



Appendix E

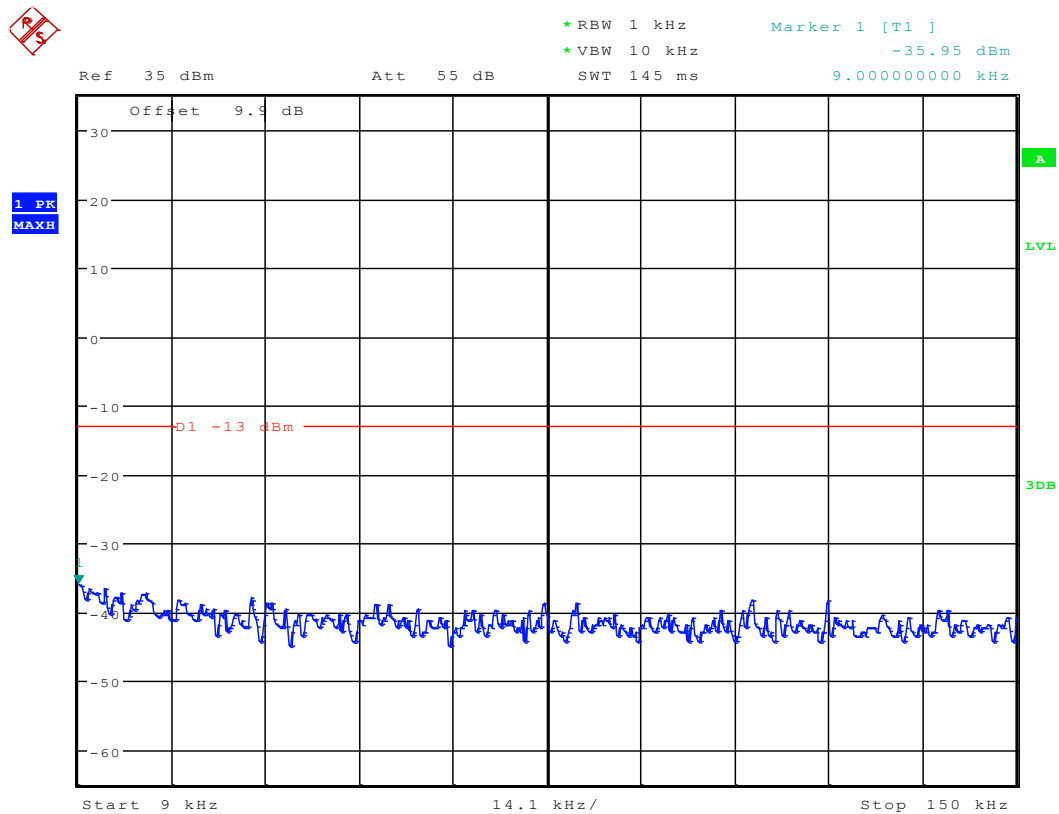
Spurious Emission at Antenna Terminal

According to FCC Part 2.1051 & 27.53

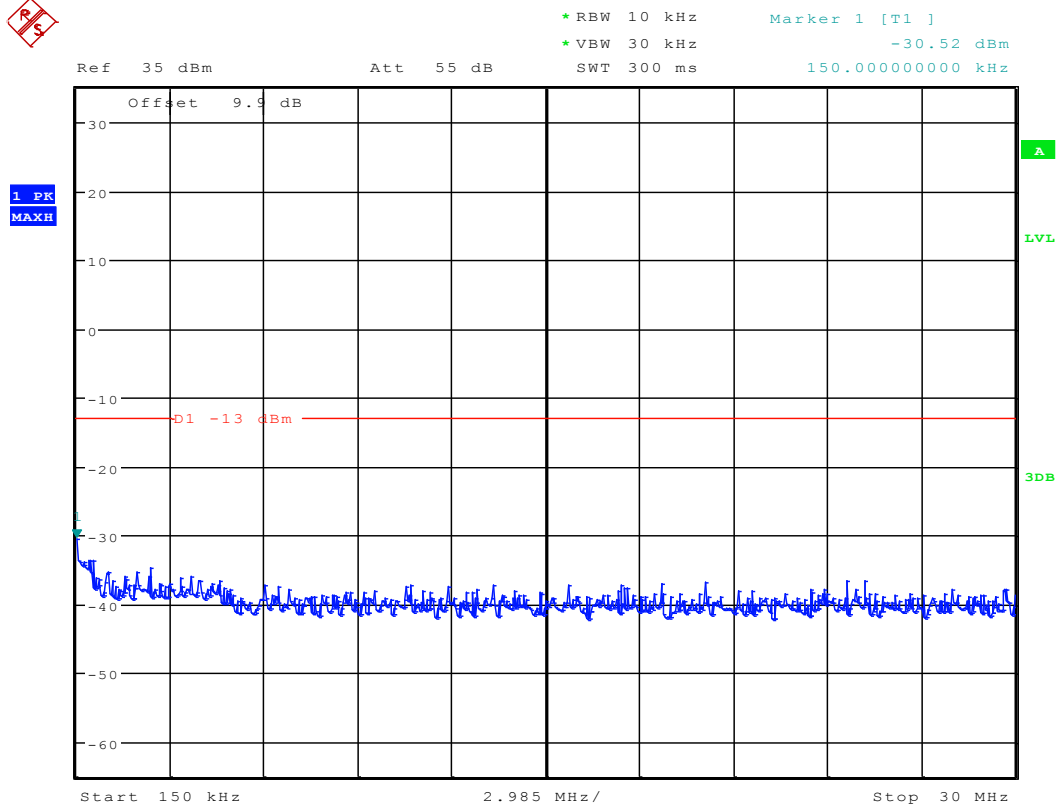


TM1

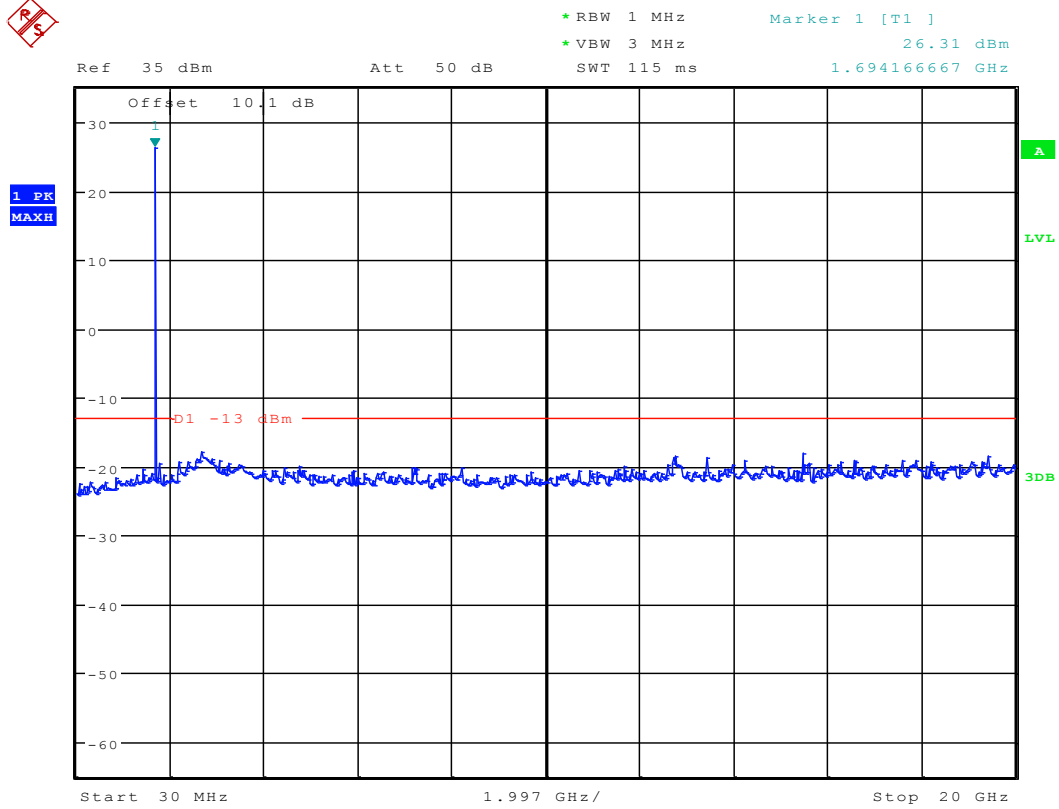
Channel 25



Date: 8.NOV.2011 23:46:46



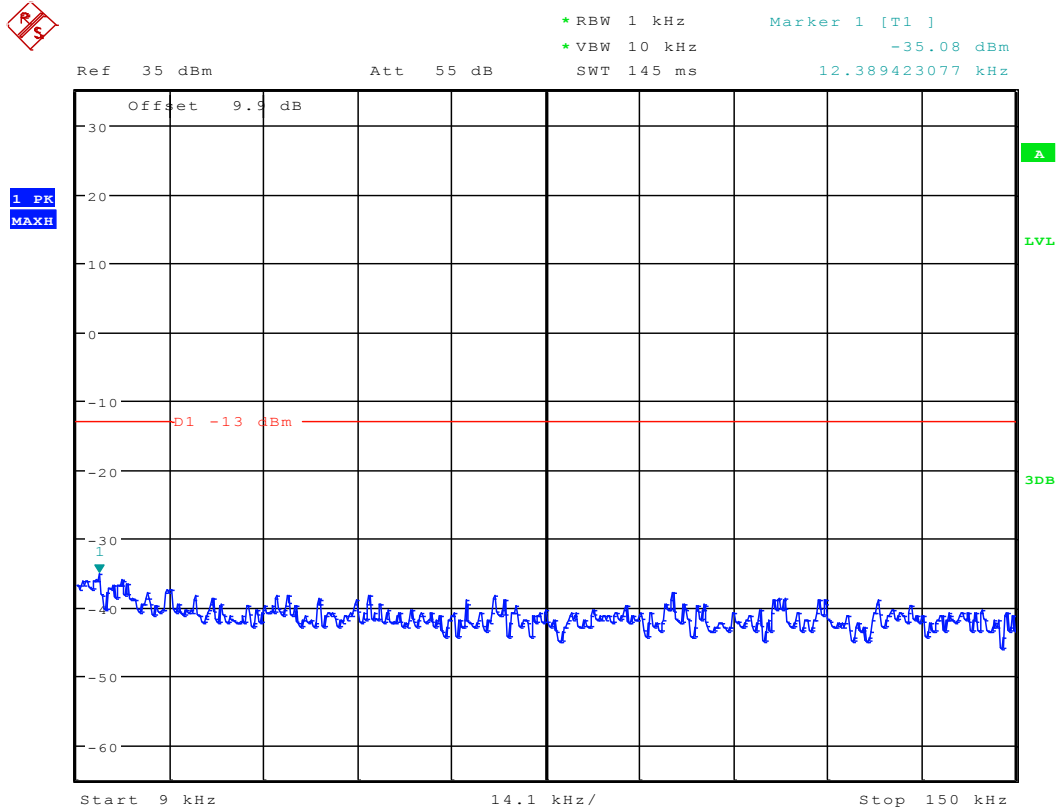
Date: 8.NOV.2011 23:47:12



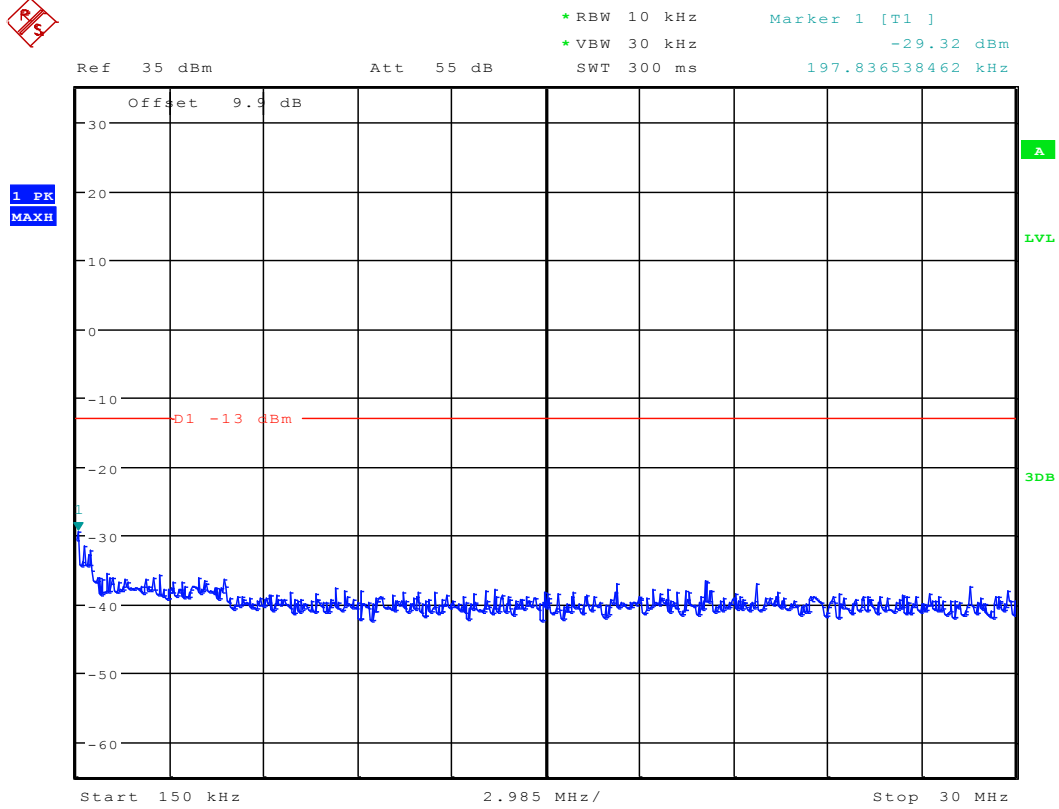
Date: 8.NOV.2011 23:47:37



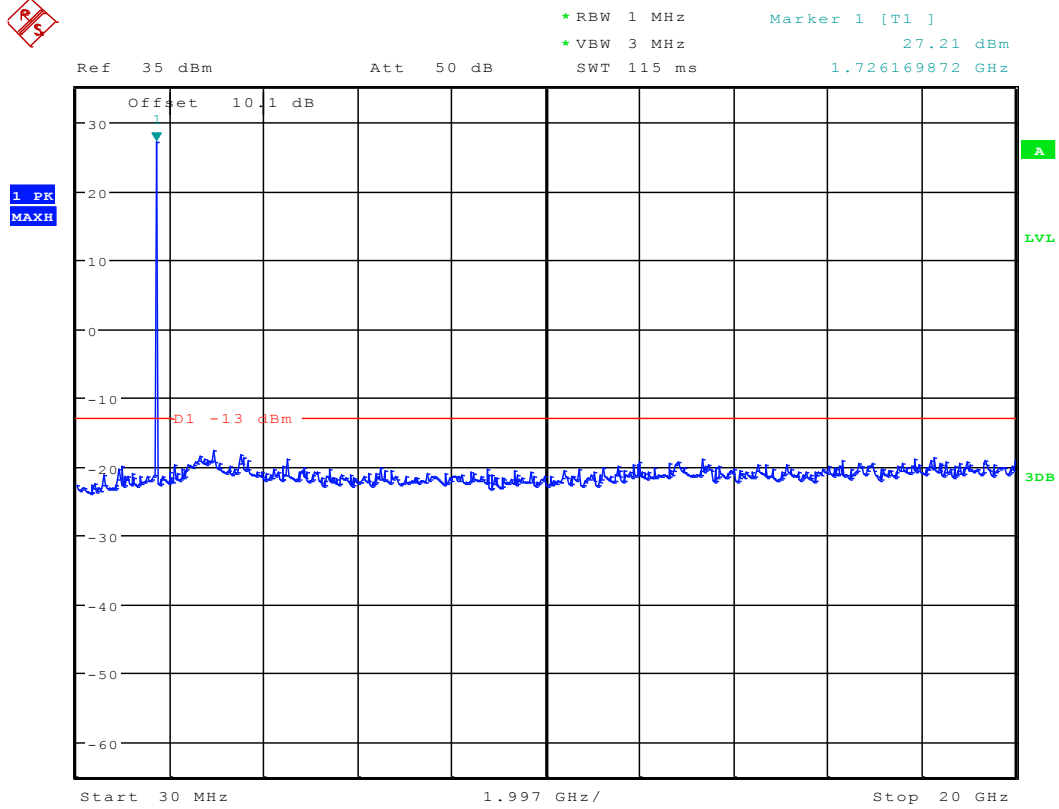
Channel 450



Date: 8.NOV.2011 23:46:54



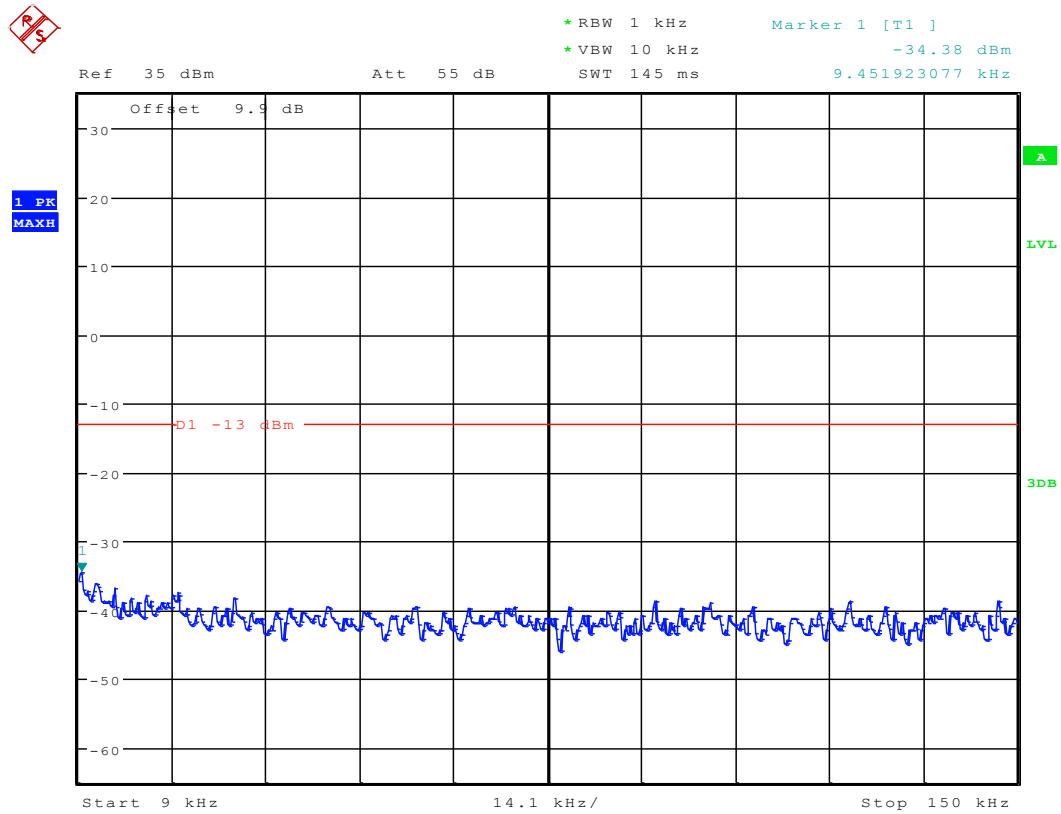
Date: 8.NOV.2011 23:47:20



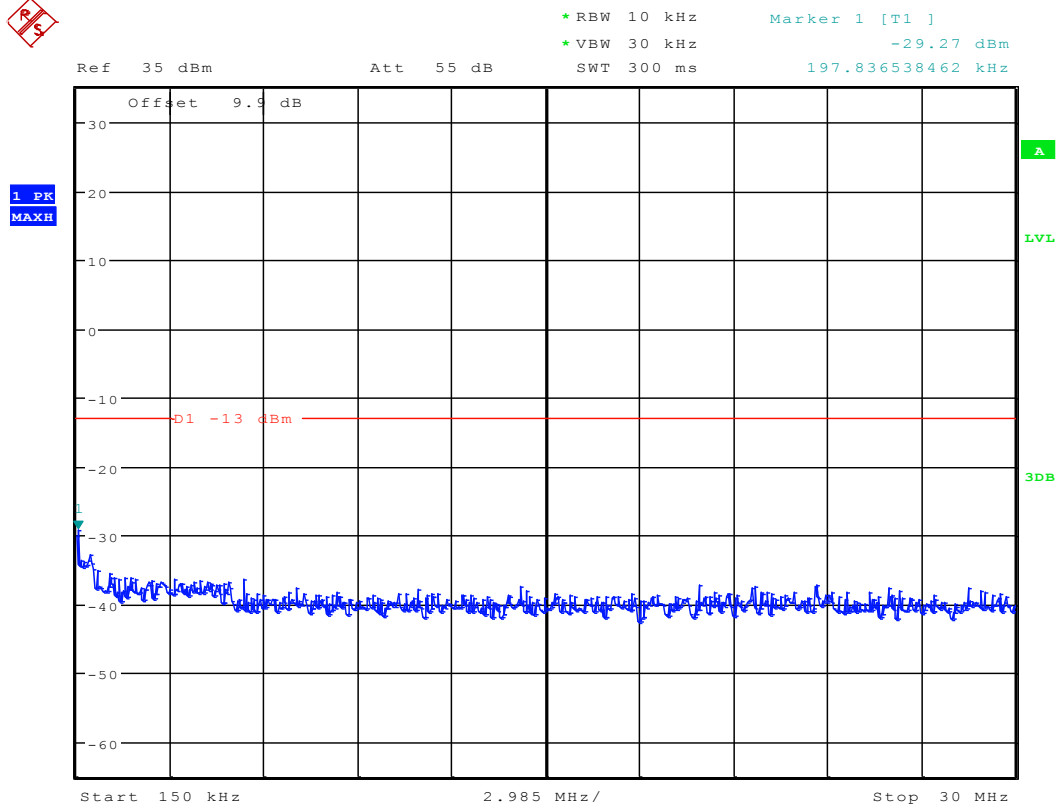
Date: 8.NOV.2011 23:47:46



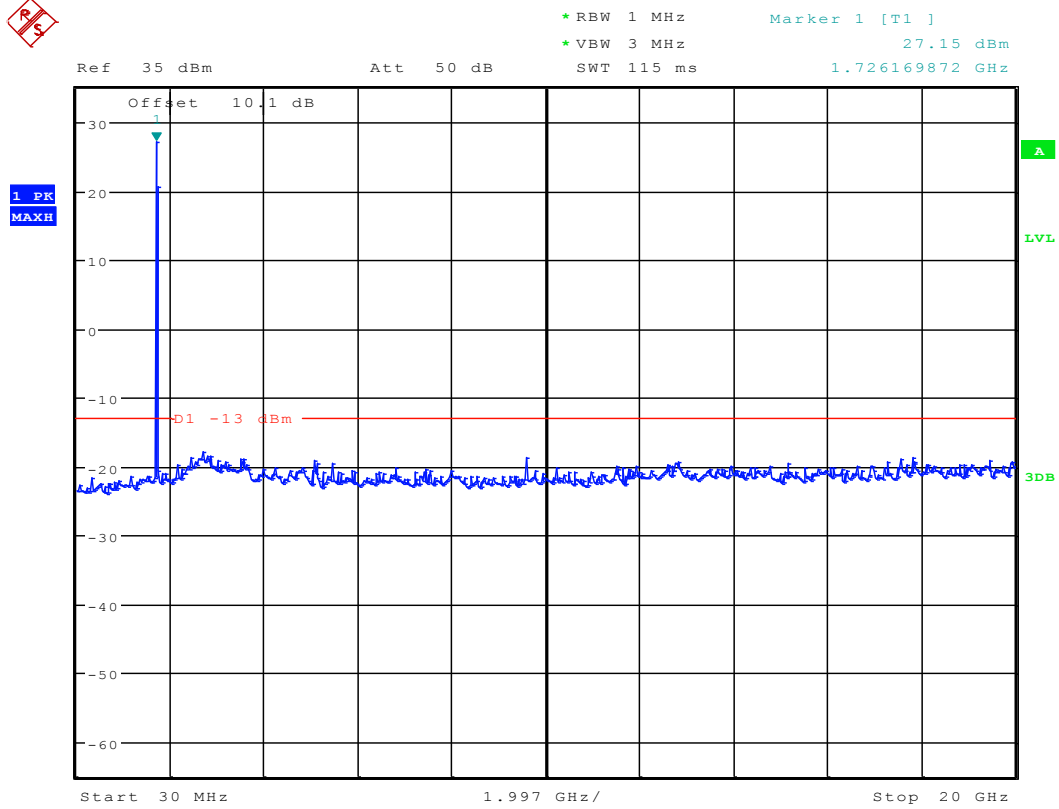
Channel 875



Date: 8.NOV.2011 23:47:03



Date: 8.NOV.2011 23:47:28

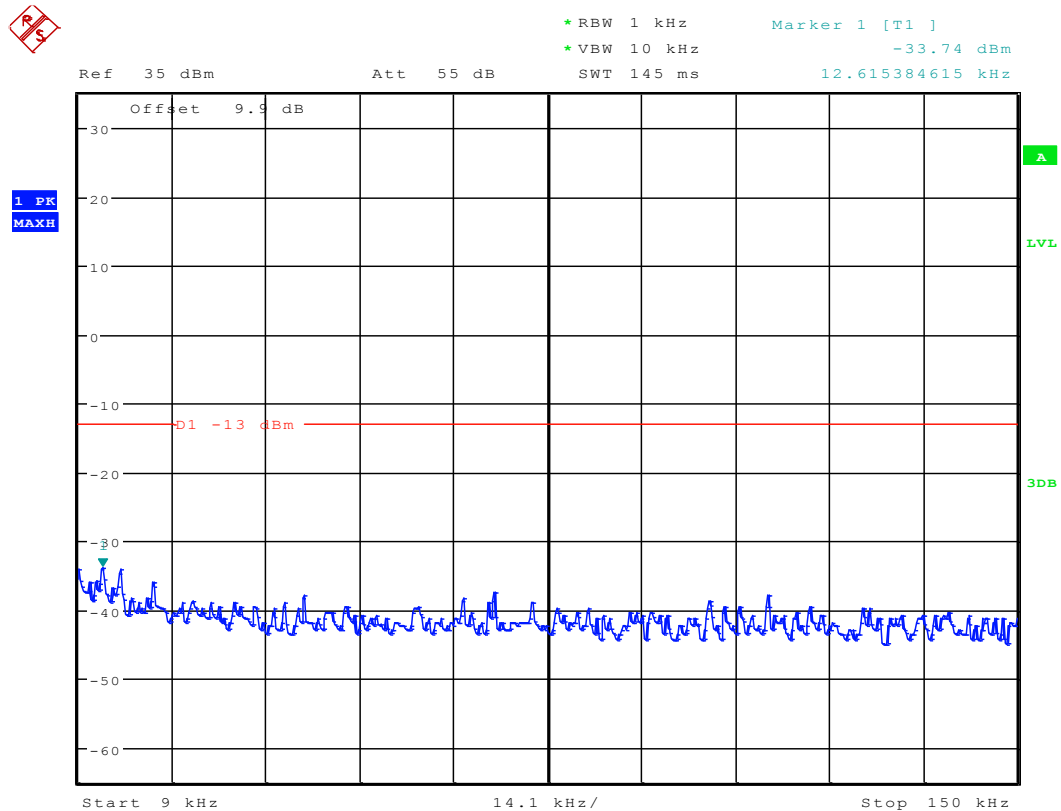


Date: 8.NOV.2011 23:47:54

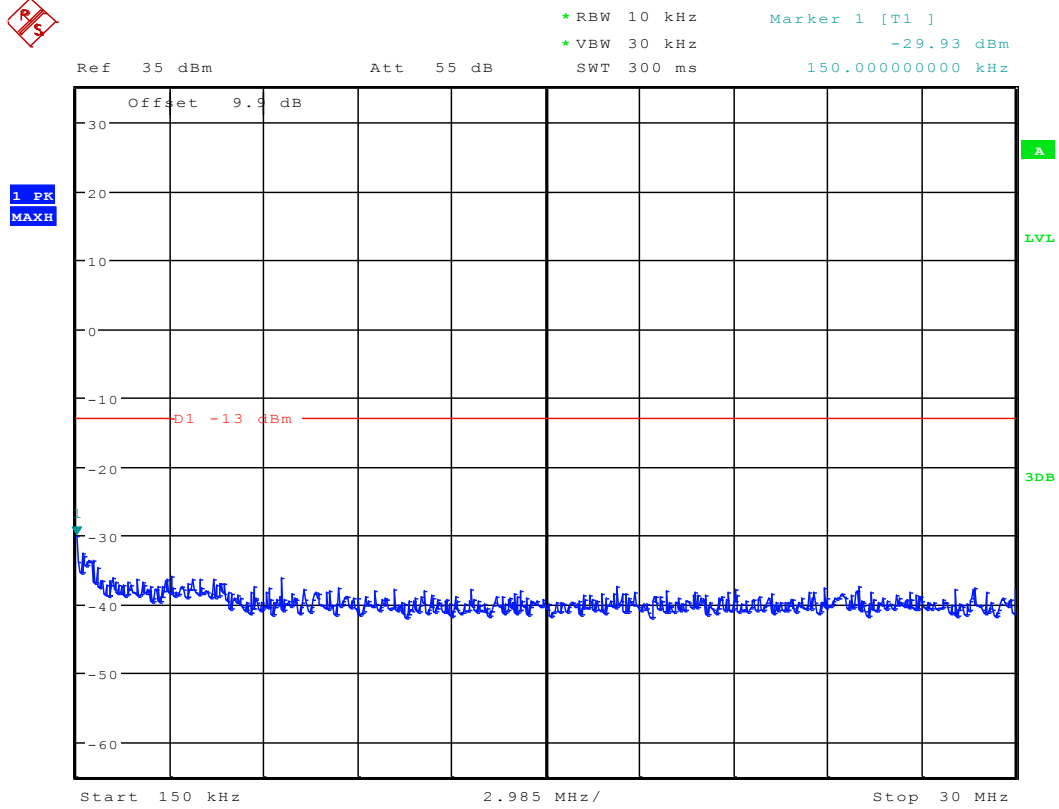


TM3

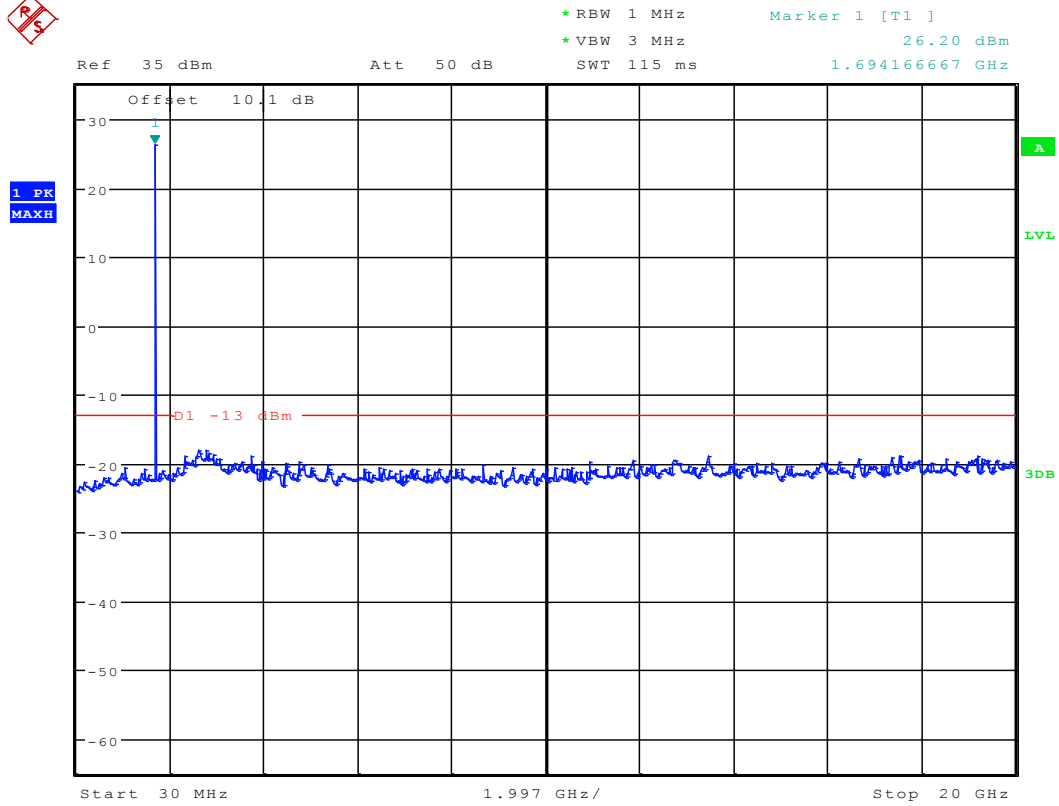
Channel 25



Date: 8.NOV.2011 23:48:05



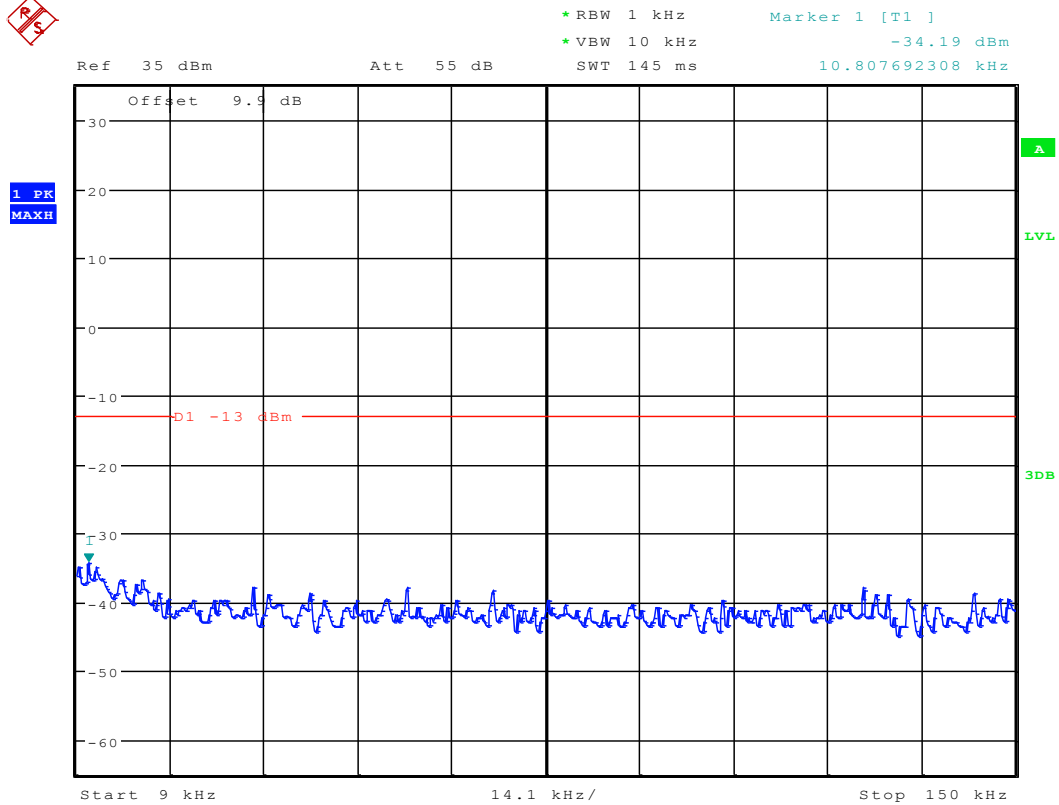
Date: 8.NOV.2011 23:48:30



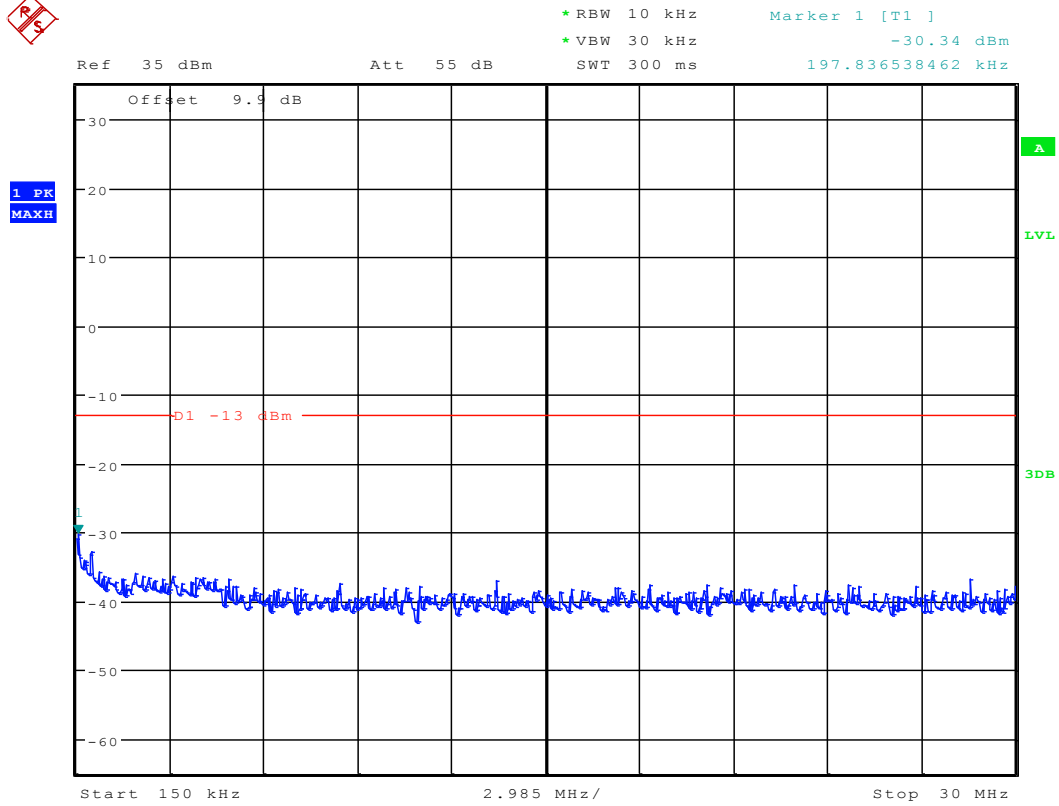
Date: 8.NOV.2011 23:48:56



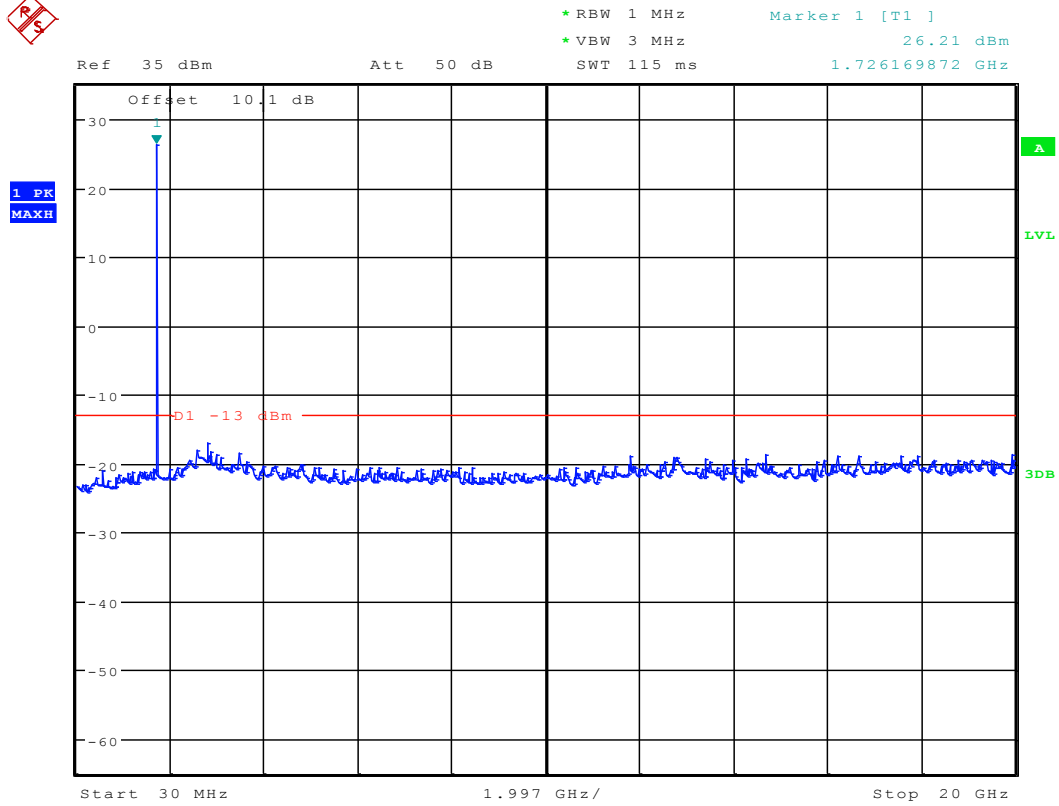
Channel 450



Date: 8.NOV.2011 23:48:13



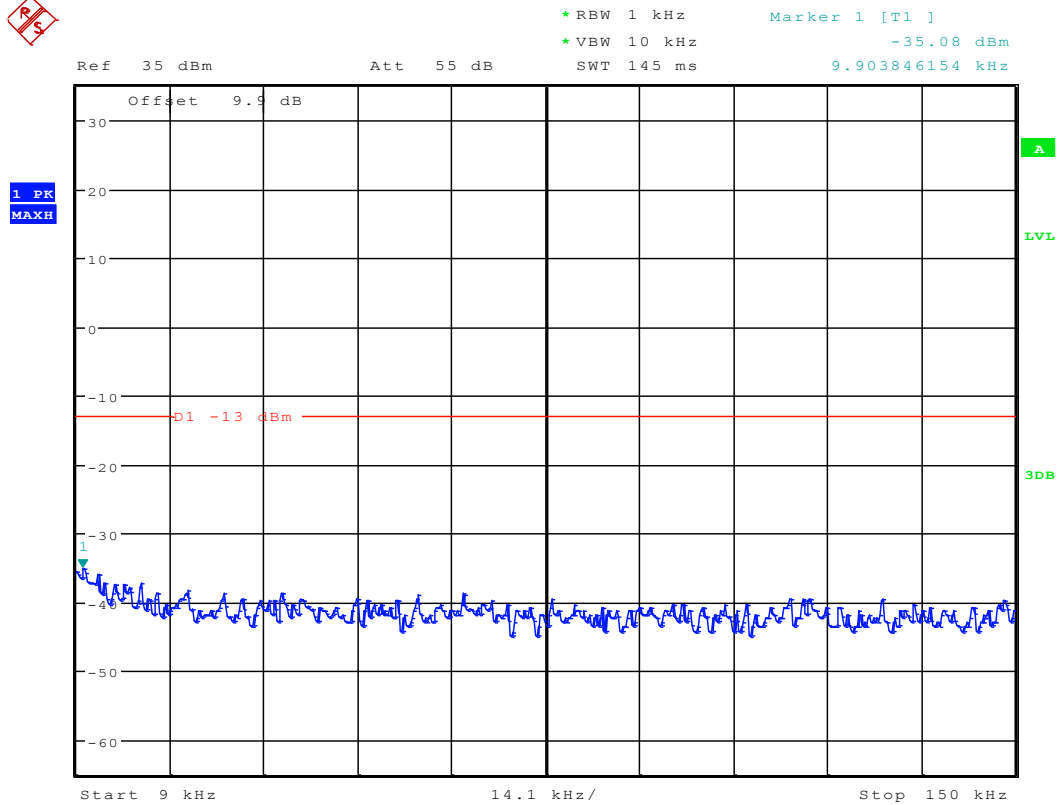
Date: 8.NOV.2011 23:48:39



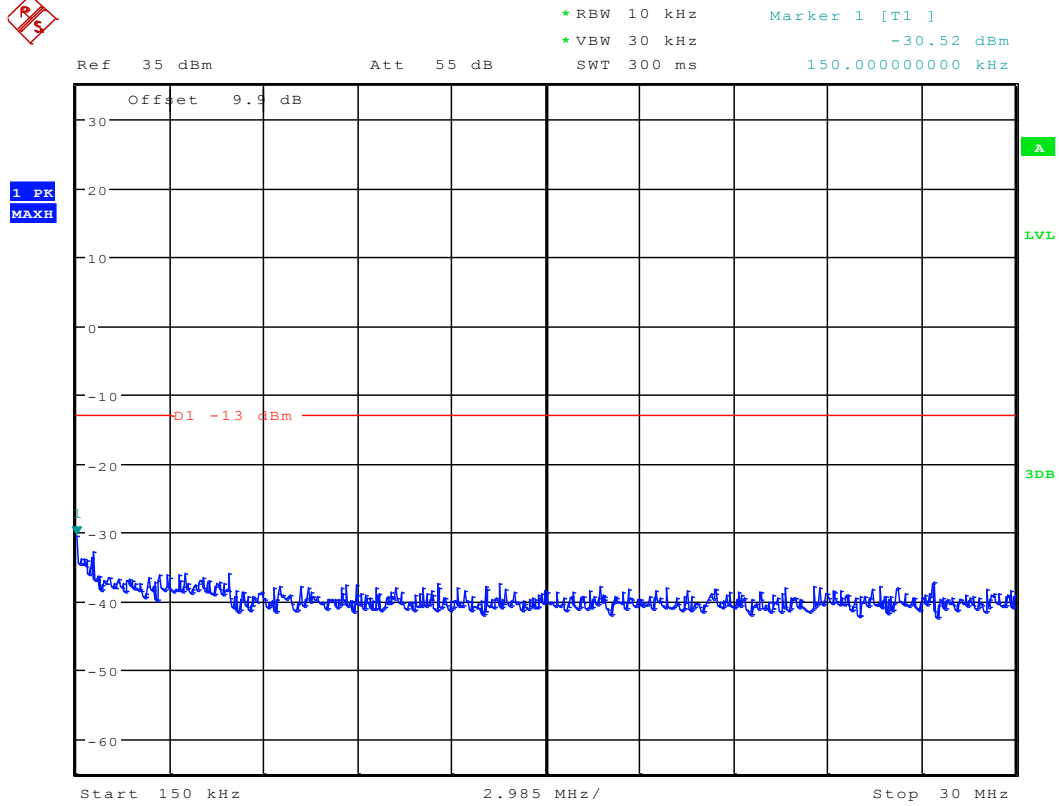
Date: 8.NOV.2011 23:49:05



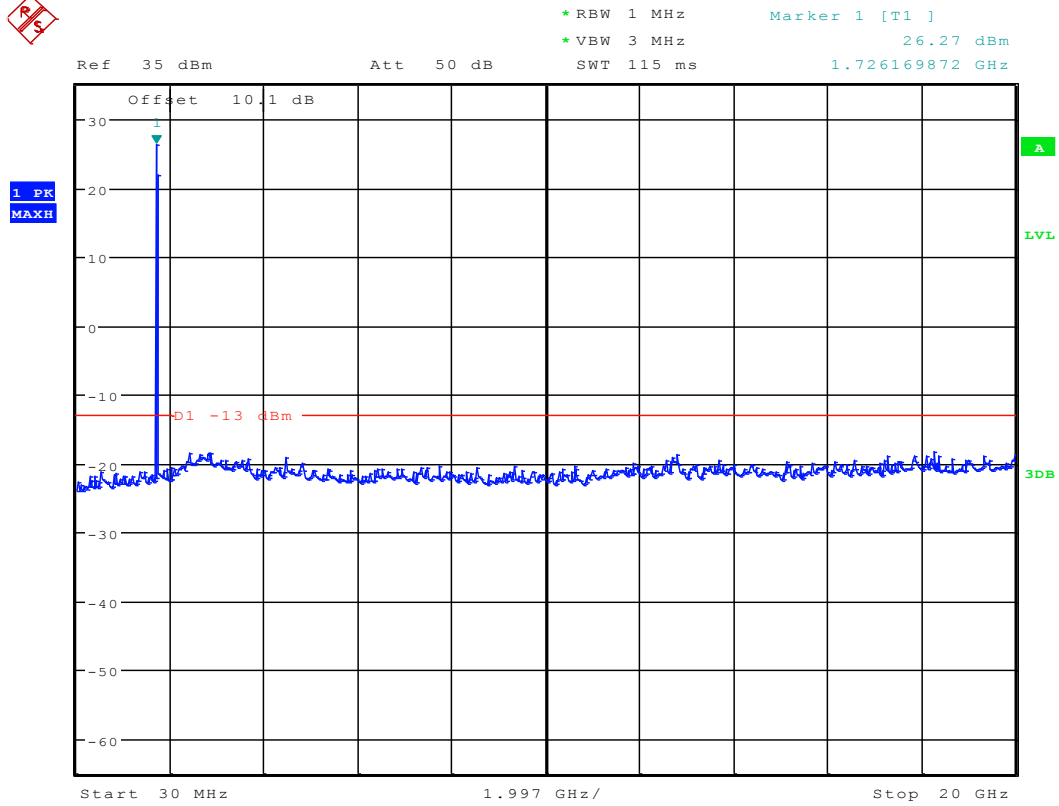
Channel 875



Date: 8.NOV.2011 23:48:21



Date: 8.NOV.2011 23:48:47

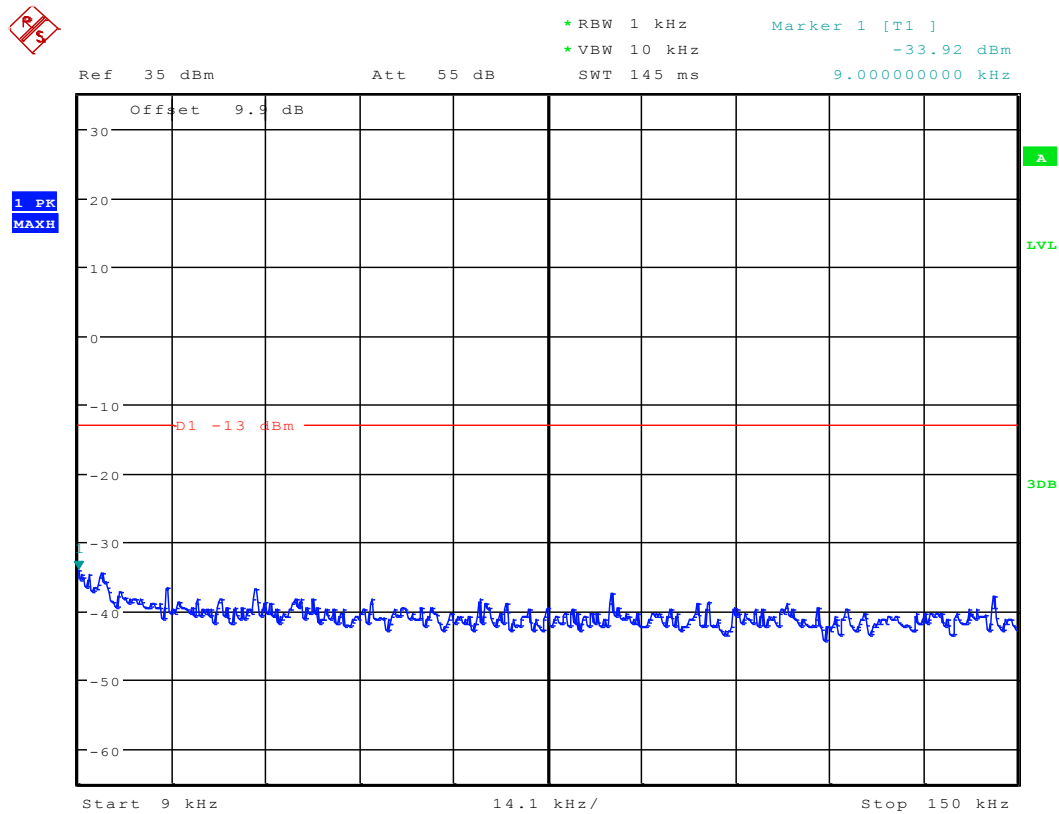


Date: 8.NOV.2011 23:49:13

