



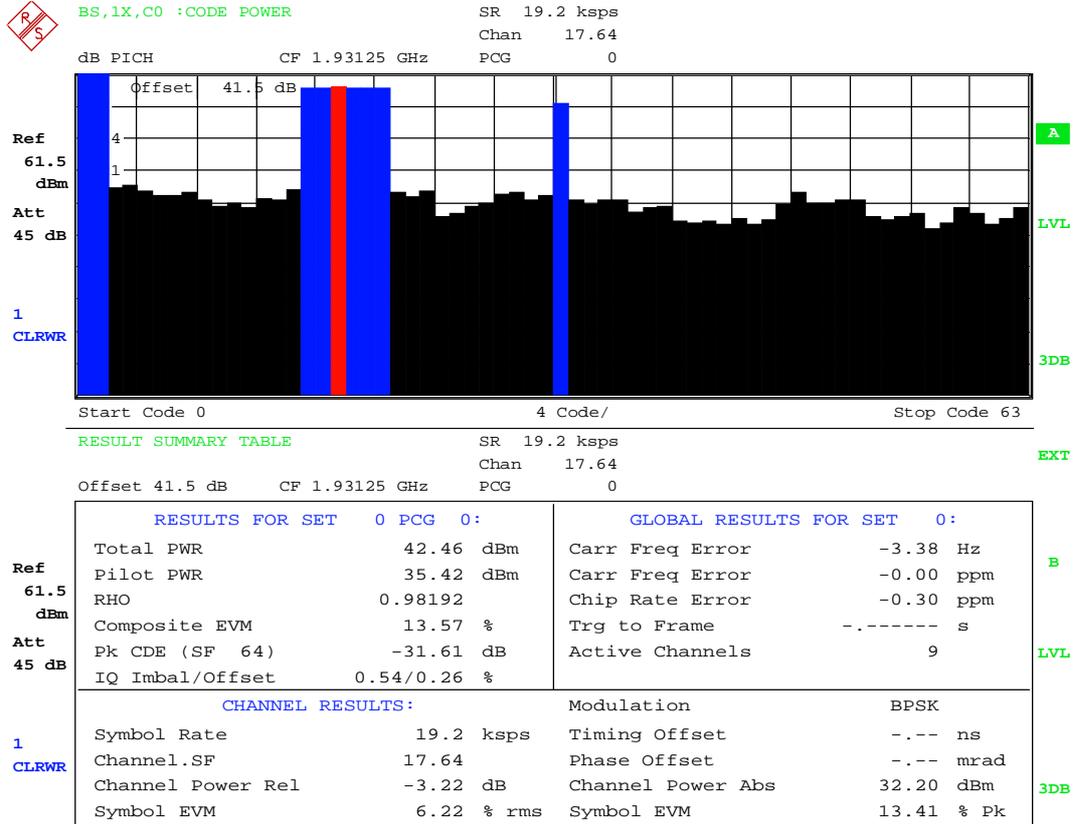
# Appendix A

## Modulation Characteristic Measurement According to FCC part 2.1047 and part 24 subpart E



# (1)RC1

## B channel



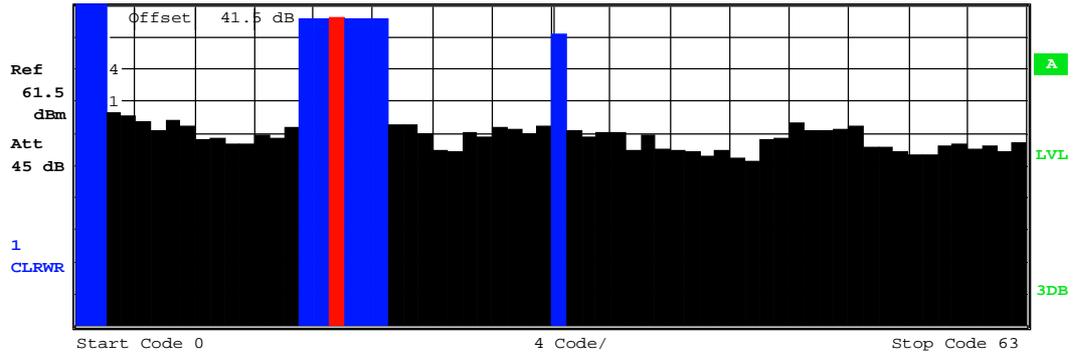
Date: 1.APR.2011 18:14:52



# M channel



BS,1X,C0 :CODE POWER SR 19.2 ksps  
 Chan 17.64  
 dB PICH CF 1.9625 GHz PCG 0



RESULT SUMMARY TABLE SR 19.2 ksps  
 Chan 17.64 EXT  
 Offset 41.5 dB CF 1.9625 GHz PCG 0

RESULTS FOR SET 0 PCG 0:		GLOBAL RESULTS FOR SET 0:	
Ref	Total PWR 42.47 dBm	Carr Freq Error -3.10 Hz	B
61.5 dBm	Pilot PWR 35.45 dBm	Carr Freq Error -0.00 ppm	
	RHO 0.98197	Chip Rate Error -0.07 ppm	
Att	Composite EVM 13.55 %	Trg to Frame -.-.-.-.- s	
45 dB	Pk CDE (SF 64) -30.90 dB	Active Channels 9	
	IQ Imbal/Offset 0.85/0.07 %		LVL
CHANNEL RESULTS:		Modulation BPSK	
1	Symbol Rate 19.2 ksps	Timing Offset -.- ns	
CLRWR	Channel.SF 17.64	Phase Offset -.- mrad	
	Channel Power Rel -3.19 dB	Channel Power Abs 32.26 dBm	3DB
	Symbol EVM 7.52 % rms	Symbol EVM 15.05 % Pk	

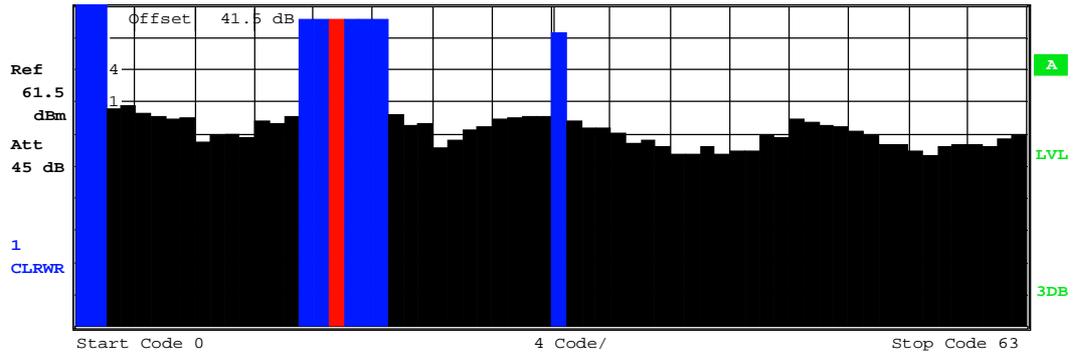
Date: 1.APR.2011 18:13:16



# T channel



BS,1X,C0 :CODE POWER SR 19.2 kbps  
 Chan 17.64  
 dB PICH CF 1.99375 GHz PCG 0



RESULT SUMMARY TABLE

SR 19.2 kbps  
 Chan 17.64  
 Offset 41.5 dB CF 1.99375 GHz PCG 0

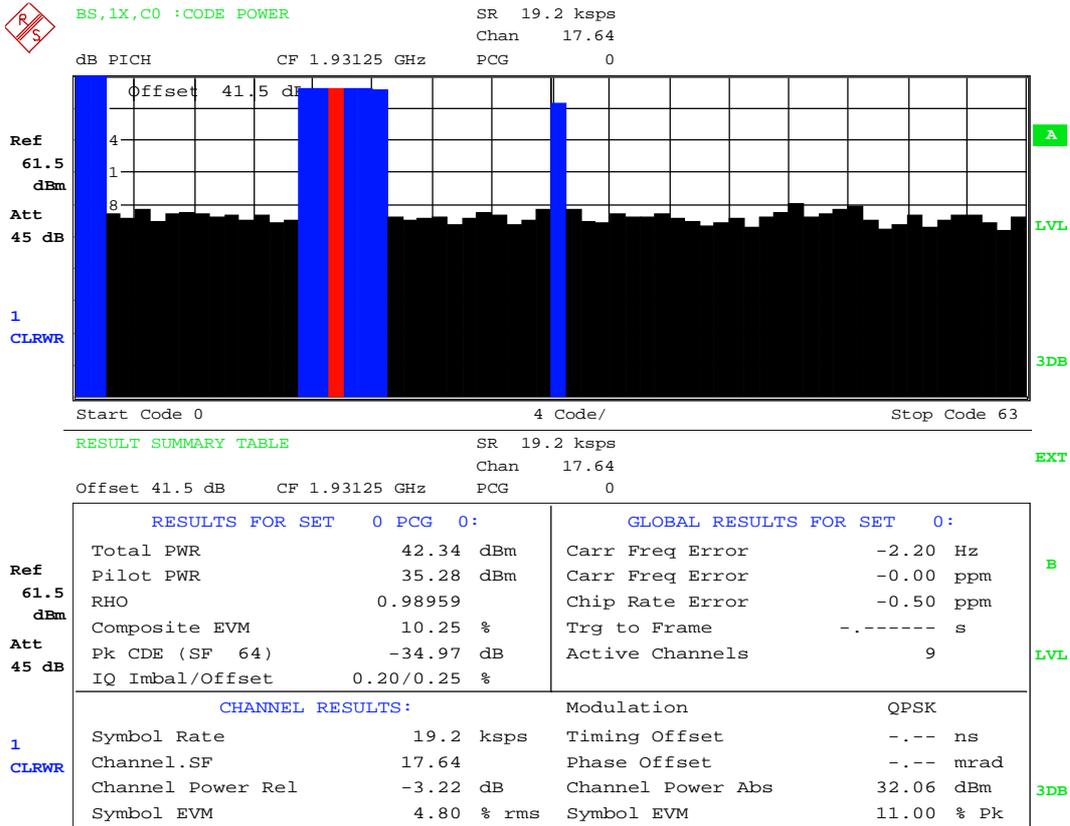
RESULTS FOR SET 0 PCG 0:		GLOBAL RESULTS FOR SET 0:		
Ref	Total PWR	42.13 dBm	Carr Freq Error	285.69 MHz
61.5 dBm	Pilot PWR	35.12 dBm	Carr Freq Error	0.00 ppm
	RHO	0.97577	Chip Rate Error	0.52 ppm
Att	Composite EVM	15.76 %	Trg to Frame	-.----- s
45 dB	Pk CDE (SF 64)	-29.05 dB	Active Channels	9
	IQ Imbal/Offset	0.51/0.49 %		
CHANNEL RESULTS:		Modulation		BPSK
1	Symbol Rate	19.2 kbps	Timing Offset	-.-- ns
CLRWR	Channel.SF	17.64	Phase Offset	-.-- mrad
	Channel Power Rel	-3.45 dB	Channel Power Abs	31.66 dBm
	Symbol EVM	7.31 % rms	Symbol EVM	12.27 % Pk

Date: 1.APR.2011 18:11:08



## (2) RC3

### B channel



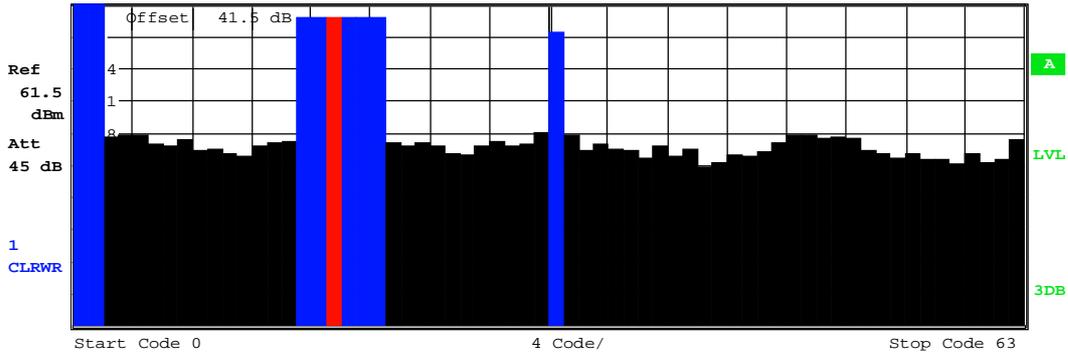
Date: 1.APR.2011 18:01:43



# M channel



BS,1X,C0 :CODE POWER SR 19.2 ksp/s  
 Chan 17.64  
 dB PICH CF 1.9625 GHz PCG 0



RESULT SUMMARY TABLE SR 19.2 ksp/s  
 Chan 17.64  
 Offset 41.5 dB CF 1.9625 GHz PCG 0

RESULTS FOR SET 0 PCG 0:		GLOBAL RESULTS FOR SET 0:			
Ref	Total PWR	42.38 dBm	Carr Freq Error	-2.19 Hz	
61.5 dBm	Pilot PWR	35.32 dBm	Carr Freq Error	-0.00 ppm	
Att	RHO	0.98986	Chip Rate Error	-1.68 ppm	
45 dB	Composite EVM	10.12 %	Trg to Frame	-.----- s	
	Pk CDE (SF 64)	-35.22 dB	Active Channels	9	
	IQ Imbal/Offset	0.52/0.17 %			
	CHANNEL RESULTS:		Modulation		QPSK
1	Symbol Rate	19.2 ksp/s	Timing Offset	-.-- ns	
CLRWR	Channel.SF	17.64	Phase Offset	-.-- mrad	
	Channel Power Rel	-3.23 dB	Channel Power Abs	32.10 dBm	
	Symbol EVM	5.09 % rms	Symbol EVM	10.25 % Pk	

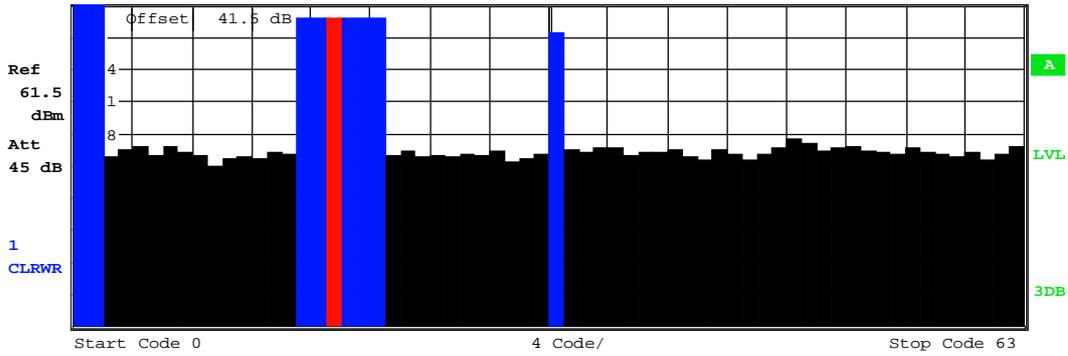
Date: 1.APR.2011 18:06:09



# T channel



BS,1X,C0 :CODE POWER SR 19.2 ksps  
 Chan 17.64  
 dB PICH CF 1.99375 GHz PCG 0



RESULT SUMMARY TABLE SR 19.2 ksps  
 Chan 17.64  
 Offset 41.5 dB CF 1.99375 GHz PCG 0

RESULTS FOR SET 0 PCG 0:		GLOBAL RESULTS FOR SET 0:	
Ref	Total PWR 42.25 dBm	Carr Freq Error -530.49 mHz	
61.5 dBm	Pilot PWR 35.19 dBm	Carr Freq Error -0.00 ppm	
	RHO 0.99266	Chip Rate Error -2.24 ppm	
Att	Composite EVM 8.60 %	Trg to Frame - .----- s	
45 dB	Pk CDE (SF 64) -36.47 dB	Active Channels 9	
	IQ Imbal/Offset 0.26/0.32 %		
CHANNEL RESULTS:		Modulation QPSK	
1	Symbol Rate 19.2 ksps	Timing Offset - .-- ns	
CLRWR	Channel.SF 17.64	Phase Offset - .-- mrad	
	Channel Power Rel -3.20 dB	Channel Power Abs 31.99 dBm	
	Symbol EVM 3.44 % rms	Symbol EVM 7.72 % Pk	

Date: 1.APR.2011 18:07:43

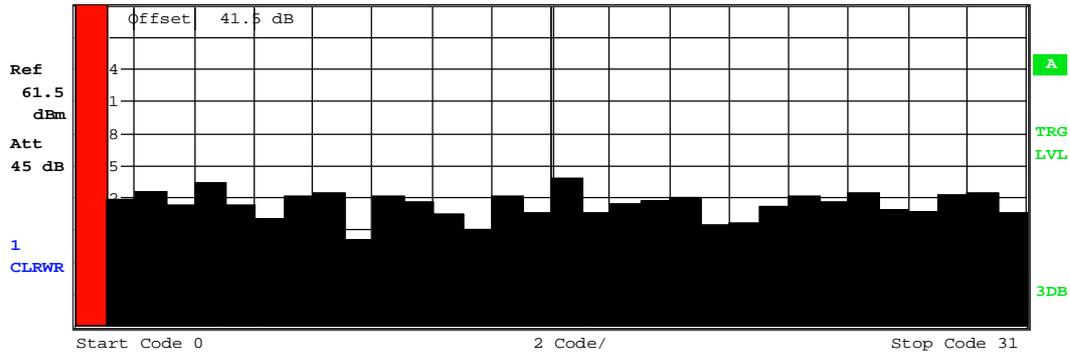


### (3) EVDO

## B channel



BS,DO,C0 :CODE POWER Type PILOT-I  
 Code 0.32  
 dB CF 1.93125 GHz Slot 0



Start Code 0 2 Code/ Stop Code 31

GENERAL RESULTS

Type ALL

EXT

Offset 41.5 dB CF 1.93125 GHz

Global Results for Set 0:			
Ref	Carr Freq Error	-120.47 mHz	RHO Pilot 0.99677
61.5 dBm	Carr Freq Error	-0.00 ppm	RHO ov-1/-2 0.99243/0.99245
	Chip Rate Error	-0.19 ppm	RHO MAC 0.99584
	Trg to Frame	-302.232280 ns	RHO DATA 0.99146
Results for Set 0 / Slot 0:			
Att	Power PILOT	42.65 dBm	Data Modulation Type 16-QAM
45 dB	Power MAC	42.31 dBm	Act. MAC Channels 21
	Power DATA	42.41 dBm	Act. DATA Channels 16
1 CLRWR	Power PREAMBLE	42.72 dBm	Preamble Length 64 Chips
	Composite EVM	9.55 %	RHO 0.99097
	Max. Pwr DATA	-14.46 dB	Max. inact. Pwr MAC -40.18 dB
	Min. Pwr DATA	-15.88 dB	

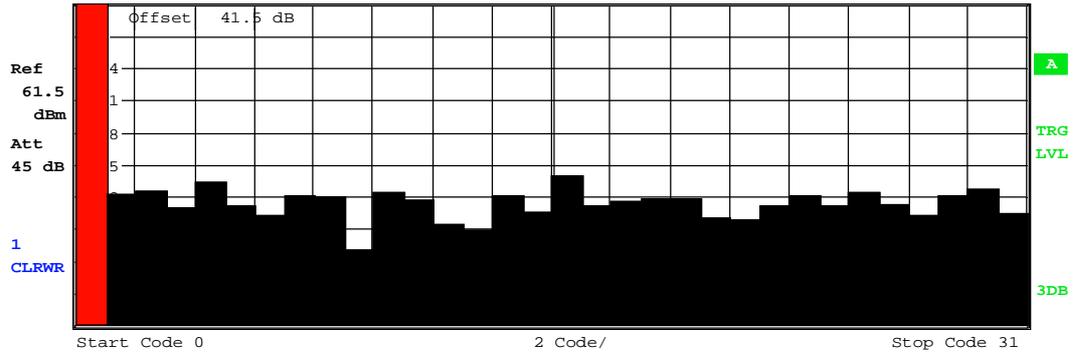
Date: 1.APR.2011 18:28:36



# M channel



BS,DO,C0 :CODE POWER Type PILOT-I  
 Code 0.32  
 CF 1.9625 GHz Slot 0



GENERAL RESULTS Type ALL EXT

Offset 41.5 dB CF 1.9625 GHz

		Global Results for Set 0:			
		Carr Freq Error	198.12 mHz	RHO Pilot	0.99655
Ref		Carr Freq Error	0.00 ppm	RHO ov-1/-2	0.99123/0.99114
61.5 dBm		Chip Rate Error	-0.49 ppm	RHO MAC	0.99452
		Trg to Frame	-338.556504 ns	RHO DATA	0.99022
		Results for Set 0 / Slot 0:			
Att		Power PILOT	42.74 dBm	Data Modulation Type	16-QAM
45 dB		Power MAC	41.83 dBm	Act. MAC Channels	50
		Power DATA	42.60 dBm	Act. DATA Channels	16
1		Power PREAMBLE	42.64 dBm	Preamble Length	64 Chips
CLRWR		Composite EVM	9.98 %	RHO	0.99013
		Max. Pwr DATA	-14.49 dB	Max. inact. Pwr MAC	-39.93 dB
		Min. Pwr DATA	-15.76 dB		

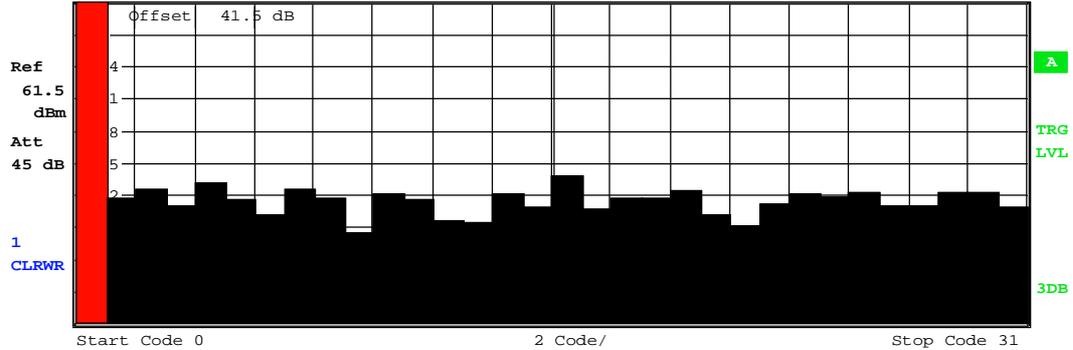
Date: 1.APR.2011 18:33:59



# T channel



BS,DO,C0 :CODE POWER Type PILOT-I  
 Code 0.32  
 dB CF 1.99375 GHz Slot 0



GENERAL RESULTS Type ALL EXT

Offset 41.5 dB CF 1.99375 GHz

		Global Results for Set 0:			
Ref 61.5 dBm	Carr Freq Error	-1.02 Hz	RHO Pilot	0.99636	B
	Carr Freq Error	-0.00 ppm	RHO ov-1/-2	0.99071/0.99068	
	Chip Rate Error	0.12 ppm	RHO MAC	0.99566	
	Trg to Frame	-314.137168 ns	RHO DATA	0.98988	
		Results for Set 0 / Slot 0:			
Att 45 dB	Power PILOT	42.63 dBm	Data Modulation Type	16-QAM	LVL
	Power MAC	42.16 dBm	Act. MAC Channels	24	
1 CLRWR	Power DATA	42.41 dBm	Act. DATA Channels	16	3DB
	Power PREAMBLE	42.69 dBm	Preamble Length	64 Chips	
	Composite EVM	9.46 %	RHO	0.99114	
	Max. Pwr DATA	-14.36 dB	Max. inact. Pwr MAC	-40.01 dB	
	Min. Pwr DATA	-15.99 dB			

