



RF Test Report

Applicant : MANN HUMMEL FILTER TECHNOLOGY S.E.A. PTE. LTD.
Product Type : Senzit
Trade Name : SENZIT
Model Number : Senzit
Test Specification : FCC 47 CFR PART 22H
FCC 47 CFR PART 24E
ANSI/TIA-603-D 2010
Receive Date : Apr. 26, 2017
Test Period : Sep. 05 ~ Sep. 14, 2017
Issue Date : Oct. 02, 2017

Issue 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

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Sep. 19, 2017	Initial Issue	Nina Lin
01	Oct. 02, 2017	Revised report information.	Nina Lin



Verification of Compliance

Issued Date: Oct. 02, 2017

Applicant : MANN HUMMEL FILTER TECHNOLOGY S.E.A. PTE. LTD.
Product Type : Senzit
Trade Name : SENZIT
Model Number : Senzit
FCC ID : 2ANLX-SZT-1
EUT Rated Voltage : DC 9V~32V
Test Voltage : DC 10.2V / DC 12V / DC 13.8V
Applicable Standard : FCC 47 CFR PART 22H
FCC 47 CFR PART 24E
ANSI/TIA-603-D 2010
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
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<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. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Approved By : Fly Lu Reviewed By : Eric Ou Yang
(Manager) (Fly Lu) (Testing Engineer) (Eric Ou Yang)



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1 General Information

1.1. EUT Description

Applicant	MANN HUMMEL FILTER TECHNOLOGY S.E.A. PTE. LTD. Fusionopolis Symbiosis, #11-24, 3 Fusionopolis Way, S138633, Singapore			
Manufacturer	DAVISCOMMS (MALAYSIA) SDN.BHD. PLOT 324A, LORONG PERINDUSTRIAN BUKIT MINYAK 20, MK13, PENANG SCIENCE PARK,14100 SIMPANG AMPAT,PULAU PINANG.			
Product Type	Senzit			
Trade Name	SENZIT			
Model Number	Senzit			
FCC ID	2ANLX-SZT-1			
IMEI No.	357042067181280			
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
Channel Control	Auto			
Antenna information	Type		Max. Gain (dBi)	
	Chip Antenan		GSM/GPRS/EGPRS 850	3.3
			GSM/GPRS/EGPRS 1900	3.64
Operate Temp. Range	-25 ~ 80 °C			

Frequency Band	Max. RF Output Power (W)	E.R.P. / E.I.R.P. (W)	
GSM 850	1.791	1.742	(E.R.P.)
GPRS 850	1.714	1.656	(E.I.R.P.)
EGPRS 850	0.995	0.555	(E.I.R.P.)
GSM 1900	0.904	0.664	(E.R.P.)
GPRS 1900	0.871	0.649	(E.I.R.P.)
EGPRS 1900	0.740	0.383	(E.I.R.P.)

Frequency Band	Occupied Bandwidth (MHz)	Emission Designator
GSM 850	0.24359	244KGXW
GPRS 850	0.25000	250KG7W
EGPRS 850	0.24519	245KG7W
GSM 1900	0.24679	247KGXW
GPRS 1900	0.24840	248KG7W
EGPRS 1900	0.24679	247KG7W

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: EGPRS 850 Link Mode
Mode 4: EGPRS 1900 Link Mode

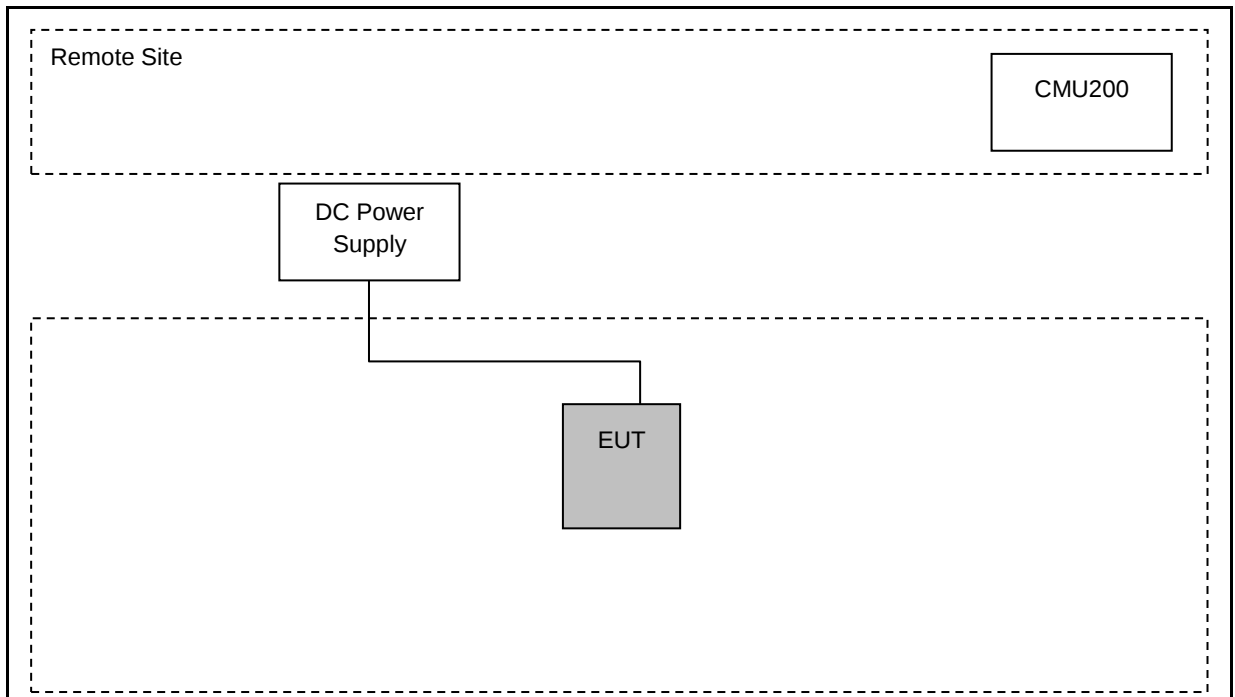
Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

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 Exercise Software

1	Setup the EUT and Base Station (CMU200) as shown on 1.4.
2	Turn on the power of all equipment.

1.4. Configuration of Test System Details





1.5. Test Instruments

For Conducted

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Cycle
Universal Radio Communication Tester	R & S	CMU200	112387	03/02/2017	1 year
Spectrum Analyzer	Agilent	N9030A	MY53120541	12/22/2016	1 year
Power divider	Agilent	87302C	3239A00760	N.C.R.	-----
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	04/17/2017	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

For Spurious Radiation

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Cycle
RF Pre-selector	Agilent	N9039A	MY46520256	04/24/2017	1 year
Spectrum Analyzer	Agilent	E4446A	MY46180578	04/24/2017	1 year
Pre Amplifier	Agilent	8449B	3008A02237	10/11/2016	1 year
Pre Amplifier	Agilent	8447D	2944A11119	01/12/2017	1 year
Broadband Antenna	Schwarzbeck	VULB9168	416	10/13/2016	1 year
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/20/2017	1 year
Horn Antenna (18~40GHz)	ETS	3116	00086467	09/11/2017	1 year
Microwave Cable	EMCI	EMC102-KM-KM-14000	151001	02/20/2017	1 year
Microwave Cable	EMCI	EMC-104-SM-SM-14000	140202	02/20/2017	1 year
Microwave Cable	EMCI	EMC104-SM-SM-600	140301	02/20/2017	1 year
Signal Generator	Agilent	E8257D	MY44320425	03/02/2017	1 year
Test Site	ATL	TE01	888001	08/29/2017	1 year

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

1.6. Test Site Environment

Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

Test Setting Condition		
L.V.	Low Voltage	DC 10.2V
N.V.	Normal Voltage	DC 12V
H.V.	High Voltage	DC 13.8V
L.T.	Low Temperature	-25 °C
N.T.	Normal Temperature	+25 °C
H.T.	High Temperature	+80 °C

1.7. Summary of Test Result

FCC Rule	Description	Result
§2.1046	Conducted Output Power	Pass
§22.913(a)(2)	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

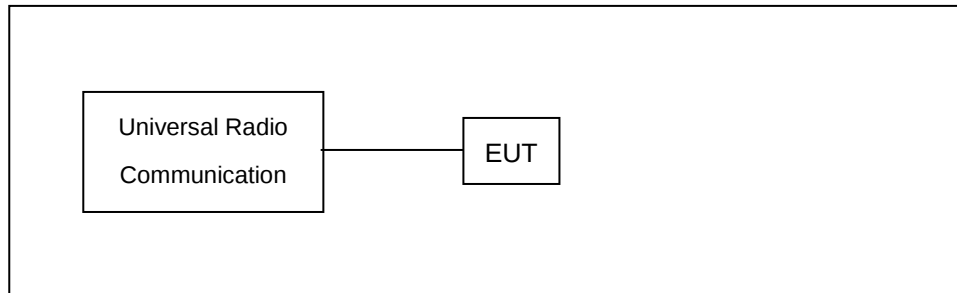
2 Test Results

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.

■ **Uncertainty**

The measurement uncertainty is defined as for RF output power measurement is 1.2 dB.

2.2. Effective Radiated Power / Equivalent Isotropic Radiated Power Test

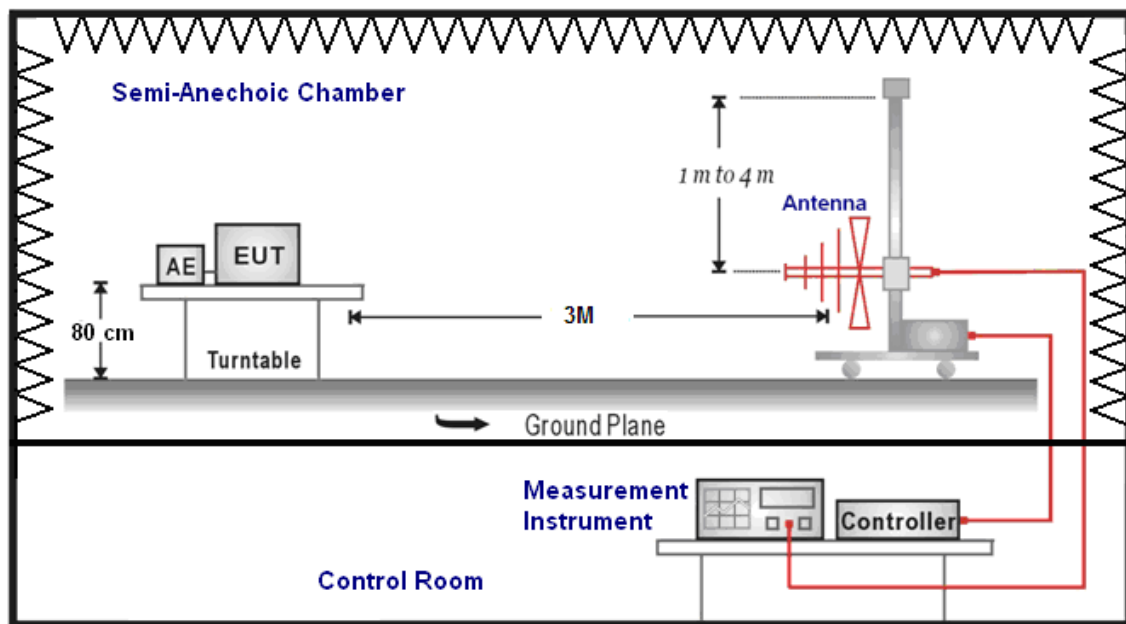
■ Limit

For FCC Part 22.913(a)(2): The E.R.P. of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

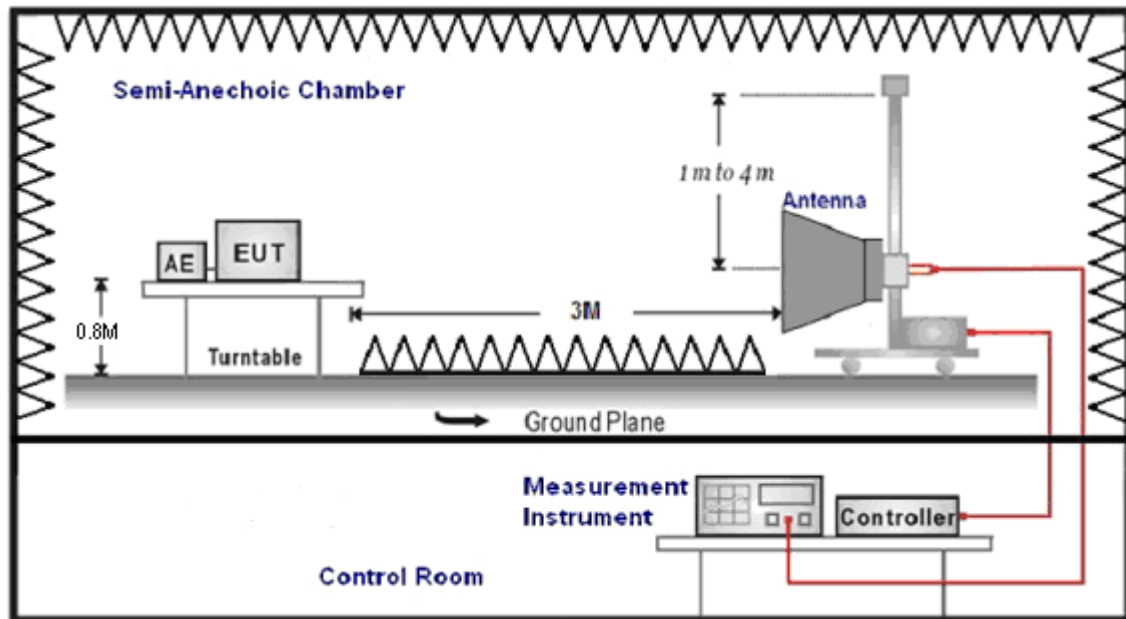
For FCC Part 24.232(c): The E.I.R.P. of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

■ Setup

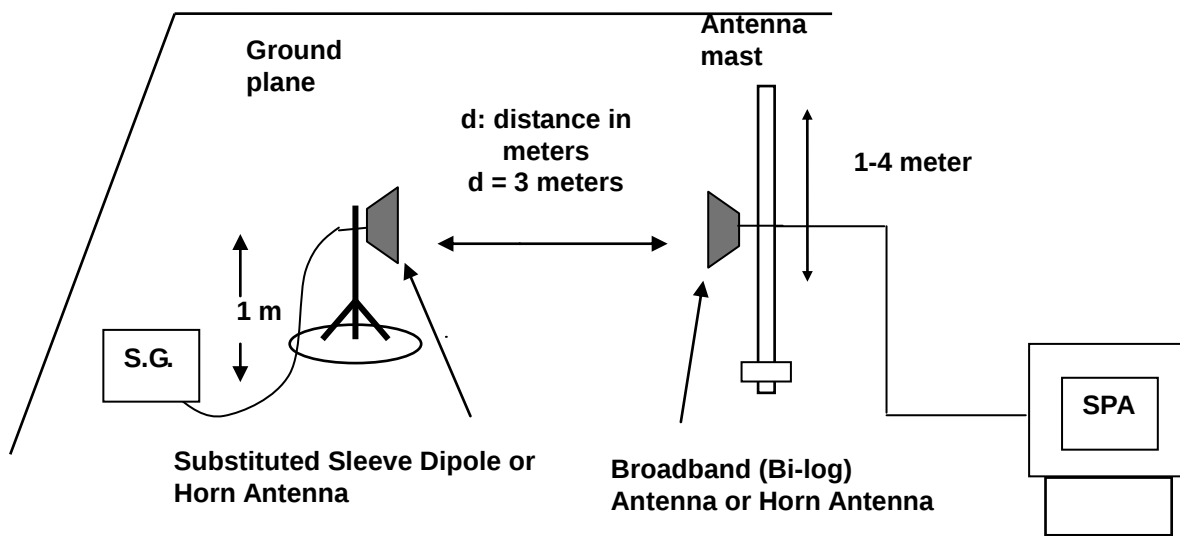
Below 1 GHz



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).
- b. E.I.R.P power measurement. In the semi-anechoic chamber, EUT placed on the 0.8m 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 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. 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.
- d. $E.I.R.P. = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$
- e. $E.R.P. = E.I.R.P. - 2.15 \text{ dB}$

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

■ Uncertainty

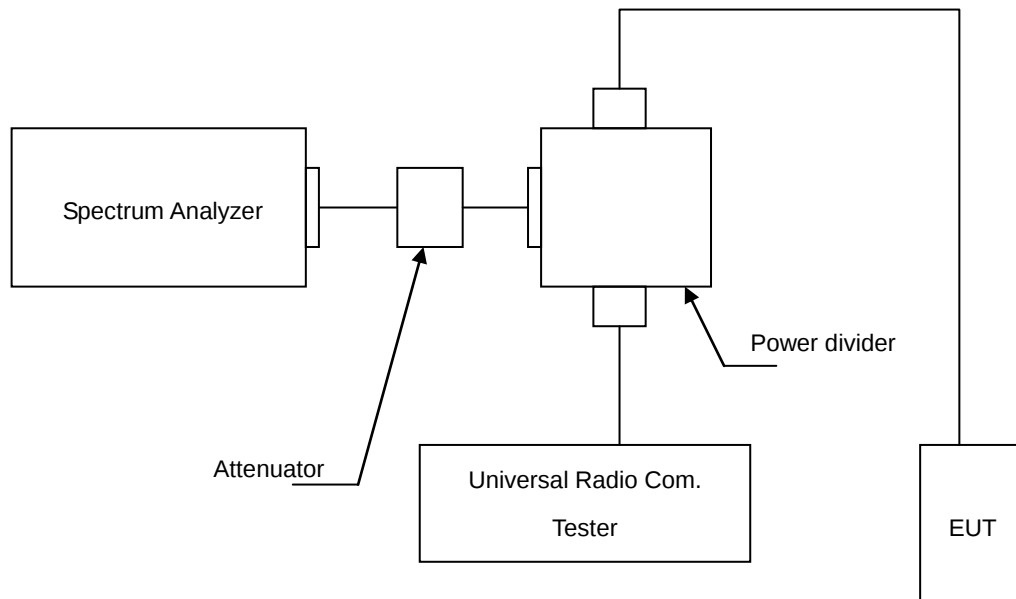
The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is $\pm 3.072 \text{ dB}$.

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.

■ Uncertainty

The measurement uncertainty is defined as $\pm 10\text{Hz}$

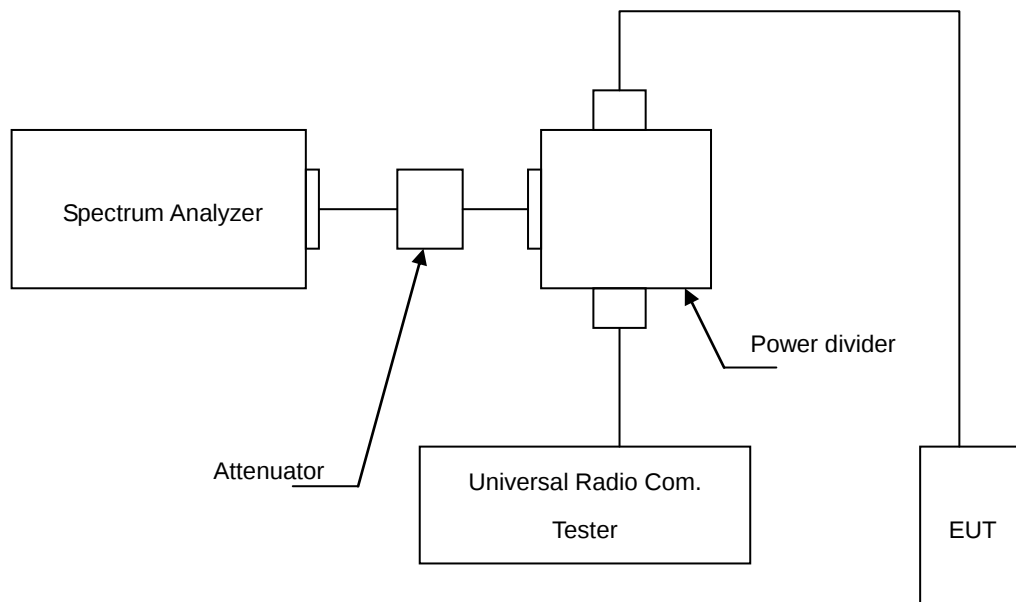
2.4. Band Edge Test

■ 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.

■ Uncertainty

The measurement uncertainty is defined as $\pm 10\text{Hz}$

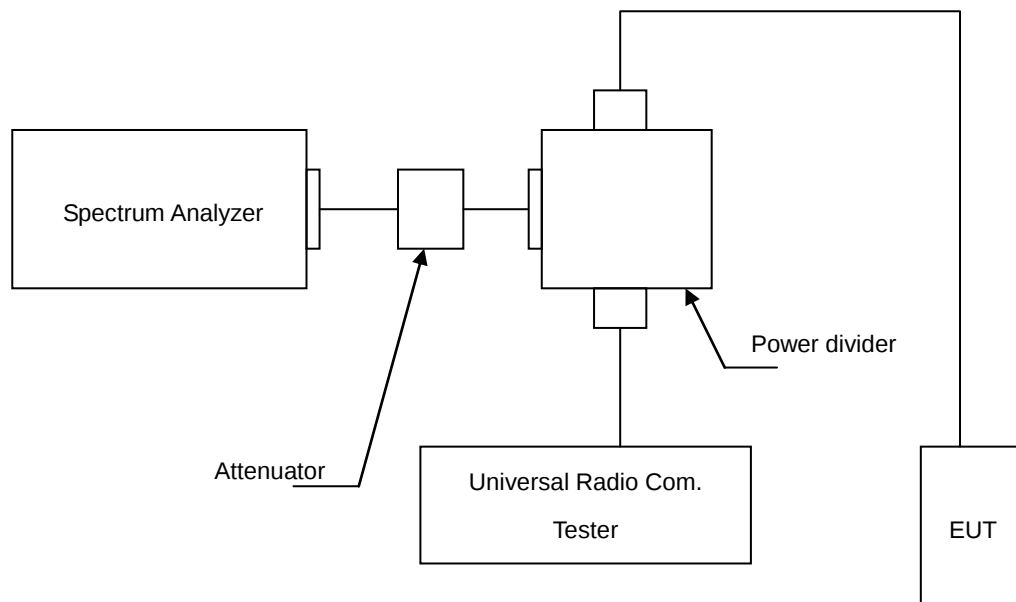
2.5. Conducted Spurious Emission Test

■ Limit

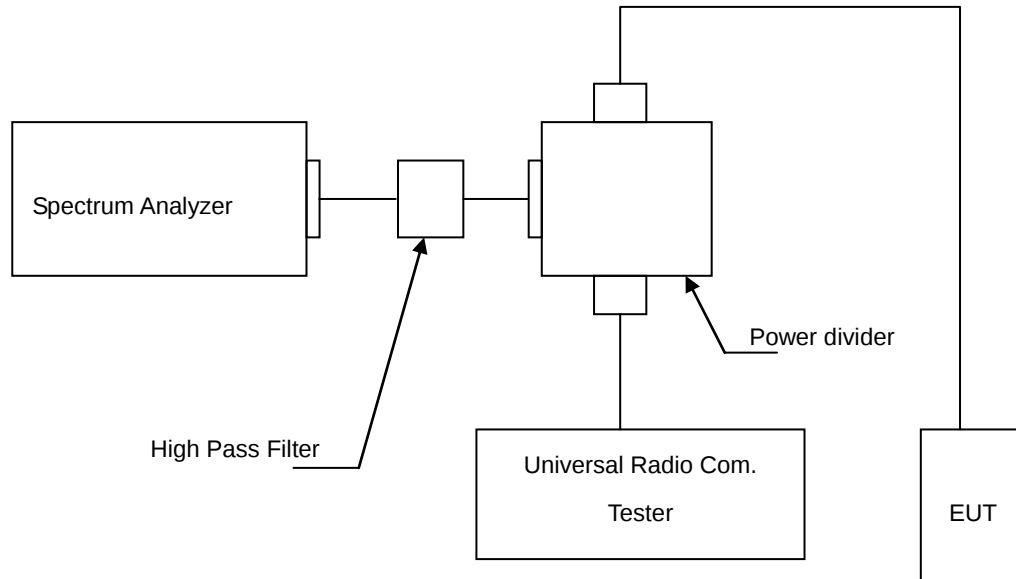
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

■ Setup

Below 2.8GHz



Above 2.8GHz



■ 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.

■ Uncertainty

The measurement uncertainty is evaluated as ± 2.24 dB.

2.6. Field Strength of Spurious Radiation Test

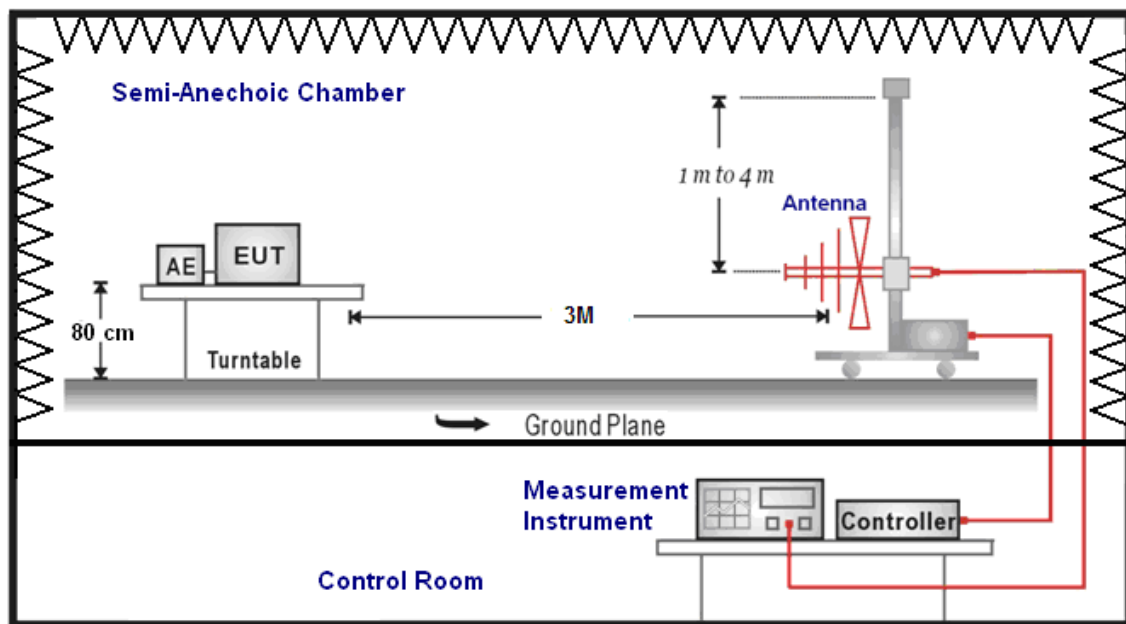
■ Limit

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.

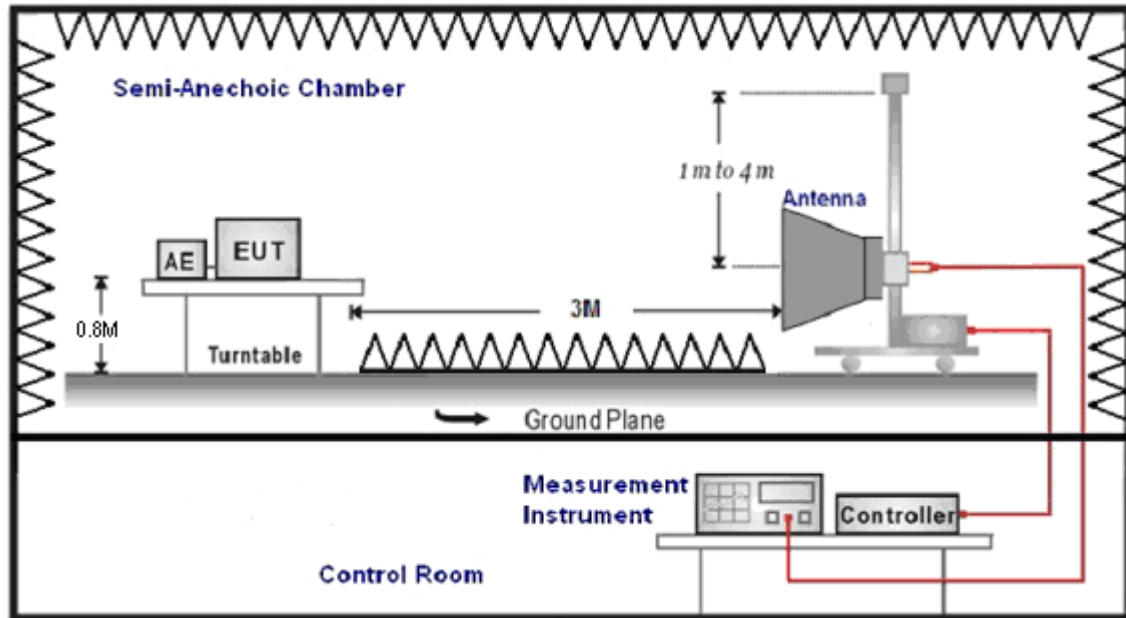
It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

■ Setup

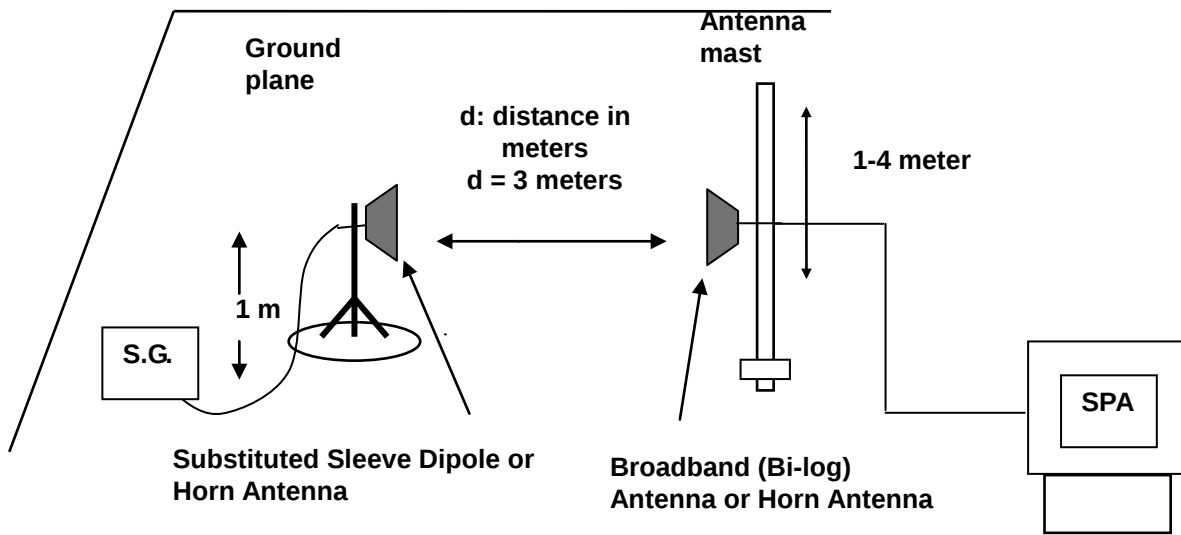
Below 1GHz



Above 1GHz



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).
- b. E.I.R.P power measurement. In the semi-anechoic chamber, EUT placed on the 0.8m 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 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. 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.
- d. $E.I.R.P. = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$
- e. $E.R.P. = E.I.R.P. - 2.15 \text{ dB}$

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

■ Uncertainty

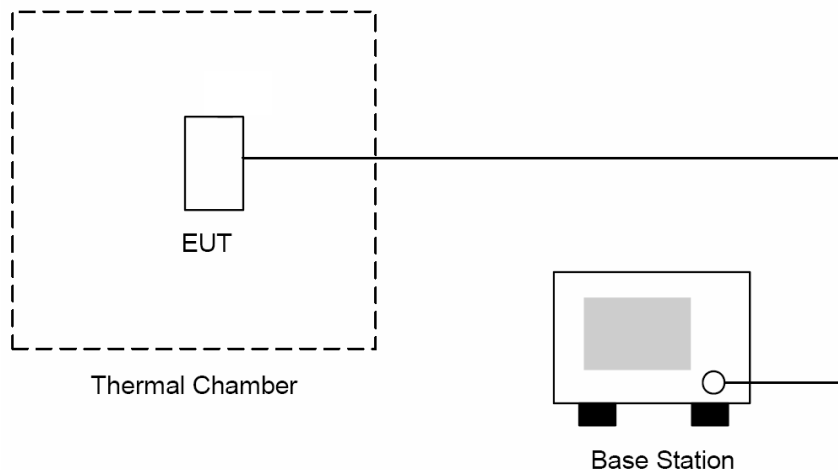
The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is $\pm 3.072 \text{ dB}$.

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 $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) 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°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute.
3. With power OFF, the temperature was raised in 10°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 $25 \pm 5^{\circ}\text{C}$ 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.

■ Uncertainty

The measurement uncertainty is defined as for Frequency Stability (Temperature Variation) measurement is $\pm 10\text{Hz}$.



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,EGPRS,8PSK modulation

Appendix A: RF Output Power

Bands	Modulation Type	Test Mode	Frequency (MHz)	Burst Average Power		Peak Power	
				(dBm)	(W)	(dBm)	(W)
GSM 850	GMSK	1Down1Up Duty factor 1/8	824.2	32.34	1.714	32.53	1.791
			836.6	32.29	1.694	32.46	1.762
			848.8	32.31	1.702	32.49	1.774
GPRS 850 Multi Class :12 Max Up:4 Max Down:4 Sum:5	GMSK	4Down1Up Duty factor 1/8	824.2	32.18	1.652	32.34	1.714
			836.6	32.10	1.622	32.29	1.694
			848.8	32.13	1.633	32.31	1.702
		3Down2Up Duty factor 2/8	824.2	29.86	0.968	30.01	1.002
			836.6	29.77	0.948	29.91	0.979
			848.8	29.79	0.953	29.93	0.984
		2Down3Up Duty factor 3/8	824.2	28.05	0.638	28.22	0.664
			836.6	27.99	0.630	28.17	0.656
			848.8	27.97	0.627	28.15	0.653
		1Down4Up Duty factor 4/8	824.2	26.60	0.457	26.80	0.479
			836.6	26.55	0.452	26.73	0.471
			848.8	26.55	0.452	26.74	0.472
EGPRS 850 Multi Class :12 Max Up:4 Max Down:4 Sum:5	8PSK	4Down1Up Duty factor 1/8	824.2	26.72	0.470	29.98	0.995
			836.6	26.67	0.465	29.92	0.982
			848.8	26.62	0.459	29.88	0.973
		3Down2Up Duty factor 2/8	824.2	23.98	0.250	27.22	0.527
			836.6	23.94	0.248	27.19	0.524
			848.8	23.87	0.244	27.12	0.515
		2Down3Up Duty factor 3/8	824.2	22.26	0.168	25.50	0.355
			836.6	22.19	0.166	25.46	0.352
			848.8	22.16	0.164	25.44	0.350
		1Down4Up Duty factor 4/8	824.2	20.84	0.121	24.13	0.259
			836.6	20.69	0.117	23.94	0.248
			848.8	20.71	0.118	23.97	0.249

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

Bands	Modulation Type	Test Mode	Frequency (MHz)	Burst Average Power		Peak Power	
				(dBm)	(W)	(dBm)	(W)
PCS 1900	GMSK	1Down1Up Duty factor 1/8	1850.2	29.31	0.853	29.49	0.889
			1880.0	29.36	0.863	29.56	0.904
			1909.8	29.34	0.859	29.51	0.893
GPRS 1900 Multi Class :12 Max Up:4 Max Down:4 Sum:5	GMSK	4Down1Up Duty factor 1/8	1850.2	29.15	0.822	29.32	0.855
			1880.0	29.22	0.836	29.40	0.871
			1909.8	29.17	0.826	29.34	0.859
		3Down2Up Duty factor 2/8	1850.2	26.60	0.457	26.76	0.474
			1880.0	26.62	0.459	26.78	0.476
			1909.8	26.56	0.453	26.74	0.472
		2Down3Up Duty factor 3/8	1850.2	24.79	0.301	24.96	0.313
			1880.0	24.82	0.303	25.00	0.316
			1909.8	24.75	0.299	24.94	0.312
		1Down4Up Duty factor 4/8	1850.2	23.38	0.218	23.59	0.229
			1880.0	23.43	0.220	23.63	0.231
			1909.8	23.46	0.222	23.67	0.233
EGPRS 1900 Multi Class :12 Max Up:4 Max Down:4 Sum:5	8PSK	4Down1Up Duty factor 1/8	1850.2	25.46	0.352	28.69	0.740
			1880.0	25.39	0.346	28.65	0.733
			1909.8	25.43	0.349	28.68	0.738
		3Down2Up Duty factor 2/8	1850.2	22.57	0.181	25.80	0.380
			1880.0	22.46	0.176	25.69	0.371
			1909.8	22.51	0.178	25.76	0.377
		2Down3Up Duty factor 3/8	1850.2	20.87	0.122	24.13	0.259
			1880.0	20.72	0.118	23.99	0.251
			1909.8	20.83	0.121	24.11	0.258
		1Down4Up Duty factor 4/8	1850.2	19.89	0.097	23.16	0.207
			1880.0	19.84	0.096	23.12	0.205
			1909.8	19.88	0.097	23.13	0.206

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

Appendix B: Effective Radiated Power / Equivalent Isotropic Radiated Power

Band	Modulation	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	E.R.P.		Limit (W)
						(dBm)	(W)	
GSM 850	GMSK	824.2	H	23.59	8.74	32.33	1.710	< 7
			V	21.93	8.74	30.67	1.167	< 7
		836.6	H	23.34	8.95	32.29	1.694	< 7
			V	21.43	8.95	30.38	1.091	< 7
		848.8	H	23.28	9.13	32.41	1.742	< 7
			V	21.17	9.13	30.30	1.072	< 7
Band	Modulation	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	E.I.R.P.		Limit (W)
						(dBm)	(W)	
GSM 1900	GMSK	1850.2	H	20.14	8.01	28.15	0.653	< 2
			V	18.56	8.01	26.57	0.454	< 2
		1880.0	H	20.01	8.12	28.13	0.650	< 2
			V	18.19	8.12	26.31	0.428	< 2
		1909.8	H	19.97	8.25	28.22	0.664	< 2
			V	17.95	8.26	26.21	0.418	< 2

Band	Modulation	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	E.R.P.		Limit (W)
						(dBm)	(W)	
GPRS 850	GMSK	824.2	H	23.32	8.74	32.06	1.607	< 7
			V	21.21	8.74	29.95	0.989	< 7
		836.6	H	23.09	8.95	32.04	1.600	< 7
			V	20.98	8.95	29.93	0.984	< 7
		848.8	H	23.06	9.13	32.19	1.656	< 7
			V	20.91	9.13	30.04	1.009	< 7
Band	Modulation	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	E.I.R.P.		Limit (W)
						(dBm)	(W)	
GPRS 1900	GMSK	1850.2	H	20.02	8.01	28.03	0.635	< 2
			V	18.38	8.01	26.39	0.436	< 2
		1880.0	H	19.90	8.12	28.02	0.634	< 2
			V	18.00	8.12	26.12	0.409	< 2
		1909.8	H	19.86	8.26	28.12	0.649	< 2
			V	17.82	8.26	26.08	0.406	< 2

Band	Modulation	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	E.R.P.		Limit (W)
						(dBm)	(W)	
EGPRS 850	8PSK	824.2	H	18.64	8.74	27.38	0.547	< 7
			V	17.04	8.74	25.78	0.378	< 7
		836.6	H	18.48	8.95	27.43	0.553	< 7
			V	16.72	8.95	25.67	0.369	< 7
		848.8	H	18.31	9.13	27.44	0.555	< 7
			V	16.40	9.13	25.53	0.357	< 7
Band	Modulation	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	E.I.R.P.		Limit (W)
						(dBm)	(W)	
EGPRS 1900	8PSK	1850.2	H	17.82	8.01	25.83	0.383	< 2
			V	15.91	8.01	23.92	0.247	< 2
		1880.0	H	17.04	8.12	25.16	0.328	< 2
			V	15.43	8.12	23.55	0.226	< 2
		1909.8	H	17.29	8.26	25.55	0.359	< 2
			V	14.99	8.26	23.25	0.211	< 2

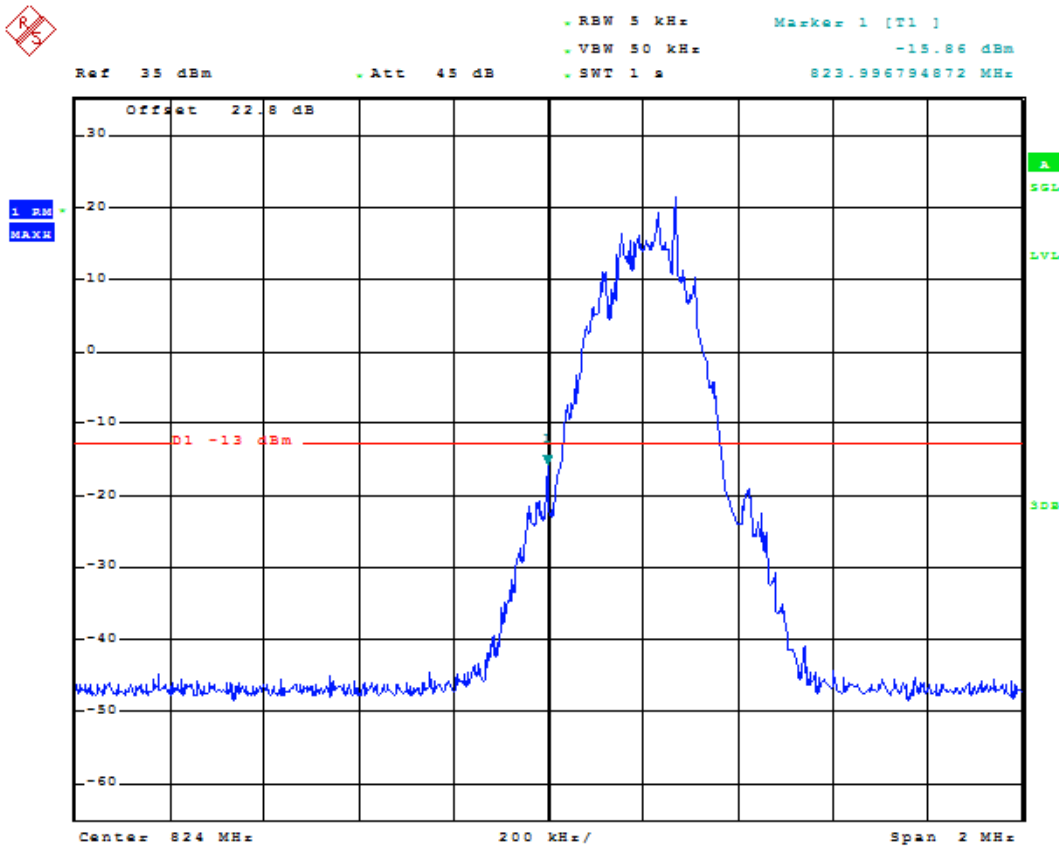
Appendix C: Emission Bandwidth & Occupied Bandwidth

