



Test report 2023-0337-EMC-TR-24-0001-V01

Designation:	CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]
Manufacturer:	Commscope
Serial No(s):	TJCXAA2305302
ID No.	7830127-0001 Rev: 04
FCC ID	X5S-CAPMX
Test Specification(s):	Class 2 Permissive Change Partly of FCC Rules and Regulations as listed in 47 CFR, Part 20 and Part 27:2024-01-01 EFFECTIVE RADIATED POWER, MEAN OUTPUT POWER AND ZONE ENHANCER GAIN OCCUPIED BANDWIDTH/INPUT-VERSUS-OUTPUT SPECTRUM OUT-OF-BAND EMISSION LIMITS OUT-OF-BAND REJECTION
Test Plan:	“CAP MX Frequenzen” from customer
Test Result:	Passed

Date of issue:	2024-06-12		Signature:
Version:	01	Technical Reviewer:	
Date of delivery:	2023-11-20		
Performance date:	2023-12-19 to 2023-12-20	Report Reviewer:	



BNetzA-CAB-19/21-20



The test results relates only to the tested item. The sample has been provided by the client.
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EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Client:

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Test laboratory:

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BNETZA-CAB-19/21-20

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FCC Test Firm Registration:

366481

Versions management:

V 01.00

Initial release



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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 Ch.1 Parts 2 and 20, 27, (01/01/2024 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 v04r02, 2019-04-15.
- FCC Public Notice 935210 applying "Measurement guidance for industrial and non-consumer signal booster, repeater and amplifier devices" 935210 D05 v01r04, 2020-04-03.
- FCC Public Notice 971168 applying "Measurement guidance for certification of licensed digital transmitters" 971168 D01 v03r01, 2018-04-09
- ANSI C63.26: 2015

Summary Test Results:

The EUT complies with all performed tests as listed in chapter 1.3 Measurement Summary/Signatures.

1.2 FCC REFERENCE TABLE

Measurement	FCC reference
Effective radiated power, mean output power and zone enhancer gain	§ 2.1046 § 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
Frequency stability	§ 2.1055 § 27.54
Out-of-band rejection	KDB 935210 D05 v01r04: 3.3
All measurements	ANSI 63.26



1.3 MEASUREMENT SUMMARY/SIGNATURES

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

§2.1046, §27.50

Effective Radiated Power, mean output power and zone enhancer gain

The measurement was performed according to ANSI C63.26, KDB 935210 D05 v01r03: 3.5

Final Result

OP-Mode

Frequency Band, Direction, Input Power, Signal Type

Band 41 BRS (LBS), RF downlink, 0.3 dB < AGC, Wideband	Passed
BAND 41 BRS (LBS), RF downlink, 3 dB > AGC, Wideband	Passed
BAND 41 BRS (LBS), RF downlink, 0.3 dB < AGC, Narrowband	Passed
BAND 41 BRS (LBS), RF downlink, 3 dB > AGC, Narrowband	Passed
BAND 41 BRS (LBS), RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
BAND 41 BRS (LBS), RF downlink, 3 dB > AGC, Wideband 5G	Passed
Band 41 BRS (UBS), RF downlink, 0.3 dB < AGC, Wideband	Passed
BAND 41 BRS (UBS), RF downlink, 3 dB > AGC, Wideband	Passed
BAND 41 BRS (UBS), RF downlink, 0.3 dB < AGC, Narrowband	Passed
BAND 41 BRS (UBS), RF downlink, 3 dB > AGC, Narrowband	Passed
BAND 41 BRS (UBS), RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
BAND 41 BRS (UBS), RF downlink, 3 dB > AGC, Wideband 5G	Passed

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

§27.50

Peak to Average Ratio

The measurement was performed according to ANSI C63.26

Final Result

OP-Mode

Frequency Band, Direction, Input Power, Signal Type

BAND 41 BRS (LBS), RF downlink, 0.3 dB < AGC, Wideband	Passed
BAND 41 BRS (LBS), RF downlink, 3 dB > AGC, Wideband	Passed
BAND 41 BRS (LBS), RF downlink, 0.3 dB < AGC, Narrowband	Passed
BAND 41 BRS (LBS), RF downlink, 3 dB > AGC, Narrowband	Passed
BAND 41 BRS (UBS), RF downlink, 0.3 dB < AGC, Wideband	Passed
BAND 41 BRS (UBS), RF downlink, 3 dB > AGC, Wideband	Passed
BAND 41 BRS (UBS), RF downlink, 0.3 dB < AGC, Narrowband	Passed
BAND 41 BRS (UBS), RF downlink, 3 dB > AGC, Narrowband	Passed

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**BUREAU
VERITAS****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
v01r03: 3.4**Final Result****OP-Mode**

Frequency Band, Direction, Input Power, Signal Type

BAND 41 BRS (LBS), RF downlink, 0.3 dB < AGC, Wideband	Passed
BAND 41 BRS (LBS), RF downlink, 3 dB > AGC, Wideband	Passed
BAND 41 BRS (LBS), RF downlink, 0.3 dB < AGC, Narrowband	Passed
BAND 41 BRS (LBS), RF downlink, 3 dB > AGC, Narrowband	Passed
BAND 41 BRS (LBS), RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
BAND 41 BRS (LBS), RF downlink, 3 dB > AGC, Wideband 5G	Passed
BAND 41 BRS (UBS), RF downlink, 0.3 dB < AGC, Wideband	Passed
BAND 41 BRS (UBS), RF downlink, 3 dB > AGC, Wideband	Passed
BAND 41 BRS (UBS), RF downlink, 0.3 dB < AGC, Narrowband	Passed
BAND 41 BRS (UBS), RF downlink, 3 dB > AGC, Narrowband	Passed
BAND 41 BRS (UBS), RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
BAND 41 BRS (UBS), RF downlink, 3 dB > AGC, Wideband 5G	Passed

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**BUREAU
VERITAS****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, Test Frequency, Direction, Signal Type

BAND 41 BRS (LBS), low, RF downlink, Wideband	Passed
BAND 41 BRS (LBS), mid, RF downlink, Wideband	Passed
BAND 41 BRS (LBS), high, RF downlink, Wideband	Passed
BAND 41 BRS (LBS)low, RF downlink, Narrowband	Passed
BAND 41 BRS (LBS), mid, RF downlink, Narrowband	Passed
BAND 41 BRS (LBS), high, RF downlink, Narrowband	Passed
BAND 41 BRS (LBS), low, RF downlink, Wideband 5G	Passed
BAND 41 BRS (LBS), mid, RF downlink, Wideband 5G	Passed
BAND 41 BRS (LBS), high, RF downlink, Wideband 5G	Passed
BAND 41 BRS (UBS), low, RF downlink, Wideband	Passed
BAND 41 BRS (UBS), mid, RF downlink, Wideband	Passed
BAND 41 BRS (UBS), high, RF downlink, Wideband	Passed
BAND 41 BRS (UBS)low, RF downlink, Narrowband	Passed
BAND 41 BRS (UBS), mid, RF downlink, Narrowband	Passed
BAND 41 BRS (UBS), high, RF downlink, Narrowband	Passed
BAND 41 BRS (UBS), low, RF downlink, Wideband 5G	Passed
BAND 41 BRS (UBS), mid, RF downlink, Wideband 5G	Passed
BAND 41 BRS (UBS), high, 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 v01r03: 3.6

Final Result

OP-Mode

Band Edge, Frequency Band, Number of signals, Direction, Input Power,
Signal Type

Upper, Band 41 BRS (LBS), 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, Band 41 BRS (LBS), 1, RF downlink, 3 dB > AGC, Wideband	Passed
Upper, Band 41 BRS (LBS), 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Upper, Band 41 BRS (LBS), 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
Upper, Band 41 BRS (LBS), 1, RF downlink, 0.3 dB < AGC, Narrowband	Passed
Upper, Band 41 BRS (LBS), 1, RF downlink, 3 dB > AGC, Narrowband	Passed
Lower, Band 41 BRS (LBS), 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Lower, Band 41 BRS (LBS), 1, RF downlink, 3 dB > AGC, Wideband	Passed
Lower, Band 41 BRS (LBS), 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Lower, Band 41 BRS (LBS), 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
Lower, Band 41 BRS (LBS), 1, RF downlink, 0.3 dB < AGC, Narrowband	Passed
Lower, Band 41 BRS (LBS), 1, RF downlink, 3 dB > AGC, Narrowband	Passed
Upper, Band 41 BRS (LBS), 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, Band 41 BRS (LBS), 2, RF downlink, 3 dB > AGC, Wideband	Passed
Upper, Band 41 BRS (LBS), 2, RF downlink, 0.3 dB < AGC, Narrowband	Passed
Upper, Band 41 BRS (LBS), 2, RF downlink, 3 dB > AGC, Narrowband	Passed
Lower, Band 41 BRS (LBS), 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
Lower, Band 41 BRS (LBS), 2, RF downlink, 3 dB > AGC, Wideband	Passed
Lower, Band 41 BRS (LBS), 2, RF downlink, 0.3 dB < AGC, Narrowband	Passed
Lower, Band 41 BRS (LBS), 2, RF downlink, 3 dB > AGC, Narrowband	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 v01r03: 3.6

Final Result

OP-Mode

Band Edge, Frequency Band, Number of signals, Direction, Input Power,
Signal Type

Upper, Band 41 BRS (UBS), 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, Band 41 BRS (UBS), 1, RF downlink, 3 dB > AGC, Wideband	Passed
Upper, Band 41 BRS (UBS), 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Upper, Band 41 BRS (UBS), 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
Upper, Band 41 BRS (UBS), 1, RF downlink, 0.3 dB < AGC, Narrowband	Passed
Upper, Band 41 BRS (UBS), 1, RF downlink, 3 dB > AGC, Narrowband	Passed
Lower, Band 41 BRS (UBS), 1, RF downlink, 0.3 dB < AGC, Wideband	Passed
Lower, Band 41 BRS (UBS), 1, RF downlink, 3 dB > AGC, Wideband	Passed
Lower, Band 41 BRS (UBS), 1, RF downlink, 0.3 dB < AGC, Wideband 5G	Passed
Lower, Band 41 BRS (UBS), 1, RF downlink, 3 dB > AGC, Wideband 5G	Passed
Lower, Band 41 BRS (UBS), 1, RF downlink, 0.3 dB < AGC, Narrowband	Passed
Lower, Band 41 BRS (UBS), 1, RF downlink, 3 dB > AGC, Narrowband	Passed
Upper, Band 41 BRS (UBS), 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
Upper, Band 41 BRS (UBS), 2, RF downlink, 3 dB > AGC, Wideband	Passed
Upper, Band 41 BRS (UBS), 2, RF downlink, 0.3 dB < AGC, Narrowband	Passed
Upper, Band 41 BRS (UBS), 2, RF downlink, 3 dB > AGC, Narrowband	Passed
Lower, Band 41 BRS (UBS), 2, RF downlink, 0.3 dB < AGC, Wideband	Passed
Lower, Band 41 BRS (UBS), 2, RF downlink, 3 dB > AGC, Wideband	Passed
Lower, Band 41 BRS (UBS), 2, RF downlink, 0.3 dB < AGC, Narrowband	Passed
Lower, Band 41 BRS (UBS), 2, RF downlink, 3 dB > AGC, Narrowband	Passed

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47 CFR CHAPTER I FCC PART 27 Subpart C [Base Stations/Repeater]**KDB 935210 D05 v01r03: 3.3**

Out-of-band rejection

The measurement was performed according to ANSI C63.26

Final Result**OP-Mode**

Frequency Band, Direction

Band 41 BRS (LBS), RF downlink

Passed

Band 41 BRS (UBS), RF downlink

Passed

47 CFR CHAPTER I FCC PART 27 Subpart C [Base Stations/Repeater]**\$2.1055, \$27.54**

Frequency stability

Final Result**OP-Mode**

Not applicable

Not applicable

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Report version control			
Version	Release date	Change Description	Version validity
Initial	2024-06-12	--	Valid

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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: Please see applicant data.

3 TEST OBJECT DATA

3.1 GENERAL EUT DESCRIPTION

Kind of Device product description	Cellular Repeater
Product name	Cellular Repeater
Type	CAP MX 6/7E/80-85/17/E/19/23/25 T-AC
Declared EUT data by the supplier	
General Product Description	The EUT is an industrial signal booster supporting the following: Band 41 (BRS-2500), Broadband Radio Service: • Lower Band Segment (LBS): 2496- 2596 MHz • Upper Band Segment (UBS): 2590 – 2690 MHz A RF operation is only supported for the downlink.
Booster Type	Industrial Signal Booster
Voltage Type	AC
Voltage Level	100 to 240 V
Maximum Output Donor Port [Uplink]	-
Maximum Output Server Port [Downlink]	32 dBm
Maximum Gain [Uplink]	-
Maximum Gain [Downlink]	33 dB

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

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3.2 EUT MAIN COMPONENTS

Sample Parameter	Value
Serial Number	F TJCXAA2305302
HW Version	7830127-0001 Rev: 04
SW Version	V5.0.0.191
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	Commscope, ION-E PSU Shelf AC, HD20886	Power supply rack
	GE Power Electronisc Inc., CAR1212FPBC-Z, HF27298	Power plug-in module
AUX2	Commscope, ION-E WCS-4, SZAEH1722A0002	Module rack
	Commscope, ION-E OPT, SZBEAD1951A0011	Optical plug-in module
	Commscope, RFD HB, SZBEAQ2123A0007	RF card plug-in module
	Commscope, RFD HB, SZBEAQ2147A0009	RF card plug-in module
	Commscope, RFD HB, SZBEAQ2210A0003	RF card plug-in module
	Commscope, ION-E RFD, SZBEAG1503A0016	RF card plug-in module
	Commscope, ION-E RFD, SZBEAG1505A0009	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

Band name	Direction	Lower Frequency Band Edge [MHz]	Upper Frequency Band Edge [MHz]	Center Frequency [MHz]	Port
41, BRS (LBS)	Downlink	2496	2596	2546	Donor
41, BRS (UBS)	Downlink	2590	2690	2640	Donor

Note:

In the previous tests three bands, LBS, MBS and UBS were tested, this was a division of the whole band into this named three part.

In comparison to previous tests the whole band now is divided into two bands named LBS and UBS. This is necessary because supplementary a 5G signal handling with a test signal of $f = 98.3$ MHz is used: To test this type of signal the division of the whole band into two 100 MHz parts is necessary.

