Appendix A

Transmitter Output Power

According to FCC Part 2.1046 & Part24.232

Conducted Power of Transmitter

	RF Output Power (Conducted)					
TEST CONDITIONS	Channel512(L)		Channel661(M)		Channel810(H)	
	1850.2MHz		1880.0MHz		1909.8MHz	
	dBm		dBm		dBm	
T_{nom} / V_{nom}	Measured	Limit	Measured	Limit	Measured	Limit
TM1	29.58	33	29.48	33	29.39	33
TM2	25.81	33	25.66	33	25.51	33

Peak-to-Average Ratio

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	1.72	13.0	1.81	13.0	1.75	13.0
TM2	4.23	13.0	4.34	13.0	4.15	13.0

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	33.15	Horn Ant.	29.45	4.5	1	32.95	33	Pass
TM1	1880.0	33.05	Horn Ant.	29.35	4.5	1	32.85	33	Pass
TM1	1909.8	32.96	Horn Ant.	28.96	4.8	1	32.76	33	Pass
TM2	1850.2	29.38	Horn Ant.	25.68	4.5	1	29.18	33	Pass
TM2	1880.0	29.23	Horn Ant.	25.53	4.5	1	29.03	33	Pass
TM2	1909.8	29.08	Horn Ant.	25.08	4.8	1	28.88	33	Pass

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

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

b, SGP=Signal Generator Level

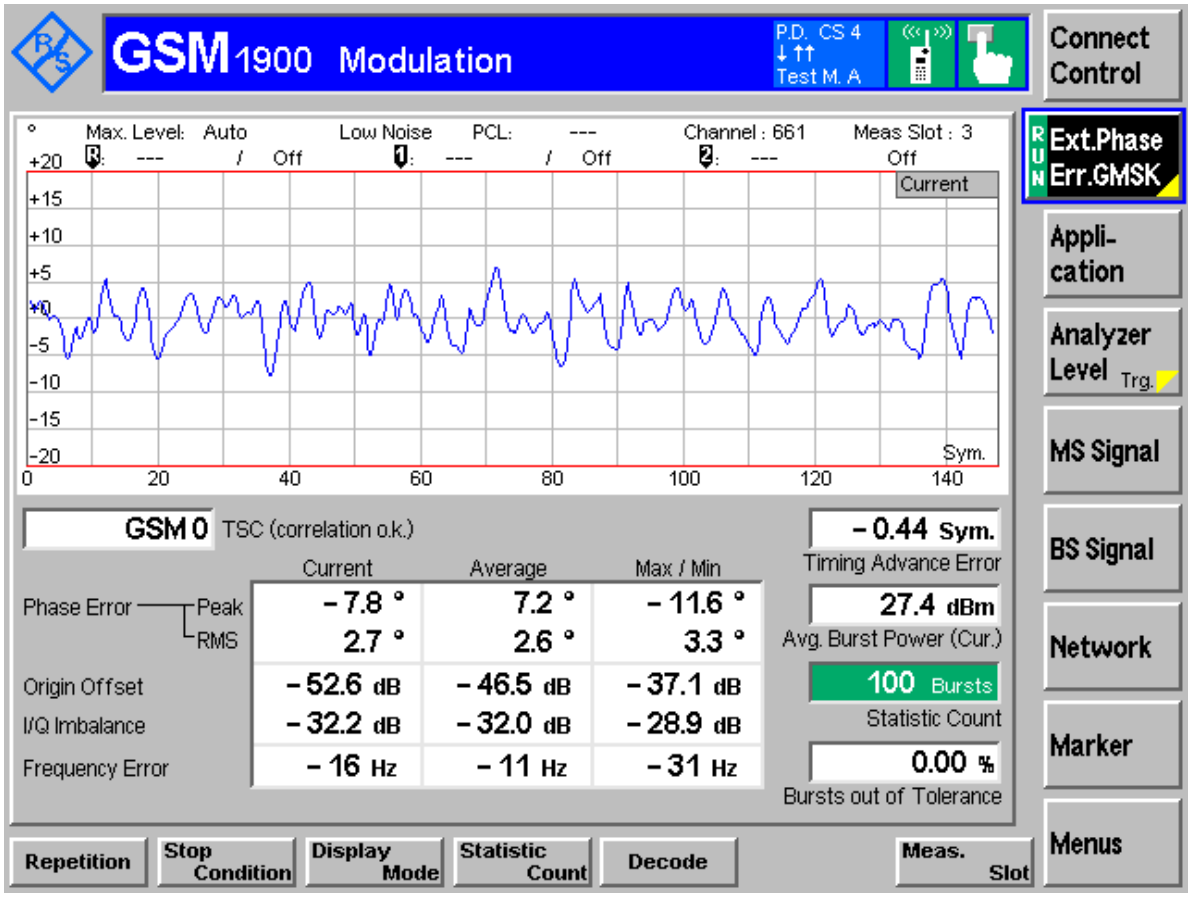
----------The END----------

Appendix B

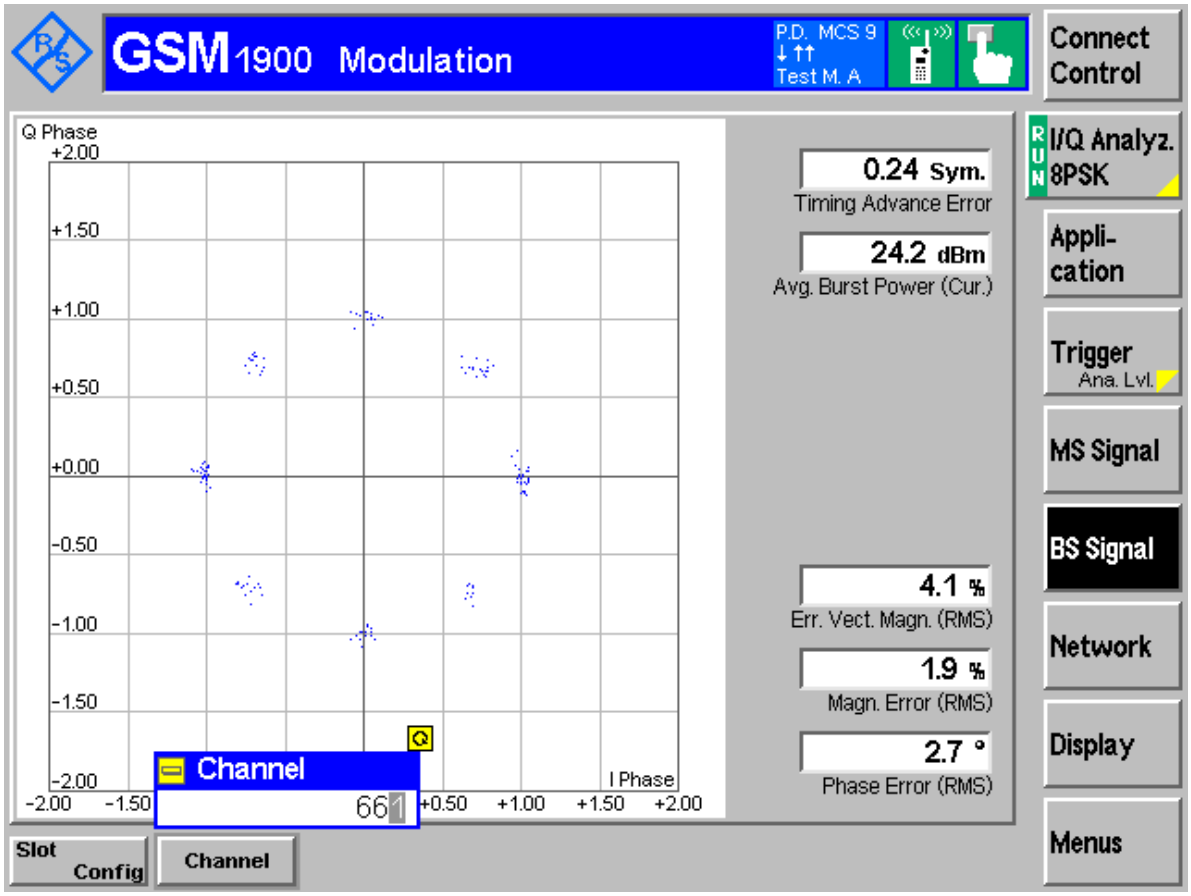
Modulation Characteristics

According to FCC Part 2.1047 & Part24 Subpart E

TM1:GPRS/GSM
Channel 661



TM2:EDGE
Channel 661



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

Appendix C

Occupied Bandwidth

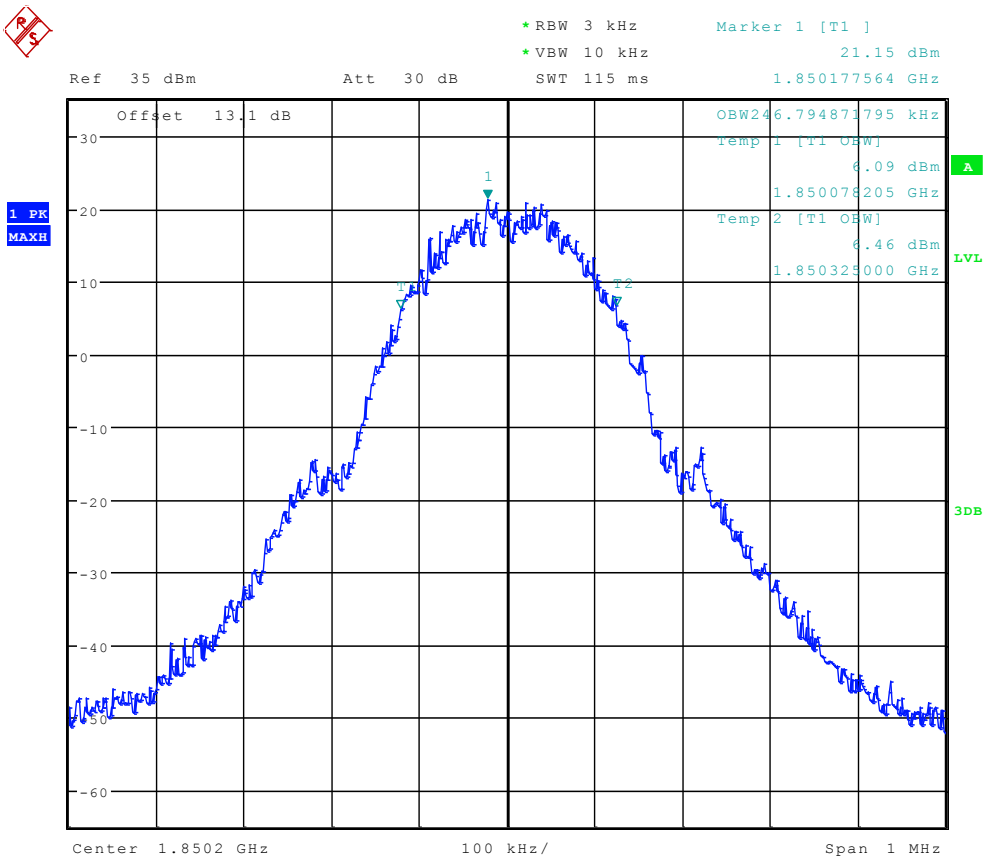
According to FCC Part 2.1049 & Part 24 Subpart E

Result Table

Table 1 Measurement Results

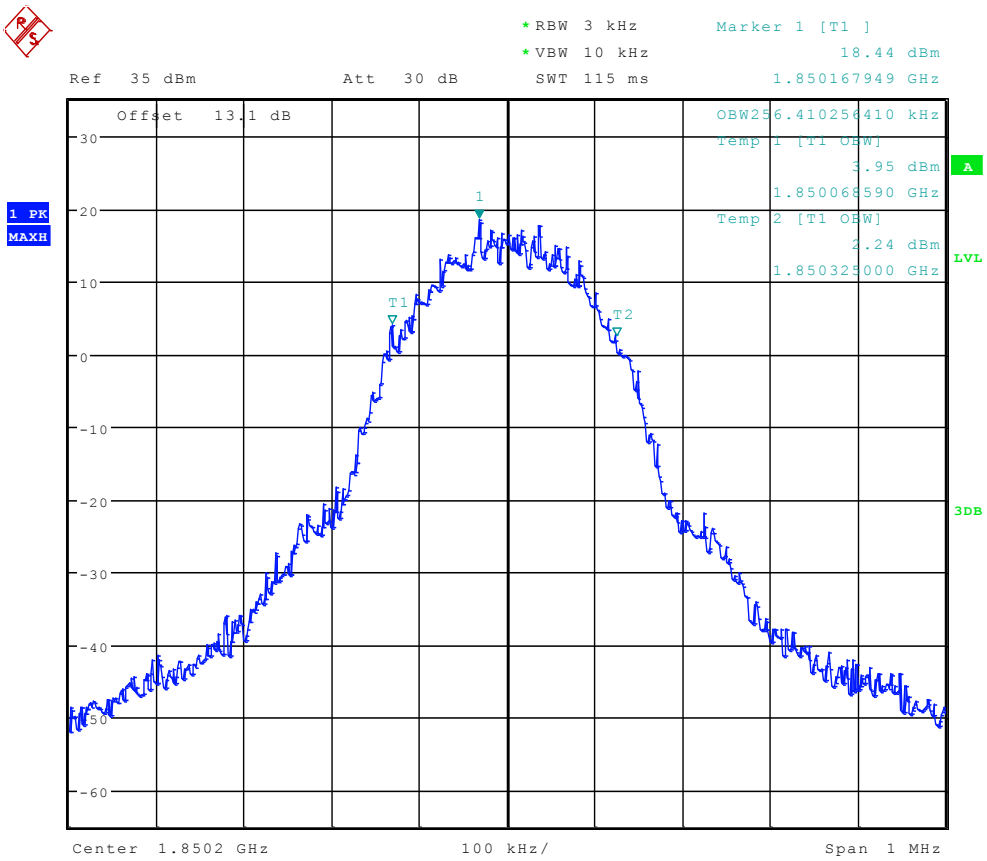
Test Mode	RF Channel	Occupied Bandwidth [kHz]	Verdict
TM1	512	246.79	Pass
	661	246.79	Pass
	810	245.19	Pass
TM2	512	256.41	Pass
	661	246.79	Pass
	810	250.00	Pass