Date: 1.APR.2011 18:36:04



## **Appendix B**

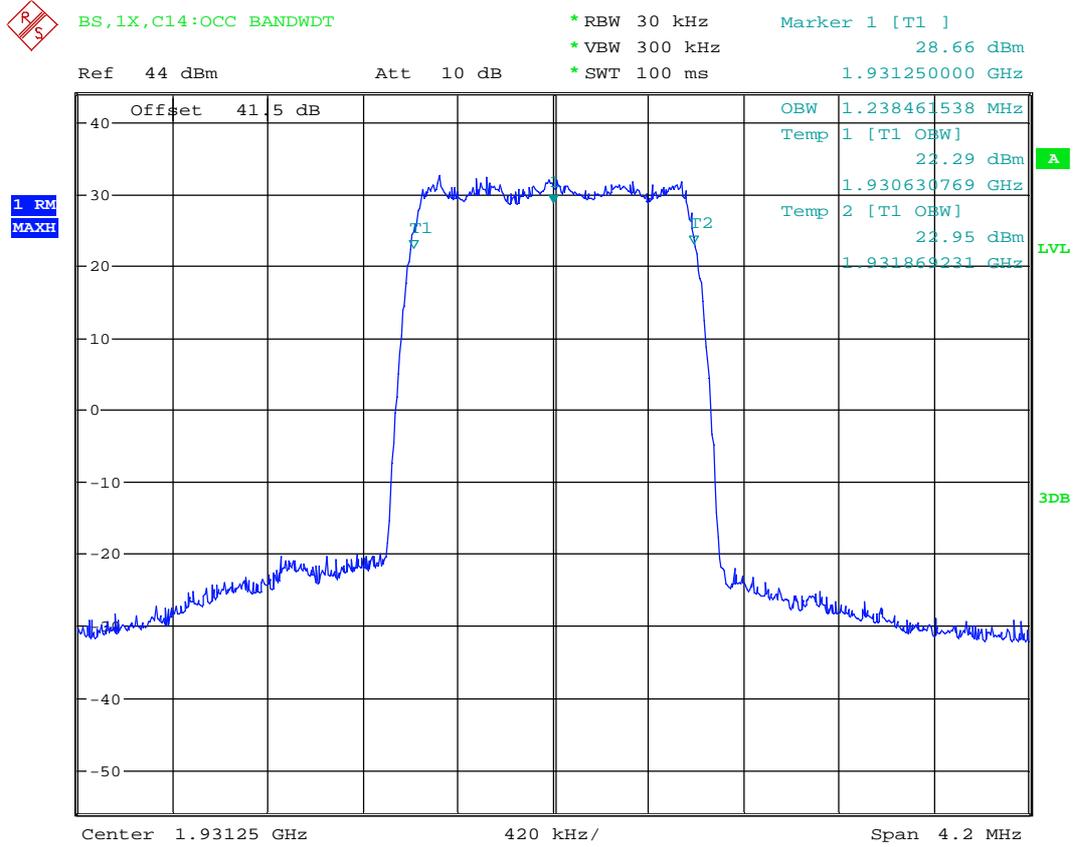
# Occupied Bandwidth Measurement

According to FCC part 2.1049 and part 24 subpart E



(1) 1X

### B channel



Date: 6.APR.2011 21:27:32



# M channel



BS,1X,C14:OCC BANDWDT

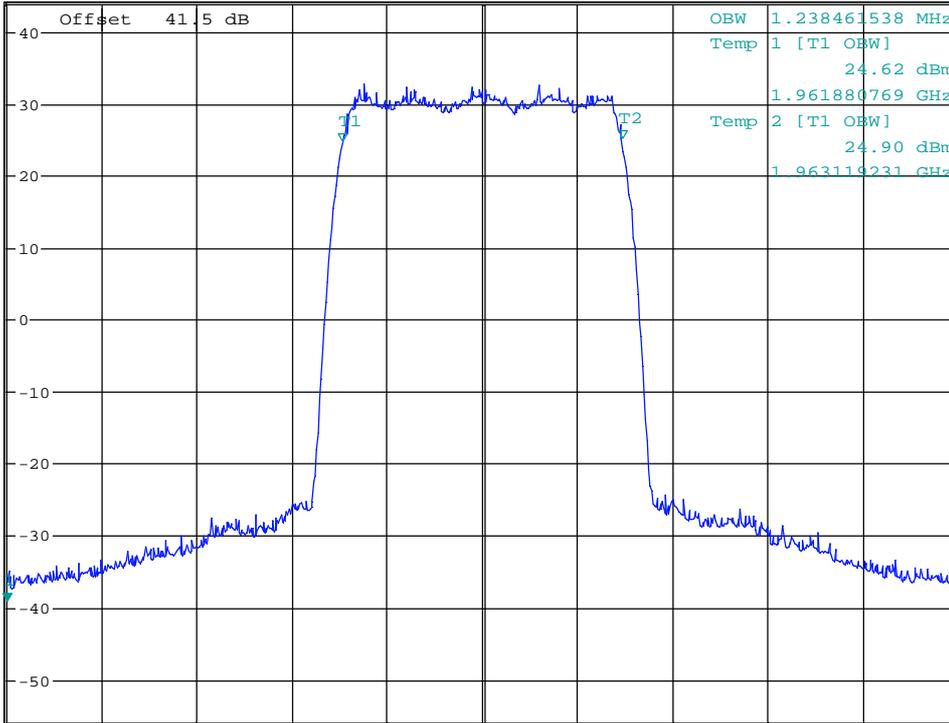
\*RBW 30 kHz  
 \*VBW 300 kHz  
 \*SWT 100 ms

Marker 1 [T1 ]  
 -39.20 dBm  
 1.960400000 GHz

Ref 44 dBm

Att 10 dB

1 RM  
 MAXH



Center 1.9625 GHz      420 kHz/      Span 4.2 MHz

Date: 6.APR.2011 21:29:43



# T channel



BS,1X,C14:OCC BANDWDT

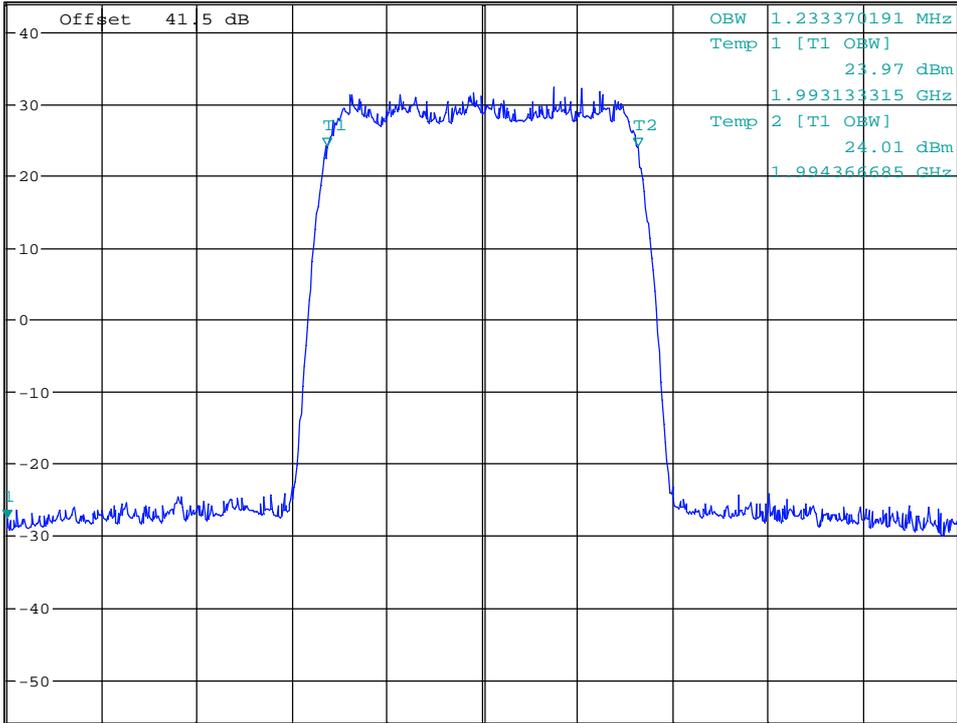
\*RBW 30 kHz  
 \*VBW 300 kHz  
 \*SWT 100 ms

Marker 1 [T1 ]  
 -27.84 dBm  
 1.991863669 GHz

Ref 44 dBm

Att 10 dB

1 RM  
 MAXH



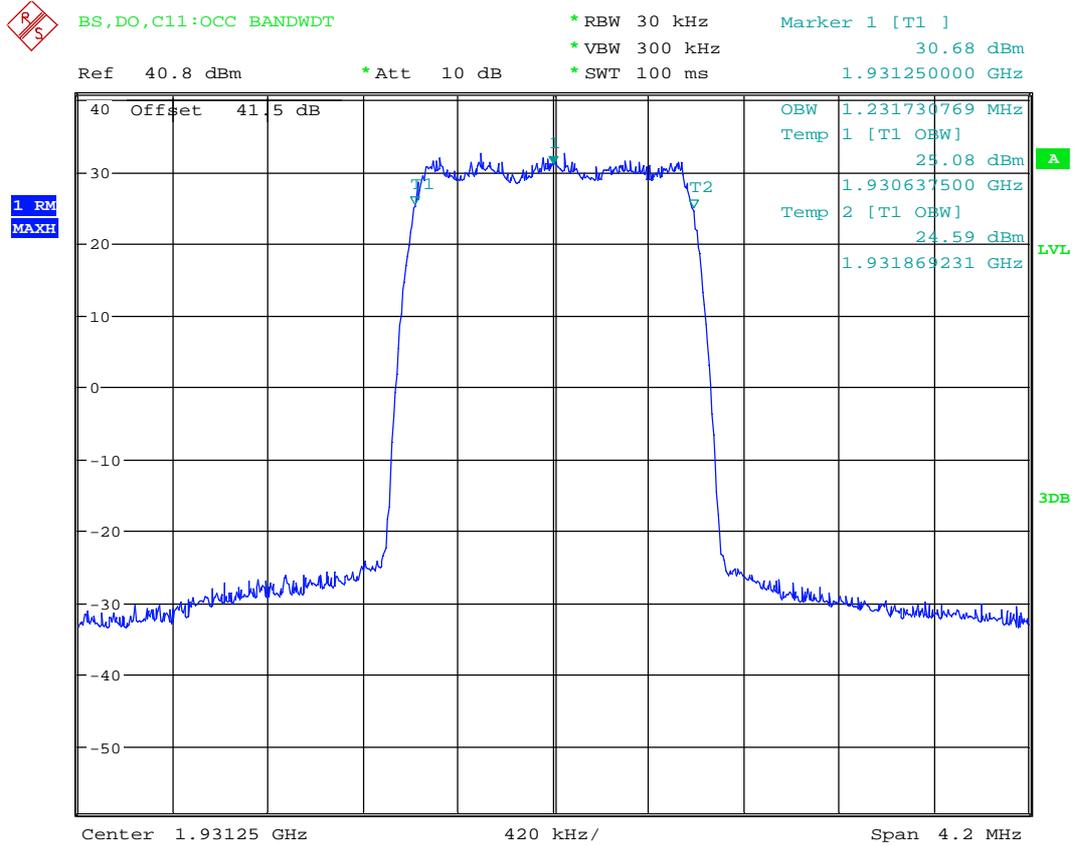
Center 1.99375 GHz 377.266176 kHz/ Span 3.77266176 MHz

Date: 6.APR.2011 21:33:09



## (2) EVDO

### B channel



Date: 6.APR.2011 20:29:36





# T channel



BS,DO,C11:OCC BANDWDT

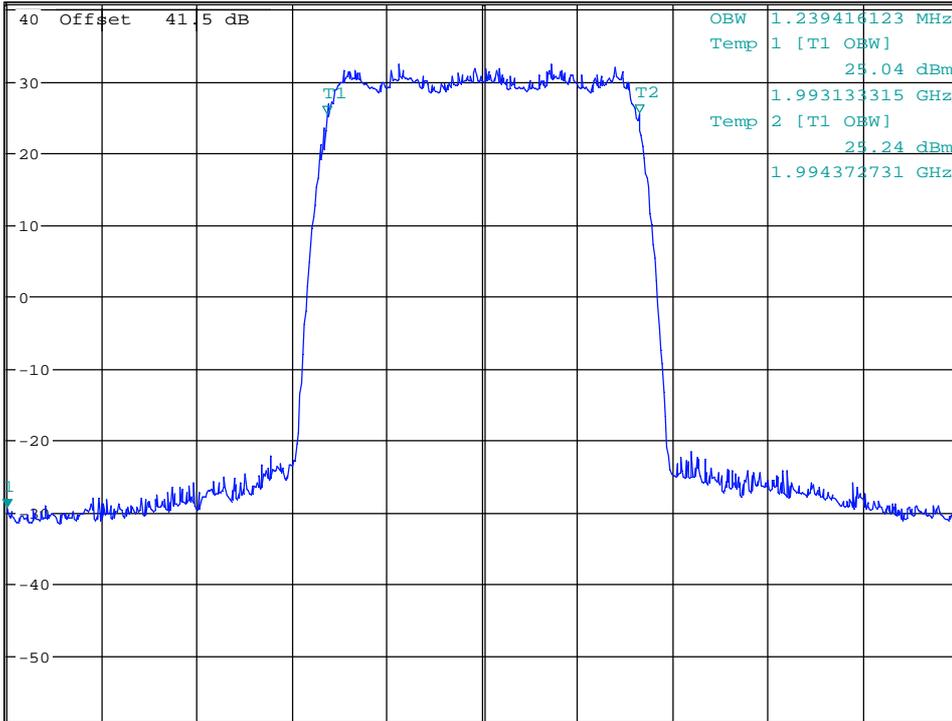
\*RBW 30 kHz  
 \*VBW 300 kHz  
 \*SWT 100 ms

