Prüfbericht-Nr.: *Test report no.:*	**50289118 007**	**Auftrags-Nr.:** *Order no.*:	**168295761**	Seite 1 von **23** *Page 1 of 23*
Kunden-Referenz-Nr.: *Client reference no.:*	**N/A**	**Auftragsdatum:** *Order date:*	2020-12-21	
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.:*	ME910G1-W1			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification:*	47 CFR FCC Part 27 47 CFR FCC Part 2			

Wareneingangsdatum: *Date of sample receipt:*	2020-12-21	Refer to Photo Documentation
Prüfmuster-Nr.: *Test sample no:*	A002940888-001	
Prüfzeitraum: *Testing period:*	2020-12-23 – 2021-01-22	
Ort der Prüfung: *Place of testing:*	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüfergebnis*: *Test result*:*	Pass	

geprüft von: *tested by:*	X Andy Yan	**genehmigt von:** *authorized by:*	X Sam Lin
Datum: *Date:* 2021-02-05		**Ausstellungsdatum:** *Issue date:* 2021-02-05	
Stellung / *Position:*	**Sachverständige(r)/Expert**	**Stellung** / *Position:*	**Sachverständige(r)/Expert**

Sonstiges / *Other:*

FCC ID: RI7ME910G1W1

Class II permissive change for add a new frequency range. This changes are performed by software upgarde and donot require any hardware changes. This report is for NB-IoT operation in new freuency range. These changes do not degrade the characteristics of EMC/Radio of other operation bands reported by the manufacturer.

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

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.
V05

TEST SUMMARY

5.1.1 RF POWER OUTPUT
RESULT: Pass

5.1.2 MODULATION CHARACTERISTICS
RESULT: Pass

5.1.3 OCCUPIED BANDWIDTH AND 26DB BANDWIDTH
RESULT: Pass

5.1.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS
RESULT: Pass

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

5.1.6 FIELD STRENGTH OF SPURIOUS RADIATION
RESULT: Pass

5.1.7 FREQUENCY STABILITY
RESULT: Pass

5.1.8 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 Band 787-788 MHz for NB-IoT operation

Appendix B: Test Results of Field Strength of Spurious Radiation for NB-IoT operation

Appendix C: PHOTOGRAPHS OF THE TEST SET-UP

1.2 TEST STANDARD(S)

Applied Rules:	47 CFR FCC Part 27 47 CFR FCC Part 2
Test Method:	KDB 971168 D01 ANSI C63.26

1.3 List of Document Change

No.	Report No.	Description
1	50289118 001	First release.
2	50289118 004	Firmware upgrade, These changes do not degrade the characteristics reported by the manufacturer. All datas were derived from the origianal report 50289118 001.
3	50289118 007	C2PC for add private network (787-788/757-758 MHz) via software change, no changes on other operation bands. This report is only for range 787-788 MHz, all datas of the other operation bands refer to the previous report 50289118 004 and 50289118 001.

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: 2020-12-23 to 2021-01-22

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)
Radio Spectrum Testing				
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	166305	20.09.2021
Signal Analyzer	Rohde & Schwarz	FSV 40	101475	20.09.2021
Vector Signal Generator	Rohde & Schwarz	SMBV100A	263466	20.09.2021
Signal Generator	Rohde & Schwarz	SMB100A	181041	17.12.2021
High Speed Power Supply	KEITHLEY	2303	4080052	17.12.2021
RF Control Unit	Tonscend	JS0806-1	19H8060192	N/A
Field Strength of Spurious Radiation				
Signal Generator	Rohde & Schwarz	SMB100A	180840	20.08.2021
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	165339	20.08.2021
Signal Analyzer	Rohde & Schwarz	FSV 40	101440	21.08.2021
System Controller Interface	Rohde & Schwarz	SCI-100	S10010036	N/A
Filterbank	Rohde & Schwarz	GSM	100811	21.08.2021
OSP	Rohde & Schwarz	OSP 120	102041	N/A
OSP	Rohde & Schwarz	OSP 150	101385	17.12.2021
Pre-amplifier	Rohde & Schwarz	SCU08F1	08320030	20.08.2021
Amplifier	Rohde & Schwarz	SCU-18F	180079	20.08.2021

Amplifier	Rohde & Schwarz	SCU40A	100450	20.09.2021
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	192	02.09.2021
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218719	02.09.2021
Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18312	02.09.2021
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19066	02.09.2021
Biconical Broadband Antenna (30 MHz - 1 GHz)	Schwarzbeck	VUBA 9117	357	02.09.2021
Double Ridged Broadband Horn Antenna (1 – 18 GHz)	Schwarzbeck	BBHA 9120 D	01760	02.09.2021
Broadband Horn Antenna (15 – 40 GHz)	Schwarzbeck	BBHA 9170	00862	02.09.2021
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	06.07.2021

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 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:	ME910G1-W1
FCC ID:	RI7ME910G1W1
Hardware Version:	0.0
Software Version:	M0C.300002 and AT#BNDOPTIONS includes B86 in the response
IMEI:	356813100035795
Type of Equipment:	Single Module
Antenna Type:	External Antenna
Operating Voltage:	DC 3.8V
Operating Temperature Range:	-40°C ~ +85°C

Table 3: Technical Specification of EUT

Characteristic	Description
Operated Modes:	NB-IoT
Operational Frequency Band(s):	Band 2, Band 4, Band 5, Band 12, Band 13, Band 25, Band 26, Band 66, Band 71, Band 85, Private network (787-788/757-758 MHz)
Nominal RF Output Power:	20 dBm ± 2dB
Modulation Type:	BPSK, QPSK
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
Device Category:	Category NB1 and NB2
Operation mode:	Stand-alone
Subcarrier spacing:	3.75kHz, 15kHz
Tones Configuration:	Single tone, Multi-tone
Extreme Voltage:	DC 3.2 ~ 4.5V

Table 4: Operating Frequency Range of EUT

Frequency Band(s)	Frequency Range						Channel Bandwidth (MHz)	Subcarrier Spacing (kHz)
	Transmitting f_{UL} (MHz)			Receiving f_{DL} (MHz)				
Band 2	1850	~	1910	1930	~	1990	1.4, 3, 5, 10, 15, 20	3.75, 15
Band 4	1710	~	1755	2110	~	2155	1.4, 3, 5, 10, 15, 20	3.75, 15
Band 5	824	~	849	869	~	894	1.4, 3, 5, 10	3.75, 15
Band 12	699	~	716	729	~	746	1.4, 3, 5, 10	3.75, 15
Band 13	777	~	787	746	~	756	5, 10	3.75, 15
Band 25	1850	~	1915	1930	~	1995	1.4, 3, 5, 10, 15, 20	3.75, 15
Band 26	814	~	849	859	~	894	1.4, 3, 5, 10, 15	3.75, 15
Band 66	1710	~	1780	2110	~	2200	1.4, 3, 5, 10, 15, 20	3.75, 15
Band 71	663	~	698	617	~	652	5, 10, 15, 20	3.75, 15
Band 85	698	~	716	728	~	746	5, 10	3.75, 15
Private network (787-788/757-758 MHz)	787	~	788	757	~	758	--	3.75, 15

3.3 INDEPENDENT OPERATION MODES

The basic operation modes are:

A. On, communication link established, Transmitting
    1) NB-IoT operating
        i. Low channel
        ii. Middle channel
        iii. High channel
B. On, communication link established, Receiving
    1) NB-IoT 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
☐ Model Difference Letter
☒ 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	Mode	Frequencies under Test					
		Uplink			Downlink		
		Range	EARFCN	Frequencies (MHz)	Range	EARFCN	Frequencies (MHz)
Private network (787-788/757-758 MHz)	Standalone	Low	134183	787.1	Low	70547	757.1
		Low+1	134184	787.2	Low+1	70548	757.2
		High-1	134190	787.8	High-1	70554	757.8
		High	134191	787.9	High	70555	757.9

Table 6: Test Environments

Environment Parameter	Selected Values During Tests		
	Temperature (°C)	Voltage (V) DC	Relative Humidity
Normal (NTNV)	22	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	Bandwidths (MHz)						Modulation		Subcarrier Spacing (kHz)	
	1.4	3	5	10	15	20	BPSK	QPSK	3.75	15
2	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
4	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
5	Δ	Δ	Δ	Δ	-	-	Δ	Δ	Δ	Δ
12	Δ	Δ	Δ	Δ	-	-	Δ	Δ	Δ	Δ
13	-	-	Δ	Δ	-	-	Δ	Δ	Δ	Δ
25	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
26	Δ	Δ	Δ	Δ	Δ	-	Δ	Δ	Δ	Δ
66	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
71	-	-	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
85	-	-	Δ	Δ	-	-	Δ	Δ	Δ	Δ
Private network (787-788/757-758 MHz)	-	-	-	-	-	-	Δ	Δ	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

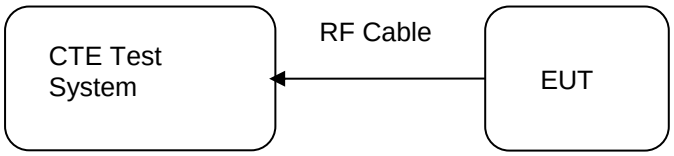
Name	Model	Manufacturer	S/N
Evaluation Kit	EVK2	Telit	N/A
LTE Magnetic Antenna	T-AT305 Frequency Range: 700-960 MHz / 1710-2700 MHz Omnidirectional antenna Gain: 2.14 dBi (Max.) Cable: RG 174mm 2500	ATEL-CAB	N/A

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 Measurement



5. TEST RESULTS

5.1 ESSENTIAL REQUIREMENTS OF STANDARD

5.1.1 RF POWER OUTPUT

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 27 47 CFR FCC Part 2	
Limits	:	Operating band	FCC Limit
		Band 2	EIRP 2 watts
		Band 4	EIRP 1 watts
		Band 5	ERP 7 watts
		Band 12	ERP 3 watts
		Band 13	ERP 3 watts
		Band 25	EIRP 2 watts
		Band 26 Lower Band	< 100 watts
		Band 26 Upper Band	ERP 7 watts
		Band 66	EIRP 1 watts
		Band 71	ERP 3 watts
		Band 85	ERP 3 watts
		Private network (787-788/757-758 MHz)	ERP 3 watts
Test procedure	:	Clause 5.2.4.2 of ANSI C63.26	
Kind of test site	:	Shielding Room	

Test Setup

Date of testing	:	2020-12-23 to 2021-01-22
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions
		☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	22 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 MODULATION CHARACTERISTICS

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 27 47 CFR FCC Part 2
Limits	:	"Other types of equipment", the use of higher order modulations such as OFDM or LTE or other modulation are acceptable for use
Test procedure	:	Clause 5.2.3 of ANSI C63.26
Kind of test site	:	Shielding Room

Note:
The device implement digital modulation such as BPSK and QPSK, hence the EUT is deemed to comply with this requirement without additional testing.

5.1.3 OCCUPIED BANDWIDTH AND 26DB BANDWIDTH

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 27 47 CFR FCC Part 2
Test requirement	:	Section 2.1049 of 47 CFR FCC Part 2
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	:	2020-12-23 to 2021-01-22
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	22 ºC
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

5.1.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 27 47 CFR FCC Part 2	
Limits	:	Operating band	FCC Limit
		Band 2	< - 13 dBm /1MHz
		Band 4	< - 13 dBm /1MHz
		Band 5	< - 13 dBm /100kHz @ < 1GHz < - 13 dBm /1MHz @ > 1GHz
		Band 12	< - 13 dBm /100kHz
		Band 13	< - 13 dBm /100kHz
		Band 25	< - 13 dBm /1MHz
		Band 26 Lower Band	< - 13 dBm /100kHz
		Band 26 Upper Band	< - 13 dBm /100kHz @ < 1GHz < - 13 dBm /1MHz @ > 1GHz
		Band 66	< - 13 dBm /1MHz
		Band 71	< - 13 dBm /100kHz
		Band 85	< - 13 dBm /100kHz
		Private network (787-788/757-758 MHz)	< - 13 dBm /100kHz
Test procedure	:	Clause 5.7.4 of ANSI C63.26	
Kind of test site	:	Shielding Room	

Test Setup

Date of testing	:	2020-12-23 to 2021-01-22
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	22 ºC
Relative humidity	:	50%
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.

5.1.5 SPURIOUS EMISSIONS AT ANTENNA TERMINALS – BAND EDGE

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 27 47 CFR FCC Part 2	
Limits	:	Operating band	FCC Limit
		Band 2	< - 13 dBm /1%EBW
		Band 4	< - 13 dBm /1%EBW
		Band 5	< - 13 dBm /1%EBW
		Band 12	< - 13 dBm /30kHz
		Band 13	< - 13 dBm /30kHz
		Band 25	< - 13 dBm /1%EBW
		Band 26 Lower Band	< - 20 dBm /1%EBW
		Band 26 Upper Band	< - 13 dBm /1%EBW
		Band 66	< - 13 dBm /1%EBW
		Band 71	< - 13 dBm /30kHz
		Band 85	< - 13 dBm /30kHz
		Private network (787-788/757-758 MHz)	< - 13 dBm /30kHz
Test procedure	:	Clause 5.7.3 of ANSI C63.26	
Kind of test site	:	Shielding Room	

Test Setup

Date of testing	:	2020-12-23 to 2021-01-22
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	22 ºC
Relative humidity	:	50%
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.

5.1.6 FIELD STRENGTH OF SPURIOUS RADIATION

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 27 47 CFR FCC Part 2	
Limits	:	Operating band	FCC Limit
		Band 2	< - 13 dBm /1MHz
		Band 4	< - 13 dBm /1MHz
		Band 5	< - 13 dBm /100kHz @ < 1GHz < - 13 dBm /1MHz @ > 1GHz
		Band 12	< - 13 dBm /100kHz
		Band 13	< - 13 dBm /100kHz
		Band 25	< - 13 dBm /1MHz
		Band 26 Lower Band	< - 13 dBm /100kHz
		Band 26 Upper Band	< - 13 dBm /100kHz @ < 1GHz < - 13 dBm /1MHz @ > 1GHz
		Band 66	< - 13 dBm /1MHz
		Band 71	< - 13 dBm /100kHz
		Band 85	< - 13 dBm /100kHz
		Private network (787-788/757-758 MHz)	< - 13 dBm /100kHz
Test procedure	:	Clause 5.5 of ANSI C63.26	
Kind of test site	:	3m Semi Anechoic Room	

Test Setup

Date of testing	:	2020-12-23 to 2021-01-22
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	22 ºC
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

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

Refer to attached Appendix B for details of test results.

5.1.7 FREQUENCY STABILITY

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 27 47 CFR FCC Part 2	
Limits	:	Operating band	FCC Limit
		Band 2	Within authorized bands
		Band 4	Within authorized bands
		Band 5	2.5 ppm
		Band 12	Within authorized bands
		Band 13	Within authorized bands
		Band 25	Within authorized bands
		Band 26 Lower Band	2.5 ppm
		Band 26 Upper Band	2.5 ppm
		Band 66	Within authorized bands
		Band 71	Within authorized bands
		Band 85	Within authorized bands
		Private network (787-788/757-758 MHz)	Within authorized bands
Test procedure	:	Clause 5.6.3 of ANSI C63.26	
Kind of test site	:	Shielding Room	

Test Setup

Date of testing	:	2020-12-23 to 2021-01-22
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☒ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	22 ºC
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

5.1.8 PEAK TO AVERAGE RATIO

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 27 47 CFR FCC Part 2	
Limits	:	Operating band	FCC Limit
		Band 2	PAR ≤ 13 dB
		Band 4	PAR ≤ 13 dB
		Band 5	PAR ≤ 13 dB
		Band 12	PAR ≤ 13 dB
		Band 13	PAR ≤ 13 dB
		Band 25	PAR ≤ 13 dB
		Band 26 Lower Band	N/A
		Band 26 Upper Band	PAR ≤ 13 dB
		Band 66	PAR ≤ 13 dB
		Band 71	PAR ≤ 13 dB
		Band 85	PAR ≤ 13 dB
		Private network (787-788/757-758 MHz)	PAR ≤ 13 dB
Test procedure	:	Clause 5.2.6 of ANSI C63.26	
Kind of test site	:	Shielding Room	

Test Setup

Date of testing	:	2020-12-23 to 2021-01-22
Input voltage	:	DC 3.8V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	22 ºC
Relative humidity	:	50%
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

========== END OF REPORT ==========

Appendix A: Test Results of Band 787-788 MHz for NB-IoT operation

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

Test Result

Test Configuration		EARFCN	Frequency (MHz)	EARFCN	Frequency (MHz)	EARFCN	Frequency (MHz)	EARFCN	Frequency (MHz)
		134183	787.1	134184	787.2	134190	787.8	134191	787.9
Modulation: BPSK		Conducted Power (dBm)	E.R.P (dBm)	Conducted Power (dBm)	E.R.P (dBm)	Conducted Power (dBm)	E.R.P (dBm)	Conducted Power (dBm)	E.R.P (dBm)
3.75kHz	1RB0	6.08	6.07	20.31	20.3	20.3	20.29	6.08	6.07
	1RB47	6.02	6.01	20.39	20.38	20.27	20.26	6	5.99
15kHz	1RB0	6.41	6.4	20.28	20.27	20.24	20.23	6.4	6.39
	1RB11	6.34	6.33	20.25	20.24	20.16	20.15	6.35	6.34
Modulation: QPSK		Conducted Power (dBm)	E.R.P (dBm)	Conducted Power (dBm)	E.R.P (dBm)	Conducted Power (dBm)	E.R.P (dBm)	Conducted Power (dBm)	E.R.P (dBm)
3.75kHz	1RB0	6.07	6.06	20.46	20.45	20.38	20.37	6.07	6.06
	1RB47	6.01	6	20.32	20.31	20.3	20.29	6.03	6.02
15kHz	1RB0	6.37	6.36	20.74	20.73	20.53	20.52	6.41	6.4
	1RB11	6.35	6.34	20.36	20.35	20.36	20.35	6.39	6.38
	3RB3	6.48	6.47	20.37	20.36	20.37	20.36	6.57	6.56

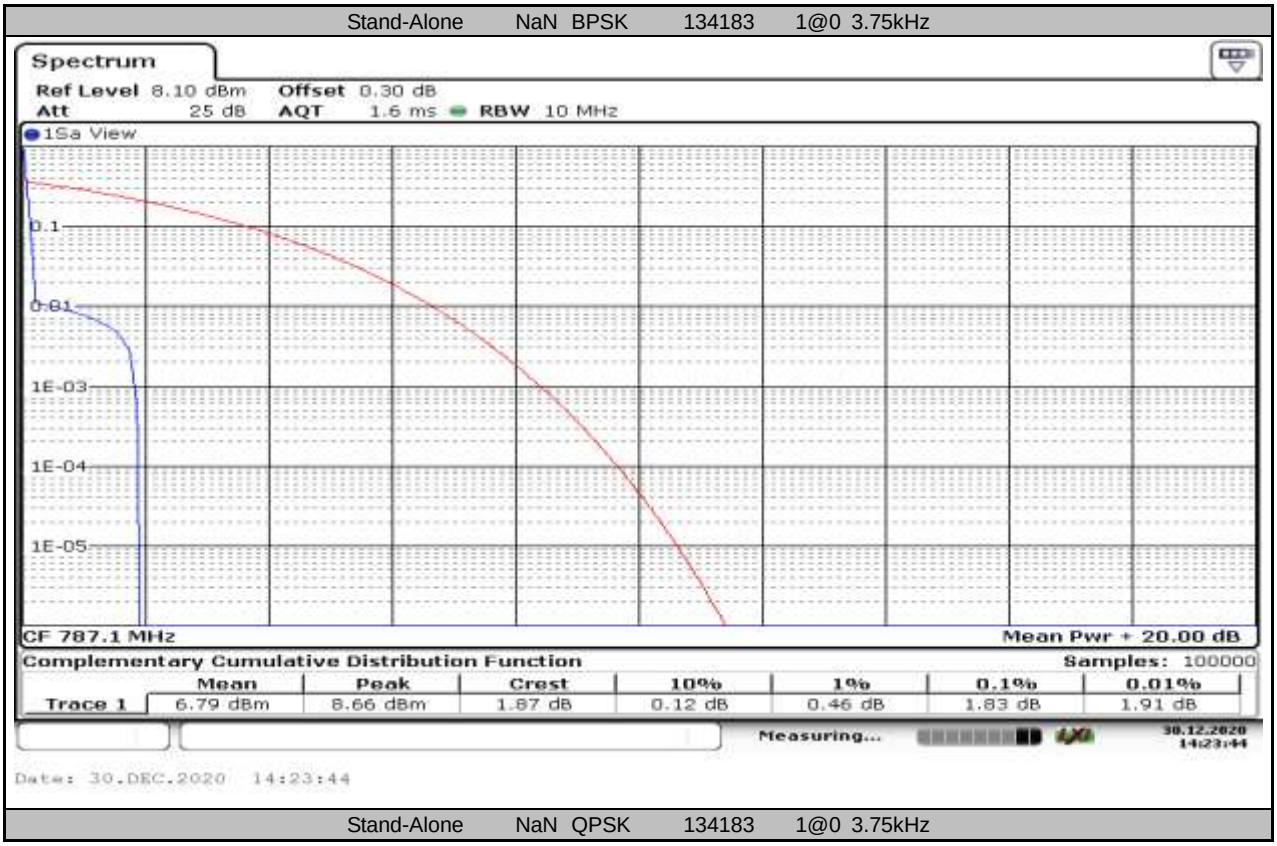
Appendix A.2: Peak-to-Average Ratio(CCDF) for NB

Test Result

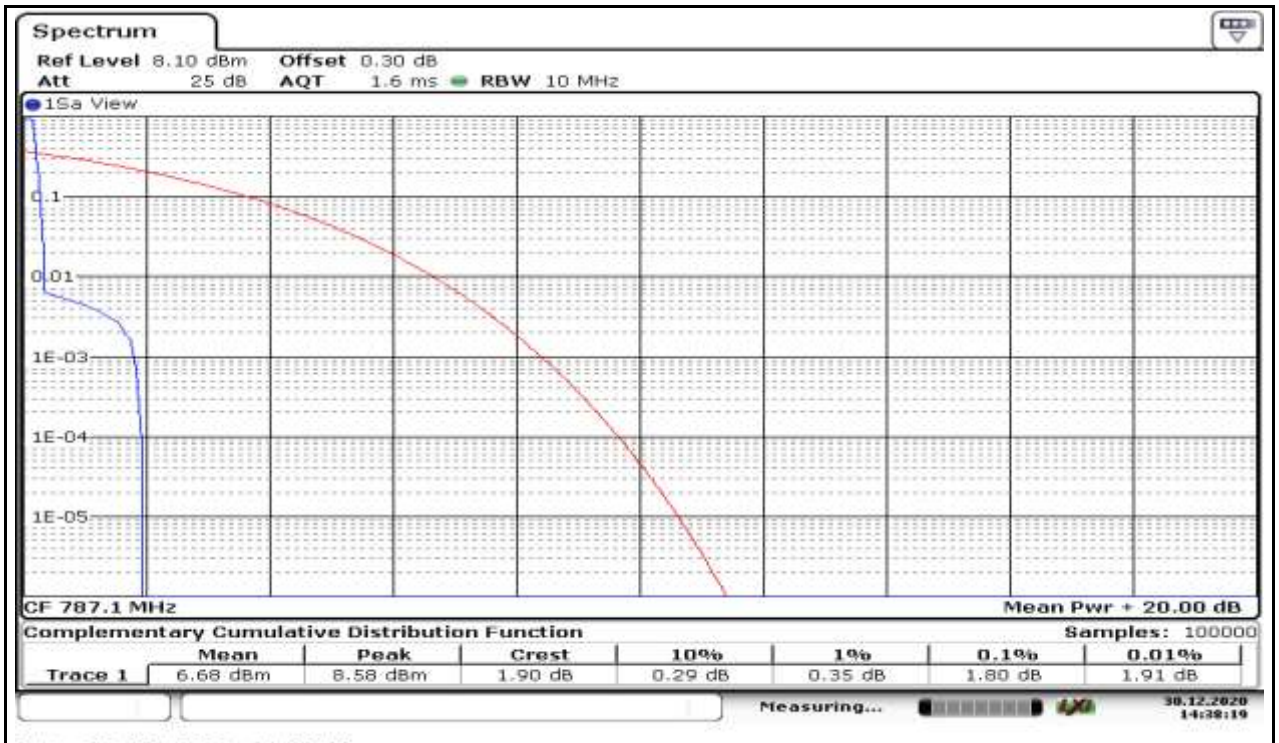
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Result (dB)	Limit (dB)	Verdict
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	3.75kHz	1.83	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	3.75kHz	1.80	<=13	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@47	3.75kHz	2.09	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@47	3.75kHz	1.74	<=13	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	15kHz	1.51	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	15kHz	1.57	<=13	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@11	15kHz	1.54	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@11	15kHz	1.57	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	3@3	15kHz	3.88	<=13	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	3.75kHz	1.86	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	3.75kHz	1.80	<=13	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@47	3.75kHz	2.09	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@47	3.75kHz	1.97	<=13	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	15kHz	1.48	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	15kHz	1.57	<=13	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@11	15kHz	1.51	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@11	15kHz	1.62	<=13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	3@3	15kHz	3.91	<=13	PASS

Test Graphs

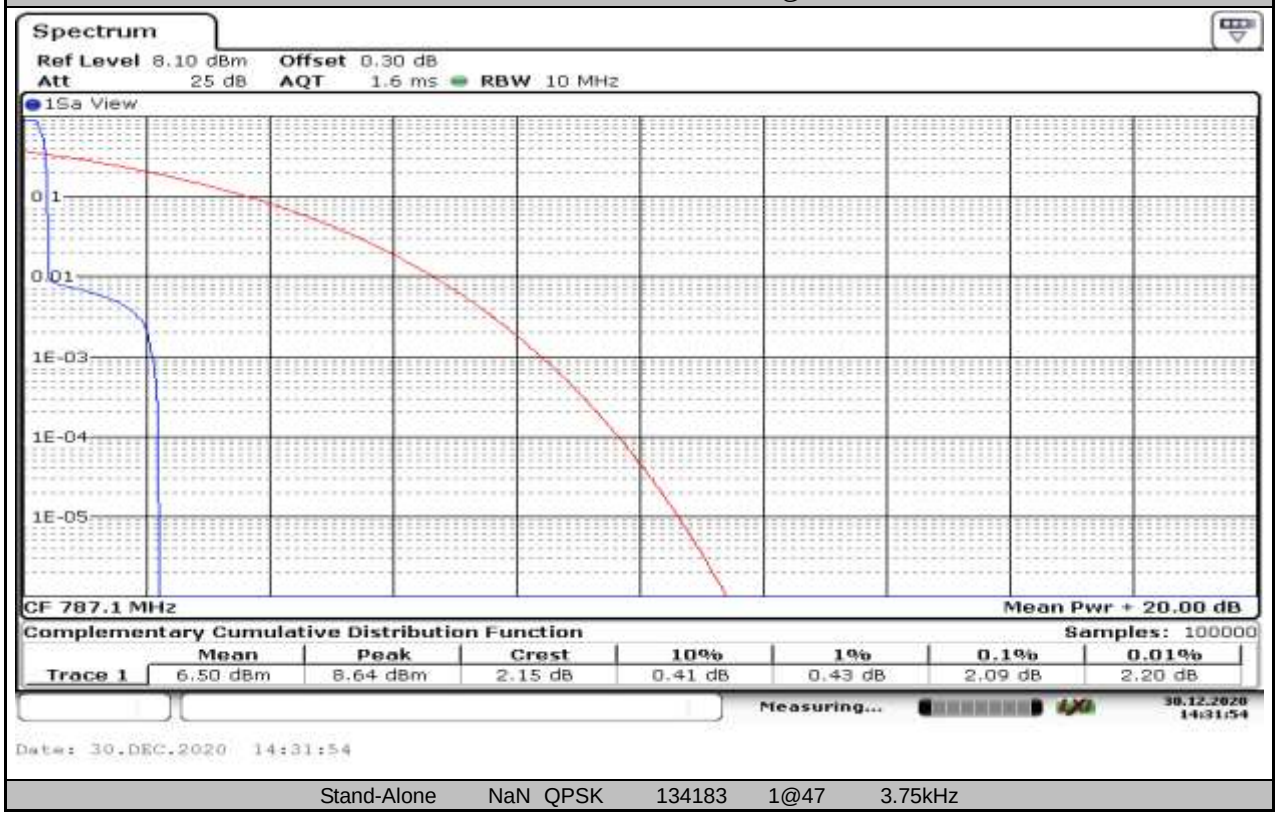
Stand-Alone NaN BPSK 134183 1@0 3.75kHz



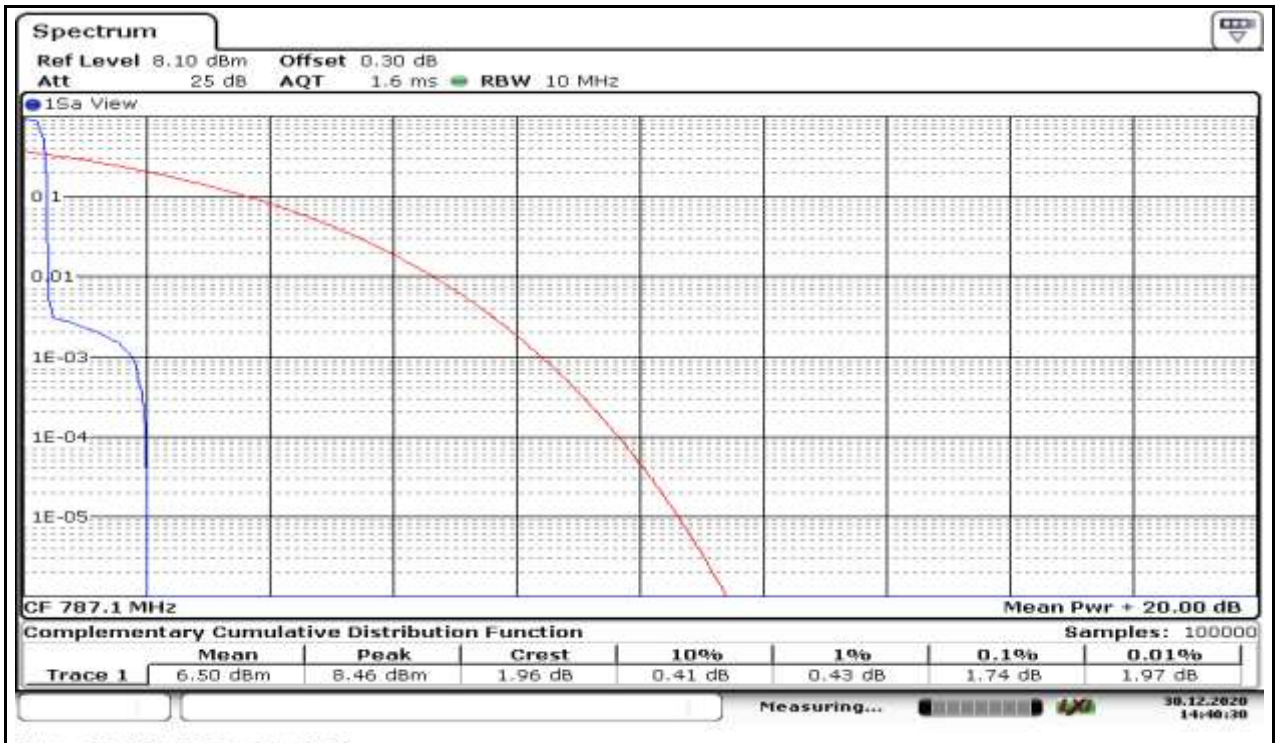
Stand-Alone NaN QPSK 134183 1@0 3.75kHz



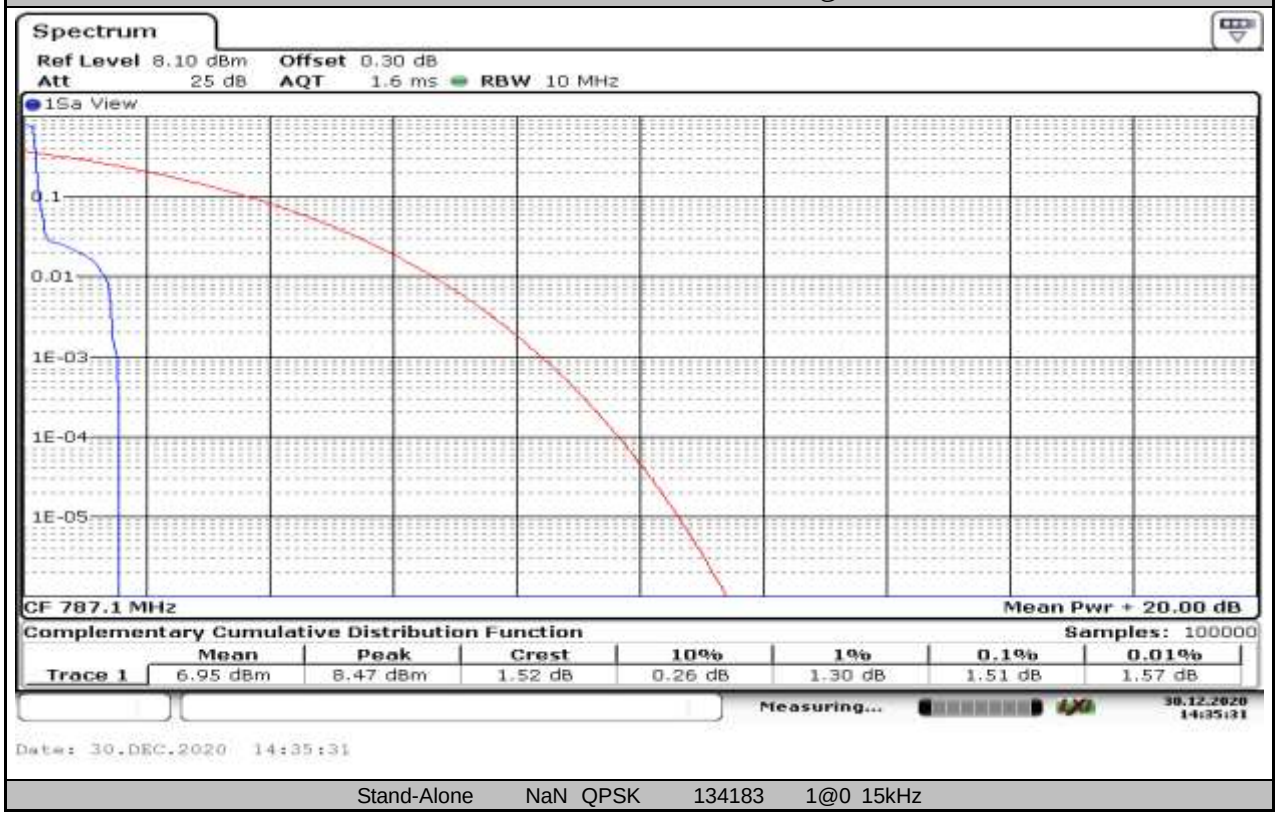
Stand-Alone	NaN	BPSK	134183	1@47	3.75kHz



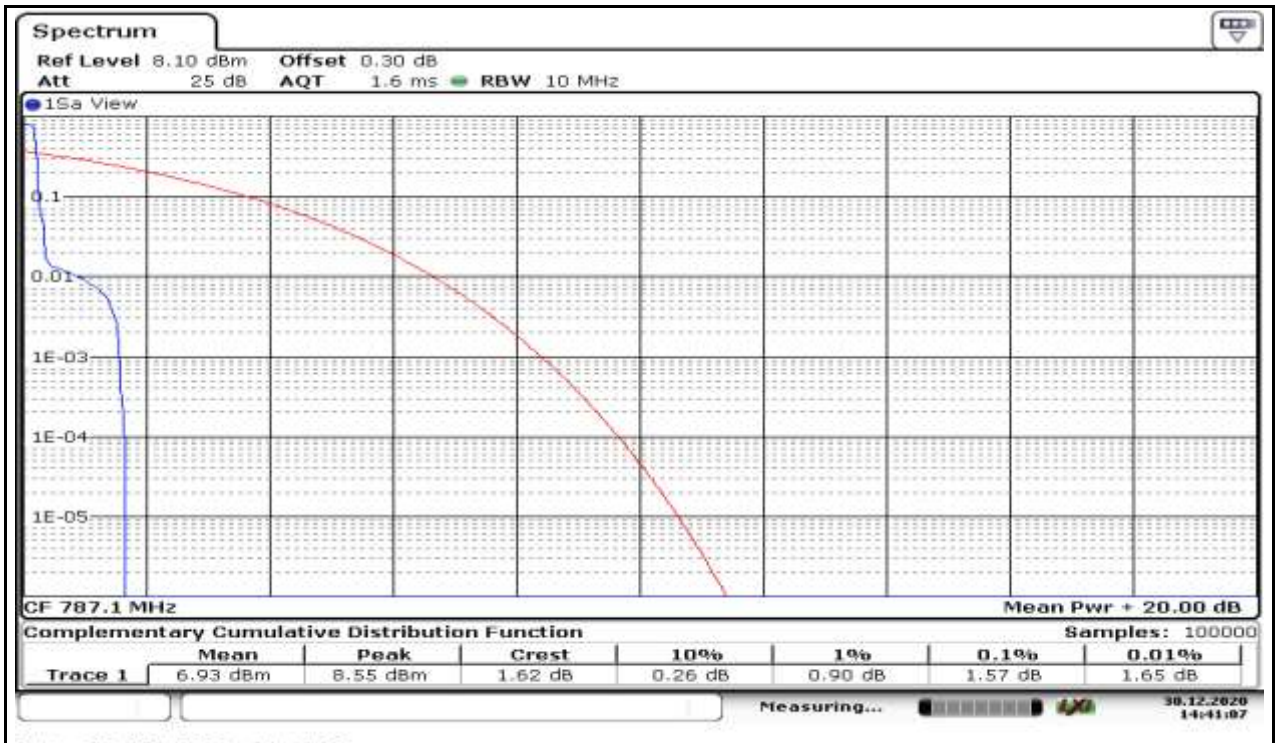
Stand-Alone	NaN	QPSK	134183	1@47	3.75kHz



