Appendix A

Test Data of GSM & WCDMA

CONTENT

Page

1 EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA 3

2 PEAK-TO-AVERAGE RATIO 5

3 BANDWIDTH 6

3.1 FOR GSM 7
3.1.1 Test Band = GSM850 7
3.1.2 Test Band = GSM1900 13
3.1.3 Test Band = WCDMA850 19
3.1.4 Test Band = WCDMA 1900 22

4 BAND EDGES COMPLIANCE 25

4.1 FOR GSM 25
4.1.1 Test Band = GSM850 25
4.1.2 Test Band = GSM1900 29
4.2 FOR WCDMA 33
4.2.1 Test Band = WCDMA 850 33
4.2.2 Test Band = WCDMA 1900 35

5 SPURIOUS EMISSION AT ANTENNA TERMINAL 37

5.1 FOR GSM 37
5.1.1 Test Band = GSM850 37
5.1.2 Test Band = GSM1900 47
5.2 FOR WCDMA 57
5.2.1 Test Band = WCDMA 850 57
5.2.2 Test Band = WCDMA 1900 67

6 FIELD STRENGTH OF SPURIOUS RADIATION 77

6.1 FOR GSM 77
6.1.1 Test Band = GSM850 77
6.1.2 Test Band = GSM1900 78
FOR WCDMA 79
6.1.3 Test Band = WCDMA850 79
6.1.4 Test Band = WCDMA 1900 80

7 FREQUENCY STABILITY 81

7.1 FOR GSM 81
7.1.1 Frequency Error VS. Voltage 81
7.1.2 Frequency Error VS. Temperature 83
7.2 FOR WCDMA 85
7.2.1 Frequency Error VS. Voltage 85
7.2.2 Frequency Error VS. Temperature 86

1 Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	ERP[dB]	Limit[dBm]	Verdict
GSM 850	GSM/TM1	LCH	29.47	30.47	38.45	PASS
		MCH	28.91	29.91	38.45	PASS
		HCH	29.15	30.15	38.45	PASS
	GSM/TM2	LCH	26.66	27.66	38.45	PASS
		MCH	25.99	26.99	38.45	PASS
		HCH	26.10	27.10	38.45	PASS

Note:
a: For getting the ERP (Efficient Radiated Power) in substitution method, the following formula should be taken to calculate it,

ERP [dBm] = SGP [dBm] – Cable Loss [dB] + Gain [dBd]
b: SGP=Signal Generator Level
c: RBW > emission bandwidth, VBW > 3 x RBW.
Detector: RMS

Test Band	Test Mode	Test Channel	Measured[dB]	EIRP[dB]	Limit[dBm]	Verdict
GSM 1900	GSM/TM1	LCH	29.79	30.79	33	PASS
		MCH	29.89	30.89	33	PASS
		HCH	29.34	30.34	33	PASS
	GSM/TM2	LCH	24.89	25.89	33	PASS
		MCH	24.77	25.77	33	PASS
		HCH	24.21	25.21	33	PASS

Note:
a: For getting the ERP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

EIRP [dBm] = SGP [dBm] – Cable Loss [dB] + Gain [dBi]
b: SGP=Signal Generator Level
c: RBW > emission bandwidth, VBW > 3 x RBW.
Detector: RMS

Test Band	Test Mode	Test Channel	Measured[dB]	ERP[dB]	Limit[dBm]	Verdict
WCDMA850	UMTS/TM1	LCH	20.18	21.18	38.45	PASS
		MCH	20.33	21.33	38.45	PASS
		HCH	20.73	21.73	38.45	PASS

Note:
a: For getting the ERP (Efficient Radiated Power) in substitution method, the following formula should be taken to calculate it,

ERP [dBm] = SGP [dBm] – Cable Loss [dB] + Gain [dBd]

b: SGP=Signal Generator Level
c: RBW > emission bandwidth, VBW > 3 x RBW.
Detector: RMS

Test Band	Test Mode	Test Channel	Measured[dB]	EIRP[dB]	Limit[dBm]	Verdict
WCDMA1900	UMTS/TM1	LCH	21.83	22.83	33	PASS
		MCH	21.80	22.80	33	PASS
		HCH	21.47	22.47	33	PASS

Note:
a: For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

EIRP [dBm] = SGP [dBm] – Cable Loss [dB] + Gain [dBi]

b: SGP=Signal Generator Level
c: RBW > emission bandwidth, VBW > 3 x RBW.
Detector: RMS

2 Peak-to-Average Ratio

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
GSM 850	GSM/TM1	LCH	0.19	13	PASS
		MCH	0.16	13	PASS
		HCH	0.14	13	PASS
	GSM/TM2	LCH	3.27	13	PASS
		MCH	3.18	13	PASS
		HCH	3.15	13	PASS
GSM 1900	GSM/TM1	LCH	0.17	13	PASS
		MCH	0.14	13	PASS
		HCH	0.15	13	PASS
	GSM/TM2	LCH	3.30	13	PASS
		MCH	3.19	13	PASS
		HCH	3.30	13	PASS

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
WCDMA850	UMTS/TM1	LCH	3.44	13	PASS
		MCH	3.56	13	PASS
		HCH	3.43	13	PASS
WCDMA1900	UMTS/TM1	LCH	3.59	13	PASS
		MCH	3.44	13	PASS
		HCH	3.38	13	PASS

3 Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [kHz]	Emission Bandwidth [kHz]	Verdict
GSM 850	UMTS/TM1	LCH	245.19	302.88	PASS
		MCH	245.19	310.90	PASS
		HCH	246.79	312.50	PASS
	UMTS/TM2	LCH	246.8	296	PASS
		MCH	248.4	300	PASS
		HCH	248.4	303	PASS
GSM 1900	UMTS/TM1	LCH	246.8	298	PASS
		MCH	246.8	316	PASS
		HCH	246.8	311	PASS
	UMTS/TM2	LCH	243.6	296	PASS
		MCH	243.6	306	PASS
		HCH	246.8	301	PASS

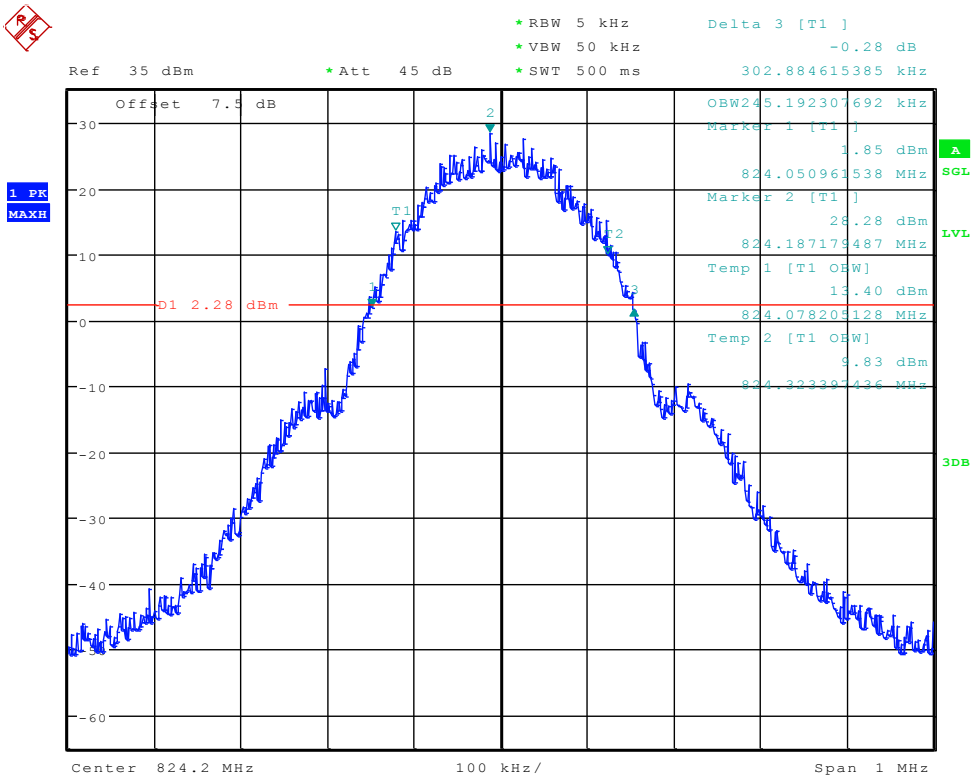
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
WCDMA850	UMTS/TM1	LCH	4166.7	4744	PASS
		MCH	4198.7	4728	PASS
		HCH	4182.7	4744	PASS
WCDMA1900	UMTS/TM1	LCH	4166.7	4696	PASS
		MCH	4166.7	4679	PASS
		HCH	4150.6	4696	PASS

