Appendix A

Transmitter Output Power

According to FCC Part 2.1046 & Part24.232

Conducted Power of Transmitter

		RF Output Power (Conducted)					
TEST CONDITIONS		Channel512(B)		Channel661(M)		Channel810(T)	
		1850.2MHz		1880.0MHz		1909.8MHz	
		dBm		dBm		dBm	
T_{nom} / V_{nom}		Measured	Limit	Measured	Limit	Measured	Limit
TM1		29.62	33	29.65	33	29.66	33
TM2		26.09	33	26.06	33	26.12	33
TEST CONDITIONS		Channel9262(B)		Channel9400(M)		Channel9538(T)	
		1852.4MHz		1880.0MHz		1907.6MHz	
		dBm		dBm		dBm	
T_{nom} / V_{nom}		Measured	Limit	Measured	Limit	Measured	Limit
TM3		23.42	33	23.24	33	23.49	33
TM4	Case1	23.34	33	23.18	33	23.39	33
	Case2	22.55	33	22.41	33	22.63	33
	Case3	21.98	33	21.82	33	22.05	33
	Case4	21.69	33	21.58	33	21.81	33
TM5	Case1	22.21	33	22.03	33	22.24	33
	Case2	20.37	33	20.22	33	20.46	33
	Case3	21.18	33	21	33	21.27	33
	Case4	20.64	33	20.55	33	20.74	33
	Case5	22.37	33	22.15	33	22.43	33

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Effective Isotropic Radiated Power of Transmitter (EIRP)

Test Mode	Freq. [MHz]	Meas. Level [dBm]	Substitution Antenna Type	SGP [dBm]	Substitution Gain [dBi]	Cable Loss [dB]	Substitution Level (EIRP) [dBm]	FCC limit [dBm]	Result
TM1	1850.2	32.22	Horn Ant.	28.71	4.5	1	32.21	33	Pass
TM1	1880.0	32.25	Horn Ant.	28.72	4.5	1	32.22	33	Pass
TM1	1909.8	32.26	Horn Ant.	28.41	4.8	1	32.21	33	Pass
TM2	1850.2	28.69	Horn Ant.	25.15	4.5	1	28.65	33	Pass
TM2	1880.0	28.66	Horn Ant.	25.26	4.5	1	28.76	33	Pass
TM2	1909.8	28.72	Horn Ant.	24.98	4.8	1	28.78	33	Pass
TM3	1852.4	26.02	Horn Ant.	22.57	4.5	1	26.07	33	Pass
TM3	1880.0	25.84	Horn Ant.	22.36	4.5	1	25.86	33	Pass
TM3	1907.6	26.09	Horn Ant.	22.39	4.8	1	26.19	33	Pass

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

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

b, SGP=Signal Generator Level

----------The END----------

Appendix B

Modulation Characteristics

According to FCC Part 2.1047 & Part24 Subpart E

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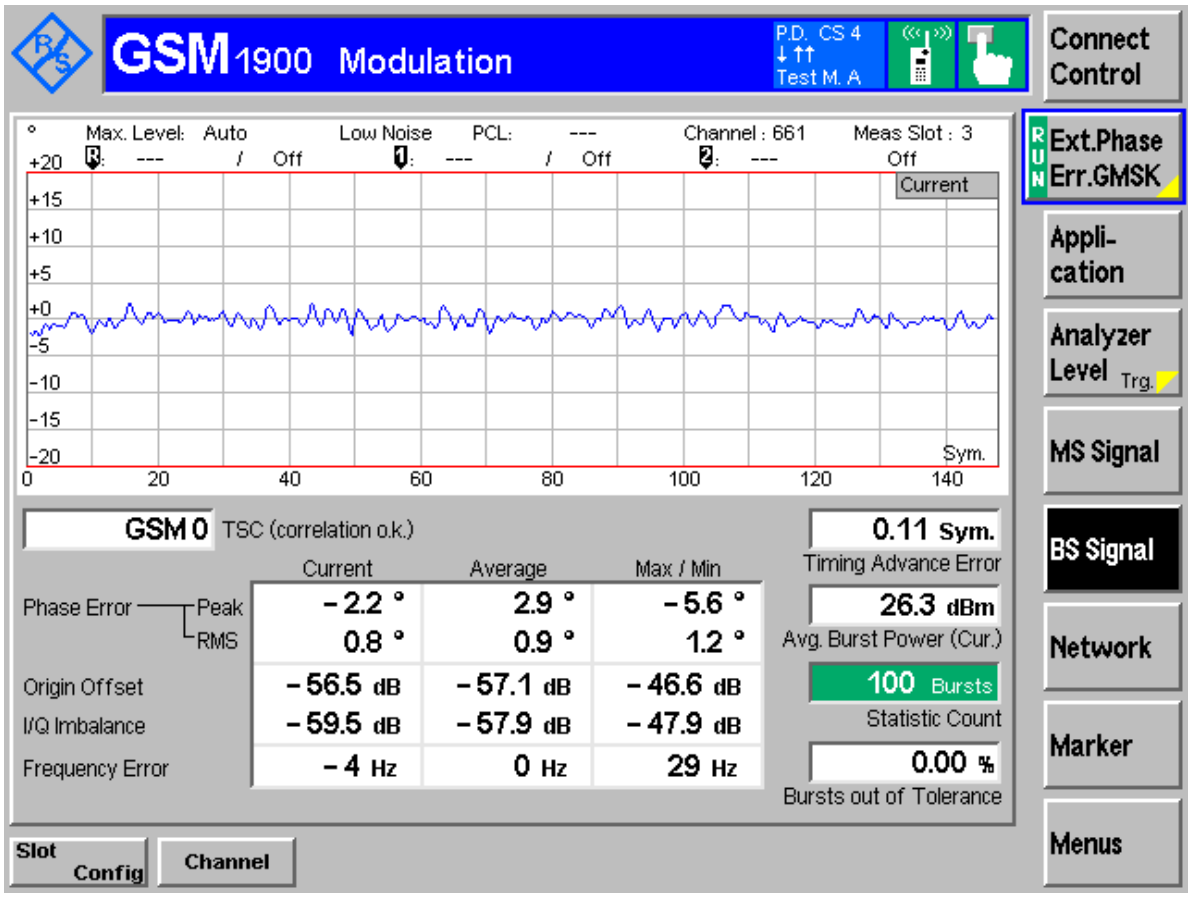
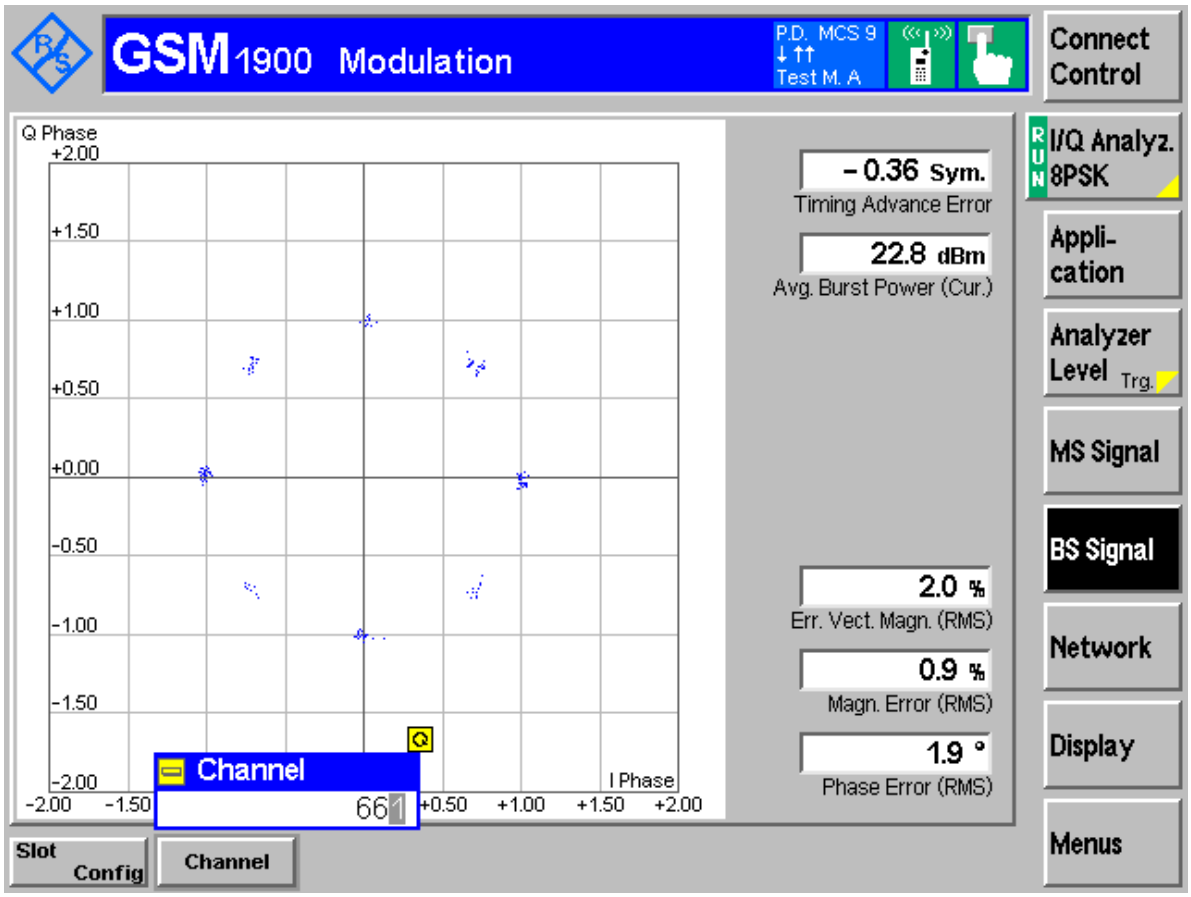
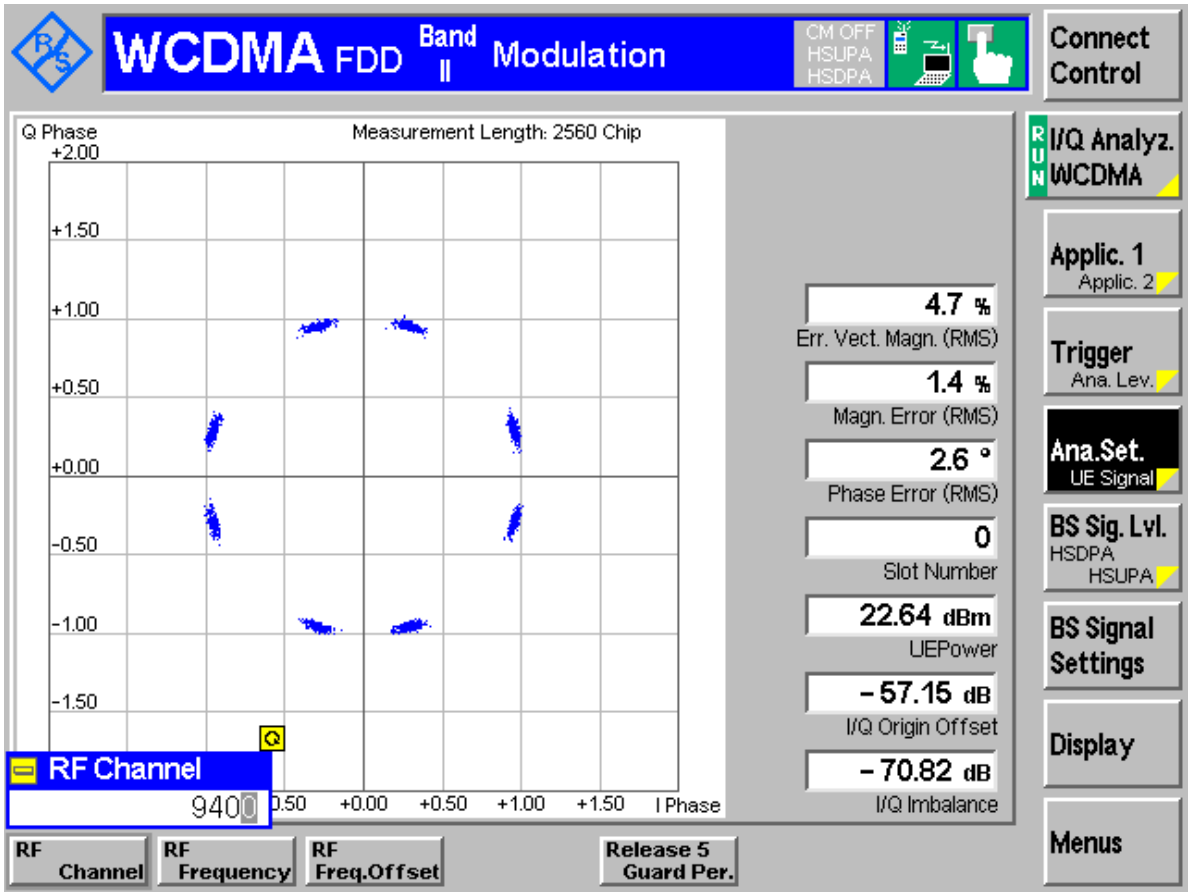
TM1:GPRS/GSM
Channel 661



TM2:EDGE
Channel 661



TM3: WCDMA
Channel 9400



----------The END----------

Appendix C

Occupied Bandwidth

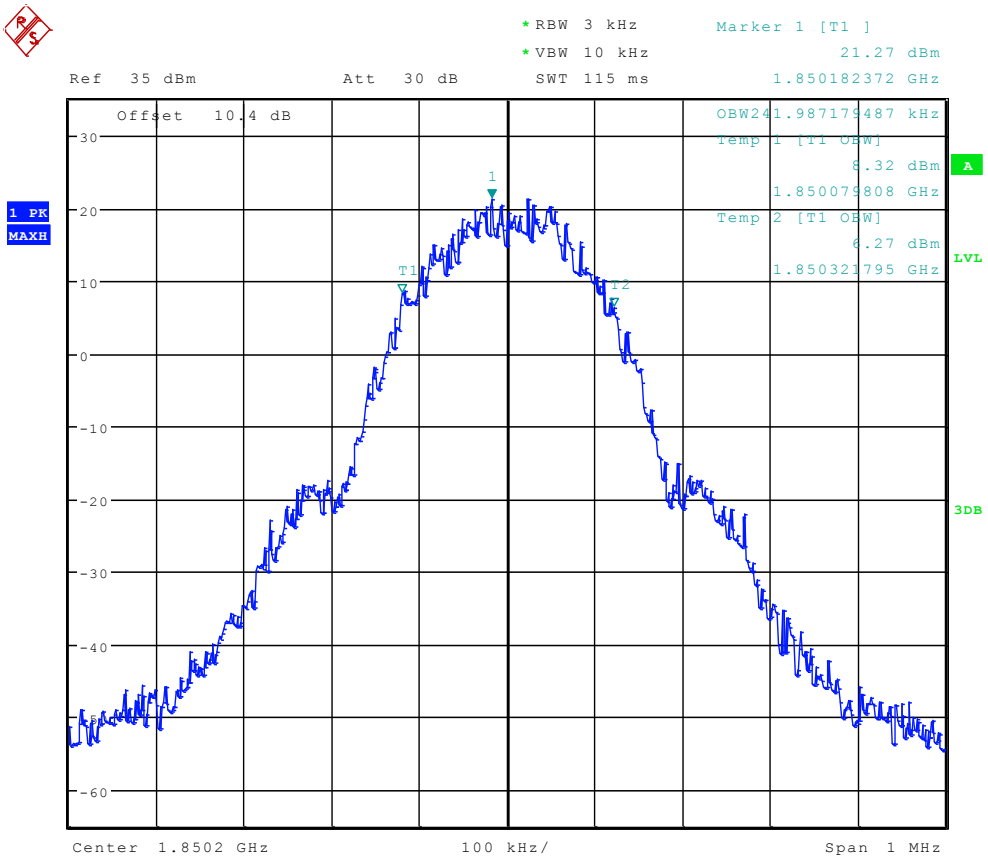
According to FCC Part 2.1049 & Part24 Subpart E

Result Table

Table 1 Measurement Results

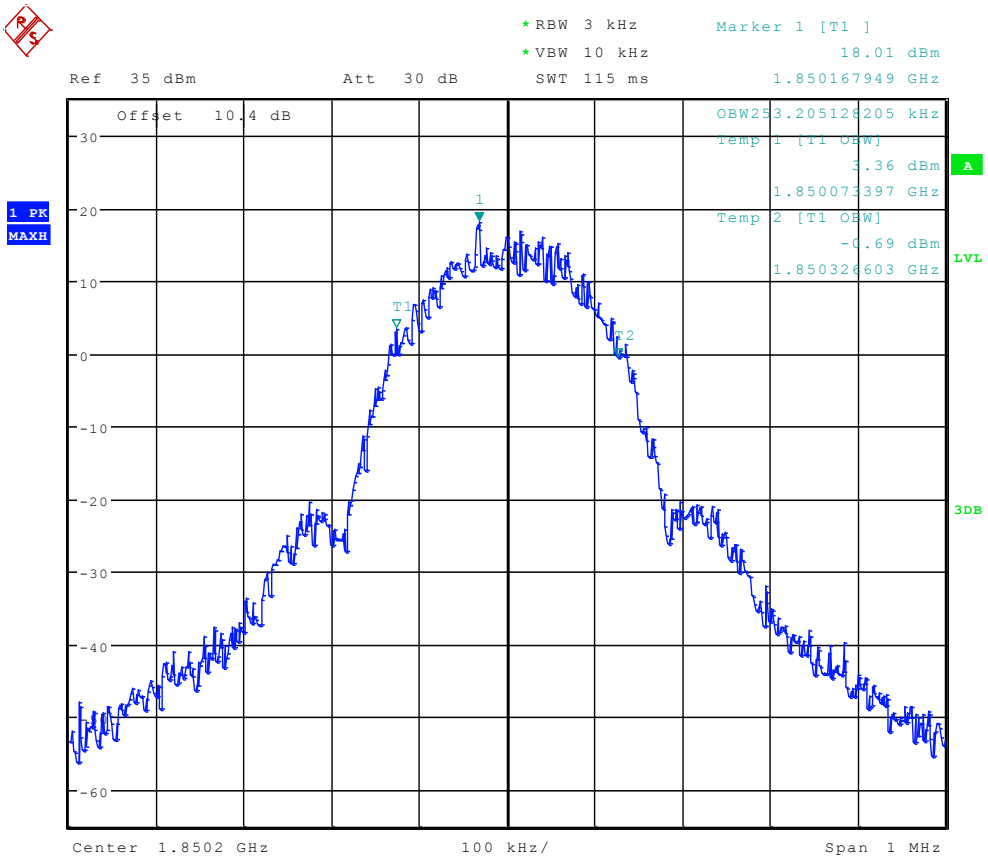
Test Mode	RF Channel	Occupied Bandwidth [kHz]	Verdict
TM1	512	241.99	Pass
	661	245.19	Pass
	810	245.19	Pass
TM2	512	253.21	Pass
	661	248.40	Pass
	810	246.79	Pass
Test Mode	RF Channel	Occupied Bandwidth [MHz]	Verdict
TM3	9262	4.07	Pass
	9400	4.05	Pass
	9538	4.05	Pass