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
GSM850	GSM/TM1	LCH	243.59	298.08	PASS
		MCH	243.59	298.08	PASS
		HCH	241.99	298.08	PASS
	GSM/TM2	LCH	248.40	306.09	PASS
		MCH	250.00	312.50	PASS
		HCH	243.59	314.10	PASS
	GSM/TM3	LCH	245.19	301.28	PASS
		MCH	241.99	296.47	PASS
		HCH	243.59	302.88	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
GSM1900	GSM/TM1	LCH	245.19	312.50	PASS
		MCH	245.19	312.50	PASS
		HCH	246.79	314.10	PASS
	GSM/TM2	LCH	248.40	317.31	PASS
		MCH	245.19	310.90	PASS
		HCH	245.19	296.47	PASS
	GSM/TM3	LCH	246.79	304.49	PASS
		MCH	245.19	302.88	PASS
		HCH	243.59	299.68	PASS

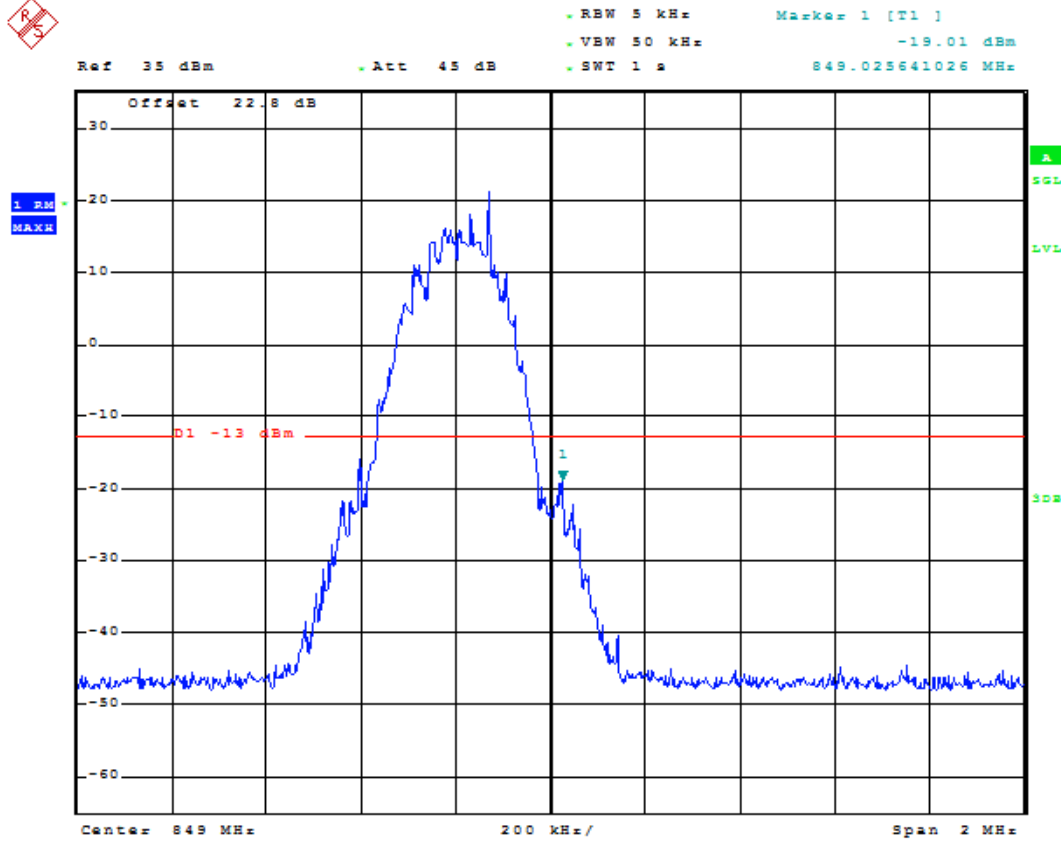
Appendix D: Band Edge

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



Date: 3.OCT.2017 12:49:20

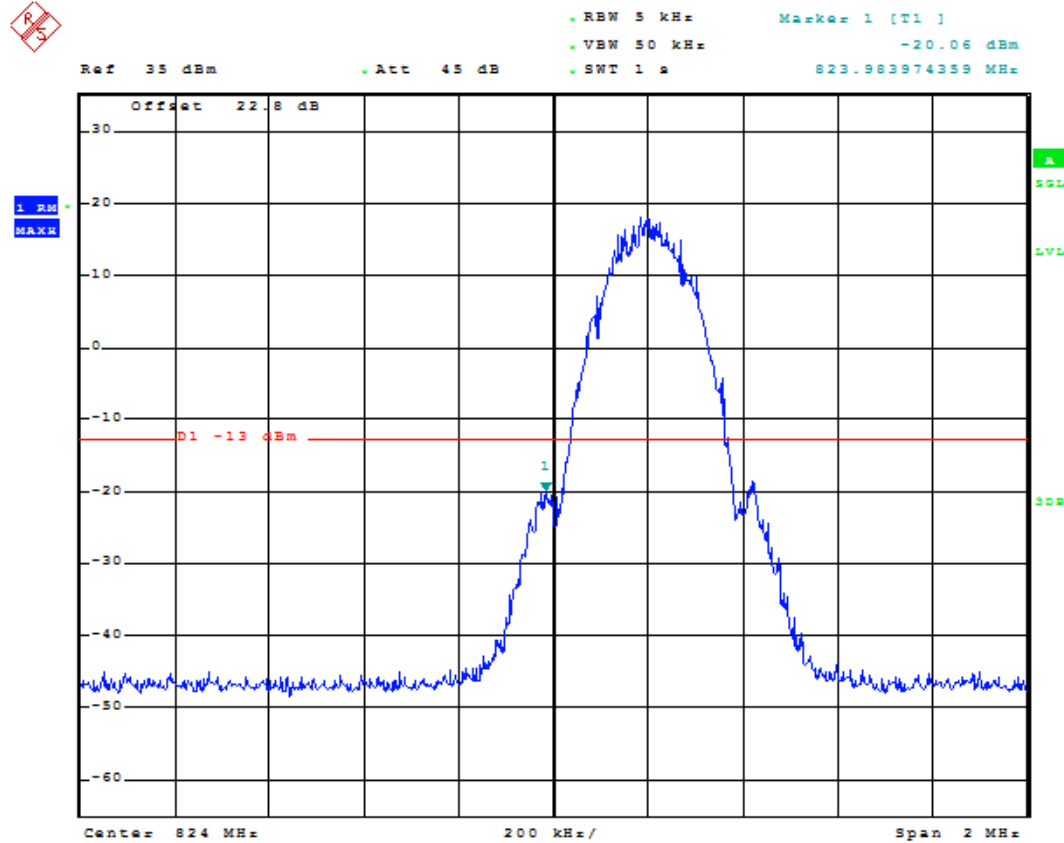
1.1.1.2 Test Channel=HCH



Date: 3.OCT.2017 12:49:52

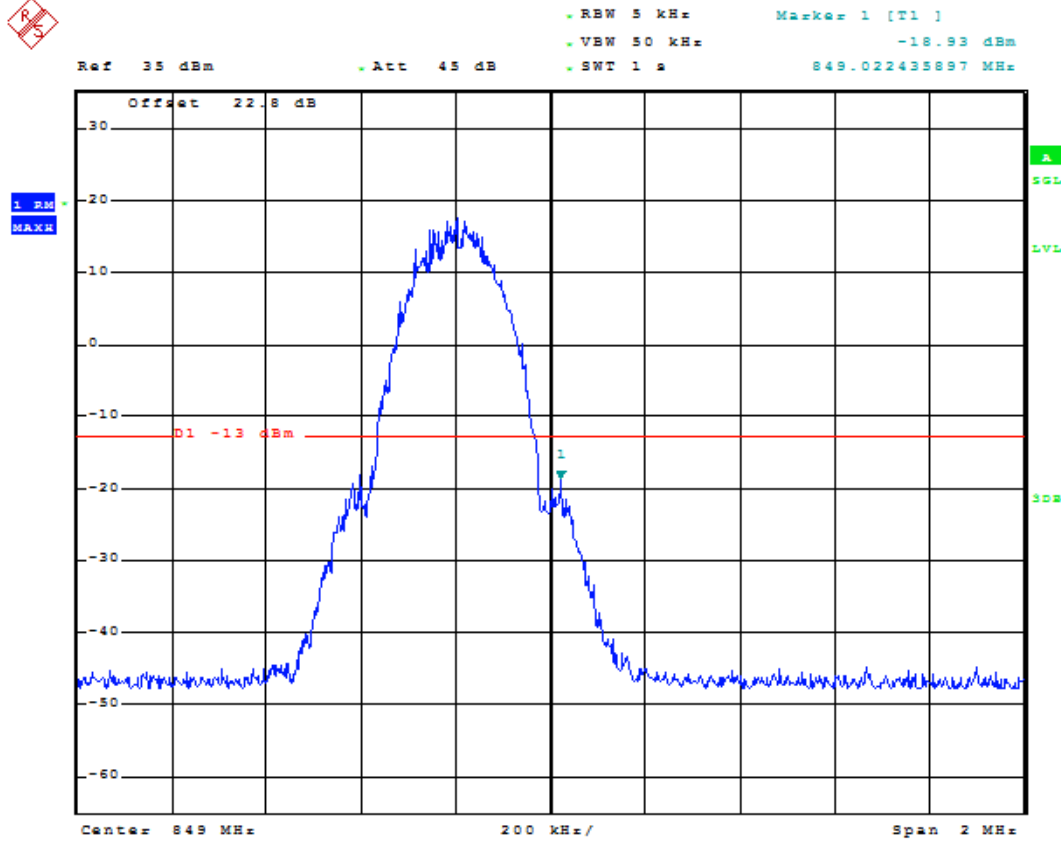
1.1.2 Test Mode=GSM/TM2

1.1.2.1 Test Channel=LCH



Date: 3.OCT.2017 13:35:52

1.1.2.2 Test Channel=HCH

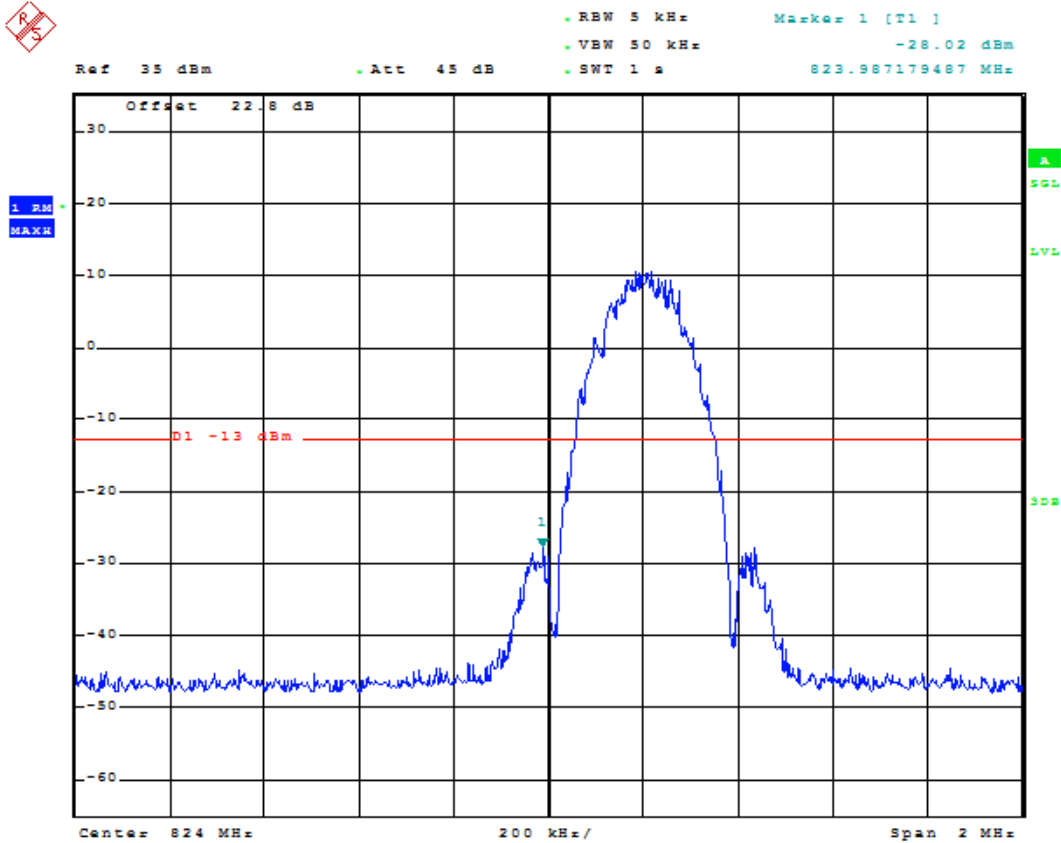


Date: 3.OCT.2017 13:36:28



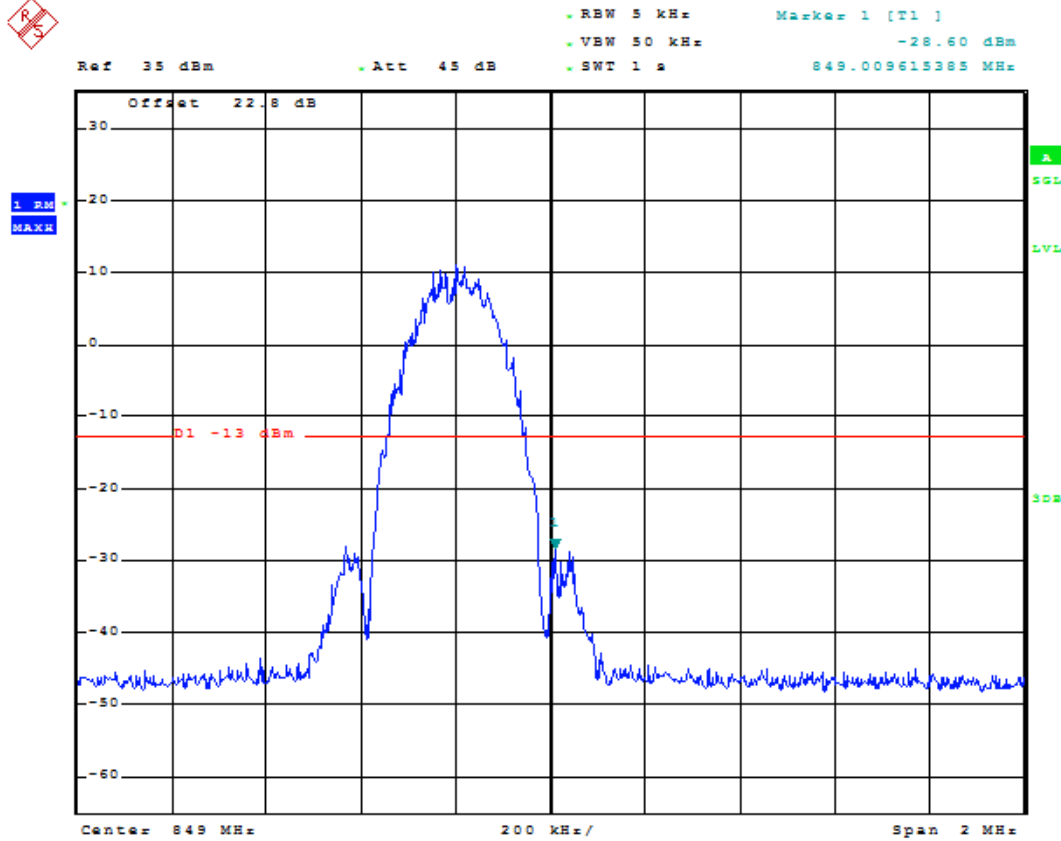
1.1.3 Test Mode=GSM/TM3

1.1.3.1 Test Channel=LCH

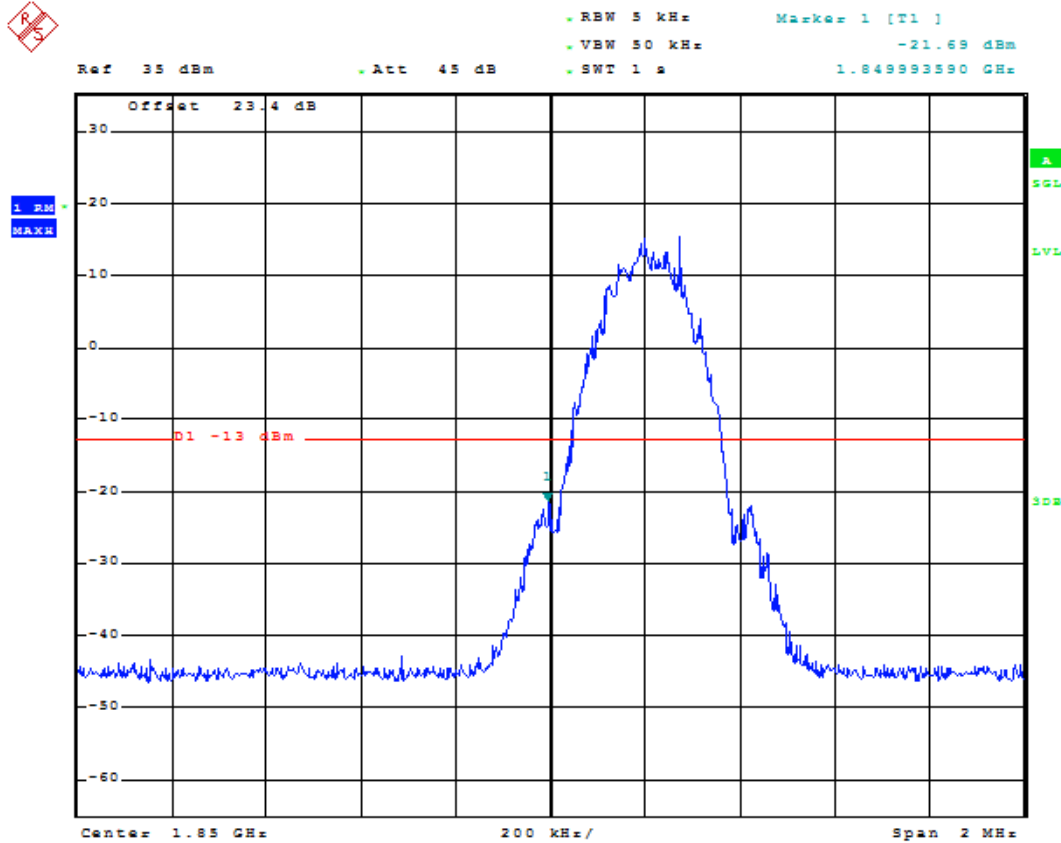
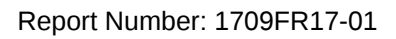


Date: 3.OCT.2017 14:07:13

1.1.3.2 Test Channel=HCH

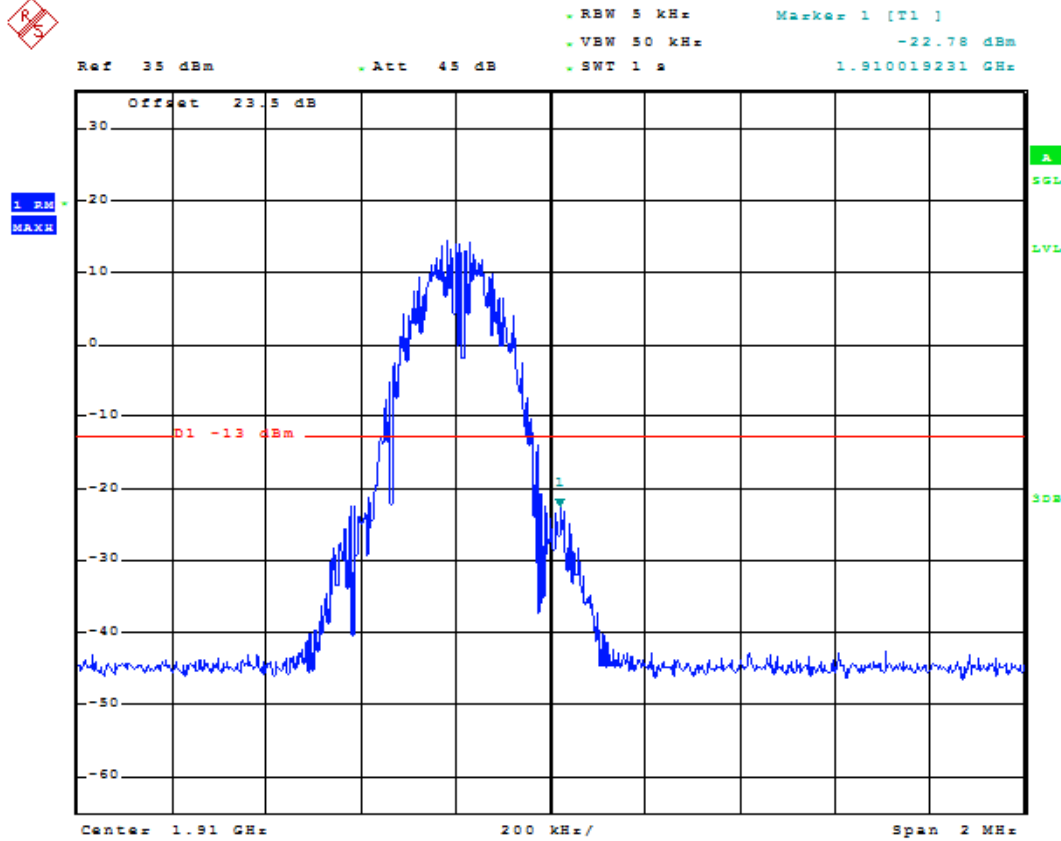


Date: 3.OCT.2017 14:07:49



Date: 3.OCT.2017 13:01:57

1.2.1.2 Test Channel=HCH

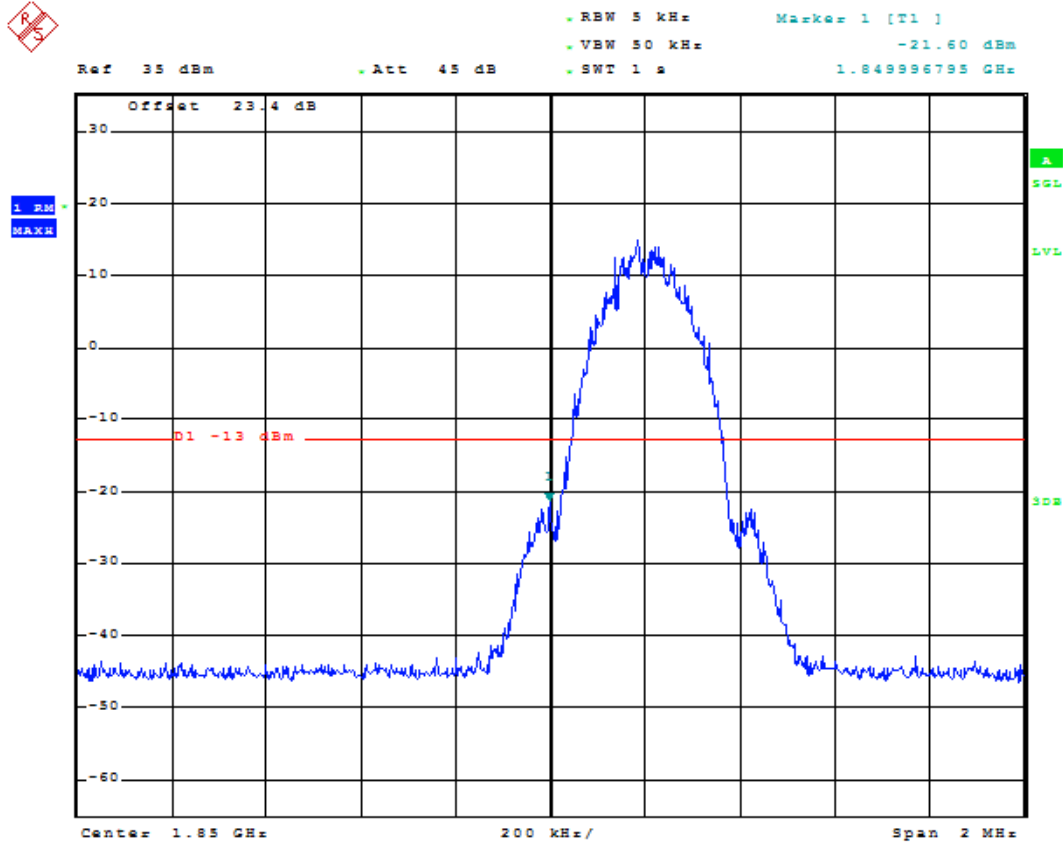


Date: 3.OCT.2017 13:02:29



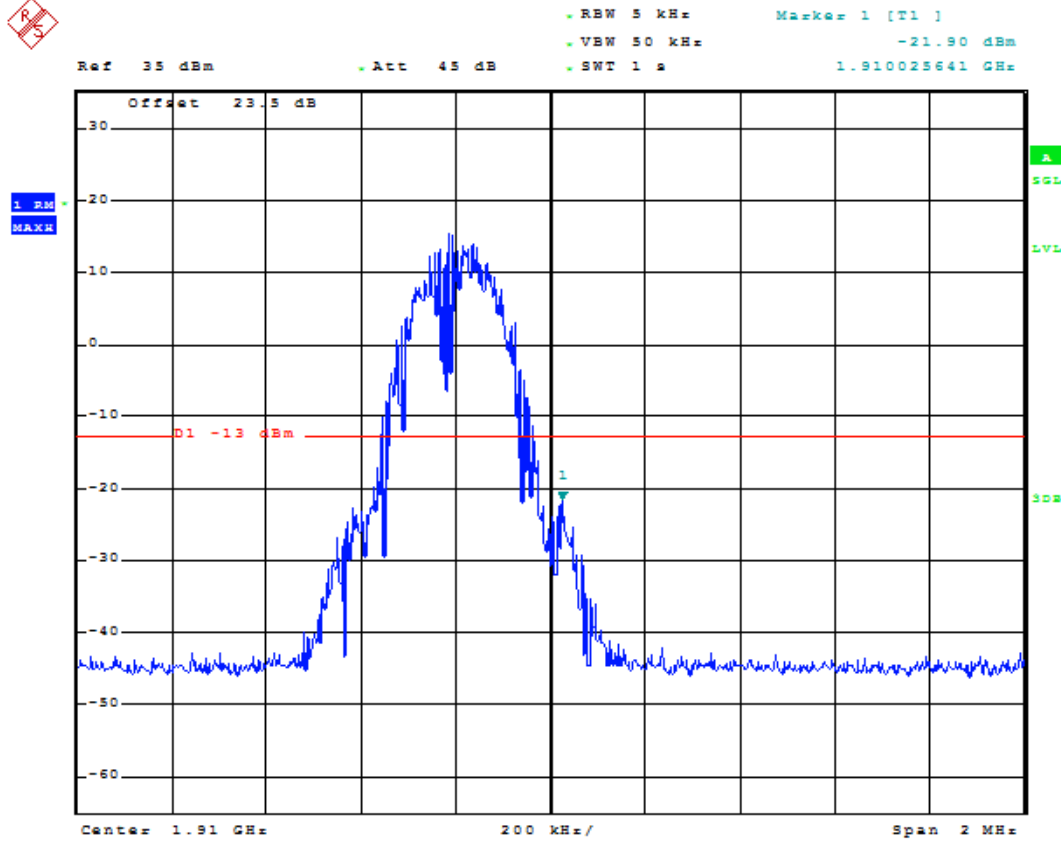
1.2.2 Test Mode=GSM/TM2

1.2.2.1 Test Channel=LCH

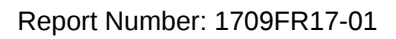


Date: 3.OCT.2017 13:50:33

1.2.2.2 Test Channel=HCH



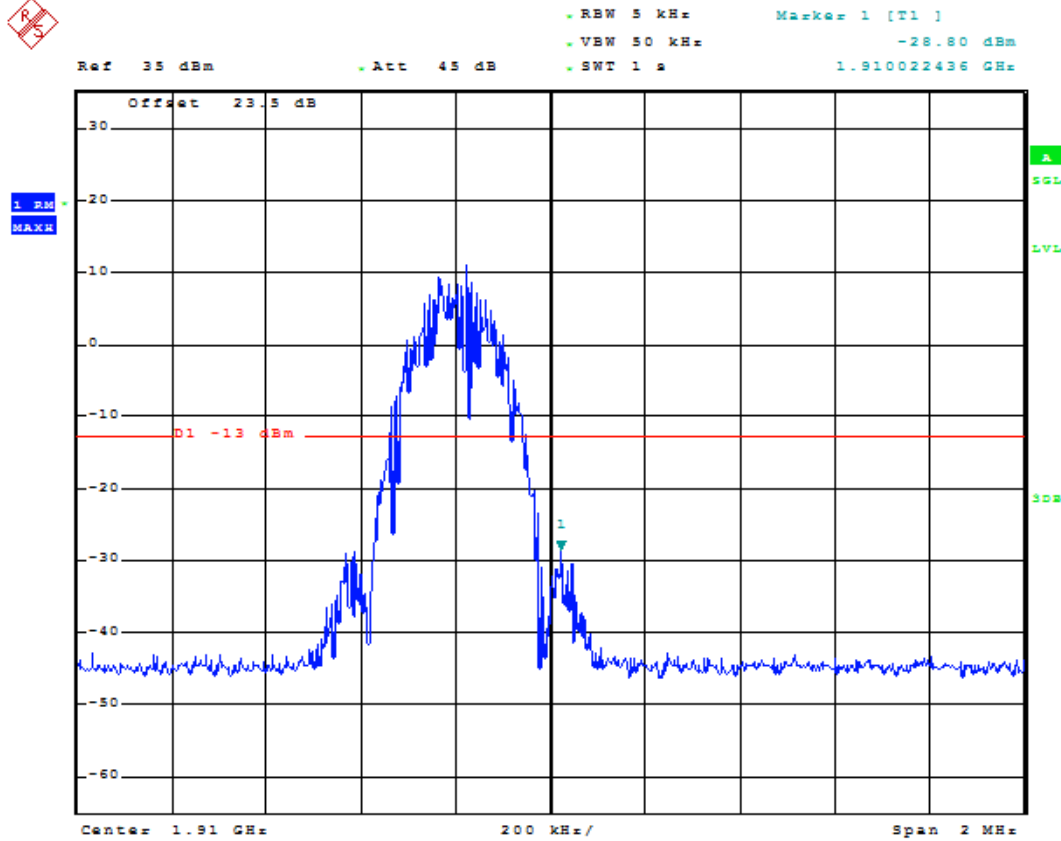
Date: 3.OCT.2017 13:51:09



1.2.3.1 Test Channel=LCH

Date: 3.OCT.2017 14:21:26

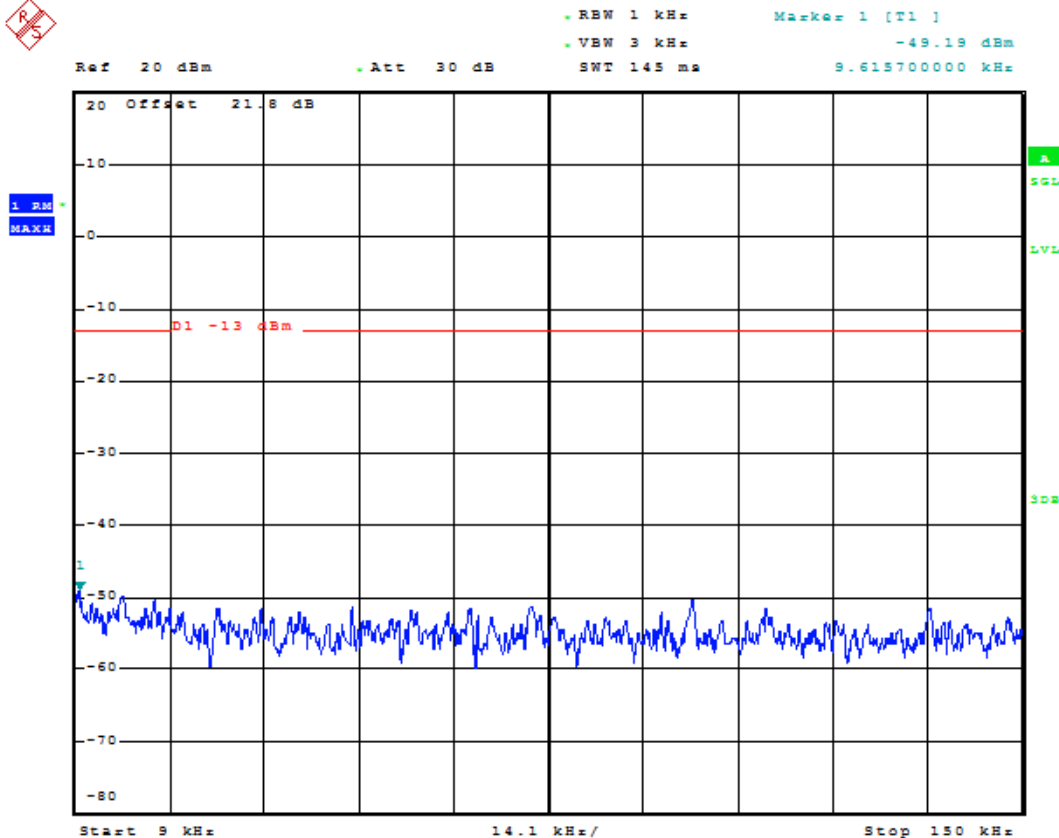
1.2.3.2 Test Channel=HCH



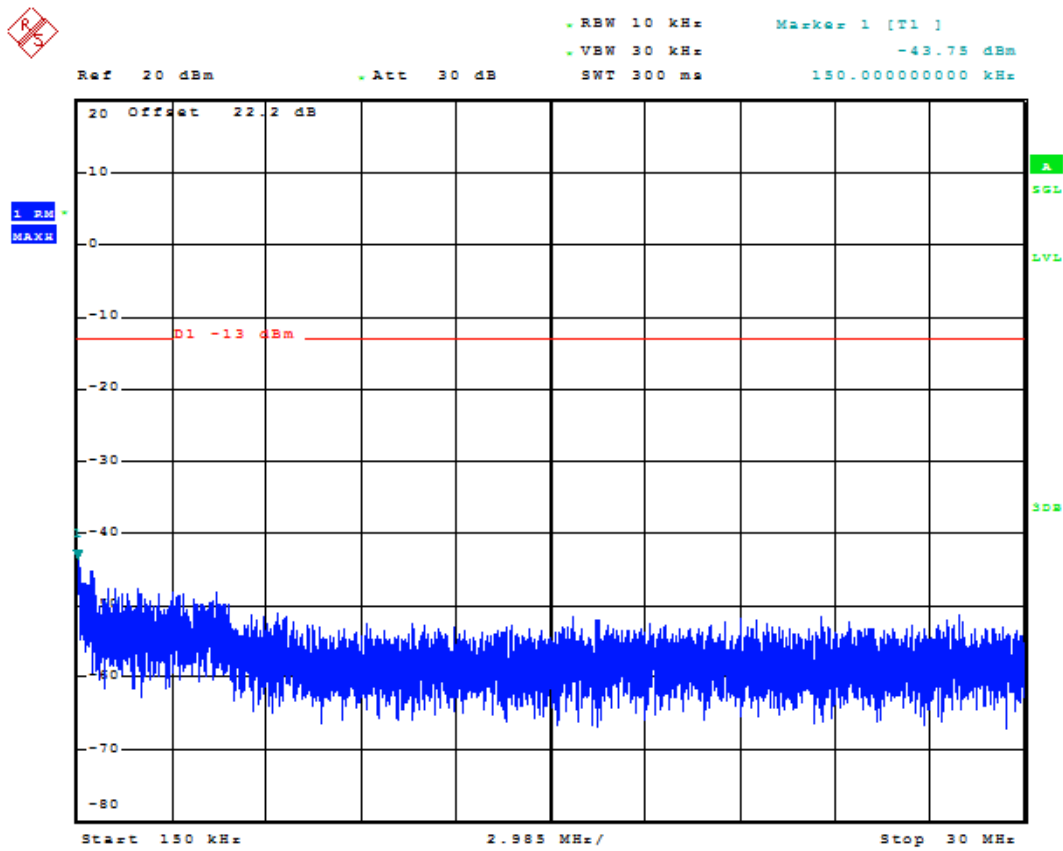
Date: 3.OCT.2017 14:22:01

Appendix E: Conducted Spurious Emission

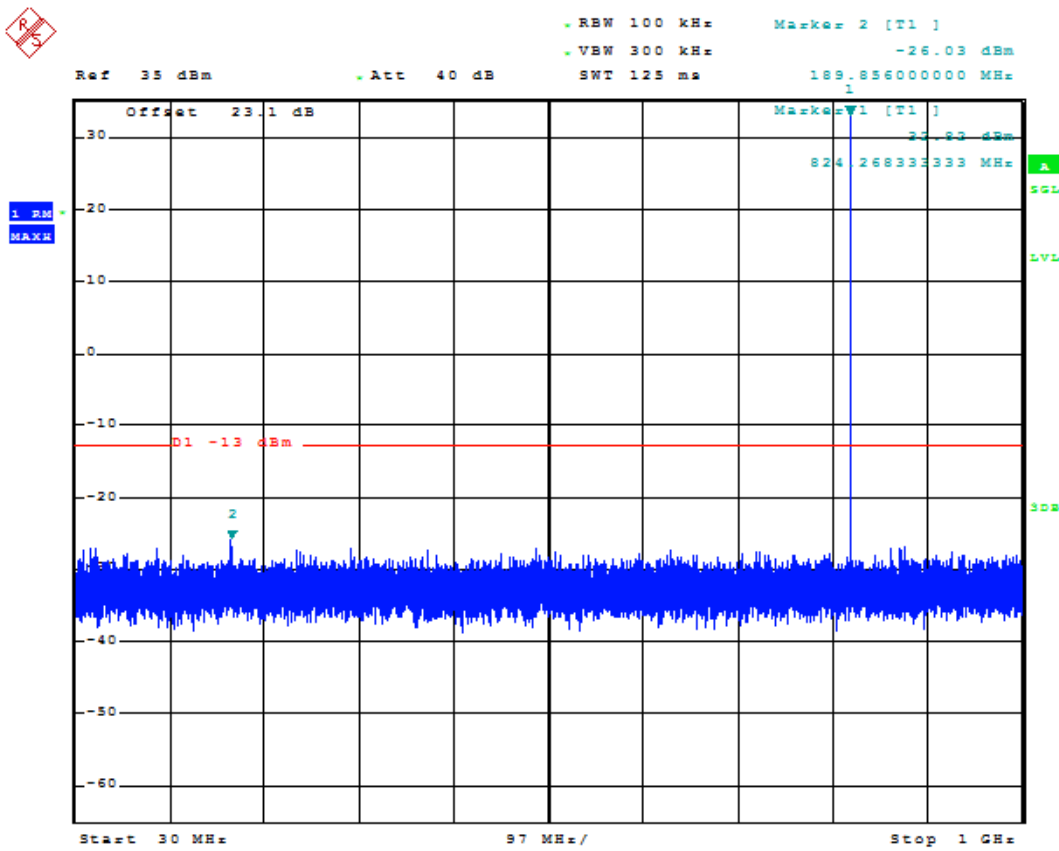
- 1 For GSM
- 1.1 Test Band=GSM850
- 1.1.1 Test Mode=GSM/TM1
- 1.1.1.1 Test Channel=LCH



