Test report 2024-0349-EMC-TR-25-0197-V02

Designation:	CAP H2 34T/37T F-AC-F1 [37T]
Manufacturer:	CommScope
Serial No(s):	BGH2AA2434005
ID No.	7857017-0001 Rev: 00
FCC ID	XS5-H23437
Test Specification(s):	ANSI 63.26:2015 FCC Rules and Regulations as listed in 47 CFR, Part 20 and Part 27:2024-10-28
Test Plan:	"BU-PC-2336-10 FCC CAP H2 34T37T" from customer.
Test Result:	**Passed**

Date of issue:	2025-02-25		Signature:
Version:	02	Technical Reviewer:	Thomas Gerngroß Test Engineer Digitally signed by Thomas Gerngroß DN: cn=Thomas Gerngroß, o=Bureau Veritas CPS Germany GmbH, ou=ECL, email=thomas.gerngross@bureauveritas.com, c=DE Date: 2025.02.25 08:10:27 +01'00'
Date of delivery:	2024-10-28		
Performance date:	2024-12-02 – 2024-12-11	Report Reviewer:	Thomas Hufnagel Test Engineer Digitally signed by Thomas Hufnagel Date: 2025.02.25 08:14:41 +01'00'

Bundesnetzagentur

BNetzA-CAB-19/21-20

ilac-MRA

DAkkS Deutsche Akkreditierungsstelle D-PL-12024-06-00

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	BNETZA-CAB-19/21-20
FCC Designation Number:	DE0023
FCC Test Firm Registration:	366481

Versions management:

V 01.00	Initial release.
V 02.00	Supplement of used antenna ports at measurements and editorial changes.

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1 APPLIED STANDARDS AND TEST SUMMARY

1.1 CFR APPLIED STANDARDS

Type of Authorization
Certification for an Industrial Signal Booster.

Applicable FCC Rules

Prepared in accordance with the requirements of FCC Rules and Regulations as listed in 47 CFR Chapter 1, Parts 2, 20 and 27, (10/28/2024 Edition). The following subparts are applicable to the results in this test report.

Part 2, Subpart J - Equipment Authorization Procedures, Certification

Part 20, Commercial Mobiles Services

§ 20.21 Signal Boosters

Part 27; Miscellaneous Wireless Communications Services
Subpart C – Technical standards

§ 27.50 – Power and duty cycle limits
§ 27.53 – Emission limits

The tests were selected and performed with reference to:

- FCC Public Notice 935210 applying "Signal Boosters Basic Certification Requirements" 935210 D02, 2024-11-20.
- FCC Public Notice 935210 applying "Measurement guidance for industrial and non-consumer signal booster, repeater and amplifier devices"
- 935210 D05, 2020-04-03.
- FCC Public Notice 971168 applying "Measurement guidance for certification of licensed digital transmitters" 971168 D01, 2018-04-09.
- ANSI C63.26: 2015

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1.2 FCC REFERENCE TABLE

Measurement	FCC reference
Effective radiated power, mean output power and zone enhancer gain	§ 27.50 KDB 935210 D05 v01r04: 3.5
Peak to Average Ratio	§ 27.50
Occupied bandwidth Input-versus-output spectrum	§ 2.1049 KDB 935210 D05 v01r04: 3.4
Conducted spurious Emission at Antenna Terminal	§ 2.1051 § 27.53 KDB 935210 D05 v01r04: 3.6
Out-of-band emissions limits	§ 2.1051 § 27.53 KDB 935210 D05 v01r04: 3.6
Out-of-band rejection	KDB 935210 D05 v01r04: 3.3
Frequency stability	§ 2.1055 § 27.54
Field strength of spurious radiation	§ 2.1053 § 27.53
All measurements	ANSI 63.26

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1.3 MEASUREMENT SUMMARY

47 CFR CHAPTER I FCC PART 27 Subpart C § 27.50 [Base Stations/Repeater]

Effective Radiated Power, mean output power and zone enhancer gain
The measurement was performed according to ANSI C63.26, KDB 935210 D05 v01r04: 3.5

OP-Mode Frequency Band, Direction, Input Power, Signal Type	**Final Result**
TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband	Passed
TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband	Passed
TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband 5G	Passed
TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband	Passed
TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband	Passed
TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband 5G	Passed

47 CFR CHAPTER I FCC PART 27 Subpart C § 27.50 [Base Stations/Repeater]

Peak to Average Ratio
The measurement was performed according to ANSI C63.26

OP-Mode Frequency Band, Direction, Input Power, Signal Type	**Final Result**
TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband	Passed
TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband	Passed
TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband 5G	Passed
TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband	Passed
TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband	Passed
TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband 5G	Passed

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47 CFR CHAPTER I FCC PART 27 Subpart C [Base Stations/Repeater] **§ 2.1049**

Occupied Bandwidth/Input-versus-output Spectrum
The measurement was performed according to ANSI C63.26, KDB 935210 D05 v01r04: 3.4 **Final Result**

OP-Mode Frequency Band, Direction, Input Power, Signal Type	**Final Result**
TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband	Passed
TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband	Passed
TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband 5G	Passed
TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband	Passed
TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband	Passed
TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband 5G	Passed

47 CFR CHAPTER I FCC PART 27 Subpart C [Base Stations/Repeater] **§ 2.1051, § 27.53**

Conducted spurious emissions at antenna terminals
The measurement was performed according to ANSI C63.26 **Final Result**

OP-Mode Frequency Band, Direction, Signal Type	**Final Result**
TDD 37, segment 1, RF downlink, Wideband	Passed
TDD 37, segment 1, RF downlink, Wideband 5G	Passed
TDD 37, segment 2, RF downlink, Wideband	Passed
TDD 37, segment 2, RF downlink, Wideband 5G	Passed
TDD 37, segment 3, RF downlink, Wideband	Passed
TDD 37, segment 3, RF downlink, Wideband 5G	Passed

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47 CFR CHAPTER I FCC PART 27 Subpart C [Base Stations/Repeater] **§ 2.1051, § 27.53**

Out-of-band emission limits
The measurement was performed according to ANSI C63.26, KDB 935210 D05 v01r04: 3.6

OP-Mode Band Edge, Frequency Band, Number of signals, Direction, Input Power, Signal Type	**Final Result**
Upper, TDD 37 segment 1, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, TDD 37 segment 1, 1, RF downlink, 3 dB > AGC, Wideband	Passed
Upper, TDD 37 segment 1, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Upper, TDD 37 segment 1, 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
Lower, TDD 37 segment 1, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Lower, TDD 37 segment 1, 1, RF downlink, 3 dB < AGC, Wideband	Passed
Lower, TDD 37 segment 1, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Lower, TDD 37 segment 1, 1, RF downlink, 3 dB < AGC, Wideband 5G	Passed
Upper, TDD 37 segment 1, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, TDD 37 segment 1, 2, RF downlink, 3 dB > AGC, Wideband	Passed
Lower, TDD 37 segment 1, 2, RF downlink, , 0.3 dB < AGC, Wideband	Passed
Lower, TDD 37 segment 1, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed

OP-Mode Band Edge, Frequency Band, Number of signals, Direction, Input Power, Signal Type	**Final Result**
Upper, TDD 37 segment 2, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, TDD 37 segment 2, 1, RF downlink, 3 dB > AGC, Wideband	Passed
Upper, TDD 37 segment 2, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Upper, TDD 37 segment 2, 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
Lower, TDD 37 segment 2, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Lower, TDD 37 segment 2, 1, RF downlink, 3 dB < AGC, Wideband	Passed
Lower, TDD 37 segment 2, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Lower, TDD 37 segment 2, 1, RF downlink, 3 dB < AGC, Wideband 5G	Passed
Upper, TDD 37 segment 2, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, TDD 37 segment 2, 2, RF downlink, 3 dB > AGC, Wideband	Passed
Lower, TDD 37 segment 2, 2, RF downlink, , 0.3 dB < AGC, Wideband	Passed
Lower, TDD 37 segment 2, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed

The test results relate only to the tested item. The sample has been provided by the client.
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OP-Mode Band Edge, Frequency Band, Number of signals, Direction, Input Power, Signal Type	**Final Result**
Upper, TDD 37 segment 3, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, TDD 37 segment 3, 1, RF downlink, 3 dB > AGC, Wideband	Passed
Upper, TDD 37 segment 3, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Upper, TDD 37 segment 3, 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
Lower, TDD 37 segment 3, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Lower, TDD 37 segment 3, 1, RF downlink, 3 dB < AGC, Wideband	Passed
Lower, TDD 37 segment 3, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Lower, TDD 37 segment 3, 1, RF downlink, 3 dB < AGC, Wideband 5G	Passed
Upper, TDD 37 segment 3, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, TDD 37 segment 3, 2, RF downlink, 3 dB > AGC, Wideband	Passed
Lower, TDD 37 segment 3, 2, RF downlink, , 0.3 dB < AGC, Wideband	Passed
Lower, TDD 37 segment 3, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed

47 CFR CHAPTER I FCC PART 27 Subpart C [Base Stations/Repeater] **KDB 935210 D05 v01r04: 3.3**

Out-of-band rejection
The measurement was performed according to ANSI C63.26; KDB 935210 D05 v01r04: 3.3

OP-Mode Frequency Band, Direction	**Final Result**
TDD 37, segment 1, RF downlink	Passed
TDD 37, segment 2, RF downlink	Passed
TDD 37, segment 3, RF downlink	Passed

47 CFR CHAPTER I FCC PART 27 Subpart C [Base Stations/Repeater] **§ 2.1053, § 27.53**

Field strength of spurious radiation
The measurement was performed according to ANSI C63.26

OP-Mode Frequency Band, Test Frequency, Direction	**Final Result**
TDD 37, segment 1, RF downlink	Passed
TDD 37, segment 2, RF downlink	Passed
TDD 37, segment 3, RF downlink	Passed

The test case frequency stability was not performed, since the EUT is not equipped with signal processing that influences the output signal frequency/frequencies (see as well chapter 5.7).

The test results relate only to the tested item. The sample has been provided by the client.
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2 ADMINISTRATIVE DATA

2.1 TESTING LABORATORY

Bureau Veritas Consumer Products Services
Germany GmbH
Thurn-und-Taxis-Straße 18
D-90411 Nürnberg
Tel.: +49 40 74041 0
Fax: +49 40 74041-2755

2.2 APPLICANT DATA

Company Name:	CommScope Andrew Wireless Systems GmbH
Address:	Industriering 10 86675 Buchdorf Germany
Contact Person:	Mr. Jiri Cecka

2.3 MANUFACTURER DATA

Company Name:	Please see applicant data.
Address:	

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3 TEST OBJECT DATA

3.1 GENERAL EUT DESCRIPTION

Kind of Device product description	Cellular Repeater
Product name	Cellular Repeater
Type	CAP H2 34T/37T F-AC-F1
Declared EUT data by the supplier	
General Product Description	The EUT is an industrial signal booster supporting the following: Band 34T: 3450 MHz - 3550 MHz Band 37T from 3700 MHz – 3980 MHz with the segments: Segment 1: 3700 MHz - 3800 MHz Segment 2: 3790 MHz - 3890 MHz Segment 3: 3880 MHz – 3980 MHz A RF operation is only supported for the downlink.
Booster Type	Industrial Signal Booster
Voltage Type	AC
Voltage Level	100 V to 240 V
Maximum Output Donor Port [Uplink]	-
Maximum Output Server Port [Downlink]	43 dBm in all bands
Maximum Gain [Uplink]	-
Maximum Gain [Downlink]	48 dB in all bands

The main components of the EUT are listed and described in chapter 3.2EUT Main components.

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3.2 EUT MAIN COMPONENTS

Sample Parameter	Value
Serial Number	BGH2AA2434005
HW Version	7857017-0001 Rev: 00
SW Version	1.10.0.180007
Comment	-----

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

3.3 ANCILLARY EQUIPMENT

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

Device	Details(Manufacturer, Type Model, OUT Code)	Description
-	-	-

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3.4 AUXILIARY EQUIPMENT

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

Device	**Details (Manufacturer, Type, S/N)**	**Description**
AUX1	GE Energy, SP800, 14CS12226993	Power supply rack
AUX2	GE Power Electronic Inc., CAR1212FPBC-Z, n. a.	Power plug-in module
AUX3	CommScope, ION-E WCS-2, SZAEJAJ1719A0003	Module rack
AUX4	CommScope, ION-E OPT, MA43	Optical plug-in module
AUX5	Commcope, 7680813,STPAP311A1802788	Optical plug in probe
AUX6	Commcope, 7680813,STPAP31184707735	Optical plug in probe
AUX8	CommScope, ION-E SUI, SZBEAC1934A0018	Interface card plug-in module
AUX8	CommScope, RFD HB, SZBEAQ2140A0014	RF card plug-in module
AUX9	CommScope, RFD HB, SZBEAQ3324A0084	RF card plug-in module

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3.5 EUT SETUPS

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

Setup	Combination of EUTs	Description and Rationale
	,	Setup for all tests

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3.6 Operating Modes

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

3.6.1 TEST CHANNELS

Segment of TDD 37 band	Direction	Lower Frequency Band Edge [MHz]	Upper Frequency Band Edge [MHz]	Center Frequency [MHz]	Port
1/low	Downlink	3700.00	3800.00	3750.00	Donor
2/mid	Downlink	3790.00	3890.00	3840.00	Donor
3/high	Downlink	3880.00	3980.00	3930.00	Donor

3.6.2 DEFINITION OF USED FREQUENCY BANDS

Wideband 1: representation by an AWGN signal with 4.1 MHz
Wideband 2: representation by an AWGN signal with 98.3 MHz

3.6.3 USED ANTENNA PORTS FOR TESTS

At all test except MIMO tests antenna port 1 was used. At MIMI test antenna ports 1 and 2 were used.

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3.6.4 AUTOMATIC GAIN CONTROL LEVELS

AGC Levels

Segment of TDD 37 band	Direction	Signal Type	AGC Start Pin [dBm]	AGC Start Pin -0.3 dB [dBm]	AGC Start Pin +3 dB [dBm]	Frequency [MHz]	Frequency
1	downlink	Wideband	-2.8	-3.1	0.2	3750.0	Mid
2	downlink	Wideband	-2.4	-2.7	0.6	3840.0	
3	downlink	Wideband	-2.6	-2.9	0.3	3930.0	
1	downlink	Wideband 5G	-3.8	-4.1	-0.8	3750.0	
2	downlink	Wideband 5G	-3.8	-4.1	-0.7	3840.0	
3	downlink	Wideband 5G	-3.5	-3.8	-0.5	3930.0	
1	downlink	Wideband	-3.0	-3.3	0.0	3702.5	Low
2	downlink	Wideband	-4.0	-4.2	-1.2.	3792.5	
3	downlink	Wideband	-2.8	-3.1	0.2	3882.5	
1	downlink	Wideband	-3.0	-3.3	0.0	3797.5	High
2	downlink	Wideband	-3.2	-3.5	-0.2	3887.5	
3	downlink	Wideband	-2.9	-3.1	0.2	3977.5	
1	downlink	Wideband	-4.1	-4.4	-!.2	3797.0	Max.Power
2	downlink	Wideband	-4.0	-4.2	-1.2	3792.0	
3	downlink	Wideband	-3.8	-4.1	-0.9	3882.6	
1	downlink	Wideband 5G	-3.8	-4.1	-0.8	3750.0	
2	downlink	Wideband 5G	-3.8	-4.1	-0.7	3840.0	
3	downlink	Wideband 5G	-3.5	-3.8	-0.5	3930.0	

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3.7 PRODUCT LABELLING

3.7.1 FCC ID LABEL

Please refer to the documentation of the applicant.

3.7.2 LOCATION OF THE LABEL ON THE EUT

Please refer to the documentation of the applicant.

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4 DESCRIPTION OF EMC TEST CENTRE

4.1 CLIMATIC CONDITIONS DURING MEASUREMENTS

The climatic conditions were within the following ranges.
For ESD testing, the conditions during the test were denoted in the corresponding chapter.

Ambient temperature:	25 ± 10 °C
Relative humidity:	20 – 60 %
Air pressure:	860 - 1060 hPa

4.2 CONFORMITY STATEMENT / DECISION RULE

4.2.1 EMISSION

If the standard or the customer defines no decision rule, the laboratory applies a decision rule following the "Binary Statement for Simple Acceptance Rule (w=0)" (chapter 4.2.1) of ILAC Guidelines on Decision Rules and Statements of Conformity (ILAC-G8:09/2019). If the measured value is at the limit value, it is evaluated as PASS. The client has agreed with application of the decision rule prior testing and demanded a statement of conformity by the test laboratory.

The test results relate only to the tested item. The sample has been provided by the client.
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4.3 MEASUREMENT UNCERTAINTY

The table below shows the measurement uncertainties for each measurement method. The expanded uncertainty was calculated with worst case values over the complete frequency area.

Measurement method	Parameter	Description	Exp. Uncertainty (k=2)
Radiated emissions – ALSE method (CISPR 25)	9 kHz – 30 MHz	Fully/Semi anechoic chamber	1.8 dB
	30 MHz – 1 GHz		1.8 dB
	1 GHz – 6 GHz		3.1 dB
Conducted emissions - Voltage method (CISPR 25)	150 kHz - 108 MHz	Fully/Semi anechoic chamber	1.1 dB
Conducted emissions – Current probe method (CISPR 25)	150 kHz – 245 MHz	Fully/Semi anechoic chamber	2.2 dB
Radiated emissions – Stripline method (CISPR 25)	100 kHz – 1 GHz	Fully/Semi anechoic chamber	1.5 dB
Radiated emissions – Capacitive voltage measurement method (OEM)	100 kHz – 30 MHz	Fully/Semi anechoic chamber	1 dB
Radiated emissions – Isotrope Magnetfeldspule 100 cm² method (OEM)	1 Hz – 400 kHz	Fully/Semi anechoic chamber	5.1 dB
Radiated emissions – Magnetfeldspule 60 cm method (OEM)	9 kHz – 30 MHz	Fully/Semi anechoic chamber	1 dB
Radiated emissions – Magnetfeldspule 12 cm method (OEM)	20 Hz – 200 kHz	Fully/Semi anechoic chamber	1.5 dB
Electrical transient conduction along supply lines only (ISO 7637-2)	Voltage	EMI	4.3 dB
	Time		0,26 %

The test results relate only to the tested item. The sample has been provided by the client.
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5 TEST RESULTS

5.1 EFFECTIVE RADIATED POWER, MEAN OUTPUT POWER AND ZONE ENHANCER GAIN

Standard FCC Part 27, §27.50

The test was performed according to:
ANSI C63.26, KDB 935210 D05 v01r04: 3.5

Test date: 2024-11-29 – 2024-12-01

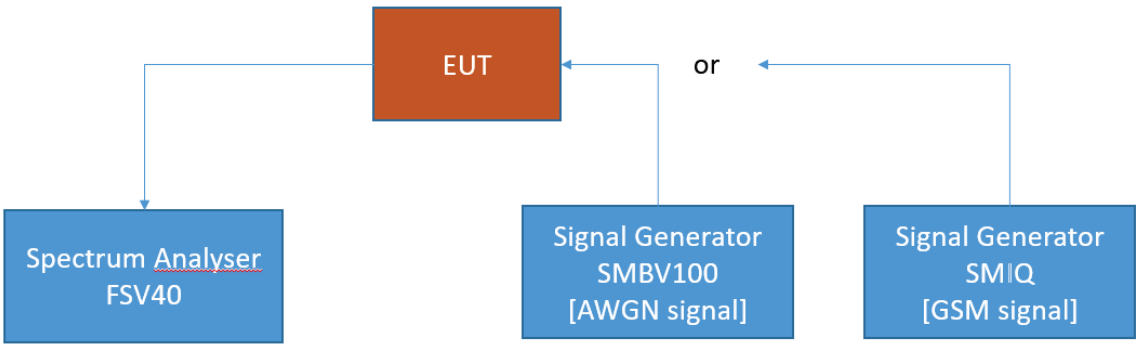
Environmental conditions: 24.7 °C; 20 % r. F.

Test engineer: Thomas Hufnagel

5.1.1 TEST DESCRIPTION

This test case is intended to demonstrate compliance to the signal booster power and gain limits and requirements for industrial signal boosters.

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



FCC Part 22/24/27/90 Industrial signal booster – Test Setup; RF Output Power / Gain

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

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

The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

5.1.2 TEST REQUIREMENTS/LIMITS

Part 27; Miscellaneous Wireless Communication Services

Subpart C – Technical standards

§ 27.50

(j) The following power requirements apply to stations transmitting in the 3700-3980 MHz band:

(1) The power of each fixed or base station transmitting in the 3700-3980 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(2) The power of each fixed or base station transmitting in the 3700-3980 MHz band and situated in any geographic location other than that described in paragraph (j)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(3) Mobile and portable stations are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(4) Equipment employed must be authorized in accordance with the provisions of § 27.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (j)(5) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(5) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, and any other relevant factors, so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

The test results relate only to the tested item. The sample has been provided by the client.
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5.1.3 TEST PROTOCOL

37T, segment 1; downlink							
Signal Type	**Input Power**	**Frequency [MHz]**	**Input Power [dBm]**	**Maximum Average Output Power [dBm]**	**Limit Average Output Power [dBm]**	**Margin to Limit [dB]**	**Gain [dB]**
Wideband	0.3 dB < AGC	3797.0	-4.4	43.1	62.1	19.0	47.5
Wideband	3 dB > AGC	3797.0	-1.2	44.2	62.1	17.9	45.4
Wideband 5G	0.3 dB < AGC	3750.0	-4.1	42.6	62.1	19.5	46.7
Wideband 5G	3 dB > AGC	3750.0	-0.8	43.4	62.1	18.7	44.2

37T, segment 2; downlink							
Signal Type	**Input Power**	**Frequency [MHz]**	**Input Power [dBm]**	**Maximum Average Output Power [dBm]**	**Limit Average Output Power [dBm]**	**Margin to Limit [dB]**	**Gain [dB]**
Wideband	0.3 dB < AGC	3792.0	-4.2	43.1	62.1	19.0	47.3
Wideband	3 dB > AGC	3792.0	-1.2	43.6	62.1	18.5	44.8
Wideband 5G	0.3 dB < AGC	3840.0	-4.1	42.7	62.1	19.4	46.8
Wideband 5G	3 dB > AGC	3840.0	-0.7	43.4	62.1	18.7	44.1

37T, segment 3; downlink							
Signal Type	**Input Power**	**Frequency [MHz]**	**Input Power [dBm]**	**Maximum Average Output Power [dBm]**	**Limit Average Output Power [dBm]**	**Margin to Limit [dB]**	**Gain [dB]**
Wideband	0.3 dB < AGC	3882.6	-4.1	43.6	62.1	18.5	47.7
Wideband	3 dB > AGC	3882.6	-0.9	43.5	62.1	18.6	44.4
Wideband 5G	0.3 dB < AGC	3930.0	-3.8	43.2	62.1	18.9	47.0
Wideband 5G	3 dB > AGC	3930.0	-0.5	43.2	62.1	18.9	43.7

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

The test results relate only to the tested item. The sample has been provided by the client.
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Maximum output power (EIRP) in consideration together with the send antenna system

The highest power level in the tables above is
$p_{highest}$ = 43.6 dBm at the channel which has the most output power of all channels.

