



EMC Test report 2025-0163-EMC-TR-25-0150-V01

Designation:	CAP H2 34T/37T F-AC-F1 [37T]
Manufacturer:	Andrew
Serial no.:	BGH2AA2434005
ID no.:	7857017-0001 Rev.: 01
FCC ID:	XS5-H23437
ISED ID:	2237E-H23437
Test specifications:	Class 2, permissive change ANSI 63.26:2015 Partly of FCC Rules and regulations as listed in 47 CFR, Part 20 and Part 27 Partly of RSS-192 Issue 5 with RSS-GEN Issue 5 and RSS-131 Issue 4 ALL CONDUCTED MEASUREMENTS PERFORMED.
	BU
Test plan:	Test plan „BU-PC-2336-10“ from customer
Test result:	Passed

Date of issue:	27.01.2026		Signature:
Version:	01	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: 2026.01.27 10:38:36 +01'00'
Date of receipt EUT:	14.07.2025		
Performance date:	17.07.2025 - 11.12.2025	Report reviewer:	 Thomas Hufnagel Test Engineer  Digitally signed by Thomas Hufnagel Date: 2026.01.27 11:10:55 +01'00'



BNetzA-CAB-19/21-20



Deutsche
Akkreditierungsstelle
D-PL-12024-06-00

The test results relates 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.

Bureau Veritas
Consumer Products Services Germany GmbH
www.bureauveritas.de/cps
Tel.: +49 (0)40 – 740 41 – 0

Schwerin
Mettenheimer Straße 12-14, 19061 Schwerin
cps-schwerin@bureauveritas.com

Tuerkheim
Businesspark A96, 86842 Tuerkheim
cps-tuerkheim@bureauveritas.com

Managing Director: Jörg-Timm Kilisch
VAT-No.: DE164793120
Reg.No.: Schwerin HRB 3564

Hamburg
Oehleckerring 40, 22419 Hamburg
cps-hamburg@bureauveritas.com

Nuremberg
Thurn-und-Taxis-Str. 18, 90411 Nuremberg
cps-nuernberg@bureauveritas.com

**Test Report No.: 25-0163-EMC-TR-25-0150-V01**

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

**BUREAU
VERITAS**

Client: Andrew Wireless System GmbH
Industriering 10
86675 Buchdorf
Germany

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

Test location: Bureau Veritas Consumer Products Services Germany GmbH
Thurn-und-Taxis-Straße 18
D-90411 Nürnberg

Laboratory accreditation no: DAKKS D-PL-12024-06-04
BNETZA-CAB-19/21-20

FCC designation number: DE0023
FCC test firm registration: 366481

ISED CAB identifier: DE0016
ISED company number: 3475A

Versions management:

V 01.00 Initial release

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.

2025-0163-EMC-TR-25-0150-V01



Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

BUREAU
VERITAS

Table of contents

1	APPLIED STANDARDS AND TEST SUMMARY	4
1.1	CFR APPLIED STANDARDS.....	4
1.2	FCC-ISED CORRELATION TABLE.....	6
1.3	MEASUREMENT SUMMARY/SIGNATURES	7
2	ADMINISTRATIVE DATA	11
2.1	TESTING LABORATORY	11
2.2	APPLICANT DATA	11
2.3	MANUFACTURER DATA.....	11
3	TEST OBJECT DATA	12
3.1	GENERAL EUT DESCRIPTION	12
3.2	EUT MAIN COMPONENTS	13
3.3	ANCILLARY EQUIPMENT	13
3.4	AUXILIARY EQUIPMENT	14
3.5	EUT SETUPS	14
3.6	OPERATING MODES.....	15
3.7	PRODUCT LABELLING.....	17
4	DESCRIPTION OF EMC TEST CENTRE	18
4.1	CLIMATIC CONDITIONS DURING MEASUREMENTS	18
4.2	CONFORMITY STATEMENT/DECISION RULE	18
4.3	MEASUREMENT UNCERTAINTIES.....	19
5	TEST RESULTS	20
5.1	EFFECTIVE RADIATED POWER, MEAN OUTPUT POWER AND ZONE ENHANCER GAIN.....	20
5.2	PEAK TO AVERAGE RATIO	40
5.3	OCCUPIED BANDWIDTH/INPUT-VERSUS-OUTPUT SPECTRUM.....	50
5.4	CONDUCTED SPURIOUS EMISSIONS AT ANTENNA TERMINALS.....	66
5.5	OUT-OF-BAND EMISSION LIMITS	85
5.6	OUT-OF-BAND REJECTION	110
5.7	FREQUENCY STABILITY	114
6	TEST EQUIPMENT	115
6.1	CONDUCTED	115
6.2	ANTENNA FACTORS. CABLE LOSS AND SAMPLE CALCULATION.....	115
7	PHOTO REPORT.....	116
	Annex A: Accreditation certificate (for information)	117
	Annex B: Additional information provided by client.....	118

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.



Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

**BUREAU
VERITAS**

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 and 20 and 27. 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

§ 27.54 – Frequency stability

§ 27.53 – Emission limits

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.

2025-0163-EMC-TR-25-0150-V01

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

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 "American National Standard for Compliance Testing of Transmitters Used in Licensec Radio Services"
- RSS-192 Issue 5 "Flexible Use Broadband Equipment Operating in the Band 3450-3900MHz"
- RSS-GEN Issue 5 "General Requirements for Compliance of Radio Apparatus"
- RSS-131 Issue 4 "Zone Enhancers"

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.

1.2 FCC-ISED CORRELATION TABLE

Correlation of measurement requirements for Industrial signal booster from FCC and ISED Canada

Measurement	FCC reference	ISED reference
Effective radiated power, mean output power and zone enhancer gain	§ 27.50 KDB 935210 D05 v01r04: 3.5	RSS-GEN Issue 5, 6.12 RSS-131 Issue 4: 9.3 RSS-192 Issue 5, 5.5
Peak to average ratio	§ 27.50	RSS-192 Issue 5, 5.5
Occupied bandwidth	§ 2.1049	RSS-GEN Issue 5, 6.7
Input-versus-output spectrum	KDB 935210 D05 v01r04: 3.4	RSS-131 Issue 4: 9.2
Out-of-band emissions limits	§ 2.1051 § 27.53 KDB 935210 D05 v01r04: 3.6	RSS-GEN Issue 5, 6.13 RSS-192 Issue 5, 5.6
Conducted spurious emission at antenna terminal(s)	§ 2.1051 § 27.53 KDB 935210 D05 v01r04: 3.6	RSS-GEN Issue 5, 6.13 RSS-192 Issue 5, 5.6
Frequency stability	§ 2.1055 § 27.54	RSS-GEN Issue 5, 6.11 RSS-131 Issue 4: 9.4 RSS-192 Issue 5, 5.4
Out-of-band rejection	KDB 935210 D05 v01r04: 3.3	RSS-131 Issue 4: 9.1
Field strength of spurious radiation	§ 2.1053 § 27.53	RSS-GEN Issue 5, 6.13 RSS-192 Issue 5, 5.5
All measurements	ANSI 63.26	ANSI 63.26

The test case frequency stability was not performed since the EUT is not equipped with signal processing capabilities. According KDB 935210 D05 in this case a measurement is not required.

The field strength of spurious radiation wasn't also tested because a class 2 permission change was performed at the DUT.



Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

1.3 MEASUREMENT SUMMARY/SIGNATURES

**47 CFR CHAPTER I FCC PART 27 Subpart C [Base § 27.50
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

Final Result

OP-Mode

Frequency band; direction; input Power; signal type

TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband

TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband

TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband 5G

TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband 5G

TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband

TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband

TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband 5G

TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband 5G

TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband

TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband

TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband 5G

TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband 5G

FCC

ISED

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

Passed

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

Peak to average ratio

The measurement was performed according to ANSI C63.26

Final Result

FCC

ISED

TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband

Passed

Passed

TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband

Passed

Passed

TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband 5G

Passed

Passed

TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband 5G

Passed

Passed

TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband

Passed

Passed

TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband

Passed

Passed

TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband 5G

Passed

Passed

TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband 5G

Passed

Passed

TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband

Passed

Passed

TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband

Passed

Passed

TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband 5G

Passed

Passed

TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband 5G

Passed

Passed

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.

47 CFR CHAPTER I FCC PART 2
§ 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

TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband
TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband
TDD 37, segment 1, RF downlink, 0.3 dB < AGC, Wideband 5G
TDD 37, segment 1, RF downlink, 3 dB > AGC, Wideband 5G
TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband
TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband
TDD 37, segment 2, RF downlink, 0.3 dB < AGC, Wideband 5G
TDD 37, segment 2, RF downlink, 3 dB > AGC, Wideband 5G
TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband
TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband
TDD 37, segment 3, RF downlink, 0.3 dB < AGC, Wideband 5G
TDD 37, segment 3, RF downlink, 3 dB > AGC, Wideband 5G

FCC
ISED

Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed 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,
KDB 935210 D05 v01r04: 3.6

Final Result
OP-Mode

Frequency band; Direction; Input power; Signal type

TDD 37, segment 1, RF downlink, Wideband
TDD 37, segment 1, RF downlink, Wideband 5G
TDD 37, segment 2, RF downlink, Wideband
TDD 37, segment 2, RF downlink, Wideband 5G
TDD 37, segment 3, RF downlink, Wideband
TDD 37, segment 3, RF downlink, Wideband 5G

FCC
ISED

Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed Passed
Passed Passed



Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

**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

FCC ISED

	Passed	Passed
Upper, TDD 37 segment 1, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed
Upper, TDD 37 segment 1, 1, RF downlink, 3 dB > AGC, Wideband	Passed	Passed
Upper, TDD 37 segment 1, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed	Passed
Upper, TDD 37 segment 1, 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed	Passed
Lower, TDD 37 segment 1, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 1, 1, RF downlink, 3 dB < AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 1, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed	Passed
Lower, TDD 37 segment 1, 1, RF downlink, 3 dB < AGC, Wideband 5G	Passed	Passed
Upper, TDD 37 segment 1, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed
Upper, TDD 37 segment 1, 2, RF downlink, 3 dB > AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 1, 2, RF downlink, , 0.3 dB < AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 1, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed

OP-Mode

Band edge; frequency band; number of signals; direction; input power; signal
type

FCC ISED

Upper, TDD 37 segment 2, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed
Upper, TDD 37 segment 2, 1, RF downlink, 3 dB > AGC, Wideband	Passed	Passed
Upper, TDD 37 segment 2, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed	Passed
Upper, TDD 37 segment 2, 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed	Passed
Lower, TDD 37 segment 2, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 2, 1, RF downlink, 3 dB < AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 2, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed	Passed
Lower, TDD 37 segment 2, 1, RF downlink, 3 dB < AGC, Wideband 5G	Passed	Passed
Upper, TDD 37 segment 2, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed
Upper, TDD 37 segment 2, 2, RF downlink, 3 dB > AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 2, 2, RF downlink, , 0.3 dB < AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 2, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed

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.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

OP-Mode

Band edge; frequency band; number of signals; direction; input power; aignal type

	FCC	ISED
Upper, TDD 37 segment 3, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed
Upper, TDD 37 segment 3, 1, RF downlink, 3 dB > AGC, Wideband	Passed	Passed
Upper, TDD 37 segment 3, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed	Passed
Upper, TDD 37 segment 3, 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed	Passed
Lower, TDD 37 segment 3, 1, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 3, 1, RF downlink, 3 dB < AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 3, 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed	Passed
Lower, TDD 37 segment 3, 1, RF downlink, 3 dB < AGC, Wideband 5G	Passed	Passed
Upper, TDD 37 segment 3, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed	Passed
Upper, TDD 37 segment 3, 2, RF downlink, 3 dB > AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 3, 2, RF downlink, , 0.3 dB < AGC, Wideband	Passed	Passed
Lower, TDD 37 segment 3, 2, RF downlink, 0.3 dB < AGC, Wideband	Passed	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

Final Result

OP-Mode

Frequency band; direction

	FCC	ISED
TDD 37, segment 1, RF downlink	Passed	Passed
TDD 37, segment 2, RF downlink	Passed	Passed
TDD 37, segment 3, RF downlink	Passed	Passed

The test case frequency stability was not performed, since the EUT is not equipped with signal processing capabilities.



Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

BUREAU
VERITAS

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: 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:

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.

2025-0163-EMC-TR-25-0150-V01

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/50 Hz – 60 Hz
Voltage level	100 V - 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 3.2 EUT Main components.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

3.2 EUT MAIN COMPONENTS

Sample parameter	Value
Serial number	SZBEAQ2501A0056
HW version	7857017-0001 Rev.: 00
SW version	1.10.0.1219
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
-	-	-

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	CommScope, ION-E PSZ Shelf AC, FD34499	Power supply rack
AUX2	GE Power Electronic Inc., CAR1212FPBC-Z, EL17448	Power plug-in module
AUX3	CommScope, ION-E WCS-2, SZAEJAJ1925A0019	Module rack
AUX4	CommScope, ION-E OPT, SZBEAD2043A0127	Optical plug-in module
AUX5	Commcope, 7680813, APAP25120001628	Optical plug in probe
AUX6	Commcope, 7680813, APAP25120001628	Optical plug in probe
AUX8	CommScope, ION-E SUI, SZBEAC172A0002	Interface card plug-in module
AUX8	CommScope, RFD HB, SZBEAQ2501A0056	RF card plug-in module
AUX9	CommScope, RFD HB, SZBEAQ2512A0017	RF card plug-in module

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

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

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: representation by an AWGN signal with 4.1 MHz

Wideband 5G: representation by an AWGN signal with 98.3 MHz

3.6.3 AUTOMATIC GAIN CONTROL LEVELS

AGC Levels							
Segment of TDD 37 band	Direction	Signal type	AGC start $L_{P\text{ in}}$ [dBm]	AGC start $L_{P\text{ in}}$ -0.3 dB [dBm]	AGC start $L_{P\text{ in}}$ +3 dB [dBm]	Frequency [MHz]	Frequency
1	Downlink	Wideband	-3.0	-3.3	0.1	3750.0	Mid
2	Downlink	Wideband	-3.8	-4.2	-0.7	3840.0	
3	Downlink	Wideband	-5.0	-4.3	-1.0	3930.0	
1	Downlink	Wideband 5G	-3.3	-3.6	-0.3	3750.0	
2	Downlink	Wideband 5G	-3.6	-3.9	-0.6	3840.0	
3	Downlink	Wideband 5G	-3.2	-4.5	-1.1	3930.0	
1	Downlink	Wideband	-3.0	-3.3	0.0	3702.5	Low
2	Downlink	Wideband	-3.0	-3.3	0.0	3792.5	
3	Downlink	Wideband	-2.8	-3.1	0.2	3882.5	
1	Downlink	Wideband	-3.4	-3.7	-0.4	3797.5	High
2	Downlink	Wideband	-2.9	-3.2	0.0	3887.5	
3	Downlink	Wideband	-3.0	-3.3	0.0	3977.5	
1	Downlink	Wideband	-3.4	-3.7	-0.4	3797.5	Max.Power
2	Downlink	Wideband	-3.8	-4.1	-0.9	3883.0	
3	Downlink	Wideband	-3.5	-4.8	-1.6	3883.0	
1	Downlink	Wideband 5G	-3.3	-3.6	-0.3	3750.0	
2	Downlink	Wideband 5G	-3.6	-3.9	-0.6	3840.0	
3	Downlink	Wideband 5G	-3.2	-4.5	-1.1	3930.0	

Remark:

If the measured frequency f_0 for the max power has a too low distance to the band edges, because in the tests modulated signals must be used: The next possible frequency to the according band edge was used.

