



# Appendix A: Transmitter Output Power



## 1 Average Power (Total)

Test Mode	Carrier Conf.	RF Ch.	Average Power [dBm]	Average Power [W]	Average Power [W/MHz]	Verdict
uTM 1	MC 1	B	47.79	60.12	---	Pass
		M	47.74	59.43	---	Pass
		T	47.88	61.38	---	Pass
	MC 2	B	46.01	39.90	---	Pass
		M	46.02	39.99	---	Pass
		T	45.97	39.54	---	Pass
gTM 1	MC 1	B	45.92	39.1	---	Pass
		M	46.11	40.8	---	Pass
		T	45.97	39.6	---	Pass
	MC 2	B	42.83	19.2	---	Pass
		M	43.28	21.3	---	Pass
		T	42.9	19.5	---	Pass
	MC 3	B	42.86	19.3	---	Pass
		M	43.3	21.4	---	Pass
		T	42.94	19.7	---	Pass
	MC 4	B	39.87	9.7	---	Pass
		M	40.25	10.6	---	Pass
		T	39.91	9.8	---	Pass
gTM 2	MC 1	B	44.05	25.4	---	Pass
		M	44.32	27	---	Pass
		T	44.12	25.8	---	Pass
	MC 2	B	40.93	12.4	---	Pass
		M	41.3	13.5	---	Pass
		T	41	12.6	---	Pass
	MC 3	B	41	12.6	---	Pass
		M	41.27	13.4	---	Pass
		T	41.04	12.7	---	Pass
	MC 4	B	38.06	6.4	---	Pass
		M	38.26	6.7	---	Pass
		T	38.13	6.5	---	Pass

## 2 Peak-to-Average Ratio

(Not applicable)



# Appendix B: Modulation Characteristics

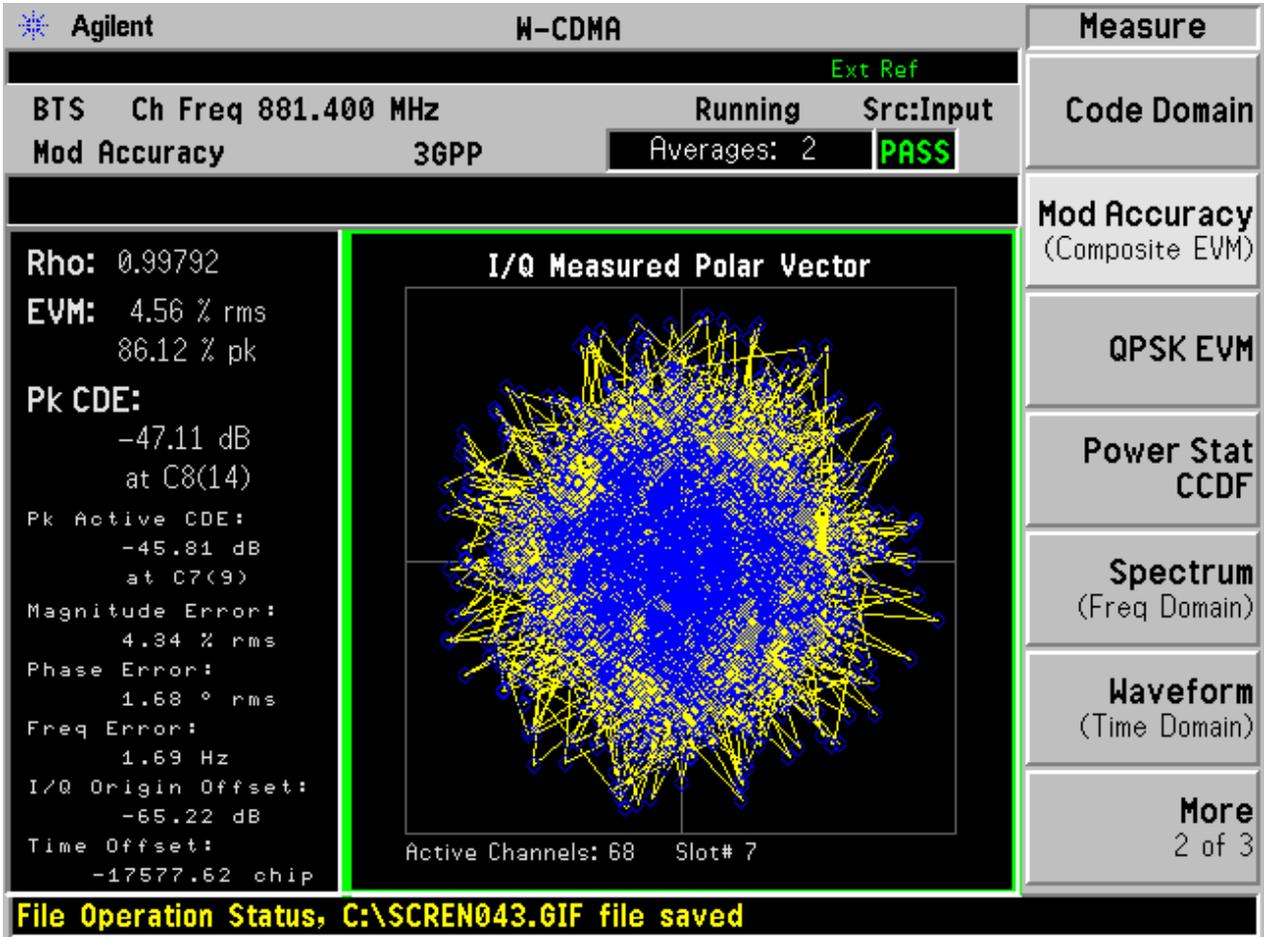


## 1 Result Table

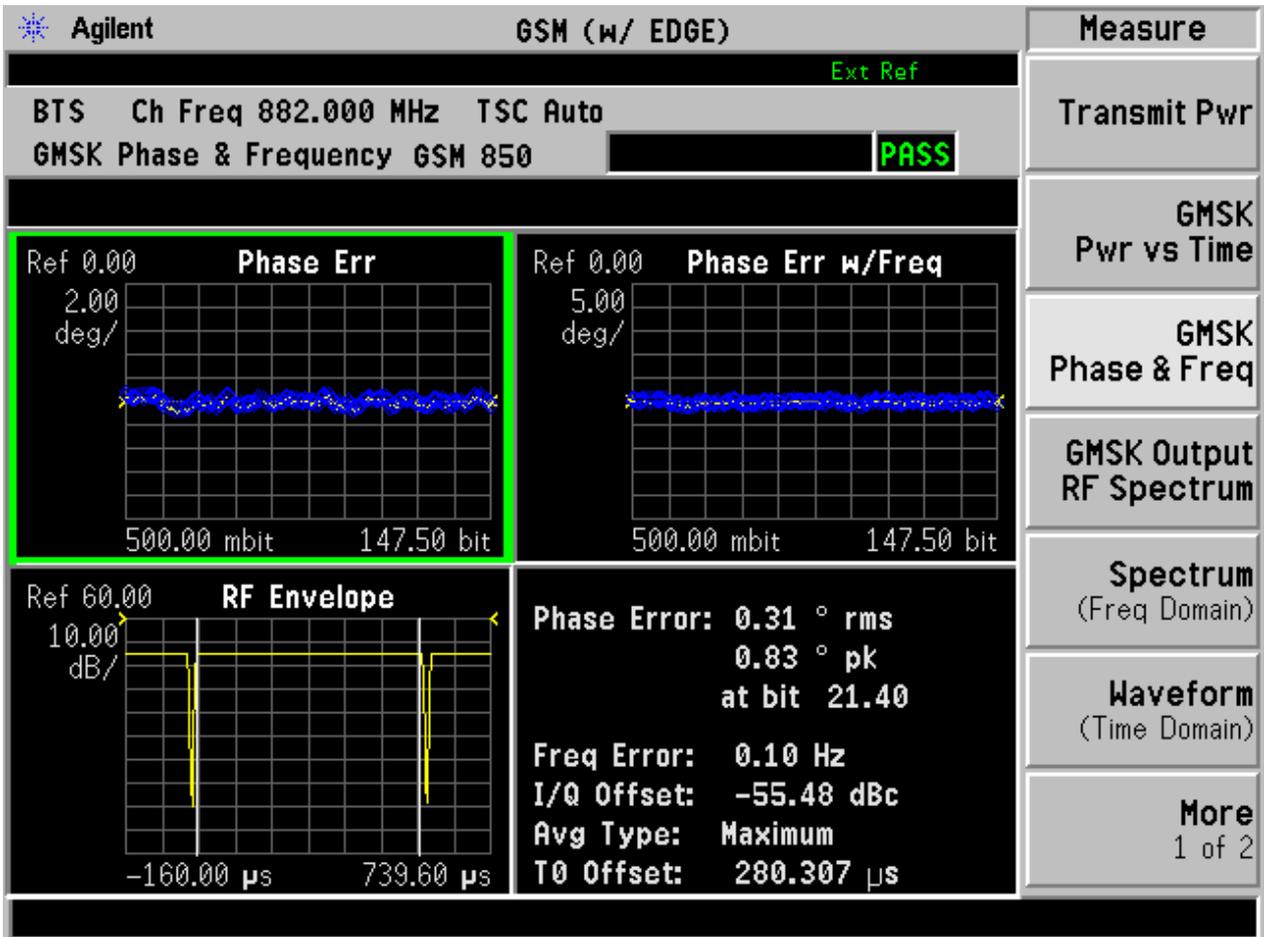
Test Mode	Digital modulation?	Verdict
uTM 1	Yes	Pass
gTM 1	Yes	Pass
gTM 2	Yes	Pass

## 2 Test Plot

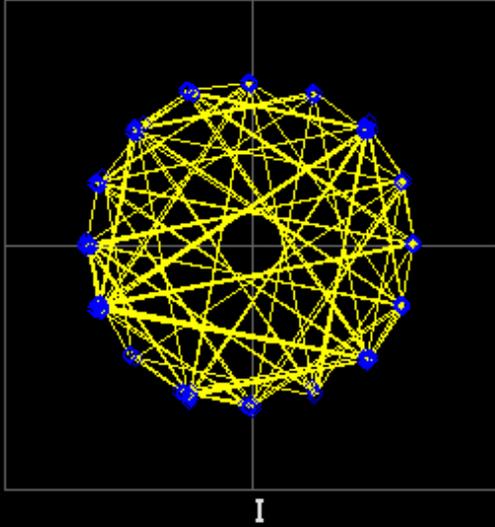
### 2.1 Test Mode = uTM 1



2.2 Test Mode = gTM 1



2.3 Test Mode = gTM 2

Agilent		GSM (w/ EDGE)		Measure
BTS Ch Freq 882.000 MHz TSC Auto <span style="float: right;">Ext Ref</span> EDGE EVM GSM 850 <span style="float: right;"><b>PASS</b></span>				Transmit Pwr
<b>RMS EVM:</b> Max 2.13 % Avg 2.13 % <b>PK EVM:</b> Max 6.19 % Avg 6.19 % <b>95%tile EVM: 3.91 %</b> Mag Error: 0.78 % Phas Error: 2.02 ° Freq Error: 763.28 mHz I/Q Offset: -48.54 dB Amplitude Droop (142 syms): -0.01 dB TSC: 0 AMPM Offset: --- T0 Offset: 273.362 μs				GMSK Pwr vs Time GMSK Phase & Freq GMSK Output RF Spectrum Spectrum (Freq Domain) Waveform (Time Domain) More 1 of 2
<b>I/Q Measured Polar Vector</b> 				



# Appendix C: Occupied Bandwidth



## 1 Result Table

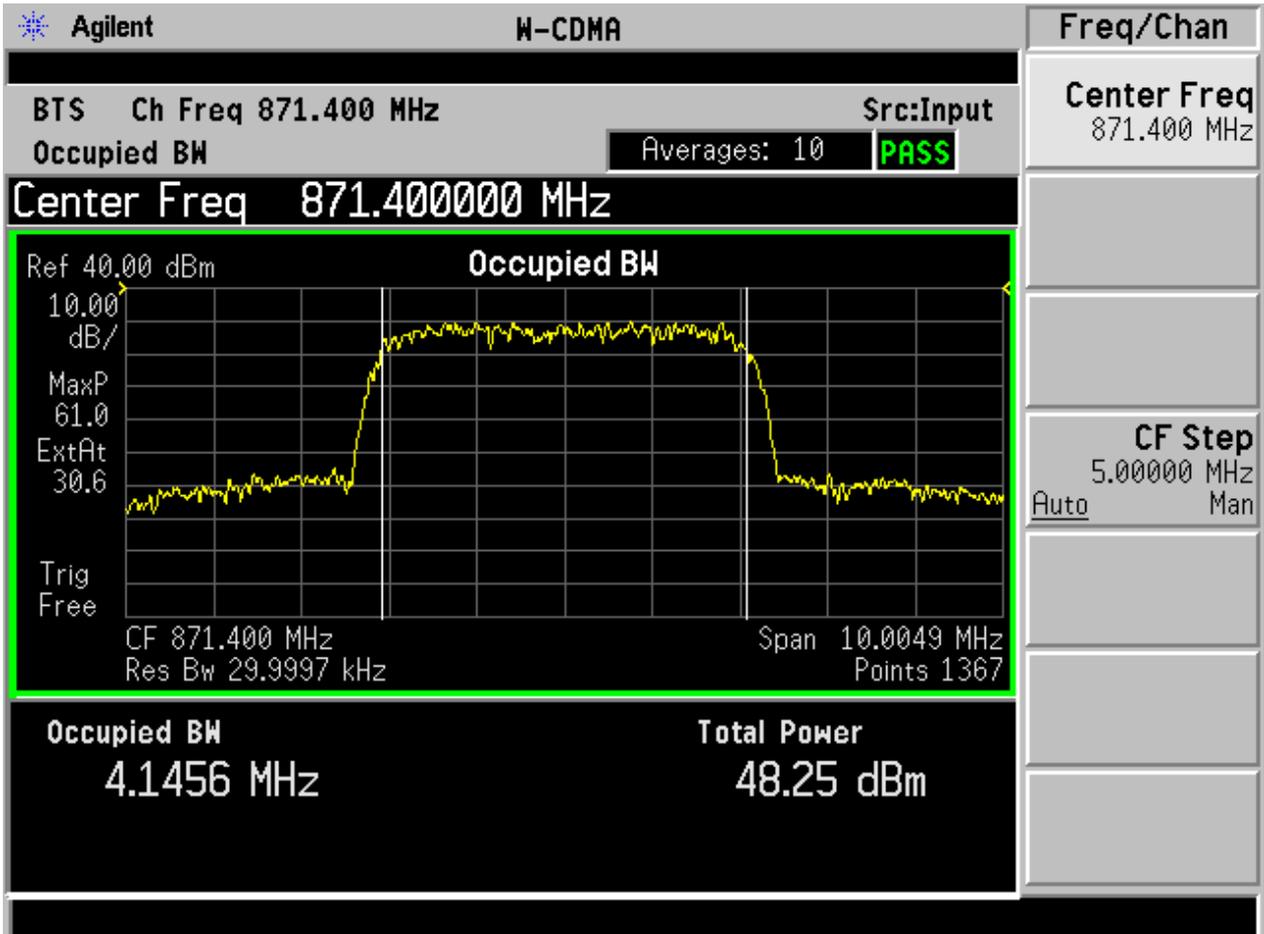
Test Mode	Carrier Conf.	RF Ch.	Occupied Bandwidth [MHz]	Verdict
uTM 1	MC 1	B	4.1456	Pass
		M	4.1387	Pass
		T	4.1596	Pass
gTM 1	MC 1	B	0.239	Pass
		M	0.242	Pass
		T	0.239	Pass
gTM 2	MC 1	B	0.236	Pass
		M	0.247	Pass
		T	0.253	Pass