Hereby at an antenna gain of G_{dB} = 13 dBi the highest effecitve radiated output power EIRP $p_{EIRP\ 1CH}$ of one channel is:

$p_{EIRP\ 1CH} = p_{highest} + G_{dB}$

This results in:

$p_{EIRP\ 1CH}$ = 43.6 dBm + 13 dBi = 56.6 dBm

The eqivalent power P is according the given formula:

$P_{EIRP\ 1CH}$ =

$$P\ EIRP\ 1CH\ [W] = 10EXP\ \left(p\ EIRP\ 1CH\ [dBm]\ /\ 10\right) * 0.001\ [W]$$

This results in:

$$P\ EIRP\ 1CH\ [W] = 10EXP\ \left(56.6\ [dBm]\ /\ 10\right) * 0.001\ [W] = 457\ \text{W}$$

Supposed all two antenna ports are working together in MIMO operation the highest value of the highest output power $p_{EIRP\ 2CH}$ is:

$p_{EIRP\ 2CH} = 2 * p_{EIRP\ 1CH}$

This results in:

$p_{EIRP\ 2CH}$ = 2 * 457 W = 914 W

Final result of this consideration:

$p_{EIRP\ 2CH}$ = 914 W < 1640 W, hereby 1640 W is the highest allowed limit in this band which equates 62.1 dBm.

The DUT doesn't exceed the limit.

The test results relate only to the tested item. The sample has been provided by the client.
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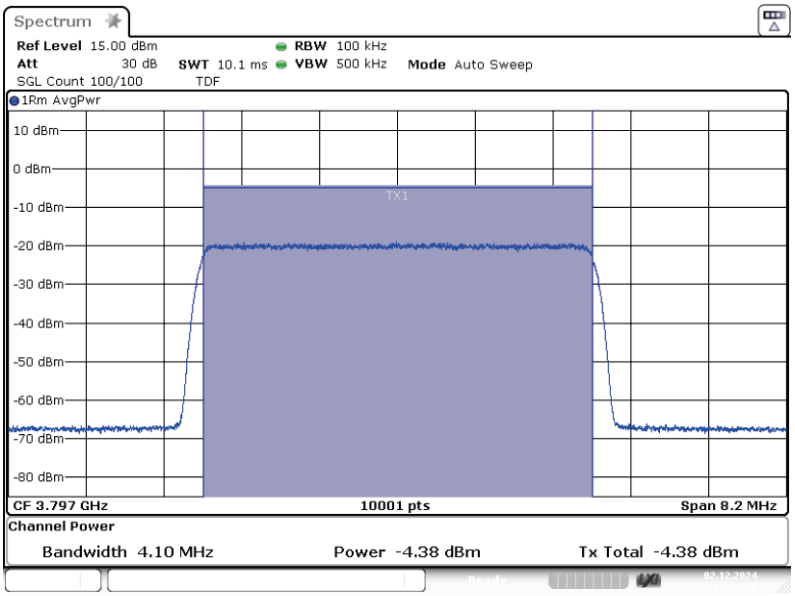
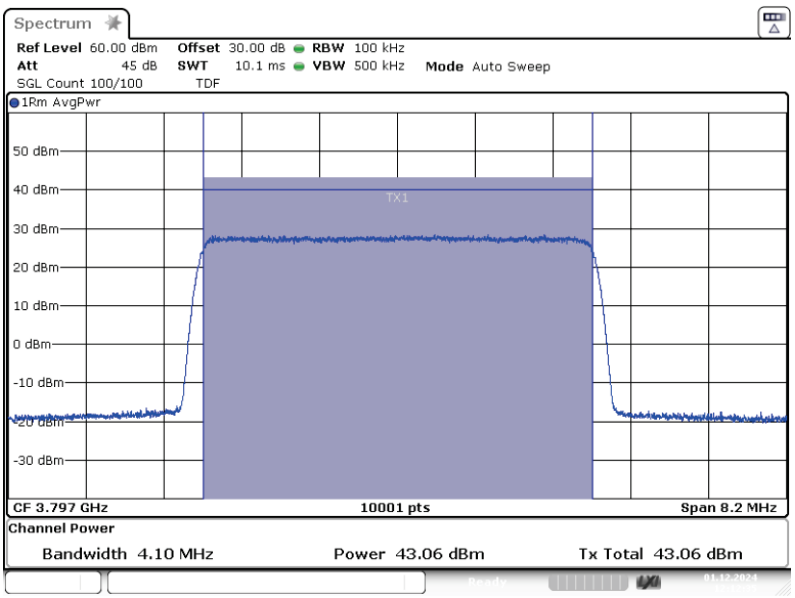
5.1.4 MEASUREMENT PLOT

Band: TDD 37, Segment 1; Frequency: 3.7970 GHz; Band Edge: f0; Mod: AWGN; Input Power 0.3 dB < AGC



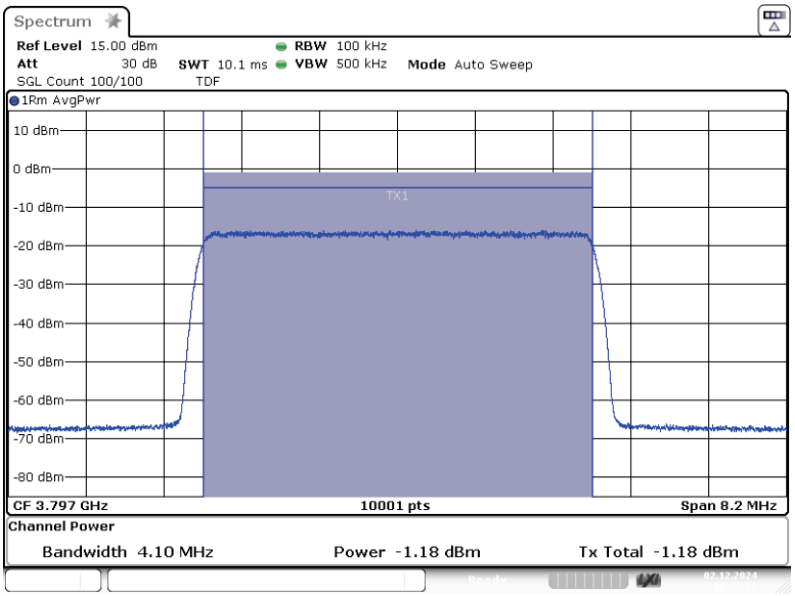
3.5.3 Power AWGN In-0.3 3.79700G

Band: TDD 37, Segment 1; Frequency: 3.7970 GHz; Band Edge: f0; Mod: AWGN; Output Power 0.3 dB < AGC



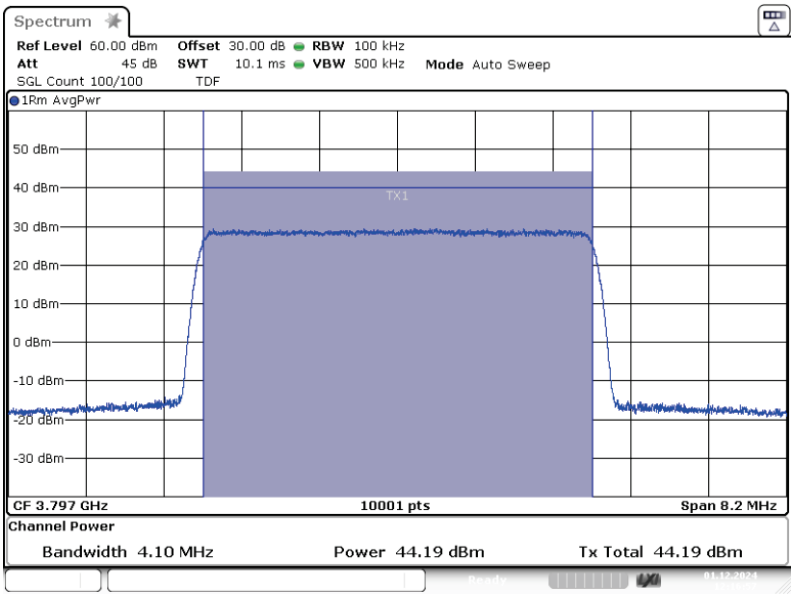
3.5.3 Power AWGN Out -0.3 3.79700G

Band: TDD 37, Segment 1; Frequency: 3.7970 GHz; Band Edge: f0; Mod: AWGN; Input Power 3 dB > AGC



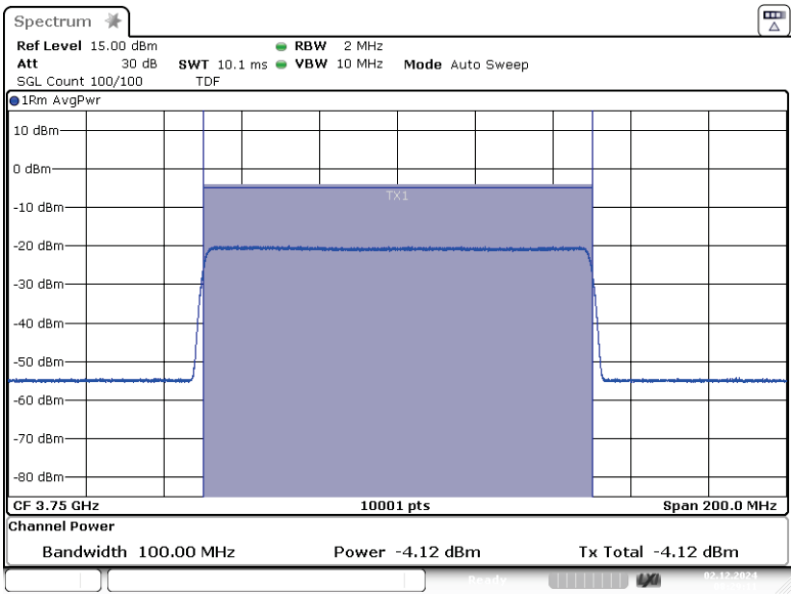
3.5.3 Power AWGN In+3 3.79700G

Band: TDD 37, Segment 1; Frequency: 3.7970 GHz; Band Edge: f0; Mod: AWGN; Output Power 3 dB > AGC



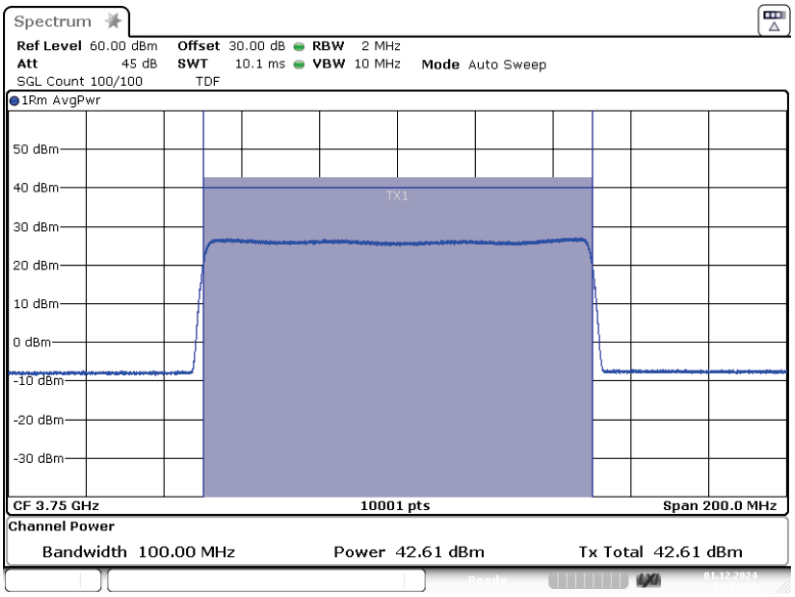
3.5.3 Power AWGN Out +3 3.79700G

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; Input Power 0.3 dB < AGC



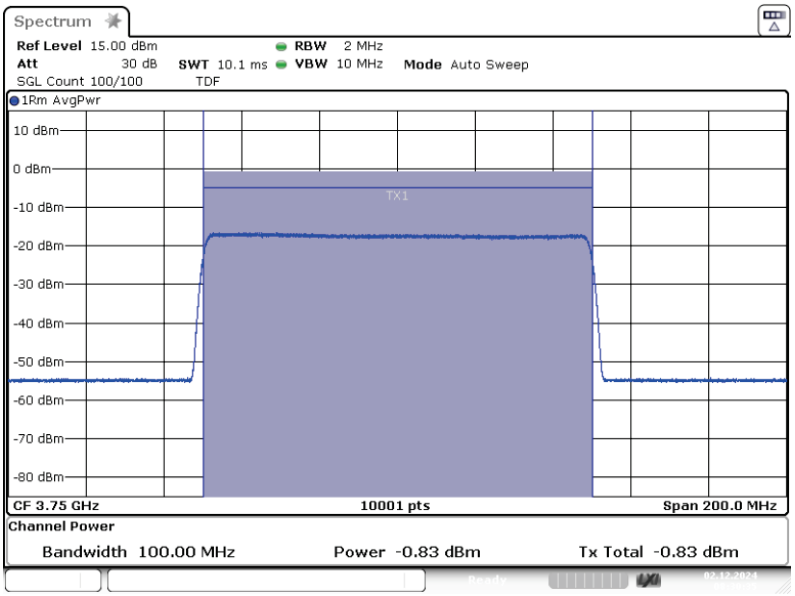
3.5.3 Power AWGN100 In-0.3 3.75000G

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; Output Power 0.3 dB < AGC



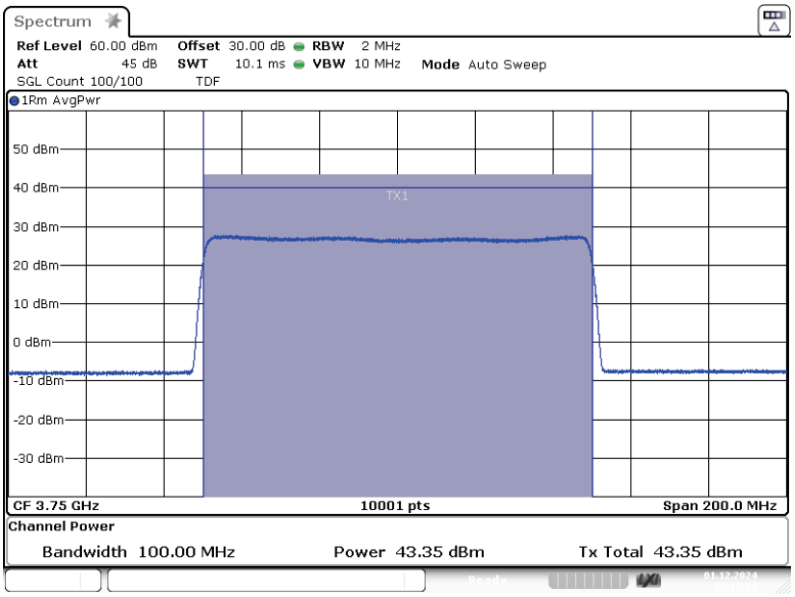
3.5.3 Power AWGN100 Out -0.3 3.75000G

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; Input Power 3 dB > AGC



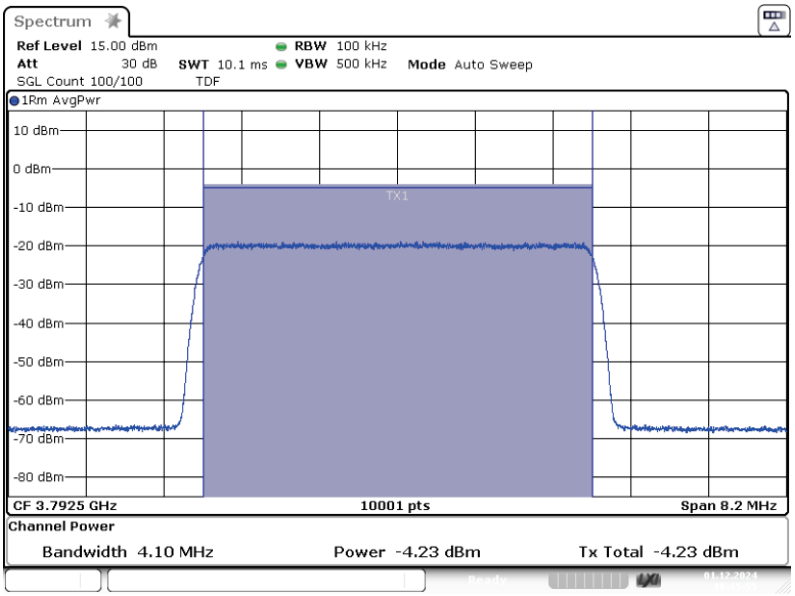
3.5.3 Power AWGN100 In+3 3.75000G

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; Output Power 3 dB > AGC



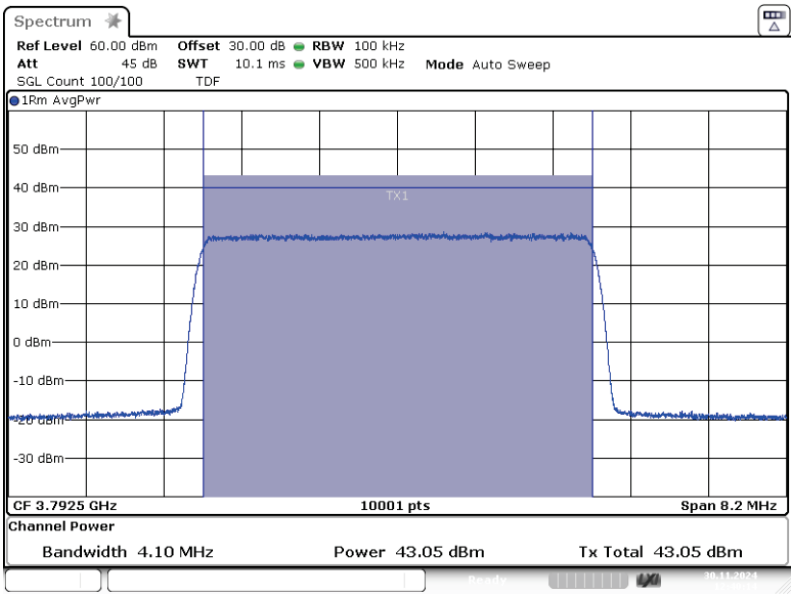
3.5.3 Power AWGN100 Out +3 3.75000G

Band: TDD 37, Segment 2; Frequency: 3.7925 GHz; Band Edge: f0; Mod: AWGN; Input Power 0.3 dB < AGC



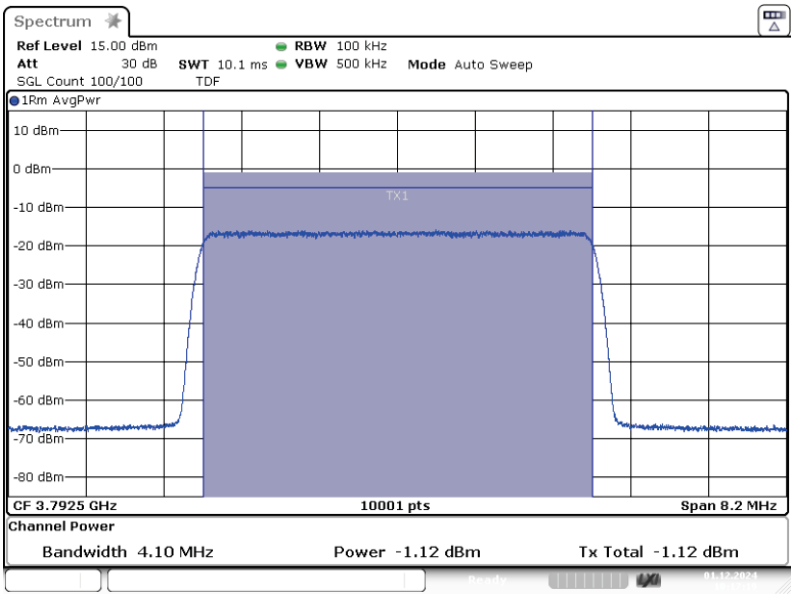
3.5.3 Power AWGN In-0.3 3.79250G

Band: TDD 37, Segment 2; Frequency: 3.7925 GHz; Band Edge: f0; Mod: AWGN; Output Power 0.3 dB < AGC



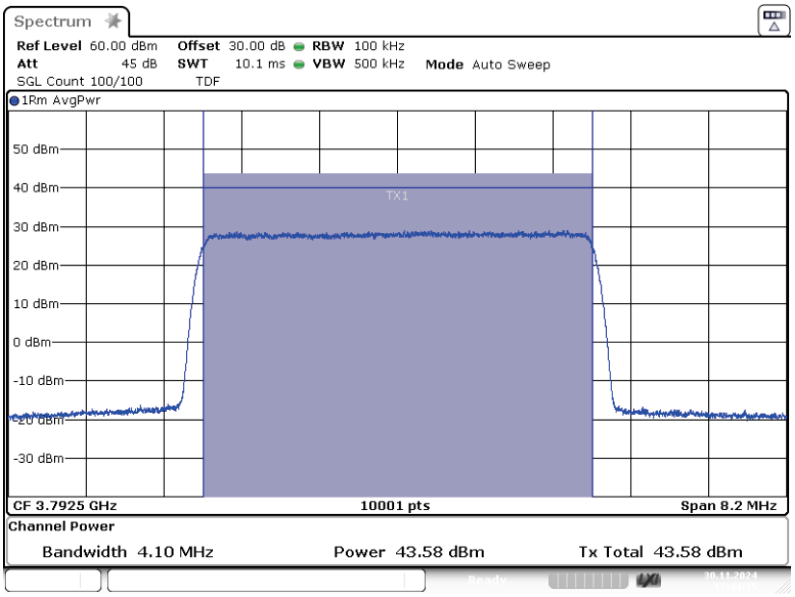
3.5.3 Power AWGN Out -0.3 3.79250G

Band: TDD 37, Segment 2; Frequency: 3.7925 GHz; Band Edge: f0; Mod: AWGN; Input Power 3 dB > AGC



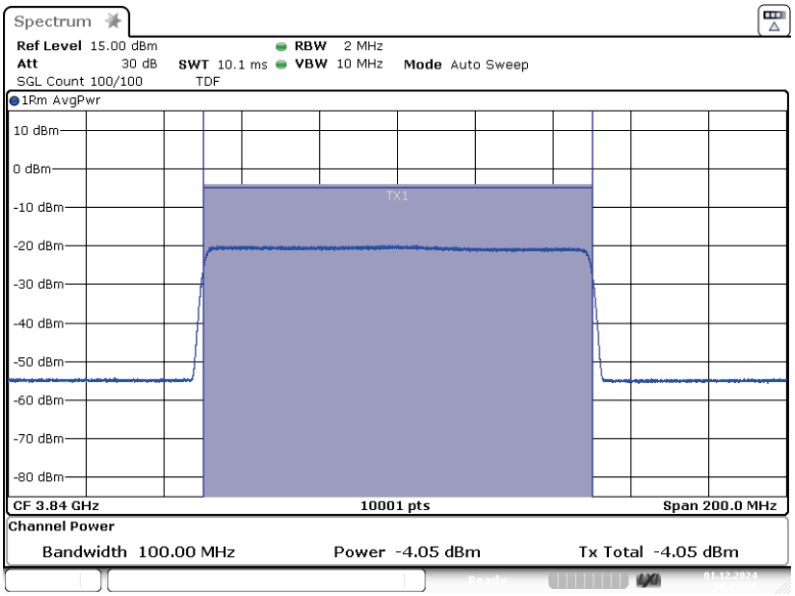
3.5.3 Power AWGN In+3 3.79250G

Band: TDD 37, Segment 2; Frequency: 3.7925 GHz; Band Edge: f0; Mod: AWGN; Output Power 3 dB > AGC