Date: 3.OCT.2017 12:50:18



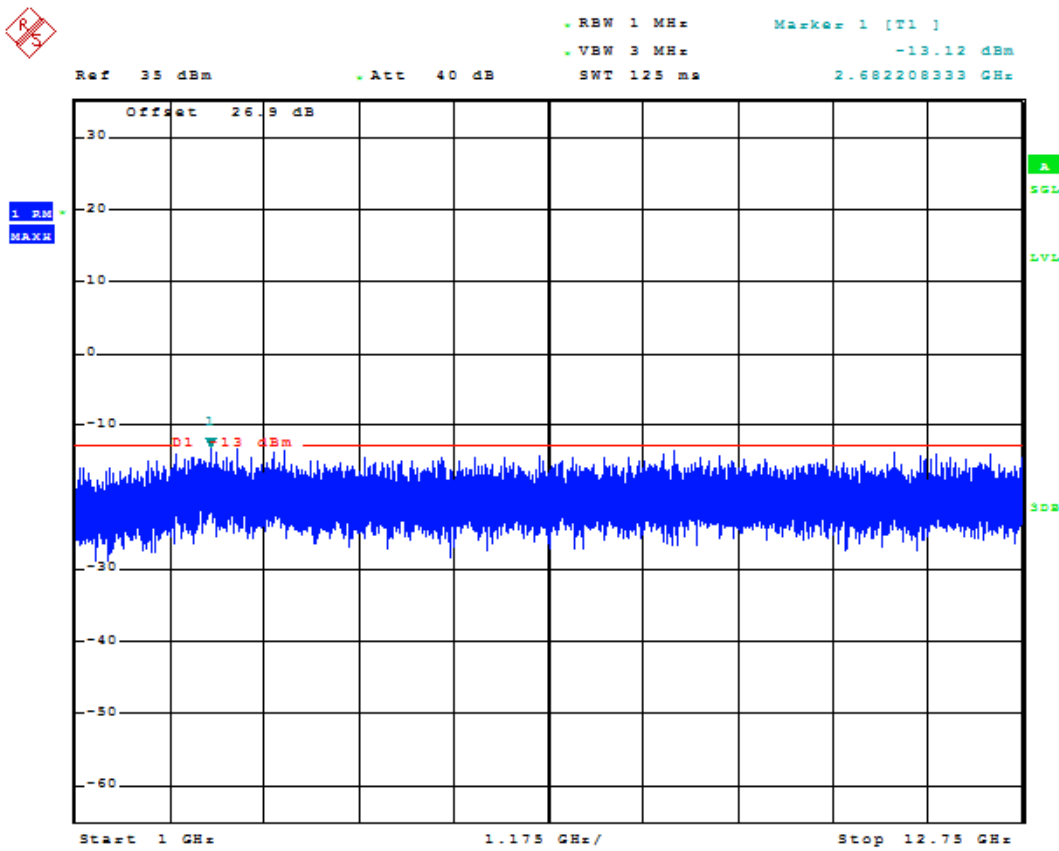
Date: 3.OCT.2017 12:50:28



Date: 3.OCT.2017 12:50:39



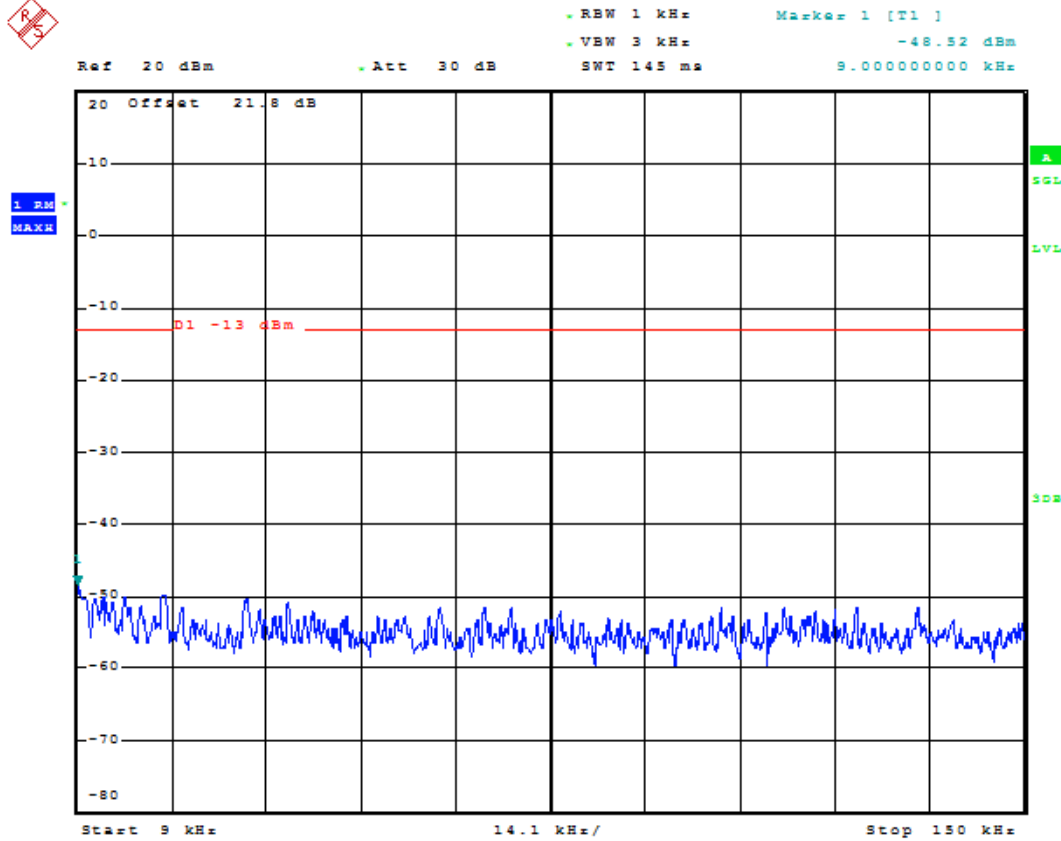
Report Number: 1709FR17-01



Date: 3.OCT.2017 12:50:49



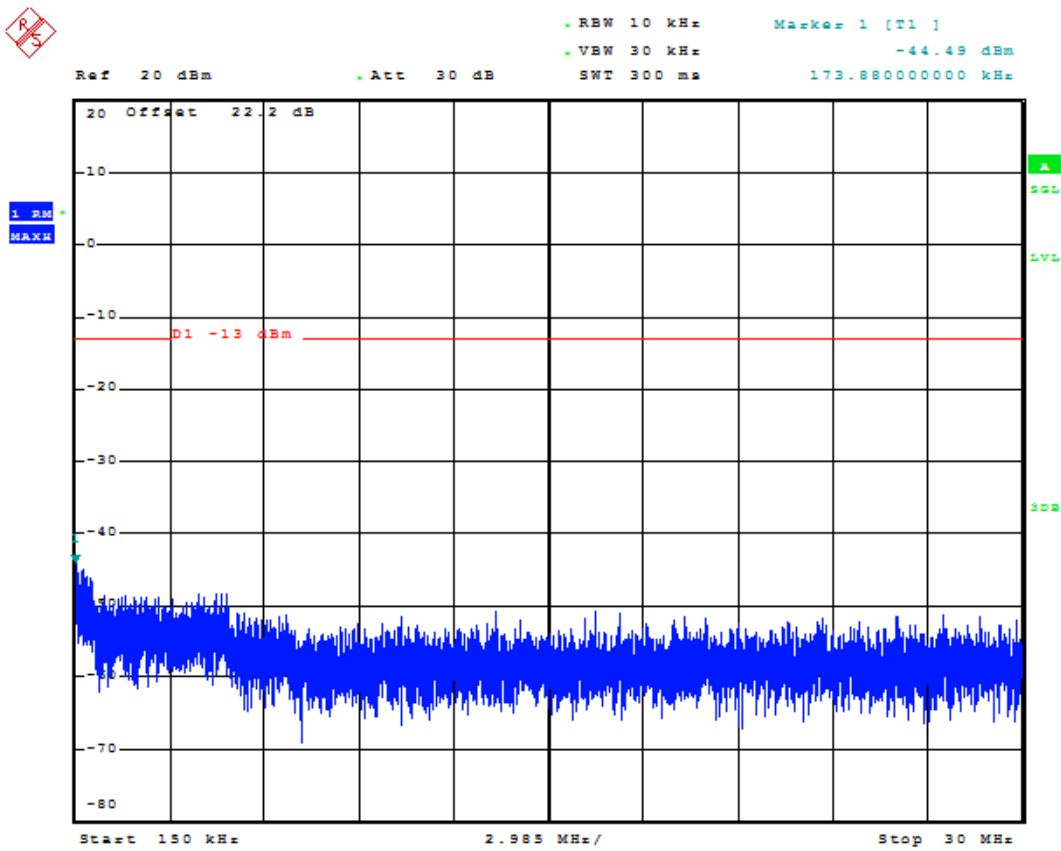
1.1.1.2 Test Channel=MCH



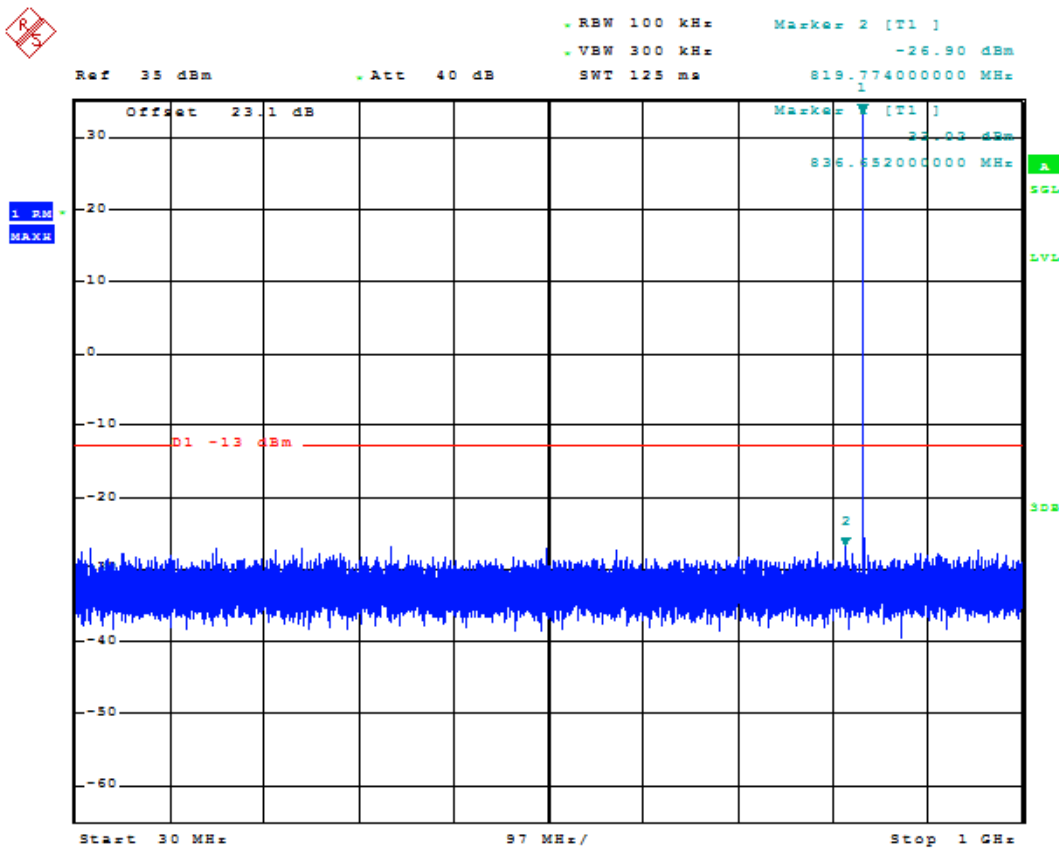
Date: 3.OCT.2017 12:51:06



Report Number: 1709FR17-01



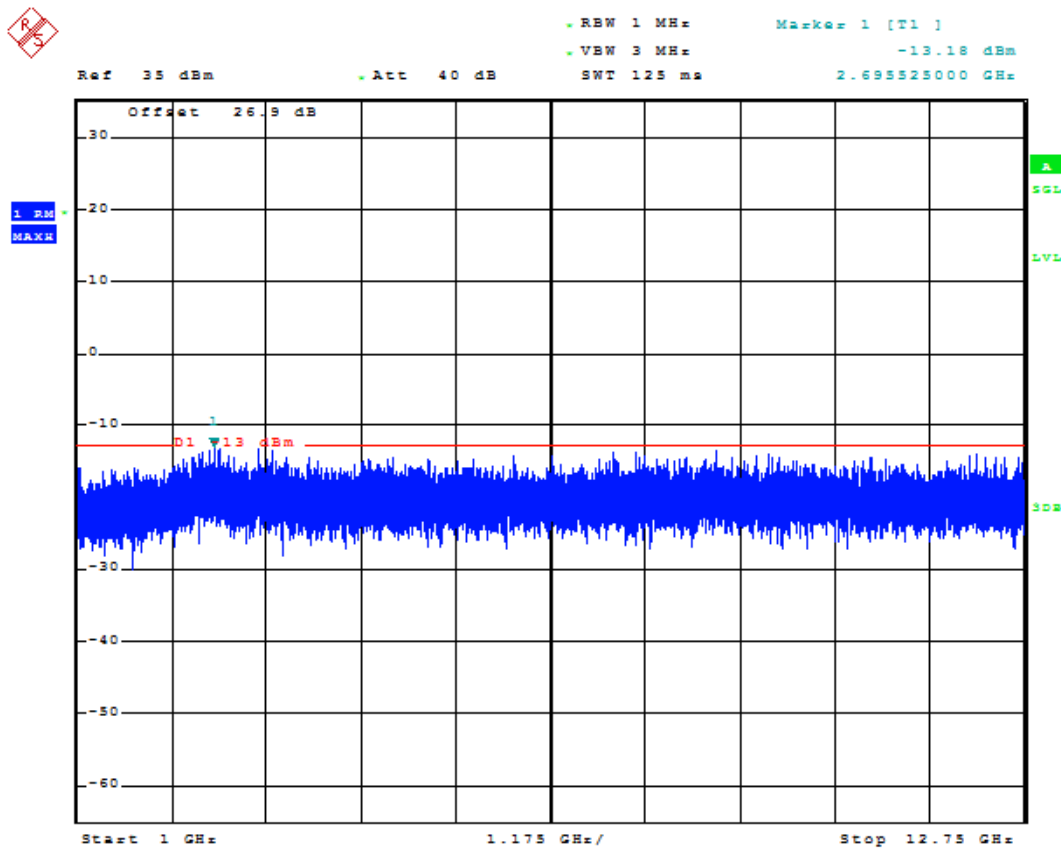
Date: 3.OCT.2017 12:51:16



Date: 3.OCT.2017 12:51:28



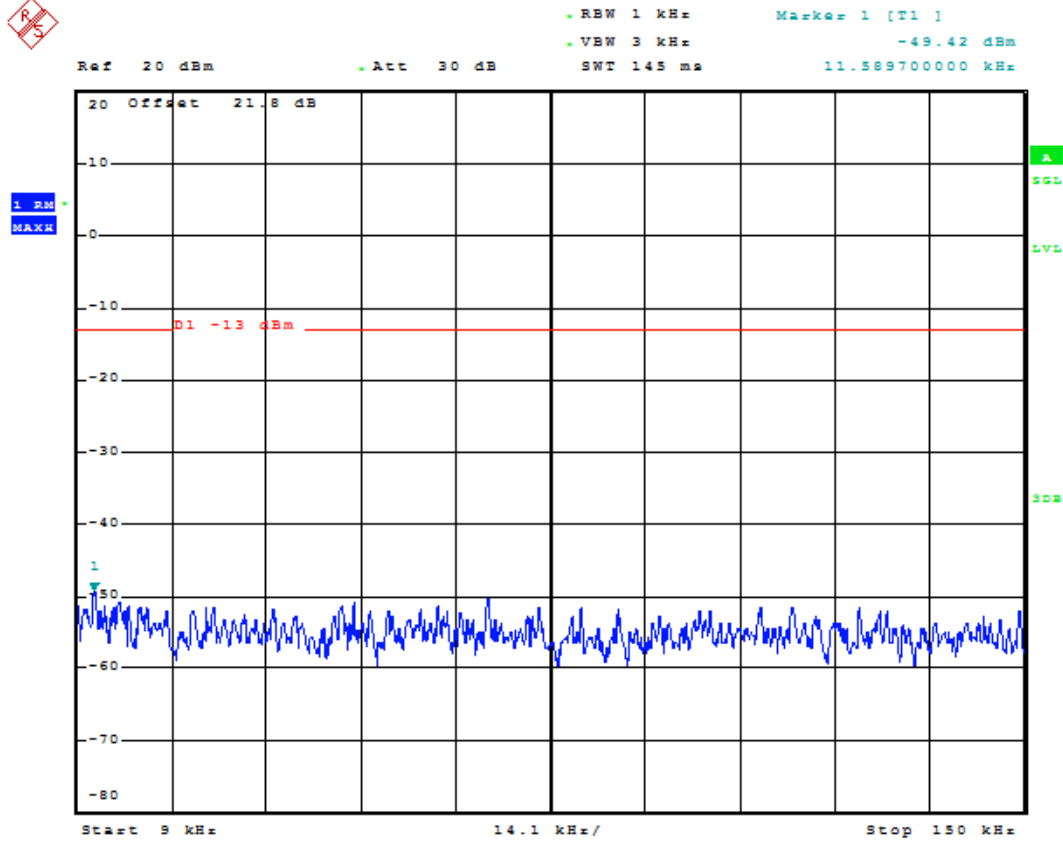
Report Number: 1709FR17-01



Date: 3.OCT.2017 12:51:38



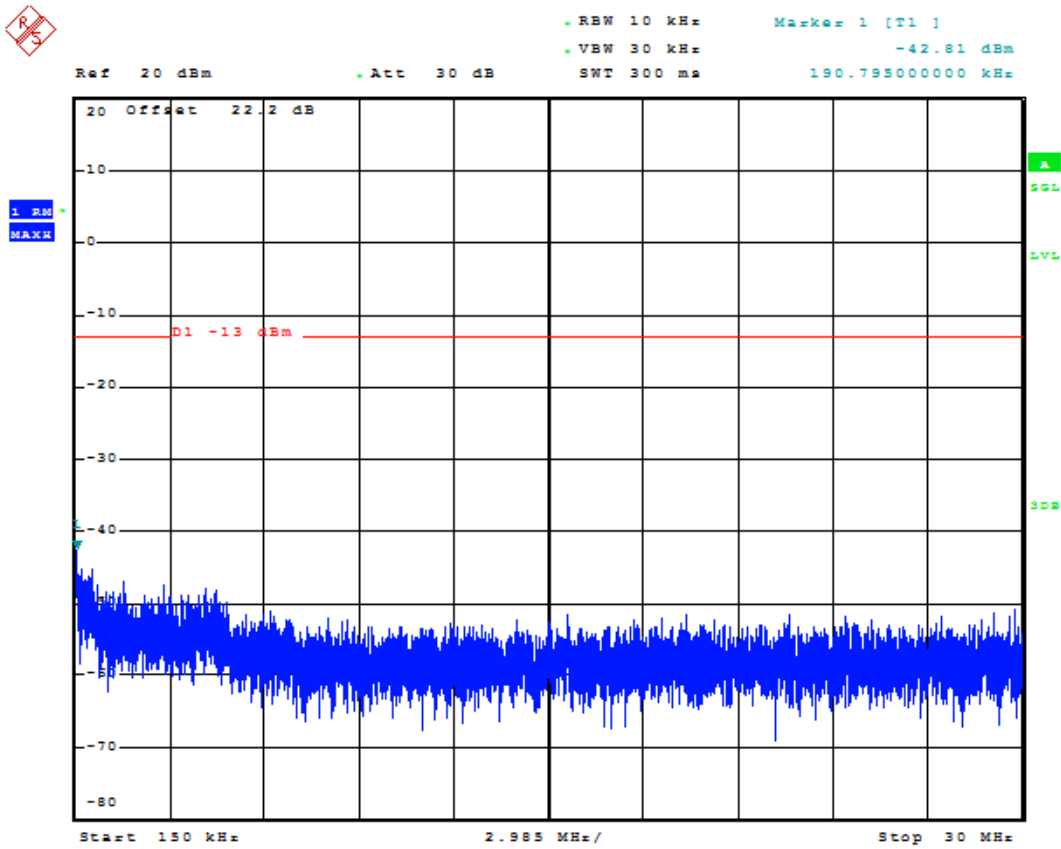
1.1.1.3 Test Channel=HCH



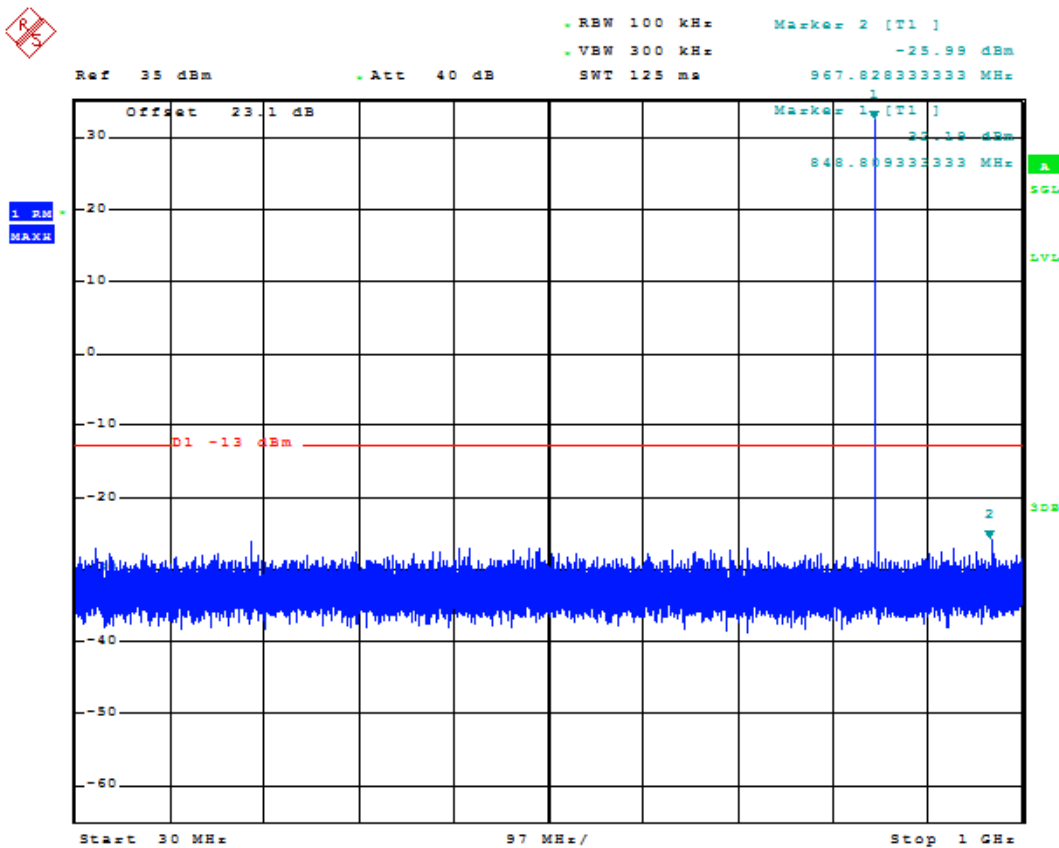
Date: 3.OCT.2017 12:51:55



Report Number: 1709FR17-01



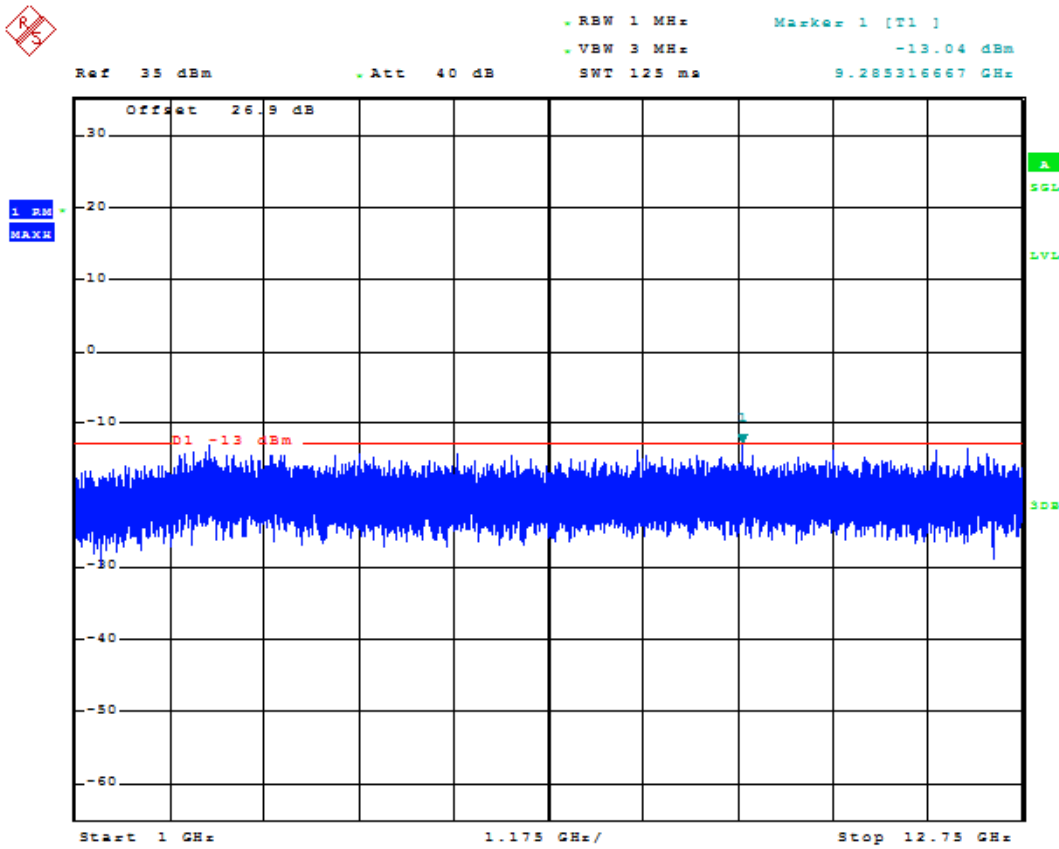
Date: 3.OCT.2017 12:52:05



Date: 3.OCT.2017 12:52:16



Report Number: 1709FR17-01

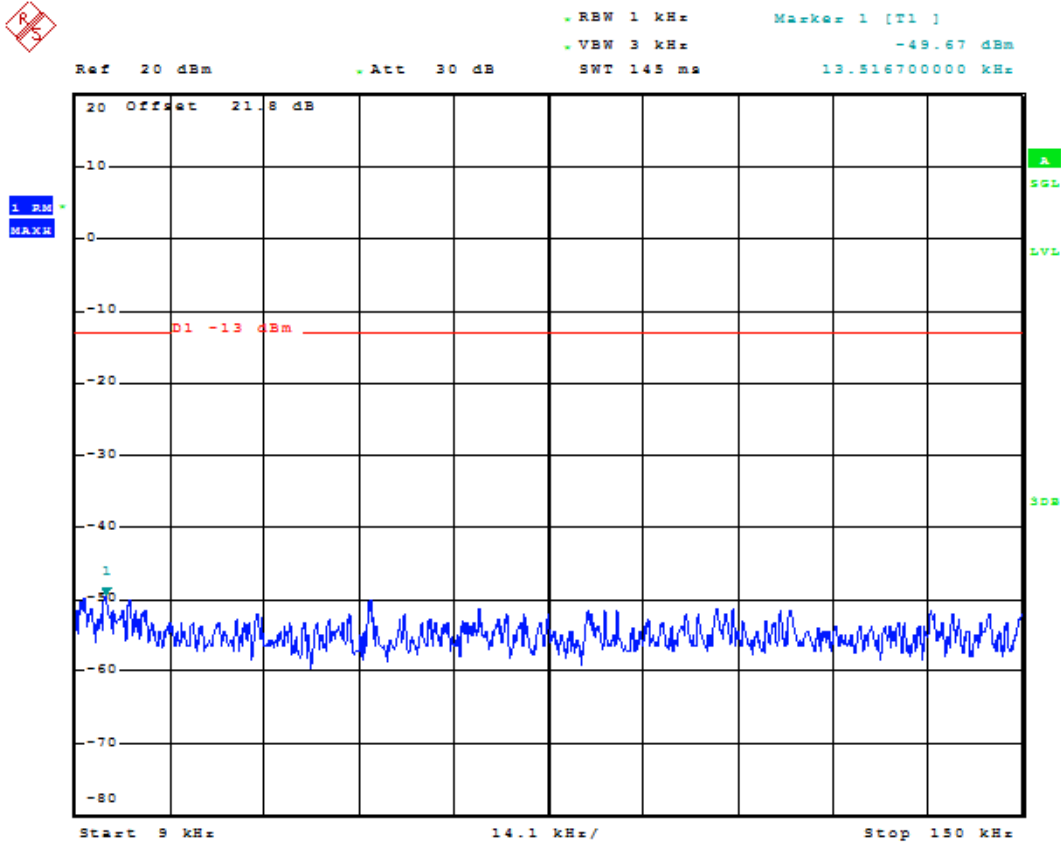


Date: 3.OCT.2017 12:52:26

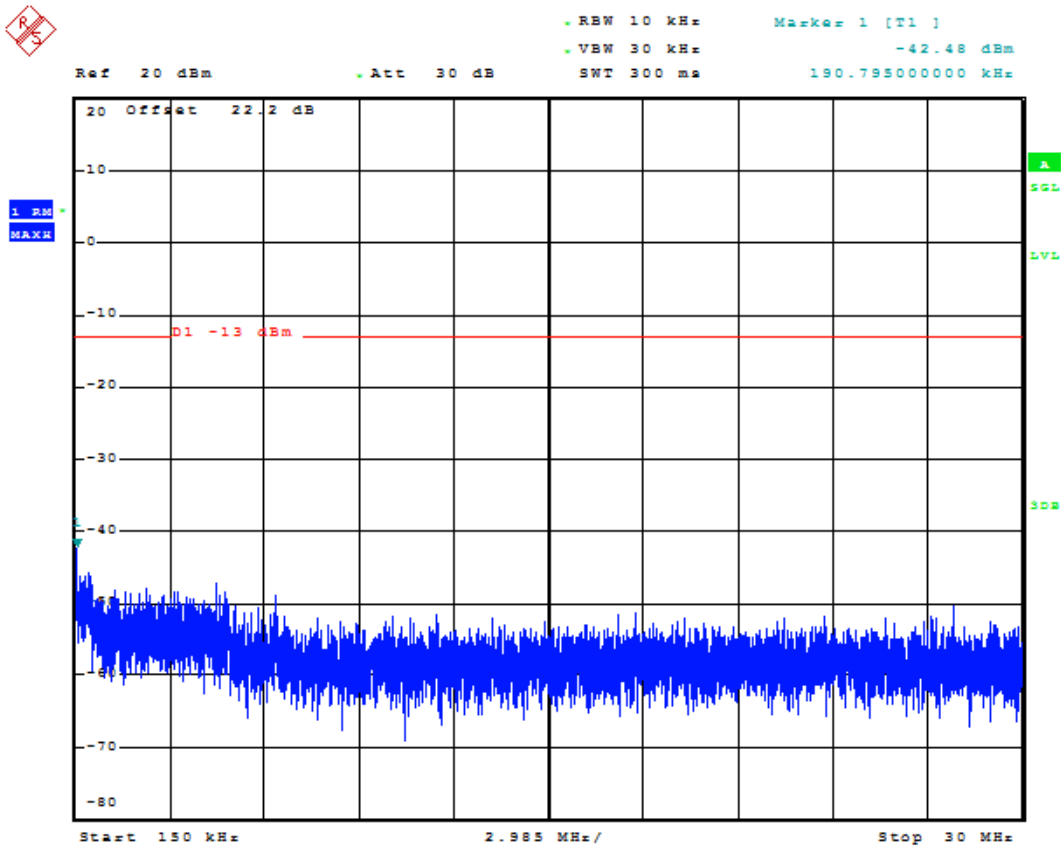


1.1.2 Test Mode=GSM/TM2

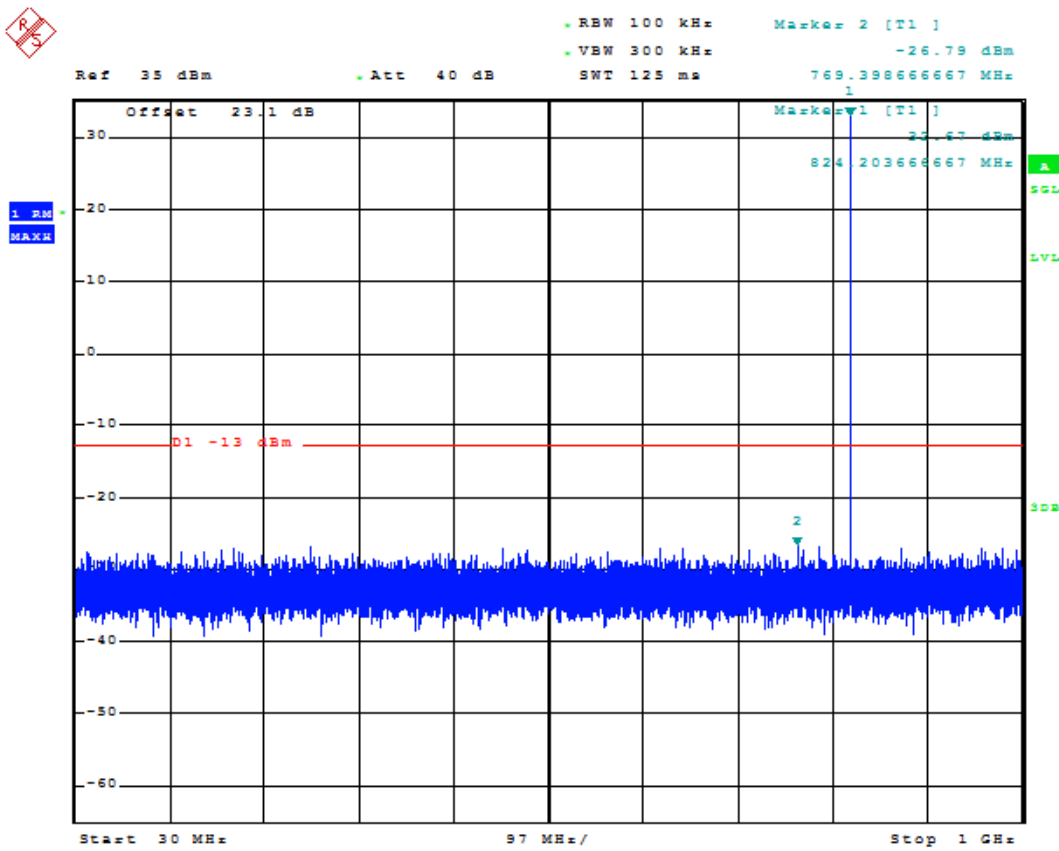
1.1.2.1 Test Channel=LCH



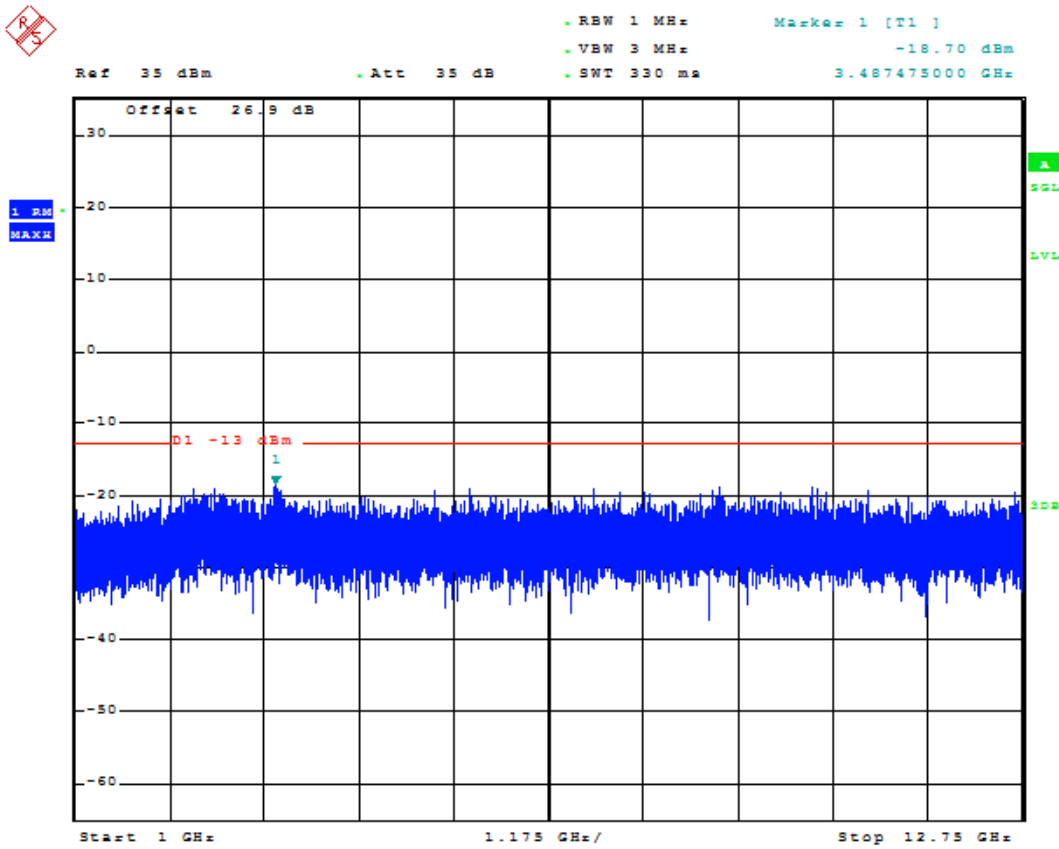
