

RF Test Report

Applicant : i-Waylink Inc.

Product Type : Mobile Computer

Trade Name : iMotion or 

Model Number : MC401

Applicable Standard : FCC 47 CFR PART 22H
FCC 47 CFR PART 24E
ANSI C63.26 2015

Received Date : Feb. 27, 2020

Test Period : Mar. 04 ~ Apr. 07, 2020

Issued Date : Aug. 18, 2020

Issued by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade District,
Taoyuan City 33465, Taiwan (R.O.C.)
Tel : +886-3-2710188 / Fax : +886-3-2710190



Taiwan Accreditation Foundation accreditation number: 1330
Test Firm MRA designation number: TW0010

Note:

1. The test results are valid only for samples provided by customers and under the test conditions described in this report.
2. This report shall not be reproduced except in full, without the written approval of A Test Lab Technology Corporation.
3. The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.



Revision History

Rev.	Issued Date	Revisions	Revised By
00	Jun. 29, 2020	Initial Issue	Nina Lin
01	Aug. 04, 2020	Update Test Results (P.5/P.26~P.28)	Snow Wang
02	Aug. 18, 2020	Update Test Results (P.5/P.26/P.30~149)	Tobey Cheng

Verification of Compliance

Applicant : i-Waylink Inc.
Product Type : Mobile Computer
Trade Name : iMotion or 
Model Number : MC401
FCC ID : SPYMC401
EUT Rated Voltage : DC 5 V, 2.5 A / DC 9 V, 2 A
Test Voltage : DC 3.6 V / DC 3.8 V / DC 4.35 V
Applicable Standard : FCC 47 CFR PART 22H
FCC 47 CFR PART 24E
ANSI C63.26 2015
Test Result : Complied

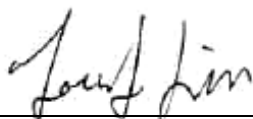
Performing Lab. : A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade District,
Taoyuan City 33465, Taiwan (R.O.C.)
Tel : +886-3-2710188 / Fax : +886-3-2710190
Taiwan Accreditation Foundation accreditation number: 1330
<http://www.atl-lab.com.tw/e-index.htm>



A Test Lab Techno Corp. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by A Test Lab Techno Corp. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Approved By

:



(Manager)

(Jeremy Lin)

TABLE OF CONTENTS

1	General Information	5
1.1.	EUT Description	5
1.2.	Mode of Operation.....	6
1.3.	EUT Test Step.....	6
1.4.	Configuration of Test System Details.....	7
1.5.	Test Instruments	8
1.6.	Test Site Environment.....	9
1.7.	Summary of Test Result	9
1.8.	Measurement Uncertainty	10
2	Measurement Procedure.....	11
2.1.	RF Output Power Test	11
2.2.	Effective Radiated Power / Equivalent Isotropic Radiated Power Test	12
2.3.	Emission Bandwidth & Occupied Bandwidth Test.....	15
2.4.	Band Edge Test.....	16
2.5.	Conducted Spurious Emission Test.....	17
2.6.	Field Strength of Spurious Radiation Test.....	19
2.7.	Frequency Stability (Temperature & Voltage Variation) Test	22
3	Test Results	23
	Appendix A: RF Output Power.....	24
	Appendix B: Effective Radiated Power / Equivalent Isotropic Radiated Power	26
	Appendix C: Peak-to-Average Ratio.....	27
	Appendix D: Emission Bandwidth & Occupied Bandwidth.....	29
	Appendix E: Band Edges Compliance.....	48
	Appendix F: Spurious Emission at Antenna Terminal	60
	Appendix G: Field Strength of Spurious Radiation.....	150
	Appendix H: Frequency Stability (Temperature & Voltage Variation)	156

1 General Information

1.1. EUT Description

Applicant	i-Waylink Inc. 6F., NO. 288, Sec. 6, Civic Blvd., Xinyi Dist., Taipei City 110, Taiwan			
Manufacturer	i-Waylink Inc. 6F., NO. 288, Sec. 6, Civic Blvd., Xinyi Dist., Taipei City 110, Taiwan			
Product Type	Mobile Computer			
Trade Name	iMotion or 			
Model Number	MC401			
FCC ID	SPYMC401			
IMEI No.	IMEI1: 359783089817300, IMEI2: 359783089817306			
Mode	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
GSM/GPRS/EGPRS	850	824.2 ~ 848.8	869.2 ~ 893.8	GMSK/8PSK
	1900	1850.2 ~ 1909.8	1930.2 ~ 1989.8	GMSK/8PSK
Antenna information	Type		Max. Gain (dBi)	
	Internal Antenna		GSM/GPRS/EGPRS 850	0.27
			GSM/GPRS/EGPRS 1900	1.51
Operate Temp. Range	-20 ~ +50 °C			

Frequency Band	Max. RF Output Power (W)	E.R.P. / E.I.R.P. (W)	
GSM 850	2.239	1.45	(E.R.P.)
GSM 1900	1.102	1.56	(E.I.R.P.)

Frequency Band	Occupied Bandwidth (MHz)	Emission Designator
GSM 850	0.24840	248KGXW
GSM 1900	0.24679	247KGXW

1.2. Mode of Operation.

ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: GSM 850 Link Mode
Mode 2: GSM 1900 Link Mode
Mode 3: GPRS 850 Link Mode
Mode 4: GPRS 1900 Link Mode
Mode 5: EGPRS 850 Link Mode
Mode 6: EGPRS 1900 Link Mode

Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

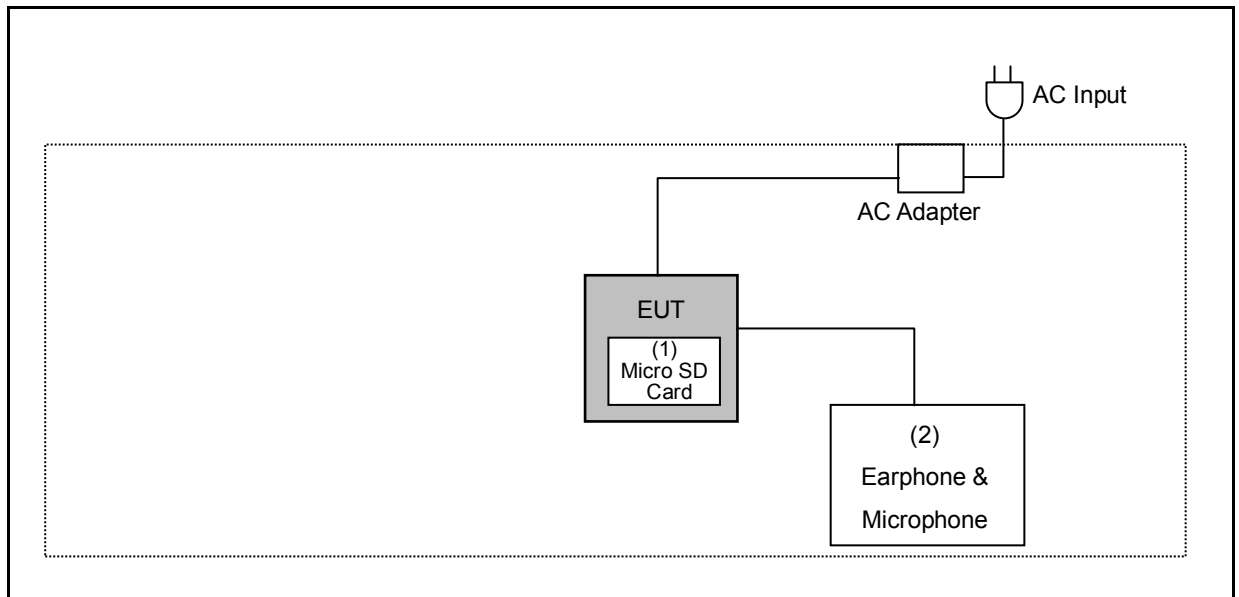
By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "X axis" position was the worst, then the final test was executed the worst condition and test data were recorded in this report.

1.3. EUT Test Step

1	Setup the EUT shown on "Configuration of Test System Details".
2	Turn on the power of all equipment.

Measurement Software			
No.	Description	Software	Version
1	Radiated Emission	EZ EMC	1.1.4.4

1.4. Configuration of Test System Details



Devices Description					
	Product	Manufacturer	Model Number	Serial Number	Power Cord
(1)	Micro SD Card	Transcend	9153BA 8G 07DS1	---	---
(2)	Earphone & Microphone	HUAWEI	22040296	---	---



1.5. Test Instruments

For Conducted

Test Period: Mar. 04 ~ Apr. 07, 2020

Testing Engineer: Eric Ouyang

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	03/31/2020	1 year
Power Supply	KEITHLEY	2303	4045290	02/11/2020	1 year
Divider	Warison	WDIV-210.5-26.5S20	WR222AM2B1	03/06/2020	1 year
FSU26 SPECTRUM ANALYZER	R&S	FSU26	201118	01/15/2020	1 year
Signal Generator	R&S	SMU200A	102598	04/08/2019	1 year
Universal Radio Communication Tester	R&S	CMU200	112387	03/15/2020	1 year
Vibration Testing System	KING DESIGN	KD-9363-EM-30F4K-10N10	RZ110218299	05/17/2019	1 year

For Radiated Emissions

Test Period: Mar. 12, 2020

Testing Engineer: Js Liao

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9010A	MY52221312	01/13/2020	1 year
Pre Amplifier (1~26.5 GHz)	Agilent	8449B	3008A02237	10/18/2019	1 year
Pre Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A11119	01/15/2020	1 year
Broadband Antenna	Schwarzbeck	VULB9168	416	10/23/2019	1 year
Horn Antenna (1~18 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	08/22/2019	1 year
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	03/29/2019	1 year
RF Cable	EMCI	EMC104-N-N-6000	TE01-1	02/20/2020	1 year
Microwave Cable	EMCI	EMC104-SM-SM-1 3000	170814	10/29/2019	1 year
Microwave Cable	EMCI	EMC102-KM-KM-1 4000	151001	02/20/2020	1 year
Wireless Communications	Agilent	E5515C	MY47511156	09/09/2019	1 year

Note: N.C.R. = No Calibration Request.

1.6. Test Site Environment

Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	20-30
Humidity (%RH)	25-75	45-75
Barometric pressure (mbar)	860-1060	990-1005

Test Setting Condition		
L.V.	Low Voltage	DC 3.6 V
N.V.	Normal Voltage	DC 3.8 V
H.V.	High Voltage	DC 4.35 V
L.T.	Low Temperature	-20 °C
N.T.	Normal Temperature	+25 °C
H.T.	High Temperature	+50 °C

1.7. Summary of Test Result

FCC Rule	Description	Result
§2.1046	Conducted Output Power	Pass
§22.913(a)(5)	Effective Radiated Power	Pass
§24.232(c)	Equivalent Isotropic Radiated Power	Pass
§2.1049 §22.917(b) §24.238(b)	Emission Bandwidth & Occupied Bandwidth	Pass
§2.1051 §22.917(a) §24.238(a)	Band Edge Measurement	Pass
§2.1051 §22.917(a) §24.238(a)	Conducted Spurious Emission	Pass
§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiation	Pass
§2.1055 §22.355 §24.235	Frequency Stability for Temperature & Voltage	Pass

1.8. Measurement Uncertainty

Parameter	Uncertainty
RF Output Power	0.69 dB
Effective Radiated Power / Equivalent Isotropic Radiated Power	5.7 dB
Emission Bandwidth & Occupied Bandwidth	4.96 %
Band Edge	0.69 dB
Conducted Spurious Emission	0.69 dB
Field Strength of Spurious Radiation	5.7 dB
Frequency Stability (Temperature & Voltage Variation)	$-1.56 \times 10^{-7} \times f_c / +1.72 \times 10^{-7} \times f_c$ Hz

Decision Rule

- ☒ Uncertainty is not included.
- ☐ Uncertainty is included.

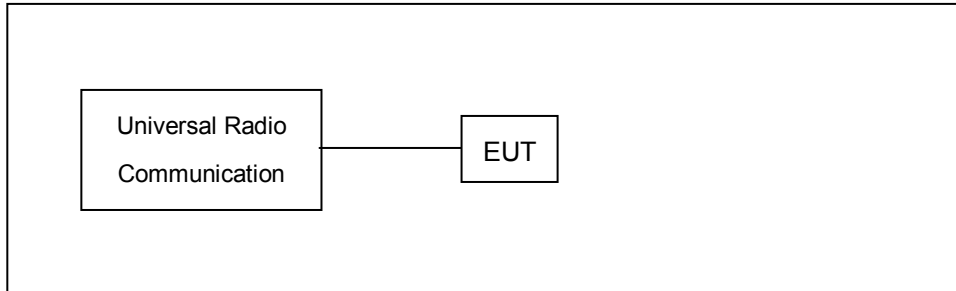
2 Measurement Procedure

2.1. RF Output Power Test

■ Limit

N/A

■ Test Setup



■ Test Procedure

- a. The EUT was set up for the maximum power with with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

2.2. Effective Radiated Power / Equivalent Isotropic Radiated Power Test

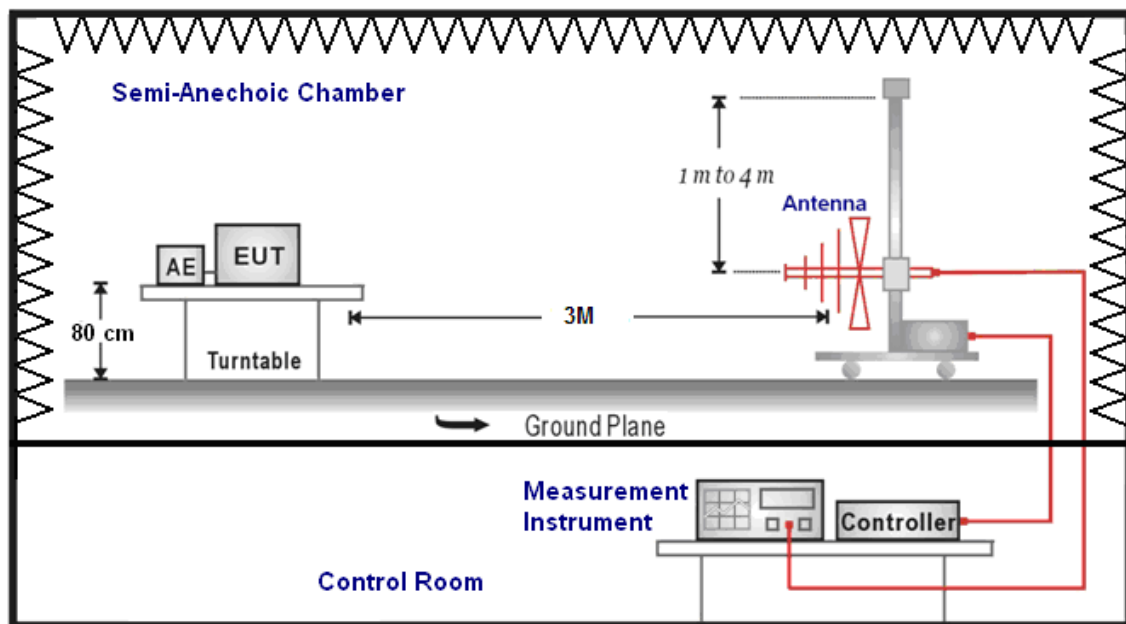
■ Limit

For FCC Part 22.913(a)(5): The E.R.P. of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

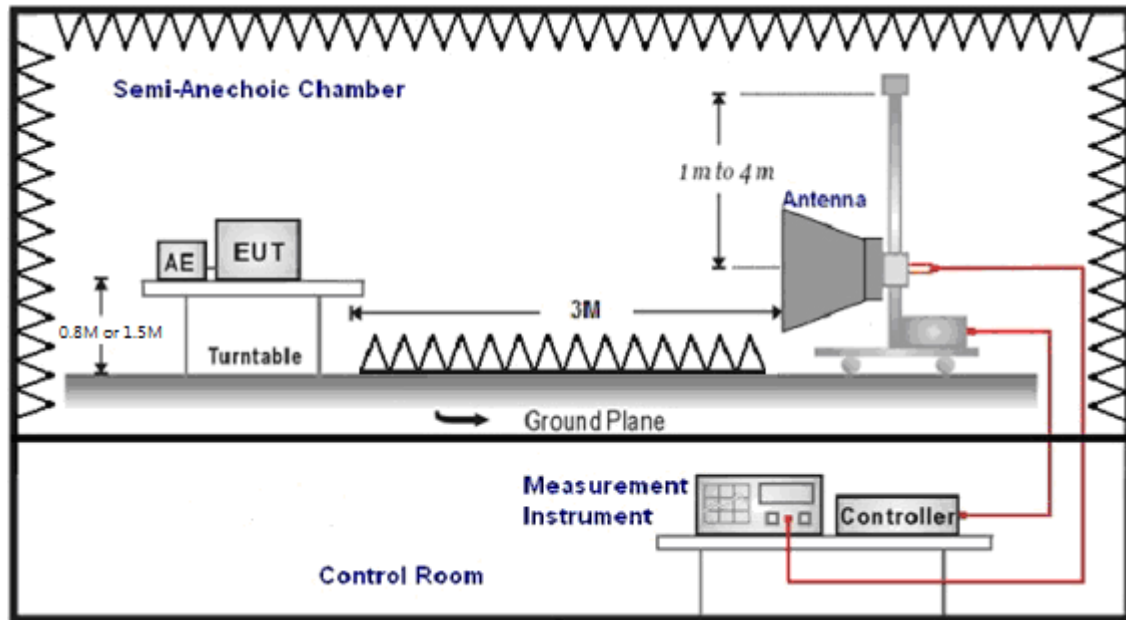
For FCC Part 24.232(c): The E.I.R.P. of Mobile and portable stations test transmitters must not exceed 2 Watts.

■ Setup

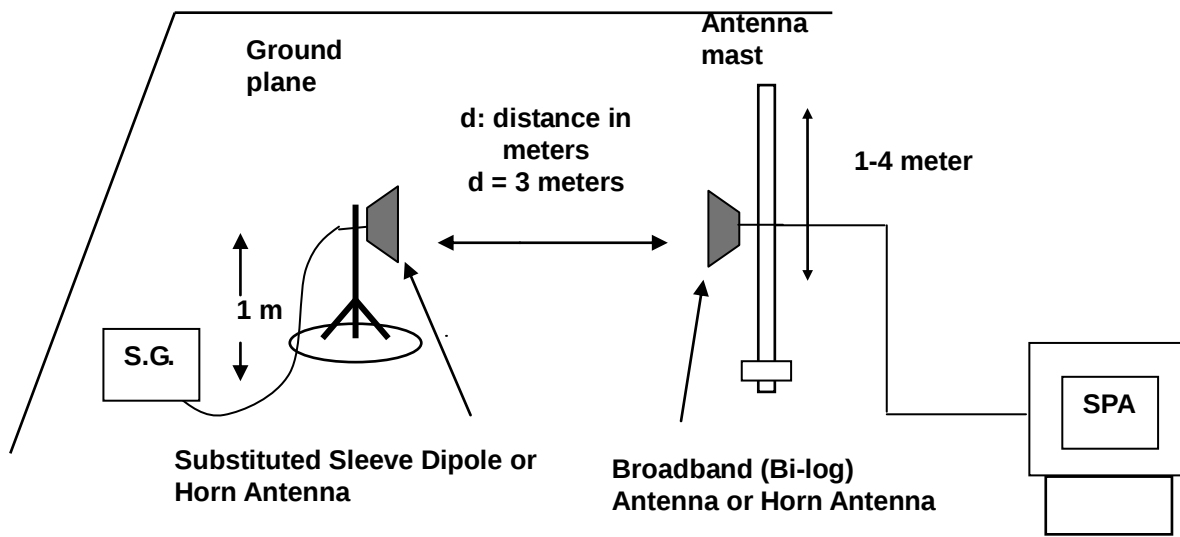
Below 1 GHz



Above 1 GHz



For Substituted Method Test Set-UP



■ Test Procedure

For FCC

- a. The EUT was set up for the maximum power with wwan link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range).
- a. E.I.R.P power measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (1.5 m for above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution antenna (Note:1 & 2) is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G.
- c. $E.I.R.P. = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$
- d. $E.R.P. = E.I.R.P. - 2.15 \text{ dB}$

Note: 1. Below 1 GHz Substituted Method Test : Sleeve dipole antenna to Bi-Log Antenna

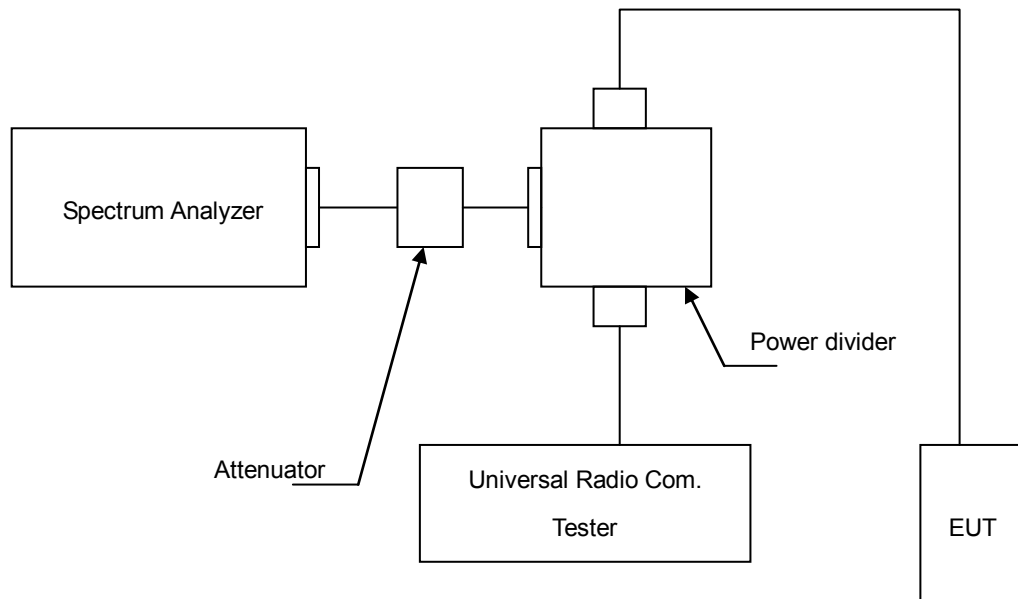
2. Above 1 GHz Substituted Method Test : Horn antenna to Horn Antenna

2.3. Emission Bandwidth & Occupied Bandwidth Test

■ Limit

The Occupied Bandwidth Limit:
N/A.

■ Setup



■ Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via Power Divider.
2. The occupied bandwidth of middle channel for the highest and lowest RF powers was measured.

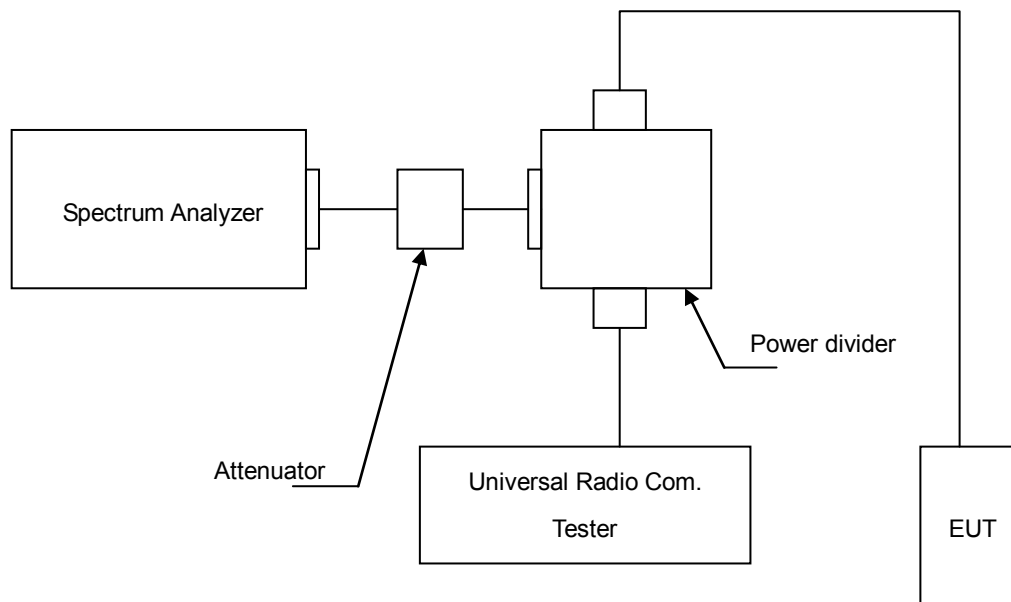
2.4. Band Edge Test

■ Limit

The Band Edge Limit:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

■ Setup



■ Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via Power Divider.
2. The band edge of low and high channels for the highest RF powers within the transmitting frequency band were measured.

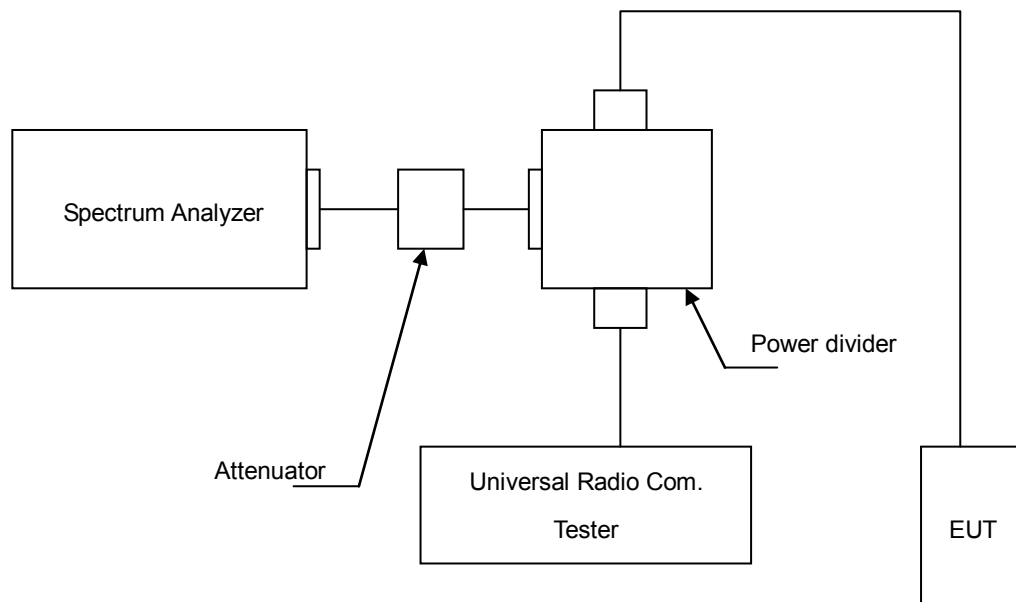
2.5. Conducted Spurious Emission Test

■ Limit

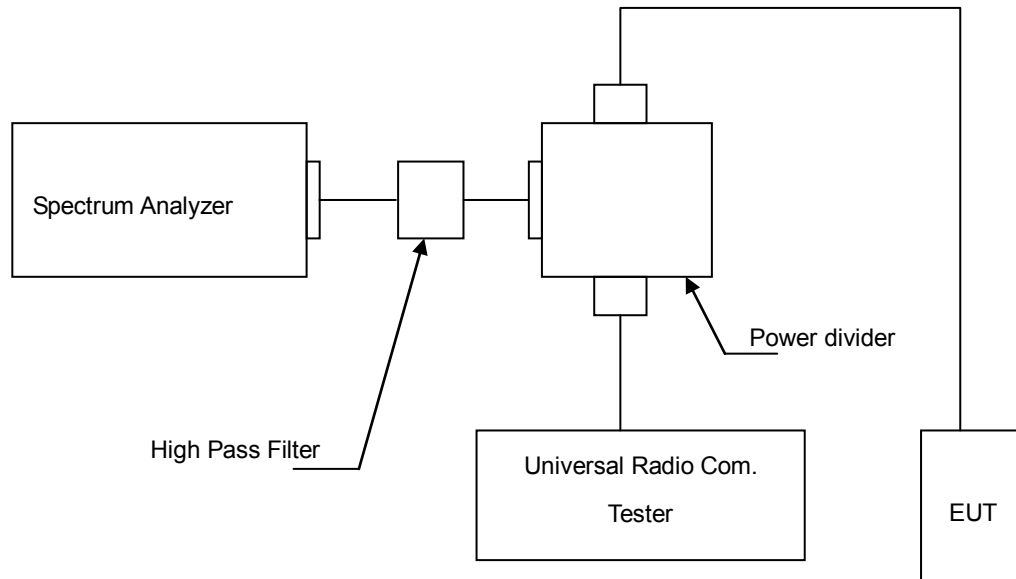
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

■ Setup

Below 2.8 GHz



Above 2.8 GHz



■ Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via Power Divider.
2. The middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.

2.6. Field Strength of Spurious Radiation Test

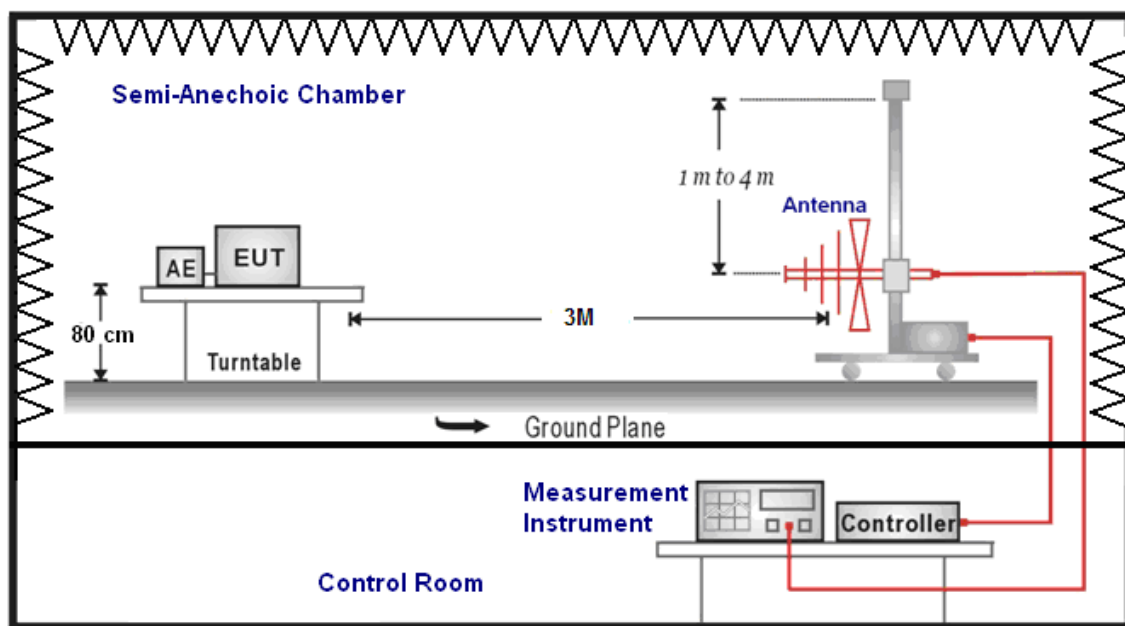
■ Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

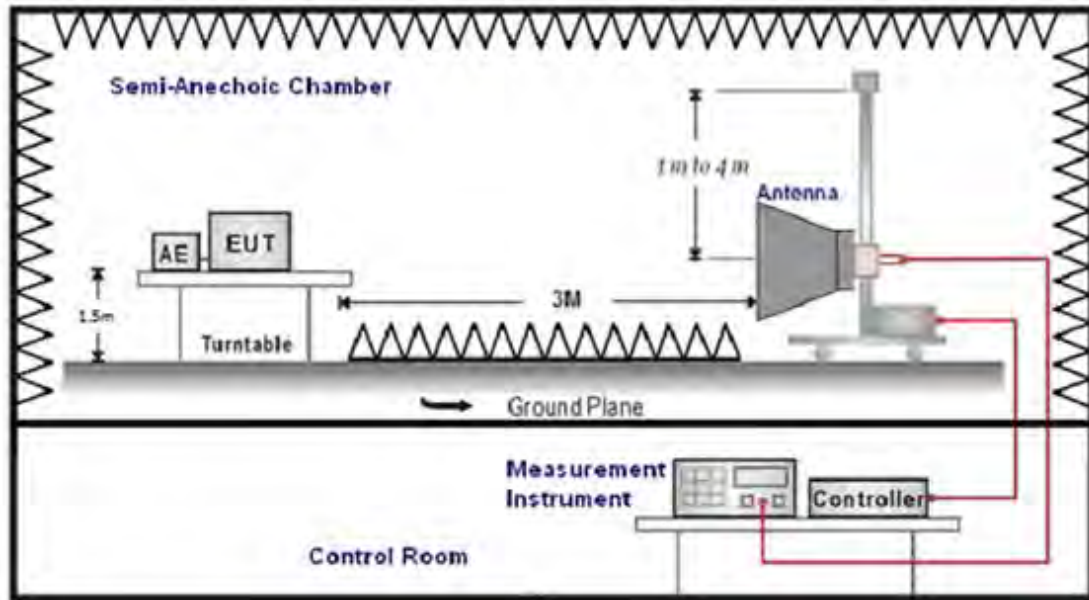
It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

■ Setup

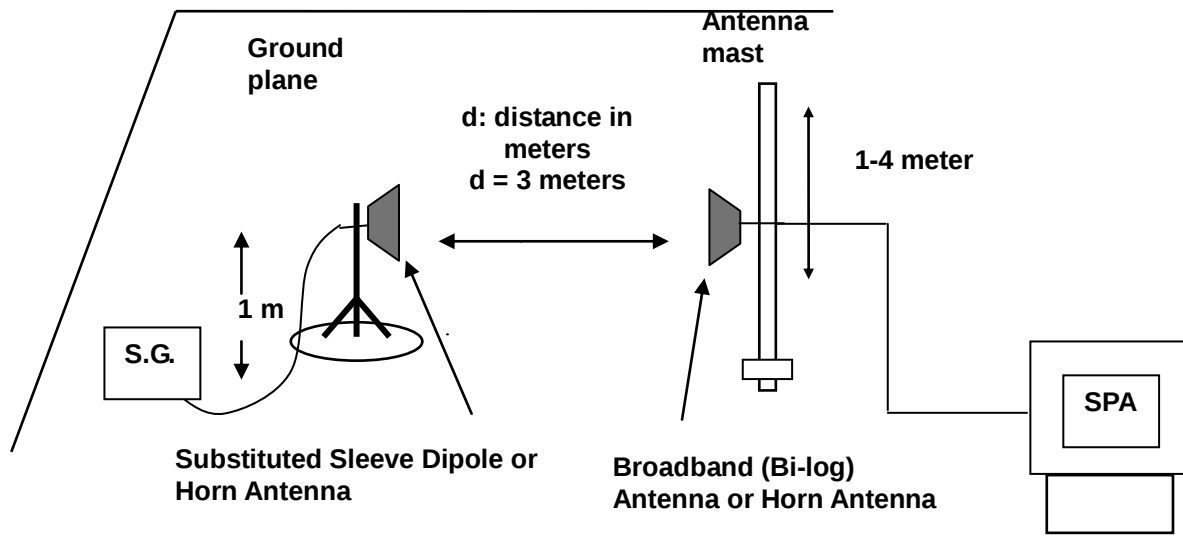
Below 1 GHz



Above 1 GHz



For Substituted Method Test Set-UP



■ Test Procedure

For FCC

- a. The EUT was set up for the maximum power with wwan link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range).
- e. E.I.R.P power measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (1.5 m for above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution antenna (Note:1 & 2) is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G.
- c. E.I.R.P. = Output power level of S.G - TX cable loss + Antenna gain of substitution horn
- d. E.R.P. = E.I.R.P.- 2.15 dB
- e. Measurement range 9 kHz - 10 th Harmonic

Note: 1. Below 1 GHz Substituted Method Test : Sleeve dipole antenna to Bi-Log Antenna

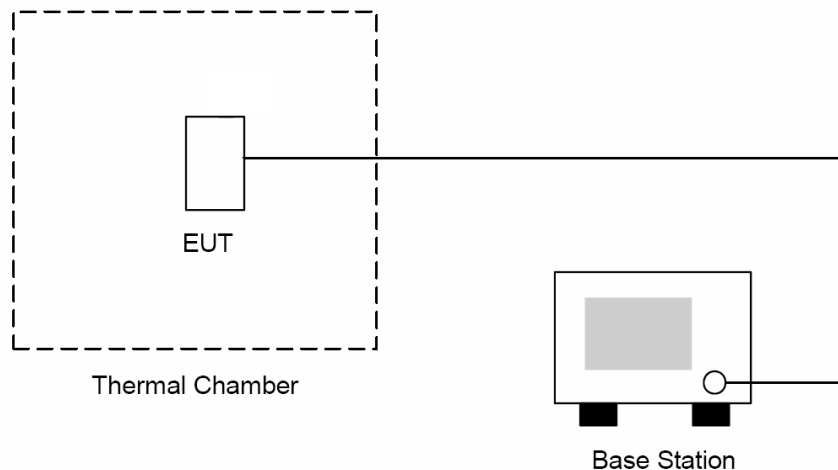
2. Above 1 GHz Substituted Method Test : Horn antenna to Horn Antenna

2.7. Frequency Stability (Temperature & Voltage Variation) Test

■ Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

■ Setup



■ Test Procedure

1. The EUT and test equipment were set up as shown on the following section.
2. With all power removed, the temperature was decreased to $-30\text{ }^{\circ}\text{C}$ and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was note within one minute.
3. With power OFF, the temperature was raised in $10\text{ }^{\circ}\text{C}$ steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
4. The EUT was placed in a temperature chamber at $25 \pm 5\text{ }^{\circ}\text{C}$ and connected as the following section.
5. The power supply voltage to the EUT was varied from BEP to 115 % of the nominal value measured at the input to the EUT.
6. The temperature tests were performed for the worst case.
7. Test data was recorded.

3 Test Results

Test Mode	Test Modes description
GSM/TM1	GSM system,GSM,GMSK modulation
GSM/TM2	GSM system,GPRS,GMSK modulation
GSM/TM3	GSM system,EDGE,8PSK modulation

Appendix A: RF Output Power

Test Band	Test Mode	Test Channel	Average Measured (dbm)	Peak Measured (dbm)	Verdict
GSM850	GSM/TM1	LCH	33.18	33.52	PASS
		MCH	33.50	33.83	PASS
		HCH	33.44	33.79	PASS
	GSM/TM2-Slot1	LCH	33.02	33.35	PASS
		MCH	33.31	33.63	PASS
		HCH	33.24	33.57	PASS
	GSM/TM2-Slot2	LCH	32.83	33.17	PASS
		MCH	33.06	33.39	PASS
		HCH	33.11	33.42	PASS
	GSM/TM2-Slot3	LCH	32.68	33.03	PASS
		MCH	32.94	33.28	PASS
		HCH	32.88	33.21	PASS
	GSM/TM2-Slot4	LCH	32.53	32.86	PASS
		MCH	32.71	33.04	PASS
		HCH	32.68	32.98	PASS
	GSM/TM3-Slot1	LCH	27.75	31.01	PASS
		MCH	27.34	30.60	PASS
		HCH	27.51	30.76	PASS
	GSM/TM3-Slot2	LCH	27.54	30.76	PASS
		MCH	27.28	30.51	PASS
		HCH	27.31	30.53	PASS
	GSM/TM3-Slot3	LCH	27.31	30.57	PASS
		MCH	27.17	30.39	PASS
		HCH	27.08	30.34	PASS
	GSM/TM3-Slot4	LCH	27.08	30.32	PASS
		MCH	26.94	30.16	PASS
		HCH	26.86	30.09	PASS

Note: The peak power testing result was used peak detector.

Test Band	Test Mode	Test Channel	Average Measured (dbm)	Peak Measured (dbm)	Verdict
GSM1900	GSM/TM1	LCH	30.07	30.43	PASS
		MCH	30.37	30.69	PASS
		HCH	30.42	30.77	PASS
	GSM/TM2-Slot1	LCH	29.84	30.17	PASS
		MCH	30.19	30.53	PASS
		HCH	30.11	30.43	PASS
	GSM/TM2-Slot2	LCH	29.64	29.96	PASS
		MCH	29.86	30.19	PASS
		HCH	29.91	30.24	PASS
	GSM/TM2-Slot3	LCH	29.51	29.83	PASS
		MCH	29.69	30.01	PASS
		HCH	29.64	29.97	PASS
	GSM/TM2-Slot4	LCH	29.29	29.59	PASS
		MCH	29.41	29.73	PASS
		HCH	29.38	29.68	PASS
	GSM/TM3-Slot1	LCH	25.91	29.19	PASS
		MCH	26.03	29.29	PASS
		HCH	26.15	29.42	PASS
	GSM/TM3-Slot2	LCH	25.68	28.88	PASS
		MCH	25.84	29.07	PASS
		HCH	25.91	29.10	PASS
	GSM/TM3-Slot3	LCH	25.44	28.66	PASS
		MCH	25.66	28.88	PASS
		HCH	25.62	28.88	PASS
	GSM/TM3-Slot4	LCH	25.21	28.42	PASS
		MCH	25.39	28.62	PASS
		HCH	25.42	28.67	PASS

Note: The peak power testing result was used peak detector.

Appendix B: Effective Radiated Power / Equivalent Isotropic Radiated Power

Test Item	E.R.P / E.I.R.P.						
Bands	Modulation Type	Frequency (MHz)	Peak Conducted power (dBm)	Antenna Gain (dBi)	E.R.P		Limit
					(dBm)	(W)	
GSM 850	GMSK	824.2	33.52	0.27	31.30	1.35	< 7W
		836.6	33.83	0.27	31.62	1.45	< 7W
		848.8	33.79	0.27	31.56	1.43	< 7W

Test Item	E.R.P / E.I.R.P.						
Bands	Modulation Type	Frequency (MHz)	Peak Conducted power (dBm)	Antenna Gain (dBi)	E.I.R.P		Limit
					(dBm)	(W)	
GSM 1900	GMSK	1850.2	30.43	1.51	31.58	1.44	< 2W
		1880.0	30.69	1.51	31.88	1.54	< 2W
		1909.8	30.77	1.51	31.93	1.56	< 2W

Note : ERP = Peak Conducted power + Antenna Gain - 2.15, EIRP = Peak Conducted power + Antenna Gain

Appendix C: Peak-to-Average Ratio

Test Band	Test Mode	Test Channel	Average Measured (dbm)	Limit (dbm)	Verdict
GSM850	GSM/TM1	LCH	0.34	13	PASS
		MCH	0.33	13	PASS
		HCH	0.35	13	PASS
	GSM/TM2 -Slot1	LCH	0.33	13	PASS
		MCH	0.32	13	PASS
		HCH	0.33	13	PASS
	GSM/TM2 -Slot2	LCH	0.34	13	PASS
		MCH	0.33	13	PASS
		HCH	0.31	13	PASS
	GSM/TM2 -Slot3	LCH	0.35	13	PASS
		MCH	0.34	13	PASS
		HCH	0.33	13	PASS
	GSM/TM2 -Slot4	LCH	0.33	13	PASS
		MCH	0.33	13	PASS
		HCH	0.30	13	PASS
	GSM/TM3 -Slot1	LCH	3.26	13	PASS
		MCH	3.26	13	PASS
		HCH	3.25	13	PASS
	GSM/TM3 -Slot2	LCH	3.22	13	PASS
		MCH	3.23	13	PASS
		HCH	3.22	13	PASS
	GSM/TM3 -Slot3	LCH	3.26	13	PASS
		MCH	3.22	13	PASS
		HCH	3.26	13	PASS
	GSM/TM3 -Slot4	LCH	3.24	13	PASS
		MCH	3.22	13	PASS
		HCH	3.23	13	PASS

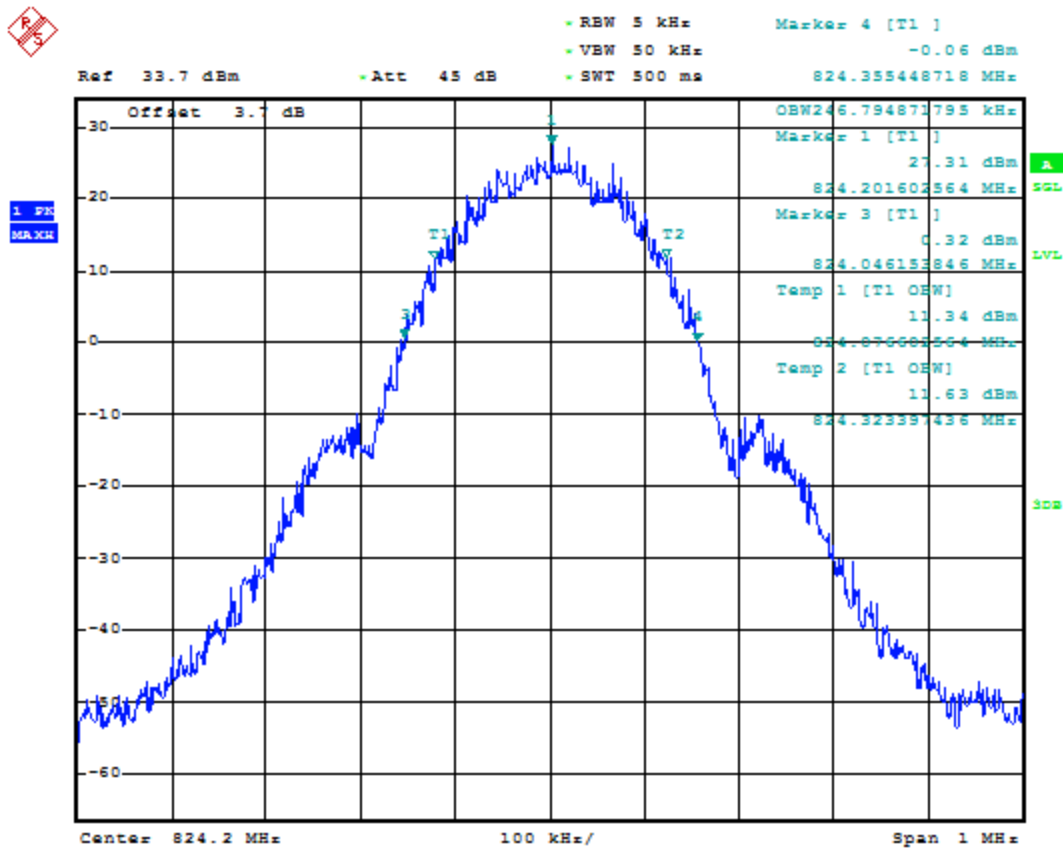
Test Band	Test Mode	Test Channel	Average Measured (dbm)	Limit (dbm)	Verdict
GSM1900	GSM/TM1	LCH	0.36	13	PASS
		MCH	0.32	13	PASS
		HCH	0.35	13	PASS
	GSM/TM2 -Slot1	LCH	0.33	13	PASS
		MCH	0.34	13	PASS
		HCH	0.32	13	PASS
	GSM/TM2 -Slot2	LCH	0.32	13	PASS
		MCH	0.33	13	PASS
		HCH	0.33	13	PASS
	GSM/TM2 -Slot3	LCH	0.32	13	PASS
		MCH	0.32	13	PASS
		HCH	0.33	13	PASS
	GSM/TM2 -Slot4	LCH	0.30	13	PASS
		MCH	0.32	13	PASS
		HCH	0.30	13	PASS
	GSM/TM3 -Slot1	LCH	3.28	13	PASS
		MCH	3.26	13	PASS
		HCH	3.27	13	PASS
	GSM/TM3 -Slot2	LCH	3.20	13	PASS
		MCH	3.23	13	PASS
		HCH	3.19	13	PASS
	GSM/TM3 -Slot3	LCH	3.22	13	PASS
		MCH	3.22	13	PASS
		HCH	3.26	13	PASS
	GSM/TM3 -Slot4	LCH	3.21	13	PASS
		MCH	3.23	13	PASS
		HCH	3.25	13	PASS