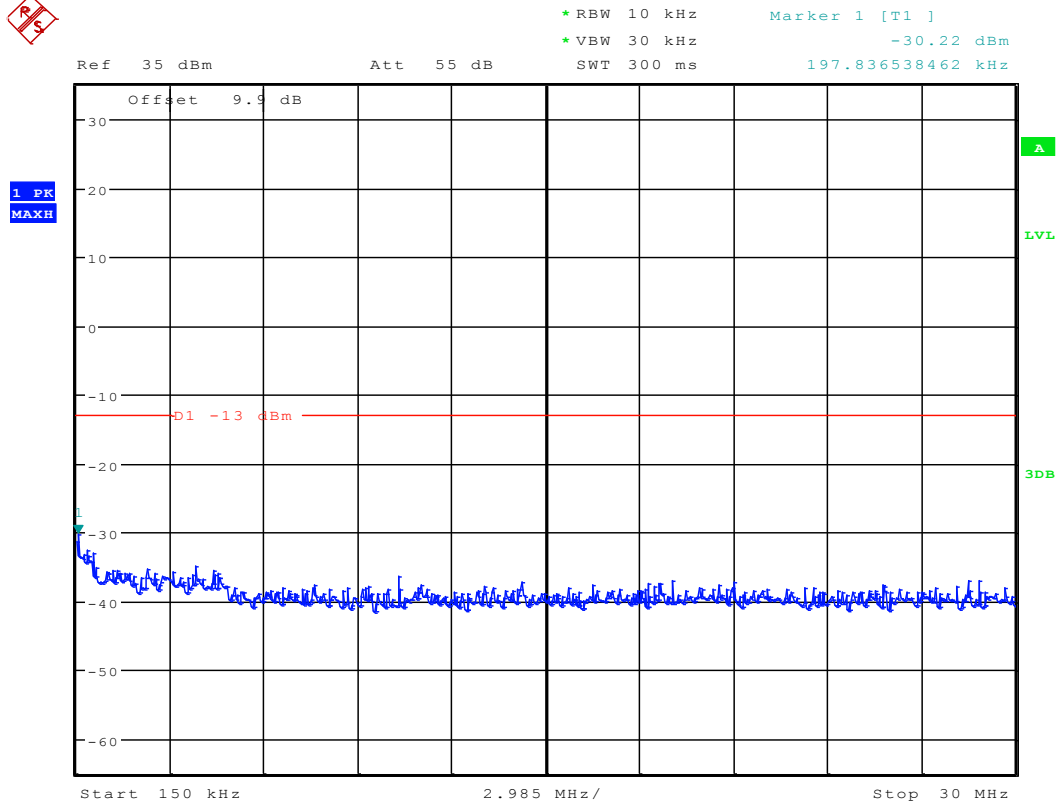


EVDO subtype 0

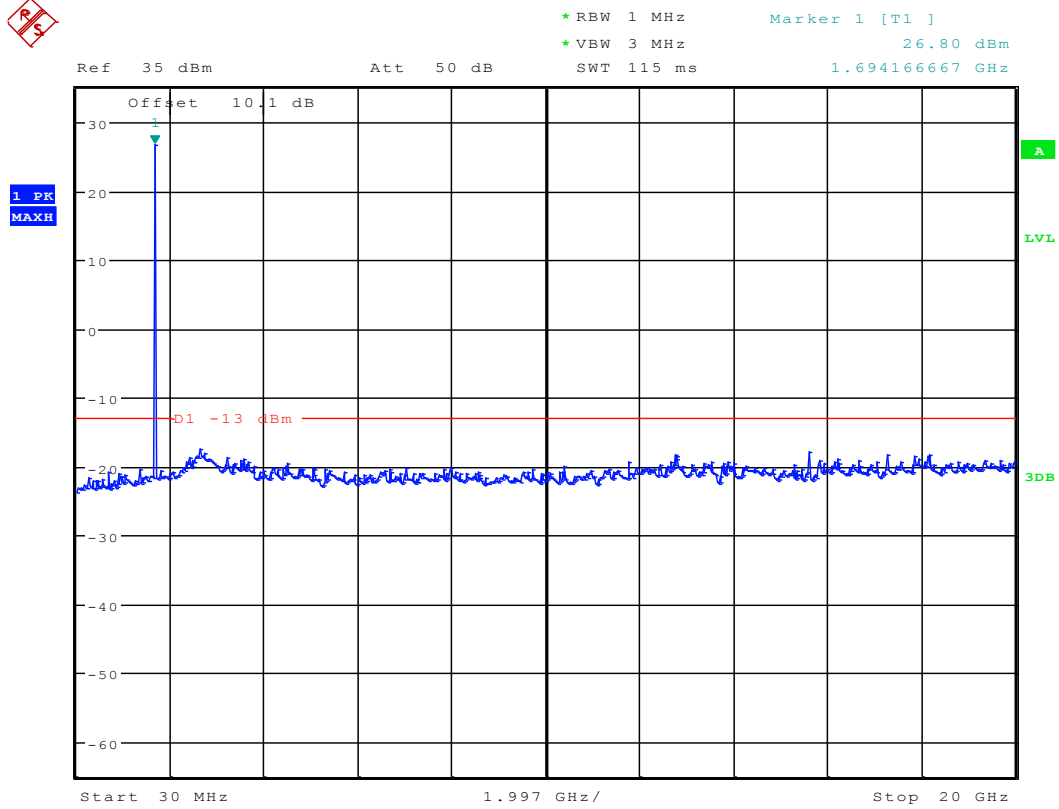
Channel 25



Date: 8.NOV.2011 23:51:22



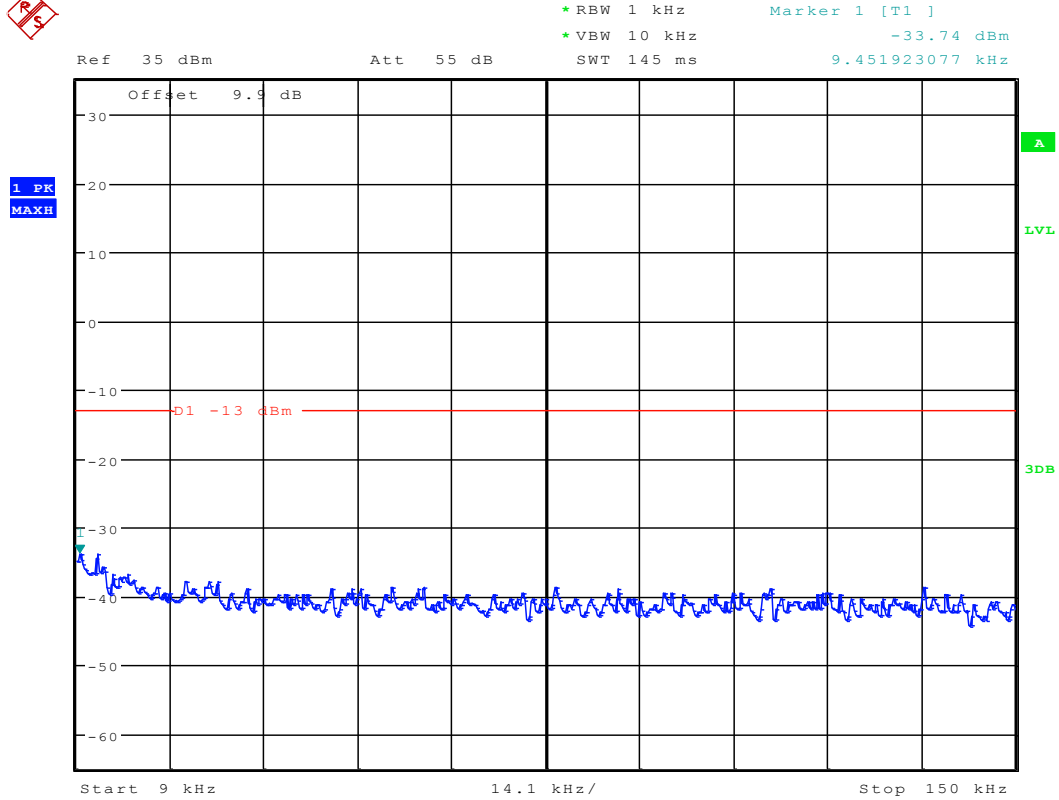
Date: 8.NOV.2011 23:52:06



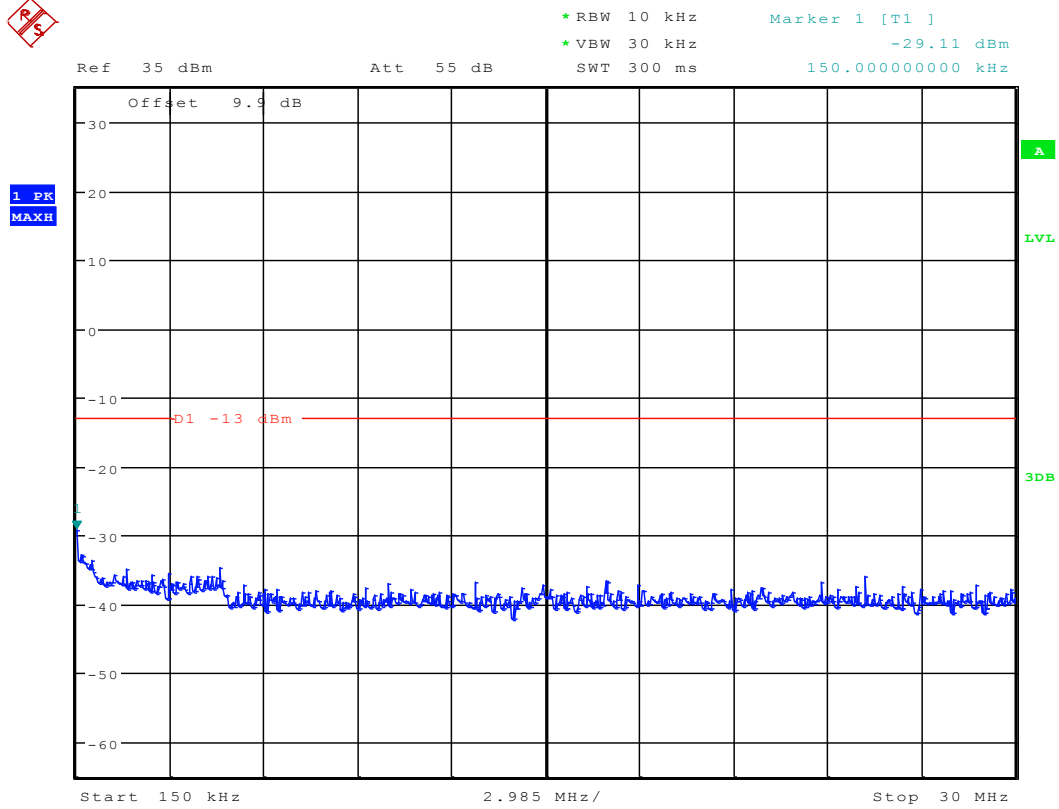
Date: 8.NOV.2011 23:52:49



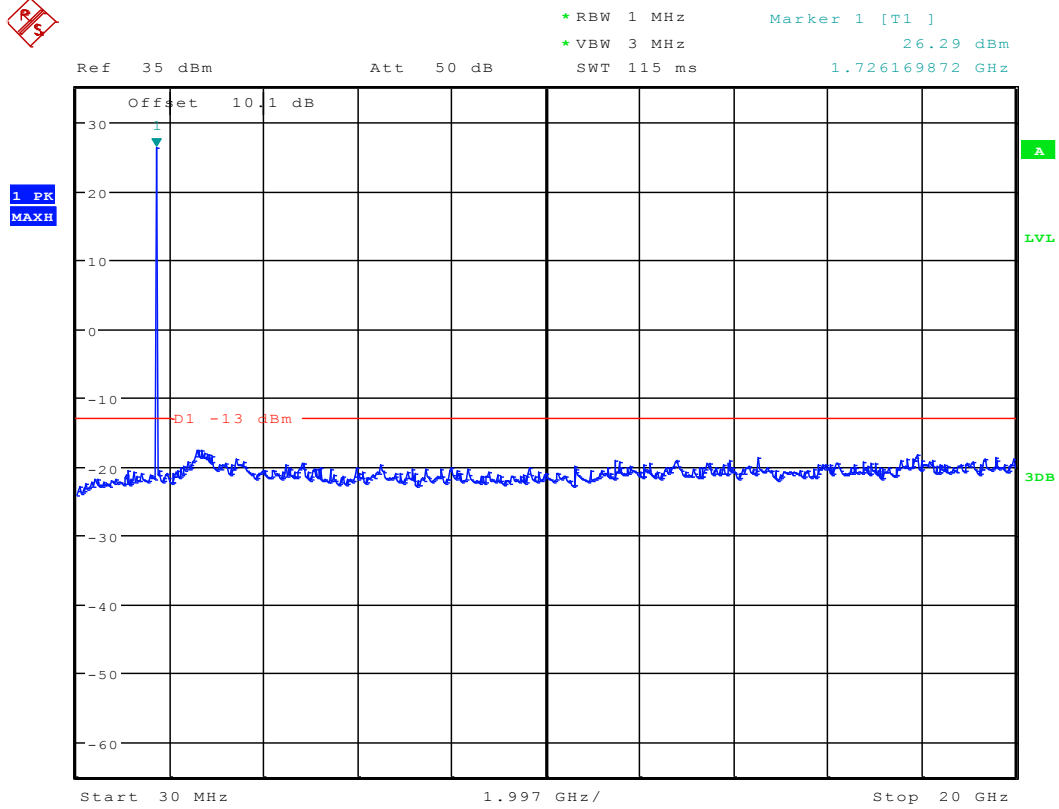
Channel 450



Date: 8.NOV.2011 23:51:36



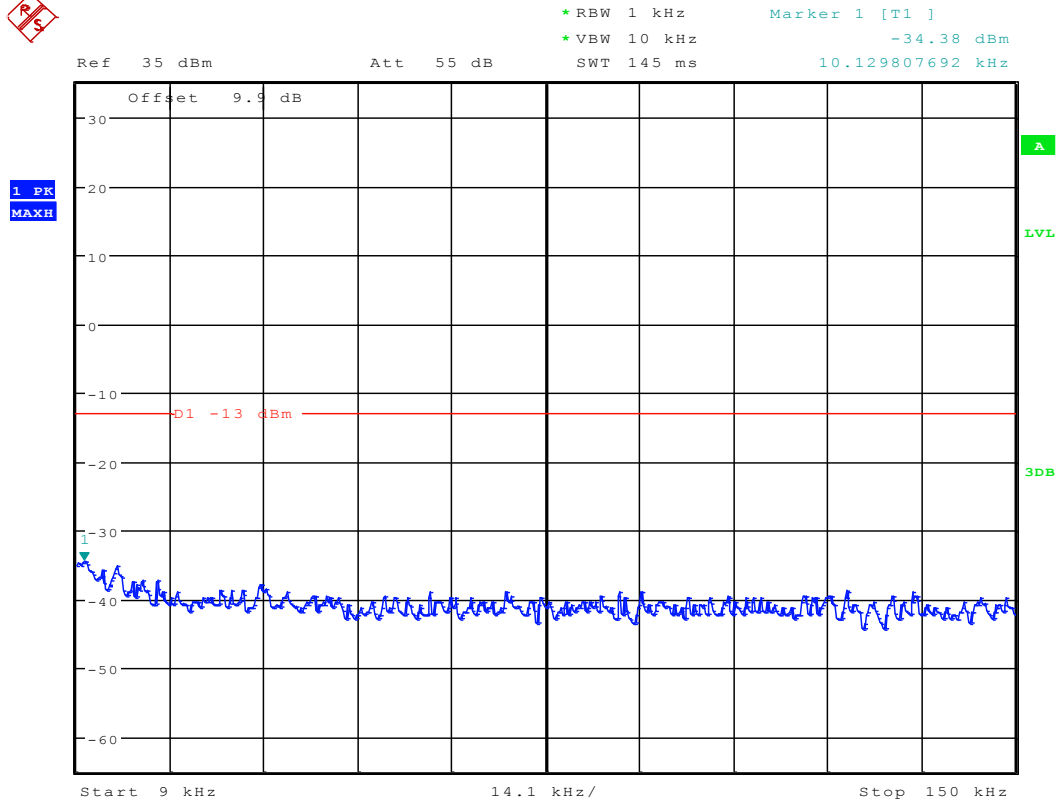
Date: 8.NOV.2011 23:52:20



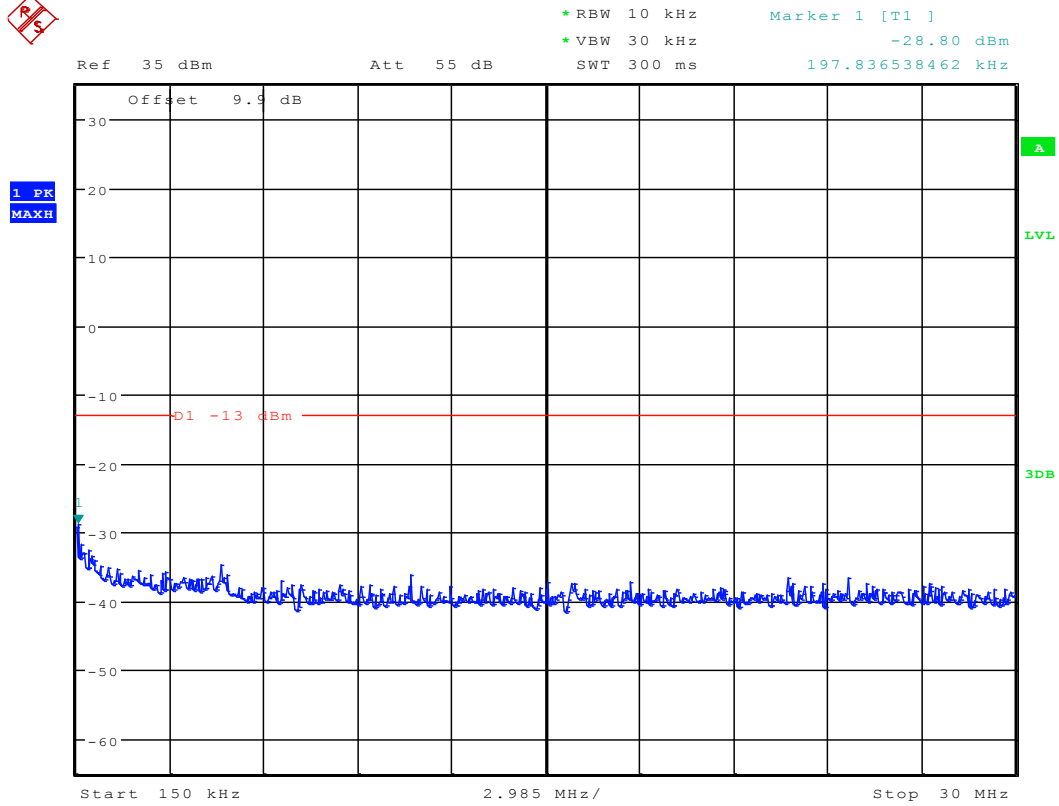
Date: 8.NOV.2011 23:53:04



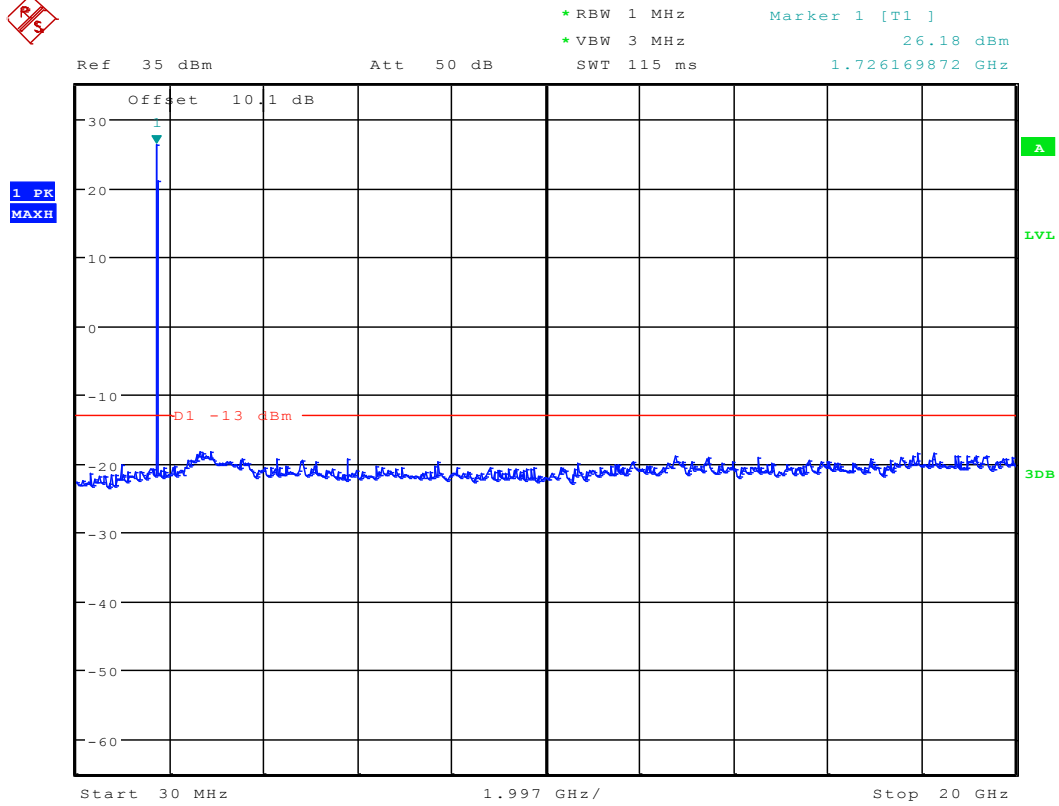
Channel 875



Date: 8.NOV.2011 23:51:51



Date: 8.NOV.2011 23:52:34

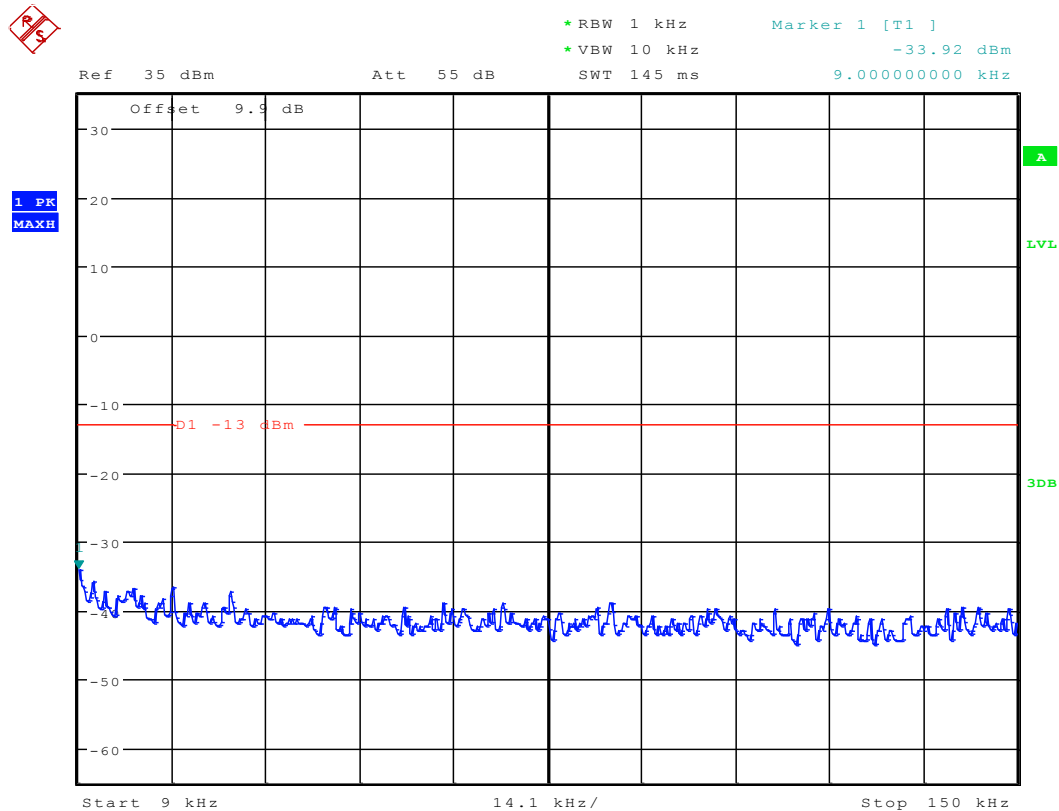


Date: 8.NOV.2011 23:53:19

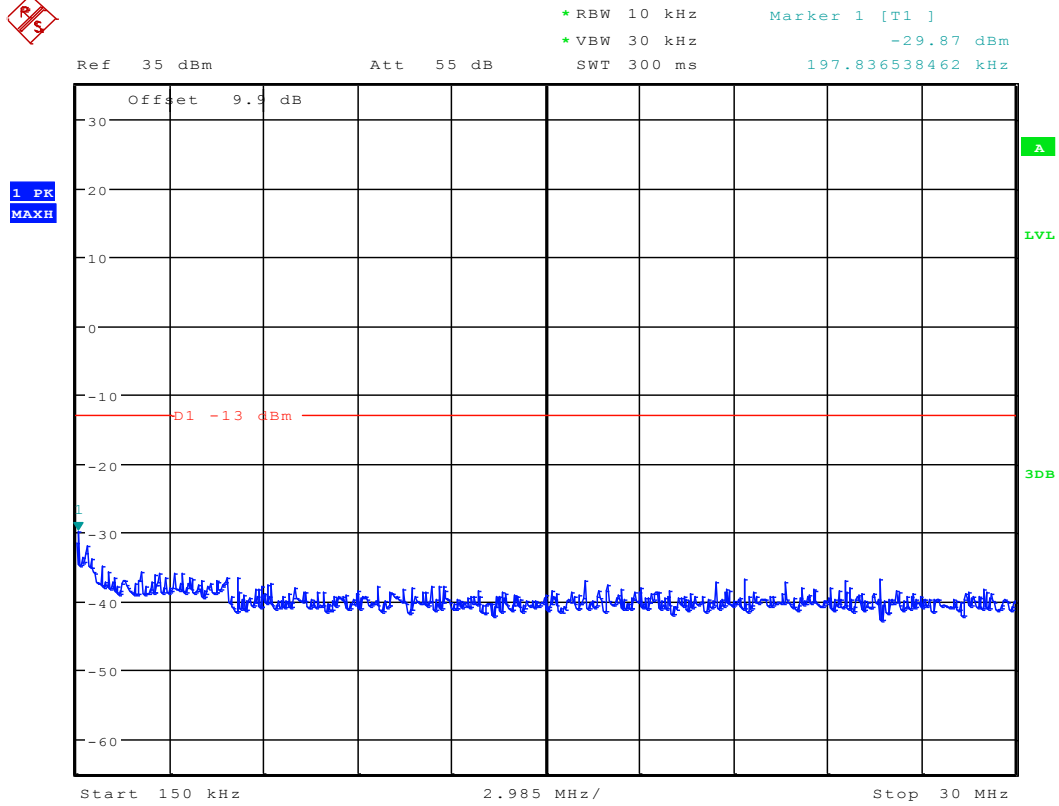


EVDO subtype 2

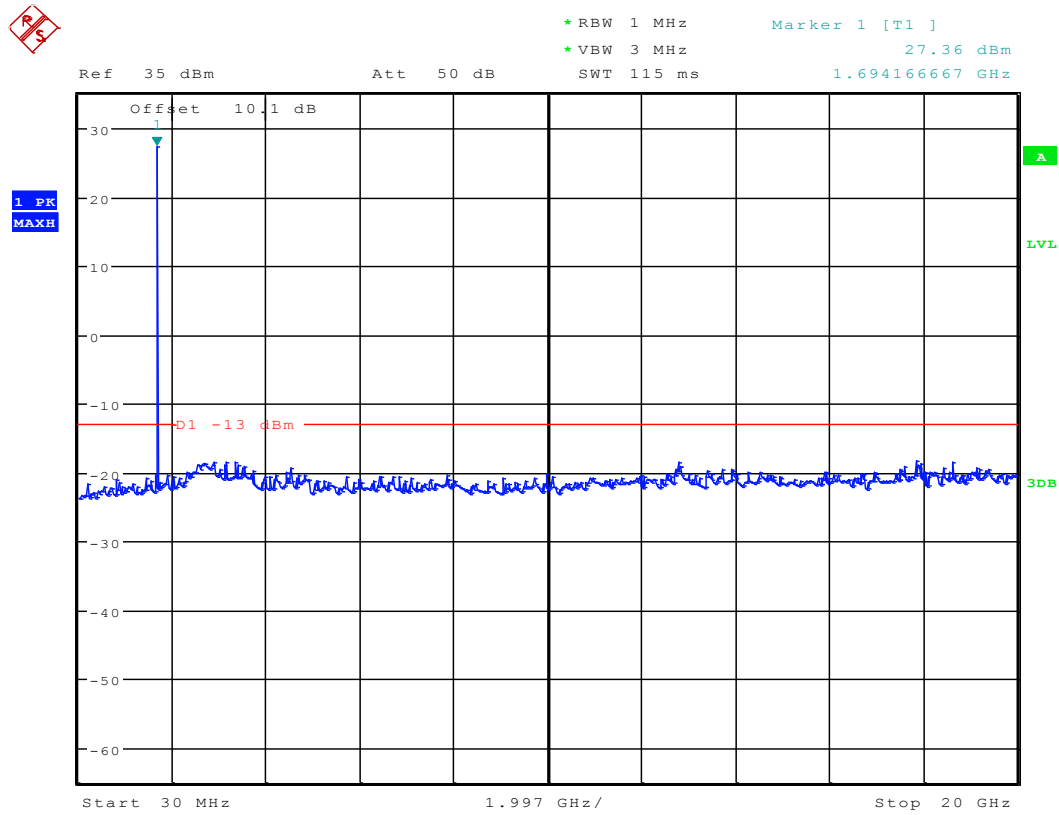
Modulation: BPSK
Channel 25



Date: 8.NOV.2011 23:57:19

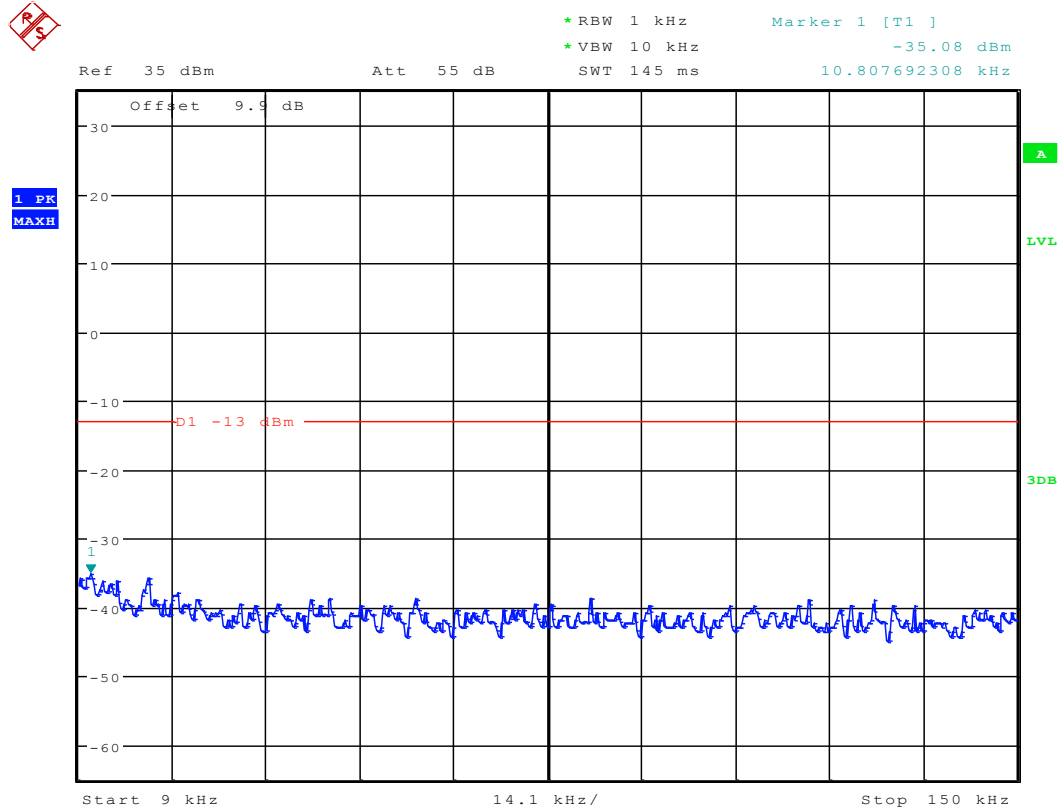


Date: 8.NOV.2011 23:57:44

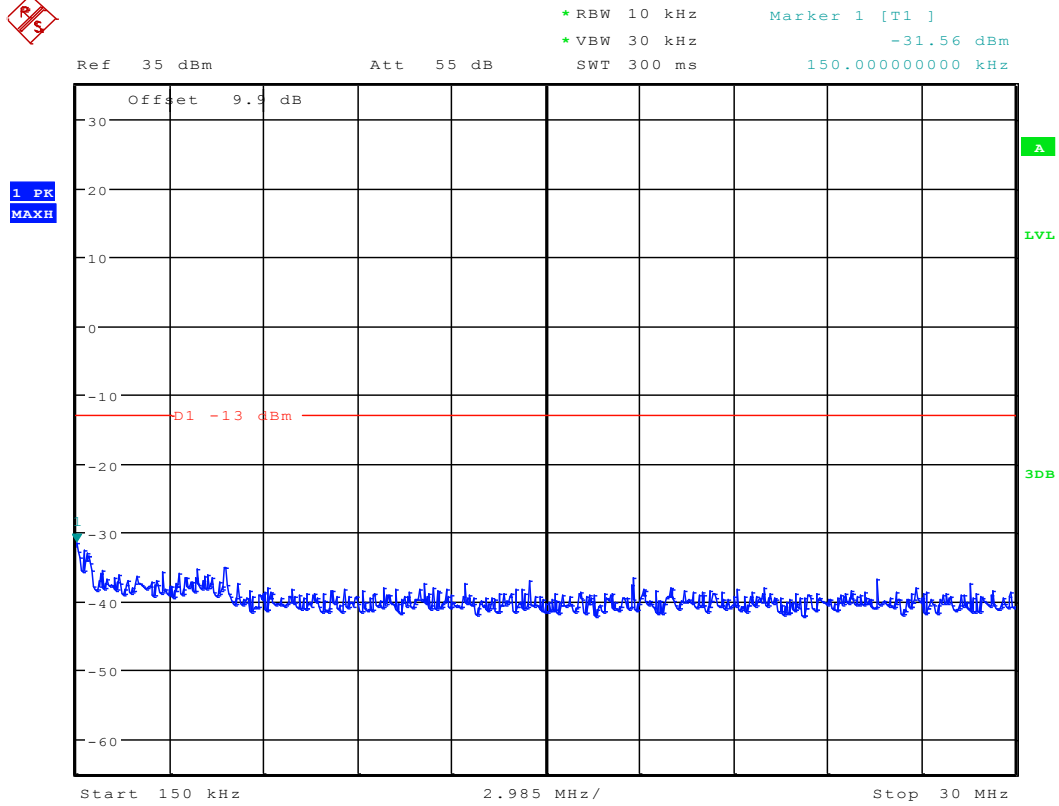


Date: 8.NOV.2011 23:58:10

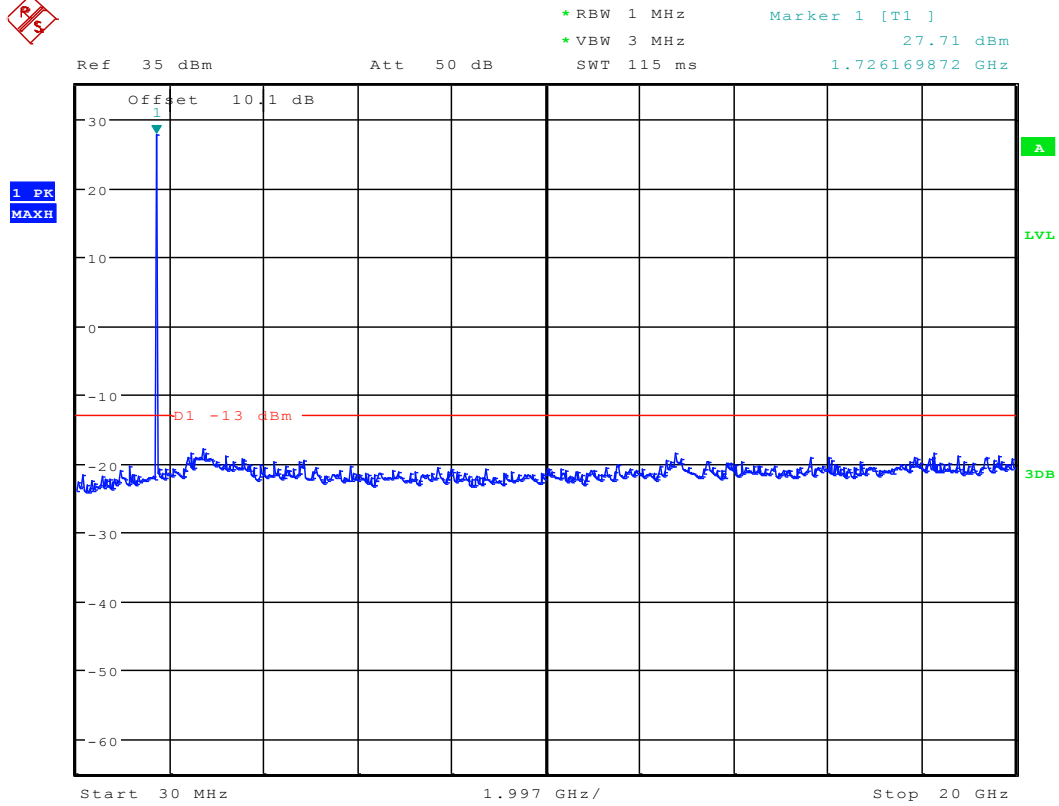
Channel 450



Date: 8.NOV.2011 23:57:27



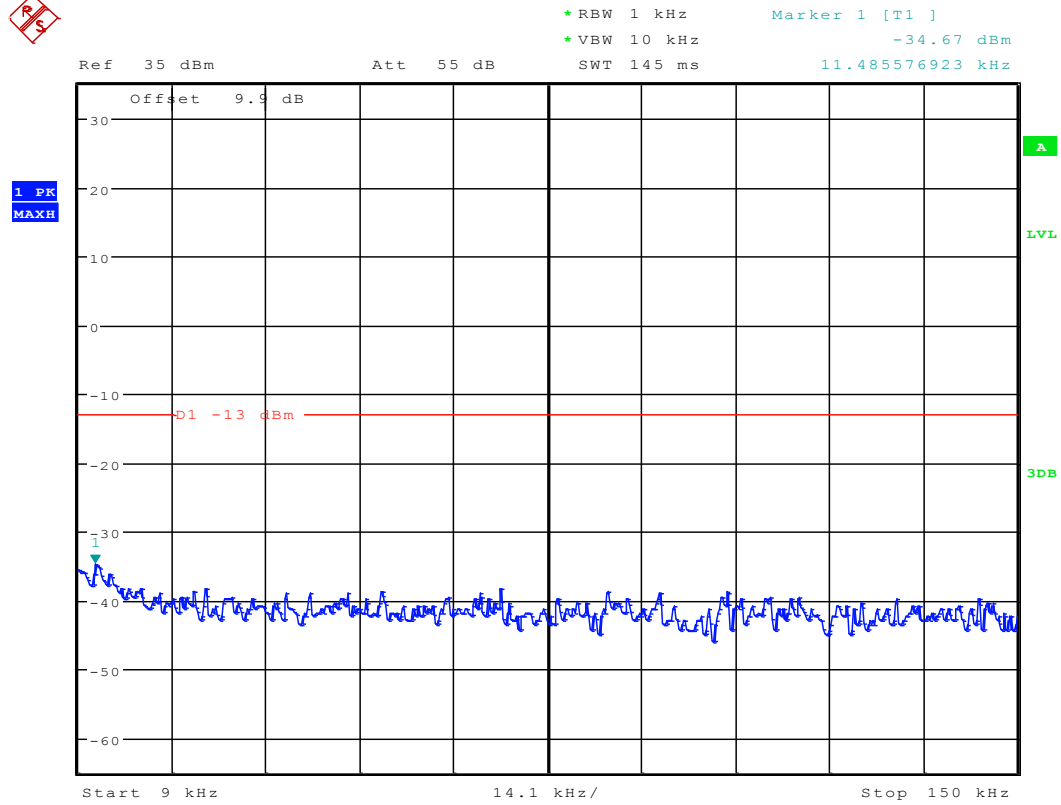
Date: 8.NOV.2011 23:57:53



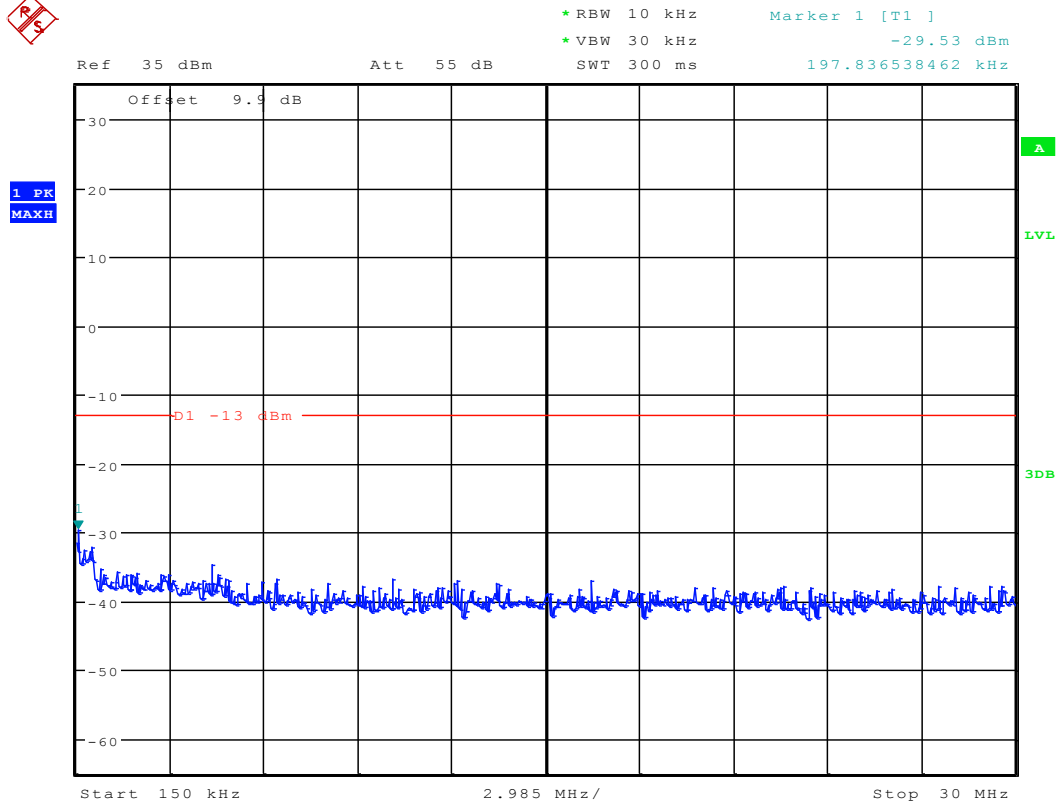
Date: 8.NOV.2011 23:58:19



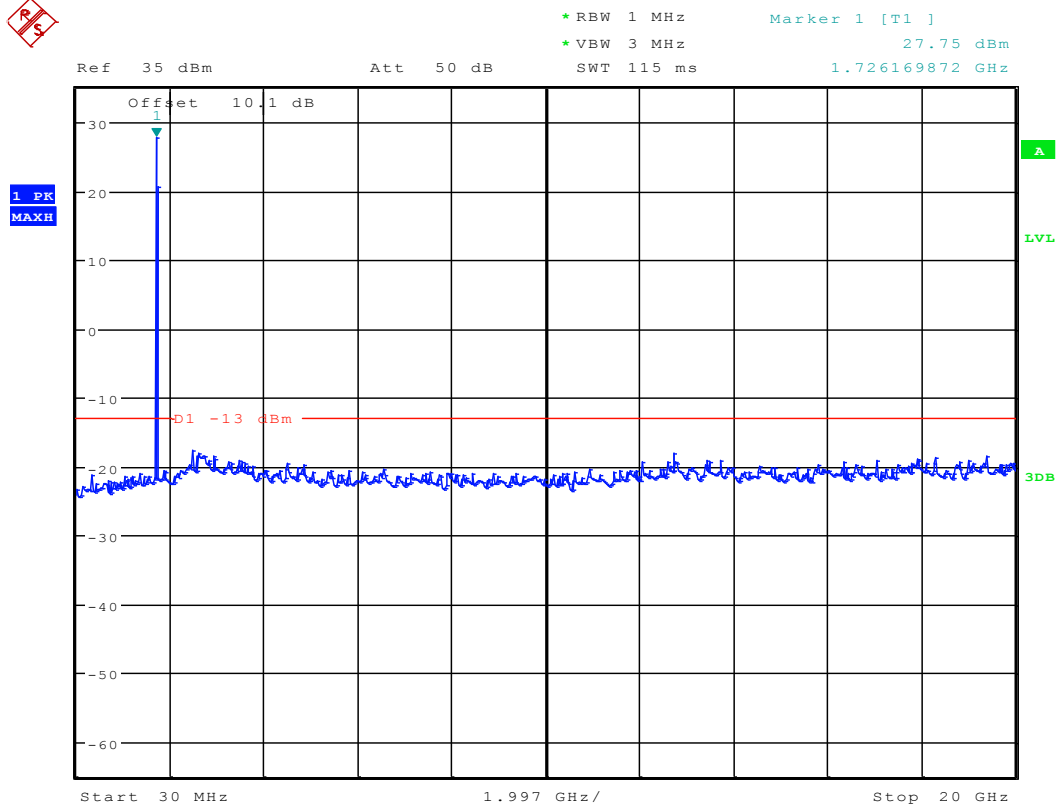
Channel 875



Date: 8.NOV.2011 23:57:35



Date: 8.NOV.2011 23:58:01

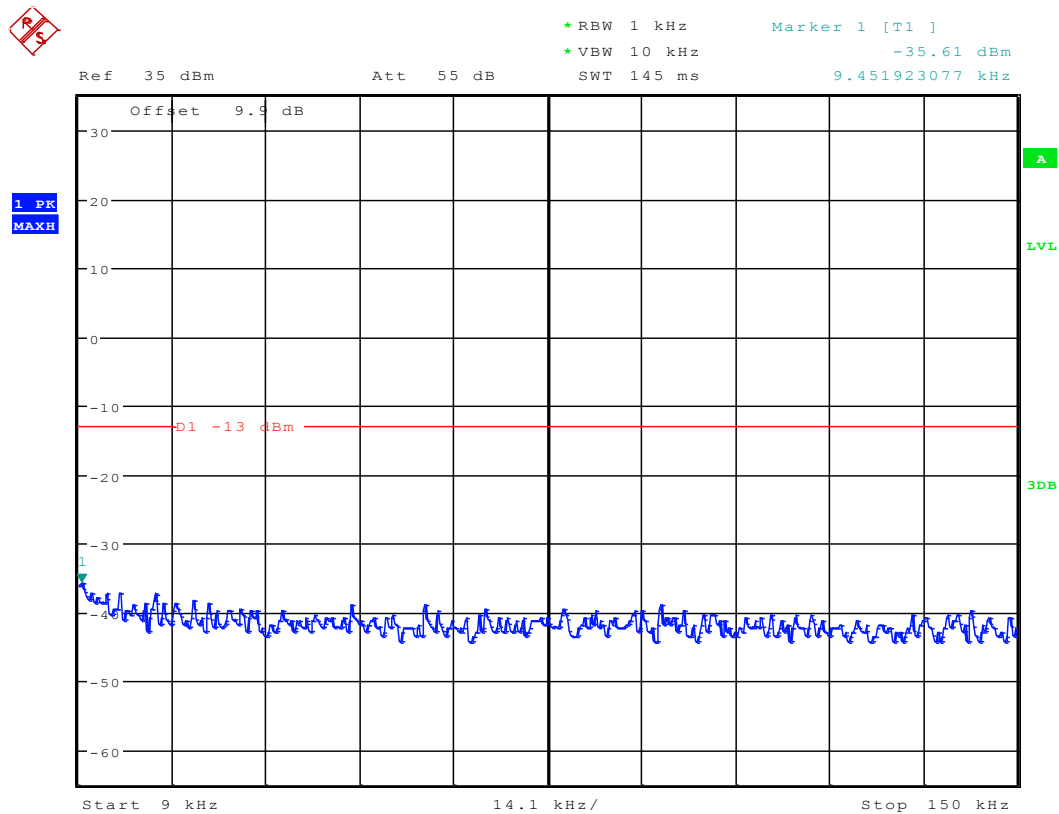


Date: 8.NOV.2011 23:58:27

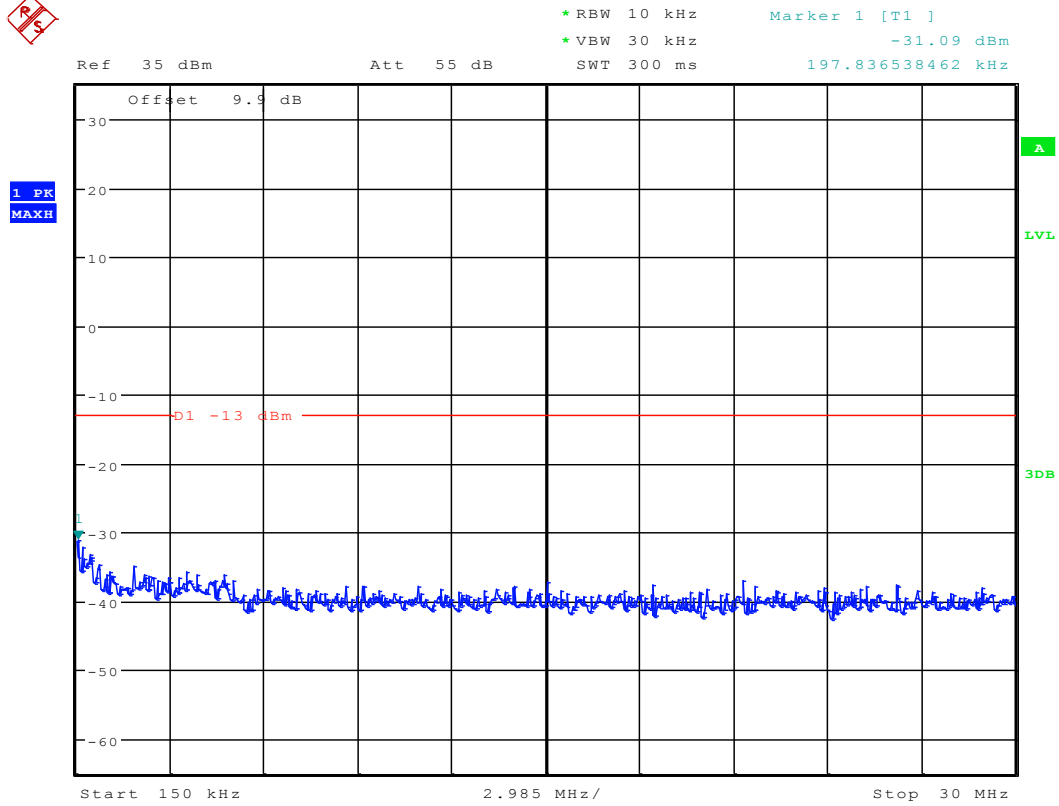


Modulation: QPSK

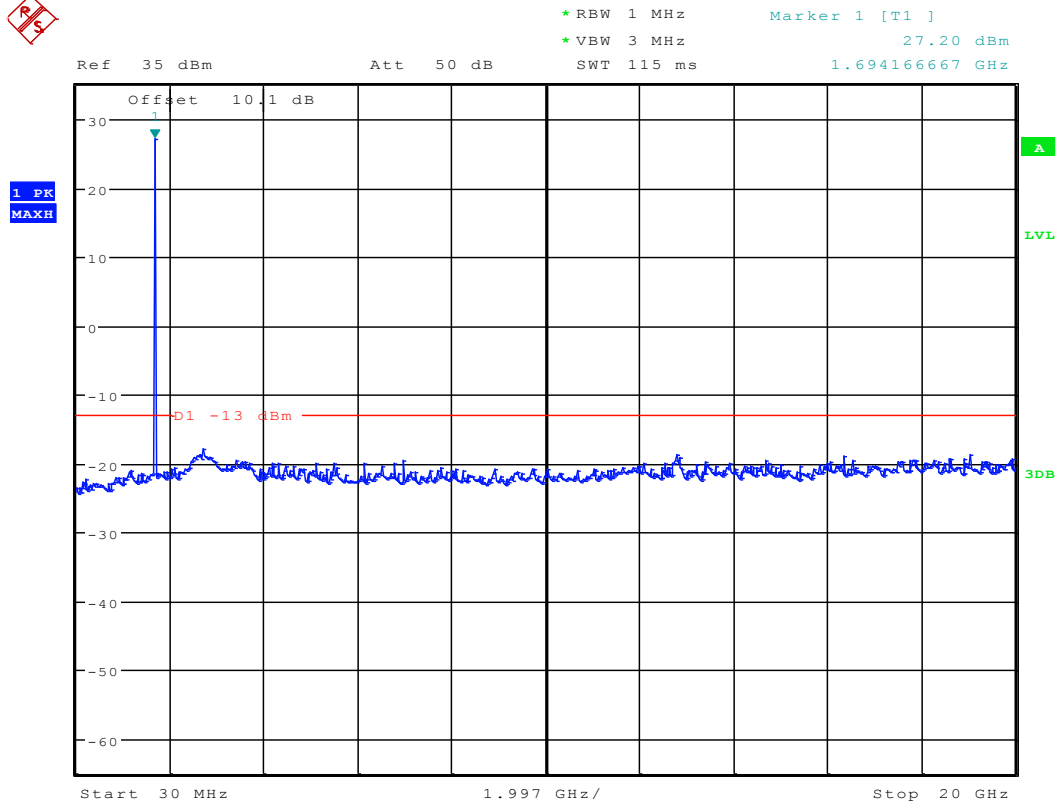
Channel 25