## 2 Test Plot

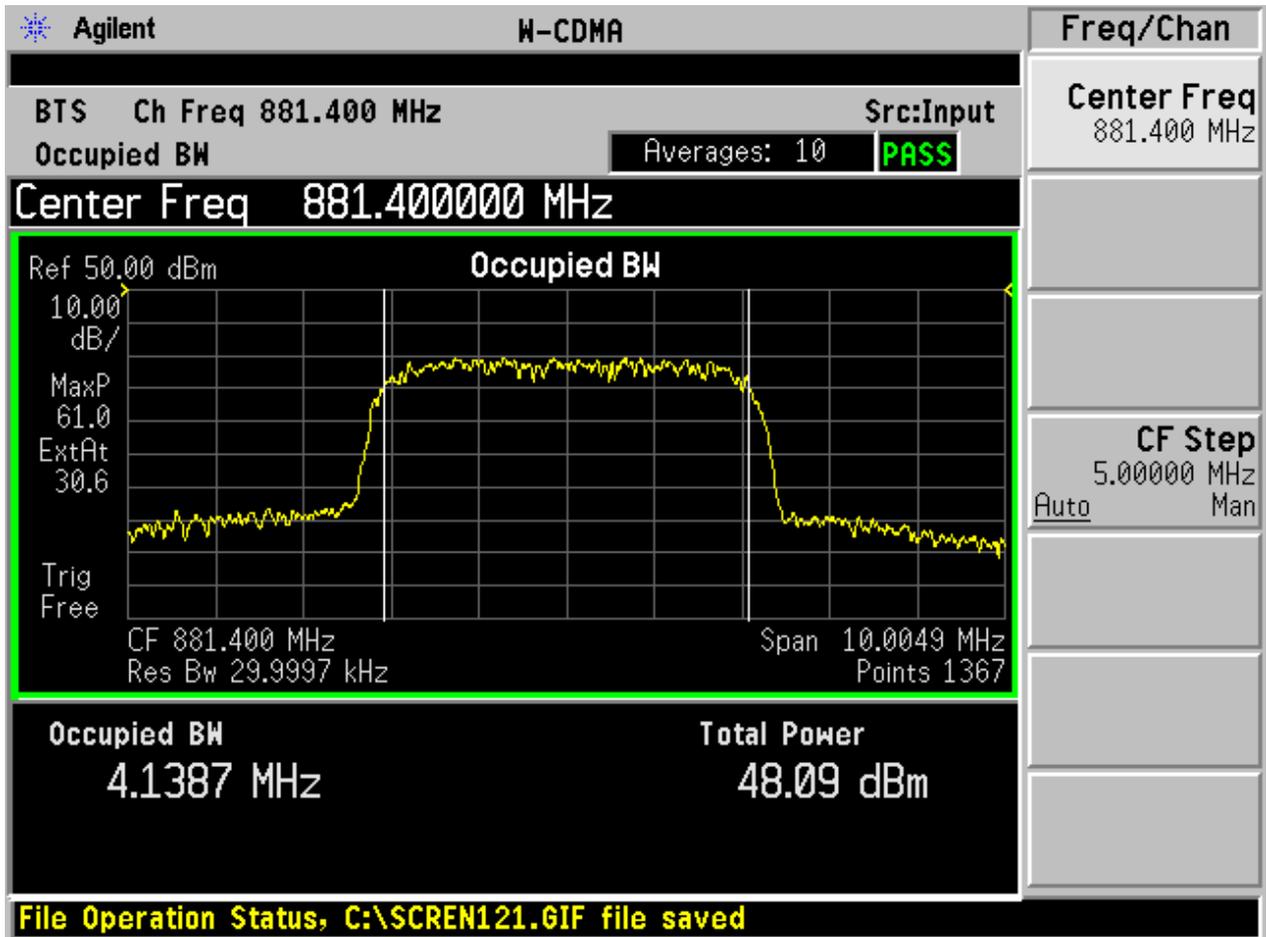
### 2.1 Test Mode = uTM 1

#### 2.1.1 Carrier Conf. = MC 1

##### 2.1.1.1 Ch. B

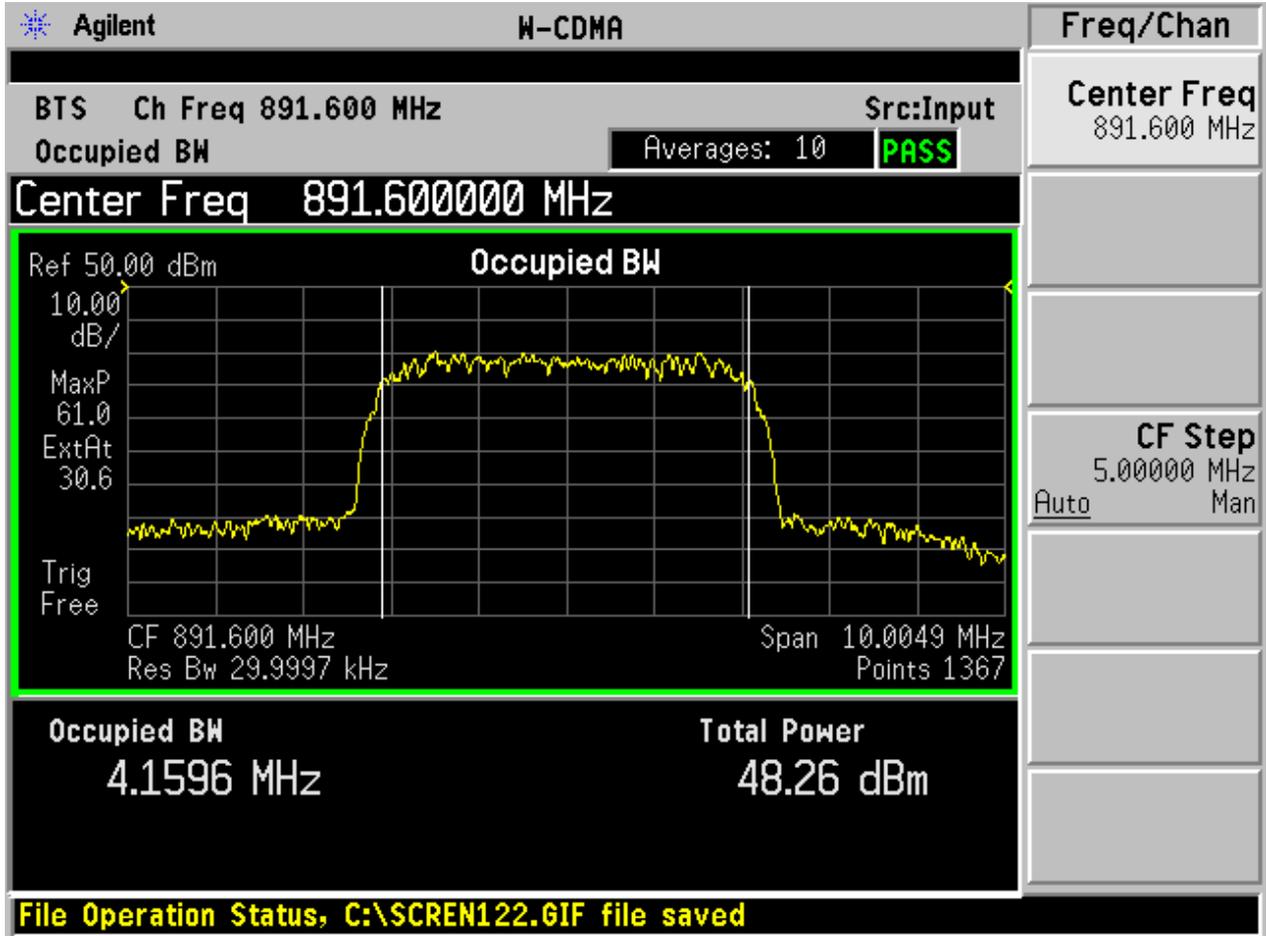


2.1.1.2 Ch. M





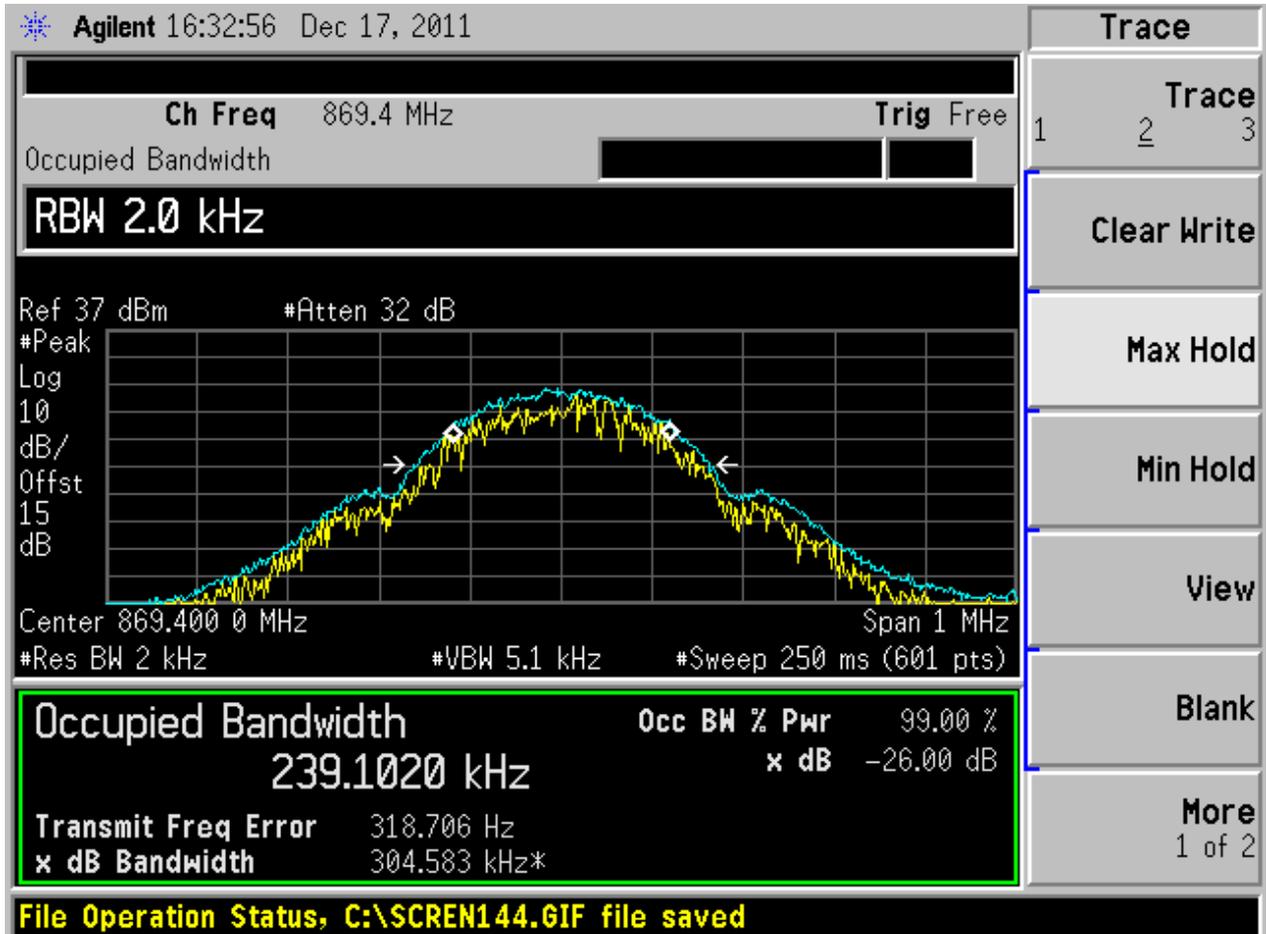
2.1.1.3 Ch. T



## 2.2 Test Mode = gTM 1

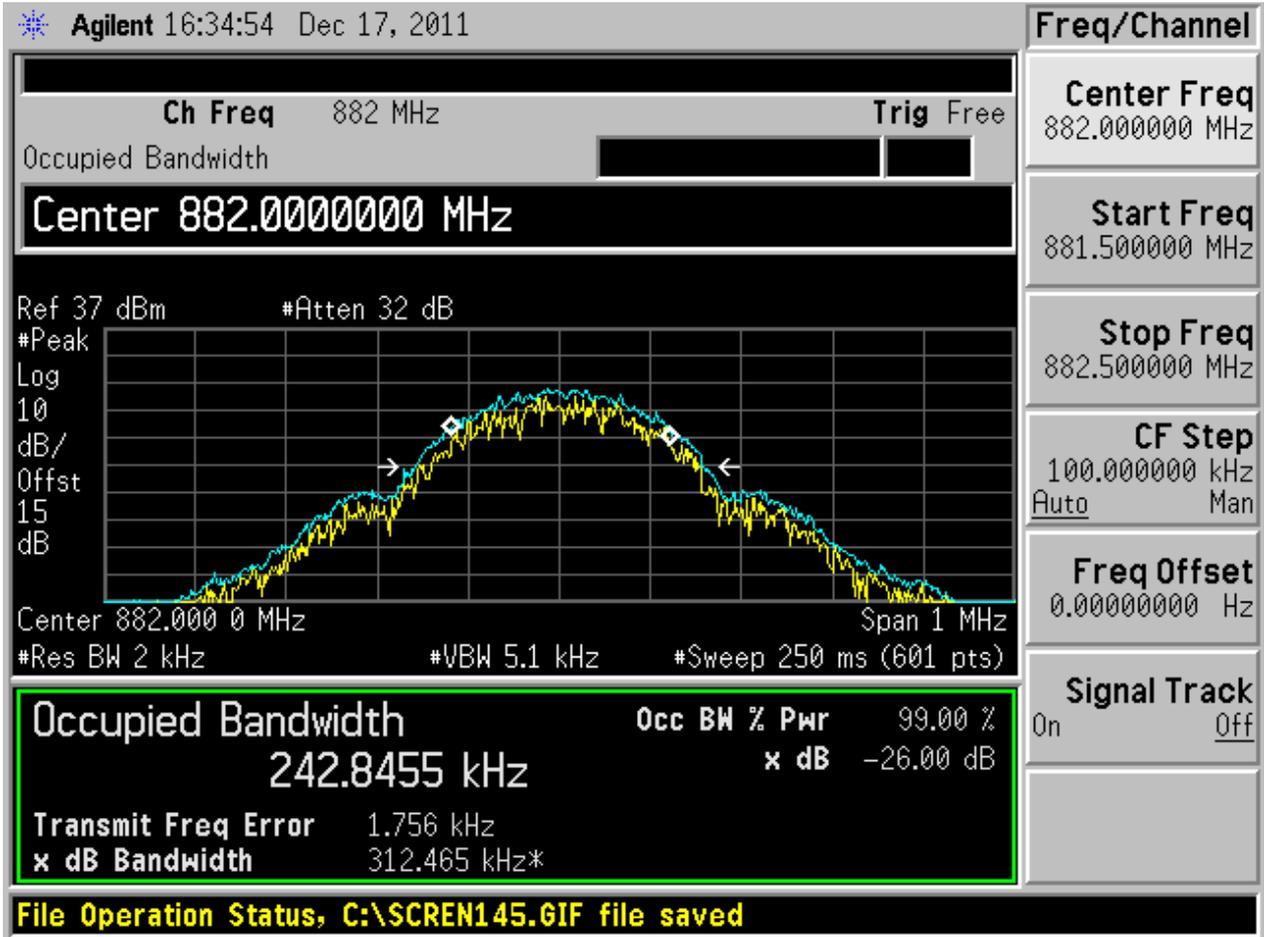
### 2.2.1 Carrier Conf. = MC 1

#### 2.2.1.1 Ch. B

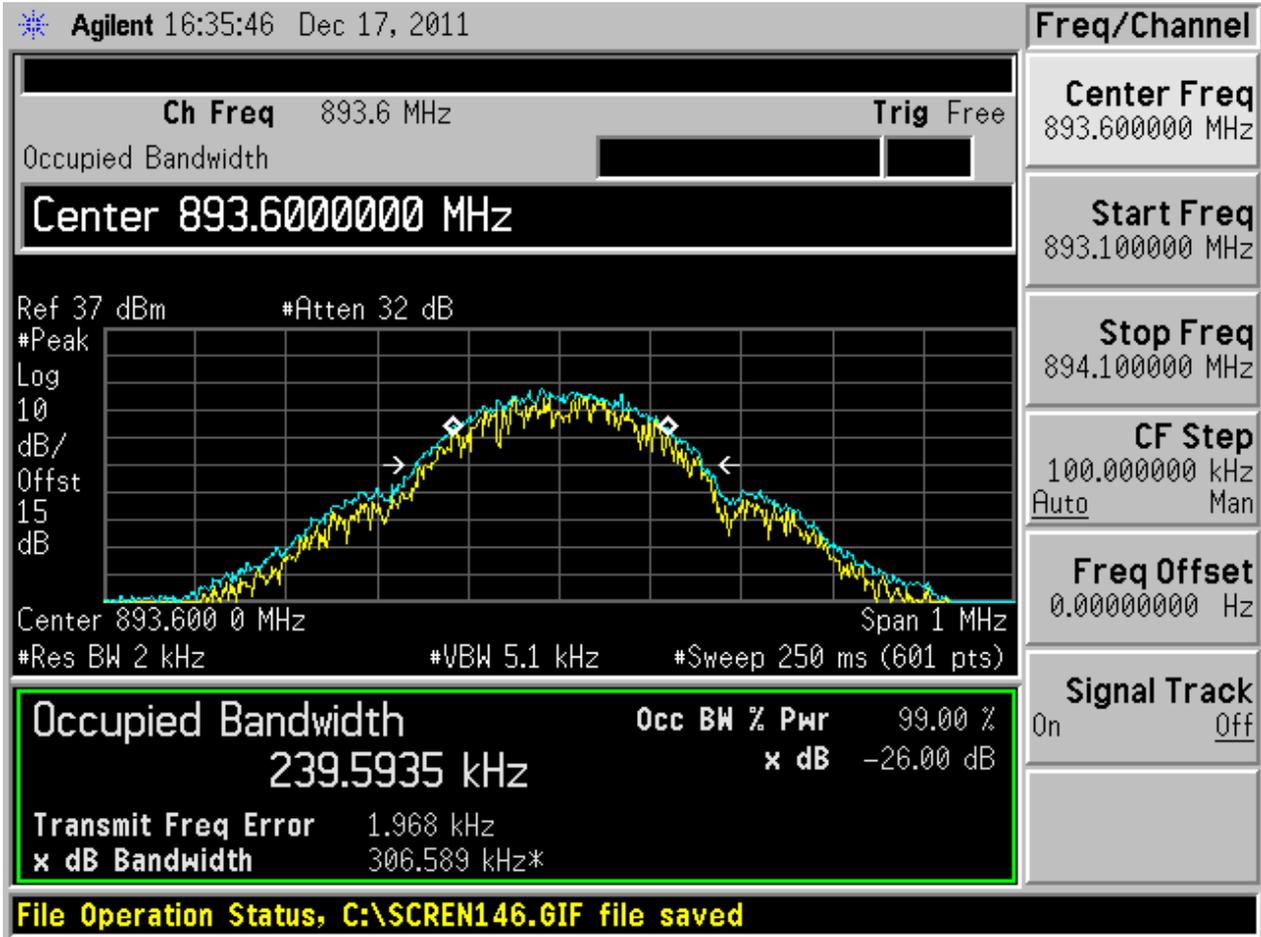




2.2.1.2 Ch. M