Appendix D: Emission Bandwidth & Occupied Bandwidth

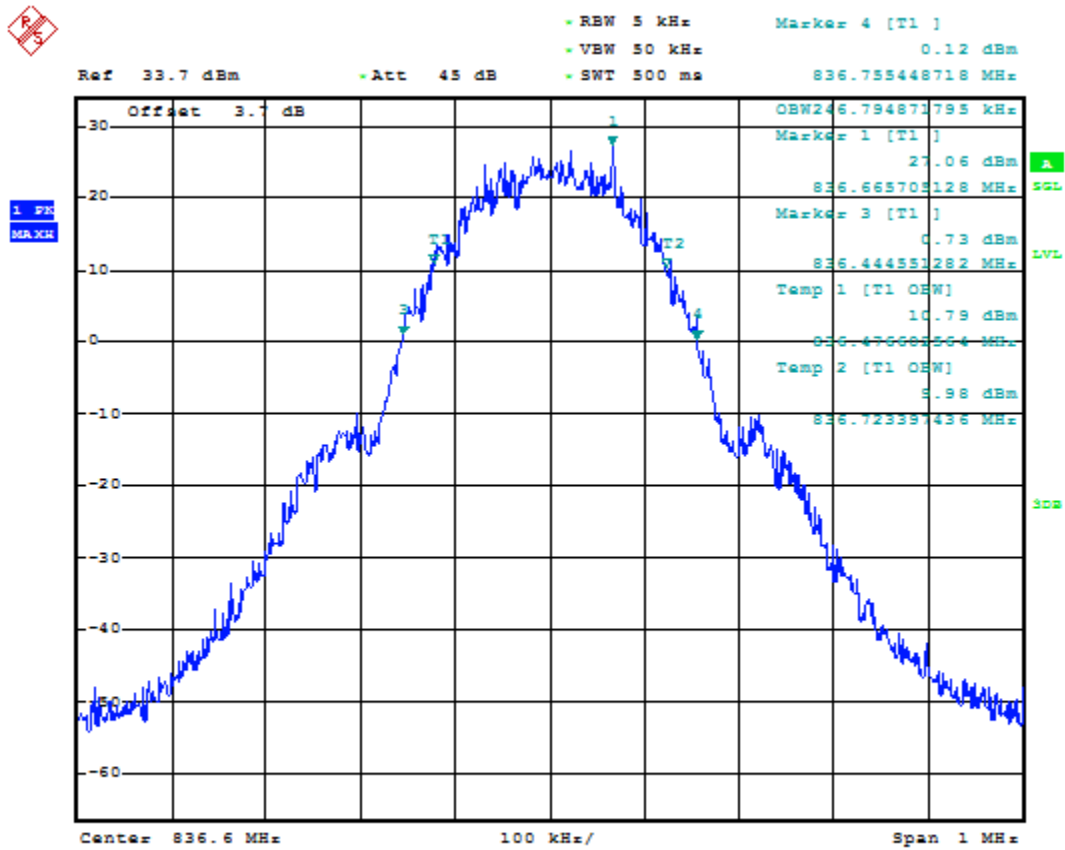
Test Band	Test Mode	Test Channel	Occupied Bandwidth (kHz)	Emission Bandwidth (kHz)	Verdict
GSM850	GSM/TM1	LCH	246.79	309.29	PASS
		MCH	246.79	310.90	PASS
		HCH	246.79	309.29	PASS
	GSM/TM2	LCH	246.79	318.91	PASS
		MCH	246.79	309.29	PASS
		HCH	246.79	309.29	PASS
	GSM/TM3	LCH	243.59	301.28	PASS
		MCH	248.40	314.10	PASS
		HCH	246.79	301.28	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (kHz)	Emission Bandwidth (kHz)	Verdict
GSM1900	GSM/TM1	LCH	245.19	312.50	PASS
		MCH	246.79	312.50	PASS
		HCH	245.19	314.10	PASS
	GSM/TM2	LCH	243.59	315.71	PASS
		MCH	246.79	314.10	PASS
		HCH	246.79	317.31	PASS
	GSM/TM3	LCH	243.59	296.47	PASS
		MCH	243.59	304.49	PASS
		HCH	241.99	294.87	PASS

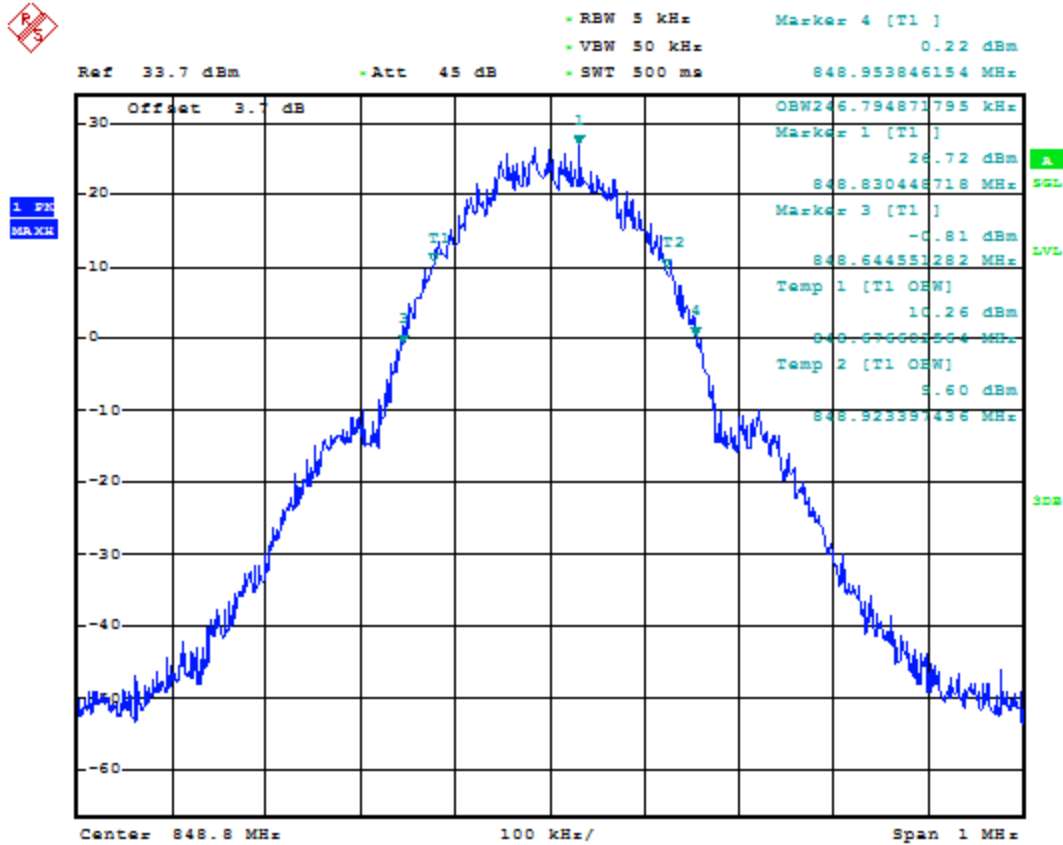
- 1 For GSM
 - 1.1 Test Band=GSM850
 - 1.1.1 Test Mode=GSM/TM1
 - 1.1.1.1 Test Channel=LCH



1.1.1.2 Test Channel=MCH

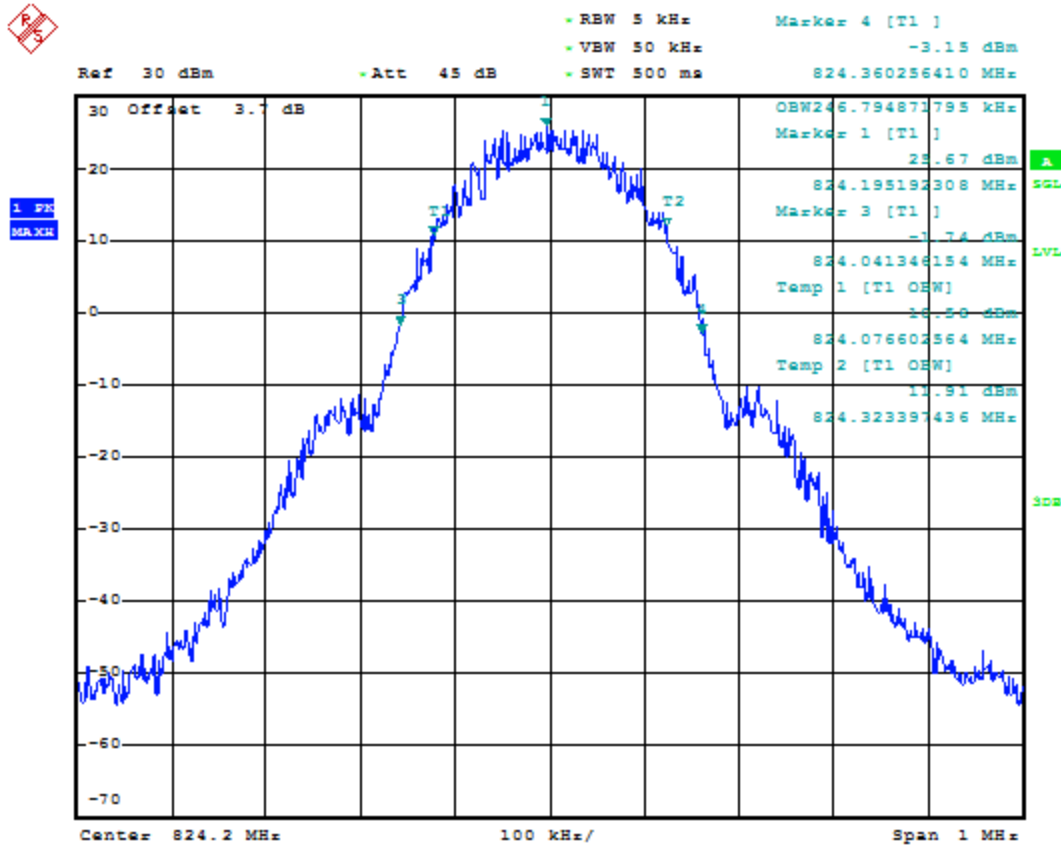


1.1.1.3 Test Channel=HCH

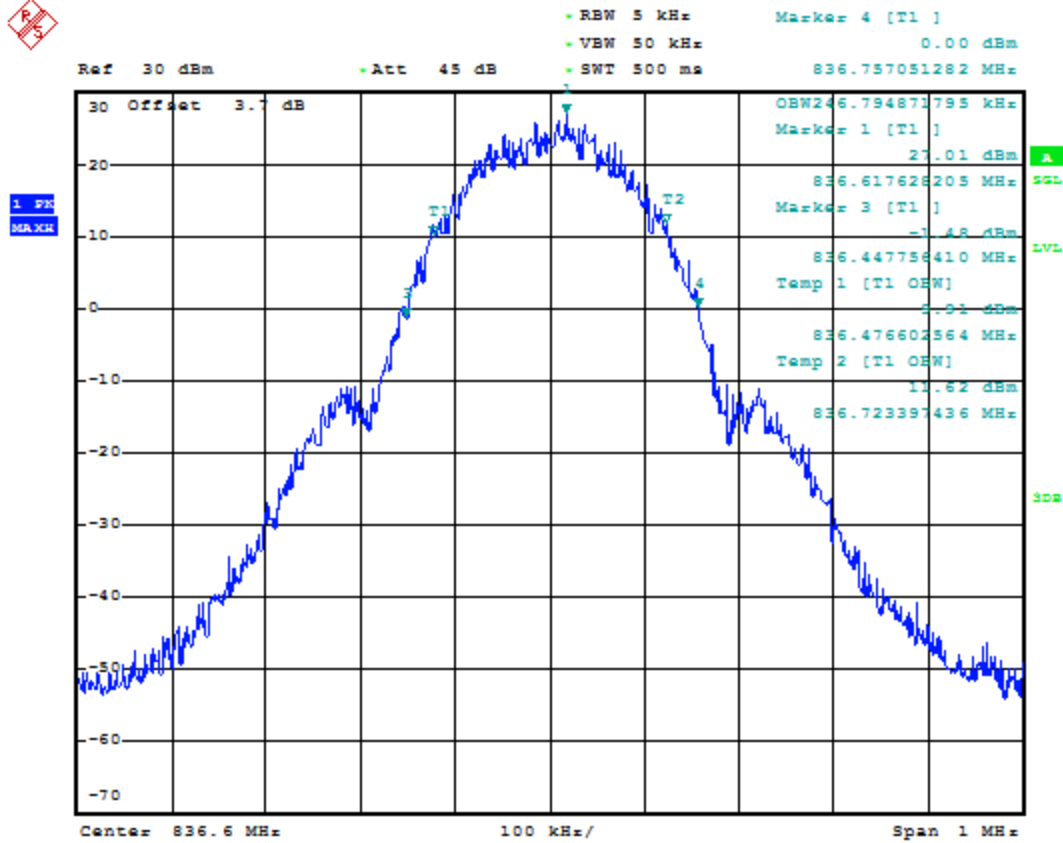


1.1.2 Test Mode=GSM/TM2

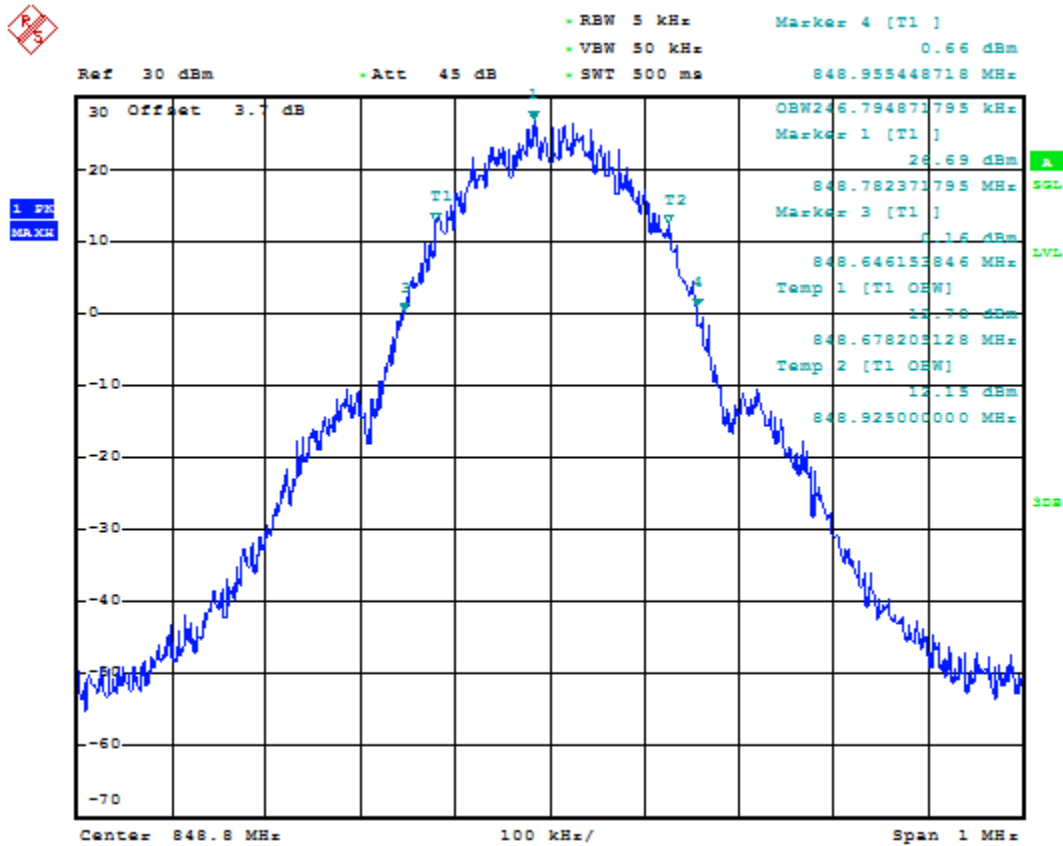
1.1.2.1 Test Channel=LCH



1.1.2.2 Test Channel=MCH

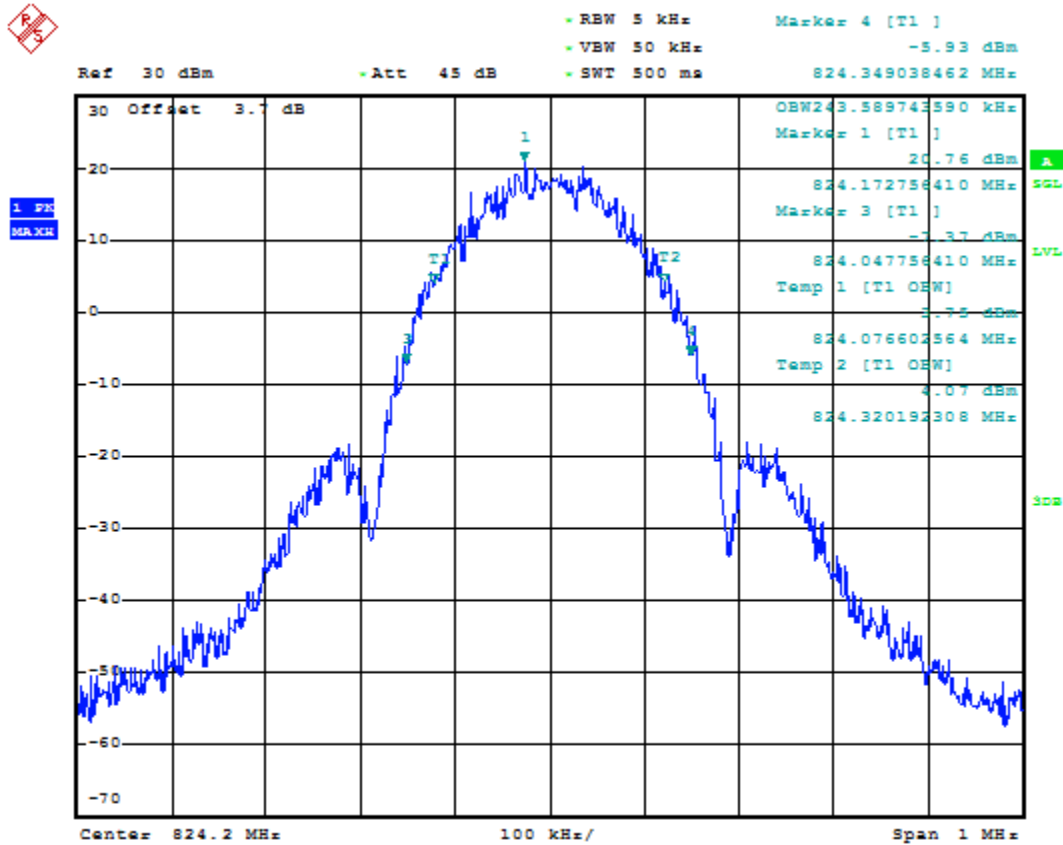


1.1.2.3 Test Channel=HCH



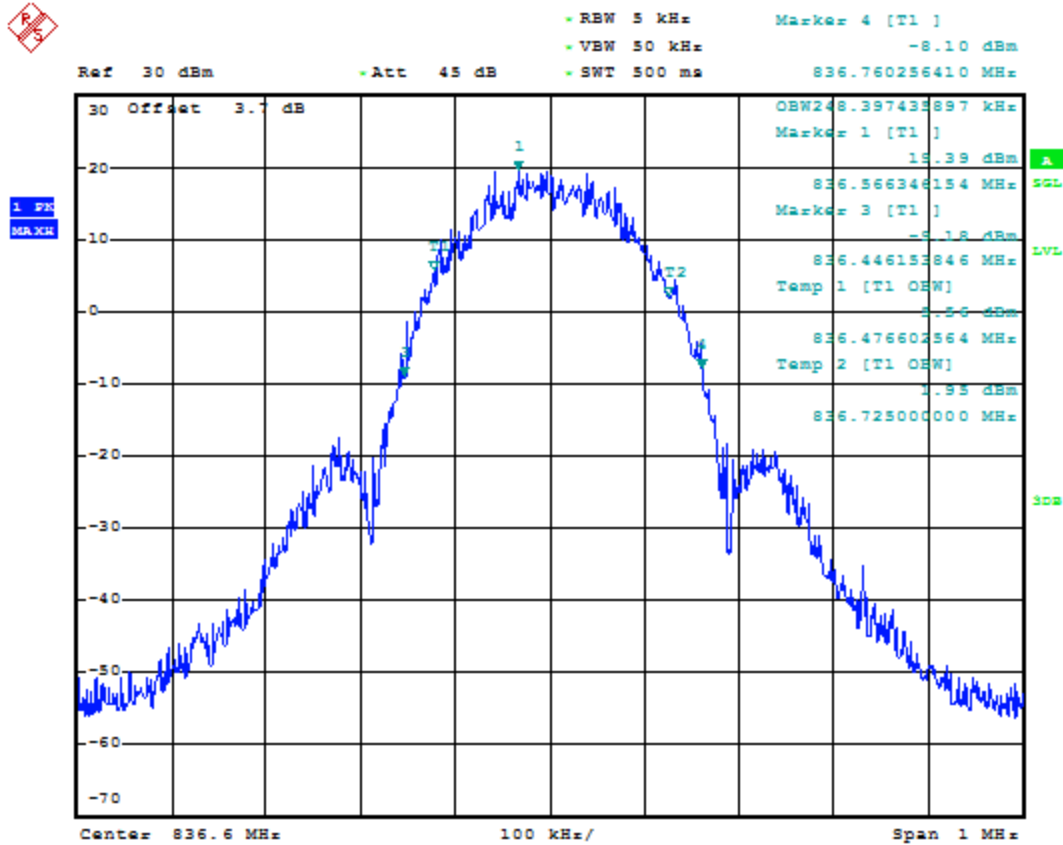
1.1.3 Test Mode=GSM/TM3

1.1.3.1 Test Channel=LCH

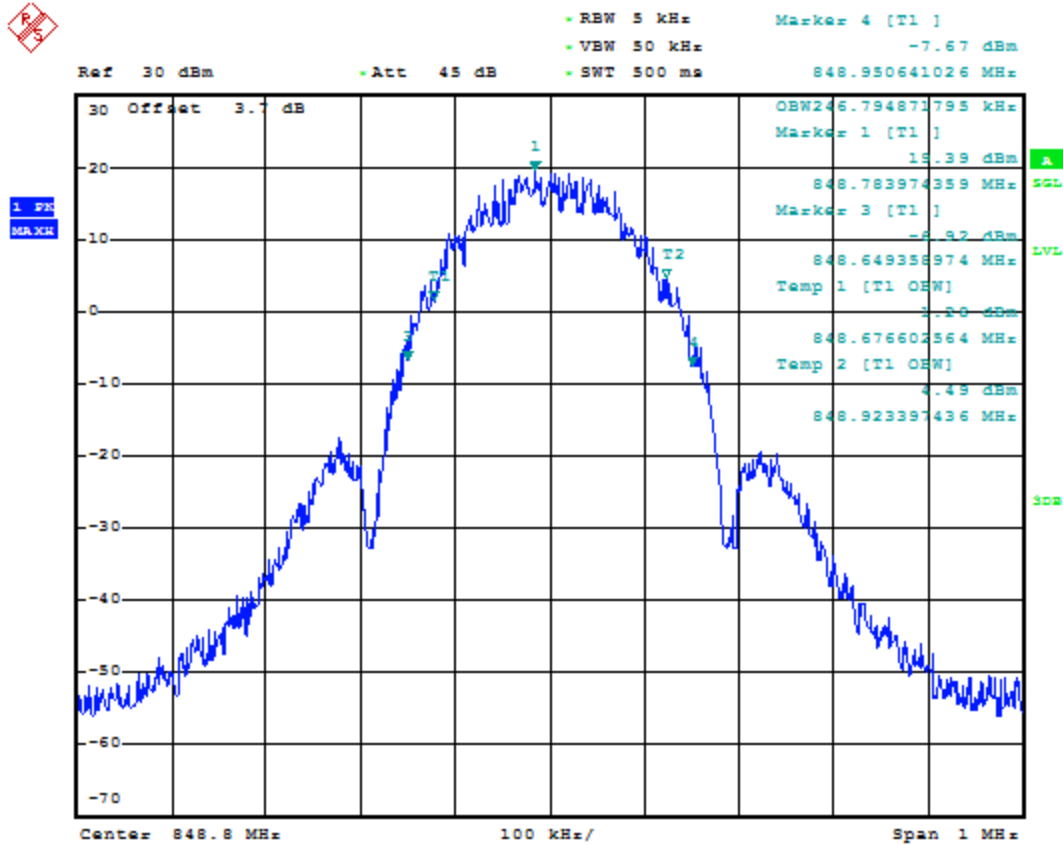




1.1.3.2 Test Channel=MCH



1.1.3.3 Test Channel=HCH

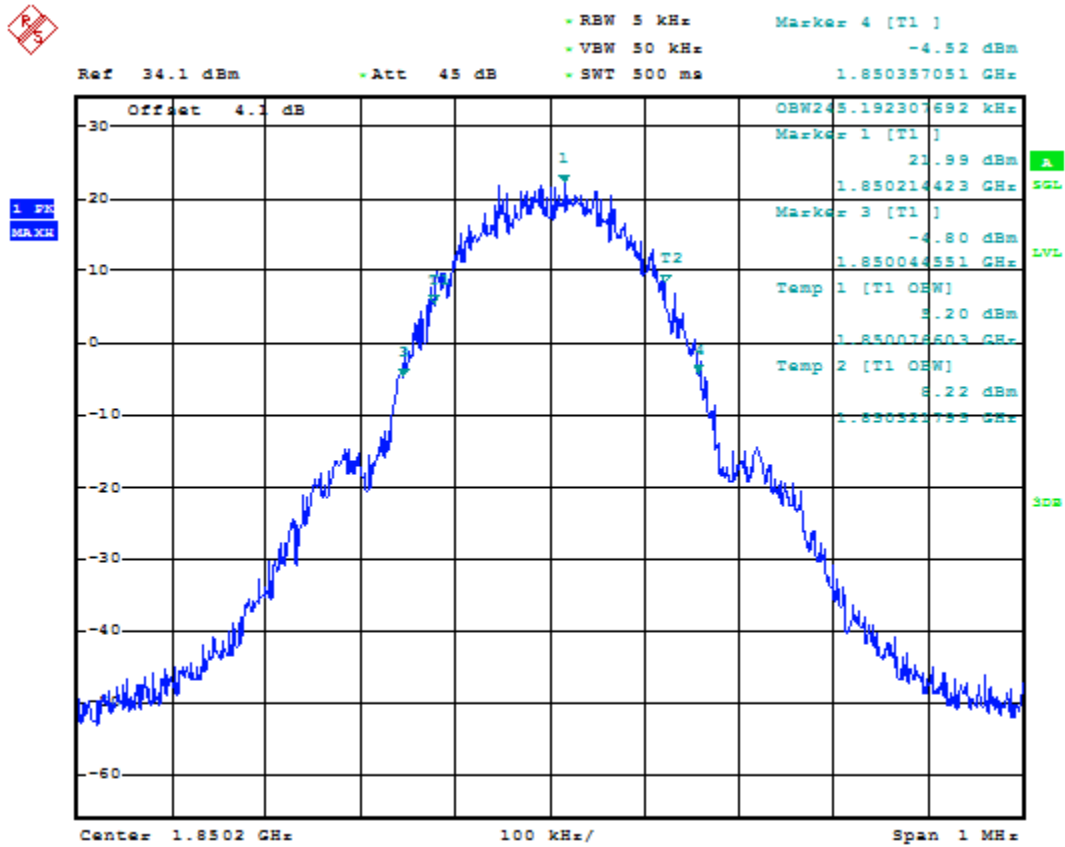


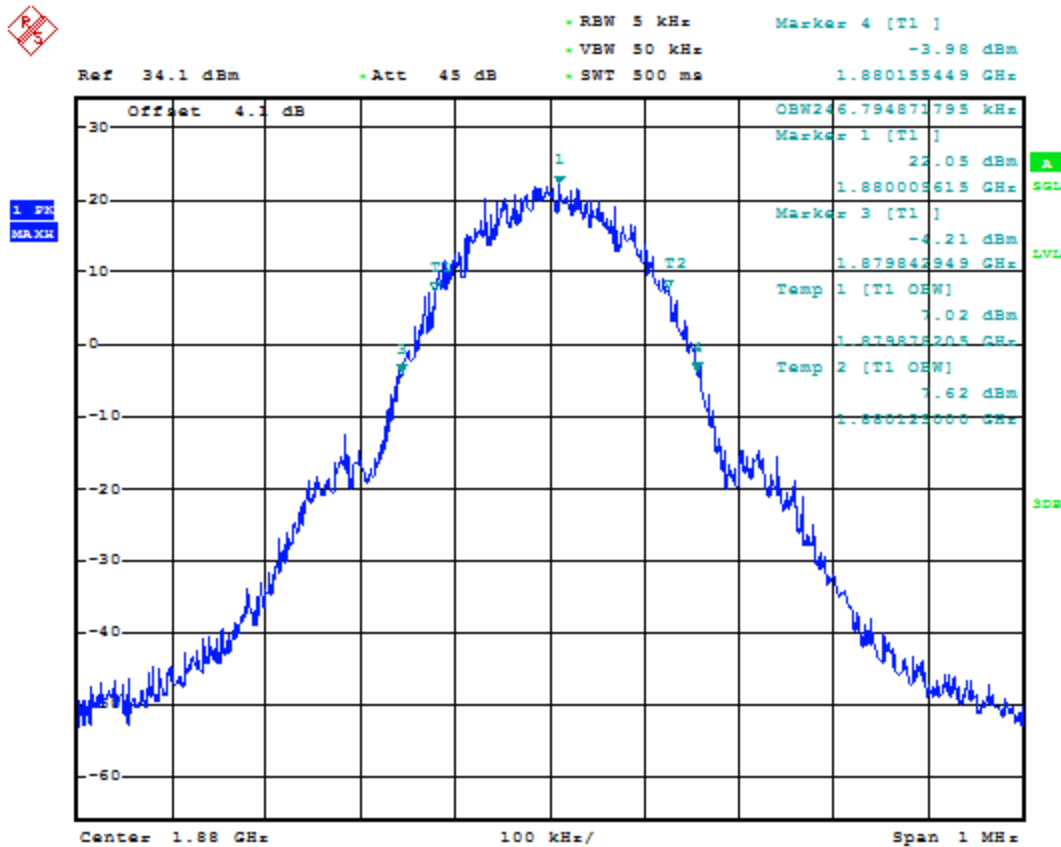
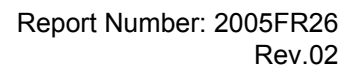


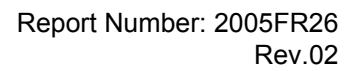
1.2 Test Band=GSM1900

1.2.1 Test Mode=GSM/TM1

1.2.1.1 Test Channel=LCH

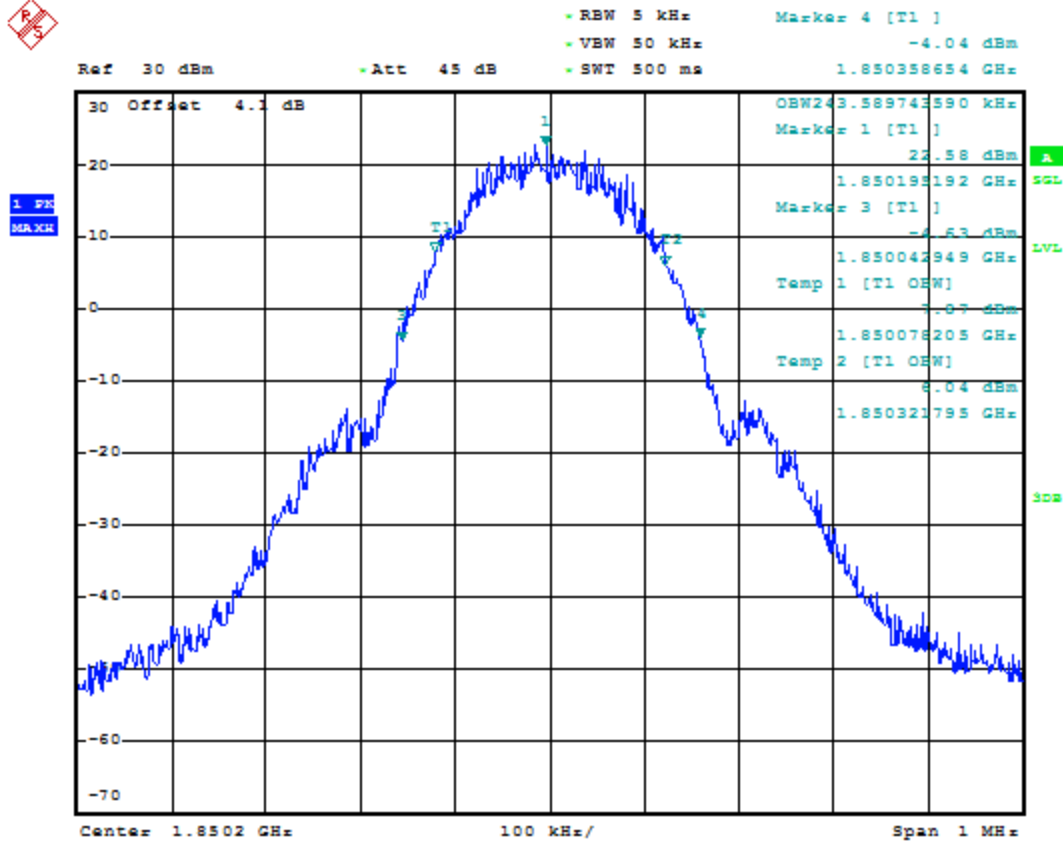




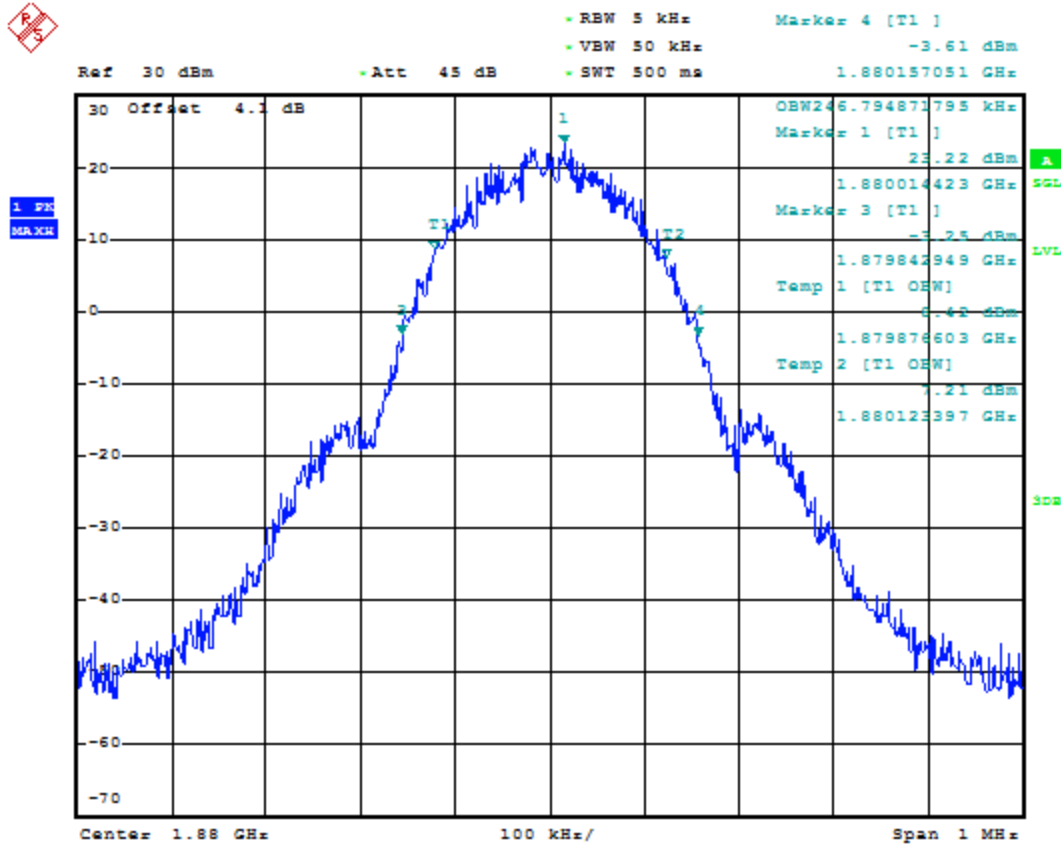


1.3 Test Mode=GSM/TM2

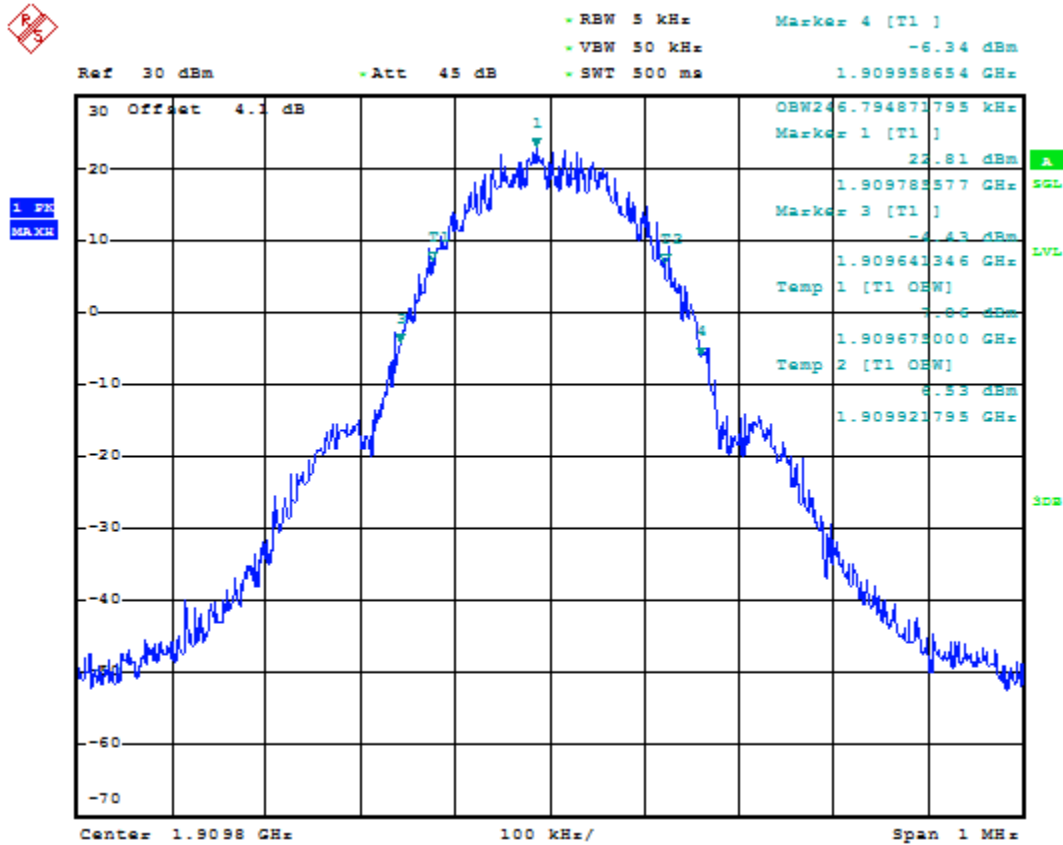
1.3.1.1 Test Channel=LCH



1.3.1.2 Test Channel=MCH

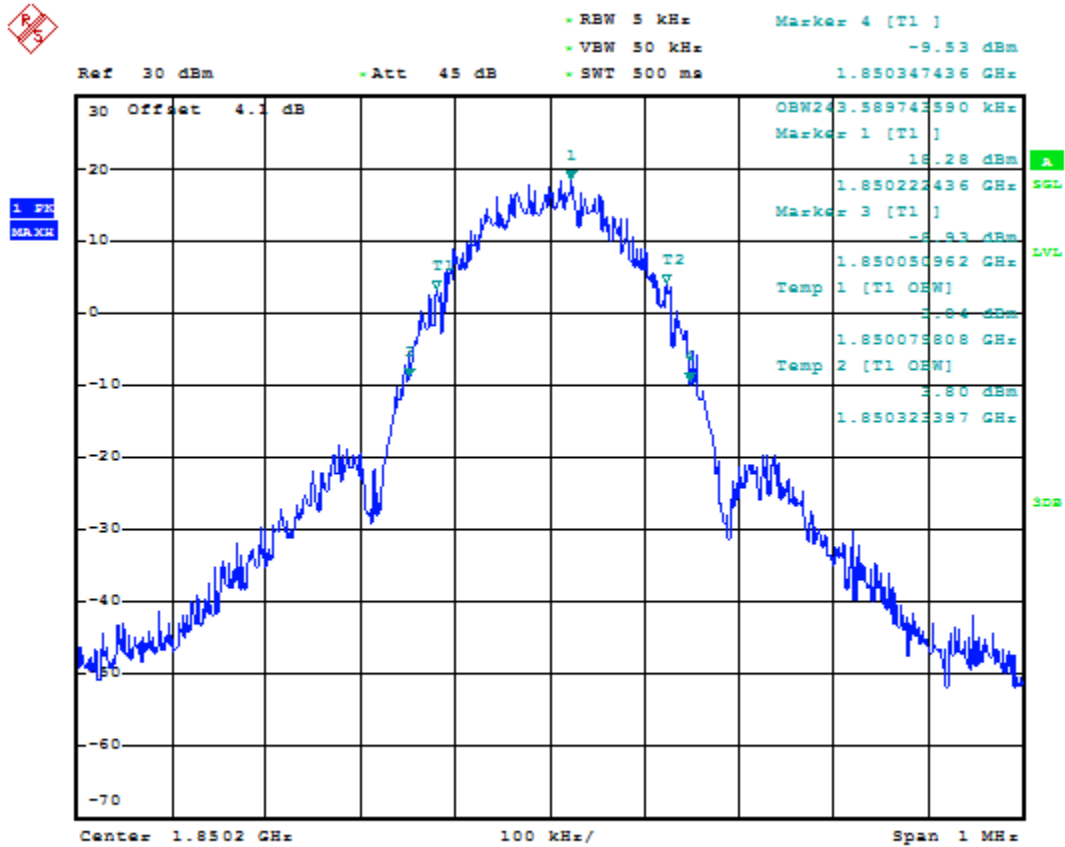


1.3.1.3 Test Channel=HCH

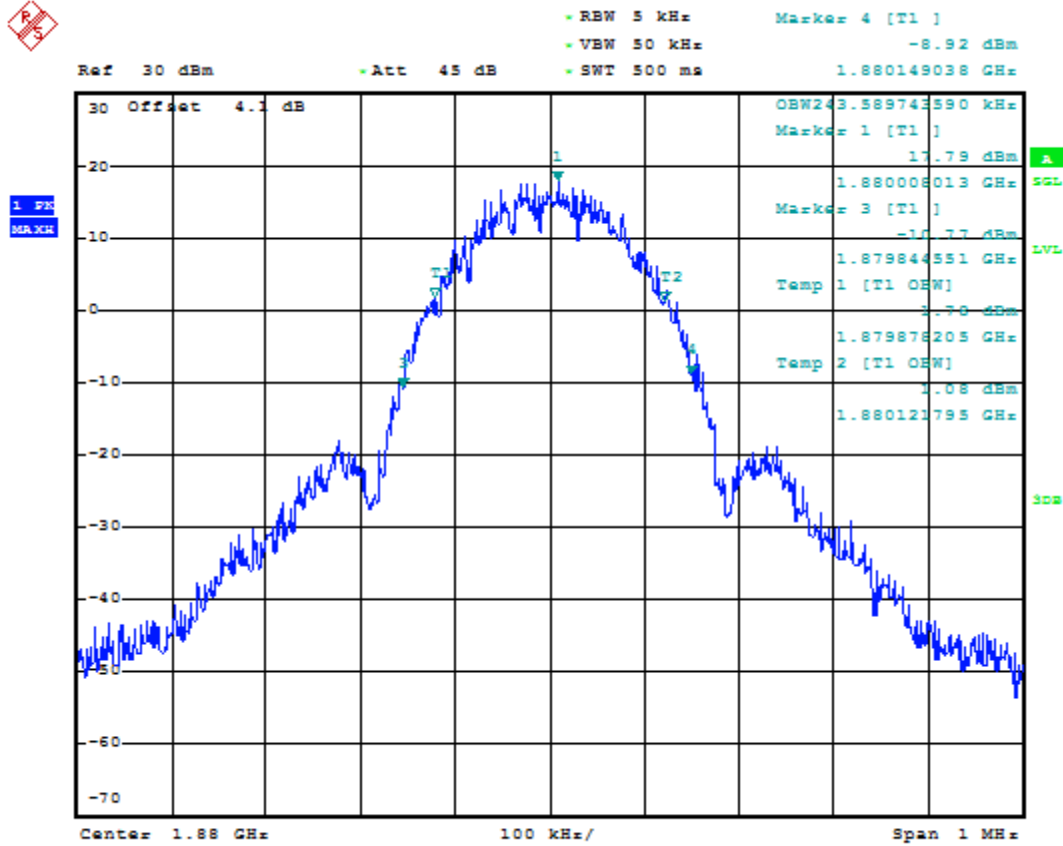


1.4 Test Mode=GSM/TM3

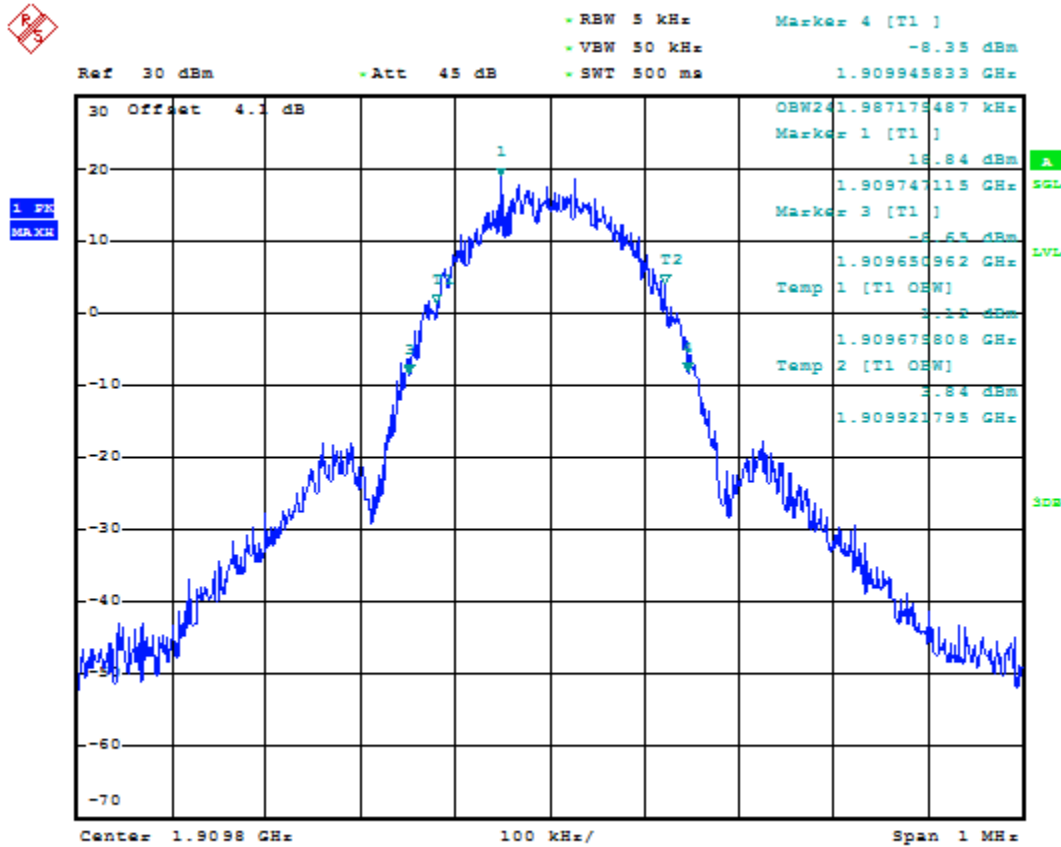
1.4.1.1 Test Channel=LCH



1.4.1.2 Test Channel=MCH

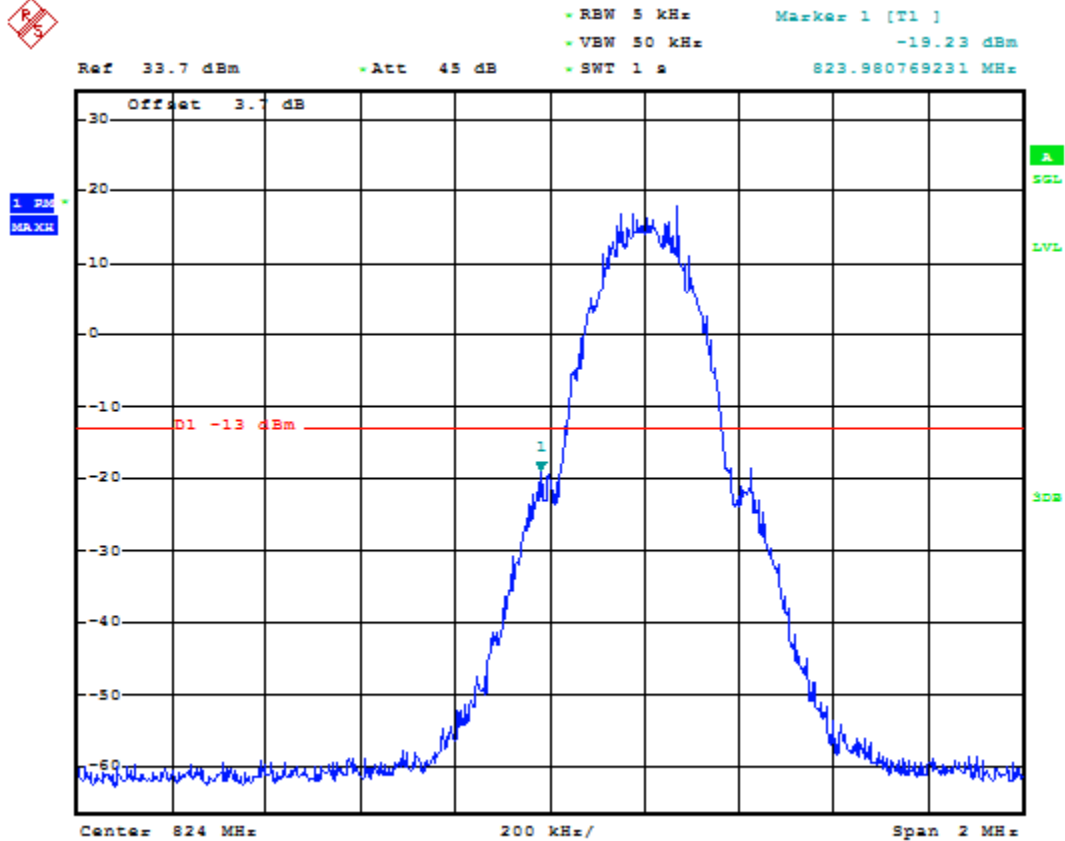


1.4.1.3 Test Channel=HCH

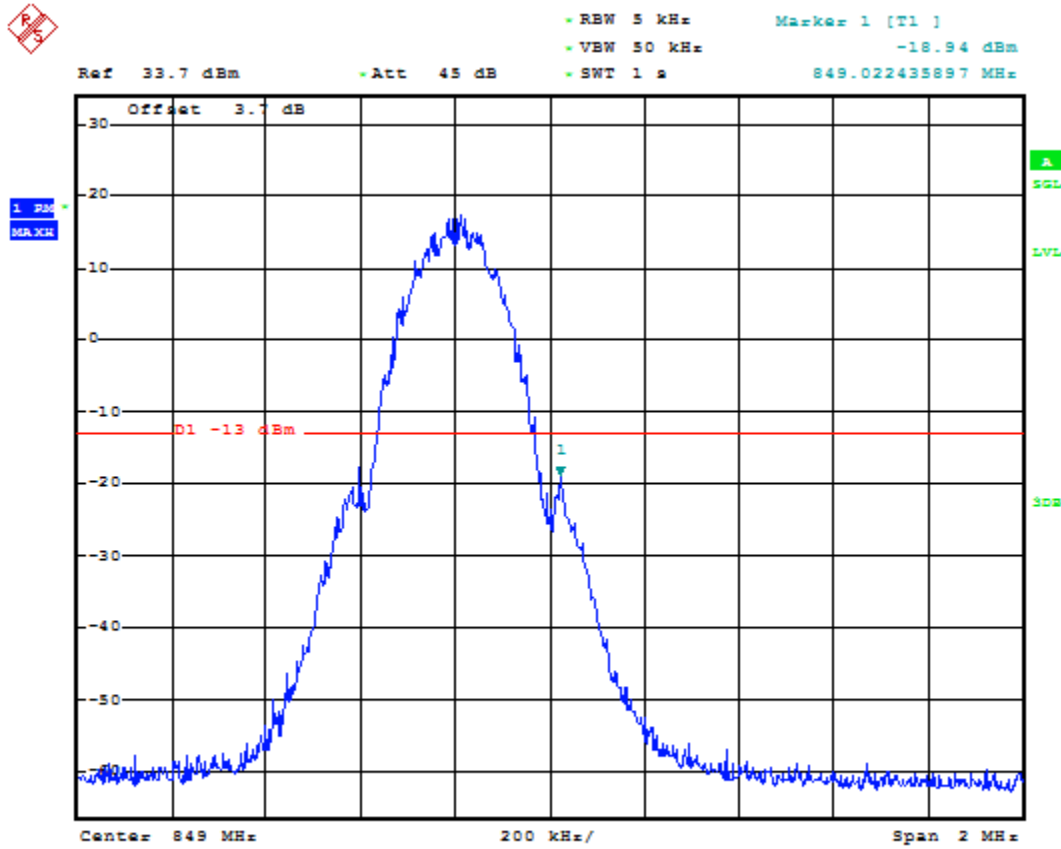


Appendix E: Band Edges Compliance

- 1 For GSM
- 1.1 Test Band=GSM850
- 1.1.1 Test Mode=GSM/TM1
- 1.1.1.1 Test Channel=LCH



