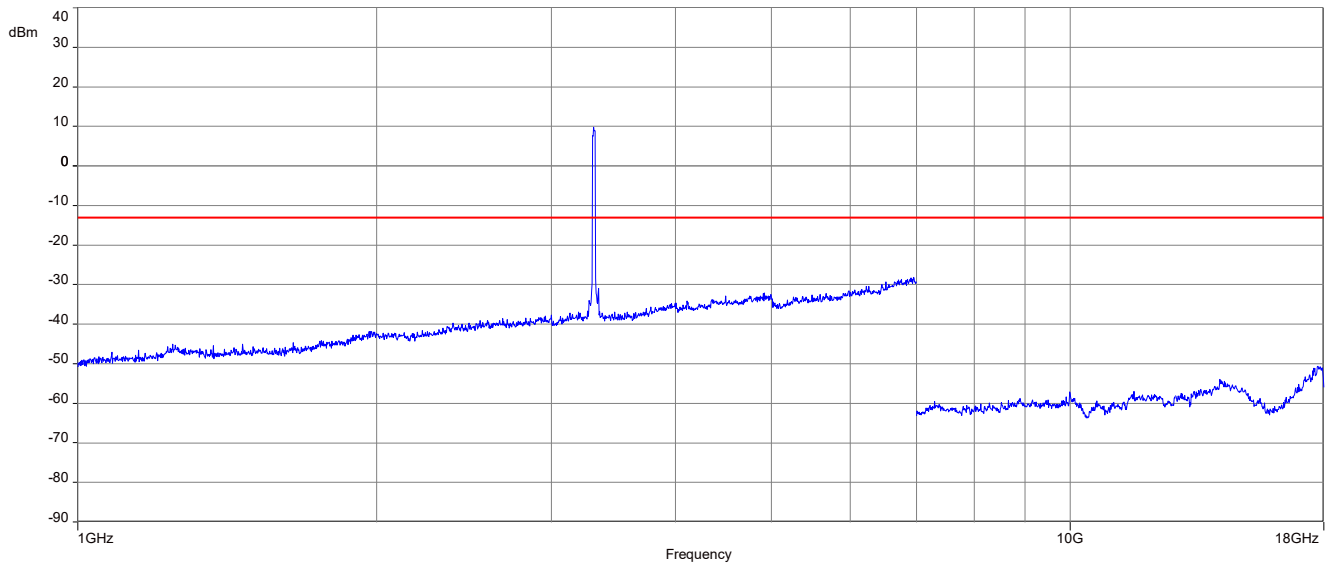
Middle channel (9 kHz - 30 MHz)



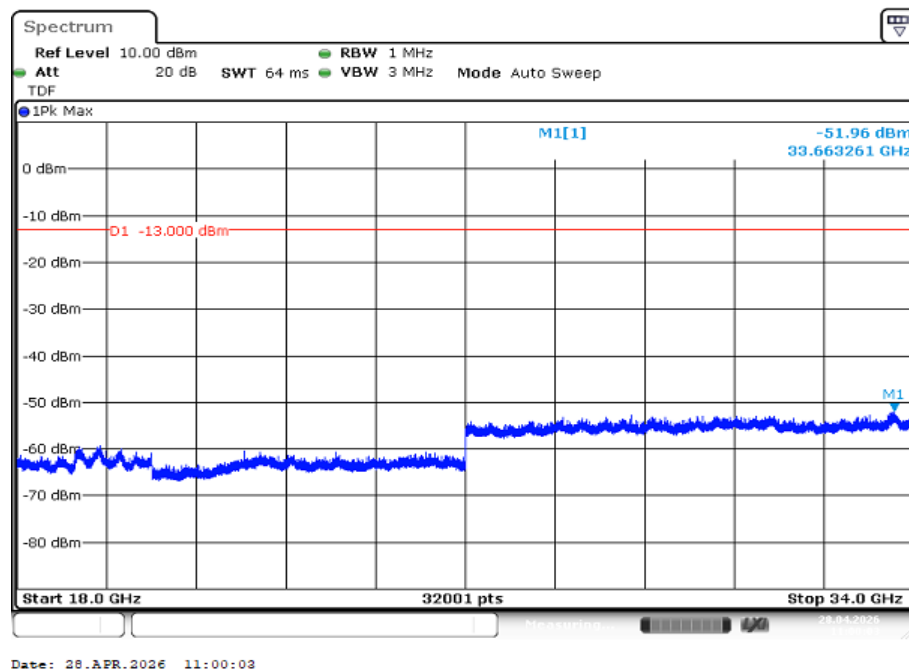
Middle channel (30 MHz – 1 GHz)



Middle channel (1 GHz – 18 GHz)



Middle channel (18 GHz – 34 GHz)



20 Results Output power (conducted)

The EUT was set to transmit the maximum power.