Marker 1 [T1 ]  
 -29.58 dBm  
 1.991863669 GHz

Ref 40.8 dBm

\*Att 10 dB

1 RM  
 MAXH



Center 1.99375 GHz      377.266176 kHz/      Span 3.77266176 MHz

Date: 6.APR.2011 20:32:30



## **Appendix C**

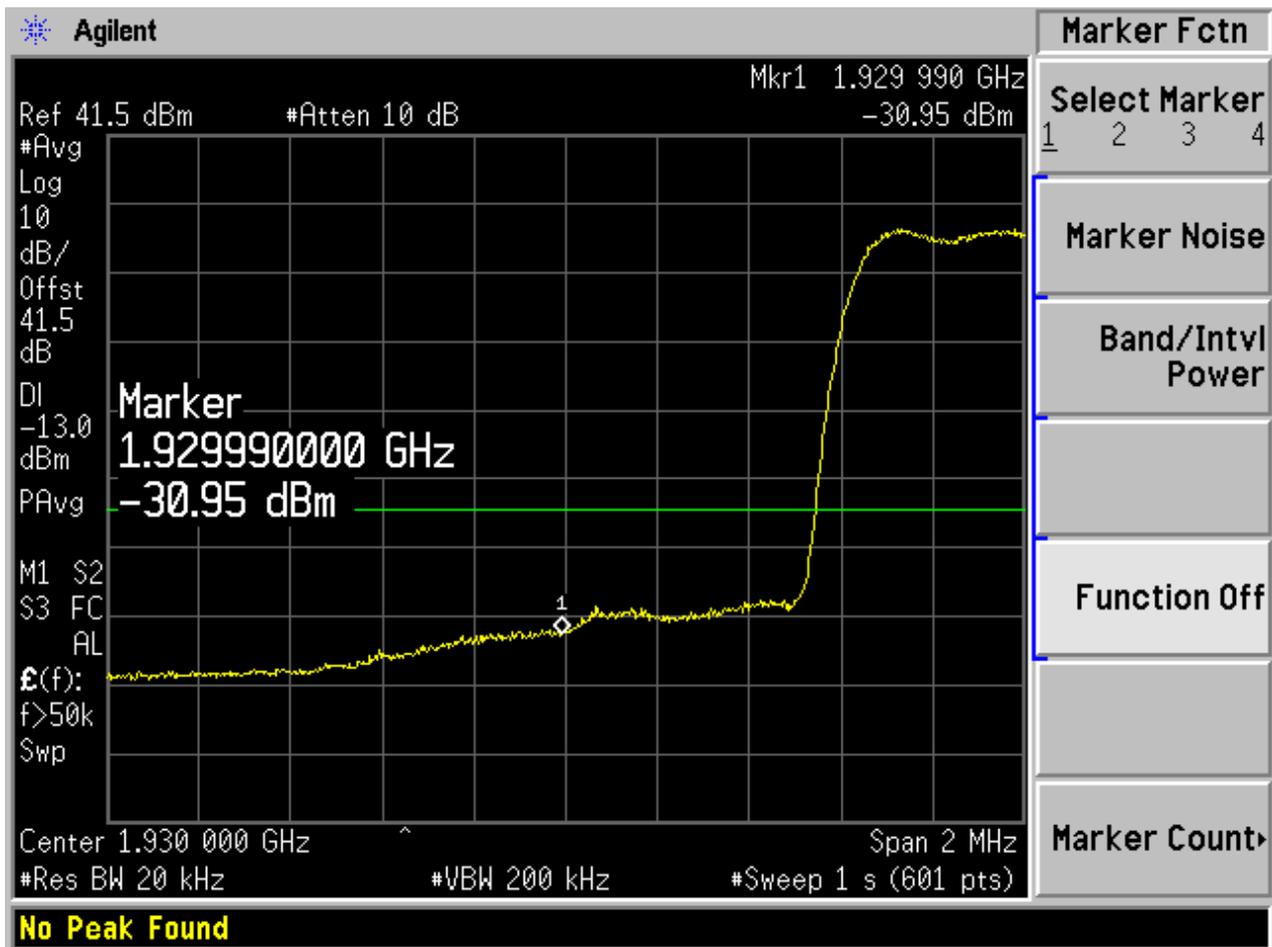
### **Band Edge Measurement**

According to FCC part 2.1051 and part 24.238



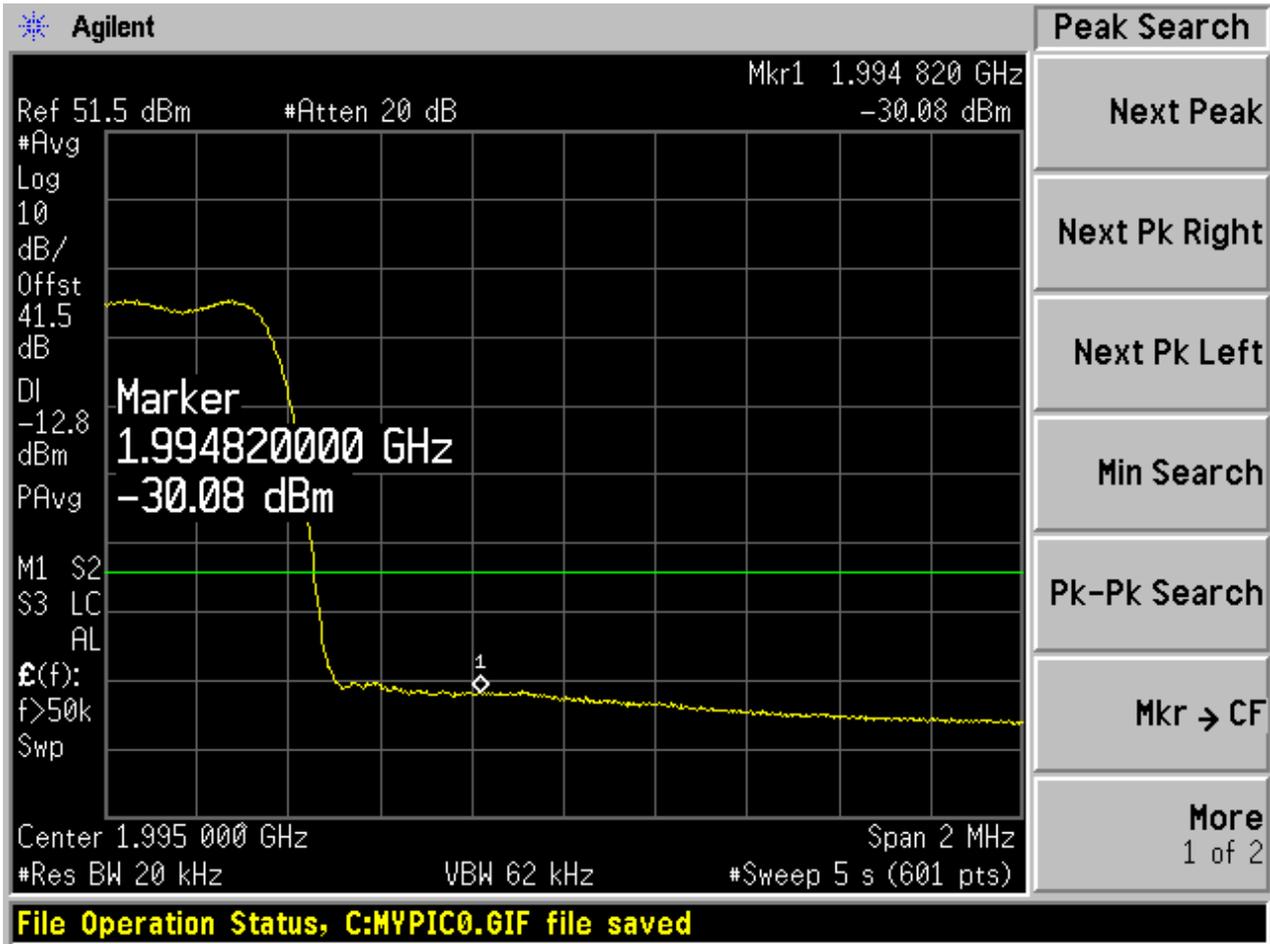
# (1) 1X One Carrier

## B channel





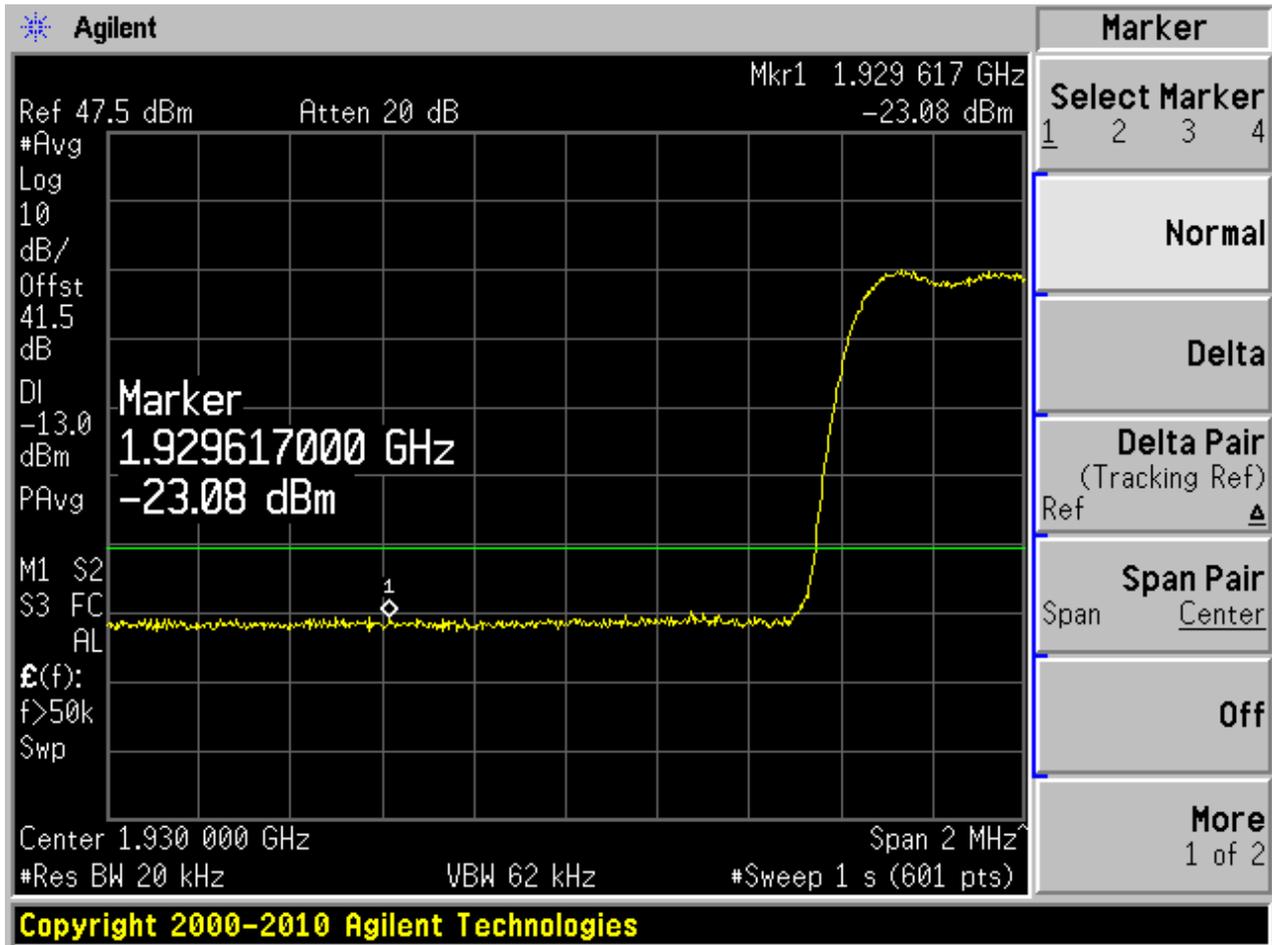
# T channel





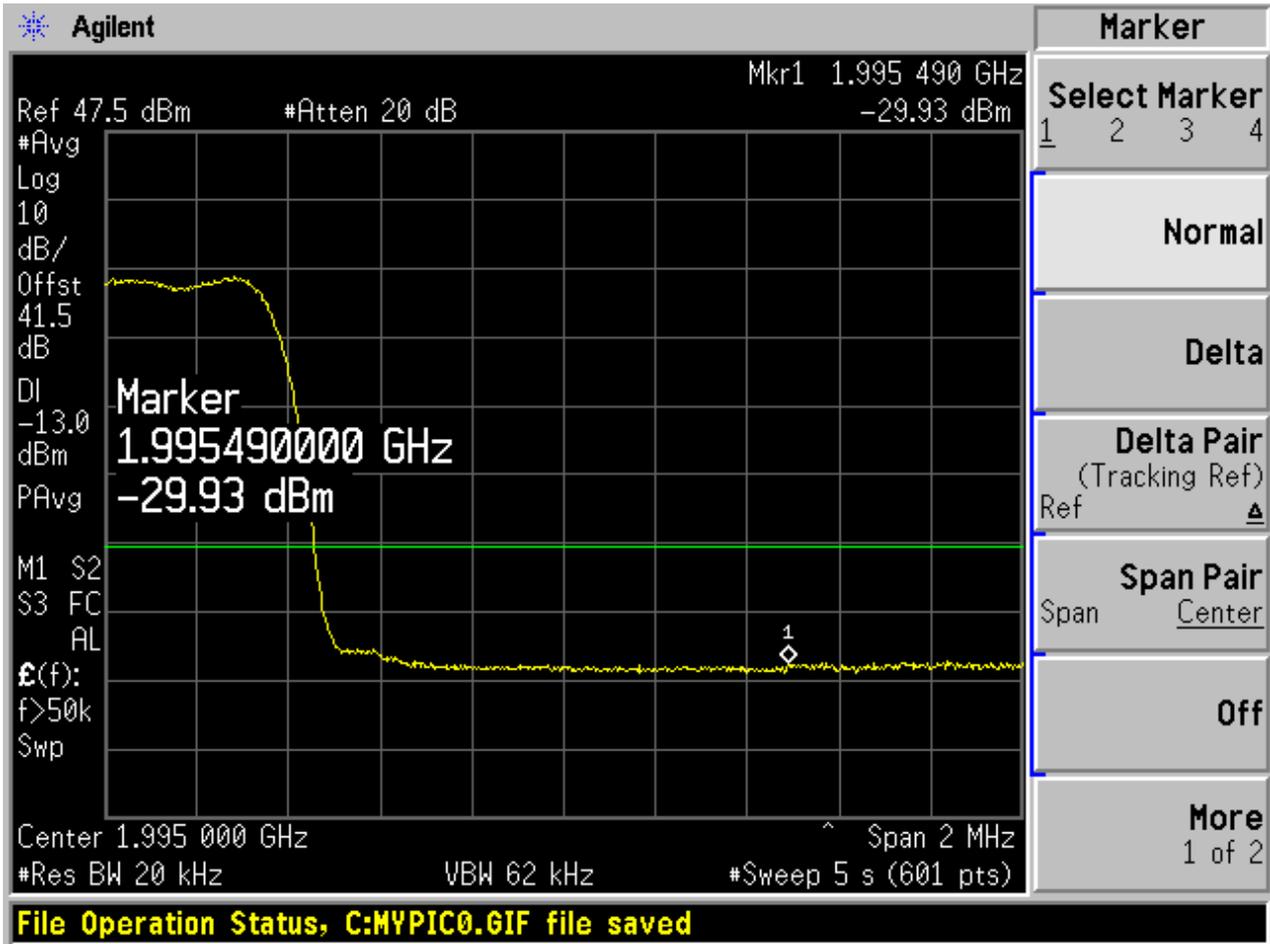
## (2) 1X Four Carriers

### B channel





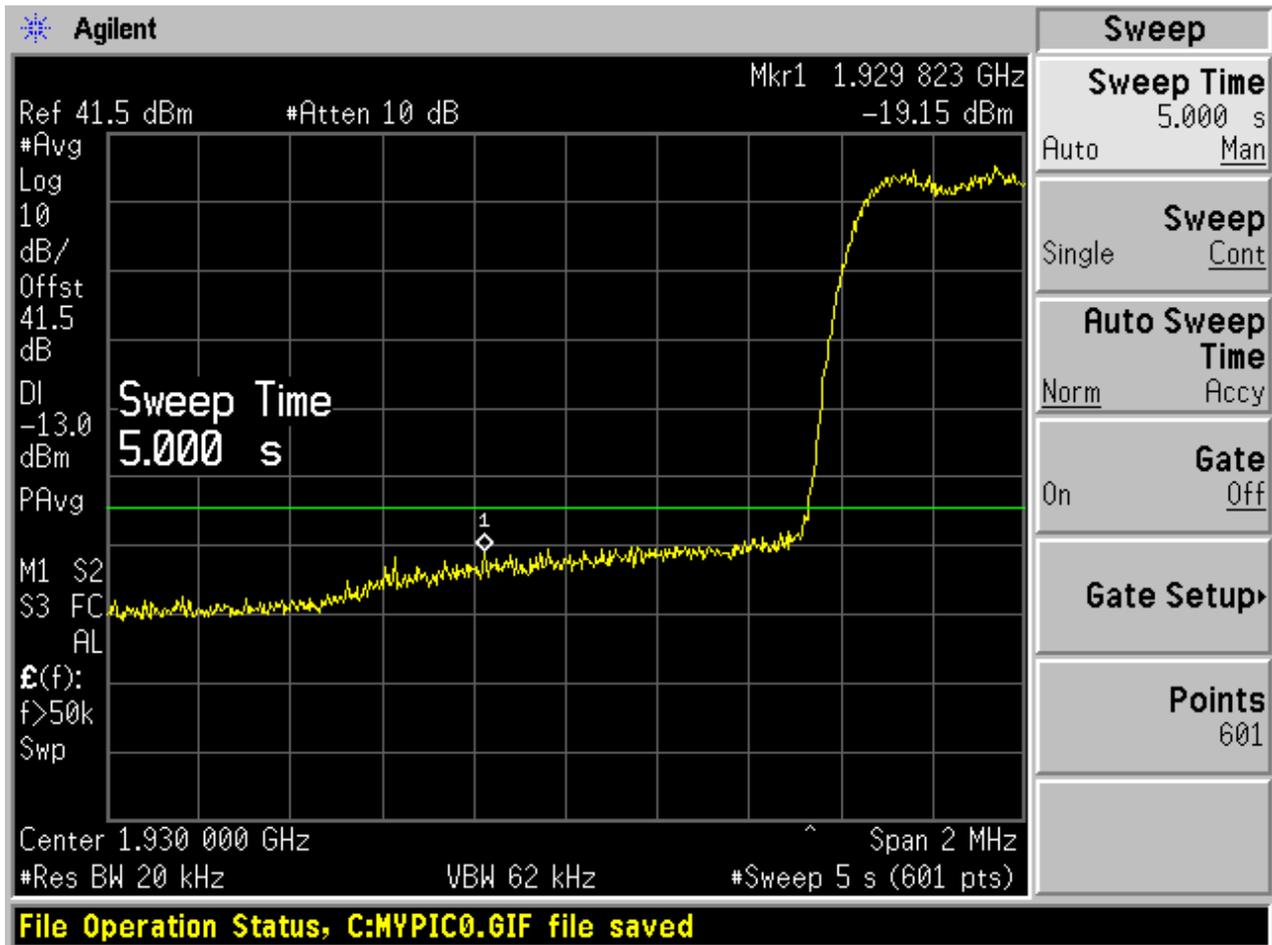
# T channel





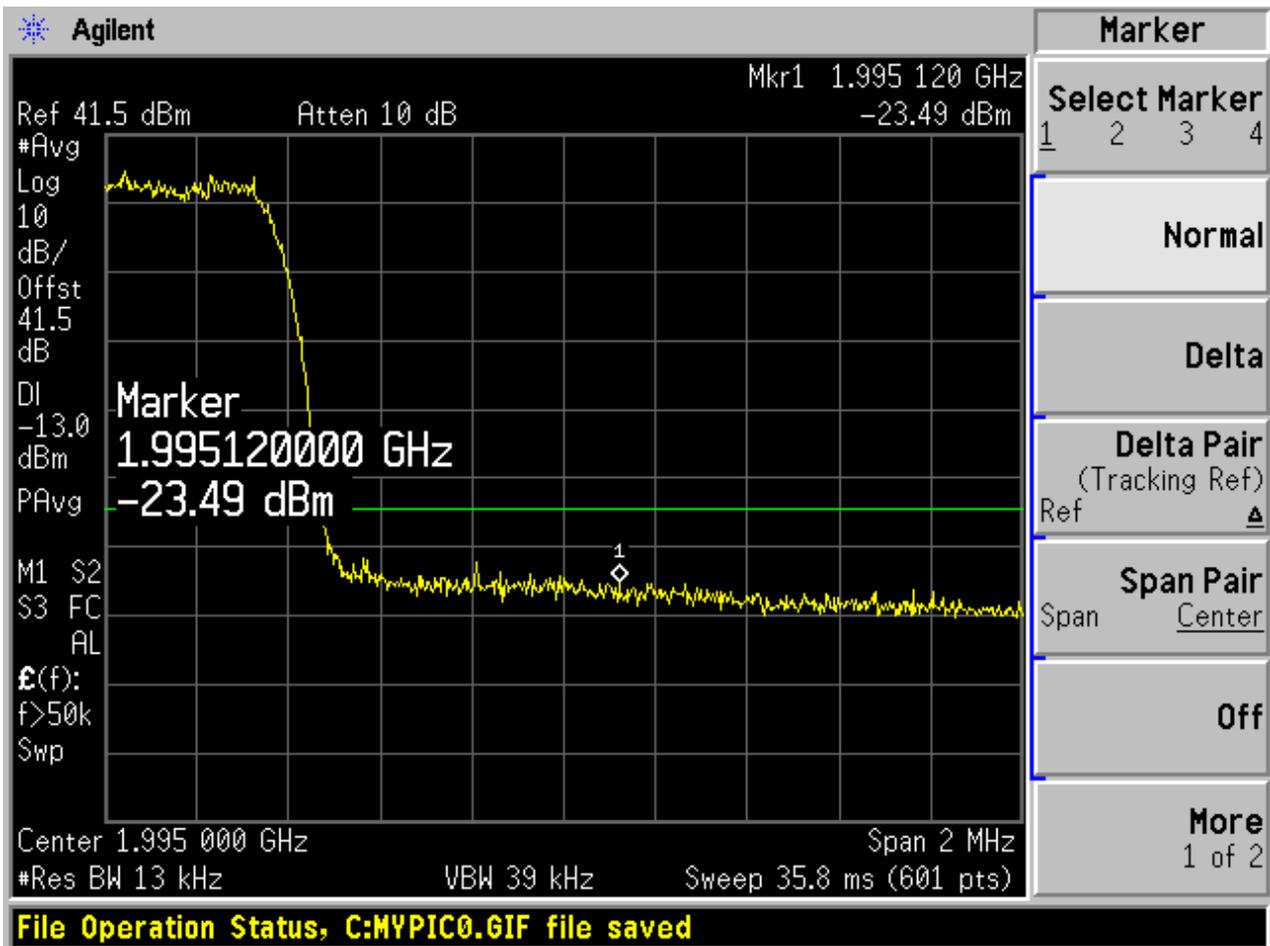
### (3) EVDO One Carrier

### B channel





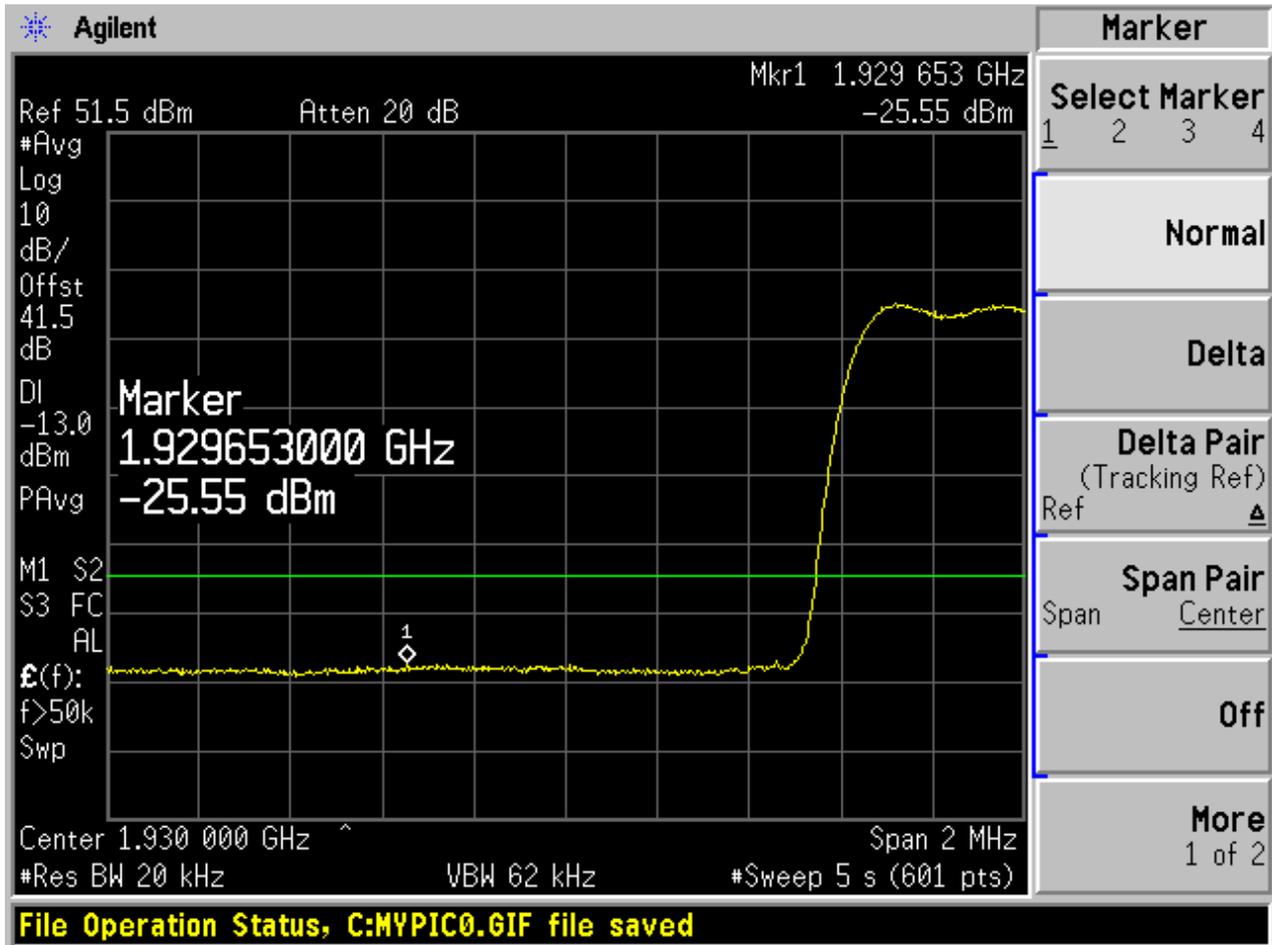
# T channel





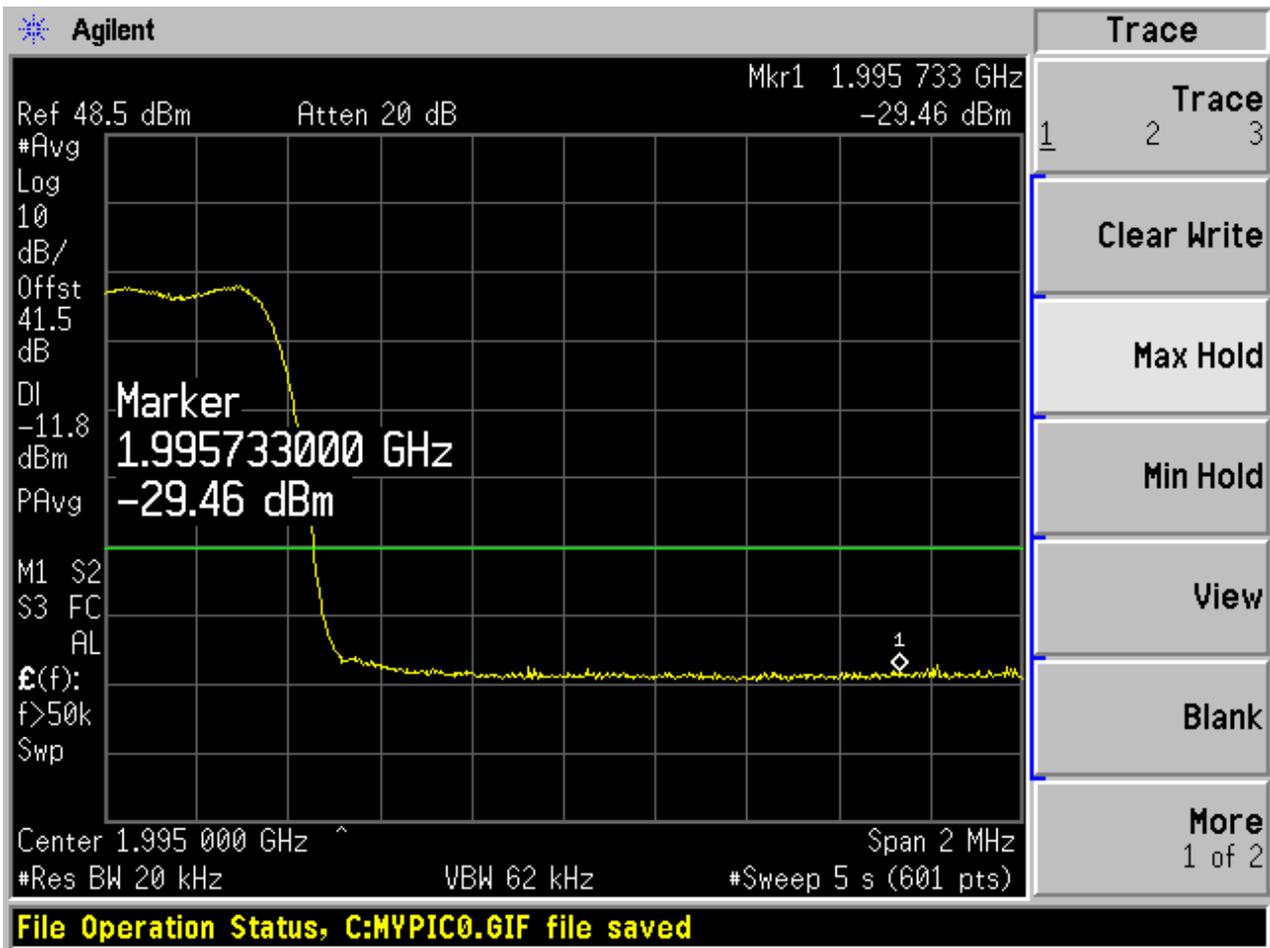
## (4) EVDO Four Carriers

### B channel





# T channel





## **Appendix D**

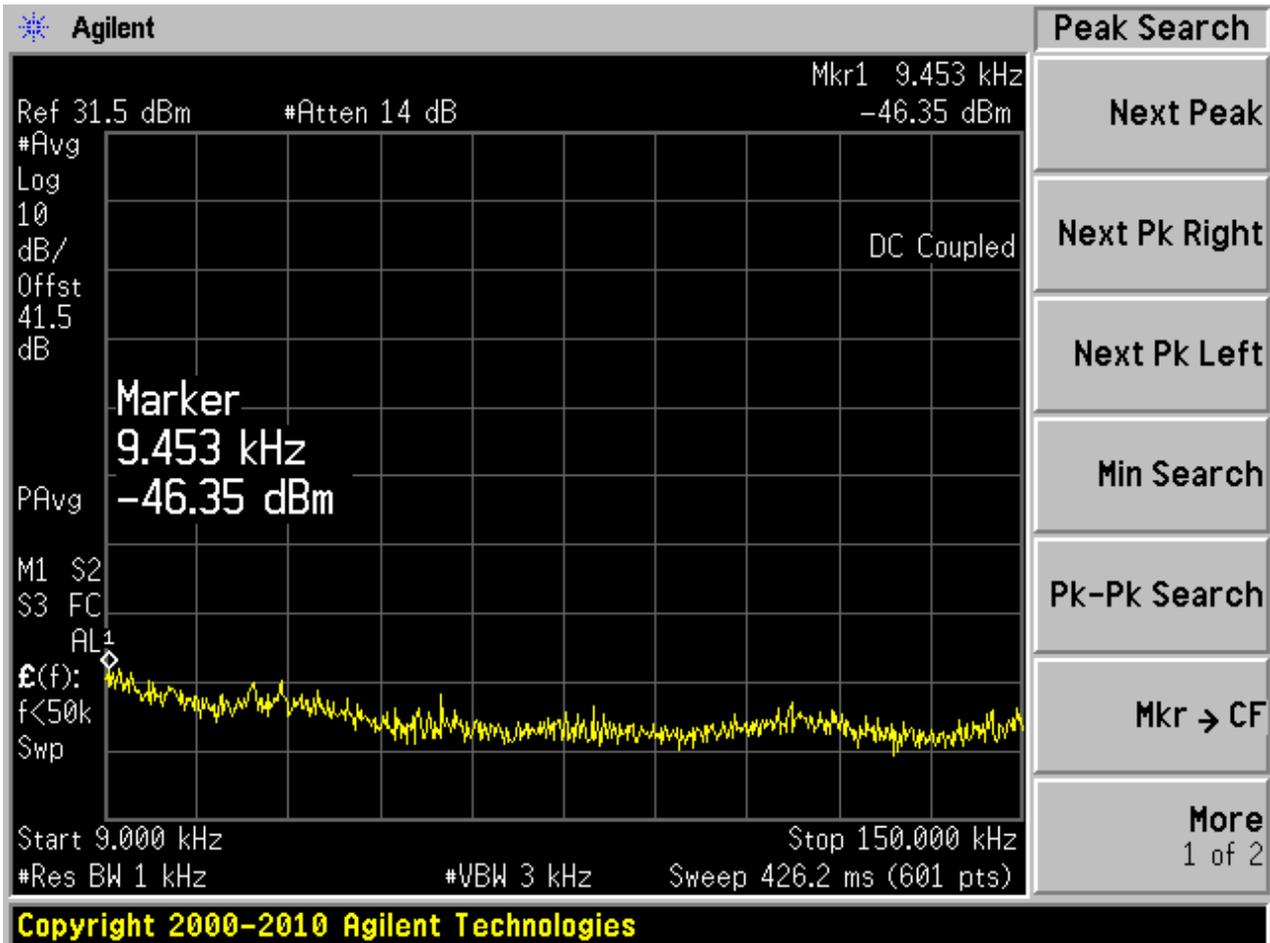
# Spurious Emission at Antenna Terminal Measurement

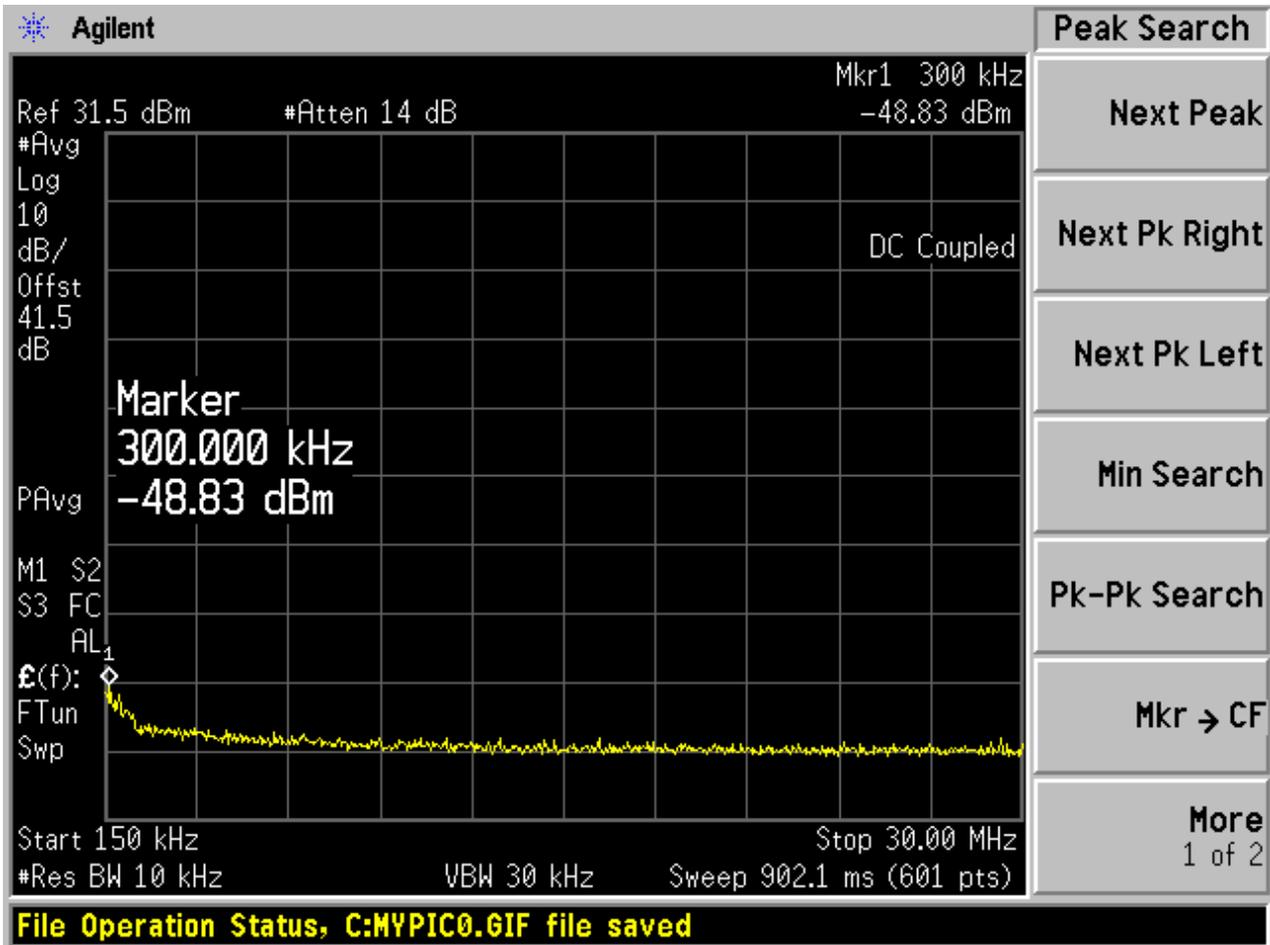
According to FCC part 2.1051 and part 24.238