TM1:GPRS/GSM
Channel 512



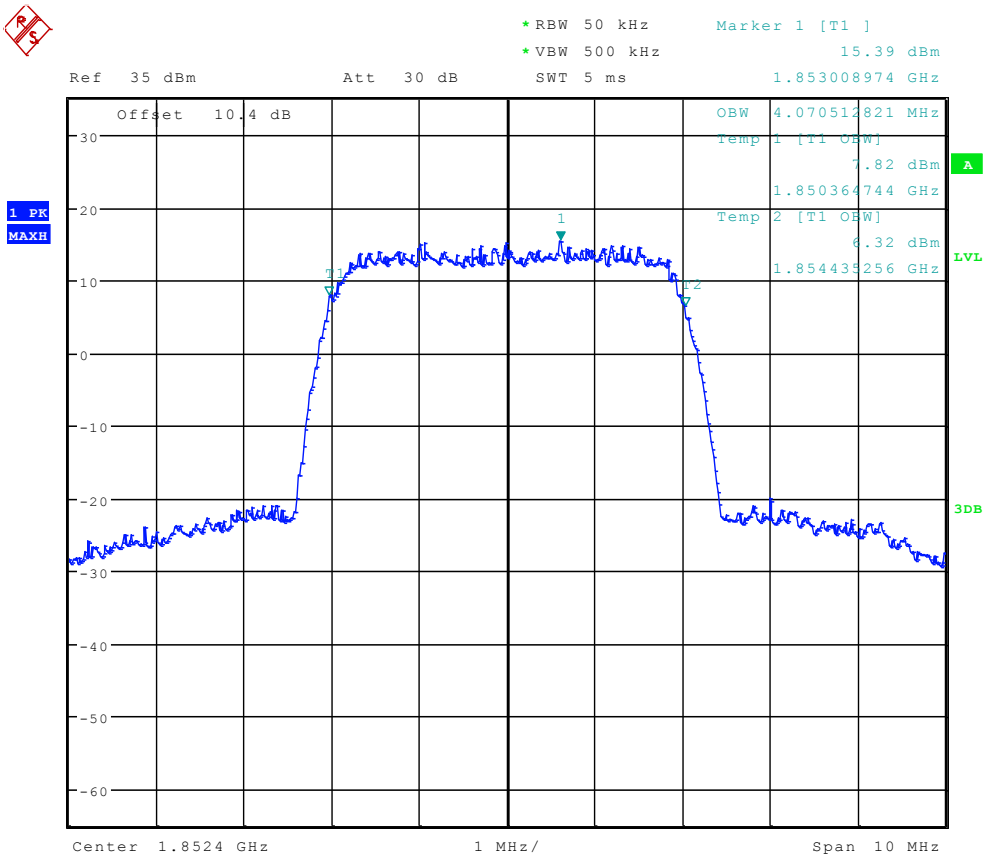
Date: 8.FEB.2012 23:53:21

TM2:EDGE
Channel 512



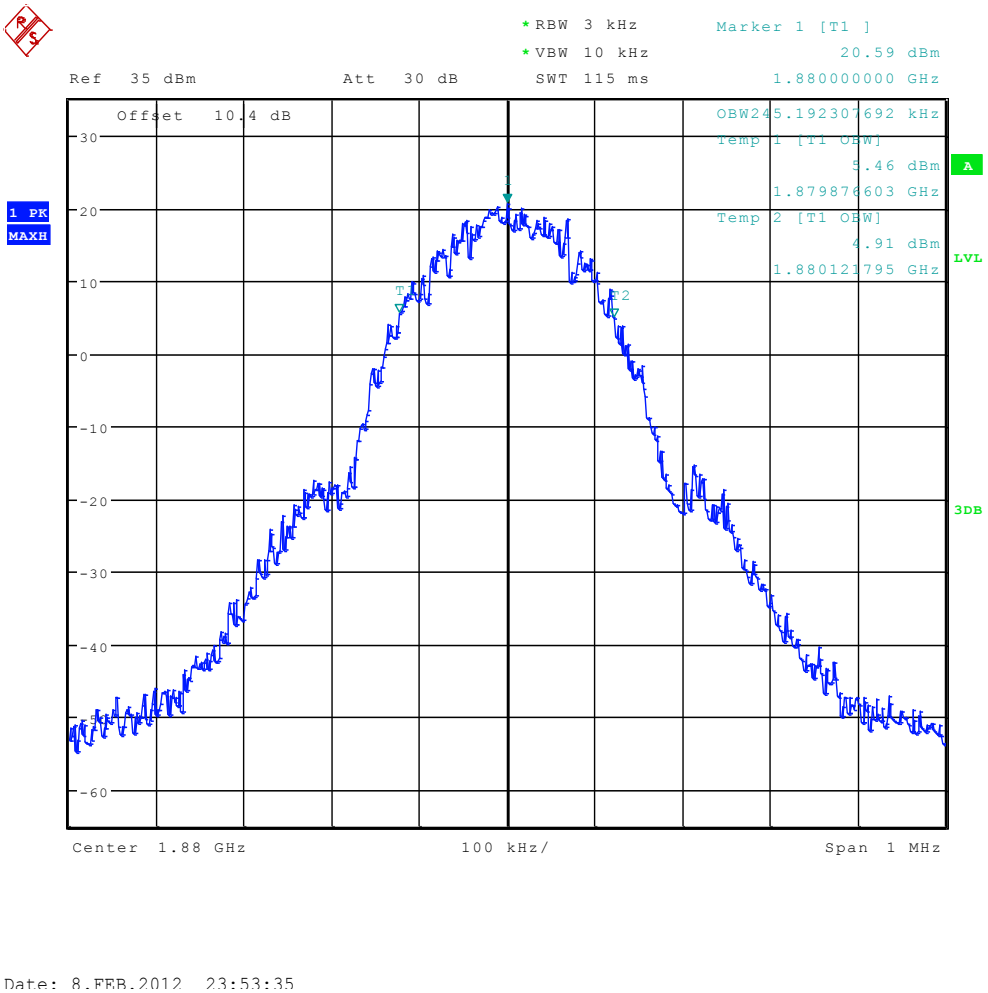
Date: 8.FEB.2012 23:59:02

TM3: WCDMA
Channel 9262



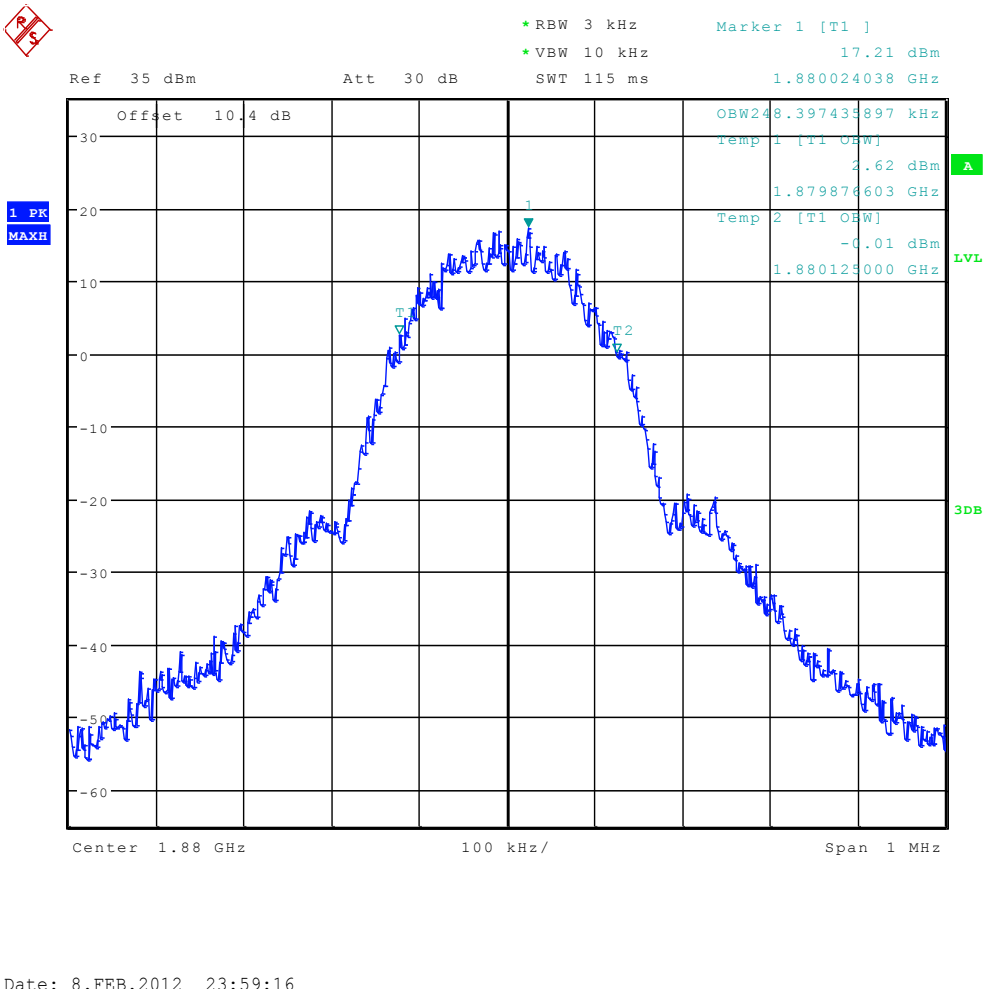
Date: 9.FEB.2012 00:03:24

TM1:GPRS/GSM
Channel 661



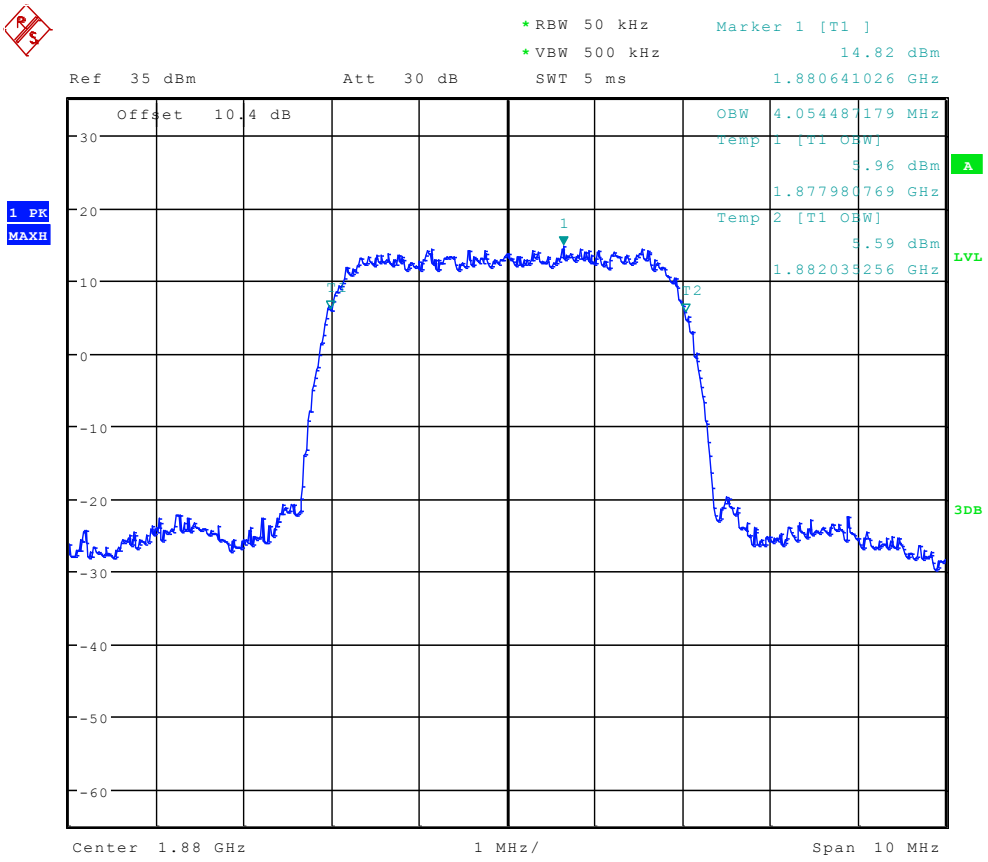
Date: 8.FEB.2012 23:53:35

TM2:EDGE
Channel 661



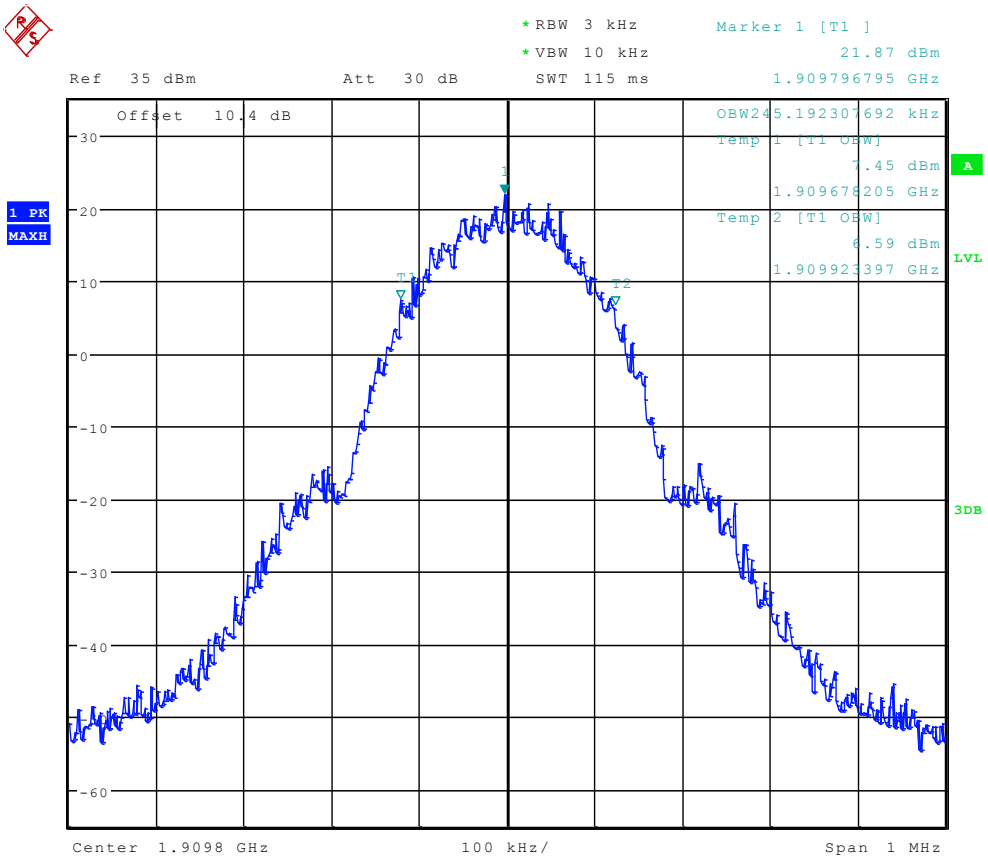
Date: 8.FEB.2012 23:59:16

TM3: WCDMA
Channel 9400



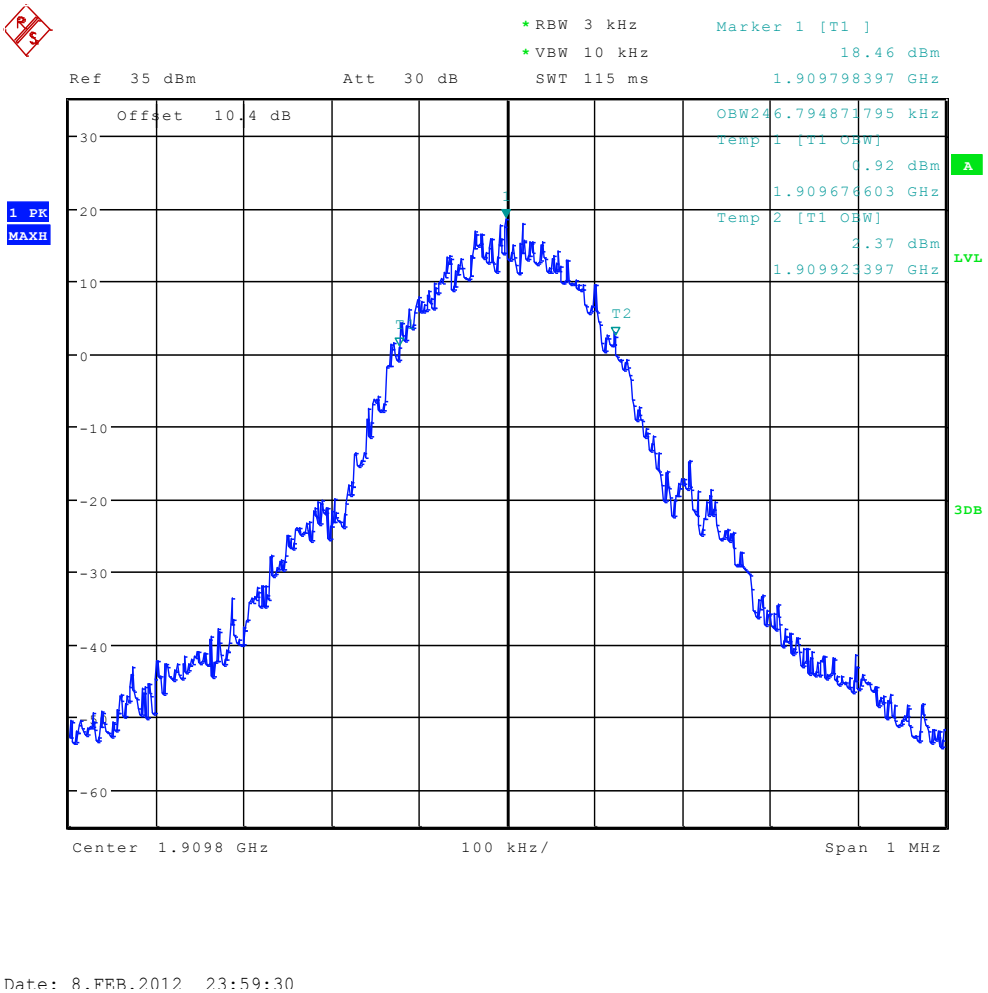
Date: 9.FEB.2012 00:03:38

TM1:GPRS/GSM
Channel 810



Date: 8.FEB.2012 23:53:49

TM2:EDGE
Channel 810



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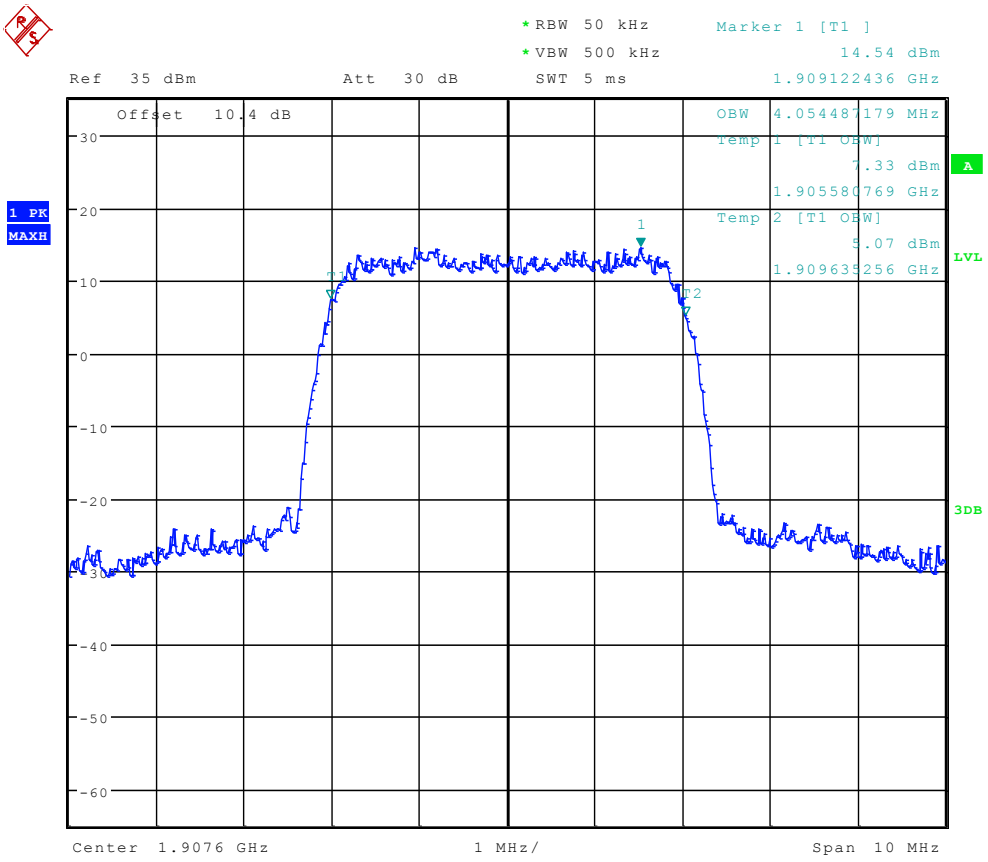
TM3: WCDMA
Channel 9538