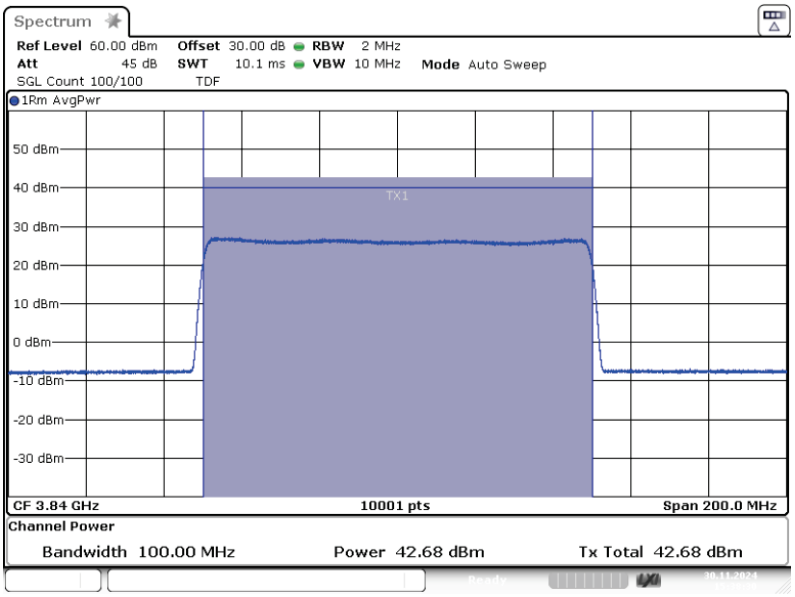
3.5.3 Power AWGN Out +3 3.79250G

Band: TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; Input Power 0.3 dB < AGC



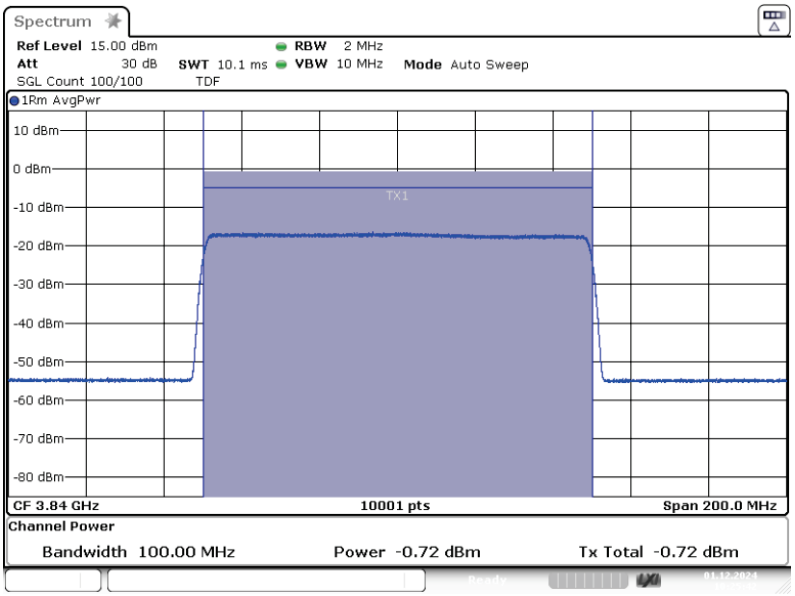
3.5.3 Power AWGN100 In-0.3 3.84000G

Band: TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; Output Power 0.3 dB < AGC



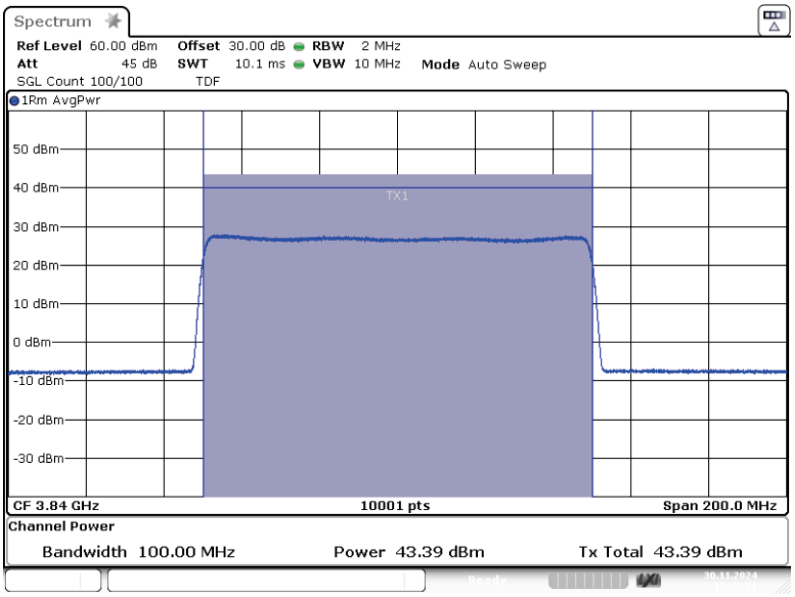
3.5.3 Power AWGN100 Out -0.3 3.84000G

Band: TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; Input Power 3 dB > AGC



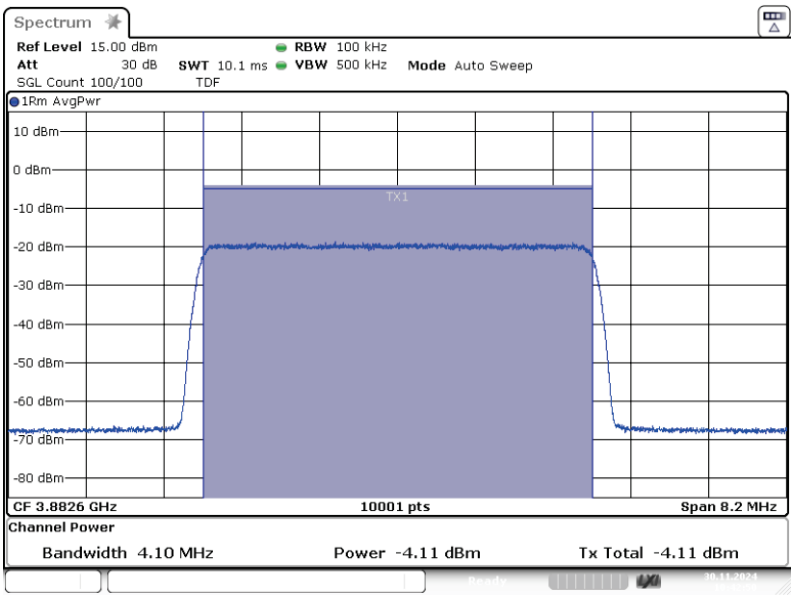
3.5.3 Power AWGN100 In+3 3.84000G

Band: TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; Output Power 3 dB > AGC



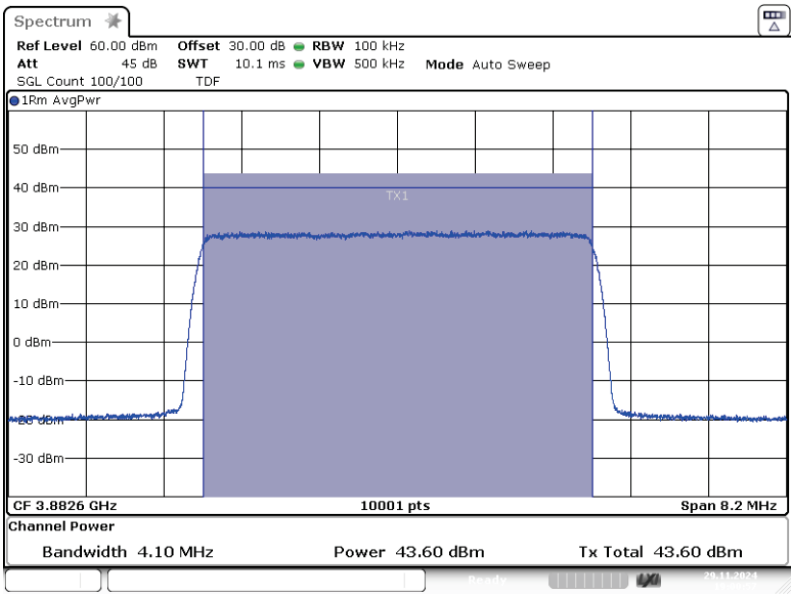
3.5.3 Power AWGN100 Out +3 3.84000G

Band: TDD 37, Segment 3; Frequency: 3.8826 GHz; Band Edge: f0; Mod: AWGN; Input Power 0.3 dB < AGC



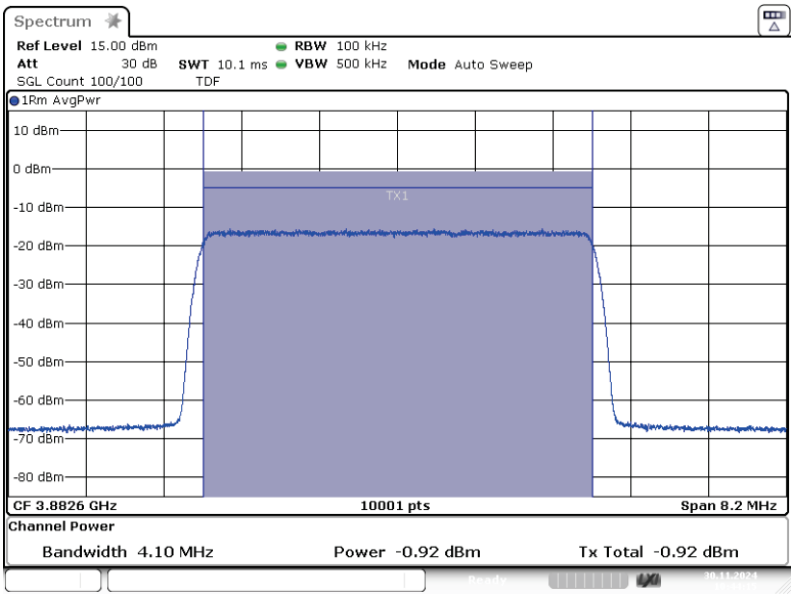
3.5.3 Power AWGN In-0.3 3.88260G

Band: TDD 37, Segment 3; Frequency: 3.8826 GHz; Band Edge: f0; Mod: AWGN; Output Power 0.3 dB < AGC



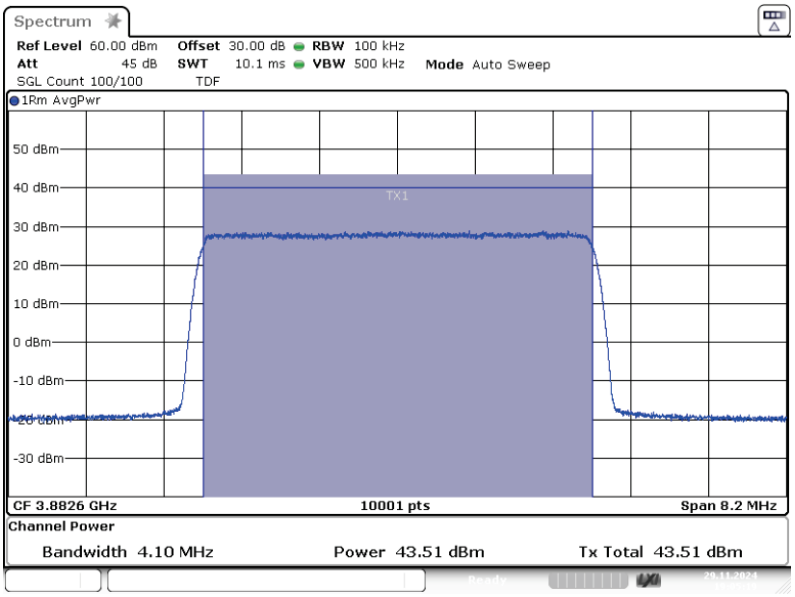
3.5.3 Power AWGN Out -0.3 3.88260G

Band: TDD 37, Segment 3; Frequency: 3.8826 GHz; Band Edge: f0; Mod: AWGN; Input Power 3 dB > AGC



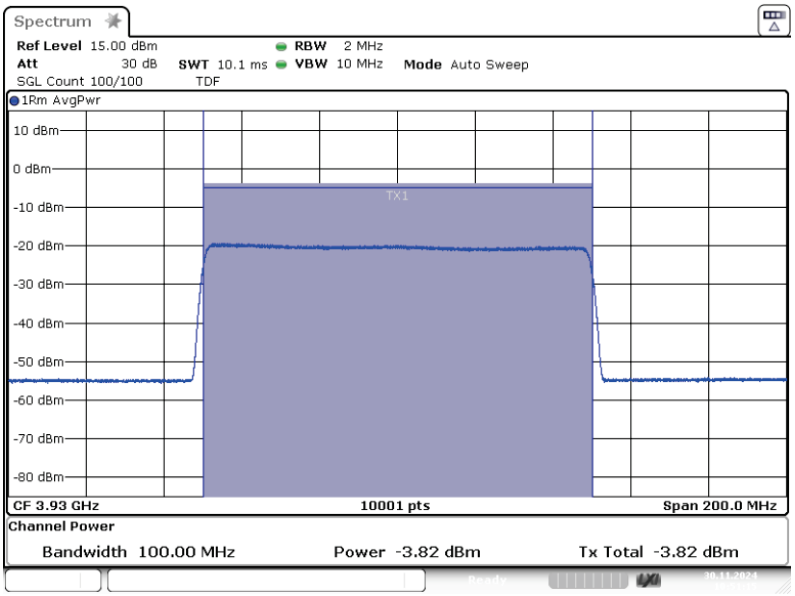
3.5.3 Power AWGN In+3 3.88260G

Band: TDD 37, Segment 3; Frequency: 3.8826 GHz; Band Edge: f0; Mod: AWGN; Output Power 3 dB > AGC



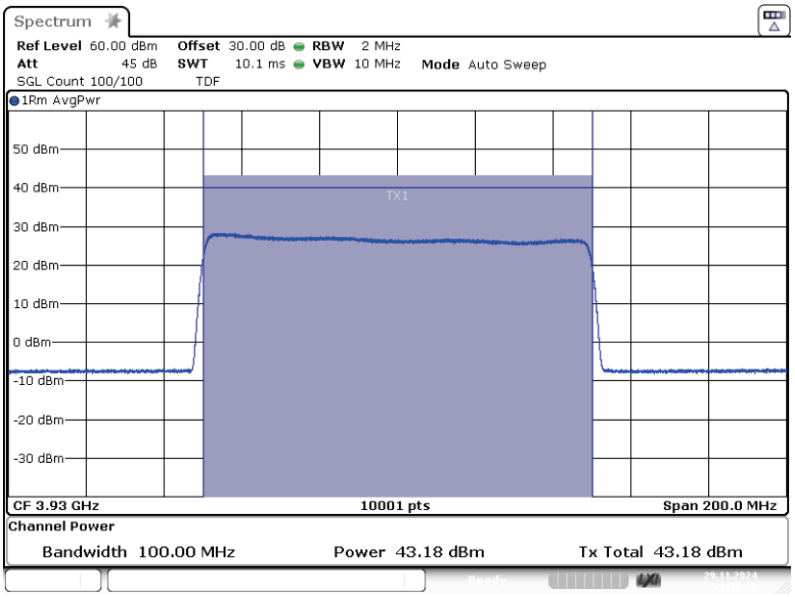
3.5.3 Power AWGN Out +3 3.88260G

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; Input Power 0.3 dB < AGC



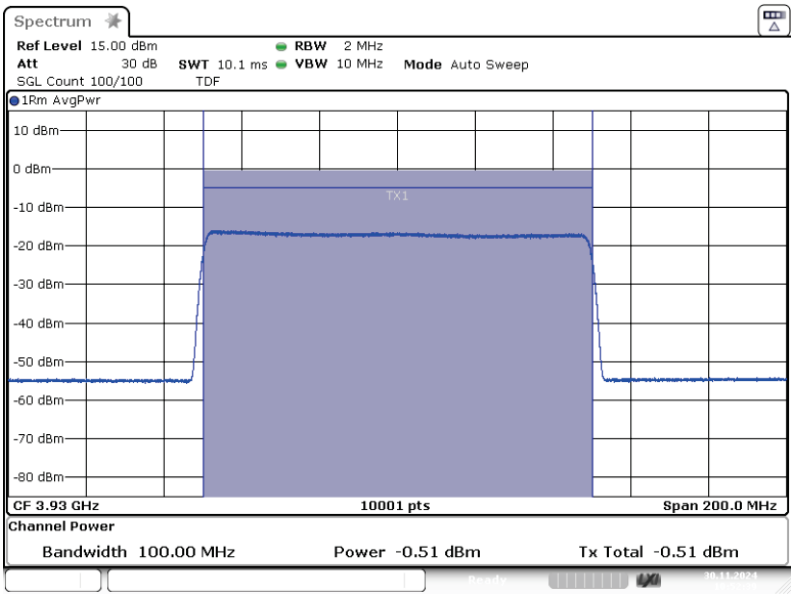
3.5.3 Power AWGN100 In-0.3 3.93000G

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; Output Power 0.3 dB < AGC



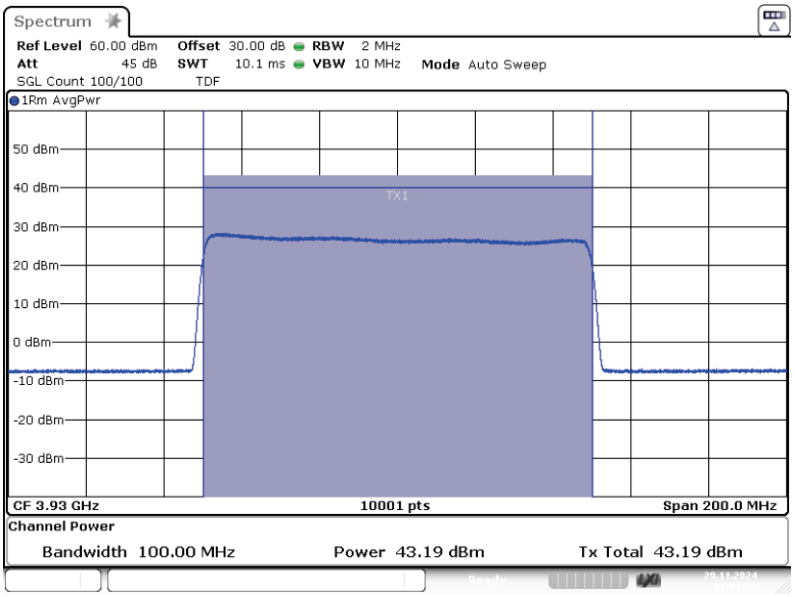
3.5.3 Power AWGN100 Out -0.3 3.93000G

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; Input Power 3 dB > AGC



3.5.3 Power AWGN100 In+3 3.93000G

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; Output Power 3 dB > AGC



3.5.3 Power AWGN100 Out +3 3.93000G

5.1.5 TEST EQUIPMENT USED

- Conducted

The test results relate only to the tested item. The sample has been provided by the client.
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5.2 PEAK TO AVERAGE RATIO

Standard FCC Part 27, §27.50

The test was performed according to:
ANSI C63.26

Test date: 2024-11-29 – 2024-12-01

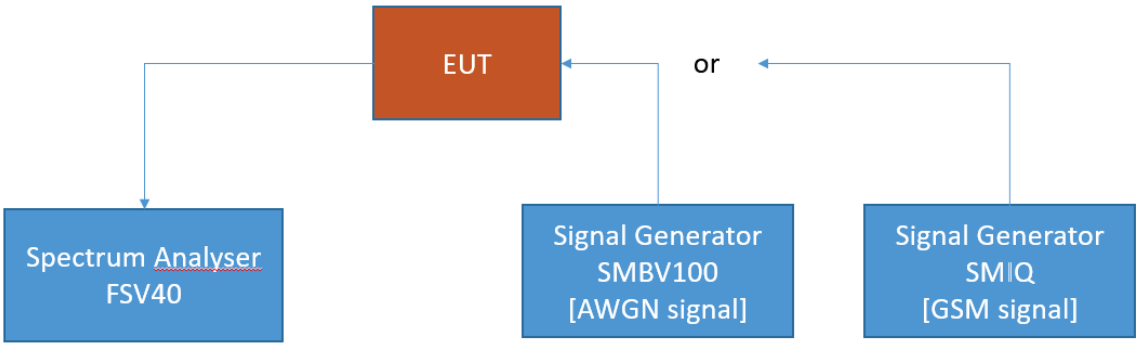
Environmental conditions: 24.7 °C; 20 % r. F.

Test engineer: Thomas Hufnagel

5.2.1 TEST DESCRIPTION

This test case is intended to demonstrate compliance to the signal booster power and gain limits and requirements for industrial signal boosters.