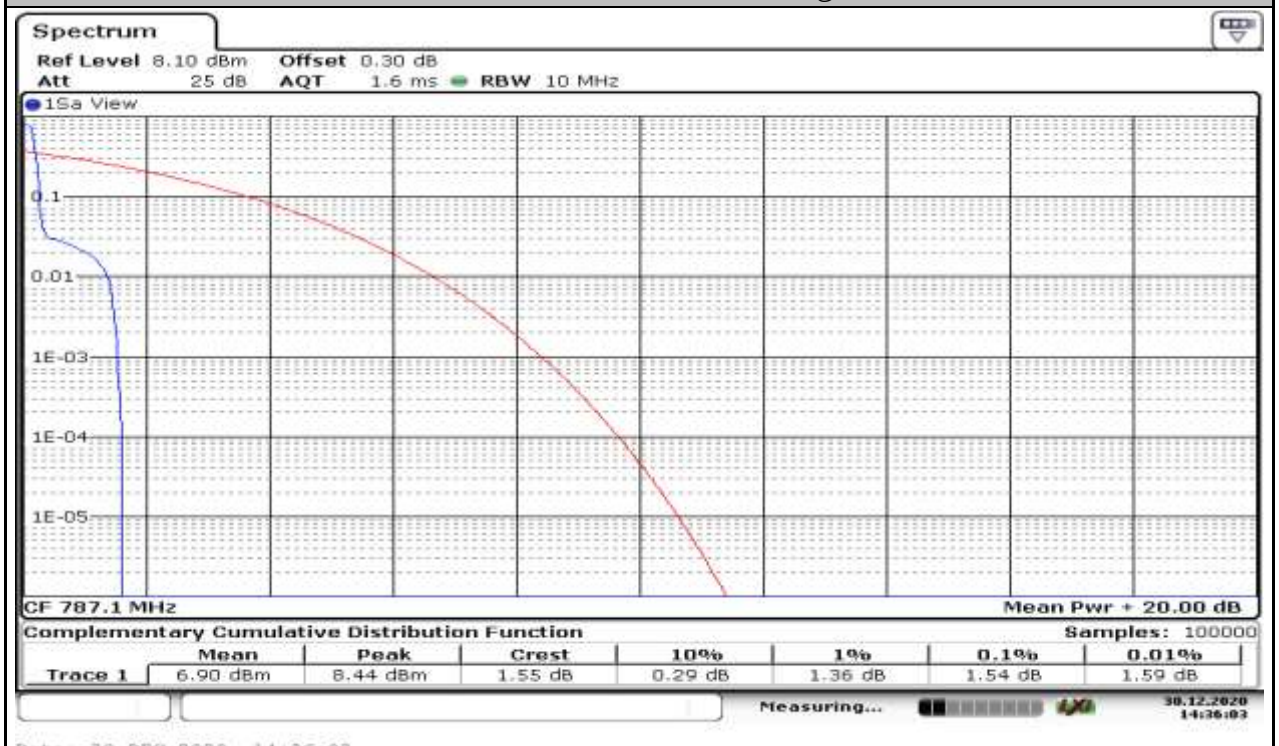
Stand-Alone NaN BPSK 134183 1@0 15kHz



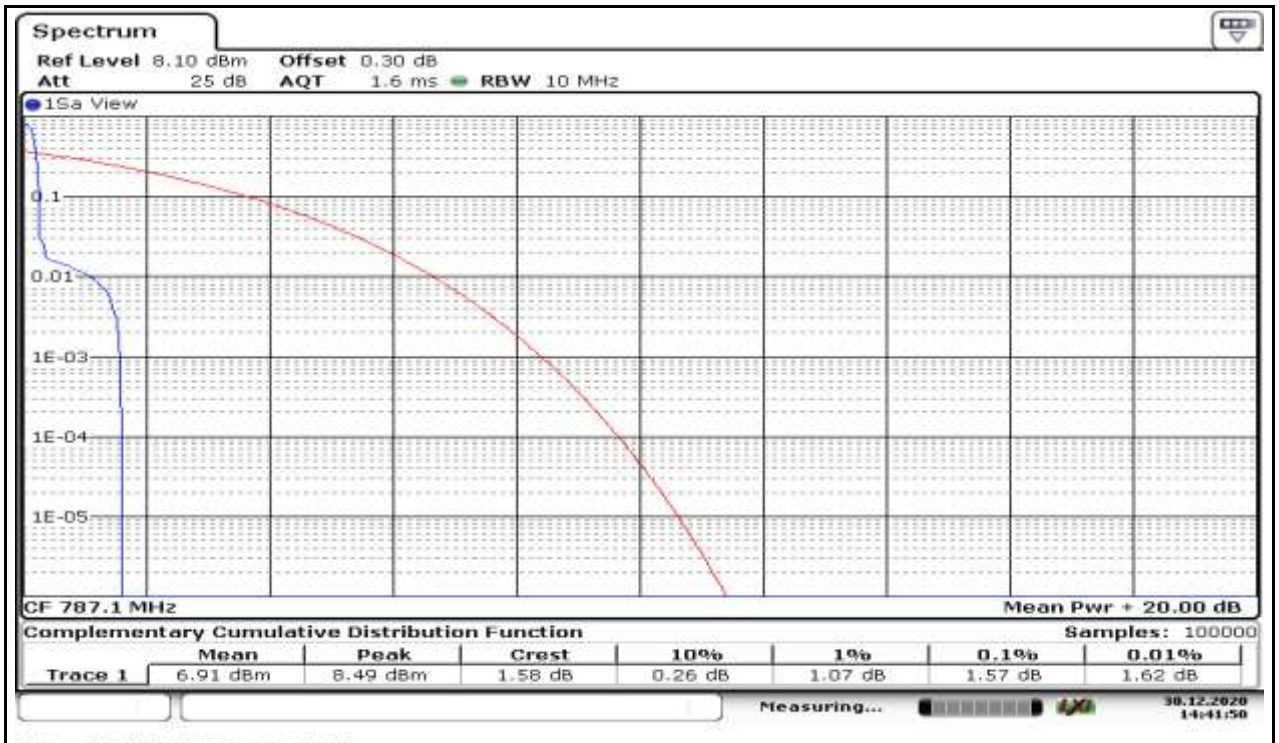
Stand-Alone NaN QPSK 134183 1@0 15kHz



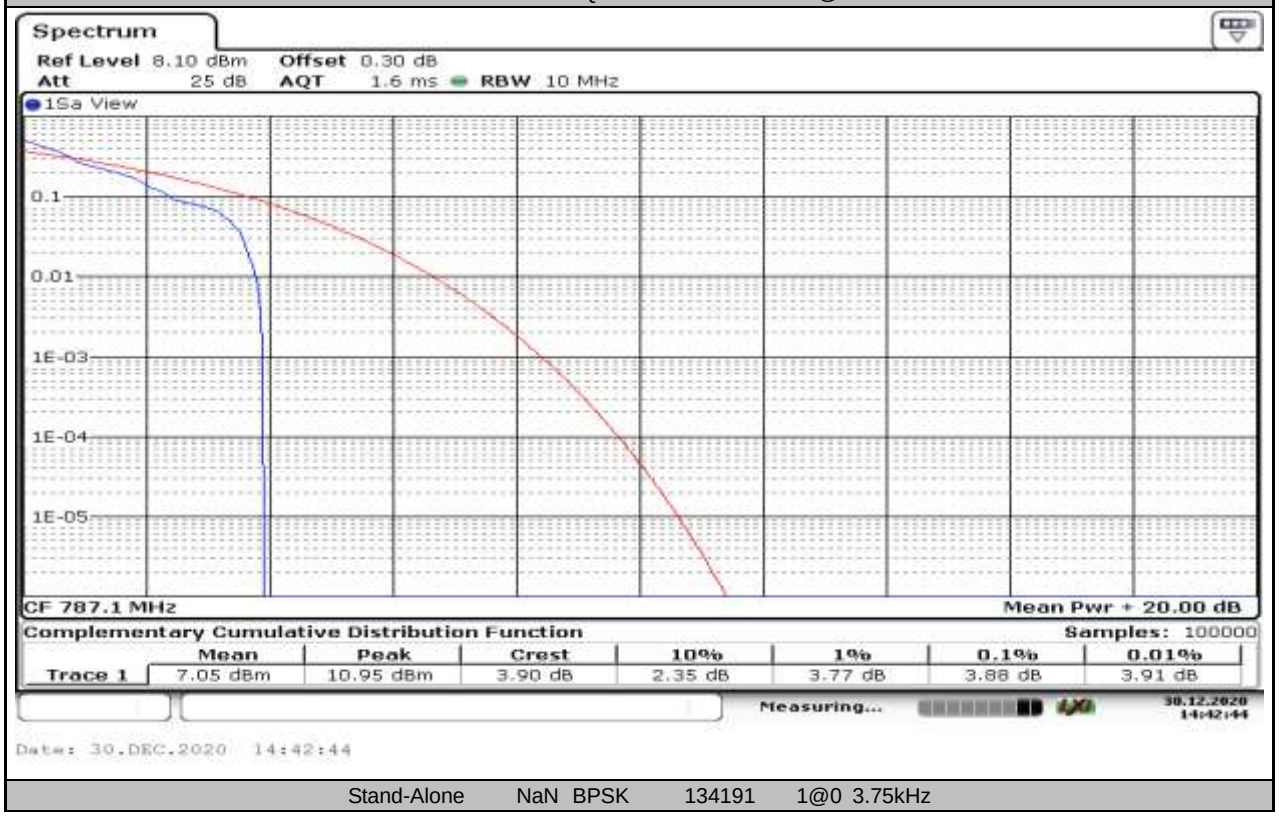
Stand-Alone NaN BPSK 134183 1@11 15kHz



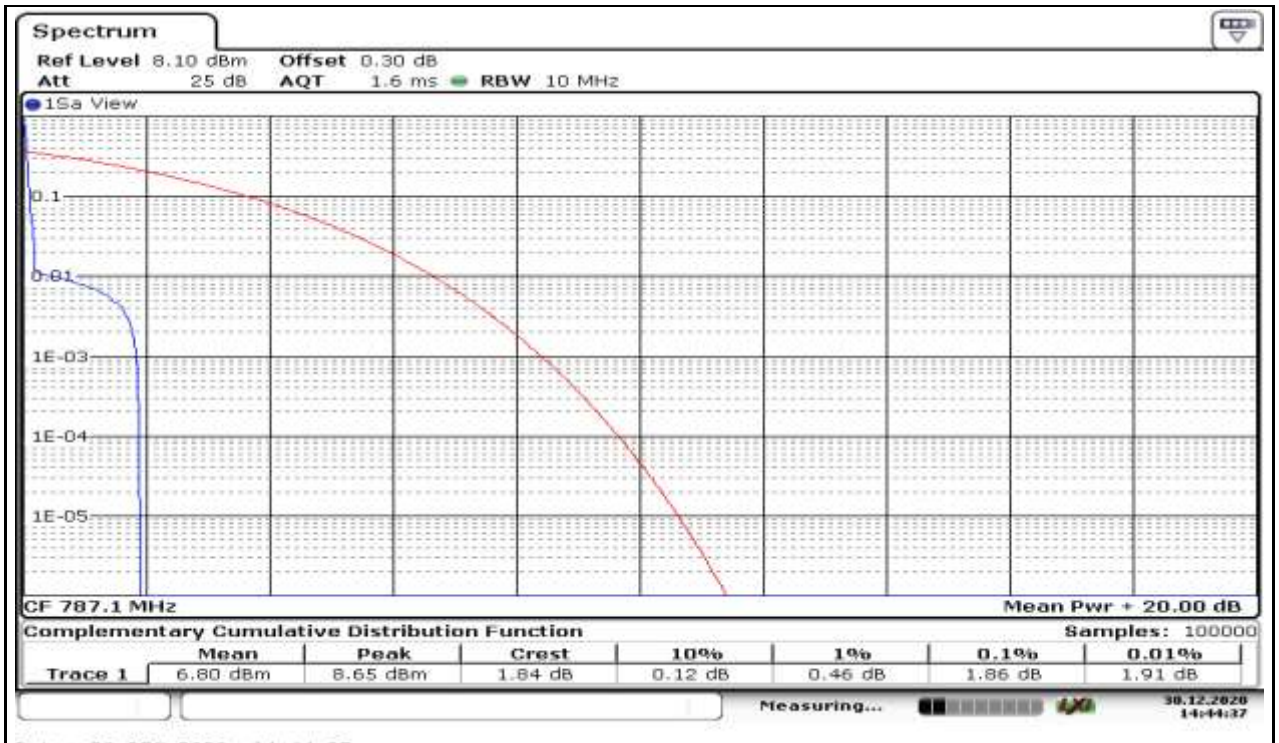
Stand-Alone NaN QPSK 134183 1@11 15kHz



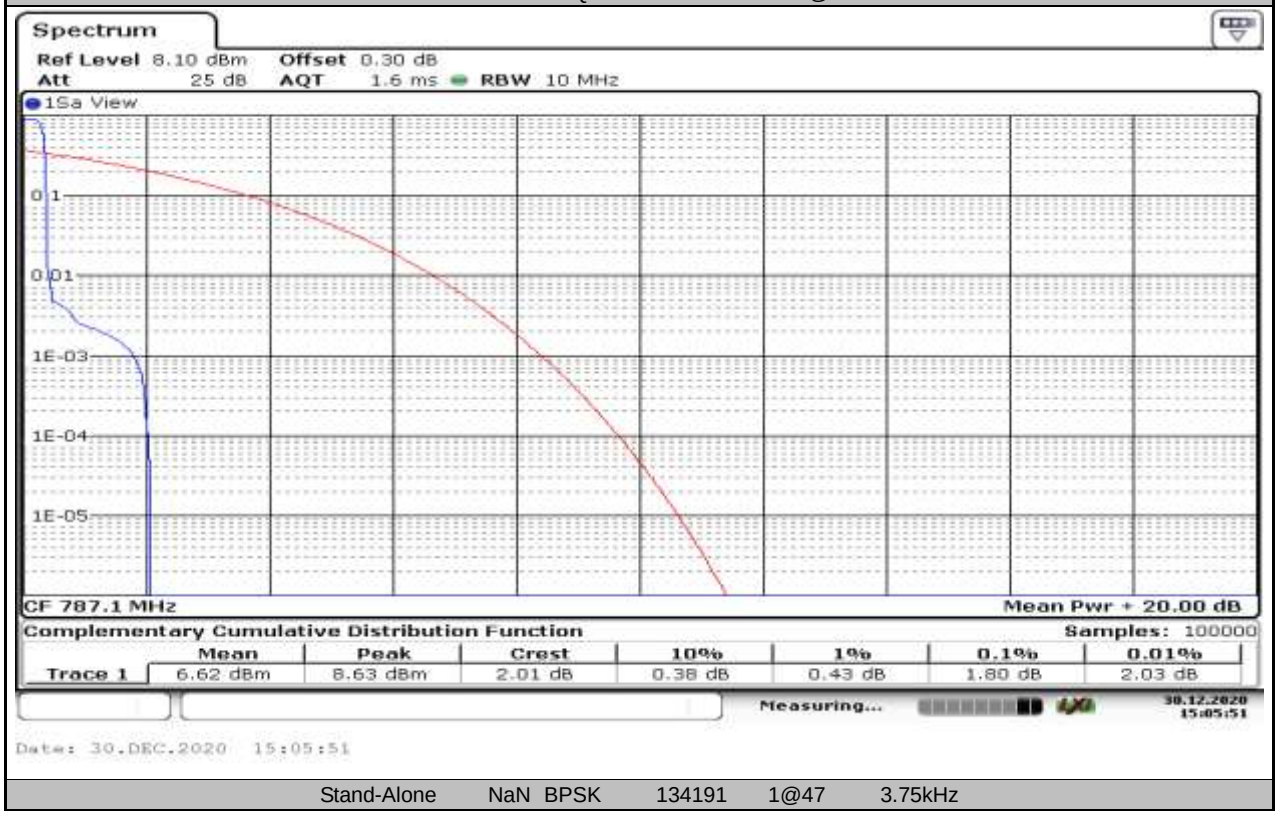
Stand-Alone NaN QPSK 134183 3@3 15kHz



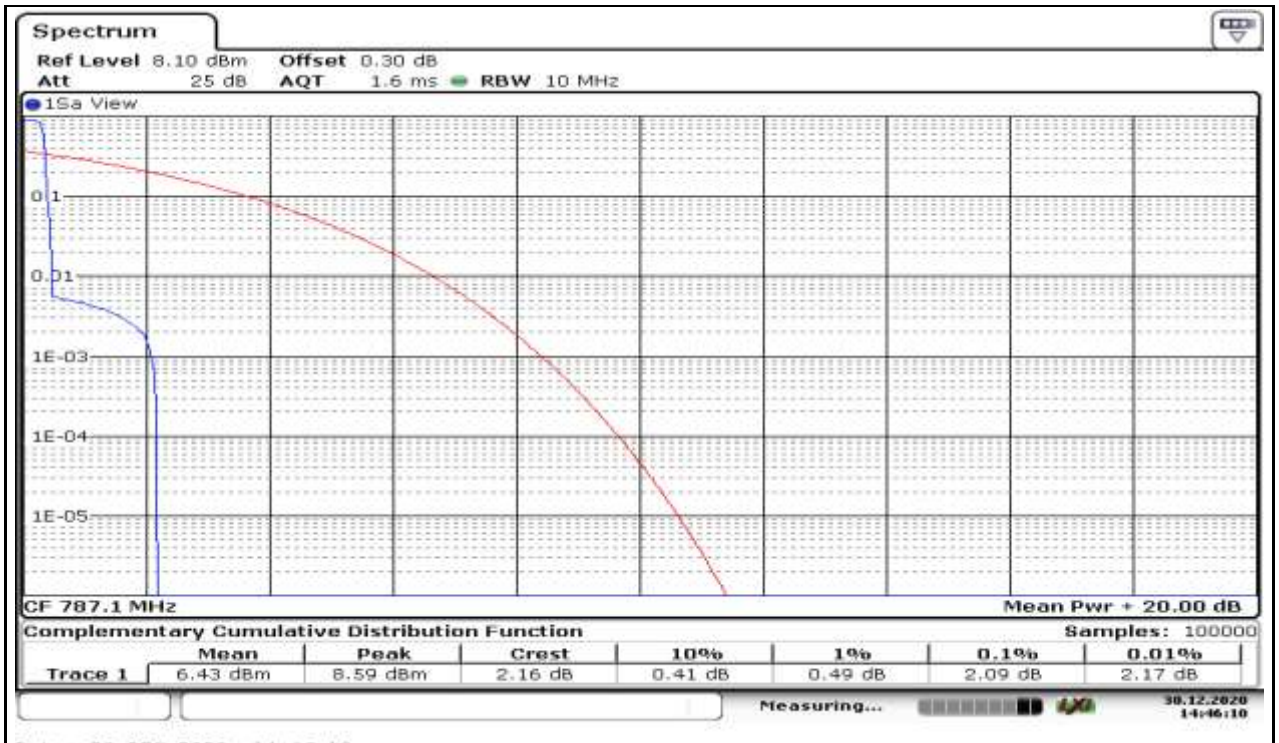
Stand-Alone NaN BPSK 134191 1@0 3.75kHz



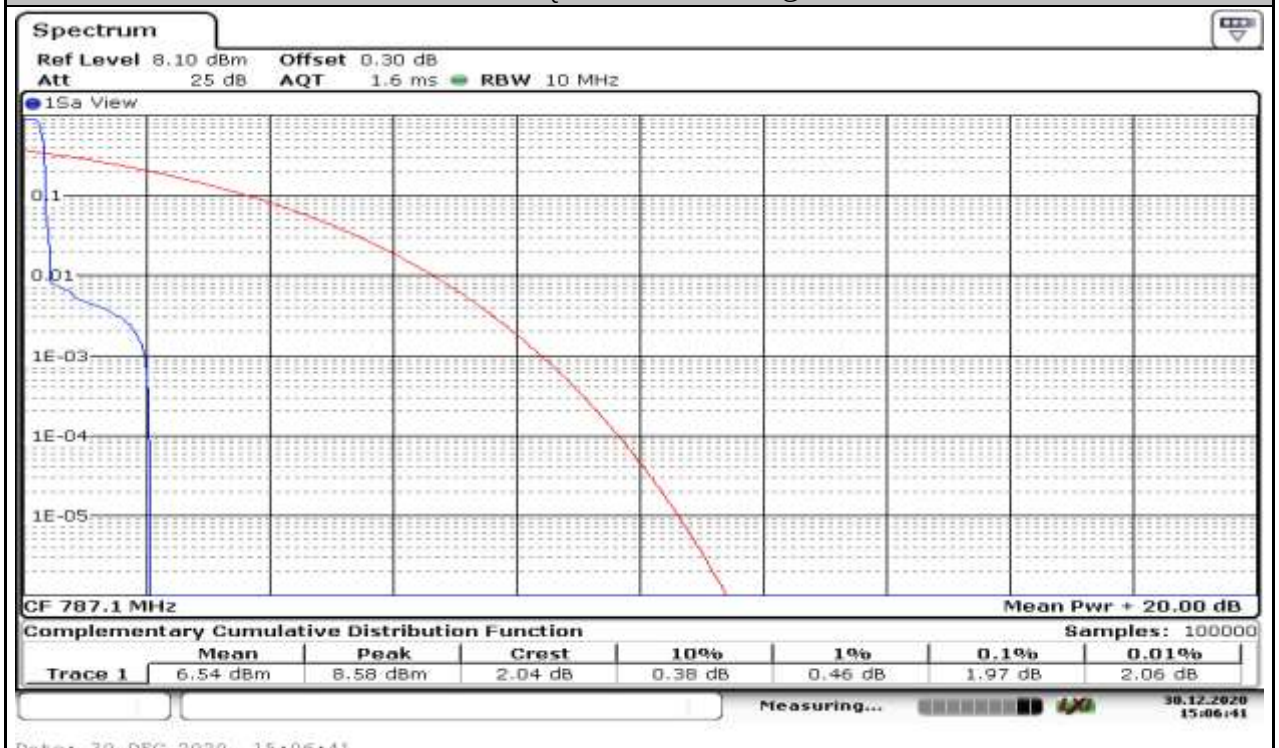
Stand-Alone	NaN	QPSK	134191	1@0	3.75kHz



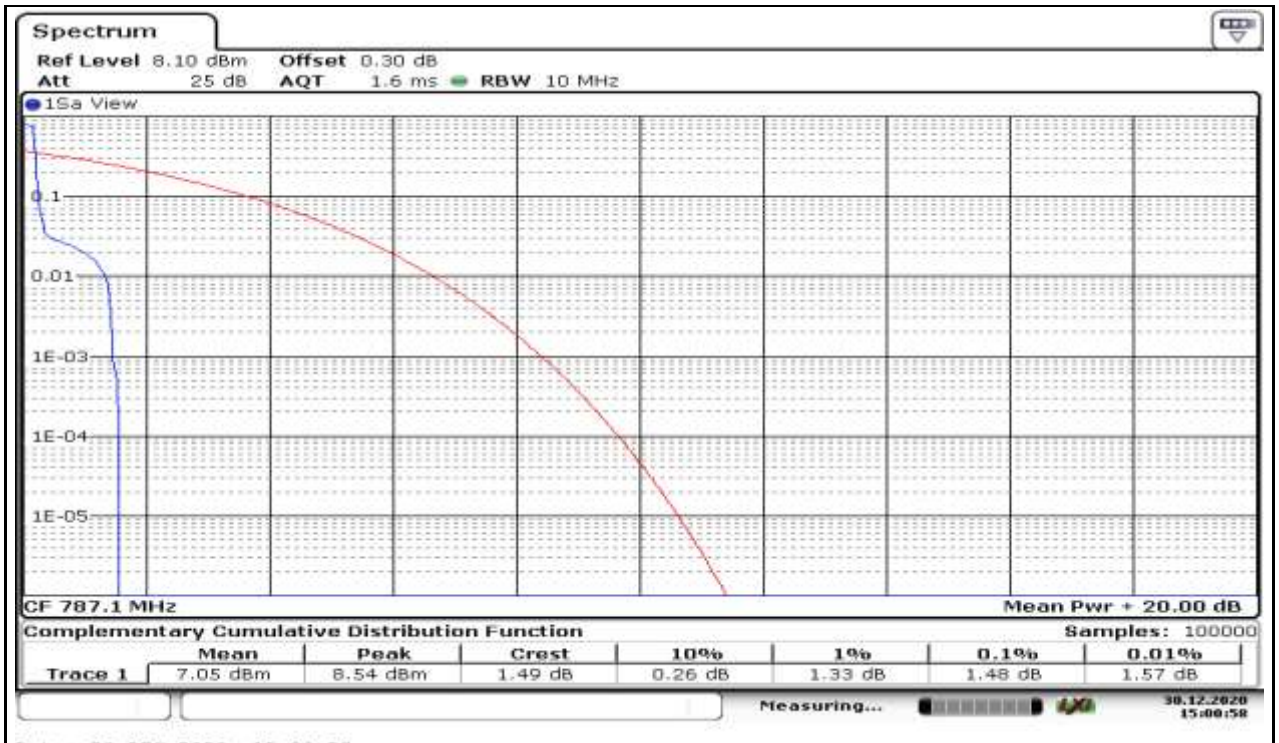
Stand-Alone	NaN	BPSK	134191	1@47	3.75kHz



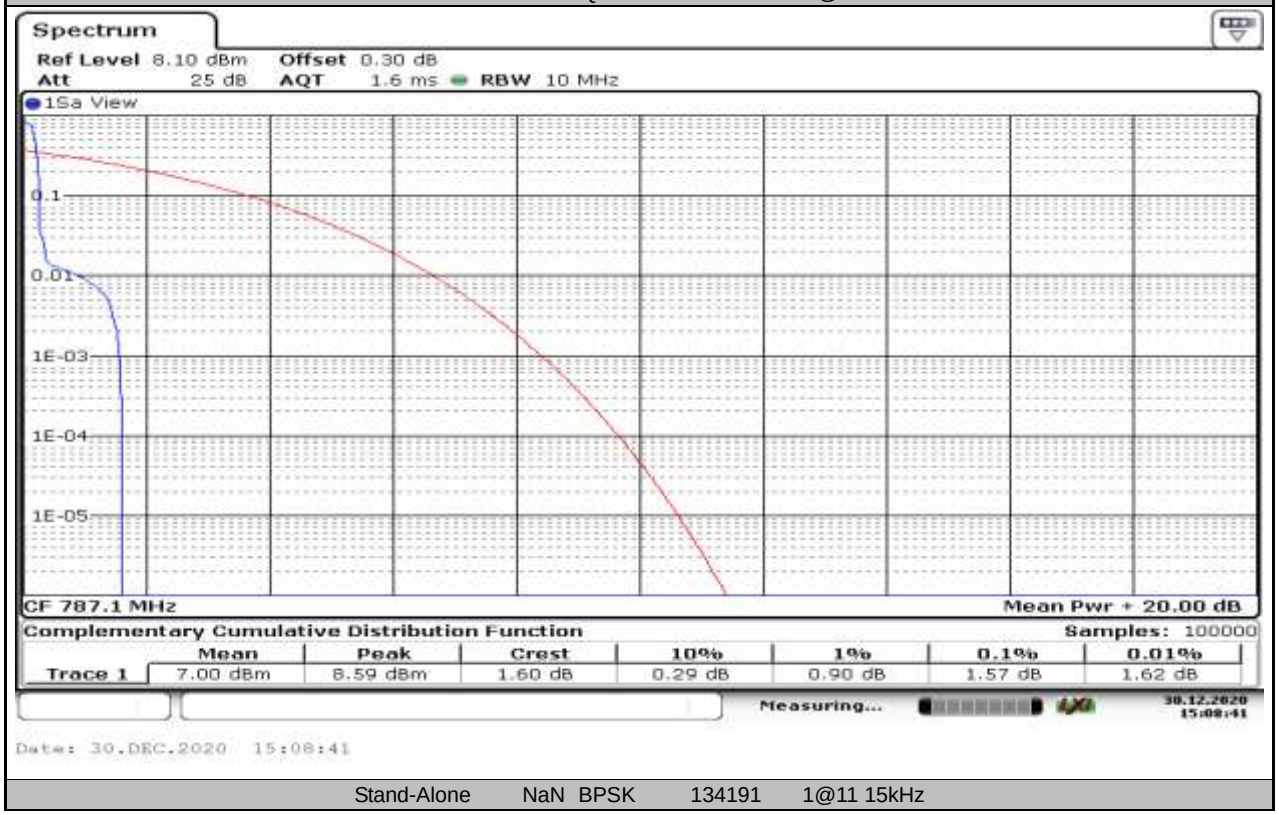
Stand-Alone	NaN	QPSK	134191	1@47	3.75kHz



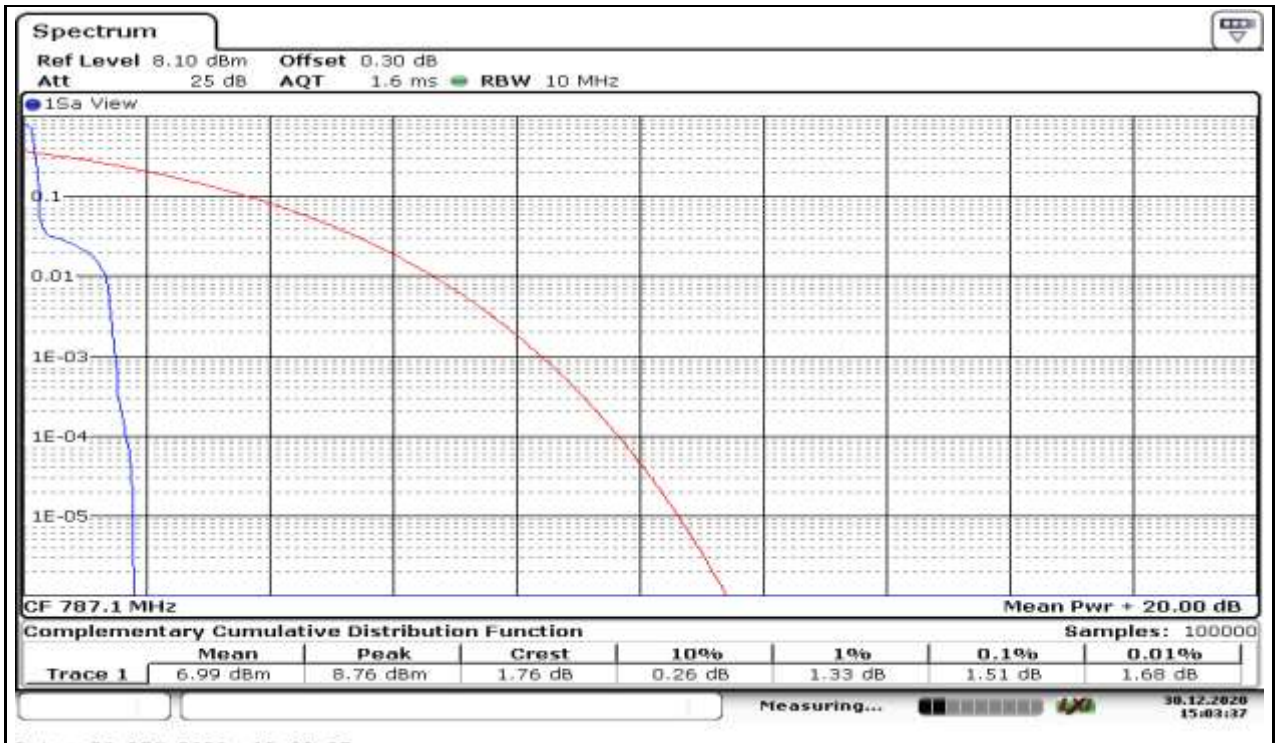
Stand-Alone	NaN	BPSK	134191	1@0	15kHz



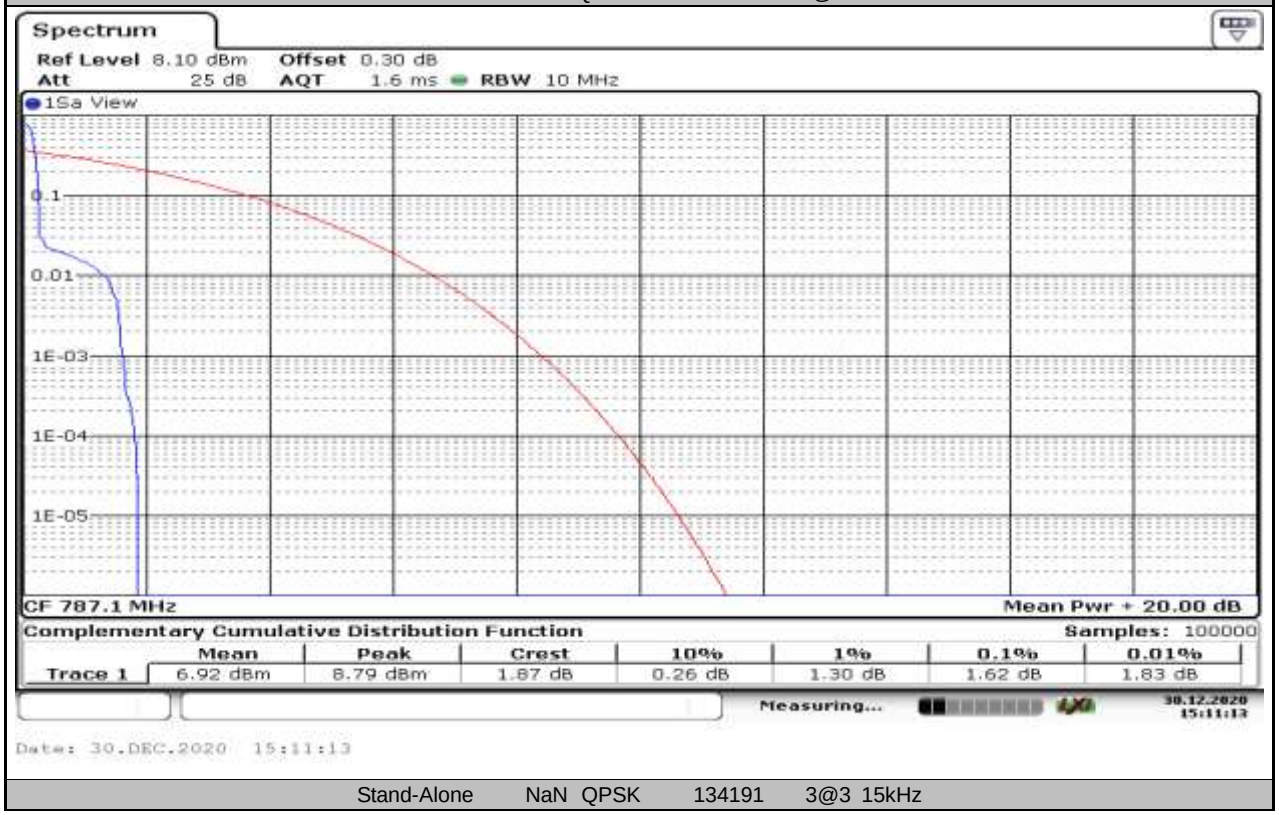
Stand-Alone NaN QPSK 134191 1@0 15kHz



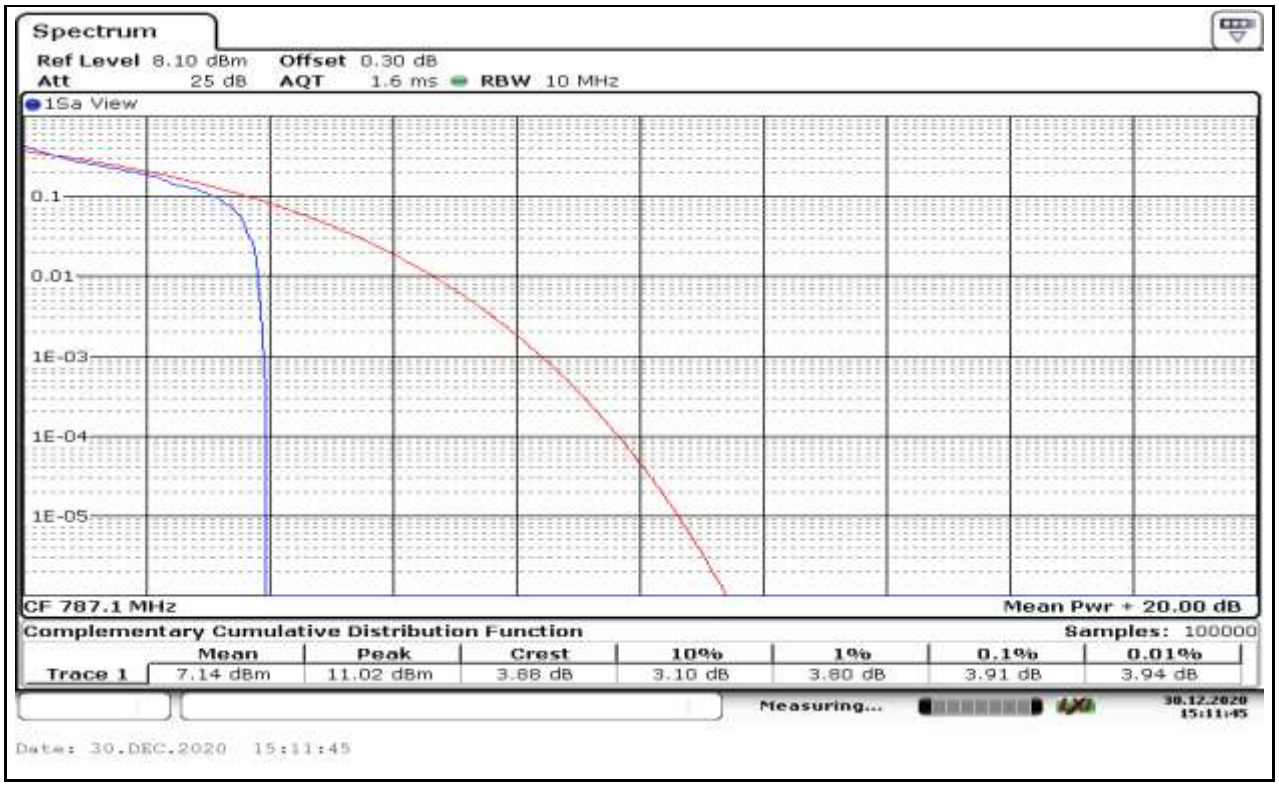
Stand-Alone NaN BPSK 134191 1@11 15kHz



Stand-Alone NaN QPSK 134191 1@11 15kHz



Stand-Alone NaN QPSK 134191 3@3 15kHz


Spectrum
Ref Level 8.10 dBm Offset 0.30 dB
Att 25 dB AQT 1.6 ms RBW 10 MHz
1Sa View
0.1
0.01
1E-03
1E-04
1E-05
CF 787.1 MHz
Mean Pwr + 20.00 dB
Complementary Cumulative Distribution Function
Samples: 100000
Mean Peak Crest 10% 1% 0.1% 0.01%
Trace 1 7.14 dBm 11.02 dBm 3.88 dB 3.10 dB 3.80 dB 3.91 dB 3.94 dB
Measuring...
30.12.2020 15:11:45
Date: 30.DEC.2020 15:11:45

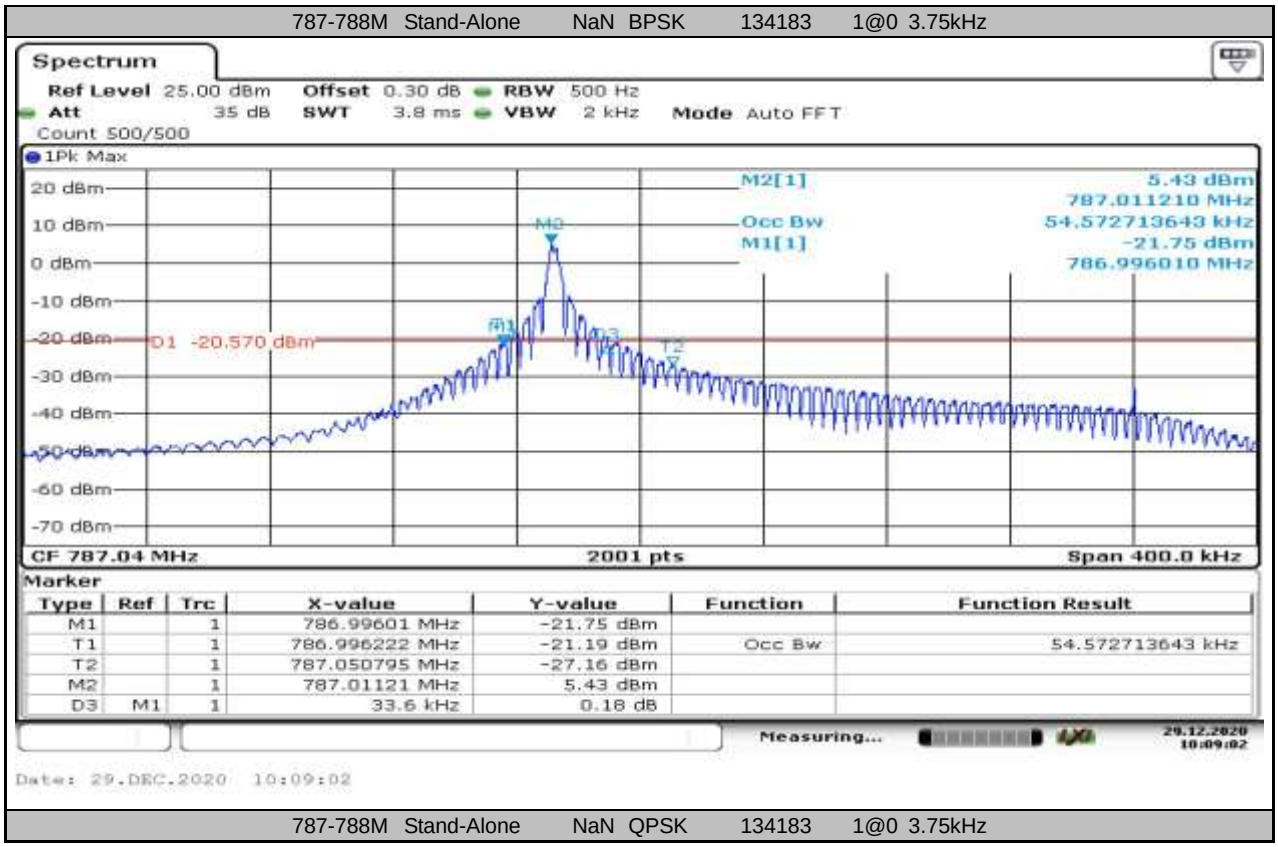
Appendix A.3: 26dB Emission Bandwidth and Occupied Bandwidth for NB

Test Result

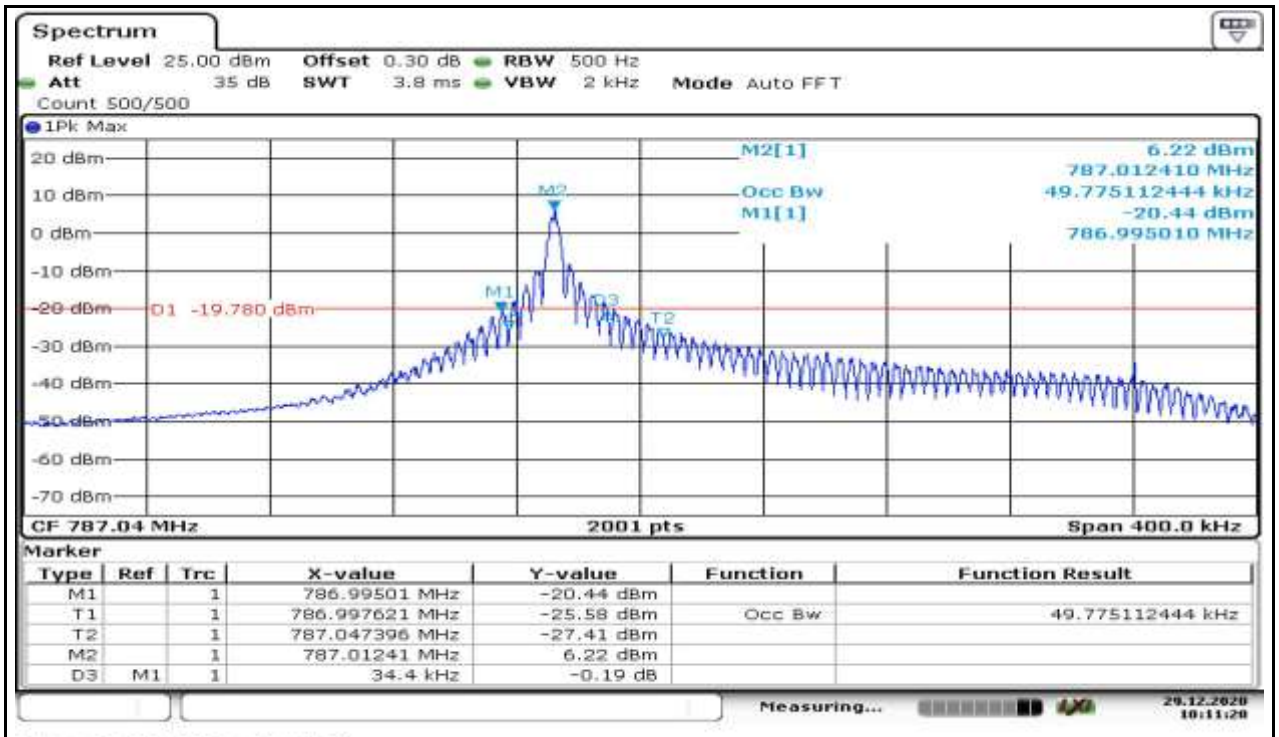
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	26dB Bandwidth (MHz)	Occupied Bandwidth (MHz)	Verdict
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	3.75kHz	0.0336	0.0546	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	3.75kHz	0.0344	0.0500	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	15kHz	0.117	0.126	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	15kHz	0.129	0.127	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	12@0	15kHz	0.244	0.186	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	3.75kHz	0.0372	0.0530	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	3.75kHz	0.0412	0.0530	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	15kHz	0.117	0.130	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	15kHz	0.131	0.128	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	12@0	15kHz	0.247	0.184	PASS

Test Graphs

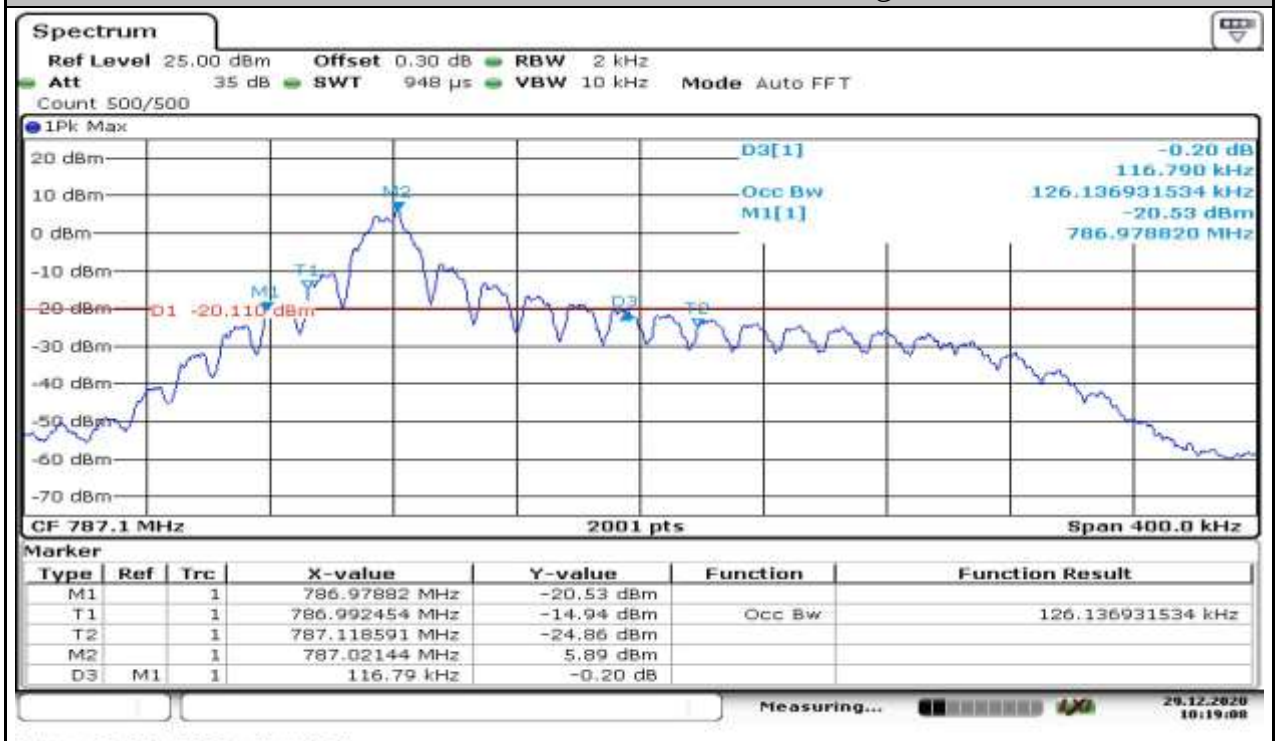
787-788M Stand-Alone NaN BPSK 134183 1@0 3.75kHz



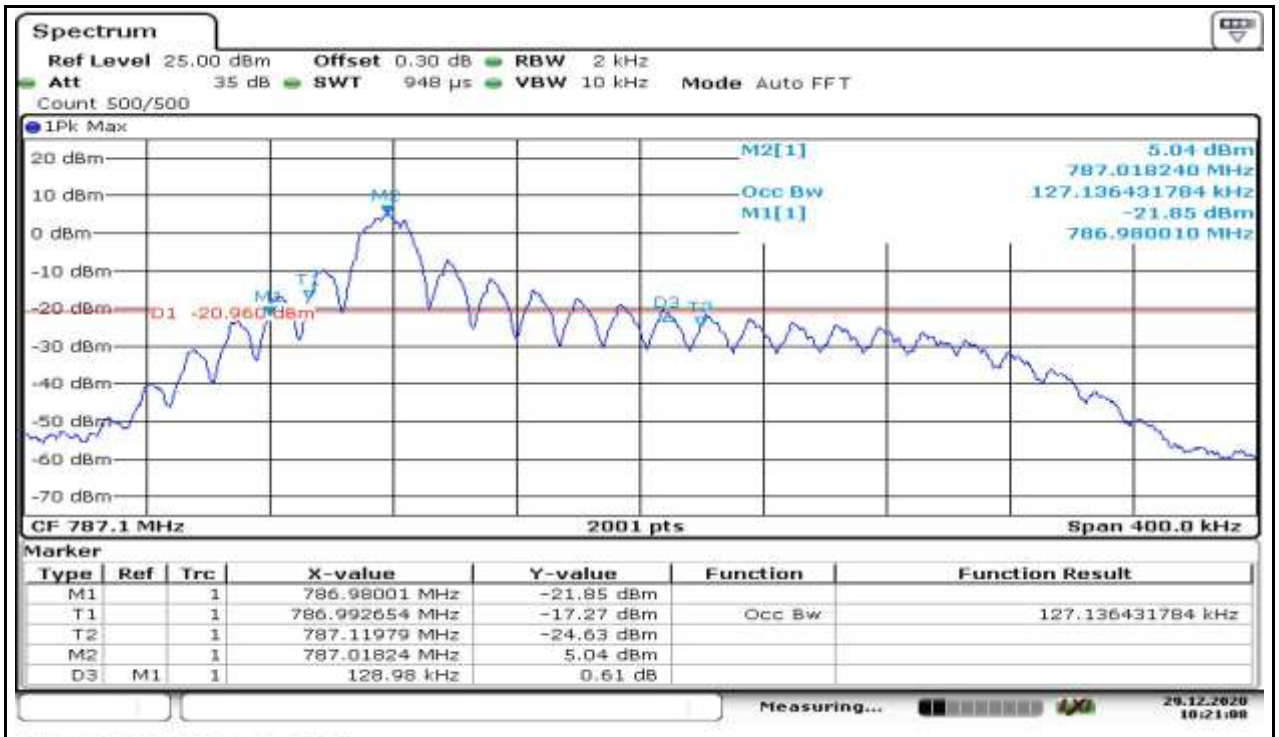
787-788M Stand-Alone NaN QPSK 134183 1@0 3.75kHz



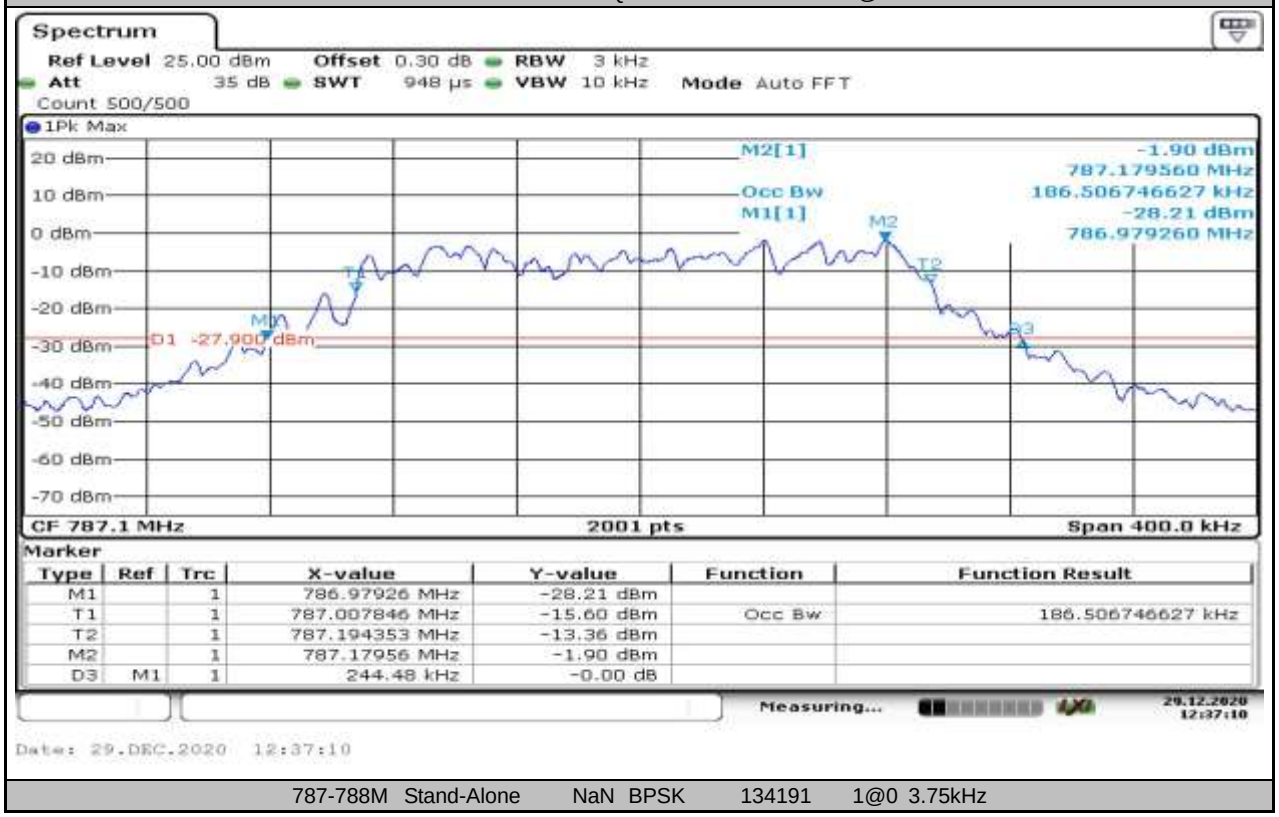
787-788M Stand-Alone NaN BPSK 134183 1@0 15kHz



