



Appendix E

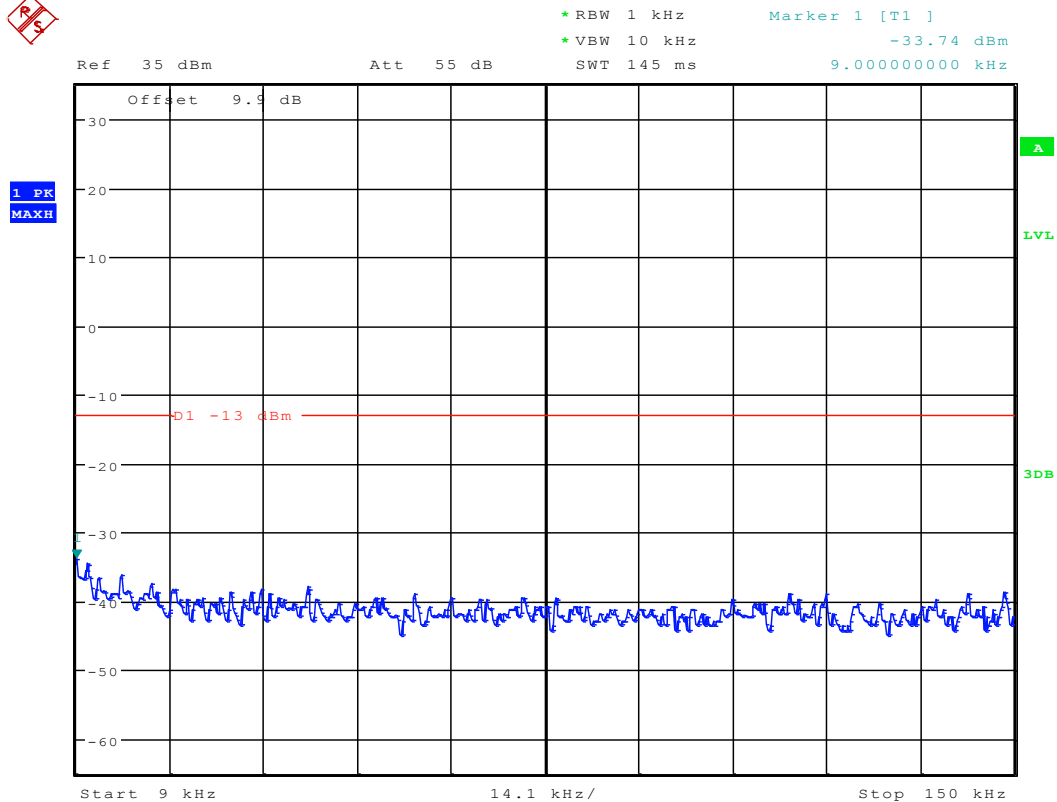
Spurious Emission at Antenna Terminal

According to FCC Part 2.1051 & 24.238

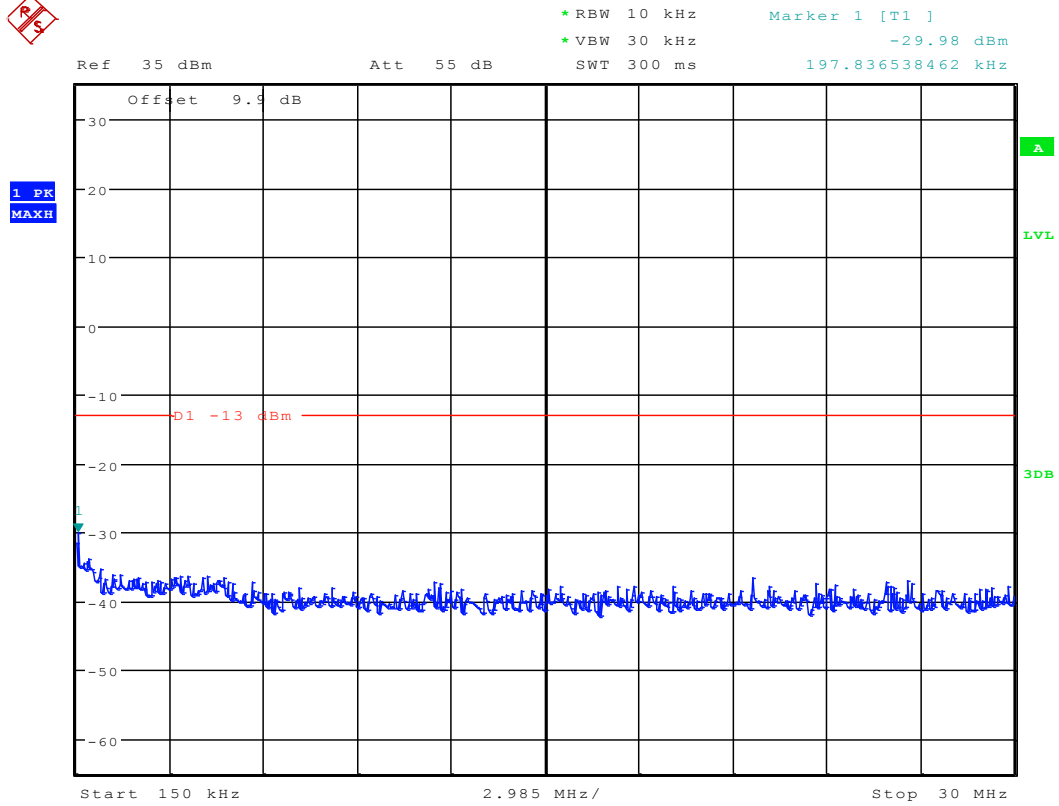


TM1

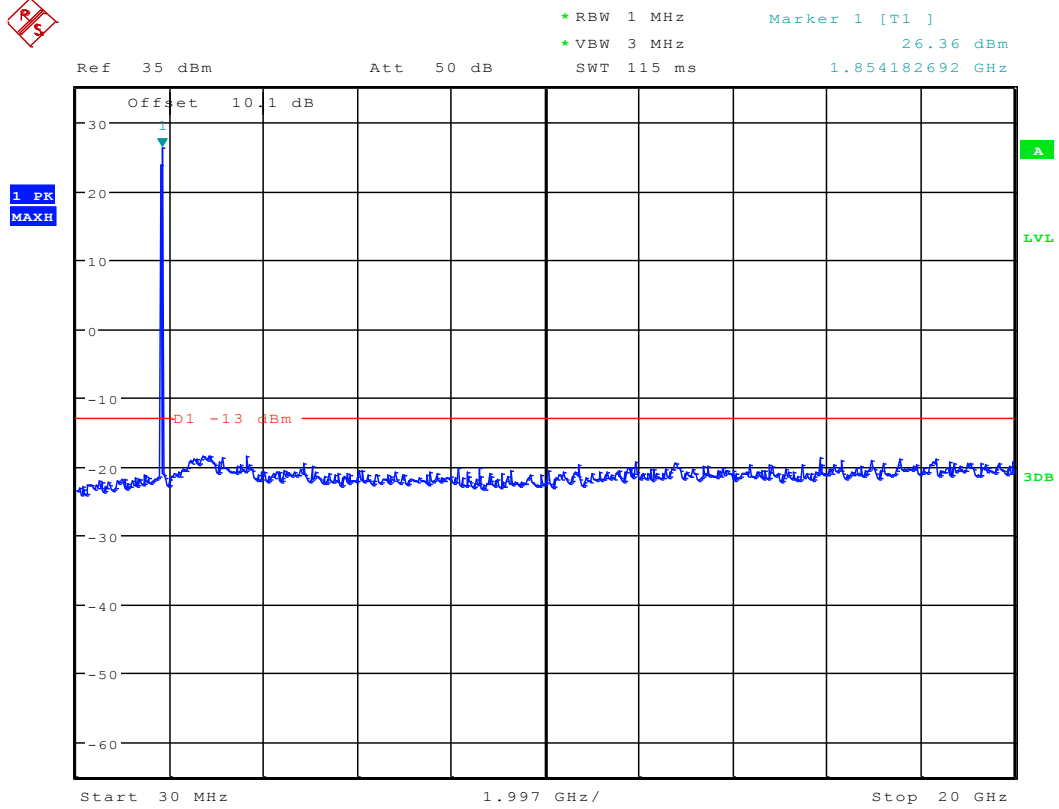
Channel 25



Date: 8.NOV.2011 23:15:03



Date: 8.NOV.2011 23:15:28



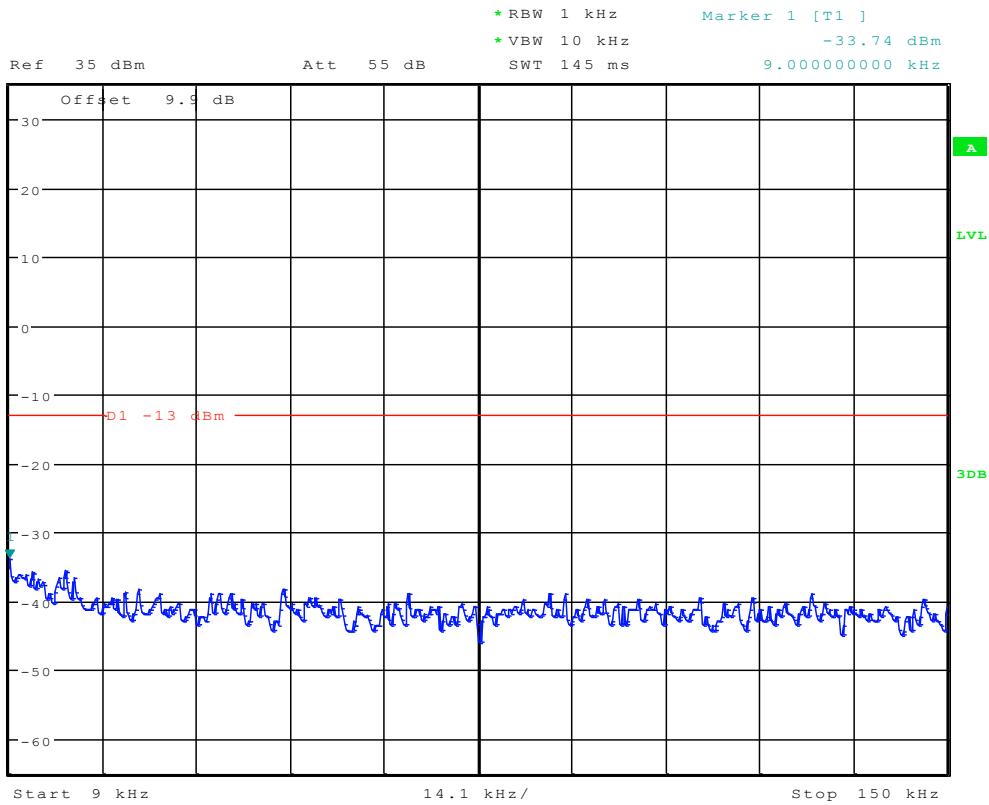
Date: 8.NOV.2011 23:15:54



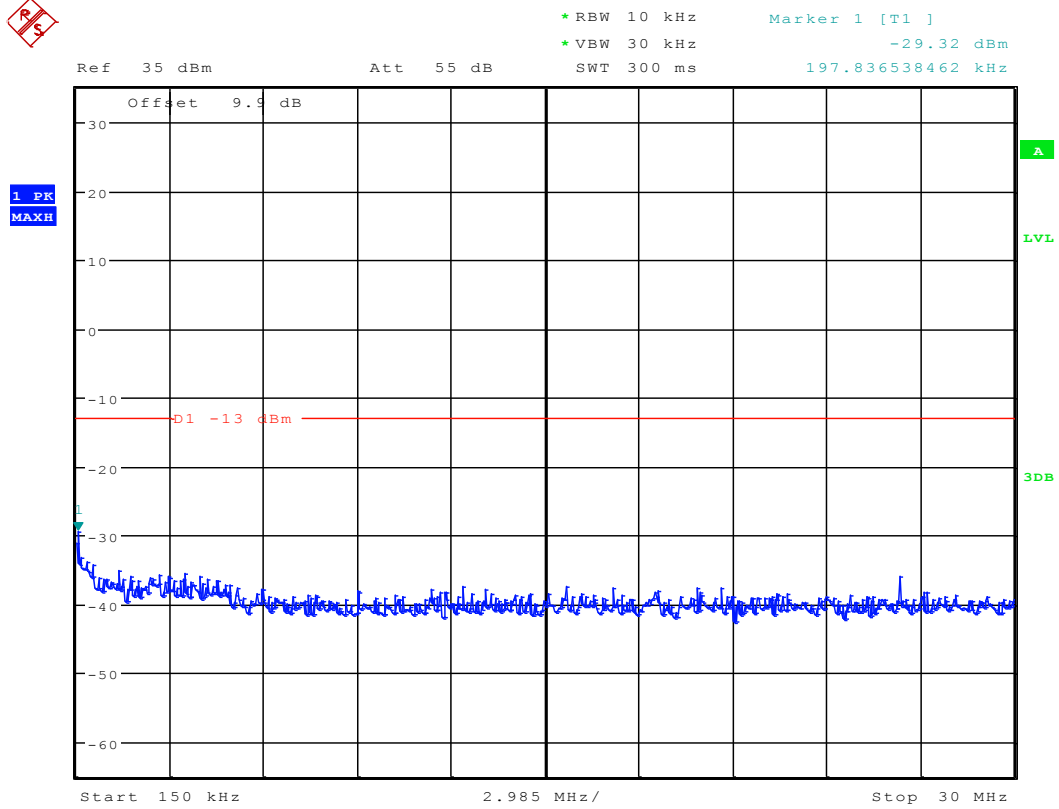
Channel 600



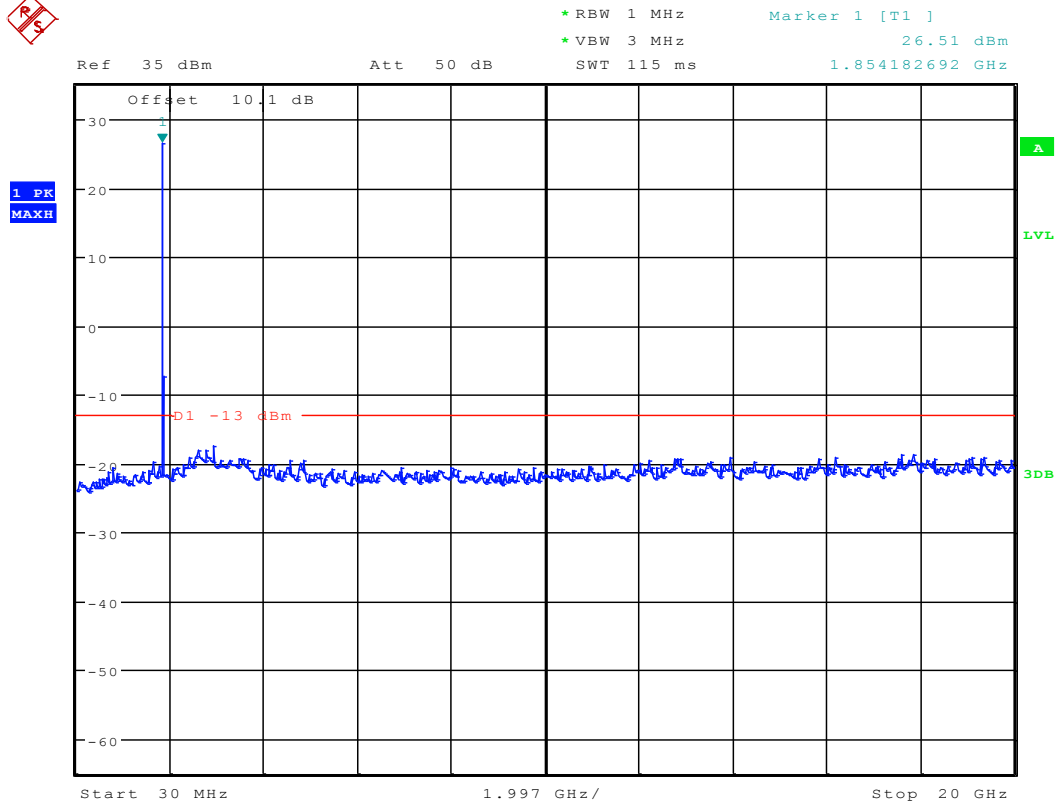
1 PK
MAXH



Date: 8.NOV.2011 23:15:11



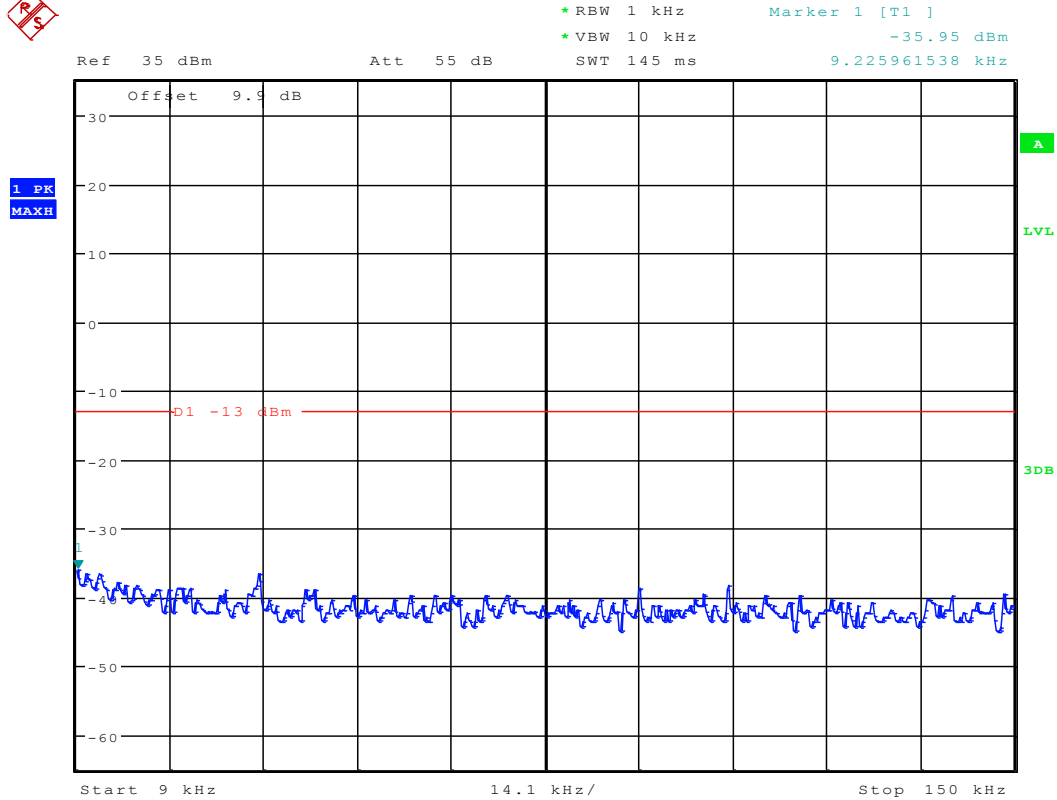
Date: 8.NOV.2011 23:15:37



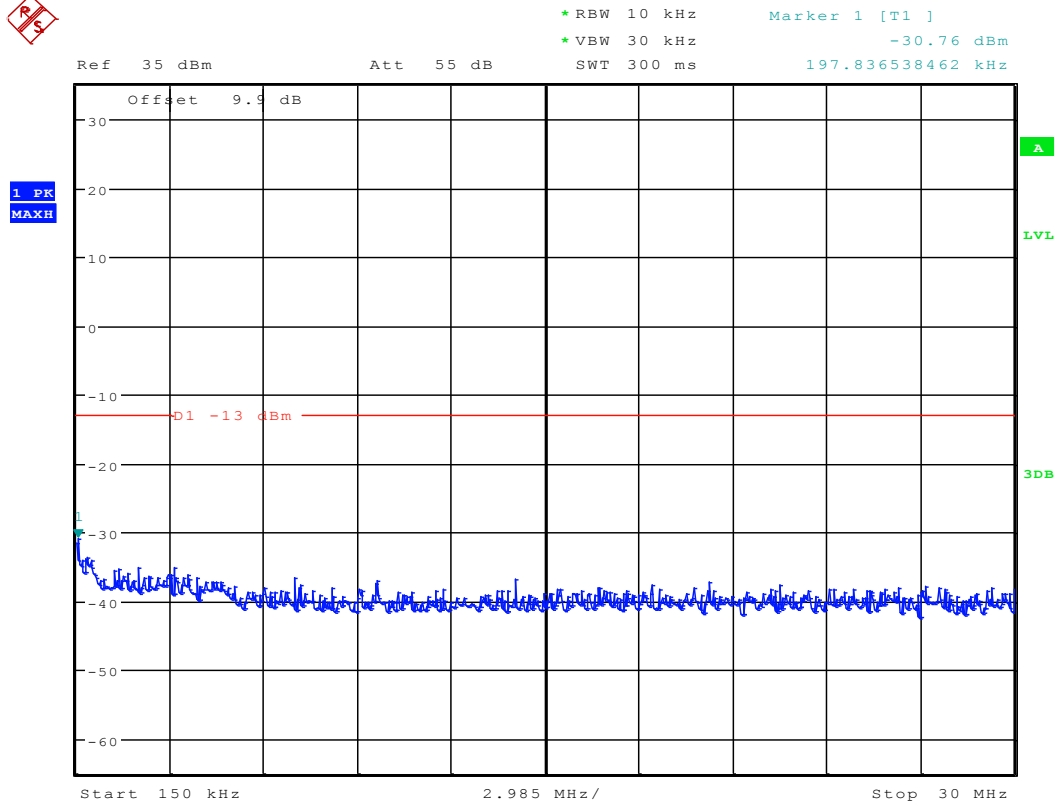
Date: 8.NOV.2011 23:16:03



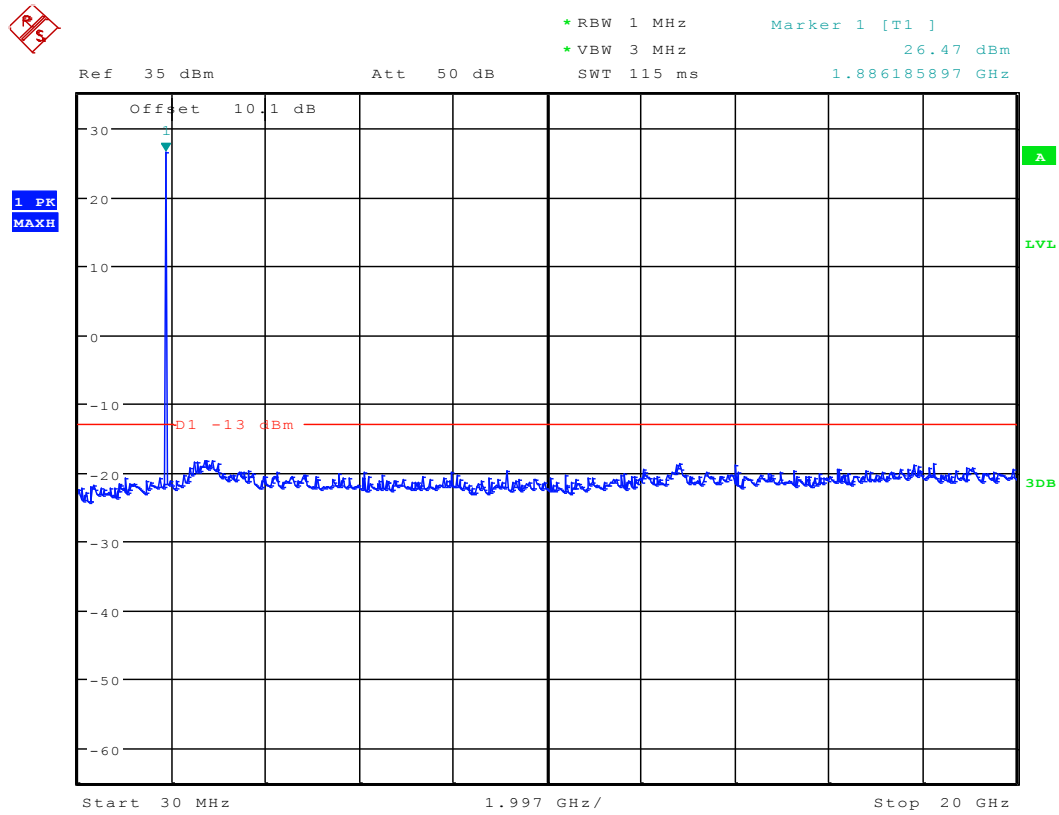
Channel 1175



Date: 8.NOV.2011 23:15:20



Date: 8.NOV.2011 23:15:45

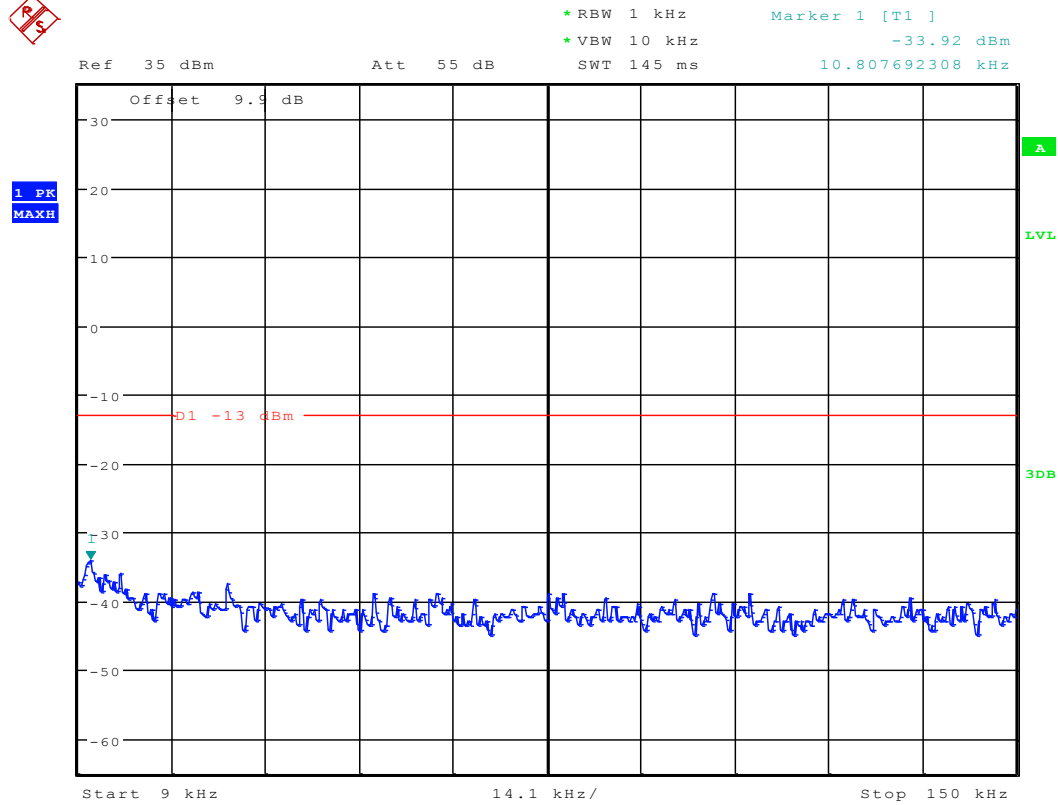


Date: 8.NOV.2011 23:16:12

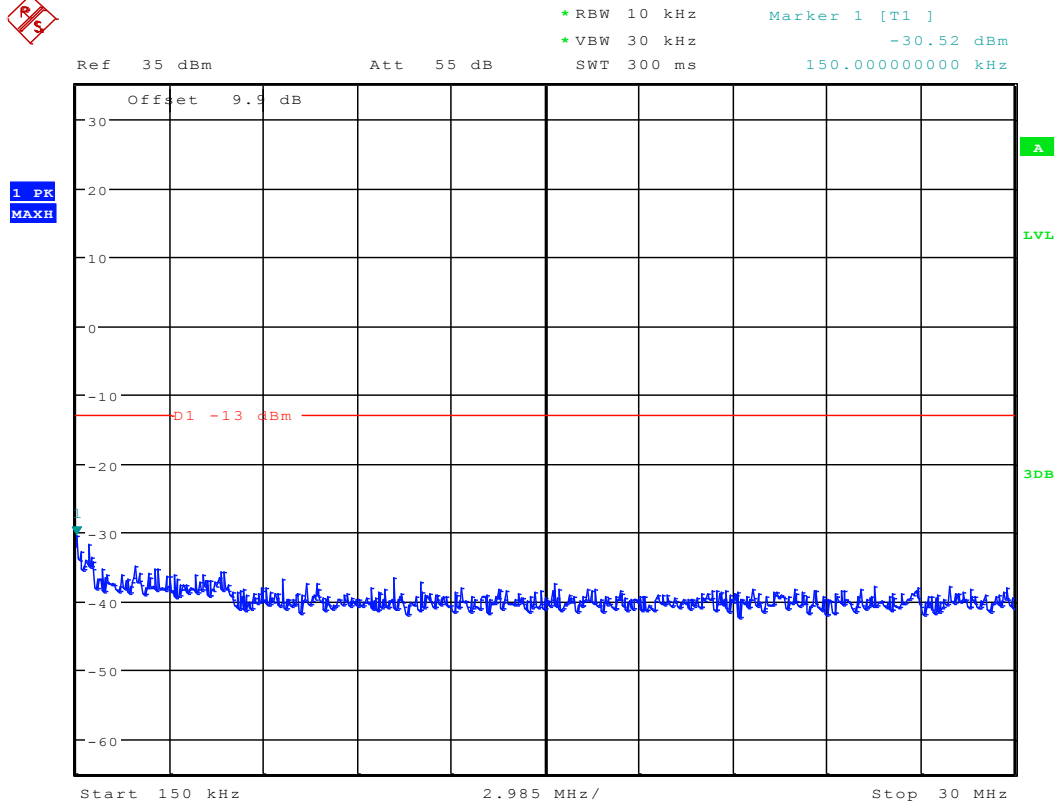


TM3

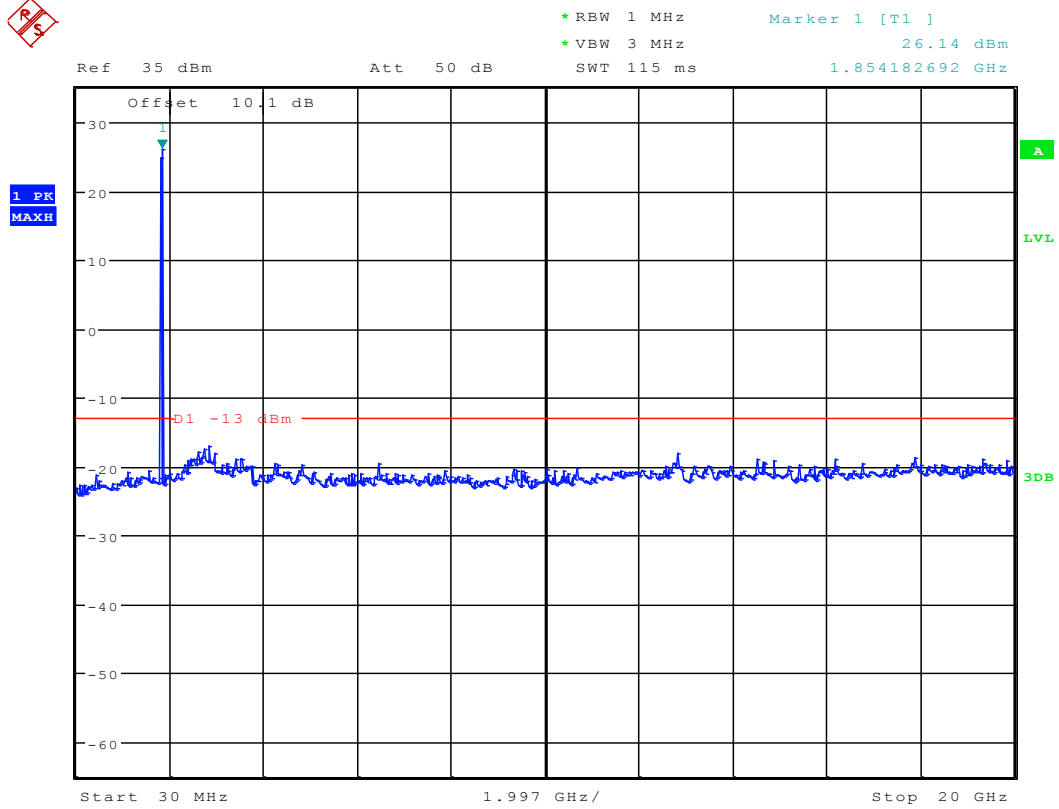
Channel 25



Date: 8.NOV.2011 23:16:22



Date: 8.NOV.2011 23:16:47



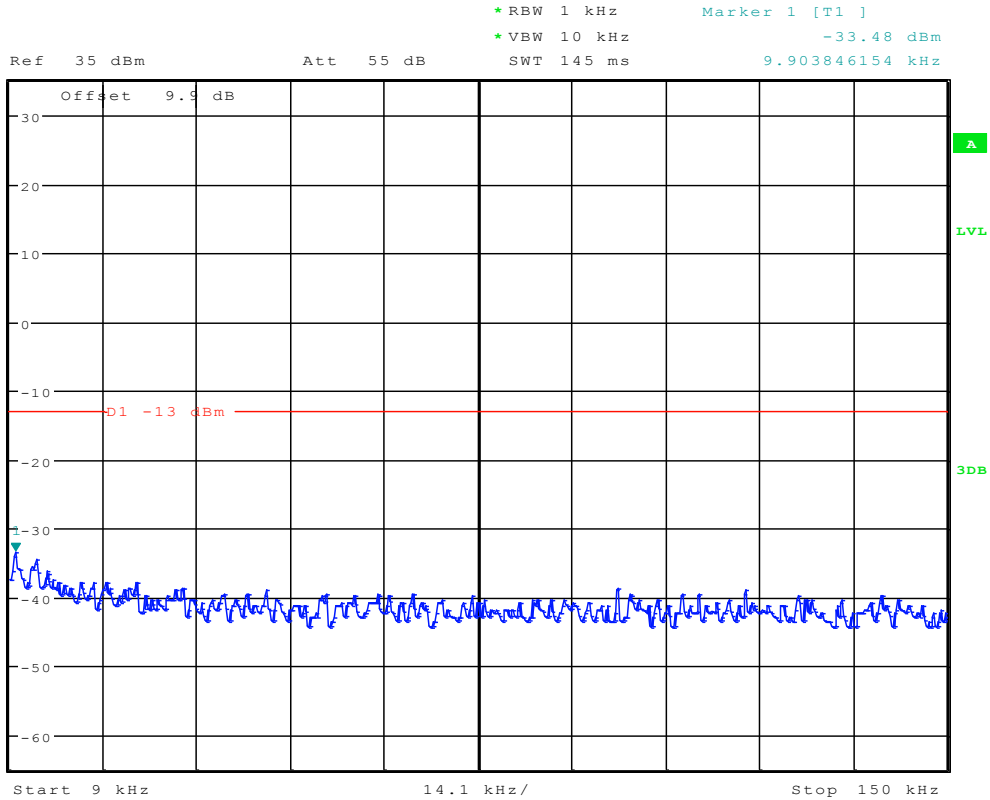
Date: 8.NOV.2011 23:17:13



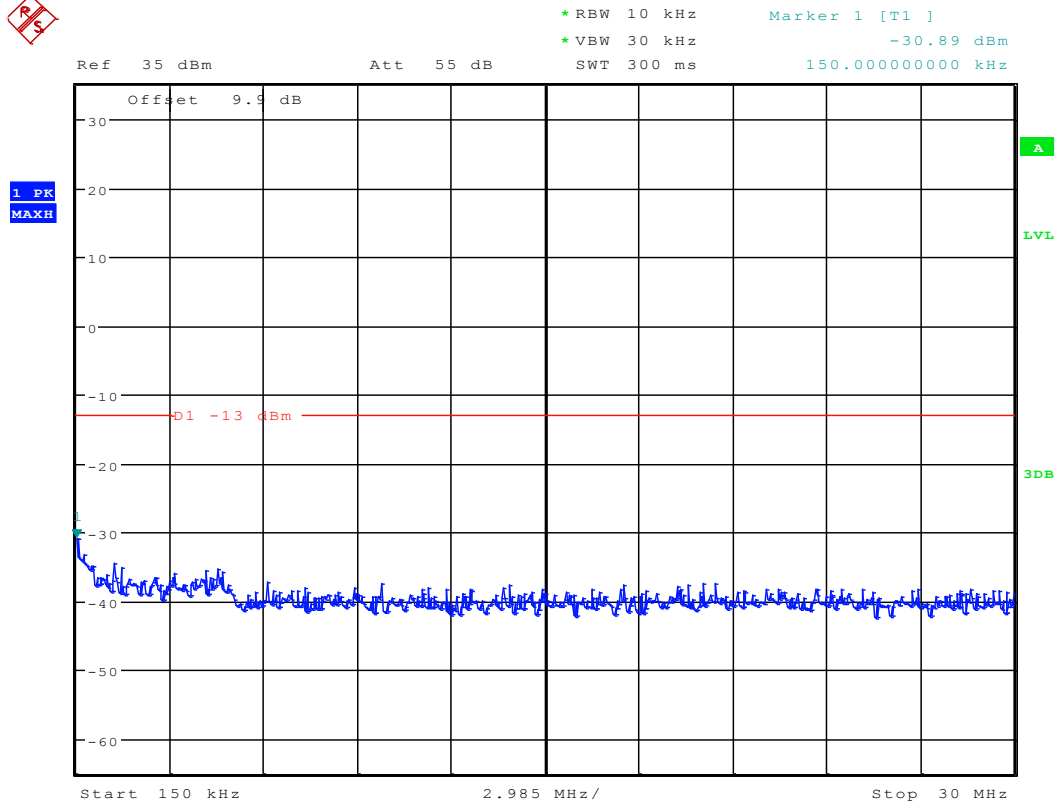
Channel 600



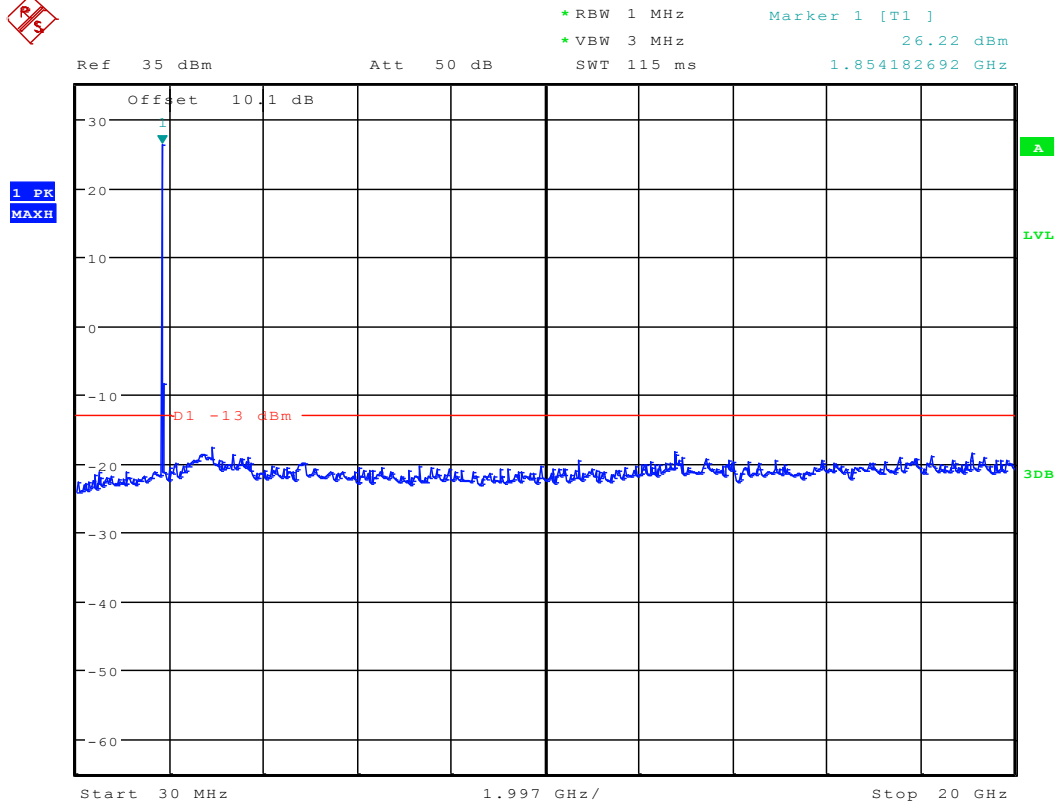
1 PK
MAXH



Date: 8.NOV.2011 23:16:30



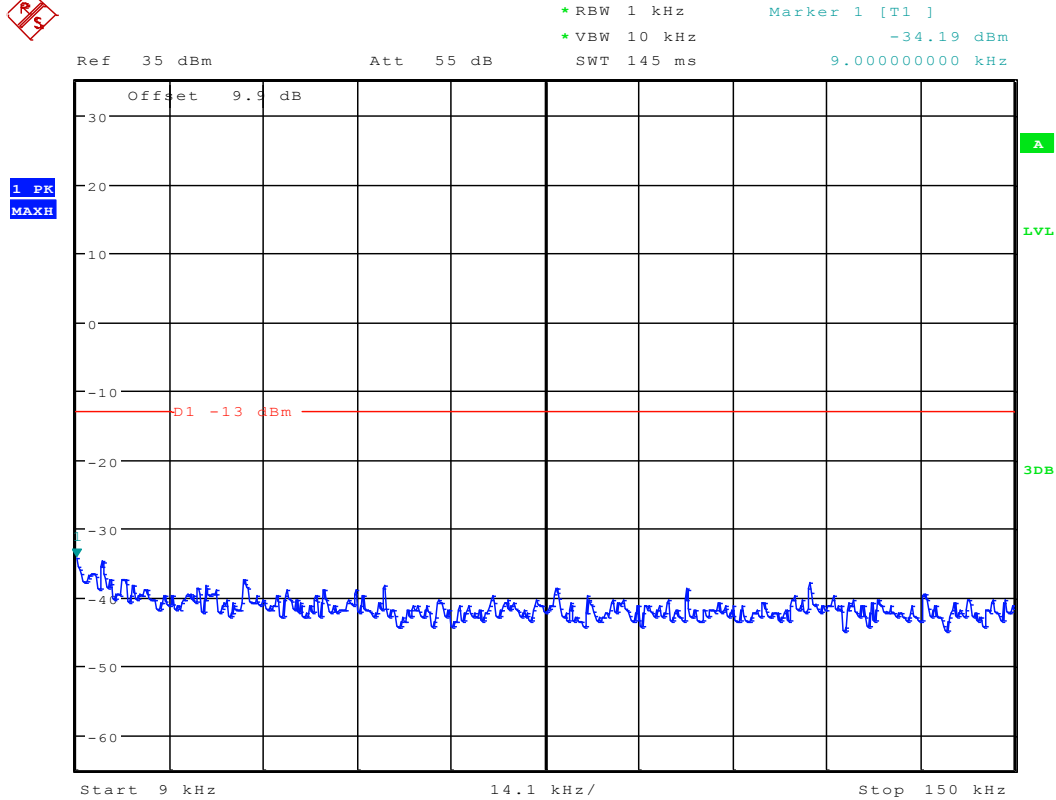
Date: 8.NOV.2011 23:16:56



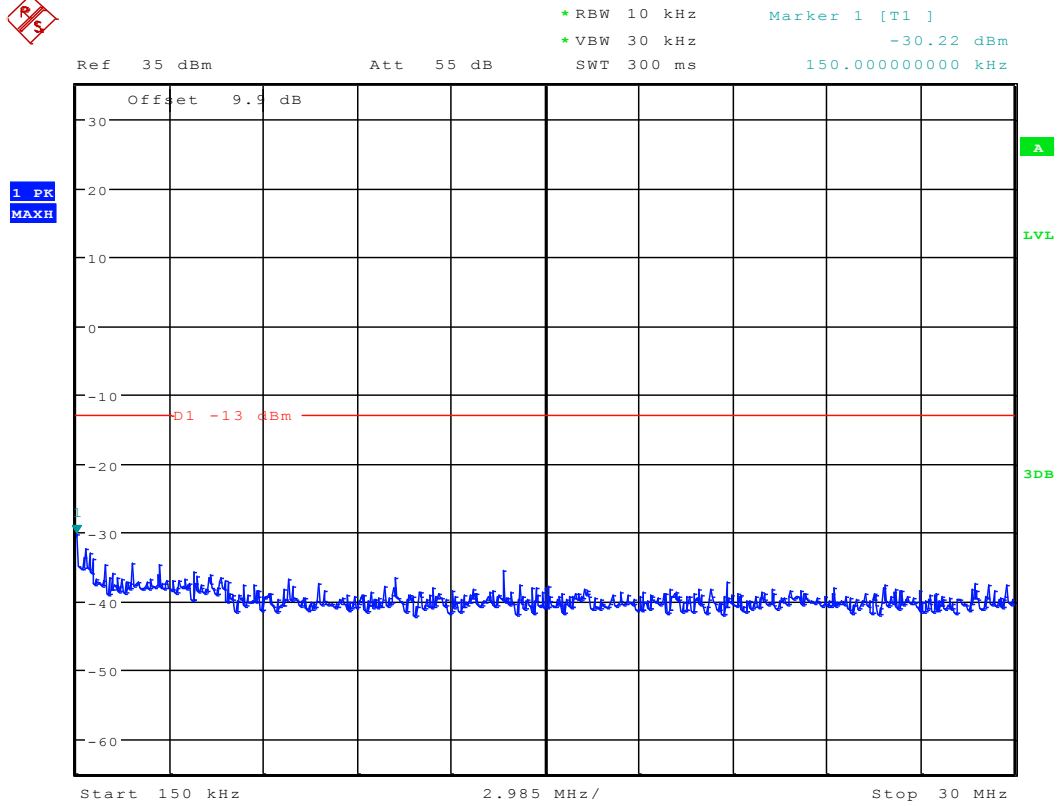
Date: 8.NOV.2011 23:17:22



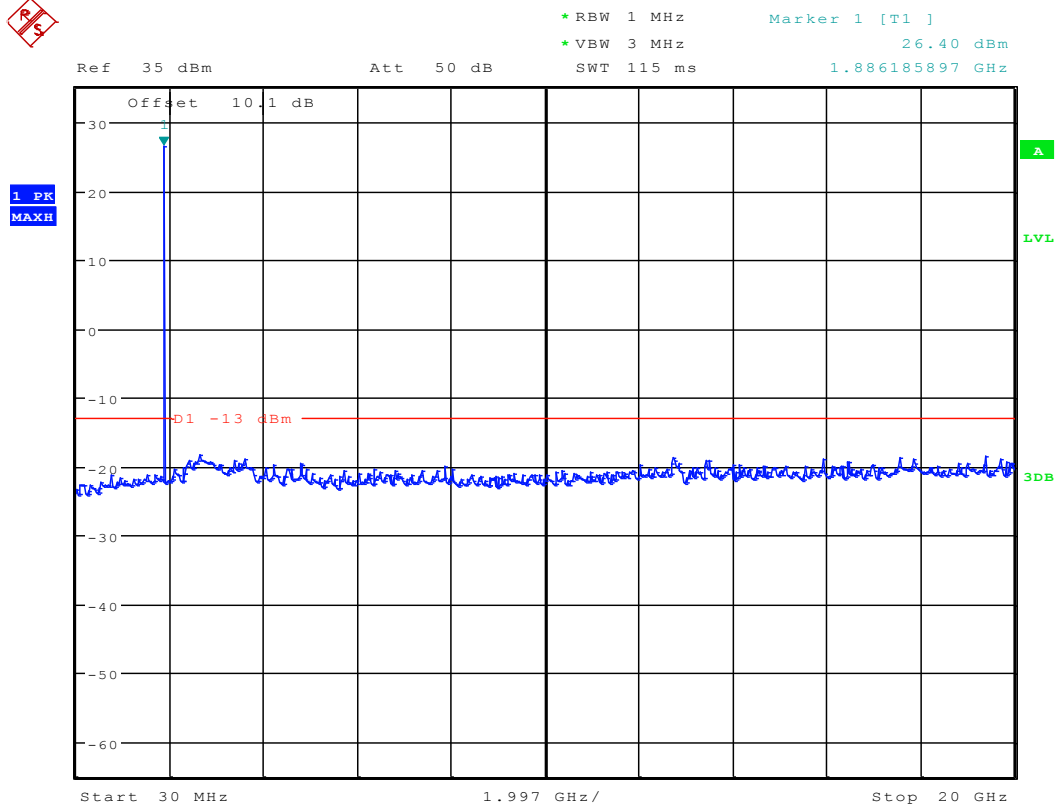
Channel 1175



Date: 8.NOV.2011 23:16:39



Date: 8.NOV.2011 23:17:04

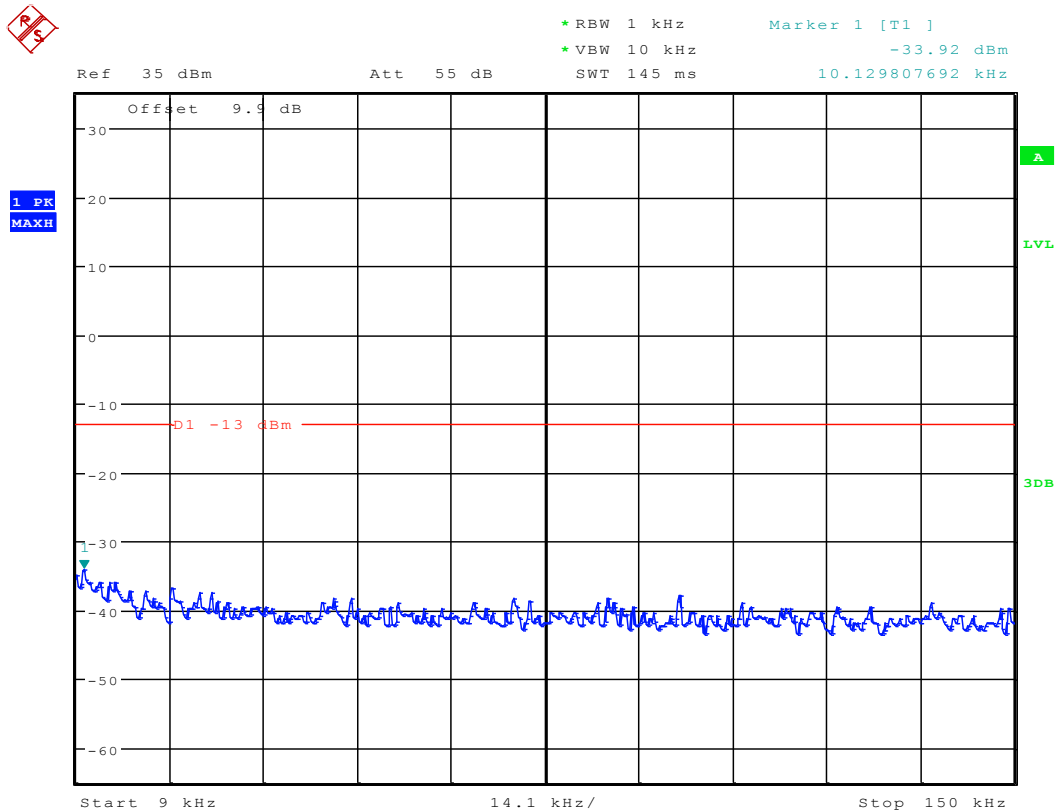