3.1 For GSM

3.1.1 Test Band = GSM850

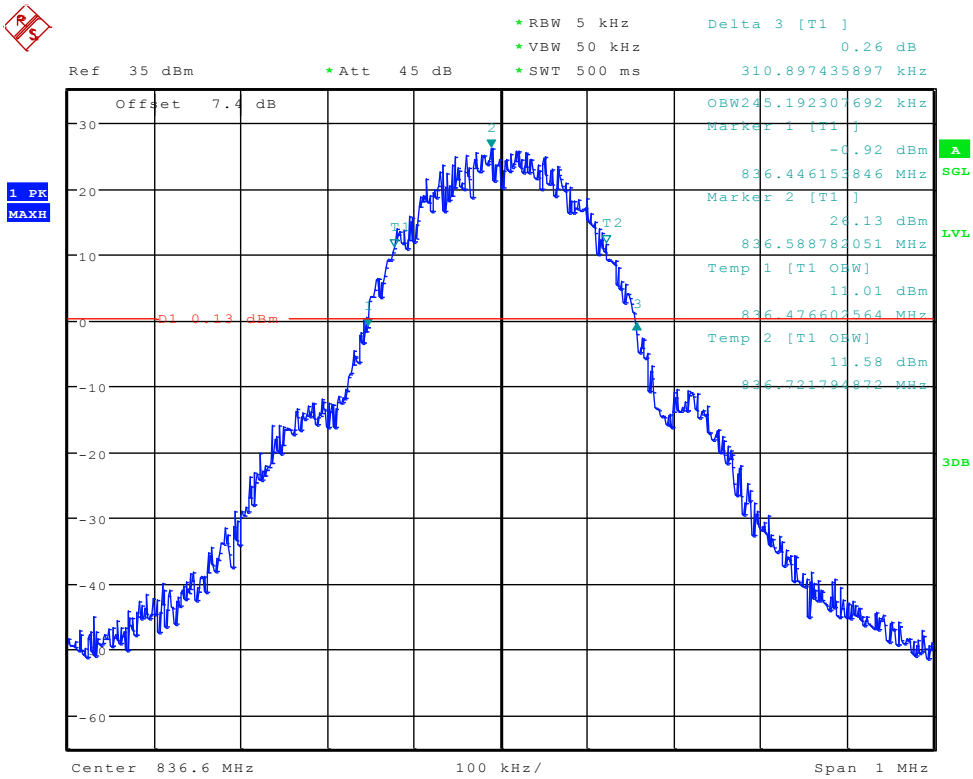
3.1.1.1 Test Mode = GSM/TM1

3.1.1.1.1 Test Channel = LCH



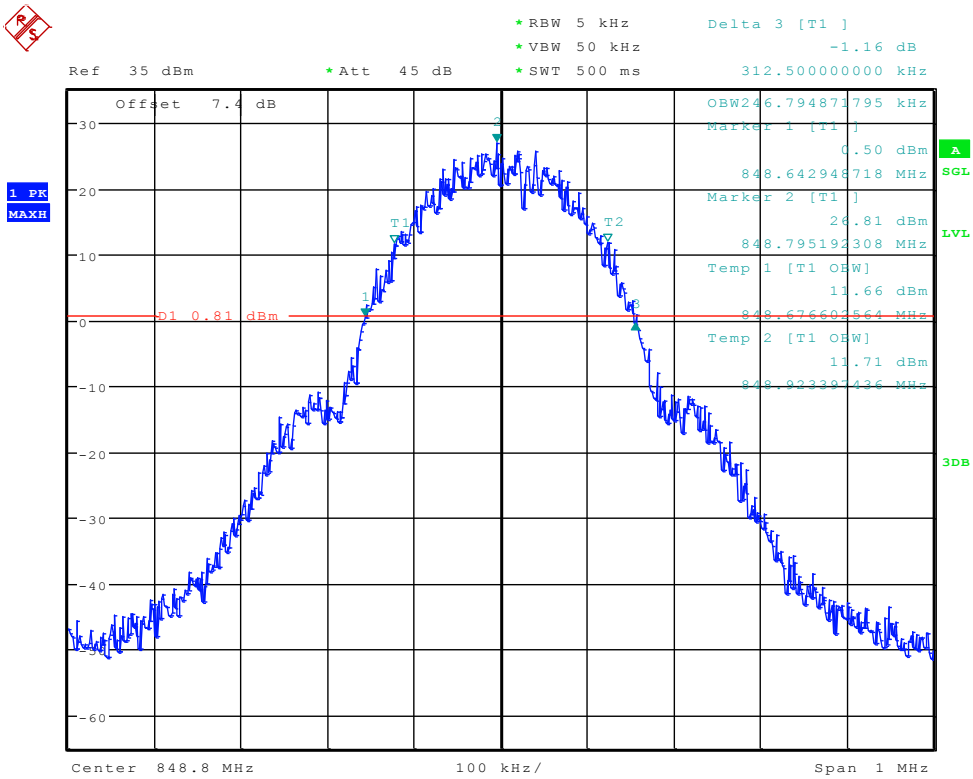
Date: 30.OCT.2018 19:41:51

3.1.1.1.2 Test Channel = MCH



Date: 30.OCT.2018 19:42:14

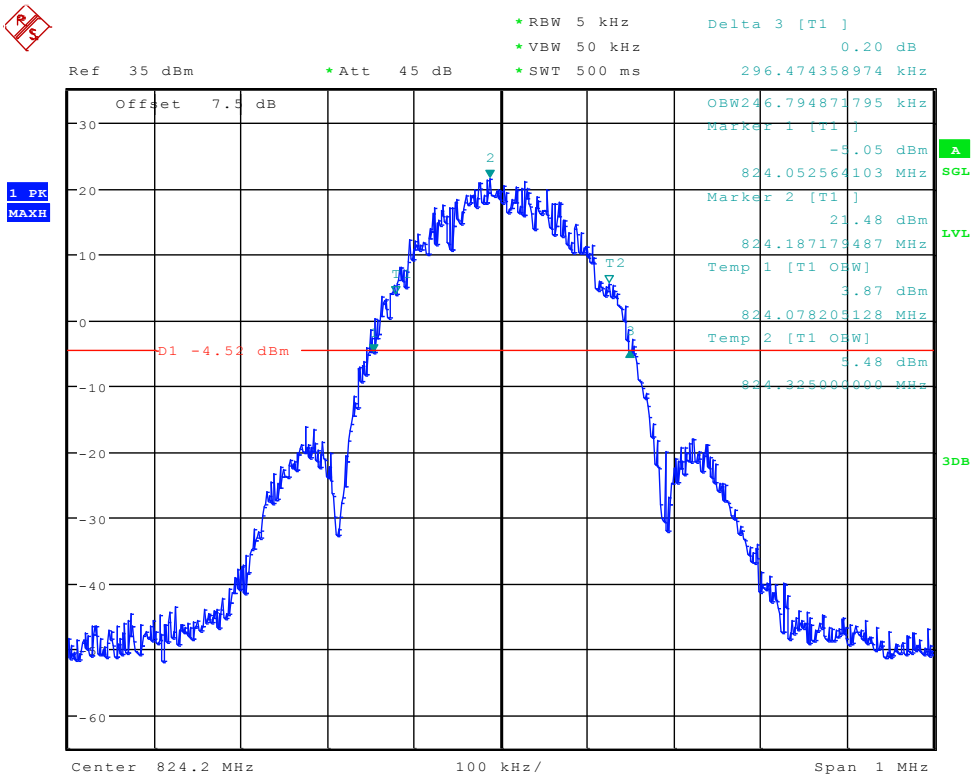
3.1.1.1.3 Test Channel = HCH



Date: 30.OCT.2018 19:42:38

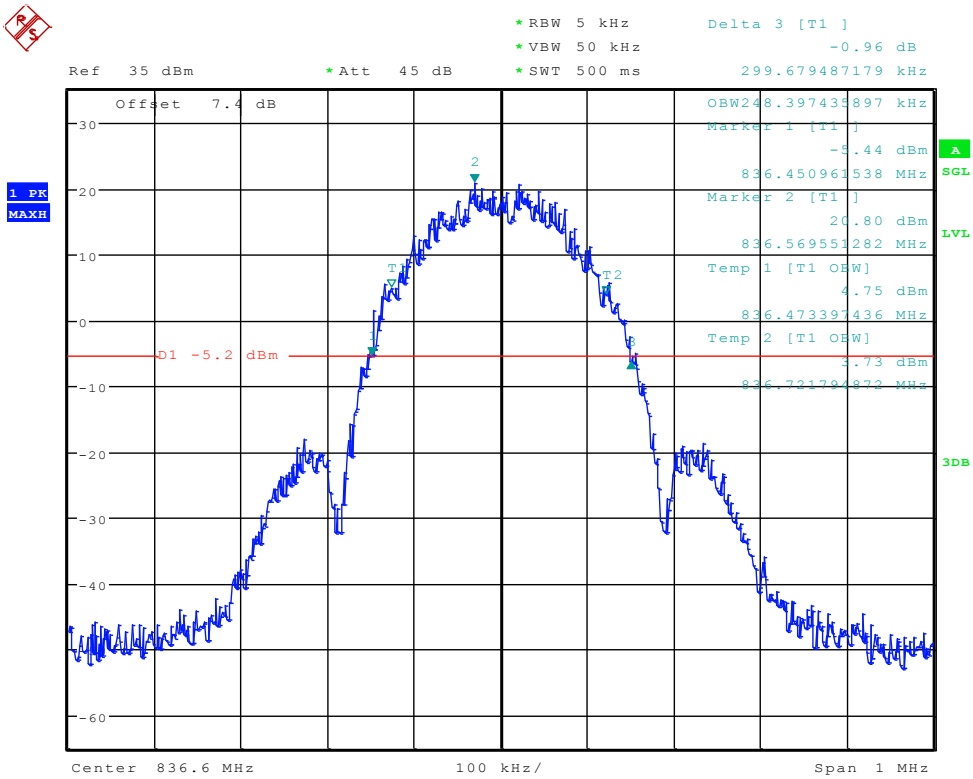
3.1.1.2 Test Mode = GSM/TM2

3.1.1.2.1 Test Channel = LCH



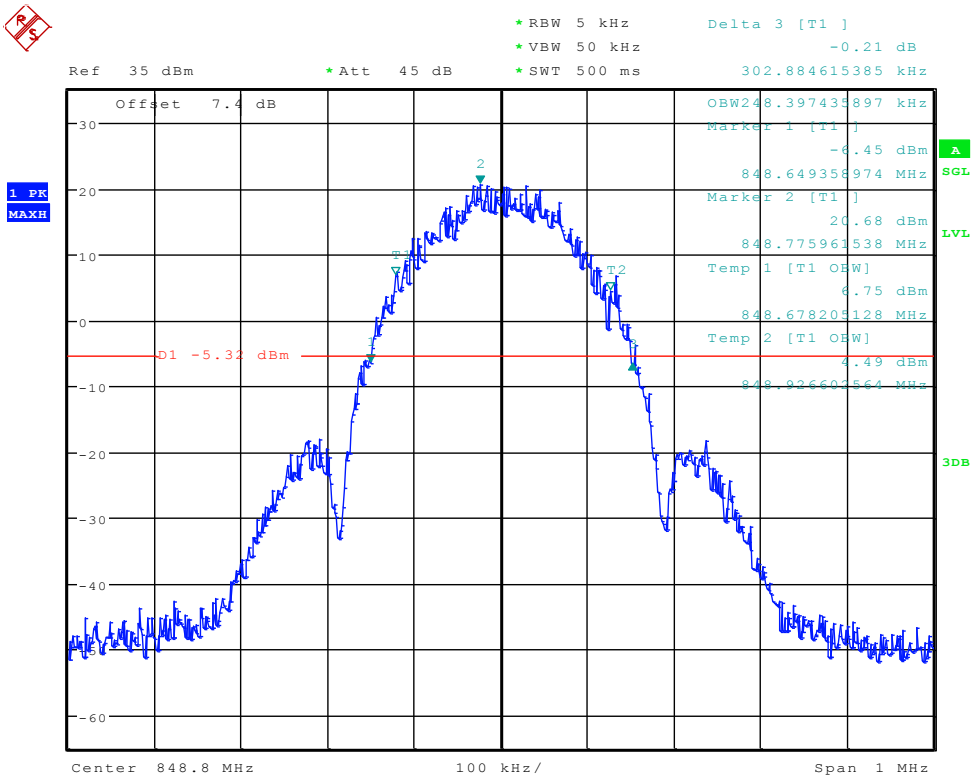
Date: 31.OCT.2018 09:21:51

3.1.1.2.2 Test Channel = MCH



Date: 31.OCT.2018 09:22:22

3.1.1.2.3 Test Channel = HCH

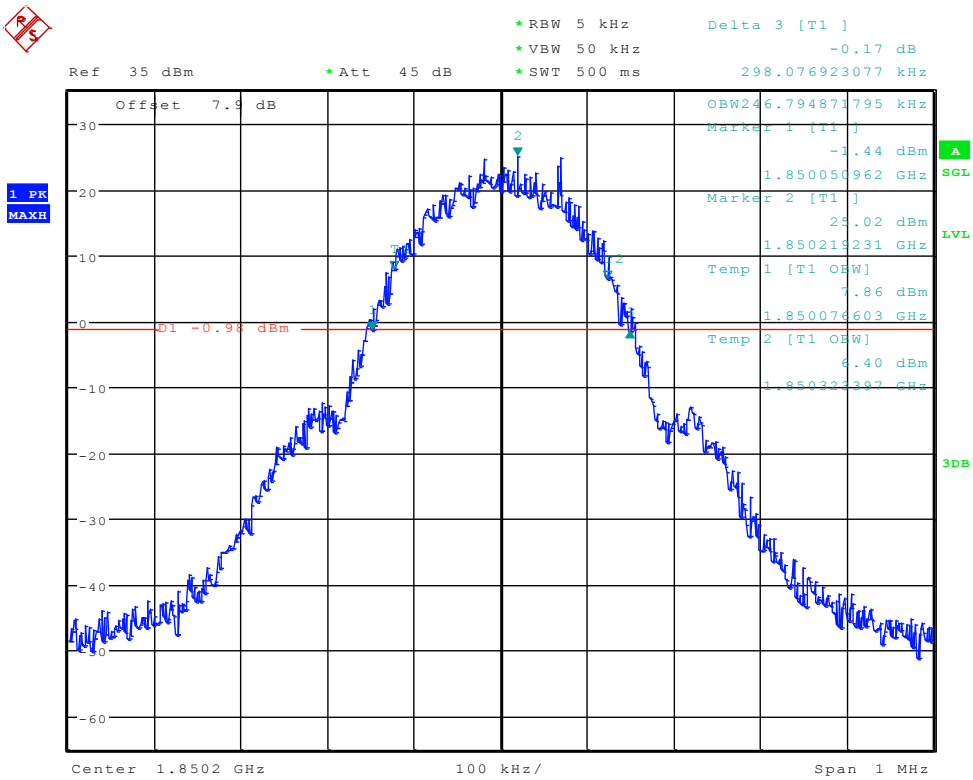


Date: 31.OCT.2018 09:22:53

3.1.2 Test Band = GSM1900

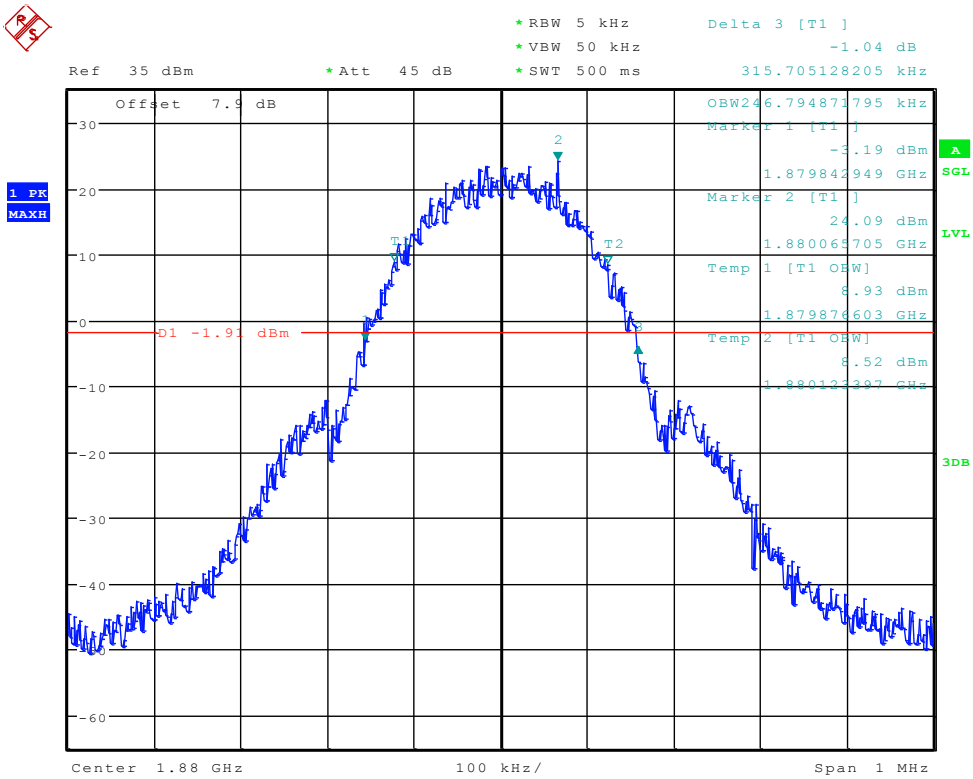
3.1.2.1 Test Mode = GSM/TM1

3.1.2.1.1 Test Channel = LCH



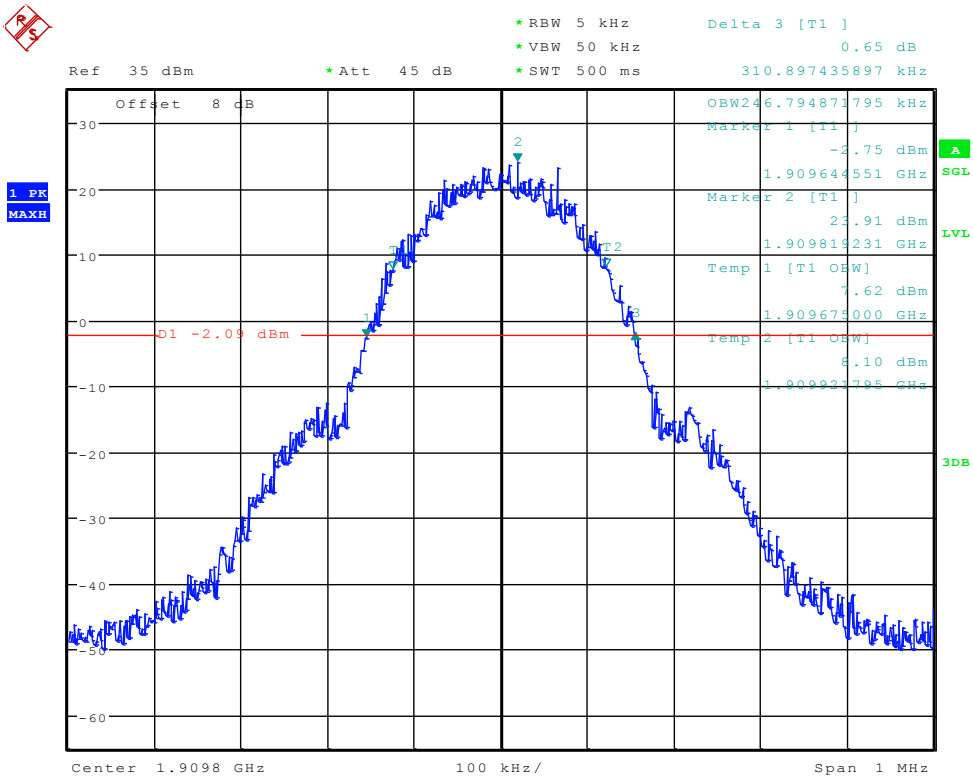
Date: 31.OCT.2018 09:33:49

3.1.2.1.2 Test Channel = MCH



Date: 31.OCT.2018 09:34:16

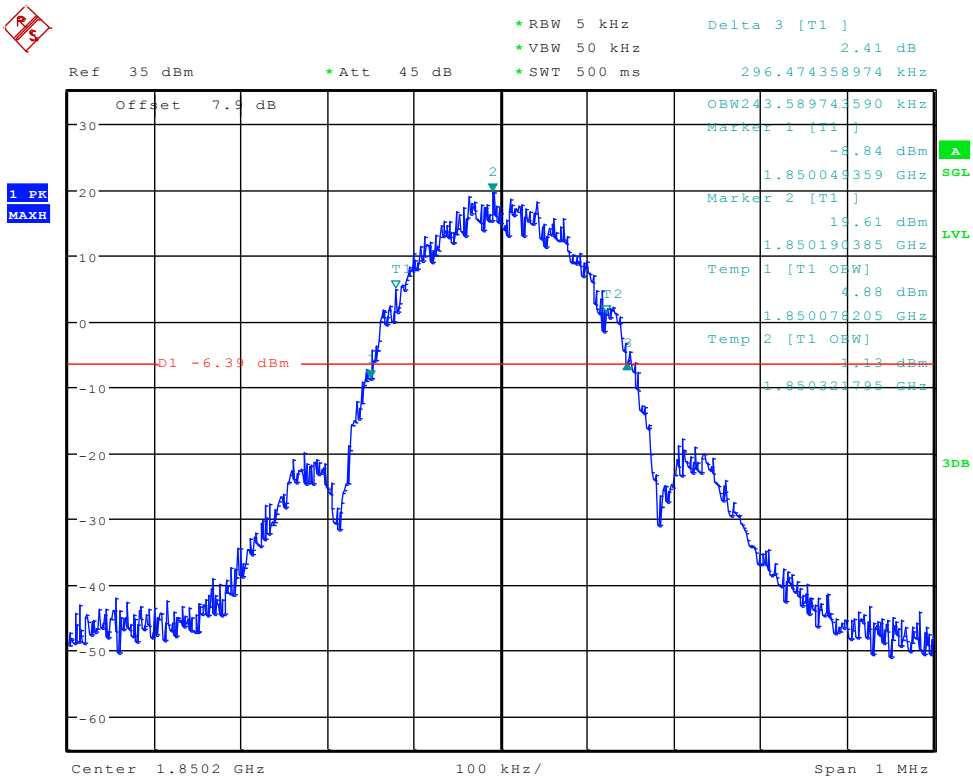
3.1.2.1.3 Test Channel = HCH



Date: 31.OCT.2018 09:34:42

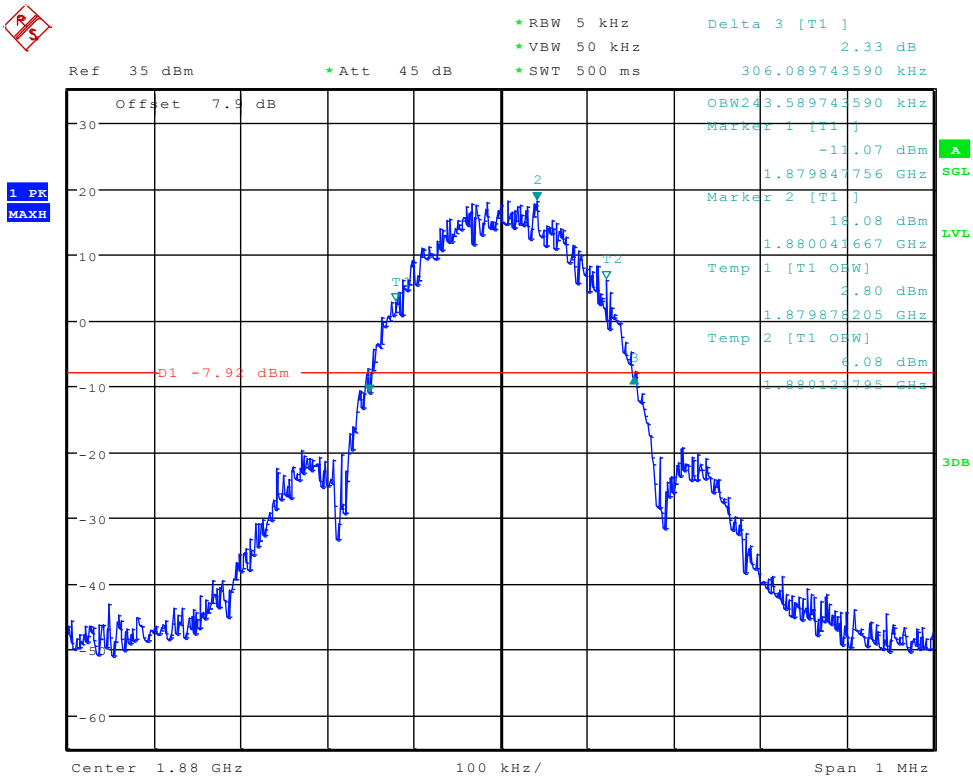
3.1.2.2 Test Mode = GSM/TM2

3.1.2.2.1 Test Channel = LCH



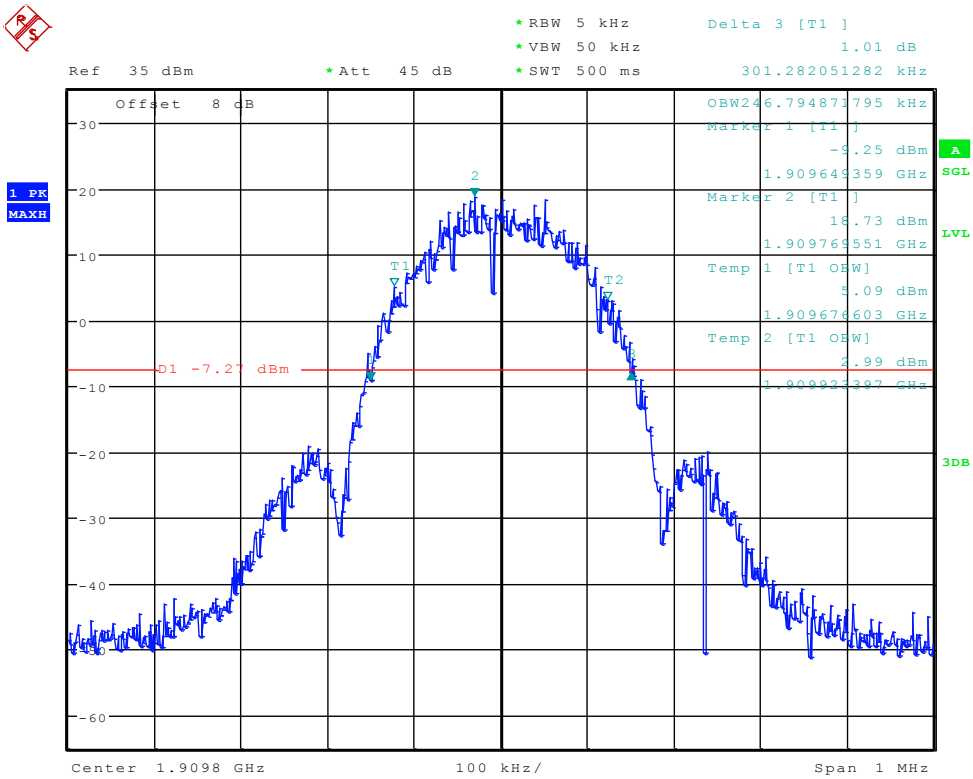
Date: 31.OCT.2018 10:17:14

3.1.2.2.2 Test Channel = MCH



Date: 31.OCT.2018 10:17:45

3.1.2.2.3 Test Channel = HCH

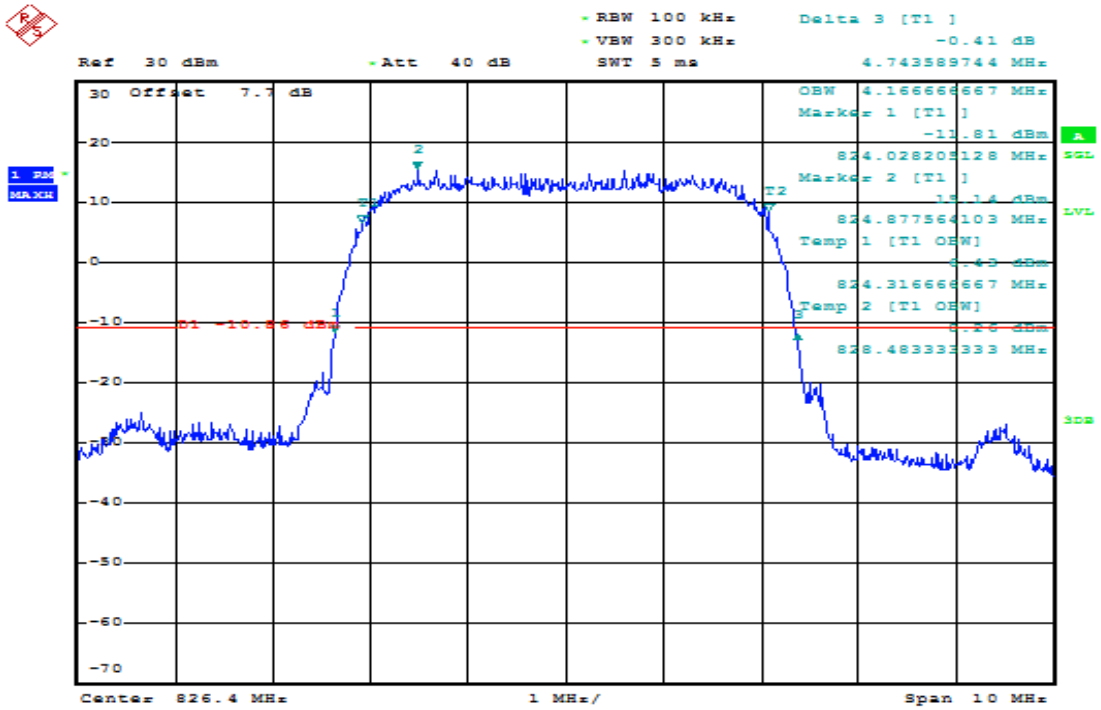


Date: 31.OCT.2018 10:18:16

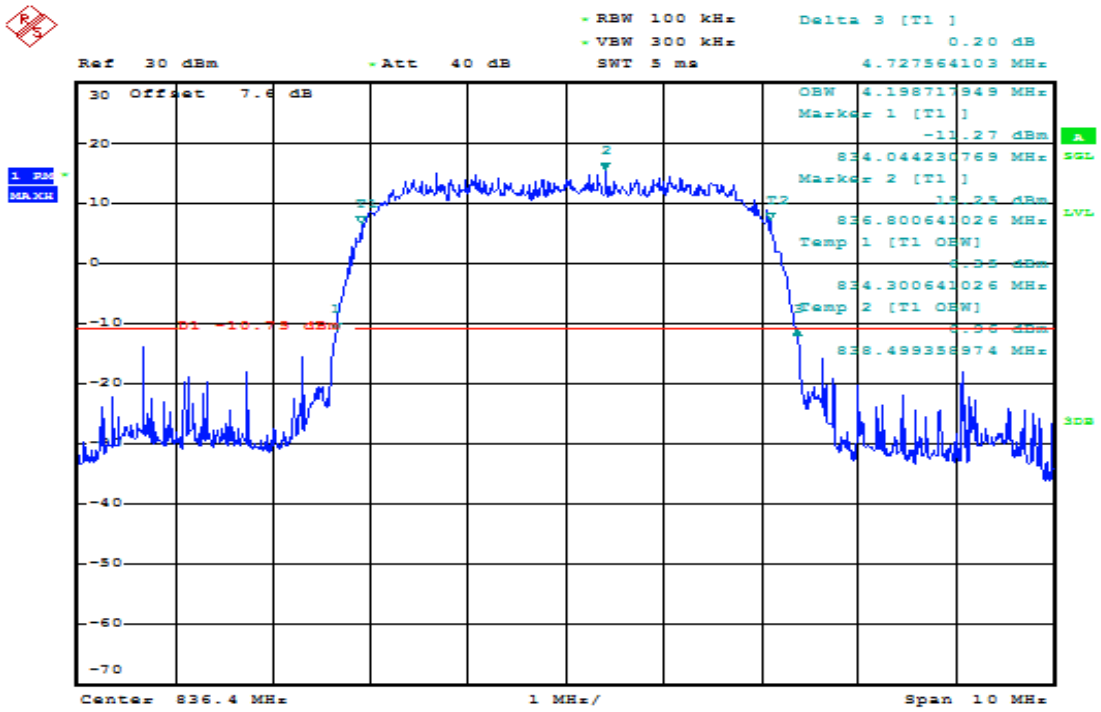
3.1.3 Test Band = WCDMA850

3.1.3.1 Test Mode = UMTS/TM1

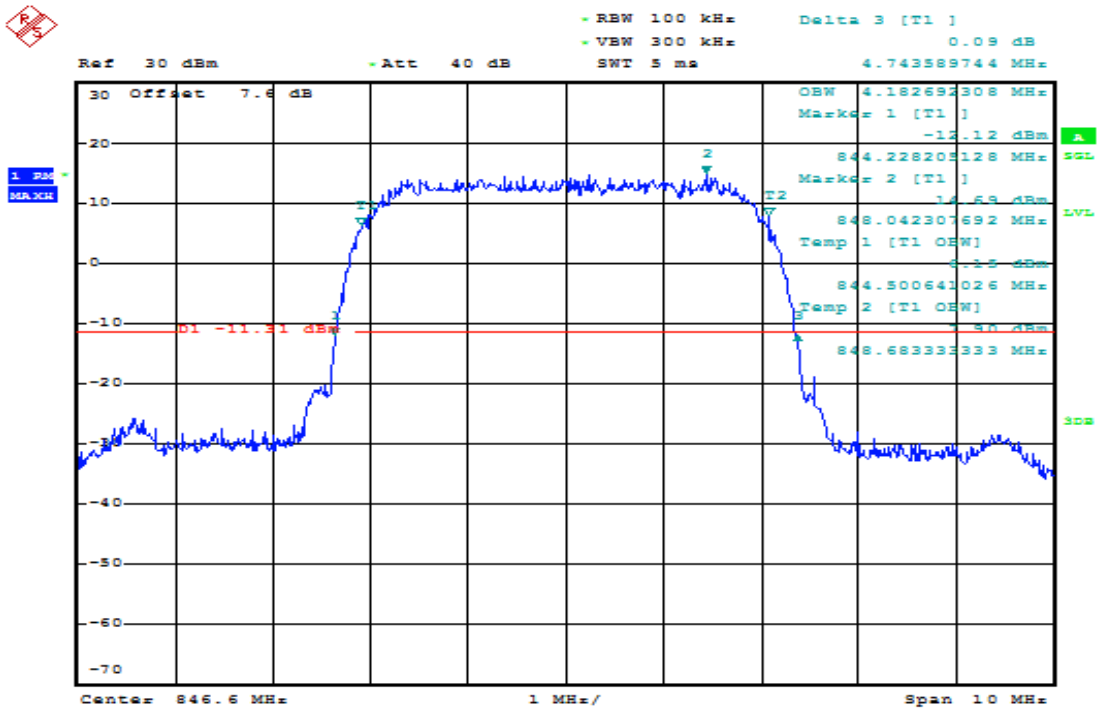
3.1.3.1.1 Test Channel = LCH



3.1.3.1.2 Test Channel = MCH



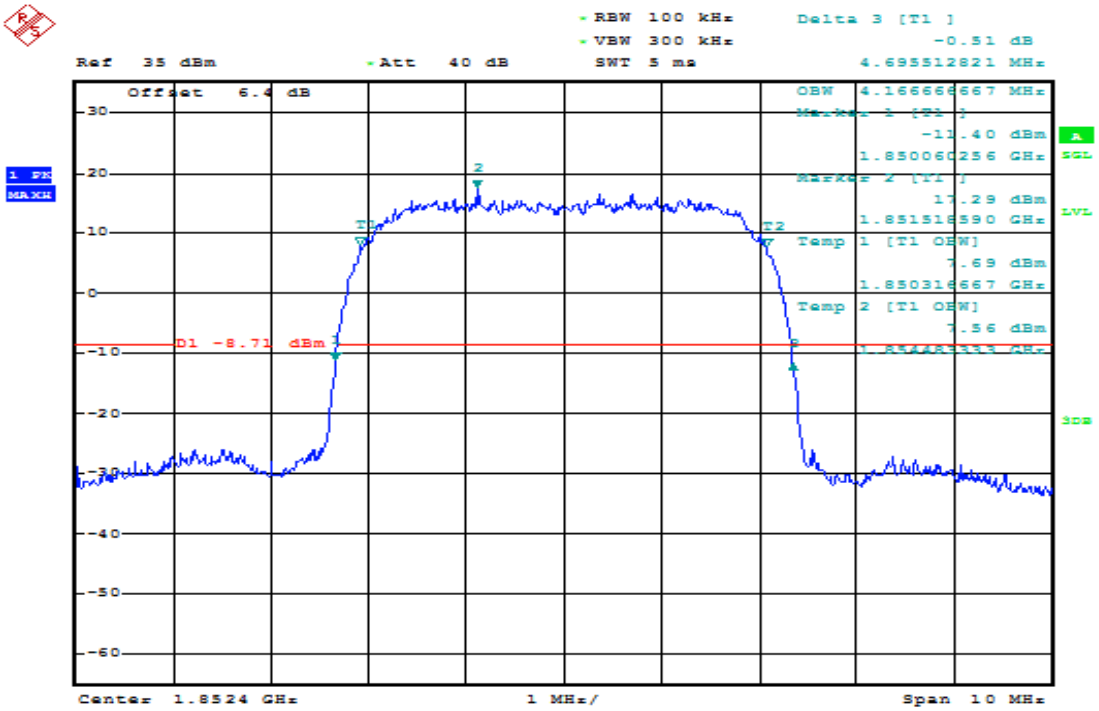
3.1.3.1.3 Test Channel = HCH



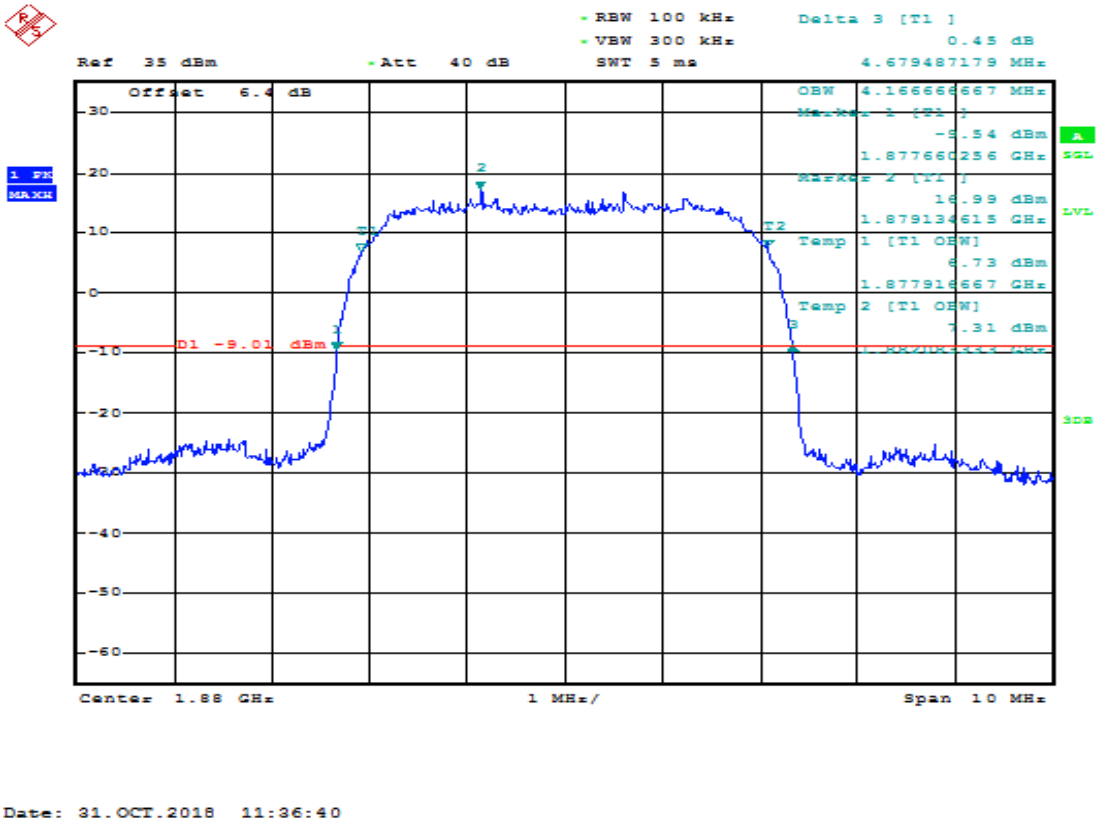
3.1.4 Test Band = WCDMA 1900

3.1.4.1 Test Mode = UMTS/TM1

3.1.4.1.1 Test Channel = LCH

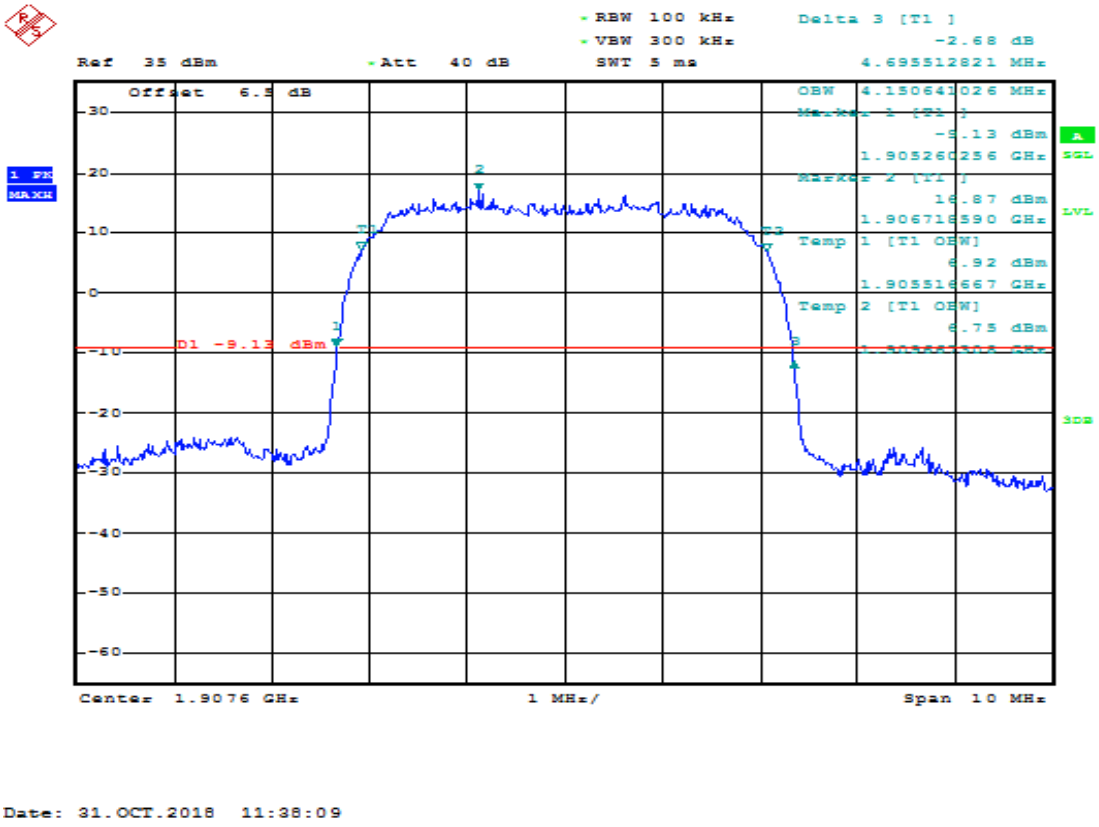


3.1.4.1.2 Test Channel = MCH



Date: 31.OCT.2018 11:36:40

3.1.4.1.3 Test Channel = HCH



4 Band Edges Compliance

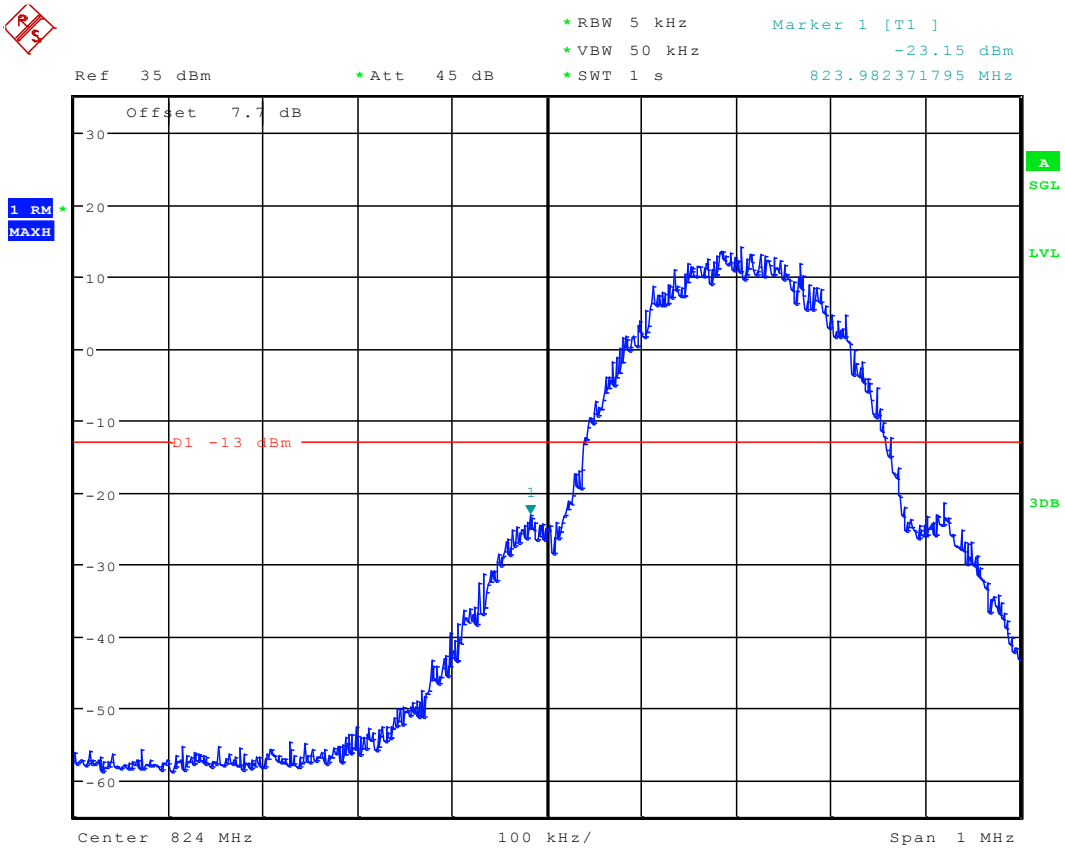
Part I - Test Plots

4.1 For GSM

4.1.1 Test Band = GSM850

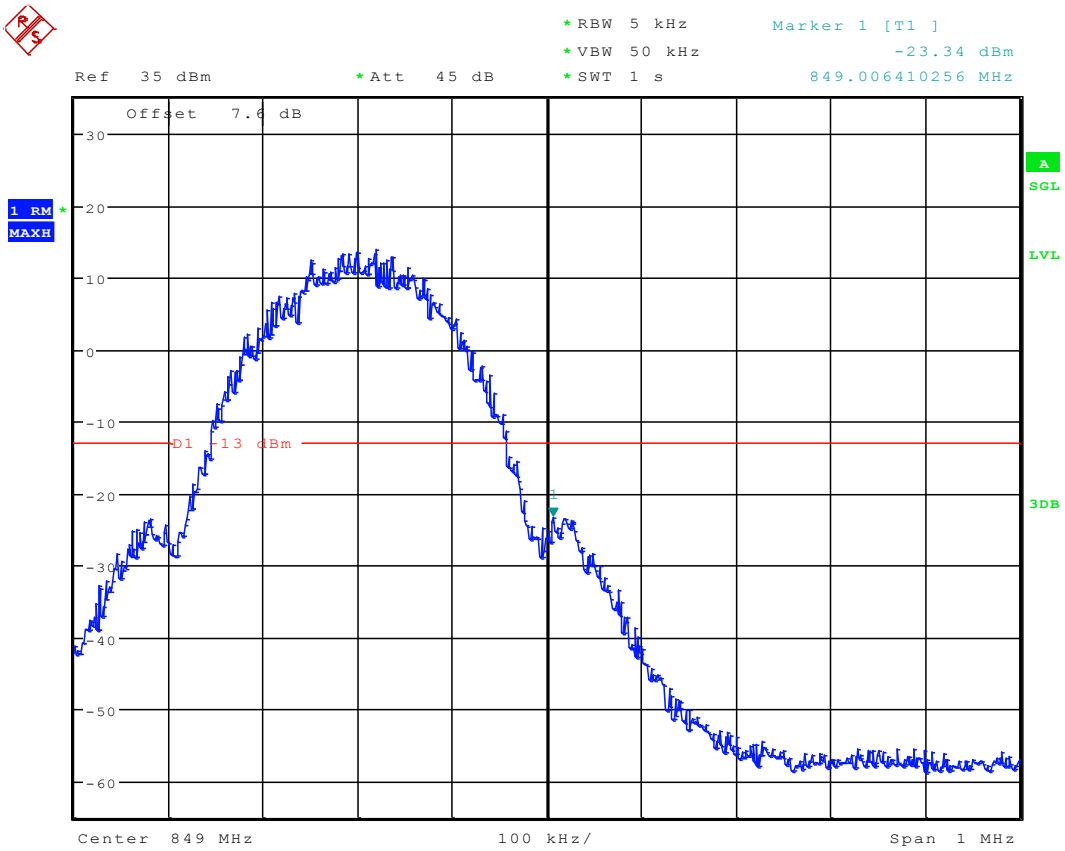
4.1.1.1 Test Mode = GSM/TM1

4.1.1.1.1 Test Channel = LCH



Date: 4.DEC.2018 09:33:43

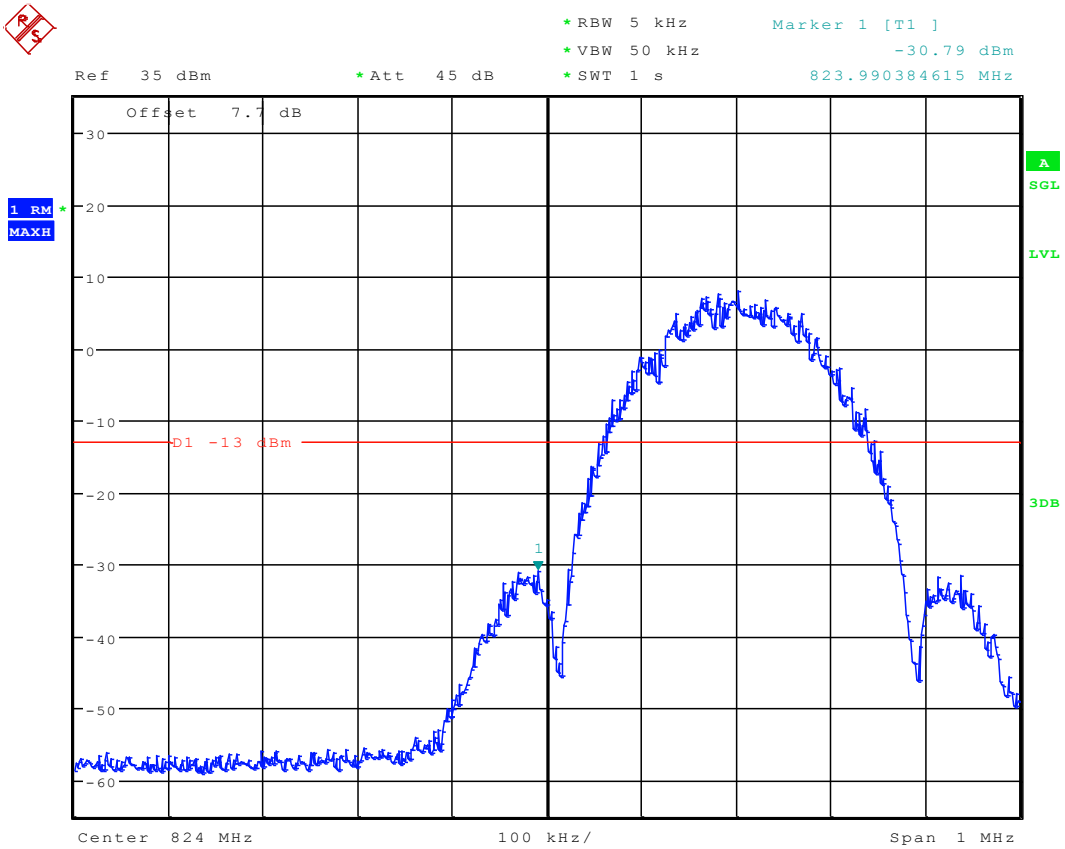
4.1.1.1.2 Test Channel = HCH



Date: 4.DEC.2018 09:34:20

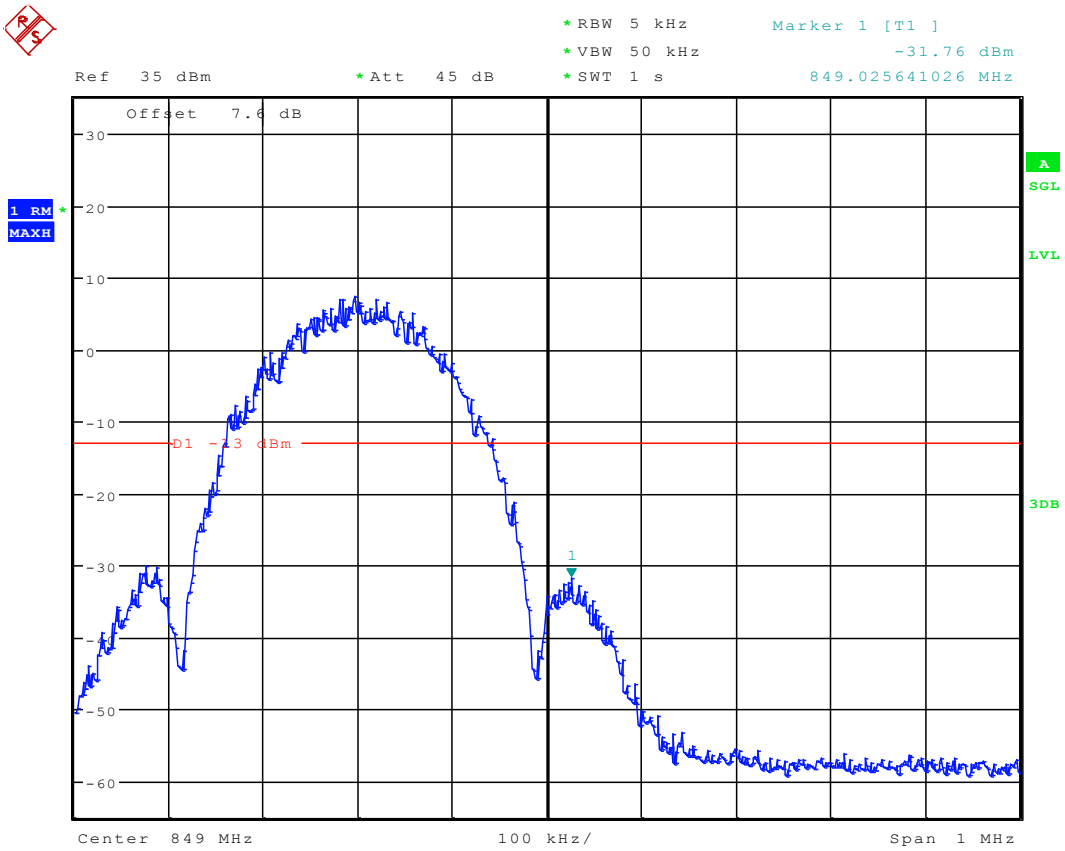
4.1.1.2 Test Mode = GSM/TM2

4.1.1.2.1 Test Channel = LCH



Date: 4.DEC.2018 09:49:59

4.1.1.2.2 Test Channel = HCH

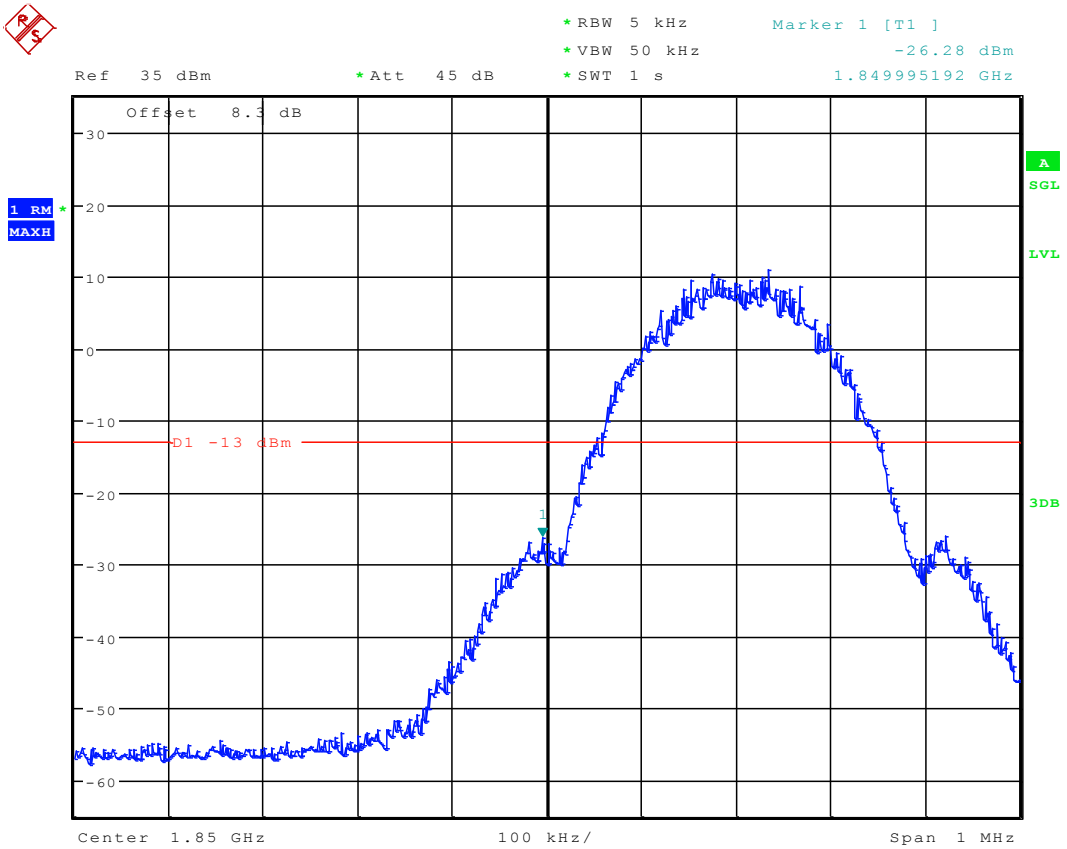


Date: 4.DEC.2018 09:50:36

4.1.2 Test Band = GSM1900

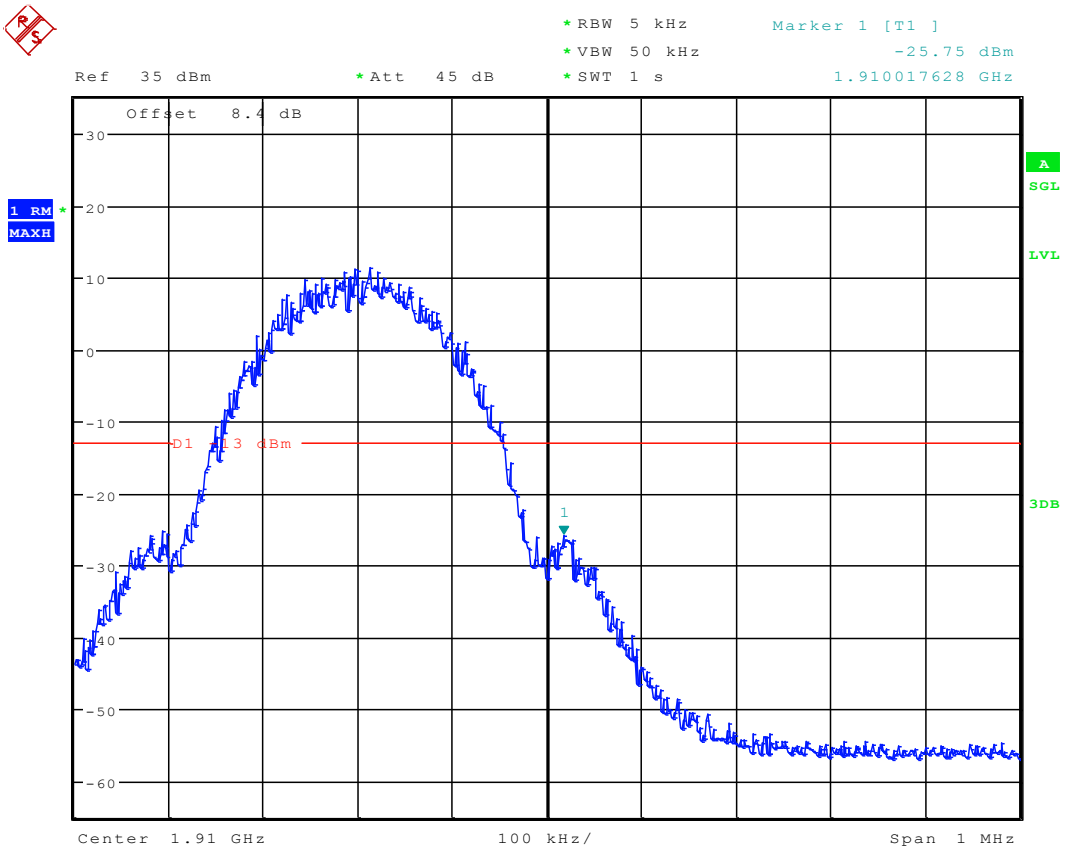
4.1.2.1 Test Mode = GSM/TM1