3.6.2 DEFINITION OF USED FREQUENCY BANDS

Narrowband: representation by a GSM signal

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 LEVEL

AGC Levels							
Band	Direction	Signal Type	AGC Start Pin [dBm]	AGC Start Pin -0.3 dB [dBm]	AGC Start Pin +3 dB [dBm]	Frequency [MHz]	Frequency
41, BRS (LBS)	Downlink	Wideband	-2.9	-3.2	0.1	2546.0	Mid
41, BRS (LBS)	Downlink	Narrowband	-2.9	-3.2	0.1	2547.0	
41, BRS (LBS)	Downlink	Wideband 5G	-3.0	-3.3	0.0	2546.0	
41, BRS (UBS)	Downlink	Wideband	-3.5	-3.8	-0.5	2640.0	
41, BRS (UBS)	Downlink	Narrowband	-3.5	-3.8	-0.5	2641.0	
41, BRS (UBS)	Downlink	Wideband 5G	-3.5	-3.8	-0.5	2640.0	
41, BRS (LBS)	Downlink	Wideband	-3.0	-3.3	0.0	2498.5	Low
41, BRS (LBS)	Downlink	Narrowband	-3.0	-3.3	0.0	2496.2	
41, BRS (UBS)	Downlink	Wideband	-3.8	-4.1	-0.8	2592.5	
41, BRS (UBS)	Downlink	Narrowband	-3.6	-3.9	-0.6	2590.2	
41, BRS (LBS)	Downlink	Wideband	-3.6	-3.9	-0.6	2593.5	High
41, BRS (LBS)	Downlink	Narrowband	-3.2	-3.5	-0.2	2595.8	
41, BRS (UBS)	Downlink	Wideband	-4.2	-4.5	-1.2	2687.5	
41, BRS (UBS)	Downlink	Narrowband	-4.0	-4.3	-1.0	2689.8	
41, BRS (LBS)	Downlink	Wideband	-4.0	-4.3	-1.0	2593.4	Max. Power
41, BRS (LBS)	Downlink	Narrowband	-3.6	-4.0	-0.6	2593.4	
41, BRS (LBS)	Downlink	Wideband 5G	-3.8	-4.1	-0.8	2546.0	
41, BRS (UBS)	Downlink	Wideband	-4.5	-4.8	-1.5	2687.5	
41, BRS (UBS)	Downlink	Narrowband	-4.4	-4.8	-1.4	2687.5	
41, BRS (UBS)	Downlink	Wideband 5G	-4.3	-4.6	-1.3	2640.0	

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 is used.

For example for minimum distances to the band edges:

GSM signal (narrowband): 0.2 MHz

AWGN signal (wideband): 2.5 MHz

AWGN signal (wideband 5G): Here only measurements at the mid frequency are possible, because the signal band has the same bandwidth as the used channel.



3.6.4 REMARKS TO THE MEASUREMENTS

Cause of an inappropriate control mode in the transmission of the narrowband signal (GSM signal) at f_{mid} , f_{mid} is increased by 1 MHz, Hereby the abbreviations are:

f_{mid} for wideband signals (AWGN signals)

f_{mid+1} for narrowband signals (GSM signals)

In the real use of the repeater narrowband signals aren't used.

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.

4 TEST RESULTS

4.1 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 KDB 935210 D05 v01r04: 3.5

Test date: 2023-12-19 – 2023-12-20

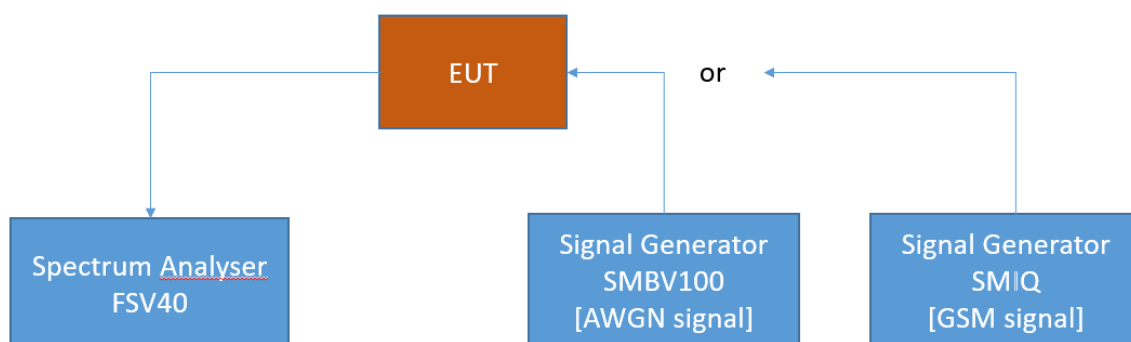
Environmental conditions: 23 °C ± 5 K; 40 % r. F. ± 20 % r. F.

Test engineer: Thomas Hufnagel

4.1.1 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.

4.1.2 TEST REQUIREMENTS/LIMITS

Part 27; Miscellaneous Wireless Communication Services

Subpart C – Technical standards

§ 27.50

Band 41:

(h) The following power limits shall apply in the BRS and EBS:

(1) *Main, booster and base stations.* (i) The maximum EIRP of a main, booster or base station shall not exceed $33 \text{ dBW} + 10\log(X/Y) \text{ dBW}$, where X is the actual channel width in MHz and Y is either 6 MHz if prior to transition or the station is in the MBS following transition or 5.5 MHz if the station is in the LBS and UBS following transition, except as provided in paragraph (h)(1)(ii) of this section.

(ii) If a main or booster station sectorizes or otherwise uses one or more transmitting antennas with a non-omnidirectional horizontal plane radiation pattern, the maximum EIRP in dBW in a given direction shall be determined by the following formula: $\text{EIRP} = 33 \text{ dBW} + 10 \log(X/Y) \text{ dBW} + 10 \log(360/\text{beamwidth}) \text{ dBW}$, where X is the actual channel width in MHz, Y is either (i) 6 MHz if prior to transition or the station is in the MBS following transition or (ii) 5.5 MHz if the station is in the LBS and UBS following transition, and beamwidth is the total horizontal plane beamwidth of the individual transmitting antenna for the station or any sector measured at the half-power points.

4.1.3 TEST PROTOCOL

Band 41, BRS (LBS), 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	2593.4	-4.3	33.2	51.6	18.4	37.5
Wideband	3 dB > AGC	2593.4	-1.0	32.8	51.6	18.8	33.8
Narrowband	0.3 dB < AGC	2593.4	-4.0	33.5	62.6	29.1	37.5
Narrowband	3 dB > AGC	2593.4	-0.6	33.1	62.6	29.5	33.7
Wideband 5G	0.3 dB < AGC	2546.0	-4.1	33.0	75.9	42.9	37.1
Wideband 5G	3 dB > AGC	2546.0	-0.8	32.6	75.9	43.3	33.4

Band 41, BRS (UBS), 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	2687.5	-4.8	32.3	51.6	19.3	37.1
Wideband	3 dB > AGC	2687.5	-1.5	33.6	51.6	18.0	35.1
Narrowband	0.3 dB < AGC	2687.5	-4.8	32.3	62.6	30.3	37.1
Narrowband	3 dB > AGC	2687.5	-1.4	33.2	62.6	29.4	34.6
Wideband 5G	0.3 dB < AGC	2640.0	-4.6	32.2	75.9	43.7	36.8
Wideband 5G	3 dB > AGC	2640.0	-1.3	32.5	75.9	43.4	33.8

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

Maximum output power (EIRP) in consideration together with the send antenna

Calculation for the highest power level of the test protocol table:

The highest power level in the table above is

$p_{\text{highest}} = 33.6 \text{ dBm}$ at the channel which has the most output power of all channels.

Hereby at an antenna gain of $G_{\text{dB}} = 9 \text{ dBi}$ the highest effective radiated output power EIRP $p_{\text{EIRP 1CH}}$ of one channel is:

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

This results in:

$$p_{\text{EIRP 1CH}} = 33.6 \text{ dBm} + 9 \text{ dB} = 42.6 \text{ dBm}$$

The equivalent power p is according the given formula:

$p_{\text{EIRP 1CH}}$:

$$p_{\text{EIRP 1CH}} [\text{W}] = 10^{\text{EXP}(p_{\text{EIRP 1CH}} [\text{dBm}] / 10)} * 0.001 [\text{W}]$$

This results in:

$$p_{\text{EIRP 1CH}} [\text{W}] = 10^{\text{EXP}(42.6 [\text{dBm}] / 10)} * 0.001 [\text{W}] = 18.2 \text{ W}$$

This repeater only has one output port, therefore the power of only one port is considered (no MIMO function possible):

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

This results in:

$$p_{\text{EIRP 1CH}} = 1 * 18.2 \text{ W} = 18.2 \text{ W}$$



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EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Now this value expressed in the unit dBW is:

$p_{EIRP\ 1CH}$:

$$p_{EIRP\ 1CH} [dBW] = 10 * LOG(p_{EIRP\ 1CH} [W])$$

This results in:

$$p_{EIRP\ 1CH} [dBW] = 10 * LOG(18.2 [W]) = 12.6\ dBW$$

$p_{EIRP\ 1CH} = 12.6\ dBW < 21.6\ dBW$, hereby 21.6 dBW is the highest allowed limit in this case.

The limits for the signals are:

Narrowband (Bandwidth = 400 kHz): 21.6 dBW

Wideband (Bandwidth = 5 MHz): 32.6 dBW

Wideband 5G (Bandwidth = 100 MHz): 45.6 dBW

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EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

According to this calculation the EIRP for power levels is:

Band 41, BRS (LBS), downlink						
Signal Type	Input Power	Frequency [MHz]	Maximum average output repeater plus send antenna with one output port [dBm]	Maximum average output repeater plus send antenna with one output port [dBW]	Limit according FCC rules [dBW]	PASS/FAIL
Wideband	0.3 dB < AGC	2593.4	42.2	12.2	21.6	PASS
Wideband	3 dB > AGC	2593.4	41.8	11.8	21.6	PASS
Narrowband	0.3 dB < AGC	2593.4	42.5	12.5	32.6	PASS
Narrowband	3 dB > AGC	2593.4	42.1	12.1	32.6	PASS
Wideband 5G	0.3 dB < AGC	2546.0	42.0	12.0	45.9	PASS
Wideband 5G	3 dB > AGC	2546.0	41.6	11.6	45.9	PASS

Band 41, BRS (UBS), downlink						
Signal Type	Input Power	Frequency [MHz]	Maximum average output repeater plus send antenna with one output port [dBm]	Maximum average output repeater plus send antenna with one output port [dBW]	Limit according FCC rules [dBW]	PASS/FAIL
Wideband	0.3 dB < AGC	2687.5	41.3	11.3	21.6	PASS
Wideband	3 dB > AGC	2687.5	42.6	12.6	21.6	PASS
Narrowband	0.3 dB < AGC	2687.5	41.3	11.3	32.6	PASS
Narrowband	3 dB > AGC	2687.5	42.2	12.2	32.6	PASS
Wideband 5G	0.3 dB < AGC	2640.0	41.2	11.2	45.9	PASS
Wideband 5G	3 dB > AGC	2640.0	41.5	11.5	45.9	PASS

The DUT doesn't exceed the limit.

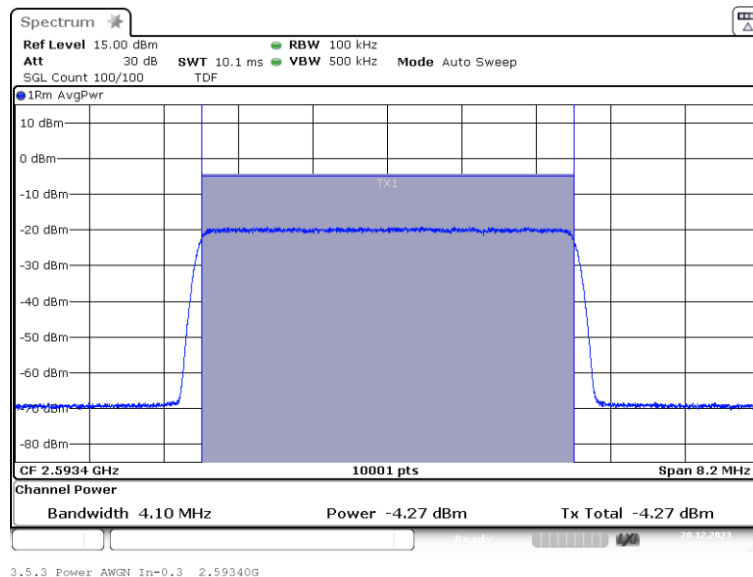


EMC Test Report No.: 24-0001

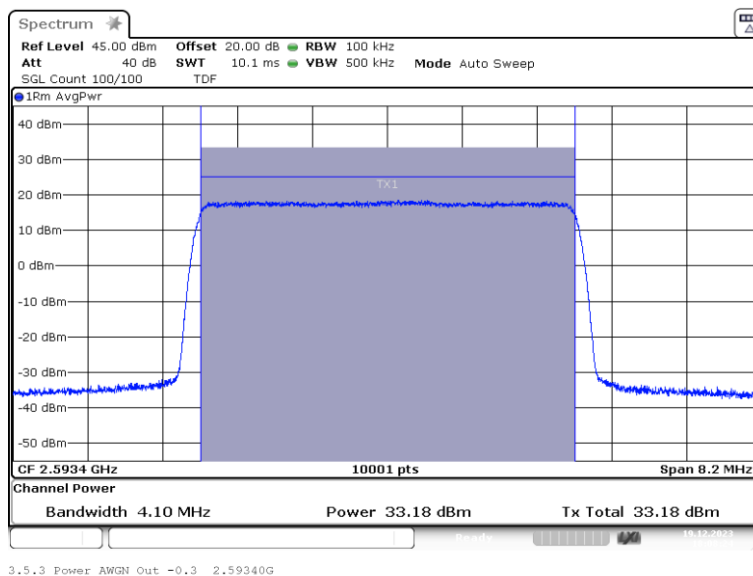
EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

4.1.4 MEASUREMENT PLOT

Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: AWGN;
Input Power 0.3 dB < AGC



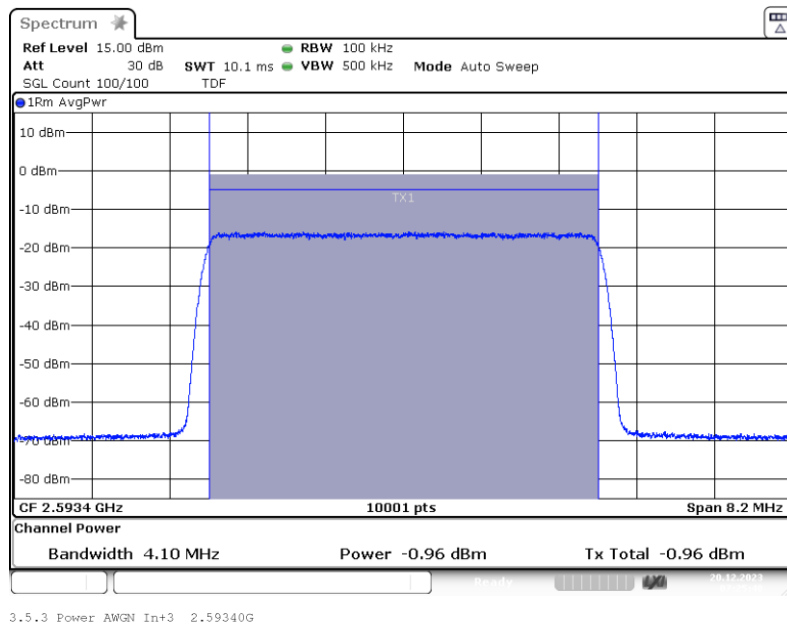
Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: AWGN;
Output Power 0.3 dB < AGC



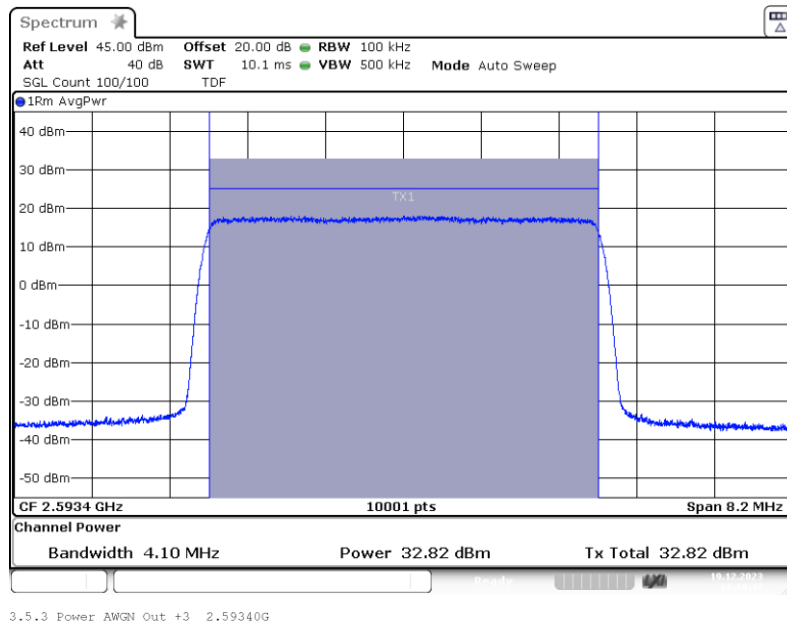
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: AWGN;
Input Power 3 dB > AGC