Date: 8.NOV.2011 23:17:30

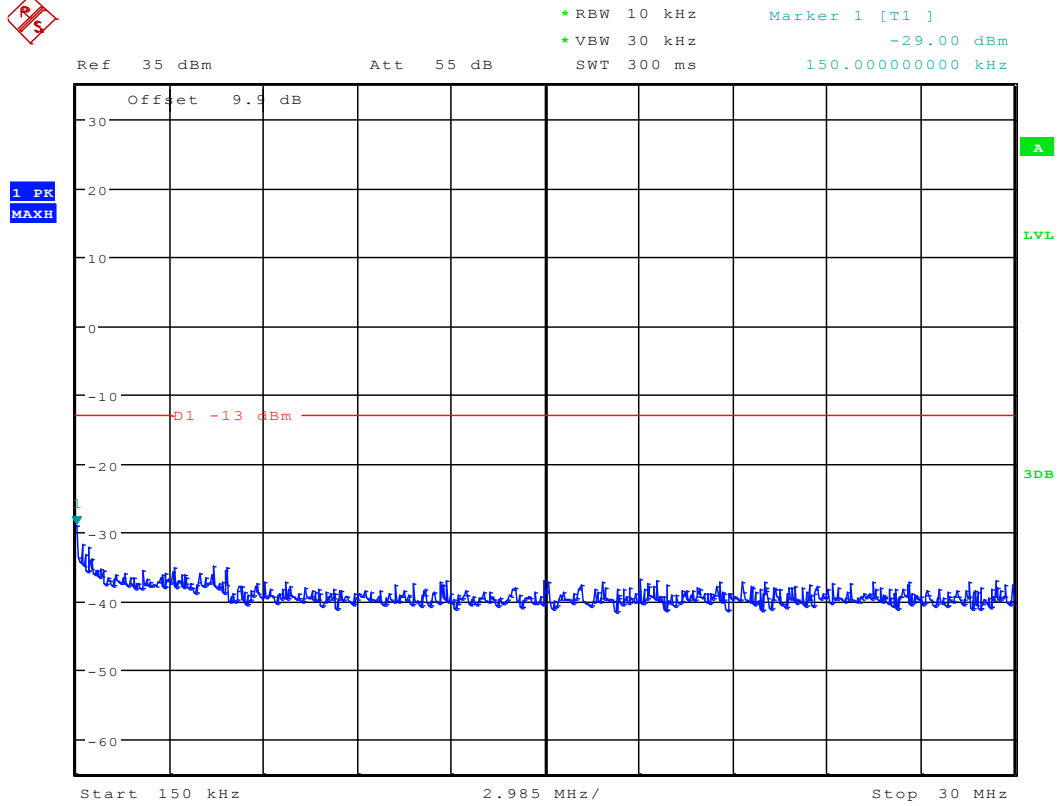


EVDO subtype 0

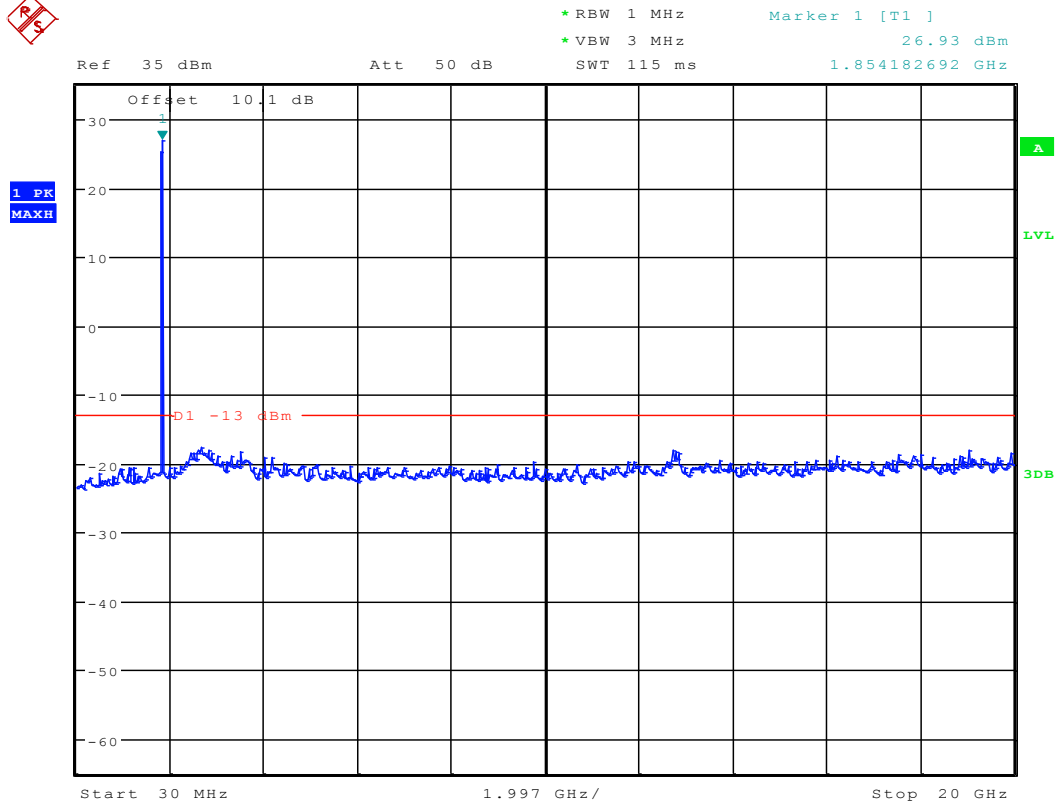
Channel 25



Date: 8.NOV.2011 23:20:03



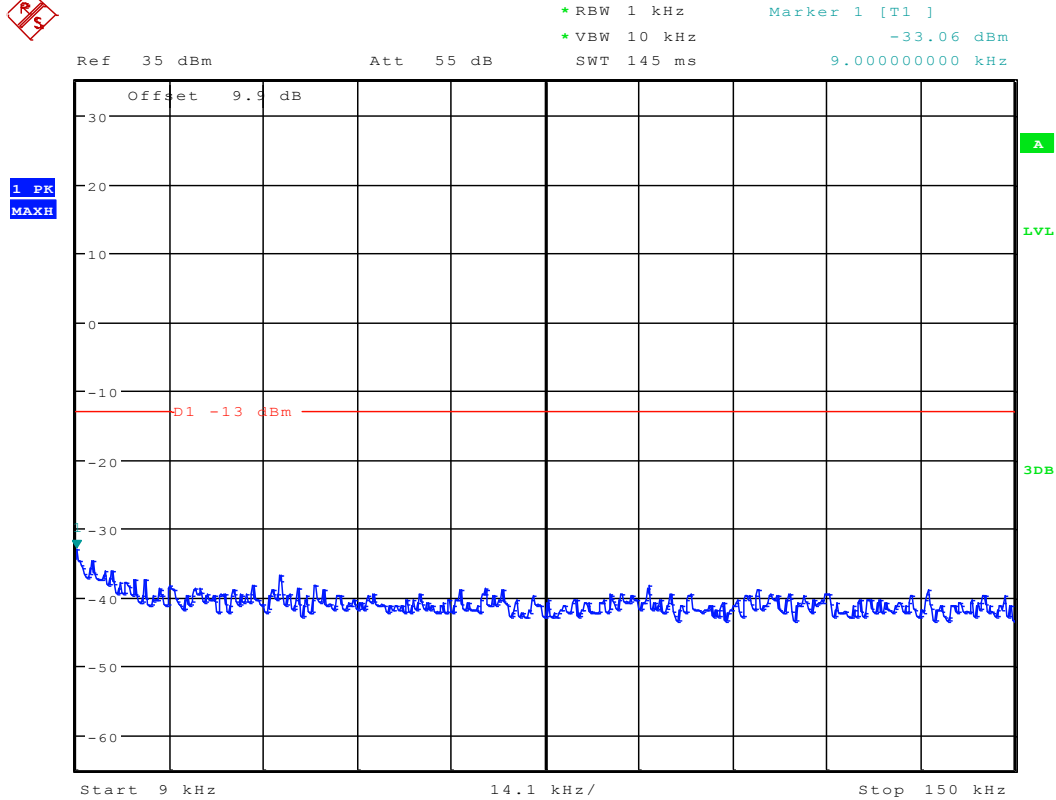
Date: 8.NOV.2011 23:20:47



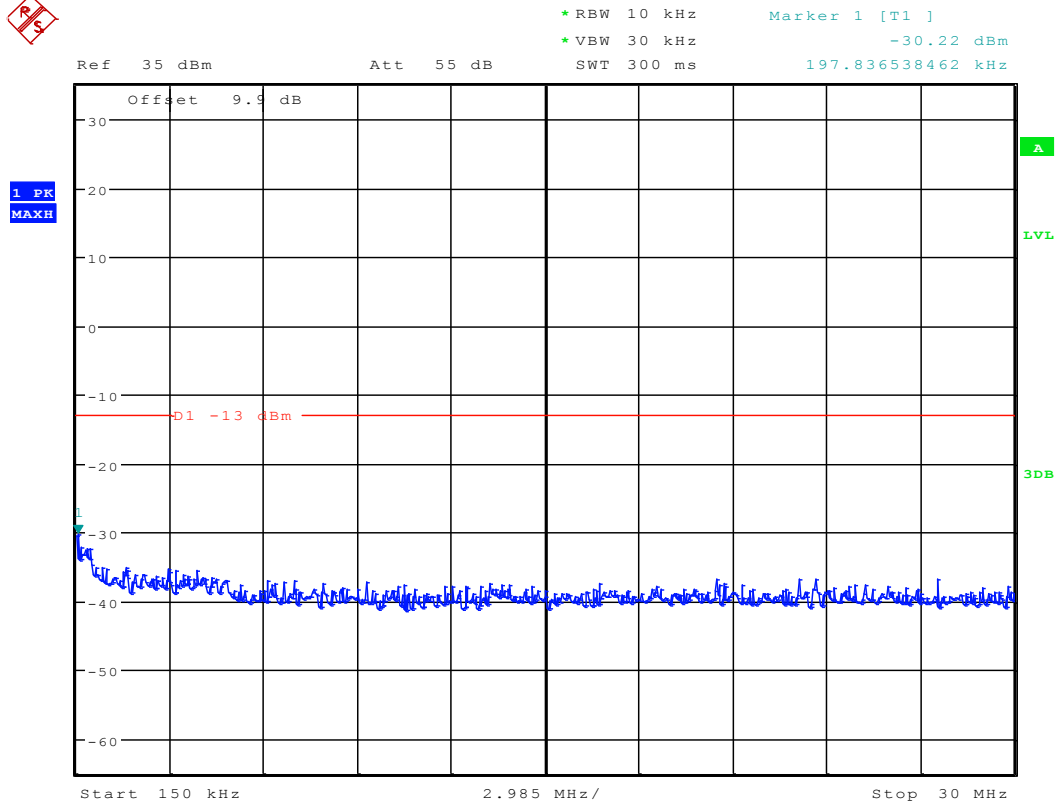
Date: 8.NOV.2011 23:21:31



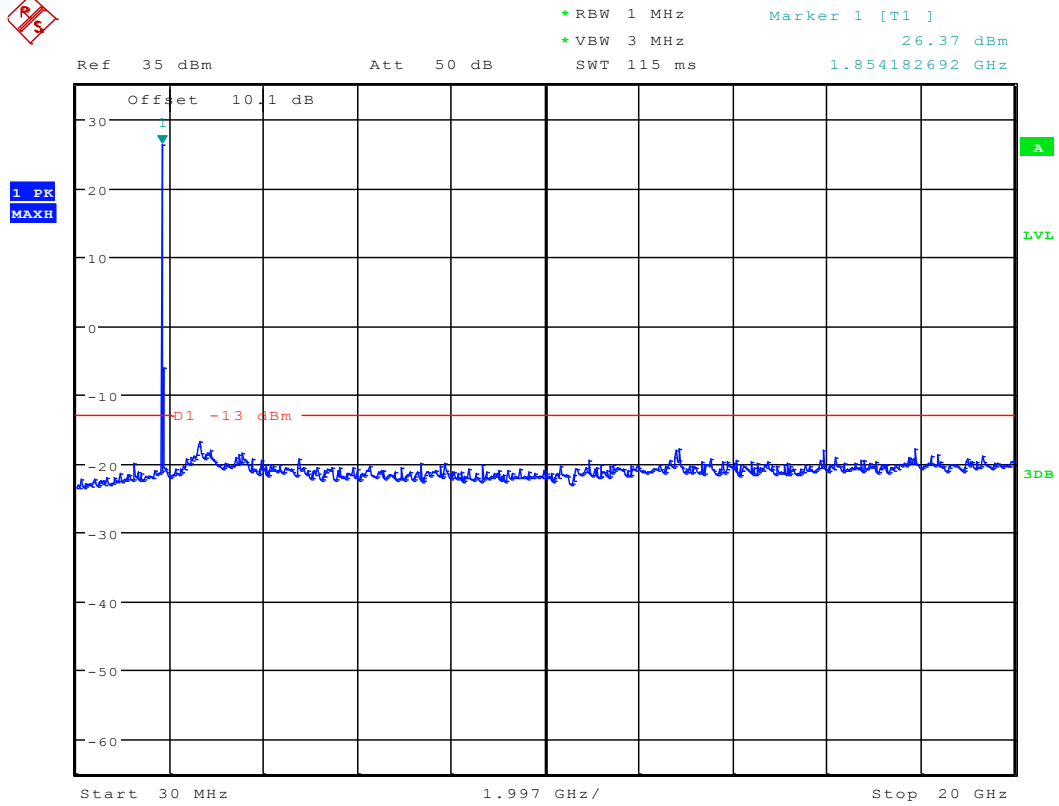
Channel 600



Date: 8.NOV.2011 23:20:18



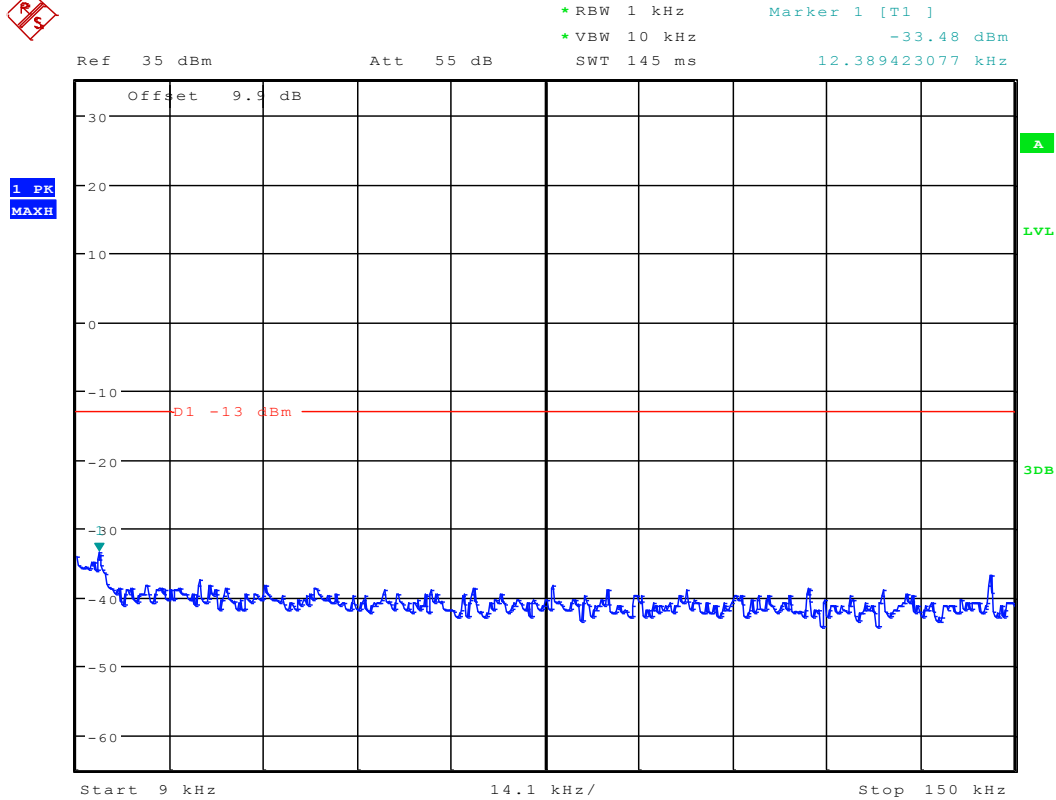
Date: 8.NOV.2011 23:21:01



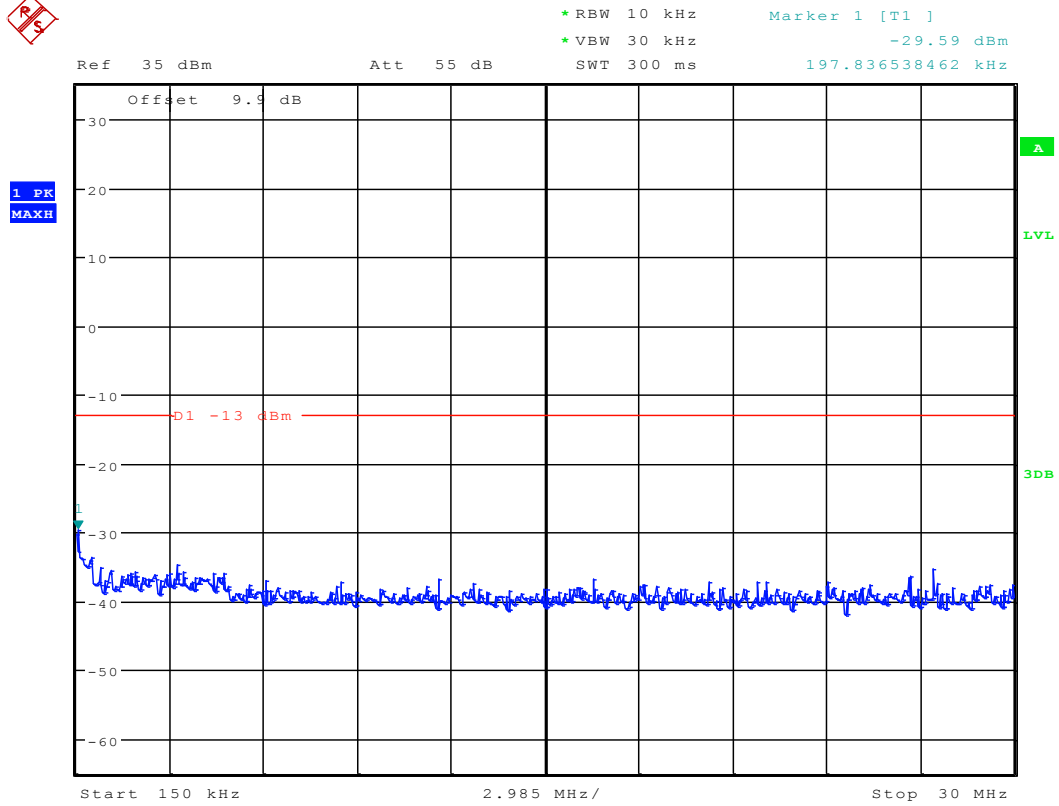
Date: 8.NOV.2011 23:21:45



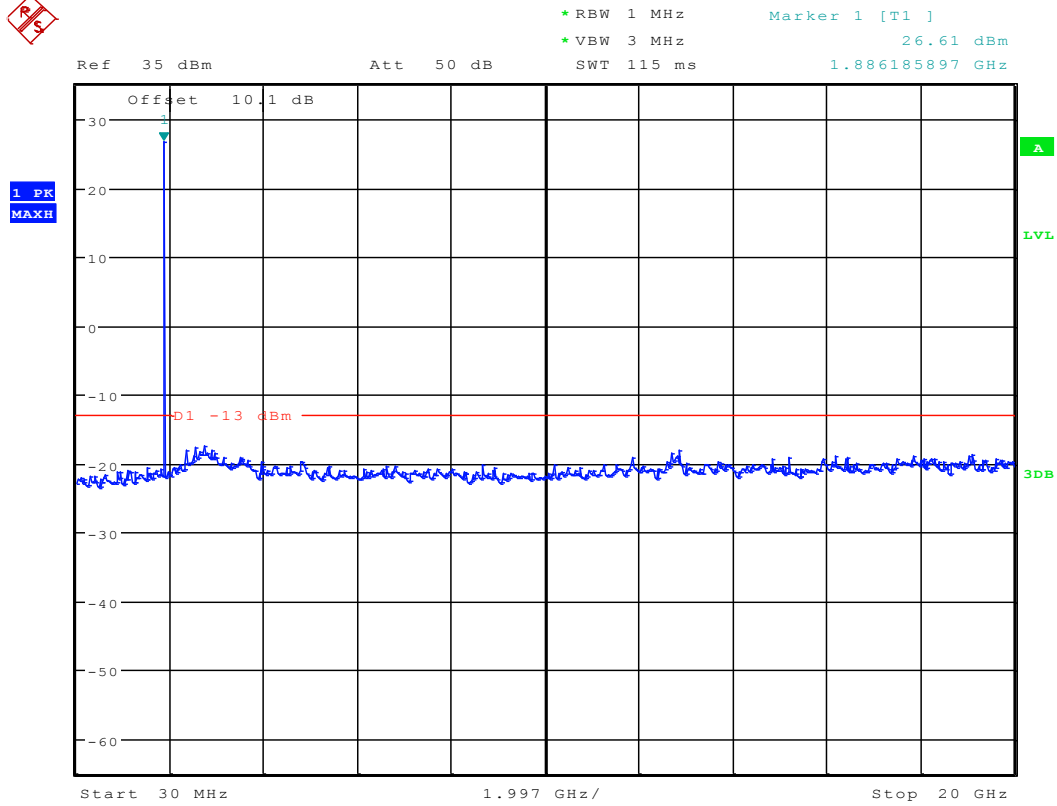
Channel 1175



Date: 8.NOV.2011 23:20:32



Date: 8.NOV.2011 23:21:16

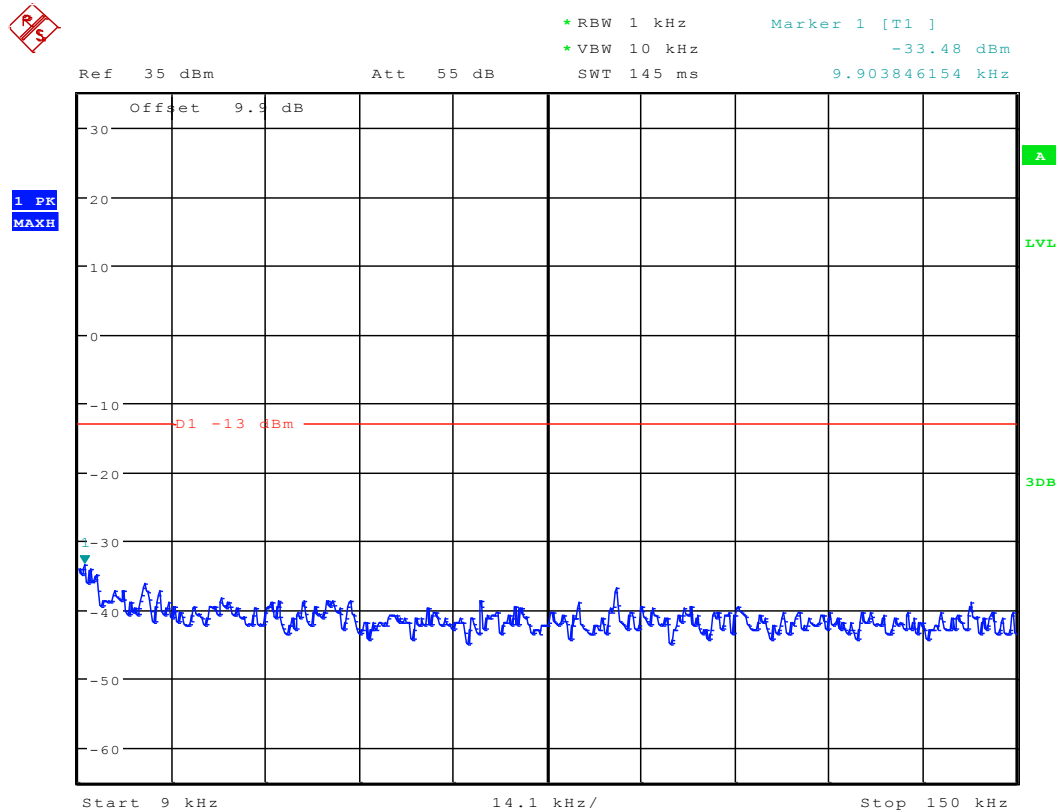


Date: 8.NOV.2011 23:22:00

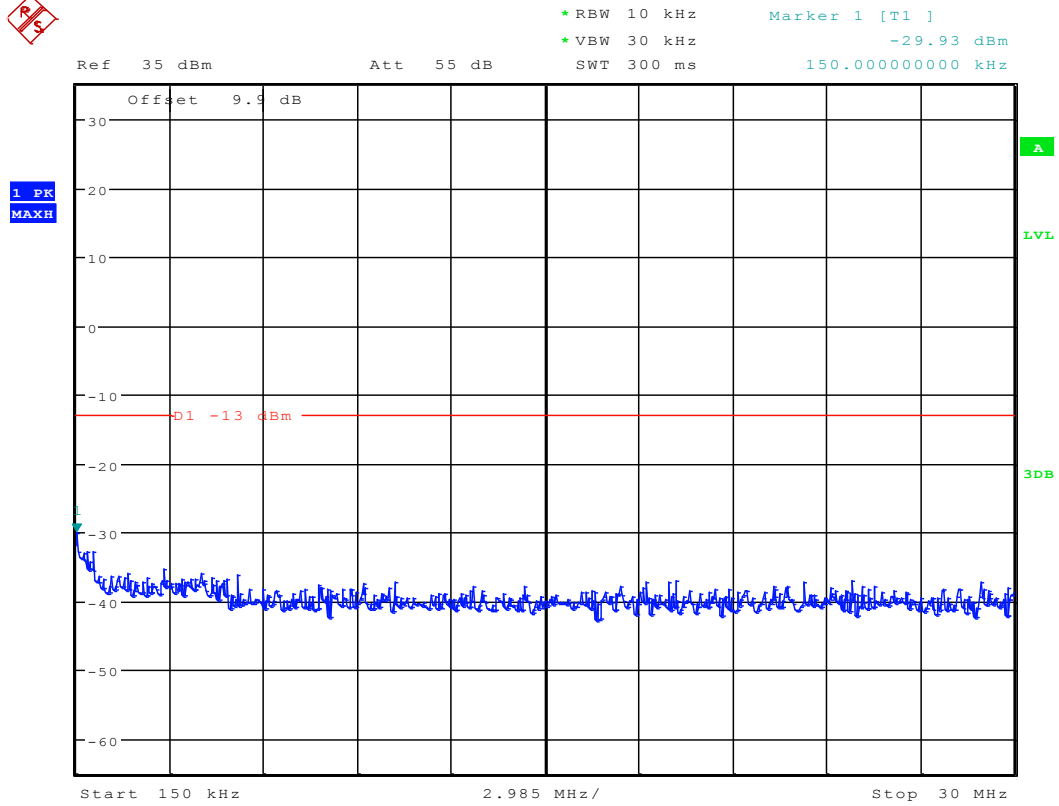


EVDO subtype 2

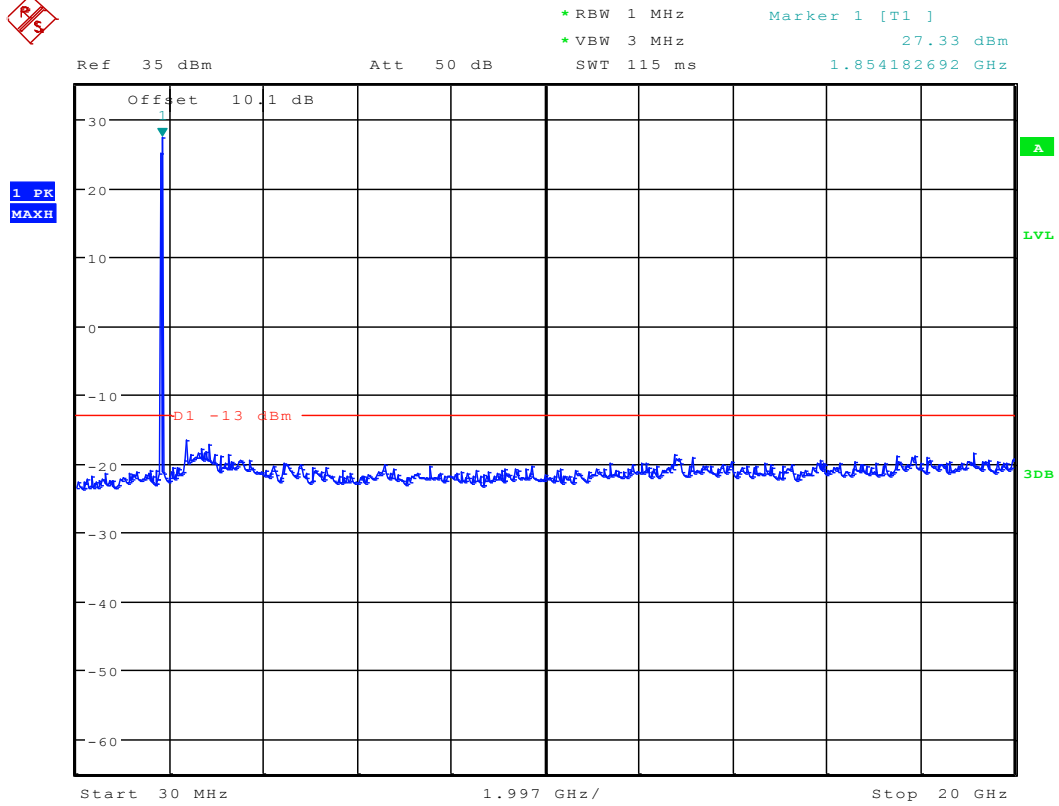
Modulation: BPSK Channel 25



Date: 8.NOV.2011 23:26:05



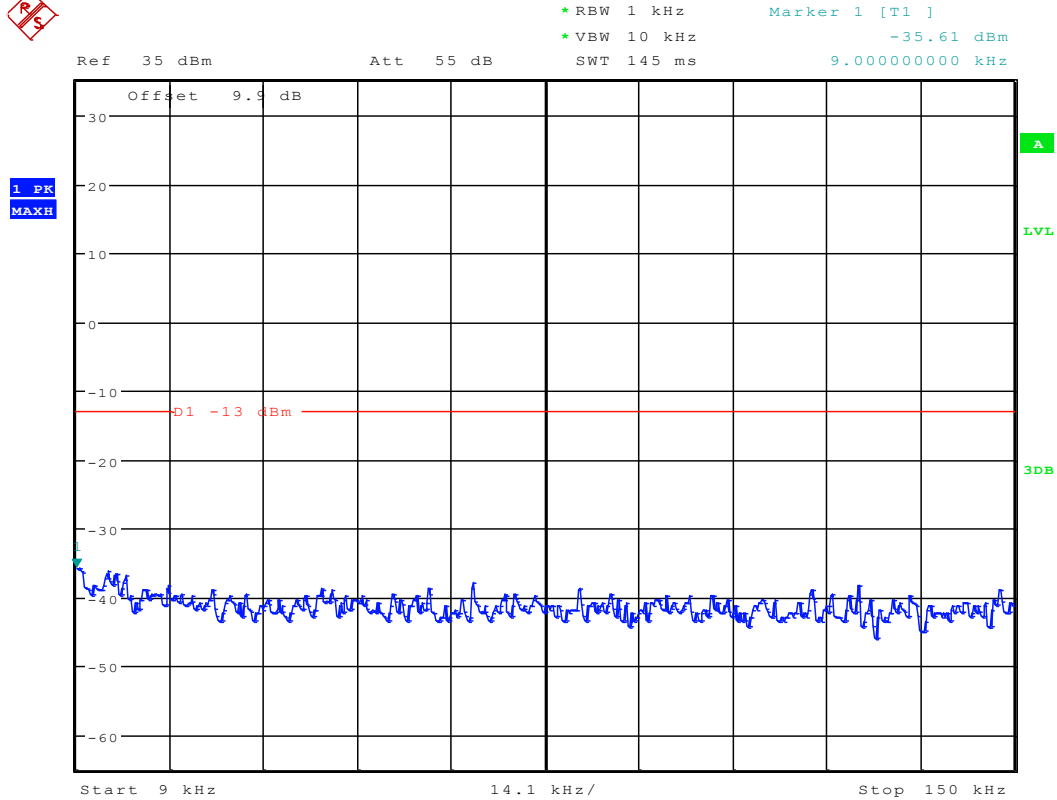
Date: 8.NOV.2011 23:26:30



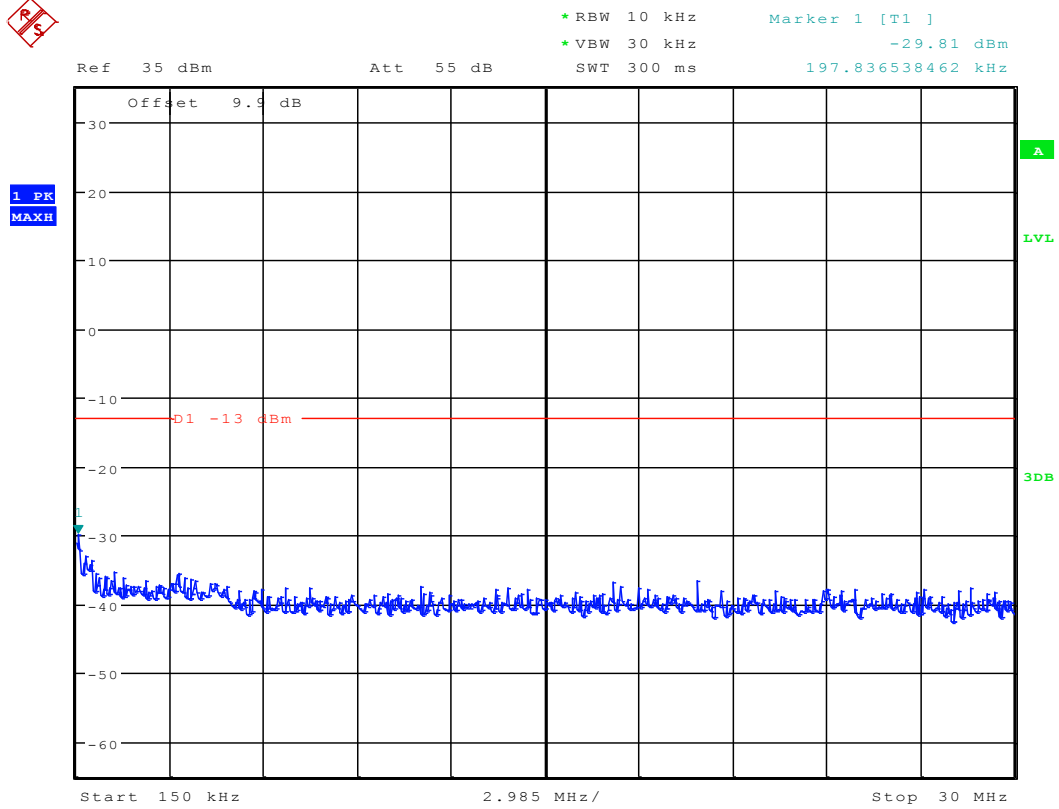
Date: 8.NOV.2011 23:26:56



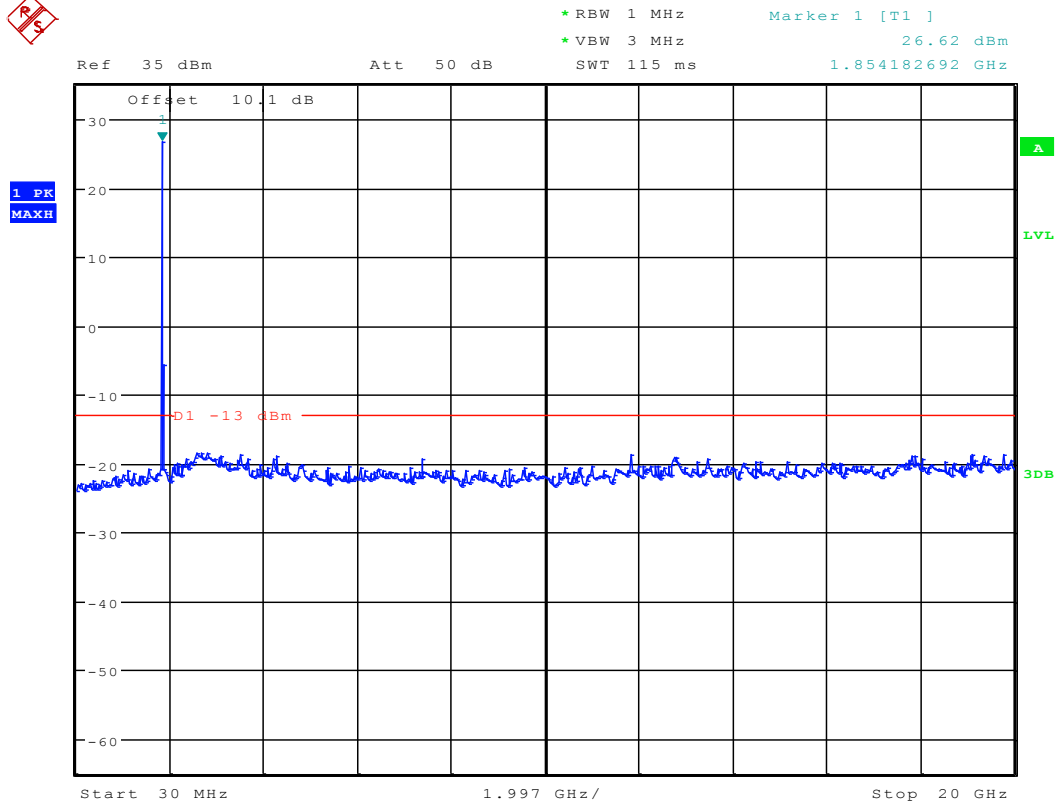
Channel 600



Date: 8.NOV.2011 23:26:13



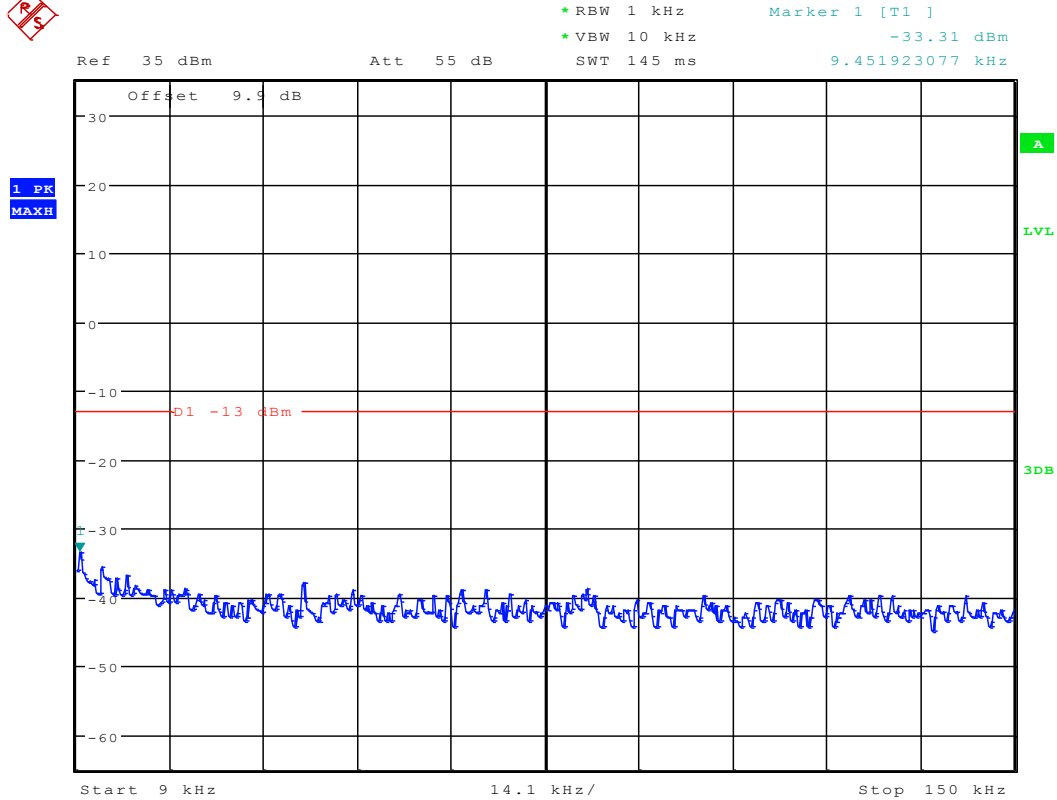
Date: 8.NOV.2011 23:26:39



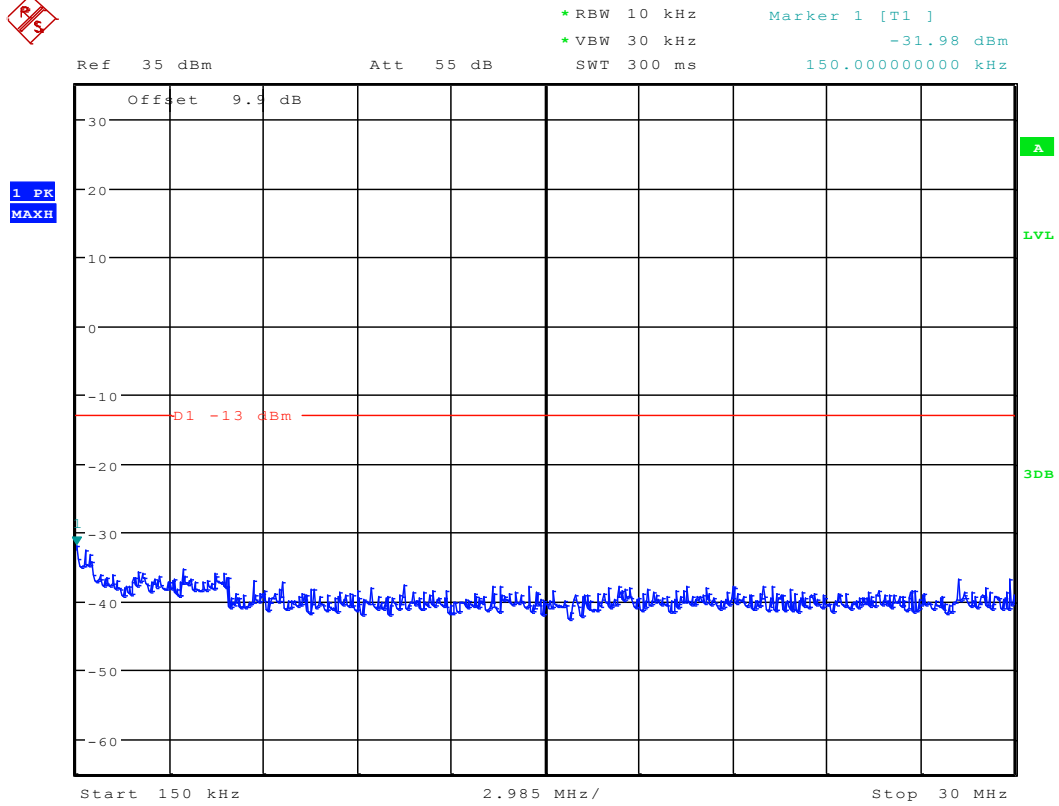
Date: 8.NOV.2011 23:27:05



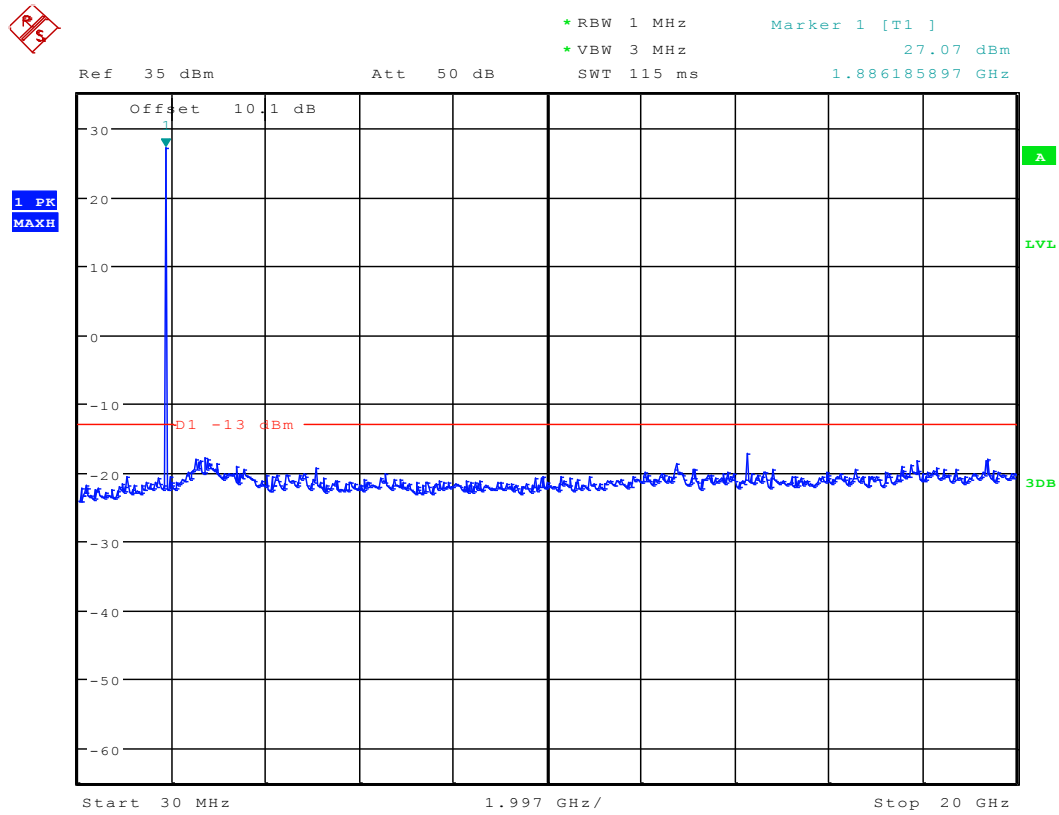
Channel 1175



Date: 8.NOV.2011 23:26:21



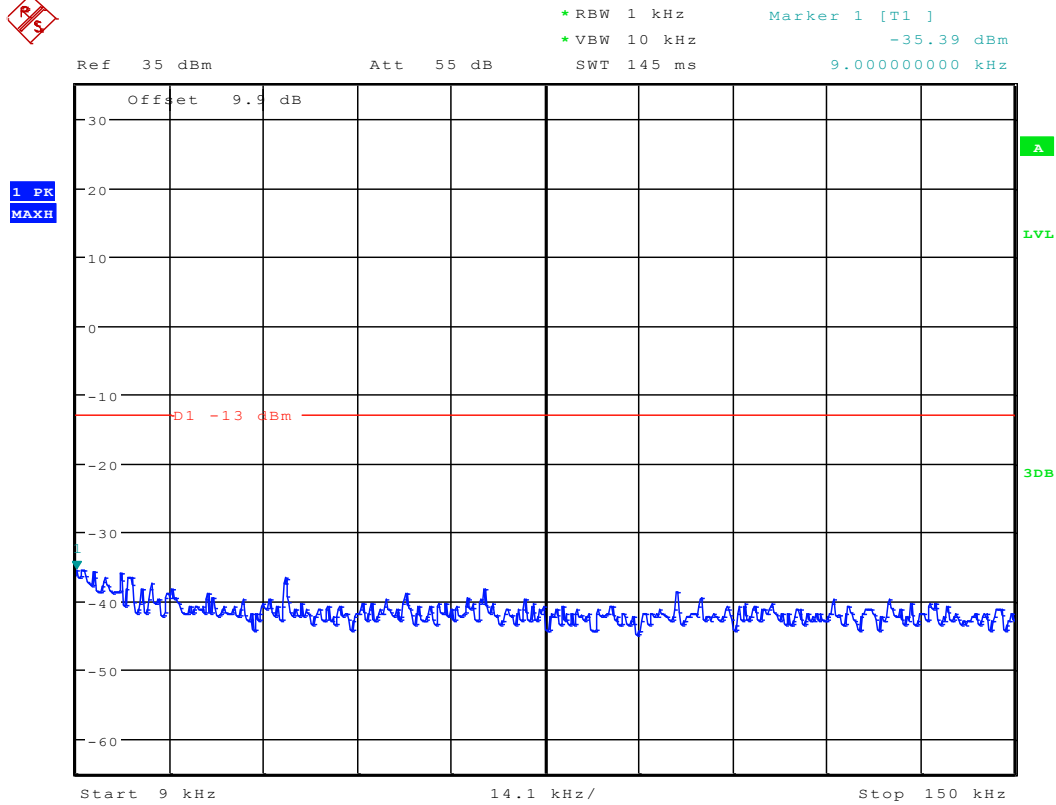
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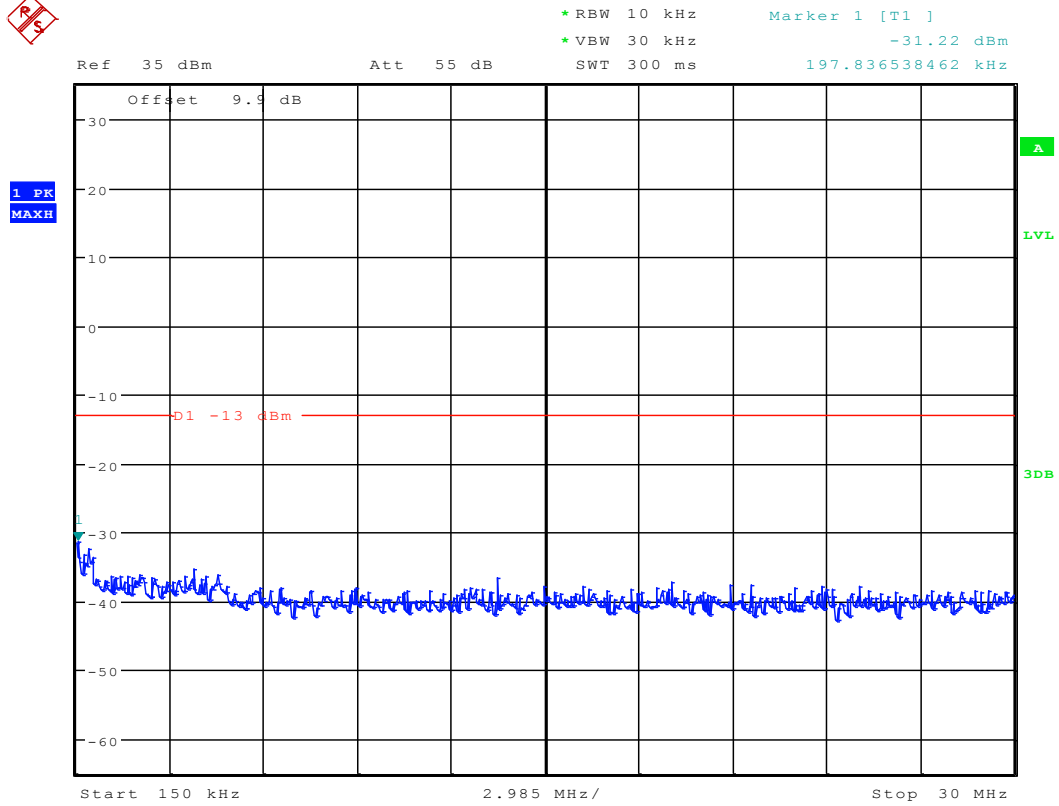
Date: 8.NOV.2011 23:27:13