TM1:GPRS/GSM
Channel 512

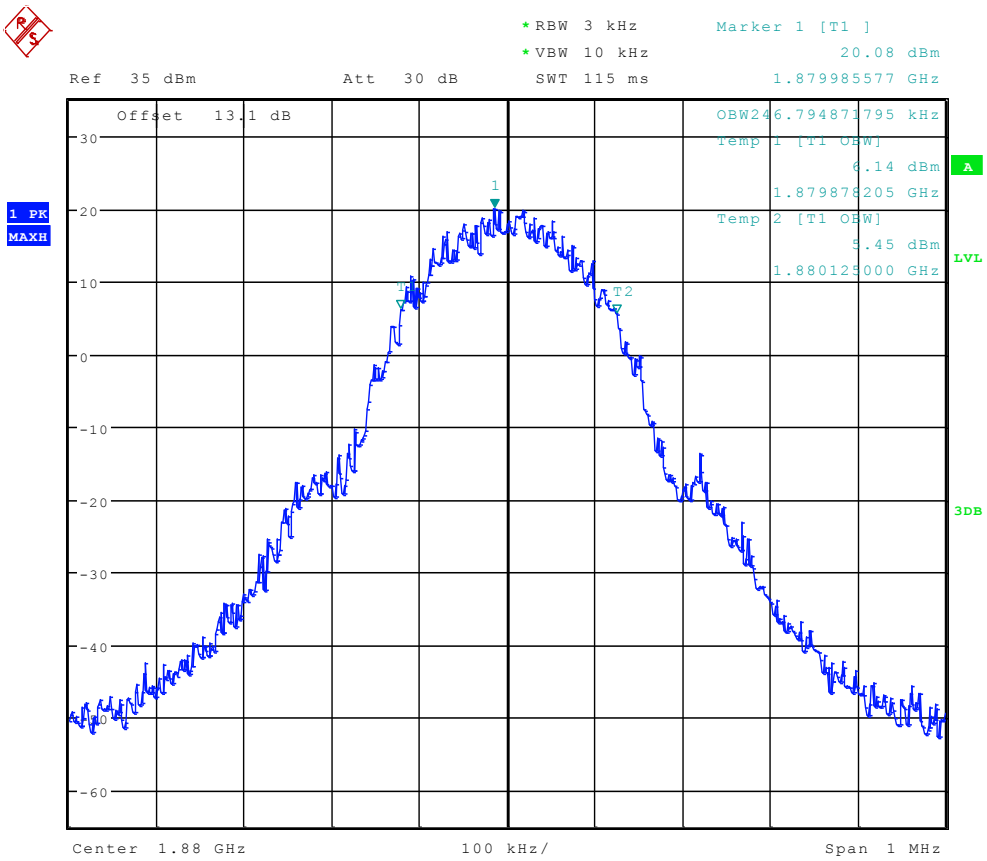


Date: 8.AUG.2012 22:21:53

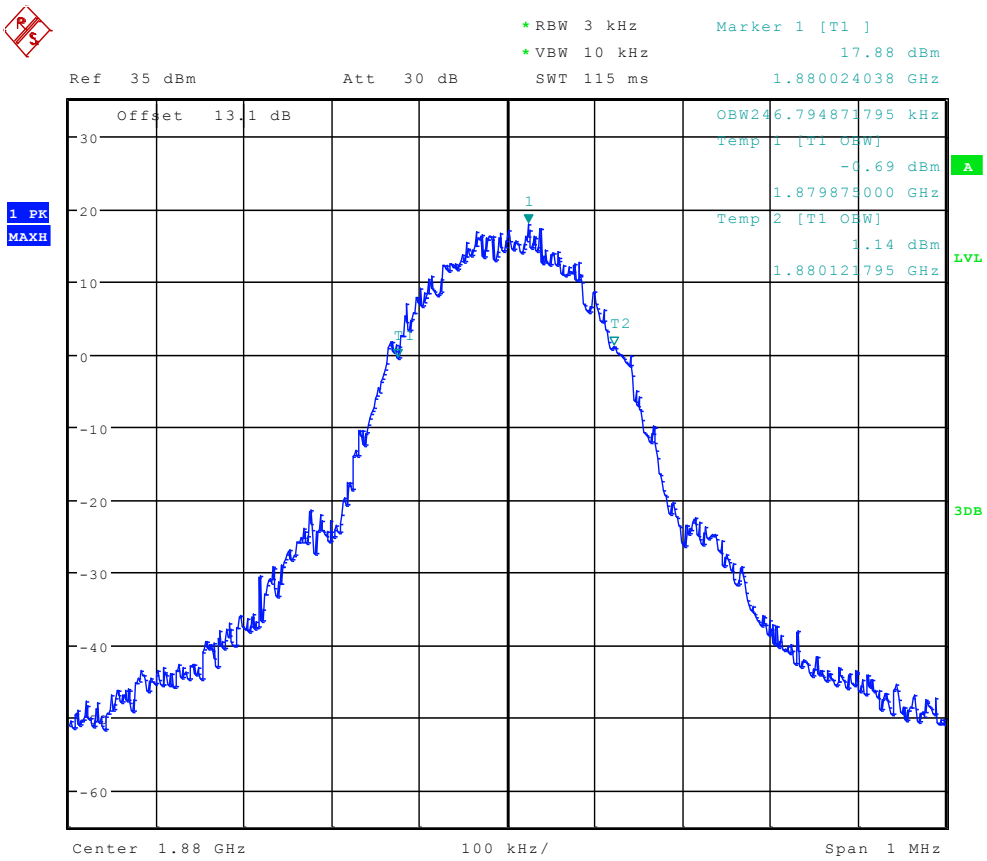
TM2:EDGE
Channel 512



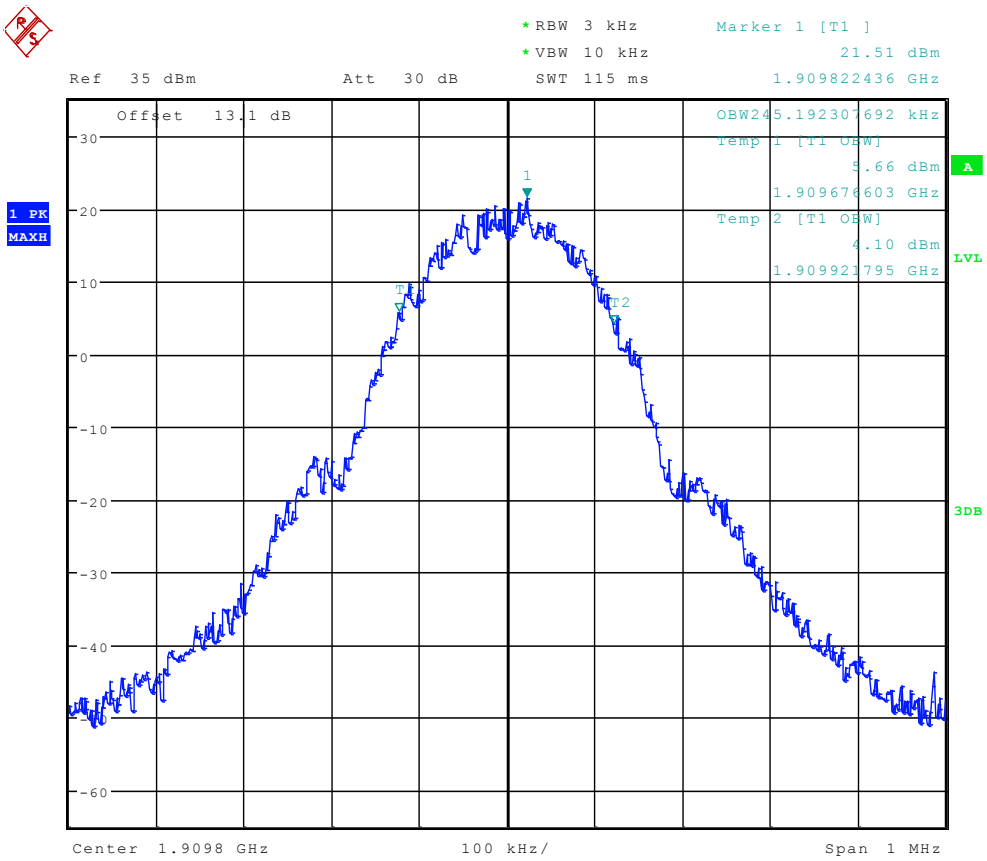
TM1:GPRS/GSM
Channel 661



TM2:EDGE
Channel 661

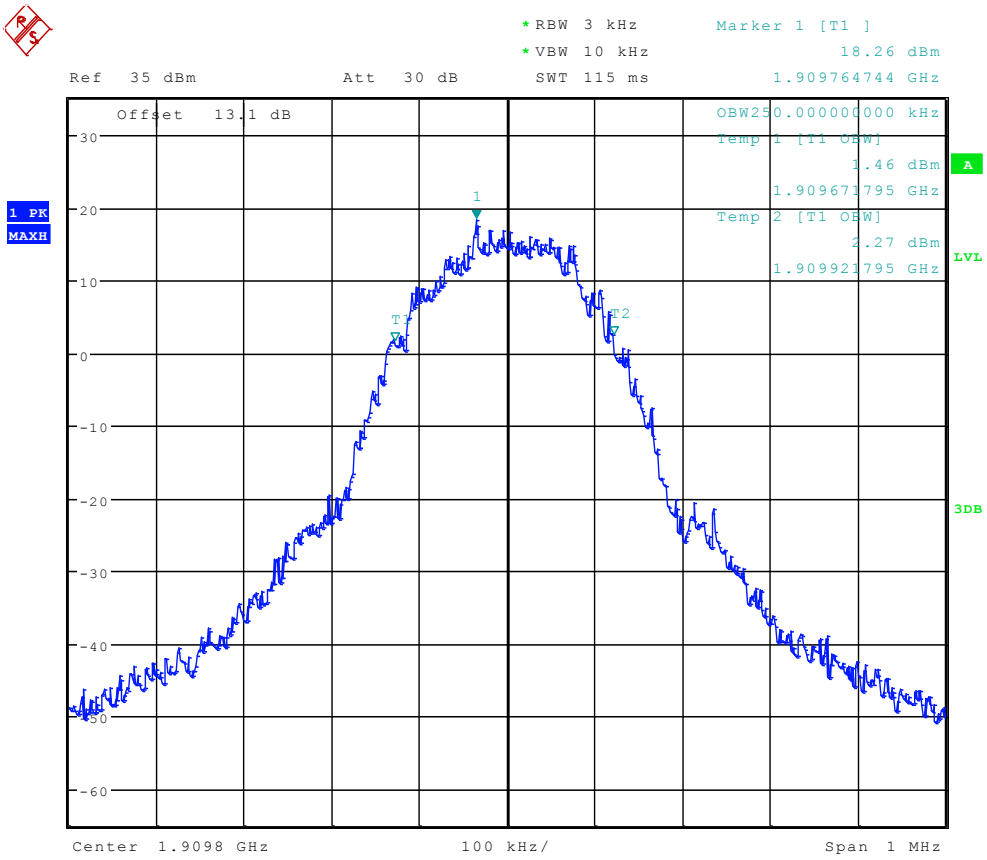


TM1:GPRS/GSM
Channel 810



Date: 8.AUG.2012 22:22:26

TM2:EDGE
Channel 810



Date: 8.AUG.2012 22:32:55

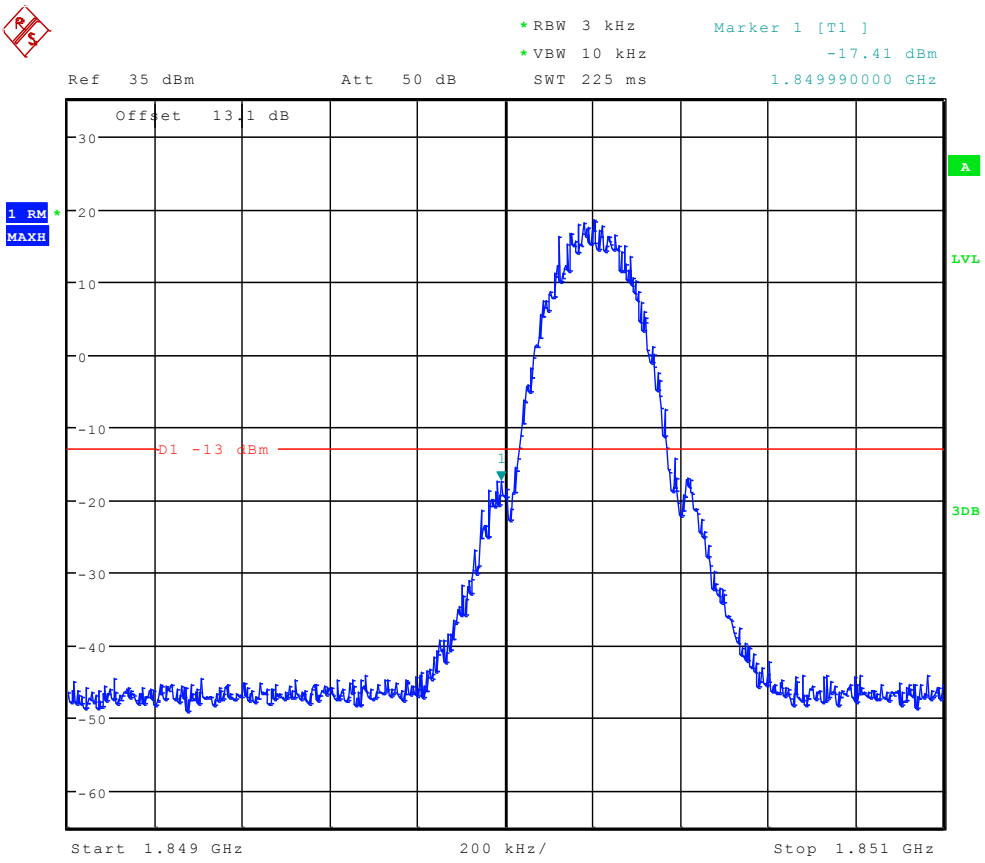
----------END----------

Appendix D

Band Edges Compliance

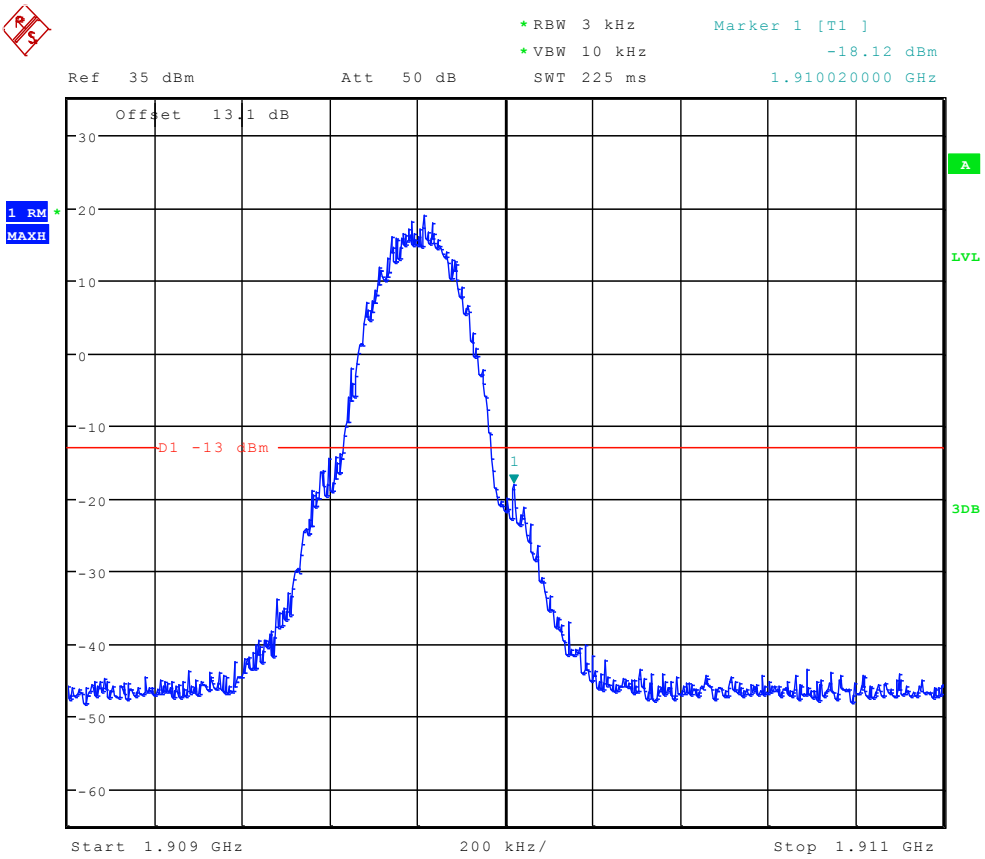