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



FCC Part 22/24/27/90 Industrial signal booster – Test Setup; RF Output Power / Gain

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

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

The test results relate only to the tested item. The sample has been provided by the client.
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5.2.2 TEST REQUIREMENTS/LIMITS

Part 27; Miscellaneous Wireless Communication Services

Subpart C – Technical standards

§ 27.50

(j) The following power requirements apply to stations transmitting in the 3700-3980 MHz band:

(4) Equipment employed must be authorized in accordance with the provisions of § 27.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (j)(5) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

5.2.3 TEST PROTOCOL

37T, segment 1; downlink						
Signal Type	**Input Power**	**Frequency [MHz]**	**Input Power [dBm]**	**PAPR [dB]**	**Limit PAPR [dB]**	**Margin to Limit [dB]**
Wideband	0.3 dB < AGC	3797.0	-4.4	8.4	13.0	4.6
Wideband	3 dB > AGC	3797.0	-1.2	8.3	13.0	4.7
Wideband 5G	0.3 dB < AGC	3750.0	-4.1	8.4	13.0	4.6
Wideband 5G	3 dB > AGC	3750.0	-0.8	8.5	13.0	4.5

37T, segment 2; downlink						
Signal Type	**Input Power**	**Frequency [MHz]**	**Input Power [dBm]**	**PAPR [dB]**	**Limit PAPR [dB]**	**Margin to Limit [dB]**
Wideband	0.3 dB < AGC	3792.0	-4.2	8.3	13.0	4.7
Wideband	3 dB > AGC	3792.0	-1.2	8.3	13.0	4.7
Wideband 5G	0.3 dB < AGC	3840.0	-4.1	8.4	13.0	4.6
Wideband 5G	3 dB > AGC	3840.0	-0.7	8.5	13.0	4.5

37T, segment 3; downlink						
Signal Type	**Input Power**	**Frequency [MHz]**	**Input Power [dBm]**	**PAPR [dB]**	**Limit PAPR [dB]**	**Margin to Limit [dB]**
Wideband	0.3 dB < AGC	3882.6	-4.1	8.4	13.0	4.6
Wideband	3 dB > AGC	3882.6	-0.9	8.4	13.0	4.6
Wideband 5G	0.3 dB < AGC	3930.0	-3.8	8.5	13.0	4.5
Wideband 5G	3 dB > AGC	3930.0	-0.5	8.5	13.0	4.5

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

The test results relate only to the tested item. The sample has been provided by the client.
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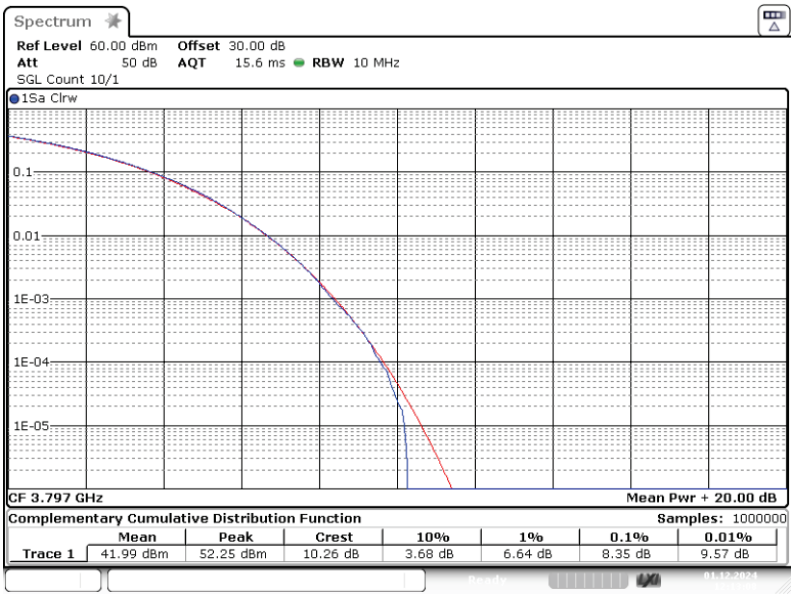
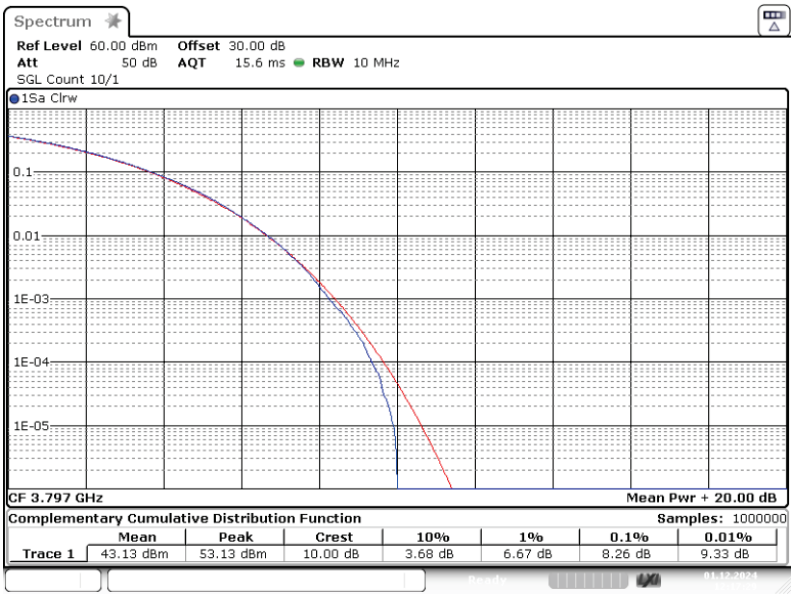
5.2.4 MEASUREMENT PLOT

Band: TDD 37, Segment 1; Frequency: 3.7970 GHz; Band Edge: f0; Mod: AWGN; PAPR 0.3 dB < AGC



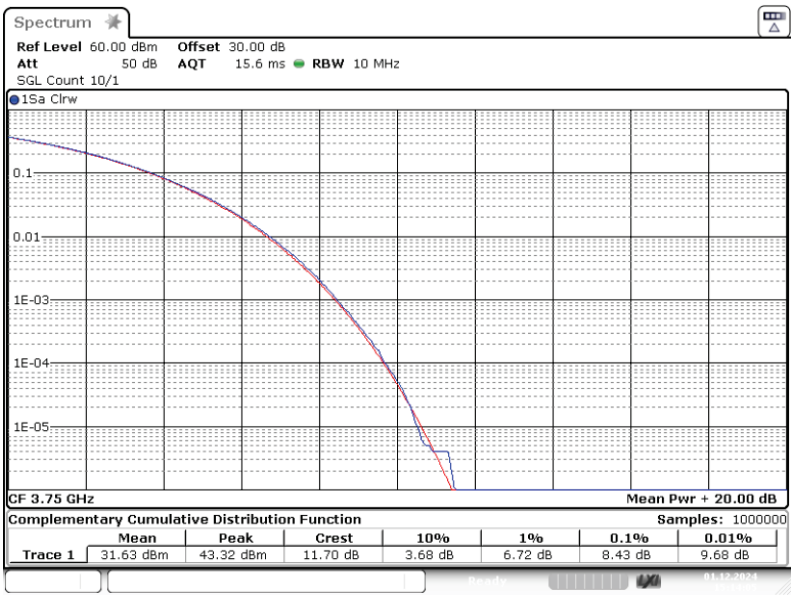
4.0 PAPR AWGN Out -0.3 3.797G

Band: TDD 37, Segment 1; Frequency: 3.7970 GHz; Band Edge: f0; Mod: AWGN; PAPR 3 dB > AGC



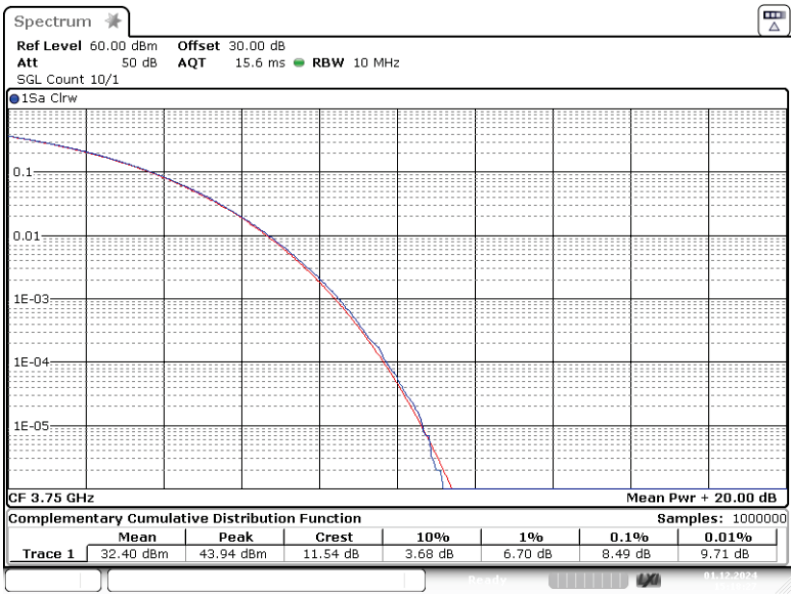
4.0 PAPR AWGN Out +3 3.797G

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; PAPR 0.3 dB < AGC



4.0 PAPR AWGN100 Out -0.3 3.750G

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; PAPR 3 dB > AGC



4.0 PAPR AWGN100 Out +3 3.750G

The test results relate only to the tested item. The sample has been provided by the client.
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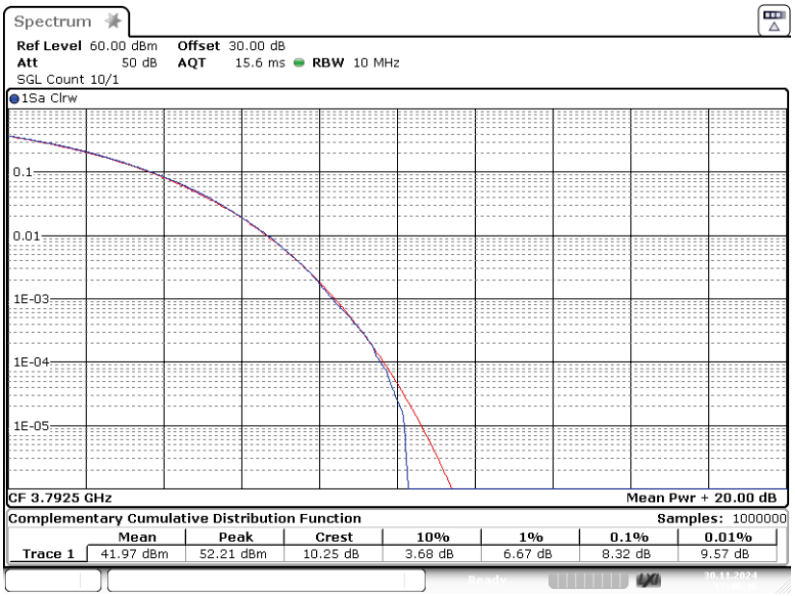
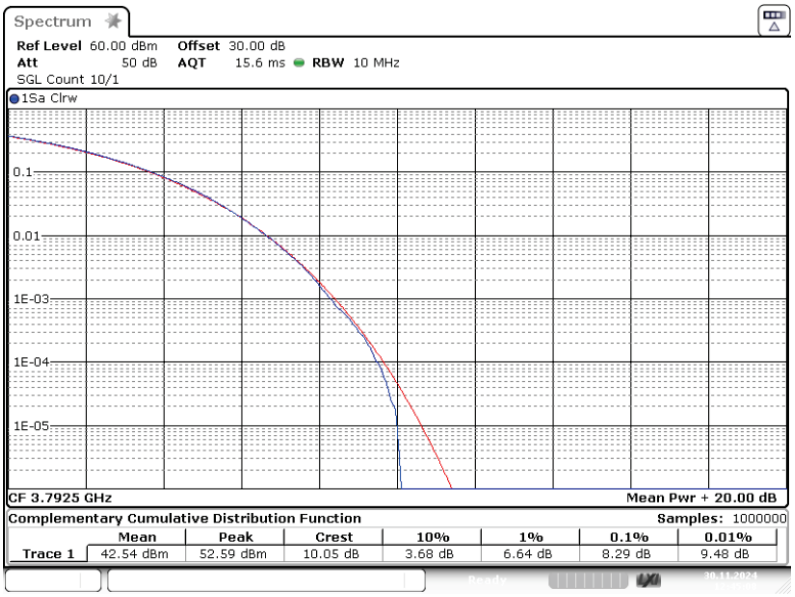
Band: TDD 37, Segment 2; Frequency: 3.7925 GHz; Band Edge: f0; Mod: AWGN; PAPR 0.3 dB < AGC



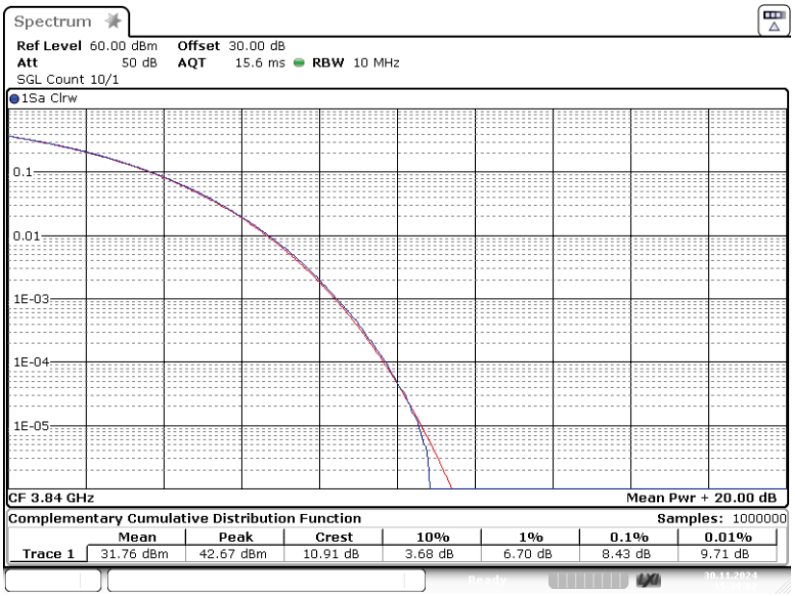
4.0 PAPR AWGN Out -0.3 3.793G

Band: TDD 37, Segment 2; Frequency: 3.7925 GHz; Band Edge: f0; Mod: AWGN; PAPR 3 dB > AGC



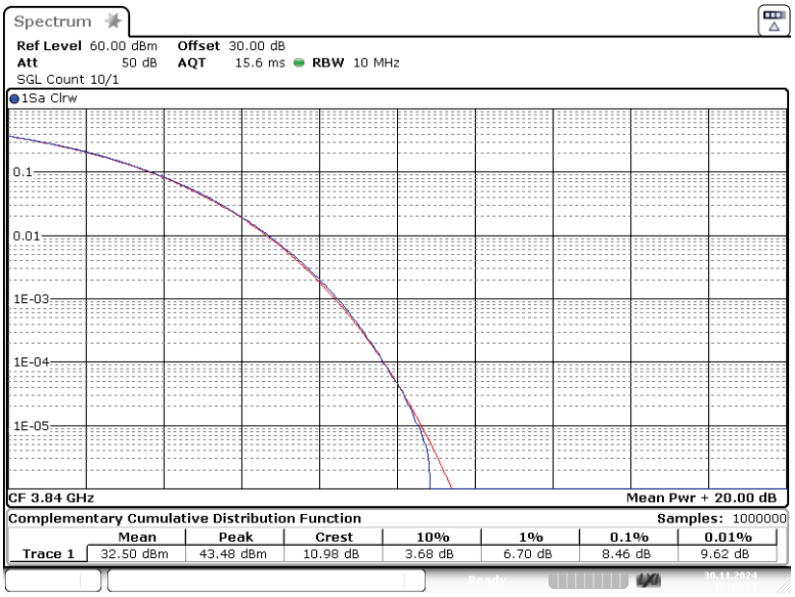
4.0 PAPR AWGN Out +3 3.793G

Band: TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; PAPR 0.3 dB < AGC



4.0 PAPR AWGN100 Out -0.3 3.840G

Band: TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; PAPR 3 dB > AGC



4.0 PAPR AWGN100 Out +3 3.840G

The test results relate only to the tested item. The sample has been provided by the client.
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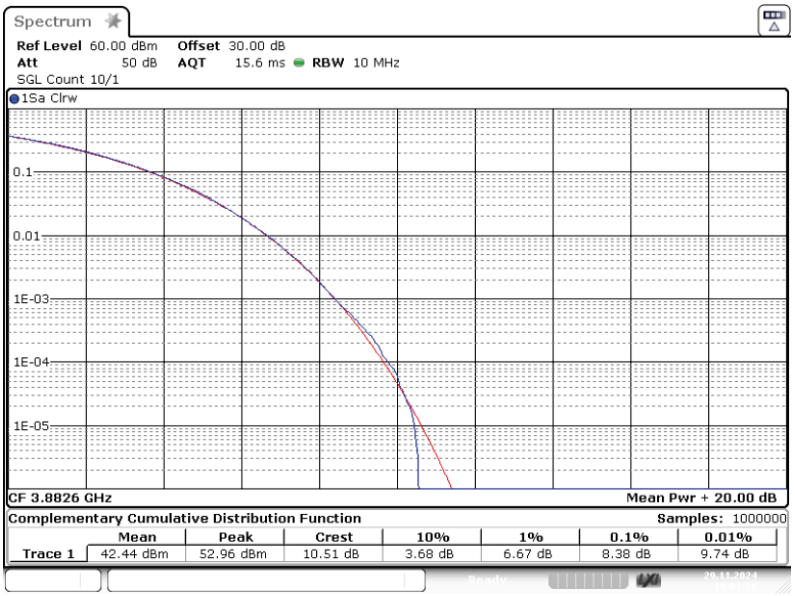
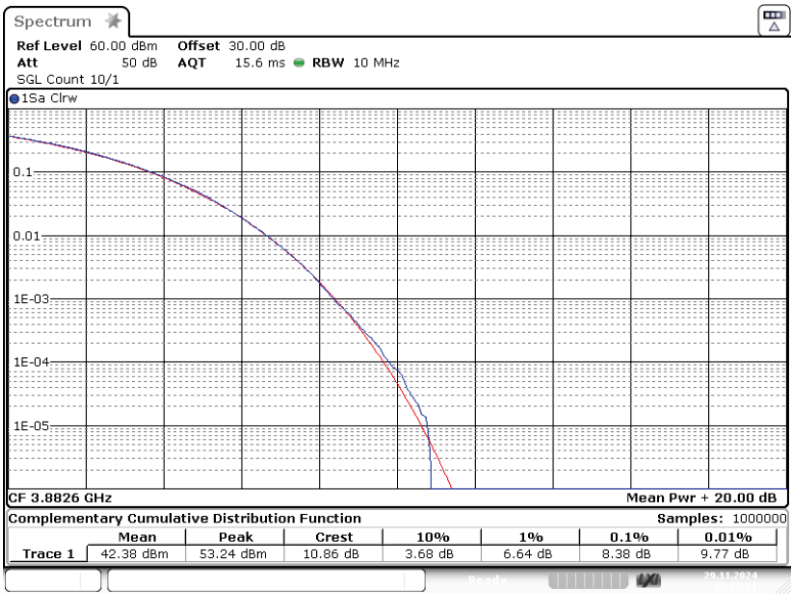
Band: TDD 37, Segment 3; Frequency: 3.8826 GHz; Band Edge: f0; Mod: AWGN; PAPR 0.3 dB < AGC



4.0 PAPR AWGN Out -0.3 3.883G

Band: TDD 37, Segment 3; Frequency: 3.8826 GHz; Band Edge: f0; Mod: AWGN; PAPR 3 dB > AGC

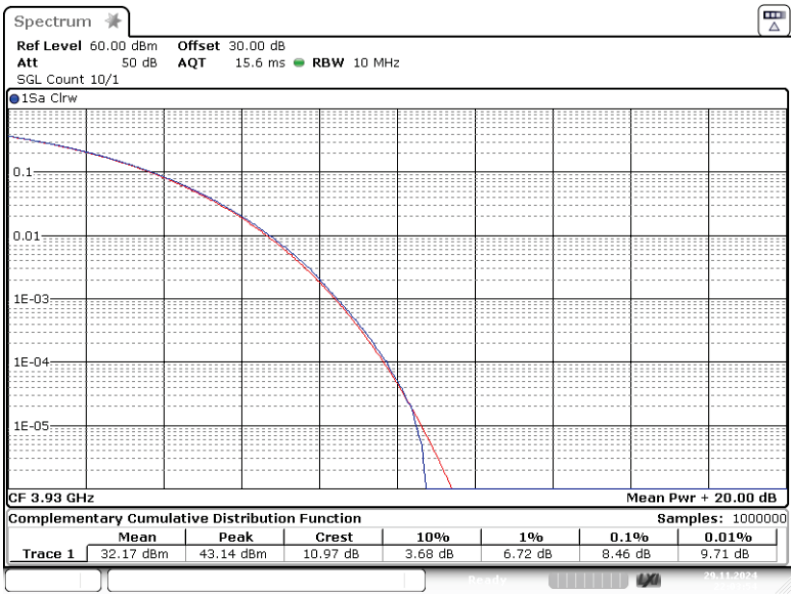


4.0 PAPR AWGN Out +3 3.883G

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; PAPR 0.3 dB < AGC

4.0 PAPR AWGN100 Out -0.3 3.930G

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; PAPR 3 dB > AGC



4.0 PAPR AWGN100 Out +3 3.930G

5.2.5 TEST EQUIPMENT USED

- Conducted

The test results relate only to the tested item. The sample has been provided by the client.
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5.3 OCCUPIED BANDWIDTH/INPUT-VERSUS-OUTPUT SPECTRUM

Standard FCC Part 2.1049; Occupied Bandwidth

The test was performed according to:
ANSI C63.26.KDB 935210 D05 v01r04: 3.4

Test date: 2024-11-29 – 2024-12-01

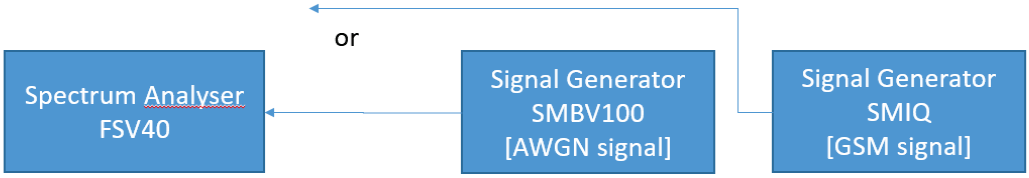
Environmental conditions: 24.7 °C; 20 % r. F.

Test engineer: Thomas Hufnagel

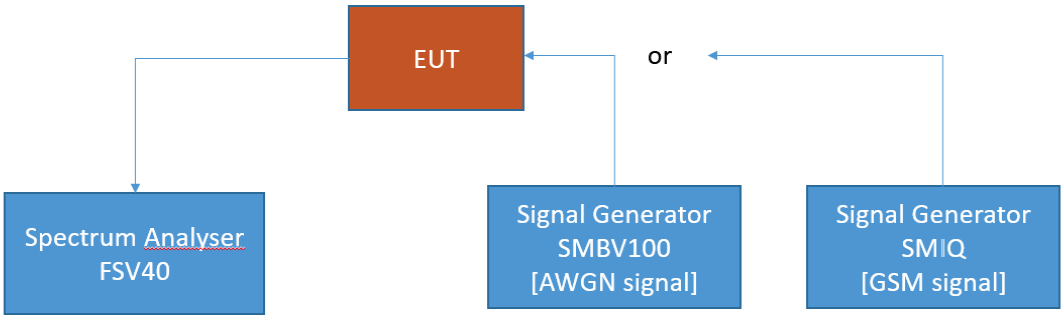
5.3.1 TEST DESCRIPTION

This test case is intended to demonstrate compliance to the applicable conducted spurious emission limits per FCC §2.1049

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



FCC Part 22/24/27/90; Industrial Signal Booster
Test Setup step 1: Measuring characteristics of test signals



FCC Part 22/24/27/90; Industrial Signal Booster
Test Setup step 2; Occupied Bandwidth/Input-versus-output spectrum

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

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

The test results relate only to the tested item. The sample has been provided by the client.
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5.3.2 TEST REQUIREMENTS/LIMITS

FCC Part 2.1049; Occupied Bandwidth:

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

(h) Transmitters employing digital modulation techniques—when modulated by an input signal such that its amplitude and symbol rate represent the maximum rated conditions under which the equipment will be operated. The signal shall be applied through any filter networks. pseudo-random generators or other devices required in normal service. Additionally. the occupied bandwidth shall be shown for operation with any devices used for modifying the spectrum when such devices are optional at the discretion of the user.

(i) Transmitters designed for other types of modulation—when modulated by an appropriate signal of sufficient amplitude to be representative of the type of service in which used. A description of the input signal should be supplied.

