

Appendix A

Channel Power Measurement

According to CFR 47 (FCC) part 2.1046 & 22.913

Channel 1013

TM1:

Measurement/Instrument Screen									
Control	Maximum/Minimum Power						Call Parms		
Max/Min Power Setup ▾	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Maximum Power</p> <p>24.50</p> <p>dBm</p> </div> <div style="text-align: center;"> <p>Minimum Power</p> <p>-63.97</p> <p>dBm/1.23 MHz</p> </div> </div> <p style="text-align: right; margin-top: 10px;">Single</p>						Cell 1 Power		
Maximum Power Setup ▾							-25.00		
Minimum Power Setup ▾							dBm/1.23 MHz		
							Cell Band		
							US Cellular		
							Channel		
							1013		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud1, Rvs1)		
							S02 (Loopback)		
							FCH Service Option Setup ▾		
			Active Cell Connected			Sys Type: IS-2000			
						Logging: No Conn.			
1 of 2				IntRef	Offset				1 of 4

TM3:

Measurement/Instrument Screen									
Control		Maximum/Minimum Power						Call Parm	
Max/Min Power Setup ▾		Maximum Power		Minimum Power				Cell 1 Power	
		24.43		-64.08				-25.00	
		dBm		dBm/1.23 MHz				dBm/1.23 MHz	
Maximum Power Setup ▾								Cell Band	
								US Cellular	
Minimum Power Setup ▾								Channel	
								1013	
								Protocol Rev	
								6 (IS-2000-0)	
								Radio Config	
								(Fud3, Rvs3)	
								S055 (Loopback)	
								FCH Service Option Setup ▾	
		Active Cell			Sys Type: IS-2000				
		Connected			Logging: No Conn.				
1 of 2				IntRef	Offset				1 of 4

Channel 777

TM1:

Measurement/Instrument Screen									
Control	Maximum/Minimum Power						Call Parm		
Max/Min Power Setup ▾	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Maximum Power</p> <p>24.88</p> <p>dBm</p> </div> <div style="text-align: center;"> <p>Minimum Power</p> <p>-62.91</p> <p>dBm/1.23 MHz</p> </div> </div>						Cell 1 Power		
Maximum Power Setup ▾							-25.00		
Minimum Power Setup ▾							dBm/1.23 MHz		
	Single						Cell Band		
							US Cellular		
							Channel		
							777		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud1, Rus1)		
							S02 (Loopback)		
							FCH Service Option Setup ▾		
				Active Cell Connected			Sys Type: IS-2000		
							Logging: No Conn.		
1 of 2				IntRef	Offset				1 of 4

TM3:

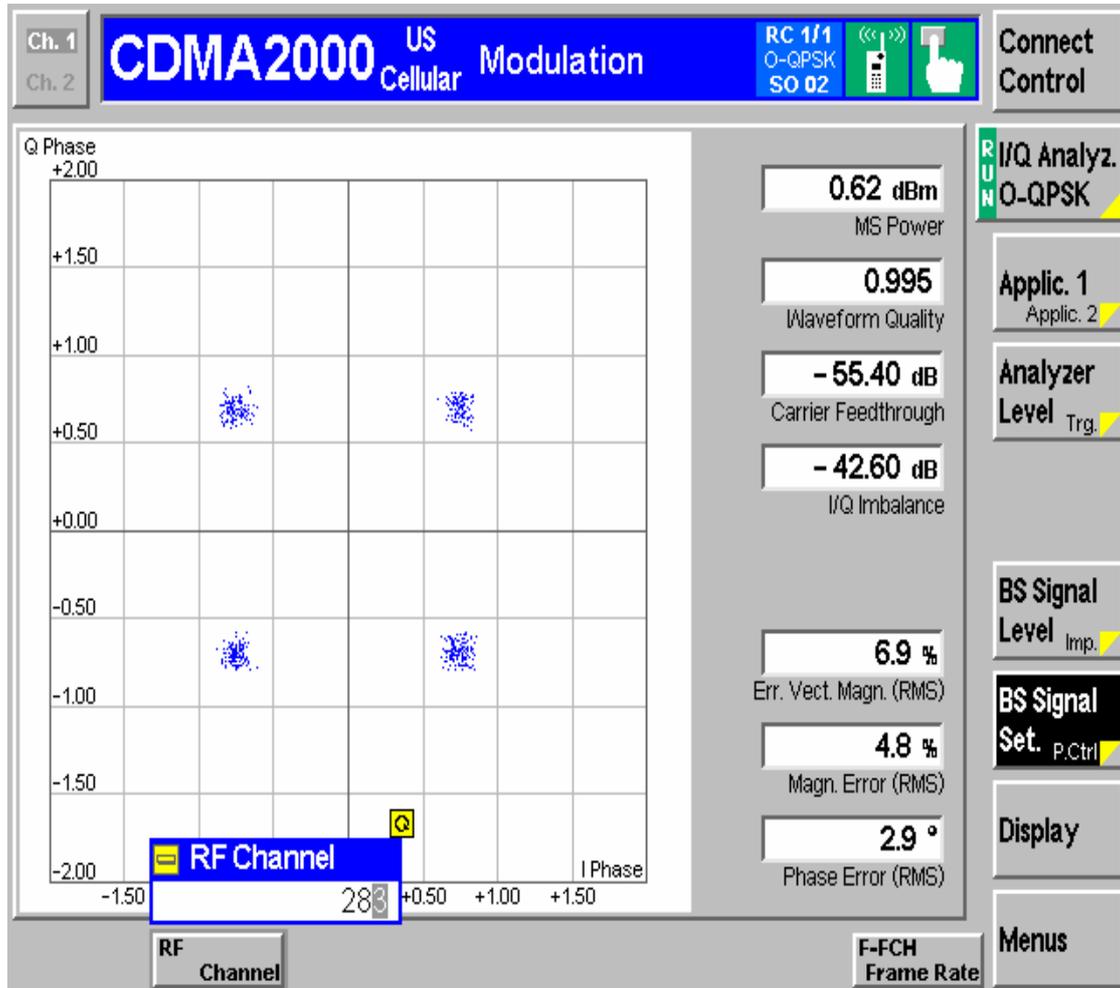
Measurement/Instrument Screen									
Control		Maximum/Minimum Power						Call Parm	
Max/Min Power Setup ▾		Maximum Power			Minimum Power			Cell 1 Power	
		24.81			-62.97			-25.00	
		dBm			dBm/1.23 MHz			dBm/1.23 MHz	
Maximum Power Setup ▾								Cell Band	
								US Cellular	
Minimum Power Setup ▾								Channel	
								777	
								Protocol Rev	
								6 (IS-2000-0)	
								Radio Config	
								(Fud3, Rvs3)	
								S055 (Loopback)	
								FCH Service Option Setup ▾	
		Active Cell			Sys Type: IS-2000				
		Connected			Logging: No Conn.				
1 of 2				IntRef	Offset				1 of 4

Appendix B

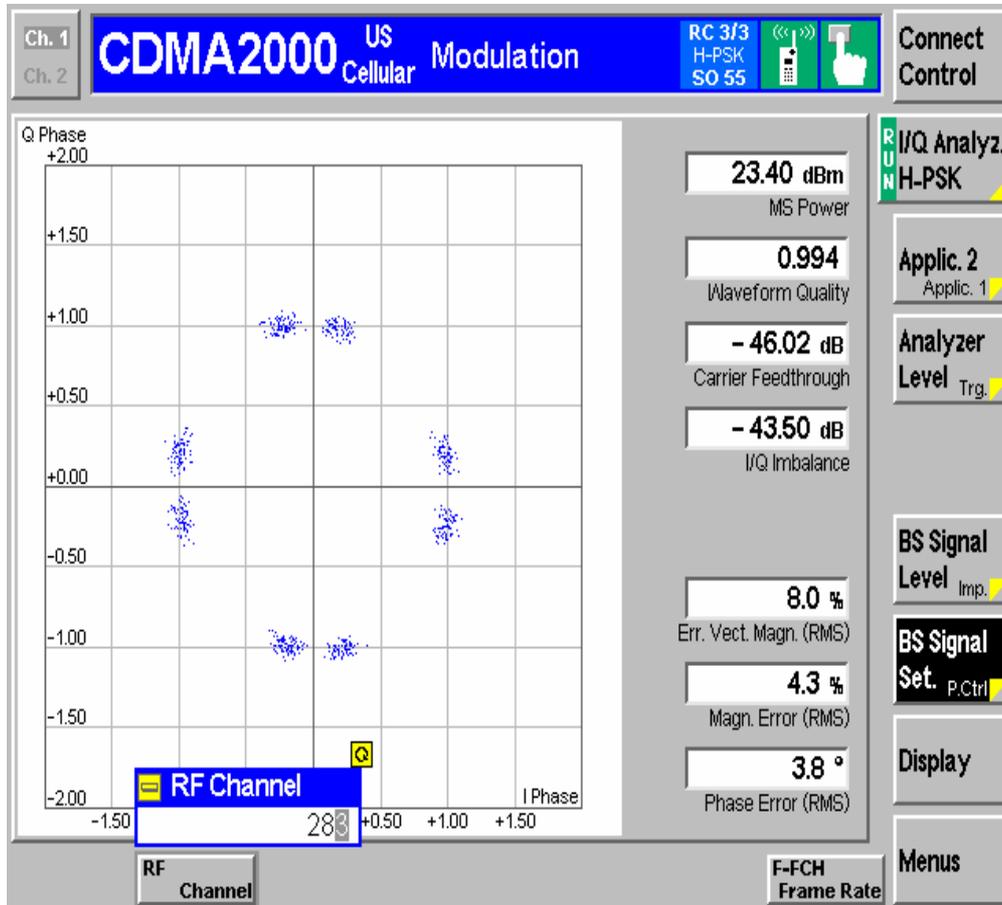
Modulation Characteristic Measurement

According to CFR 47 (FCC) part 2.1047 & 22.915

Channel 283 (TM1)



Channel 283 (TM3)