According to FCC Part 2.1051 & 24.238

TM1:GPRS/GSM
Left Edge
Channel 512



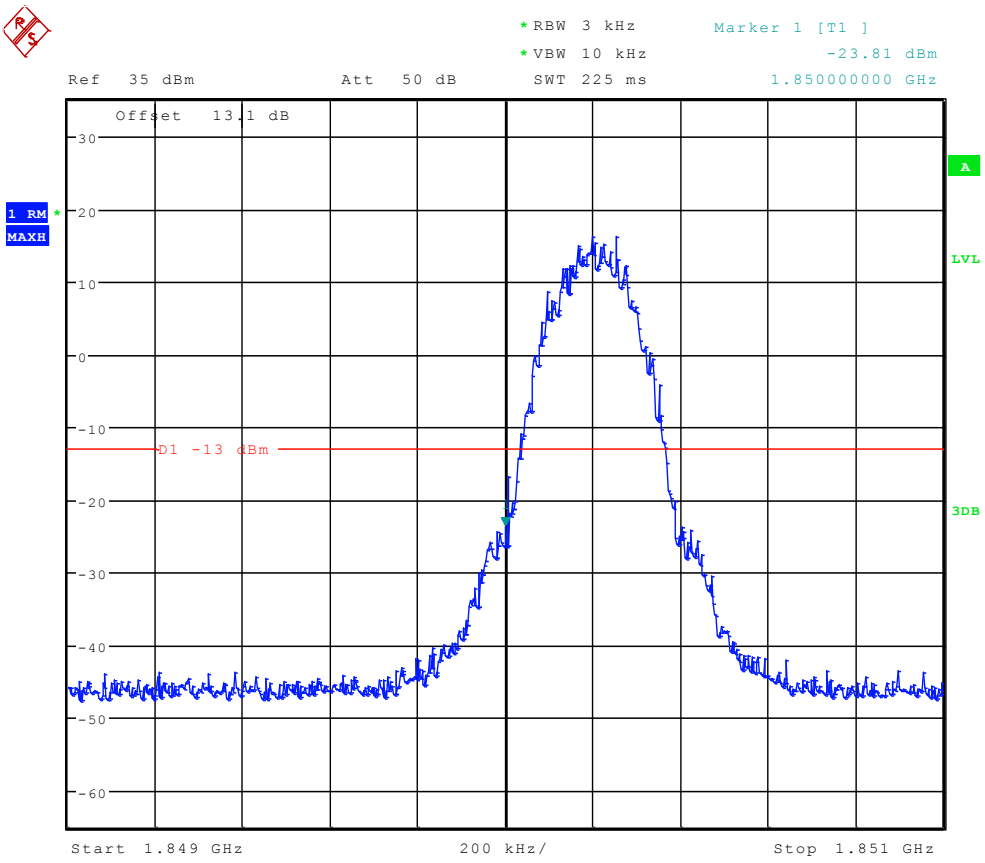
Date: 8.AUG.2012 22:26:46

Right Edge
Channel 810



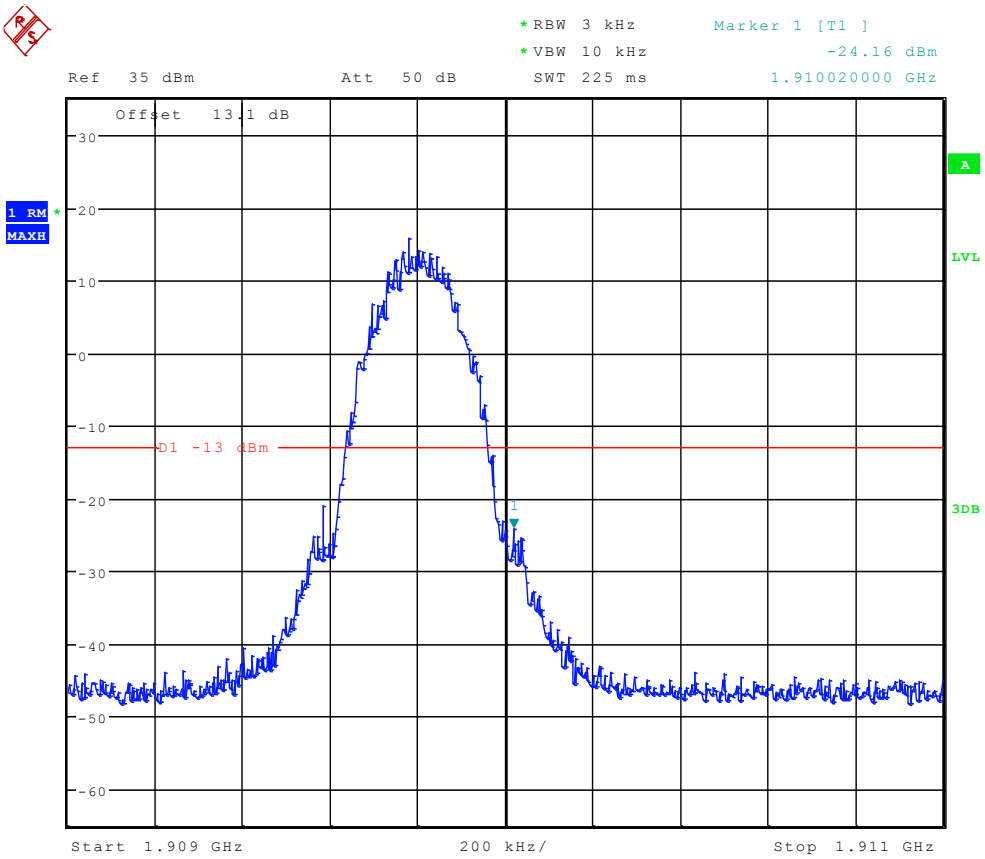
Date: 8.AUG.2012 22:27:31

TM2:EDGE
Left Edge
Channel 512



Date: 8.AUG.2012 22:36:54

Right Edge
Channel 810



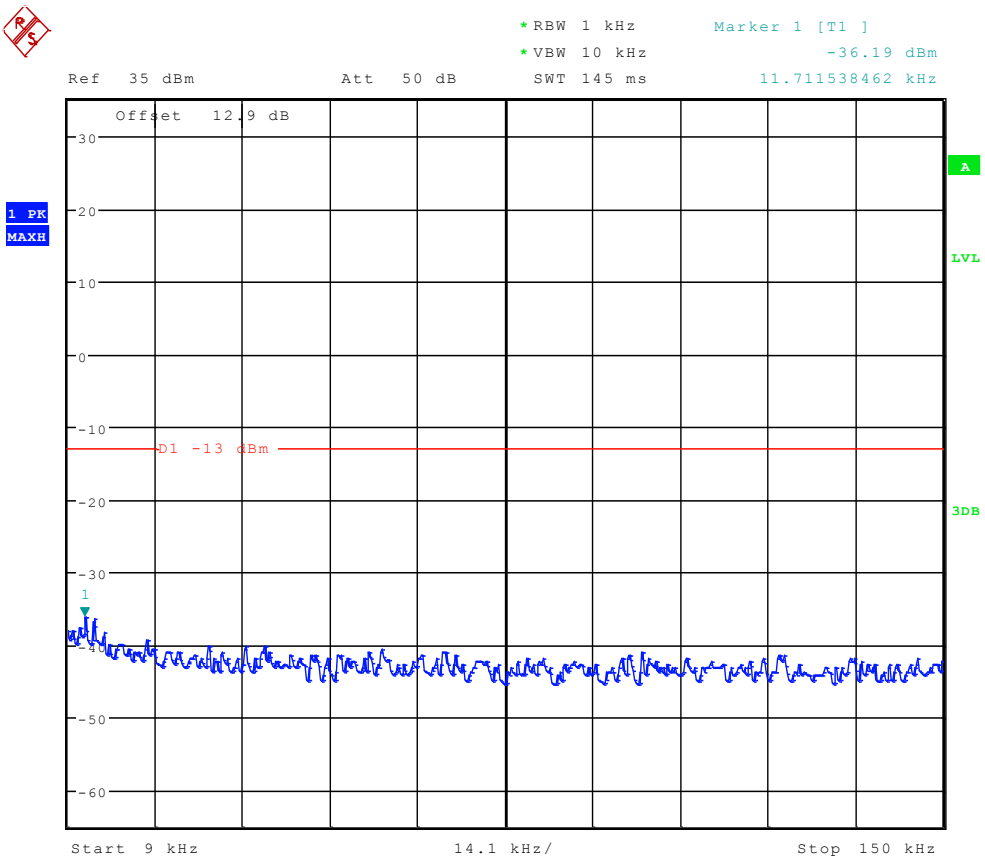
Date: 8.AUG.2012 22:37:34

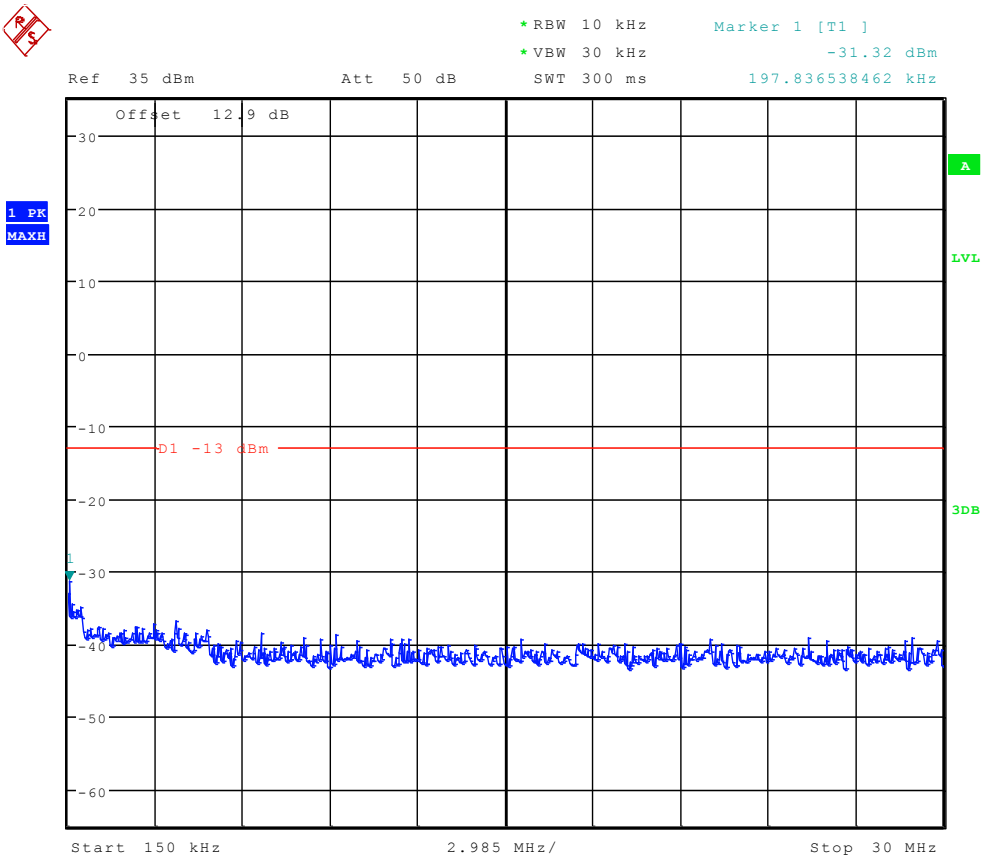
Appendix E

Spurious Emission at Antenna Terminal

According to FCC Part 2.1051 & 24.238