Date: 8.NOV.2011 23:58:36



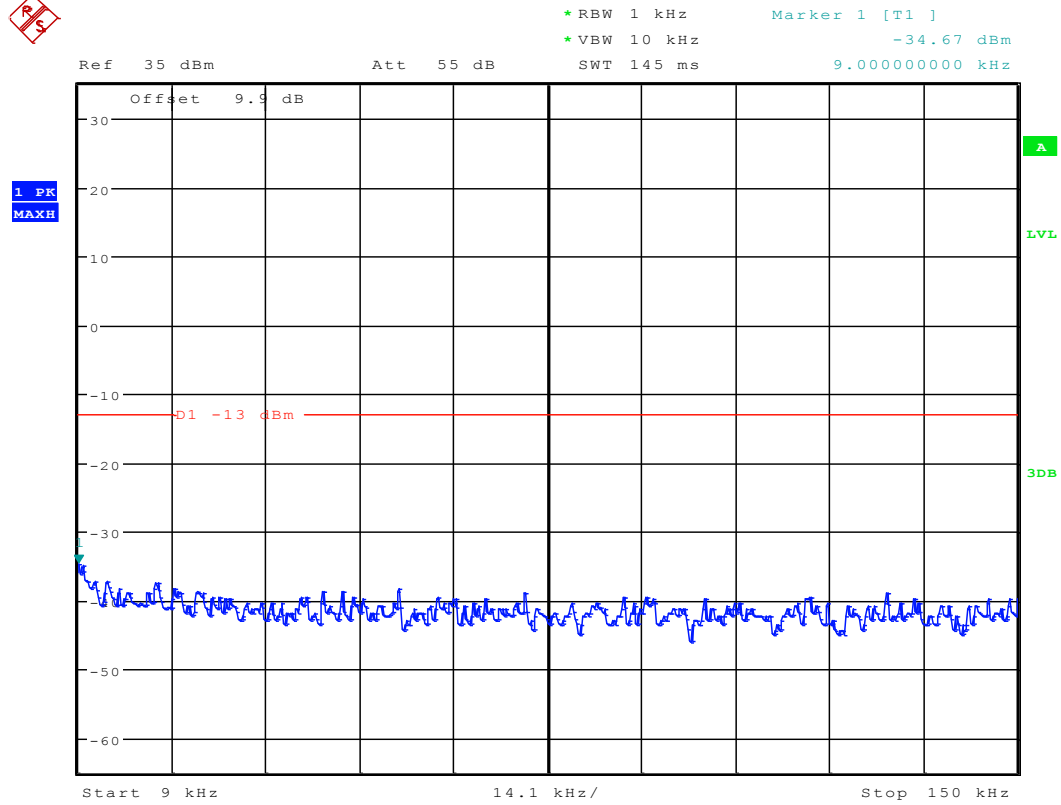
Date: 8.NOV.2011 23:59:02



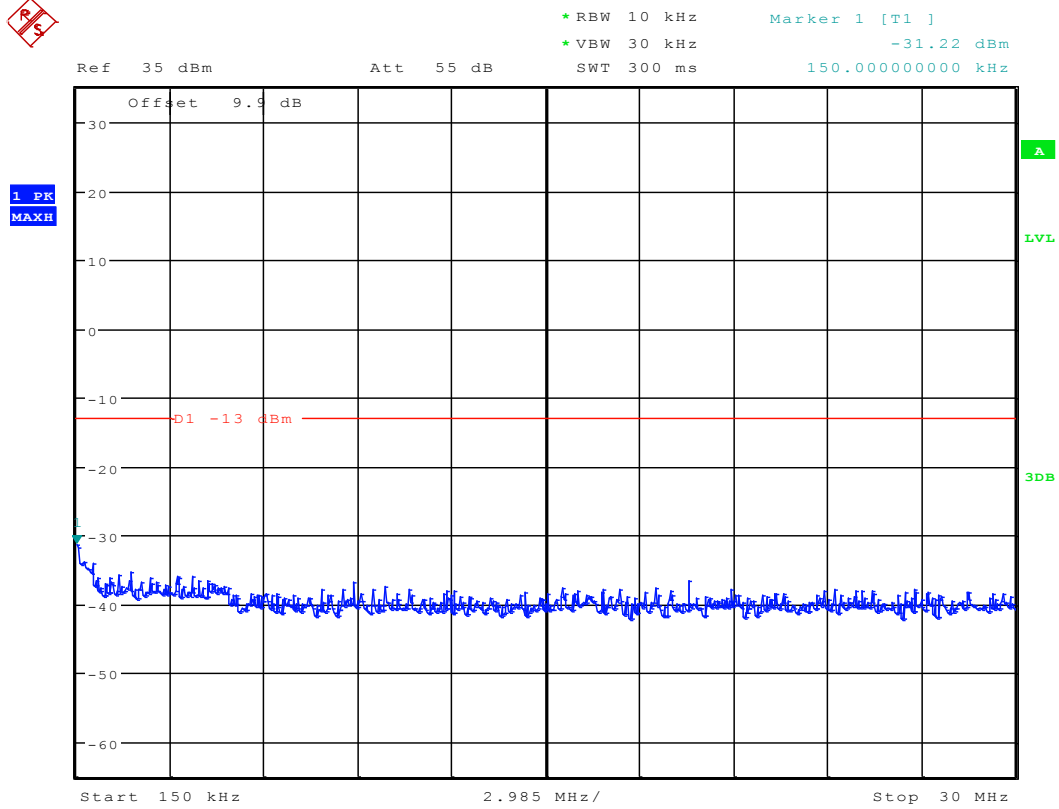
Date: 8.NOV.2011 23:59:28



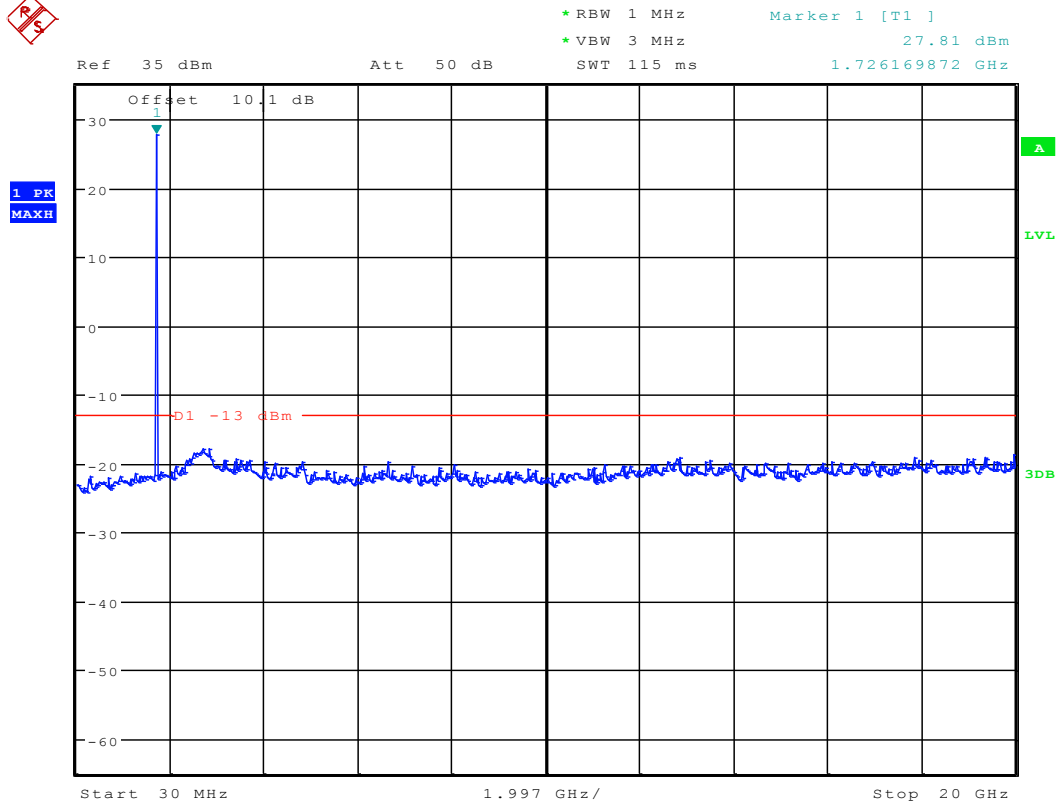
Channel 450



Date: 8.NOV.2011 23:58:44



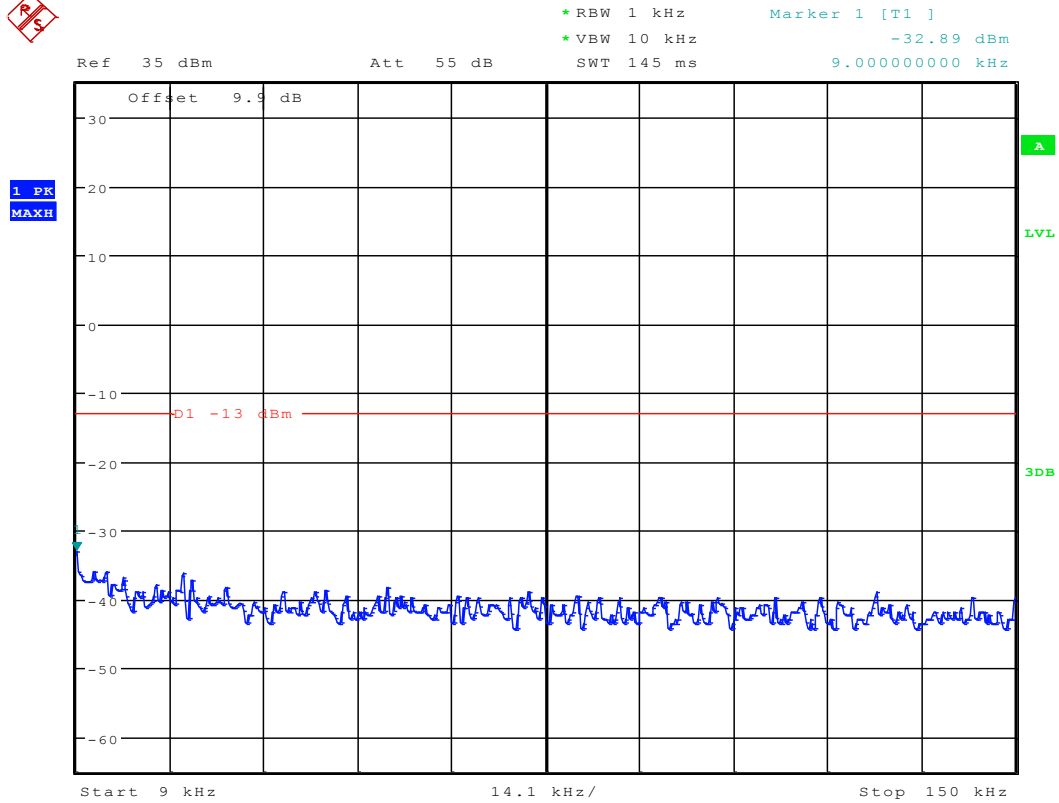
Date: 8.NOV.2011 23:59:10



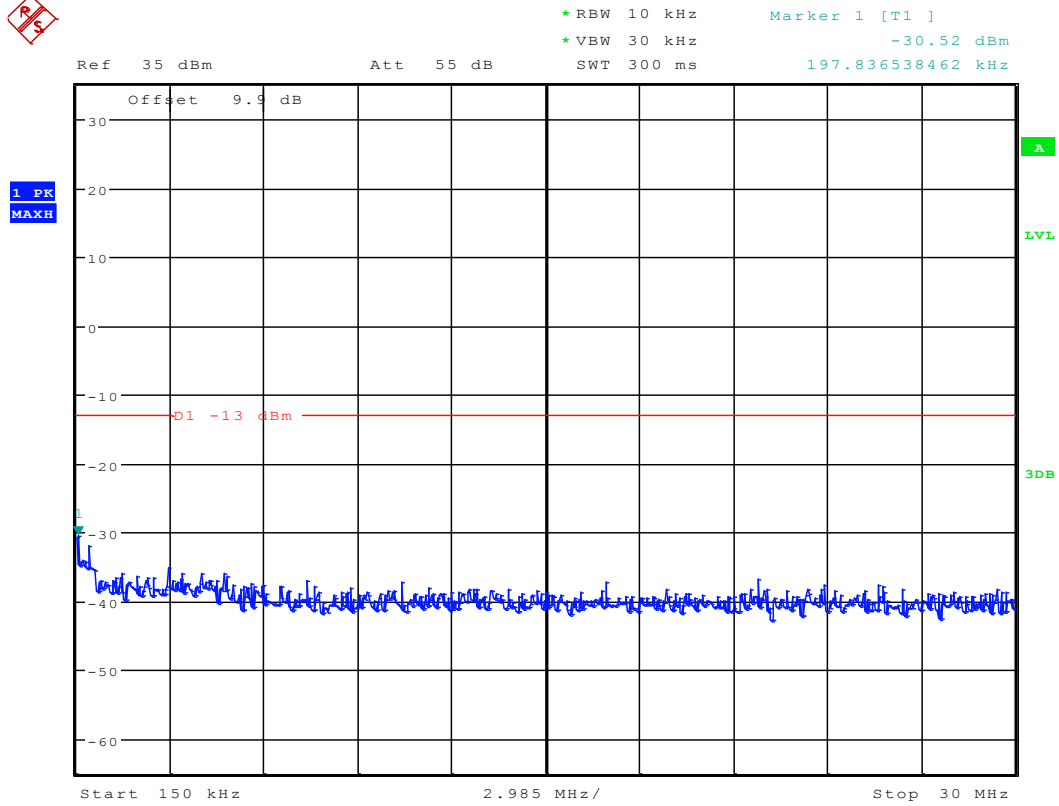
Date: 8.NOV.2011 23:59:36



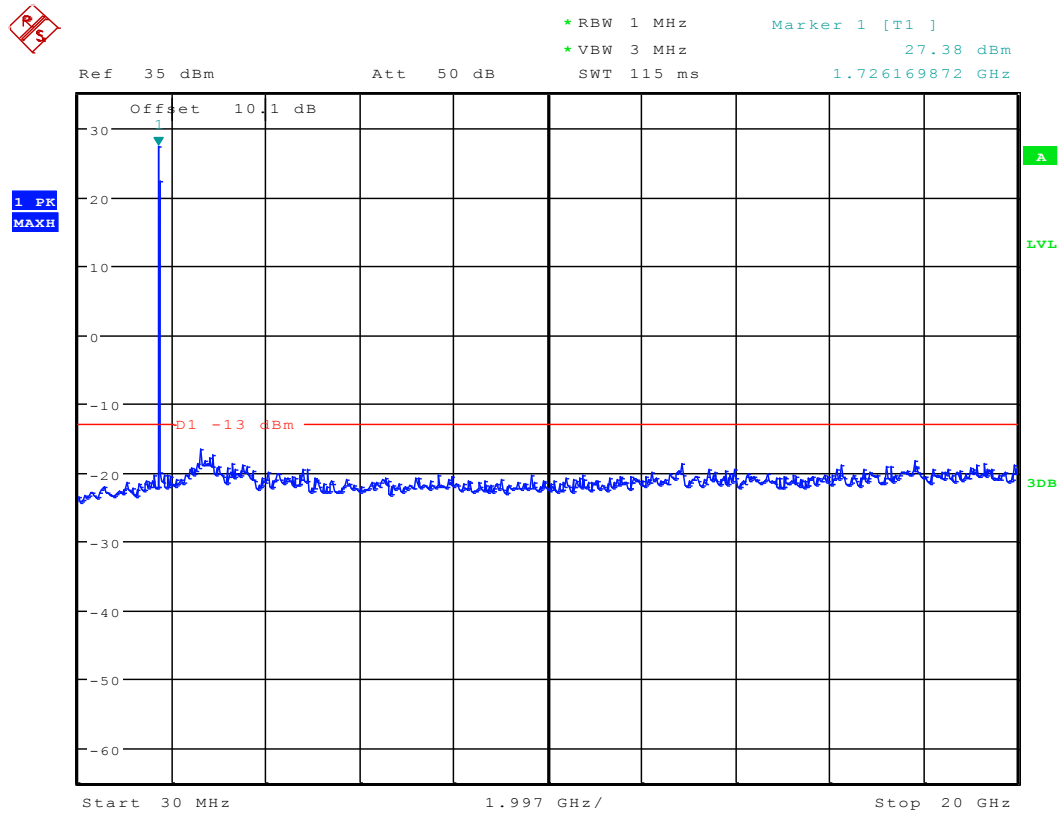
Channel 875



Date: 8.NOV.2011 23:58:53



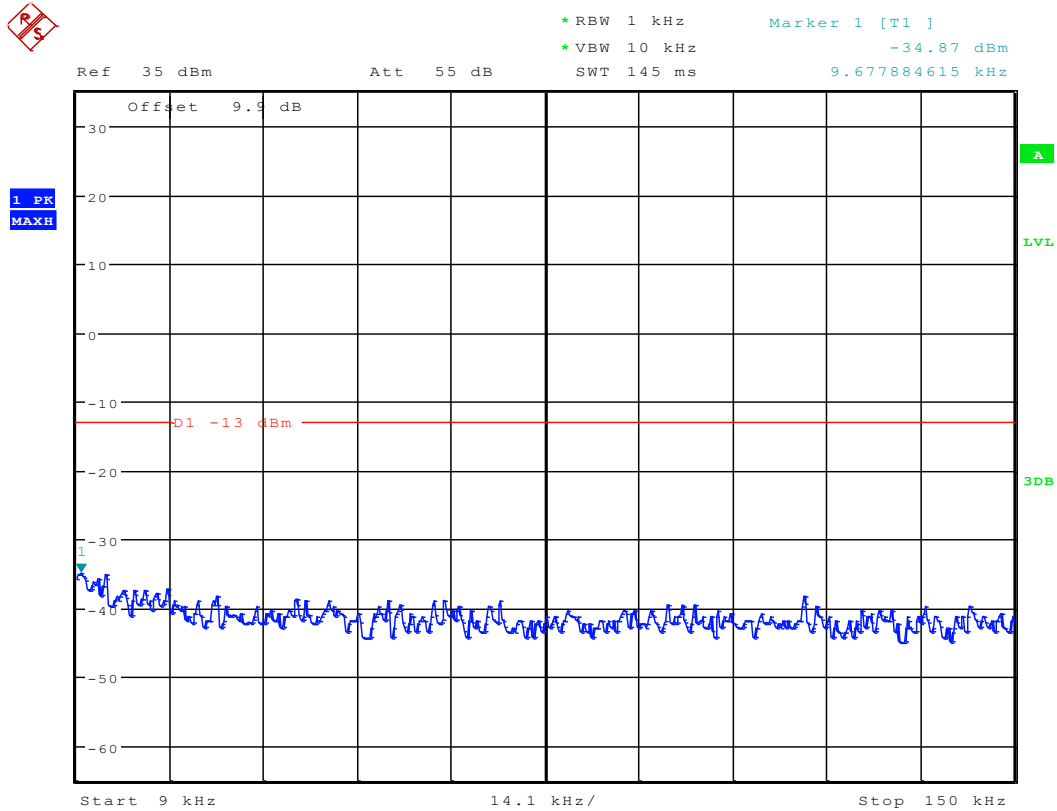
Date: 8.NOV.2011 23:59:19



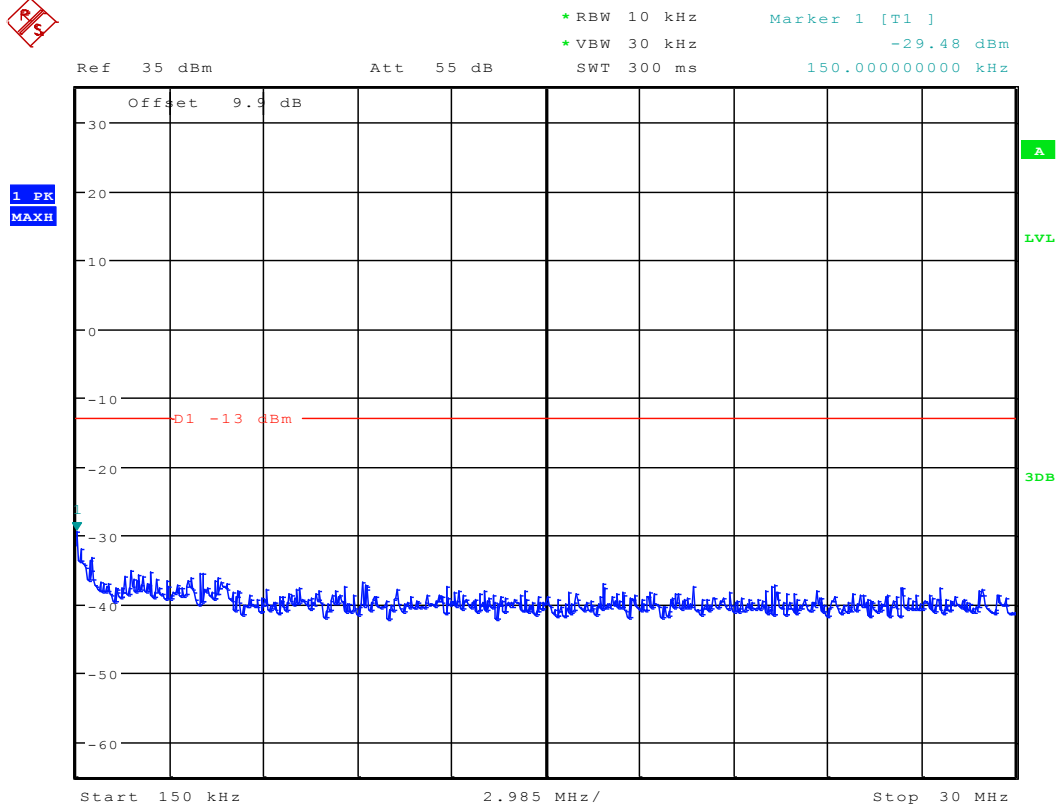
Date: 8.NOV.2011 23:59:45



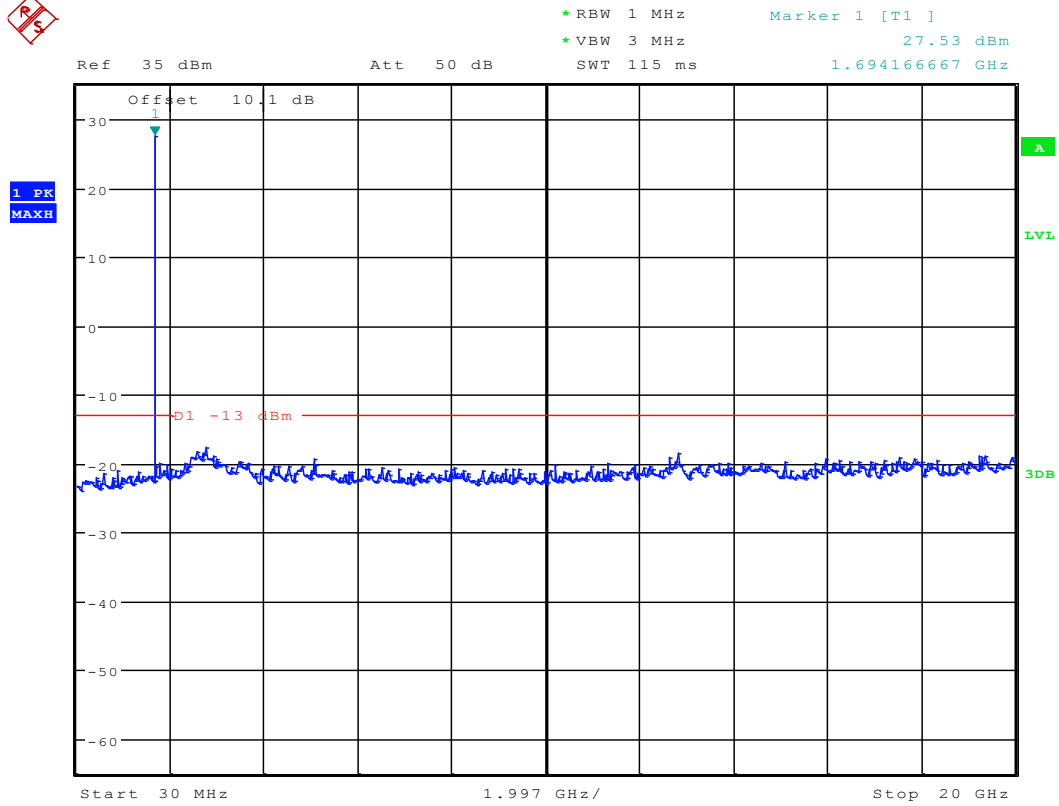
Modulation: 8PSK
Channel 25



Date: 8.NOV.2011 23:59:53



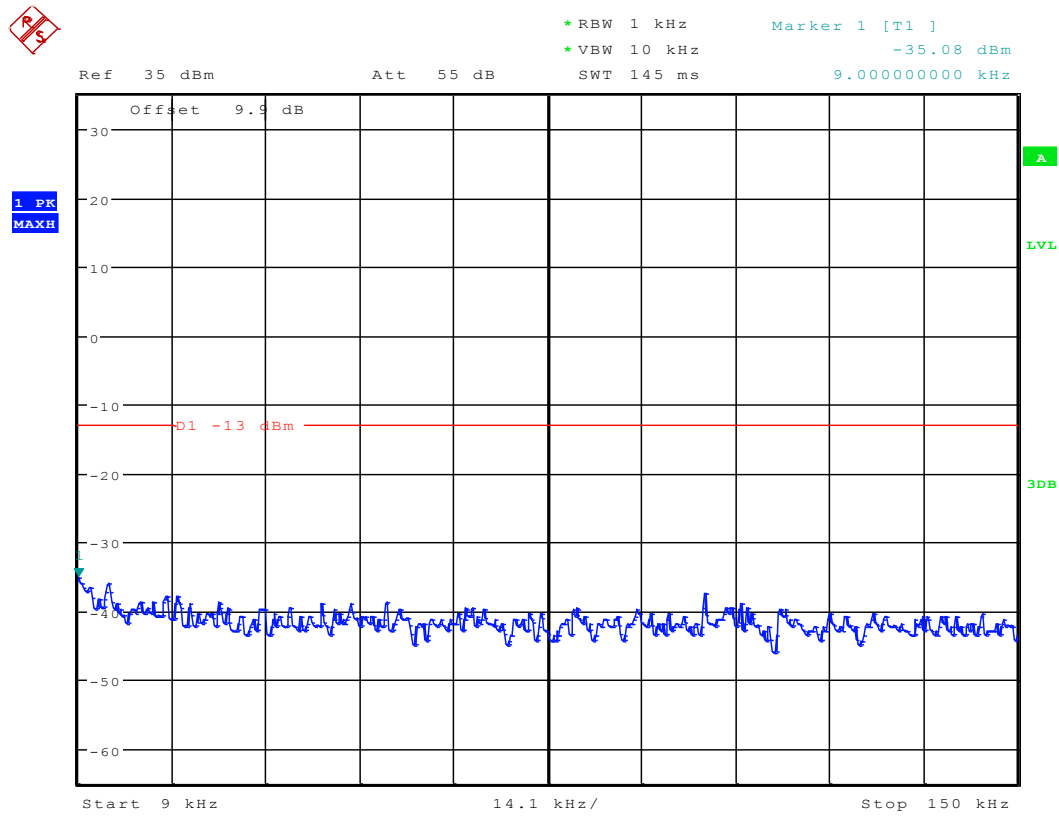
Date: 9.NOV.2011 00:00:19



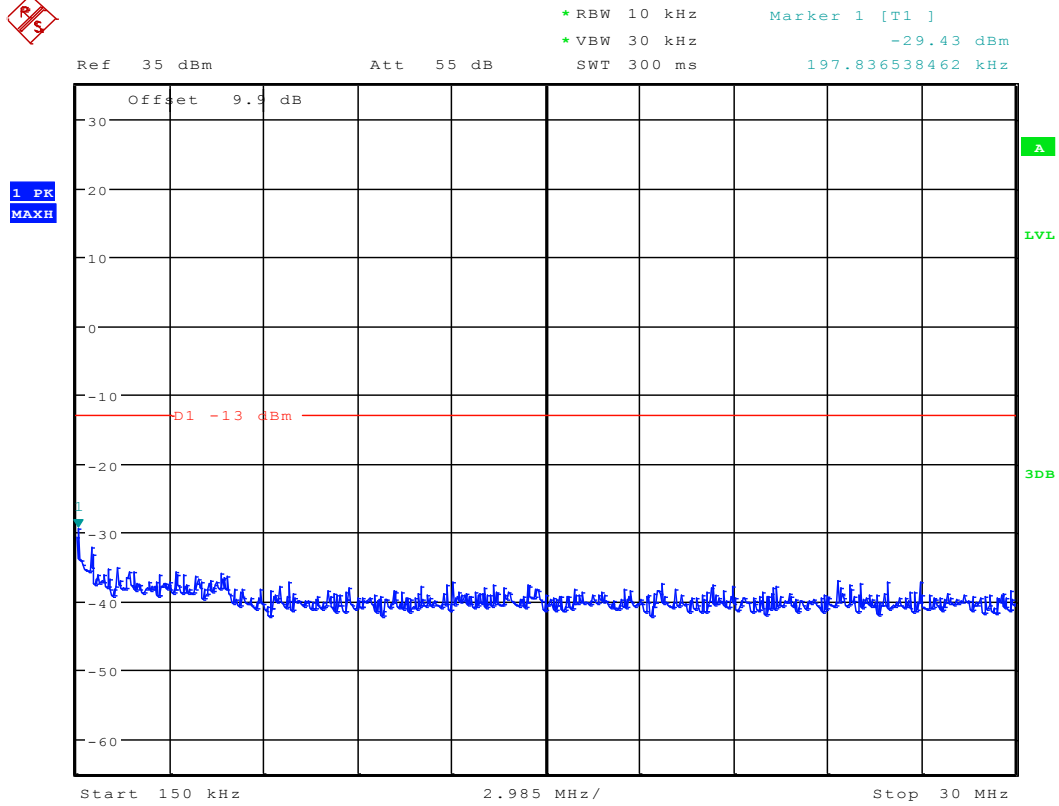
Date: 9.NOV.2011 00:00:45



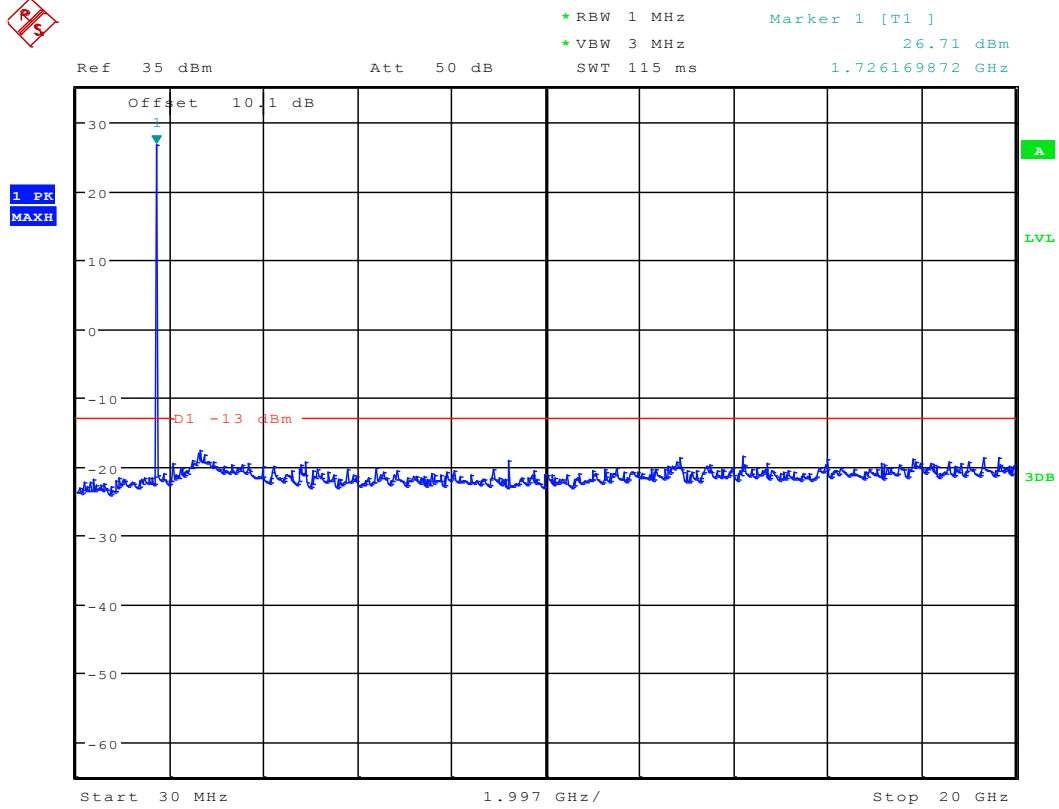
Channel 450



Date: 9.NOV.2011 00:00:02



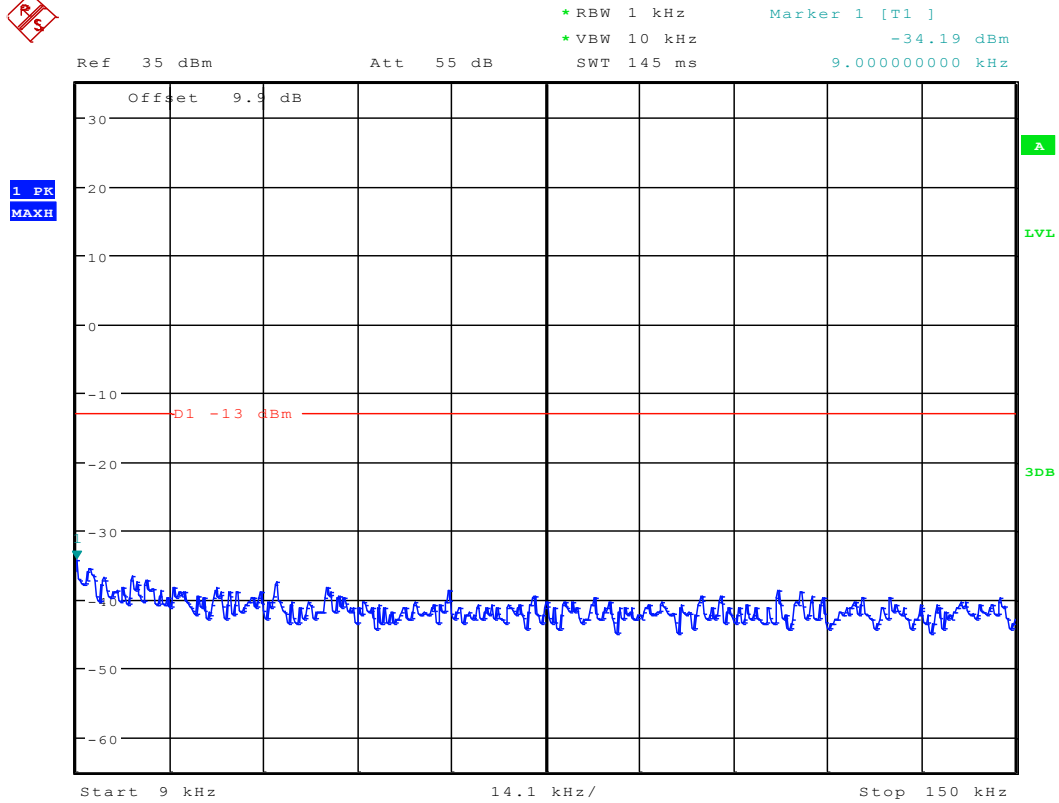
Date: 9.NOV.2011 00:00:28



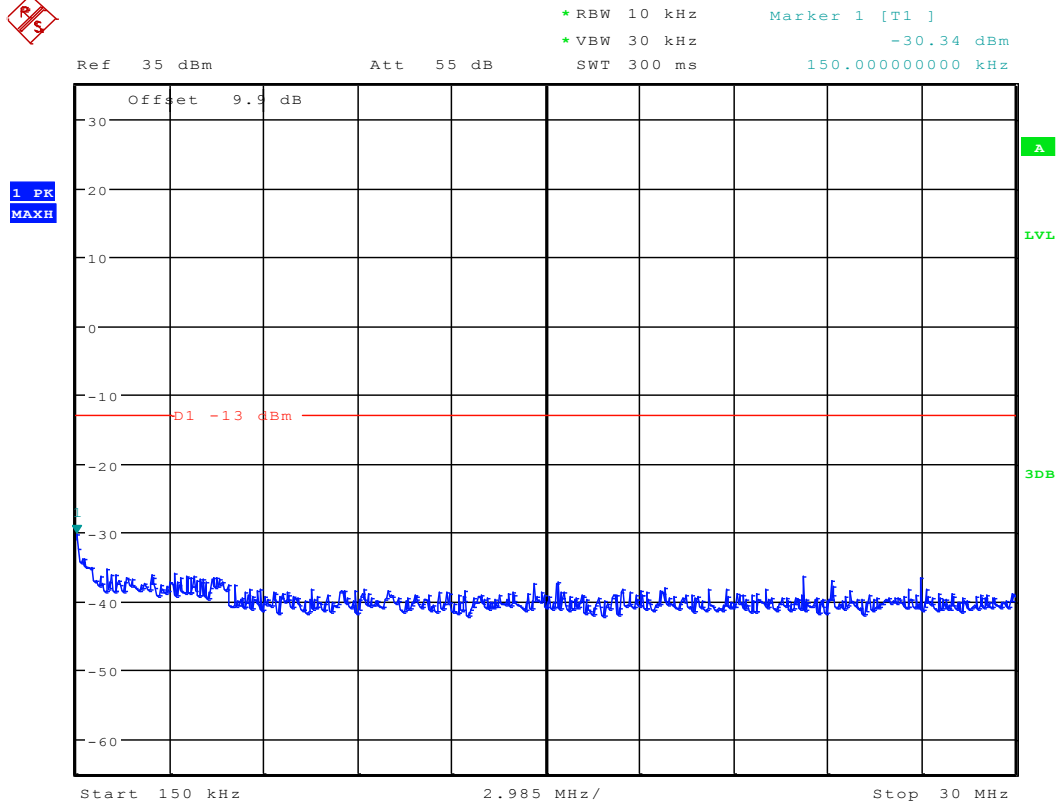
Date: 9.NOV.2011 00:00:54



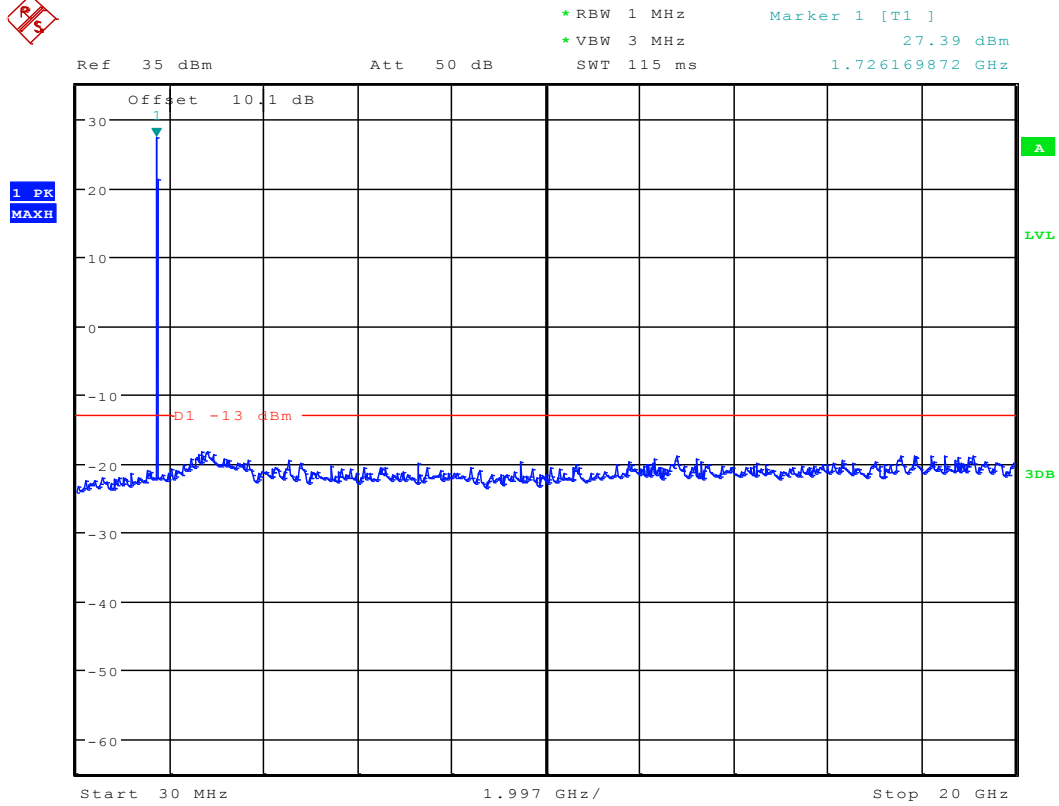
Channel 875



Date: 9.NOV.2011 00:00:10



Date: 9.NOV.2011 00:00:36



Date: 9.NOV.2011 00:01:02



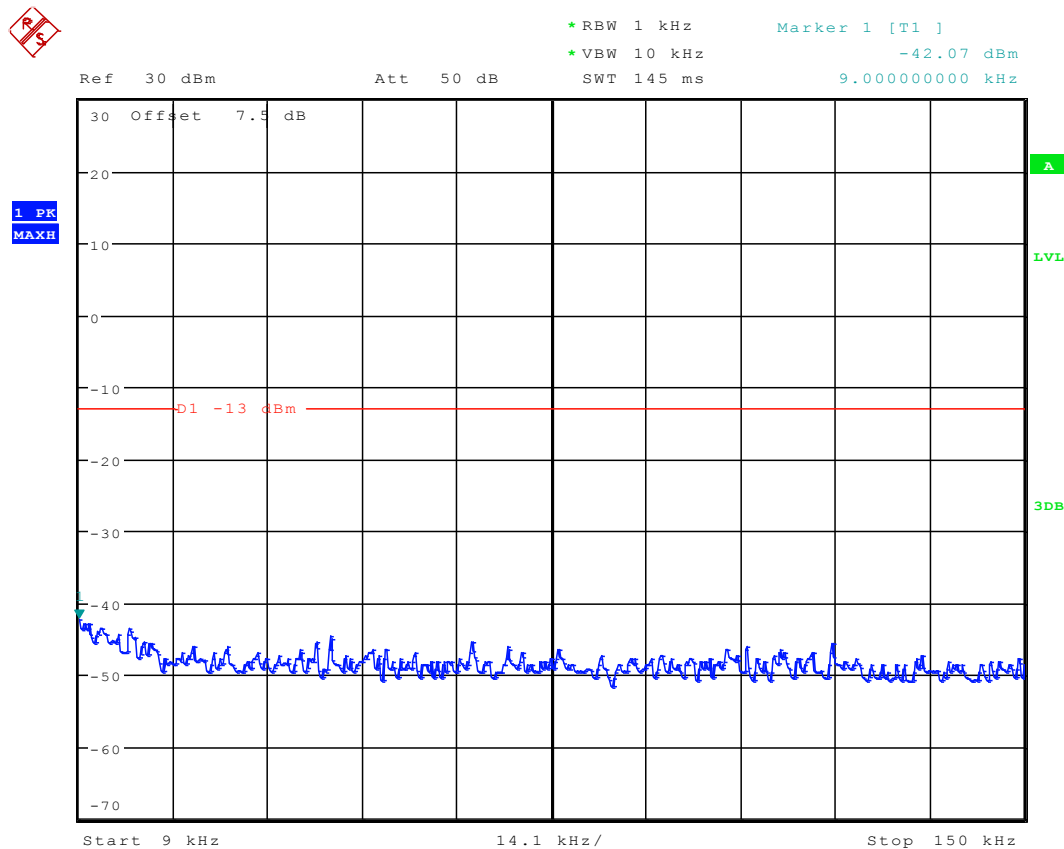
TM4 (QPSK)

NOTE1: QPSK output power higher than 16QAM, so only test the QPSK mode.

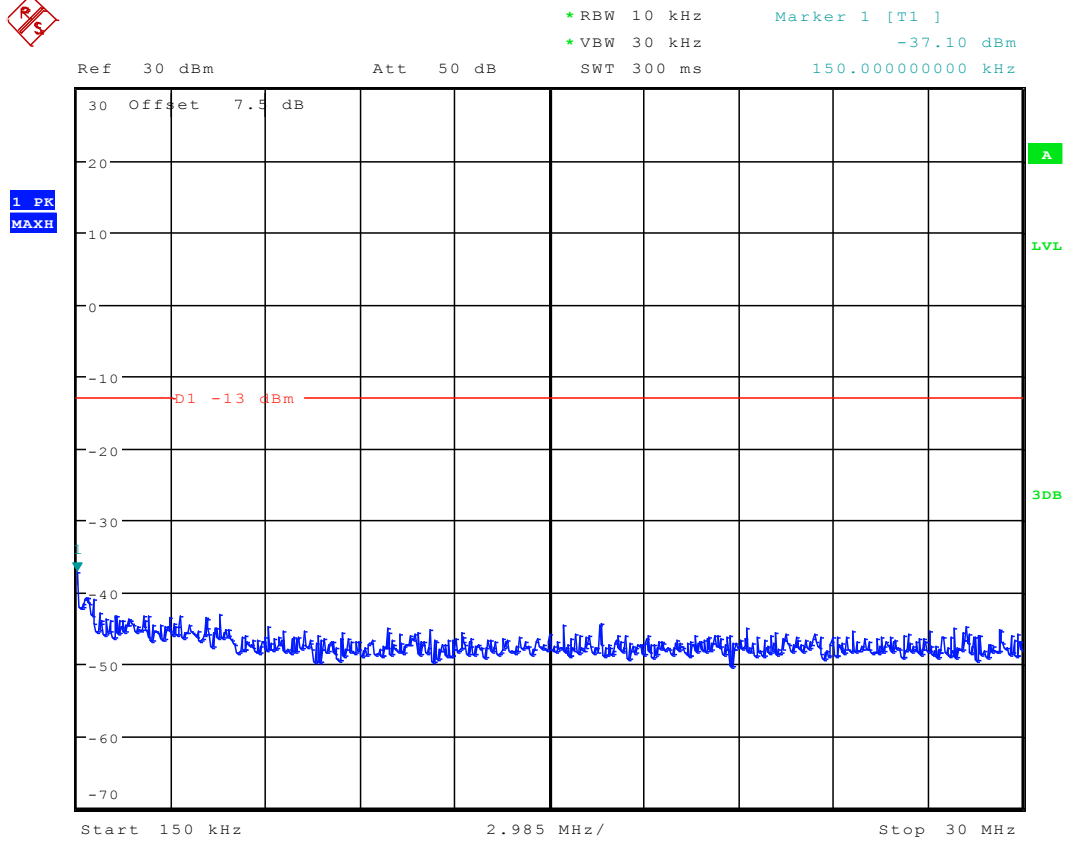
NOTE2: All relevant operation modes have been tested, and the worst case data (1RB&full RB) is included in this report.