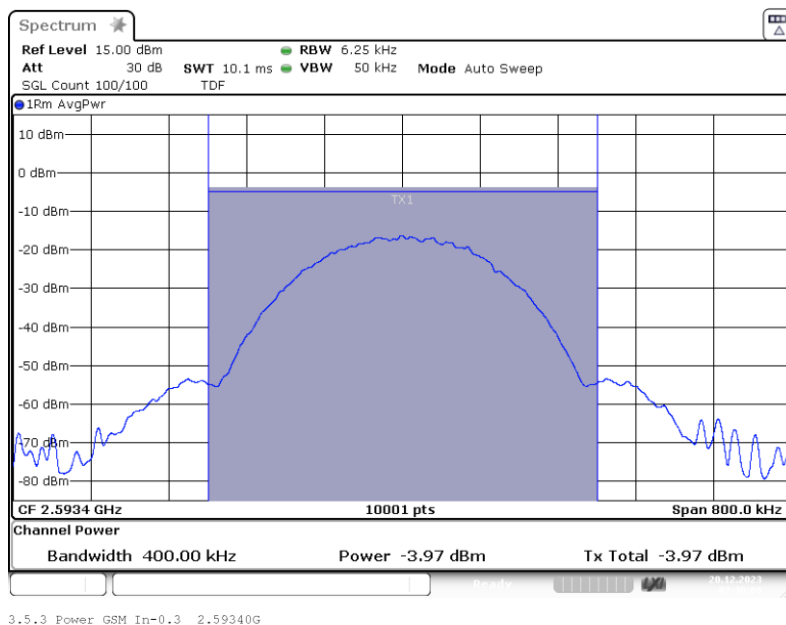
Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: AWGN;
Output Power 3 dB > AGC



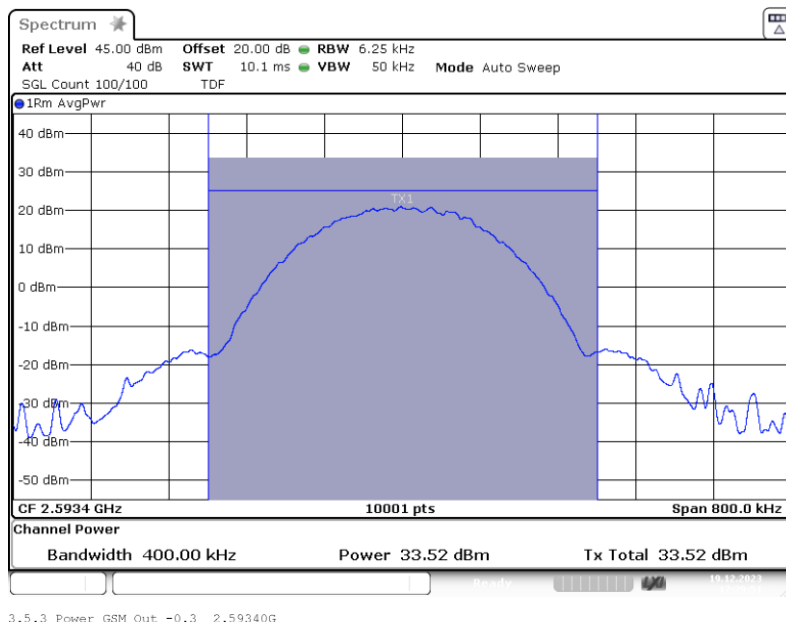
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: GSM;
Input Power 0.3 dB < AGC



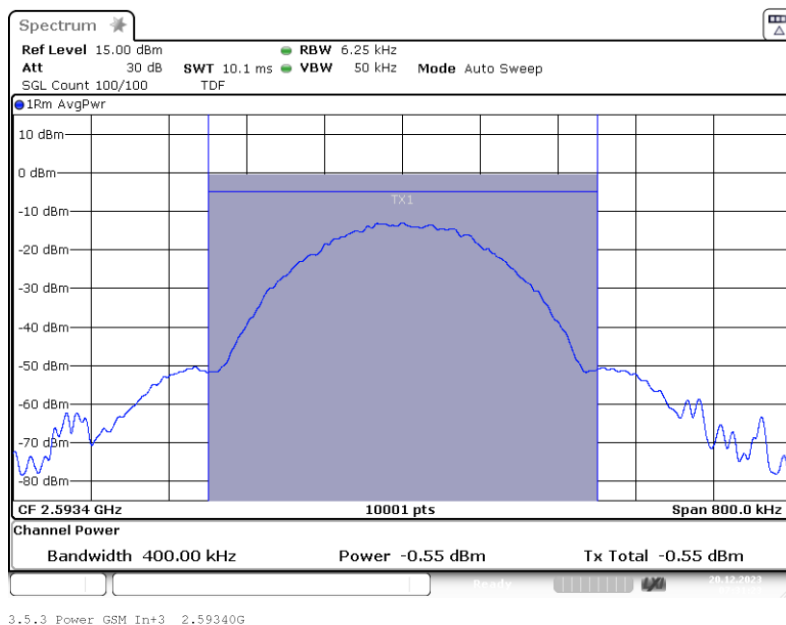
Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: GSM;
Output Power 0.3 dB < AGC



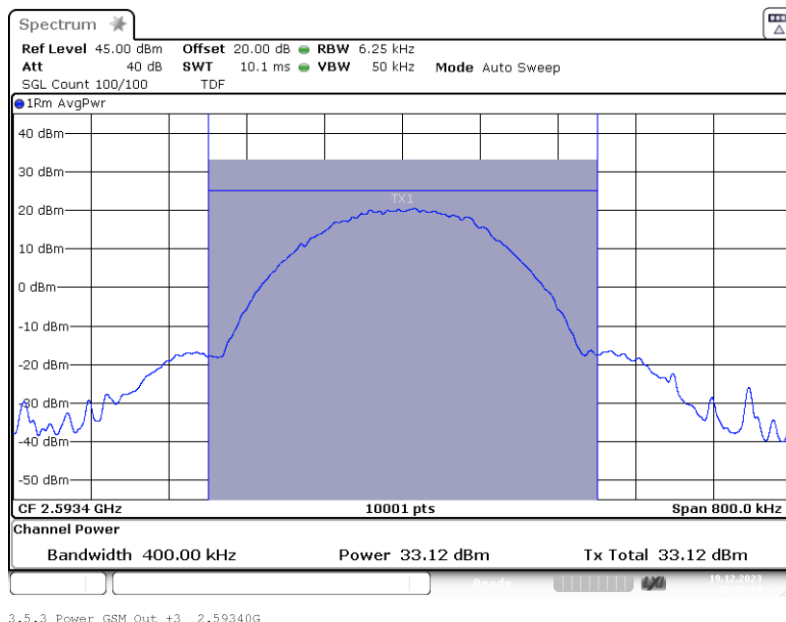
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: GSM;
Input Power 3 dB > AGC



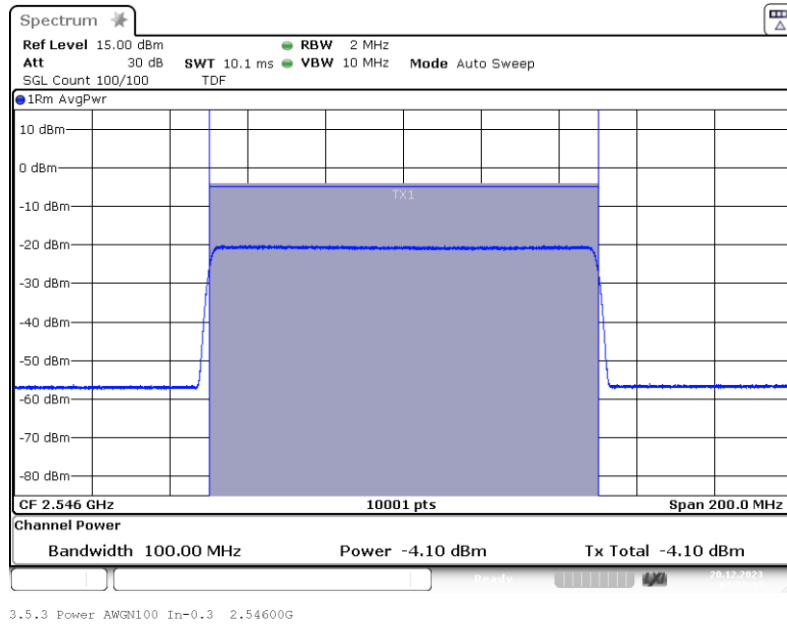
Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: GSM;
Output Power 3 dB > AGC



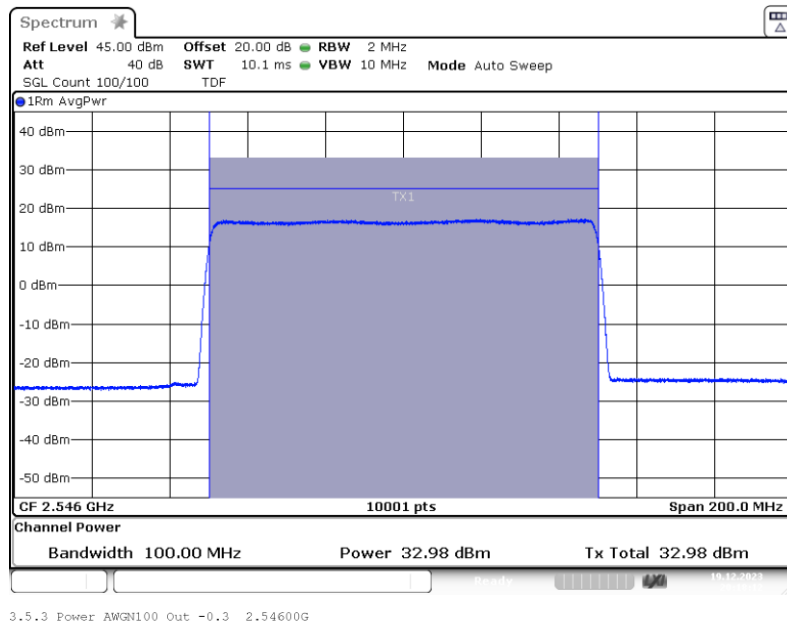
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS LBS; Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN100;
Input Power 0.3 dB < AGC



Band 41 BRS LBS; Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN100;
Output Power 0.3 dB < AGC



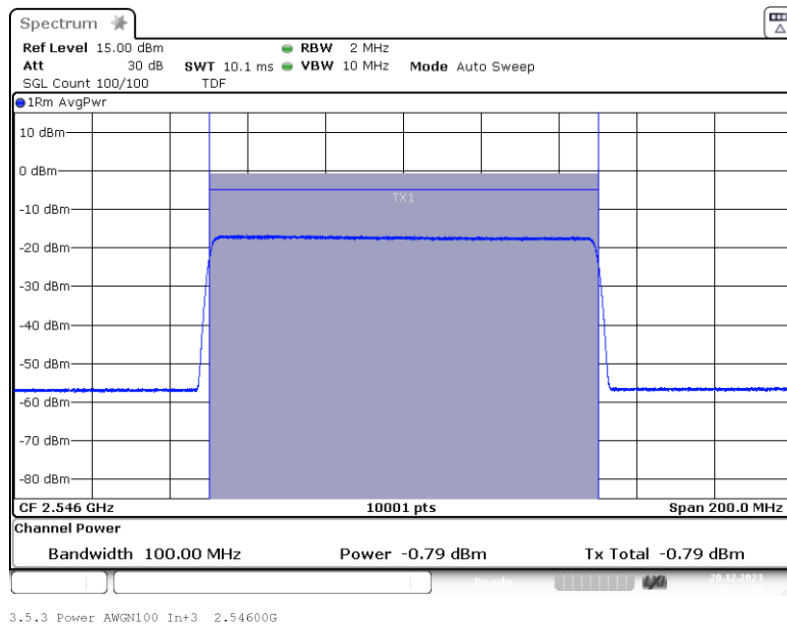


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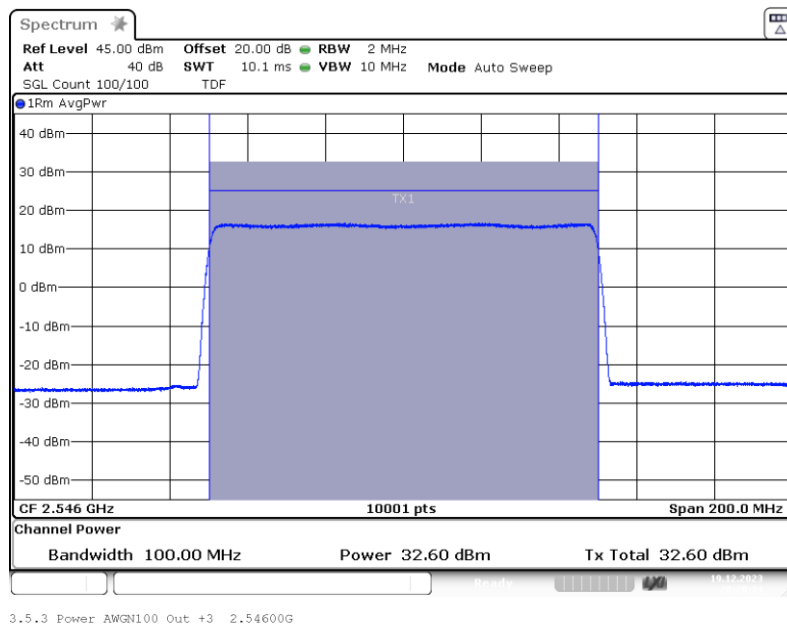
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS LBS; Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN100;
Input Power 3 dB > AGC



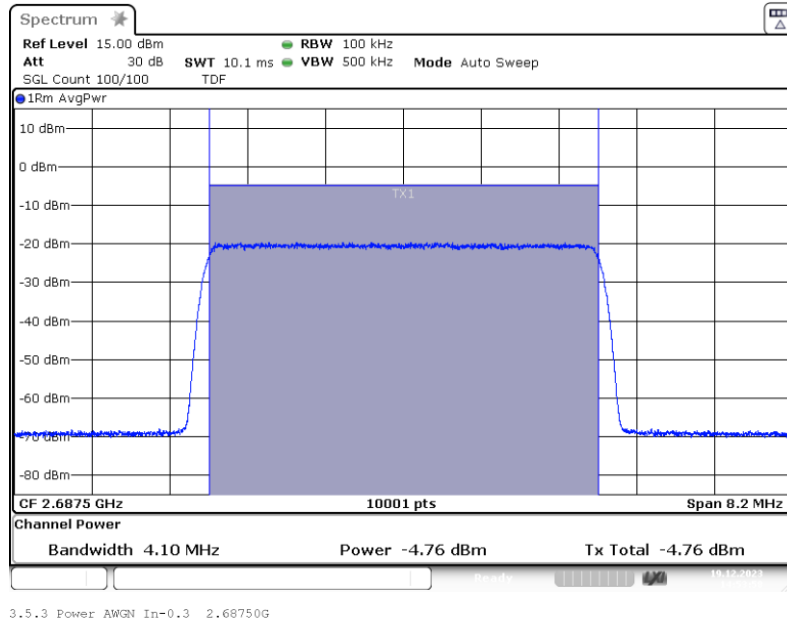
Band 41 BRS LBS; Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN100;
Output Power 3 dB > AGC