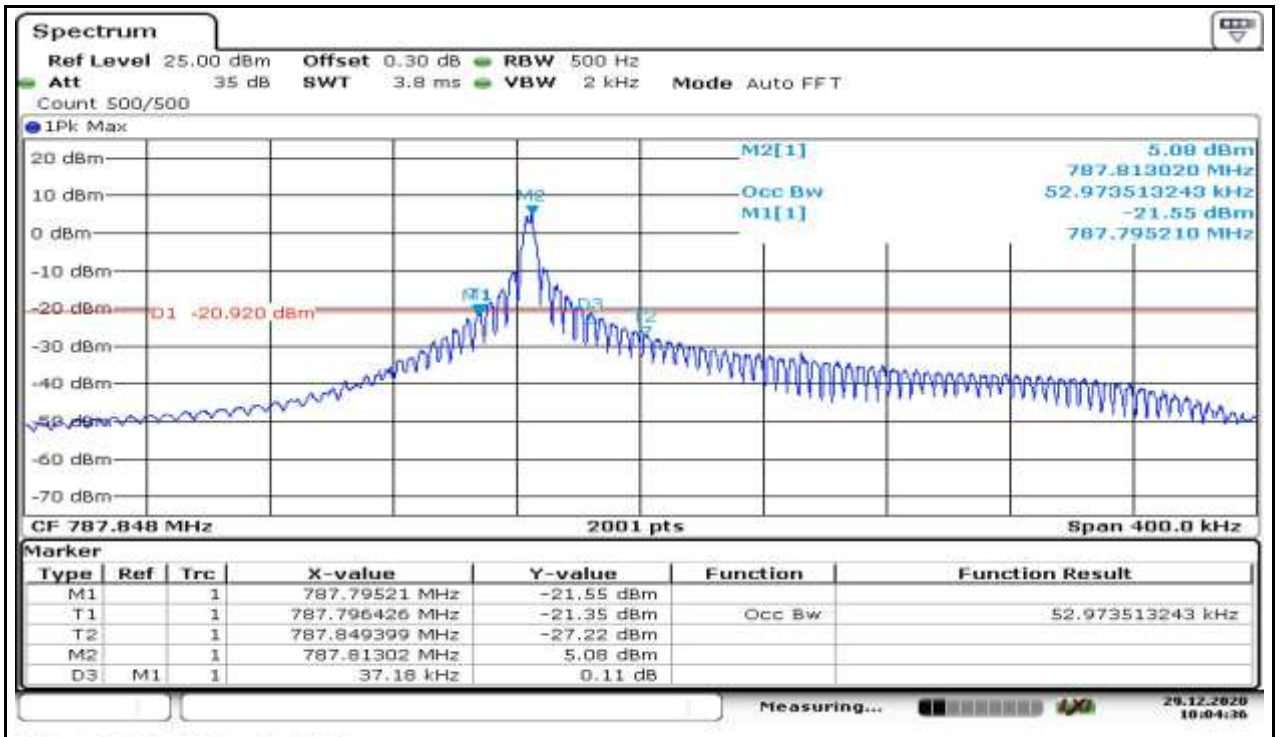
787-788M Stand-Alone NaN QPSK 134183 1@0 15kHz



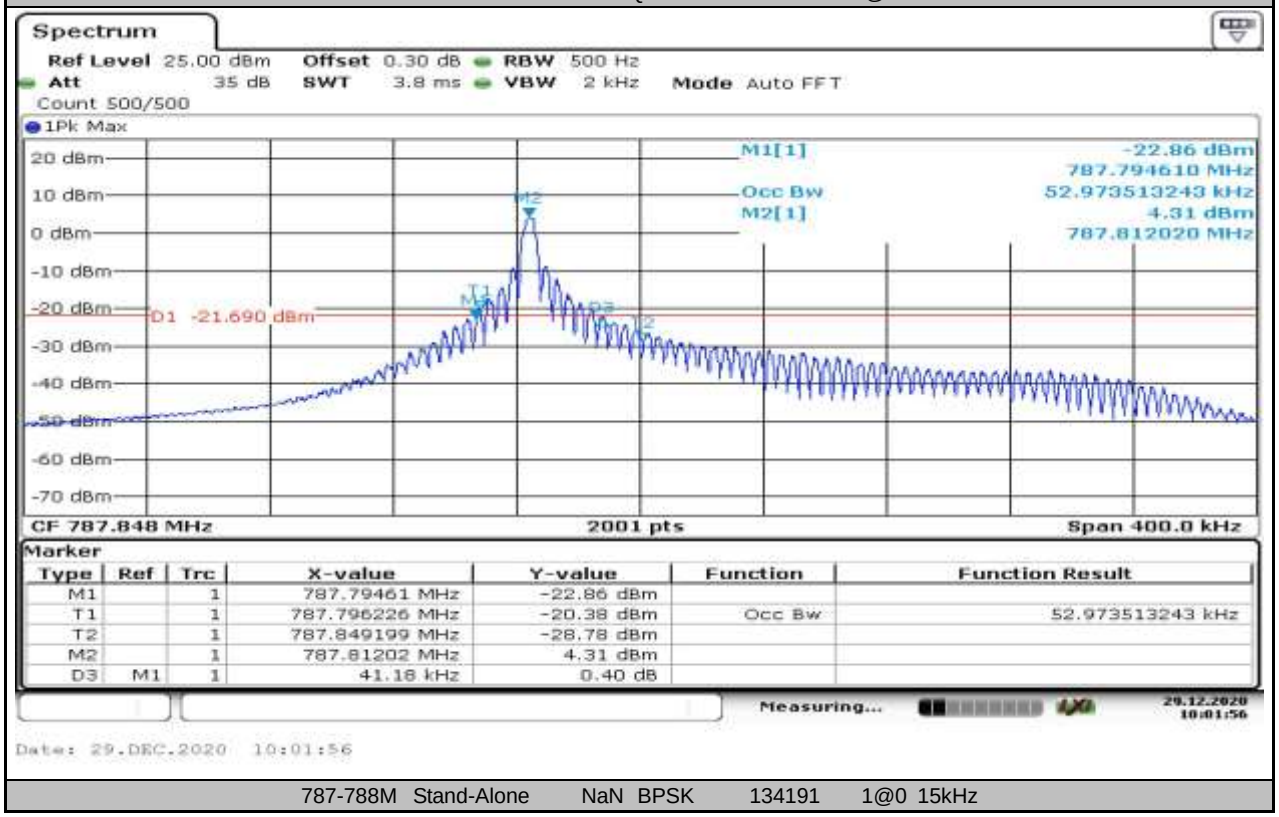
787-788M Stand-Alone NaN QPSK 134183 12@0 15kHz



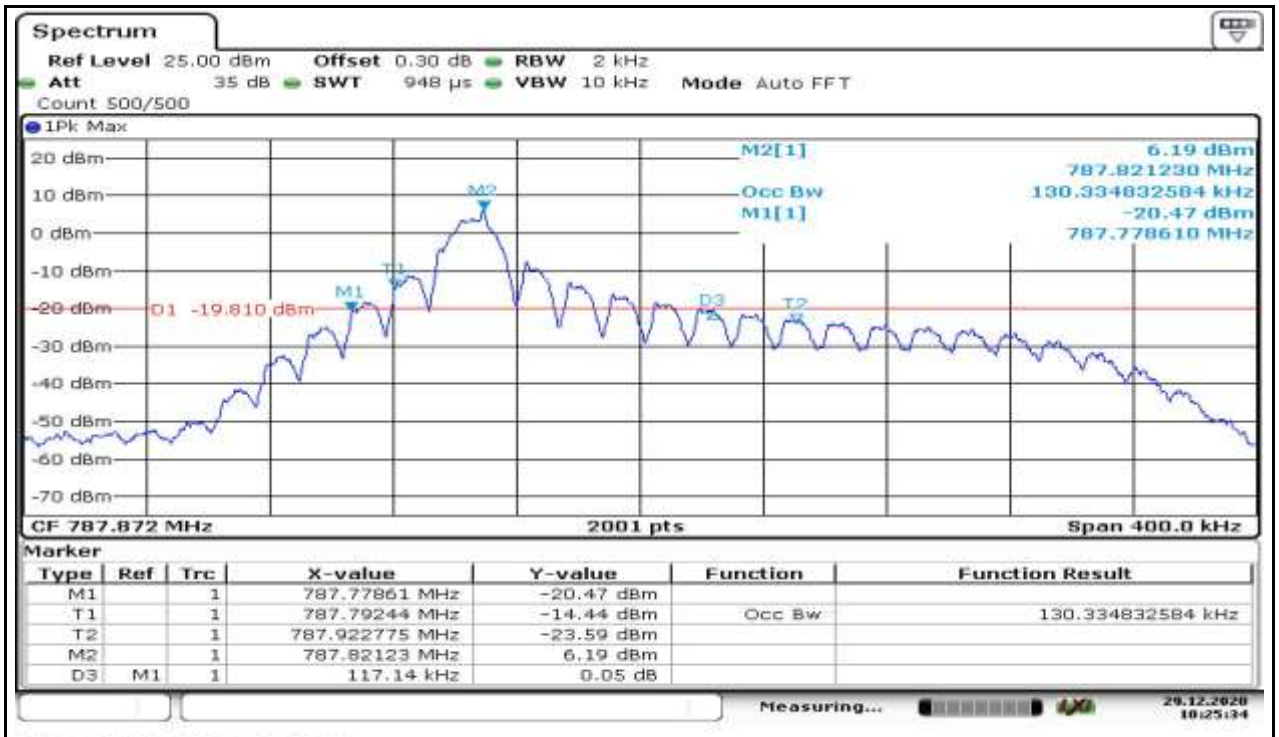
787-788M Stand-Alone NaN BPSK 134191 1@0 3.75kHz



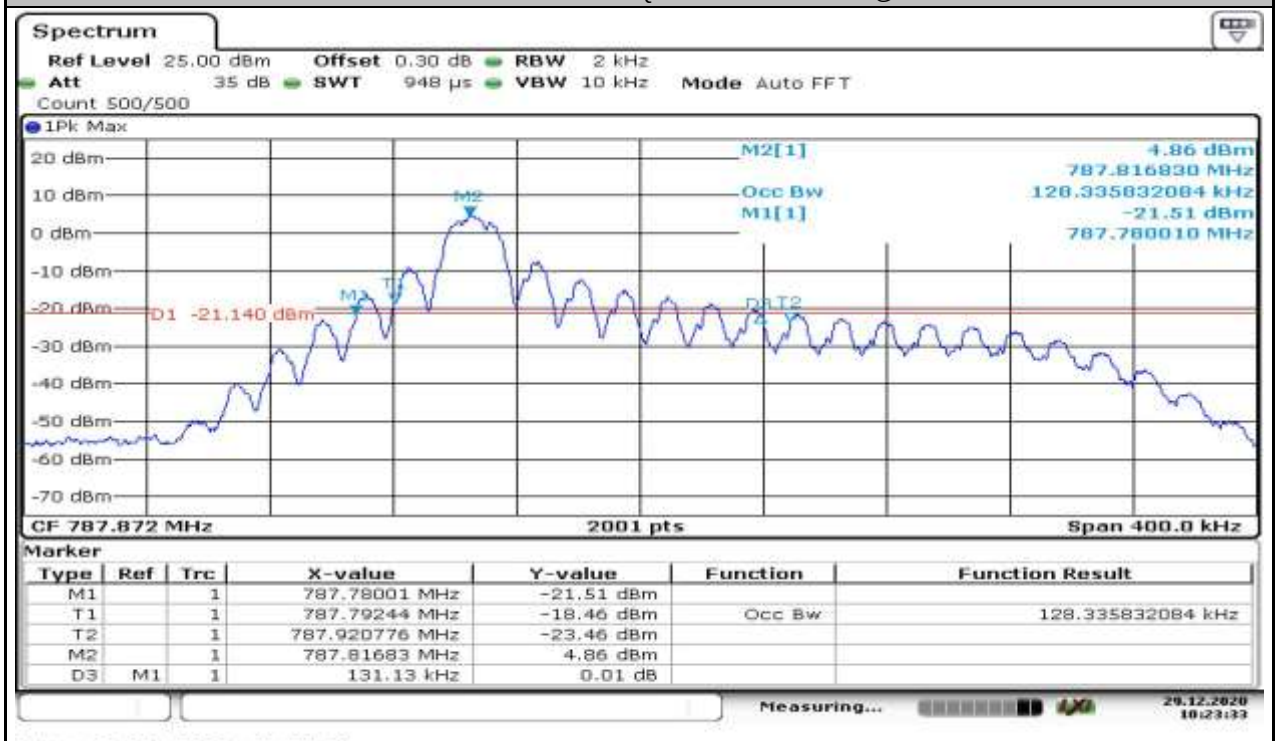
787-788M Stand-Alone NaN QPSK 134191 1@0 3.75kHz



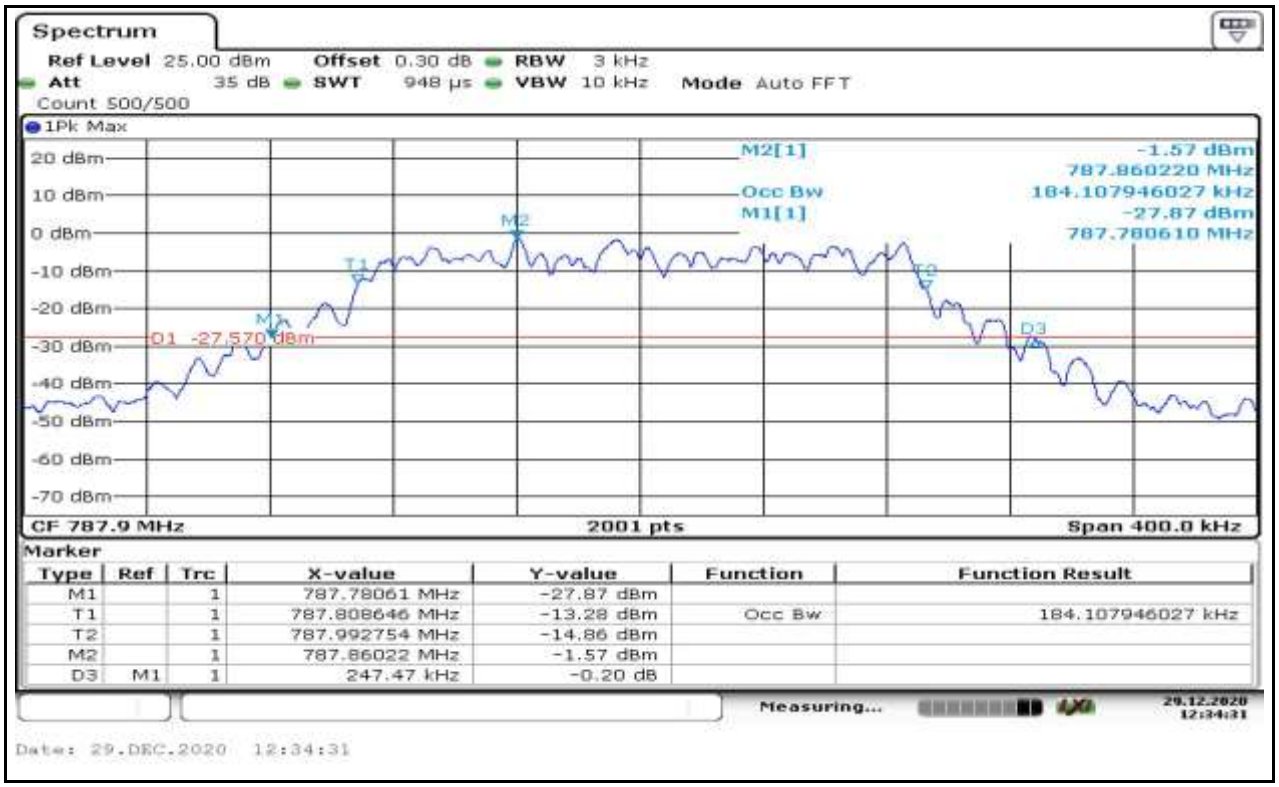
787-788M Stand-Alone NaN BPSK 134191 1@0 15kHz



787-788M Stand-Alone NaN QPSK 134191 1@0 15kHz



787-788M Stand-Alone NaN QPSK 134191 12@0 15kHz


Spectrum
Ref Level 25.00 dBm Offset 0.30 dB RBW 3 kHz
Att 35 dB SWT 948 µs VBW 10 kHz Mode Auto FFT
Count 500/500
1Pk Max
M2[1] -1.57 dBm
787.860220 MHz
Occ Bw 184.107946027 kHz
M1[1] -27.87 dBm
787.780610 MHz
D1 -27.570 dBm
CF 787.9 MHz
2001 pts
Span 400.0 kHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 787.78061 MHz -27.87 dBm
T1 1 787.808646 MHz -13.28 dBm Occ Bw 184.107946027 kHz
T2 1 787.992754 MHz -14.86 dBm
M2 1 787.86022 MHz -1.57 dBm
D3 M1 1 247.47 kHz -0.20 dB
Measuring...
Date: 29.DEC.2020 12:34:31

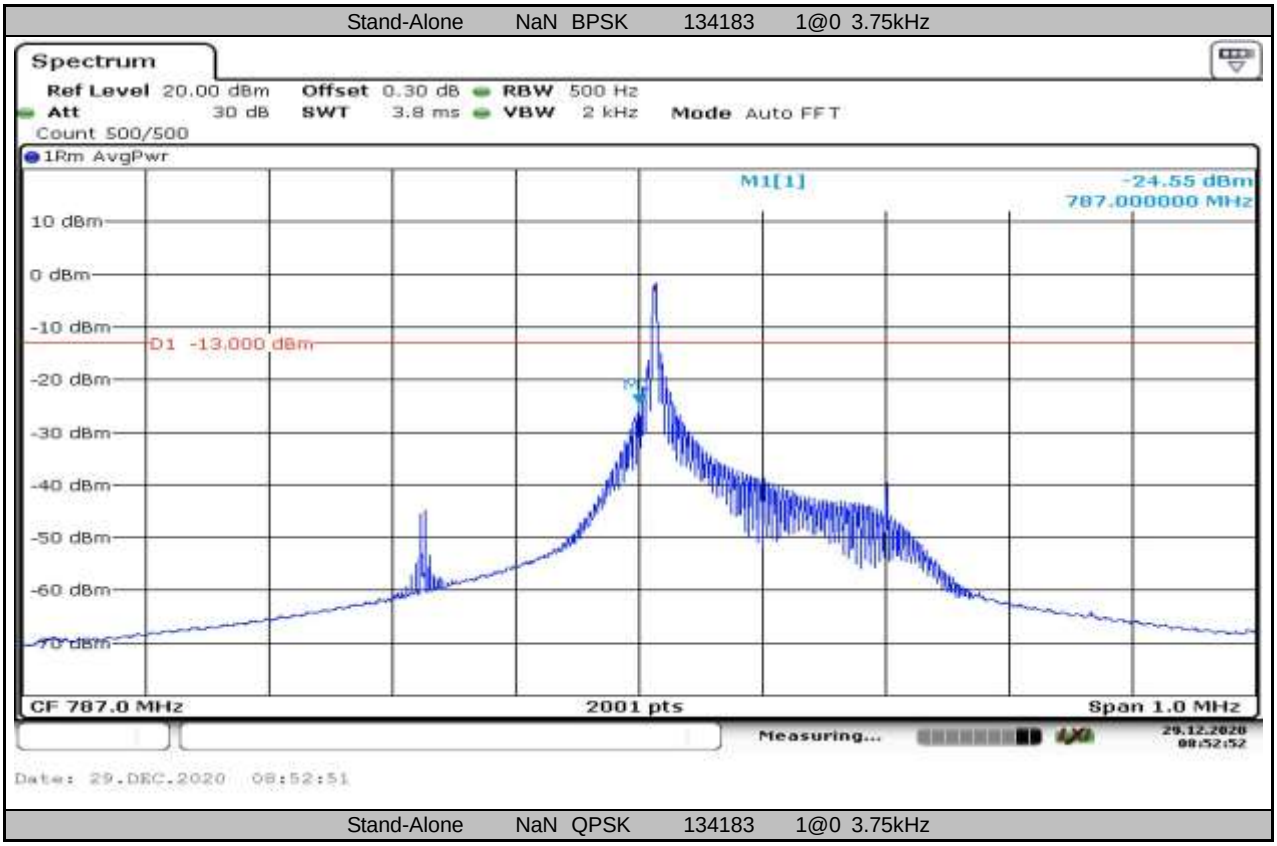
Appendix A.4: Band Edge for NB

Test Result

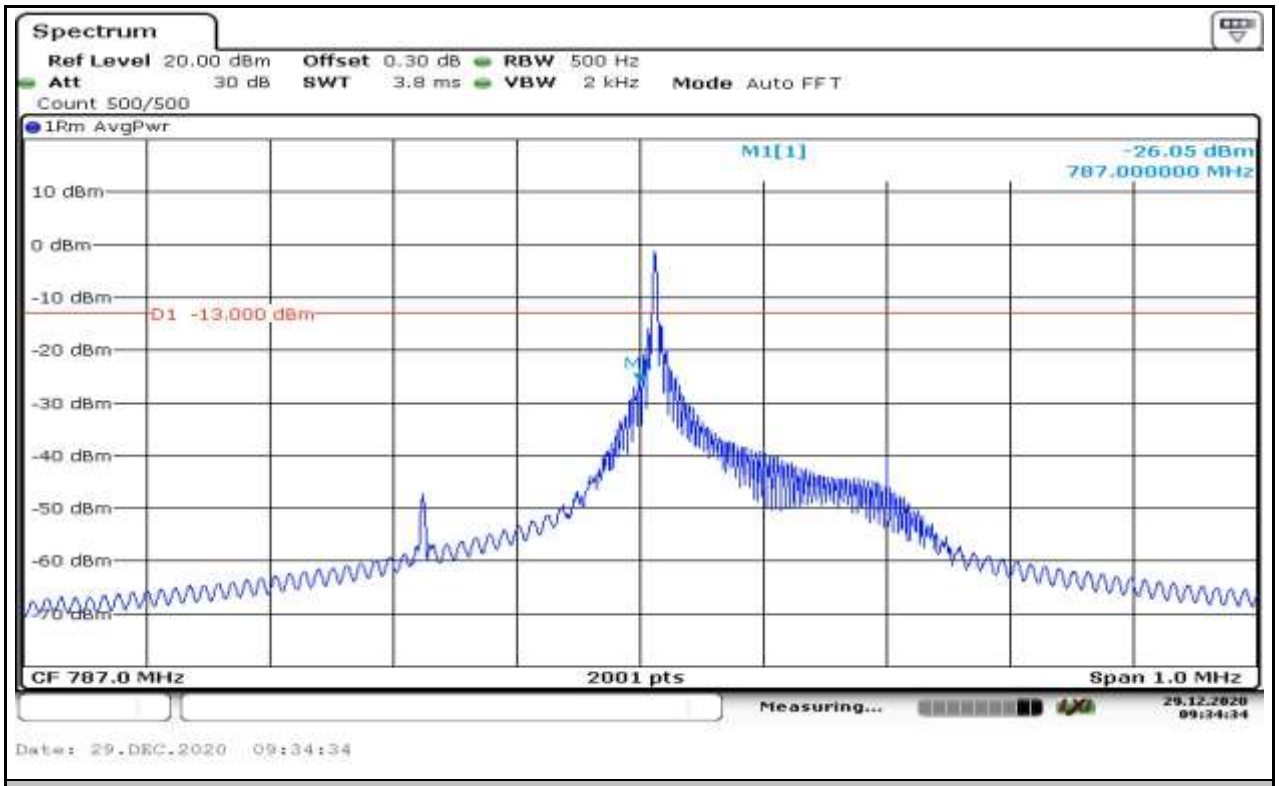
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Result (dBm)	Verdict
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	3.75kHz	-24.55	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	3.75kHz	-26.05	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@47	3.75kHz	-52.92	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@47	3.75kHz	-47.41	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	15kHz	-16.36	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	15kHz	-17.50	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@11	15kHz	-39.31	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@11	15kHz	-38.86	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	12@0	15kHz	-25.64	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	3.75kHz	-46.73	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	3.75kHz	-46.01	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@47	3.75kHz	-29.28	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@47	3.75kHz	-27.30	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	15kHz	-38.27	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	15kHz	-40.28	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@11	15kHz	-18.55	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@11	15kHz	-19.89	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	12@0	15kHz	-25.89	PASS

Test Graphs

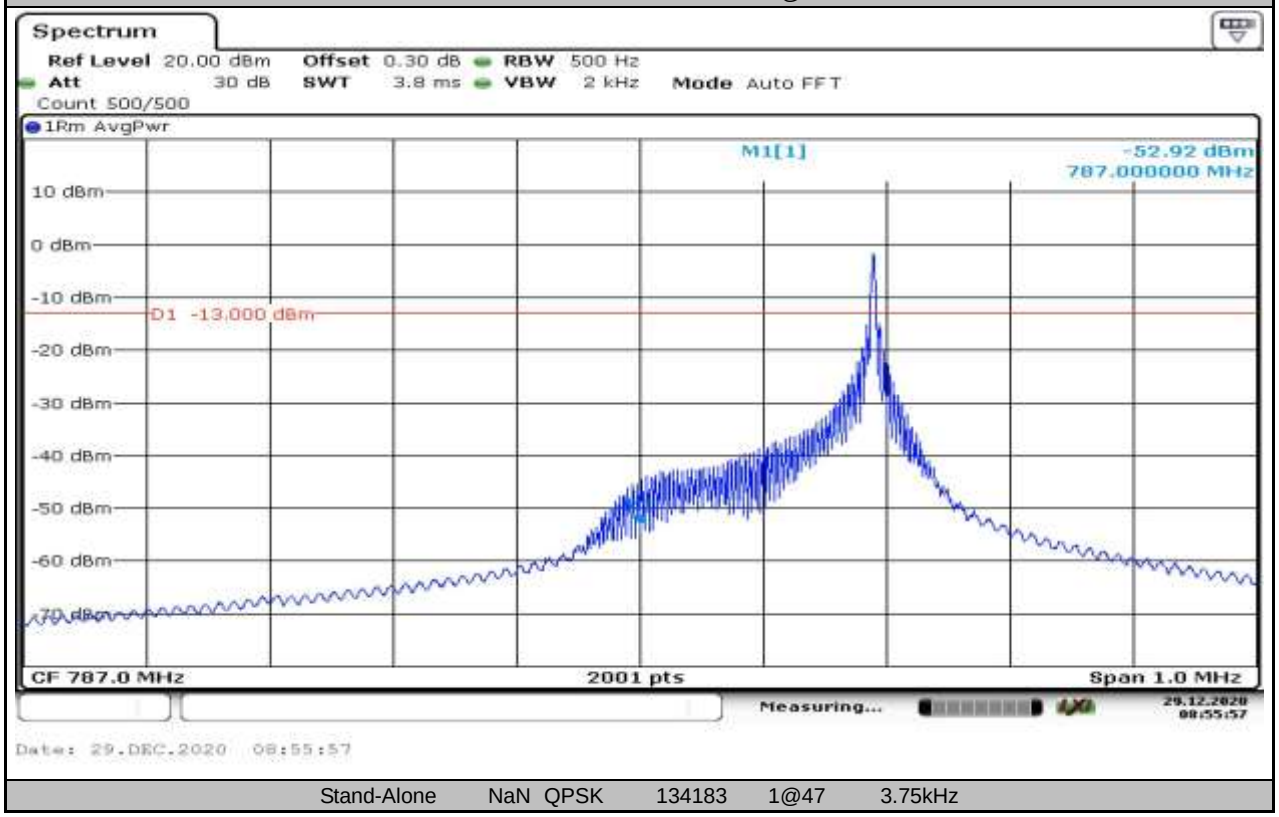
Stand-Alone NaN BPSK 134183 1@0 3.75kHz



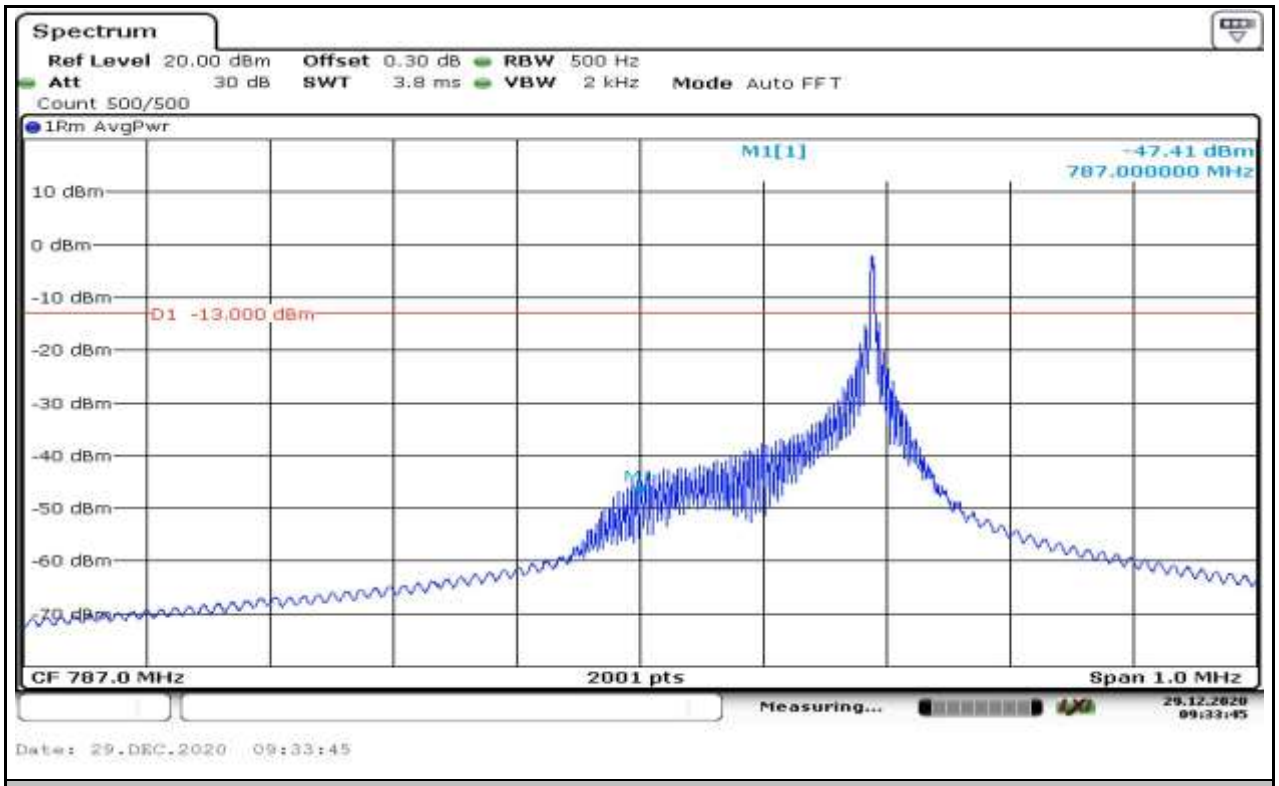
Stand-Alone NaN QPSK 134183 1@0 3.75kHz



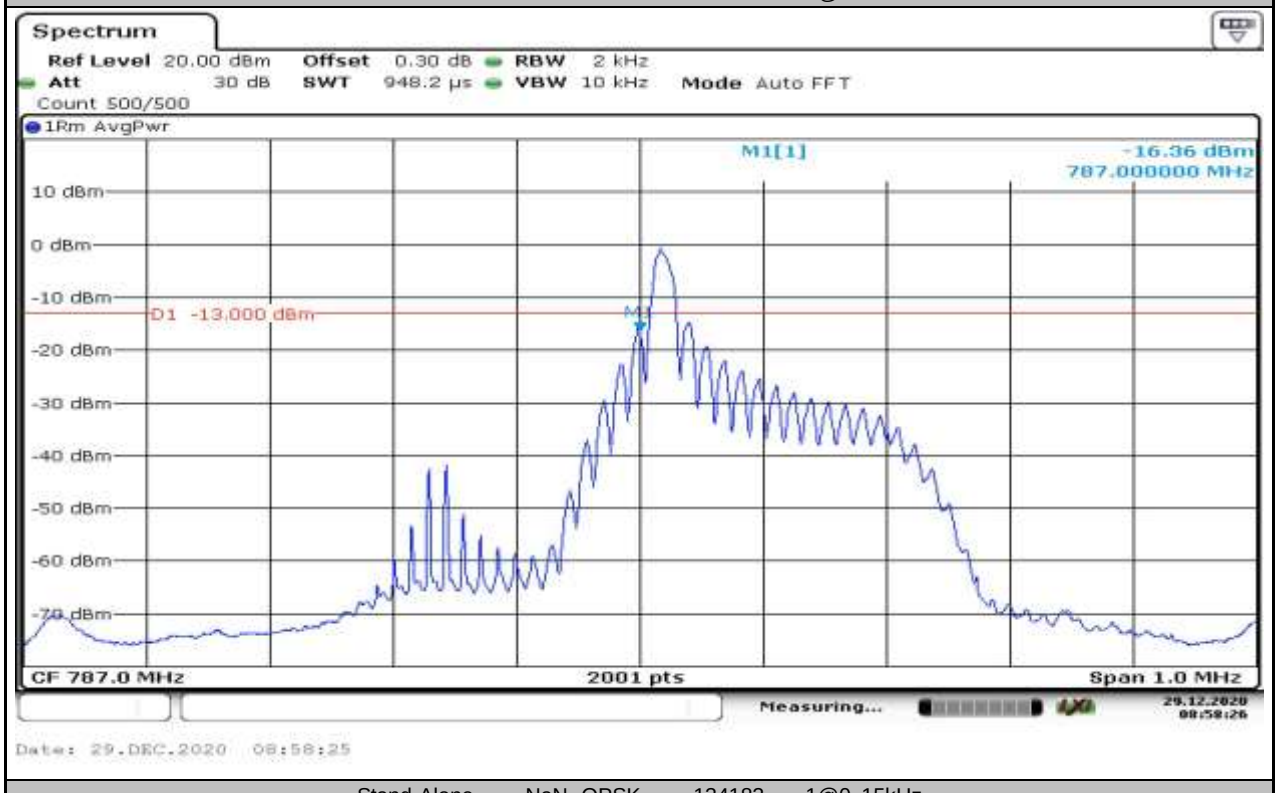
Stand-Alone	NaN	BPSK	134183	1@47	3.75kHz



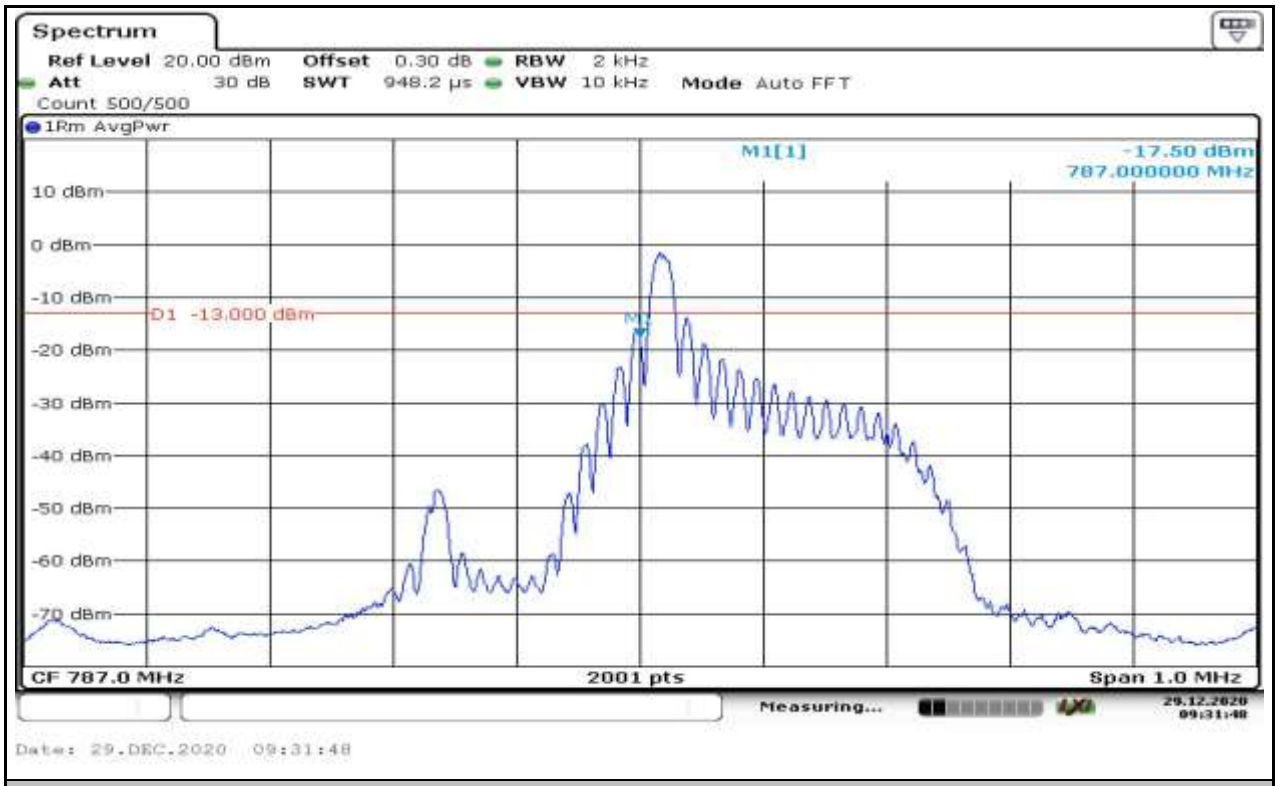
Stand-Alone	NaN	QPSK	134183	1@47	3.75kHz