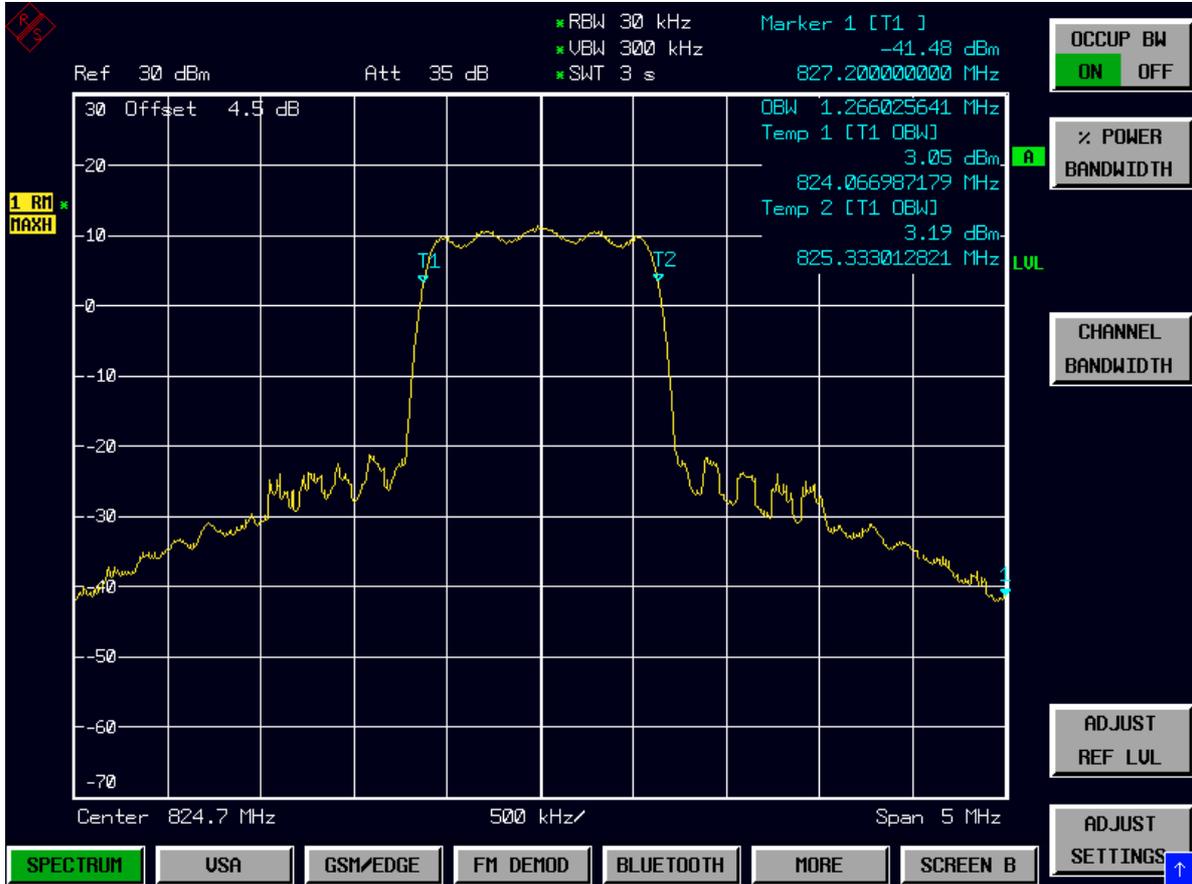


Appendix C

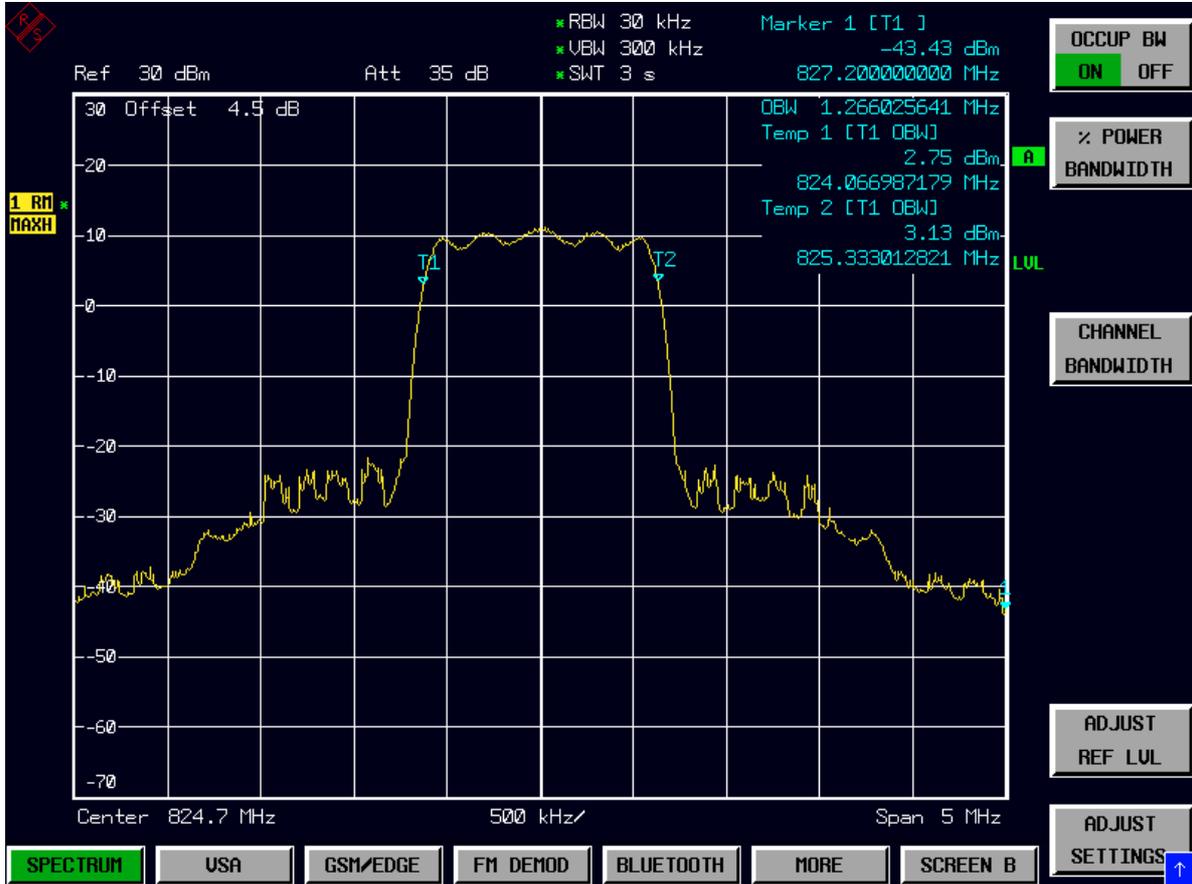
Occupied Bandwidth Measurement

According to CFR 47 (FCC) part 2.1049& 22.917

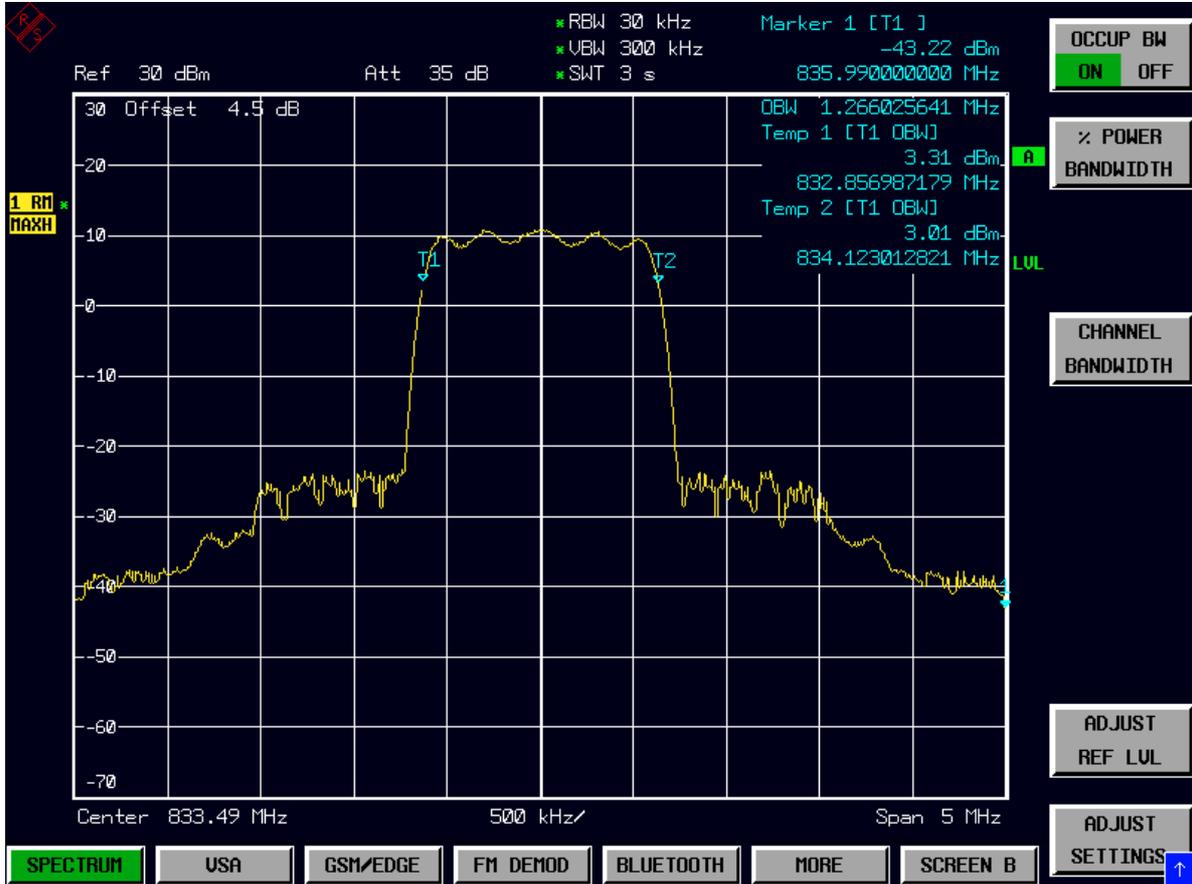
Channel 1013 (TM1)



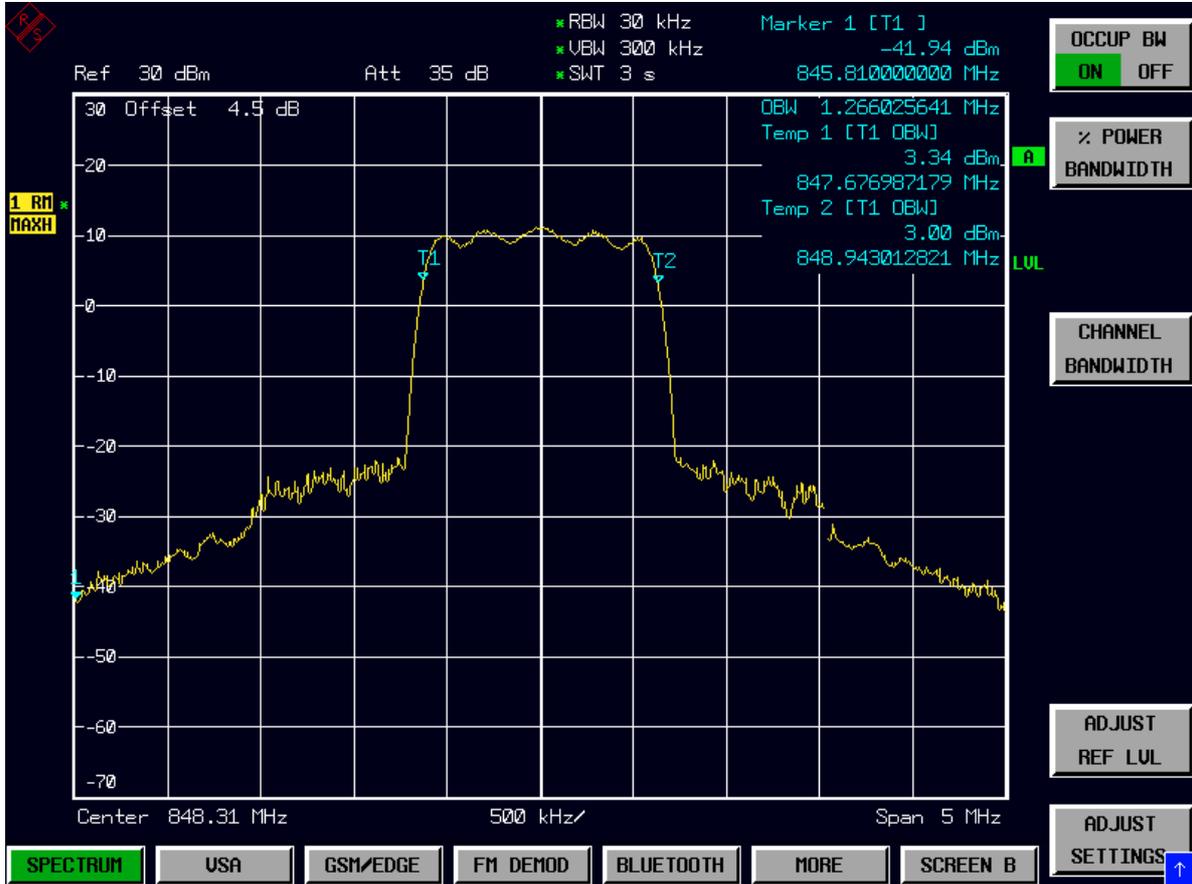
Channel 1013 (TM3)



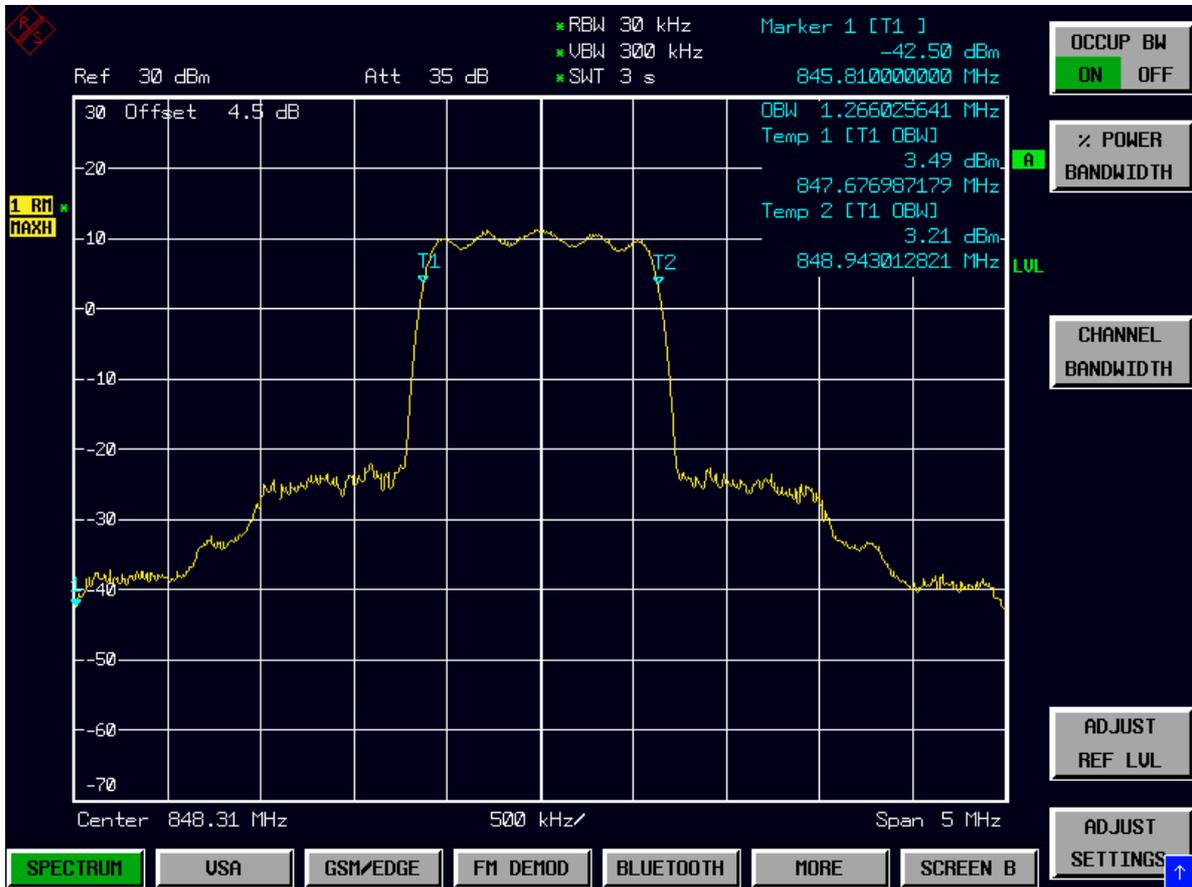
Channel 283 (TM3)



Channel 777 (TM1)



Channel 777 (TM3)



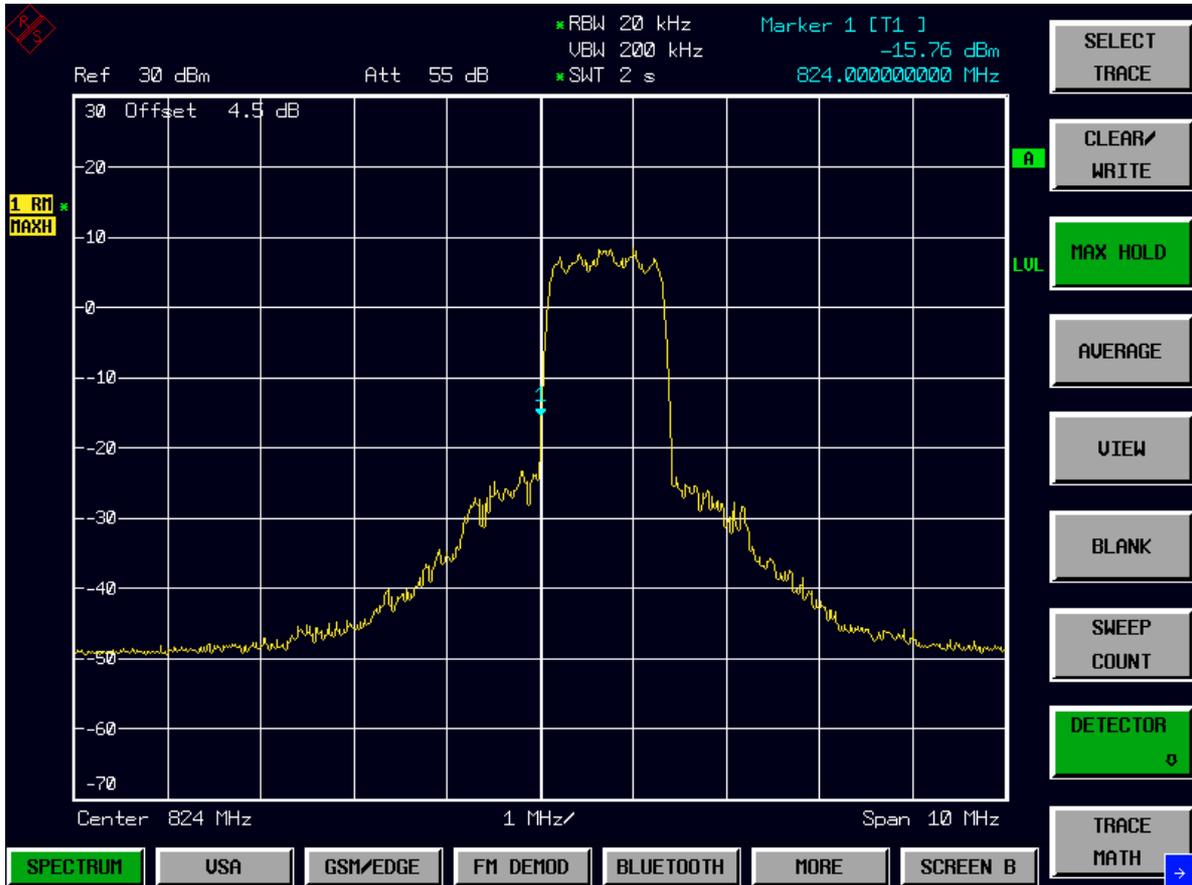
Appendix D

Measurement Results Band Edges

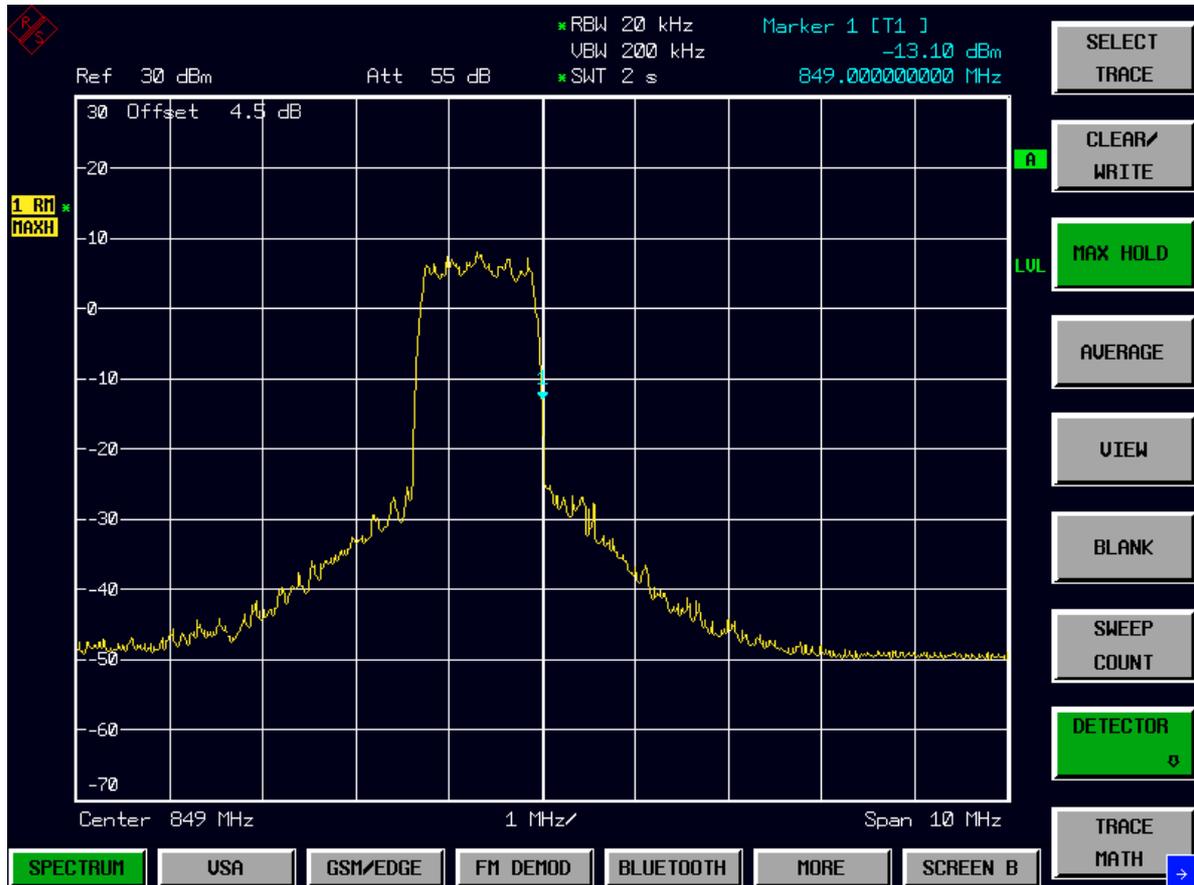
According to CFR 47 (FCC) part 2.1051 & 22.917(e)