Date: 9.FEB.2012 00:03:51

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Appendix D

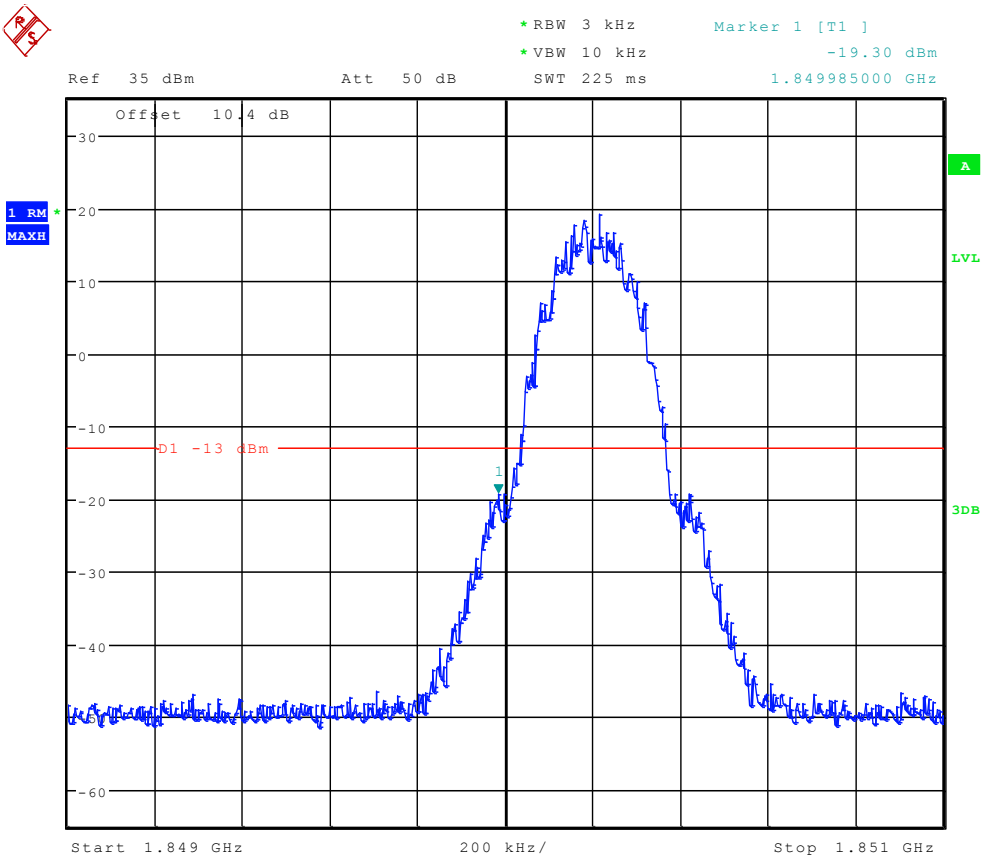
Band Edges Compliance

According to FCC Part 2.1051 & Part24 Subpart E

TM1:GPRS/GSM

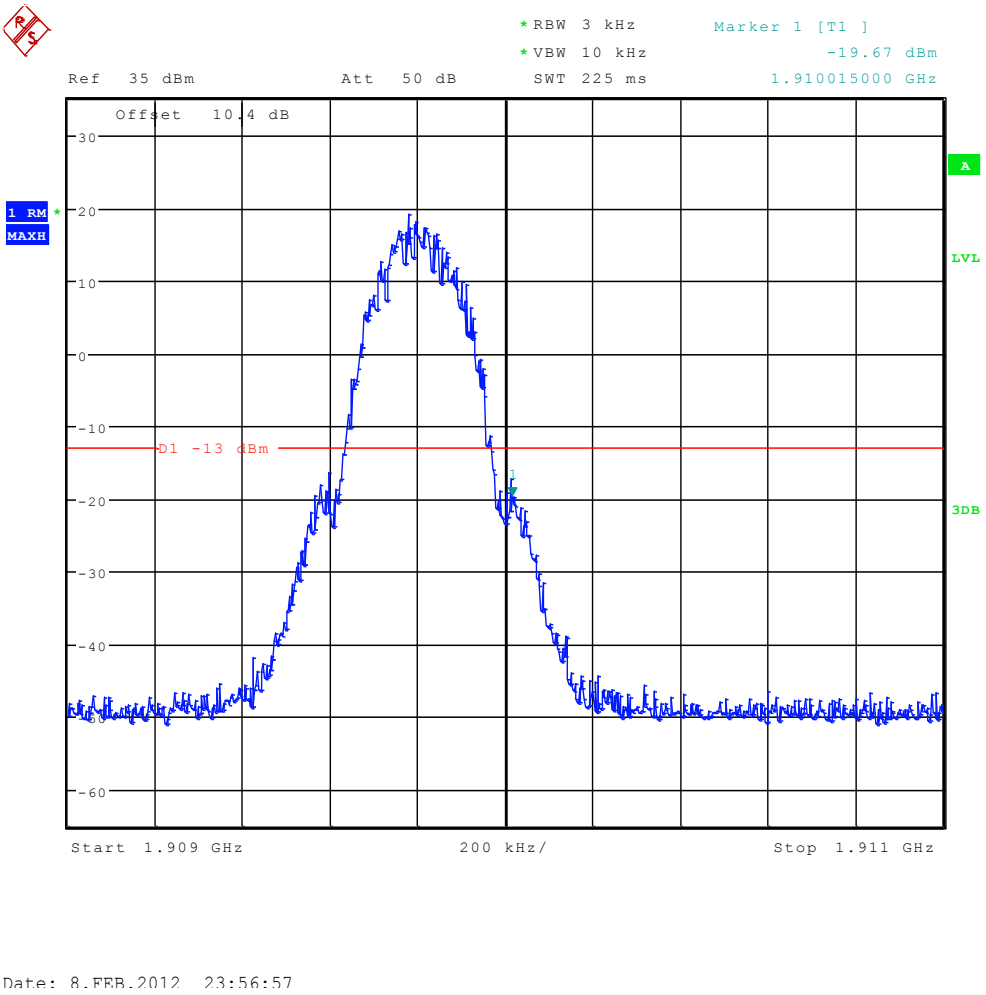
Left Edge

Channel 512



Date: 8.FEB.2012 23:56:26

Right Edge
Channel 810

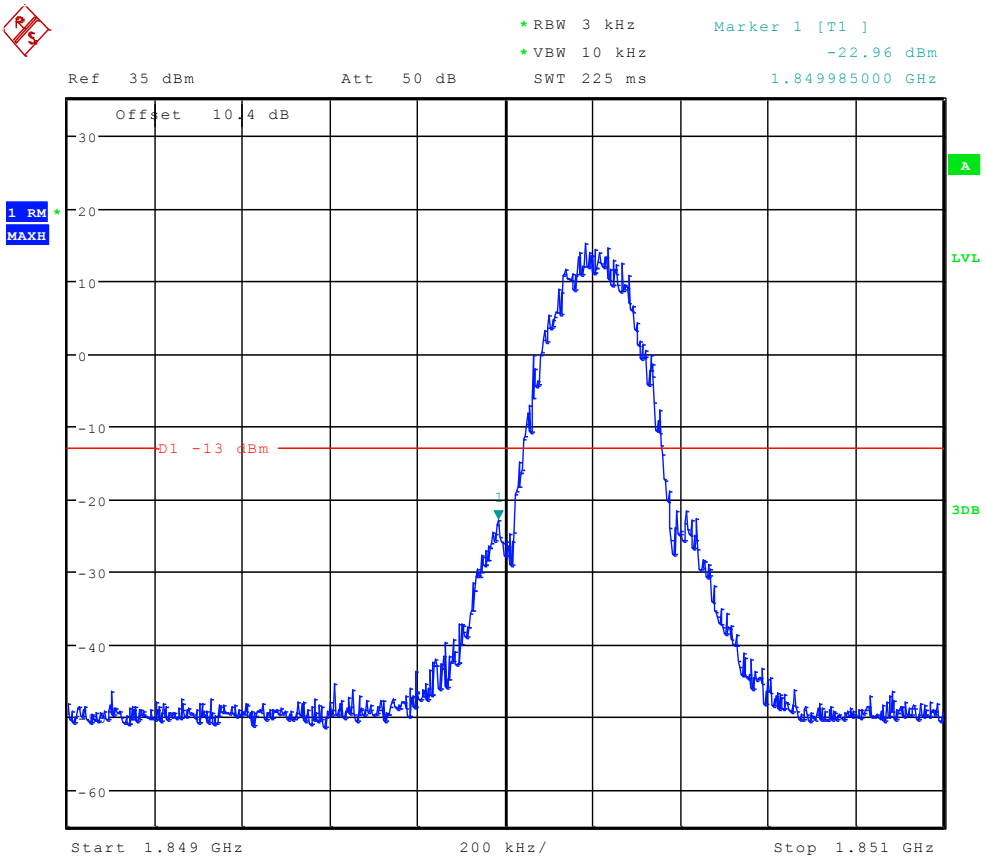


Date: 8.FEB.2012 23:56:57

TM2:EDGE

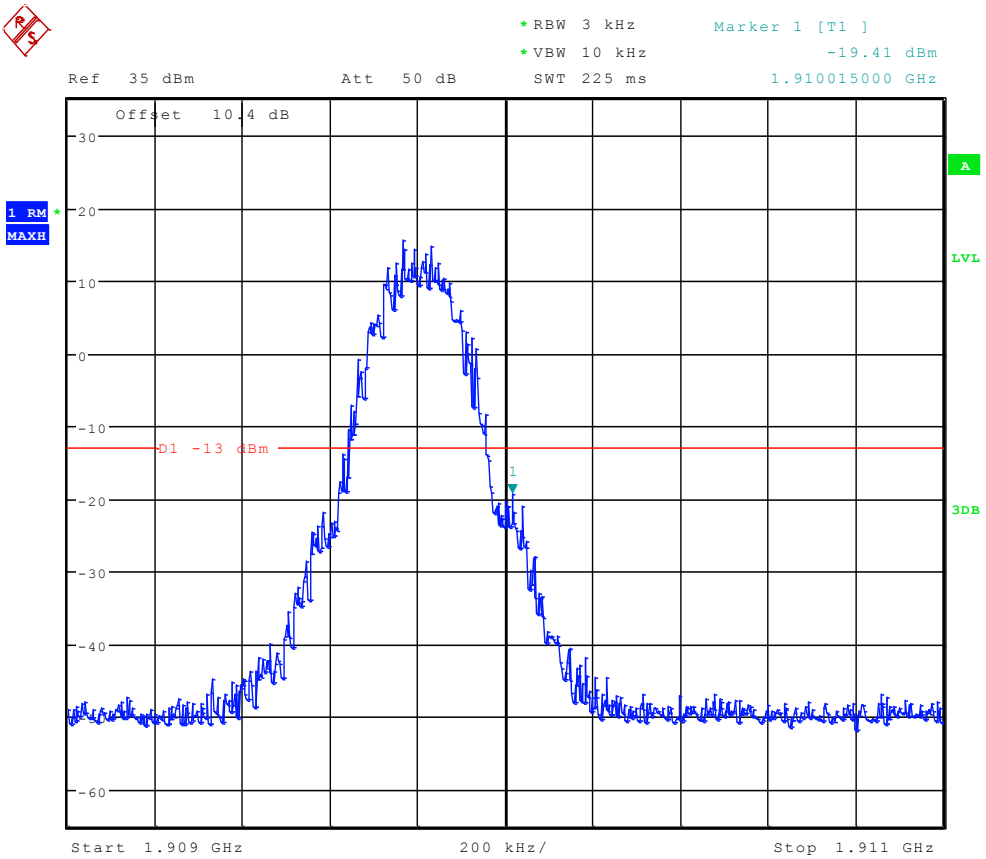
Left Edge

Channel 512



Date: 8.FEB.2012 23:58:23

Right Edge
Channel 810



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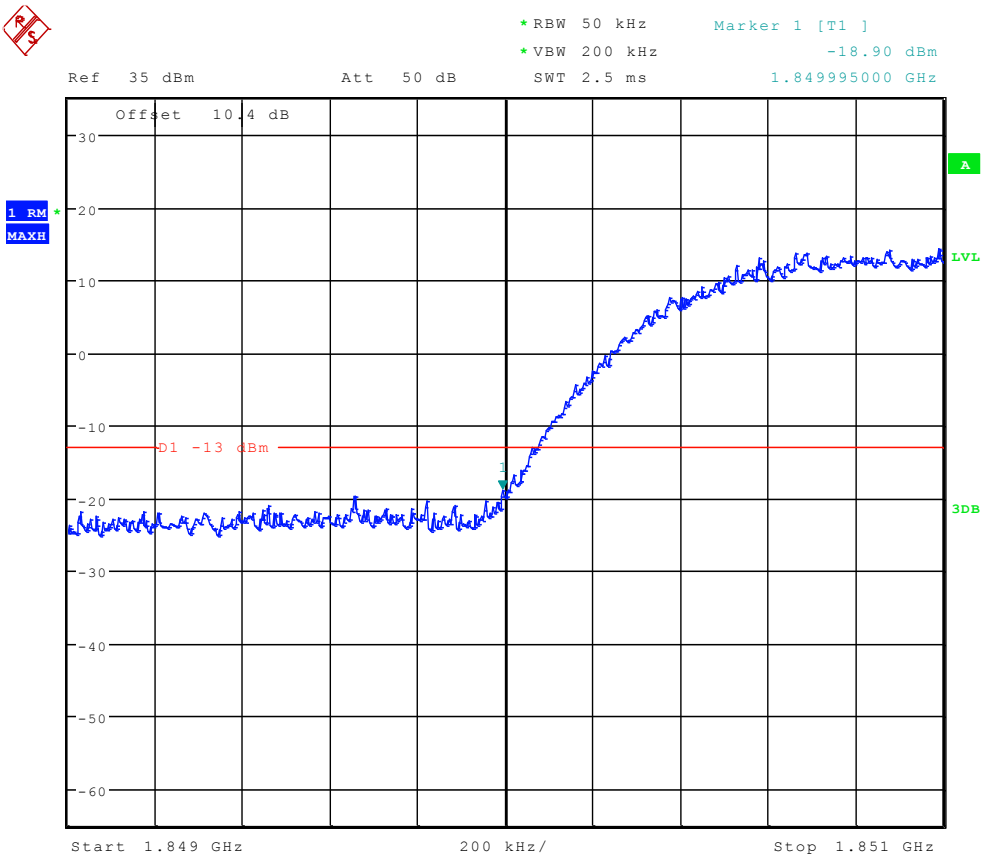
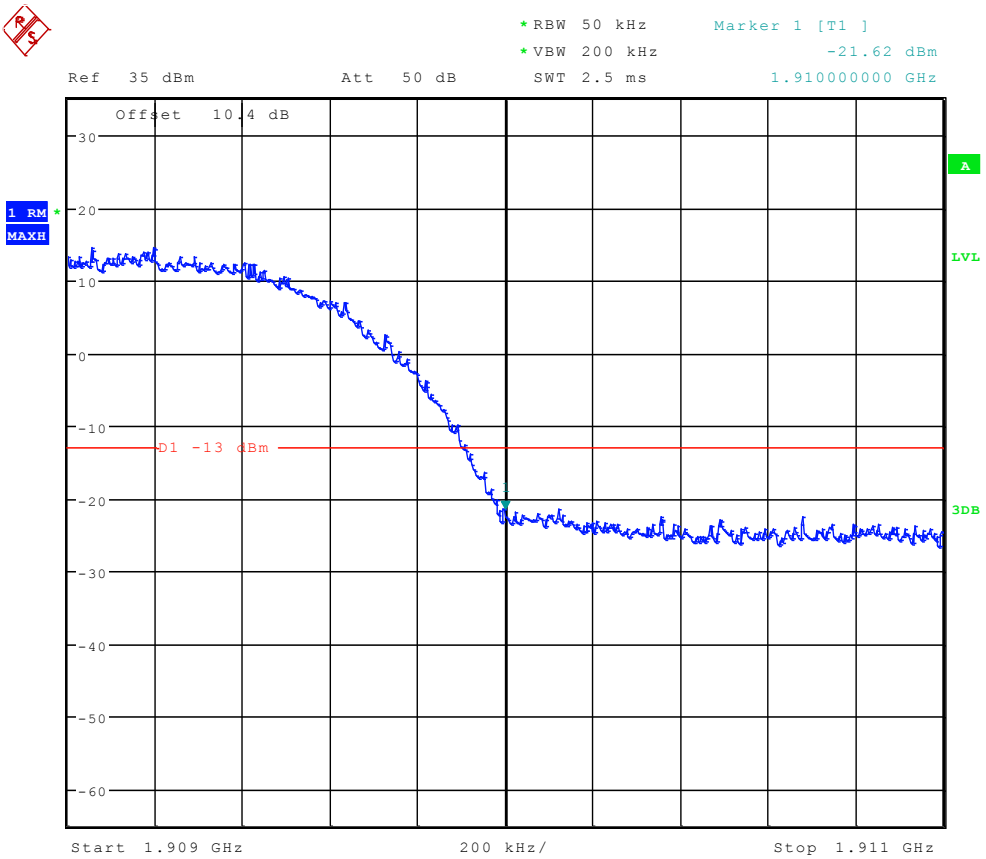
TM3: WCDMA

Left Edge
Channel 9262



Date: 9.FEB.2012 00:04:06

Right Edge
Channel 9538



Date: 9.FEB.2012 00:04:19

----------The END----------

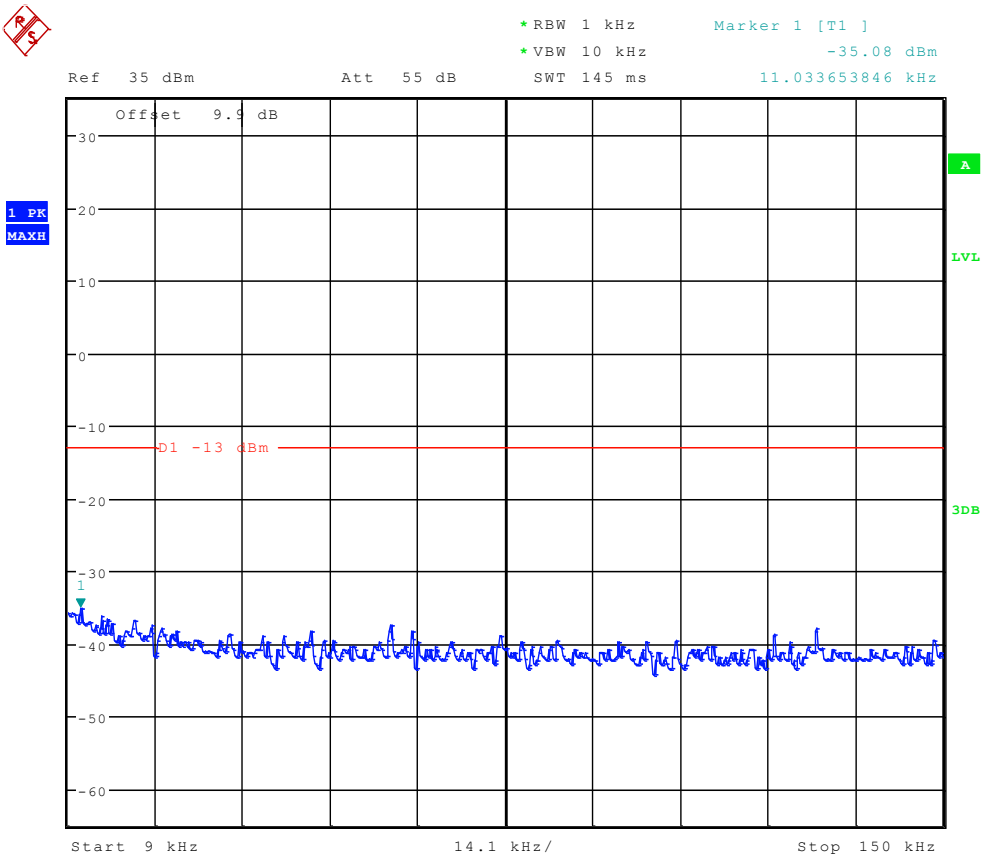
Appendix E

Spurious Emission at Antenna Terminal

According to FCC Part 2.1051 & Part24 Subpart E

TM1:GPRS/GSM

Channel 512



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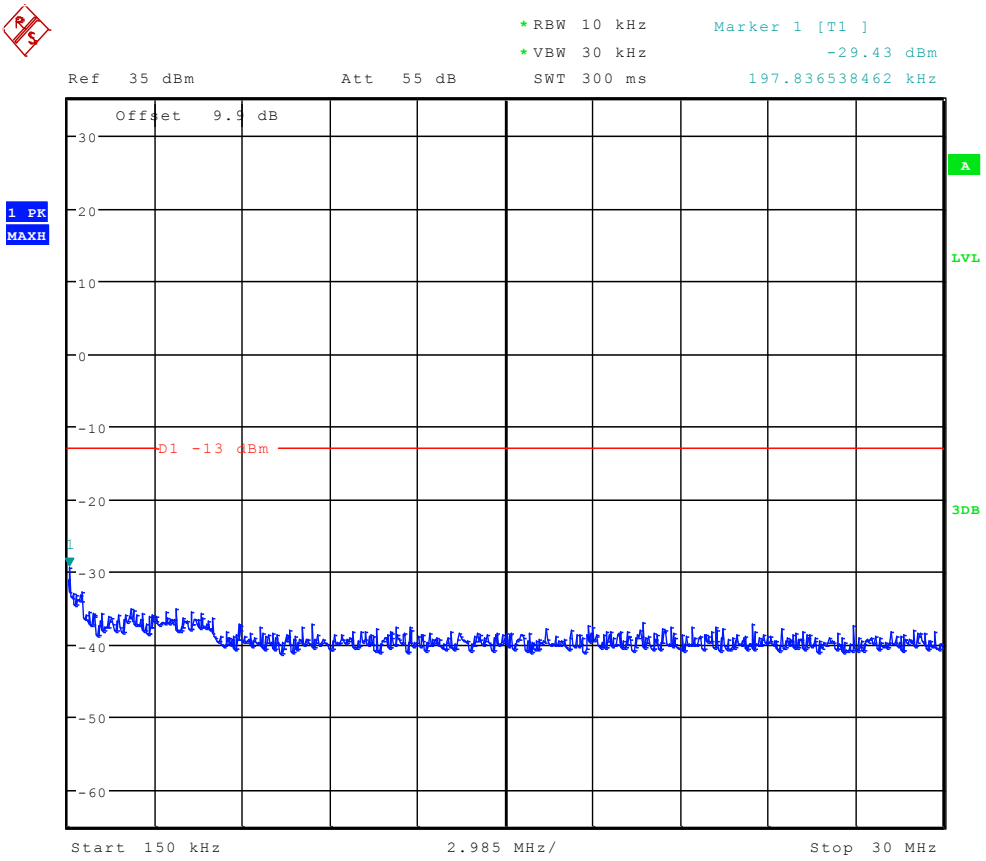

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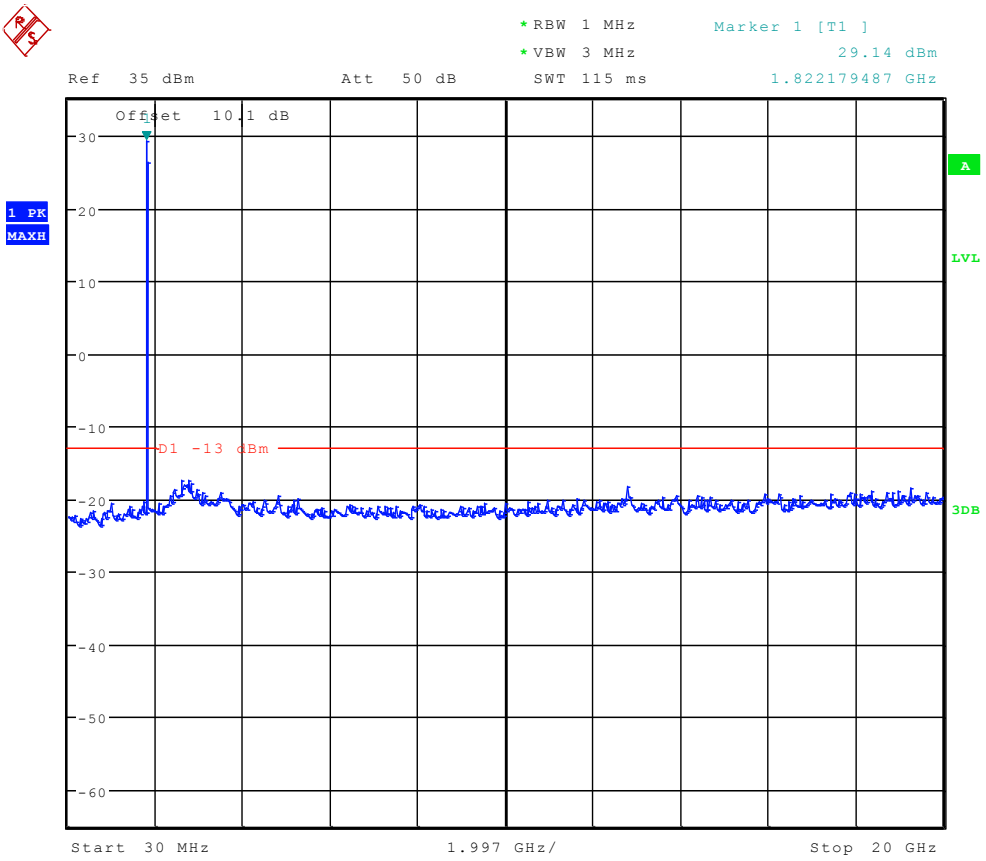
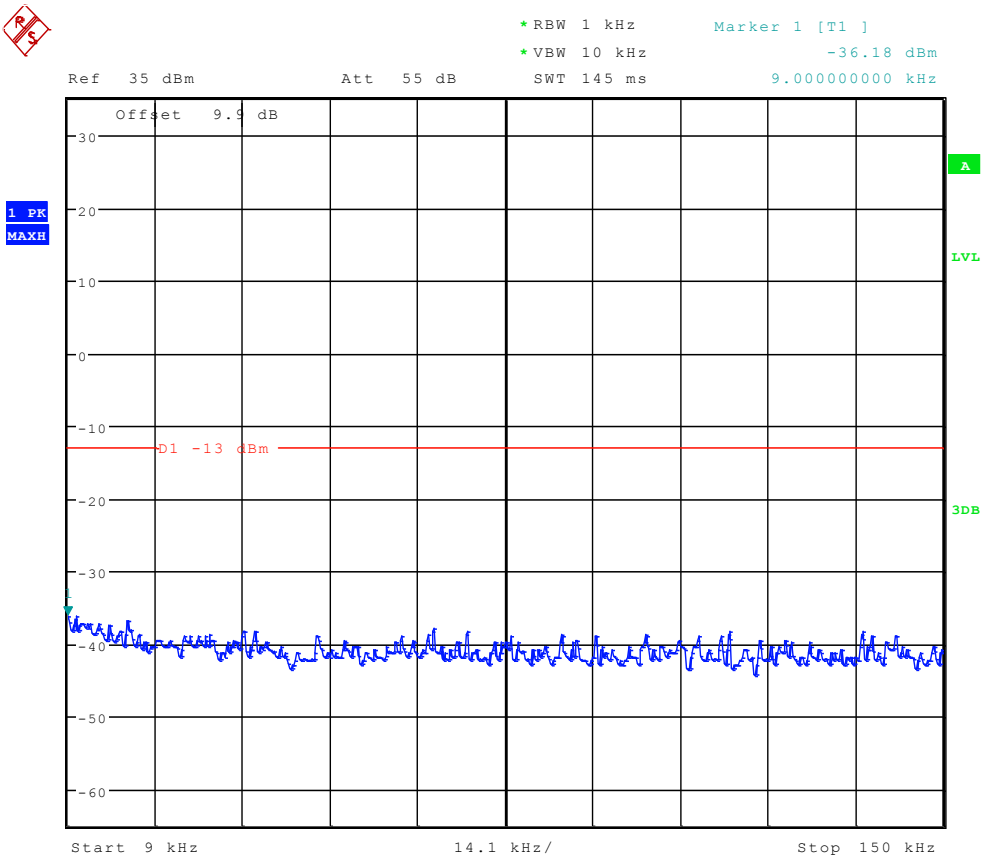
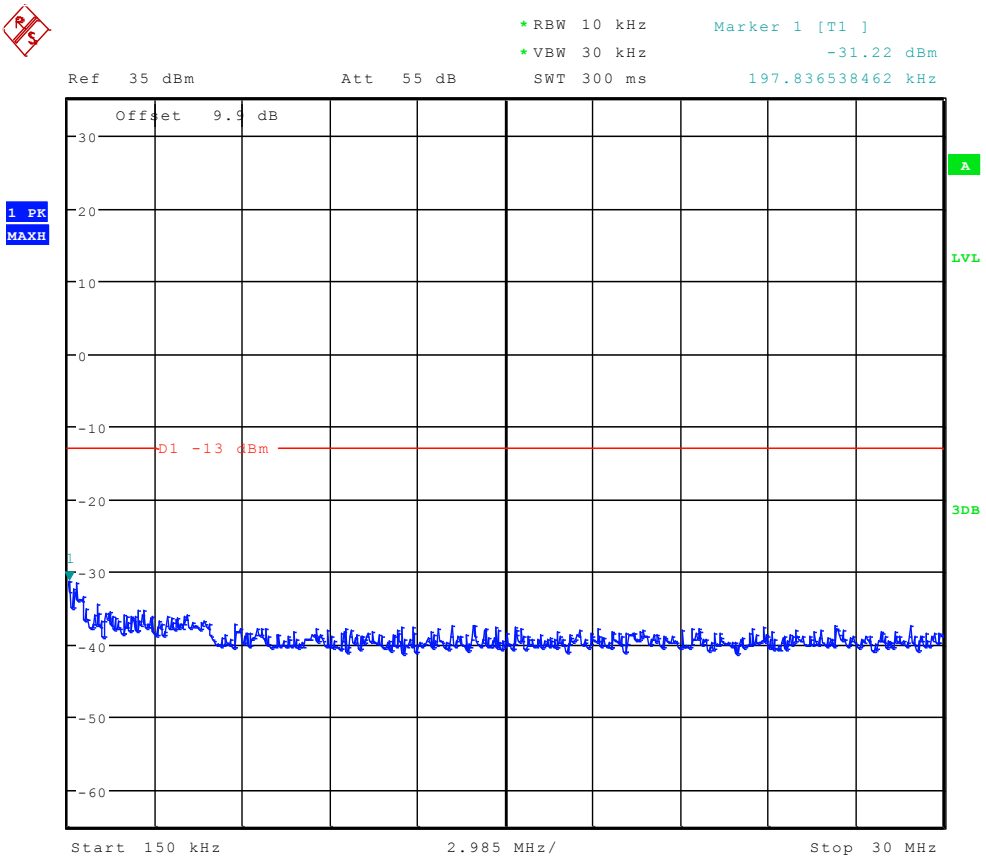