4.1.2.1.1 Test Channel = LCH



Date: 4.DEC.2018 10:25:55

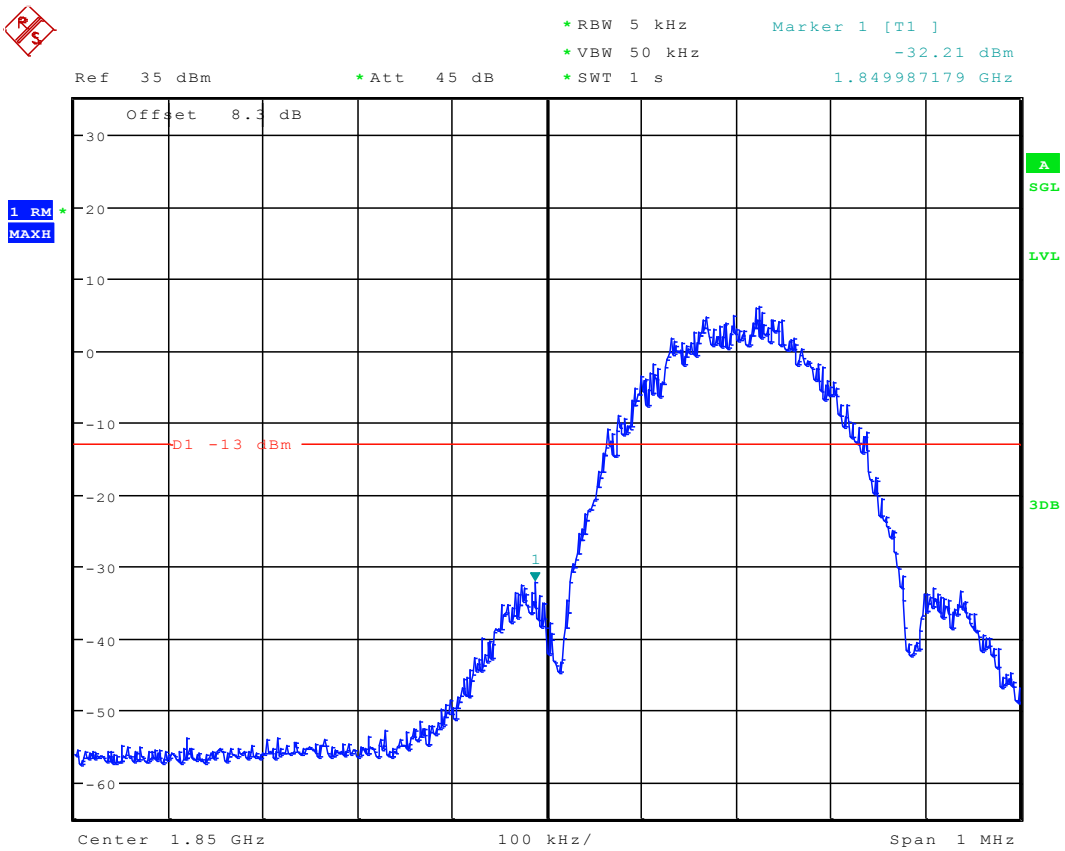
4.1.2.1.2 Test Channel = HCH



Date: 4.DEC.2018 10:26:31

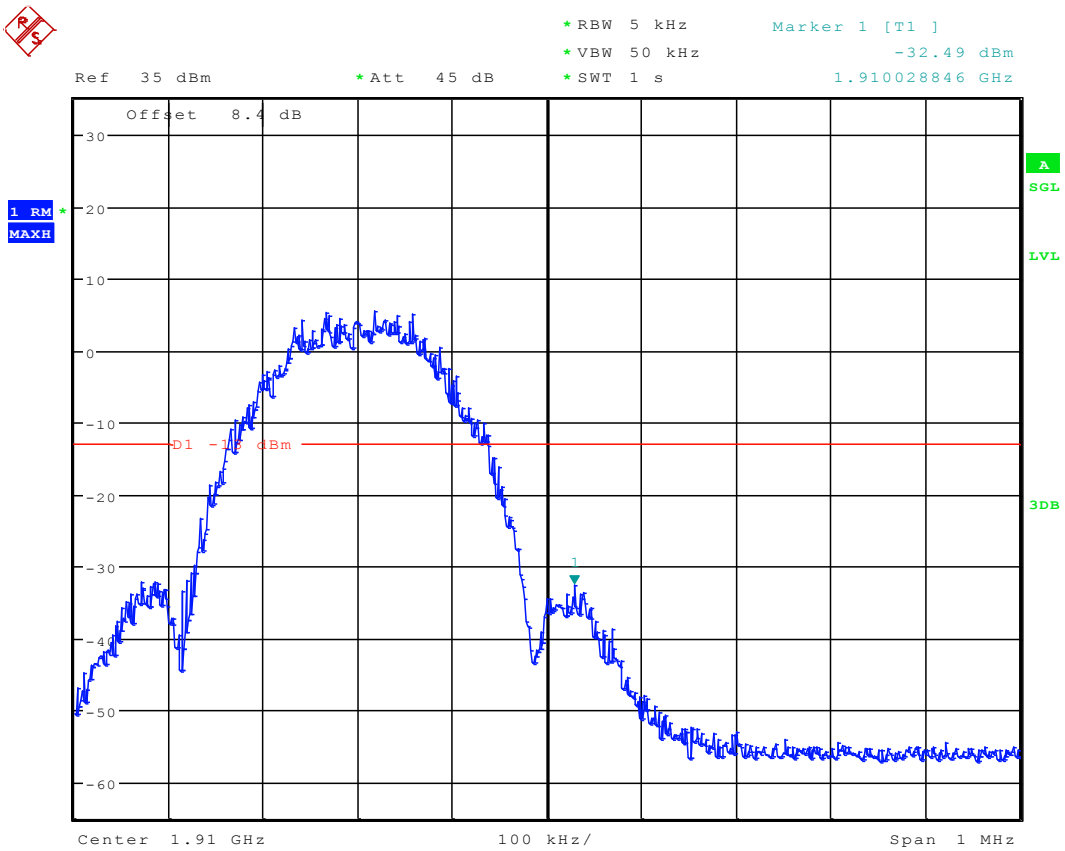
4.1.2.2 Test Mode = GSM/TM2

4.1.2.2.1 Test Channel = LCH



Date: 4.DEC.2018 10:40:56

4.1.2.2.2 Test Channel = HCH



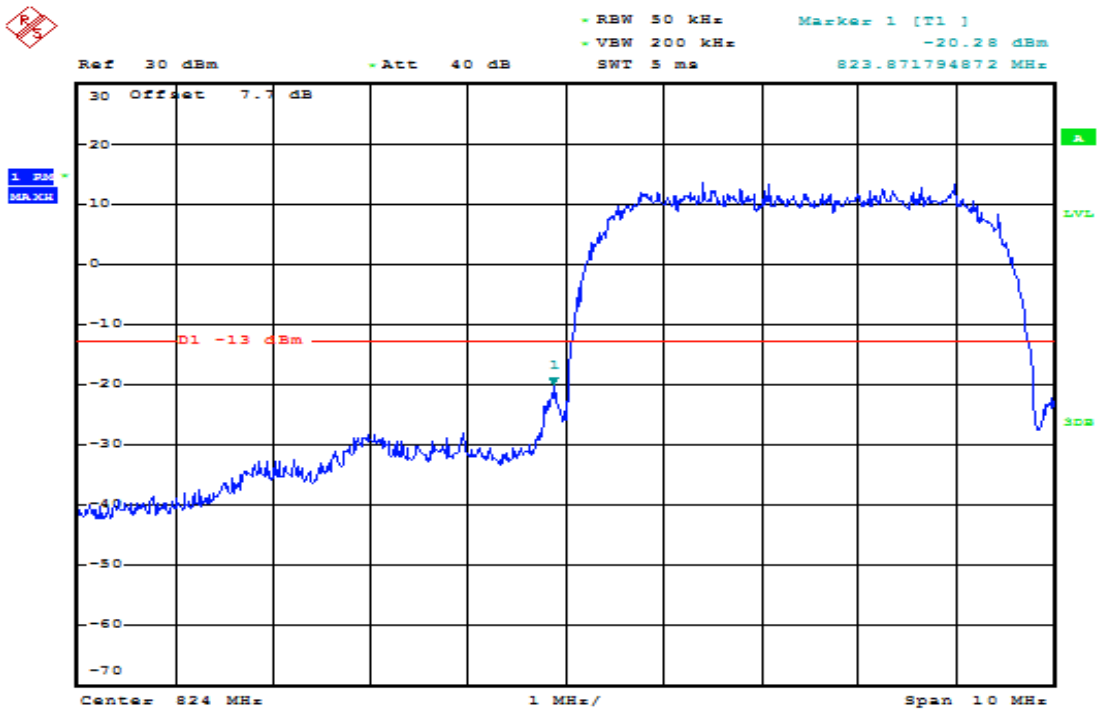
Date: 4.DEC.2018 10:41:32

4.2 For WCDMA

4.2.1 Test Band = WCDMA 850

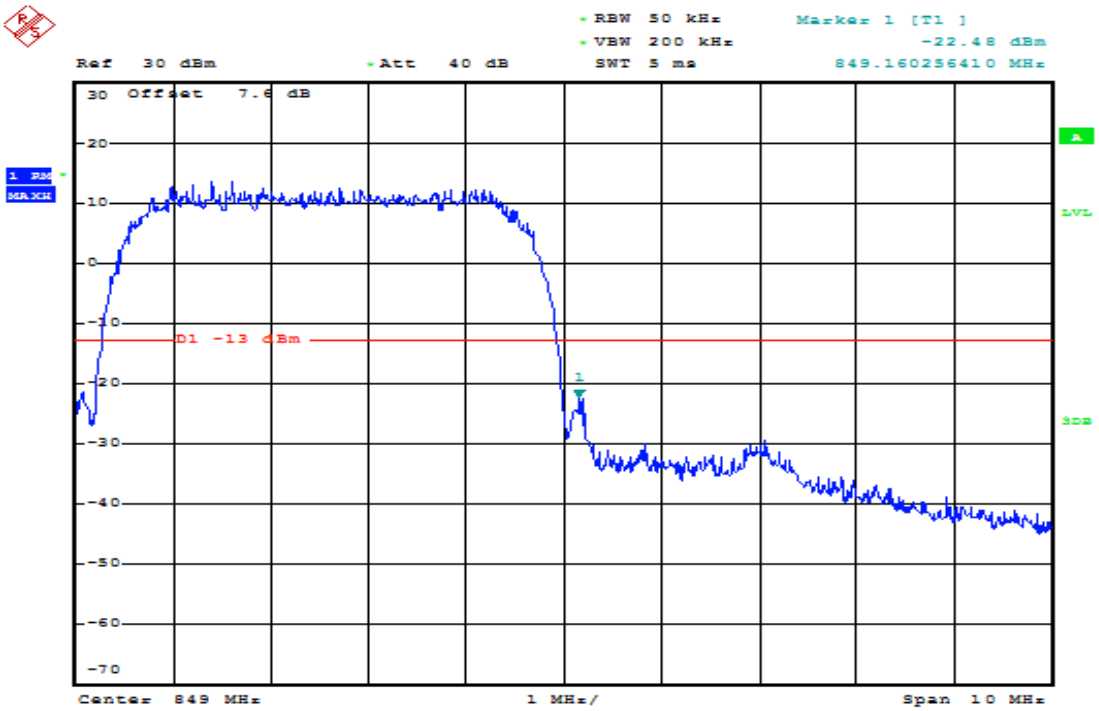
4.2.1.1 Test Mode = UMTS/TM1

4.2.1.1.1 Test Channel = LCH



Date: 1.NOV.2018 17:09:03

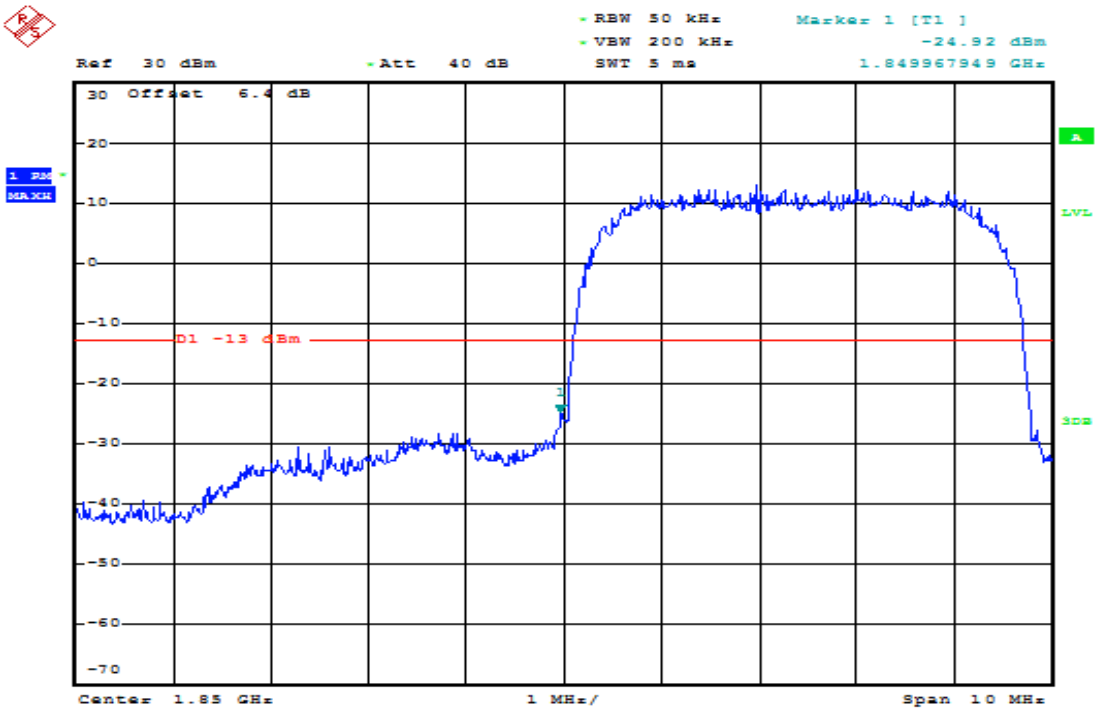
4.2.1.1.2 Test Channel = HCH



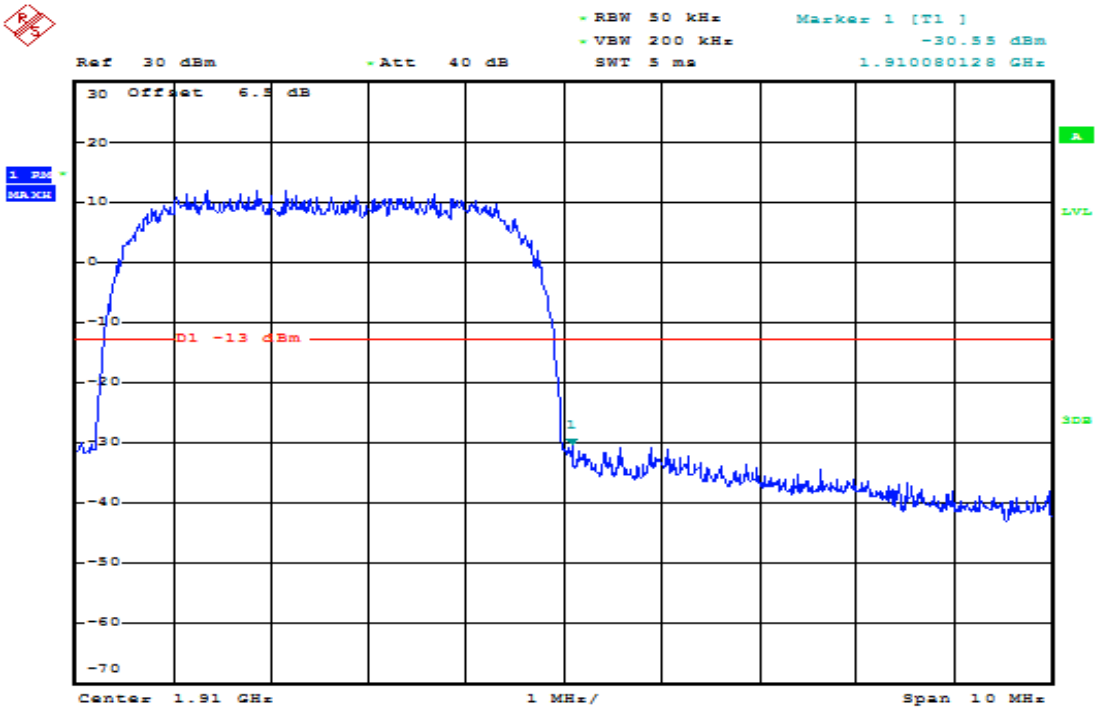
4.2.2 Test Band = WCDMA 1900

4.2.2.1 Test Mode = UMTS/TM1

4.2.2.1.1 Test Channel = LCH



4.2.2.1.2 Test Channel = HCH



Date: 31.OCT.2018 11:38:56

5 Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

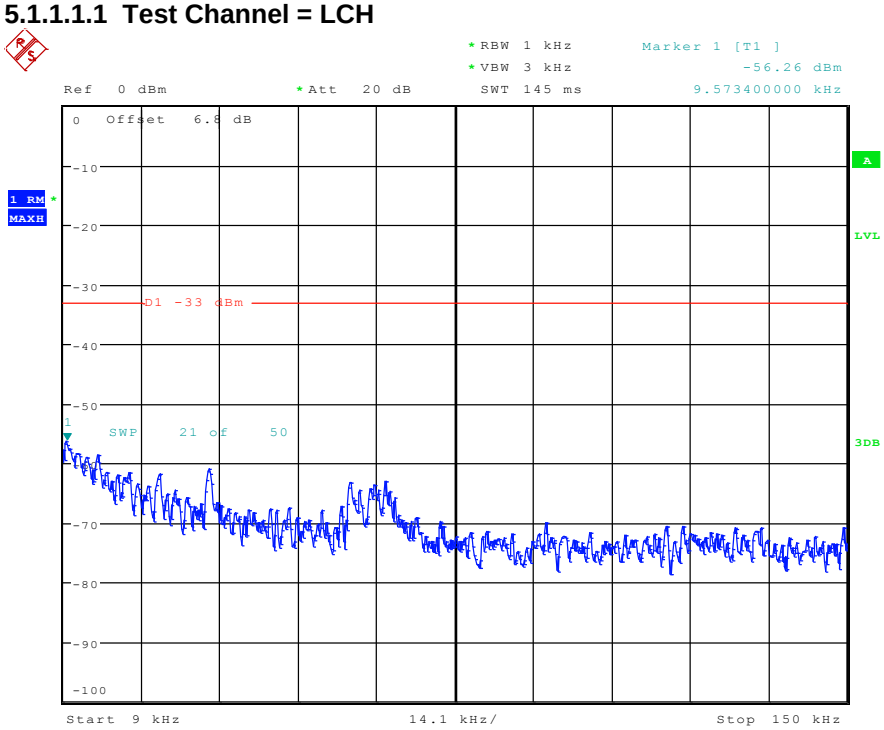
Part I - Test Plots

5.1 For GSM

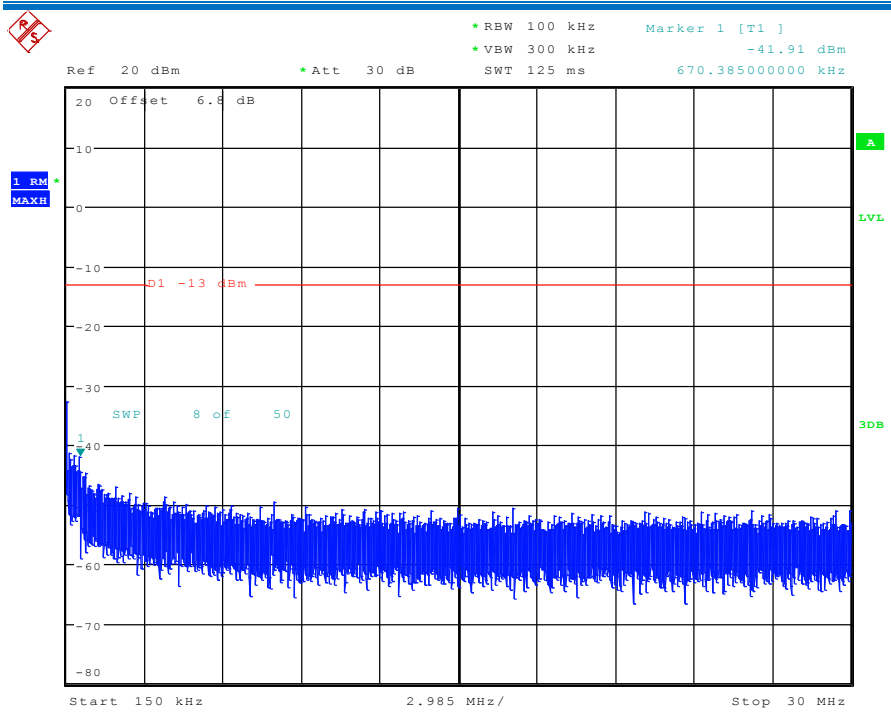
5.1.1 Test Band = GSM850

5.1.1.1 Test Mode = GSM/TM1

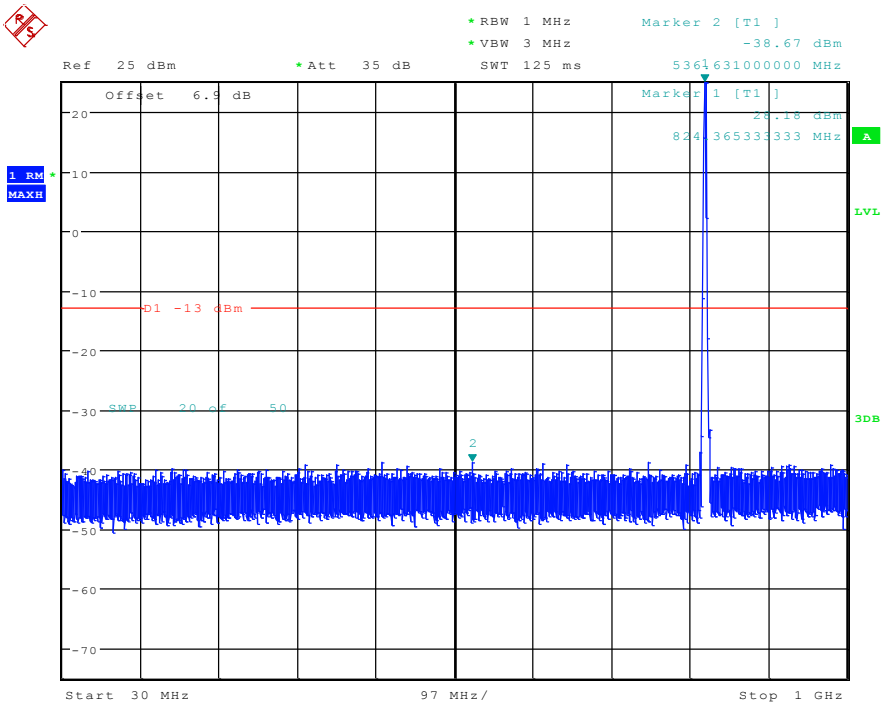
5.1.1.1.1 Test Channel = LCH



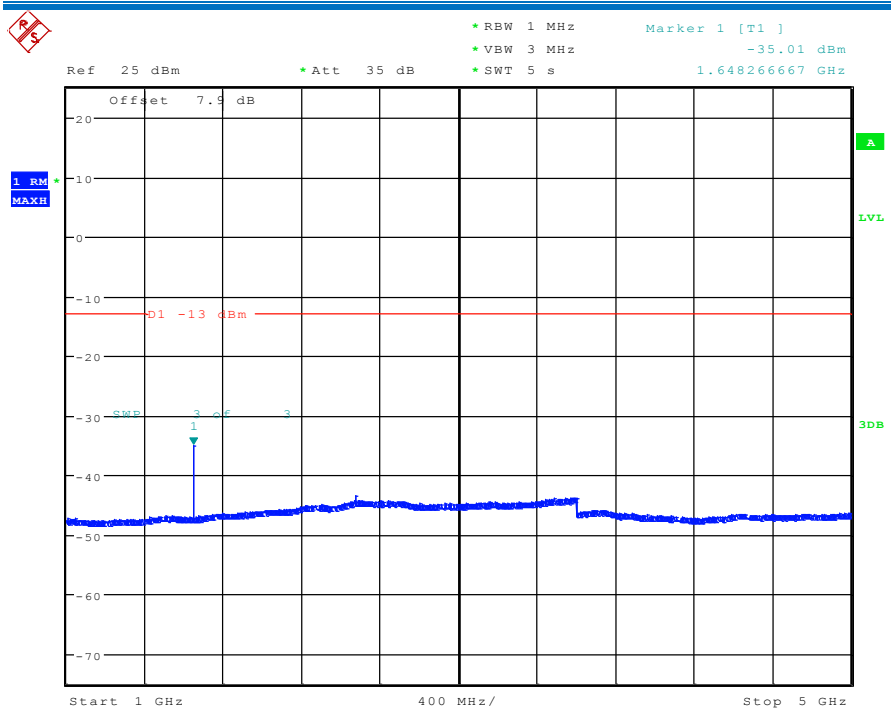
Date: 4.DEC.2018 09:11:42



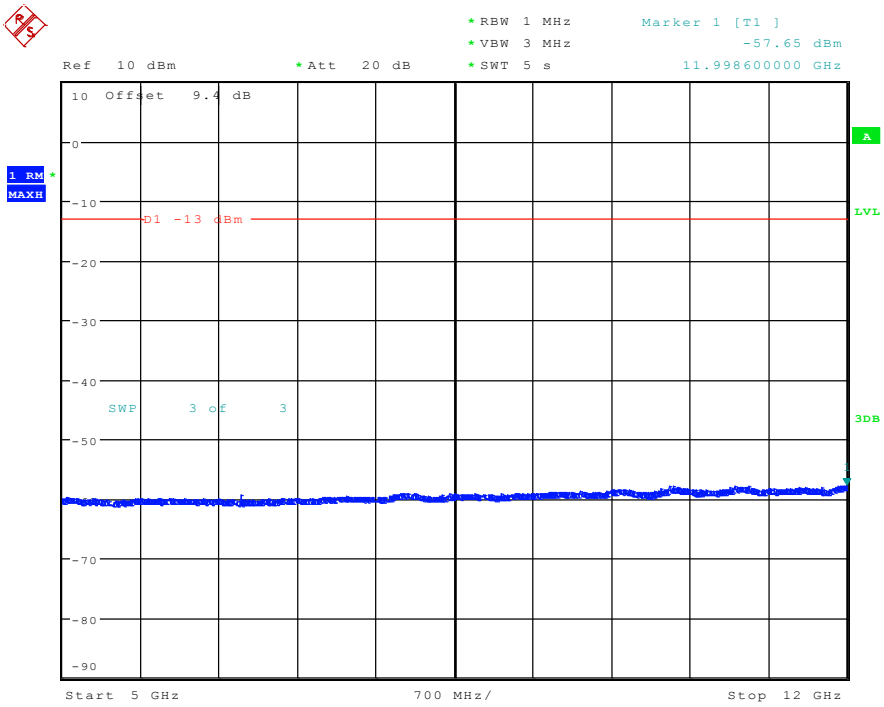
Date: 4.DEC.2018 09:11:49



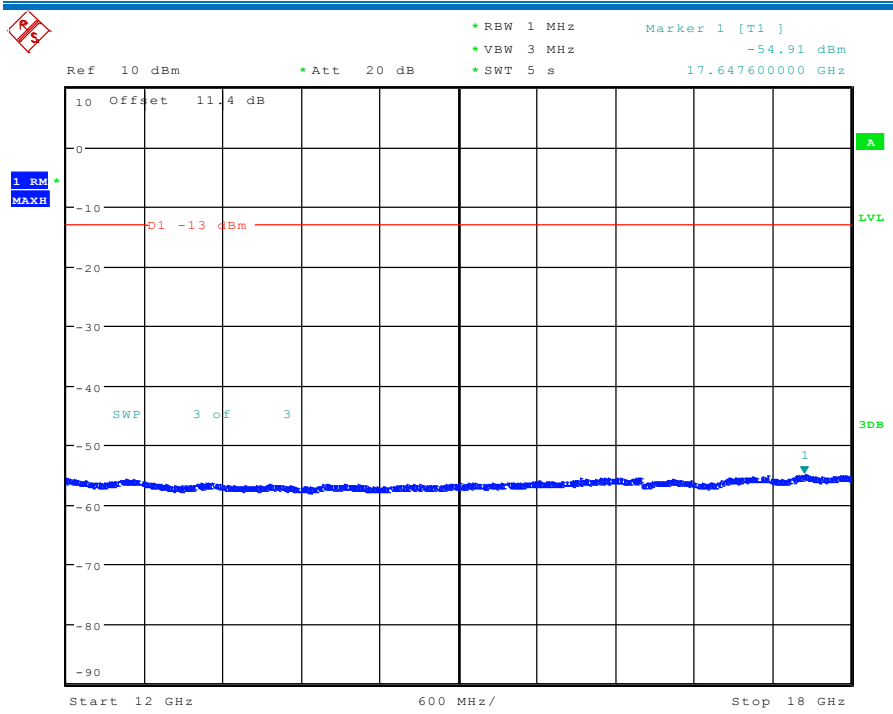
Date: 4.DEC.2018 09:11:59



Date: 4.DEC.2018 09:12:58

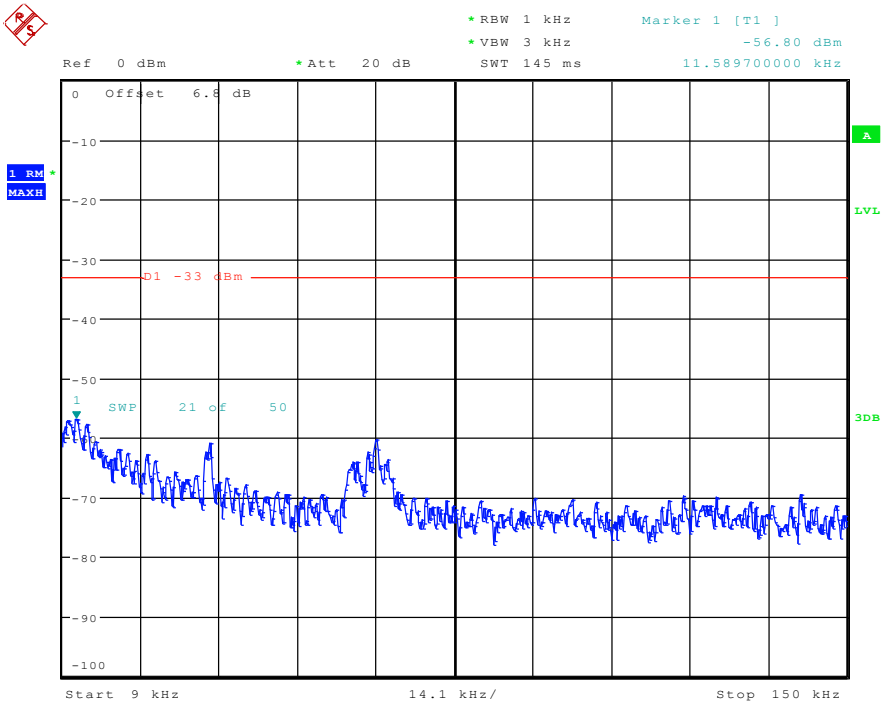


Date: 4.DEC.2018 09:13:56

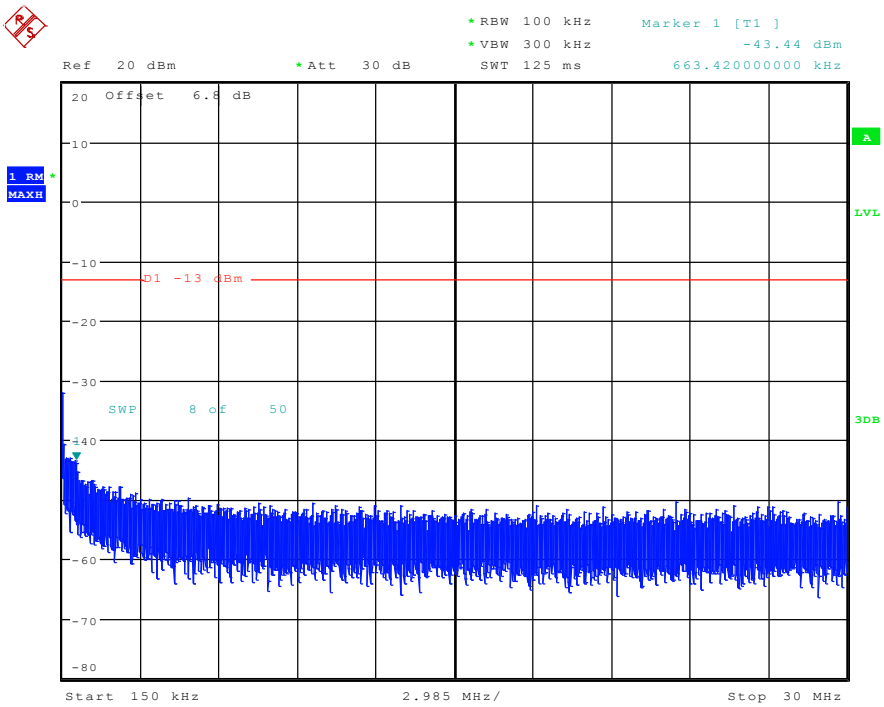


Date: 4.DEC.2018 09:14:53

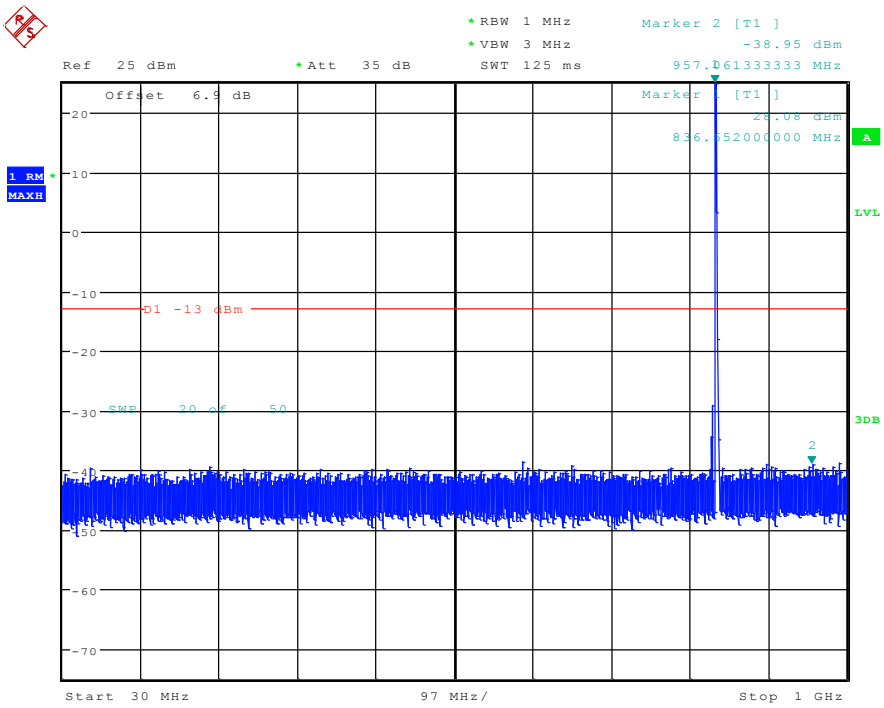
5.1.1.1.2 Test Channel = MCH



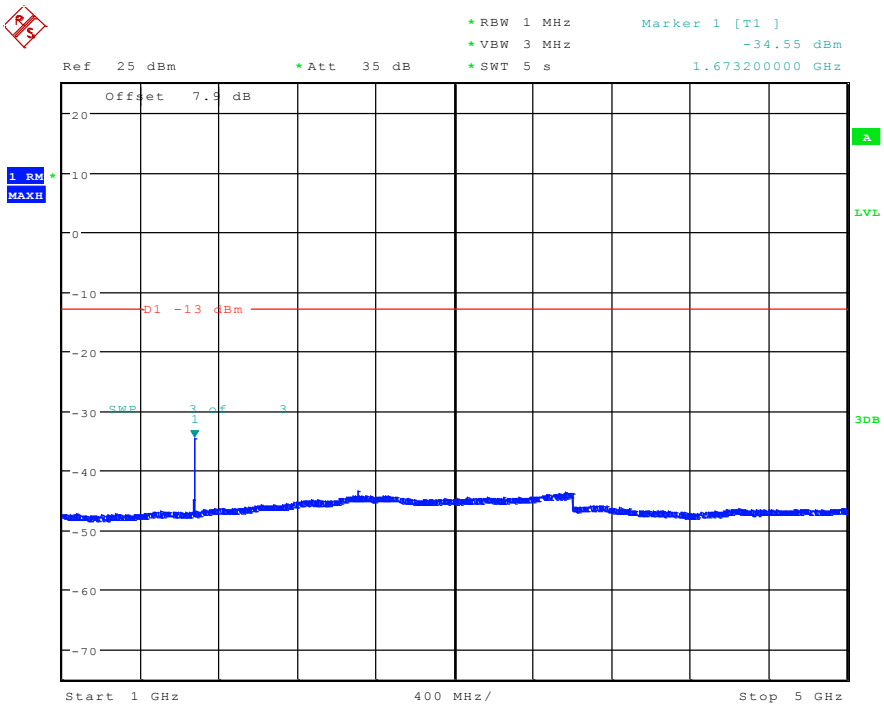
Date: 4.DEC.2018 09:15:06



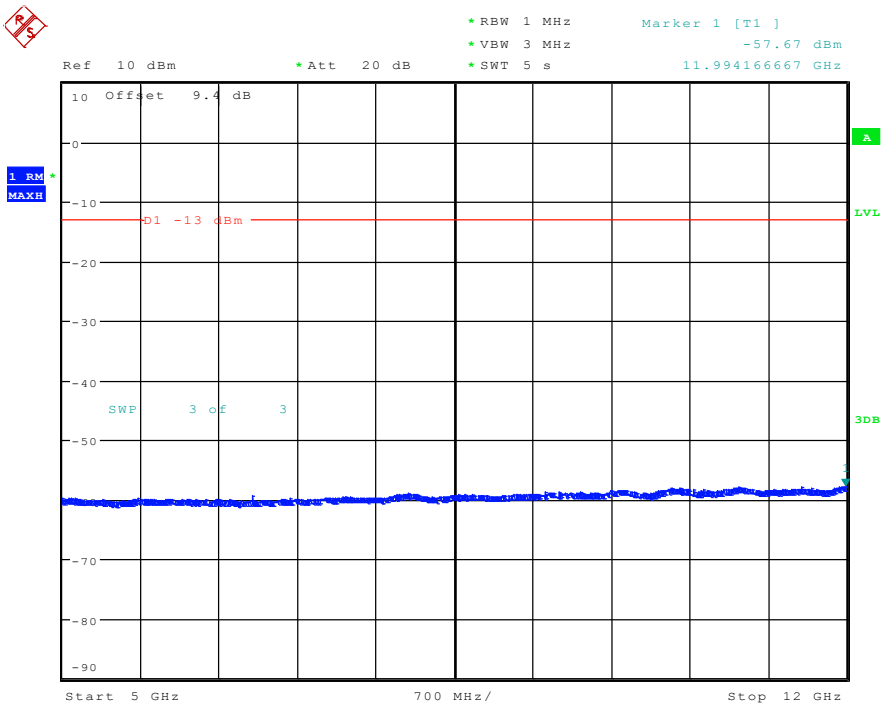
Date: 4.DEC.2018 09:15:13



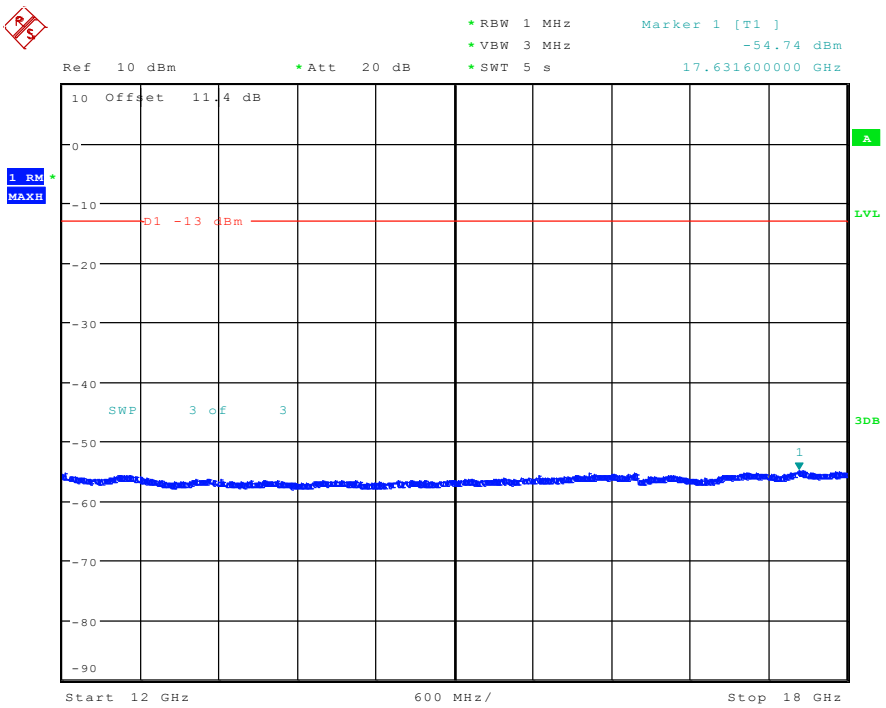
Date: 4.DEC.2018 09:15:23



Date: 4.DEC.2018 09:16:22

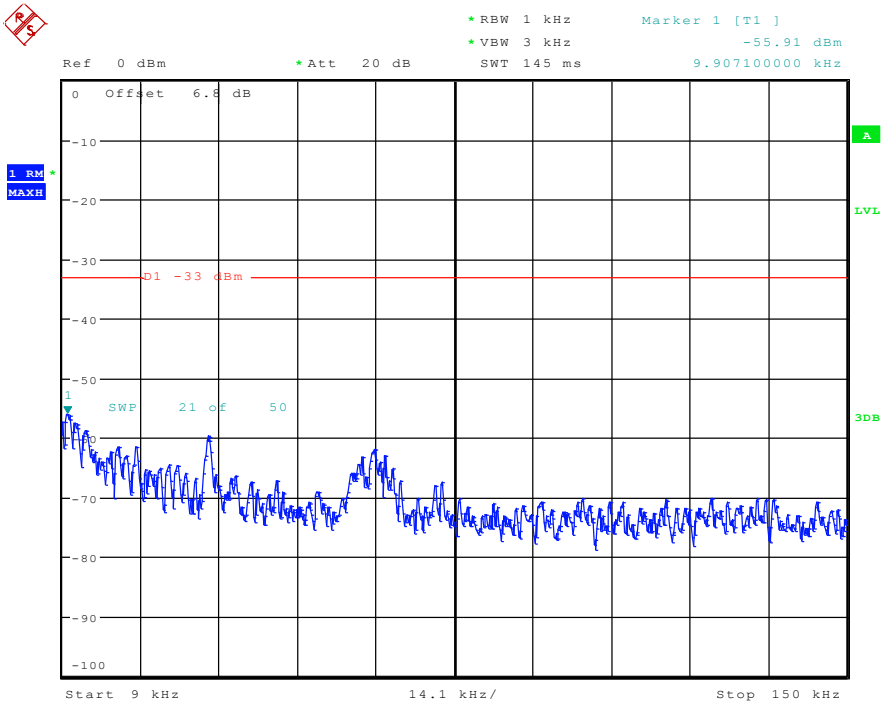


Date: 4.DEC.2018 09:17:21

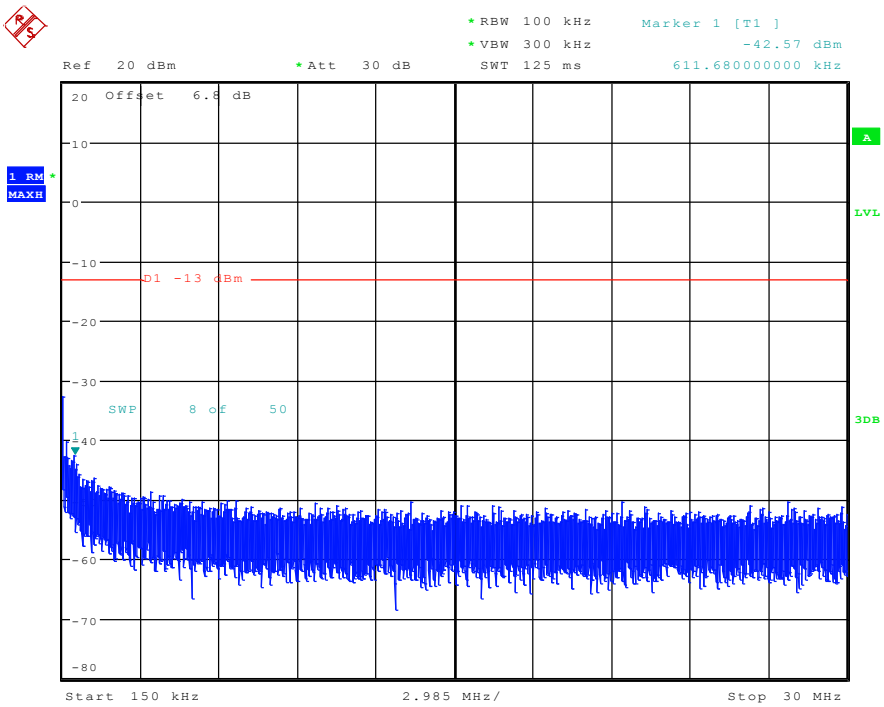


Date: 4.DEC.2018 09:18:17

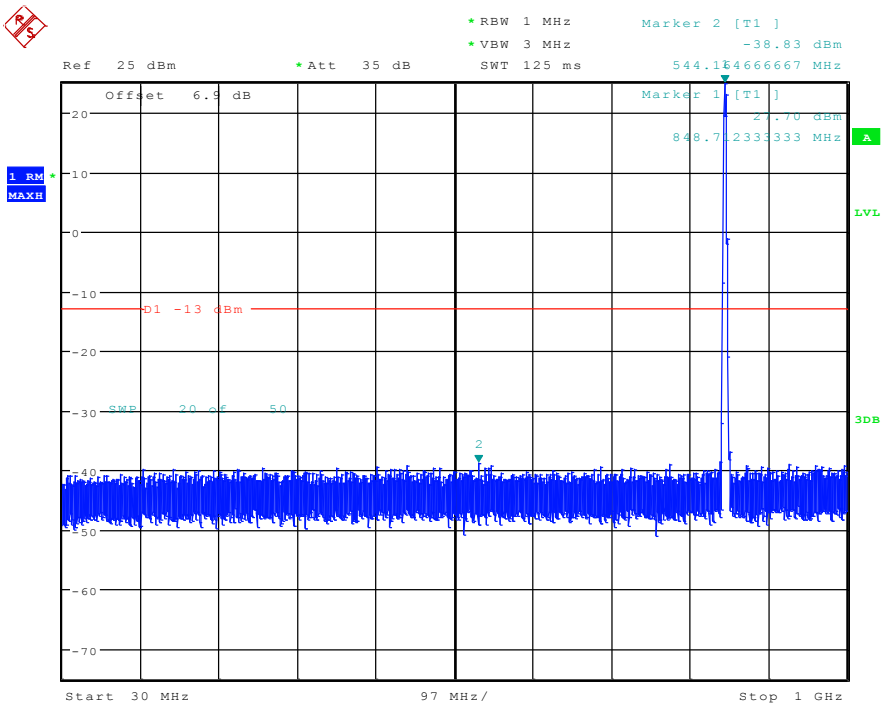
5.1.1.1.3 Test Channel = HCH



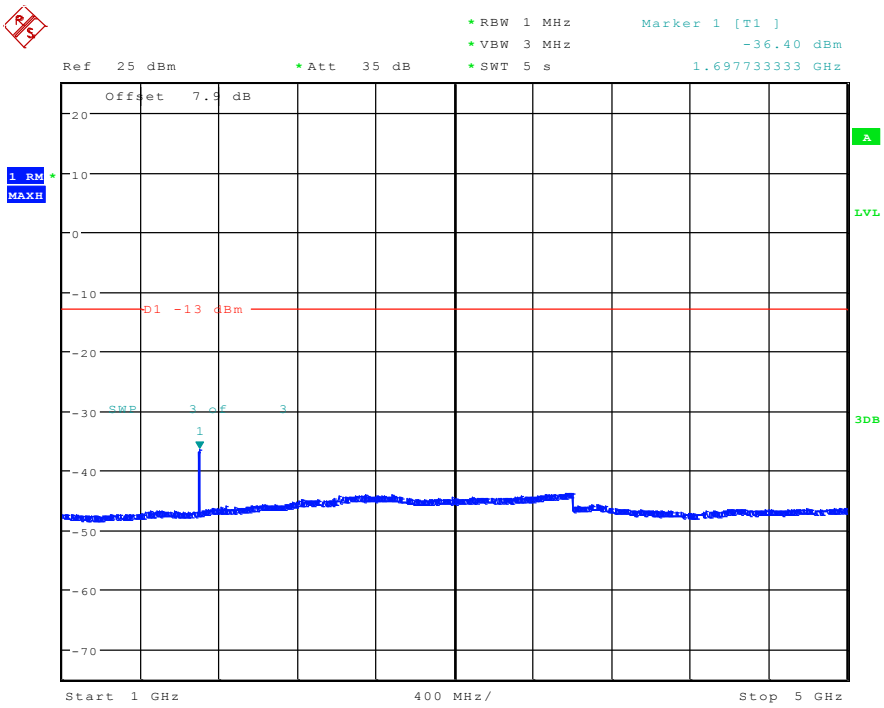
Date: 4.DEC.2018 09:18:31



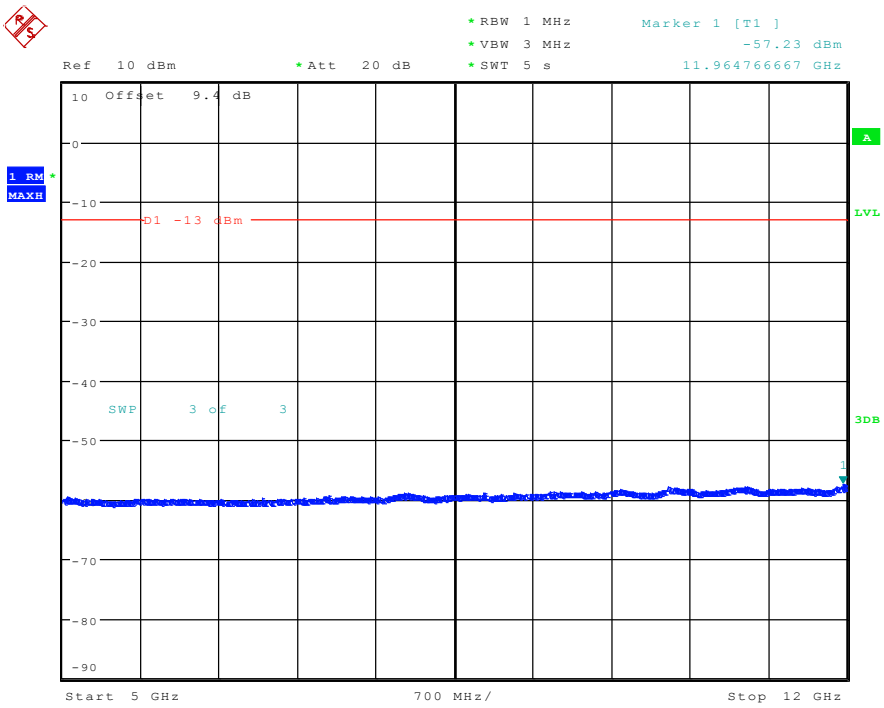
Date: 4.DEC.2018 09:18:37



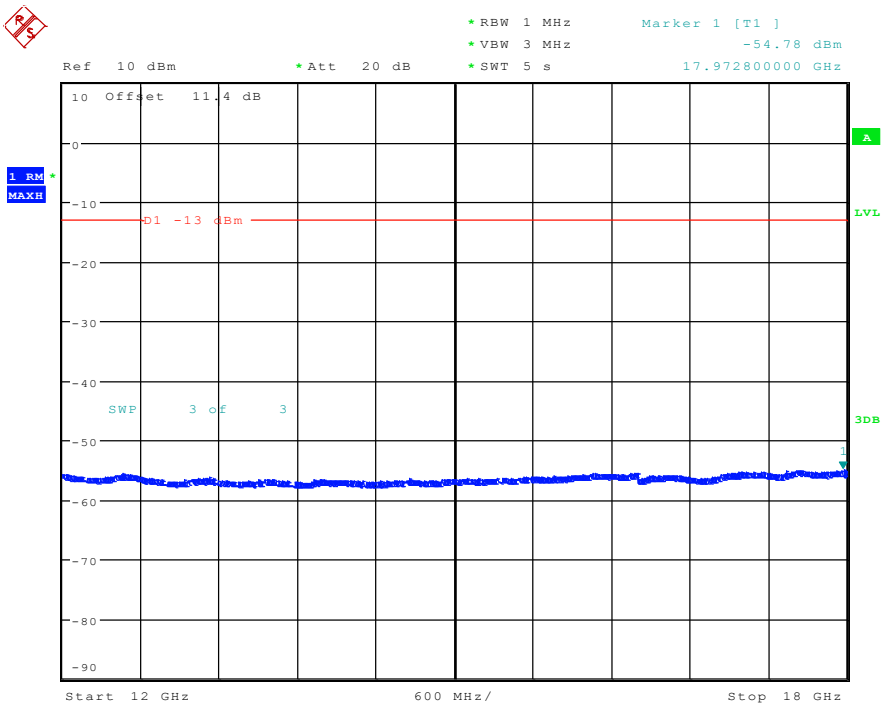
Date: 4.DEC.2018 09:18:47



Date: 4.DEC.2018 09:19:46



Date: 4.DEC.2018 09:20:45

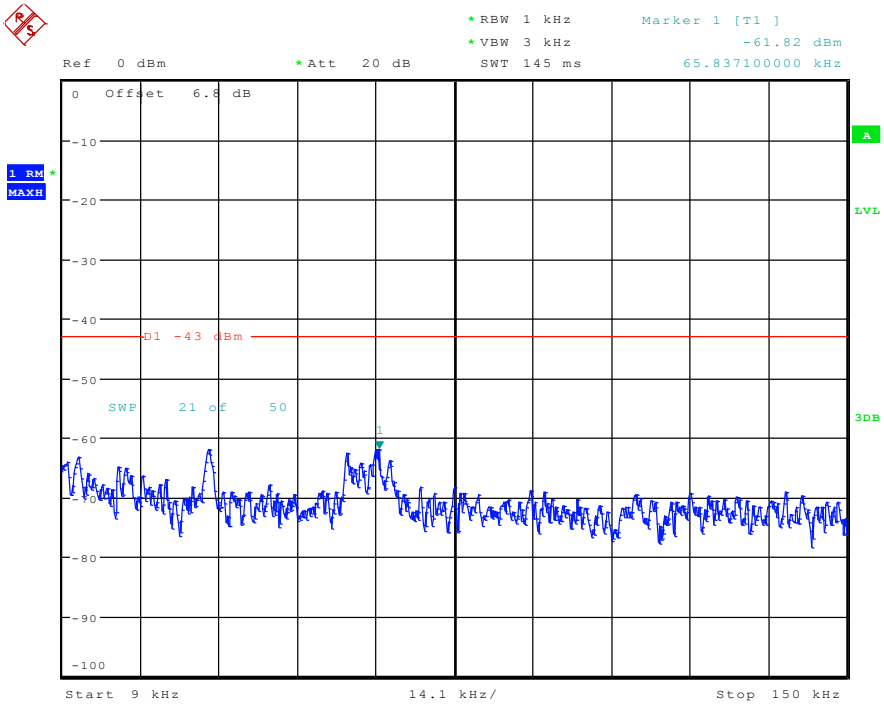


Date: 4.DEC.2018 09:21:42

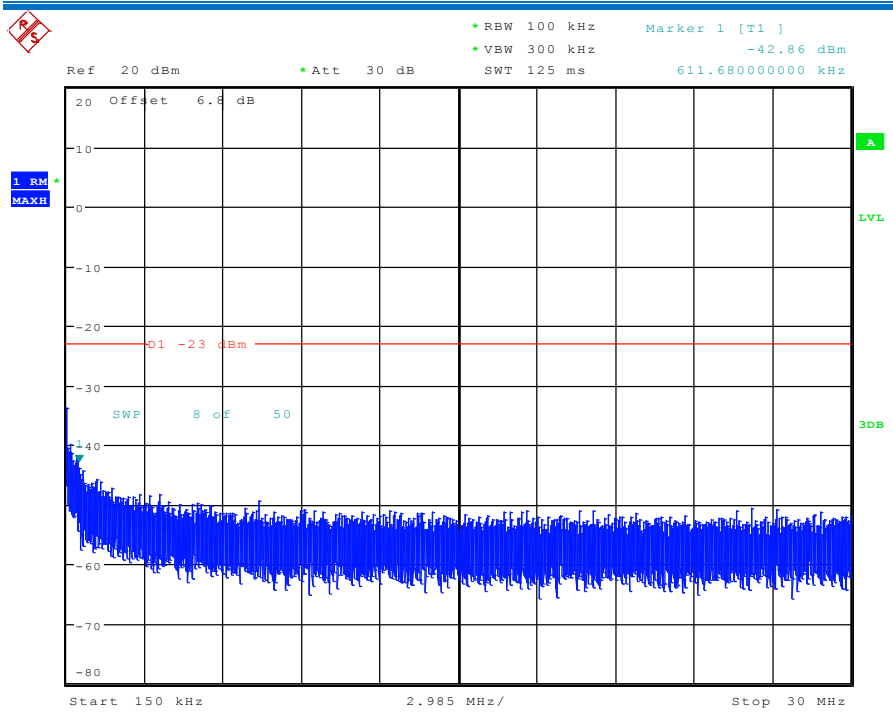
5.1.2 Test Band = GSM1900

5.1.2.1 Test Mode = GSM/TM1

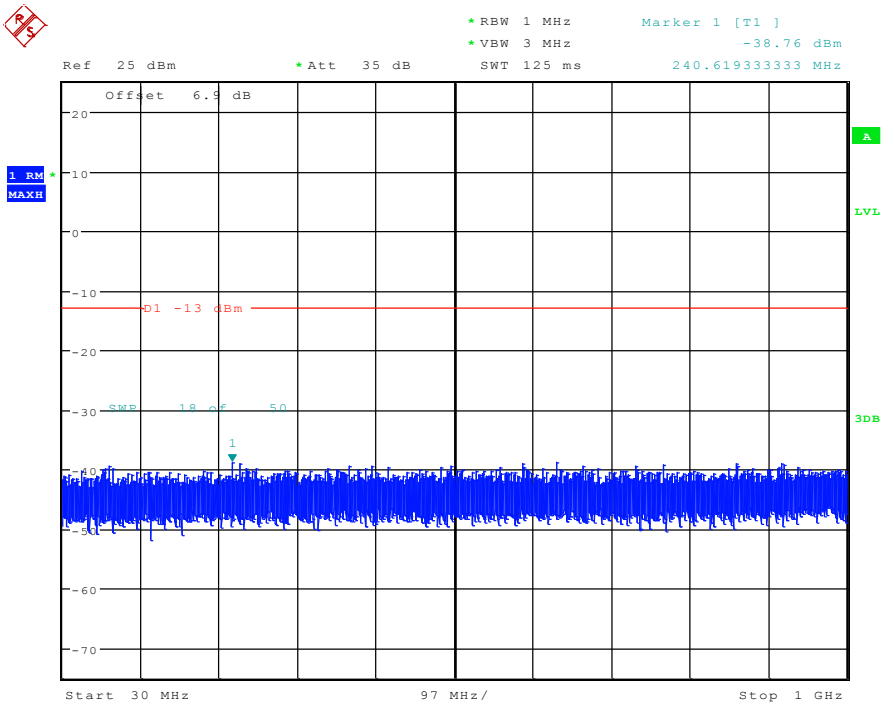
5.1.2.1.1 Test Channel = LCH



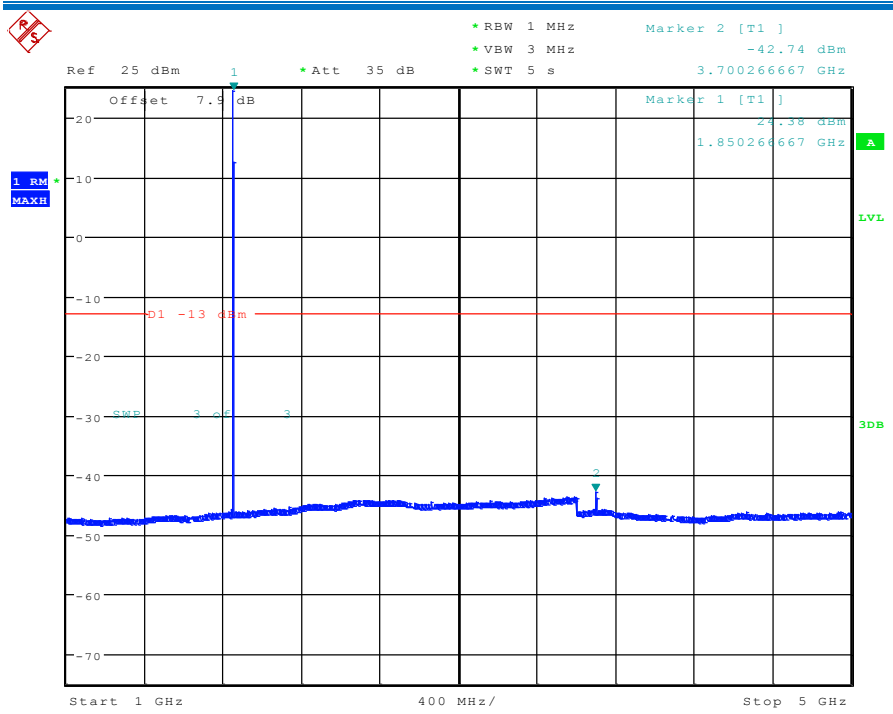
Date: 4.DEC.2018 10:01:54