The minimum distances to the band edges are:

AWGN signal (wideband): 2.5 MHz

AWGN signal (wideband 5G): Here only measurements at the mid frequency were performed, because of the signal width.



**BUREAU
VERITAS**

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

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.

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.

2025-0163-EMC-TR-25-0150-V01

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.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

4.3 MEASUREMENT UNCERTAINTIES

KDB 935210 D05	Test laboratory
Power measurement	0,68 dB
Measuring AGC threshold level	0,90 dB
Out of band rejection	0,90 dB
Input-versus-output signal comparison	0,91 dB
Mean power output	0,90 dB
Measuring out-of-band/out-of-block (including intermodulation) emissions and spurious emissions	0,90 dB
Out-of-band/out-of-block emissions conducted measurements	0,90 dB
Spurious emissions conducted	2,18 dB
Spurious emissions radiated measurements	5,38 dB
Total frequency uncertainty	2×10^{-7}

Reference : ECL-MU5.4.6.3-EMC-14-001-V03.00 MU Wireless.xlsx

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.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

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:

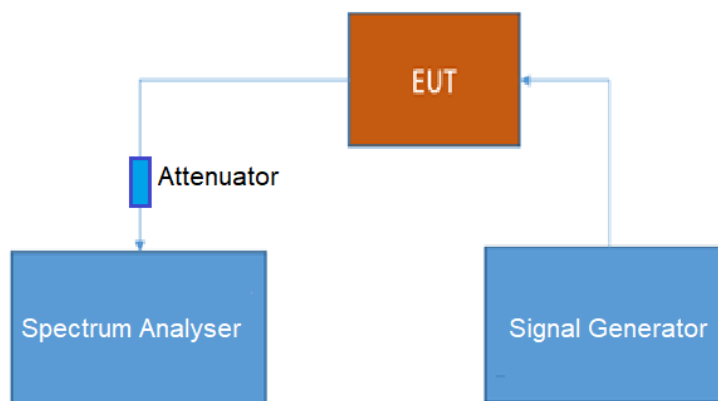
ANSI C63.26, KDB 935210 D05 v01r04: 3.5

Test date: 2025-07-17 – 2025-07-23**Environmental conditions:** 27.5 °C; 41 % r. H. (average values from the test times)**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:



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

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

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

5.1.2 TEST REQUIREMENTS/LIMITSAbstract from FCC Part 27:**§ 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.

Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Abstract from RSS-131:**RSS-131; 9.3 Mean output power and zone enhancer gain**

The zone enhancer gain shall not exceed the nominal gain (i.e the maximum gain at any frequency within the zone enhancer's passband) by more than 1.0 dB. Outside of the 20 dB passband bandwidth, the gain shall not exceed the gain at the 20 dB point.

Abstract from RSS-192:**RSS-192; 5.5 Transmitter output power**

The maximum output power of the equipment measured in terms of average values shall comply with the limits specified in table 1.

Table 1: Maximum power of equipment

Equipment type	Maximum power
Non-AAS: base station (outdoor), fixed P-P station, P-MP hub station	68 dBm e.i.r.p./5 MHz
AAS: base station (outdoor), P-MP hub station	47 dBm TRP/5MHz
Indoor base station	39 dBm TRP/channel bandwidth
Fixed subscriber equipment	39 dBm e.i.r.p./channel bandwidth
Subscriber equipment other than fixed subscriber equipment	30 dBm e.i.r.p./channel bandwidth

Use of ISED limit:

The ISED limit of 68 dBm/5 MHz EIRP is taken and converted into the limit of 61.0 dBm/MHz EIRP for the tables.

5.1.3 TEST PROTOCOL

FCC table

TDD 37, segment 1, ANT 2; Downlink							
Signal type	Input power	Frequency [MHz]	Input power [dBm]	Maximum average output power [dBm]	Limit average output power [dBm/MHz] EIRP	Margin to limit [dB]	Gain [dB]
Wideband	0.3 dB < AGC	3797.5	-3.7	43.7	62.1	18.4	47.4
Wideband	3 dB > AGC	3797.5	-0.4	43.9	62.1	18.2	44.3
Wideband 5G	0.3 dB < AGC	3750.0	-3.6	42.5	62.1	19.6	46.0
Wideband 5G	3 dB > AGC	3750.0	-0.3	43.5	62.1	18.6	43.8

TDD 37, segment 2, ANT 2; Downlink							
Signal type	Input power	Frequency [MHz]	Input power [dBm]	Maximum average output power [dBm]	Limit average output power [dBm/MHz] EIRP	Margin to limit [dB]	Gain [dB]
Wideband	0.3 dB < AGC	3883.0	-4.1	43.2	62.1	19.0	47.2
Wideband	3 dB > AGC	3883.0	-0.9	43.8	62.1	18.3	44.7
Wideband 5G	0.3 dB < AGC	3840.0	-3.9	43.7	62.1	18.4	47.7
Wideband 5G	3 dB > AGC	3840.0	-0.6	43.4	62.1	18.7	44.0

TDD 37, segment 3, ANT 2; Downlink							
Signal type	Input power	Frequency [MHz]	Input power [dBm]	Maximum average output power [dBm]	Limit average output power [dBm/MHz] EIRP	Margin to limit [dB]	Gain [dB]
Wideband	0.3 dB < AGC	3883.0	-4.8	43.6	62.1	18.5	48.3
Wideband	3 dB > AGC	3883.0	-1.6	43.6	62.1	18.5	45.1
Wideband 5G	0.3 dB < AGC	3930.0	-4.5	43.4	62.1	18.7	47.8
Wideband 5G	3 dB > AGC	3930.0	-1.1	43.0	62.1	19.1	44.1

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.

ISED table

TDD 37, segment 1, ANT 2; Downlink							
Signal type	Input power	Frequency [MHz]	Input power [dBm]	Maximum average output power [dBm]	Limit average output power [dBm/MHz] EIRP	Margin to limit [dB]	Gain [dB]
Wideband	0.3 dB < AGC	3797.5	-3.7	43.7	61.0	17.3	47.4
Wideband	3 dB > AGC	3797.5	-0.4	43.9	61.0	17.1	44.3
Wideband 5G	0.3 dB < AGC	3750.0	-3.6	42.5	61.0	18.5	46.0
Wideband 5G	3 dB > AGC	3750.0	-0.3	43.5	61.0	17.5	43.8

TDD 37, segment 2, ANT 2; Downlink							
Signal Type	Input Power	Frequency [MHz]	Input power [dBm]	Maximum average output power [dBm]	Limit average output power [dBm/MHz] EIRP	Margin to limit [dB]	Gain [dB]
Wideband	0.3 dB < AGC	3883.0	-4.1	43.2	61.0	17.9	47.2
Wideband	3 dB > AGC	3883.0	-0.9	43.8	61.0	17.2	44.7
Wideband 5G	0.3 dB < AGC	3840.0	-3.9	43.7	61.0	17.3	47.7
Wideband 5G	3 dB > AGC	3840.0	-0.6	43.4	62.1	18.7	44.0

TDD 37, segment 3, ANT 2; Downlink							
Signal Type	Input Power	Frequency [MHz]	Input power [dBm]	Maximum average output power [dBm]	Limit average output power [dBm/MHz] EIRP	Margin to limit [dB]	Gain [dB]
Wideband	0.3 dB < AGC	3883.0	-4.8	43.6	61.0	17.4	48.3
Wideband	3 dB > AGC	3883.0	-1.6	43.6	61.0	17.4	45.1
Wideband 5G	0.3 dB < AGC	3930.0	-4.5	43.4	61.0	17.6	47.8
Wideband 5G	3 dB > AGC	3930.0	-1.1	43.0	61.0	18.0	44.1

The manufacturer's nominal gain value is 48 dB. According RSS-131 the gain may not exceed a limit of nominal gain plus 1.0 dB.

The maximum measured gain in the ISED tables above is 48.3 dB: The DUT meets this requirement: **PASS**.

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

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

5.1.4 SAMPLE CALCULATION OF OUTPUT POWERFCC calculation:**Maximum output power (EIRP) in consideration together with the send antenna**

The highest power level in the tables above is

 $p_{\text{highest}} = 43.7 \text{ dBm}$ at the channel which has the most output power of all channels.Hereby at an antenna gain of $G_{\text{dBi}} = 13 \text{ dB}$ the highest effective radiated output power EIRP $p_{\text{EIRP 1CH}}$ of one channel is:

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

This results in:

$$p_{\text{EIRP 1CH}} = 43.7 \text{ dBm} + 13.0 \text{ dB} = 56.7 \text{ dBm}$$

The equivalent power P is according the given formula:

$$P_{\text{EIRP 1CH}} =$$

$$P_{\text{EIRP 1CH}} [\text{W}] = 10 \exp \left(\left(p_{\text{EIRP 1CH}} [\text{dBm}] / 10 \right) * 0.001 [\text{W}] \right)$$

This results in:

$$P_{\text{EIRP 1CH}} [\text{W}] = 10 \exp \left(\left(56.7 [\text{dBm}] / 10 \right) * 0.001 [\text{W}] \right) = 468 \text{ W}$$

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

$$p_{\text{EIRP all channels}} = 2 * p_{\text{EIRP 1CH}}$$

This results in:

$$p_{\text{EIRP all channels}} = 2 * 468 \text{ W} = 936 \text{ W}$$

Final result of this consideration:

 $p_{\text{EIRP all channels}} = 936 \text{ W} < 1640 \text{ W/MHz}$, hereby 1640 W/MHz is the highest allowed limit in this band which equates 62.1 dBm/MHz.**The DUT doesn't exceed the limit.**

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

ISED calculation:**Maximum output power (EIRP) in consideration together with the send antenna**

The highest power level in the tables above is

$p_{\text{highest}} = 43.7 \text{ dBm}$ at the channel which has the most output power of all channels.

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

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

This results in:

$$p_{\text{EIRP 1CH}} = 43.7 \text{ dBm} + 13.0 \text{ dB} = 56.7 \text{ dBm}$$

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

$$p_{\text{EIRP all channels}} = p_{\text{EIRP 1CH}} + 3 \text{ dB}$$

This results in:

$$p_{\text{EIRP all channels}} = 56.7 \text{ dBm} + 3.0 \text{ dB} = 59.7 \text{ dBm}$$

Final result of this consideration:

$p_{\text{EIRP all channels}} = 59.7 \text{ dBm} < 61.0 \text{ dBm/MHz}$, hereby the limit of 61.0 dBm/MHz equates the ISED limit of 68 dBm/5 MHz

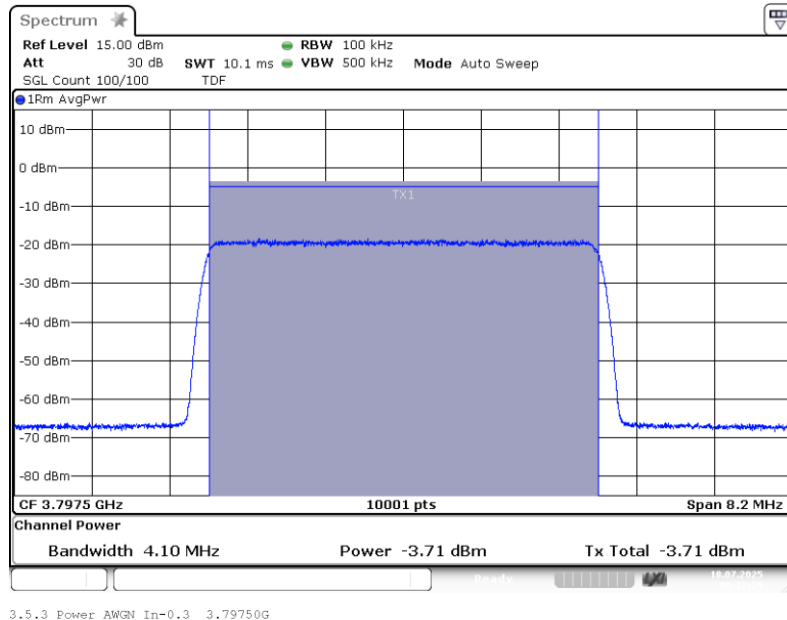
The DUT doesn't exceed the limit.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

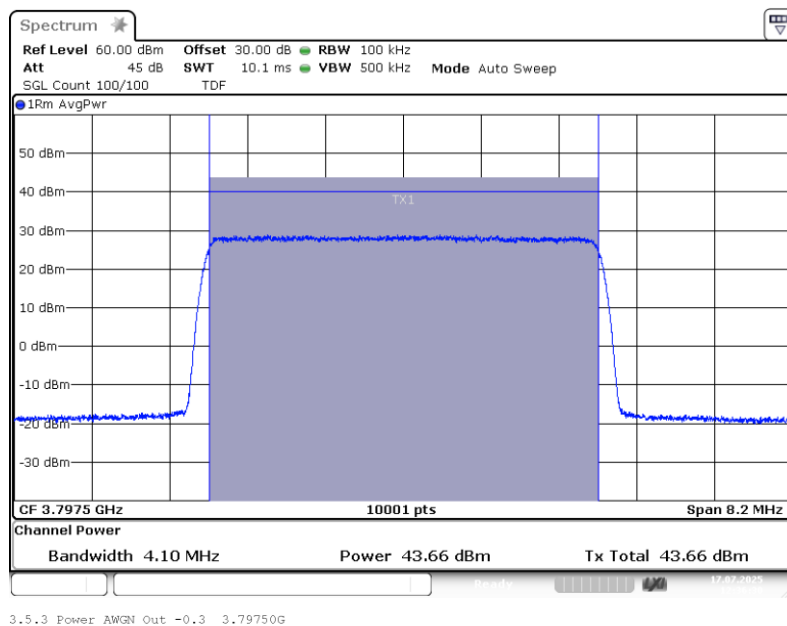
Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

5.1.5 MEASUREMENT PLOT

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7975 GHz; Band edge: f0;
Mod: AWGN; Input power 0.3 dB < AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7975 GHz; Band edge: f0;
Mod: AWGN; Output power 0.3 dB < AGC