TM1

Channel 1013 (824 MHz)

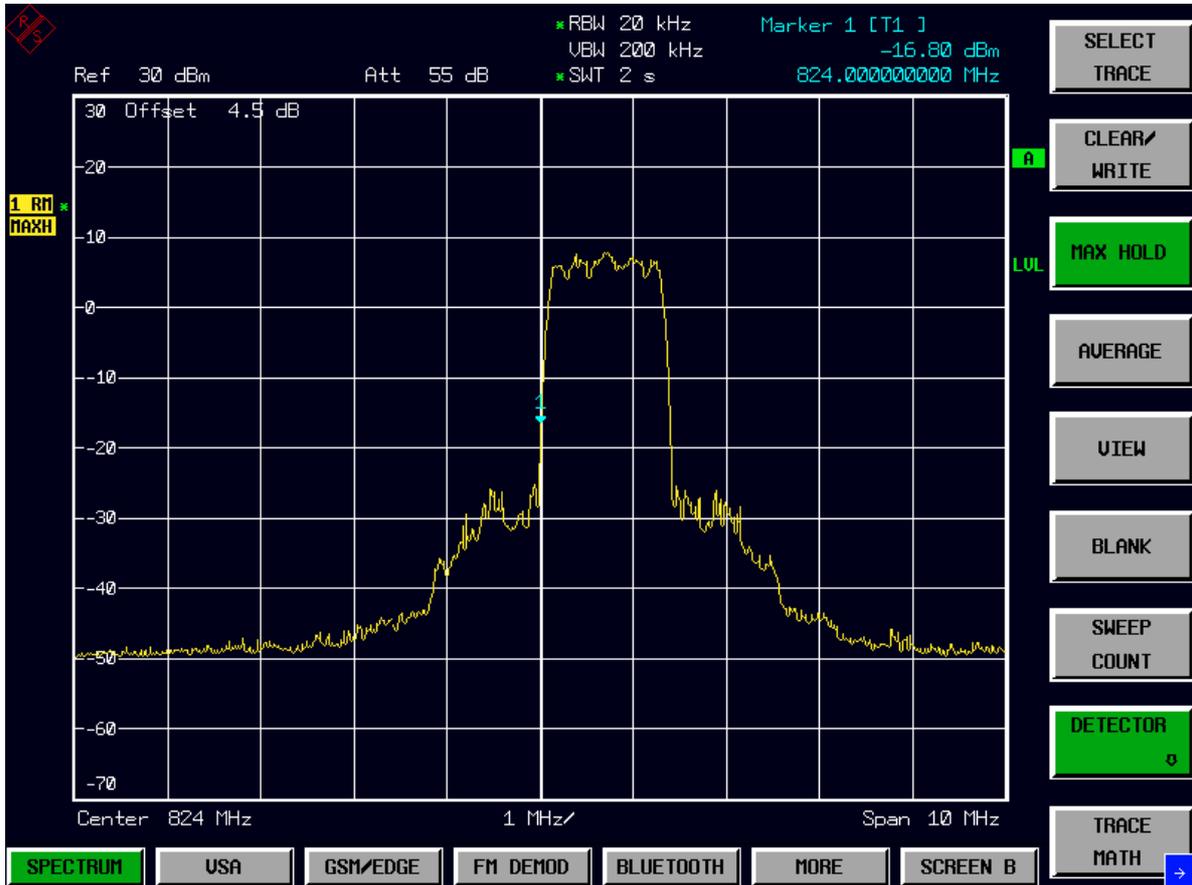


Channel 777(849 MHz)

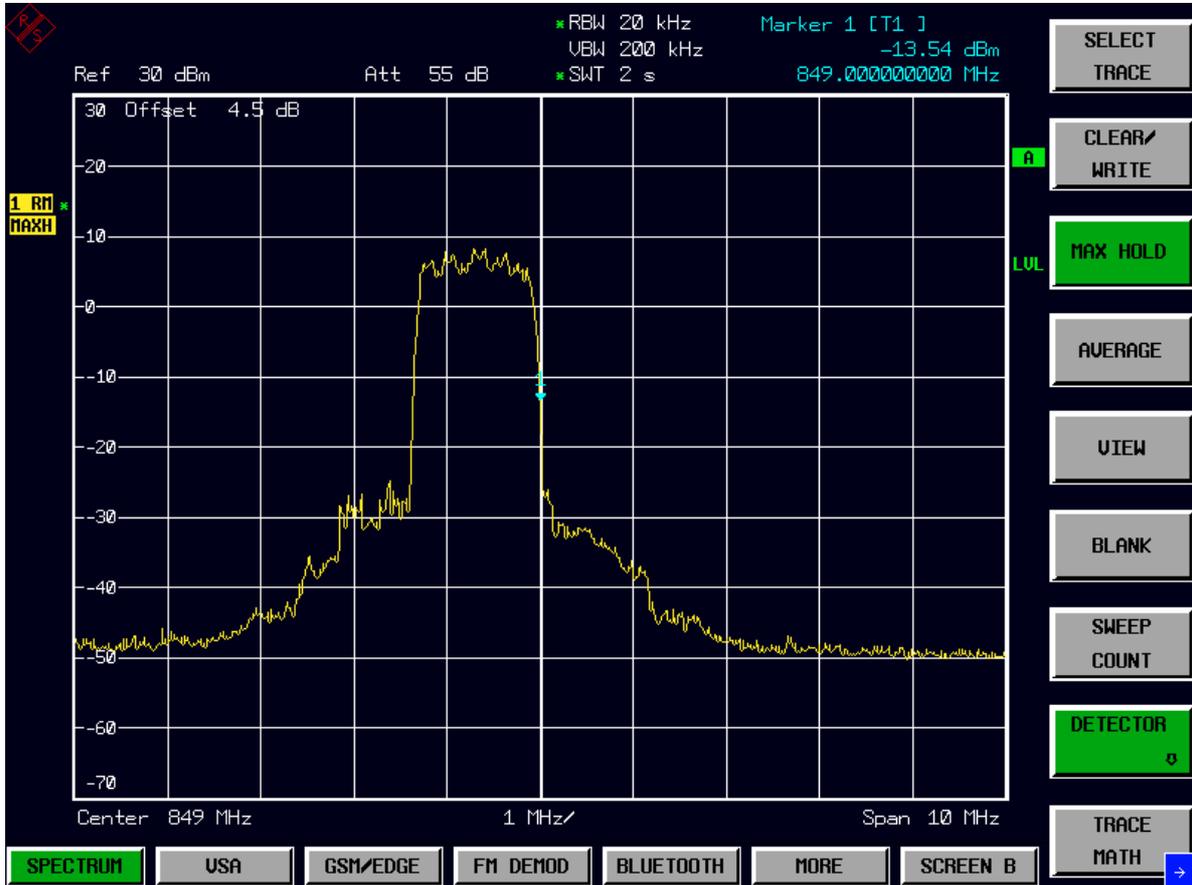


TM3

Channel 1013 (824 MHz)



Channel 777 (849 MHz)



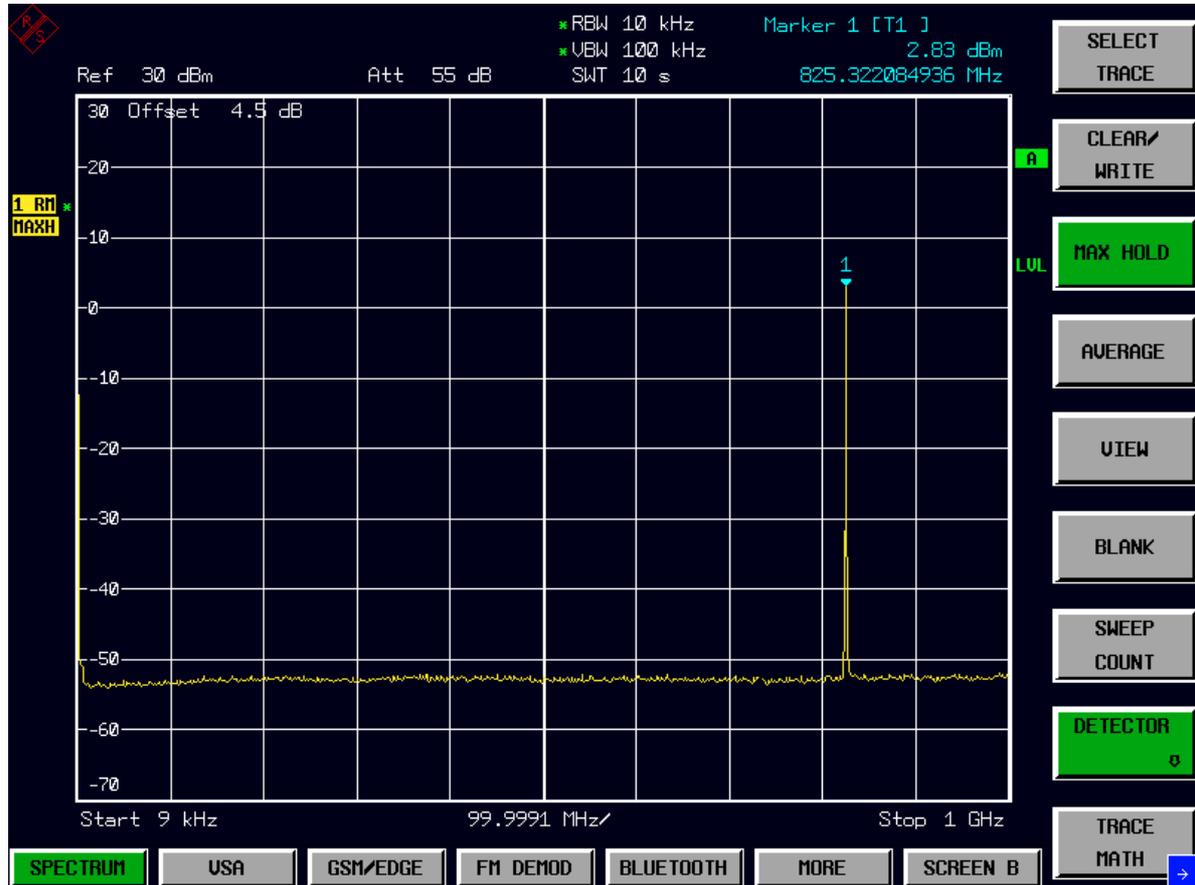
Appendix E

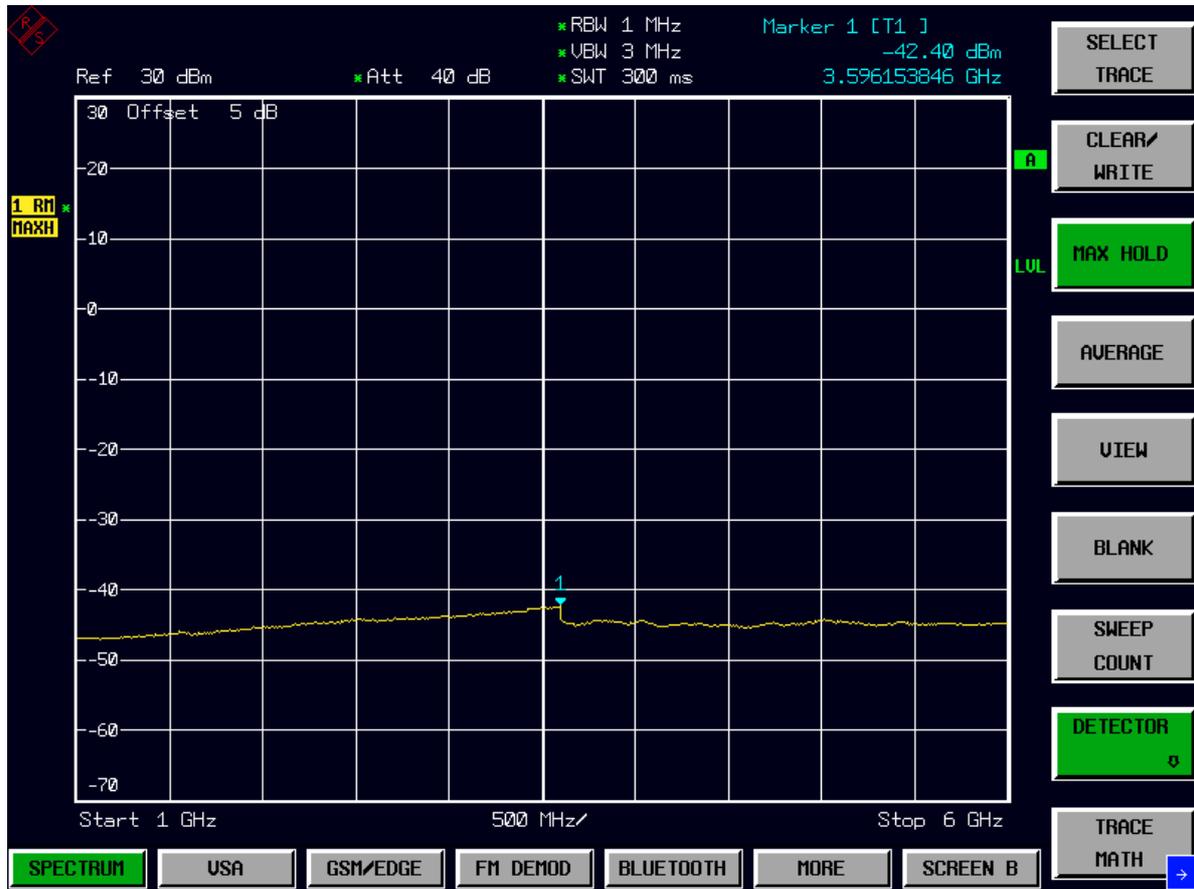
Spurious Emission at Antenna Terminal

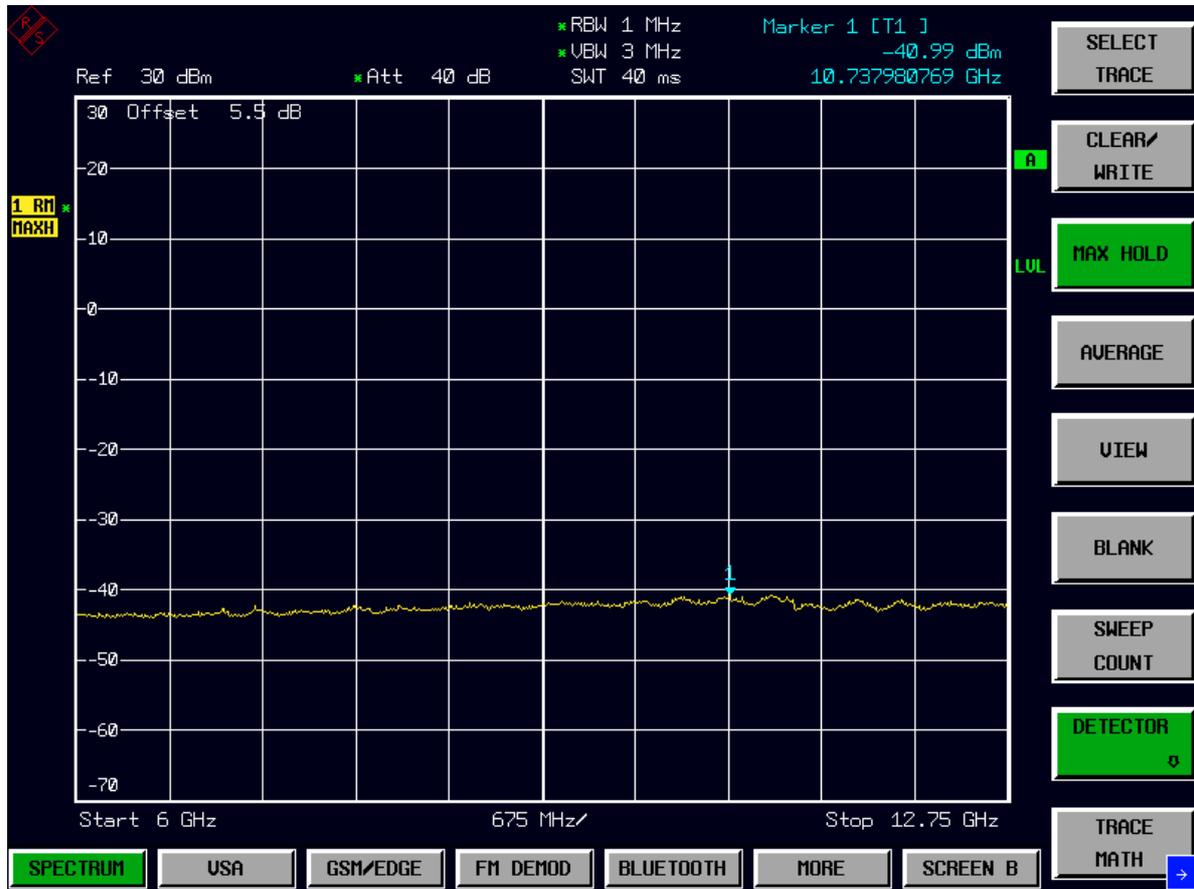
According to CFR 47 (FCC) part 2.1051 & 22.917(e)