Description:

This paragraph contains conducted average power.

Measurement:

The mobile was set up for the maximum output power with pseudo random data modulation.

Measurement parameters	
Detector:	Average
Resolution bandwidth:	40 MHz
Used equipment:	See chapter 7.4 setup A, B
Measurement uncertainty:	see chapter 9

Limits:

Bands and Technology	FCC rule part	ISED Rule part	ERP/EIRP limit FCC	Power limit ISED
WCDMA 2	§24.232(c)	RSS-133, Issue 7	33 dBm EIRP	33 dBm EIRP
WCDMA 4	§27.50(d)(4)	RSS-139, Issue 4	30 dBm EIRP	30 dBm EIRP
WCDMA 5	§22.913(a)(5)	RSS-132, Issue 4	38.45 dBm ERP	34.77 dBm ERP
LTE band 2	§24.232(c)	RSS-133, Issue 7	33 dBm EIRP	33 dBm EIRP
LTE band 4	§27.50(d)(4)	RSS-139, Issue 4	30 dBm EIRP	30 dBm EIRP
LTE band 5	§22.913(a)(5)	RSS-132, Issue 4	38.45 dBm ERP	34.77 dBm ERP
LTE band 7	§27.50(h)(2)	RSS-199, Issue 4	33 dBm EIRP	33 dBm EIRP
LTE band 12	§27.50(c)(10)	RSS-130, Issue 2	34.77 dBm ERP	34.77 dBm ERP
LTE band 13	§27.50(b)(10)	RSS-130, Issue 2	34.77 dBm ERP	34.77 dBm ERP
LTE band 14	§90.542(a)	RSS-140, Issue 1	34.77 dBm ERP	34.77 dBm ERP
LTE band 17	§27.50(c)(10)	RSS-130, Issue 2	34.77 dBm ERP	34.77 dBm ERP
LTE band 25	§24.232(c)	RSS-133, Issue 7	33 dBm EIRP	33 dBm EIRP
LTE band 26	§22.913(a)(5) §90.635(b)	N/A in Canada	38.45 dBm ERP (824-849 MHz) 100 Watt (814-824 MHz)	N/A in Canada
LTE band 38	§27.50(h)(2)	RSS-199, Issue 4	33 dBm EIRP	33 dBm EIRP
LTE band 41	§27.50(h)(2)	RSS-199, Issue 4	33 dBm EIRP	33 dBm EIRP
LTE band 42	§27.50(k)(3)	RSS-192, Issue 5	30 dBm EIRP	30 dBm EIRP
LTE band 43	§27.50(j)(3)	RSS-192, Issue 5 RSS-197, Issue 1	30 dBm EIRP	30 dBm EIRP
LTE band 48	§96.41	RSS-192, Issue 5 RSS-197, Issue 1	23 dBm/10 MHz EIRP	30 dBm EIRP
LTE band 66	§27.50(d)(4)	RSS-139, Issue 4	30 dBm EIRP	30 dBm EIRP
LTE band 71	§27.50(c)(10)	RSS-130, Issue 2	34.77 dBm ERP	34.77 dBm ERP
5G NR band 2	§24.232(c)	RSS-133, Issue 7	33 dBm EIRP	33 dBm EIRP
5G NR band 5	§22.913(a)(5)	RSS-132, Issue 4	38.45 dBm ERP	34.77 dBm ERP
5G NR band 7	§27.50(h)(2)	RSS-199, Issue 4	33 dBm EIRP	33 dBm EIRP
5G NR band 12	§27.50(c)(10)	RSS-130, Issue 2	34.77 dBm ERP	34.77 dBm ERP
5G NR band 13	§27.50(b)(10)	RSS-130, Issue 2	34.77 dBm ERP	34.77 dBm ERP
5G NR band 25	§24.232(c)	RSS-133, Issue 7	33 dBm EIRP	33 dBm EIRP
5G NR band 26	§22.913(a)(5) §90.635(b)	N/A in Canada	38.45 dBm ERP (824-849 MHz) 100 Watt (814-824 MHz)	N/A in Canada
5G NR band 38	§27.50(h)(2)	RSS-199, Issue 4	33 dBm EIRP	33 dBm EIRP
5G NR band 41	§27.50(h)(2)	RSS-199, Issue 4	33 dBm EIRP	33 dBm EIRP
5G NR band 48	§96.41	RSS-192, Issue 5 RSS-197, Issue 1	23 dBm/10 MHz EIRP	30 dBm EIRP
5G NR band 66	§27.50(d)(4)	RSS-139, Issue 4	30 dBm EIRP	30 dBm EIRP
5G NR band 71	§27.50(c)(10)	RSS-130, Issue 2	34.77 dBm ERP	34.77 dBm ERP
5G NR band 77	§27.50(j)(3)	RSS-192, Issue 5 RSS-197, Issue 1 RSS-198, Issue 1	30 dBm EIRP	30 dBm EIRP
5G NR band 78	§27.50(j)(3)	RSS-192, Issue 5 RSS-197, Issue 1	30 dBm EIRP	30 dBm EIRP

