Prüfbericht-Nr.: *Test Report No.*:	**60356613 003**	**Auftrags-Nr.:** *Order No.*:	168126583	Seite 1 von 19 *Page 1 of 19*
Kunden-Referenz-Nr.: *Client Reference No.*:	N/A	**Auftragsdatum:** *Order date*:	07.08.2019	
Auftraggeber: *Client*:	Telit Communications S.p.A., Viale Stazione di Prosecco 5/b, 34010, Trieste, Italy			
Prüfgegenstand: *Test item*:	Data Terminal Module			
Bezeichnung / Typ-Nr.: *Identification / Type No.*:	ME310G1-WW			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification*:	47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 2		RSS-132 Issue 3 RSS-133 Issue 6 RSS-Gen Issue 5	

Wareneingangsdatum: *Date of receipt*:	12.11.2019
Prüfmuster-Nr.: *Test sample No.*:	A001027661-005
Prüfzeitraum: *Testing period*:	24.03.2020 - 15.05.2020
Ort der Prüfung: *Place of testing*:	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüflaboratorium: *Testing laboratory*:	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüfergebnis*: *Test result**:	Pass

Refer to Photo Documentation

geprüft von / *tested by*:			**kontrolliert von /** *reviewed by*:		
16.05.2020	Lin Lin / Senior Project Manager		16.05.2020	Winnie Hou / Technical Certifier	
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

Sonstiges / *Other*: FCC ID: RI7ME310G1WW; IC: 5131A-ME310G1WW
This report is for GPRS/EGPRS operation.

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

TEST SUMMARY

5.1.1 RF POWER OUTPUT
RESULT: Pass

5.1.2 OCCUPIED BANDWIDTH AND 26DB BANDWIDTH
RESULT: Pass

5.1.3 SPURIOUS EMISSIONS AT ANTENNA TERMINALS
RESULT: Pass

5.1.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS – BAND EDGE
RESULT: Pass

5.1.5 FIELD STRENGTH OF SPURIOUS RADIATION
RESULT: Pass

5.1.6 FREQUENCY STABILITY
RESULT: Pass

5.1.7 PEAK TO AVERAGE RATIO
RESULT: Pass

CONTENTS

1. GENERAL REMARKS

1.1 COMPLEMENTARY MATERIALS

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of GPRS/EGPRS

Appendix B: Test Results of Field Strength of Spurious Radiation for GPRS/EGPRS operation

Appendix C: Photographs of the Test Set-Up

1.2 TEST STANDARD(S)

Applied Rules:	47 CFR FCC Part 22	RSS-132 Issue 3
	47 CFR FCC Part 24	RSS-133 Issue 6
	47 CFR FCC Part 2	RSS-Gen Issue 5
Test Method:	KDB 971168 D01	
	ANSI C63.26	

2. TEST SITES

2.1 TEST FACILITIES

TÜV Rheinland (Shenzhen) Co., Ltd.
(FCC Registration No.: 694916 & IC Registration Number: 25069)

Address: No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, P.R. China

2.2 TEST DATE

Date of test: 24.03.2020 - 02.04.2020

2.3 LIST OF TEST AND MEASUREMENT INSTRUMENTS

Table 1: List of Test and Measurement Equipment

Description	Manufacturer	Model	Serial No.	Calibrated until (DD.MM.YYYY)
Raido Spectrum Testing				
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	166305	20.09.2020
Signal Analyzer	Rohde & Schwarz	FSV 40	101475	20.09.2020
Vector Signal Generator	Rohde & Schwarz	SMBV100A	263466	20.09.2020
Signal Generator	Rohde & Schwarz	SMB100A	181041	17.12.2020
High Speed Power Supply	KEITHLEY	2303	4080052	17.12.2020
RF Control Unit	Tonscend	JS0806-1	19H8060192	N/A
Field Strength of Spurious Radiation				
Signal Generator	Rohde & Schwarz	SMB100A	180840	20.08.2020
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	165339	20.08.2020
Signal Analyzer	Rohde & Schwarz	FSV 40	101440	21.08.2020
System Controller Interface	Rohde & Schwarz	SCI-100	S10010036	N/A
Filterbank	Rohde & Schwarz	GSM	100811	21.08.2020
OSP	Rohde & Schwarz	OSP 120	102041	N/A
OSP	Rohde & Schwarz	OSP 150	101385	17.12.2020
Pre-amplifier	Rohde & Schwarz	SCU08F1	08320030	20.08.2020
Amplifier	Rohde & Schwarz	SCU-18F	180079	20.08.2020

Amplifier	Rohde & Schwarz	SCU40A	100450	20.09.2020
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	192	02.09.2020
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218719	02.09.2020
Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18312	02.09.2020
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19066	02.09.2020
Biconical Broadband Antenna (30 MHz - 1 GHz)	Schwarzbeck	VUBA 9117	357	02.09.2020
Double Ridged Broadband Horn Antenna (1 – 18 GHz)	Schwarzbeck	BBHA 9120 D	01760	02.09.2020
Broadband Horn Antenna (15 – 40 GHz)	Schwarzbeck	BBHA 9170	00862	02.09.2020
Test software	Rohde & Schwarz	EMC32 (V10.40.00)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NW9P2	N/A
3m Fully Anechoic Chamber	Albatross	FAC-3m	APC17151-FAC	06.07.2020

2.4 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.5 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. facility located at No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. GENERAL PRODUCT INFORMATION

3.1 GENERAL DESCRIPTION

The EUT is wireless module which supports GPRS/EGPRS, NB-IoT and eMTC wireless technology.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 RATING AND SYSTEM DETAILS

Table 2: Rating of EUT

General Information of EUT	Description
Kind of Equipment:	Data Terminal Module
Type Designation:	ME310G1-WW
FCC ID:	RI7ME310G1WW
IC:	5131A-ME310G1WW
Hardware Version:	0.0
Software Version:	M0C.200001
Type of Equipment:	Single Module
Antenna:	External Antenna
Operating Voltage:	DC 3.8V
Operating Temperature Range:	-40°C ~ +85°C

Table 3: Technical Specification of EUT

Characteristic	Description
Operated Modes:	GPRS, EGPRS
Operational Frequency Band(s):	GSM 850, PCS 1900
Nominal RF Output Power:	GSM 850: 33 dBm ± 2dB PCS 1900: 30 dBm ± 2dB
Power Class:	GSM 850: Class 4 PCS 1900: Class 1
Modulation Type:	GMSK(GPRS/EGPRS), 8PSK(EGPRS)
Antenna Type:	External Antenna The EUT doesn't have antenna, The adapter and antenna used for testing in this report is the after-market accessory
Antenna Gain:	2.14 dBi
Extreme Voltage:	DC 3.2 ~ 4.5V
Extreme Temperature:	-40 ~ +85 °C

Table 4: Operating Frequency Range and Channel Bandwidth of EUT

Frequency Band(s)	Frequency Range					
	Transmitting f_{UL} (MHz)			Receiving f_{DL} (MHz)		
GSM 850	824	~	849	869	~	894
PCS 1900	1850	~	1910	1930	~	1990

3.3 INDEPENDENT OPERATION MODES

The basic operation modes are:

A. On, communication link established, Transmitting
   1) GPRS/EGPRS GMSK operating
      i. Low channel
      ii. Middle channel
      iii. High channel
   2) EGPRS 8PSK operating
      i. Low channel
      ii. Middle channel
      iii. High channel

B. On, communication link established, Receiving
   1) GPRS/EGPRS operating

C. Idle

D. Off

3.4 NOISE GENERATING AND NOISE SUPPRESSING PARTS

Refer to the Circuit Diagram.

3.5 SUBMITTED DOCUMENTS

☒ User Manual
☒ Circuit Diagram
☒ Block Diagram
☒ Schematics
☒ Rating Label
☒ PCB Layout
☒ Photo Document
☒ Parts List

4. TEST SET-UP AND OPERATION MODES

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedure in KDB 971168 D01 and ANSI C63.26.

Table 5: List of Frequencies under Test

Operation bands	TX/RX	RF Channel		
		Low (L)	Middle (M)	High (H)
GSM 850	TX	Channel 128	Channel 190	Channel 251
		824.2MHz	836.6MHz	848.8MHz
	RX	Channel 128	Channel 190	Channel 251
		869.2MHz	881.6MHz	893.8MHz
PCS 1900	TX	Channel 512	Channel 661	Channel 810
		1850.2MHz	1880.0MHz	1909.8MHz
	RX	Channel 512	Channel 661	Channel 810
		1930.2MHz	1960.0MHz	1989.8MHz

Table 6: Test Environments

Environment Parameter	Selected Values During Tests		
	Temperature (°C)	Voltage (V) DC	Relative Humidity (%)
Normal (NTNV)	24	3.8	51%
HTHV	85 °C	4.5	---
LTHV	-40 °C	4.5	---
HTLV	85 °C	3.2	---
LTLV	-40 °C	3.2	---

Table 7: Test Configurations

Frequency Bands	Modulation	
	GMSK	8PSK
GSM 850/PCS1900 GPRS	Δ	-
GSM 850/PCS1900 EGPRS	Δ	Δ

4.3 Special Accessories and Auxiliary Equipment

Table 8: Cables used during test

Port	Quantity	Length (m)	Connector	Type of Cable
USB	1	1.2	USB	USB cable, shielding

Table 9: Auxiliary Equipment used during test

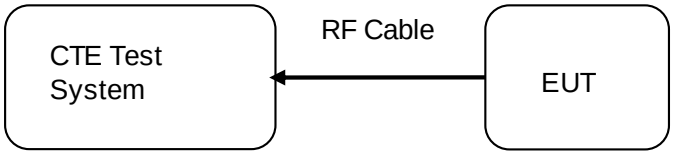
Name	Model	Manufacturer	S/N
Evaluation Kit	EVK2	Telit	N/A
LTE Magnetic Antenna	T-AT305 Frequency Range: 700-960 MHz / 1710-2700 MHz Omnidirectional antenna Gain: 2.14 dBi (Max.) Cable: RG 174mm 2500	ATEL-CAB	N/A

4.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Equipment Configuration for Transmitter Conducted Measurement



5. TEST RESULTS

5.1 ESSENTIAL REQUIREMENTS

5.1.1 RF POWER OUTPUT

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 22		RSS-132 Issue 3
		47 CFR FCC Part 24		RSS-133 Issue 6
		47 CFR FCC Part 2		RSS-Gen Issue 5
Limits	:	Operating band	FCC Limit	ISED Limit
		GSM 850	ERP 7 watts	ERP 11.5 watts
		PCS 1900	EIRP 2 watts	EIRP 2 watts
Test procedure	:	Clause 5.2.4.2 of ANSI C63.26		
Kind of test site	:	Shielding Room		

TEST SETUP

Date of testing	:	24.03.2020 - 15.05.2020
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions
		☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	23 ºC
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

ERP or EIRP = $P_{Meas} + G_T$

where

ERP or EIRP: effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g. dBm)

P_{Meas}: measured transmitter output power, in dBm

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

Refer to attached Appendix A for details of test results.

5.1.2 OCCUPIED BANDWIDTH AND 26DB BANDWIDTH

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 2	RSS-132 Issue 3 RSS-133 Issue 6 RSS-Gen Issue 5
Test requirement	:	Section 2.1049 of 47 CFR FCC Part 2 Clause 6.7 of RSS-Gen Issue 5	
Limits	:	No limit	
Test procedure	:	Section 5.4.3 of ANSI C63.26 ☒ Conducted measurements ☐ Radiated measurements	
Kind of test site	:	Shielding Room	

TEST SETUP

Date of testing	:	24.03.2020 - 02.04.2020
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

5.1.3 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 2	RSS-132 Issue 3 RSS-133 Issue 6 RSS-Gen Issue 5	
Limits	:	Operating band	FCC Limit	ISED Limit
		PCS 1900	< - 13 dBm /1MHz	< - 13 dBm /1MHz
		GSM 850	< - 13 dBm /100kHz @ < 1GHz < - 13 dBm /1MHz @ > 1GHz	< - 13 dBm / 100 kHz
Test procedure	:	Clause 5.7.4 of ANSI C63.26		
Kind of test site	:	Shielding Room		

TEST SETUP

Date of testing	:	24.03.2020 - 02.04.2020
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

The limit calculation:
Limit = P_{Meas} (dBm) – [43+10log(P_{Meas})] = −13 dBm

Refer to attached Appendix A for details of test results.

5.1.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS – BAND EDGE

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 22		RSS-132 Issue 3
		47 CFR FCC Part 24		RSS-133 Issue 6
		47 CFR FCC Part 2		RSS-Gen Issue 5
Limits	:	Operating band	FCC Limit	ISED Limit
		PCS 1900	< - 13 dBm /1%EBW	< - 13 dBm / 1%OBW
		GSM 850	< - 13 dBm /1%EBW	< - 13 dBm / 1%OBW
Test procedure	:	Clause 5.7.3 of ANSI C63.26		
Kind of test site	:	Shielding Room		

TEST SETUP

Date of testing	:	24.03.2020 - 02.04.2020
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions
		☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

The limit calculation:
Limit = P_{Meas} (dBm) – [43+10log(P_{Meas})] = -13 dBm
Limit = P_{Meas} (dBm) – [50+10log(P_{Meas})] = -20 dBm

Refer to attached Appendix A for details of test results.

5.1.5 FIELD STRENGTH OF SPURIOUS RADIATION

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 2		RSS-132 Issue 3 RSS-133 Issue 6 RSS-Gen Issue 5
Limits	:	Operating band	FCC Limit	ISED Limit
		PCS 1900	< - 13 dBm /1MHz	< - 13 dBm /1MHz
		GSM 850	< - 13 dBm /100kHz @ < 1GHz < - 13 dBm /1MHz @ > 1GHz	< - 13 dBm / 100 kHz
Test procedure	:	Clause 5.5 of ANSI C63.26		
Kind of test site	:	3m Semi Anechoic Room		

TEST SETUP

Date of testing	:	24.03.2020 - 02.04.2020
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	23 °C
Relative humidity	:	48%
Atmospheric pressure	:	101.0 kPa

The limit calculation:

Limit = PMeas (dBm) – [43+10log(PMeas)] = -13 dBm

Sweep the whole frequency band through the range from 9 kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in this report. The measurement is performed for all operational modes and both antenna polarization, only the data of the worst mode is recorded in this report.

Refer to attached Appendix B for details of test results.