1.4MHz(BW/)
Channel 19957

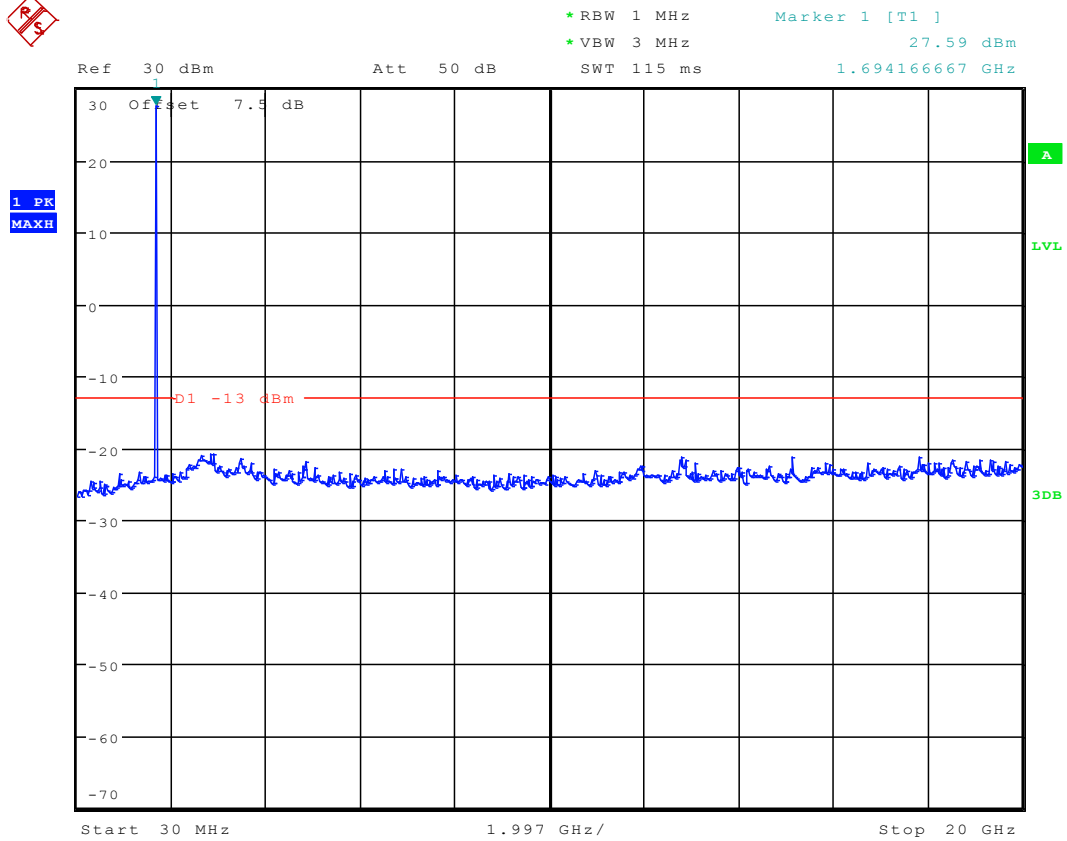
1 RB/RB #0



Date: 9.NOV.2011 18:29:49



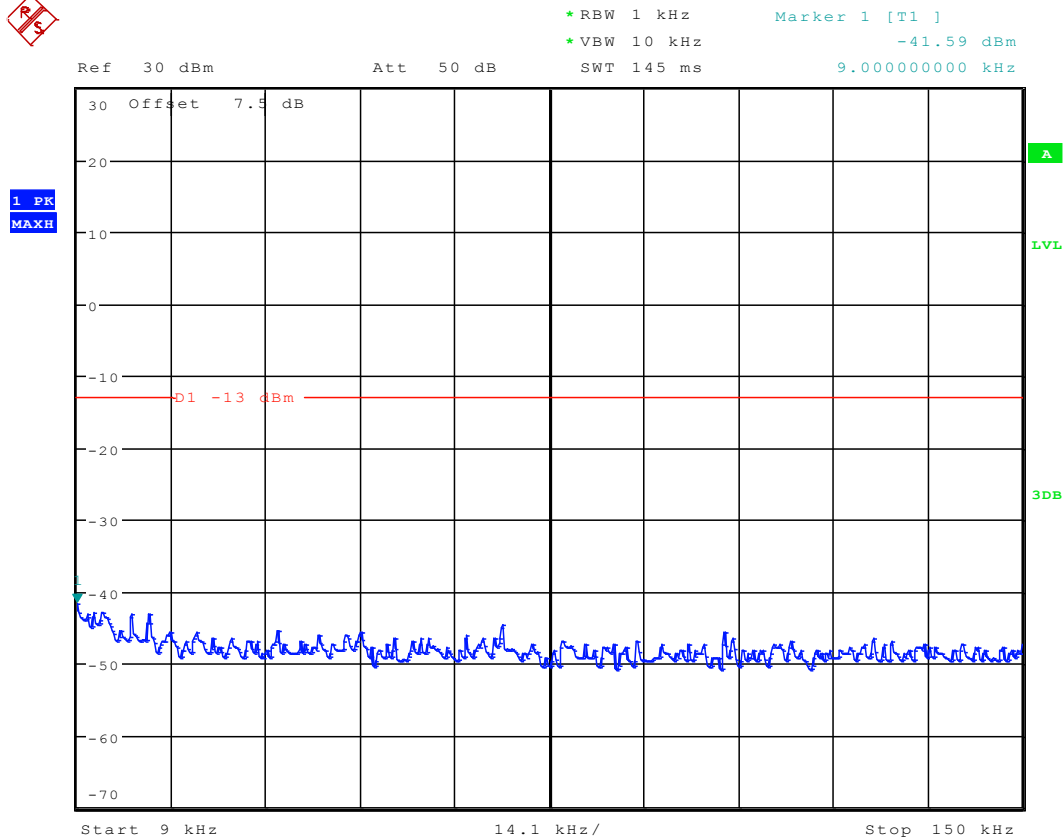
Date: 9.NOV.2011 18:28:31



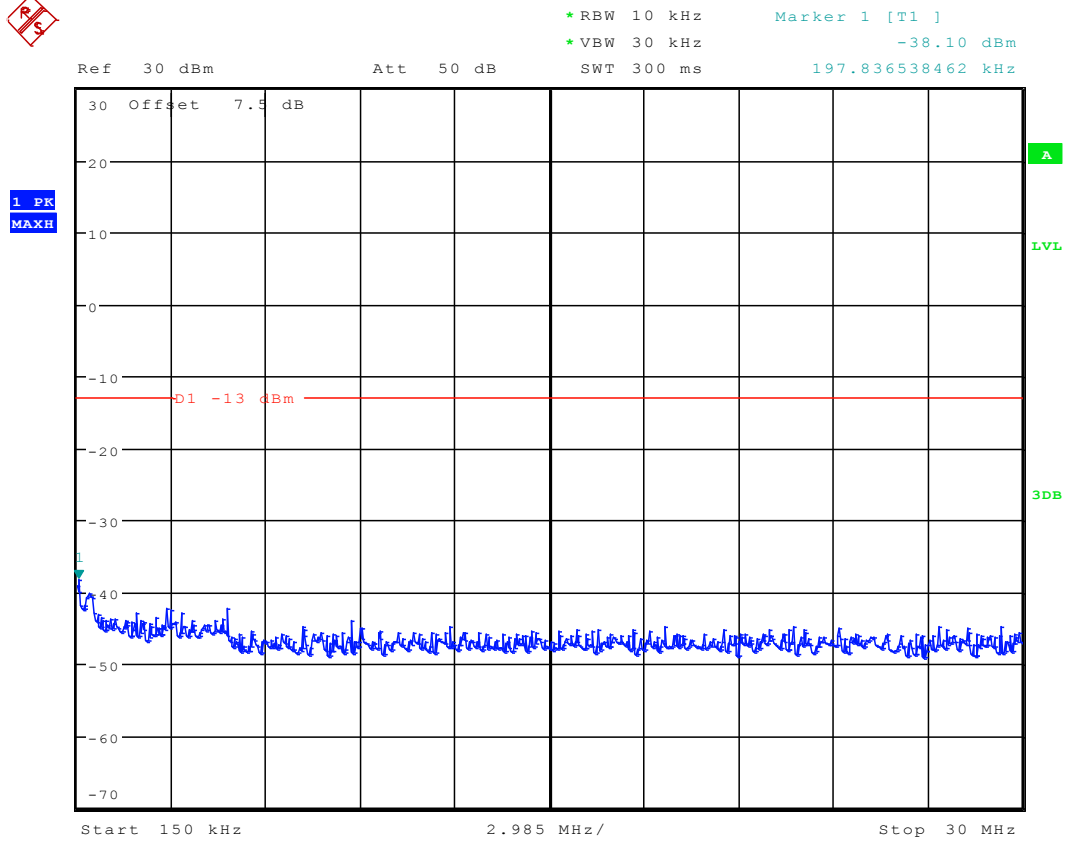
Date: 9.NOV.2011 18:27:27



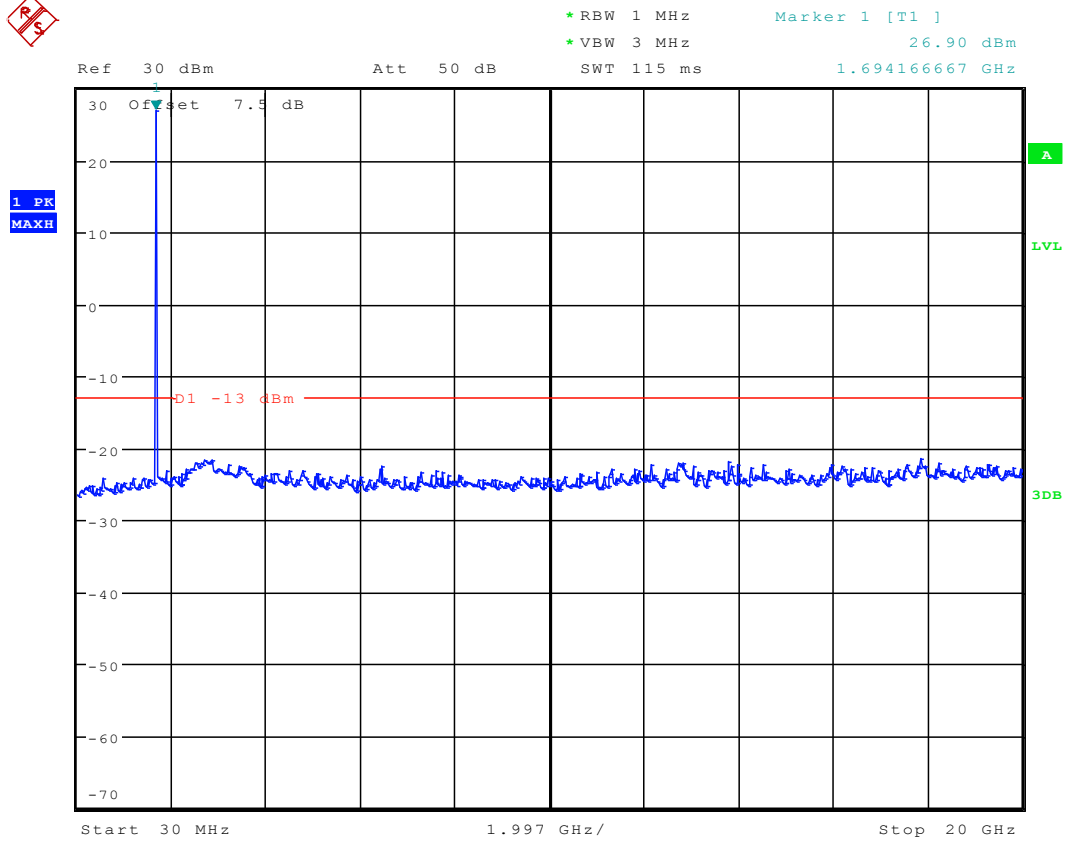
1 RB/RB #max



Date: 9.NOV.2011 18:30:16



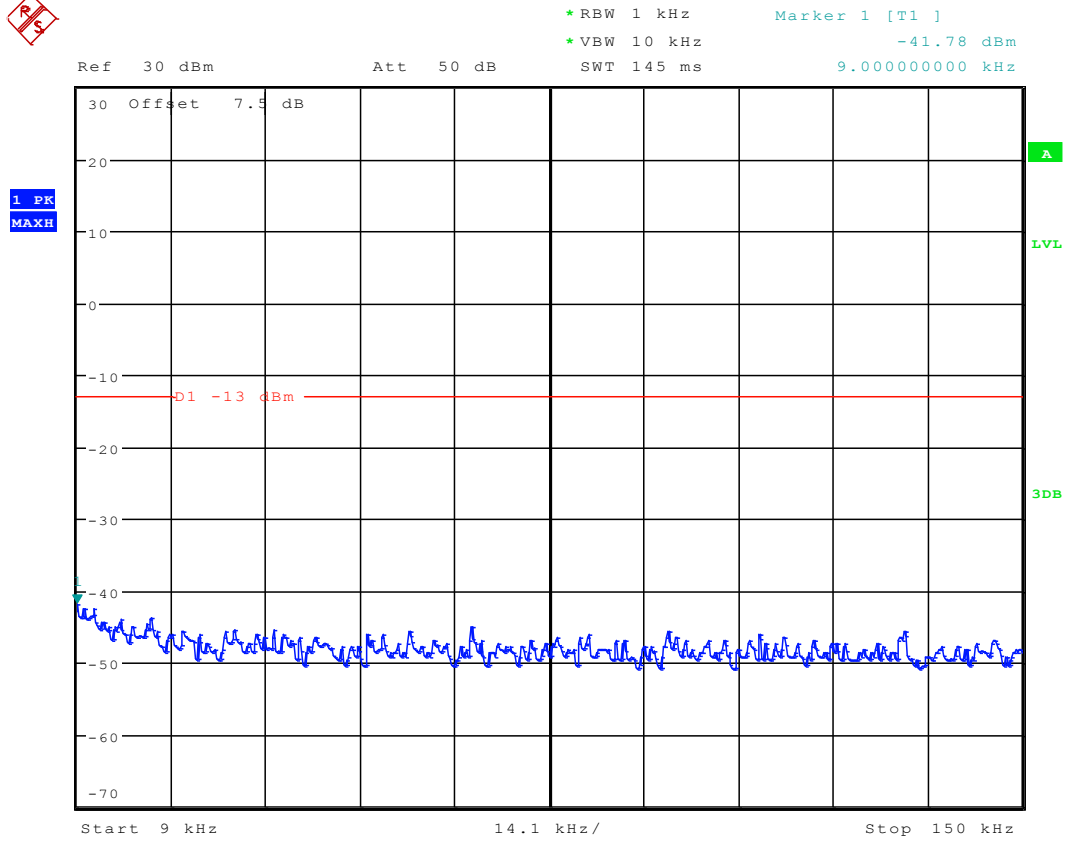
Date: 9.NOV.2011 18:28:10



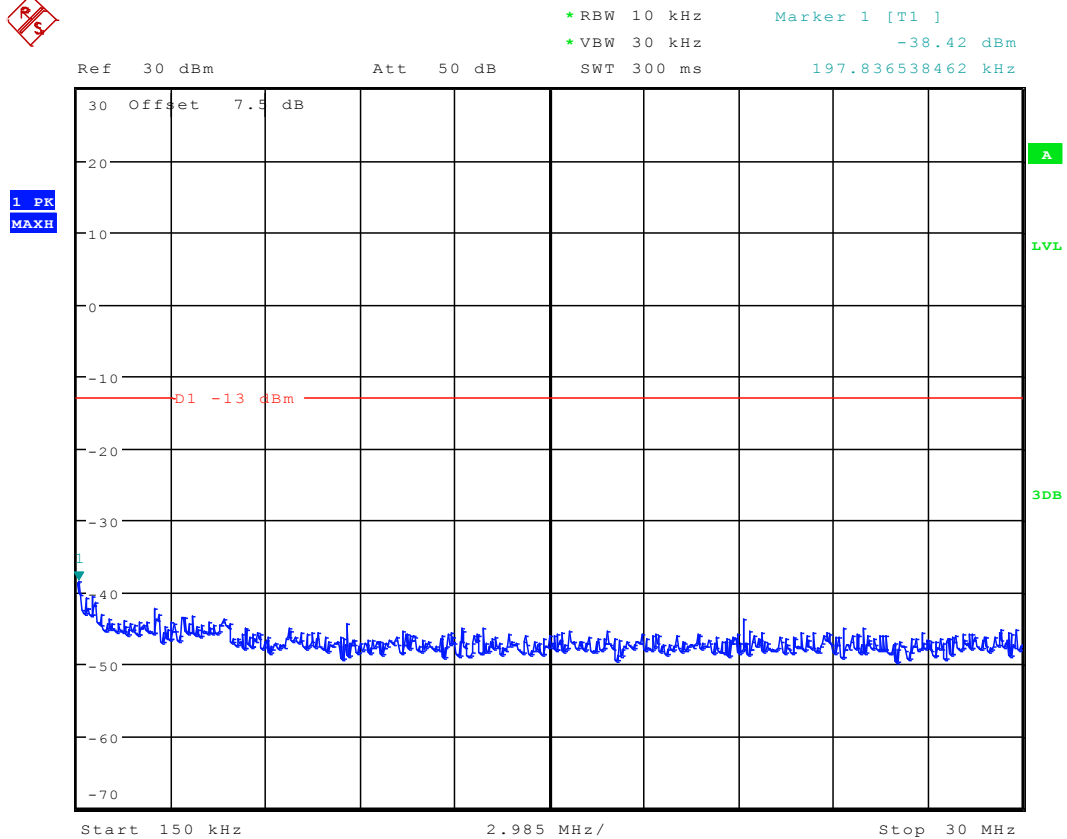
Date: 9.NOV.2011 18:27:43



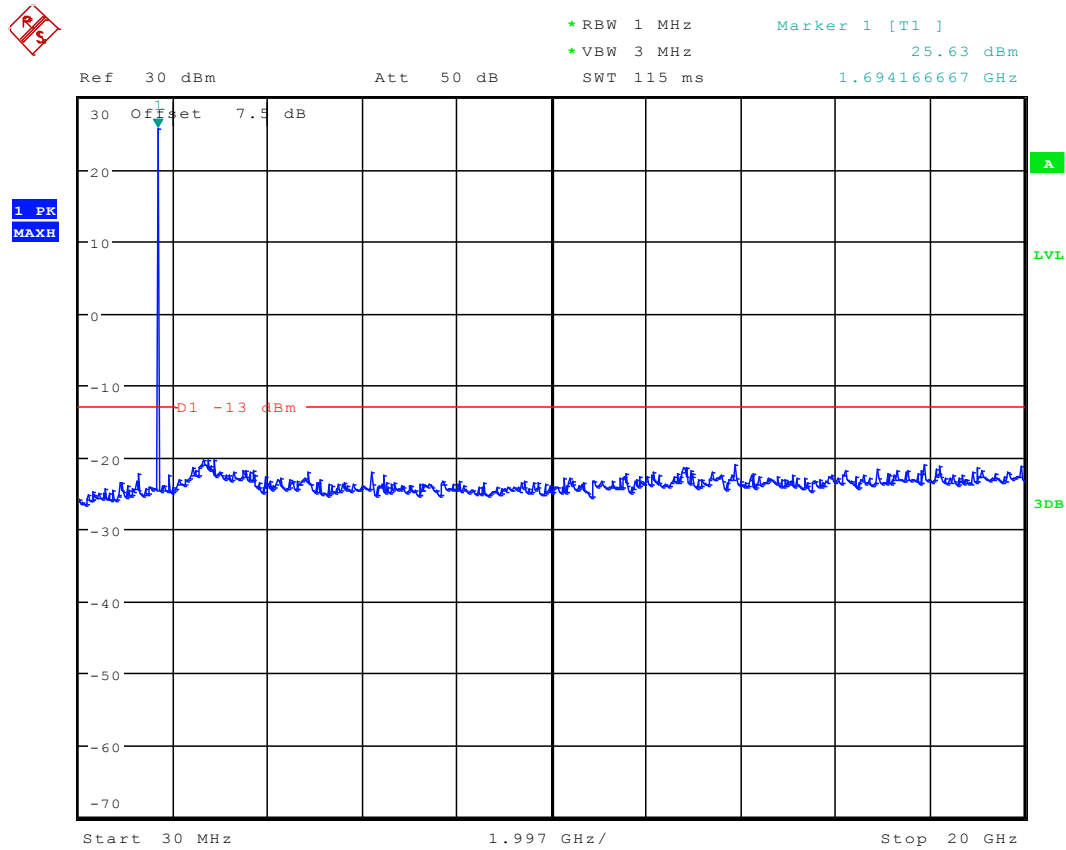
full RBs



Date: 9.NOV.2011 18:29:18



Date: 9.NOV.2011 18:28:50

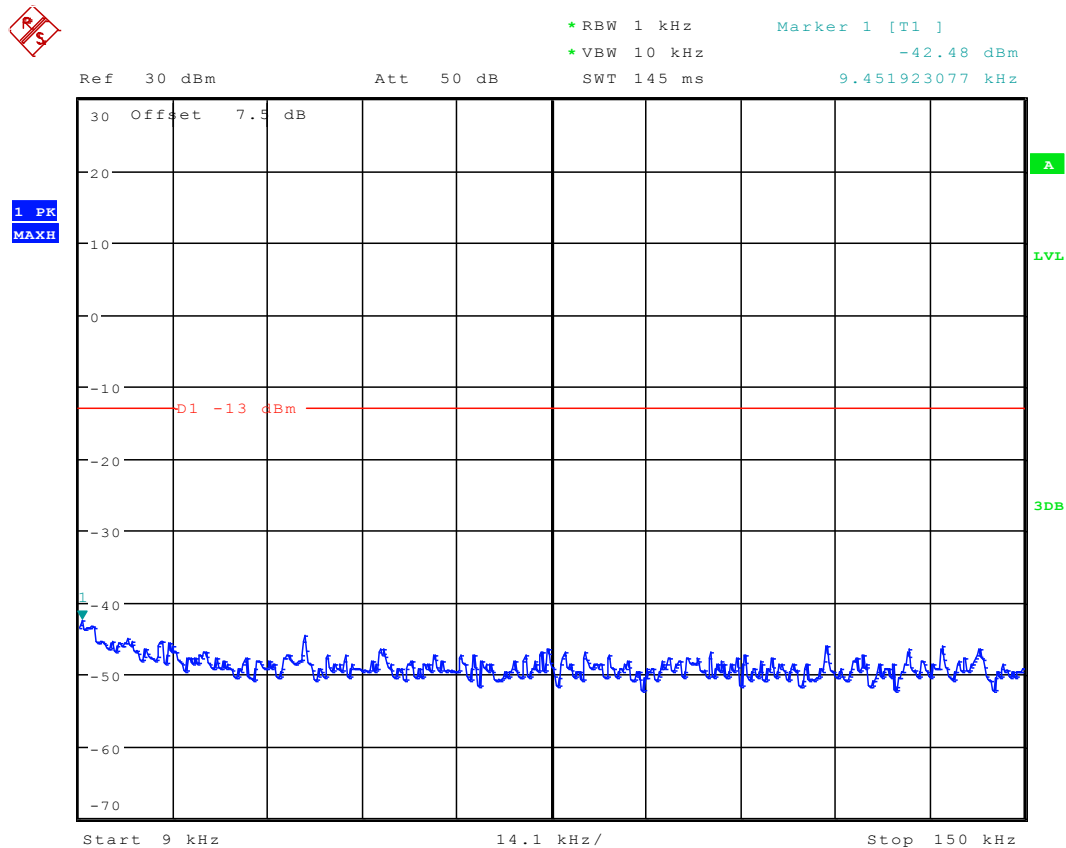


Date: 9.NOV.2011 18:26:54

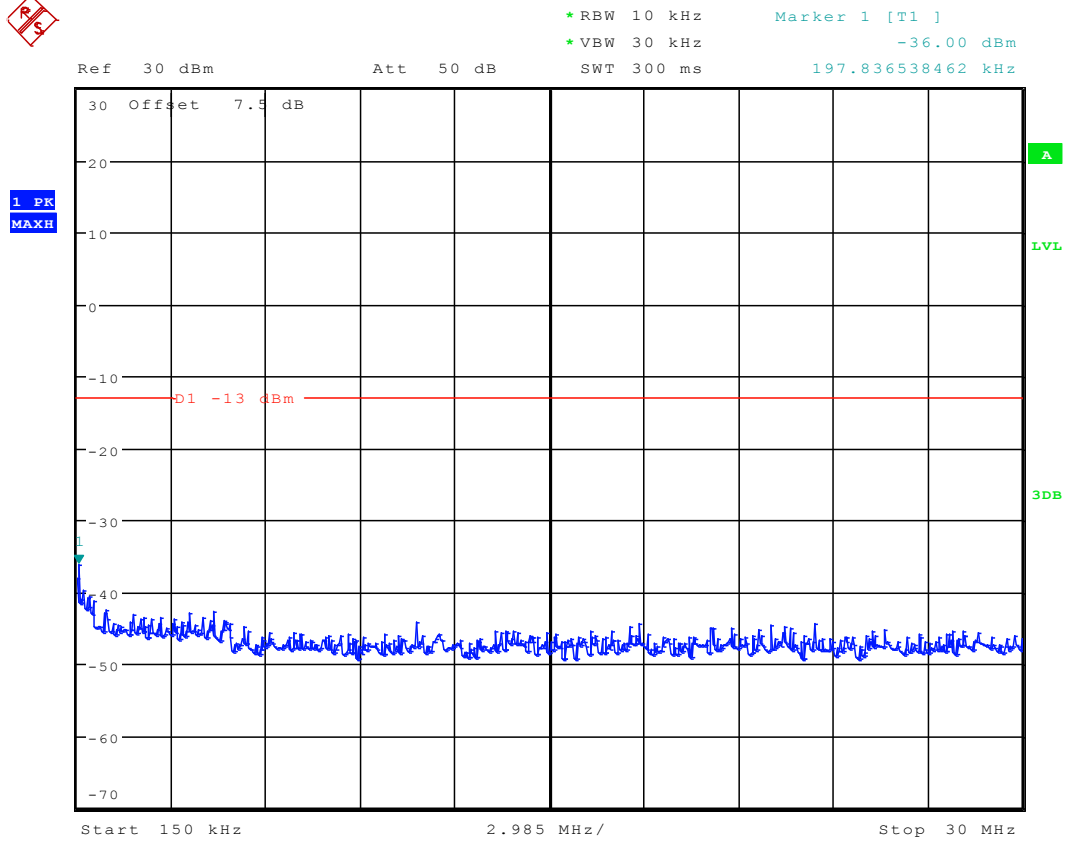


1.4MHz(BW/) Channel 20175

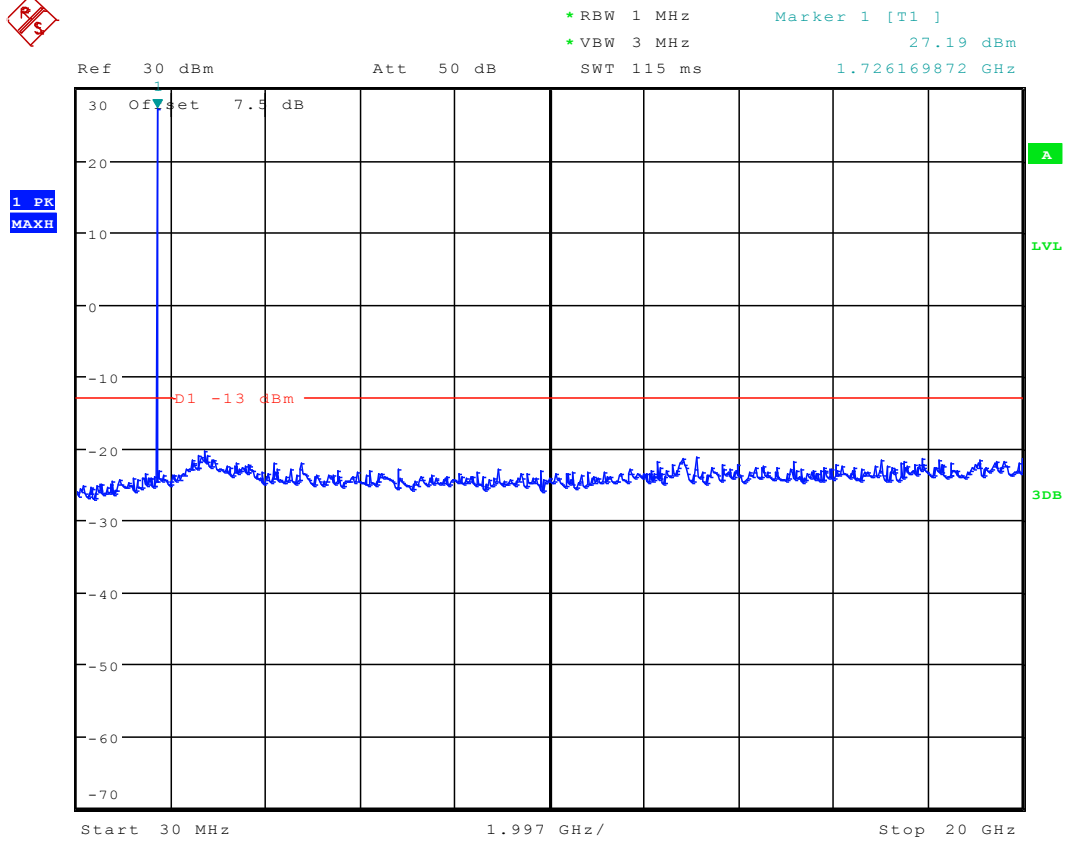
1 RB/RB #0



Date: 9.NOV.2011 18:21:16



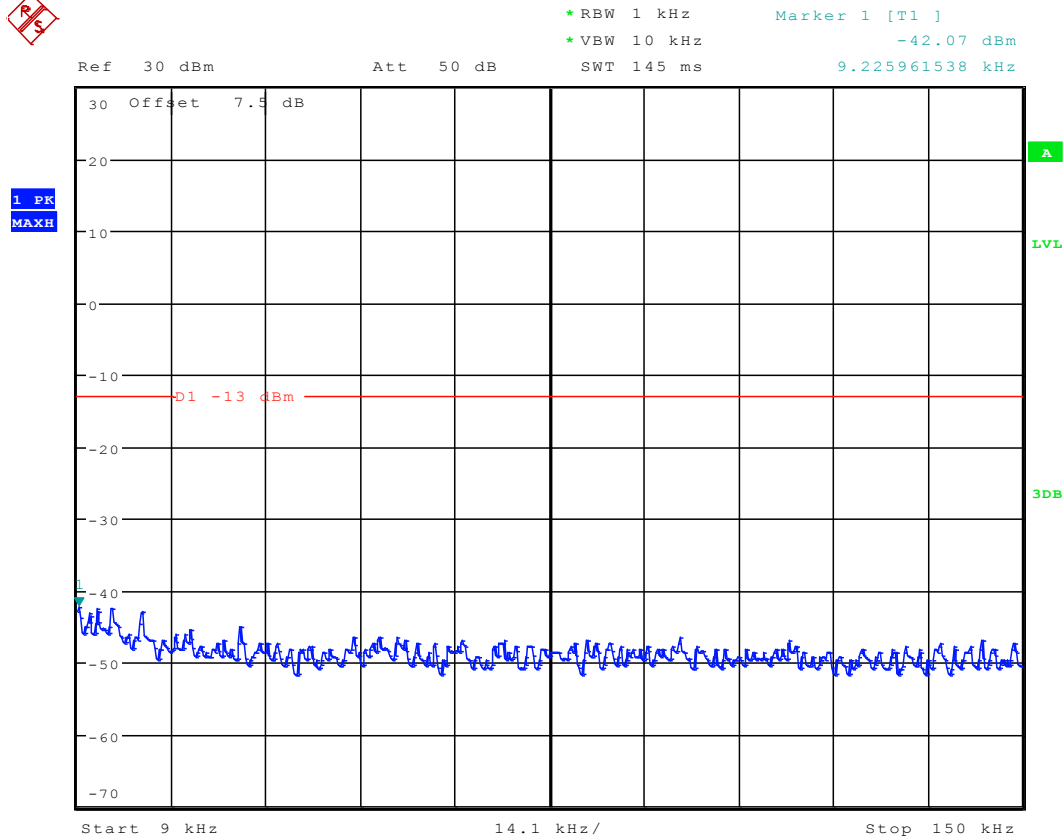
Date: 9.NOV.2011 18:22:56



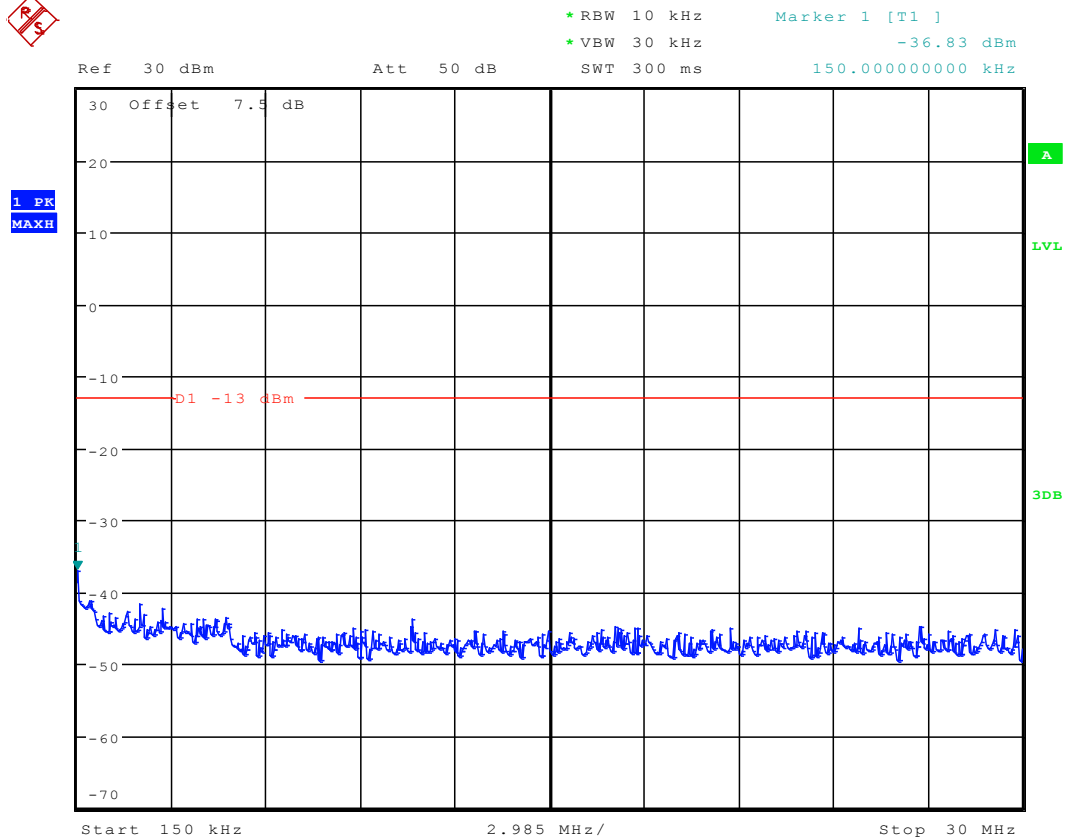
Date: 9.NOV.2011 18:24:15



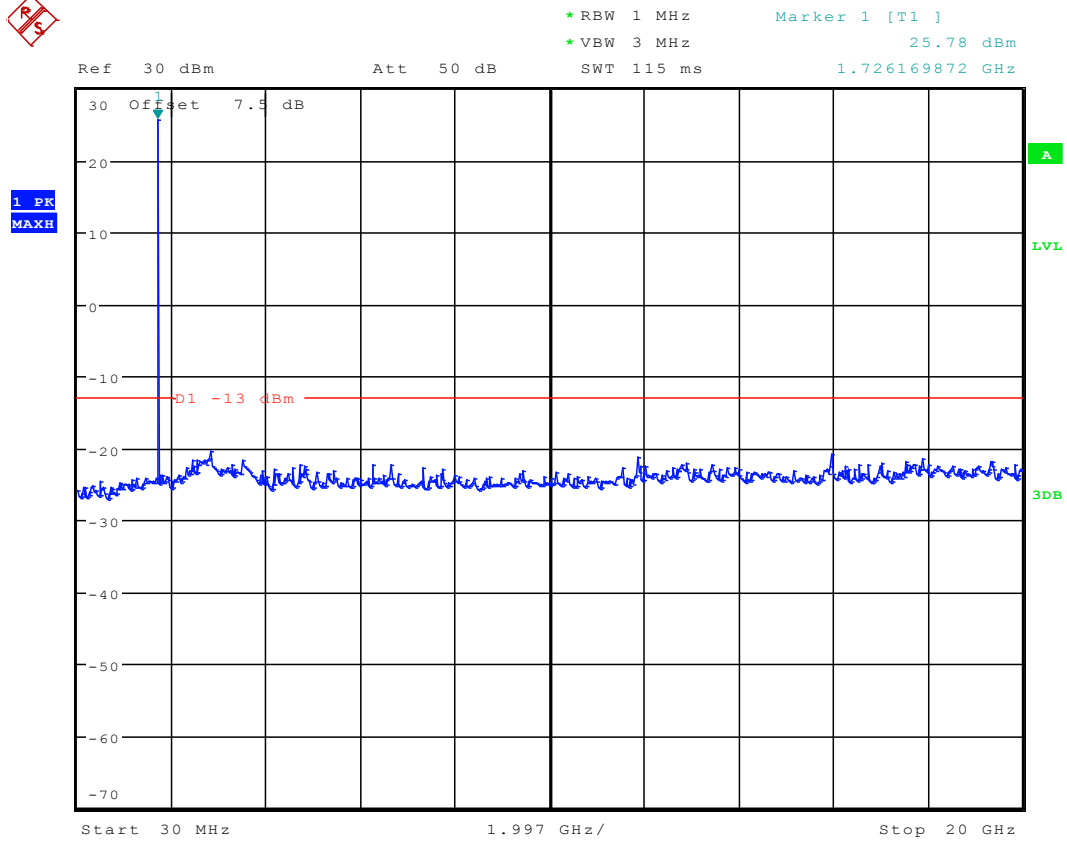
1 RB/RB #max



Date: 9.NOV.2011 18:21:38



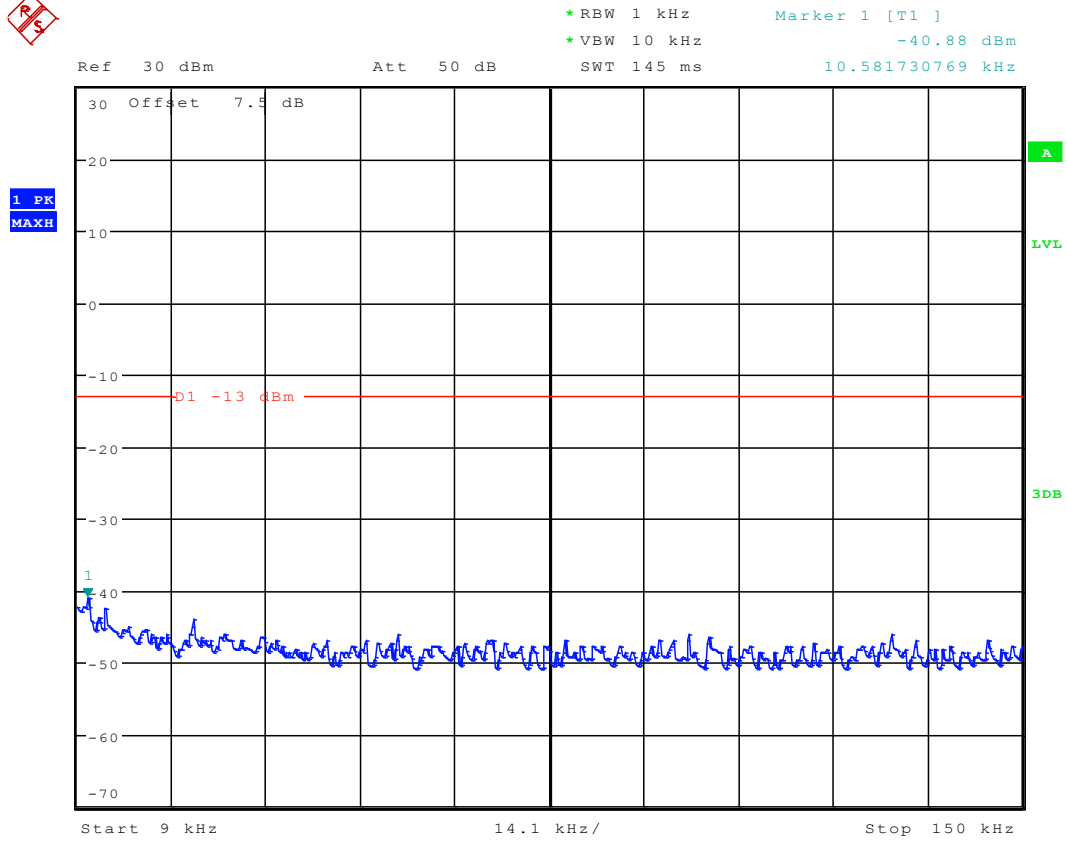
Date: 9.NOV.2011 18:22:38



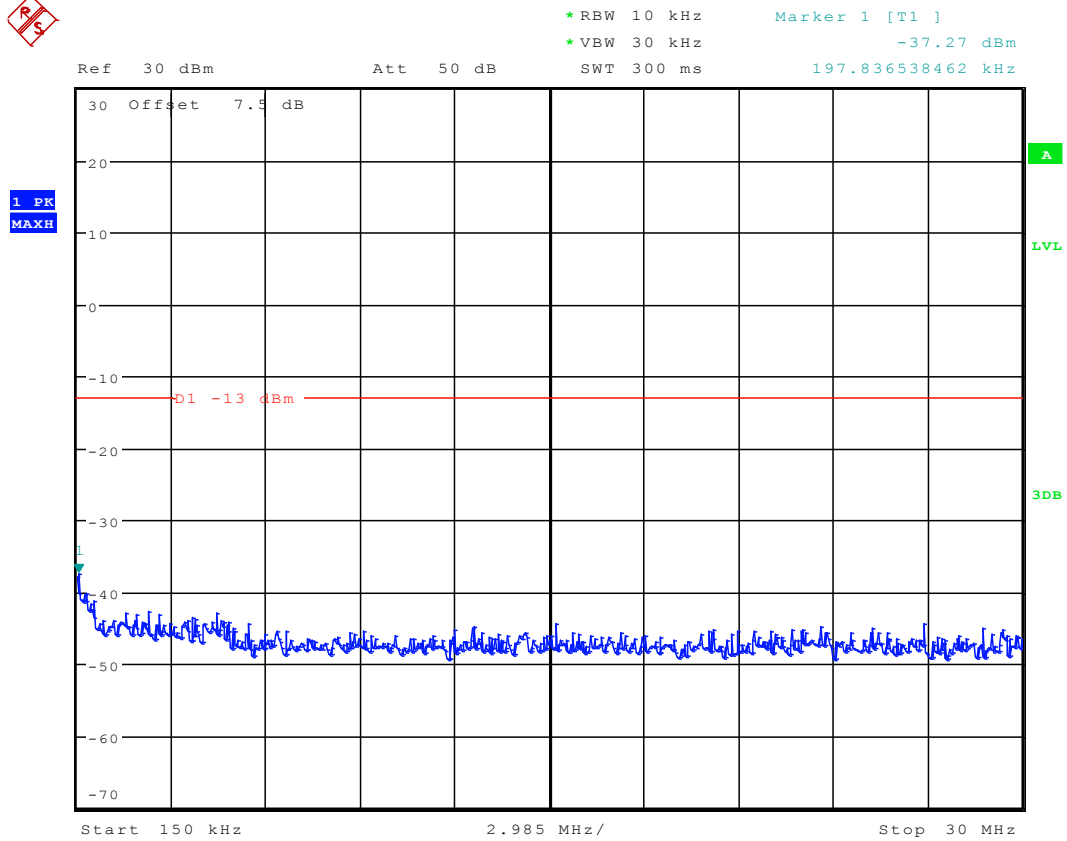
Date: 9.NOV.2011 18:24:32



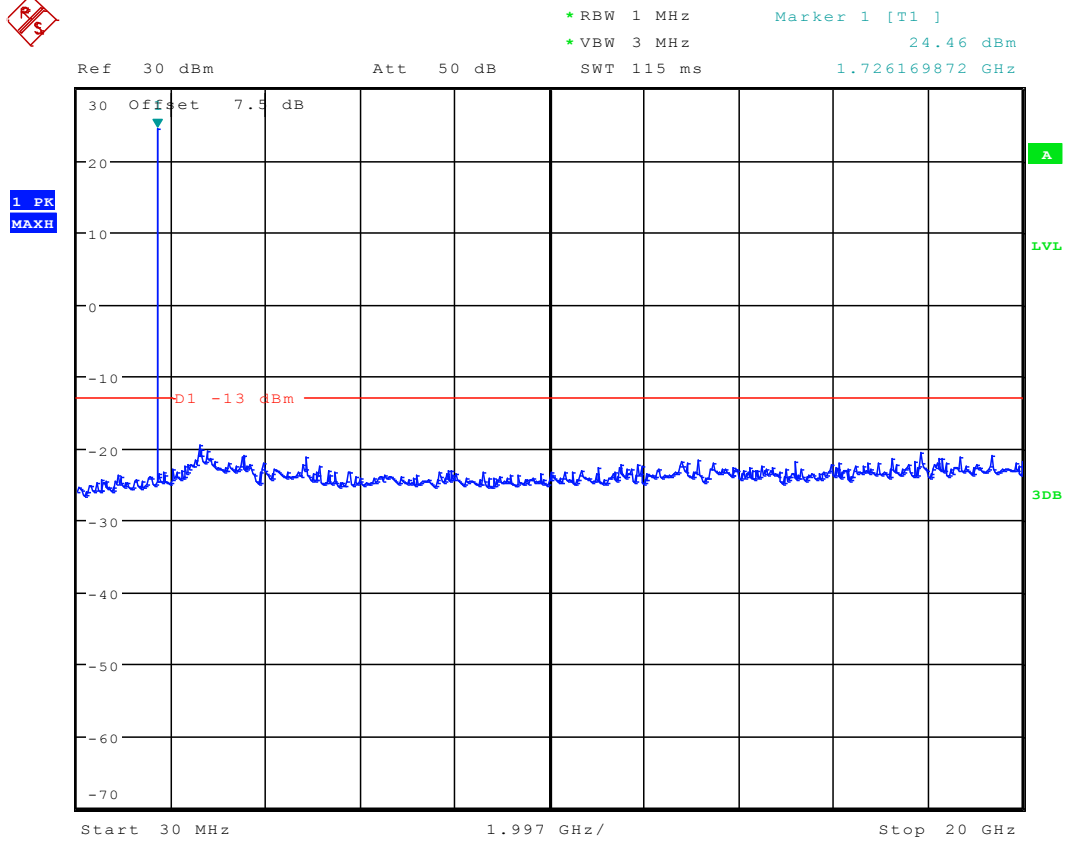
full RBs



Date: 9.NOV.2011 18:20:29



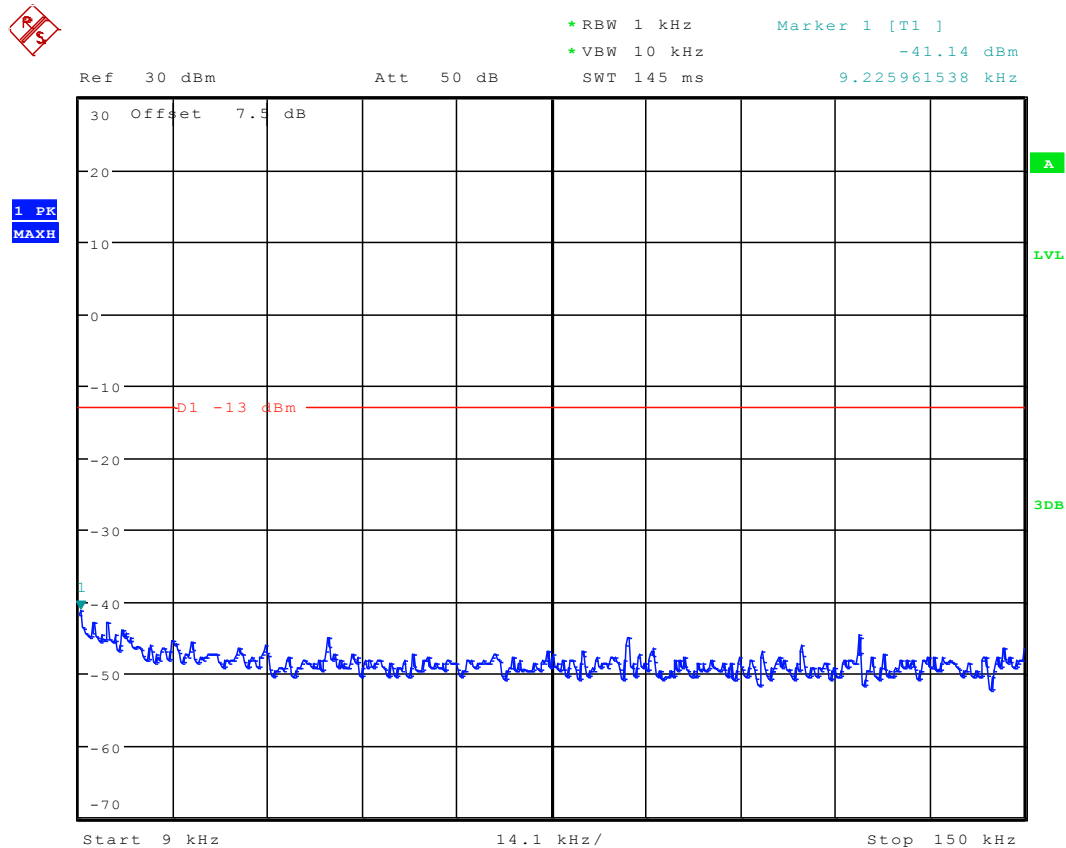
Date: 9.NOV.2011 18:23:19



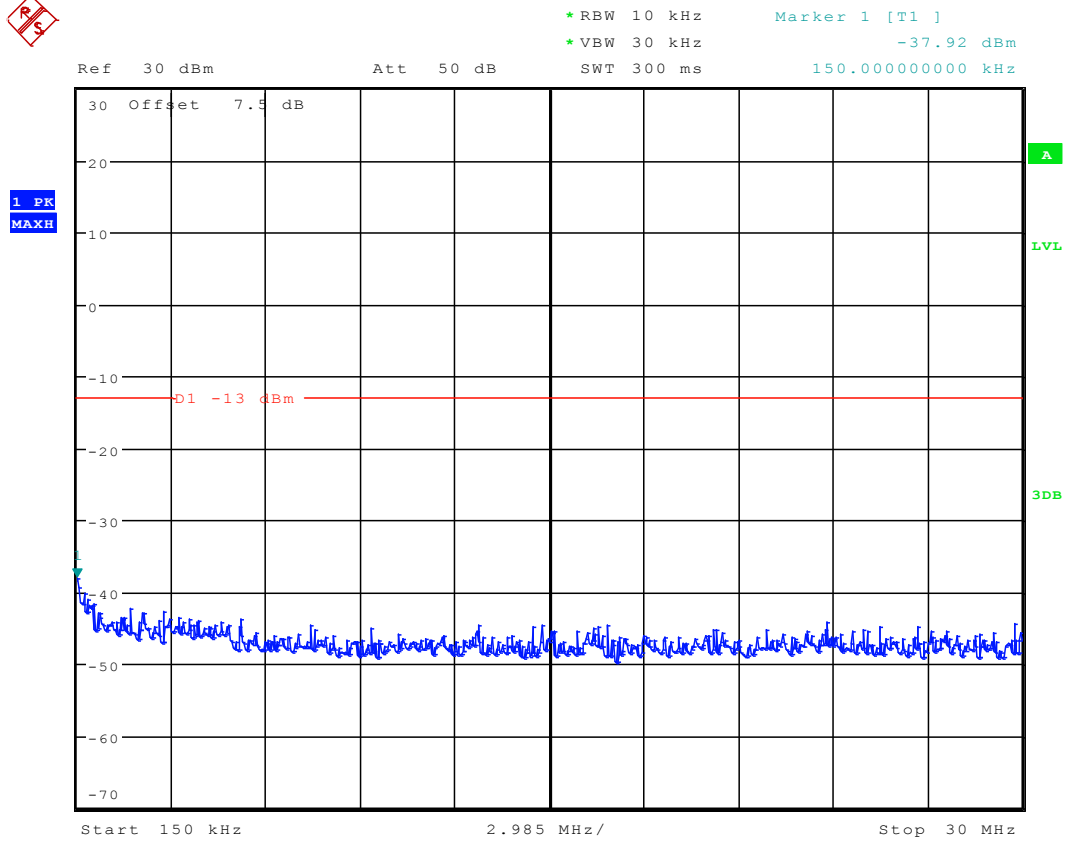
Date: 9.NOV.2011 18:23:47