# (1) 1X One Carrier

## B channel

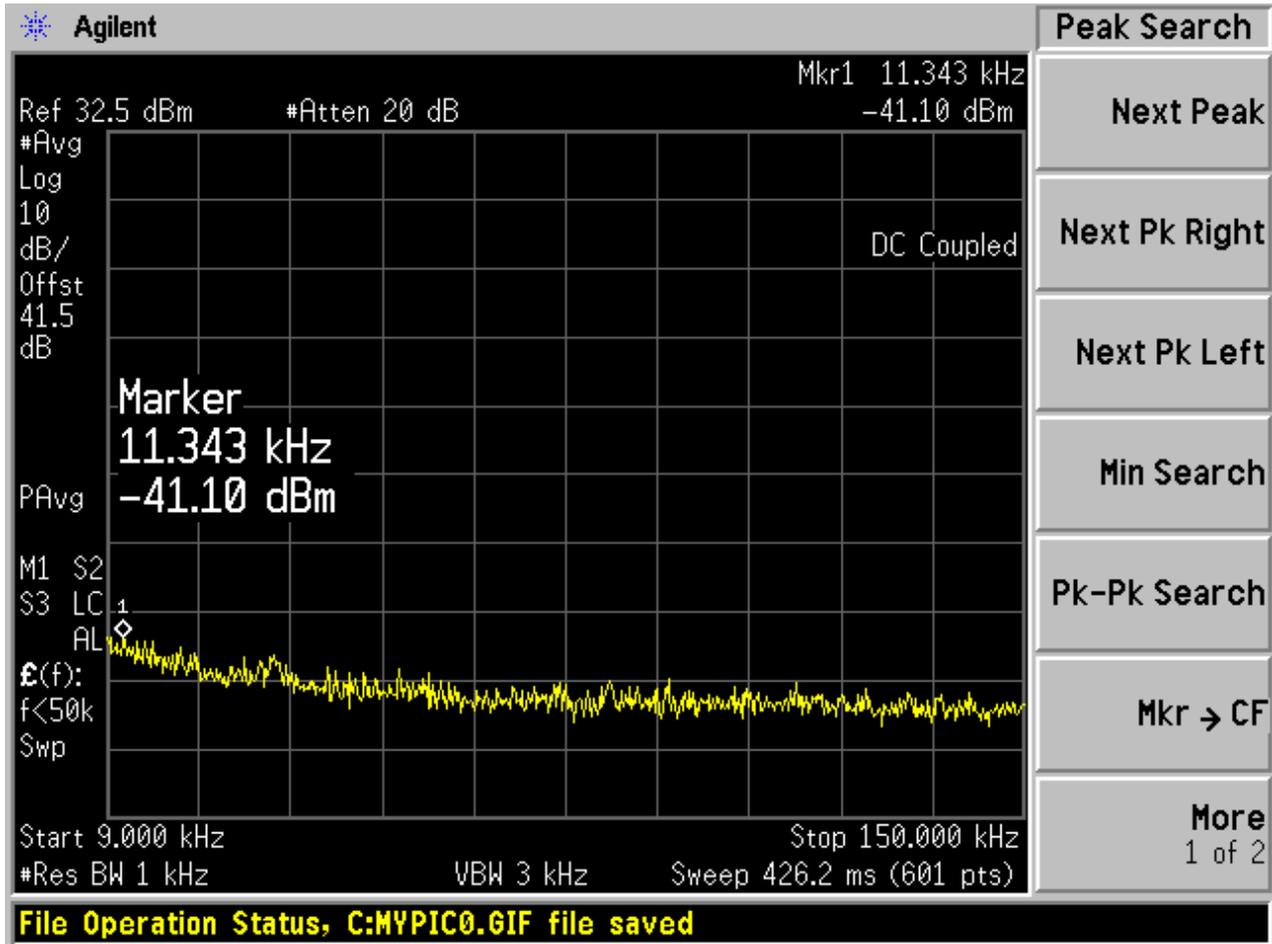


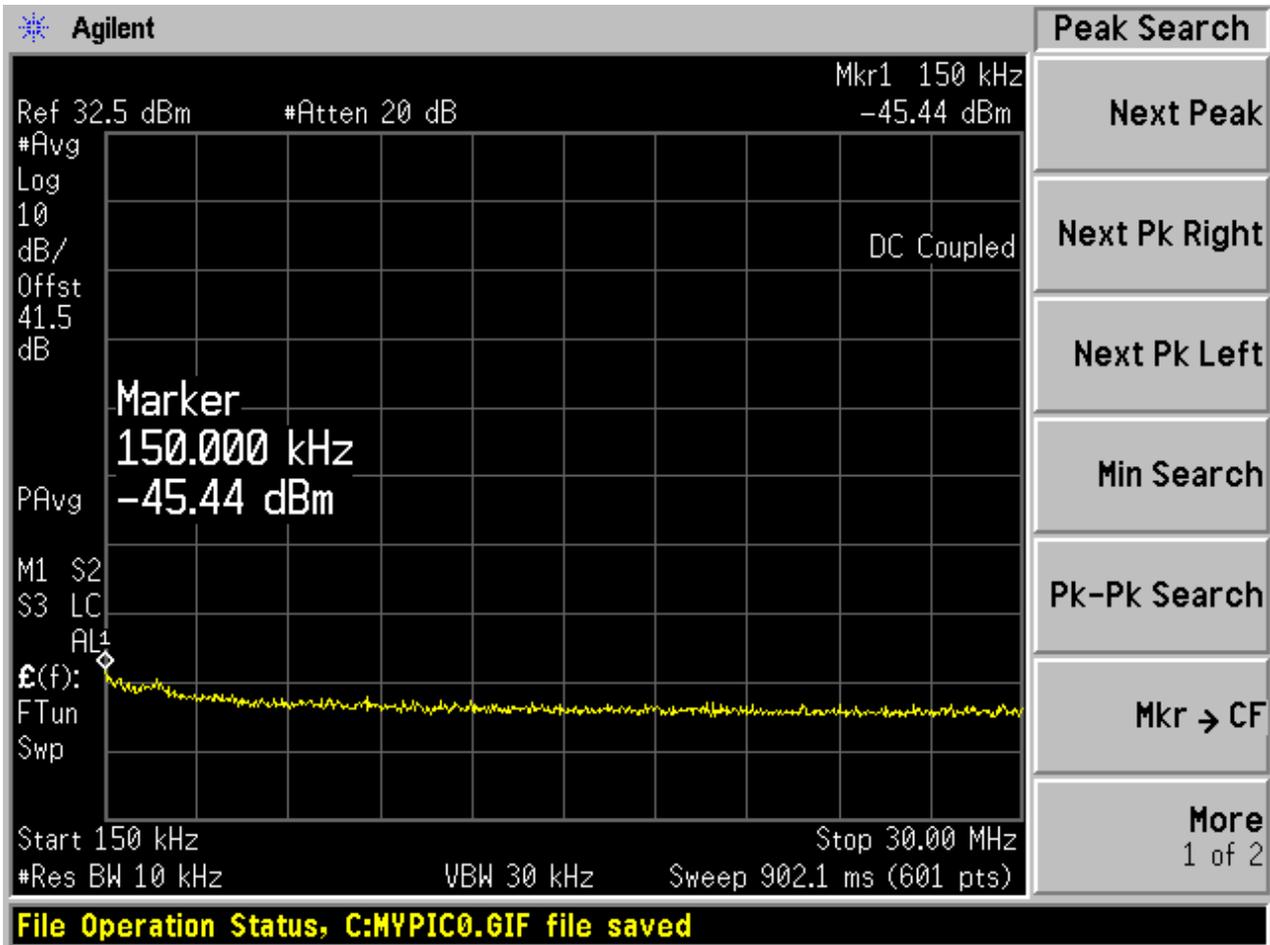


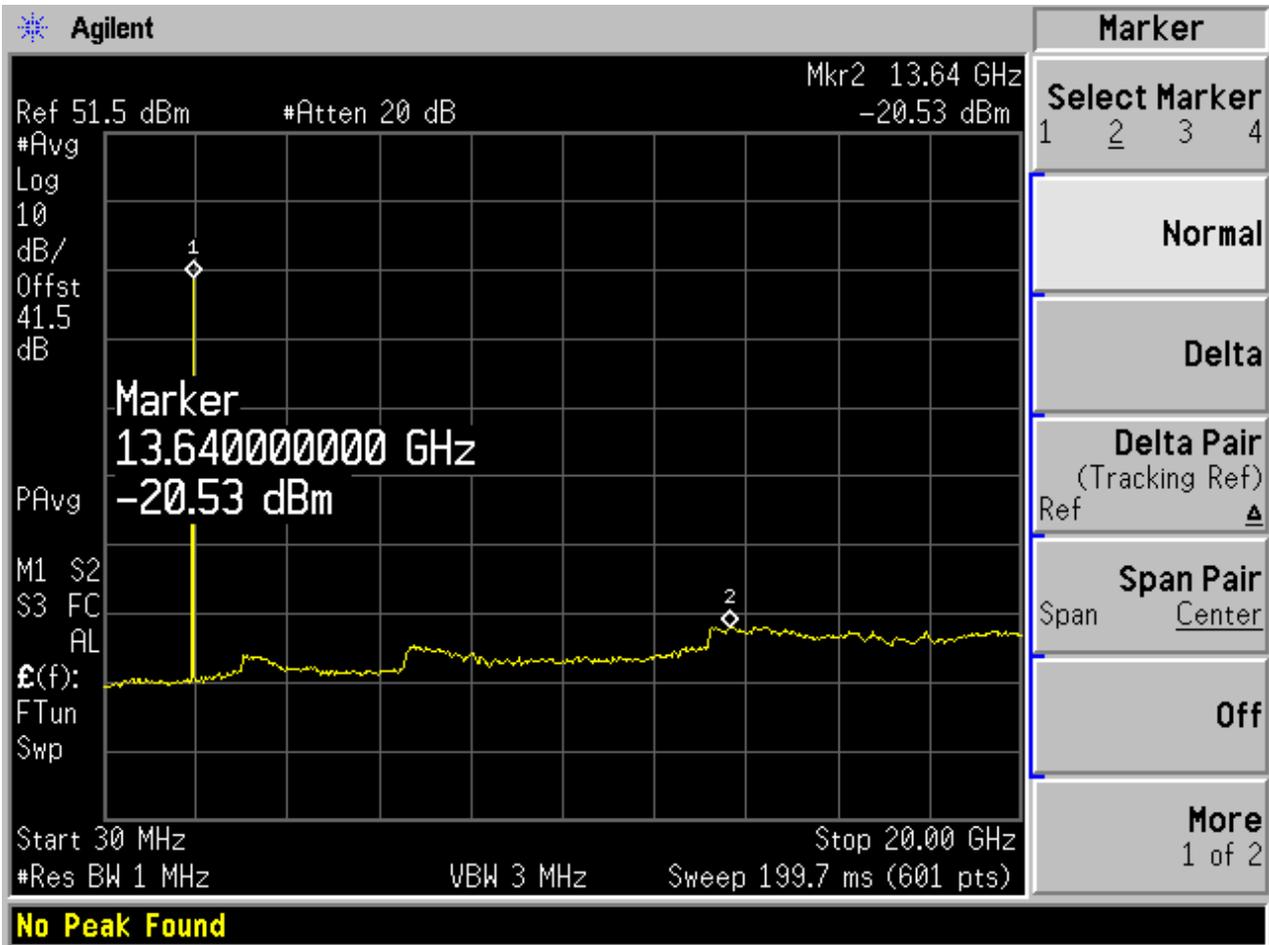




# M channel

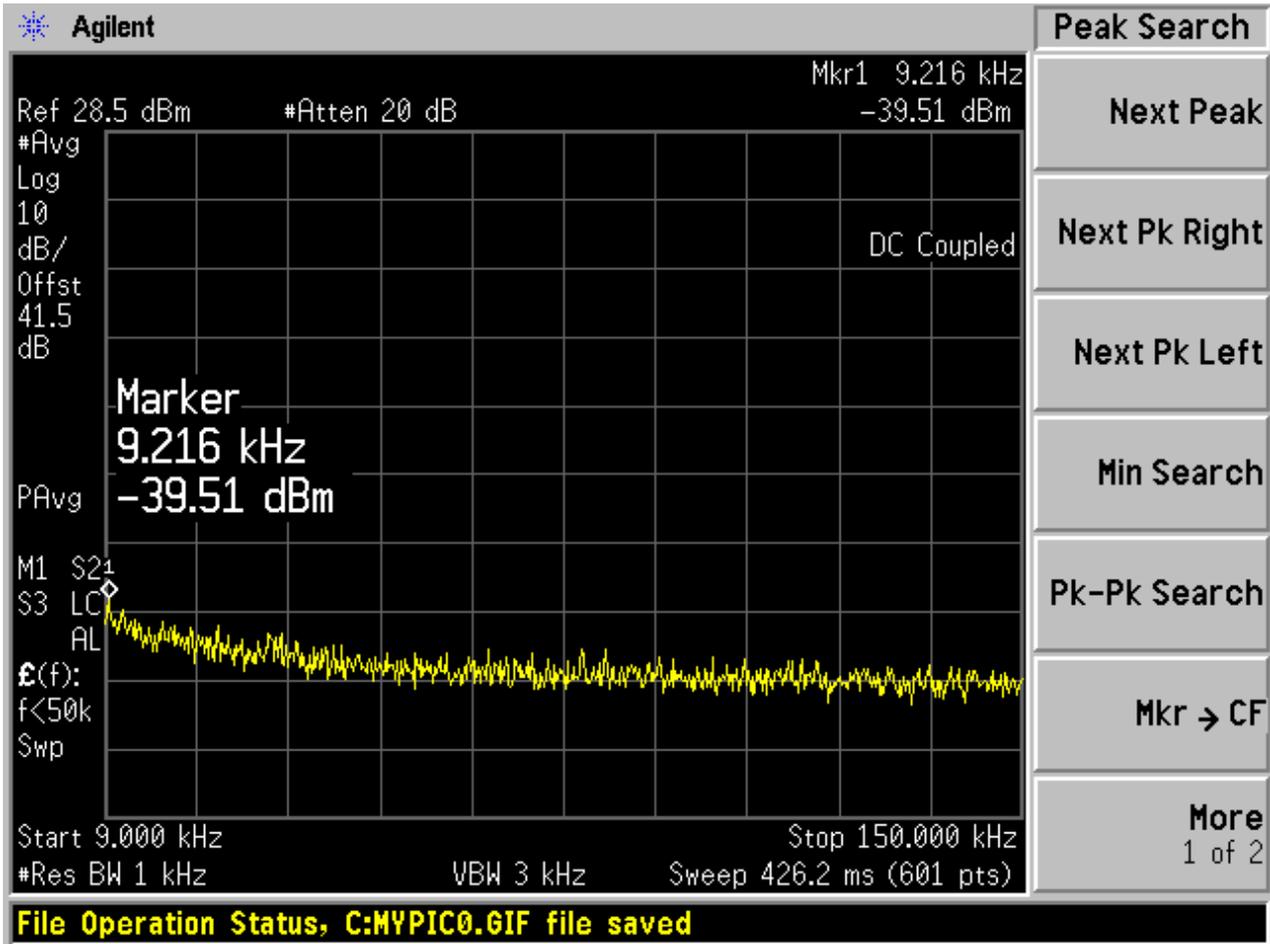


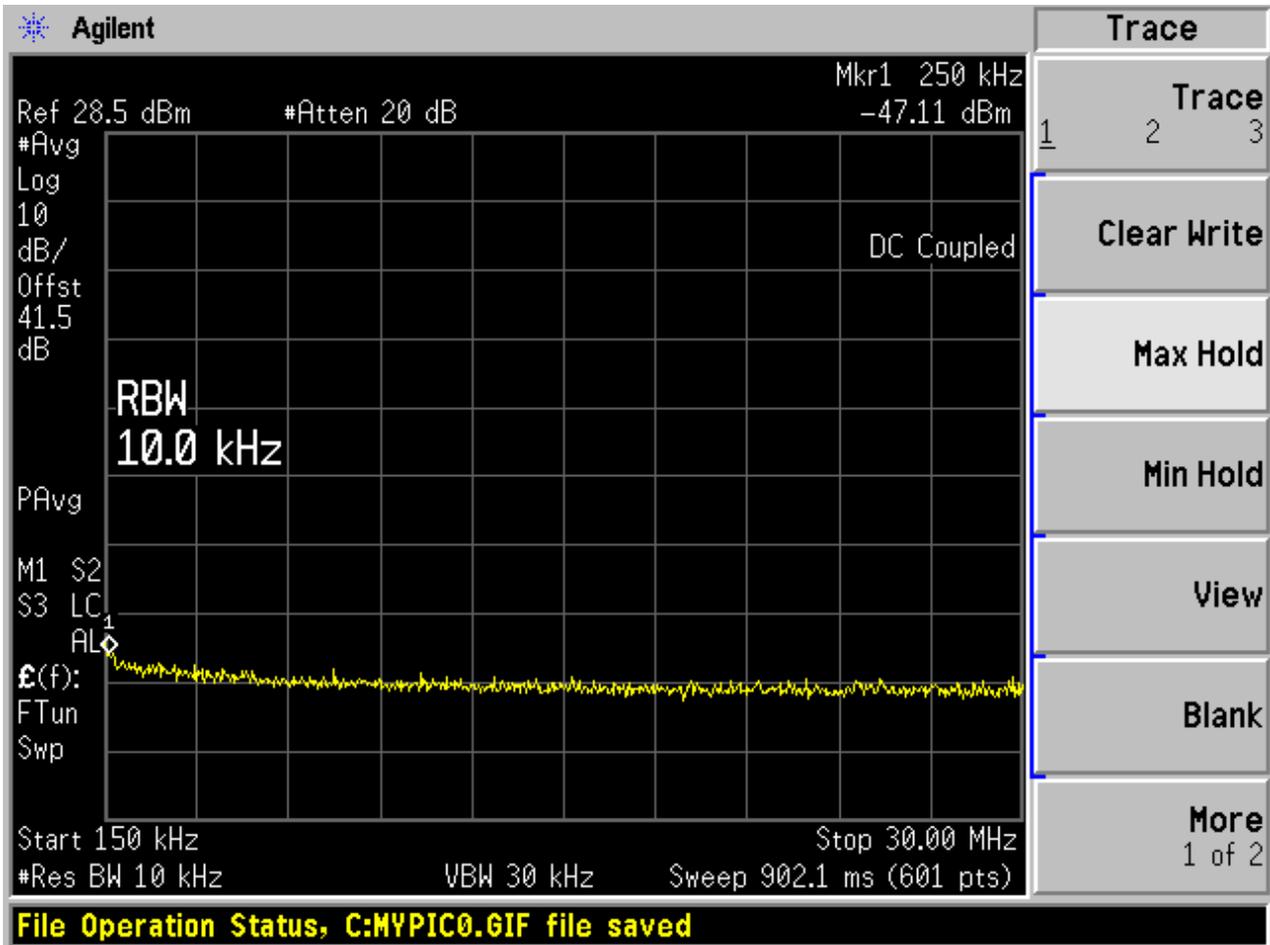


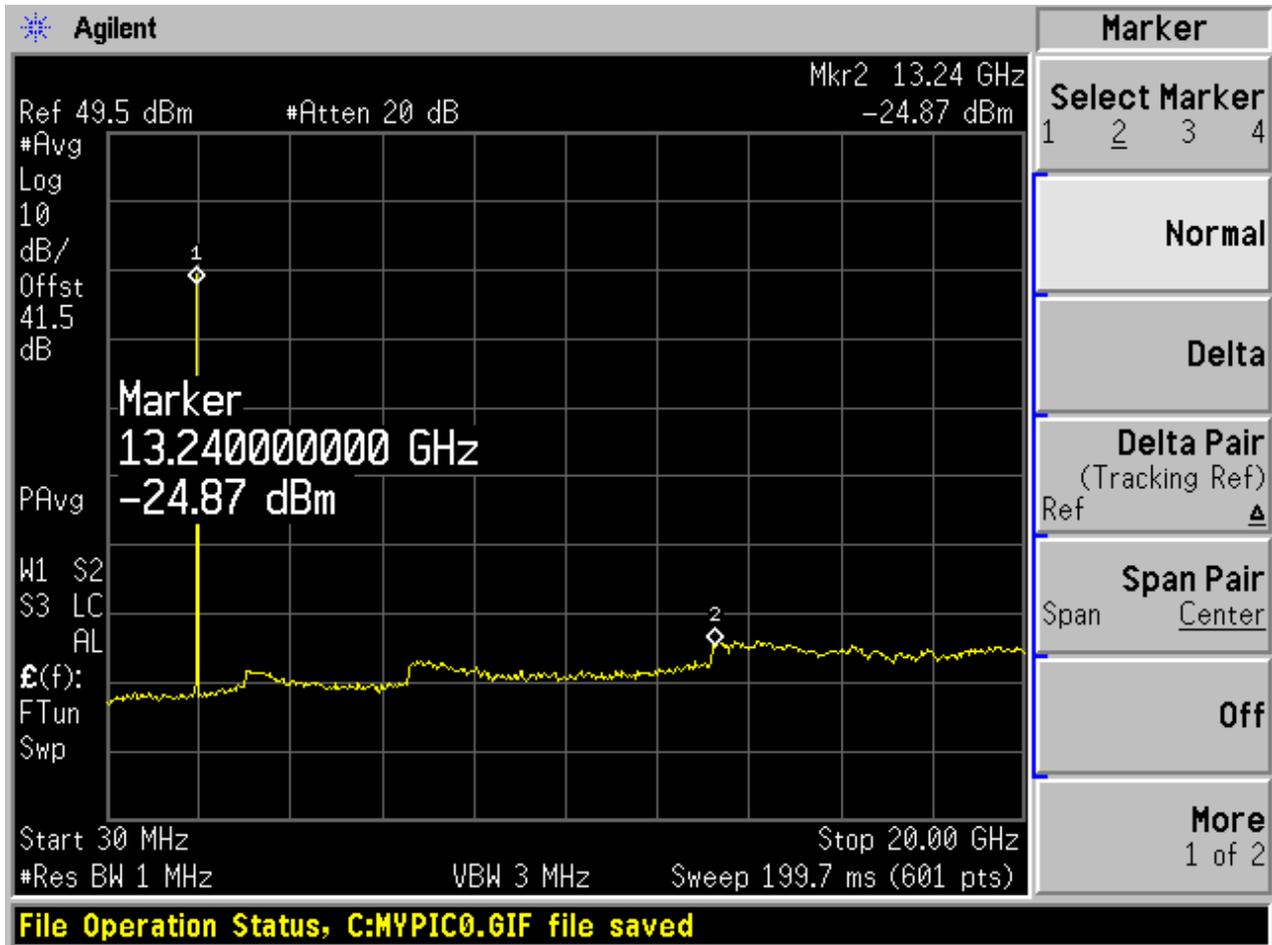




# T channel



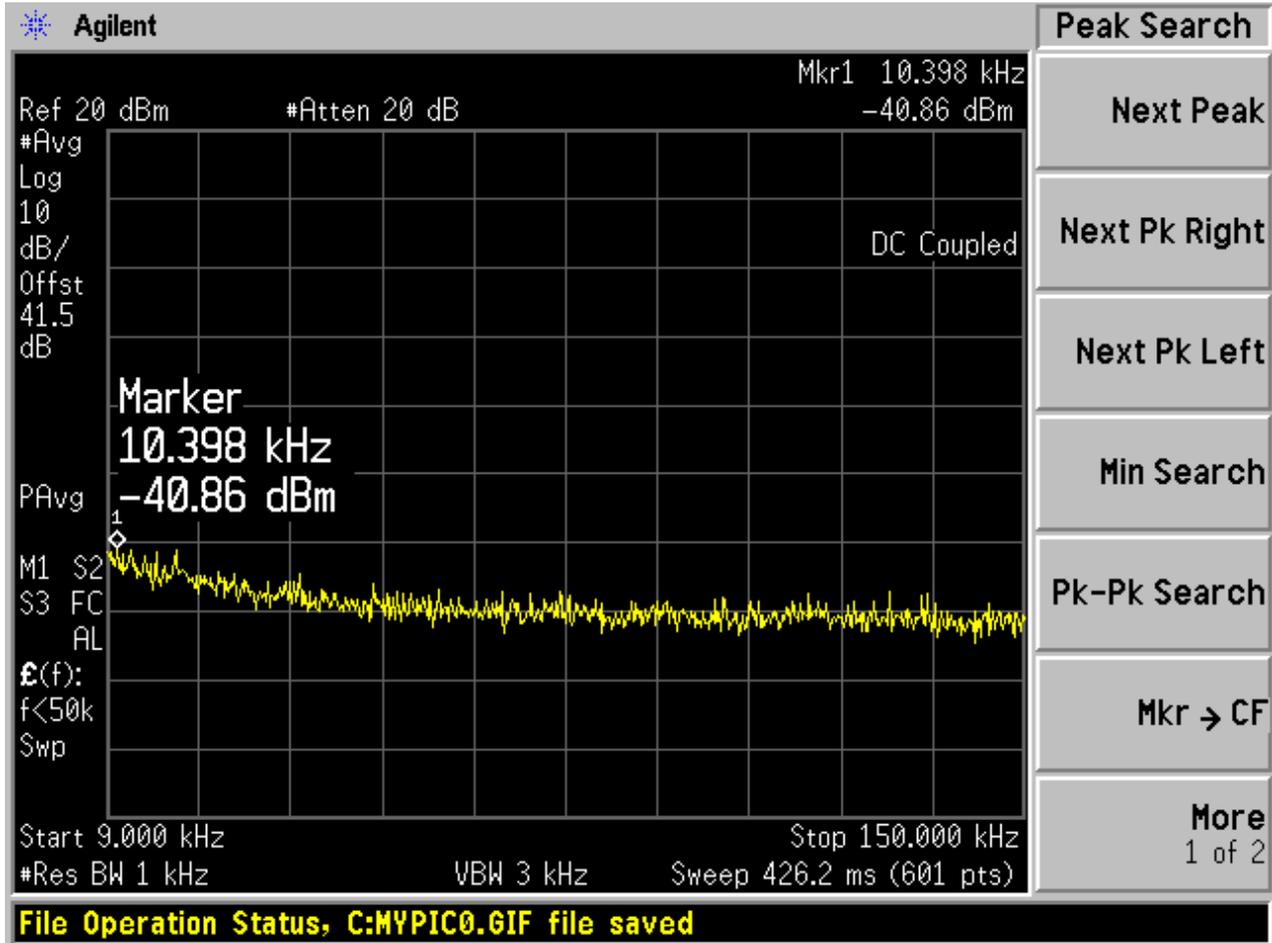


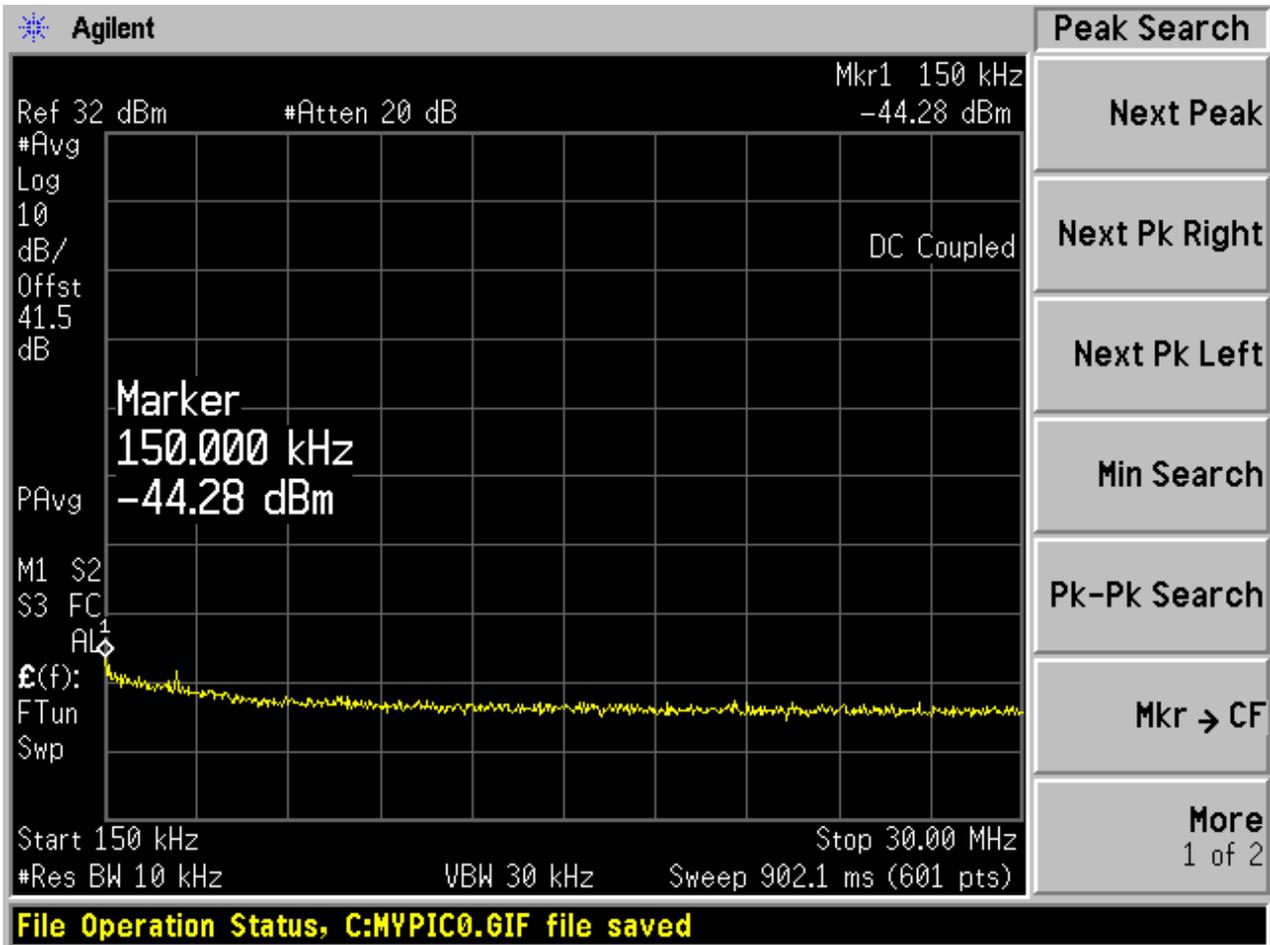


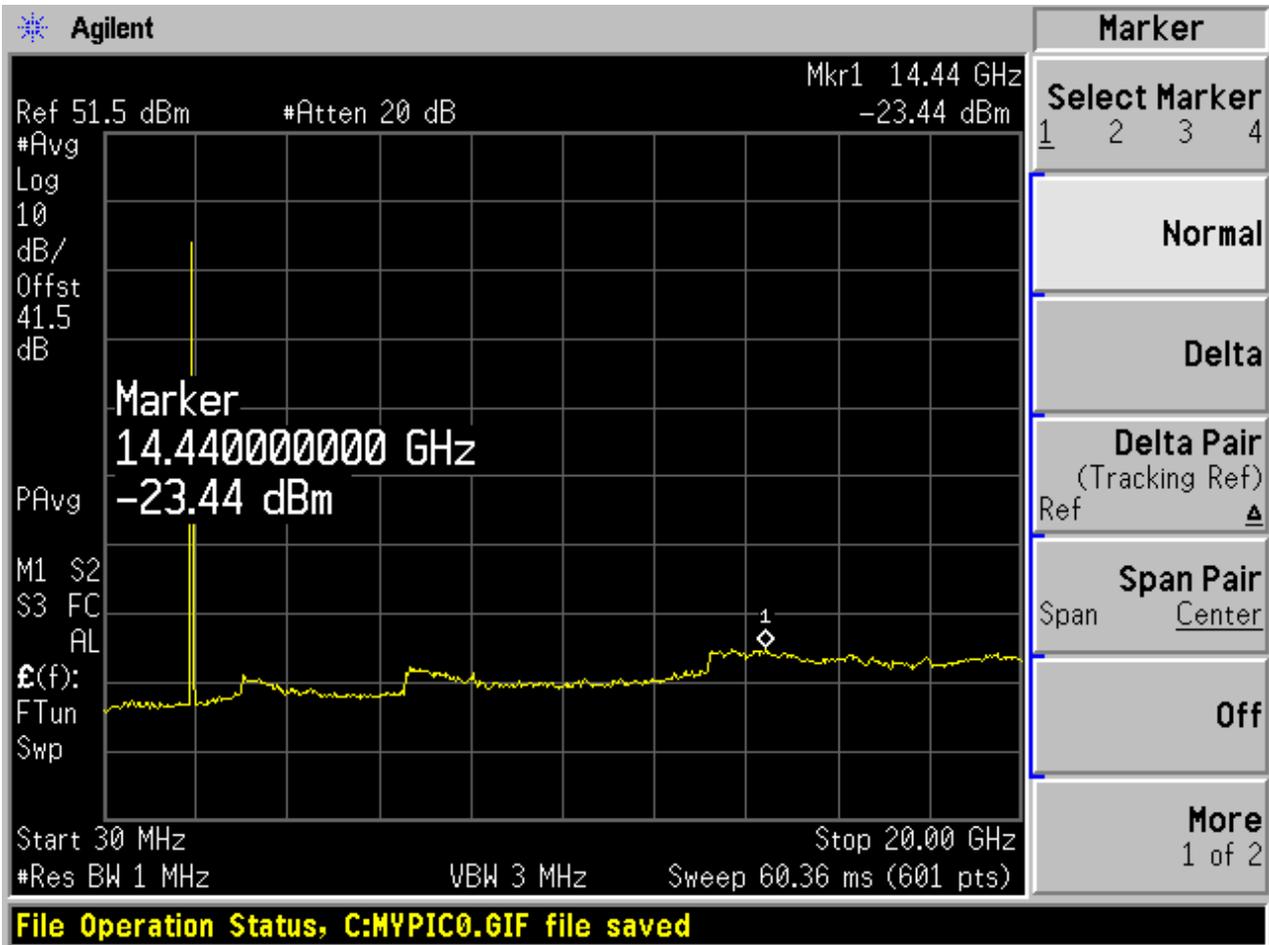