TM1:GPRS/GSM
Channel 512





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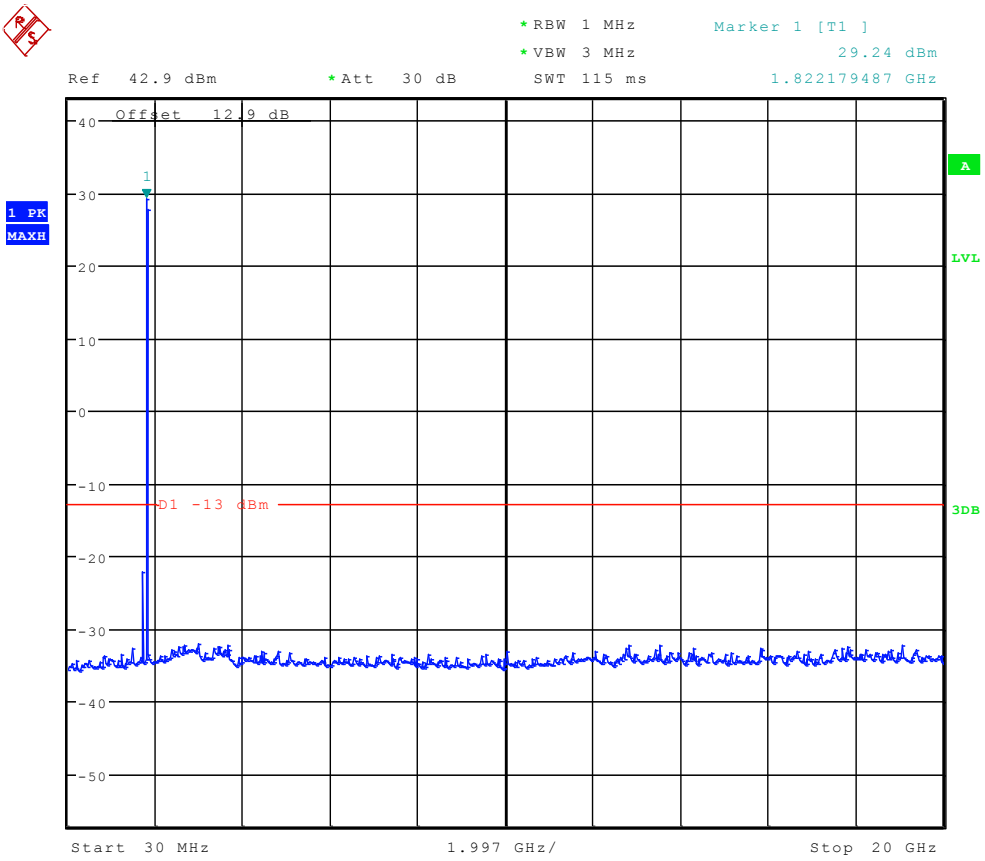
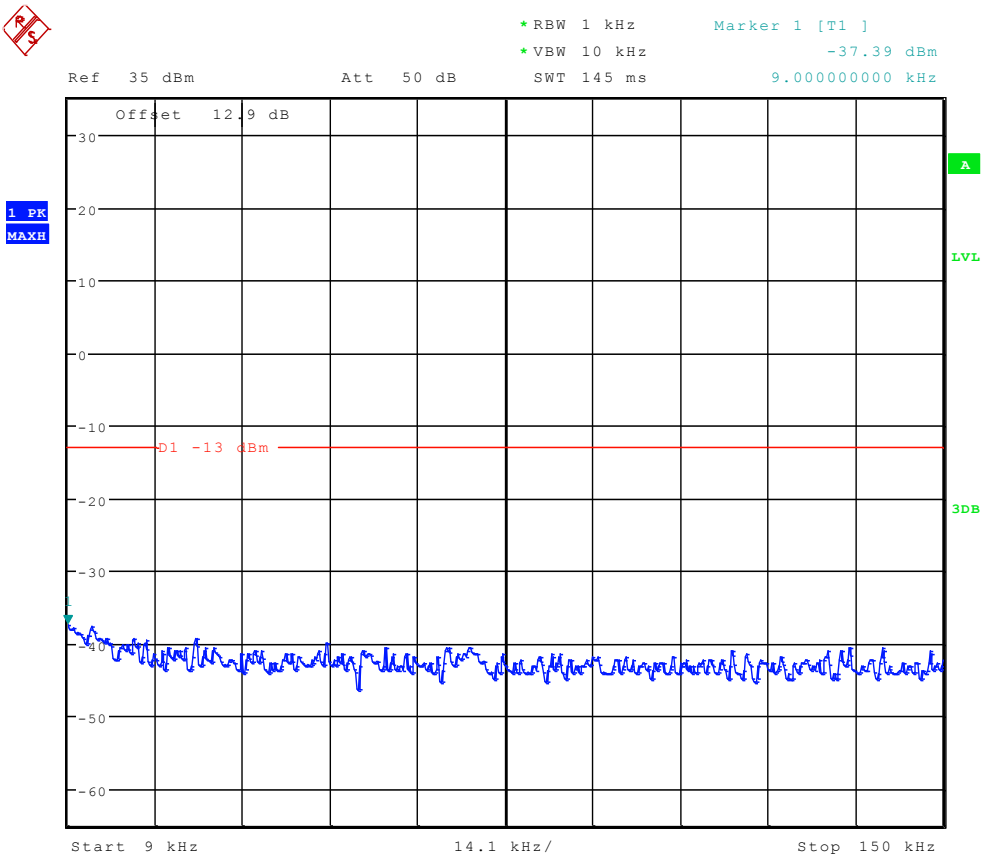
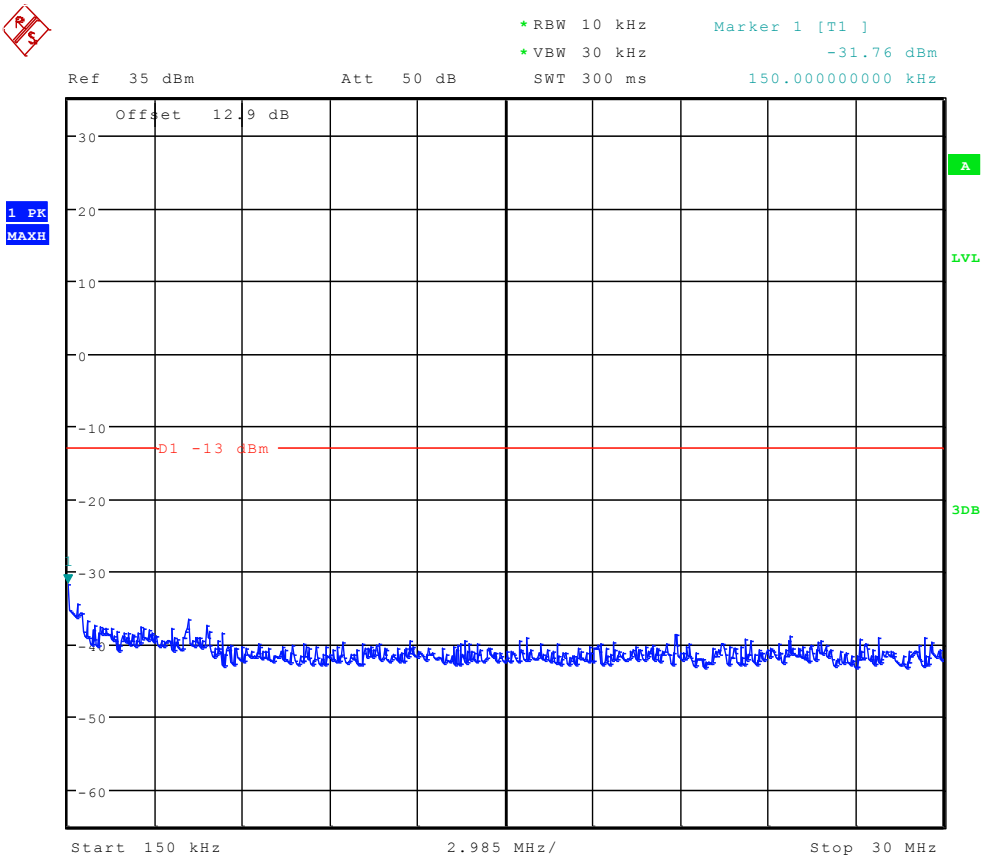


Date: 8.AUG.2012 22:25:42

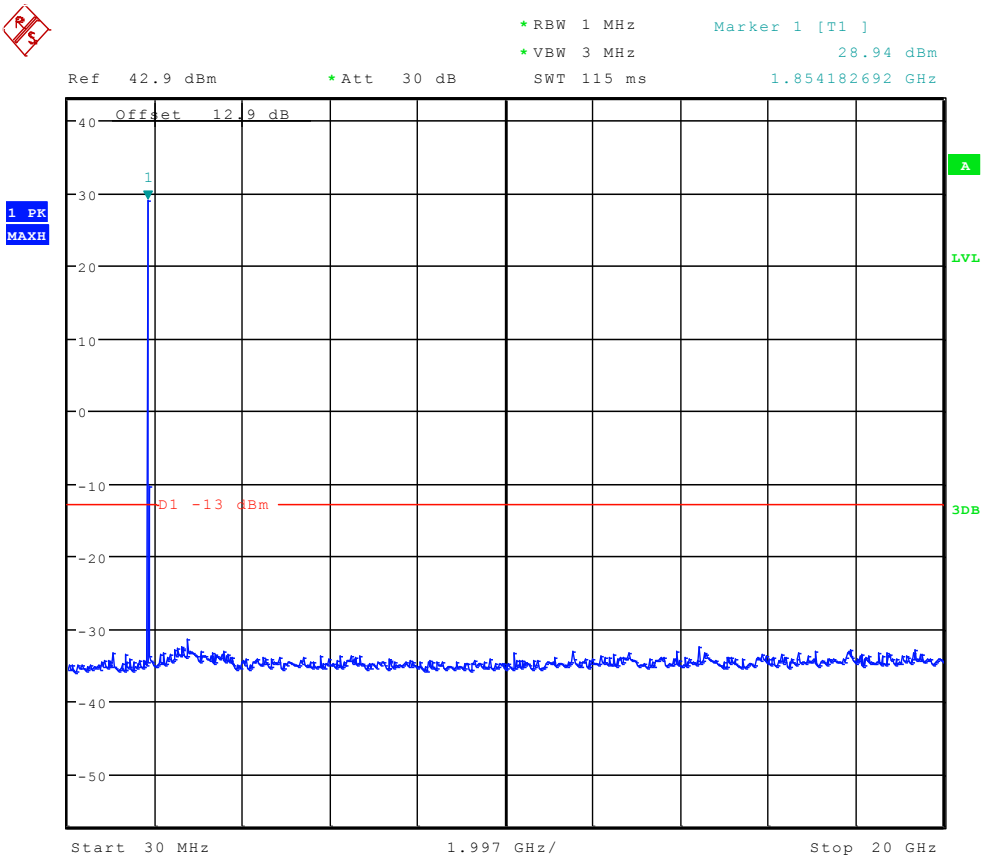
Channel 661



Date: 8.AUG.2012 22:22:55

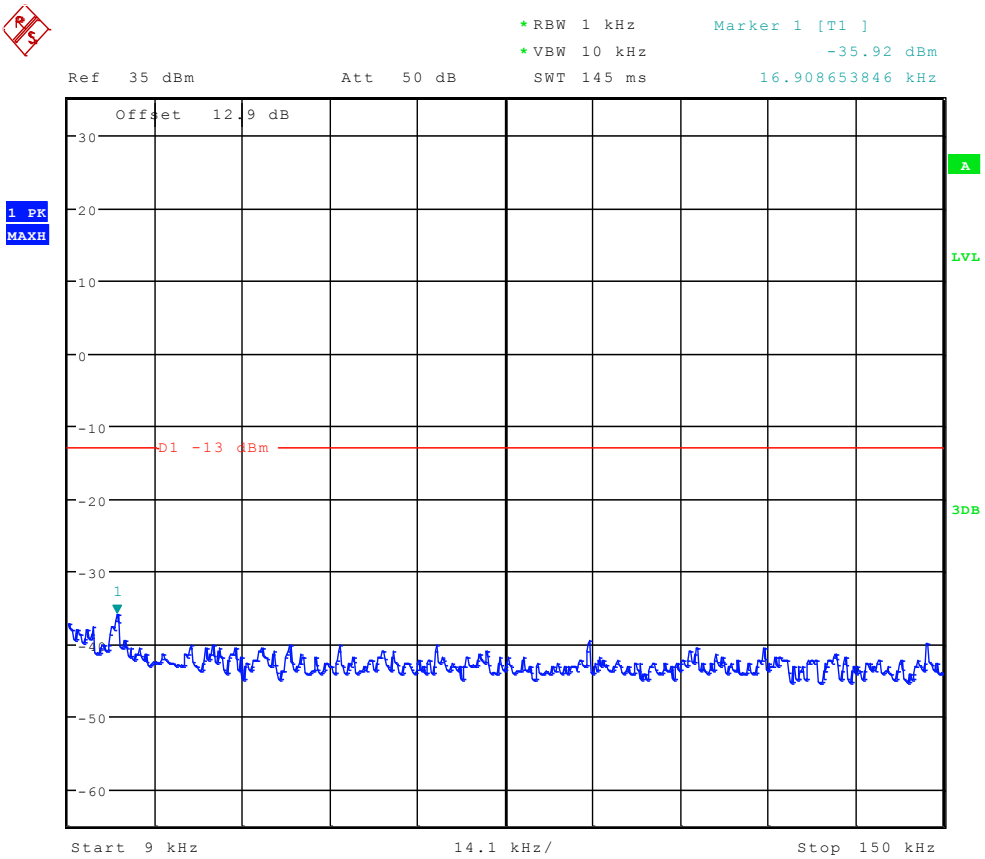


Date: 8.AUG.2012 22:23:39



Date: 8.AUG.2012 22:25:56

Channel 810



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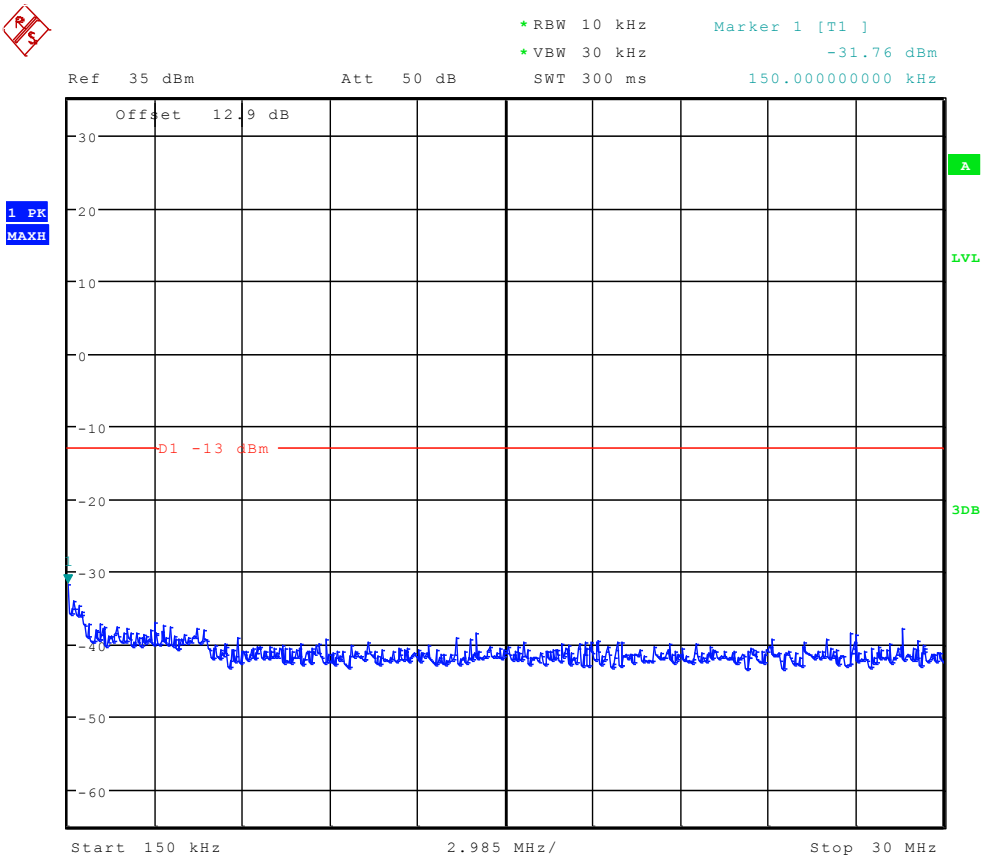