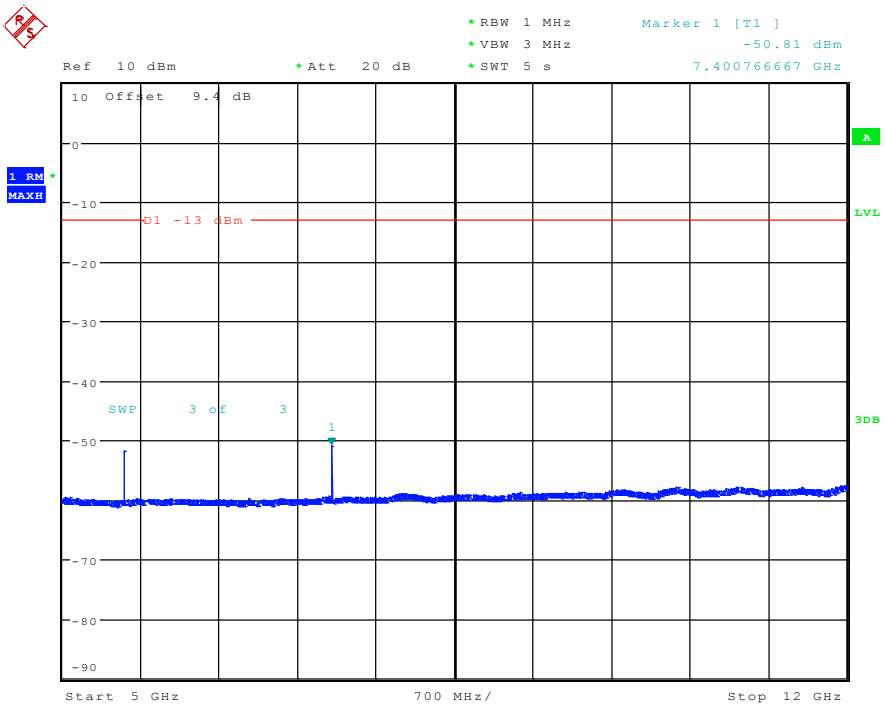
Date: 4.DEC.2018 10:02:01



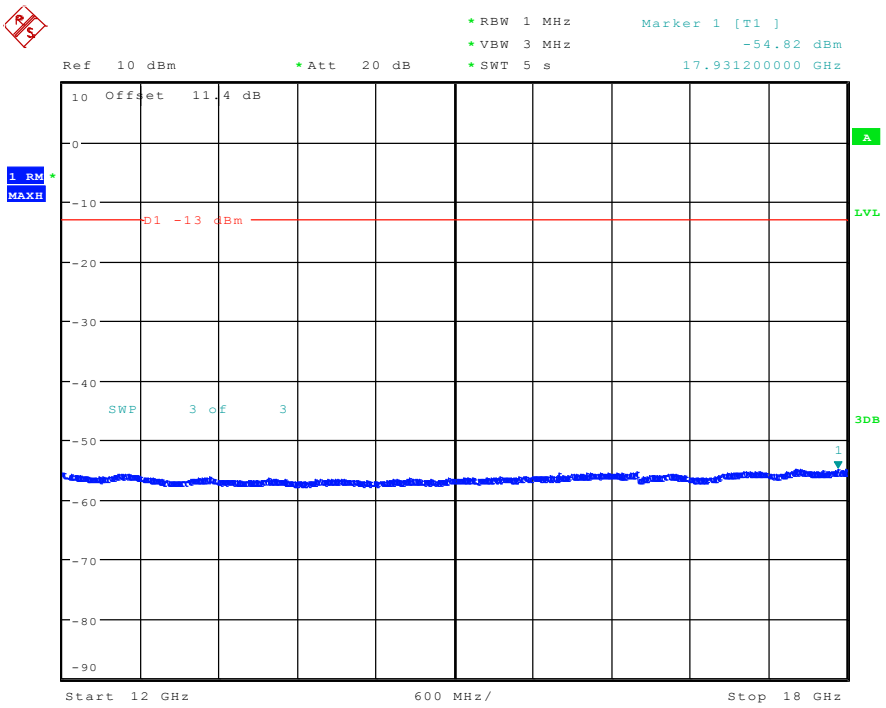
Date: 4.DEC.2018 10:02:10



Date: 4.DEC.2018 10:03:10

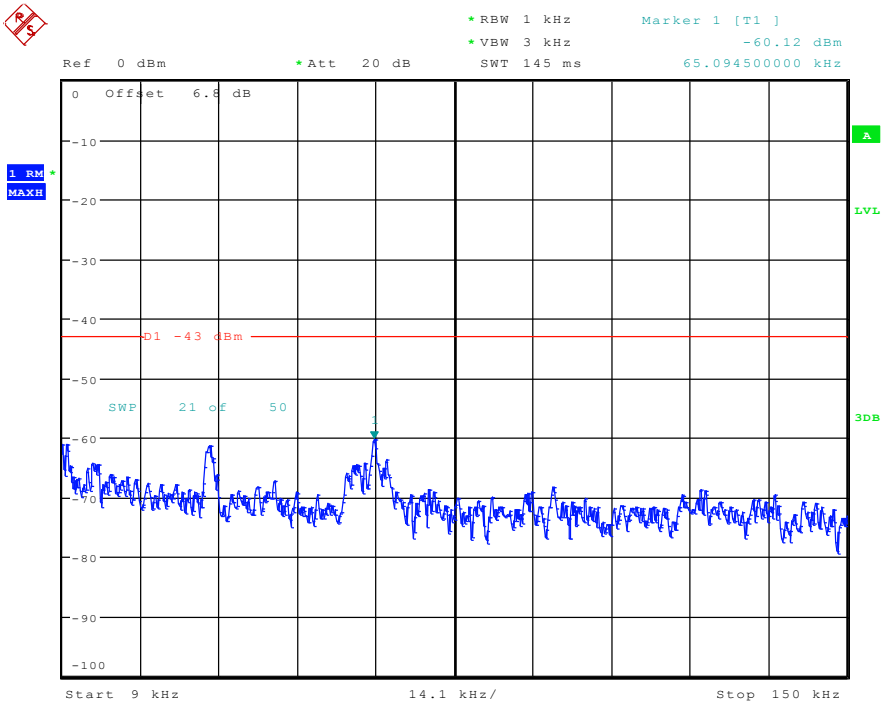


Date: 4.DEC.2018 10:04:09

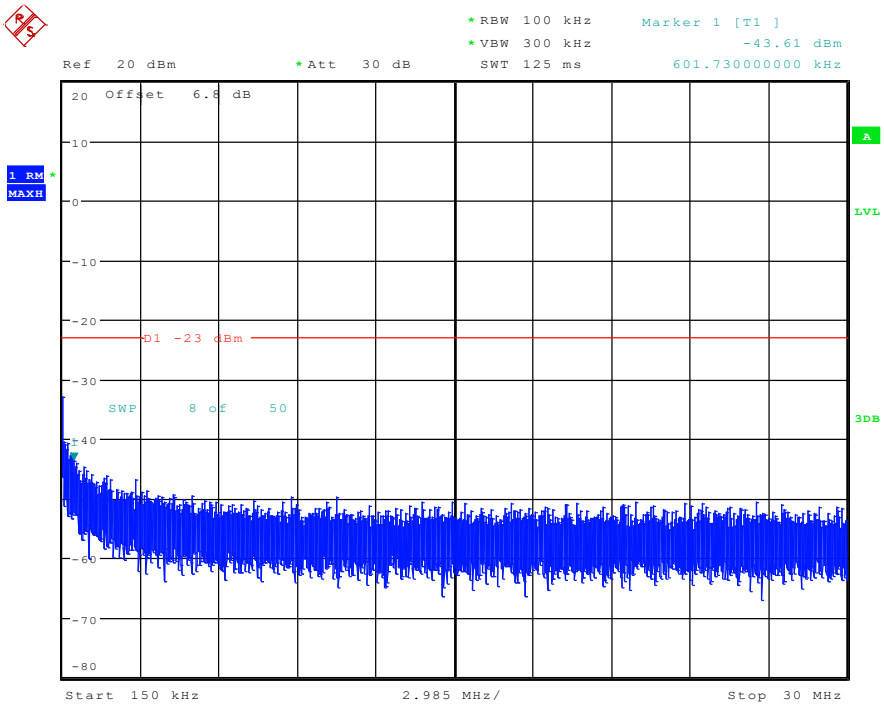


Date: 4.DEC.2018 10:05:06

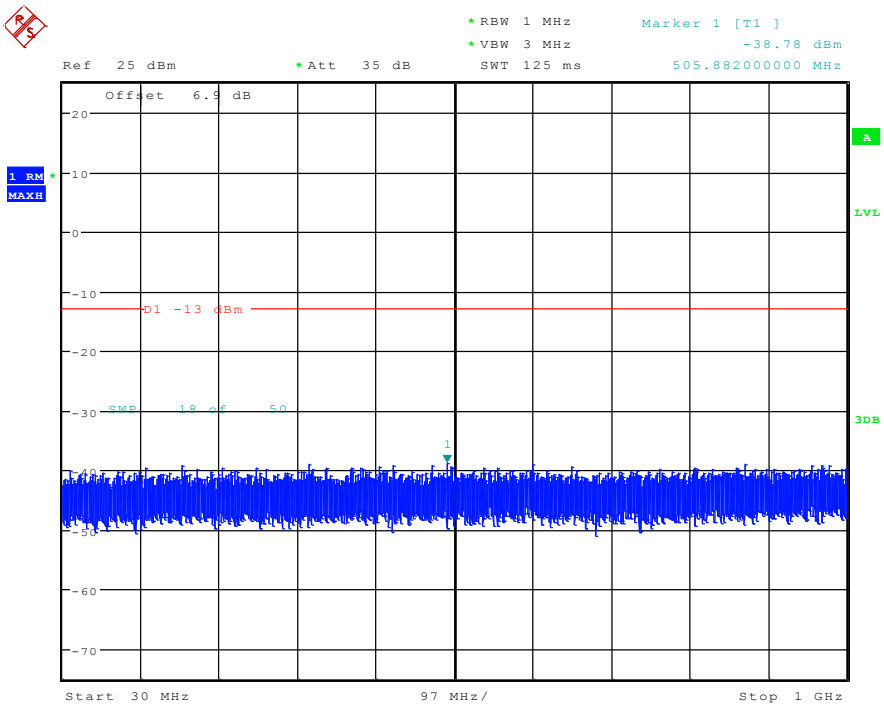
5.1.2.1.2 Test Channel = MCH



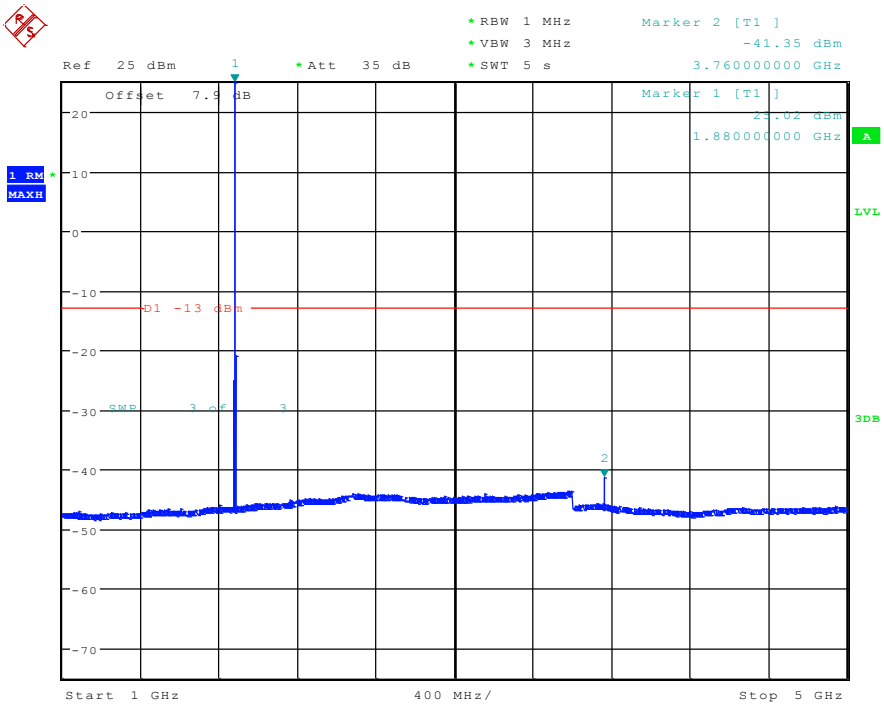
Date: 4.DEC.2018 10:05:19



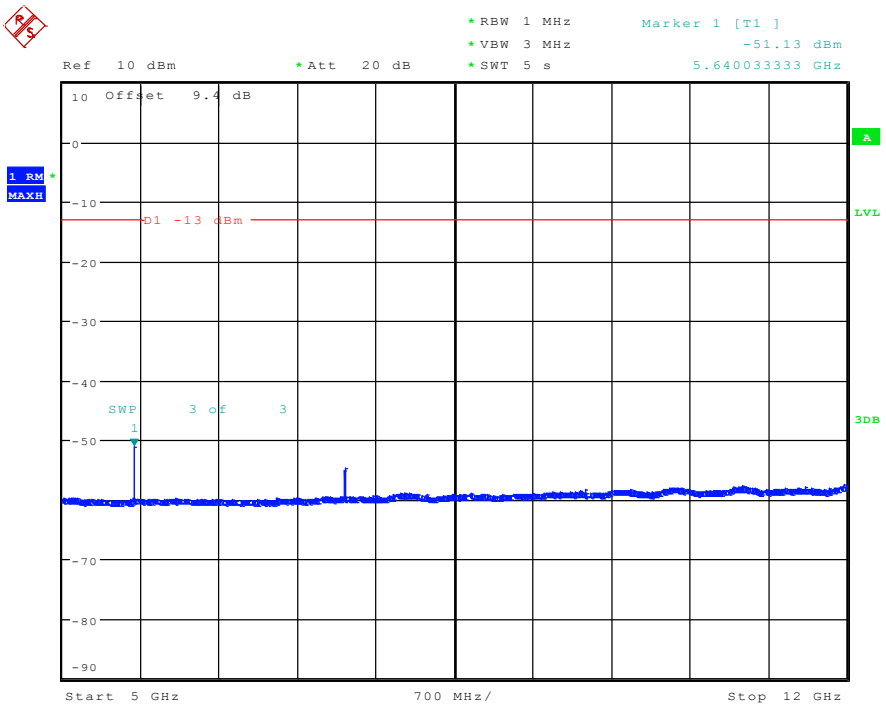
Date: 4.DEC.2018 10:05:26



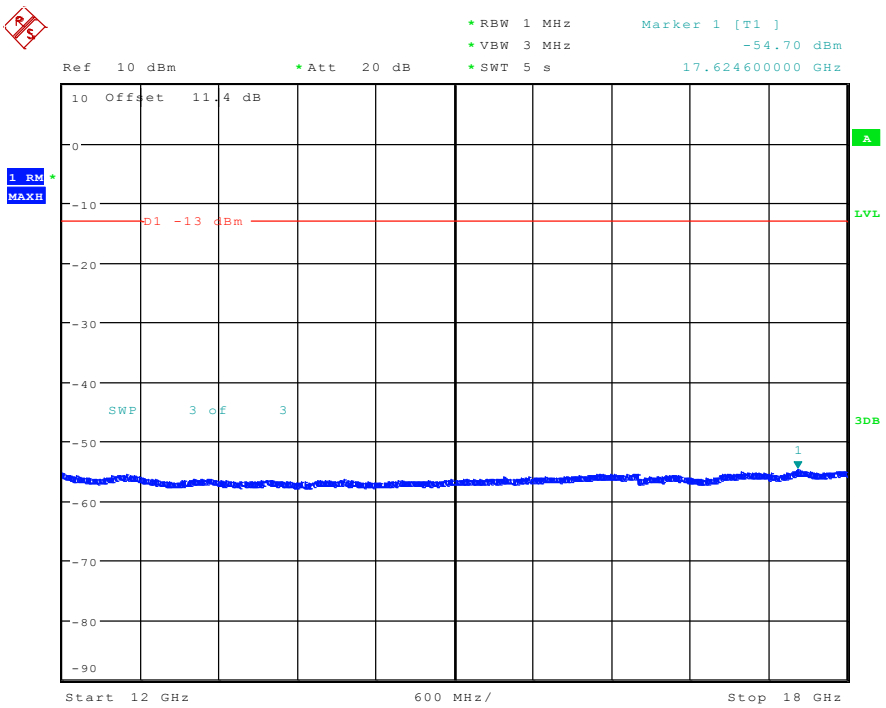
Date: 4.DEC.2018 10:05:35



Date: 4.DEC.2018 10:06:35

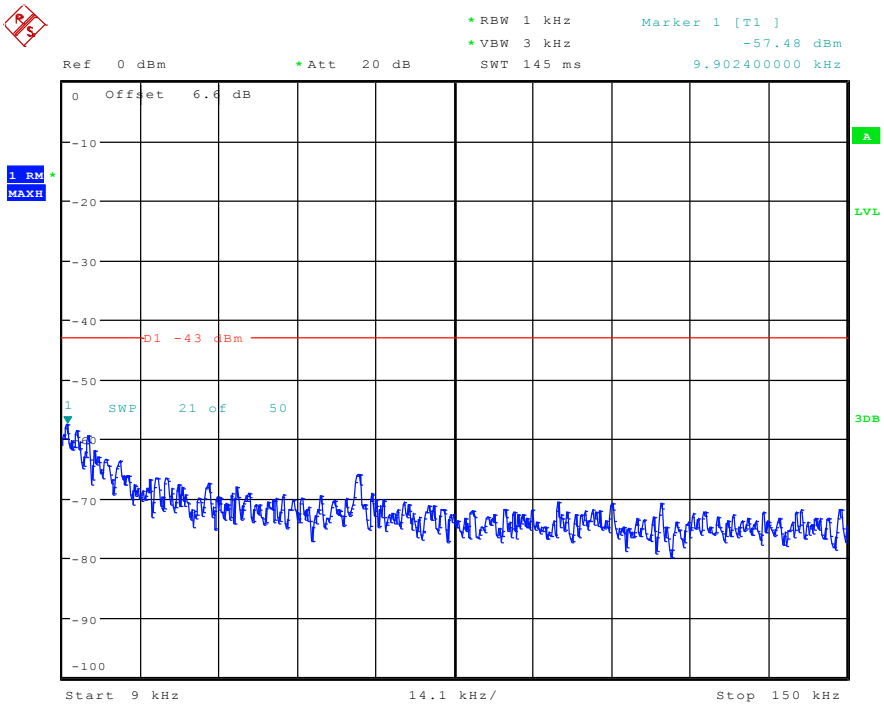


Date: 4.DEC.2018 10:07:34

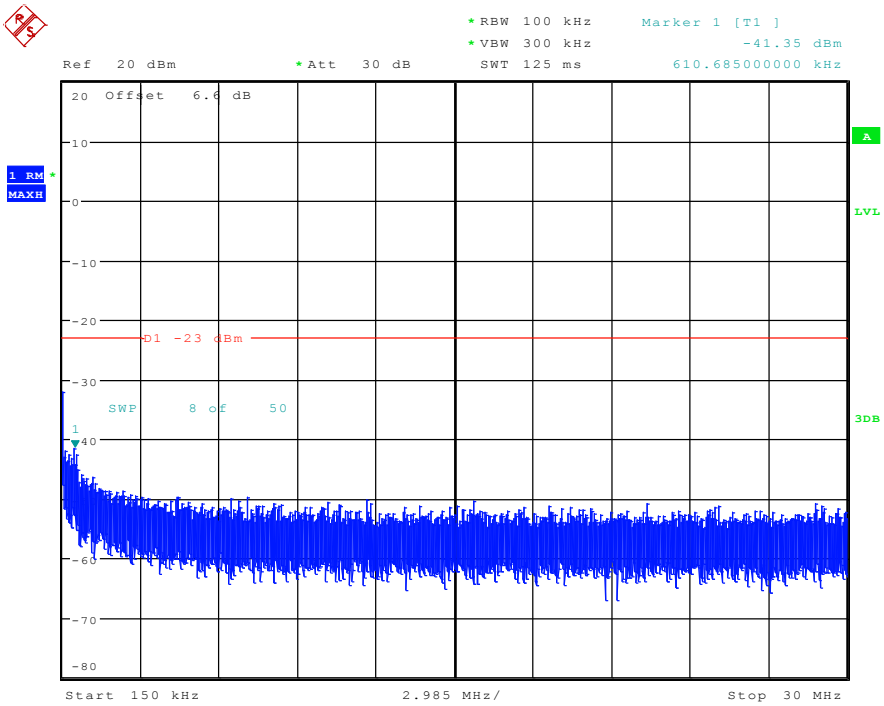


Date: 4.DEC.2018 10:08:31

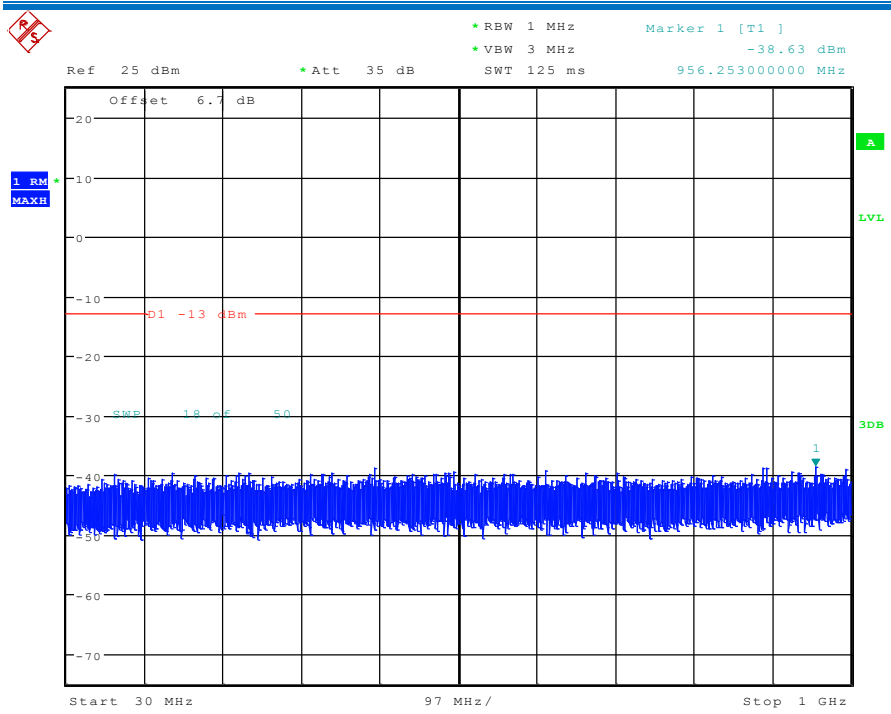
5.1.2.1.3 Test Channel = HCH



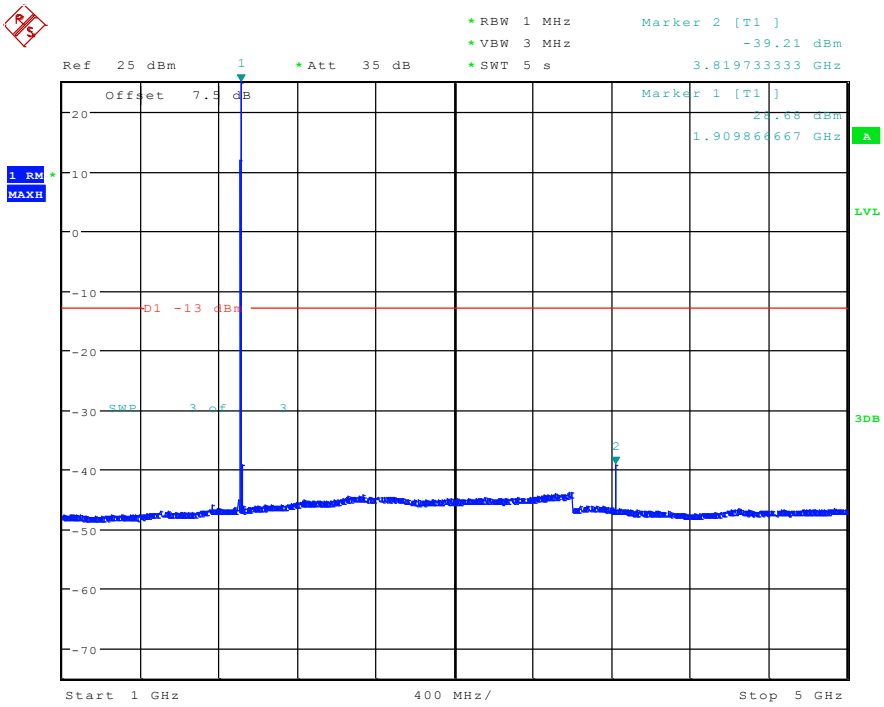
Date: 31.OCT.2018 09:43:06



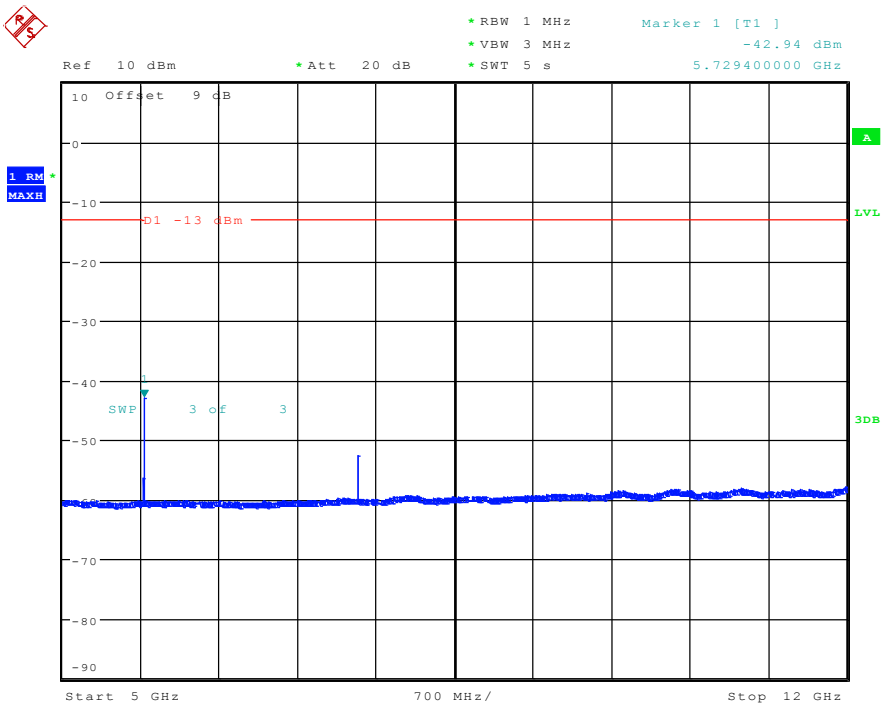
Date: 31.OCT.2018 09:43:13



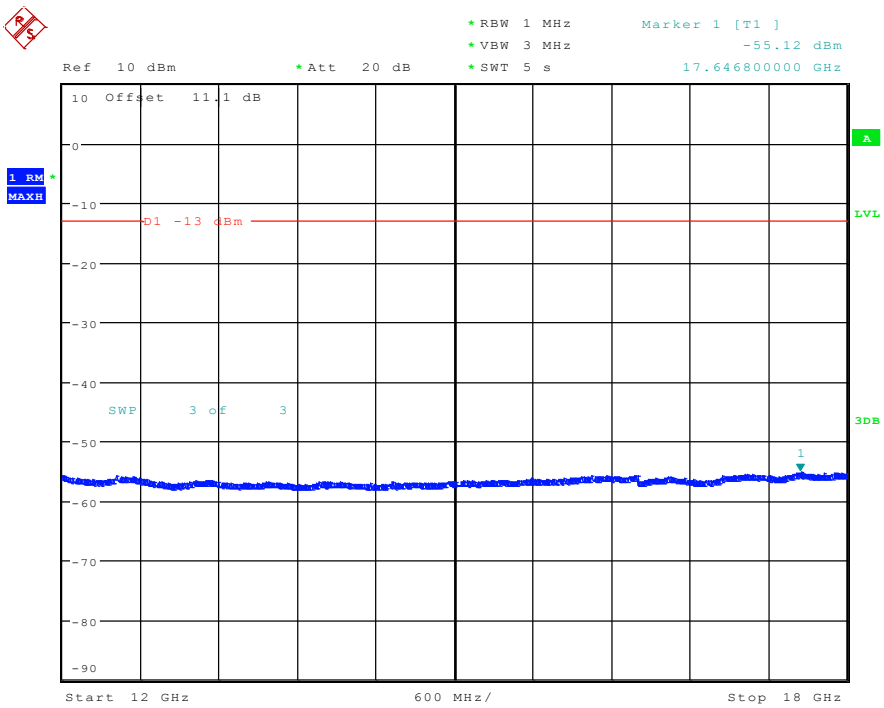
Date: 31.OCT.2018 09:43:22



Date: 31.OCT.2018 09:44:22



Date: 31.OCT.2018 09:45:21



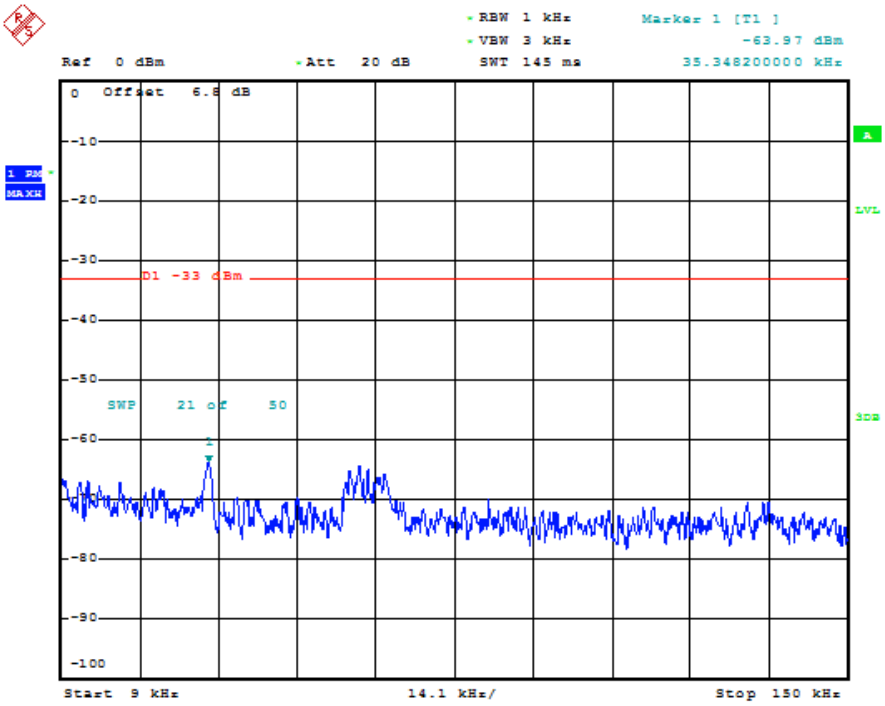
Date: 31.OCT.2018 09:46:18

5.2 For WCDMA

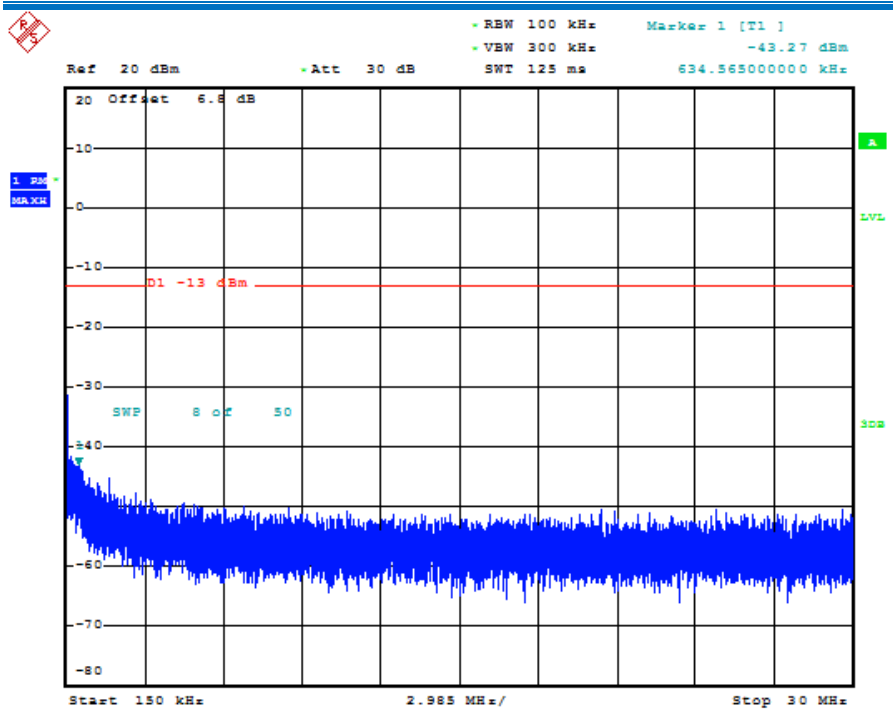
5.2.1 Test Band = WCDMA 850

5.2.1.1 Test Mode = UMTS/TM1

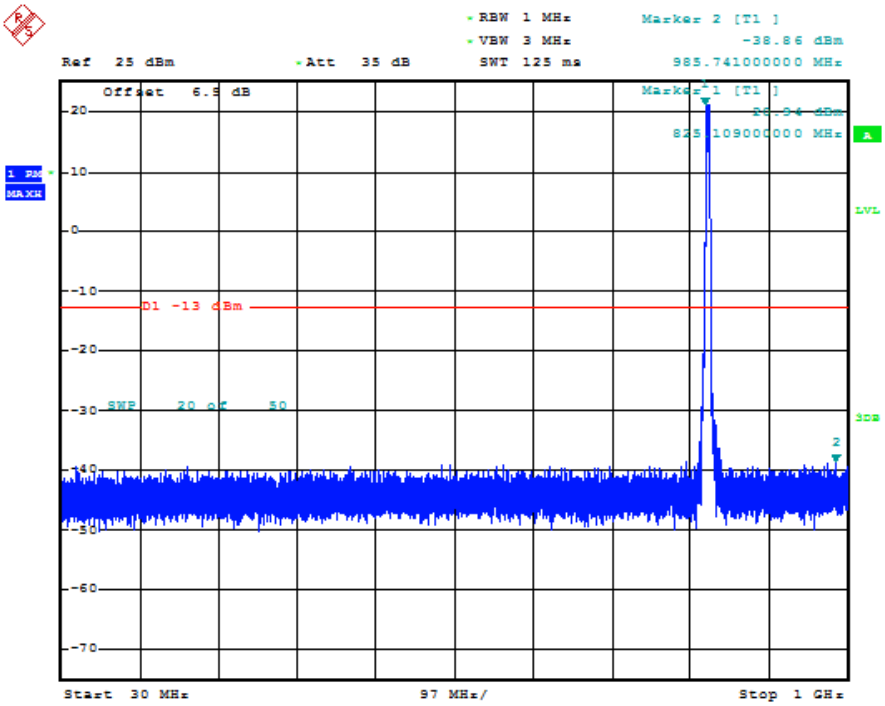
5.2.1.1.1 Test Channel = LCH



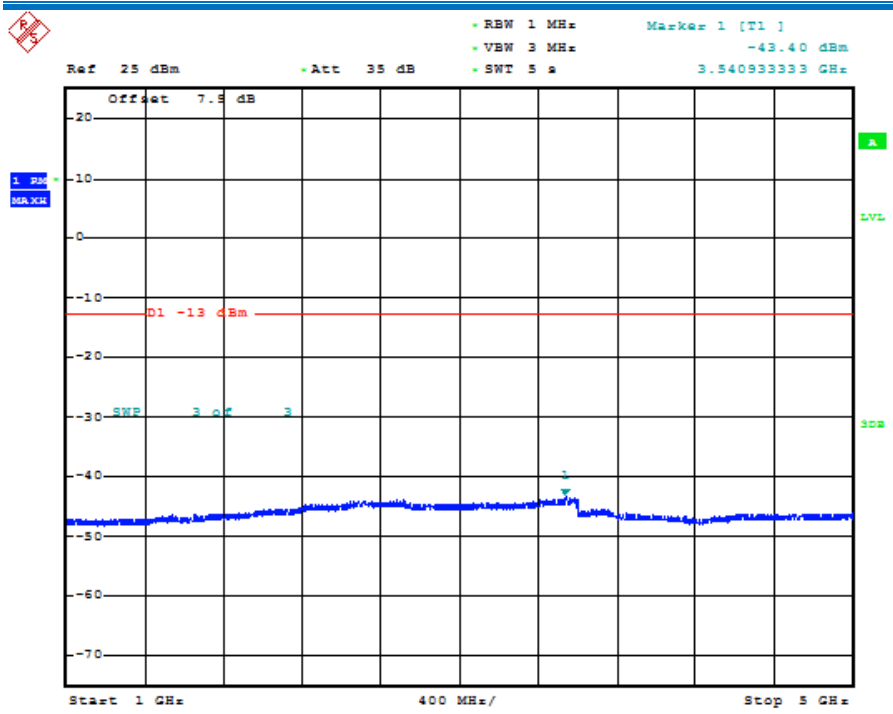
Date: 1.NOV.2018 17:09:47



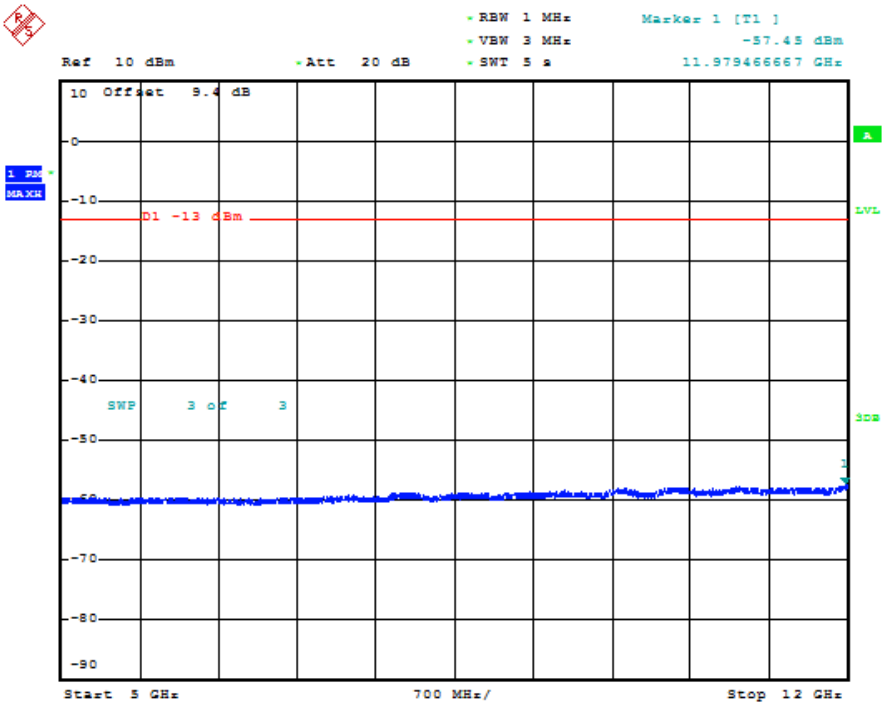
Date: 1.NOV.2018 17:09:53



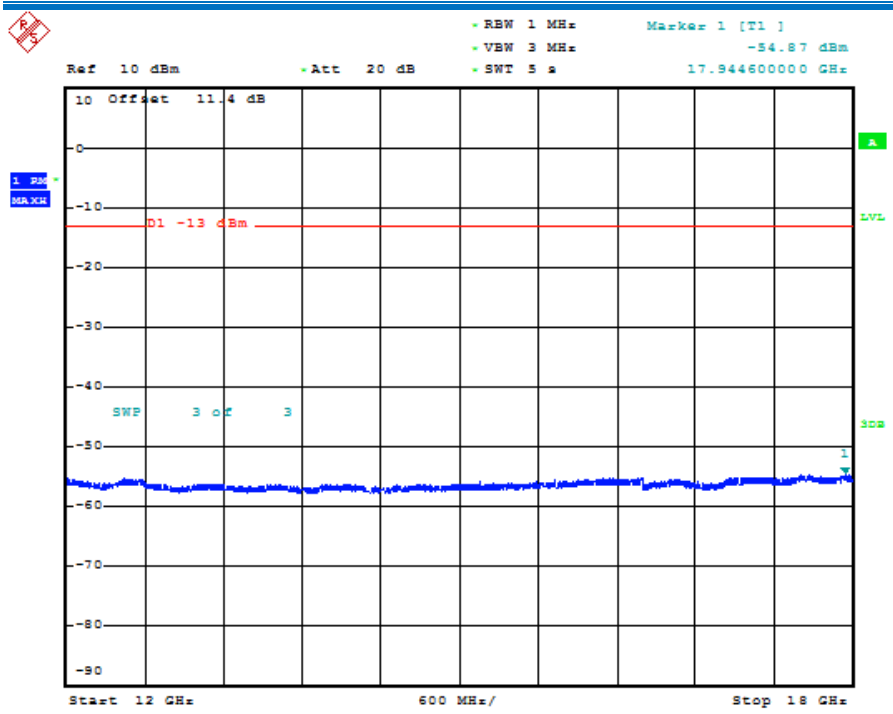
Date: 1.NOV.2018 17:10:03



Date: 1.NOV.2018 17:11:02

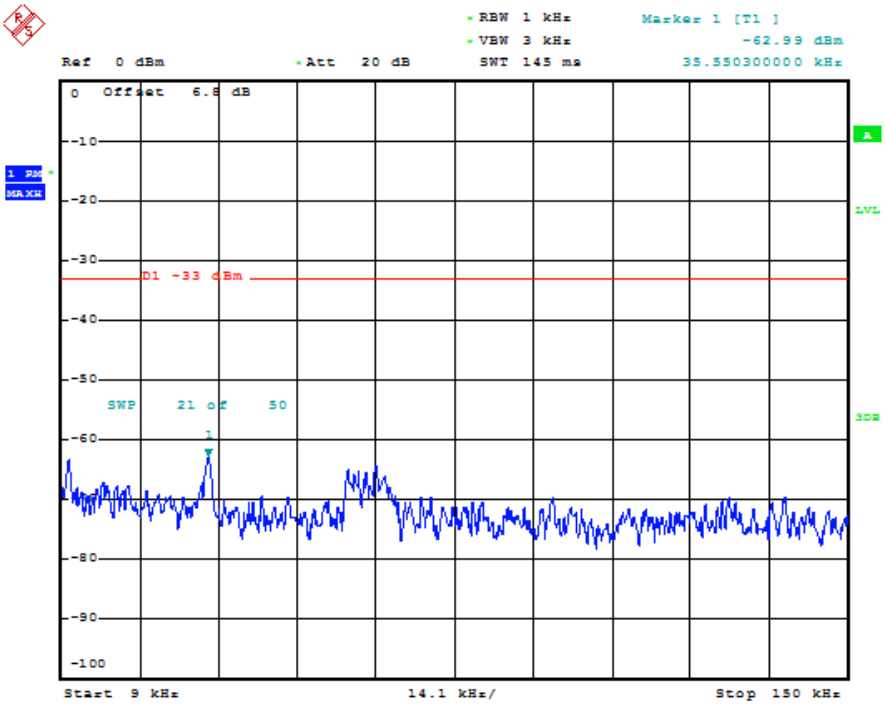


Date: 1.NOV.2018 17:12:00

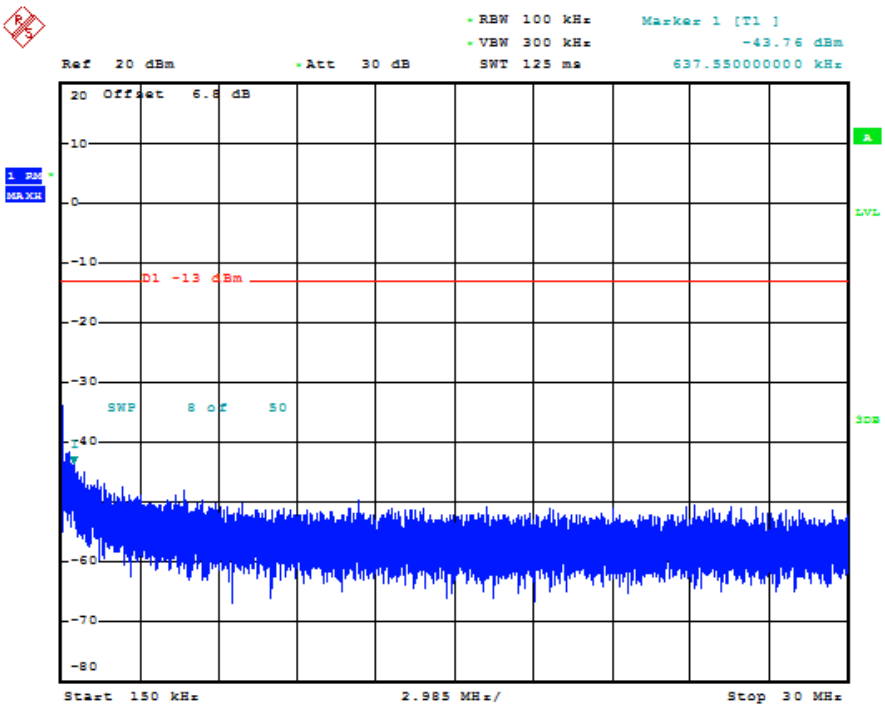


Date: 1.NOV.2018 17:12:56

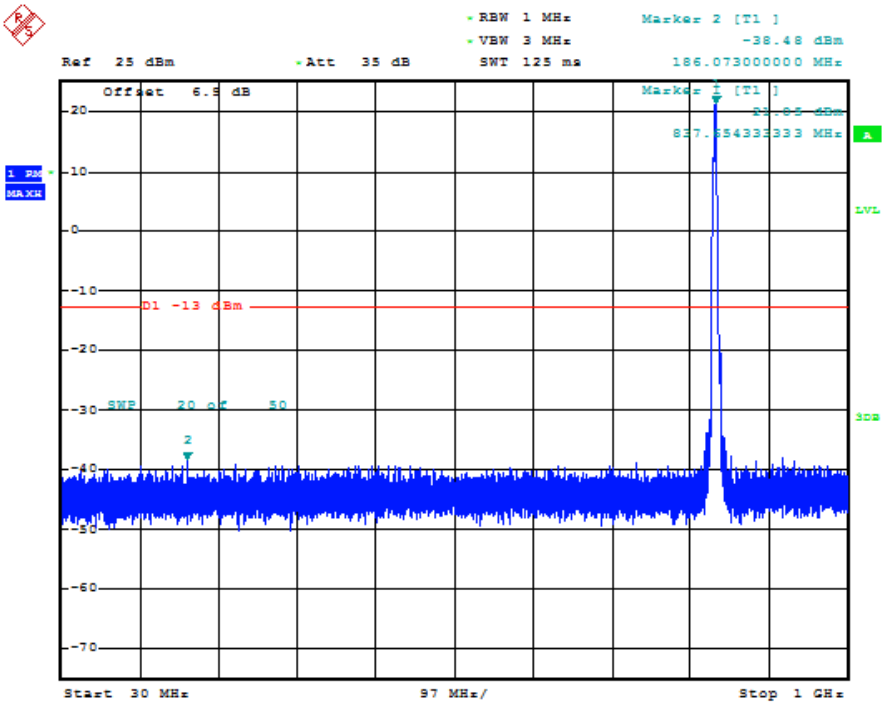
5.2.1.1.2 Test Channel = MCH



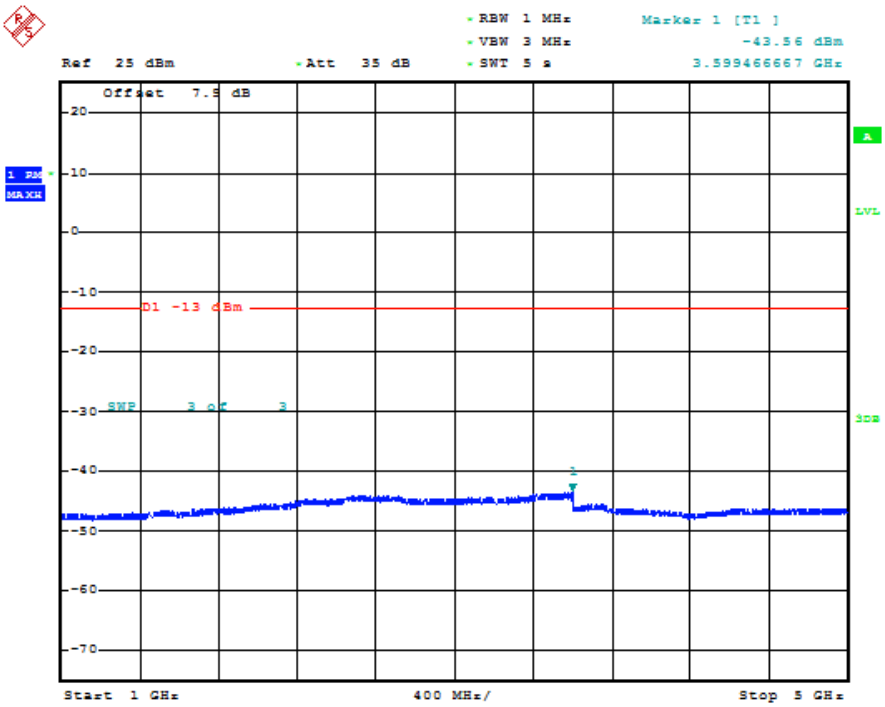
Date: 1.NOV.2018 17:13:06



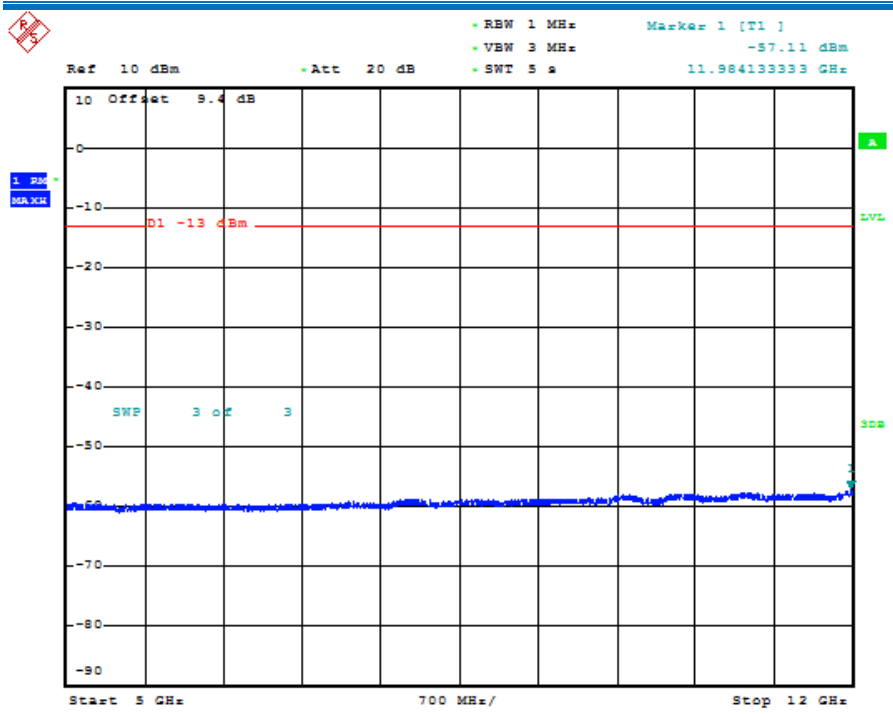
Date: 1.NOV.2018 17:13:12



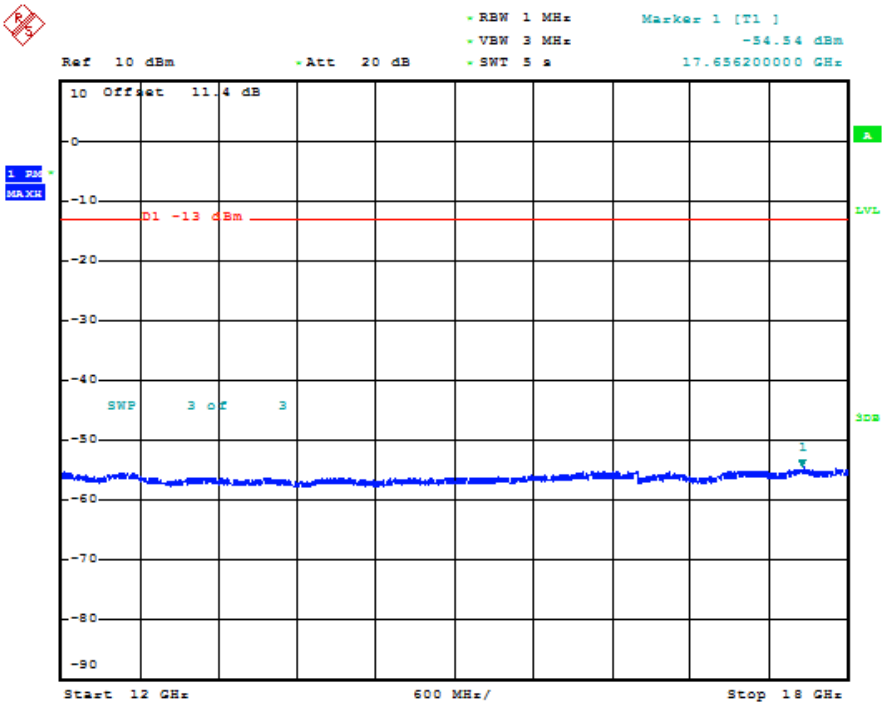
Date: 1.NOV.2018 17:19:49



Date: 1.NOV.2018 17:20:47

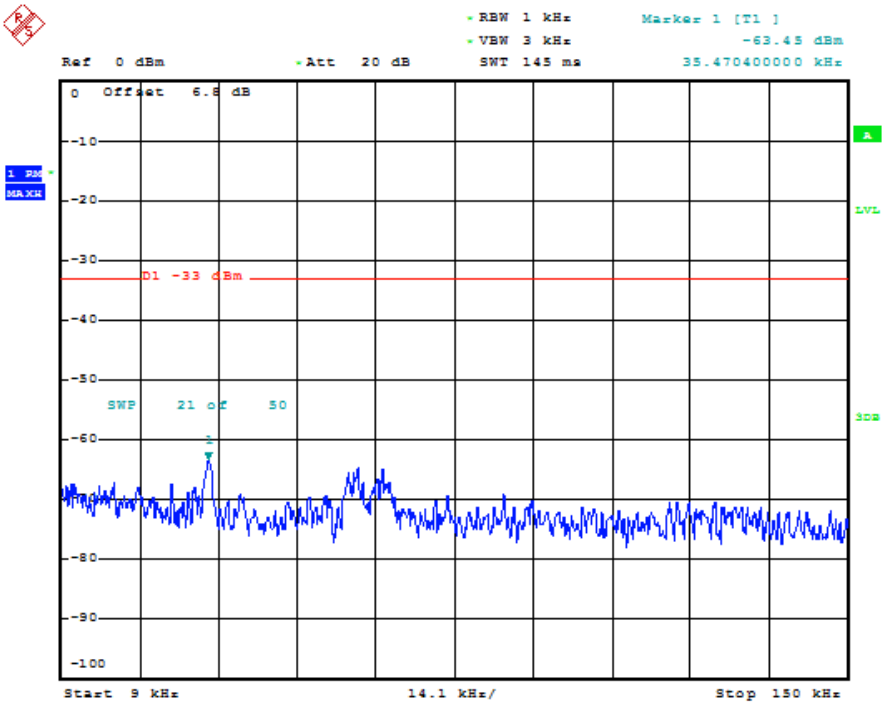


Date: 1.NOV.2018 17:21:45

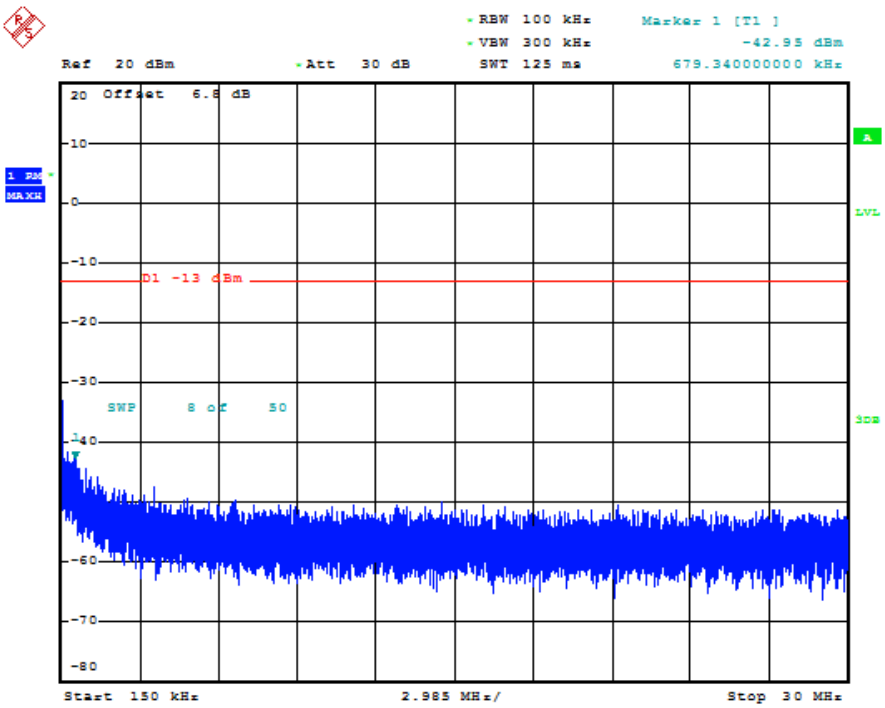


Date: 1.NOV.2018 17:22:42

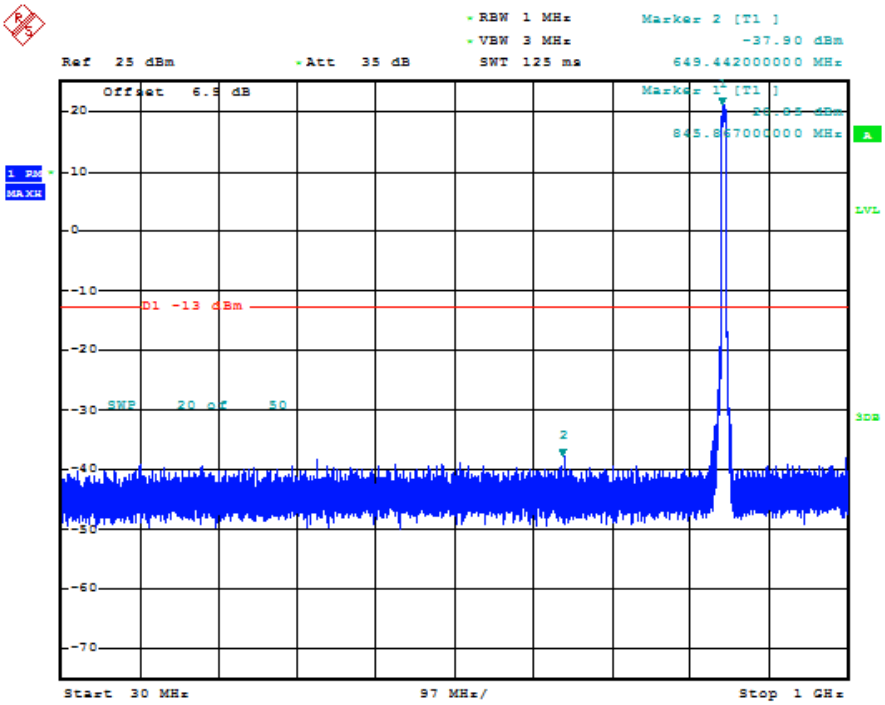
5.2.1.1.3 Test Channel = HCH



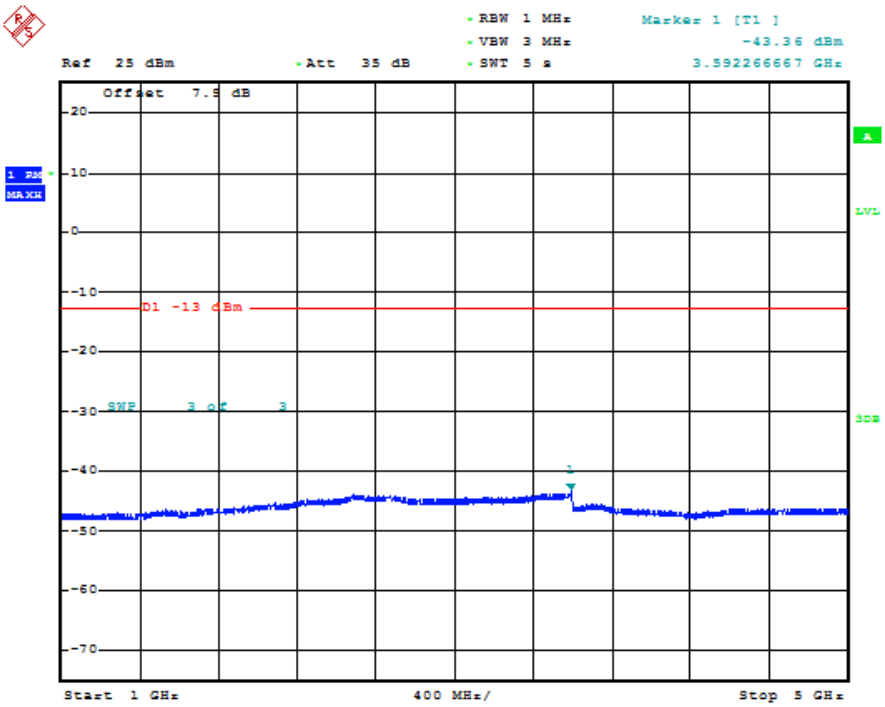
Date: 1.NOV.2018 17:22:51



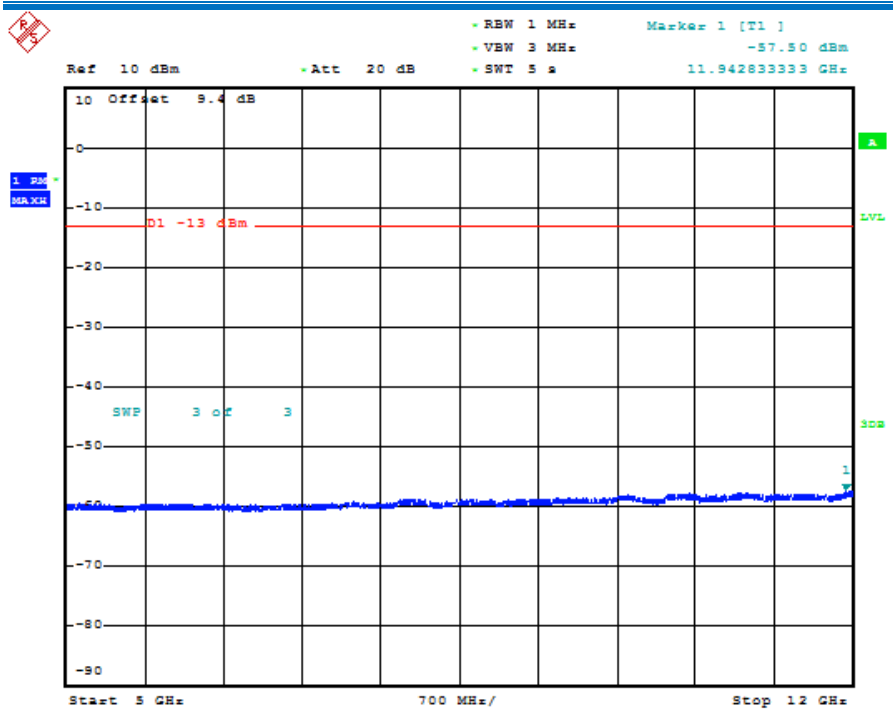
Date: 1.NOV.2018 17:22:57



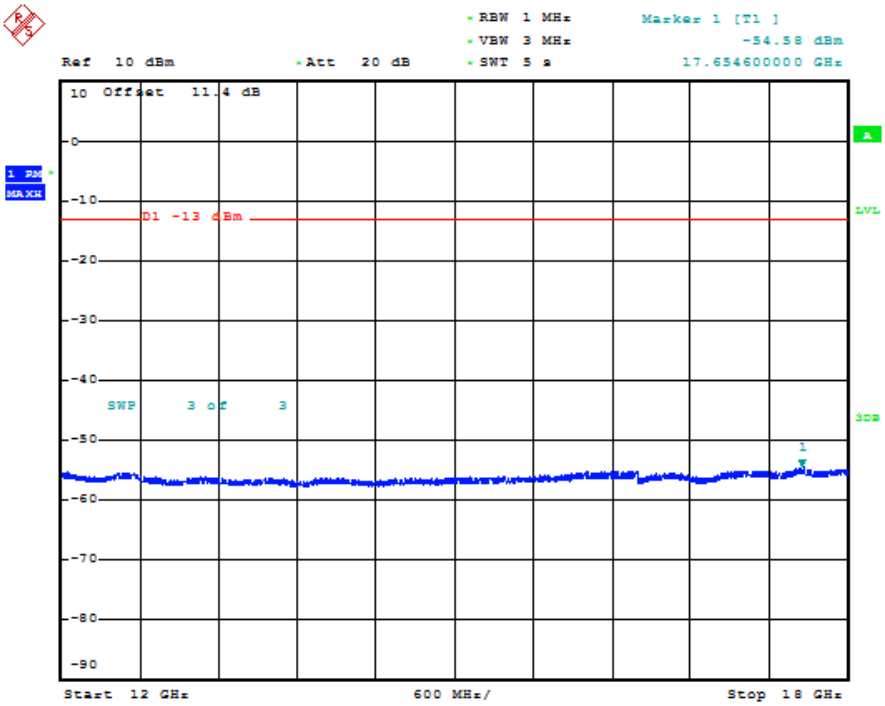
Date: 1.NOV.2018 17:23:07



Date: 1.NOV.2018 17:24:05



Date: 1.NOV.2018 17:25:03

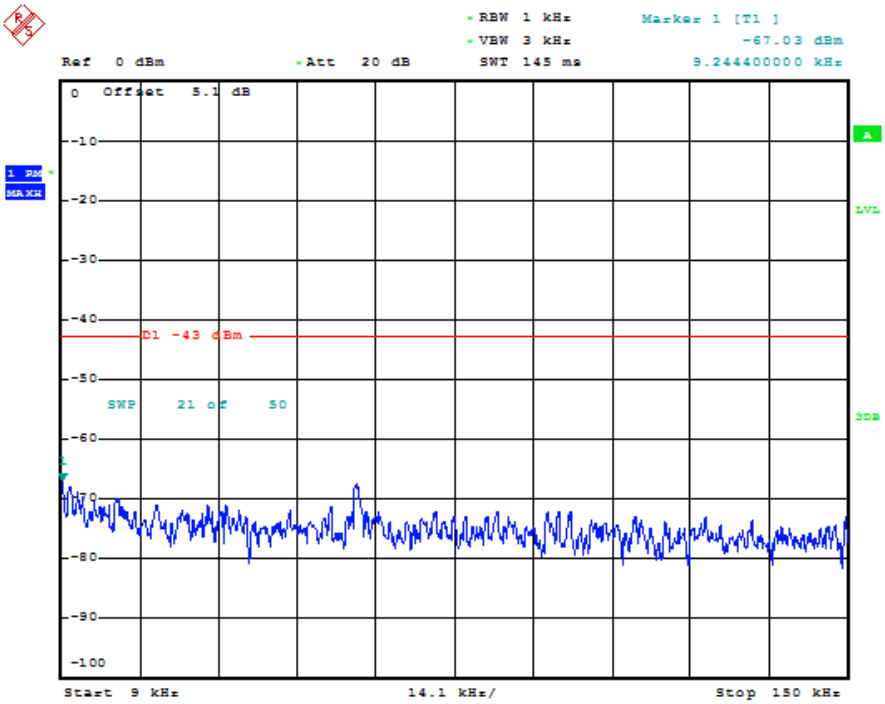


Date: 1.NOV.2018 17:26:00