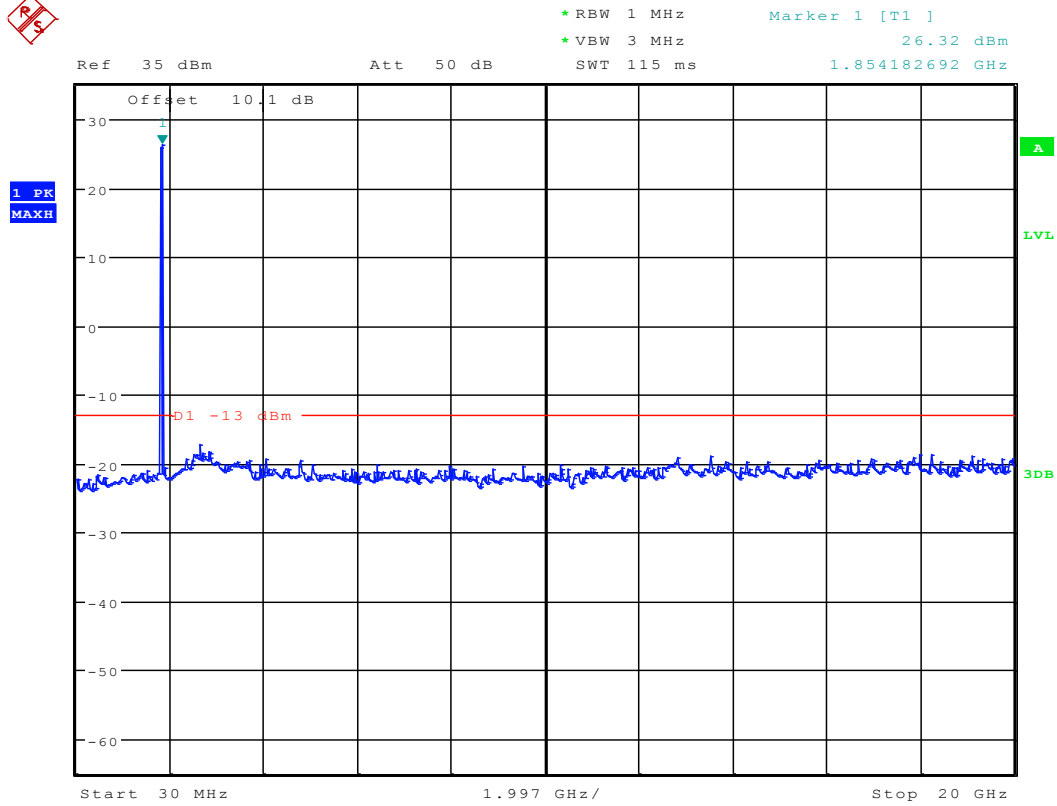
Modulation: QPSK Channel 25



Date: 8.NOV.2011 23:27:22



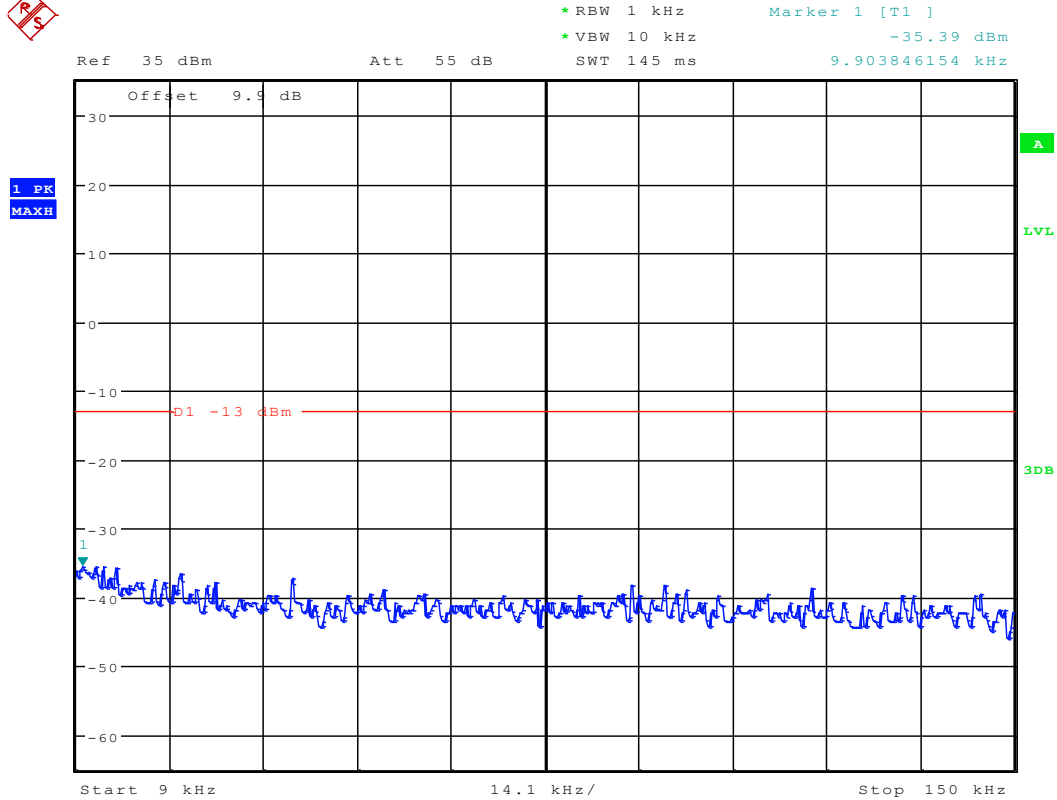
Date: 8.NOV.2011 23:27:48



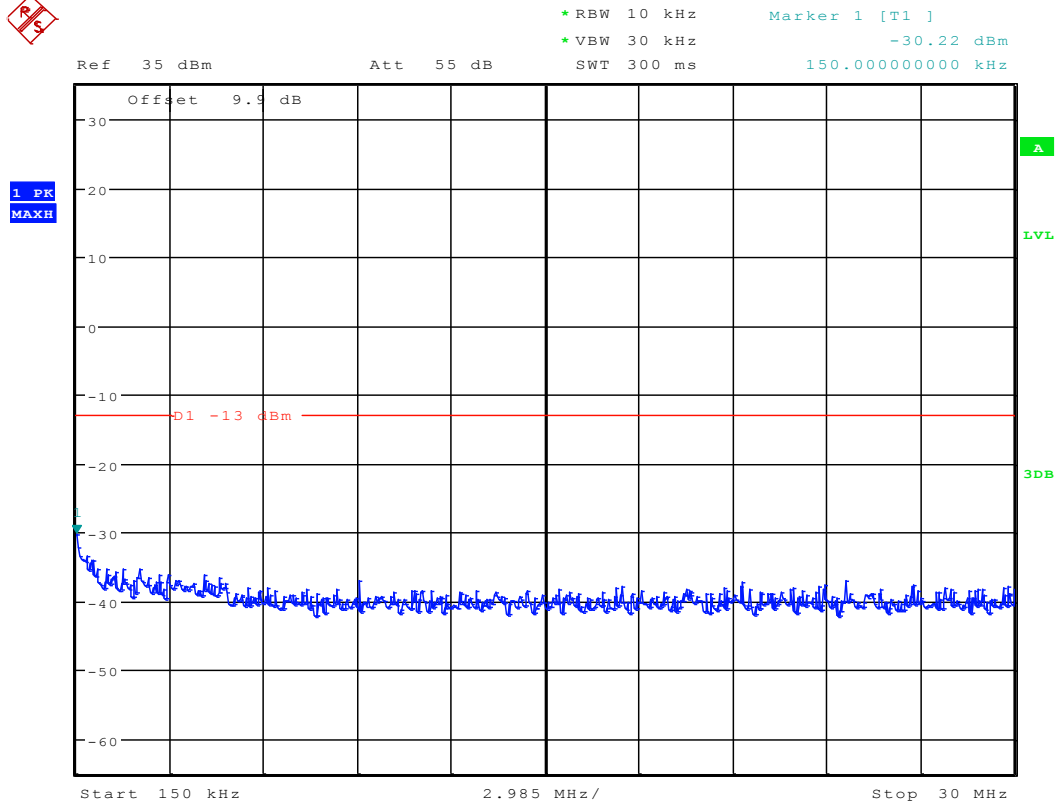
Date: 8.NOV.2011 23:28:14



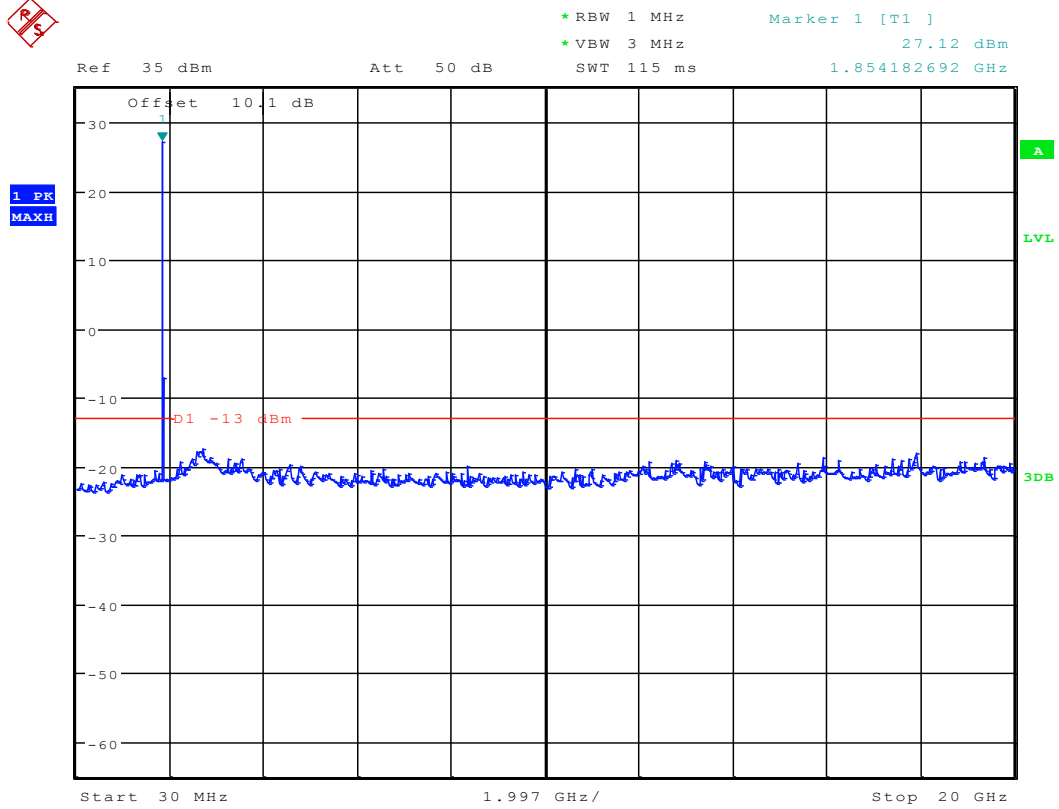
Channel 600



Date: 8.NOV.2011 23:27:30



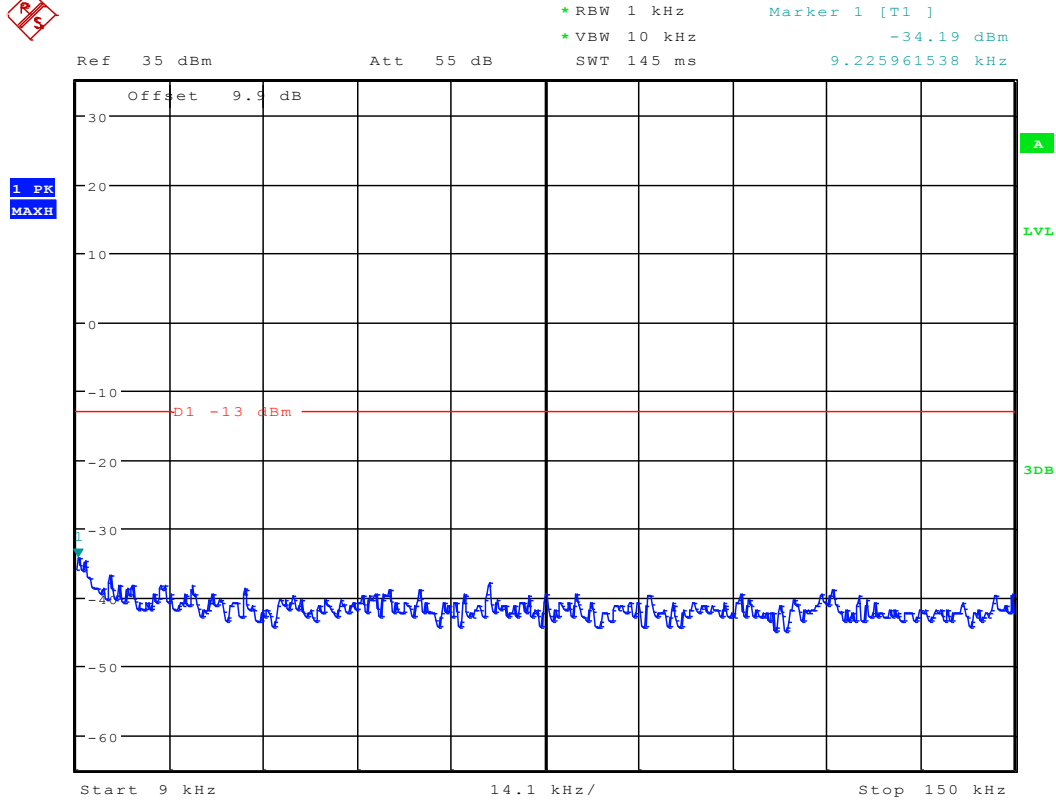
Date: 8.NOV.2011 23:27:56



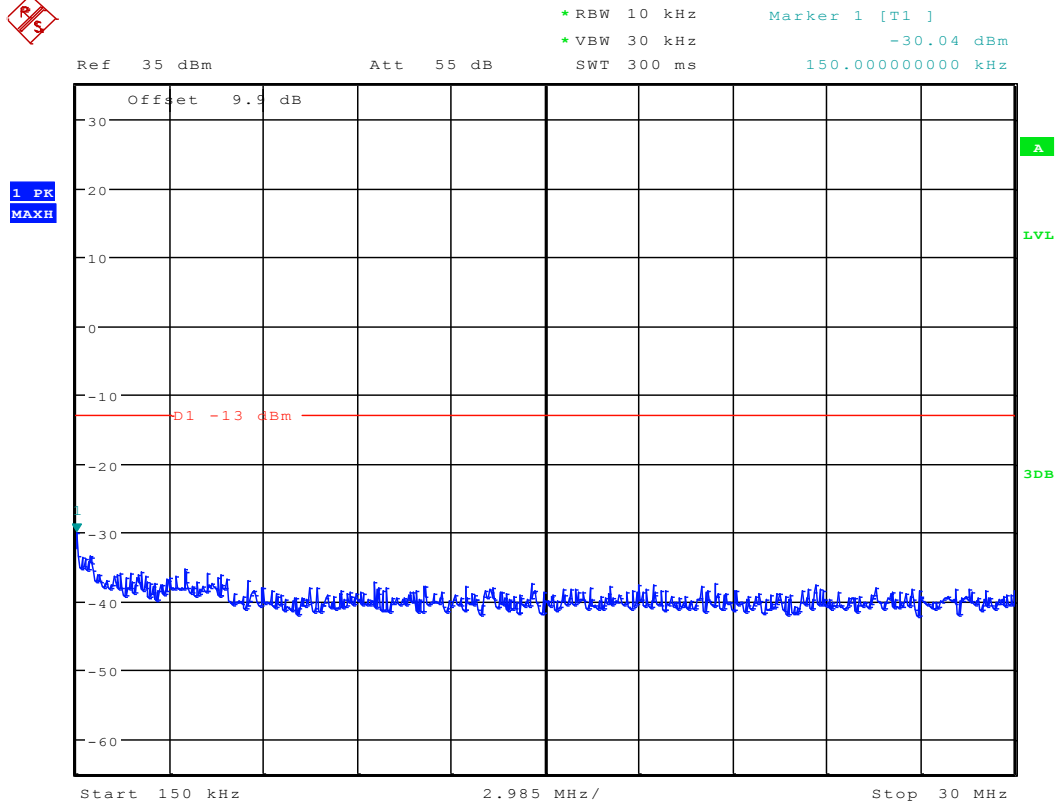
Date: 8.NOV.2011 23:28:22



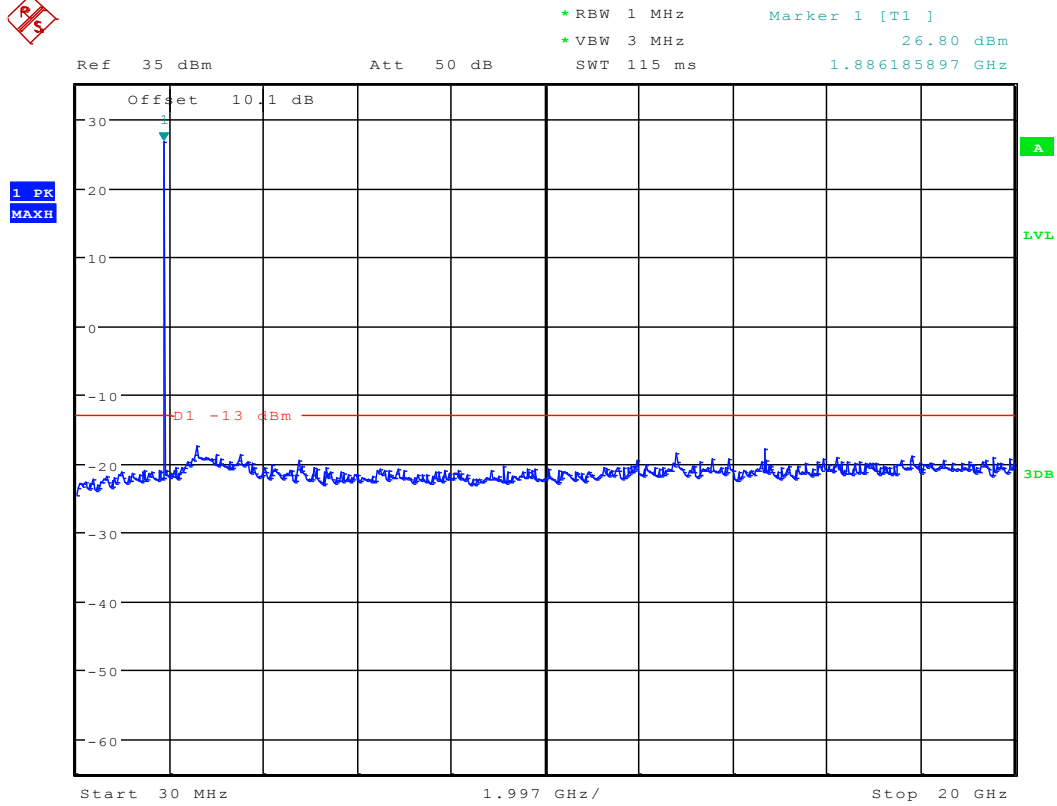
Channel 1175



Date: 8.NOV.2011 23:27:39



Date: 8.NOV.2011 23:28:04

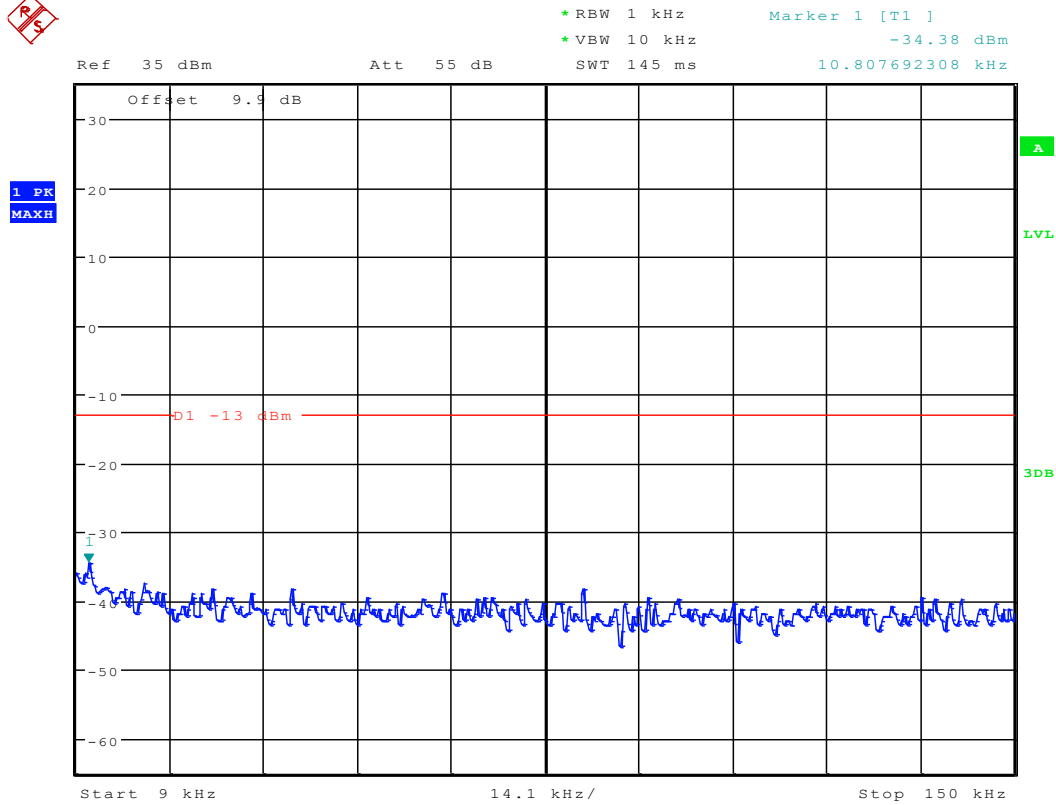


Date: 8.NOV.2011 23:28:31

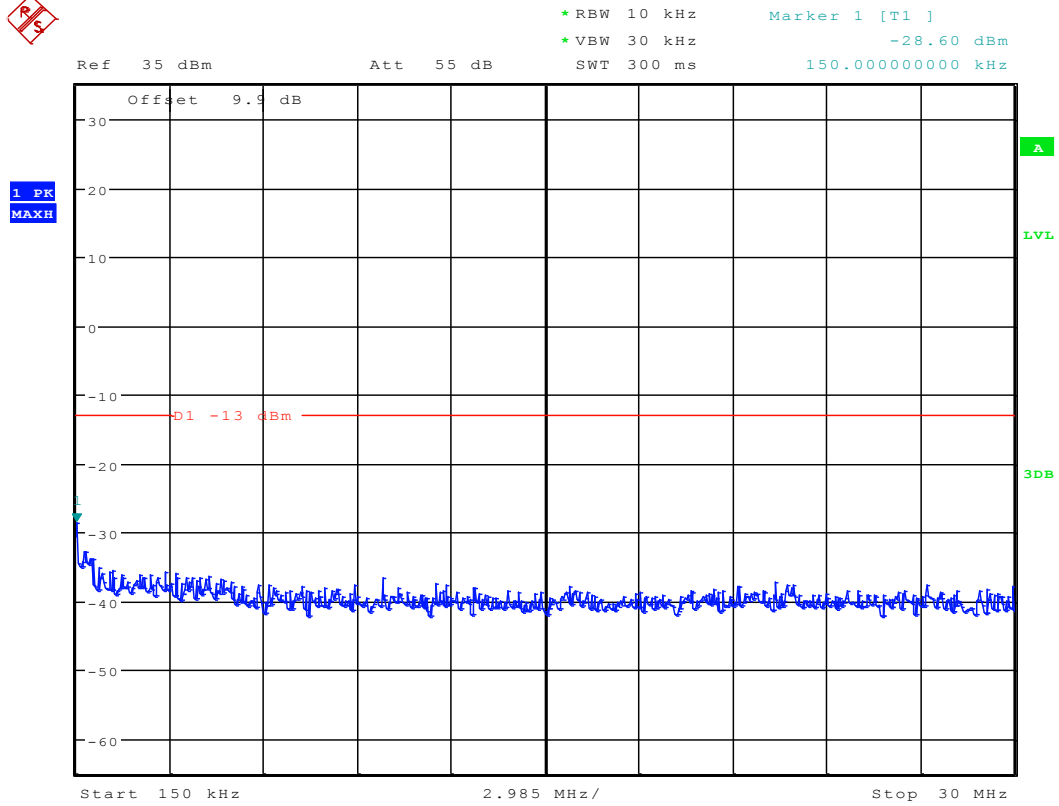


Modulation: 8PSK

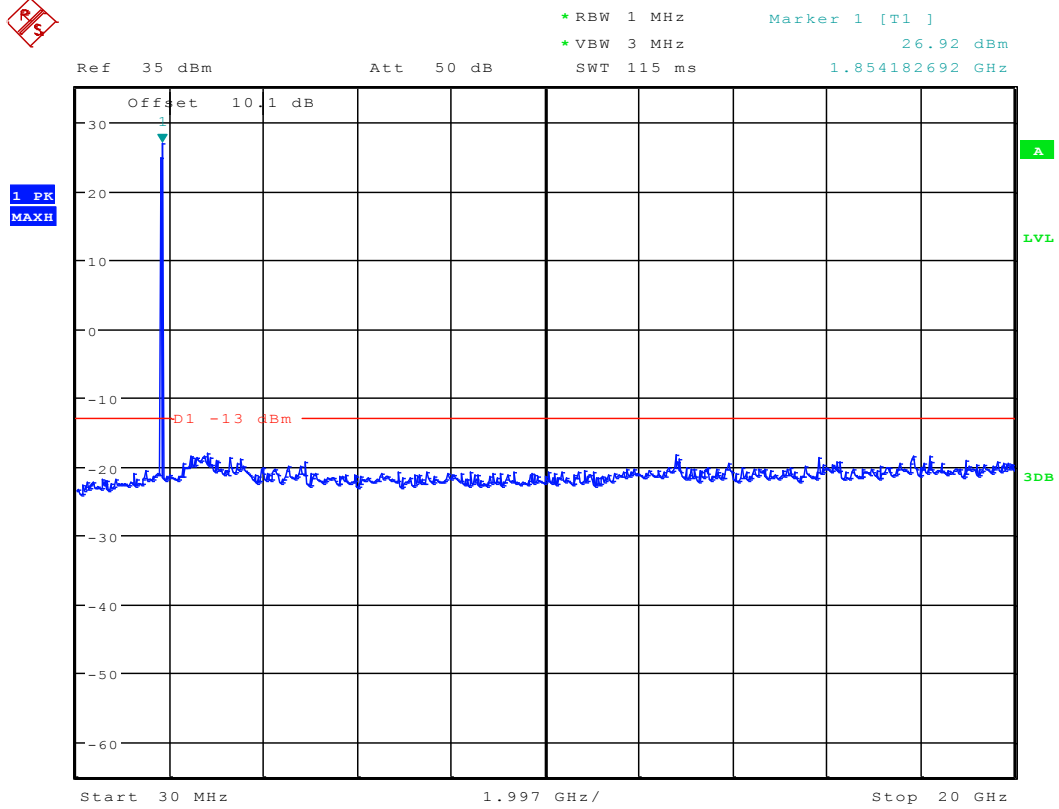
Channel 25



Date: 8.NOV.2011 23:28:40



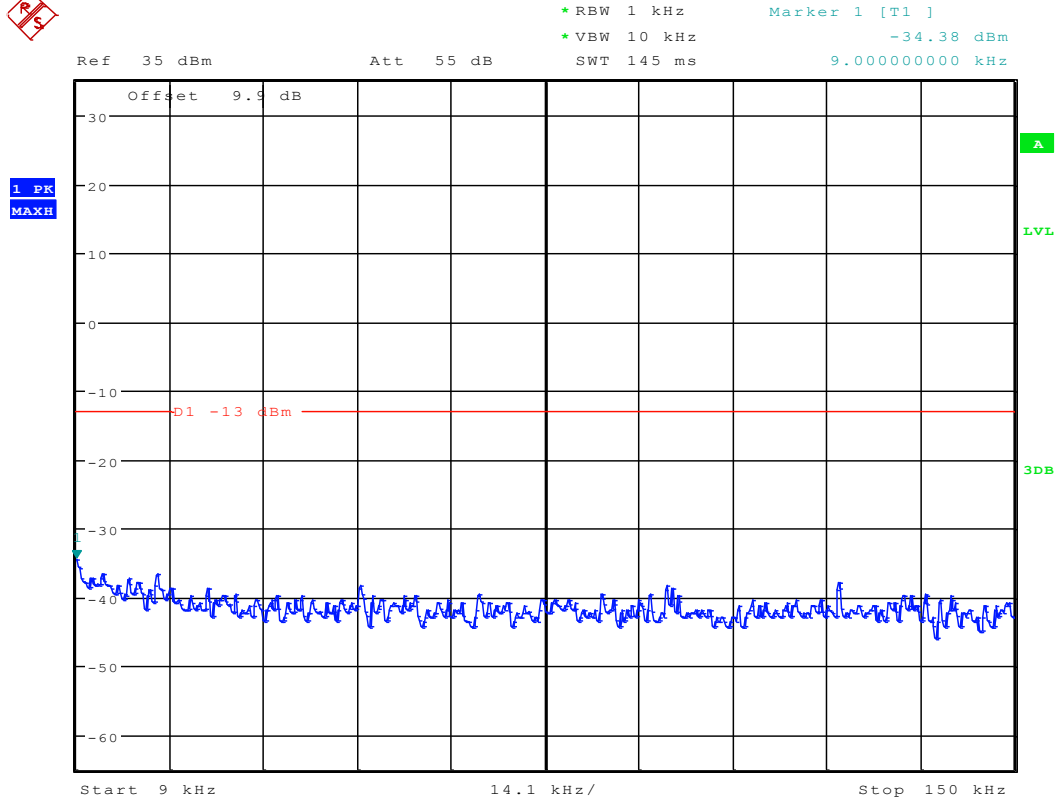
Date: 8.NOV.2011 23:29:05



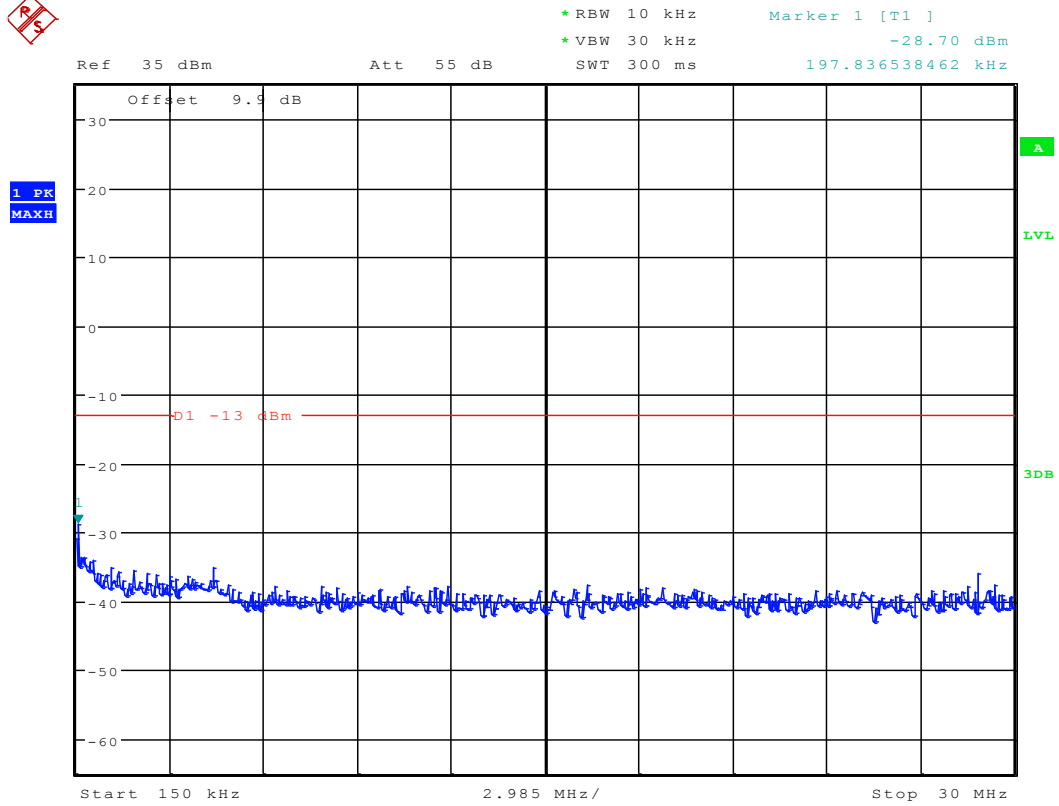
Date: 8.NOV.2011 23:29:31



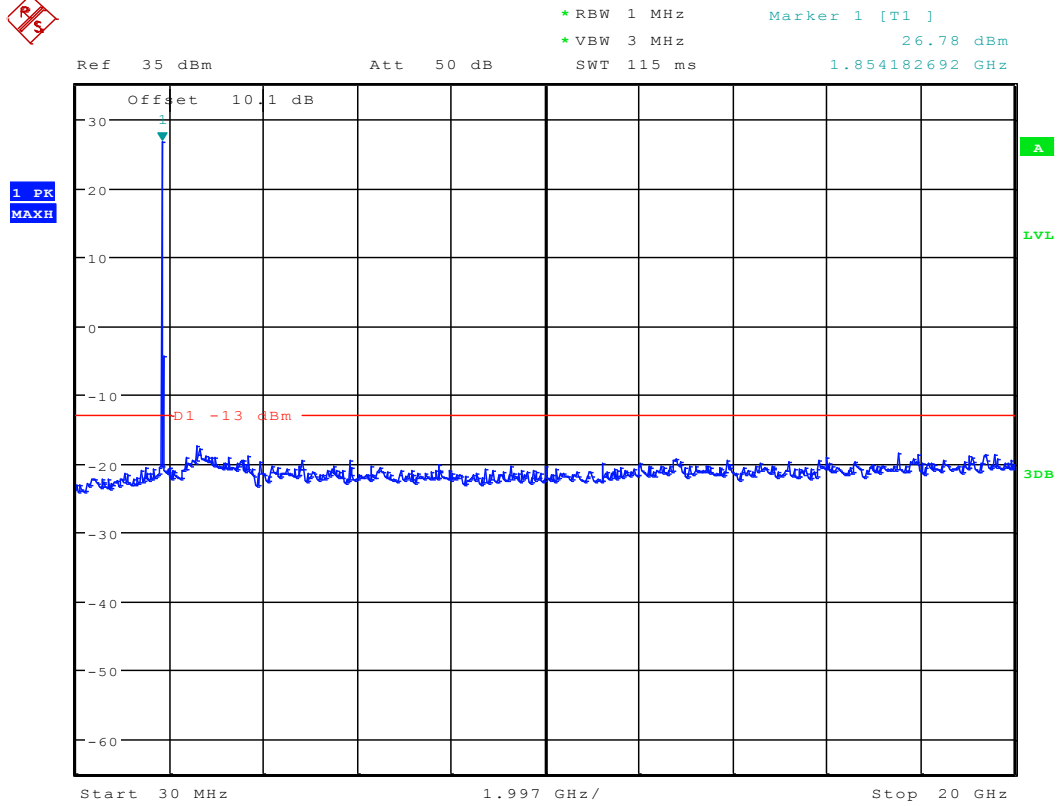
Channel 600



Date: 8.NOV.2011 23:28:48



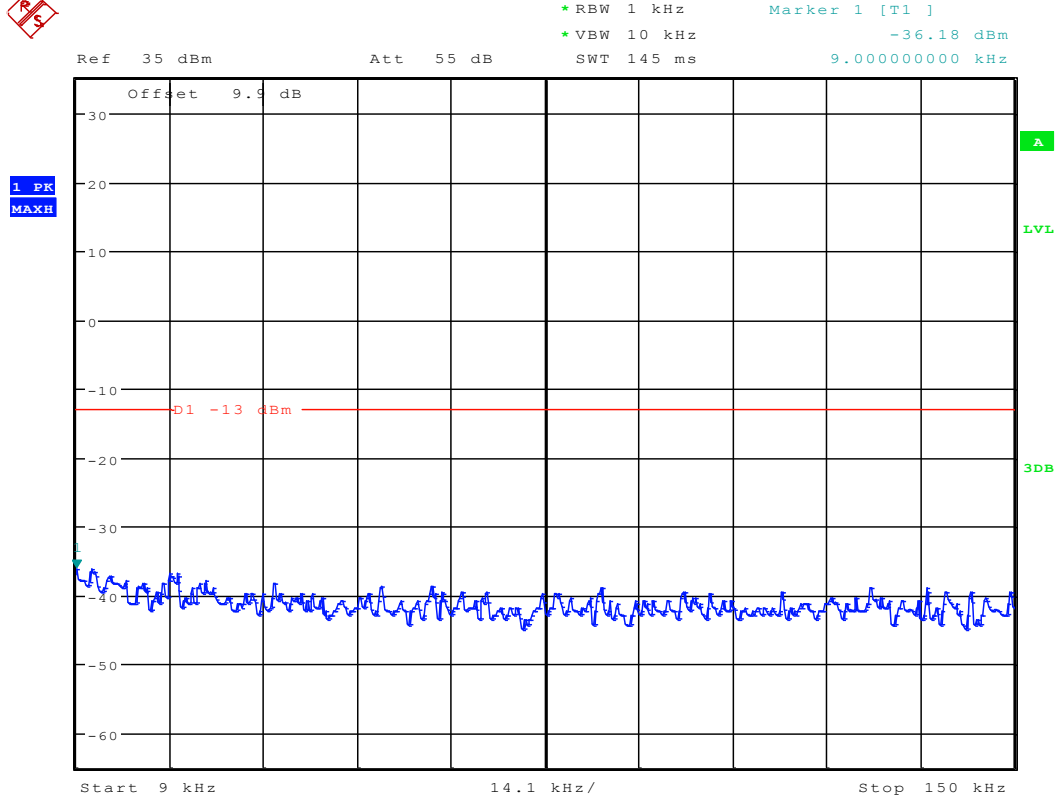
Date: 8.NOV.2011 23:29:14



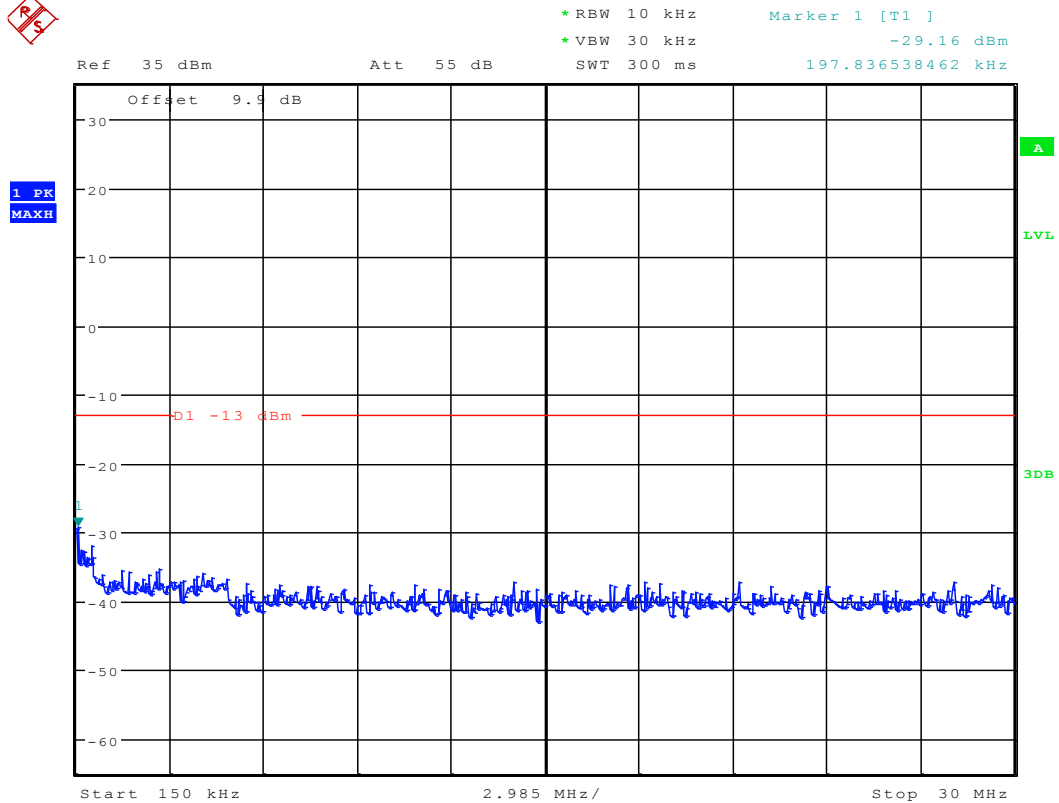
Date: 8.NOV.2011 23:29:40



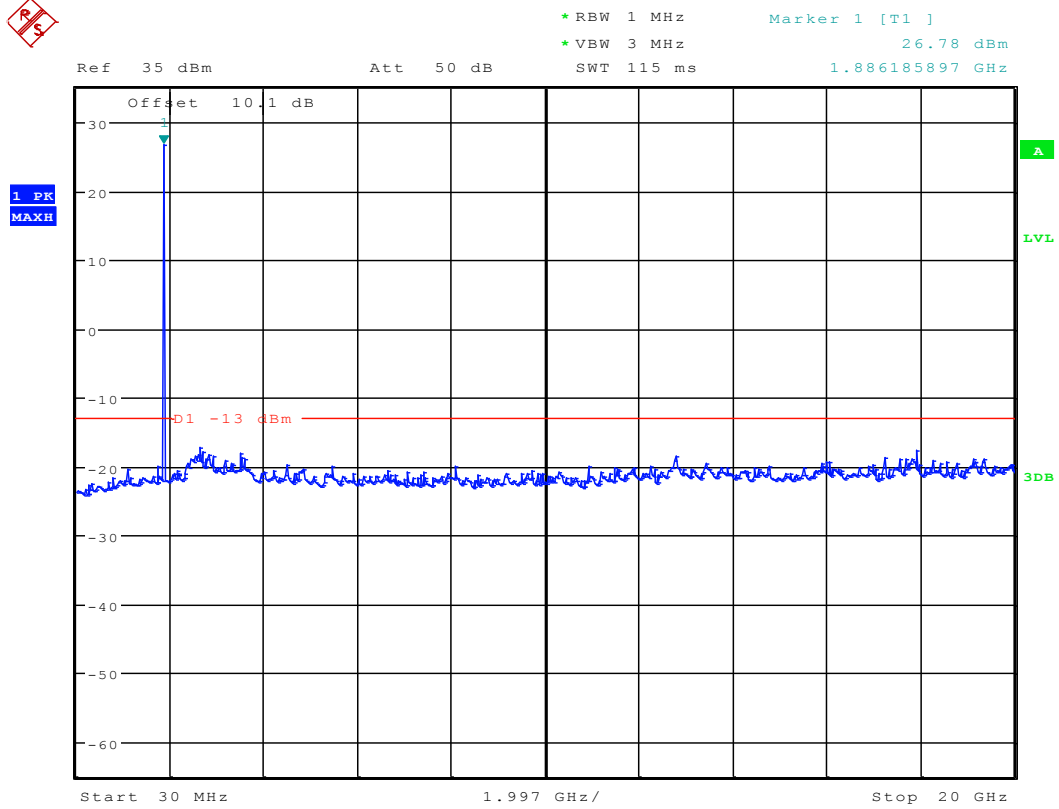
Channel 1175



Date: 8.NOV.2011 23:28:56



Date: 8.NOV.2011 23:29:22



Date: 8.NOV.2011 23:29:48



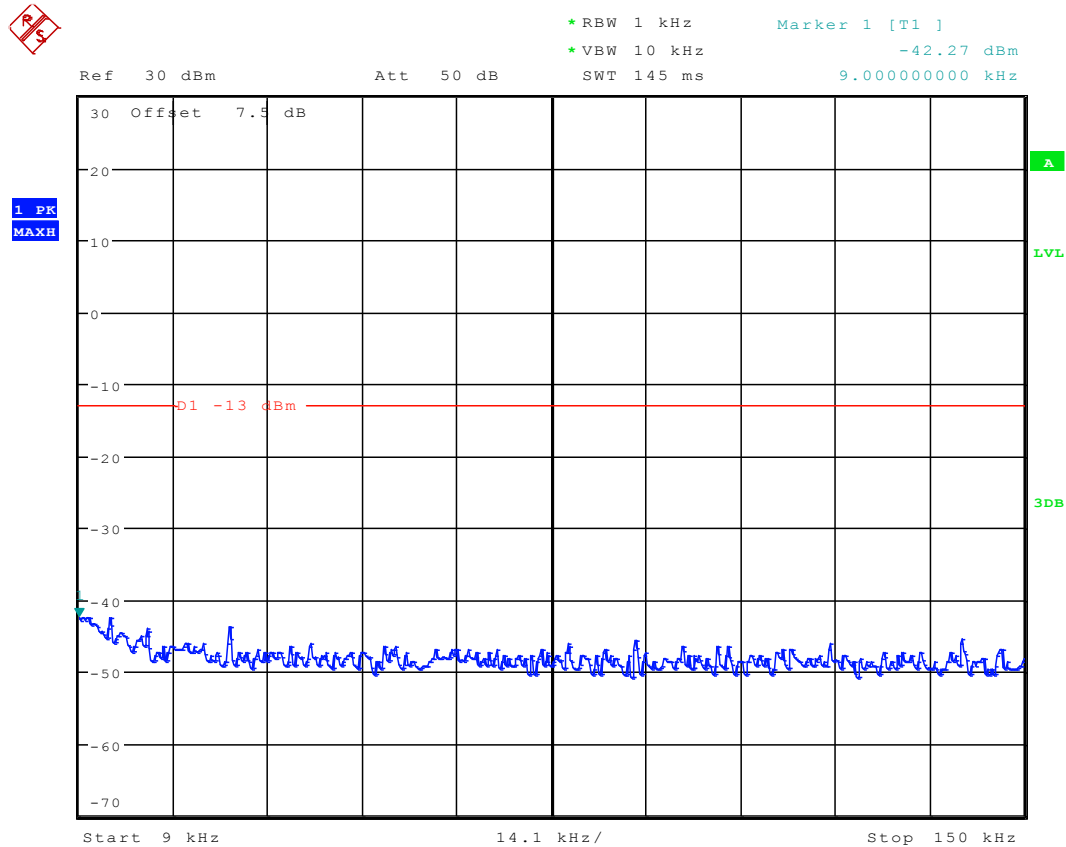
TM4

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

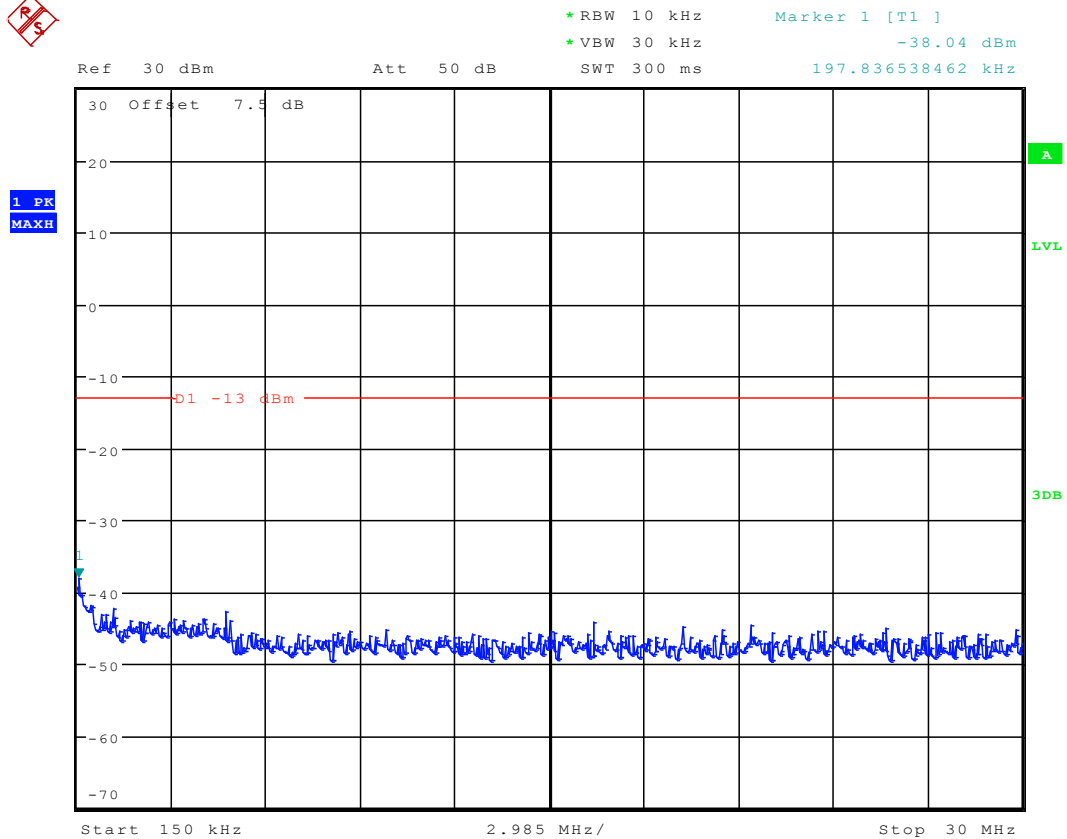
NOTE2: All relevant operation modes have been tested, and the worst case data (1RB&full RB) is included in this report.