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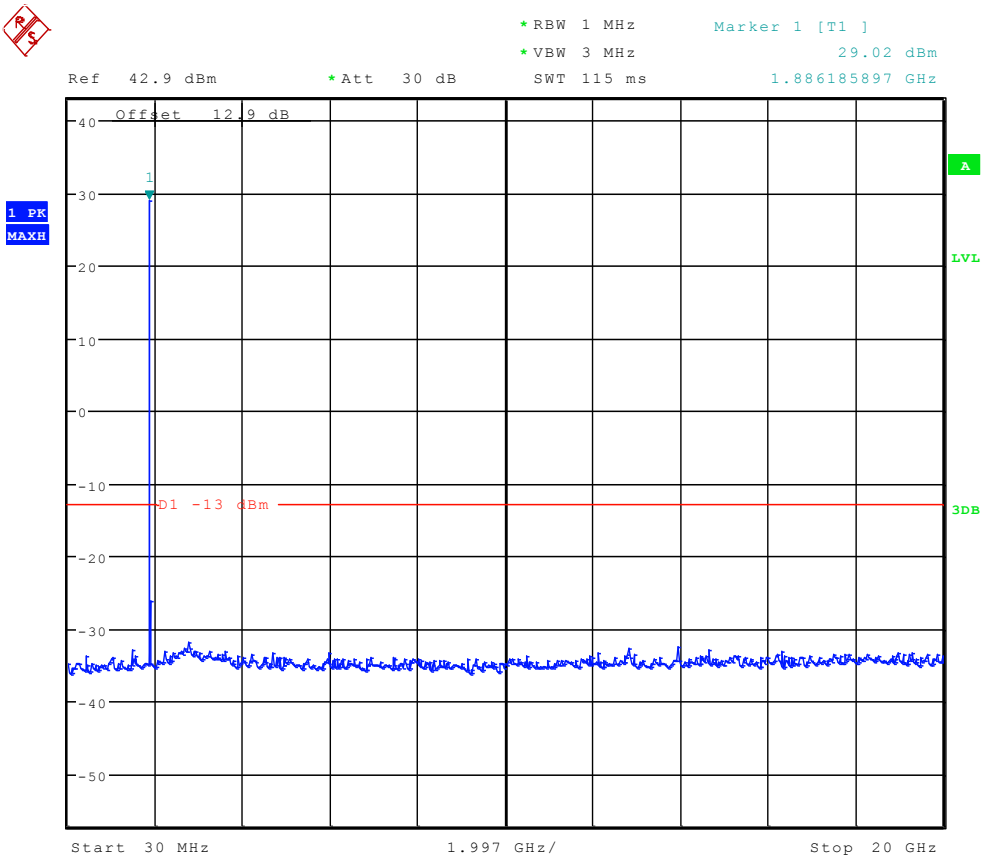
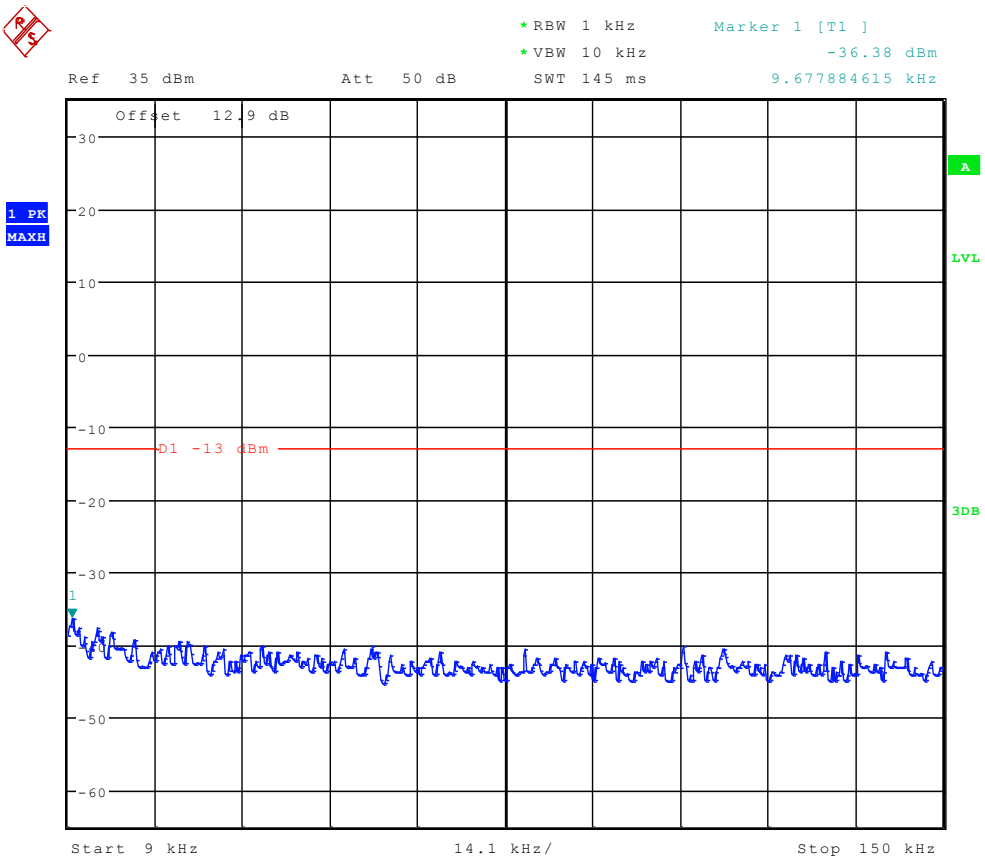


Date: 8.AUG.2012 22:26:11

TM2:EDGE
Channel 512



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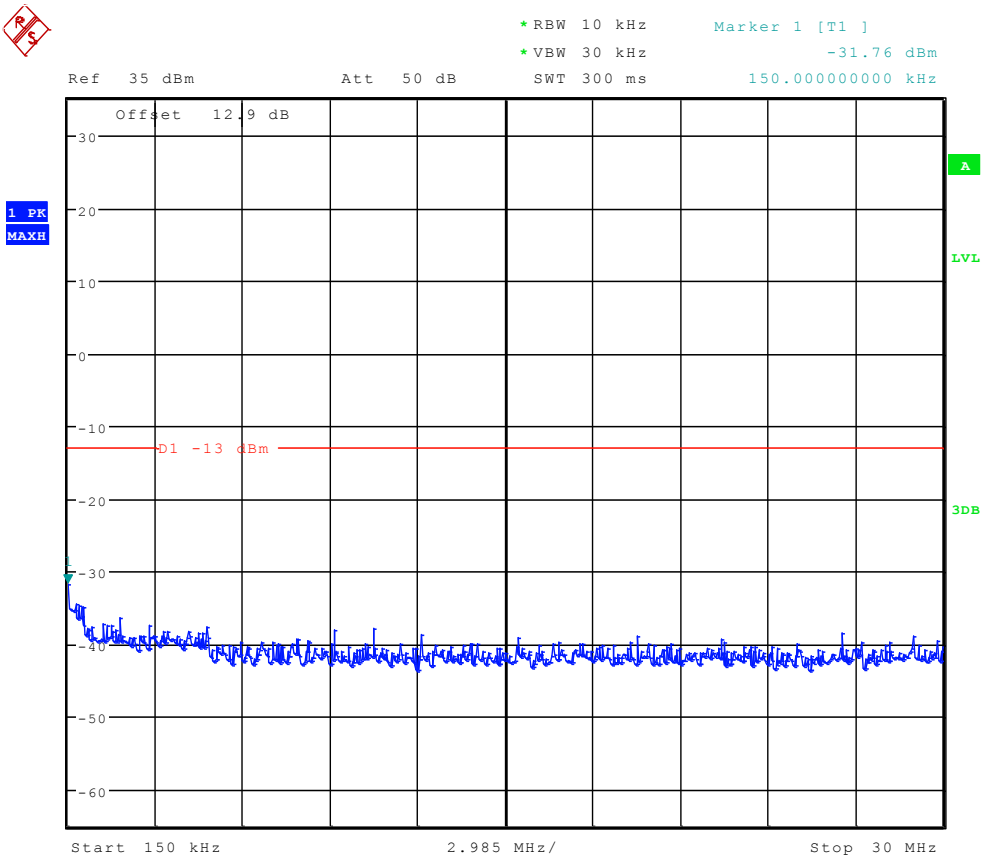
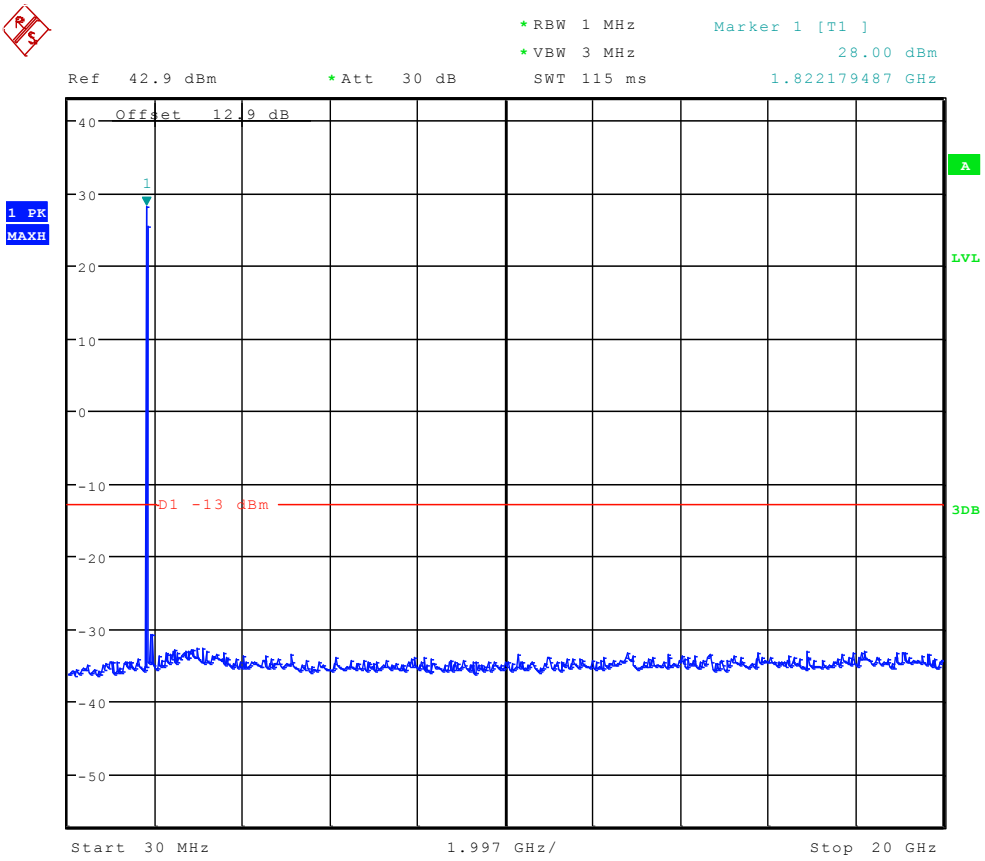
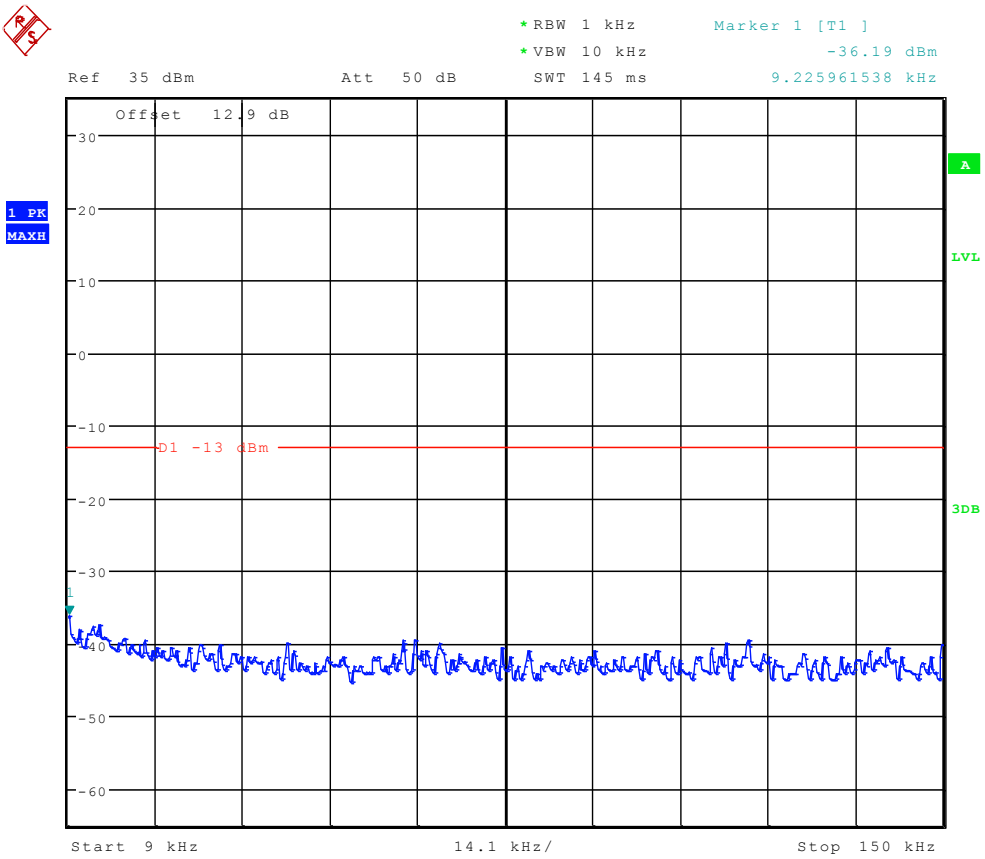