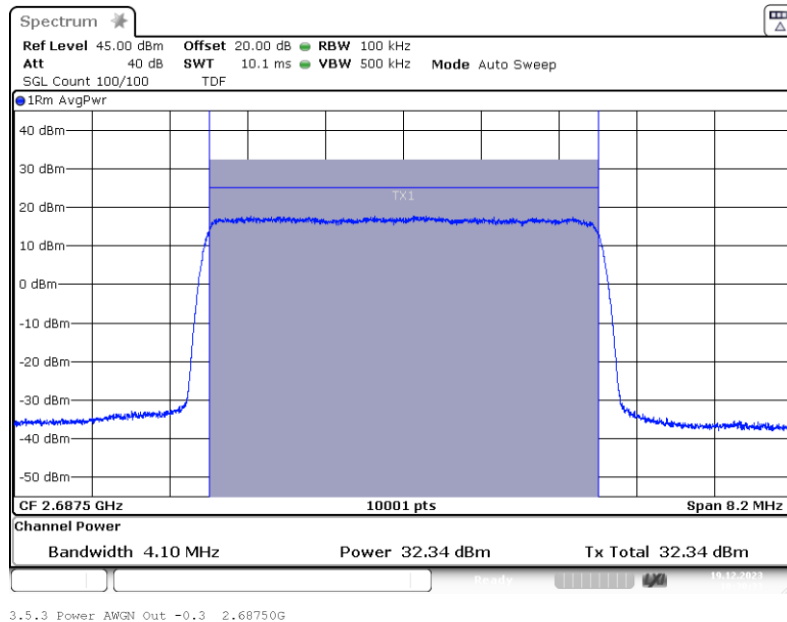
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: AWGN;
Input Power 0.3 dB < AGC



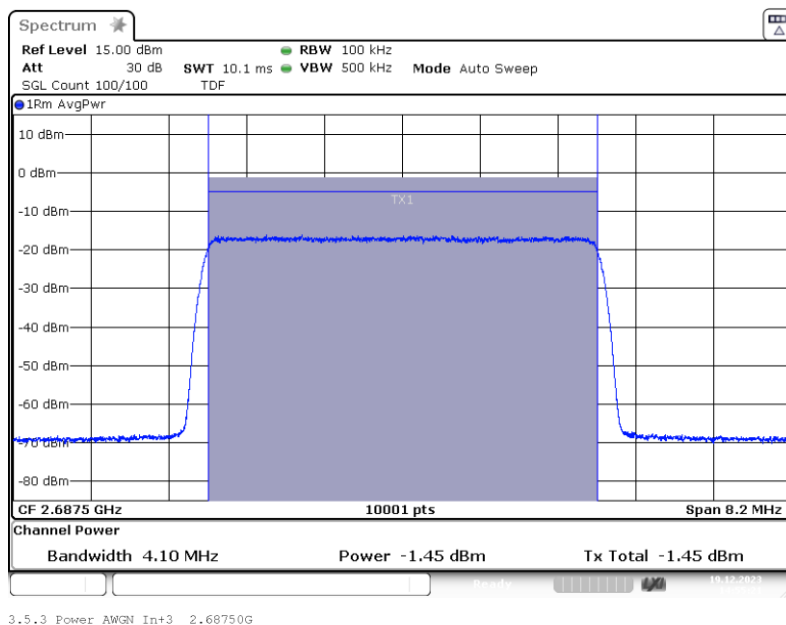
Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: AWGN;
Output Power 0.3 dB < AGC



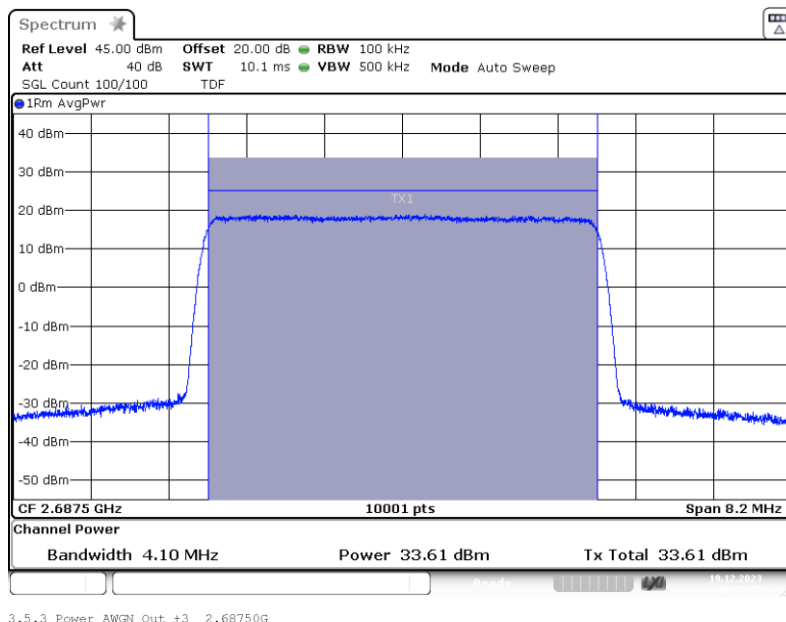
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: AWGN;
Input Power 3 dB > AGC



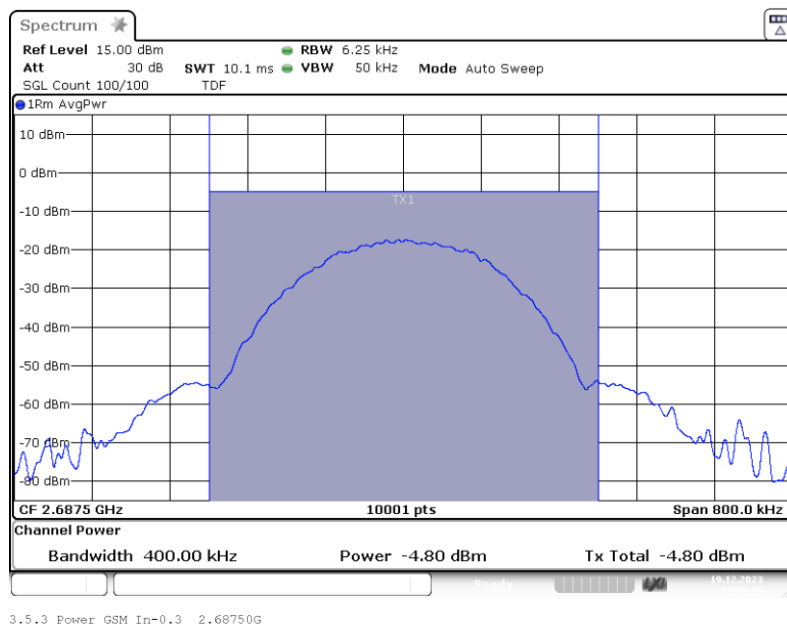
Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: AWGN;
Output Power 3 dB > AGC



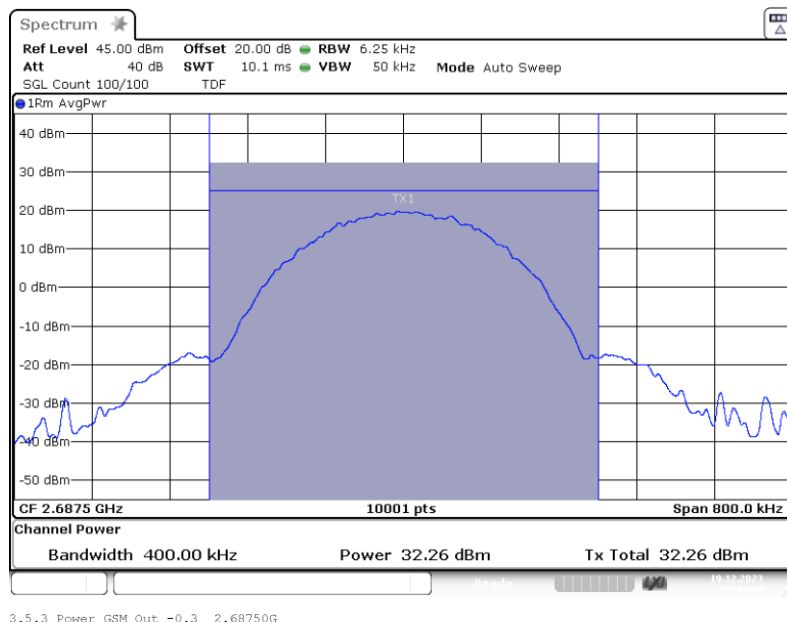
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: GSM;
Input Power 0.3 dB < AGC



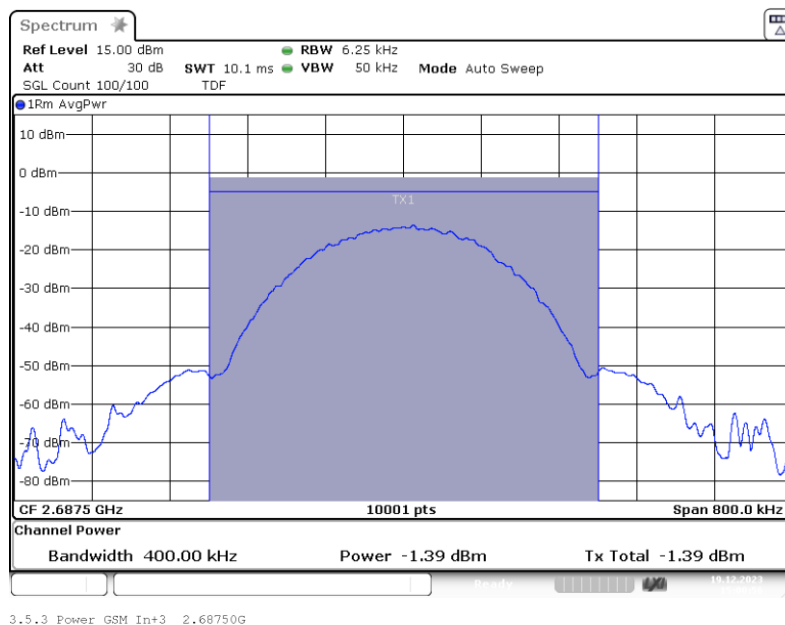
Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: GSM;
Output Power 0.3 dB < AGC



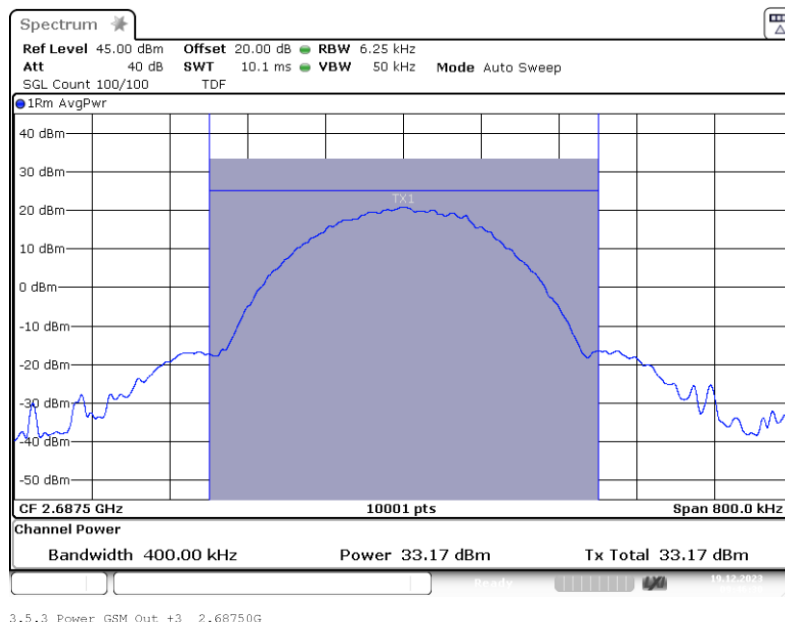
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: GSM;
Input Power 3 dB > AGC



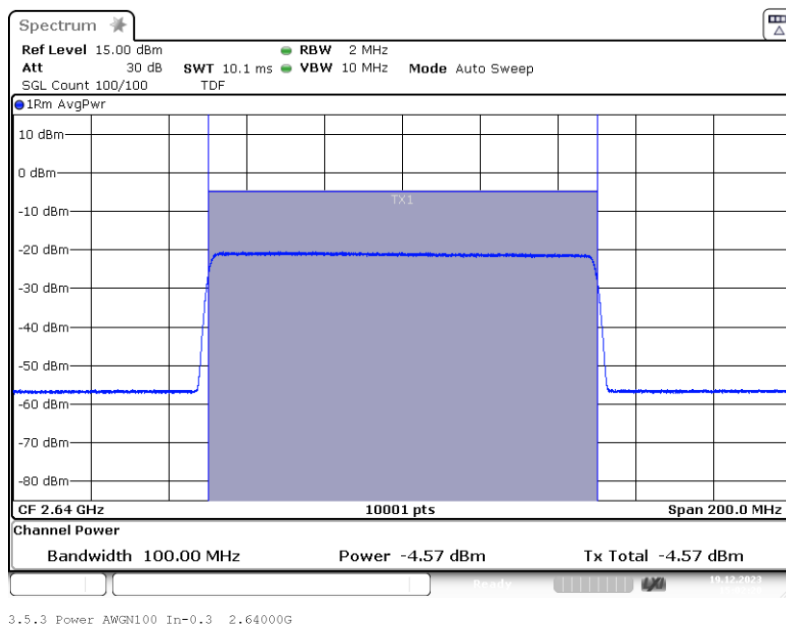
Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: GSM;
Output Power 3 dB > AGC



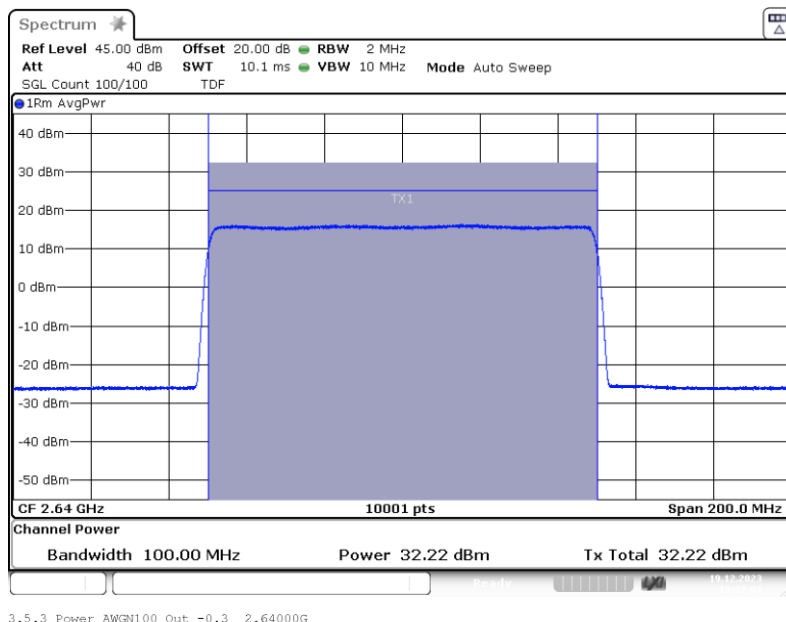
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS UBS; Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN100;
Input Power 0.3 dB < AGC