Date: 3.OCT.2017 13:36:55



Date: 3.OCT.2017 13:37:04



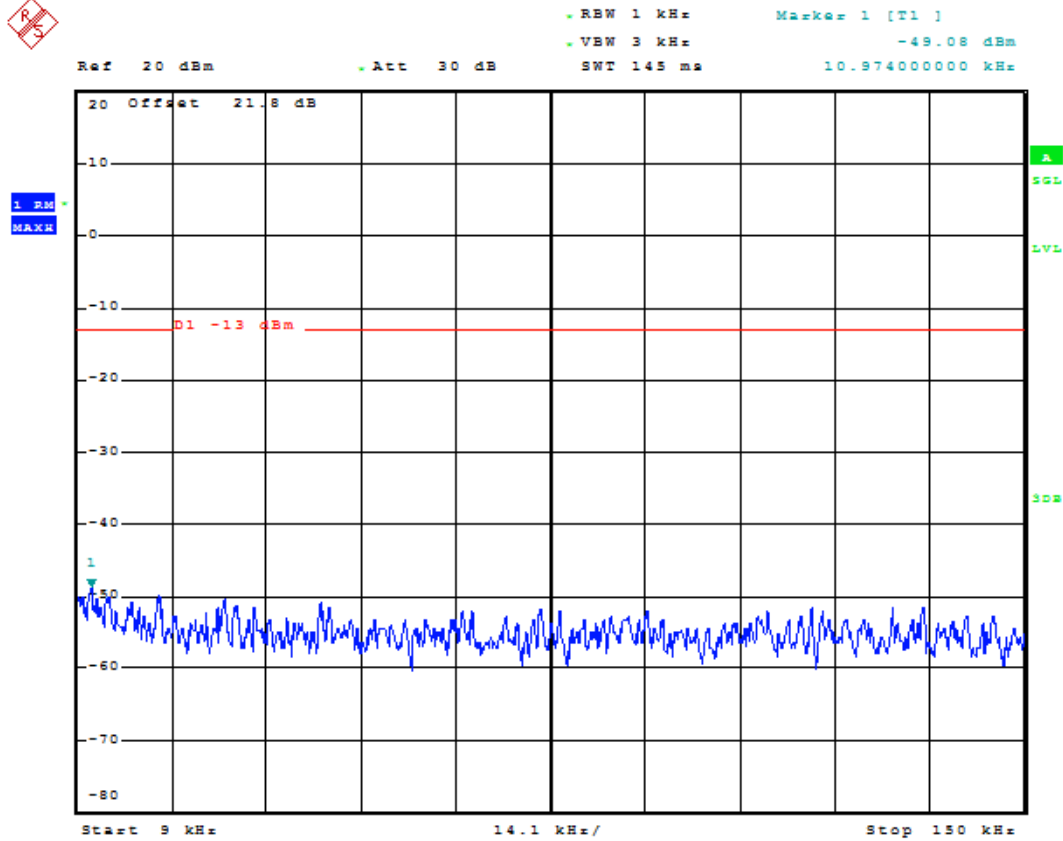
Date: 3.OCT.2017 13:37:14



Date: 3.OCT.2017 13:37:32



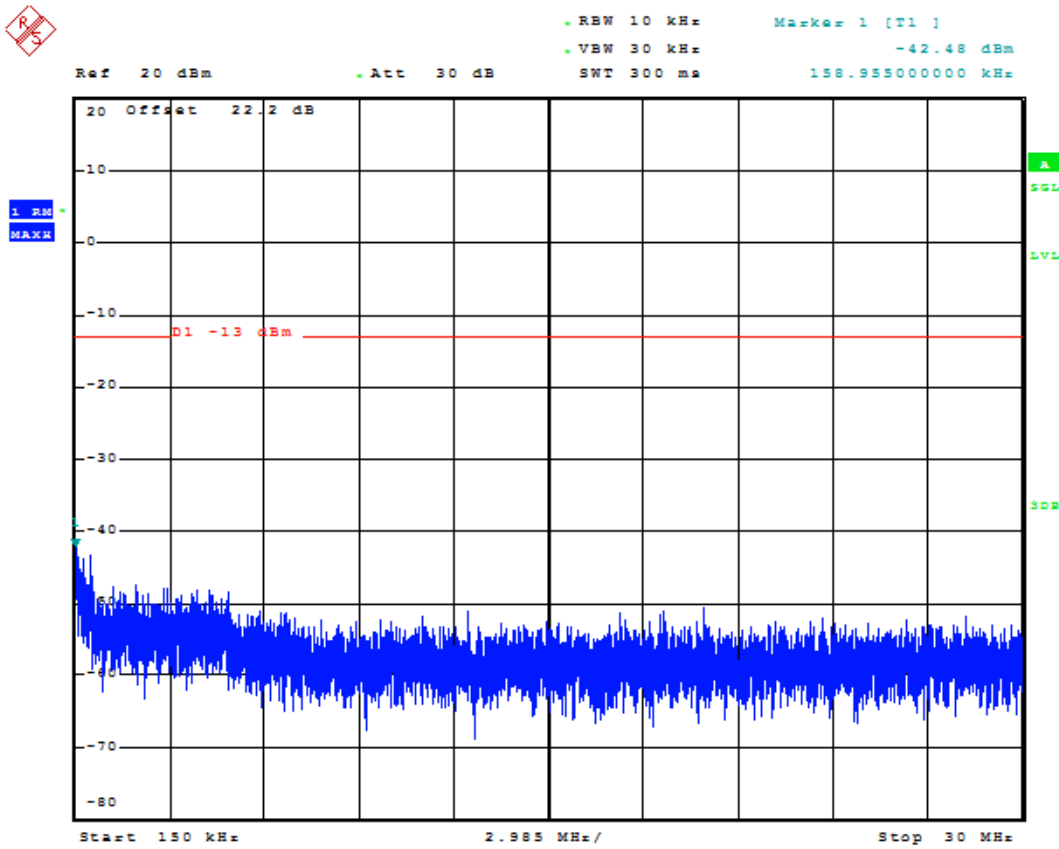
1.1.2.2 Test Channel=MCH



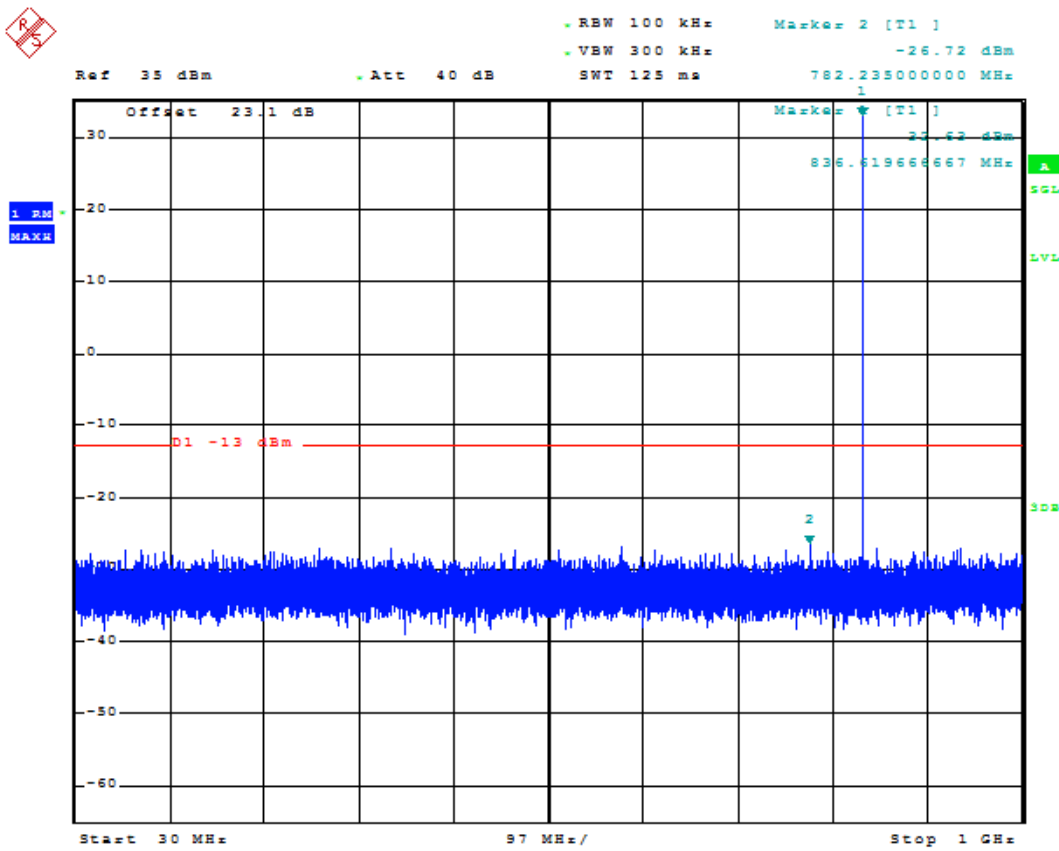
Date: 3.OCT.2017 13:37:50



Report Number: 1709FR17-01



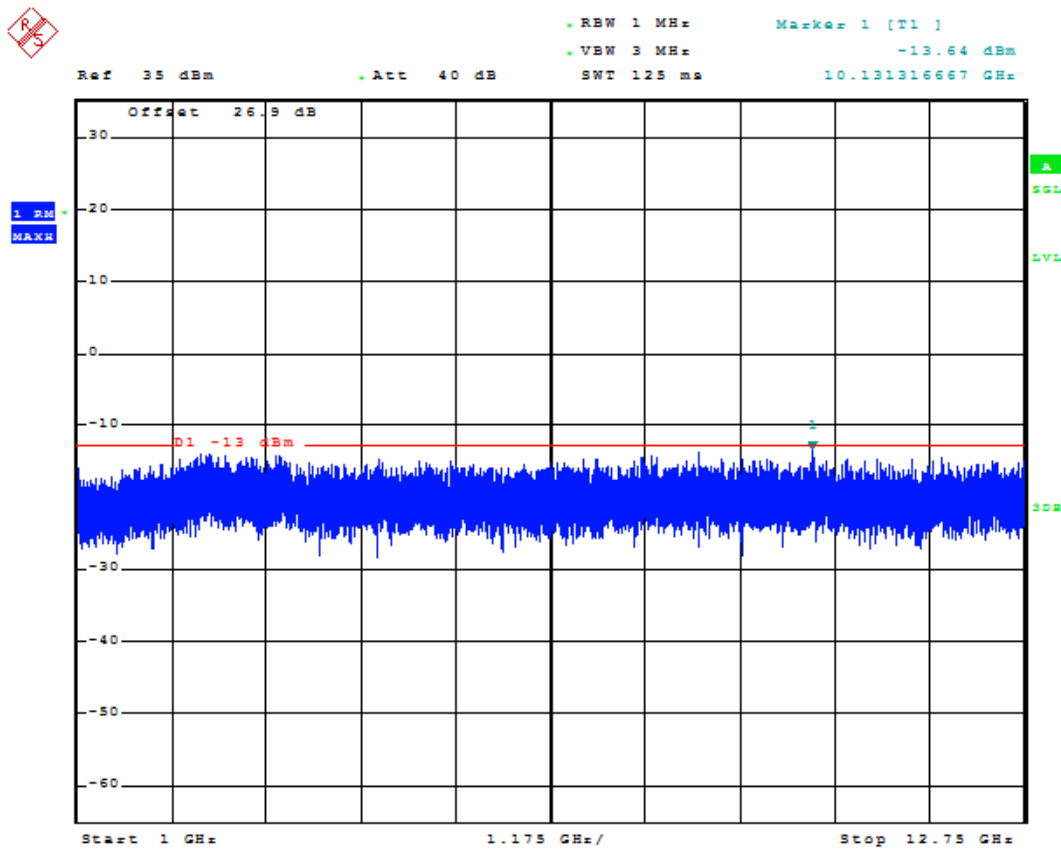
Date: 3.OCT.2017 13:37:59



Date: 3.OCT.2017 13:38:09



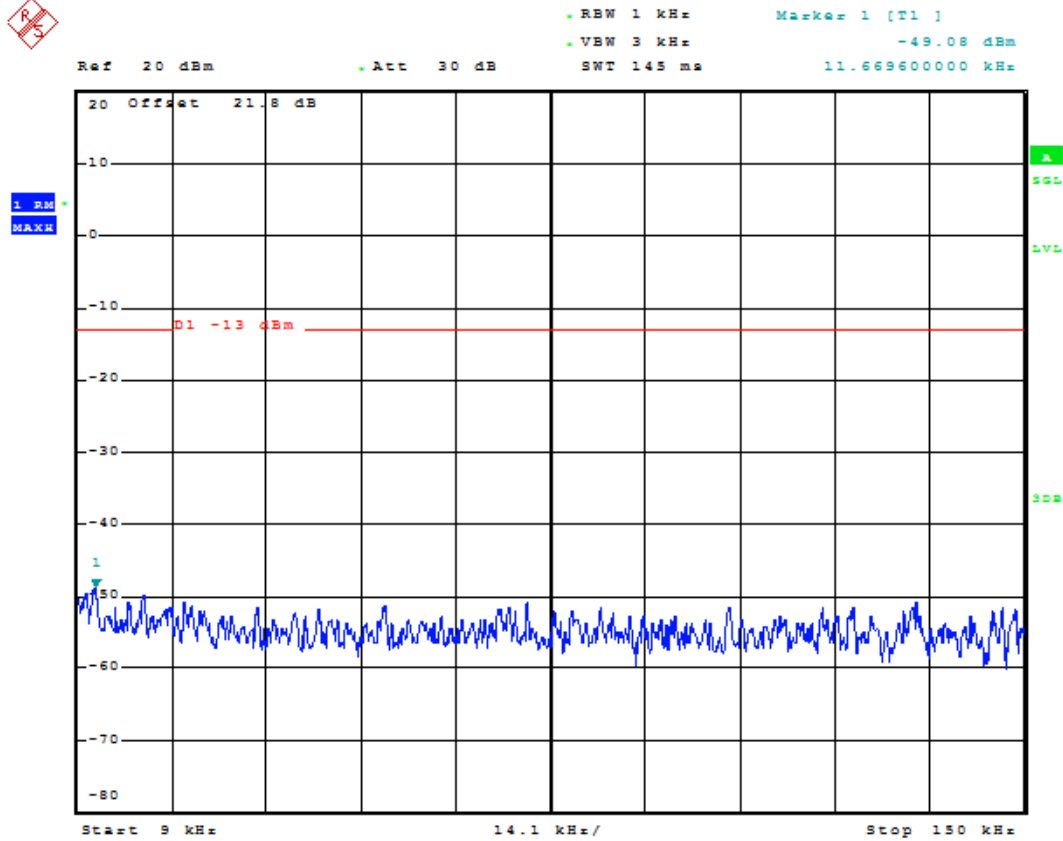
Report Number: 1709FR17-01



Date: 3.OCT.2017 13:38:18



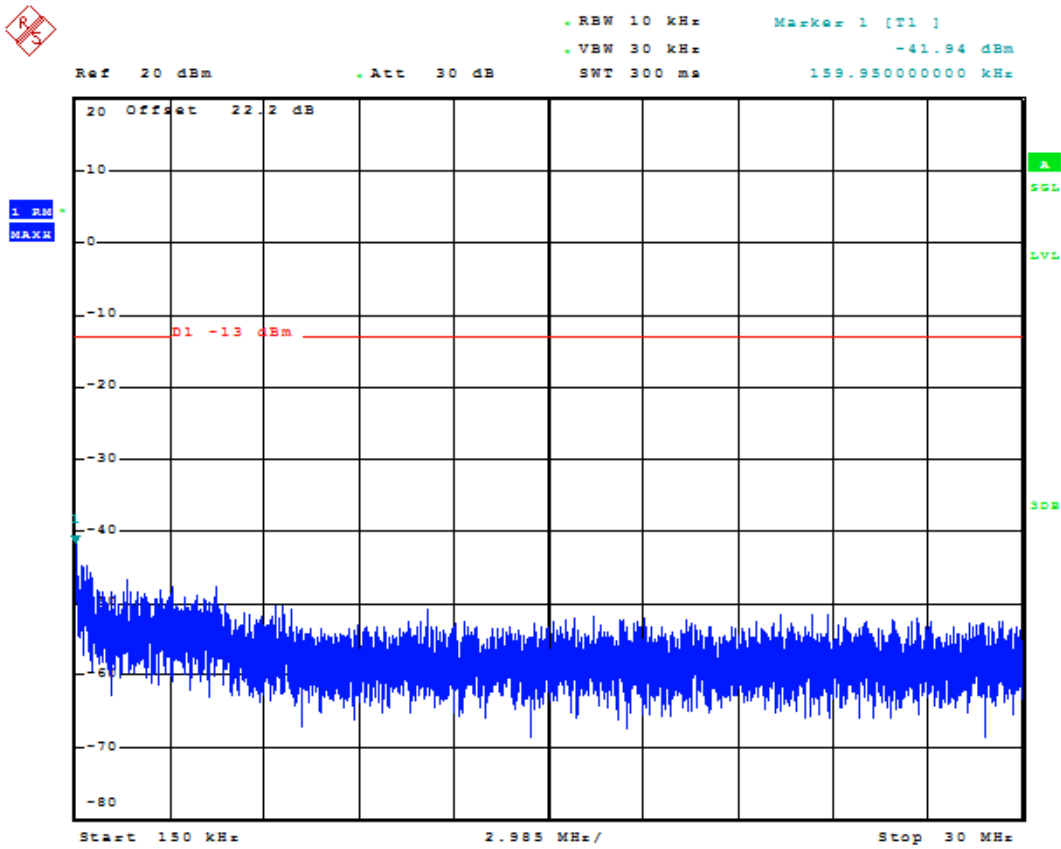
1.1.2.3 Test Channel=HCH



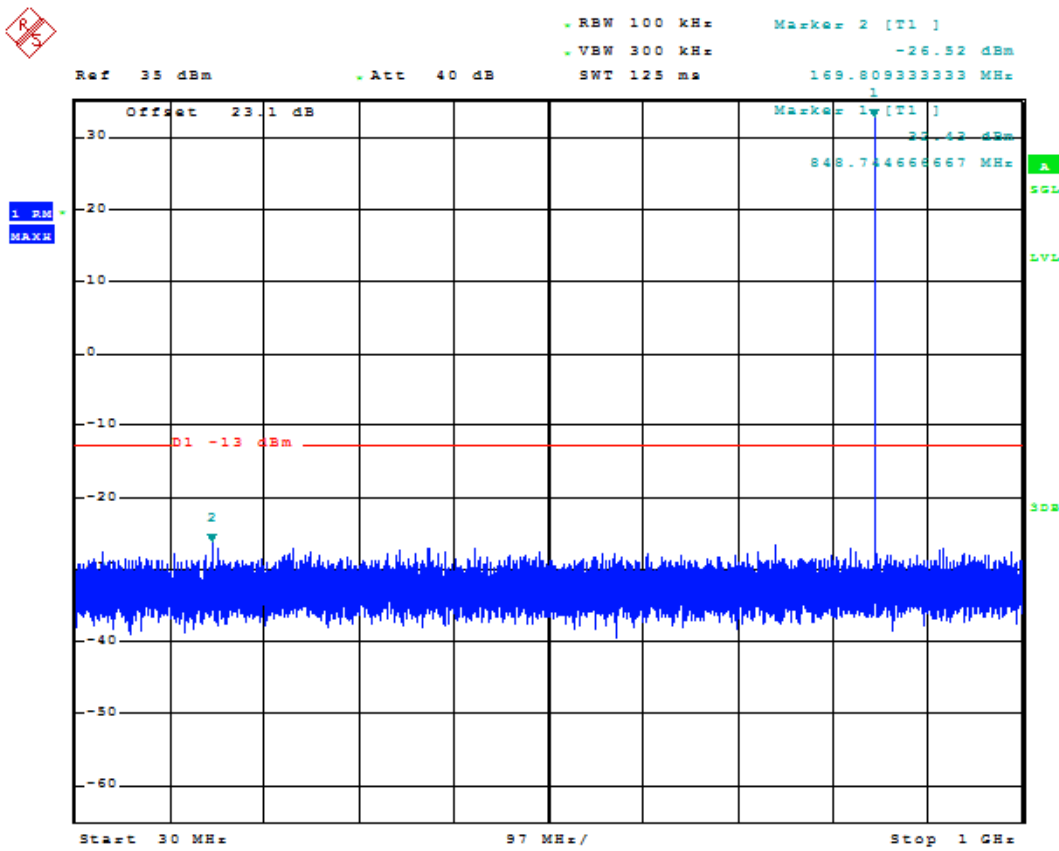
Date: 3.OCT.2017 13:38:35



Report Number: 1709FR17-01



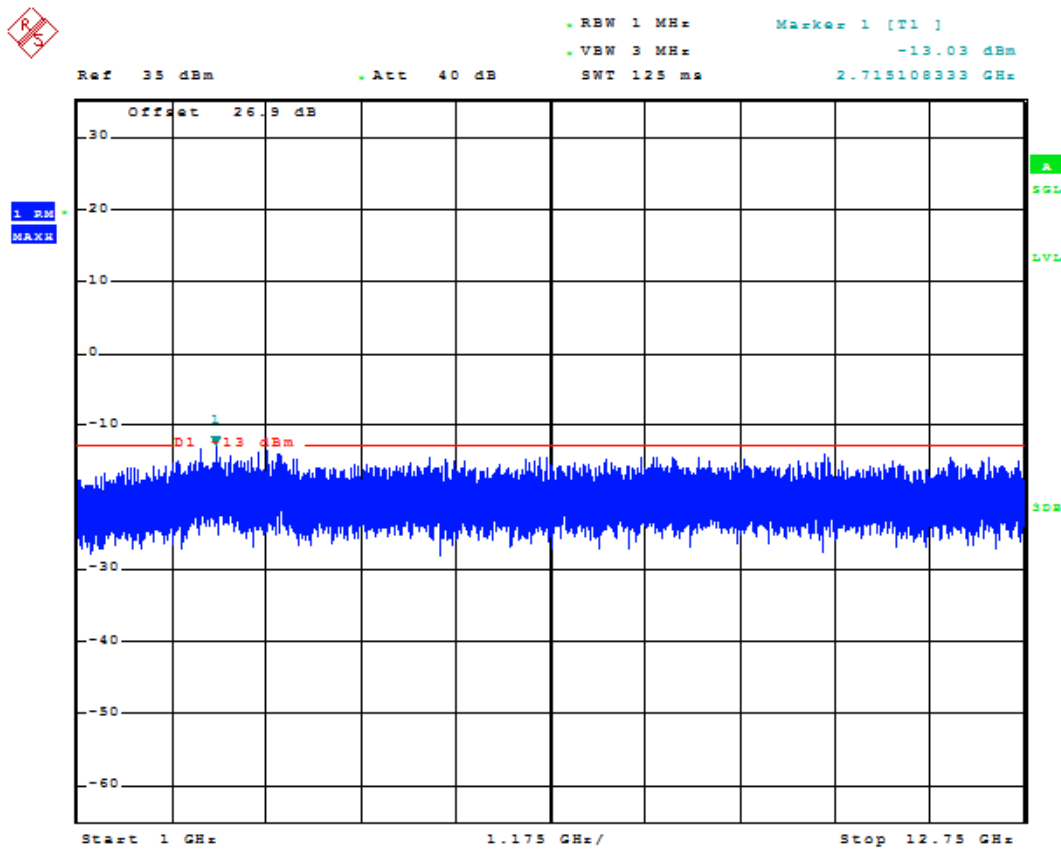
Date: 3.OCT.2017 13:38:44



Date: 3.OCT.2017 13:38:54



Report Number: 1709FR17-01

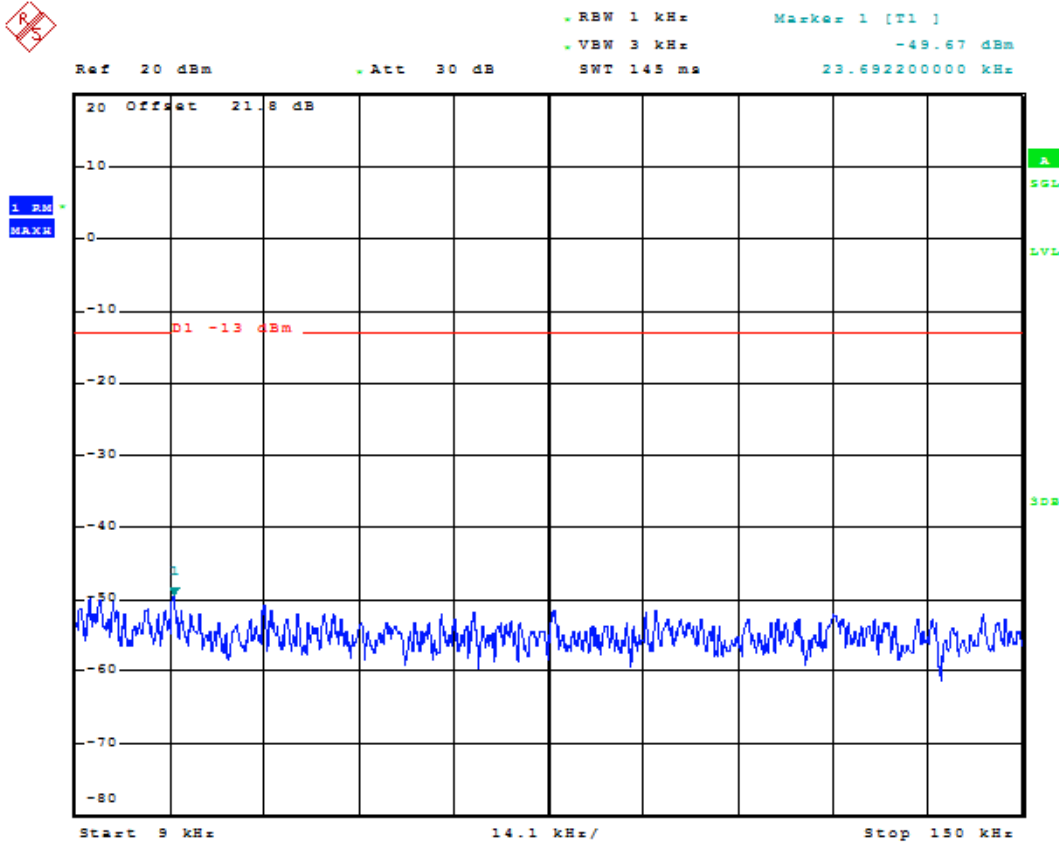


Date: 3.OCT.2017 13:39:03



1.1.3 Test Mode=GSM/TM3

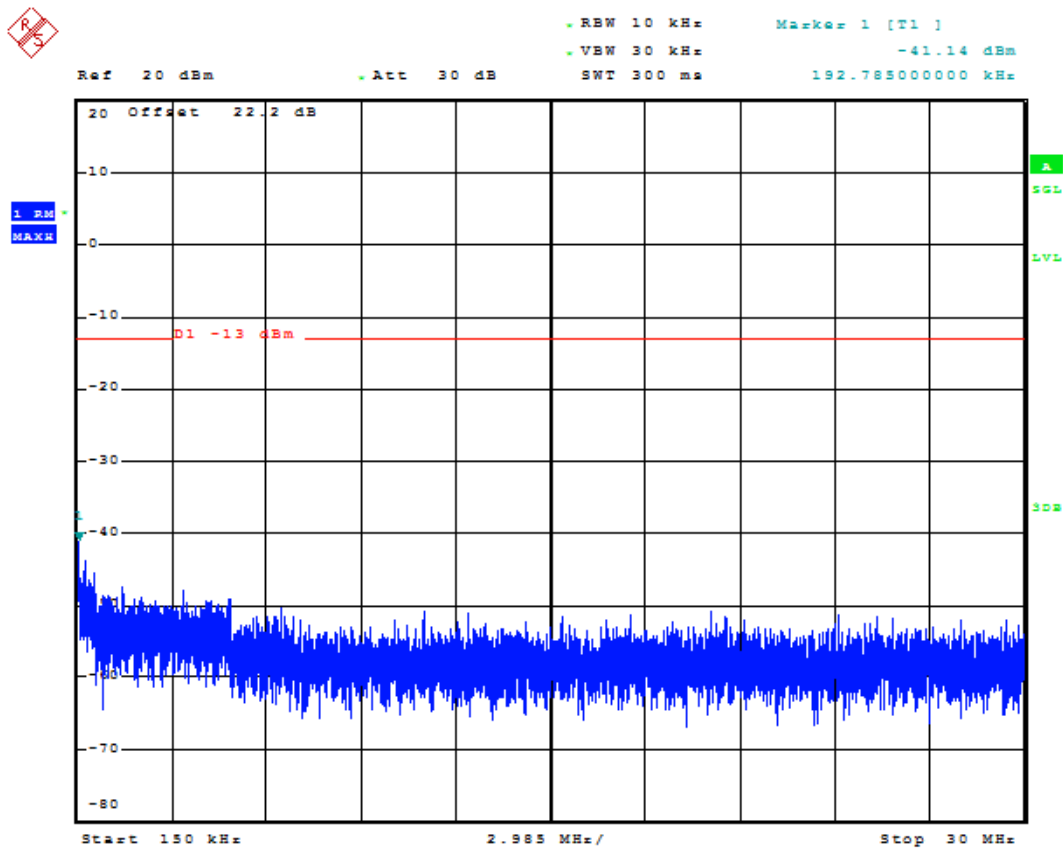
1.1.3.1 Test Channel=LCH



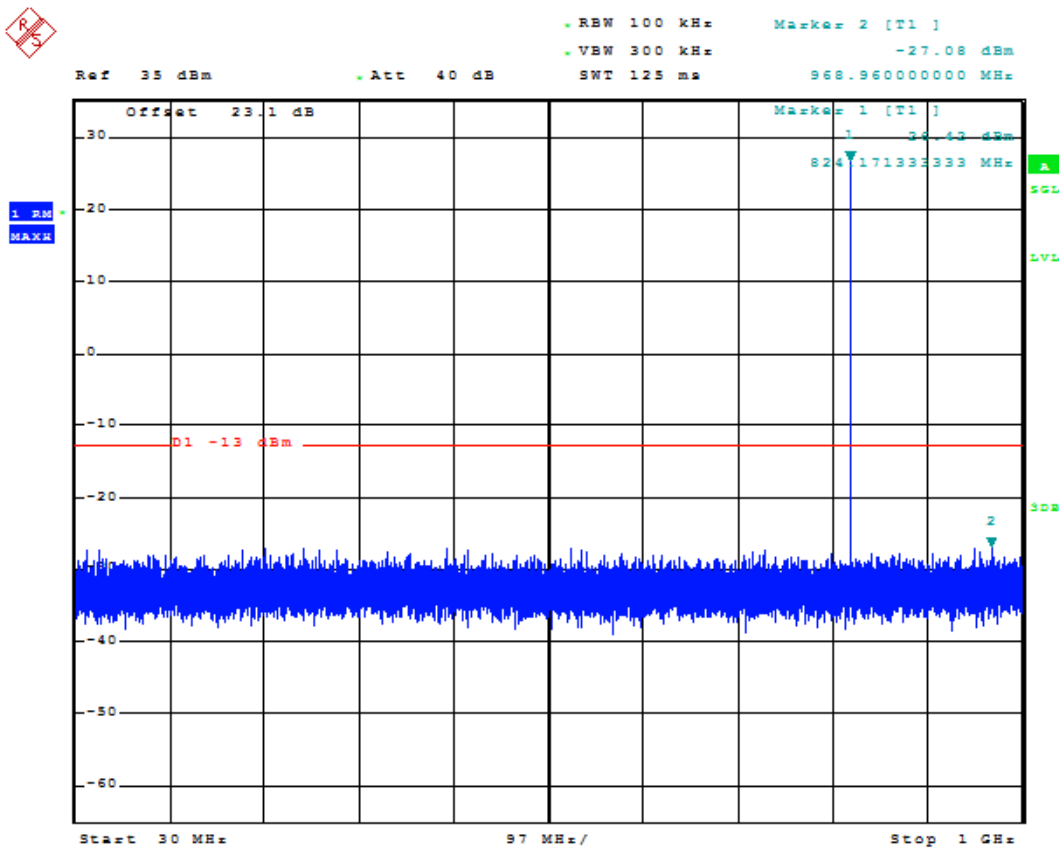
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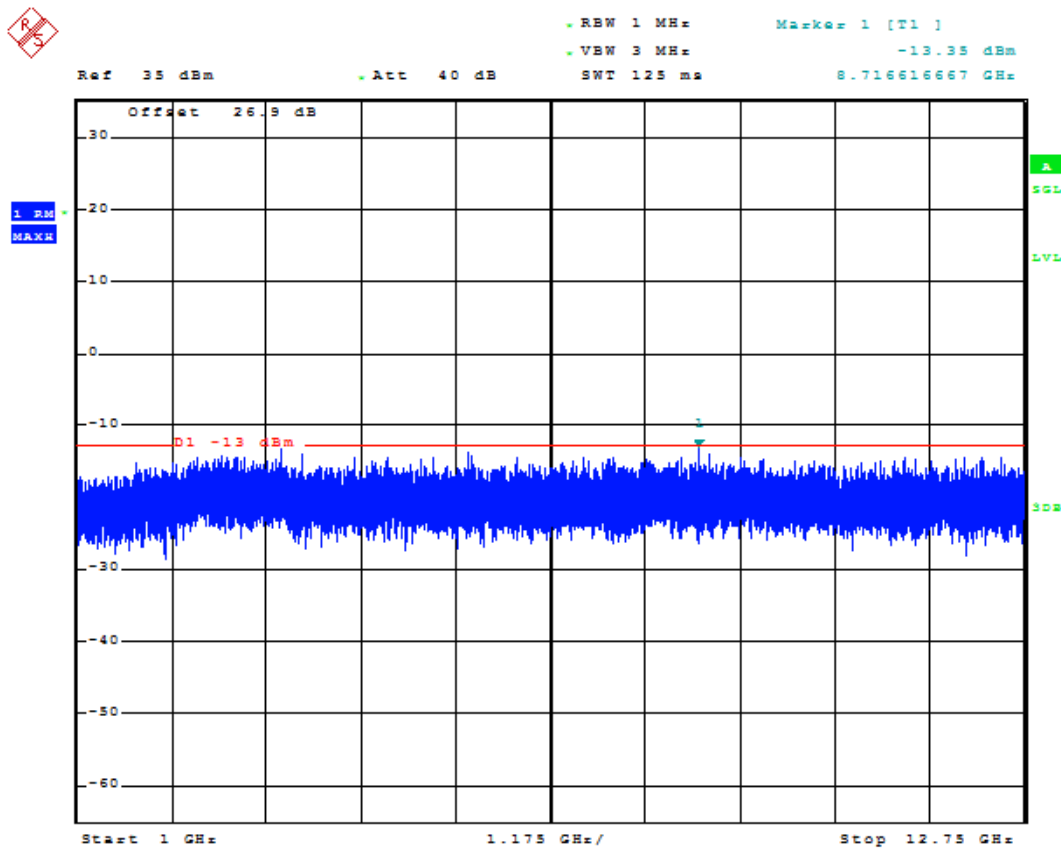
Report Number: 1709FR17-01