5.1.6 FREQUENCY STABILITY

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 2	RSS-132 Issue 3 RSS-133 Issue 6 RSS-Gen Issue 5	
Limits	:	Operating band	FCC Limit	ISED Limit
		PCS 1900	Within authorized bands	2.5 ppm
		GSM 850	2.5 ppm	2.5 ppm
Test procedure	:	Clause 5.6.3 of ANSI C63.26		
Kind of test site	:	Shielding Room		

TEST SETUP

Date of testing	:	24.03.2020 - 02.04.2020
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☒ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

5.1.7 PEAK TO AVERAGE RATIO

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 2	RSS-132 Issue 3 RSS-133 Issue 6 RSS-Gen Issue 5	
Limits	:	Operating band	FCC Limit	ISED Limit
		PCS 1900	PAR ≤ 13 dB	PAR ≤ 13 dB
		GSM 850	PAR ≤ 13 dB	PAR ≤ 13 dB
Test procedure	:	Clause 5.2.6 of ANSI C63.26		
Kind of test site	:	Shielding Room		

TEST SETUP

Date of testing	:	24.03.2020 - 02.04.2020
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

6. SYSTEM MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

Table 10: System Measurement Uncertainty

Items		Extended Uncertainty
RE	Radiated emission 9 kHz - 30 MHz	±3.97 dB
	Radiated emission 30 MHz - 1 GHz	±4.30 dB
Remark: 95% Confidence Levels, K=2.		

7. LIST OF TABLES

Appendix A: Test Results of GPRS/EGPRS

Appendix A.1: RF Power Output and Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Modulation	Channel	Slot	Result (dBm)	ERP		Limit (watts)	Verdict
					dBm	Watts		
GPRS850	GMSK	128	1	32.29	32.28	1.690	7	PASS
GPRS850	GMSK	190	1	32.06	32.05	1.603	7	PASS
GPRS850	GMSK	251	1	31.82	31.81	1.517	7	PASS
EGPRS850	8PSK	128	1	26.82	26.81	0.480	7	PASS
EGPRS850	8PSK	190	1	26.83	26.82	0.481	7	PASS
EGPRS850	8PSK	251	1	26.45	26.44	0.441	7	PASS

Band	Modulation	Channel	Slot	Result (dBm)	EIRP		Limit (watts)	Verdict
					dBm	Watts		
GPRS1900	GMSK	512	1	30.24	32.38	1.730	2	PASS
GPRS1900	GMSK	661	1	29.91	32.05	1.603	2	PASS
GPRS1900	GMSK	810	1	29.55	31.69	1.476	2	PASS
EGPRS1900	8PSK	512	1	26.08	28.22	0.664	2	PASS
EGPRS1900	8PSK	661	1	25.87	28.01	0.632	2	PASS
EGPRS1900	8PSK	810	1	25.57	27.71	0.590	2	PASS

Note:
All slot configuration have been tested, only the worst-case data are reported.

Appendix A.2: Peak-to-Average Ratio (CCDF)

Test Result

GMSK

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
GPRS850	128	7.74	13	PASS
GPRS850	190	7.77	13	PASS
GPRS850	251	7.80	13	PASS
EGPRS850	128	7.74	13	PASS
EGPRS850	190	7.74	13	PASS
EGPRS850	251	7.74	13	PASS
GPRS1900	512	7.80	13	PASS
GPRS1900	661	7.86	13	PASS
GPRS1900	810	7.83	13	PASS
EGPRS1900	512	7.80	13	PASS
EGPRS1900	661	7.83	13	PASS
EGPRS1900	810	7.83	13	PASS

8PSK

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
EGPRS850	128	10.75	13	PASS
EGPRS850	190	10.72	13	PASS
EGPRS850	251	11.16	13	PASS
EGPRS1900	512	10.90	13	PASS
EGPRS1900	661	11.07	13	PASS
EGPRS1900	810	10.93	13	PASS

Appendix A.3: 26dB Bandwidth and Occupied Bandwidth

Test Result

GMSK

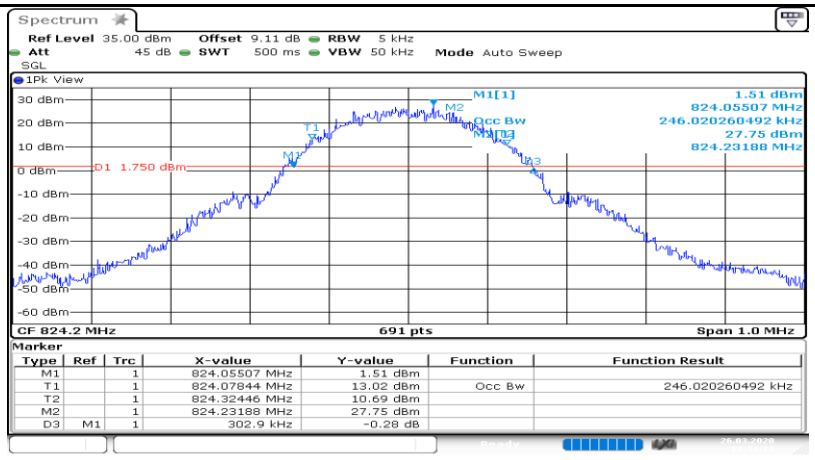
Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Verdict
GPRS850	128	246.02	302.90	PASS
GPRS850	190	247.47	305.80	PASS
GPRS850	251	244.57	301.45	PASS
EGPRS850	128	247.47	304.35	PASS
EGPRS850	190	247.47	300.00	PASS
EGPRS850	251	241.68	295.65	PASS
GPRS1900	512	244.57	308.70	PASS
GPRS1900	661	241.68	292.75	PASS
GPRS1900	810	247.47	314.49	PASS
EGPRS1900	512	244.57	298.55	PASS
EGPRS1900	661	246.02	317.39	PASS
EGPRS1900	810	244.57	308.70	PASS

8PSK

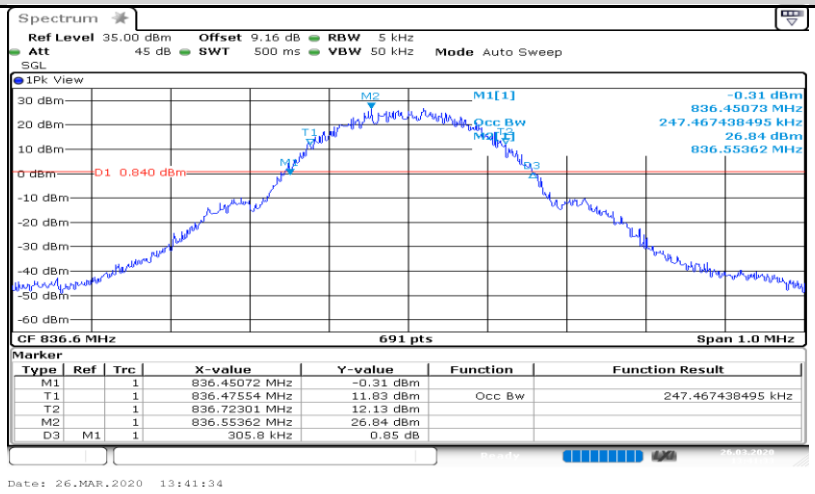
Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Verdict
EGPRS850	128	248.91	304.35	PASS
EGPRS850	190	243.13	297.10	PASS
EGPRS850	251	246.02	297.10	PASS
EGPRS1900	512	247.47	298.55	PASS
EGPRS1900	661	244.57	295.65	PASS
EGPRS1900	810	246.02	302.90	PASS