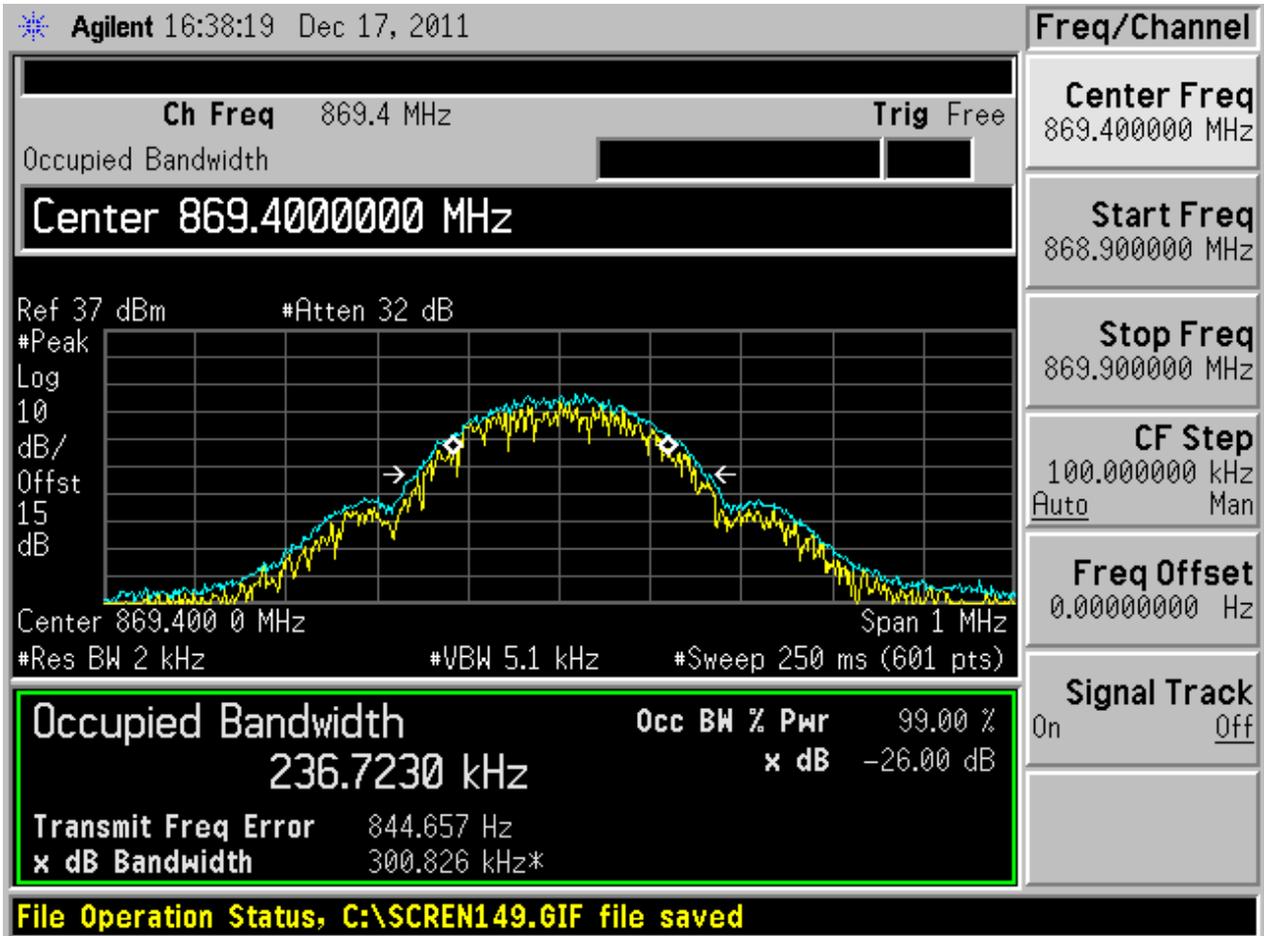
2.2.1.3 Ch. T



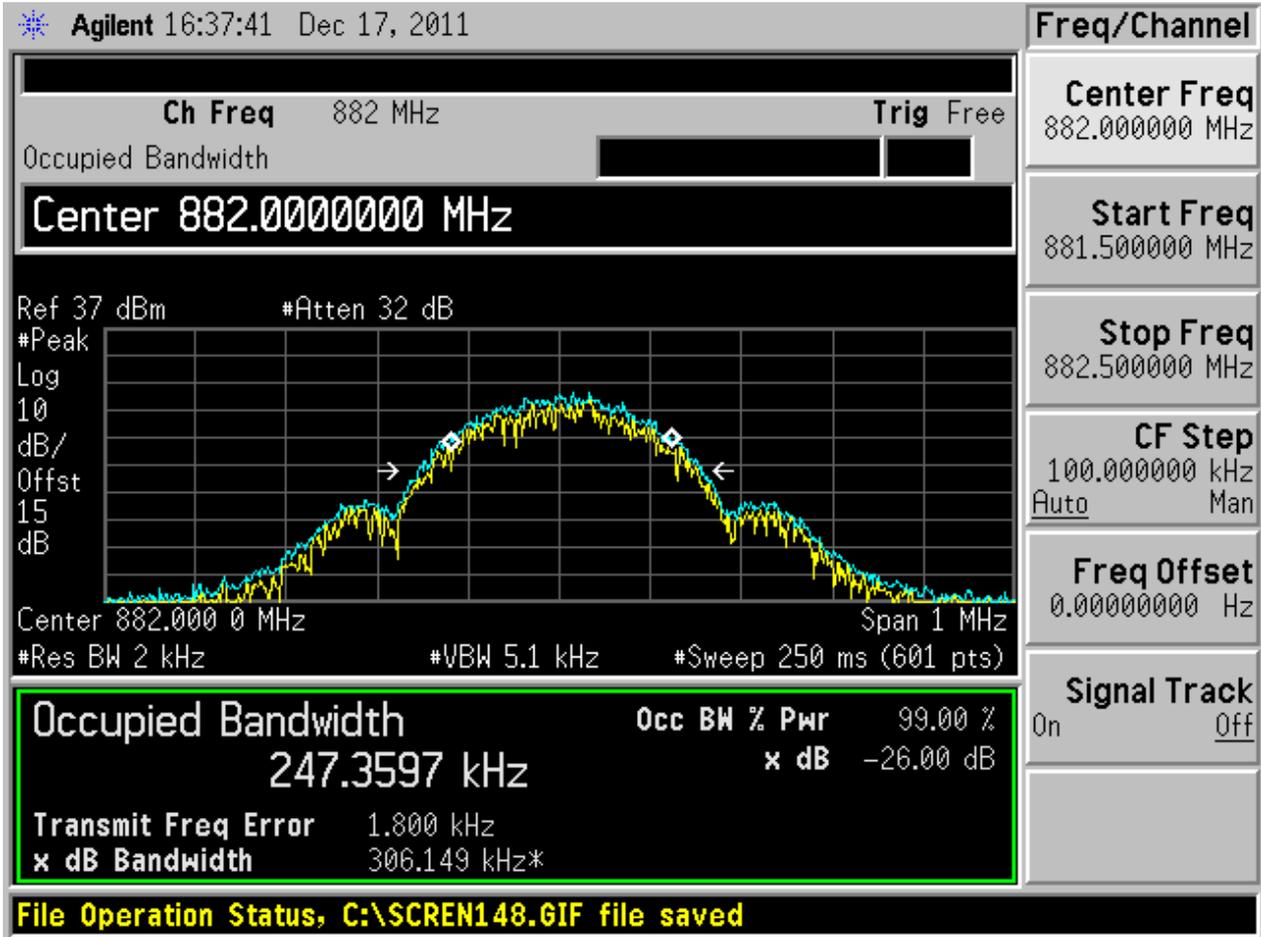
2.3 Test Mode = gTM 2

2.3.1 Carrier Conf. = MC 1

2.3.1.1 Ch. B

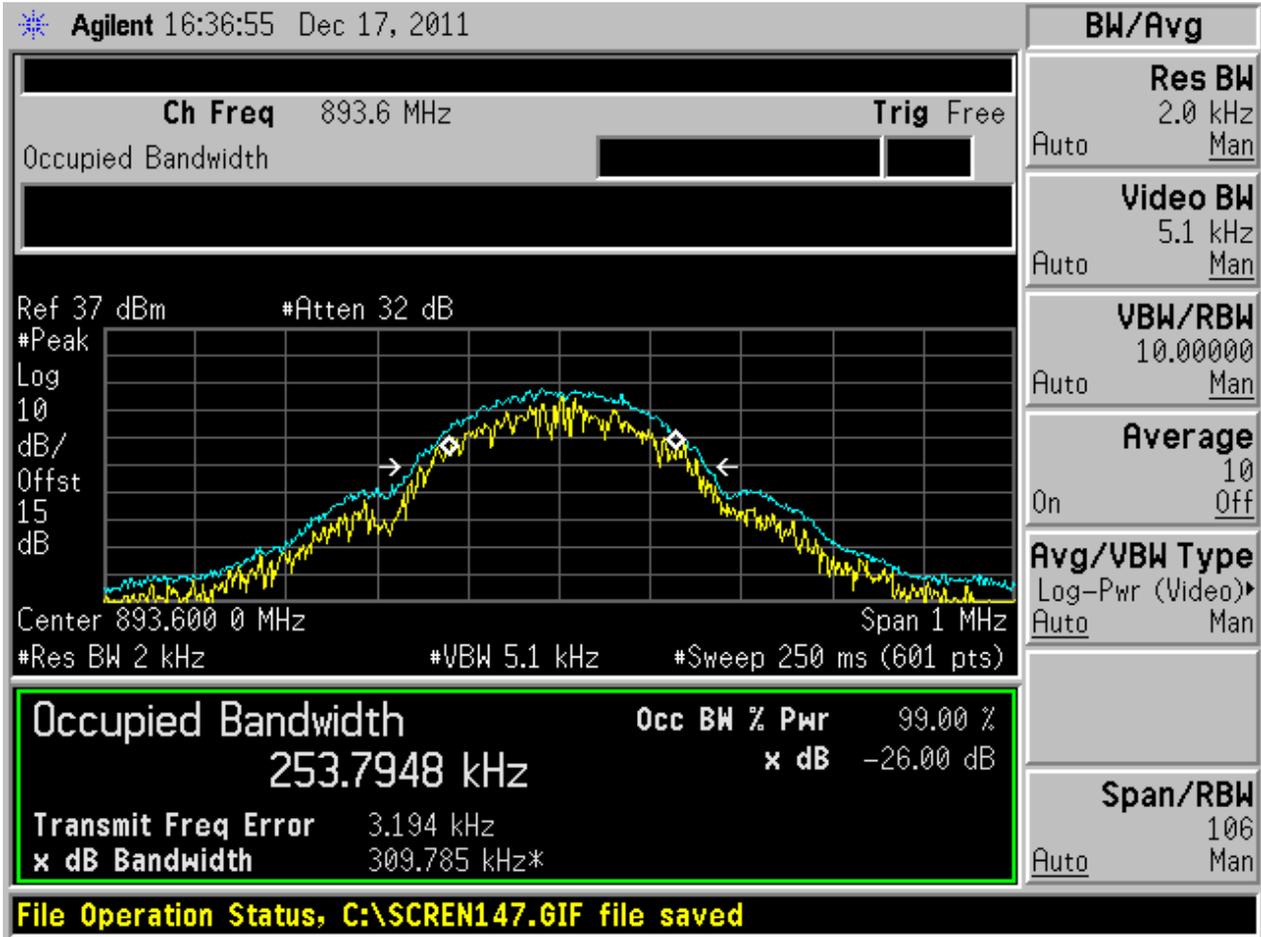


2.3.1.2 Ch. M





2.3.1.3 Ch. T





# Appendix D: Band Edges Compliance



## 1 Result Table

NOTE: The offset of measurement filter -3dB point may be considered when identifying the maximum emission for e.g. the CDMA, WCDMA, WiMAX, LTE systems.