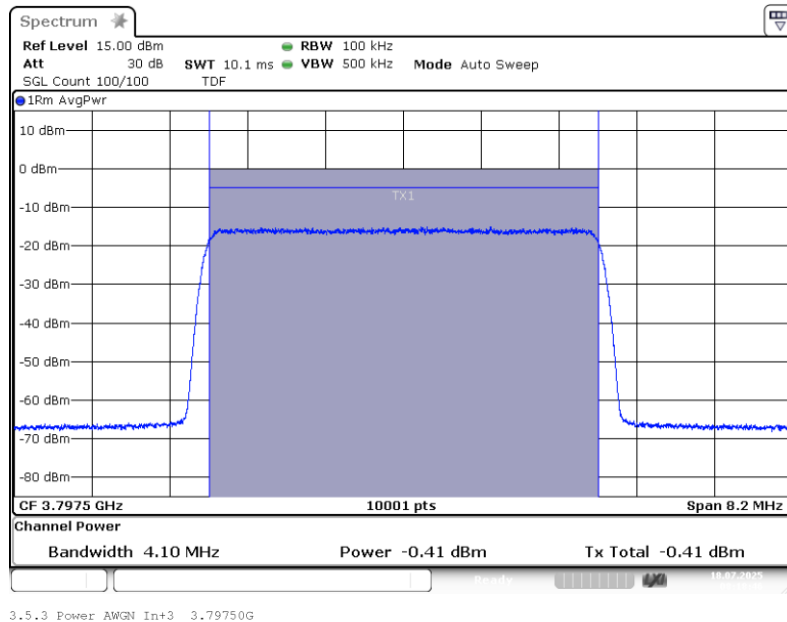


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

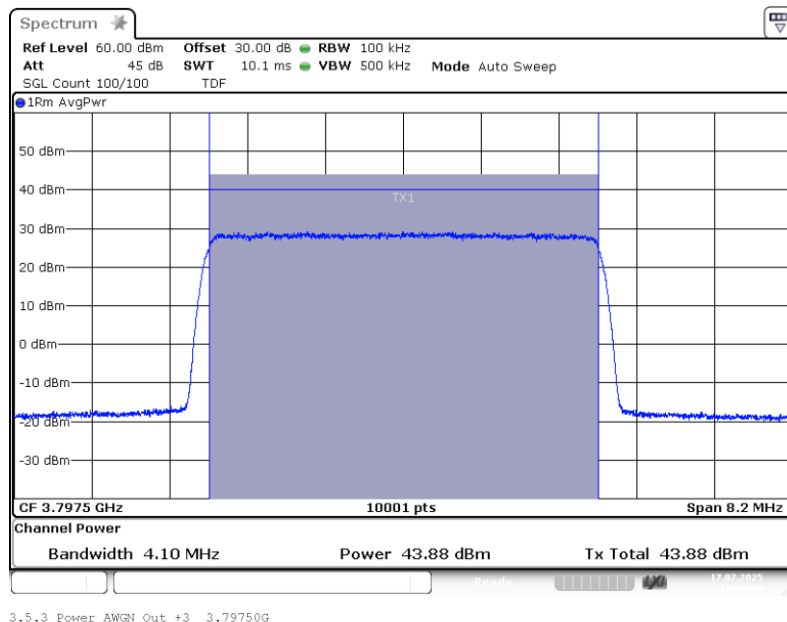
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7975 GHz; Band edge: f0;
Mod: AWGN; Input power 3 dB > AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7975 GHz; Band edge: f0;
Mod: AWGN; Output power 3 dB > AGC

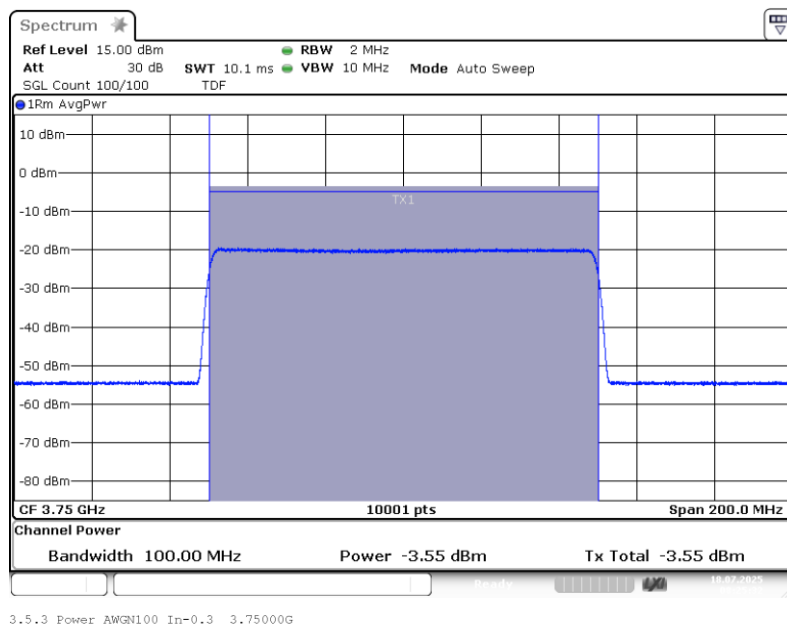


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

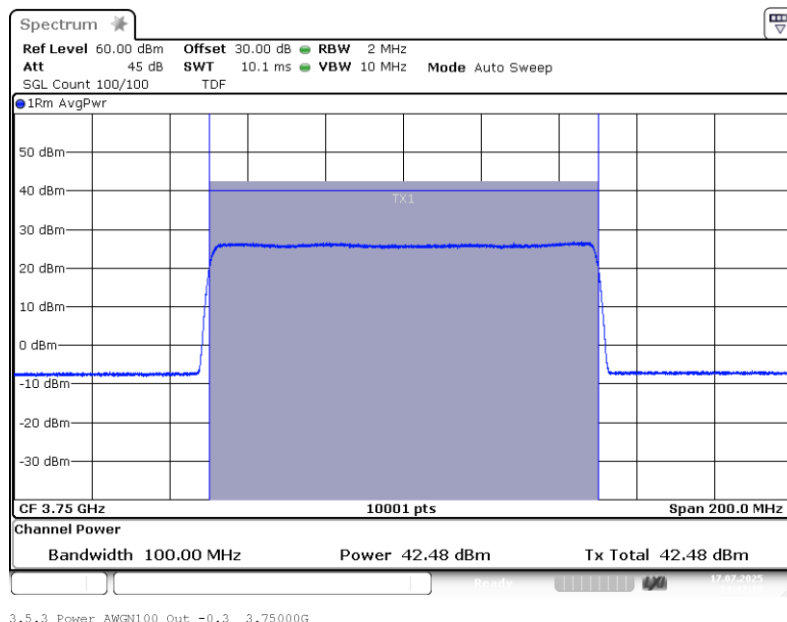
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; Input power 0.3 dB < AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; Output power 0.3 dB < AGC

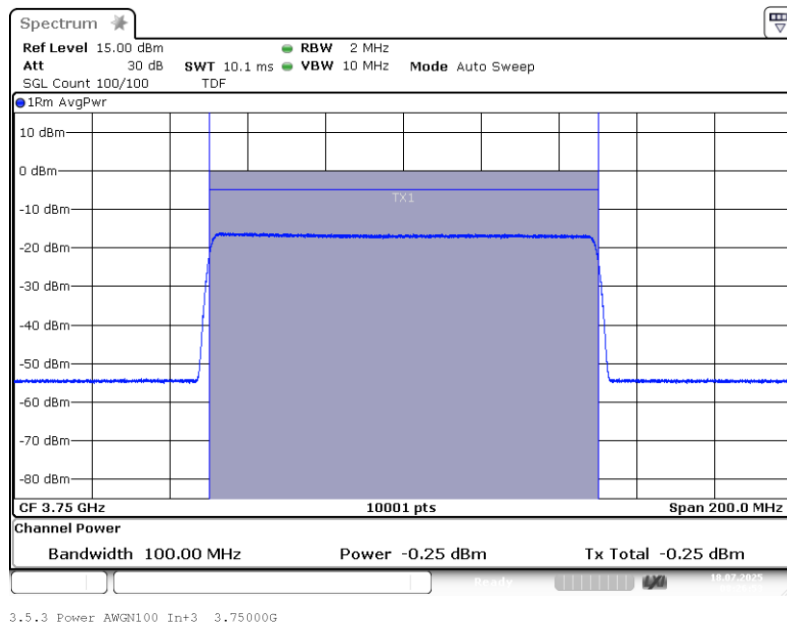


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

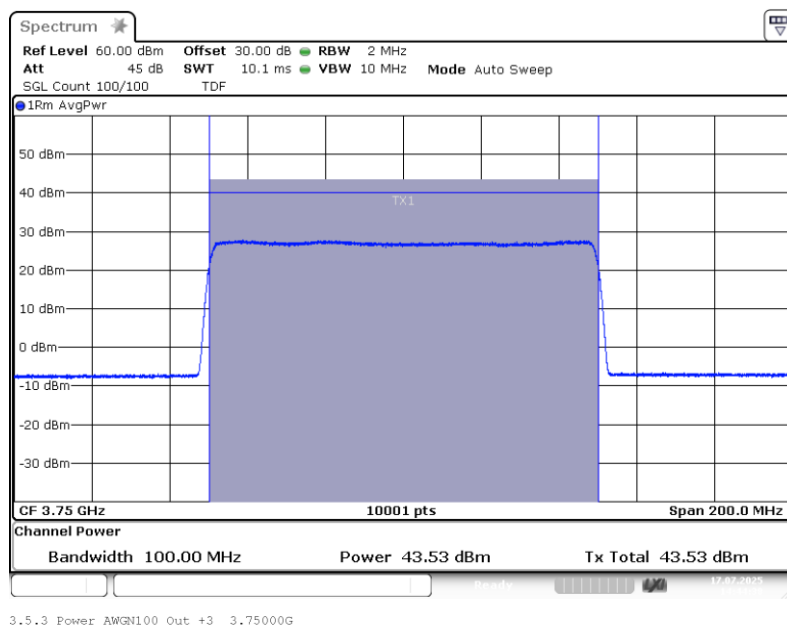
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; Input power 3 dB > AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; Output power 3 dB > AGC

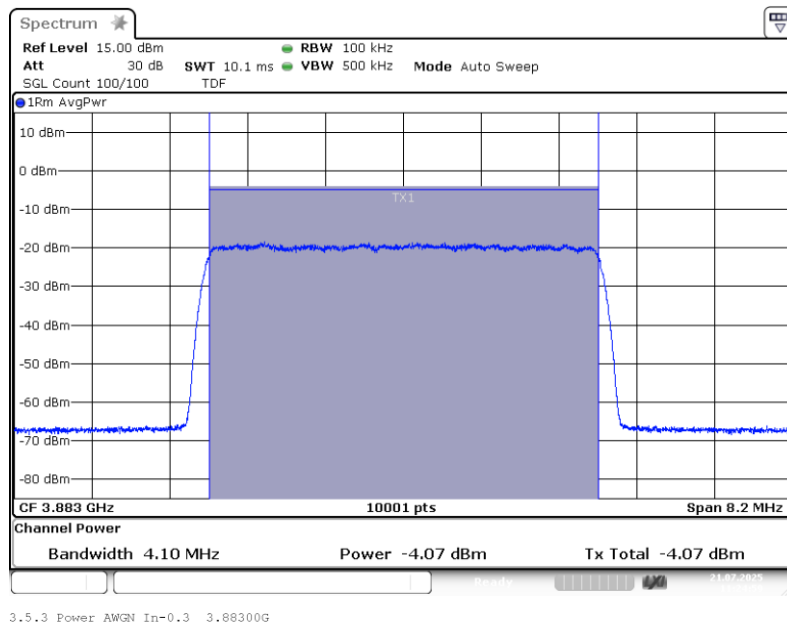


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

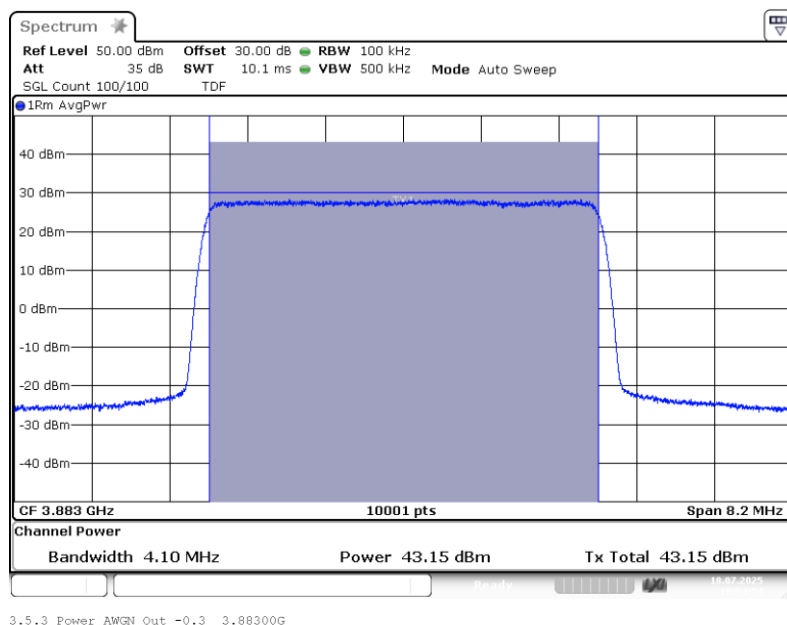
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; Input power 0.3 dB < AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; Output power 0.3 dB < AGC



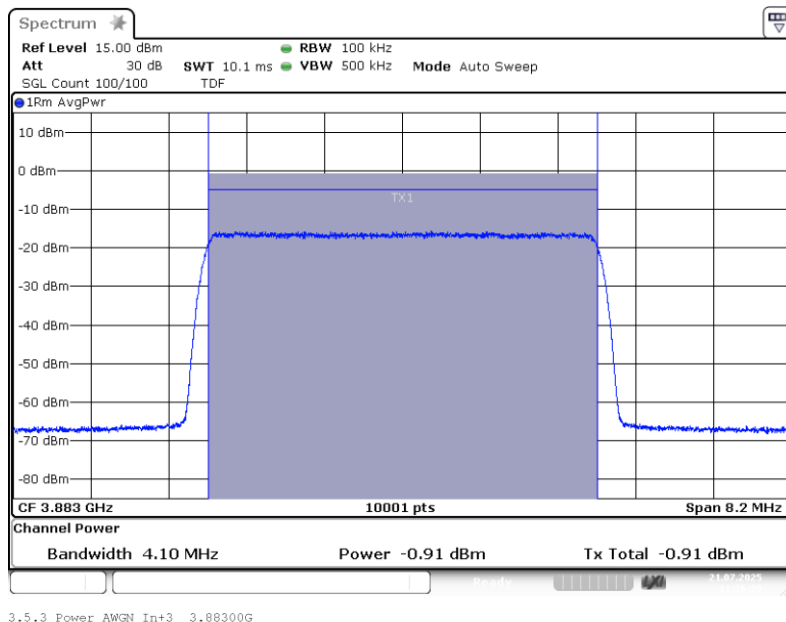
The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