1.4MHz(BW/)
Channel 20393

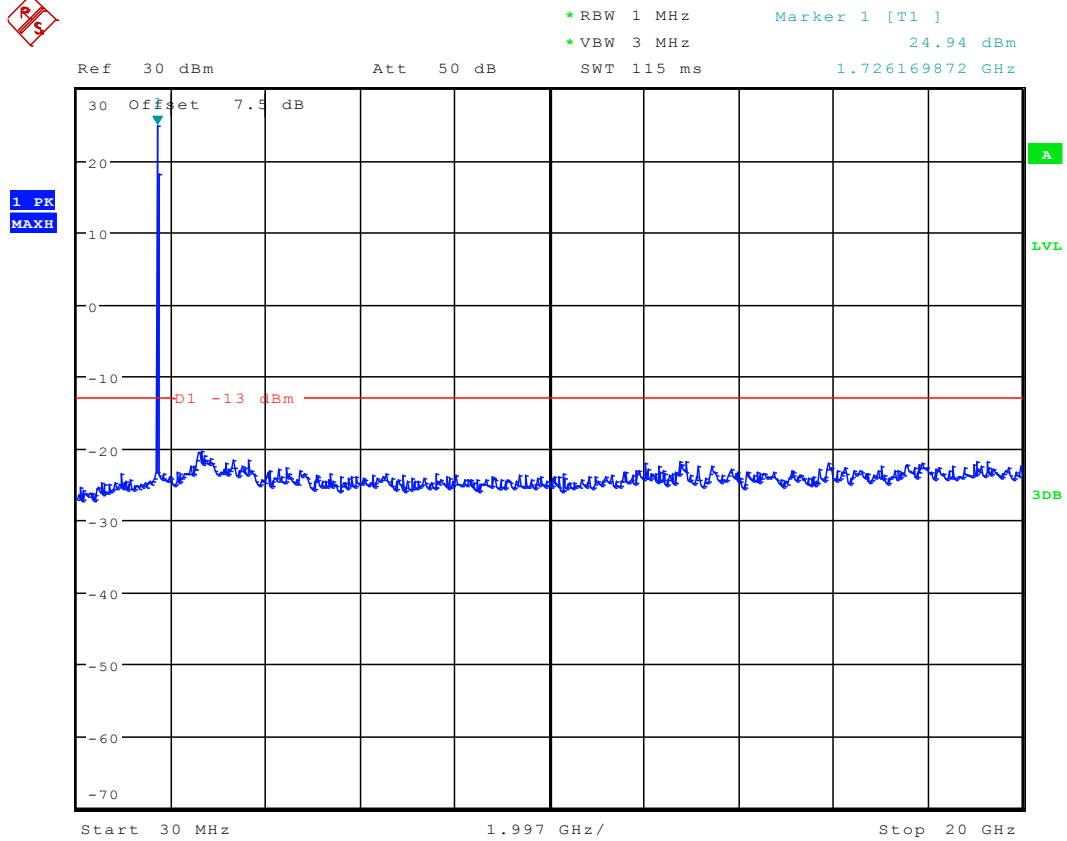
1 RB/RB #0



Date: 9.NOV.2011 18:38:53

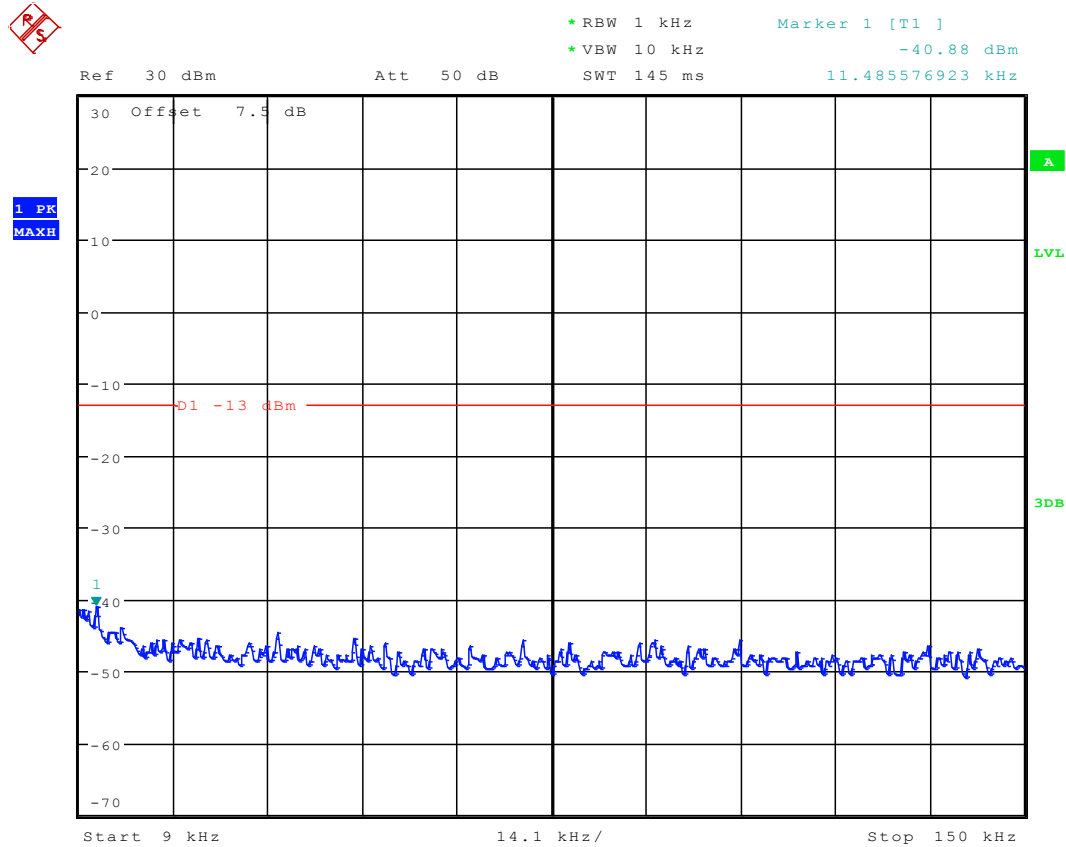


Date: 9.NOV.2011 18:40:18

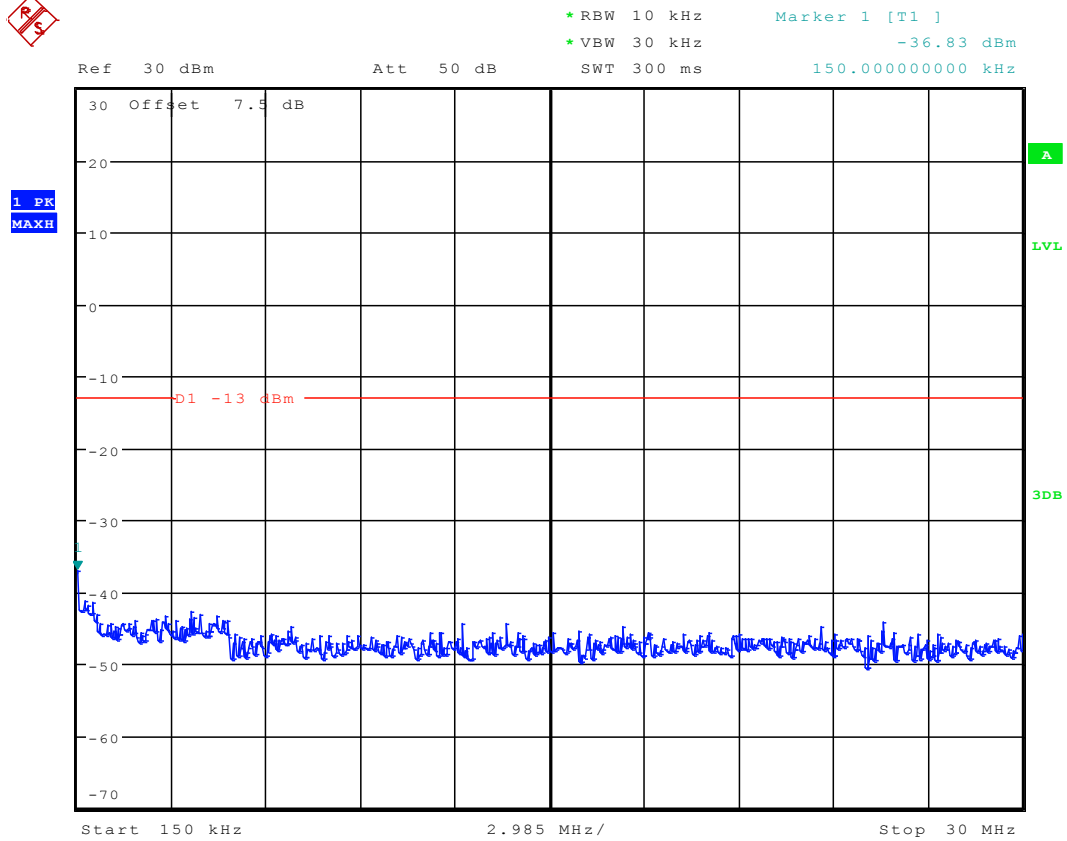


Date: 9.NOV.2011 18:41:29

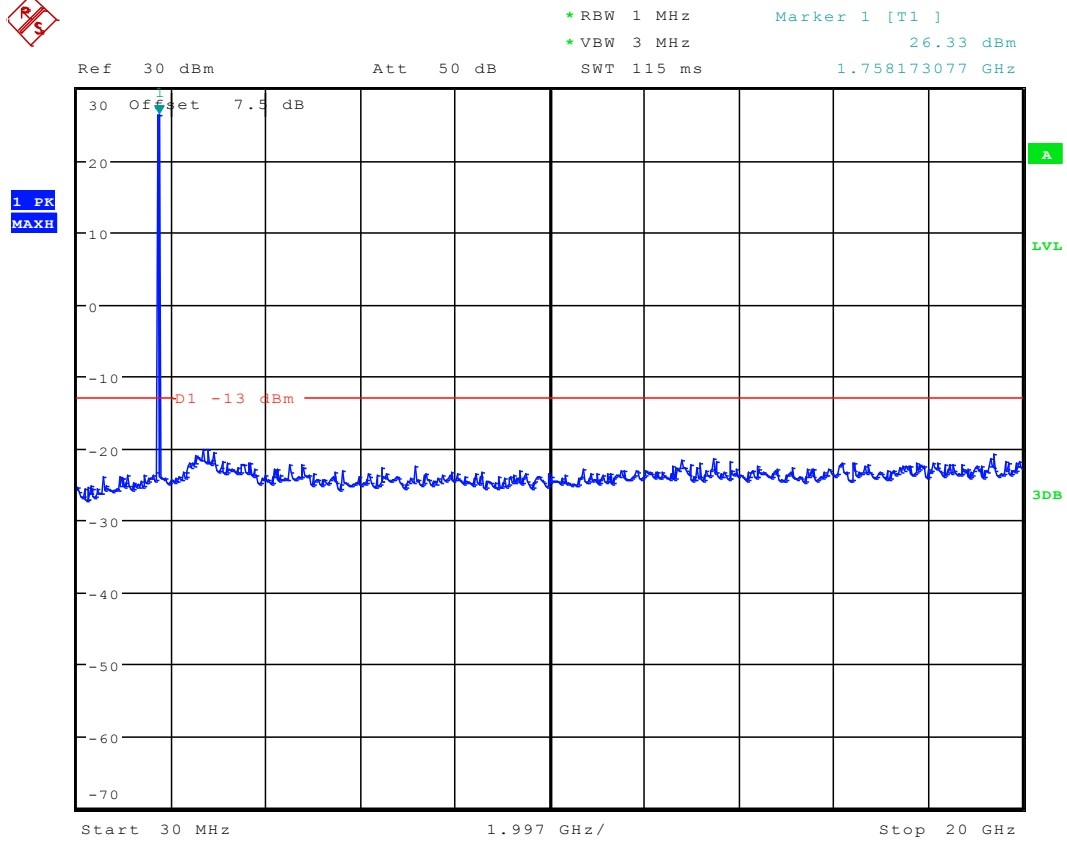
1 RB/RB #max



Date: 9.NOV.2011 18:38:20



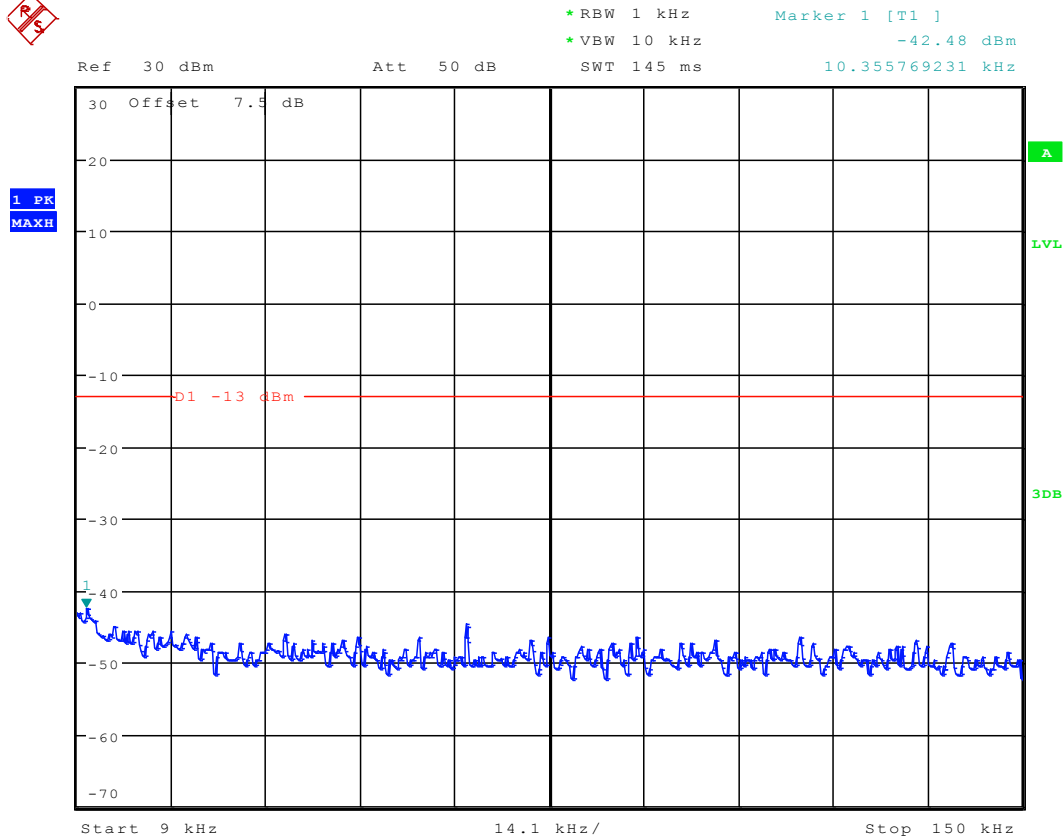
Date: 9.NOV.2011 18:40:33



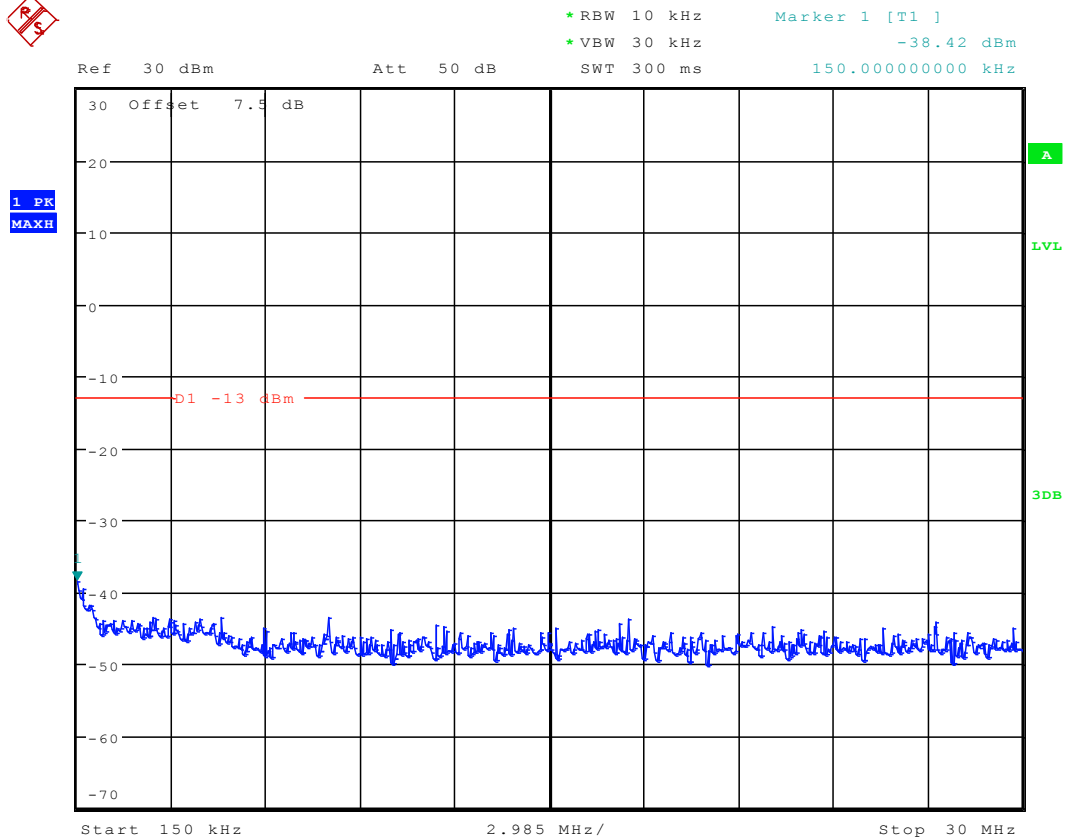
Date: 9.NOV.2011 18:41:03



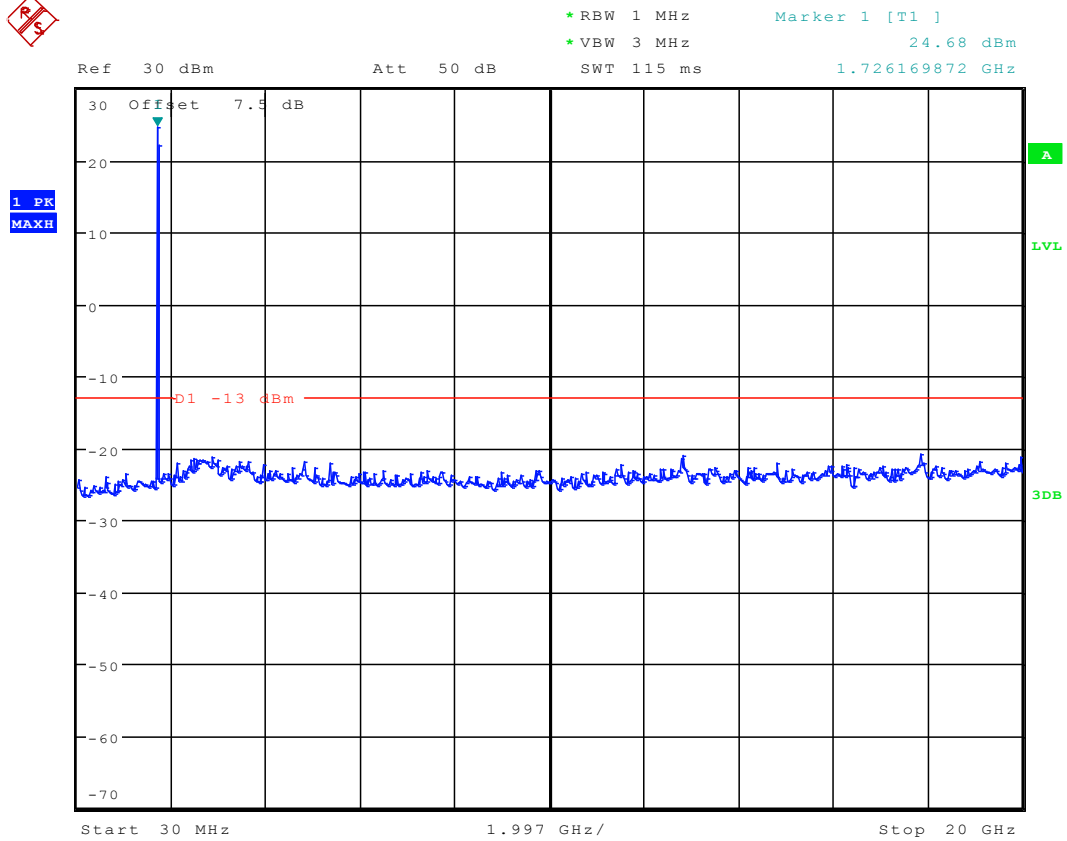
full RBs



Date: 9.NOV.2011 18:39:17



Date: 9.NOV.2011 18:39:51

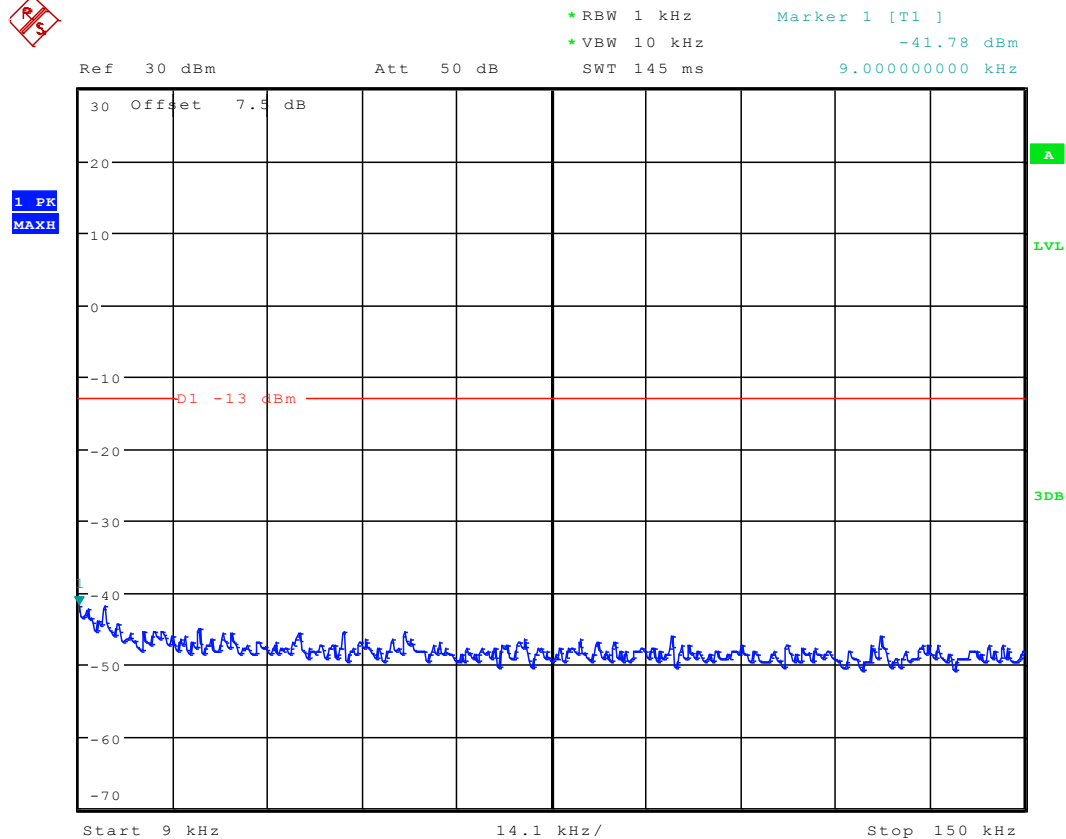


Date: 9.NOV.2011 18:41:48

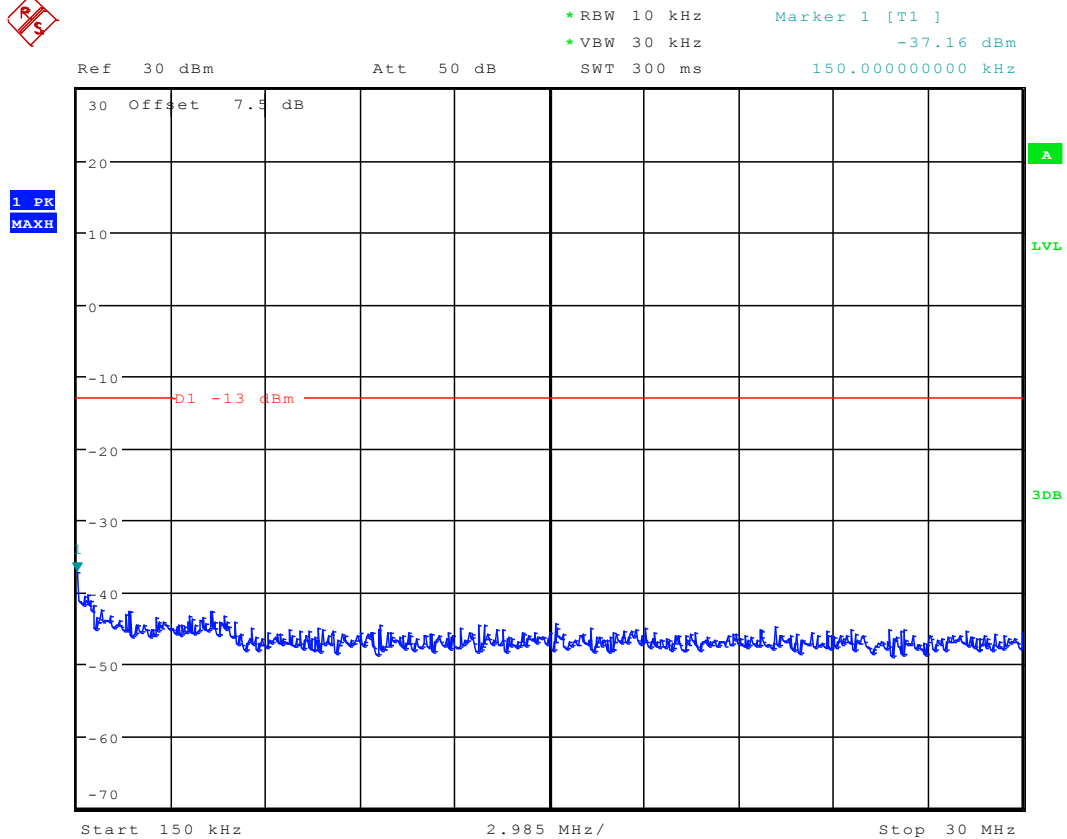


5MHz(BW) Channel 19975

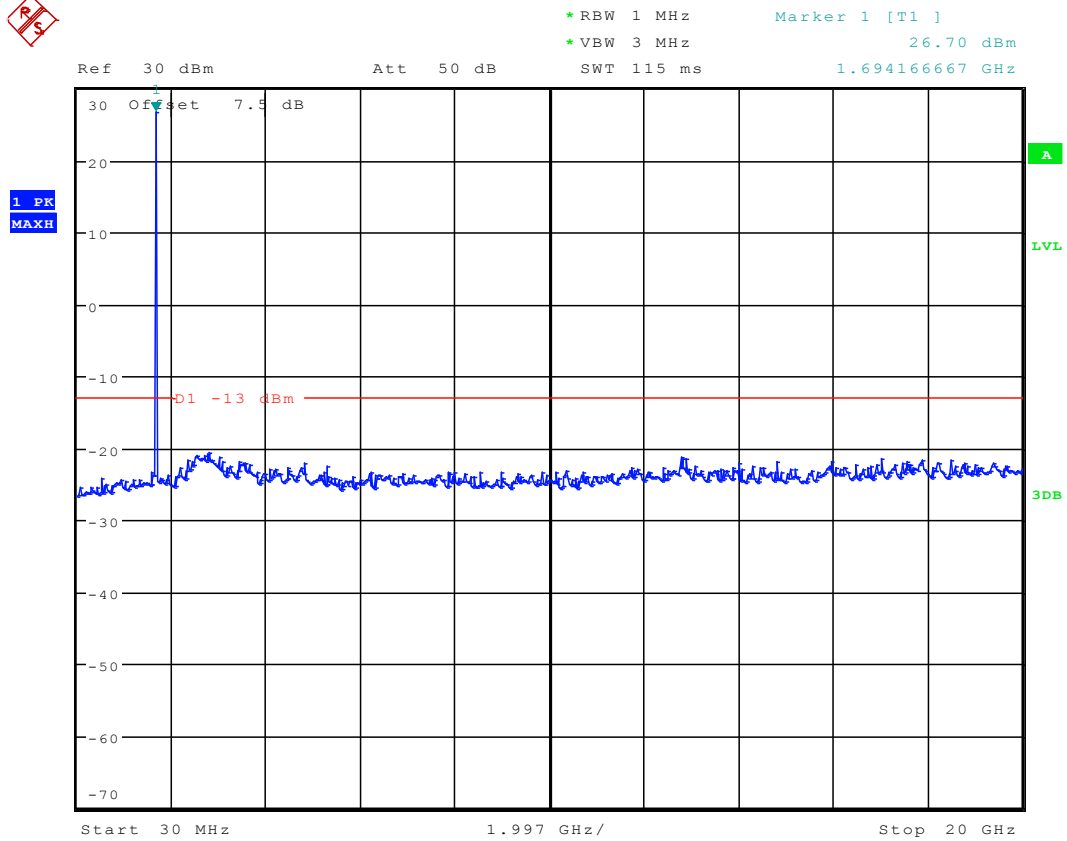
1 RB/RB #0



Date: 9.NOV.2011 16:26:38



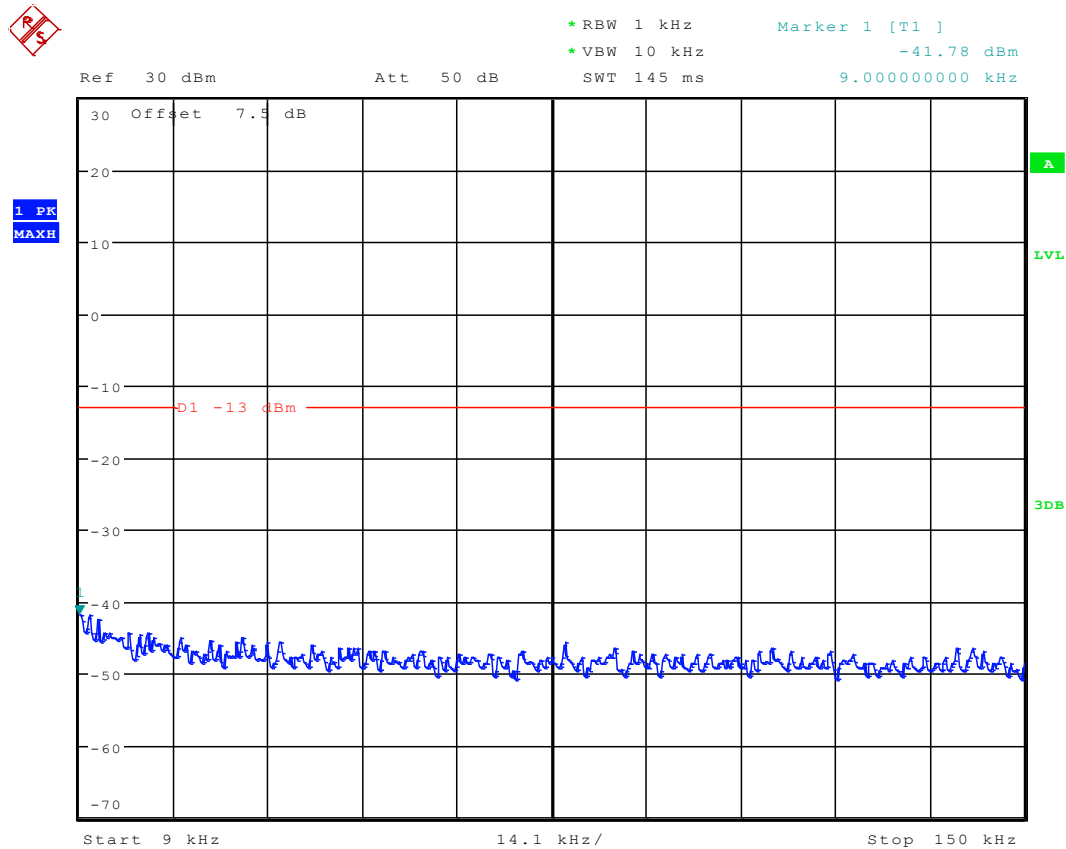
Date: 9.NOV.2011 16:30:37



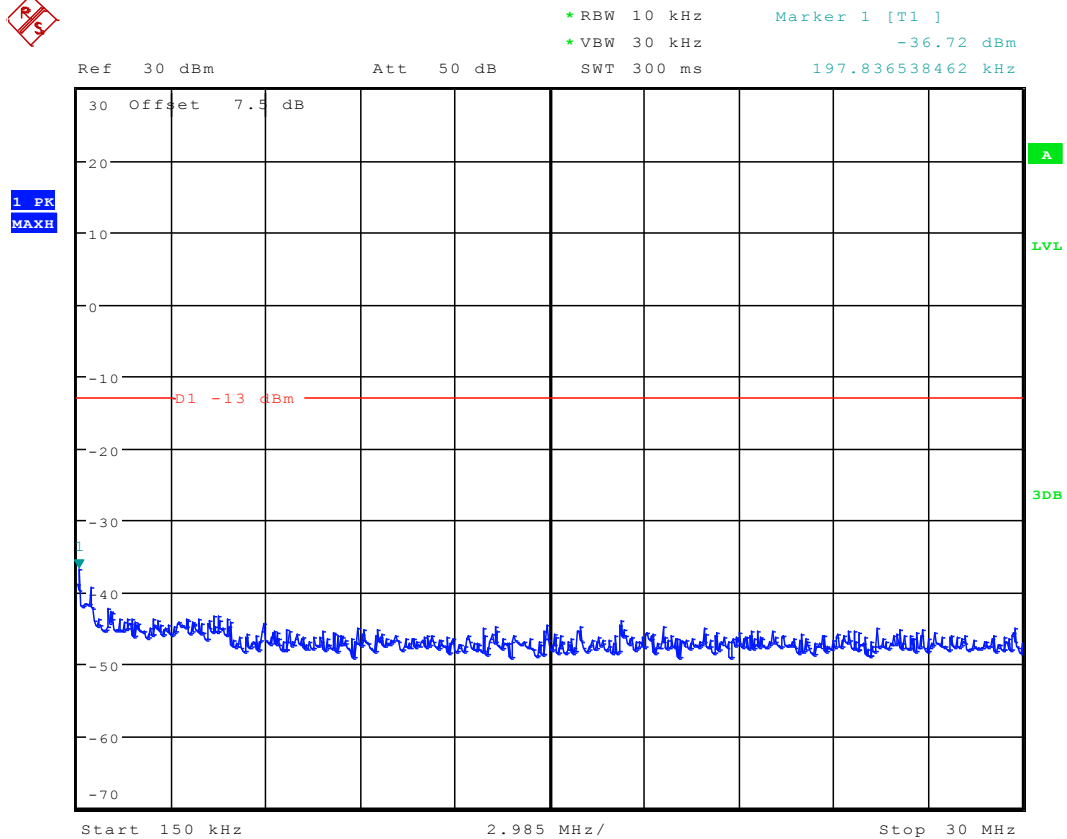
Date: 9.NOV.2011 16:46:58



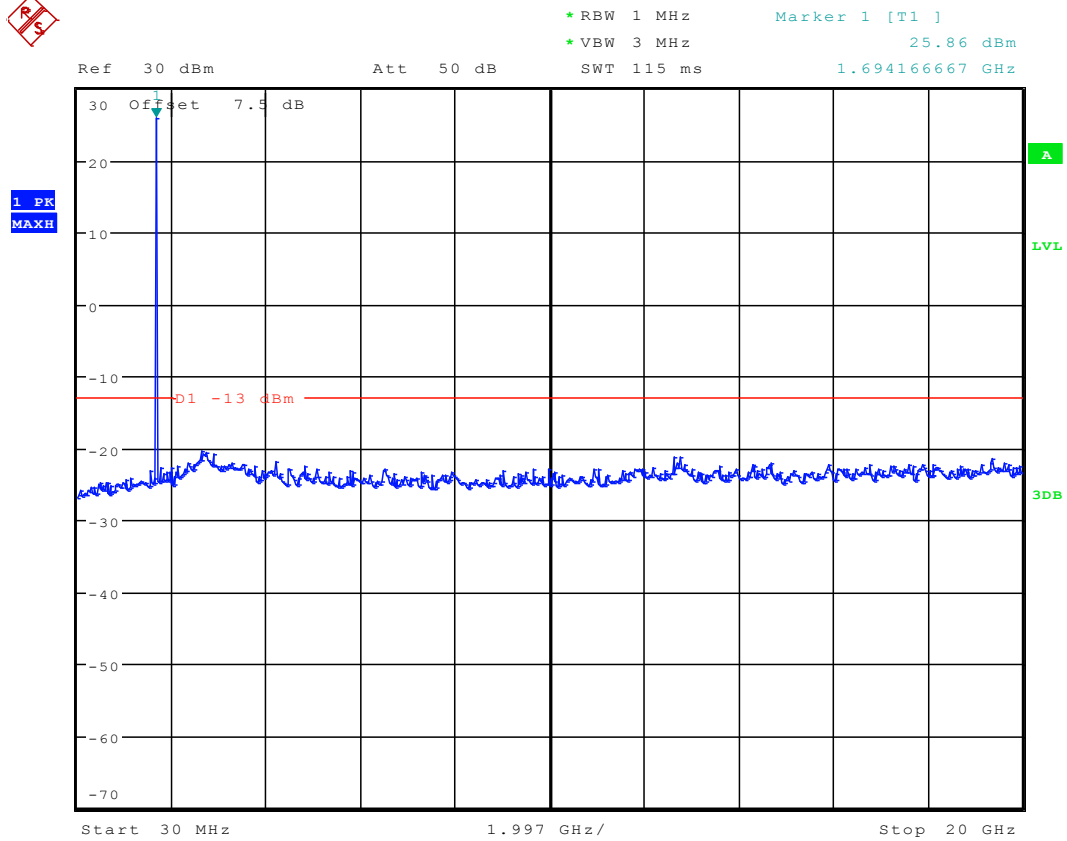
1 RB/RB #max



Date: 9.NOV.2011 16:27:17



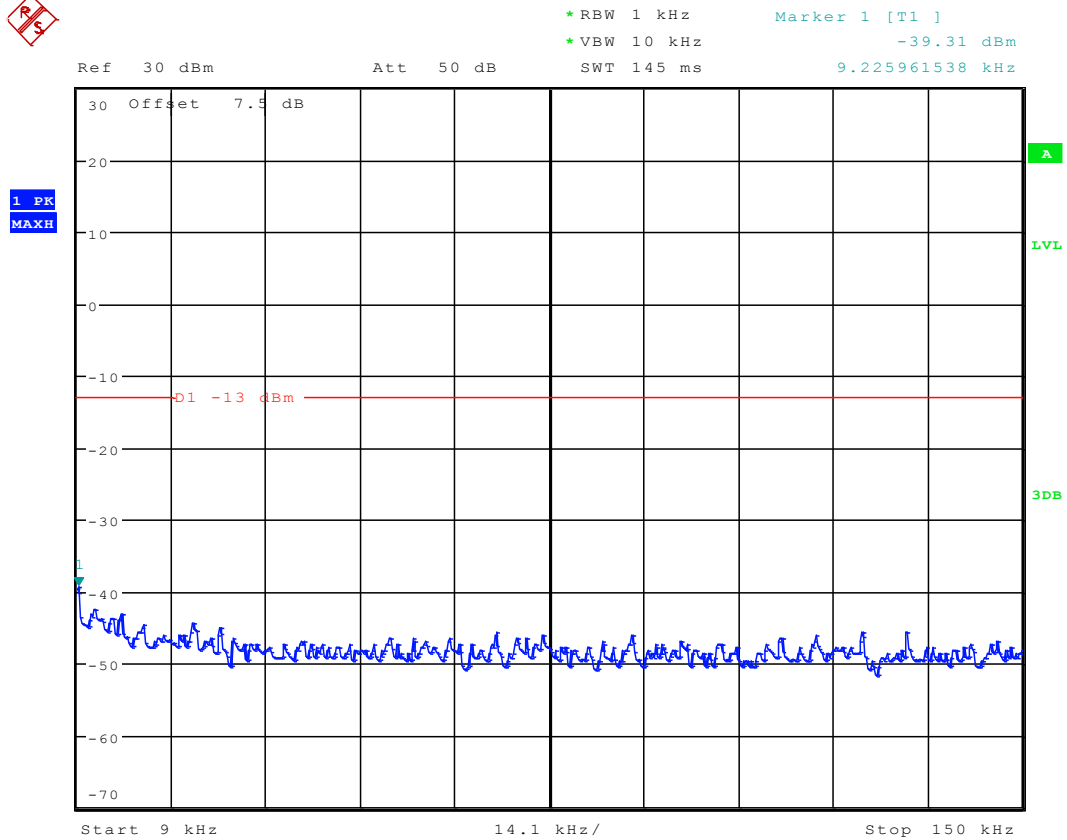
Date: 9.NOV.2011 16:30:01



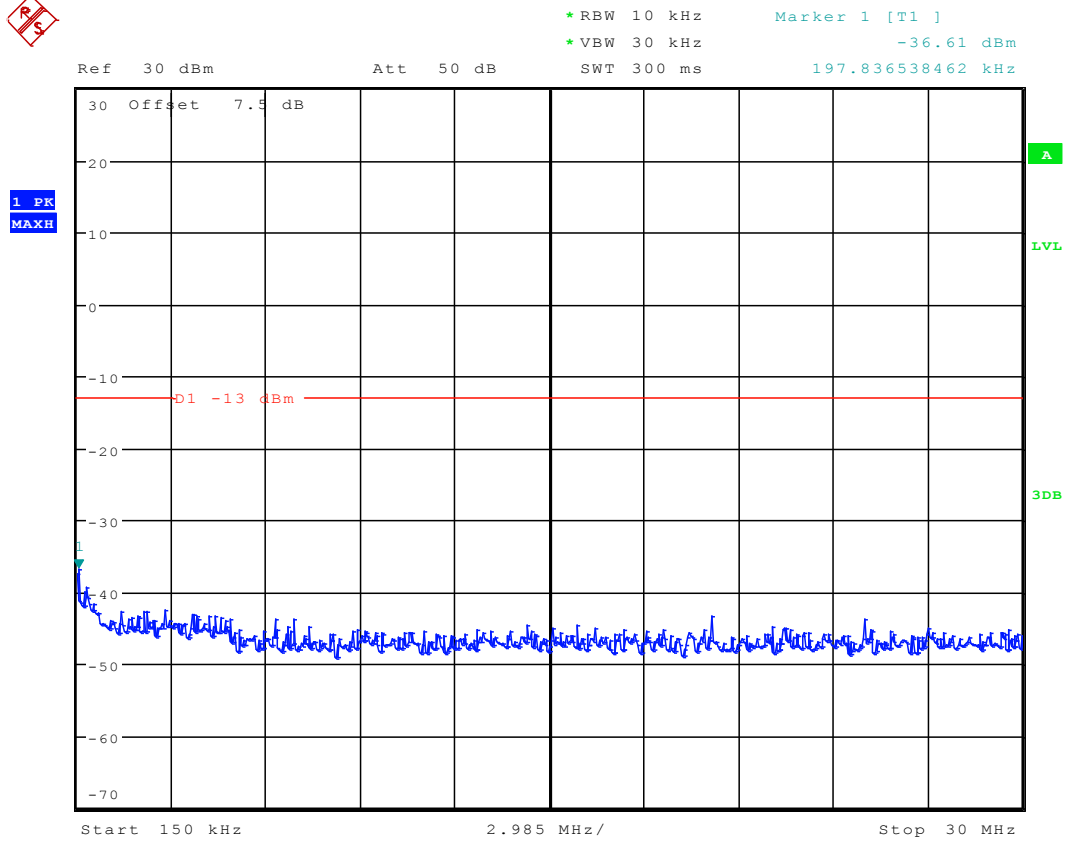
Date: 9.NOV.2011 16:47:26



full RBs



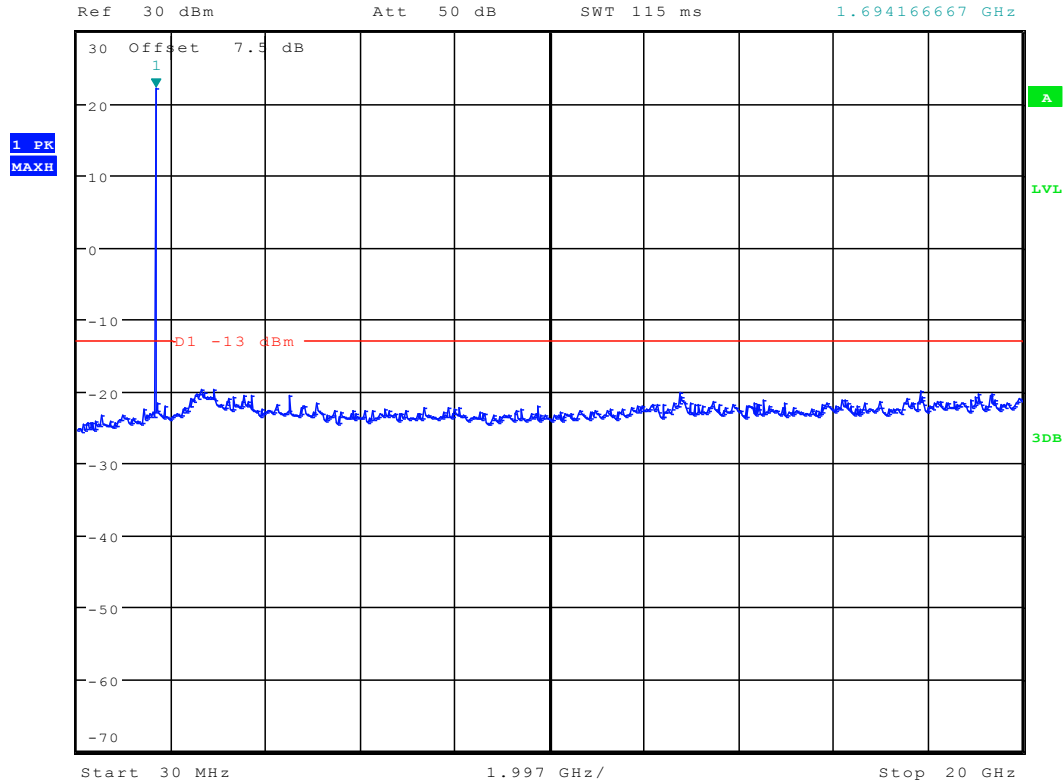
Date: 9.NOV.2011 16:25:43



Date: 9.NOV.2011 16:31:17



```
* RBW 1 MHz           Marker 1 [T1 ]
* VBW 3 MHz           22.18 dBm
SWT 115 ms           1.694166667 GHz
```