Date: 3.OCT.2017 14:08:26



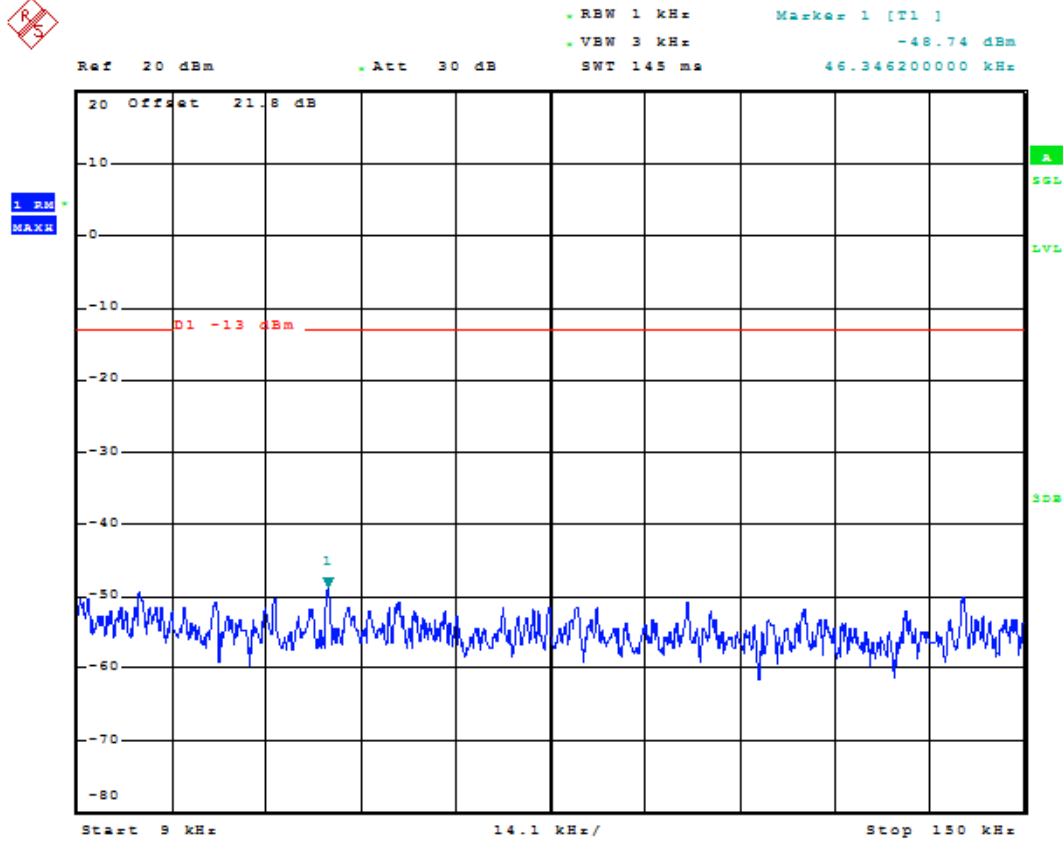
Date: 3.OCT.2017 14:08:36



Date: 3.OCT.2017 14:08:46



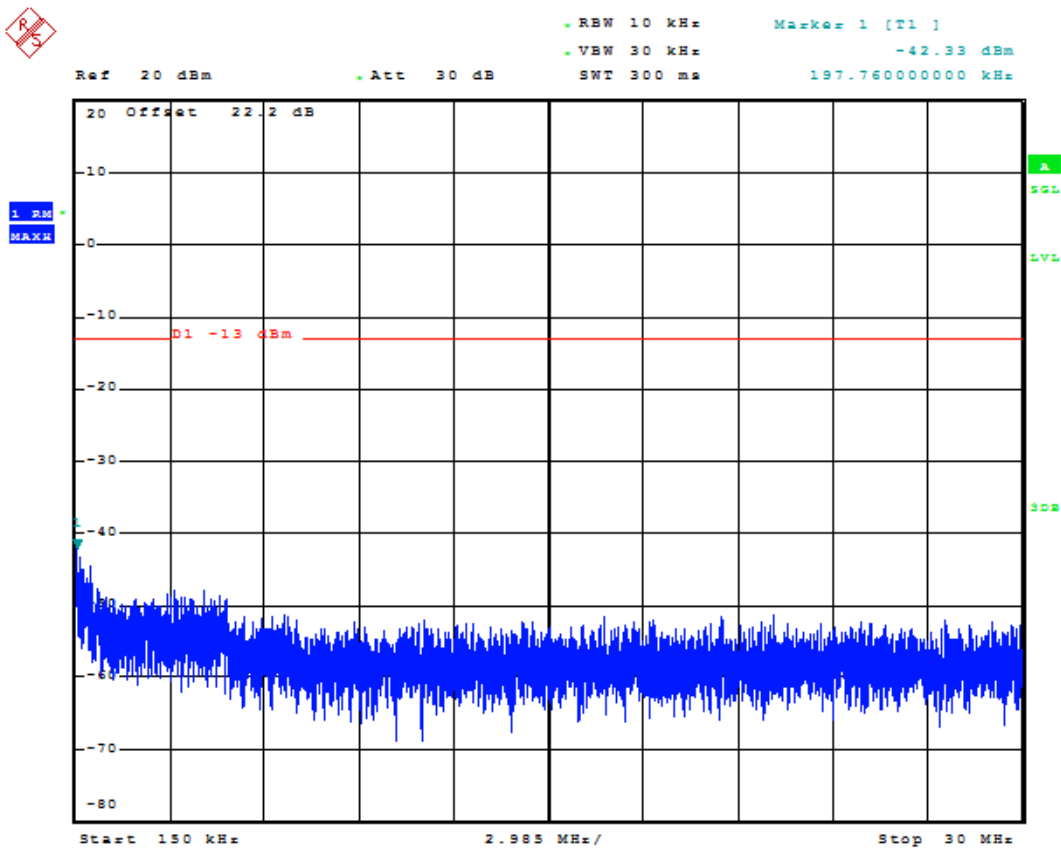
1.1.3.2 Test Channel=MCH



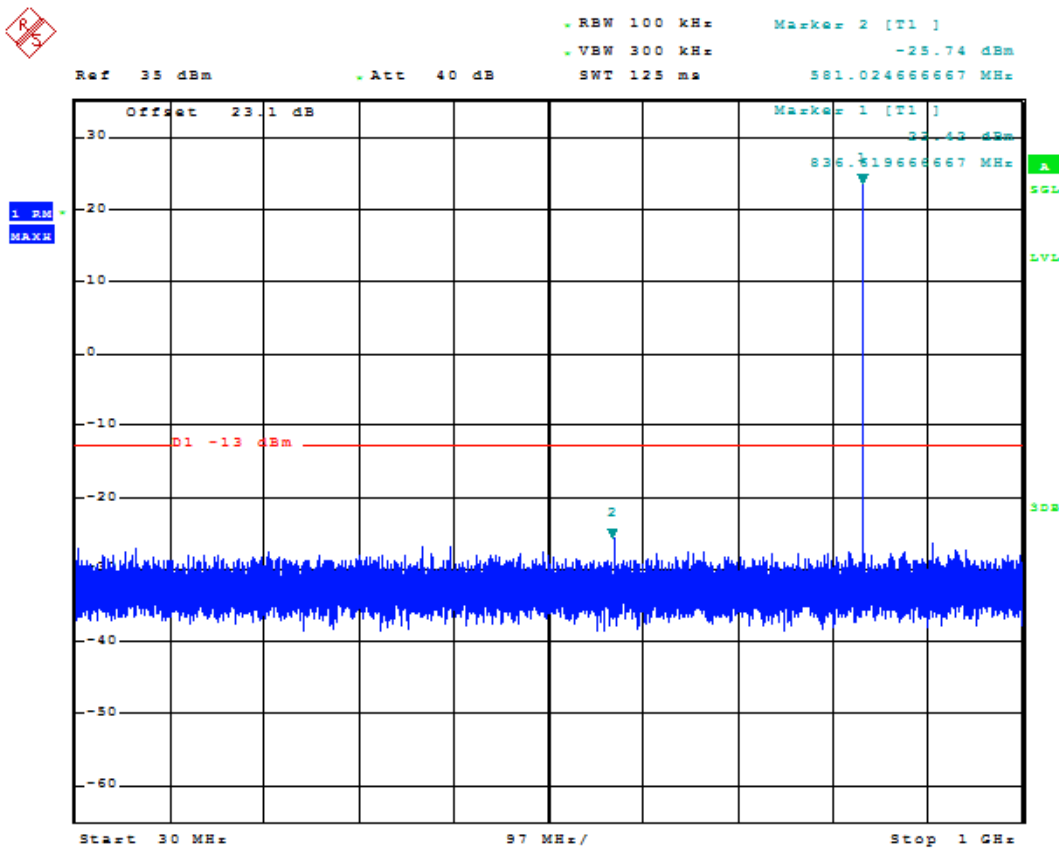
Date: 3.OCT.2017 14:09:04



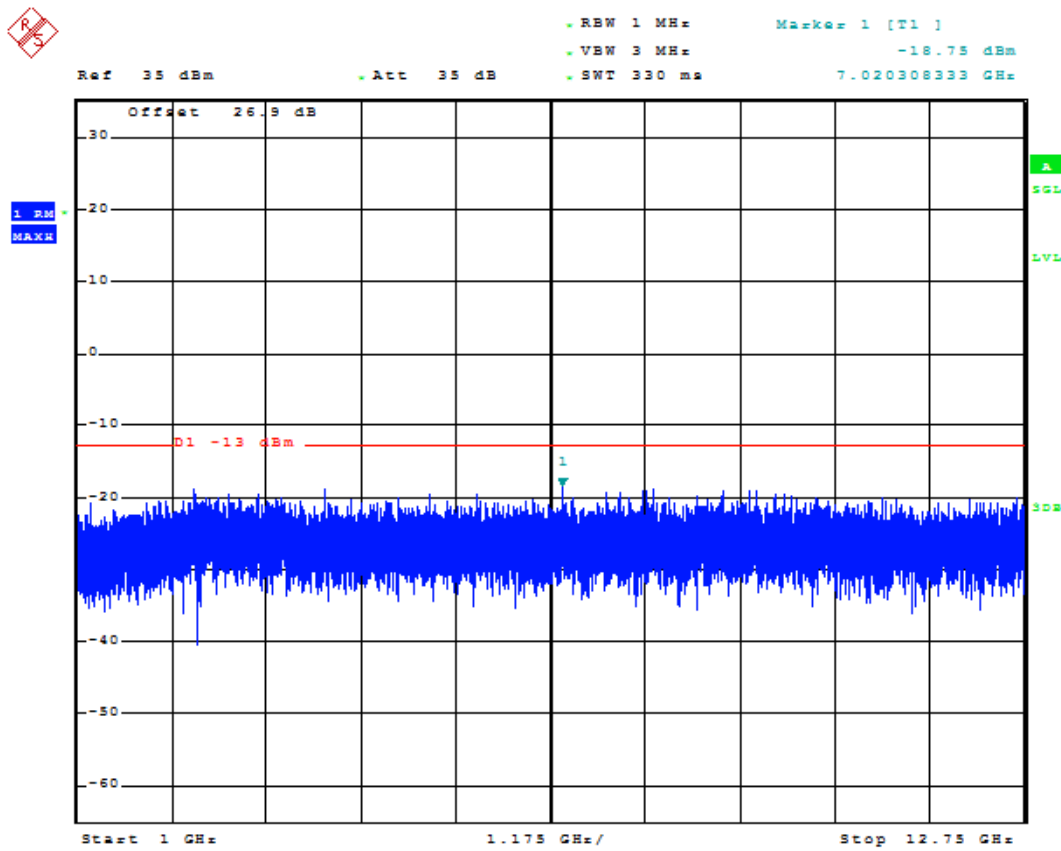
Report Number: 1709FR17-01



Date: 3.OCT.2017 14:09:13



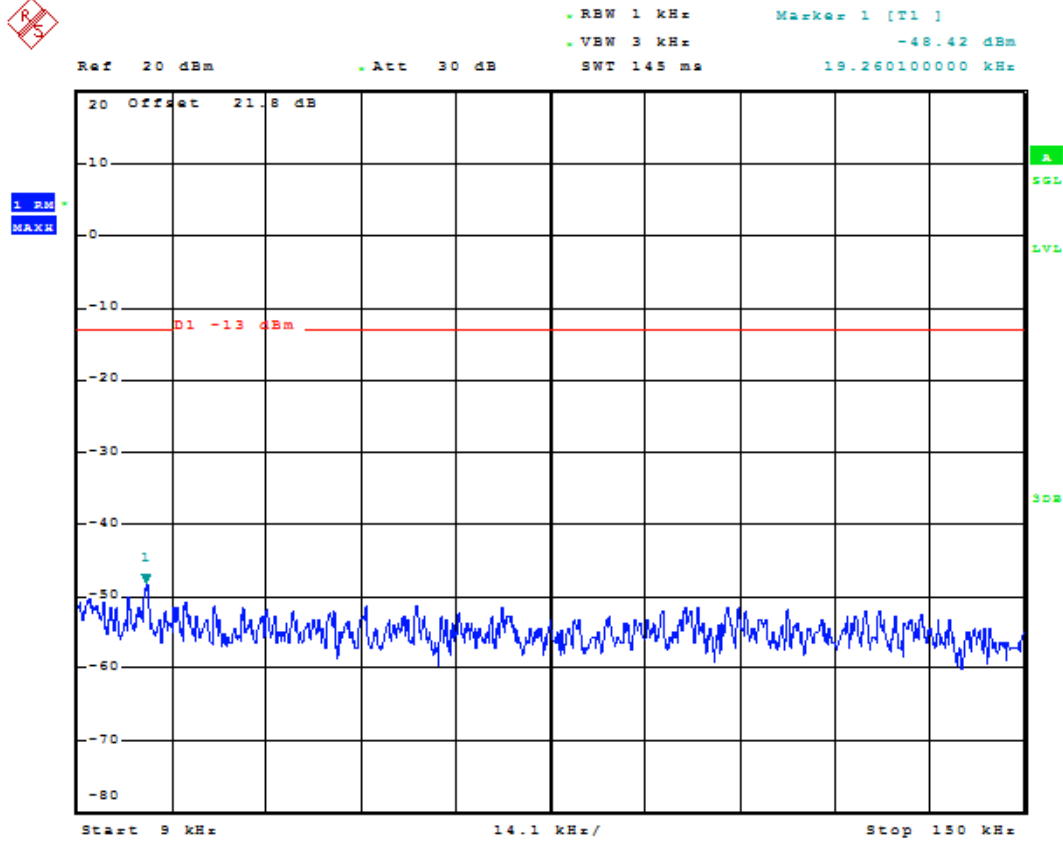
Date: 3.OCT.2017 14:09:24



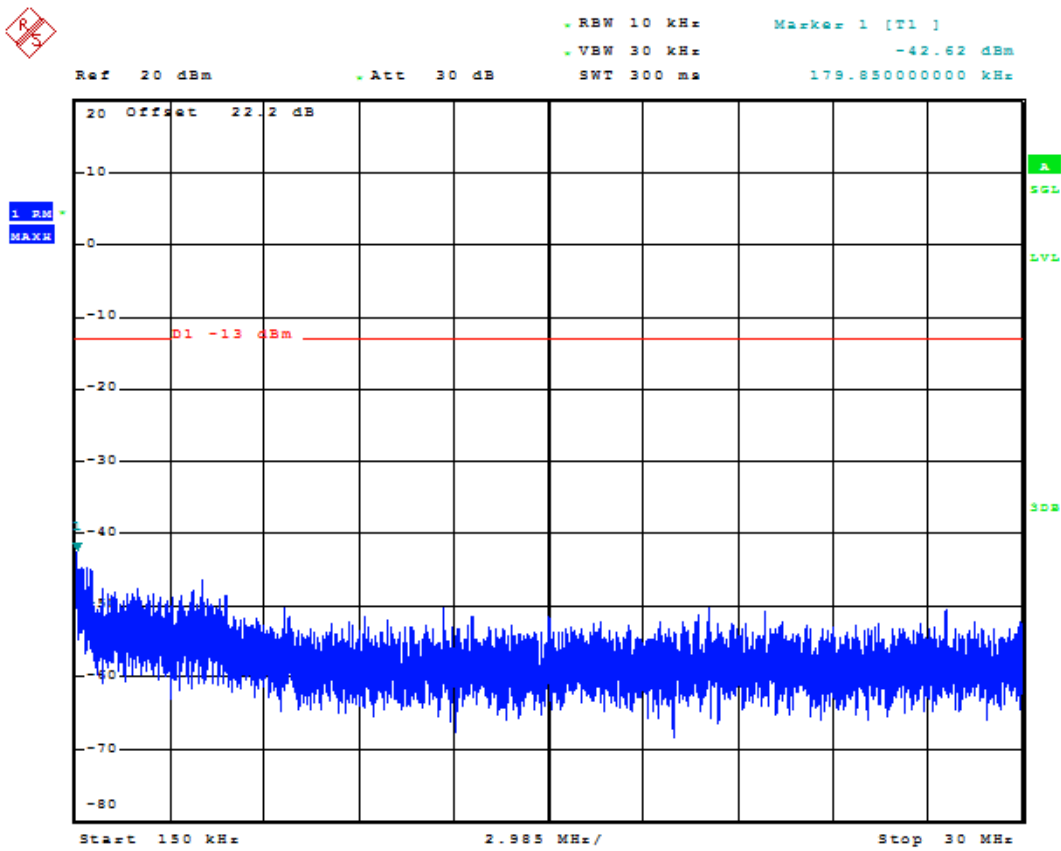
Date: 3.OCT.2017 14:09:41



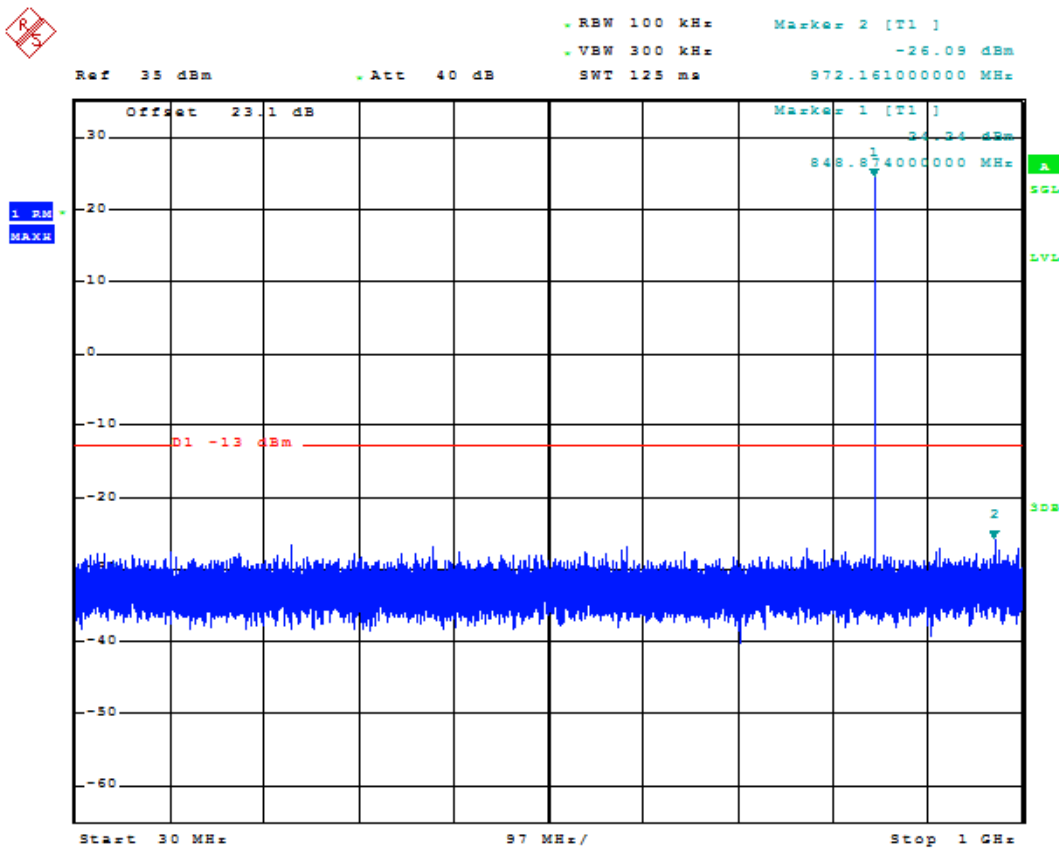
1.1.3.3 Test Channel=HCH



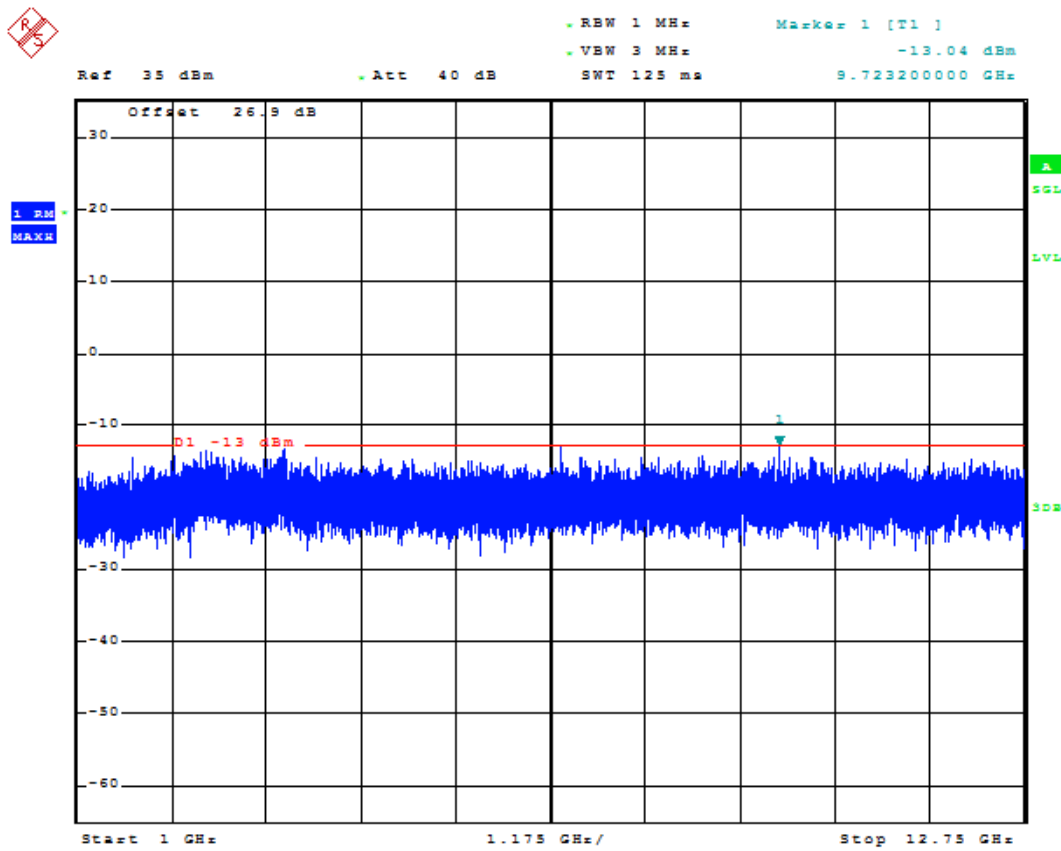
Date: 3.OCT.2017 14:09:59



Date: 3.OCT.2017 14:10:08



Date: 3.OCT.2017 14:10:19



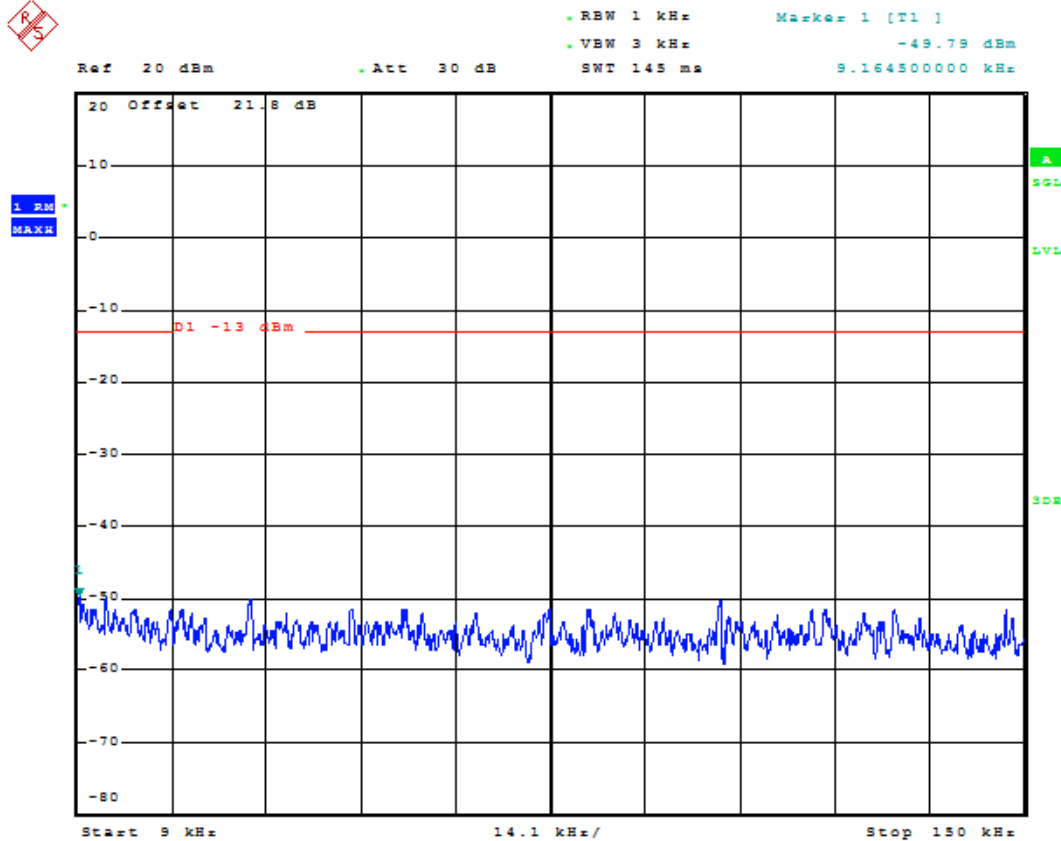
Date: 3.OCT.2017 14:10:29



1.2 Test Band=GSM1900

1.2.1 Test Mode=GSM/TM1

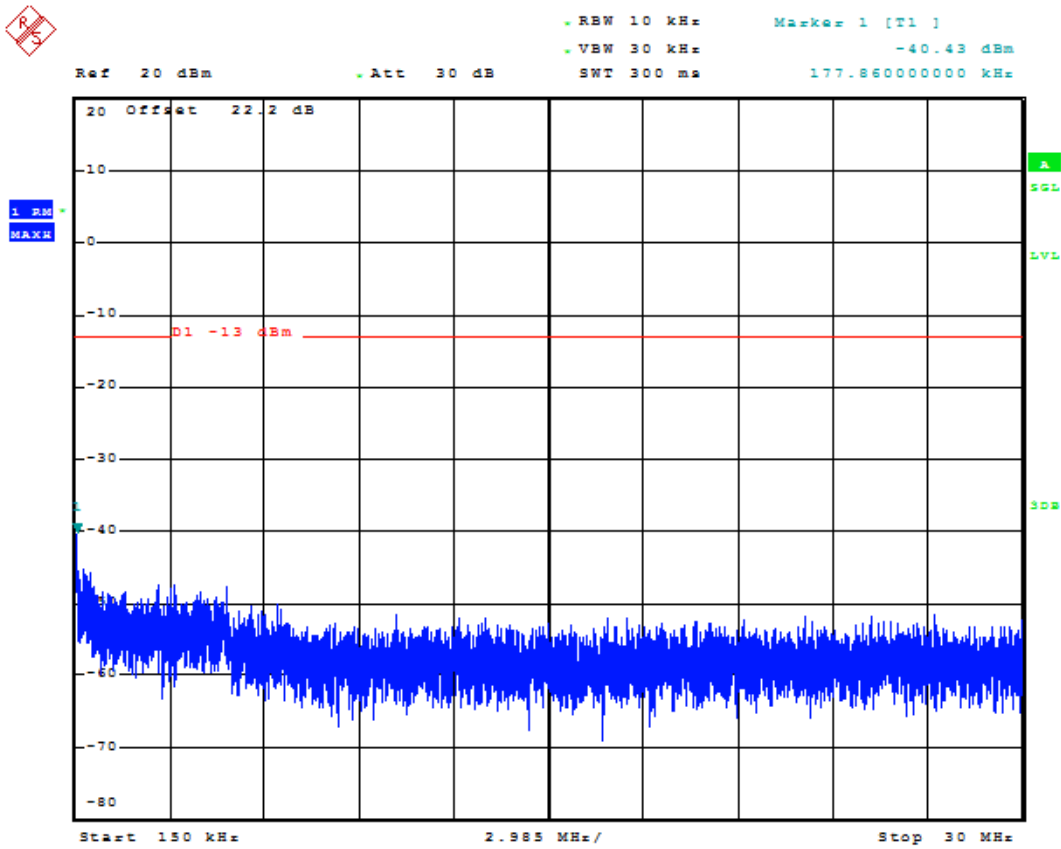
1.2.1.1 Test Channel=LCH



Date: 3.OCT.2017 13:02:55



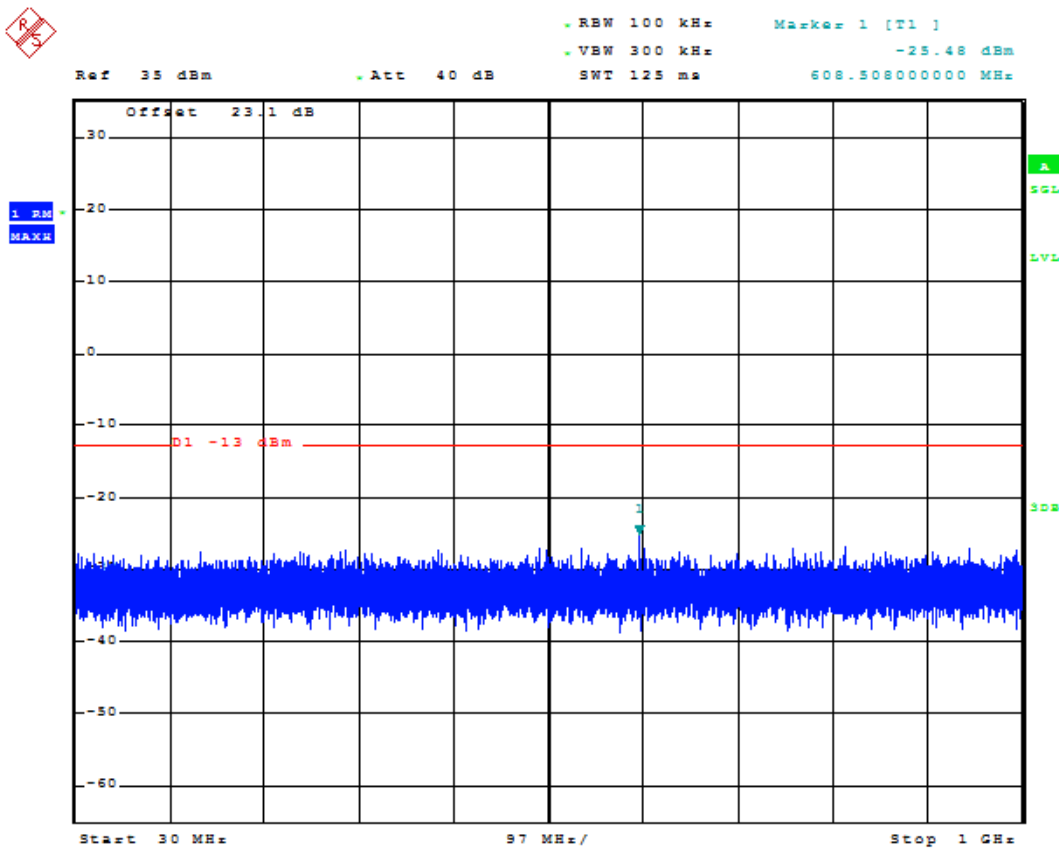
Report Number: 1709FR17-01



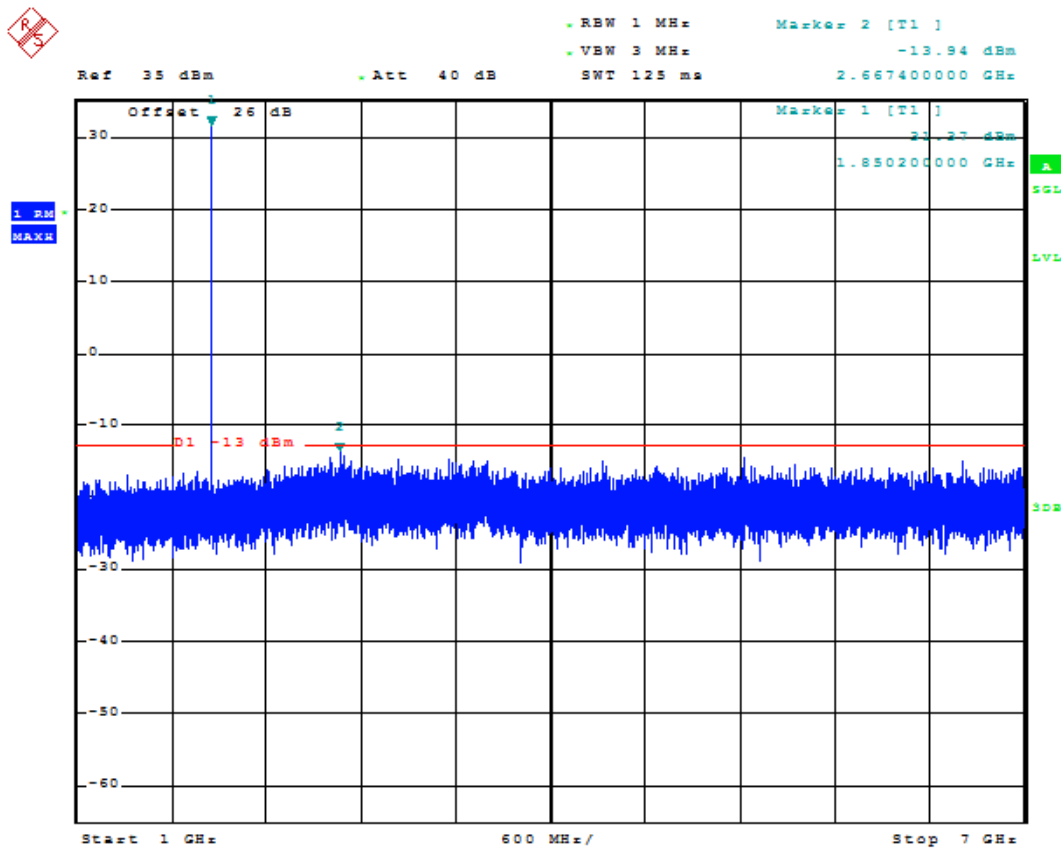
Date: 3.OCT.2017 13:03:05



Report Number: 1709FR17-01



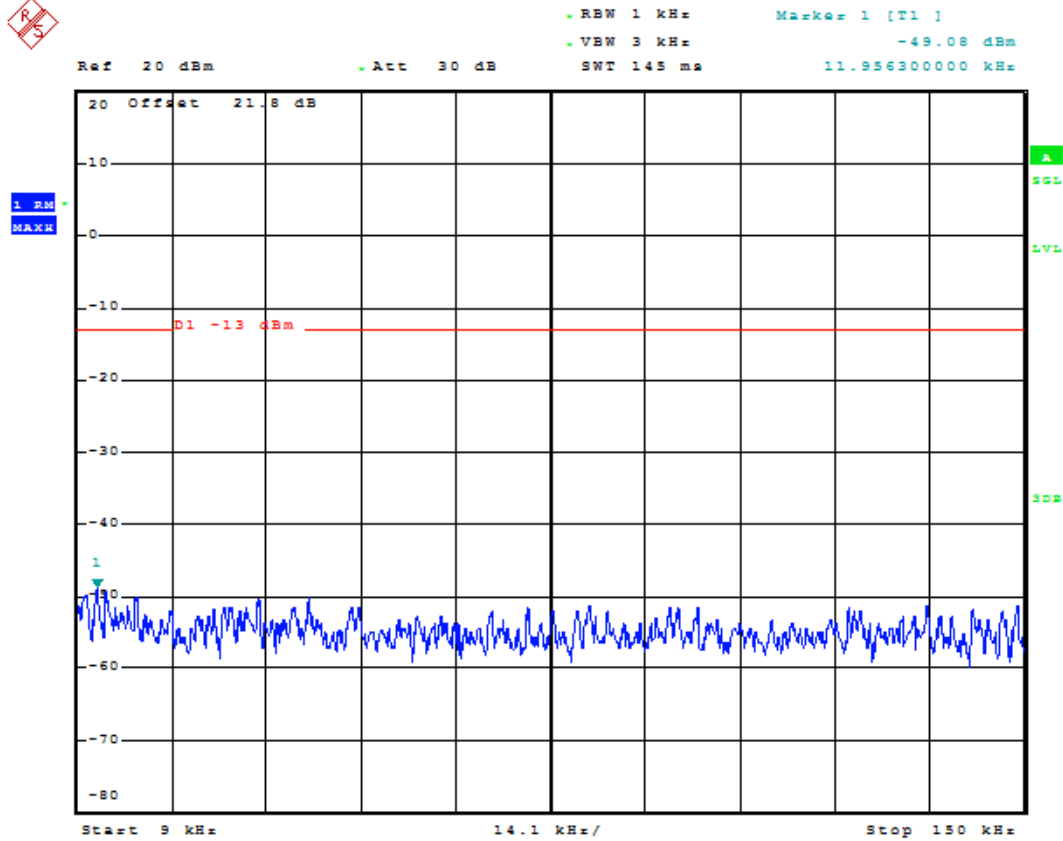
Date: 3.OCT.2017 13:03:15



Date: 3.OCT.2017 13:03:26



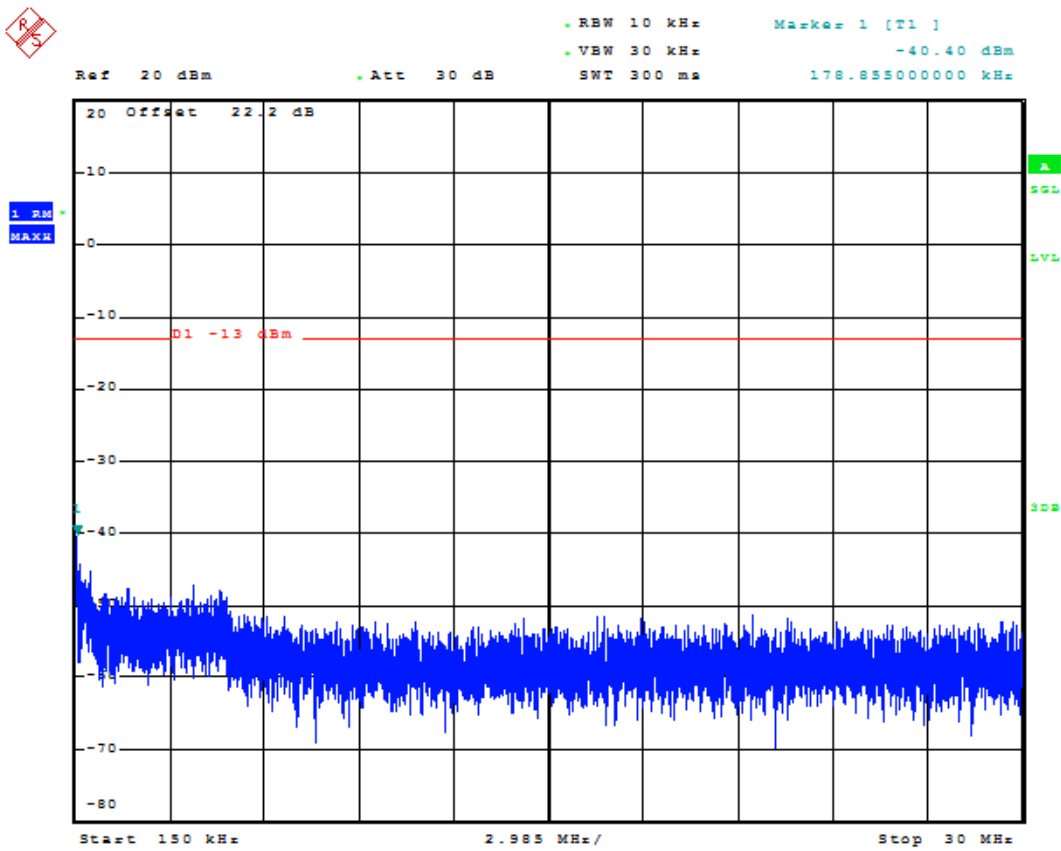
1.2.1.2 Test Channel=MCH



Date: 3.OCT.2017 13:04:20



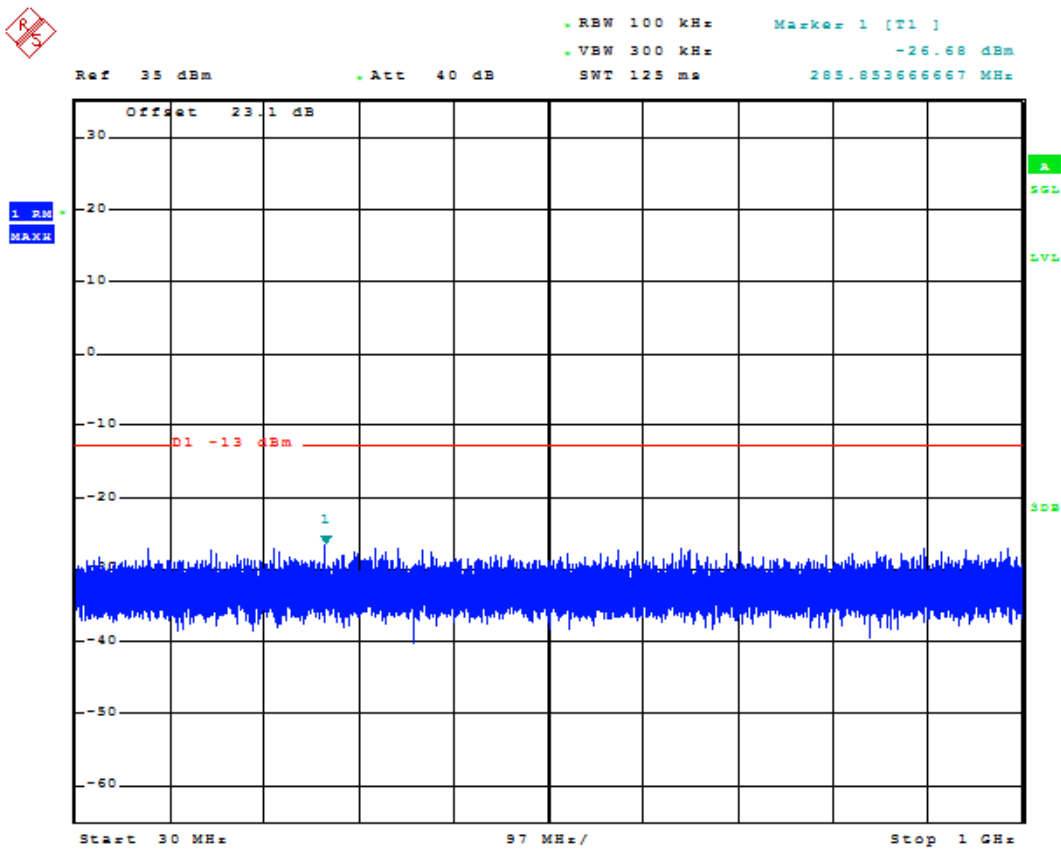
Report Number: 1709FR17-01



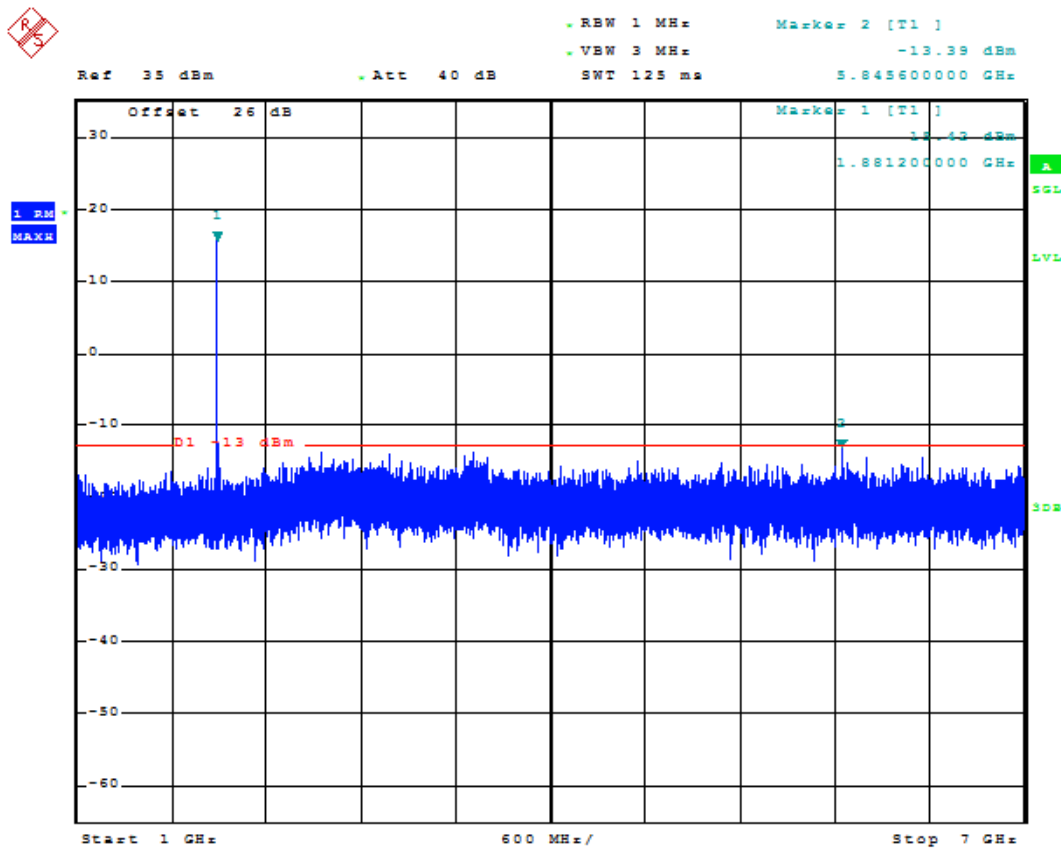
Date: 3.OCT.2017 13:04:30



Report Number: 1709FR17-01

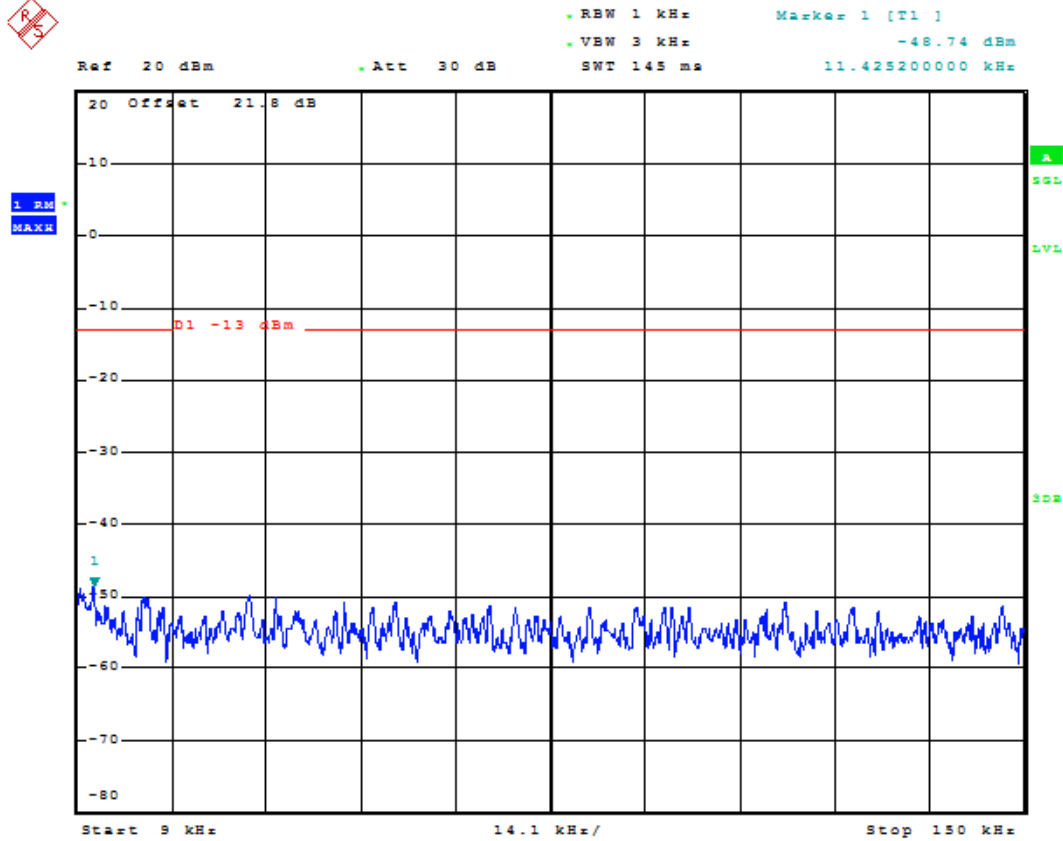


Date: 3.OCT.2017 13:04:41





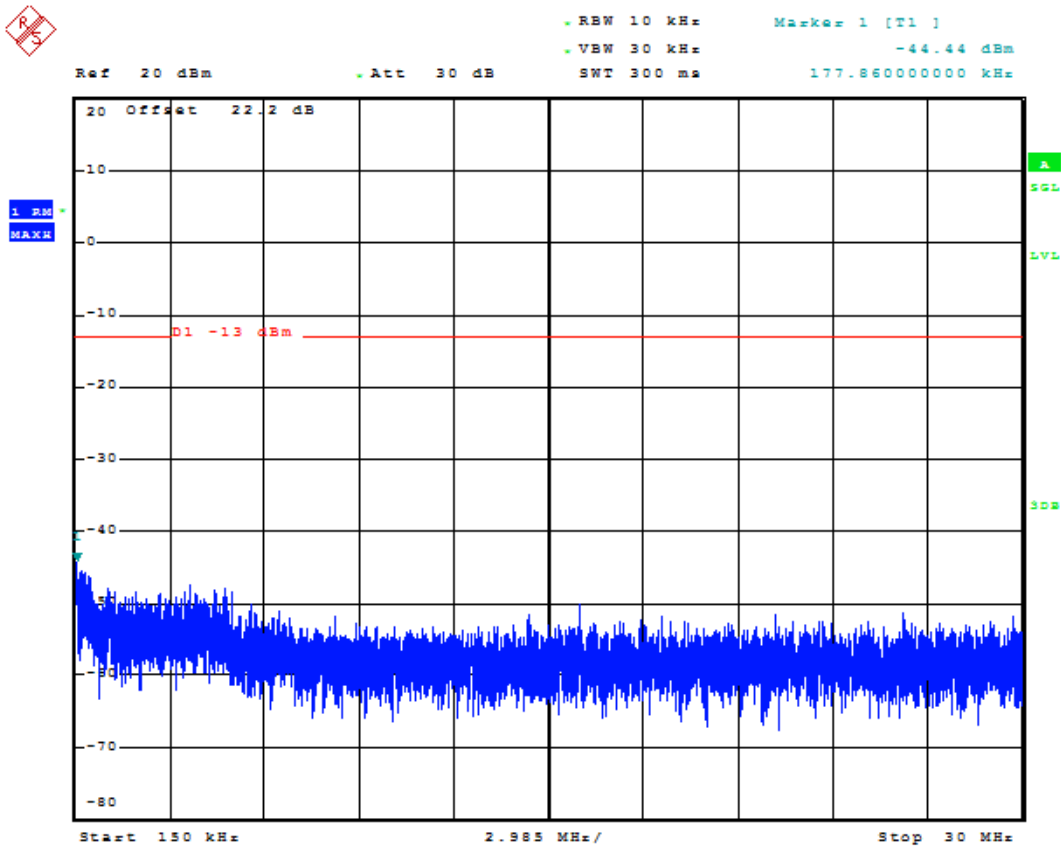
1.2.1.3 Test Channel=HCH



Date: 3.OCT.2017 13:05:46



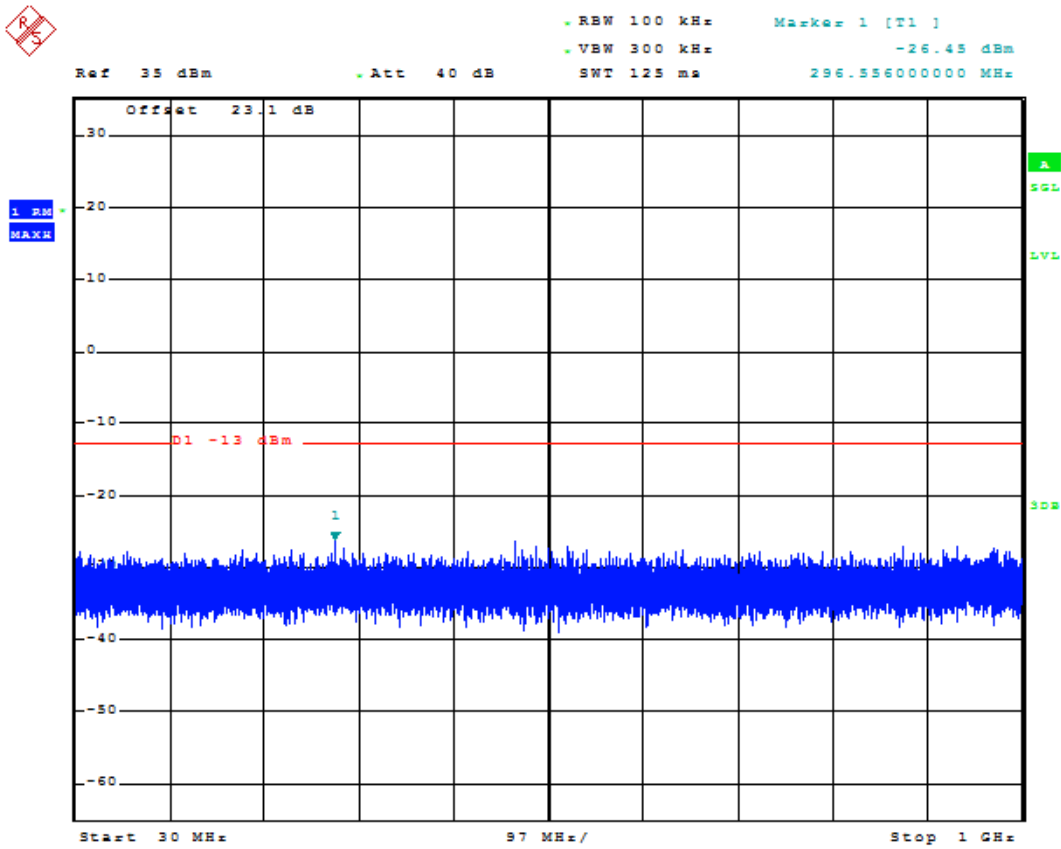
Report Number: 1709FR17-01



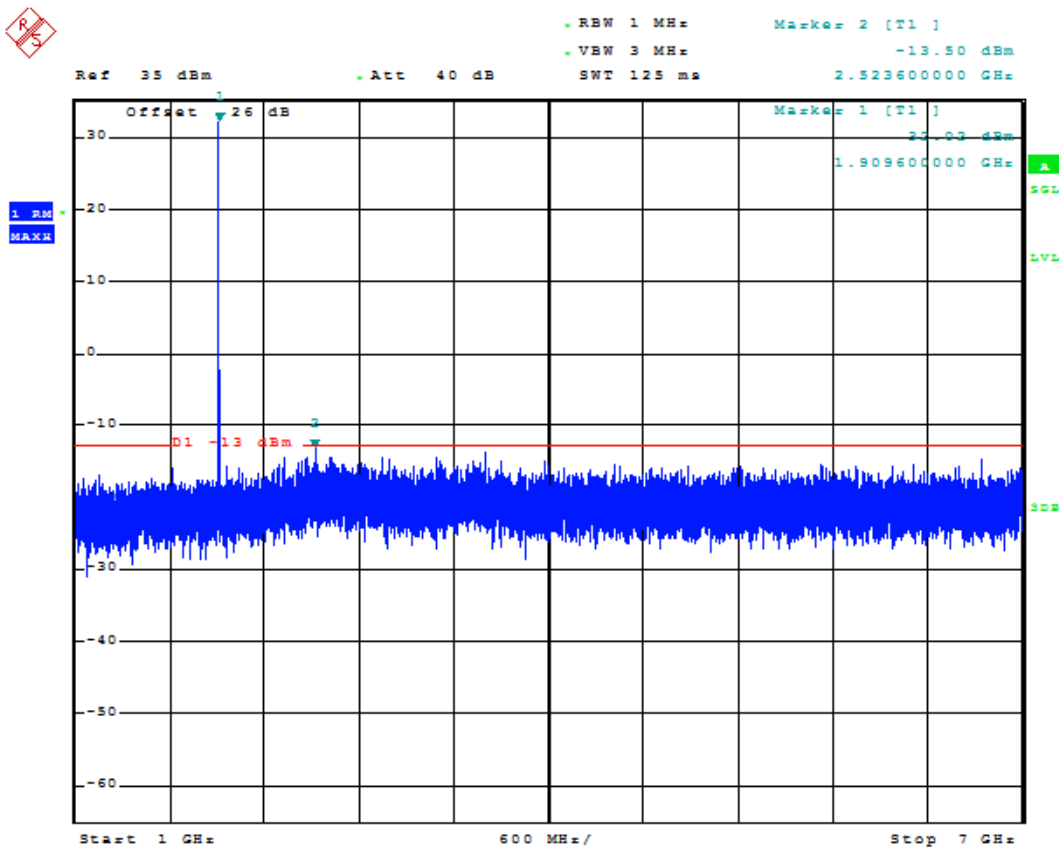
Date: 3.OCT.2017 13:05:56



Report Number: 1709FR17-01



Date: 3.OCT.2017 13:06:06

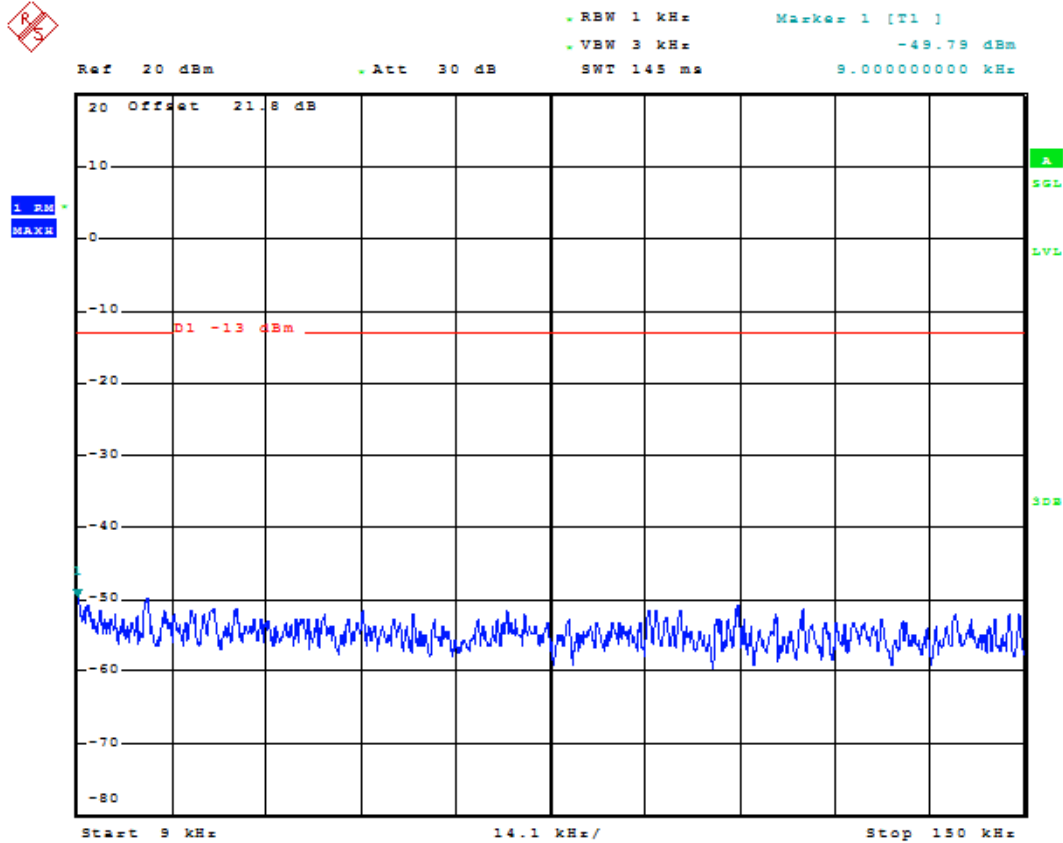


Date: 3.OCT.2017 13:06:17



1.2.2 Test Mode=GSM/TM2

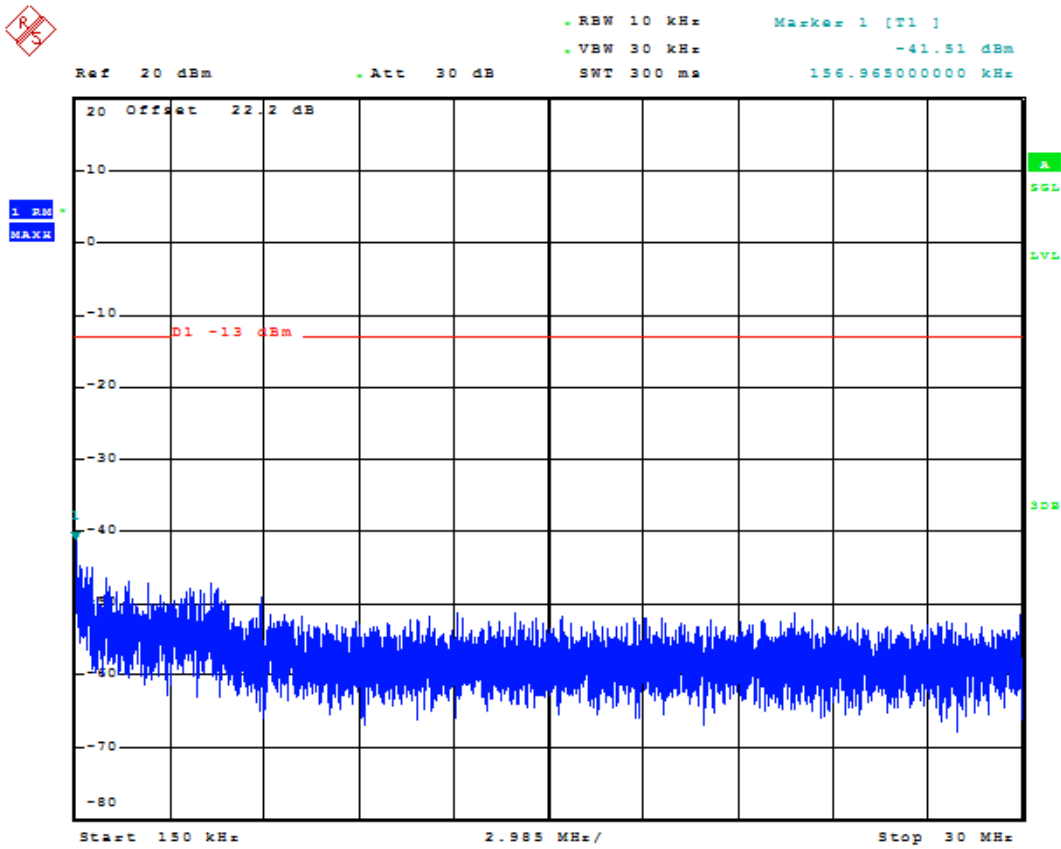
1.2.2.1 Test Channel=LCH



Date: 3.OCT.2017 13:51:35



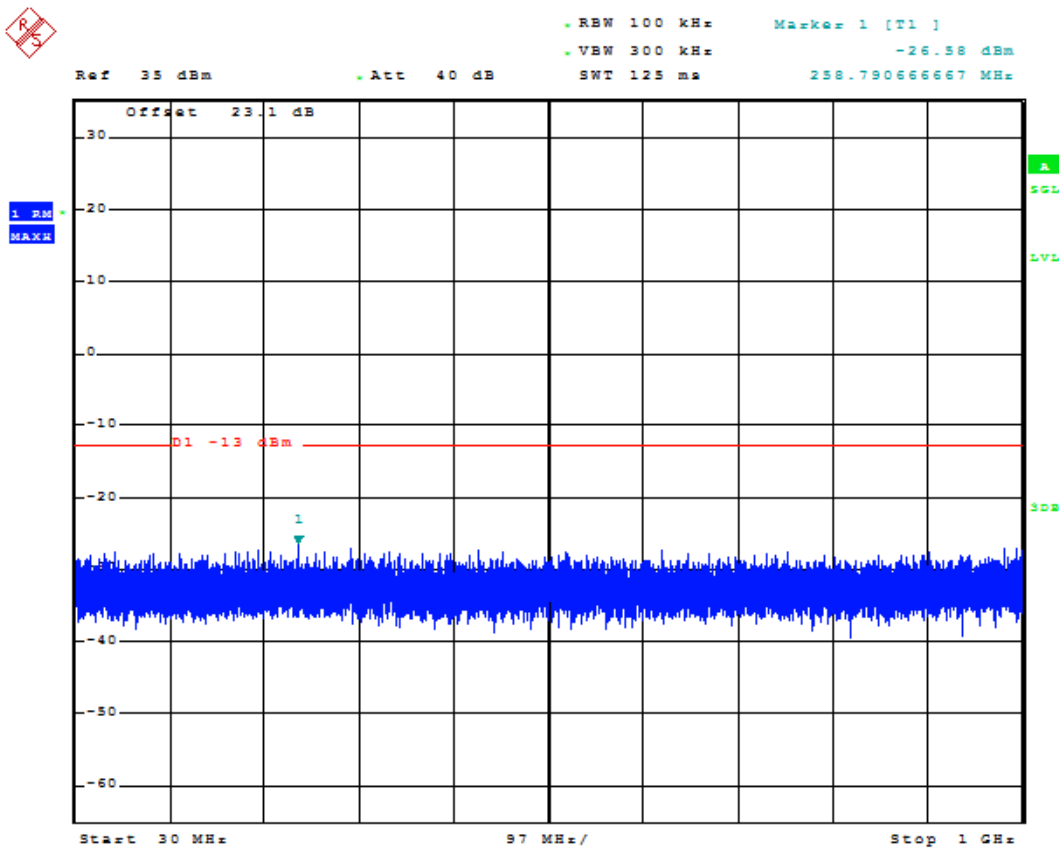
Report Number: 1709FR17-01



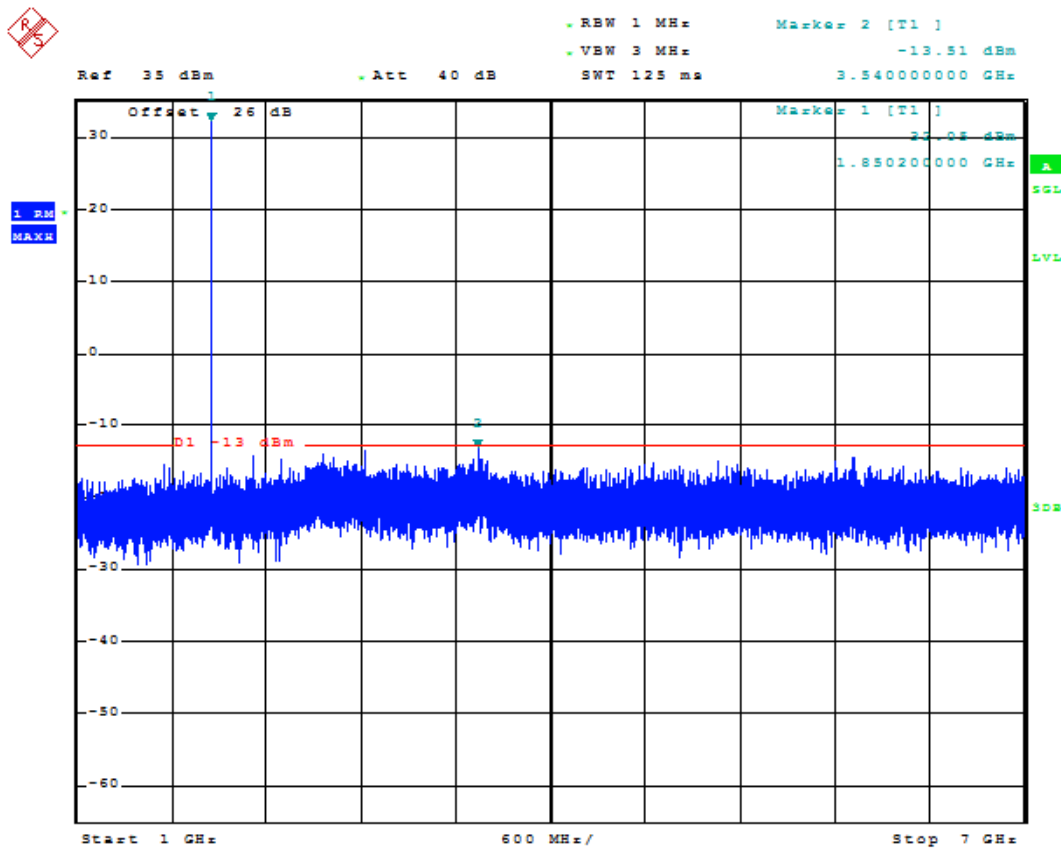
Date: 3.OCT.2017 13:51:44



Report Number: 1709FR17-01



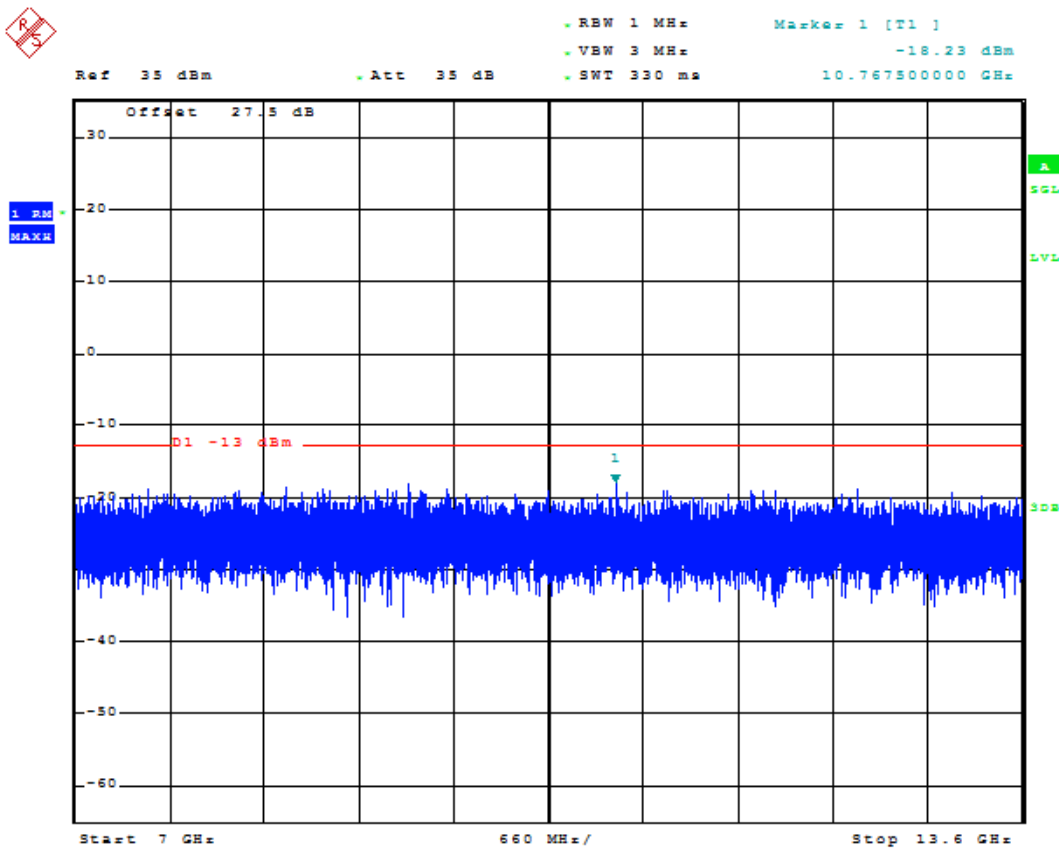
Date: 3.OCT.2017 13:51:53



Date: 3.OCT.2017 13:52:03



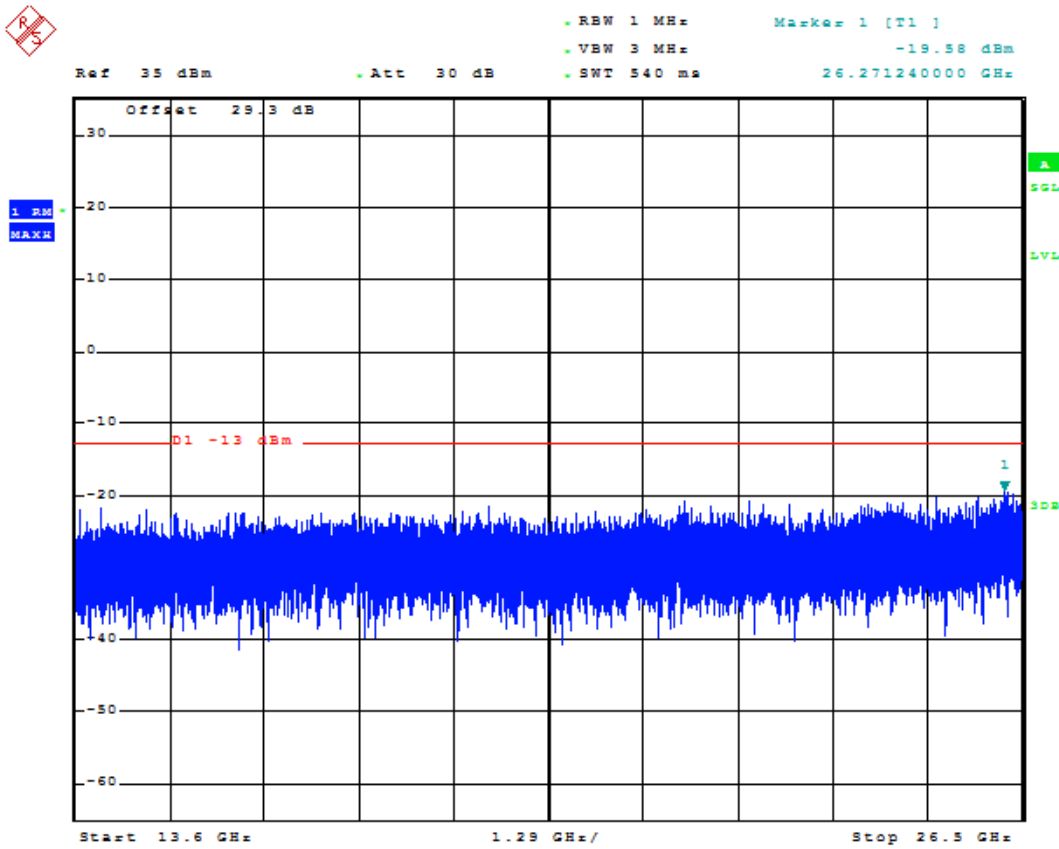
Report Number: 1709FR17-01



Date: 3.OCT.2017 13:52:20



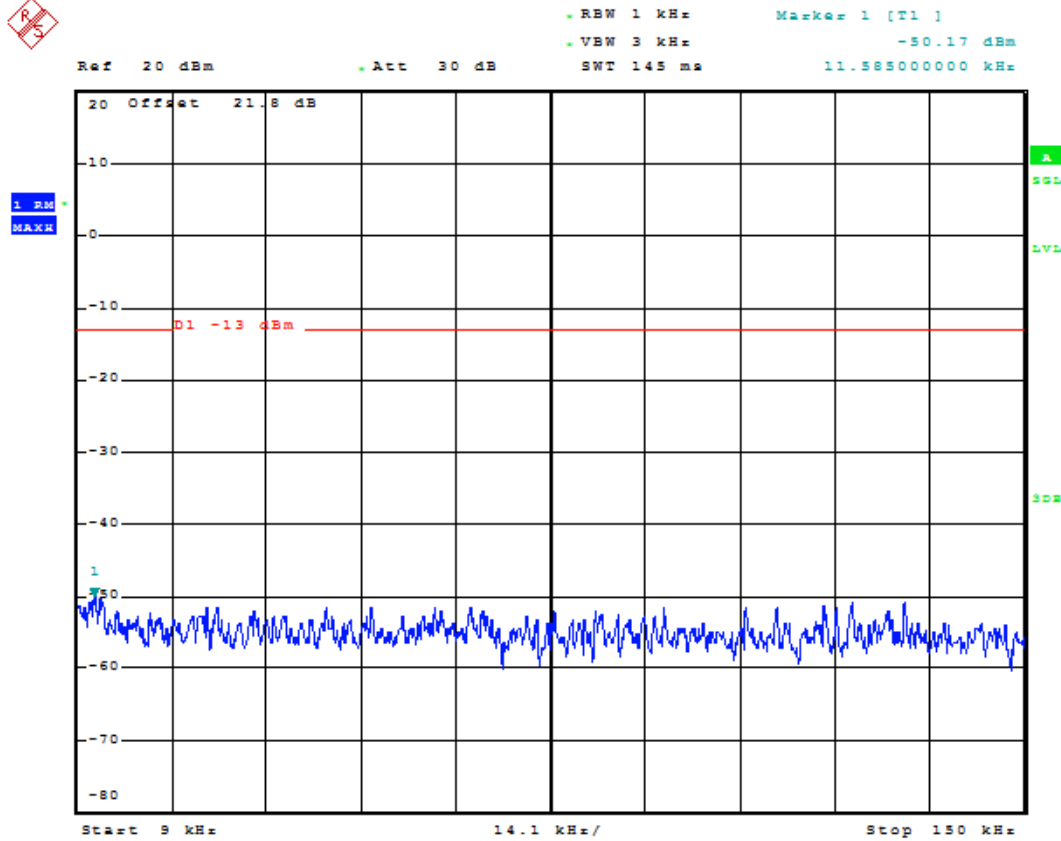
Report Number: 1709FR17-01



Date: 3.OCT.2017 13:52:45



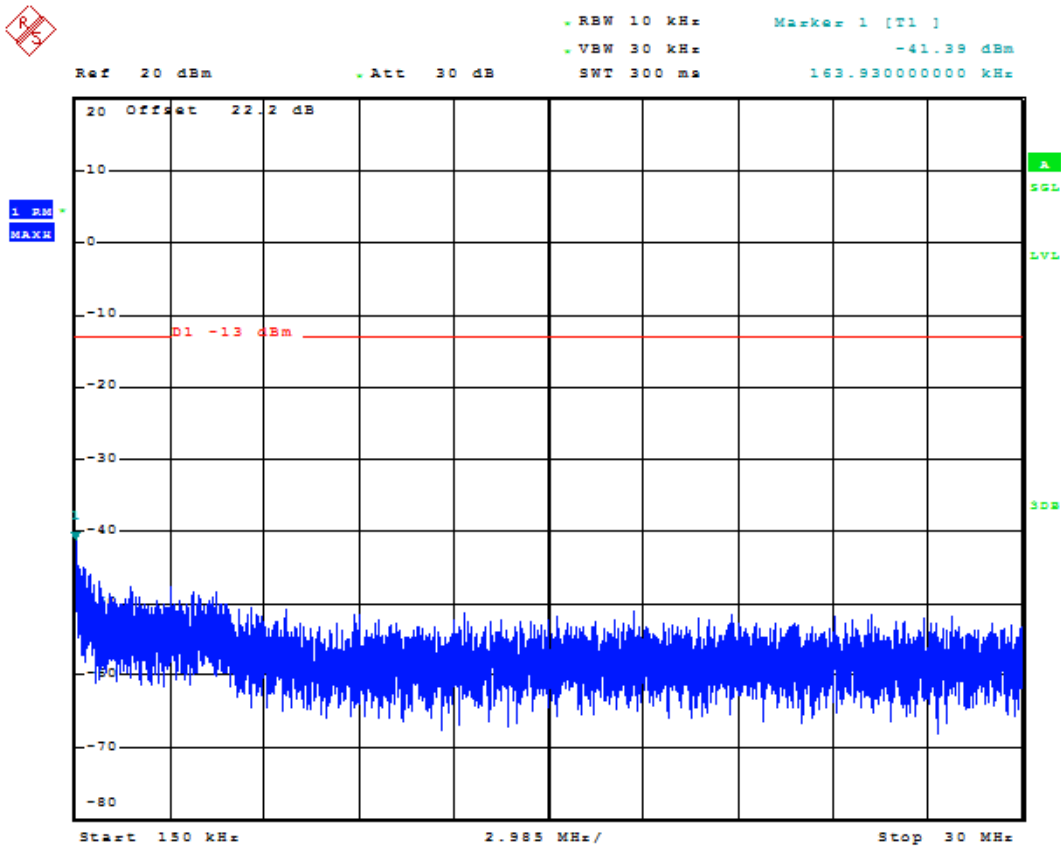
1.2.2.2 Test Channel=MCH



Date: 3.OCT.2017 13:53:02



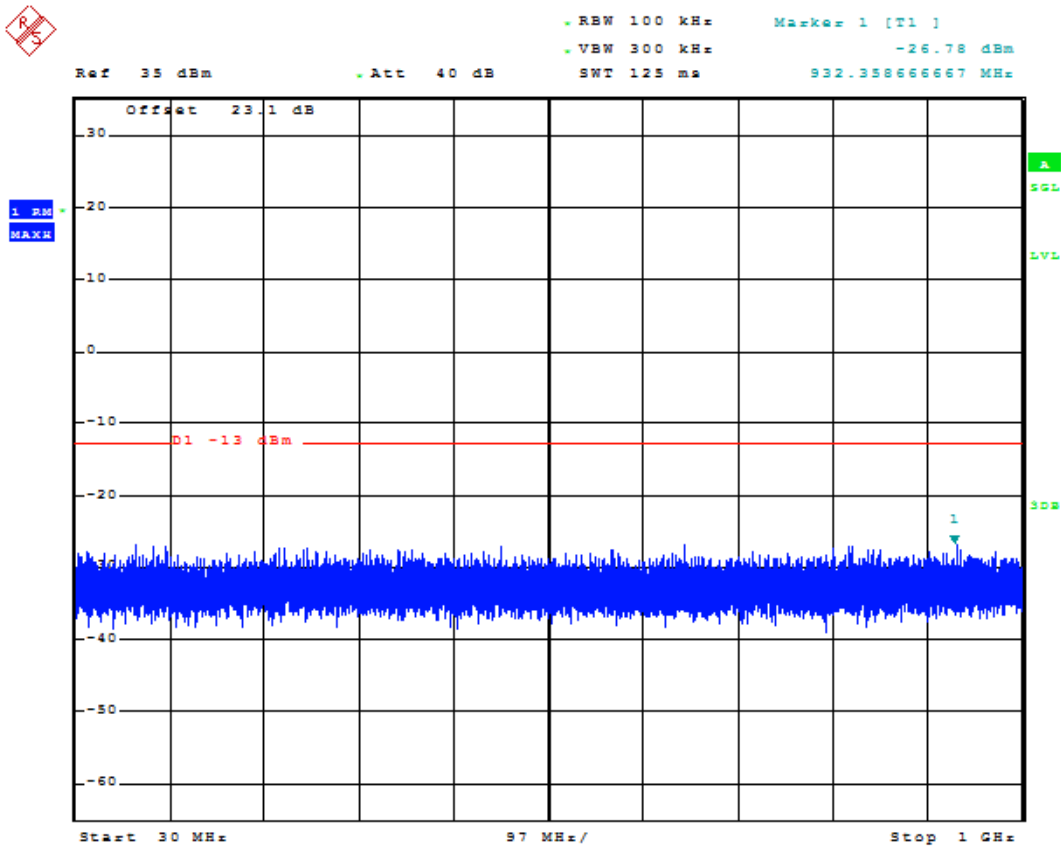
Report Number: 1709FR17-01



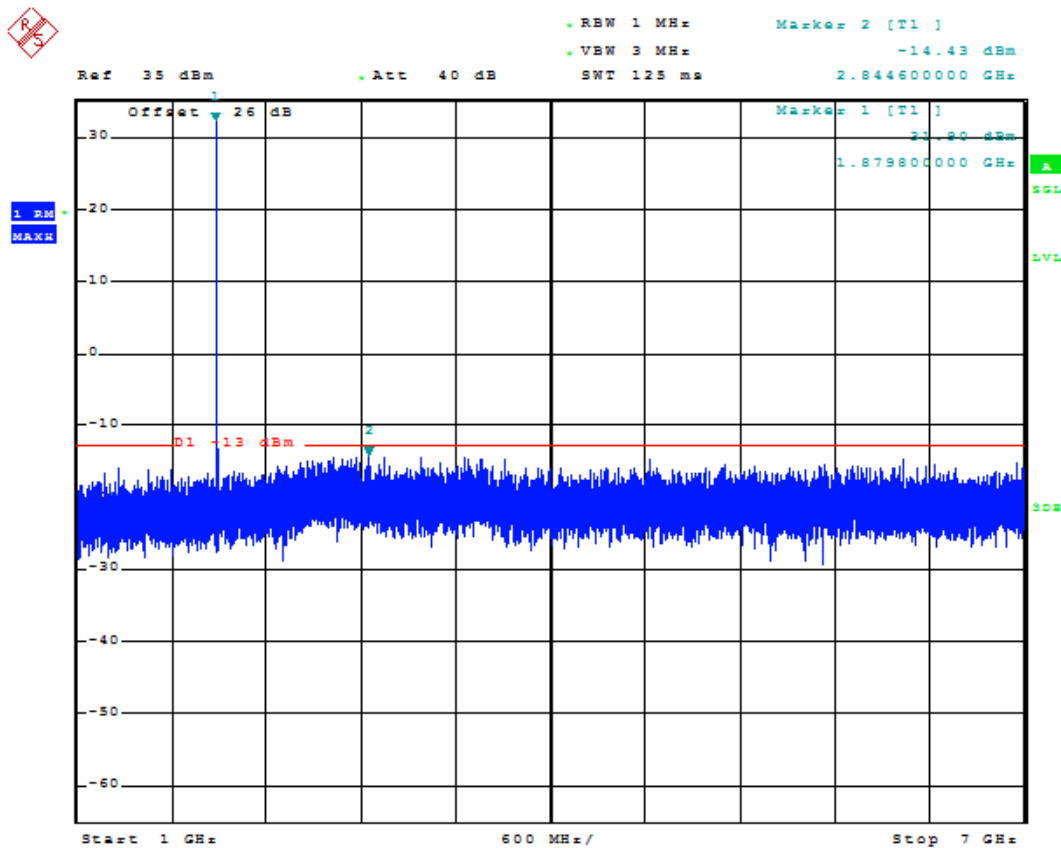
Date: 3.OCT.2017 13:53:11



Report Number: 1709FR17-01



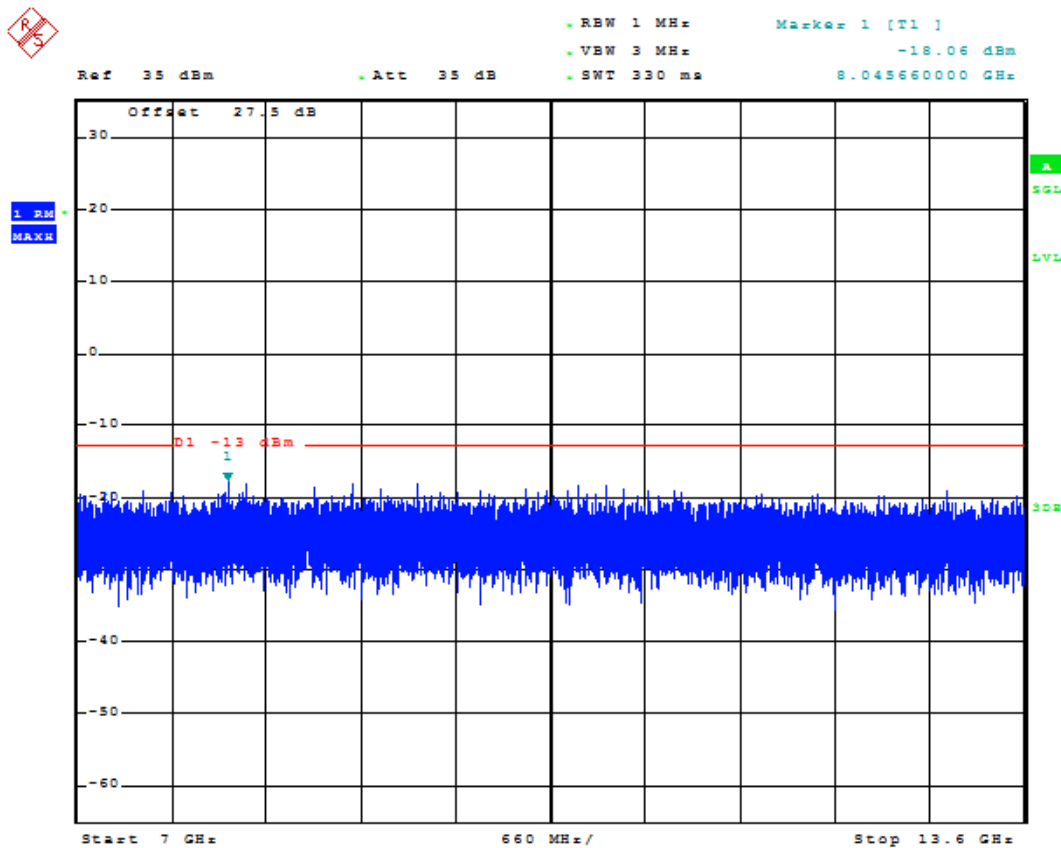
Date: 3.OCT.2017 13:53:20



Date: 3.OCT.2017 13:53:30



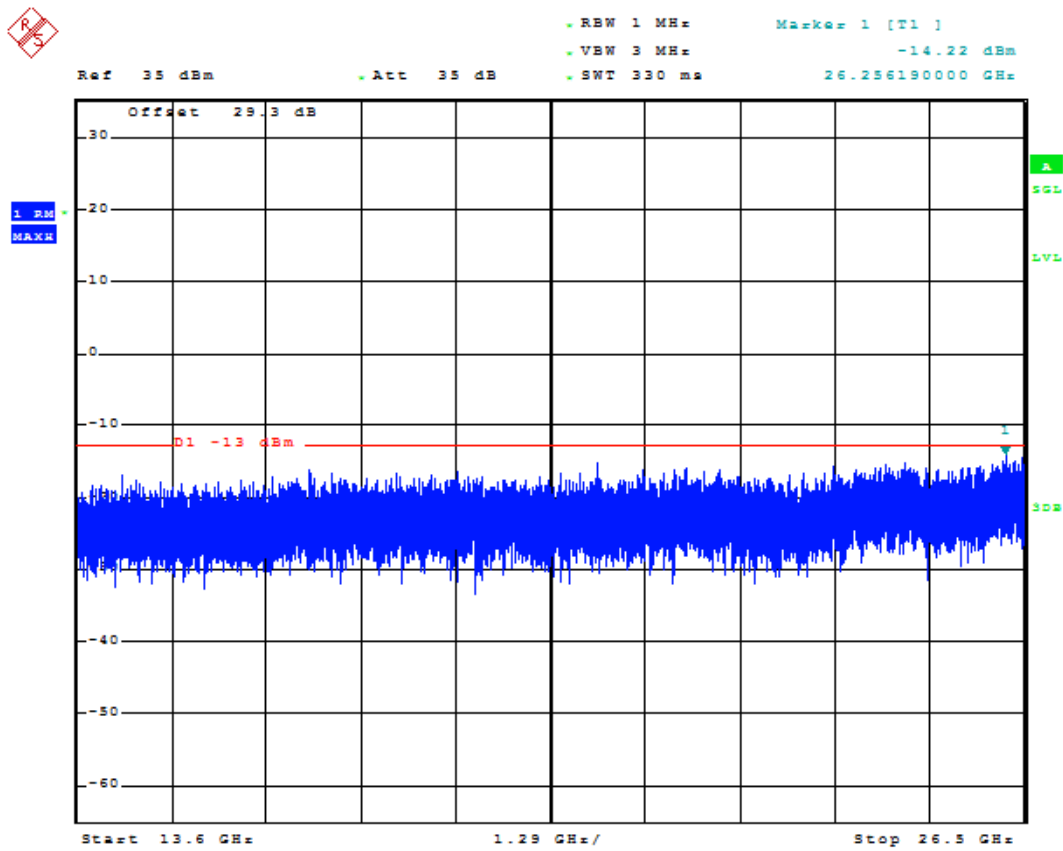
Report Number: 1709FR17-01



Date: 3.OCT.2017 13:53:46



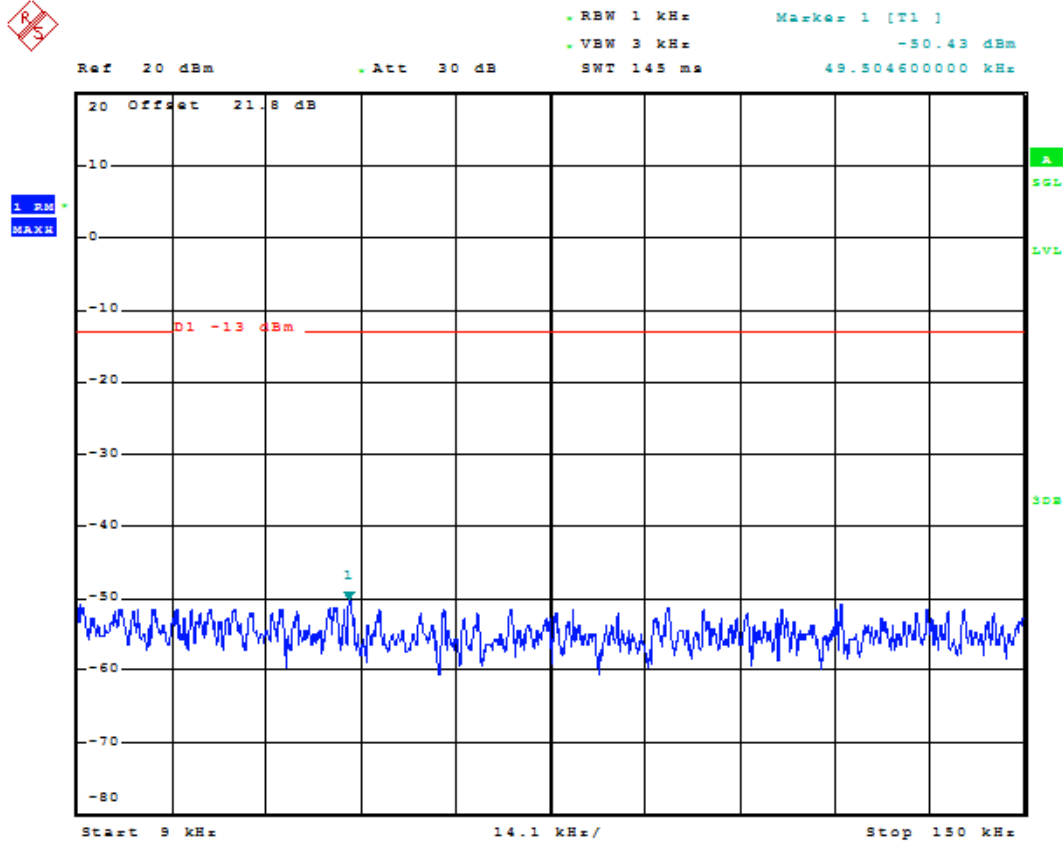
Report Number: 1709FR17-01



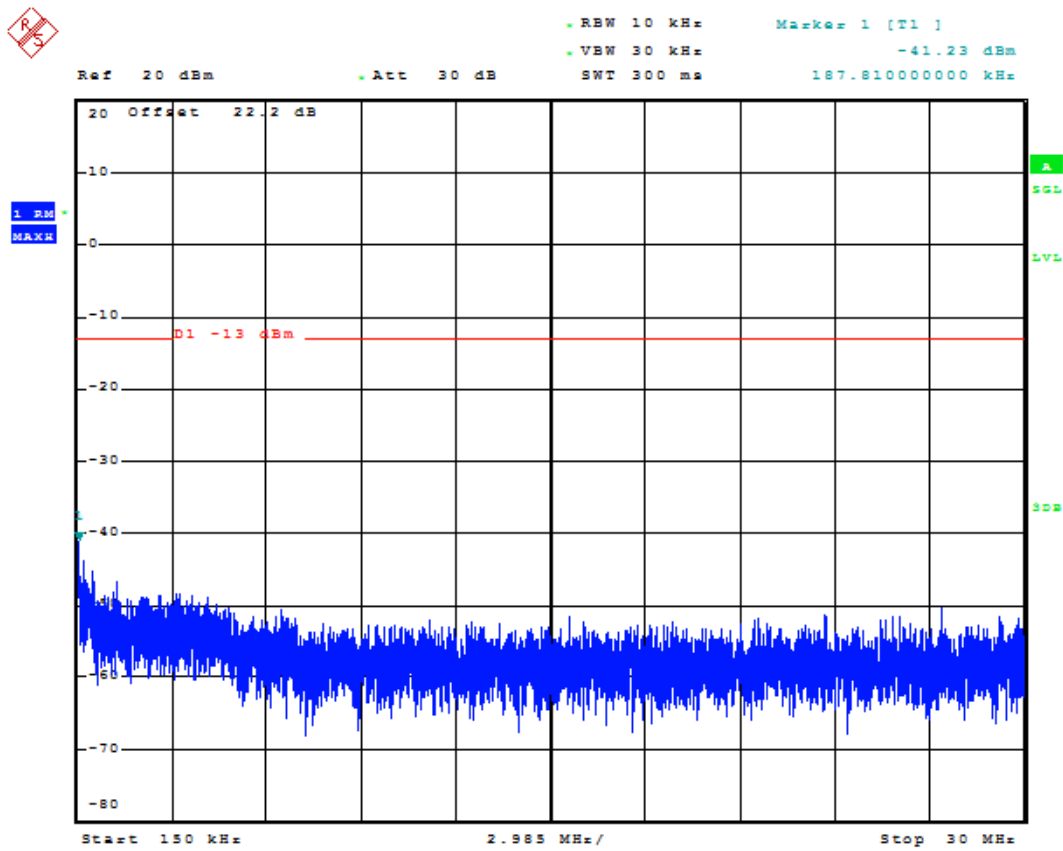
Date: 3.OCT.2017 13:54:03



1.2.2.3 Test Channel=HCH



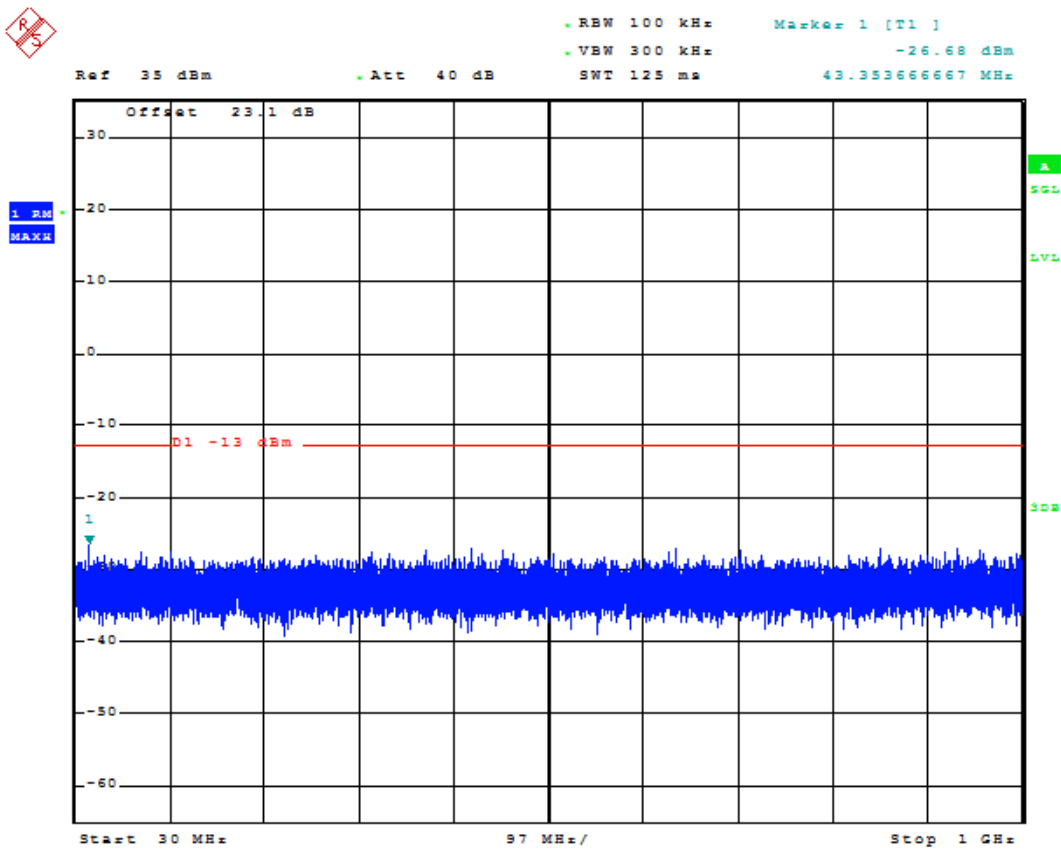
Date: 3.OCT.2017 13:54:20



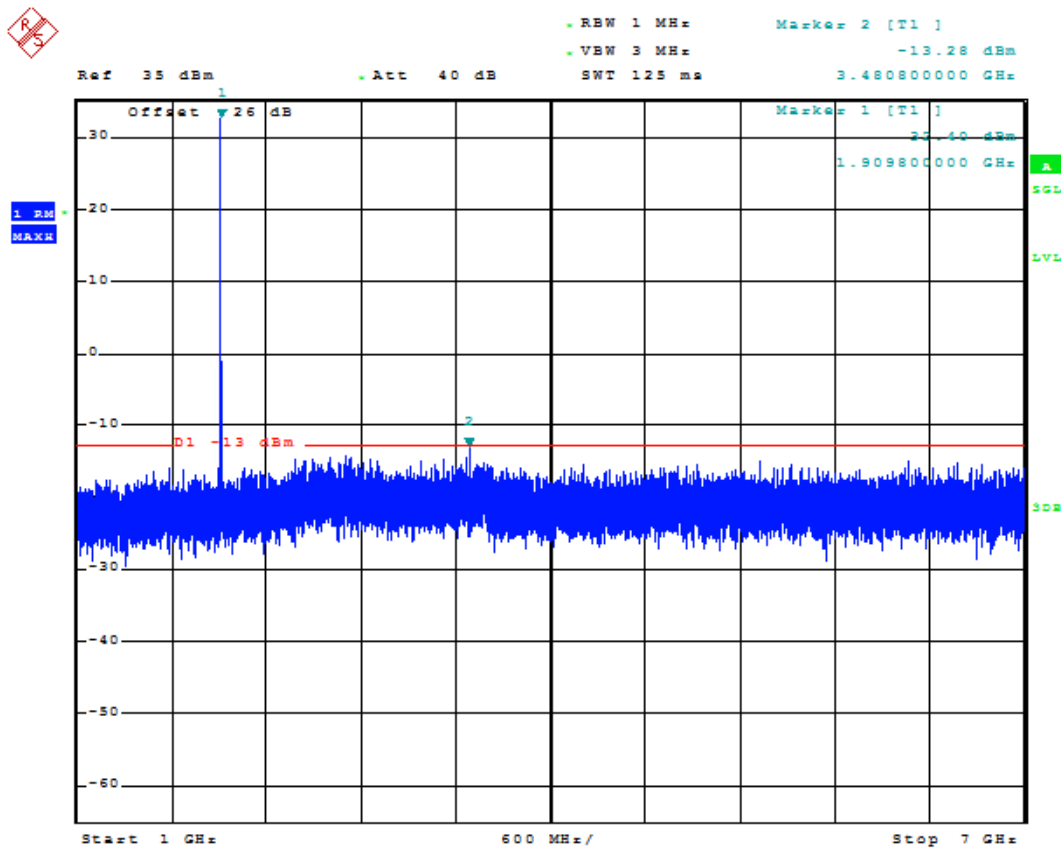
Date: 3.OCT.2017 13:54:29



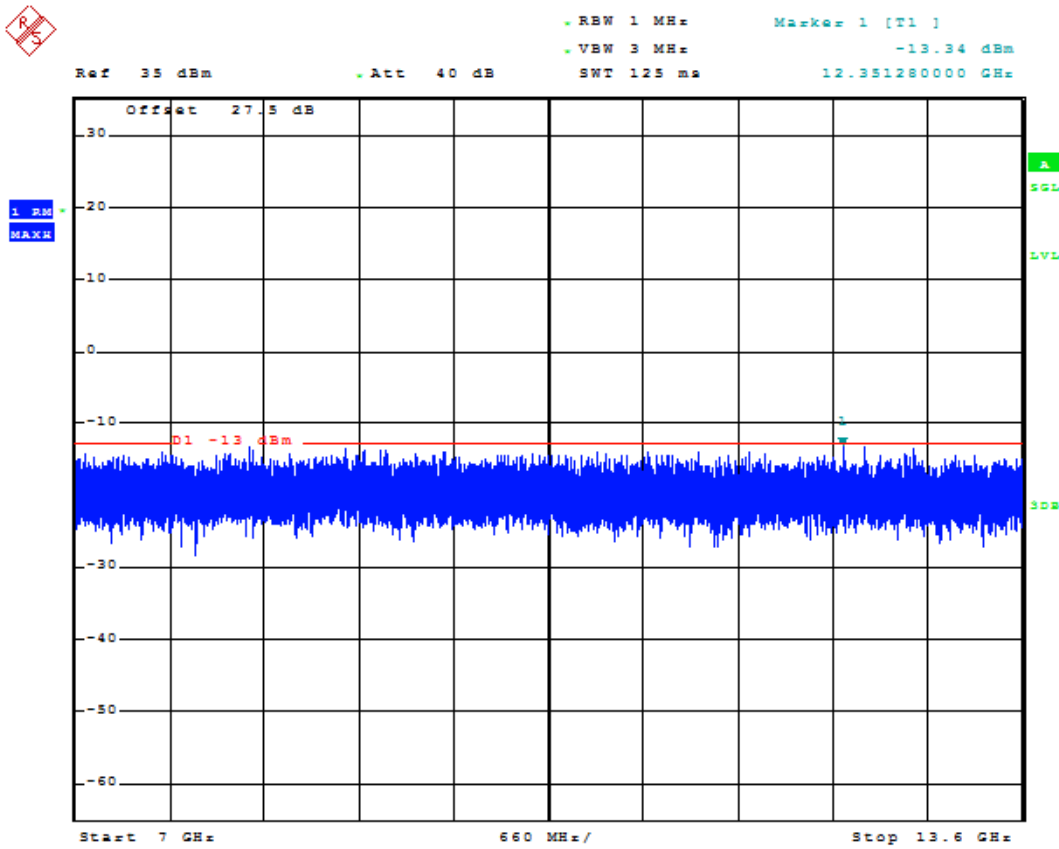
Report Number: 1709FR17-01



Date: 3.OCT.2017 13:54:38



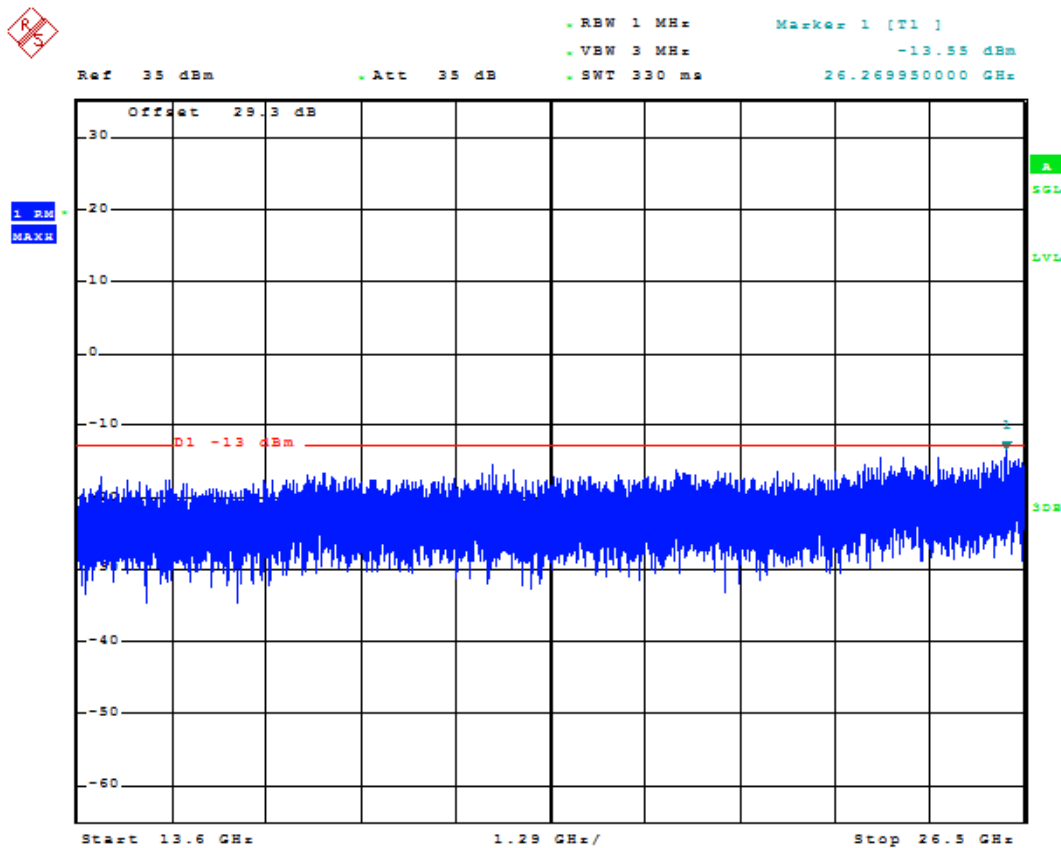
Date: 3.OCT.2017 13:54:48



Date: 3.OCT.2017 13:54:57



Report Number: 1709FR17-01

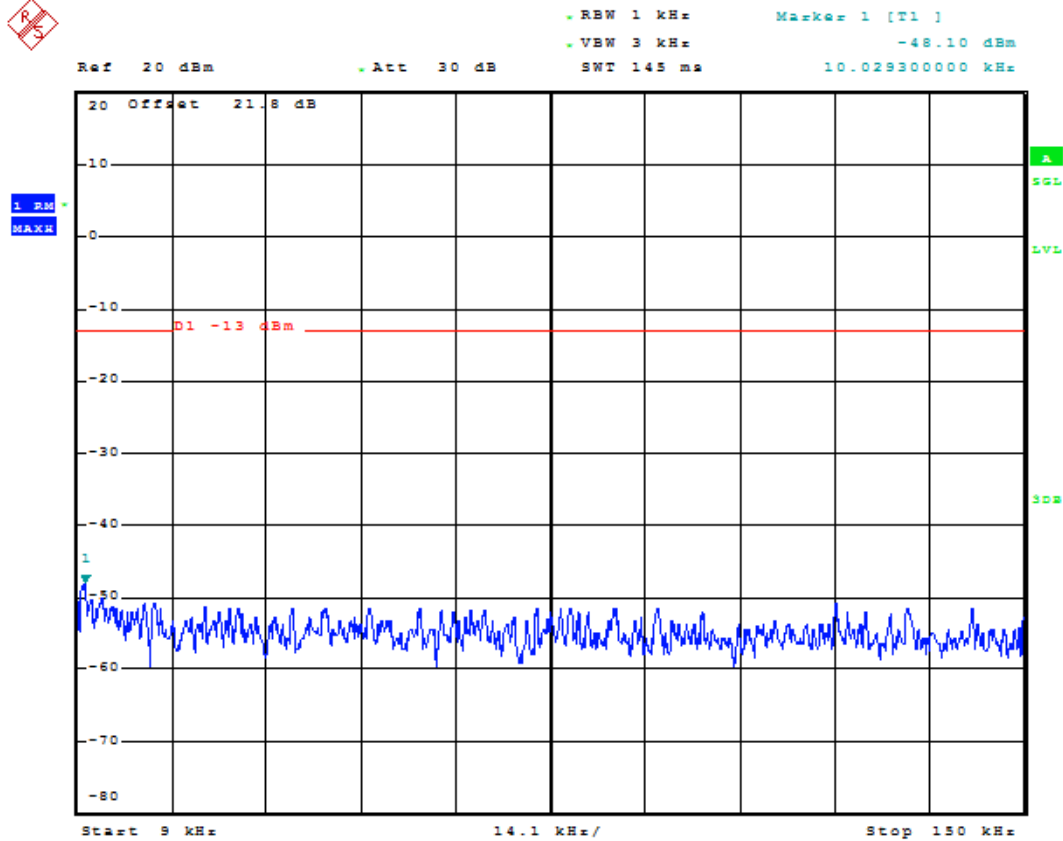


Date: 3.OCT.2017 13:55:14

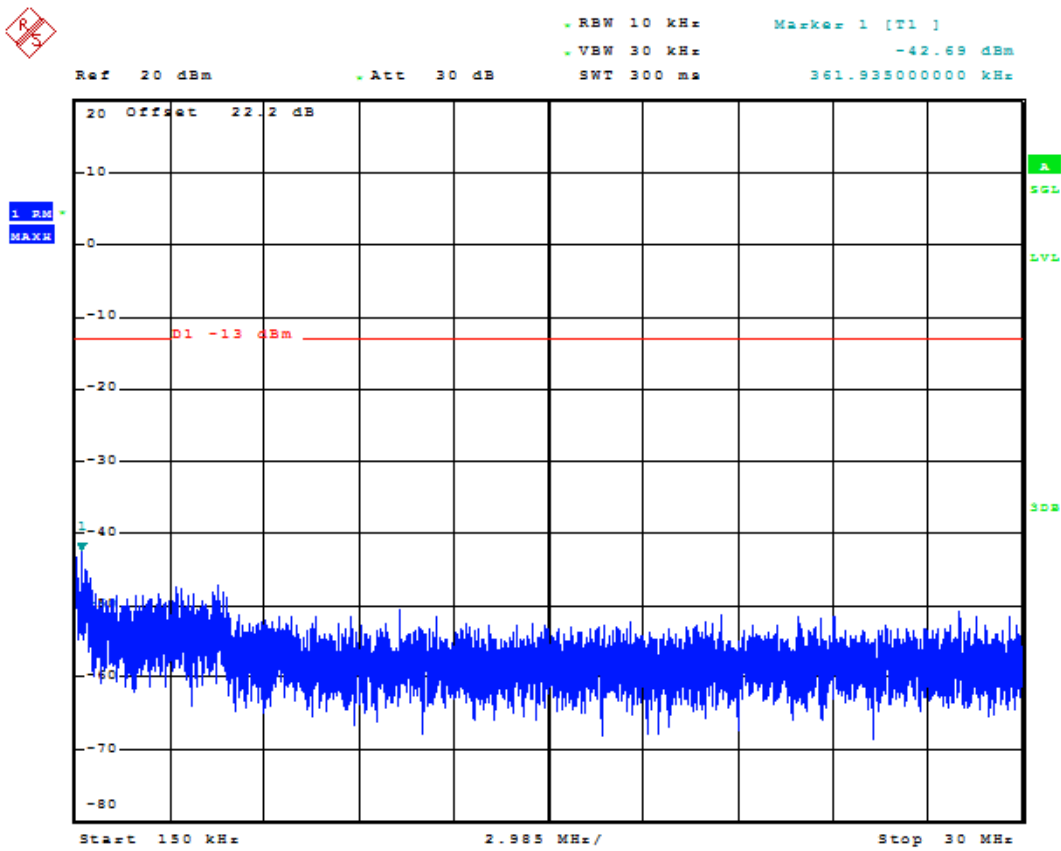


1.2.3 Test Mode=GSM/TM3

1.2.3.1 Test Channel=LCH



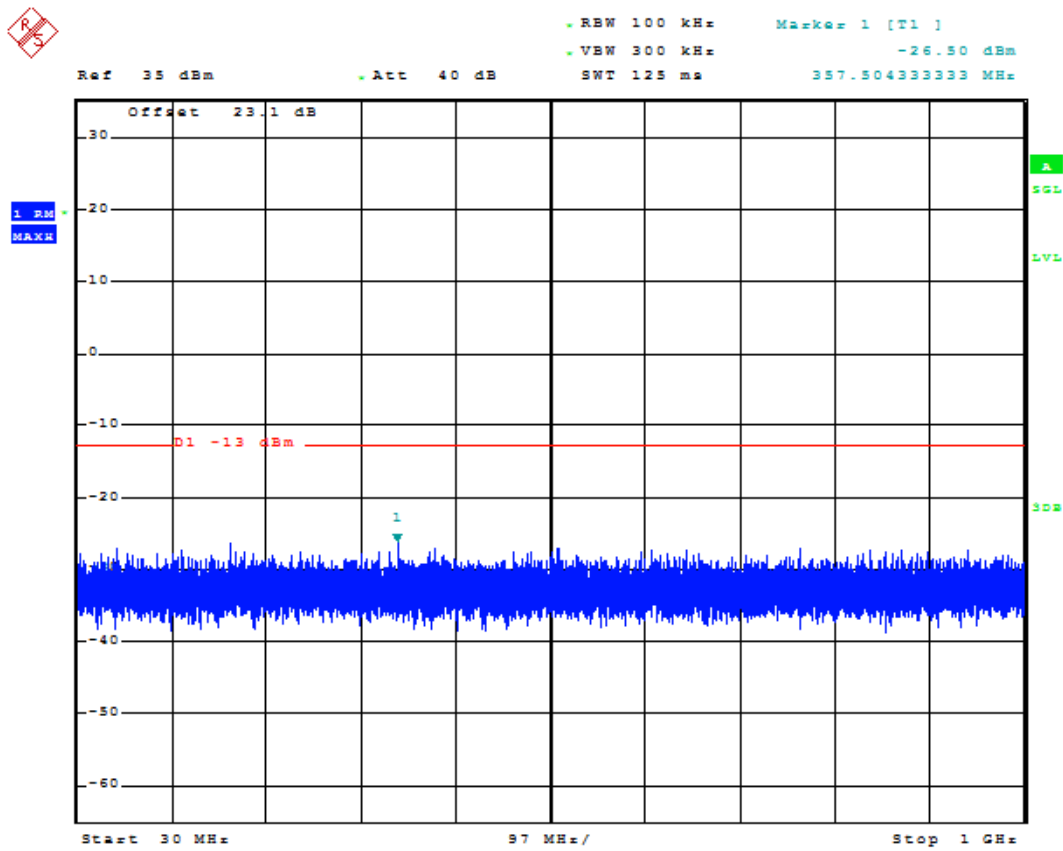
Date: 3.OCT.2017 14:29:24



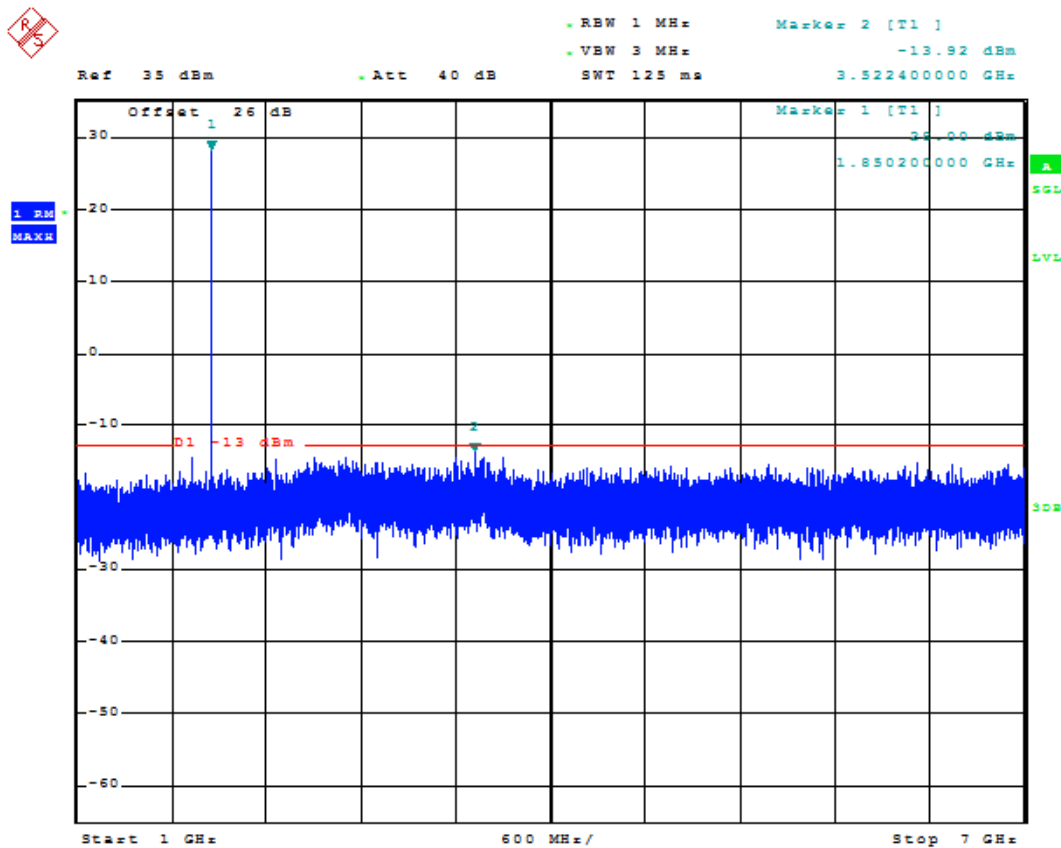
Date: 3.OCT.2017 14:29:34



Report Number: 1709FR17-01

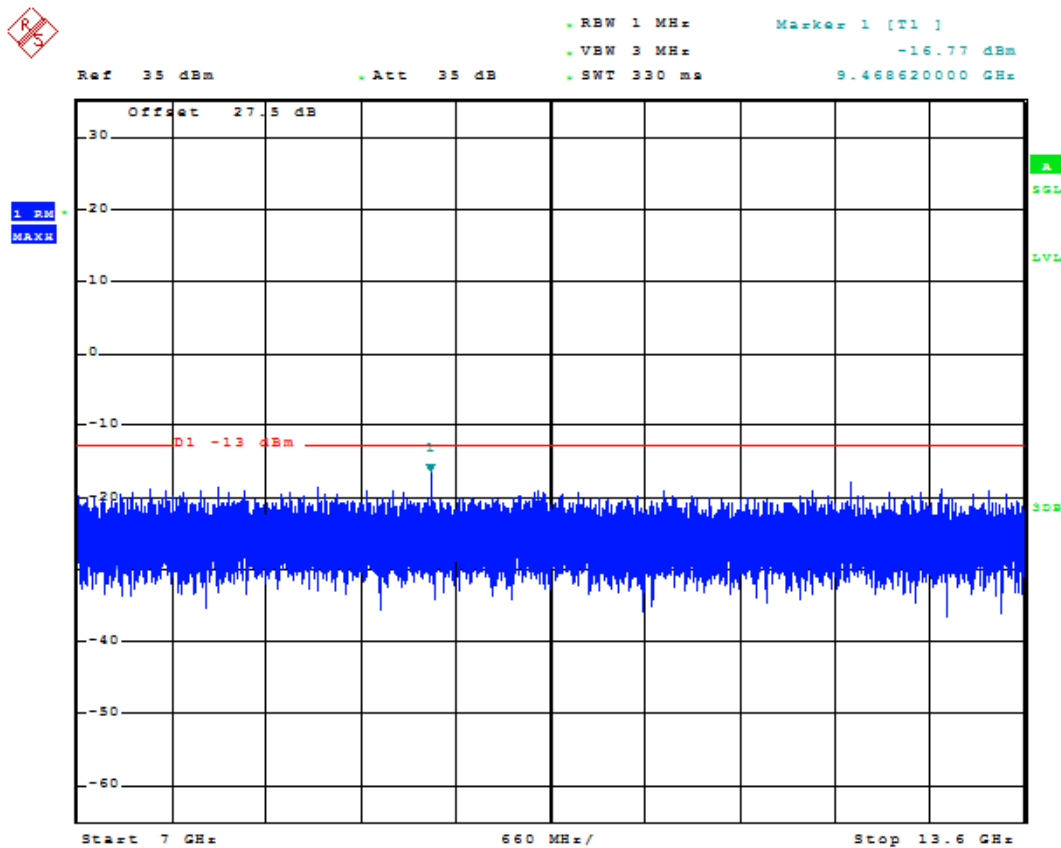


Date: 3.OCT.2017 14:29:43





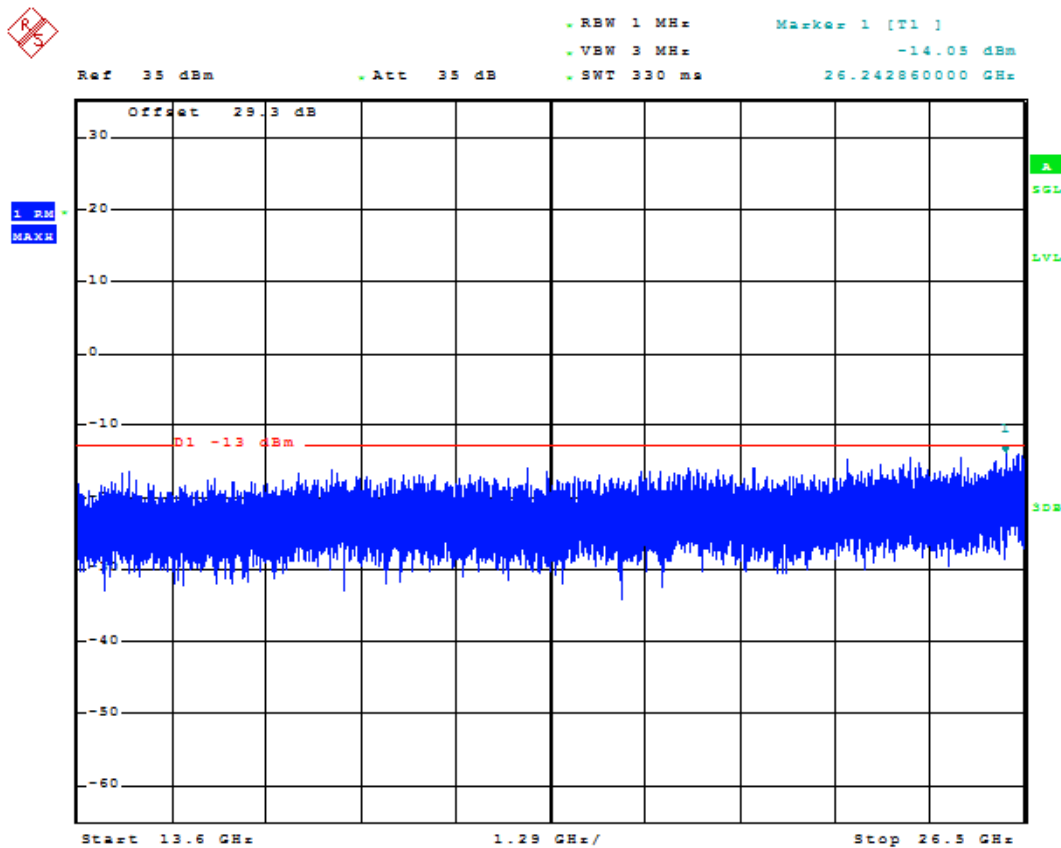
Report Number: 1709FR17-01



Date: 3.OCT.2017 14:30:11



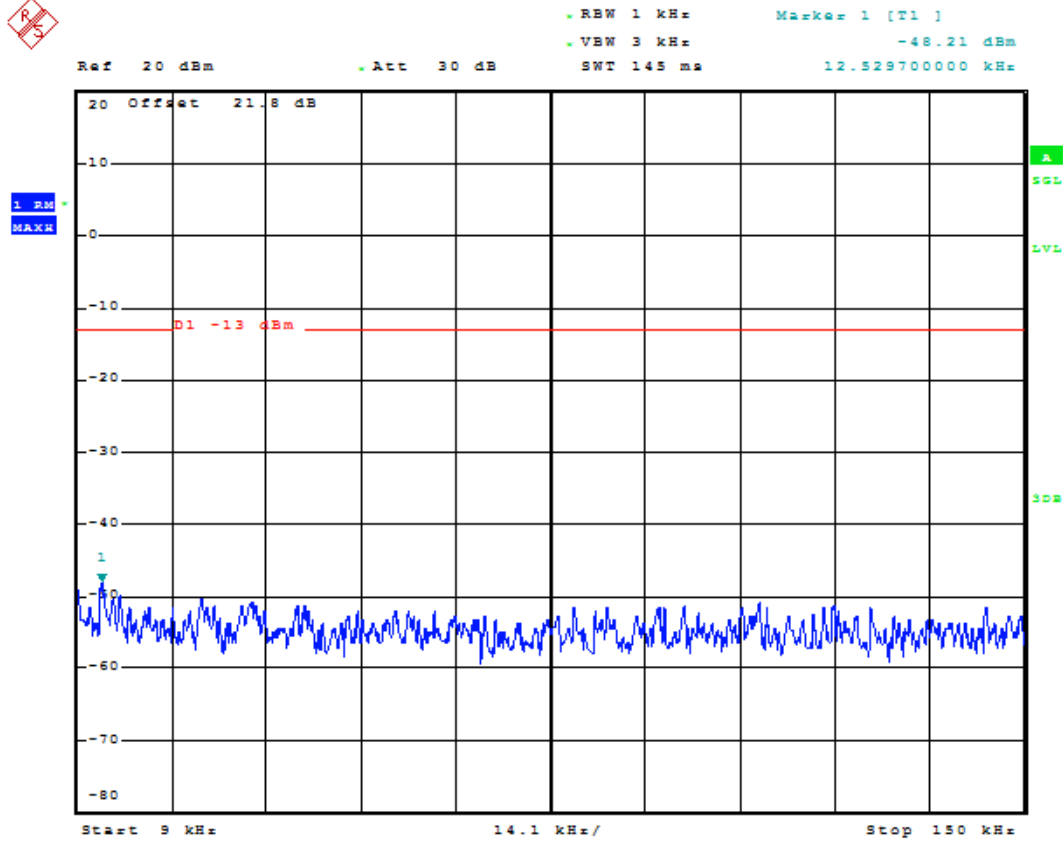
Report Number: 1709FR17-01



Date: 3.OCT.2017 14:30:29



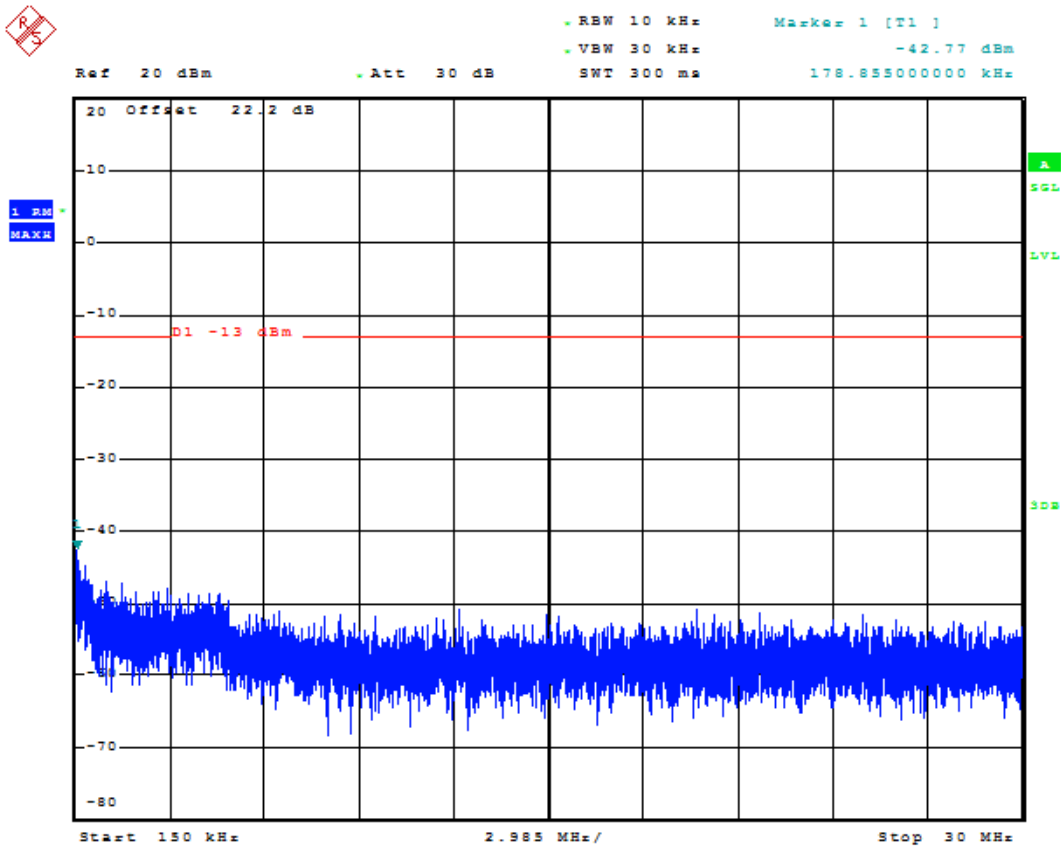
1.2.3.2 Test Channel=MCH



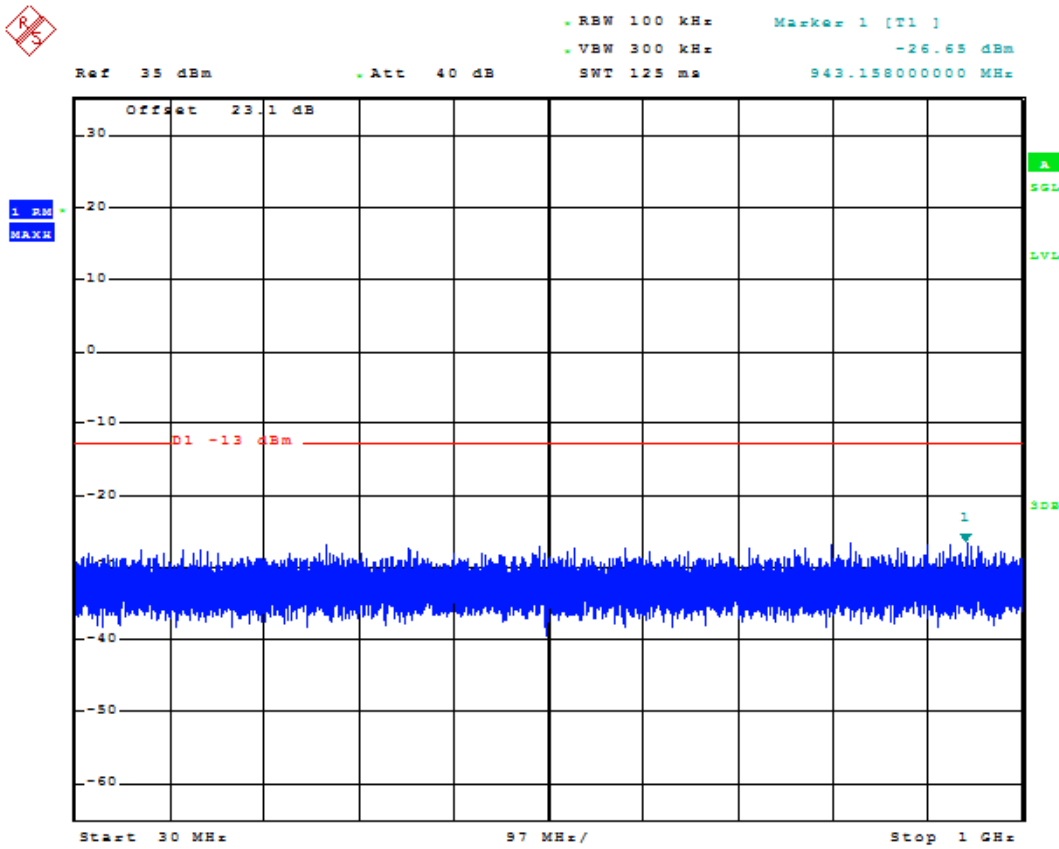
Date: 3.OCT.2017 14:23:52



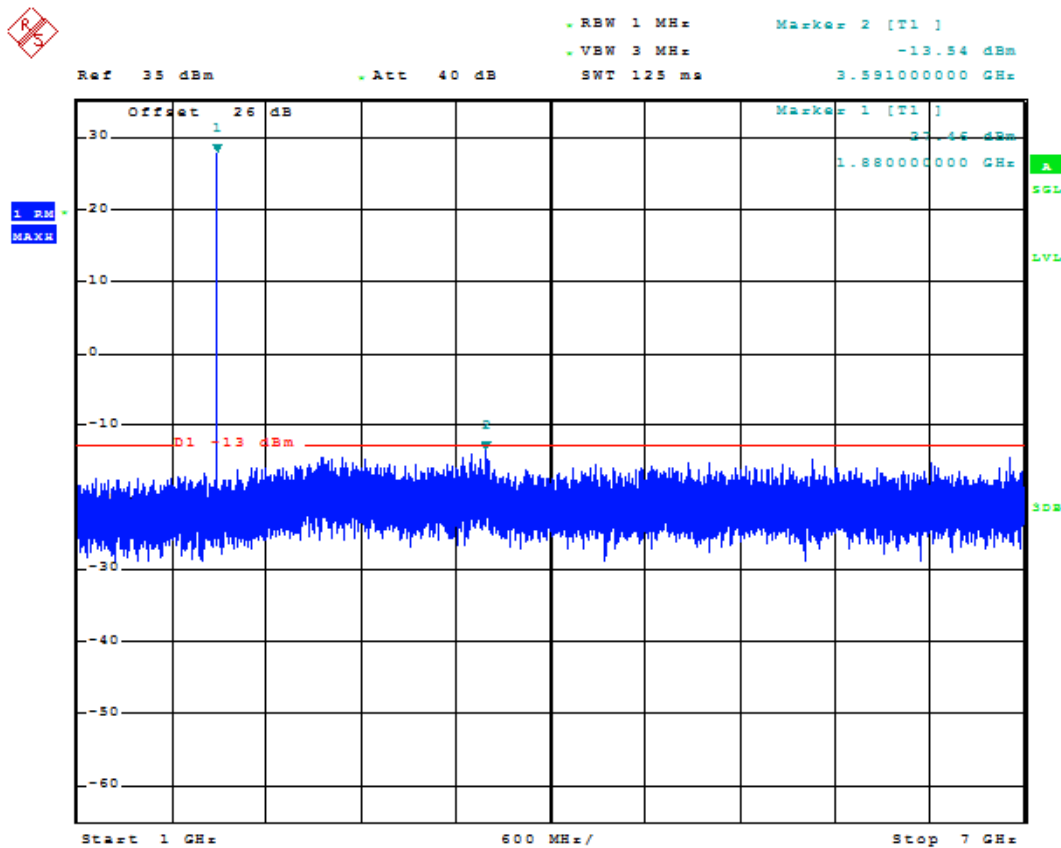
Report Number: 1709FR17-01



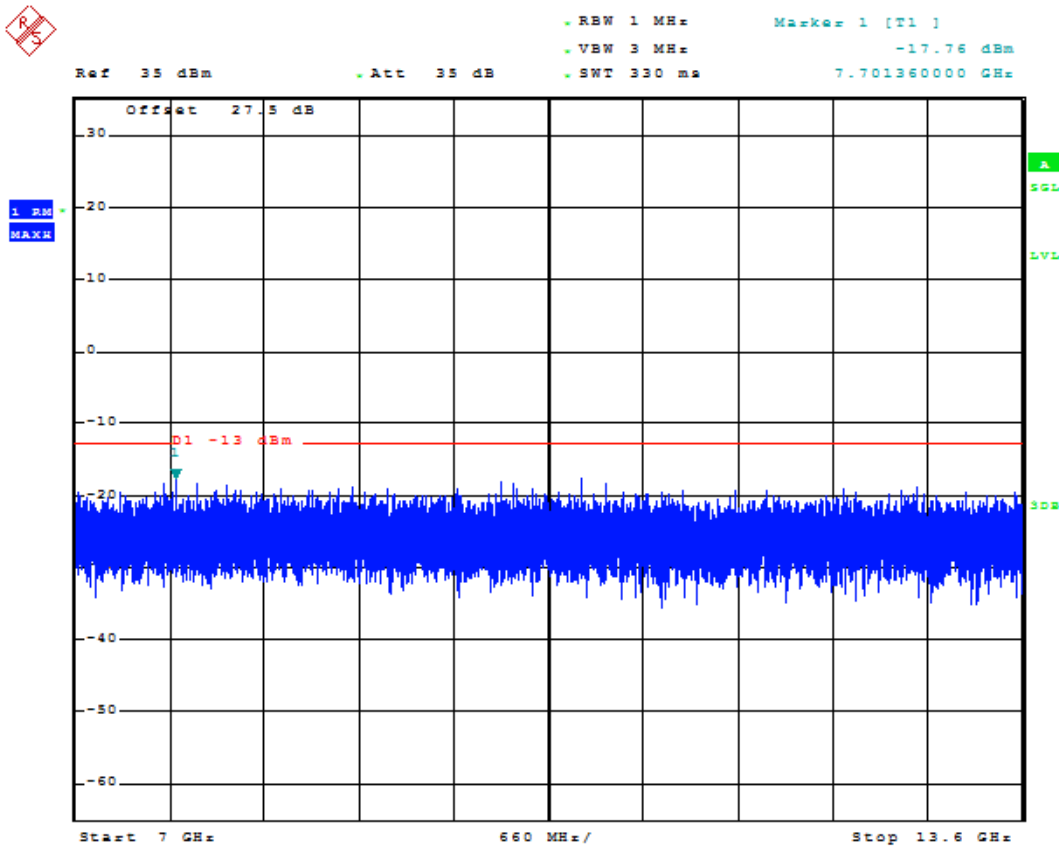
Date: 3.OCT.2017 14:24:01



Date: 3.OCT.2017 14:24:10



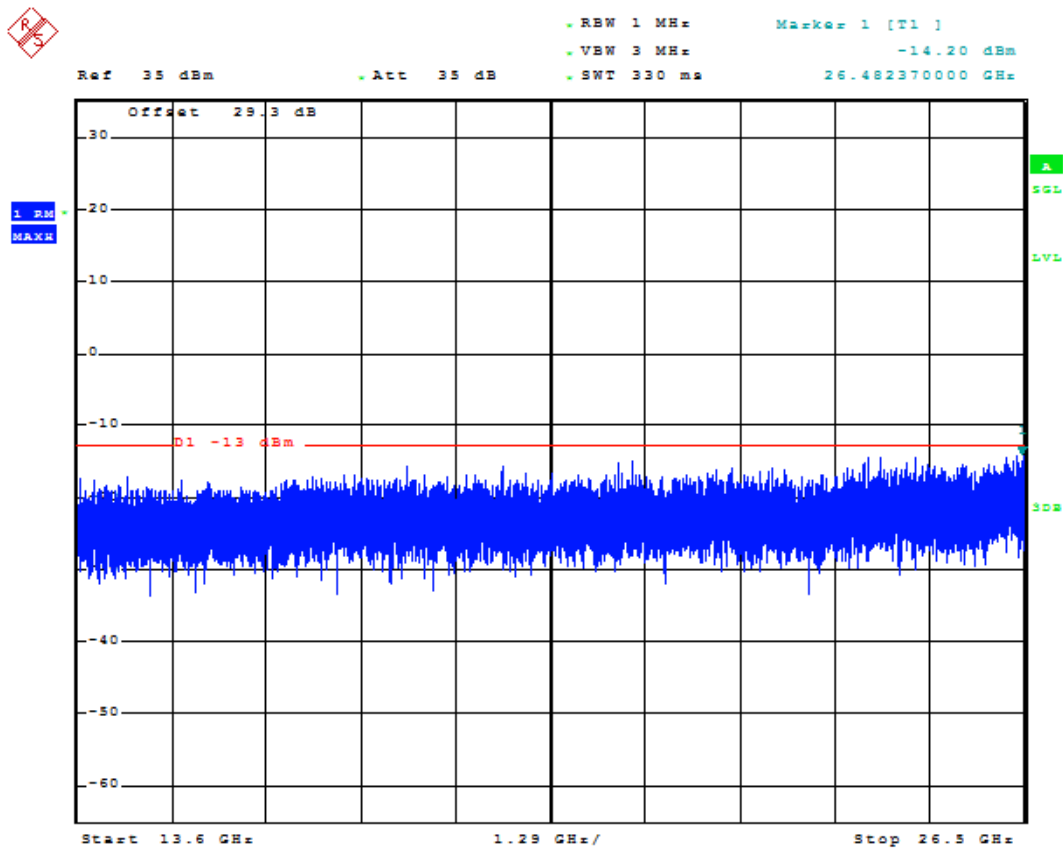
Date: 3.OCT.2017 14:24:21



Date: 3.OCT.2017 14:24:39



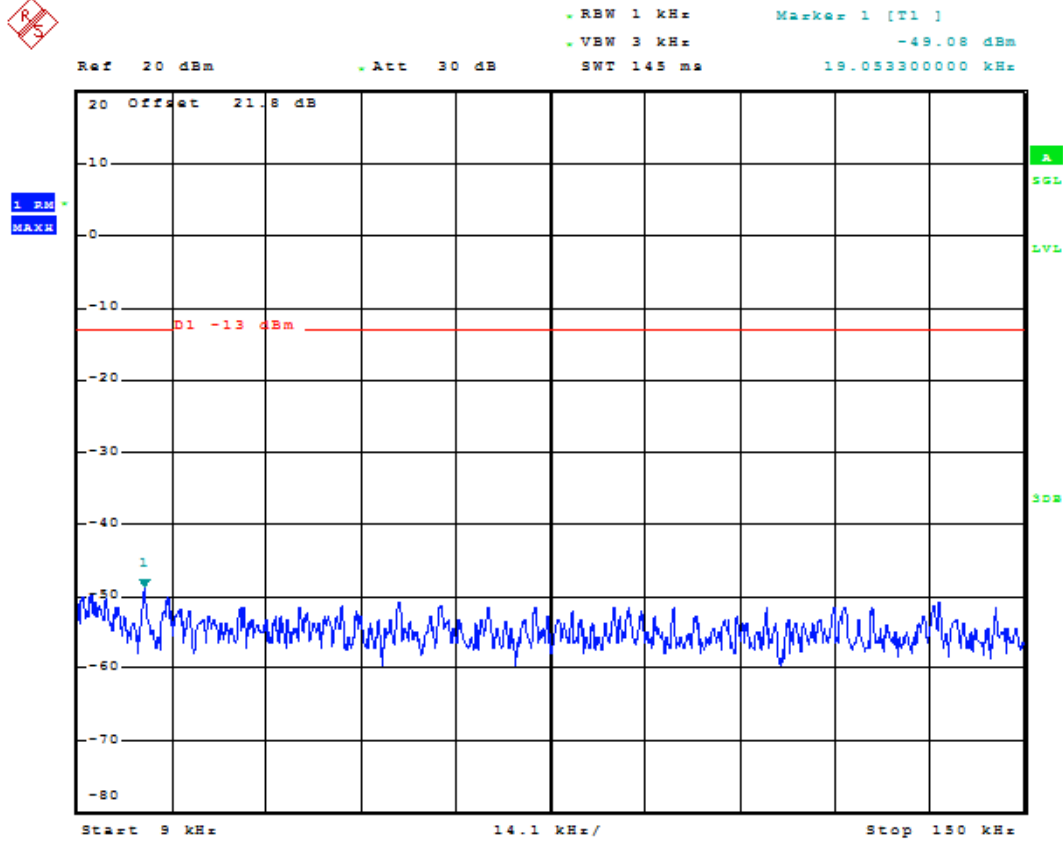
Report Number: 1709FR17-01



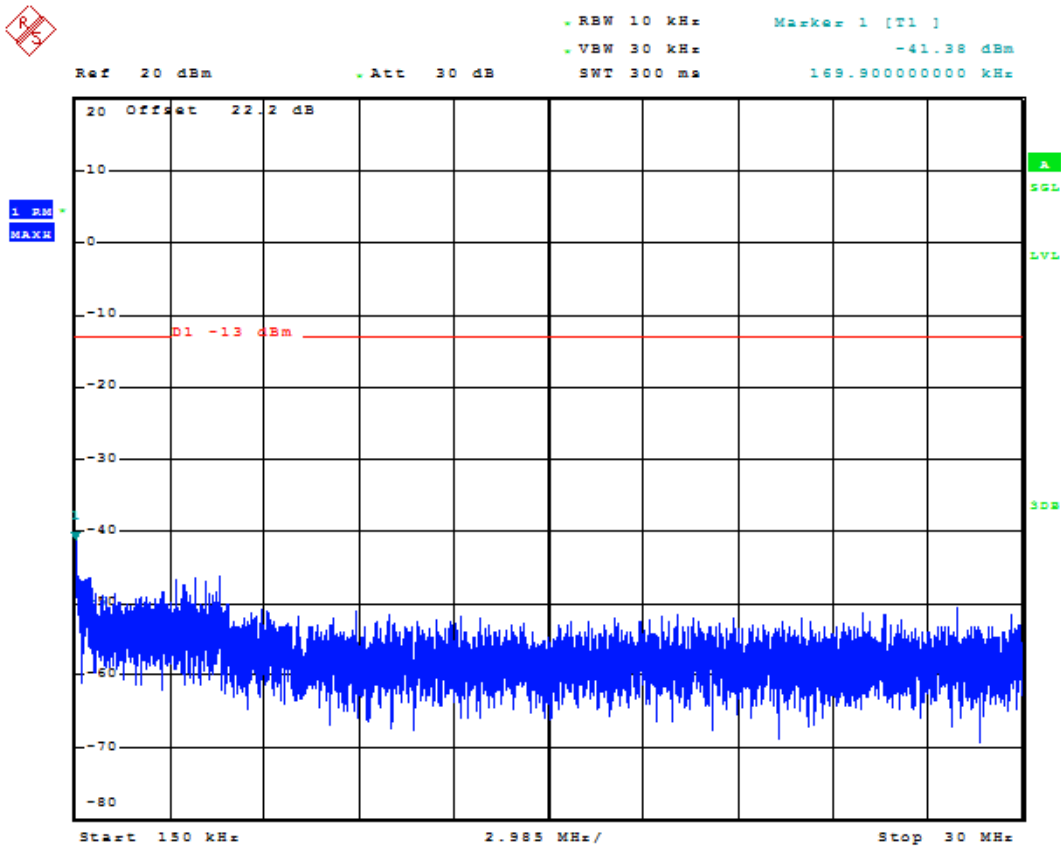
Date: 3.OCT.2017 14:24:56



1.2.3.3 Test Channel=HCH



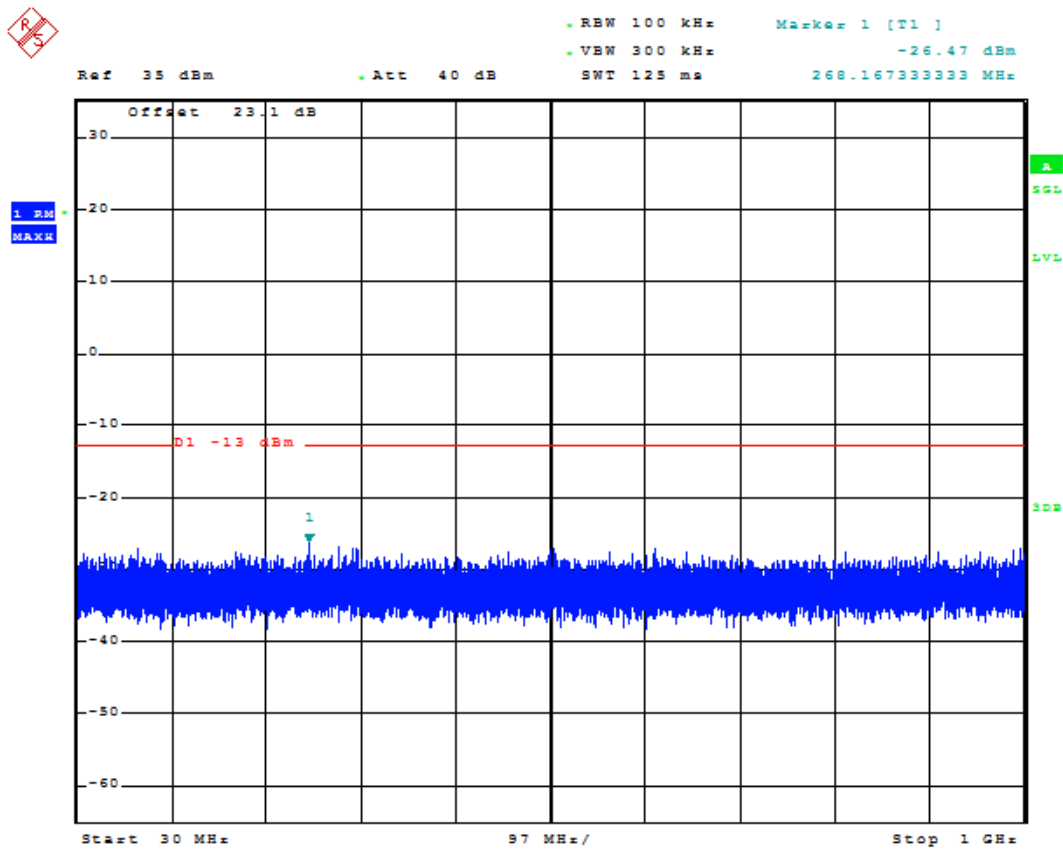
Date: 3.OCT.2017 14:25:14



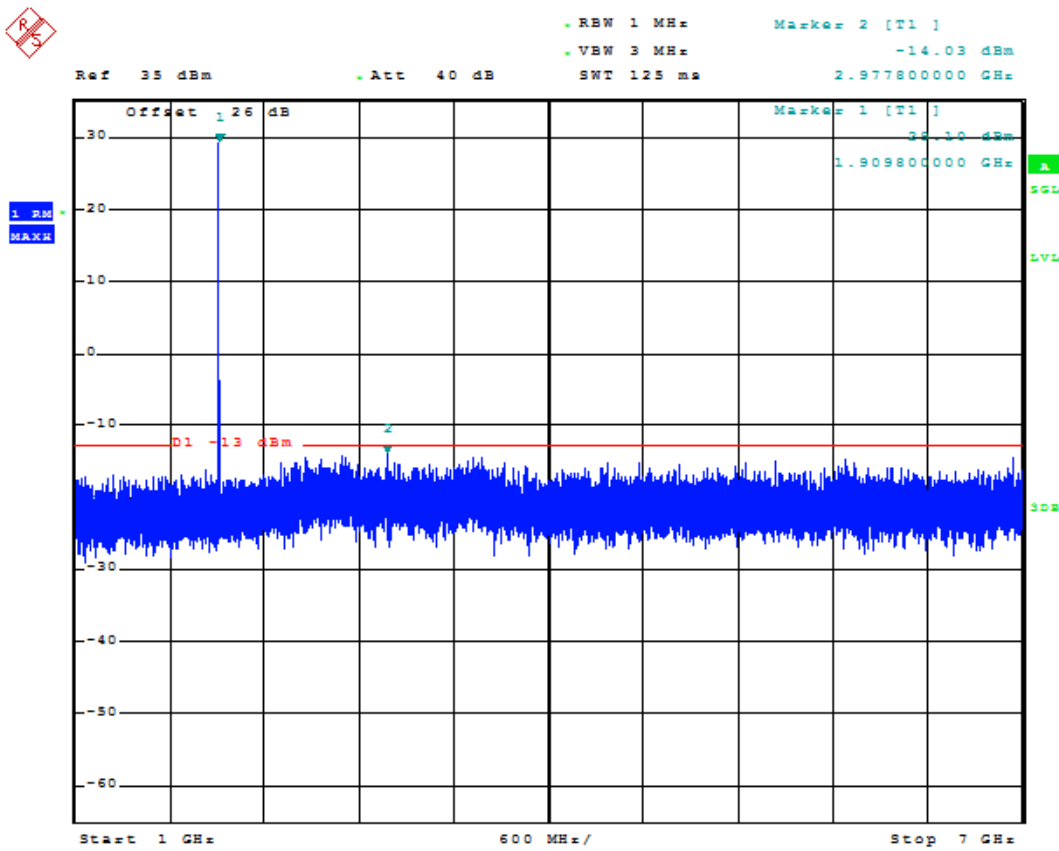
Date: 3.OCT.2017 14:25:24



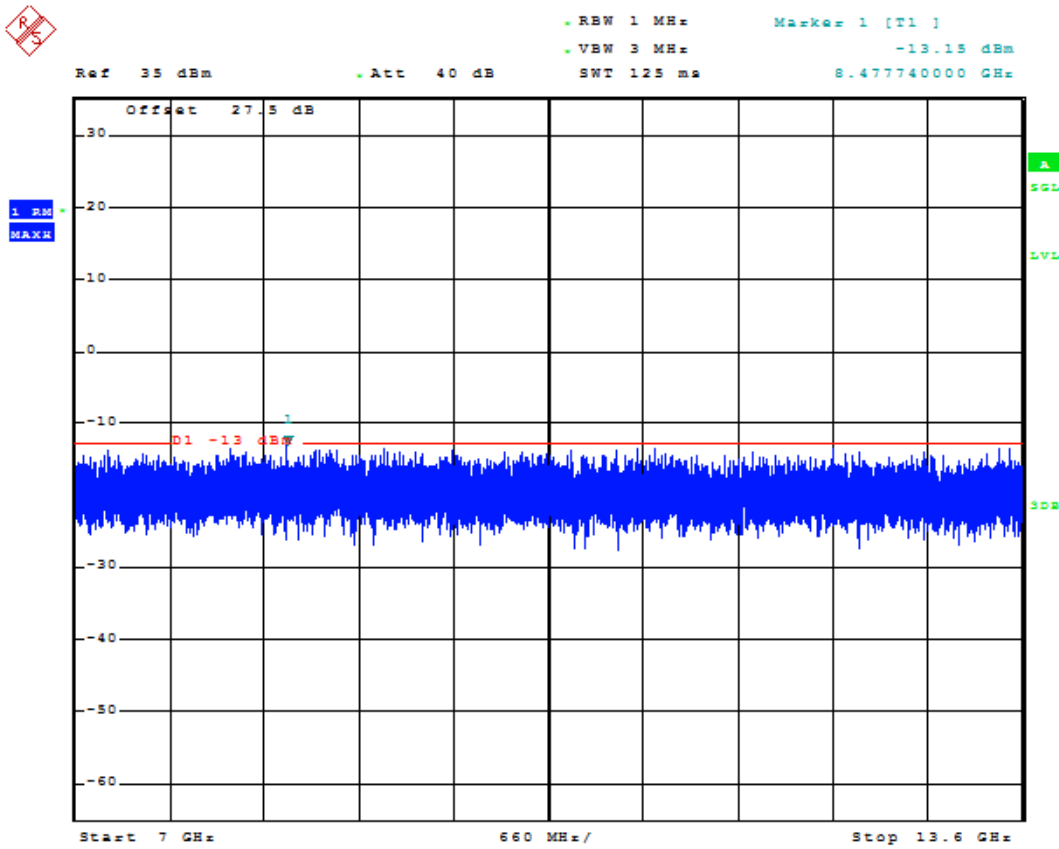
Report Number: 1709FR17-01



Date: 3.OCT.2017 14:25:33



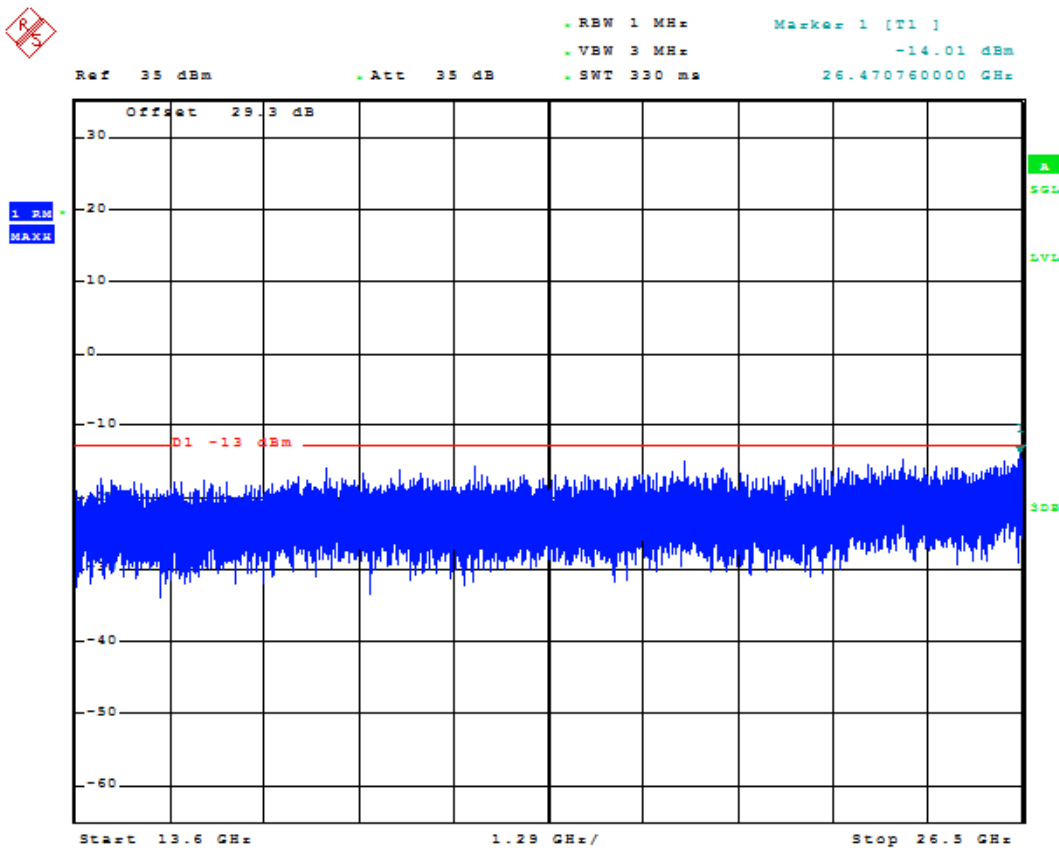
Date: 3.OCT.2017 14:25:44



Date: 3.OCT.2017 14:25:53



Report Number: 1709FR17-01



Date: 3.OCT.2017 14:26:11



Appendix F: Field Strength of Spurious Radiation

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	824.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_850_CH128	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1648.400	-31.84	0.00	-31.84	-13.00	-18.84	peak
2	2472.600	-26.49	-3.30	-29.79	-13.00	-16.79	peak
3	3296.800	-38.16	-1.39	-39.55	-13.00	-26.55	peak
4	4121.000	-28.11	0.53	-27.58	-13.00	-14.58	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	824.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_850_CH128	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1648.400	-31.90	0.00	-31.90	-13.00	-18.90	peak
2	2472.600	-23.28	-3.30	-26.58	-13.00	-13.58	peak
3	3296.800	-37.28	-1.39	-38.67	-13.00	-25.67	peak