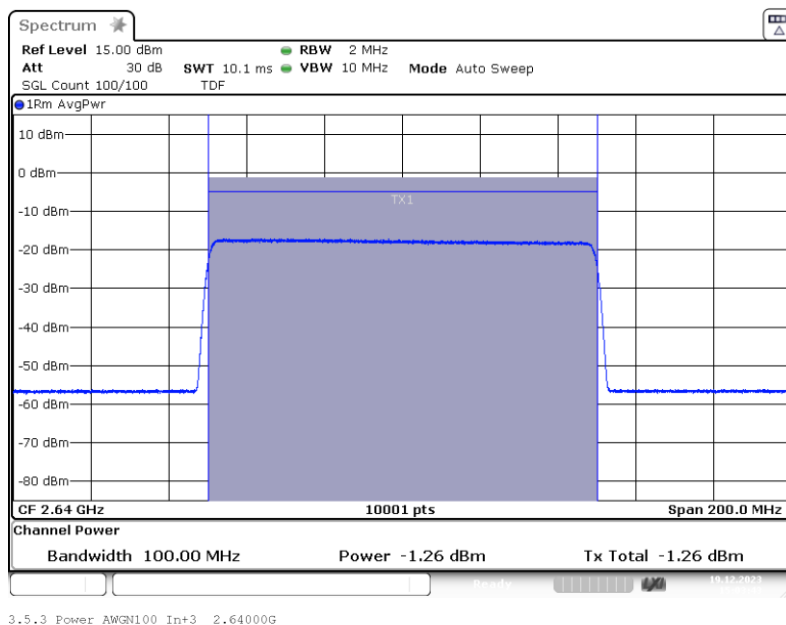
Band 41 BRS UBS; Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN100;
Output Power 0.3 dB < AGC



EMC Test Report No.: 24-0001

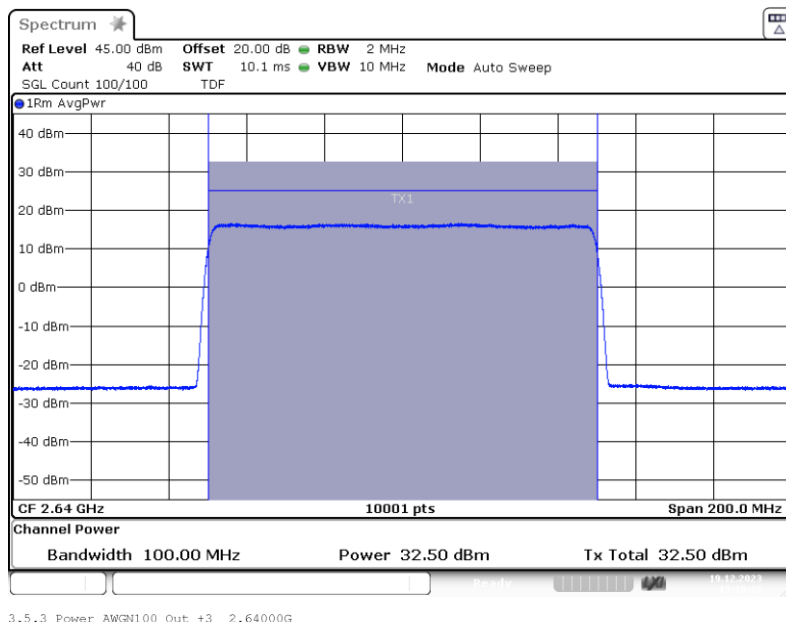
EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS UBS; Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN100;
Input Power 3 dB > AGC



3.5.3 Power AWGN100 In+3 2.64000G

Band 41 BRS UBS; Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN100;
Output Power 3 dB > AGC



3.5.3 Power AWGN100 Out +3 2.64000G



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EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

4.1.5 TEST EQUIPMENT USED

- Conducted

EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

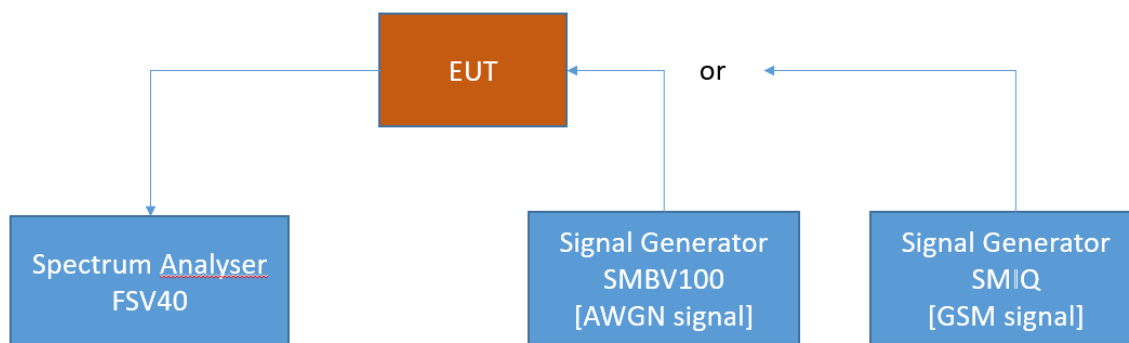
4.2 PEAK TO AVERAGE RATIO

Standard FCC Part 27, §27.50

The test was performed according to:
ANSI C63.26**Test date:** 2023-12-19 – 2023-12-20**Environmental conditions:** 23 °C ± 5 K; 40 % r. F. ± 20 % r. F.**Test engineer:** Thomas Hufnagel**4.2.1 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.



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EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

4.2.2 TEST REQUIREMENTS/LIMITS

Part 27; Miscellaneous Wireless Communication Services

Subpart C – Technical standards

§ 27.50

Band 41:

For the band 41(BRS, LBS/UBS) exists no FCC peak-to-average power ratio (PAPR) limit. Although here no limit exists, a fictive limit with the usual 13 dB value is set and the margin to this fictive limit is calculated.

EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

4.2.3 TEST PROTOCOL

Band 41 BRS (LBS), downlink						
Signal Type	Input Power	Frequency [MHz]	Input Power [dBm]	PAPR [dB]	Fictive Limit PAPR [dB]	Margin to fictive Limit [dB]
Wideband	0.3 dB < AGC	2593.4	-4.3	8.4	13.0	4.6
Wideband	3 dB > AGC	2593.4	-1.0	8.4	13.0	4.6
Narrowband	0.3 dB < AGC	2593.4	-4.0	0.2	13.0	12.8
Narrowband	3 dB > AGC	2593.4	-0.6	0.2	13.0	12.8

Band 41 BRS (UBS), downlink						
Signal Type	Input Power	Frequency [MHz]	Input Power [dBm]	PAPR [dB]	Fictive Limit PAPR [dB]	Margin to Fictive Limit [dB]
Wideband	0.3 dB < AGC	2687.5	-4.8	8.3	13.0	4.7
Wideband	3 dB > AGC	2687.5	-1.5	8.3	13.0	4.7
Narrowband	0.3 dB < AGC	2687.5	-4.8	0.1	13.0	12.9
Narrowband	3 dB > AGC	2687.5	-1.4	0.2	13.0	12.8

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

EMC Test Report No.: 24-0001

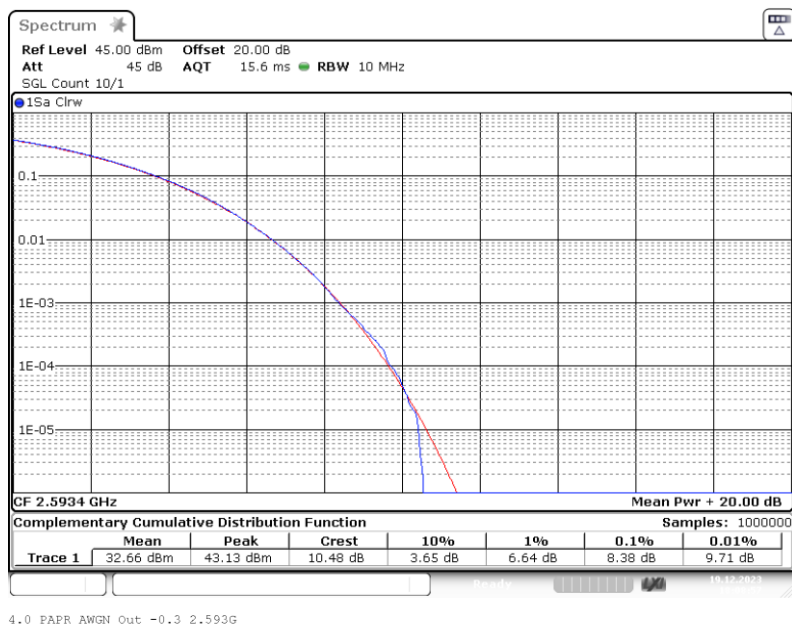
EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]



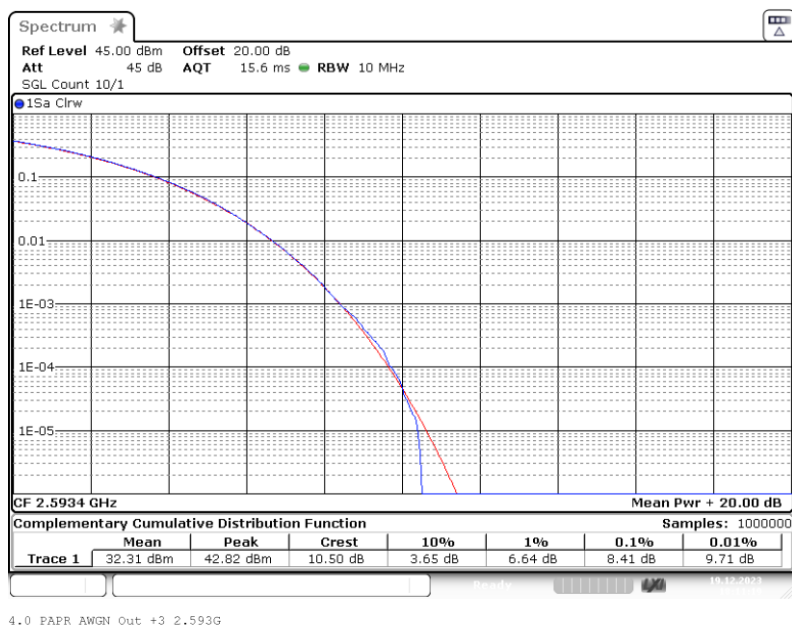
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4.2.4 MEASUREMENT PLOT (SHOWING THE HIGHEST VALUE. "WORST CASE")

Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: AWGN; PAPR 0.3 dB < AGC



Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: AWGN; PAPR 3 dB > AGC



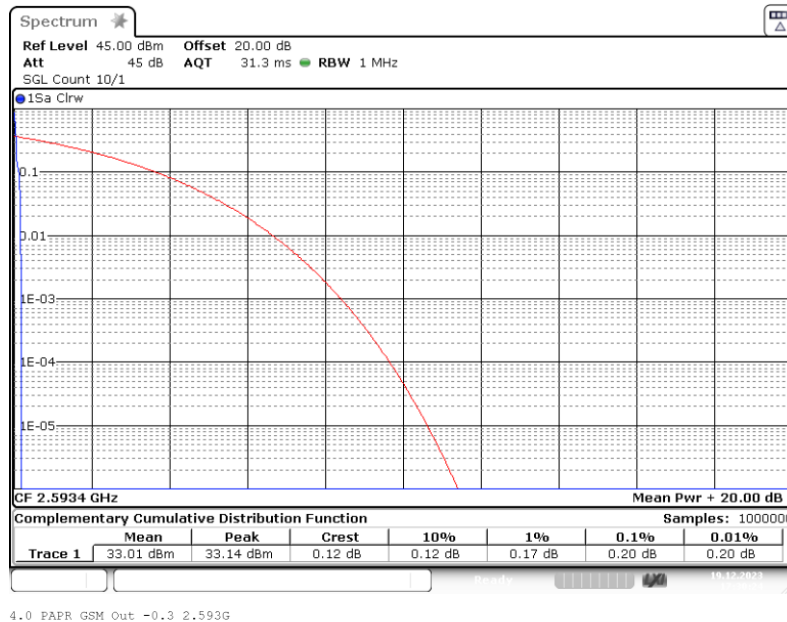
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

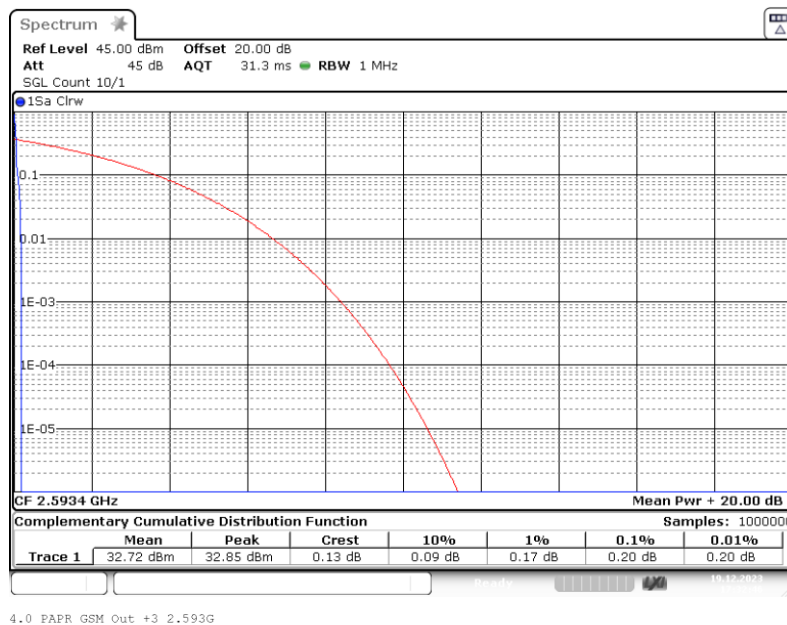


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Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: GSM; PAPR 0.3 dB < AGC



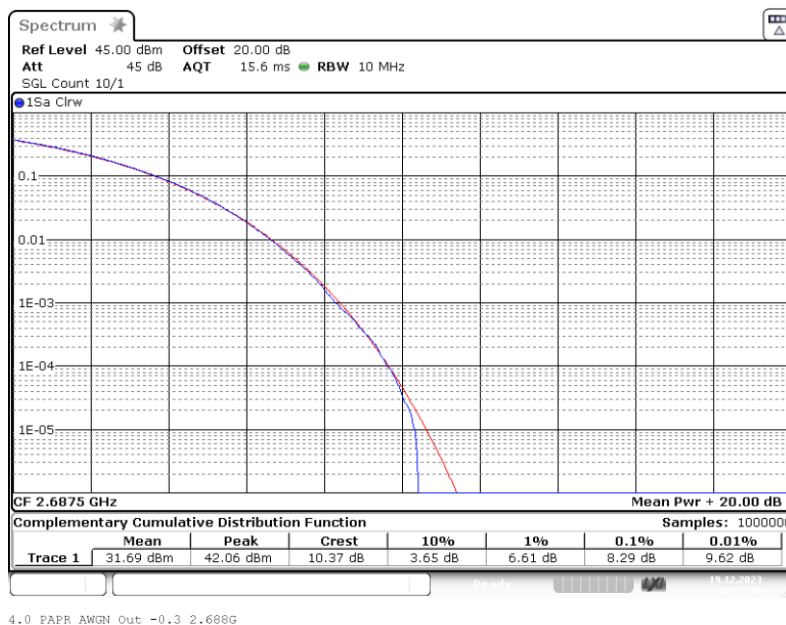
Band 41 BRS LBS; Frequency: 2.5934 GHz; Band Edge: f0; Mod: GSM; PAPR 3 dB > AGC