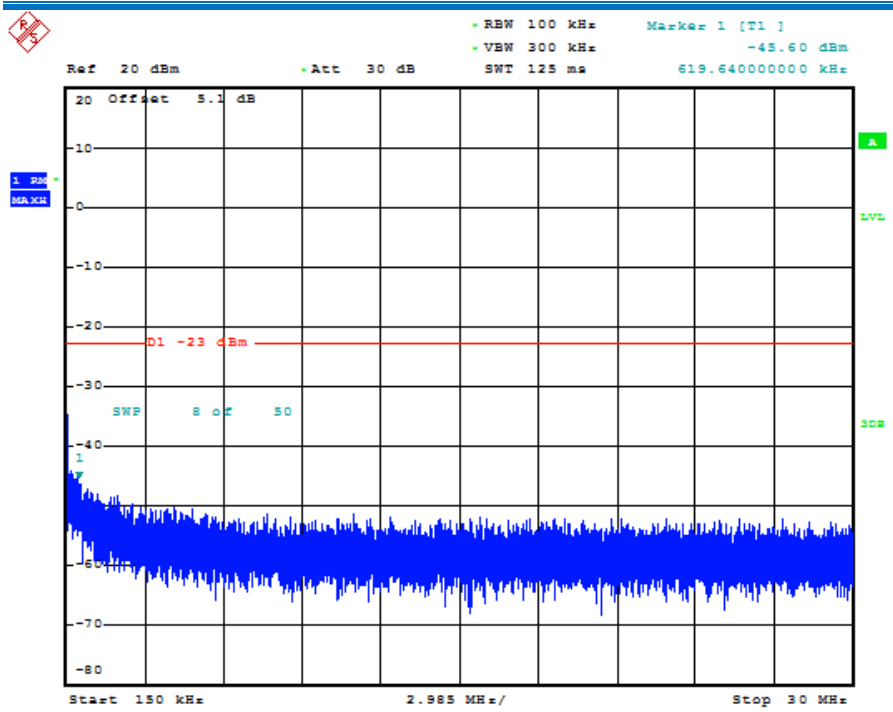
5.2.2 Test Band = WCDMA 1900

5.2.2.1 Test Mode = UMTS/TM1

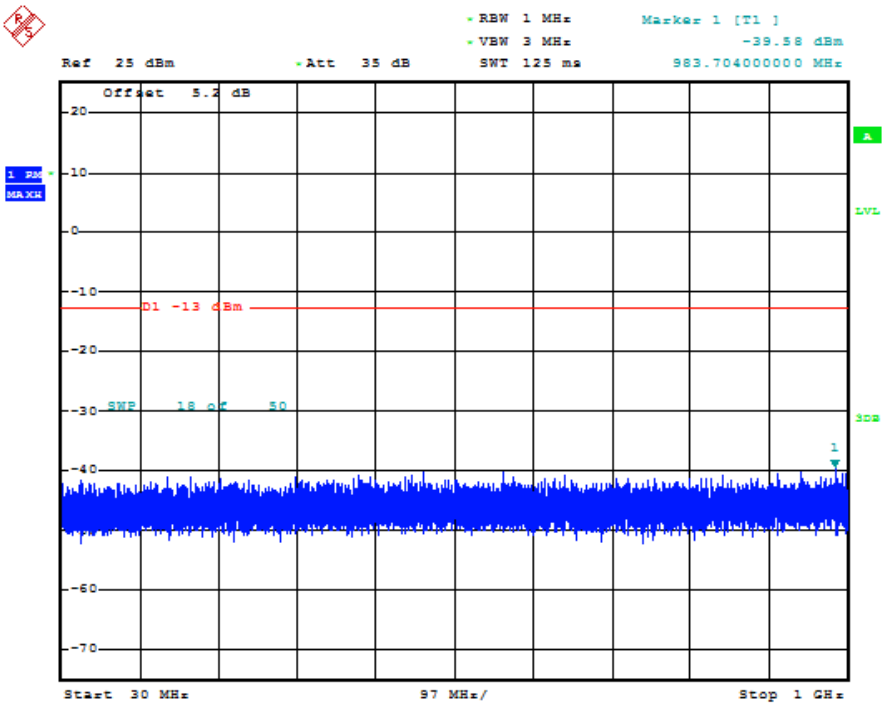
5.2.2.1.1 Test Channel = LCH



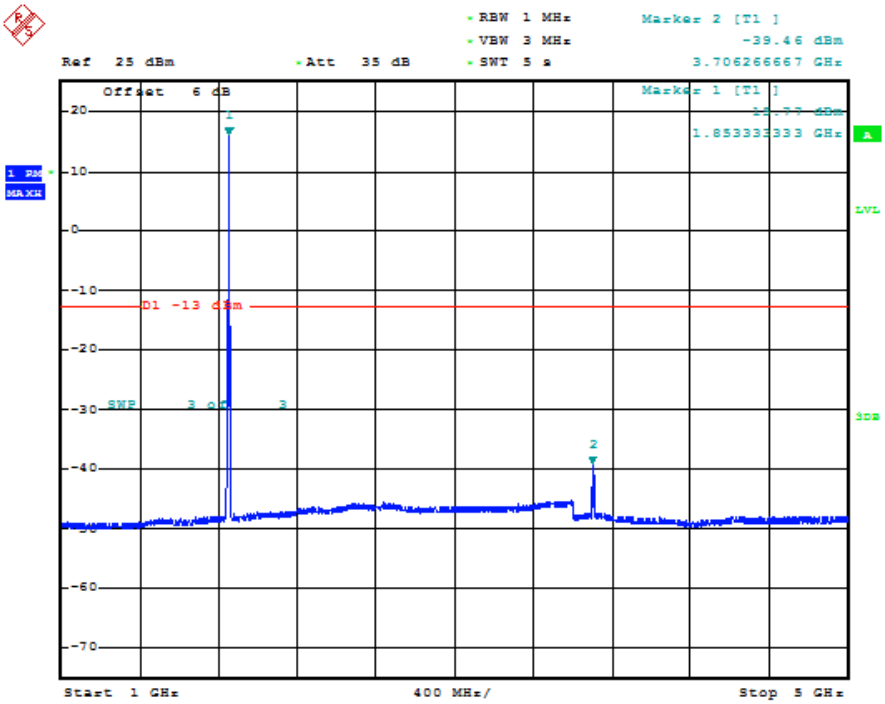
Date: 31.OCT.2018 11:39:16



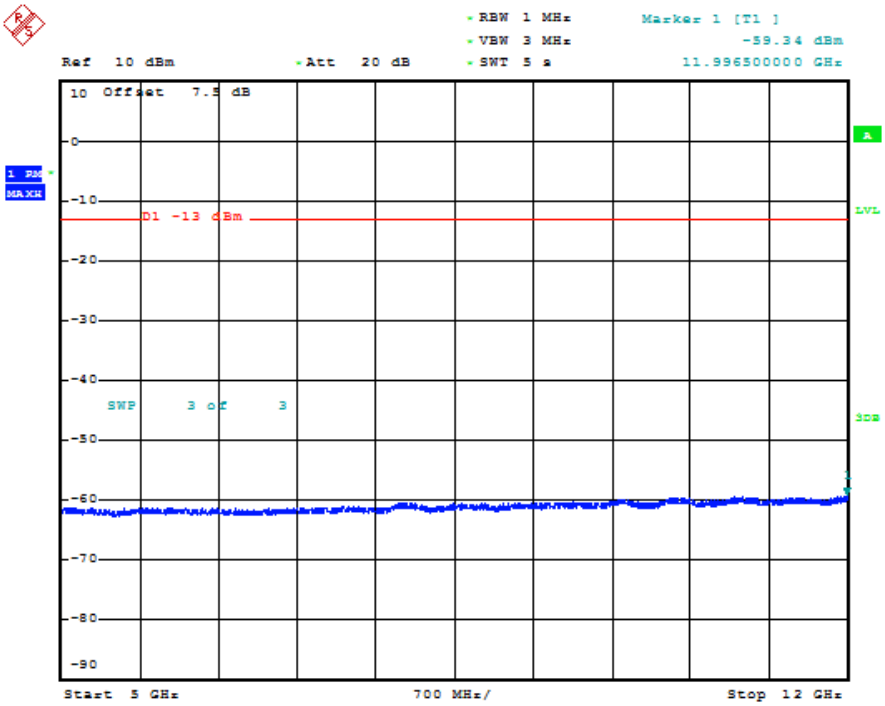
Date: 31.OCT.2018 11:39:22



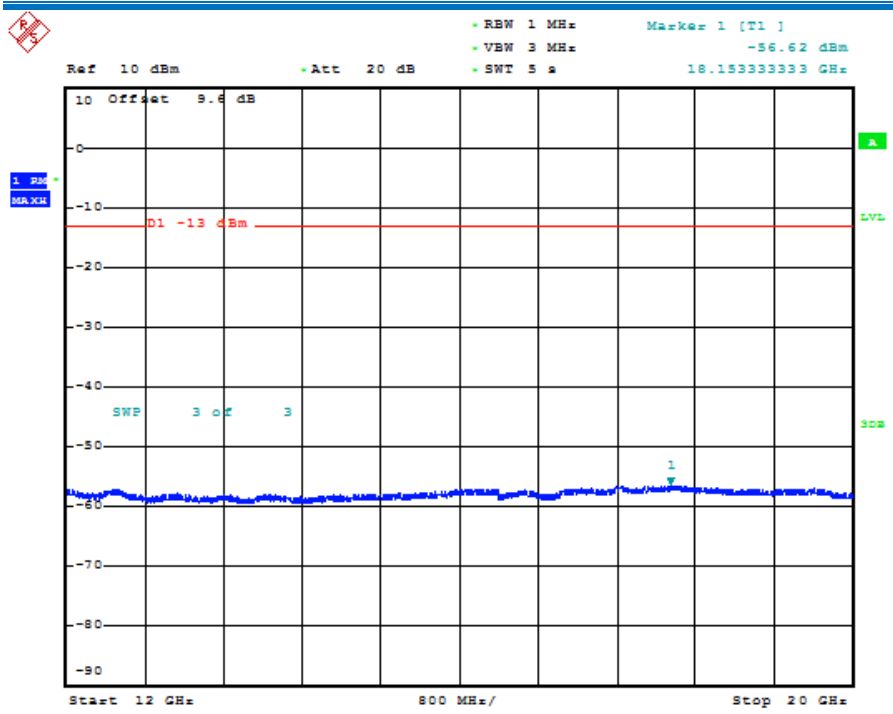
Date: 31.OCT.2018 11:39:30



Date: 31.OCT.2018 11:40:30

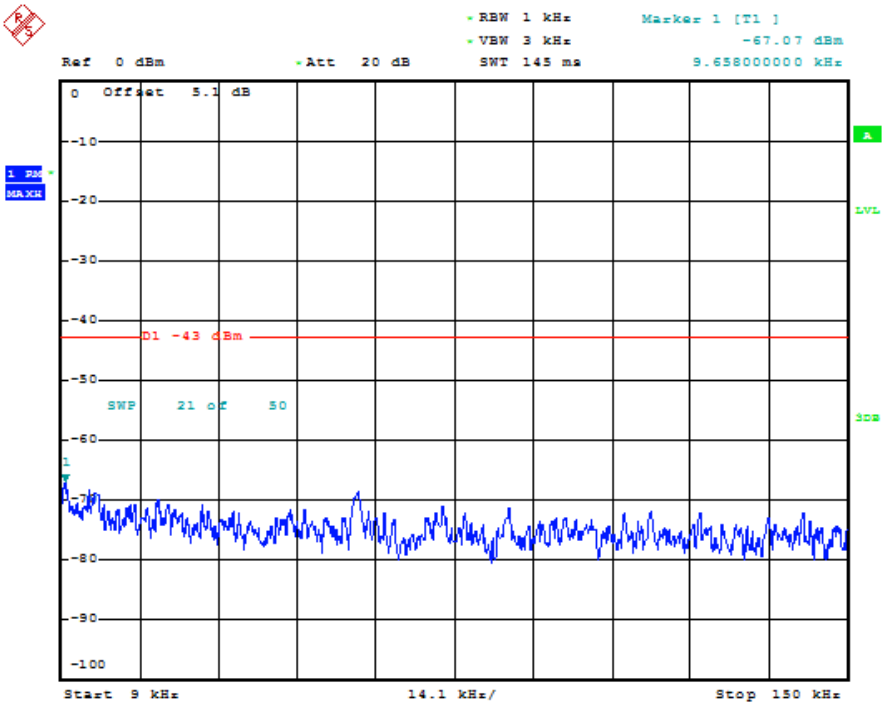


Date: 31.OCT.2018 11:41:28

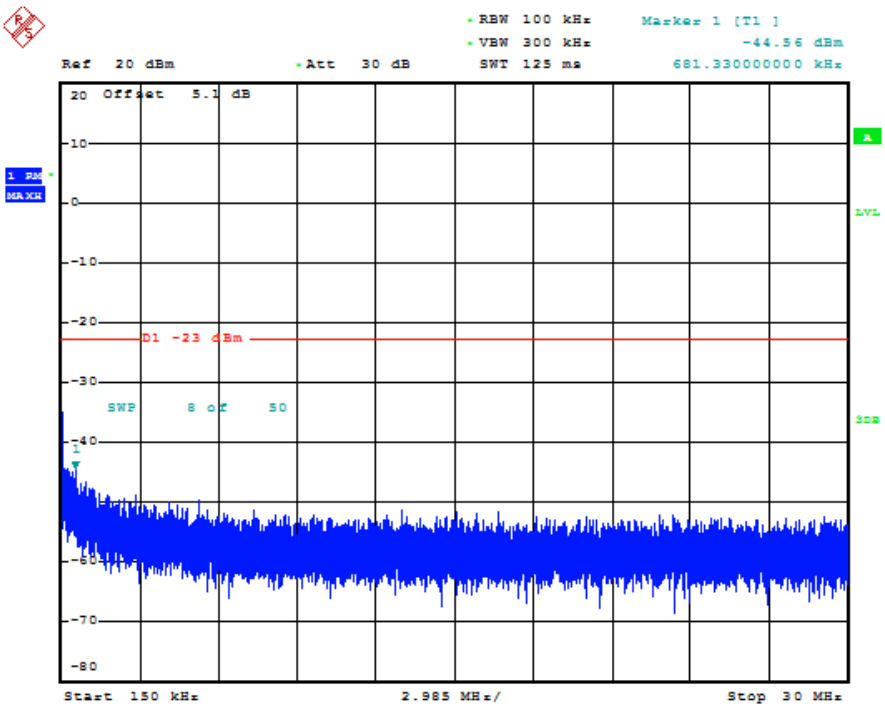


Date: 31.OCT.2018 11:42:24

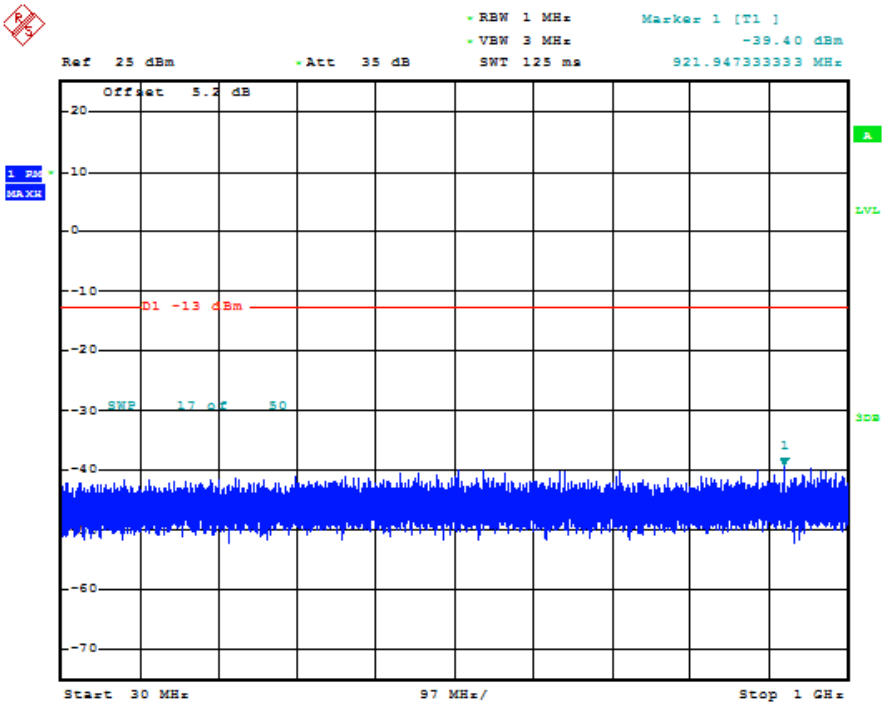
5.2.2.1.2 Test Channel = MCH



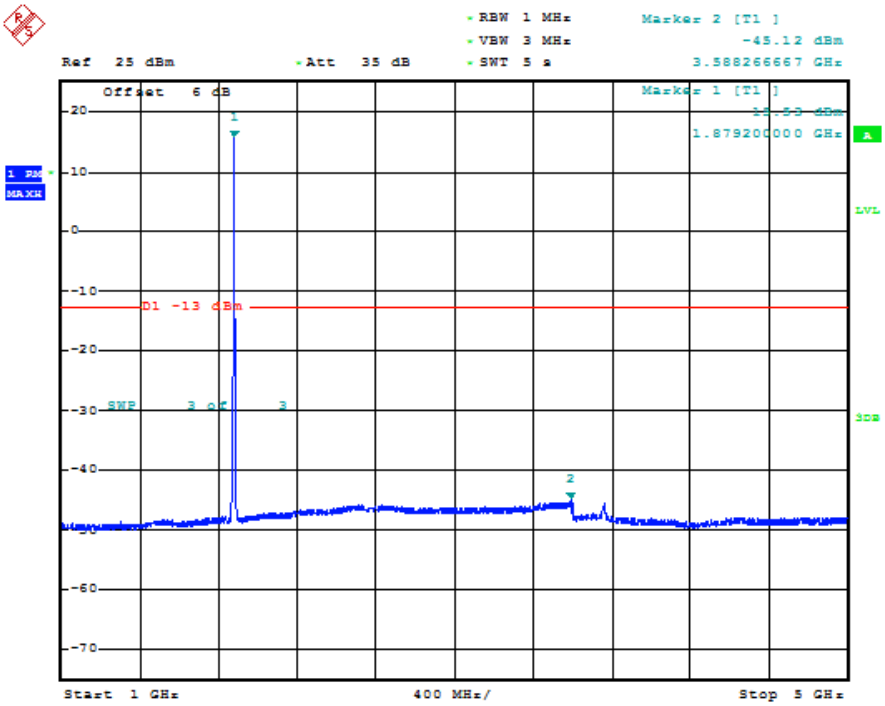
Date: 31.OCT.2018 11:42:34



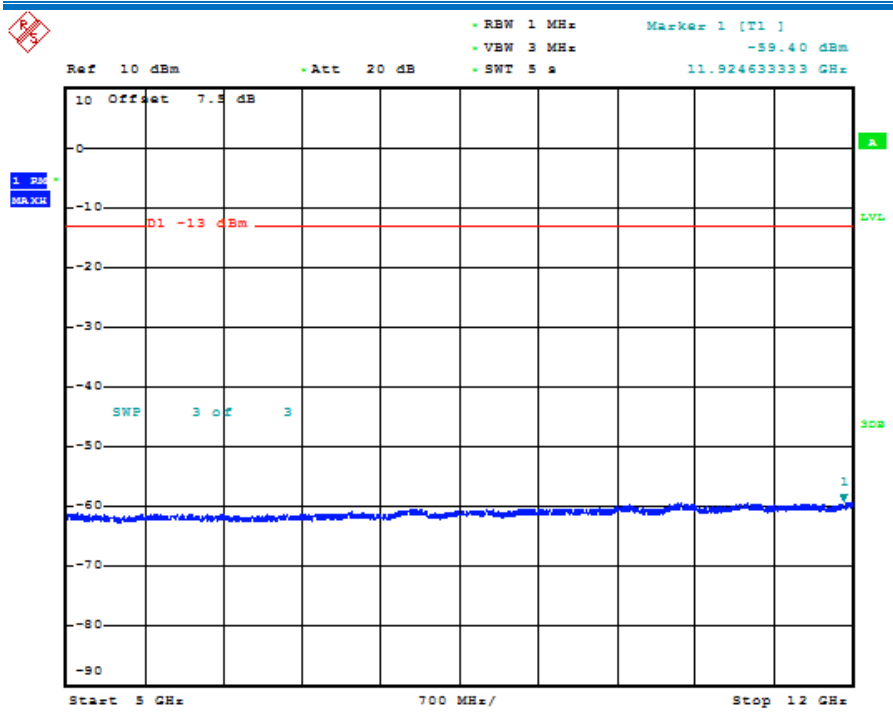
Date: 31.OCT.2018 11:42:40



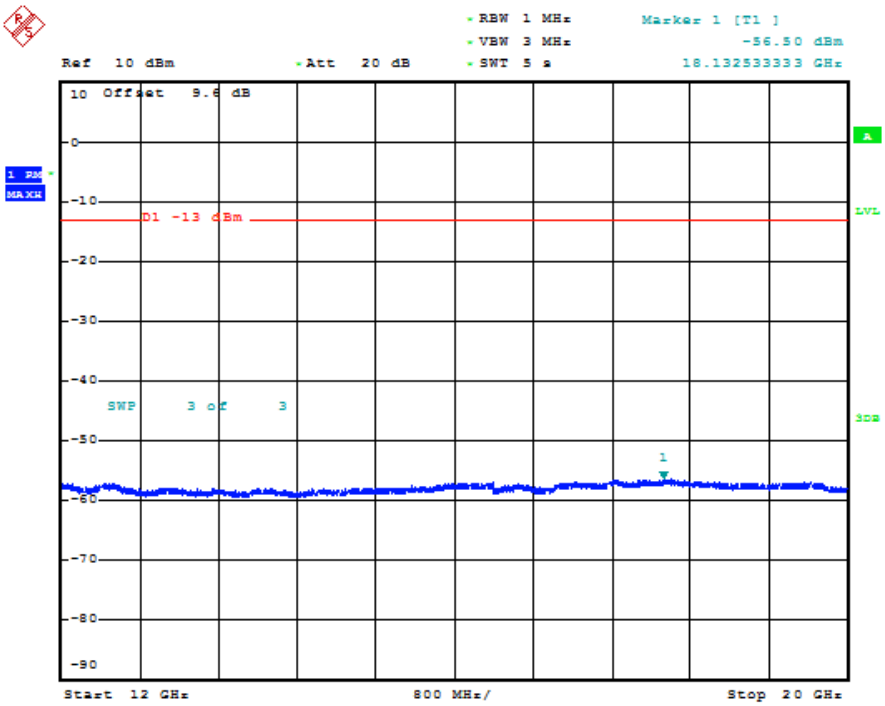
Date: 31.OCT.2018 11:42:48



Date: 31.OCT.2018 11:43:48

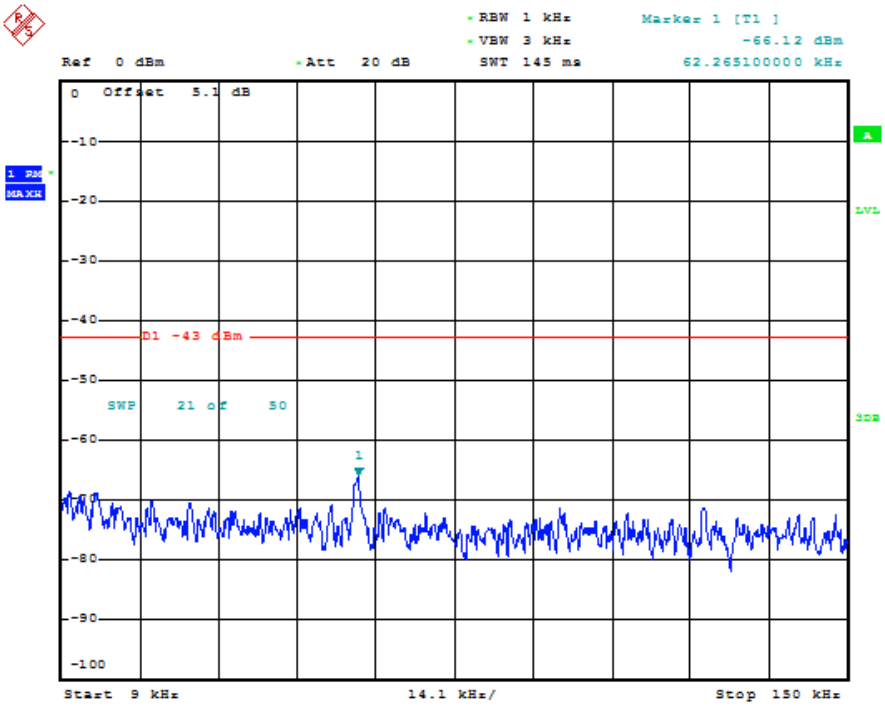


Date: 31.OCT.2018 11:44:47

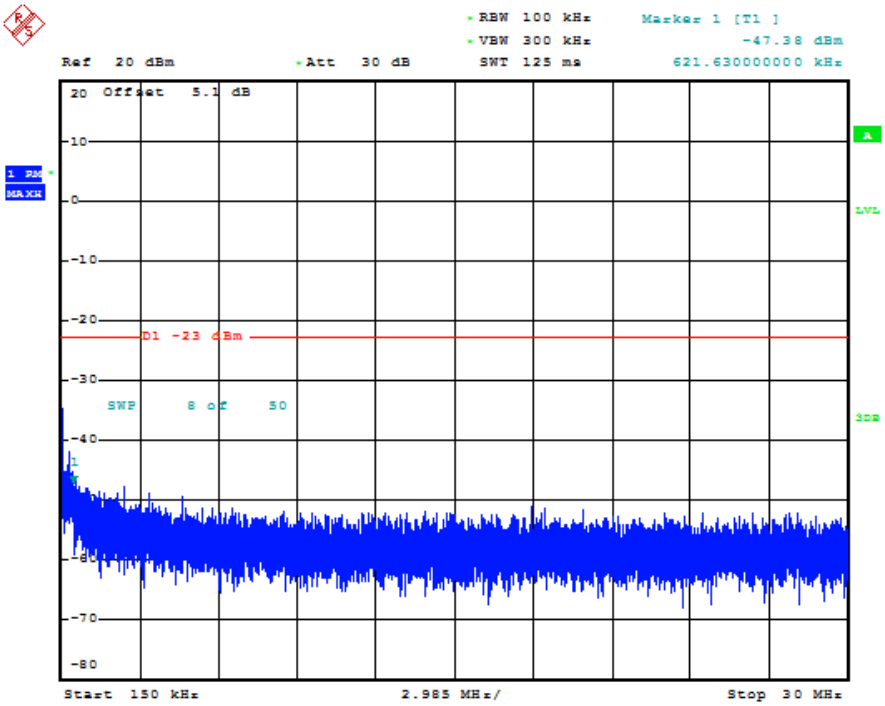


Date: 31.OCT.2018 11:45:43

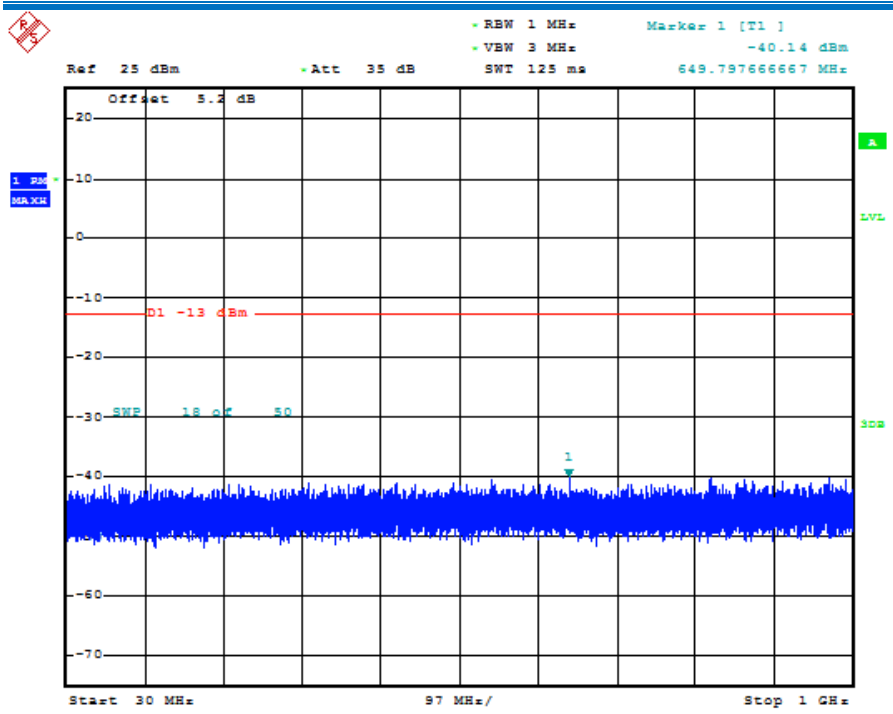
5.2.2.1.3 Test Channel = HCH



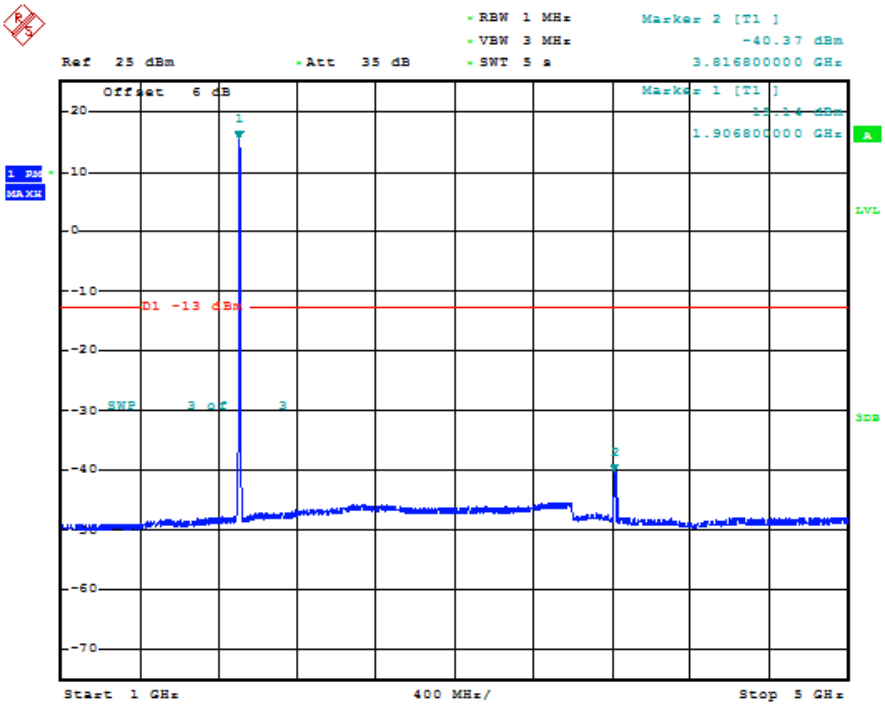
Date: 31.OCT.2018 11:45:52



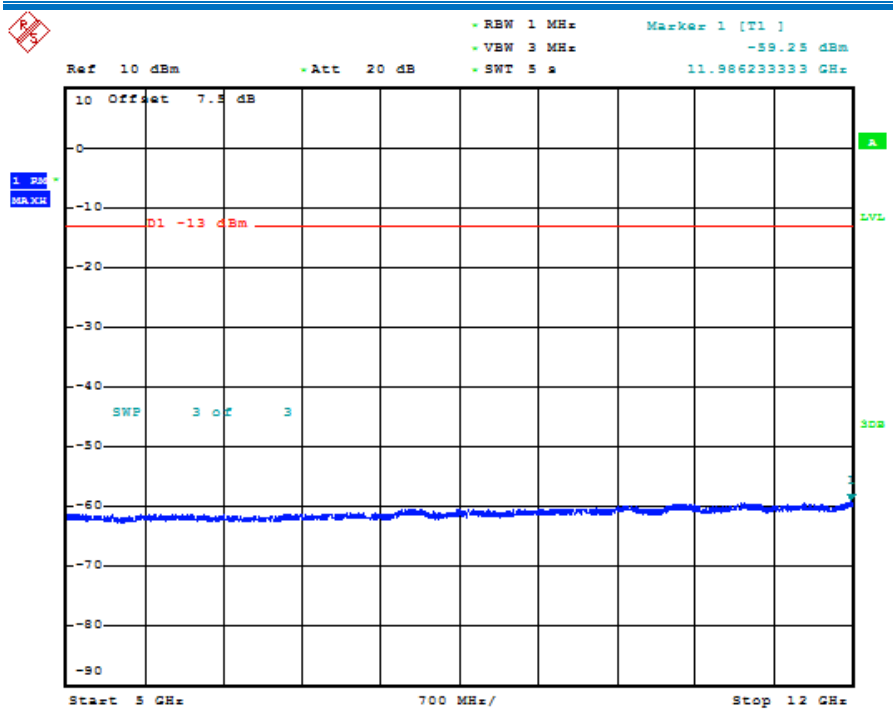
Date: 31.OCT.2018 11:45:58



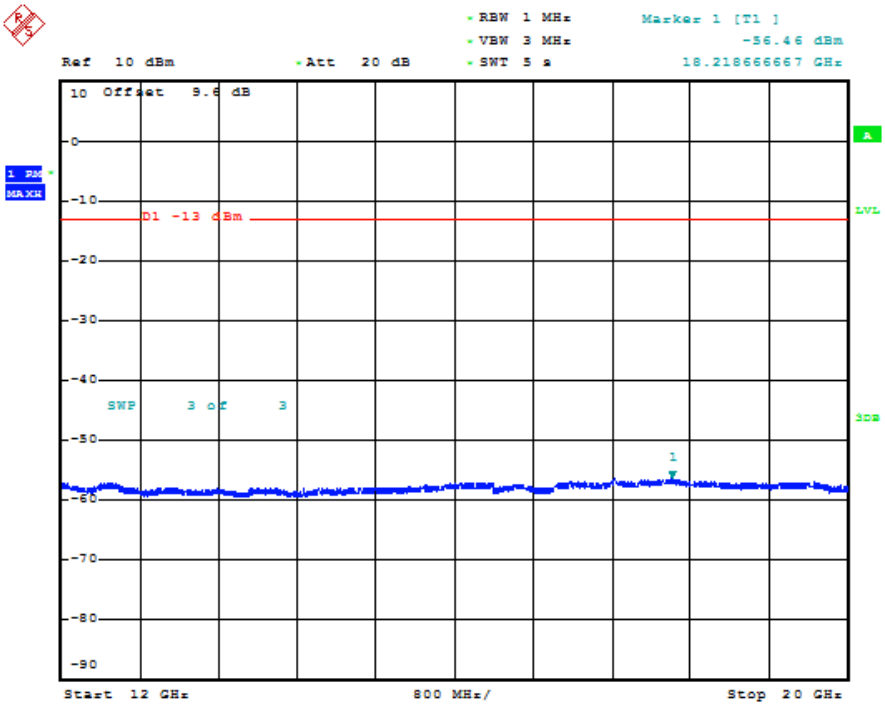
Date: 31.OCT.2018 11:46:07



Date: 31.OCT.2018 11:47:06



Date: 31.OCT.2018 11:48:04



Date: 31.OCT.2018 11:49:00

6 Field Strength of Spurious Radiation

Part I - Test Plots

6.1 For GSM

6.1.1 Test Band = GSM850

6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1648.400	-40.50	-13	-27.50	Vertical
2472.600	-41.68	-13	-28.68	Vertical
3296.800	-50.47	-13	-37.47	Vertical
1648.400	-41.69	-13	-28.69	Horizontal
2472.600	-45.58	-13	-32.58	Horizontal
3296.800	-50.50	-13	-37.50	Horizontal

6.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1673.200	-43.36	-13	-30.36	Vertical
2509.800	-44.43	-13	-31.43	Vertical
3346.400	-49.64	-13	-36.64	Vertical
1673.200	-43.25	-13	-30.25	Horizontal
2509.800	-44.60	-13	-31.60	Horizontal
3346.400	-49.62	-13	-36.62	Horizontal

6.1.1.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1697.600	-41.88	-13	-28.88	Vertical
2546.400	-42.58	-13	-29.58	Vertical
3395.200	-48.86	-13	-35.86	Vertical
1697.600	-41.90	-13	-28.90	Horizontal
2546.400	-44.67	-13	-31.67	Horizontal
3395.200	-50.89	-13	-37.89	Horizontal

6.1.2 Test Band = GSM1900

6.1.2.1 Test Mode = GSM/TM1

6.1.2.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3700.400	-40.23	-13	-27.23	Vertical
5550.600	-42.27	-13	-29.27	Vertical
7400.800	-48.79	-13	-35.79	Vertical
3700.400	-42.29	-13	-29.29	Horizontal
5550.600	-44.98	-13	-31.98	Horizontal