1.4MHz(BW/) Channel 18607

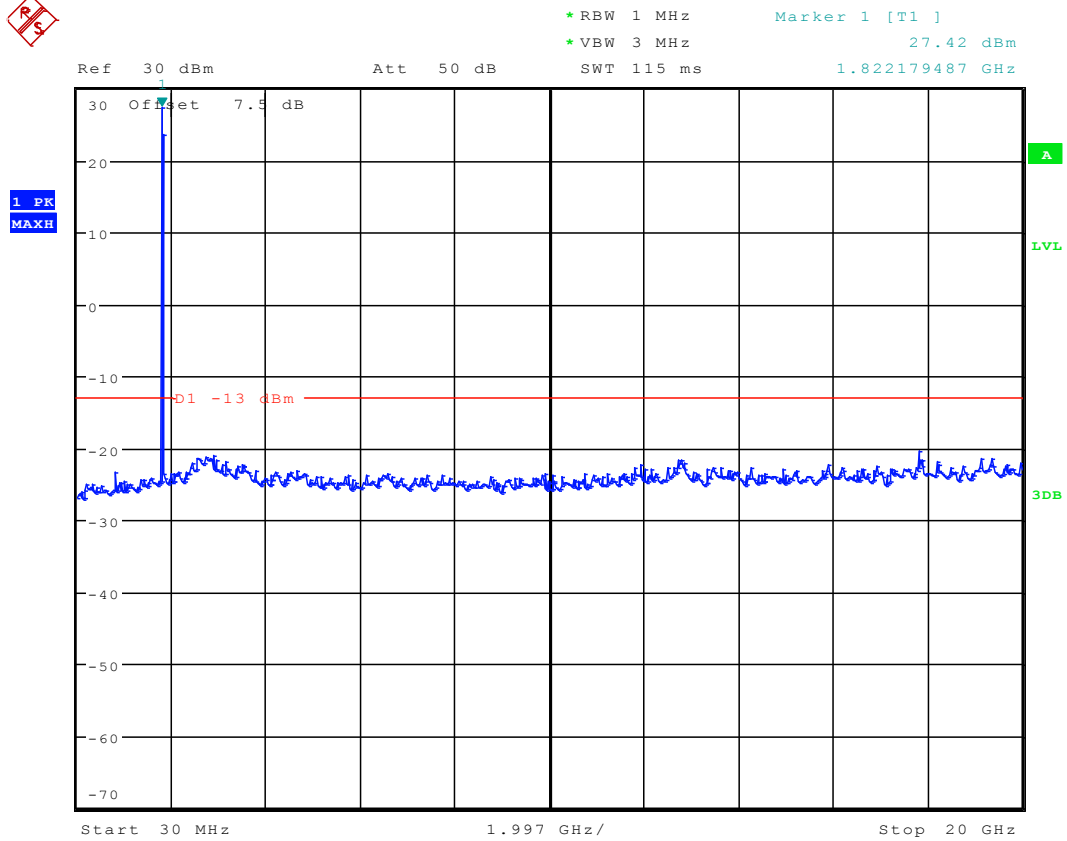
1 RB/RB #0



Date: 14.NOV.2011 10:56:28



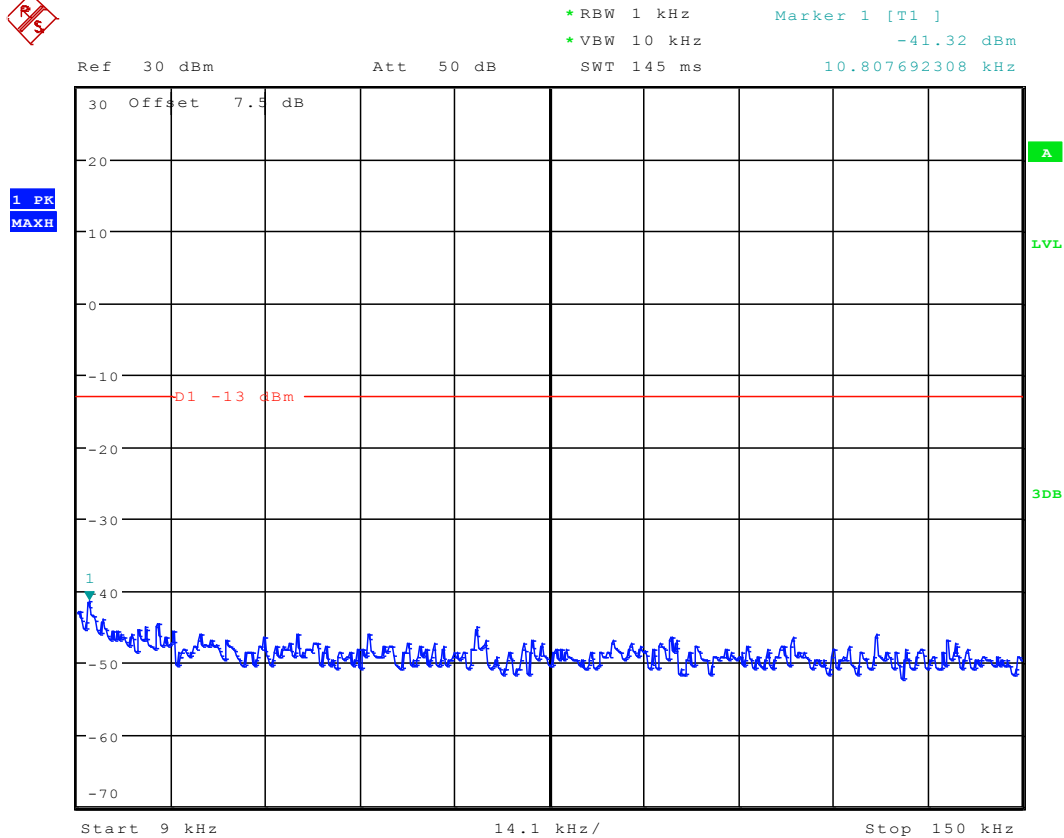
Date: 14.NOV.2011 10:57:51



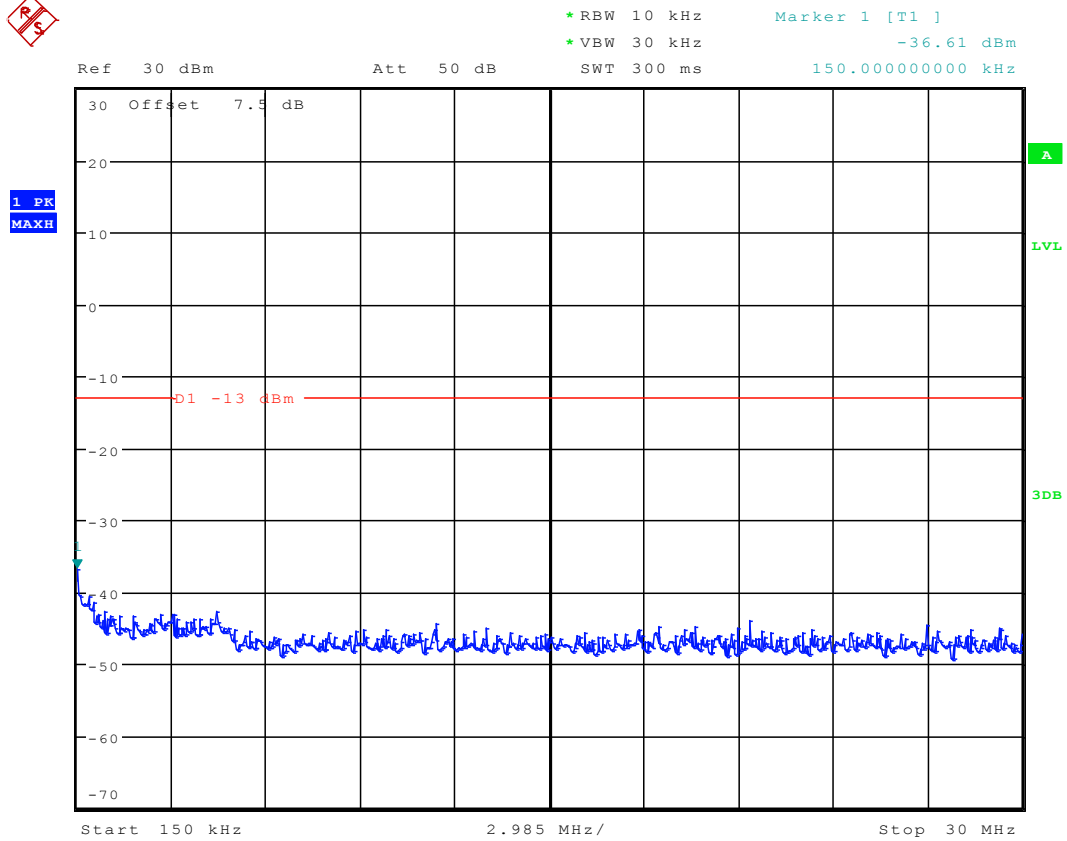
Date: 14.NOV.2011 11:00:13



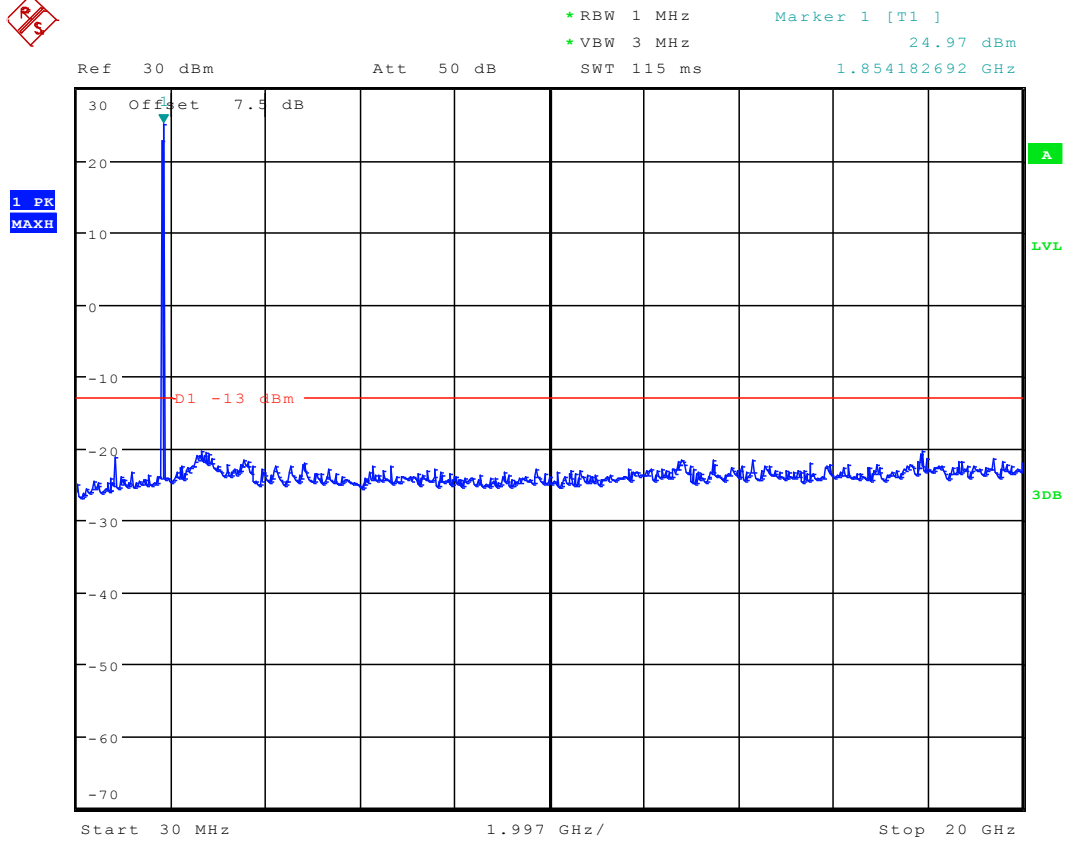
1 RB/RB #max



Date: 14.NOV.2011 10:56:55



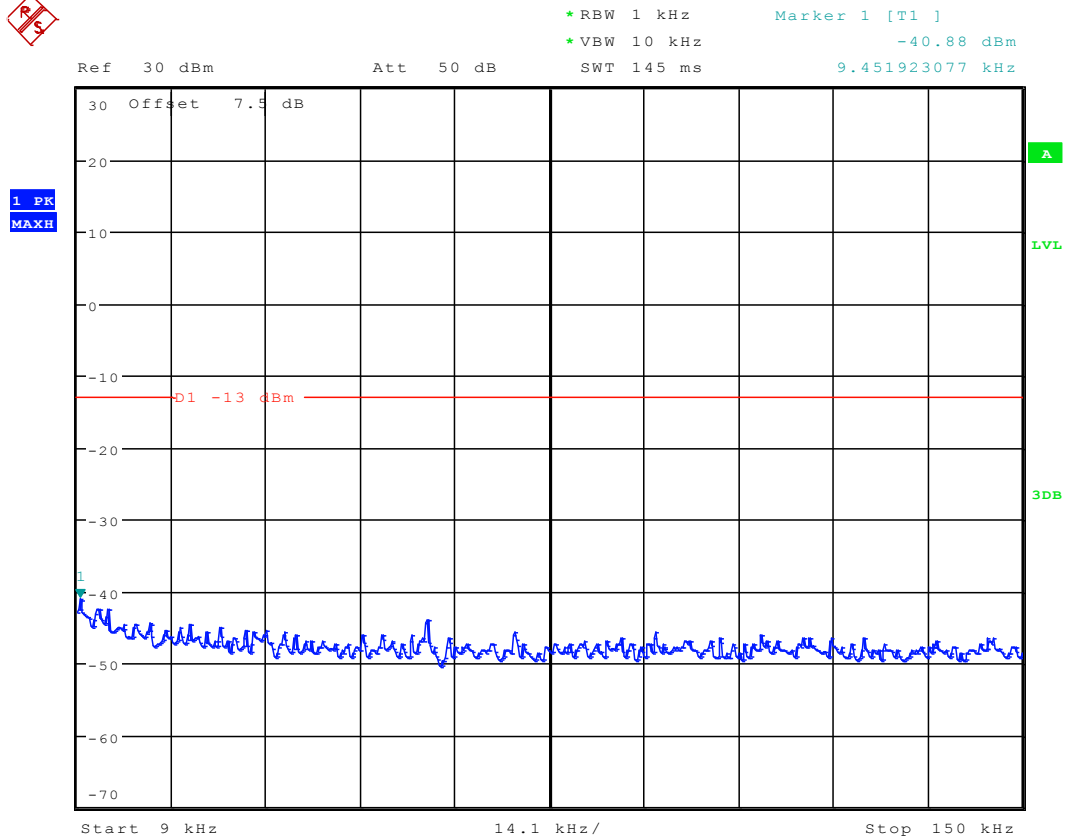
Date: 14.NOV.2011 10:57:26



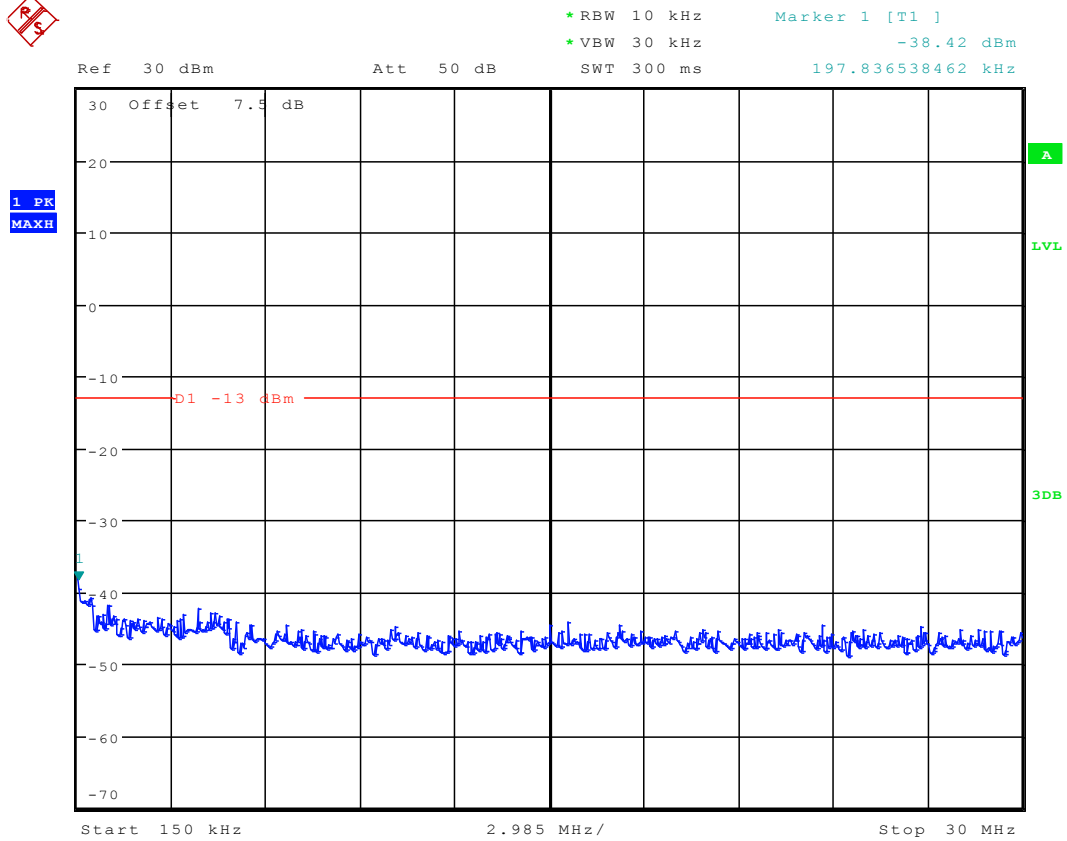
Date: 14.NOV.2011 11:00:36



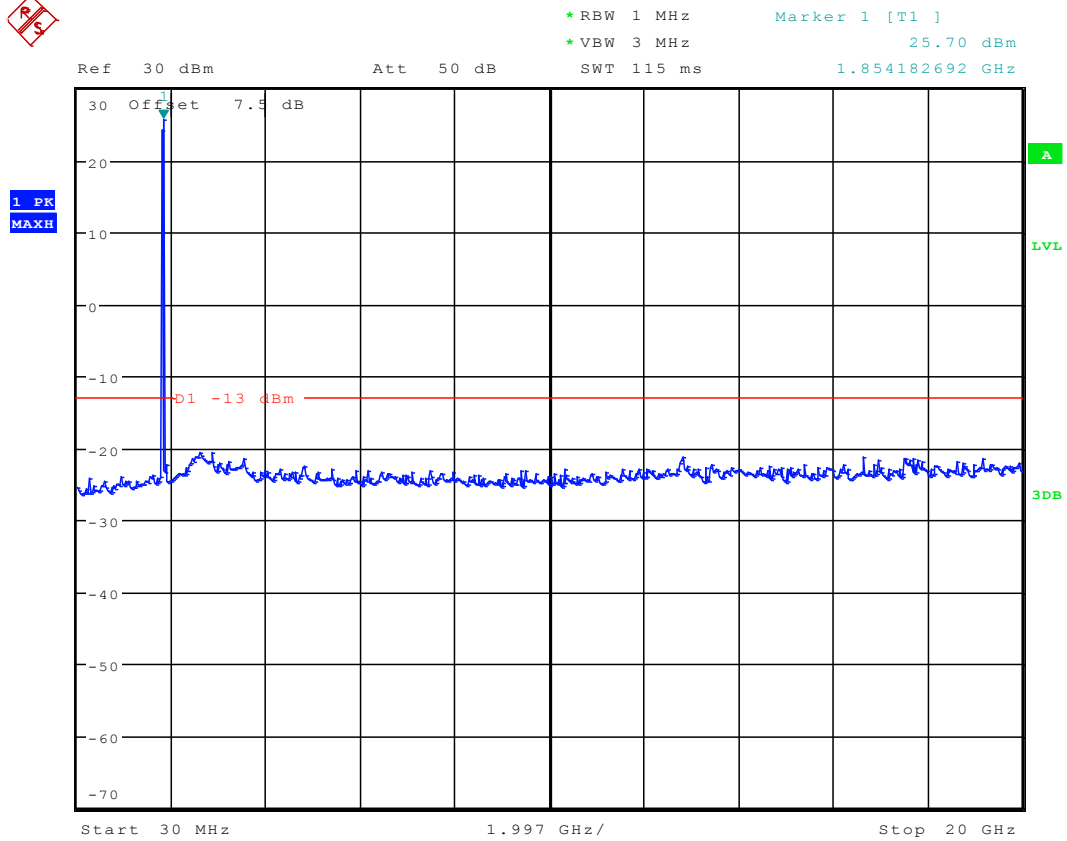
full RBs



Date: 14.NOV.2011 09:28:11



Date: 14.NOV.2011 10:58:28

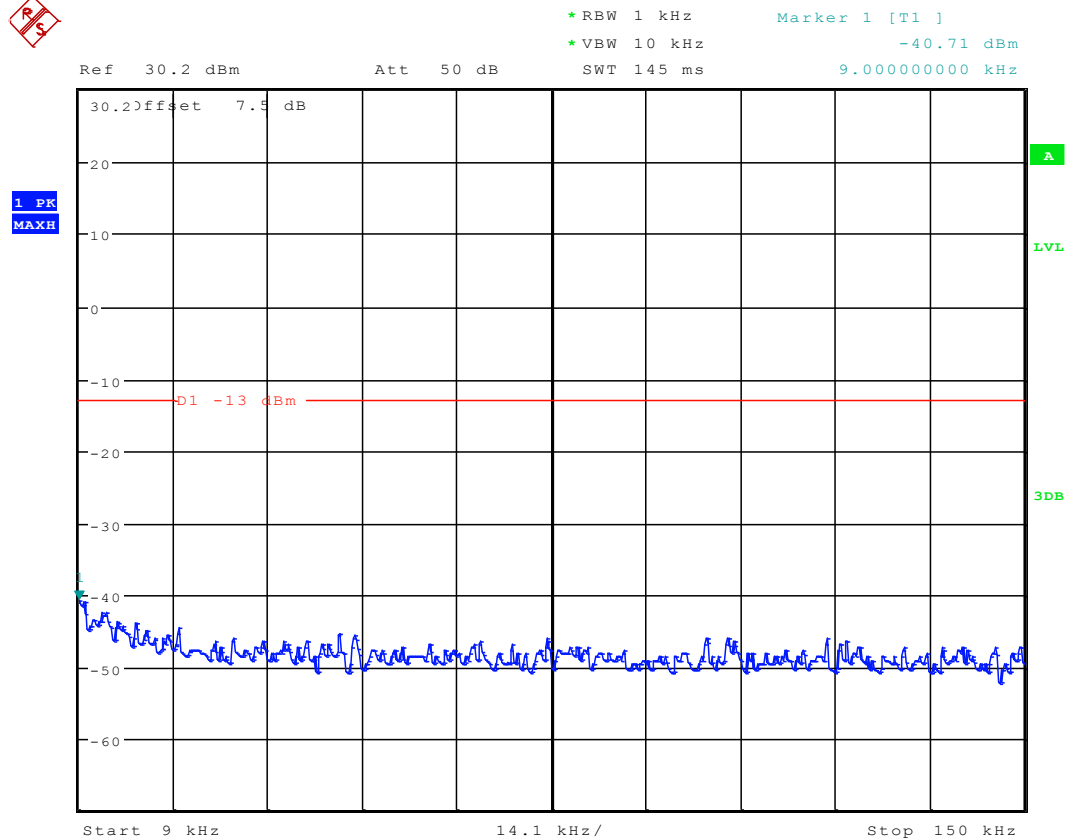


Date: 14.NOV.2011 10:59:36

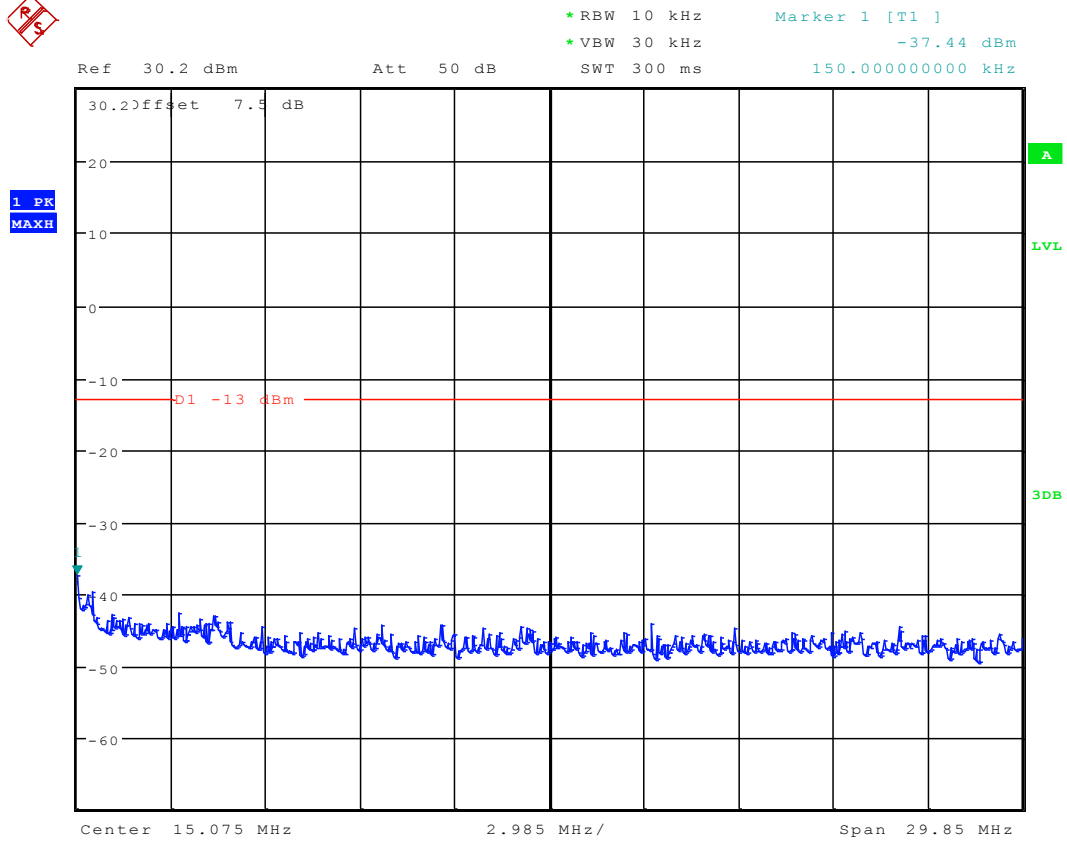


1.4MHz(BW/) Channel 18900

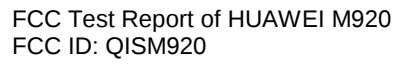
1 RB/RB #0



Date: 13.NOV.2011 18:08:57



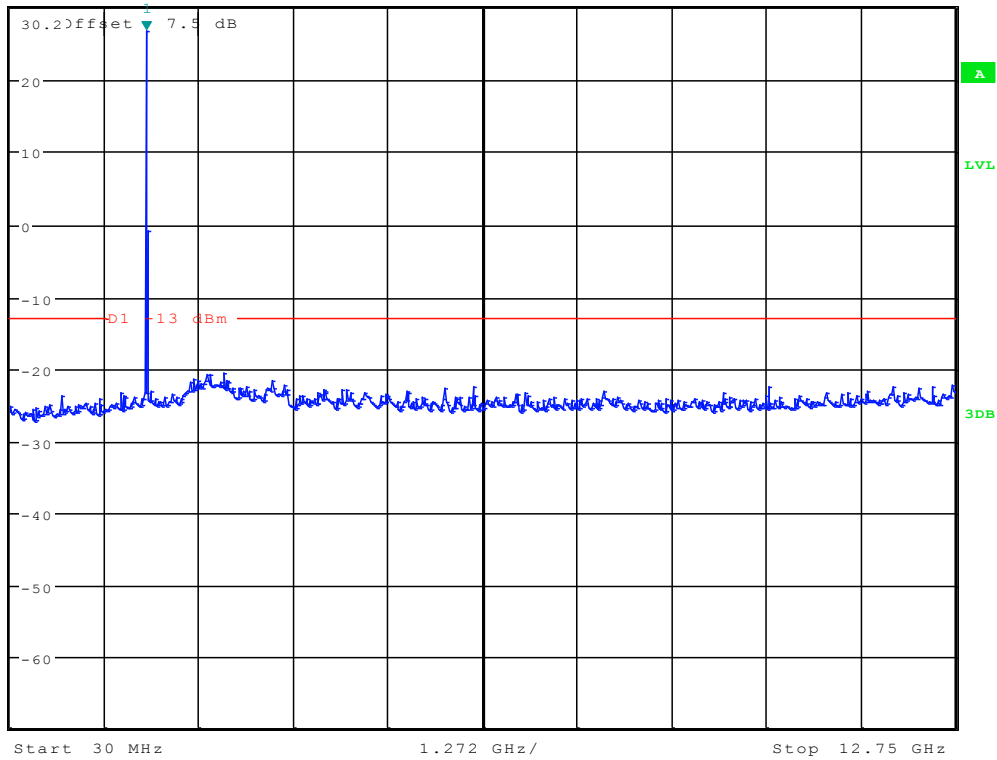
Date: 13.NOV.2011 18:07:46



Marker 1 [T1]