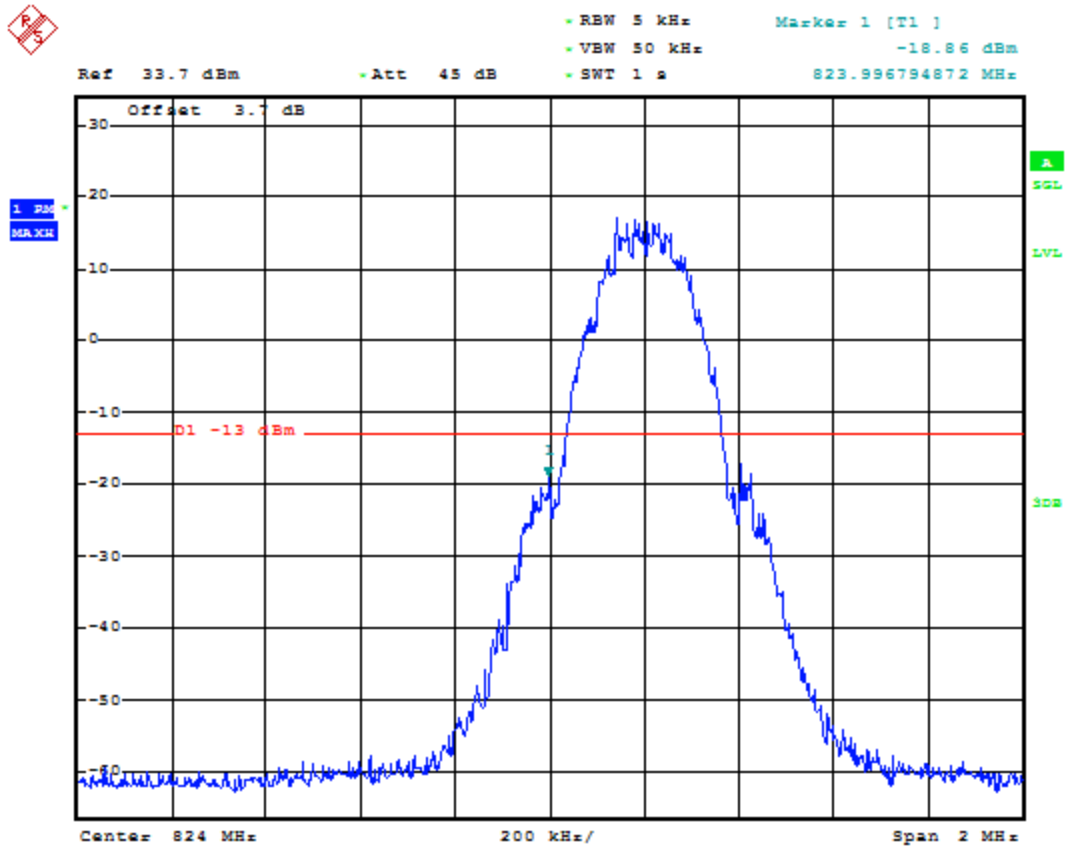
1.1.1.2 Test Channel=HCH





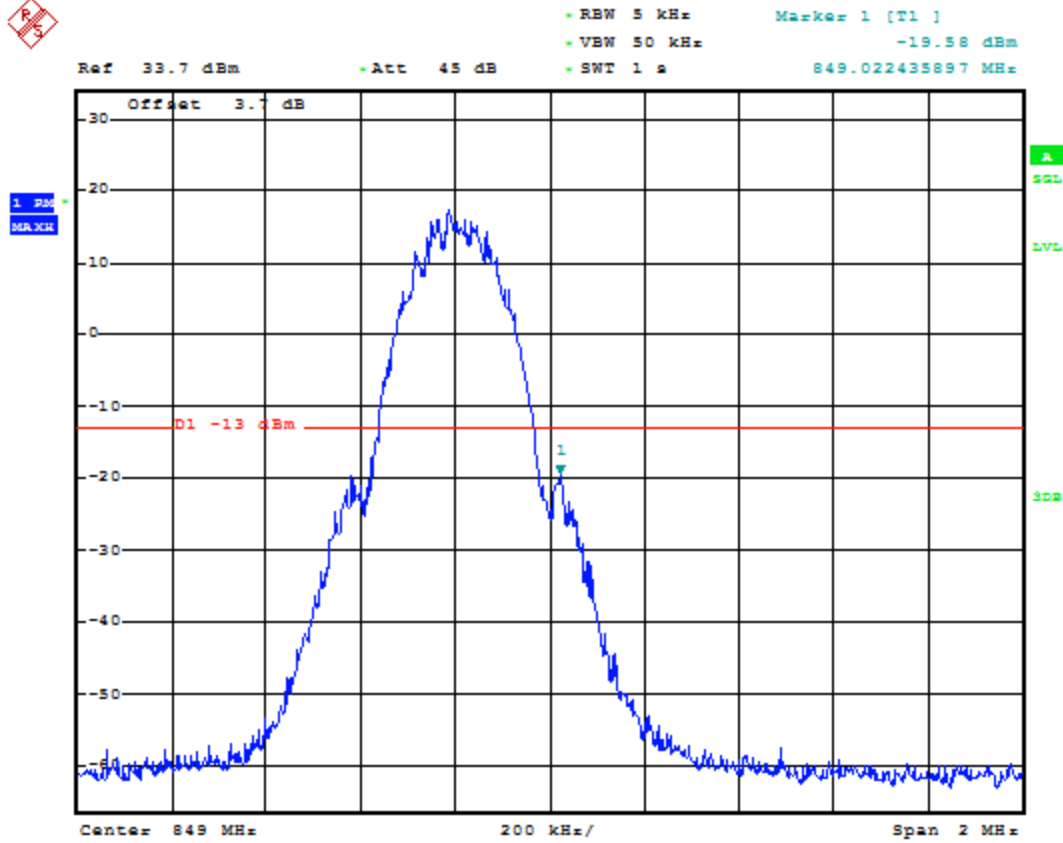
1.1.2 Test Mode=GSM/TM2

1.1.2.1 Test Channel=LCH



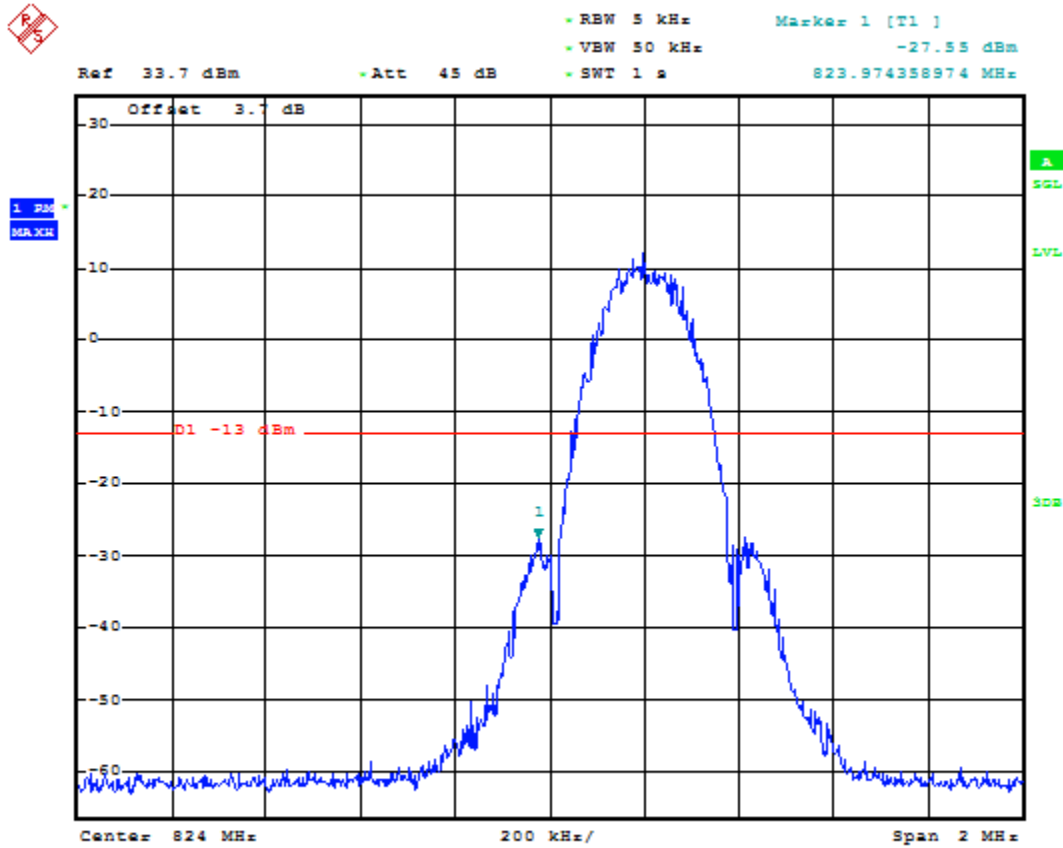


1.1.2.2 Test Channel=HCH

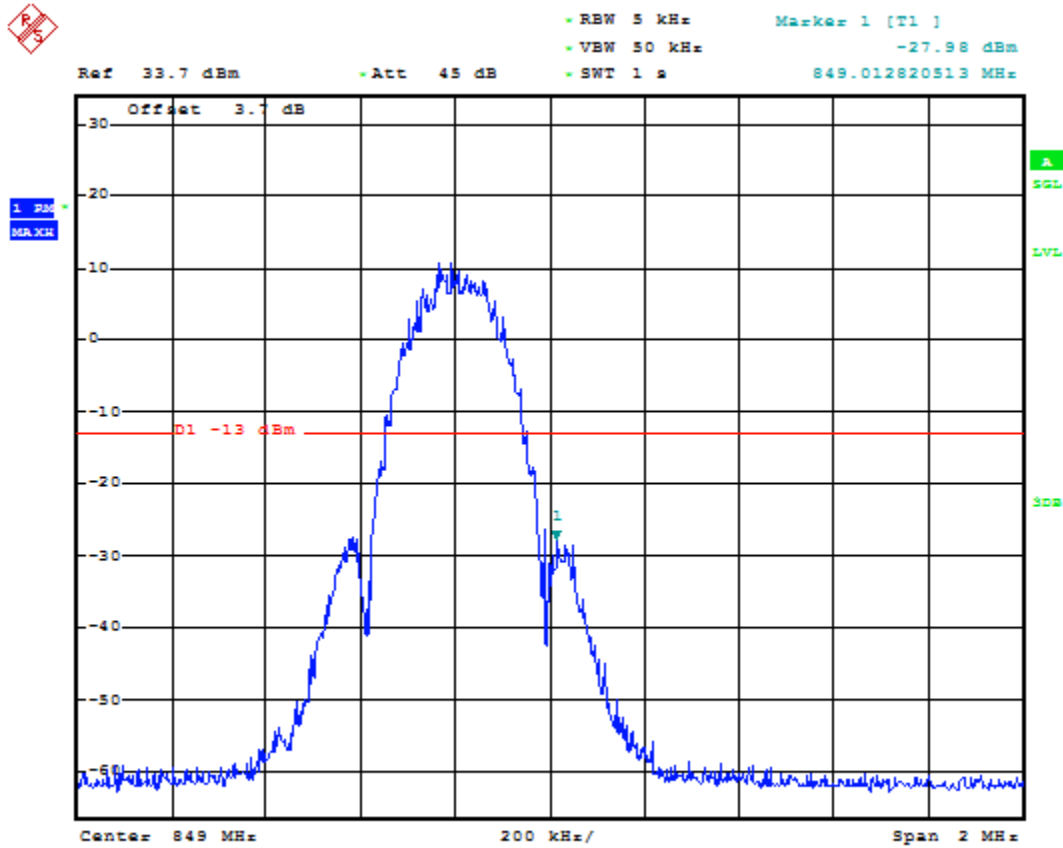


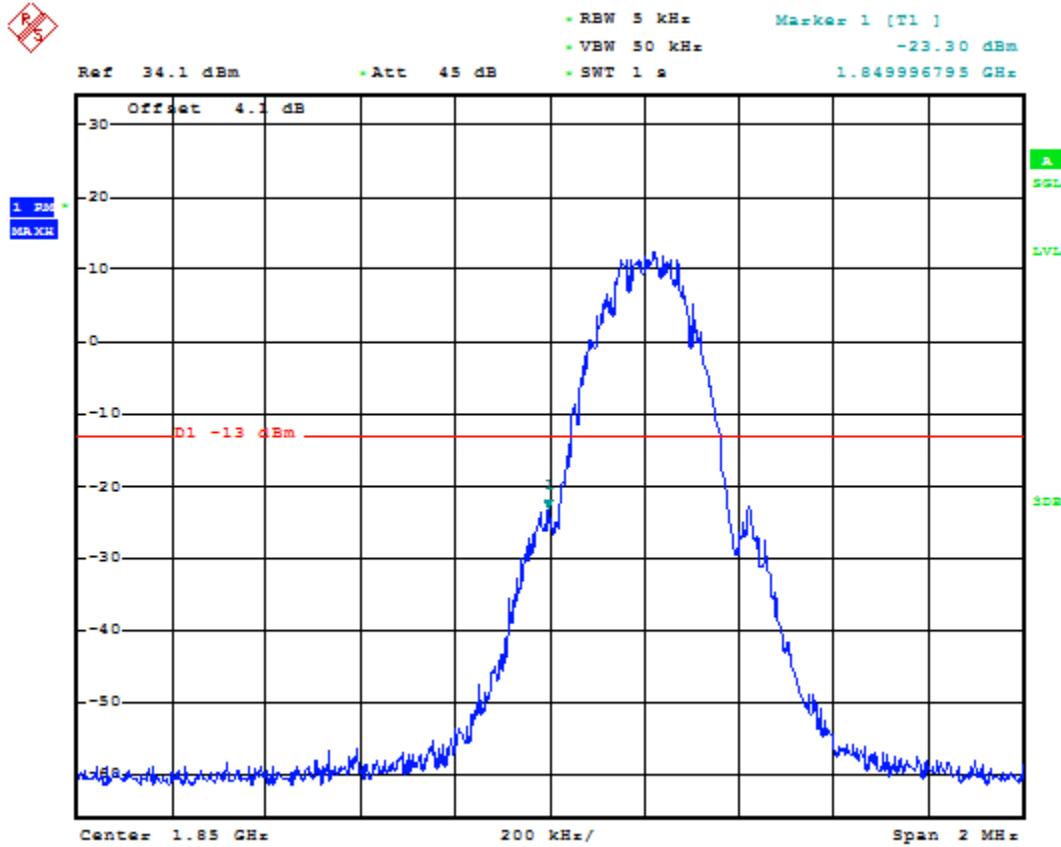
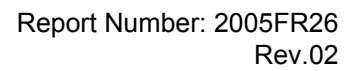
1.1.3 Test Mode=GSM/TM3

1.1.3.1 Test Channel=LCH

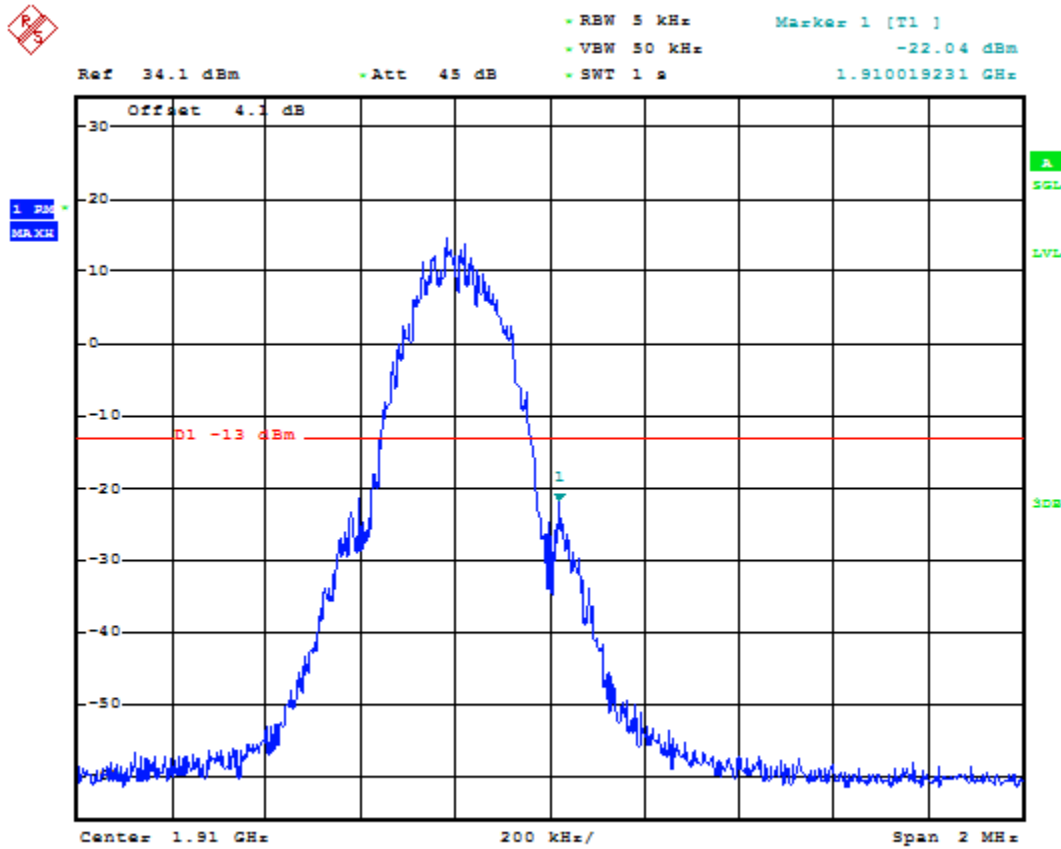


1.1.3.2 Test Channel=HCH



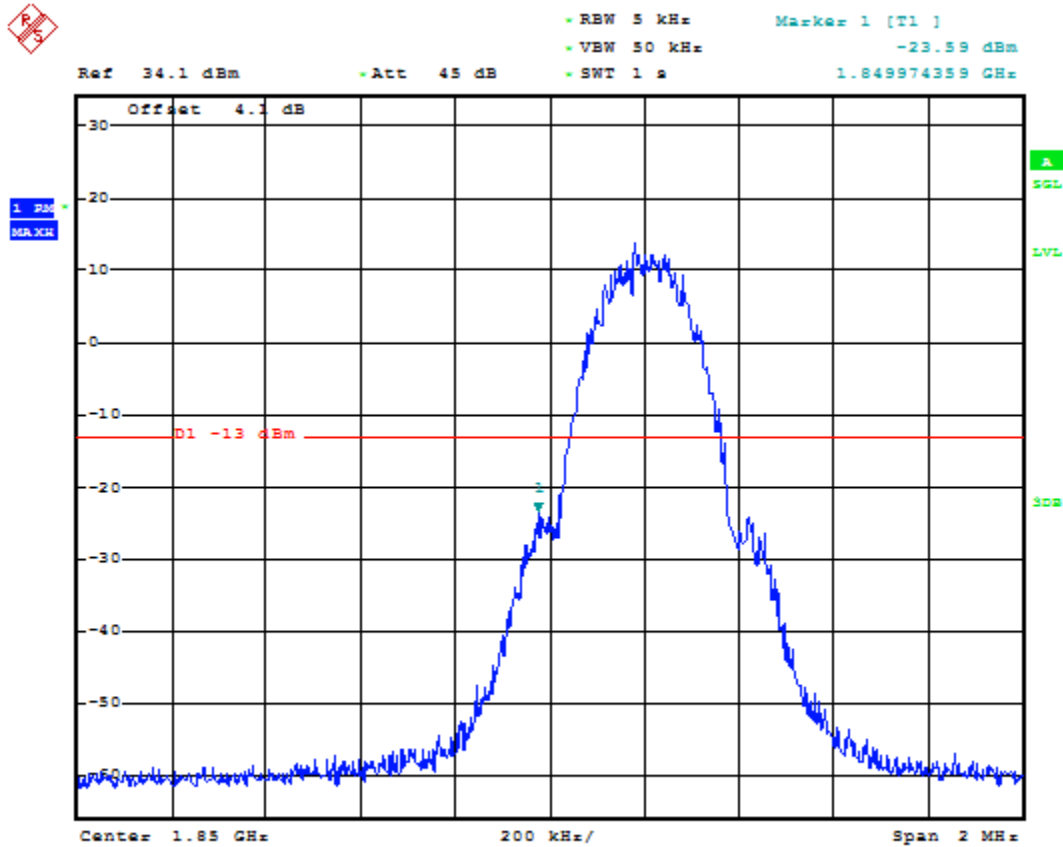


1.2.1.2 Test Channel=HCH

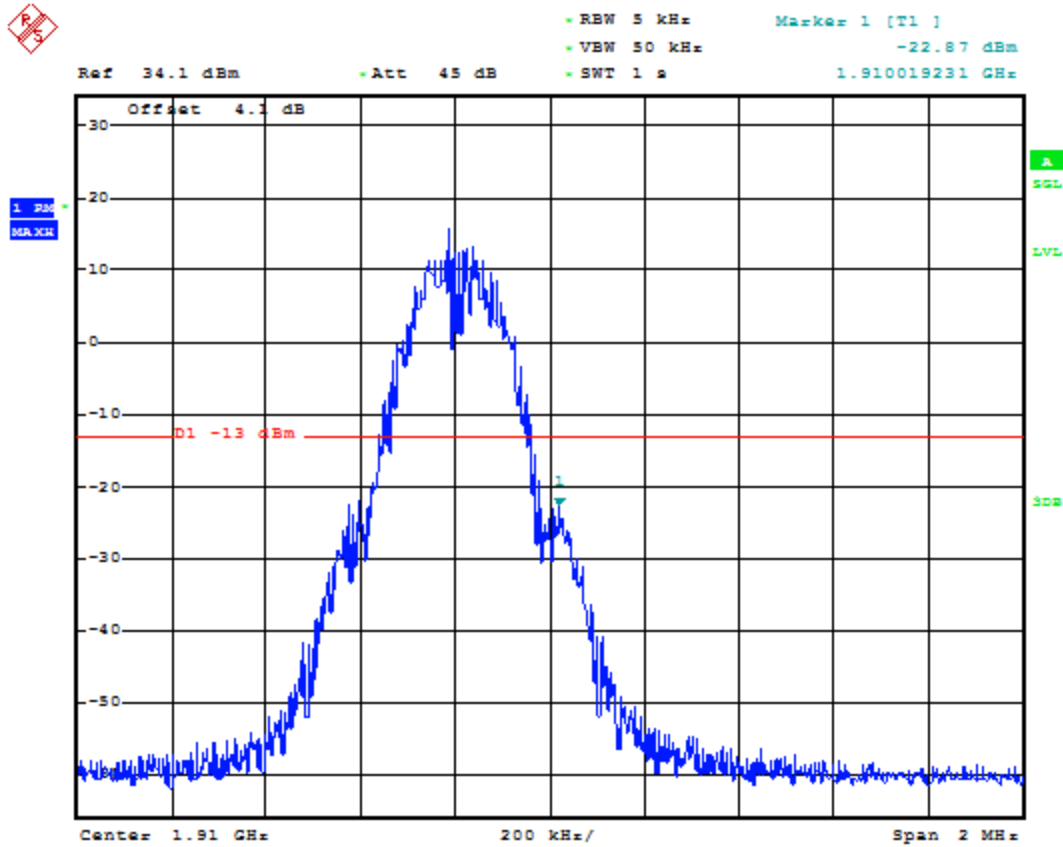


1.2.2 Test Mode=GSM/TM2

1.2.2.1 Test Channel=LCH

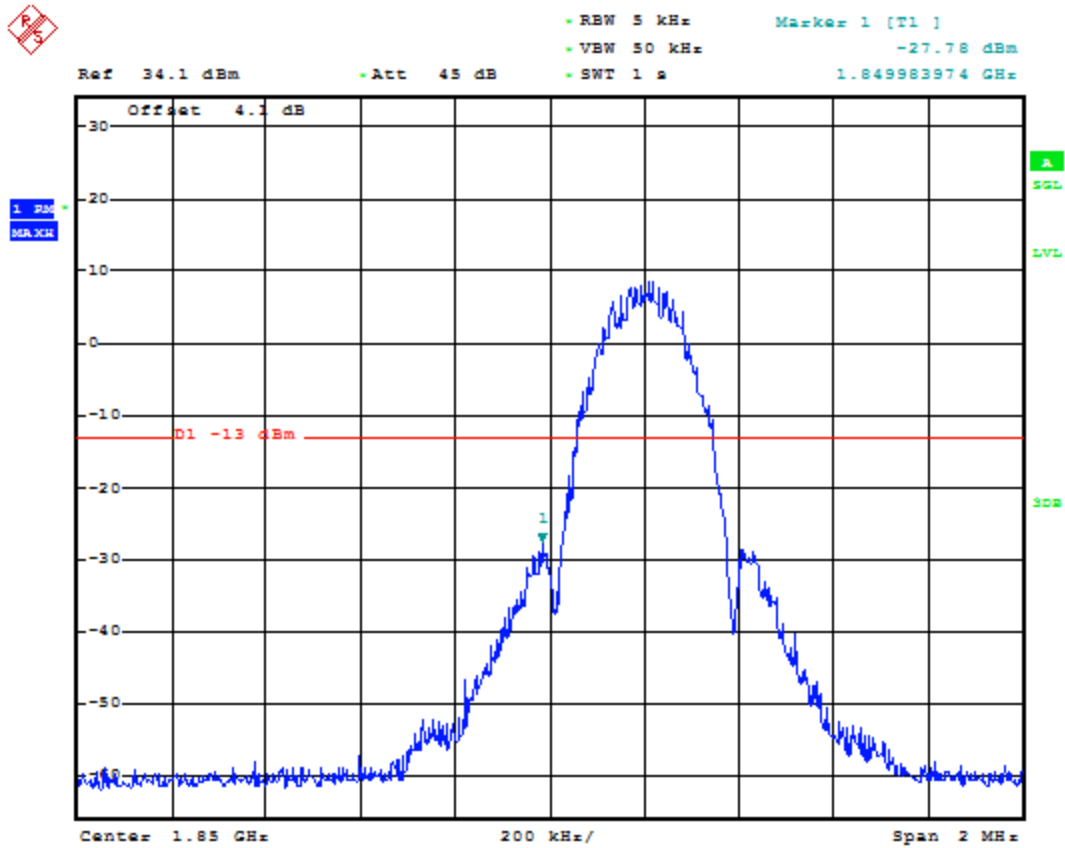


1.2.2.2 Test Channel=HCH

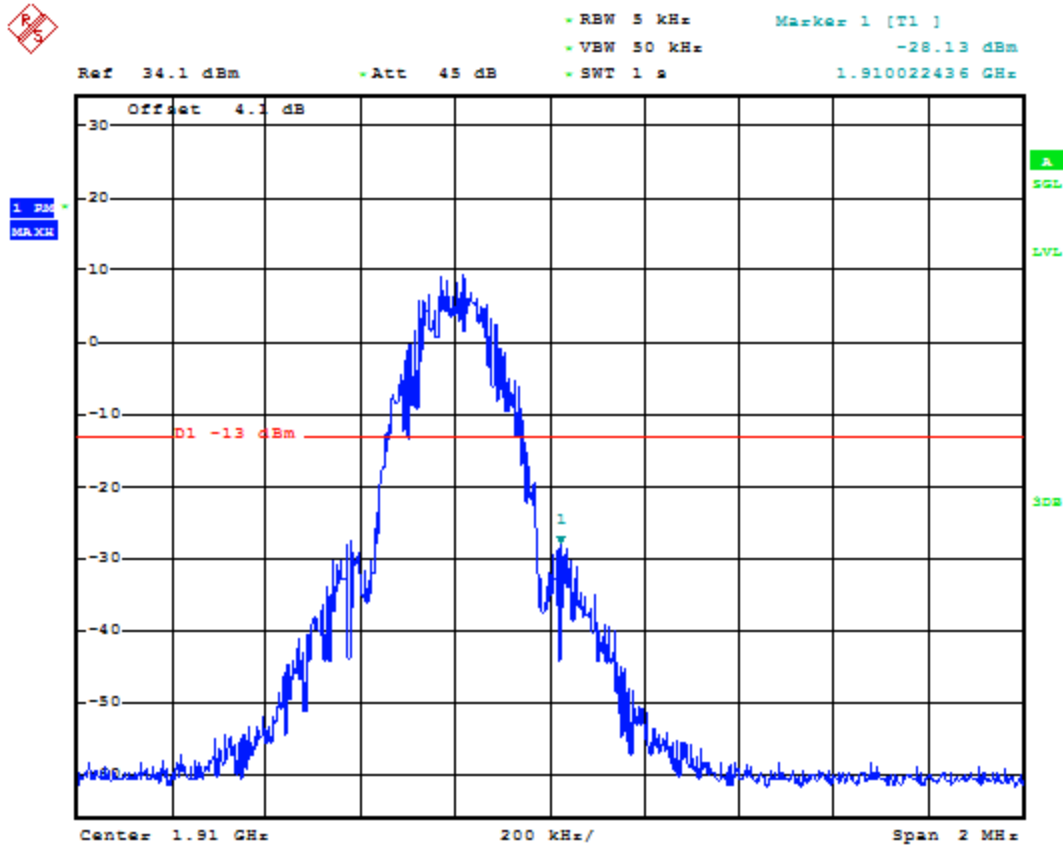


1.2.3 Test Mode=GSM/TM3

1.2.3.1 Test Channel=LCH

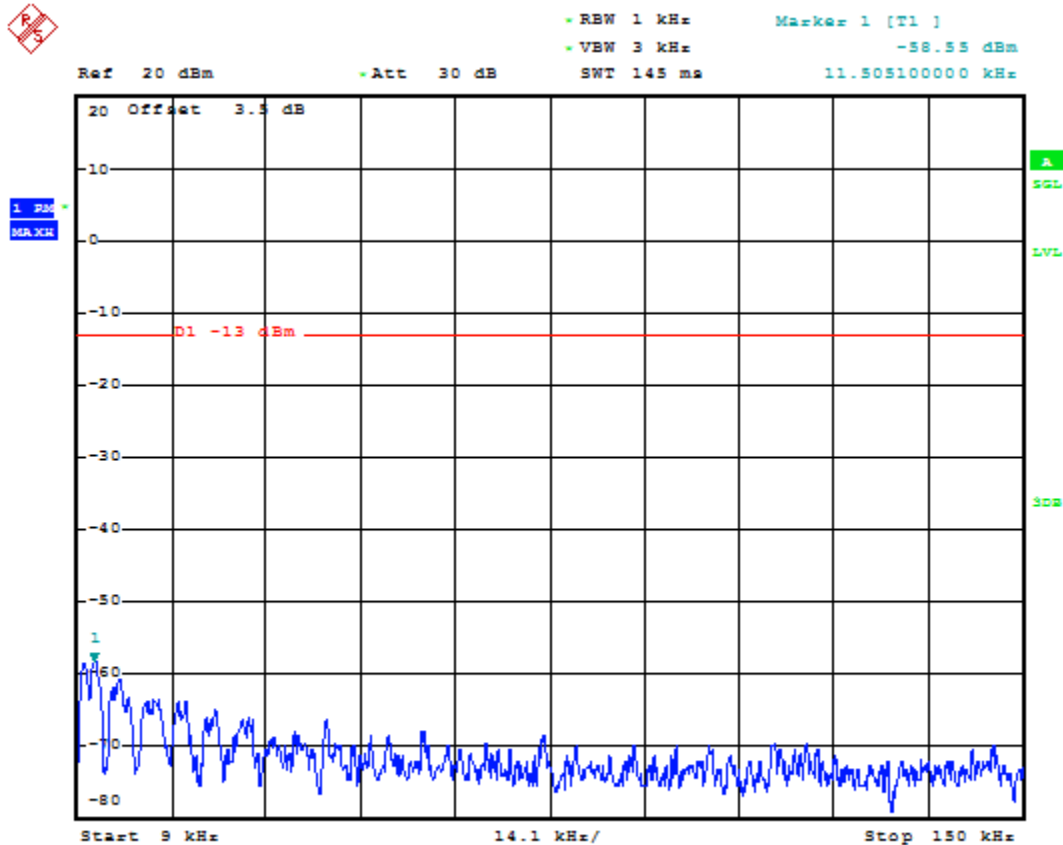


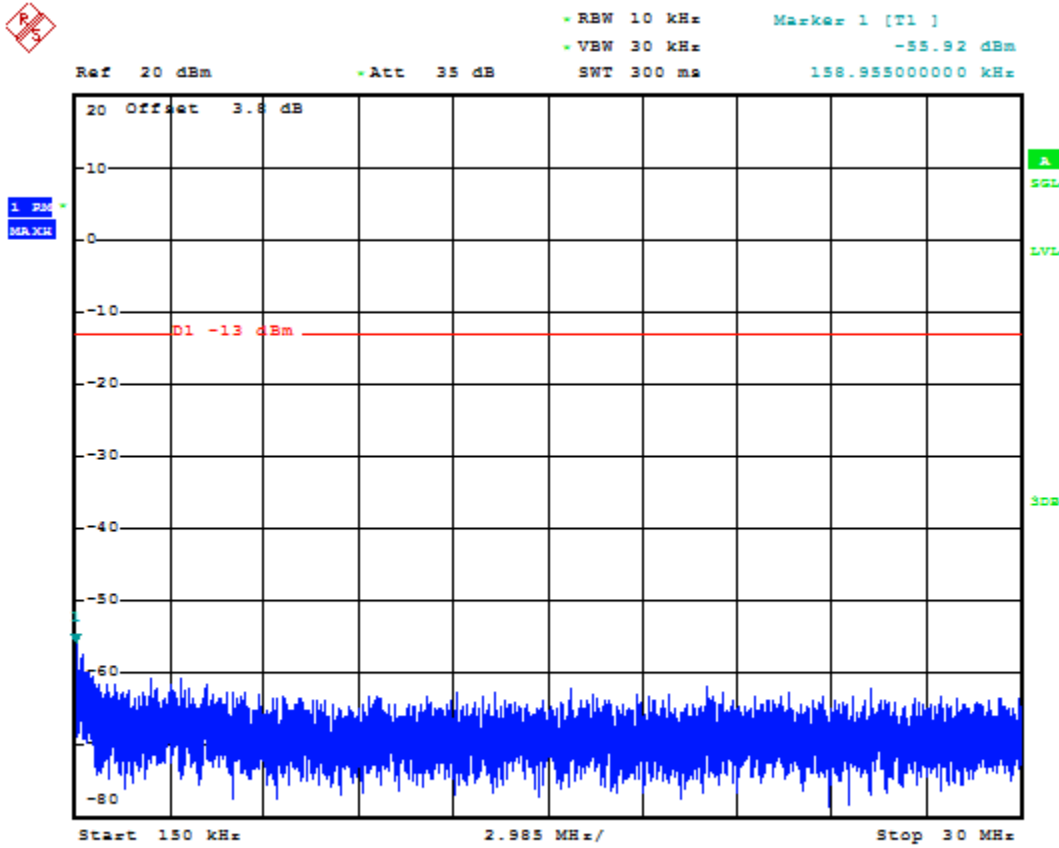
1.2.3.2 Test Channel=HCH

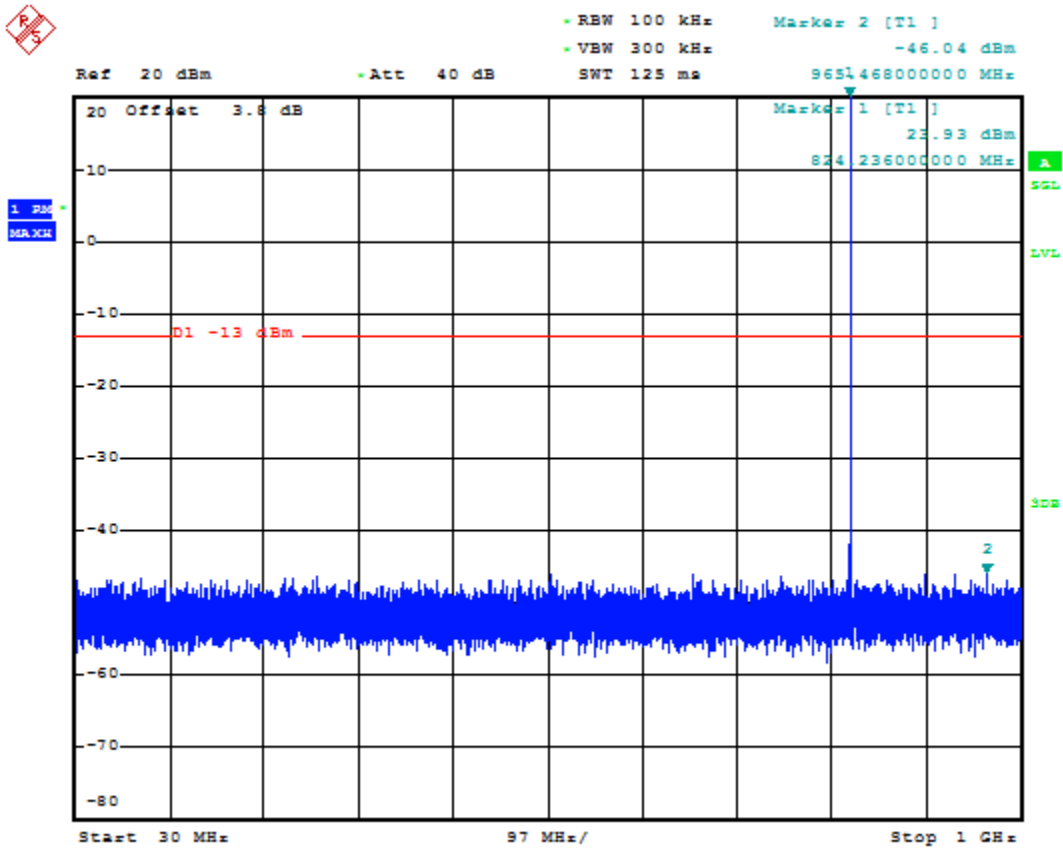


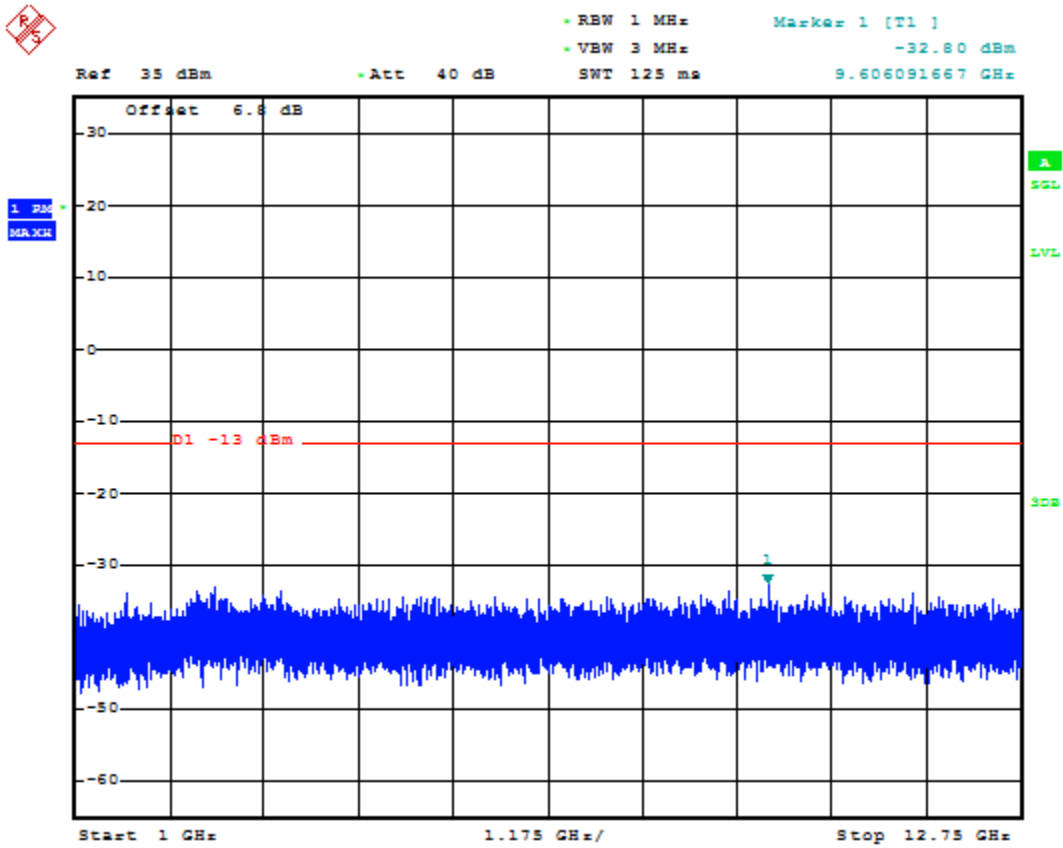
Appendix F: Spurious Emission at Antenna Terminal

- 1 For GSM
- 1.1 Test Band=GSM850
- 1.1.1 Test Mode=GSM/TM1
- 1.1.1.1 Test Channel=LCH