Test Graphs

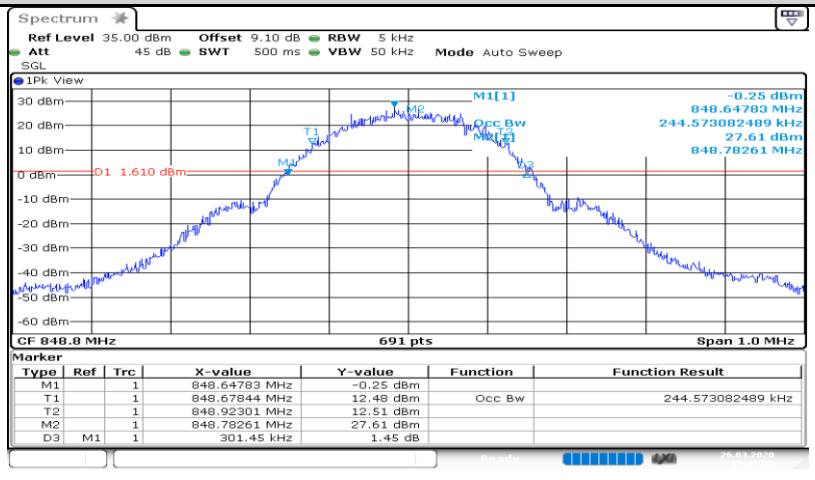
GMSK



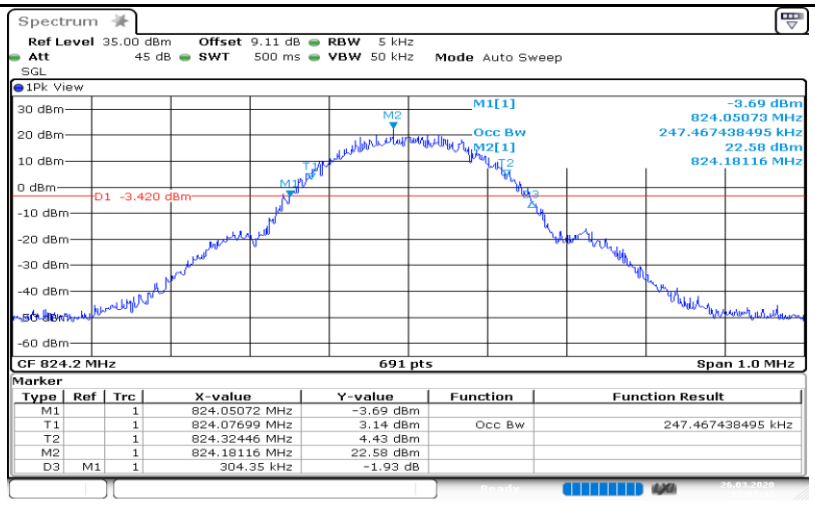
GPRS850-128



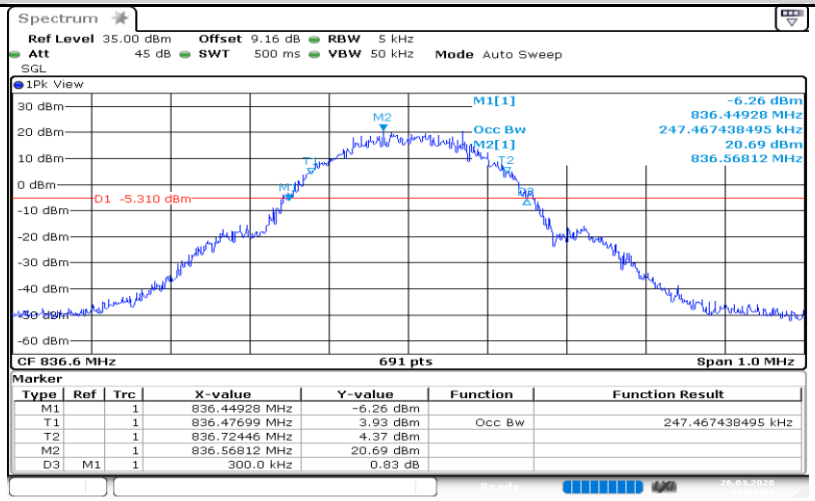
GPRS850-190



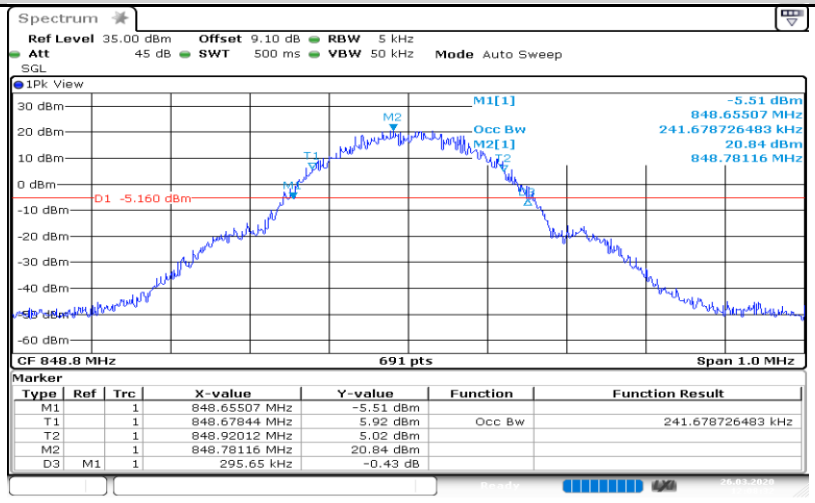
GPRS850-251



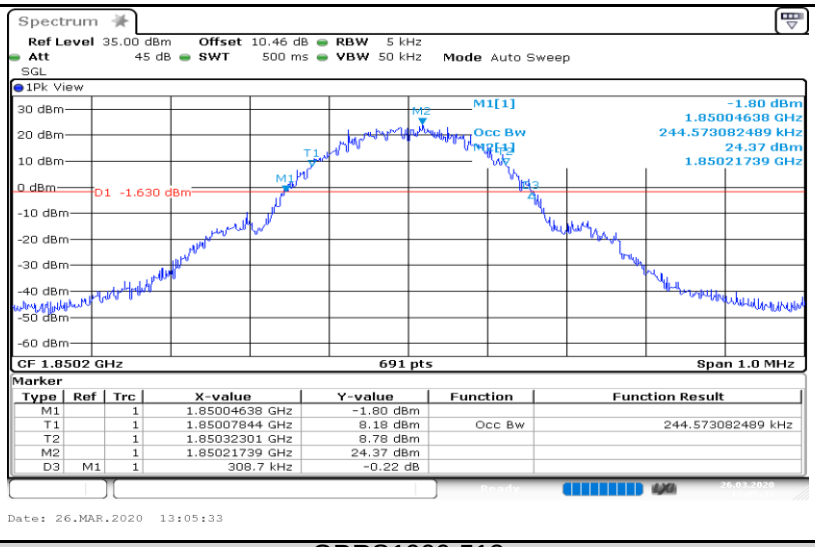
EGPRS850-128



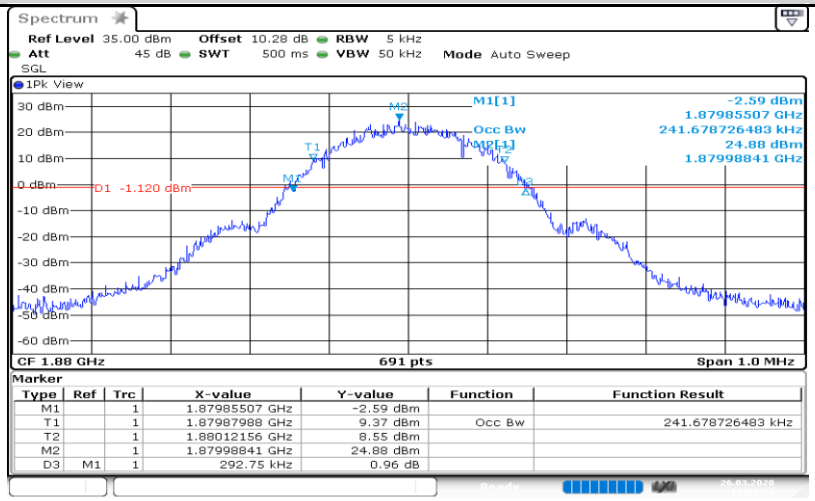
EGPRS850-190



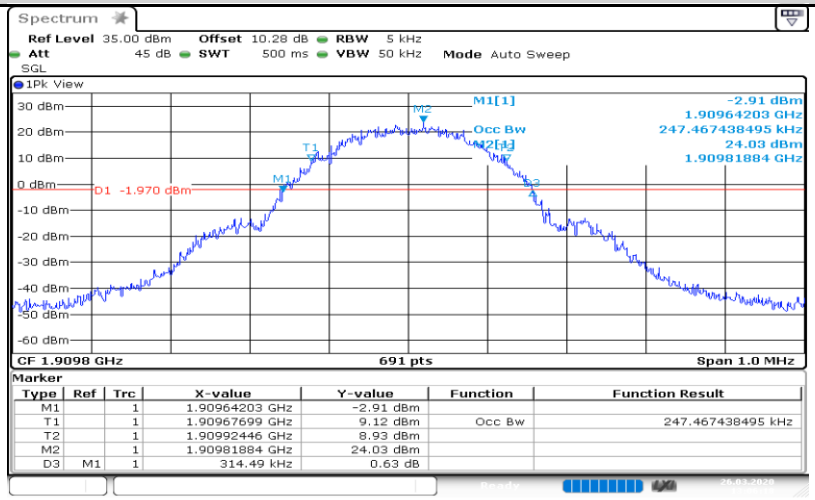
EGPRS850-251



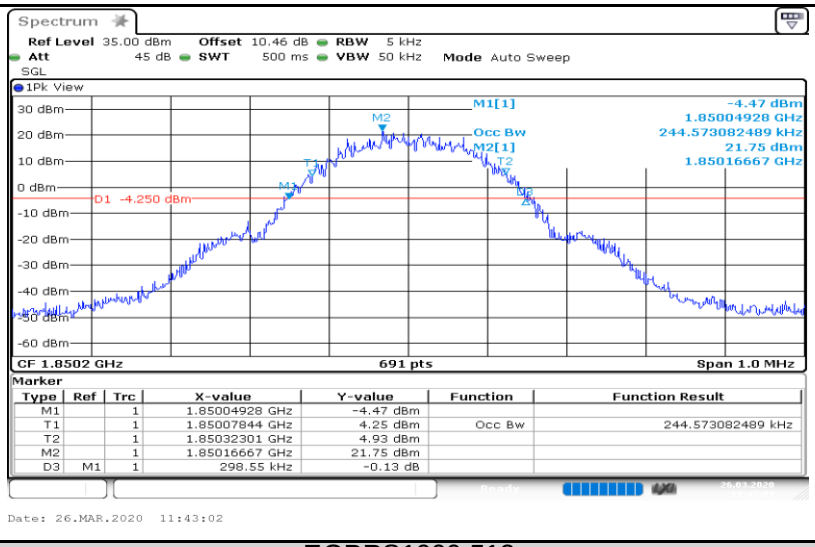
GPRS1900-512



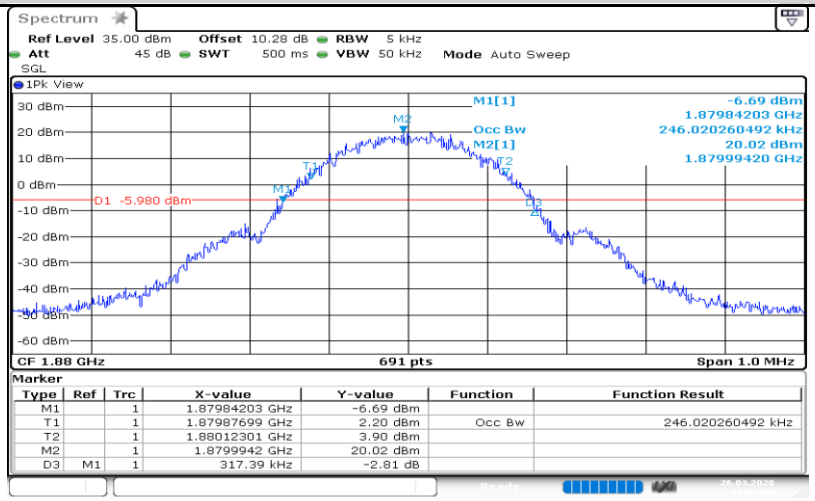
GPRS1900-661



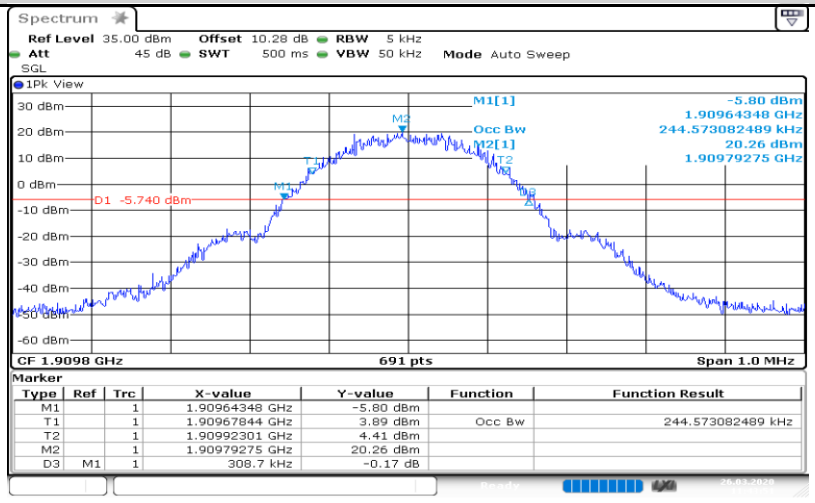
GPRS1900-810



EGPRS1900-512

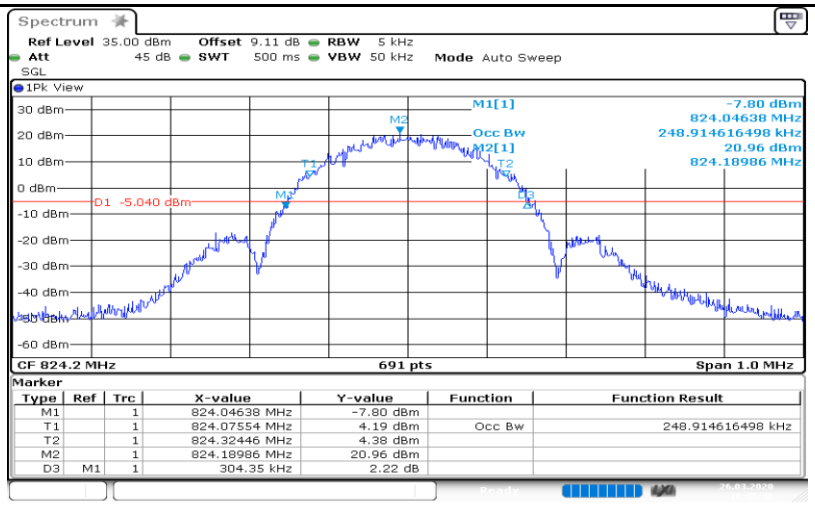


EGPRS1900-661



EGPRS1900-810

8PSK



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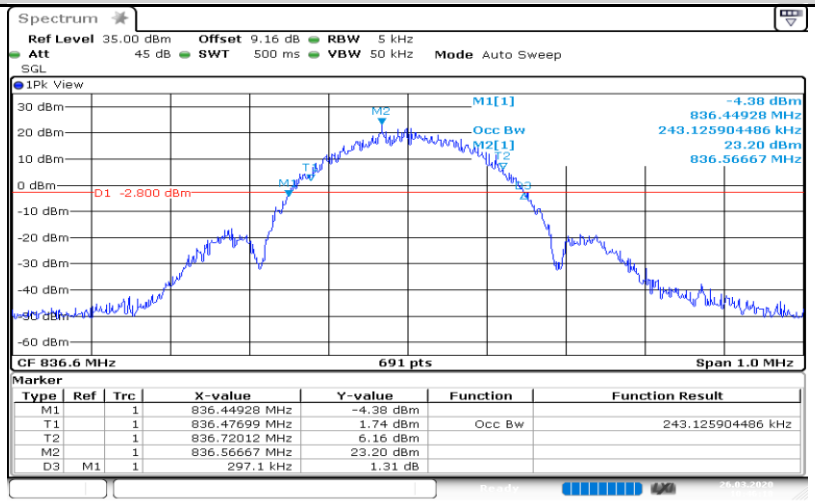

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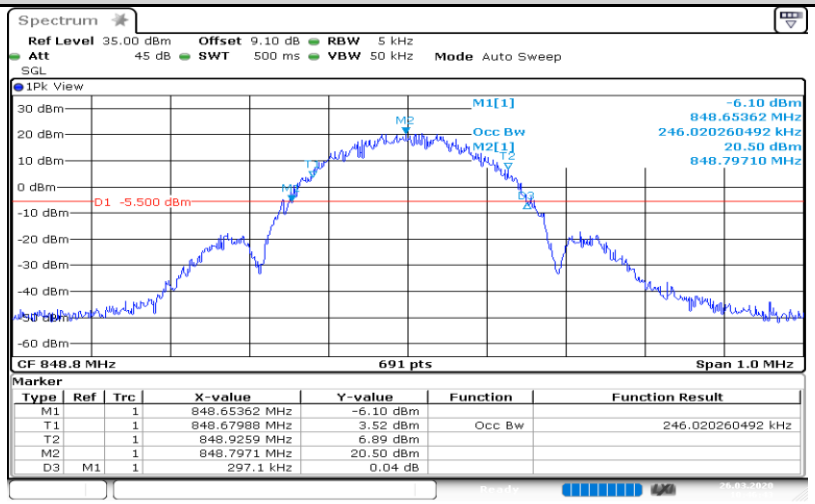
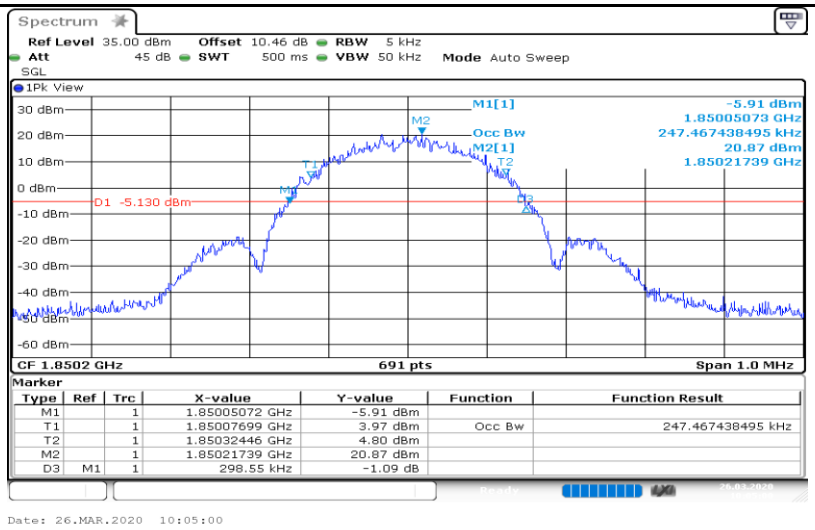
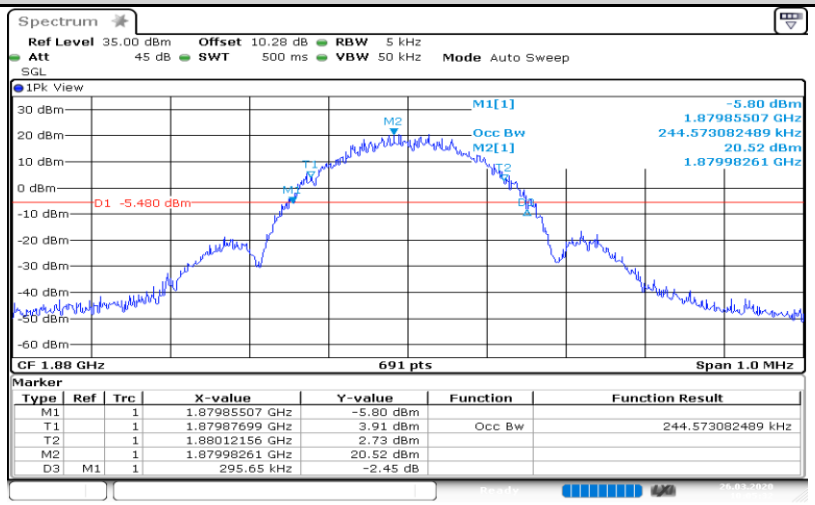