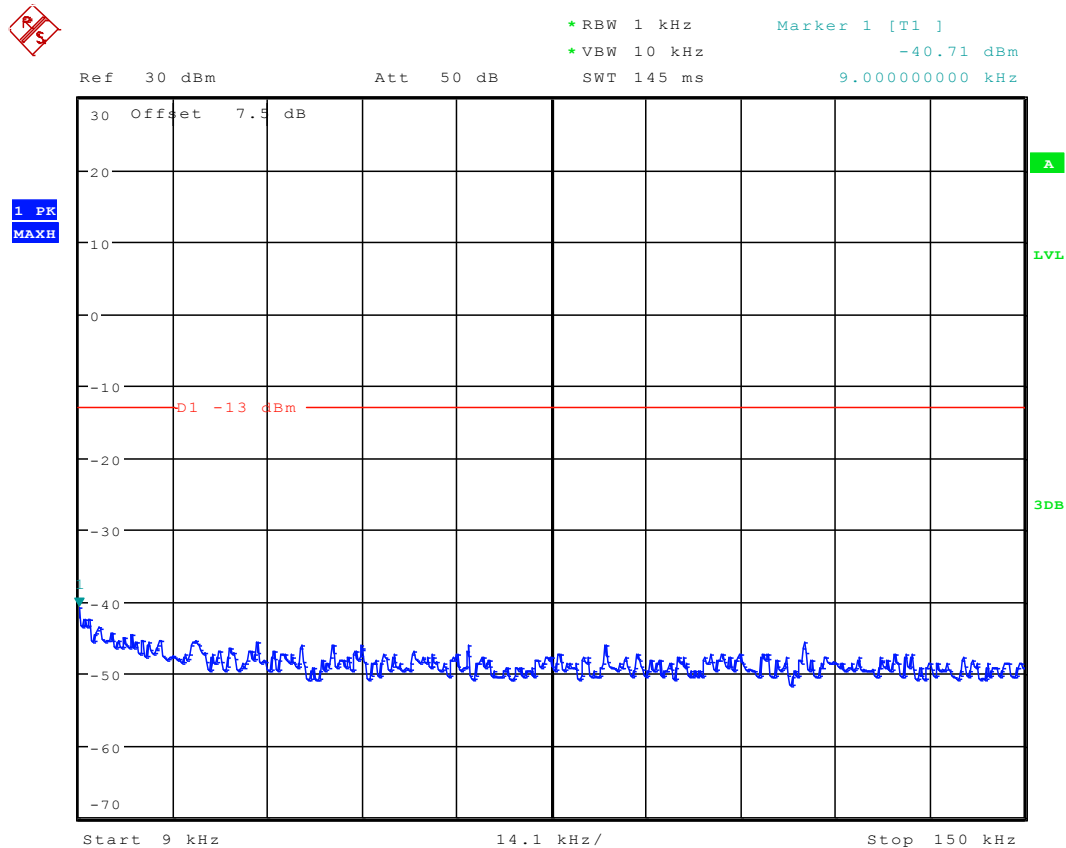


Date: 9.NOV.2011 16:46:29

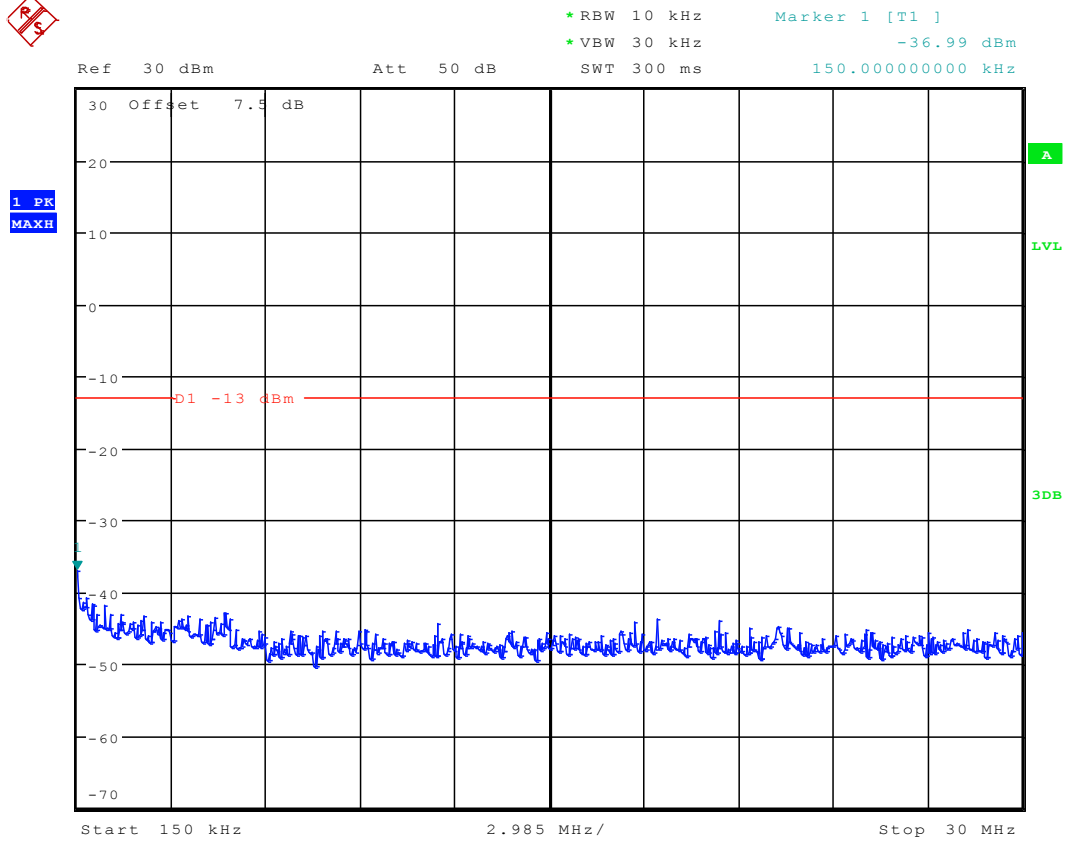


5MHz(BW) Channel 20175

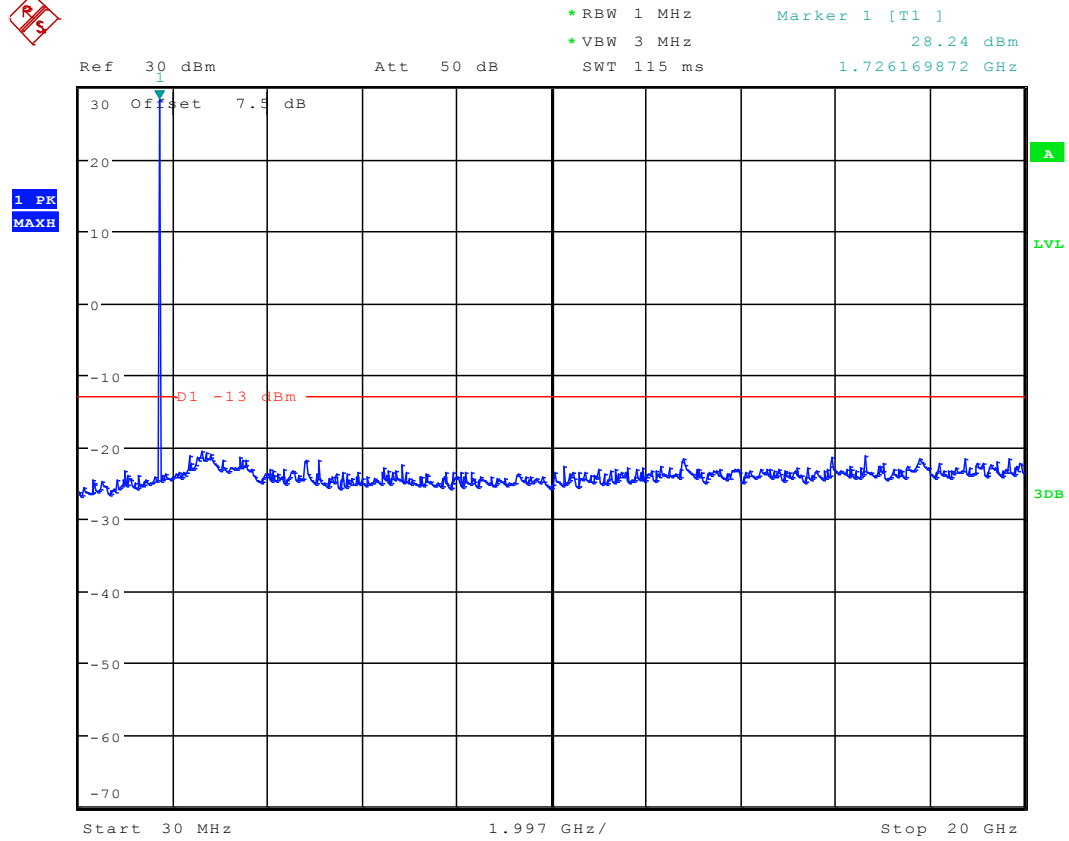
1 RB/RB #0



Date: 9.NOV.2011 16:54:37



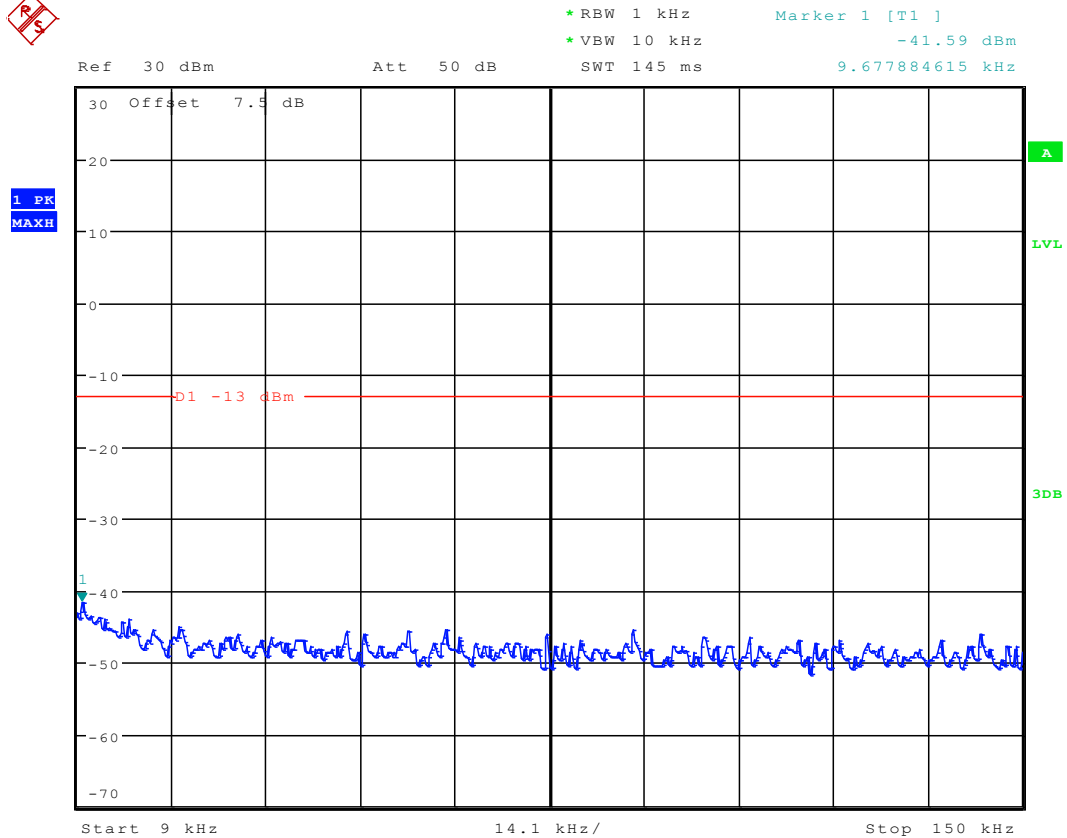
Date: 9.NOV.2011 16:53:04



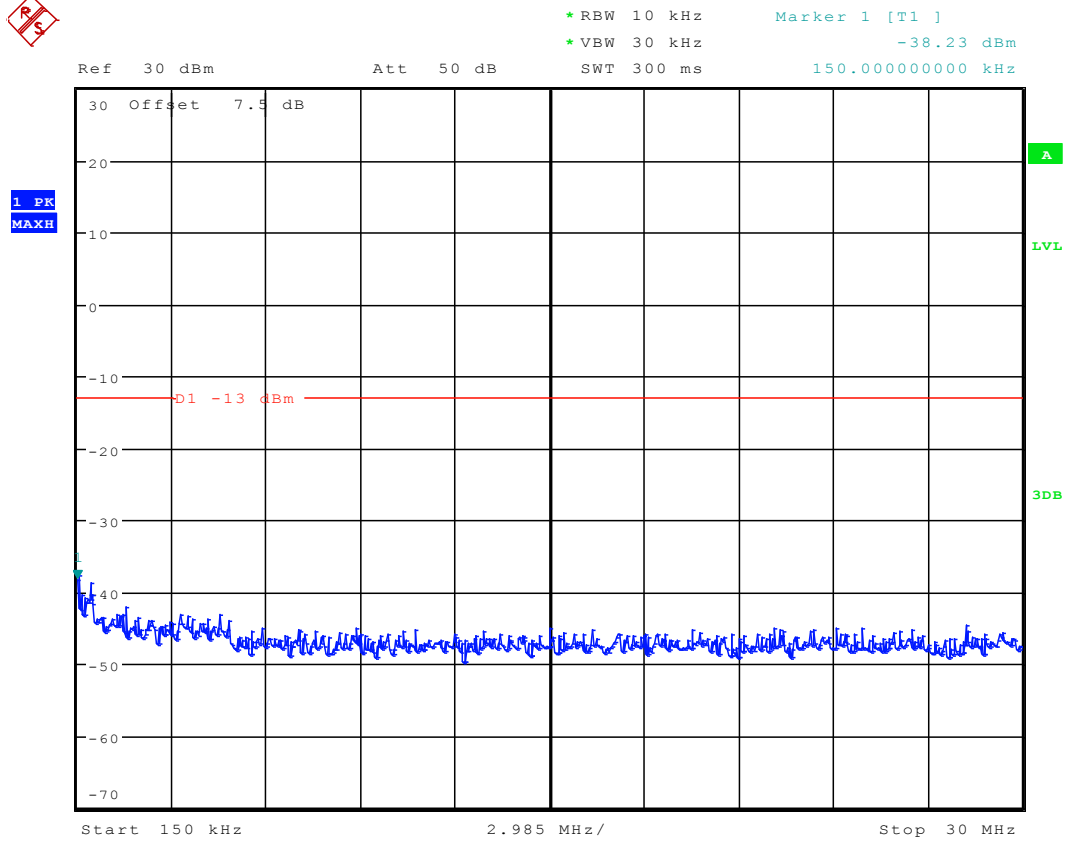
Date: 9.NOV.2011 16:50:38



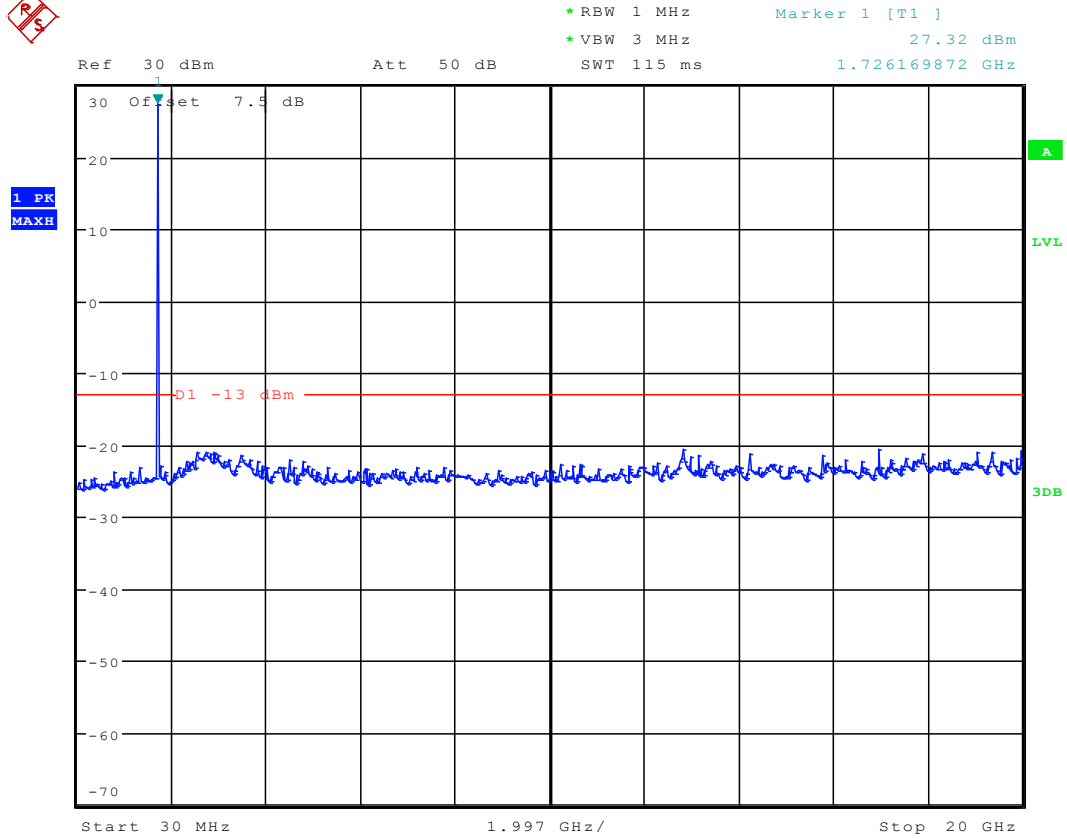
1 RB/RB #max



Date: 9.NOV.2011 16:54:12



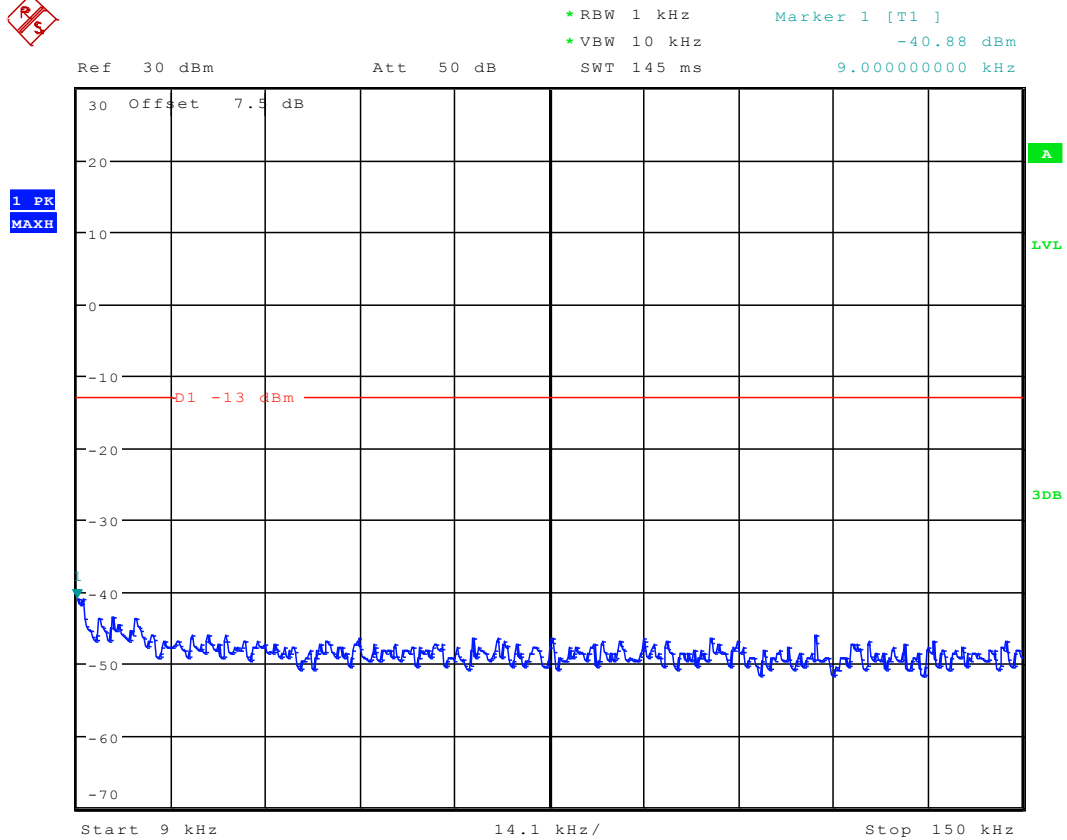
Date: 9.NOV.2011 16:53:30



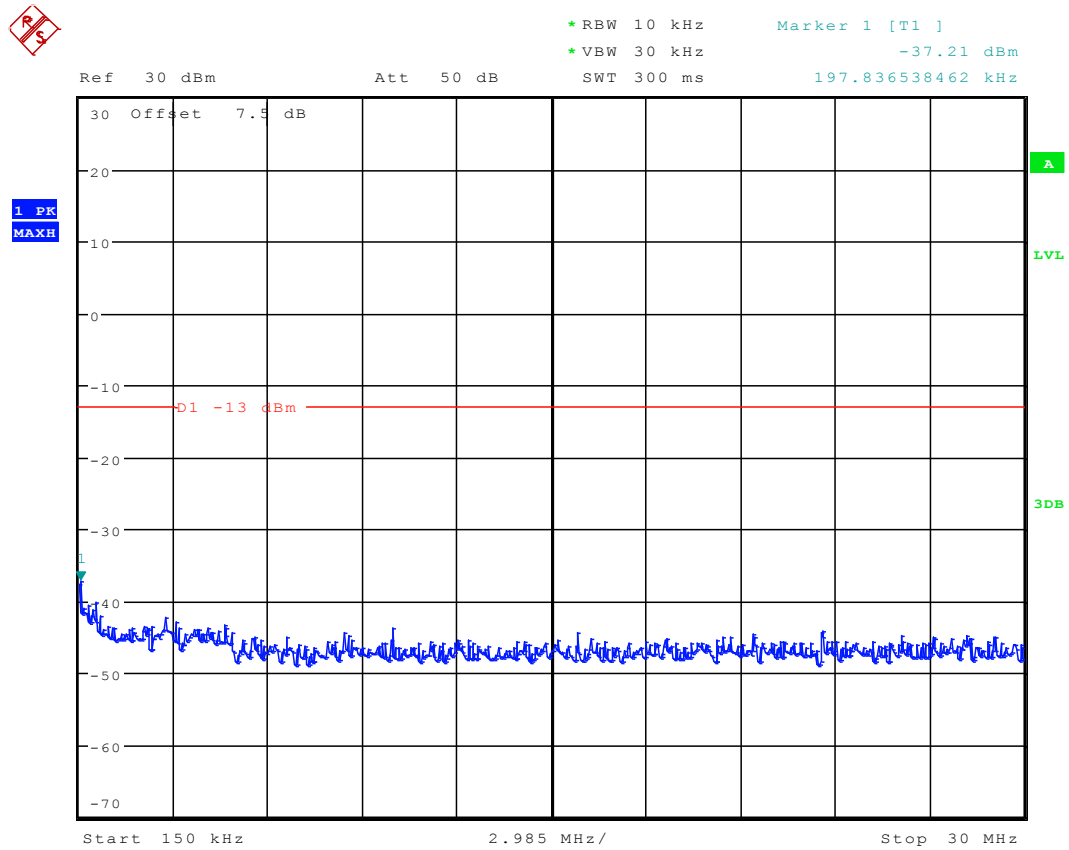
Date: 9.NOV.2011 16:50:00



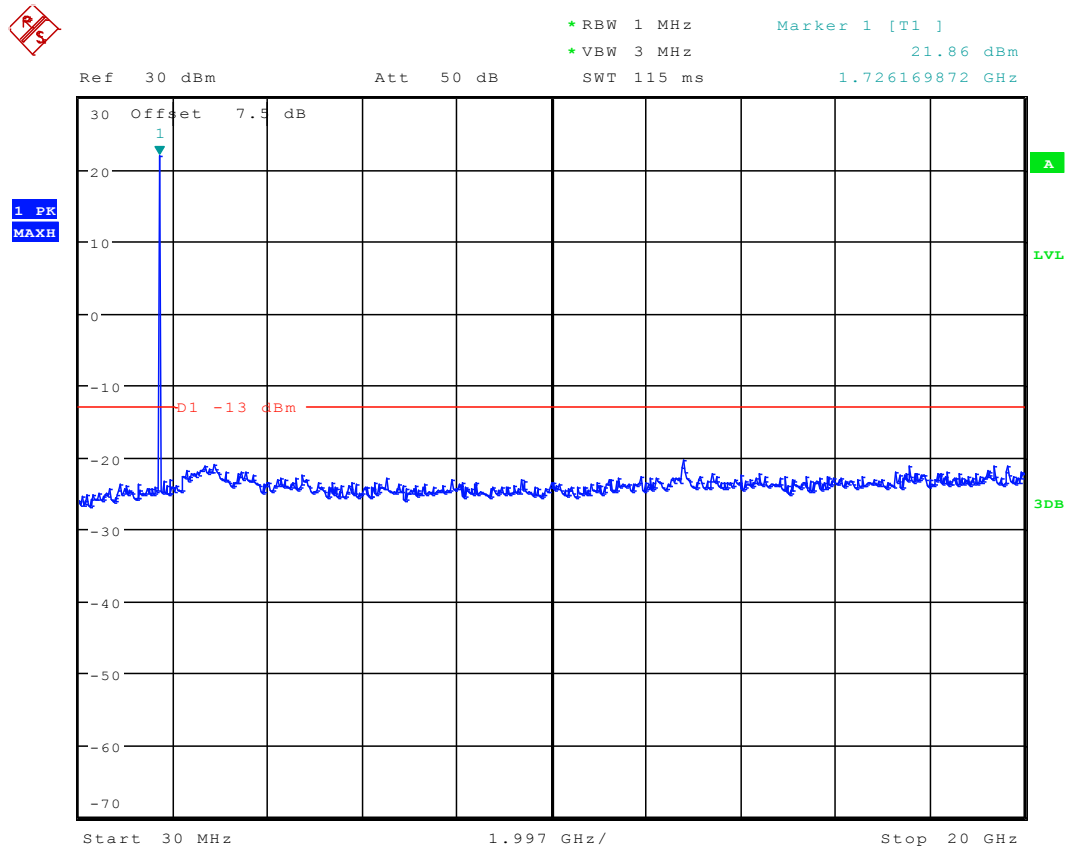
full RBs



Date: 9.NOV.2011 16:55:06



Date: 9.NOV.2011 16:52:40

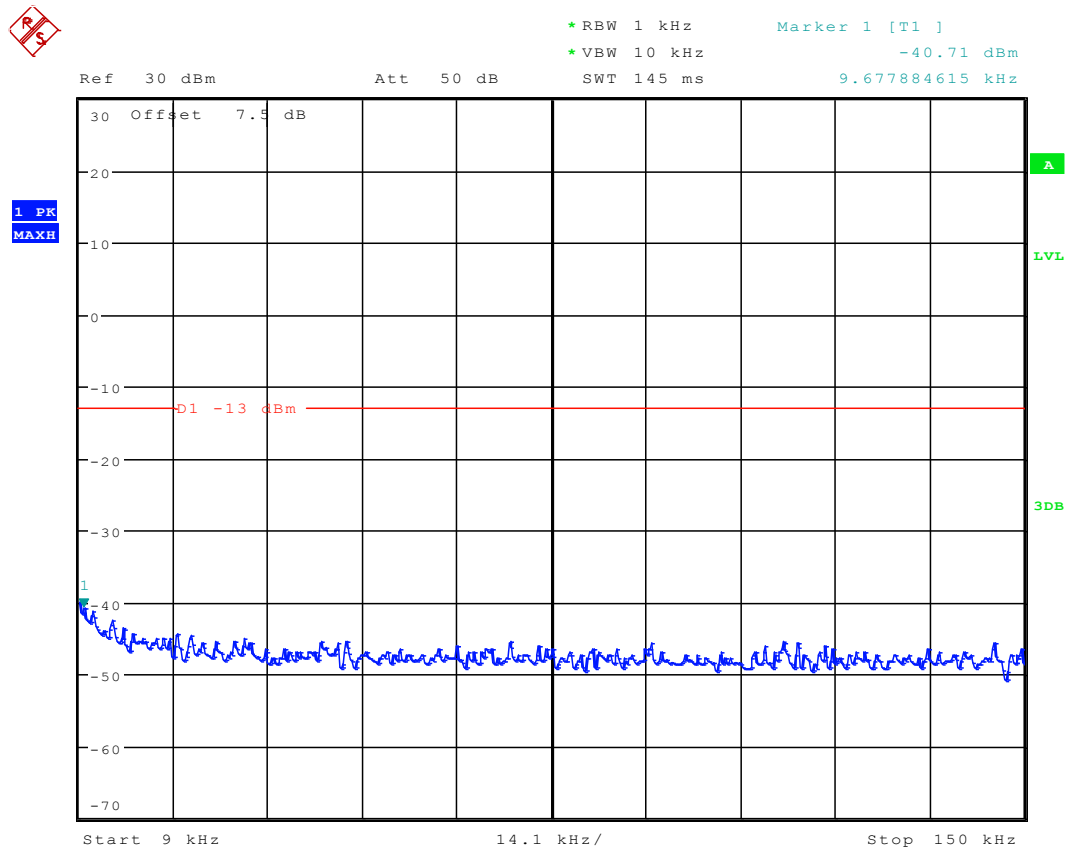


Date: 9.NOV.2011 16:51:05

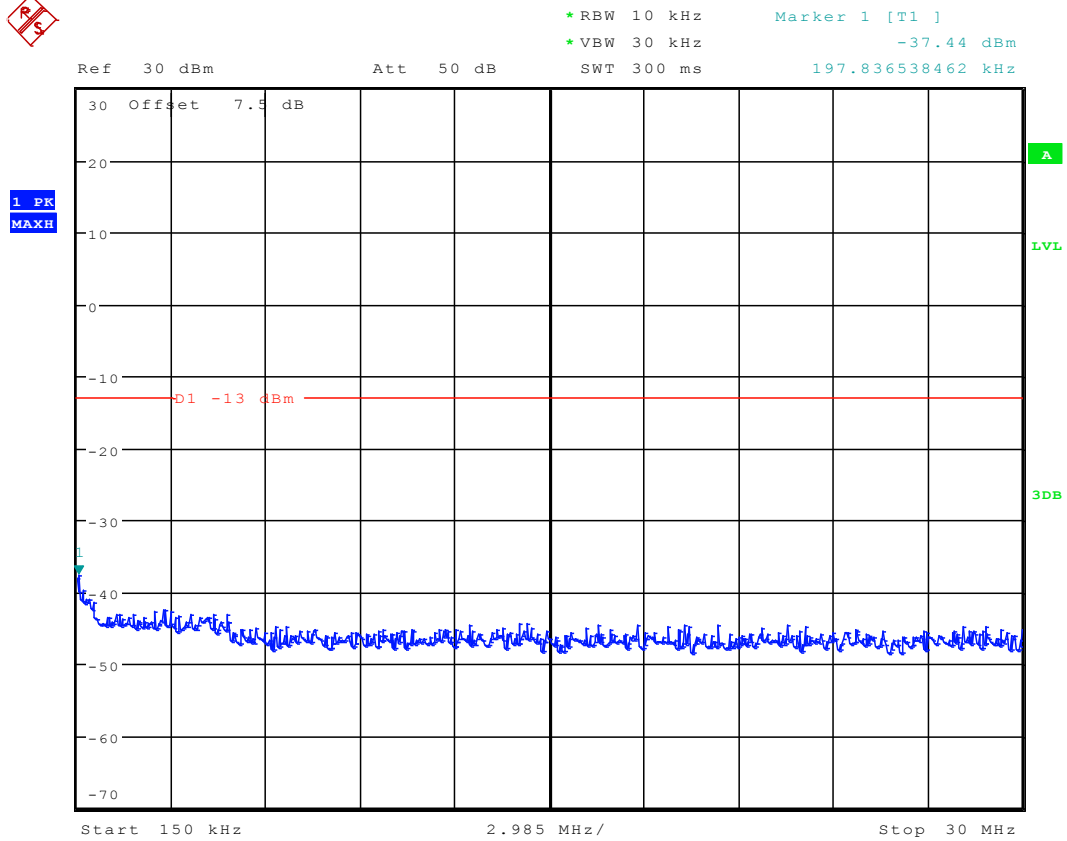


5MHz(BW) Channel 20375

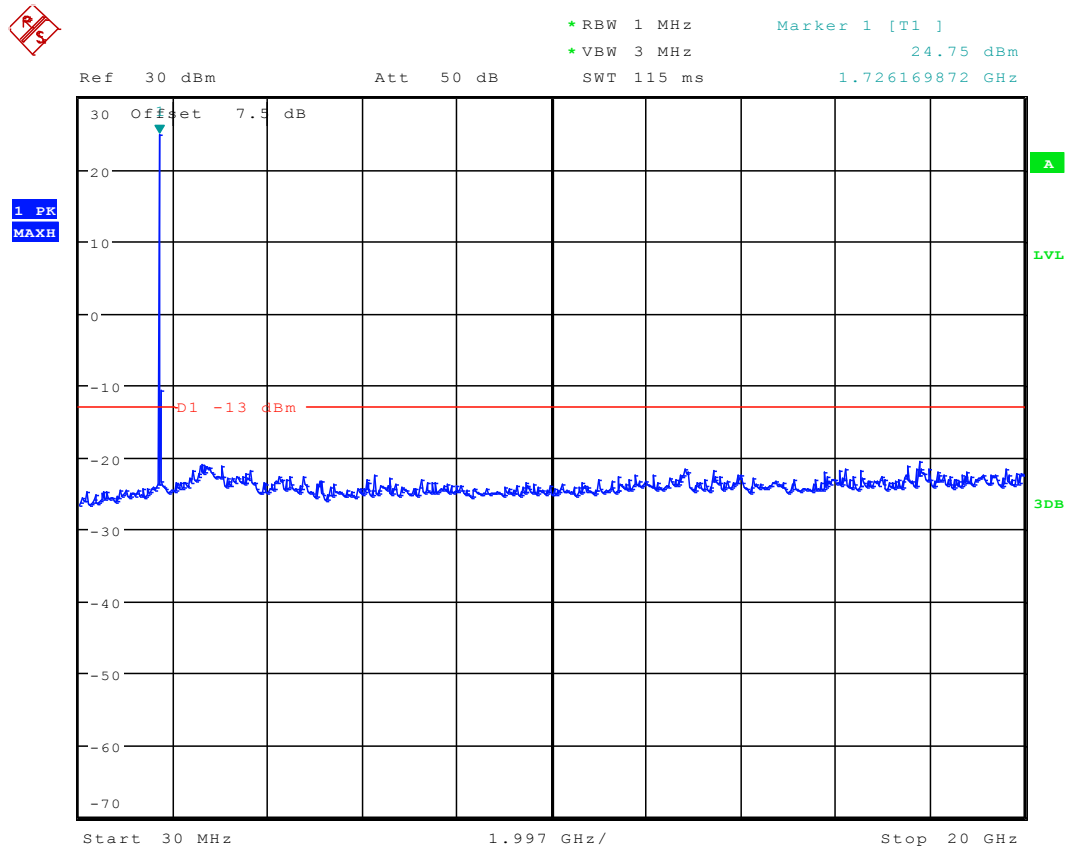
1 RB/RB #0



Date: 9.NOV.2011 17:14:31



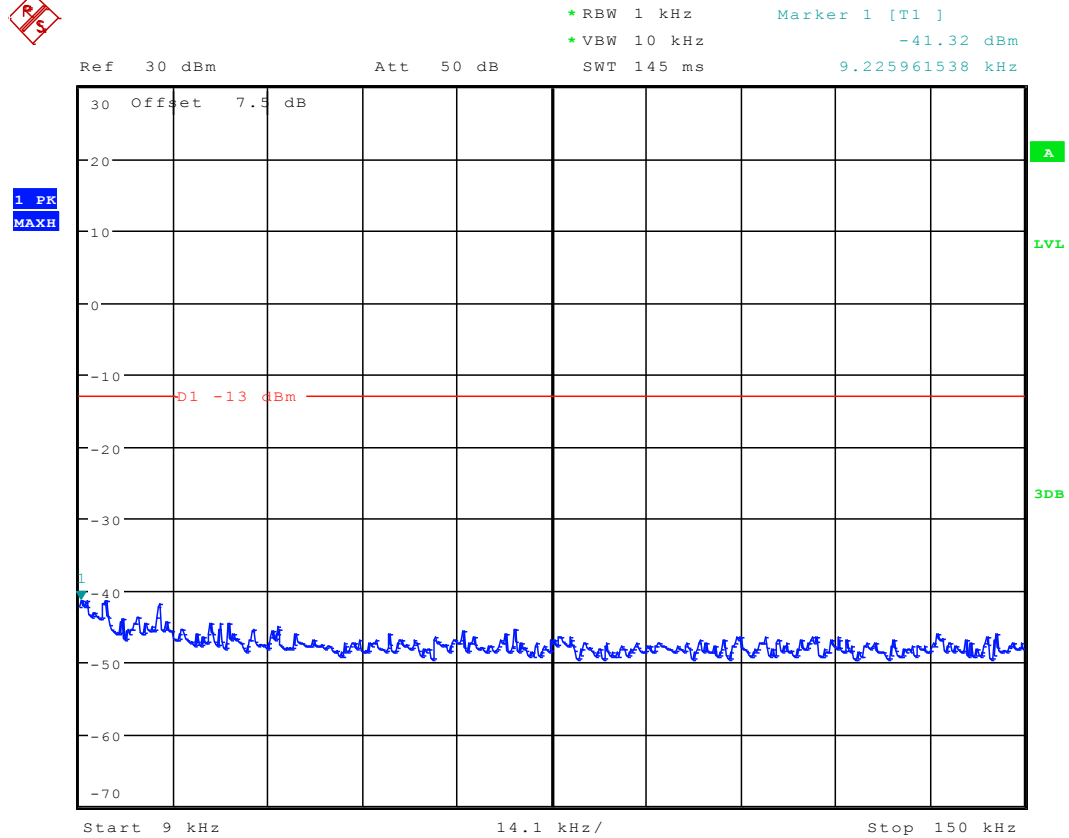
Date: 9.NOV.2011 17:17:00



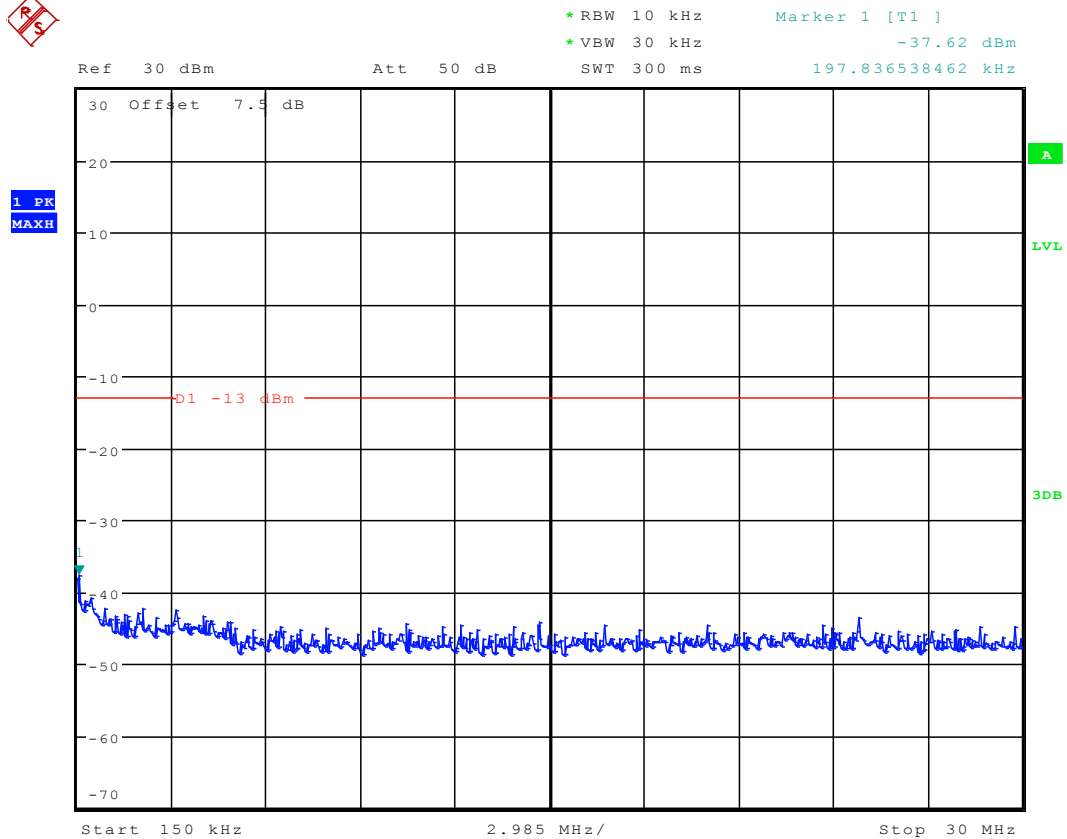
Date: 9.NOV.2011 17:21:32



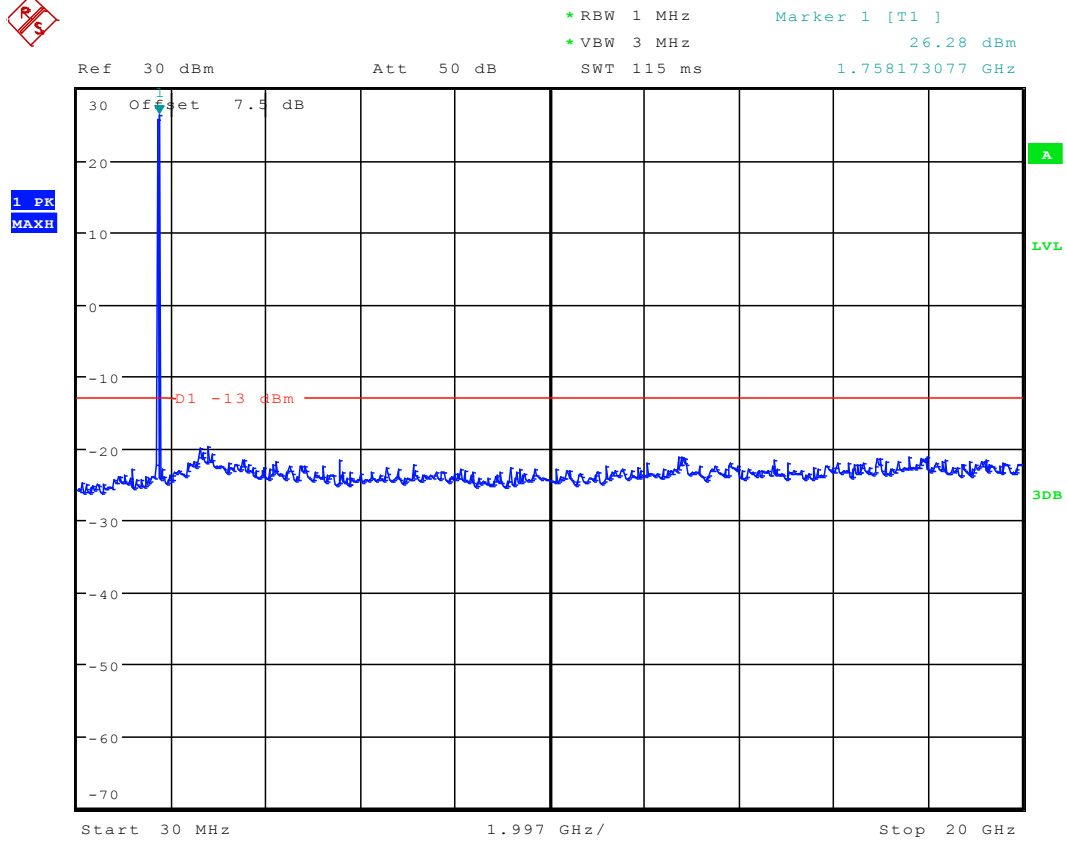
1 RB/RB #max



Date: 9.NOV.2011 17:15:30



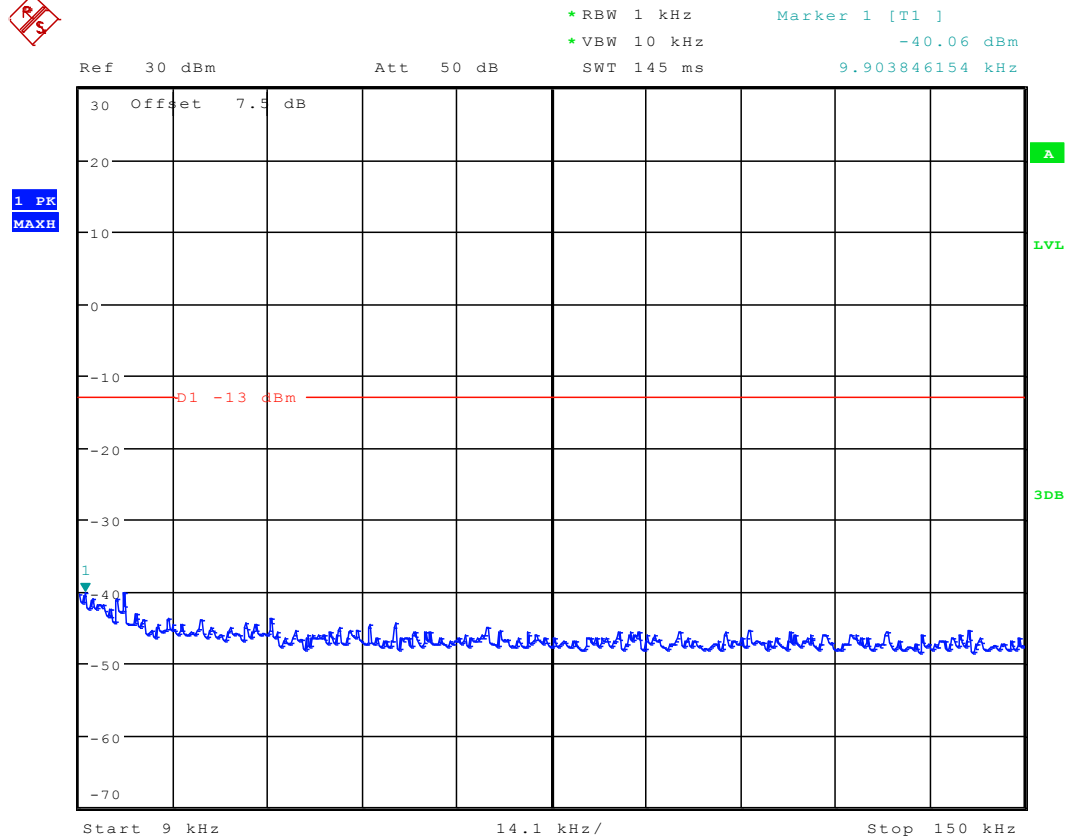
Date: 9.NOV.2011 17:16:14



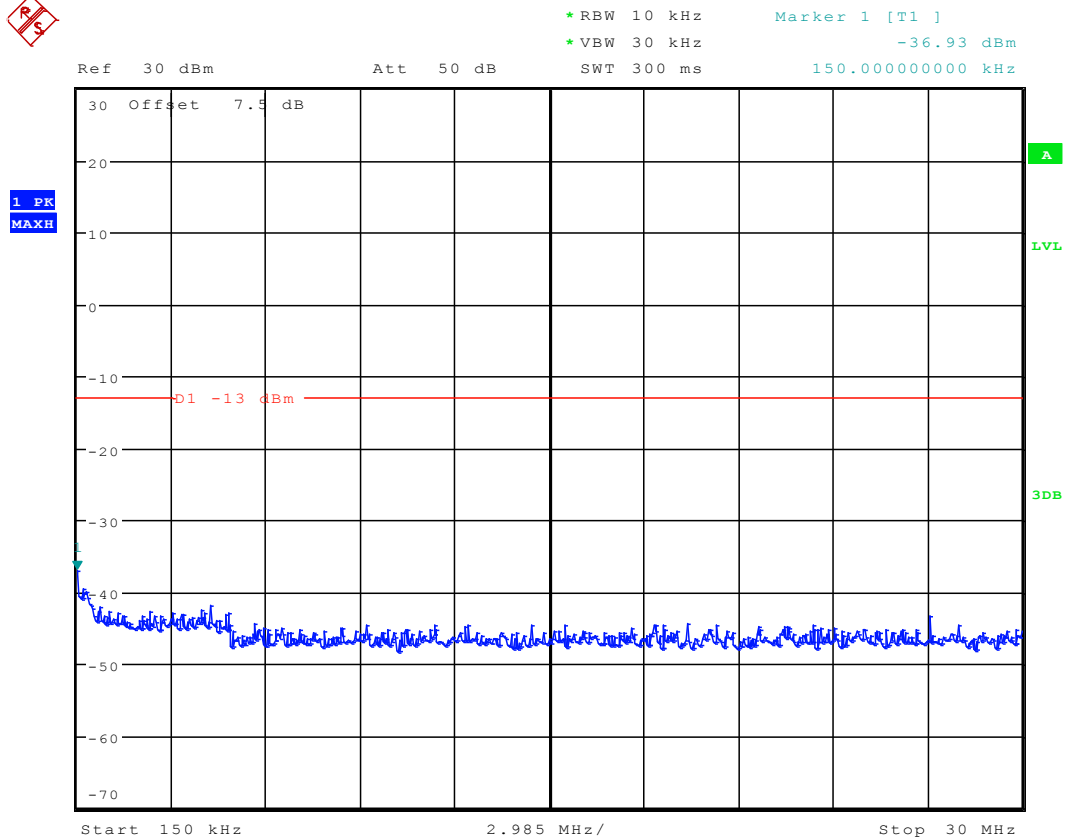
Date: 9.NOV.2011 17:22:36



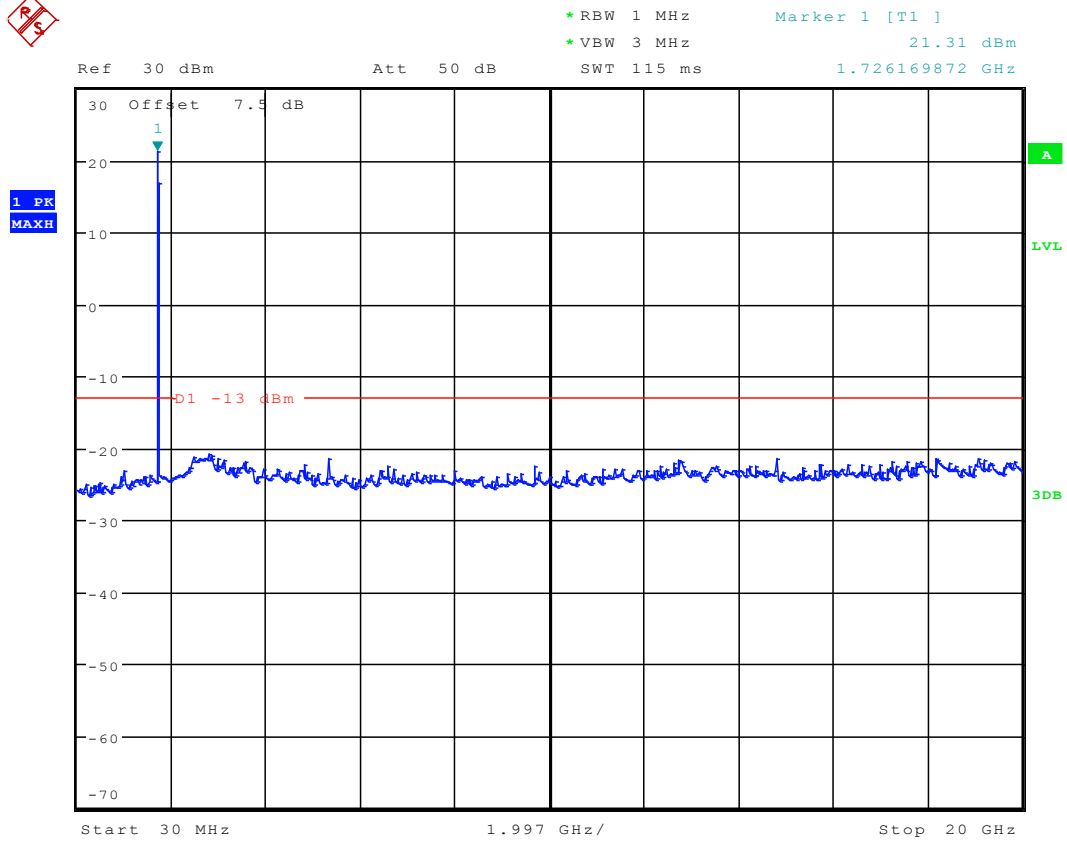
full RBs



Date: 9.NOV.2011 17:13:16



Date: 9.NOV.2011 17:19:13

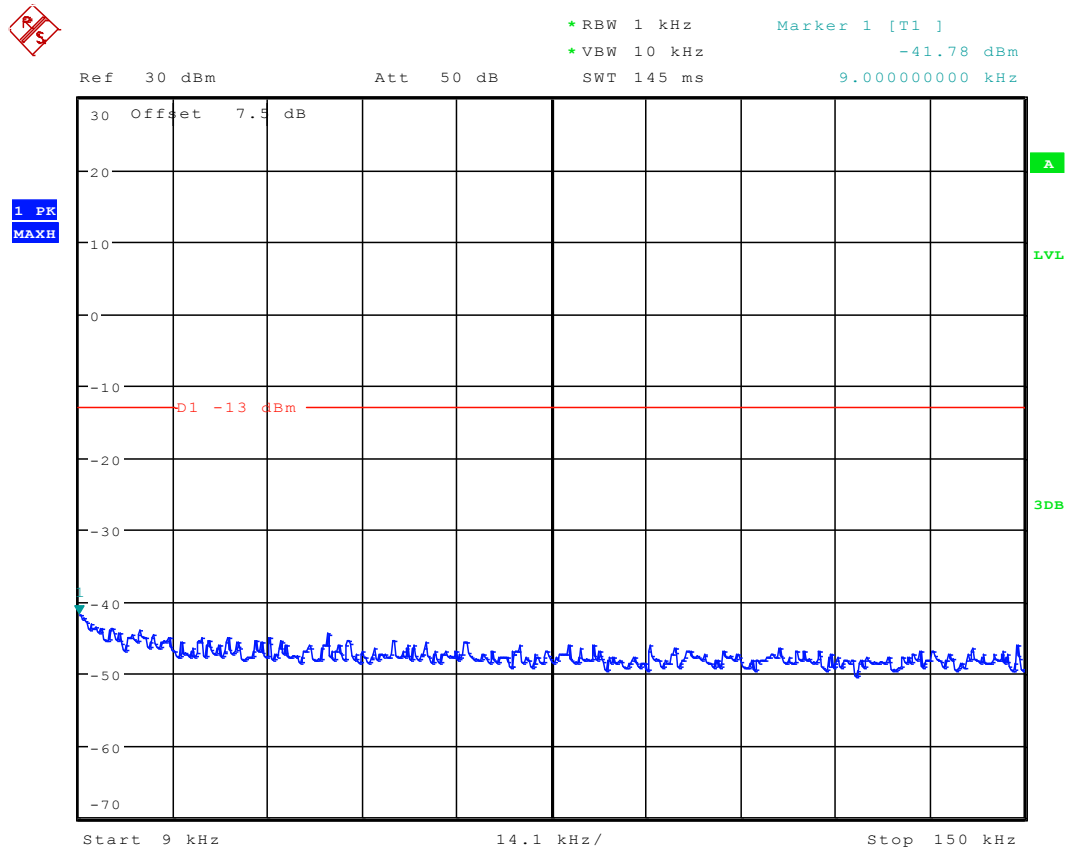


Date: 9.NOV.2011 17:21:06

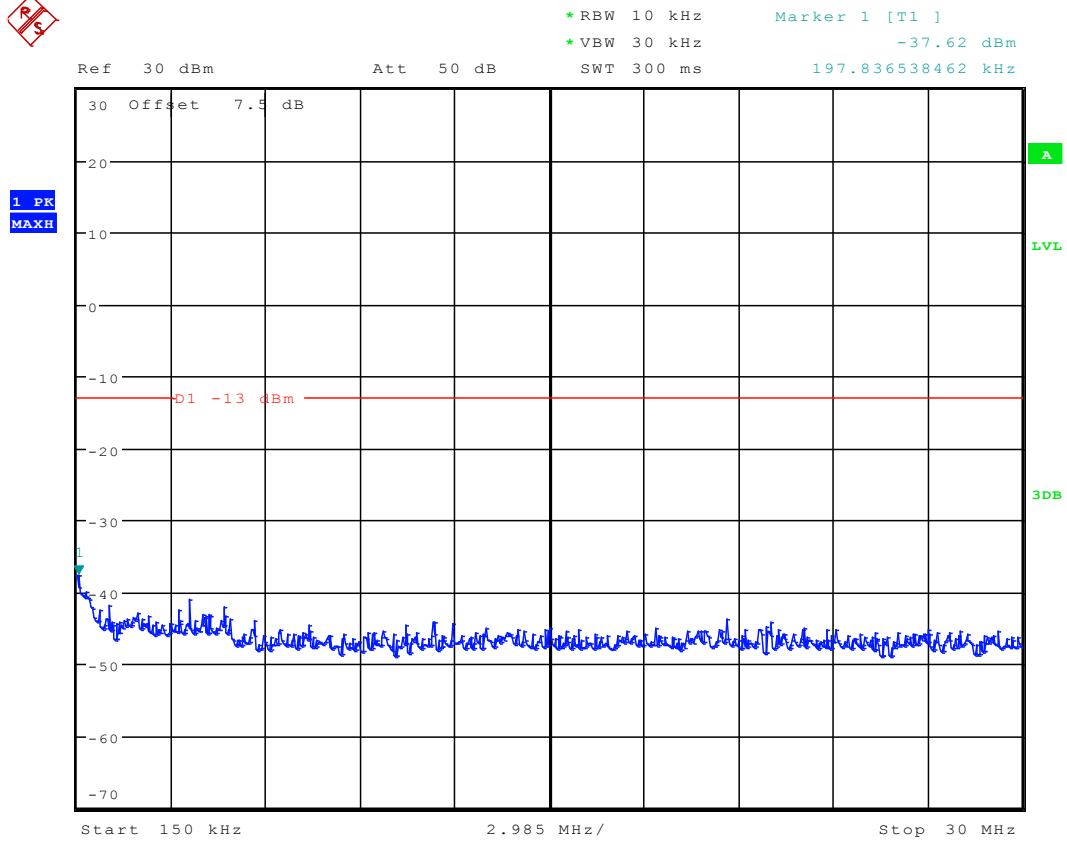


10MHz(BW) Channel 20000

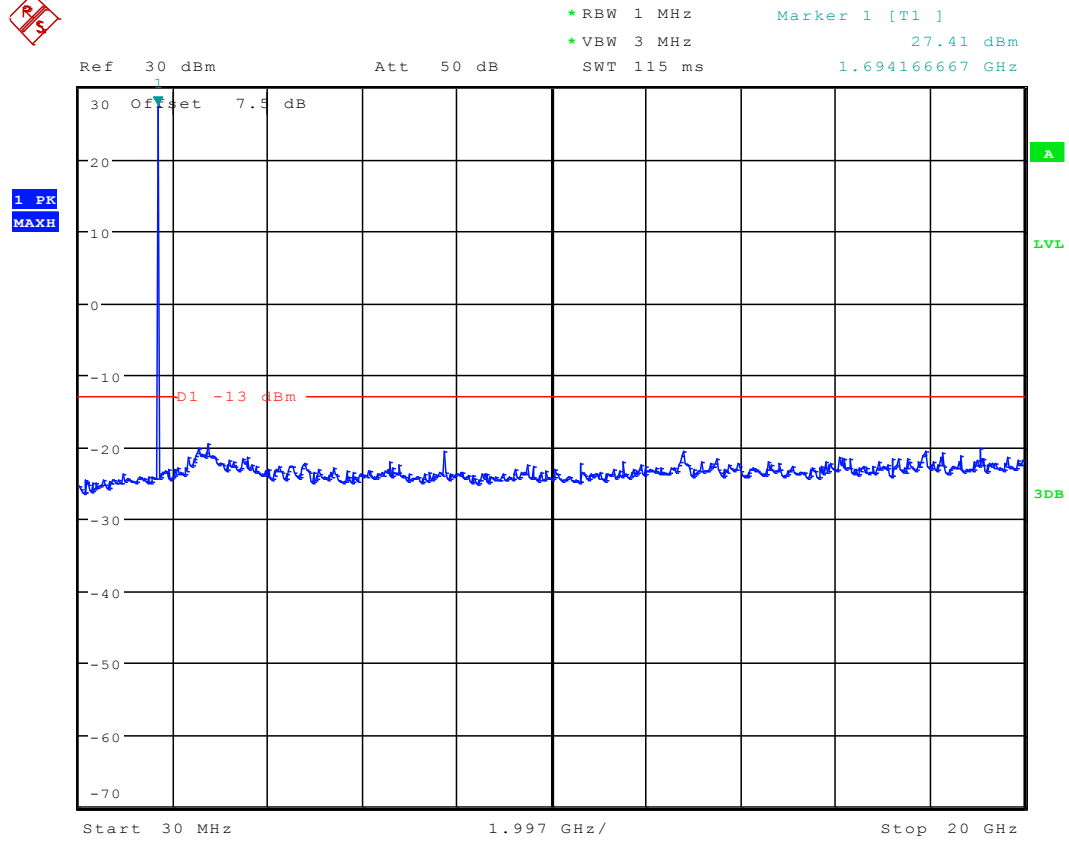
1 RB/RB #0



Date: 9.NOV.2011 17:40:25



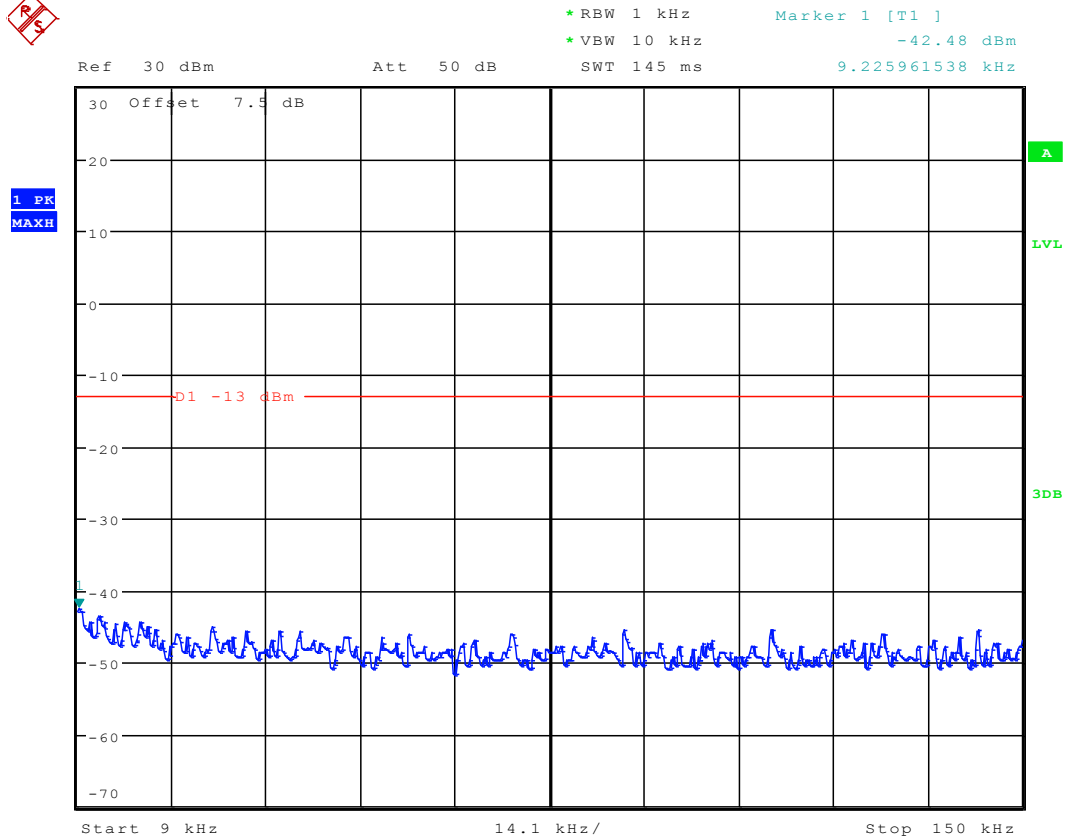
Date: 9.NOV.2011 17:36:52



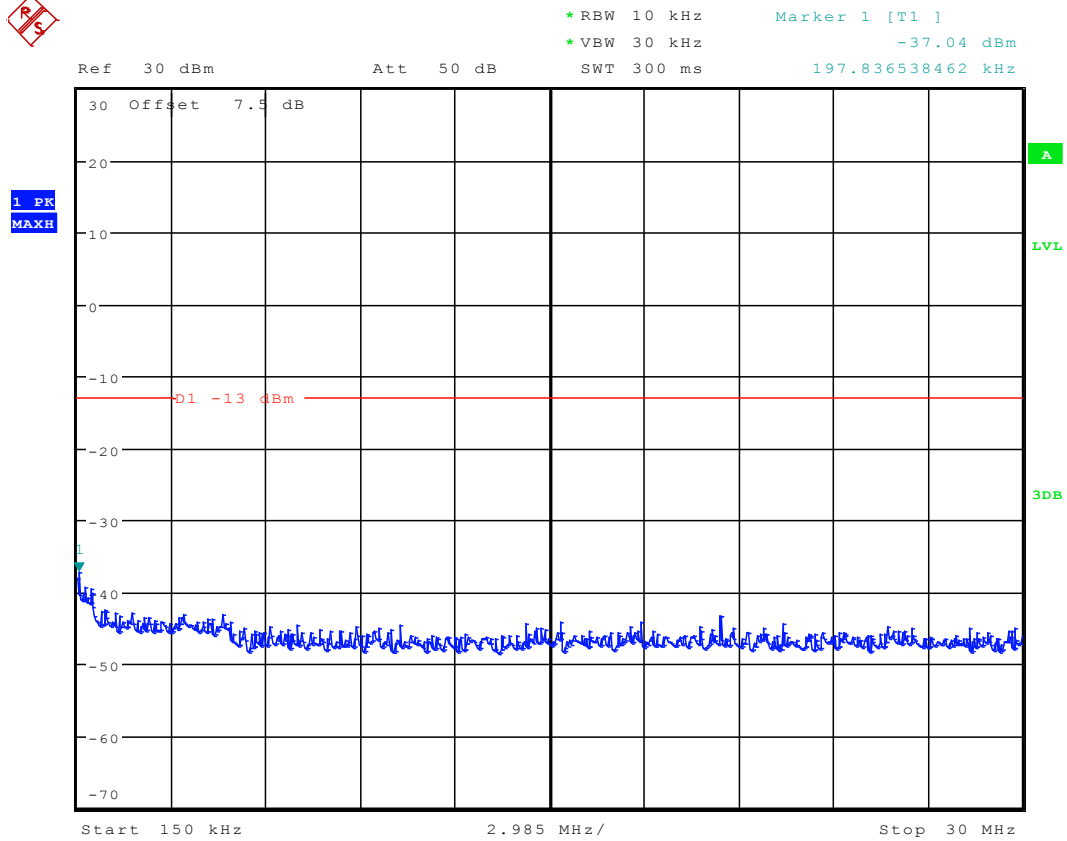
Date: 9.NOV.2011 17:34:24



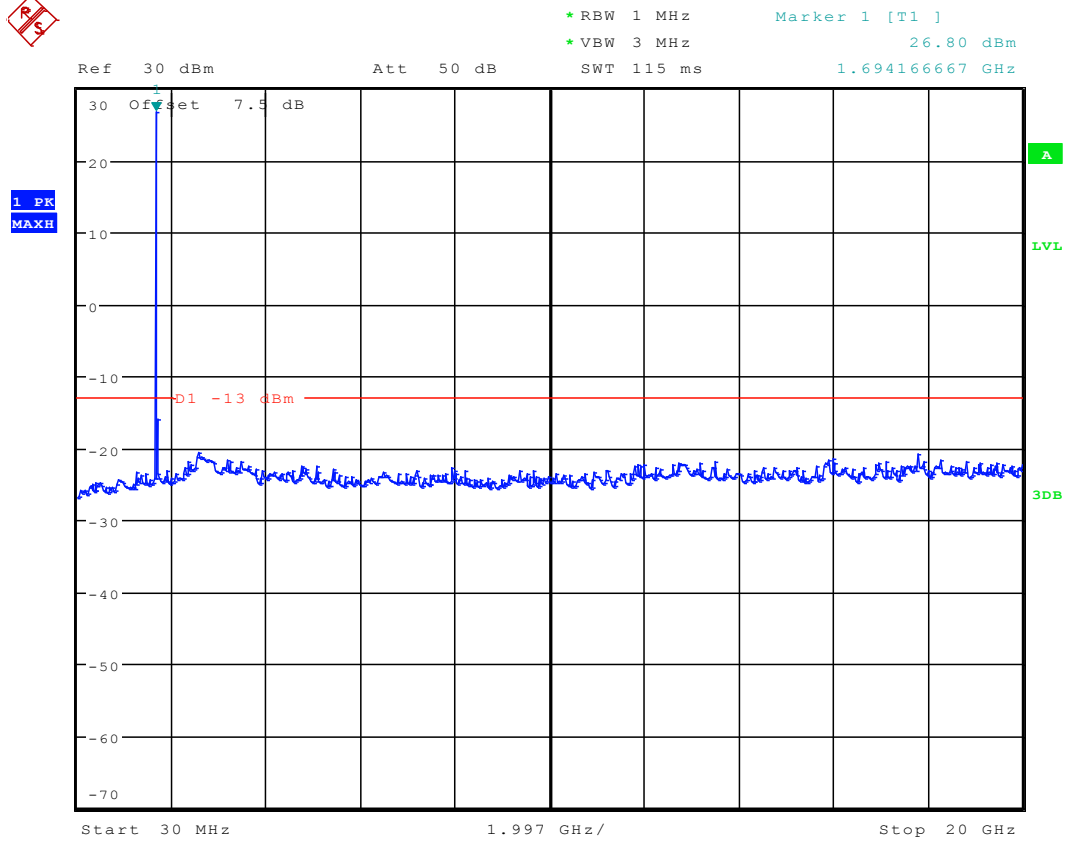
1 RB/RB #max



Date: 9.NOV.2011 17:41:01



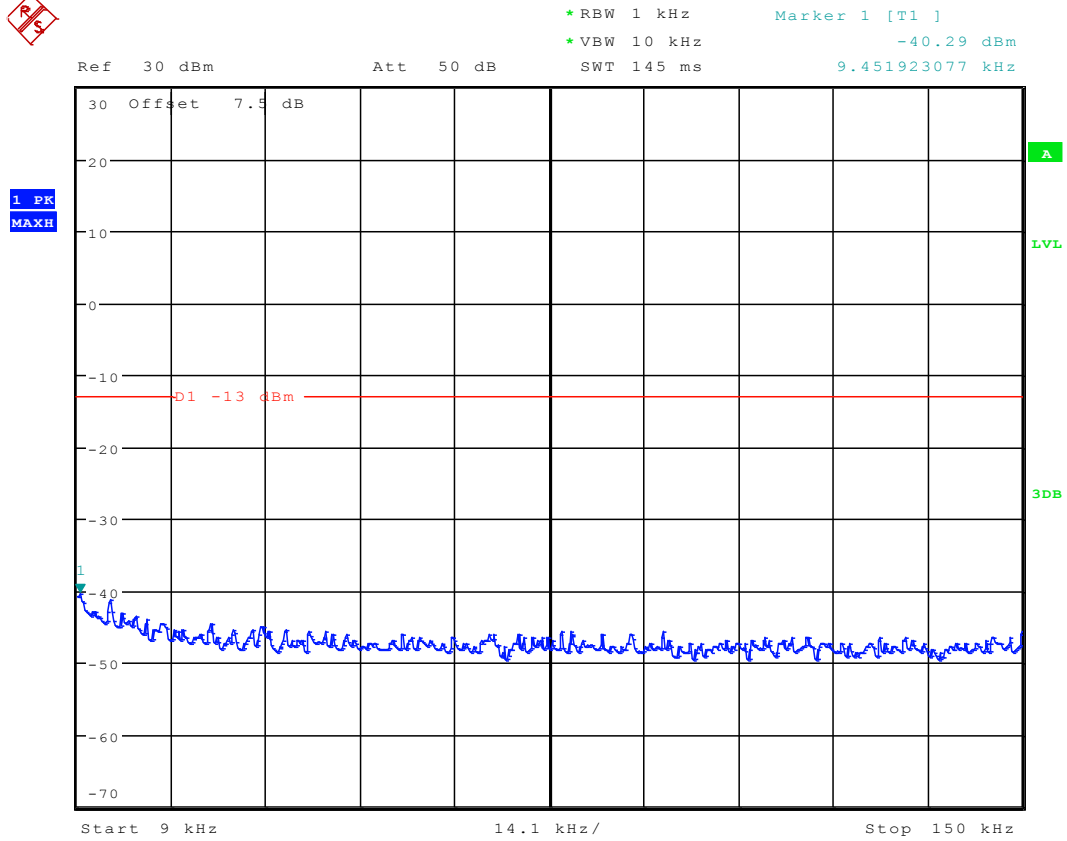