Stand-Alone NaN BPSK 134183 1@0 15kHz

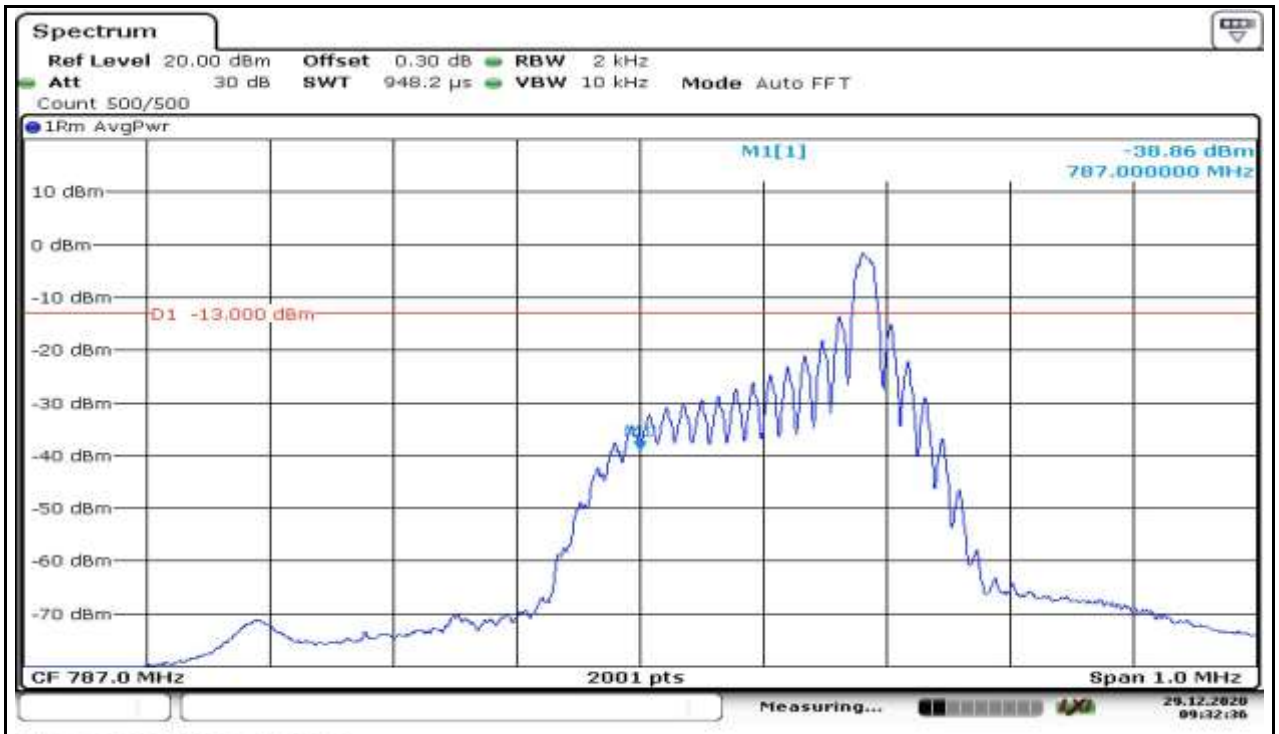


Stand-Alone NaN QPSK 134183 1@0 15kHz

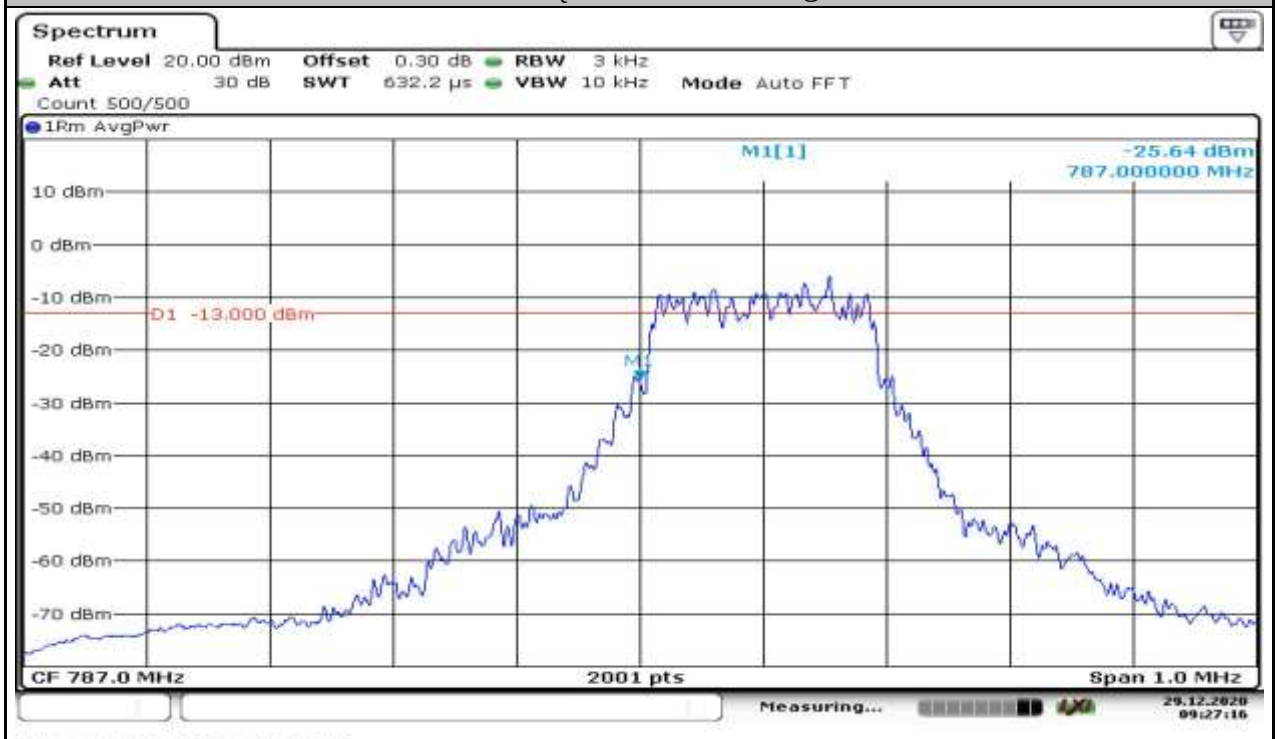


Stand-Alone NaN BPSK 134183 1@11 15kHz

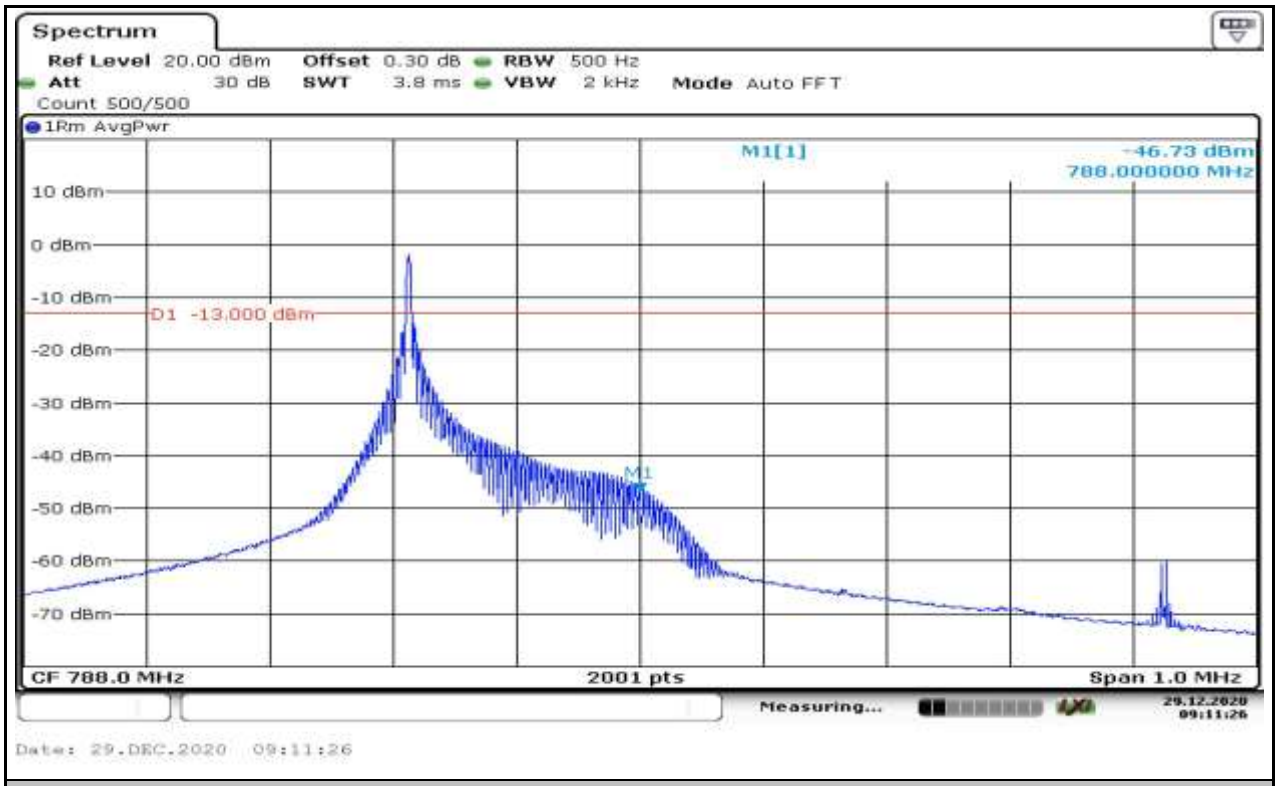
Stand-Alone NaN QPSK 134183 1@11 15kHz



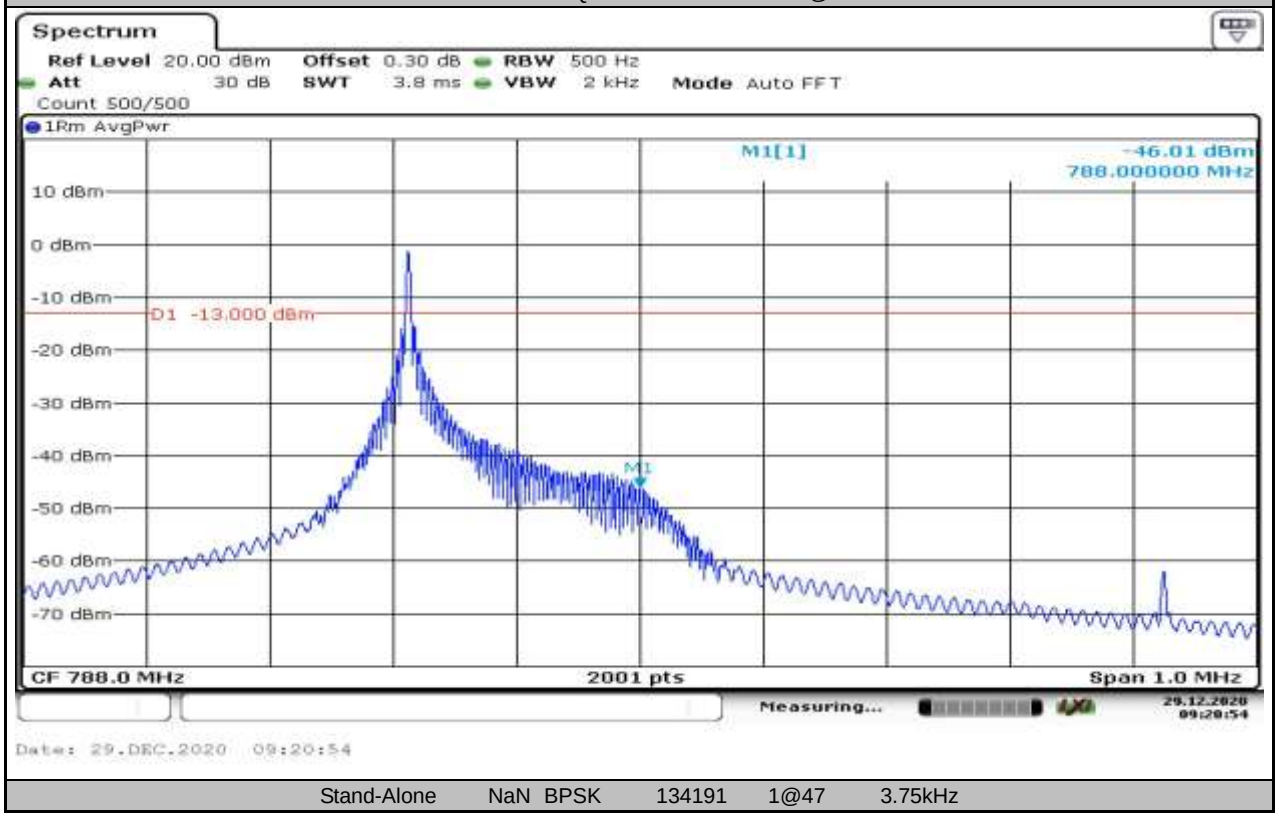
Stand-Alone NaN QPSK 134183 12@0 15kHz



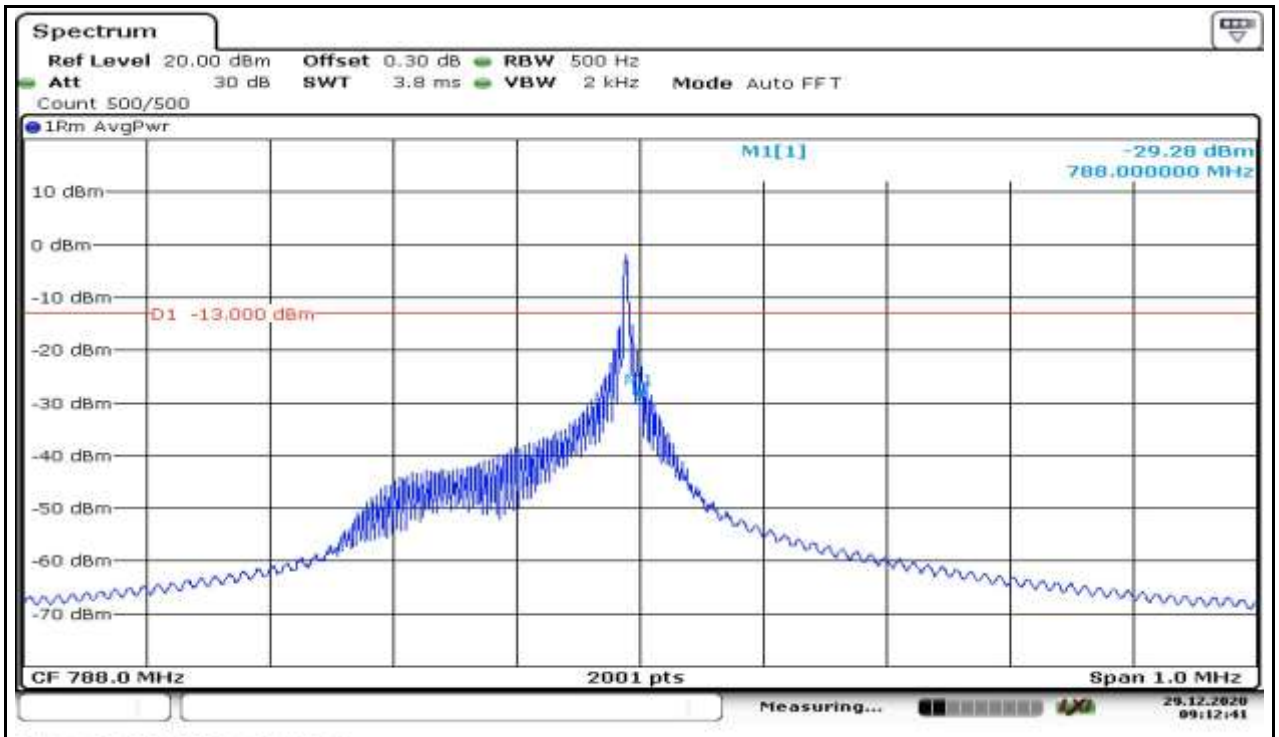
Stand-Alone NaN BPSK 134191 1@0 3.75kHz



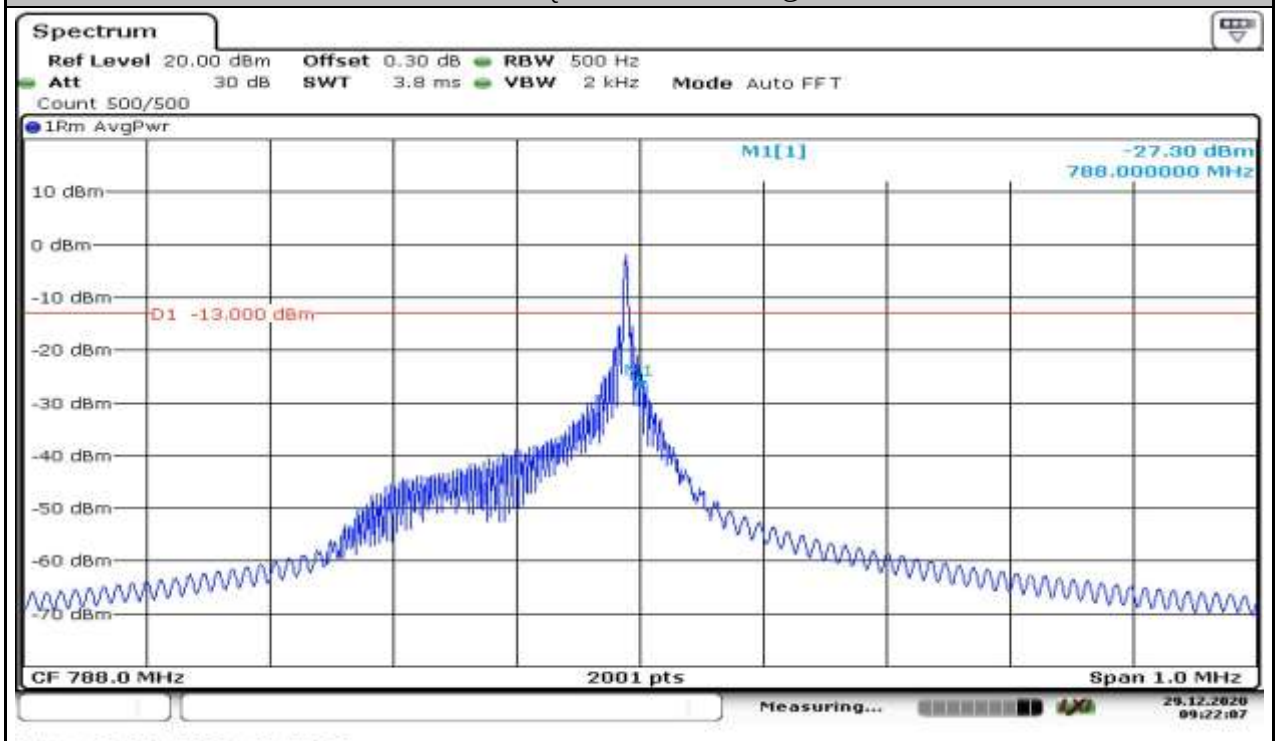
Stand-Alone	NaN	QPSK	134191	1@0	3.75kHz



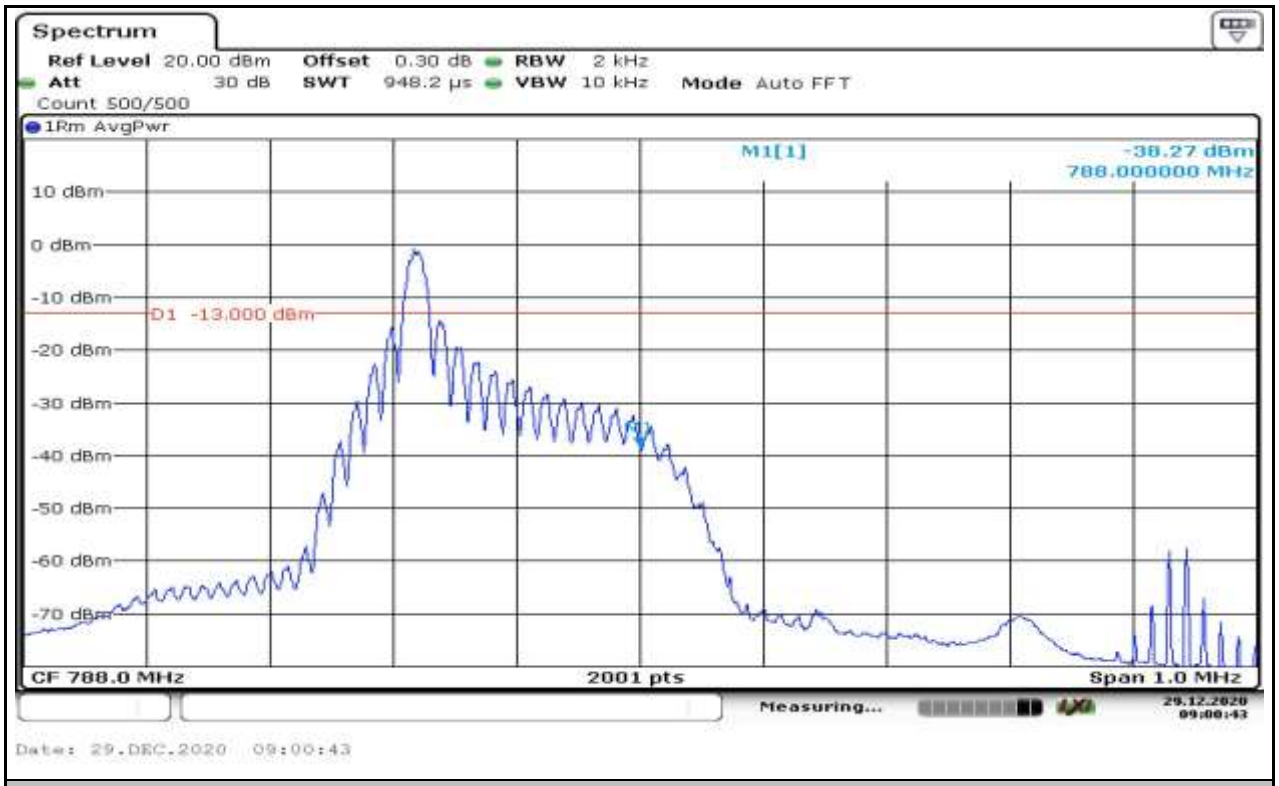
Stand-Alone	NaN	BPSK	134191	1@47	3.75kHz



Stand-Alone NaN QPSK 134191 1@47 3.75kHz



Stand-Alone NaN BPSK 134191 1@0 15kHz



Stand-Alone NaN QPSK 134191 1@0 15kHz

Stand-Alone NaN BPSK 134191 1@11 15kHz

Stand-Alone NaN QPSK 134191 1@11 15kHz

Stand-Alone NaN QPSK 134191 12@0 15kHz

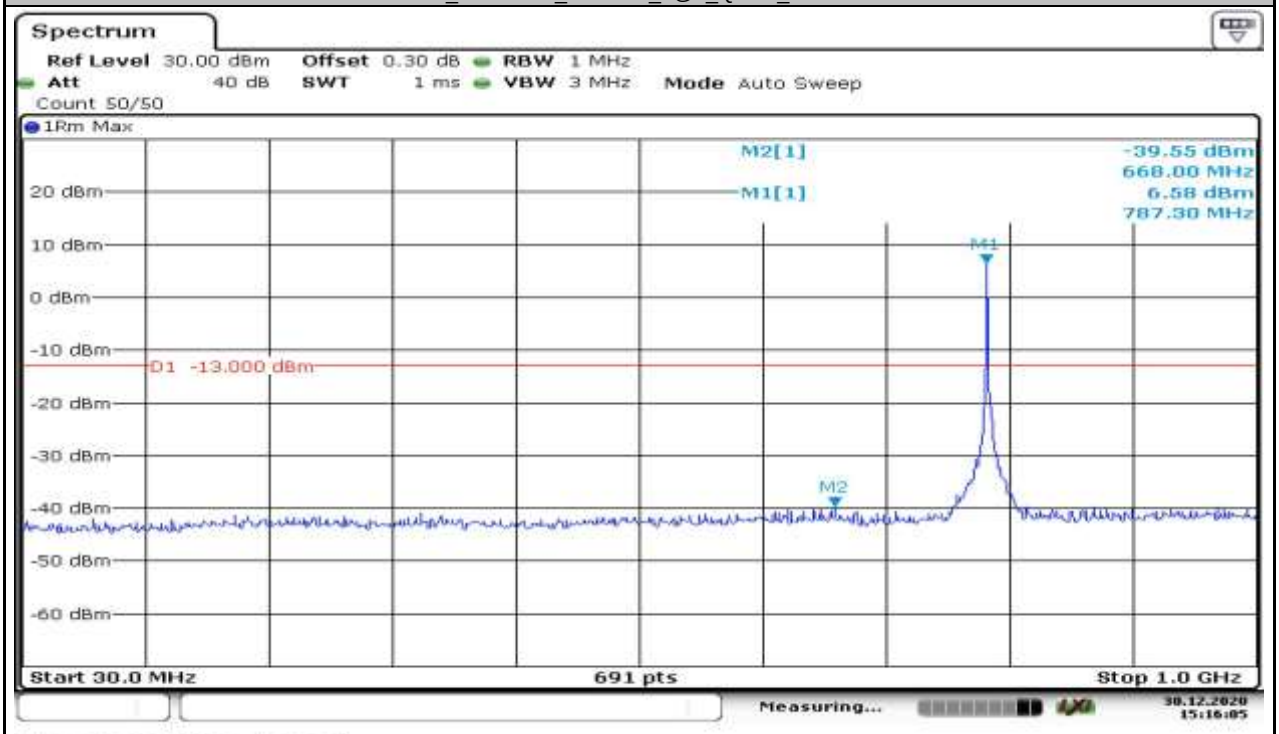

Spectrum
Ref Level 20.00 dBm Offset 0.30 dB RBW 3 kHz
Att 30 dB SWT 632.2 µs VBW 10 kHz Mode Auto FFT
Count 500/500
1Rm AvgPwr
M1[1]
-25.89 dBm
788.000000 MHz
10 dBm
0 dBm
-10 dBm
D1 -13.000 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 788.0 MHz
2001 pts
Span 1.0 MHz
Measuring...
29.12.2020
09:24:51
Date: 29.DEC.2020 09:24:51

Appendix A.5: Conducted Spurious Emission for NB
Test Result

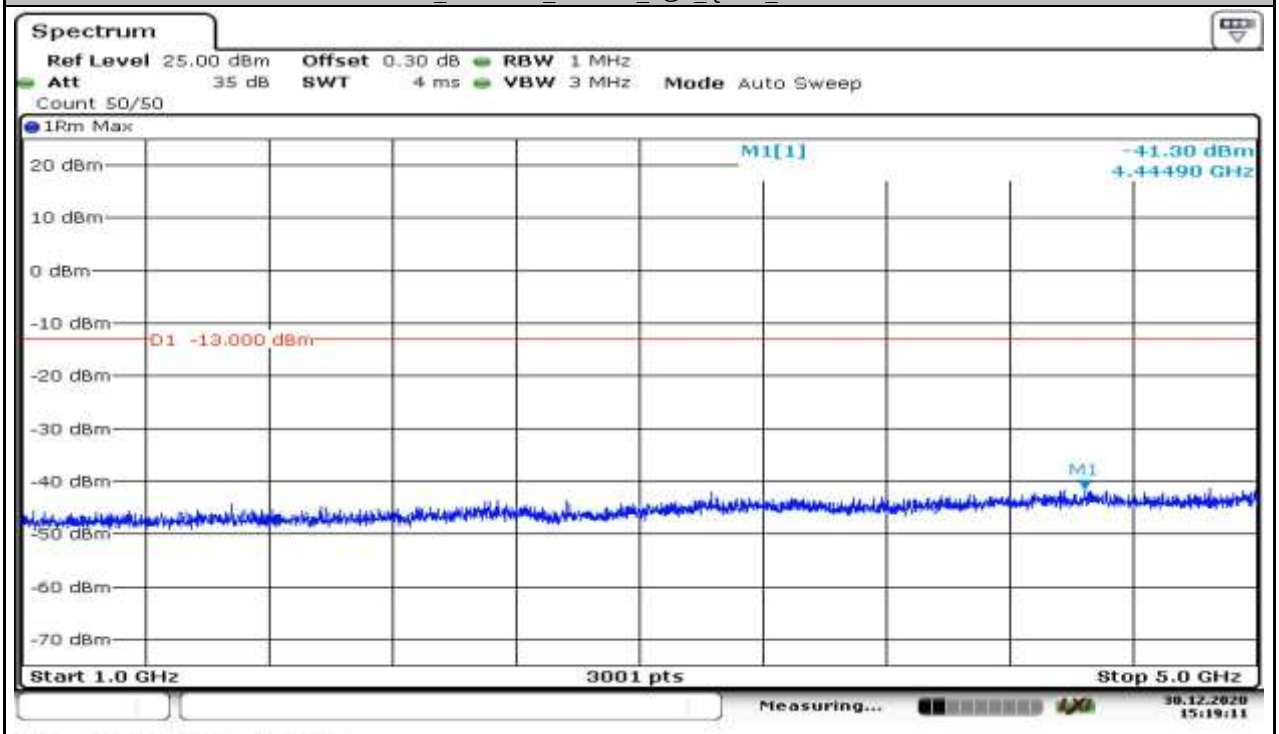
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	StartFreq (MHz)	StopFreq (MHz)	Result (dBm)	Limit (dBm)	Verdict
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	3.75kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	3.75kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	3.75kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	1@0	3.75kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	15kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	15kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	15kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134183	1@0	15kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	12@0	15kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	12@0	15kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	12@0	15kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134183	12@0	15kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134184	1@0	15kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134184	1@0	15kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134184	1@0	15kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134184	1@0	15kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	12@0	15kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	12@0	15kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	12@0	15kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	12@0	15kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134190	1@0	15kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134190	1@0	15kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134190	1@0	15kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134190	1@0	15kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	12@0	15kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	12@0	15kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	12@0	15kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	12@0	15kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	3.75kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	3.75kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	3.75kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	1@0	3.75kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	15kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	15kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	15kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	BPSK	134191	1@0	15kHz	12000	26500		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	12@0	15kHz	30	1000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	12@0	15kHz	1000	5000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	12@0	15kHz	5000	12000		-13	PASS
787-788M	Stand-Alone	NaN	QPSK	134191	12@0	15kHz	12000	26500		-13	PASS

Test Graphs

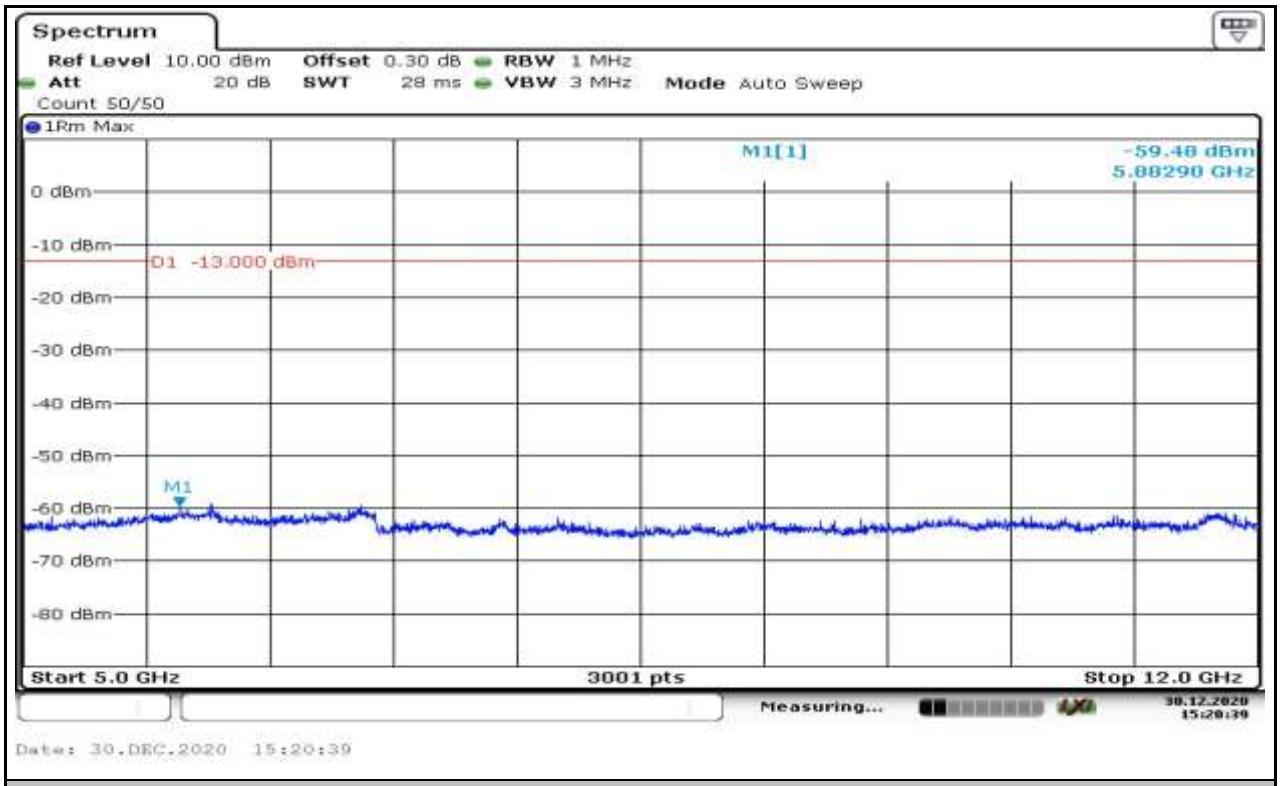
134183_787.1MHz_3.75KHz_1@0_QPSK_30M-1000M



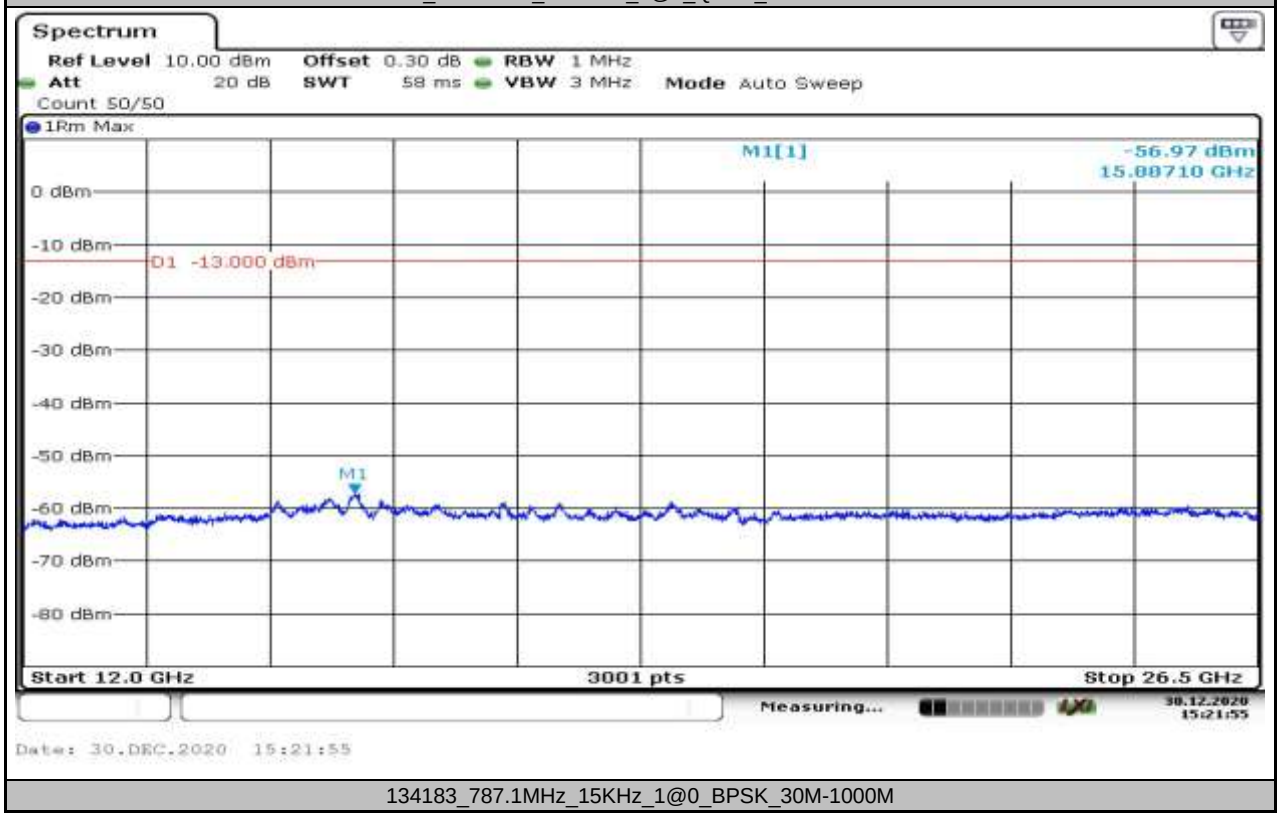
134183_787.1MHz_3.75KHz_1@0_QPSK_1000M-5000M



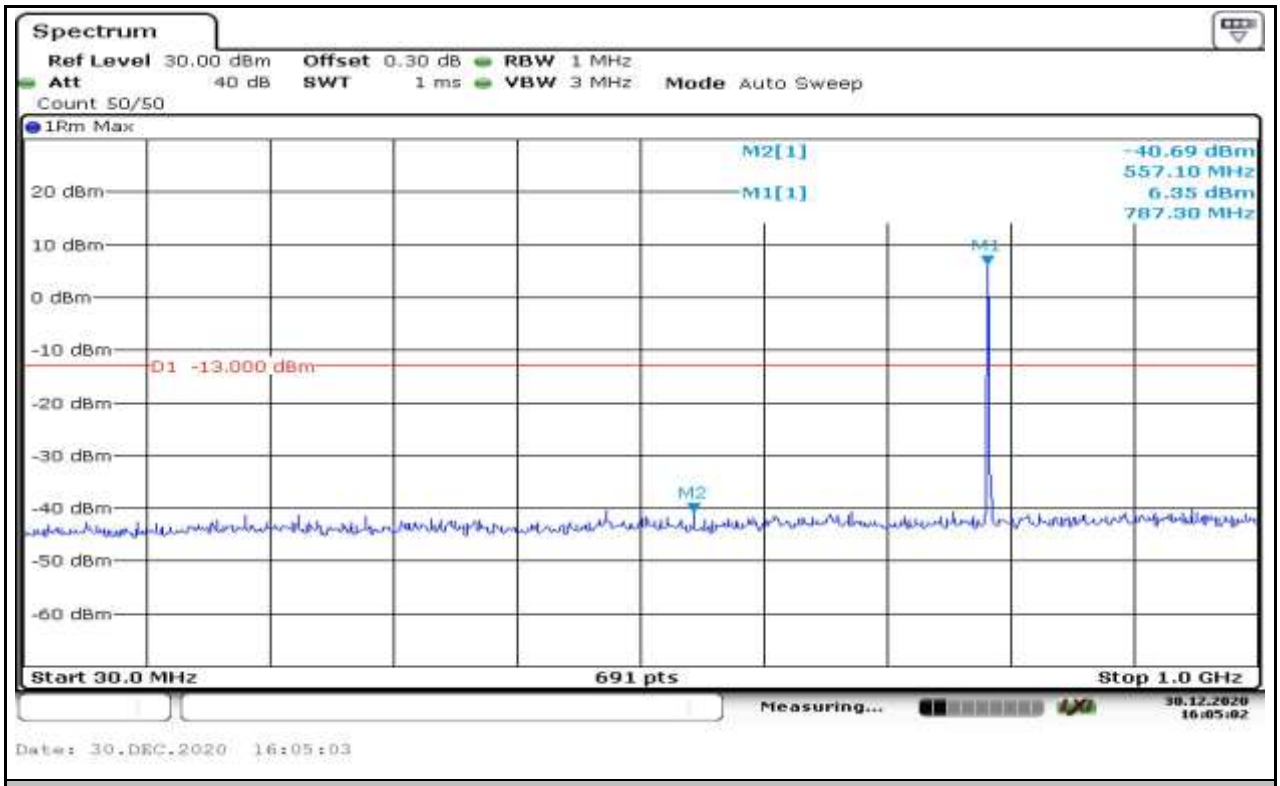
134183_787.1MHz_3.75KHz_1@0_QPSK_5000M-12000M



134183_787.1MHz_3.75KHz_1@0_QPSK_12000M-26500M



134183_787.1MHz_15KHz_1@0_BPSK_30M-1000M



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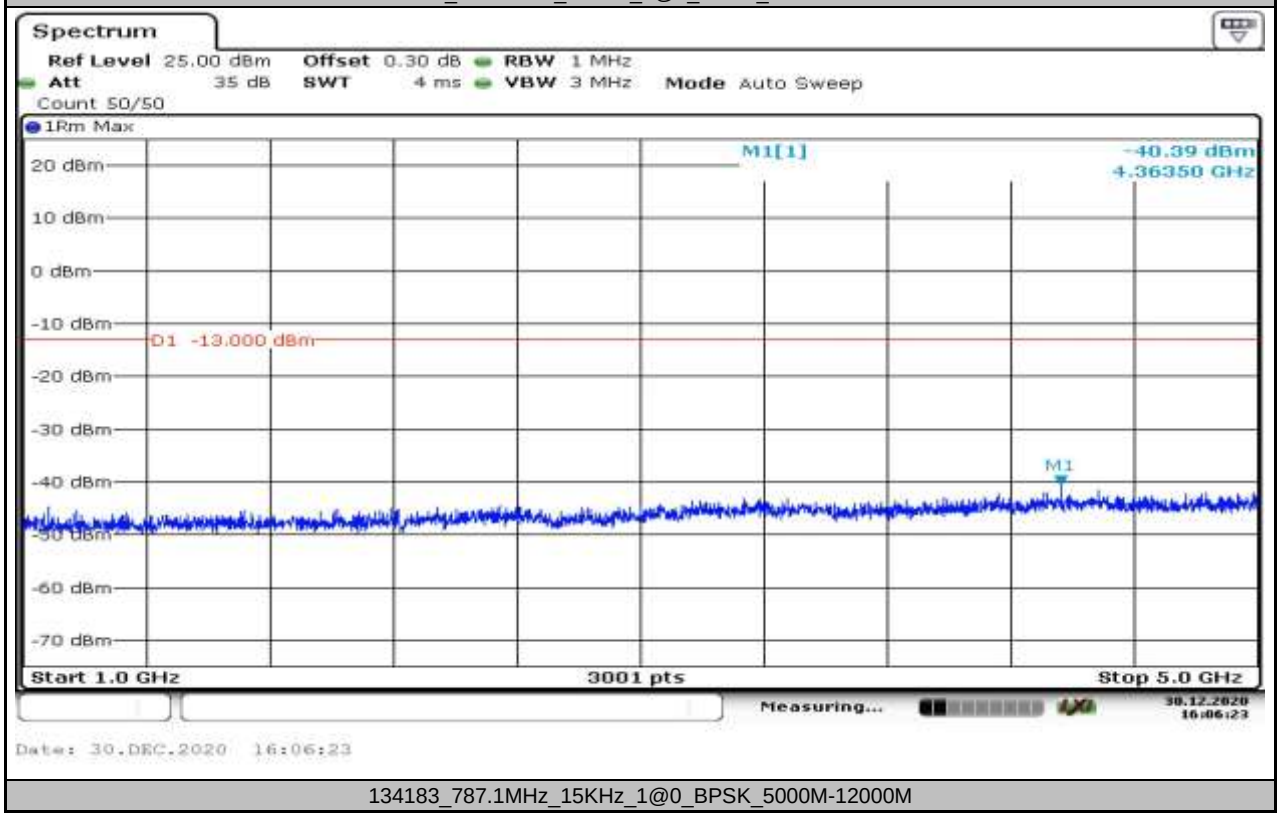

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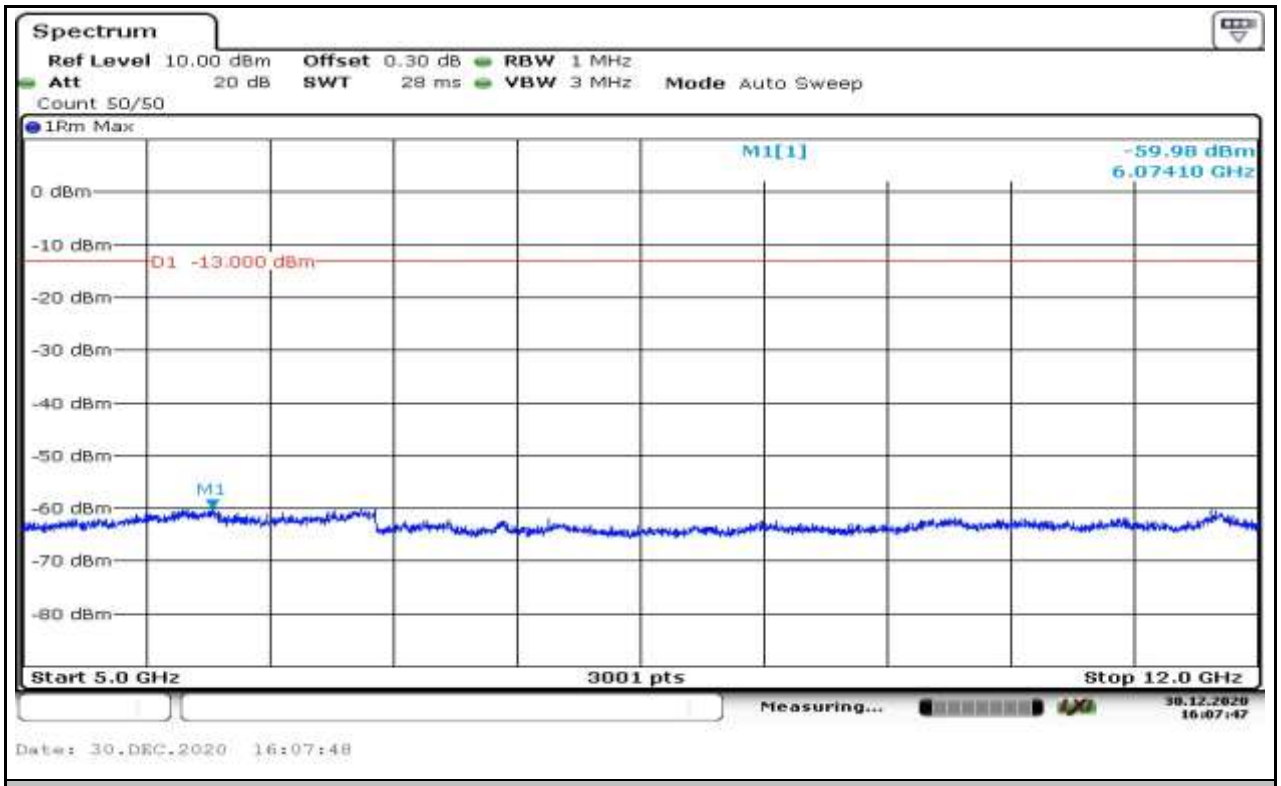
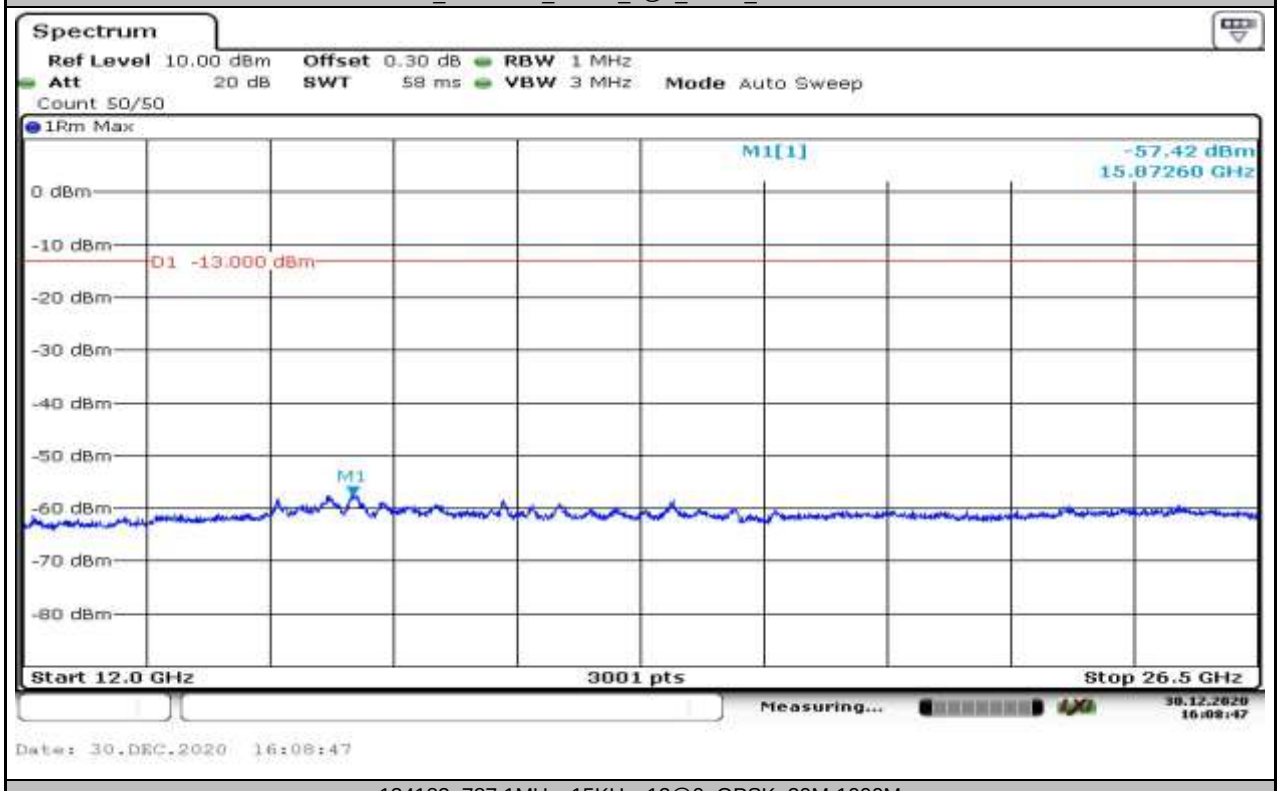
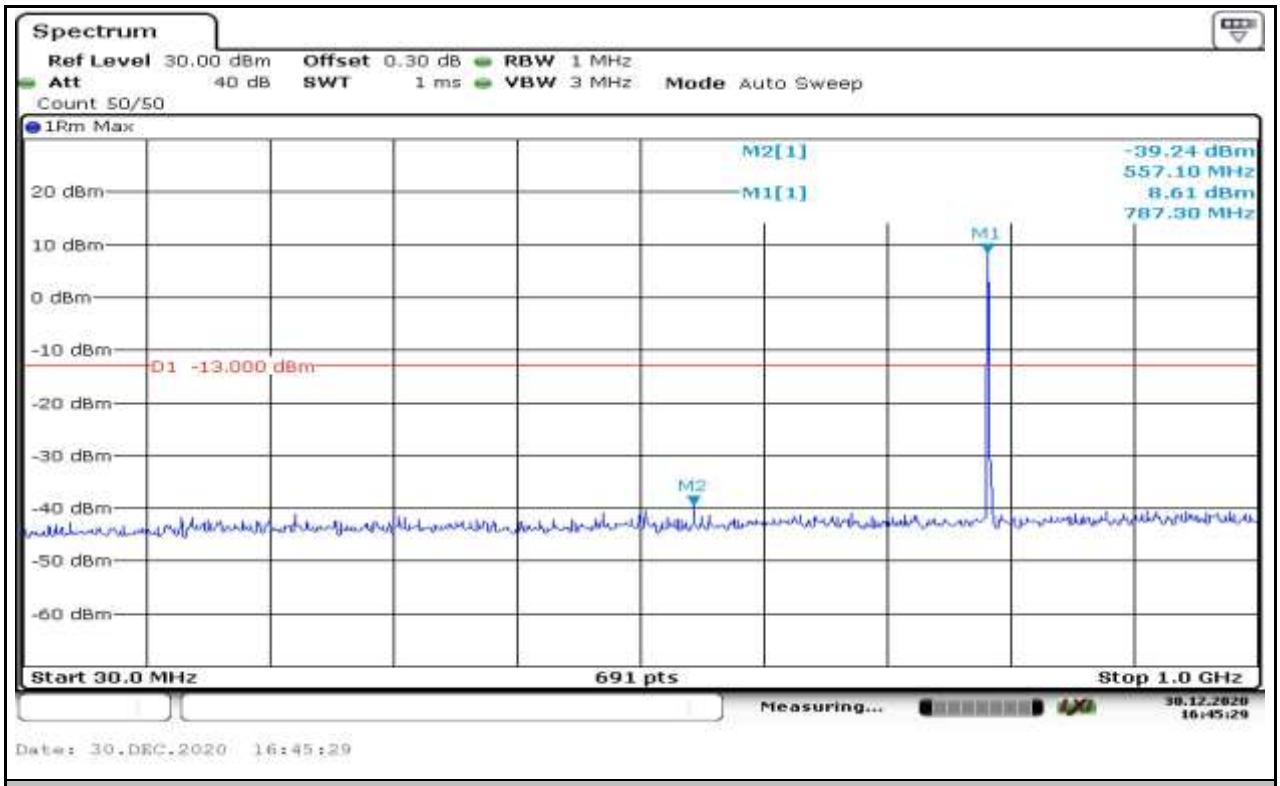