Test Mode	Carrier Conf.	RF Ch.	Band Edges Emissions [dBm]	Verdict
uTM 1	MC 1	B	-18.95	Pass
		T	-17.66	Pass
	MC 2	B	-21.41	Pass
		T	-22.14	Pass
gTM 1	MC 1	B	-40.19	Pass
		T	-37.32	Pass
	MC 4	B	-39	Pass
		T	-40	Pass
gTM 2	MC 1	B	-39.63	Pass
		T	-38.11	Pass
	MC 4	B	-41	Pass
		T	-43.47	Pass

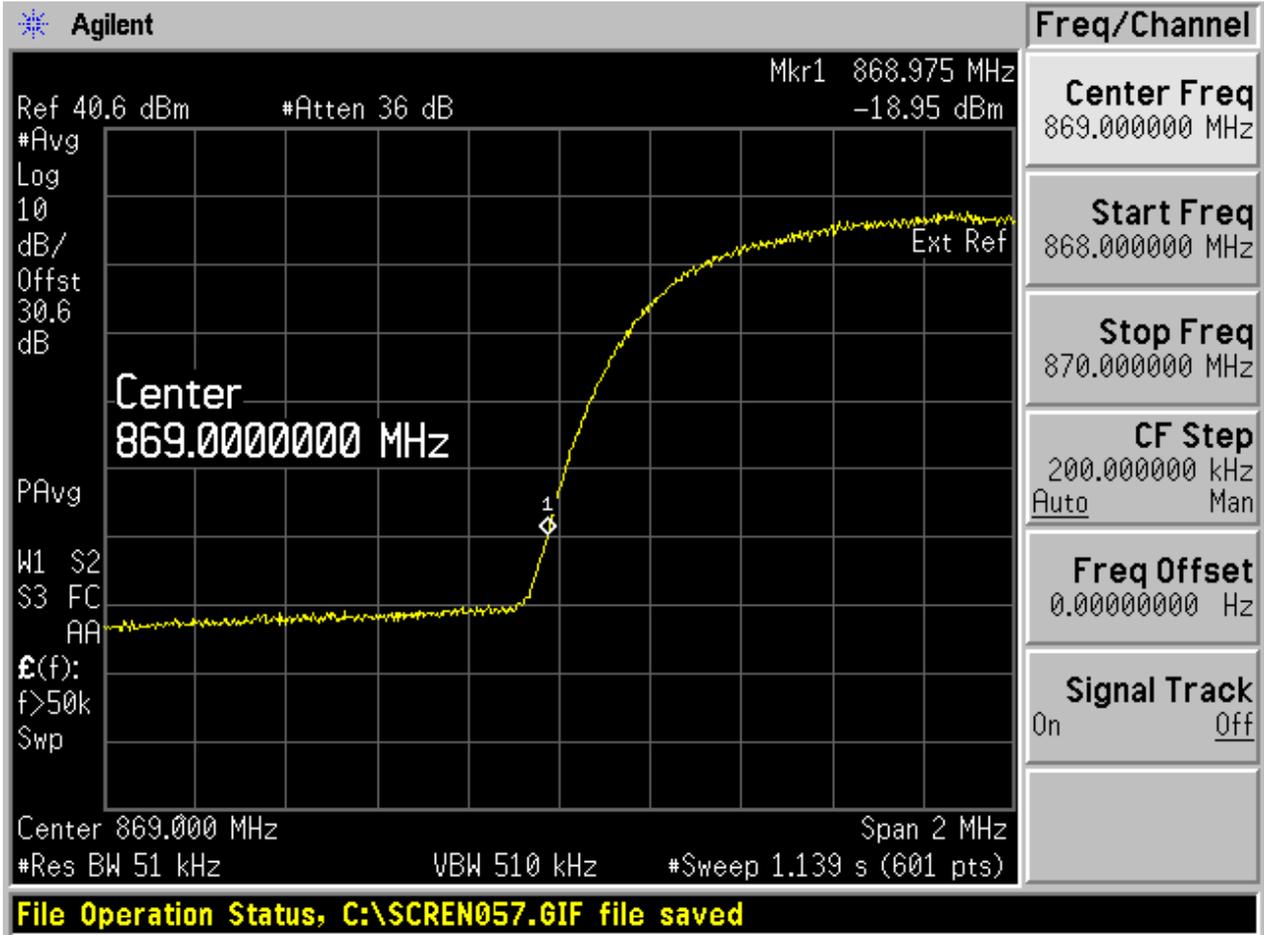


2 Test Plot

2.1 Test Mode = uTM 1

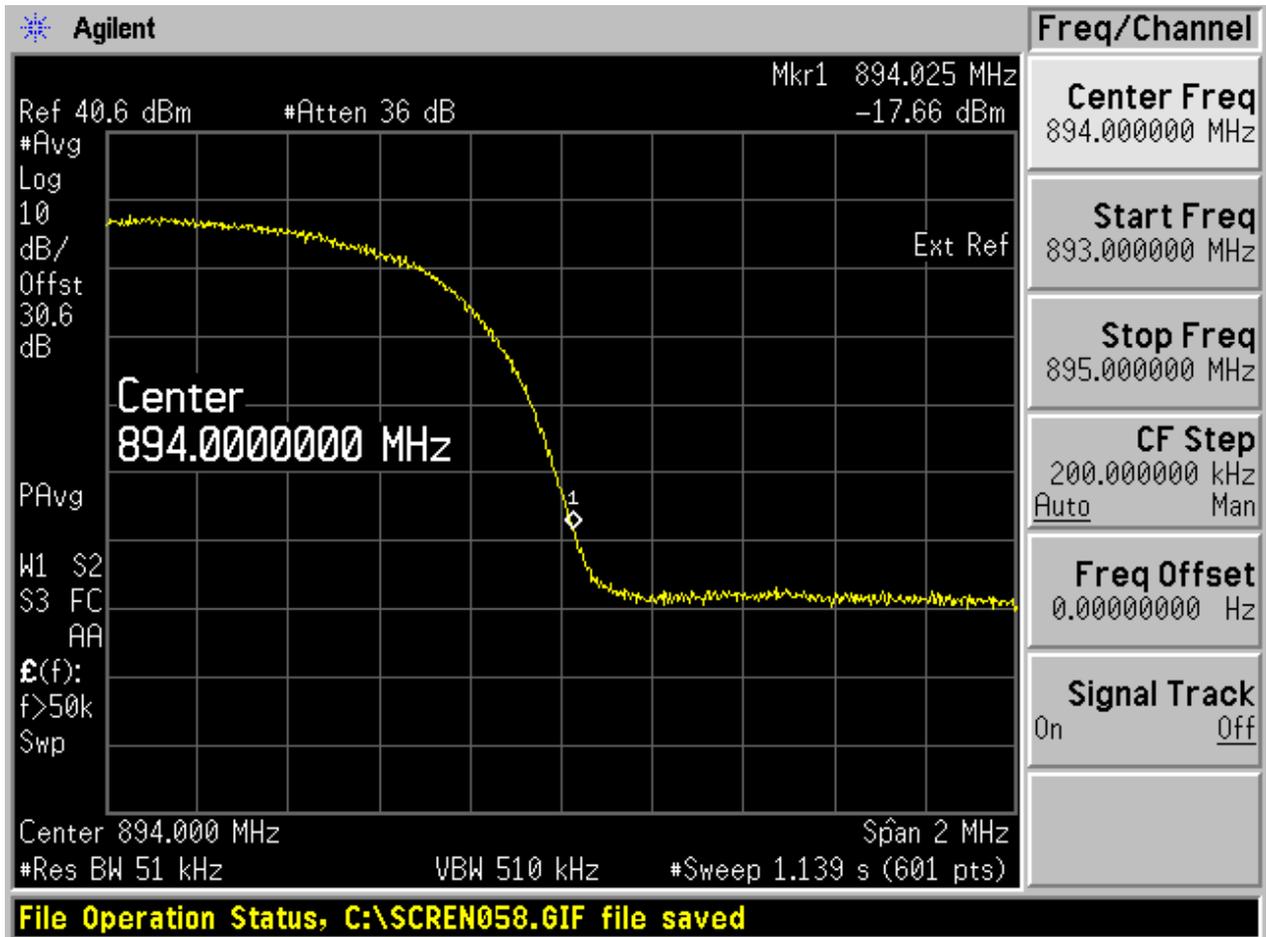
2.1.1 Carrier Conf. = MC 1

2.1.1.1 Ch. B



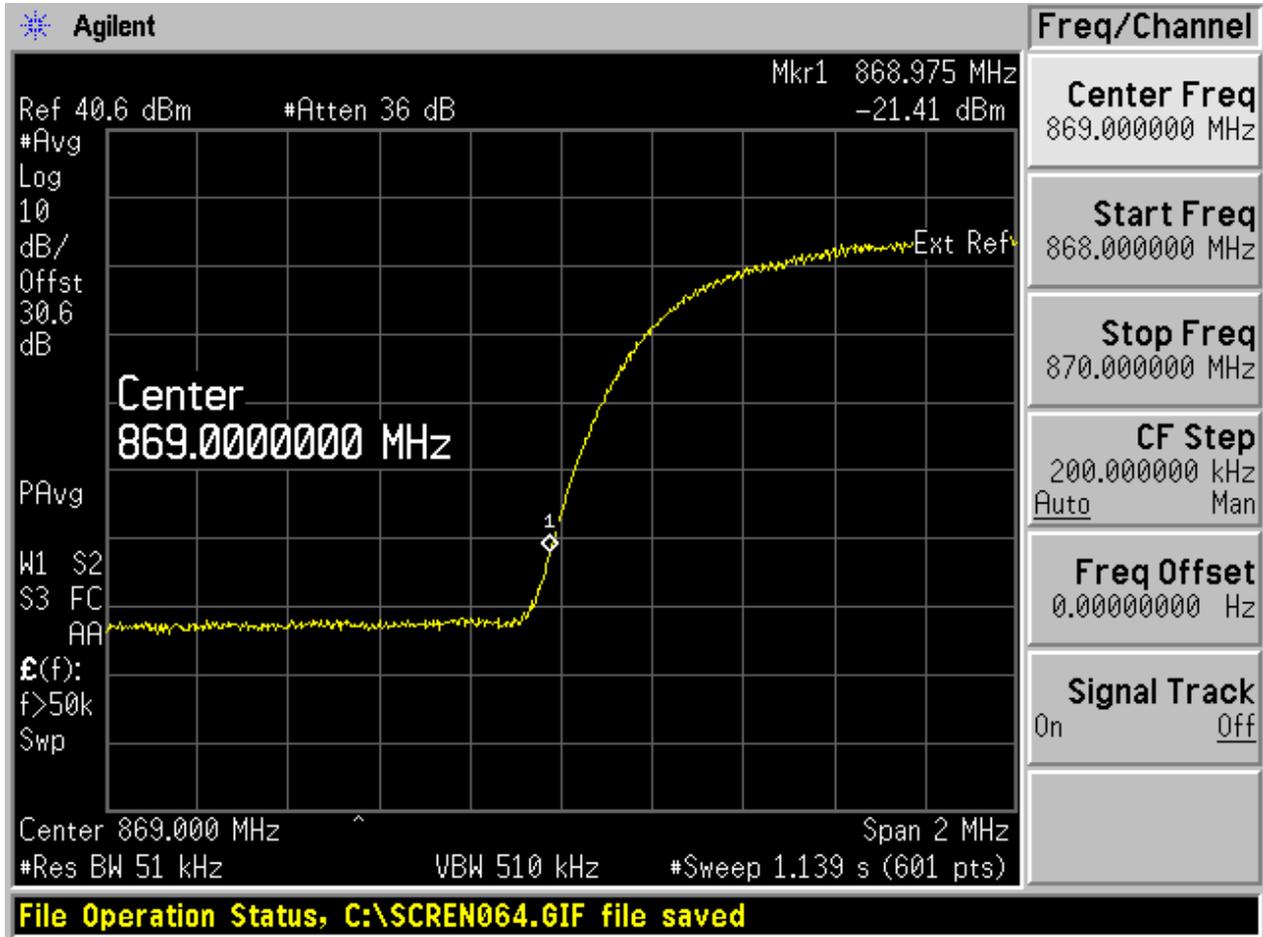


2.1.1.2 Ch. T

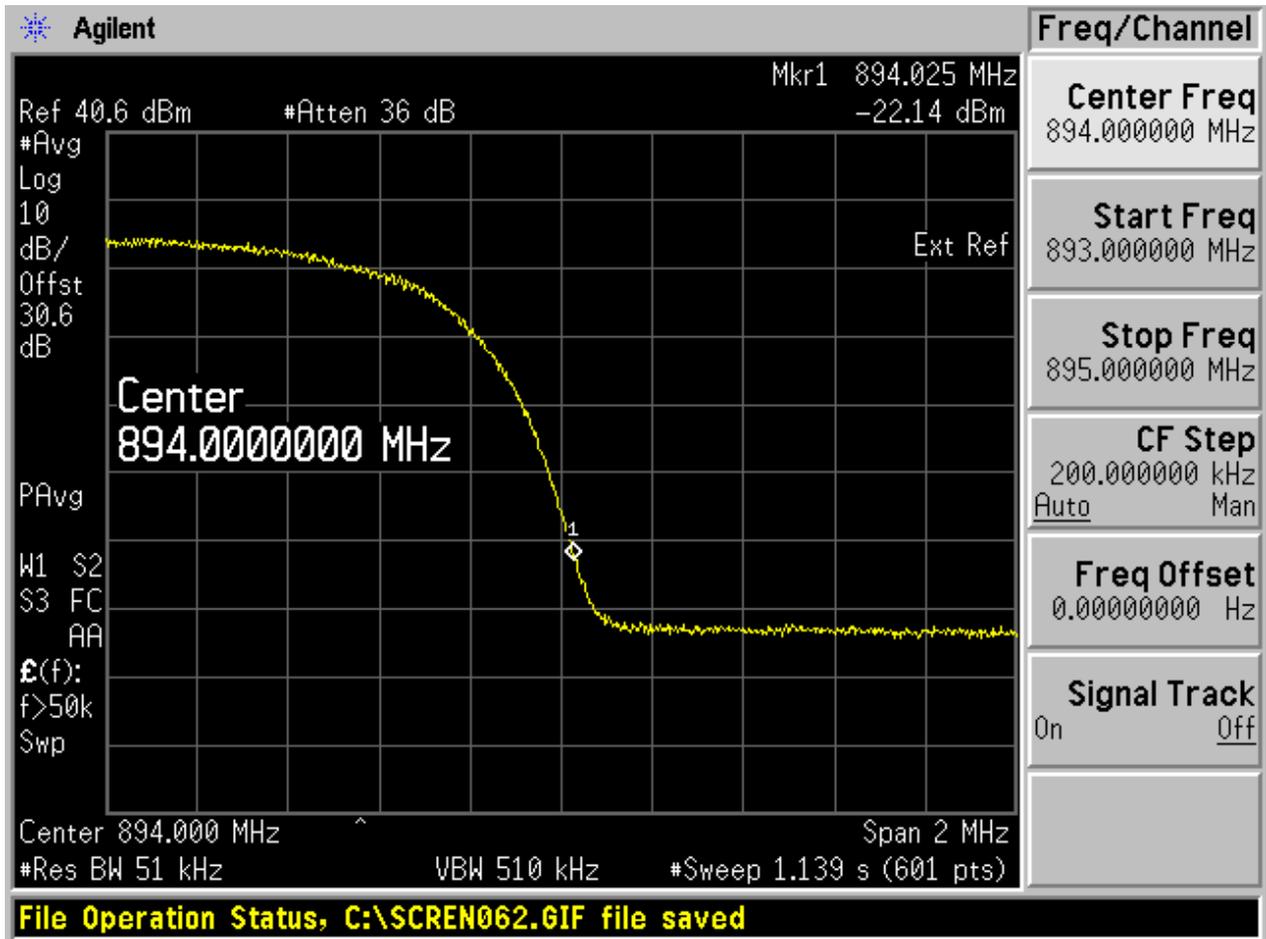


## 2.1.2 Carrier Conf. = MC 2

### 2.1.2.1 Ch. B



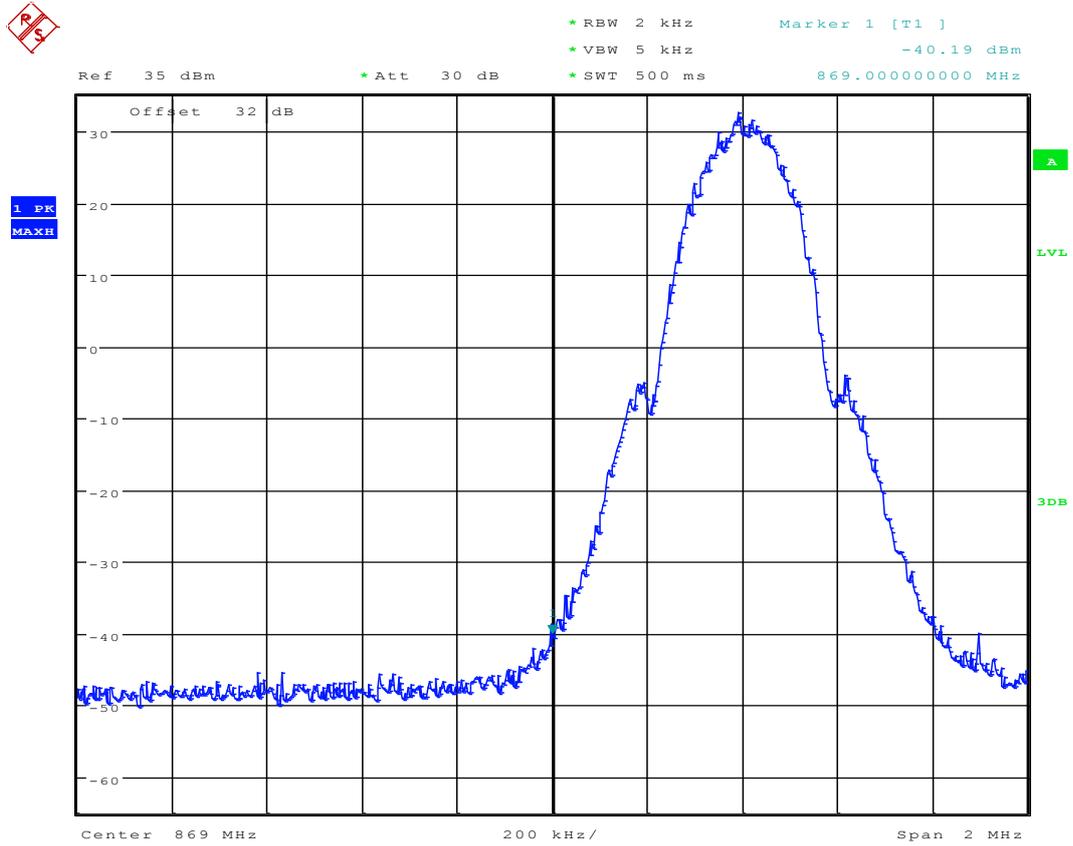