Date: 8.FEB.2012 23:55:31

Channel 661



Date: 8.FEB.2012 23:54:18



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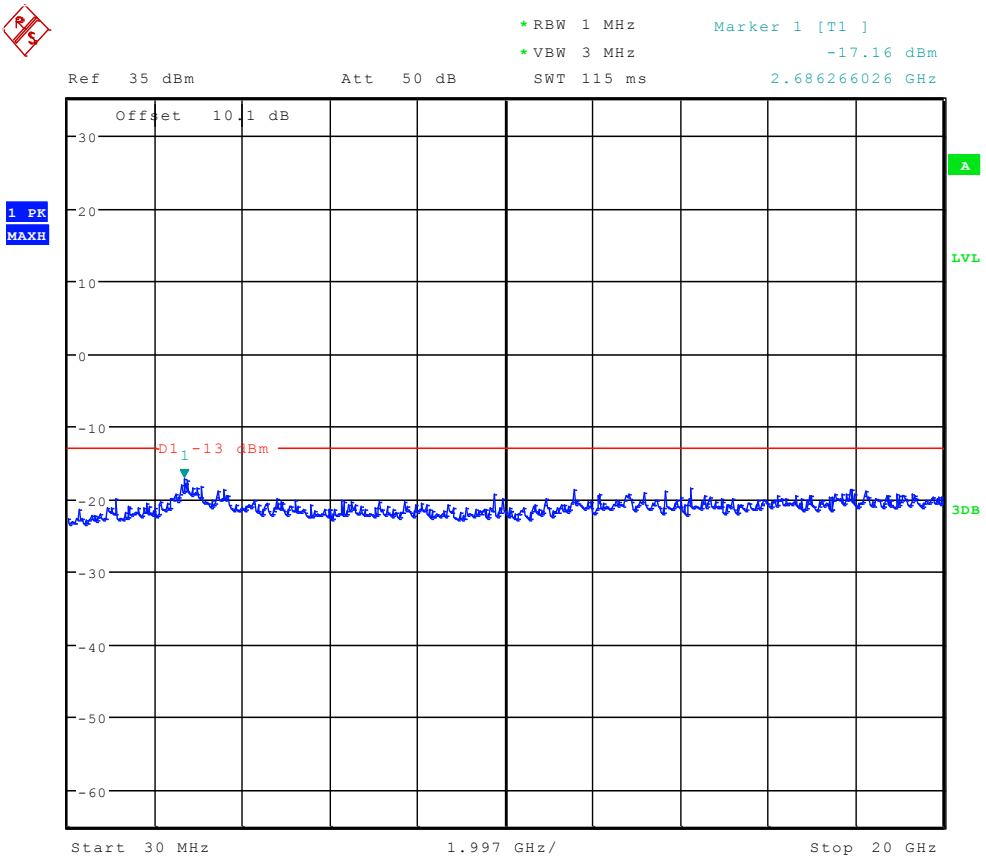

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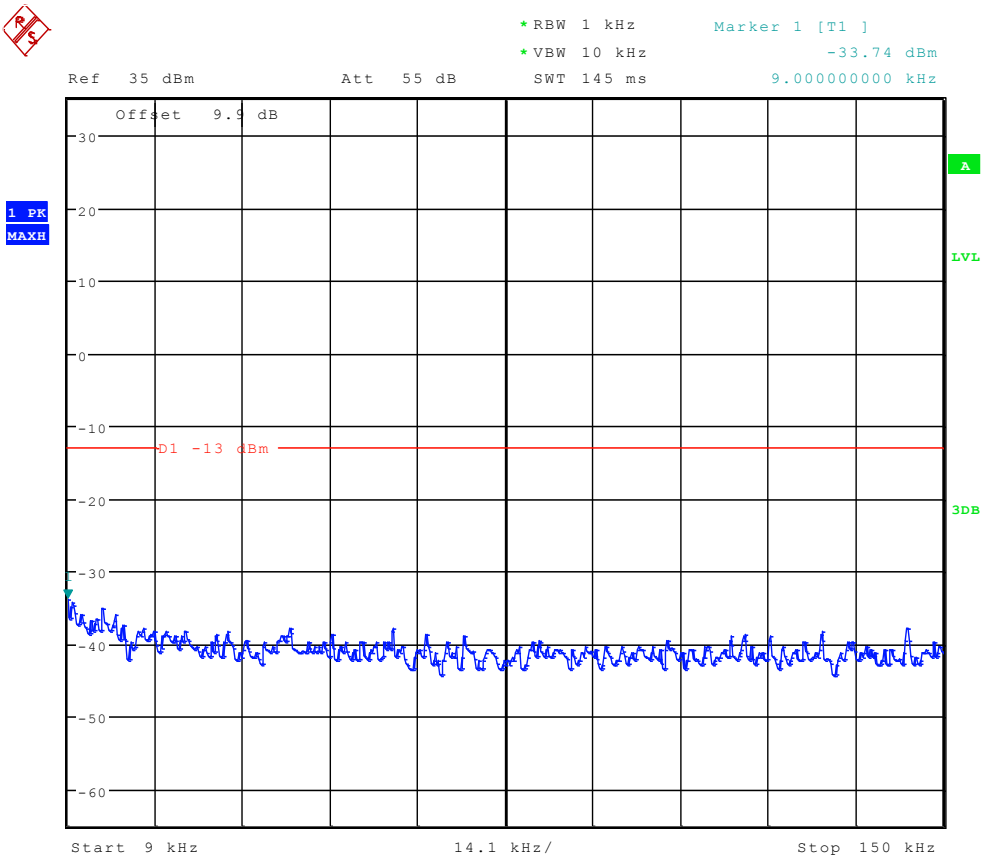
Channel 810



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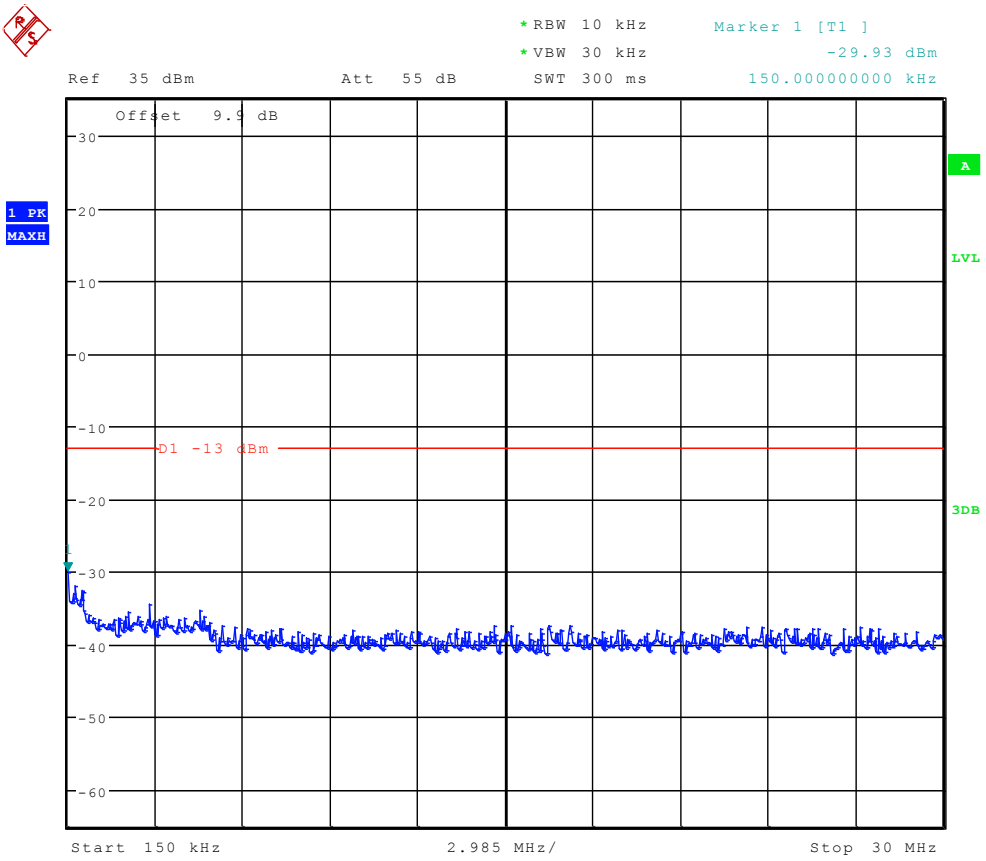

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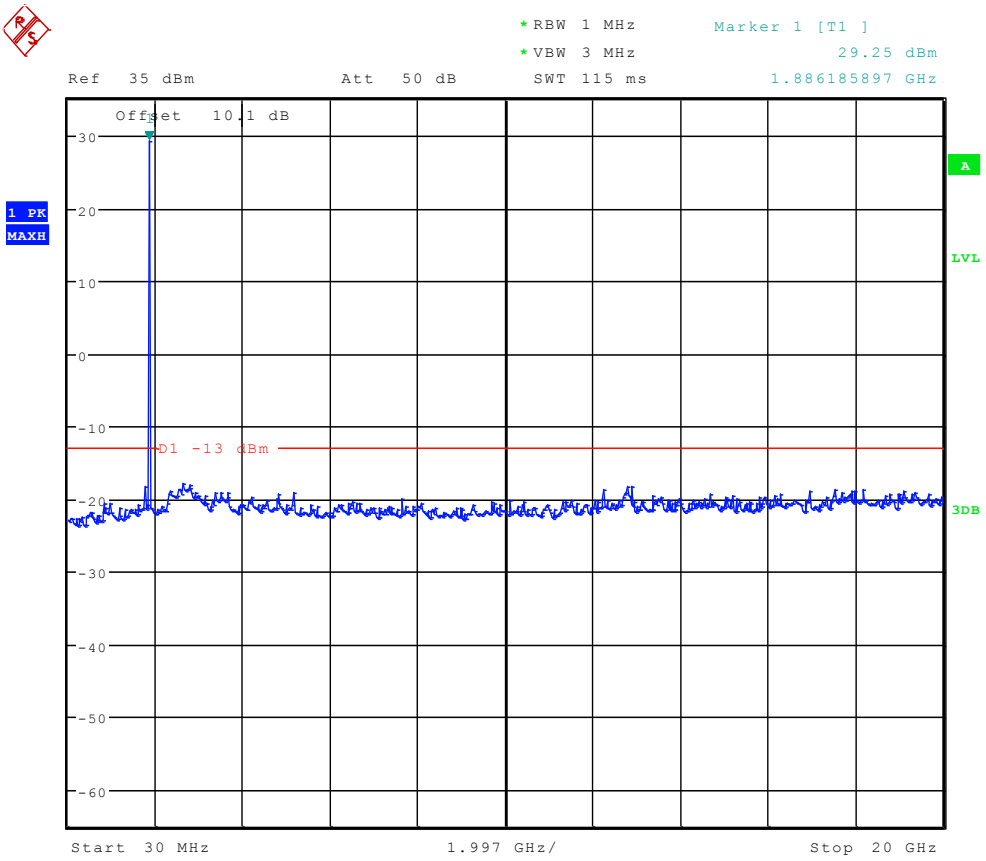
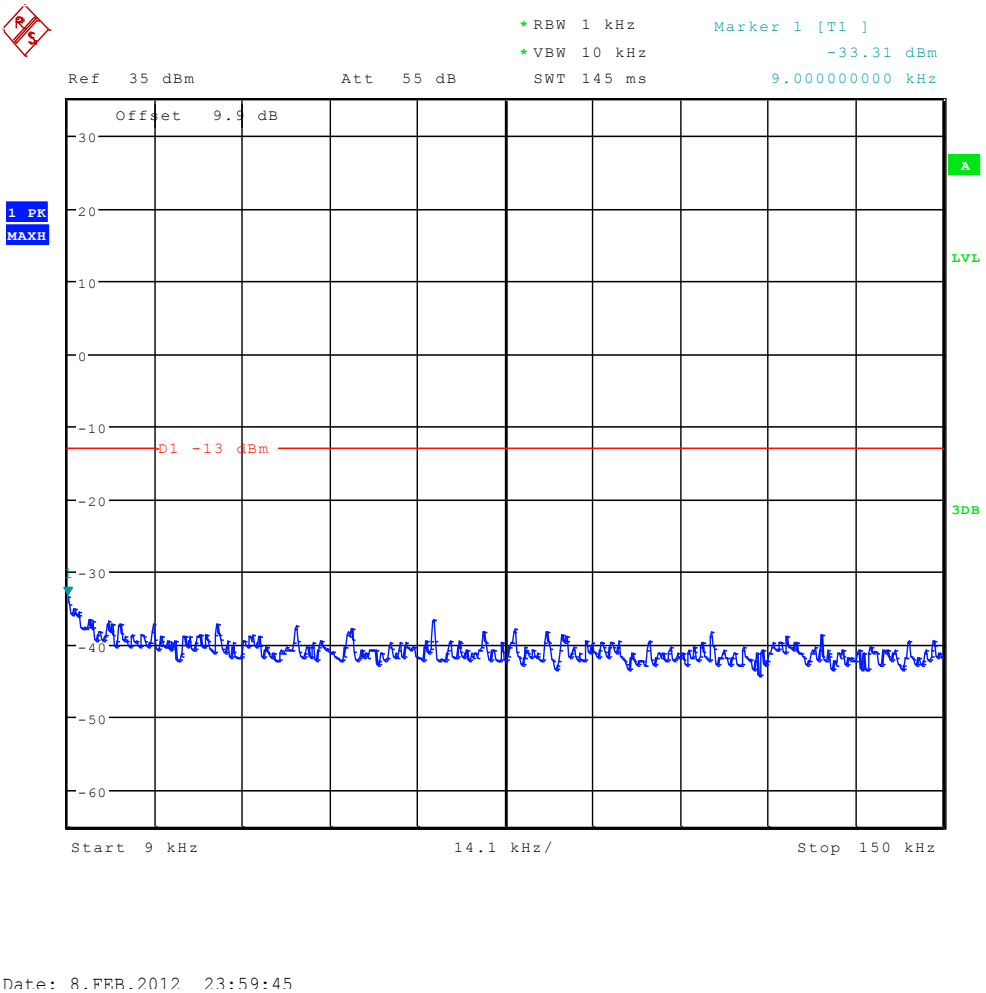
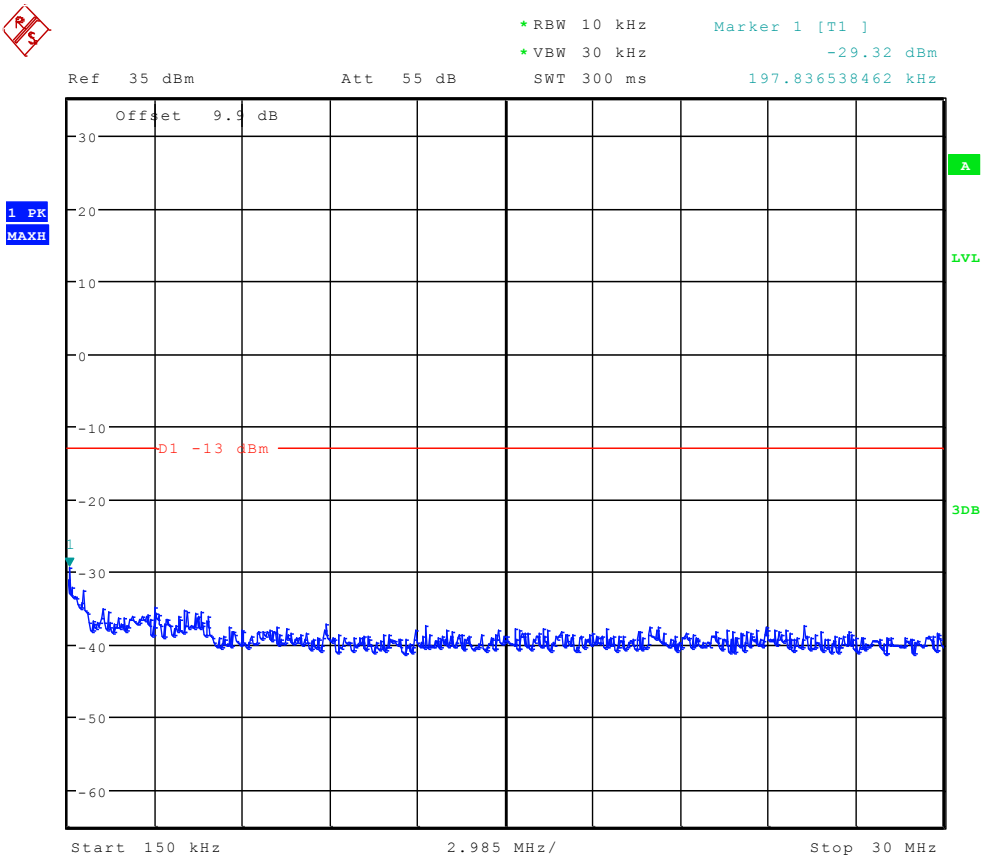


Date: 8.FEB.2012 23:56:00

TM2:EDGE
Channel 512





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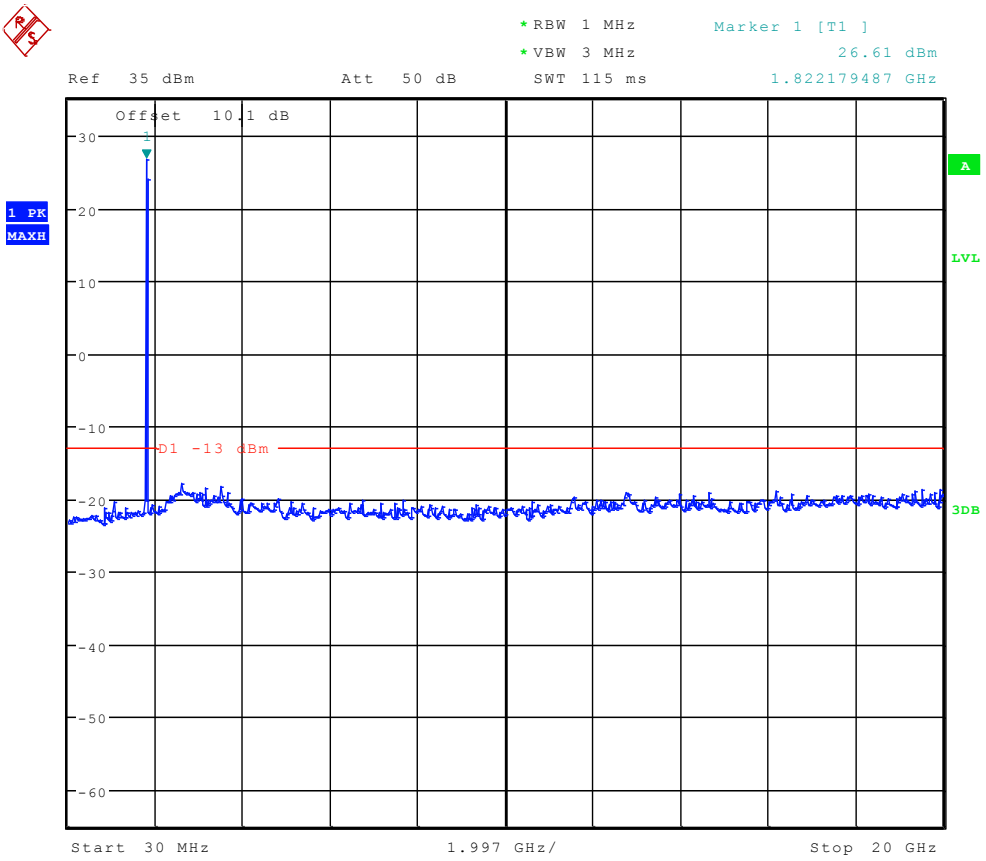
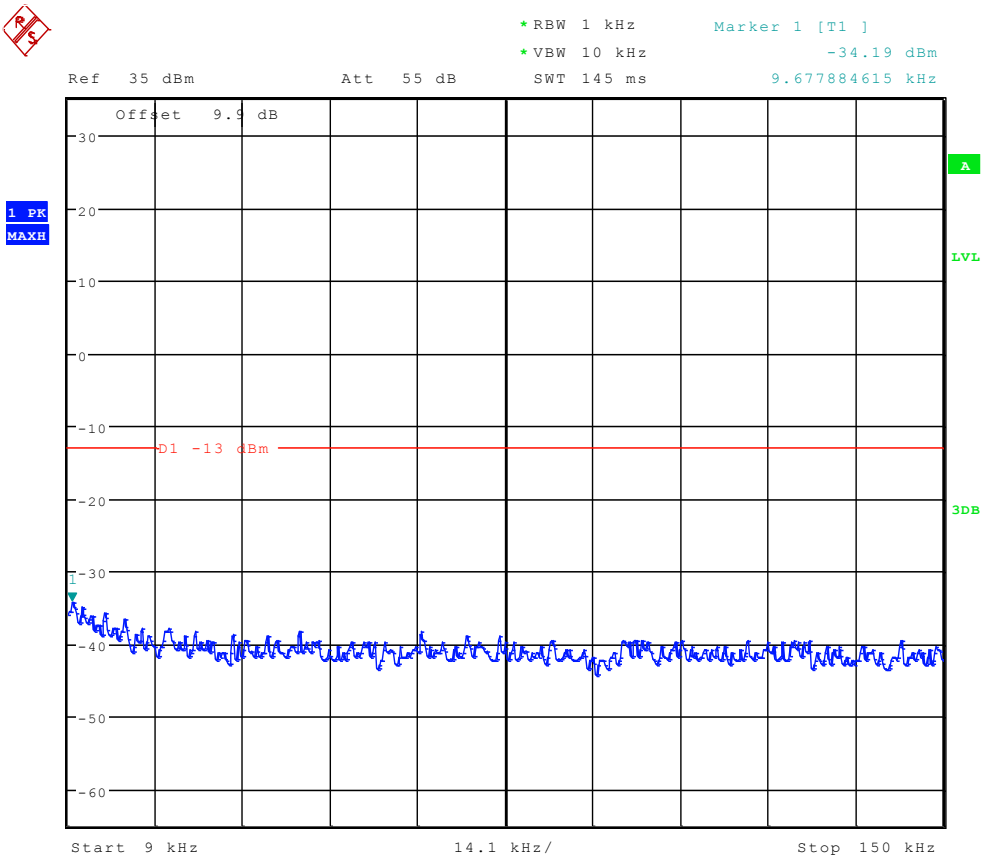