4	4121.000	-26.91	0.53	-26.38	-13.00	-13.38	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	836.6MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_850_CH190	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1673.200	-25.68	-6.10	-31.78	-13.00	-18.78	peak
2	2509.800	-33.63	-3.17	-36.80	-13.00	-23.80	peak
3	3346.400	-42.88	-1.30	-44.18	-13.00	-31.18	peak
4	4183.000	-33.11	0.66	-32.45	-13.00	-19.45	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	836.6MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_850_CH190	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1673.200	-25.59	-6.10	-31.69	-13.00	-18.69	peak
2	2509.800	-26.09	-3.17	-29.26	-13.00	-16.26	peak
3	3346.400	-41.84	-1.30	-43.14	-13.00	-30.14	peak
4	4183.000	-31.67	0.66	-31.01	-13.00	-18.01	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	848.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_850_CH251	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1697.600	-25.51	-6.03	-31.54	-13.00	-18.54	peak
2	2546.400	-30.15	-3.07	-33.22	-13.00	-20.22	peak
3	3395.200	-42.21	-1.23	-43.44	-13.00	-30.44	peak
4	4244.000	-32.12	0.78	-31.34	-13.00	-18.34	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	848.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_850_CH251	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1697.600	-25.60	-6.03	-31.63	-13.00	-18.63	peak
2	2546.400	-25.95	-3.07	-29.02	-13.00	-16.02	peak
3	3395.200	-42.61	-1.23	-43.84	-13.00	-30.84	peak
4	4244.000	-30.56	0.78	-29.78	-13.00	-16.78	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1850.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_1900_CH512	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3700.400	-52.39	-0.52	-52.91	-13.00	-39.91	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1850.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_1900_CH512	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3700.400	-51.37	-0.52	-51.89	-13.00	-38.89	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1880MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_1900_CH661	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-51.56	-0.37	-51.93	-13.00	-38.93	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1880MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_1900_CH661	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-52.47	-0.37	-52.84	-13.00	-39.84	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1909.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_1900_CH810	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3819.600	-54.01	-0.21	-54.22	-13.00	-41.22	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1909.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GSM_1900_CH810	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3819.600	-52.60	-0.21	-52.81	-13.00	-39.81	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	824.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_850_CH128	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1648.400	-25.64	-6.19	-31.83	-13.00	-18.83	peak
2	2472.600	-30.26	-3.31	-33.57	-13.00	-20.57	peak
3	3296.800	-38.05	-1.38	-39.43	-13.00	-26.43	peak
4	4121.000	-31.93	0.53	-31.40	-13.00	-18.40	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	824.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_850_CH128	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1648.400	-25.66	-6.19	-31.85	-13.00	-18.85	peak
2	2472.600	-23.21	-3.31	-26.52	-13.00	-13.52	peak
3	3296.800	-34.65	-1.38	-36.03	-13.00	-23.03	peak
4	4121.000	-28.80	0.53	-28.27	-13.00	-15.27	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	836.6MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_850_CH190	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1673.200	-25.67	-6.10	-31.77	-13.00	-18.77	peak
2	2509.800	-30.46	-3.17	-33.63	-13.00	-20.63	peak
3	3346.400	-39.59	-1.30	-40.89	-13.00	-27.89	peak
4	4183.000	-32.05	0.66	-31.39	-13.00	-18.39	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	836.6MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_850_CH190	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1673.200	-25.64	-6.10	-31.74	-13.00	-18.74	peak
2	2509.800	-24.69	-3.17	-27.86	-13.00	-14.86	peak
3	3346.400	-37.58	-1.30	-38.88	-13.00	-25.88	peak
4	4183.000	-27.36	0.66	-26.70	-13.00	-13.70	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	848.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_850_CH251	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1697.600	-25.52	-6.03	-31.55	-13.00	-18.55	peak
2	2546.400	-29.34	-3.07	-32.41	-13.00	-19.41	peak
3	3395.200	-40.32	-1.23	-41.55	-13.00	-28.55	peak
4	4244.000	-33.04	0.78	-32.26	-13.00	-19.26	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	848.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_850_CH251	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1697.600	-25.46	-6.03	-31.49	-13.00	-18.49	peak
2	2546.400	-23.12	-3.07	-26.19	-13.00	-13.19	peak
3	3395.200	-37.48	-1.23	-38.71	-13.00	-25.71	peak
4	4244.000	-29.19	0.78	-28.41	-13.00	-15.41	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1850.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_1900_CH512	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3700.400	-52.48	-0.52	-53.00	-13.00	-40.00	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1850.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_1900_CH512	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3700.400	-54.18	-0.52	-54.70	-13.00	-41.70	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1880MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_1900_CH661	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-53.49	-0.37	-53.86	-13.00	-40.86	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1880MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_1900_CH661	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-52.92	-0.37	-53.29	-13.00	-40.29	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1909.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_1900_CH810	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3819.600	-52.97	-0.21	-53.18	-13.00	-40.18	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1909.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_GPRS_1900_CH810	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3819.600	-52.98	-0.21	-53.19	-13.00	-40.19	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	824.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_850_CH128	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1648.400	-25.64	-6.19	-31.83	-13.00	-18.83	peak