Results: Conducted, Extracted from ANNEX 1-2152-25-01-03_TR1-A201-R01

WCDMA/LTE – Conducted Average Output Power (dBm)						
Band	Technology	Bandwidth (MHz)	Modulation	Result (dBm)	Channel location	Channel
2	WCDMA	5 MHz	QPSK	23.8	mid	9400
4	WCDMA	5 MHz	QPSK	23.81	low	1312
5	WCDMA	5 MHz	QPSK	24.04	high	4233
2	LTE	20	QPSK	24.18	low	18700
2	LTE	15	16QAM	23.60	mid	18900
4	LTE	20	QPSK	24.20	high	20300
4	LTE	3	16QAM	23.56	mid	20175
5	LTE	10	QPSK	24.20	high	20600
5	LTE	1.4	16QAM	23.79	low	20407
7	LTE	5	QPSK	23.96	mid	21100
7	LTE	20	16QAM	23.70	high	21350
12	LTE	10	QPSK	24.21	low	23060
12	LTE	5	16QAM	23.64	low	23035
13	LTE	5	16QAM	23.58	low	23205
14	LTE	10	QPSK	24.24	high	23330
14	LTE	5	16QAM	23.67	low	23305
17	LTE	5	QPSK	24.15	low	23755
17	LTE	10	16QAM	23.58	mid	23790
25	LTE	20	QPSK	24.30	low	26140
25	LTE	10	16QAM	23.47	mid	26365
26	LTE	10	QPSK	24.23	high	26990
26	LTE	10	16QAM	23.69	high	26990
38	LTE	5	QPSK	25.95	mid	38000
38	LTE	5	16QAM	25.21	high	38225
41	LTE	5	QPSK	26.01	mid	40620
41	LTE	10	16QAM	25.40	mid	40620
42*	LTE	10	QPSK	25.93	low	41640
42*	LTE	5	16QAM	25.37	low	41615
43*	LTE	20	16QAM	25.46	mid	44590
48	LTE	10	QPSK	23.86	low	55290
48	LTE	20	16QAM	23.35	low	55340
66	LTE	15	QPSK	24.26	mid	132322
66	LTE	10	16QAM	23.51	mid	132322
71	LTE	15	QPSK	24.47	mid	133297
71	LTE	10	16QAM	23.69	low	133172

* LTE band power class 2

Results: Conducted, Module test report

Power rating according to tune up information:

LTE bands: Power class 3, 23 dBm ± 2 dB

LTE bands: Power class 2, 26 dBm ± 2 dB (B38, B41, B42, B43)

Conclusion: The conducted power verification was performed in QPSK and 16-QAM modulation. The maximum values of the EUT do match the module values in the same configurations. Therefore all other module results from the module report are representative for the EUT.

Results: Conducted, Extracted from ANNEX 1-2152-25-01-03_TR1-A201-R01

NR – Conduted Average Output Power (dBm) - conducted						
Band	Technology	Bandwidth (MHz)	Modulation	Result (dBm)	Channel location	Channel
2	NR	20	BPSK	24.19	low	372000
2	NR	20	QPSK	24.35	low	372000
2	NR	20	16QAM	23.45	low	372000
5	NR	15	BPSK	24.26	low	166300
5	NR	15	QPSK	24.37	low	166300
5	NR	15	16QAM	23.58	low	166300
7	NR	40	BPSK	24.15	high	510000
7	NR	25	QPSK	24.25	high	511500
7	NR	25	16QAM	23.36	low	502500
12	NR	15	BPSK	24.23	low	141300
12	NR	15	QPSK	24.33	low	141300
12	NR	15	16QAM	23.37	low	141300
13	NR	5	BPSK	24.20	low	155900
13	NR	5	QPSK	24.34	mid	156400
13	NR	5	16QAM	23.47	low	155900
25	NR	20	BPSK	24.14	low	372000
25	NR	40	QPSK	24.22	low	374000
25	NR	30	16QAM	23.30	low	373000
26	NR	20	BPSK	24.97	low	164800
26	NR	15	QPSK	25.04	low	164300
26	NR	10	16QAM	24.17	low	163800
38*	NR	15	BPSK	26.38	low	515500
38*	NR	15	QPSK	26.43	low	515500
38*	NR	15	16QAM	25.65	low	515500
41*	NR	30	BPSK	26.22	mid	518598
41*	NR	30	QPSK	26.30	mid	518598
41*	NR	30	16QAM	25.49	mid	518598
48	NR	40	BPSK	23.20	mid	641666
48	NR	40	QPSK	23.03	mid	641666
48	NR	40	16QAM	22.36	mid	641666
66	NR	40	BPSK	24.27	mid	349000
66	NR	25	QPSK	24.35	mid	349000
66	NR	25	16QAM	23.44	mid	349000
71	NR	20	BPSK	24.35	high	137600
71	NR	15	QPSK	24.55	high	138100
71	NR	15	16QAM	23.68	high	138100
77A*	NR	40	BPSK	26.21	mid	633332
77A*	NR	40	QPSK	26.15	mid	633332