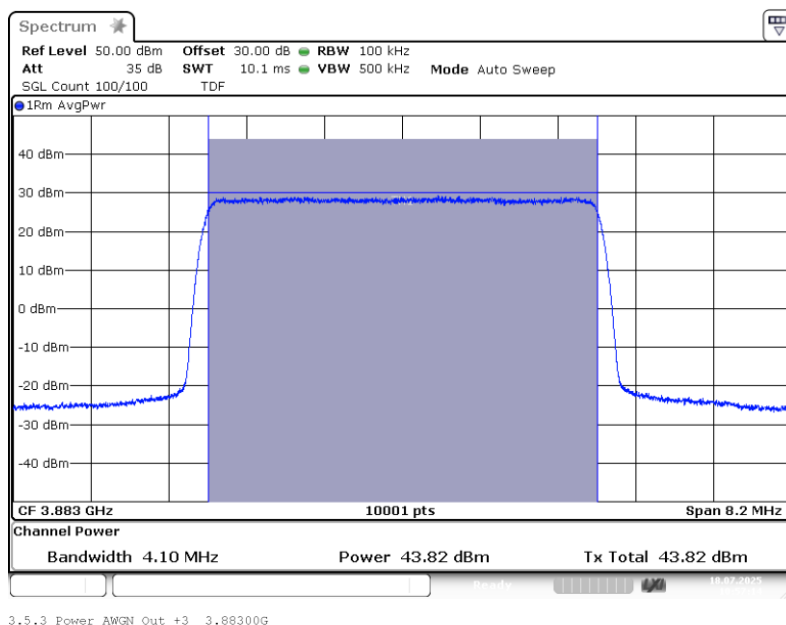
Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

**BUREAU
VERITAS**

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; Input power 3 dB > AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; Output power 3 dB > AGC

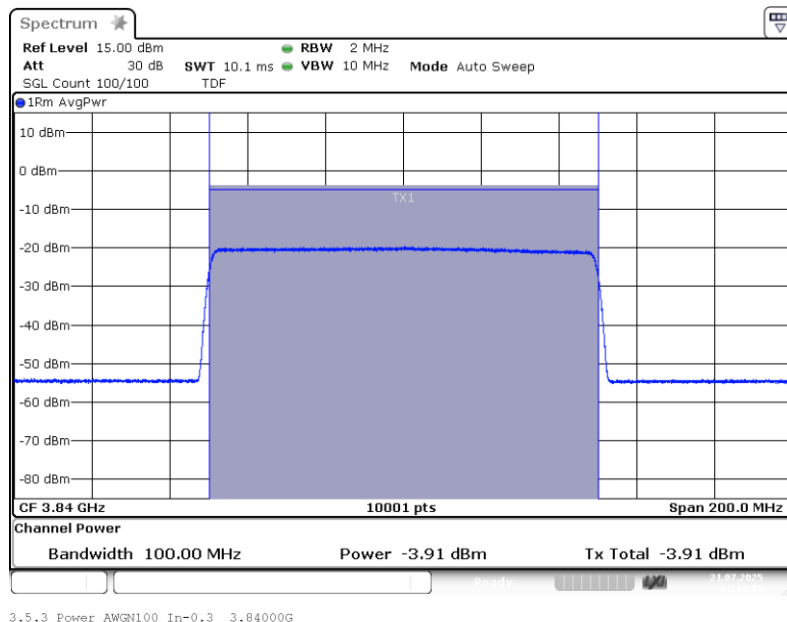


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

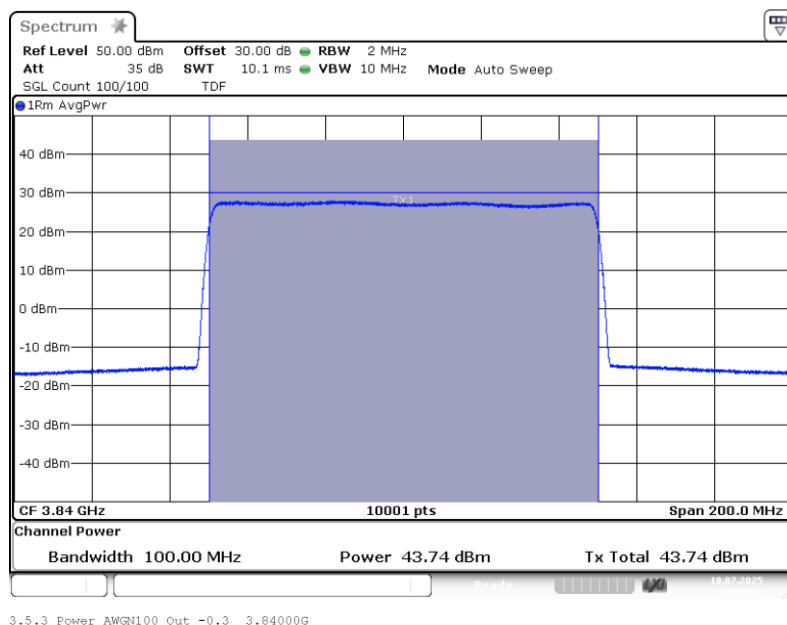
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; Input power 0.3 dB < AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; Output power 0.3 dB < AGC

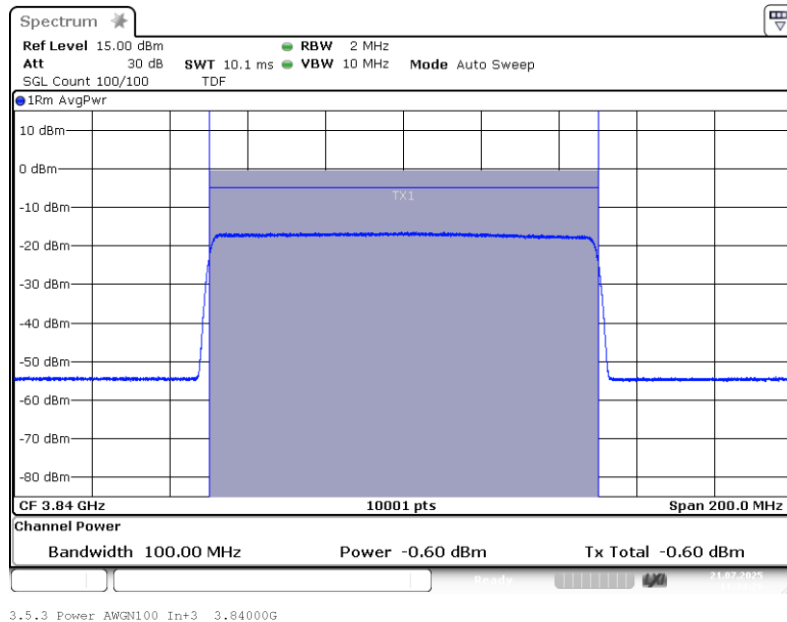


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

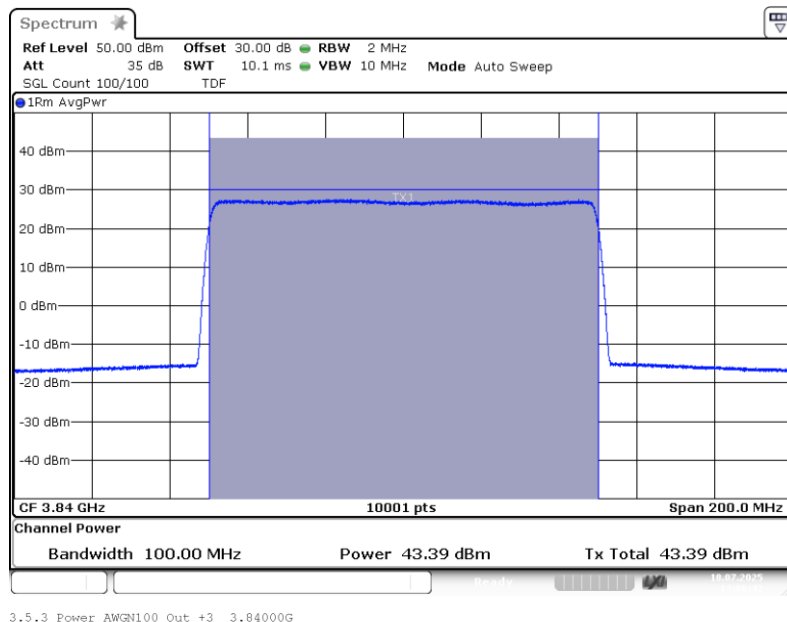
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; Input power 3 dB > AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; Output power 3 dB > AGC

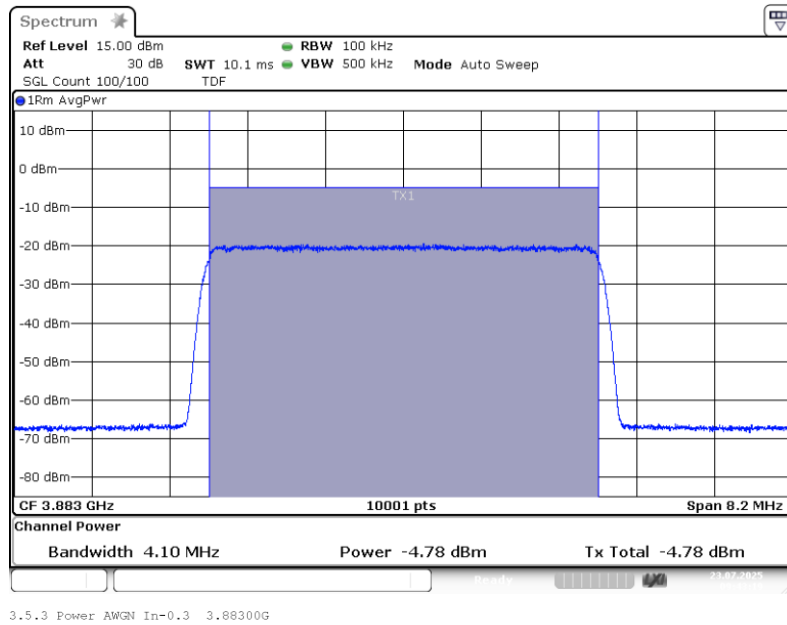


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

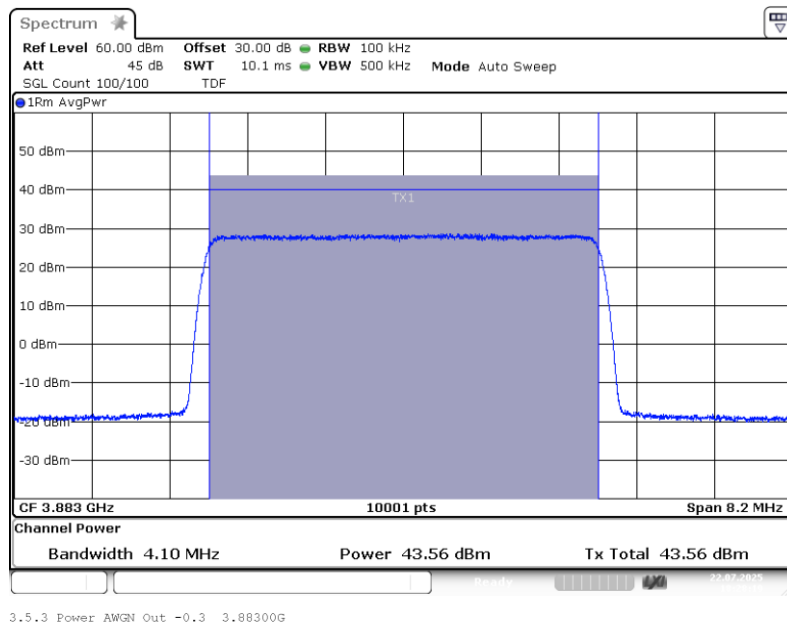
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 3, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; Input power 0.3 dB < AGC



Band: TDD 37, segment 3, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; Output power 0.3 dB < AGC

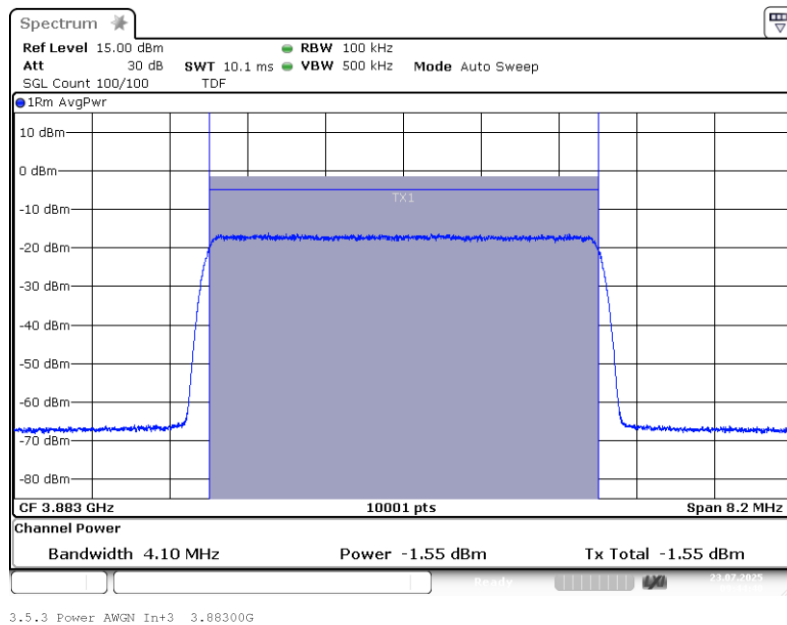


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

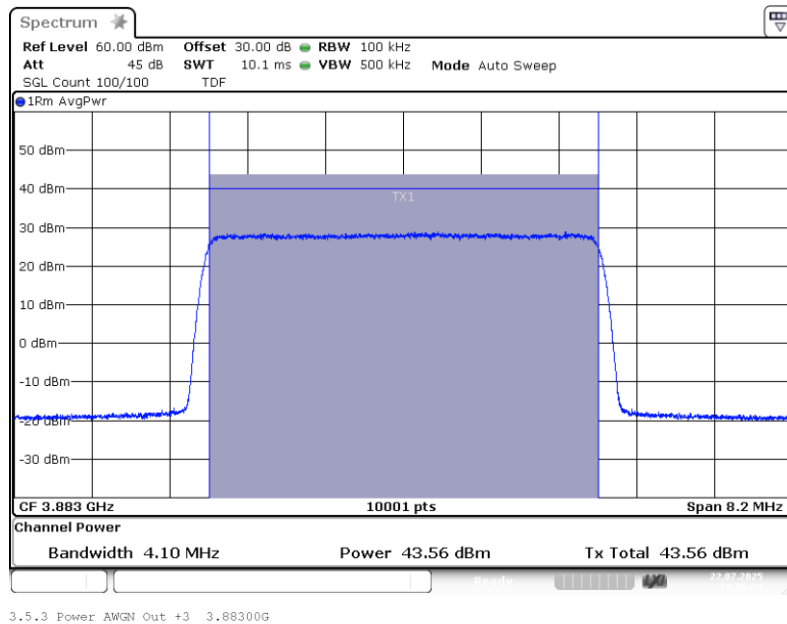
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 3, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; Input power 3 dB > AGC



Band: TDD 37, segment 3, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; Output power 3 dB > AGC