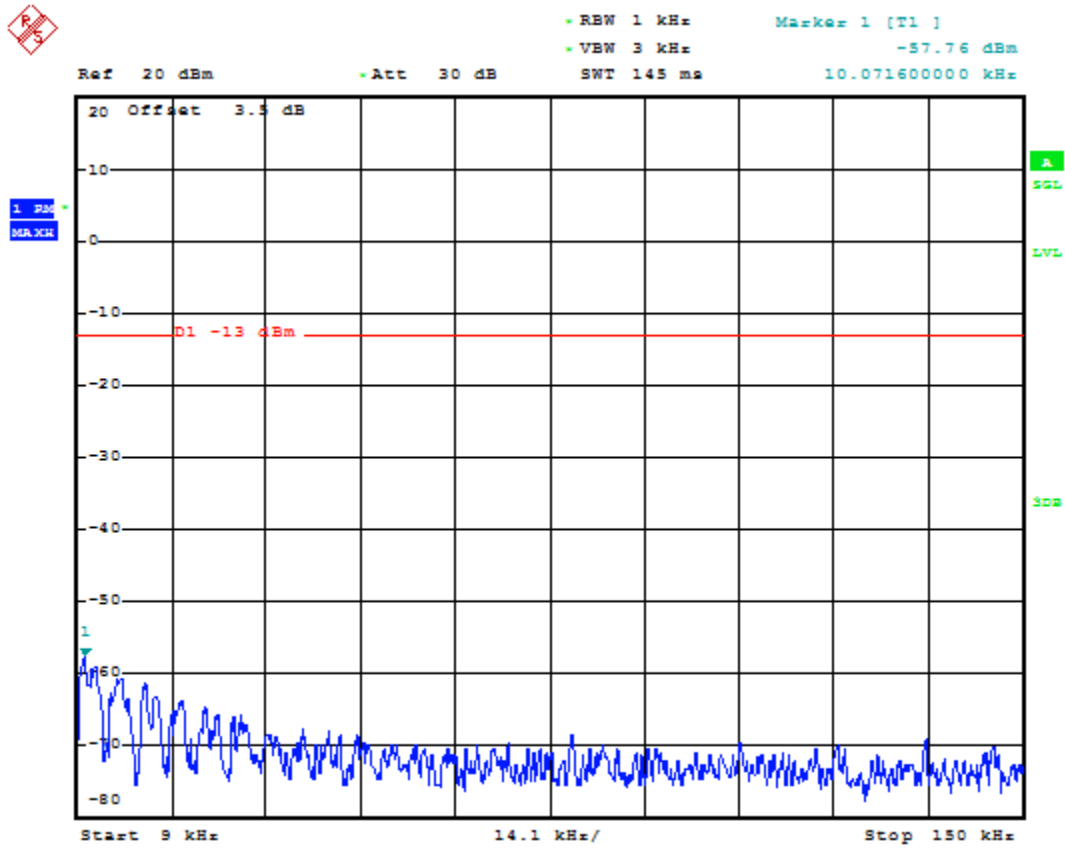


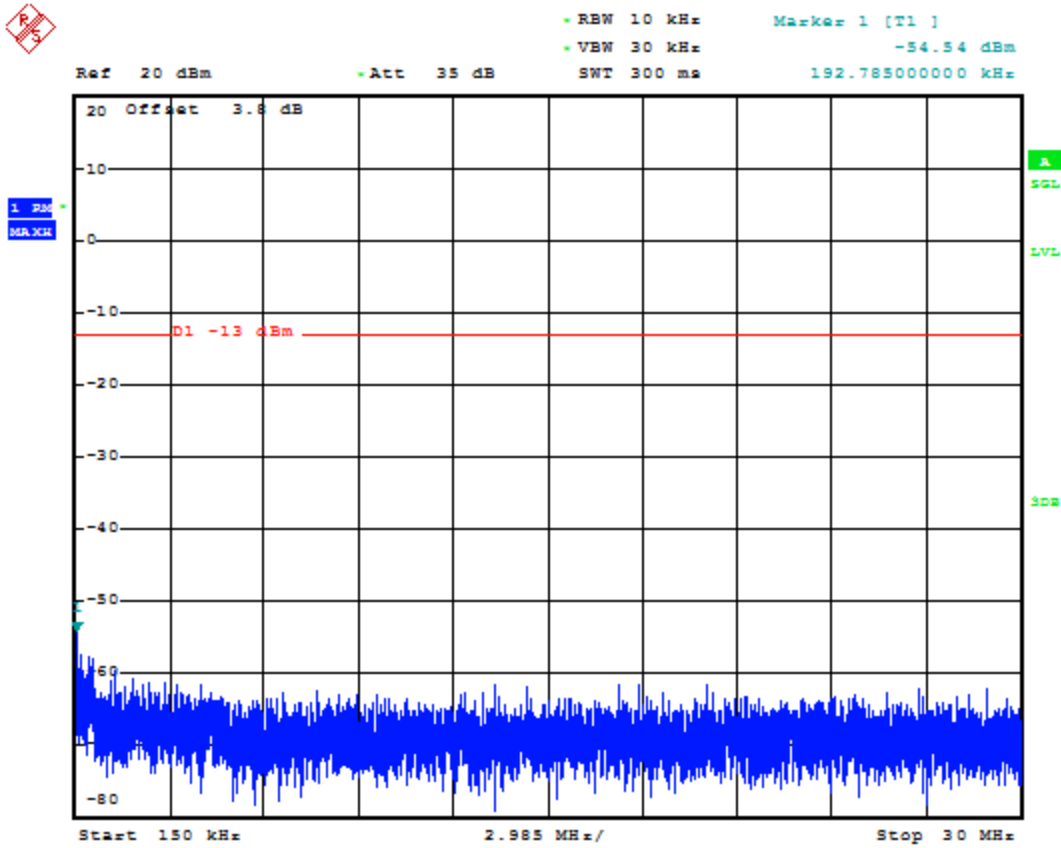


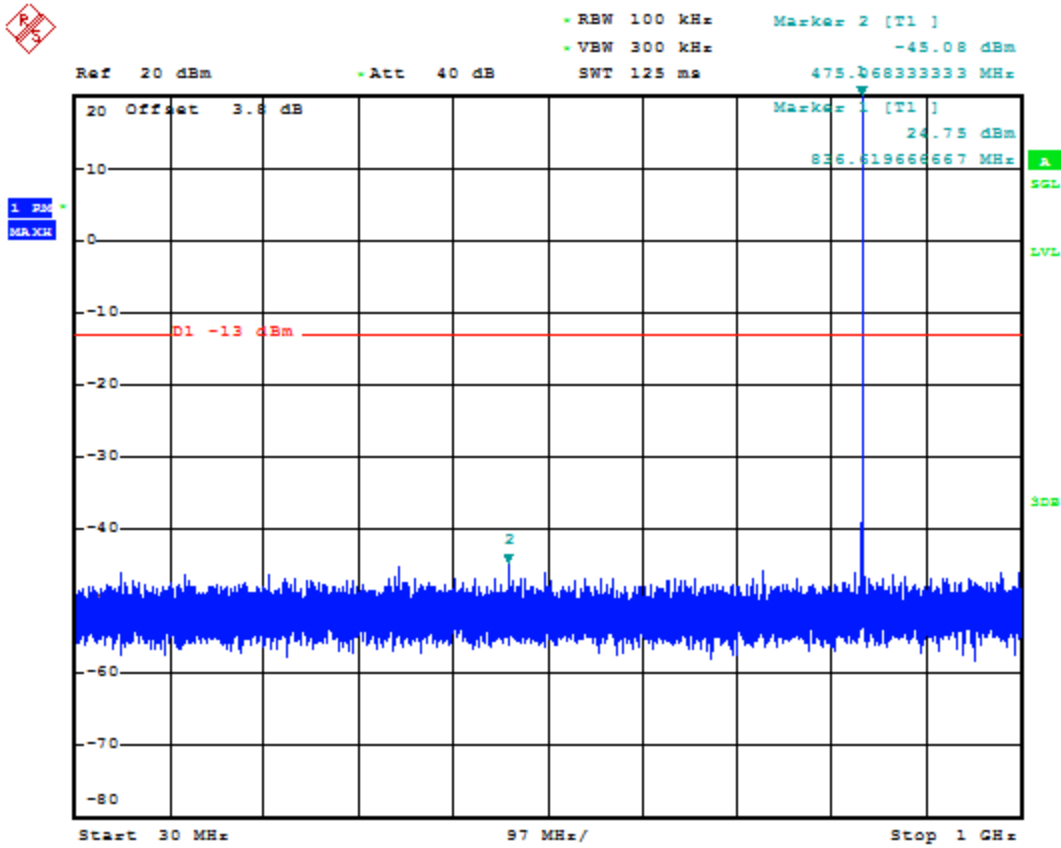


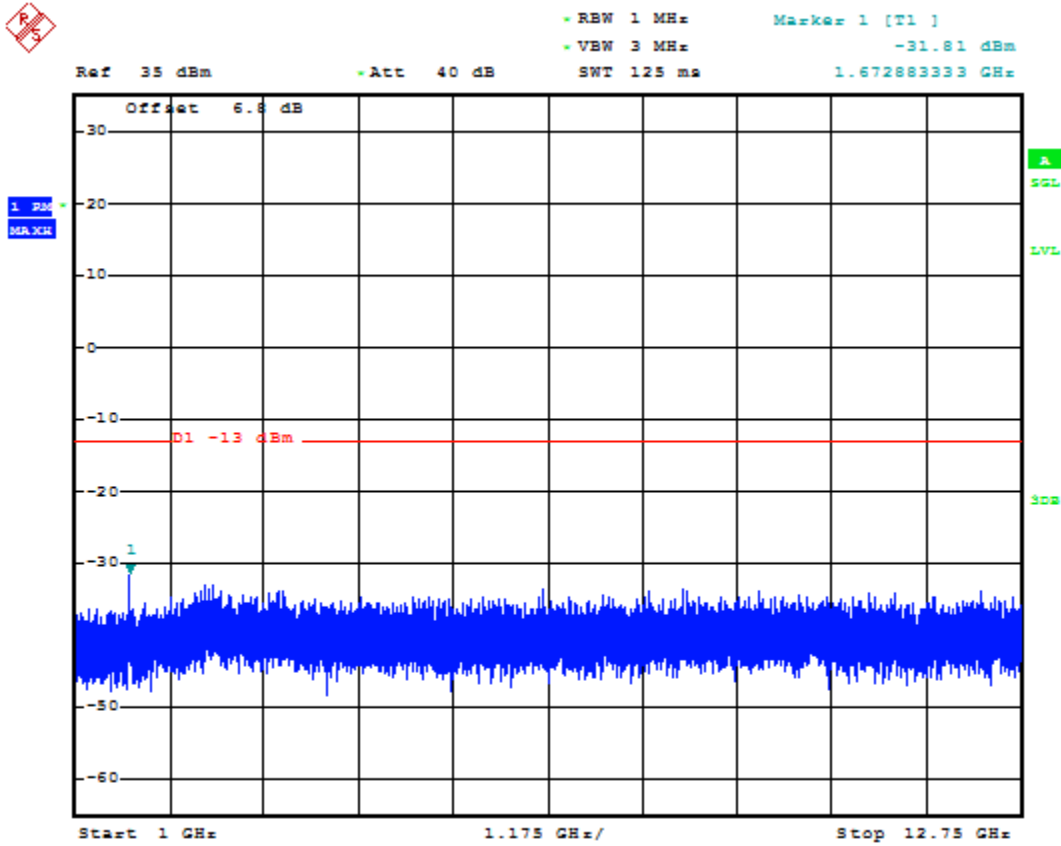


1.1.1.2 Test Channel=MCH



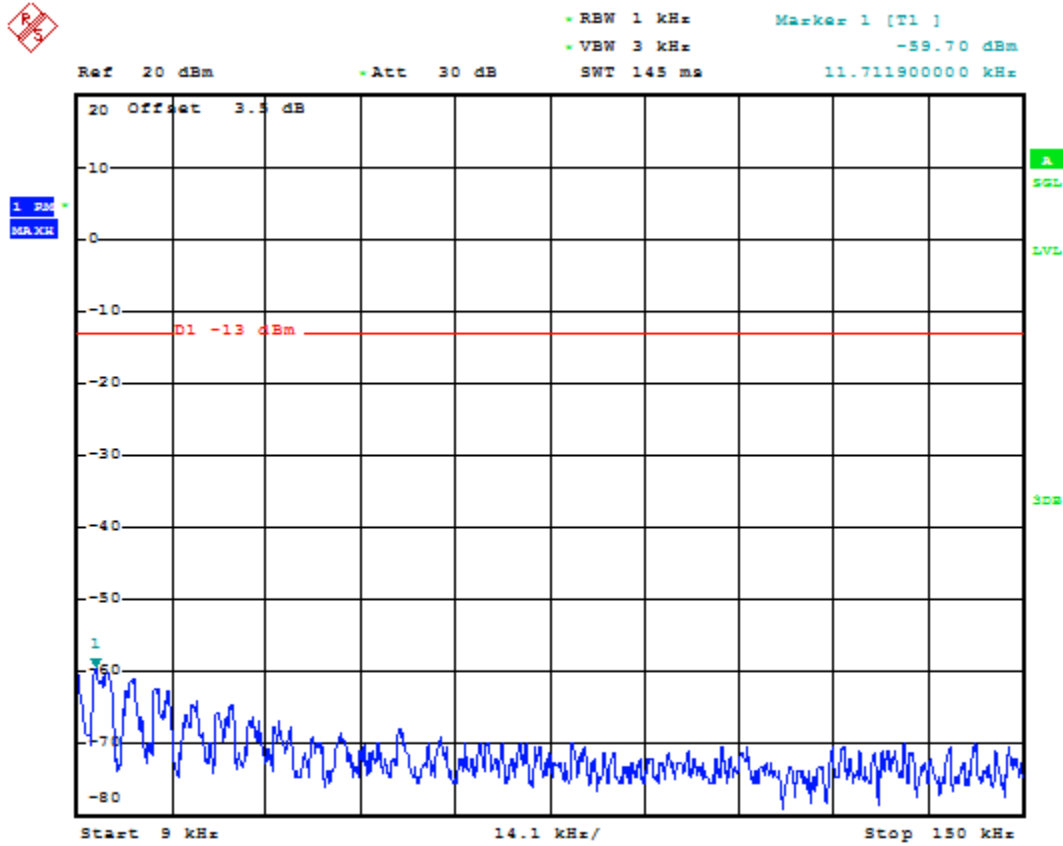


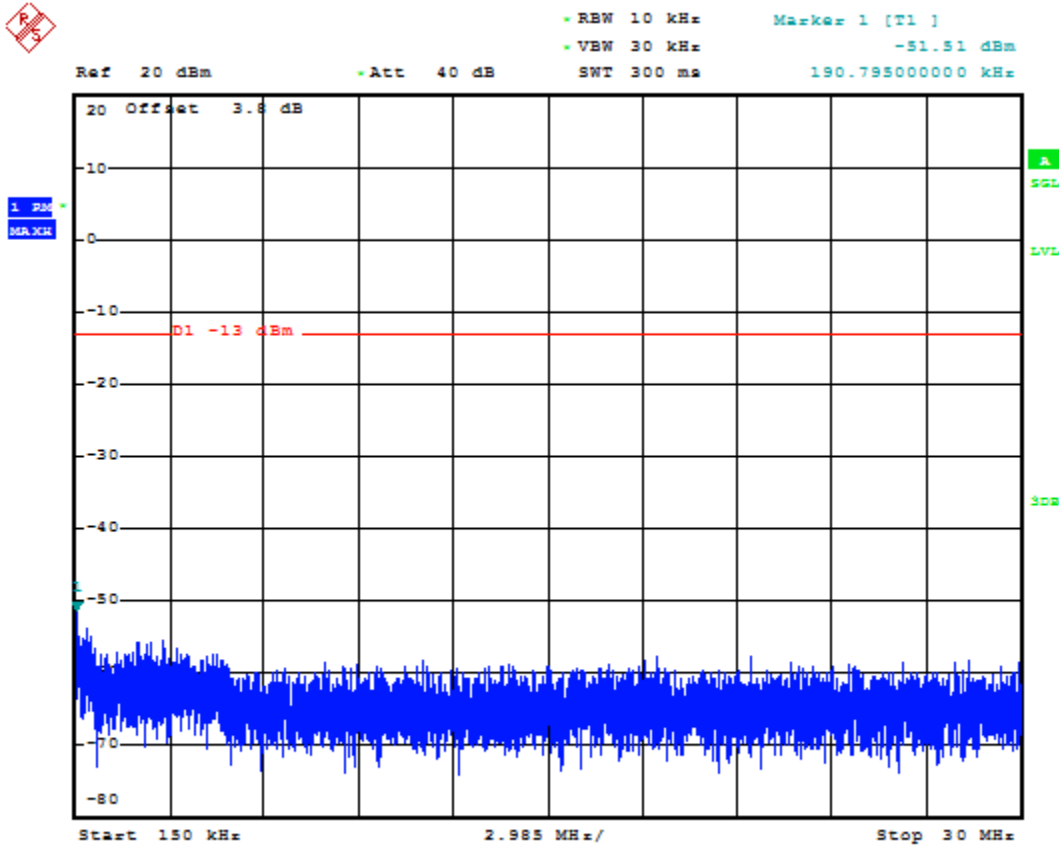


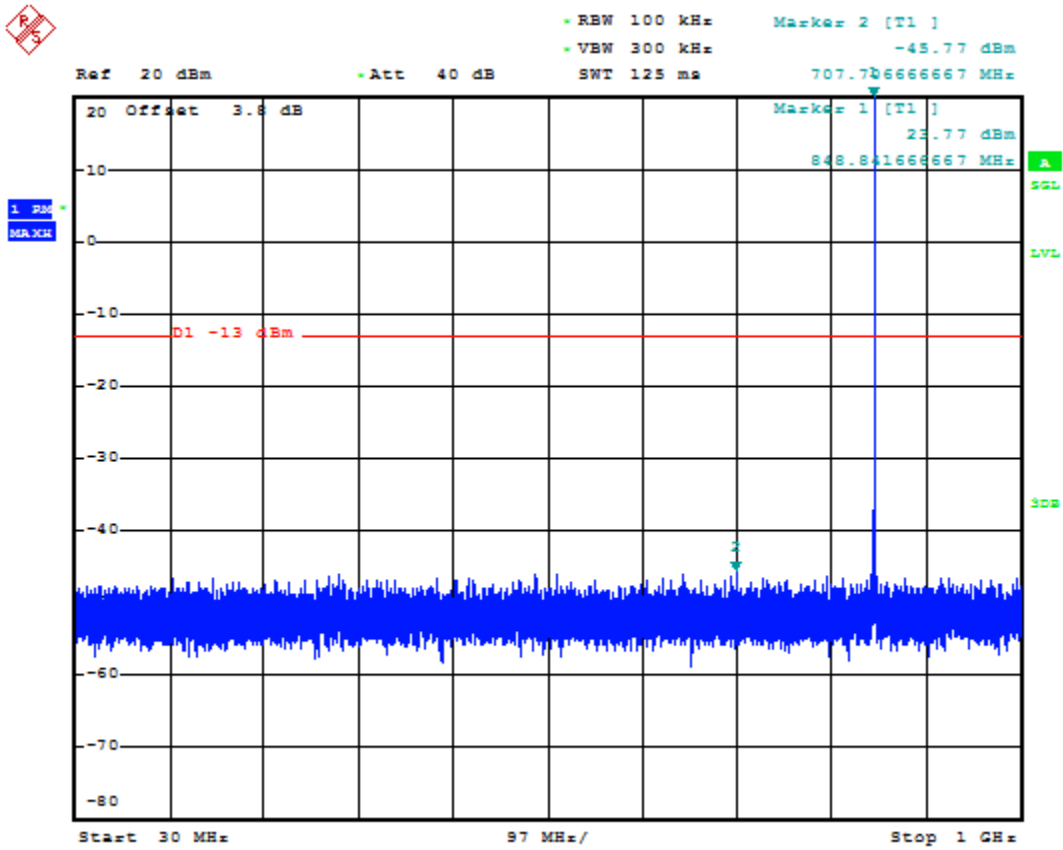


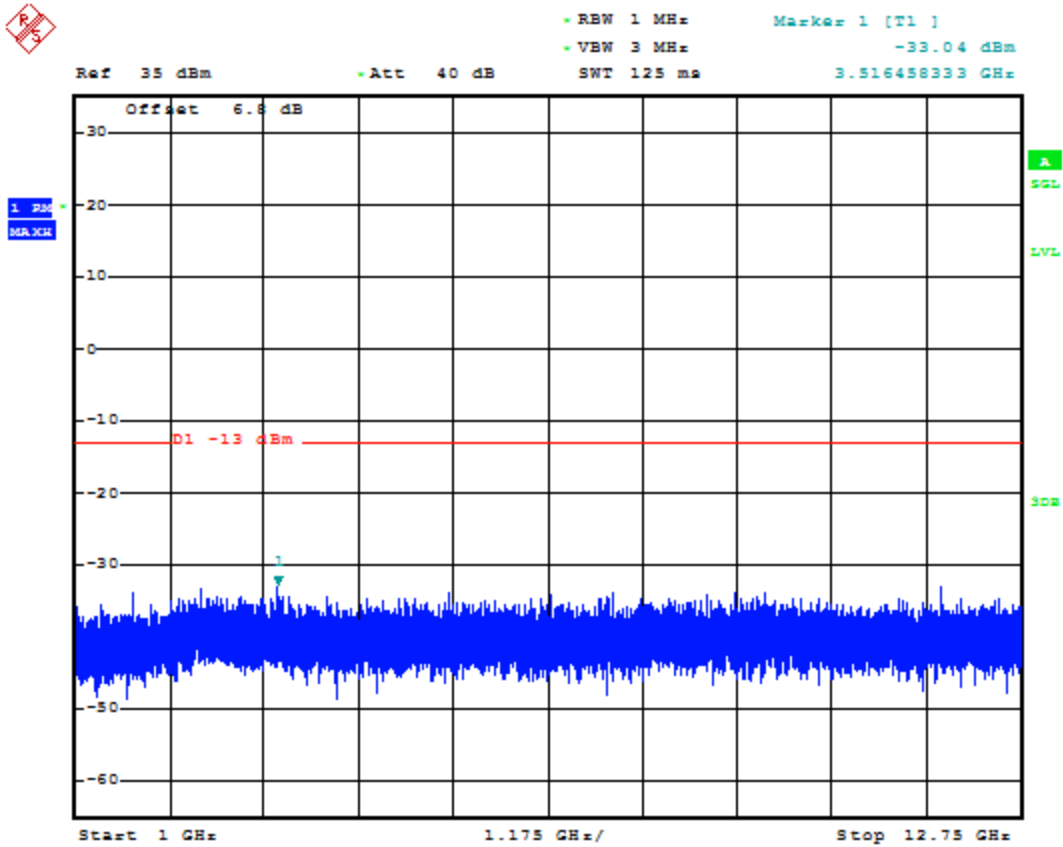


1.1.1.3 Test Channel=HCH





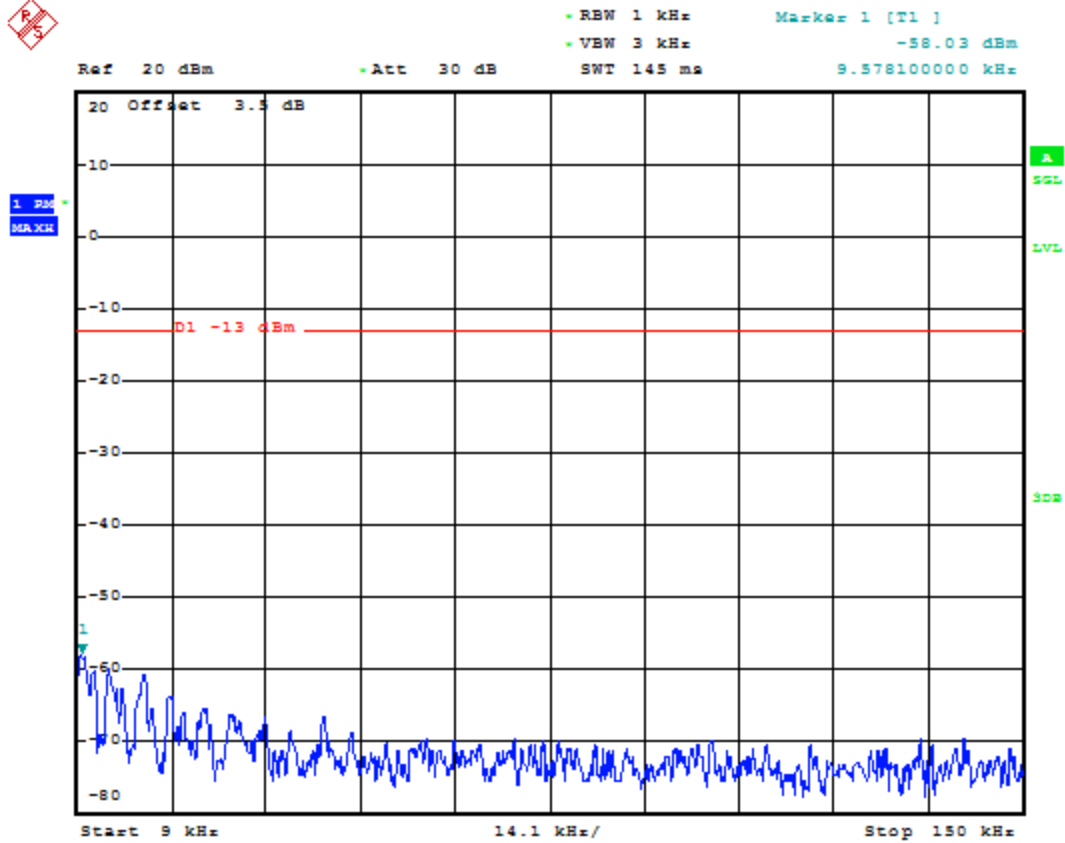


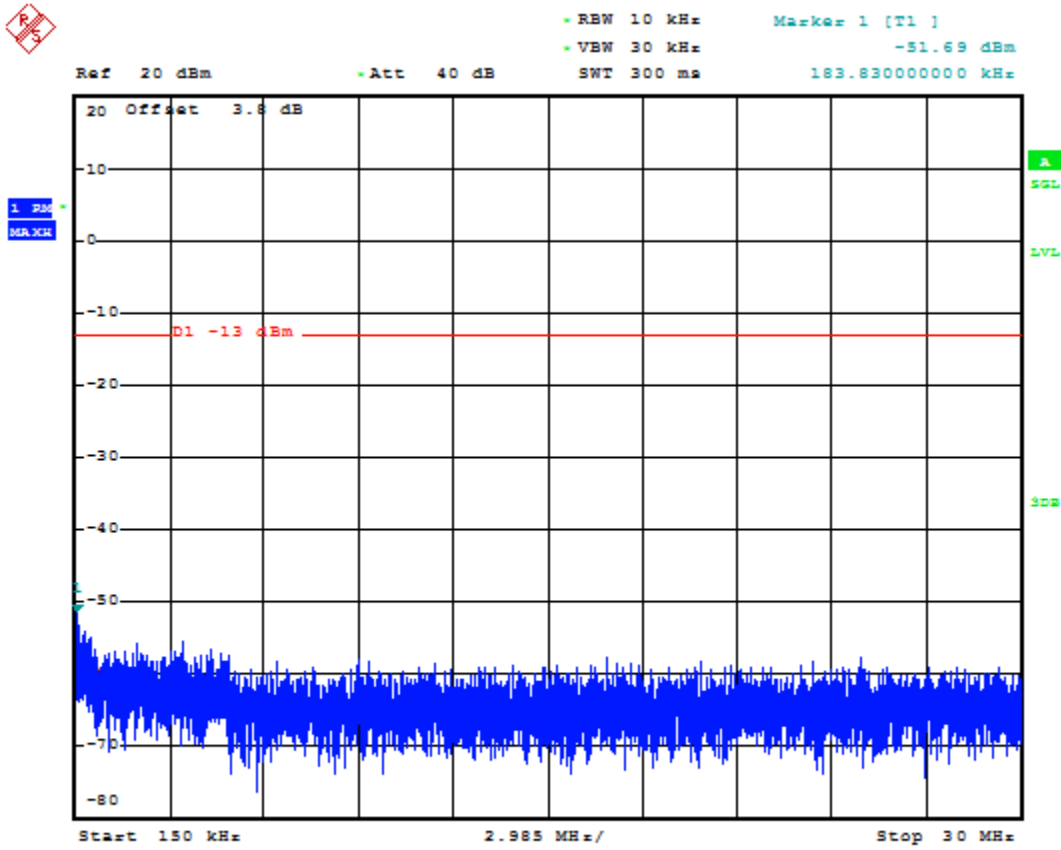


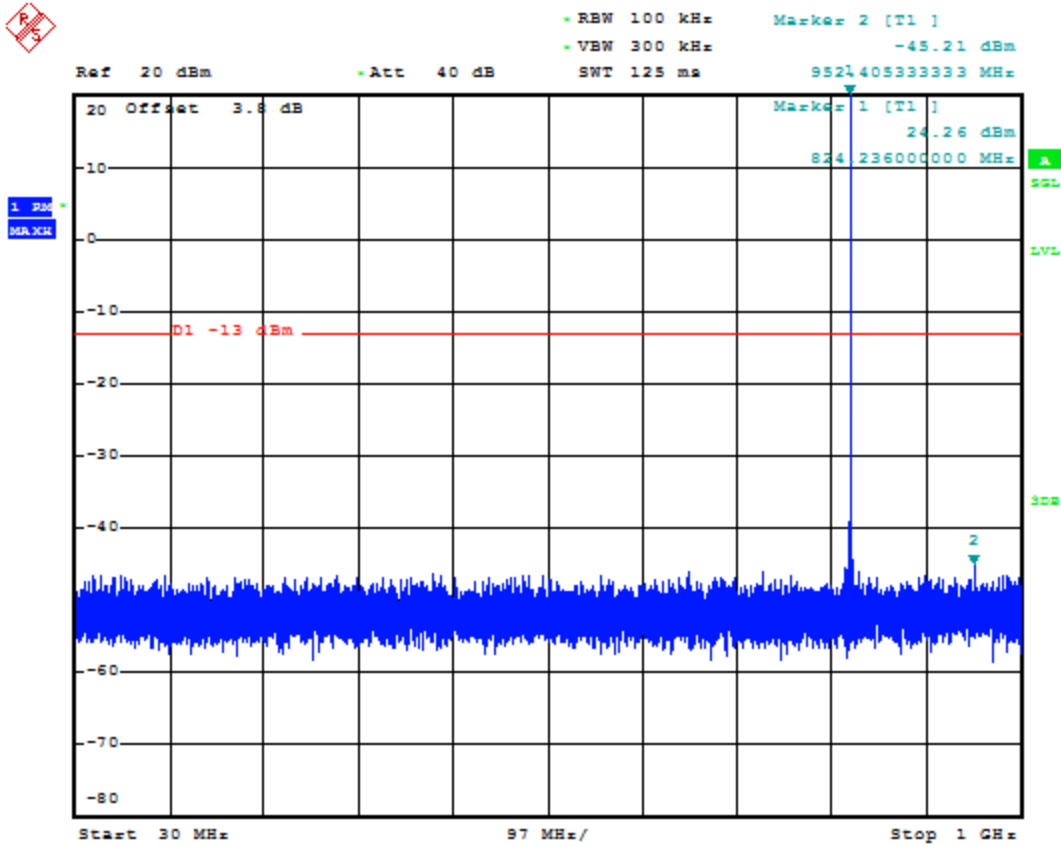


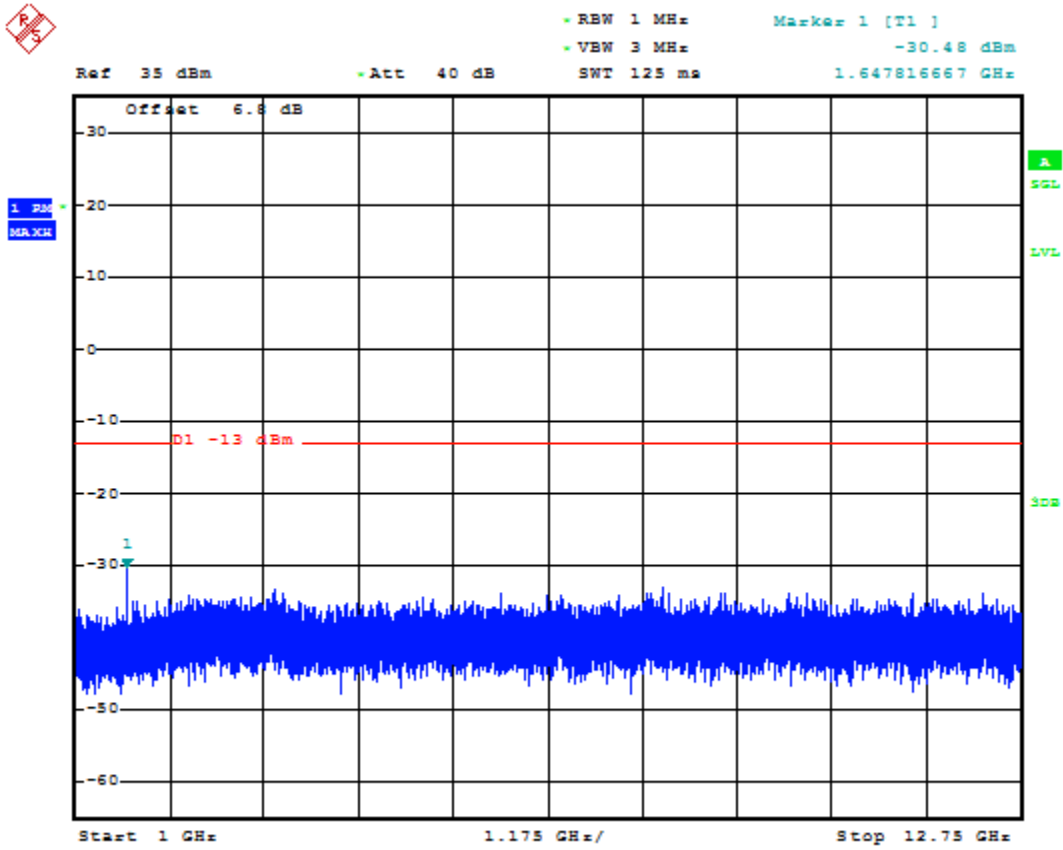
1.1.2 Test Mode=GSM/TM2

1.1.2.1 Test Channel=LCH



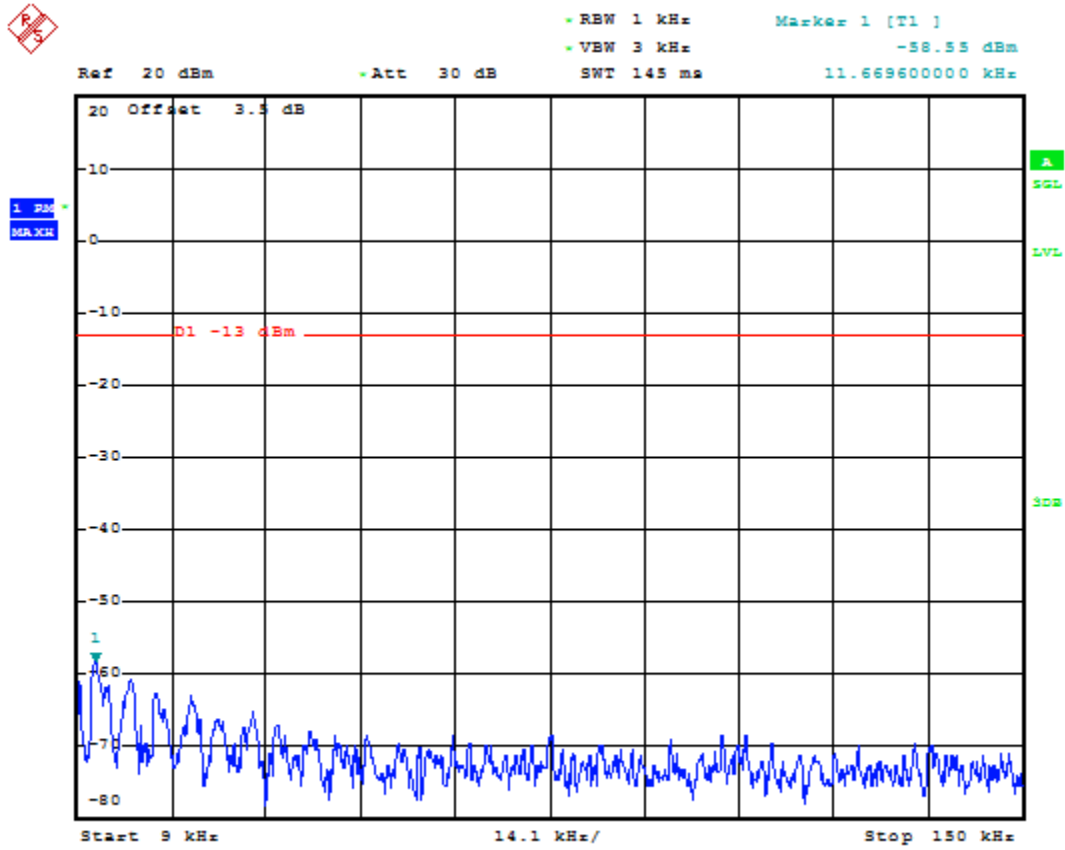


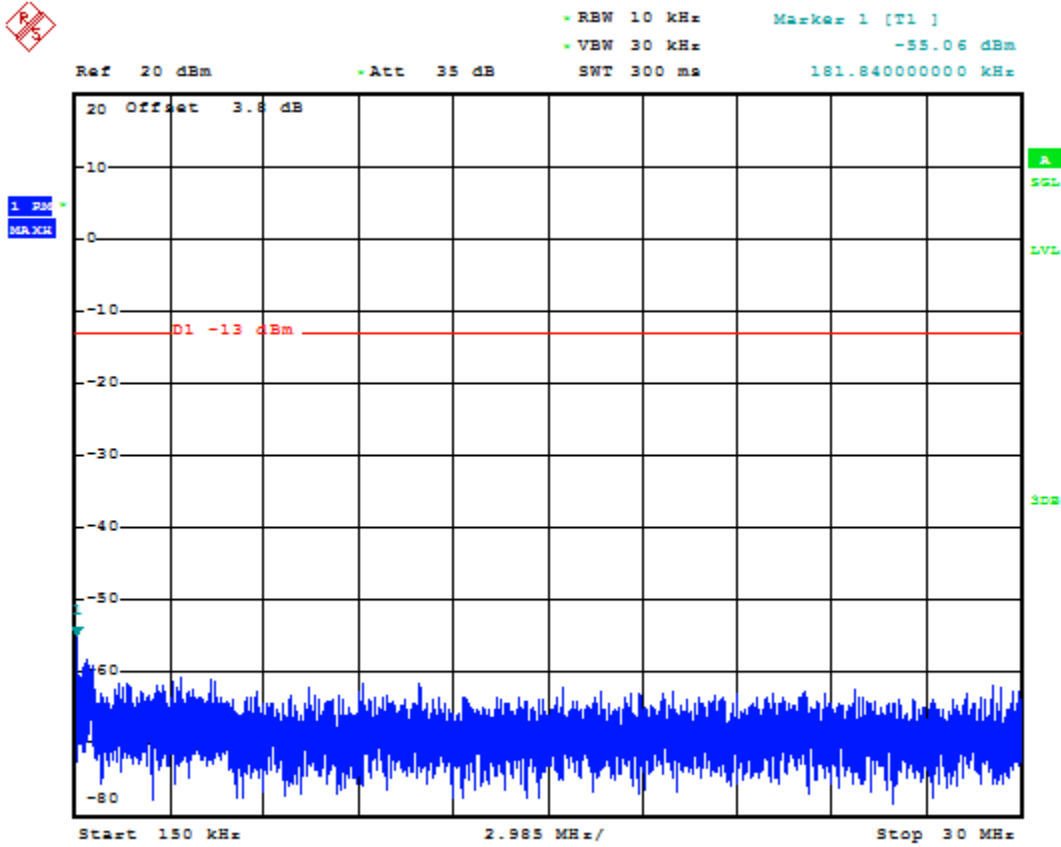


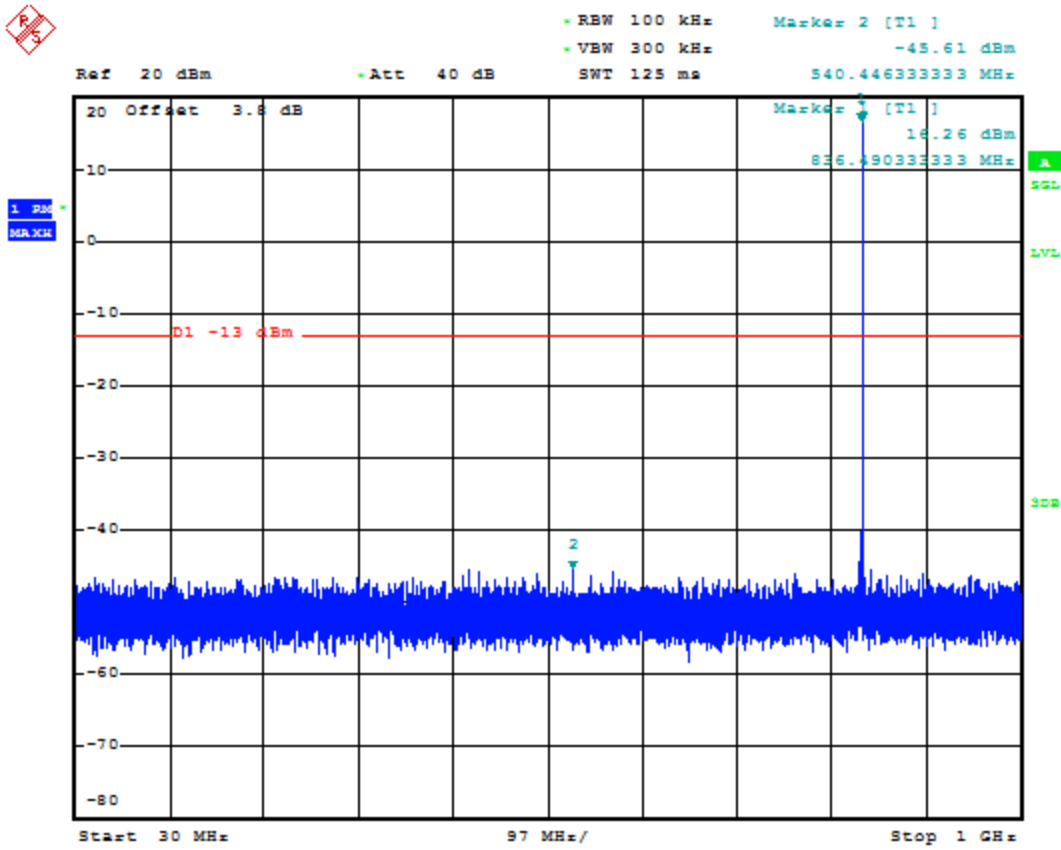


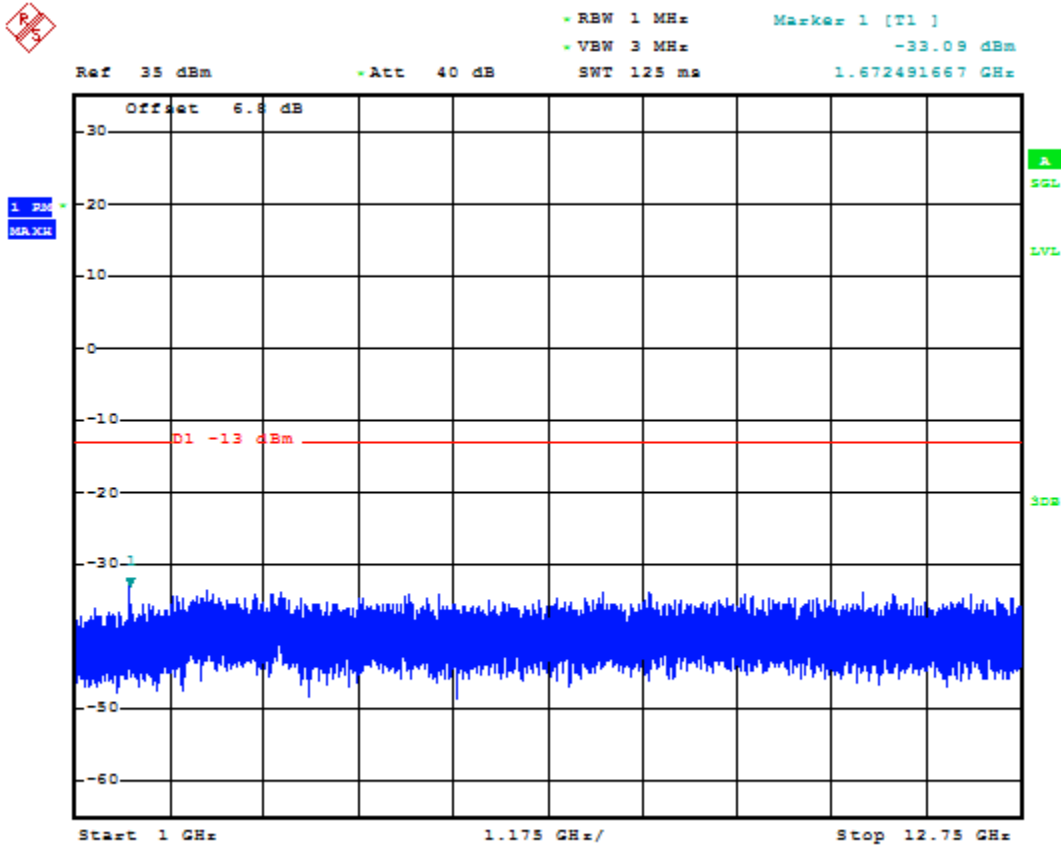


1.1.2.2 Test Channel=MCH



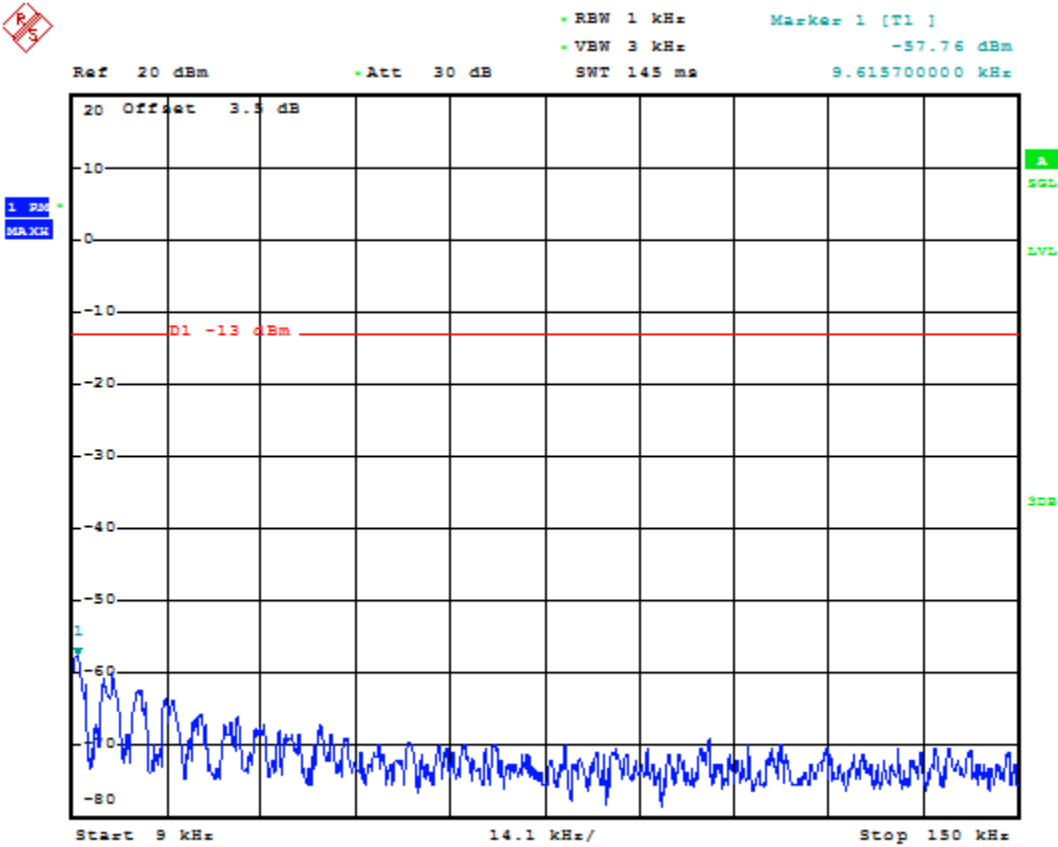


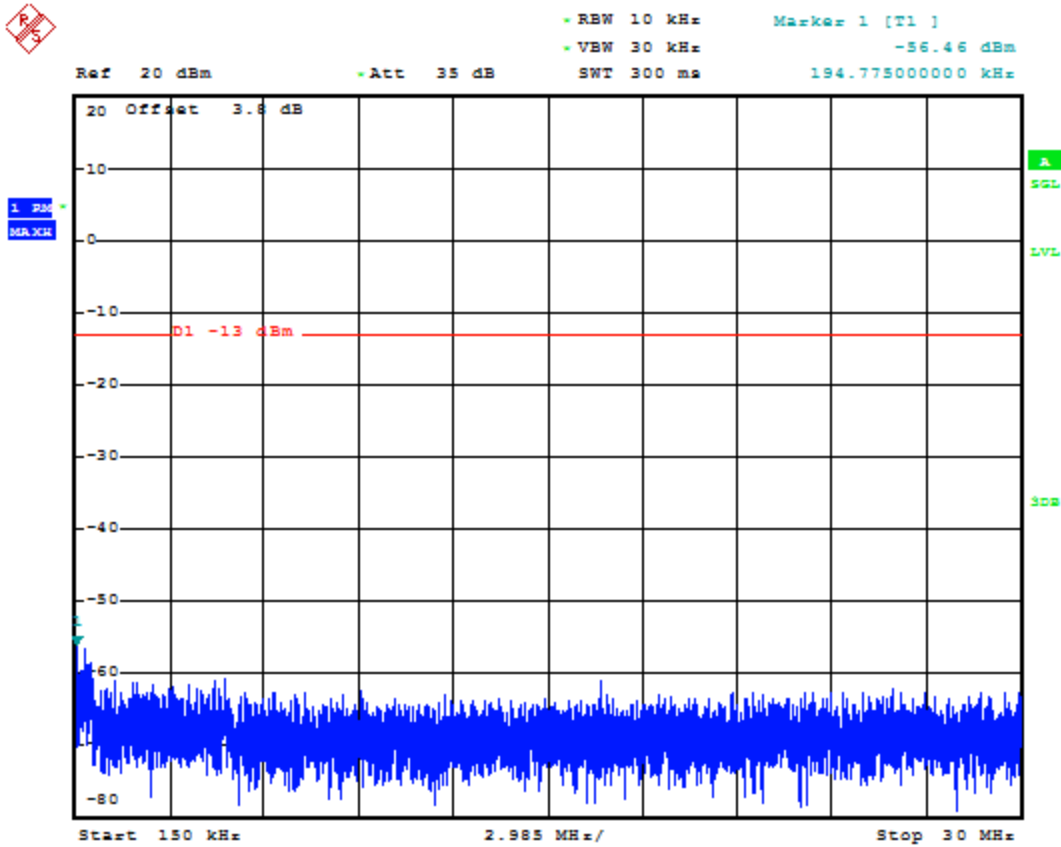


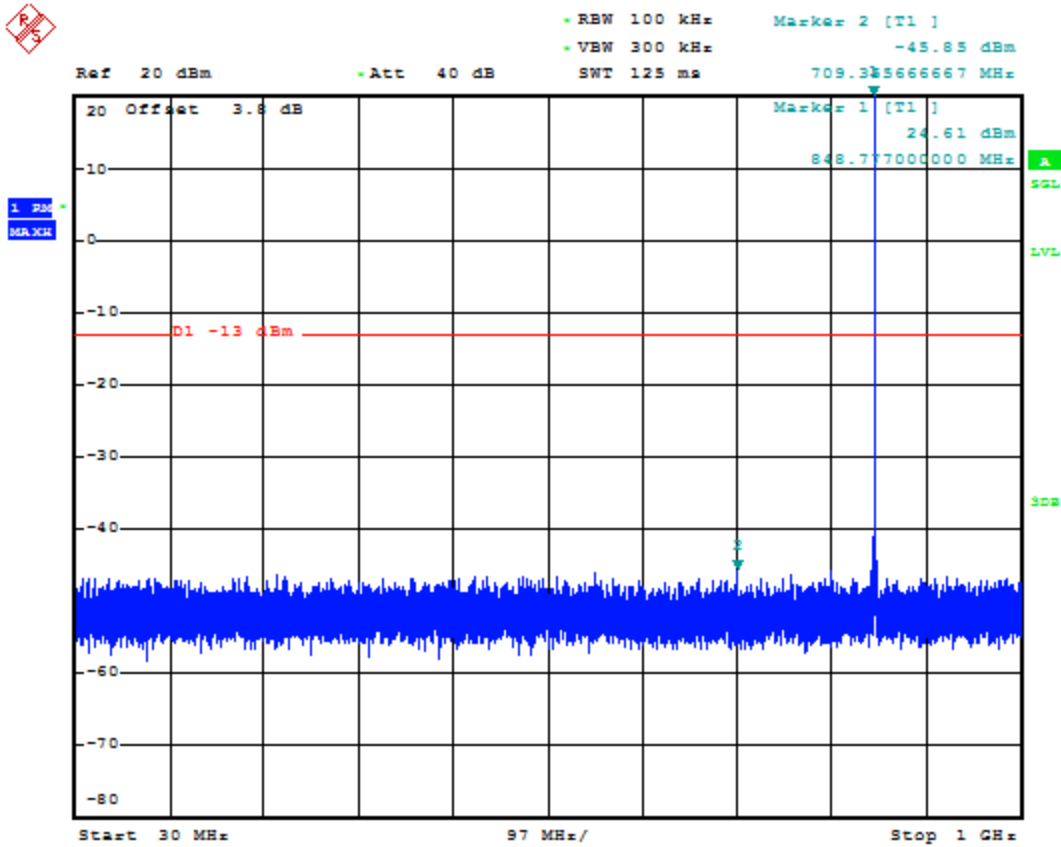


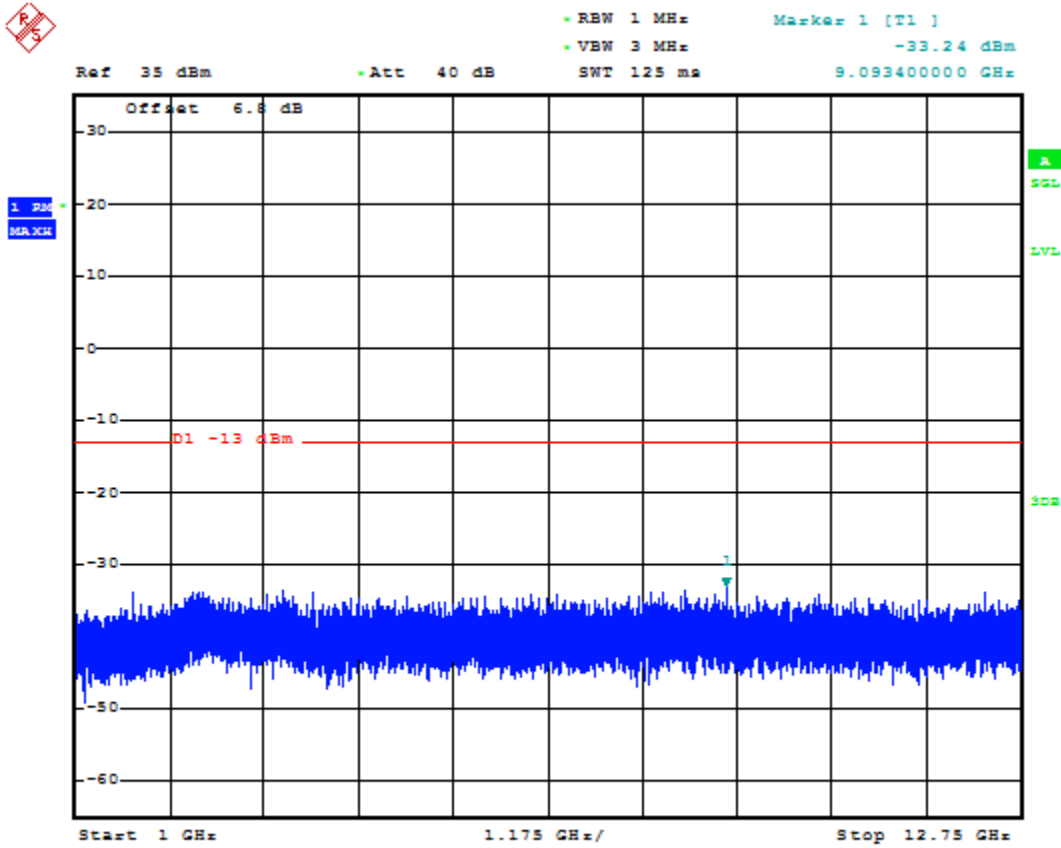