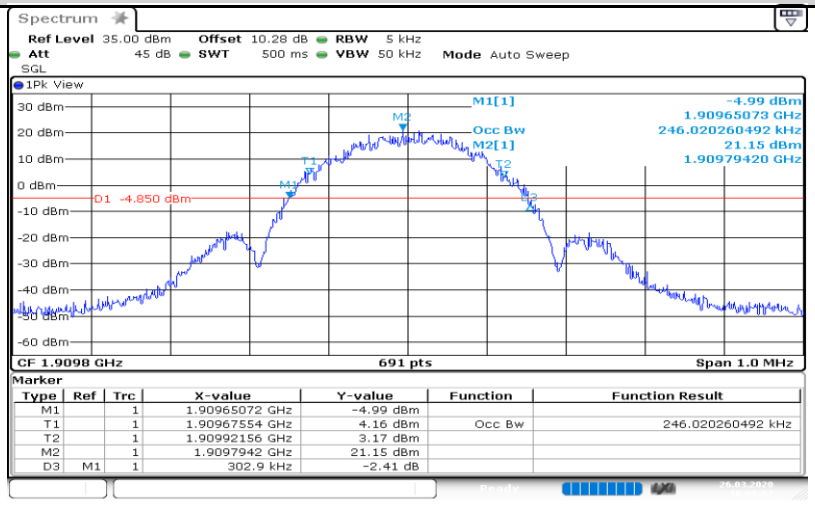
EGPRS850-251



EGPRS1900-512



EGPRS1900-661



EGPRS1900-810

Appendix A.4: Band Edge

Test Result

GMSK

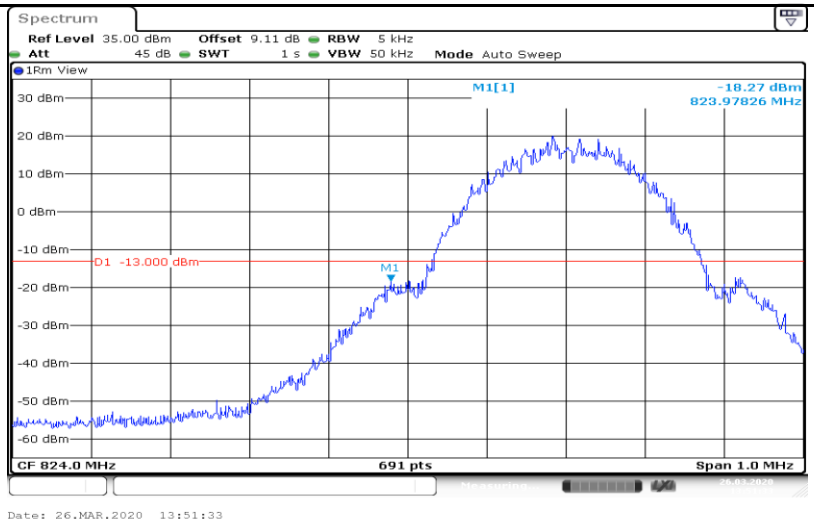
Band	Channel	Value(dBm)	Limit(dBm)	Verdict
GPRS850	128	-18.27	-13	PASS
GPRS850	251	-17.52	-13	PASS
EGPRS850	128	-24.48	-13	PASS
EGPRS850	251	-23.30	-13	PASS
GPRS1900	512	-20.45	-13	PASS
GPRS1900	810	-20.08	-13	PASS
EGPRS1900	512	-24.15	-13	PASS
EGPRS1900	810	-24.87	-13	PASS

8PSK

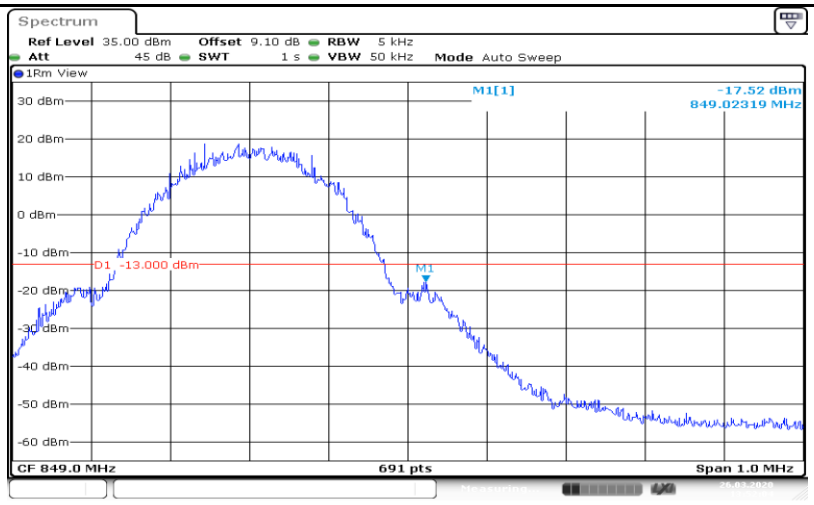
Band	Channel	Value(dBm)	Limit(dBm)	Verdict
EGPRS850	128	-25.42	-13	PASS
EGPRS850	251	-26.30	-13	PASS
EGPRS1900	512	-25.39	-13	PASS
EGPRS1900	810	-26.93	-13	PASS