The test results relate only to the tested item. The sample has been provided by the client.
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5.3.3 TEST PROTOCOL

37T, segment 1; downlink							
Signal Type	**Input Power**	**Signal Frequency [MHz]**	**Occupied Bandwidth SG [kHz]**	**Occupied Bandwidth Booster [kHz]**	**Delta Occupied Bandwidth [kHz]**	**Limit Delta Occupied Bandwidth [kHz]**	**Margin to Limit [kHz]**
Wideband	0.3 dB < AGC	3750.0	4389.0	4387.8	1.2	205.0	203.8
Wideband	3 dB > AGC	3750.0	4387.8	4388.4	0.6	205.0	204.4
Wideband 5G	0.3 dB < AGC	3750.0	103645	103225	420	4915	4495
Wideband 5G	3 dB > AGC	3750.0	103225	103045	180	4915	4735

37T, segment 2; downlink							
Signal Type	**Input Power**	**Signal Frequency [MHz]**	**Occupied Bandwidth SG [kHz]**	**Occupied Bandwidth Booster [kHz]**	**Delta Occupied Bandwidth [kHz]**	**Limit Delta Occupied Bandwidth [kHz]**	**Margin to Limit [kHz]**
Wideband	0.3 dB < AGC	3840.0	4386.6	4386.0	0.6	205.0	204.4
Wideband	3 dB > AGC	3840.0	4388.4	4387.2	1.2	205.0	203.8
Wideband 5G	0.3 dB < AGC	3840.0	103465	103195	270	4915	4645
Wideband 5G	3 dB > AGC	3840.0	103270	103360	90	4915	4825

37T, segment 3; downlink							
Signal Type	**Input Power**	**Signal Frequency [MHz]**	**Occupied Bandwidth SG [kHz]**	**Occupied Bandwidth Booster [kHz]**	**Delta Occupied Bandwidth [kHz]**	**Limit Delta Occupied Bandwidth [kHz]**	**Margin to Limit [kHz]**
Wideband	0.3 dB < AGC	3930.0	4392.1	4386.6	5.5	205.0	199.5
Wideband	3 dB > AGC	3930.0	4388.4	4480.7	92.3	205.0	112.8
Wideband 5G	0.3 dB < AGC	3930.0	103405	103345	60	4915	4855
Wideband 5G	3 dB > AGC	3930.0	103195	103090	105	4915	4810

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

The test results relate only to the tested item. The sample has been provided by the client.
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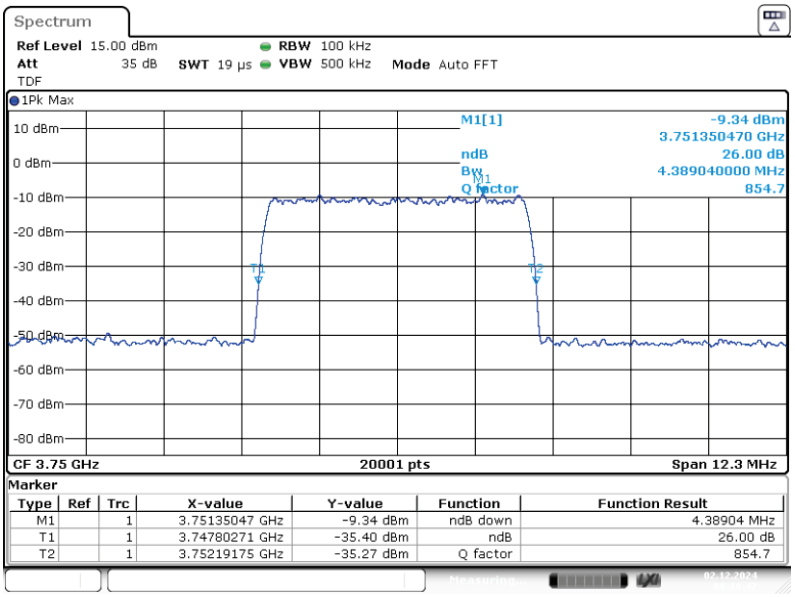
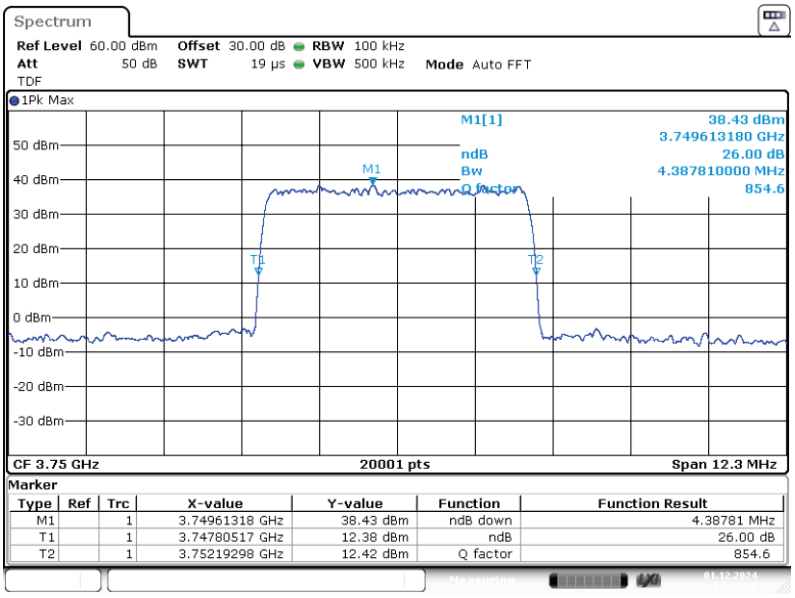
5.3.4 MEASUREMENT PLOT

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN; Input OCBw 0.3 dB < AGC



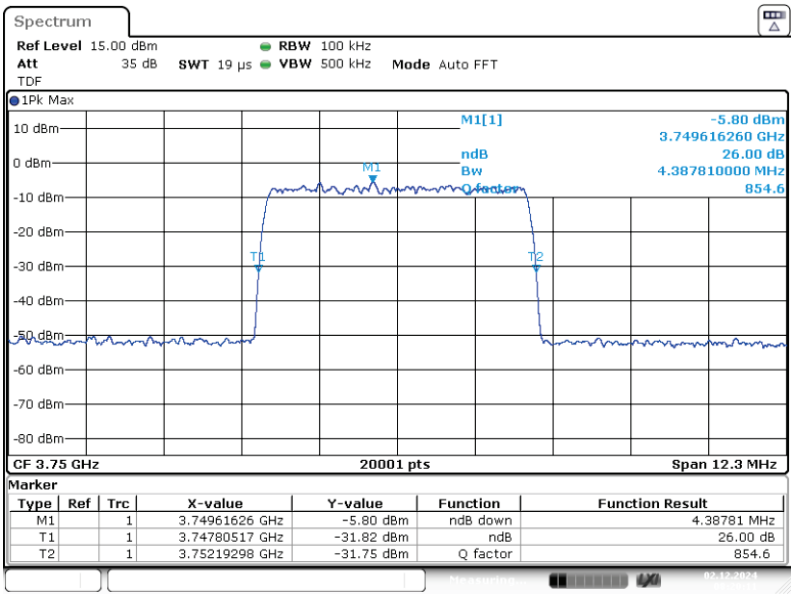
3.4 OCBw AWGN In-0.3 3.7500G _26dB

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN; Output OCBw 0.3 dB < AGC



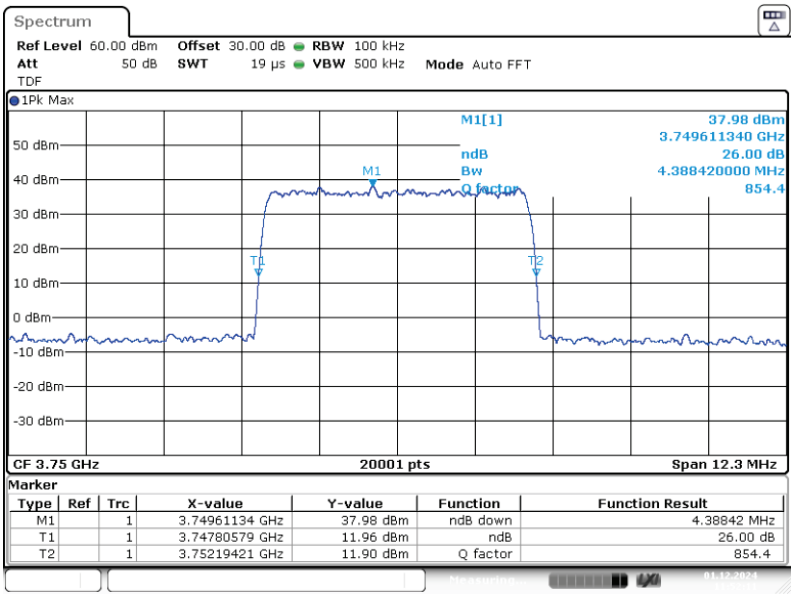
3.4 OCBw AWGN Out -0.3 3.7500G _26dB

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN; Input OCBw 3 dB > AGC



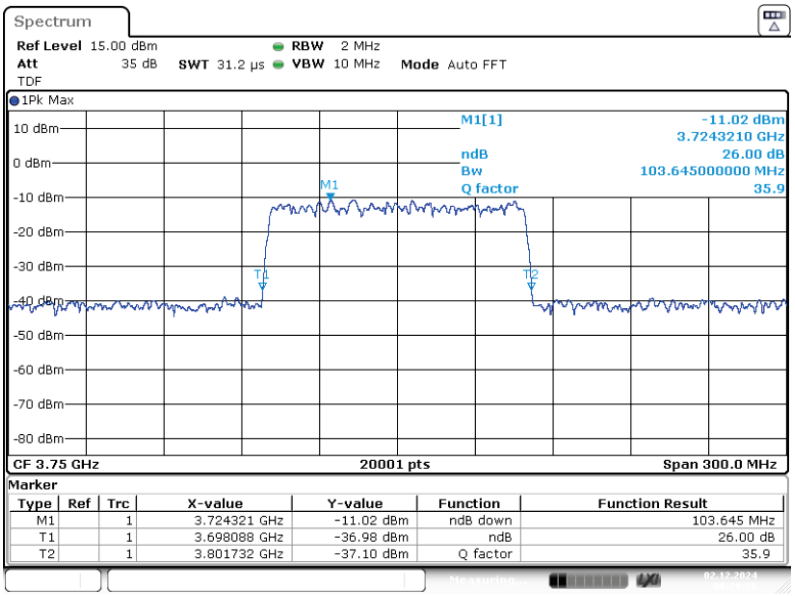
3.4 OCBw AWGN In+3 3.7500G _26dB

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN; Output OCBw 3 dB > AGC



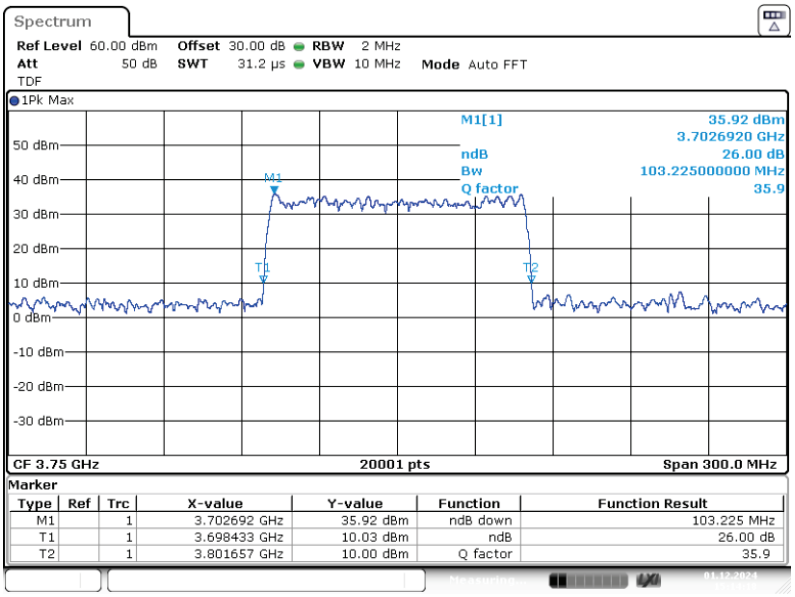
3.4 OCBw AWGN Out +3 3.7500G _26dB

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; Input OCBw 0.3 dB < AGC



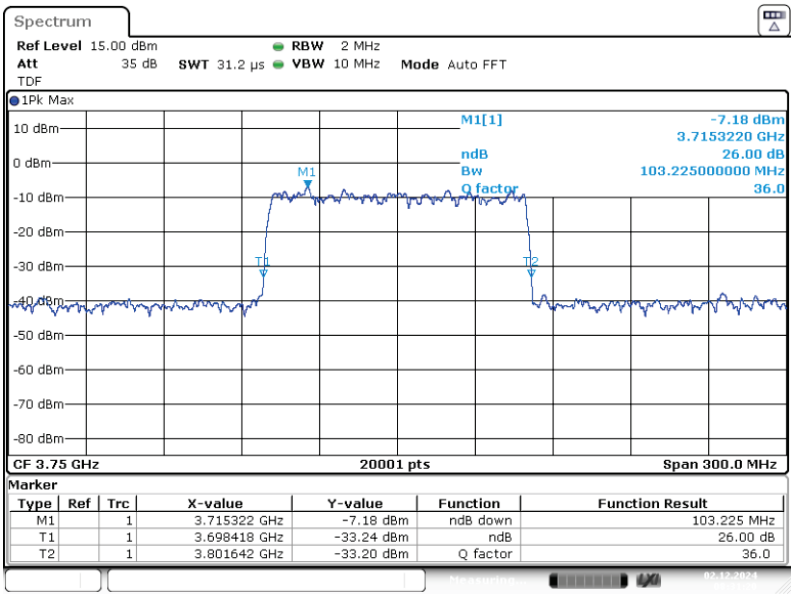
3.4 OCBw AWGN100 In-0.3 3.7500G _26dB

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; Output OCBw 0.3 dB < AGC



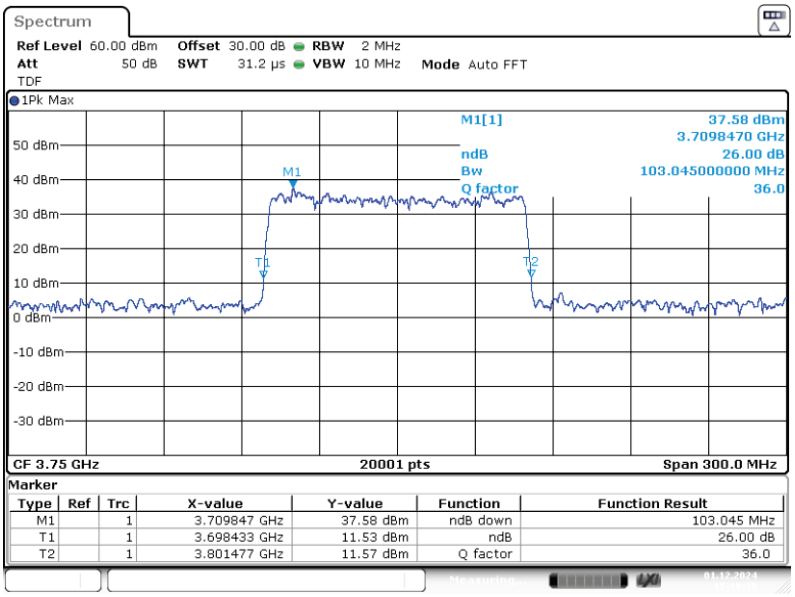
3.4 OCBw AWGN100 Out -0.3 3.7500G _26dB

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; Input OCBw 3 dB > AGC



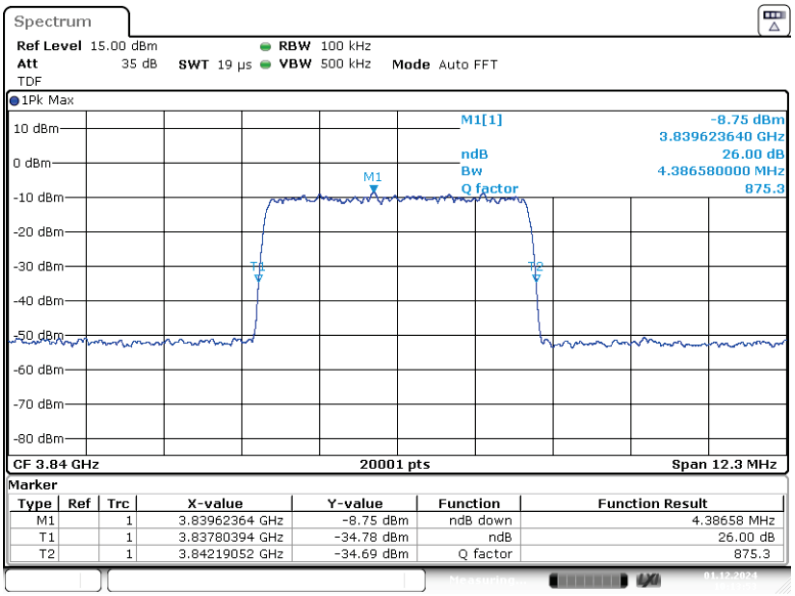
3.4 OCBw AWGN100 In+3 3.7500G _26dB

Band: TDD 37, Segment 1; Frequency: 3.7500 GHz; Band Edge: mid; Mod: AWGN100; Output OCBw 3 dB > AGC



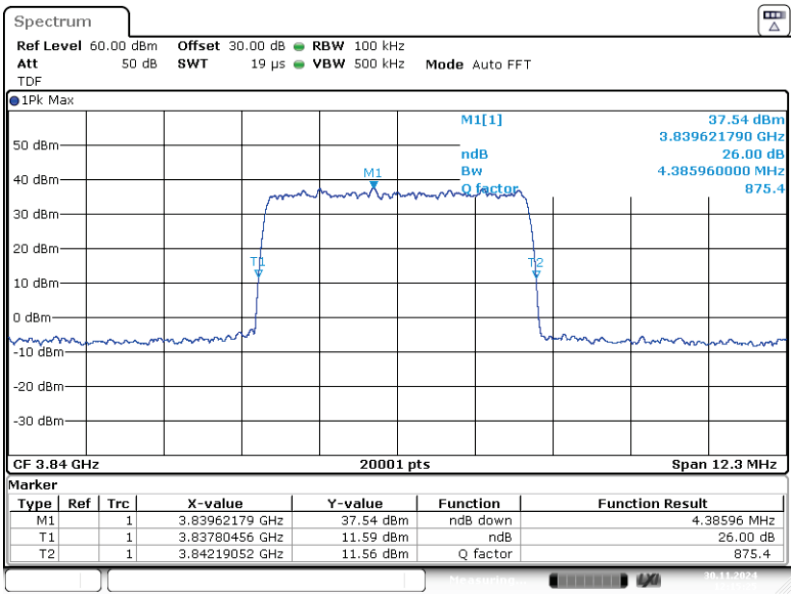
3.4 OCBw AWGN100 Out +3 3.7500G _26dB

Band: ,TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN; Input OCBw 0.3 dB < AGC



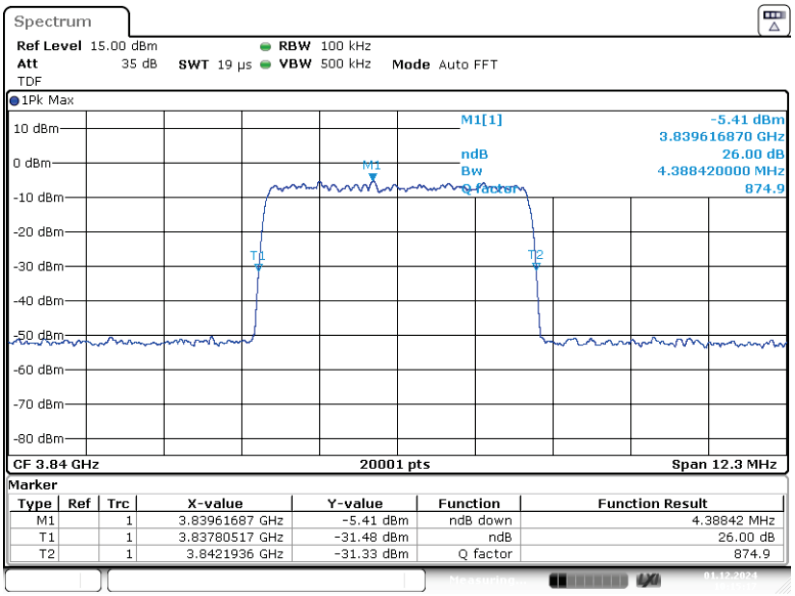
3.4 OCBw AWGN In-0.3 3.8400G _26dB

Band: ,TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN; Output OCBw 0.3 dB < AGC



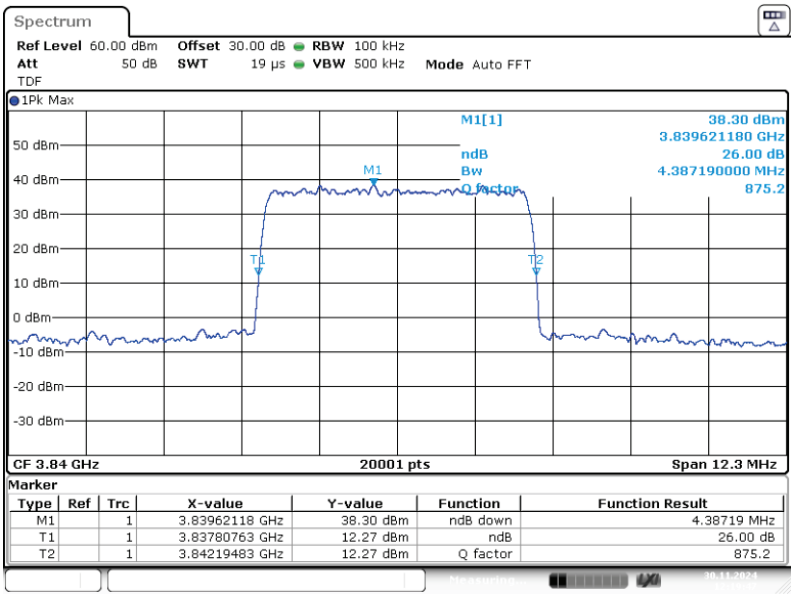
3.4 OCBw AWGN Out -0.3 3.8400G _26dB

Band: ,TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN; Input OCBw 3 dB > AGC



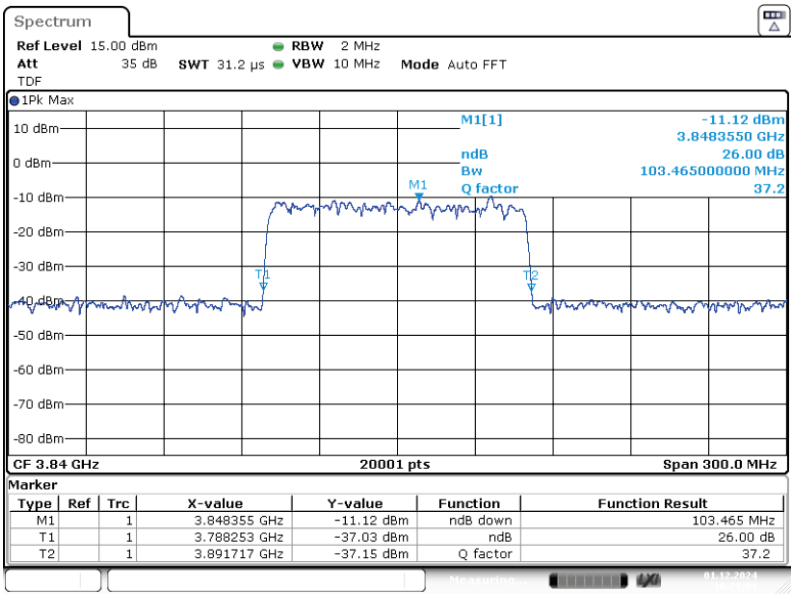
3.4 OCBw AWGN In+3 3.8400G _26dB

Band: ,TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN; Output OCBw 3 dB > AGC



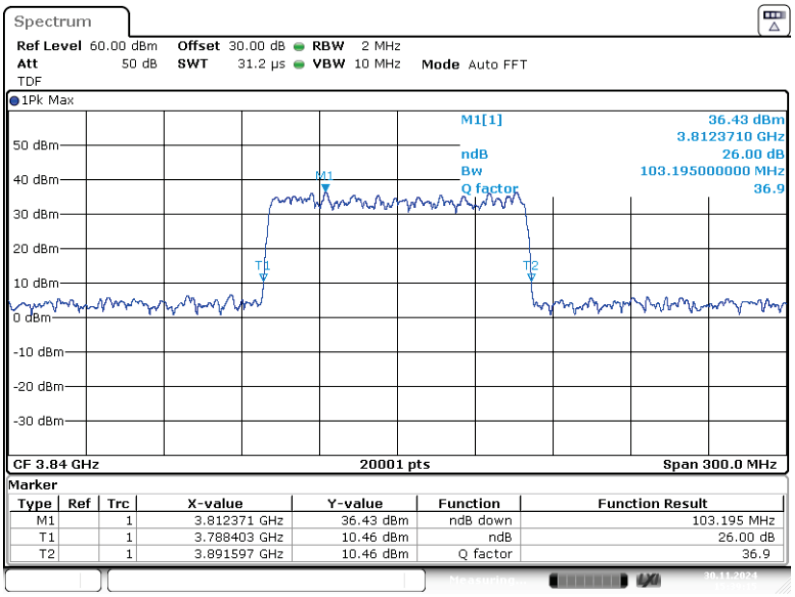
3.4 OCBw AWGN Out +3 3.8400G _26dB

Band: ,TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; Input OCBw 0.3 dB < AGC