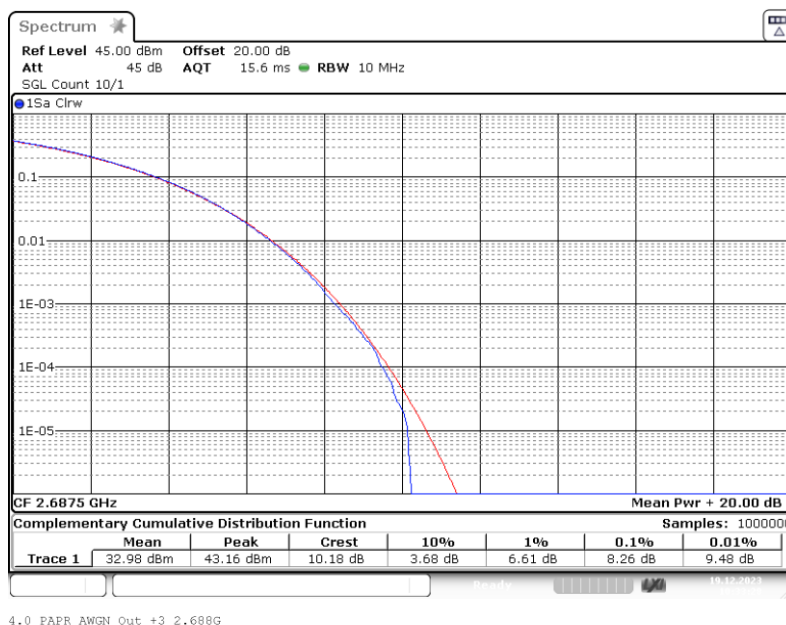
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: AWGN; PAPR 0.3 dB < AGC



Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: AWGN; PAPR 3 dB > AGC



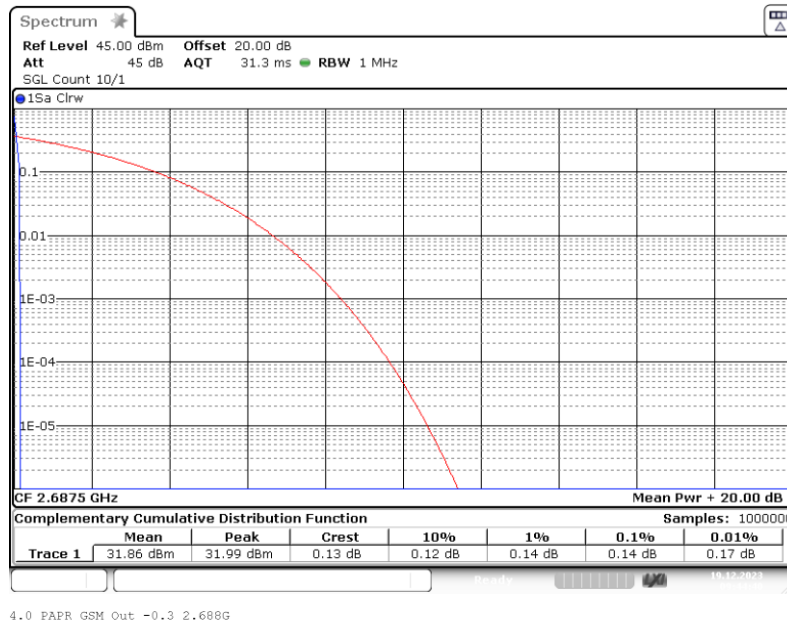
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

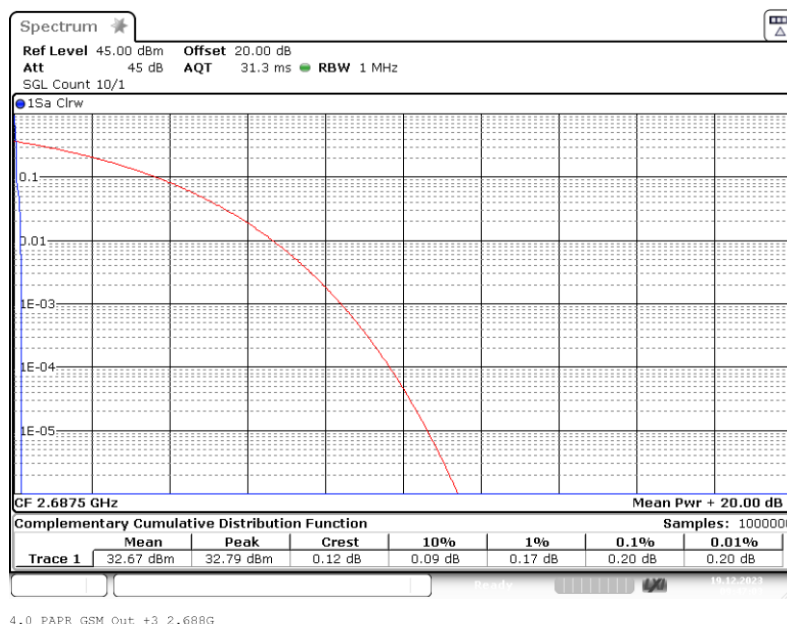


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Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: GSM; PAPR 0.3 dB < AGC



Band 41 BRS UBS; Frequency: 2.6875 GHz; Band Edge: f0; Mod: GSM; PAPR 3 dB > AGC





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EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

4.2.5 STEST EQUIPMENT USED

- Conducted

4.3 OCCUPIED BANDWIDTH/INPUT-VERSUS-OUTPUT SPECTRUM

Standard FCC Part 2.1049; Occupied Bandwidth

The test was performed according to:

ANSI C63.26. KDB KDB 935210 D05 v01r04: 3.4

Test date: 2023-12-19 – 2023-12-20

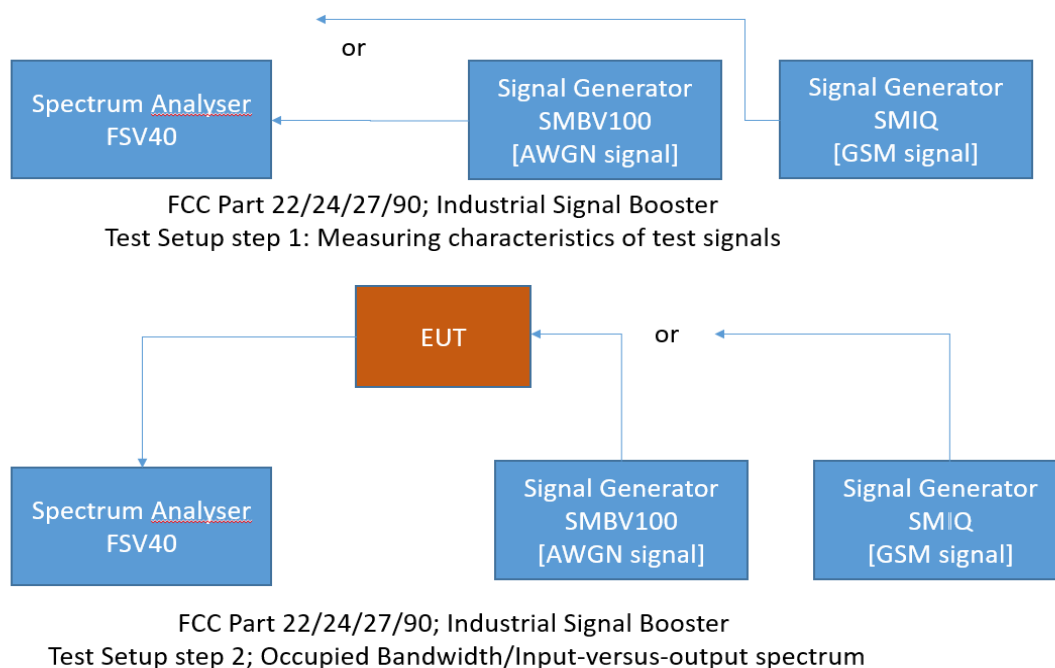
Environmental conditions: 23 °C ± 5 K; 40 % r. F. ± 20 % r. F.

Test engineer: Thomas Hufnagel

4.3.1 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:



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.



4.3.2 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.



EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

4.3.3 TEST PROTOCOL

Band 41 BRS (LBS), 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	2546.0	4388.4	4386.6	1.0	205.0	203.2
Wideband	3 dB > AGC	2546.0	4386.6	4386.0	0.6	205.0	204.4
Narrowband	0.3 dB < AGC	2547.0	317.1	317.6	0.5	10.0	9.5
Narrowband	3 dB > AGC	2547.0	321.2	311.2	10.0	10.0	0.0
Wideband 5G	0.3 dB < AGC	2546.0	103180	103105	75	4915	4840
Wideband 5G	3 dB > AGC	2546.0	103150	103165	15	4915	4900

Band 41 BRS (UBS), 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	2640.0	4387.2	4387.8	0.6	205.0	204.4
Wideband	3 dB > AGC	2640.0	4389.0	4390.9	1.9	205.0	203.1
Narrowband	0.3 dB < AGC	2641.0	314.9	316.8	1.9	10.0	8.1
Narrowband	3 dB > AGC	2641.0	318.6	317.0	1.6	10.0	8.4
Wideband 5G	0.3 dB < AGC	2640.0	103210	103105	105	4915	4810
Wideband 5G	3 dB > AGC	2640.0	103150	103300	150	4915	4765

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

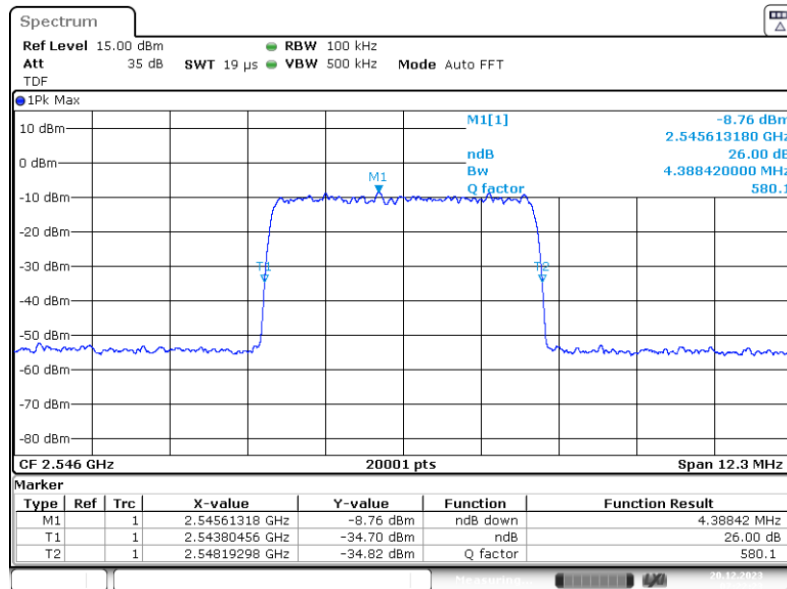


EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

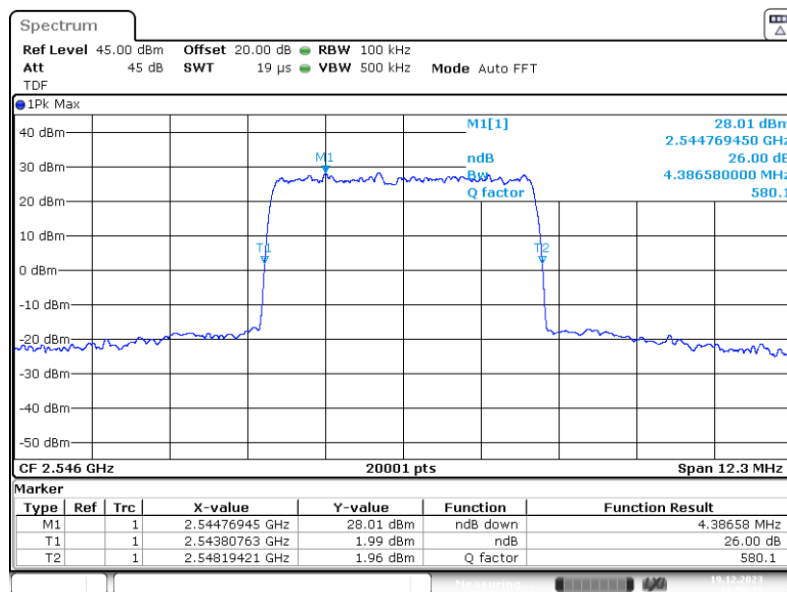
4.3.4 MEASUREMENT PLOT

Band 41 BRS (LBS); Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN
Input OCBw 0.3 dB < AGC



3.4 OCBw AWGN In-0.3 2.5460G _26dB

Band 41 BRS (LBS); Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN;
Output OCBw 0.3 dB < AGC



3.4 OCBw AWGN Out -0.3 2.5460G _26dB

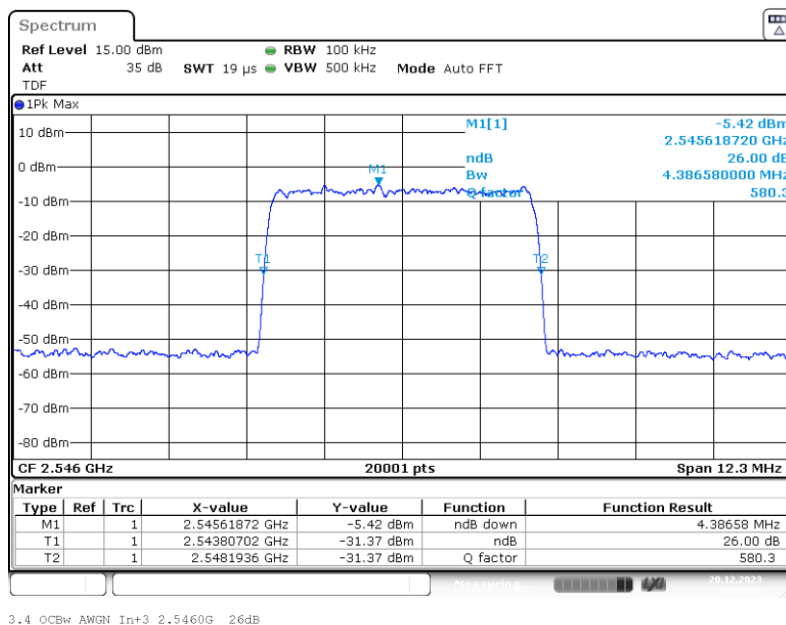


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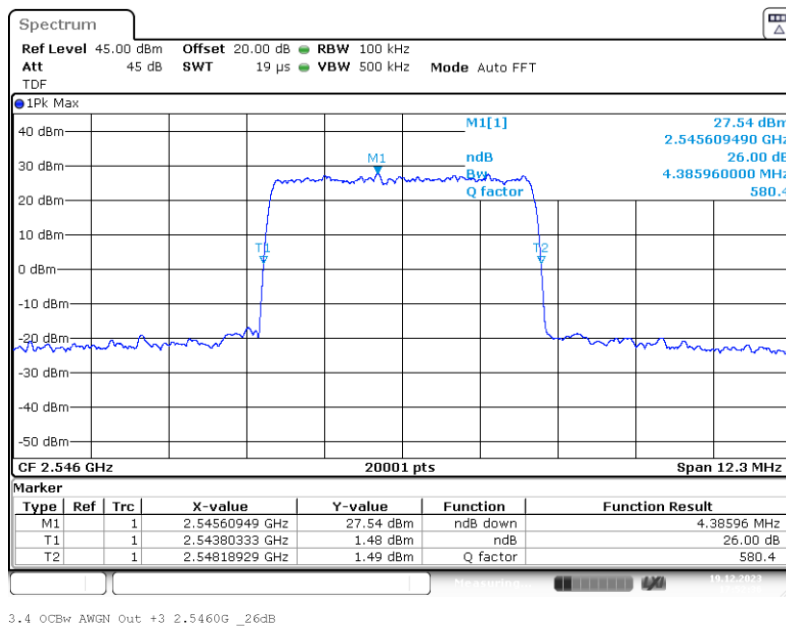
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS (LBS); Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN;
Input OCBw 3 dB > AGC