7400.800	-50.12	-13	-37.12	Horizontal

6.1.2.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3760.000	-39.96	-13	-26.96	Vertical
5640.000	-42.97	-13	-29.97	Vertical
7520.000	-48.97	-13	-35.97	Vertical
3760.000	-42.99	-13	-29.99	Horizontal
5640.000	-45.70	-13	-32.70	Horizontal
7520.000	-50.35	-13	-37.35	Horizontal

6.1.2.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3819.600	-39.46	-13	-26.46	Vertical
5729.400	-40.38	-13	-27.38	Vertical
7639.200	-50.20	-13	-37.20	Vertical
3819.600	-42.30	-13	-29.30	Horizontal
5729.400	-45.92	-13	-32.92	Horizontal
7639.200	-50.92	-13	-37.92	Horizontal

NOTE:

1) The disturbance above 13GHz and below 1GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

For WCDMA

6.1.3 Test Band = WCDMA850

6.1.3.1 Test Mode = UMTS/TM1

6.1.3.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1652.800	-39.61	-13	-26.61	Vertical
2479.200	-42.77	-13	-29.77	Vertical
3305.600	-49.26	-13	-36.26	Vertical
1652.800	-41.79	-13	-28.79	Horizontal
2479.200	-45.07	-13	-32.07	Horizontal
3305.600	-49.90	-13	-36.90	Horizontal

6.1.3.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1672.800	-42.61	-13	-29.61	Vertical
2509.200	-45.25	-13	-32.25	Vertical
3345.600	-50.27	-13	-37.27	Vertical
1672.800	-41.82	-13	-28.82	Horizontal
2509.200	-44.75	-13	-31.75	Horizontal
3345.600	-50.25	-13	-37.25	Horizontal

6.1.3.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1693.200	-40.91	-13	-27.91	Vertical
2539.800	-42.91	-13	-29.91	Vertical
3386.400	-50.54	-13	-37.54	Vertical
1693.200	-43.57	-13	-30.57	Horizontal
2539.800	-45.00	-13	-32.00	Horizontal
3386.400	-51.39	-13	-38.39	Horizontal

6.1.4 Test Band = WCDMA 1900

6.1.4.1 Test Mode = UMTS/TM1

6.1.4.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3704.800	-43.31	-13	-30.31	Vertical
5557.200	-45.53	-13	-32.53	Vertical
7409.600	-49.37	-13	-36.37	Vertical
3704.800	-41.76	-13	-28.76	Horizontal
5557.200	-46.08	-13	-33.08	Horizontal
7409.600	-50.77	-13	-37.77	Horizontal

6.1.4.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3760.000	-39.70	-13	-26.70	Vertical
5640.000	-42.39	-13	-29.39	Vertical
7520.000	-50.06	-13	-37.06	Vertical
3760.000	-41.63	-13	-28.63	Horizontal
5640.000	-45.14	-13	-32.14	Horizontal
7520.000	-50.94	-13	-37.94	Horizontal

6.1.4.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3815.200	-41.22	-13	-28.22	Vertical
5722.800	-40.07	-13	-27.07	Vertical
7630.400	-50.39	-13	-37.39	Vertical
3815.200	-43.15	-13	-30.15	Horizontal
5722.800	-46.23	-13	-33.23	Horizontal
7630.400	-50.71	-13	-37.71	Horizontal

NOTE:

1) The disturbance above 13GHz and below 1GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