## (2) 1X Four Carriers

### B channel

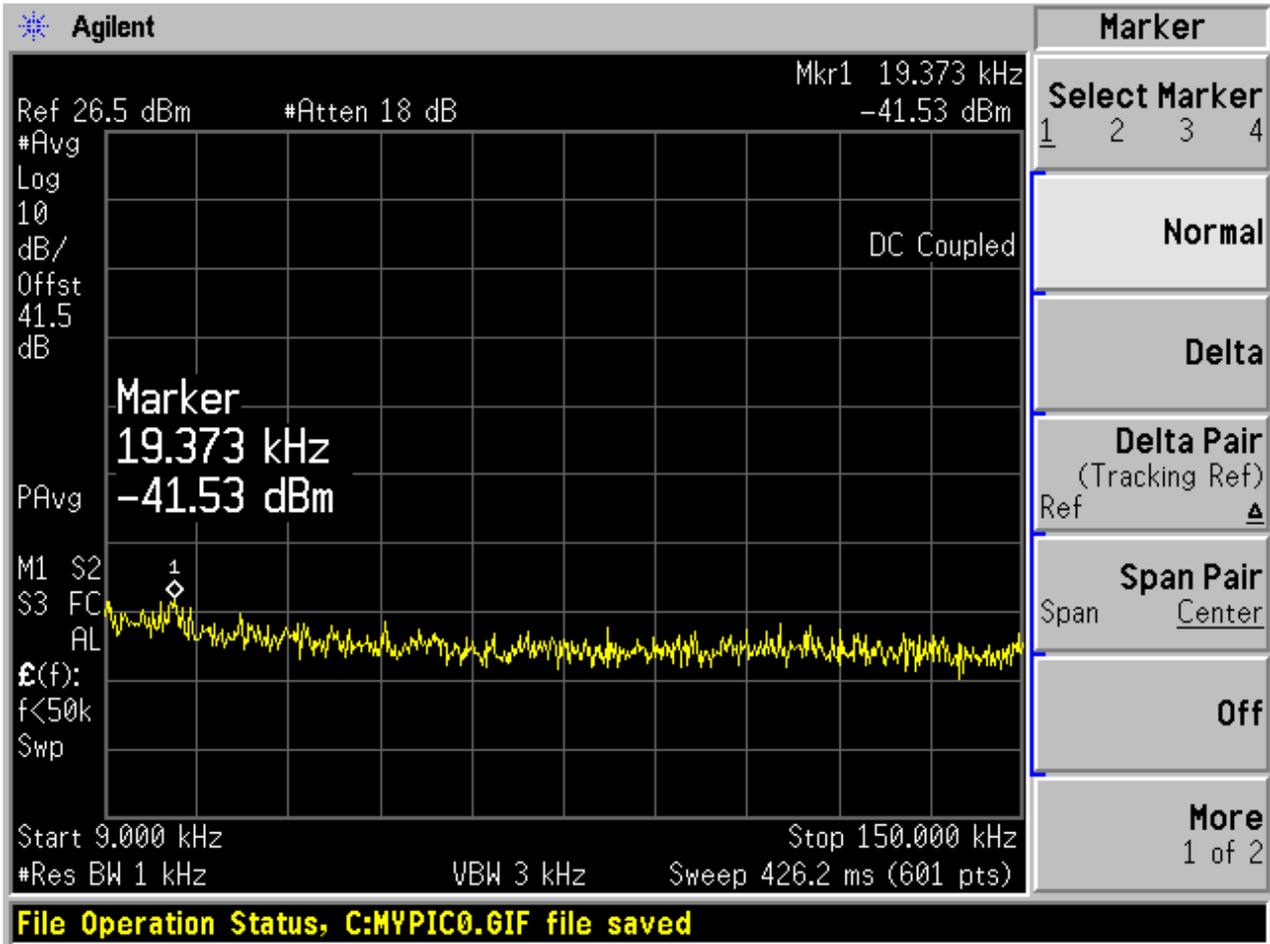


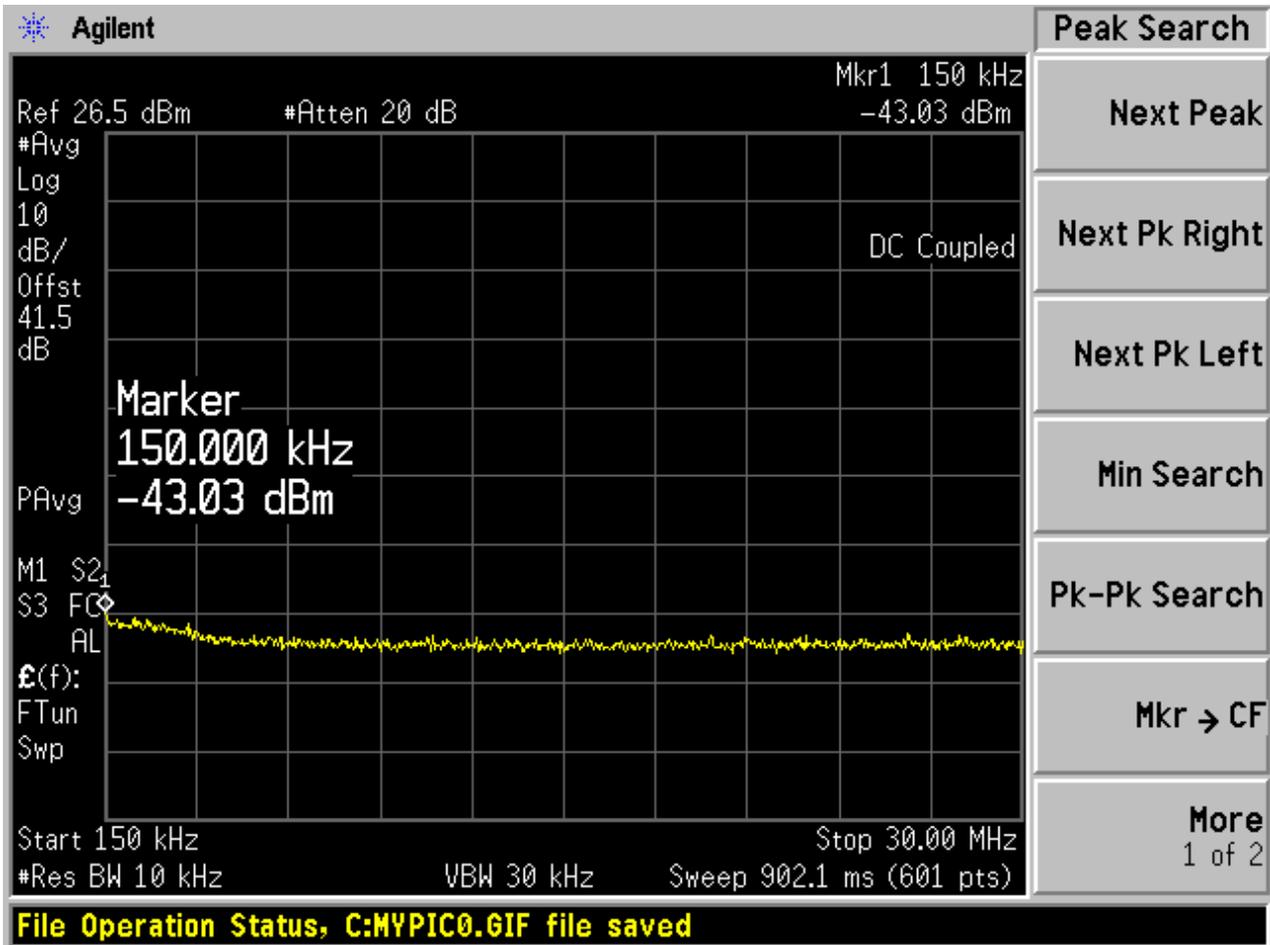


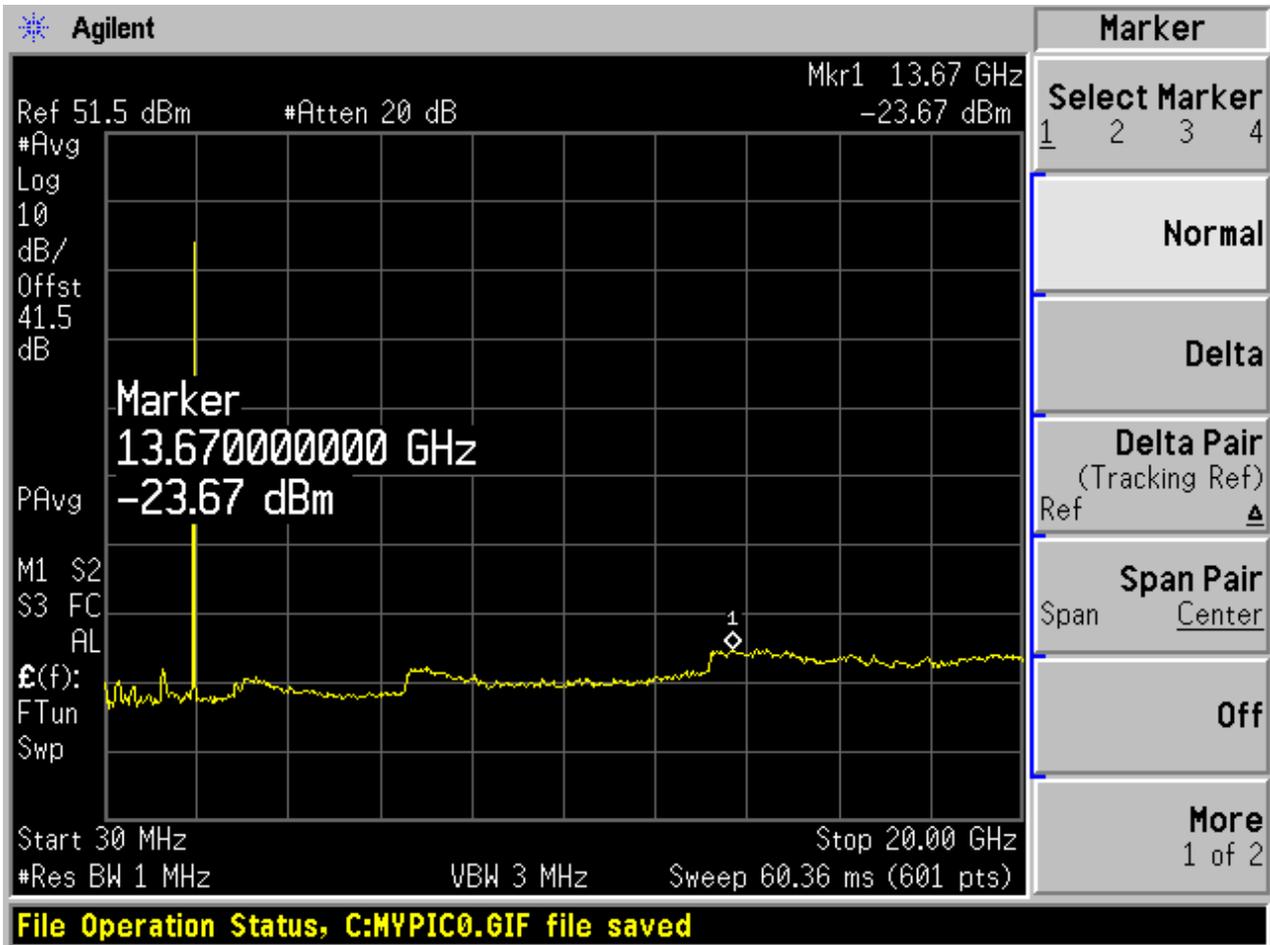




# M channel

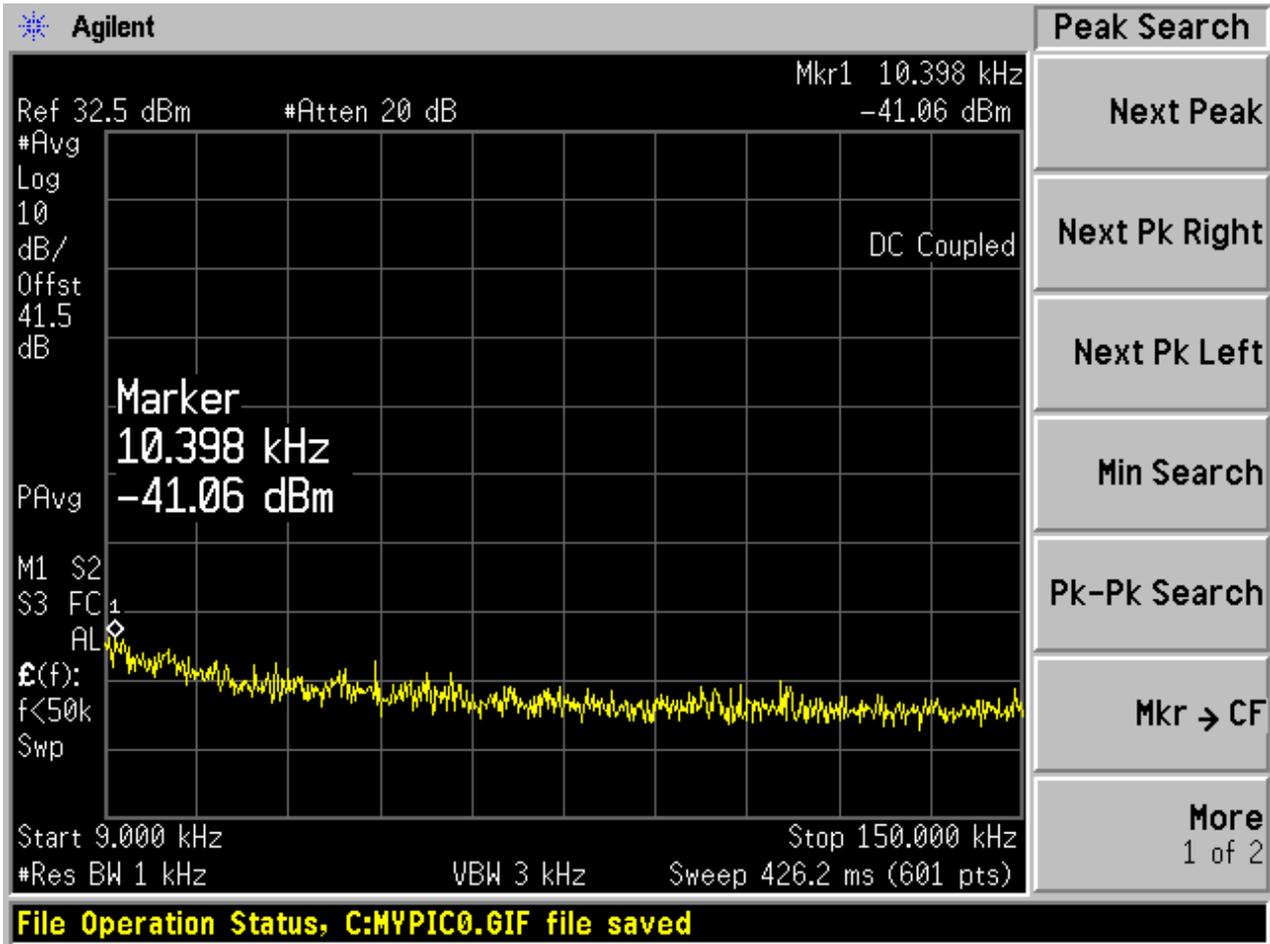


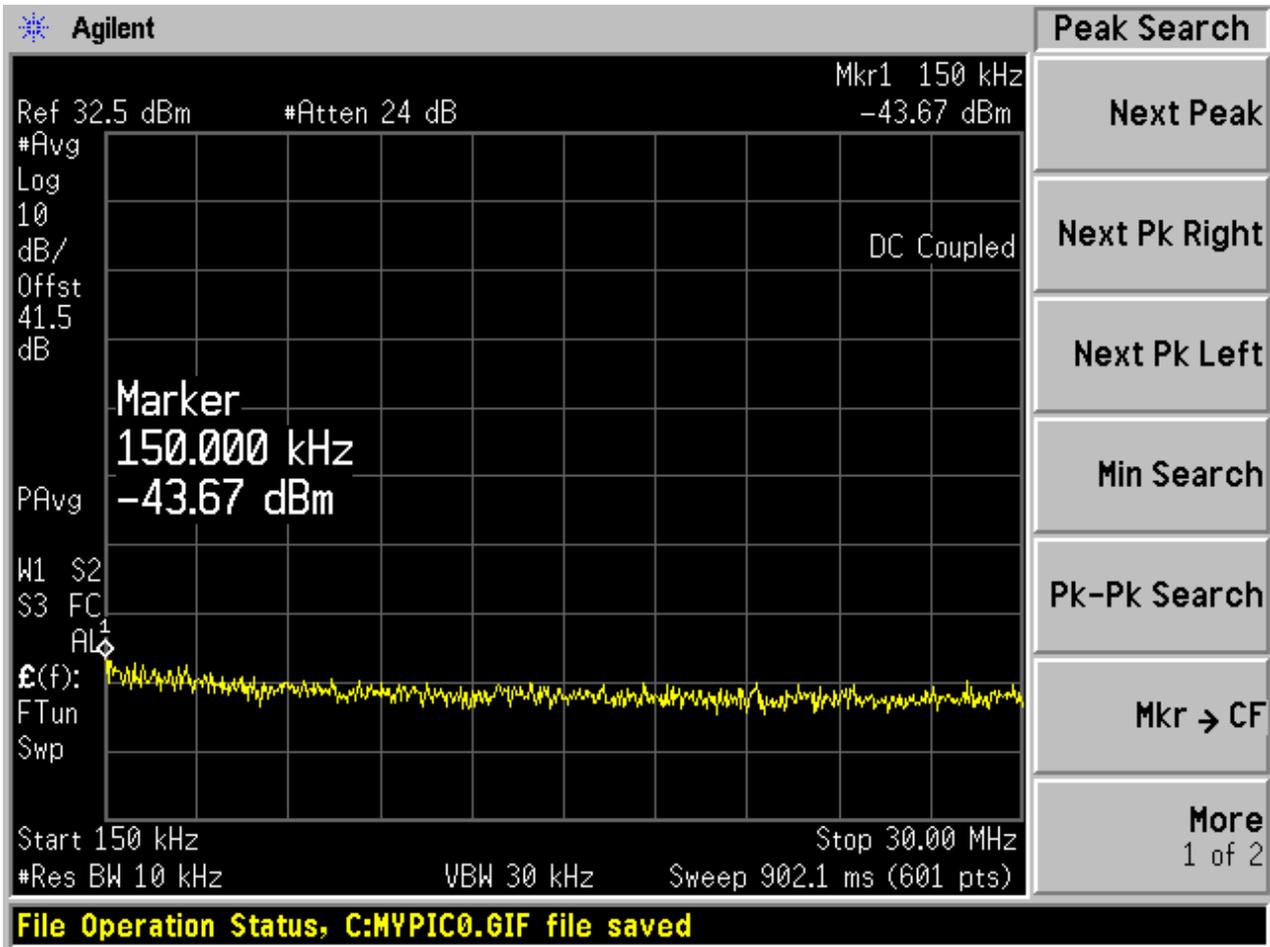


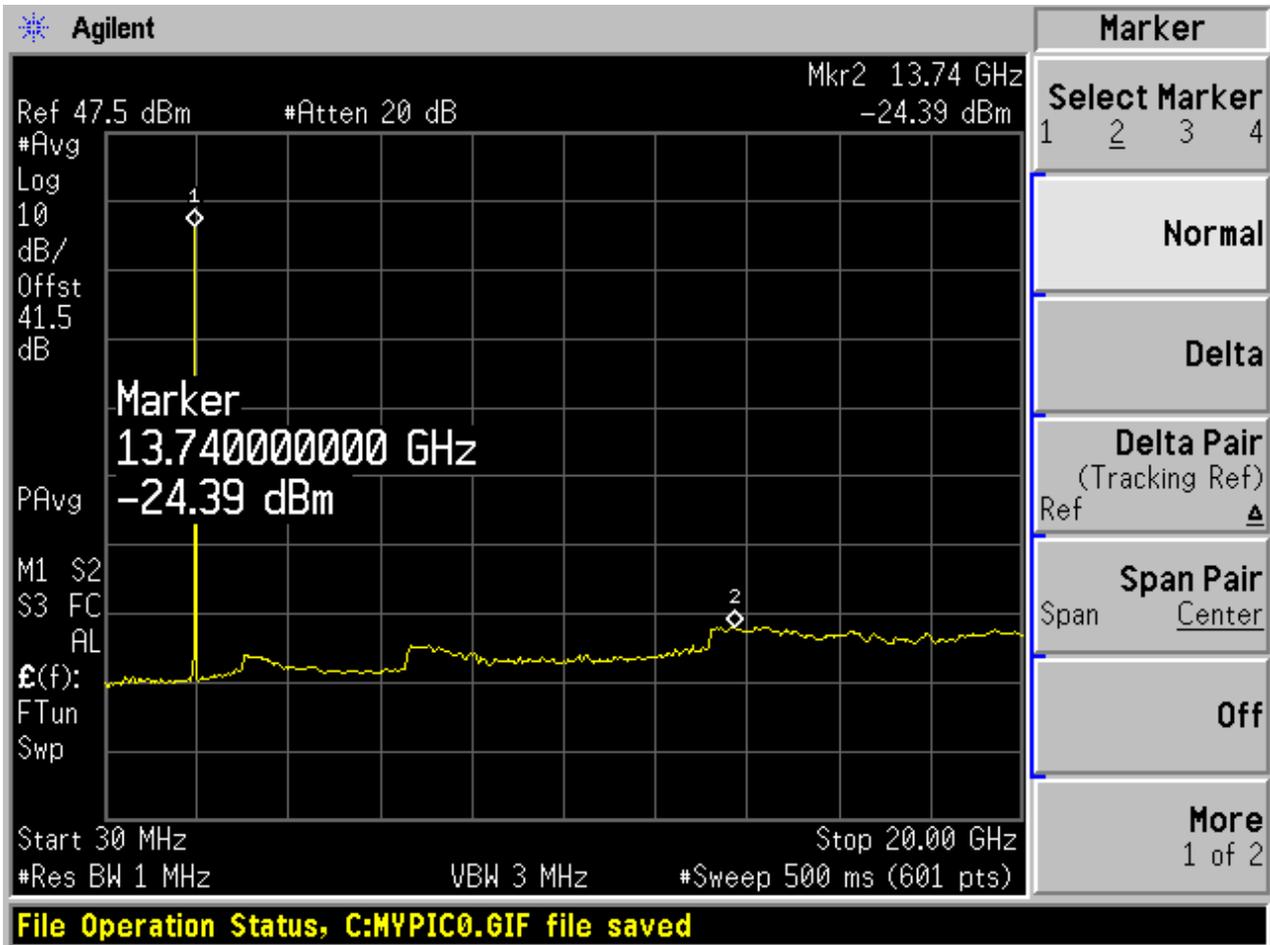




# T channel



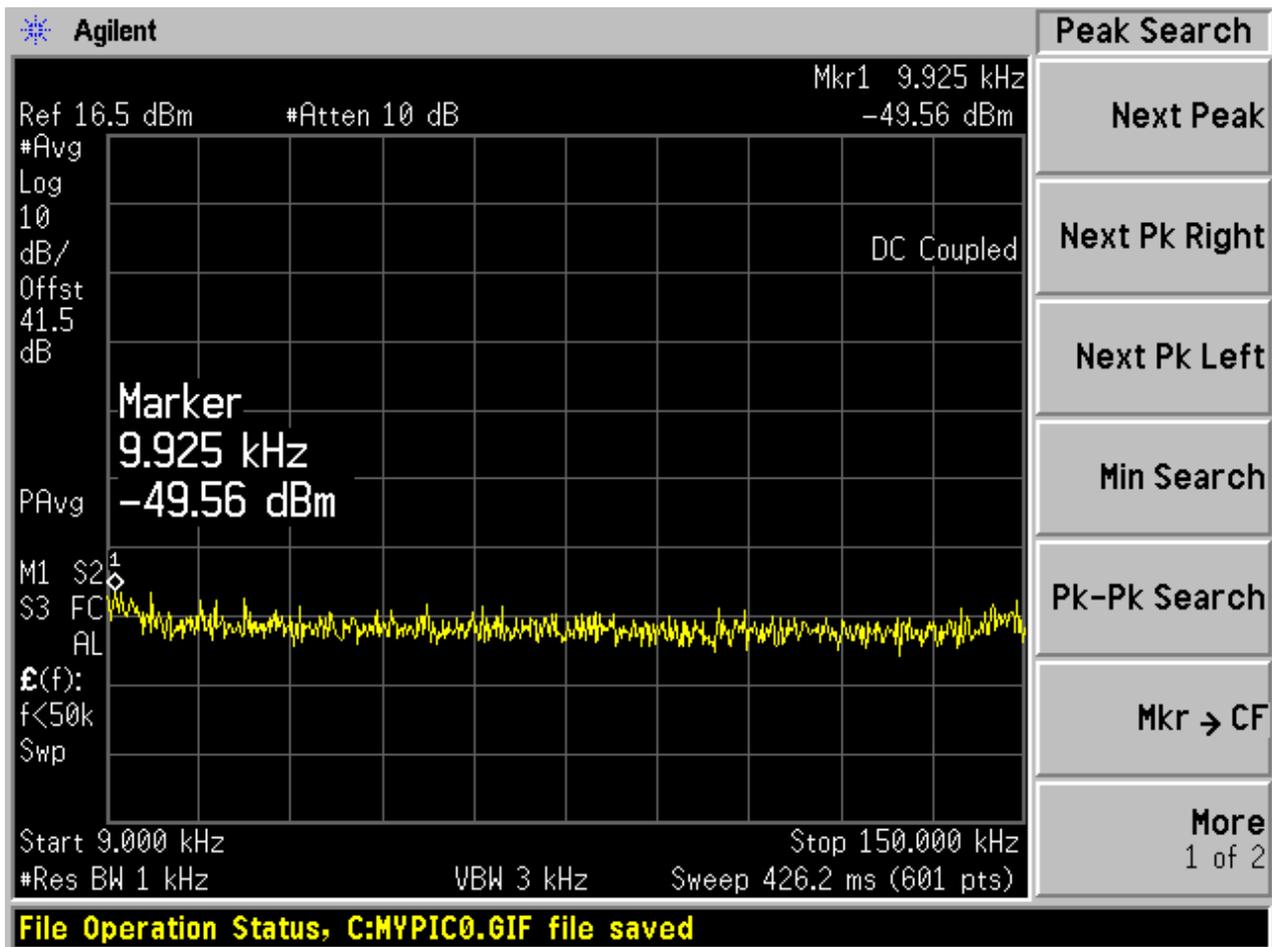


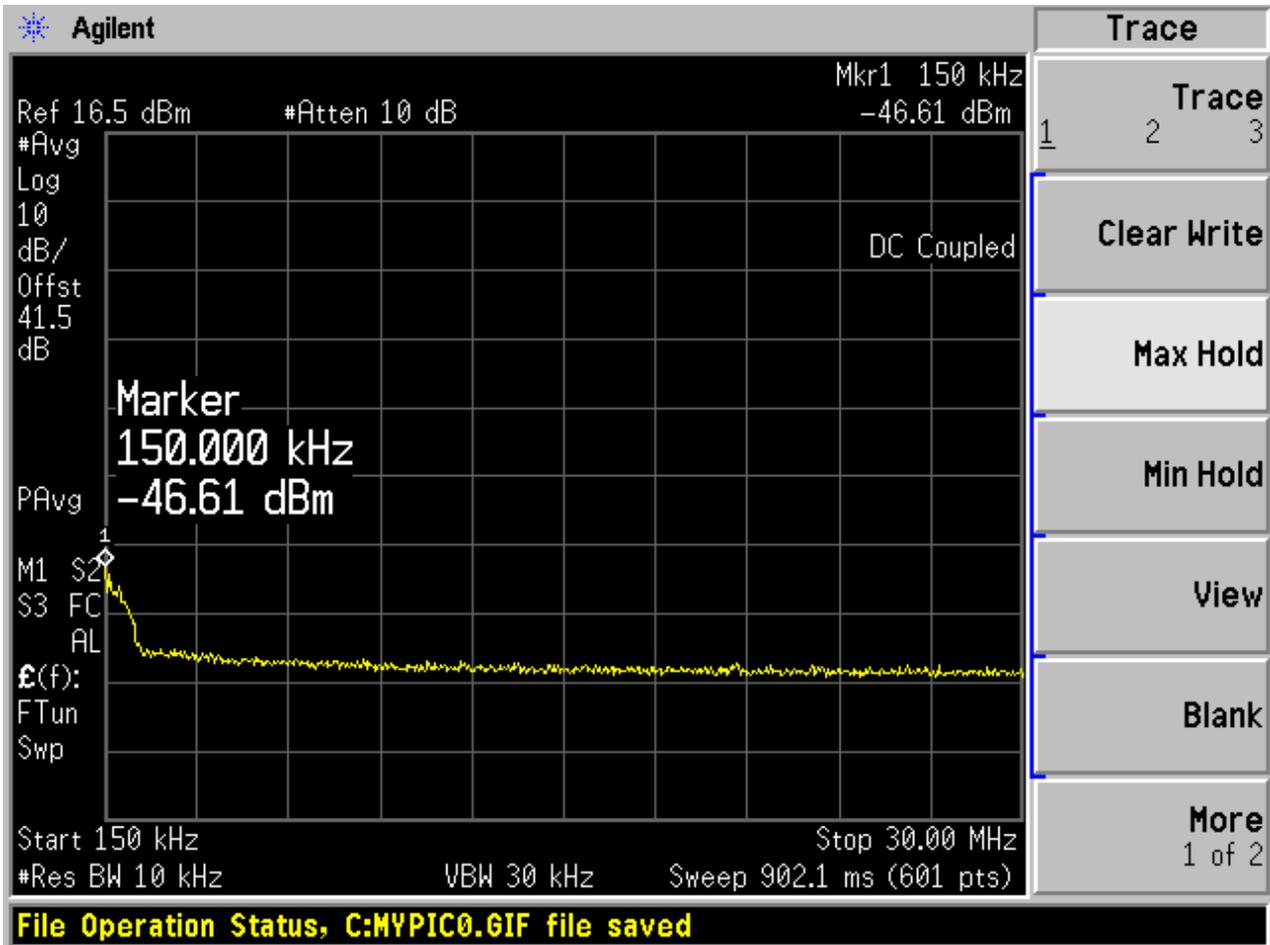


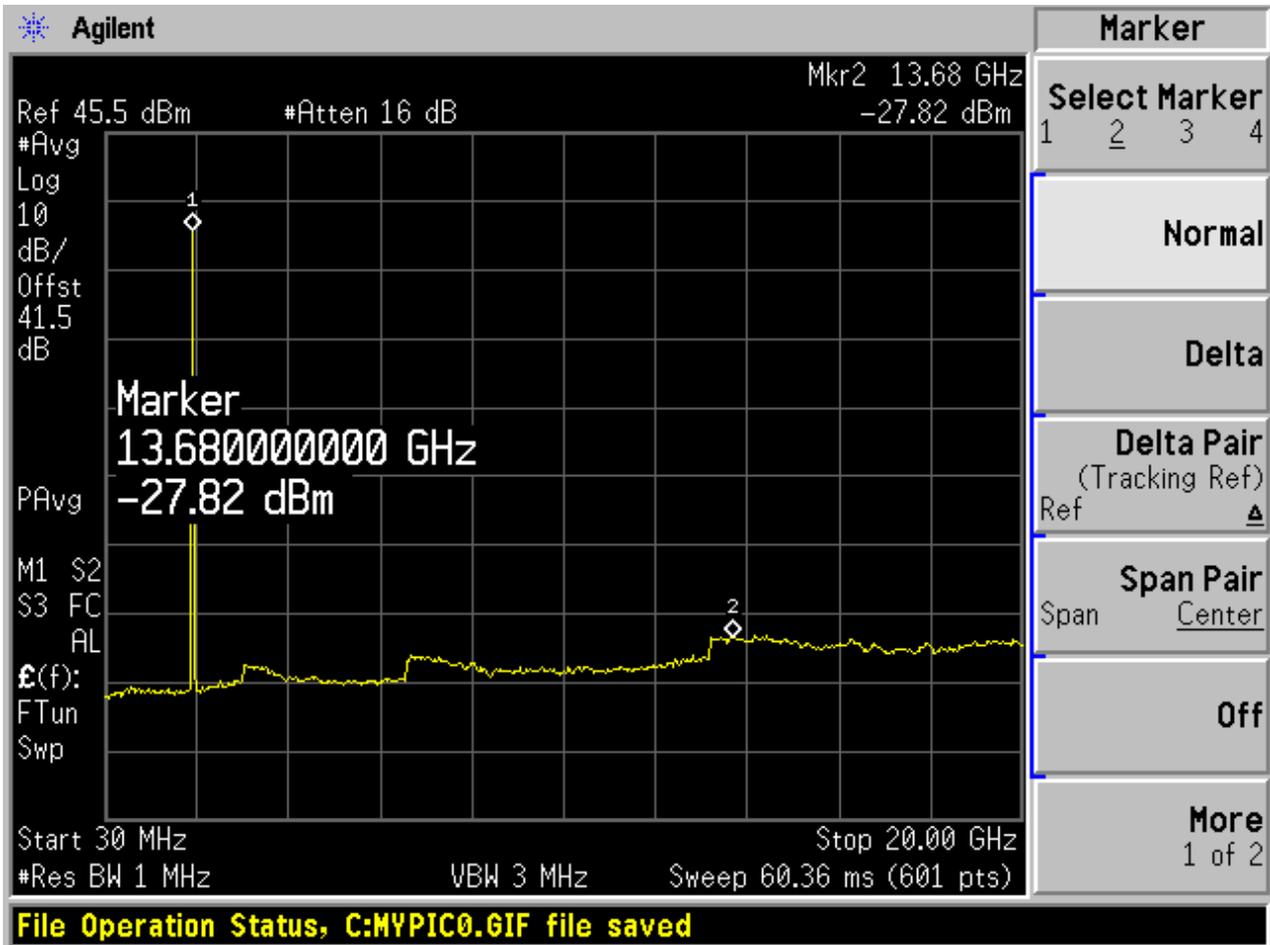