Test Graphs

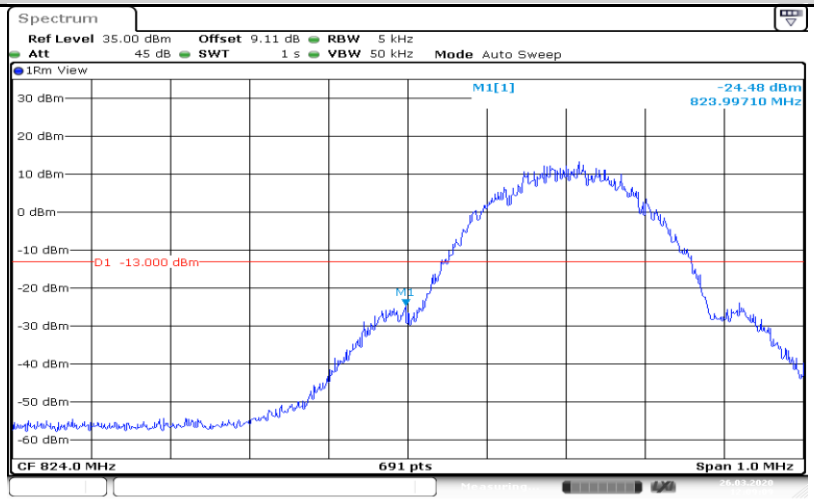
GMSK



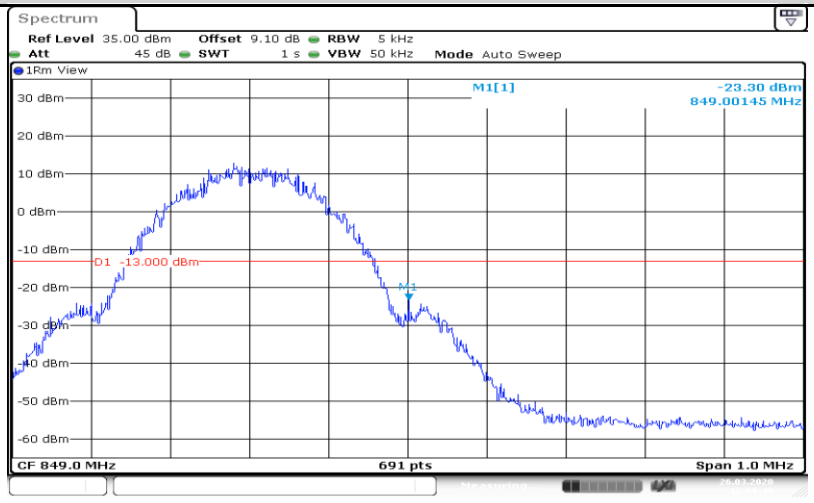
GPRS850-128



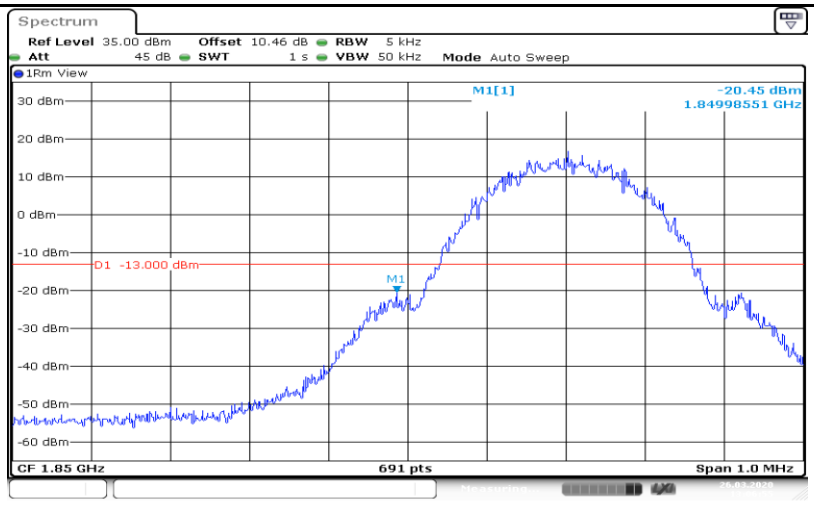
GPRS850-251



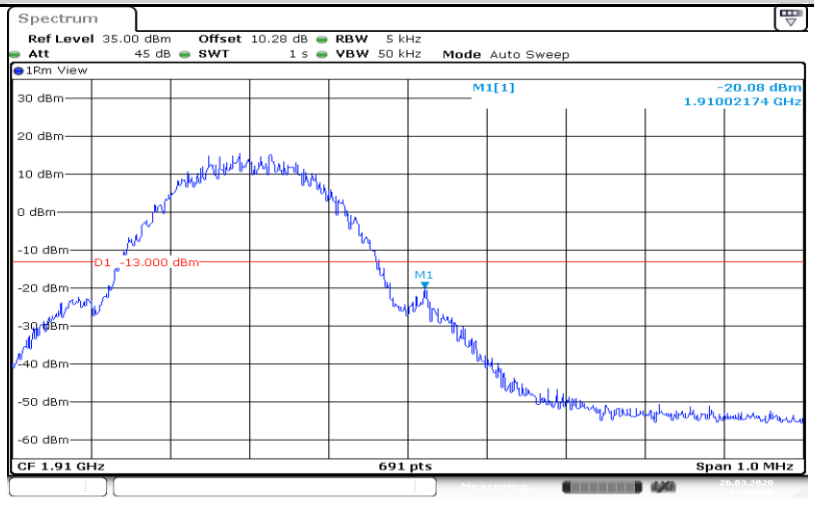
EGPRS850-128



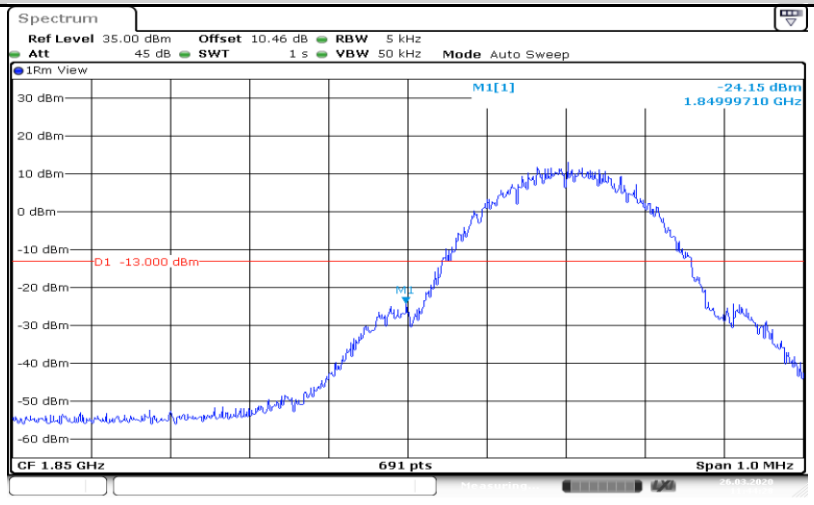
EGPRS850-251



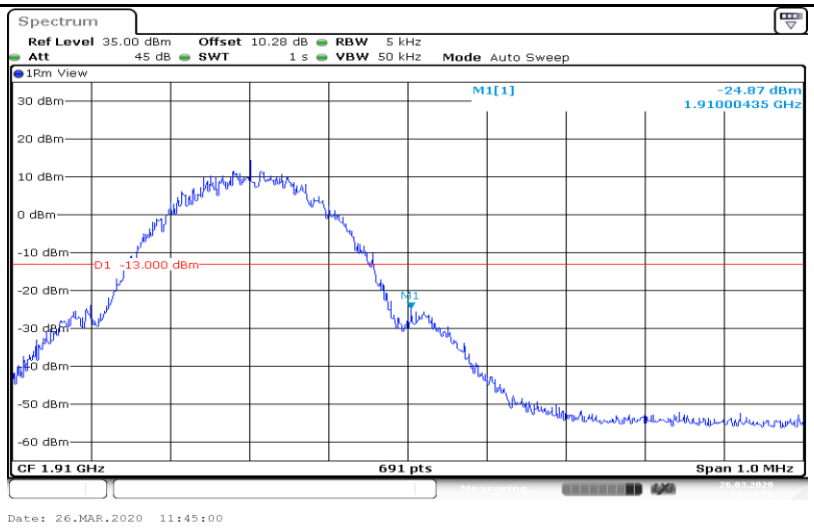
GPRS1900-512



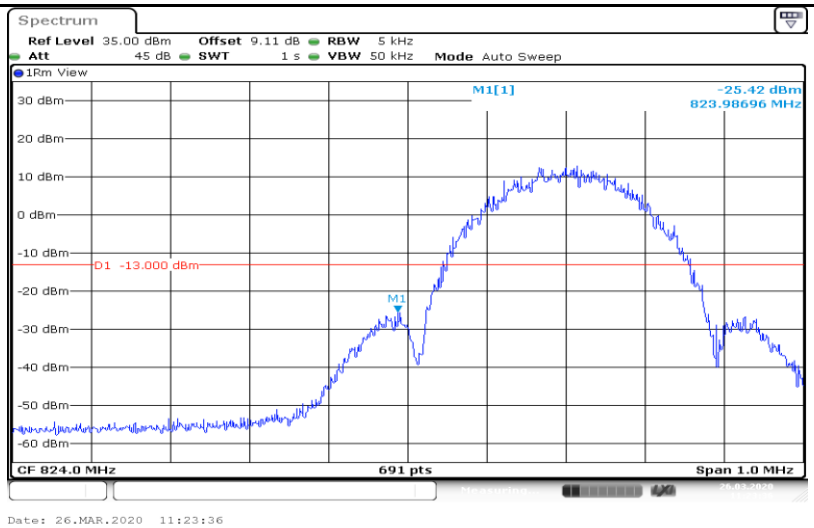
GPRS1900-810



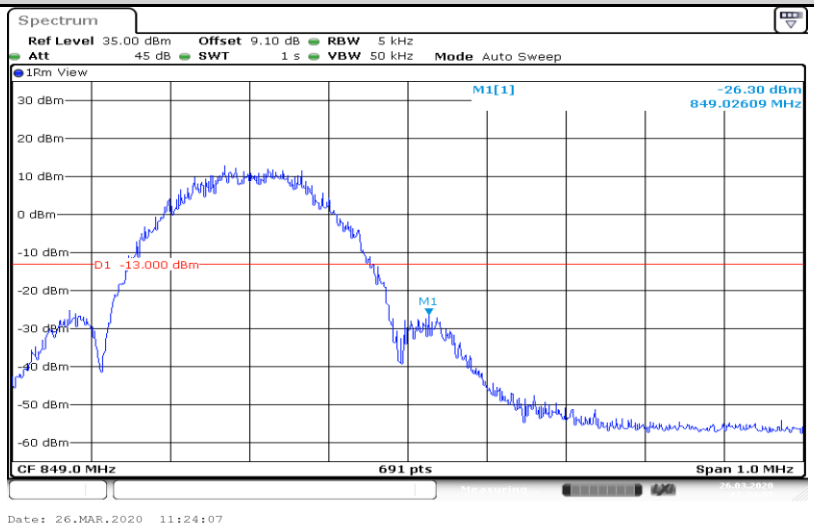
EGPRS1900-512



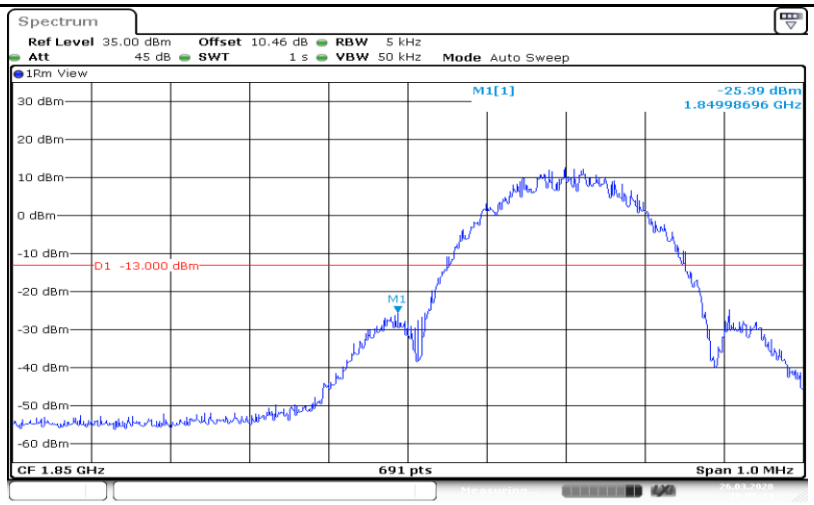
8PSK



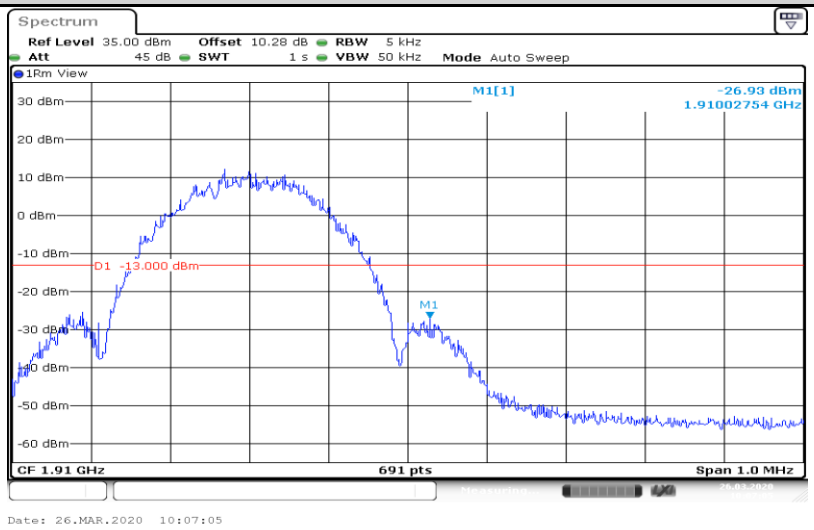
EGPRS850-128



EGPRS850-251



EGPRS1900-512



EGPRS1900-810

Appendix A.5: Conducted Spurious Emission

Test Result

GMSK

Band	Channel	Frequency Range(Mhz)	Value(dBm)	Limit(dBm)	Verdict
GPRS850	128	0.009~0.15	-51.31	-33	PASS
GPRS850	128	0.15~30	-53.50	-13	PASS
GPRS850	128	30~1000	-35.13	-13	PASS
GPRS850	128	1000~5000	-38.81	-13	PASS
GPRS850	128	5000~12000	-48.99	-13	PASS
GPRS850	128	12000~18000	-42.55	-13	PASS
GPRS850	190	0.009~0.15	-51.05	-33	PASS
GPRS850	190	0.15~30	-54.18	-13	PASS
GPRS850	190	30~1000	-36.19	-13	PASS
GPRS850	190	1000~5000	-39.47	-13	PASS
GPRS850	190	5000~12000	-49.49	-13	PASS
GPRS850	190	12000~18000	-42.40	-13	PASS
GPRS850	251	0.009~0.15	-50.82	-33	PASS
GPRS850	251	0.15~30	-52.67	-13	PASS
GPRS850	251	30~1000	-35.40	-13	PASS
GPRS850	251	1000~5000	-39.09	-13	PASS
GPRS850	251	5000~12000	-49.59	-13	PASS
GPRS850	251	12000~18000	-42.51	-13	PASS
EGPRS850	128	0.009~0.15	-52.08	-33	PASS
EGPRS850	128	0.15~30	-54.11	-13	PASS
EGPRS850	128	30~1000	-37.00	-13	PASS
EGPRS850	128	1000~5000	-40.36	-13	PASS
EGPRS850	128	5000~12000	-50.28	-13	PASS
EGPRS850	128	12000~18000	-42.21	-13	PASS
EGPRS850	190	0.009~0.15	-52.13	-33	PASS
EGPRS850	190	0.15~30	-54.05	-13	PASS
EGPRS850	190	30~1000	-37.85	-13	PASS
EGPRS850	190	1000~5000	-40.19	-13	PASS
EGPRS850	190	5000~12000	-50.39	-13	PASS
EGPRS850	190	12000~18000	-42.22	-13	PASS
EGPRS850	251	0.009~0.15	-51.79	-33	PASS
EGPRS850	251	0.15~30	-54.05	-13	PASS
EGPRS850	251	30~1000	-37.01	-13	PASS
EGPRS850	251	1000~5000	-40.26	-13	PASS
EGPRS850	251	5000~12000	-50.35	-13	PASS
EGPRS850	251	12000~18000	-42.17	-13	PASS
GPRS1900	512	0.009~0.15	-49.55	-43	PASS
GPRS1900	512	0.15~30	-52.66	-23	PASS
GPRS1900	512	30~1000	-37.60	-13	PASS
GPRS1900	512	1000~5000	-40.43	-13	PASS
GPRS1900	512	5000~12000	-50.38	-13	PASS
GPRS1900	512	12000~26500	-42.38	-13	PASS
GPRS1900	661	0.009~0.15	-49.96	-43	PASS
GPRS1900	661	0.15~30	-55.00	-23	PASS
GPRS1900	661	30~1000	-37.25	-13	PASS
GPRS1900	661	1000~5000	-40.34	-13	PASS
GPRS1900	661	5000~12000	-50.39	-13	PASS
GPRS1900	661	12000~26500	-42.23	-13	PASS

GPRS1900	810	0.009~0.15	-50.18	-43	PASS
GPRS1900	810	0.15~30	-53.74	-23	PASS
GPRS1900	810	30~1000	-37.17	-13	PASS
GPRS1900	810	1000~5000	-40.24	-13	PASS
GPRS1900	810	5000~12000	-50.43	-13	PASS
GPRS1900	810	12000~26500	-42.27	-13	PASS
EGPRS1900	512	0.009~0.15	-51.70	-43	PASS
EGPRS1900	512	0.15~30	-53.64	-23	PASS
EGPRS1900	512	30~1000	-37.27	-13	PASS
EGPRS1900	512	1000~5000	-40.27	-13	PASS
EGPRS1900	512	5000~12000	-50.35	-13	PASS
EGPRS1900	512	12000~26500	-42.25	-13	PASS
EGPRS1900	661	0.009~0.15	-51.91	-43	PASS
EGPRS1900	661	0.15~30	-54.55	-23	PASS
EGPRS1900	661	30~1000	-37.81	-13	PASS
EGPRS1900	661	1000~5000	-39.95	-13	PASS
EGPRS1900	661	5000~12000	-50.15	-13	PASS
EGPRS1900	661	12000~26500	-42.19	-13	PASS
EGPRS1900	810	0.009~0.15	-51.97	-43	PASS
EGPRS1900	810	0.15~30	-54.40	-23	PASS
EGPRS1900	810	30~1000	-37.31	-13	PASS
EGPRS1900	810	1000~5000	-40.18	-13	PASS
EGPRS1900	810	5000~12000	-50.37	-13	PASS
EGPRS1900	810	12000~26500	-42.26	-13	PASS

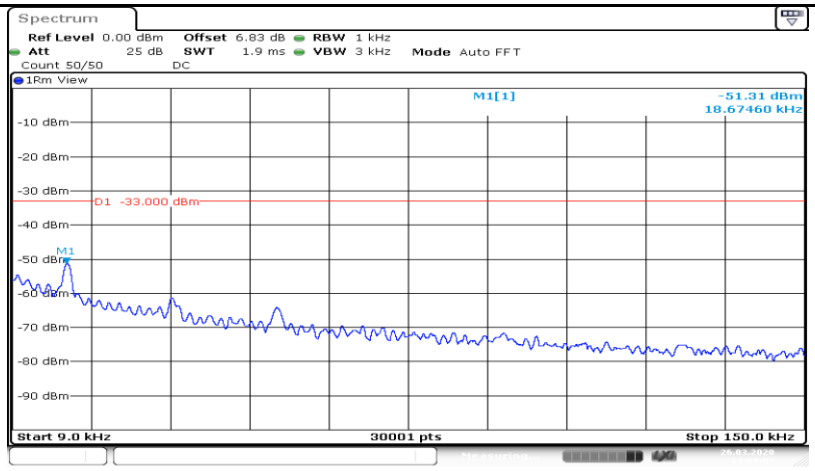
8PSK

Band	Channel	Frequency Range(Mhz)	Value(dBm)	Limit(dBm)	Verdict
EGPRS850	128	0.009~0.15	-51.38	-33	PASS
EGPRS850	128	0.15~30	-54.44	-13	PASS
EGPRS850	128	30~1000	-35.10	-13	PASS
EGPRS850	128	1000~5000	-40.19	-13	PASS
EGPRS850	128	5000~12000	-50.28	-13	PASS
EGPRS850	128	12000~18000	-41.99	-13	PASS
EGPRS850	190	0.009~0.15	-49.32	-33	PASS
EGPRS850	190	0.15~30	-53.82	-13	PASS
EGPRS850	190	30~1000	-35.82	-13	PASS
EGPRS850	190	1000~5000	-40.14	-13	PASS
EGPRS850	190	5000~12000	-50.01	-13	PASS
EGPRS850	190	12000~18000	-42.08	-13	PASS
EGPRS850	251	0.009~0.15	-51.72	-33	PASS
EGPRS850	251	0.15~30	-53.85	-13	PASS
EGPRS850	251	30~1000	-36.93	-13	PASS
EGPRS850	251	1000~5000	-40.06	-13	PASS
EGPRS850	251	5000~12000	-50.29	-13	PASS
EGPRS850	251	12000~18000	-42.18	-13	PASS
EGPRS1900	512	0.009~0.15	-46.96	-43	PASS
EGPRS1900	512	0.15~30	-54.17	-23	PASS
EGPRS1900	512	30~1000	-37.17	-13	PASS
EGPRS1900	512	1000~5000	-40.01	-13	PASS
EGPRS1900	512	5000~12000	-50.11	-13	PASS
EGPRS1900	512	12000~26500	-42.23	-13	PASS
EGPRS1900	661	0.009~0.15	-44.38	-43	PASS
EGPRS1900	661	0.15~30	-54.26	-23	PASS
EGPRS1900	661	30~1000	-37.59	-13	PASS
EGPRS1900	661	1000~5000	-40.25	-13	PASS

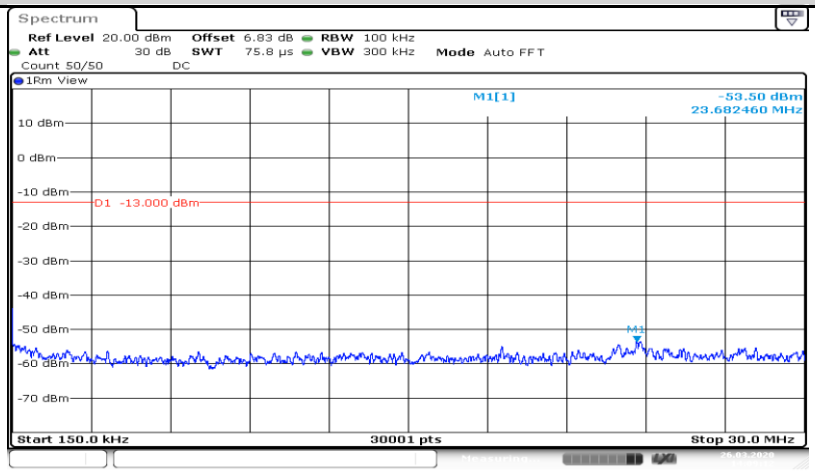
EGPRS1900	661	5000~12000	-50.35	-13	PASS
EGPRS1900	661	12000~26500	-42.30	-13	PASS
EGPRS1900	810	0.009~0.15	-45.09	-43	PASS
EGPRS1900	810	0.15~30	-54.37	-23	PASS
EGPRS1900	810	30~1000	-37.13	-13	PASS
EGPRS1900	810	1000~5000	-40.18	-13	PASS
EGPRS1900	810	5000~12000	-50.46	-13	PASS
EGPRS1900	810	12000~26500	-42.20	-13	PASS