7 Frequency Stability

7.1 For GSM

7.1.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM850	GSM/TM1	LCH	TN	VL	3.04	0.00369	PASS
				VN	1.97	0.00239	PASS
				VH	-2.64	-0.00320	PASS
		MCH	TN	VL	5.32	0.00636	PASS
				VN	3.00	0.00359	PASS
				VH	-10.45	-0.00613	PASS
		HCH	TN	VL	1.44	0.00170	PASS
				VN	4.33	0.00510	PASS
				VH	-12.08	-0.01423	PASS
GSM850	GSM/TM2	LCH	TN	VL	1.54	0.00187	PASS
				VN	3.65	0.00443	PASS
				VH	0.43	0.00052	PASS
		MCH	TN	VL	-5.43	-0.00649	PASS
				VN	4.23	0.00506	PASS
				VH	3.44	0.00411	PASS
		HCH	TN	VL	-4.32	-0.00509	PASS
				VN	-11.87	-0.01398	PASS
				VH	2.04	0.00240	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM1900	GSM/TM1	LCH	TN	VL	0.44	0.00024	PASS
				VN	4.25	0.00230	PASS
				VH	2.75	0.00149	PASS
		MCH	TN	VL	-12.87	-0.02083	PASS
				VN	5.32	0.00283	PASS
				VH	1.74	0.00093	PASS
		HCH	TN	VL	-5.39	-0.00282	PASS
				VN	2.45	0.00128	PASS
				VH	3.69	0.00193	PASS
GSM1900	GSM/TM2	LCH	TN	VL	1.94	0.00105	PASS
				VN	5.23	0.00283	PASS
				VH	-12.44	-0.02755	PASS
		MCH	TN	VL	4.38	0.00233	PASS
				VN	1.34	0.00071	PASS
				VH	2.37	0.00126	PASS
		HCH	TN	VL	-4.45	-0.00233	PASS
				VN	-2.43	-0.00127	PASS
				VH	1.99	0.00104	PASS

7.1.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM850	GSM/TM1	LCH	VN	-30	-2.73	-0.00331	PASS
				-20	1.60	0.00194	PASS
				-10	3.67	0.00445	PASS
				0	-2.18	-0.00264	PASS
				10	3.56	0.00432	PASS
				20	-4.80	-0.00582	PASS
				30	1.40	0.00170	PASS
				40	-0.74	-0.00090	PASS
				50	-5.01	-0.00608	PASS
		MCH	VN	-30	-3.80	-0.00454	PASS
				-20	-5.08	-0.00607	PASS
				-10	-10.89	-0.00579	PASS
				0	-3.38	-0.00404	PASS
				10	1.37	0.00164	PASS
				20	2.52	0.00301	PASS
				30	4.61	0.00551	PASS
				40	0.73	0.00087	PASS
				50	-4.35	-0.00520	PASS
		HCH	VN	-30	-2.17	-0.00256	PASS
				-20	3.68	0.00434	PASS
				-10	2.25	0.00265	PASS
				0	-5.42	-0.00639	PASS
				10	1.59	0.00187	PASS
				20	-2.58	-0.00304	PASS
				30	3.64	0.00429	PASS
				40	-2.63	-0.00310	PASS
				50	-4.27	-0.00503	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM1900	GSM/TM1	LCH	VN	-30	-5.49	-0.00666	PASS
				-20	2.96	0.00359	PASS
				-10	-4.37	-0.00530	PASS
				0	0.70	0.00085	PASS
				10	-4.65	-0.00564	PASS
				20	-4.71	-0.00571	PASS
				30	-3.58	-0.00434	PASS
				40	-5.66	-0.00687	PASS
				50	-2.74	-0.00332	PASS
		MCH	VN	-30	-1.94	-0.00232	PASS
				-20	3.29	0.00393	PASS
				-10	-4.34	-0.00519	PASS
				0	1.78	0.00213	PASS
				10	-5.10	-0.00610	PASS
				20	-3.33	-0.00398	PASS
				30	-12.13	-0.00645	PASS
				40	-3.09	-0.00369	PASS
				50	-1.50	-0.00179	PASS
		HCH	VN	-30	-2.25	-0.00265	PASS