26.95 dBm

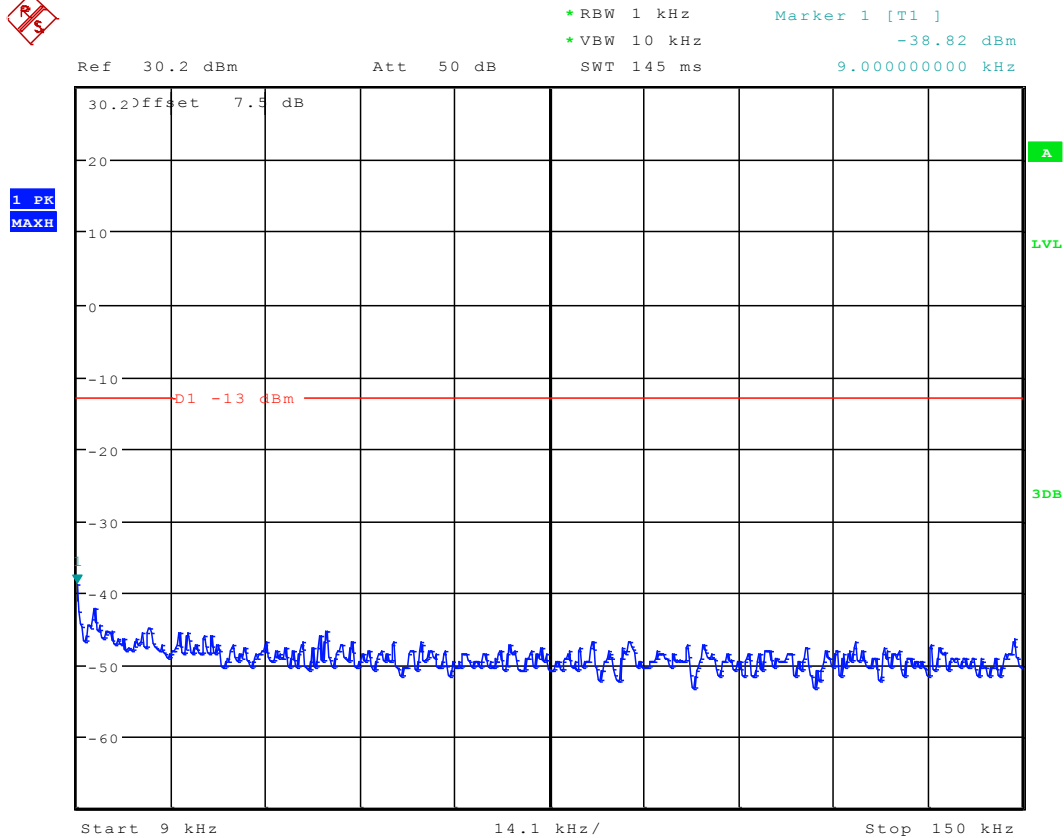
1.864615385 GHz



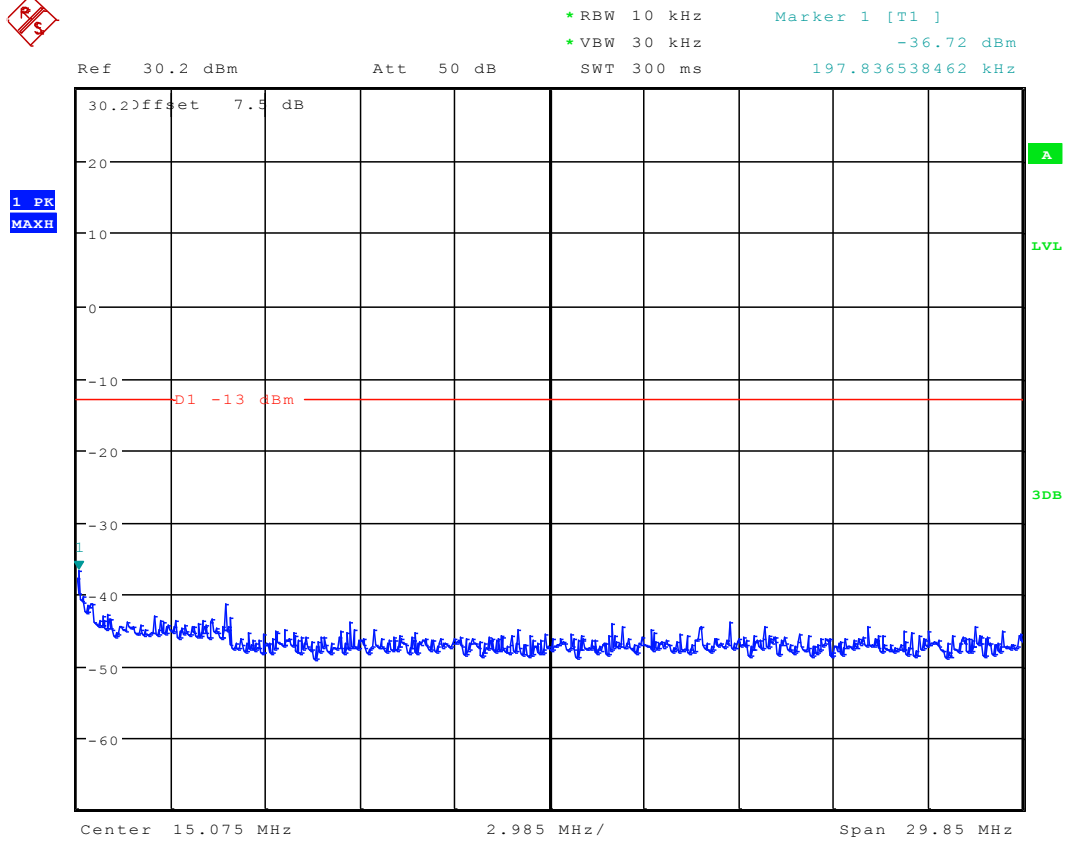
Date: 13.NOV.2011 18:06:21



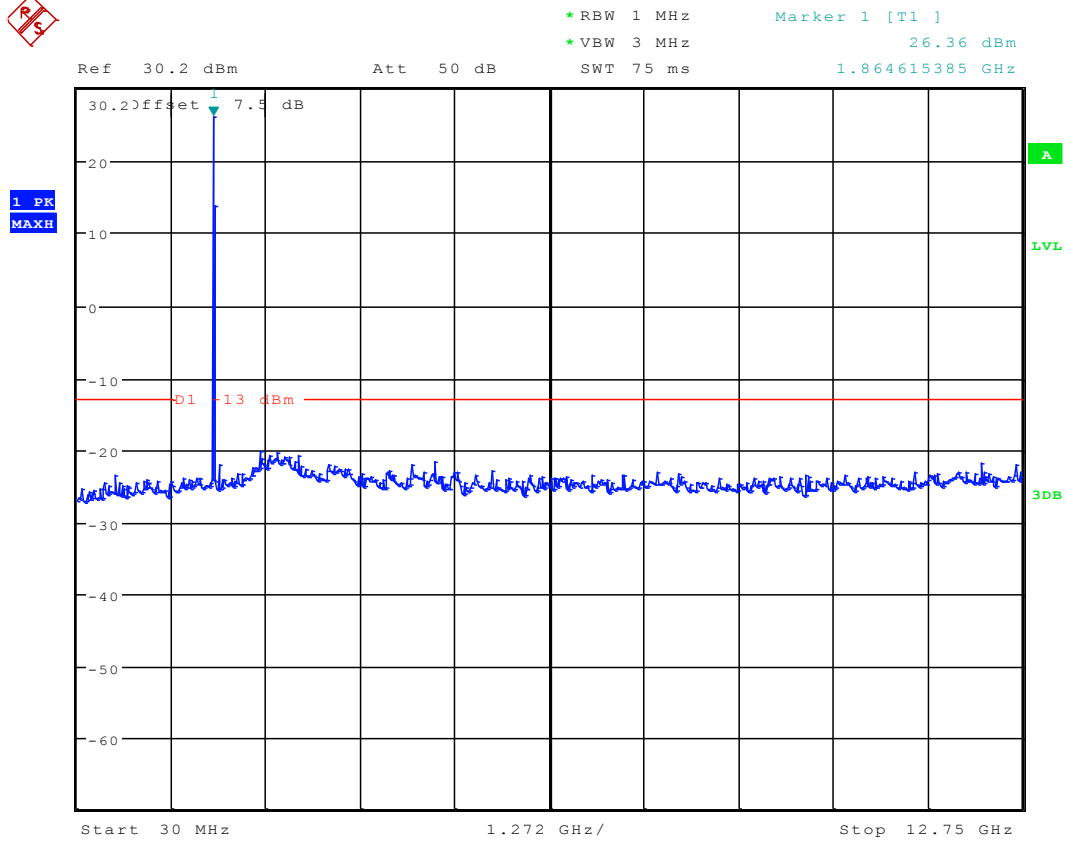
1 RB/RB #max



Date: 13.NOV.2011 18:09:18



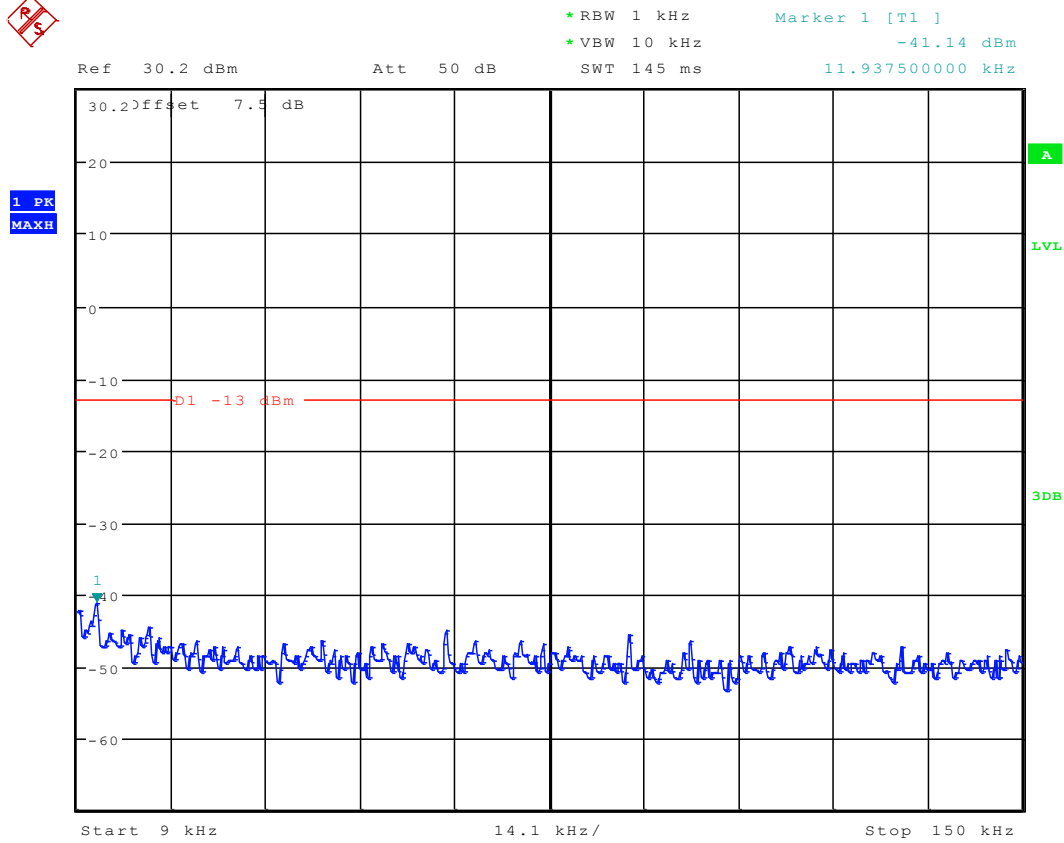
Date: 13.NOV.2011 18:07:23



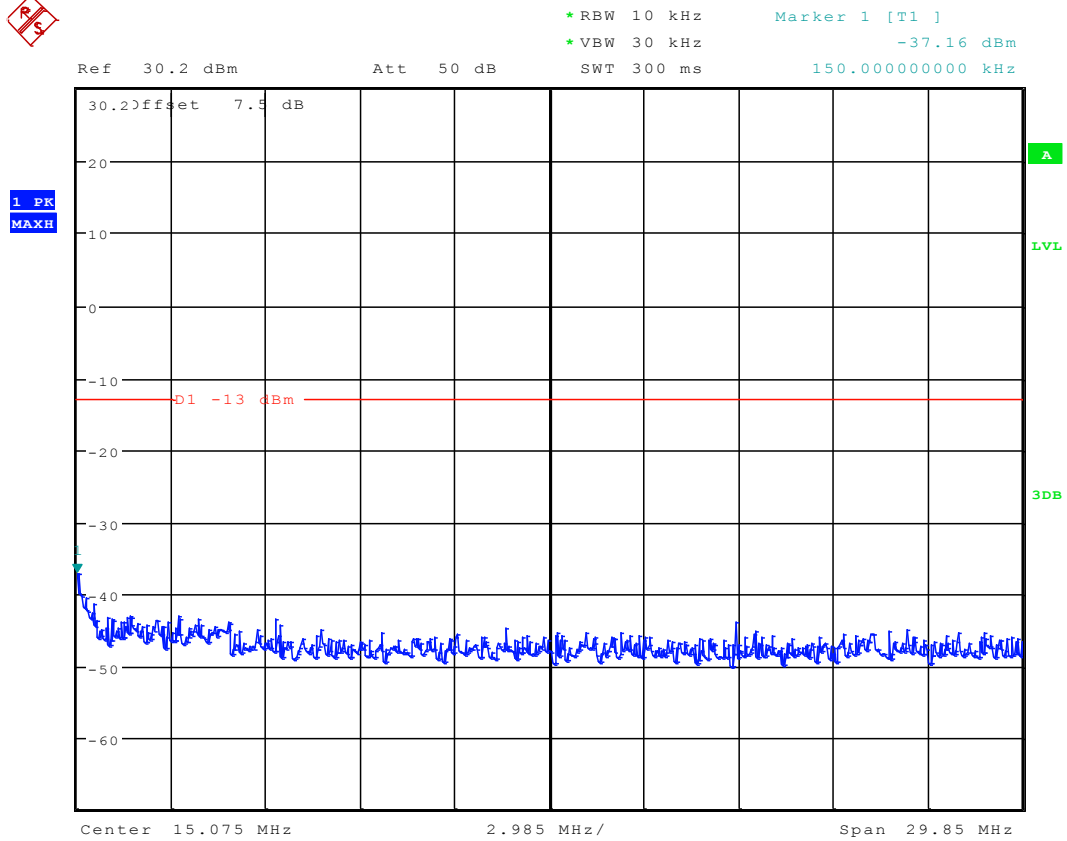
Date: 13.NOV.2011 18:06:45



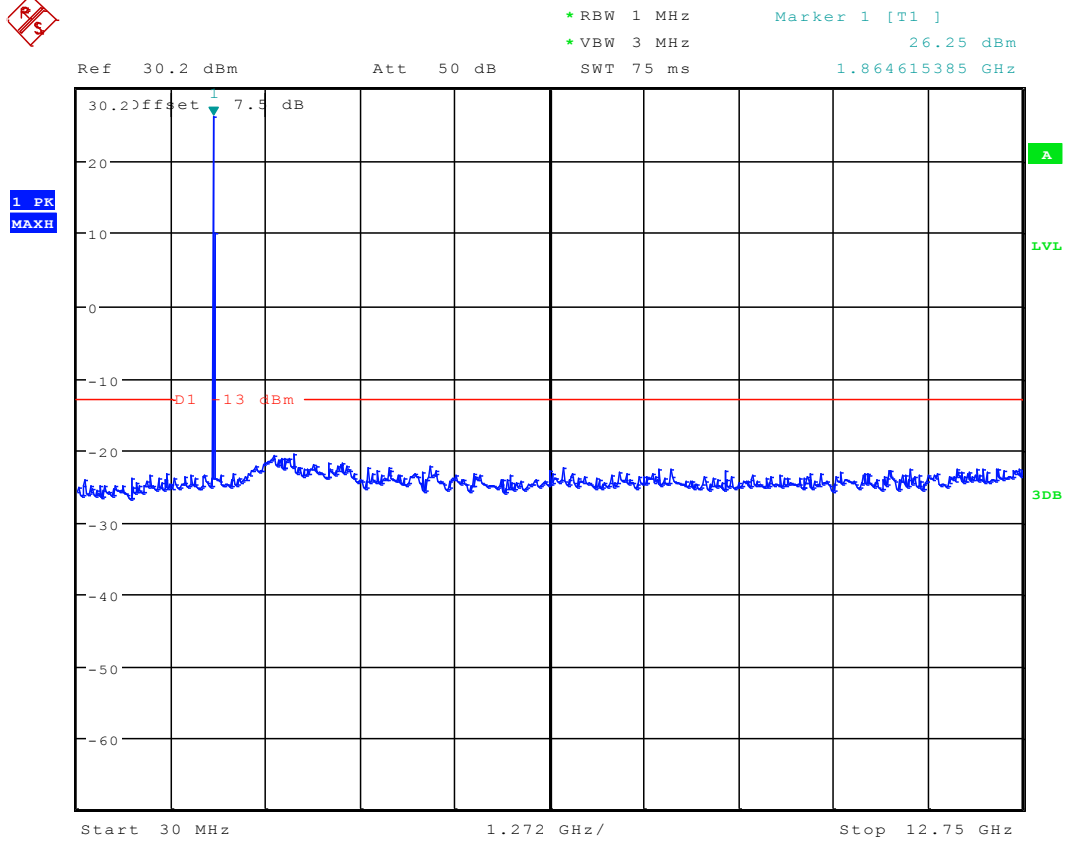
full RBs



Date: 13.NOV.2011 18:08:29



Date: 13.NOV.2011 18:08:05

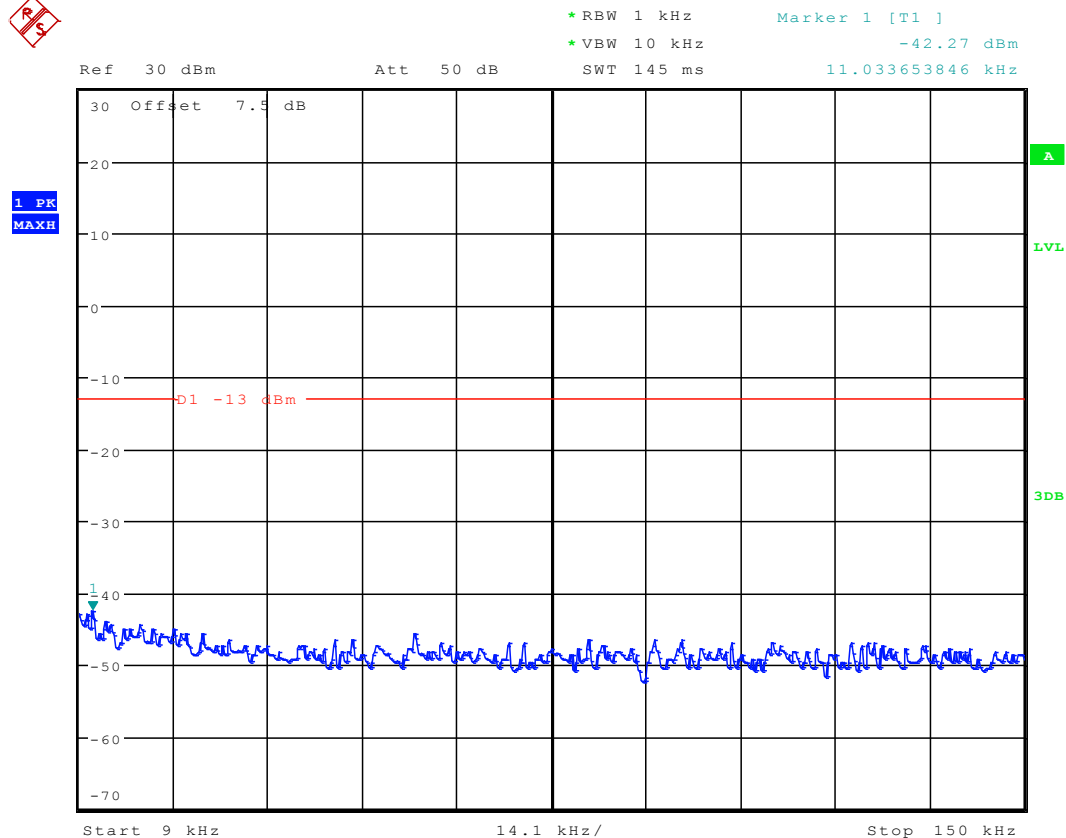


Date: 13.NOV.2011 18:05:44

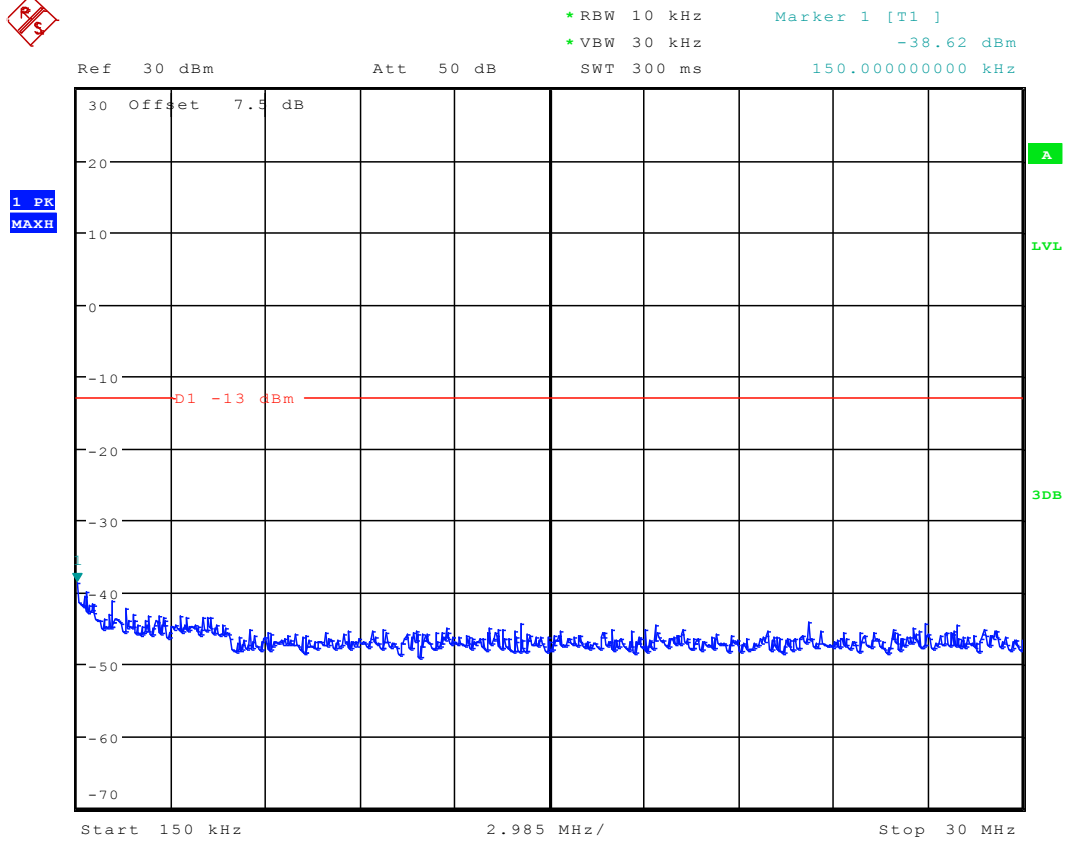


1.4MHz(BW/) Channel 19193

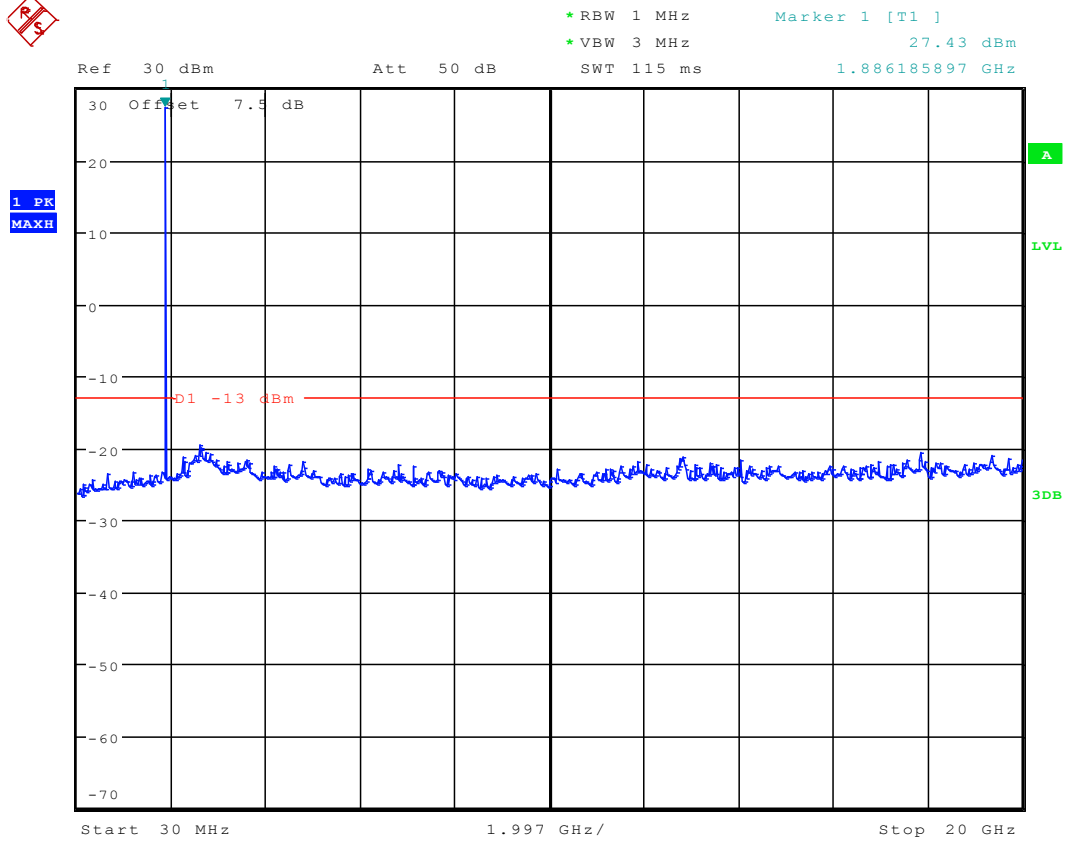
1 RB/RB #0



Date: 14.NOV.2011 11:11:42



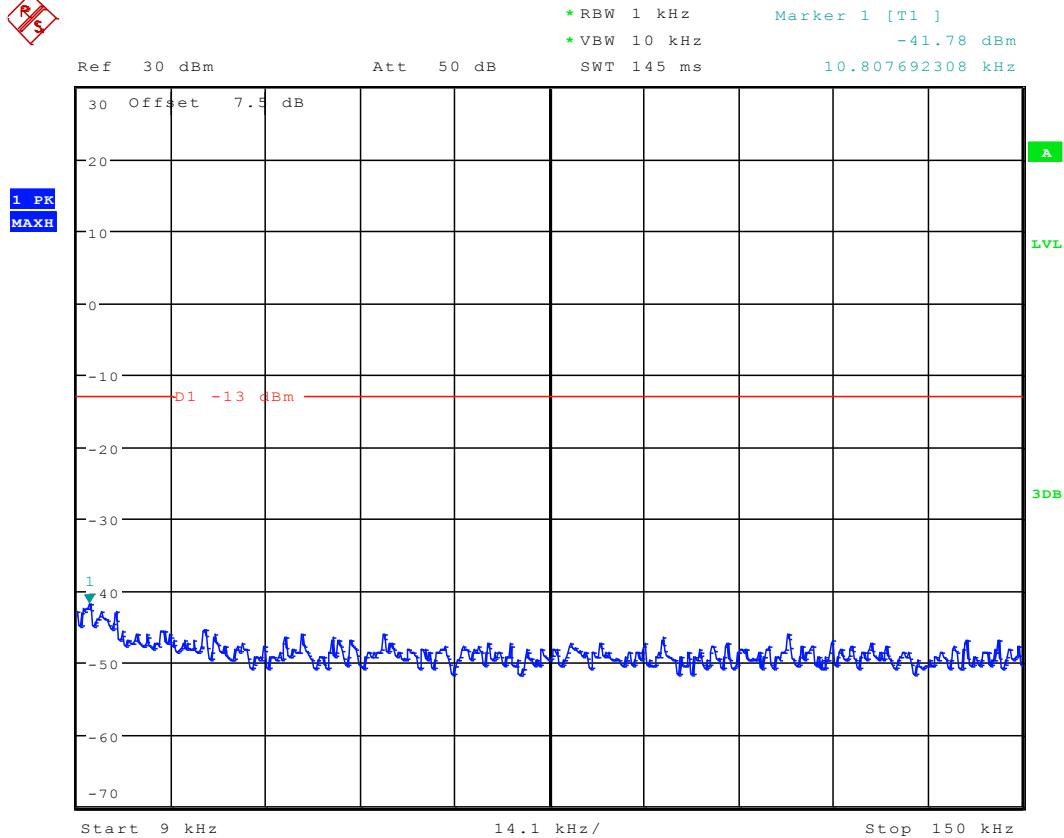
Date: 14.NOV.2011 11:10:14



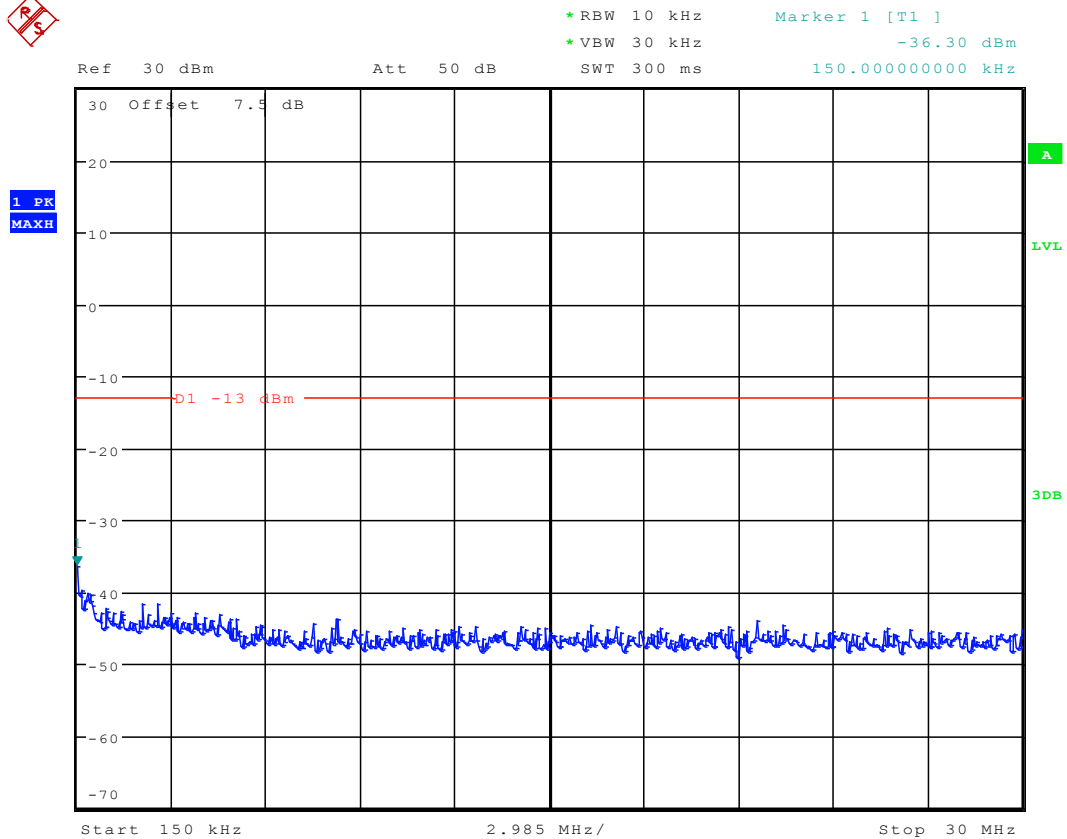
Date: 14.NOV.2011 11:07:20



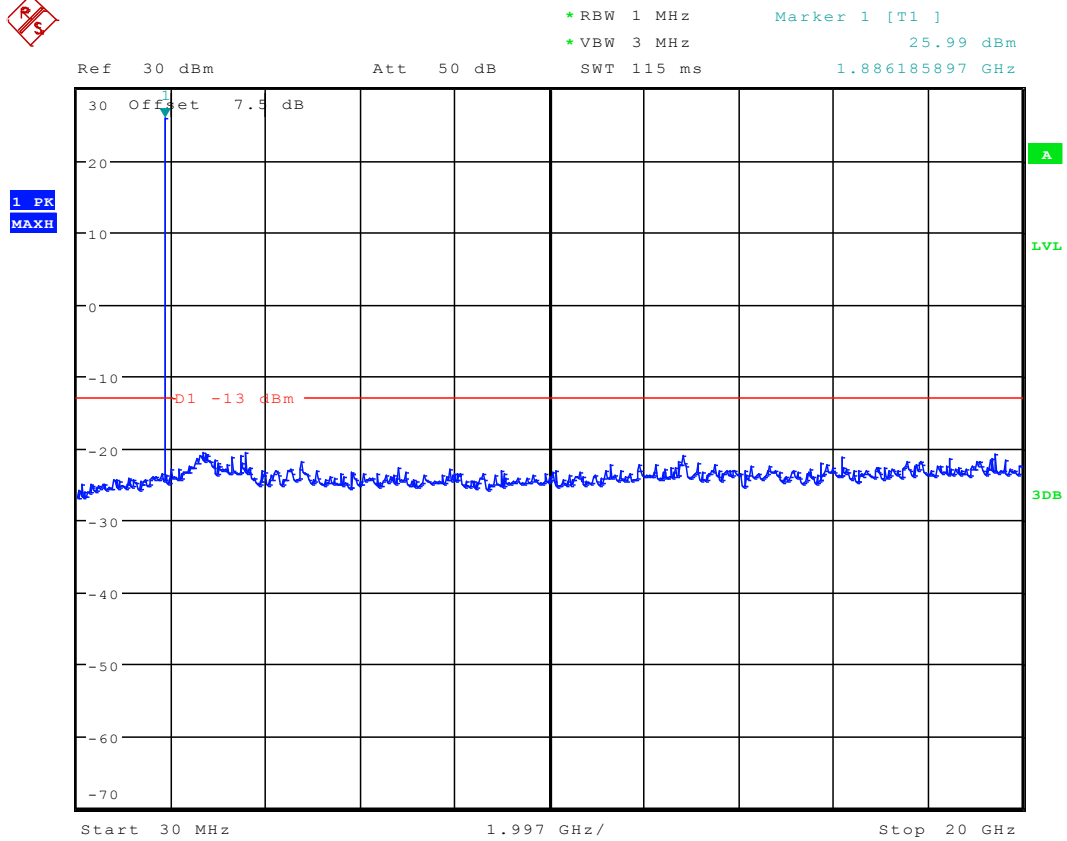
1 RB/RB #max



Date: 14.NOV.2011 11:12:13



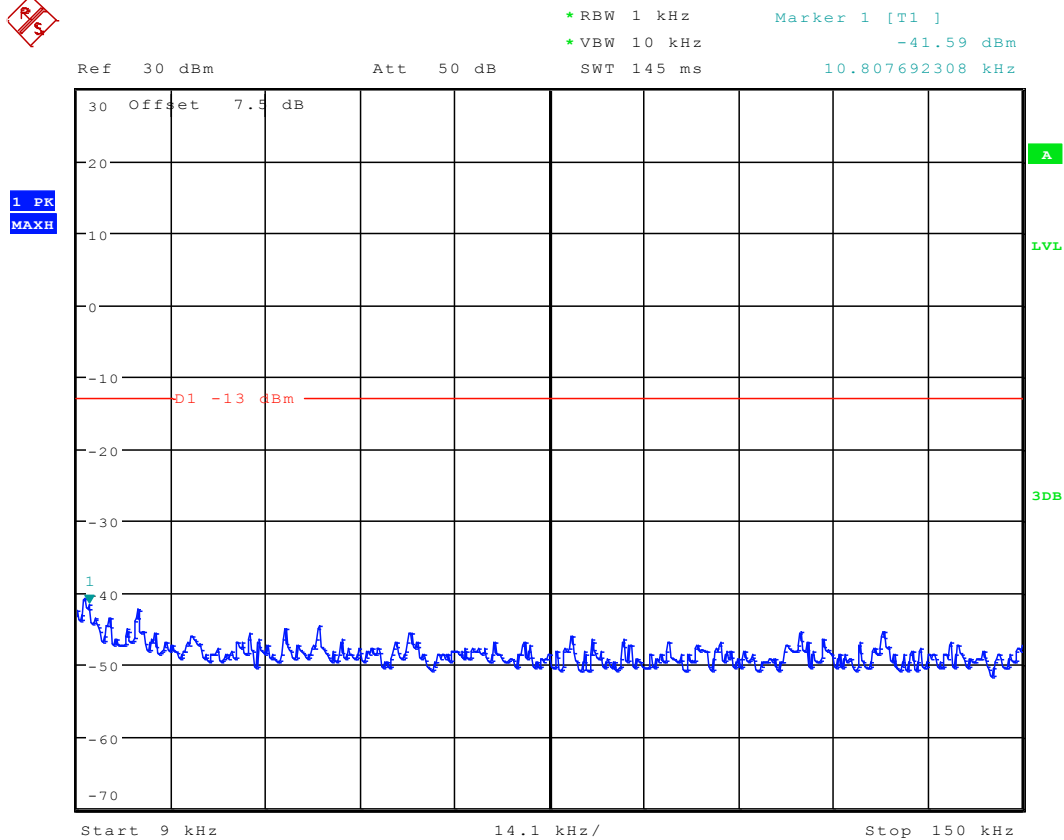
Date: 14.NOV.2011 11:09:44



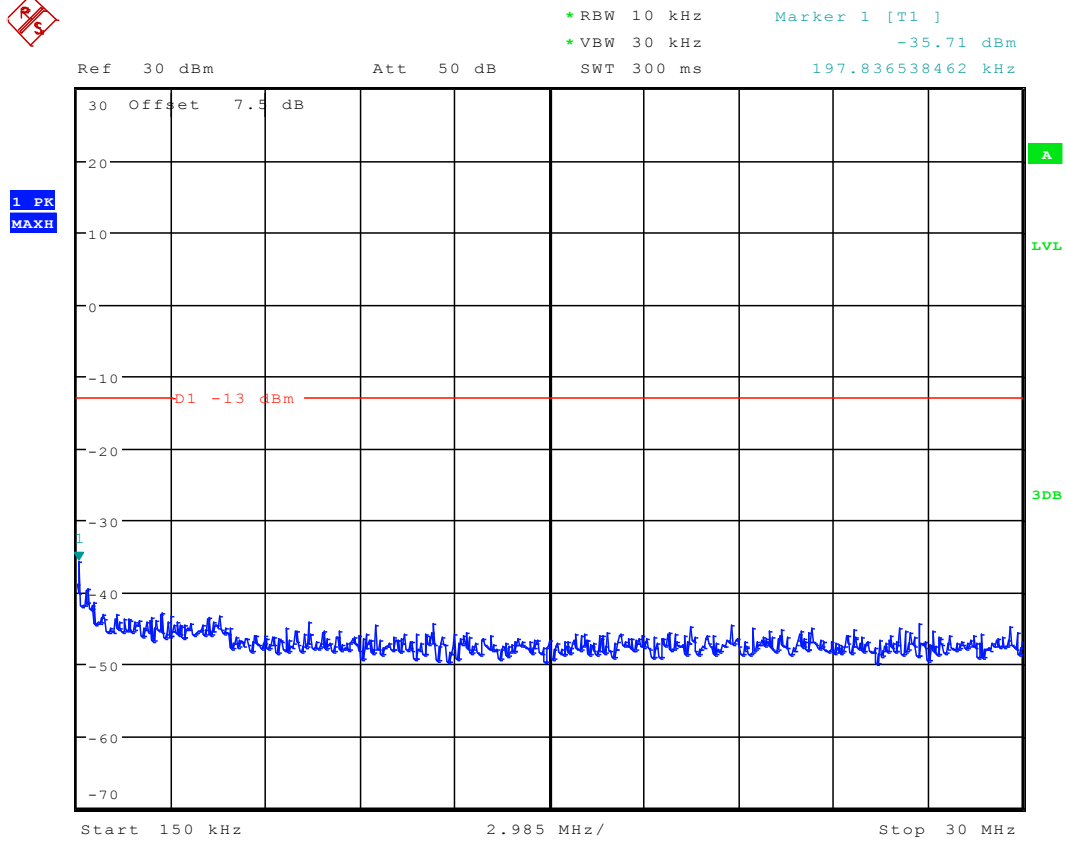
Date: 14.NOV.2011 11:07:45



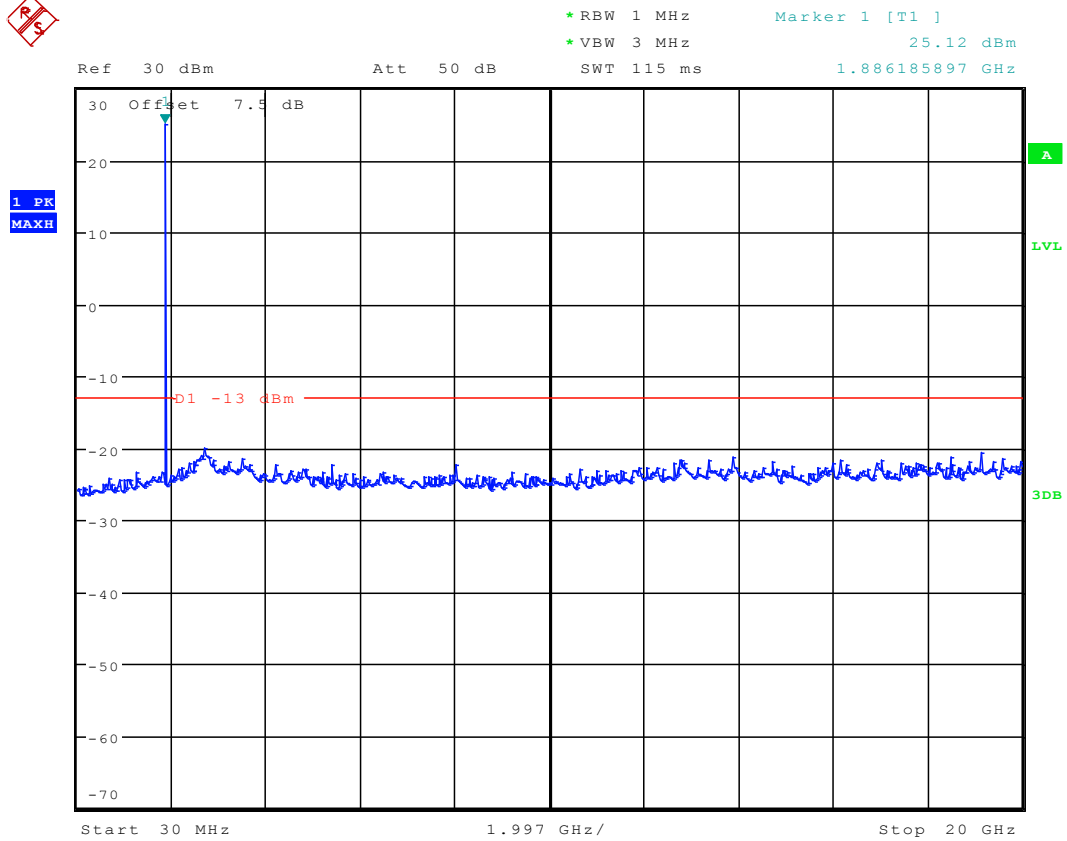
full RBs



Date: 14.NOV.2011 11:11:15



Date: 14.NOV.2011 11:10:46

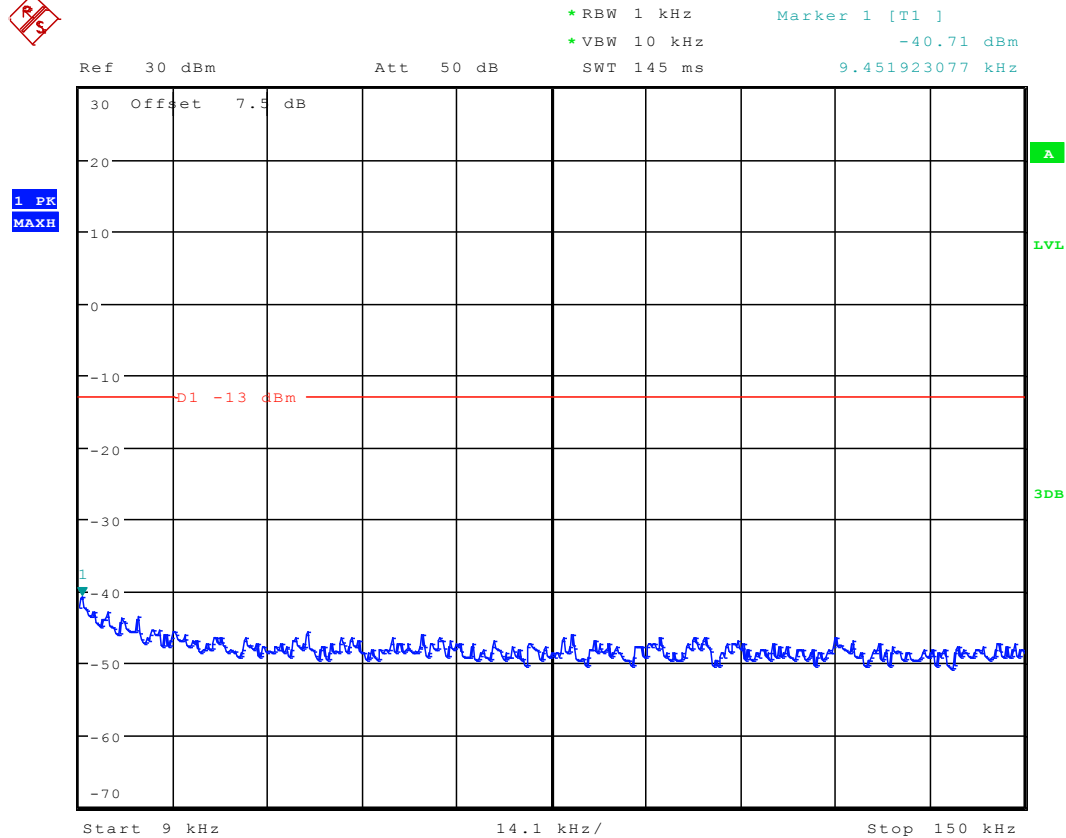


Date: 14.NOV.2011 11:06:44

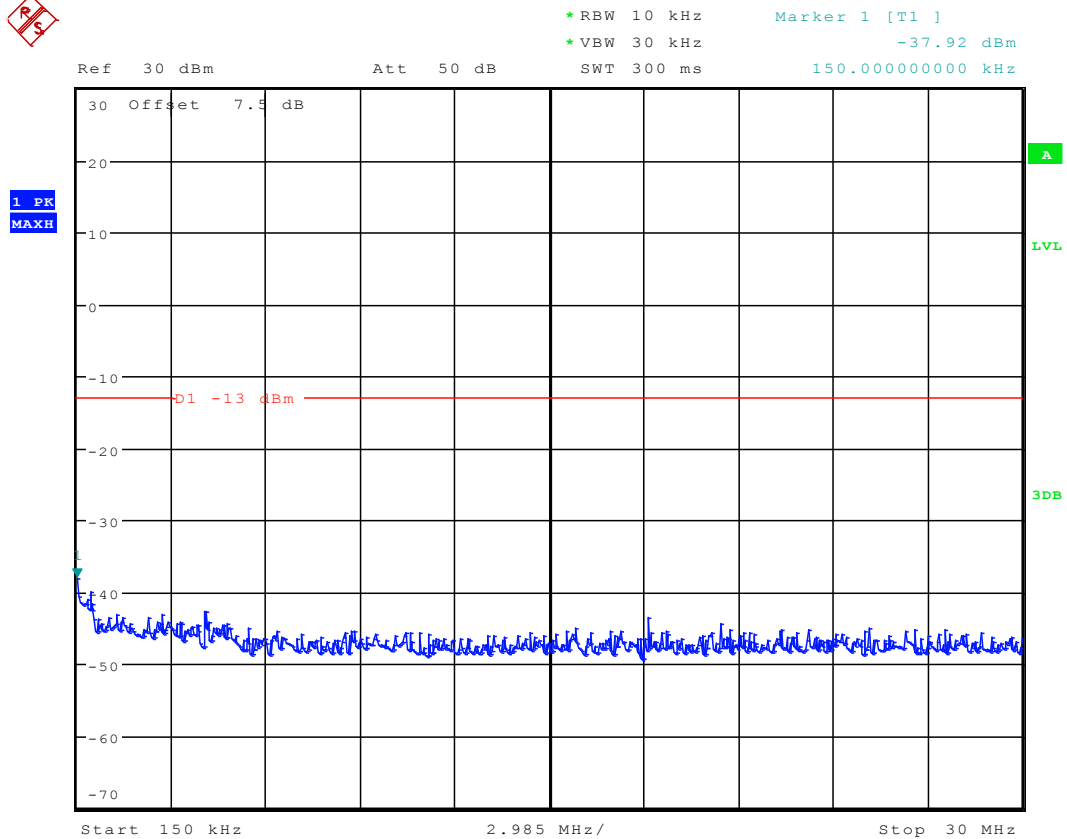


5MHz(BW/) Channel 18625

1 RB/RB #0



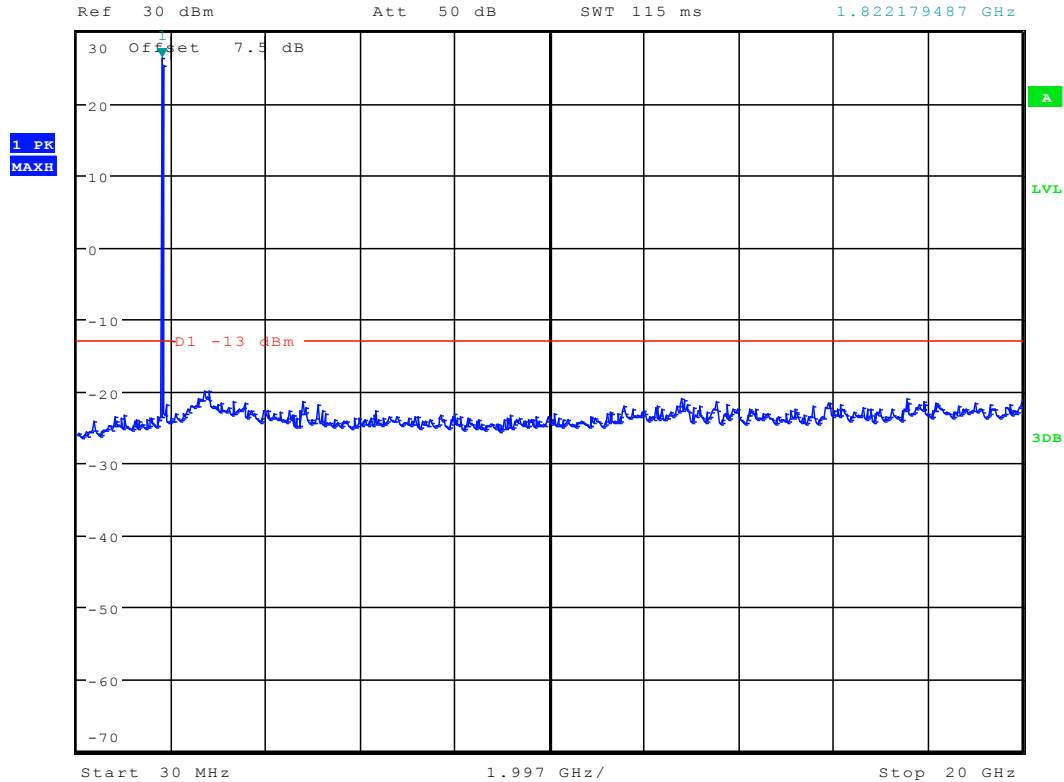
Date: 9.NOV.2011 14:56:21



Date: 9.NOV.2011 15:03:10



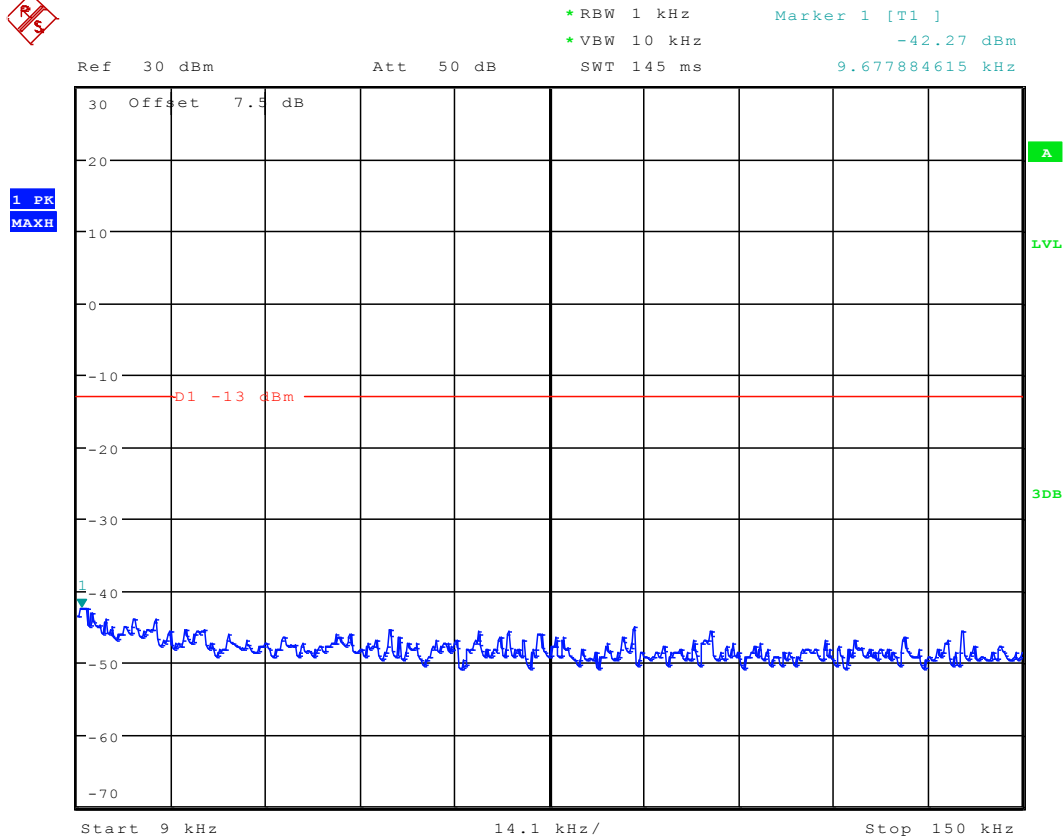
```
* RBW 1 MHz           Marker 1 [T1 ]
* VBW 3 MHz           26.40 dBm
SWT 115 ms           1.822179487 GHz
```