1.1.2.3 Test Channel=HCH



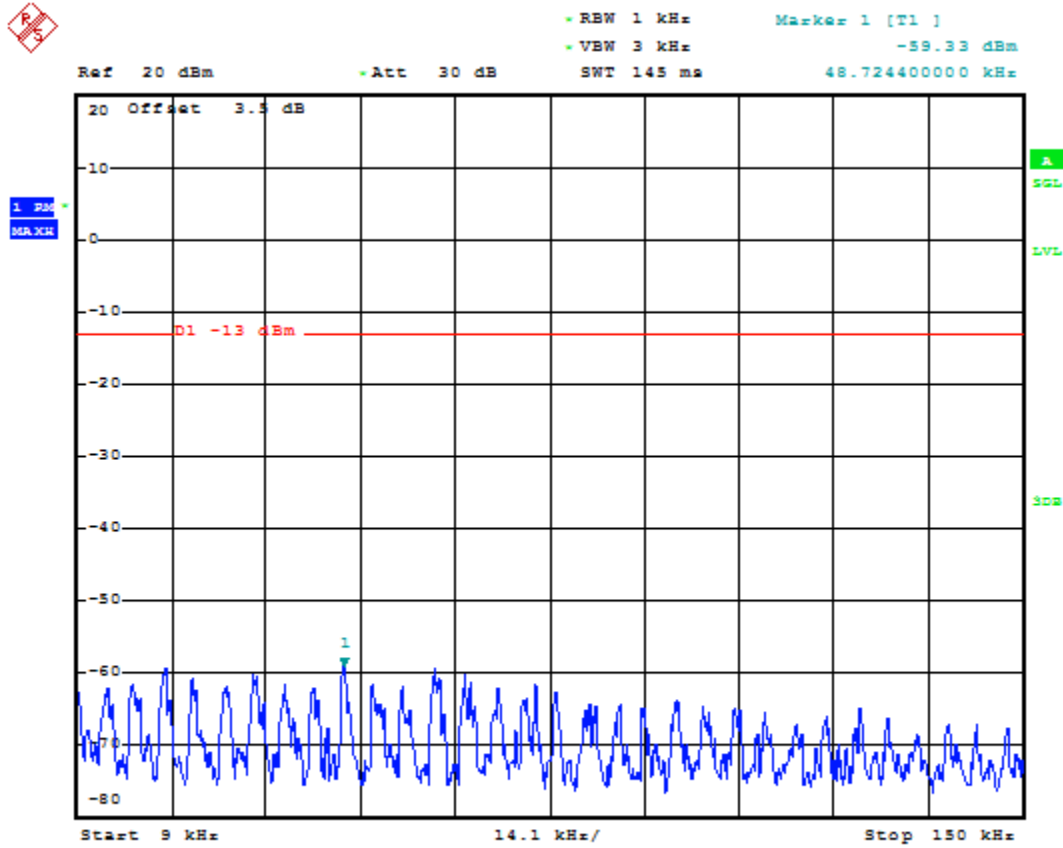


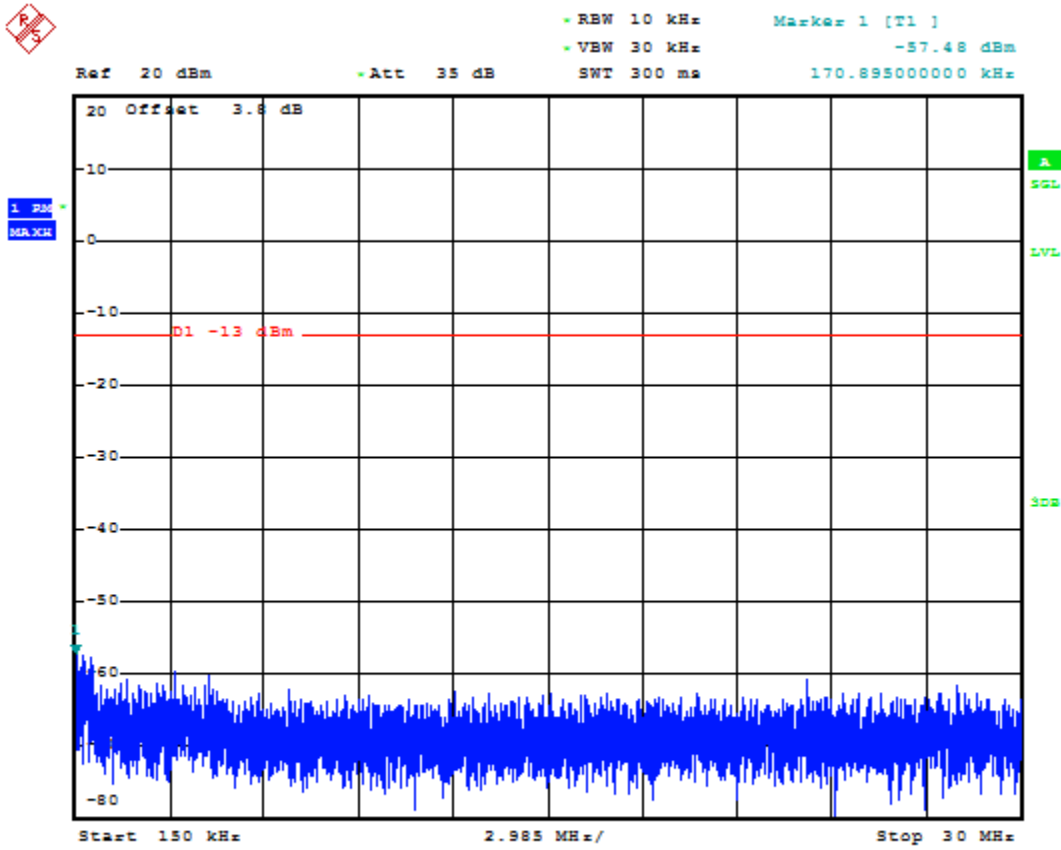


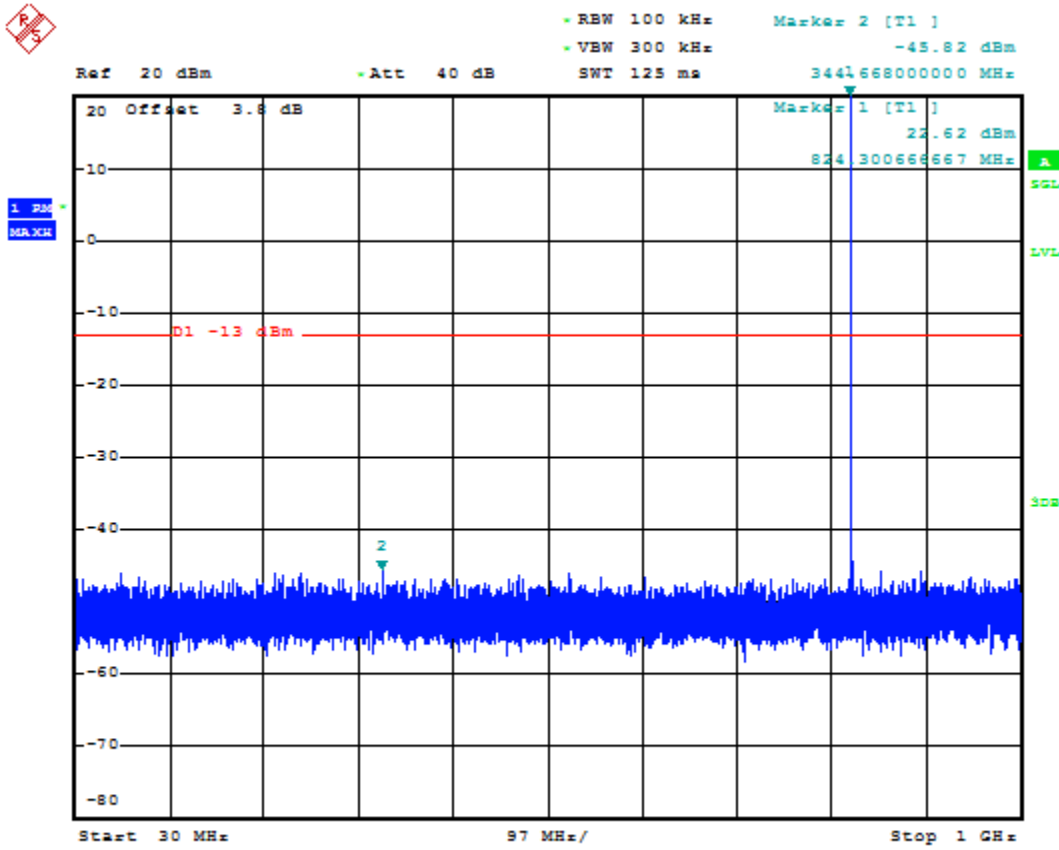


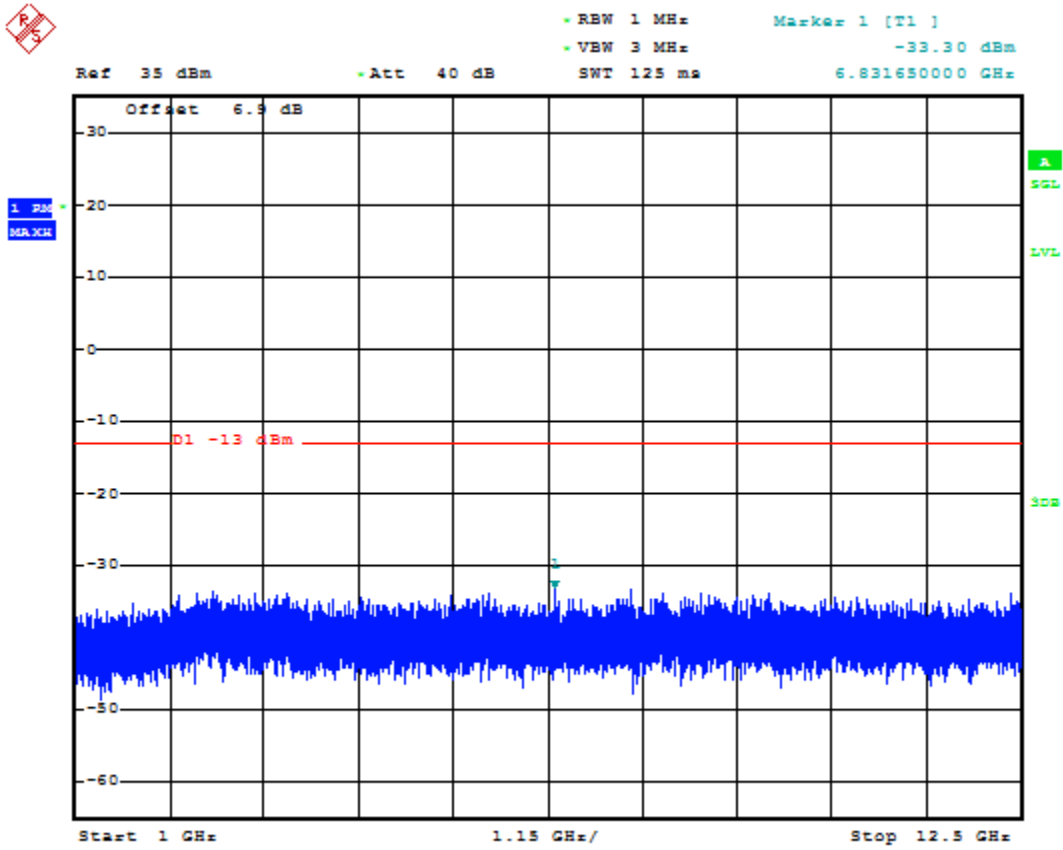
1.1.3 Test Mode=GSM/TM3

1.1.3.1 Test Channel=LCH



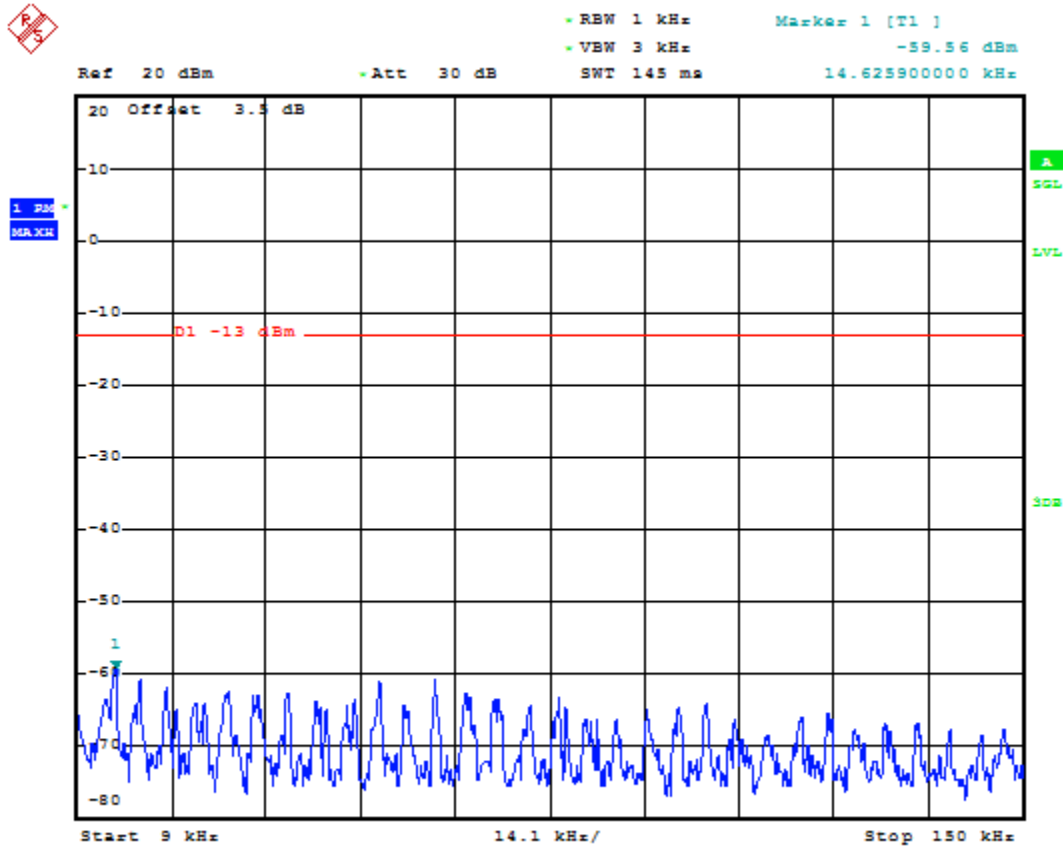


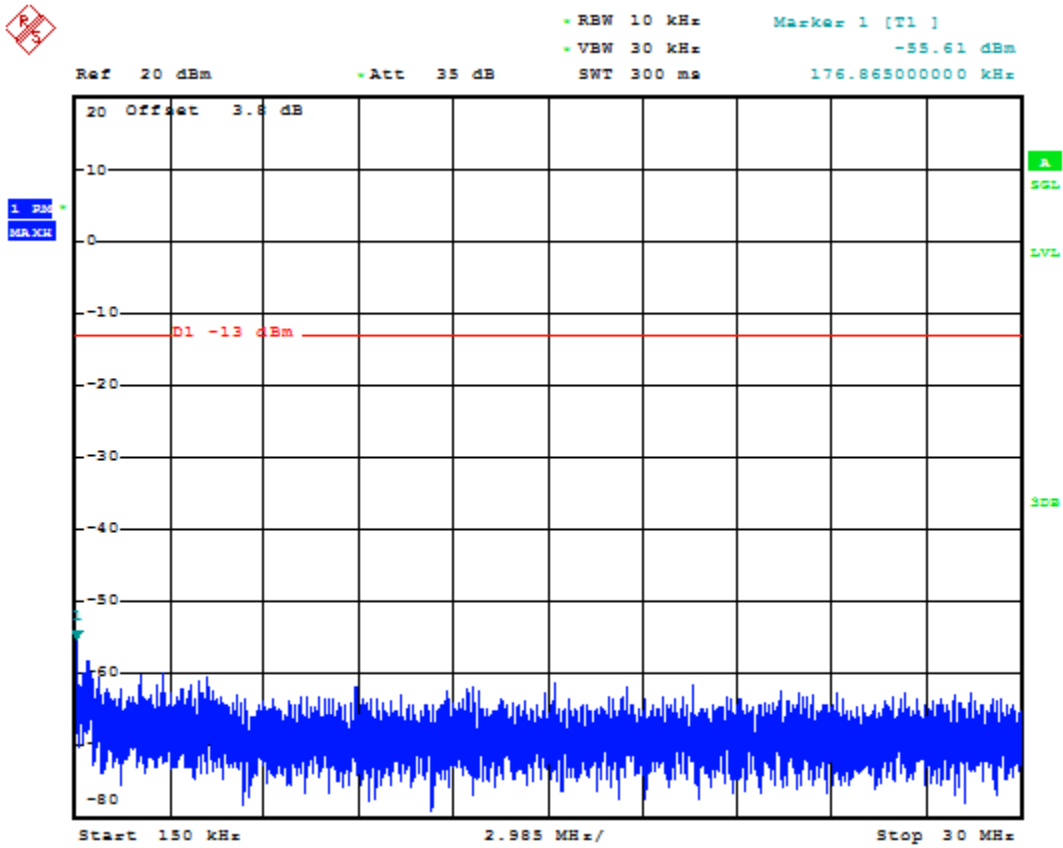


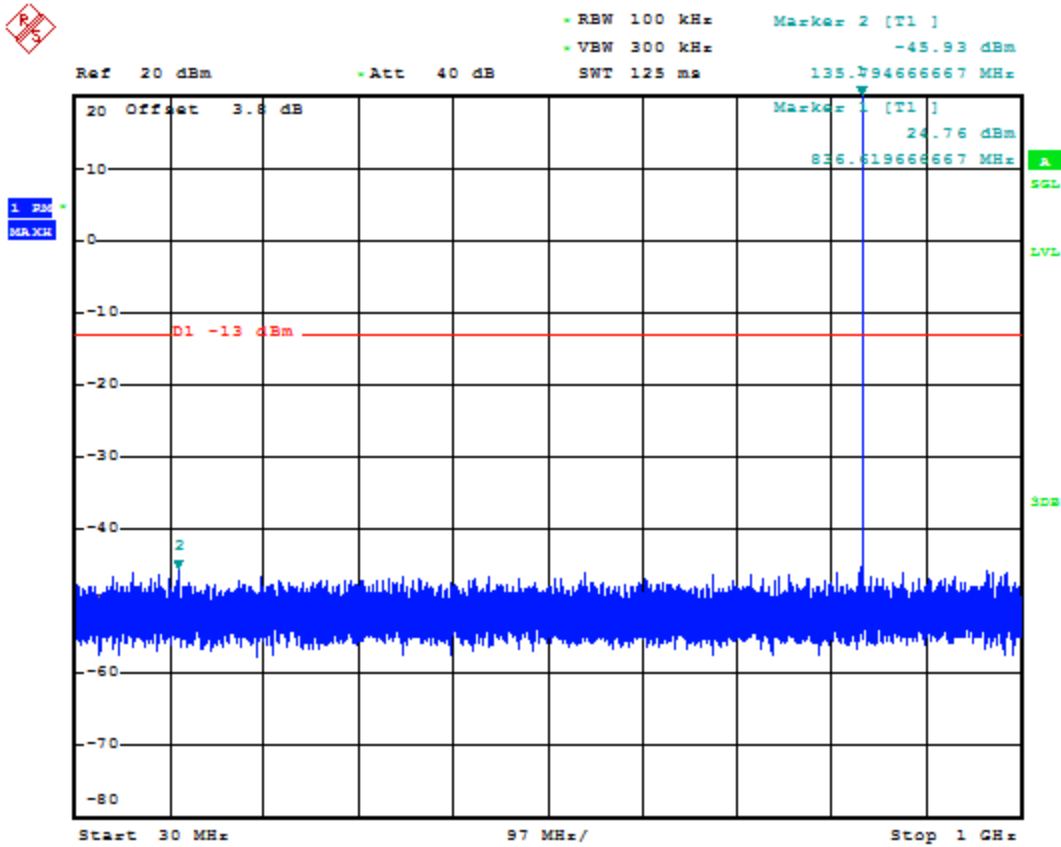


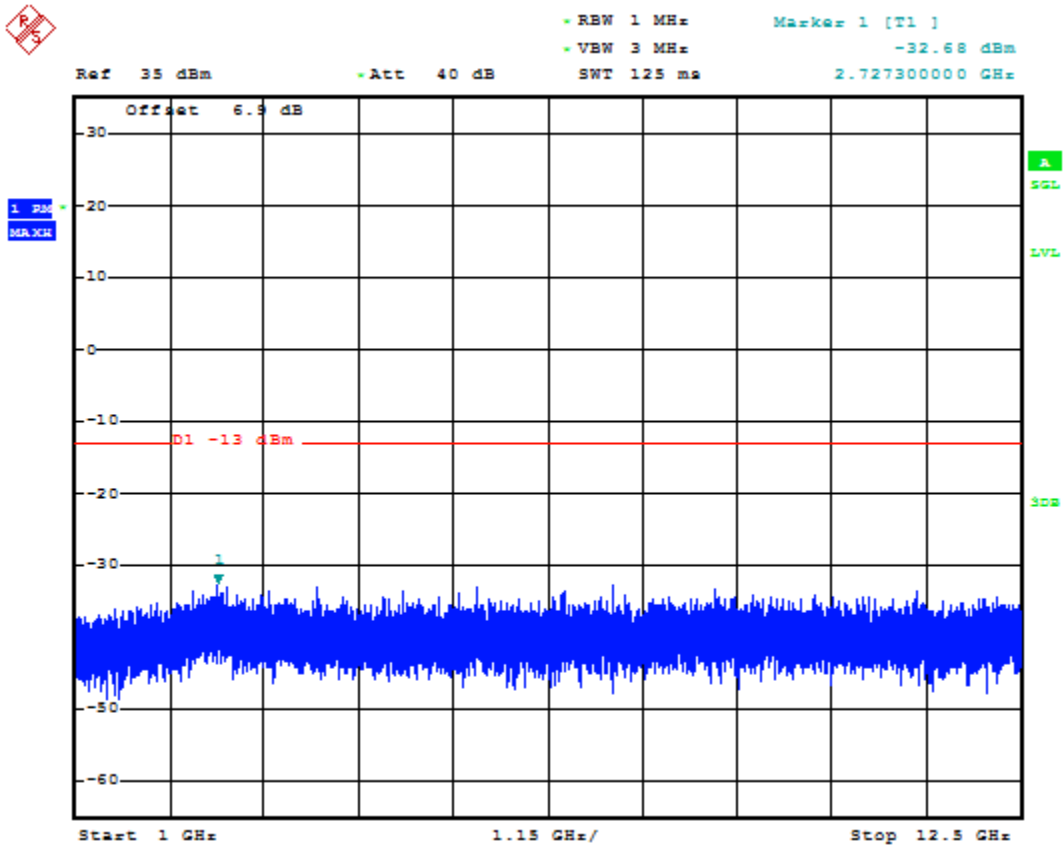


1.1.3.2 Test Channel=MCH



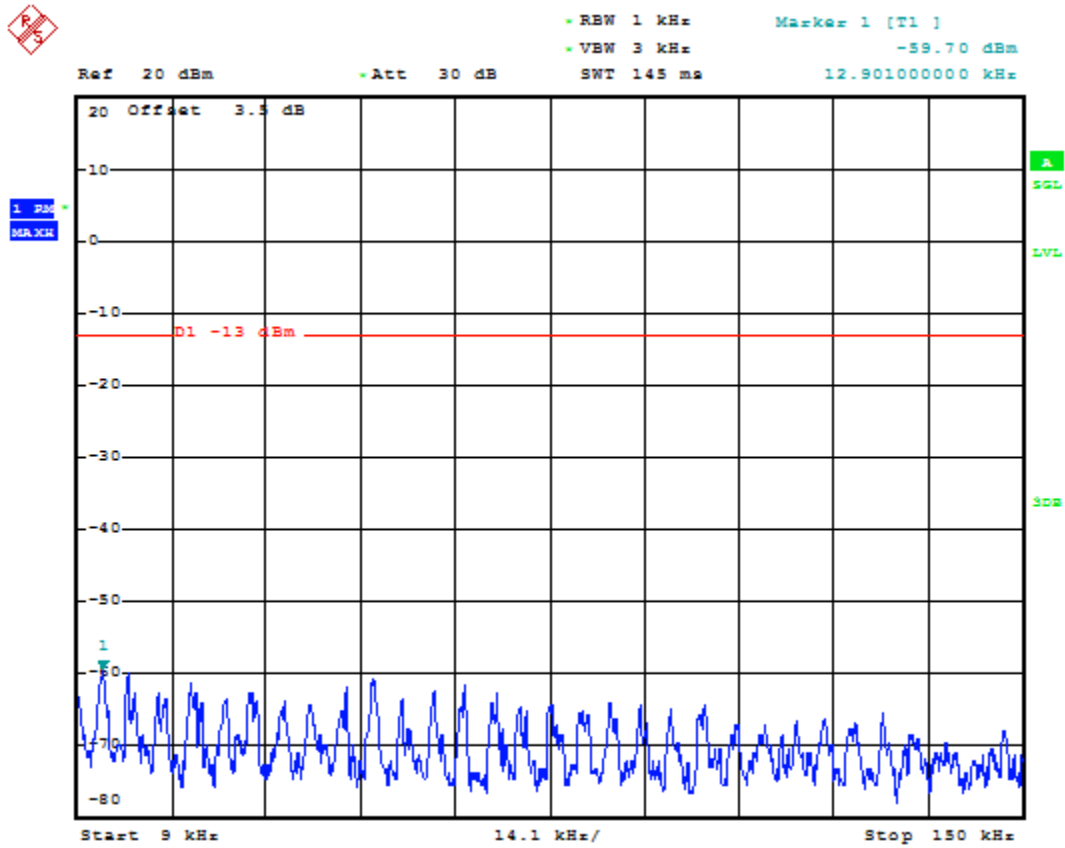


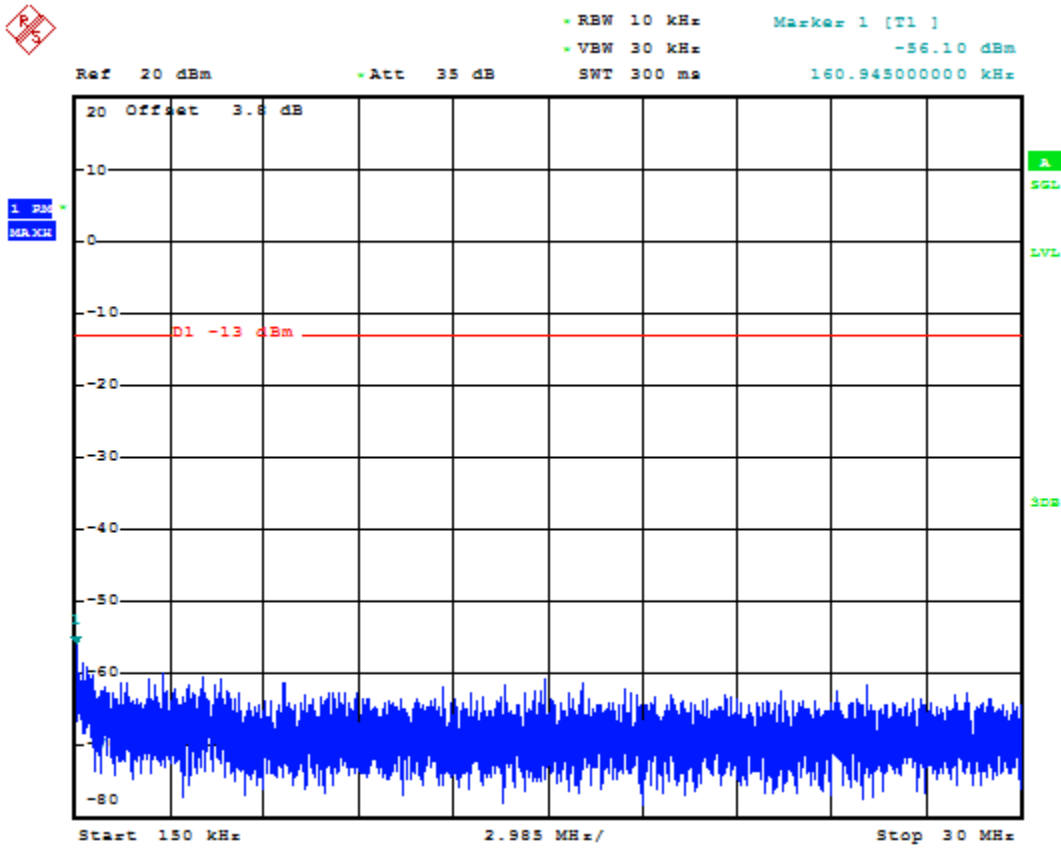


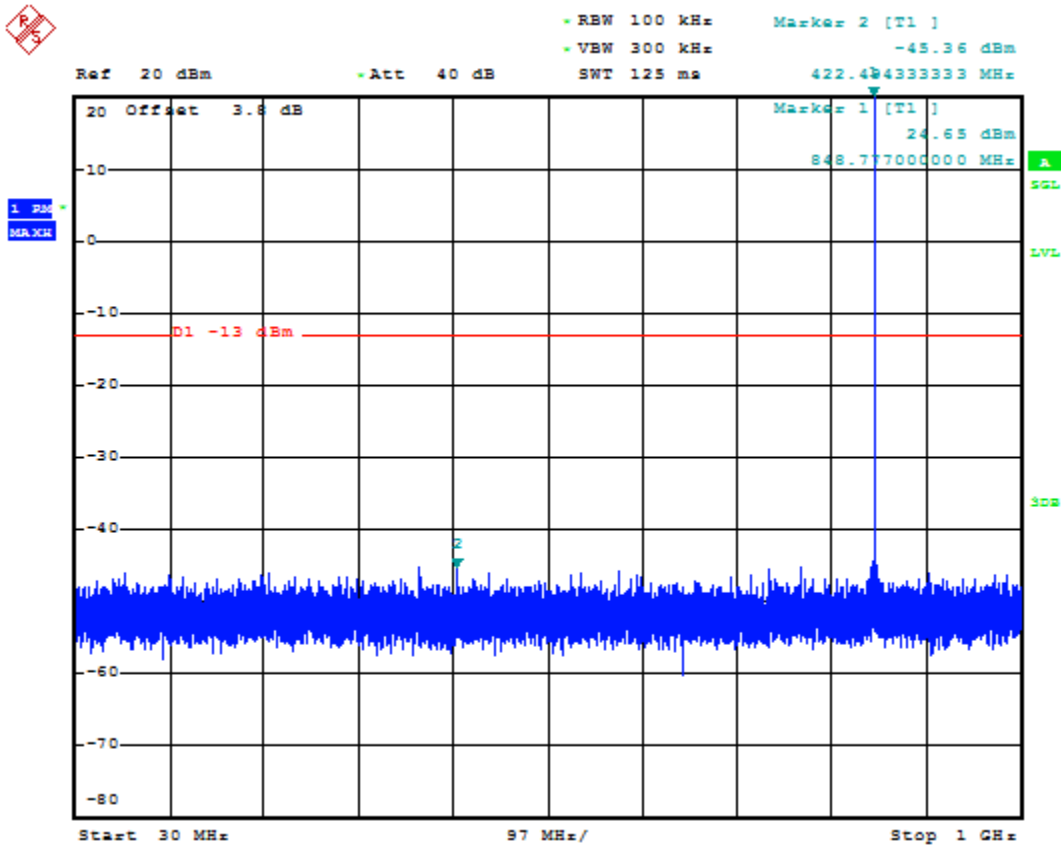


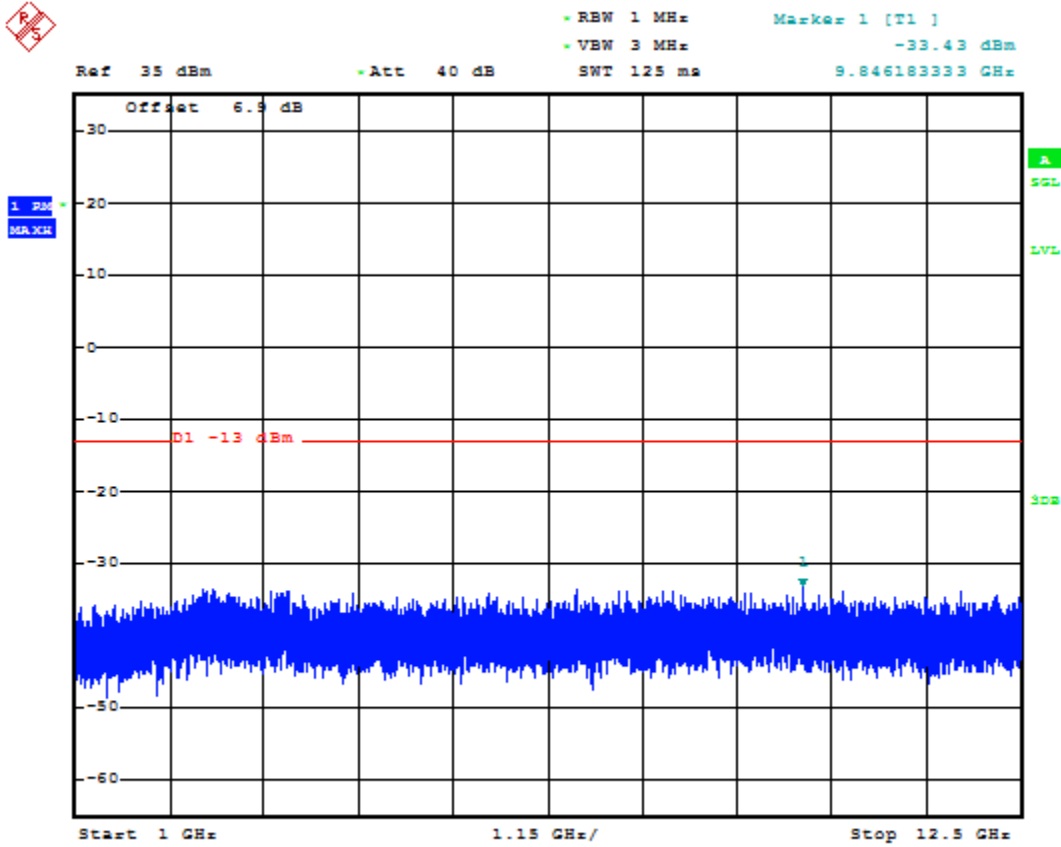


1.1.3.3 Test Channel=HCH



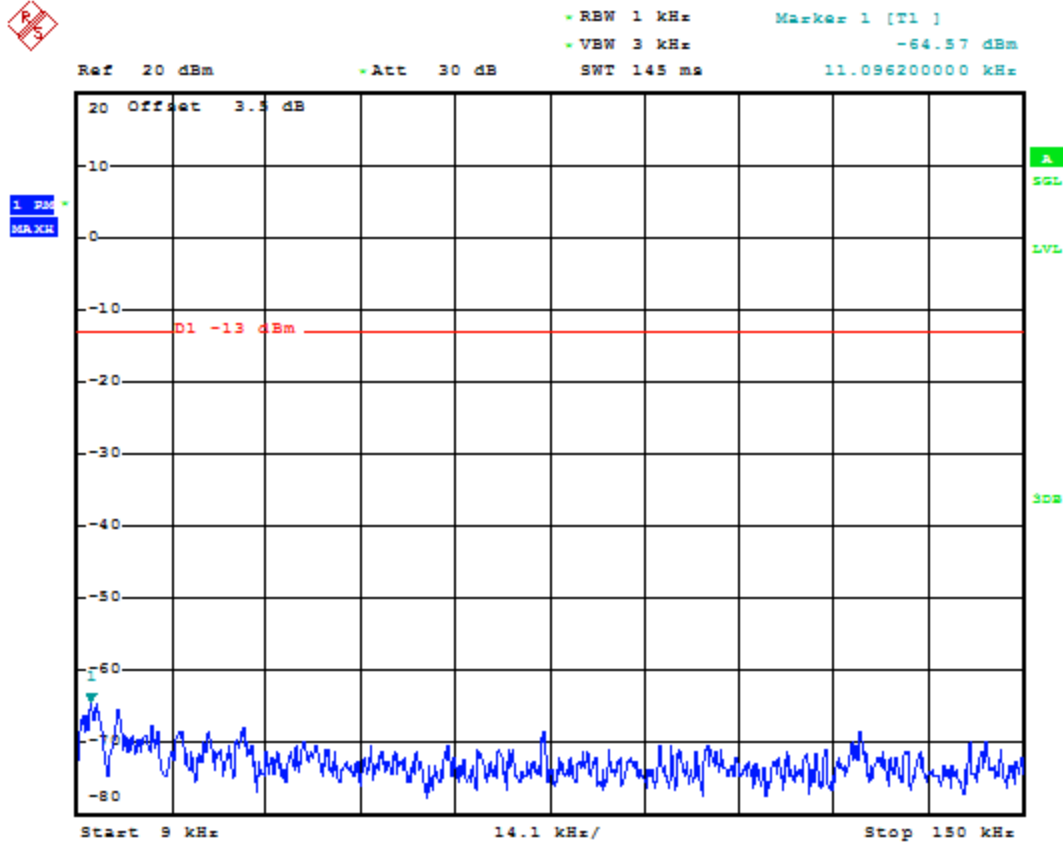


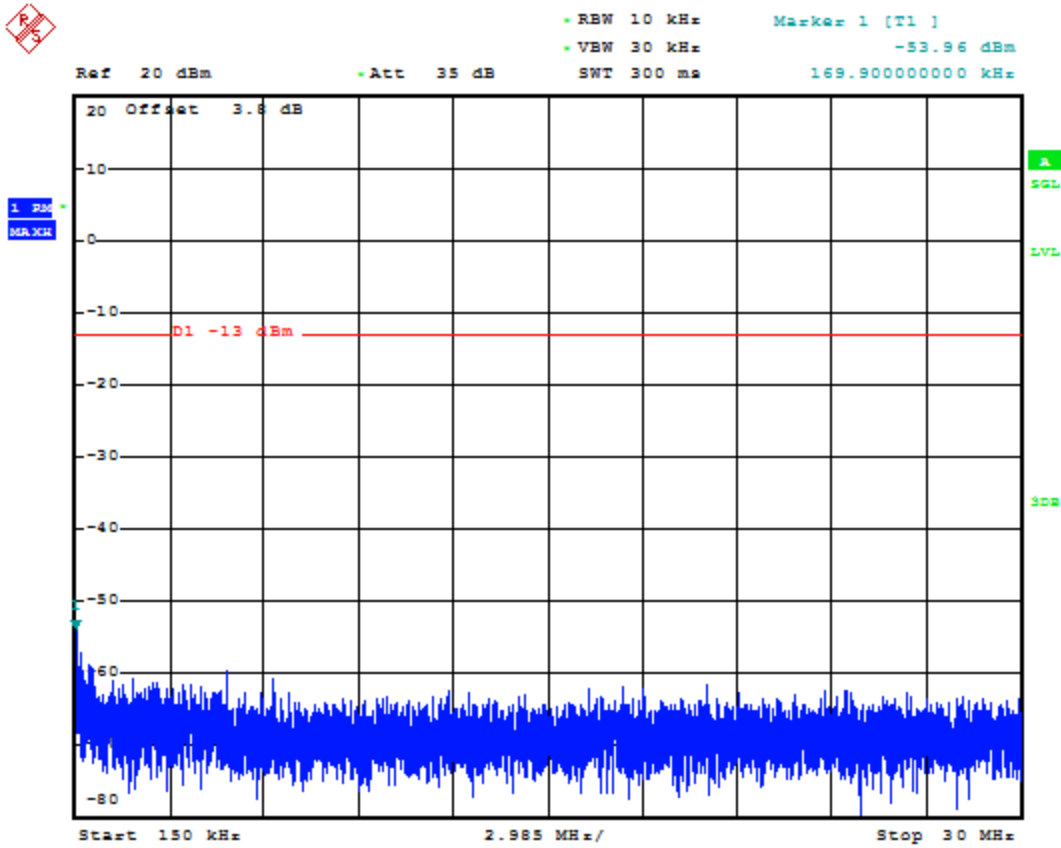


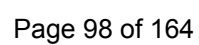
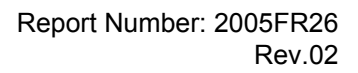


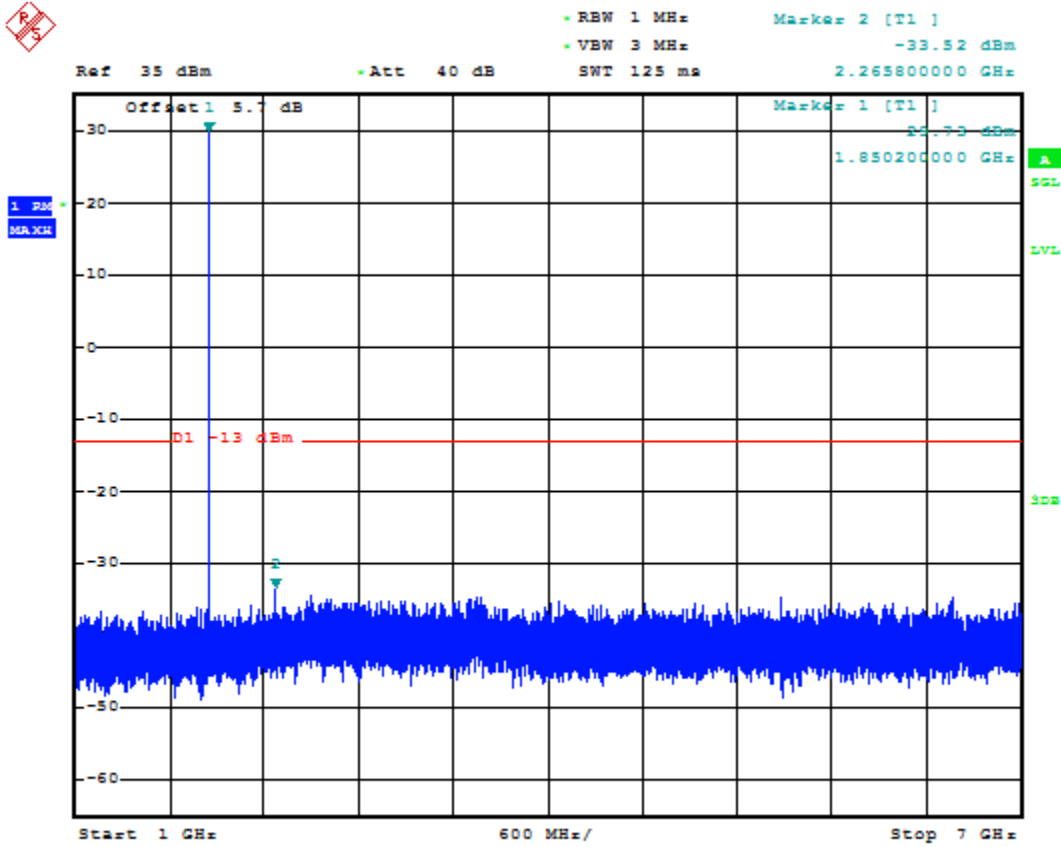


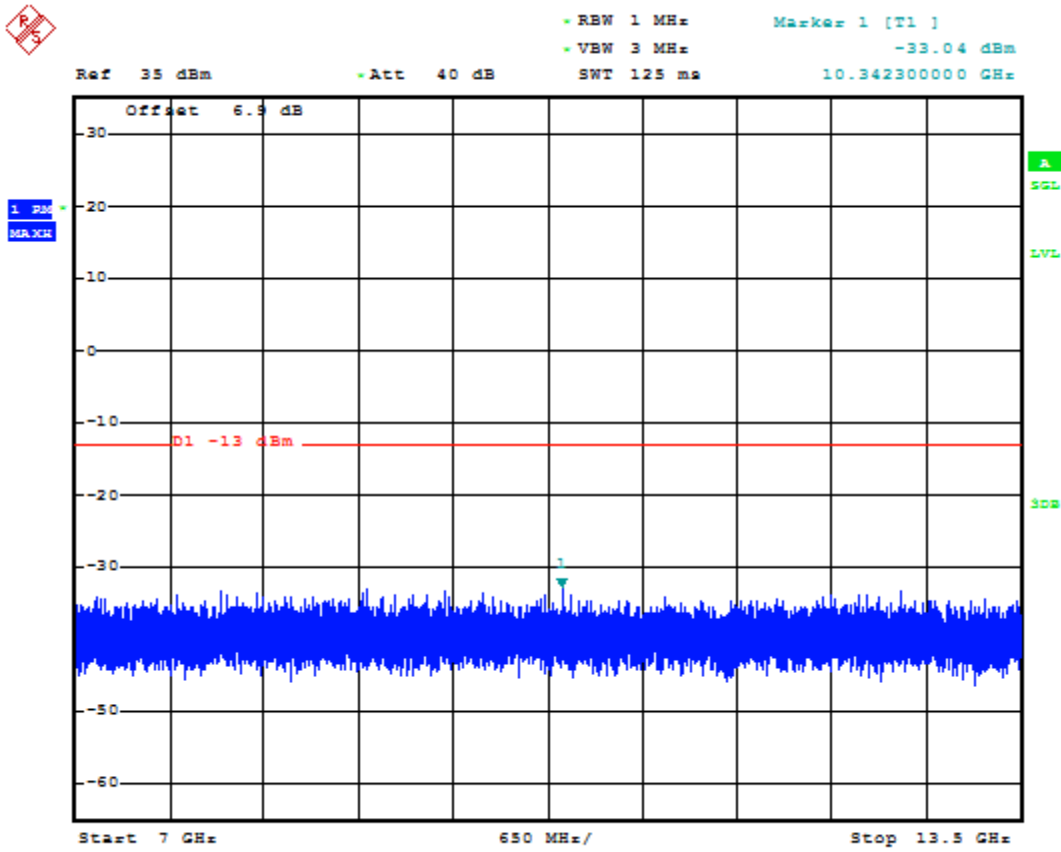
1.2 Test Band=GSM1900
1.2.1 Test Mode=GSM/TM1
1.2.1.1 Test Channel=LCH