Test Graphs

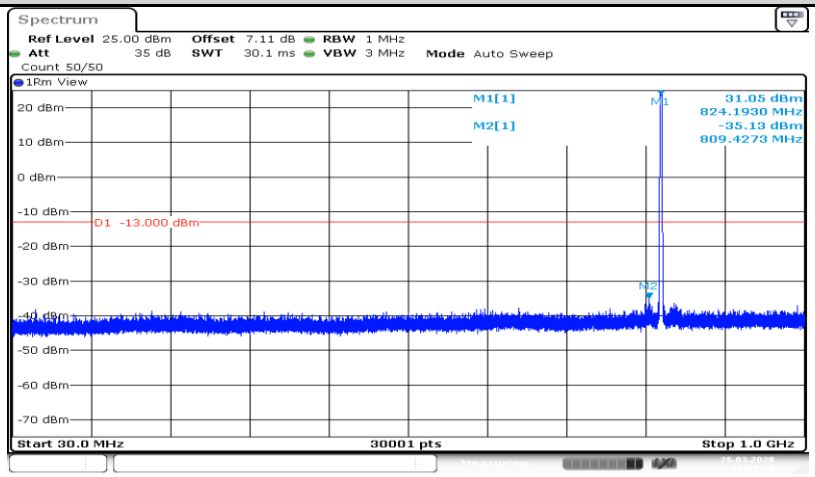
GMSK



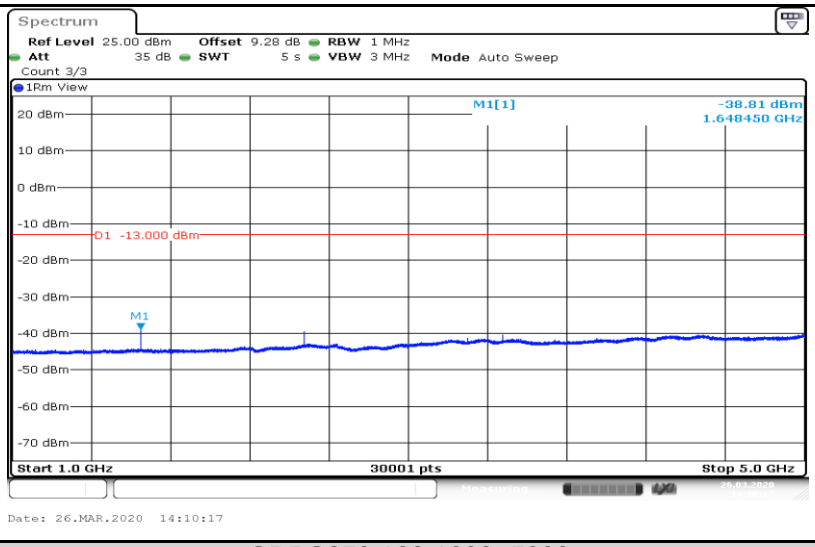
GPRS850-128-0.009~0.15



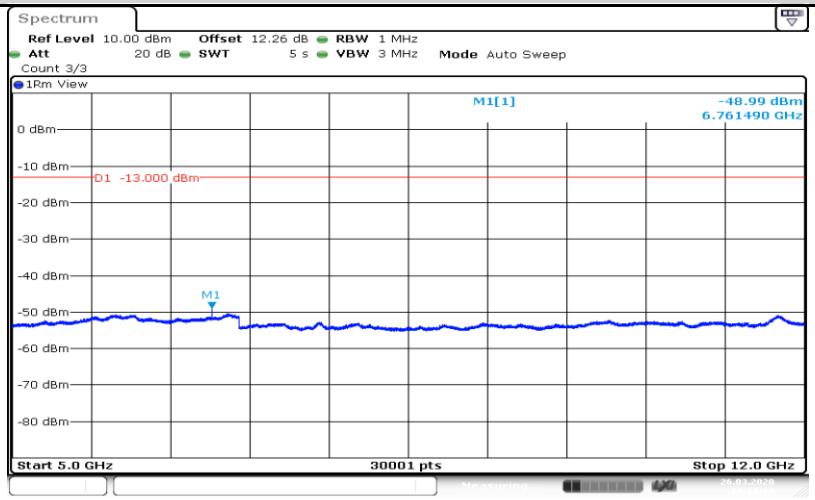
GPRS850-128-0.15~30



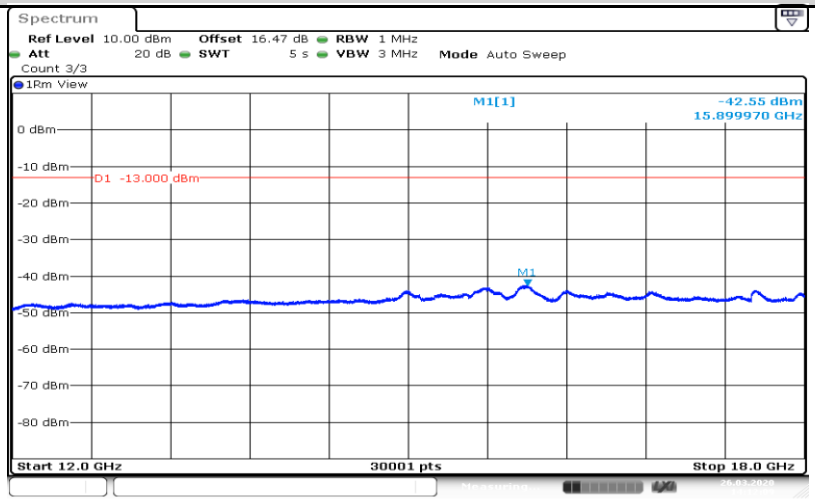
GPRS850-128-30~1000



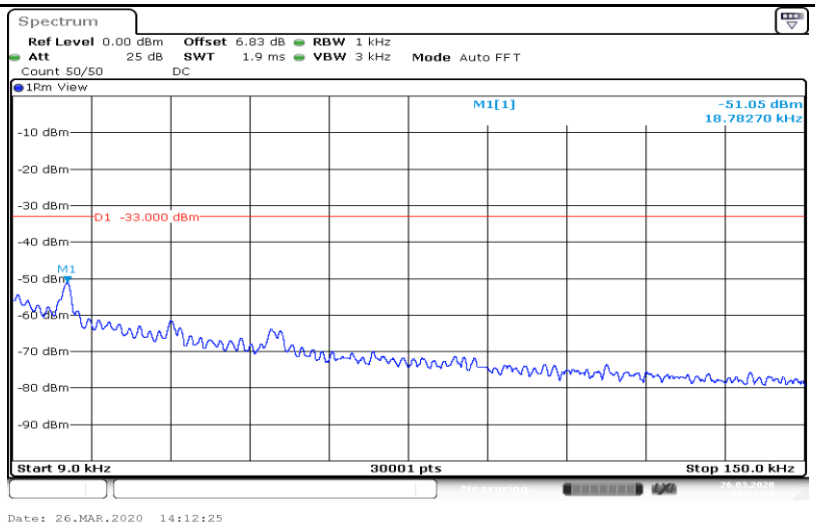
GPRS850-128-1000~5000



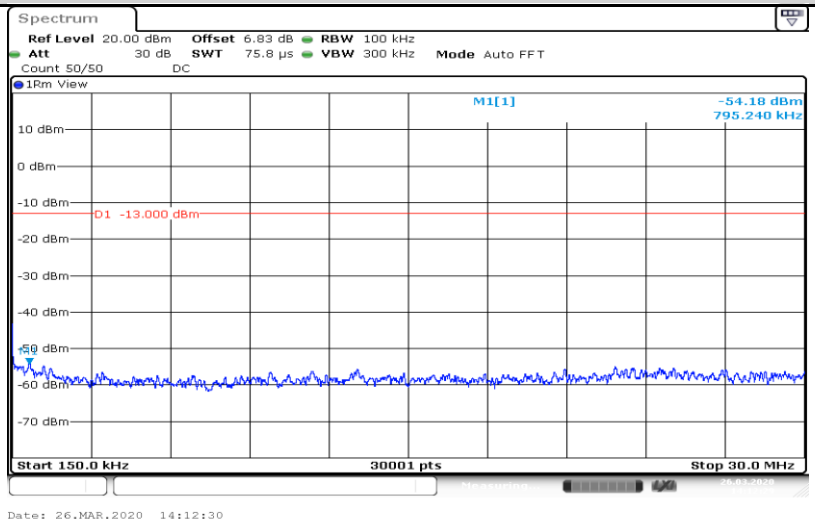
GPRS850-128-5000~12000



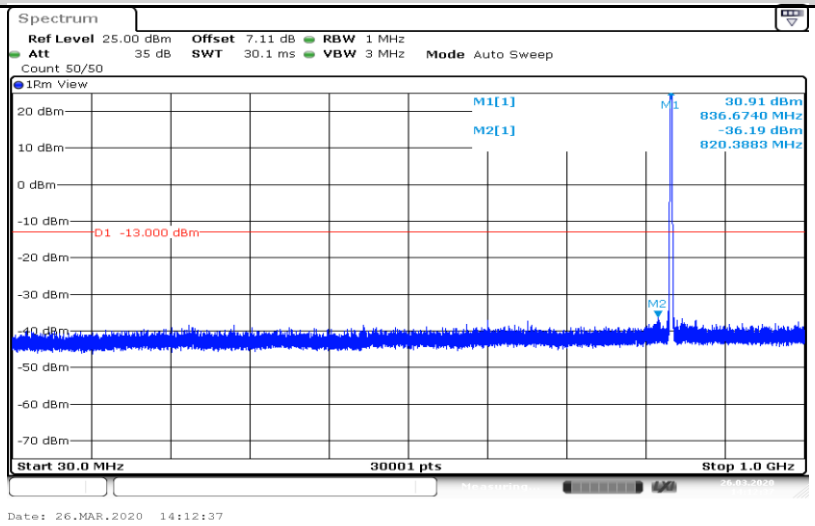
GPRS850-128-12000~18000



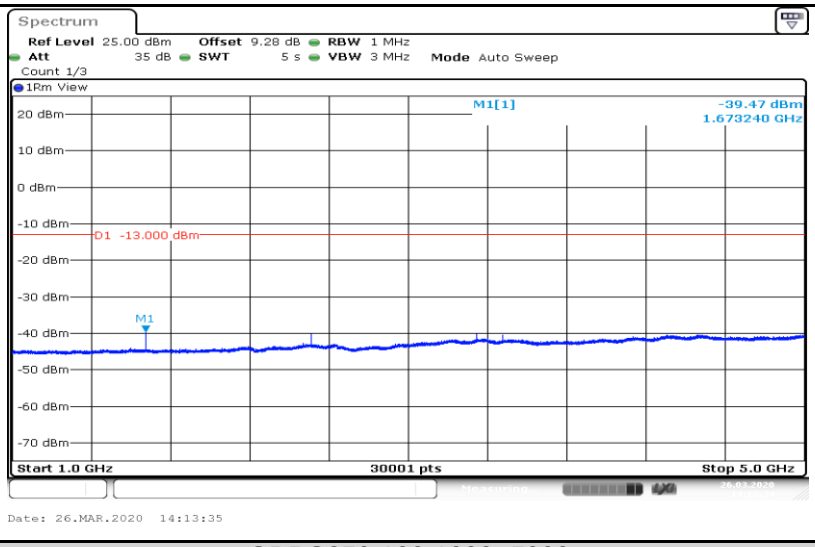
GPRS850-190-0.009~0.15



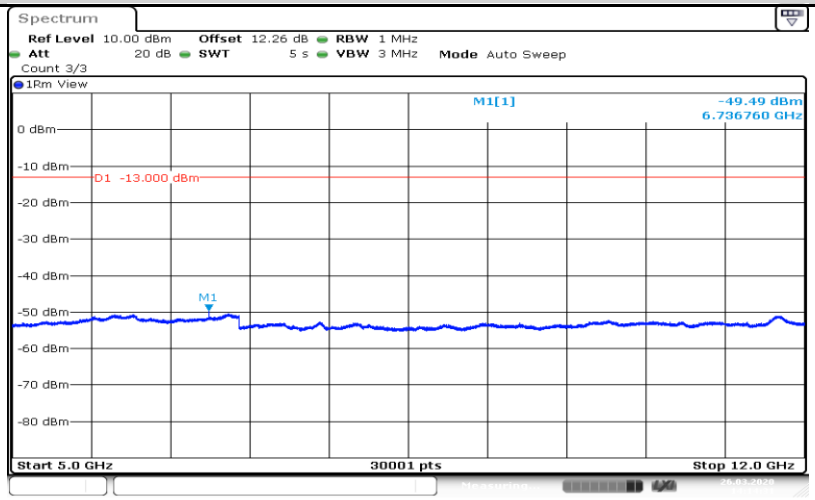
GPRS850-190-0.15~30



GPRS850-190-30~1000



GPRS850-190-1000~5000



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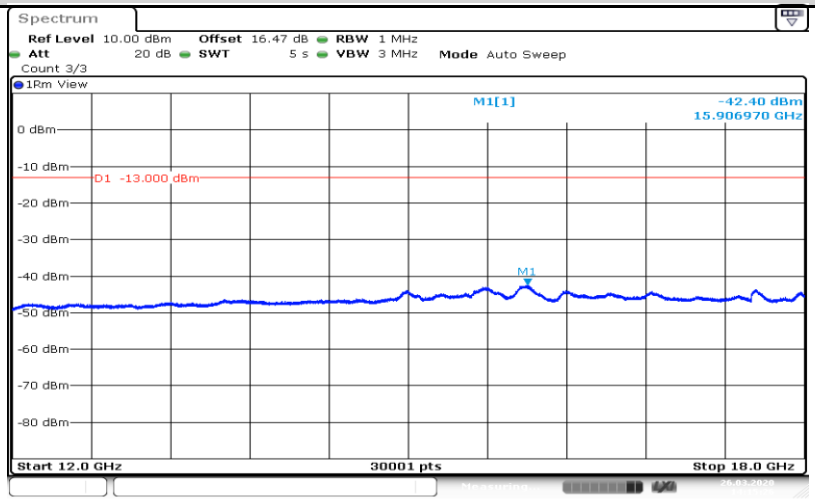