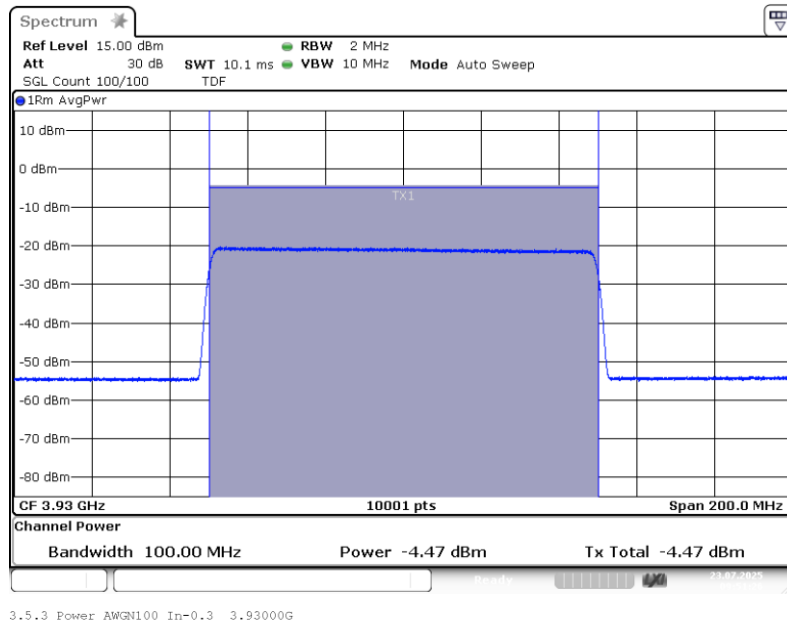


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

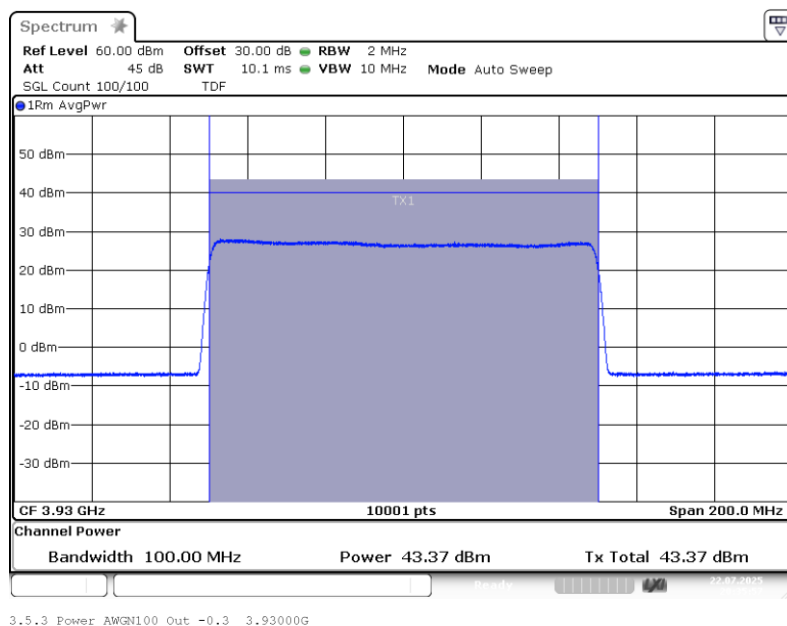
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 3, ANT 2; Frequency: 3.9300 GHz; Band edge: mid;
Mod: AWGN100; Input power 0.3 dB < AGC



Band: TDD 37, segment 3, ANT 2; Frequency: 3.9300 GHz; Band edge: mid;
Mod: AWGN100; Output power 0.3 dB < AGC

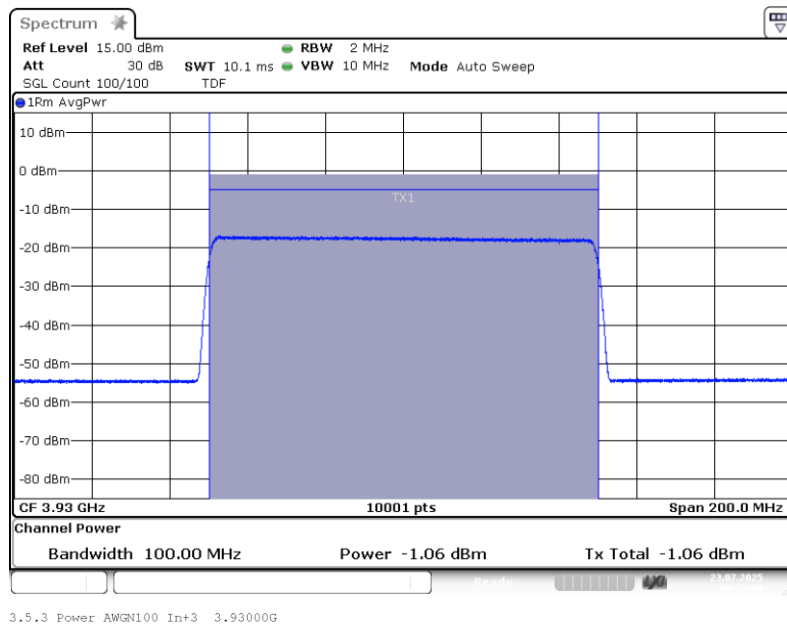


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

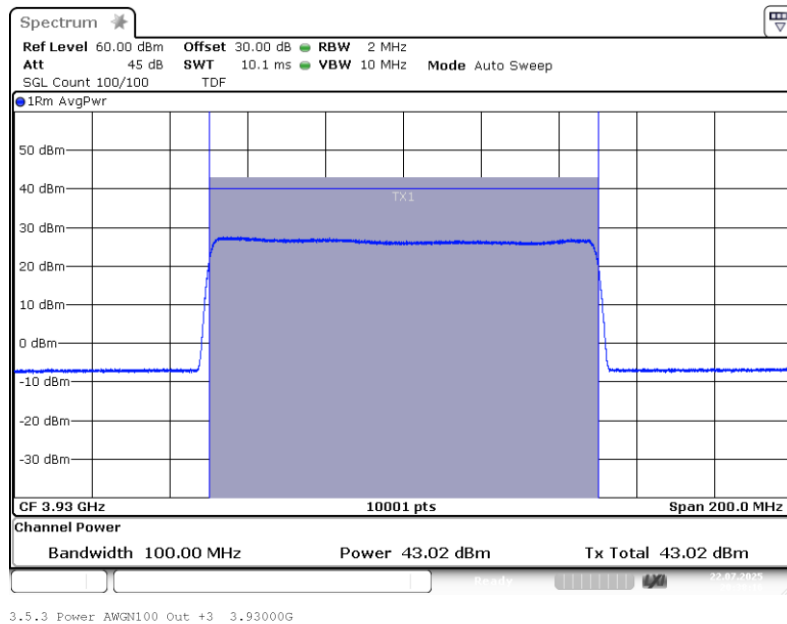
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 3, ANT 2; Frequency: 3.9300 GHz; Band edge: mid;
Mod: AWGN100; Input power 3 dB > AGC



Band: TDD 37, segment 3, ANT 2; Frequency: 3.9300 GHz; Band edge: mid;
Mod: AWGN100; Output power 3 dB > AGC



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.



Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

BUREAU
VERITAS

5.1.6 TEST EQUIPMENT USED

- Conducted

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.

2025-0163-EMC-TR-25-0150-V01

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

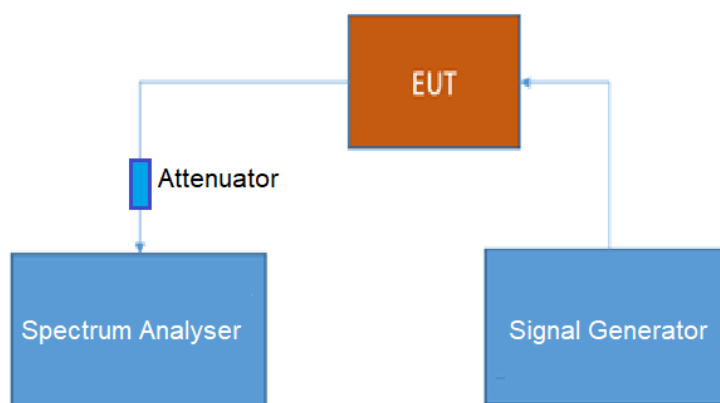
5.2 PEAK TO AVERAGE RATIO

Standard FCC Part 27, §27.50

The test was performed according to:
ANSI C63.26**Test date:** 2025-07-17 – 2025-07-23**Environmental conditions:** 27.5 °C; 41 % r. H. (average values from the test times)**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:



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.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

5.2.2 TEST REQUIREMENTS/LIMITSAbstract from FCC Part 27:**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.

Abstract from RSS-192:**RSS-192; 5.5 Transmitter output power**

In addition, the peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

5.2.3 TEST PROTOCOL

TDD 37, segment 1, ANT 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	3797.5	-3.7	8.3	13.0	4.7
Wideband	3 dB > AGC	3797.5	-0.4	8.3	13.0	4.7
Wideband 5G	0.3 dB < AGC	3750.0	-3.6	8.5	13.0	4.5
Wideband 5G	3 dB > AGC	3750.0	-0.3	8.5	13.0	4.5

TDD 37, segment 2, ANT 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	3883.0	-4.1	8.4	13.0	4.7
Wideband	3 dB > AGC	3883.0	-0.9	8.4	13.0	4.6
Wideband 5G	0.3 dB < AGC	3840.0	-3.9	8.5	13.0	4.5
Wideband 5G	3 dB > AGC	3840.0	-0.6	8.5	13.0	4.5

TDD 37, segment 3, ANT 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	3883.0	-4.8	8.4	13.0	4.7
Wideband	3 dB > AGC	3883.0	-1.6	8.4	13.0	4.6
Wideband 5G	0.3 dB < AGC	3930.0	-4.5	8.5	13.0	4.5
Wideband 5G	3 dB > AGC	3930.0	-1.1	8.5	13.0	4.5

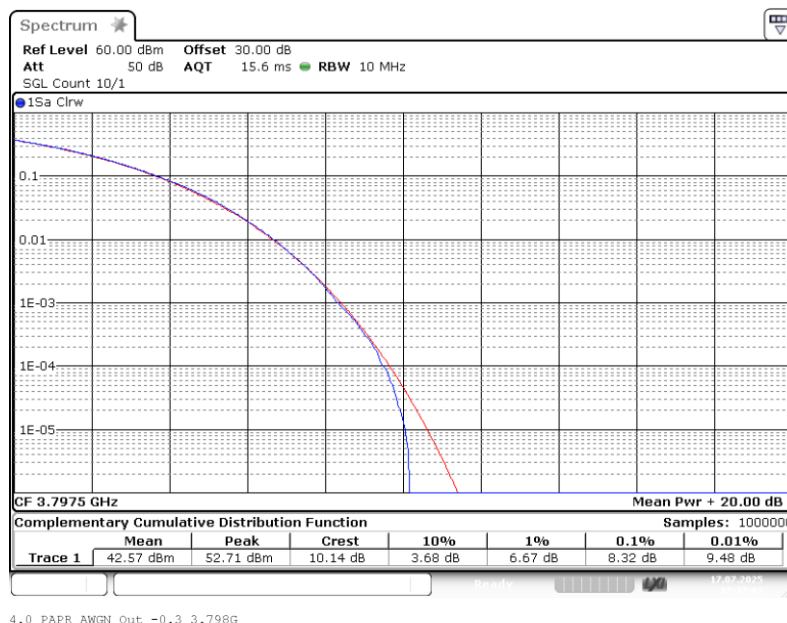
Remark: Please see next sub-clause for the measurement plot.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

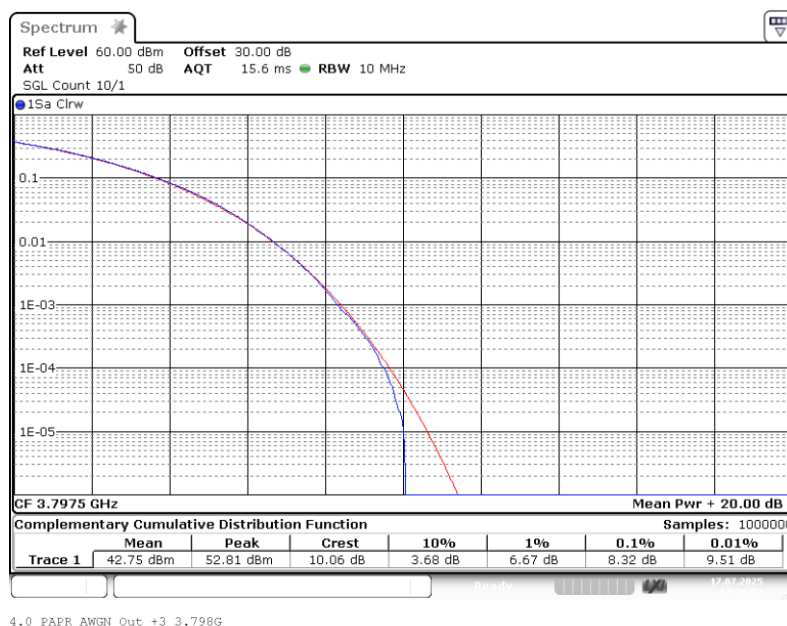
Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

5.2.4 MEASUREMENT PLOT

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7975 GHz; Band edge: f0;
Mod: AWGN; PAPR 0.3 dB < AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7975 GHz; Band edge: f0;
Mod: AWGN; PAPR 3 dB > AGC

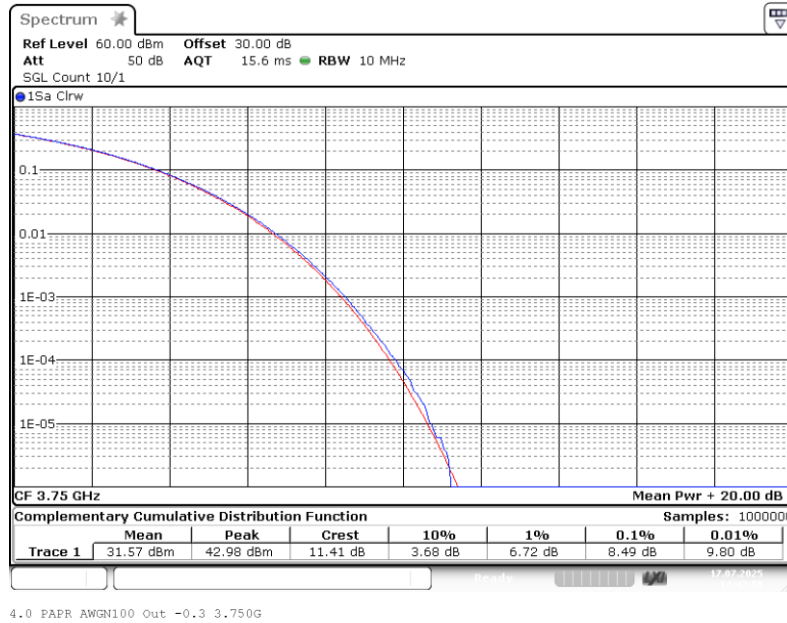


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

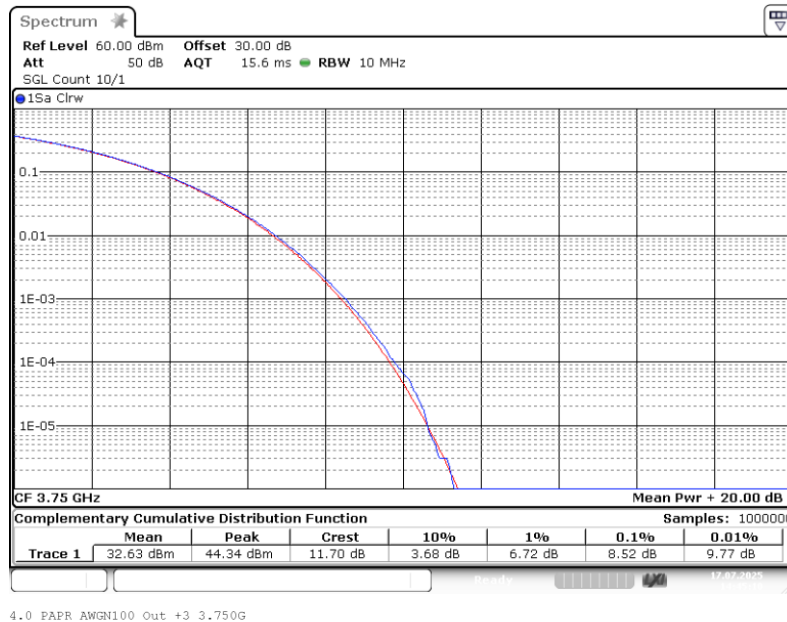
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; PAPR 0.3 dB < AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; PAPR 3 dB > AGC