### (3) EVDO One Carrier

### B channel

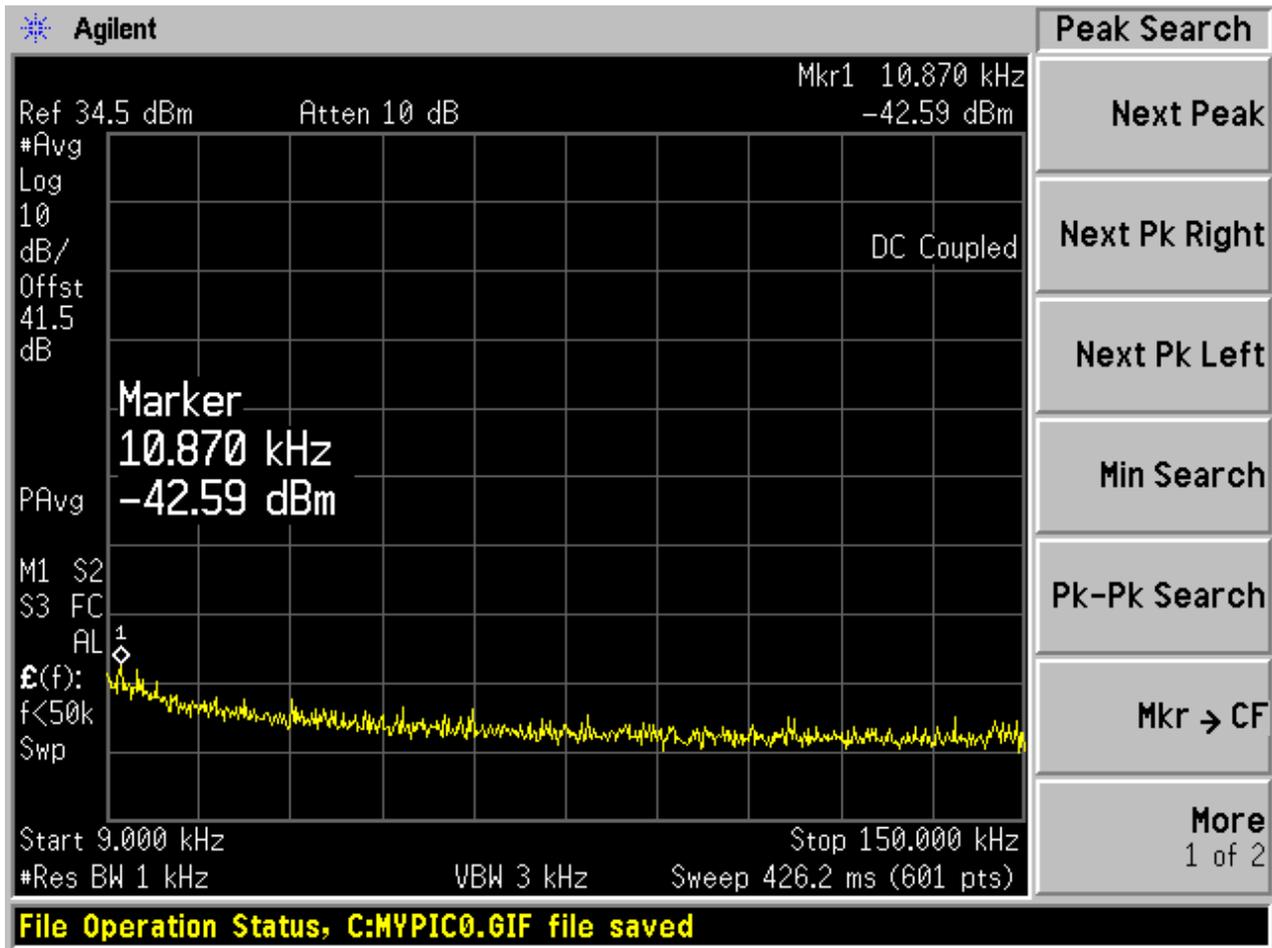


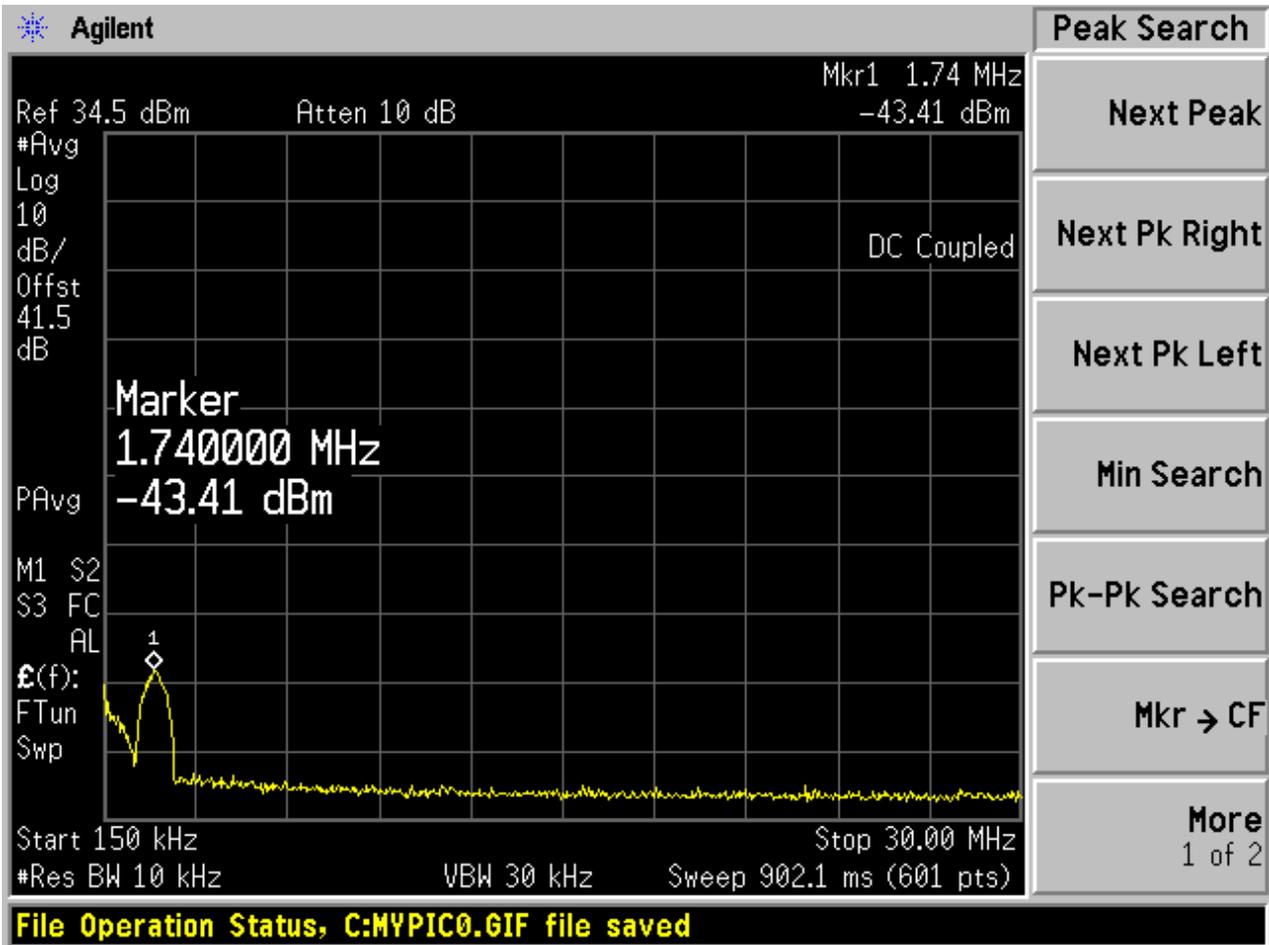


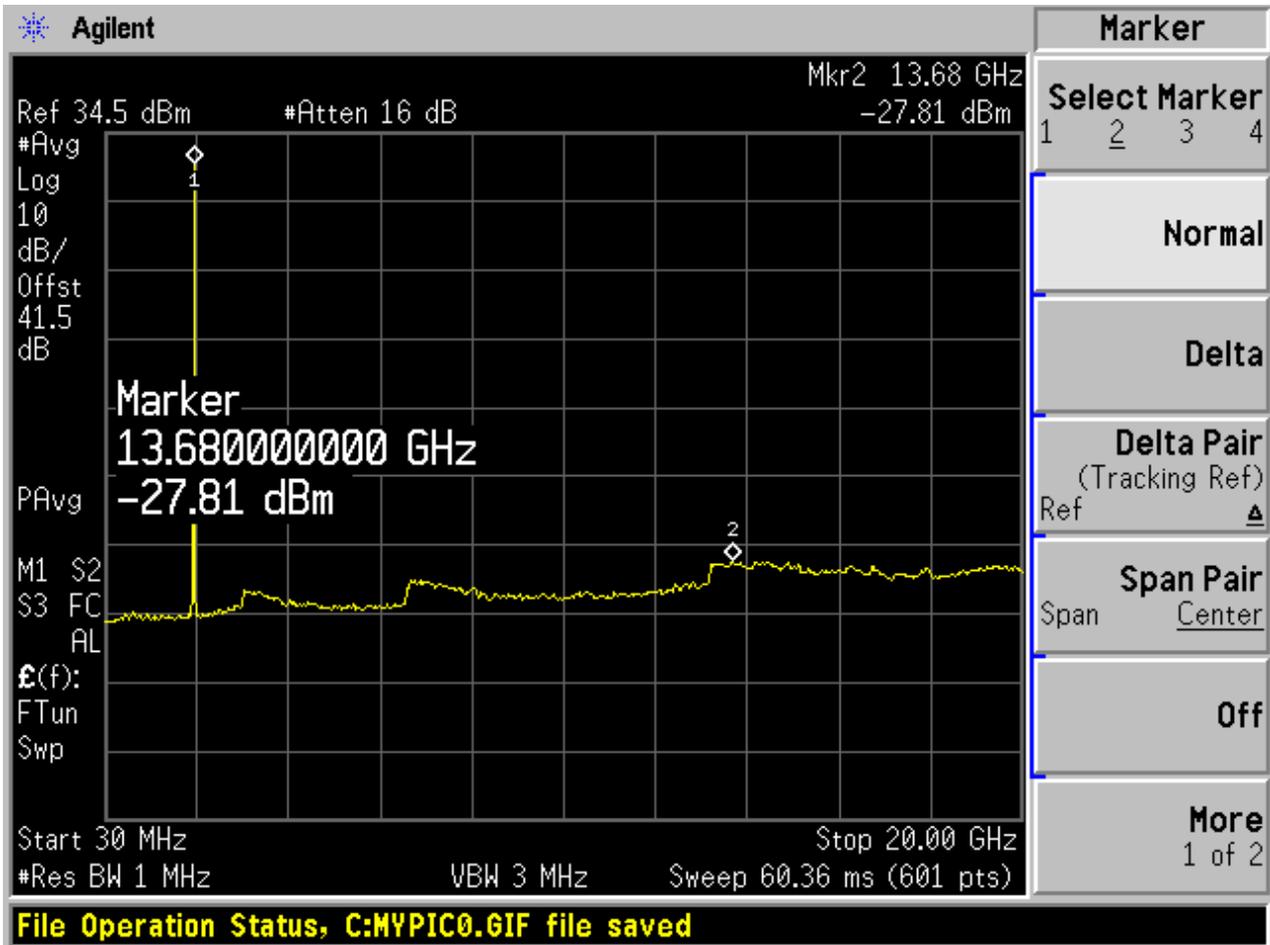




# M channel

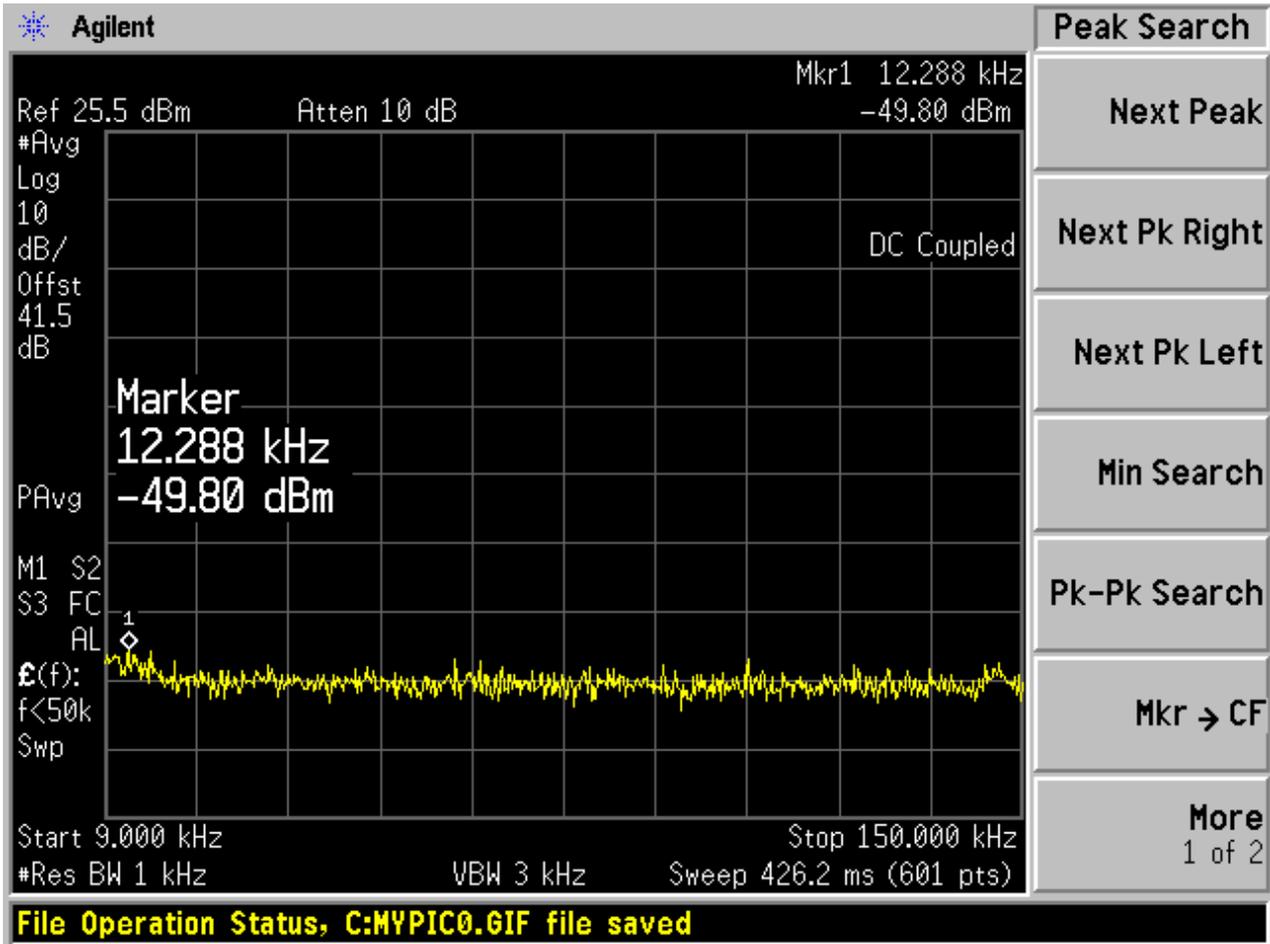


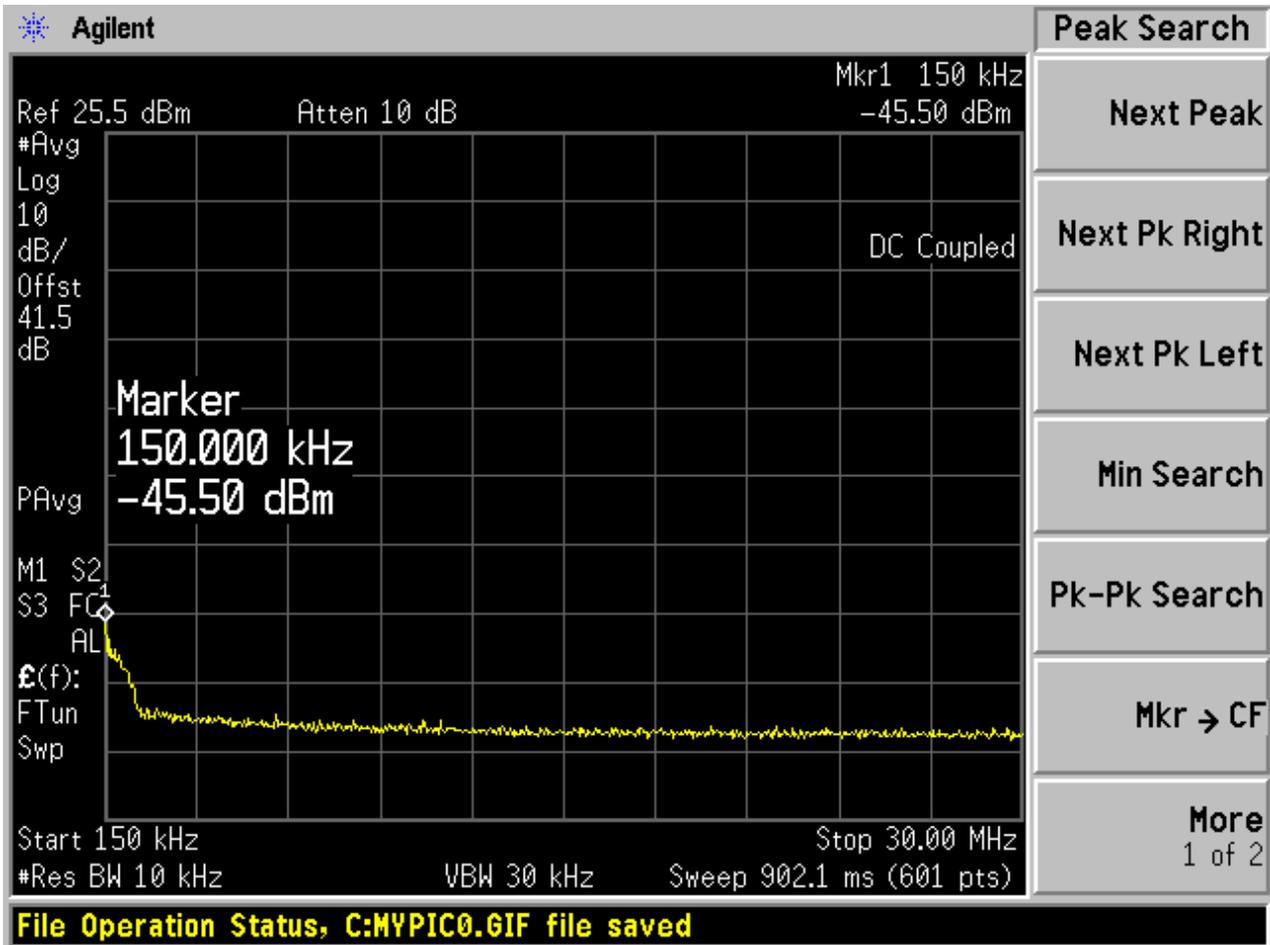


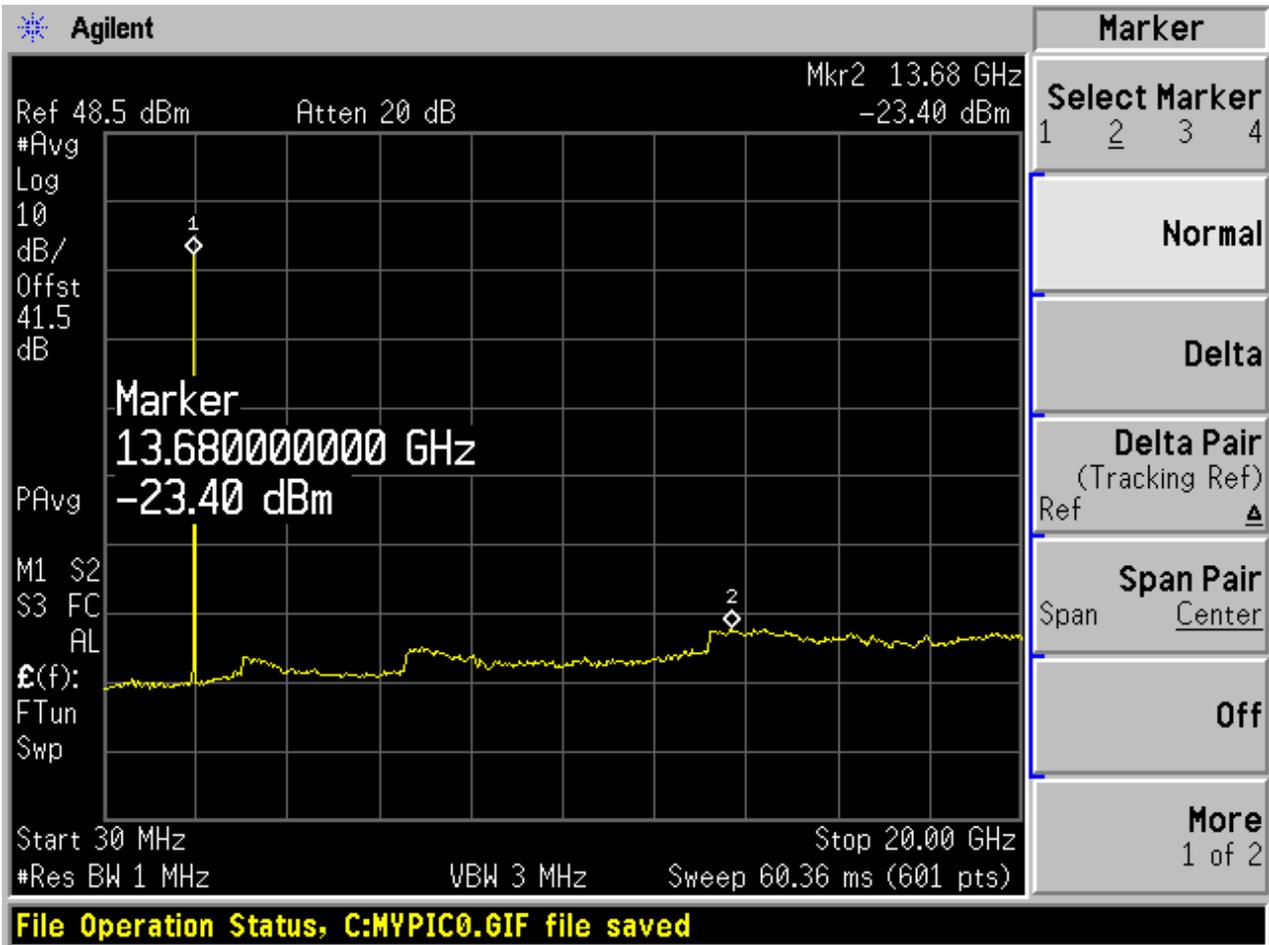




# T channel



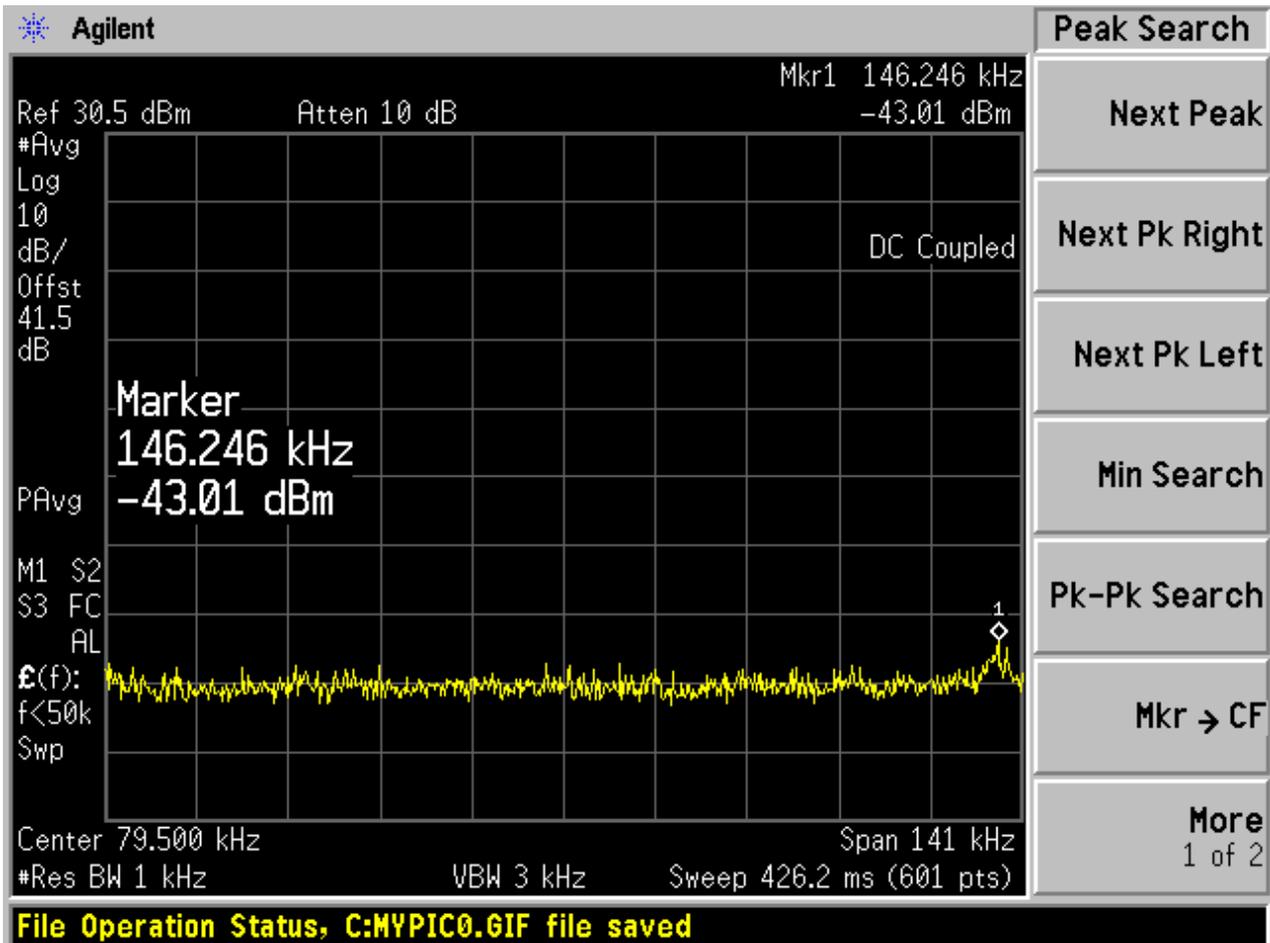




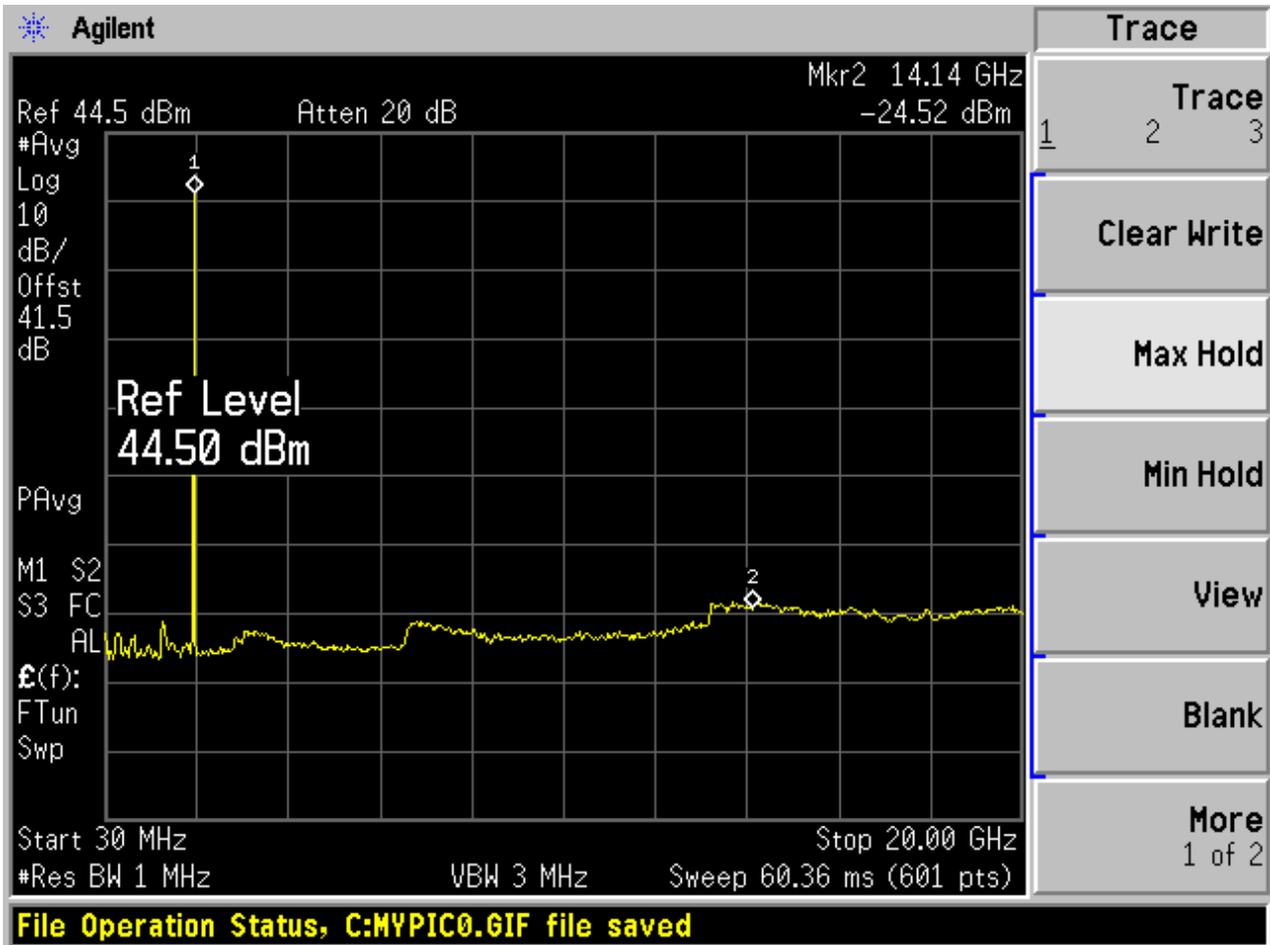