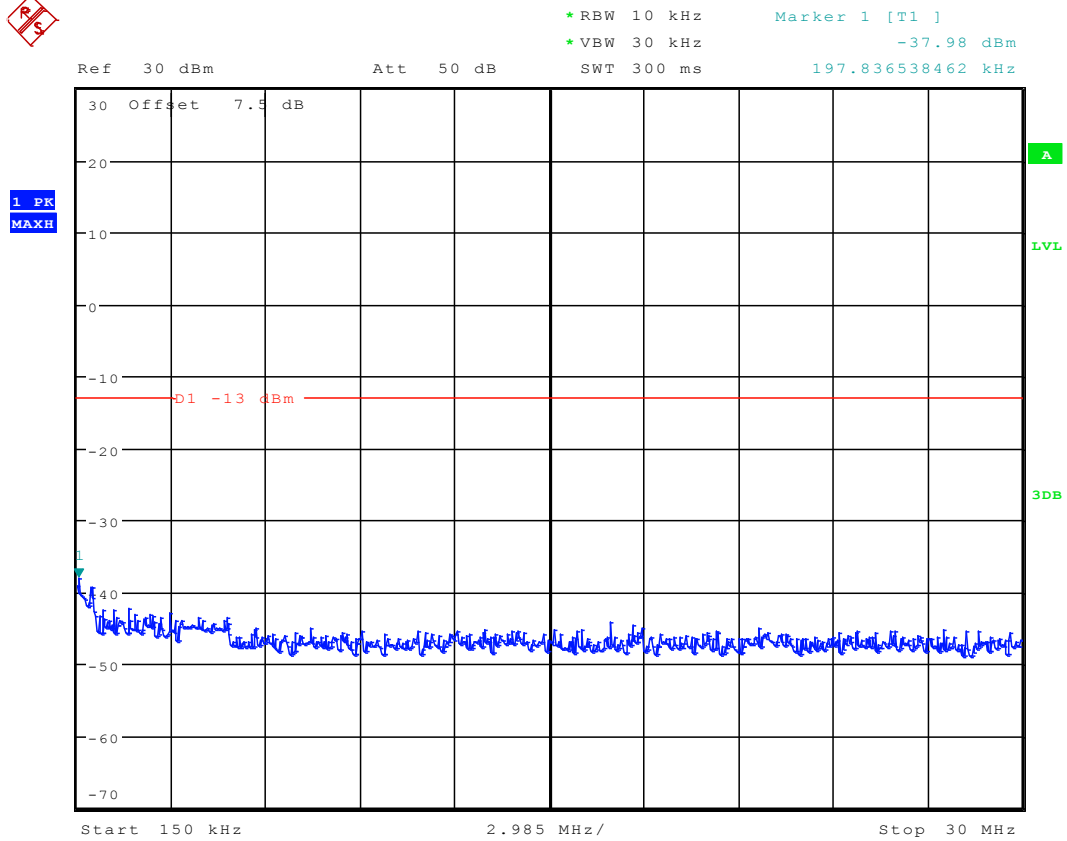
Date: 9.NOV.2011 15:06:31



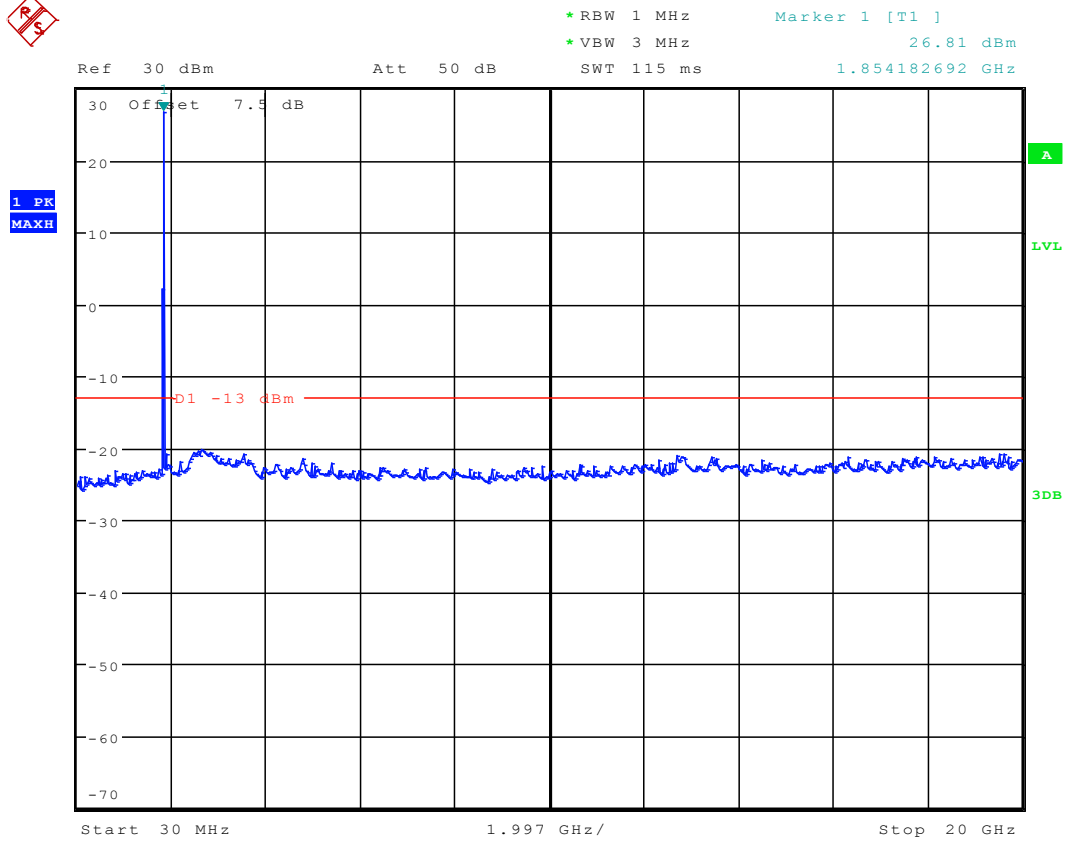
1 RB/RB #max



Date: 9.NOV.2011 14:56:59



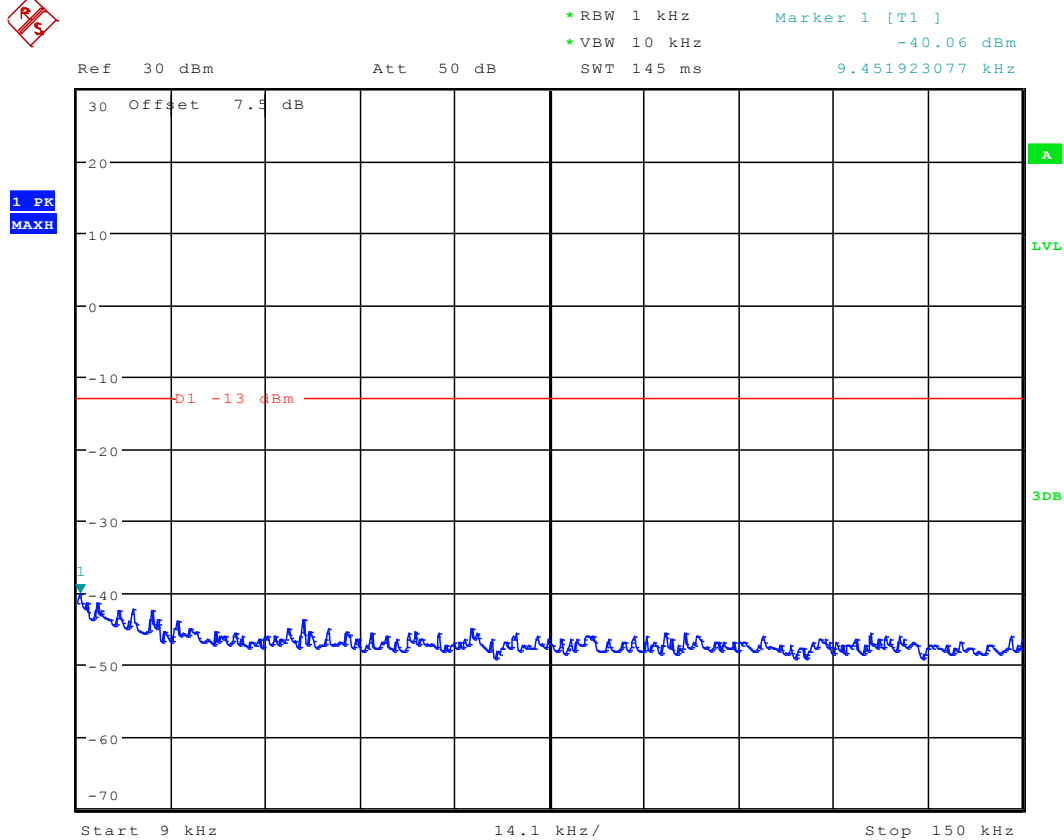
Date: 9.NOV.2011 15:03:54



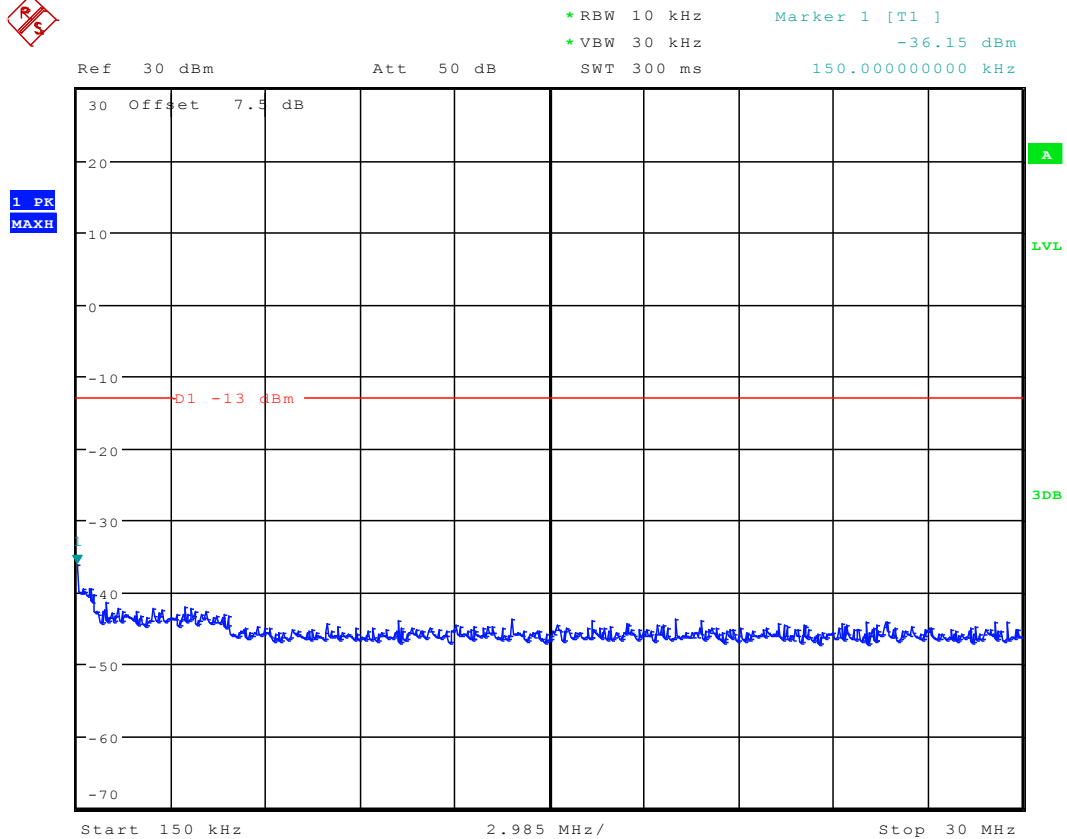
Date: 9.NOV.2011 15:05:48



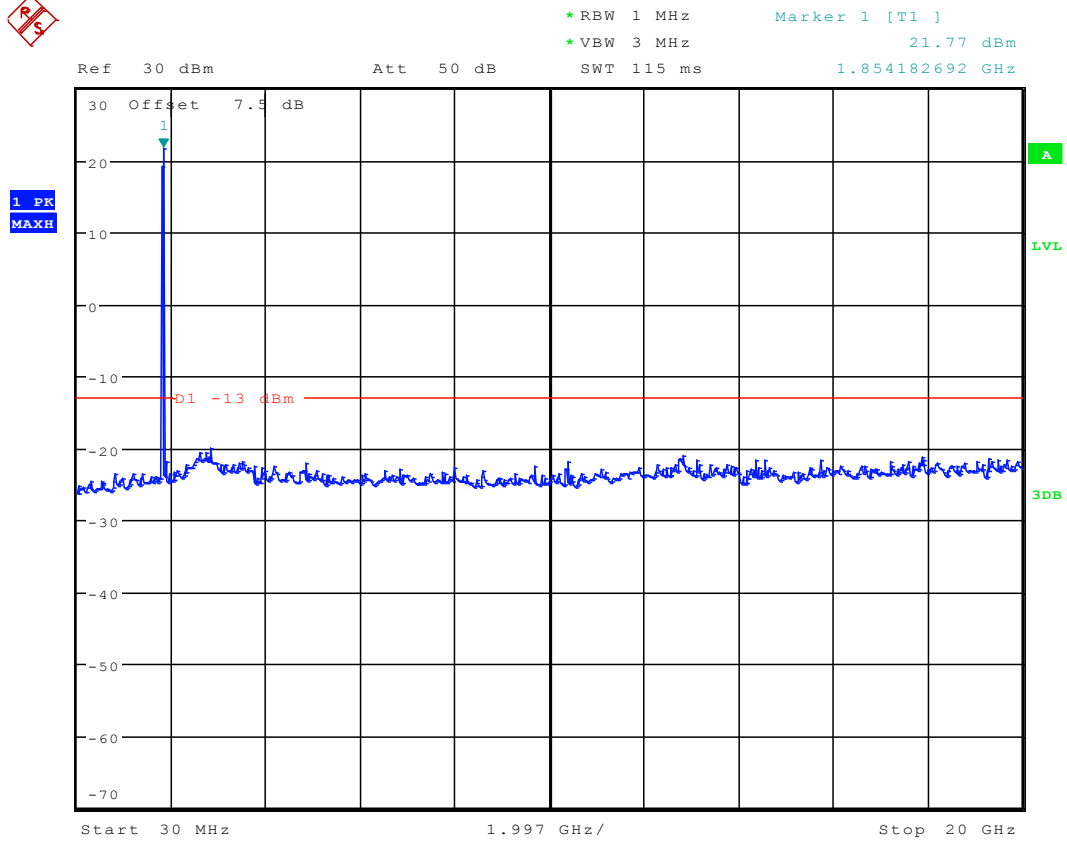
full RBs



Date: 9.NOV.2011 14:54:59



Date: 9.NOV.2011 15:02:39

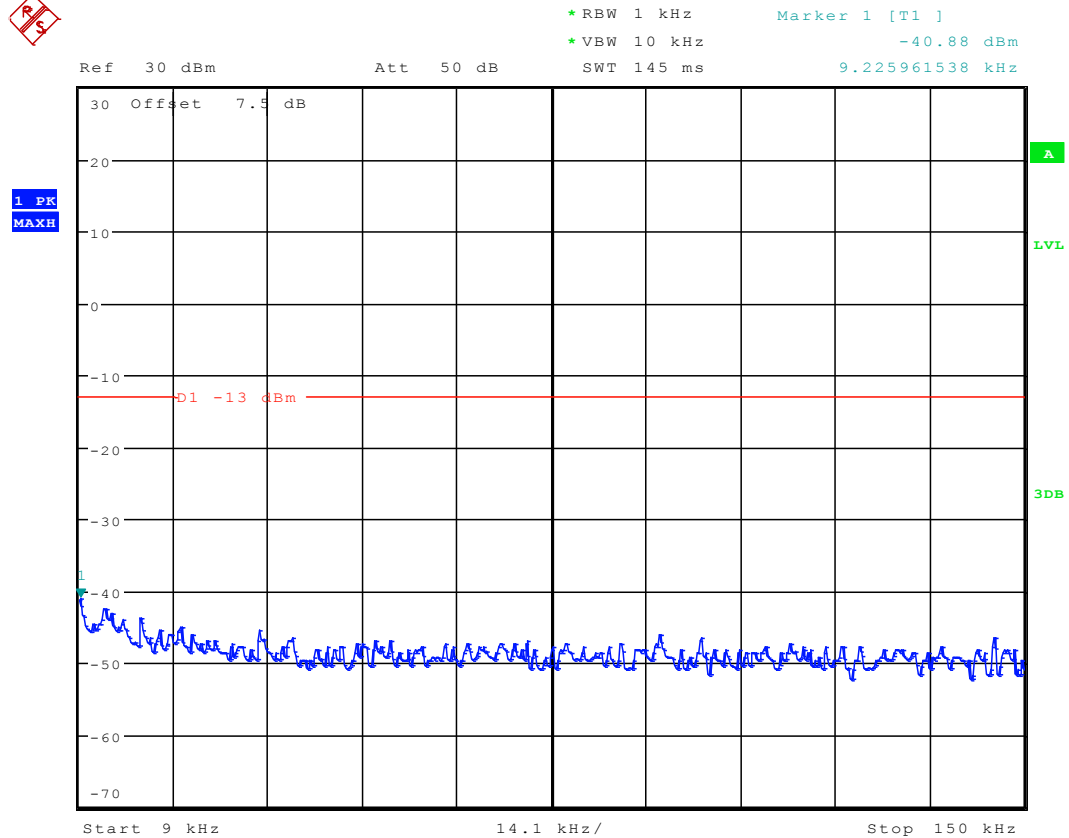


Date: 9.NOV.2011 15:07:08

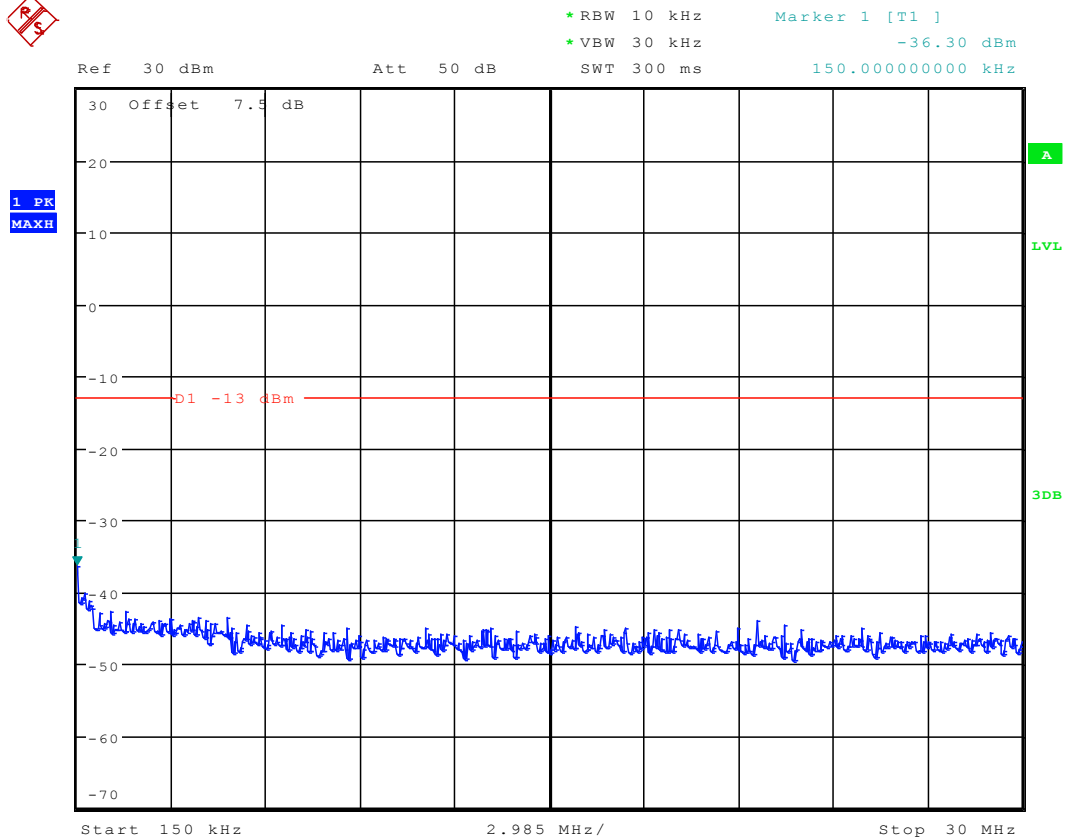


5MHz(BW/) Channel 18900

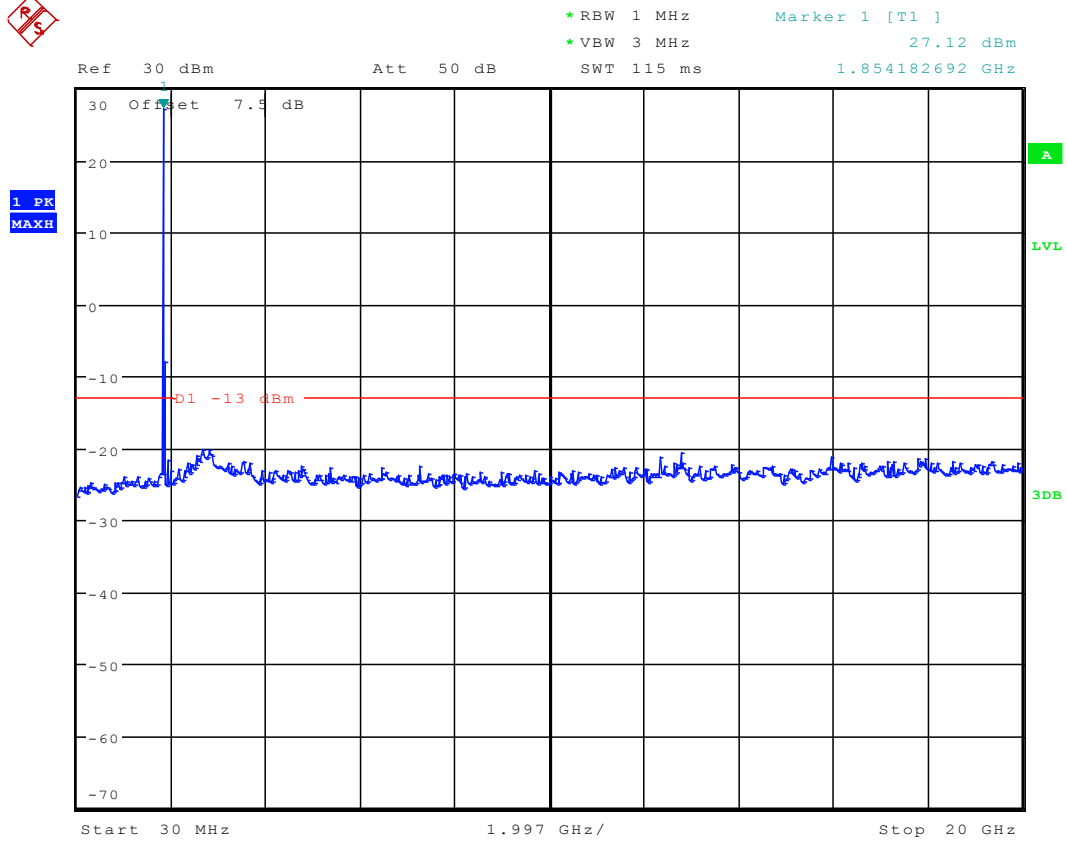
1 RB/RB #0



Date: 9.NOV.2011 15:15:46



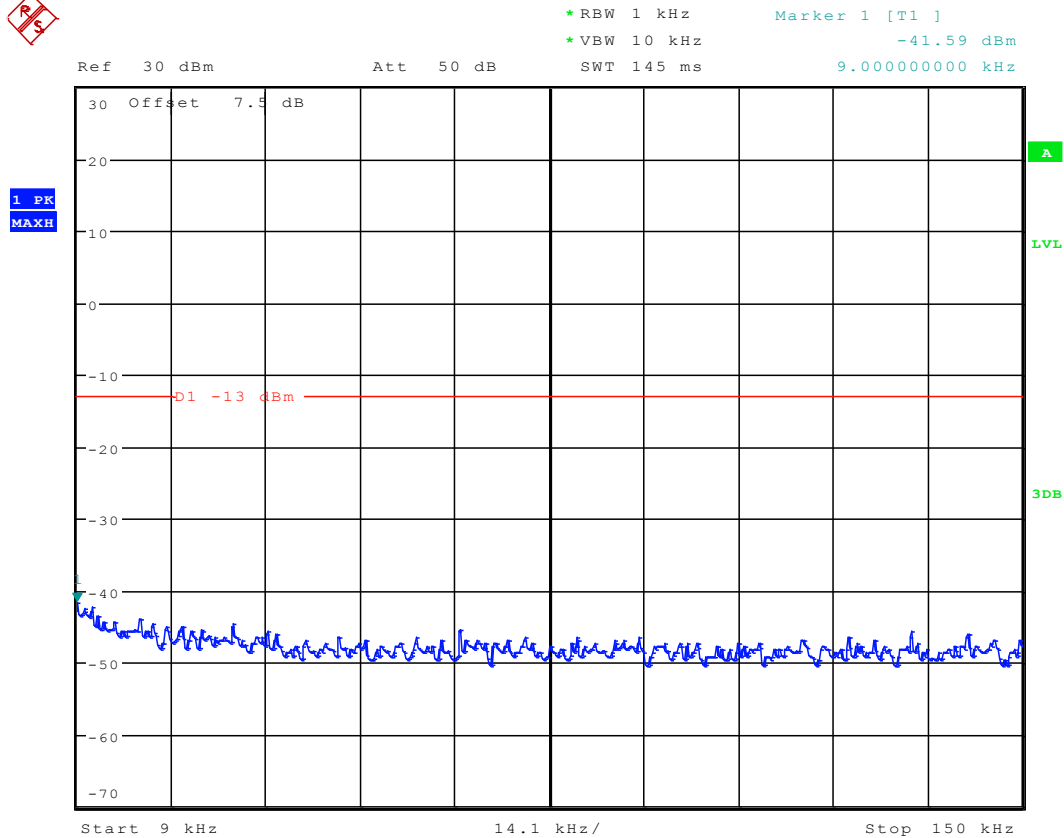
Date: 9.NOV.2011 15:12:35



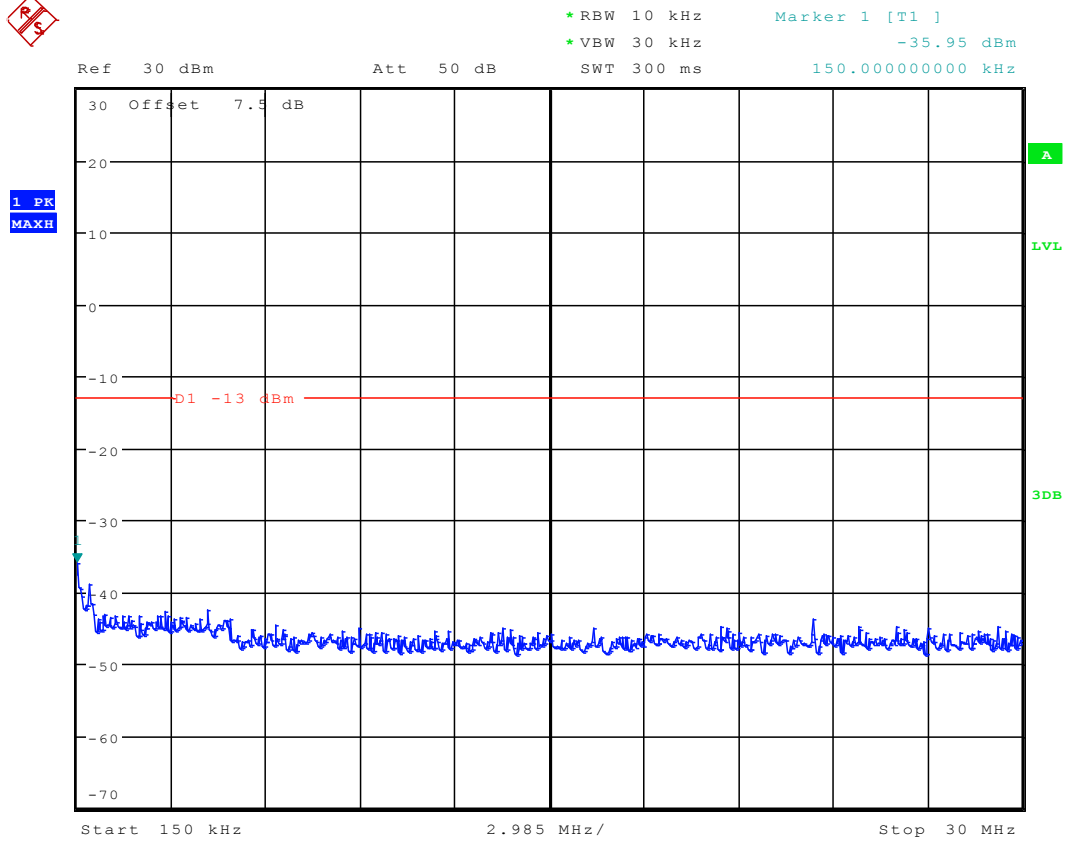
Date: 9.NOV.2011 15:10:22



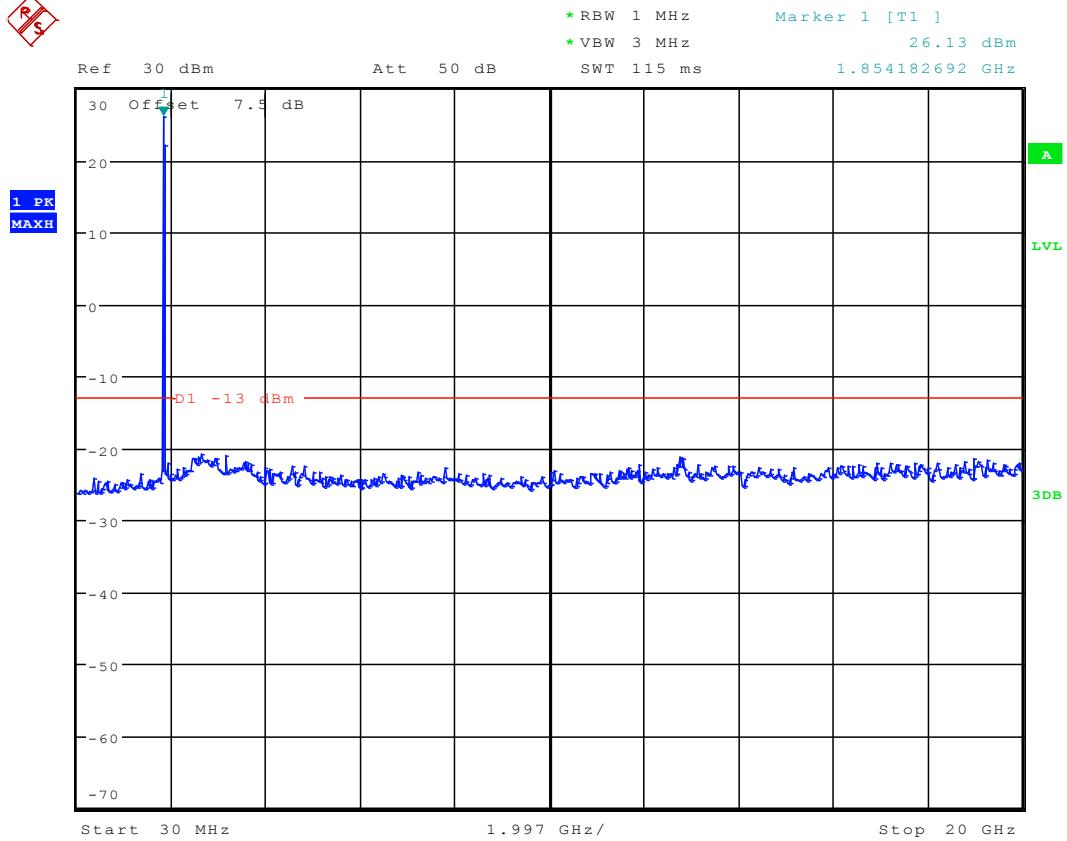
1 RB/RB #max



Date: 9.NOV.2011 15:16:23



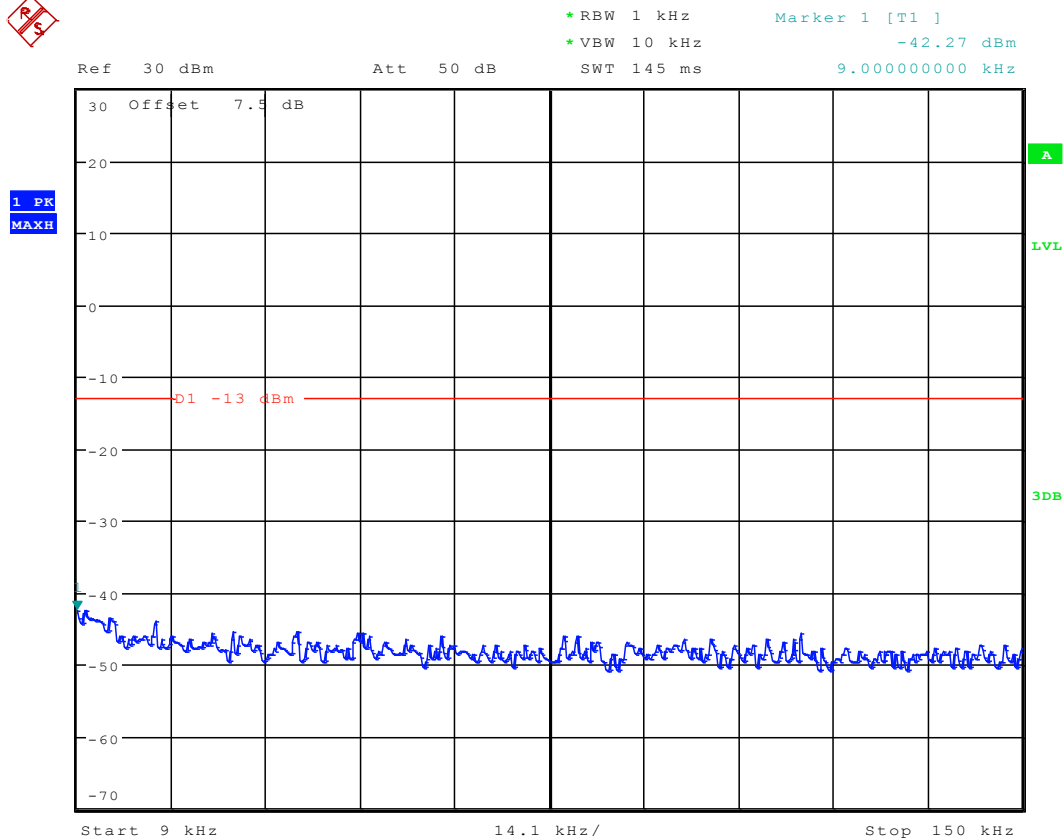
Date: 9.NOV.2011 15:12:01



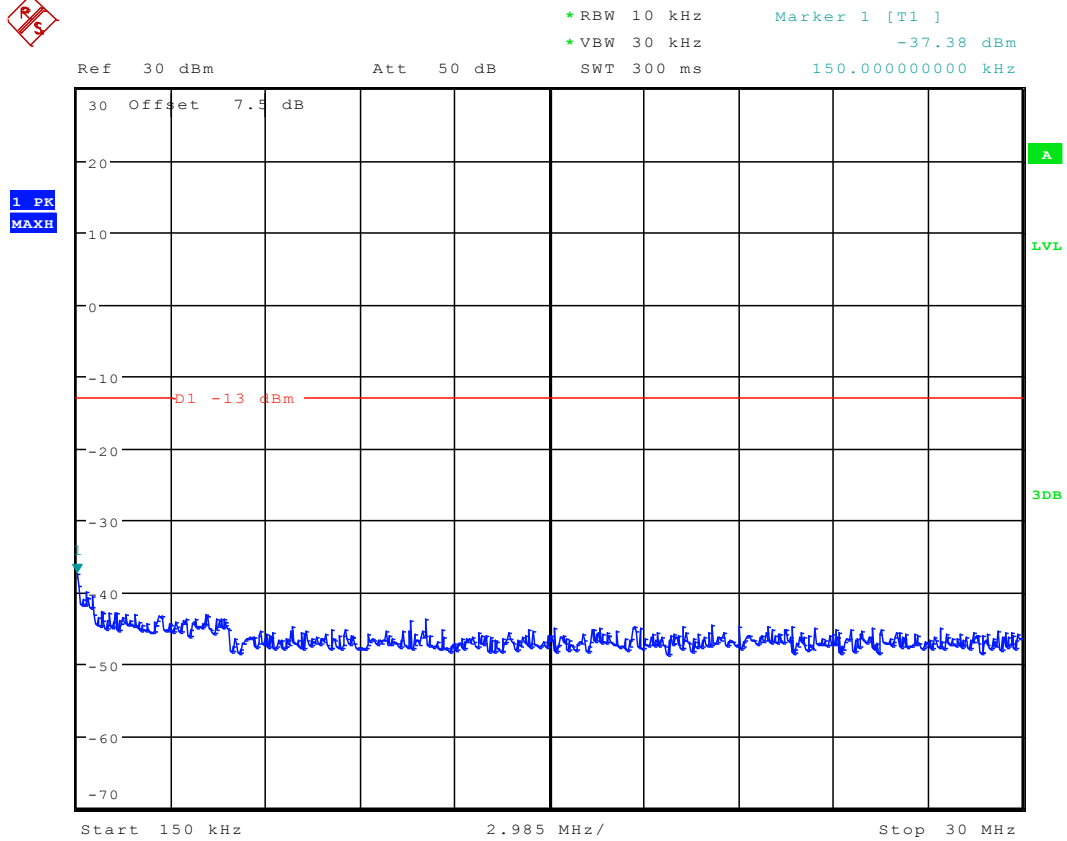
Date: 9.NOV.2011 15:10:59



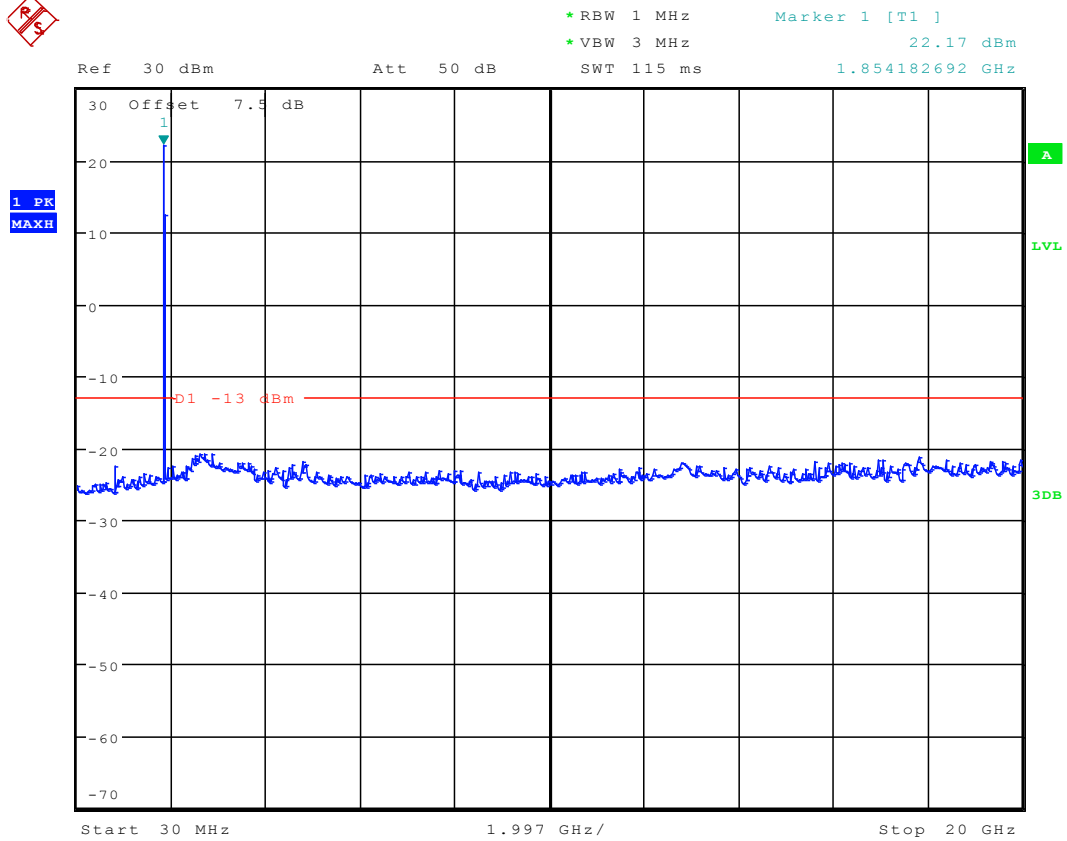
full RBs



Date: 9.NOV.2011 15:14:21



Date: 9.NOV.2011 15:13:14

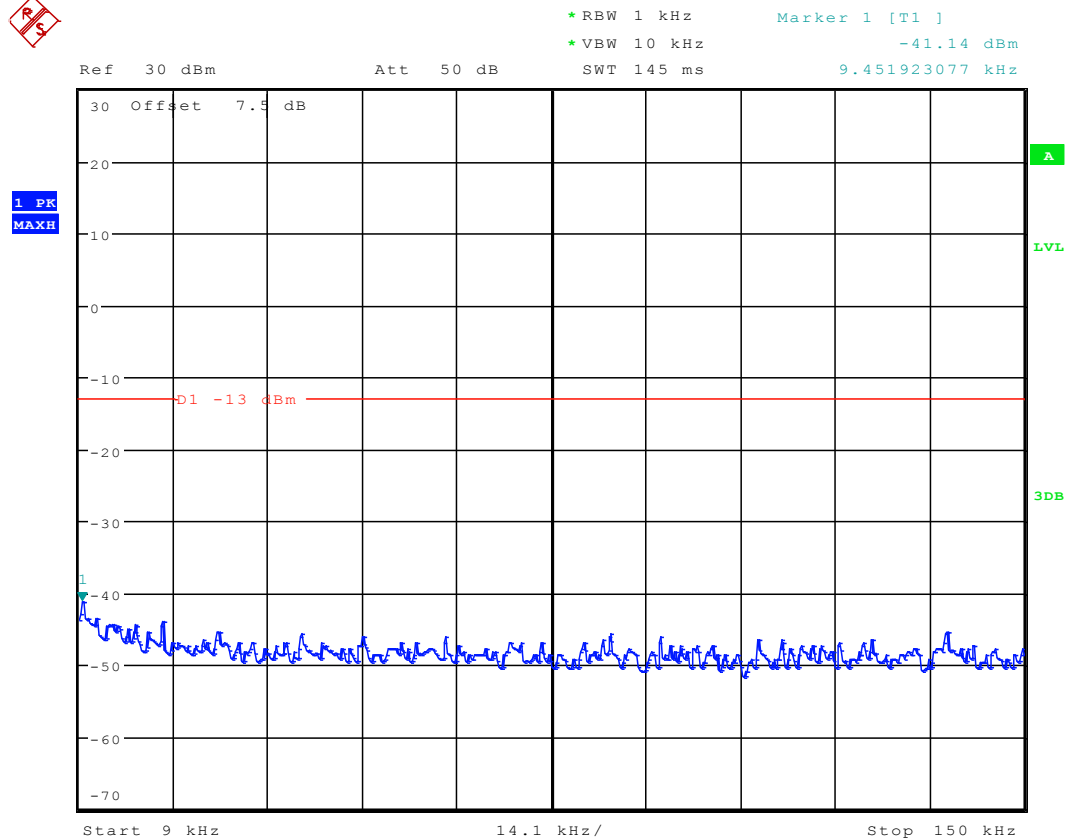


Date: 9.NOV.2011 15:09:41

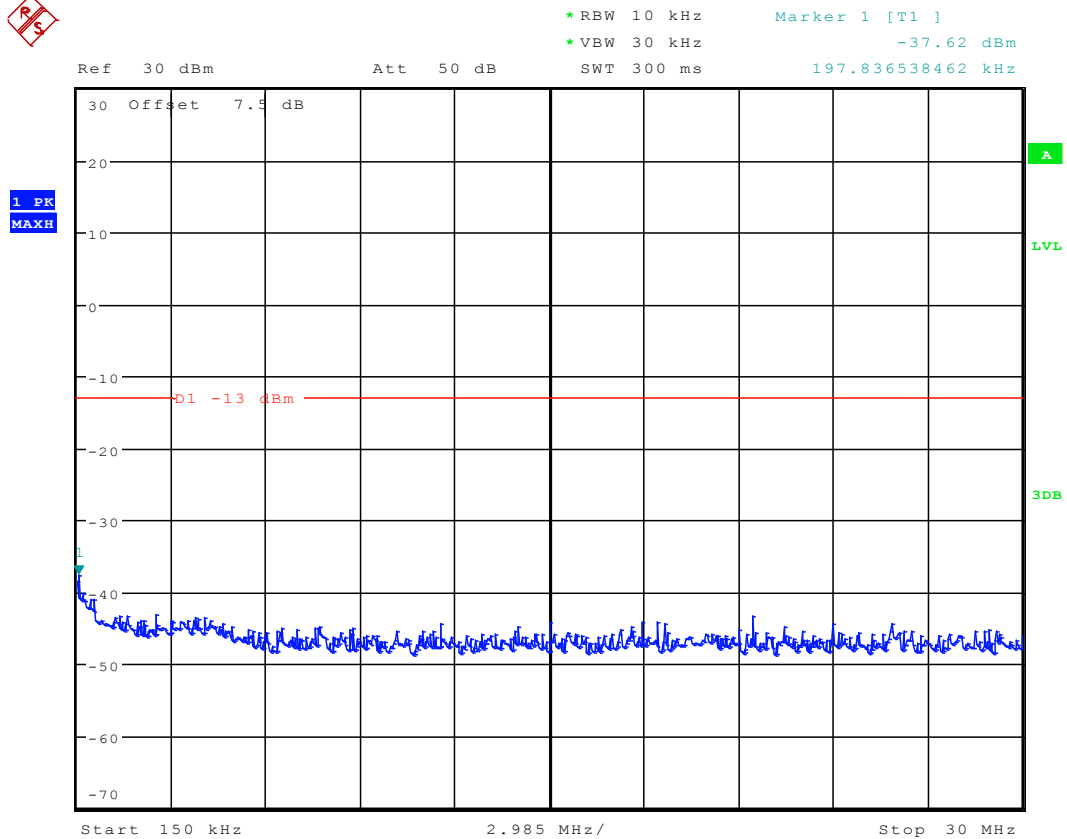


5MHz(BW/) Channel 19175

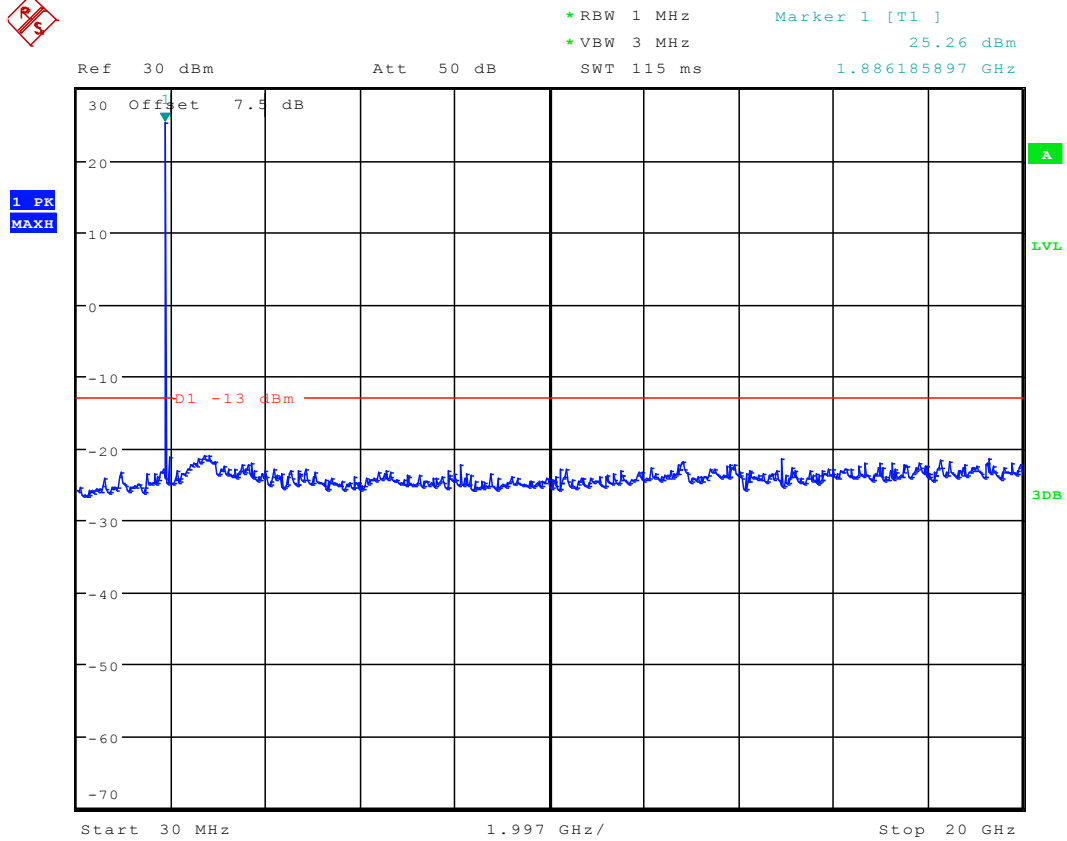
1 RB/RB #0



Date: 9.NOV.2011 15:19:34



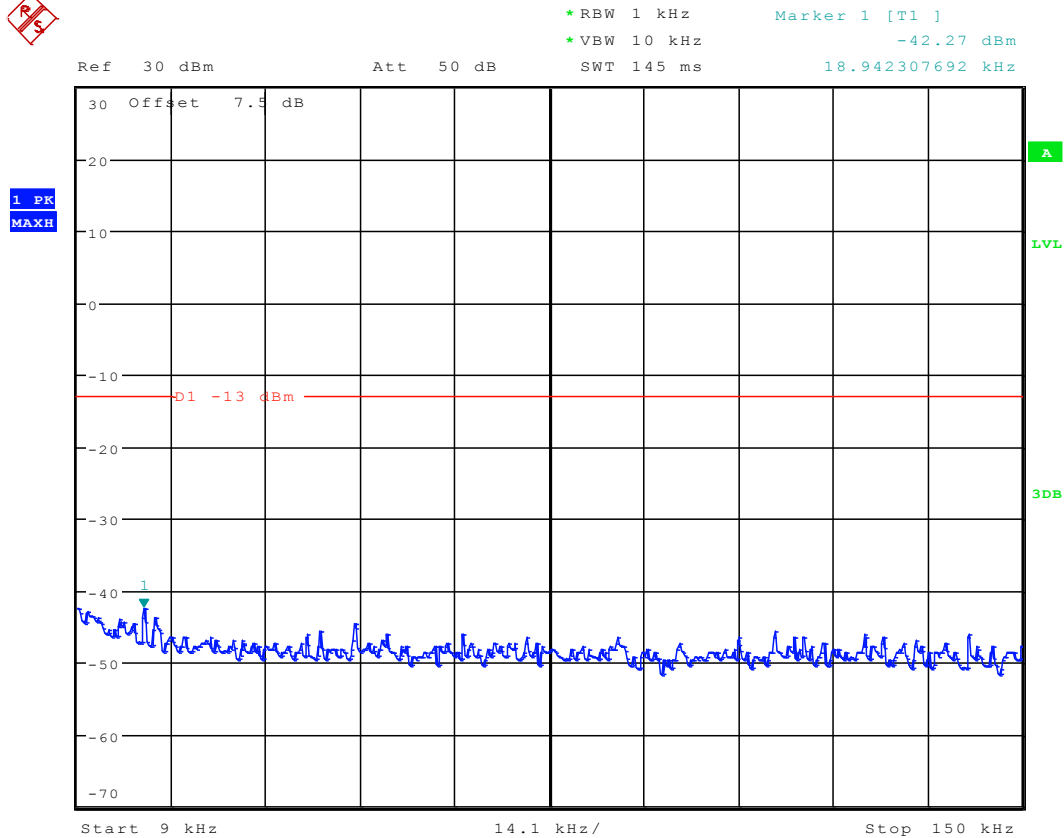
Date: 9.NOV.2011 15:23:21



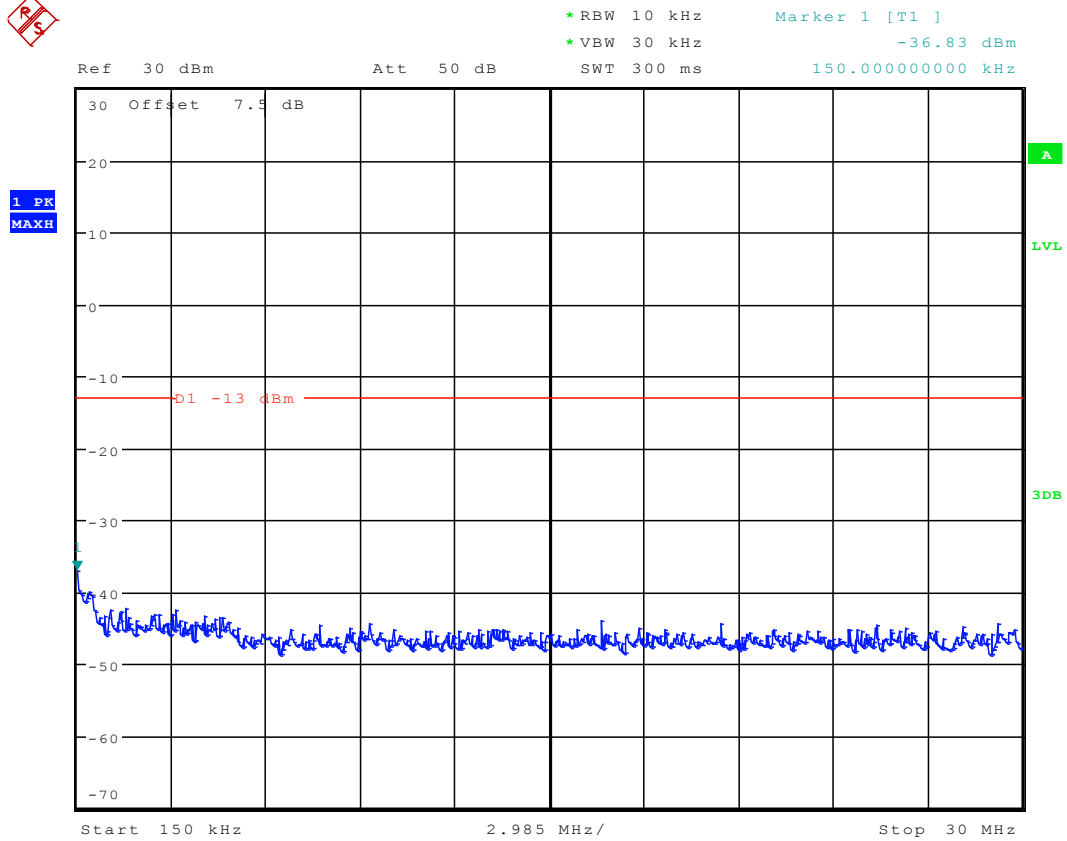
Date: 9.NOV.2011 15:25:36



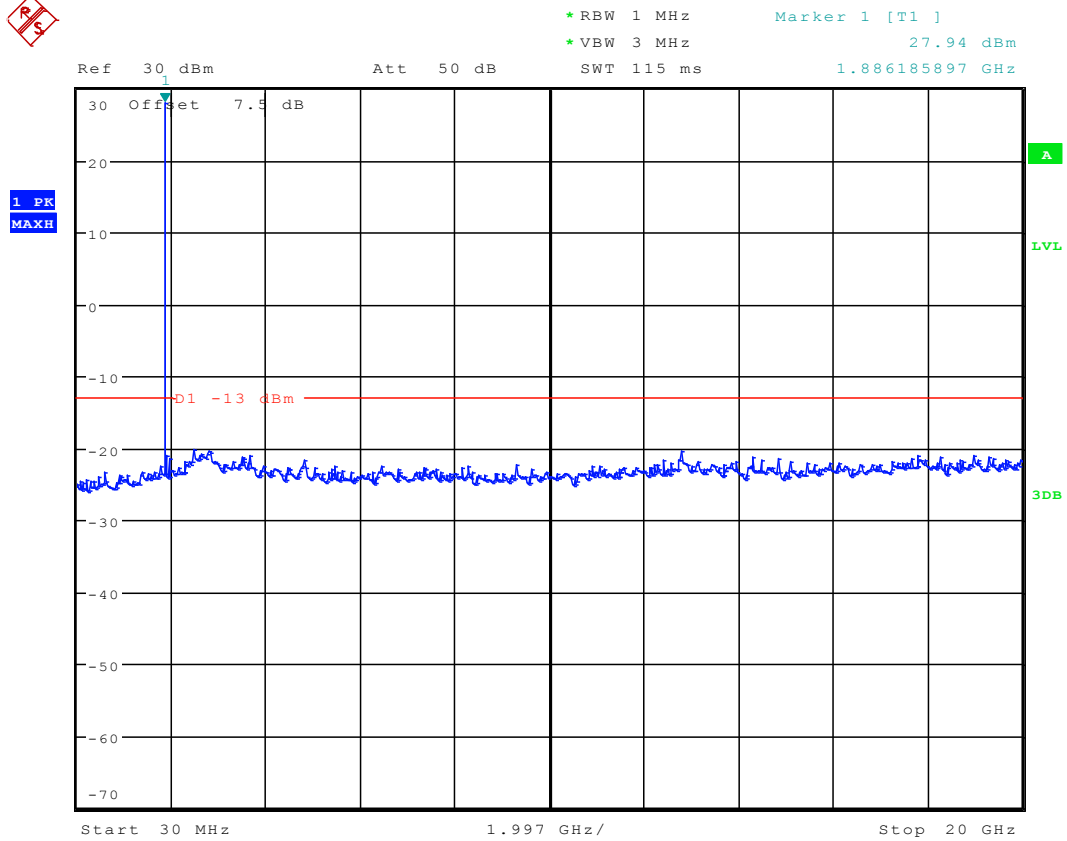
1 RB/RB #max



Date: 9.NOV.2011 15:18:55



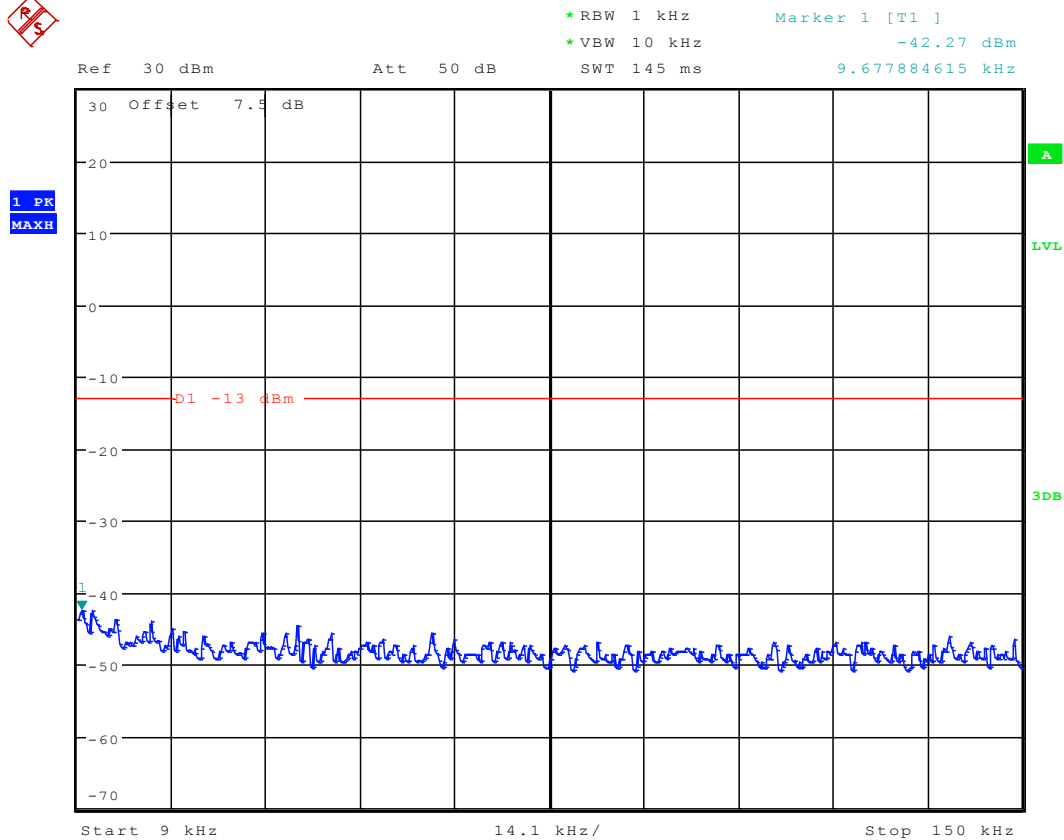
Date: 9.NOV.2011 15:23:58



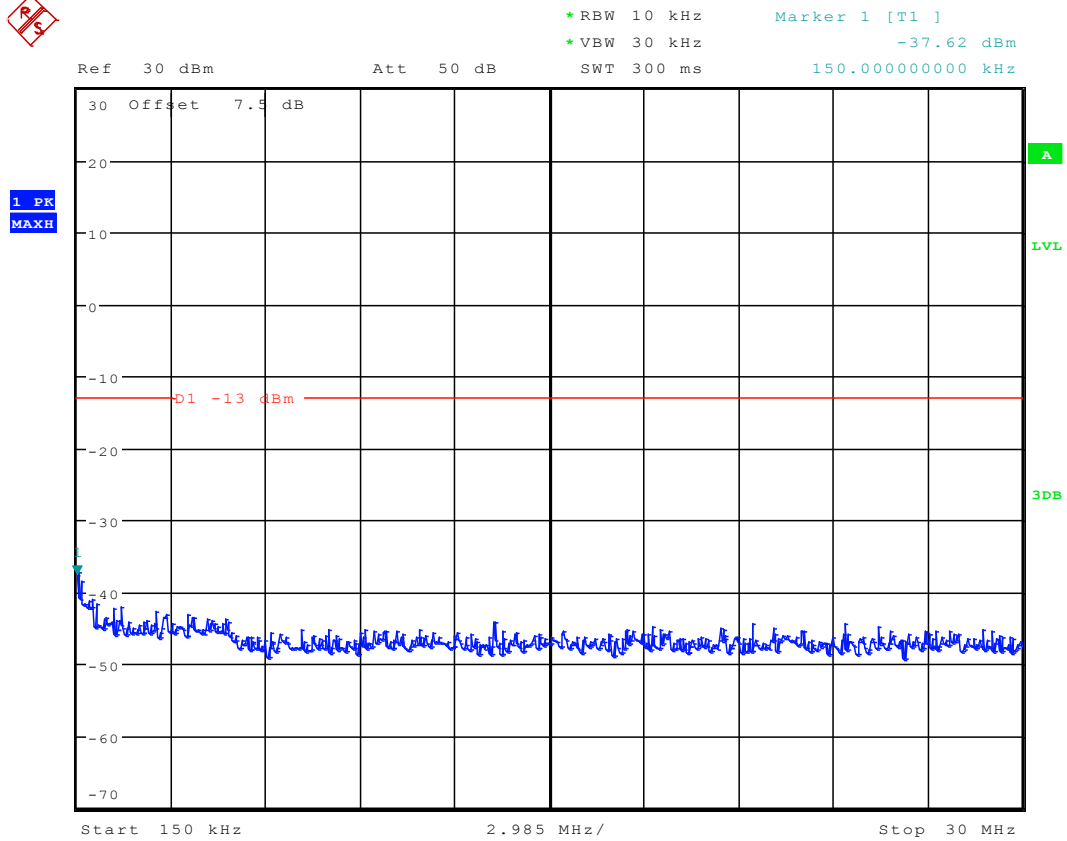
Date: 9.NOV.2011 15:24:56



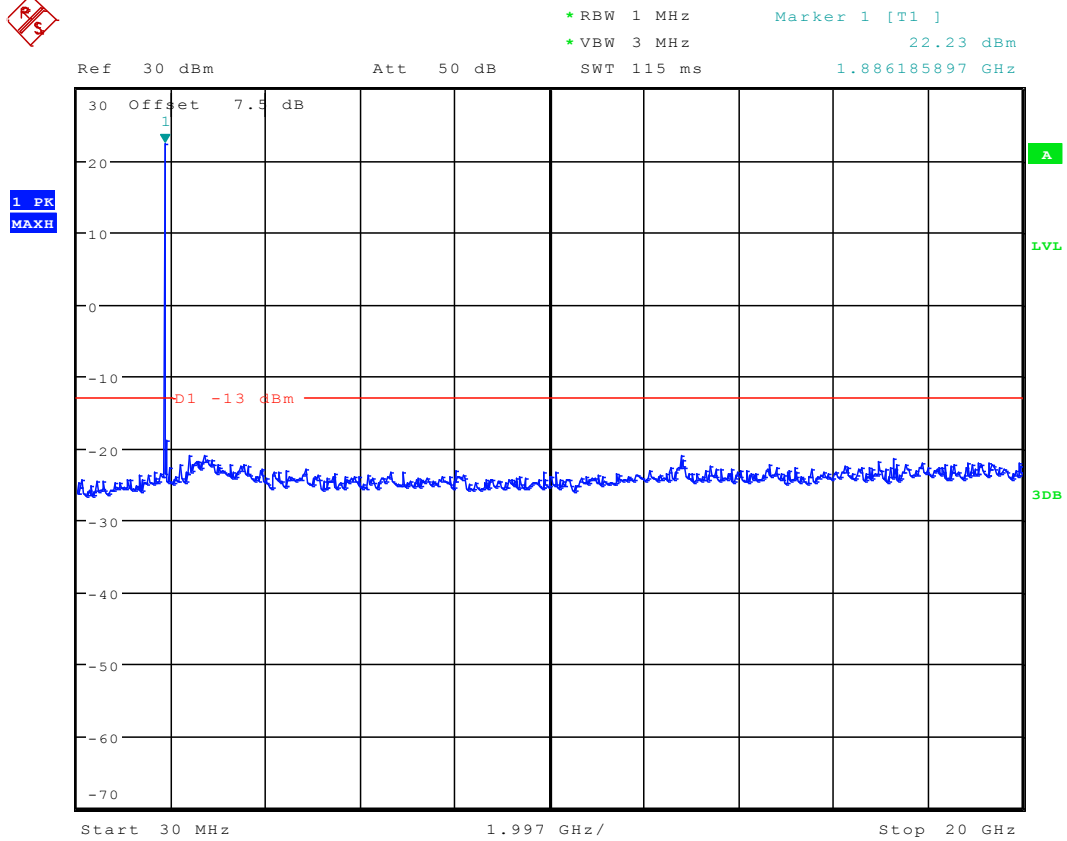
full RBs



Date: 9.NOV.2011 15:20:19



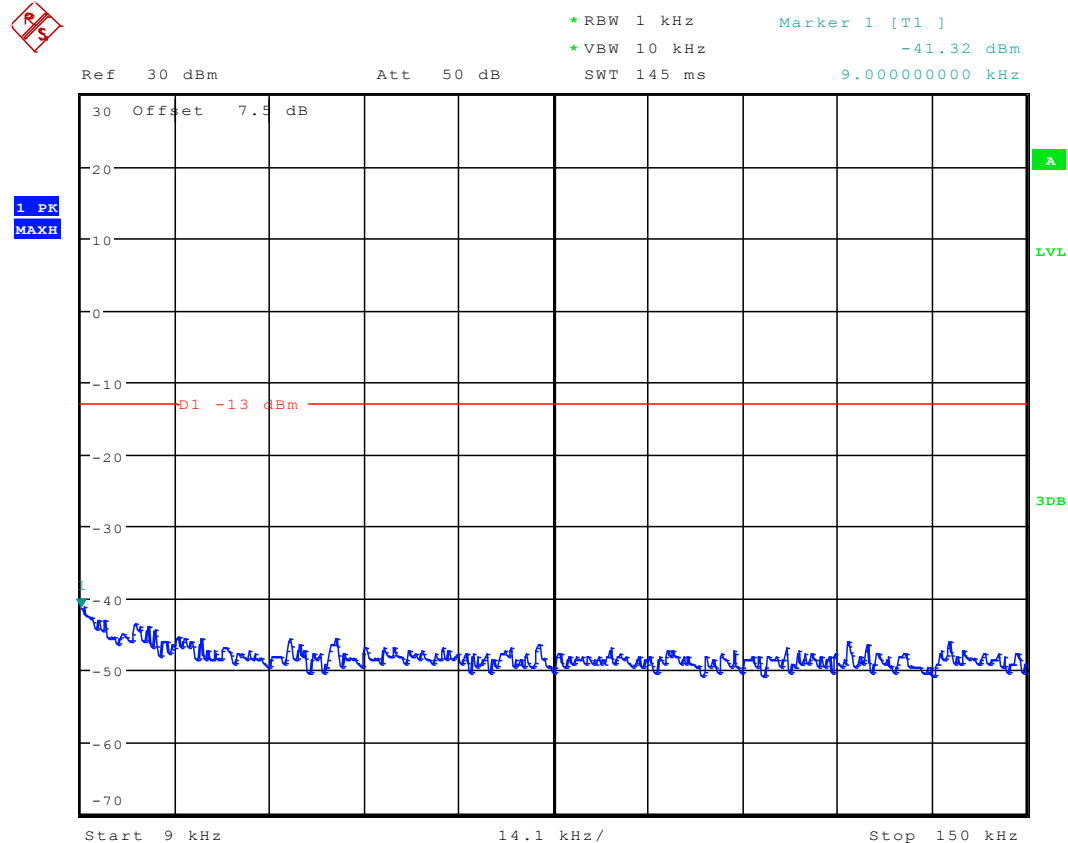
Date: 9.NOV.2011 15:22:39



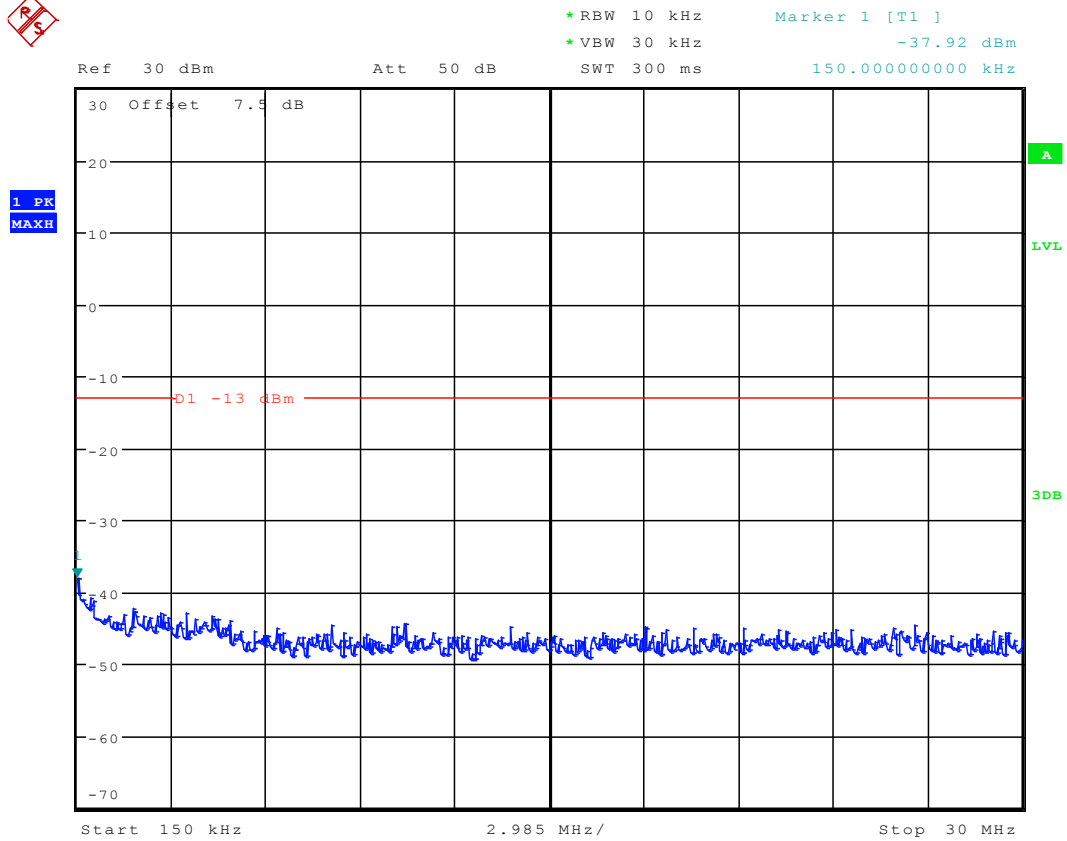
Date: 9.NOV.2011 15:26:02

10MHz(BW/)
Channel 18650

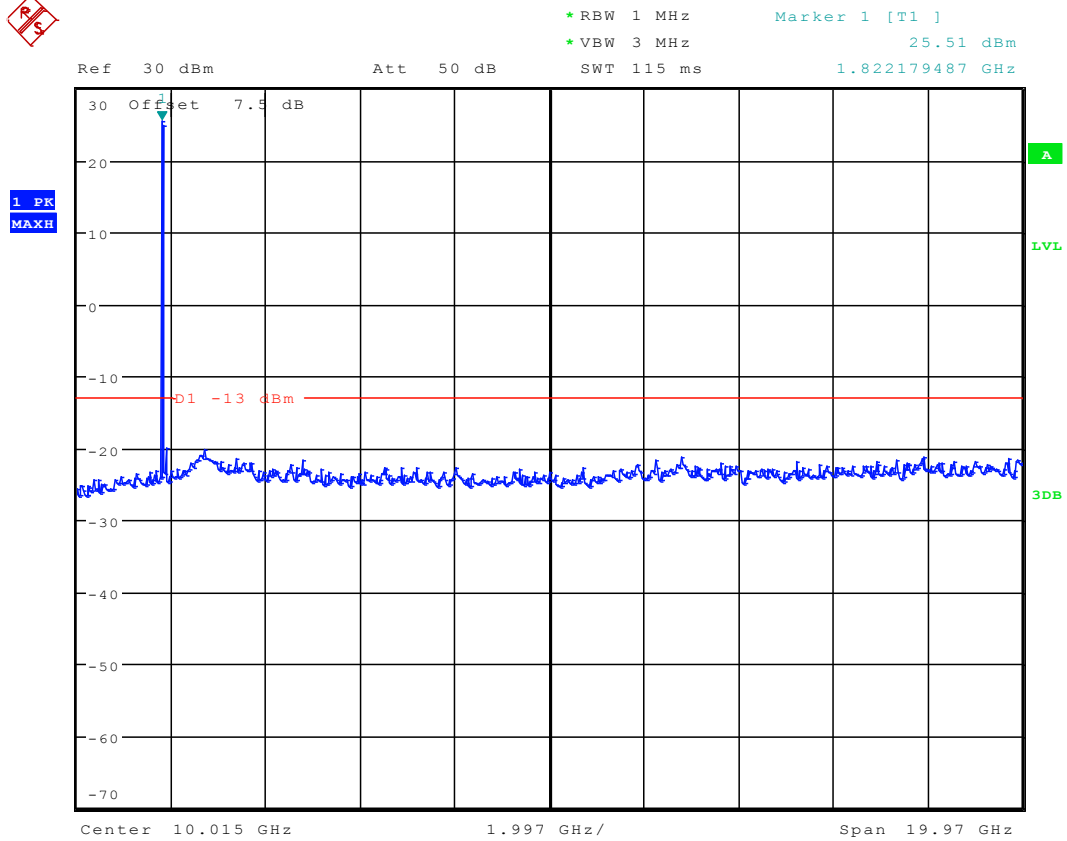
1 RB/RB #0



Date: 9.NOV.2011 15:37:36



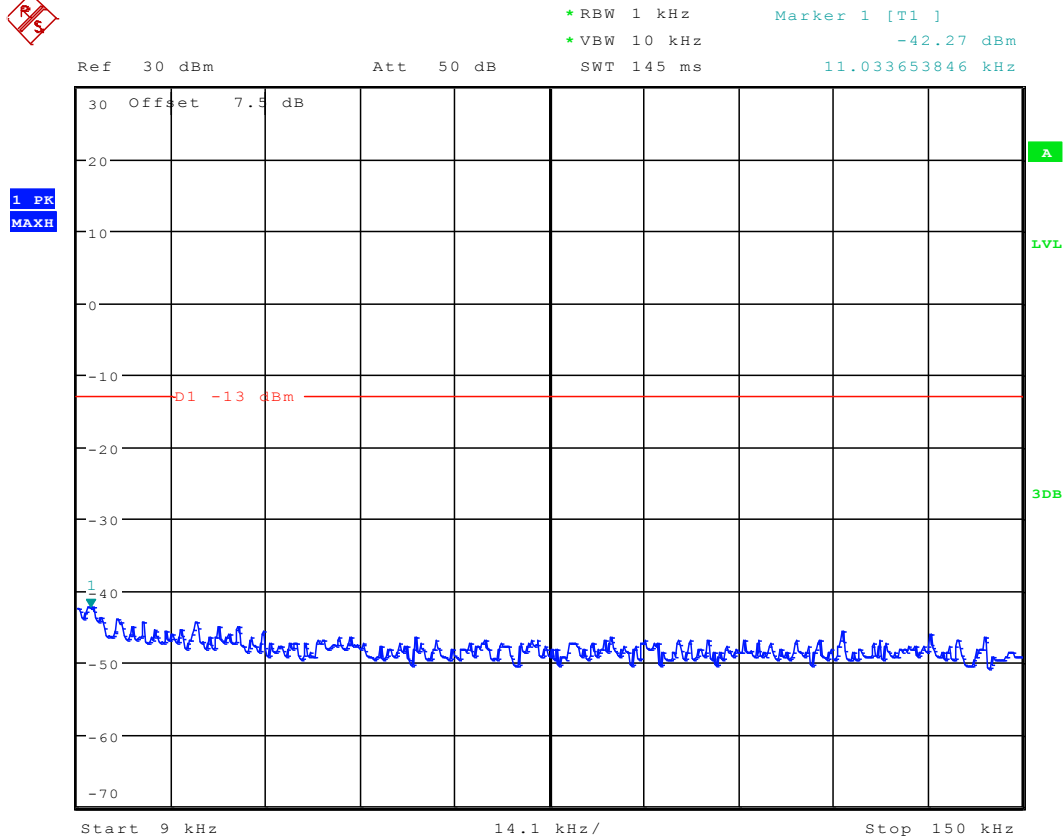