2	2472.600	-43.07	-3.31	-46.38	-13.00	-33.38	peak
3	4121.000	-39.82	0.53	-39.29	-13.00	-26.29	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	824.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_850_CH128	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1648.400	-25.67	-6.19	-31.86	-13.00	-18.86	peak
2	2472.600	-30.82	-3.31	-34.13	-13.00	-21.13	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	836.6MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_850_CH190	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1673.200	-25.53	-6.10	-31.63	-13.00	-18.63	peak
2	2509.800	-40.75	-3.17	-43.92	-13.00	-30.92	peak
3	4183.000	-38.08	0.66	-37.42	-13.00	-24.42	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	836.6MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_850_CH190	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1673.200	-25.60	-6.10	-31.70	-13.00	-18.70	peak
2	2509.800	-25.71	-3.17	-28.88	-13.00	-15.88	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	848.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_850_CH251	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1697.600	-25.53	-6.03	-31.56	-13.00	-18.56	peak
2	2546.400	-40.02	-3.07	-43.09	-13.00	-30.09	peak
3	3395.200	-45.48	-1.23	-46.71	-13.00	-33.71	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	848.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_850_CH251	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1697.600	-25.50	-6.03	-31.53	-13.00	-18.53	peak
2	2546.400	-34.36	-3.07	-37.43	-13.00	-24.43	peak
3	3395.200	-43.03	-1.23	-44.26	-13.00	-31.26	peak
4	4244.000	-45.88	0.78	-45.10	-13.00	-32.10	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1850.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_1900_CH512	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3700.400	-54.52	-0.52	-55.04	-13.00	-42.04	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1850.2MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_1900_CH512	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3700.400	-53.82	-0.52	-54.34	-13.00	-41.34	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1880MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_1900_CH661	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-53.74	-0.37	-54.11	-13.00	-41.11	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1880MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_1900_CH661	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-54.17	-0.37	-54.54	-13.00	-41.54	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1909.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_1900_CH810	Date:	09/12/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3819.600	-53.29	-0.21	-53.50	-13.00	-40.50	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	1909.8MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2G_EDGE_1900_CH810	Date:	09/12/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3819.600	-53.75	-0.21	-53.96	-13.00	-40.96	peak



Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Mode:	RX	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Ant.Polar.:	Horizontal	Date:	09/13/2017
Description:			

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2547.000	50.49	-13.38	37.11	74.00	-36.89	peak
2	4570.000	49.05	-7.87	41.18	74.00	-32.82	peak
3	6338.000	46.94	-3.58	43.36	74.00	-30.64	peak

Standard:	FCC Part 22H / 24E	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Mode:	RX	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Ant.Polar.:	Vertical	Date:	09/13/2017
Description:			

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2530.000	51.57	-13.42	38.15	74.00	-35.85	peak
2	4349.000	50.84	-8.47	42.37	74.00	-31.63	peak
3	6287.000	48.86	-3.76	45.10	74.00	-28.90	peak



Appendix G: 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	1.10	0.00	±2.5	PASS
			TN	VN	-1.42	0.00	±2.5	PASS
			TN	VH	0.13	0.00	±2.5	PASS
		MCH	TN	VL	13.04	0.02	±2.5	PASS
			TN	VN	18.47	0.02	±2.5	PASS
			TN	VH	21.11	0.03	±2.5	PASS
		HCH	TN	VL	-4.52	-0.01	±2.5	PASS
			TN	VN	-5.75	-0.01	±2.5	PASS
			TN	VH	-4.97	-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	8.27	0.01	±2.5	PASS
			TN	VN	7.75	0.01	±2.5	PASS
			TN	VH	7.49	0.01	±2.5	PASS
		MCH	TN	VL	11.11	0.01	±2.5	PASS
			TN	VN	15.95	0.02	±2.5	PASS
			TN	VH	16.34	0.02	±2.5	PASS
		HCH	TN	VL	7.62	0.01	±2.5	PASS
			TN	VN	5.29	0.01	±2.5	PASS
			TN	VH	6.59	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	TM3	LCH	TN	VL	14.98	0.02	±2.5	PASS
			TN	VN	14.63	0.02	±2.5	PASS
			TN	VH	15.46	0.02	±2.5	PASS
		MCH	TN	VL	21.18	0.03	±2.5	PASS
			TN	VN	23.12	0.03	±2.5	PASS
			TN	VH	21.99	0.03	±2.5	PASS
		HCH	TN	VL	11.11	0.01	±2.5	PASS
			TN	VN	12.75	0.02	±2.5	PASS
			TN	VH	10.72	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
GSM1900	TM1	LCH	TN	VL	-10.59	-0.01	±2.5	PASS
			TN	VN	-7.81	0.00	±2.5	PASS
			TN	VH	-11.69	-0.01	±2.5	PASS
		MCH	TN	VL	-1.55	0.00	±2.5	PASS
			TN	VN	-1.42	0.00	±2.5	PASS
			TN	VH	-3.87	0.00	±2.5	PASS
		HCH	TN	VL	-9.30	0.00	±2.5	PASS
			TN	VN	-8.39	0.00	±2.5	PASS
			TN	VH	-11.62	-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