1.1 TM1

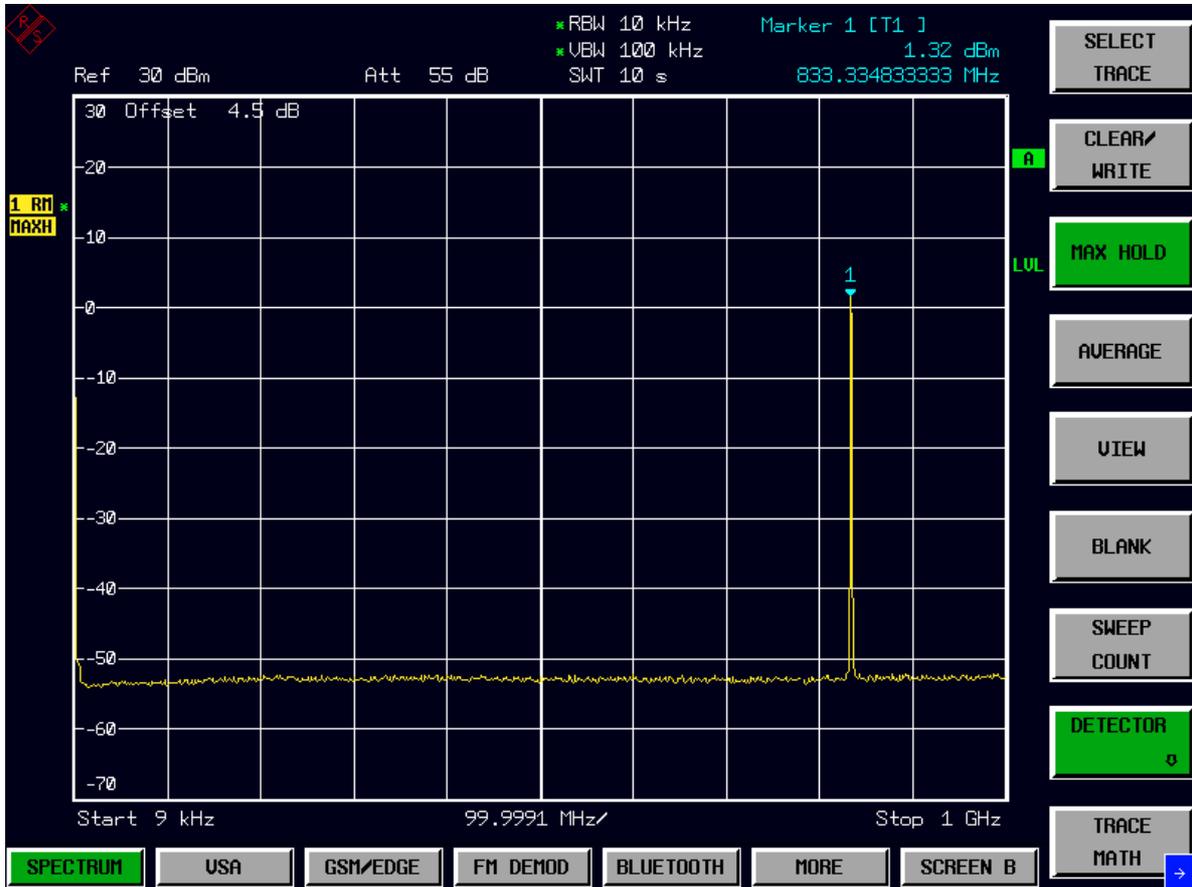
Channel 1013

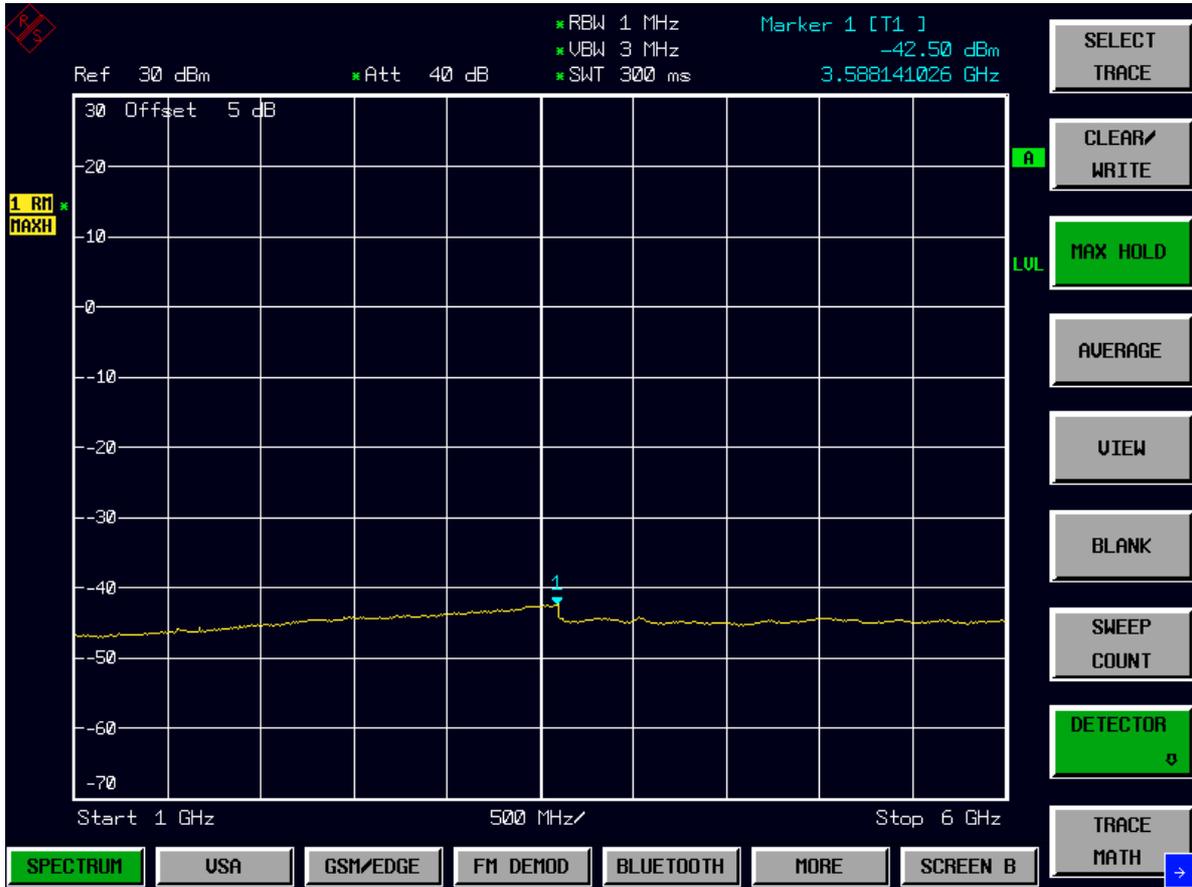


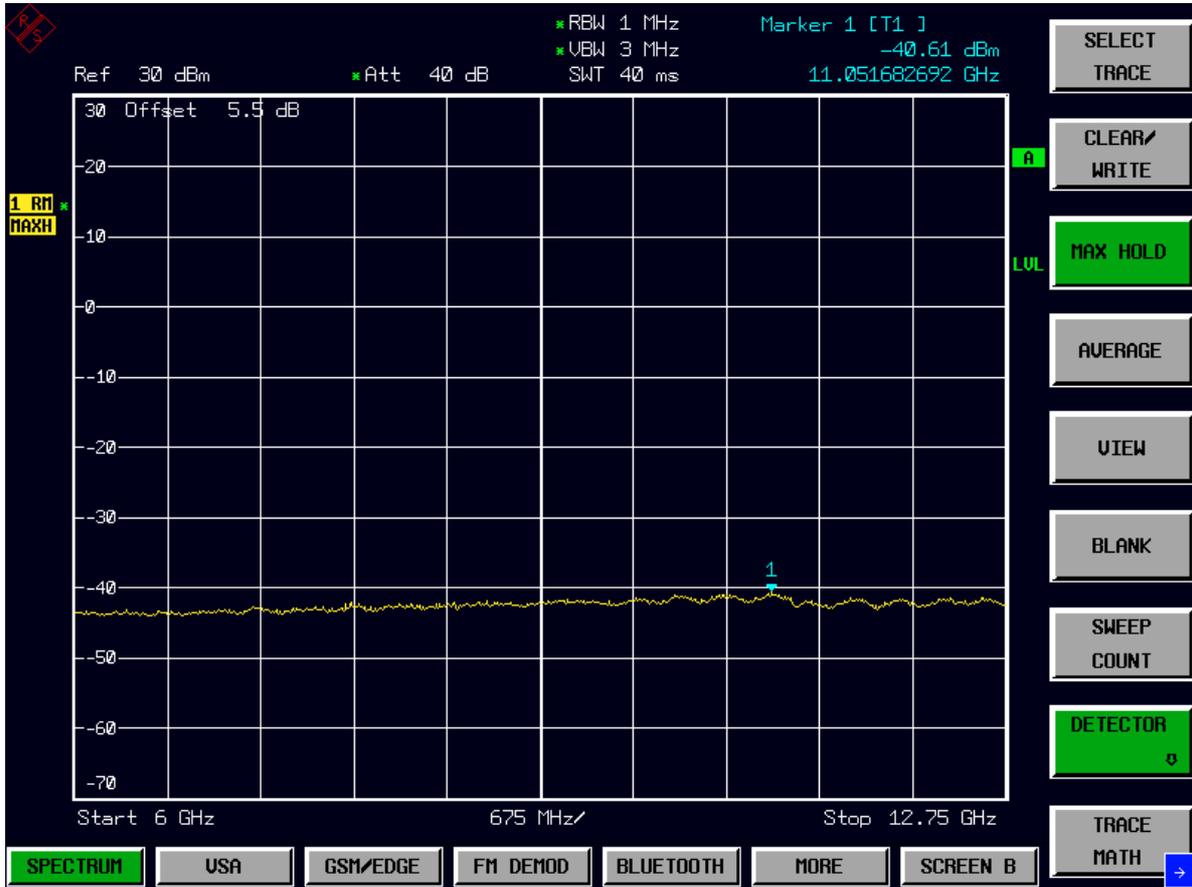




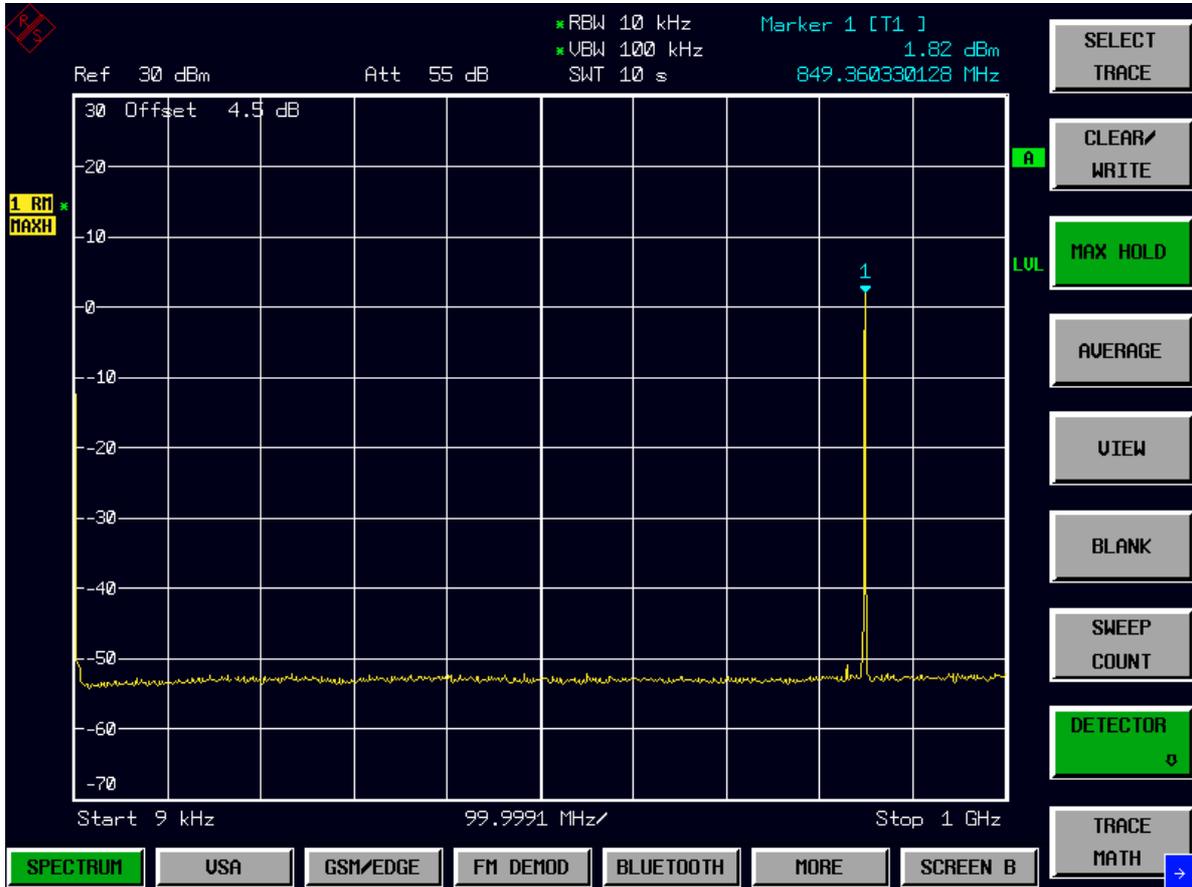
Channel 283

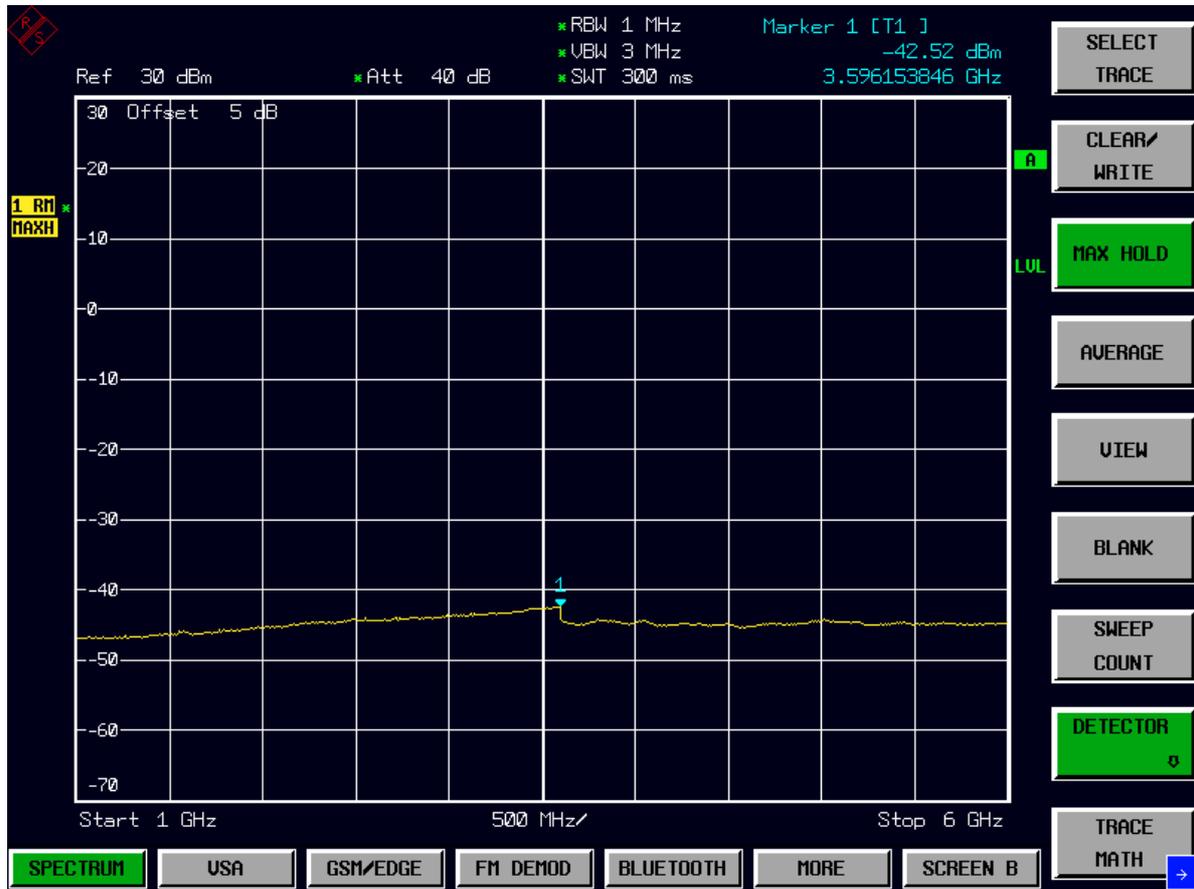


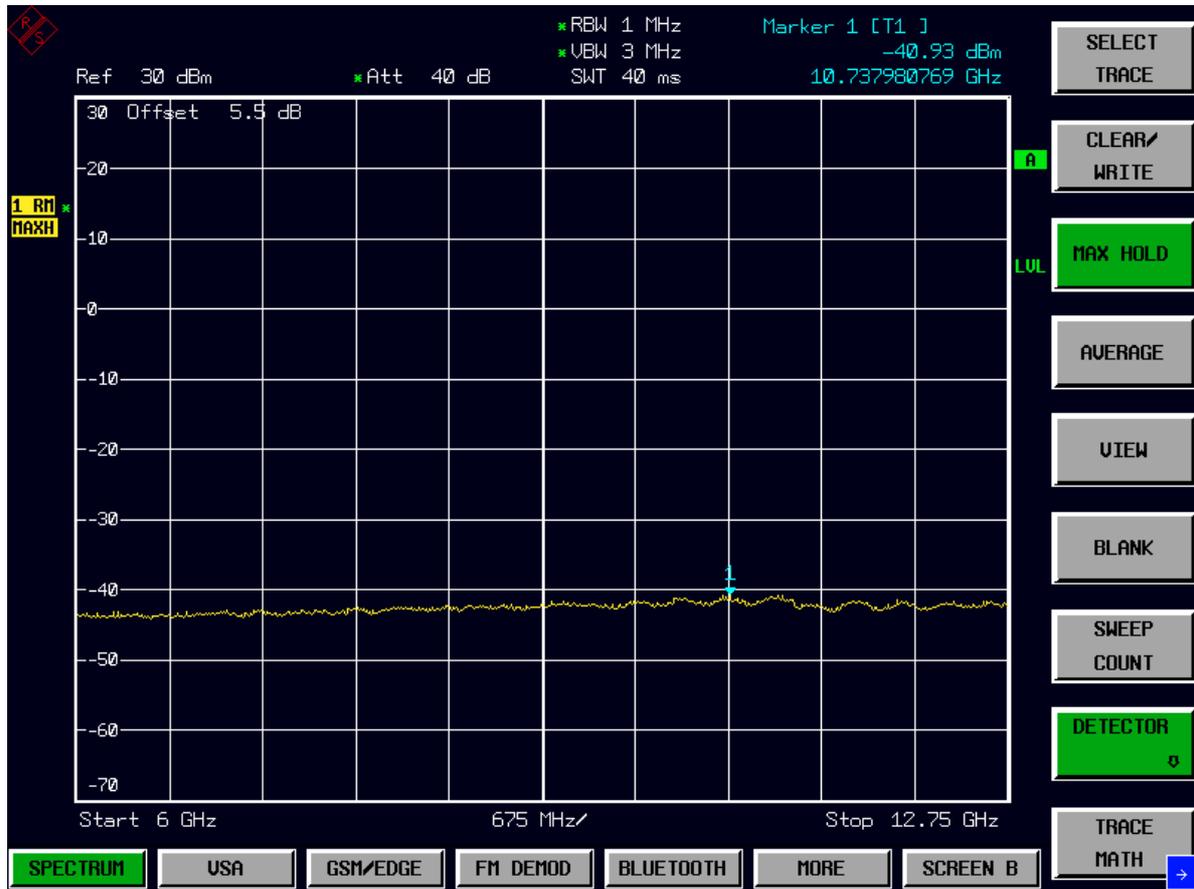




Channel 777