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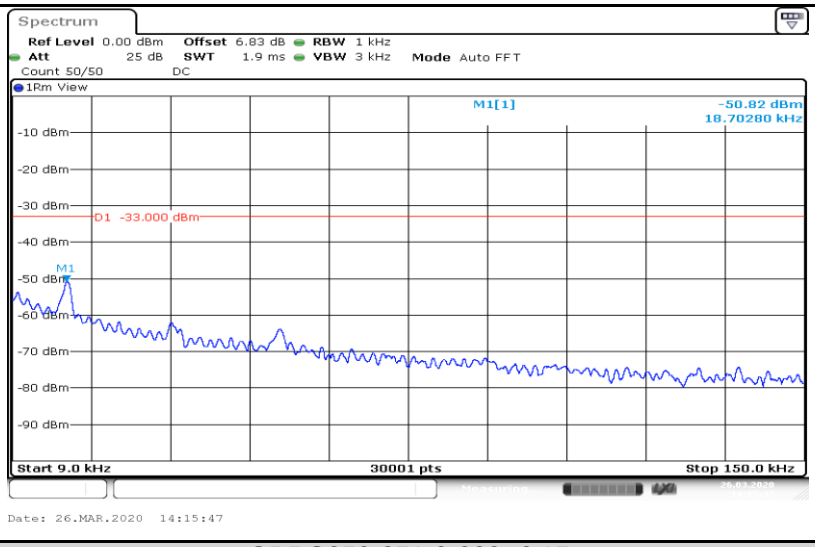

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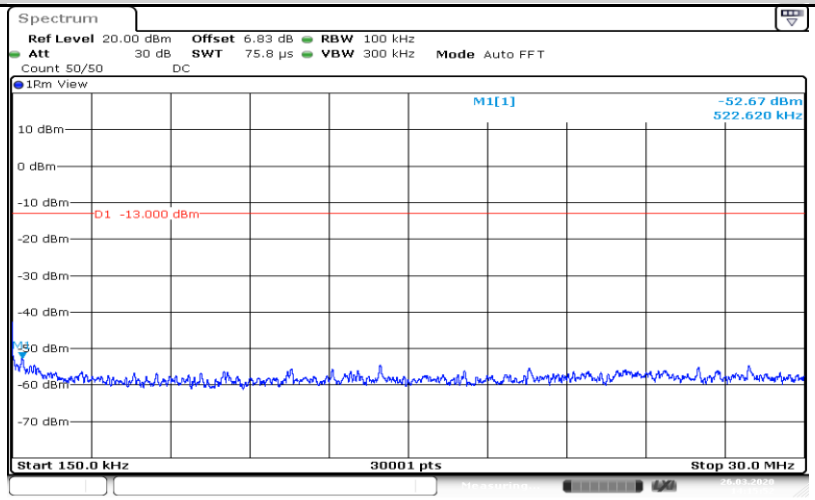

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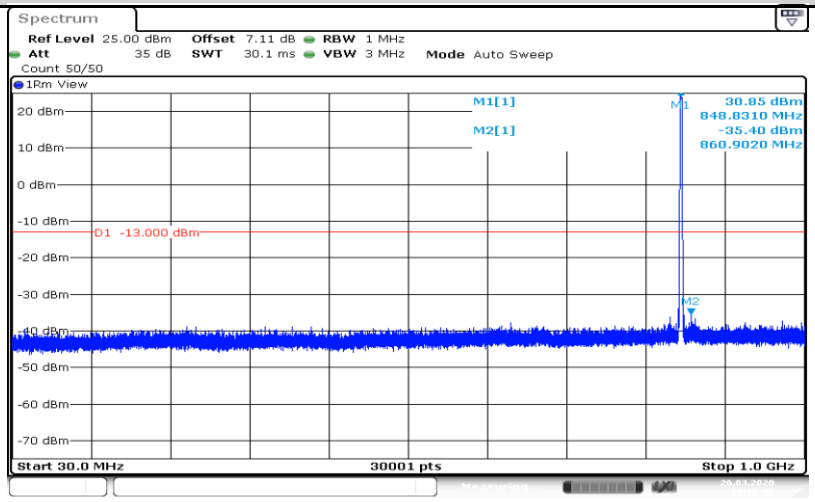

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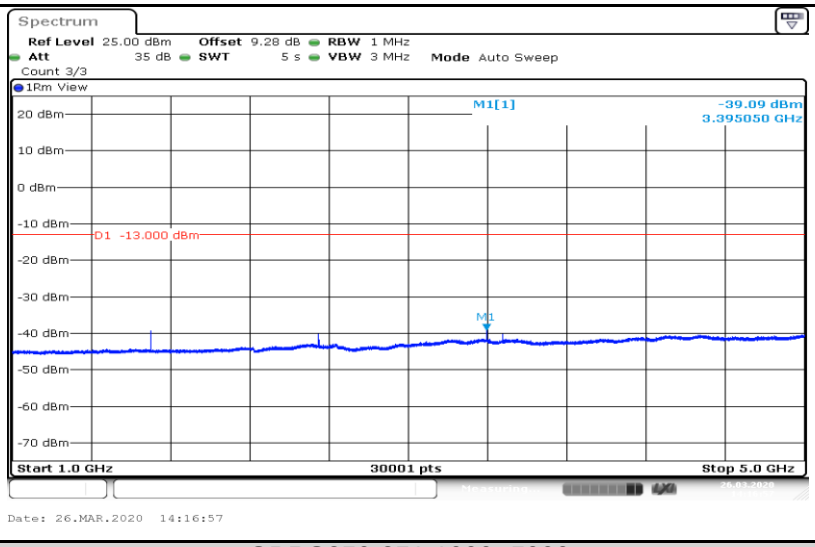

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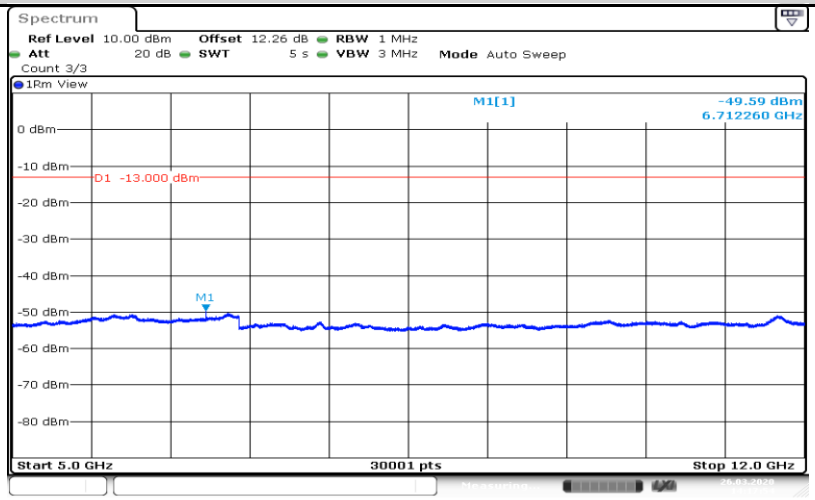

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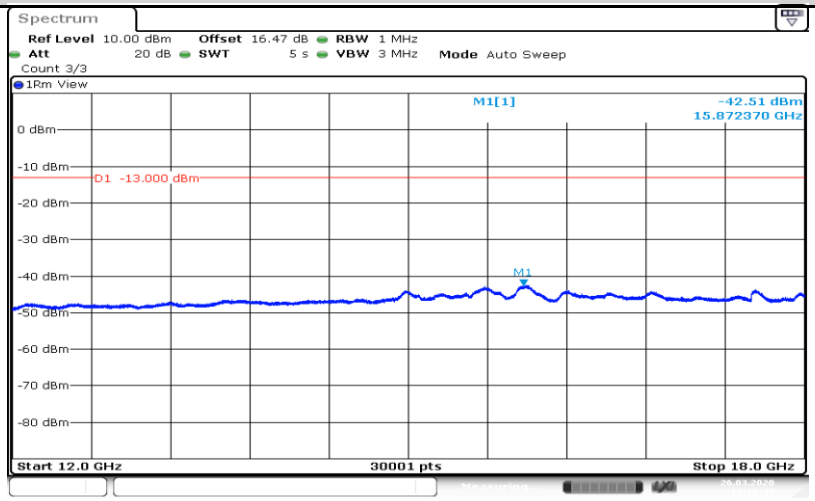

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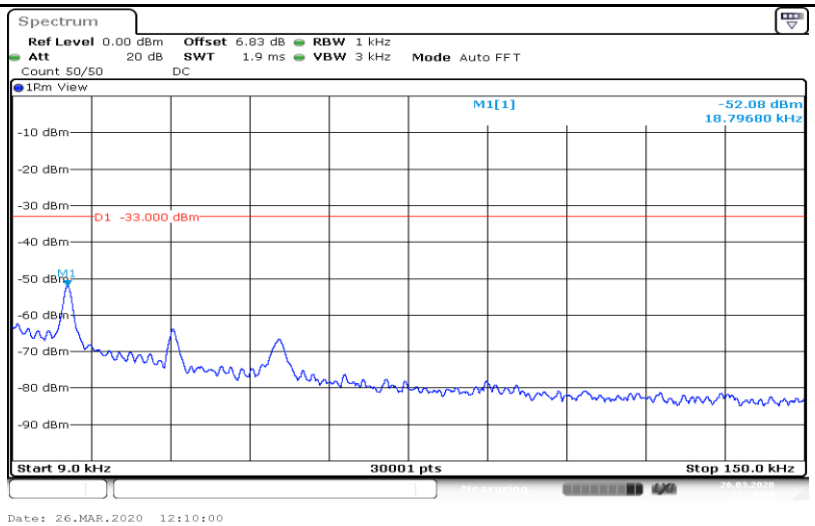

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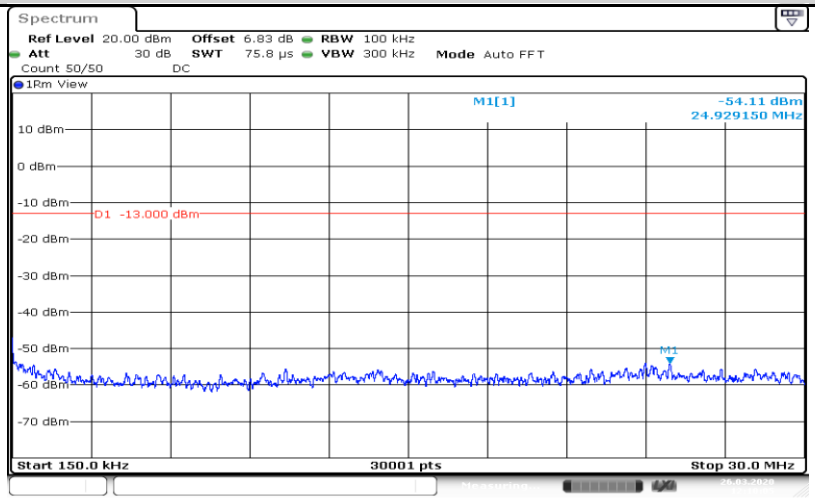

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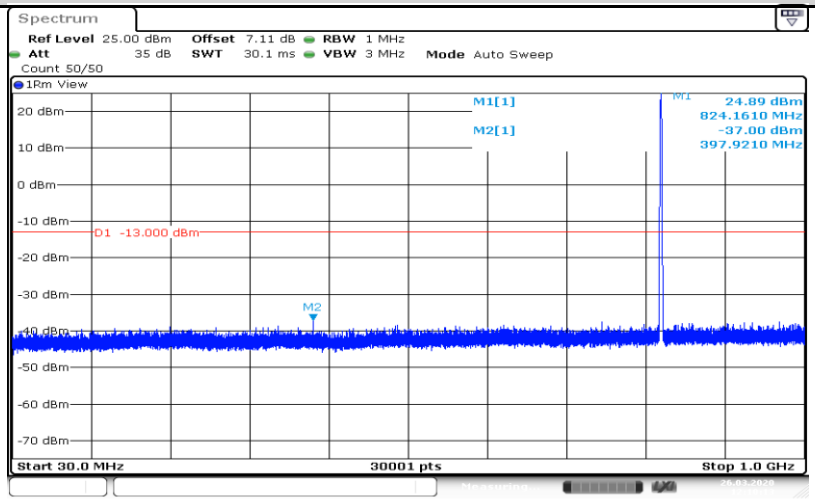

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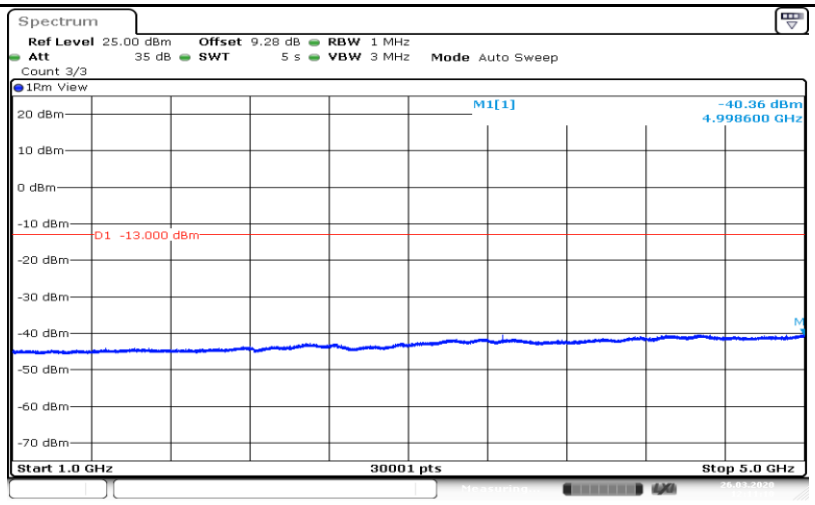