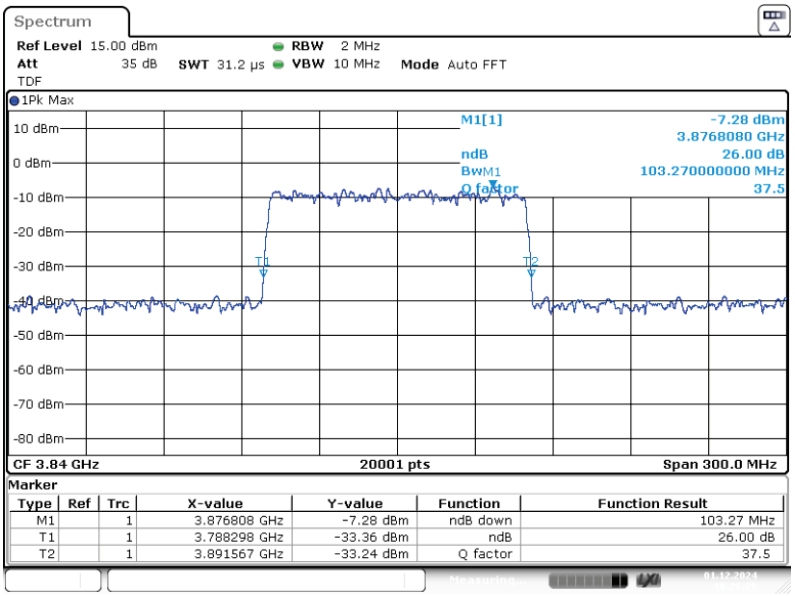
3.4 OCBw AWGN100 In-0.3 3.8400G _26dB

Band: ,TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; Output OCBw 0.3 dB < AGC



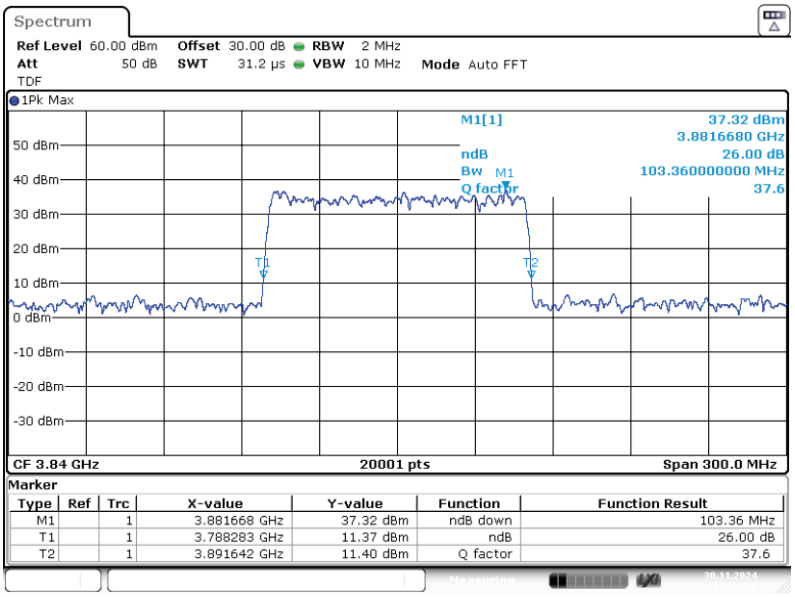
3.4 OCBw AWGN100 Out -0.3 3.8400G _26dB

Band: ,TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; Input OCBw 3 dB > AGC



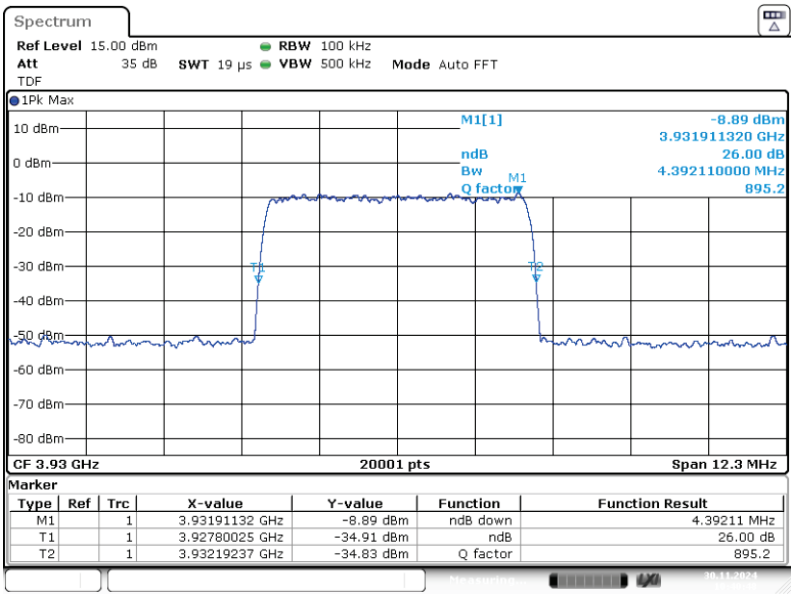
3.4 OCBw AWGN100 In+3 3.8400G _26dB

Band: ,TDD 37, Segment 2; Frequency: 3.8400 GHz; Band Edge: mid; Mod: AWGN100; Output OCBw 3 dB > AGC



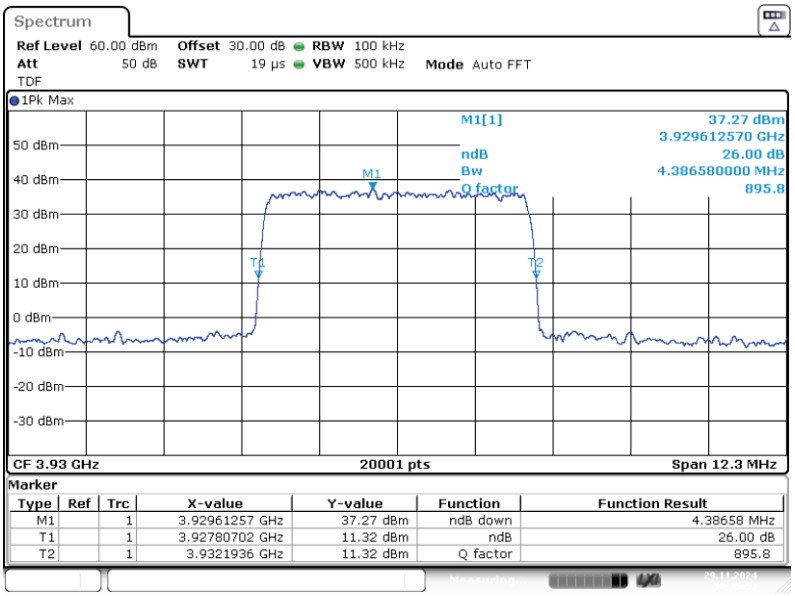
3.4 OCBw AWGN100 Out +3 3.8400G _26dB

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN
Input OCBw 0.3 dB < AGC



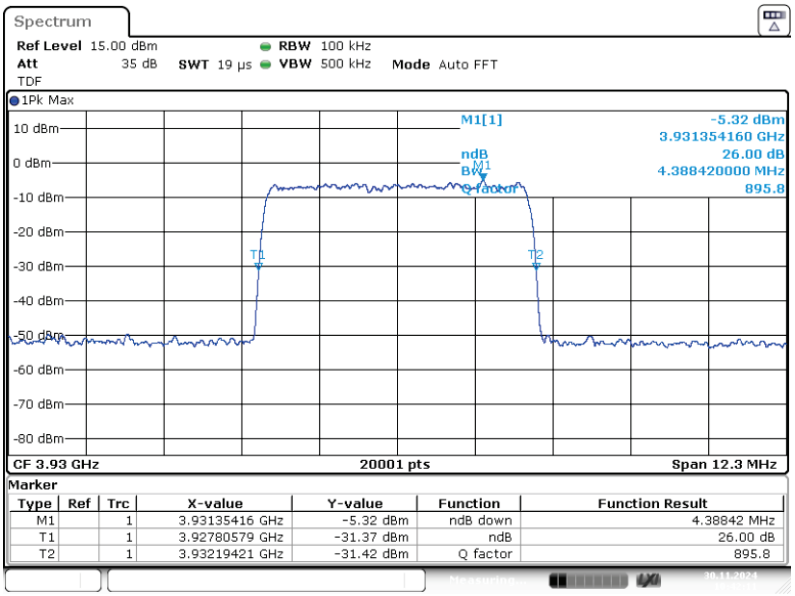
3.4 OCBw AWGN In-0.3 3.9300G _26dB

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN;
Output OCBw 0.3 dB < AGC



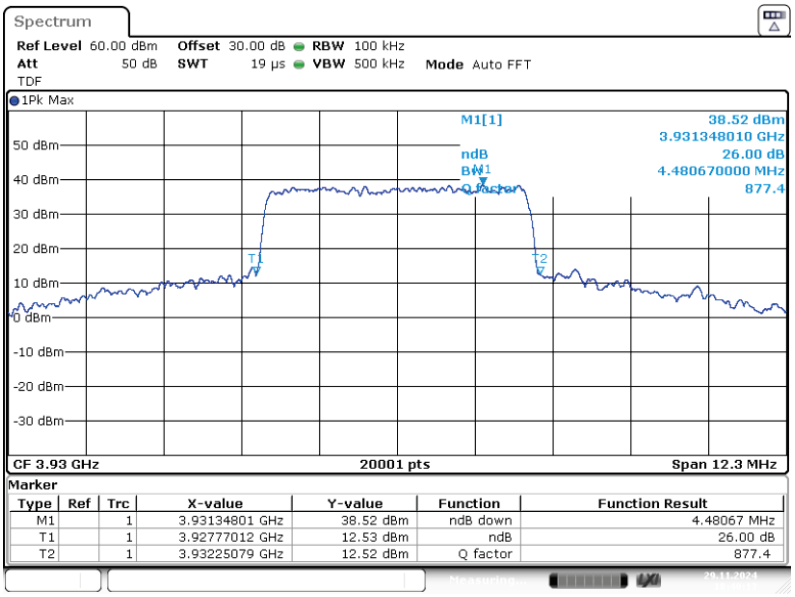
3.4 OCBw AWGN Out -0.3 3.9300G _26dB

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN; Input OCBw 3 dB > AGC



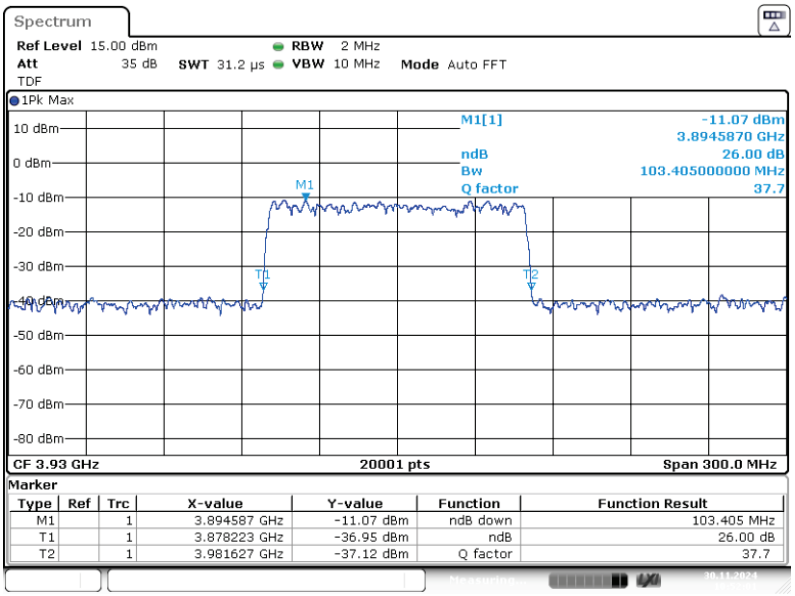
3.4 OCBw AWGN In+3 3.9300G _26dB

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN; Output OCBw 3 dB > AGC



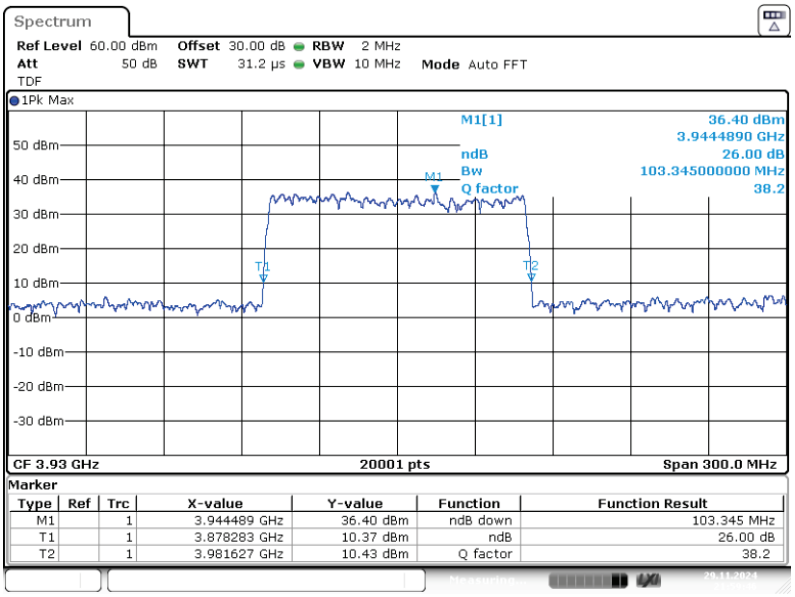
3.4 OCBw AWGN Out +3 3.9300G _26dB

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; Input OCBw 0.3 dB < AGC



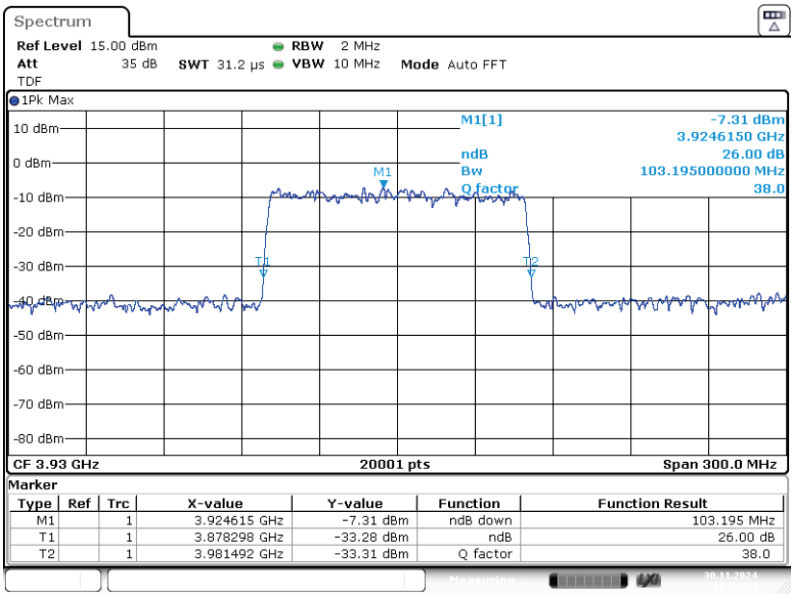
3.4 OCBw AWGN100 In-0.3 3.9300G _26dB

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; Output OCBw 0.3 dB < AGC



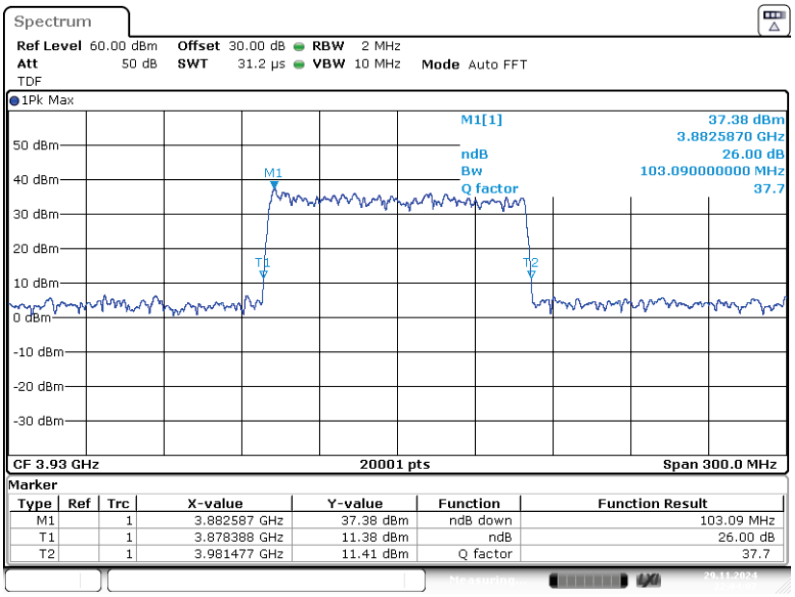
3.4 OCBw AWGN100 Out -0.3 3.9300G _26dB

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; Input OCBw 3 dB > AGC



3.4 OCBw AWGN100 In+3 3.9300G _26dB

Band: TDD 37, Segment 3; Frequency: 3.9300 GHz; Band Edge: mid; Mod: AWGN100; Output OCBw 3 dB > AGC



3.4 OCBw AWGN100 Out +3 3.9300G _26dB

5.3.5 TEST EQUIPMENT USED

- Conducted

The test results relate only to the tested item. The sample has been provided by the client.
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5.4 CONDUCTED SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Standard FCC Part §2.1051. §27.53

The test was performed according to:
ANSI C63.26

Test date: 2024-12-04 – 2024-12-05

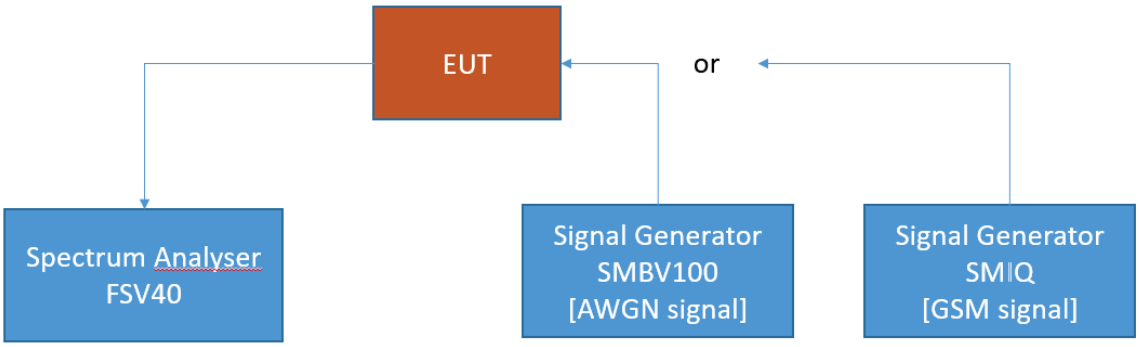
Environmental conditions: 26.3 ° C; 22 % r. F.

Test engineer:Thomas Hufnagel

5.4.1 TEST DESCRIPTION

This test case is intended to demonstrate compliance to the signal booster power and gain limits and requirements for industrial signal boosters.

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



FCC Part 22/24/27/90 Industrial signal booster – Test Setup; RF Output Power / Gain

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

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

The test results relate only to the tested item. The sample has been provided by the client.
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5.4.2 TEST REQUIREMENTS/LIMITS

FCC Part 2.1051; Measurement required: Spurious emissions at antenna terminal:

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in §2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

The test results relate only to the tested item. The sample has been provided by the client.
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Part 27; Miscellaneous Wireless Communication Services

Subpart C – Technical standards

§27.53 – Emission limits

(l) **3.7 GHz Service**. The following emission limits apply to stations transmitting in the 3700-3980 MHz band:

(1) For base station operations in the 3700-3980 MHz band. the conducted power of any emissionoutside the licensee's authorized bandwidth shall not exceed –13 dBm/MHz. Compliance with this paragraph (l)(1) is based on the use of measurement instrumentation employing a resolutionbandwidth of 1 megahertz or greater. However. in the 1 megahertz bands immediately outside andadjacent to the licensee's frequency block. a resolution bandwidth of at least one percent of theemission bandwidth of the fundamental emission of the transmitter may be employed. The emissionbandwidth is defined as the width of the signal between two points. one below the carrier centerfrequency and one above the carrier center frequency. outside of which all emissions are attenuatedat least 26 dB below the transmitter power.

(2) For mobile operations in the 3700-3980 MHz band. the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed –13 dBm/MHz. Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However. in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block. the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block. the minimum resolution bandwidth for the measurement shall be 500 kHz. 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 26 dB below the transmitter power.

The test results relate only to the tested item. The sample has been provided by the client.
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5.4.3 TEST PROTOCOL

General considerations concerning the limits:

The measuring bandwidth of 1 MHz was chosen according the test requirements exept at the band edges: At the band edges reducing of measurement bandwidth was necessary to prevent overlaying the RF-signal over the spurious emissions.
Also outside the downlink frequency band at lower frequencies the measurement bandwidths were reduced to have the possibility to record the spurious emissions at these lower frequencies.

At frequencies were measuring bandwidths were reduced also the limit lines were reduced acoording the given formula:

$$p\ RBWreduced\ [dBm] = 10 * \log\left(RBWreduced\ [kHz] \quad / \quad 1000\ kHz\right) + pRBW\ 1000\ kHz[dBm]$$

Hereby "p" are the limit lines' values.