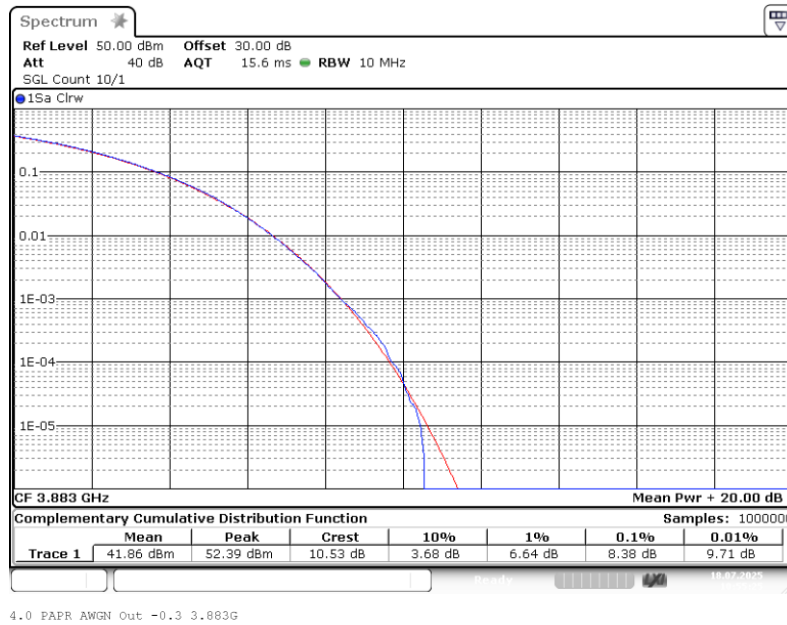


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

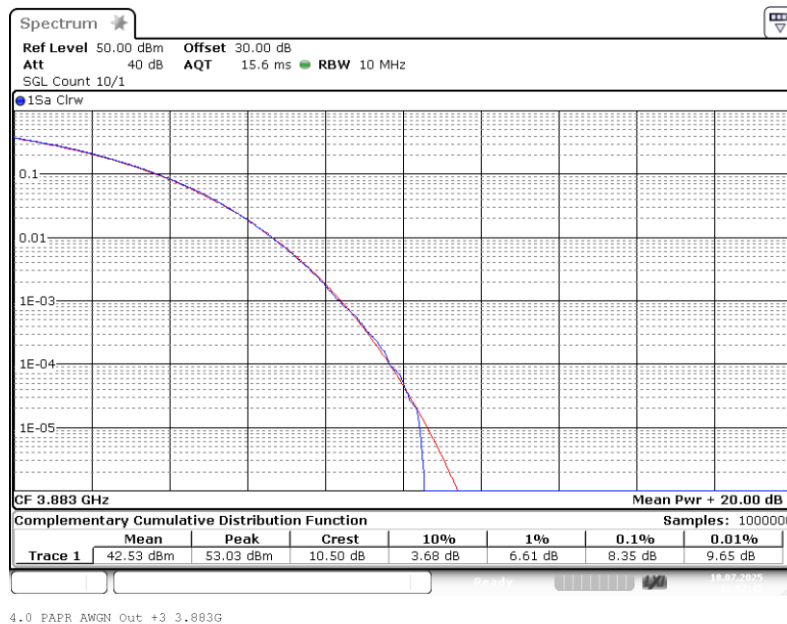
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; PAPR 0.3 dB < AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; PAPR 3 dB > AGC

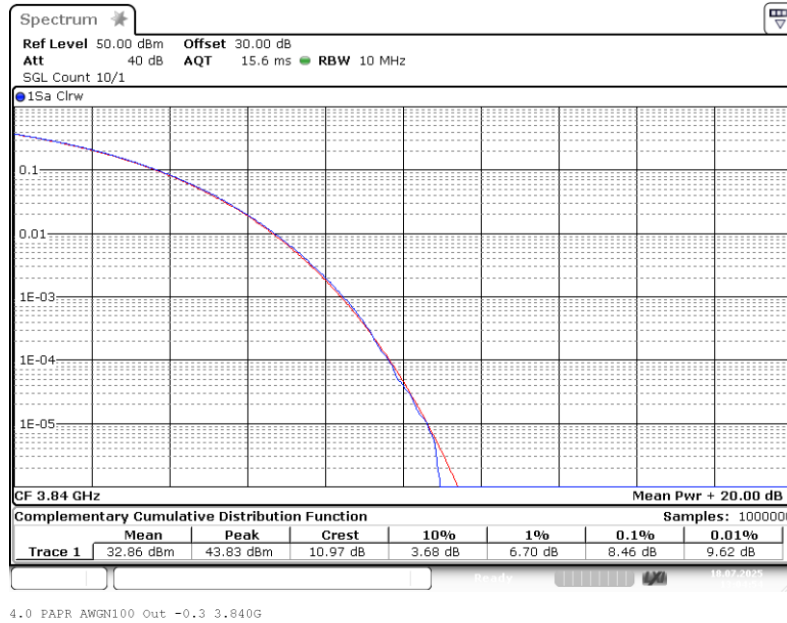


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

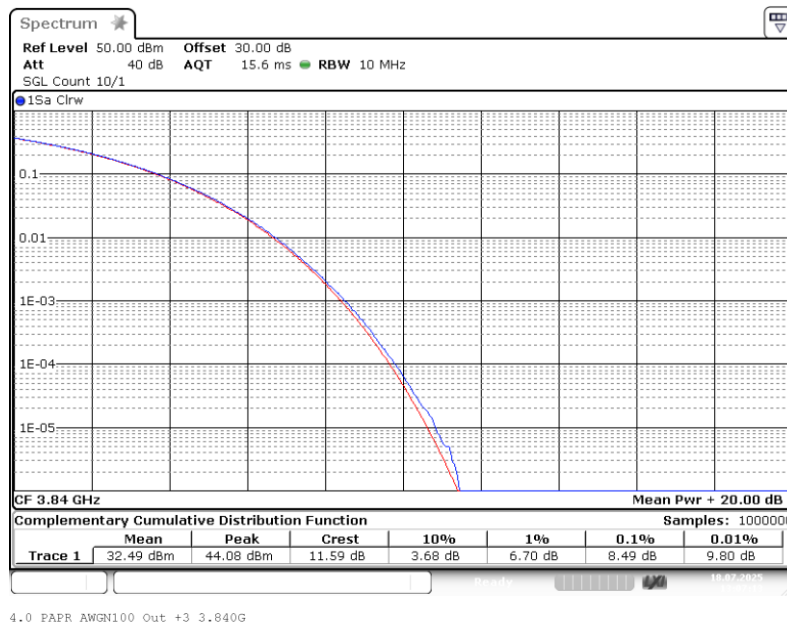
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; PAPR 0.3 dB < AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; PAPR 3 dB > AGC

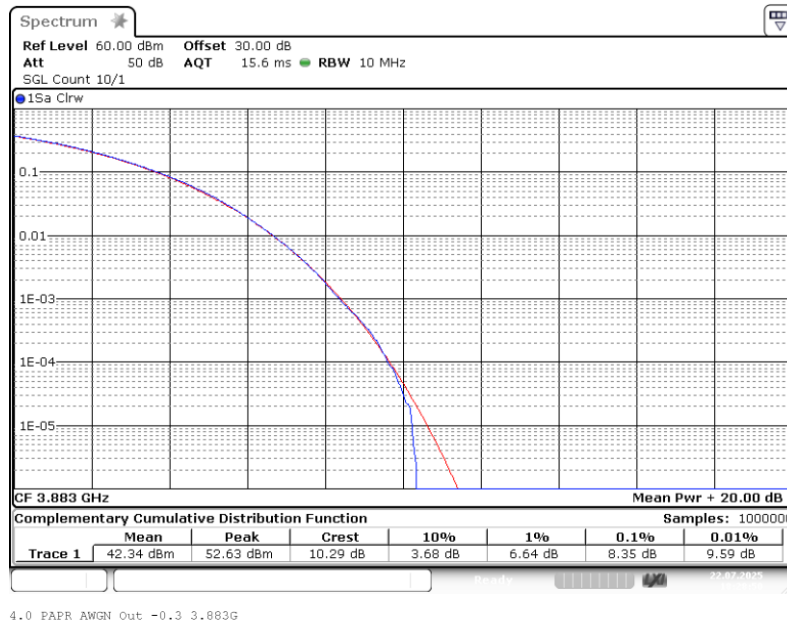


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

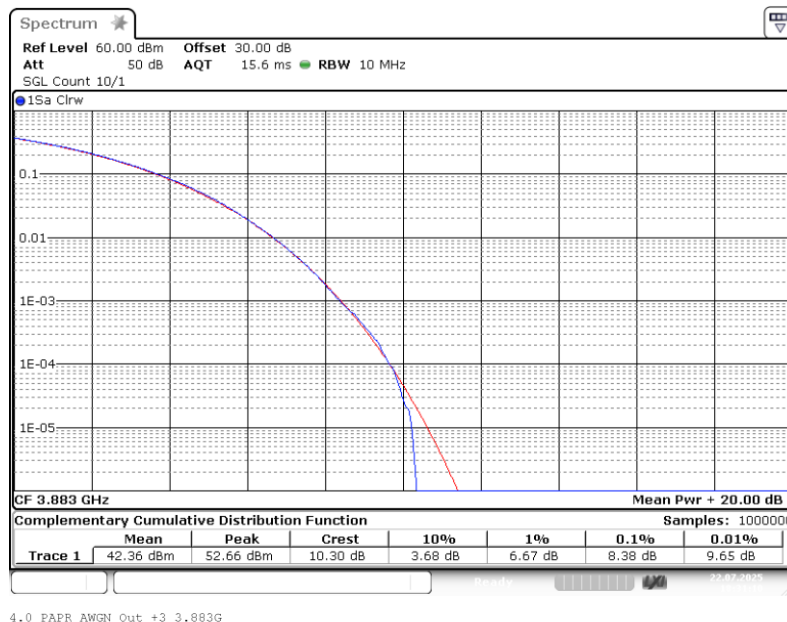
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 3, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; PAPR 0.3 dB < AGC



Band: TDD 37, segment 3, ANT 2; Frequency: 3.8830 GHz; Band edge: f0;
Mod: AWGN; PAPR 3 dB > AGC

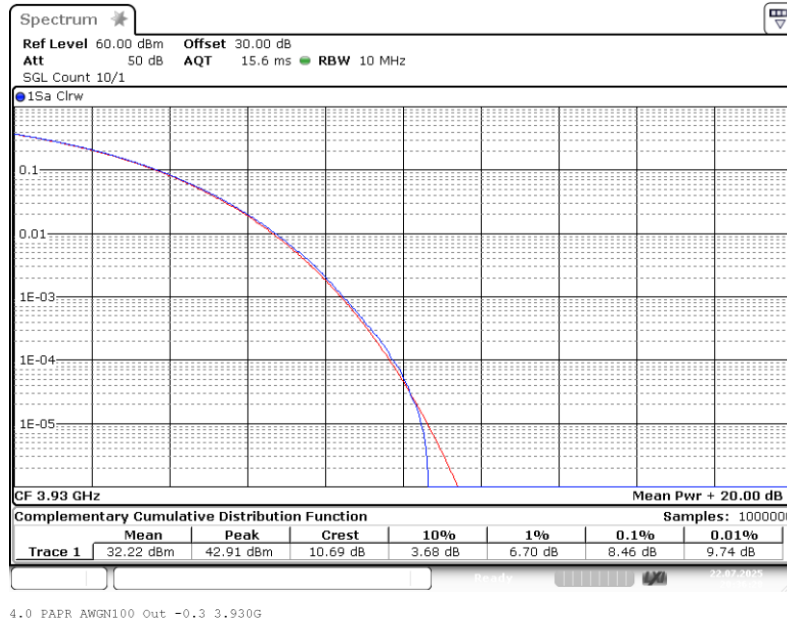


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

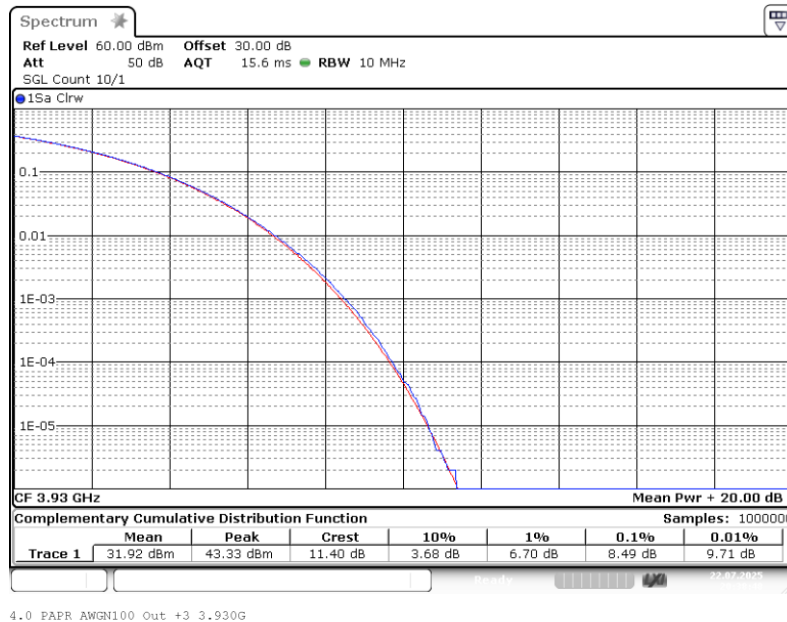
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 3, ANT 2; Frequency: 3.9300 GHz; Band edge: mid;
Mod: AWGN100; PAPR 0.3 dB < AGC



Band: TDD 37, segment 3, ANT 2; Frequency: 3.9300 GHz; Band edge: mid;
Mod: AWGN100; PAPR 3 dB > AGC



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.



Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

BUREAU
VERITAS

5.2.5 TEST EQUIPMENT USED

- Conducted

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.

2025-0163-EMC-TR-25-0150-V01

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: 2025-07-17 – 2025-07-23

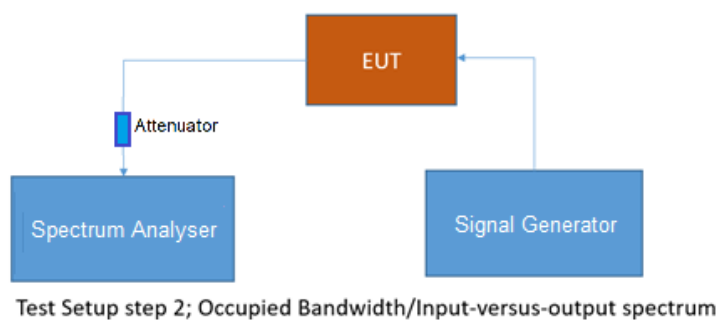
Environmental conditions: 27.5 °C; 41 % r. H. (average values from the test times)

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, RSS-GEN 6.4 and RSS-131-5.2.2

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



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.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

5.3.2 TEST REQUIREMENTS/LIMITSAbstract from FCC Part 2:**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 0.3 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.

Abstract from ISED RSS-131:**RSS-131; 92 Input-versus-output spectrum**

The spectral growth of the 26 dB bandwidth of the output signal shall be less than 5% of the input signal spectrum.

5.3.3 TEST PROTOCOL

TDD 37, segment 1, ANT 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	3750.0	4388.4	4394.0	5.5	205.0	199.5
Wideband	3 dB > AGC	3750.0	4387.2	4382.9	4.3	205.0	200.7
Wideband 5G	0.3 dB < AGC	3750.0	103645	103225	420	4915	4495
Wideband 5G	3 dB > AGC	3750.0	103285	103255	30	4915	4885

TDD 37, segment 2, ANT 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	4390.9	4386.6	4.3	205.0	200.7
Wideband	3 dB > AGC	3840.0	4389.7	4389.0	0.6	205.0	204.4
Wideband 5G	0.3 dB < AGC	3840.0	103555	103195	360	4915	4555
Wideband 5G	3 dB > AGC	3840.0	103285	102835	450	4915	4465

TDD 37, segment 3, ANT 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	3930.0	4392.7	4391.0	1.7	205.0	203.3
Wideband	3 dB > AGC	3930.0	4391.5	4389.7	1.9	205.0	203.2
Wideband 5G	0.3 dB < AGC	3930.0	103480	103345	135	4915	4780
Wideband 5G	3 dB > AGC	3930.0	103105	103420	315	4915	4600

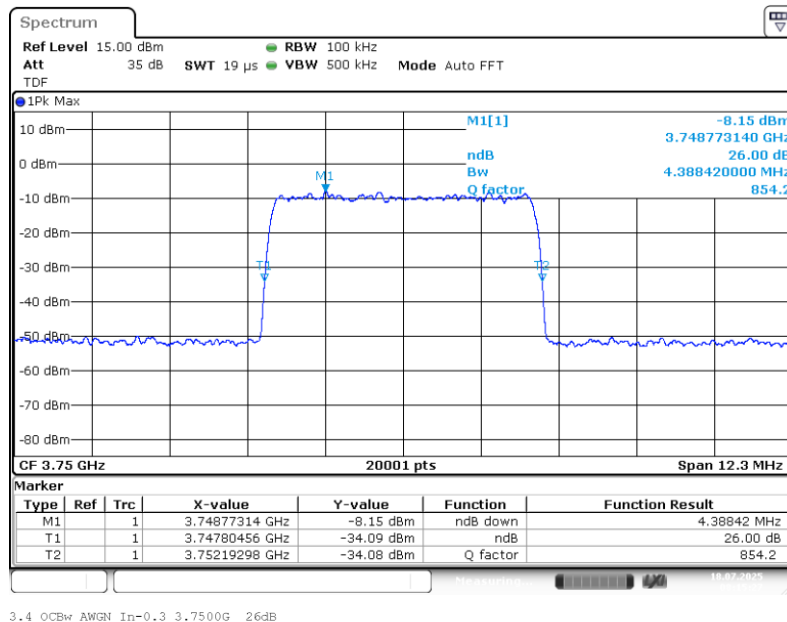
Remark: Please see next sub-clause for the measurement plot.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

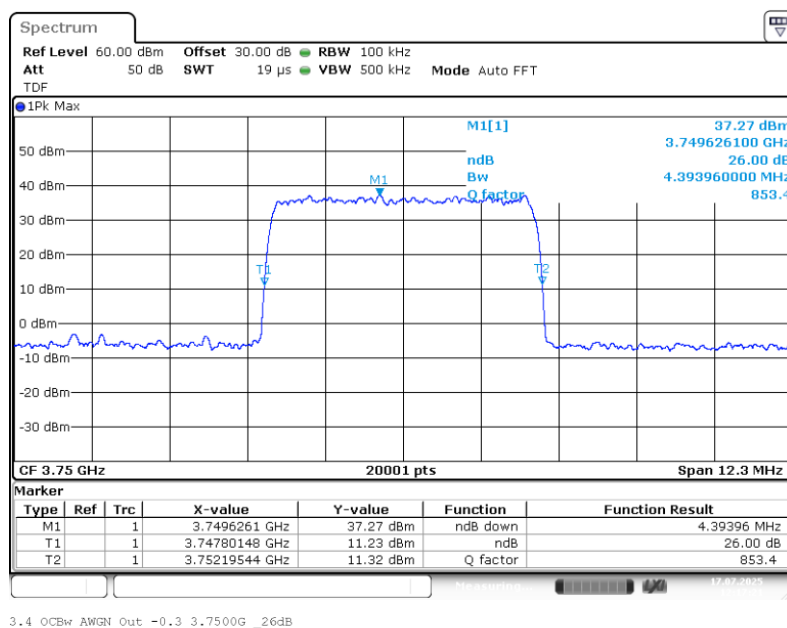
Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

5.3.4 MEASUREMENT PLOT

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN; Input OCBw 0.3 dB < AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN; Output OCBw 0.3 dB < AGC

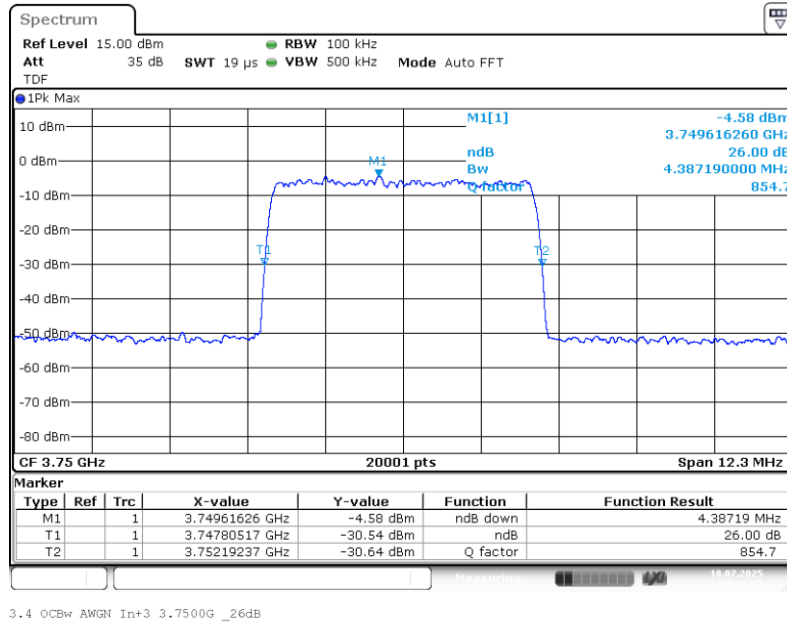


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

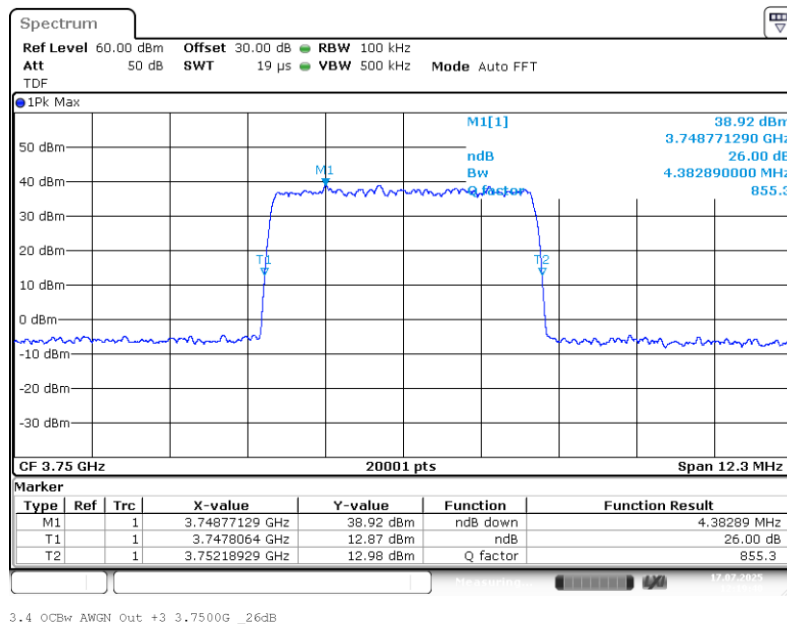
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN; Input OCBw 3 dB > AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN; Output OCBw 3 dB > AGC

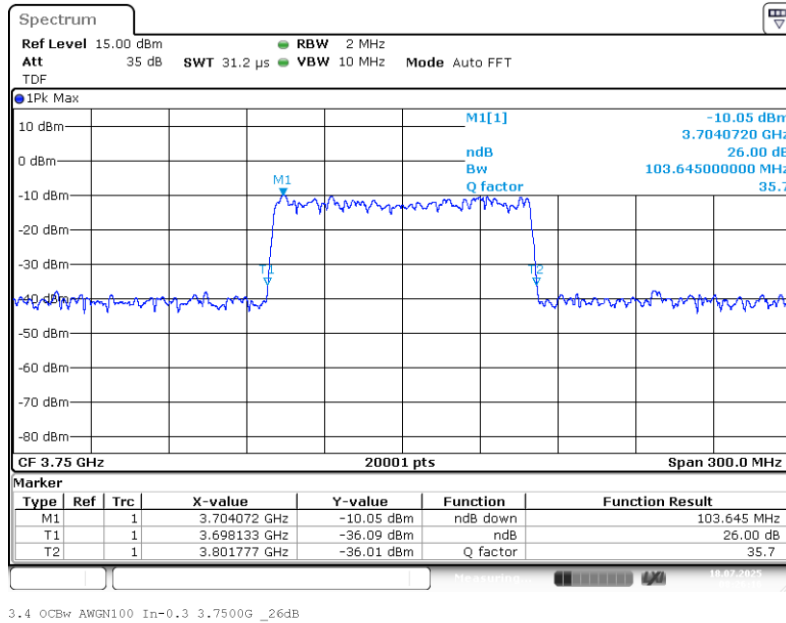


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

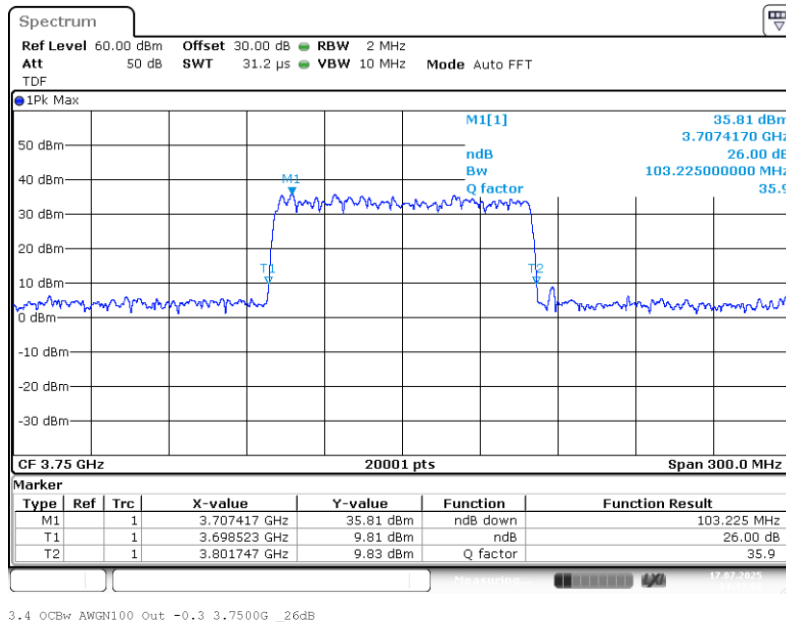
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; Input OCBw 0.3 dB < AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; Output OCBw 0.3 dB < AGC

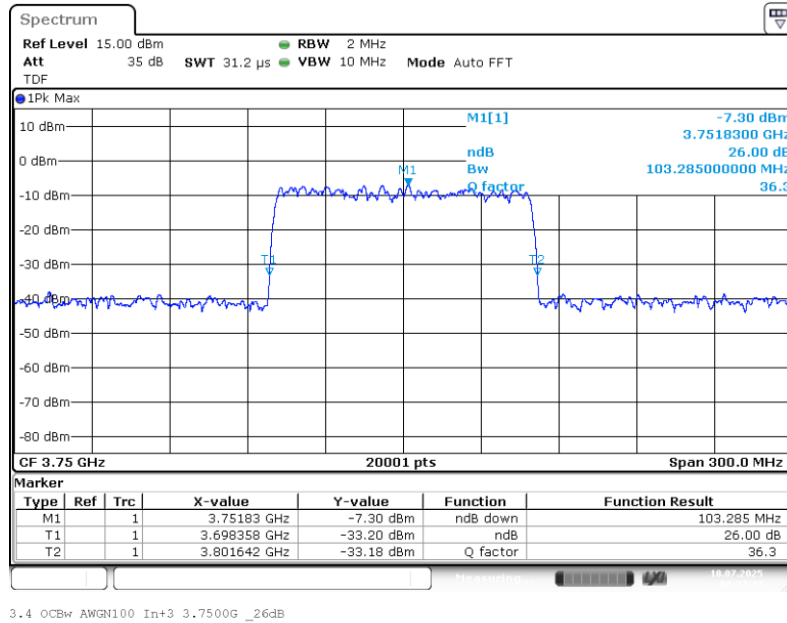


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

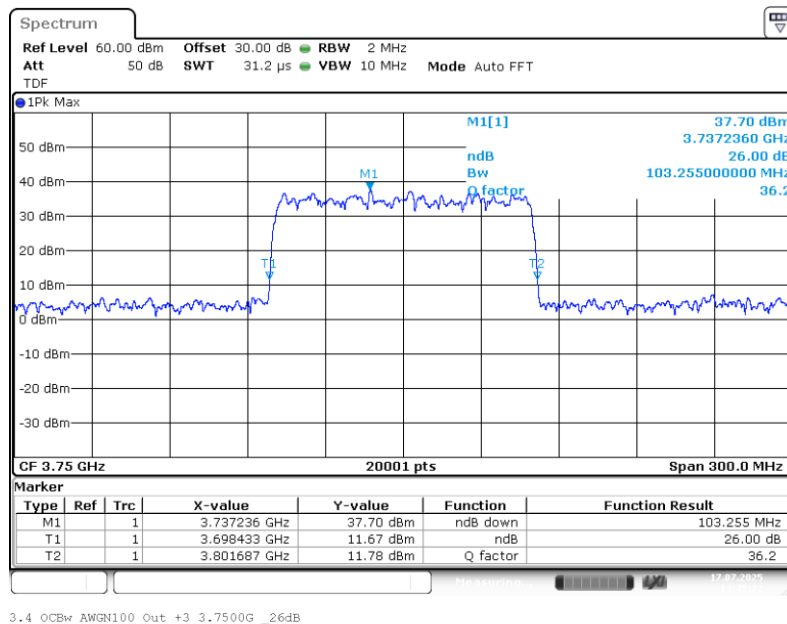
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; Input OCBw 3 dB > AGC