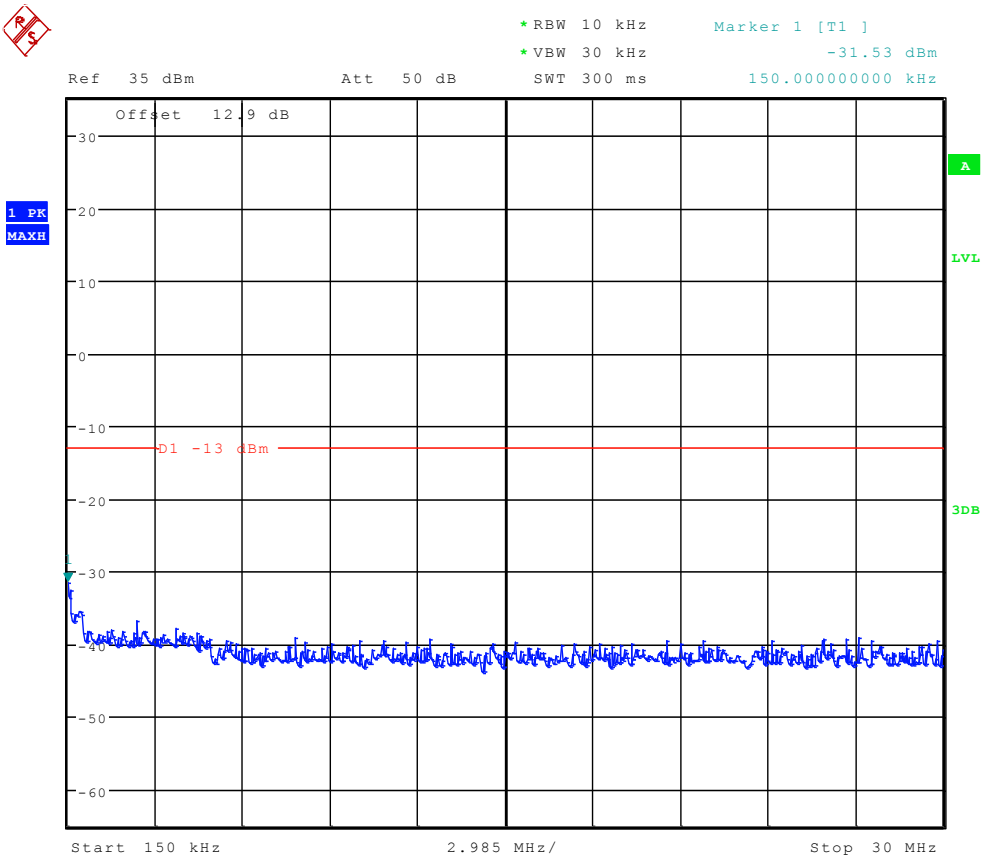
Date: 8.AUG.2012 22:33:53


RBW 1 MHz
VBW 3 MHz
SWT 115 ms
Marker 1 [T1]
28.00 dBm
1.822179487 GHz
Ref 42.9 dBm
Att 30 dB
Offset 12.9 dB
1 PK
MAXH
A
LVL
3DB
D1 -13 dBm
Start 30 MHz
1.997 GHz/
Stop 20 GHz
Date: 8.AUG.2012 22:34:58

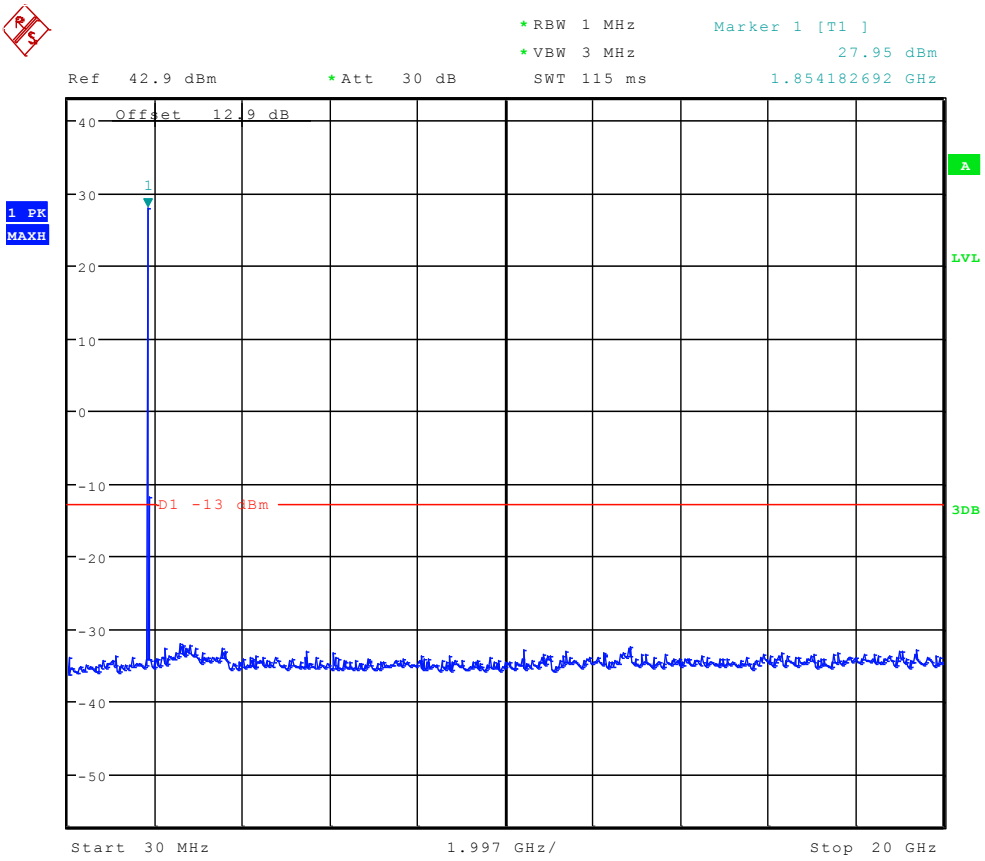
Channel 661



Date: 8.AUG.2012 22:33:24

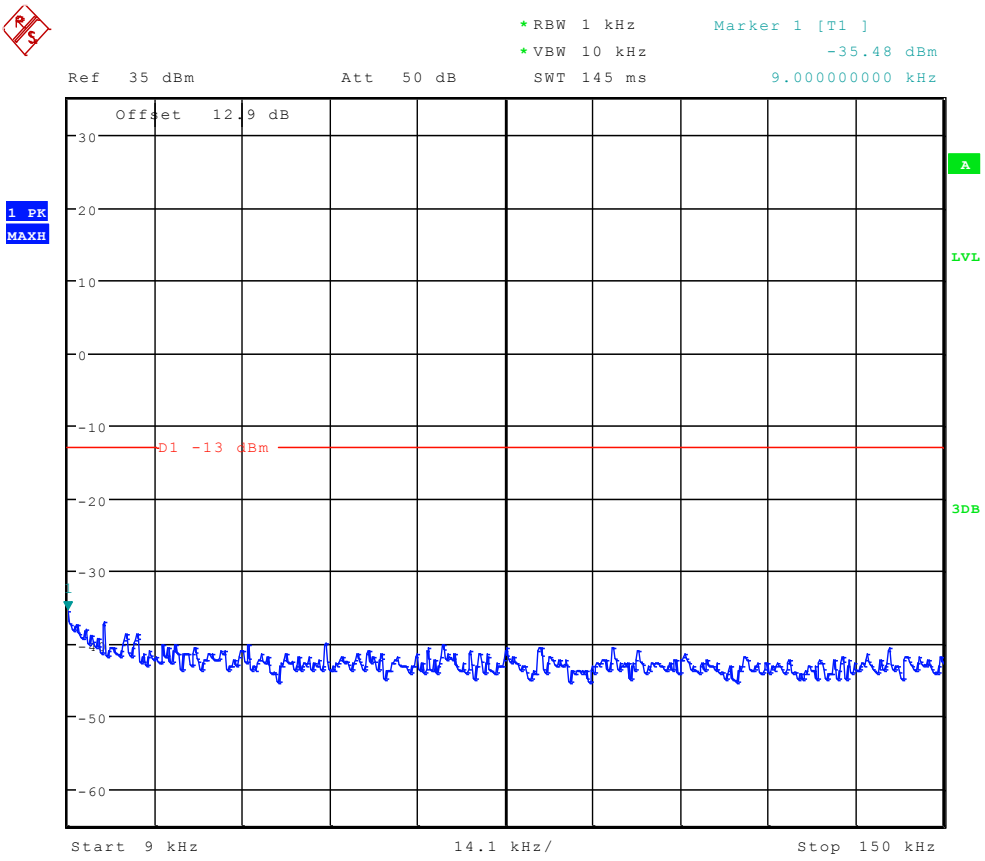


Date: 8.AUG.2012 22:34:08

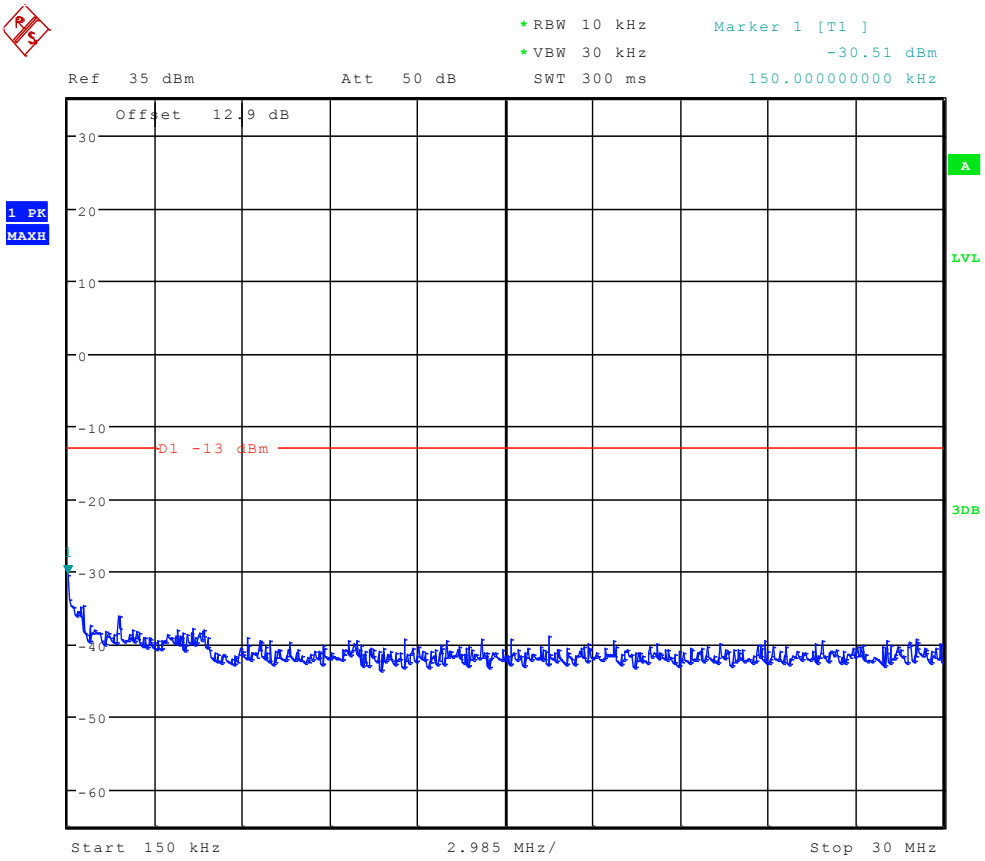


Date: 8.AUG.2012 22:35:12

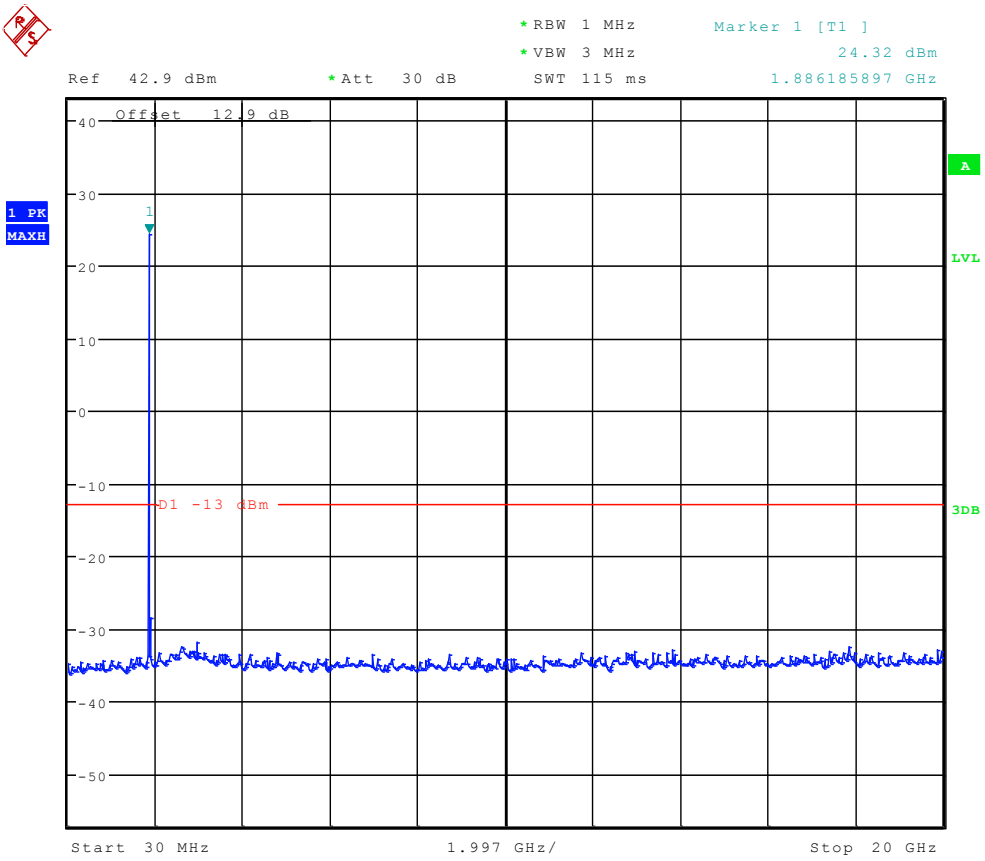
Channel 810



Date: 8.AUG.2012 22:33:38



Date: 8.AUG.2012 22:34:22


RBW 1 MHz
VBW 3 MHz
SWT 115 ms
Marker 1 [T1]
24.32 dBm
1.886185897 GHz
Ref 42.9 dBm
Att 30 dB
Offset 12.9 dB
1 PK
MAXH
A
LVL
3DB
D1 -13 dBm
Start 30 MHz
1.997 GHz/
Stop 20 GHz
Date: 8.AUG.2012 22:35:27