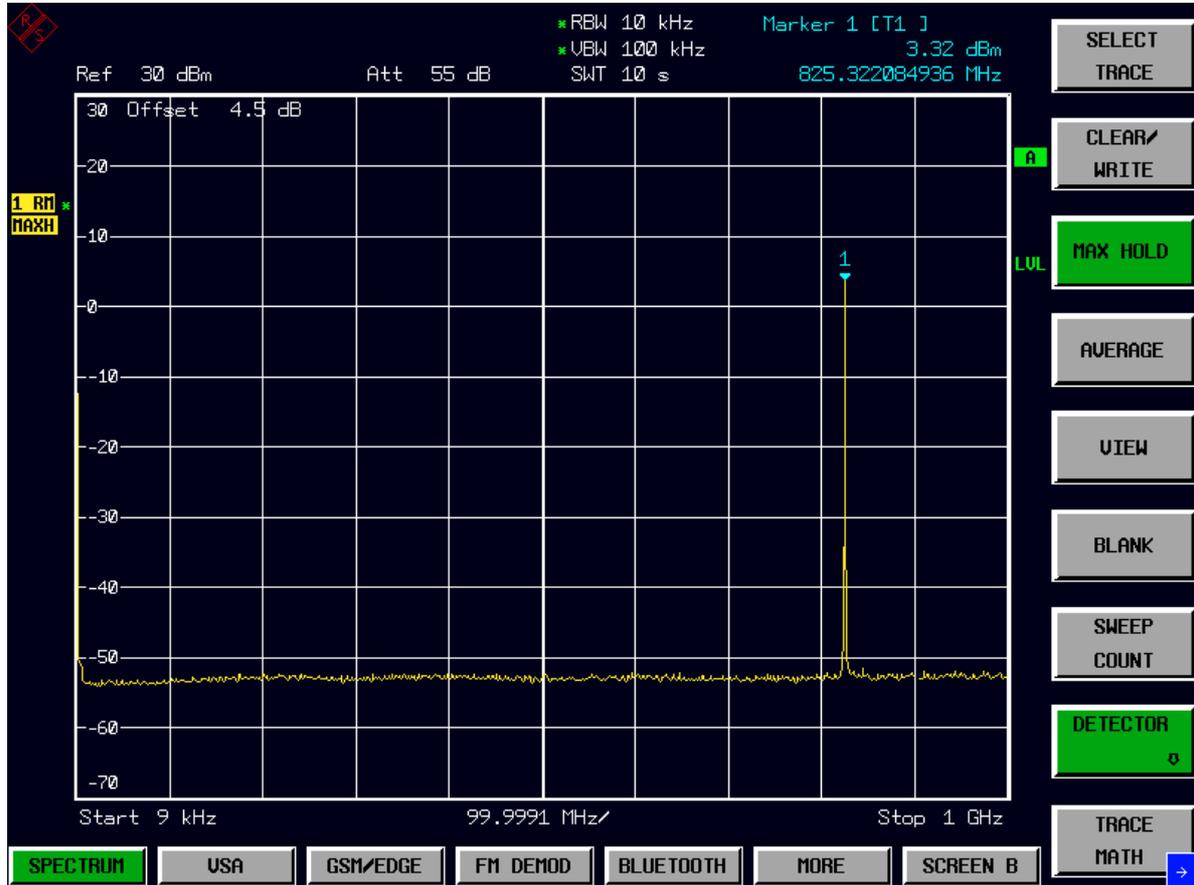


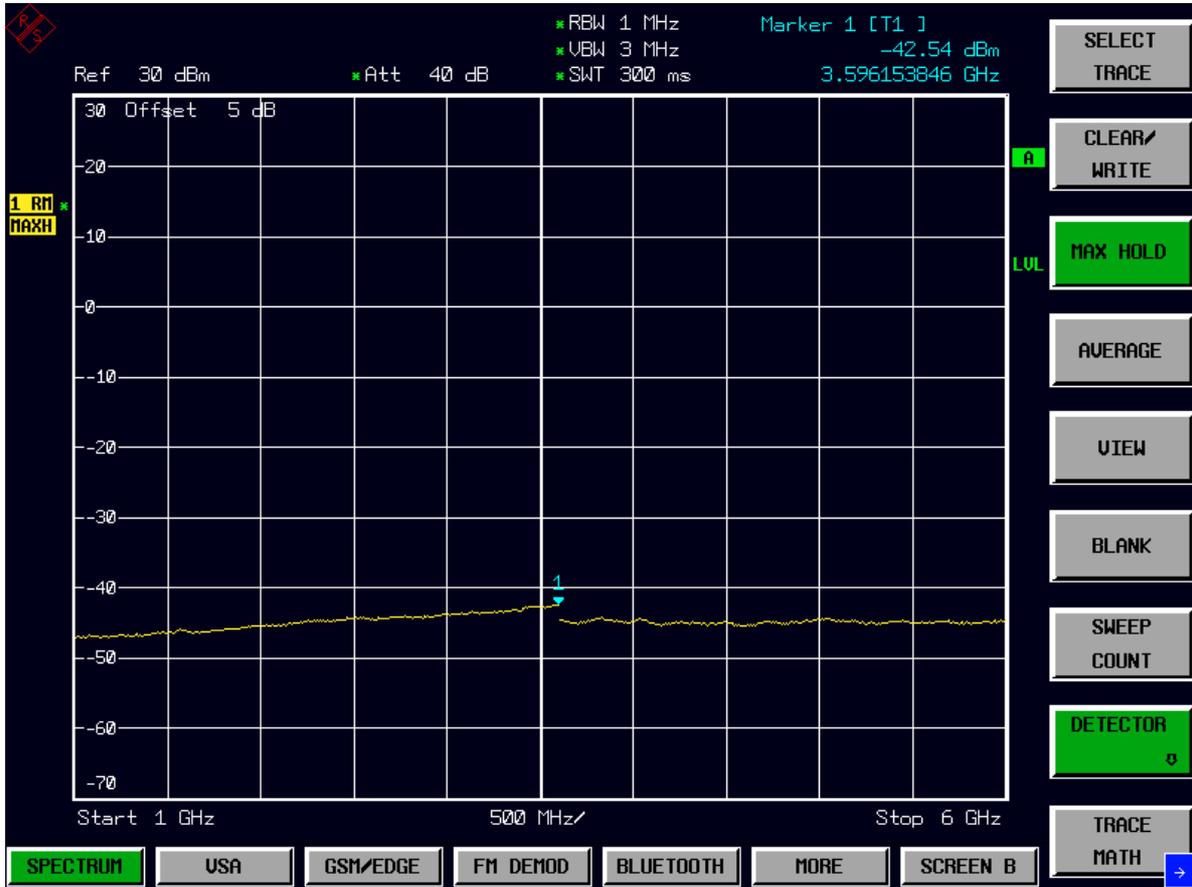


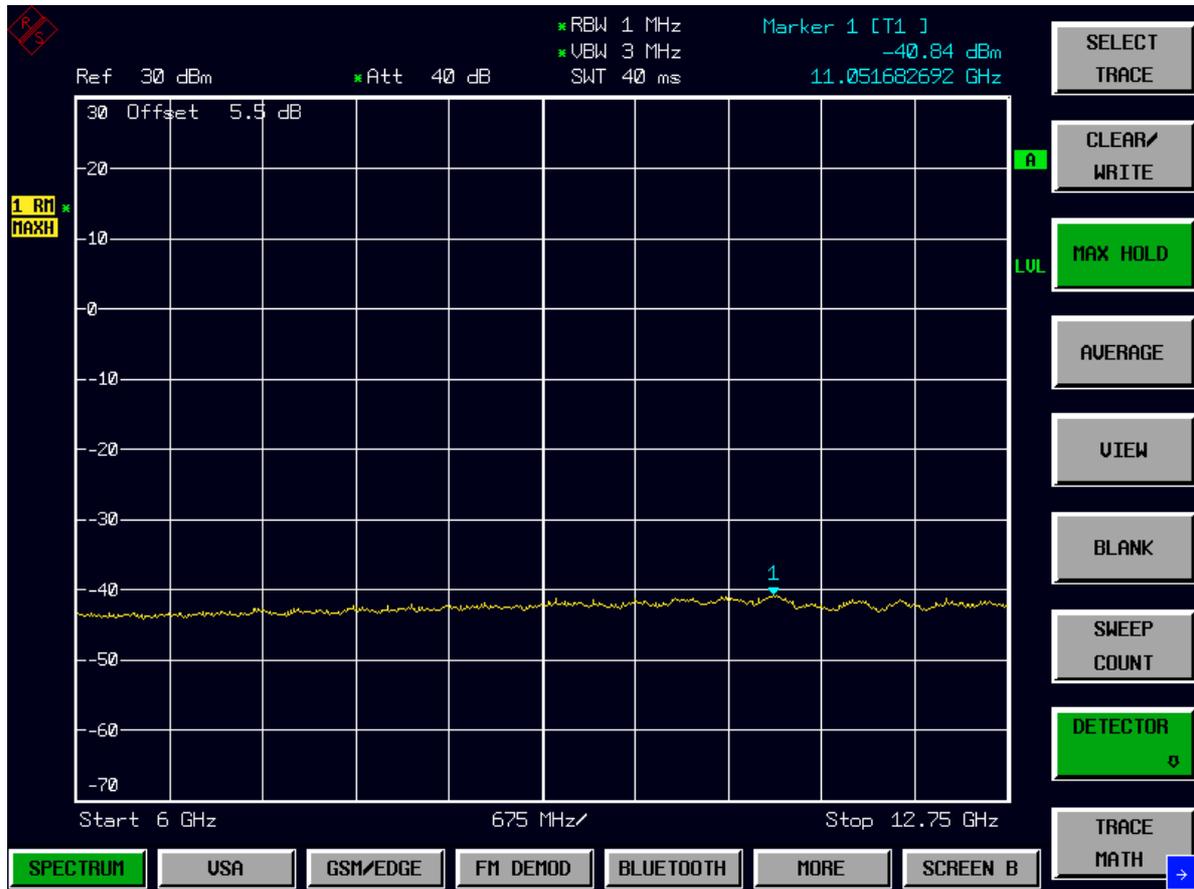


1.2 TM3

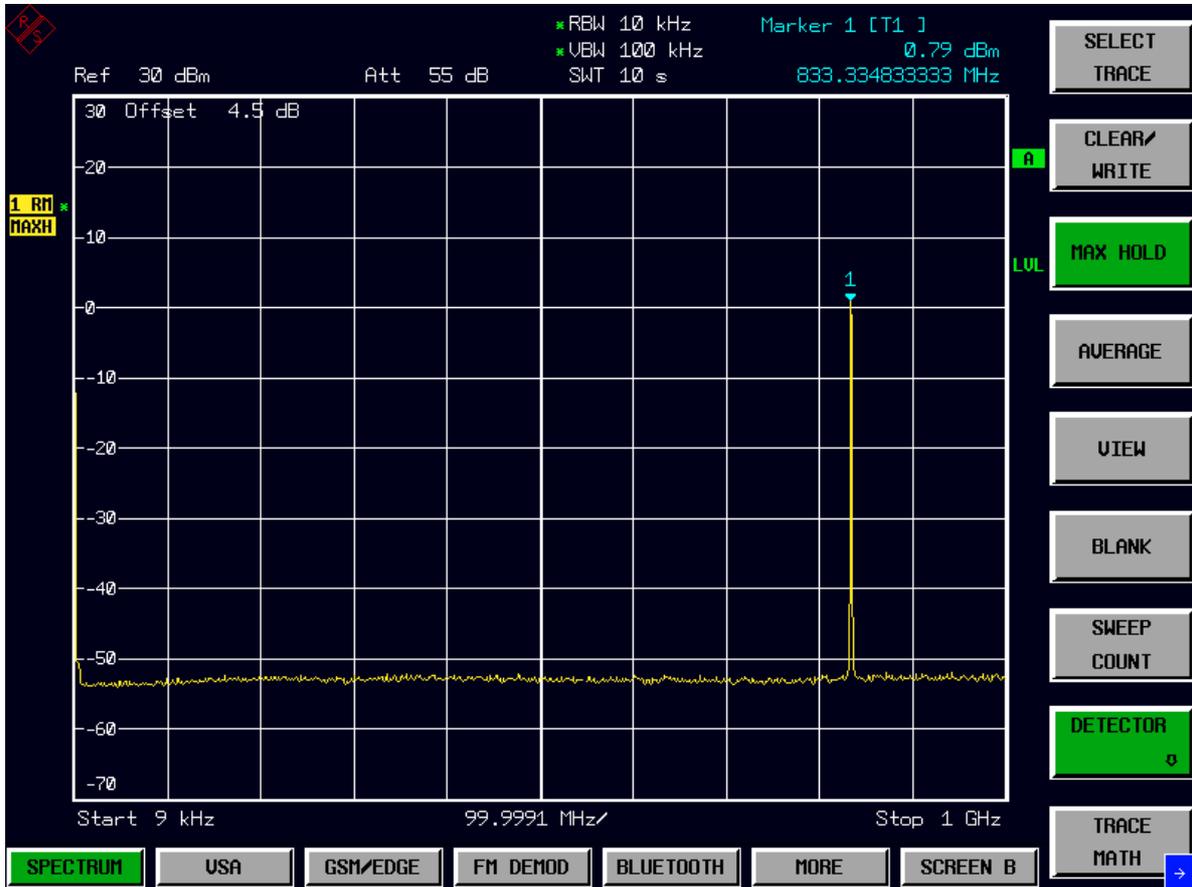
Channel 1013

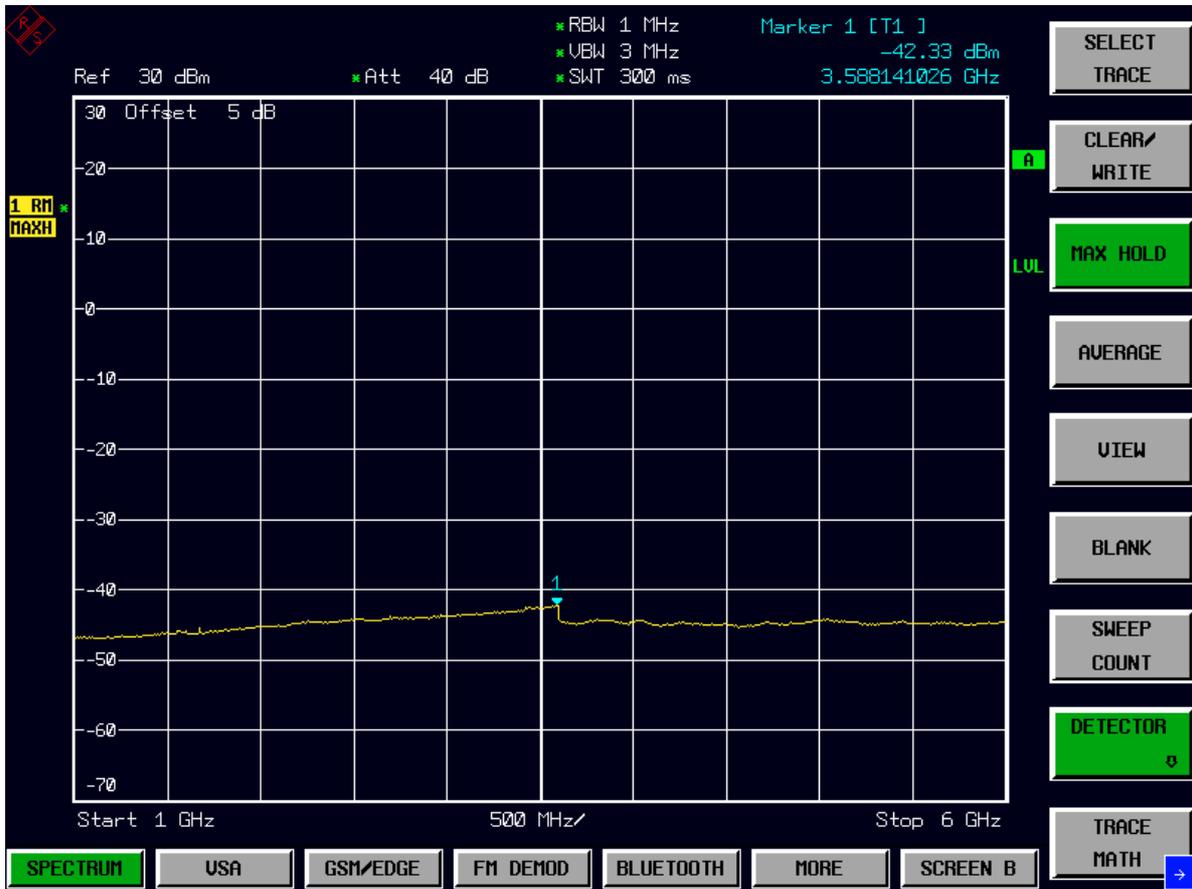


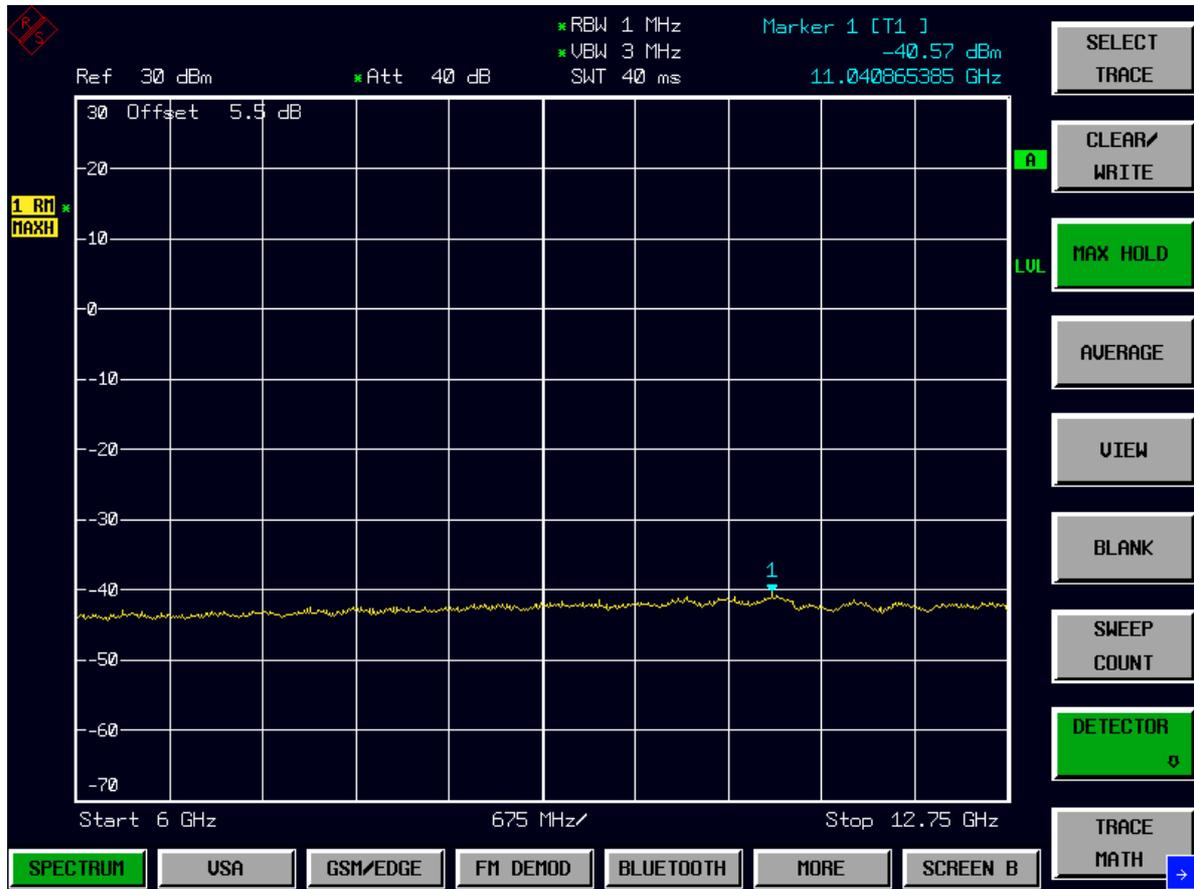




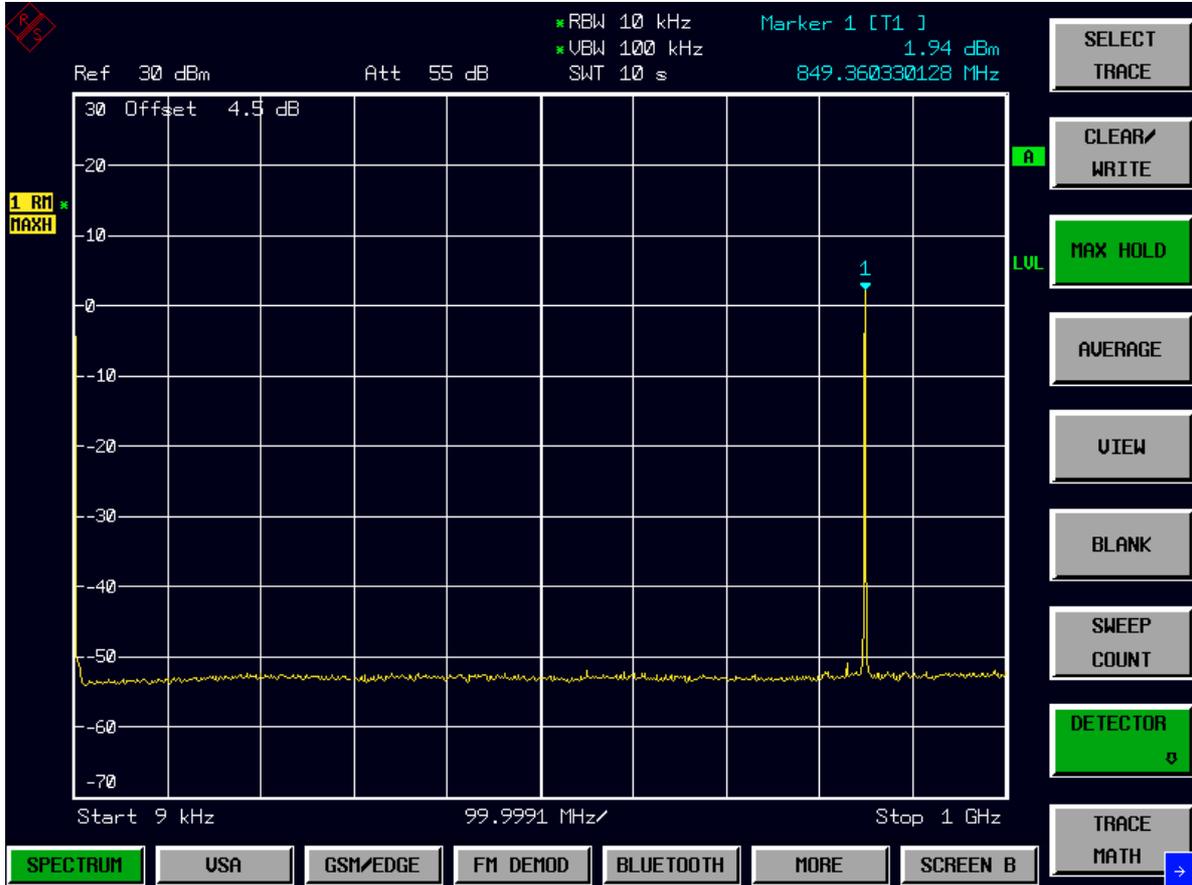
Channel 283