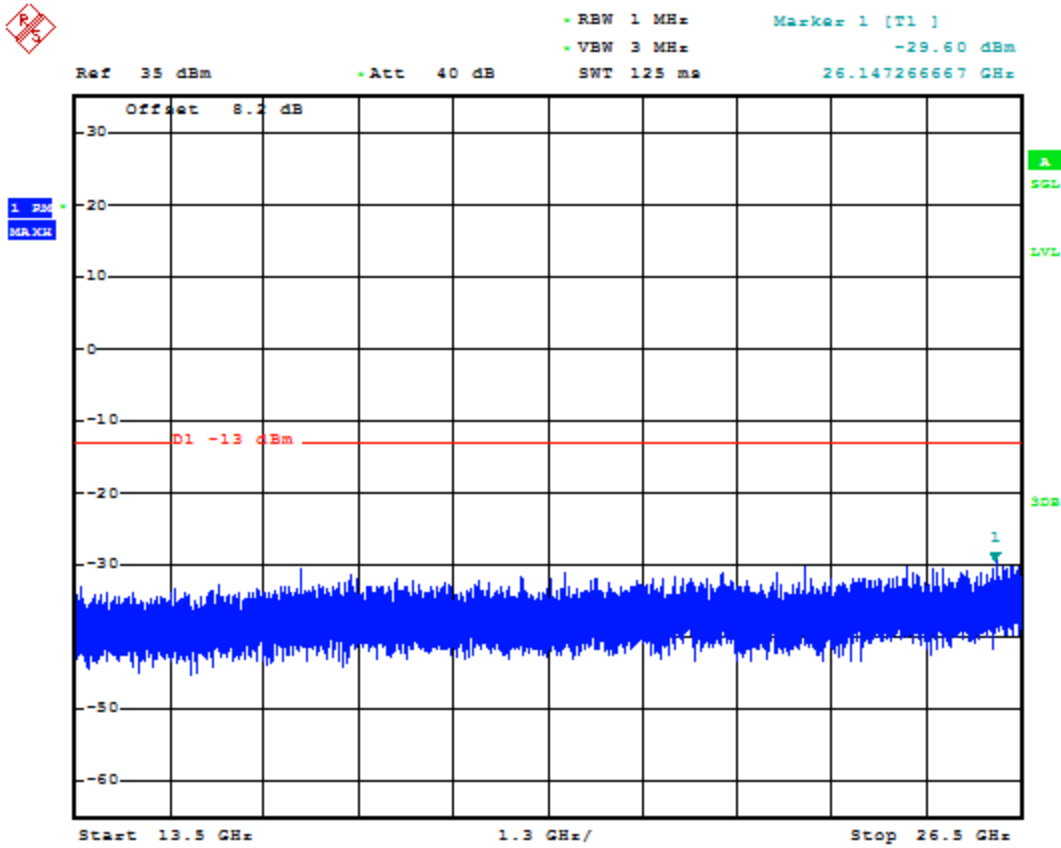






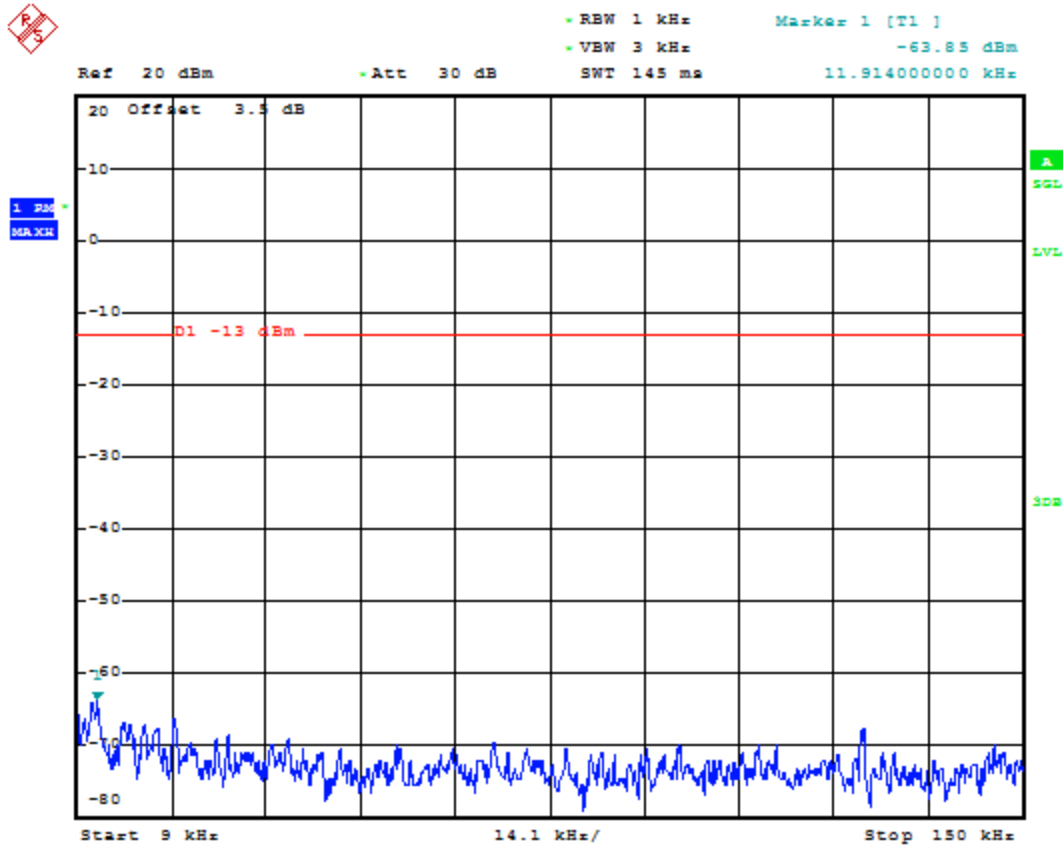


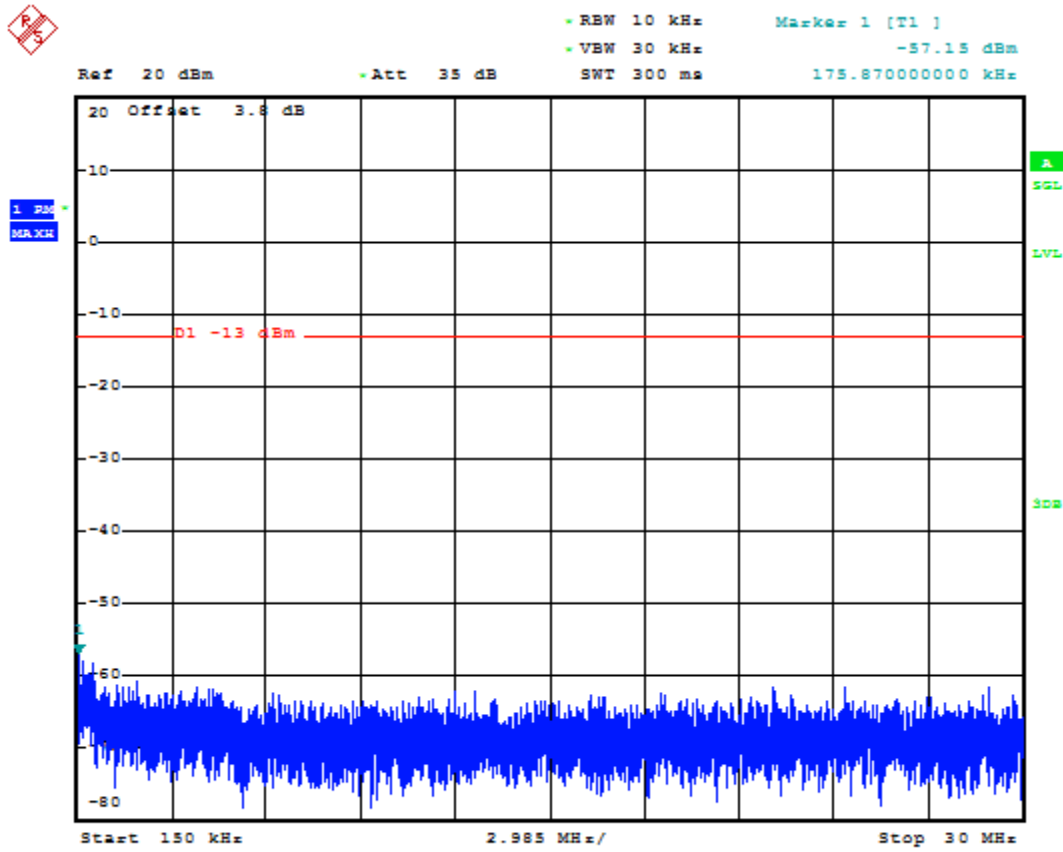


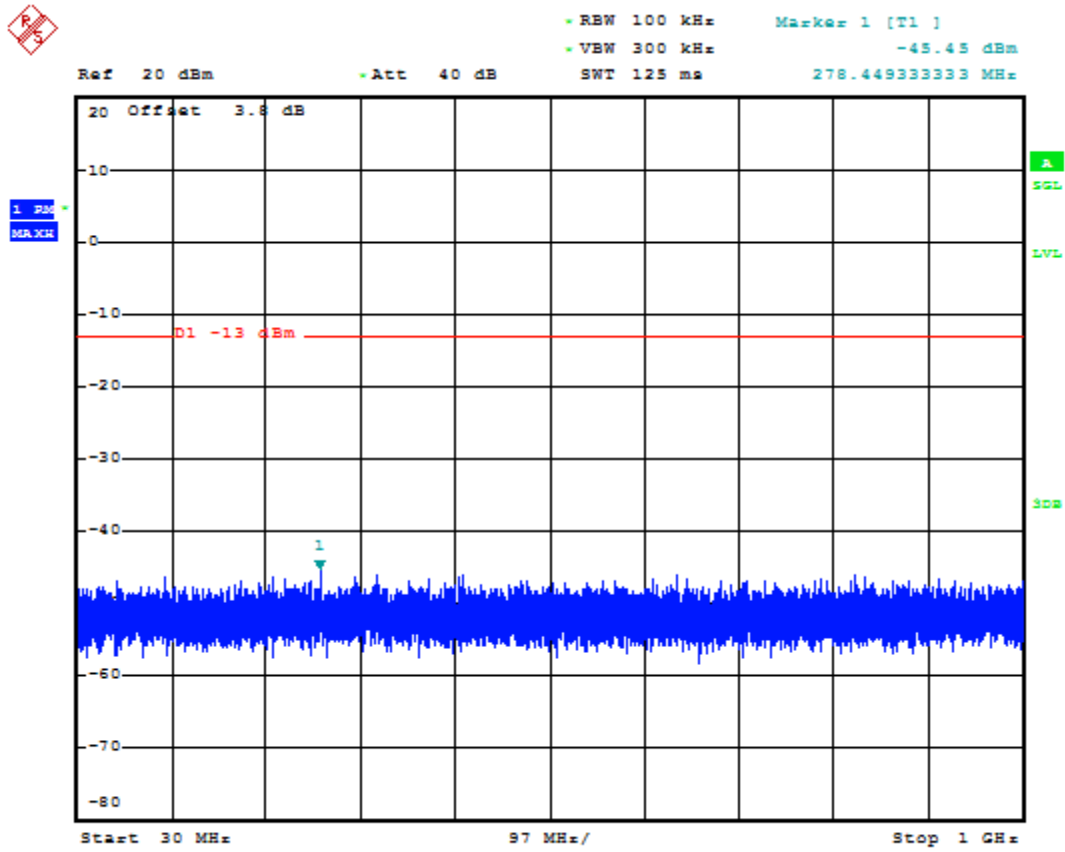


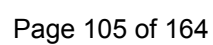
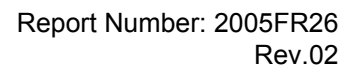