## (4) EVDO Four Carriers

### B channel

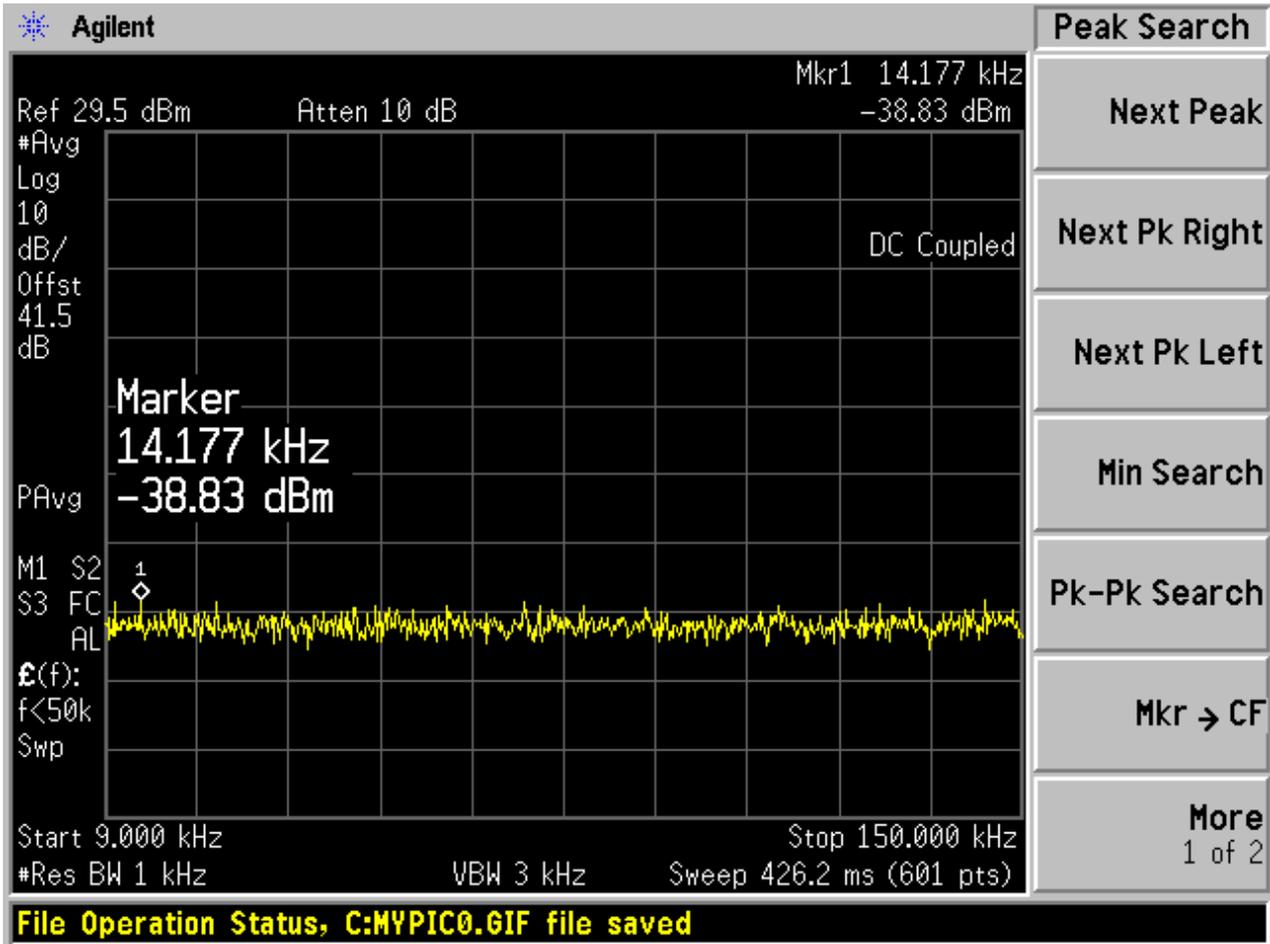


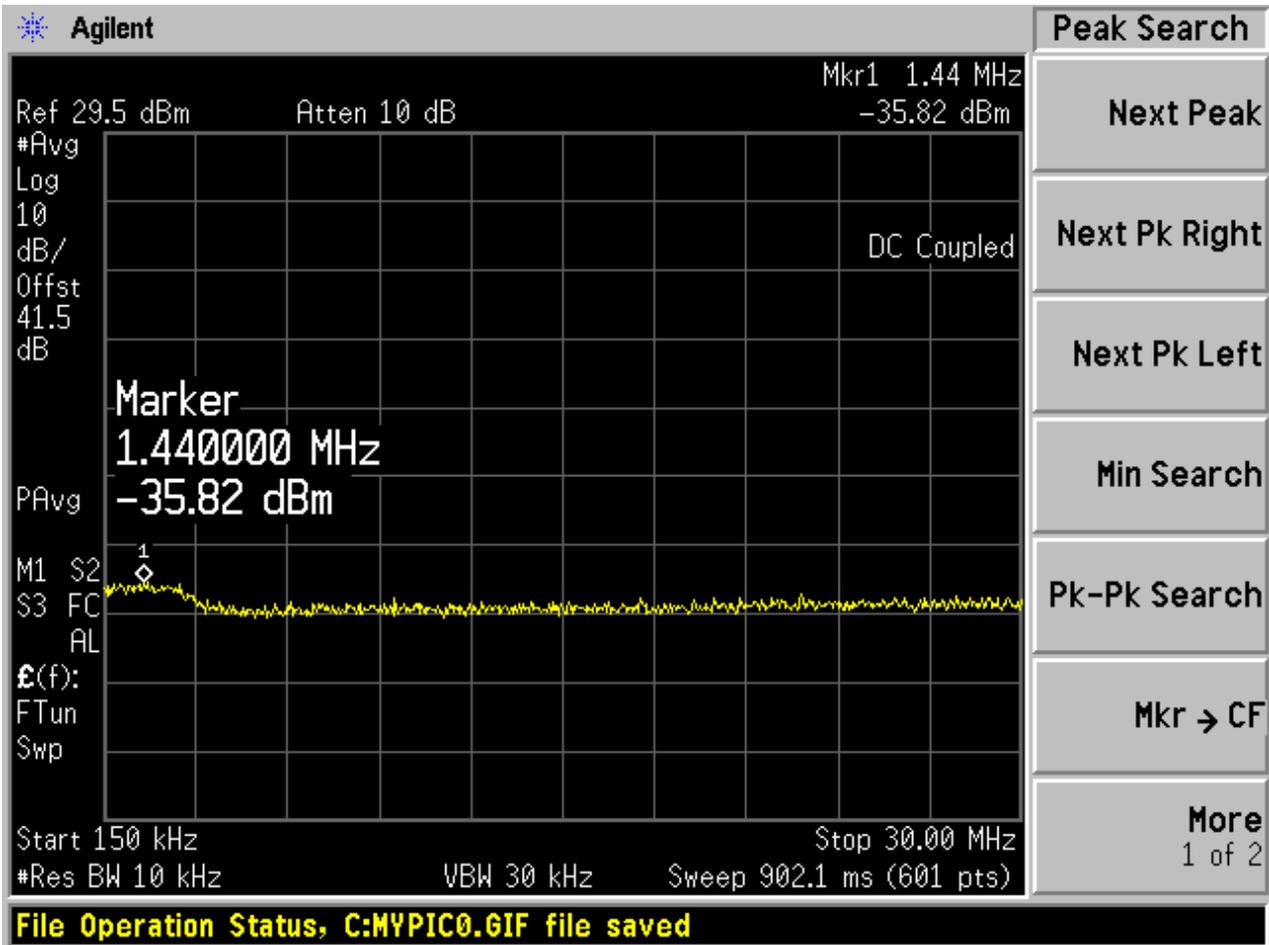






# M channel

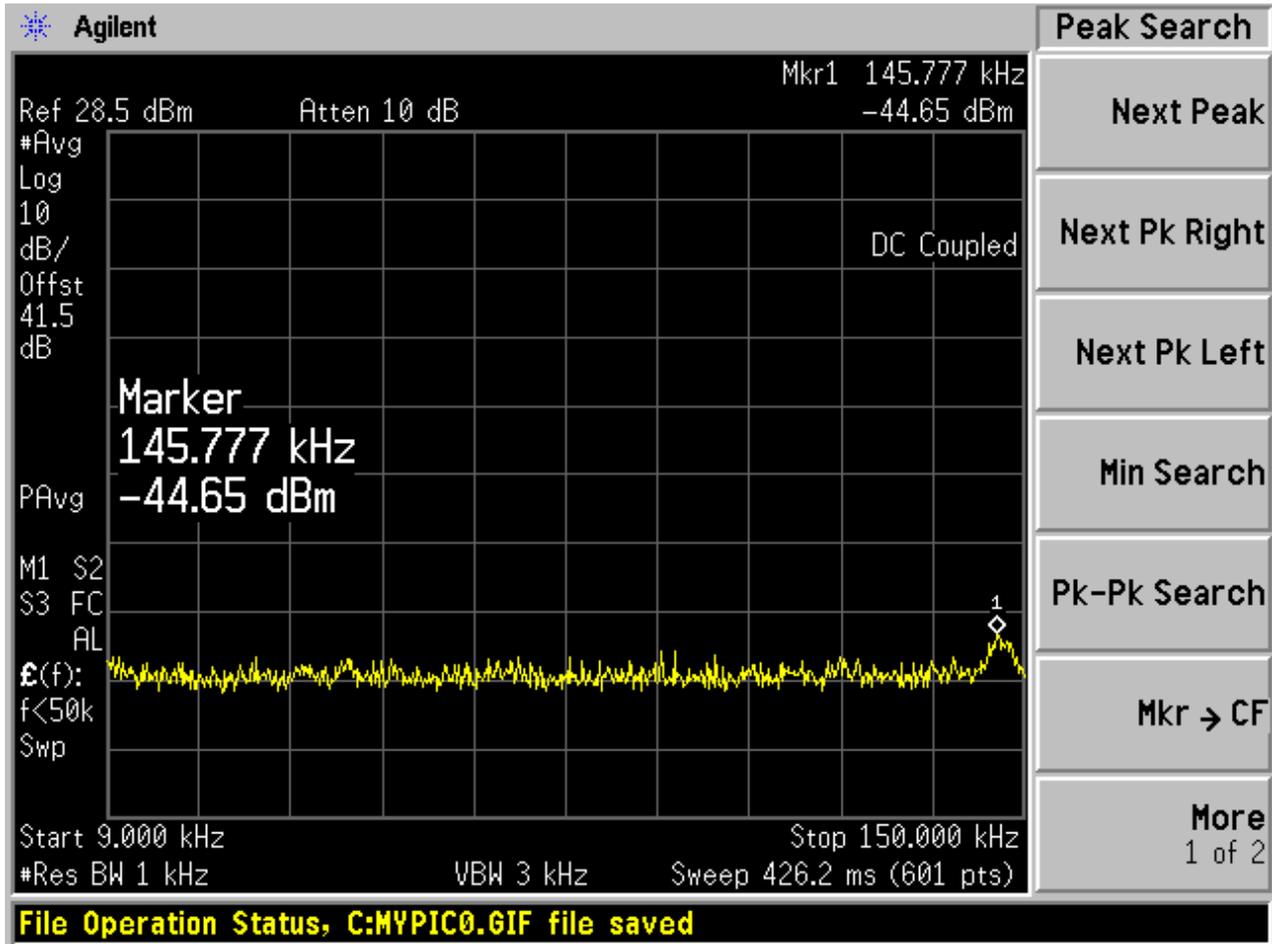


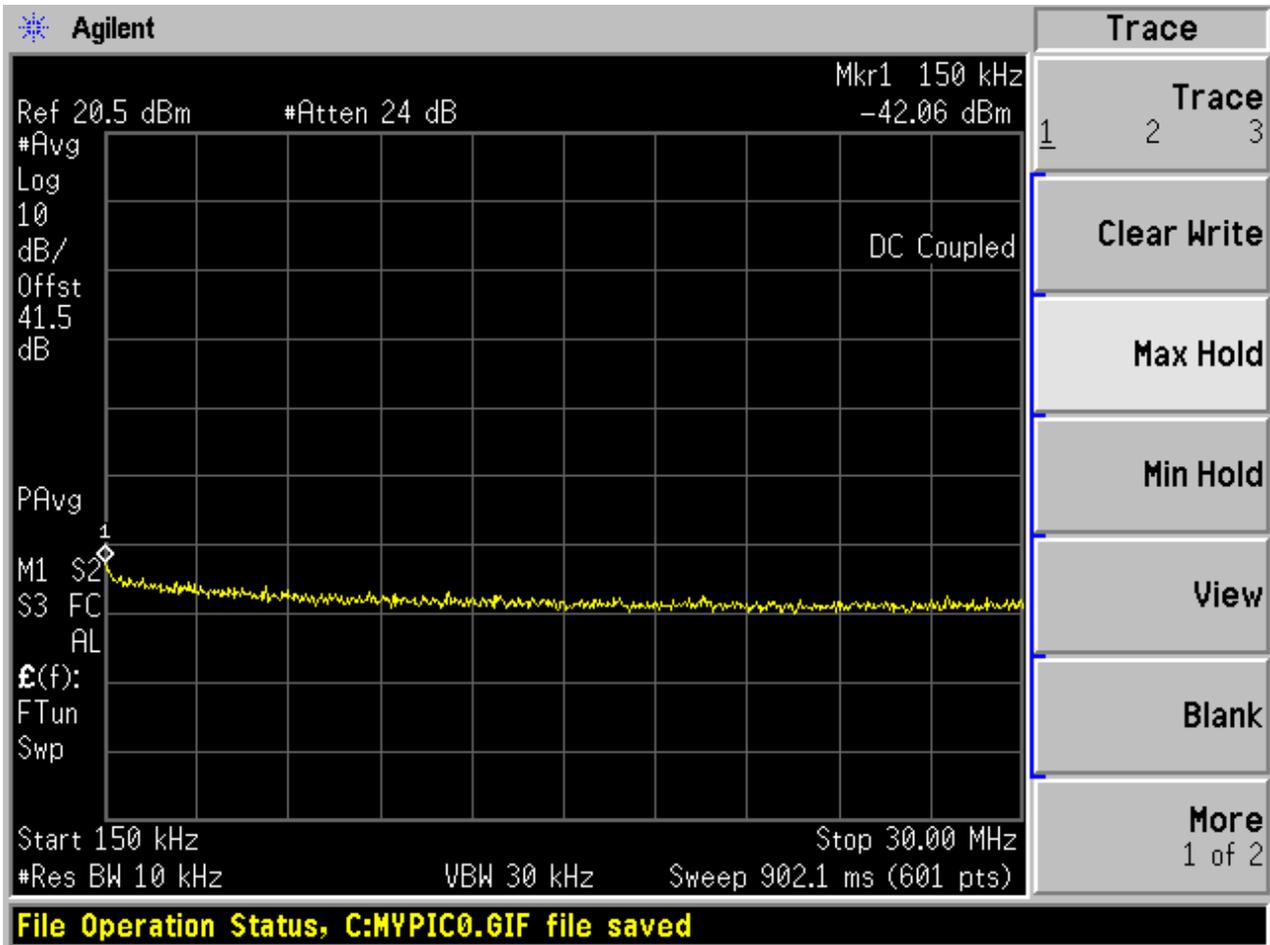


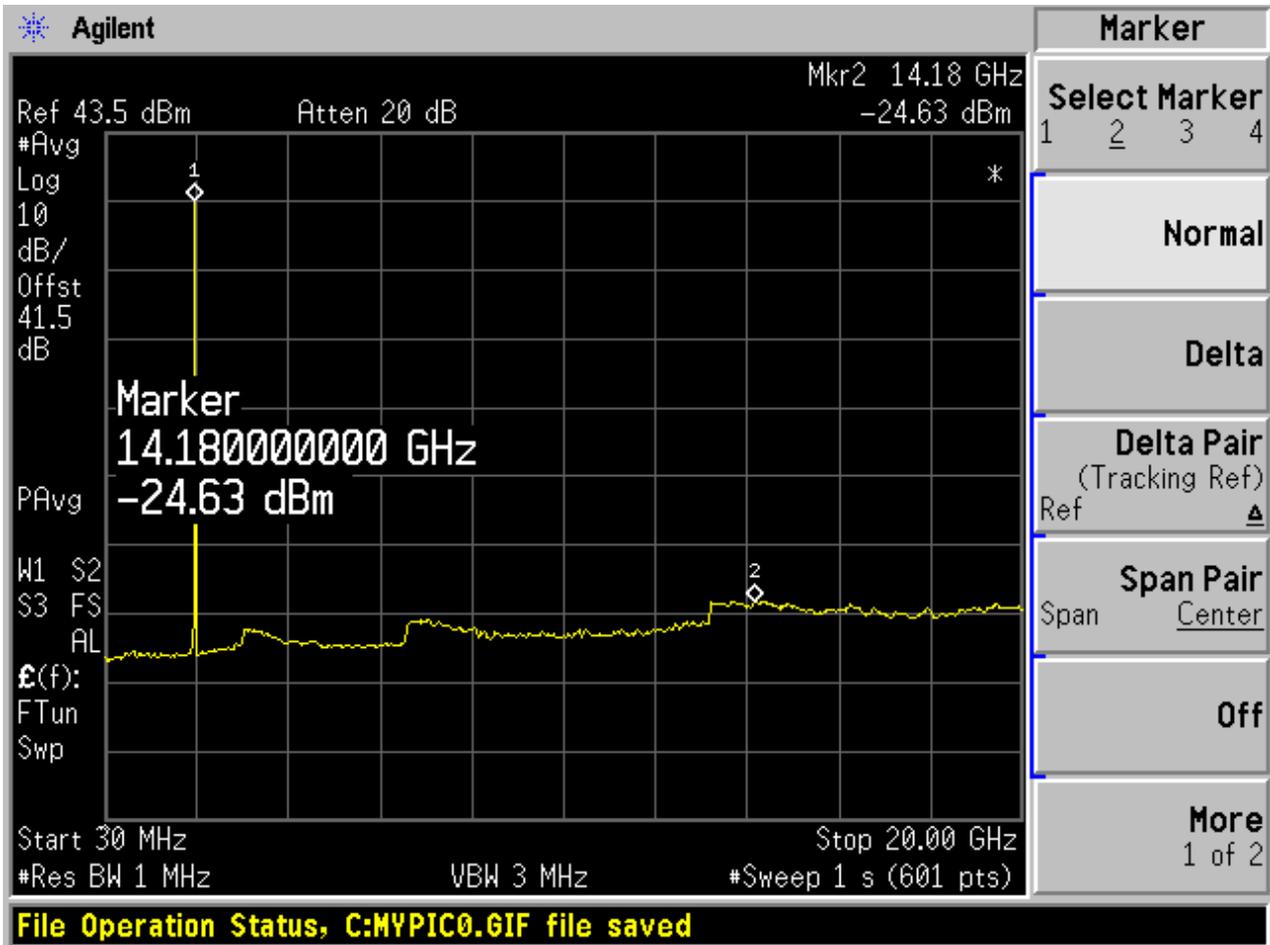




# T channel









## **Appendix E**

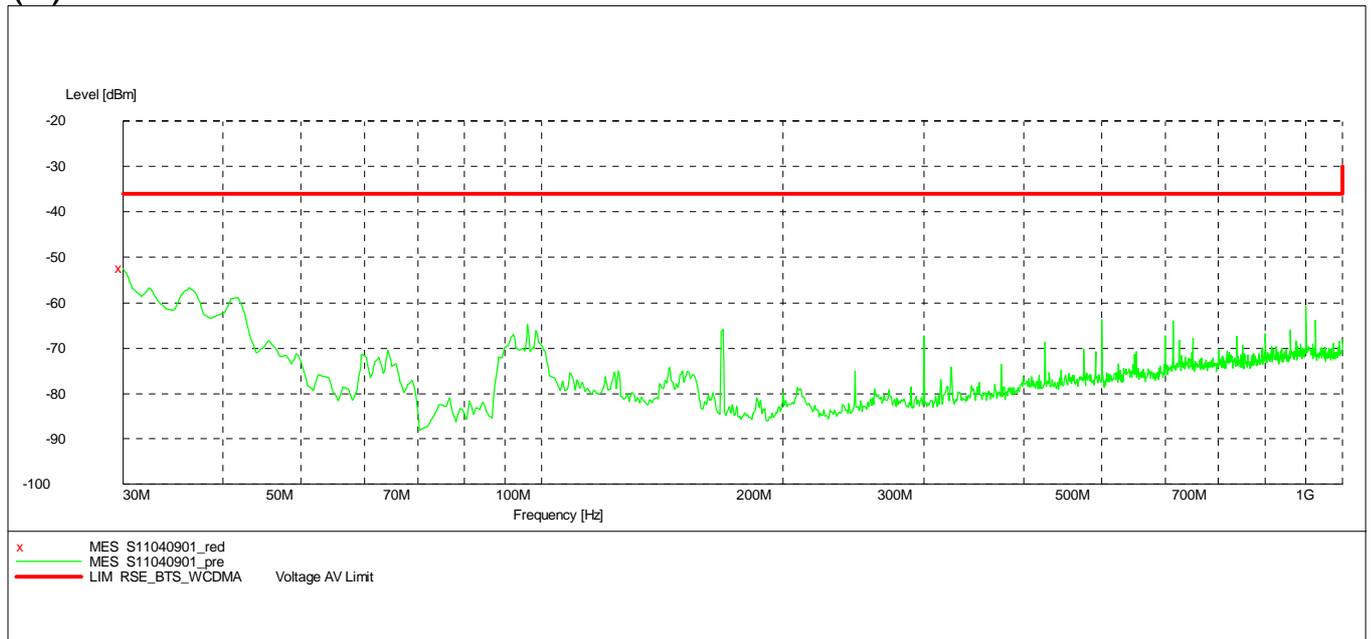
# Field Strength of Spurious Radiation Measurement

According to FCC part 2.1053 and part 24.238