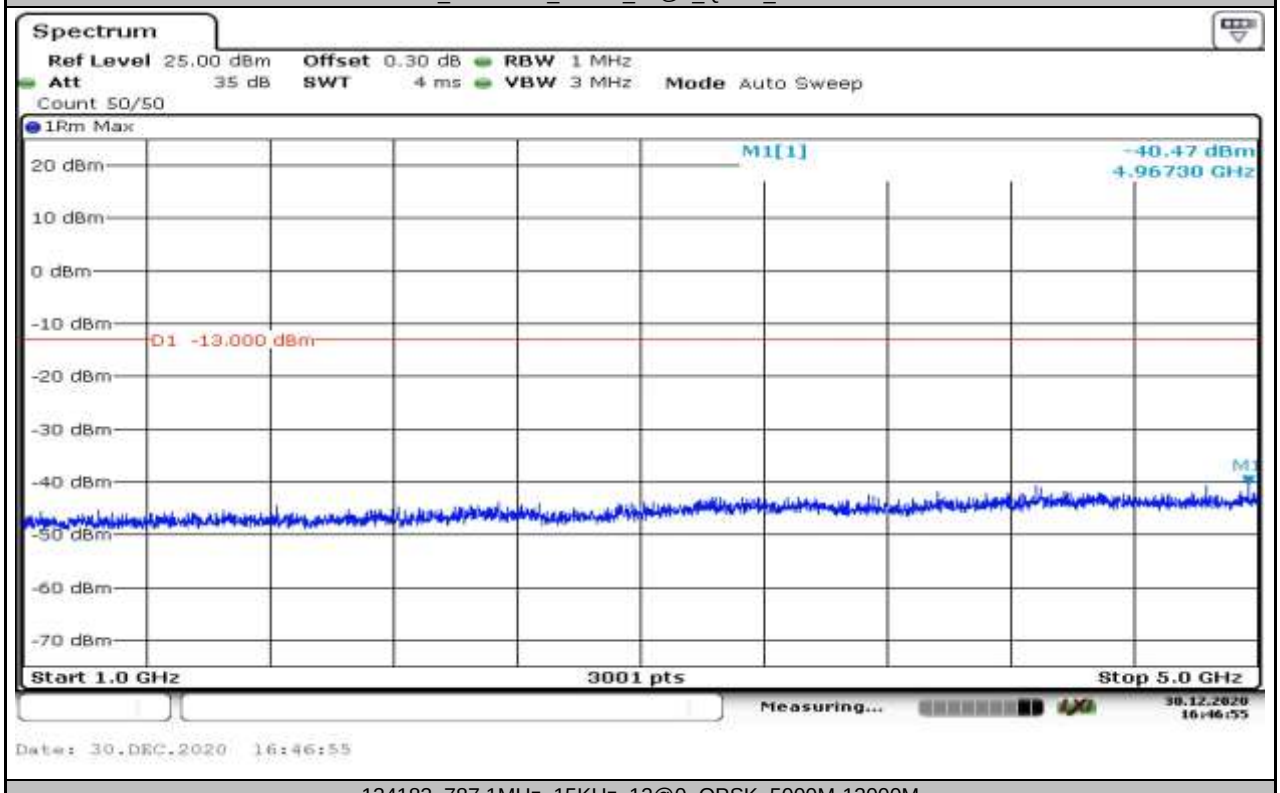
134183_787.1MHz_15KHz_1@0_BPSK_12000M-26500M



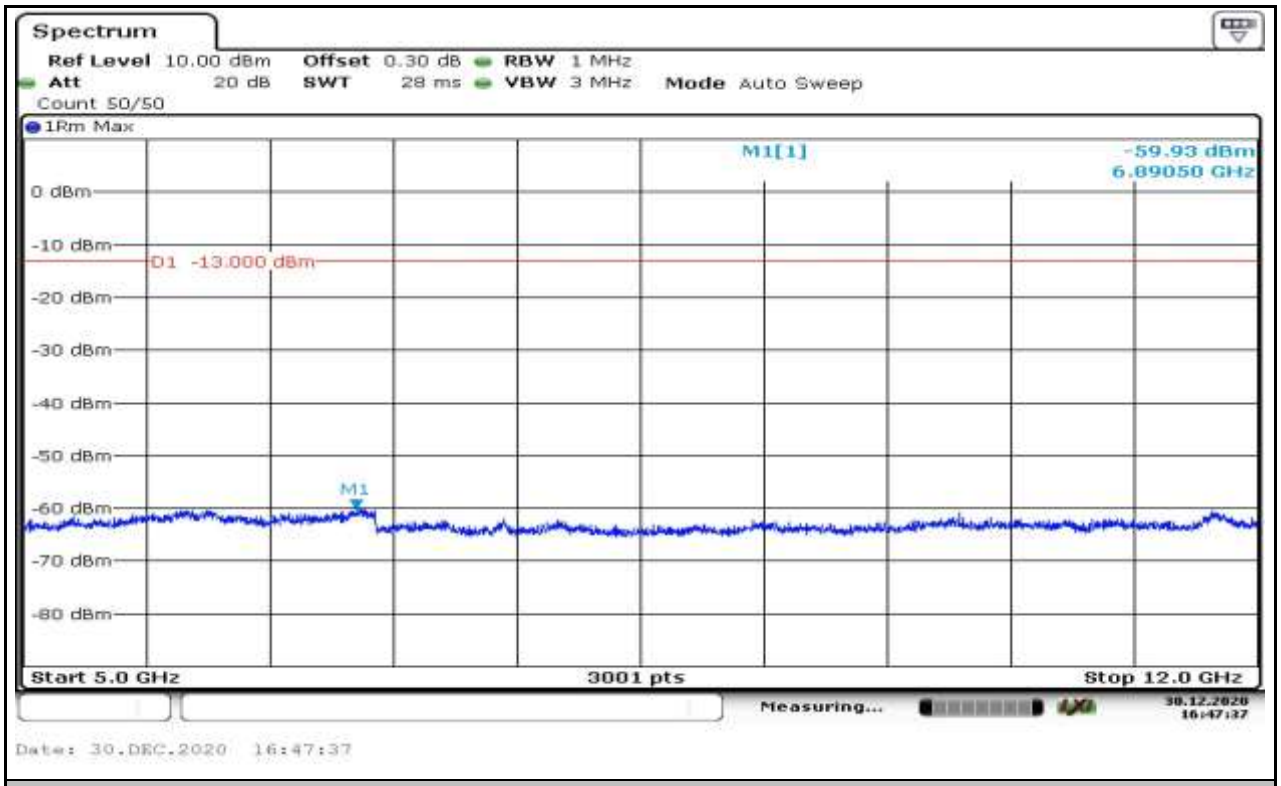
134183_787.1MHz_15KHz_12@0_QPSK_30M-1000M



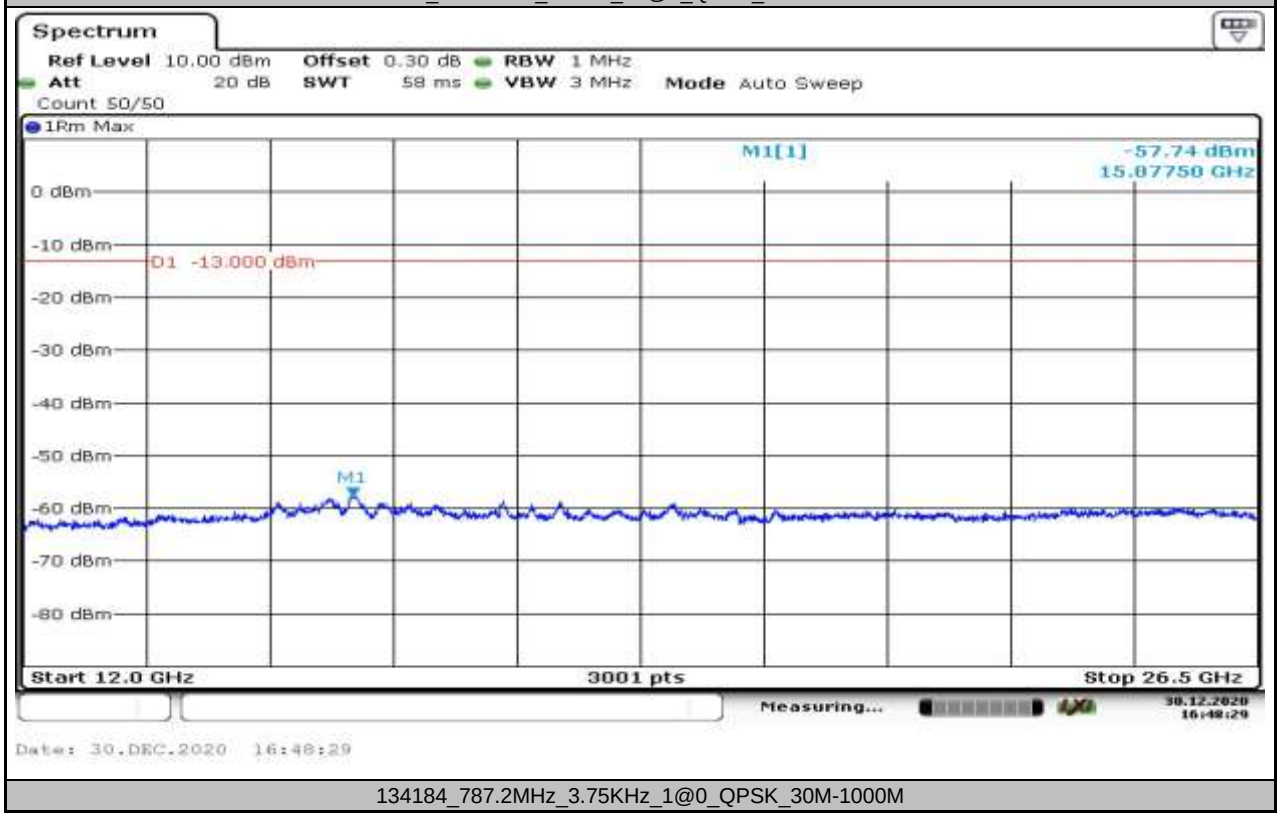
134183_787.1MHz_15KHz_12@0_QPSK_1000M-5000M



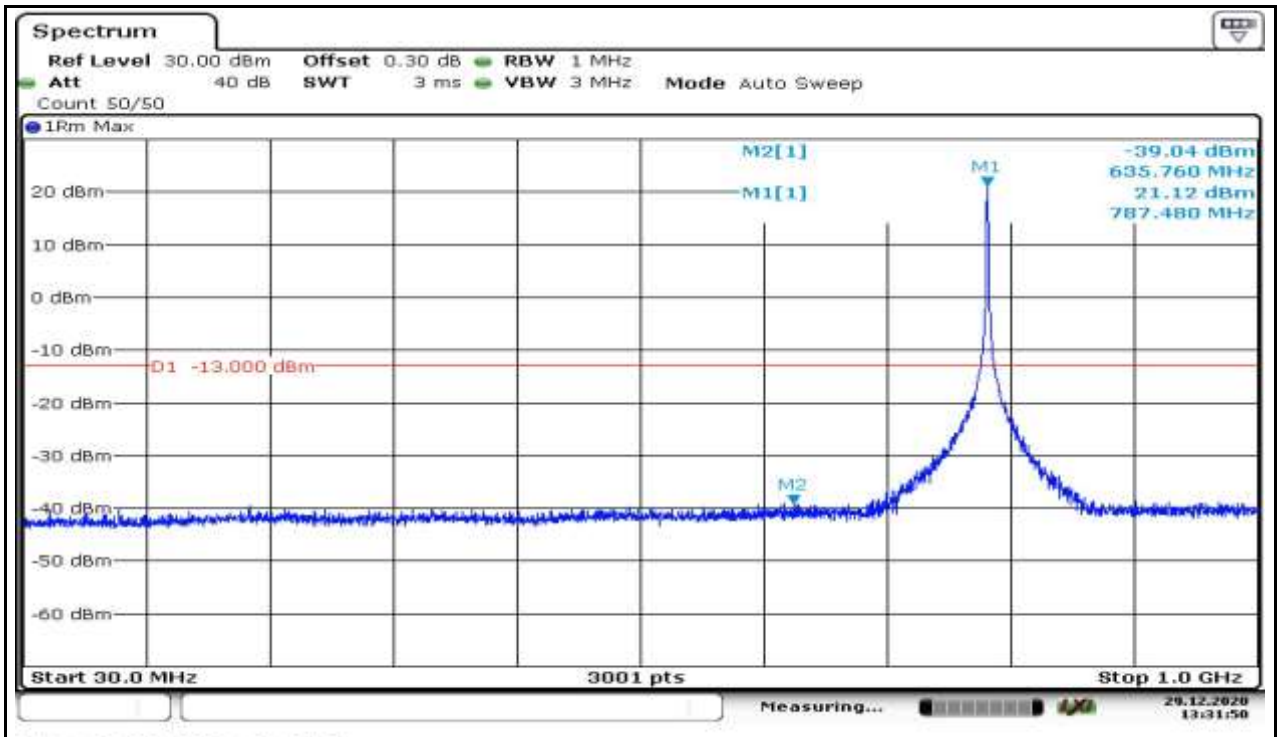
134183_787.1MHz_15KHz_12@0_QPSK_5000M-12000M



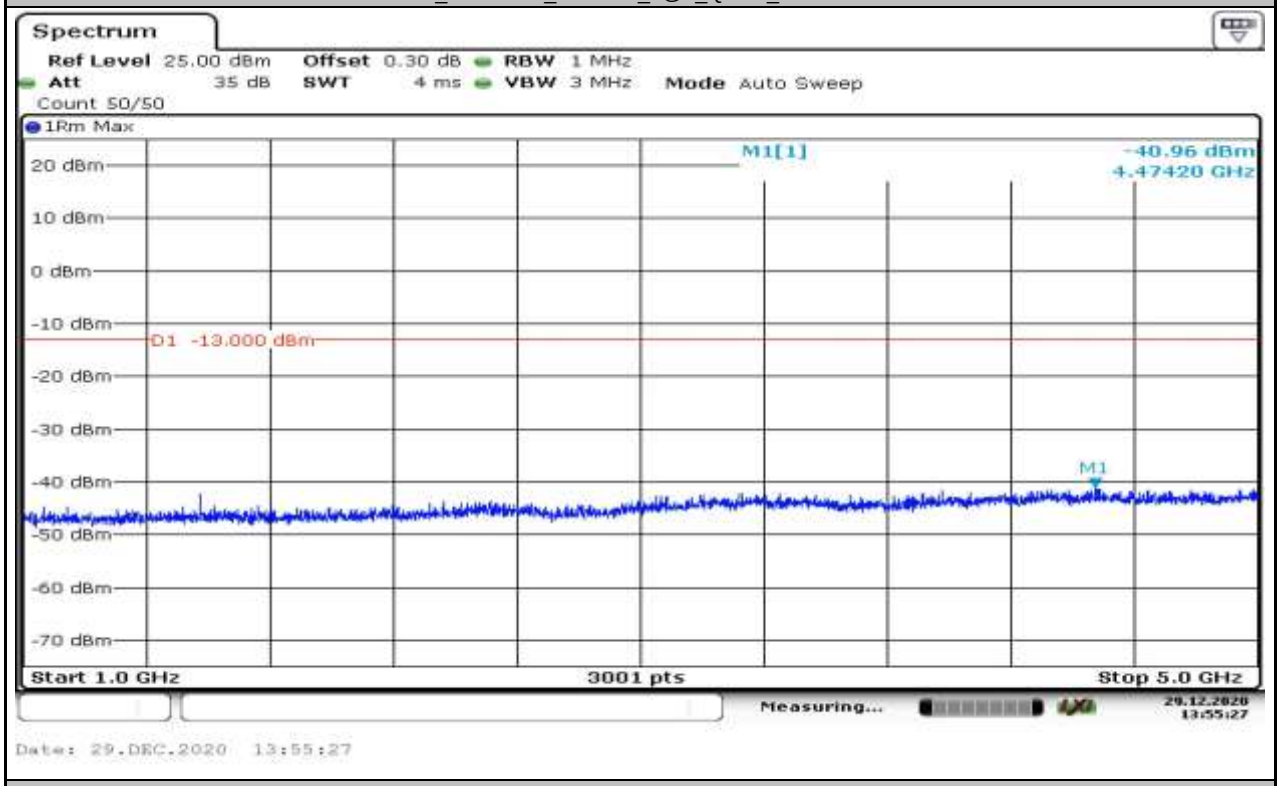
134183_787.1MHz_15KHz_12@0_QPSK_12000M-26500M



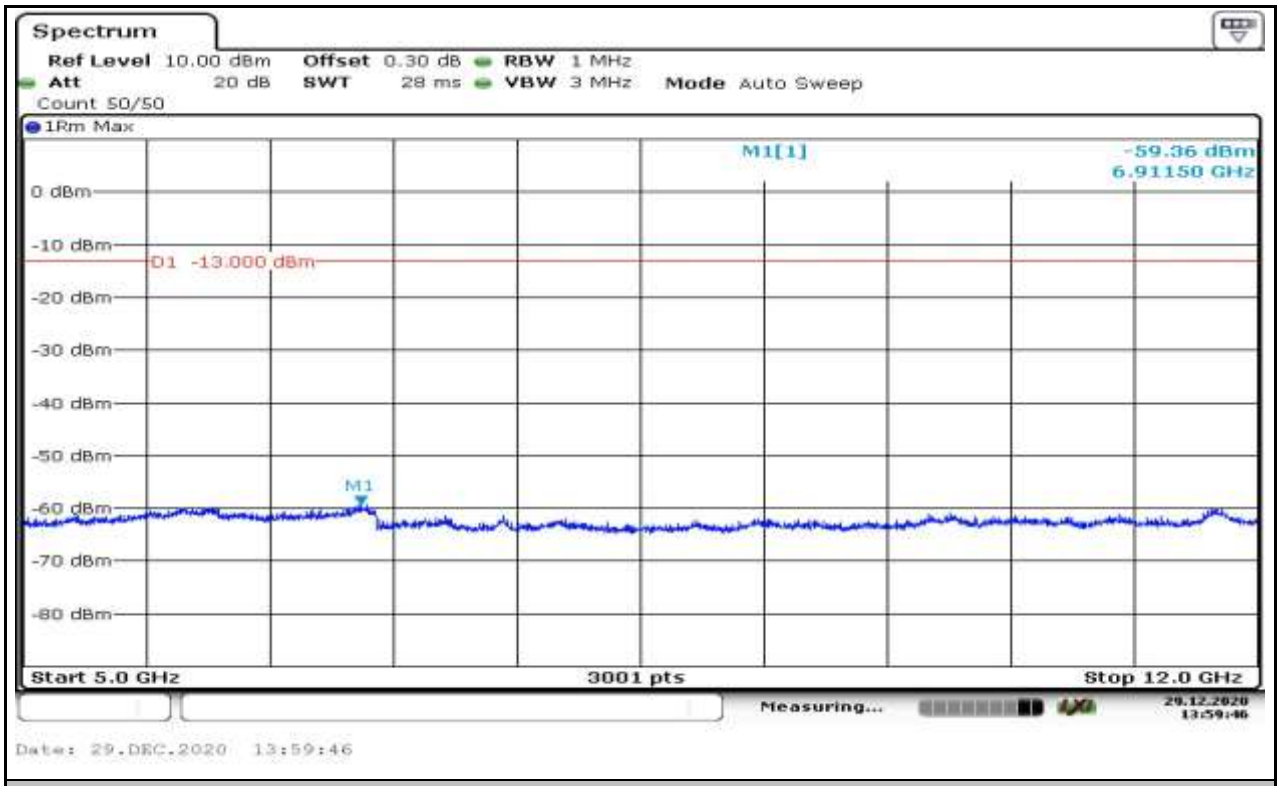
134184_787.2MHz_3.75KHz_1@0_QPSK_30M-1000M



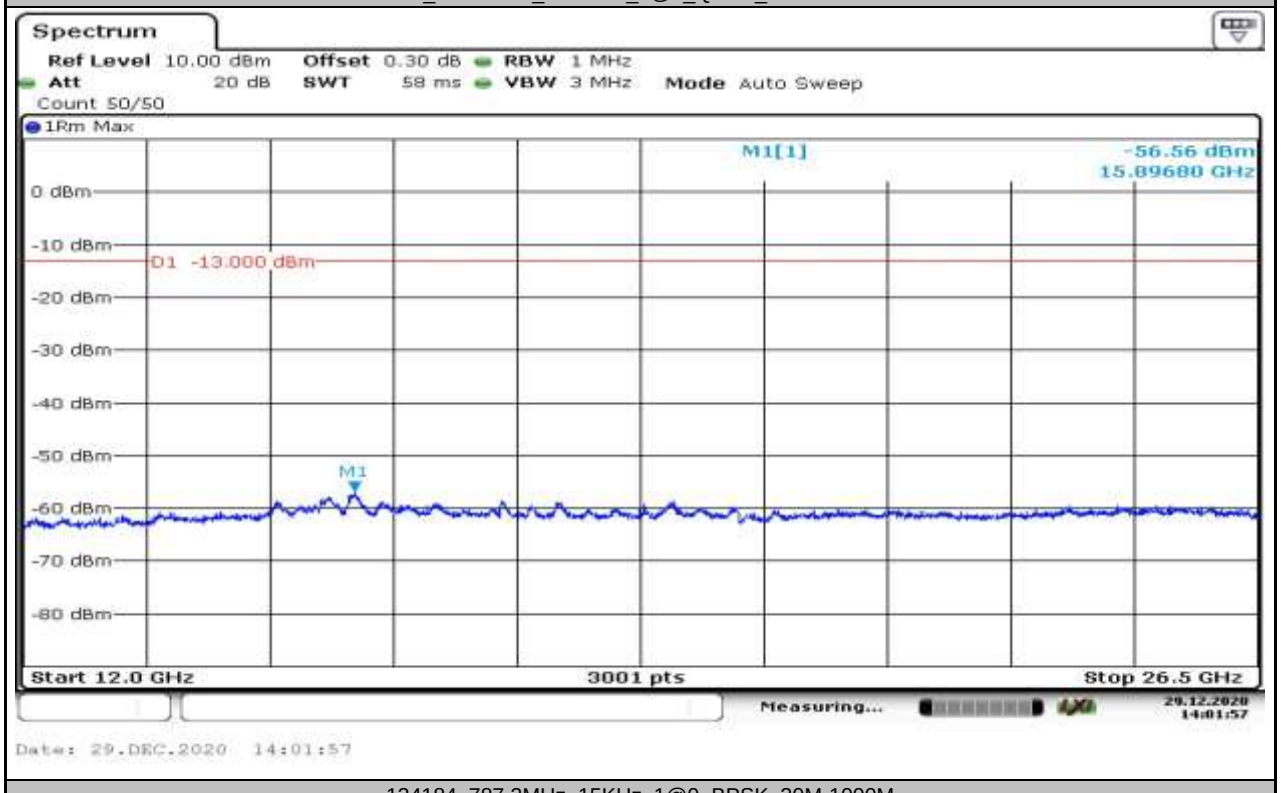
134184_787.2MHz_3.75KHz_1@0_QPSK_1000M-5000M



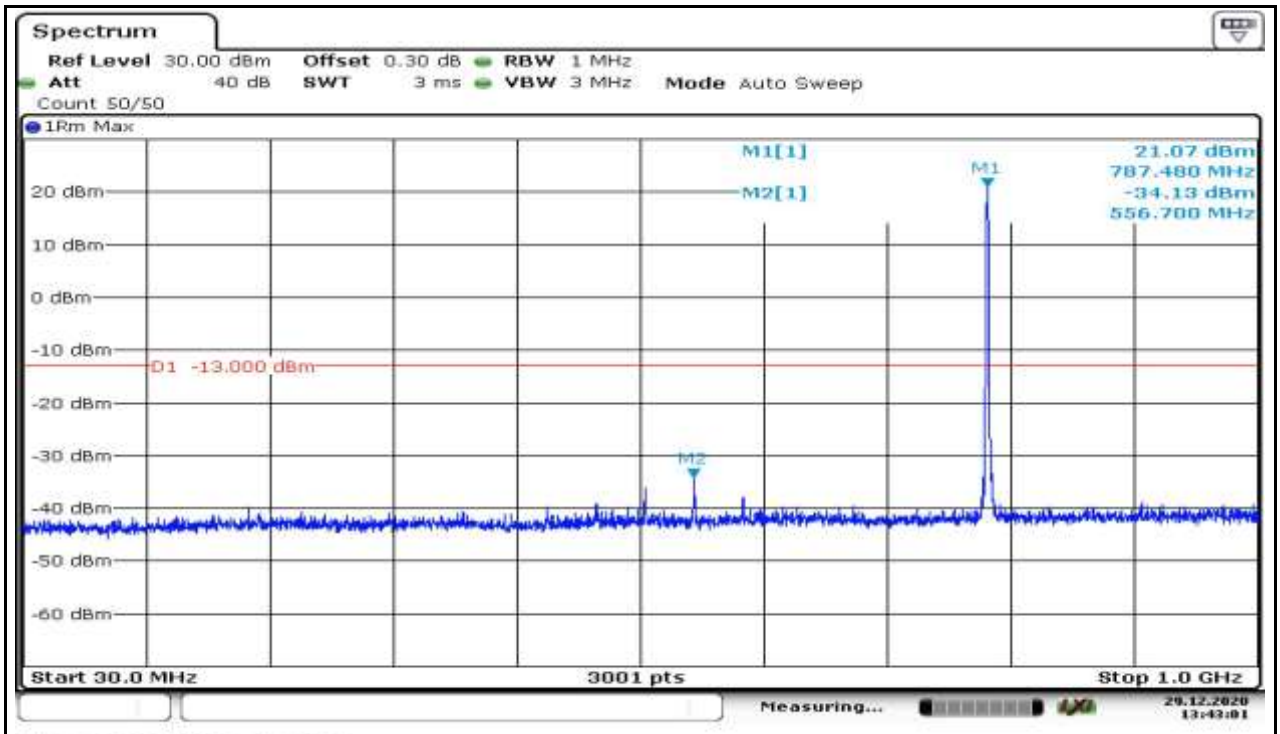
134184_787.2MHz_3.75KHz_1@0_QPSK_5000M-12000M



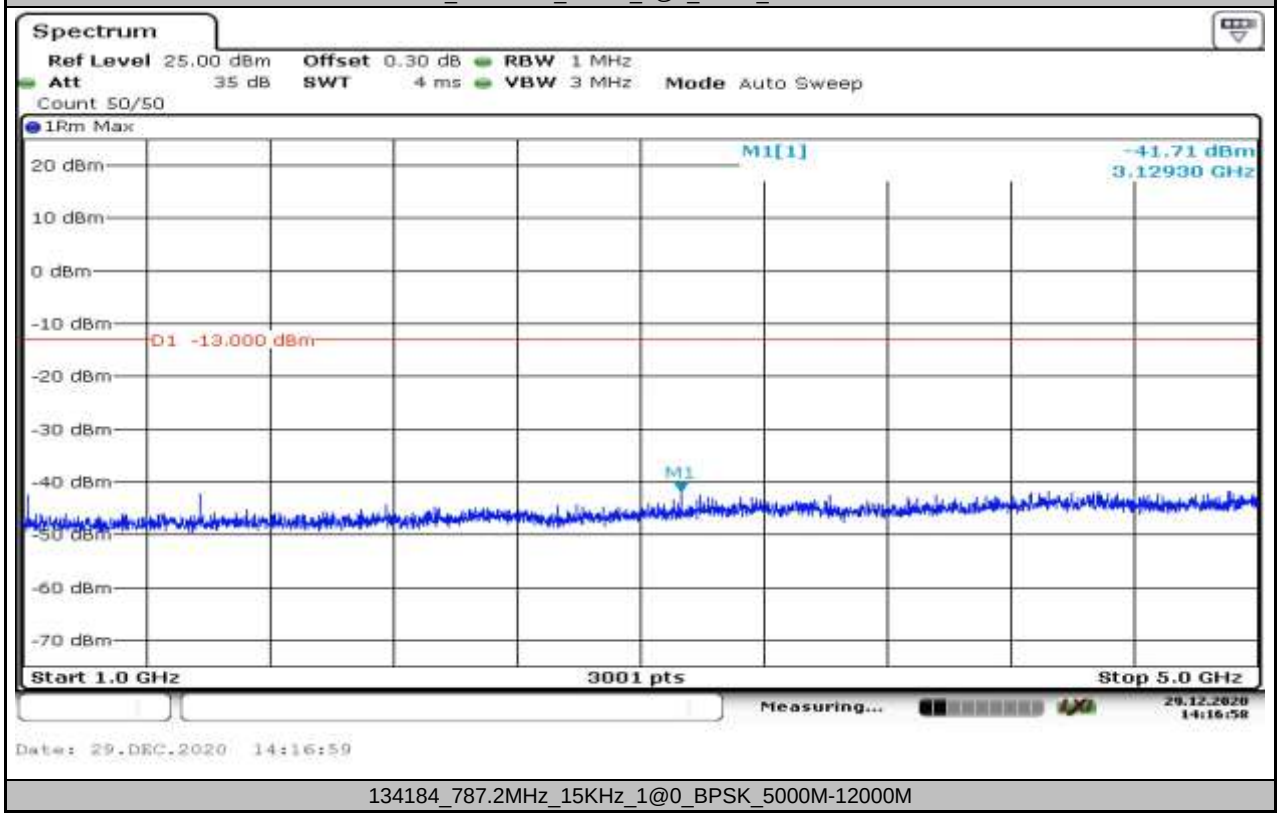
134184_787.2MHz_3.75KHz_1@0_QPSK_12000M-26500M



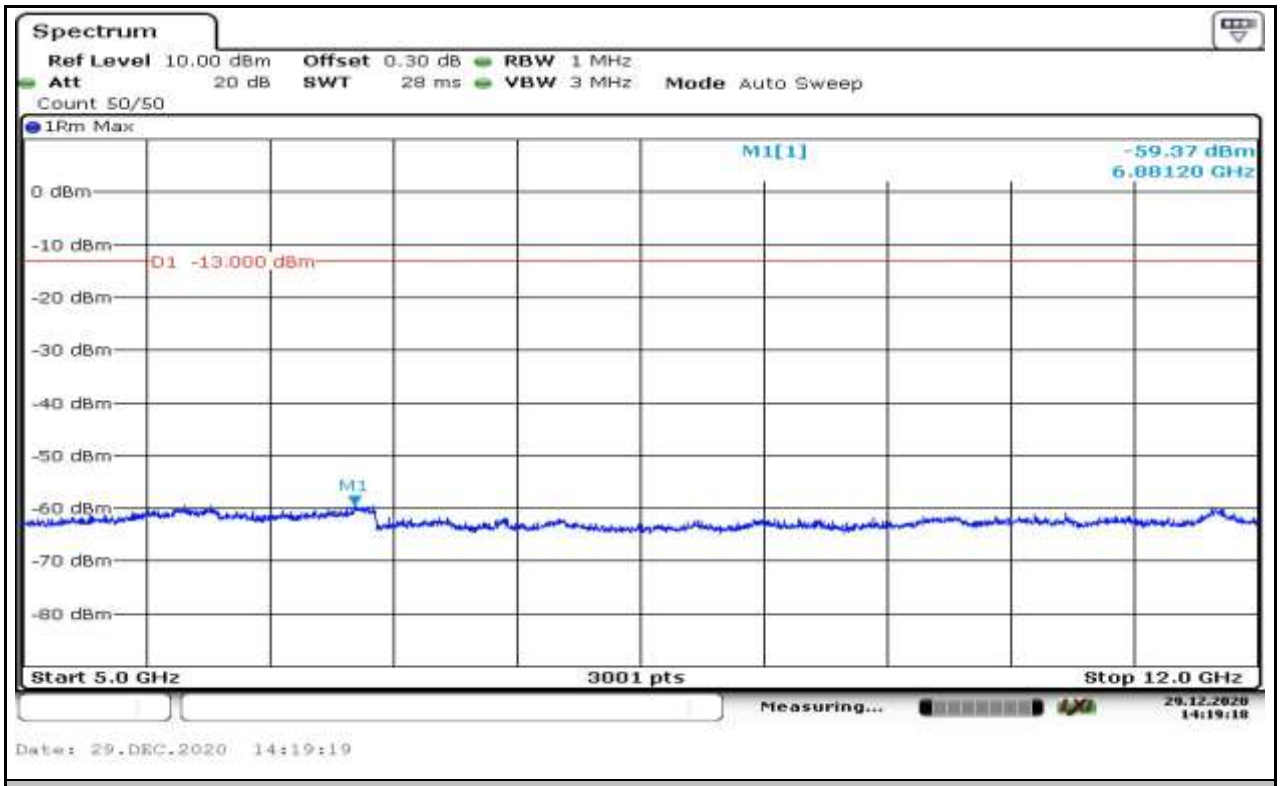
134184_787.2MHz_15KHz_1@0_BPSK_30M-1000M



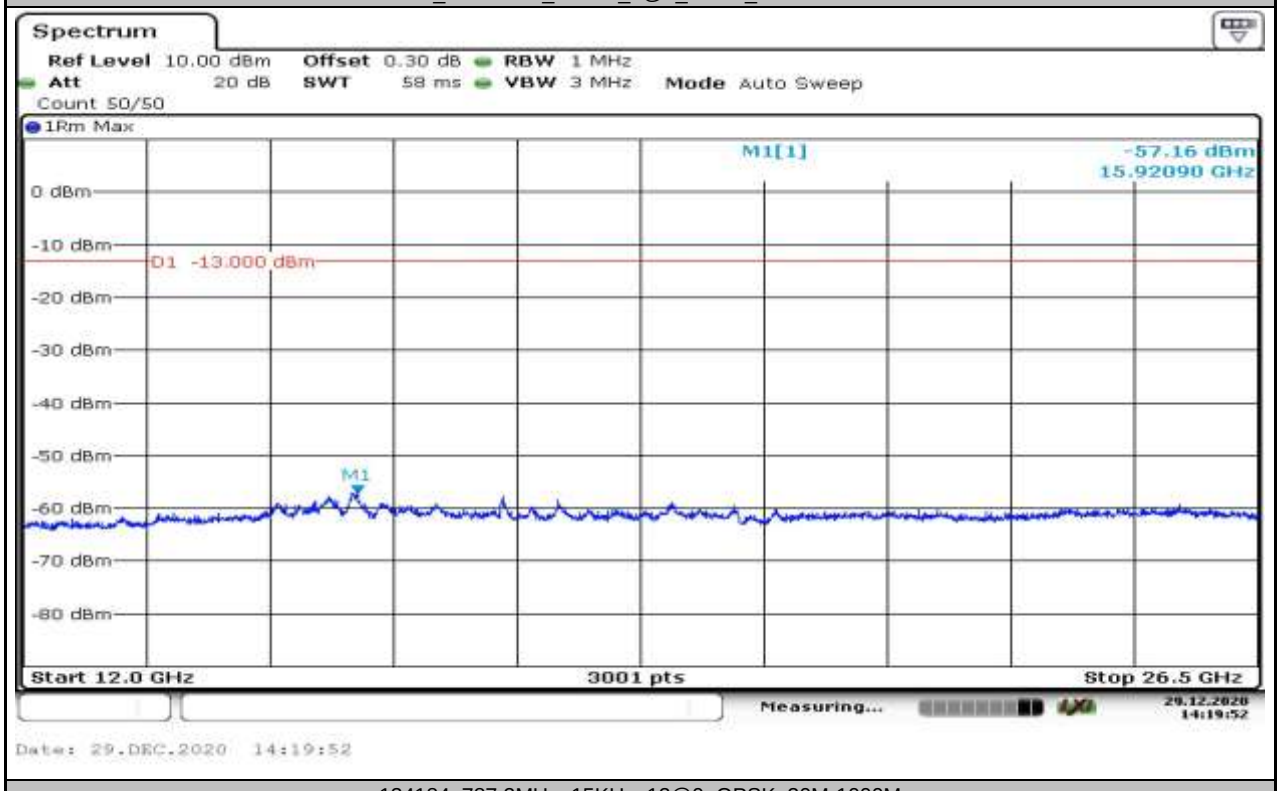
134184_787.2MHz_15KHz_1@0_BPSK_1000M-5000M



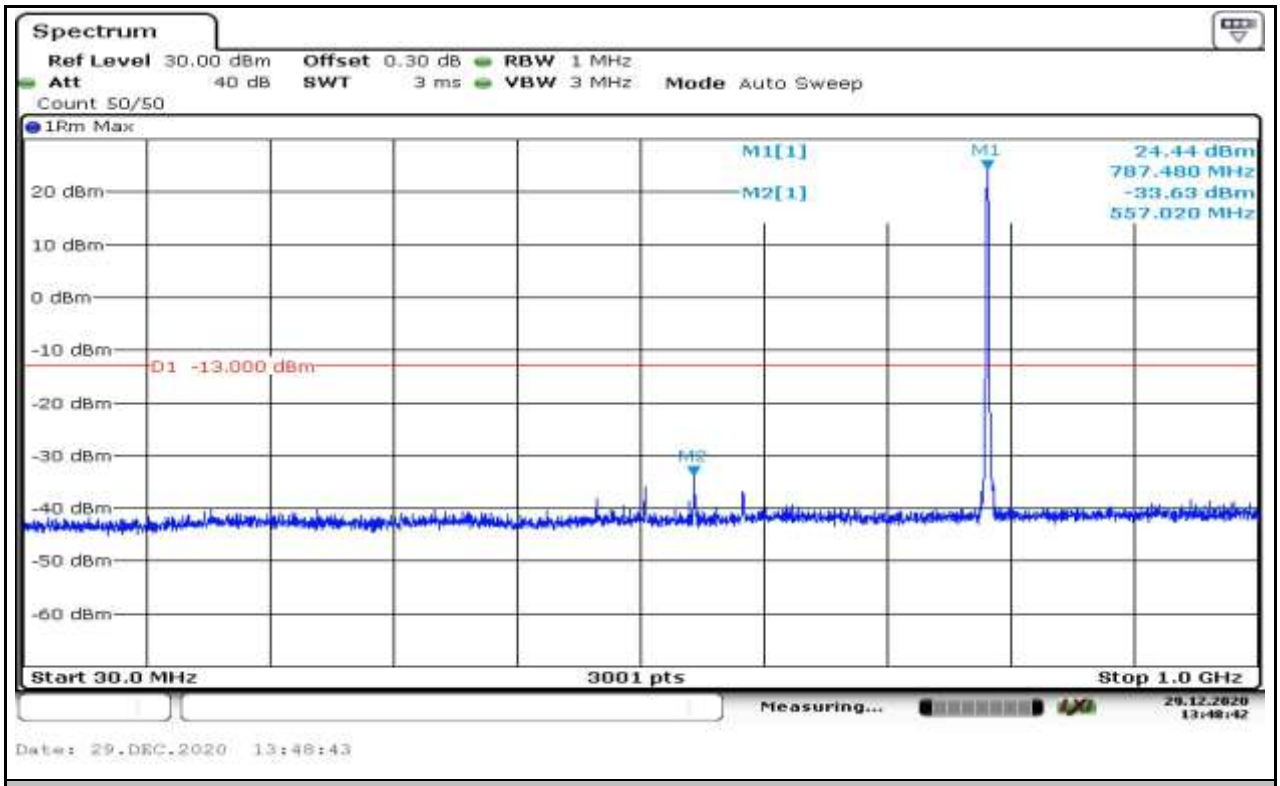
134184_787.2MHz_15KHz_1@0_BPSK_5000M-12000M



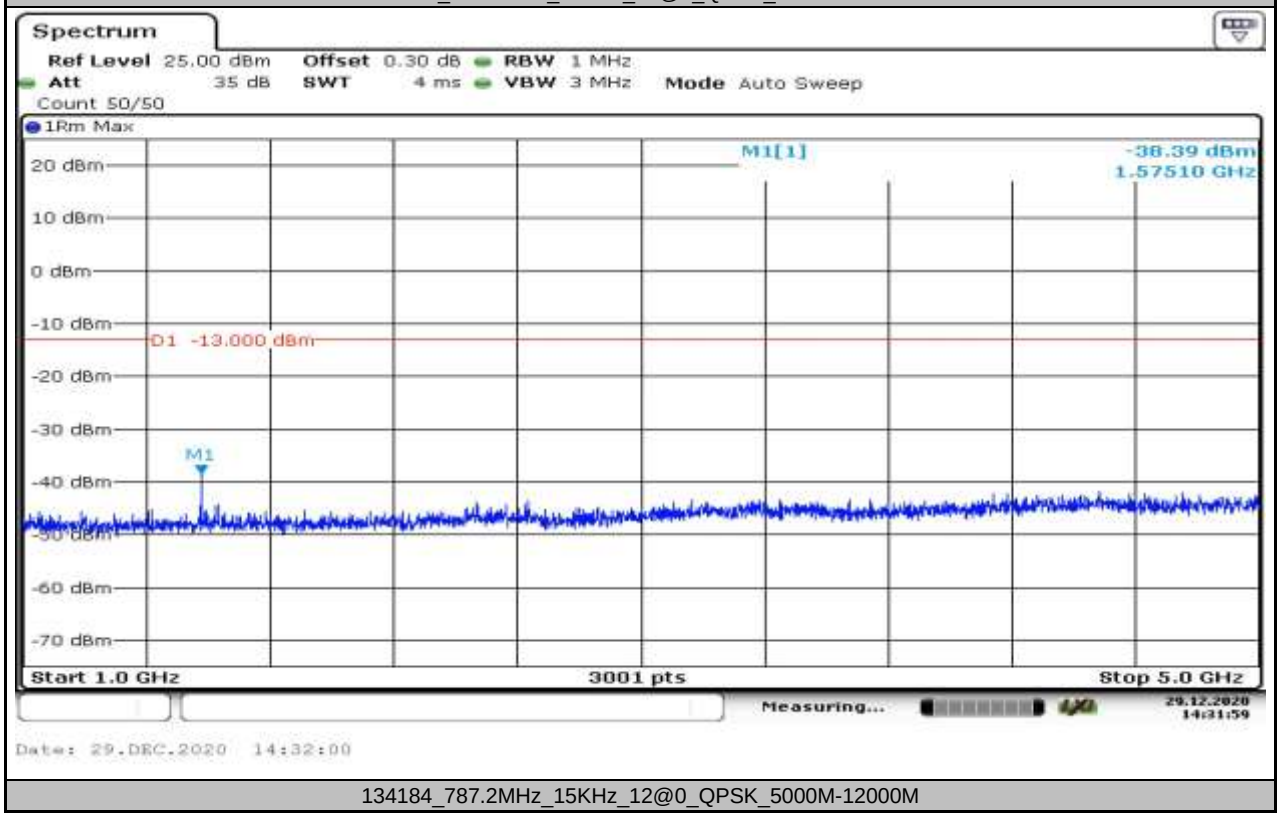
134184_787.2MHz_15KHz_1@0_BPSK_12000M-26500M



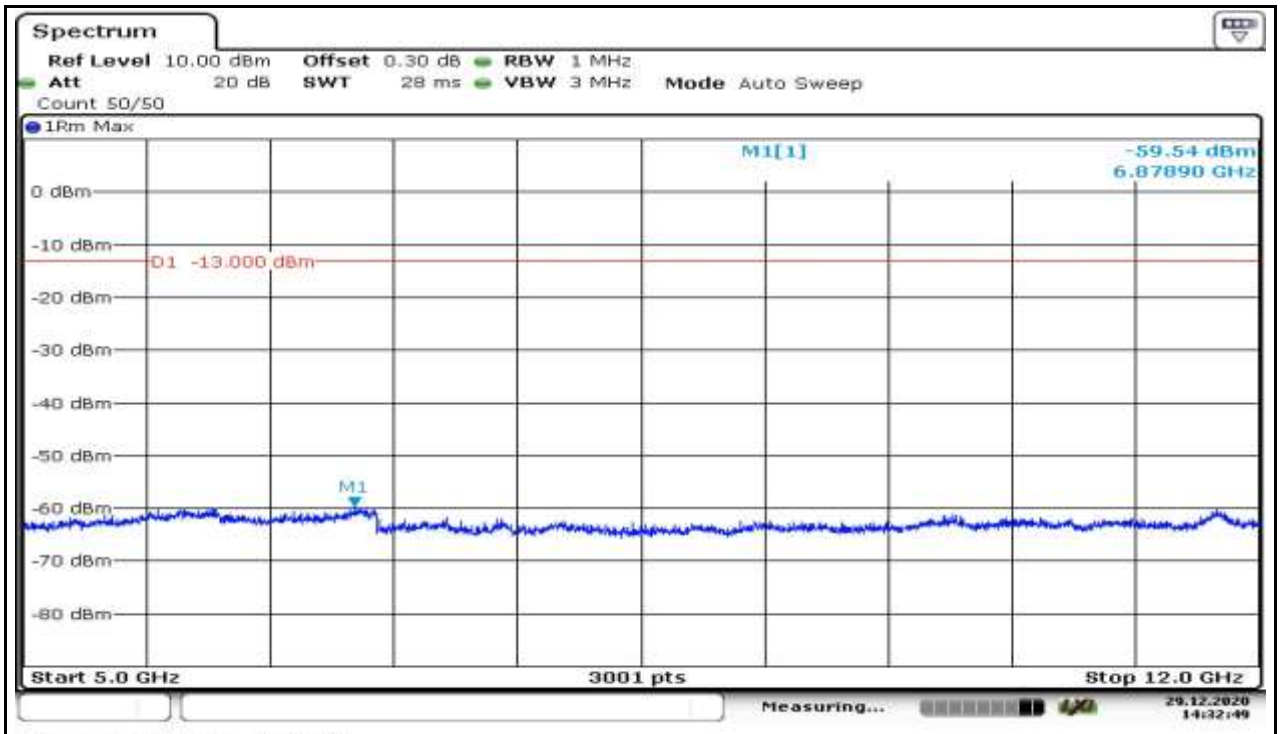
134184_787.2MHz_15KHz_12@0_QPSK_30M-1000M