				-20	-6.34	-0.00747	PASS
				-10	-2.73	-0.00322	PASS
				0	-5.88	-0.00693	PASS
				10	1.07	0.00126	PASS
				20	-4.03	-0.00475	PASS
				30	-3.12	-0.00368	PASS
				40	-2.84	-0.00335	PASS
				50	-5.07	-0.00597	PASS

7.2 For WCDMA

7.2.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA 850	UMTS/TM1	LCH	TN	VL	-12.63	-0.015288	PASS
				VN	-8.19	-0.009797	PASS
				VH	-7.37	-0.008705	PASS
		MCH	TN	VL	-10.62	-0.012851	PASS
				VN	-13.29	-0.015890	PASS
				VH	-12.37	-0.014617	PASS
		HCH	TN	VL	-16.36	-0.019794	PASS
				VN	-10.06	-0.012022	PASS
				VH	-3.89	-0.004596	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA 1900	UMTS/TM1	LCH	TN	VL	-4.38	-0.002364	PASS
				VN	-7.37	-0.003920	PASS
				VH	-9.43	-0.004943	PASS
		MCH	TN	VL	-9.84	-0.005313	PASS
				VN	-4.67	-0.002484	PASS
				VH	-7.51	-0.003935	PASS
		HCH	TN	VL	-7.00	-0.003781	PASS
				VN	-6.04	-0.003214	PASS
				VH	-13.61	-0.007135	PASS

7.2.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA 850	UMTS/TM1	LCH	VN	-30	-4.50	-0.002430	PASS
				-20	-5.81	-0.003138	PASS
				-10	-2.87	-0.001549	PASS
				0	-4.44	-0.002397	PASS
				10	-2.87	-0.001549	PASS
				20	-1.34	-0.000725	PASS
				30	-4.12	-0.002224	PASS
				40	-6.45	-0.003484	PASS
				50	-3.95	-0.002133	PASS
		MCH	VN	-30	-9.61	-0.005113	PASS
				-20	-6.97	-0.003709	PASS
				-10	-8.83	-0.004699	PASS
				0	-14.89	-0.007922	PASS
				10	-4.26	-0.002264	PASS
				20	-7.51	-0.003993	PASS
				30	-9.37	-0.004983	PASS
				40	-9.98	-0.005308	PASS
				50	-10.47	-0.005568	PASS
		HCH	VN	-30	-7.37	-0.003863	PASS
				-20	-5.26	-0.002760	PASS
				-10	-13.41	-0.007031	PASS
				0	-10.67	-0.005591	PASS
				10	-8.99	-0.004711	PASS
				20	-12.08	-0.006335	PASS
				30	-6.58	-0.003448	PASS
				40	-12.63	-0.006623	PASS
				50	-8.06	-0.004223	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA 1900	UMTS/TM1	LCH	VN	-30	-10.71	-0.012962	PASS
				-20	-11.76	-0.014236	PASS
				-10	-9.77	-0.011817	PASS
				0	-12.18	-0.014734	PASS
				10	-7.68	-0.009287	PASS
				20	-7.13	-0.008623	PASS
				30	-18.40	-0.022268	PASS
				40	-8.54	-0.010340	PASS
				50	-14.71	-0.017799	PASS
		MCH	VN	-30	-13.92	-0.016638	PASS
				-20	-6.91	-0.008264	PASS
				-10	-10.80	-0.012916	PASS
				0	-11.17	-0.013354	PASS
				10	-6.16	-0.007370	PASS
				20	-9.23	-0.011037	PASS
				30	-9.64	-0.011530	PASS
				40	-9.09	-0.010873	PASS
				50	-12.24	-0.014631	PASS
		HCH	VN	-30	-2.47	-0.002920	PASS
				-20	-6.88	-0.008129	PASS
				-10	-6.77	-0.008002	PASS
				0	-9.70	-0.011463	PASS
				10	-6.42	-0.007588	PASS
				20	-6.82	-0.008057	PASS
				30	-7.49	-0.008850	PASS
				40	-5.00	-0.005912	PASS
				50	-8.09	-0.009553	PASS

The End