----------END----------

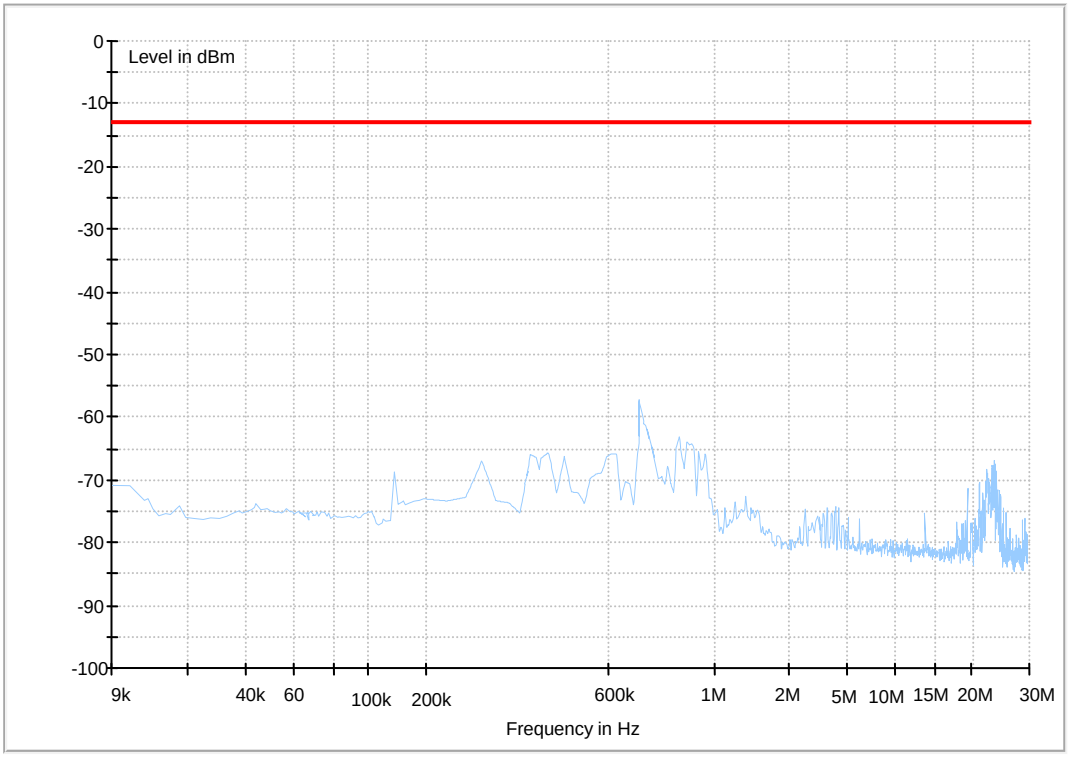
Appendix F

Radiated spurious emission

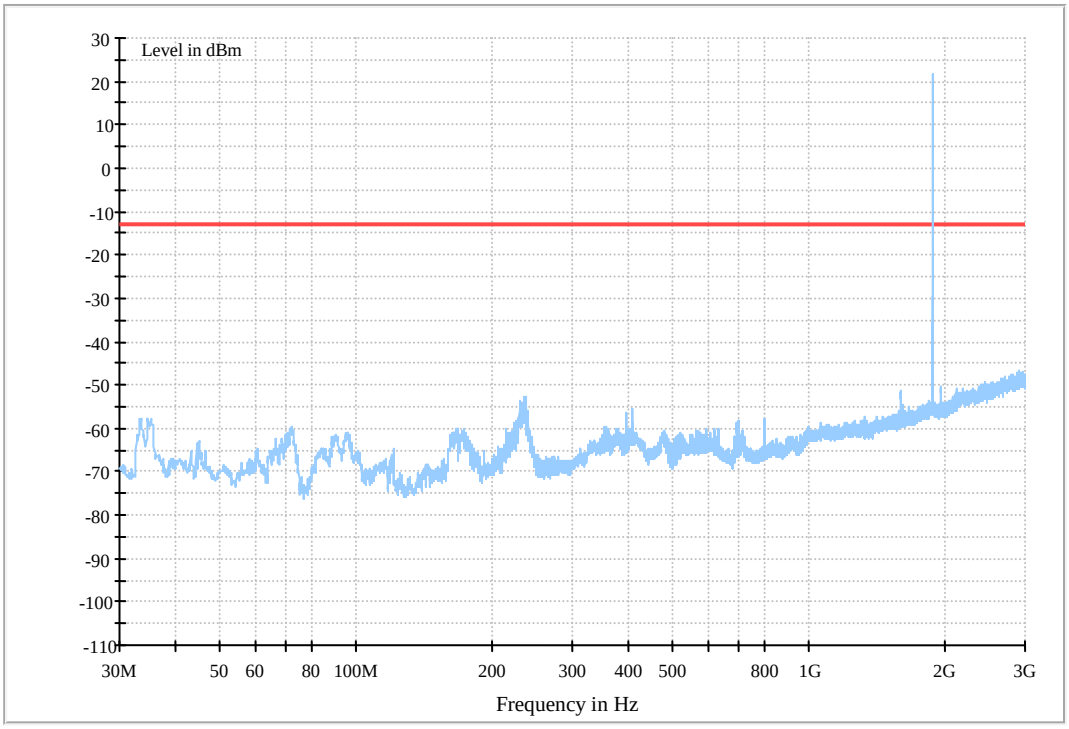
According to FCC Part 2.1053& Part 24.238

GPRS 1900

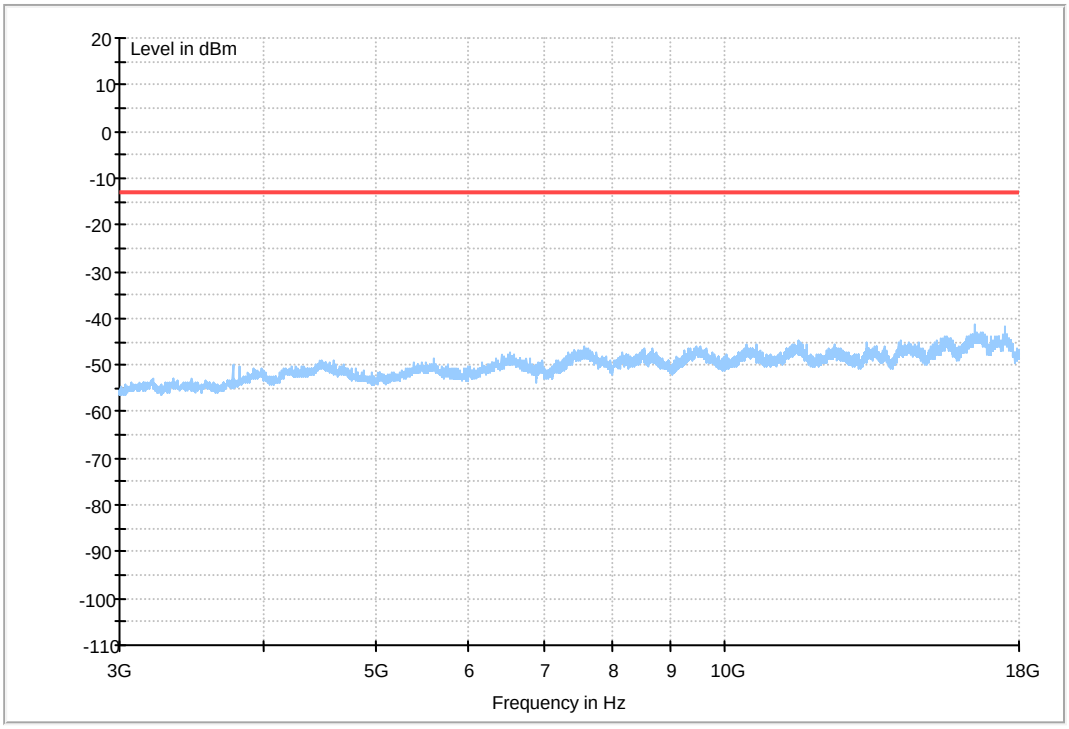
(9kHz-30MHz)



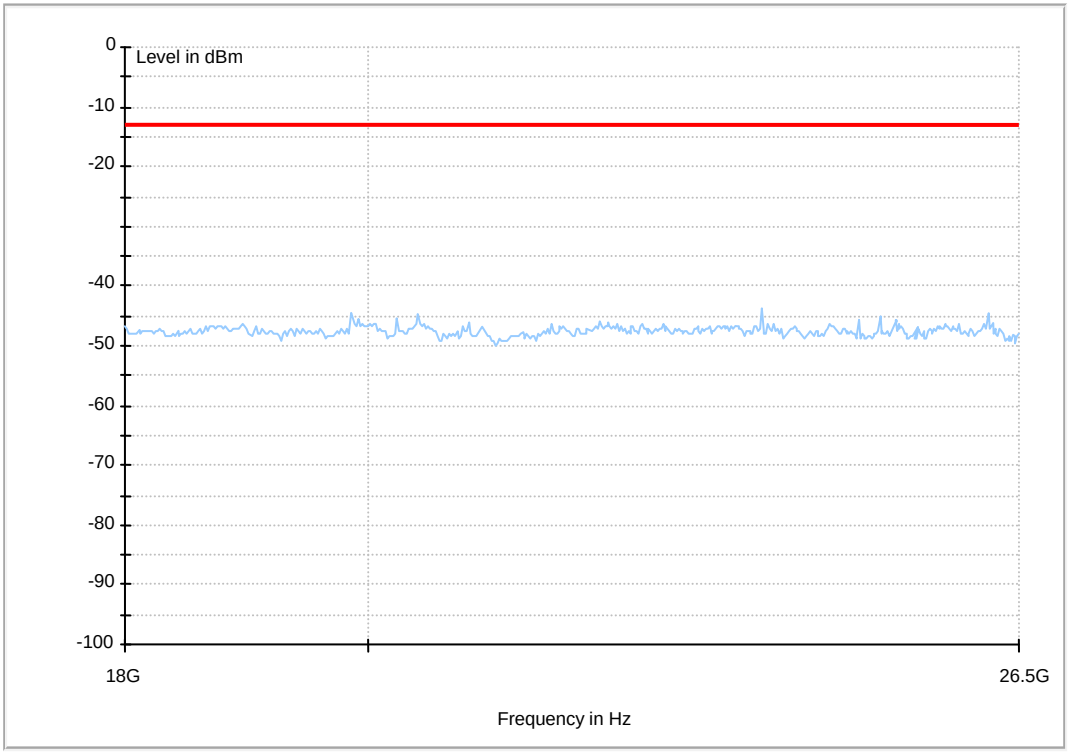
Traffic Mode (30MHz-3GHz)



Traffic Mode (3GHz-18GHz)

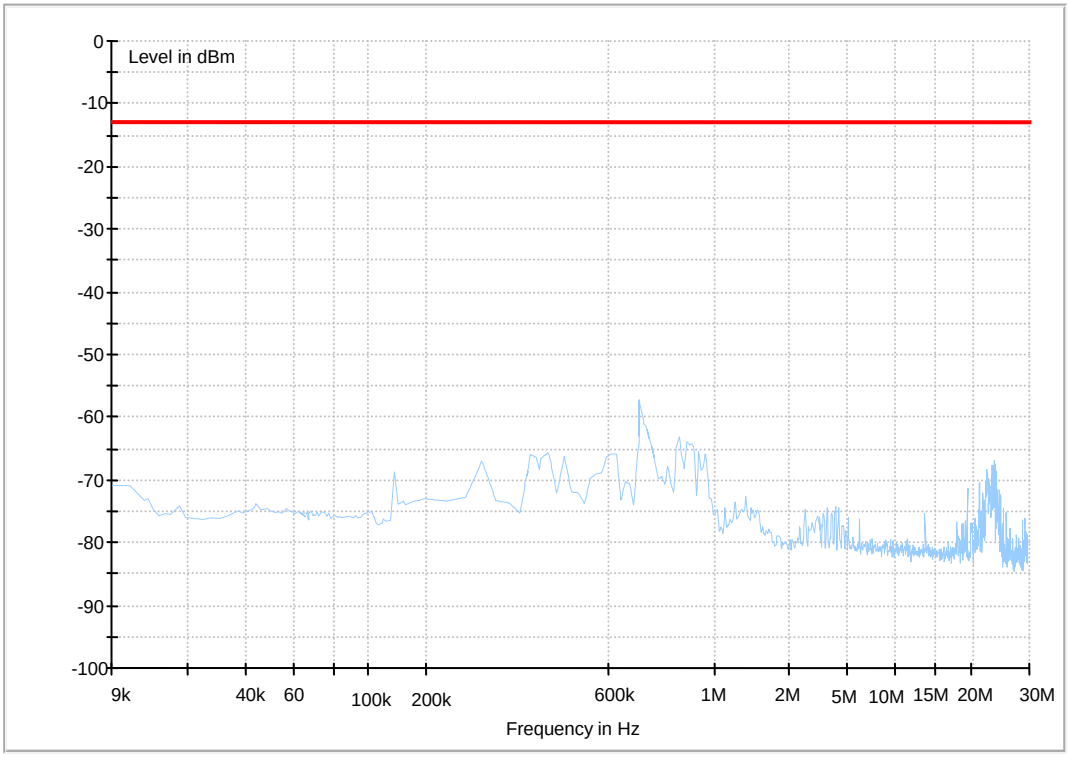


(18GHz-26.5GHz)