Date: 9.FEB.2012 00:01:12

Channel 661



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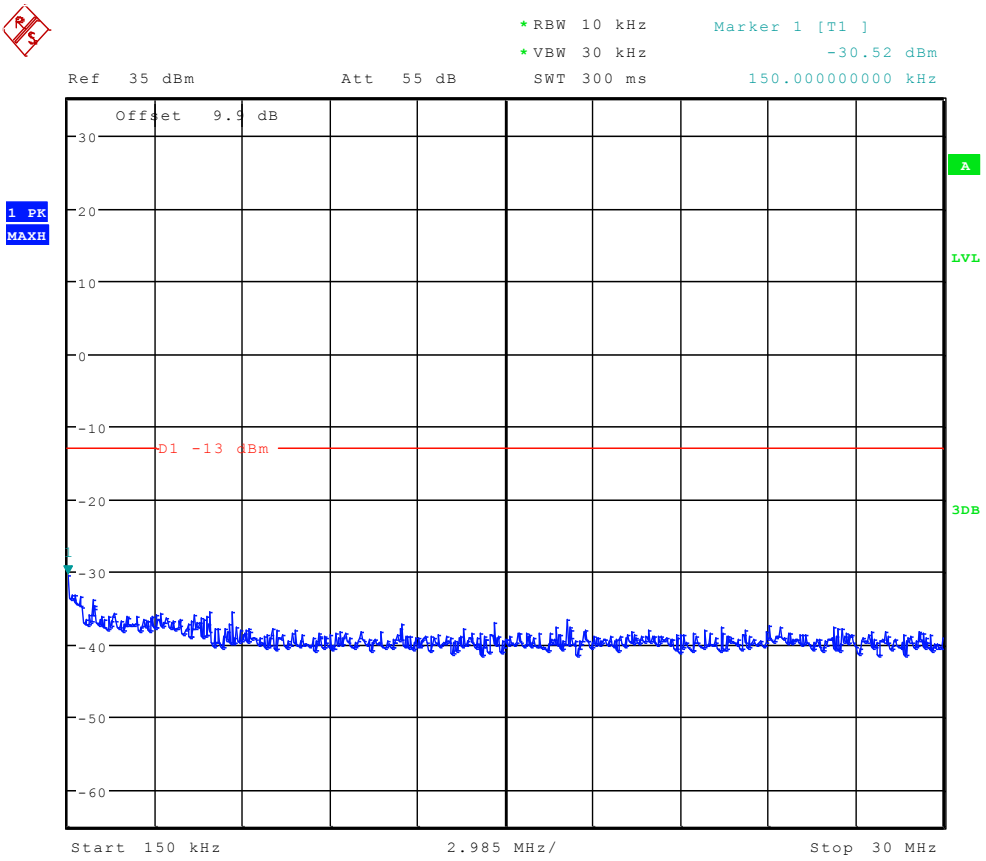

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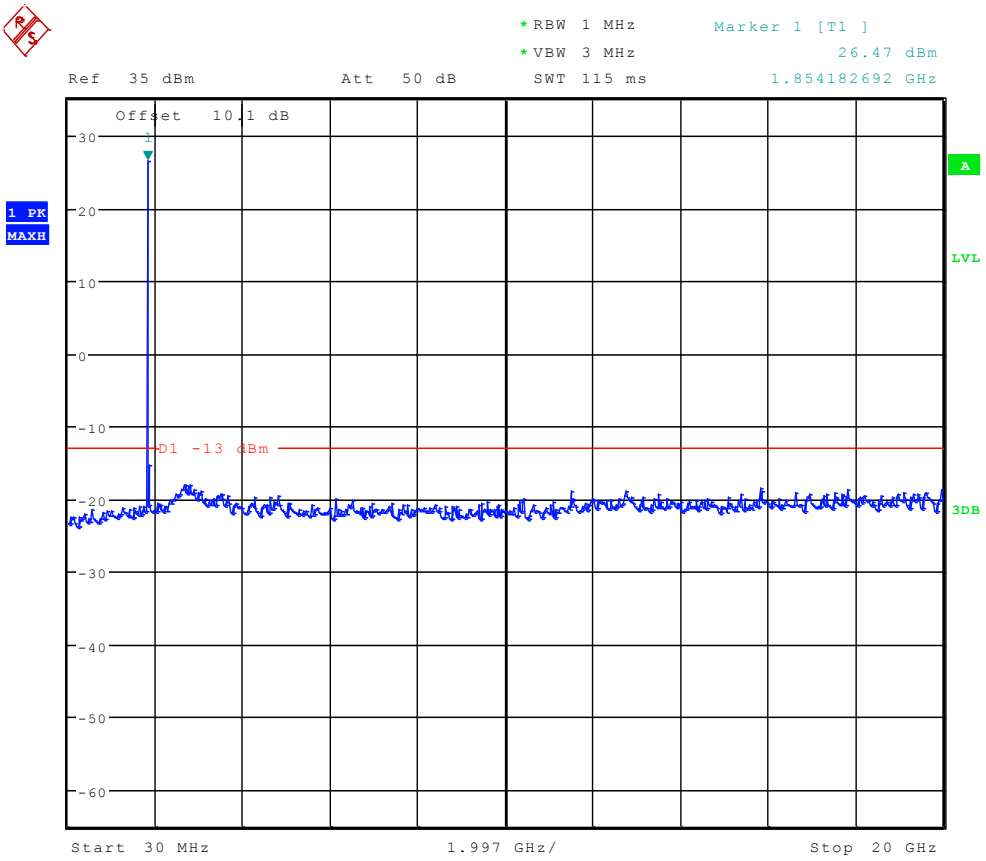

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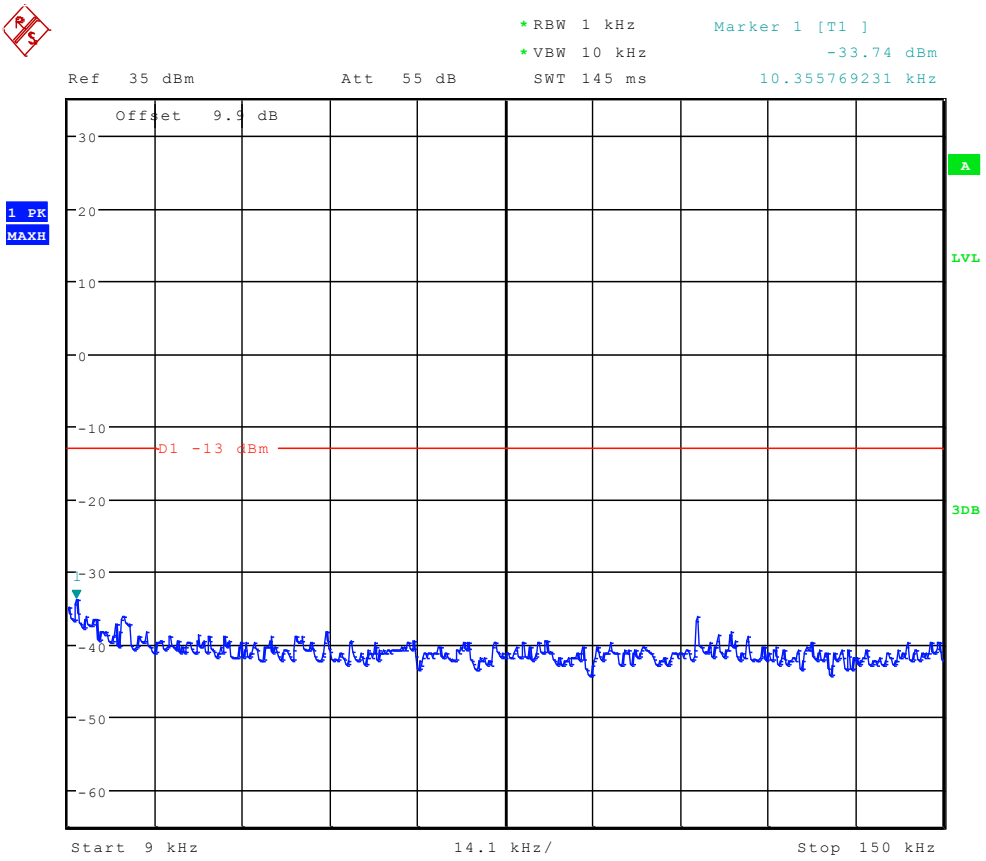
Channel 810



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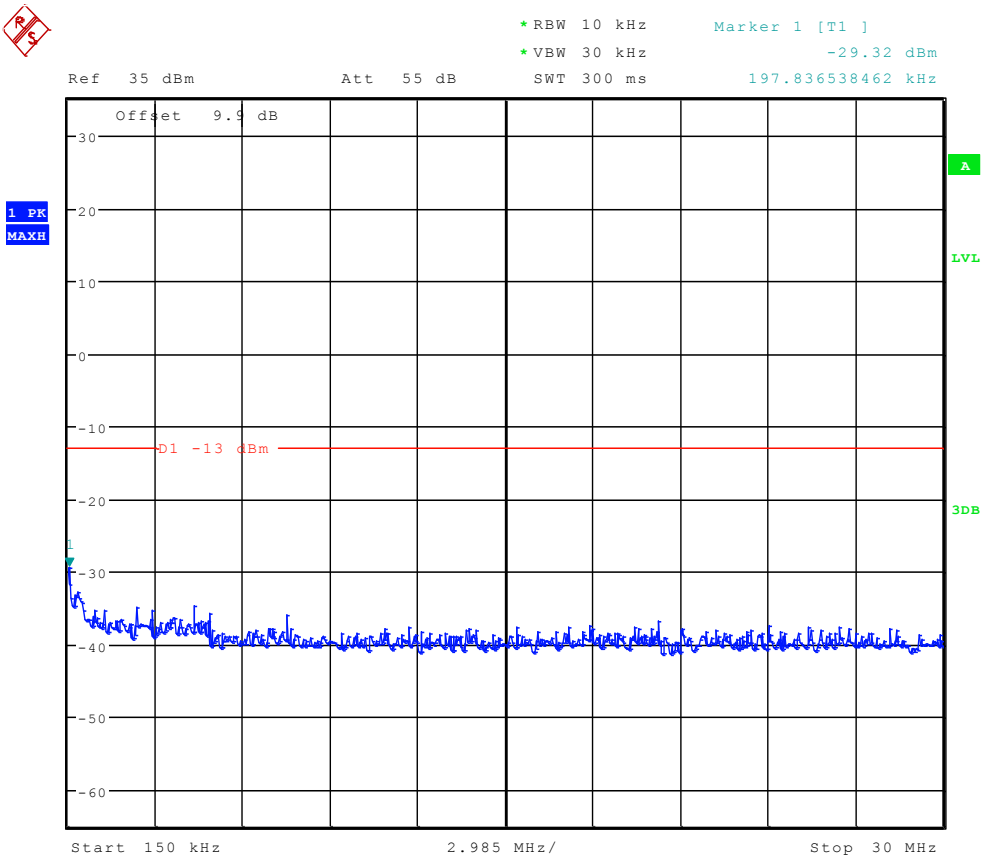

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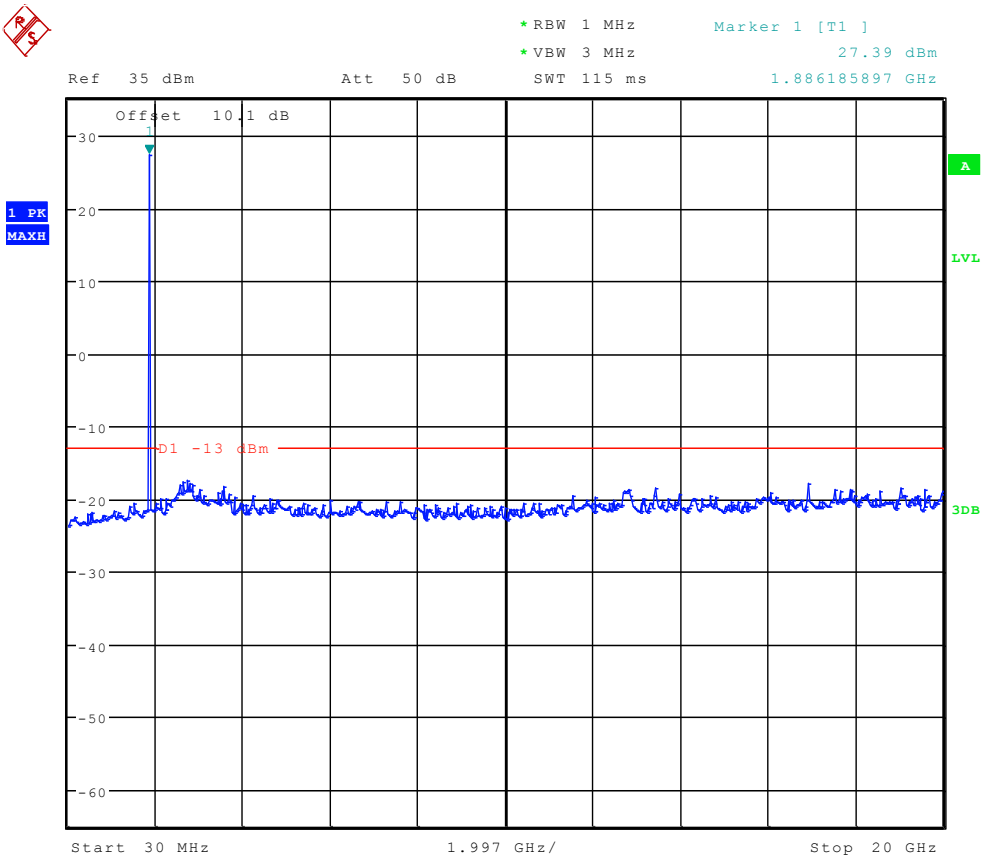
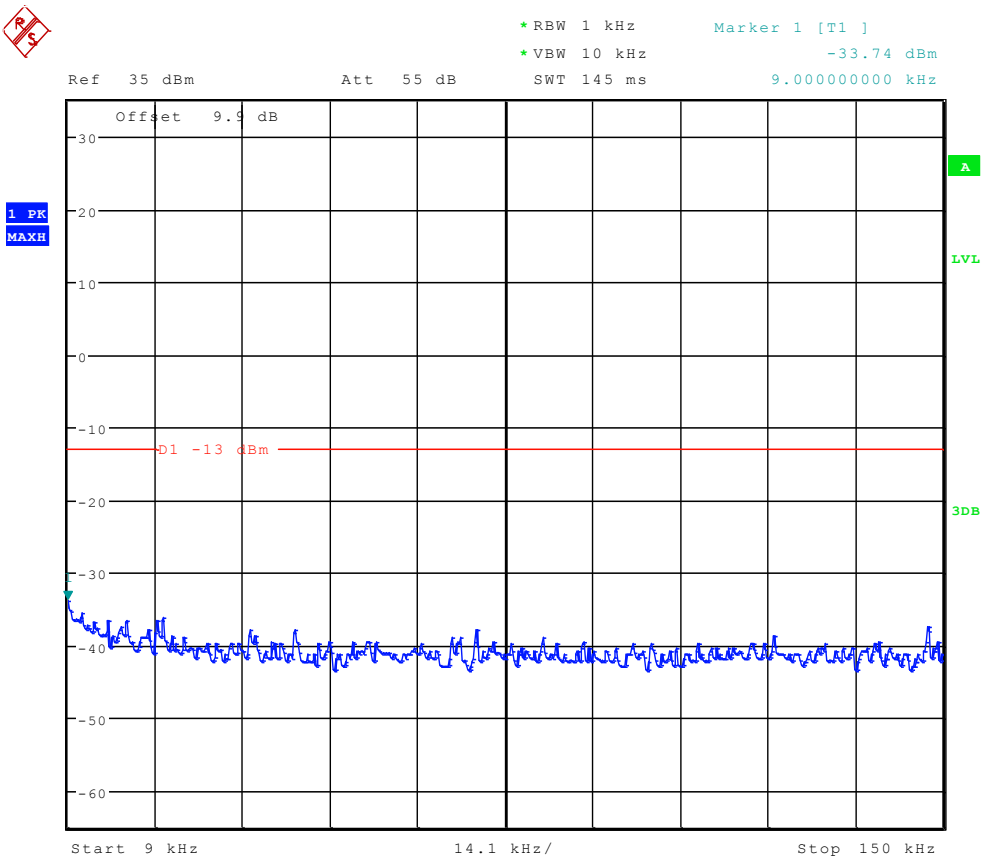


Date: 9.FEB.2012 00:01:41

TM3: WCDMA

Channel 9262



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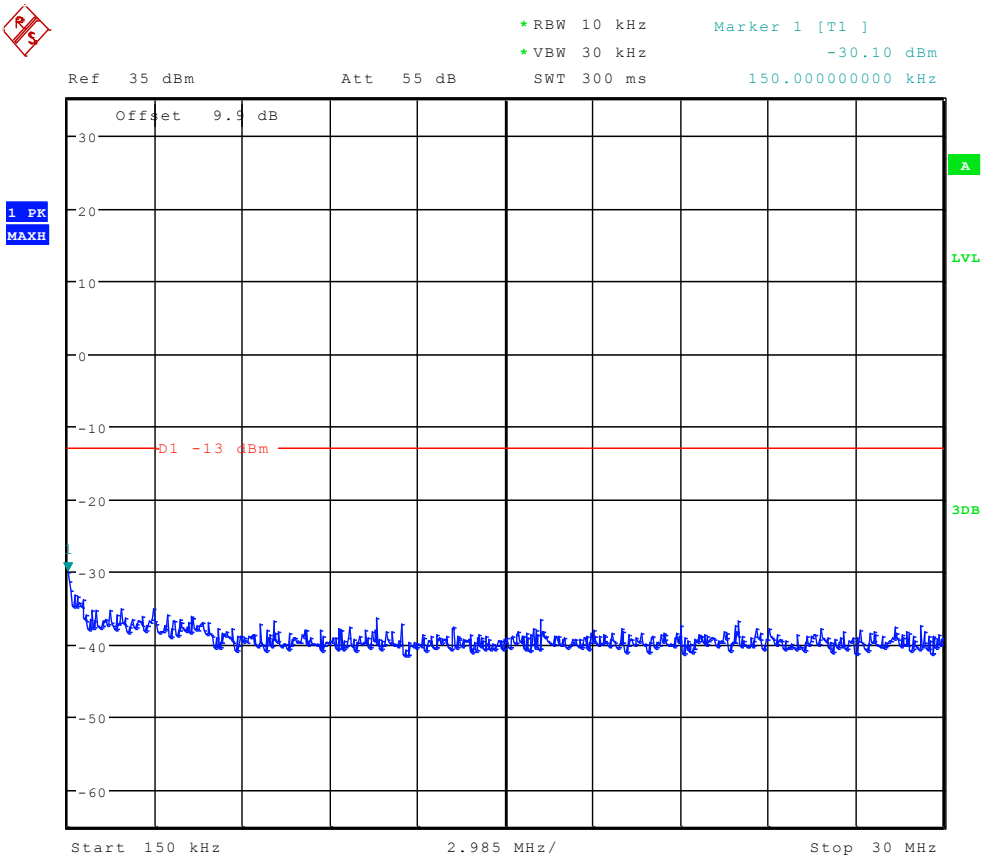

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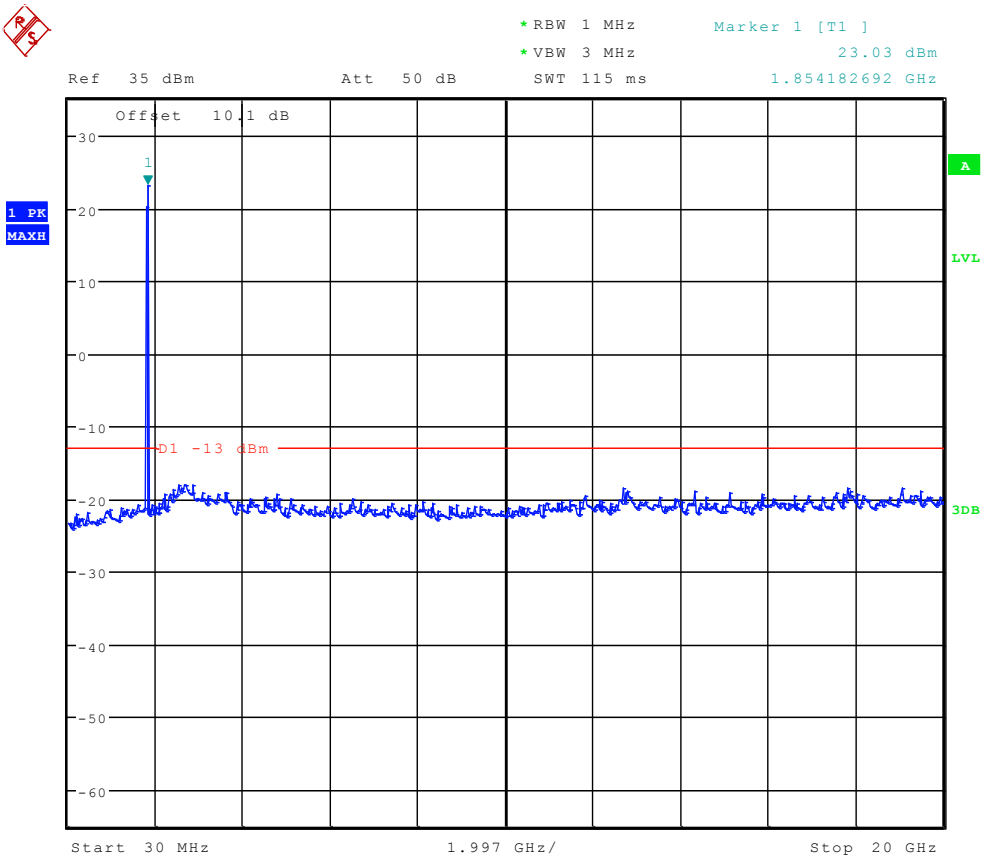
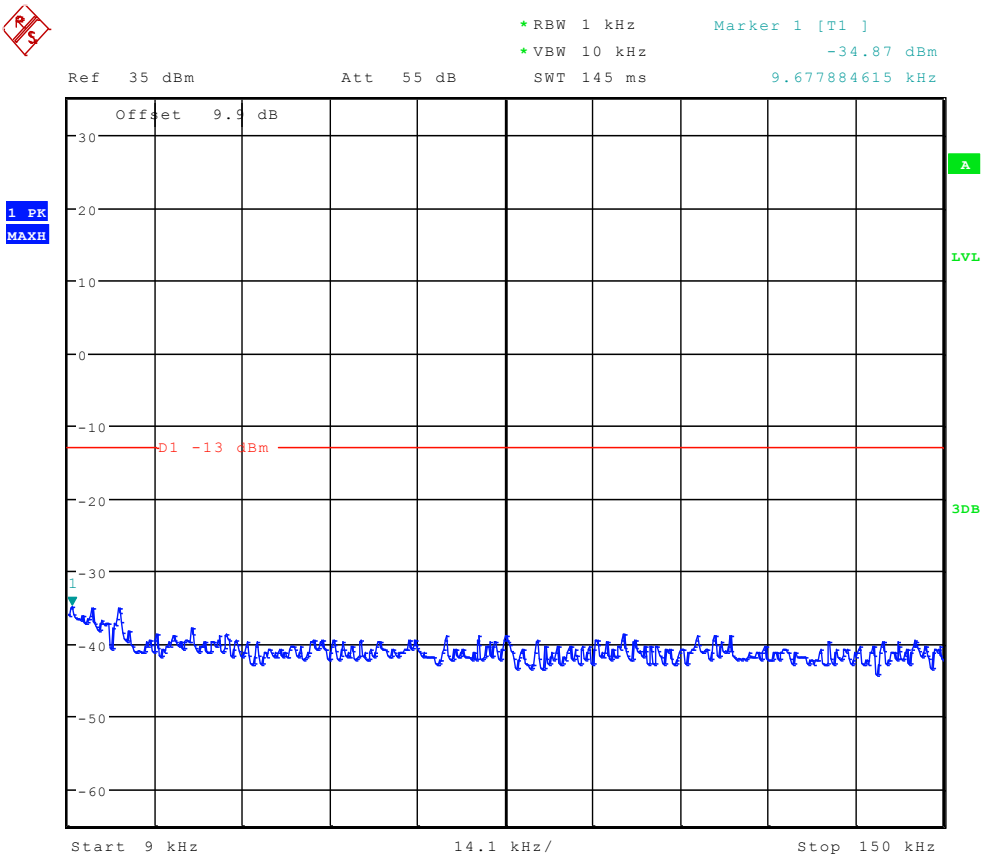