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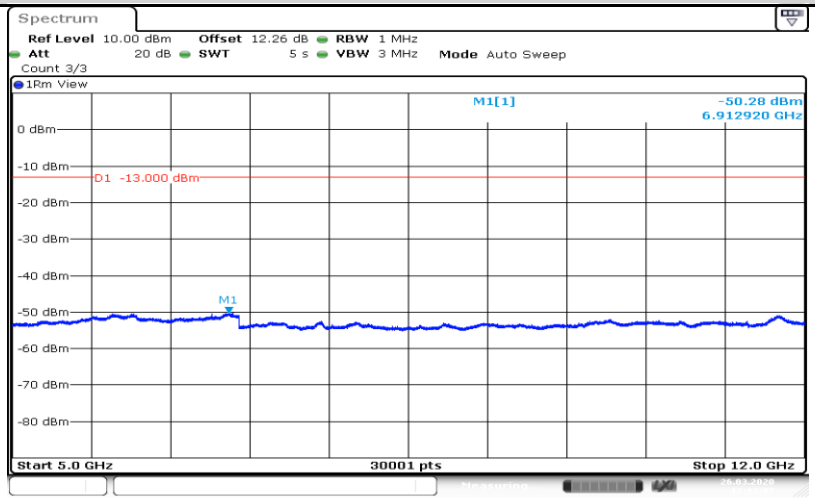

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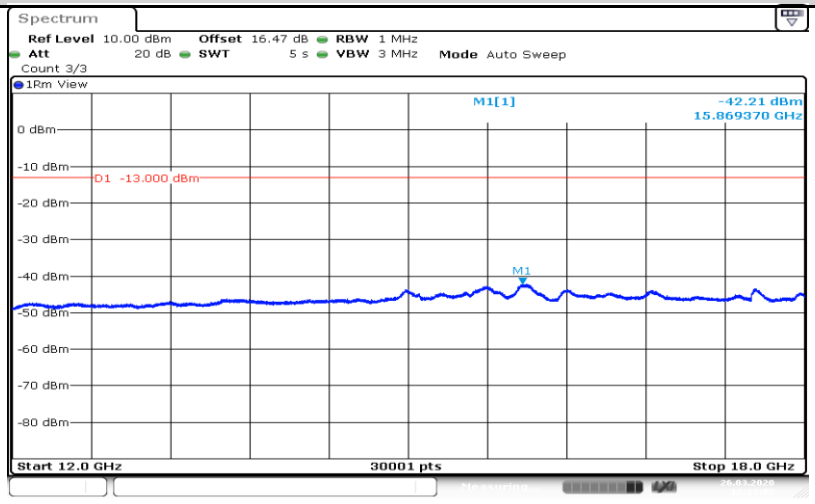

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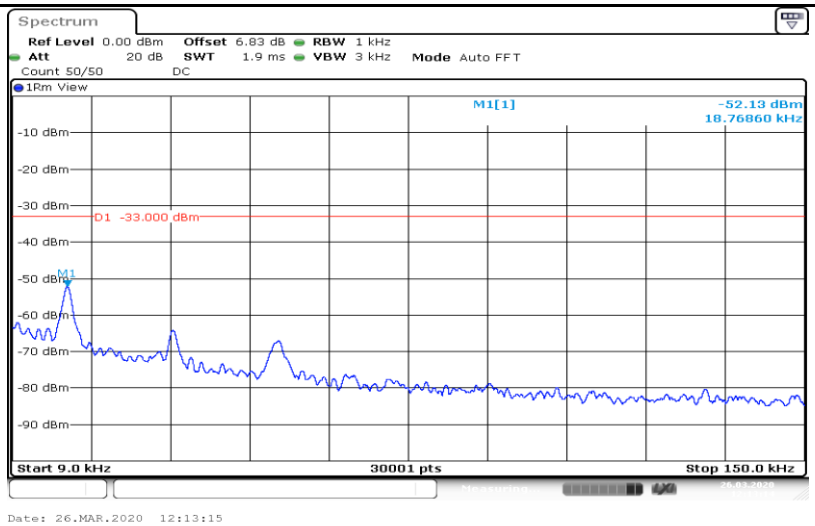

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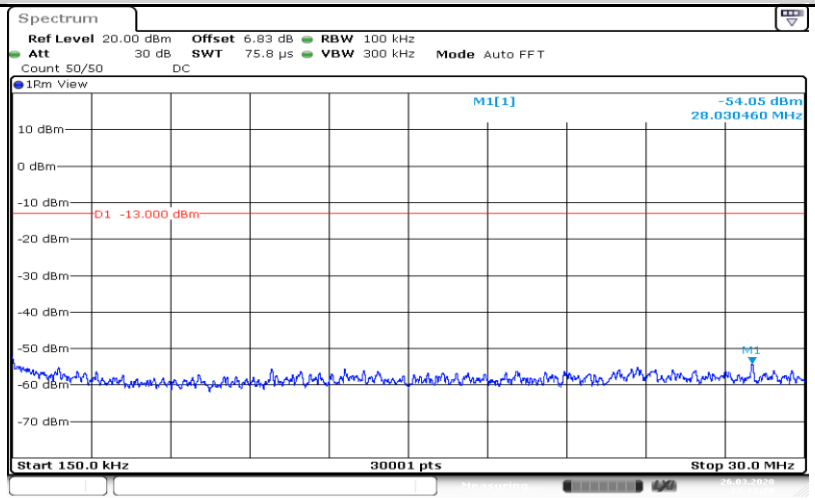

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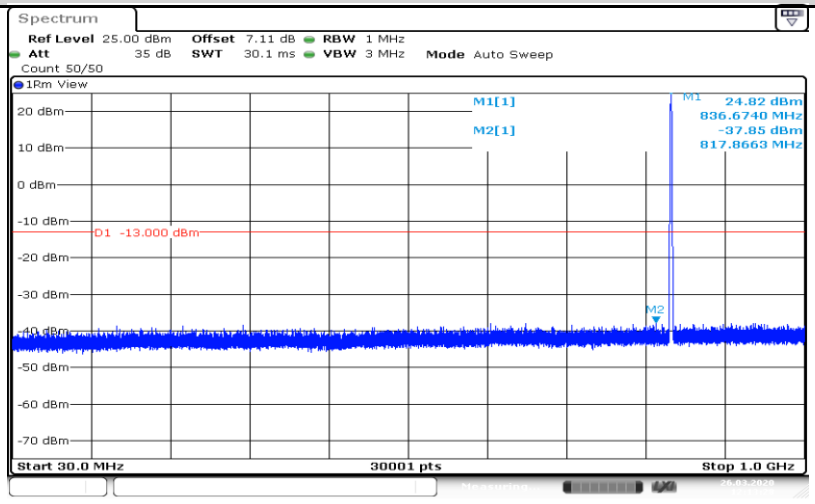

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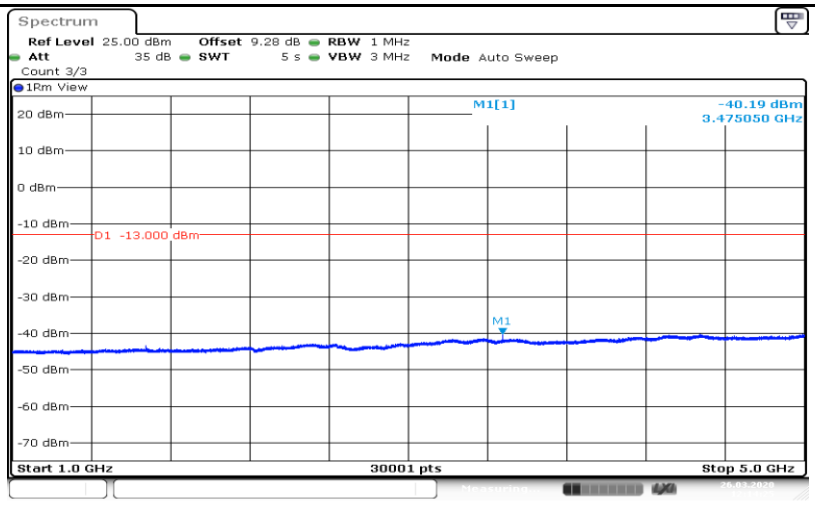

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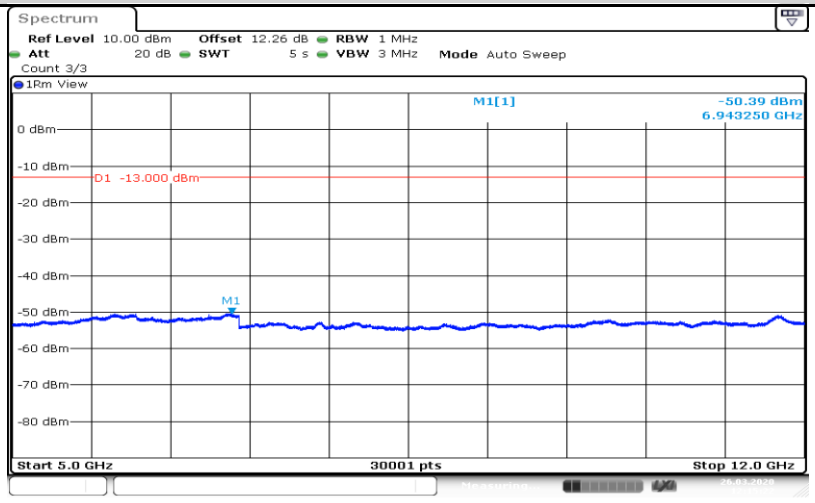

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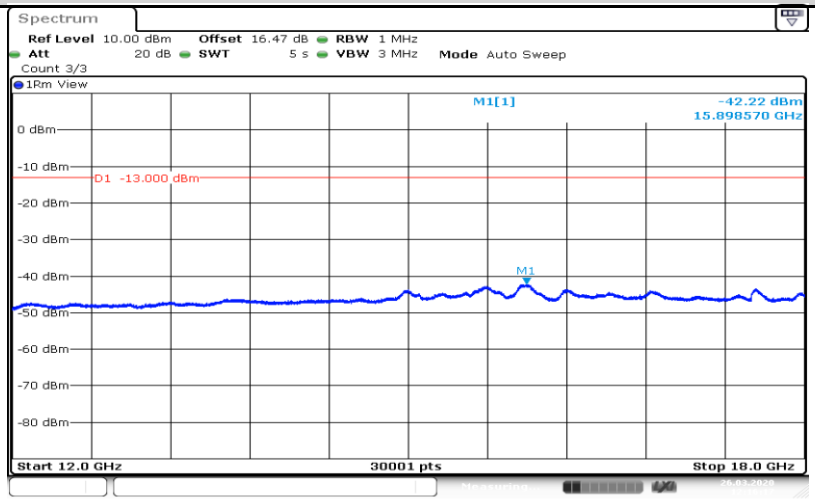

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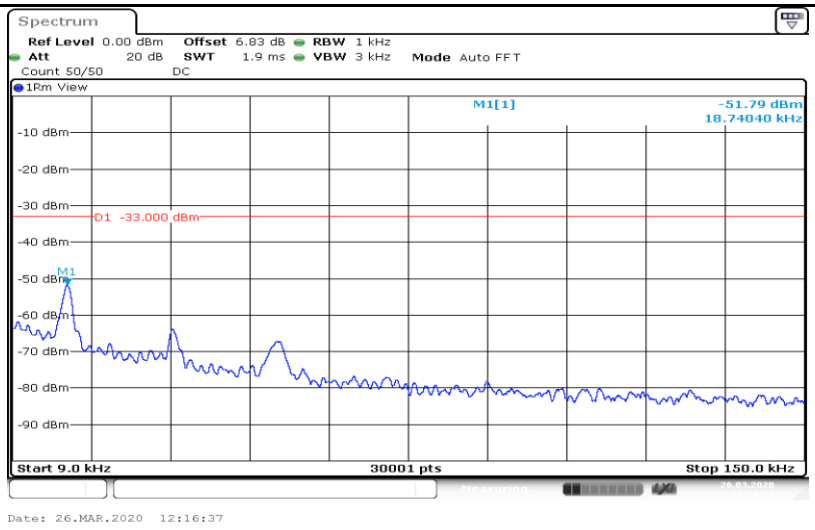

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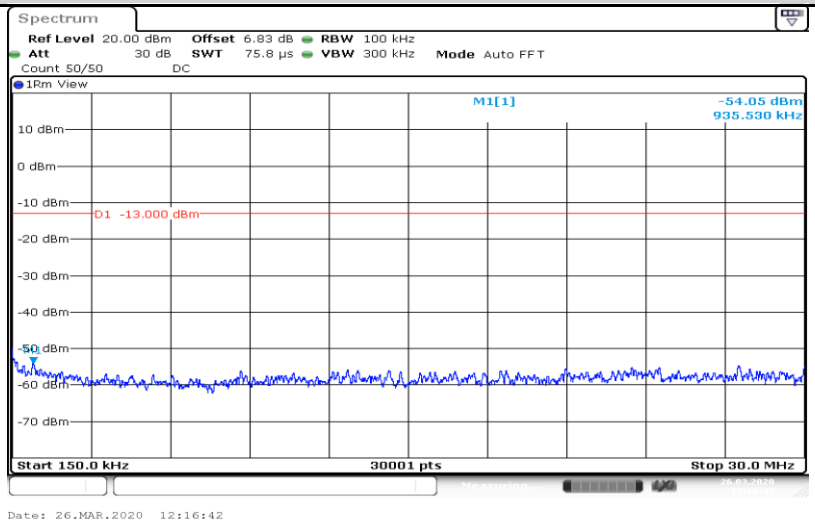

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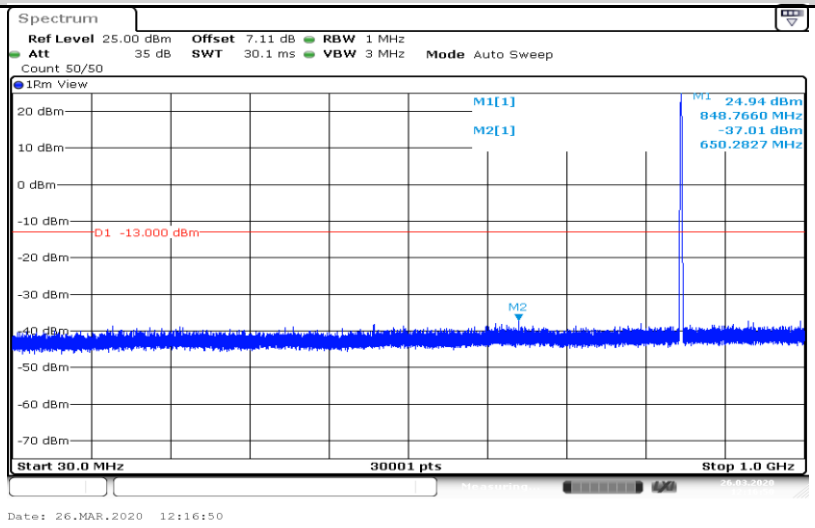

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