The test results relate only to the tested item. The sample has been provided by the client.
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37 TDD, segment 1;downlink							
Test Frequency	**Signal Type**	**Spurious Freq. [MHz]**	**Spurious Level [dBm]**	**Detector**	**RBW [kHz]**	**Limit [dBm]**	**Margin to Limit [dB]**
low	Wideband	0.01082	-49.9	RMS	1	-43.0	6.9
low	Wideband	0.14748	-43.7	RMS	10	-33.0	10.7
low	Wideband	810.4	-33.5	RMS	100	-23.0	10.5
low	Wideband	3621.8	-24.4	RMS	1000	-13.0	11.4
low	Wideband	3646.3	-25.8	RMS	1000	-13.0	12.8
low	Wideband	3802.9	-33.8	RMS	100	-23.0	10.8
low	Wideband	3840.2	-15.3	RMS	1000	-13.0	2.3
low	Wideband	6807.6	-21.0	RMS	1000	-13.0	8.0
low	Wideband	19543.8	-21.9	RMS	1000	-13.0	8.9
low	Wideband	19883.8	-22.6	RMS	1000	-13.0	9.6
low	Wideband	30313.0	-24.3	RMS	1000	-13.0	11.3
low	Wideband	39958.8	-25.9	RMS	1000	-13.0	12.9
mid	Wideband	0.01205	-50.4	RMS	1	-43.0	7.4
mid	Wideband	0.15748	-44.0	RMS	10	-33.0	11.0
mid	Wideband	800.2	-33.5	RMS	100	-23.0	10.5
mid	Wideband	3653.8	-25.4	RMS	1000	-13.0	12.4
mid	Wideband	3698.6	-34.2	RMS	100	-23.0	11.2
mid	Wideband	3802.9	-33.6	RMS	100	-23.0	10.6
mid	Wideband	3840.2	-20.1	RMS	1000	-13.0	7.1
mid	Wideband	6811.1	-20.9	RMS	1000	-13.0	7.9
mid	Wideband	19997.2	-21.4	RMS	1000	-13.0	8.4
mid	Wideband	19897.8	-22.6	RMS	1000	-13.0	9.6
mid	Wideband	30790.9	-24.3	RMS	1000	-13.0	11.3
mid	Wideband	39968.3	-25.6	RMS	1000	-13.0	12.6
high	Wideband	0.01009	-50.5	RMS	1	-43.0	7.5
high	Wideband	0.14748	-44.2	RMS	10	-33.0	11.2
high	Wideband	952.3	-33.1	RMS	100	-23.0	10.1
high	Wideband	3652.3	-25.1	RMS	1000	-13.0	12.1
high	Wideband	3694.2	-34.2	RMS	100	-23.0	11.2
high	Wideband	3771.4	-28.4	RMS	100	60.0	88.4
high	Wideband	3840.2	-14.1	RMS	1000	-13.0	1.1
high	Wideband	6918.6	-20.9	RMS	1000	-13.0	7.9
high	Wideband	19565.3	-21.9	RMS	1000	-13.0	8.9
high	Wideband	19972.8	-22.2	RMS	1000	-13.0	9.2
high	Wideband	30779.4	-24.5	RMS	1000	-13.0	11.5
high	Wideband	39984.3	-25.6	RMS	1000	-13.0	12.6

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37 TDD, segment 1;downlink							
Test Frequency	**Signal Type**	**Spurious Freq. [MHz]**	**Spurious Level [dBm]**	**Detector**	**RBW [kHz]**	**Limit [dBm]**	**Margin to Limit [dB]**
low	Wideband 5G	0.010454	-50.0	RMS	1	-43.0	7.0
low	Wideband 5G	0.07750	-44.1	RMS	10	-33.0	11.1
low	Wideband 5G	953.2	-33.1	RMS	100	-23.0	10.1
low	Wideband 5G	3583.3	-25.0	RMS	1000	-13.0	12.0
low	Wideband 5G	3697.1	-30.9	RMS	100	-23.0	7.9
low	Wideband 5G	3802.1	-29.4	RMS	100	-23.0	6.4
low	Wideband 5G	3816.2	-20.3	RMS	1000	-13.0	7.3
low	Wideband 5G	6841.1	-21.0	RMS	1000	-13.0	8.0
low	Wideband 5G	19561.3	-21.9	RMS	1000	-13.0	8.9
low	Wideband 5G	19963.3	-22.0	RMS	1000	-13.0	9.0
low	Wideband 5G	30987.4	-24.6	RMS	1000	-13.0	11.6
low	Wideband 5G	39950.3	-26.1	RMS	1000	-13.0	13.1
mid	Wideband 5G	0.00902	-49.9	RMS	1	-43.0	6.9
mid	Wideband 5G	0.15248	-44.5	RMS	10	-33.0	11.5
mid	Wideband 5G	950.6	-33.0	RMS	100	-23.0	10.0
mid	Wideband 5G	3681.8	-24.7	RMS	1000	-13.0	11.7
mid	Wideband 5G	3698.6	-30.5	RMS	100	-23.0	7.5
mid	Wideband 5G	3807.5	-29.2	RMS	100	-23.0	6.2
mid	Wideband 5G	3840.2	-20.3	RMS	1000	-13.0	7.3
mid	Wideband 5G	6817.1	-20.7	RMS	1000	-13.0	7.7
mid	Wideband 5G	19622.3	-21.6	RMS	1000	-13.0	8.6
mid	Wideband 5G	19904.3	-22.2	RMS	1000	-13.0	9.2
mid	Wideband 5G	30782.9	-24.1	RMS	1000	-13.0	11.1
mid	Wideband 5G	39974.3	-25.3	RMS	1000	-13.0	12.3
high	Wideband 5G	0.00910	-48.6	RMS	1	-43.0	5.6
high	Wideband 5G	0.06750	-44.5	RMS	10	-33.0	11.5
high	Wideband 5G	810.3	-32.2	RMS	100	-23.0	9.2
high	Wideband 5G	3622.8	-24.9	RMS	1000	-13.0	11.9
high	Wideband 5G	3698.3	-31.1	RMS	100	-23.0	8.1
high	Wideband 5G	3801.4	-29.2	RMS	100	-23.0	6.2
high	Wideband 5G	3809.7	-20.7	RMS	1000	-13.0	7.7
high	Wideband 5G	6975.6	-20.6	RMS	1000	-13.0	7.6
high	Wideband 5G	17909.9	-21.6	RMS	1000	-13.0	8.6
high	Wideband 5G	19969.8	-22.0	RMS	1000	-13.0	9.0
high	Wideband 5G	30661.4	-24.3	RMS	1000	-13.0	11.3
high	Wideband 5G	39983.3	-25.7	RMS	1000	-13.0	12.7

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37 TDD, segment 2;downlink							
Test Frequency	**Signal Type**	**Spurious Freq. [MHz]**	**Spurious Level [dBm]**	**Detector**	**RBW [kHz]**	**Limit [dBm]**	**Margin to Limit [dB]**
low	Wideband	0.00910	-50.2	RMS	1	-43.0	7.2
low	Wideband	0.15748	-45.2	RMS	10	-33.0	12.2
low	Wideband	950.7	-33.5	RMS	100	-23.0	10.5
low	Wideband	3778.8	-23.4	RMS	1000	-13.0	10.4
low	Wideband	3788.8	-27.5	RMS	100	-23.0	4.5
low	Wideband	3892.3	-34.2	RMS	100	-23.0	11.2
low	Wideband	4980.3	-24.8	RMS	1000	-13.0	11.8
low	Wideband	6881.6	-21.6	RMS	1000	-13.0	8.6
low	Wideband	19560.8	-22.4	RMS	1000	-13.0	9.4
low	Wideband	19882.8	-23.0	RMS	1000	-13.0	10.0
low	Wideband	30653.4	-25.3	RMS	1000	-13.0	12.3
low	Wideband	39958.8	-26.5	RMS	1000	-13.0	13.5
mid	Wideband	0.00927	-55.4	RMS	1	-43.0	12.4
mid	Wideband	0.06750	-48.1	RMS	10	-33.0	15.1
mid	Wideband	949.0	-42.7	RMS	100	-23.0	19.7
mid	Wideband	3774.8	-29.9	RMS	1000	-13.0	16.9
mid	Wideband	3785.3	-38.5	RMS	100	-23.0	15.5
mid	Wideband	3897.3	-38.3	RMS	100	-23.0	15.3
mid	Wideband	3907.2	-29.2	RMS	1000	-13.0	16.2
mid	Wideband	6970.6	-30.9	RMS	1000	-13.0	17.9
mid	Wideband	19551.8	-31.6	RMS	1000	-13.0	18.6
mid	Wideband	19883.8	-32.4	RMS	1000	-13.0	19.4
mid	Wideband	30778.9	-33.9	RMS	1000	-13.0	20.9
mid	Wideband	39952.3	-37.1	RMS	1000	-13.0	24.1
high	Wideband	0.01959	-56.3	RMS	1	-43.0	13.3
high	Wideband	0.07250	-49.1	RMS	10	-33.0	16.1
high	Wideband	950.9	-43.1	RMS	100	-23.0	20.1
high	Wideband	3775.8	-29.4	RMS	1000	-13.0	16.4
high	Wideband	3788.4	-38.2	RMS	100	-23.0	15.2
high	Wideband	3885.9	30.0	RMS	100	60.0	30.0
high	Wideband	6926.6	-30.8	RMS	1000	-13.0	17.8
high	Wideband	19560.8	-31.3	RMS	1000	-13.0	18.3
high	Wideband	19971.8	-31.9	RMS	1000	-13.0	18.9
high	Wideband	30931.4	-33.7	RMS	1000	-13.0	20.7
high	Wideband	39952.8	-37.4	RMS	1000	-13.0	24.4

The test results relate only to the tested item. The sample has been provided by the client.
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37 TDD, segment 2;downlink							
Test Frequency	**Signal Type**	**Spurious Freq. [MHz]**	**Spurious Level [dBm]**	**Detector**	**RBW [kHz]**	**Limit [dBm]**	**Margin to Limit [dB]**
low	Wideband 5G	0.01779	-59.9	RMS	1	-43.0	16.9
low	Wideband 5G	0.06250	-53.8	RMS	10	-33.0	20.8
low	Wideband 5G	950.8	-43.2	RMS	100	-23.0	20.2
low	Wideband 5G	3780.8	-21.7	RMS	1000	-13.0	8.7
low	Wideband 5G	3783.9	-30.9	RMS	100	-23.0	7.9
low	Wideband 5G	3892.1	-29.2	RMS	100	-23.0	6.2
low	Wideband 5G	3900.2	-21.2	RMS	1000	-13.0	8.2
low	Wideband 5G	6852.6	-31.1	RMS	1000	-13.0	18.1
low	Wideband 5G	19563.3	-31.7	RMS	1000	-13.0	18.7
low	Wideband 5G	19899.8	-32.0	RMS	1000	-13.0	19.0
low	Wideband 5G	30756.9	-33.8	RMS	1000	-13.0	20.8
low	Wideband 5G	39920.8	-37.4	RMS	1000	-13.0	24.4
mid	Wideband 5G	0.01103	-59.6	RMS	1	-43.0	16.6
mid	Wideband 5G	0.05750	-52.7	RMS	10	-33.0	19.7
mid	Wideband 5G	793.1	-43.4	RMS	100	-23.0	20.4
mid	Wideband 5G	3770.8	-22.1	RMS	1000	-13.0	9.1
mid	Wideband 5G	3784.5	-30.9	RMS	100	-23.0	7.9
mid	Wideband 5G	3891.7	-30.0	RMS	100	-23.0	7.0
mid	Wideband 5G	3899.7	-22.1	RMS	1000	-13.0	9.1
mid	Wideband 5G	6905.6	-30.9	RMS	1000	-13.0	17.9
mid	Wideband 5G	19561.8	-31.5	RMS	1000	-13.0	18.5
mid	Wideband 5G	19896.8	-32.3	RMS	1000	-13.0	19.3
mid	Wideband 5G	30790.4	-33.8	RMS	1000	-13.0	20.8
mid	Wideband 5G	39988.8	-37.0	RMS	1000	-13.0	24.0
high	Wideband 5G	0.00976	-59.0	RMS	1	-43.0	16.0
high	Wideband 5G	0.48243	-55.2	RMS	10	-33.0	22.2
high	Wideband 5G	950.3	-43.4	RMS	100	-23.0	20.4
high	Wideband 5G	3770.3	-21.8	RMS	1000	-13.0	8.8
high	Wideband 5G	3782.2	-30.1	RMS	100	-23.0	7.1
high	Wideband 5G	3900.2	-21.3	RMS	1000	-13.0	8.3
high	Wideband 5G	6821.1	-30.7	RMS	1000	-13.0	17.7
high	Wideband 5G	19543.3	-31.7	RMS	1000	-13.0	18.7
high	Wideband 5G	19915.3	-32.3	RMS	1000	-13.0	19.3
high	Wideband 5G	30924.4	-33.9	RMS	1000	-13.0	20.9
high	Wideband 5G	39996.3	-37.4	RMS	1000	-13.0	24.4

The test results relate only to the tested item. The sample has been provided by the client.
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37 TDD, segment 3;downlink							
Test Frequency	**Signal Type**	**Spurious Freq. [MHz]**	**Spurious Level [dBm]**	**Detector**	**RBW [kHz]**	**Limit [dBm]**	**Margin to Limit [dB]**
low	Wideband	0.01226	-50.8	RMS	1	-43.0	7.8
low	Wideband	0.15248	-44.0	RMS	10	-33.0	11.0
low	Wideband	950.2	-32.8	RMS	100	-23.0	9.8
low	Wideband	3840.3	-18.4	RMS	1000	-13.0	5.4
low	Wideband	3878.5	-26.5	RMS	100	-23.0	3.5
low	Wideband	3981.0	-33.4	RMS	100	-23.0	10.4
low	Wideband	4978.8	-23.4	RMS	1000	-13.0	10.4
low	Wideband	6997.6	-21.0	RMS	1000	-13.0	8.0
low	Wideband	19577.3	-21.5	RMS	1000	-13.0	8.5
low	Wideband	19965.3	-22.2	RMS	1000	-13.0	9.2
low	Wideband	30300.0	-24.6	RMS	1000	-13.0	11.6
low	Wideband	39983.3	-25.9	RMS	1000	-13.0	12.9
mid	Wideband	0.01123	-50.8	RMS	1	-43.0	7.8
mid	Wideband	0.14748	-43.8	RMS	10	-33.0	10.8
mid	Wideband	949.5	-33.5	RMS	100	-23.0	10.5
mid	Wideband	3840.3	-15.1	RMS	1000	-13.0	2.1
mid	Wideband	3873.6	-32.9	RMS	100	-23.0	9.9
mid	Wideband	3981.0	-33.4	RMS	100	-23.0	10.4
mid	Wideband	4325.1	-23.4	RMS	1000	-13.0	10.4
mid	Wideband	6879.1	-21.0	RMS	1000	-13.0	8.0
mid	Wideband	19549.8	-21.5	RMS	1000	-13.0	8.5
mid	Wideband	20000.2	-22.3	RMS	1000	-13.0	9.3
mid	Wideband	30645.4	-24.6	RMS	1000	-13.0	11.6
mid	Wideband	39933.8	-25.5	RMS	1000	-13.0	12.5
high	Wideband	0.00992	-50.2	RMS	1	-43.0	7.2
high	Wideband	0.15248	-44.3	RMS	10	-33.0	11.3
high	Wideband	810.6	-33.8	RMS	100	-23.0	10.8
high	Wideband	3840.3	-16.5	RMS	1000	-13.0	3.5
high	Wideband	3872.1	-32.8	RMS	100	-23.0	9.8
high	Wideband	3981.2	-29.8	RMS	100	-23.0	6.8
high	Wideband	4384.1	-23.7	RMS	1000	-13.0	10.7
high	Wideband	6775.1	-20.9	RMS	1000	-13.0	7.9
high	Wideband	19579.3	-21.6	RMS	1000	-13.0	8.6
high	Wideband	19930.8	-22.6	RMS	1000	-13.0	9.6
high	Wideband	30729.9	-24.2	RMS	1000	-13.0	11.2
high	Wideband	39983.3	-25.5	RMS	1000	-13.0	12.5

The test results relate only to the tested item. The sample has been provided by the client.
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37 TDD, segment 3;downlink							
Test Frequency	**Signal Type**	**Spurious Freq. [MHz]**	**Spurious Level [dBm]**	**Detector**	**RBW [kHz]**	**Limit [dBm]**	**Margin to Limit [dB]**
low	Wideband 5G	0.00902	-50.8	RMS	1	-43.0	7.8
low	Wideband 5G	0.06250	-44.5	RMS	10	-33.0	11.5
low	Wideband 5G	810.8	-33.5	RMS	100	-23.0	10.5
low	Wideband 5G	3870.3	-20.6	RMS	1000	-13.0	7.6
low	Wideband 5G	3875.4	-29.2	RMS	100	-23.0	6.2
low	Wideband 5G	4094.2	-23.9	RMS	1000	-13.0	10.9
low	Wideband 5G	6979.6	-20.9	RMS	1000	-13.0	7.9
low	Wideband 5G	19995.8	-21.7	RMS	1000	-13.0	8.7
low	Wideband 5G	20002.3	-21.2	RMS	1000	-13.0	8.2
low	Wideband 5G	30760.9	-24.7	RMS	1000	-13.0	11.7
low	Wideband 5G	38493.9	-25.7	RMS	1000	-13.0	12.7
mid	Wideband 5G	0.0	-50.4	RMS	1	-43.0	7.4
mid	Wideband 5G	0.07250	-44.3	RMS	10	-33.0	11.3
mid	Wideband 5G	951.52749	-33.7	RMS	100	-23.0	10.7
mid	Wideband 5G	3856.3	-20.7	RMS	1000	-13.0	7.7
mid	Wideband 5G	3877.9	-29.0	RMS	100	-23.0	6.0
mid	Wideband 5G	3982.3	-29.4	RMS	100	-23.0	6.4
mid	Wideband 5G	4353.1	-23.5	RMS	1000	-13.0	10.5
mid	Wideband 5G	6972.6	-20.7	RMS	1000	-13.0	7.7
mid	Wideband 5G	17905.4	-21.7	RMS	1000	-13.0	8.7
mid	Wideband 5G	19949.8	-22.2	RMS	1000	-13.0	9.2
mid	Wideband 5G	30747.9	-24.1	RMS	1000	-13.0	11.1
mid	Wideband 5G	39998.8	-25.4	RMS	1000	-13.0	12.4
high	Wideband 5G	0.01181	-50.6	RMS	1	-43.0	7.6
high	Wideband 5G	0.15248	-45.7	RMS	10	-33.0	12.7
high	Wideband 5G	949.6	-33.3	RMS	100	-23.0	10.3
high	Wideband 5G	3866.3	-21.0	RMS	1000	-13.0	8.0
high	Wideband 5G	3874.9	-29.4	RMS	100	-23.0	6.4
high	Wideband 5G	3981.7	-29.4	RMS	100	-23.0	6.4
high	Wideband 5G	4125.7	-23.8	RMS	1000	-13.0	10.8
high	Wideband 5G	6984.1	-20.9	RMS	1000	-13.0	7.9
high	Wideband 5G	19572.3	-22.0	RMS	1000	-13.0	9.0
high	Wideband 5G	19865.3	-22.6	RMS	1000	-13.0	9.6
high	Wideband 5G	30704.9	-24.3	RMS	1000	-13.0	11.3
high	Wideband 5G	39954.3	-25.4	RMS	1000	-13.0	12.4

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

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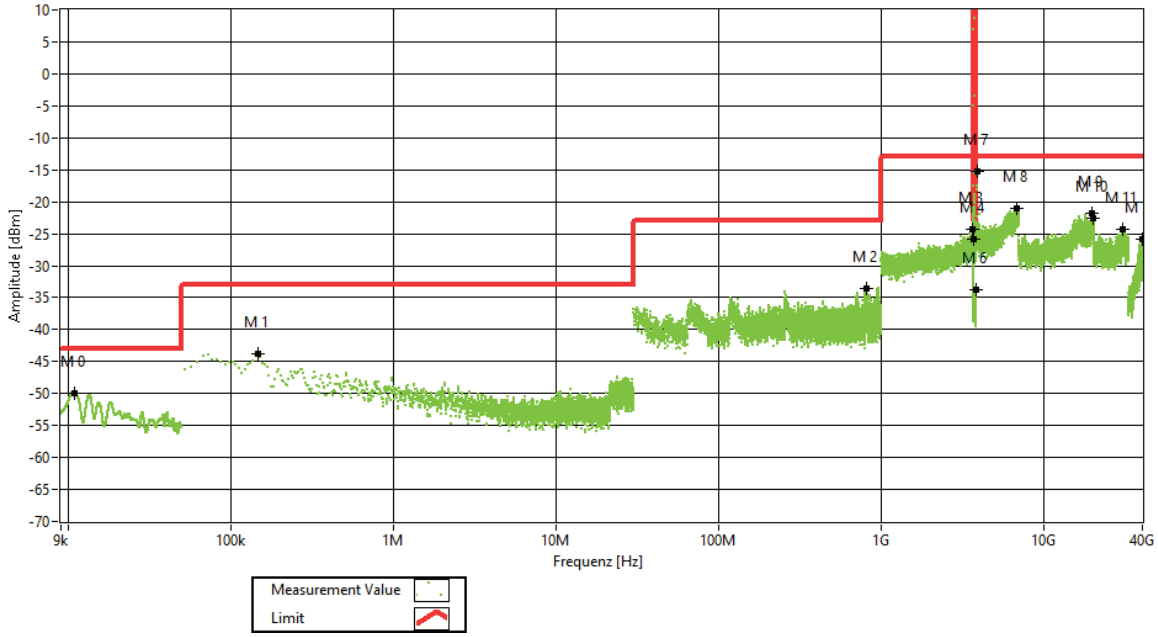
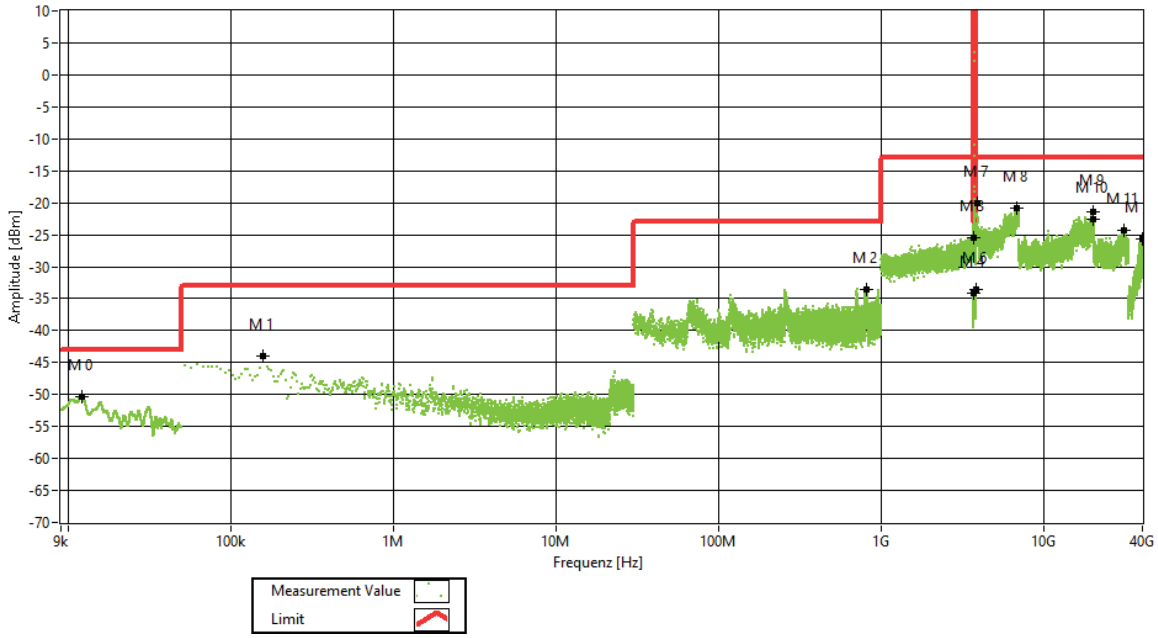
5.4.4 MEASUREMENT PLOT

Frequency Band = 37 TDD. Segment 1. Test Frequency = low. Direction = RF downlink.
Signal Type = Wideband



Frequency Band = 37 TDD. Segment 1. Test Frequency = mid. Direction = RF downlink.
Signal Type = Wideband



The test results relate only to the tested item. The sample has been provided by the client.
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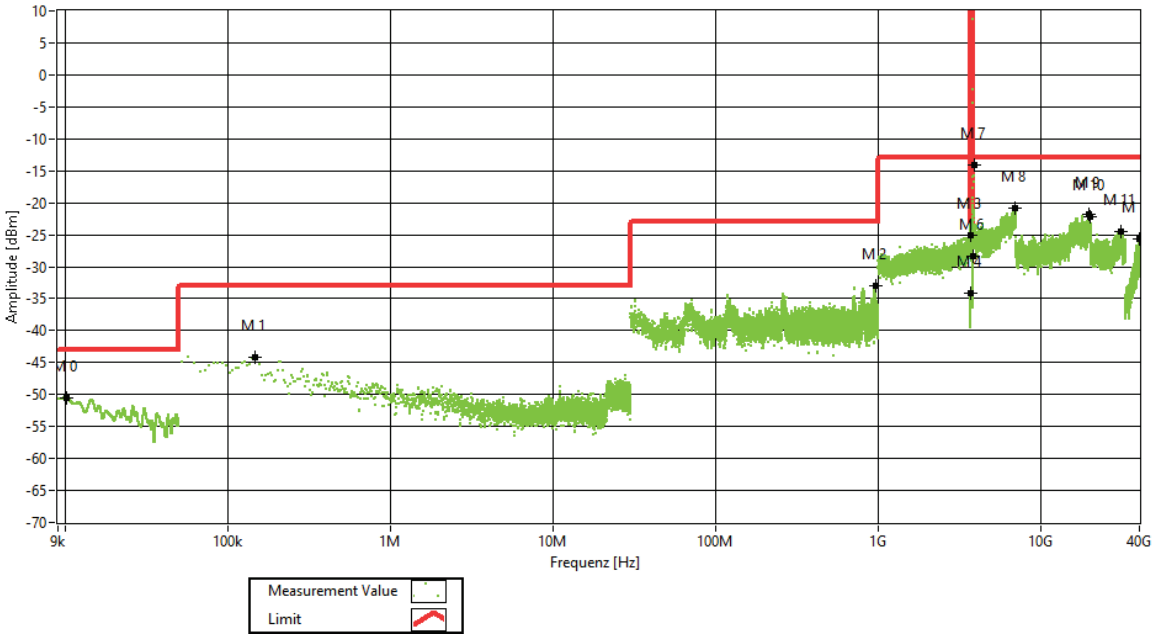
Frequency Band = 37 TDD. Segment 1. Test Frequency = high. Direction = RF downlink.
Signal Type = Wideband