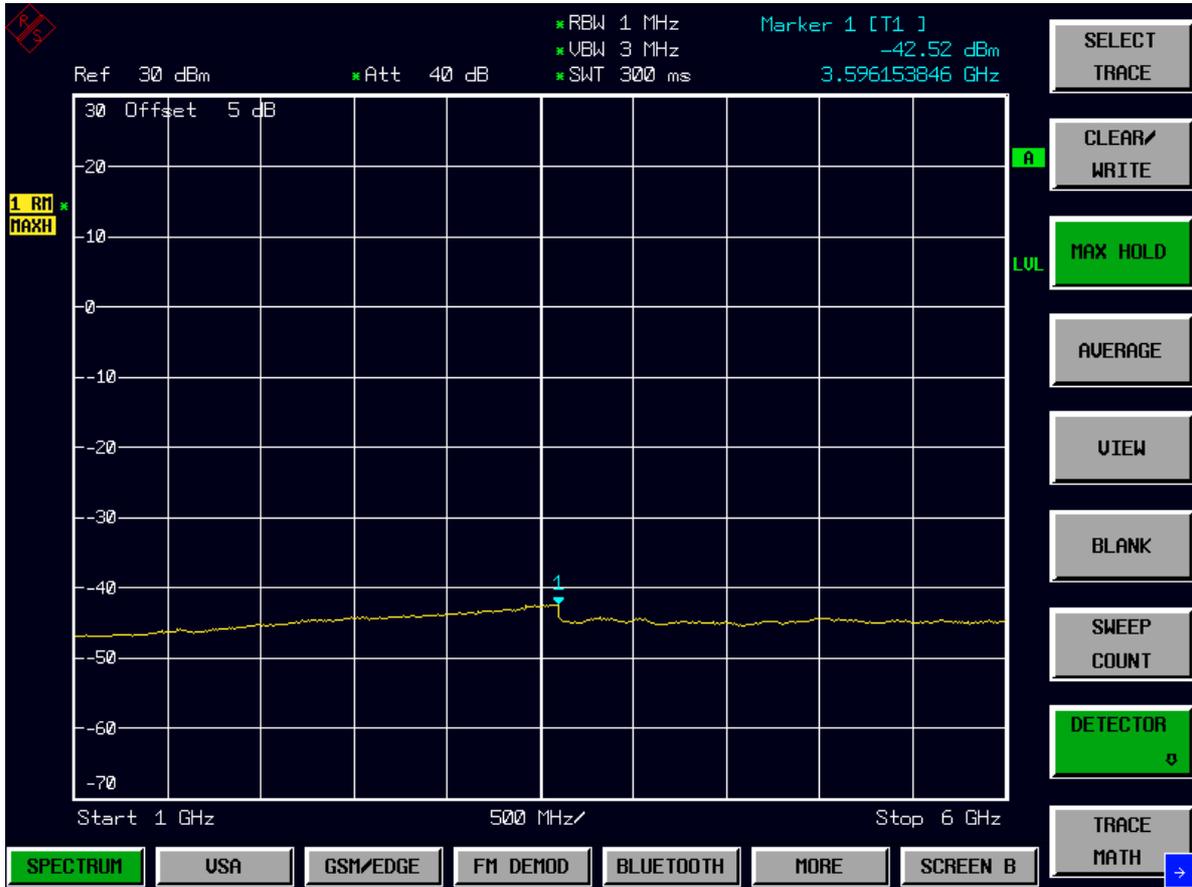


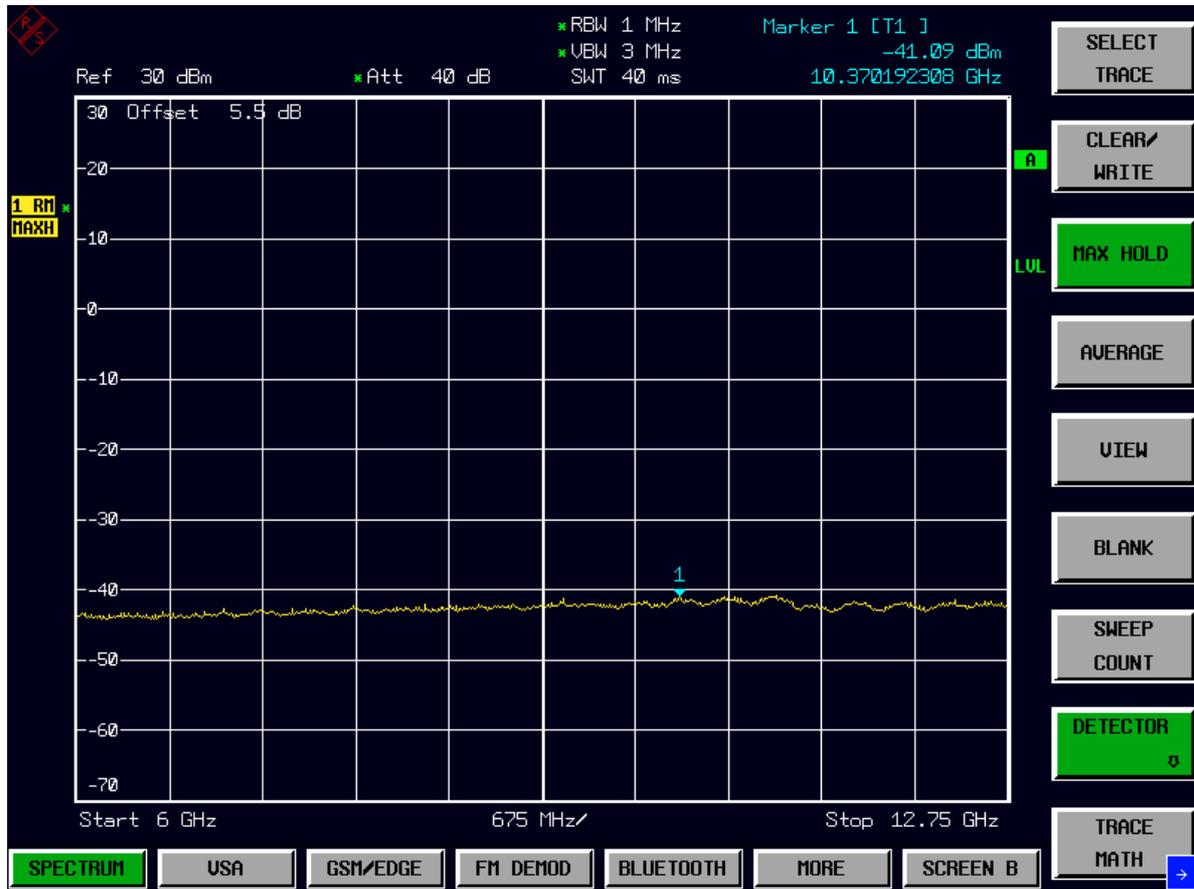




Channel 777



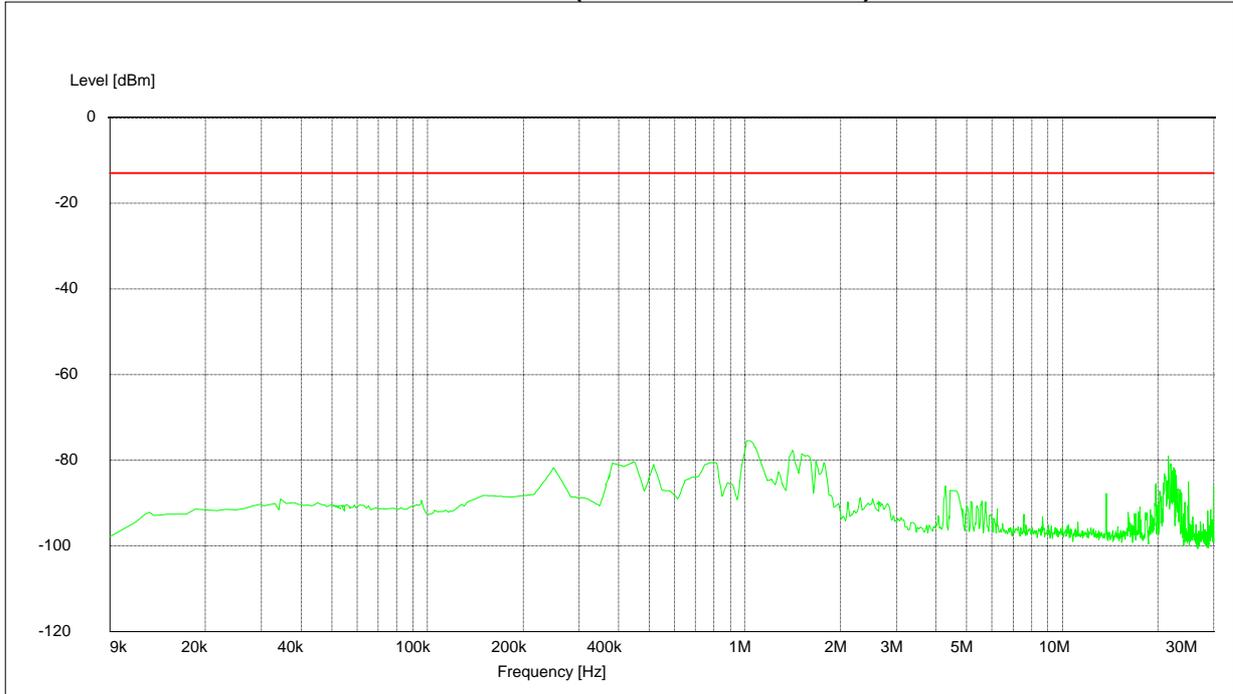




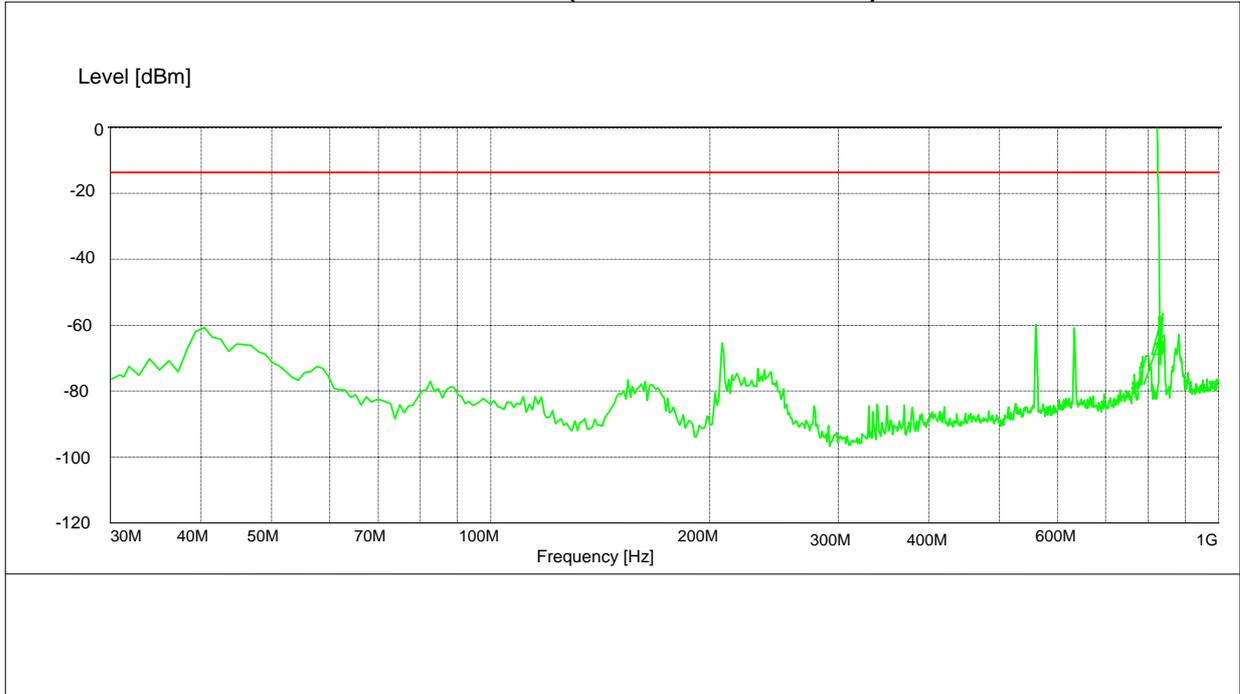
Appendix F

Field Strength of Spurious Radiation According to CFR 47 (FCC) part 2.1053 & 22.917(e)

TRA Mode (9kHz-30MHz)