GSM1900	TM2	LCH	TN	VL	-1.03	0.00	±2.5	PASS
			TN	VN	-1.94	0.00	±2.5	PASS
			TN	VH	-3.10	0.00	±2.5	PASS
		MCH	TN	VL	2.58	0.00	±2.5	PASS
			TN	VN	2.26	0.00	±2.5	PASS
			TN	VH	1.94	0.00	±2.5	PASS
		HCH	TN	VL	-3.81	0.00	±2.5	PASS
			TN	VN	-2.20	0.00	±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	2.68	0.00	±2.5	PASS
			TN	VN	4.62	0.00	±2.5	PASS
			TN	VH	3.45	0.00	±2.5	PASS
		MCH	TN	VL	6.46	0.00	±2.5	PASS
			TN	VN	10.59	0.01	±2.5	PASS
			TN	VH	6.94	0.00	±2.5	PASS
		HCH	TN	VL	10.91	0.01	±2.5	PASS
			TN	VN	2.68	0.00	±2.5	PASS
			TN	VH	9.49	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	0.13	0.00	±2.5	PASS
			VN	-20	-1.49	0.00	±2.5	PASS
			VN	-10	-0.77	0.00	±2.5	PASS
			VN	0	-0.65	0.00	±2.5	PASS
			VN	10	-1.49	0.00	±2.5	PASS
			VN	20	-0.58	0.00	±2.5	PASS
			VN	30	-0.45	0.00	±2.5	PASS
			VN	40	-0.52	0.00	±2.5	PASS
			VN	50	0.65	0.00	±2.5	PASS
GSM850	TM1	MCH	VN	-30	15.50	0.02	±2.5	PASS
			VN	-20	20.53	0.02	±2.5	PASS
			VN	-10	14.08	0.02	±2.5	PASS
			VN	0	16.47	0.02	±2.5	PASS
			VN	10	20.73	0.02	±2.5	PASS
			VN	20	20.66	0.02	±2.5	PASS
			VN	30	5.23	0.01	±2.5	PASS
			VN	40	13.69	0.02	±2.5	PASS
			VN	50	1.81	0.00	±2.5	PASS
GSM850	TM1	HCH	VN	-30	-4.97	-0.01	±2.5	PASS
			VN	-20	-3.36	0.00	±2.5	PASS
			VN	-10	-3.03	0.00	±2.5	PASS
			VN	0	-6.33	-0.01	±2.5	PASS
			VN	10	-5.94	-0.01	±2.5	PASS
			VN	20	-4.07	0.00	±2.5	PASS
			VN	30	-5.81	-0.01	±2.5	PASS
			VN	40	-5.75	-0.01	±2.5	PASS
			VN	50	-2.78	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
GSM850	TM2	LCH	VN	-30	9.36	0.01	±2.5	PASS
			VN	-20	8.20	0.01	±2.5	PASS
			VN	-10	7.68	0.01	±2.5	PASS
			VN	0	4.65	0.01	±2.5	PASS
			VN	10	6.46	0.01	±2.5	PASS
			VN	20	5.88	0.01	±2.5	PASS
			VN	30	7.62	0.01	±2.5	PASS
			VN	40	7.49	0.01	±2.5	PASS
			VN	50	8.85	0.01	±2.5	PASS
GSM850	TM2	MCH	VN	-30	19.82	0.02	±2.5	PASS
			VN	-20	15.24	0.02	±2.5	PASS
			VN	-10	12.40	0.01	±2.5	PASS
			VN	0	23.37	0.03	±2.5	PASS
			VN	10	20.40	0.02	±2.5	PASS
			VN	20	20.92	0.03	±2.5	PASS
			VN	30	17.11	0.02	±2.5	PASS
			VN	40	18.34	0.02	±2.5	PASS
			VN	50	18.02	0.02	±2.5	PASS
GSM850	TM2	HCH	VN	-30	4.07	0.00	±2.5	PASS
			VN	-20	9.04	0.01	±2.5	PASS
			VN	-10	5.68	0.01	±2.5	PASS
			VN	0	5.29	0.01	±2.5	PASS
			VN	10	5.17	0.01	±2.5	PASS
			VN	20	6.20	0.01	±2.5	PASS
			VN	30	4.78	0.01	±2.5	PASS
			VN	40	4.97	0.01	±2.5	PASS
			VN	50	7.55	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
GSM850	TM3	LCH	VN	-30	13.69	0.02	±2.5	PASS
			VN	-20	14.88	0.02	±2.5	PASS
			VN	-10	14.17	0.02	±2.5	PASS
			VN	0	14.50	0.02	±2.5	PASS
			VN	10	14.27	0.02	±2.5	PASS
			VN	20	14.59	0.02	±2.5	PASS
			VN	30	14.66	0.02	±2.5	PASS
			VN	40	13.40	0.02	±2.5	PASS
			VN	50	14.30	0.02	±2.5	PASS
GSM850	TM3	MCH	VN	-30	19.76	0.02	±2.5	PASS
			VN	-20	29.12	0.03	±2.5	PASS
			VN	-10	27.31	0.03	±2.5	PASS
			VN	0	22.47	0.03	±2.5	PASS
			VN	10	22.15	0.03	±2.5	PASS
			VN	20	27.25	0.03	±2.5	PASS
			VN	30	25.63	0.03	±2.5	PASS
			VN	40	22.70	0.03	±2.5	PASS
			VN	50	23.41	0.03	±2.5	PASS
GSM850	TM3	HCH	VN	-30	10.65	0.01	±2.5	PASS
			VN	-20	12.79	0.02	±2.5	PASS
			VN	-10	11.40	0.01	±2.5	PASS
			VN	0	12.59	0.01	±2.5	PASS
			VN	10	12.11	0.01	±2.5	PASS
			VN	20	12.49	0.01	±2.5	PASS
			VN	30	14.24	0.02	±2.5	PASS
			VN	40	10.94	0.01	±2.5	PASS
			VN	50	11.62	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	TM1	LCH	VN	-30	-11.75	-0.01	±2.5	PASS
			VN	-20	-12.07	-0.01	±2.5	PASS
			VN	-10	-11.30	-0.01	±2.5	PASS
			VN	0	-11.04	-0.01	±2.5	PASS
			VN	10	-11.56	-0.01	±2.5	PASS
			VN	20	-5.68	0.00	±2.5	PASS
			VN	30	-11.56	-0.01	±2.5	PASS
			VN	40	-10.33	-0.01	±2.5	PASS
			VN	50	-12.91	-0.01	±2.5	PASS
GSM1900	TM1	MCH	VN	-30	3.29	0.00	±2.5	PASS
			VN	-20	2.13	0.00	±2.5	PASS
			VN	-10	2.71	0.00	±2.5	PASS
			VN	0	0.90	0.00	±2.5	PASS
			VN	10	0.39	0.00	±2.5	PASS
			VN	20	3.94	0.00	±2.5	PASS
			VN	30	3.03	0.00	±2.5	PASS
			VN	40	-0.06	0.00	±2.5	PASS
			VN	50	2.00	0.00	±2.5	PASS
GSM1900	TM1	HCH	VN	-30	-11.24	-0.01	±2.5	PASS
			VN	-20	-8.20	0.00	±2.5	PASS
			VN	-10	-11.95	-0.01	±2.5	PASS
			VN	0	-8.39	0.00	±2.5	PASS
			VN	10	-8.27	0.00	±2.5	PASS
			VN	20	-11.24	-0.01	±2.5	PASS
			VN	30	-6.07	0.00	±2.5	PASS
			VN	40	-9.17	0.00	±2.5	PASS
			VN	50	-7.04	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	TM2	LCH	VN	-30	-3.62	0.00	±2.5	PASS
			VN	-20	-3.42	0.00	±2.5	PASS
			VN	-10	-5.29	0.00	±2.5	PASS
			VN	0	-2.39	0.00	±2.5	PASS
			VN	10	-3.94	0.00	±2.5	PASS
			VN	20	-2.13	0.00	±2.5	PASS
			VN	30	-4.91	0.00	±2.5	PASS
			VN	40	-5.04	0.00	±2.5	PASS
			VN	50	-0.71	0.00	±2.5	PASS
GSM1900	TM2	MCH	VN	-30	4.84	0.00	±2.5	PASS
			VN	-20	7.30	0.00	±2.5	PASS
			VN	-10	4.26	0.00	±2.5	PASS
			VN	0	6.33	0.00	±2.5	PASS
			VN	10	7.23	0.00	±2.5	PASS
			VN	20	6.01	0.00	±2.5	PASS
			VN	30	1.29	0.00	±2.5	PASS
			VN	40	6.07	0.00	±2.5	PASS
			VN	50	6.84	0.00	±2.5	PASS
GSM1900	TM2	HCH	VN	-30	1.55	0.00	±2.5	PASS
			VN	-20	-0.06	0.00	±2.5	PASS
			VN	-10	1.29	0.00	±2.5	PASS
			VN	0	1.81	0.00	±2.5	PASS
			VN	10	-0.45	0.00	±2.5	PASS
			VN	20	-0.52	0.00	±2.5	PASS
			VN	30	-0.77	0.00	±2.5	PASS
			VN	40	2.84	0.00	±2.5	PASS
			VN	50	0.13	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	8.88	0.00	±2.5	PASS
			VN	-20	4.46	0.00	±2.5	PASS
			VN	-10	2.36	0.00	±2.5	PASS
			VN	0	6.88	0.00	±2.5	PASS
			VN	10	4.62	0.00	±2.5	PASS
			VN	20	4.46	0.00	±2.5	PASS
			VN	30	6.30	0.00	±2.5	PASS
			VN	40	6.20	0.00	±2.5	PASS
			VN	50	1.84	0.00	±2.5	PASS
GSM1900	TM3	MCH	VN	-30	8.59	0.00	±2.5	PASS
			VN	-20	8.94	0.00	±2.5	PASS
			VN	-10	6.23	0.00	±2.5	PASS
			VN	0	10.56	0.01	±2.5	PASS
			VN	10	11.59	0.01	±2.5	PASS
			VN	20	7.88	0.00	±2.5	PASS
			VN	30	7.07	0.00	±2.5	PASS
			VN	40	9.14	0.00	±2.5	PASS
			VN	50	8.27	0.00	±2.5	PASS
GSM1900	TM3	HCH	VN	-30	4.20	0.00	±2.5	PASS
			VN	-20	5.42	0.00	±2.5	PASS
			VN	-10	6.59	0.00	±2.5	PASS
			VN	0	9.78	0.01	±2.5	PASS
			VN	10	6.78	0.00	±2.5	PASS
			VN	20	5.20	0.00	±2.5	PASS
			VN	30	6.78	0.00	±2.5	PASS
			VN	40	8.98	0.00	±2.5	PASS
			VN	50	6.33	0.00	±2.5	PASS