Date: 9.NOV.2011 17:36:15



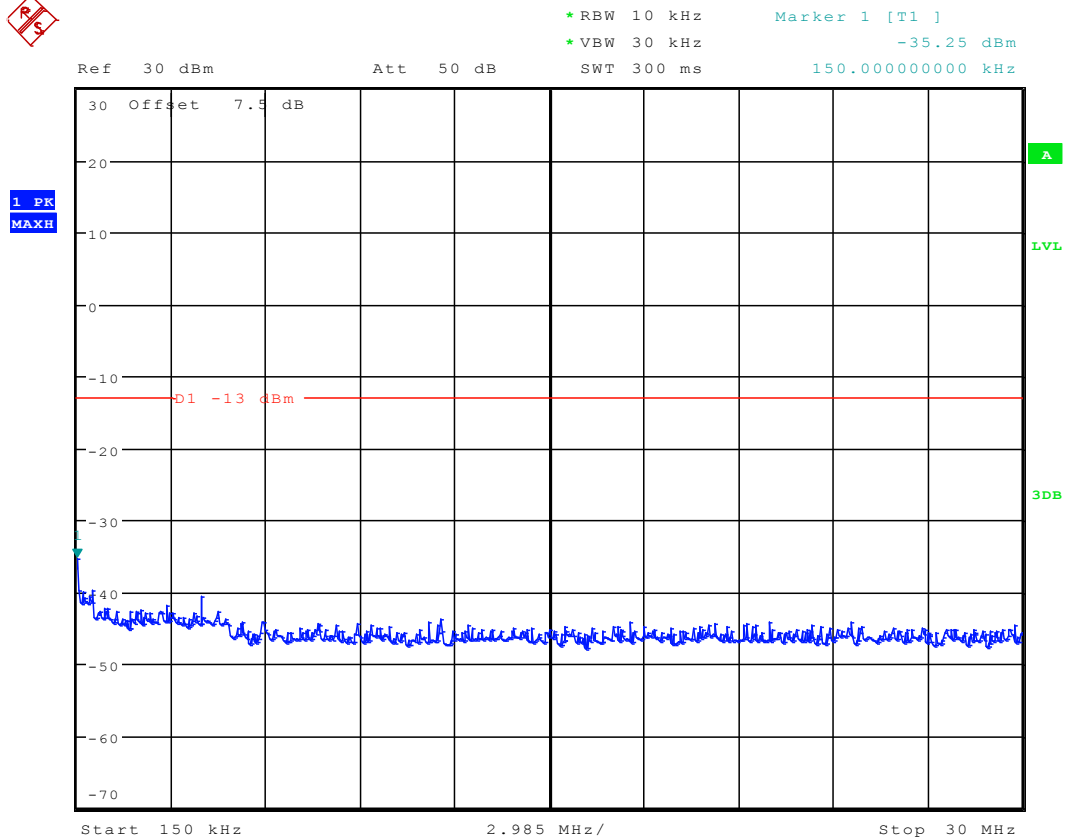
Date: 9.NOV.2011 17:34:44



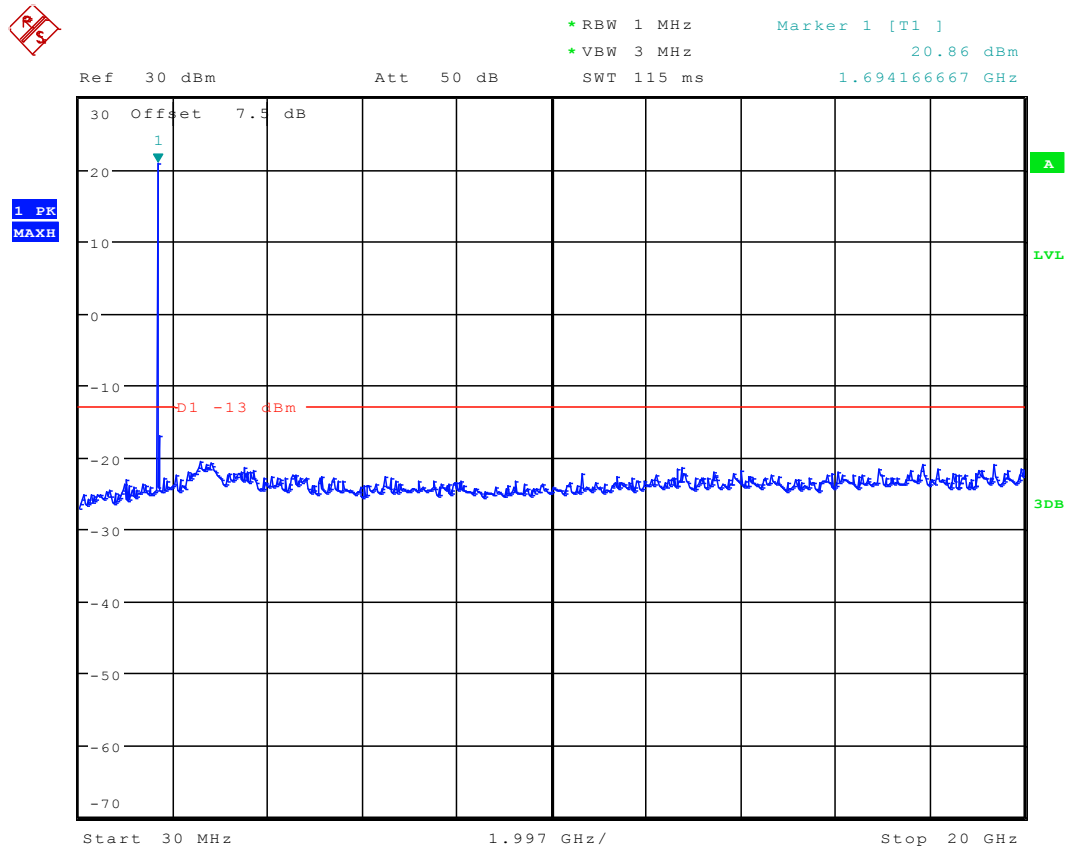
full RBs



Date: 9.NOV.2011 17:39:24



Date: 9.NOV.2011 17:38:02

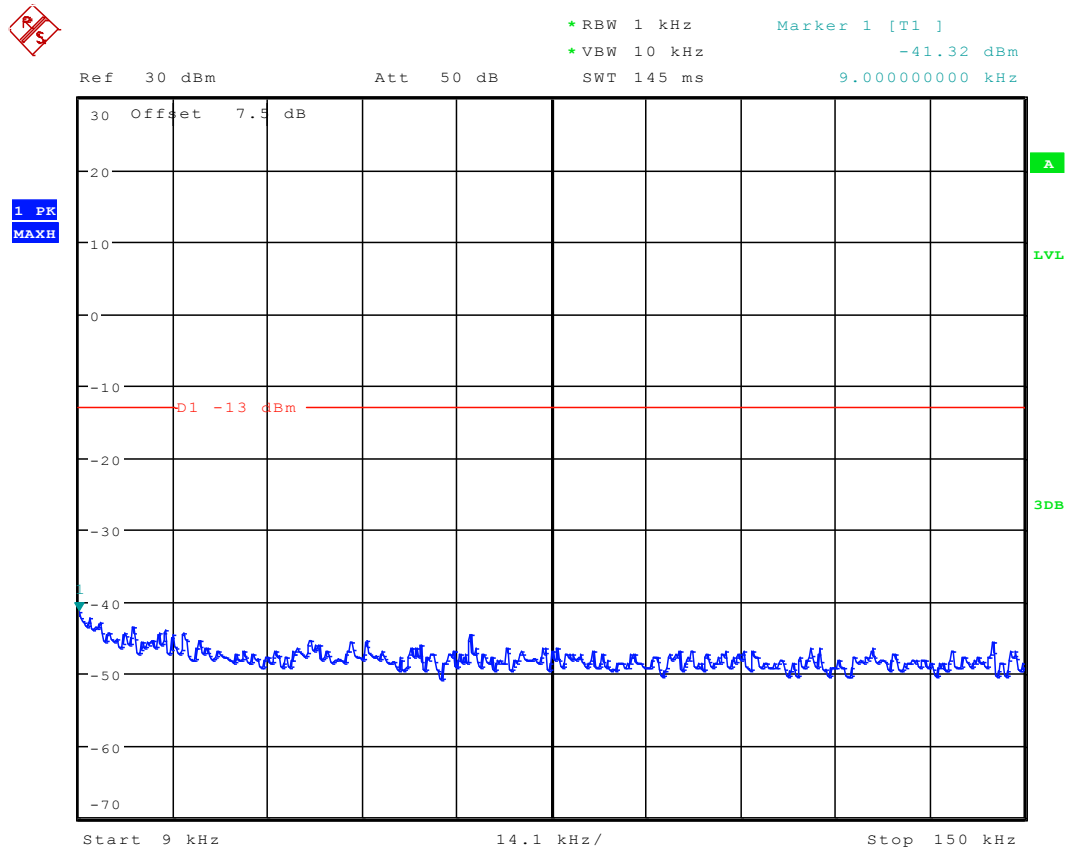


Date: 9.NOV.2011 17:27:03

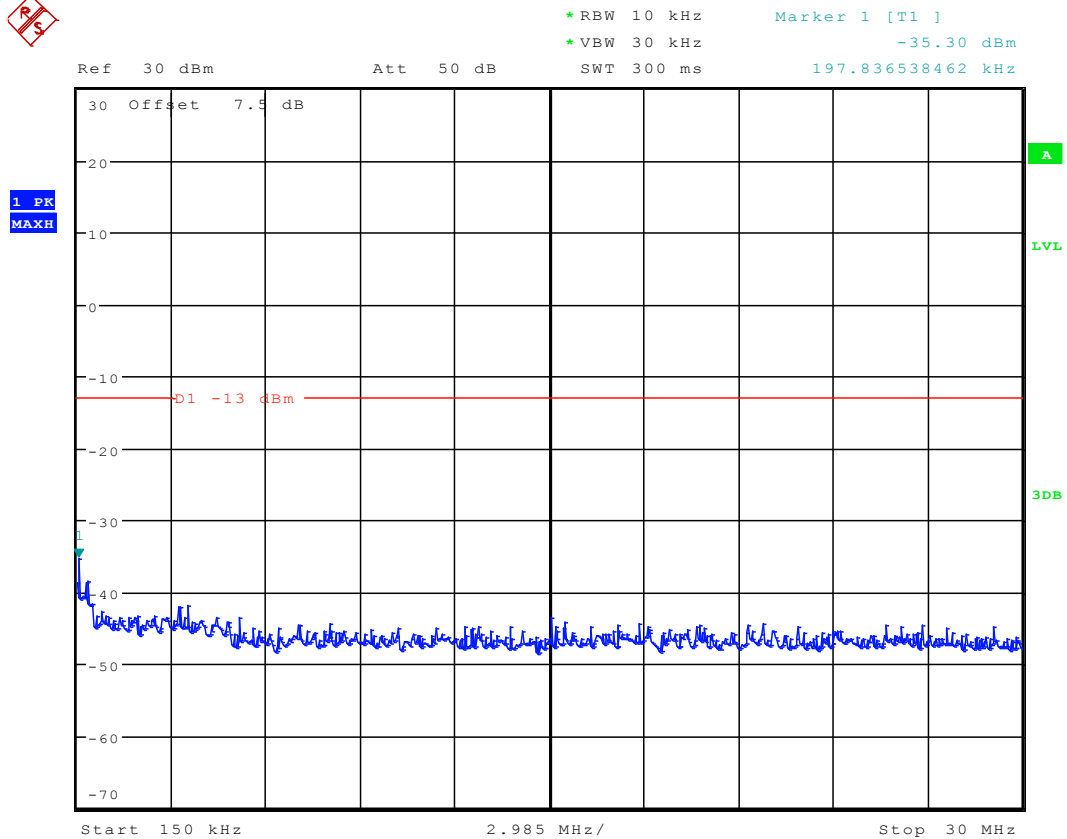


10MHz(BW) Channel 20175

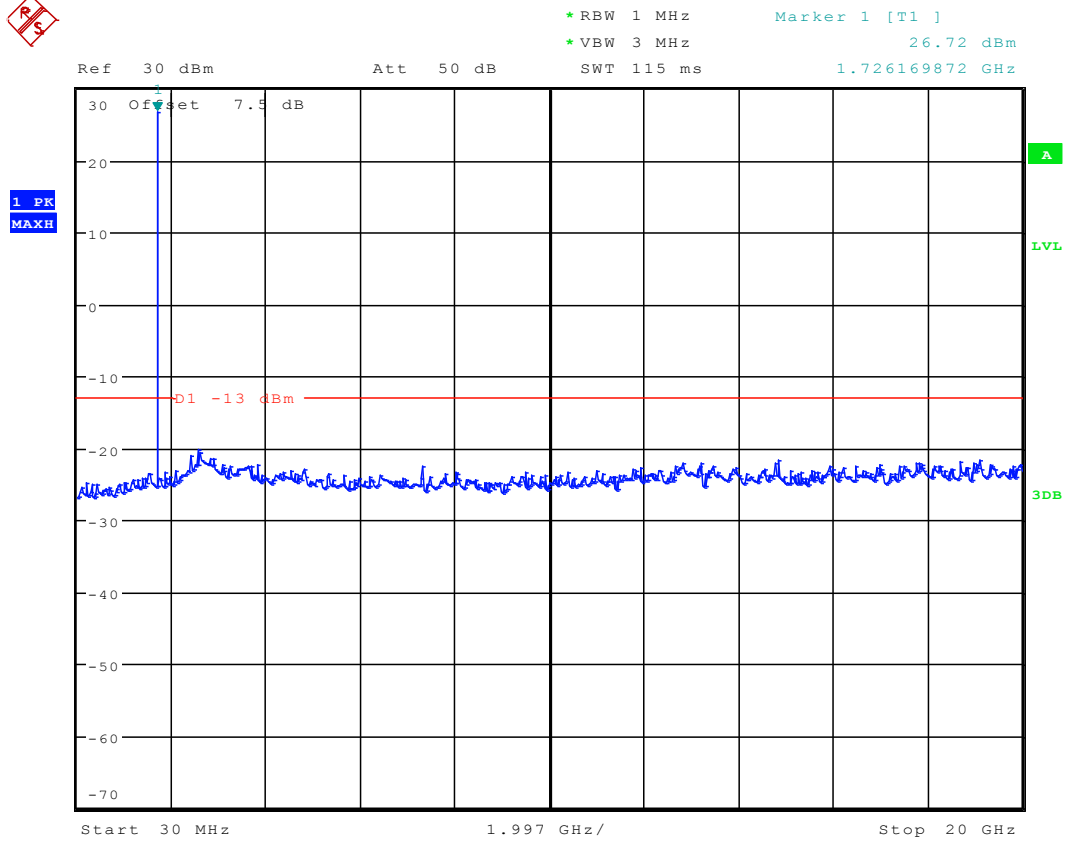
1 RB/RB #0



Date: 9.NOV.2011 17:47:15



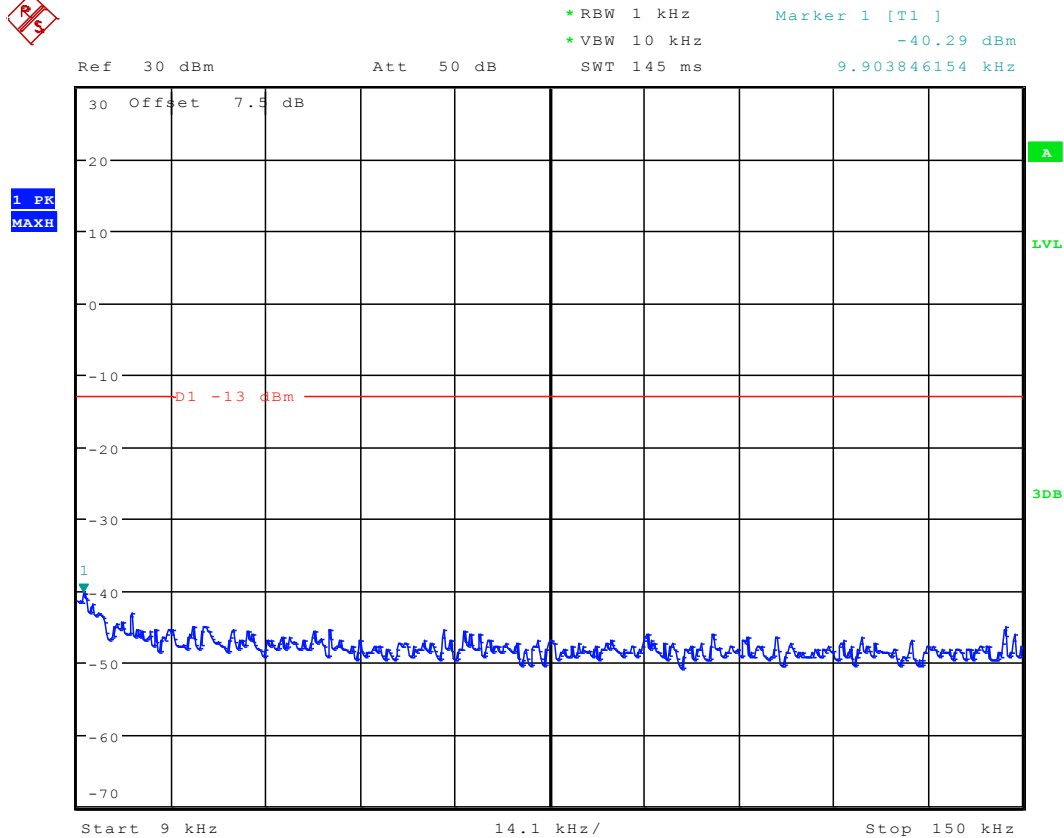
Date: 9.NOV.2011 17:51:15



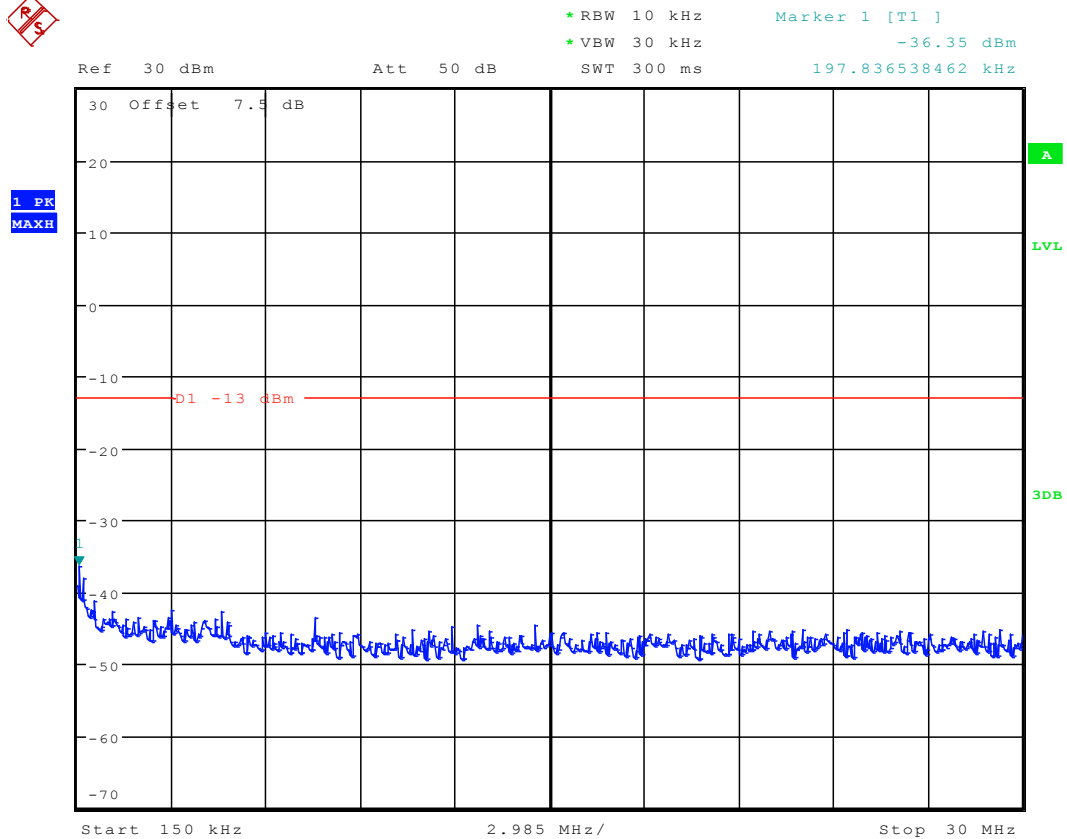
Date: 9.NOV.2011 17:53:39



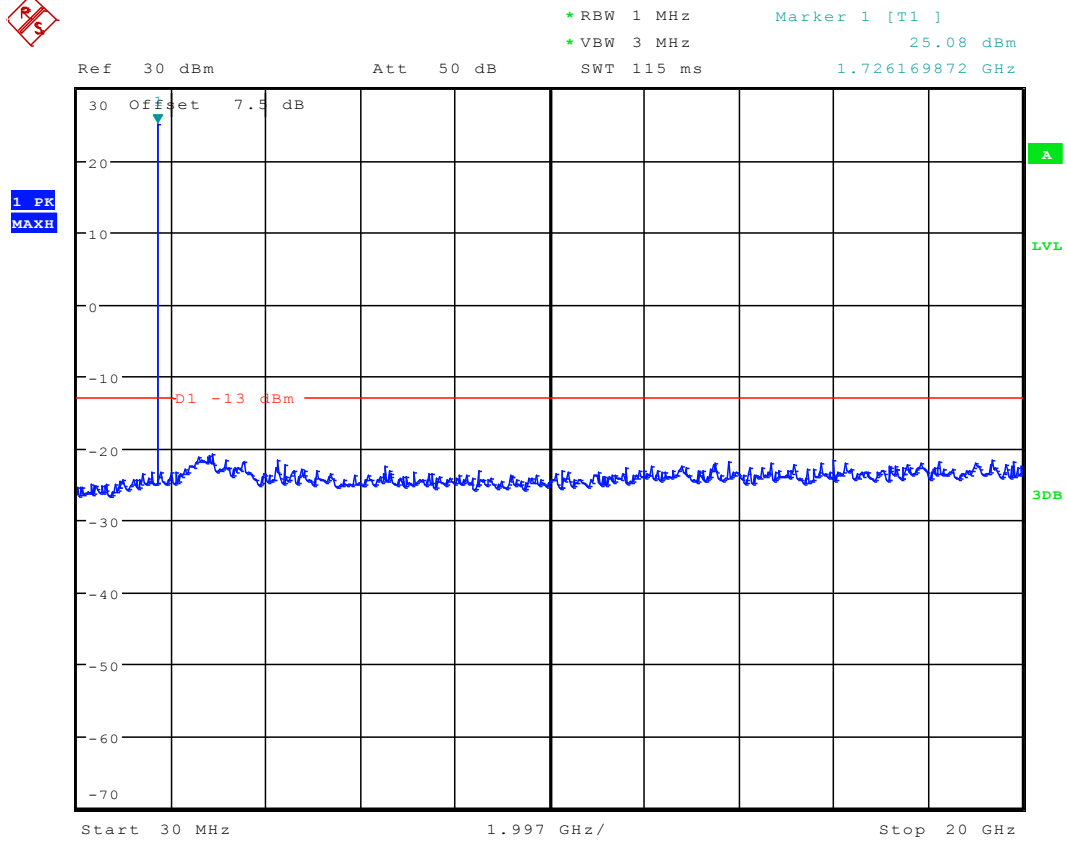
1 RB/RB #max



Date: 9.NOV.2011 17:46:09



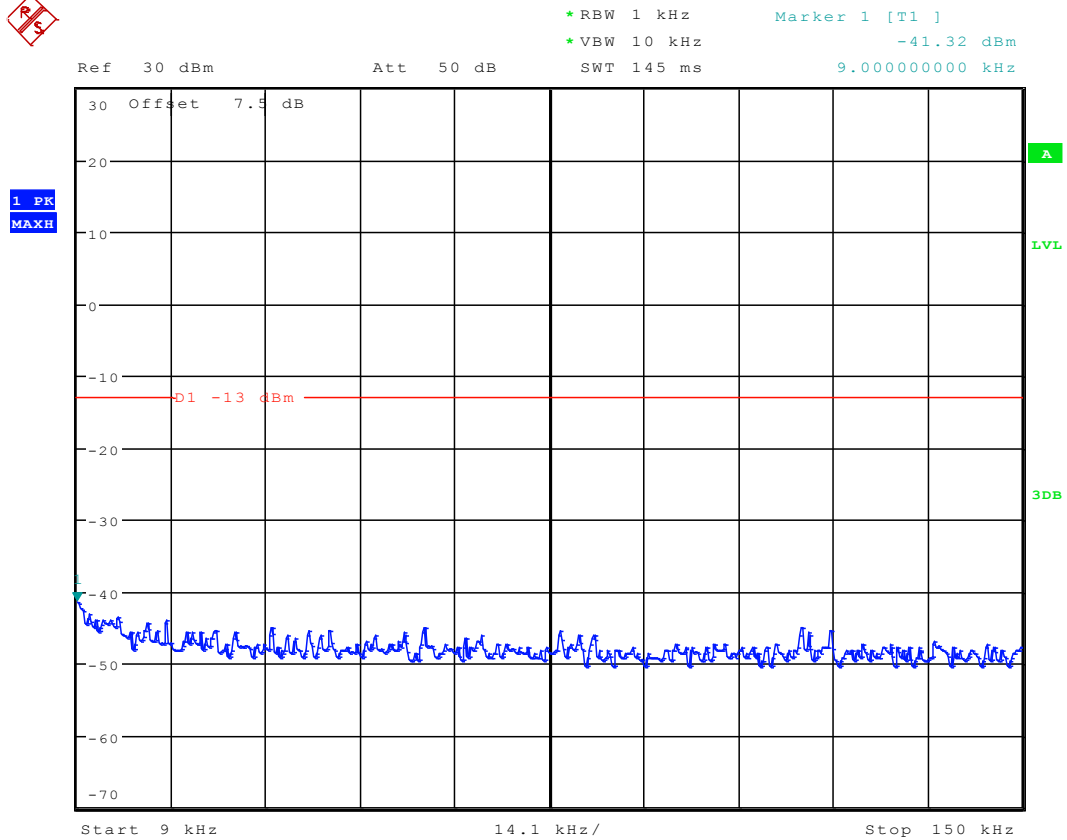
Date: 9.NOV.2011 17:52:32



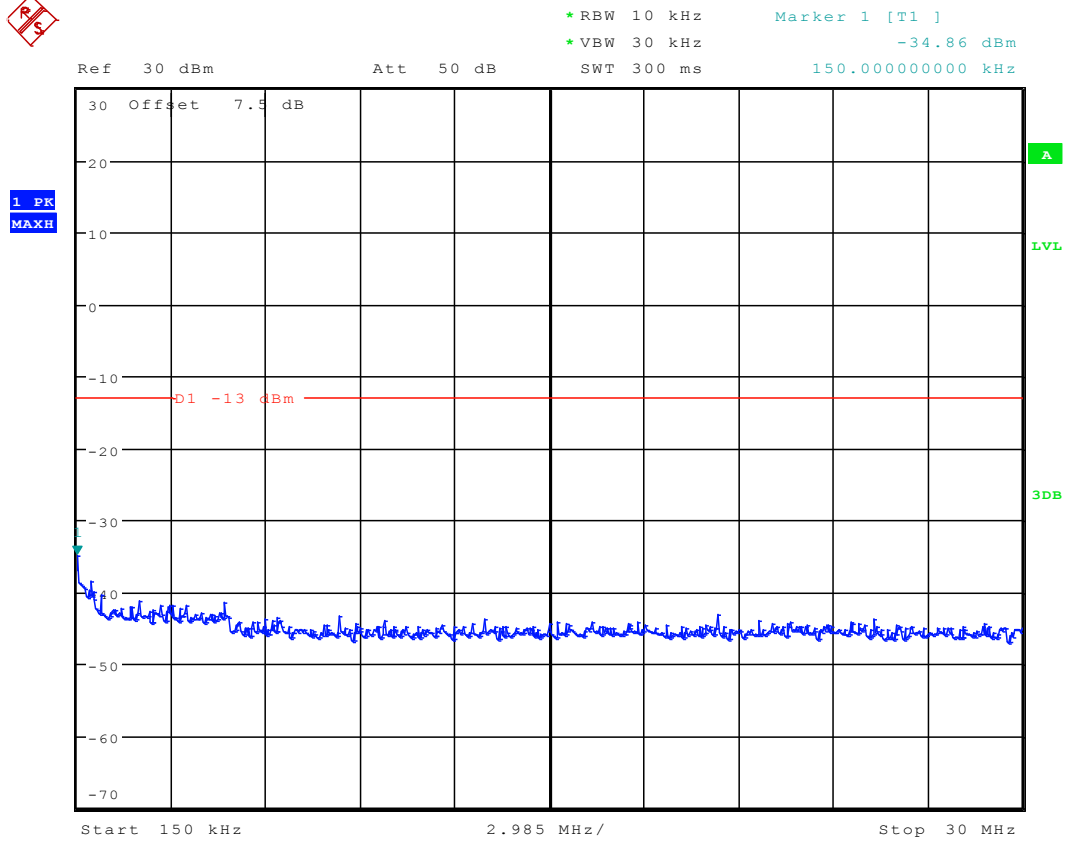
Date: 9.NOV.2011 17:53:18



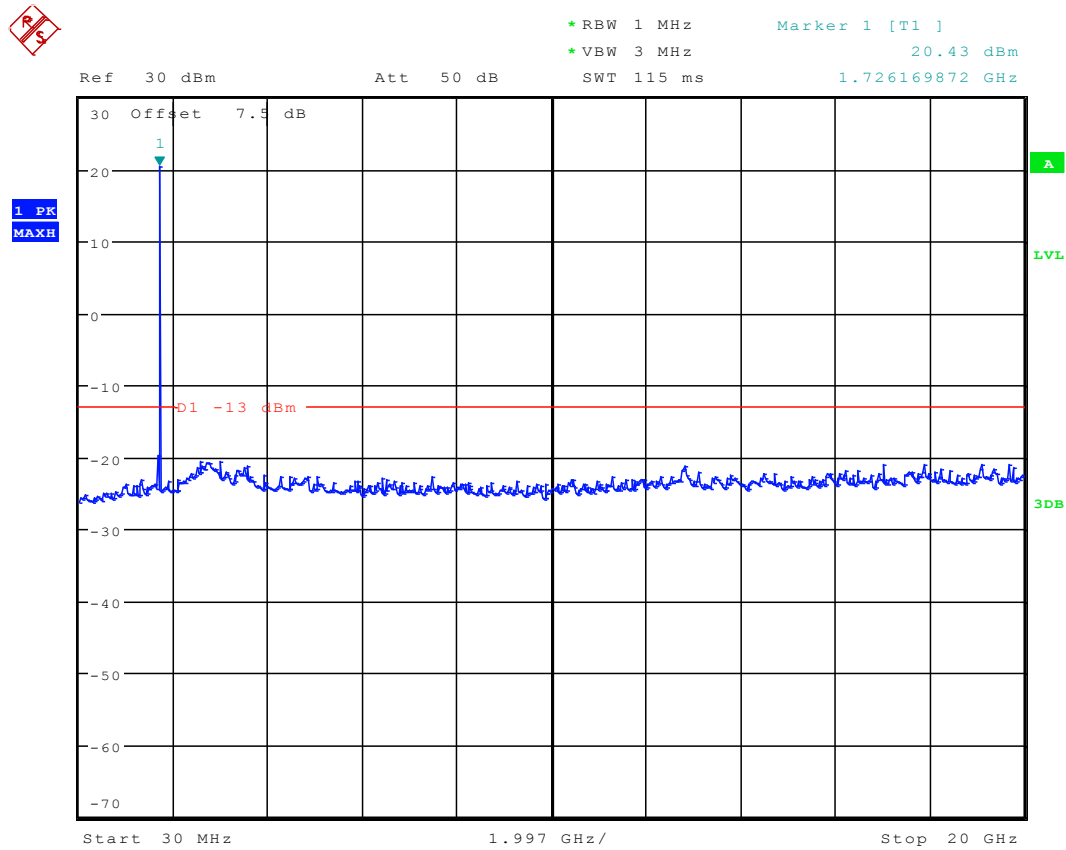
full RBs



Date: 9.NOV.2011 17:48:04



Date: 9.NOV.2011 17:50:27

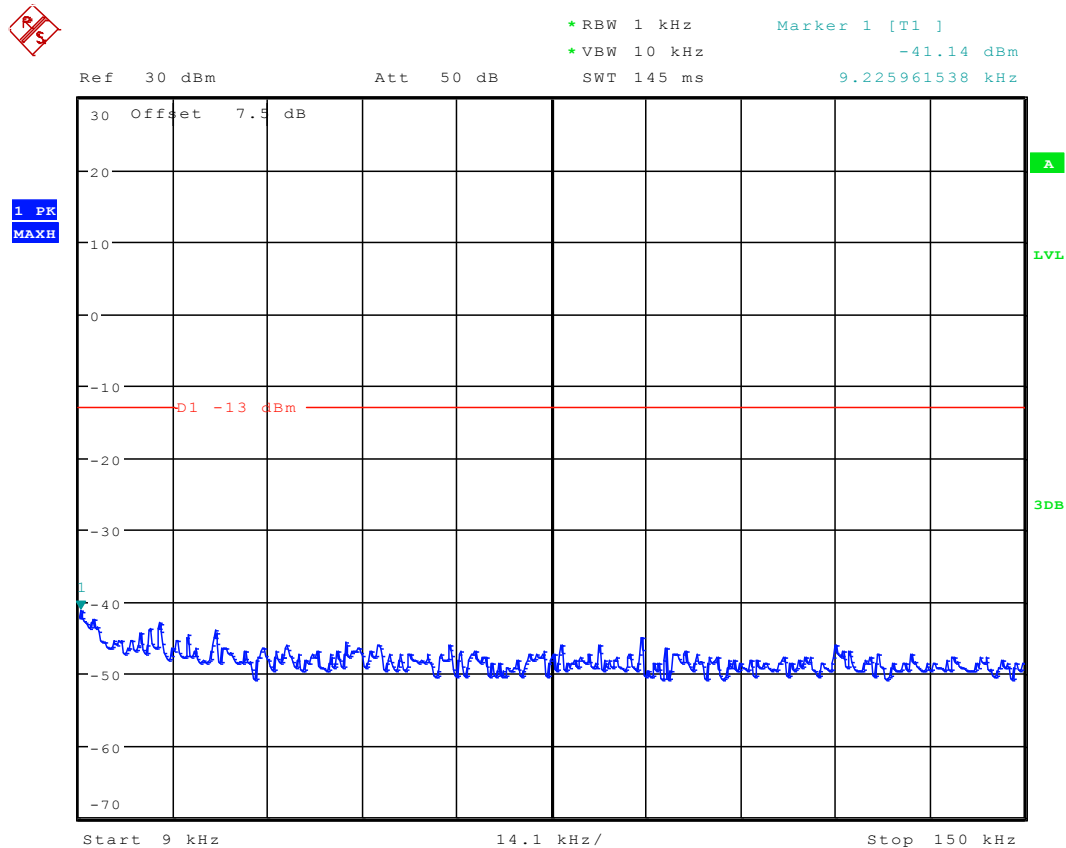


Date: 9.NOV.2011 17:54:13

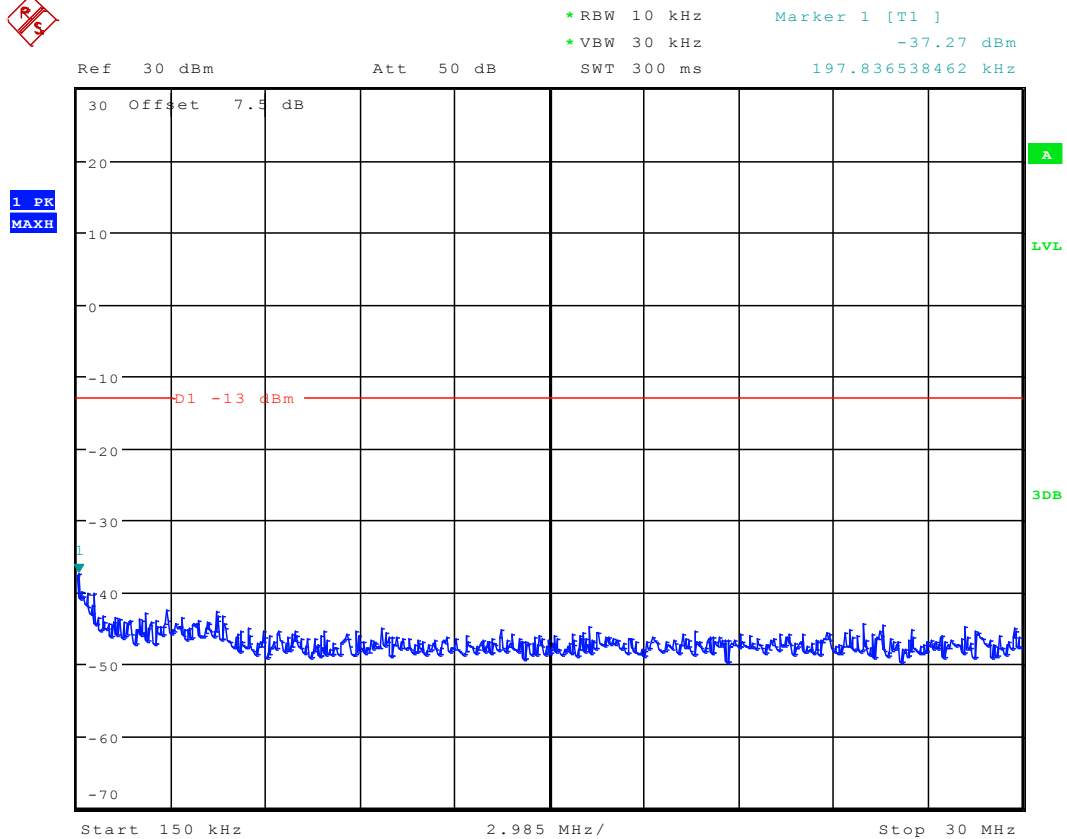


10MHz(BW) Channel 20350

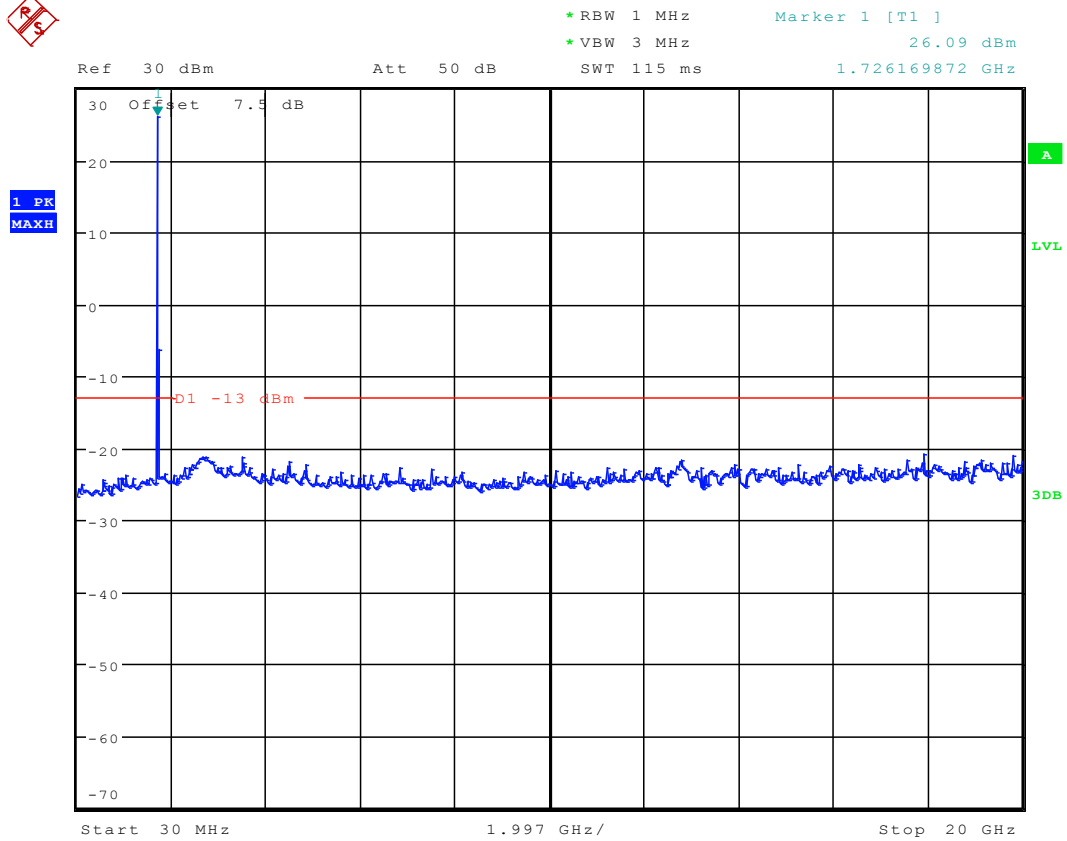
1 RB/RB #0



Date: 9.NOV.2011 18:08:21



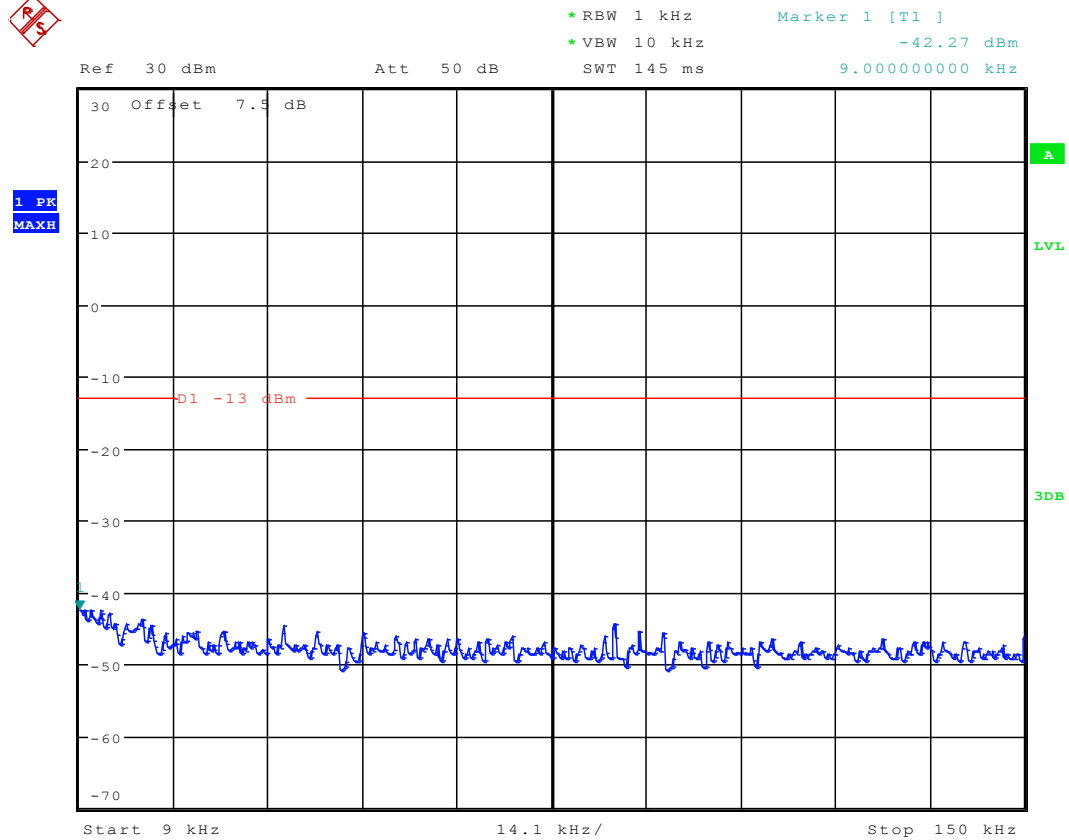
Date: 9.NOV.2011 18:04:52



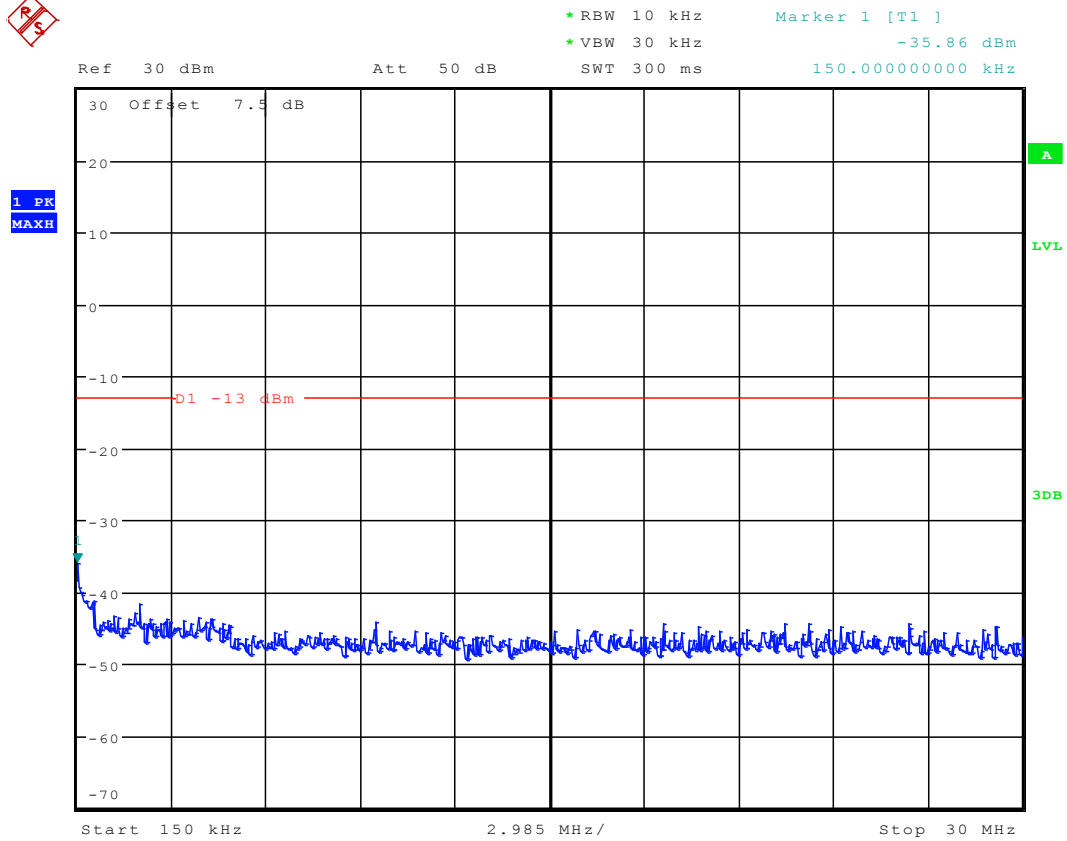
Date: 9.NOV.2011 18:03:21



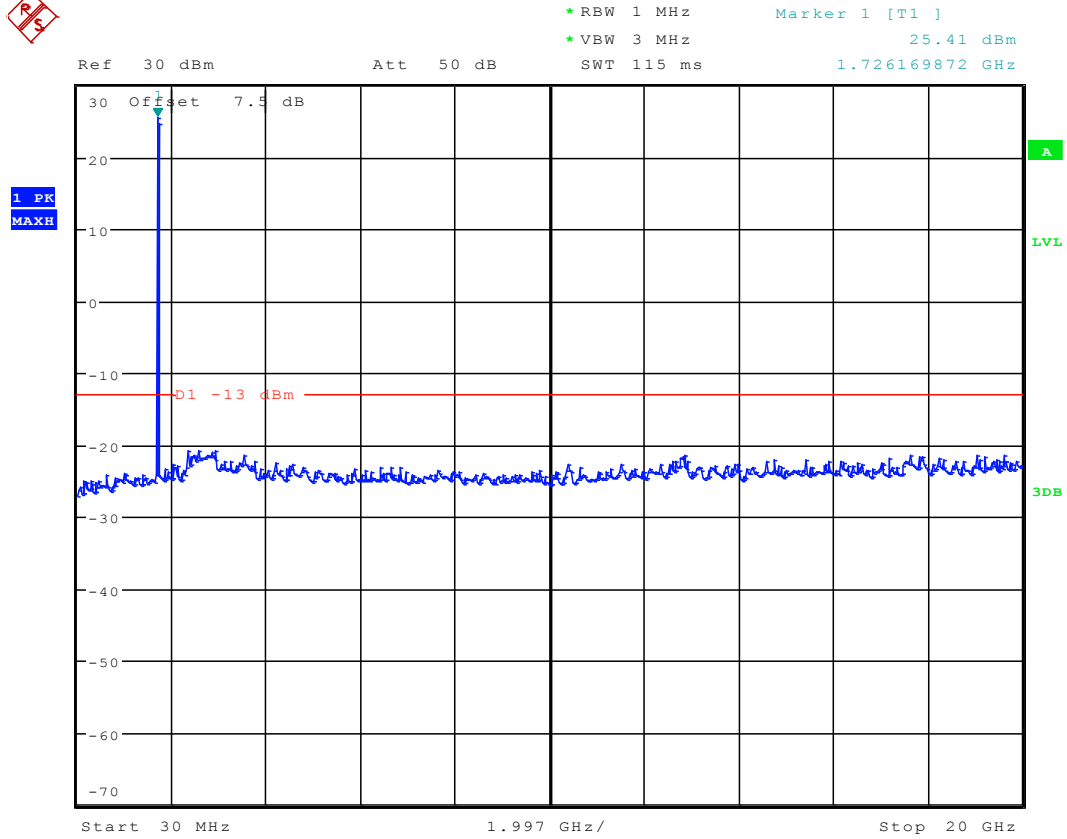
1 RB/RB #max



Date: 9.NOV.2011 18:09:20



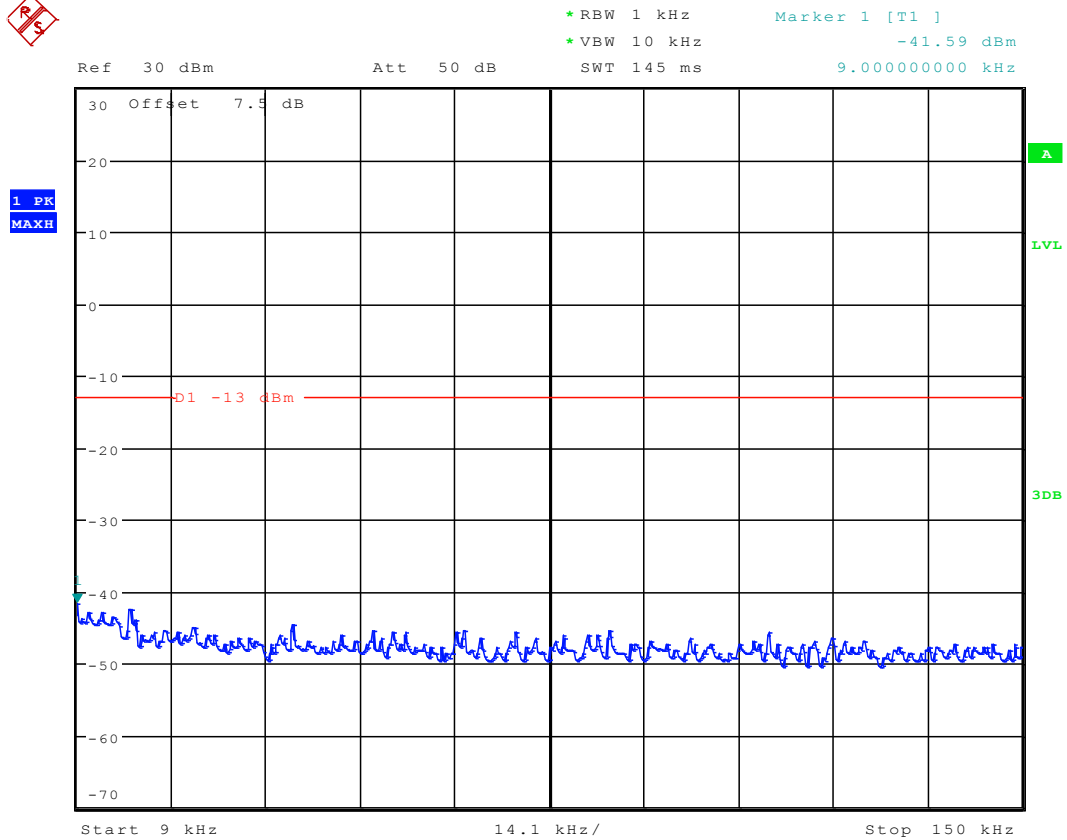
Date: 9.NOV.2011 18:04:28



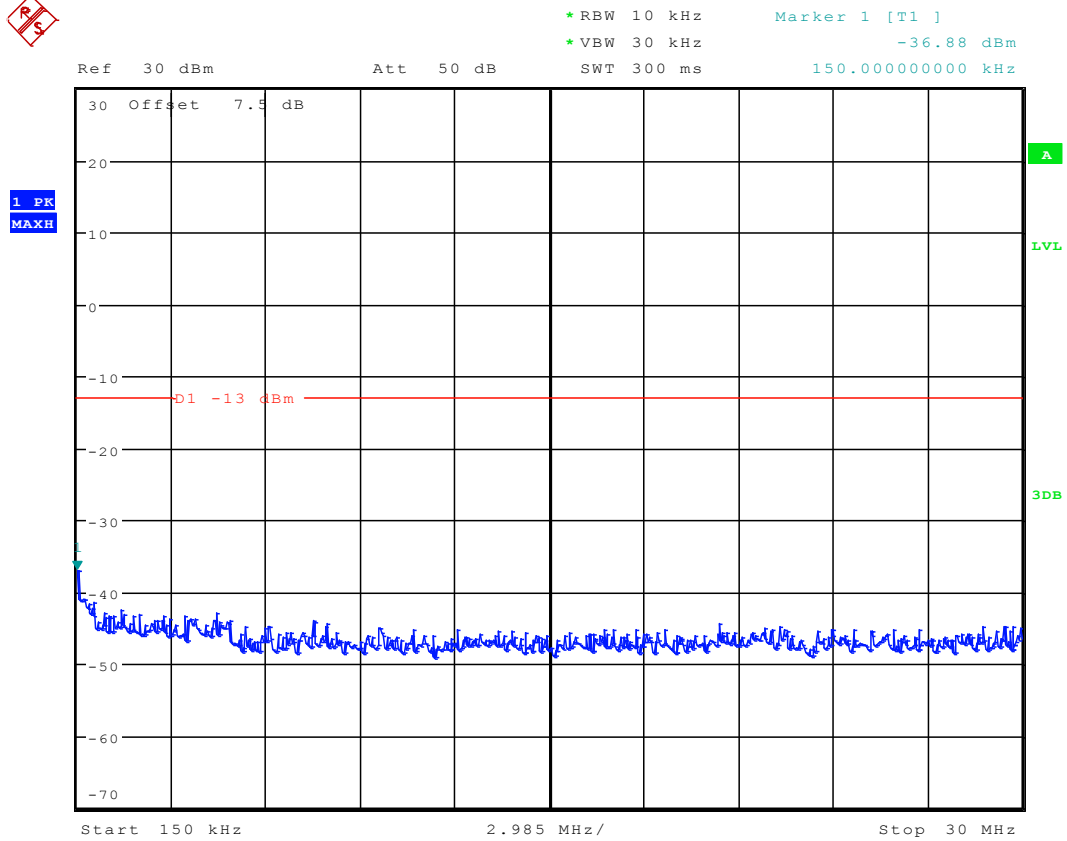
Date: 9.NOV.2011 18:03:43



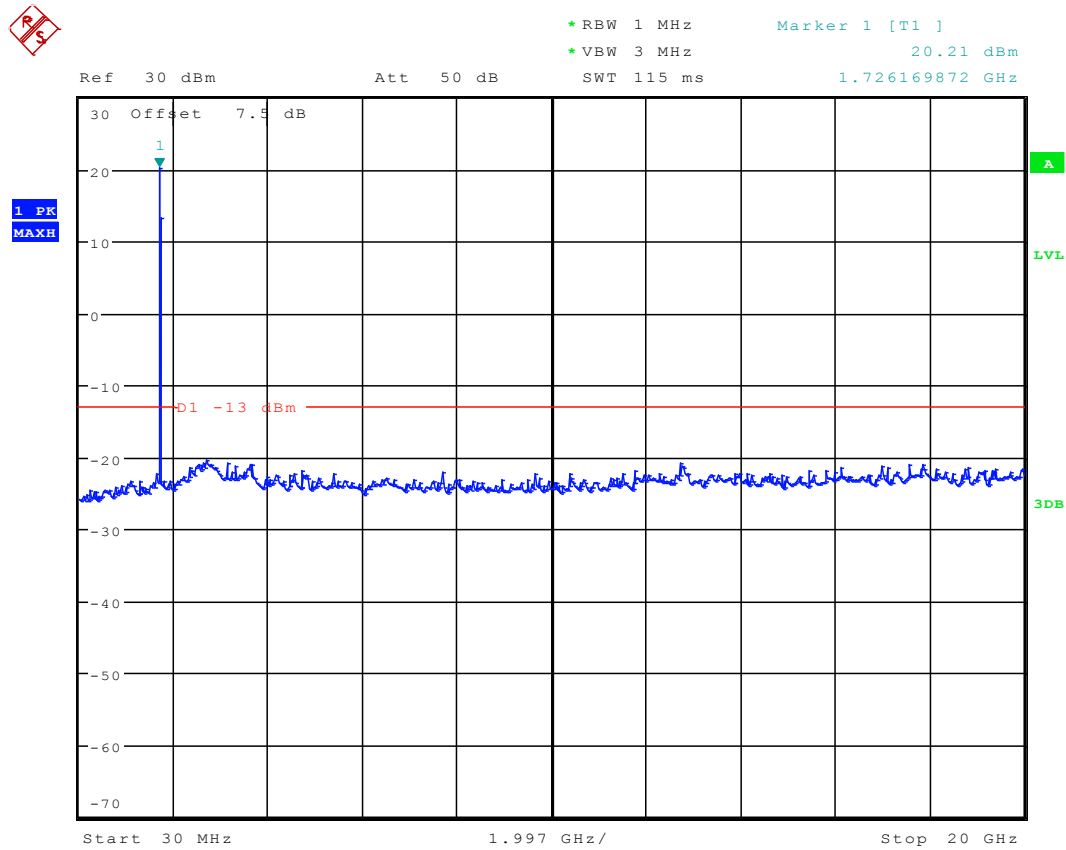
full RBs



Date: 9.NOV.2011 18:06:18



Date: 9.NOV.2011 18:05:17



Date: 9.NOV.2011 18:02:51



Appendix F

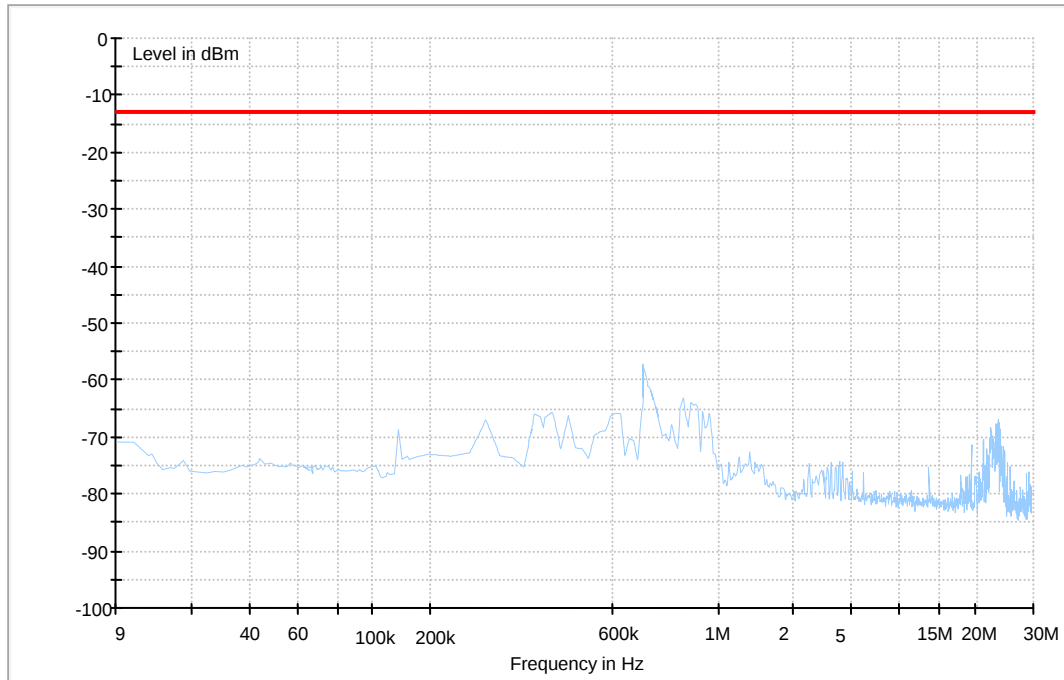
Radiated spurious emission

According to FCC Part 2.1053& Part 27.53



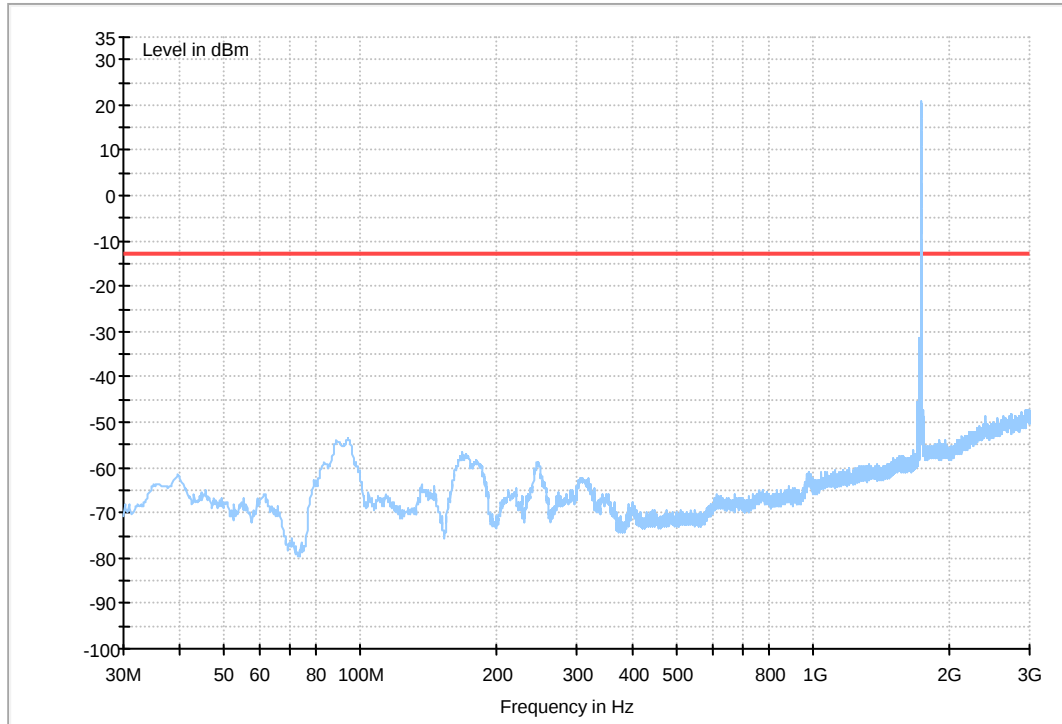
CDMA AWS

Traffic Mode (9kHz-30MHz)



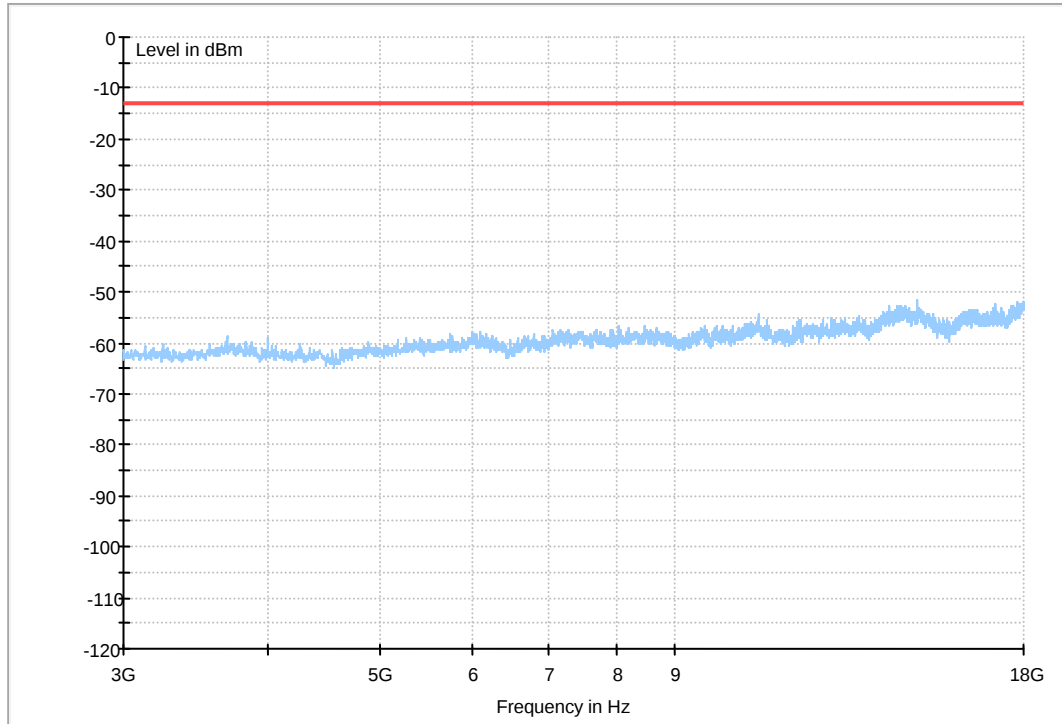


Traffic Mode (30MHz-3GHz)