Date: 9.NOV.2011 15:34:06



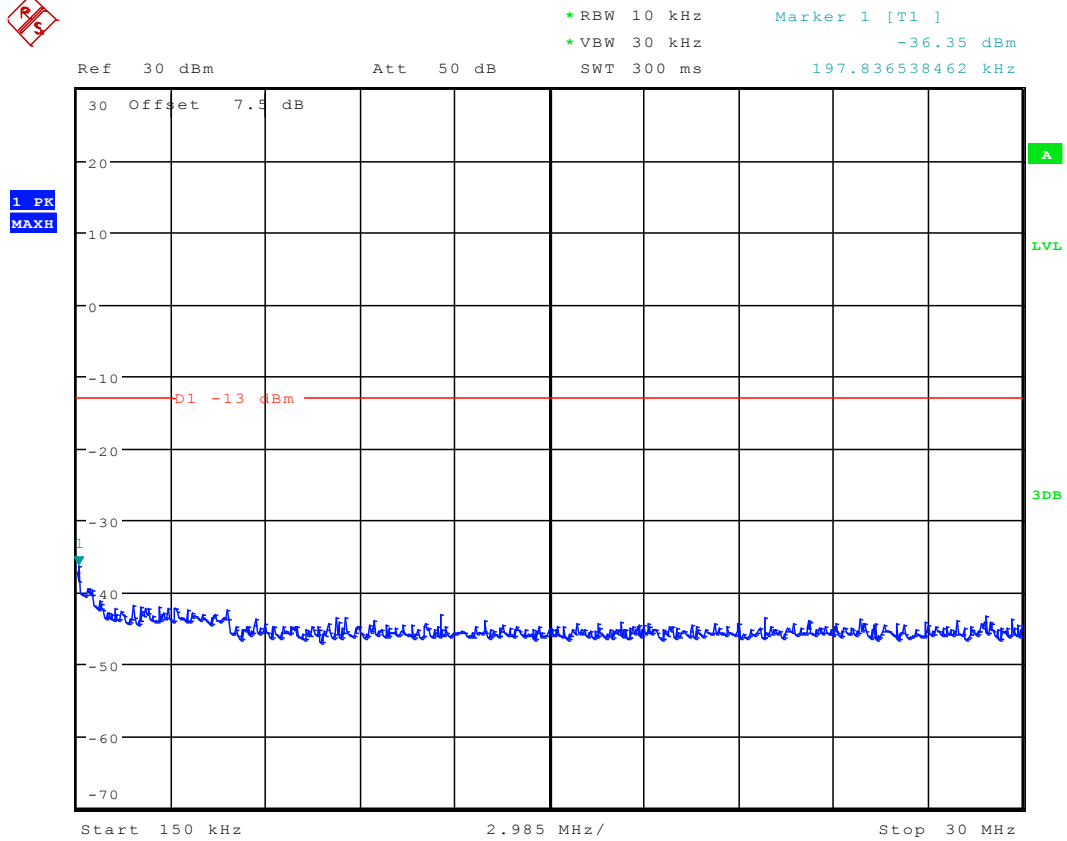
Date: 9.NOV.2011 15:30:54



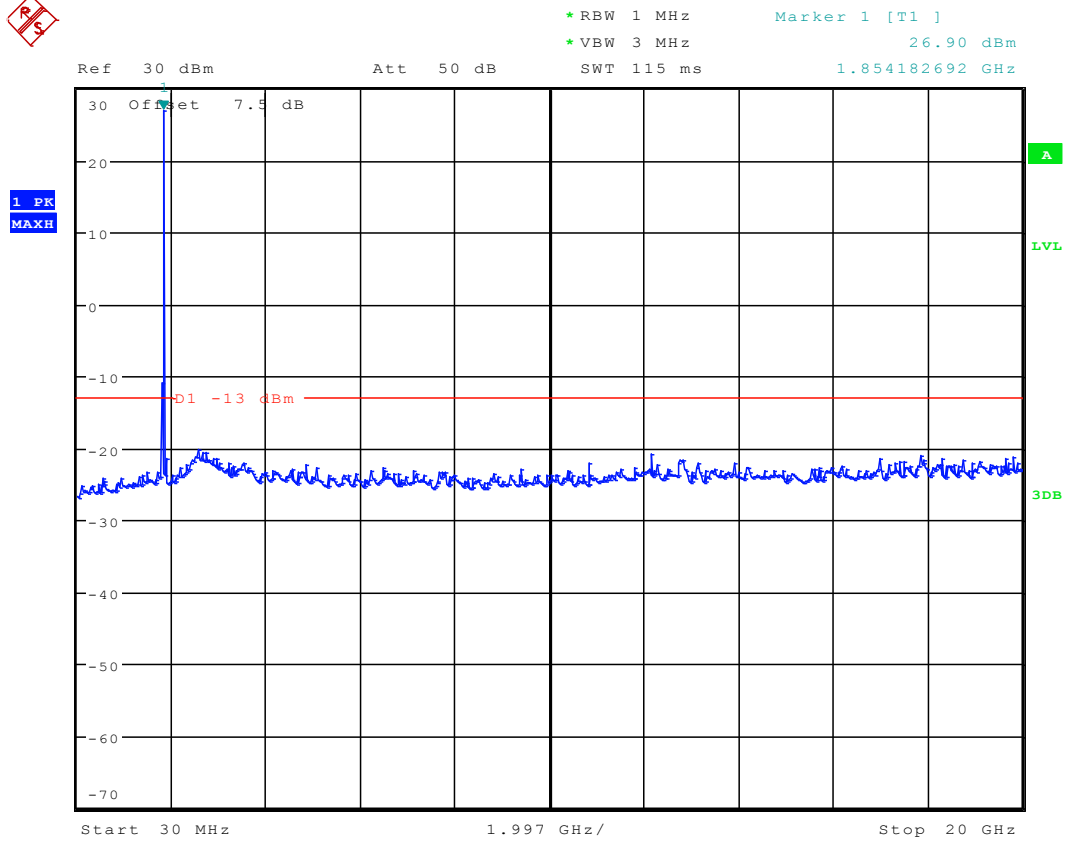
1 RB/RB #max



Date: 9.NOV.2011 15:37:03



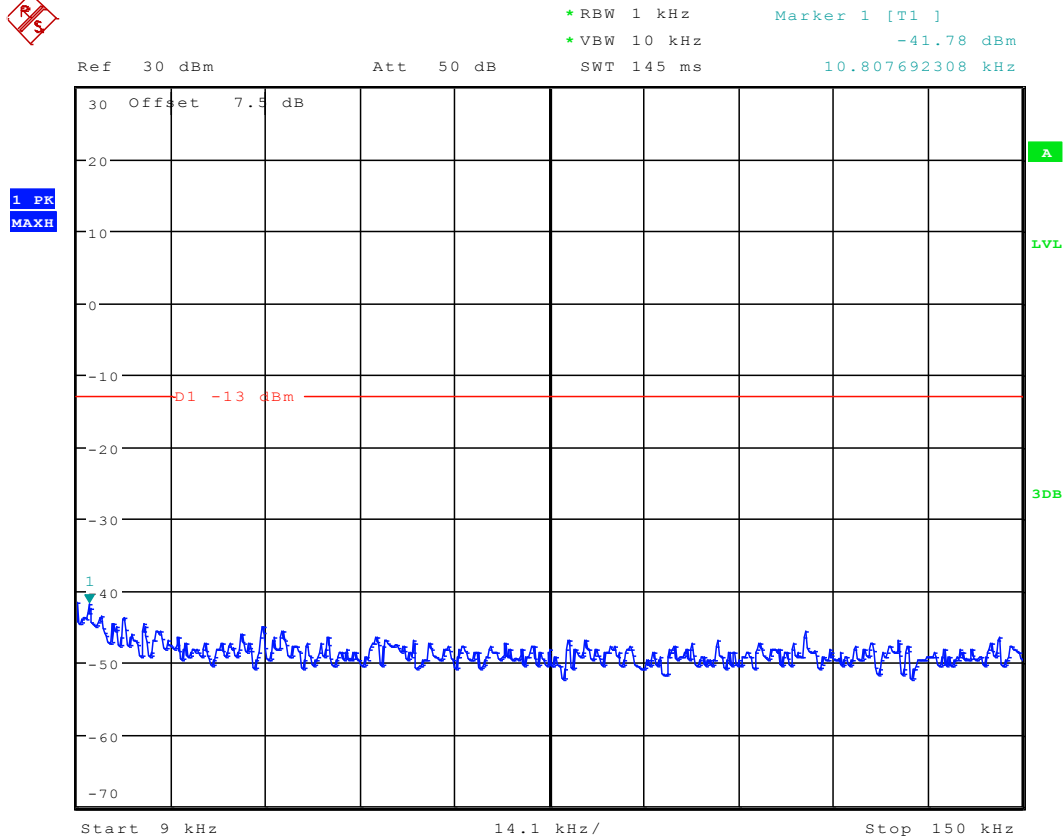
Date: 9.NOV.2011 15:36:09



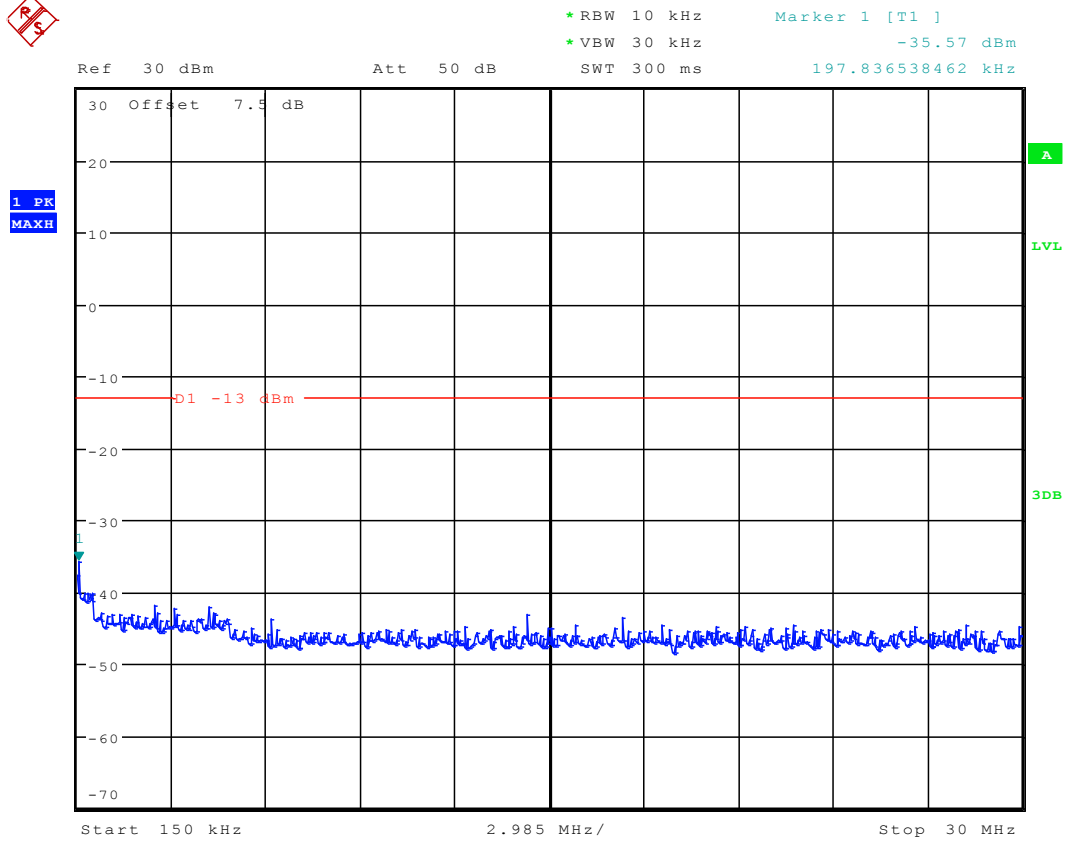
Date: 9.NOV.2011 15:30:13



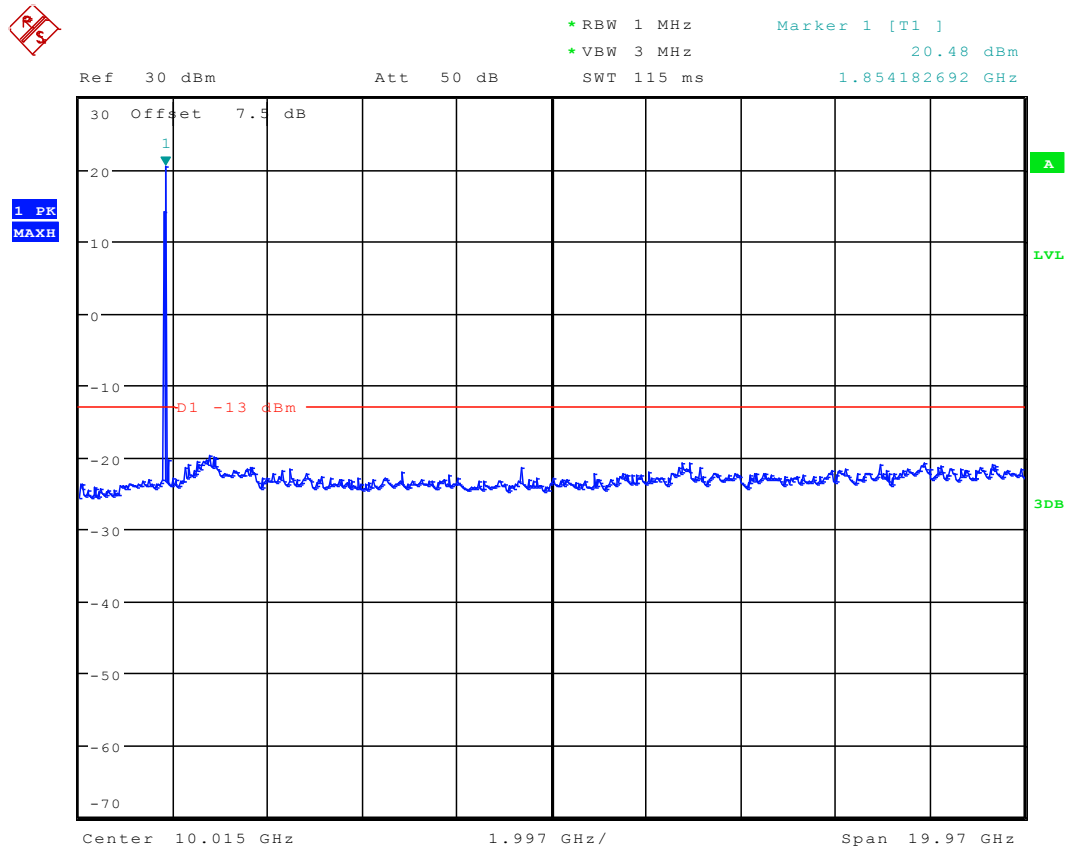
full RBs



Date: 9.NOV.2011 15:38:05



Date: 9.NOV.2011 15:33:33

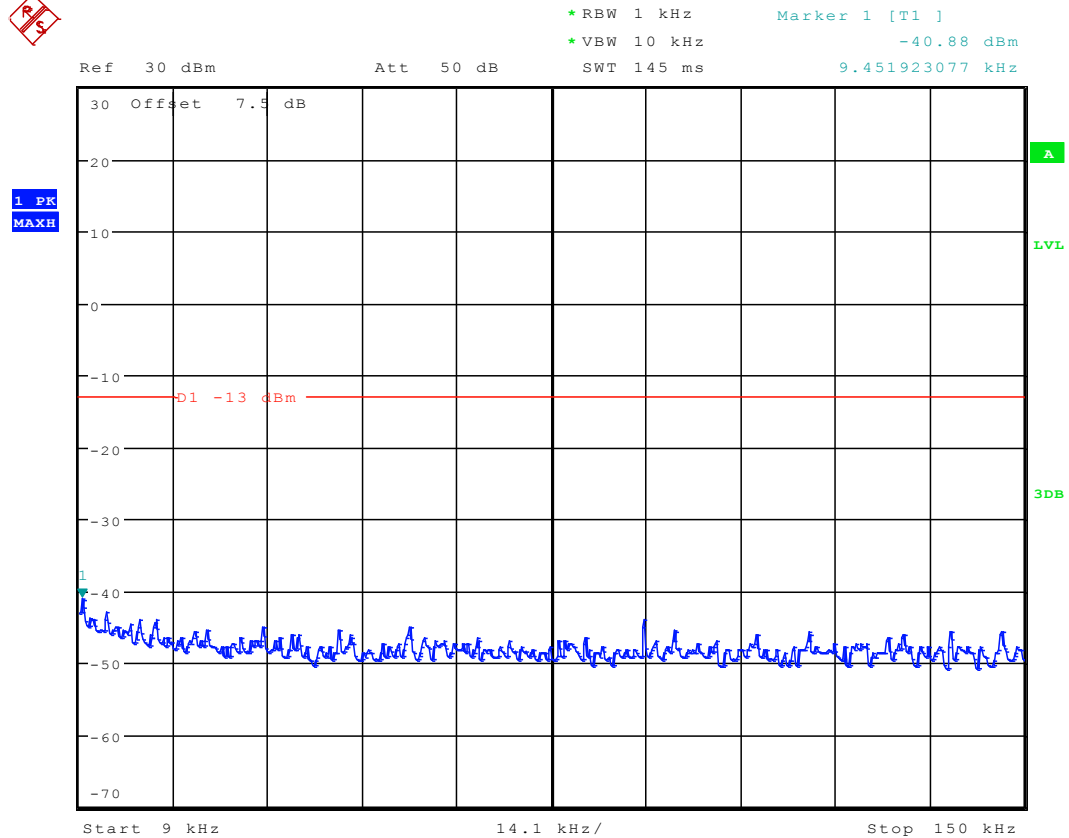


Date: 9.NOV.2011 15:32:17

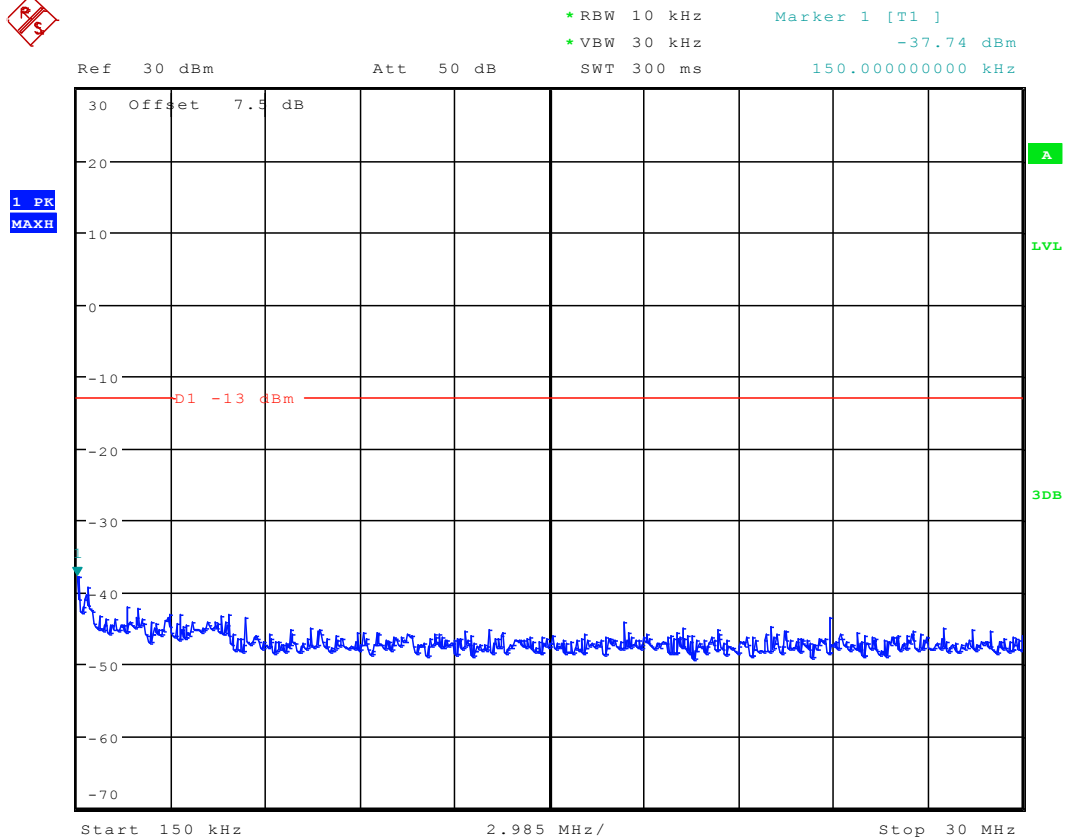


10MHz(BW/) Channel 18900

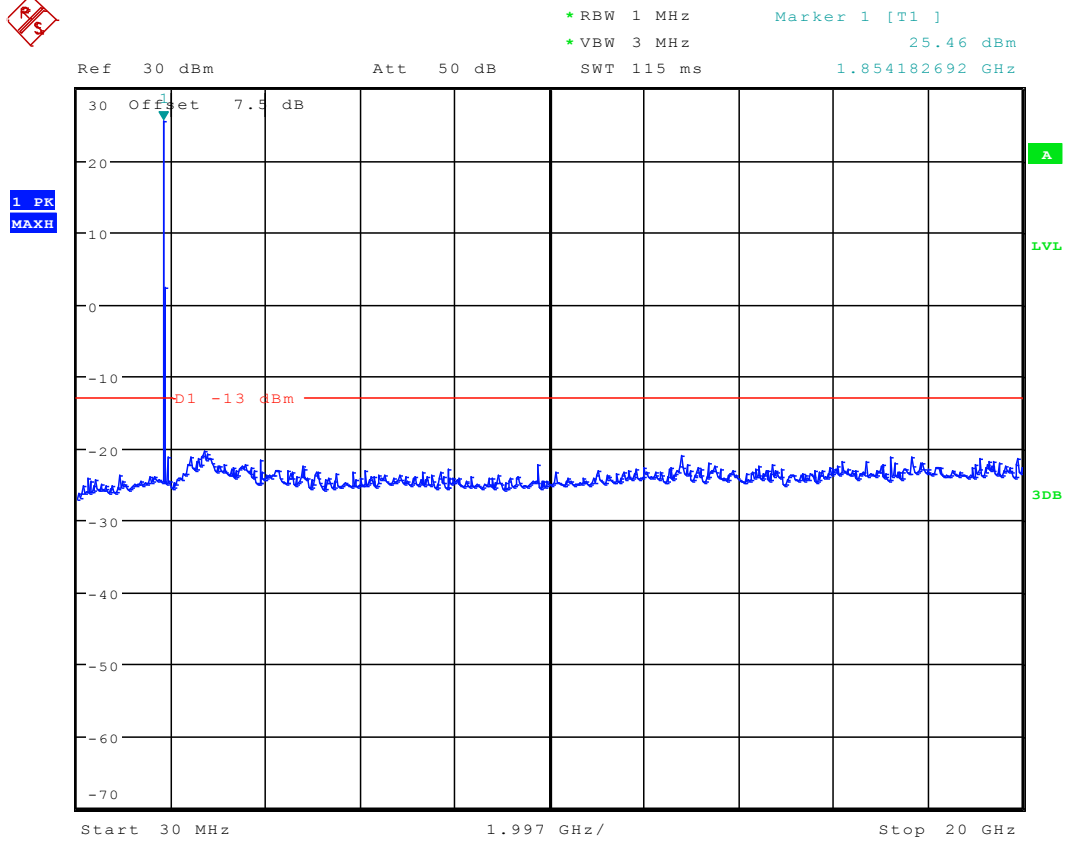
1 RB/RB #0



Date: 9.NOV.2011 15:41:56



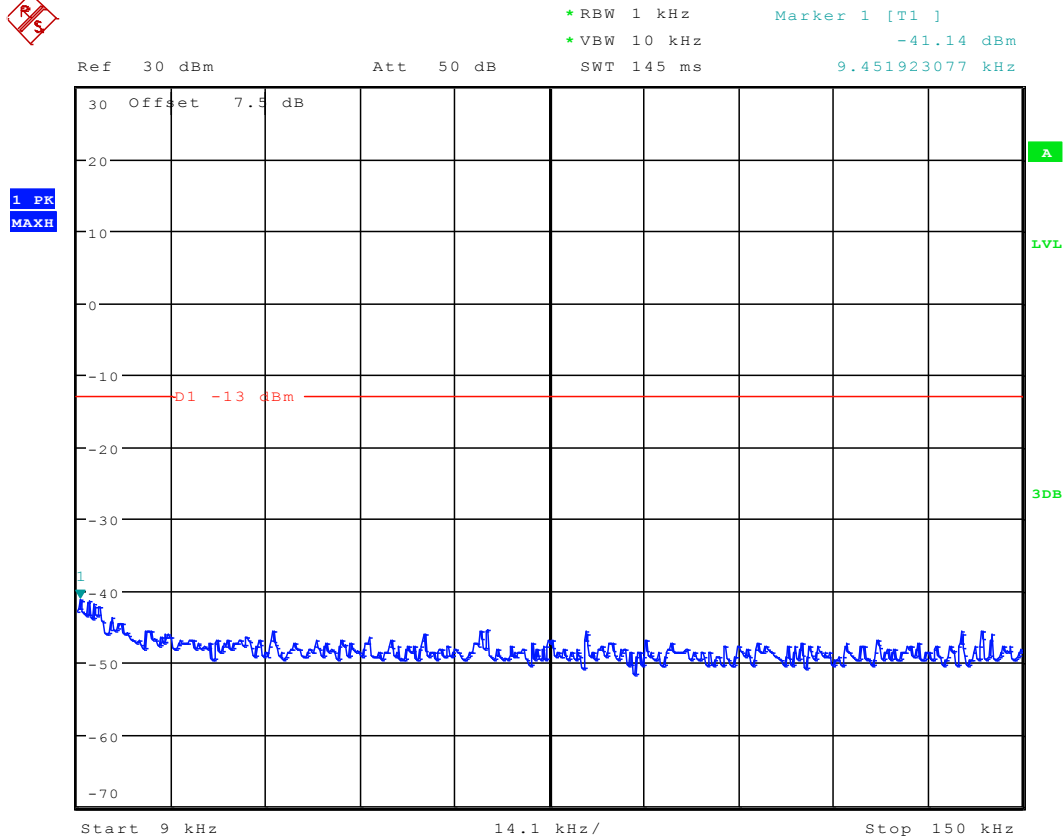
Date: 9.NOV.2011 15:44:24



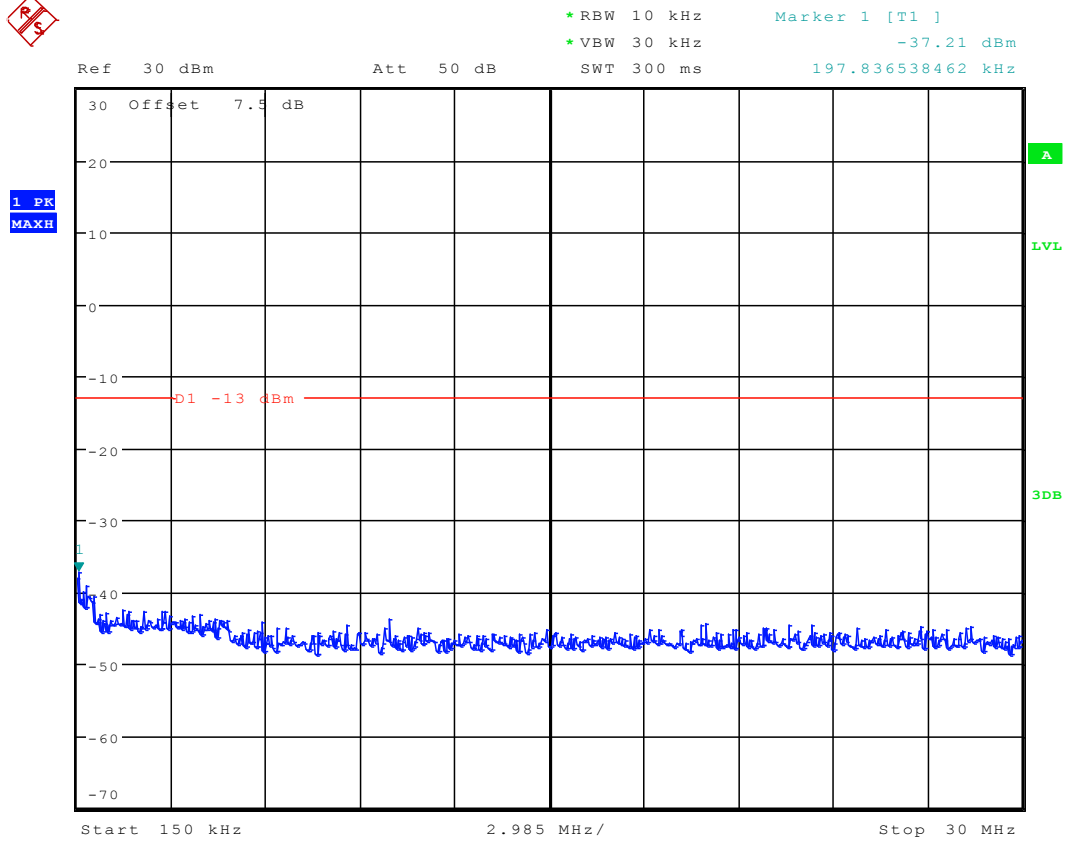
Date: 9.NOV.2011 15:46:27



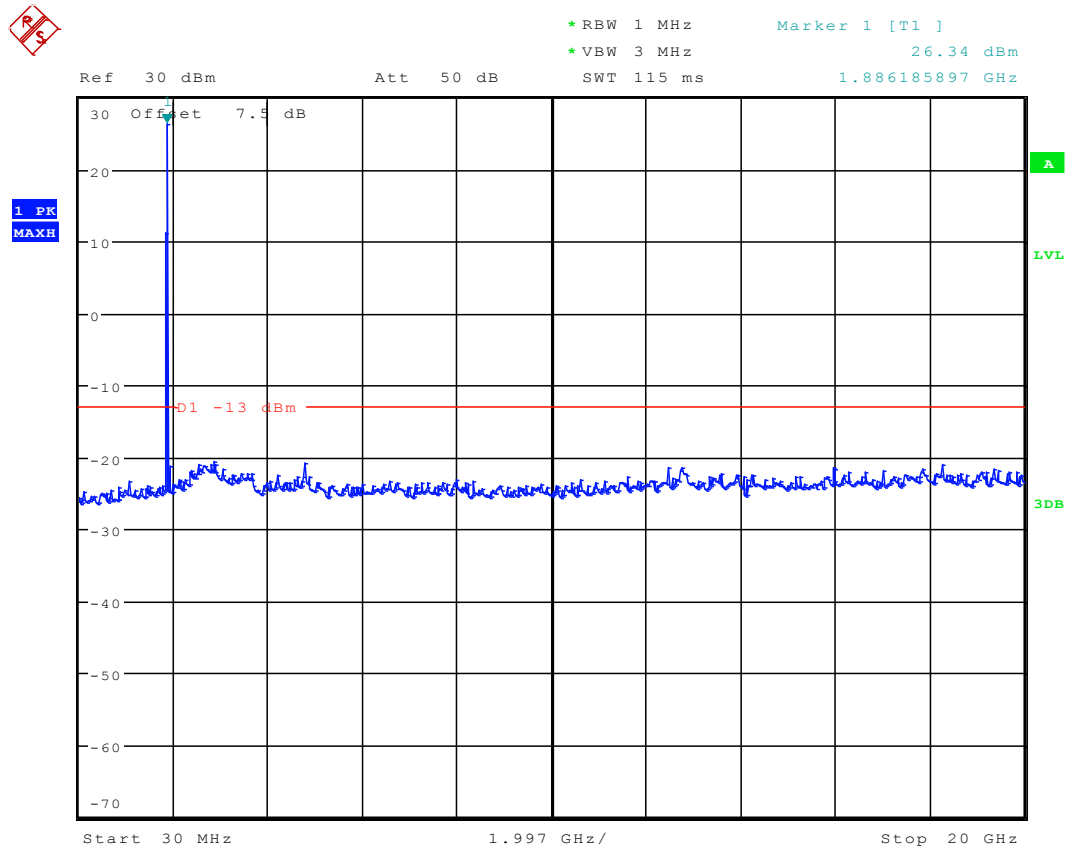
1 RB/RB #max



Date: 9.NOV.2011 15:42:57



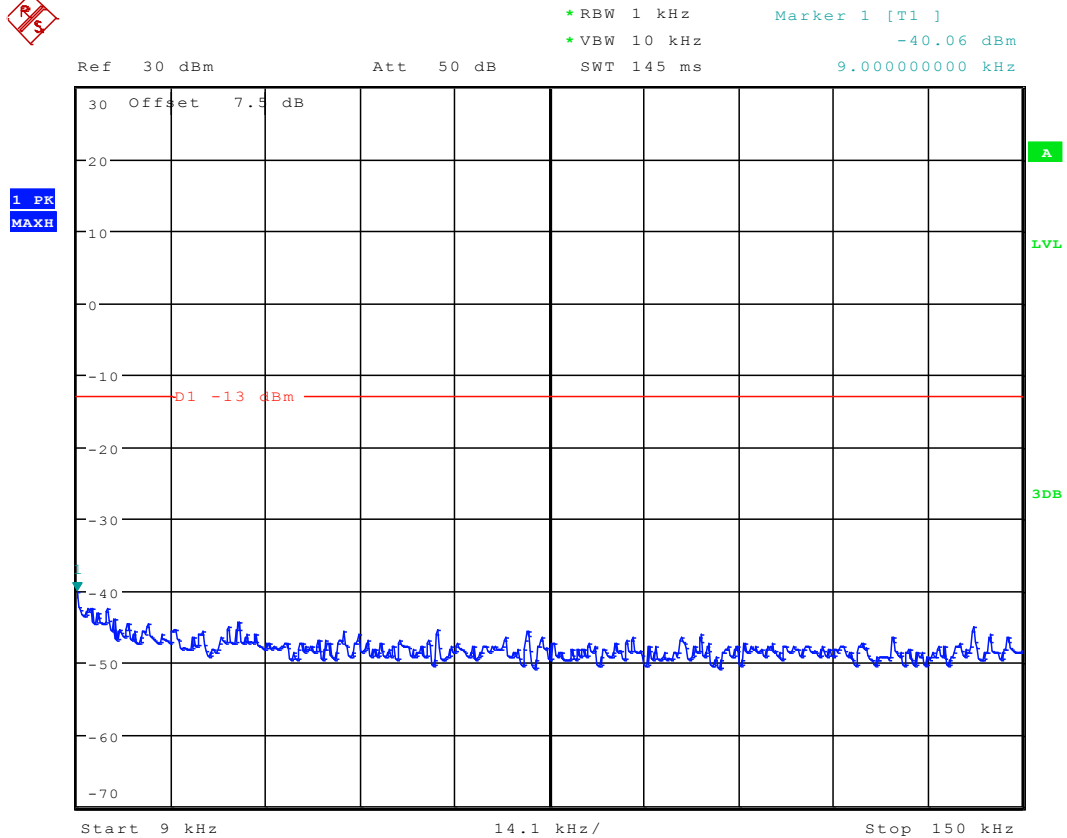
Date: 9.NOV.2011 15:43:54



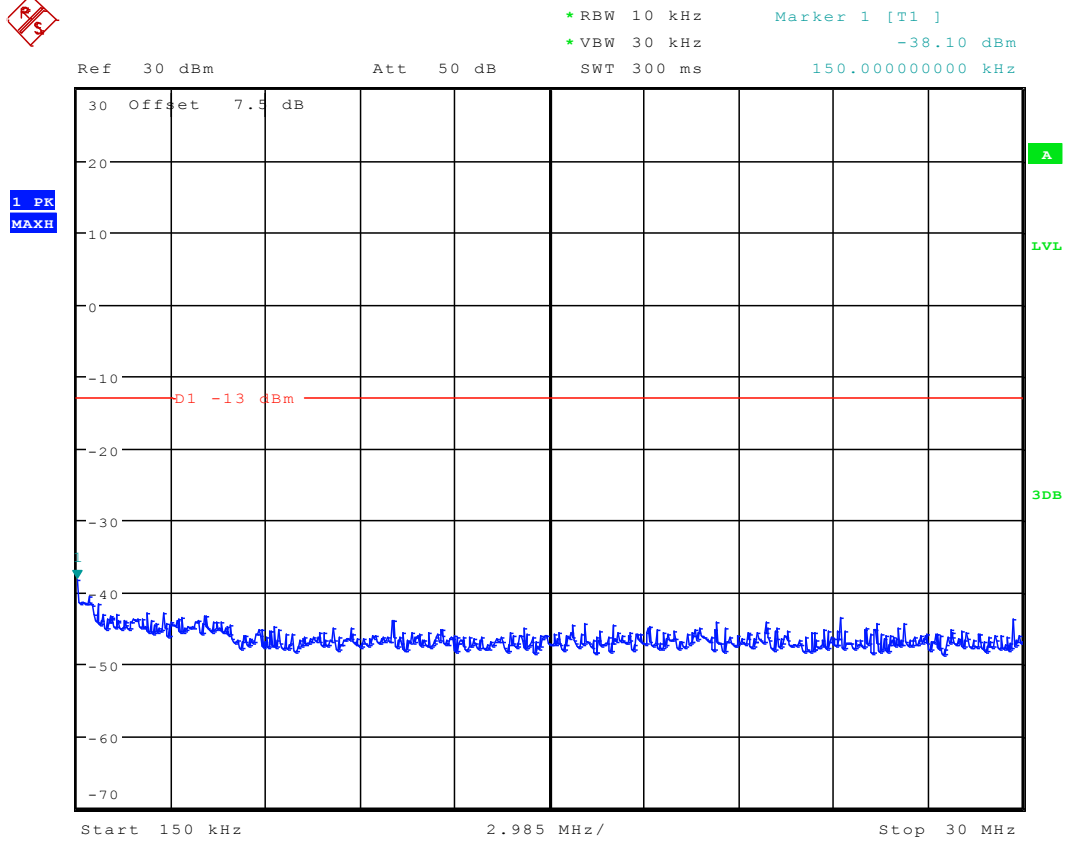
Date: 9.NOV.2011 15:47:21



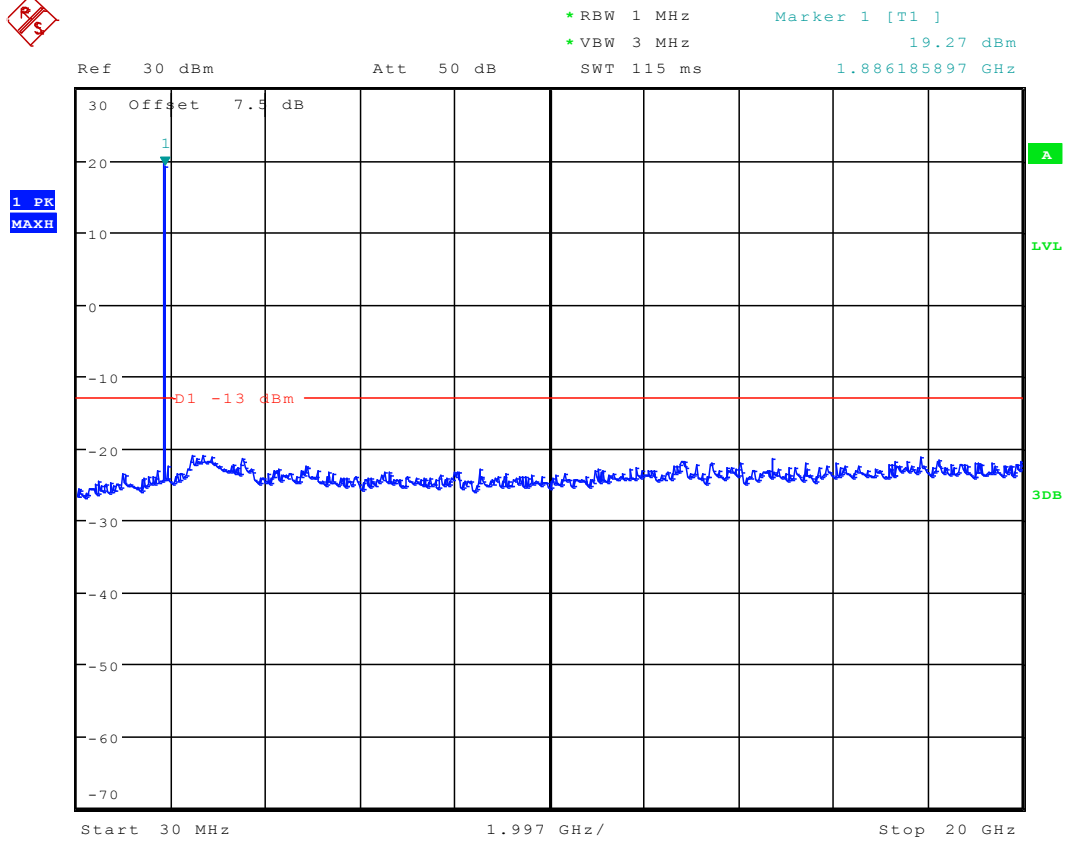
full RBs



Date: 9.NOV.2011 15:40:58



Date: 9.NOV.2011 15:45:06

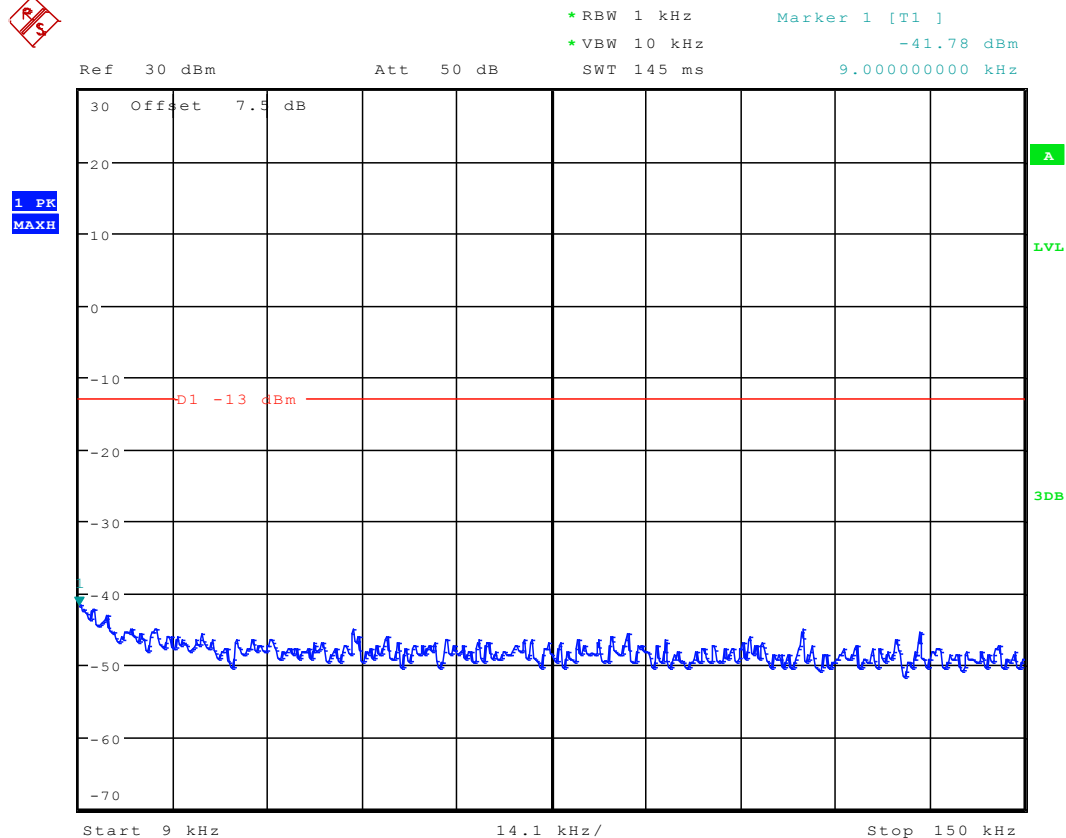


Date: 9.NOV.2011 15:45:55

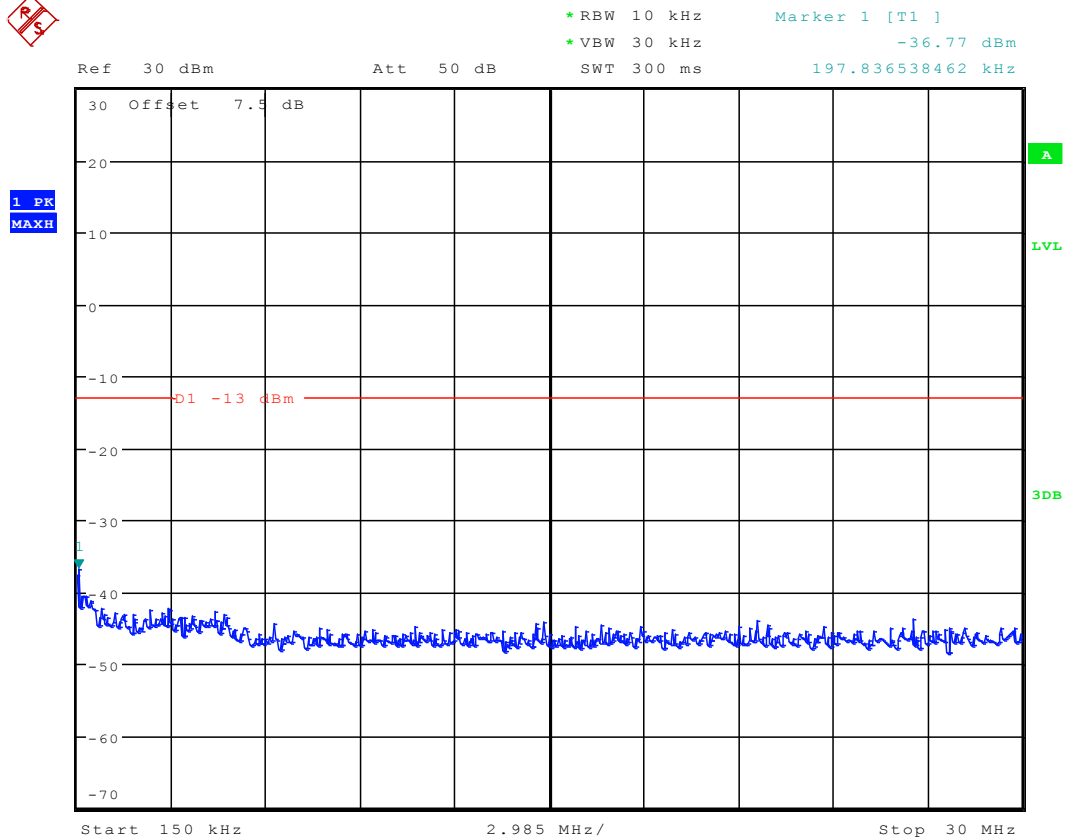


10MHz(BW/) Channel 19150

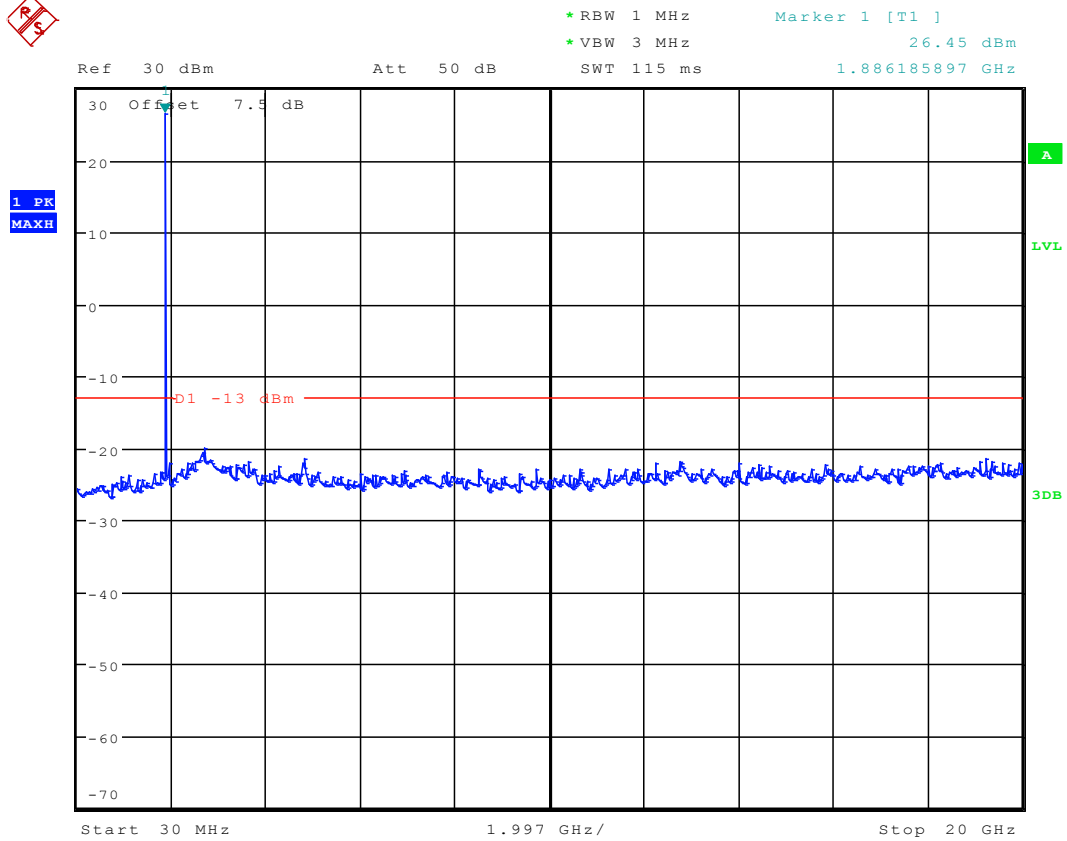
1 RB/RB #0



Date: 9.NOV.2011 16:05:41



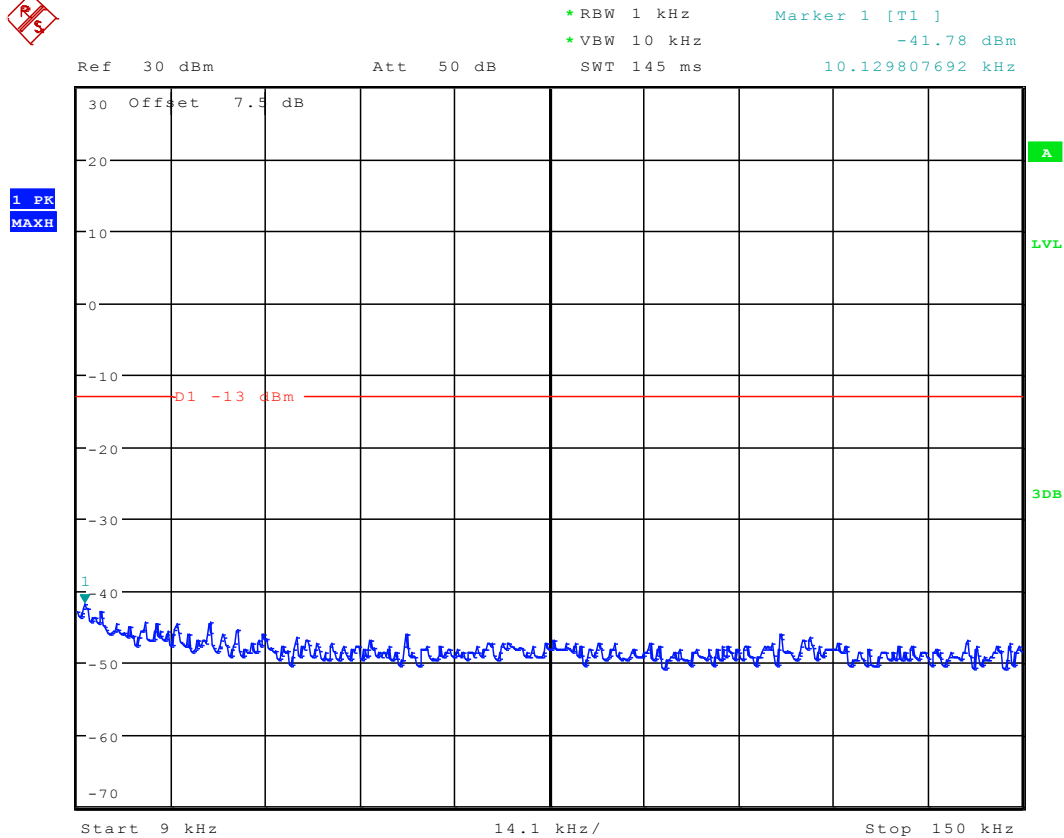
Date: 9.NOV.2011 16:02:14



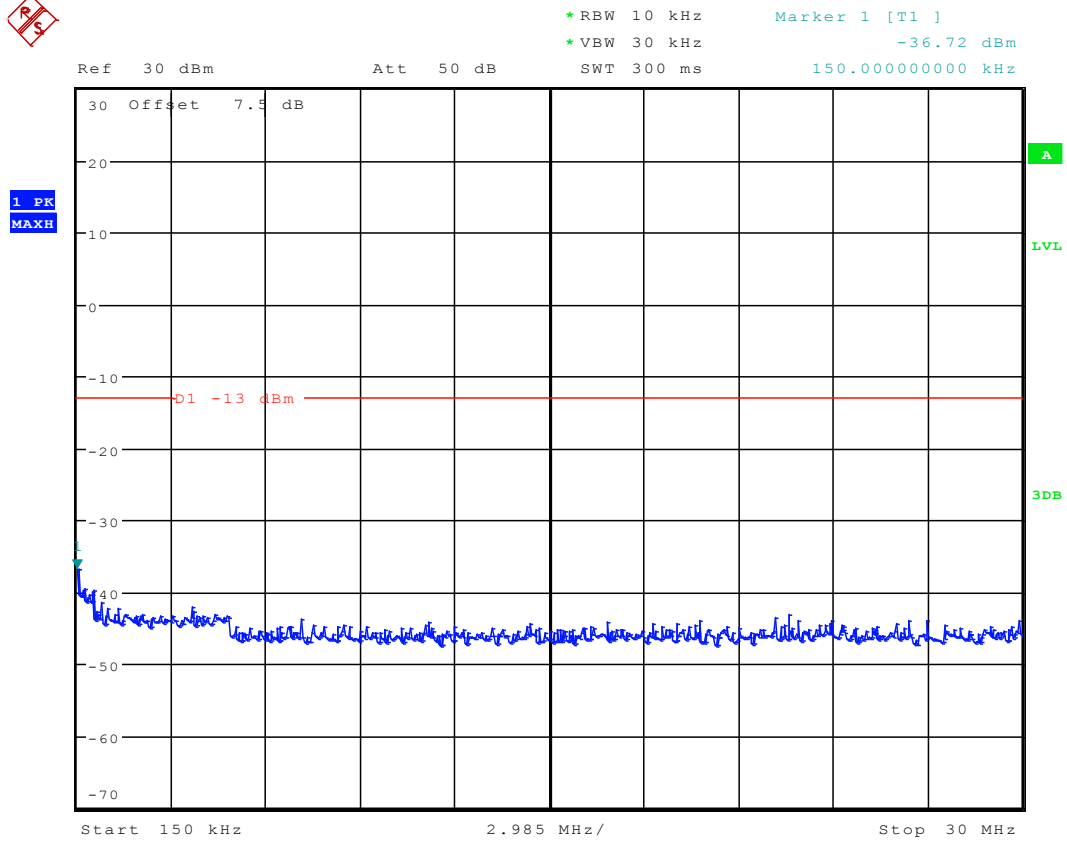
Date: 9.NOV.2011 15:56:26



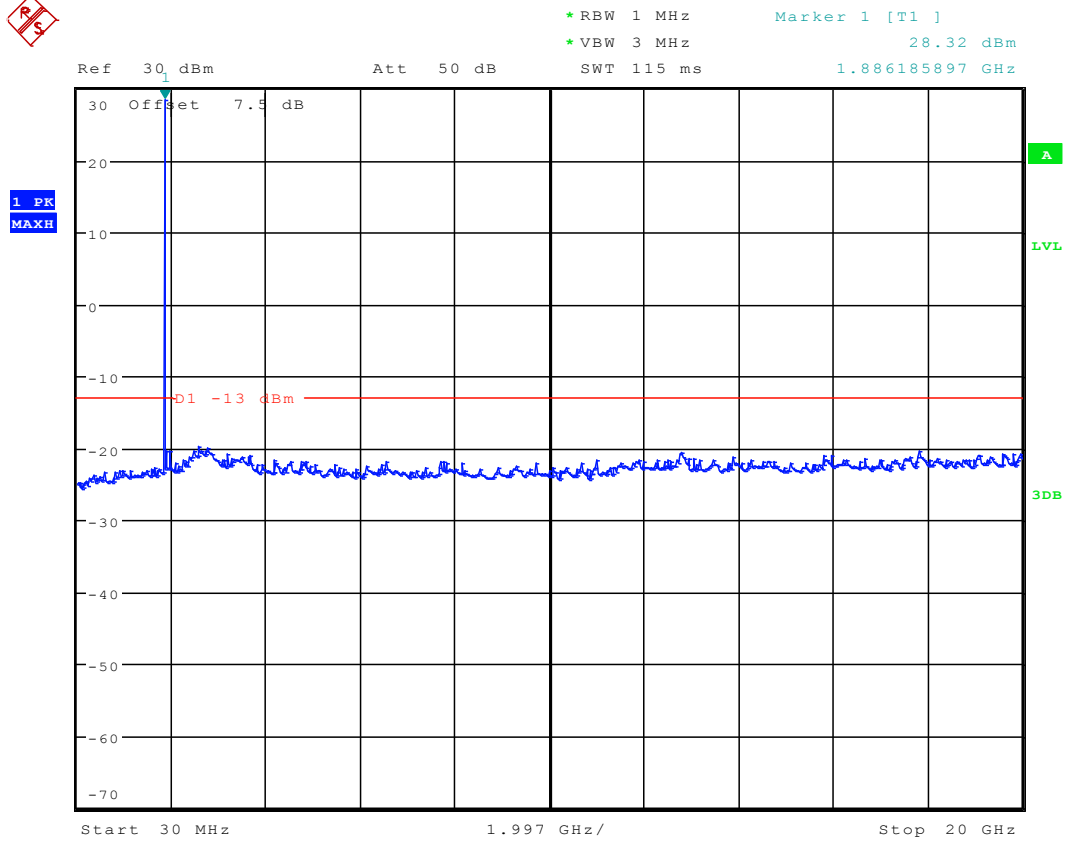
1 RB/RB #max



Date: 9.NOV.2011 16:05:01



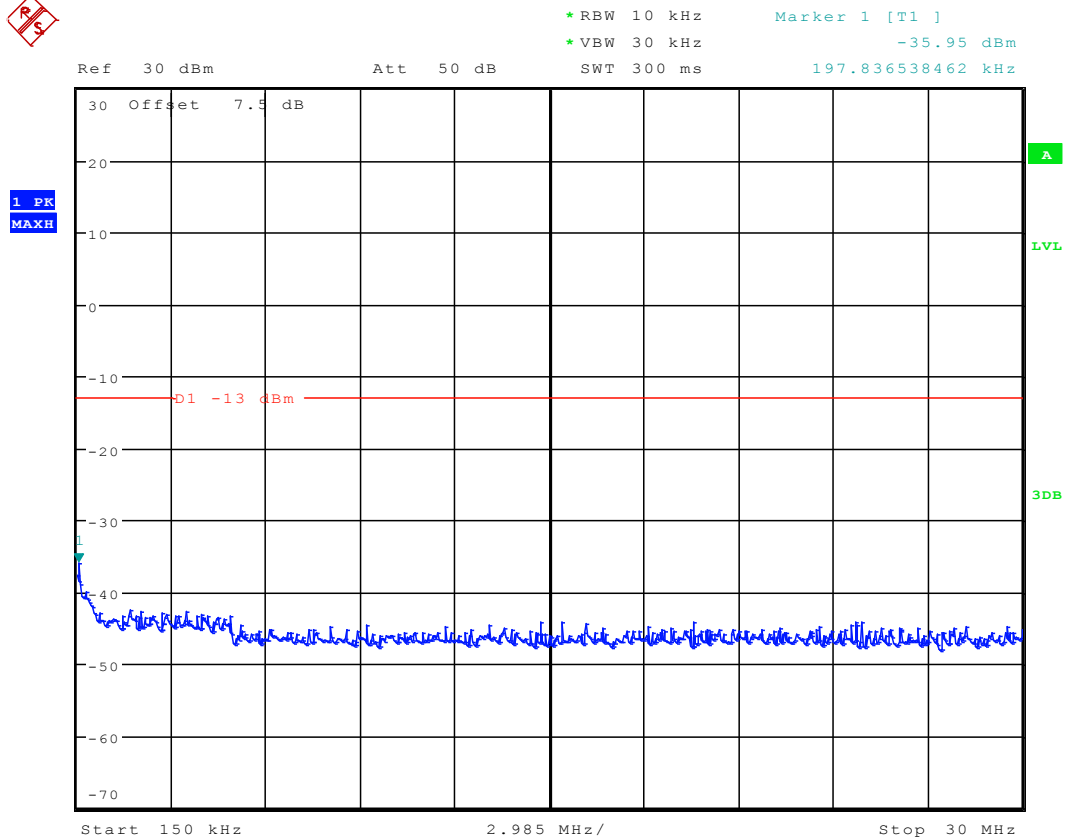
Date: 9.NOV.2011 16:04:07



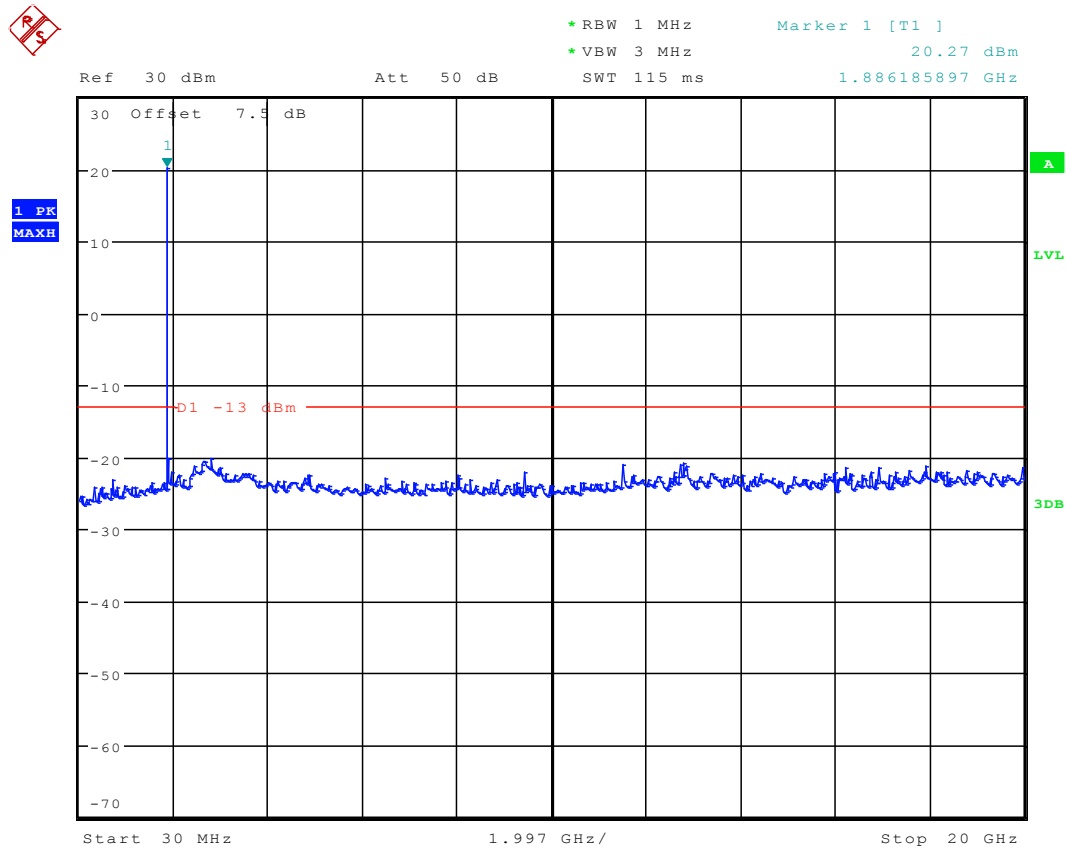
Date: 9.NOV.2011 15:55:06



full RBs



Date: 9.NOV.2011 15:59:52



Date: 9.NOV.2011 15:57:08



Appendix F

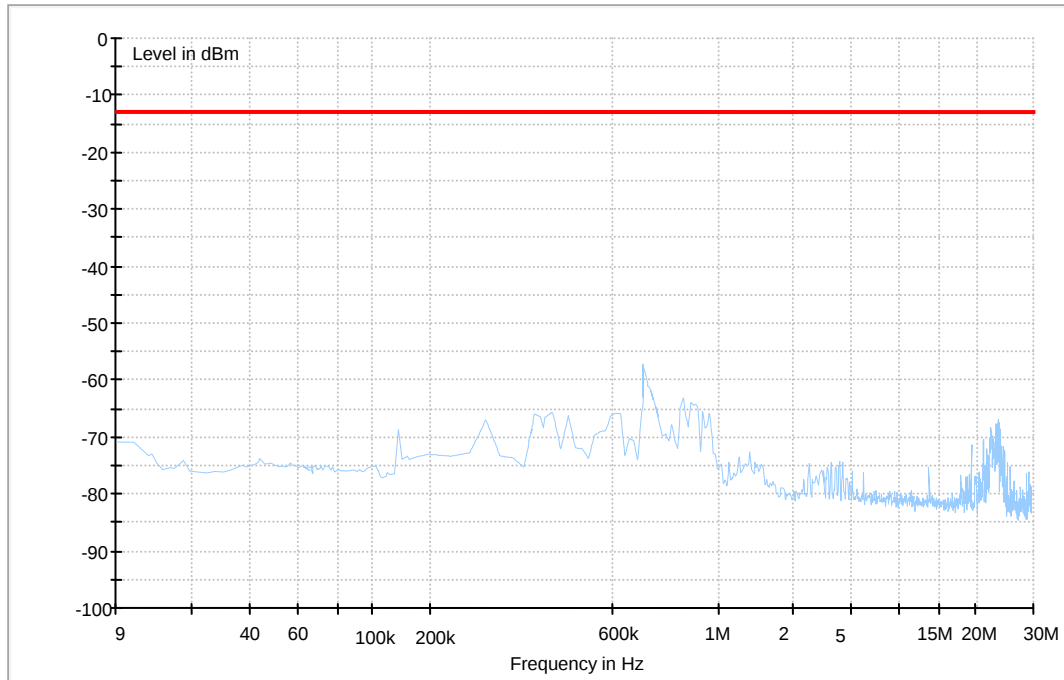
Radiated spurious emission

According to FCC Part 2.1053& Part 24 Subpart E



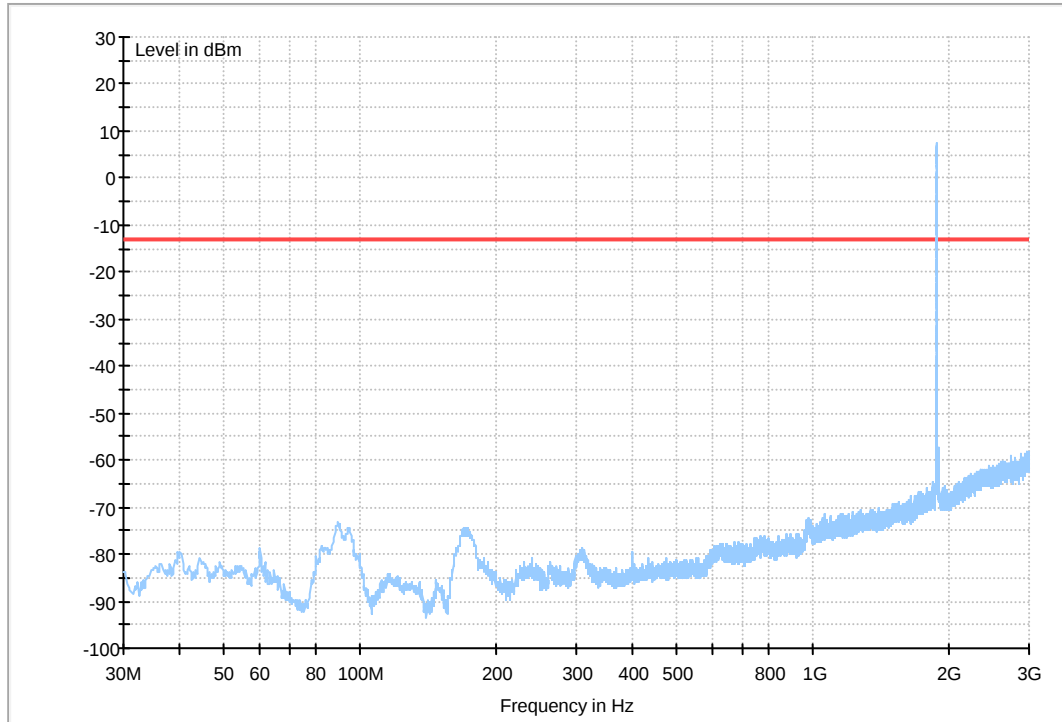
CDMA 1900

Traffic Mode (9kHz-30MHz)



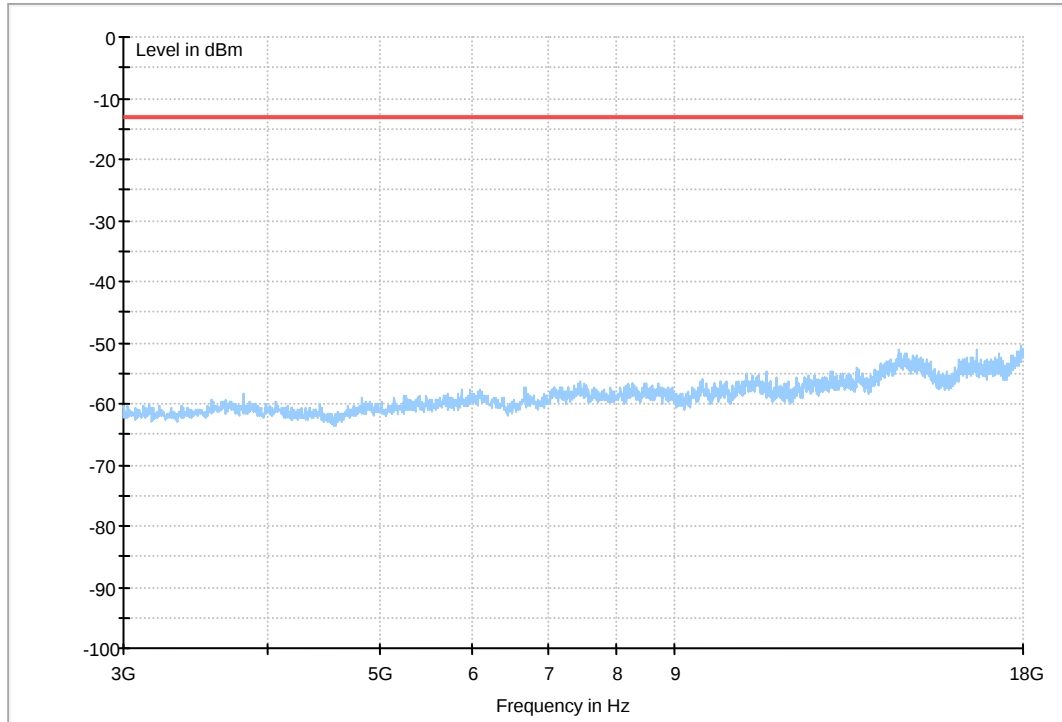


Traffic Mode (30MHz-3GHz)