Date: 9.FEB.2012 00:06:02

Channel 9400



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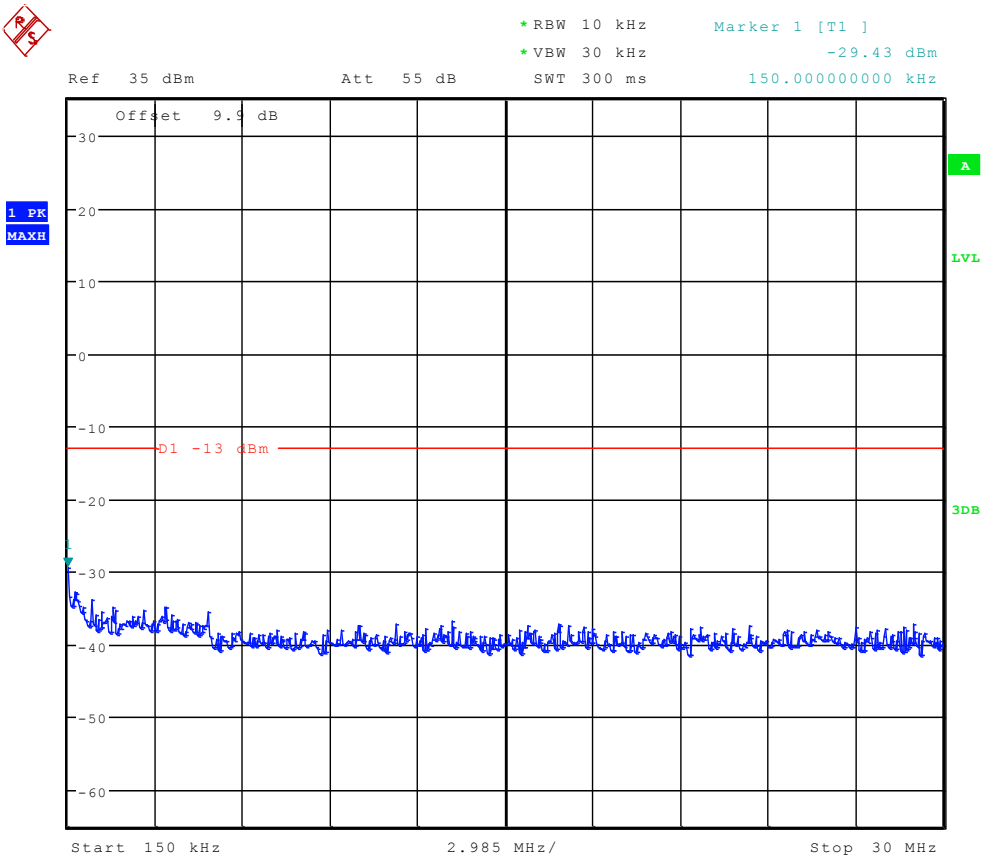

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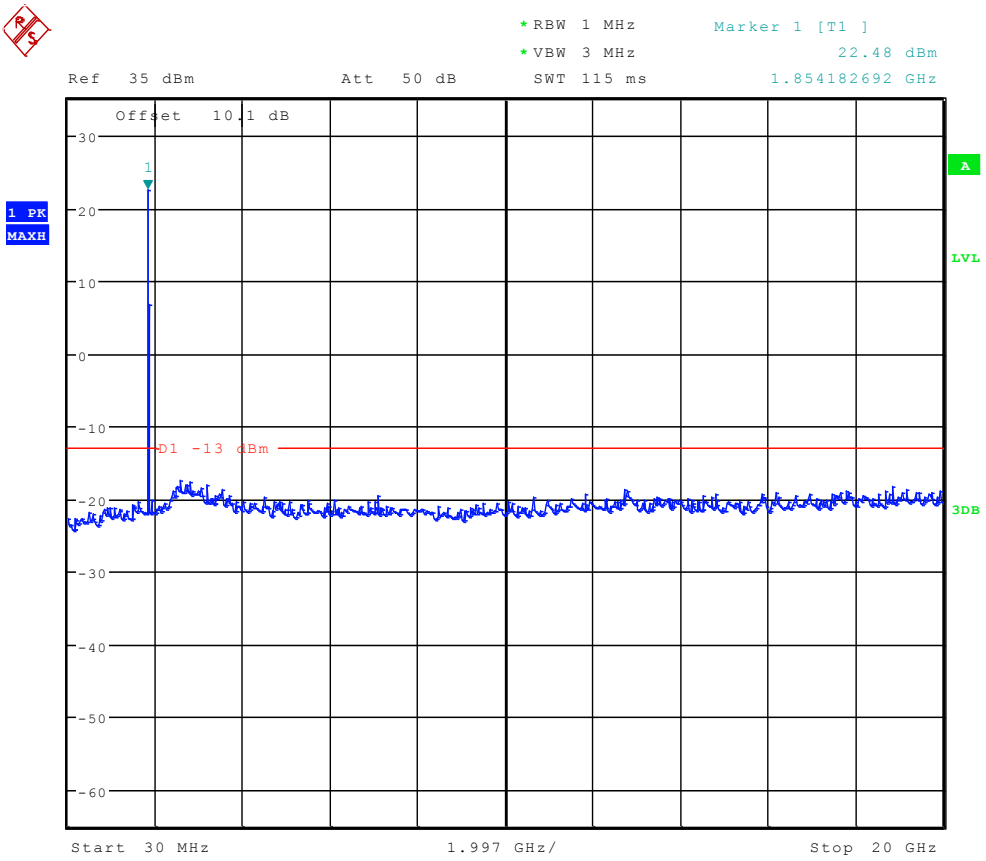
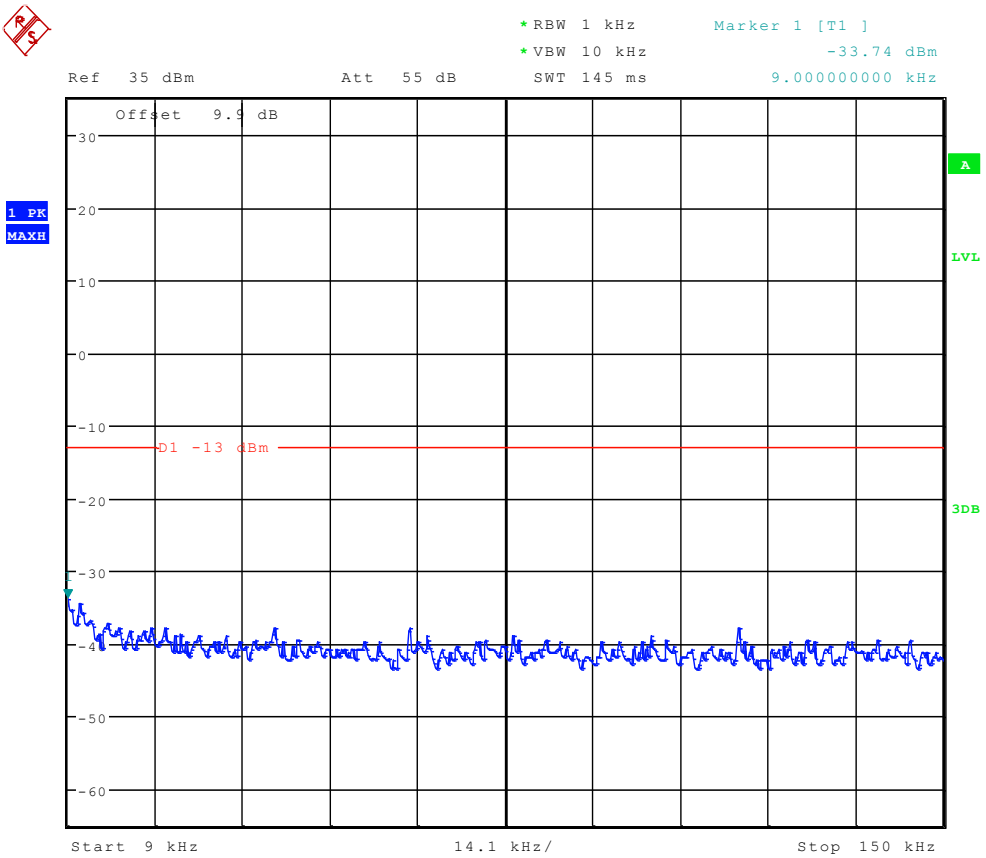
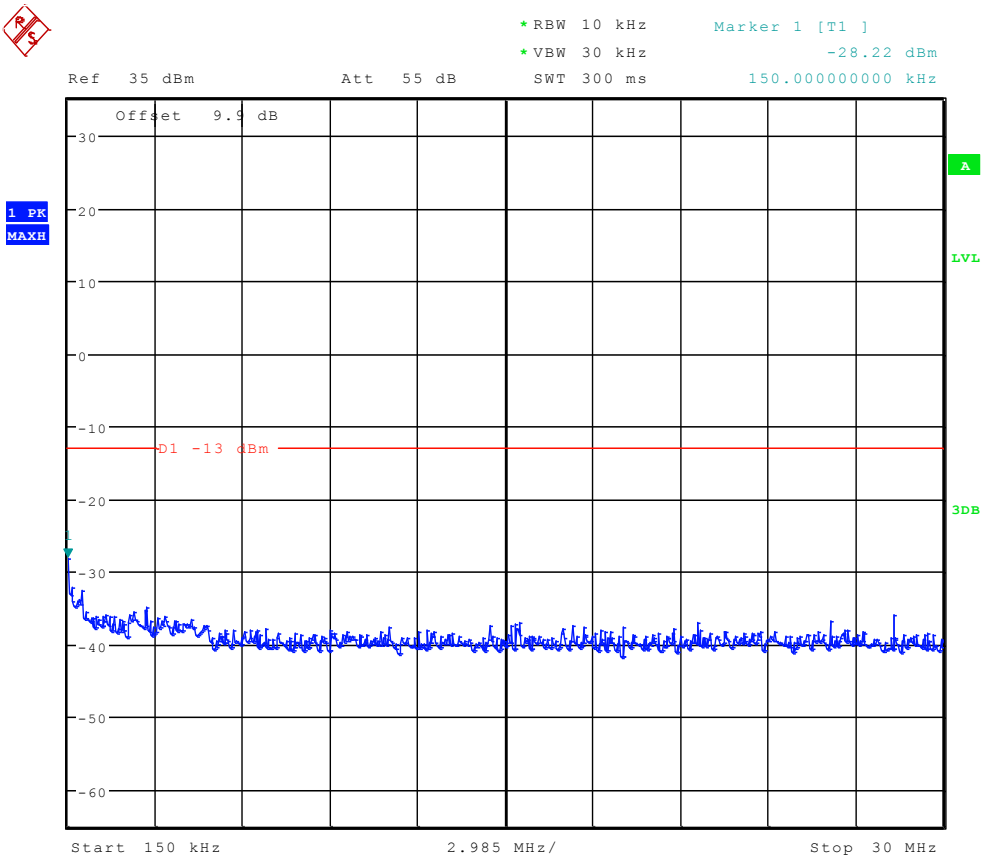


Date: 9.FEB.2012 00:06:16

Channel 9538



Date: 9.FEB.2012 00:05:03



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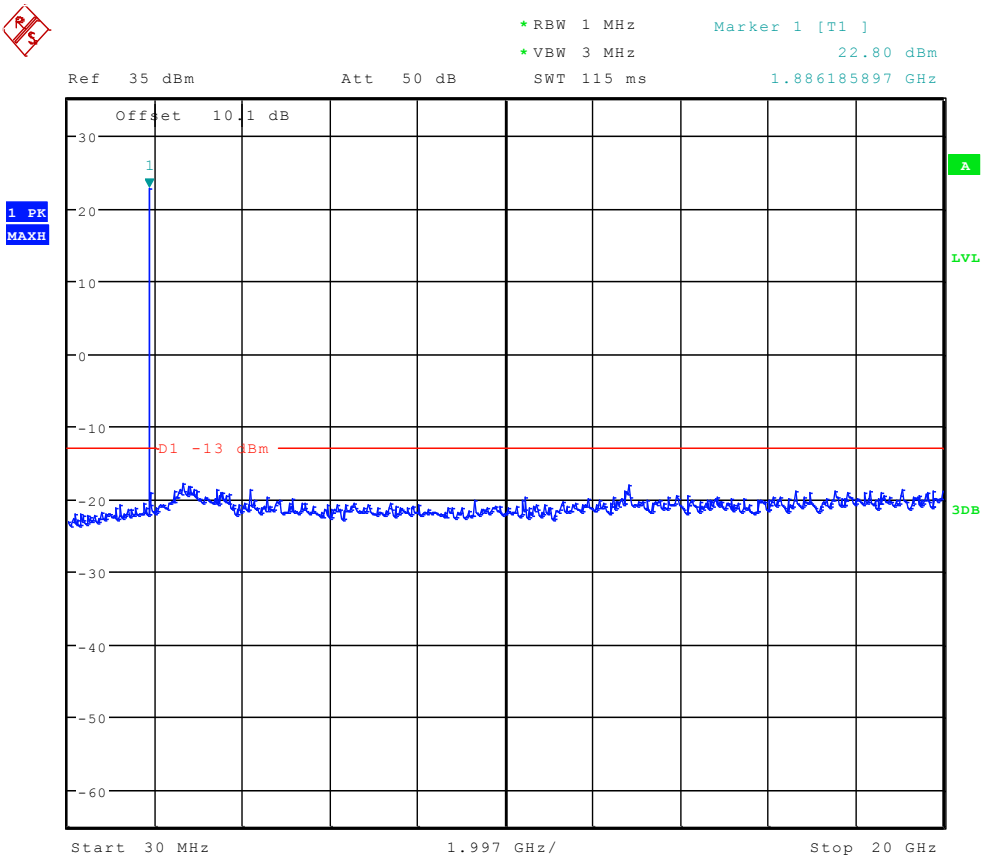


Date: 9.FEB.2012 00:06:31

----------The END----------

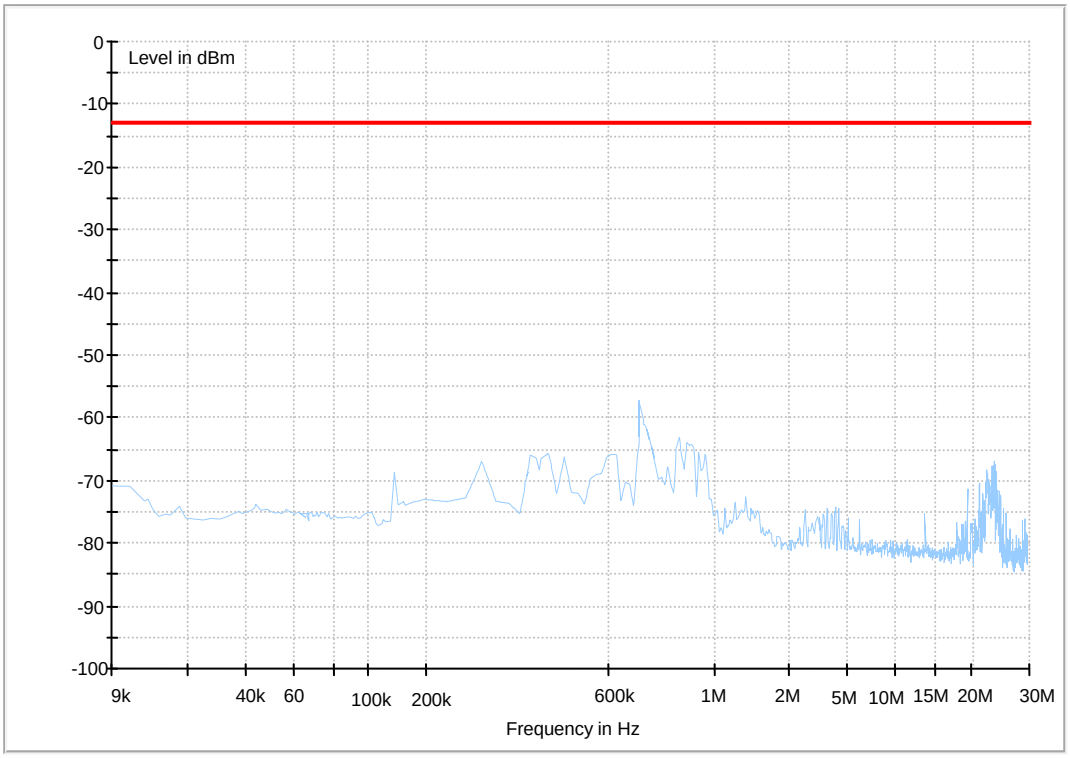
Appendix F

Radiated spurious emission

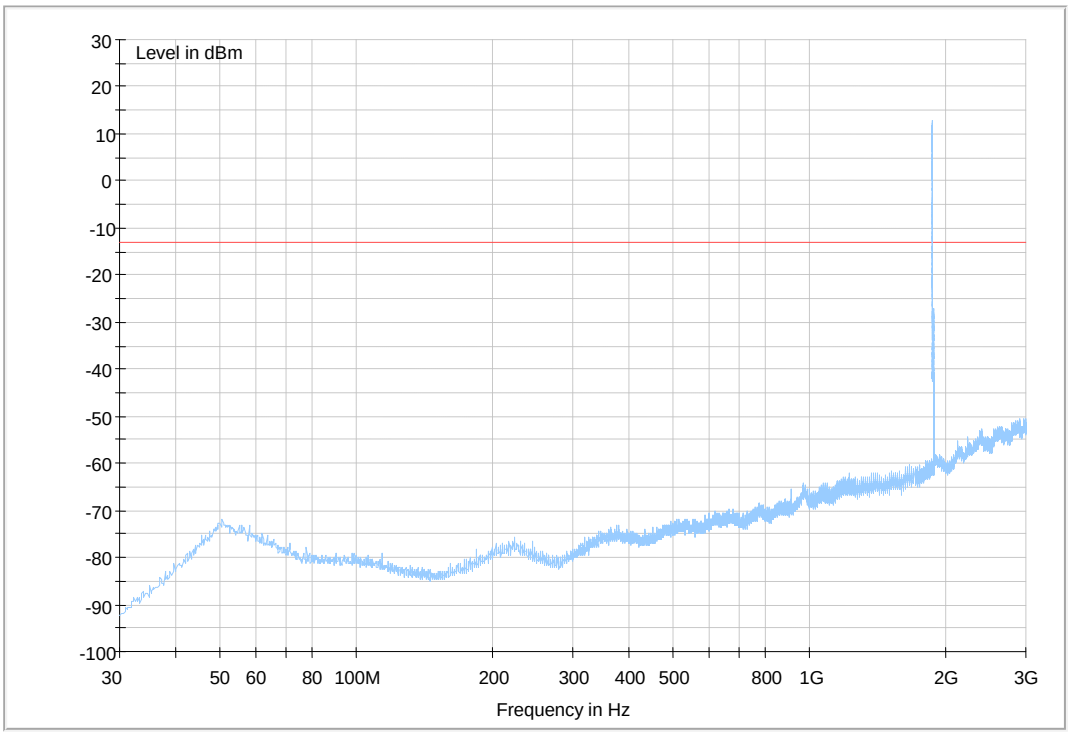
According to FCC Part 2.1053& Part 24.238

GPRS 1900

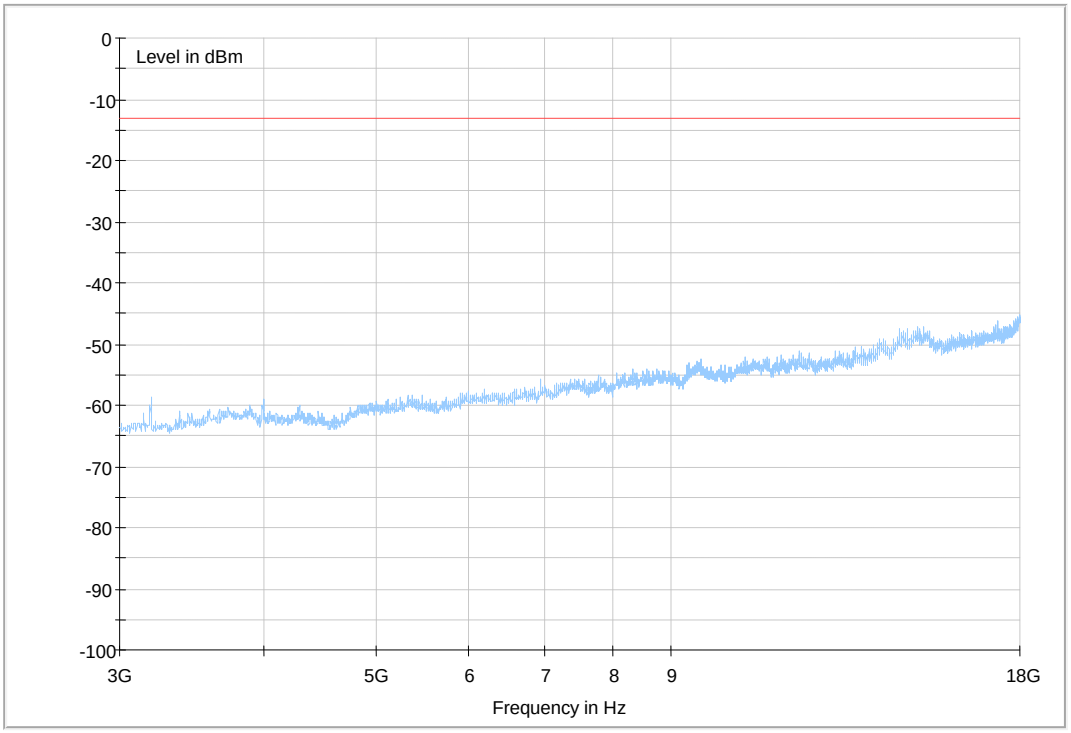
(9kHz-30MHz)