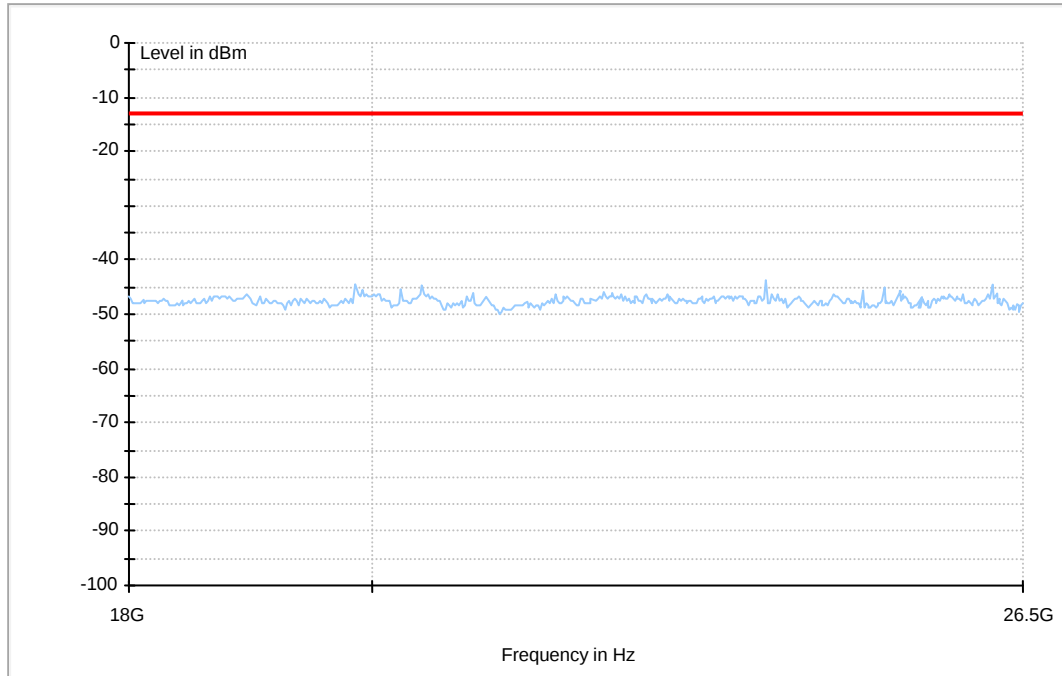


Traffic Mode (3GHz-18GHz)





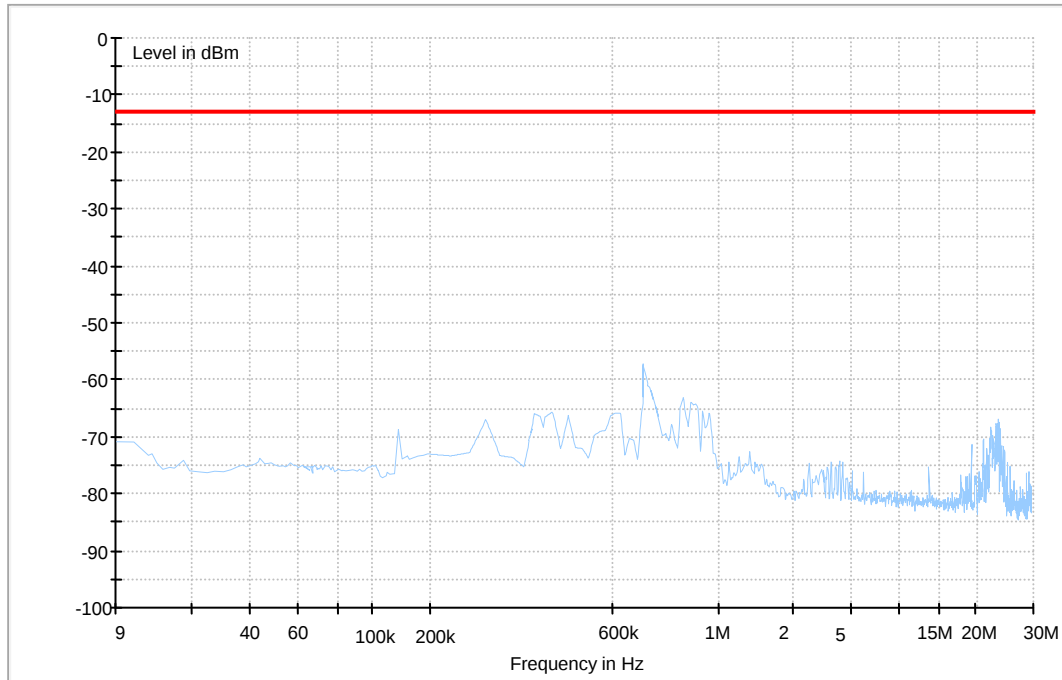
Traffic Mode (18GHz-26.5GHz)





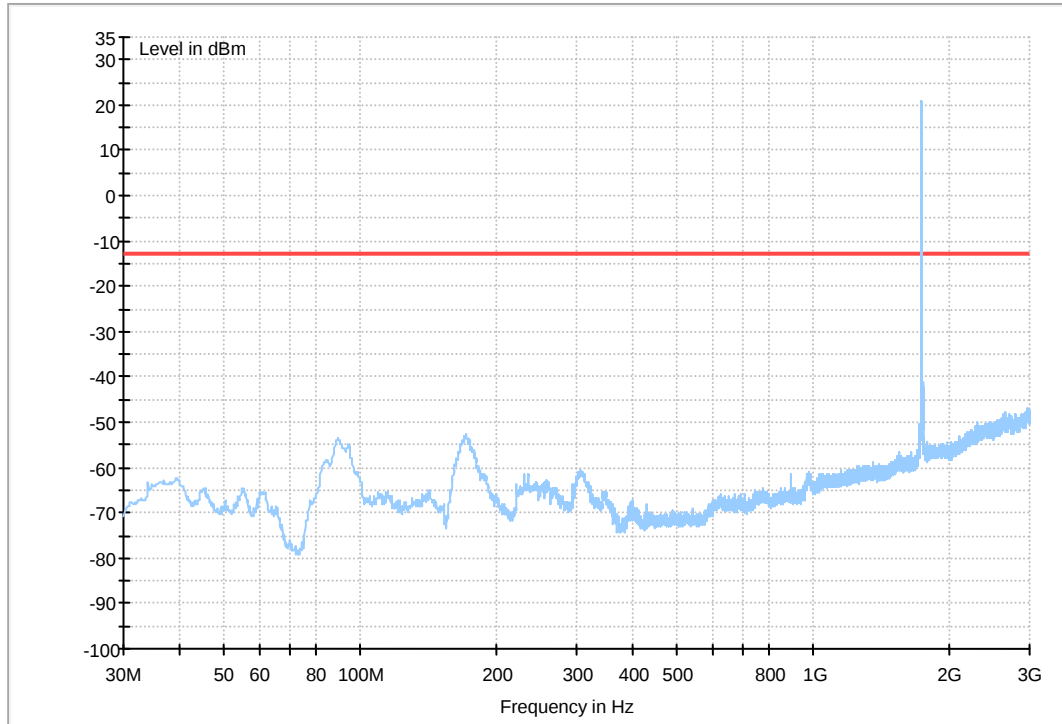
EVDO AWS R.0

Traffic Mode (9kHz-30MHz)



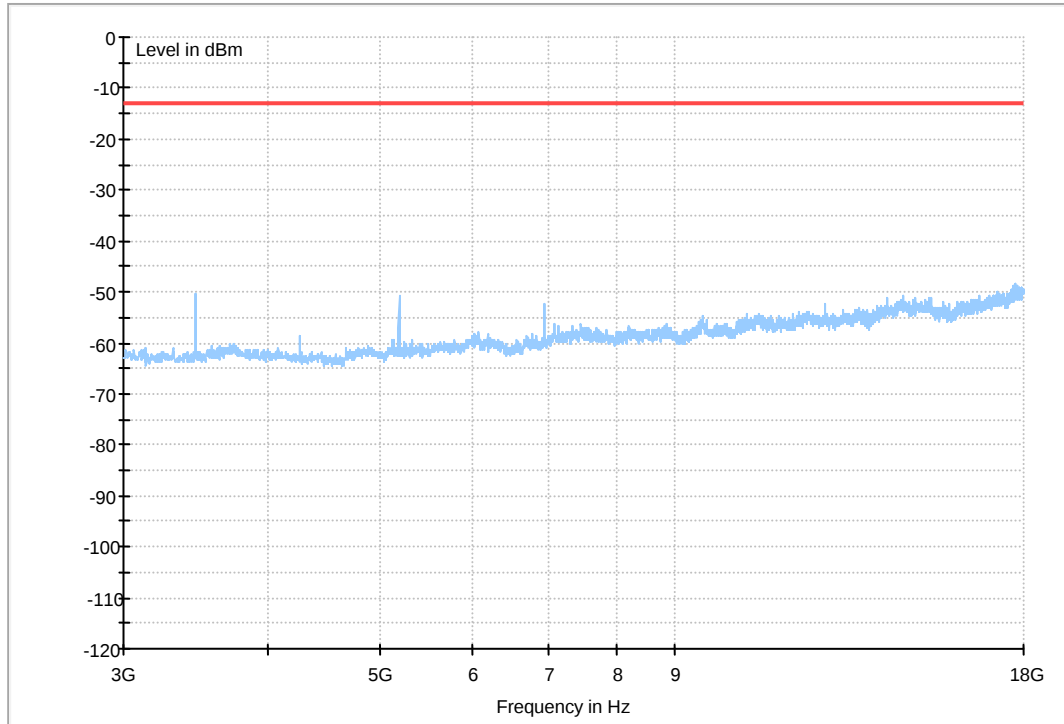


Traffic Mode (30MHz-3GHz)



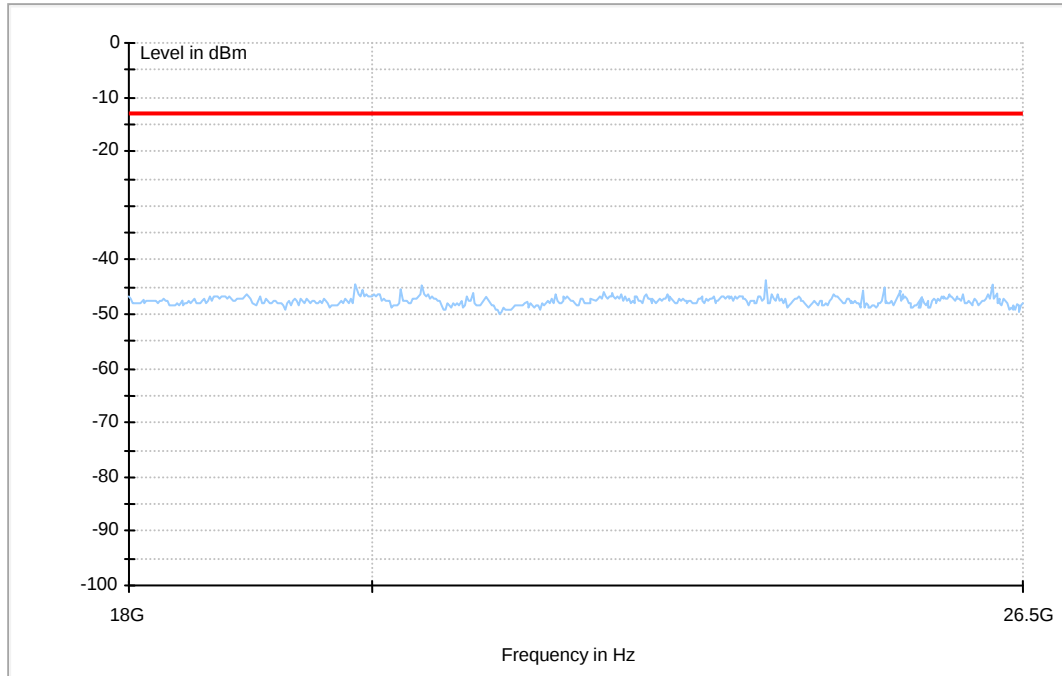


Traffic Mode (3GHz-18GHz)





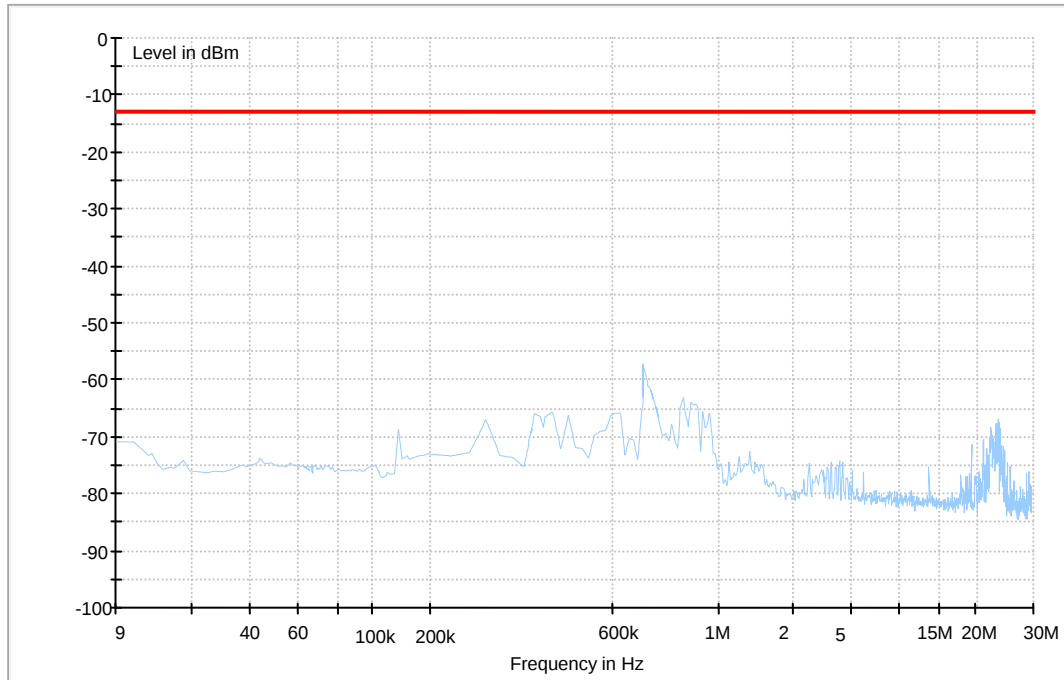
Traffic Mode (18GHz-26.5GHz)





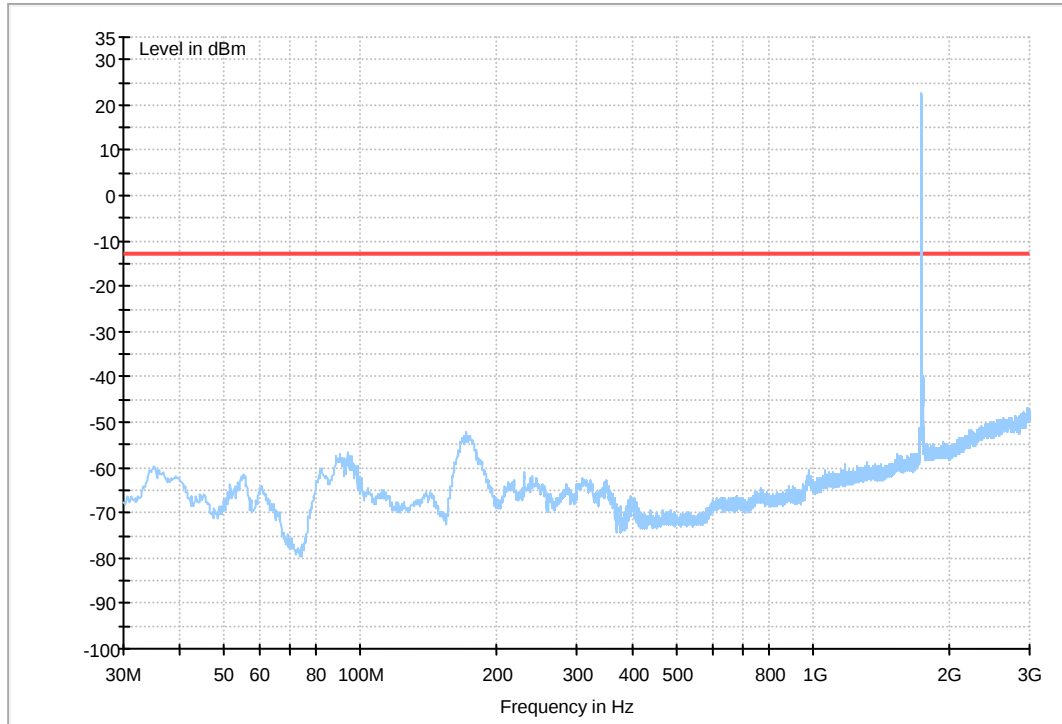
EVDO AWS R.A

Traffic Mode (9kHz-30MHz)



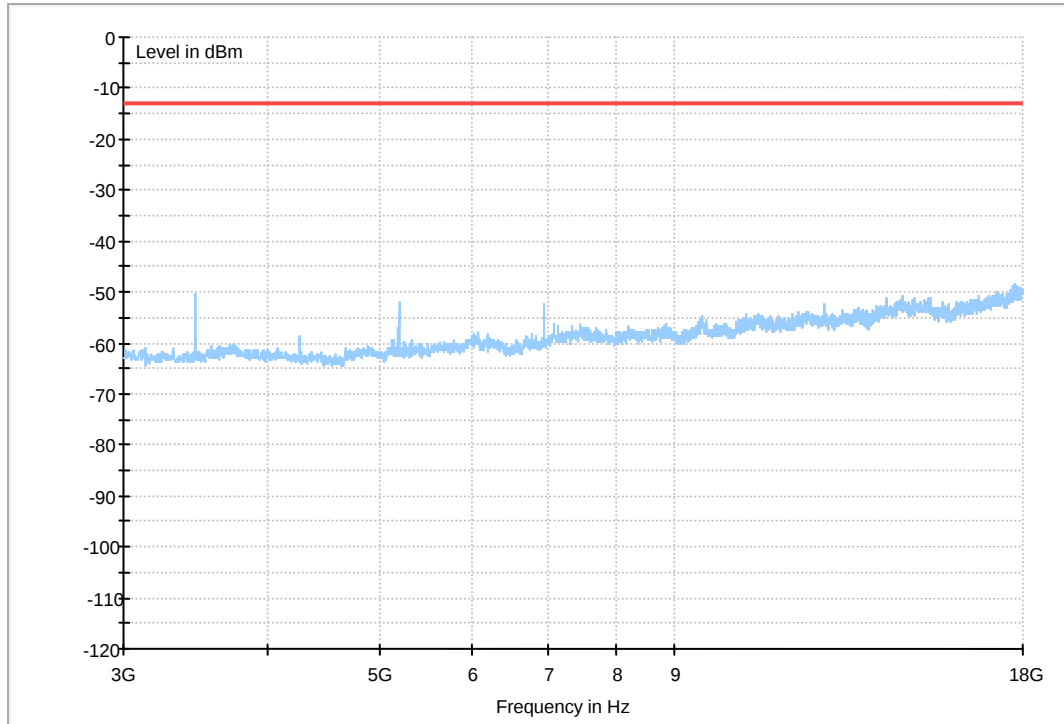


Traffic Mode (30MHz-3GHz)



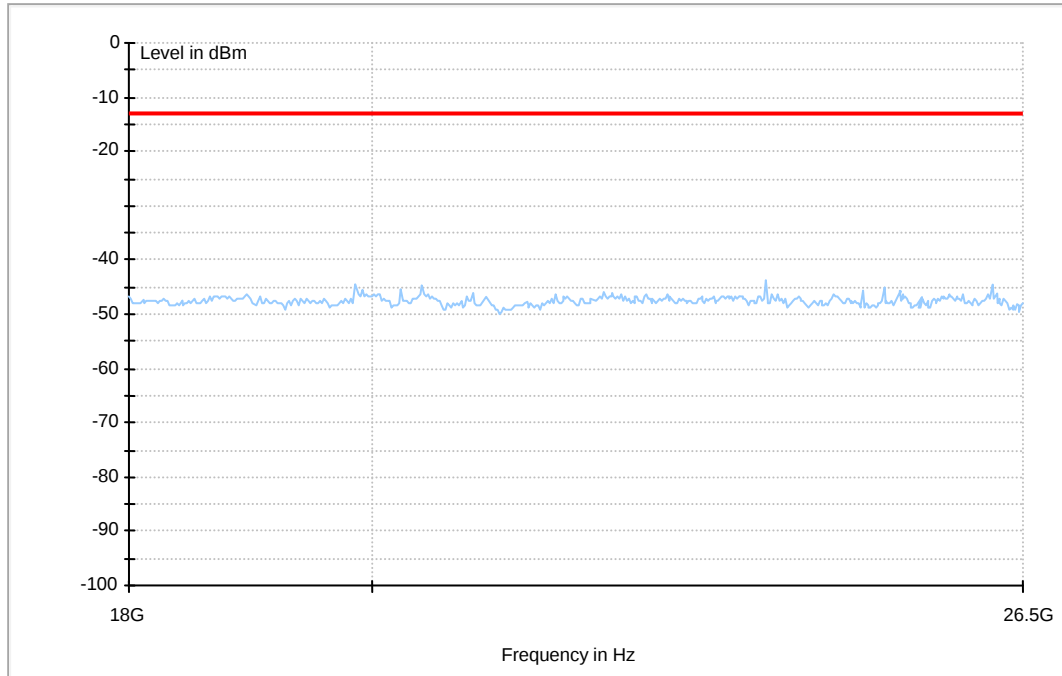


Traffic Mode (3GHz-18GHz)





Traffic Mode (18GHz-26.5GHz)



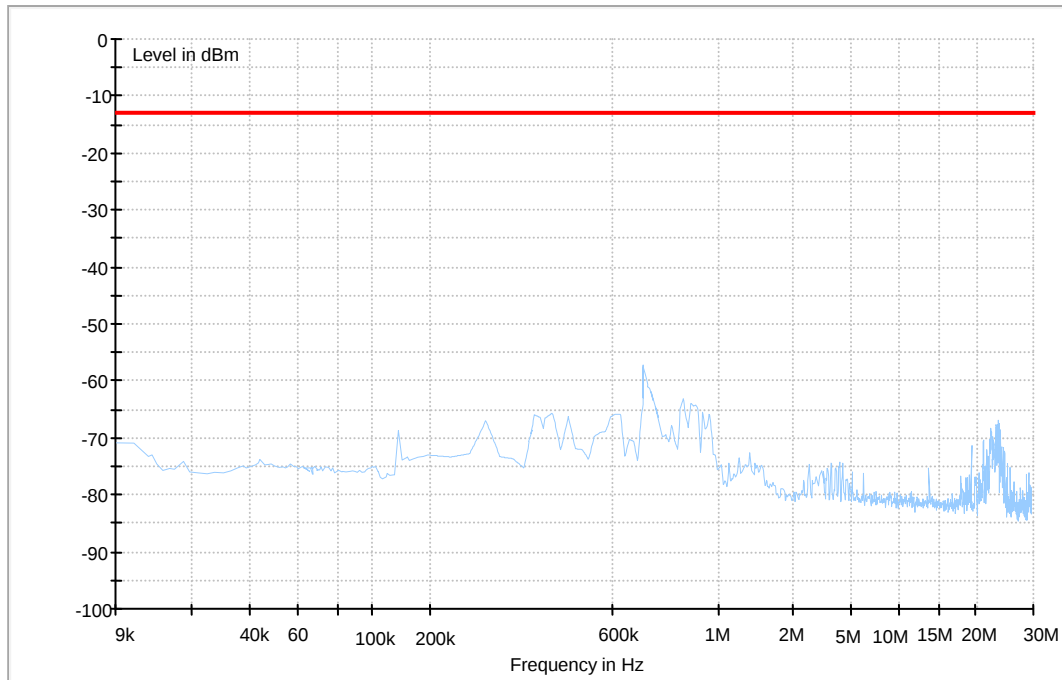


LTE BAND 4 (1.4MHz)

NOTE1: QPSK output power higher than 16QAM, so only test the QPSK mode.

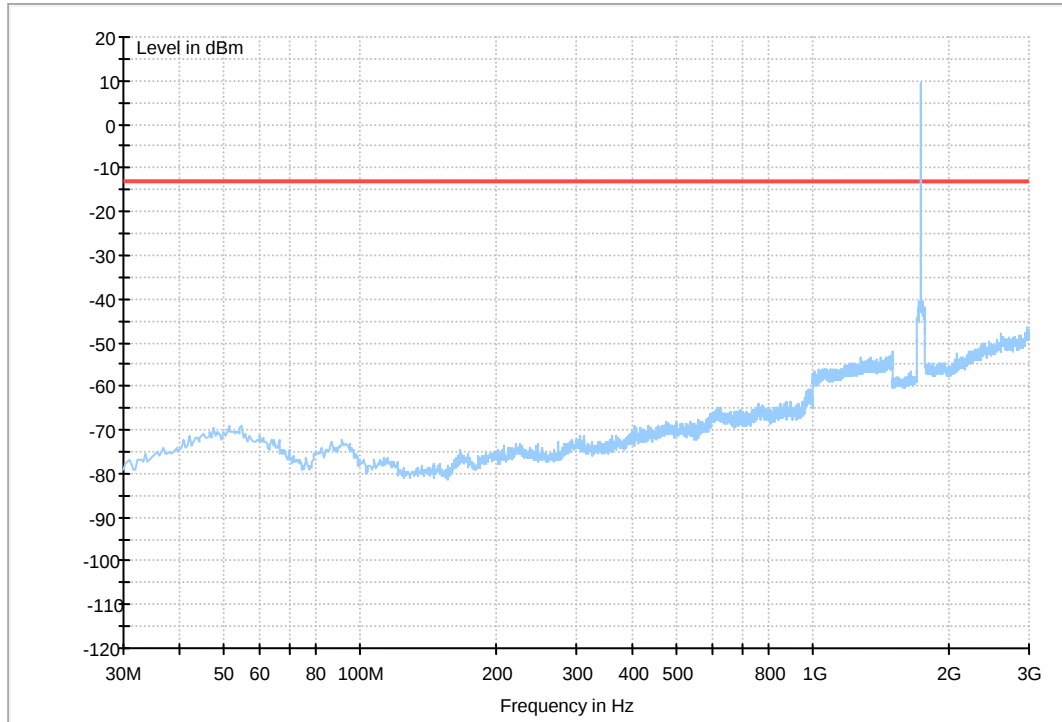
NOTE2: All relevant operation modes have been tested, and the worst case data is included in this report.

Traffic Mode (9kHz-30MHz)



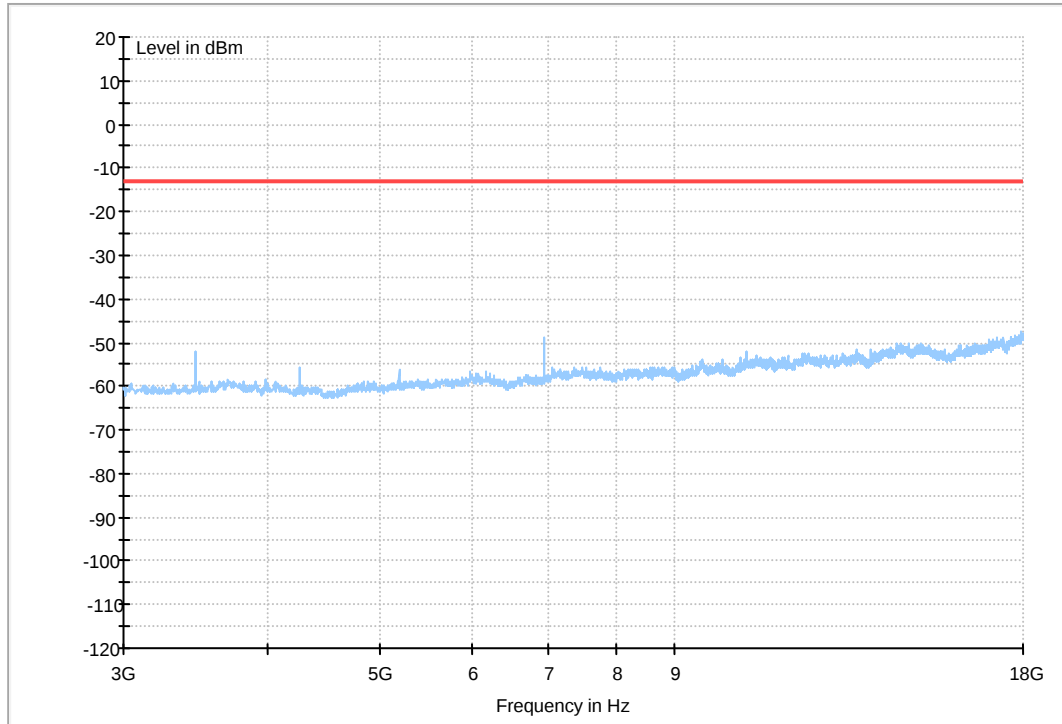


Traffic Mode (30MHz-3GHz)



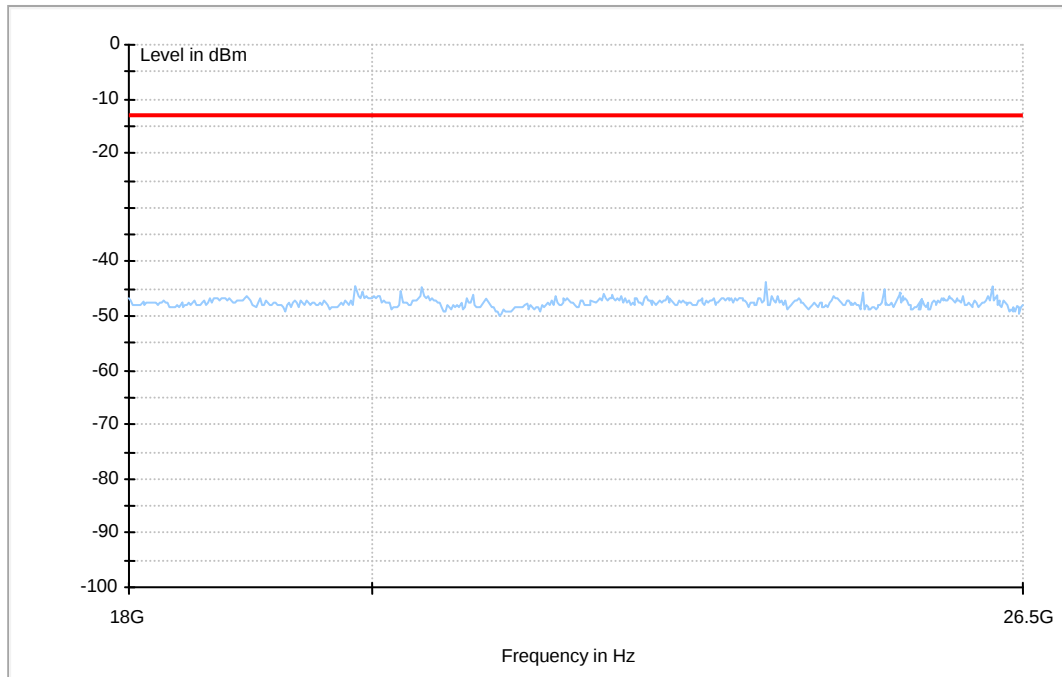


Traffic Mode (3GHz-18GHz)





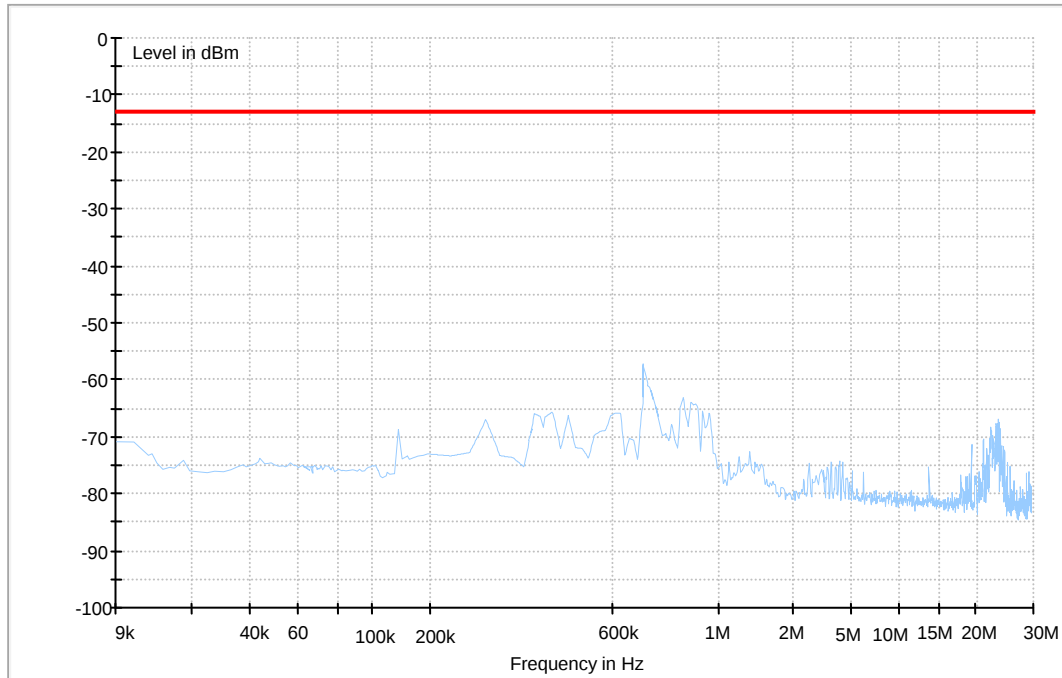
Traffic Mode (18GHz-26.5GHz)





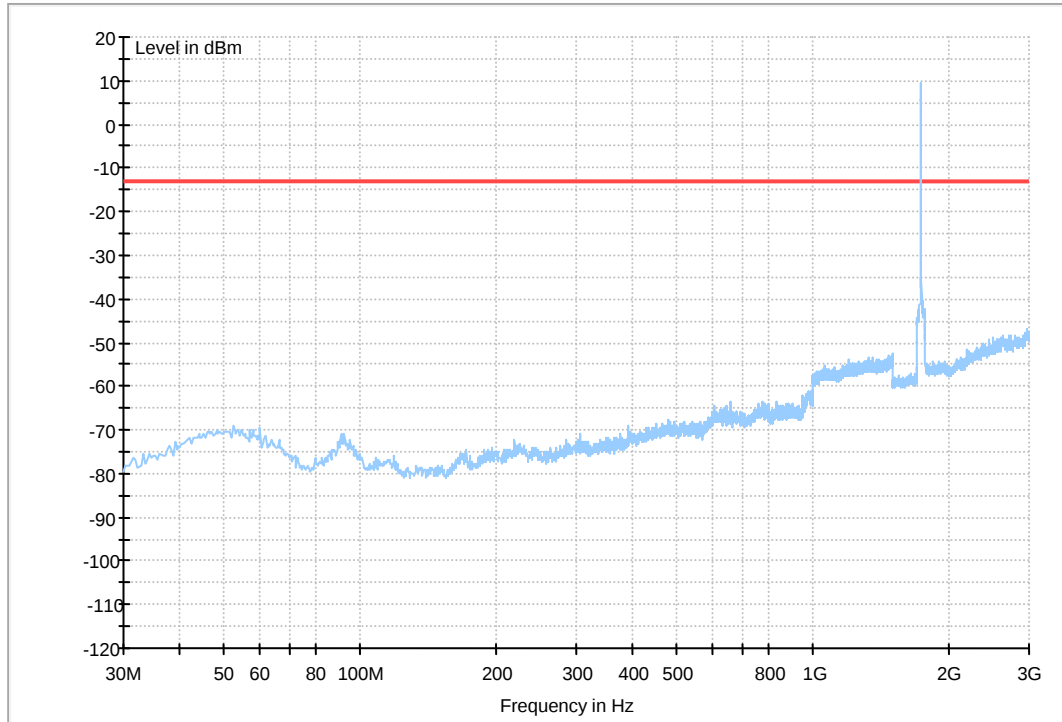
LTE BAND 4 (5MHz)

Traffic Mode (9kHz-30MHz)



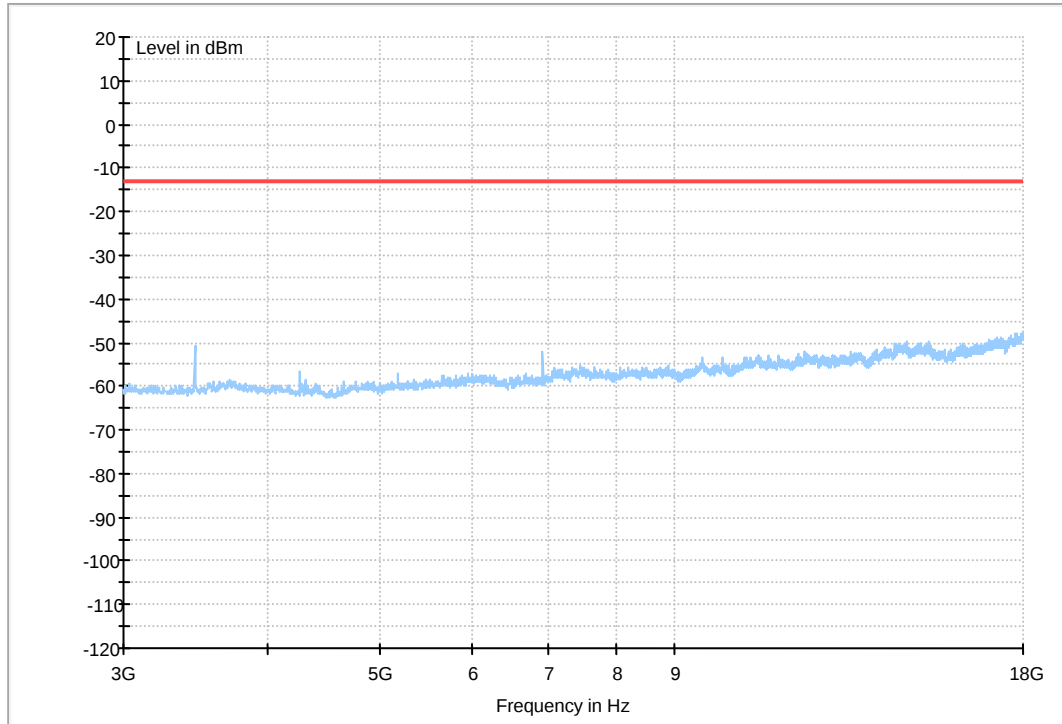


Traffic Mode (30MHz-3GHz)



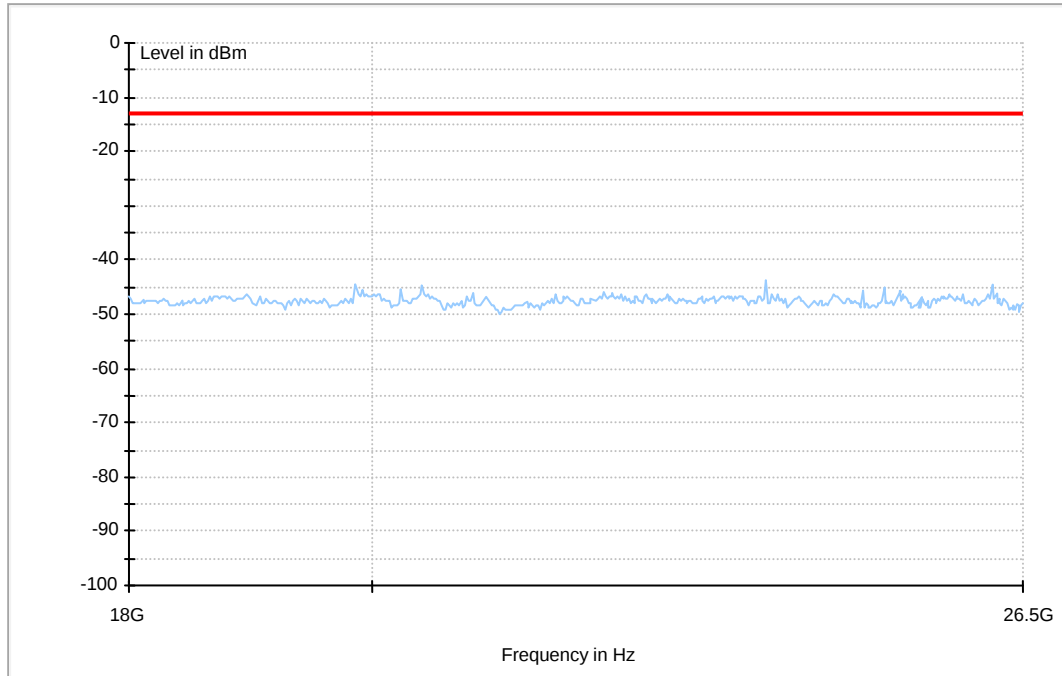


Traffic Mode (3GHz-18GHz)





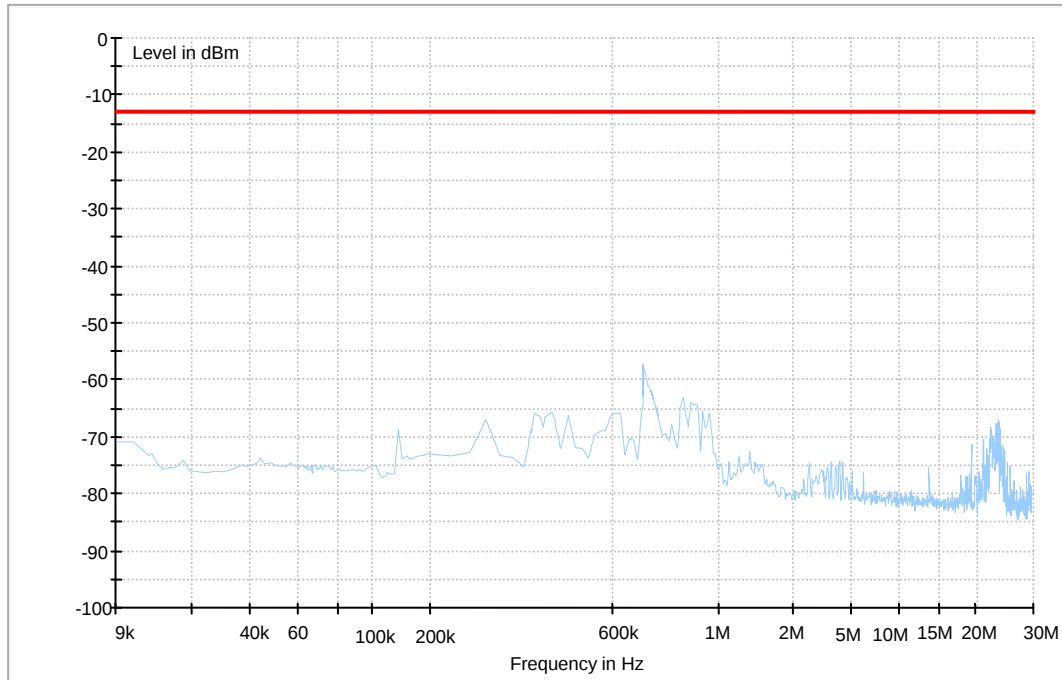
Traffic Mode (18GHz-26.5GHz)





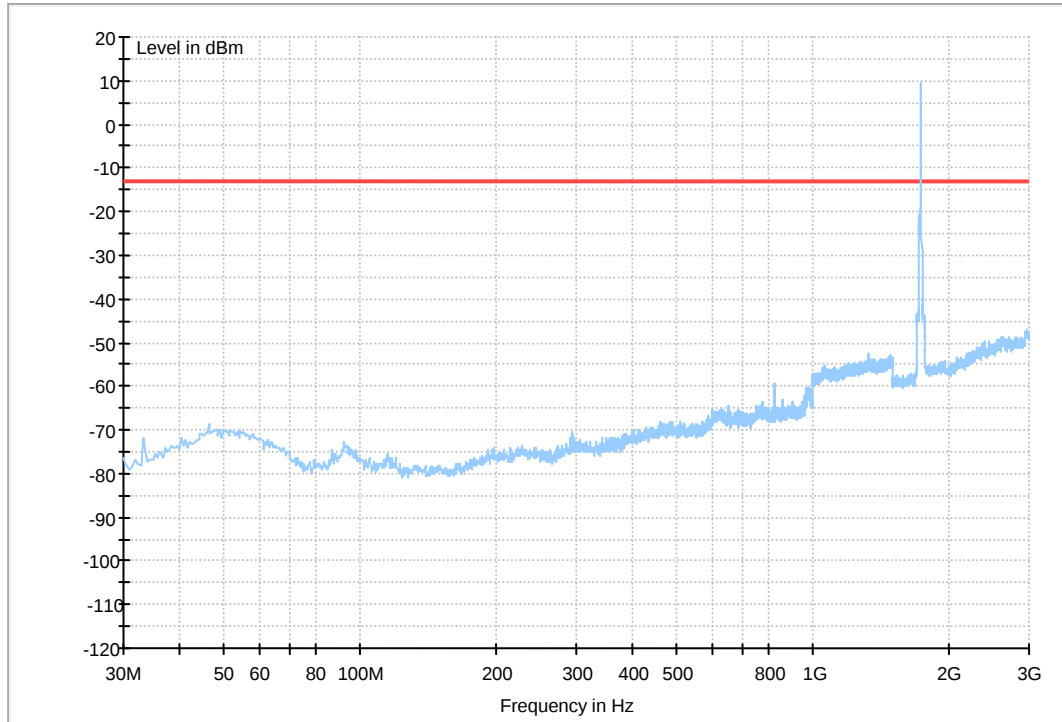
LTE BAND 4 (10MHz)

Traffic Mode (9kHz-30MHz)



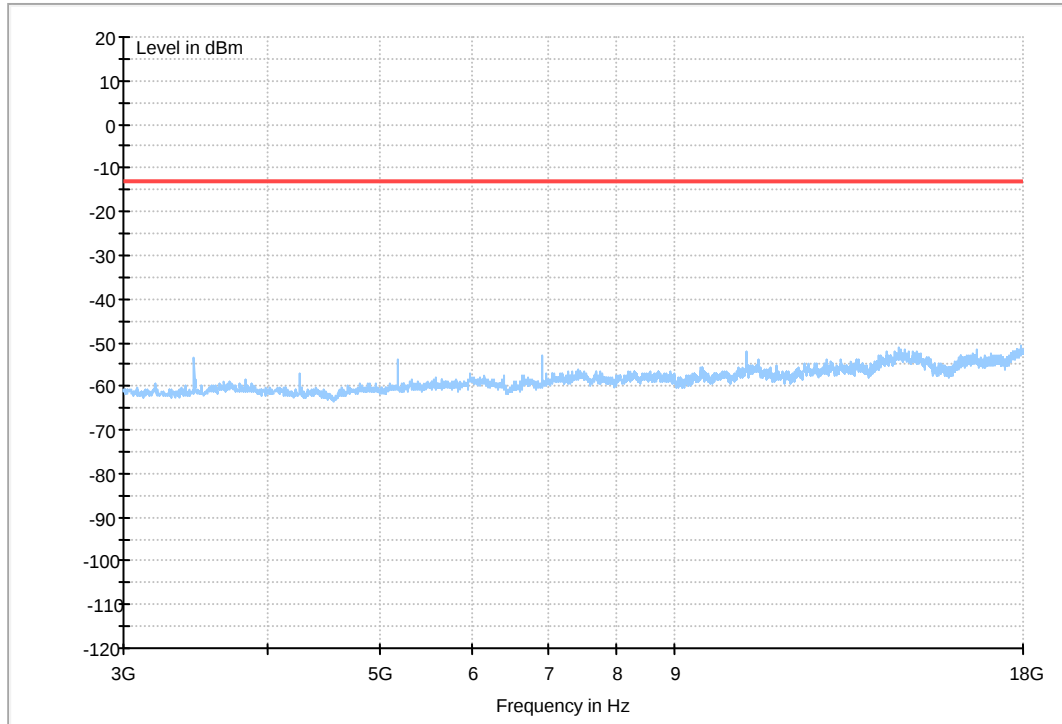


Traffic Mode (30MHz-3GHz)



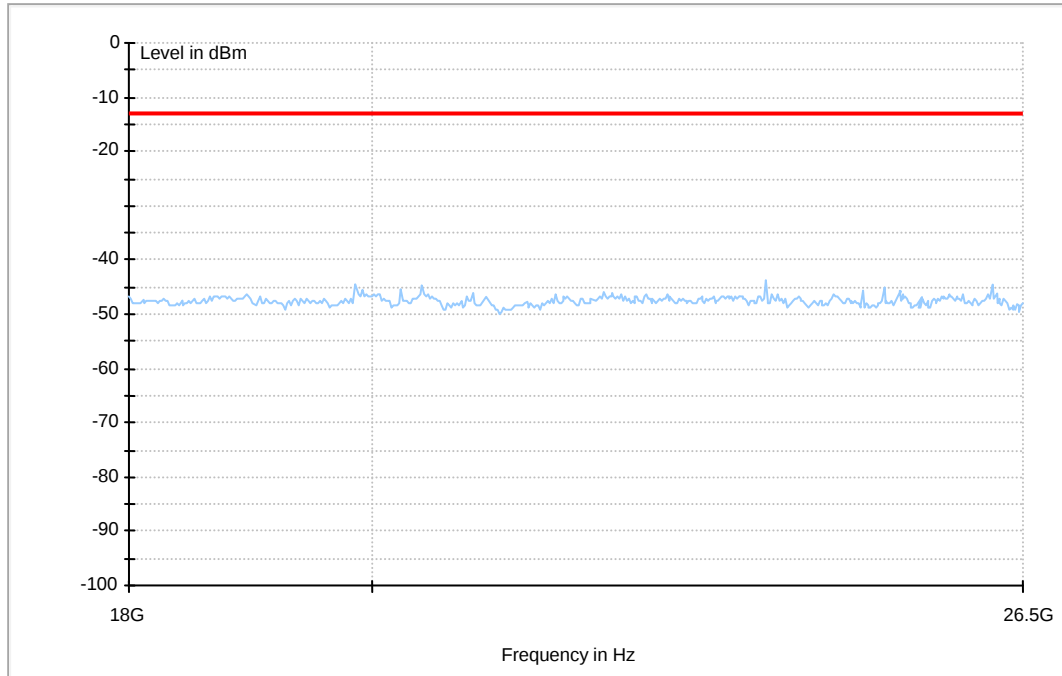


Traffic Mode (3GHz-18GHz)





Traffic Mode (18GHz-26.5GHz)





Appendix G

Frequency Stability According to FCC Part 2.1055& Part 27.54



Frequency Error vs. Temperature:

NOTE: All relevant operation modes have been tested, and the worst case data is included in this report.

Test Mode	RF Ch.	Volt.	Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Limit [ppm]	Verdict
TM 1	M	100%	-30 °C	15	0.0087	---	±2.5	Pass
			-20 °C	-14	-0.0081	---	±2.5	Pass
			-10 °C	18	0.0104	---	±2.5	Pass
			0 °C	9	0.0052	---	±2.5	Pass
			10 °C	13	0.0075	---	±2.5	Pass
			20 °C	-17	-0.0098	---	±2.5	Pass
			30 °C	19	0.0110	---	±2.5	Pass
			40 °C	-18	-0.0104	---	±2.5	Pass
TM 3	M	100%	50 °C	10	0.0058	---	±2.5	Pass
			-30 °C	15	0.0087	---	±2.5	Pass
			-20 °C	-8	-0.0046	---	±2.5	Pass
			-10 °C	-16	-0.0092	---	±2.5	Pass
			0 °C	10	0.0058	---	±2.5	Pass
			10 °C	-13	-0.0075	---	±2.5	Pass
			20 °C	-8	-0.0046	---	±2.5	Pass
			30 °C	-15	-0.0087	---	±2.5	Pass
Subtype 0	M	100%	40 °C	-12	-0.0069	---	±2.5	Pass
			50 °C	16	0.0092	---	±2.5	Pass
			-30 °C	8	0.0046	---	±2.5	Pass
			-20 °C	12	0.0069	---	±2.5	Pass
			-10 °C	-15	-0.0087	---	±2.5	Pass
			0 °C	17	0.0098	---	±2.5	Pass
			10 °C	-14	-0.0081	---	±2.5	Pass
			20 °C	-13	-0.0075	---	±2.5	Pass
Subtype 2	M	100%	30 °C	11	0.0063	---	±2.5	Pass
			40 °C	-10	-0.0058	---	±2.5	Pass
			50 °C	-9	-0.0052	---	±2.5	Pass
			-30 °C	17	0.0098	---	±2.5	Pass
			-20 °C	-15	-0.0087	---	±2.5	Pass
			-10 °C	-11	-0.0063	---	±2.5	Pass
			0 °C	14	0.0081	---	±2.5	Pass
			10 °C	13	0.0075	---	±2.5	Pass
			20 °C	-17	-0.0098	---	±2.5	Pass
			30 °C	18	0.0104	---	±2.5	Pass



Test Mode	RF Ch.	Volt.	Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Limit [ppm]	Verdict
TM 4(1.4M)	M	100%	40 °C	8	0.0046	---	±2.5	Pass
			50 °C	-10	-0.0058	---	±2.5	Pass
			-30 °C	8	0.0046	---	±2.5	Pass
			-20 °C	-15	-0.0087	---	±2.5	Pass
			-10 °C	18	0.0104	---	±2.5	Pass
			0 °C	13	0.0075	---	±2.5	Pass
			10 °C	-15	-0.0087	---	±2.5	Pass
			20 °C	-13	-0.0075	---	±2.5	Pass
			30 °C	10	0.0058	---	±2.5	Pass
TM 4(3M)	M	100%	40 °C	9	0.0052	---	±2.5	Pass
			50 °C	-16	-0.0092	---	±2.5	Pass
			-30 °C	-14	-0.0081	---	±2.5	Pass
			-20 °C	-15	-0.0087	---	±2.5	Pass
			-10 °C	13	0.0075	---	±2.5	Pass
			0 °C	12	0.0069	---	±2.5	Pass
			10 °C	-12	-0.0069	---	±2.5	Pass
			20 °C	-13	-0.0075	---	±2.5	Pass
			30 °C	19	0.0110	---	±2.5	Pass
TM 4(5M)	M	100%	40 °C	18	0.0104	---	±2.5	Pass
			50 °C	-17	-0.0098	---	±2.5	Pass
			-30 °C	-16	-0.0092	---	±2.5	Pass
			-20 °C	-9	-0.0052	---	±2.5	Pass
			-10 °C	13	0.0075	---	±2.5	Pass
			0 °C	-15	-0.0087	---	±2.5	Pass
			10 °C	10	0.0058	---	±2.5	Pass
			20 °C	8	0.0046	---	±2.5	Pass
			30 °C	-15	-0.0087	---	±2.5	Pass
TM 4(10M)	M	100%	40 °C	-12	-0.0069	---	±2.5	Pass
			50 °C	18	0.0104	---	±2.5	Pass
			-30 °C	10	0.0058	---	±2.5	Pass
			-20 °C	-16	-0.0092	---	±2.5	Pass
			-10 °C	14	0.0081	---	±2.5	Pass
			0 °C	-12	-0.0069	---	±2.5	Pass
			10 °C	18	0.0104	---	±2.5	Pass
			20 °C	-15	-0.0087	---	±2.5	Pass
			30 °C	-13	-0.0075	---	±2.5	Pass
			40 °C	-10	-0.0058	---	±2.5	Pass



Test Mode	RF Ch.	Volt.	Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Limit [ppm]	Verdict
			50 °C	11	0.0063	---	± 2.5	Pass



Frequency Error vs. Voltage:

Test Mode	RF Ch.	Temp.	Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Limit [ppm]	Verdict
TM 1	M	20 °C	VL	18	0.0104	---	±2.5	Pass
			VN	-15	-0.0087	---	±2.5	Pass
			VH	14	0.0081	---	±2.5	Pass
TM 3	M	20 °C	VL	-16	-0.0092	---	±2.5	Pass
			VN	18	0.0104	---	±2.5	Pass
			VH	-17	-0.0098	---	±2.5	Pass
Subtype 0	M	20 °C	VL	17	0.0098	---	±2.5	Pass
			VN	-11	-0.0063	---	±2.5	Pass
			VH	13	0.0075	---	±2.5	Pass
Subtype 2	M	20 °C	VL	19	0.0110	---	±2.5	Pass
			VN	15	0.0087	---	±2.5	Pass
			VH	-13	-0.0075	---	±2.5	Pass
TM4(1.4M)	M	20 °C	VL	18	0.0104	---	±2.5	Pass
			VN	-14	-0.0081	---	±2.5	Pass
			VH	18	0.0104	---	±2.5	Pass
TM4(3M)	M	20 °C	VL	14	0.0081	---	±2.5	Pass
			VN	19	0.0110	---	±2.5	Pass
			VH	-16	-0.0092	---	±2.5	Pass
TM4(5M)	M	20 °C	VL	18	0.0104	---	±2.5	Pass
			VN	11	0.0063	---	±2.5	Pass
			VH	-12	-0.0069	---	±2.5	Pass
TM4(10M)	M	20 °C	VL	16	0.0092	---	±2.5	Pass
			VN	-18	-0.0104	---	±2.5	Pass
			VH	10	0.0058	---	±2.5	Pass