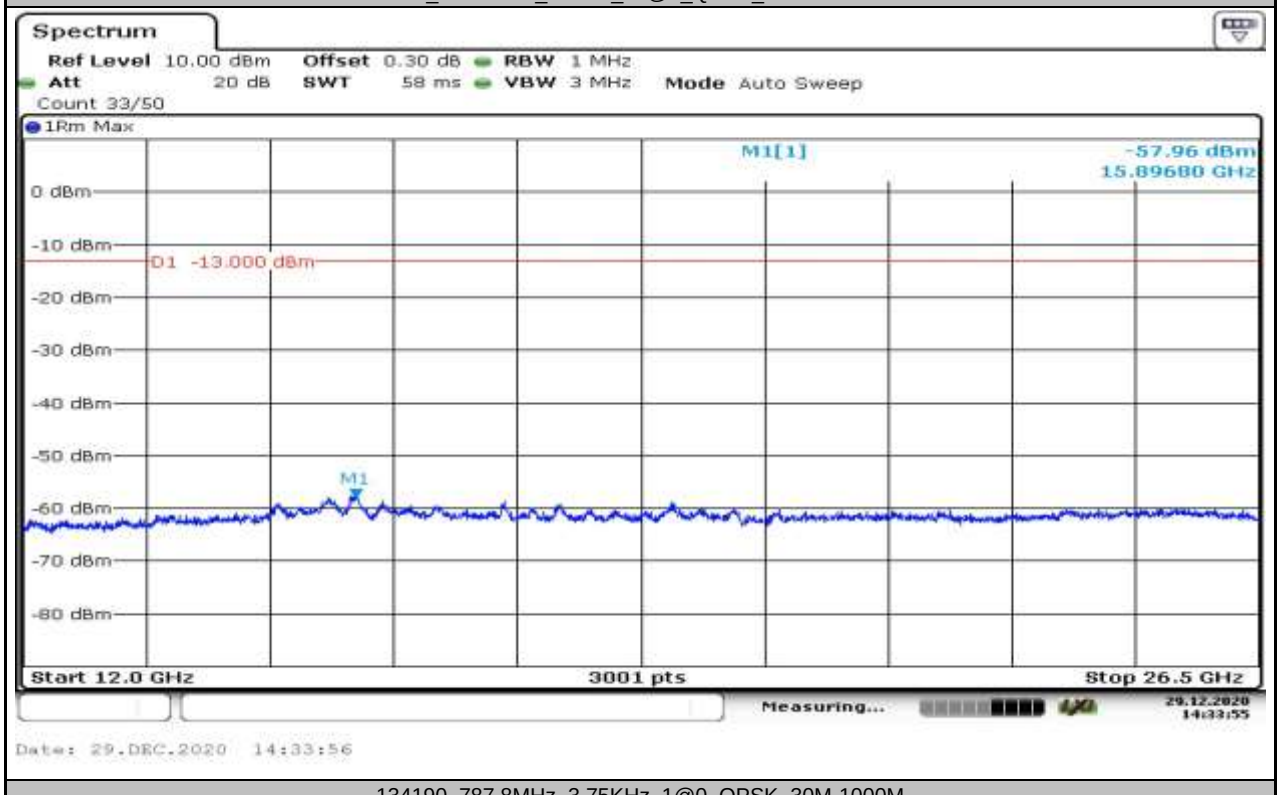
134184_787.2MHz_15KHz_12@0_QPSK_1000M-5000M



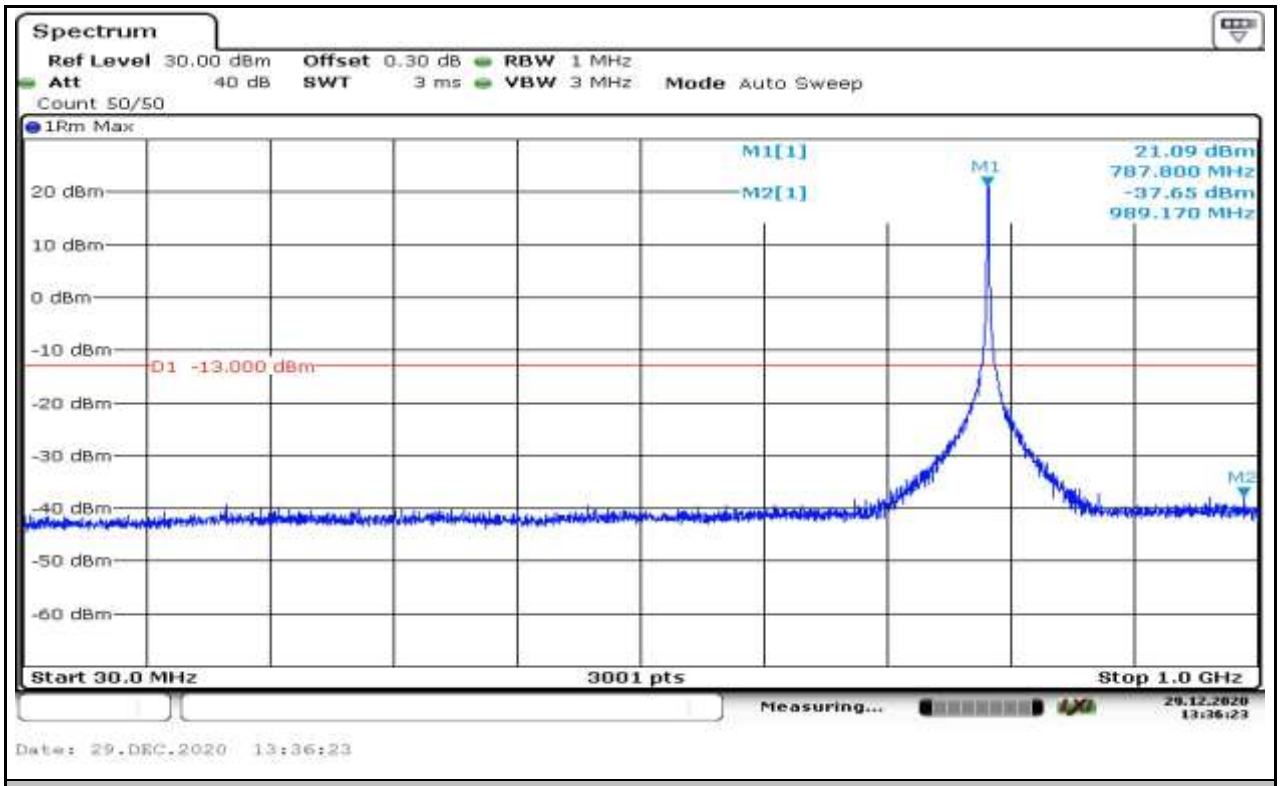
134184_787.2MHz_15KHz_12@0_QPSK_5000M-12000M



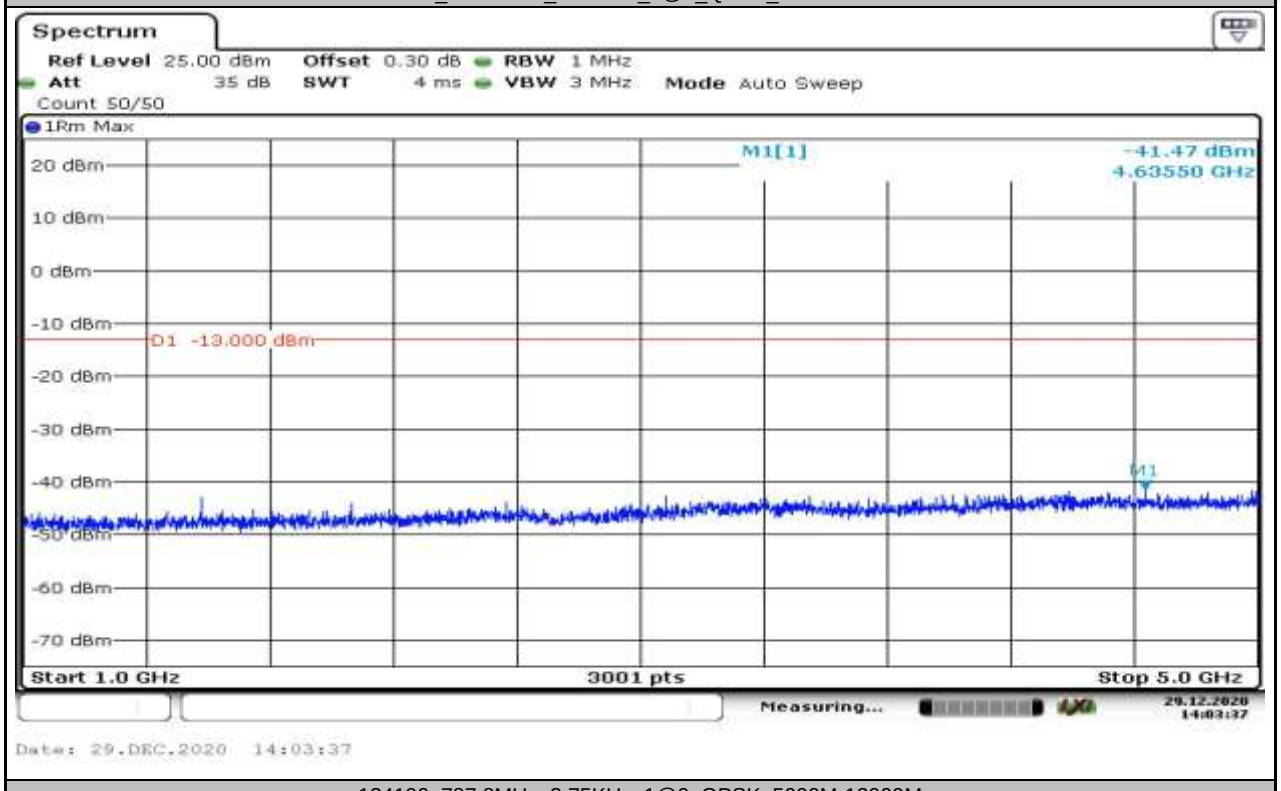
134184_787.2MHz_15KHz_12@0_QPSK_12000M-26500M



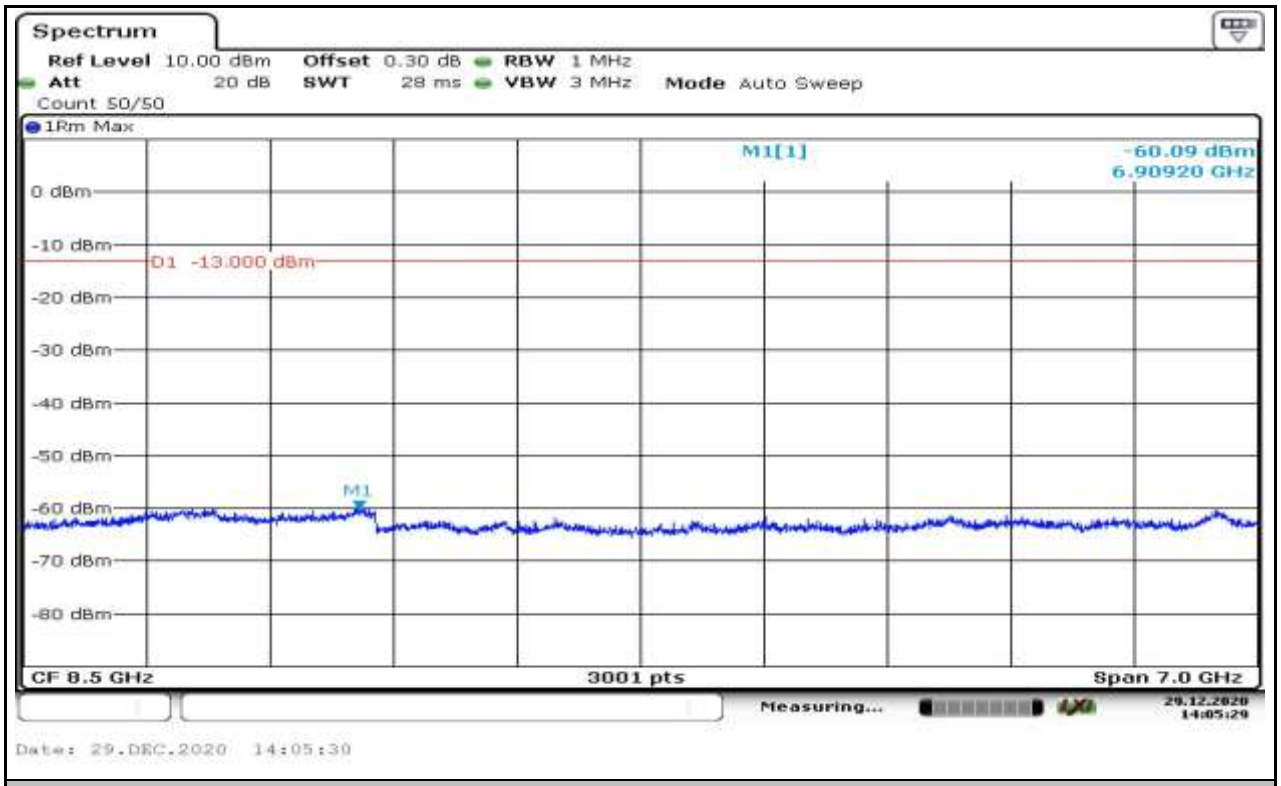
134190_787.8MHz_3.75KHz_1@0_QPSK_30M-1000M



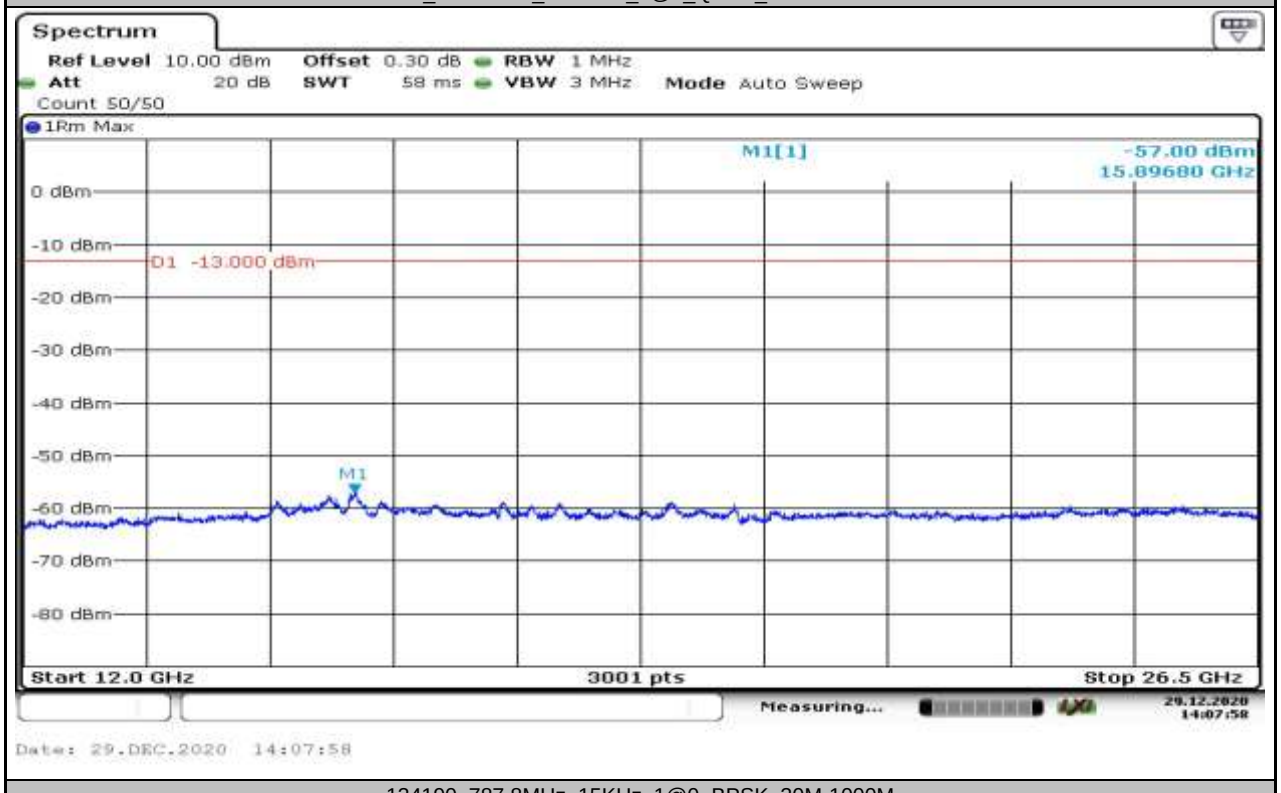
134190_787.8MHz_3.75KHz_1@0_QPSK_1000M-5000M



134190_787.8MHz_3.75KHz_1@0_QPSK_5000M-12000M



134190_787.8MHz_3.75KHz_1@0_QPSK_12000M-26500M



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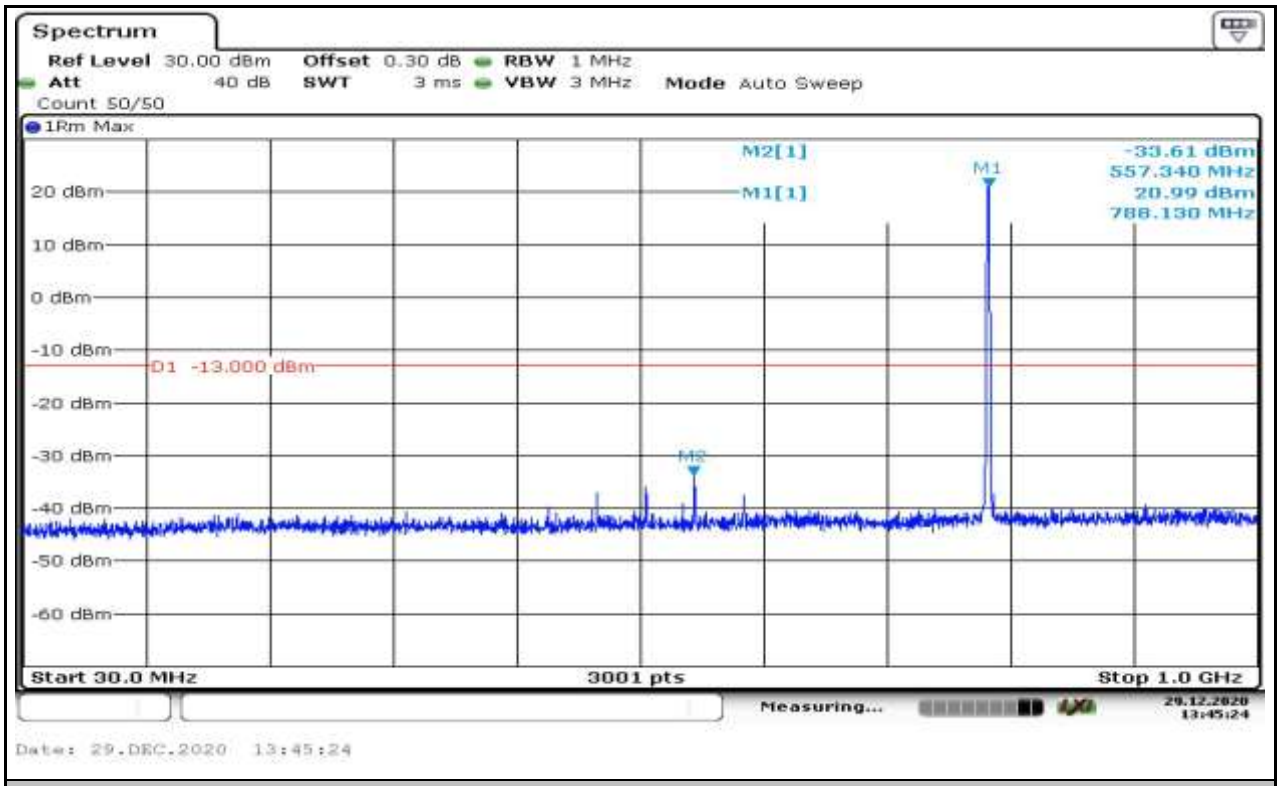

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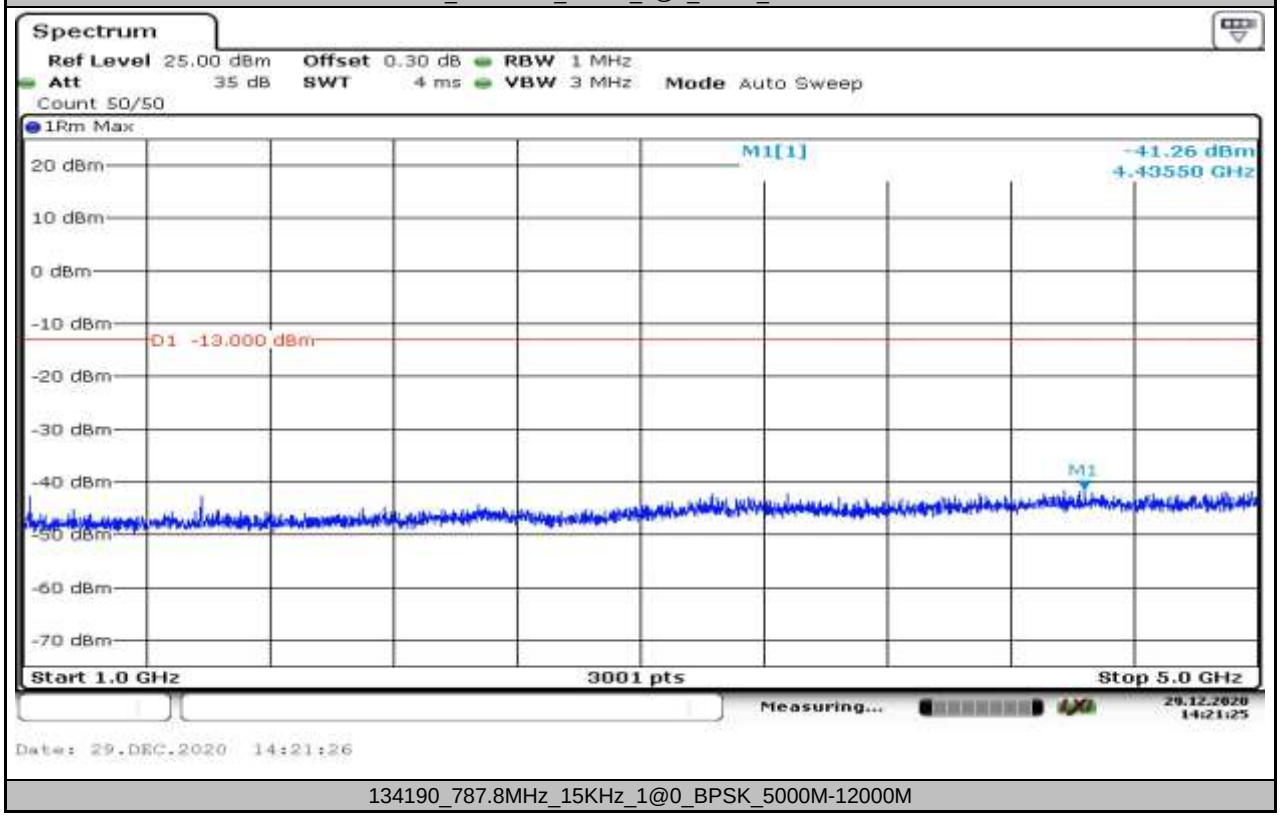

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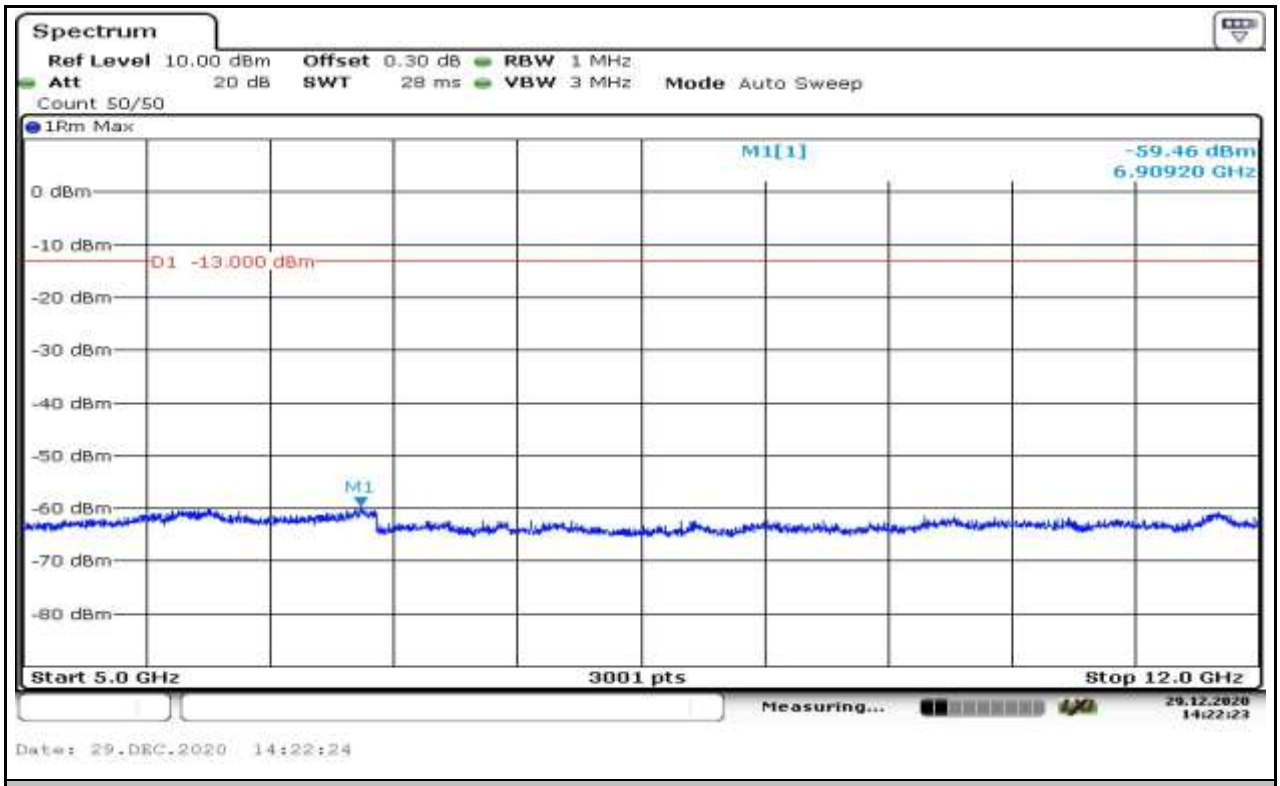

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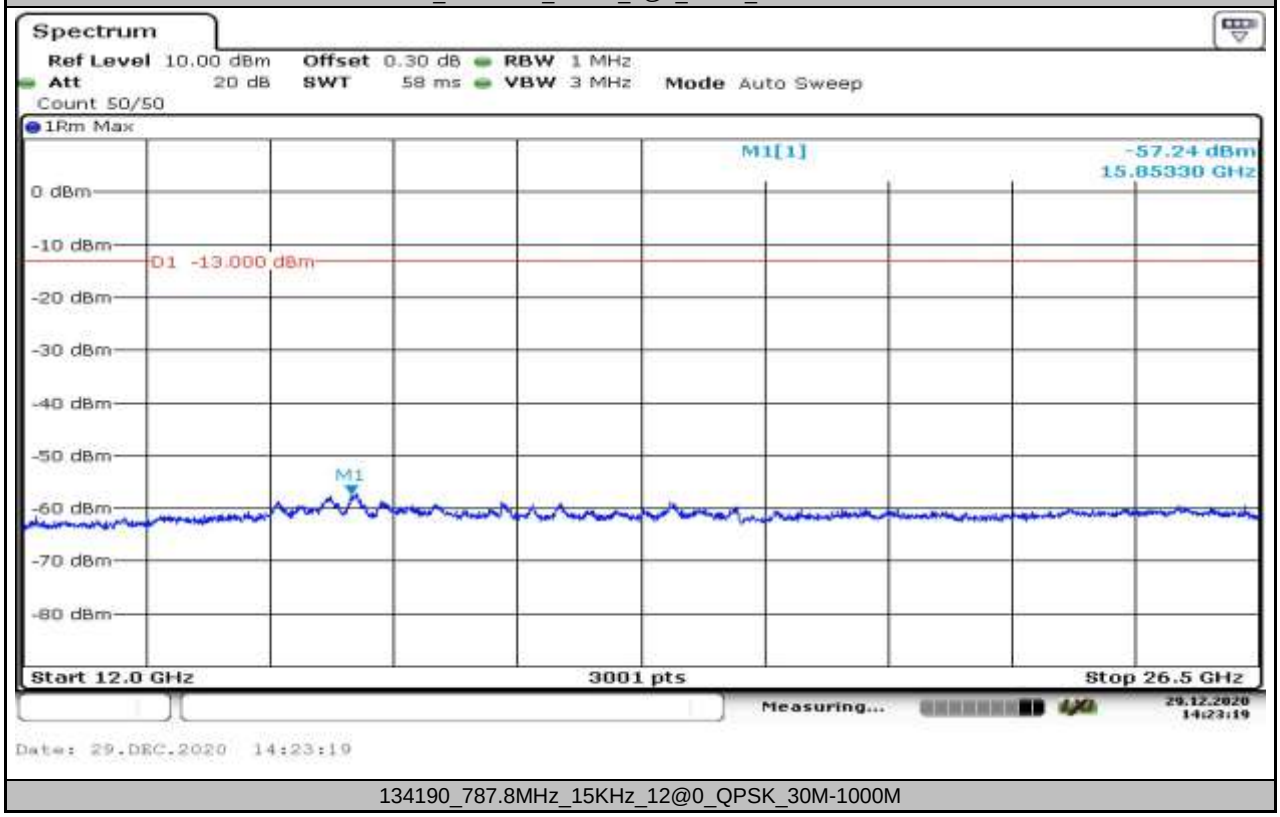

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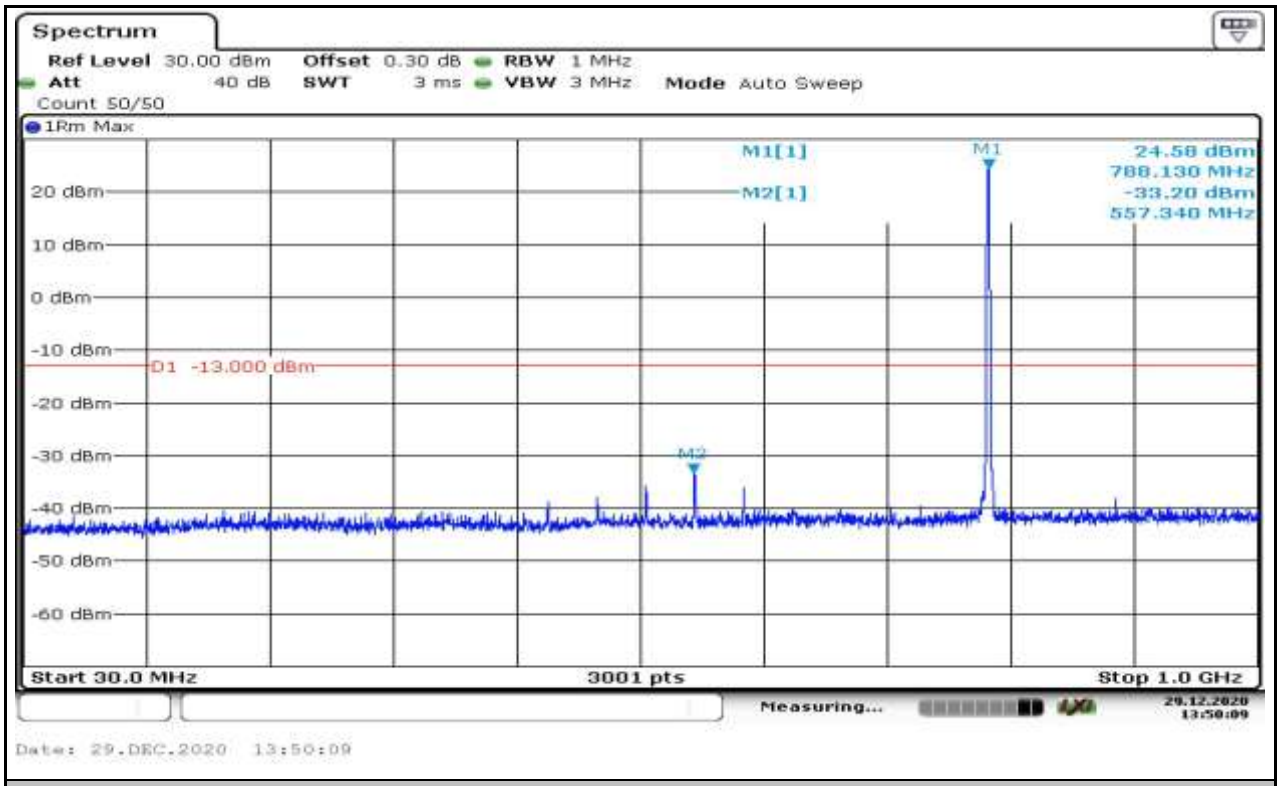

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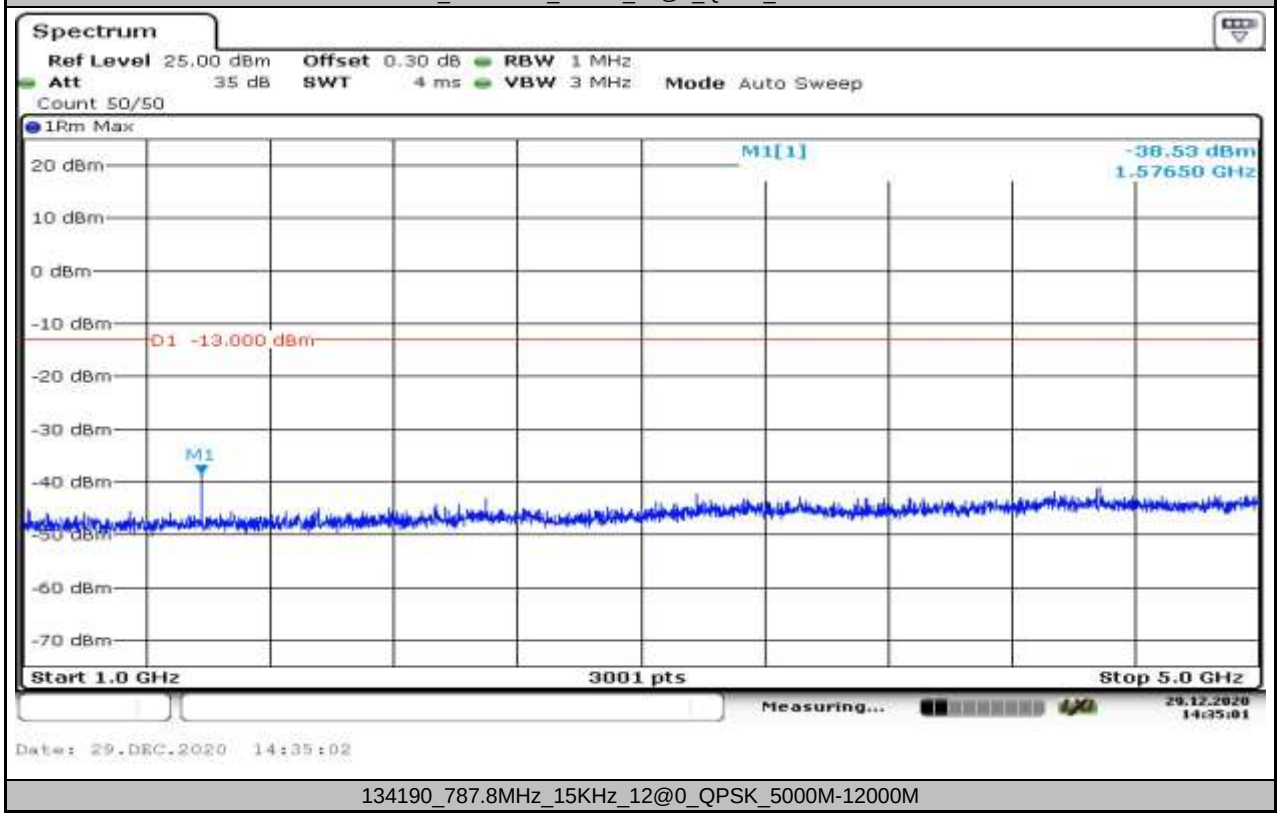

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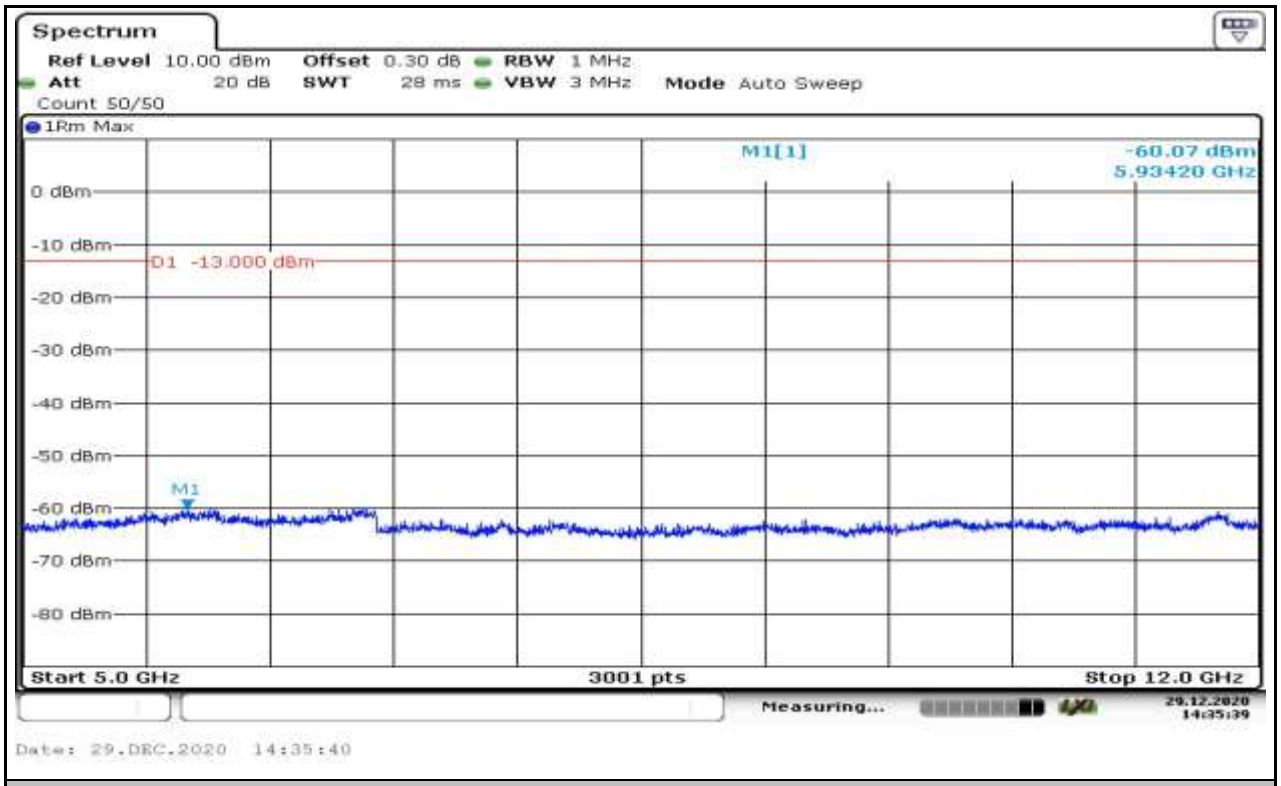

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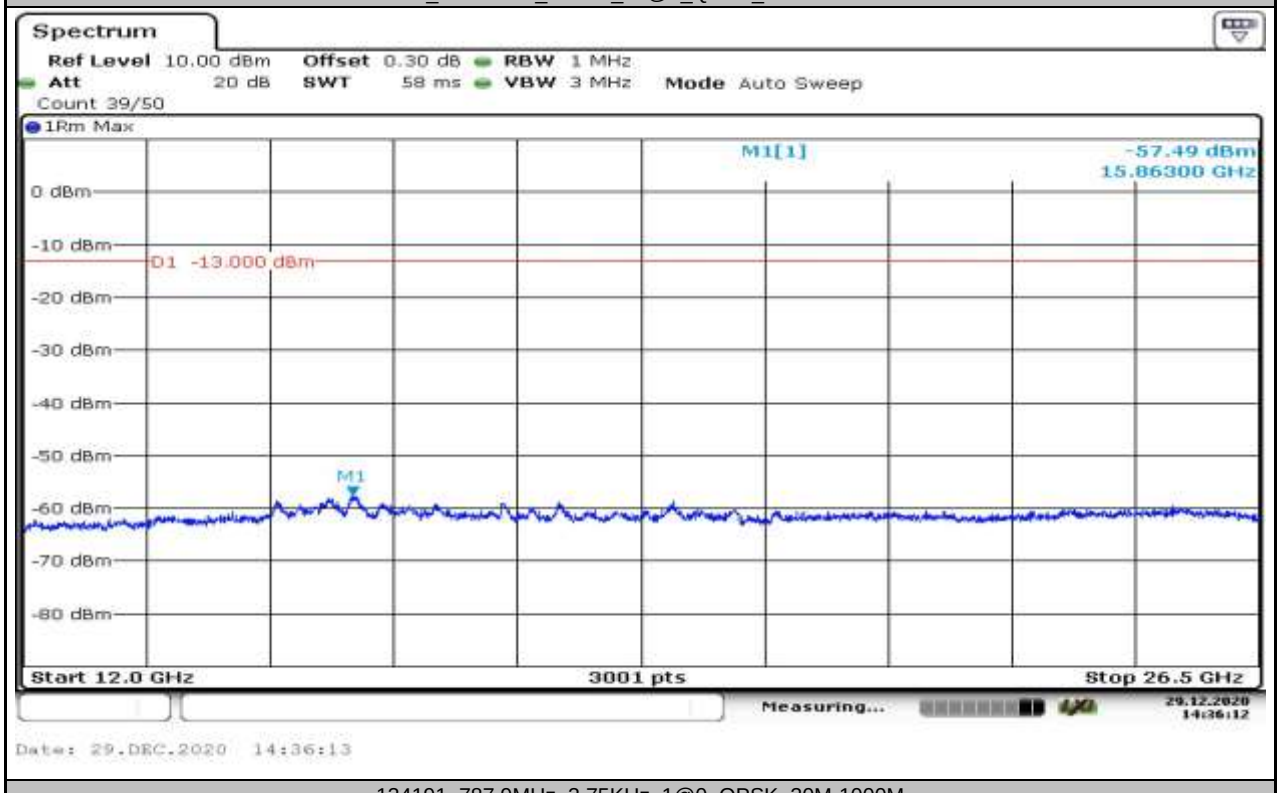

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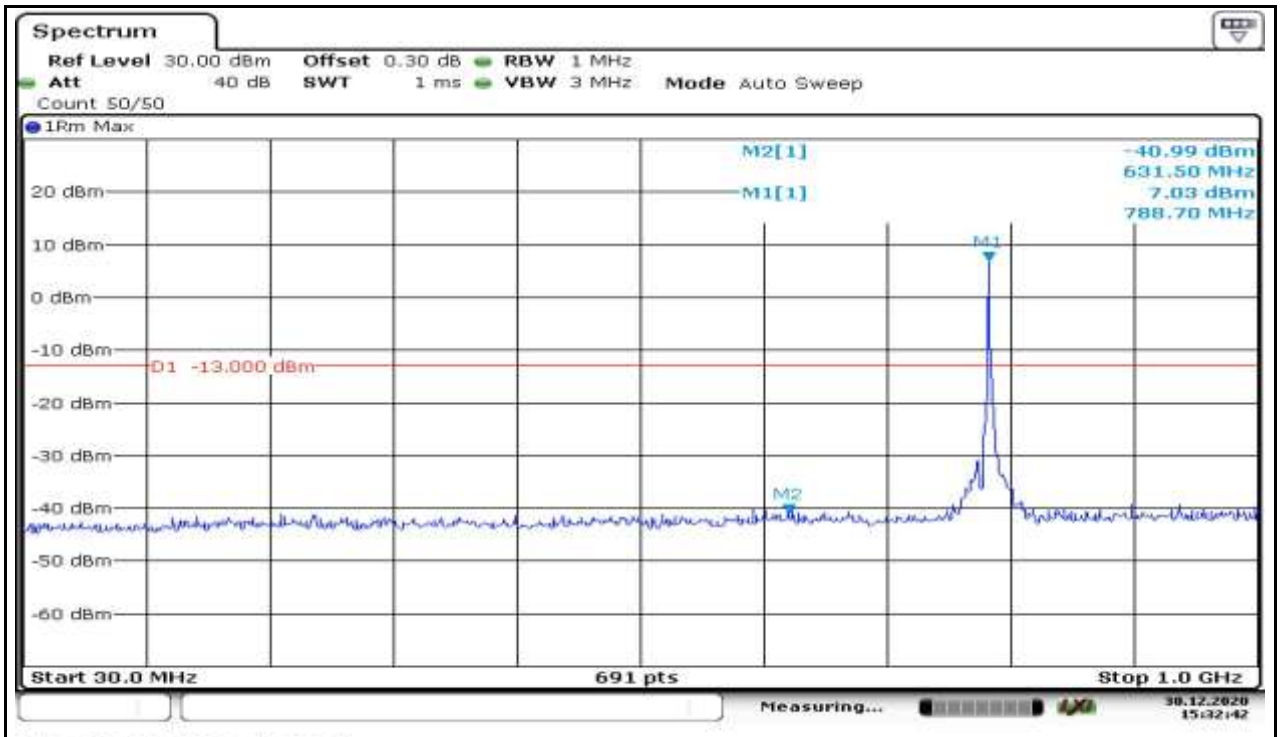
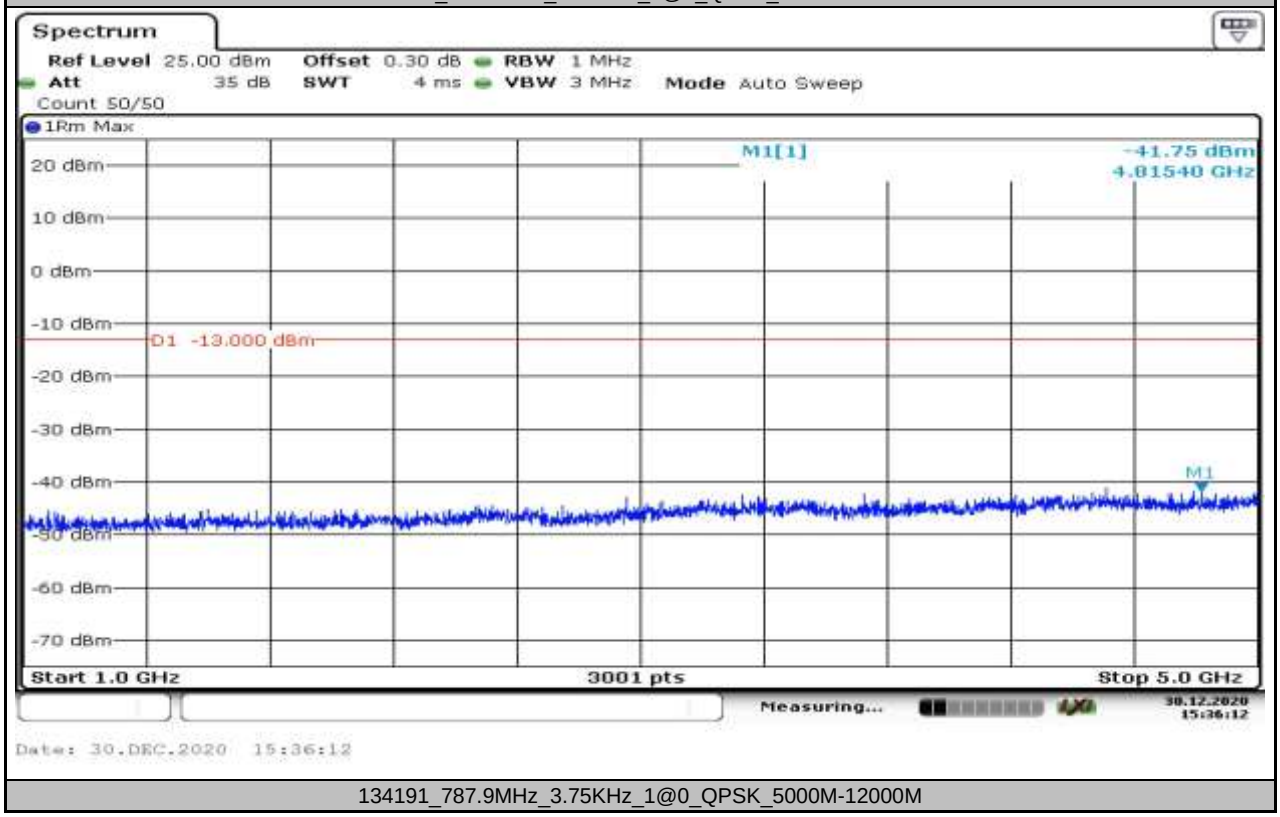