2.1.2.2 Ch. T



## 2.2 Test Mode = gTM 1

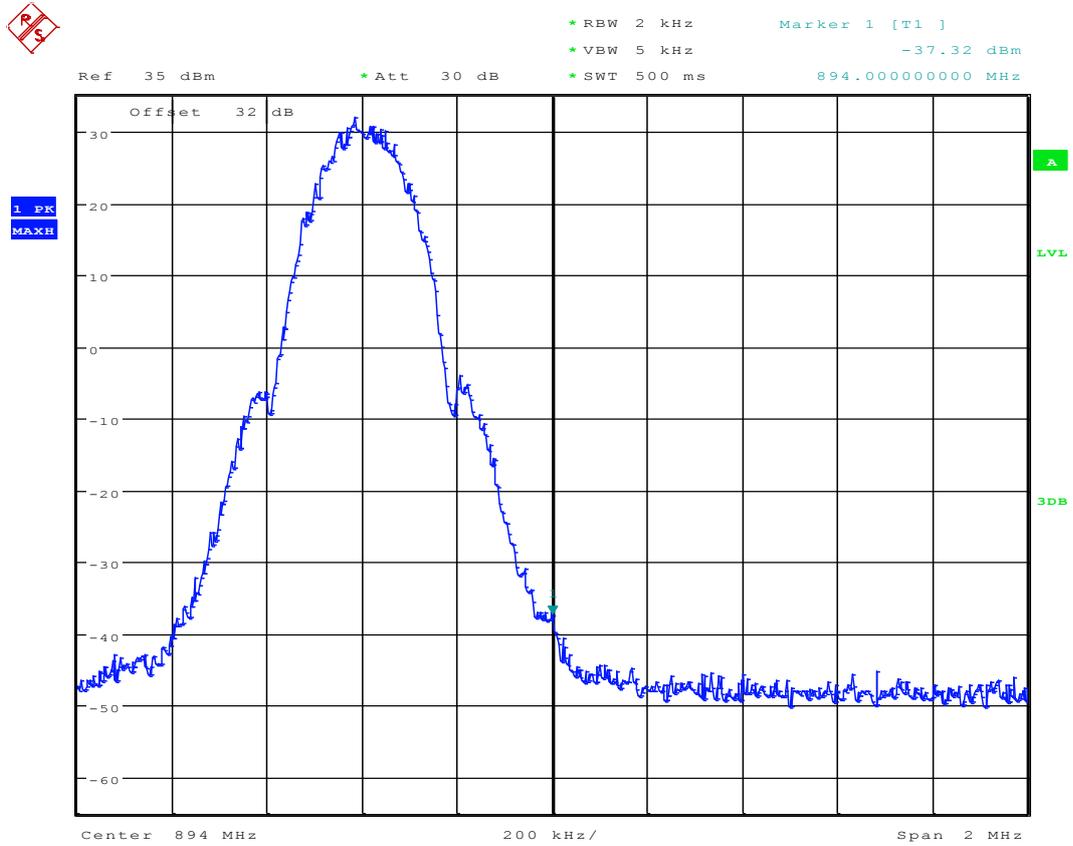
### 2.2.1 Carrier Conf. = MC 1

#### 2.2.1.1 Ch. B



Date: 14.DEC.2011 15:35:40

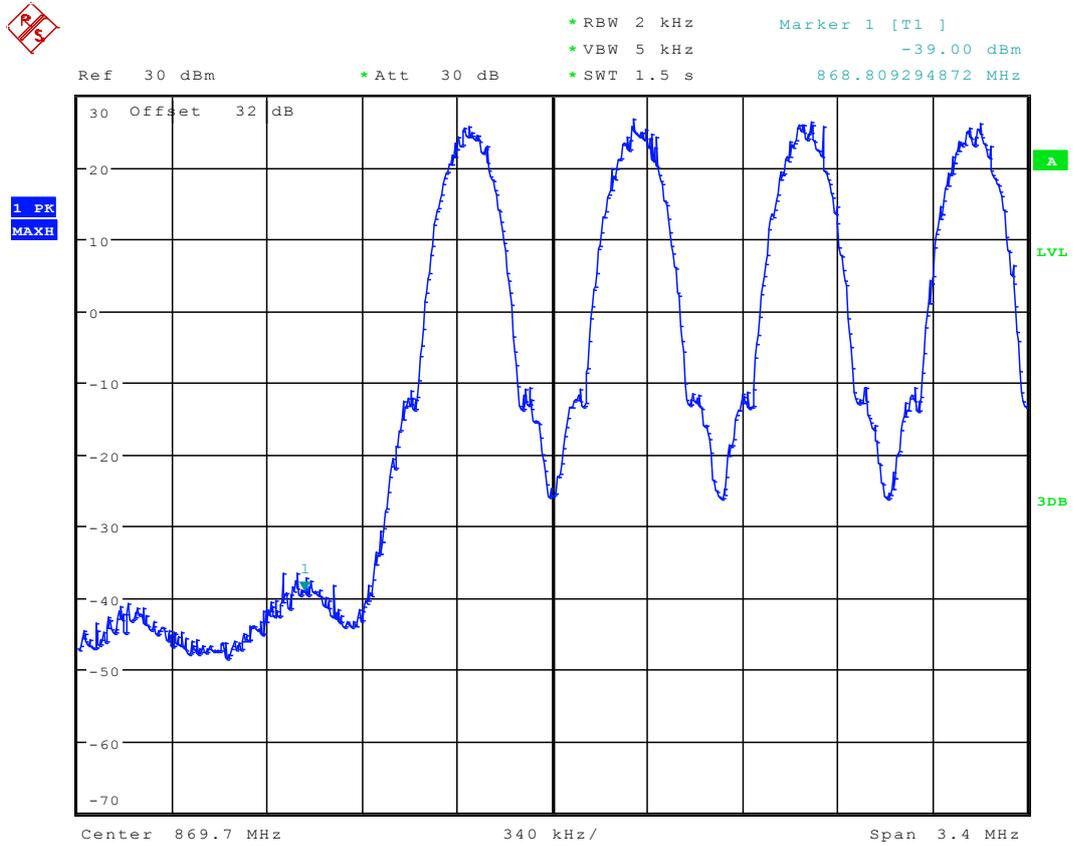
### 2.2.1.2 Ch. T



Date: 14.DEC.2011 15:34:17

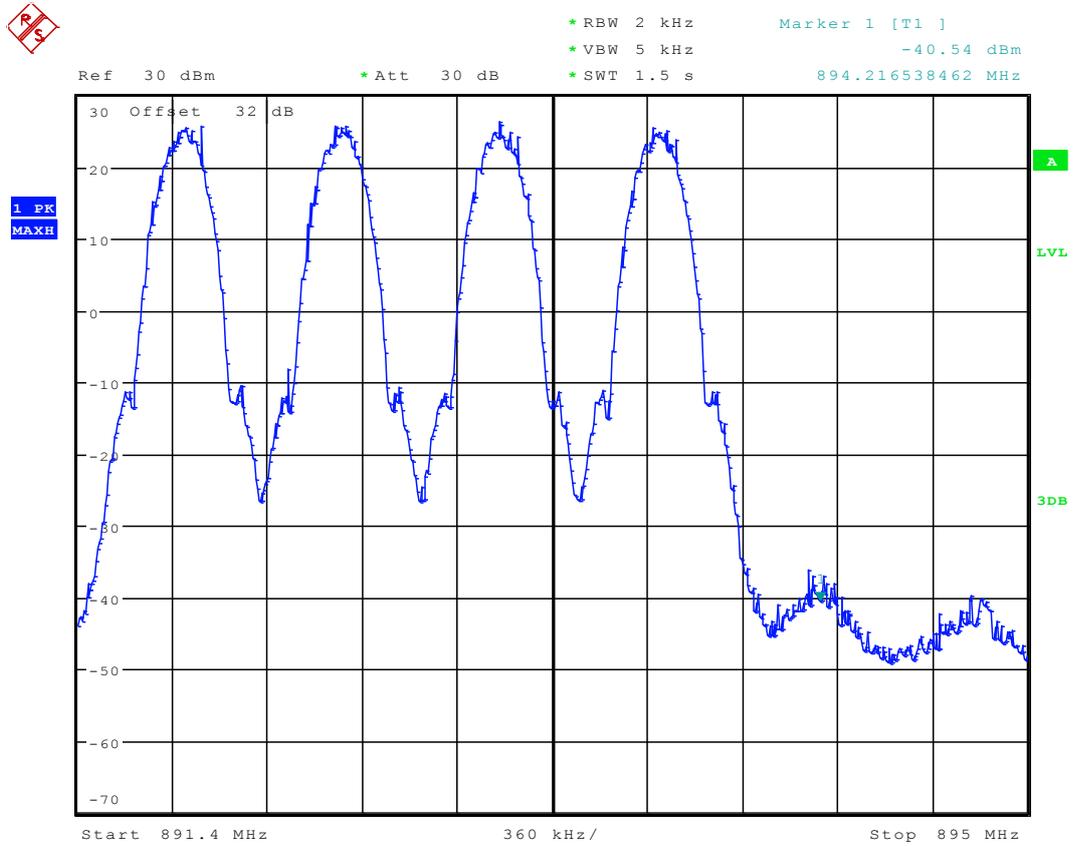
## 2.2.2 Carrier Conf. = MC 4

### 2.2.2.1 Ch. B



Date: 14.DEC.2011 16:06:19

### 2.2.2.2 Ch. T

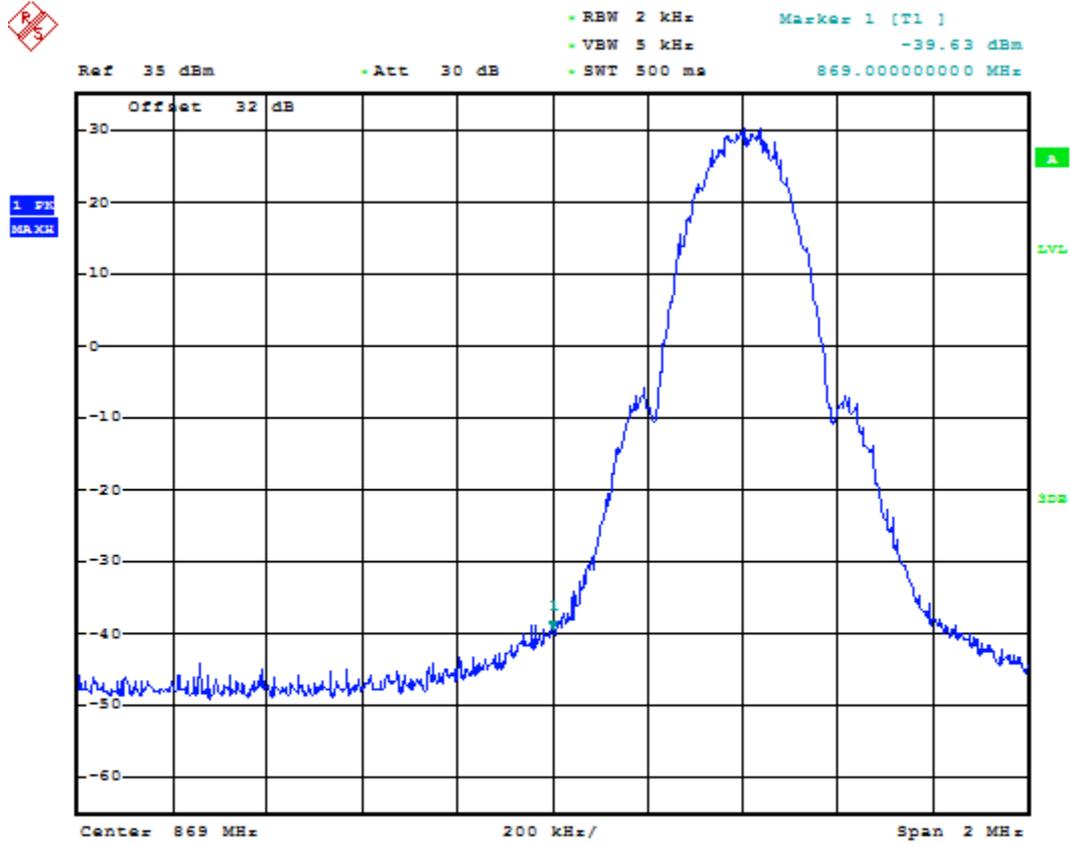


Date: 14.DEC.2011 16:10:20

### 2.3 Test Mode = gTM 2

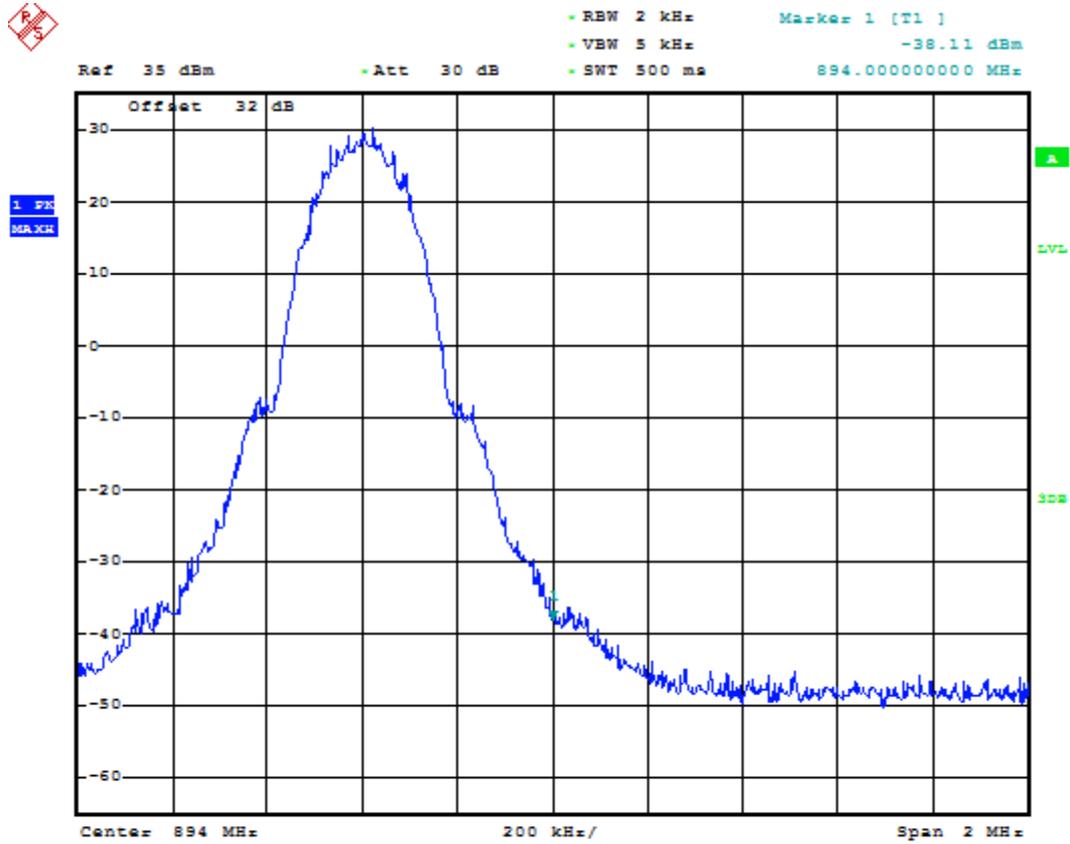
#### 2.3.1 Carrier Conf. = MC 1

##### 2.3.1.1 Ch. B



Date: 14.DEC.2011 15:30:40

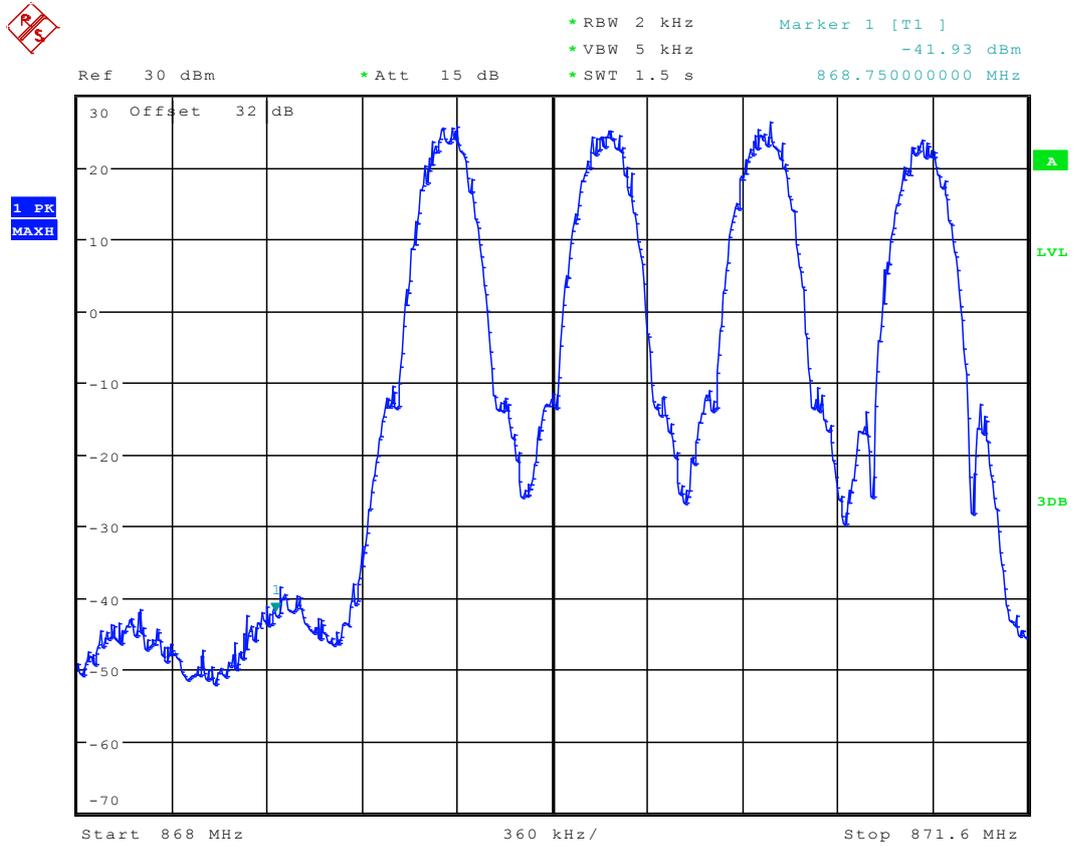