NR – Conduced Average Output Power (dBm) - conducted						
Band	Technology	Bandwidth (MHz)	Modulation	Result (dBm)	Channel location	Channel
77A*	NR	40	16QAM	25.40	low	631334
77B*	NR	15	BPSK	26.29	high	664832
77B*	NR	40	QPSK	26.29	high	664000
77B*	NR	40	16QAM	25.49	high	664000
78*	NR	15	BPSK	26.14	high	652832
78*	NR	40	QPSK	26.15	low	621334
78*	NR	15	16QAM	25.36	high	652832

NOTE: Band 77A: 3450 MHz to 3550 MHz; Band 77B: 3700 MHz to 3980 MHz

Results: Conducted, Module test report

Power rating according to tune up information:

5G NR bands: Power class 3, 23 dBm ± 2 dB

5G NR bands: Power class 2, 26 dBm $+2$ dB/ -3 dB (n38, n41, B77, B78)

Conclusion: The conducted power verification was performed in BPSK, QPSK and 16-QAM modulation. The maximum values of the EUT do match the module values in the same configurations. Therefore all other module results from the module report are representative for the EUT.

21 Antenna gain

Measurement:

Measurement parameter	
Detector:	Peak
Sweep time:	Auto
Video bandwidth:	3 MHz
Resolution bandwidth:	3 MHz
Span:	Zero-Span
Trace-Mode:	Max Hold
Test setup	See sub clause 7.5 – A
Measurement uncertainty	See sub clause 9

Results:

Freq. [MHz]	3797.5	3625	3500	3972.5	3320	2310
Antenna HG Gain [dBi]	-5.0	-6.3	-6.0	-4.2	-6.5	0.8
Antenna FG Gain [dBi]	-4.0	-5.2	-6.6	-2.9	-6.6	2.1

NOTE: The device was positioned in the OTA chamber and a CW generator was connected to the antennas instead of cellular module. The antennas remained installed in the EUT for the tests.

22 Observations

No observations except those reported with the single test cases have been made.

23 Glossary

AVG	Average
C	Compliant
C/N₀	Carrier to noise-density ratio, expressed in dB-Hz
CAC	Channel availability check
CW	Clean wave
DC	Duty cycle
DFS	Dynamic frequency selection
DSSS	Dynamic sequence spread spectrum
DUT	Device under test
EN	European Standard
ETSI	European Telecommunications Standards Institute
EMC	Electromagnetic Compatibility
EUT	Equipment under test
FCC	Federal Communications Commission
FCC ID	Combination of Grantee Code and Equipment Product Code
FHSS	Frequency hopping spread spectrum
FVIN	Firmware version identification number
GNSS	Global Navigation Satellite System
GUE	GNSS User Equipment
HMN	Host marketing name
HVIN	Hardware version identification number
HW	Hardware
ISED	Innovation, Science and Economic Development Canada
Inv. No.	Inventory number
MC	Modulated carrier
NA	Not applicable
NC	Not compliant
NOP	Non occupancy period
NP	Not performed
OBW	Occupied bandwidth
OC	Operating channel
OCW	Operating channel bandwidth
OFDM	Orthogonal frequency division multiplexing
OOB	Out of band
OP	Occupancy period
PER	Packet error rate
PMN	Product marketing name
PP	Positive peak
QP	Quasi peak
RLAN	Radio local area network
S/N or SN	Serial number
SW	Software
UUT	Unit under test
WLAN	Wireless local area network

24 Document history

Version	Applied changes	Date of release
R01	Initial release	2026-07-29
R02	Band 30 results removed, antenna gain results added	2026-09-18

END OF TEST REPORT