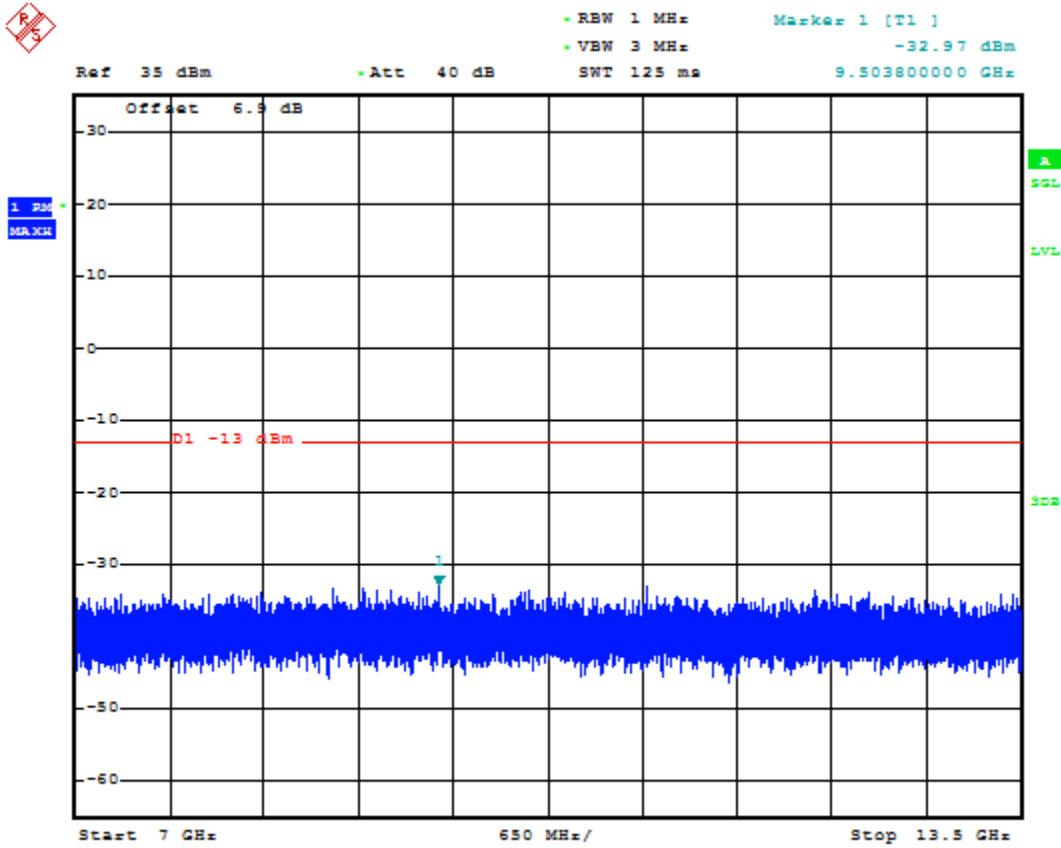
1.2.1.2 Test Channel=MCH

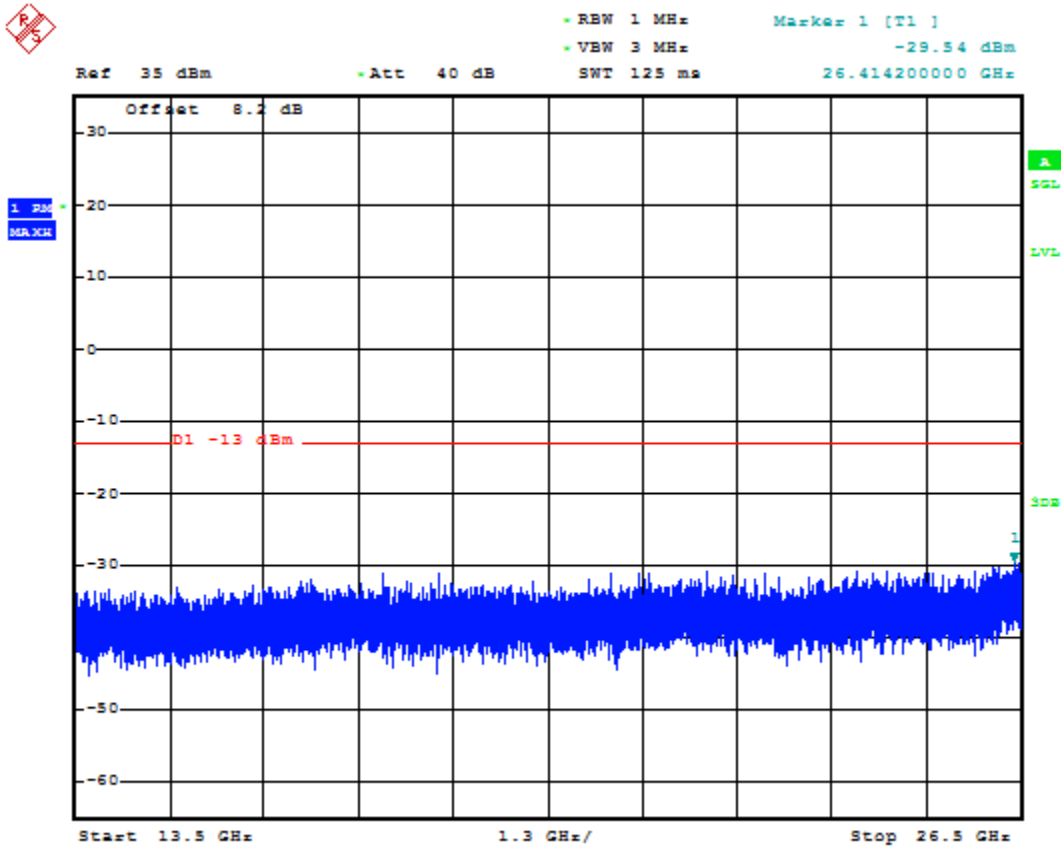






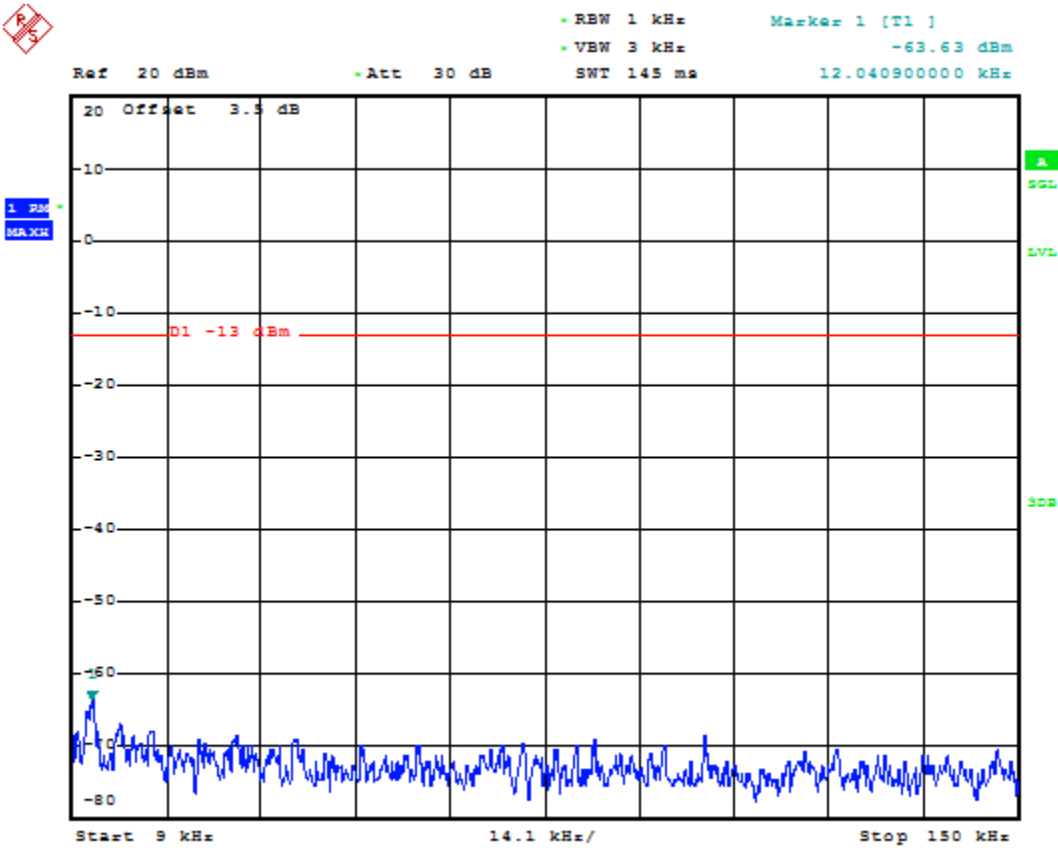


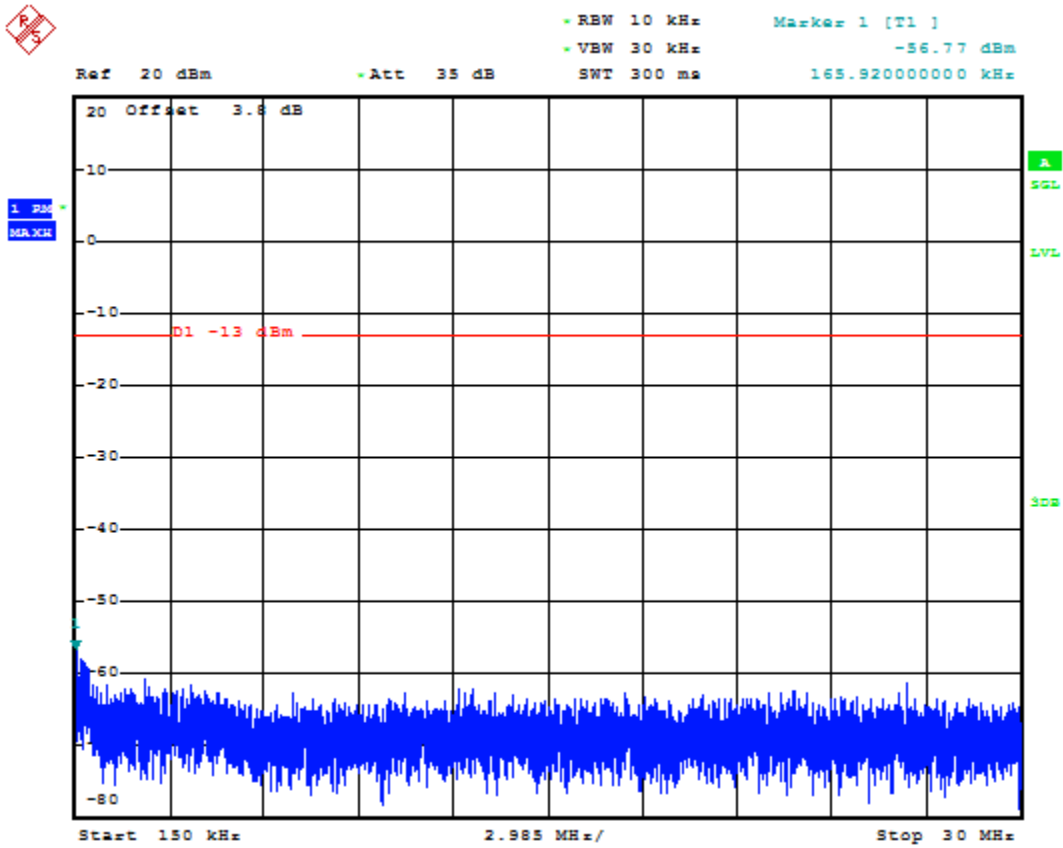


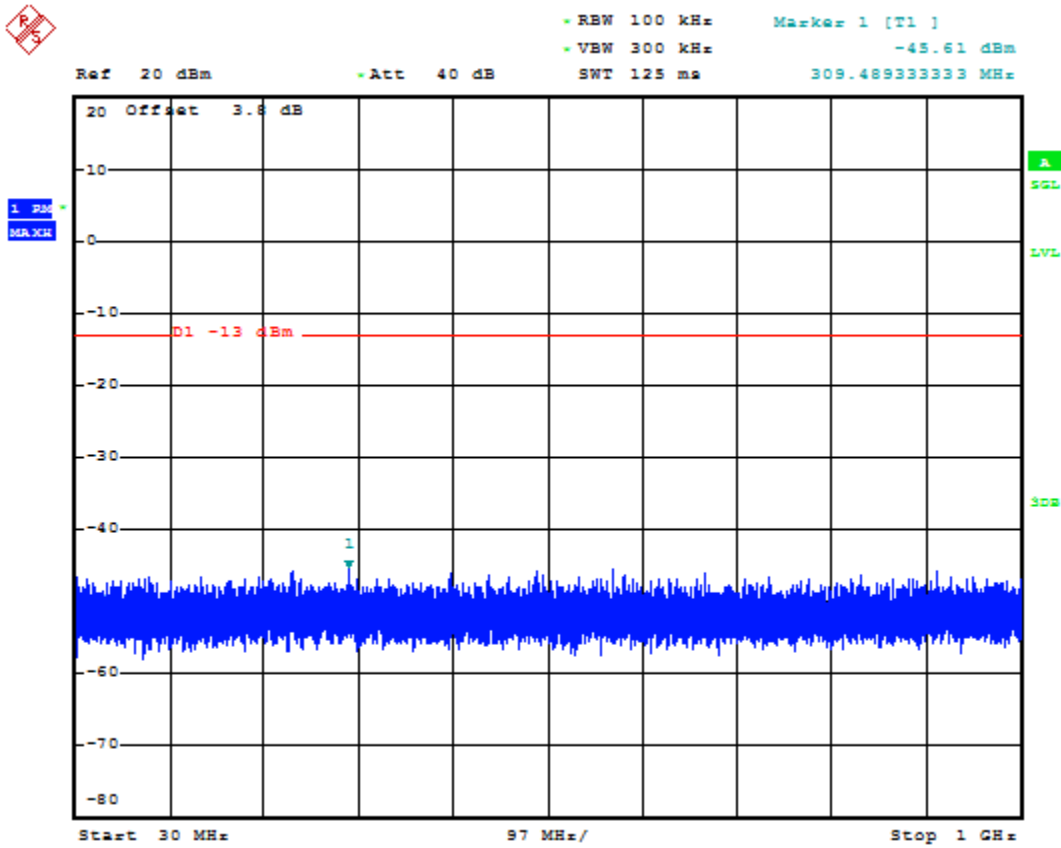


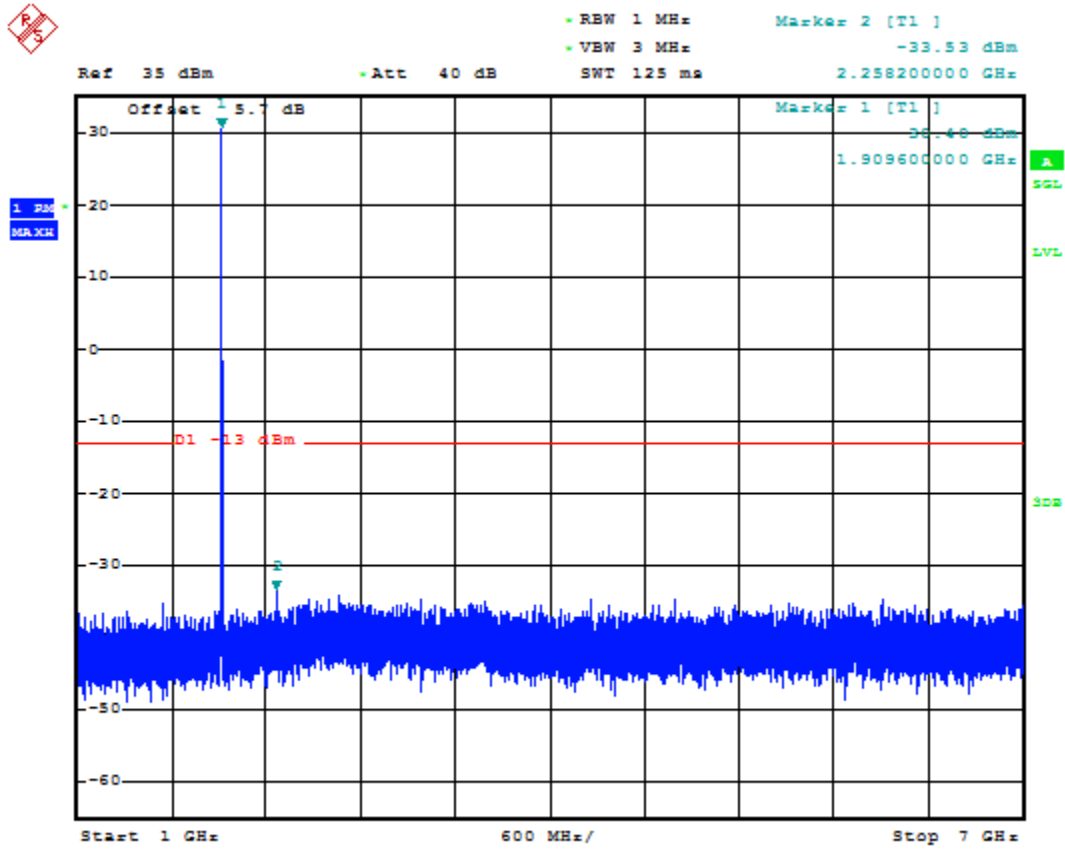


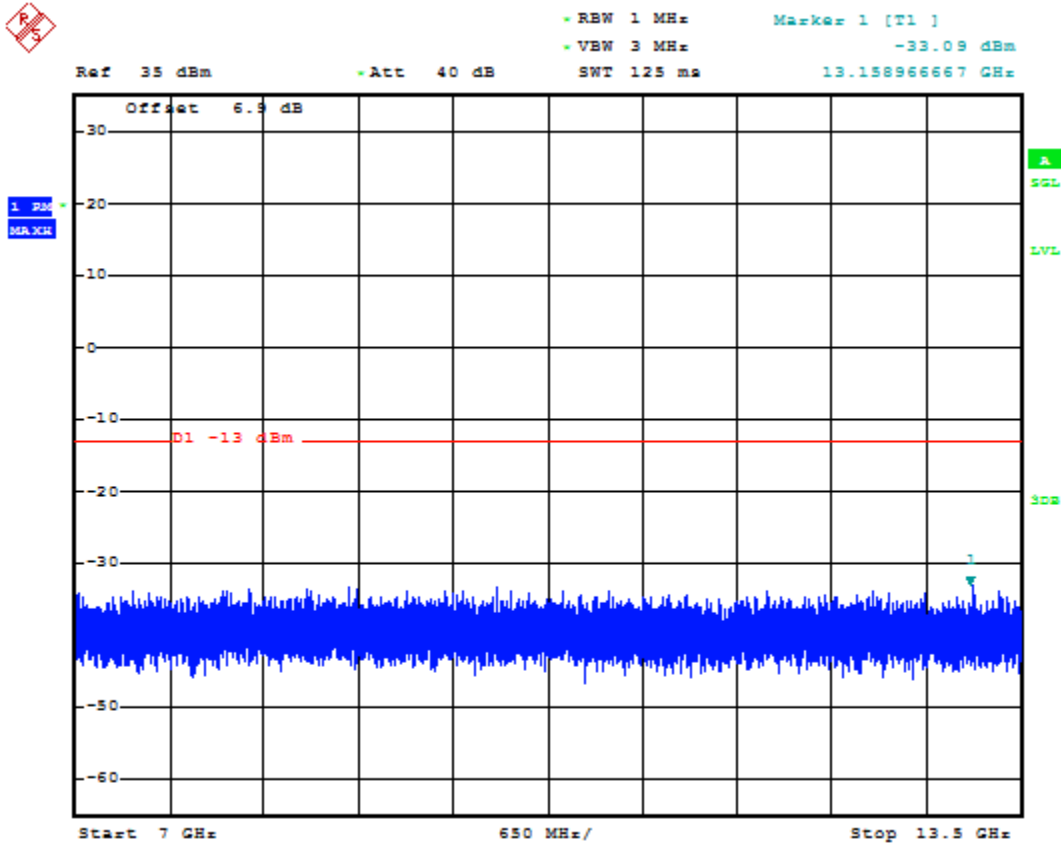
1.2.1.3 Test Channel=HCH

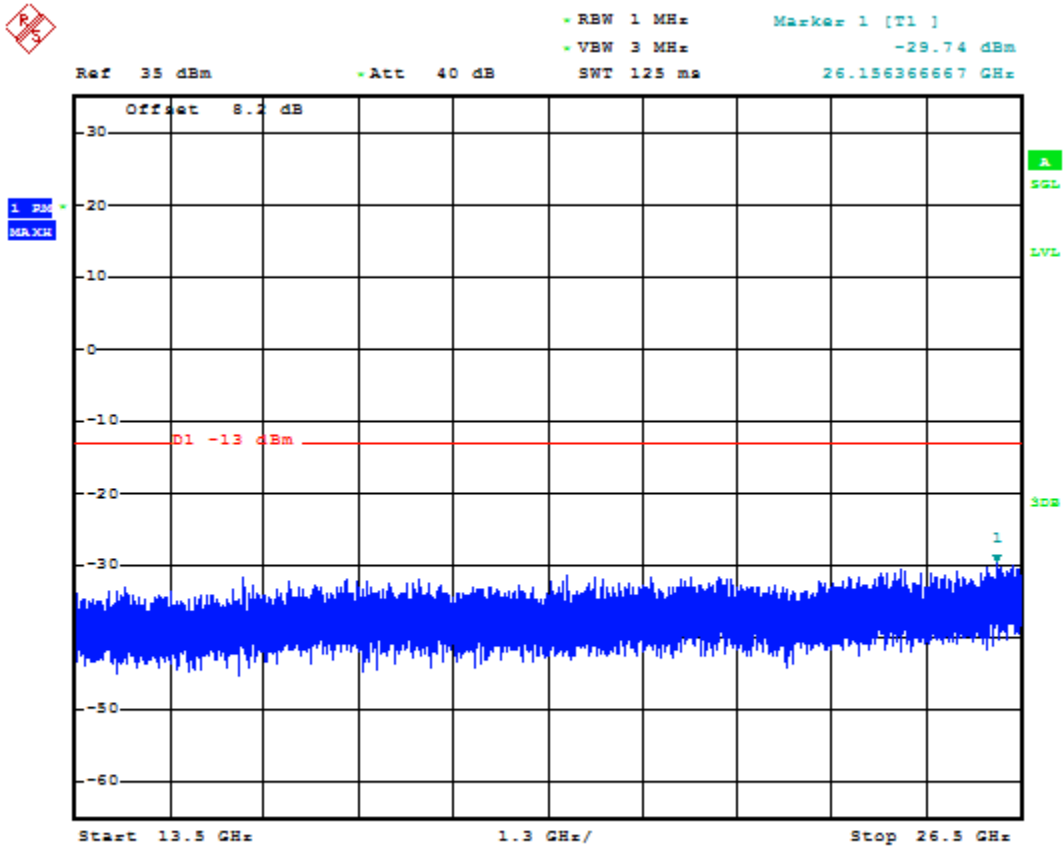








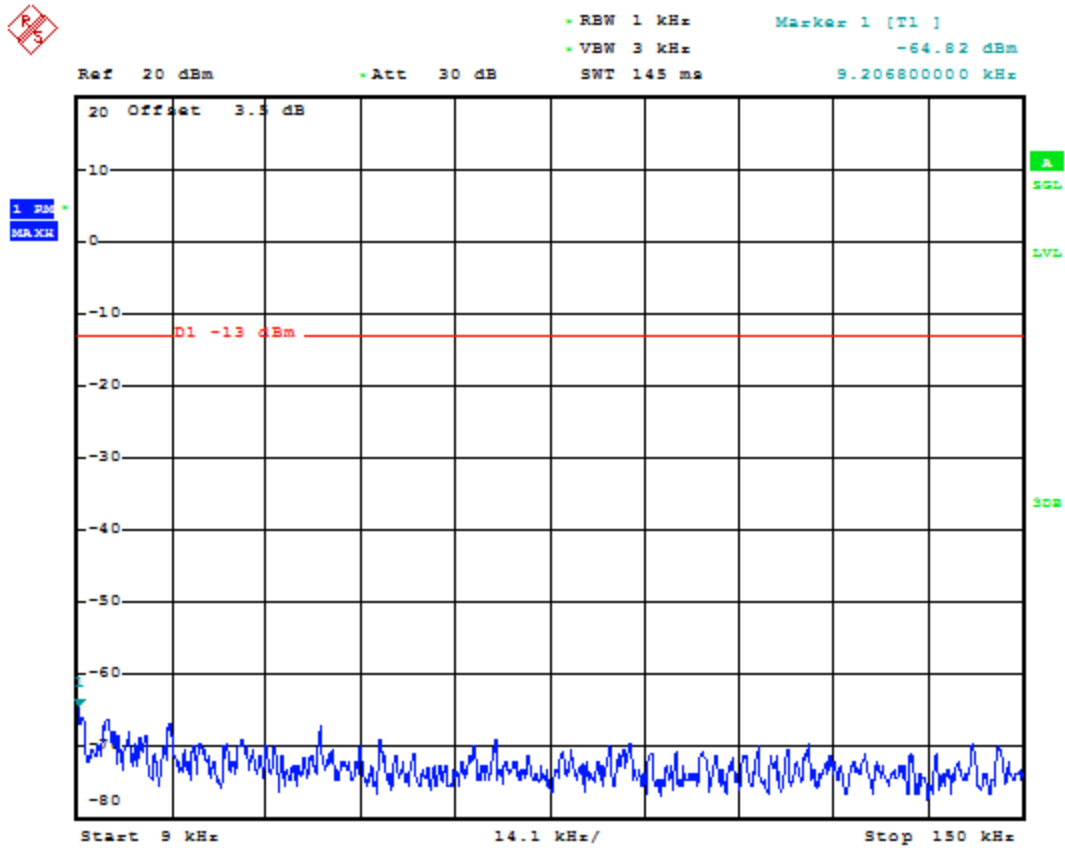


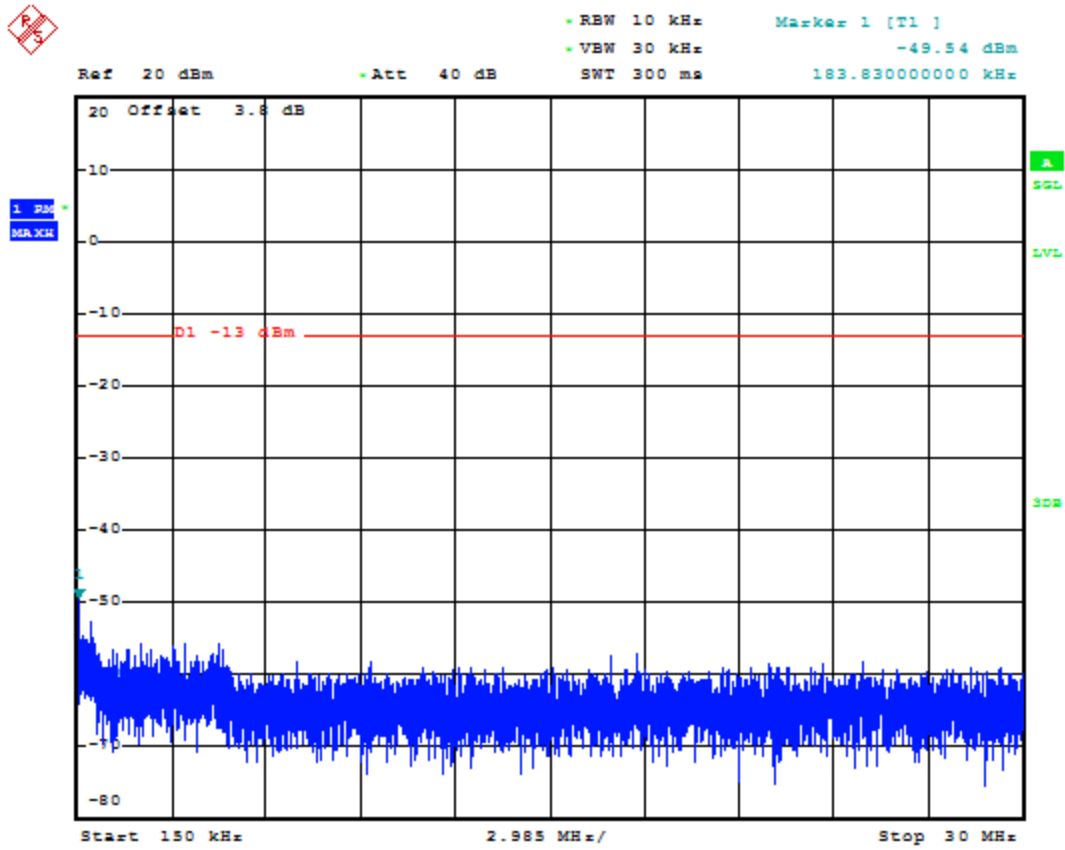


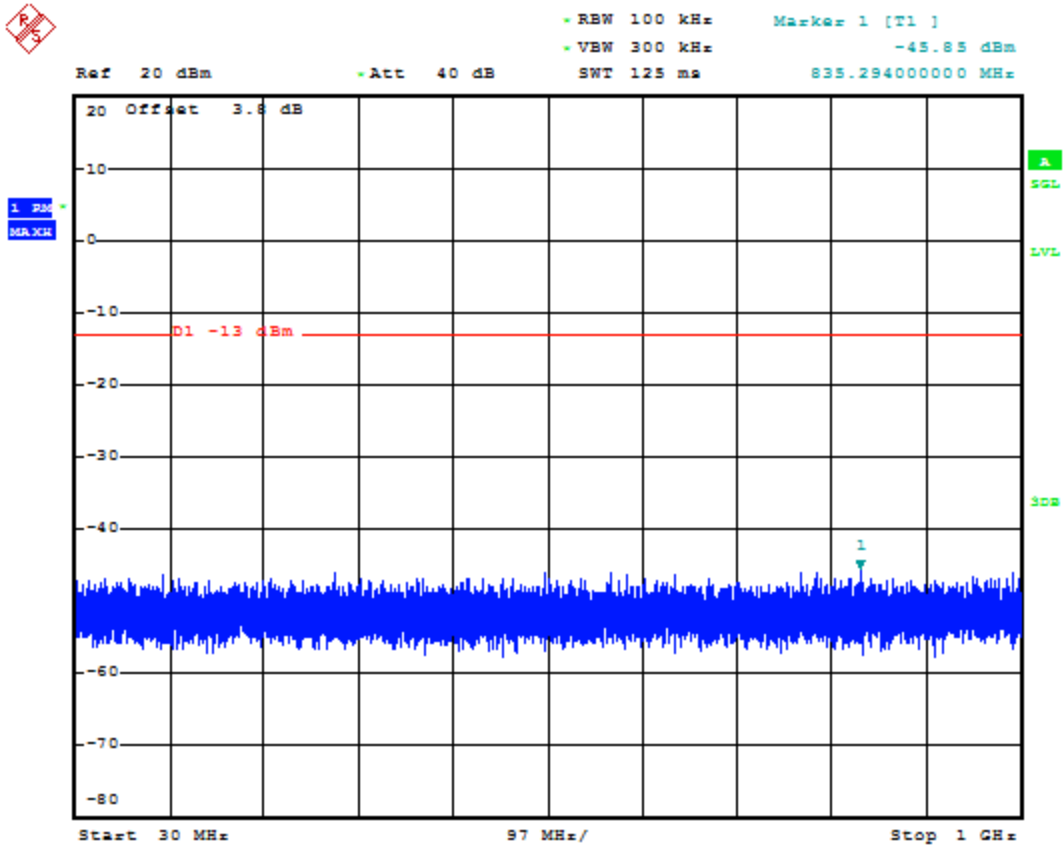


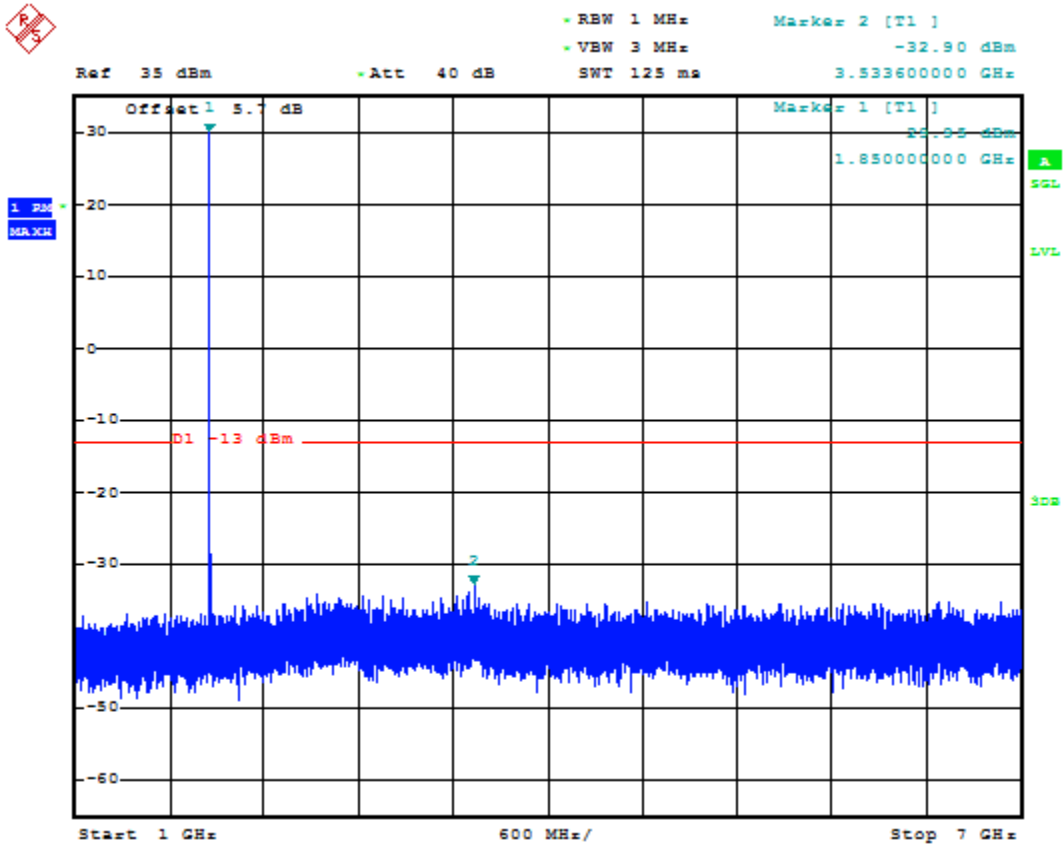
1.2.2 Test Mode=GSM/TM2

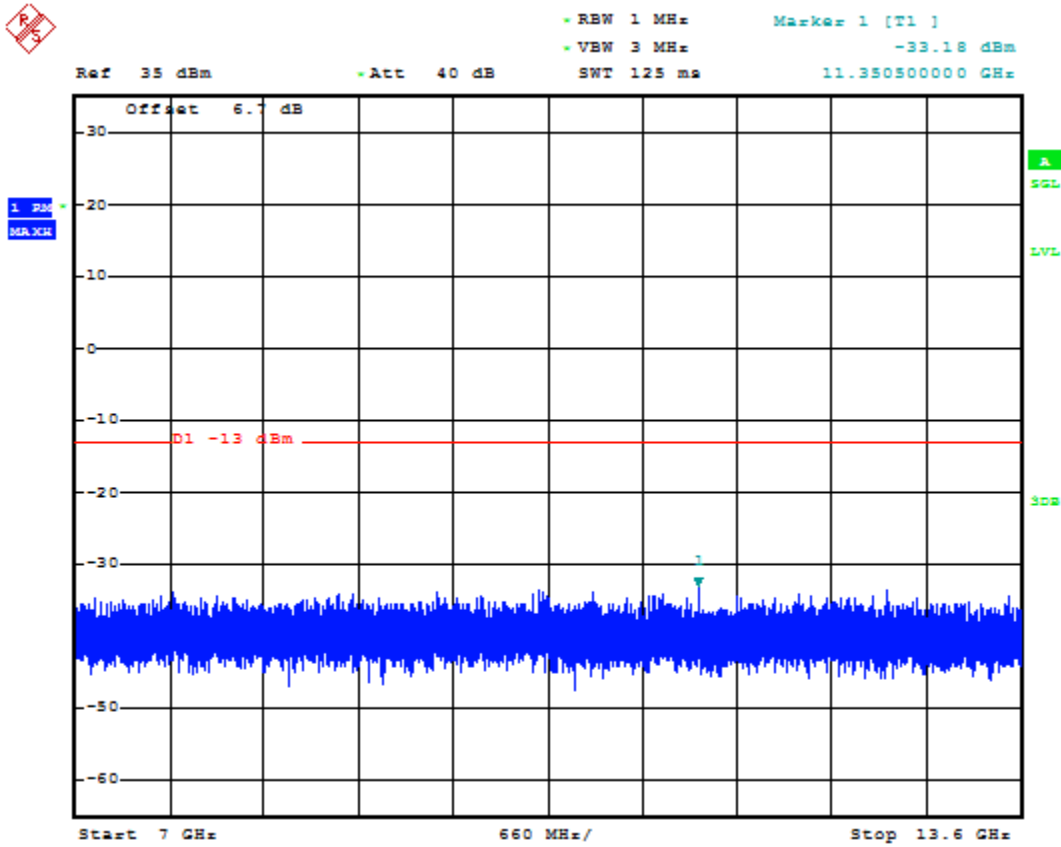
1.2.2.1 Test Channel=LCH

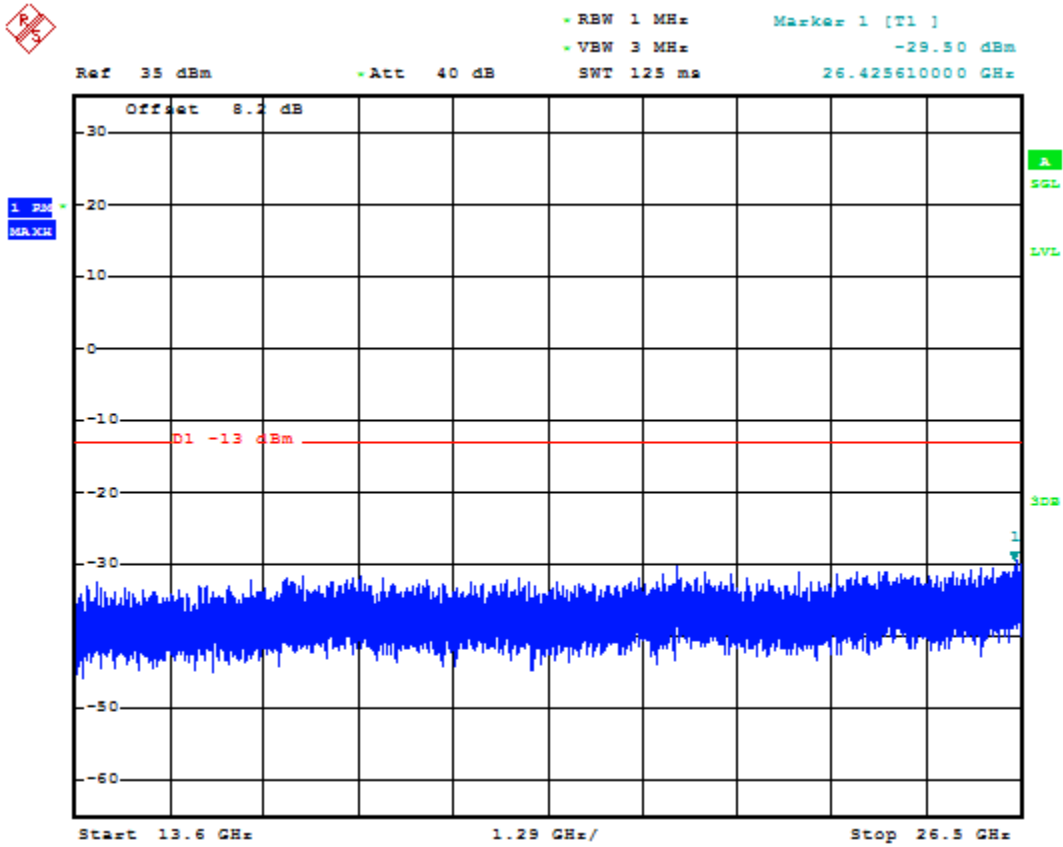






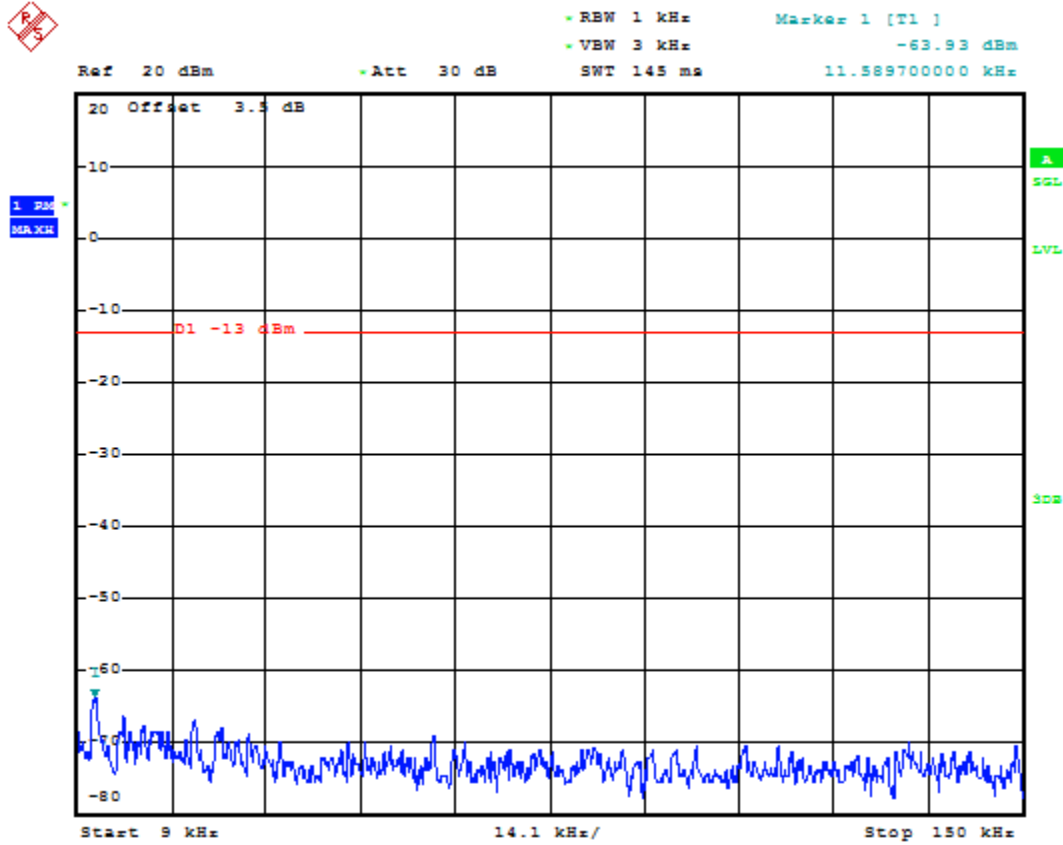


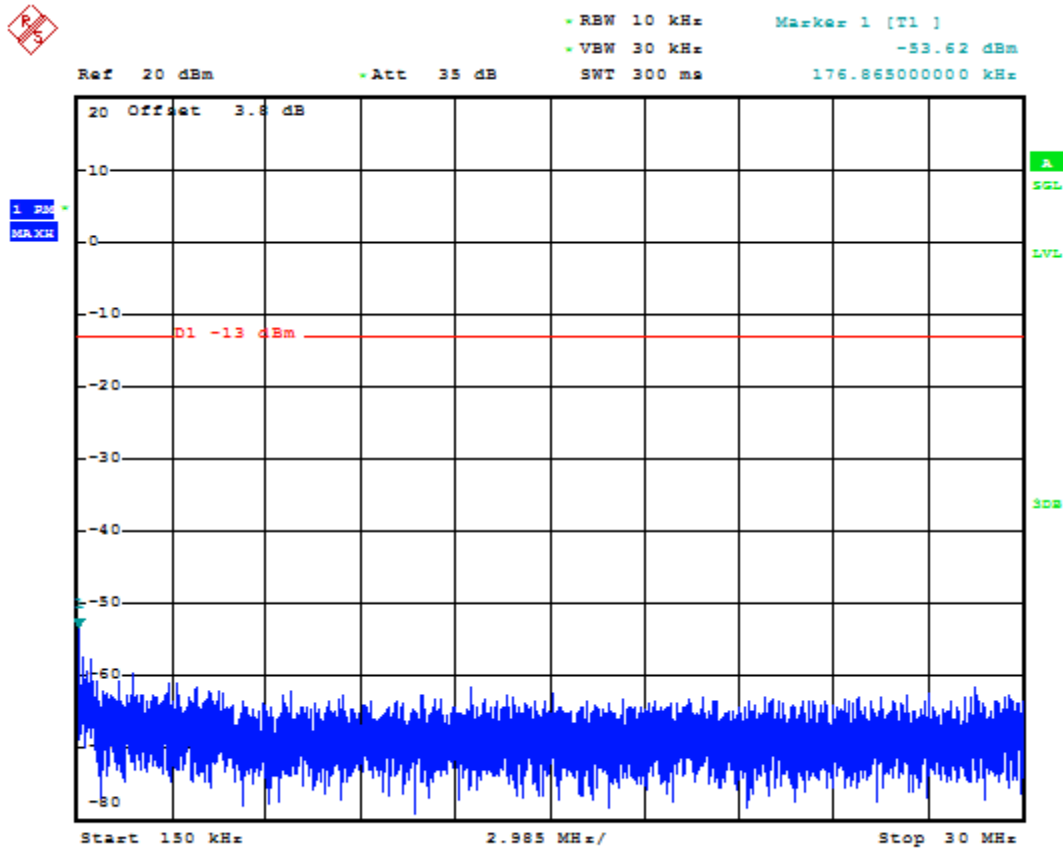


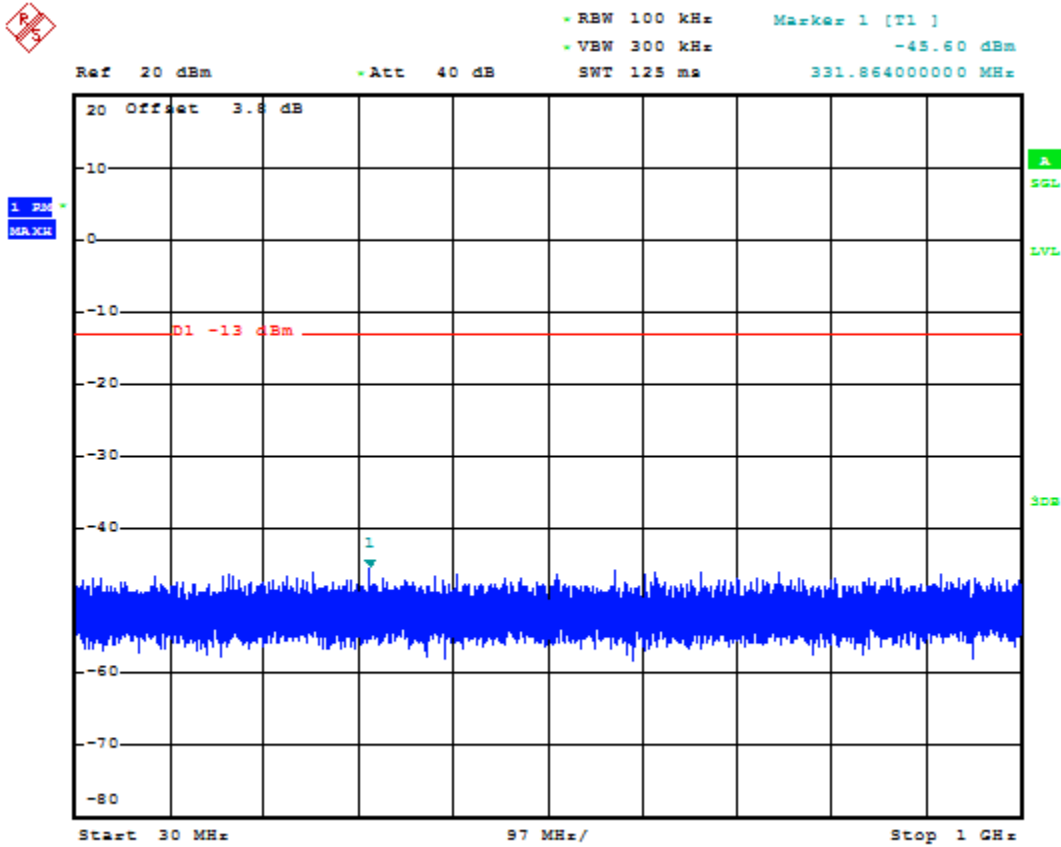


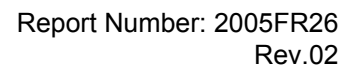


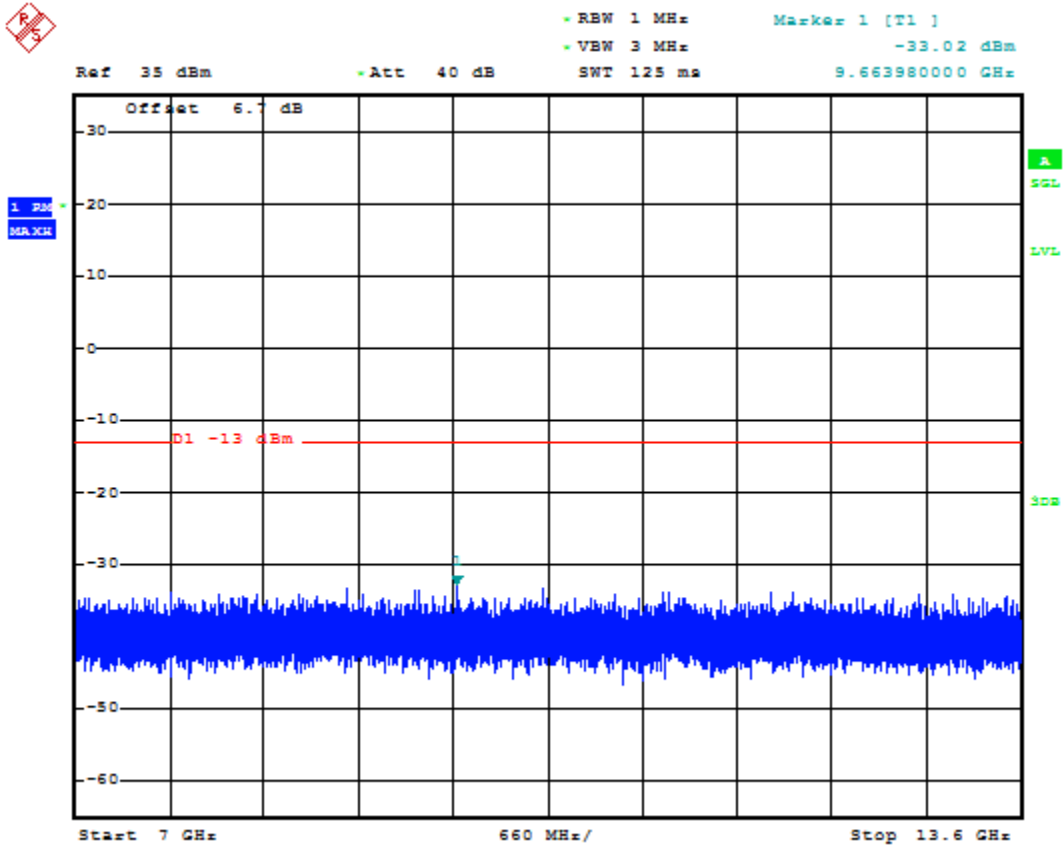
1.2.2.2 Test Channel=MCH

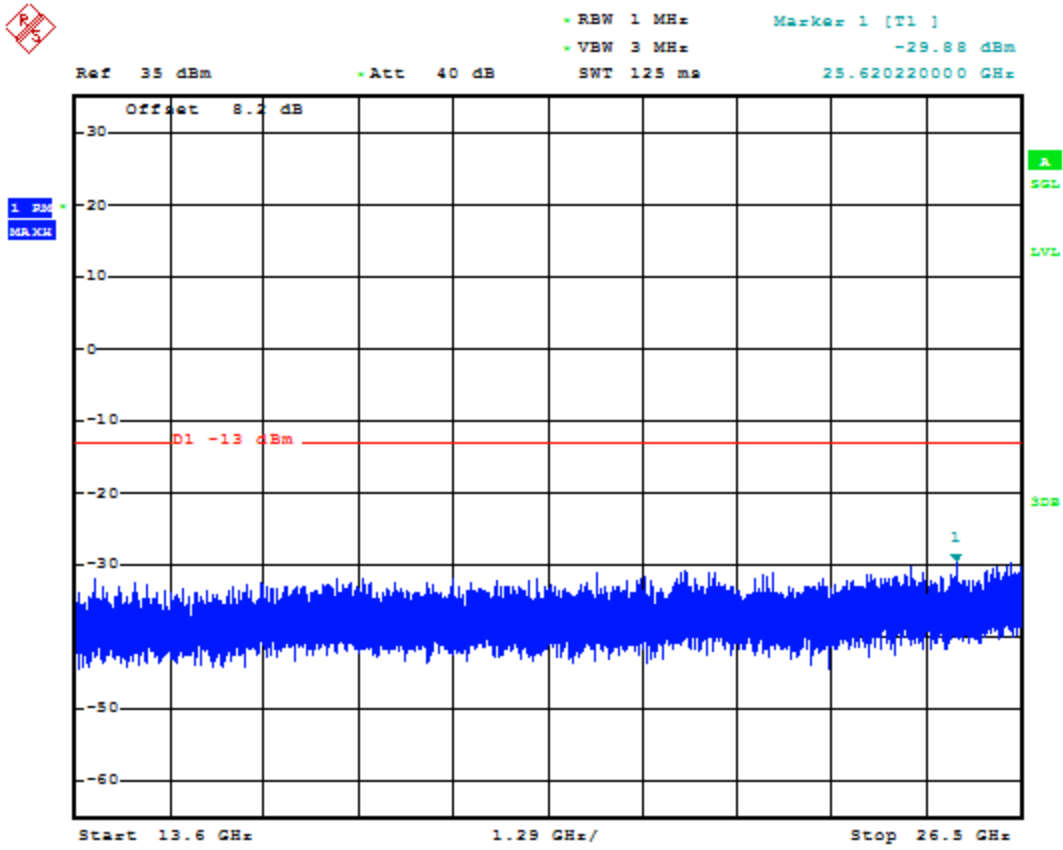






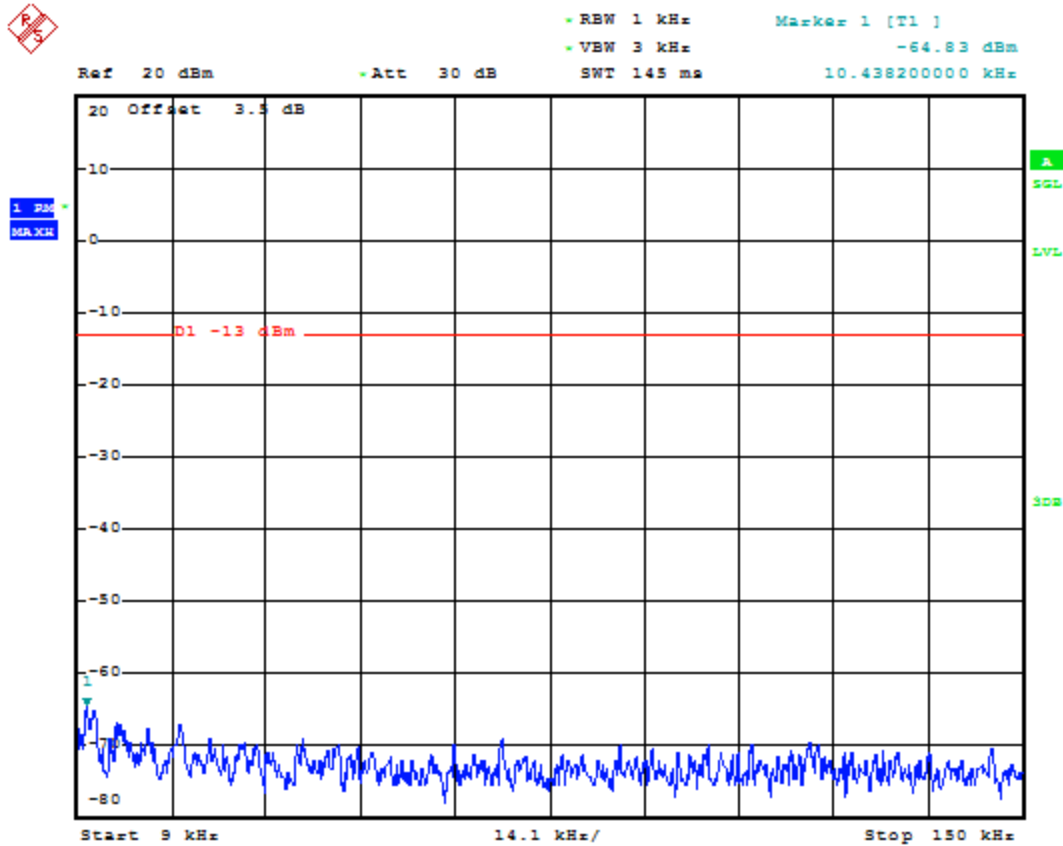


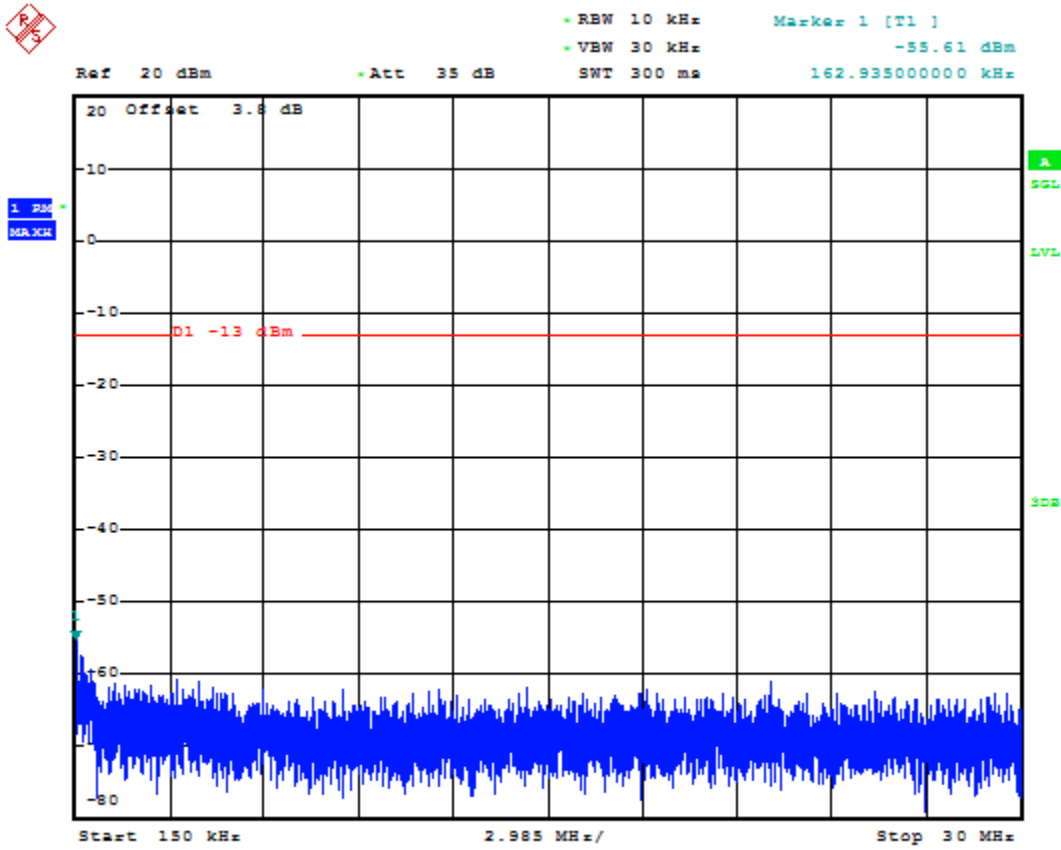


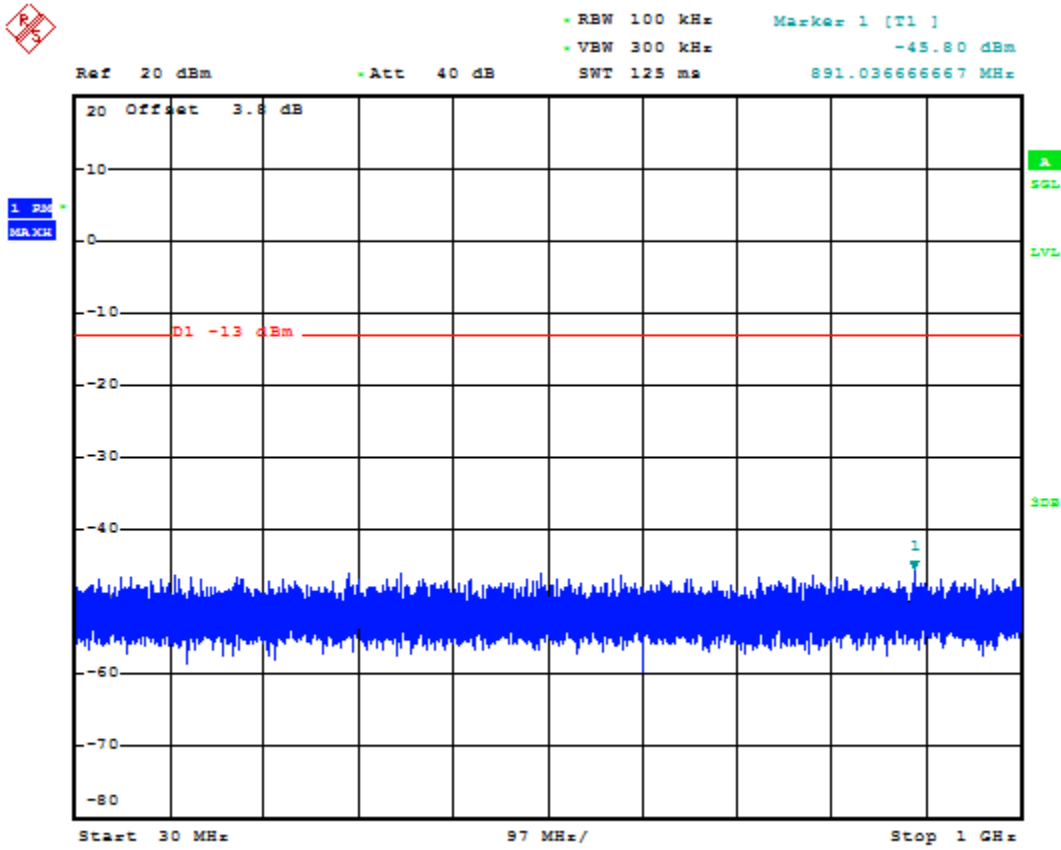


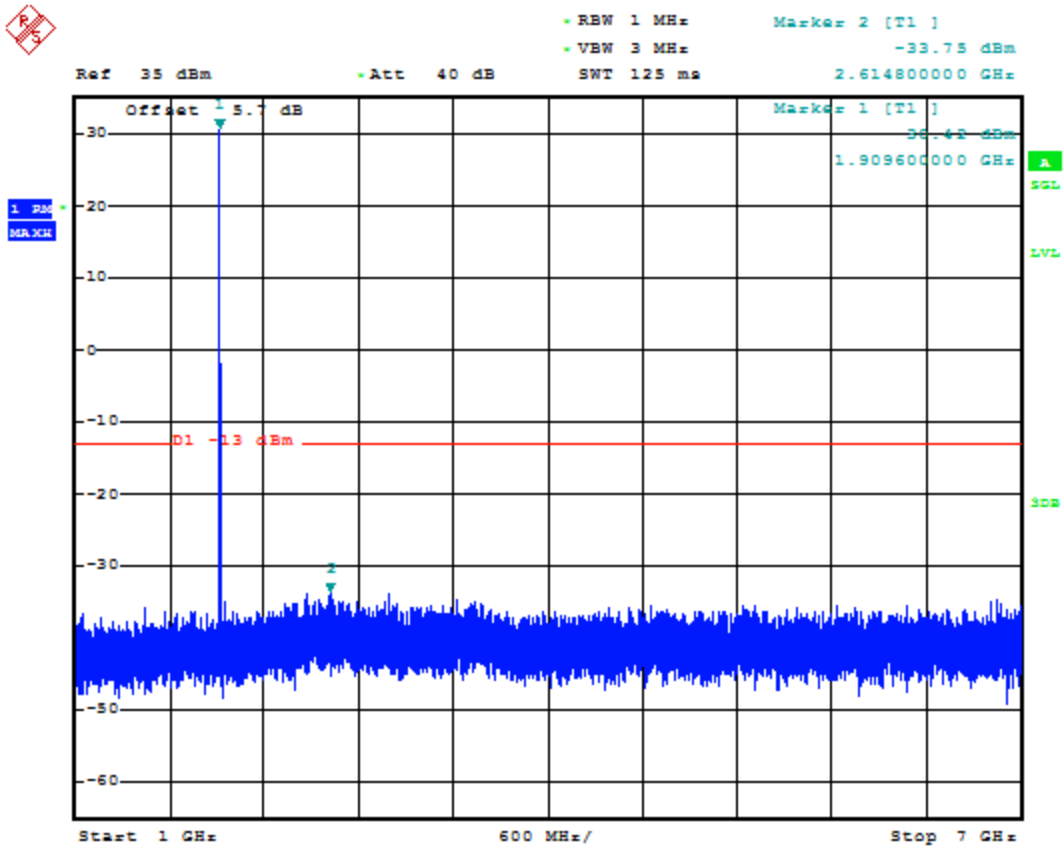


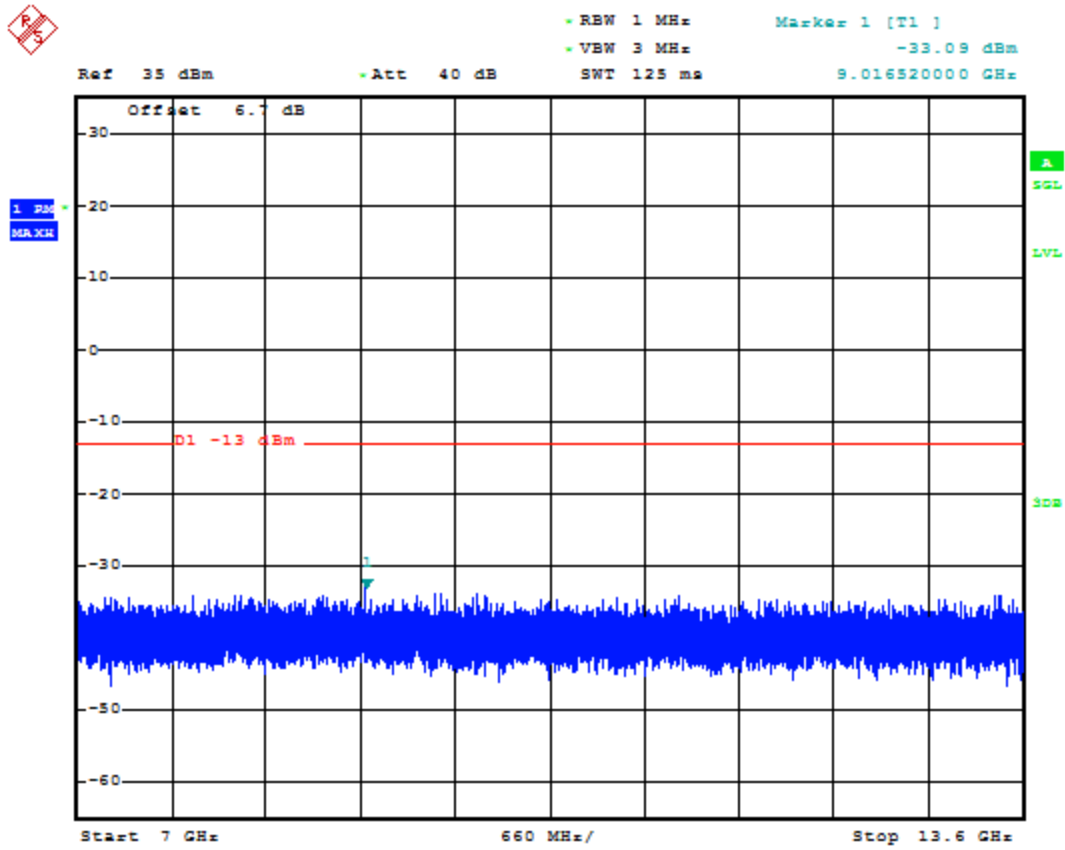
1.2.2.3 Test Channel=HCH

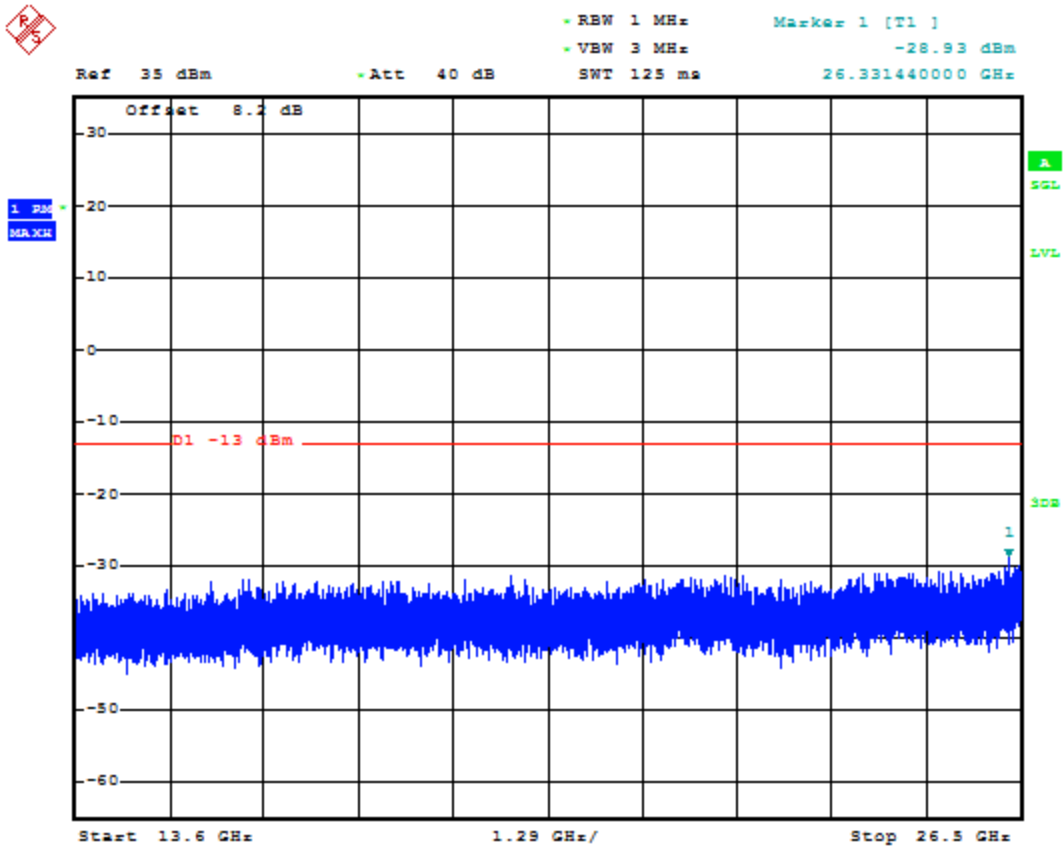








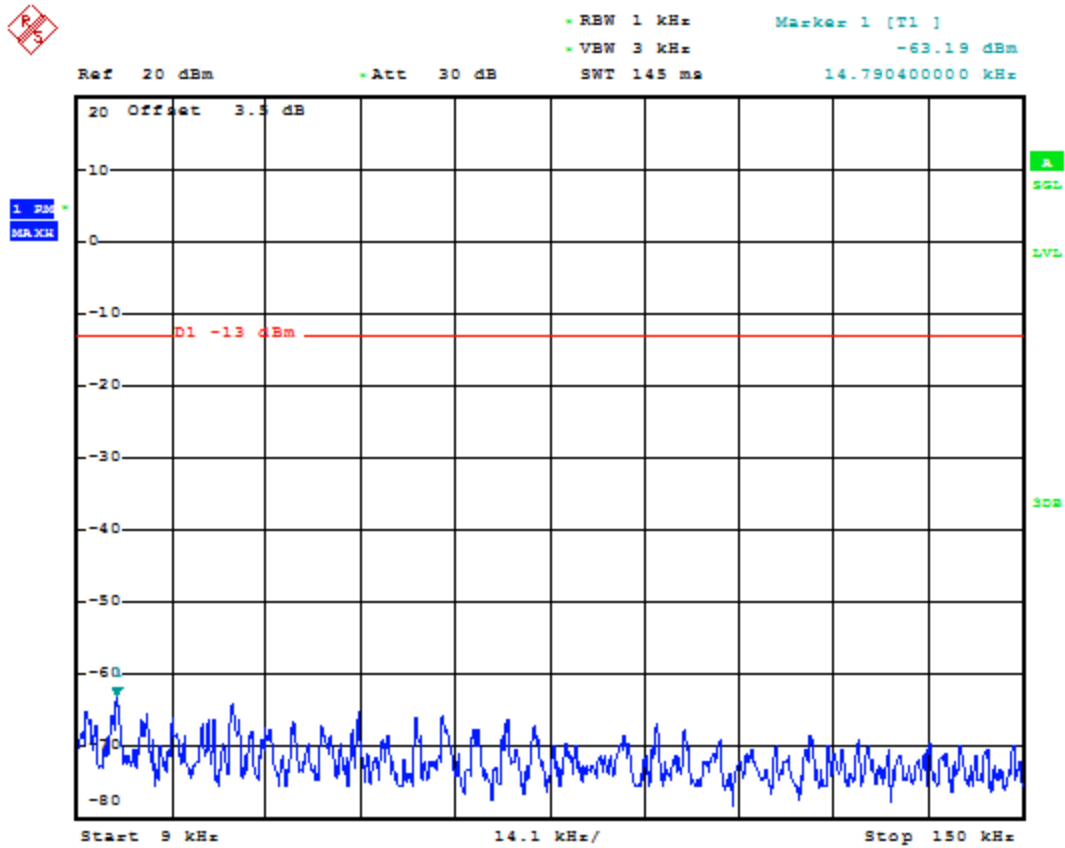


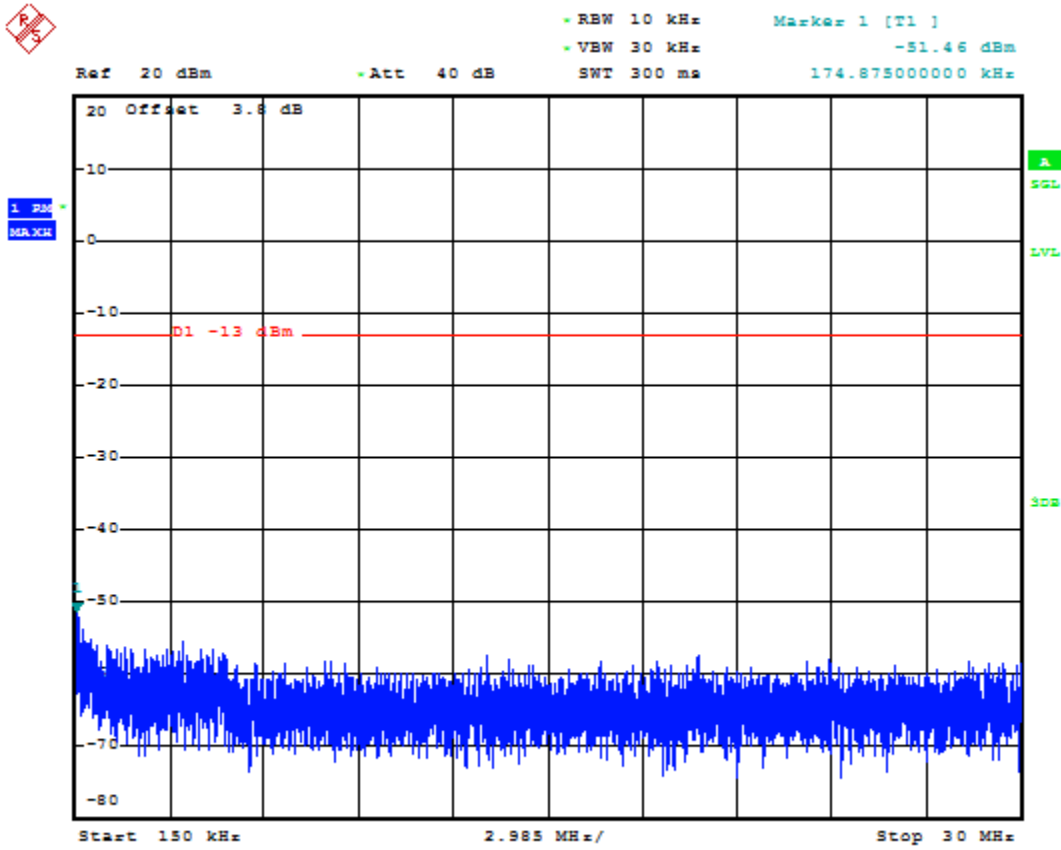


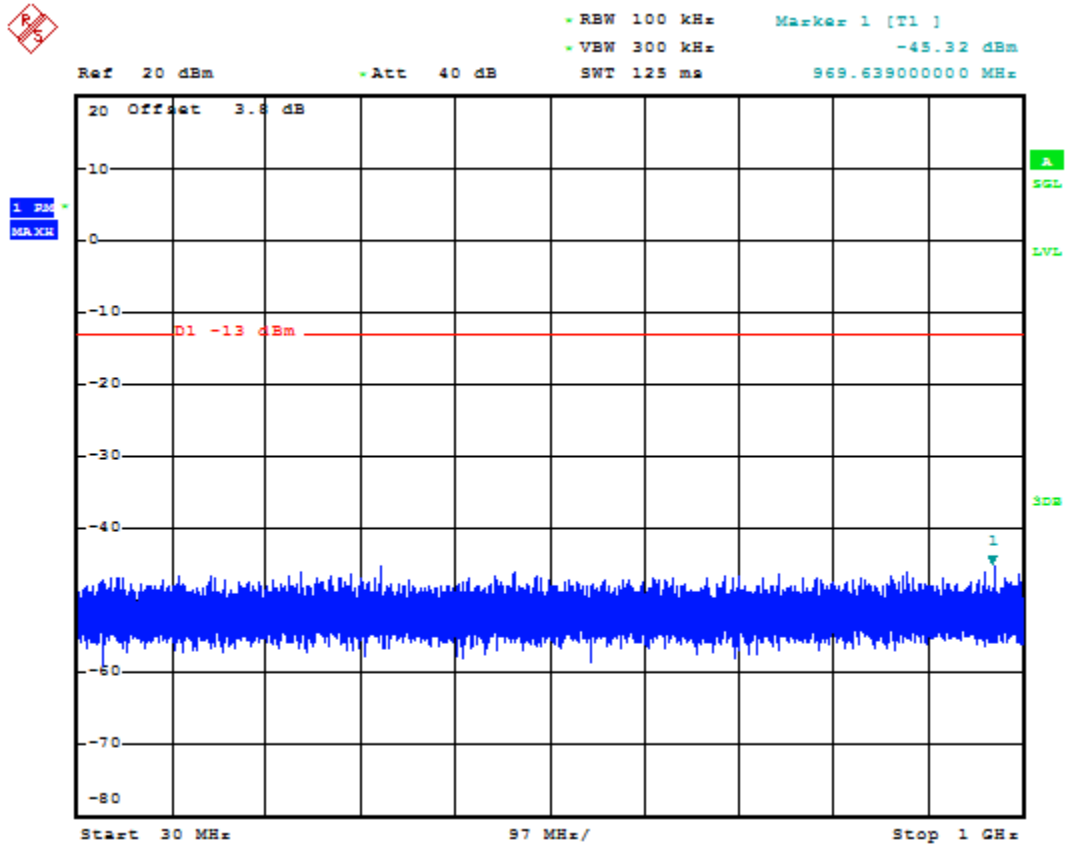


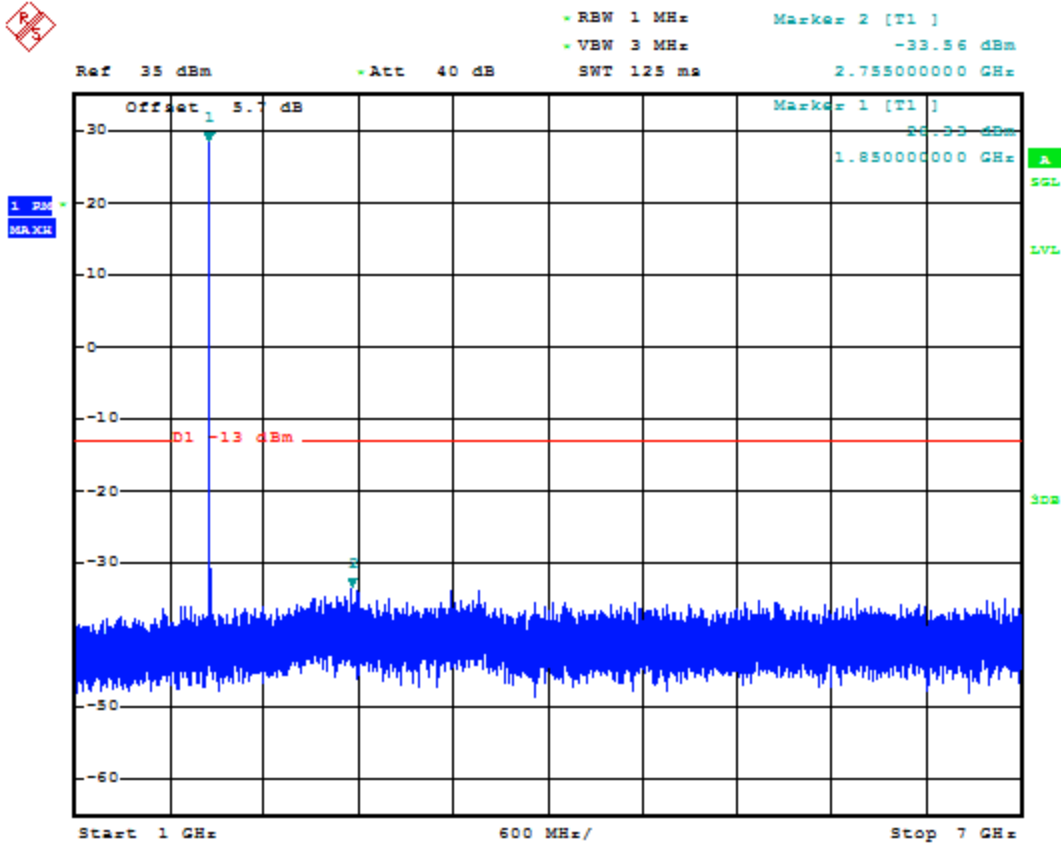
1.2.3 Test Mode=GSM/TM3

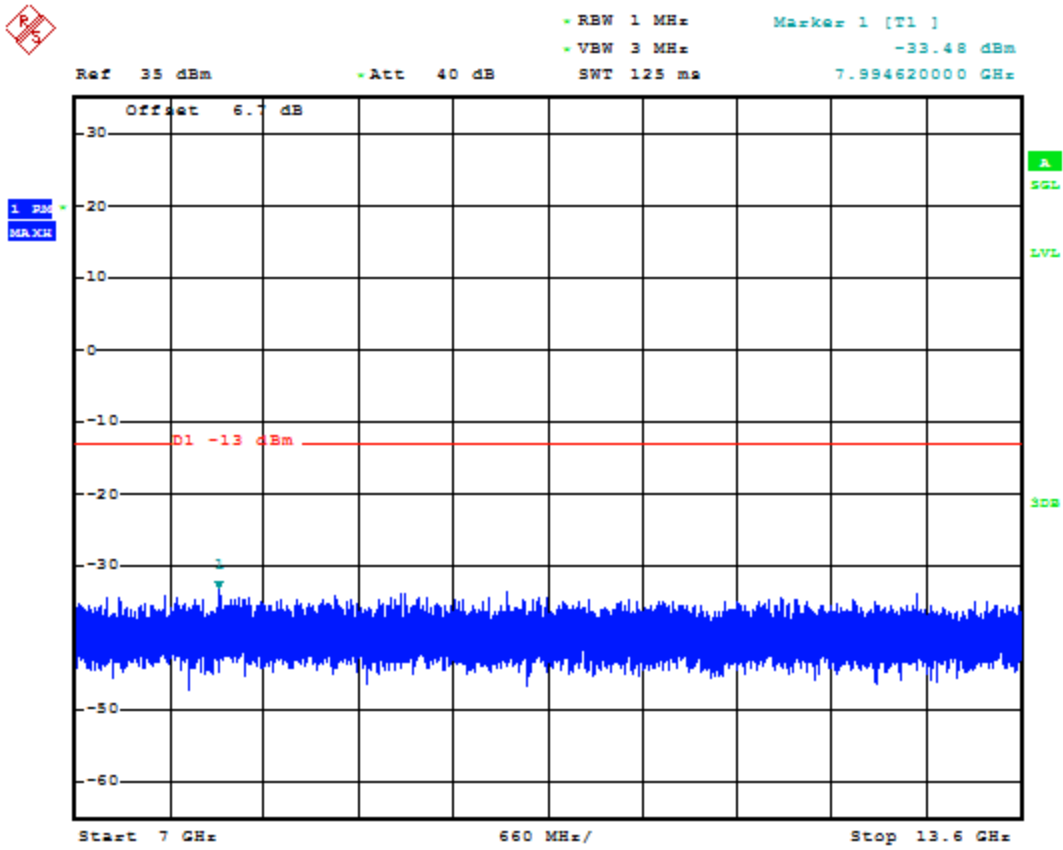
1.2.3.1 Test Channel=LCH

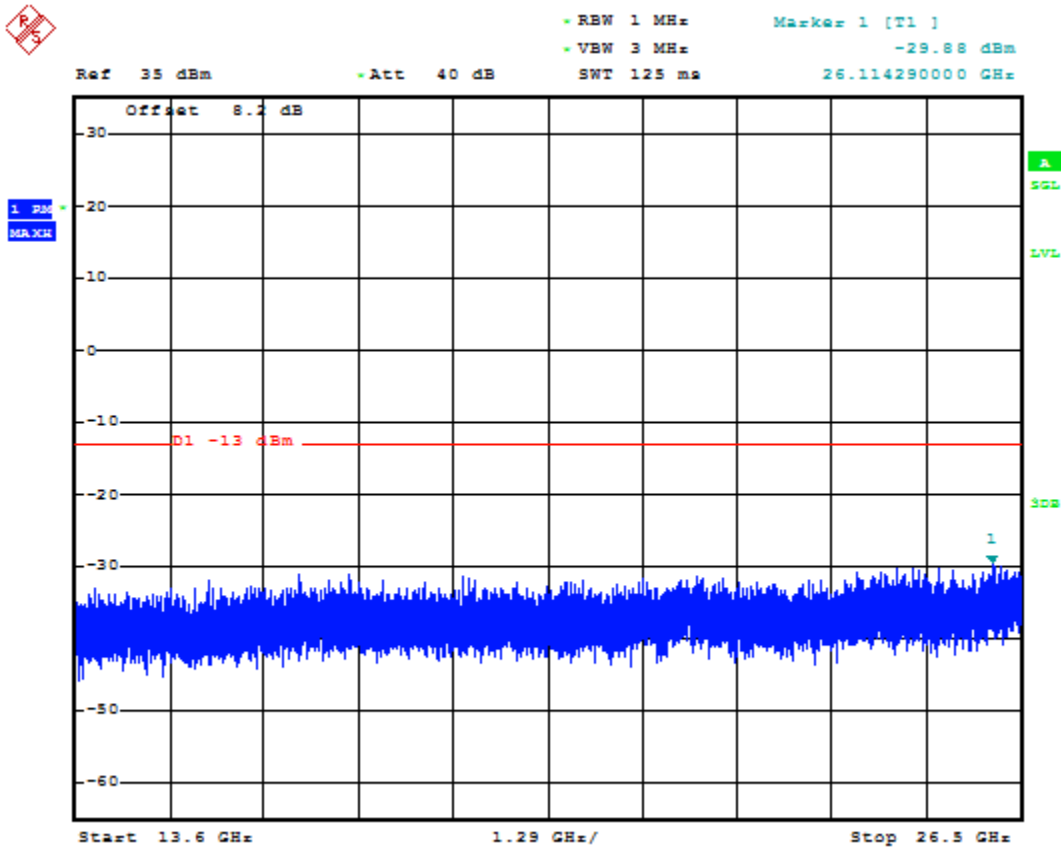






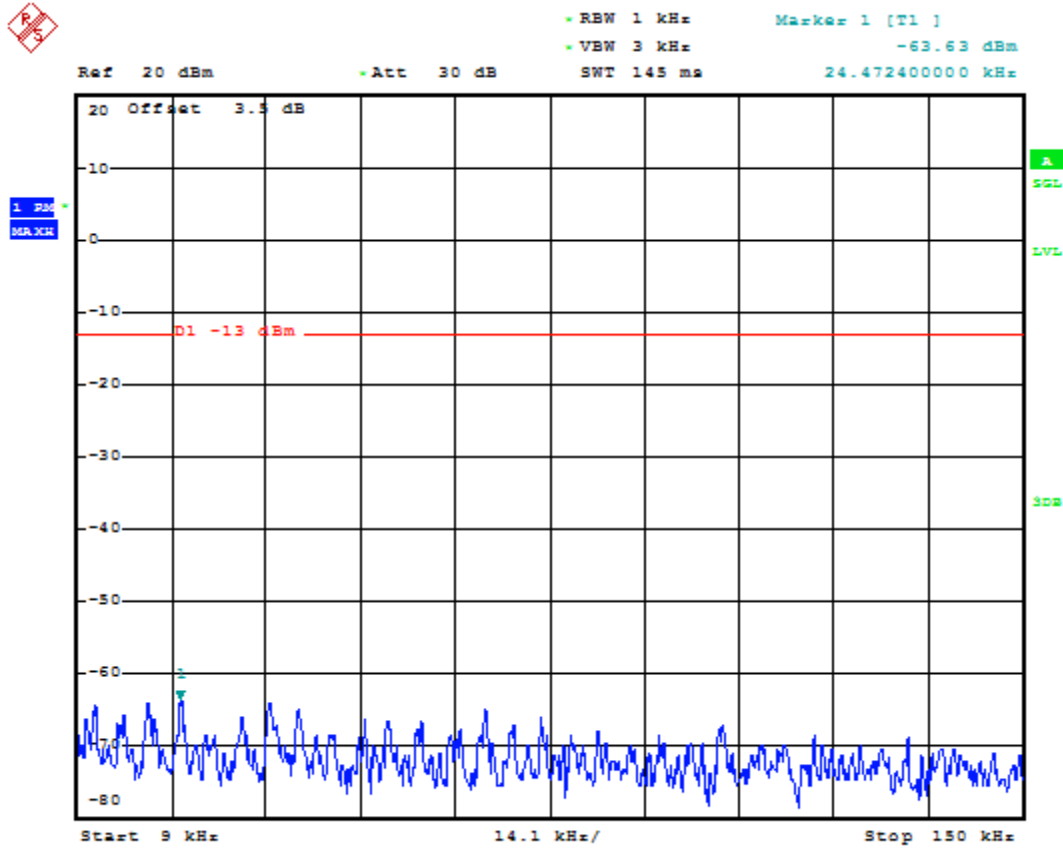


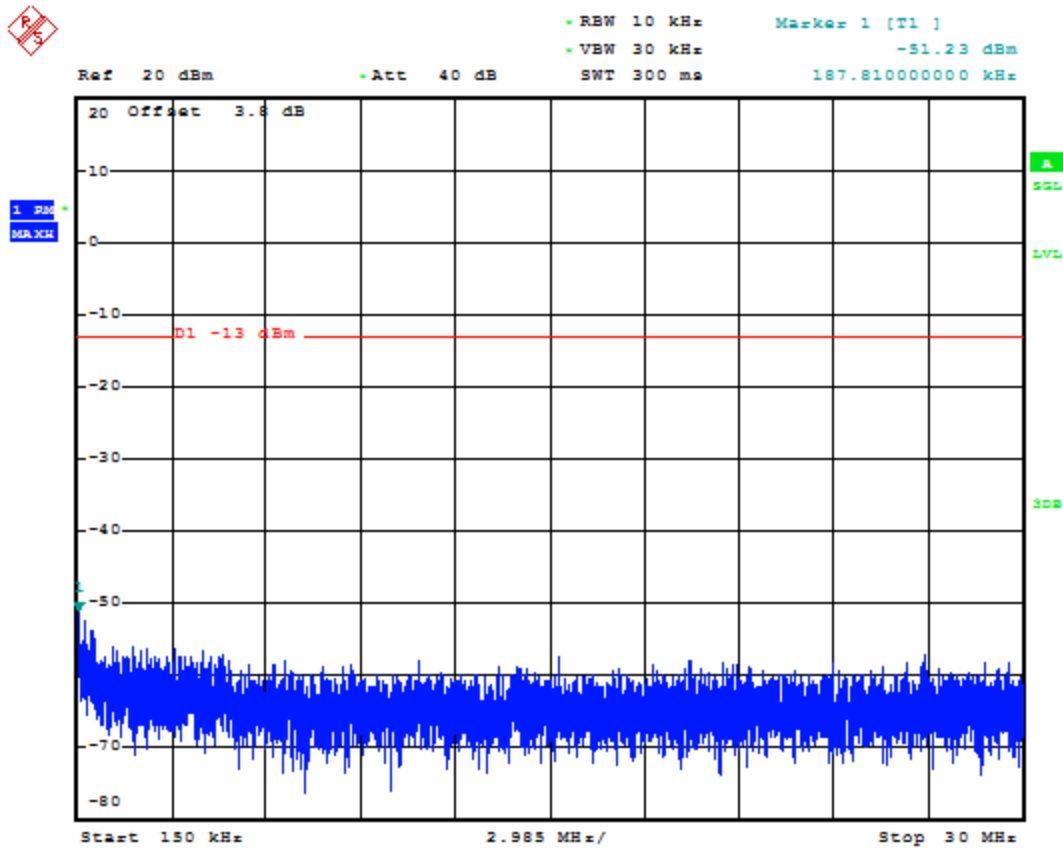


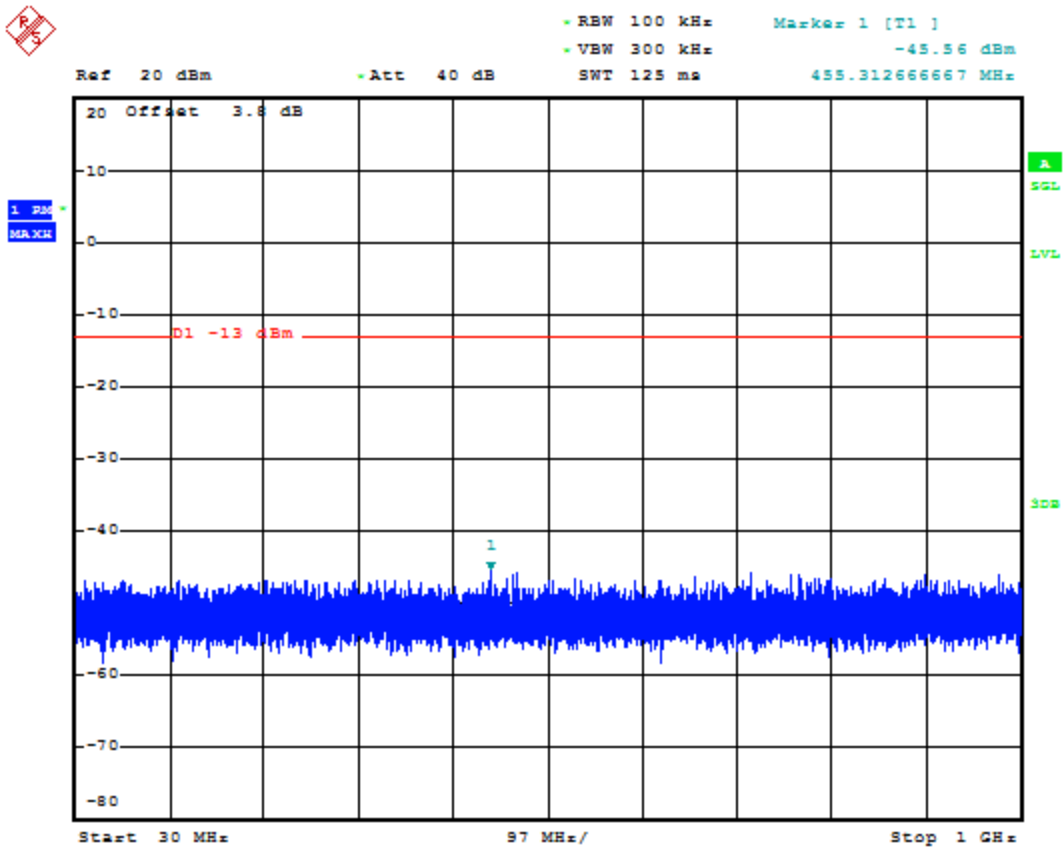


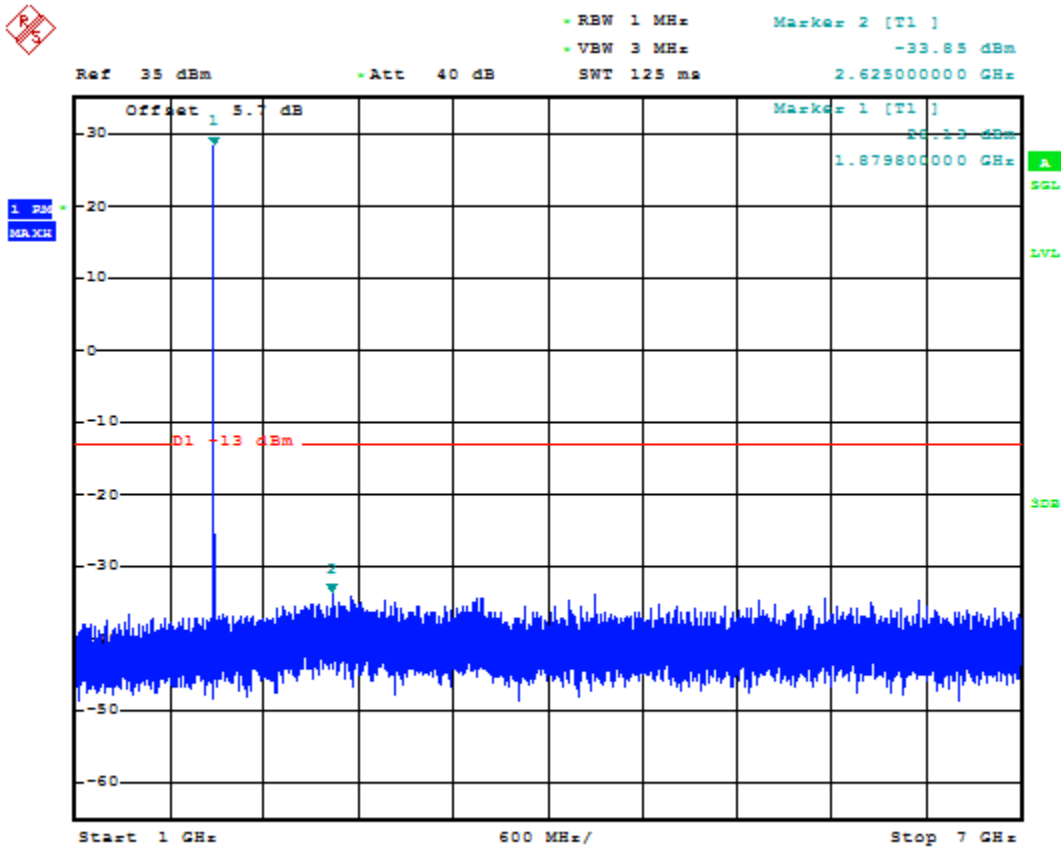


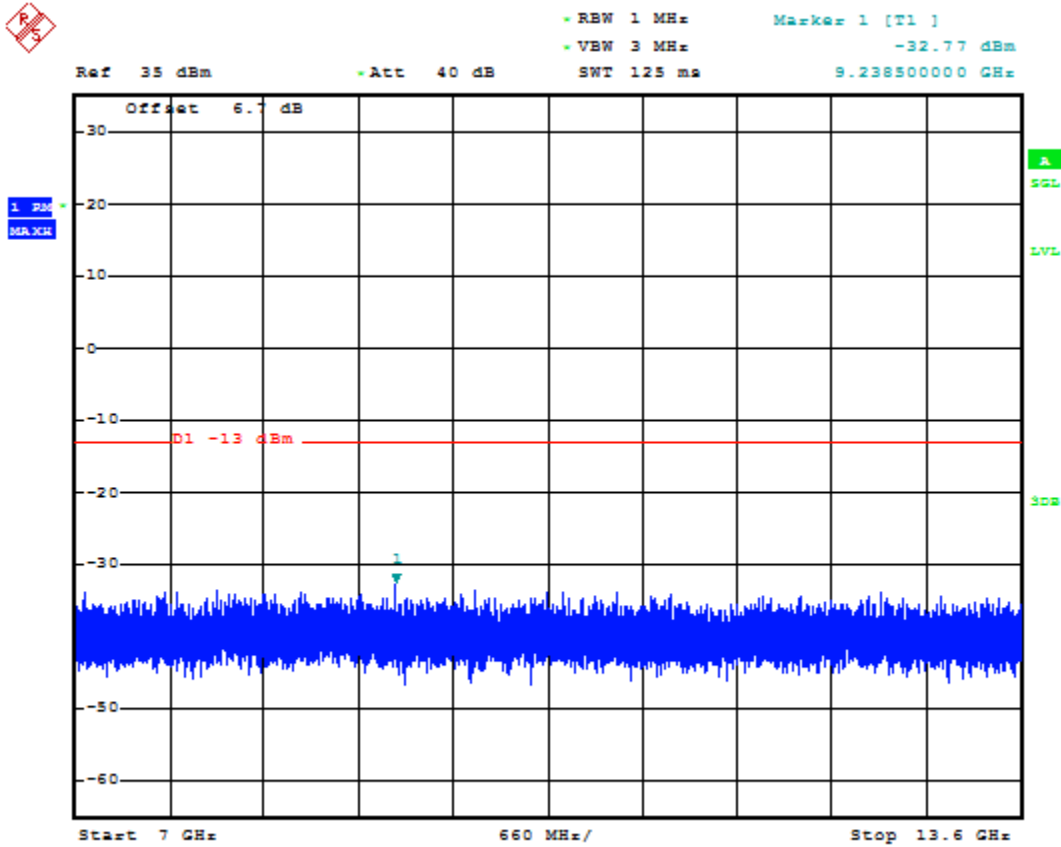
1.2.3.2 Test Channel=MCH

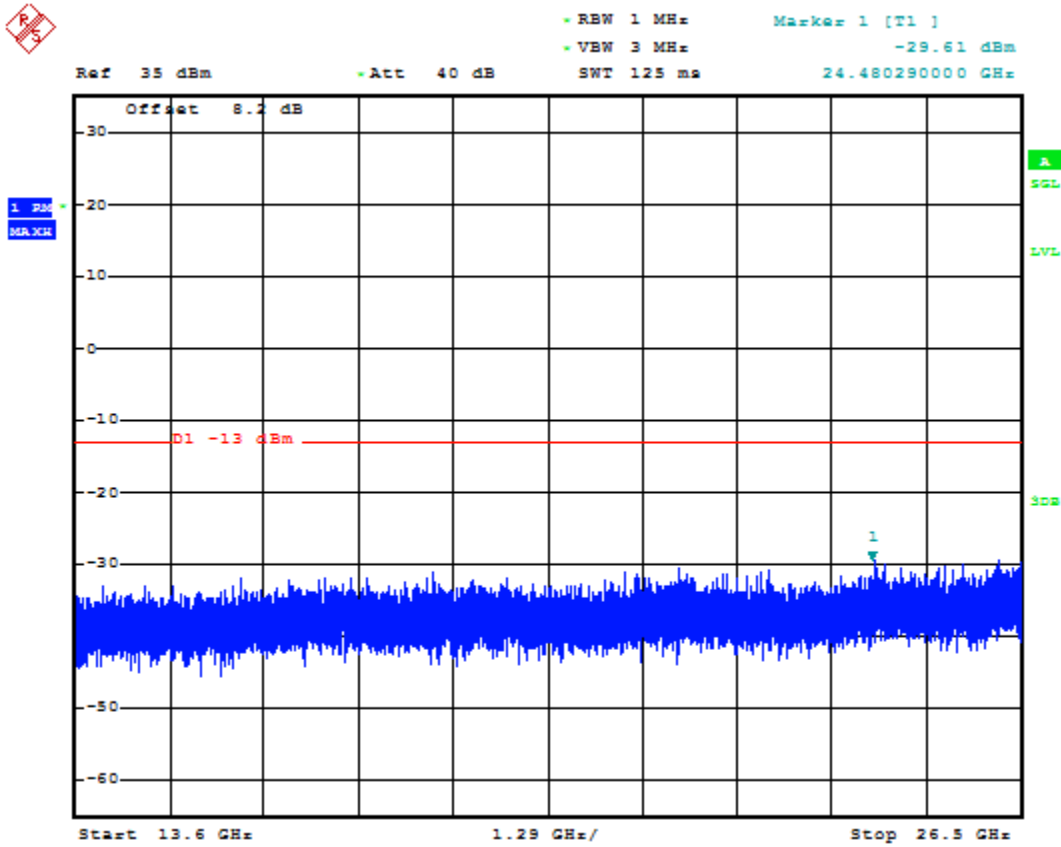






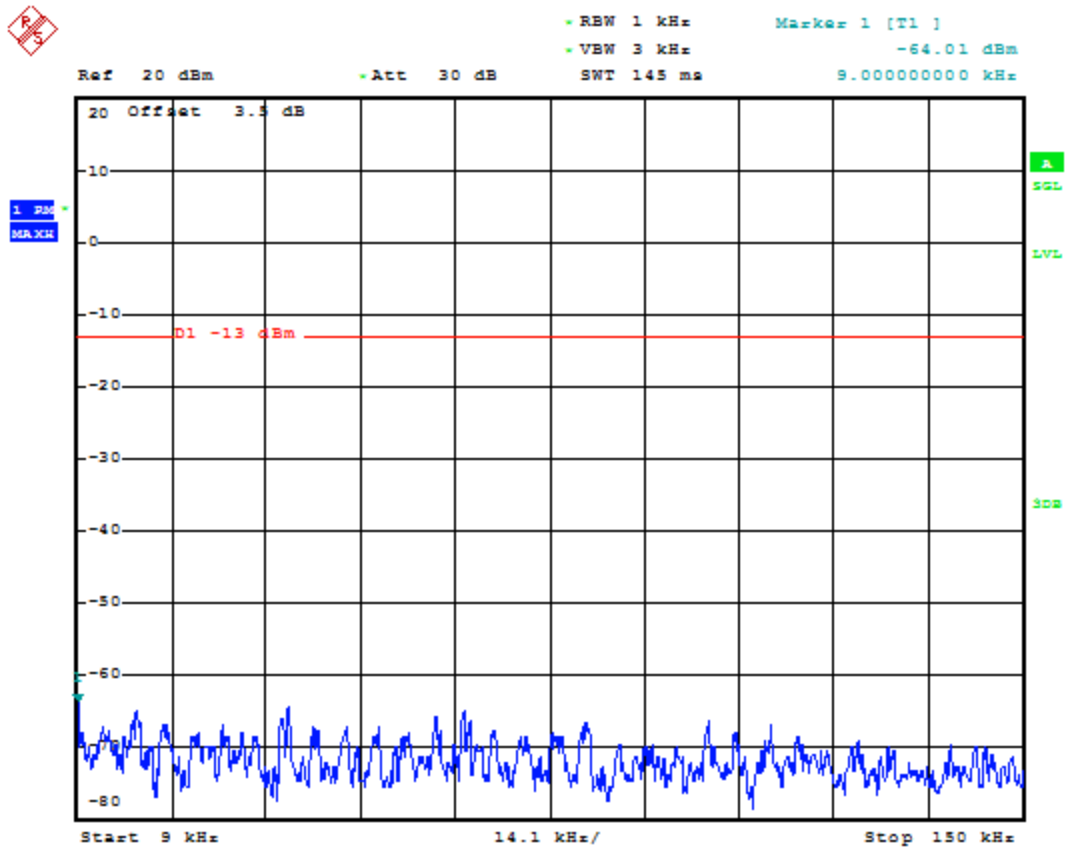


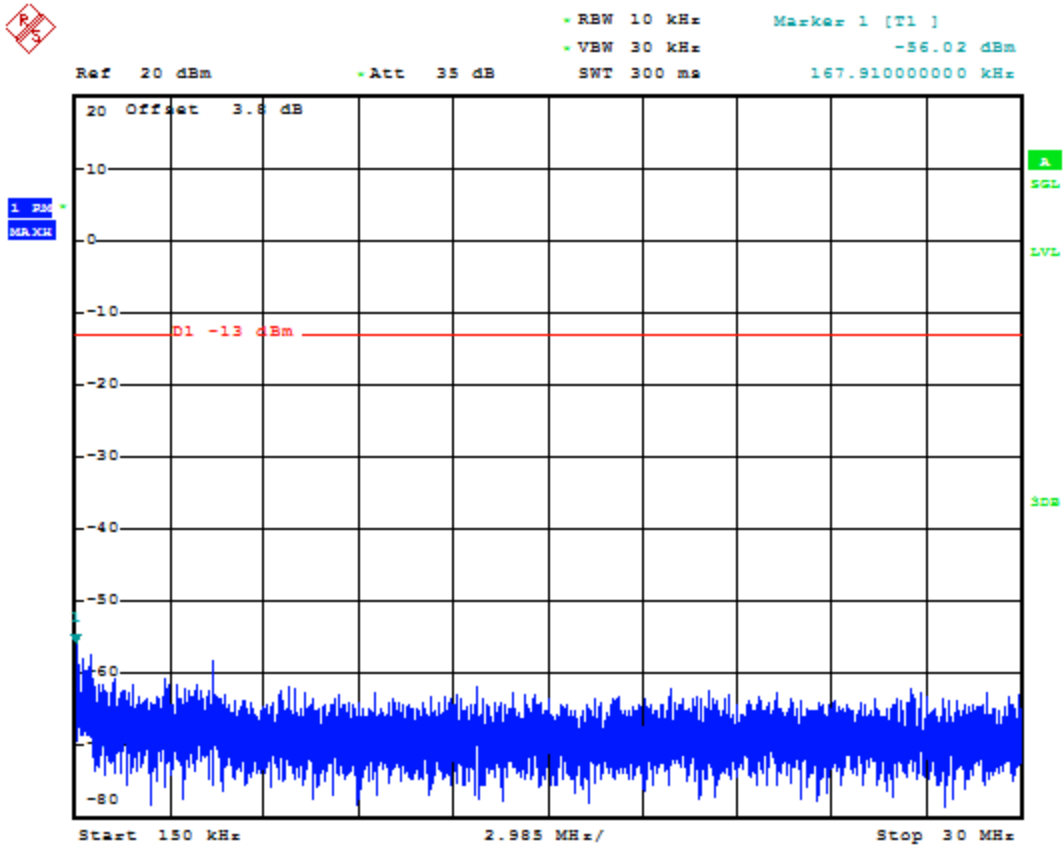


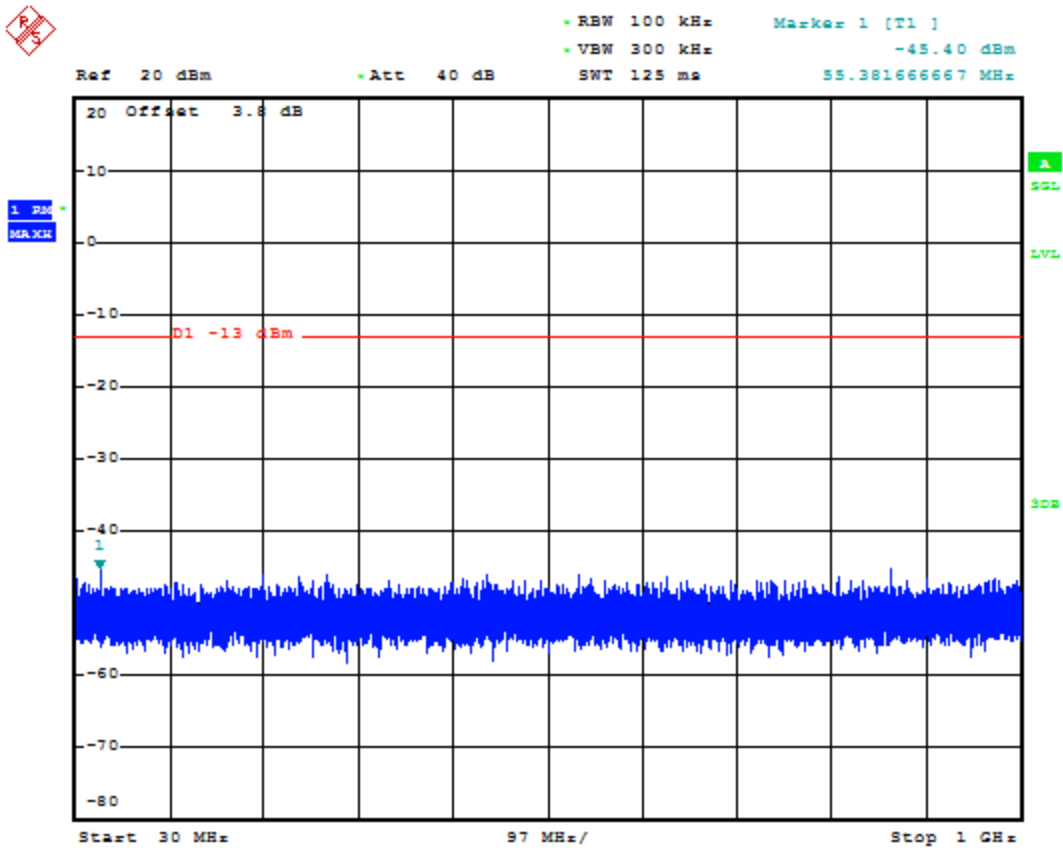


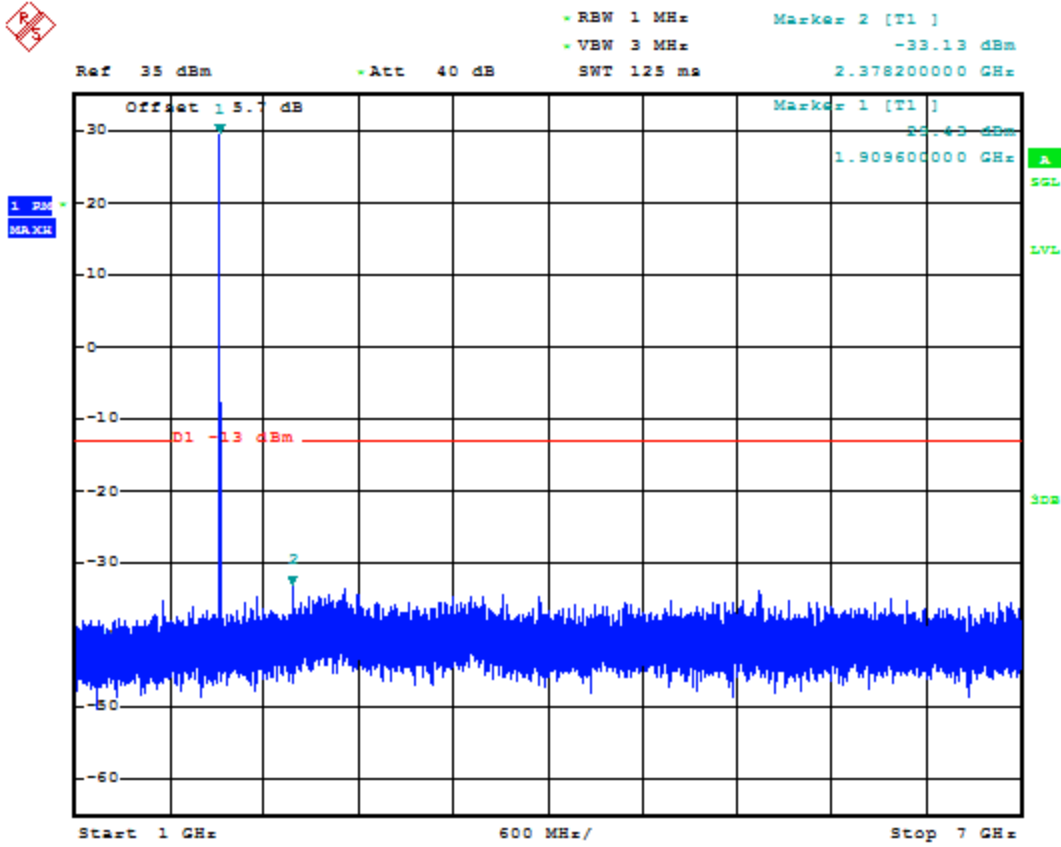


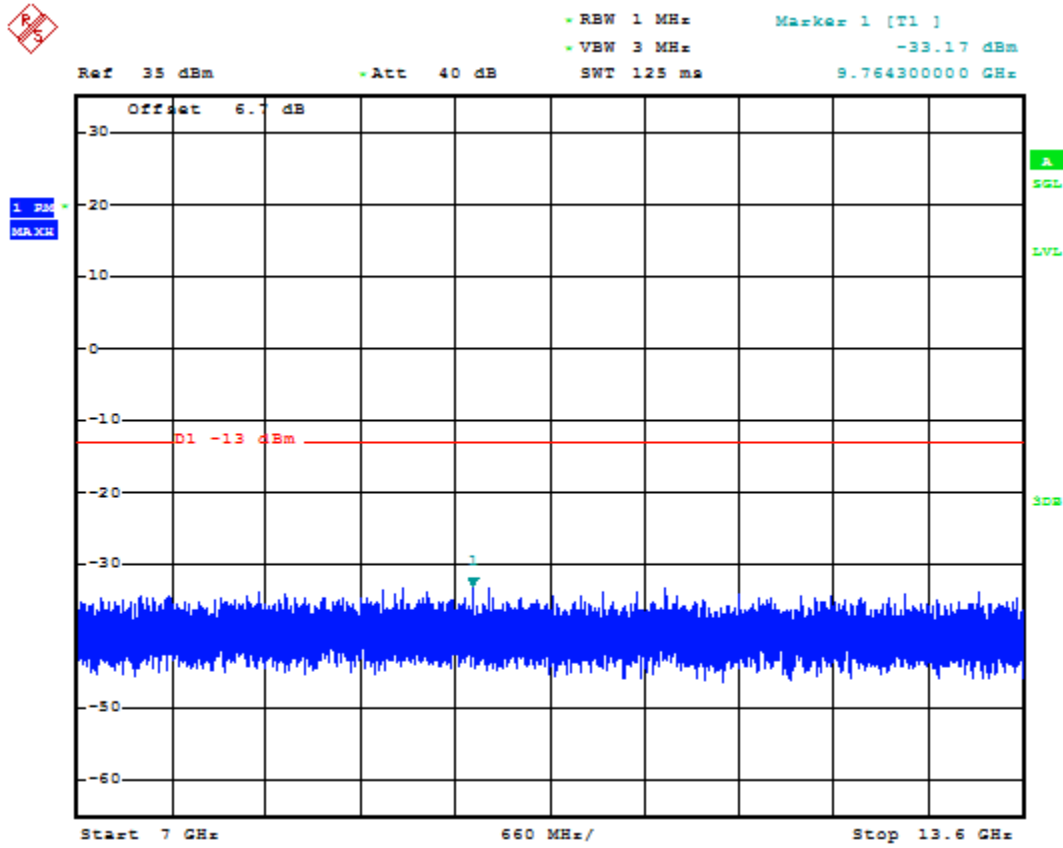
1.2.3.3 Test Channel=HCH

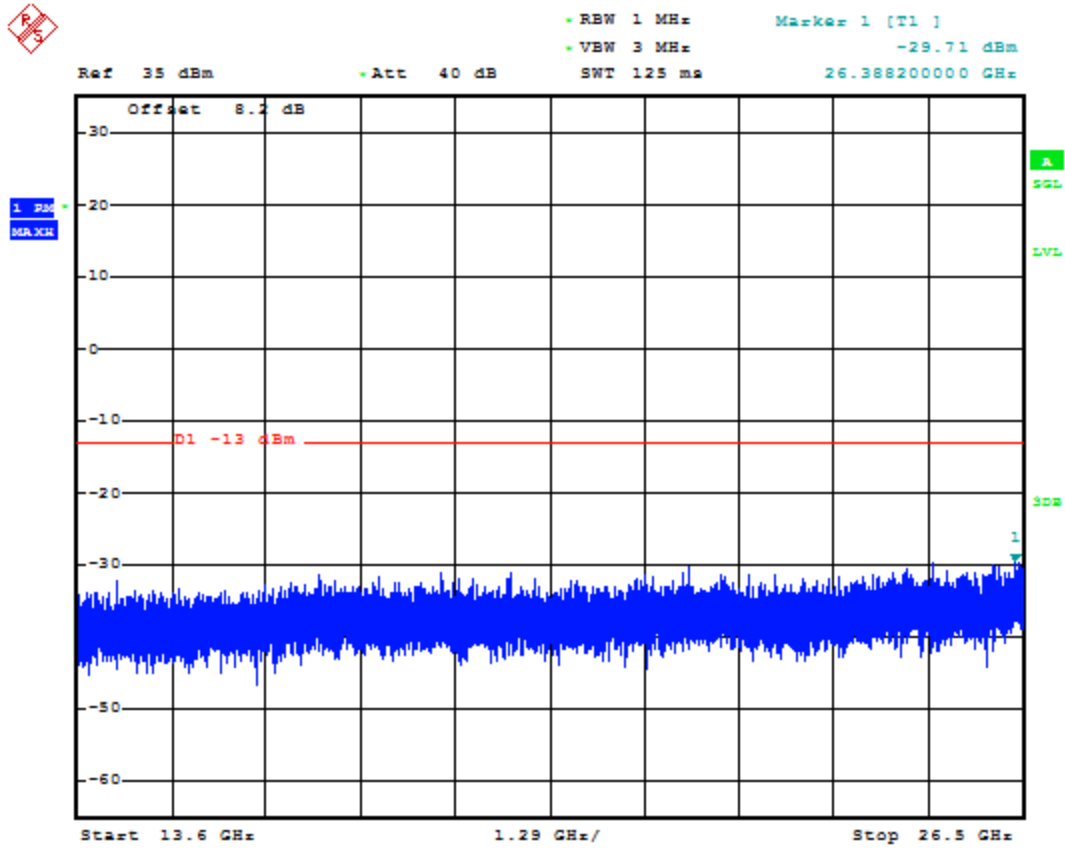












Appendix G: Field Strength of Spurious Radiation

Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	824.2 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_850_CH128		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1648.400	-30.83	7.69	-23.14	-13.00	-10.14	peak
2	2472.600	-63.44	11.34	-52.10	-13.00	-39.10	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	824.2 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_850_CH128		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1648.400	-38.92	7.69	-31.23	-13.00	-18.23	peak
2	2472.600	-61.05	11.34	-49.71	-13.00	-36.71	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	836.6 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_850_CH190		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1673.200	-29.29	7.78	-21.51	-13.00	-8.51	peak
2	2509.800	-58.45	11.51	-46.94	-13.00	-33.94	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	836.6 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_850_CH190		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1673.200	-36.22	7.78	-28.44	-13.00	-15.44	peak
2	2509.800	-57.96	11.51	-46.45	-13.00	-33.45	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	848.8 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_850_CH251		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1697.600	-27.75	7.85	-19.90	-13.00	-6.90	peak
2	2546.400	-54.60	11.63	-42.97	-13.00	-29.97	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	848.8 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_850_CH251		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1697.600	-37.34	7.85	-29.49	-13.00	-16.49	peak
2	2546.400	-57.03	11.63	-45.40	-13.00	-32.40	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1850.2 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_1900_CH512		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3700.400	-47.45	14.75	-32.70	-13.00	-19.70	peak
2	5550.600	-63.75	19.79	-43.96	-13.00	-30.96	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1850.2 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_1900_CH512		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3700.400	-38.95	14.75	-24.20	-13.00	-11.20	peak
2	5550.600	-61.32	19.79	-41.53	-13.00	-28.53	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_1900_CH661		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-46.37	14.96	-31.41	-13.00	-18.41	peak
2	5640.000	-66.50	19.98	-46.52	-13.00	-33.52	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_1900_CH661		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-41.43	14.96	-26.47	-13.00	-13.47	peak
2	5640.000	-64.13	19.98	-44.15	-13.00	-31.15	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1909.8 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_1900_CH810		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3819.600	-44.09	15.17	-28.92	-13.00	-15.92	peak
2	5729.400	-66.81	20.17	-46.64	-13.00	-33.64	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1909.8 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	2 G_GSM_1900_CH810		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3819.600	-41.18	15.17	-26.01	-13.00	-13.01	peak
2	5729.400	-62.88	20.17	-42.71	-13.00	-29.71	peak

Appendix H: Frequency Stability (Temperature & Voltage Variation)

Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM1	LCH	TN	VL	15.63	0.02	±2.5	PASS
			TN	VN	16.01	0.02	±2.5	PASS
			TN	VH	11.56	0.01	±2.5	PASS
		MCH	TN	VL	9.94	0.01	±2.5	PASS
			TN	VN	12.27	0.01	±2.5	PASS
			TN	VH	7.30	0.01	±2.5	PASS
		HCH	TN	VL	1.42	0.00	±2.5	PASS
			TN	VN	8.78	0.01	±2.5	PASS
			TN	VH	10.07	0.01	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM2	LCH	TN	VL	17.56	0.02	±2.5	PASS
			TN	VN	24.54	0.03	±2.5	PASS
			TN	VH	38.68	0.05	±2.5	PASS
		MCH	TN	VL	18.60	0.02	±2.5	PASS
			TN	VN	16.72	0.02	±2.5	PASS
			TN	VH	15.50	0.02	±2.5	PASS
		HCH	TN	VL	22.21	0.03	±2.5	PASS
			TN	VN	17.24	0.02	±2.5	PASS
			TN	VH	15.30	0.02	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM3	LCH	TN	VL	21.99	0.03	±2.5	PASS
			TN	VN	18.76	0.02	±2.5	PASS
			TN	VH	24.05	0.03	±2.5	PASS
		MCH	TN	VL	23.79	0.03	±2.5	PASS
			TN	VN	13.75	0.02	±2.5	PASS
			TN	VH	21.60	0.03	±2.5	PASS
		HCH	TN	VL	14.82	0.02	±2.5	PASS
			TN	VN	16.24	0.02	±2.5	PASS