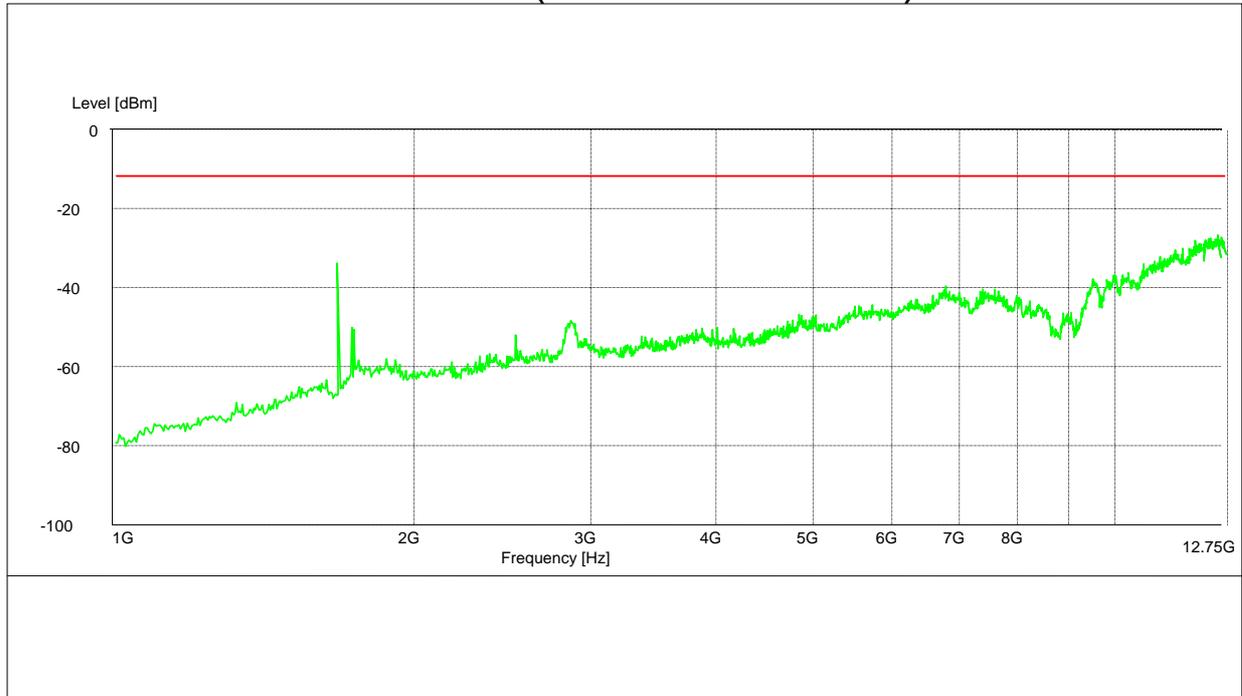


TRA Mode (30MHz-1GHz)

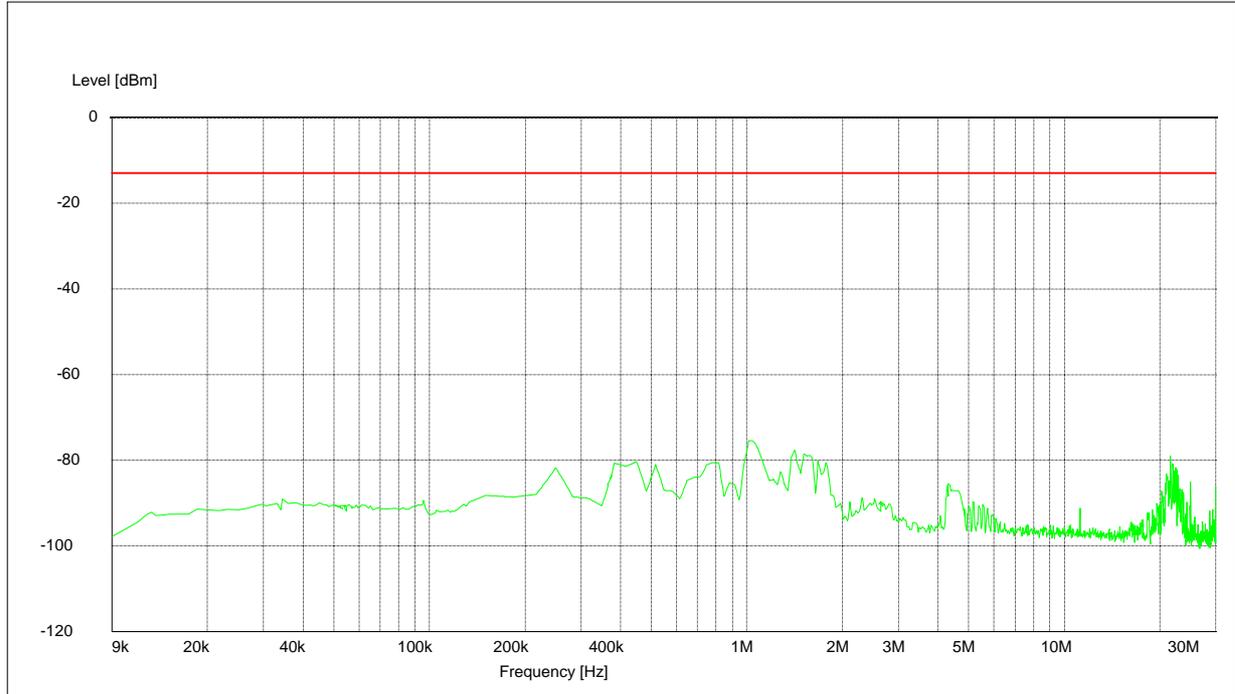


Note: The frequency which exceeded the limit was the carrier frequency.

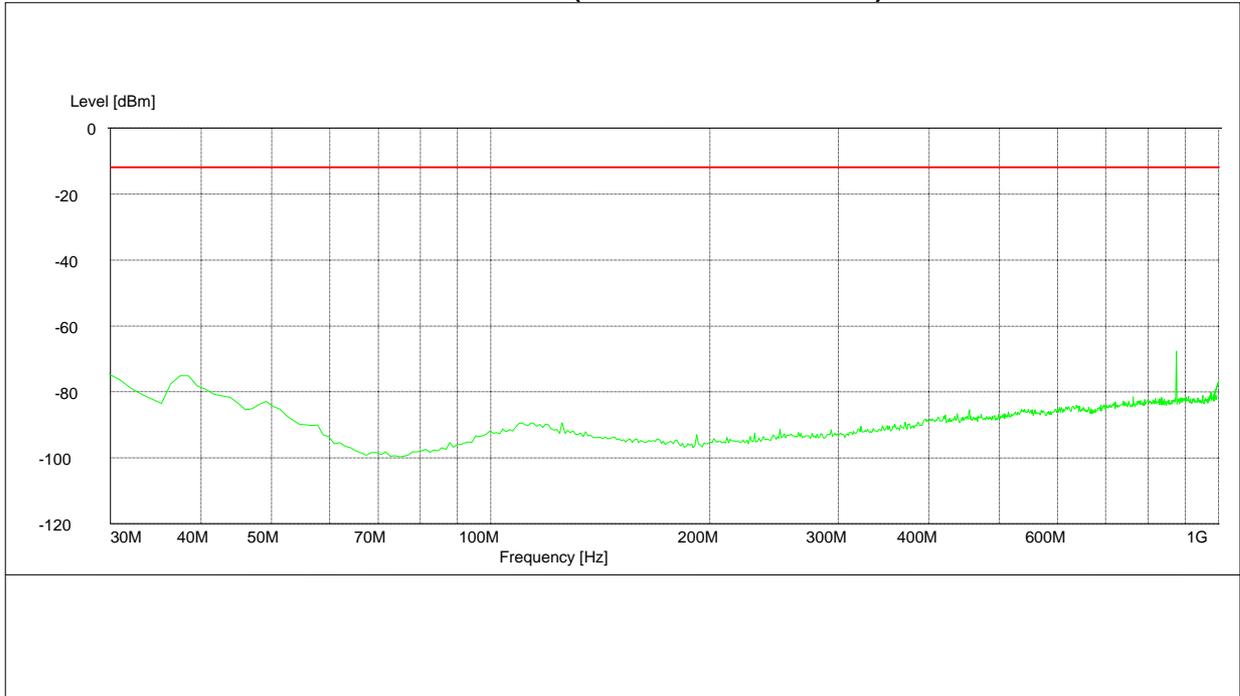
TRA Mode (1GHz-12.75GHz)



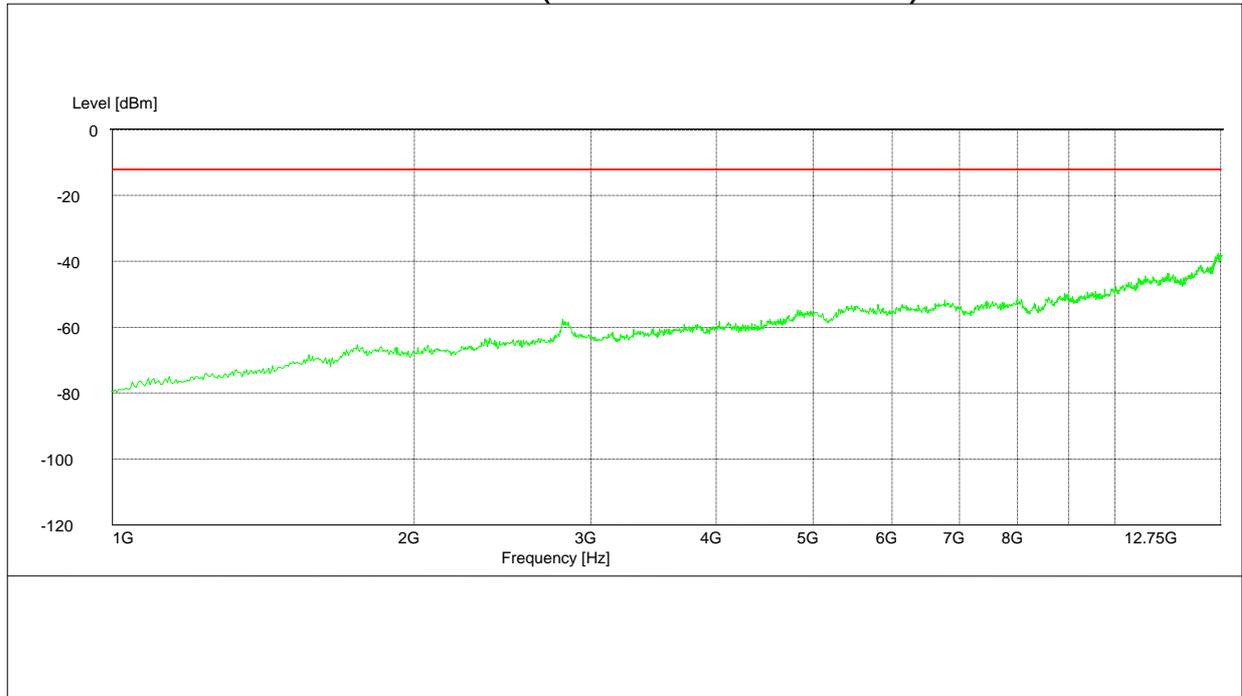
IDLE Mode (9 kHz-30MHz)