134191_787.9MHz_3.75KHz_1@0_QPSK_1000M-5000M



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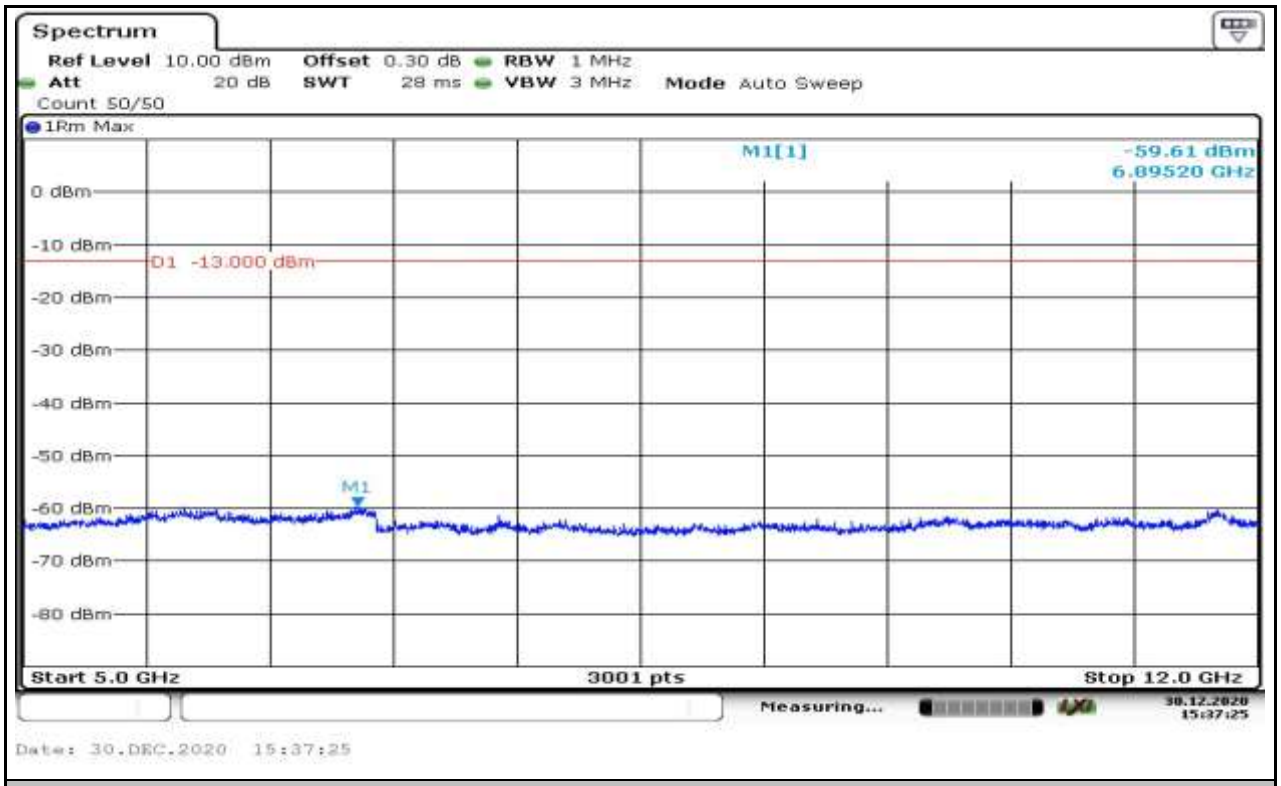

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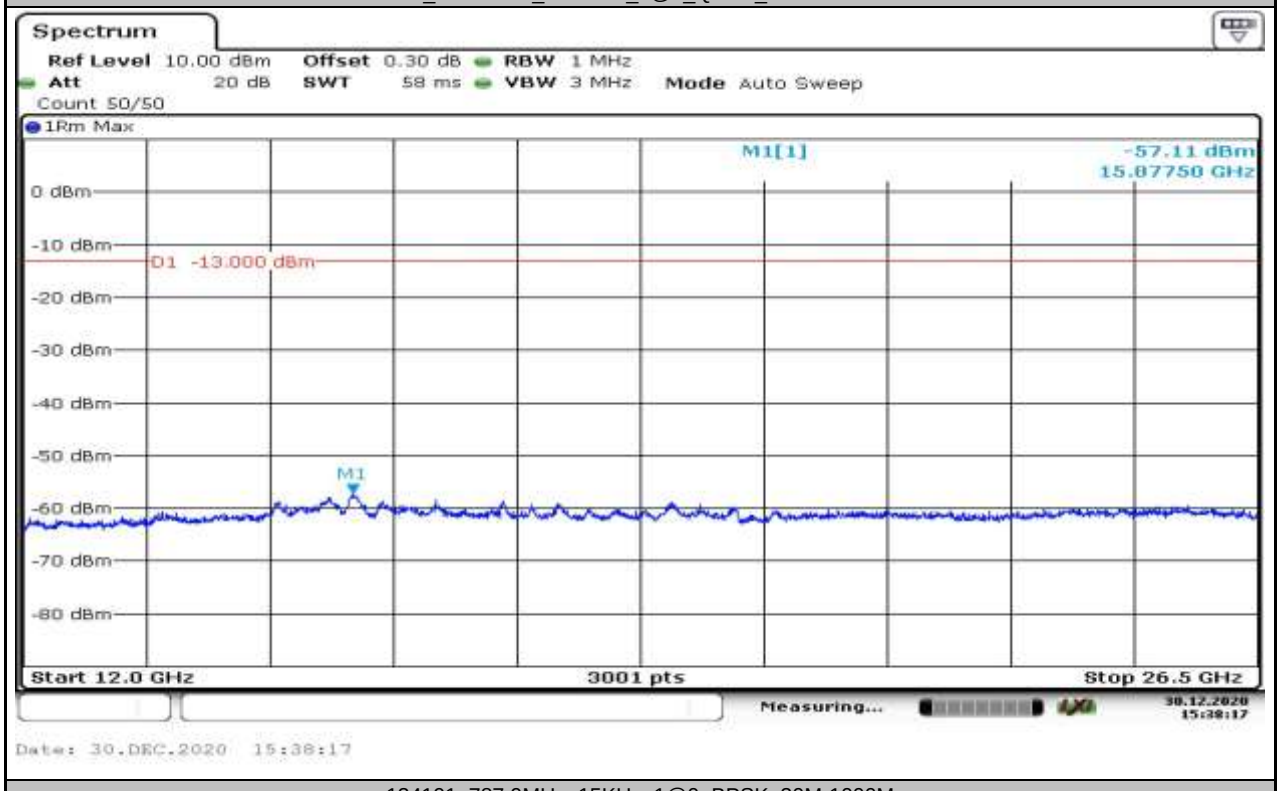
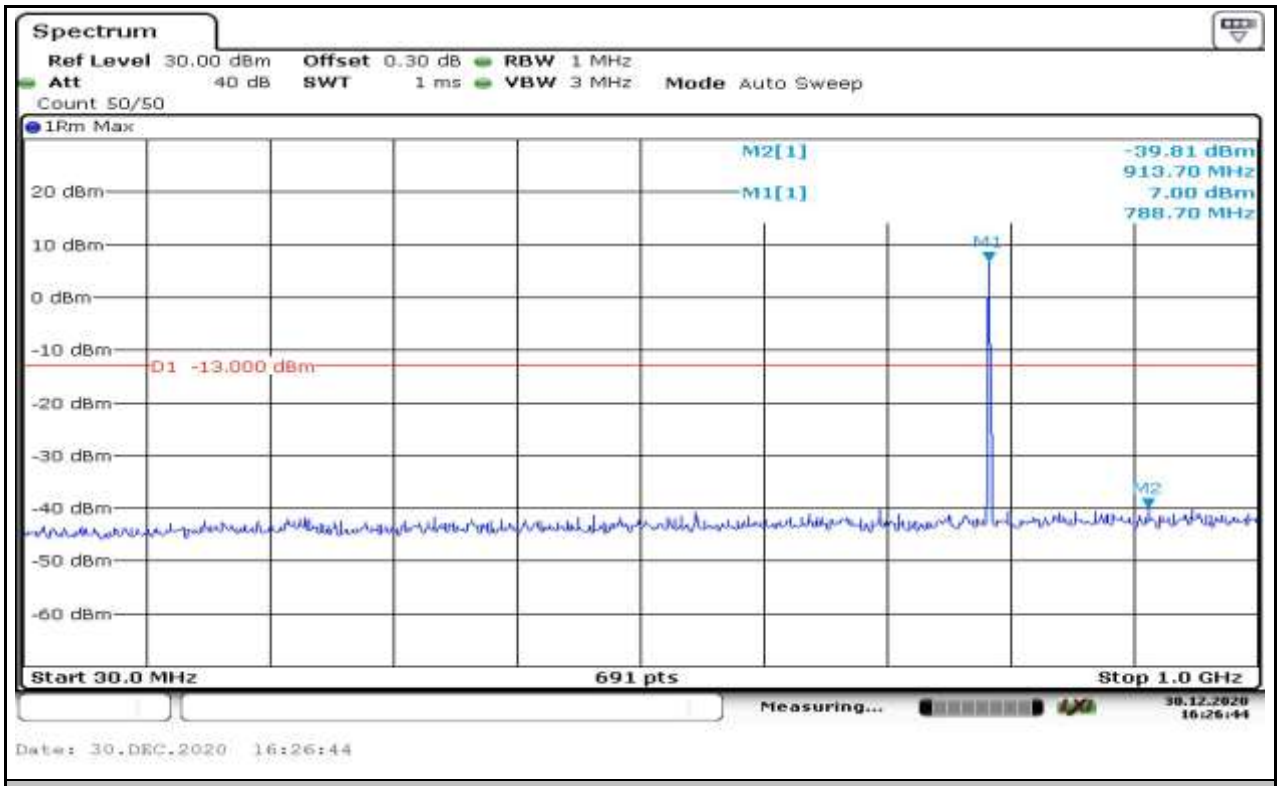


134191_787.9MHz_15KHz_1@0_BPSK_30M-1000M



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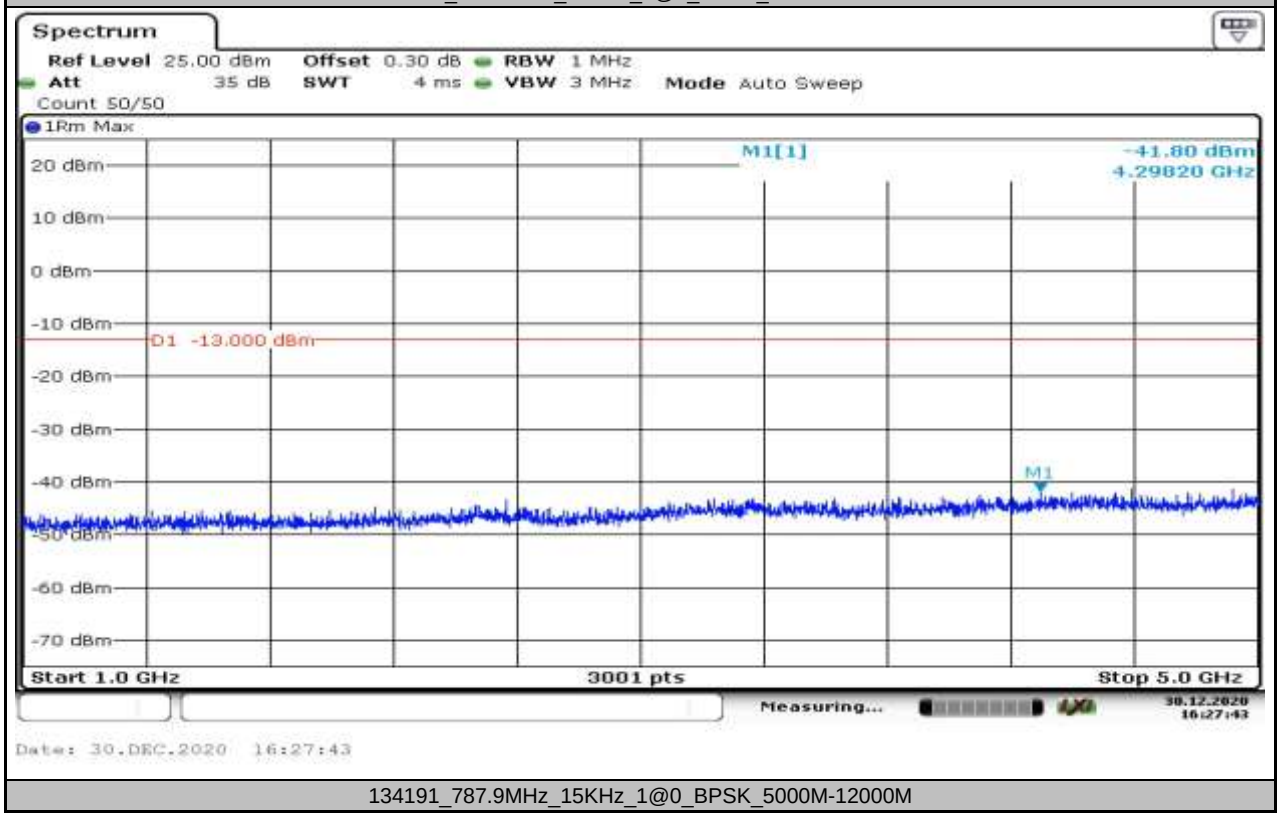
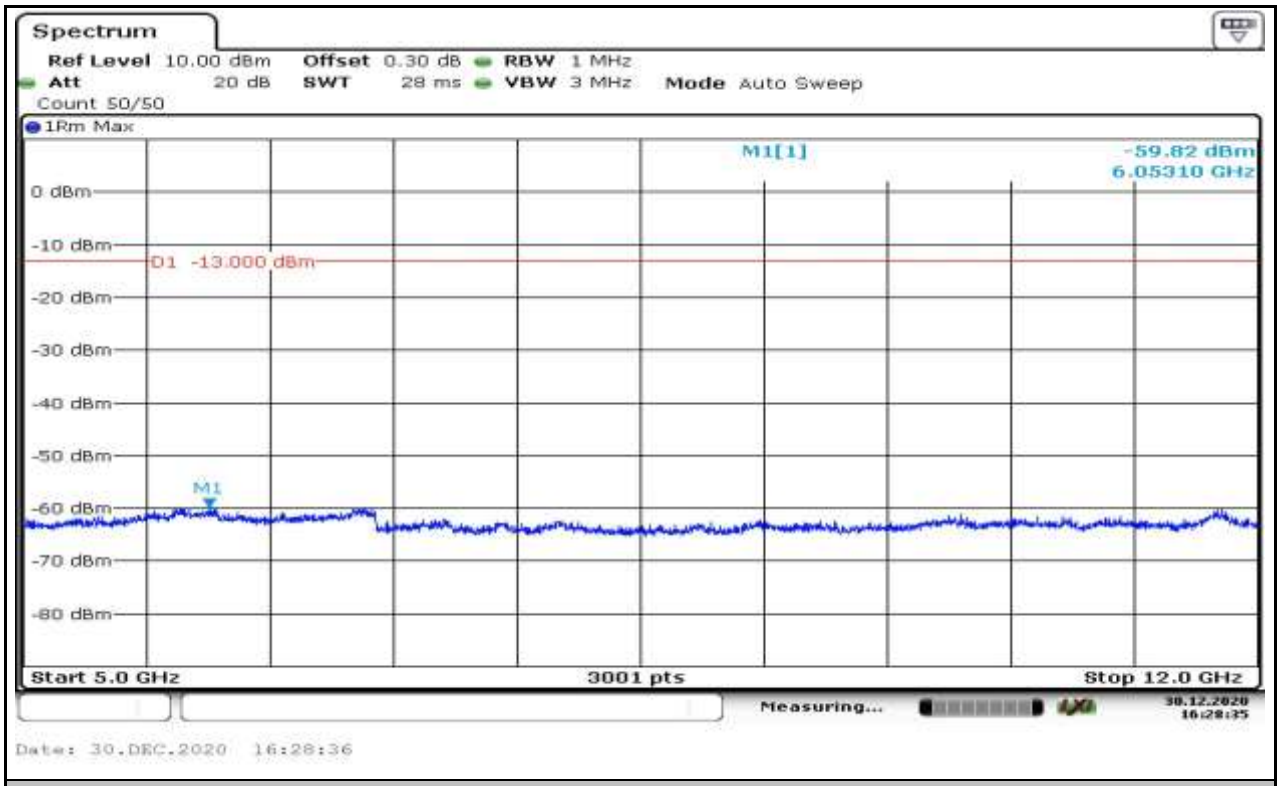
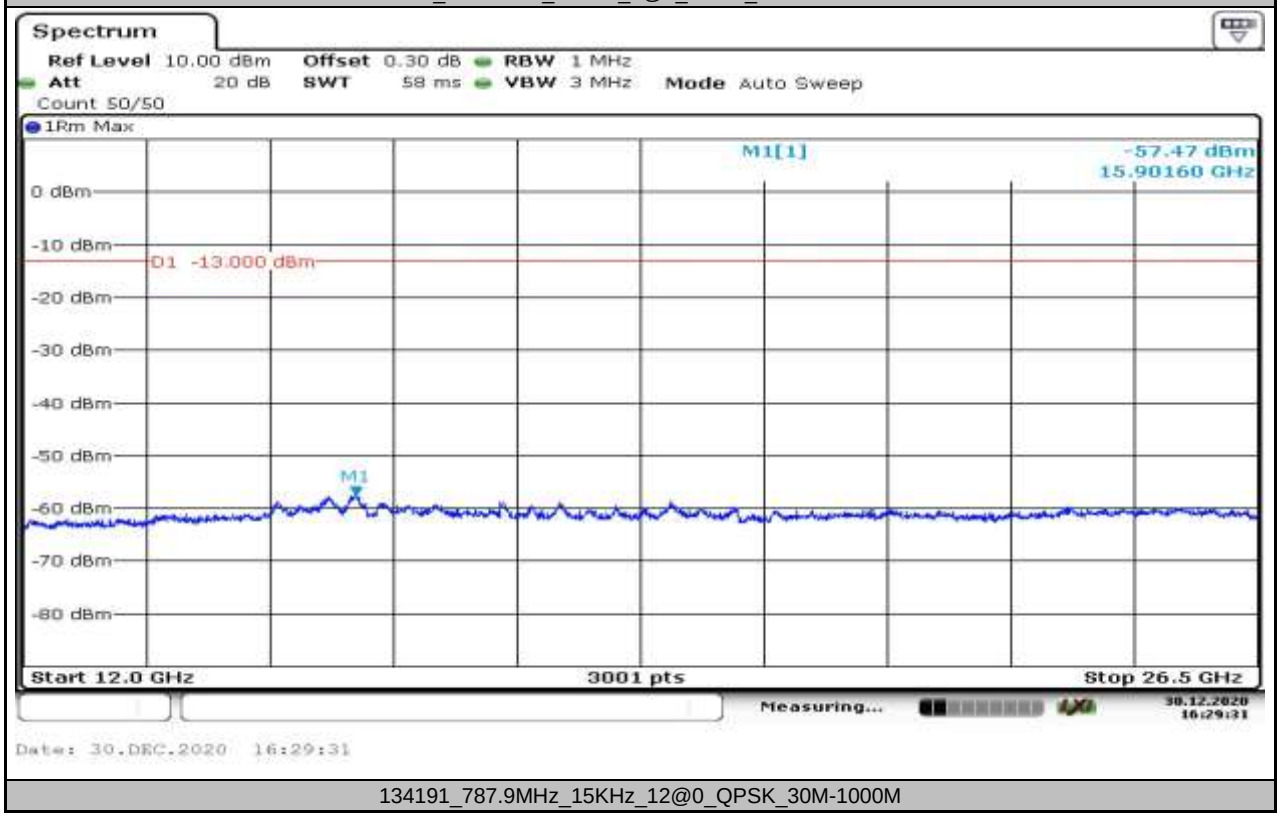


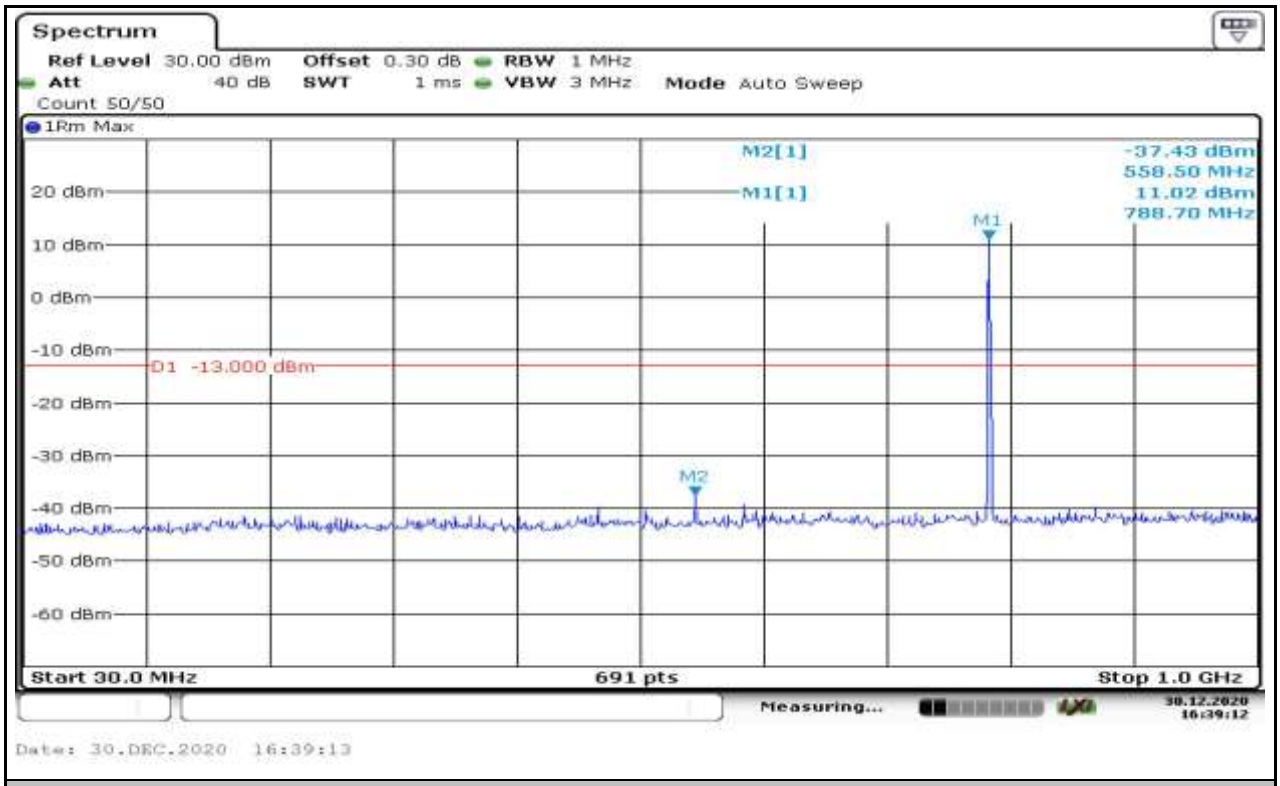
134191_787.9MHz_15KHz_1@0_BPSK_5000M-12000M



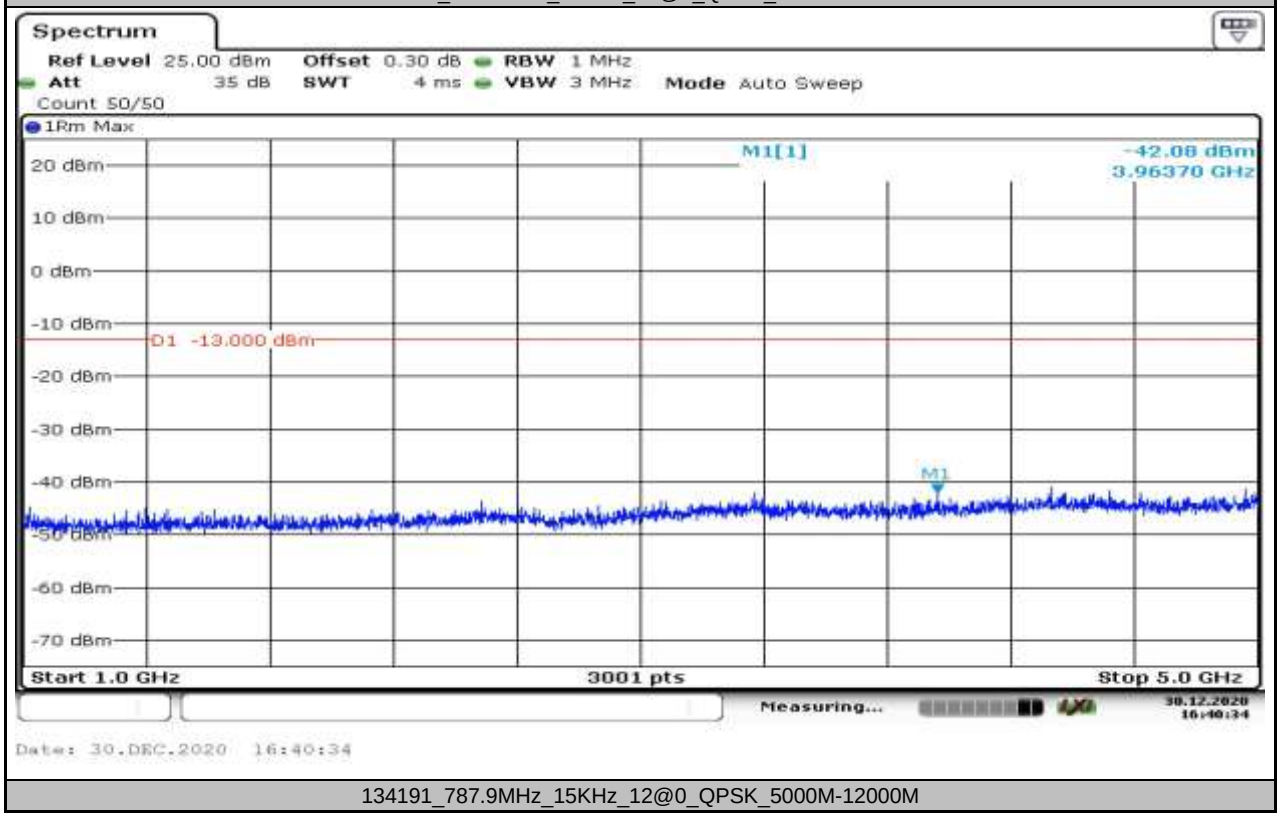
134191_787.9MHz_15KHz_1@0_BPSK_12000M-26500M



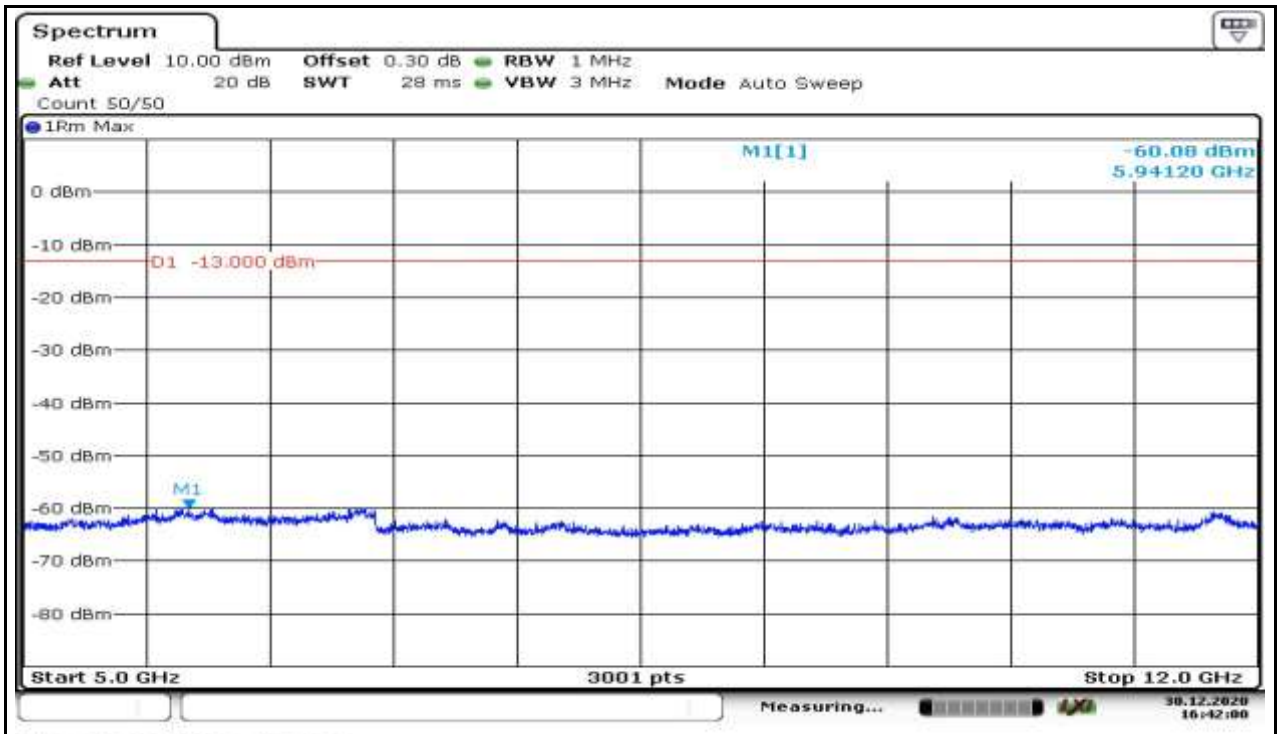
134191_787.9MHz_15KHz_12@0_QPSK_30M-1000M



134191_787.9MHz_15KHz_12@0_QPSK_1000M-5000M



134191_787.9MHz_15KHz_12@0_QPSK_5000M-12000M



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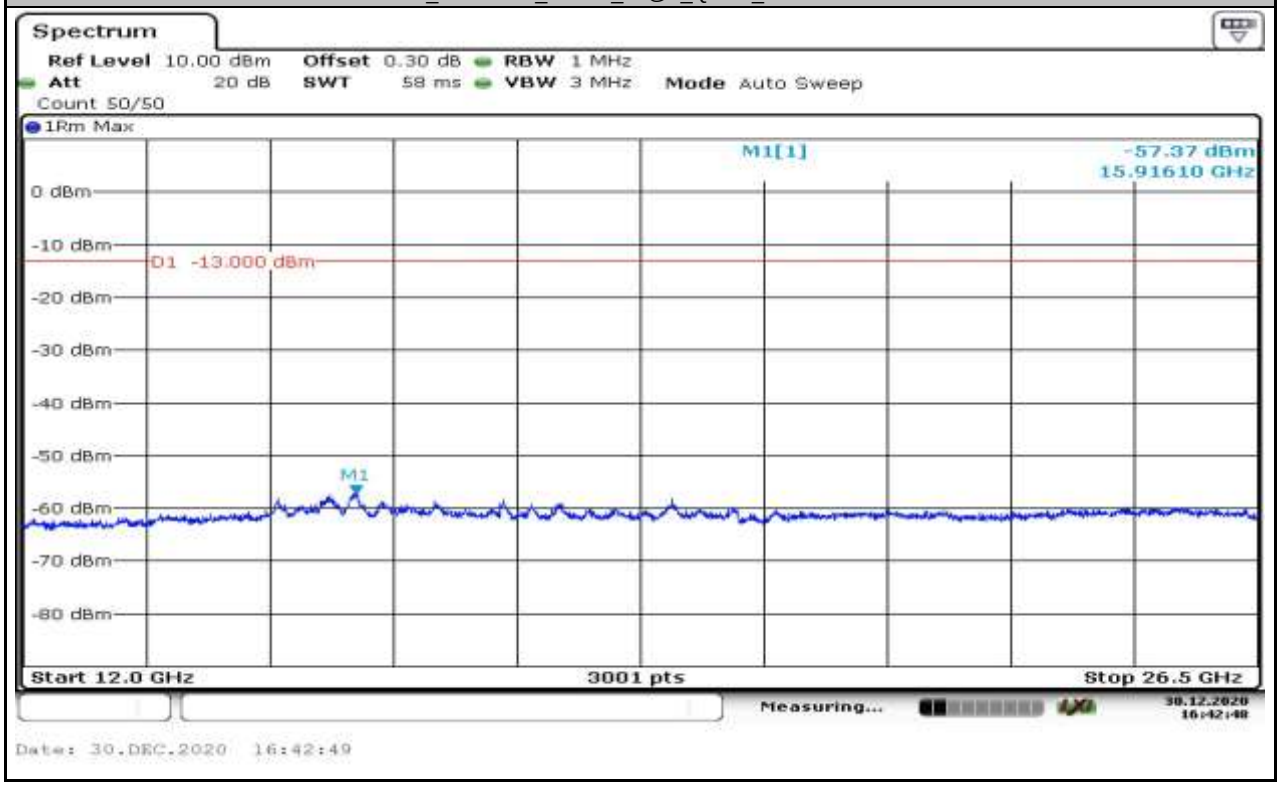


Appendix A.6: Frequency Stability for NB
Test Result

Voltage												
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	HV	NT	4.38	0.005564	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	LV	NT	-8.57	-0.010887	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	NT	-11.97	-0.015206	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	HV	NT	-9.47	-0.012021	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	LV	NT	-15.3	-0.019421	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	NT	-10.08	-0.012795	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	HV	NT	-9.43	-0.011979	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	LV	NT	-9.61	-0.012208	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	NT	-7.23	-0.009184	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	HV	NT	-12.86	-0.016324	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	LV	NT	-8.74	-0.011094	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	NT	8.12	0.010307	±2.5	PASS

Temperature												
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	85	-19.27	-0.024479	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	80	-20.54	-0.026092	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	70	-7.07	-0.008981	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	60	-2.46	-0.003125	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	50	-16.56	-0.021037	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	40	-4.68	-0.005945	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	30	-19.5	-0.024771	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	20	-10.38	-0.013186	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	10	-16.06	-0.020401	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	0	-18.02	-0.022891	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	-10	-29.2	-0.037093	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	-20	-20.12	-0.025559	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	-30	-17.28	-0.021951	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	3.75kHz	NV	-40	-18.03	-0.022904	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	85	18.31	0.023260	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	80	-20.38	-0.025889	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	70	-19.83	-0.025191	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	60	-18.85	-0.023946	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	50	-22.12	-0.028100	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	40	-18.12	-0.023018	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	30	-15.77	-0.020033	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	20	-23.31	-0.029611	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	10	-22.04	-0.027998	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	0	-27.67	-0.035150	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	-10	-15.24	-0.019360	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	-20	-33.23	-0.042213	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	-30	-28.51	-0.036217	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134184	1@0	15kHz	NV	-40	-10.46	-0.013288	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	85	-10.1	-0.012830	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	80	-14.85	-0.018864	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	70	-16.39	-0.020821	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	60	-10.04	-0.012754	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	50	-8.82	-0.011204	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	40	-13.72	-0.017429	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	30	-10.21	-0.012970	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	20	-24.71	-0.031390	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	10	-2.29	-0.002909	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	0	-21.6	-0.027439	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	-10	-18.03	-0.022904	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	-20	-8.1	-0.010290	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	-30	-2.27	-0.002884	±2.5	PASS

787-788M	Stand-Alone	NaN	QPSK	134190	1@0	3.75kHz	NV	-40	-3.84	-0.004878	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	85	-7.46	-0.009477	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	80	-20.37	-0.025877	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	70	-10	-0.012703	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	60	-13.02	-0.016540	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	50	-10	-0.012703	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	40	-32.18	-0.040879	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	30	-16.22	-0.020605	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	20	-16.83	-0.021380	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	10	-1.69	-0.002147	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	0	-5.5	-0.006987	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	-10	-19.61	-0.024911	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	-20	-10.98	-0.013948	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	-30	-19.61	-0.024911	±2.5	PASS
787-788M	Stand-Alone	NaN	QPSK	134190	1@0	15kHz	NV	-40	-2.44	-0.003100	±2.5	PASS

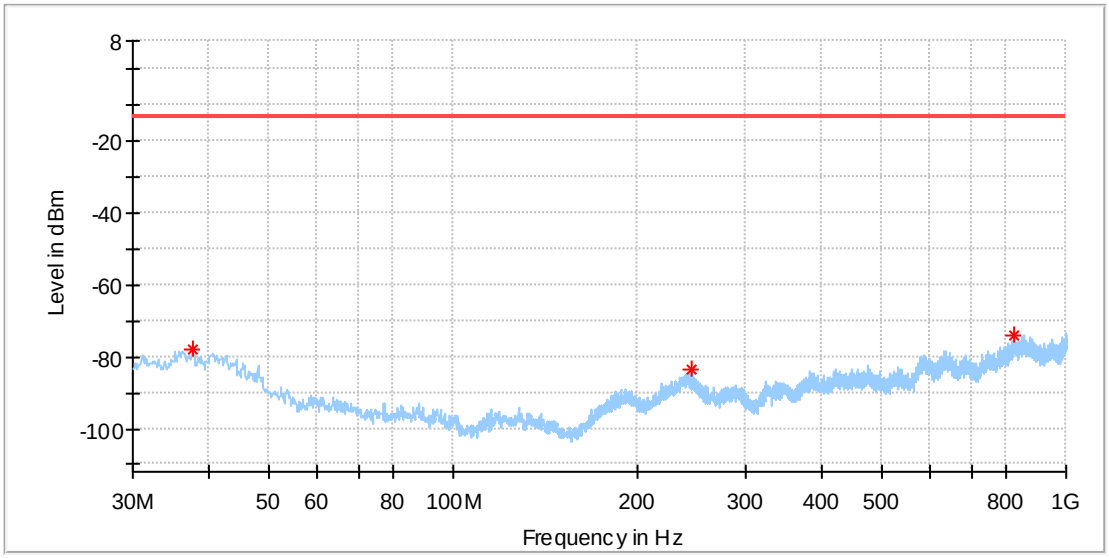
Appendix B: Test Results of Field Strength of Spurious Radiation for NB-IoT operation

Appendix B.1: Field Strength of Spurious Radiation

Below 1 GHz
3.75 kHz configuration

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

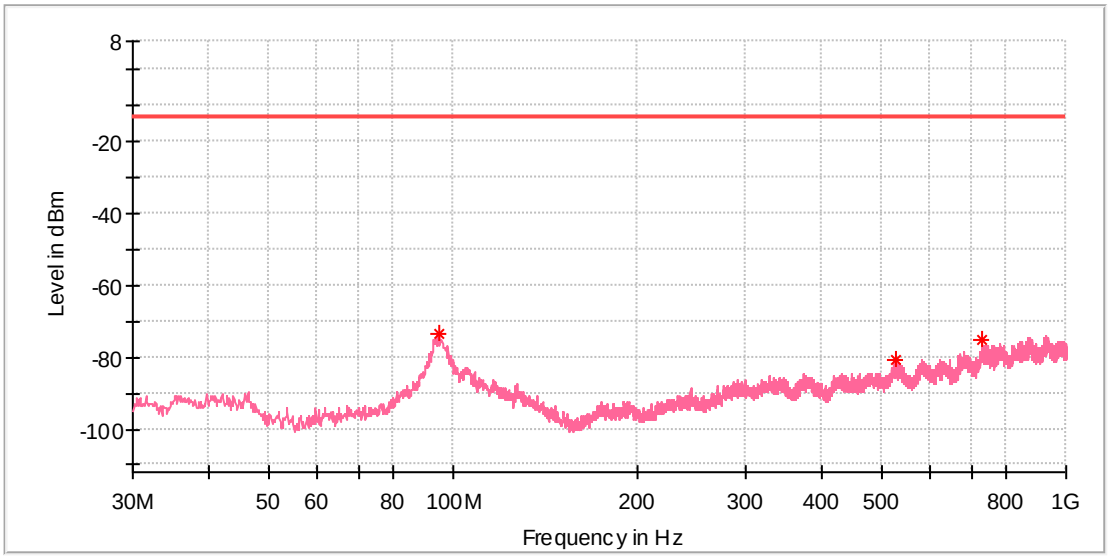
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
37.638750	-77.79	---	-13.00	64.79	100.0	H	0.0	-114.0
244.370000	-83.46	---	-13.00	70.46	100.0	H	283.0	-110.0
822.368750	-74.11	---	-13.00	61.11	100.0	H	0.0	-100.5

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

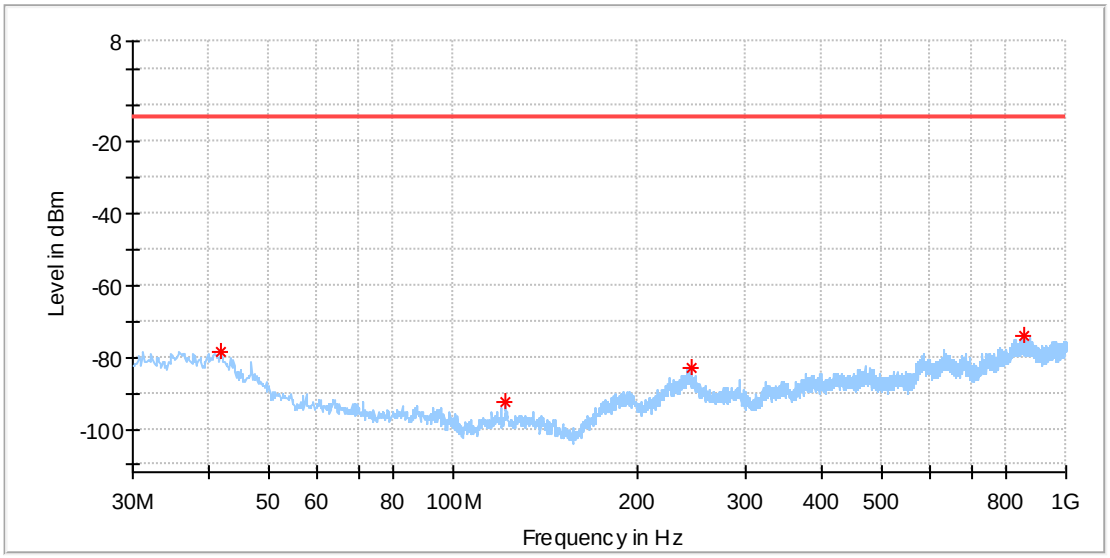
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
94.868750	-73.60	---	-13.00	60.60	100.0	V	84.0	-99.8
528.458750	-81.02	---	-13.00	68.02	100.0	V	0.0	-107.8
729.370000	-74.93	---	-13.00	61.93	100.0	V	212.0	-103.0

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

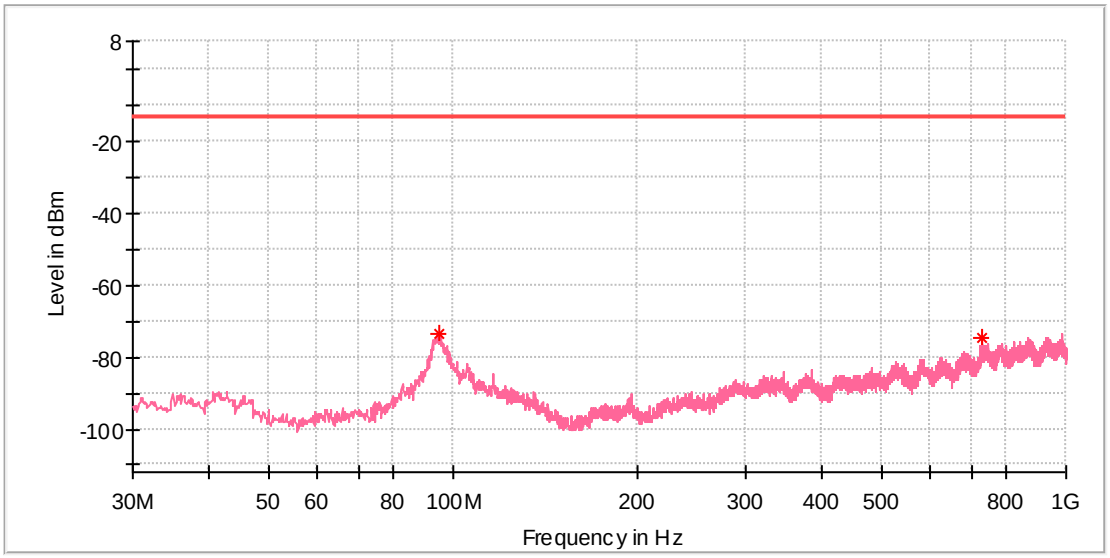
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
41.882500	-78.66	---	-13.00	65.66	100.0	H	121.0	-112.4
121.907500	-92.65	---	-13.00	79.65	100.0	H	165.0	-122.4
244.127500	-82.84	---	-13.00	69.84	100.0	H	351.0	-110.0
856.561250	-74.24	---	-13.00	61.24	100.0	H	0.0	-99.3