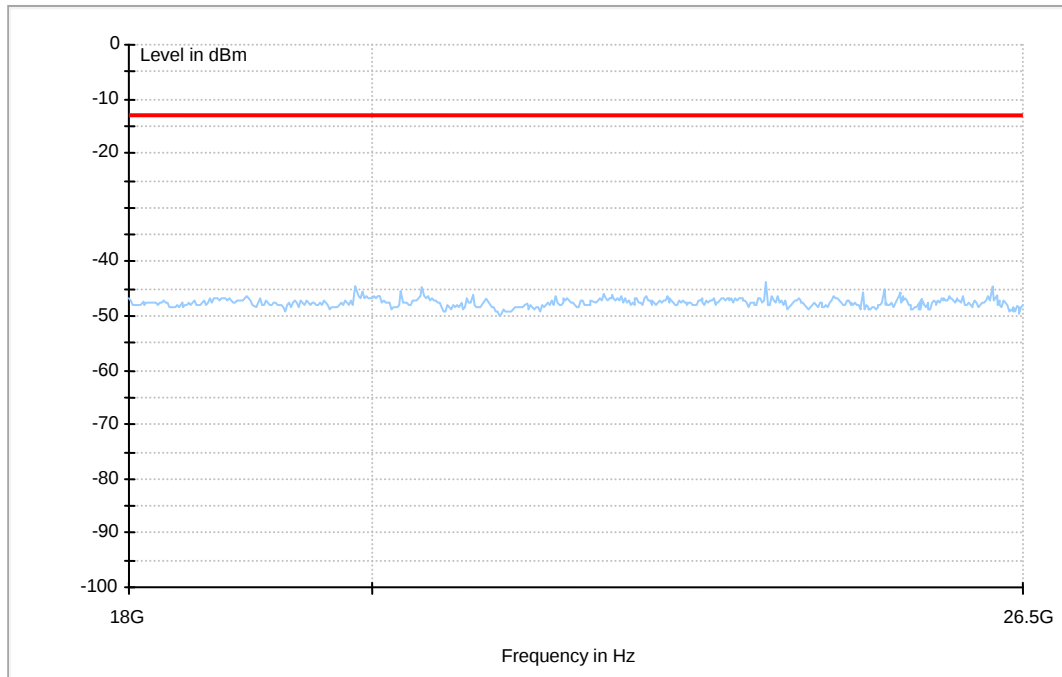


Traffic Mode (3GHz-18GHz)





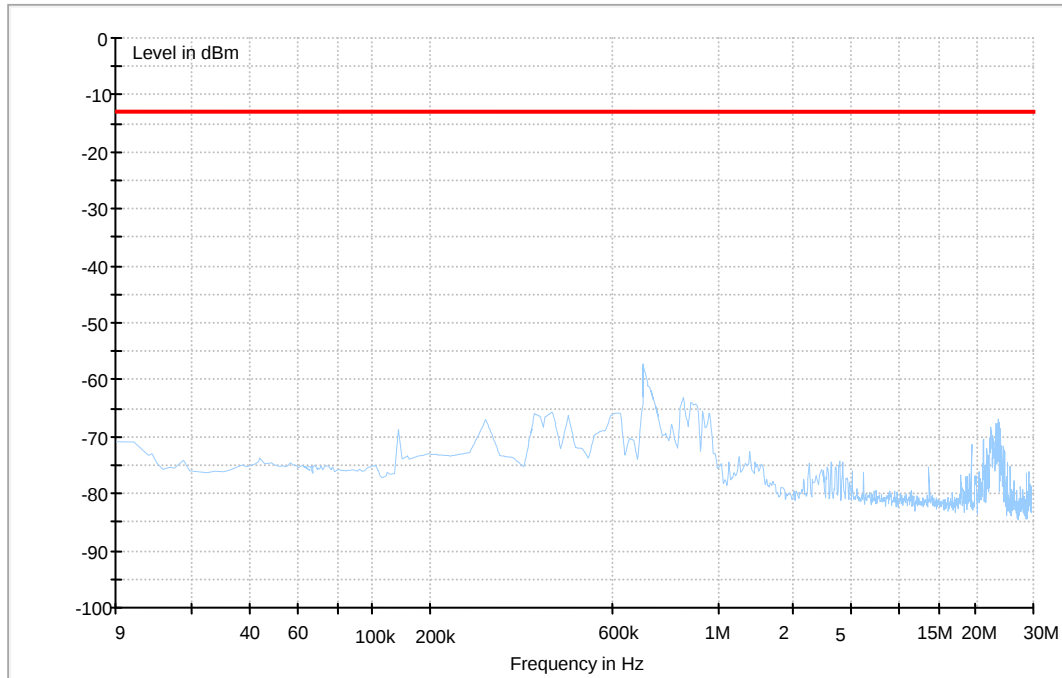
Traffic Mode (18GHz-26.5GHz)





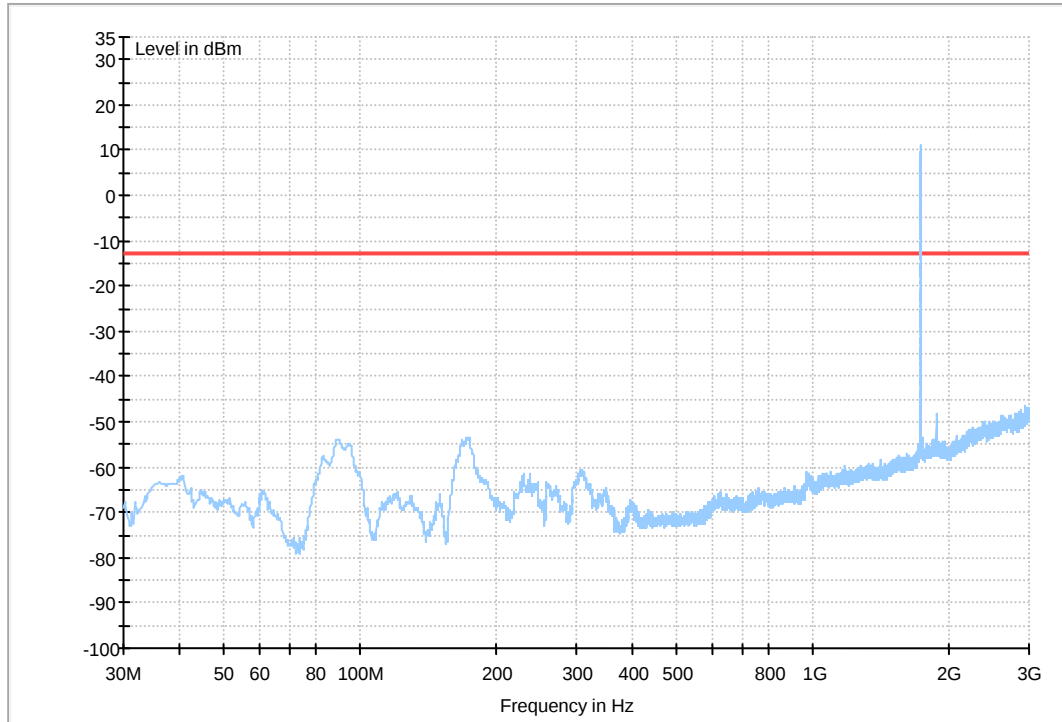
EVDO 1900 R.0

Traffic Mode (9kHz-30MHz)



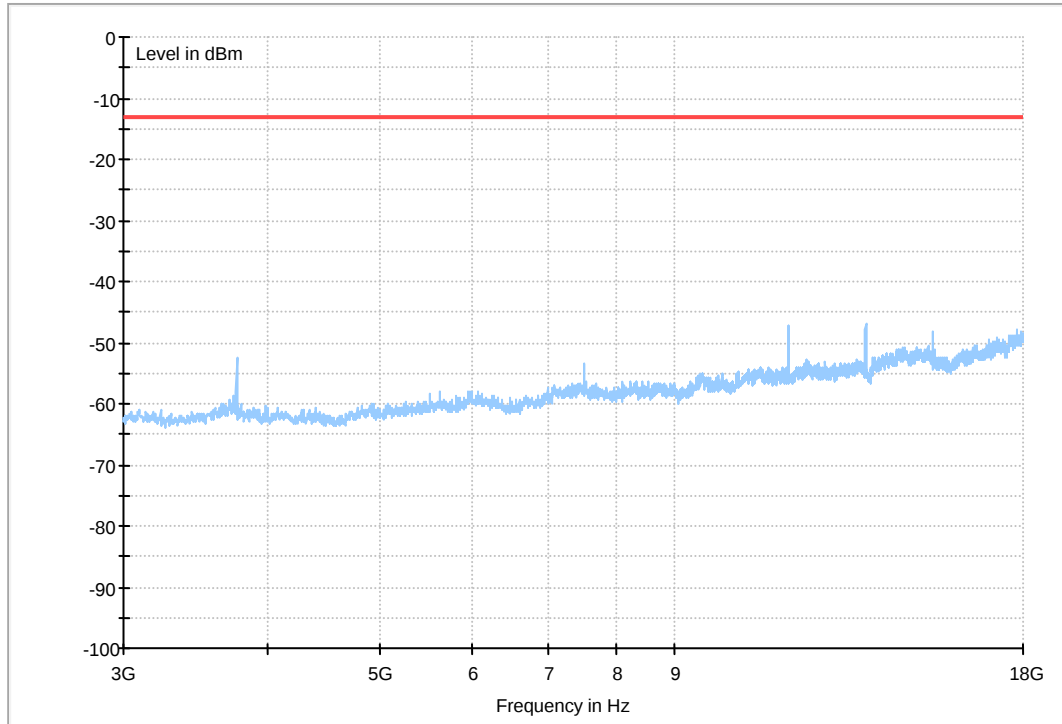


Traffic Mode (30MHz-3GHz)



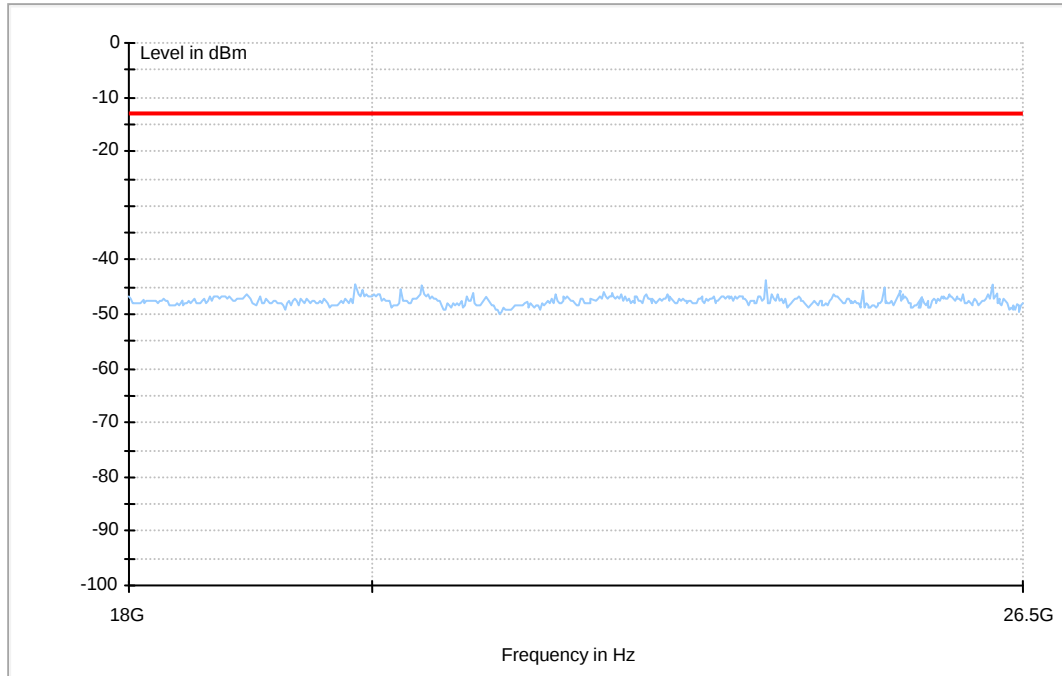


Traffic Mode (3GHz-18GHz)





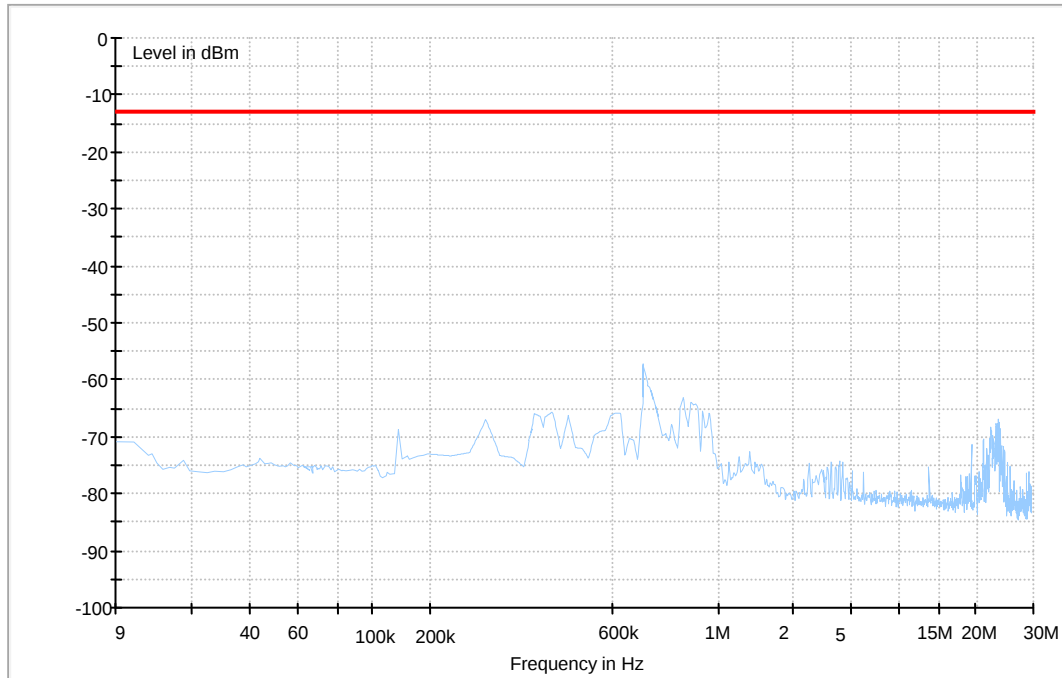
Traffic Mode (18GHz-26.5GHz)





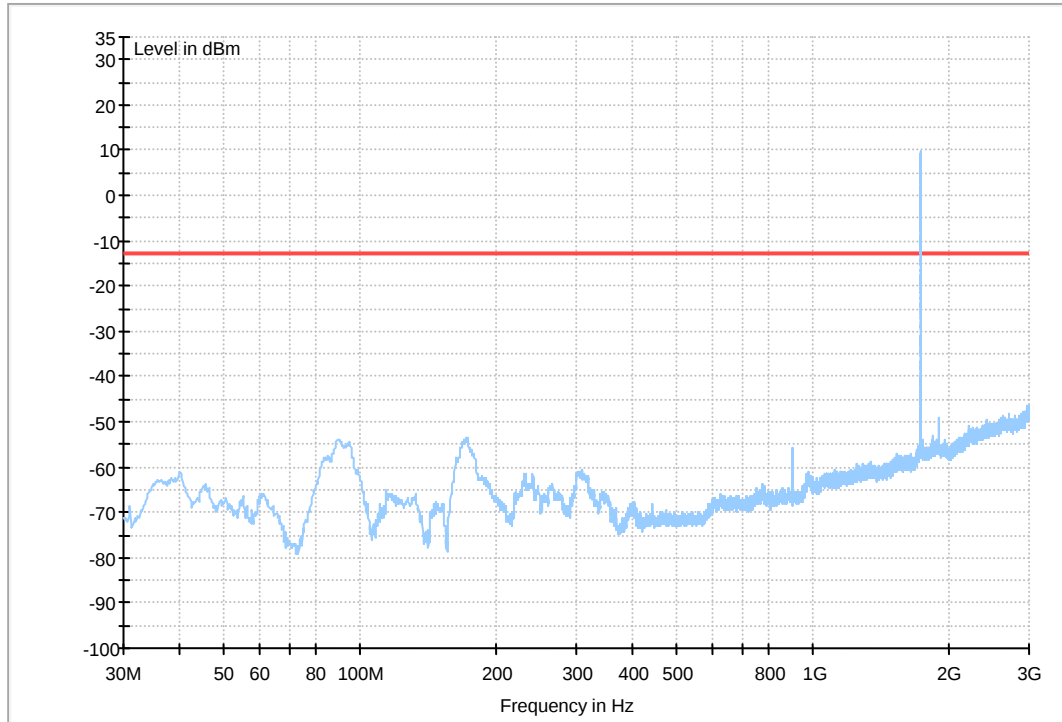
EVDO 1900 R.A

Traffic Mode (9kHz-30MHz)



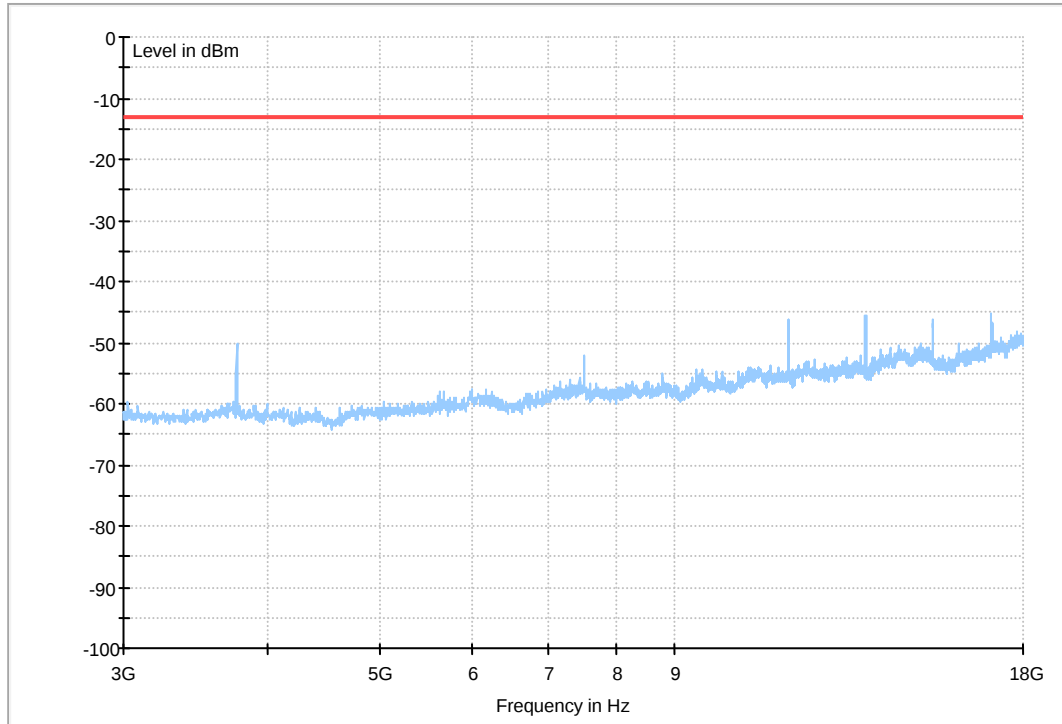


Traffic Mode (30MHz-3GHz)



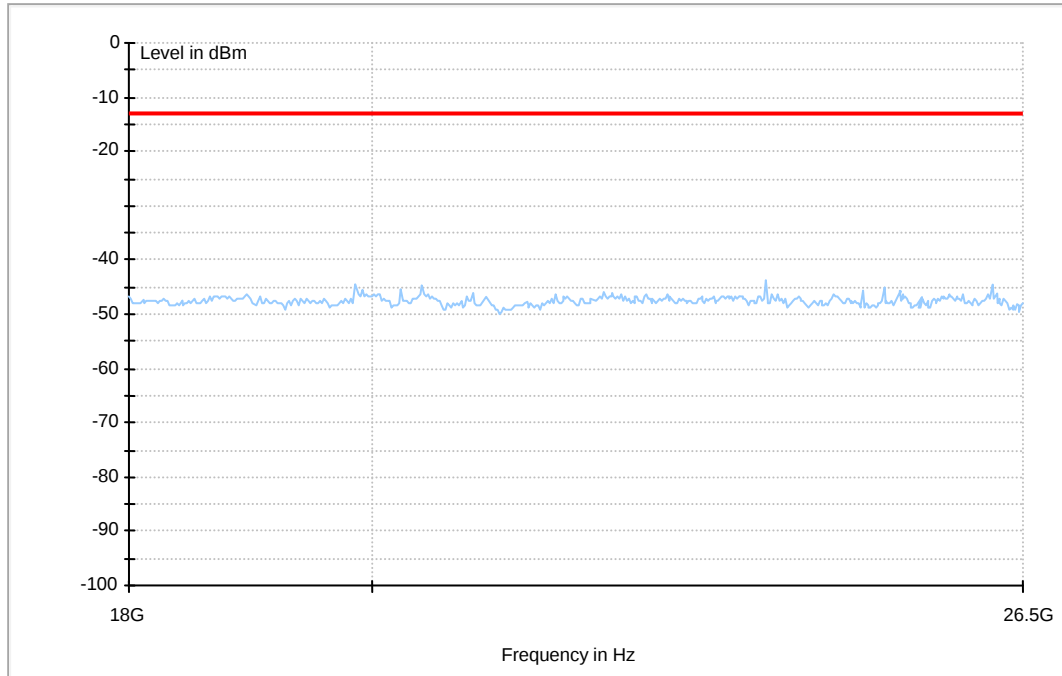


Traffic Mode (3GHz-18GHz)





Traffic Mode (18GHz-26.5GHz)



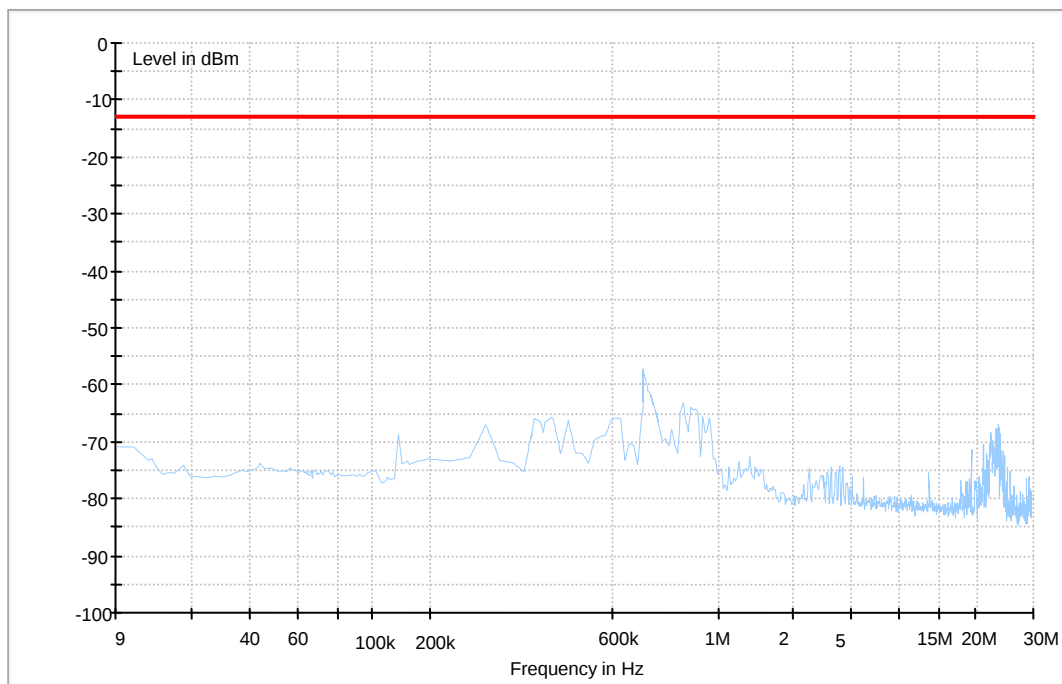


LTE BAND 2 (1.4MHz)

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

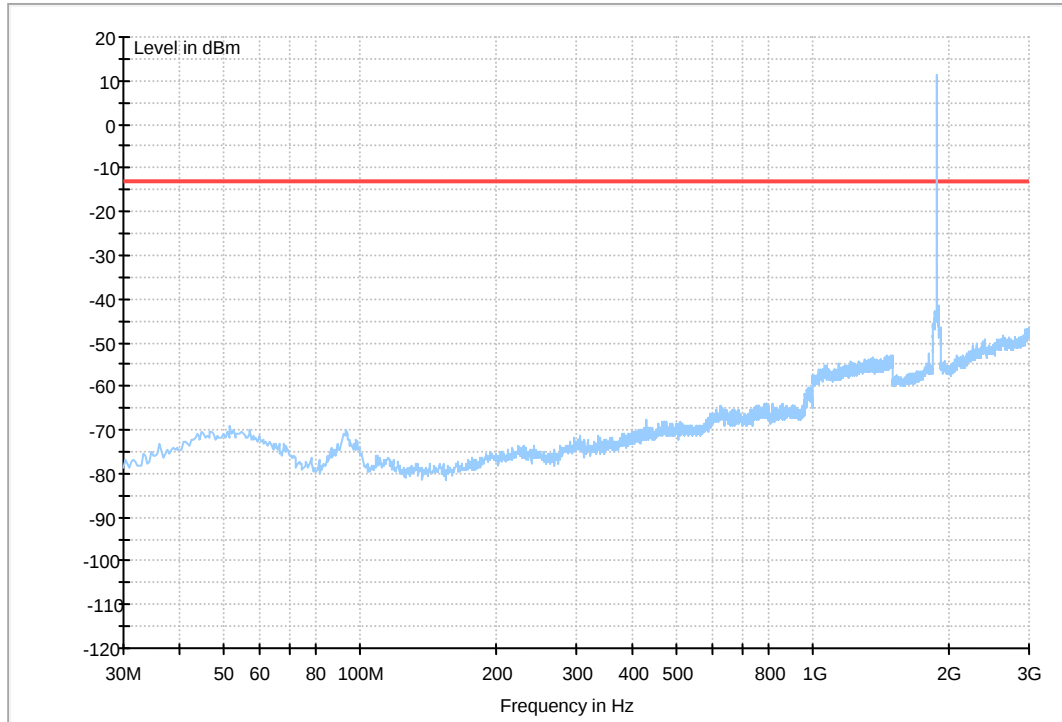
NOTE2: All relevant operation modes have been tested, and the worst case data is included in this report.

Traffic Mode (9kHz-30MHz)



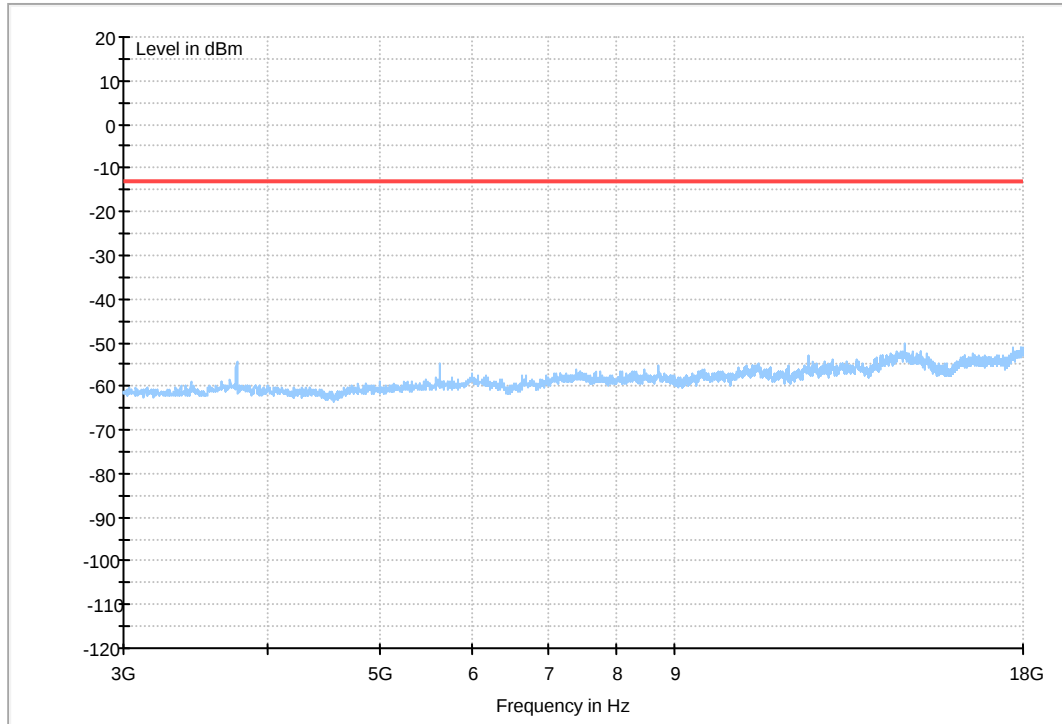


Traffic Mode (30MHz-3GHz)



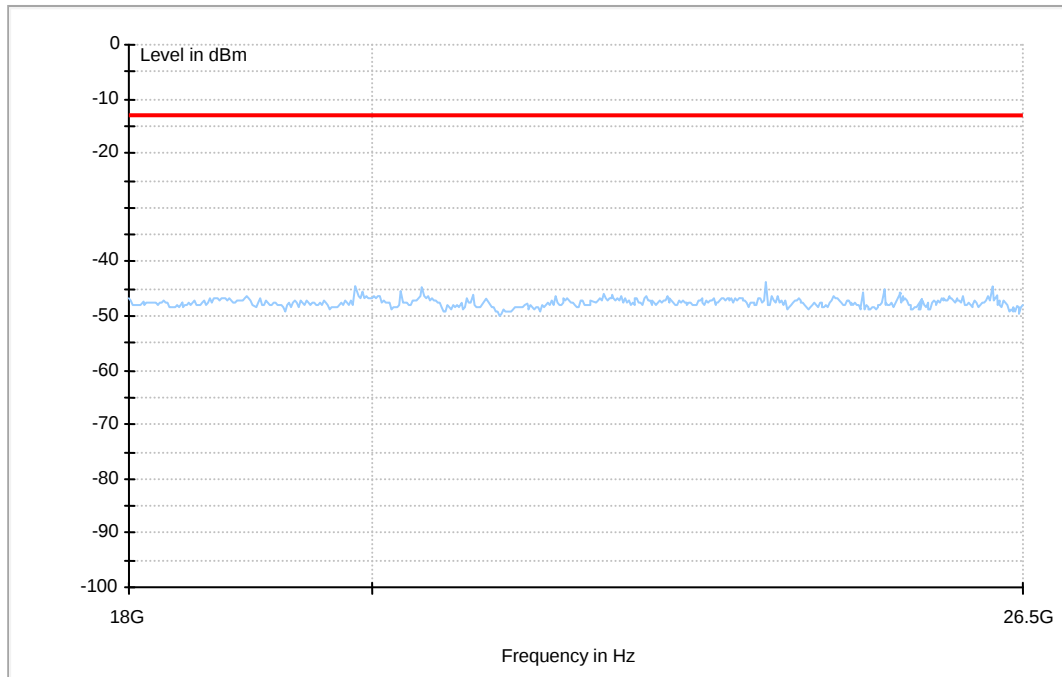


Traffic Mode (3GHz-18GHz)





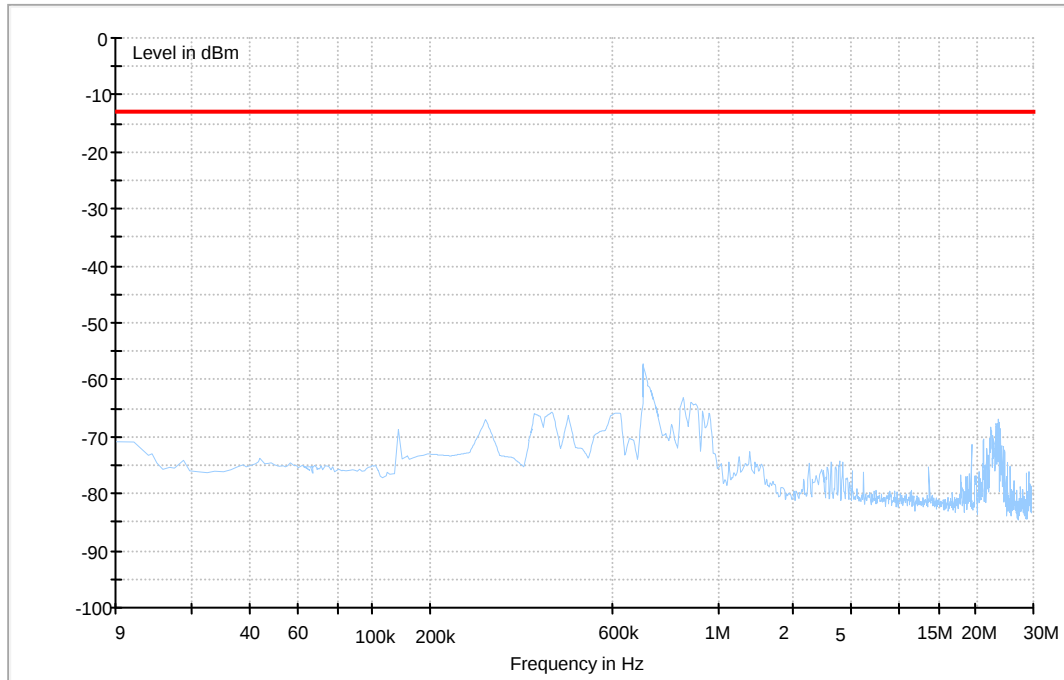
Traffic Mode (18GHz-26.5GHz)





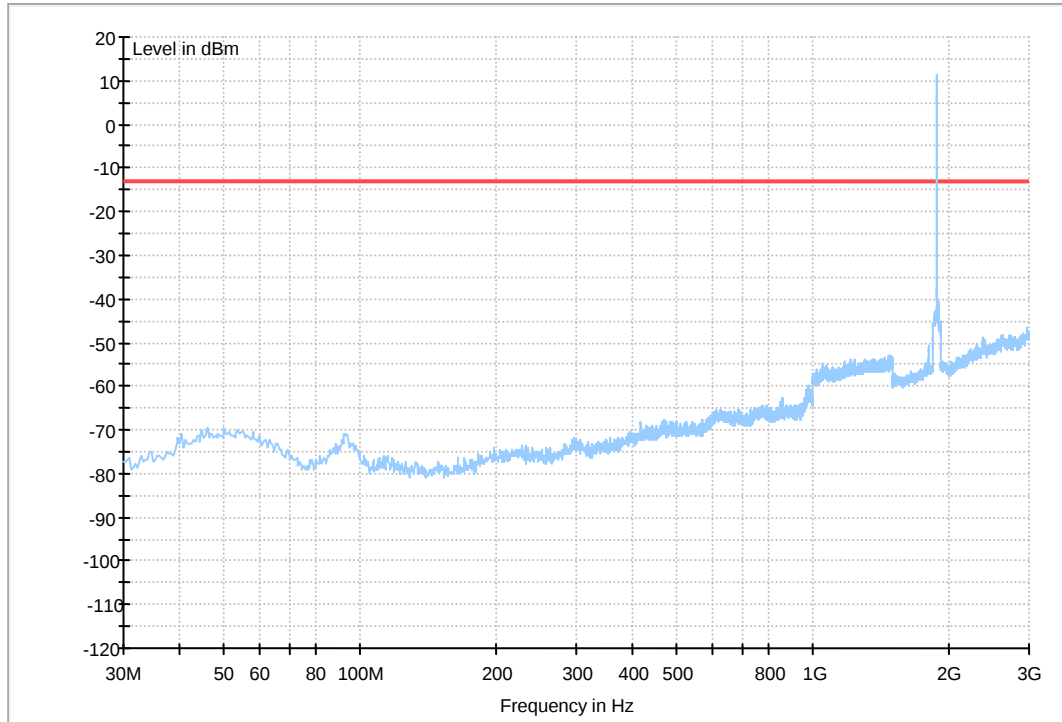
LTE BAND 2 (5MHz)

Traffic Mode (9kHz-30MHz)



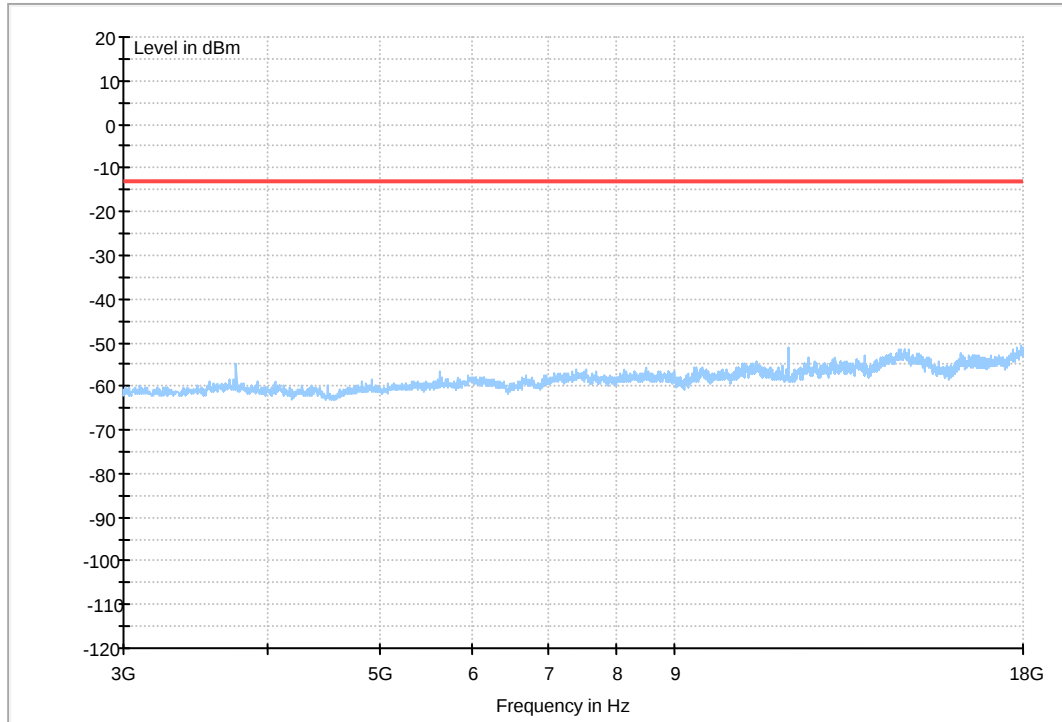


Traffic Mode (30MHz-3GHz)



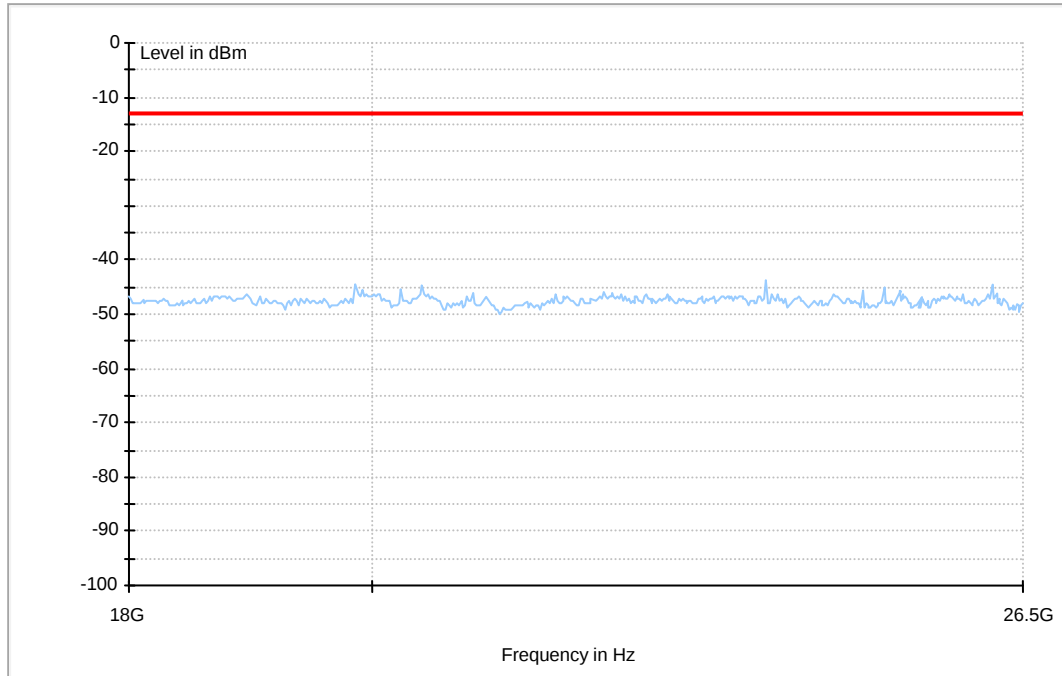


Traffic Mode (3GHz-18GHz)





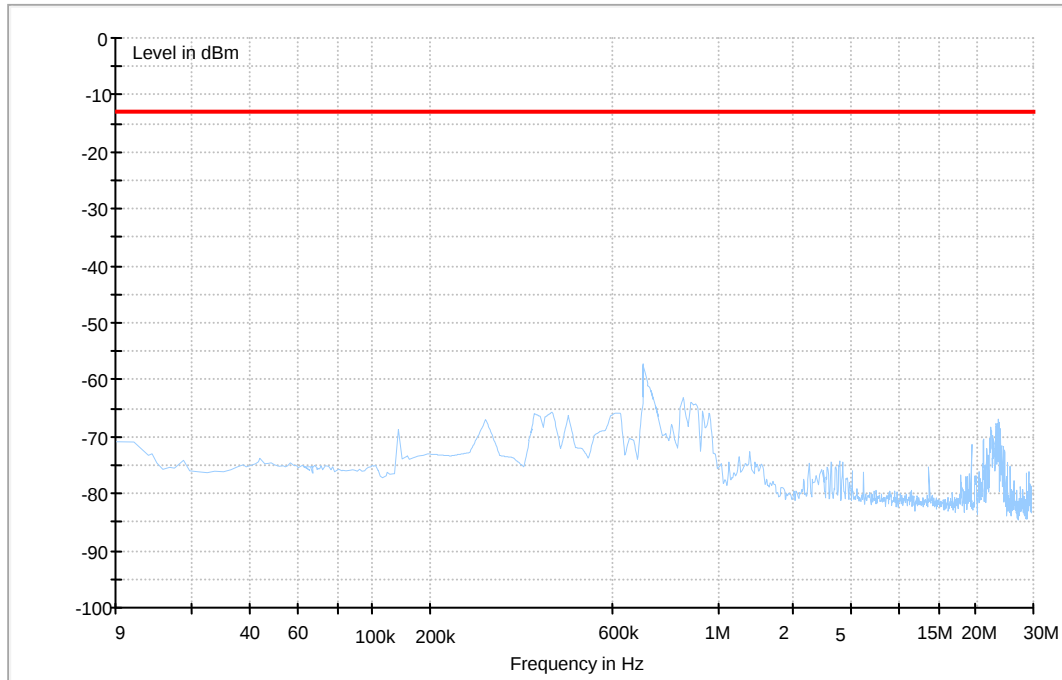
Traffic Mode (18GHz-26.5GHz)





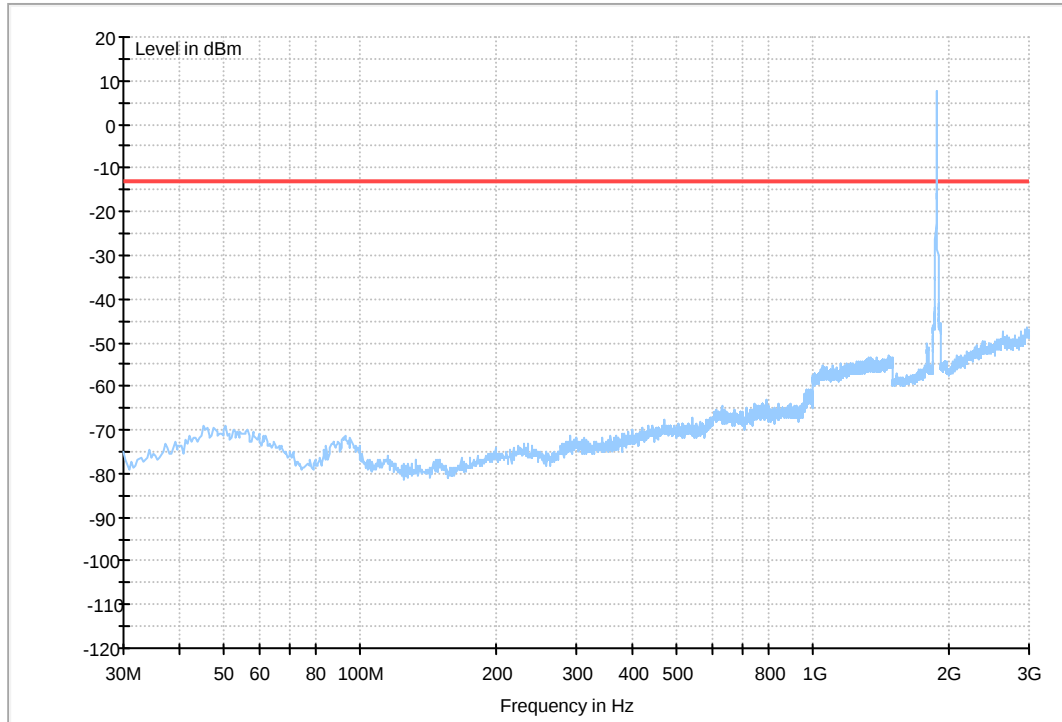
LTE BAND 2 (10MHz)

Traffic Mode (9kHz-30MHz)



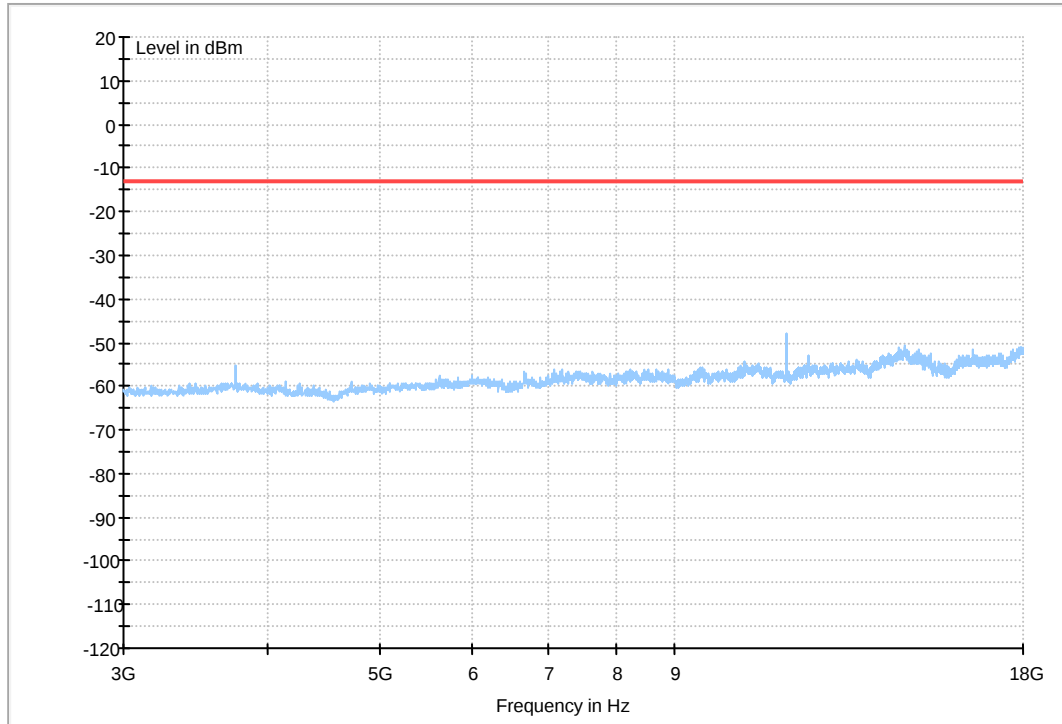


Traffic Mode (30MHz-3GHz)



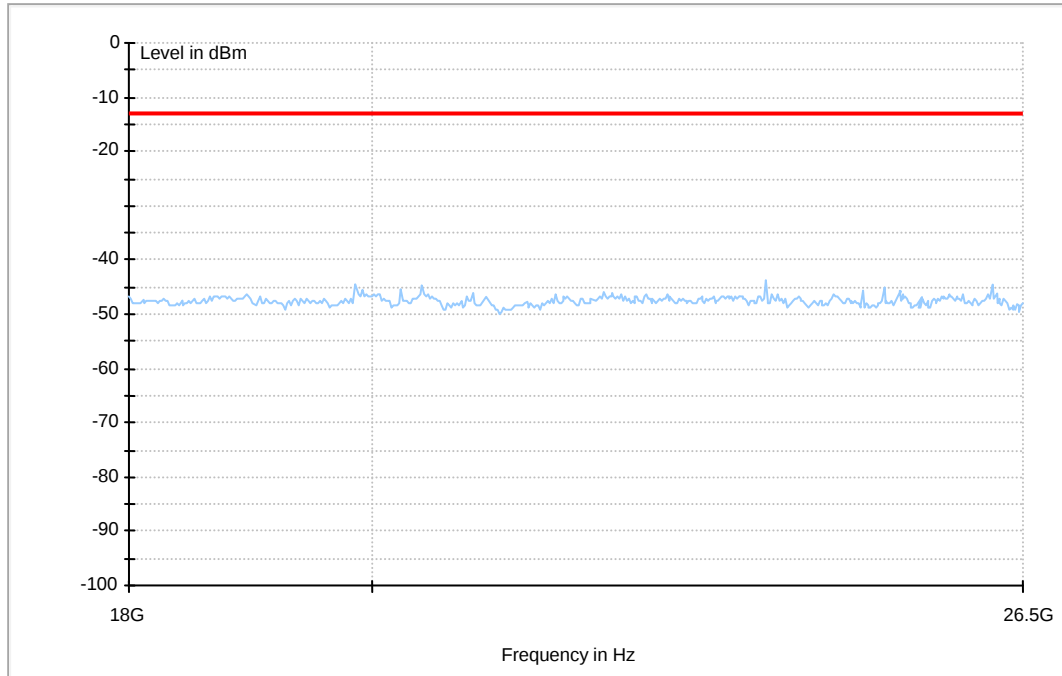


Traffic Mode (3GHz-18GHz)





Traffic Mode (18GHz-26.5GHz)





Appendix G

Frequency Stability

According to FCC Part 2.1055& Part 24.235



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	12	0.0064	---	±2.5	Pass
			-20 °C	-10	-0.0053	---	±2.5	Pass
			-10 °C	-9	-0.0048	---	±2.5	Pass
			0 °C	7	0.0037	---	±2.5	Pass
			10 °C	-18	-0.0096	---	±2.5	Pass
			20 °C	-16	-0.0085	---	±2.5	Pass
			30 °C	19	0.0101	---	±2.5	Pass
			40 °C	-18	-0.0096	---	±2.5	Pass
TM 3	M	100%	50 °C	-12	-0.0064	---	±2.5	Pass
			-30 °C	11	0.0059	---	±2.5	Pass
			-20 °C	14	0.0074	---	±2.5	Pass
			-10 °C	-10	-0.0053	---	±2.5	Pass
			0 °C	-16	-0.0085	---	±2.5	Pass
			10 °C	18	0.0096	---	±2.5	Pass
			20 °C	-10	-0.0053	---	±2.5	Pass
			30 °C	9	0.0048	---	±2.5	Pass
Subtype 0	M	100%	40 °C	-15	-0.0080	---	±2.5	Pass
			50 °C	-14	-0.0074	---	±2.5	Pass
			-30 °C	8	0.0043	---	±2.5	Pass
			-20 °C	-10	-0.0053	---	±2.5	Pass
			-10 °C	-14	-0.0074	---	±2.5	Pass
			0 °C	15	0.0080	---	±2.5	Pass
			10 °C	16	0.0085	---	±2.5	Pass
			20 °C	-16	-0.0085	---	±2.5	Pass
Subtype 2	M	100%	30 °C	-11	-0.0059	---	±2.5	Pass
			40 °C	7	0.0037	---	±2.5	Pass
			50 °C	-6	-0.0032	---	±2.5	Pass
			-30 °C	8	0.0043	---	±2.5	Pass
			-20 °C	10	0.0053	---	±2.5	Pass
			-10 °C	-15	-0.0080	---	±2.5	Pass
			0 °C	-12	-0.0064	---	±2.5	Pass
			10 °C	14	0.0074	---	±2.5	Pass
			20 °C	18	0.0096	---	±2.5	Pass
			30 °C	-17	-0.0090	---	±2.5	Pass
			40 °C	-7	-0.0037	---	±2.5	Pass
			50 °C	13	0.0069	---	±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%	-30 °C	-8	-0.0043	---	±2.5	Pass
			-20 °C	-13	-0.0069	---	±2.5	Pass
			-10 °C	15	0.0080	---	±2.5	Pass
			0 °C	16	0.0085	---	±2.5	Pass
			10 °C	-12	-0.0064	---	±2.5	Pass
			20 °C	-10	-0.0053	---	±2.5	Pass
			30 °C	14	0.0074	---	±2.5	Pass
			40 °C	-7	-0.0037	---	±2.5	Pass
			50 °C	-10	-0.0053	---	±2.5	Pass
TM 4(3M)	M	100%	-30 °C	8	0.0043	---	±2.5	Pass
			-20 °C	9	0.0048	---	±2.5	Pass
			-10 °C	-7	-0.0037	---	±2.5	Pass
			0 °C	-18	-0.0096	---	±2.5	Pass
			10 °C	13	0.0069	---	±2.5	Pass
			20 °C	-14	-0.0074	---	±2.5	Pass
			30 °C	11	0.0059	---	±2.5	Pass
			40 °C	-9	-0.0048	---	±2.5	Pass
			50 °C	-7	-0.0037	---	±2.5	Pass
TM 4(5M)	M	100%	-30 °C	6	0.0032	---	±2.5	Pass
			-20 °C	-15	-0.0080	---	±2.5	Pass
			-10 °C	16	0.0085	---	±2.5	Pass
			0 °C	-18	-0.0096	---	±2.5	Pass
			10 °C	14	0.0074	---	±2.5	Pass
			20 °C	12	0.0064	---	±2.5	Pass
			30 °C	10	0.0053	---	±2.5	Pass
			40 °C	-8	-0.0043	---	±2.5	Pass
			50 °C	-10	-0.0053	---	±2.5	Pass
TM 4(10M)	M	100%	-30 °C	9	0.0048	---	±2.5	Pass
			-20 °C	-15	-0.0080	---	±2.5	Pass
			-10 °C	18	0.0096	---	±2.5	Pass
			0 °C	-19	-0.0101	---	±2.5	Pass
			10 °C	-14	-0.0074	---	±2.5	Pass
			20 °C	-11	-0.0059	---	±2.5	Pass
			30 °C	13	0.0069	---	±2.5	Pass
			40 °C	-9	-0.0048	---	±2.5	Pass
			50 °C	15	0.0080	---	±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	20	0.0106	---	±2.5	Pass
			VN	-17	-0.0090	---	±2.5	Pass
			VH	9	0.0048	---	±2.5	Pass
TM 3	M	20 °C	VL	-14	-0.0074	---	±2.5	Pass
			VN	-11	-0.0059	---	±2.5	Pass
			VH	10	0.0053	---	±2.5	Pass
Subtype 0	M	20 °C	VL	-11	-0.0059	---	±2.5	Pass
			VN	12	0.0064	---	±2.5	Pass
			VH	-14	-0.0074	---	±2.5	Pass
Subtype 2	M	20 °C	VL	15	0.0080	---	±2.5	Pass
			VN	-18	-0.0096	---	±2.5	Pass
			VH	-15	-0.0080	---	±2.5	Pass
TM4(1.4M)	M	20 °C	VL	14	0.0074	---	±2.5	Pass
			VN	-13	-0.0069	---	±2.5	Pass
			VH	18	0.0096	---	±2.5	Pass
TM4(3M)	M	20 °C	VL	14	0.0074	---	±2.5	Pass
			VN	-16	-0.0085	---	±2.5	Pass
			VH	-10	-0.0053	---	±2.5	Pass
TM4(5M)	M	20 °C	VL	-9	-0.0048	---	±2.5	Pass
			VN	11	0.0059	---	±2.5	Pass
			VH	-15	-0.0080	---	±2.5	Pass
TM4(10M)	M	20 °C	VL	18	0.0096	---	±2.5	Pass
			VN	-13	-0.0069	---	±2.5	Pass
			VH	-12	-0.0064	---	±2.5	Pass