IDLE Mode (30MHz-1GHz)



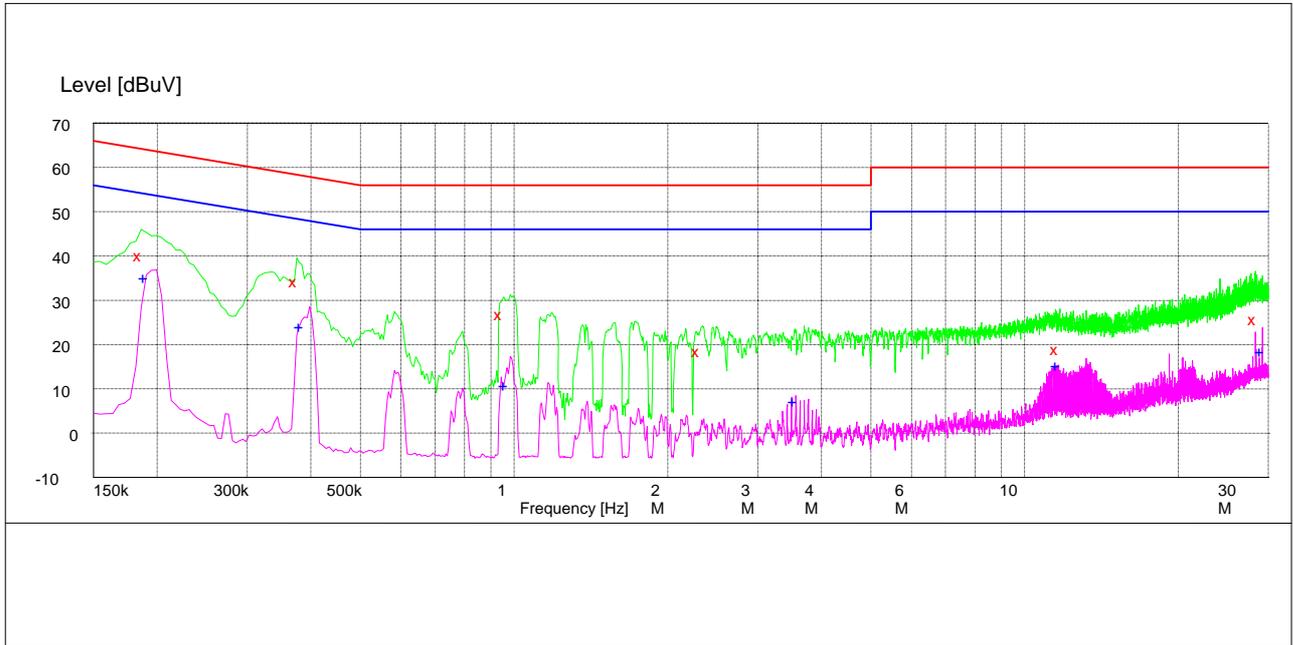
IDLE Mode (1GHz-12.75GHz)



Appendix G

Conducted Emission at Power Port

According to CFR 47 (FCC) part 15.107



MEASUREMENT RESULT: QP DECTER

Frequency (MHz)	Level (dBμV)	Transd (dB)	Limit (dBμV)	Margin (dB)	Line	PE
0.186000	40.40	1.5	64	23.9	L2	FLO
0.375000	34.60	0.9	58	23.8	L2	FLO
0.946500	27.30	0.5	56	28.7	N	FLO
2.305500	18.90	0.4	56	37.1	L2	FLO
11.638500	19.30	2.1	60	40.7	L2	FLO
28.342500	26.00	3.5	60	34.0	L2	FLO

MEASUREMENT RESULT: "AV DECTER"

Frequency (MHz)	Level (dBμV)	Transd (dB)	Limit (dBμV)	Margin (dB)	Line	PE
0.190500	35.60	1.4	54	18.4	N	FLO
0.384000	24.60	0.8	48	23.6	N	FLO
0.964500	11.20	0.5	46	34.8	N	FLO
3.561000	7.70	0.5	46	38.4	N	FLO

Appendix H

Radiated Emission of Enclosure in Idle Mode

According to CFR 47 (FCC) part 15.109



MEASUREMENT RESULT: QP DECTER

Frequency (MHz)	Level (dBµV/m)	Transd (dB)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Azimuth (deg)	Polarisation
59.220000	32.00	-16.0	40.0	8.0	100.0	111.00	VERTICAL
153.600000	27.50	-10.2	43.5	16.0	116.0	90.00	VERTICAL
165.300000	26.70	-10.6	43.5	16.8	100.0	89.00	VERTICAL
239.820000	32.50	-8.9	46.0	13.5	110.0	248.00	HORIZONTAL
326.460000	29.80	-6.4	46.0	16.2	100.0	251.00	HORIZONTAL
335.640000	20.10	-6.1	46.0	25.9	171.0	99.00	HORIZONTAL



Appendix I

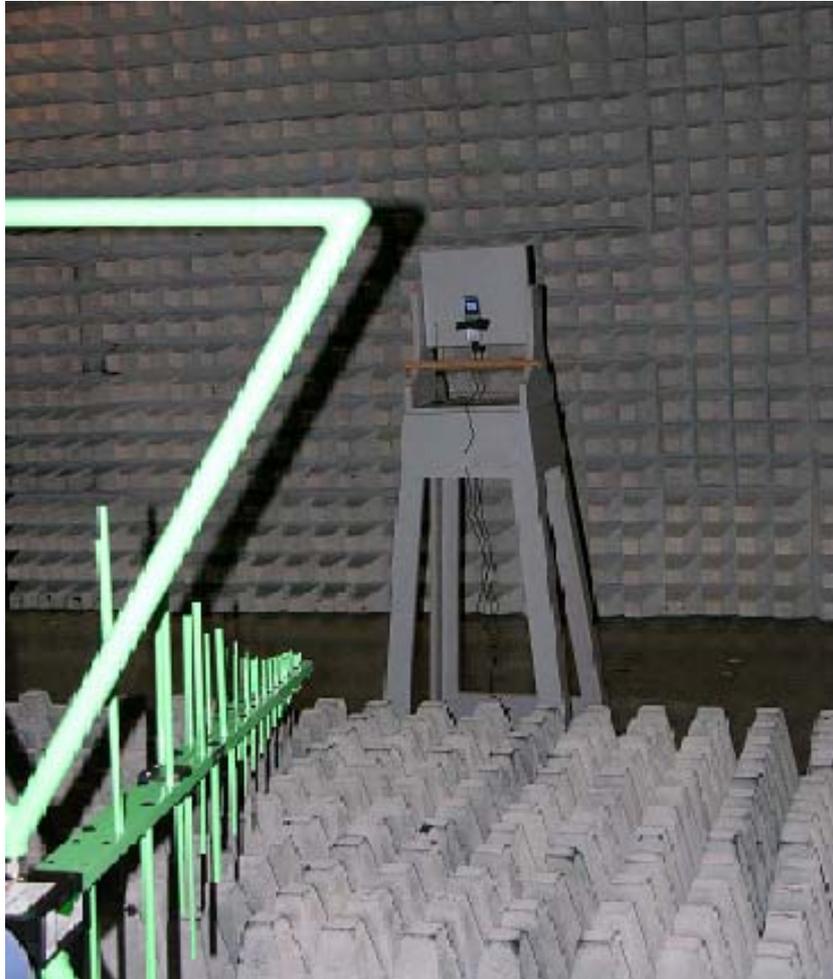
Photos of Test Setup

2 Radiated Emissions



Radiated Disturbance

3 Radiated Spurious Emissions



Radiated Spurious Emission (below 1GHz)



Radiated Spurious Emission (above 1GHz)

4 Conducted Emissions



Conducted Emissions for AC Por

Appendix J

Measurement Results Maximum Conducted Output Power

Maximum conducted power at 1st minute (dBm)				
Channel	1013	283	384	777
RC1	23.62	23.96	24.10	23.79
RC3	23.46	24.29	24.06	23.84
Maximum conducted power at 20th minute (dBm)				
Channel	1013	283	384	777
RC1	23.55	23.79	24.07	23.78
RC3	23.41	24.02	23.95	23.76
Maximum conducted power at 40th minute (dBm)				
Channel	1013	283	384	777
RC1	23.45	23.71	23.99	23.74
RC3	23.37	24.02	23.85	23.66

Channel 1013
1st minute

Measurement/Instrument Screen									
Control	Digital Average Power							Call Parm	
Digital Average Power Setup ▾	Digital Average Power 23.62 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous							Cell 1 Power	-104.00
								dBm/1.23 MHz	
								Cell Band	US Cellular
								Channel	1013
								Protocol Rev	6 (IS-2000-0)
Calibrate Digital Avg Pur								Radio Config	(Fud1, Rvs1)
								S02 (Loopback)	
								FCH Service Option Setup ▾	
								Active Cell	Connected
								Sys Type: IS-2000	
								Logging: No Conn.	
1 of 2				IntRef	Offset				1 of 4

Measurement/Instrument Screen									
Control		Digital Average Power					Call Params		
Digital Average Power Setup ▾		Digital Average Power 23.46 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
							-104.00 dBm/1.23 MHz		
							Cell Band		
							US Cellular		
							Channel		
							1013		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud3, Rvs3) S055 (Loopback)		
							FCH Service Option Setup ▾		
				Active Cell		Sys Type: IS-2000			
				Connected		Logging: No Conn.			
1 of 2				IntRef	Offset				1 of 4

20th minute

Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.55 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected					Sys Type: IS-2000 Logging: No Conn.		
		IntRef		Offset		1 of 4			

Measurement/Instrument Screen									
Control		Digital Average Power					Call Params		
Digital Average Power Setup ▾		Digital Average Power 23.41 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected			Sys Type: IS-2000		Cell Band		
		IntRef			Offset		US Cellular		
					Logging: No Conn.		Channel		
							1013		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud3, Rvs3)		
							S055 (Loopback)		
							FCH Service Option Setup ▾		
							1 of 4		

40th minute



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.45 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected Sys Type: IS-2000 Logging: No Conn.					Cell Band		
		IntRef Offset					US Cellular		
							Channel		
							1013		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud1, Rvs1)		
							S02 (Loopback)		
							FCH Service Option Setup ▾		
							1 of 4		



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.37 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected			Sys Type: IS-2000		US Cellular		
		IntRef			Offset		Channel		
		Logging: No Conn.			1013				
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud3, Rvs3)		
							S055 (Loopback)		
							FCH Service Option Setup ▾		
							1 of 4		

Channel 283
1st minute



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.96 dBm Expected Mobile Pouer: 23.00 dBm/1.23 MHz Continuous					Cell 1 Pouer		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2							US Cellular		
							Channel		
							283		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud1, Rvs1)		
							S02 (Loopback)		
							FCH Service Option Setup ▾		
		Active Cell			Sys Type: IS-2000				
		Connected			Logging: No Conn.				
		IntRef	Offset						1 of 4



Measurement/Instrument Screen									
Control		Digital Average Power						Call Parm	
Digital Average Power Setup ▾		Digital Average Power 24.29 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous						Cell 1 Power	
								-104.00	
								Cell Band	
								US Cellular	
								Channel	
								283	
Calibrate Digital Avg Pur								Protocol Rev	
								6 (IS-2000-0)	
								Radio Config	
								(Fud3, Rvs3)	
								S055 (Loopback)	
								FCH Service Option Setup ▾	
		Active Cell				Sys Type: IS-2000			
		Connected				Logging: No Conn.			
1 of 2				IntRef	Offset				1 of 4

20th minute



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.79 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2							US Cellular		
							Channel		
							283		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud1, Rvs1)		
							S02 (Loopback)		
							FCH Service Option Setup ▾		
		Active Cell			Sys Type: IS-2000				
		Connected			Logging: No Conn.				
		IntRef		Offset					
						1 of 4			



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 24.02 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected			Sys Type: IS-2000		US Cellular		
		IntRef			Offset		Channel		
					Logging: No Conn.		283		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud3, Rvs3)		
							S055 (Loopback)		
							FCH Service Option Setup ▾		
							1 of 4		

40th minute



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.71 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected			Sys Type: IS-2000		Channel		
		IntRef			Offset		283		
					Logging: No Conn.		Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud1, Rvs1)		
							S02 (Loopback)		
							FCH Service Option Setup ▾		
							1 of 4		

Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 24.02 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected			Sys Type: IS-2000			Channel	
		IntRef			Offset			283	
		Logging: No Conn.			Protocol Rev			6 (IS-2000-0)	
					Radio Config			FCH Service Option Setup ▾	
					(Fud3, Rvs3)			S055 (Loopback)	
					1 of 4				

Channel 384
1st minute



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 24.10 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected			Sys Type: IS-2000		US Cellular		
		IntRef			Offset		Channel		
					Logging: No Conn.		384		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud1, Rvs1)		
							S02 (Loopback)		
							FCH Service Option Setup ▾		
							1 of 4		

Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 24.06 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected			Sys Type: IS-2000		Channel		
		IntRef			Offset		384		
					Logging: No Conn.		Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud3, Rvs3)		
							S055 (Loopback)		
							FCH Service Option Setup ▾		
							1 of 4		

20th minute

Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 24.07 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2							Cell Band		
							US Cellular		
							Channel		
							384		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud1, Rvs1)		
							S02 (Loopback)		
							FCH Service Option Setup ▾		
		Active Cell			Sys Type: IS-2000				
		Connected			Logging: No Conn.				
		IntRef		Offset					
						1 of 4			

Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.95 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		US Cellular			Channel			384	
		Protocol Rev			6 (IS-2000-0)			Radio Config	
		(Fud3, Rvs3)			S055 (Loopback)			FCH Service Option Setup ▾	
		Active Cell			Sys Type: IS-2000				
		Connected			Logging: No Conn.				
		IntRef			Offset			1 of 4	

40th minute



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.99 dBm Expected Mobile Pouer: 23.00 dBm/1.23 MHz Continuous					Cell 1 Pouer		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2							US Cellular		
							Channel		
							384		
							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud1, Rvs1)		
							S02 (Loopback)		
							FCH Service Option Setup ▾		
		Active Cell			Sys Type: IS-2000				
		Connected			Logging: No Conn.				
		IntRef		Offset					
						1 of 4			



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.85 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected					Sys Type: IS-2000		
		IntRef Offset					Logging: No Conn.		
							1 of 4		

channel 777
1st minute



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.79 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected					Sys Type: IS-2000		
		IntRef Offset					Logging: No Conn.		
							1 of 4		

Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.84 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
							-104.00 dBm/1.23 MHz		
							Cell Band		
							US Cellular		
							Channel		
							777		
Calibrate Digital Avg Pur							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud3, Rvs3)		
							S055 (Loopback)		
							FCH Service Option Setup ▾		
		Active Cell		Sys Type: IS-2000					
		Connected		Logging: No Conn.					
1 of 2			IntRef	Offset					1 of 4

20th minute



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.78 dBm Expected Mobile Pouer: 23.00 dBm/1.23 MHz Continuous					Cell 1 Pouer		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected					Sys Type: IS-2000		
		IntRef Offset					Logging: No Conn.		
							1 of 4		



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.76 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
							-104.00 dBm/1.23 MHz		
							Cell Band		
							US Cellular		
							Channel		
							777		
Calibrate Digital Avg Pur							Protocol Rev		
							6 (IS-2000-0)		
							Radio Config		
							(Fud3, Rvs3)		
							S055 (Loopback)		
							FCH Service Option Setup ▾		
				Active Cell		Sys Type: IS-2000			
				Connected		Logging: No Conn.			
1 of 2				IntRef	Offset				1 of 4

40th minute



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.74 dBm Expected Mobile Power: 23.00 dBm/1.23 MHz Continuous					Cell 1 Power		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected					Sys Type: IS-2000 Logging: No Conn.		
		IntRef		Offset				1 of 4	



Measurement/Instrument Screen									
Control		Digital Average Power					Call Parm		
Digital Average Power Setup ▾		Digital Average Power 23.66 dBm Expected Mobile Pouer: 23.00 dBm/1.23 MHz Continuous					Cell 1 Pouer		
Calibrate Digital Avg Pur							-104.00 dBm/1.23 MHz		
1 of 2		Active Cell Connected					Sys Type: IS-2000 Logging: No Conn.		
		IntRef		Offset		1 of 4			