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
94.868750	-73.57	---	-13.00	60.57	100.0	V	242.0	-99.8
729.733750	-74.48	---	-13.00	61.48	100.0	V	144.0	-103.0

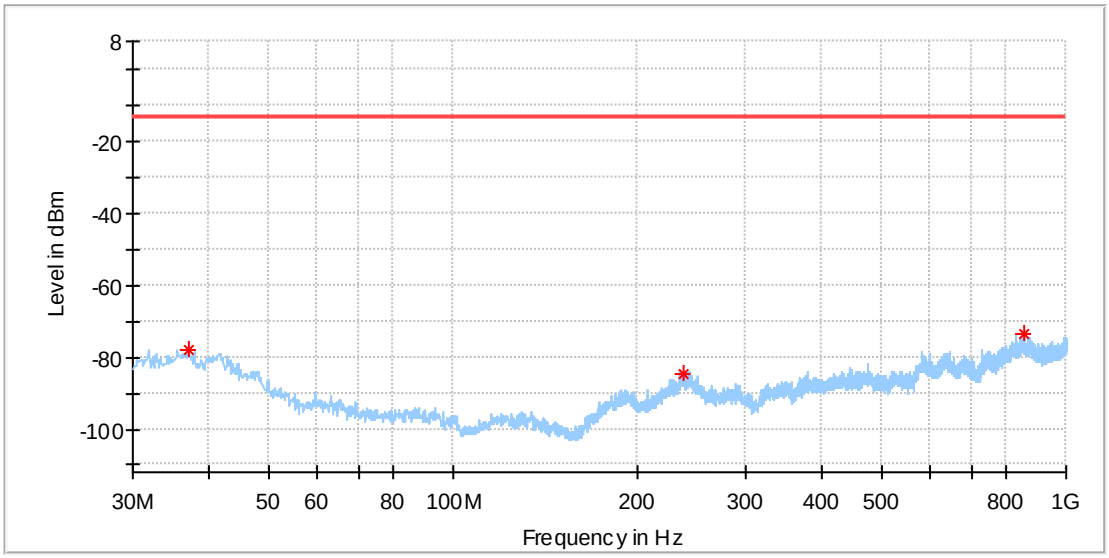
Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

15 kHz configuration

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

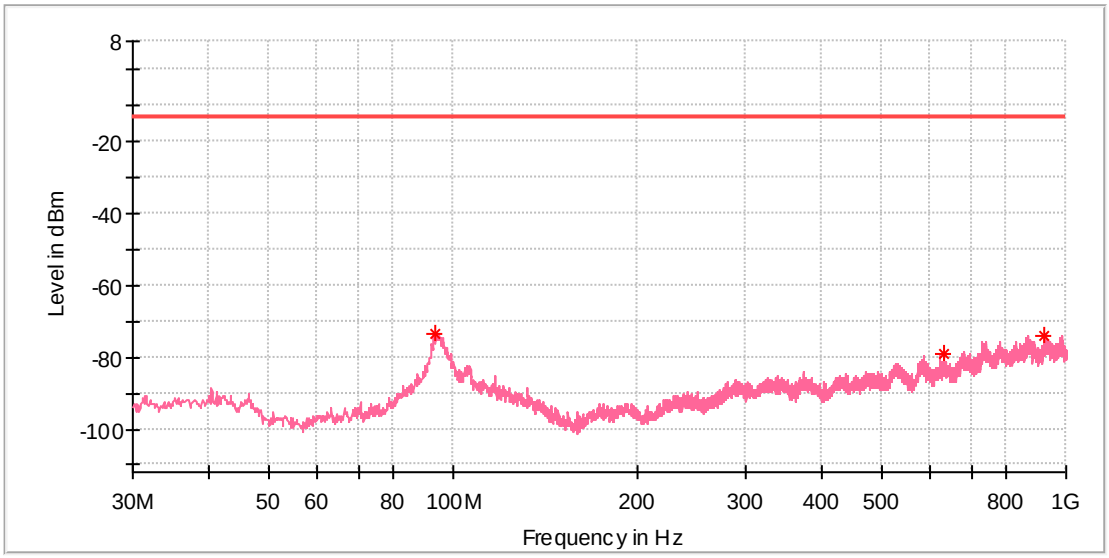
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
36.911250	-77.79	---	-13.00	64.79	100.0	H	319.0	-113.4
238.186250	-84.56	---	-13.00	71.56	100.0	H	326.0	-110.8
850.983750	-73.45	---	-13.00	60.45	100.0	H	296.0	-99.1

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

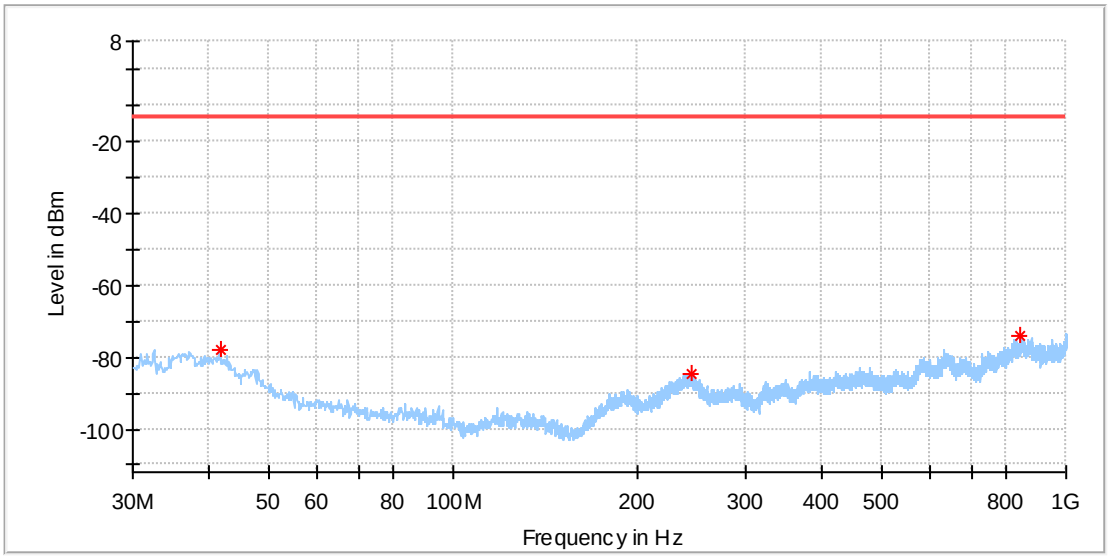
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
93.535000	-73.37	---	-13.00	60.37	100.0	V	217.0	-101.0
629.702500	-78.99	---	-13.00	65.99	100.0	V	157.0	-106.6
922.885000	-74.07	---	-13.00	61.07	100.0	V	322.0	-100.3

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
41.640000	-77.75	---	-13.00	64.75	100.0	H	53.0	-112.3
244.127500	-84.52	---	-13.00	71.52	100.0	H	0.0	-110.0
839.343750	-74.12	---	-13.00	61.12	100.0	H	198.0	-100.7

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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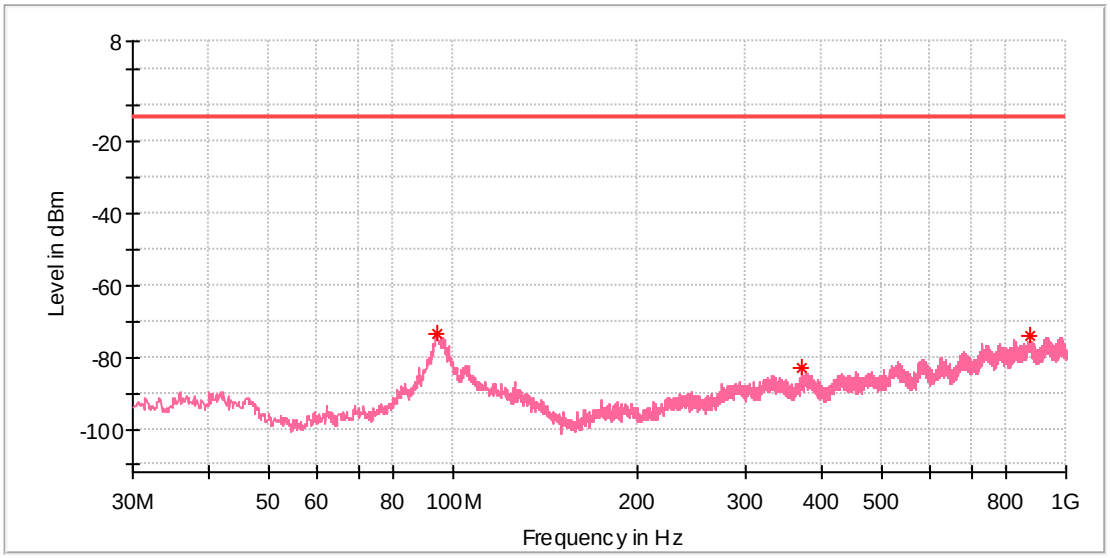
EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
94.141250	-73.35	---	-13.00	60.35	100.0	V	2.0	-99.8
370.955000	-83.07	---	-13.00	70.07	100.0	V	200.0	-111.0
871.960000	-74.06	---	-13.00	61.06	100.0	V	94.0	-100.4

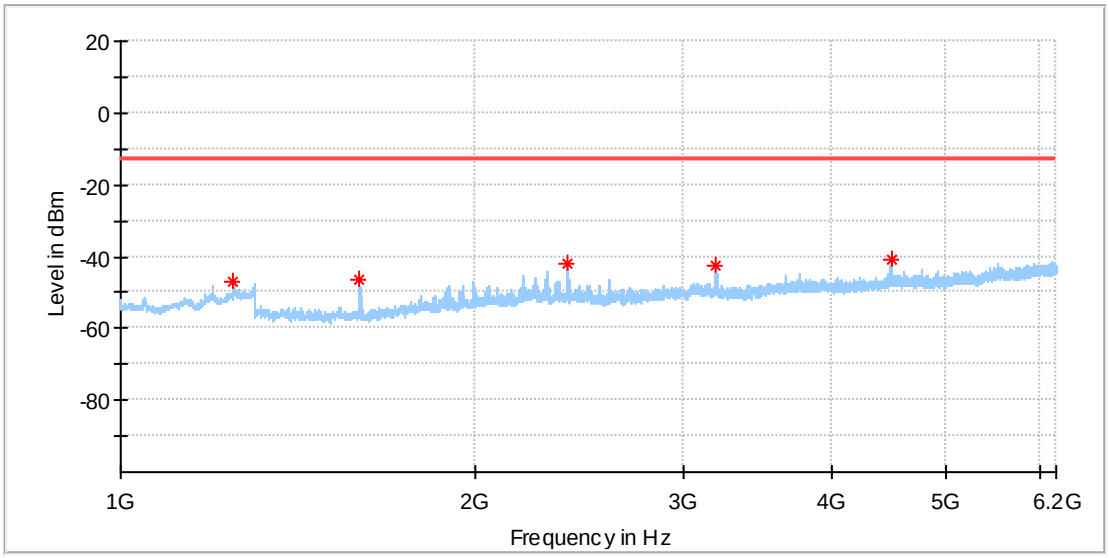
Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

Above 1 GHz
3.75 kHz configuration

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

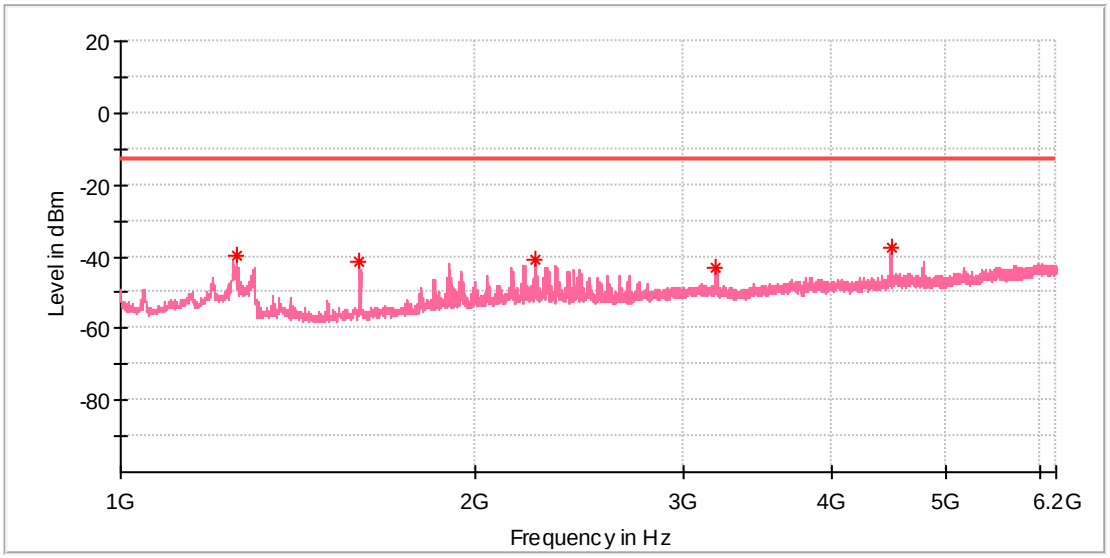
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1246.000000	-46.83	---	-13.00	33.83	100.0	H	323.0	-92.5
1594.500000	-46.30	---	-13.00	33.30	100.0	H	52.0	-92.7
2390.500000	-41.92	---	-13.00	28.92	100.0	H	268.0	-88.0
3193.000000	-42.45	---	-13.00	29.45	100.0	H	260.0	-86.4
4498.500000	-41.01	---	-13.00	28.01	100.0	H	268.0	-83.8

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1253.000000	-39.58	---	-13.00	26.58	100.0	V	280.0	-92.3
1594.500000	-41.55	---	-13.00	28.56	100.0	V	355.0	-92.9
2246.000000	-40.95	---	-13.00	27.95	100.0	V	295.0	-87.8
3191.000000	-42.80	---	-13.00	29.80	100.0	V	53.0	-86.3
4495.000000	-37.49	---	-13.00	24.49	100.0	V	332.0	-83.8

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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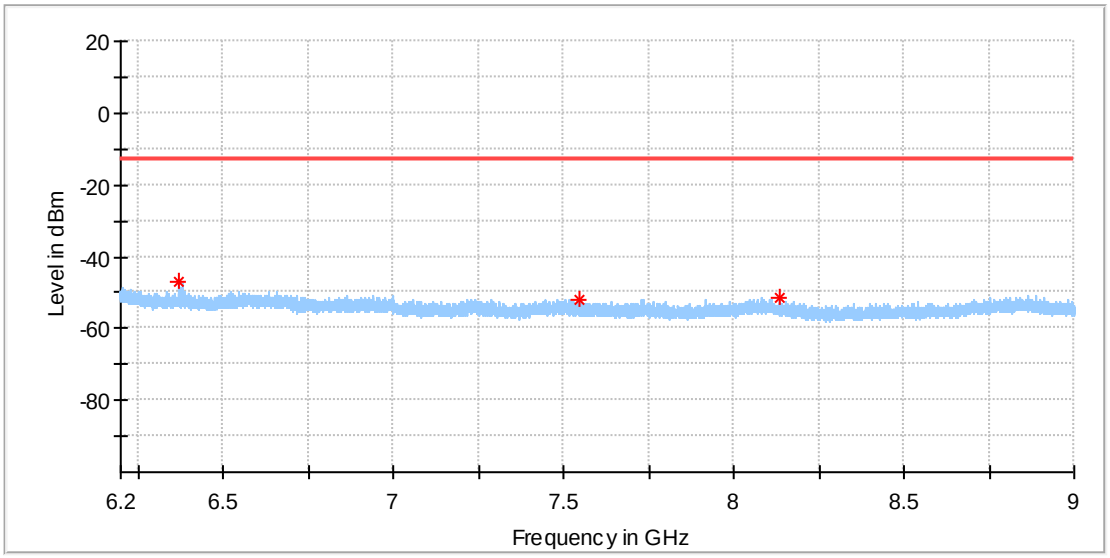
EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

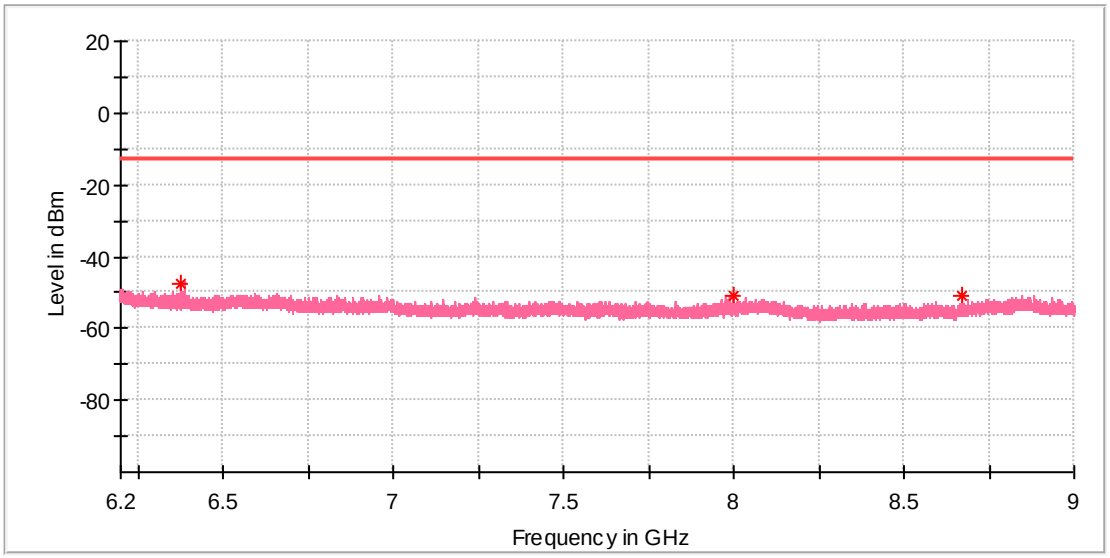
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6373.366667	-46.85	---	-13.00	33.85	100.0	H	347.0	-87.6
7547.850000	-51.81	---	-13.00	38.81	100.0	H	245.0	-87.2
8136.783333	-51.22	---	-13.00	38.22	100.0	H	58.0	-87.0

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

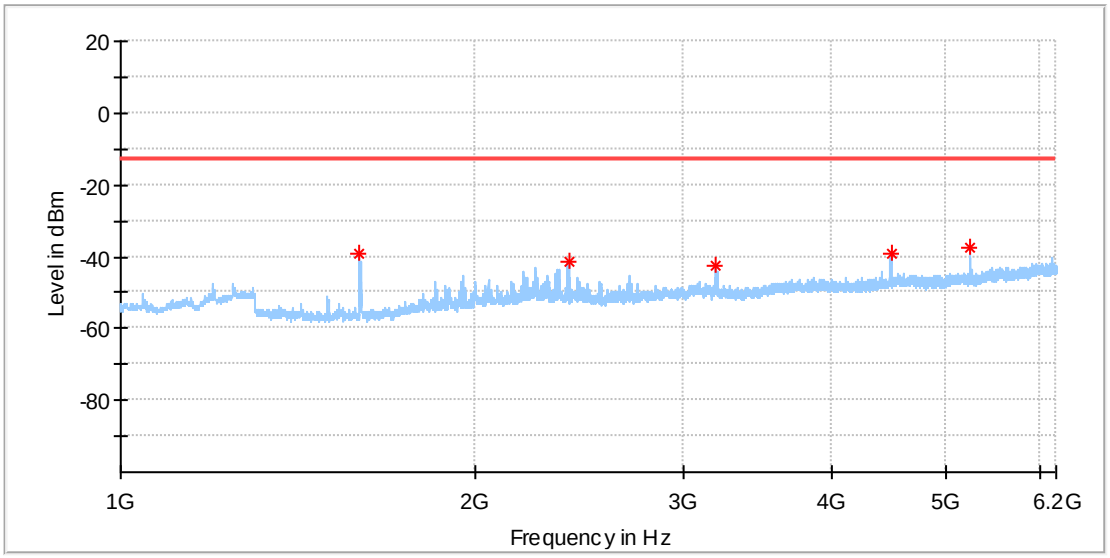
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6377.566667	-47.39	---	-13.00	34.39	100.0	V	254.0	-87.7
7997.133333	-50.87	---	-13.00	37.87	100.0	V	263.0	-87.5
8670.183333	-50.97	---	-13.00	37.97	100.0	V	349.0	-86.7

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1594.000000	-39.43	---	-13.00	26.43	100.0	H	265.0	-92.7
2395.000000	-41.62	---	-13.00	28.62	100.0	H	290.0	-88.0
3196.500000	-42.26	---	-13.00	29.26	100.0	H	210.0	-86.4
4497.000000	-39.28	---	-13.00	26.28	100.0	H	299.0	-83.8
5241.500000	-37.67	---	-13.00	24.67	100.0	H	146.0	-83.1

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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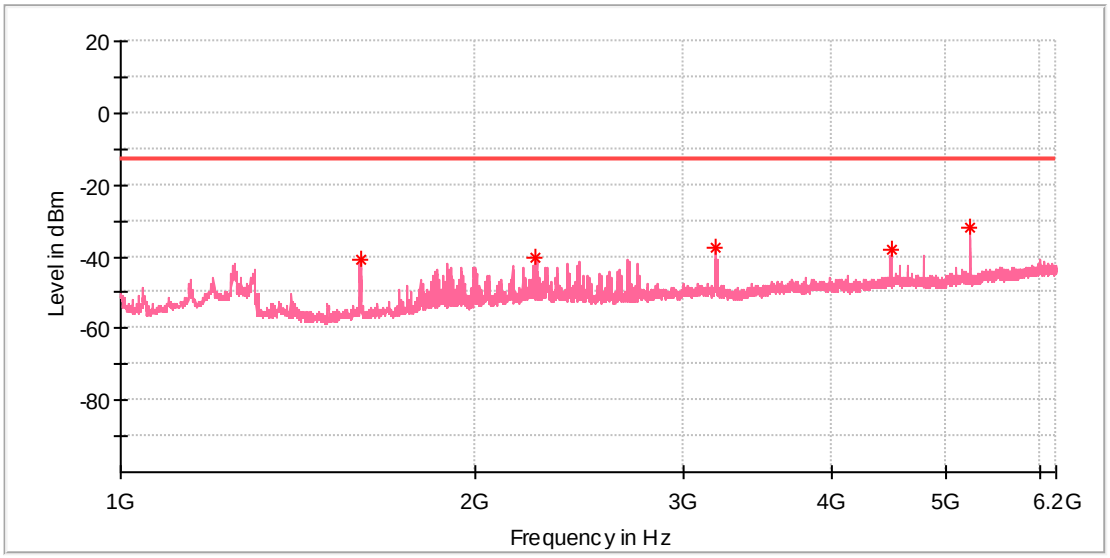
EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

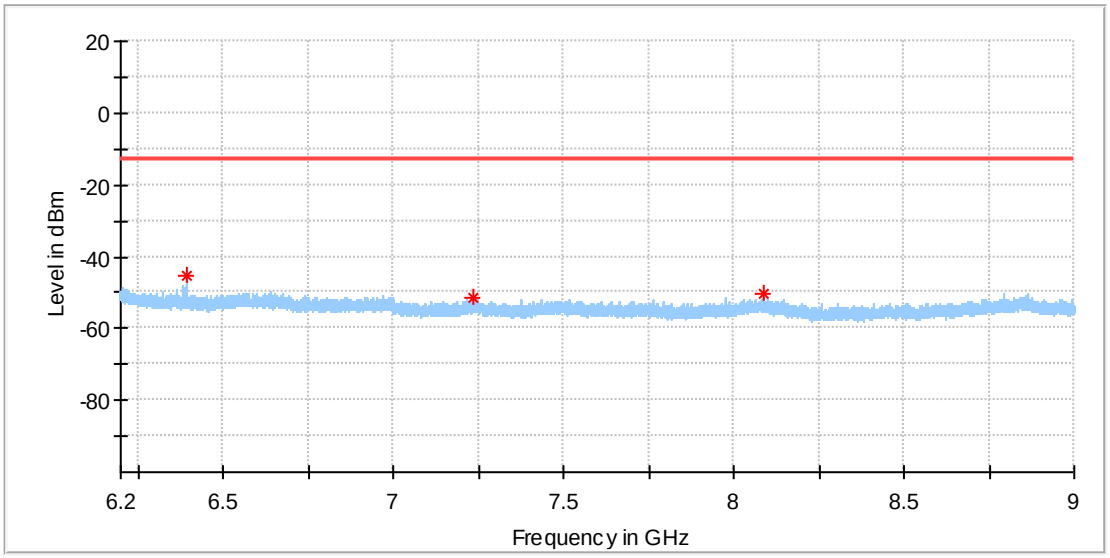
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1596.000000	-40.74	---	-13.00	27.74	100.0	V	204.0	-92.9
2247.500000	-40.20	---	-13.00	27.20	100.0	V	281.0	-87.8
3192.000000	-37.71	---	-13.00	24.71	100.0	V	266.0	-86.3
4495.000000	-38.07	---	-13.00	25.07	100.0	V	281.0	-83.8
5234.000000	-32.18	---	-13.00	19.18	100.0	V	111.0	-83.1

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

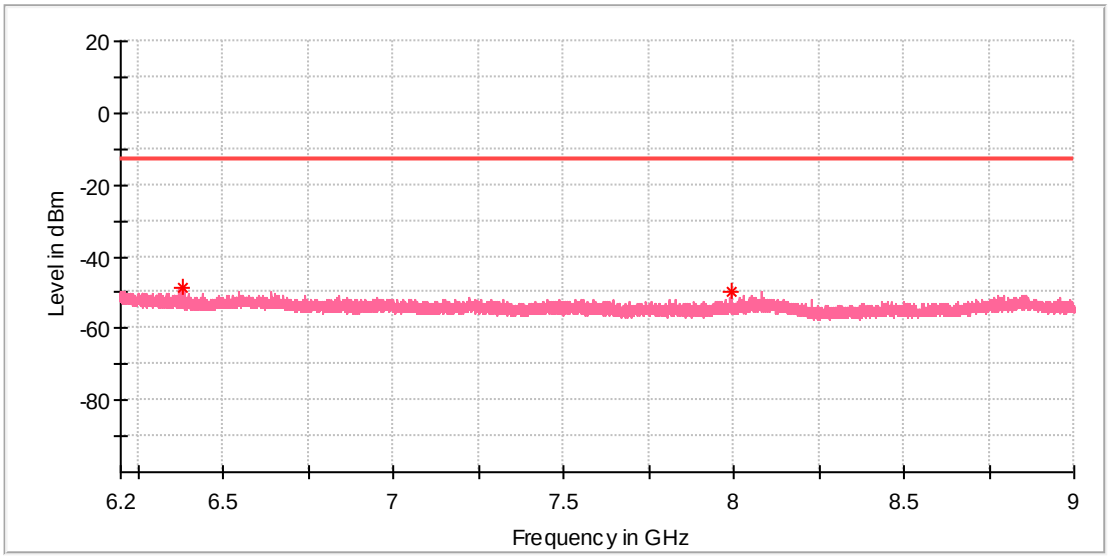
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6395.416667	-45.45	---	-13.00	32.45	100.0	H	343.0	-87.7
7233.900000	-51.47	---	-13.00	38.47	100.0	H	26.0	-87.1
8086.616667	-50.58	---	-13.00	37.58	100.0	H	0.0	-86.6

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_3.75kHz_BPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6380.133333	-48.81	---	-13.00	35.81	100.0	V	16.0	-87.7
7992.466667	-49.76	---	-13.00	36.76	100.0	V	142.0	-87.5

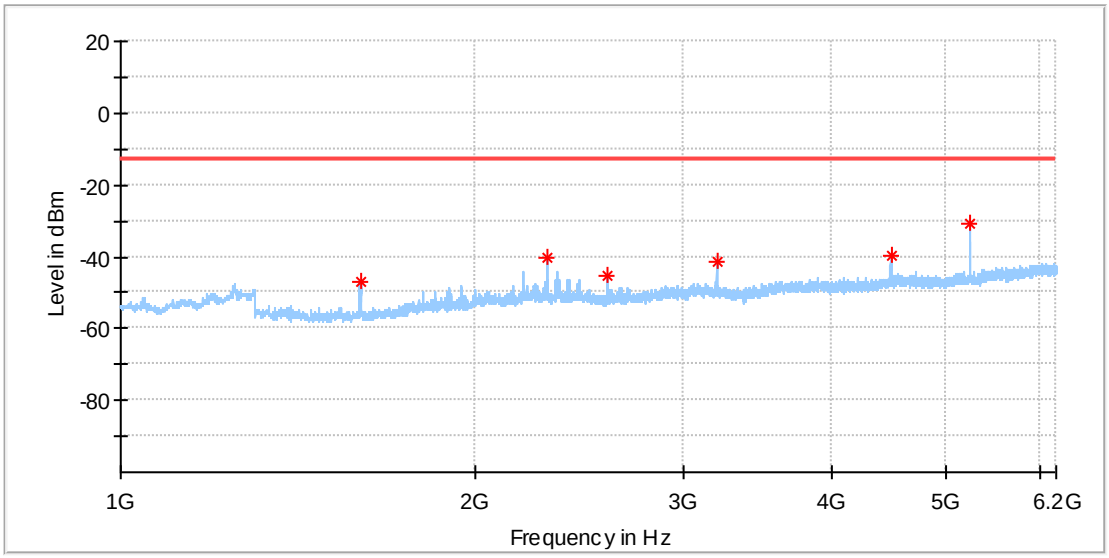
Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

15 kHz configuration

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

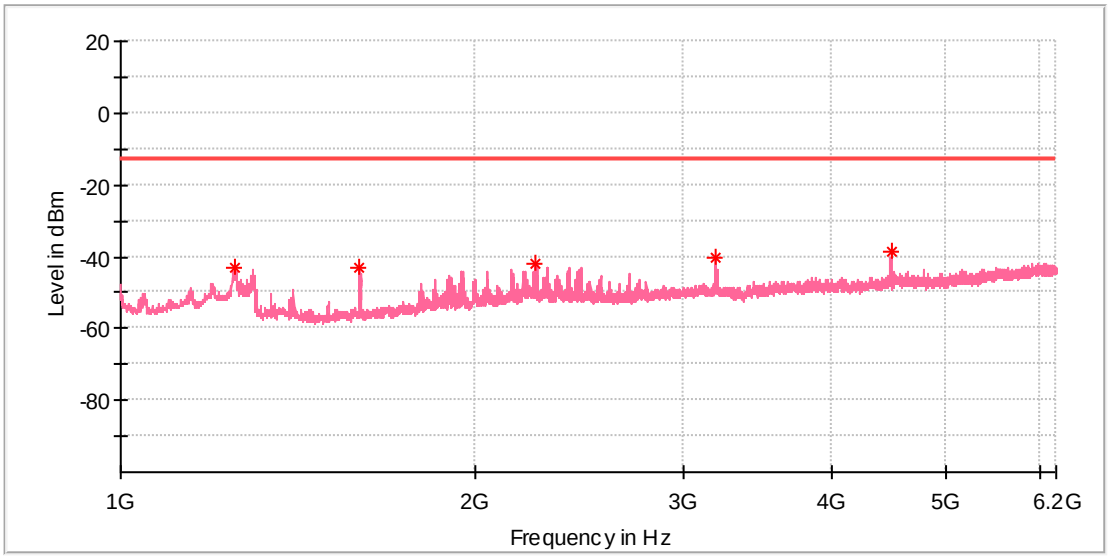
Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1598.000000	-46.97	---	-13.00	33.97	100.0	H	355.0	-92.7
2298.000000	-40.39	---	-13.00	27.39	100.0	H	217.0	-88.0
2588.000000	-45.48	---	-13.00	32.48	100.0	H	278.0	-88.4
3197.500000	-41.54	---	-13.00	28.54	100.0	H	254.0	-86.4
4498.500000	-39.91	---	-13.00	26.91	100.0	H	271.0	-83.8
5237.500000	-30.65	---	-13.00	17.65	100.0	H	100.0	-83.1

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
---	---	---	---	---		---	---

EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1248.500000	-43.00	---	-13.00	30.00	100.0	V	303.0	-92.3
1595.000000	-43.11	---	-13.00	30.11	100.0	V	23.0	-92.9
2249.000000	-41.88	---	-13.00	28.88	100.0	V	272.0	-87.7
3186.500000	-40.17	---	-13.00	27.17	100.0	V	293.0	-86.3
4495.000000	-38.56	---	-13.00	25.56	100.0	V	328.0	-83.8

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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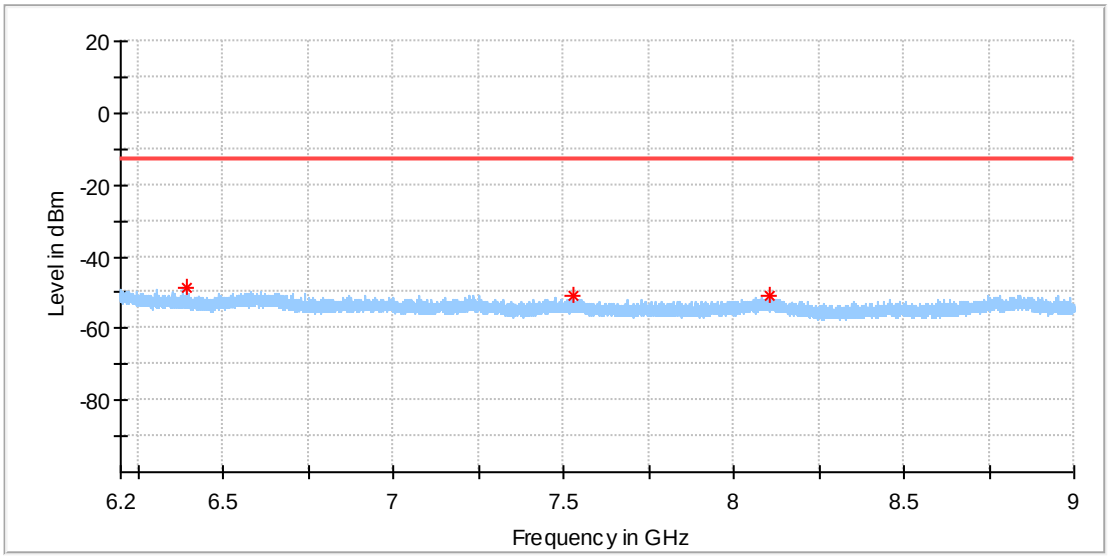
EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6392.266667	-48.62	---	-13.00	35.62	100.0	H	344.0	-87.7
7528.483333	-51.08	---	-13.00	38.08	100.0	H	318.0	-87.1
8105.516667	-51.13	---	-13.00	38.13	100.0	H	84.0	-86.7

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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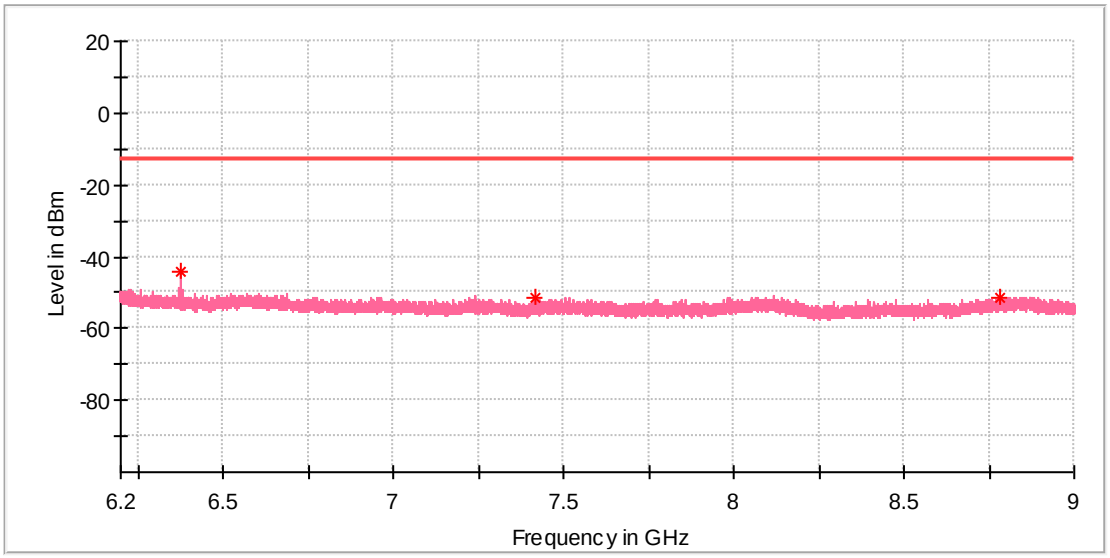
EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_High channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6377.333333	-44.29	---	-13.00	31.29	100.0	V	256.0	-87.7
7419.633333	-51.36	---	-13.00	38.36	100.0	V	143.0	-87.7
8783.000000	-51.23	---	-13.00	38.23	100.0	V	174.0	-85.6

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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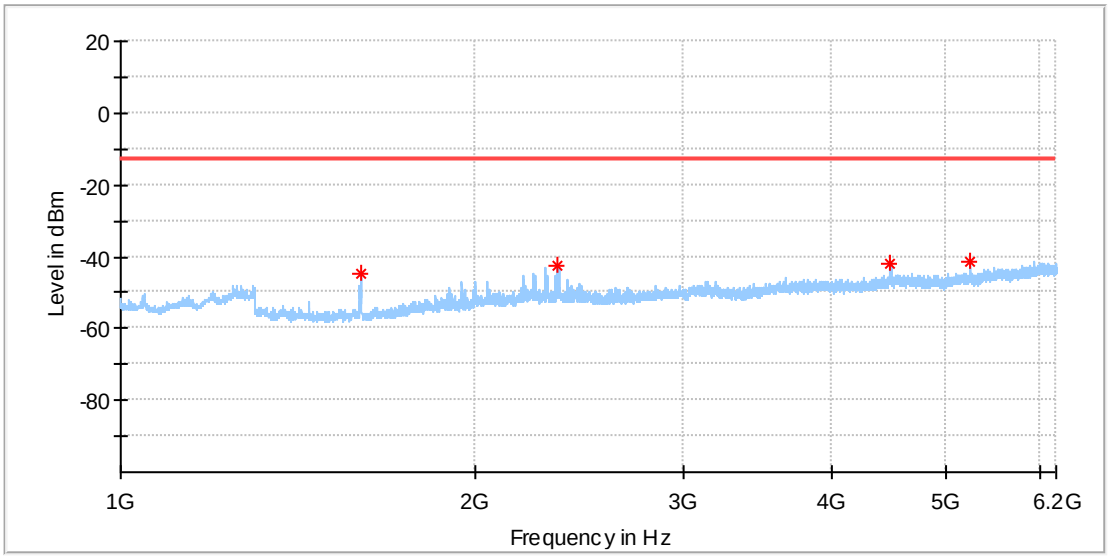
EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1596.500000	-44.47	---	-13.00	31.47	100.0	H	264.0	-92.6
2345.000000	-42.63	---	-13.00	29.63	100.0	H	271.0	-87.5
4491.500000	-42.04	---	-13.00	29.04	100.0	H	271.0	-83.9
5240.000000	-41.22	---	-13.00	28.22	100.0	H	340.0	-83.1

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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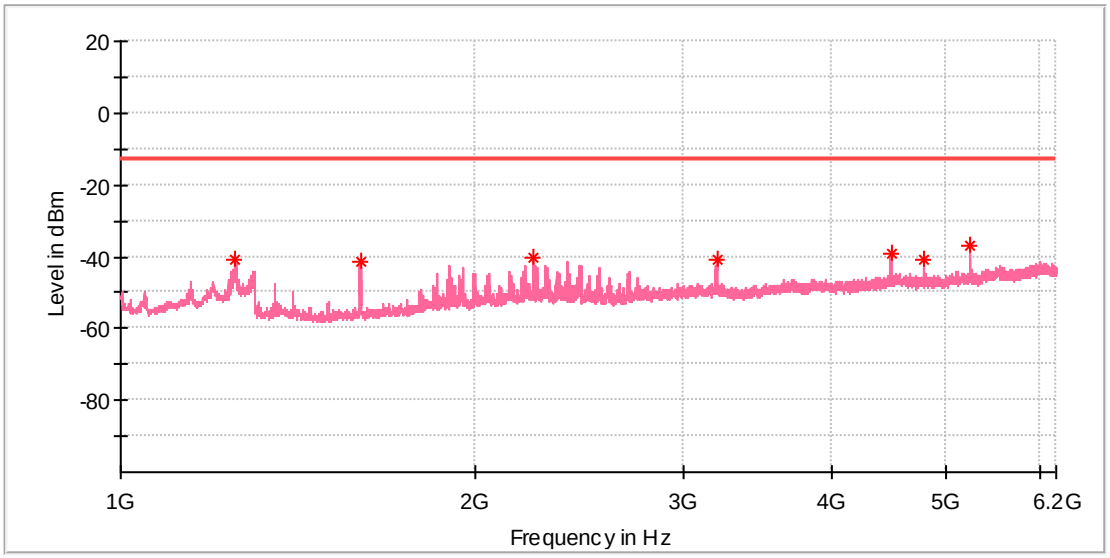
EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1248.500000	-41.10	---	-13.00	28.10	100.0	V	287.0	-92.3
1599.500000	-41.39	---	-13.00	28.39	100.0	V	16.0	-92.9
2237.500000	-40.25	---	-13.00	27.25	100.0	V	283.0	-87.8
3198.000000	-41.04	---	-13.00	28.04	100.0	V	80.0	-86.3
4496.000000	-38.93	---	-13.00	25.93	100.0	V	332.0	-83.8
4788.000000	-40.76	---	-13.00	27.76	100.0	V	313.0	-83.9
5237.000000	-36.82	---	-13.00	23.82	100.0	V	161.0	-83.1

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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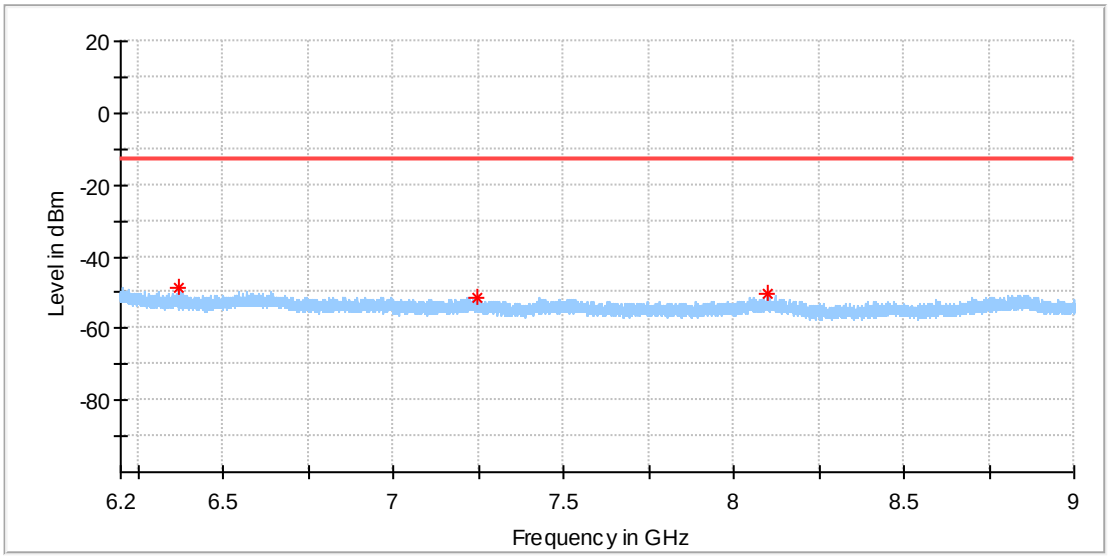
EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_Low channel
Test Voltage::	DC 3.8V
Remark:	Temp 22 Humi:50%
Test Standard:	FCC Part 27
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6371.500000	-48.64	---	-13.00	35.64	100.0	H	349.0	-87.5
7248.133333	-51.62	---	-13.00	38.62	100.0	H	24.0	-87.1
8102.600000	-50.57	---	-13.00	37.57	100.0	H	145.0	-86.7

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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EUT Information

EUT Name:	DATA TERMINAL MODULE
Model:	ME910G1-W1
Test Mode:	787-788M_15kHz_QPSK 1@0_Low channel
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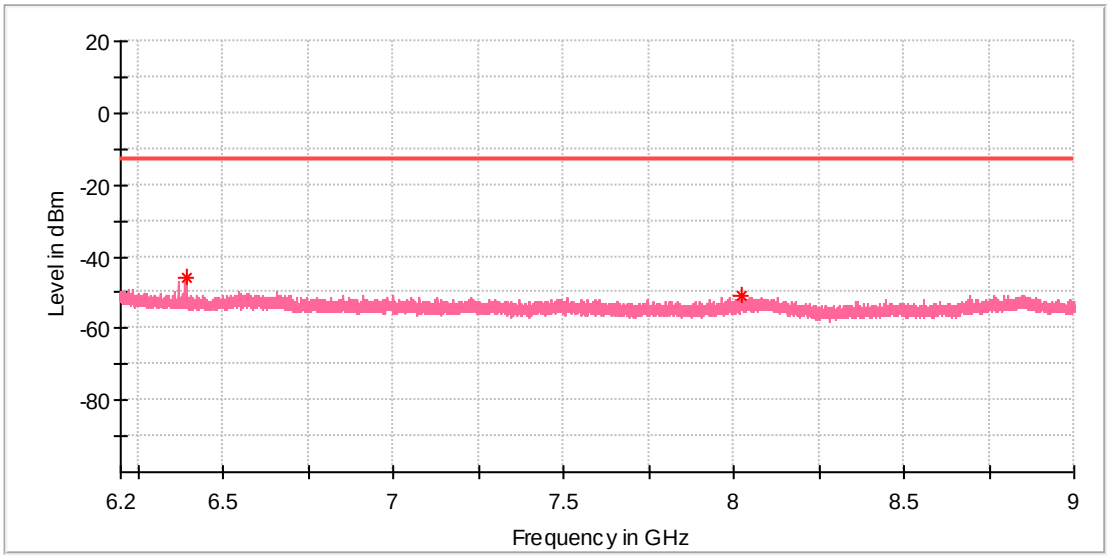

Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	DET 2 (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6394.950000	-45.73	---	-13.00	32.73	100.0	V	277.0	-87.8
8023.733333	-50.89	---	-13.00	37.89	100.0	V	0.0	-87.1

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
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