			TN	VH	16.27	0.02	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM1900	TM1	LCH	TN	VL	21.95	0.01	±2.5	PASS
			TN	VN	8.39	0.00	±2.5	PASS
			TN	VH	13.43	0.01	±2.5	PASS
		MCH	TN	VL	-29.83	-0.02	±2.5	PASS
			TN	VN	3.94	0.00	±2.5	PASS
			TN	VH	2.20	0.00	±2.5	PASS
		HCH	TN	VL	34.48	0.02	±2.5	PASS
			TN	VN	6.84	0.00	±2.5	PASS
			TN	VH	3.23	0.00	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM1900	TM2	LCH	TN	VL	6.52	0.00	±2.5	PASS
			TN	VN	14.27	0.01	±2.5	PASS
			TN	VH	-2.20	0.00	±2.5	PASS
		MCH	TN	VL	10.07	0.01	±2.5	PASS
			TN	VN	12.14	0.01	±2.5	PASS
			TN	VH	25.12	0.01	±2.5	PASS
		HCH	TN	VL	-8.85	0.00	±2.5	PASS
			TN	VN	12.40	0.01	±2.5	PASS
			TN	VH	3.29	0.00	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM1900	TM3	LCH	TN	VL	7.78	0.00	±2.5	PASS
			TN	VN	7.94	0.00	±2.5	PASS
			TN	VH	15.72	0.01	±2.5	PASS
		MCH	TN	VL	-40.42	-0.02	±2.5	PASS
			TN	VN	-4.16	0.00	±2.5	PASS
			TN	VH	-36.74	-0.02	±2.5	PASS
		HCH	TN	VL	-0.36	0.00	±2.5	PASS
			TN	VN	8.62	0.00	±2.5	PASS
			TN	VH	0.29	0.00	±2.5	PASS

Frequency Error vs. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM1	LCH	VN	-30	11.43	0.01	±2.5	PASS
			VN	-20	24.34	0.03	±2.5	PASS
			VN	-10	15.05	0.02	±2.5	PASS
			VN	0	14.85	0.02	±2.5	PASS
			VN	10	28.61	0.03	±2.5	PASS
			VN	20	14.79	0.02	±2.5	PASS
			VN	30	13.62	0.02	±2.5	PASS
			VN	40	22.34	0.03	±2.5	PASS
			VN	50	11.24	0.01	±2.5	PASS
GSM850	TM1	MCH	VN	-30	4.65	0.01	±2.5	PASS
			VN	-20	10.14	0.01	±2.5	PASS
			VN	-10	12.14	0.01	±2.5	PASS
			VN	0	-4.84	-0.01	±2.5	PASS
			VN	10	7.10	0.01	±2.5	PASS
			VN	20	9.04	0.01	±2.5	PASS
			VN	30	-1.16	0.00	±2.5	PASS
			VN	40	10.59	0.01	±2.5	PASS
			VN	50	10.33	0.01	±2.5	PASS
GSM850	TM1	HCH	VN	-30	-5.75	-0.01	±2.5	PASS
			VN	-20	18.92	0.02	±2.5	PASS
			VN	-10	16.14	0.02	±2.5	PASS
			VN	0	-2.32	0.00	±2.5	PASS
			VN	10	14.01	0.02	±2.5	PASS
			VN	20	18.02	0.02	±2.5	PASS
			VN	30	12.66	0.01	±2.5	PASS
			VN	40	13.24	0.02	±2.5	PASS
			VN	50	14.85	0.02	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM2	LCH	VN	-30	24.60	0.03	±2.5	PASS
			VN	-20	24.67	0.03	±2.5	PASS
			VN	-10	24.60	0.03	±2.5	PASS
			VN	0	19.18	0.02	±2.5	PASS
			VN	10	21.63	0.03	±2.5	PASS
			VN	20	40.49	0.05	±2.5	PASS
			VN	30	20.08	0.02	±2.5	PASS
			VN	40	41.52	0.05	±2.5	PASS
			VN	50	22.41	0.03	±2.5	PASS
GSM850	TM2	MCH	VN	-30	8.20	0.01	±2.5	PASS
			VN	-20	15.95	0.02	±2.5	PASS
			VN	-10	1.10	0.00	±2.5	PASS
			VN	0	17.69	0.02	±2.5	PASS
			VN	10	6.33	0.01	±2.5	PASS
			VN	20	17.95	0.02	±2.5	PASS
			VN	30	14.46	0.02	±2.5	PASS
			VN	40	17.24	0.02	±2.5	PASS
			VN	50	8.39	0.01	±2.5	PASS
GSM850	TM2	HCH	VN	-30	17.37	0.02	±2.5	PASS
			VN	-20	22.92	0.03	±2.5	PASS
			VN	-10	22.08	0.03	±2.5	PASS
			VN	0	22.41	0.03	±2.5	PASS
			VN	10	18.47	0.02	±2.5	PASS
			VN	20	20.99	0.02	±2.5	PASS
			VN	30	18.60	0.02	±2.5	PASS
			VN	40	12.40	0.01	±2.5	PASS
			VN	50	16.72	0.02	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM3	LCH	VN	-30	16.18	0.02	±2.5	PASS
			VN	-20	19.53	0.02	±2.5	PASS
			VN	-10	19.98	0.02	±2.5	PASS
			VN	0	17.11	0.02	±2.5	PASS
			VN	10	12.14	0.01	±2.5	PASS
			VN	20	19.53	0.02	±2.5	PASS
			VN	30	11.88	0.01	±2.5	PASS
			VN	40	15.08	0.02	±2.5	PASS
			VN	50	10.56	0.01	±2.5	PASS
GSM850	TM3	MCH	VN	-30	13.79	0.02	±2.5	PASS
			VN	-20	33.58	0.04	±2.5	PASS
			VN	-10	20.11	0.02	±2.5	PASS
			VN	0	35.71	0.04	±2.5	PASS
			VN	10	19.37	0.02	±2.5	PASS
			VN	20	35.68	0.04	±2.5	PASS
			VN	30	14.75	0.02	±2.5	PASS
			VN	40	31.22	0.04	±2.5	PASS
			VN	50	18.63	0.02	±2.5	PASS
GSM850	TM3	HCH	VN	-30	18.34	0.02	±2.5	PASS
			VN	-20	18.82	0.02	±2.5	PASS
			VN	-10	19.92	0.02	±2.5	PASS
			VN	0	14.01	0.02	±2.5	PASS
			VN	10	15.30	0.02	±2.5	PASS
			VN	20	16.43	0.02	±2.5	PASS
			VN	30	18.40	0.02	±2.5	PASS
			VN	40	16.14	0.02	±2.5	PASS
			VN	50	15.43	0.02	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM1900	TM1	LCH	VN	-30	-8.98	0.00	±2.5	PASS
			VN	-20	5.81	0.00	±2.5	PASS
			VN	-10	6.07	0.00	±2.5	PASS
			VN	0	-27.57	-0.01	±2.5	PASS
			VN	10	10.20	0.01	±2.5	PASS
			VN	20	14.08	0.01	±2.5	PASS
			VN	30	-30.28	-0.02	±2.5	PASS
			VN	40	12.79	0.01	±2.5	PASS
			VN	50	2.91	0.00	±2.5	PASS
GSM1900	TM1	MCH	VN	-30	-28.86	-0.02	±2.5	PASS
			VN	-20	0.06	0.00	±2.5	PASS
			VN	-10	0.19	0.00	±2.5	PASS
			VN	0	-17.89	-0.01	±2.5	PASS
			VN	10	2.65	0.00	±2.5	PASS
			VN	20	-0.97	0.00	±2.5	PASS
			VN	30	5.04	0.00	±2.5	PASS
			VN	40	4.39	0.00	±2.5	PASS
			VN	50	4.71	0.00	±2.5	PASS
GSM1900	TM1	HCH	VN	-30	30.54	0.02	±2.5	PASS
			VN	-20	7.36	0.00	±2.5	PASS
			VN	-10	5.42	0.00	±2.5	PASS
			VN	0	31.32	0.02	±2.5	PASS
			VN	10	11.17	0.01	±2.5	PASS
			VN	20	7.75	0.00	±2.5	PASS
			VN	30	26.80	0.01	±2.5	PASS
			VN	40	2.00	0.00	±2.5	PASS
			VN	50	13.04	0.01	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM1900	TM2	LCH	VN	-30	8.72	0.00	±2.5	PASS
			VN	-20	-6.33	0.00	±2.5	PASS
			VN	-10	16.08	0.01	±2.5	PASS
			VN	0	-16.40	-0.01	±2.5	PASS
			VN	10	11.04	0.01	±2.5	PASS
			VN	20	-7.17	0.00	±2.5	PASS
			VN	30	2.20	0.00	±2.5	PASS
			VN	40	-24.28	-0.01	±2.5	PASS
			VN	50	14.27	0.01	±2.5	PASS
GSM1900	TM2	MCH	VN	-30	15.76	0.01	±2.5	PASS
			VN	-20	18.40	0.01	±2.5	PASS
			VN	-10	18.21	0.01	±2.5	PASS
			VN	0	19.50	0.01	±2.5	PASS
			VN	10	14.27	0.01	±2.5	PASS
			VN	20	16.40	0.01	±2.5	PASS
			VN	30	6.84	0.00	±2.5	PASS
			VN	40	22.54	0.01	±2.5	PASS
			VN	50	10.98	0.01	±2.5	PASS
GSM1900	TM2	HCH	VN	-30	24.15	0.01	±2.5	PASS
			VN	-20	8.39	0.00	±2.5	PASS
			VN	-10	13.43	0.01	±2.5	PASS
			VN	0	10.59	0.01	±2.5	PASS
			VN	10	4.78	0.00	±2.5	PASS
			VN	20	7.62	0.00	±2.5	PASS
			VN	30	4.00	0.00	±2.5	PASS
			VN	40	-0.32	0.00	±2.5	PASS
			VN	50	7.17	0.00	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM1900	TM3	LCH	VN	-30	7.94	0.00	±2.5	PASS
			VN	-20	12.56	0.01	±2.5	PASS
			VN	-10	14.43	0.01	±2.5	PASS
			VN	0	11.46	0.01	±2.5	PASS
			VN	10	9.81	0.01	±2.5	PASS
			VN	20	9.04	0.00	±2.5	PASS
			VN	30	12.69	0.01	±2.5	PASS
			VN	40	9.10	0.00	±2.5	PASS
			VN	50	7.17	0.00	±2.5	PASS
GSM1900	TM3	MCH	VN	-30	3.58	0.00	±2.5	PASS
			VN	-20	-44.23	-0.02	±2.5	PASS
			VN	-10	-2.42	0.00	±2.5	PASS
			VN	0	-38.45	-0.02	±2.5	PASS
			VN	10	3.26	0.00	±2.5	PASS
			VN	20	-28.99	-0.02	±2.5	PASS
			VN	30	-4.49	0.00	±2.5	PASS
			VN	40	-27.09	-0.01	±2.5	PASS
			VN	50	3.36	0.00	±2.5	PASS
GSM1900	TM3	HCH	VN	-30	9.17	0.00	±2.5	PASS
			VN	-20	-0.32	0.00	±2.5	PASS
			VN	-10	4.88	0.00	±2.5	PASS
			VN	0	-4.10	0.00	±2.5	PASS
			VN	10	3.81	0.00	±2.5	PASS
			VN	20	-2.20	0.00	±2.5	PASS
			VN	30	1.19	0.00	±2.5	PASS
			VN	40	0.71	0.00	±2.5	PASS
			VN	50	0.26	0.00	±2.5	PASS

--- END---