### 2.3.1.2 Ch. T



Date: 14.DEC.2011 15:31:52

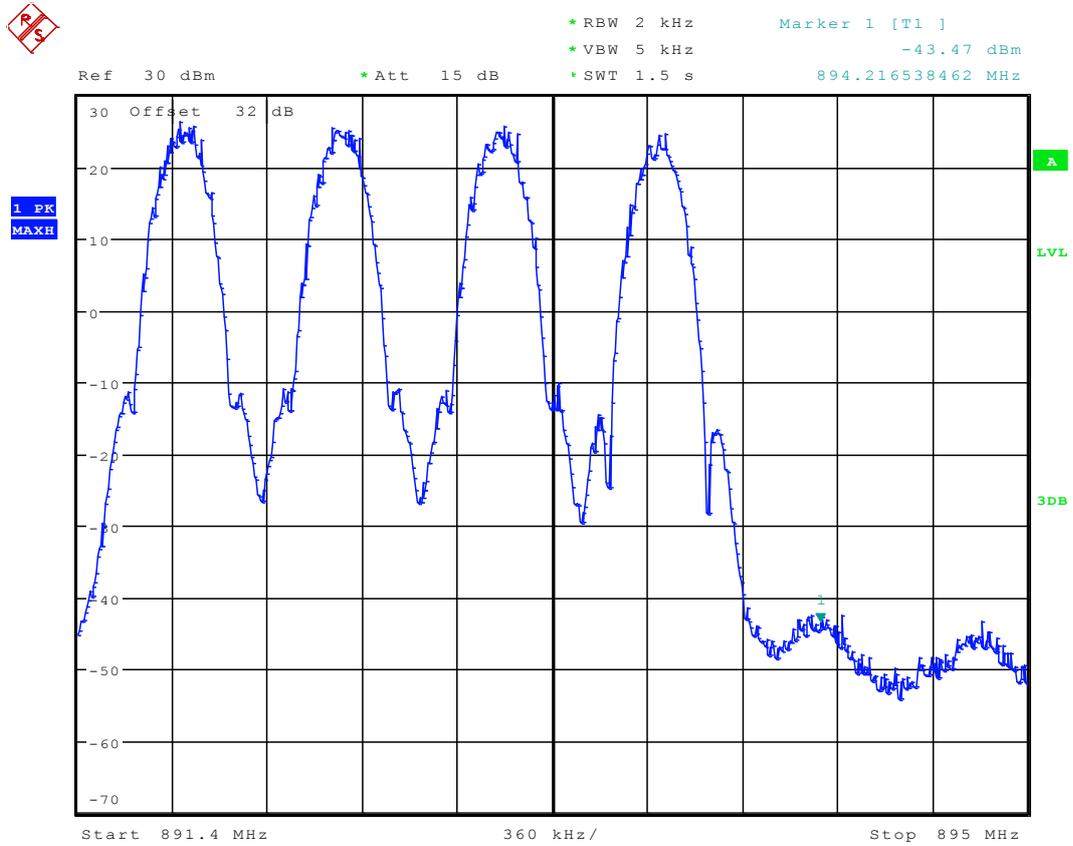
### 2.3.2 Carrier Conf. = MC 4

#### 2.3.2.1 Ch. B



Date: 14.DEC.2011 16:15:28

### 2.3.2.2 Ch. T



Date: 14.DEC.2011 16:12:40



# Appendix E: Spurious Emission at Antenna Terminals



## 1 Result Table

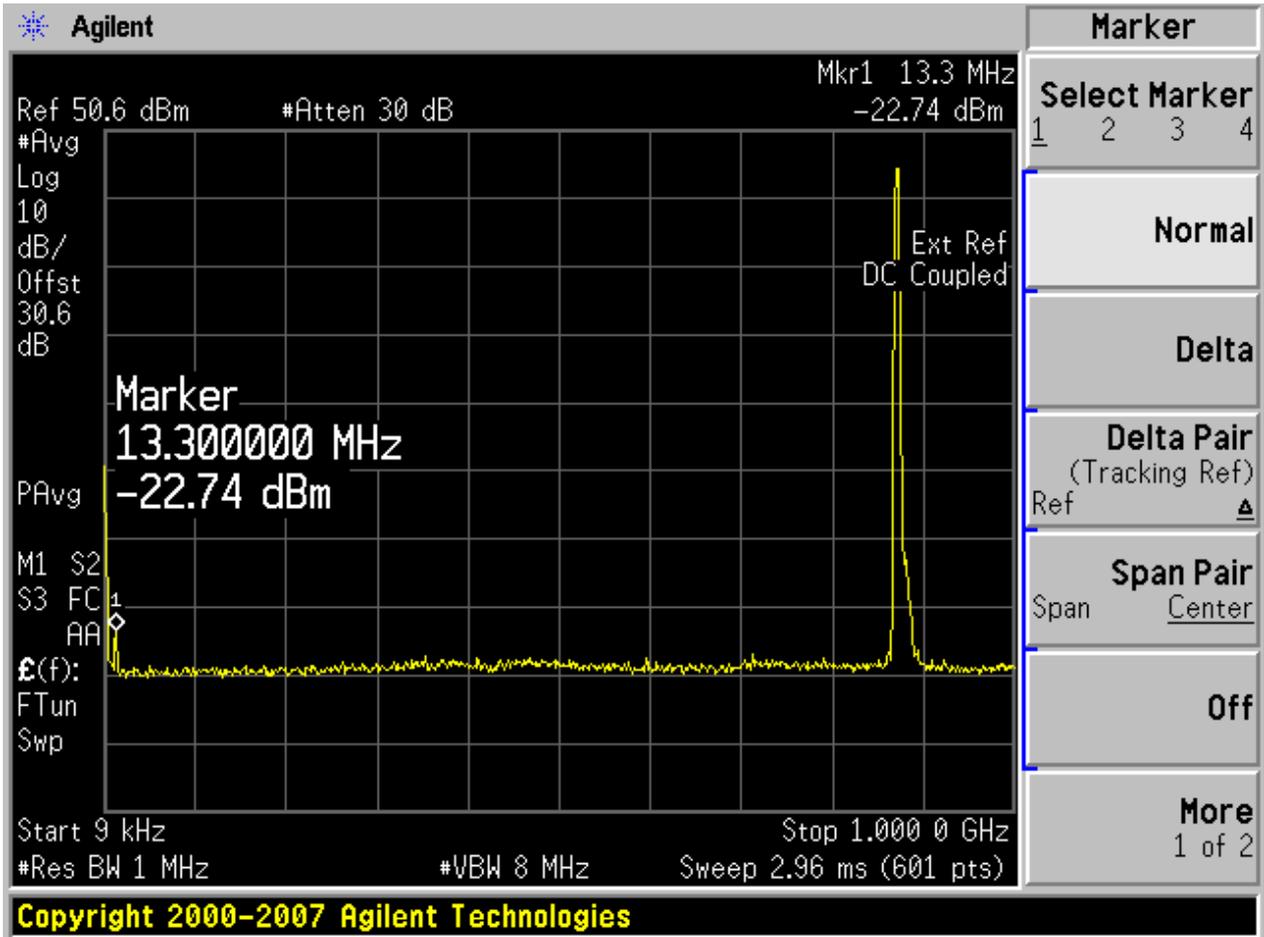
Test Mode	Carrier Conf.	RF Ch.	Spurious Emission at Antenna Terminals [dBm]	Verdict
uTM 1	MC 1	B	-22.74	Pass
		T	-16.85	Pass
	MC 2	B	-21.45	Pass
		T	-21.31	Pass
gTM 1	MC 1	B	-24.98	Pass
		T	-24.20	Pass
	MC 2	B	-17.58	Pass
		T	-24.20	Pass
gTM 2	MC 1	B	-24.53	Pass
		T	-23.08	Pass
	MC 2	B	-18.62	Pass
		T	-19.34	Pass