Band 41 BRS (LBS); Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN;
Output OCBw 3 dB > AGC



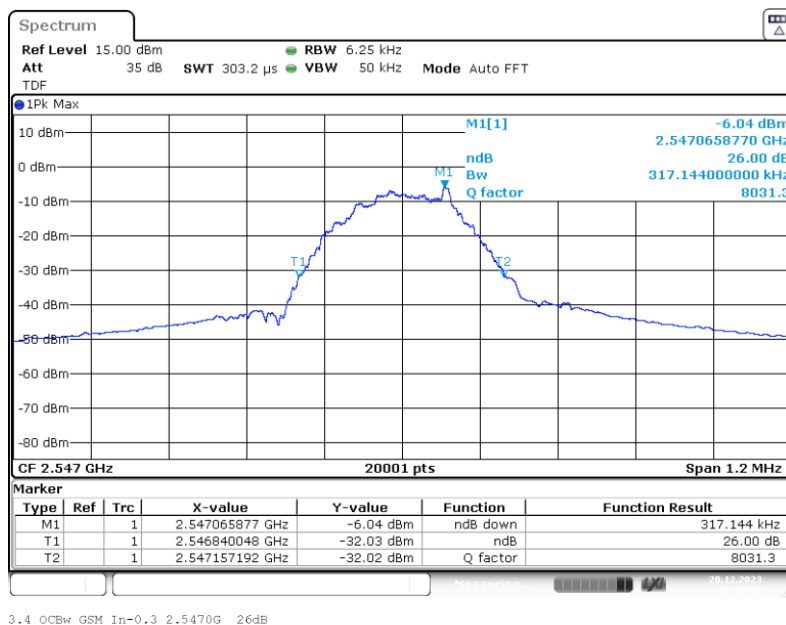


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VERITAS

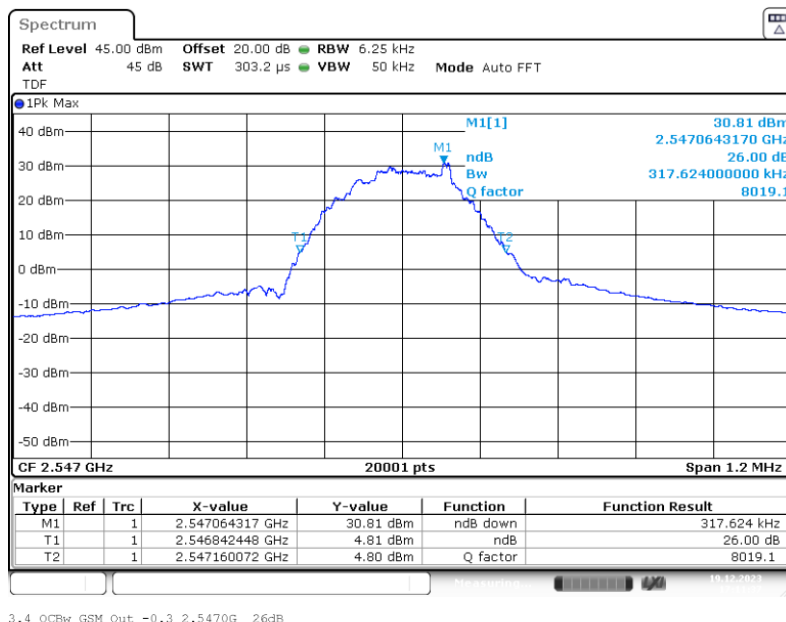
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS (LBS); Frequency: 2.5470 GHz; Band Edge: mid; Mod: GSM;
Input OCBw 0.3 dB < AGC



Band 41 BRS (LBS); Frequency: 2.5470 GHz; Band Edge: mid; Mod: GSM;
Output OCBw 0.3 dB < AGC



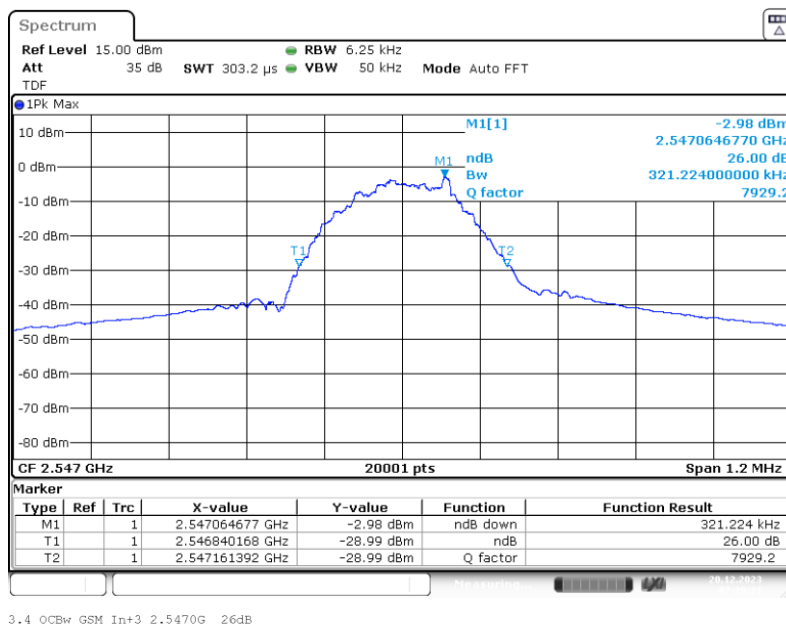


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VERITAS

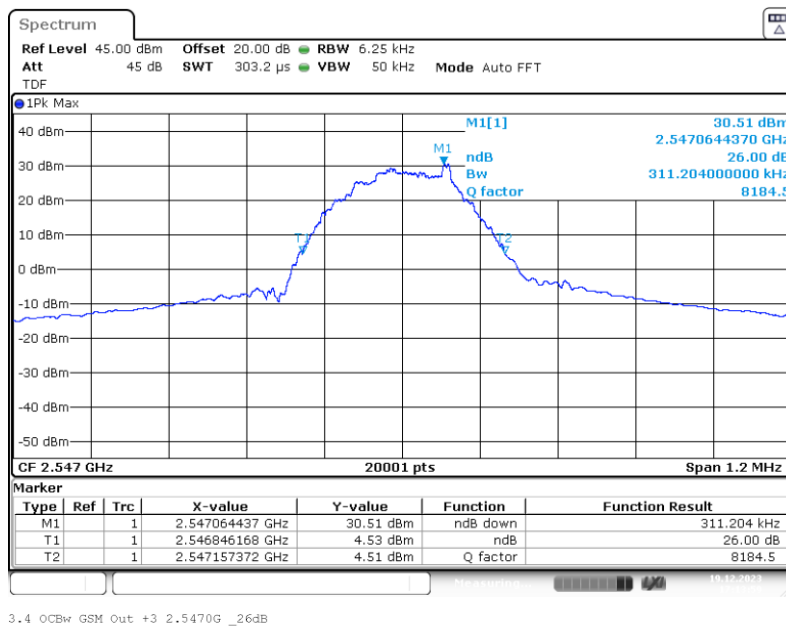
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS (LBS); Frequency: 2.5470 GHz; Band Edge: mid; Mod: GSM;
Input OCBw 3 dB > AGC



Band 41 BRS (LBS); Frequency: 2.5470 GHz; Band Edge: mid; Mod: GSM;
Output OCBw 3 dB > AGC



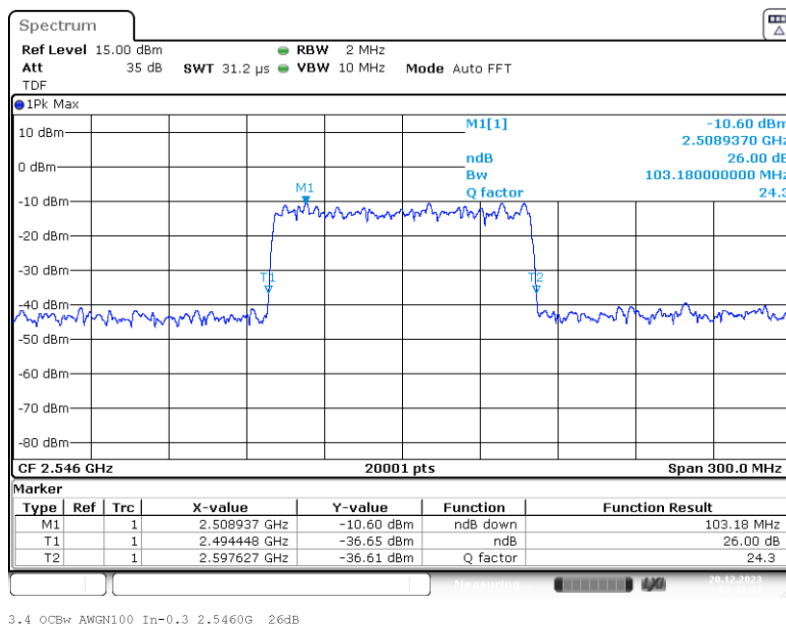


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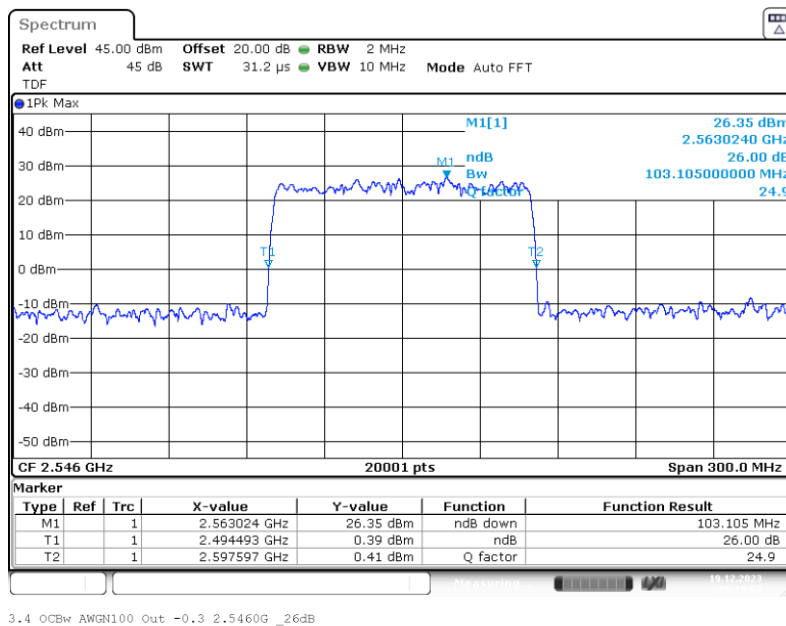
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS (LBS); Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN100;
Input OCBw 0.3 dB < AGC



Band 41 BRS (LBS); Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN100;
Output OCBw 0.3 dB < AGC



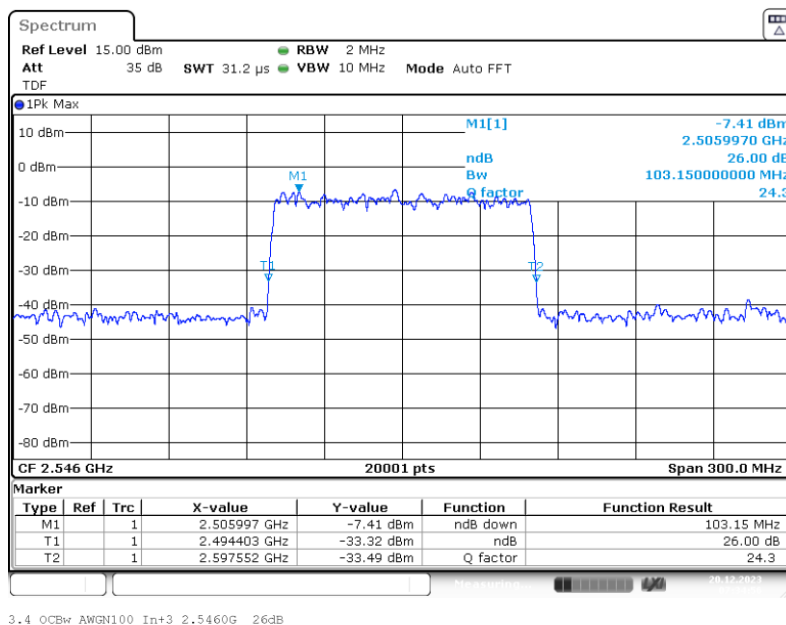


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VERITAS

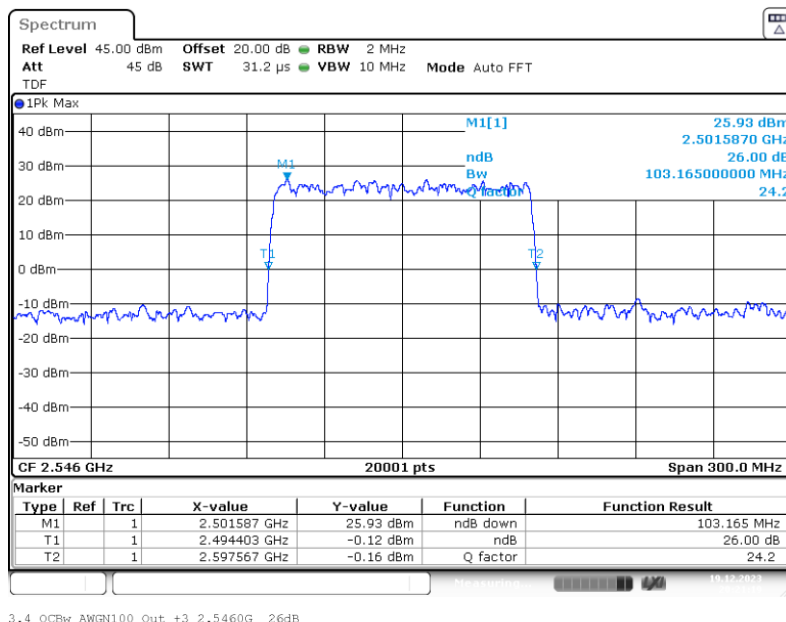
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

Band 41 BRS (LBS); Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN100;
Input OCBw 3 dB > AGC



Band 41 BRS (LBS); Frequency: 2.5460 GHz; Band Edge: mid; Mod: AWGN100;
Output OCBw 3 dB > AGC