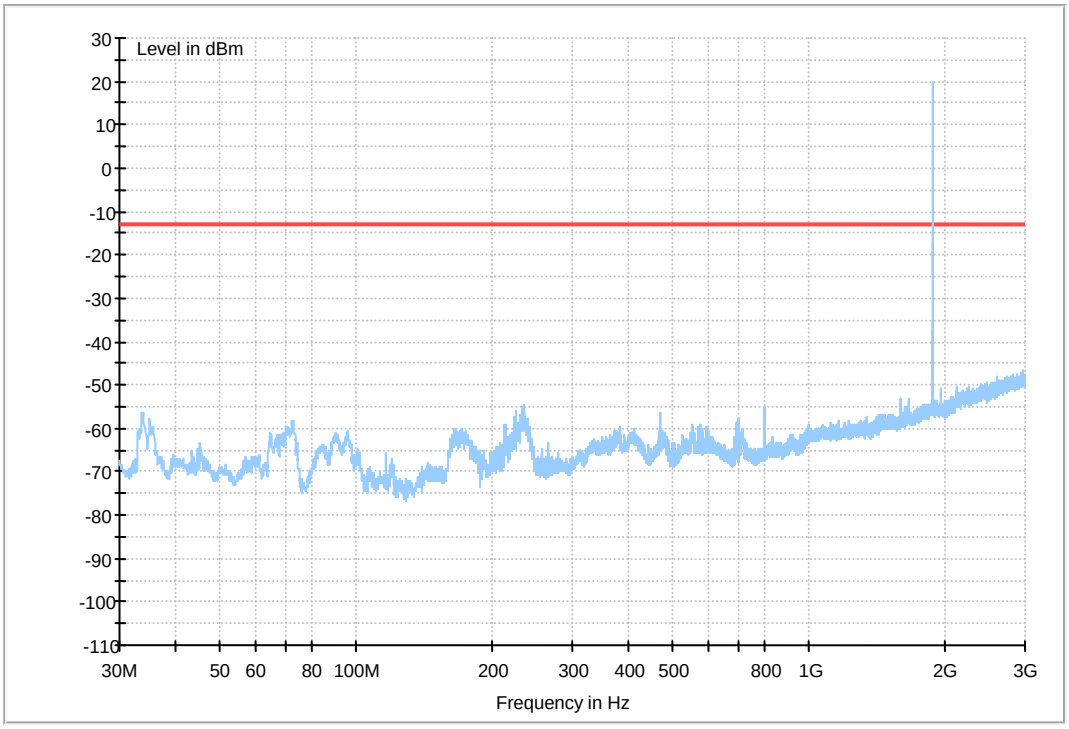


EDGE 1900

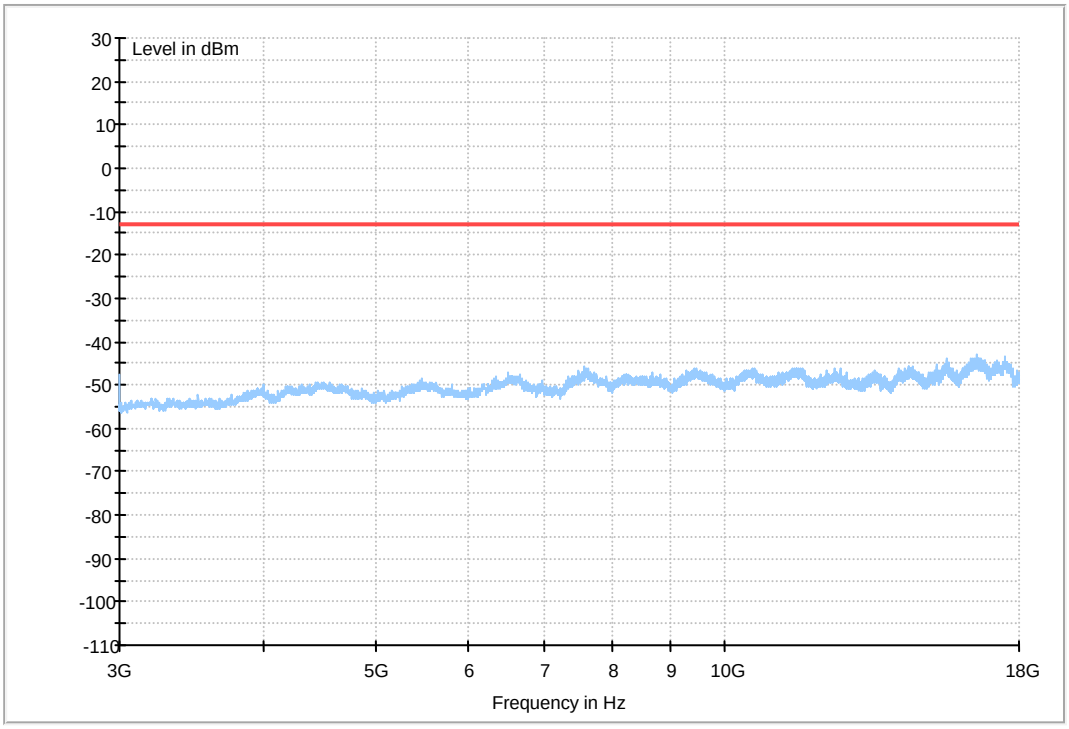
(9kHz-30MHz)



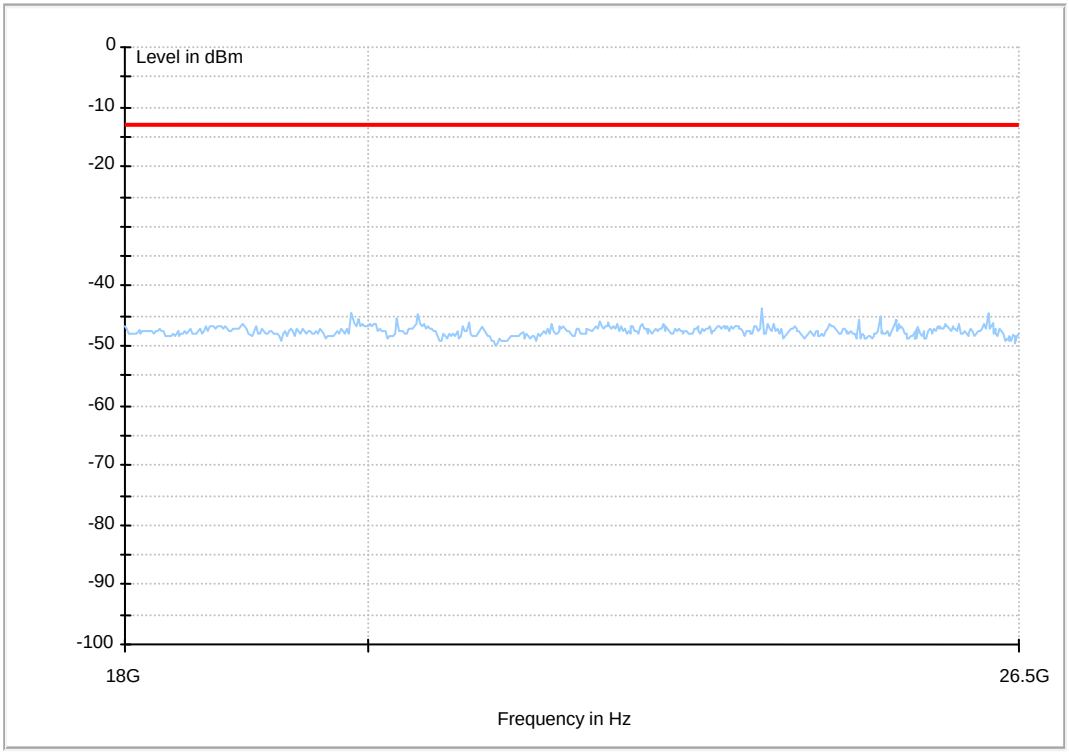
Traffic Mode (30MHz-3GHz)



Traffic Mode (3GHz-18GHz)



(18GHz-26.5GHz)



Appendix G

Frequency Stability

According to FCC Part 2.1055& Part 24.235

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	VN	-30 °C	-21	-0.01117	---	±2.5	Pass
			-20 °C	-22	-0.01170	---	±2.5	Pass
			-10 °C	21	0.01117	---	±2.5	Pass
			0 °C	21	0.01117	---	±2.5	Pass
			10 °C	18	0.00957	---	±2.5	Pass
			20 °C	14	0.00745	---	±2.5	Pass
			30 °C	13	0.00691	---	±2.5	Pass
			40 °C	-14	-0.00745	---	±2.5	Pass
			50 °C	-14	-0.00745	---	±2.5	Pass
TM 2	M	VN	-30 °C	18	0.00957	---	±2.5	Pass
			-20 °C	23	0.01223	---	±2.5	Pass
			-10 °C	-7	-0.00372	---	±2.5	Pass
			0 °C	15	0.00798	---	±2.5	Pass
			10 °C	24	0.01277	---	±2.5	Pass
			20 °C	-23	-0.01223	---	±2.5	Pass
			30 °C	24	0.01277	---	±2.5	Pass
			40 °C	-8	-0.00426	---	±2.5	Pass
			50 °C	-9	-0.00479	---	±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	TN	VL	-14	-0.00745	---	±2.5	Pass
			VN	15	0.00798	---	±2.5	Pass
			VH	-24	-0.01277	---	±2.5	Pass
TM 2	M	TN	VL	-15	-0.00798	---	±2.5	Pass
			VN	-25	-0.01330	---	±2.5	Pass
			VH	-20	-0.01064	---	±2.5	Pass

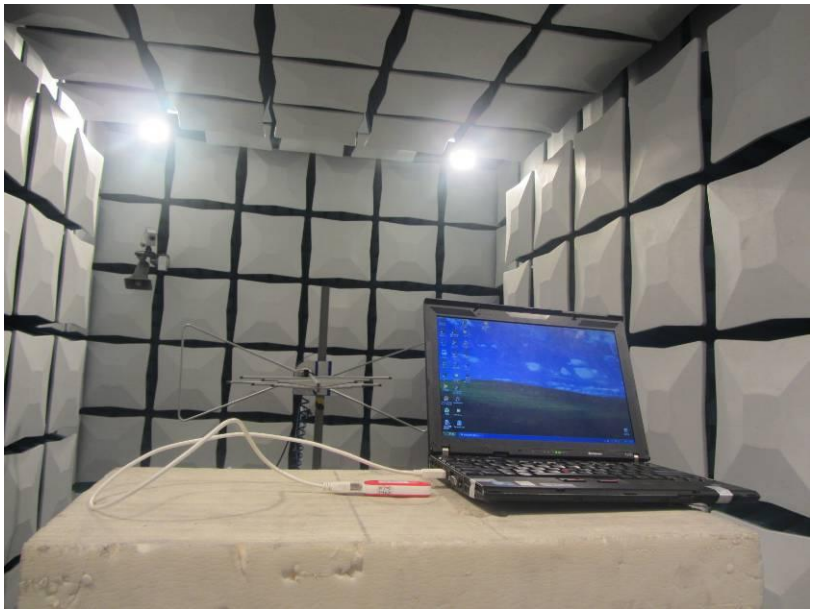
----------The END----------

Appendix H

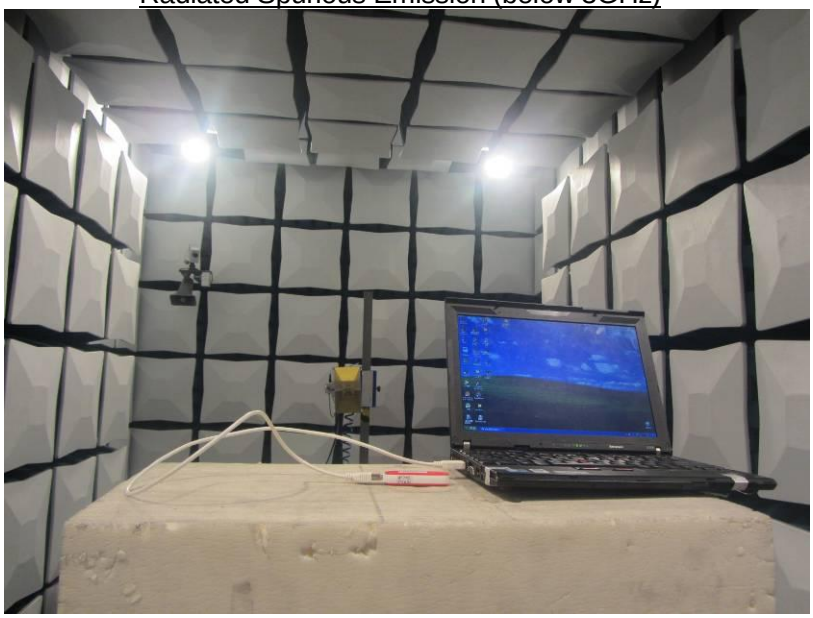
Photos of Radiated Spurious Emissions

Photos of Test Setup

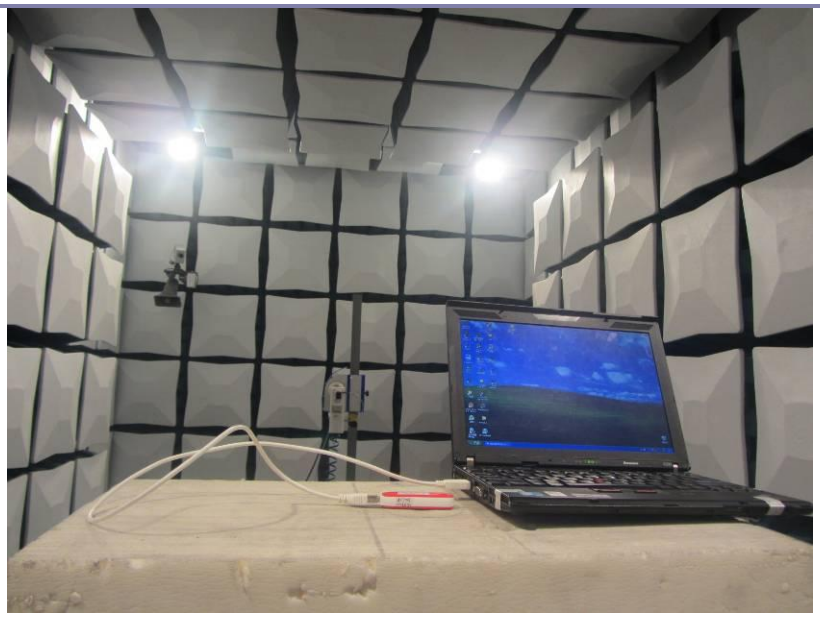
1 Radiated Spurious Emissions



Radiated Spurious Emission (below 3GHz)



Radiated Spurious Emission (3GHz to18GHz)



Radiated Spurious Emission (18GHz to26.5GHz)

----------THE END----------