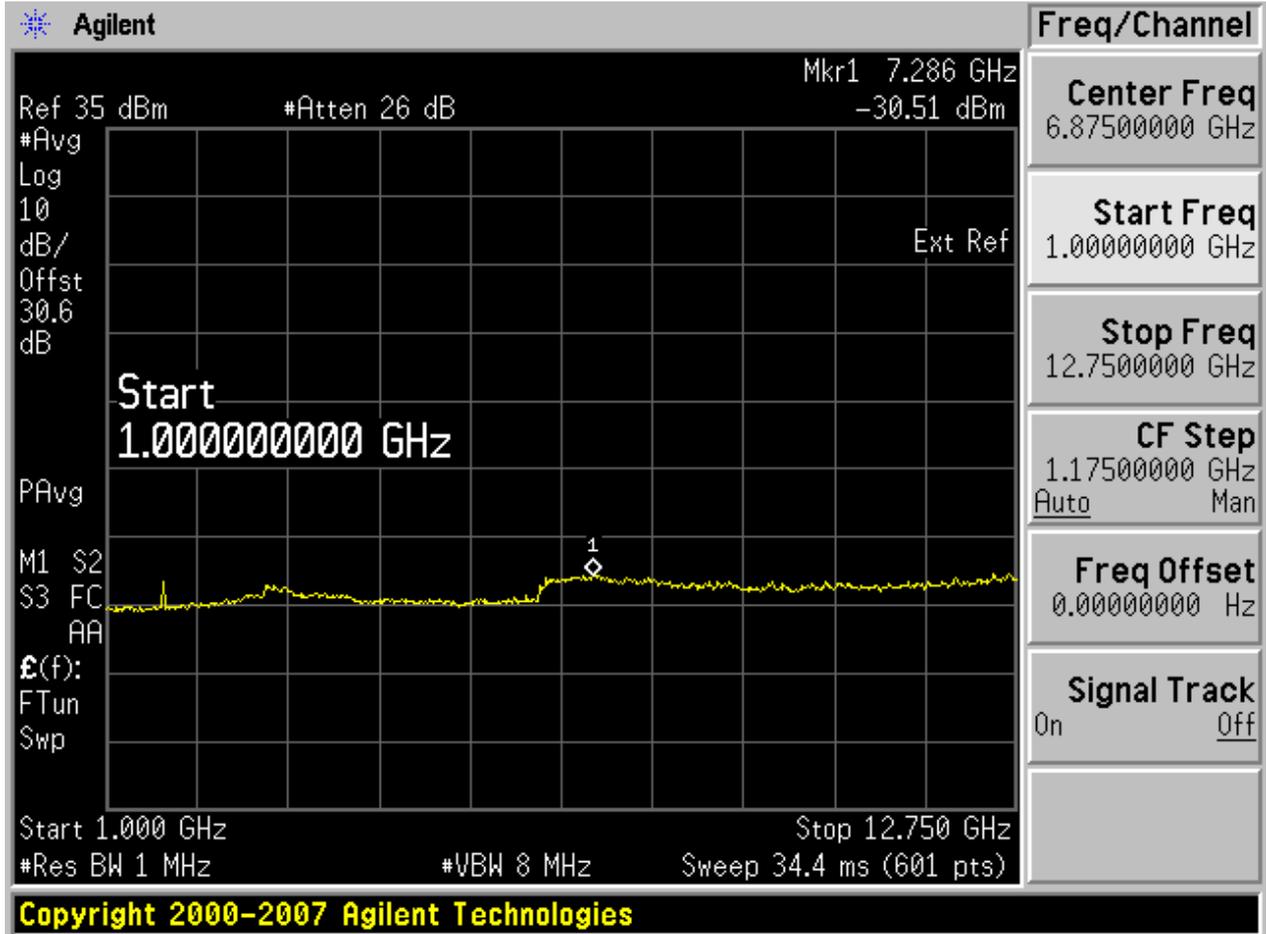
## 2 Test Plot

### 2.1 Test Mode = uTM 1

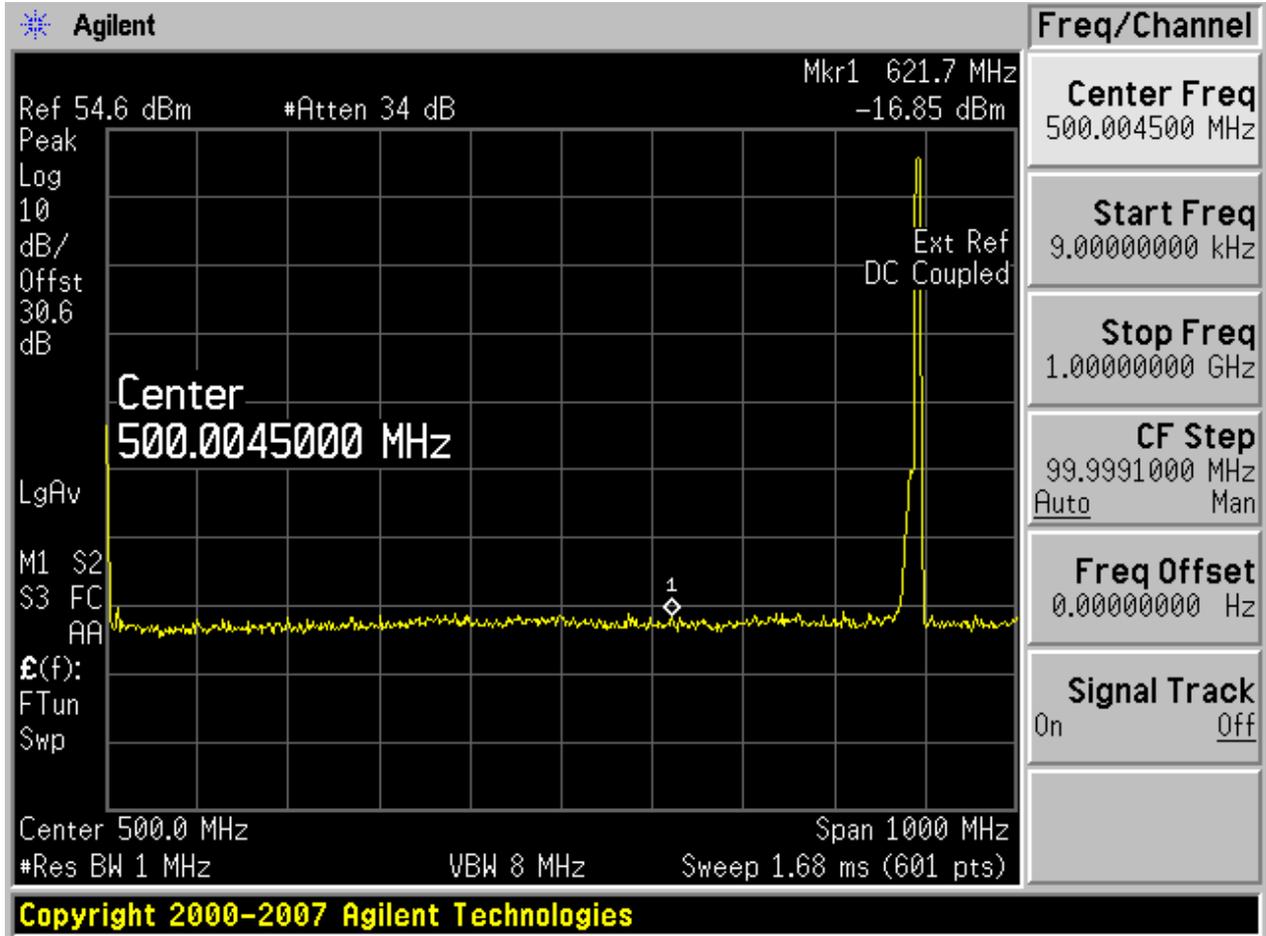
#### 2.1.1 Carrier Conf. = MC 1

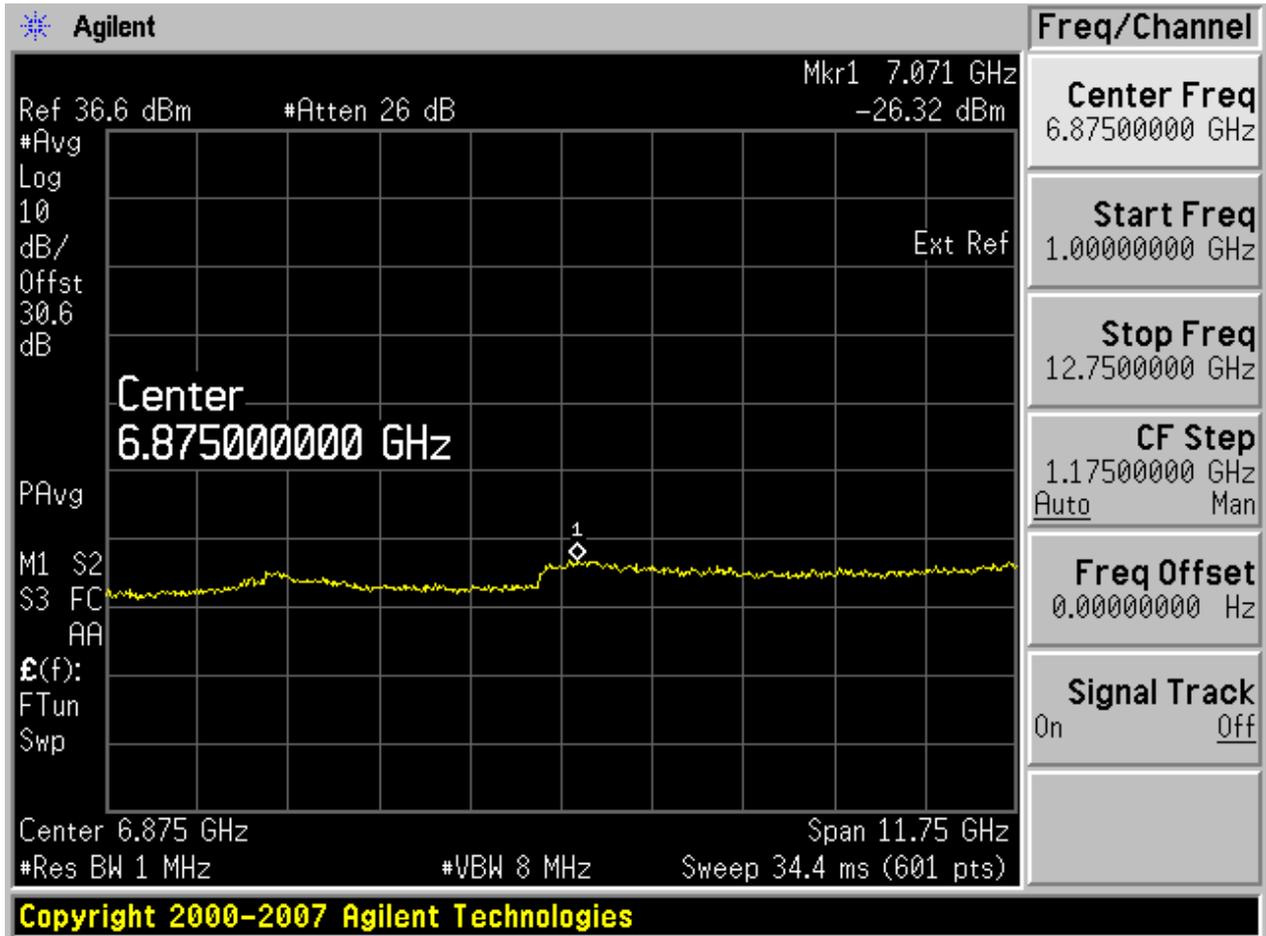
##### 2.1.1.1 Ch. B





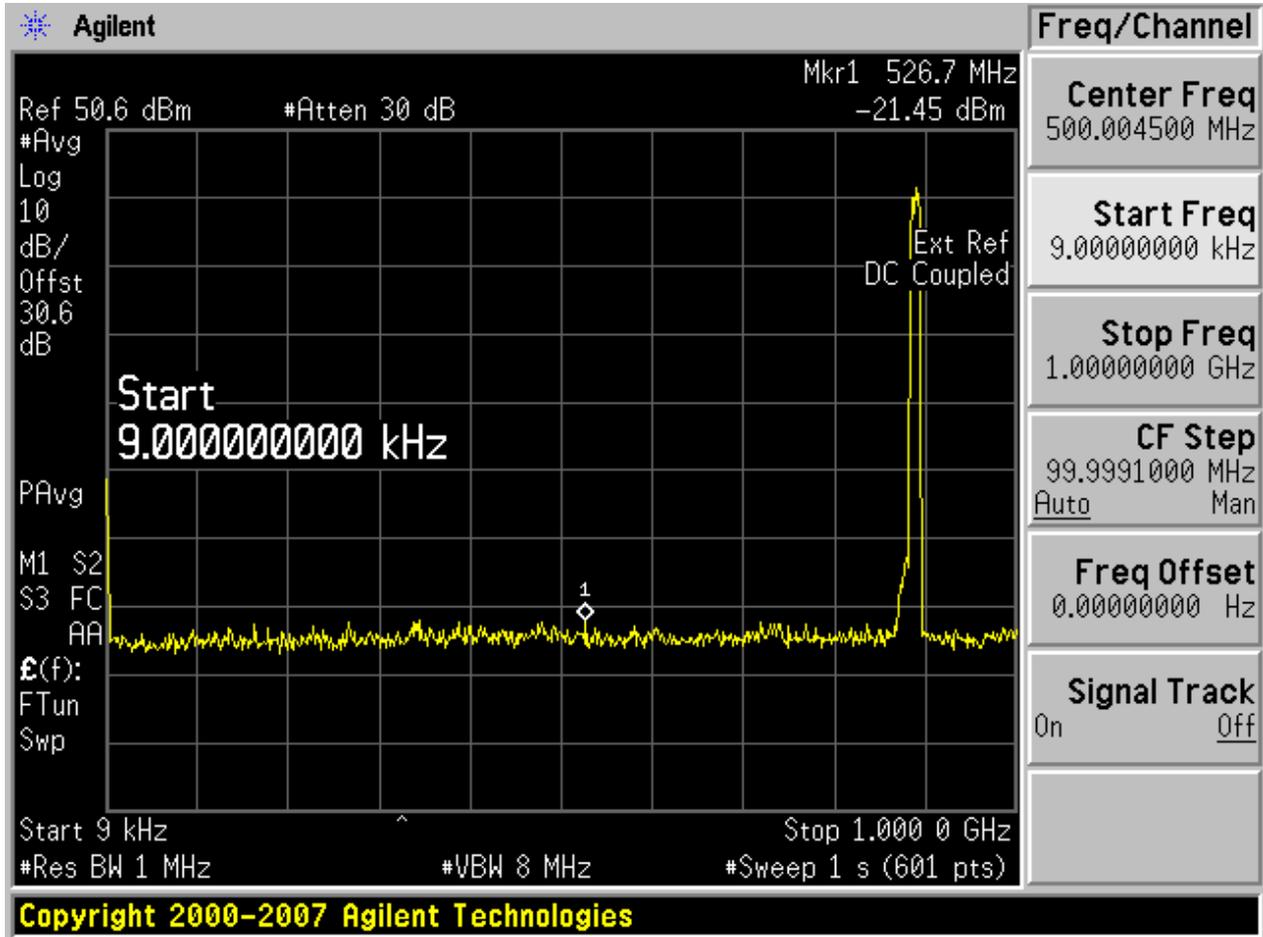
2.1.1.2 Ch. T

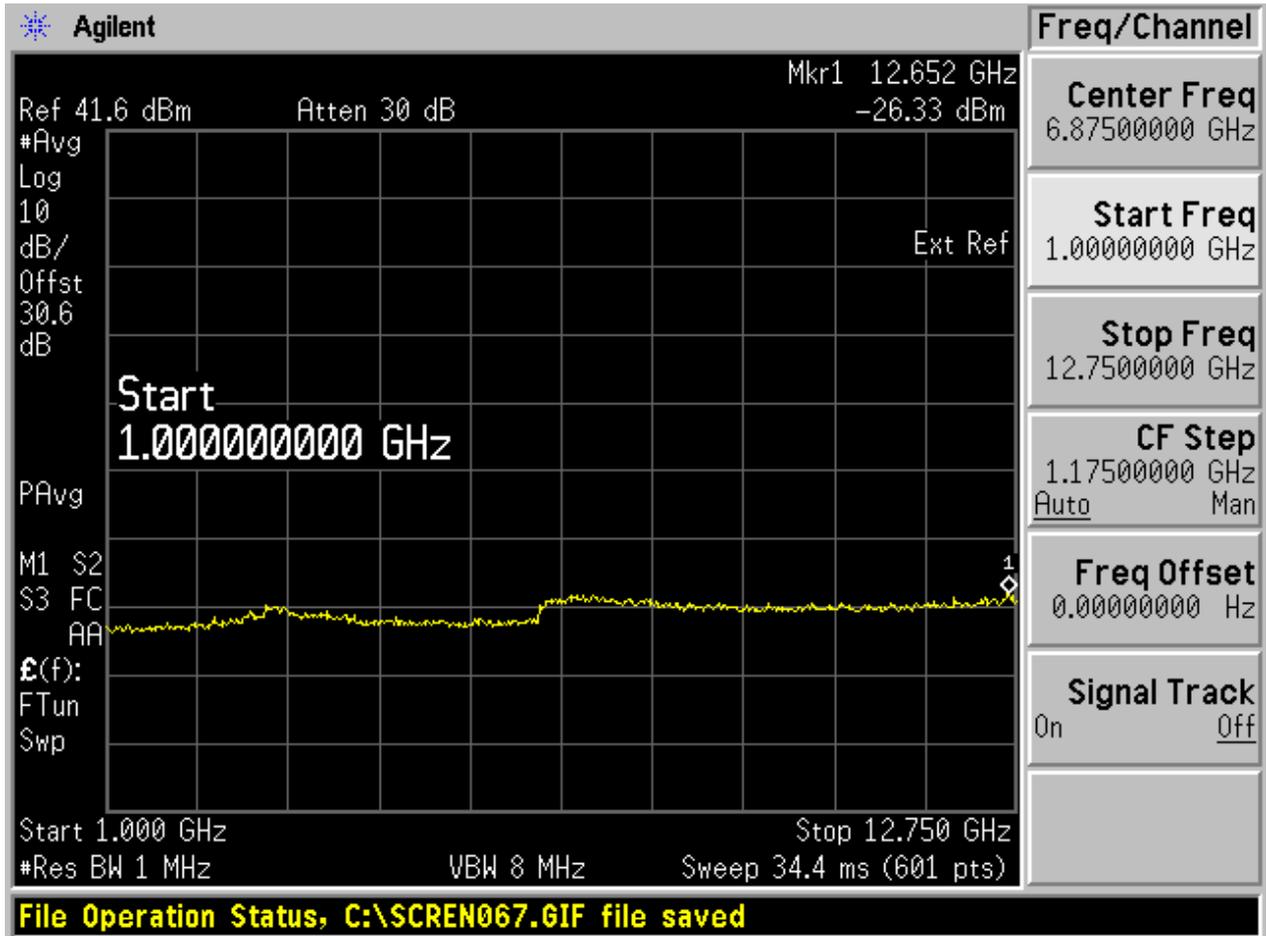