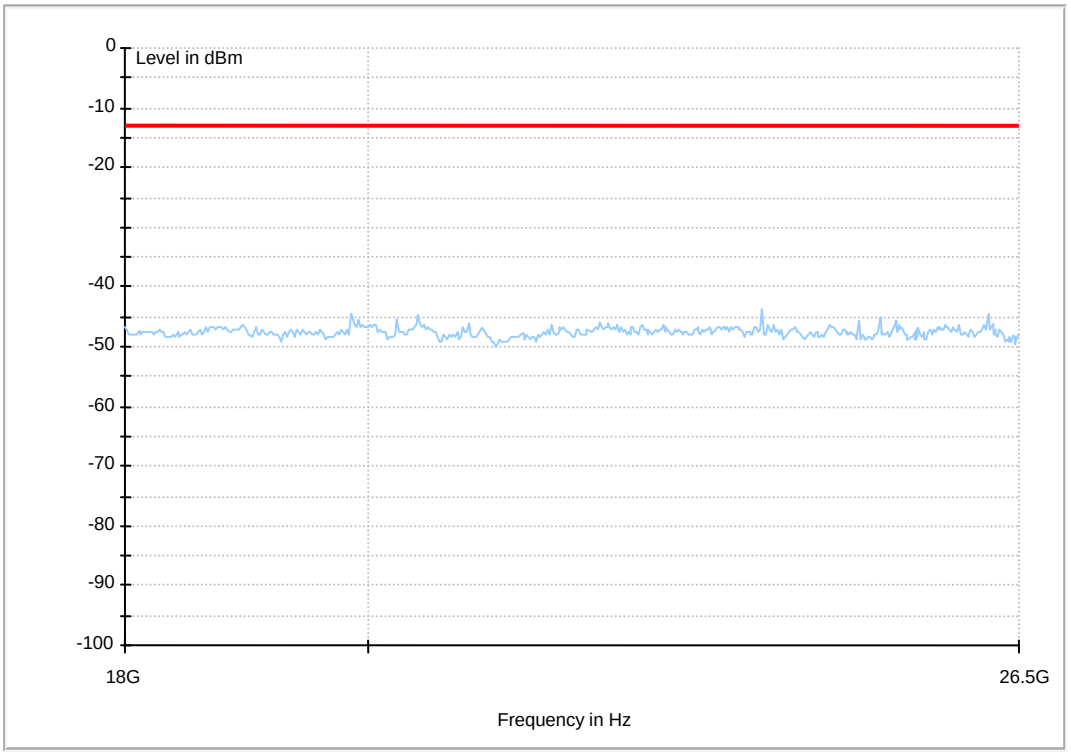
(30MHz~3GHz)



(3GHz~18GHz)

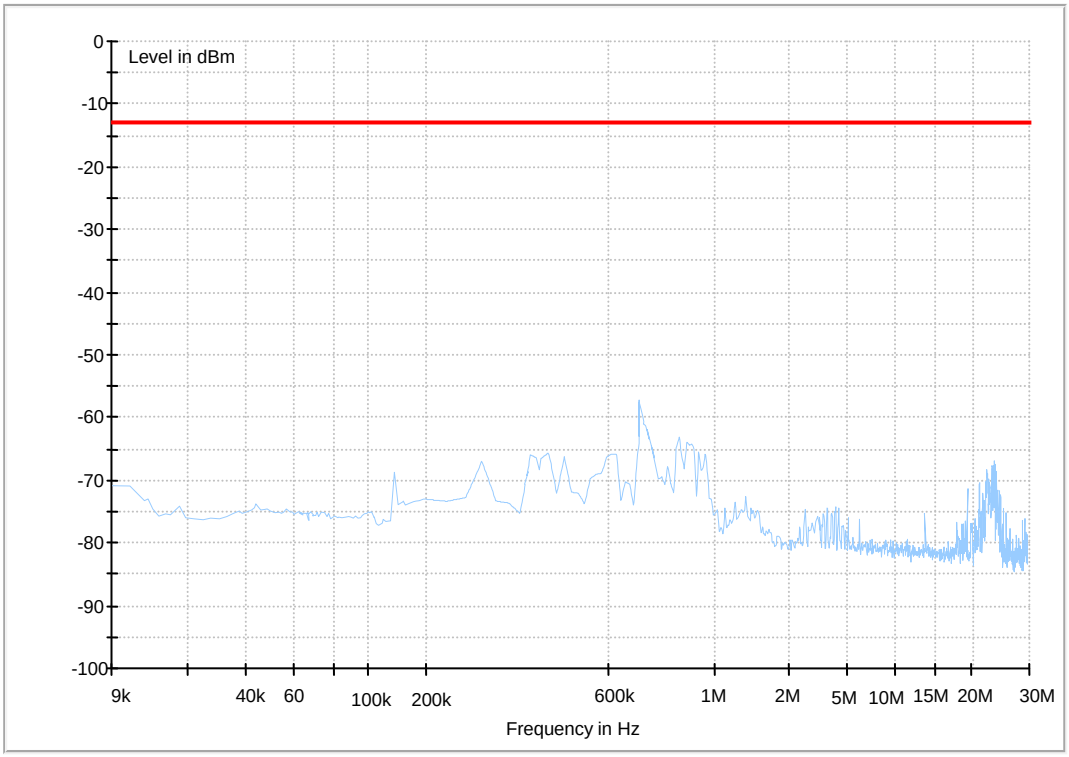


(18GHz-26.5GHz)

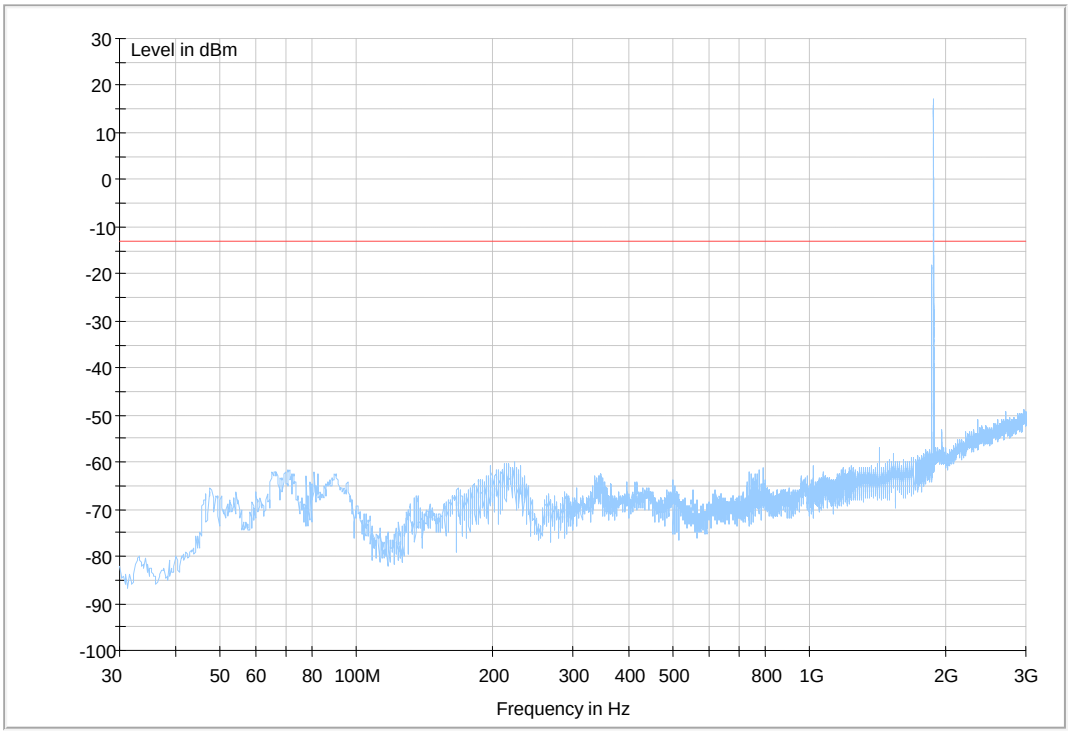


EDGE 1900

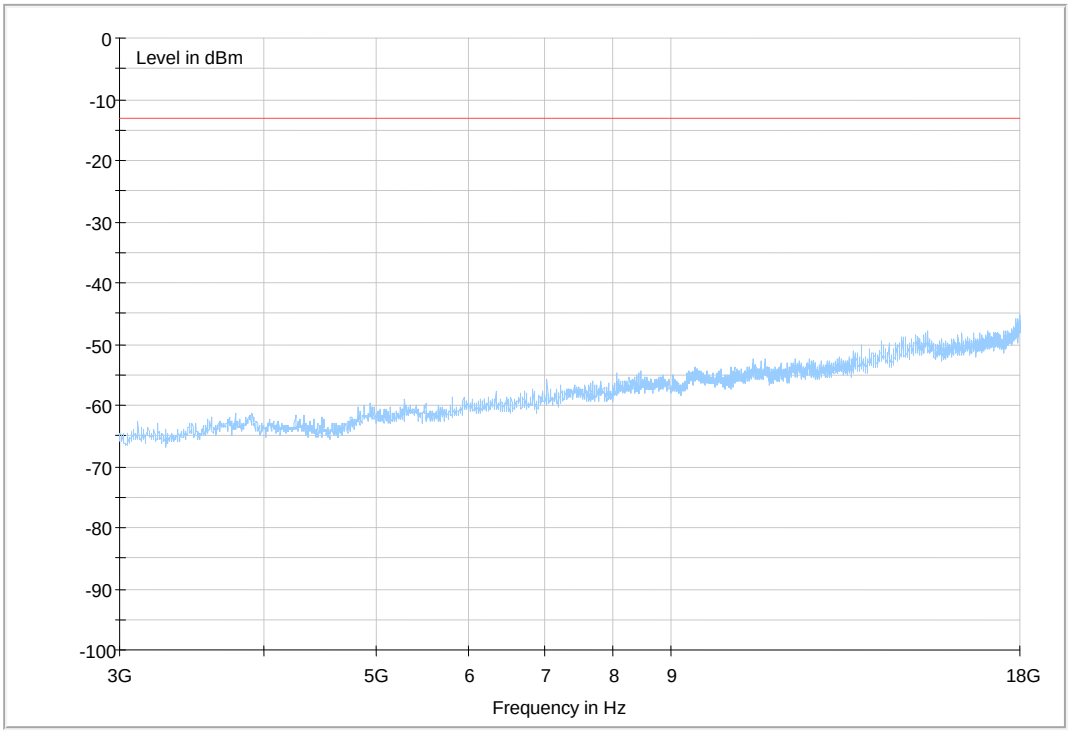
(9kHz-30MHz)



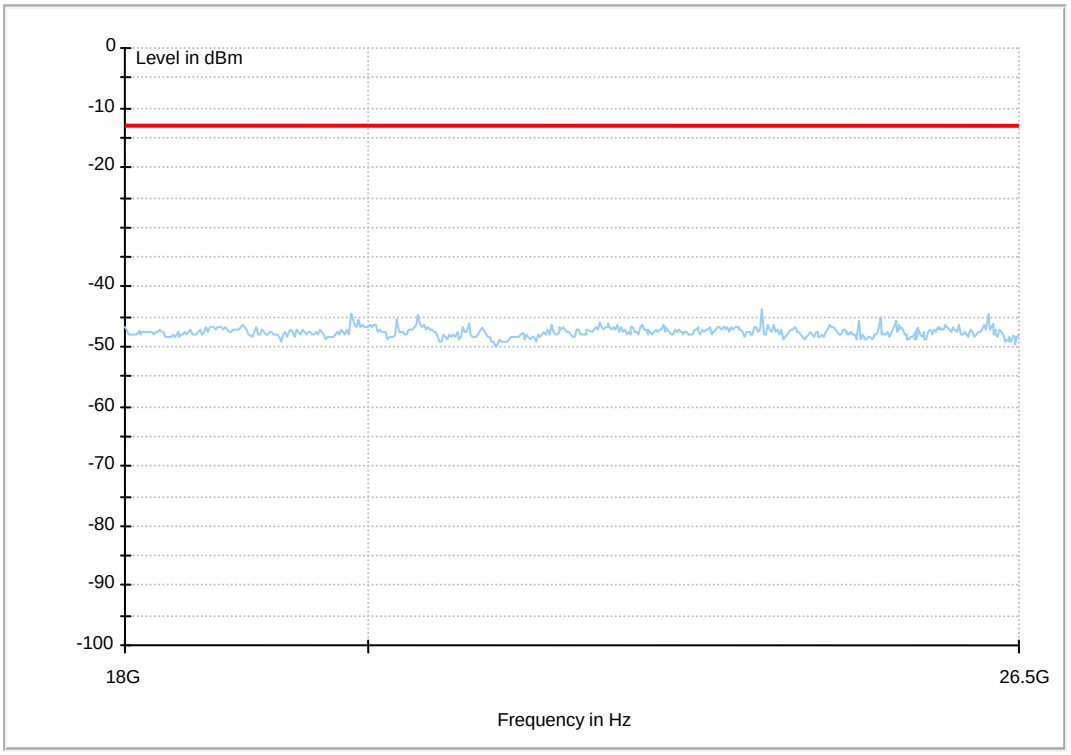
(30MHz~3GHz)



(3GHz~18GHz)

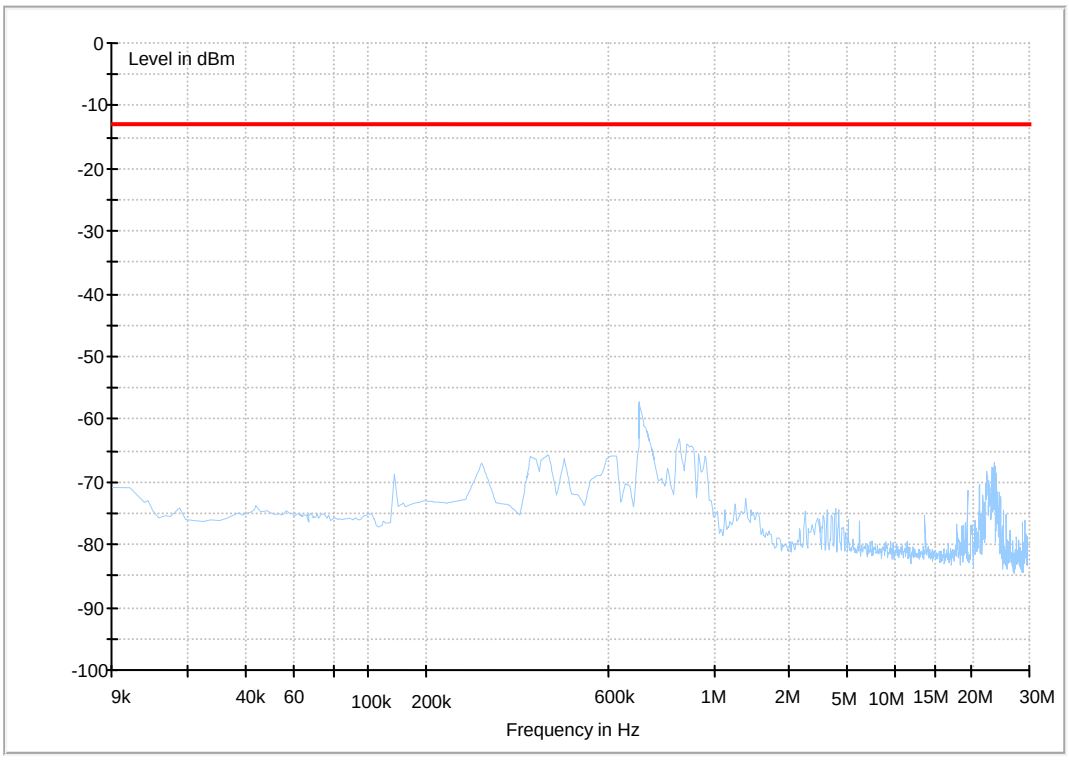


(18GHz-26.5GHz)

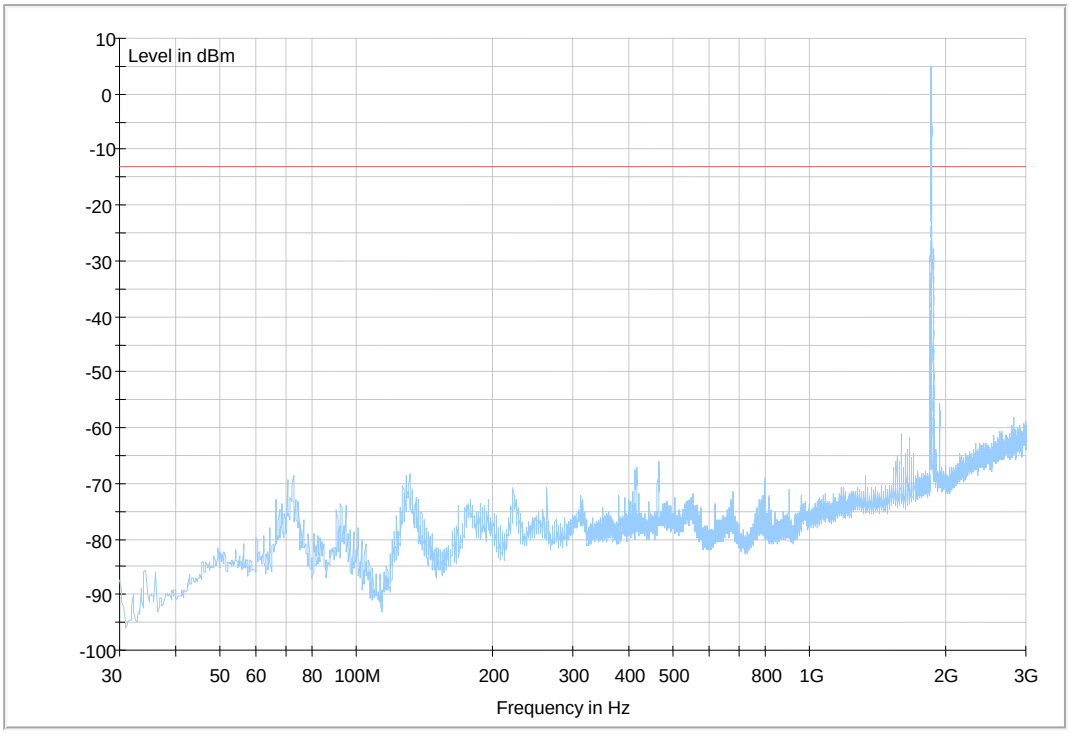


WCDMA Band II

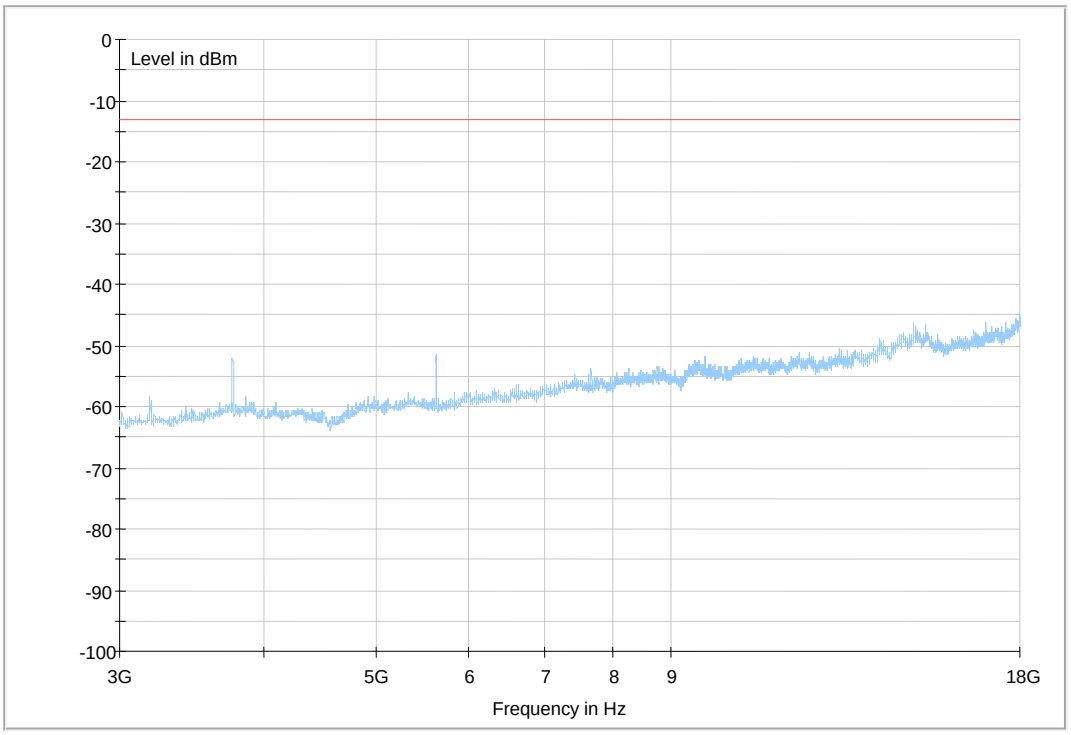
(9KHz~30MHz)



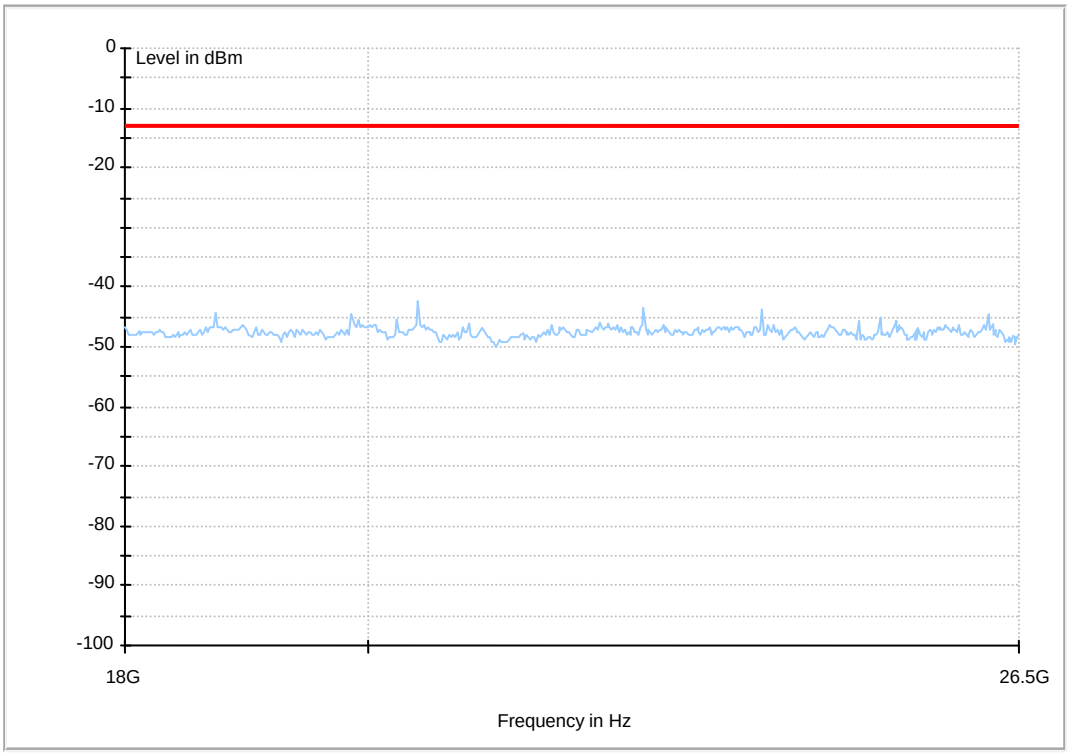
(30MHz~3GHz)



(3GHz~18GHz)