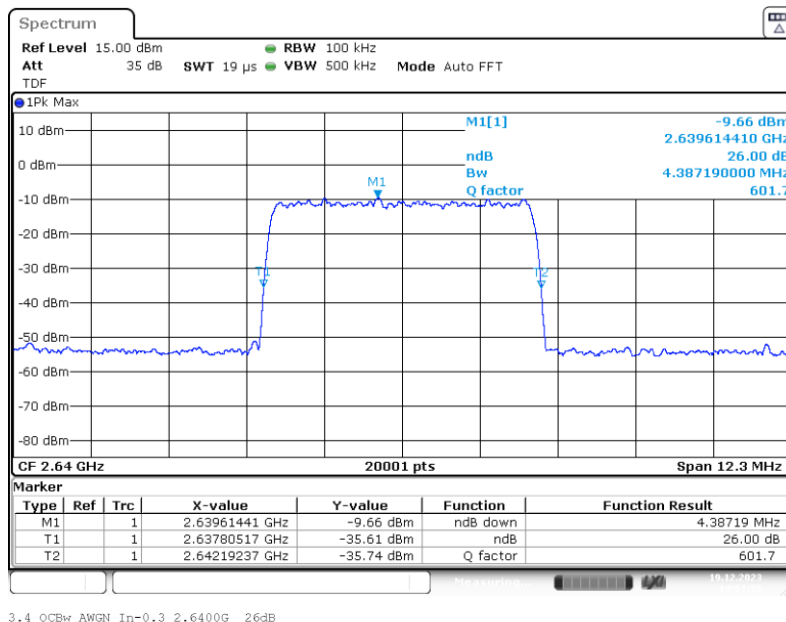


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VERITAS

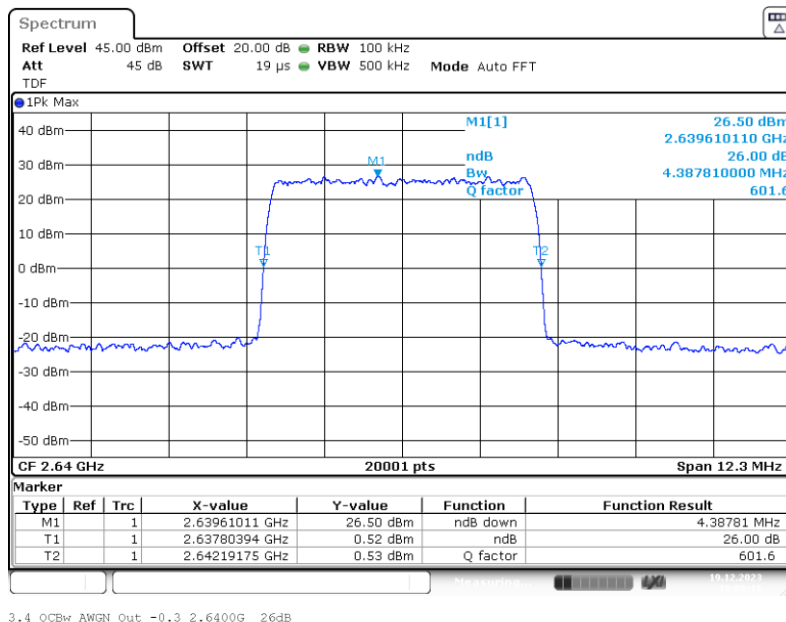
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

.Band 41 BRS (UBS); Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN; Input OCBw 0.3 dB < AGC



.Band 41 BRS (UBS); Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN; Output OCBw 0.3 dB < AGC

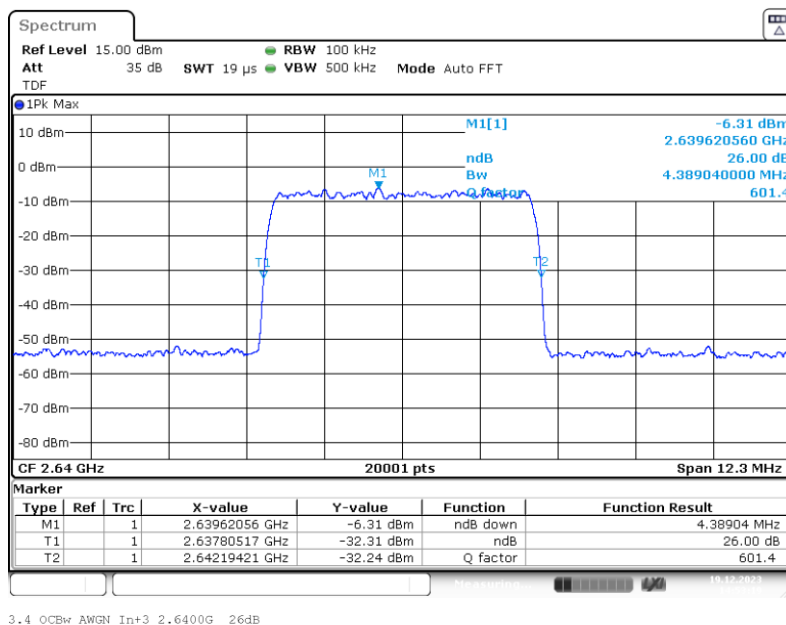




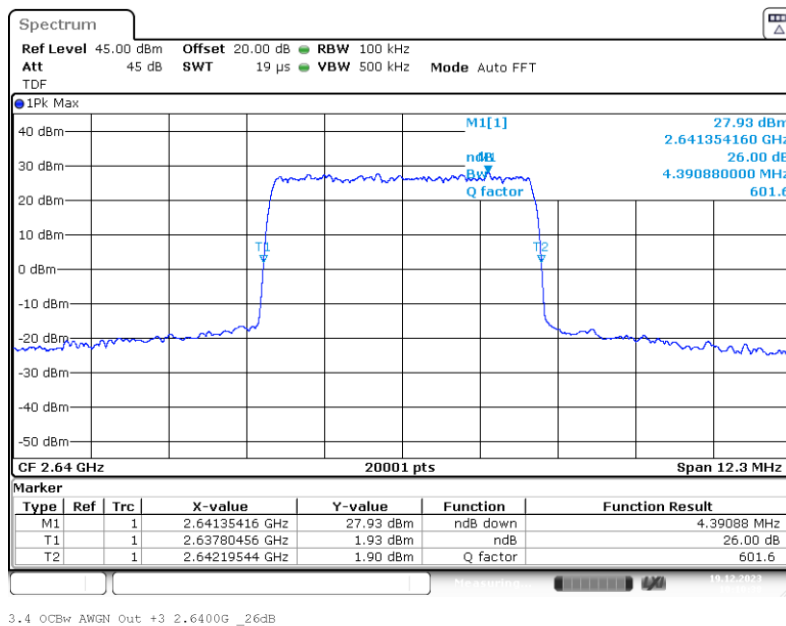
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

.Band 41 BRS (UBS); Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN; Input OCBw 3 dB > AGC



.Band 41 BRS (UBS); Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN; Output OCBw 3 dB > AGC

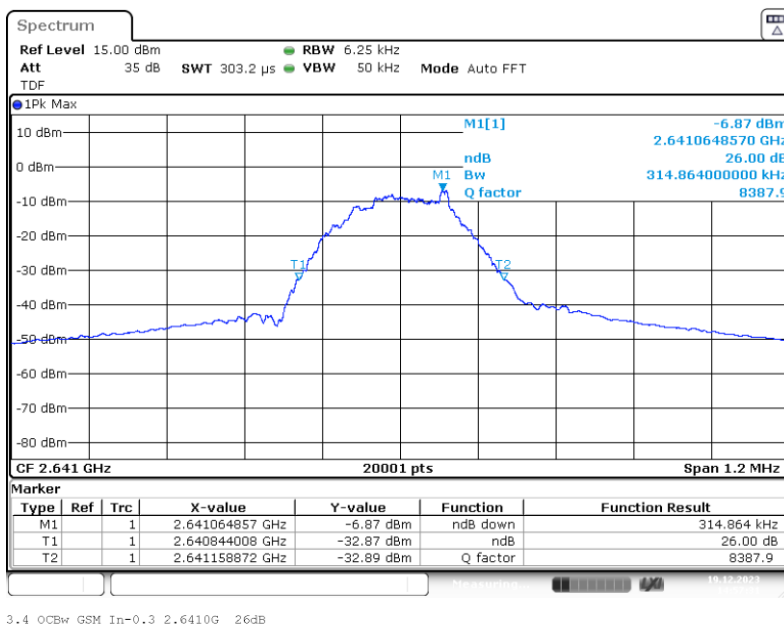




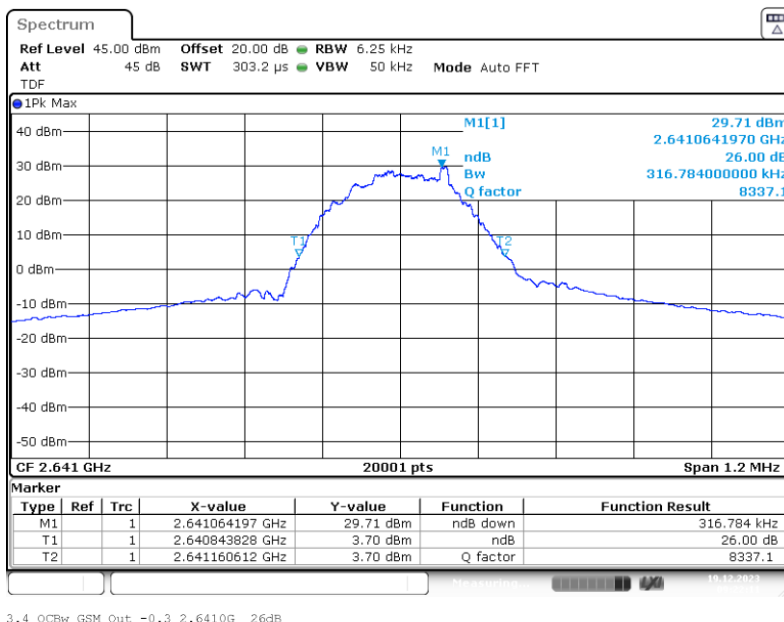
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

.Band 41 BRS (UBS); Frequency: 2.6410 GHz; Band Edge: mid; Mod: GSM; Input OCBw 0.3 dB < AGC



.Band 41 BRS (UBS); Frequency: 2.6410 GHz; Band Edge: mid; Mod: GSM; Output OCBw 0.3 dB < AGC

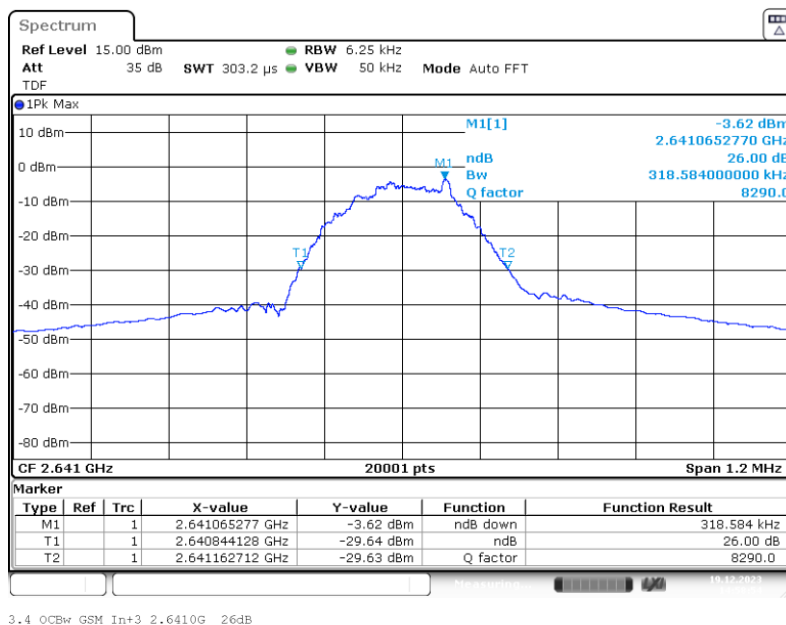




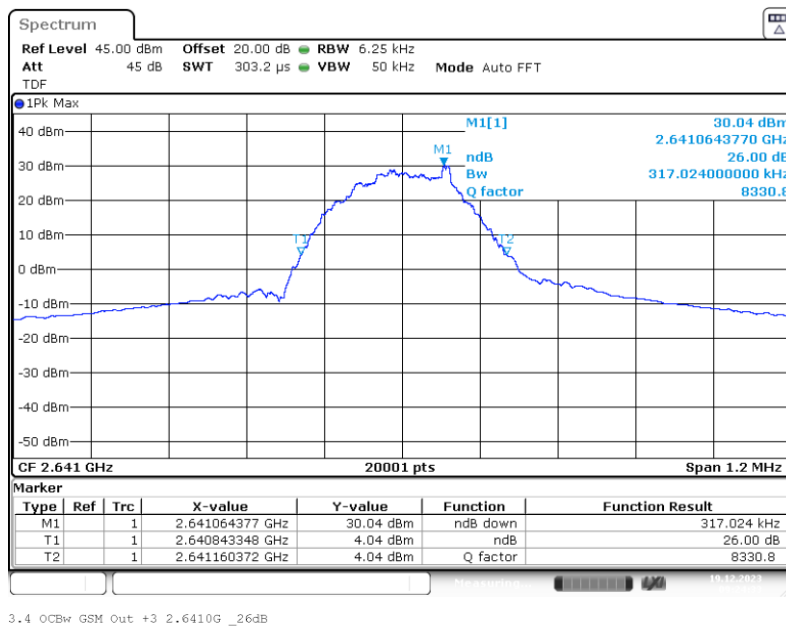
EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

.Band 41 BRS (UBS); Frequency: 2.6410 GHz; Band Edge: mid; Mod: GSM; Input OCBw 3 dB
> AGC



.Band 41 BRS (UBS); Frequency: 2.6410 GHz; Band Edge: mid; Mod: GSM; Output OCBw 3 dB
> AGC

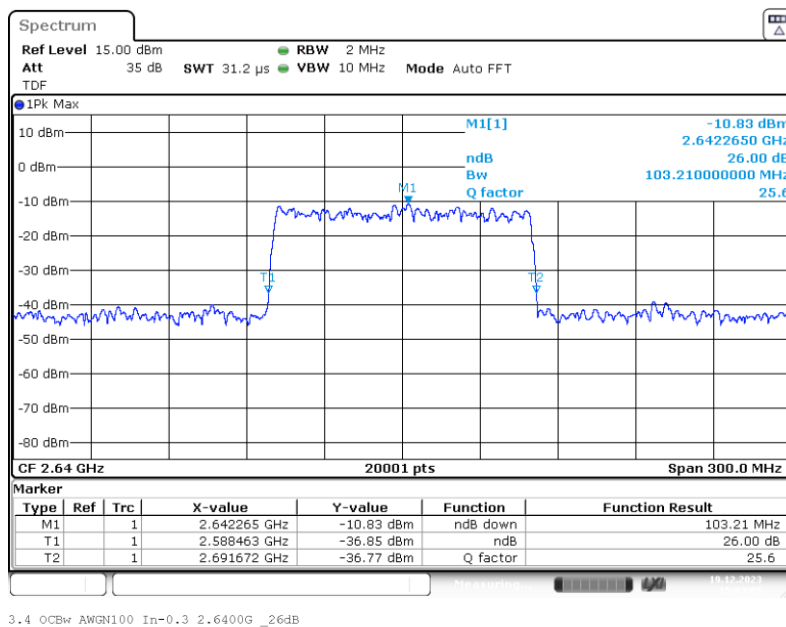




EMC Test Report No.: 24-0001

EMC tests on Andrew CAP MX 6/7E/80-85/17/E/19/23/25 T-AC [BRS]

.Band 41 BRS (UBS); Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN100; Input OCBw
0.3 dB < AGC



.Band 41 BRS (UBS); Frequency: 2.6400 GHz; Band Edge: mid; Mod: AWGN100; Output
OCBw 0.3 dB < AGC