The test results relate only to the tested item. The sample has been provided by the client.
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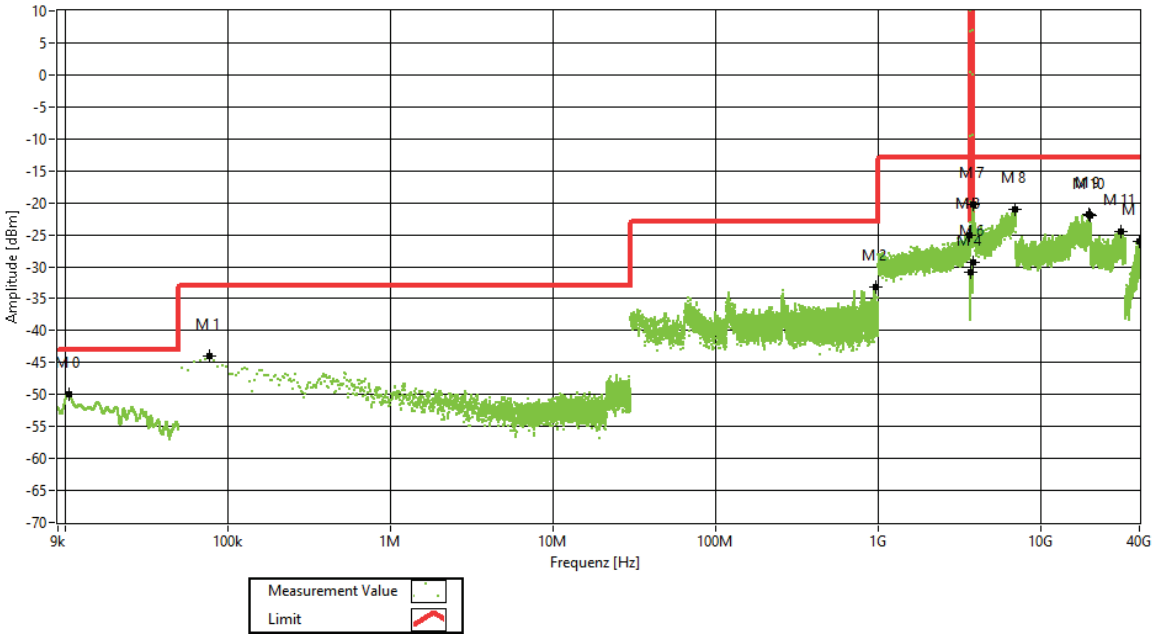
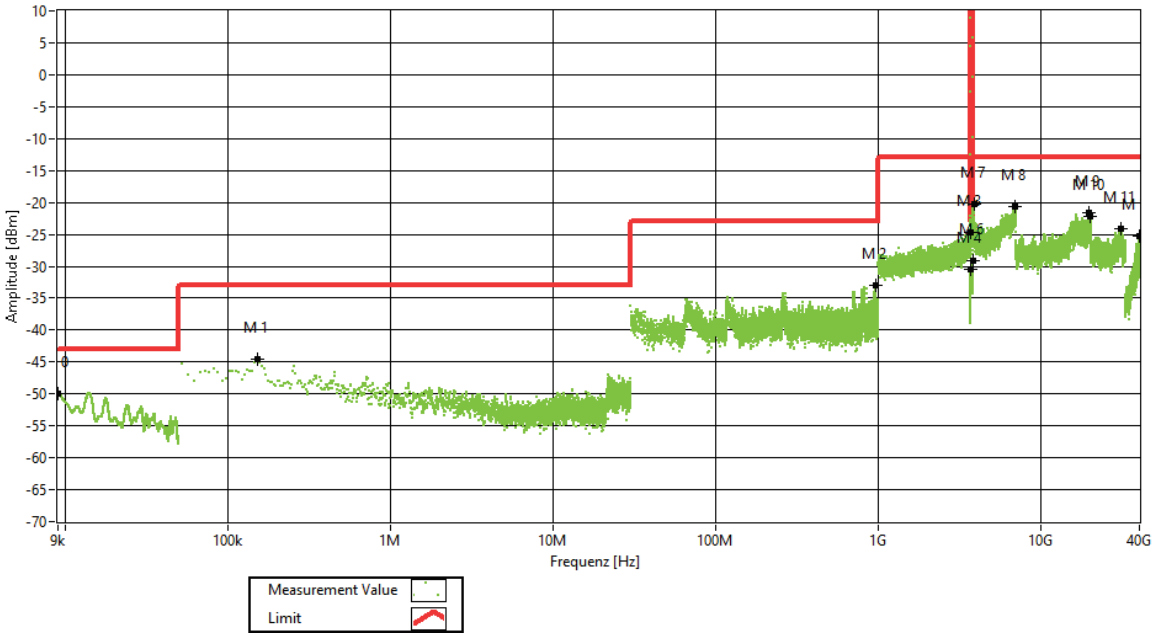
Frequency Band = 37 TDD. Segment 1. Test Frequency = low. Direction = RF downlink.
Signal Type = Wideband 5G



Frequency Band = 37 TDD. Segment 1. Test Frequency = mid. Direction = RF downlink.
Signal Type = Wideband 5G



The test results relate only to the tested item. The sample has been provided by the client.
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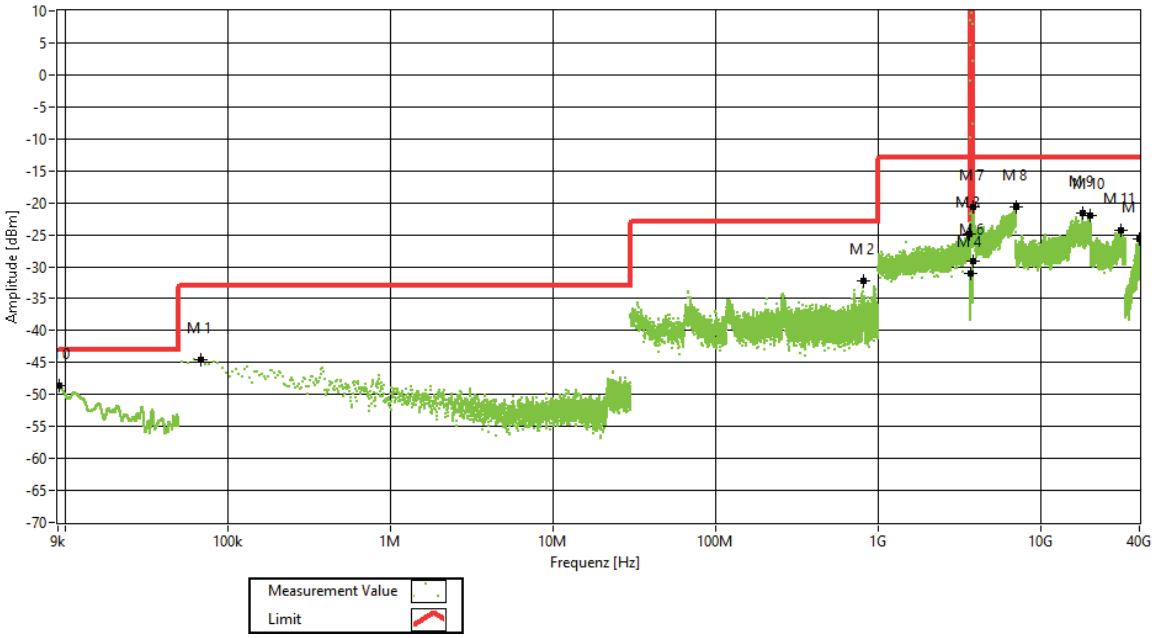
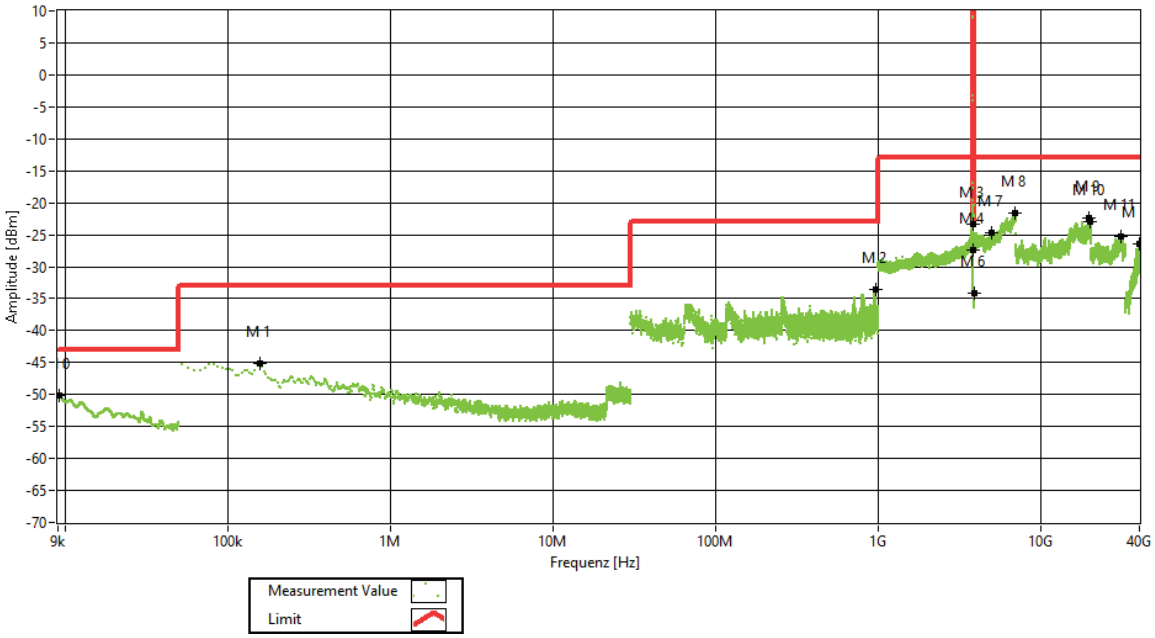
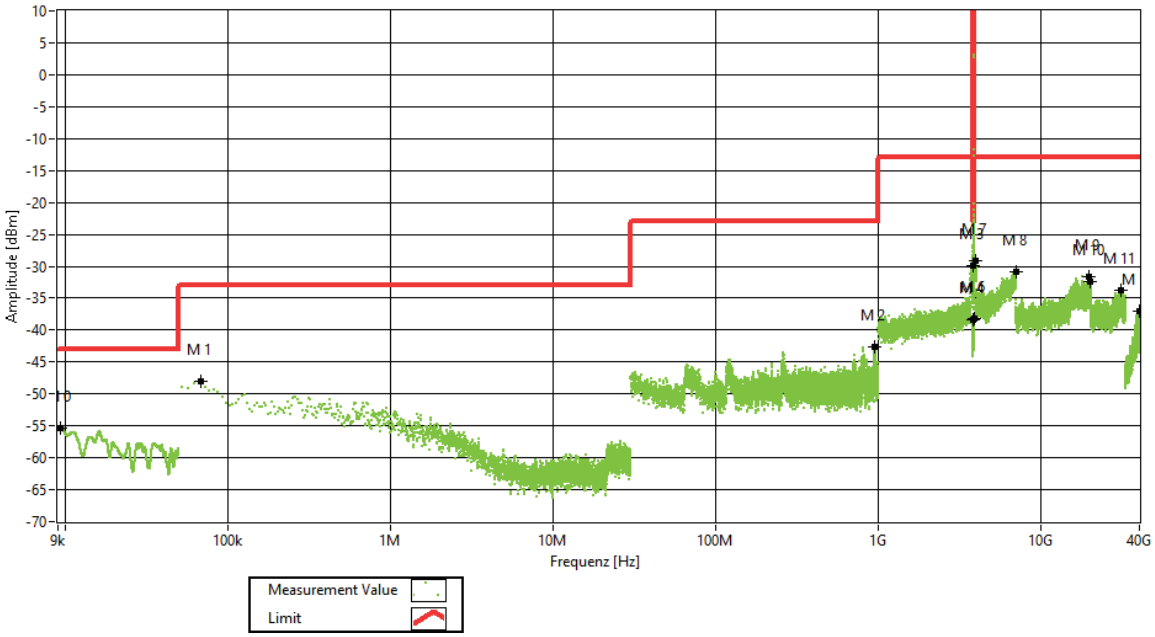
Frequency Band = 37 TDD. Segment 1. Test Frequency = high. Direction = RF downlink.
Signal Type = Wideband 5G



Frequency Band = 37 TDD. Segment 2. Test Frequency = low. Direction = RF downlink.
Signal Type = Wideband



Frequency Band = 37 TDD. Segment 2. Test Frequency = mid. Direction = RF downlink.
Signal Type = Wideband



The test results relate only to the tested item. The sample has been provided by the client.
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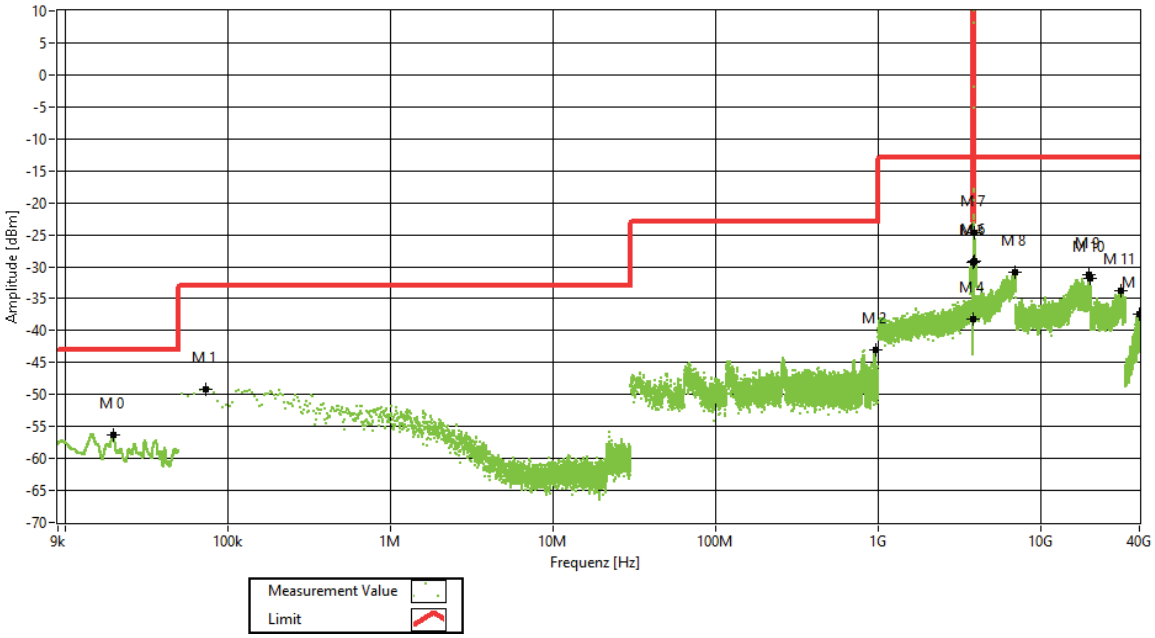
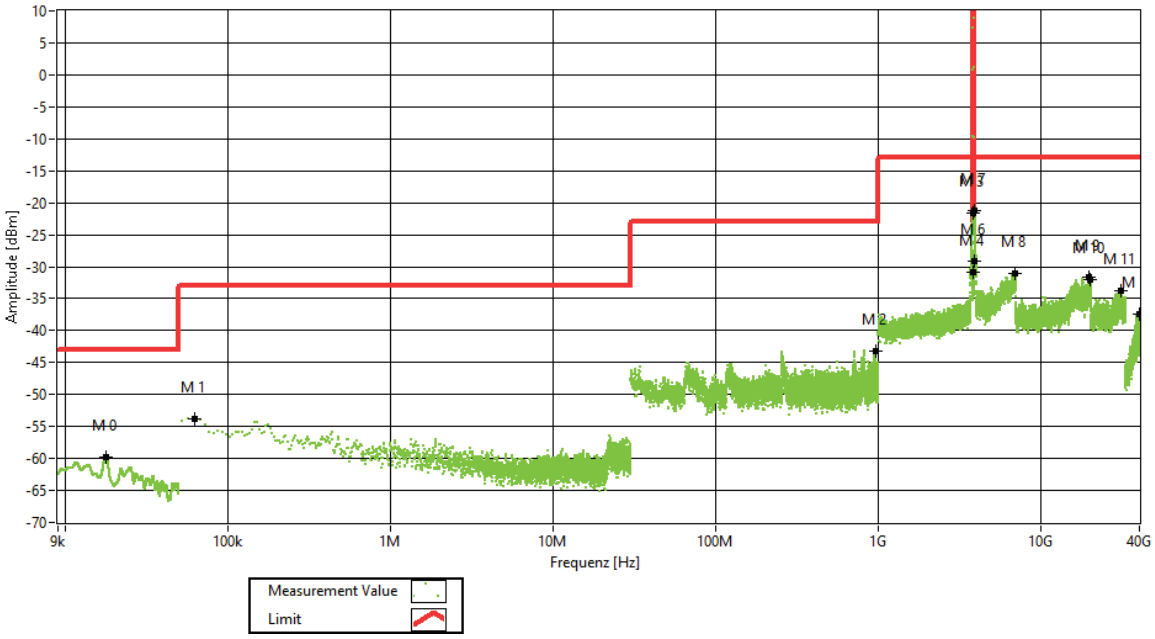
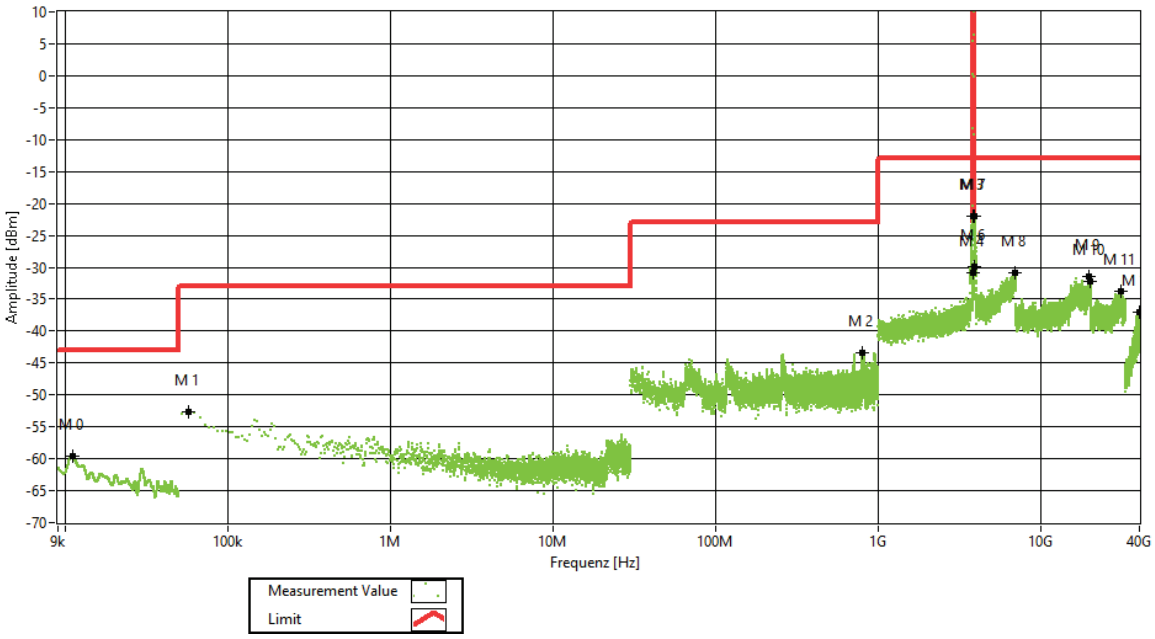
Frequency Band = 37 TDD. Segment 2. Test Frequency = high. Direction = RF downlink.
Signal Type = Wideband



Frequency Band = 37 TDD. Segment 2. Test Frequency = low. Direction = RF downlink.
Signal Type = Wideband 5G



Frequency Band = 37 TDD. Segment 2. Test Frequency = mid. Direction = RF downlink.
Signal Type = Wideband 5G



The test results relate only to the tested item. The sample has been provided by the client.
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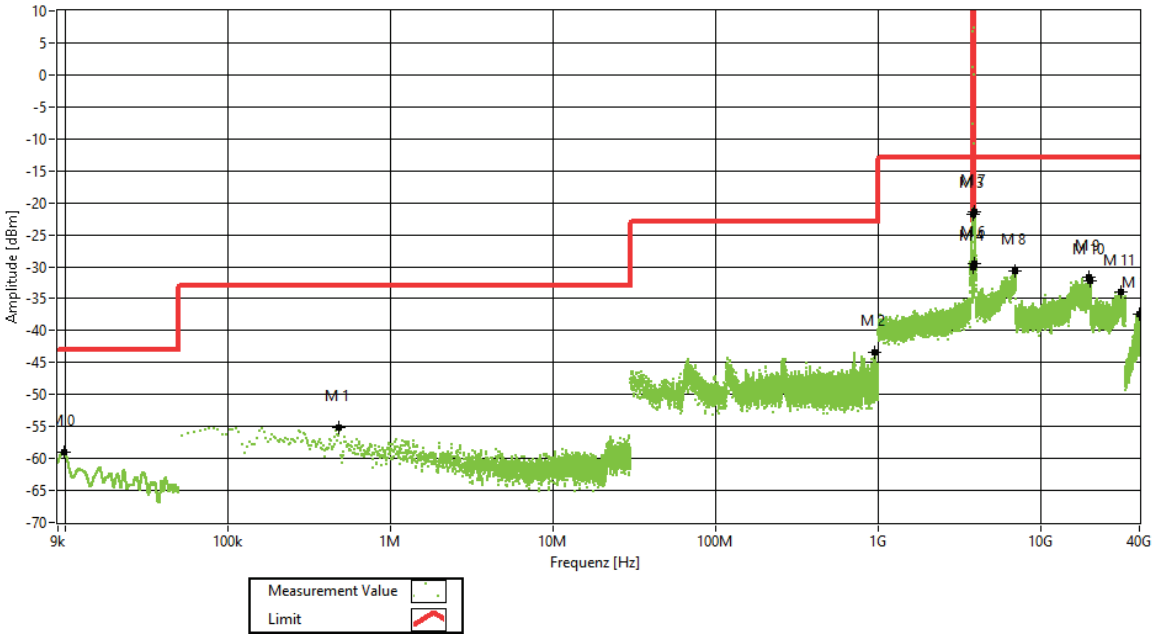
Frequency Band = 37 TDD. Segment 2. Test Frequency = high. Direction = RF downlink.
Signal Type = Wideband 5G