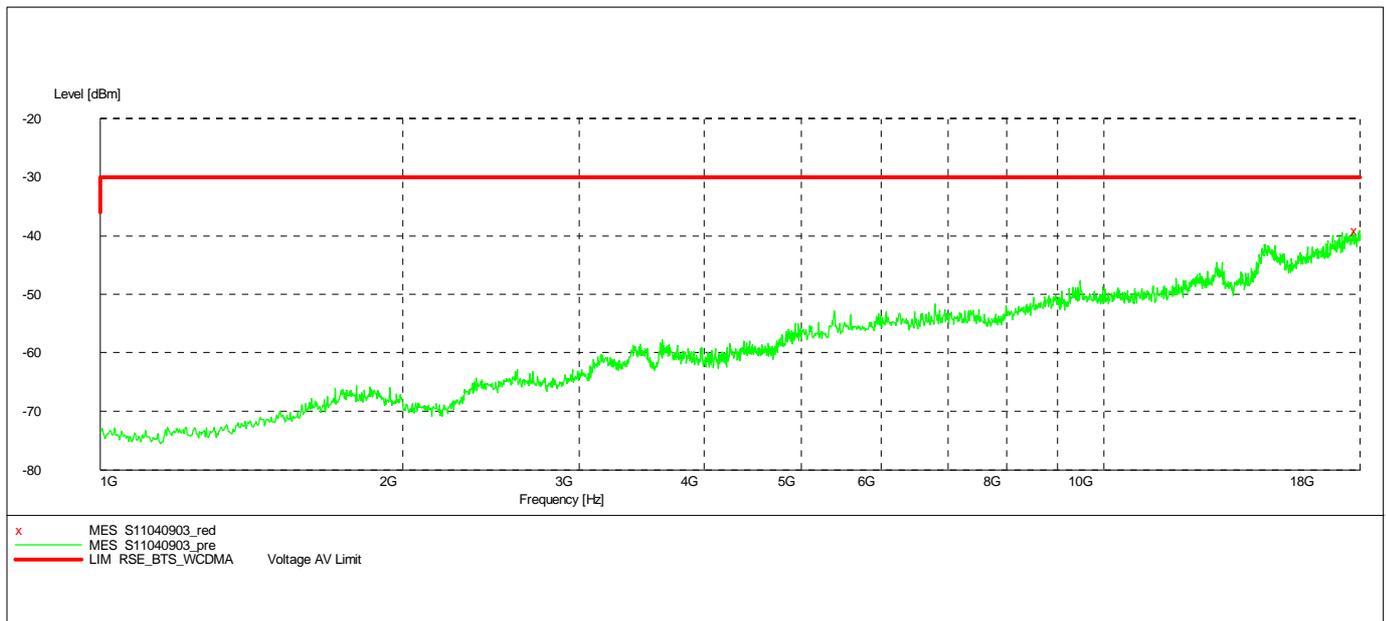
NOTE: a limit line that is stringent than FCC limit (-13dBm) is used in plot(s).

(1) Below 1GHz:





## (2) Above 1GHz:



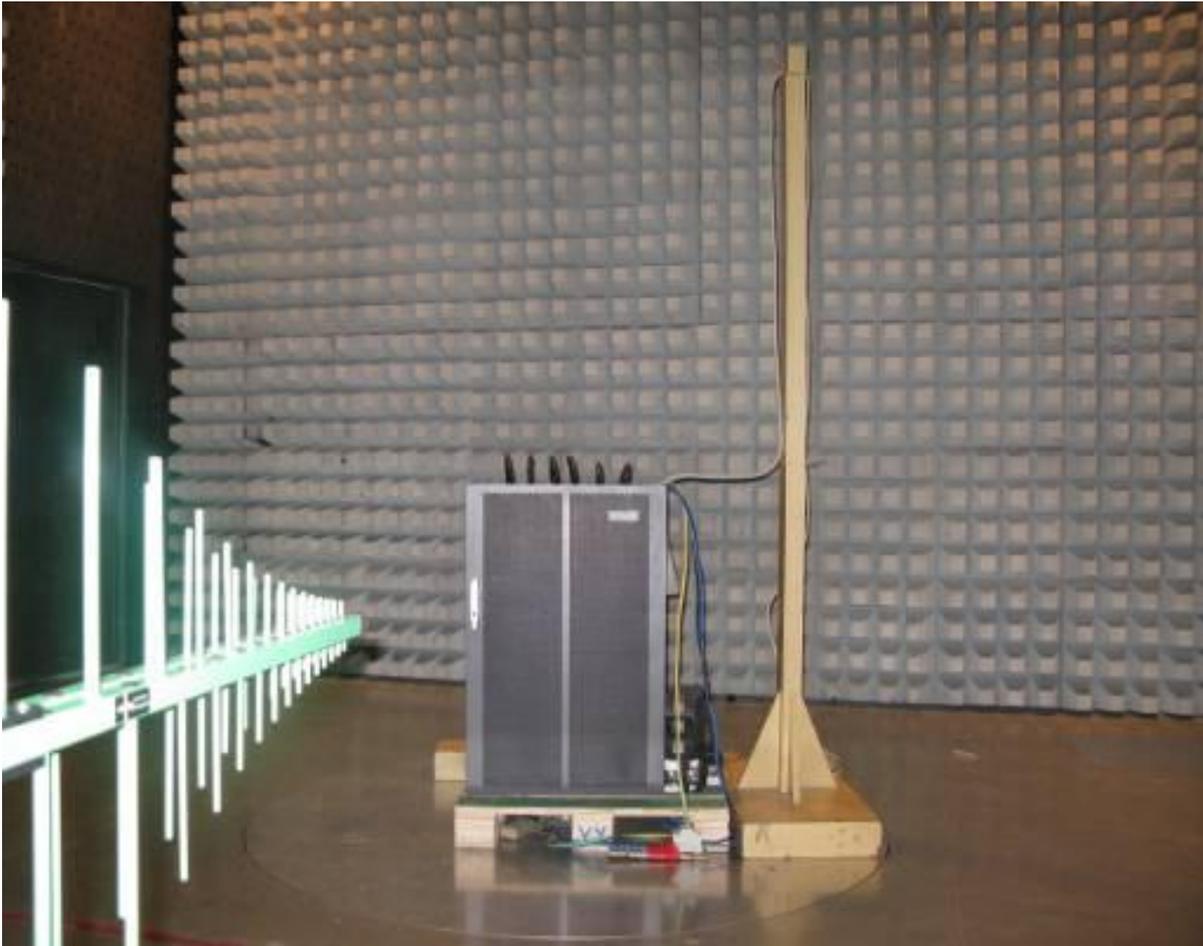


# Appendix F

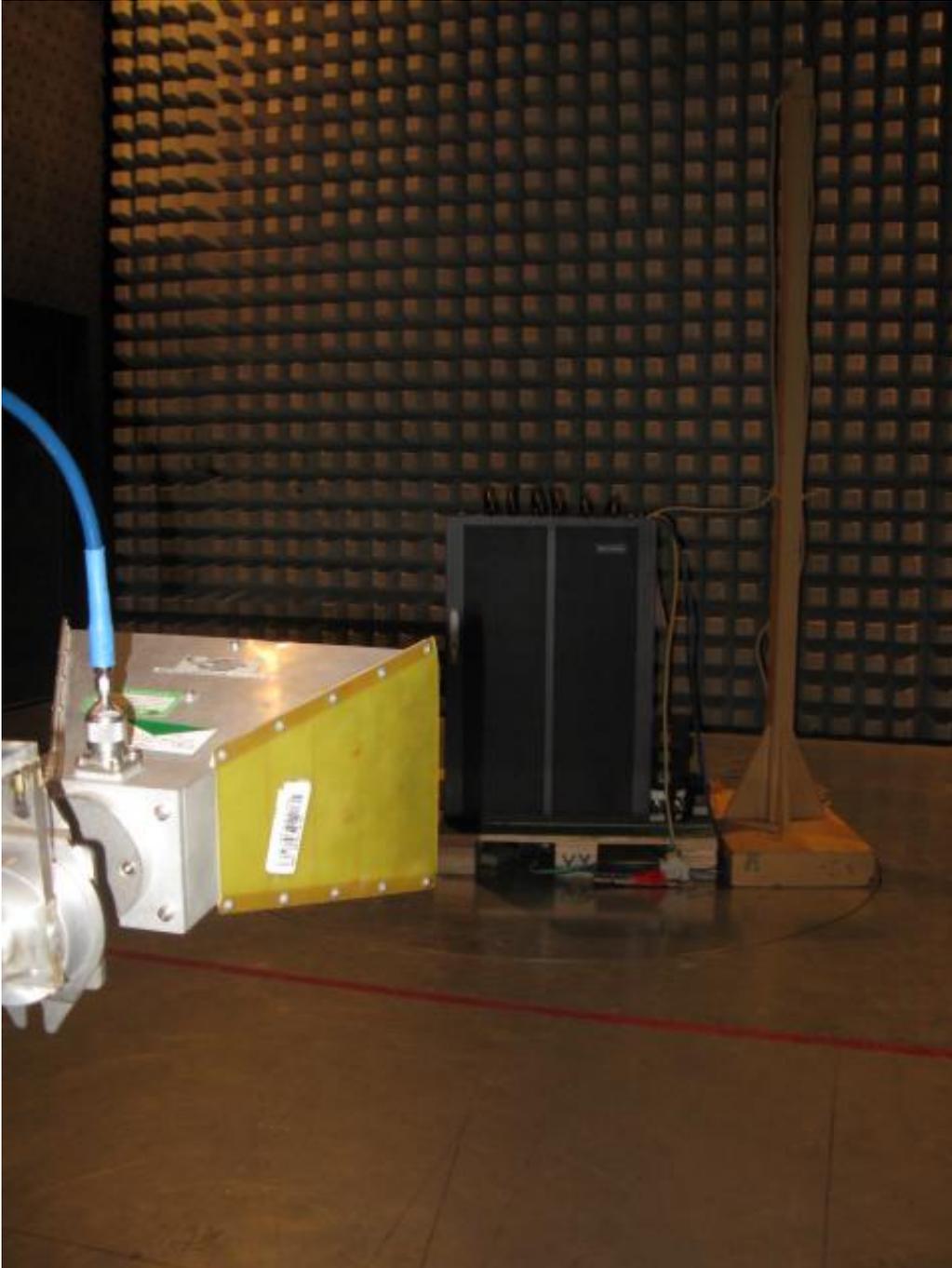
## Photos of Test Setup

## 1. Photos for Radiated Spurious Emissions:

### 1) Radiated Spurious Disturbance (below 1GHz)



## 2) Radiated Spurious Disturbance (above 1GHz)





---

**END**