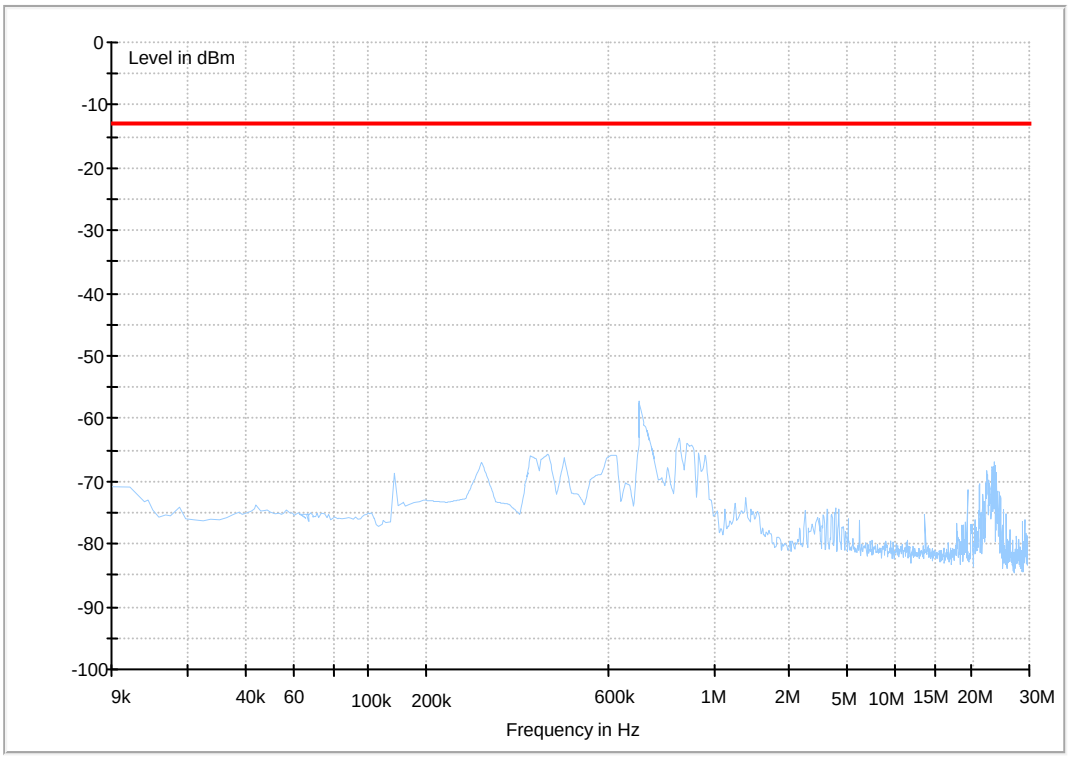


(18GHz~26.5GHz)

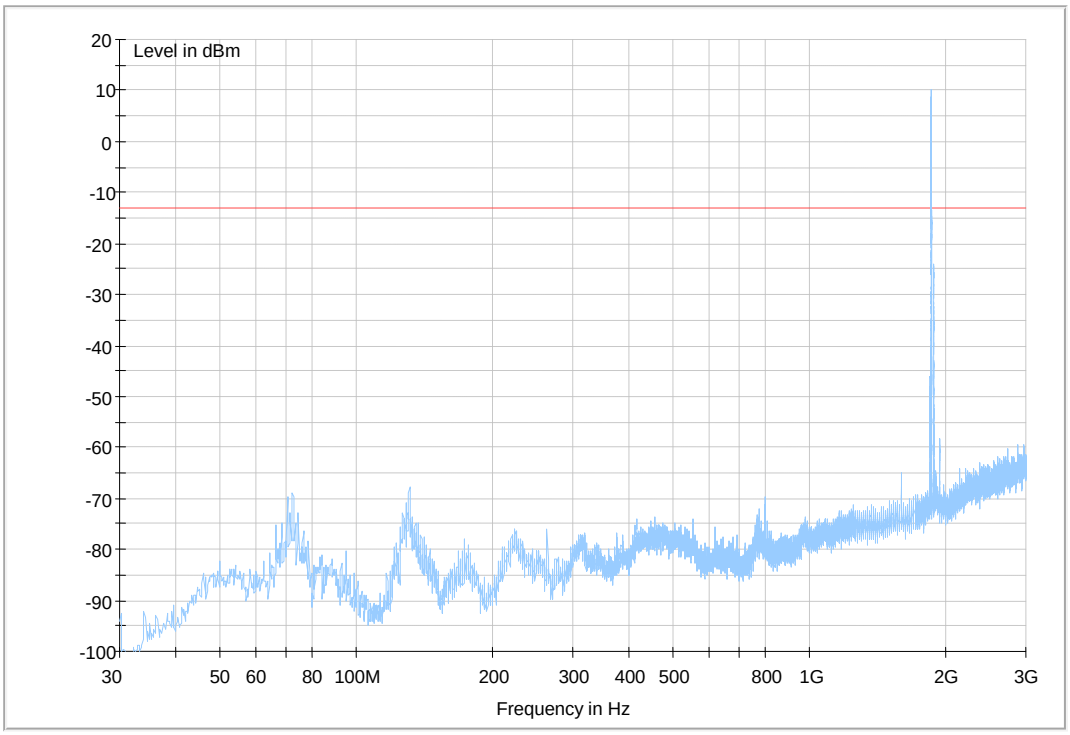


HSDPA Band II

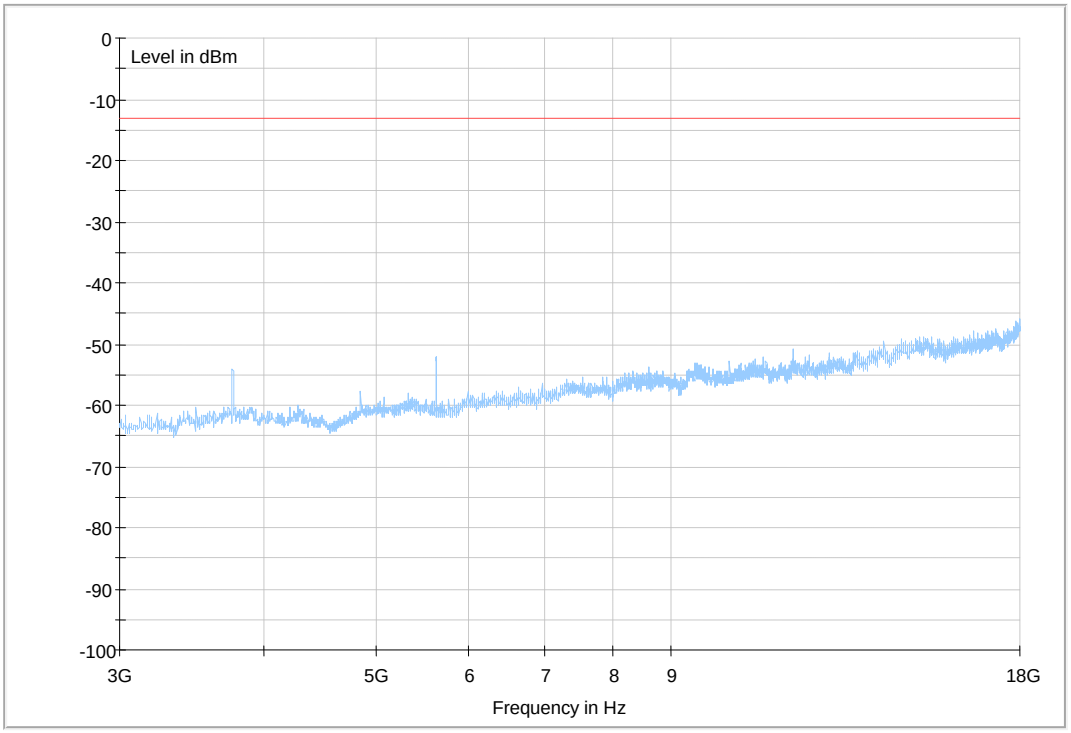
(9KHz~30MHz)



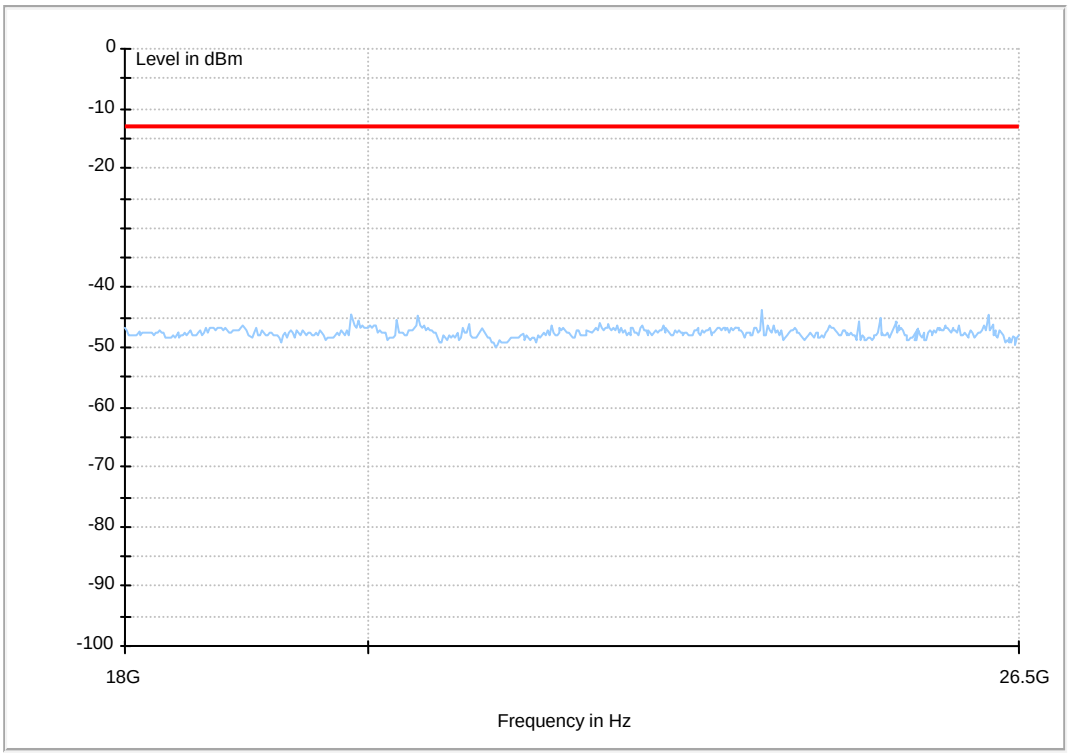
(30MHz ~3GHz)



(3GHz~18GHz)

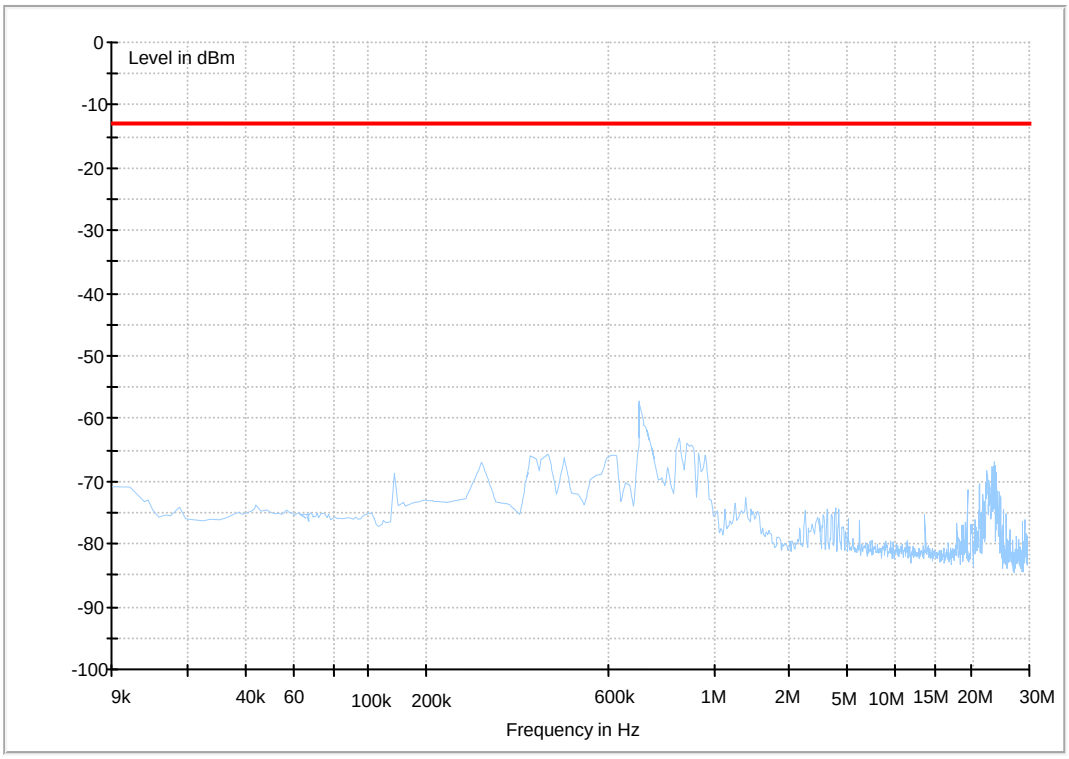


(18GHz~26.5GHz)

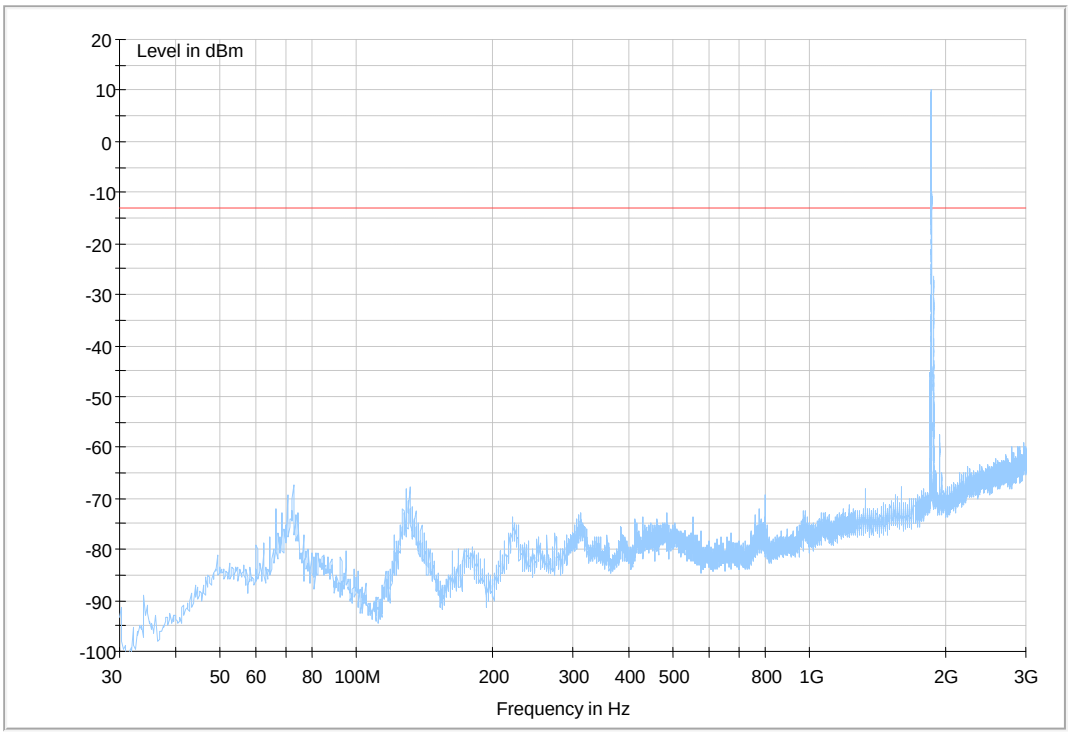


HSUPA Band II

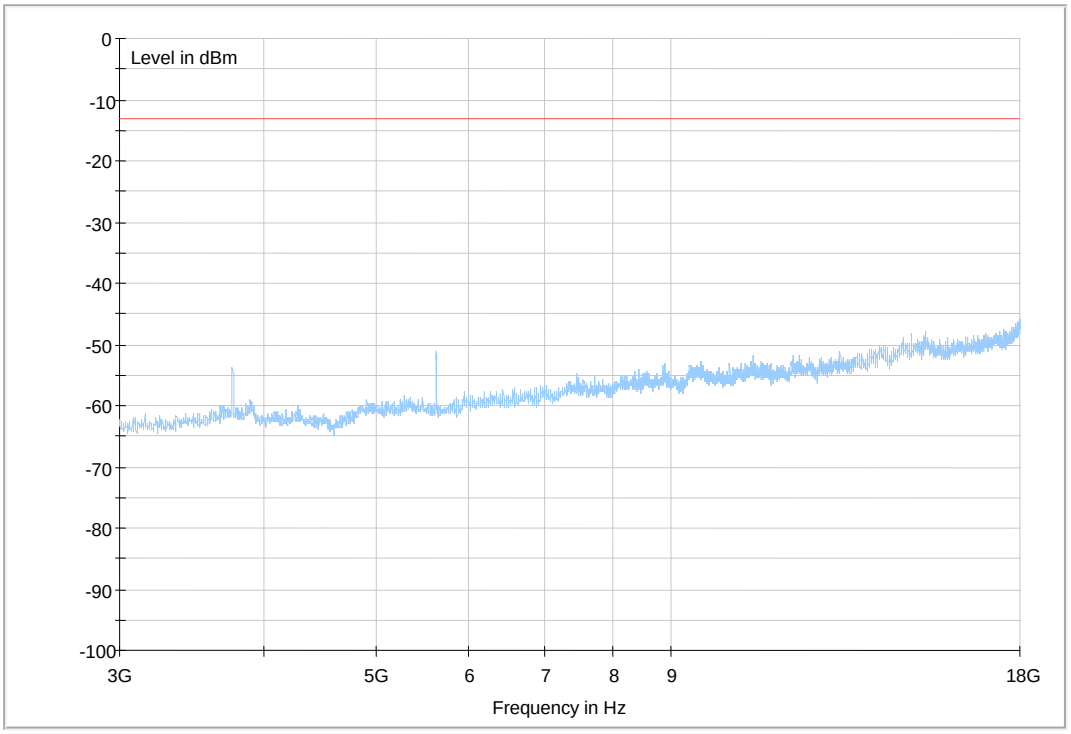
(9KHz~30MHz)



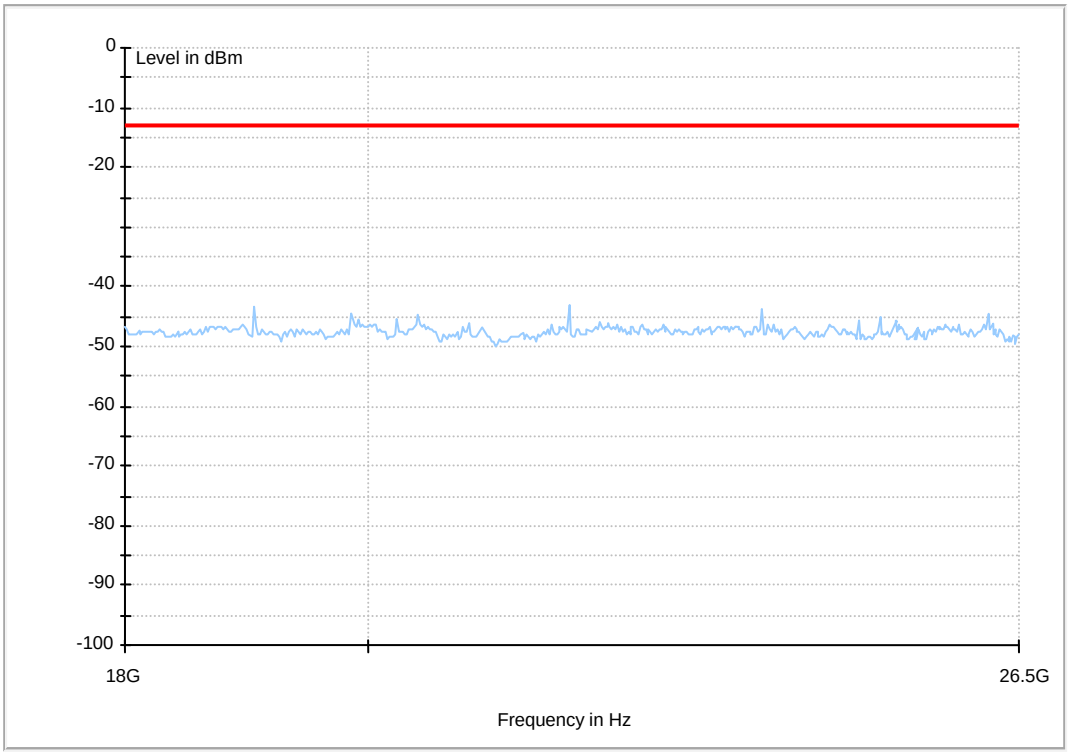
(30MHz~3GHz)



(3GHz~18GHz)



(18GHz~26.5GHz)



Appendix G

Frequency Stability

According to FCC Part 2.1055& Part 24.235

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No Distribution without Written Permission

Frequency Error vs. Temperature:

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	0.0080	---	±2.5	Pass
			-20 °C	-7	-0.0037	---	±2.5	Pass
			-10 °C	11	0.0059	---	±2.5	Pass
			0 °C	-16	-0.0085	---	±2.5	Pass
			10 °C	-14	-0.0074	---	±2.5	Pass
			20 °C	9	0.0048	---	±2.5	Pass
			30 °C	-13	-0.0069	---	±2.5	Pass
			40 °C	21	0.0112	---	±2.5	Pass
			50 °C	-18	-0.0096	---	±2.5	Pass
TM 2	M	100%	-30 °C	11	0.0059	---	±2.5	Pass
			-20 °C	20	0.0106	---	±2.5	Pass
			-10 °C	-13	-0.0069	---	±2.5	Pass
			0 °C	17	0.0090	---	±2.5	Pass
			10 °C	-16	-0.0085	---	±2.5	Pass
			20 °C	6	0.0032	---	±2.5	Pass
			30 °C	10	0.0053	---	±2.5	Pass
			40 °C	-15	-0.0080	---	±2.5	Pass
			50 °C	-12	-0.0064	---	±2.5	Pass
TM 3	M	100%	-30 °C	16	0.0085	---	±2.5	Pass
			-20 °C	5	0.0027	---	±2.5	Pass
			-10 °C	12	0.0064	---	±2.5	Pass
			0 °C	-19	-0.0101	---	±2.5	Pass
			10 °C	-11	-0.0059	---	±2.5	Pass
			20 °C	15	0.0080	---	±2.5	Pass
			30 °C	-17	-0.0090	---	±2.5	Pass
			40 °C	13	0.0069	---	±2.5	Pass
			50 °C	-7	-0.0037	---	±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	85 %	-12	-0.0064	---	±2.5	Pass
			100 %	9	0.0048	---	±2.5	Pass
			115 %	15	0.0080	---	±2.5	Pass
TM 2	M	20 °C	85 %	10	0.0053	---	±2.5	Pass
			100 %	-14	-0.0074	---	±2.5	Pass
			115 %	13	0.0070	---	±2.5	Pass
TM 3	M	20 °C	85 %	-4	-0.0021	---	±2.5	Pass
			100 %	11	0.0059	---	±2.5	Pass
			115 %	16	0.0085	---	±2.5	Pass

----------The END----------