Band: TDD 37, segment 1, ANT 2; Frequency: 3.7500 GHz; Band edge: mid;
Mod: AWGN100; Output OCBw 3 dB > AGC



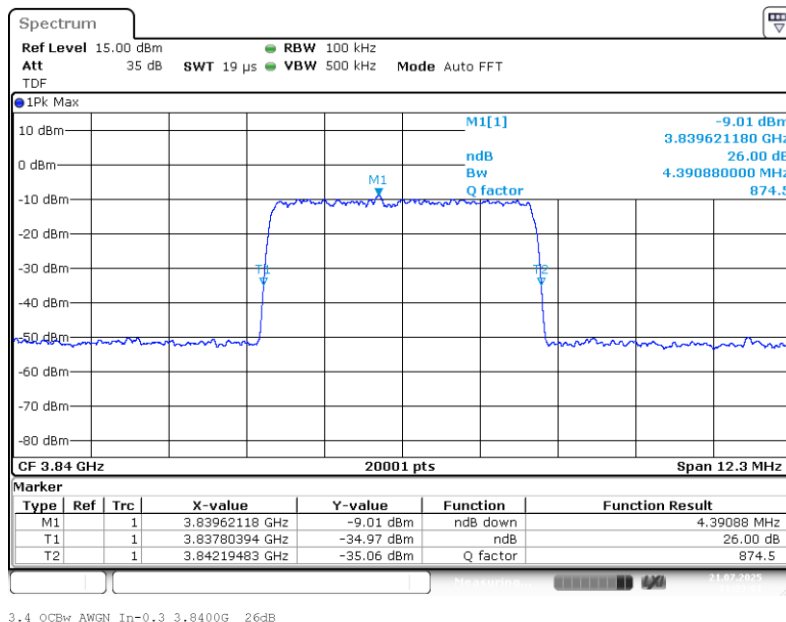
The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

Test Report No.: 25-0163-EMC-TR-25-0150-V01

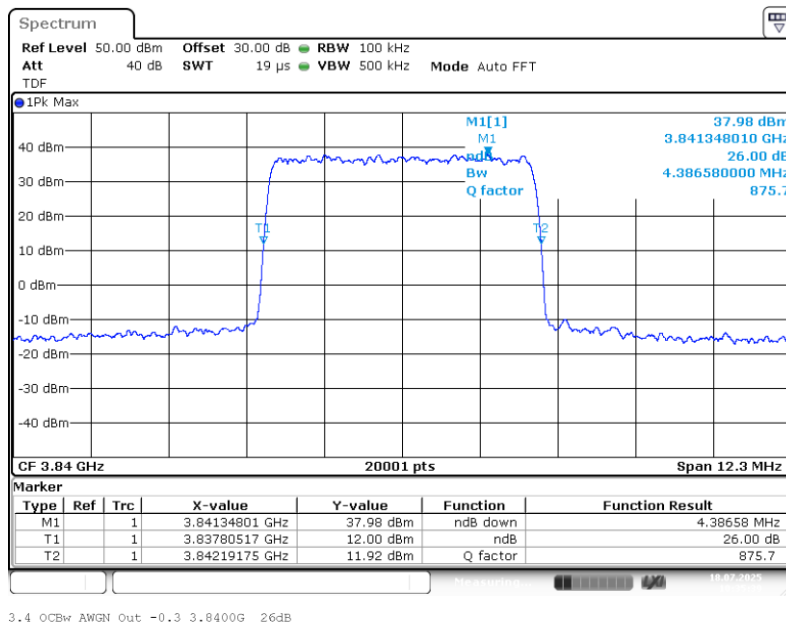
Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

**BUREAU
VERITAS**

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN; Input OCBw 0.3 dB < AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN; Output OCBw 0.3 dB < AGC

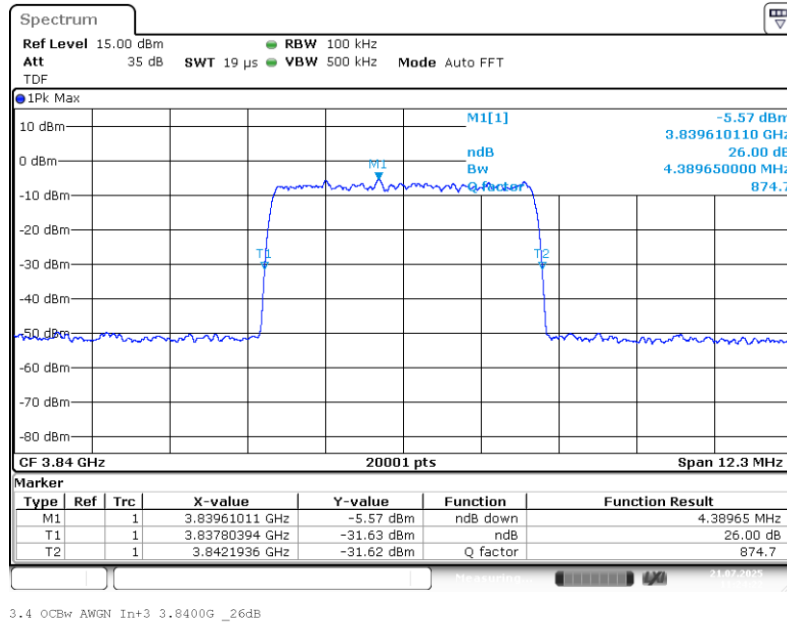


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

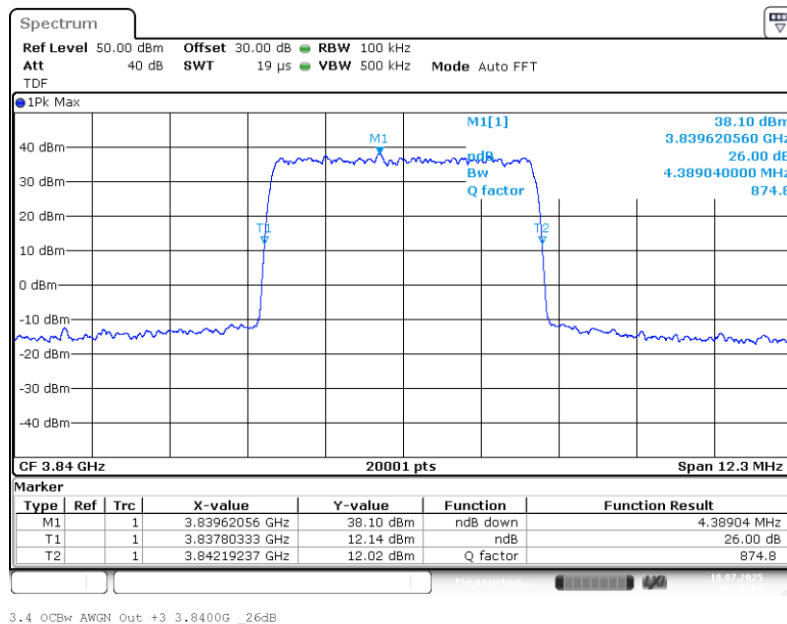
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN; Input OCBw 3 dB > AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN; Output OCBw 3 dB > AGC

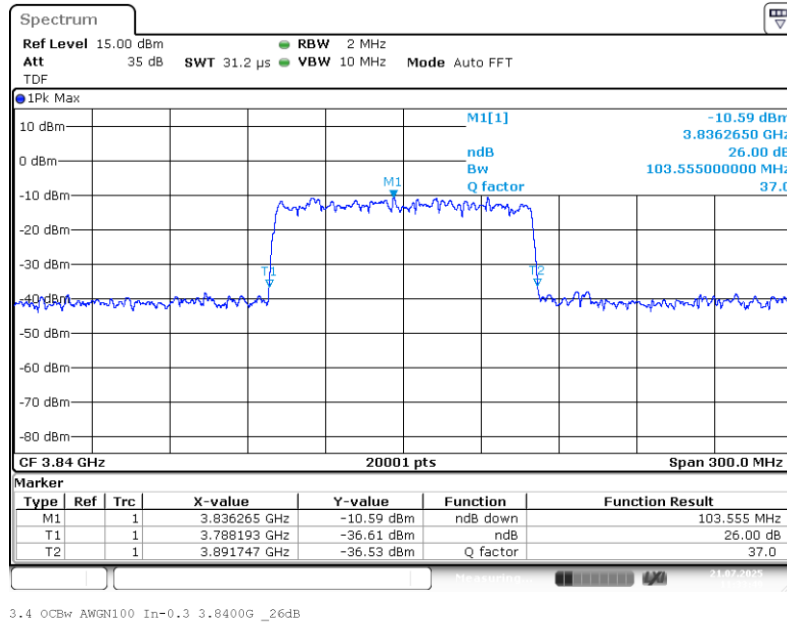


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

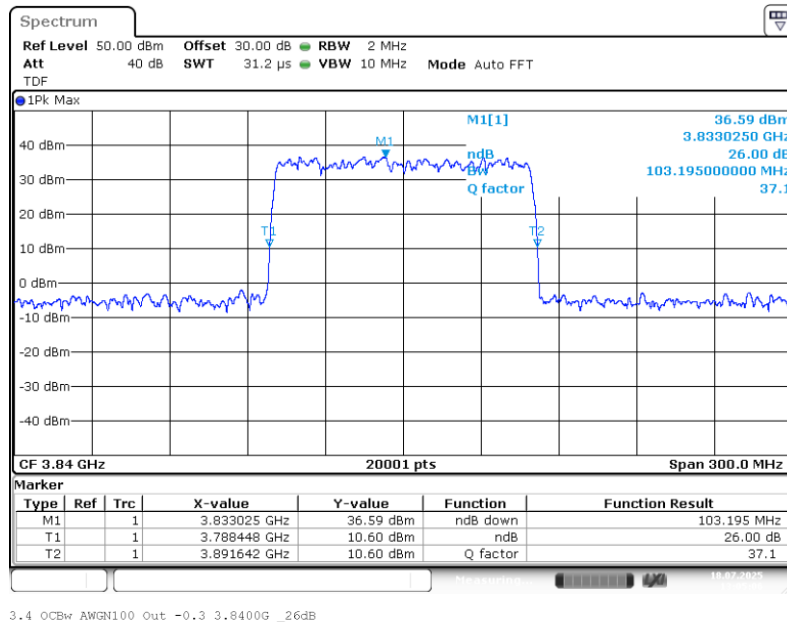
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; Input OCBw 0.3 dB < AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; Output OCBw 0.3 dB < AGC

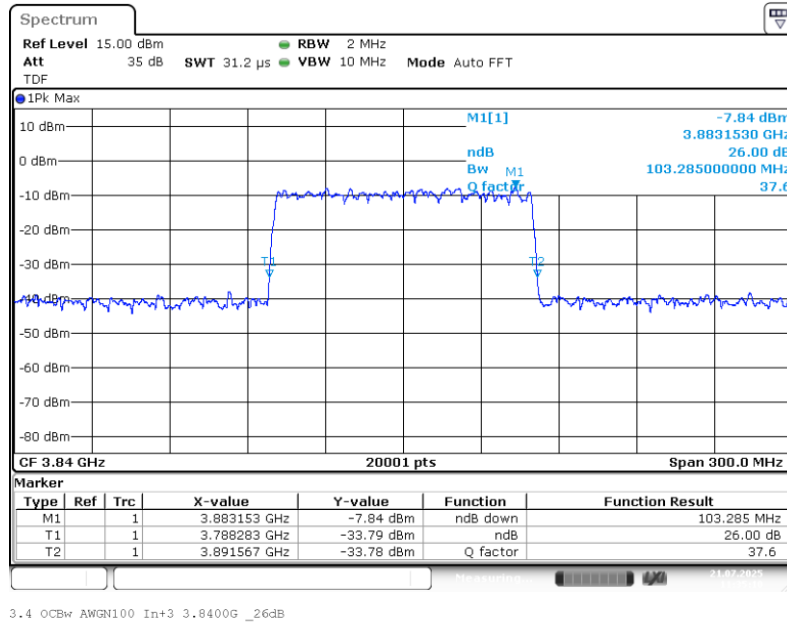


The test results relate only to the tested item. The sample has been provided by the client.
Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced.

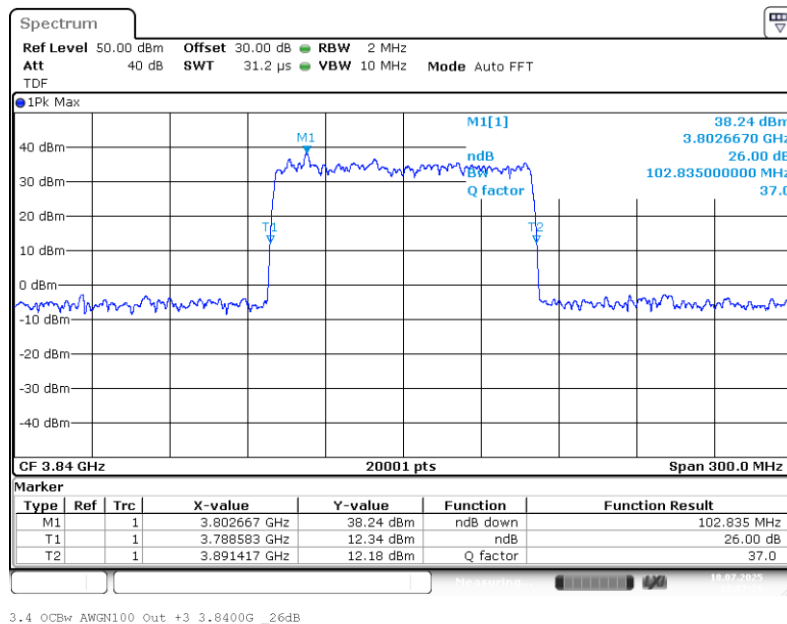
Test Report No.: 25-0163-EMC-TR-25-0150-V01

Tests performed on CAP H2 34T/37T F-AC-F1 [37T]

Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; Input OCBw 3 dB > AGC



Band: TDD 37, segment 2, ANT 2; Frequency: 3.8400 GHz; Band edge: mid;
Mod: AWGN100; Output OCBw 3 dB > AGC



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.