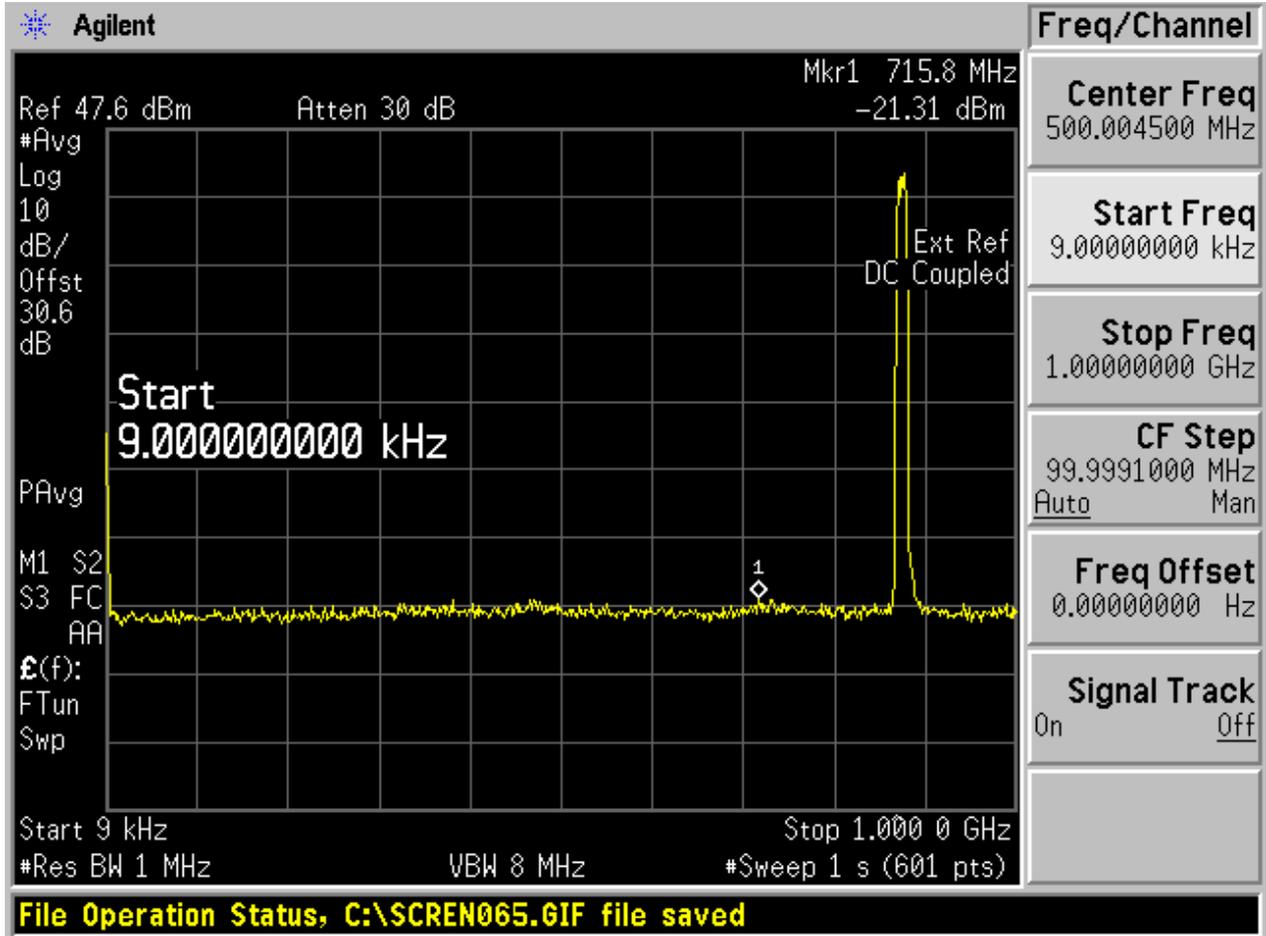
2.1.2 Carrier Conf. = MC 2

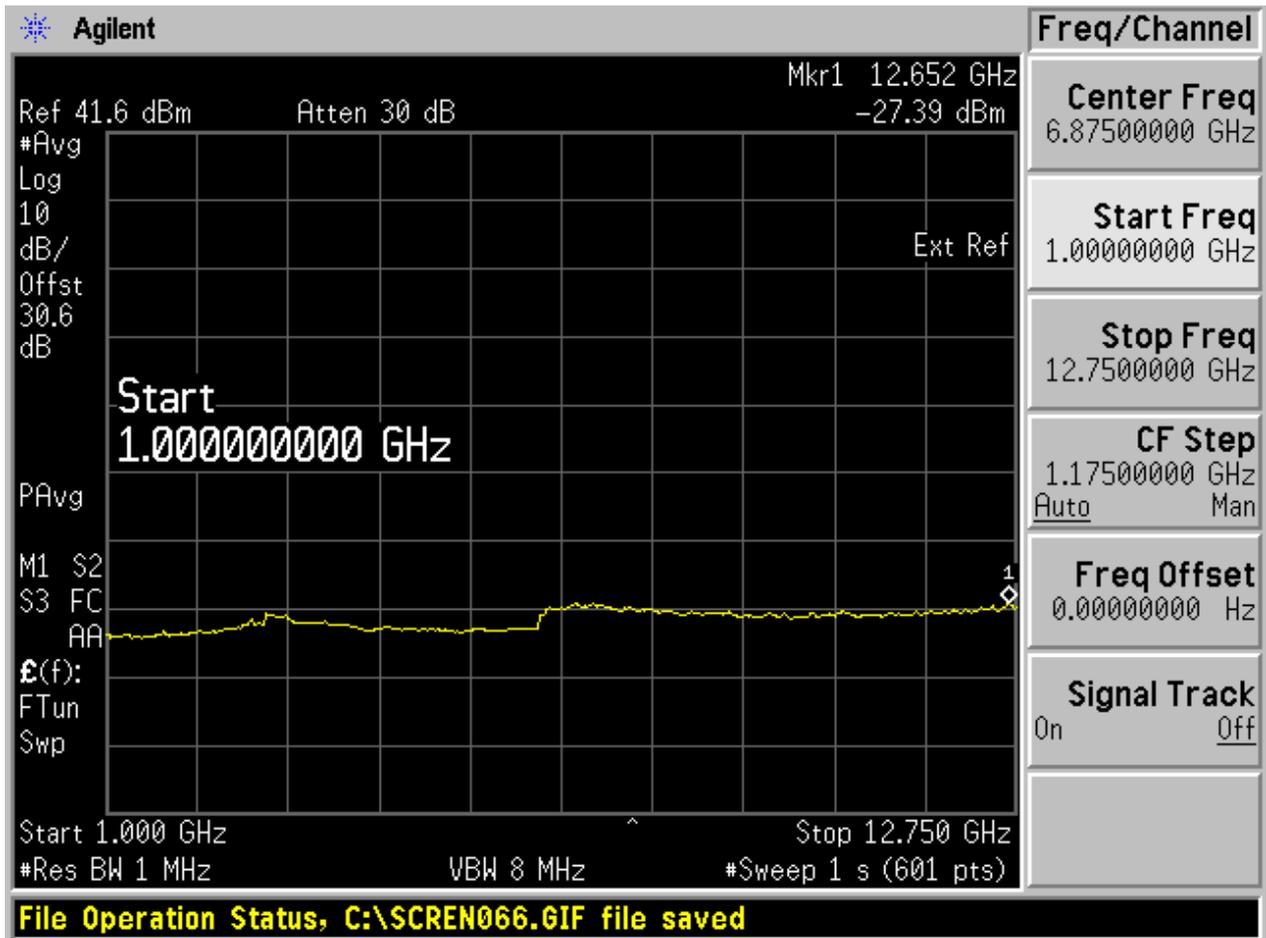
2.1.2.1 Ch. B





2.1.2.2 Ch. T



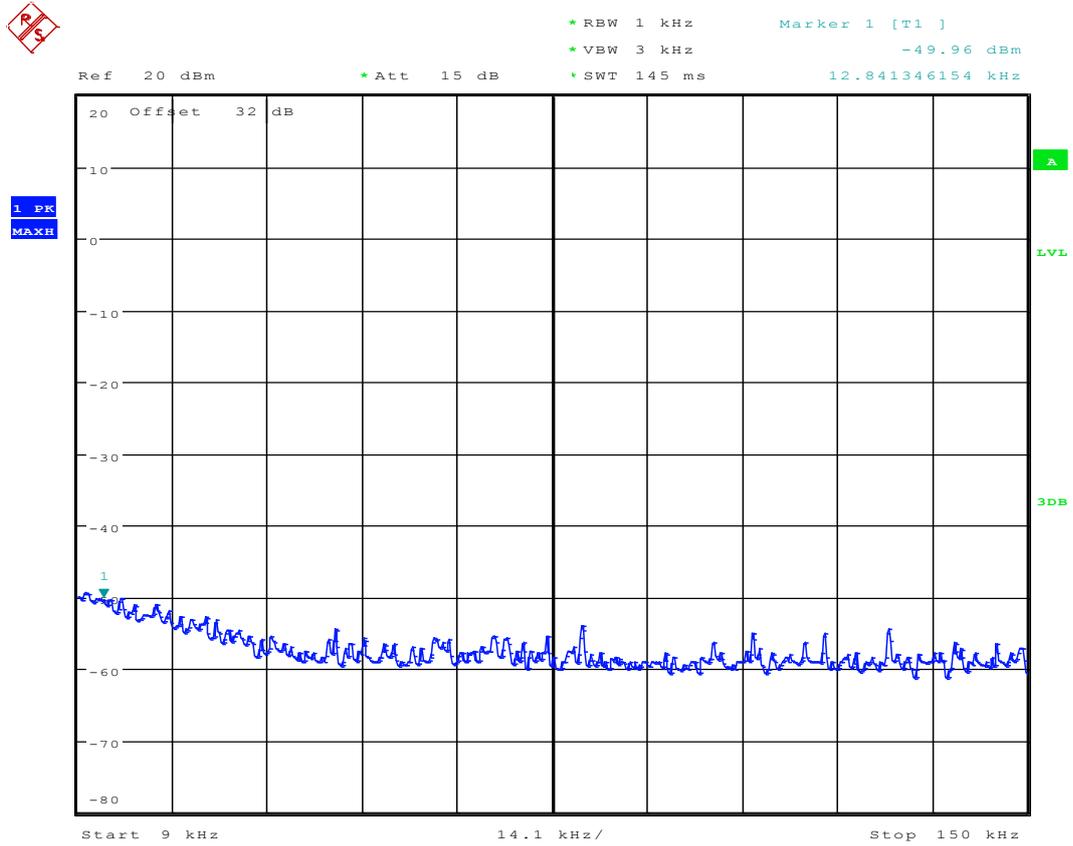




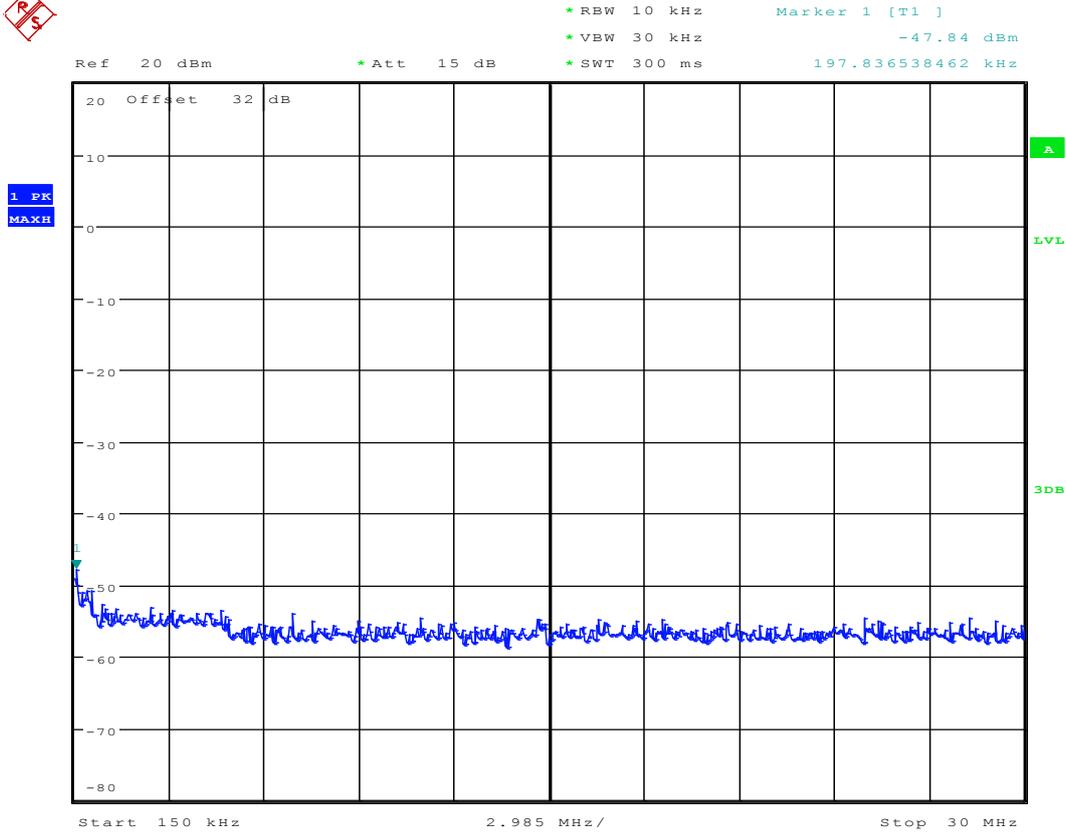
## 2.2 Test Mode = gTM 1

### 2.2.1 Carrier Conf. = MC 1

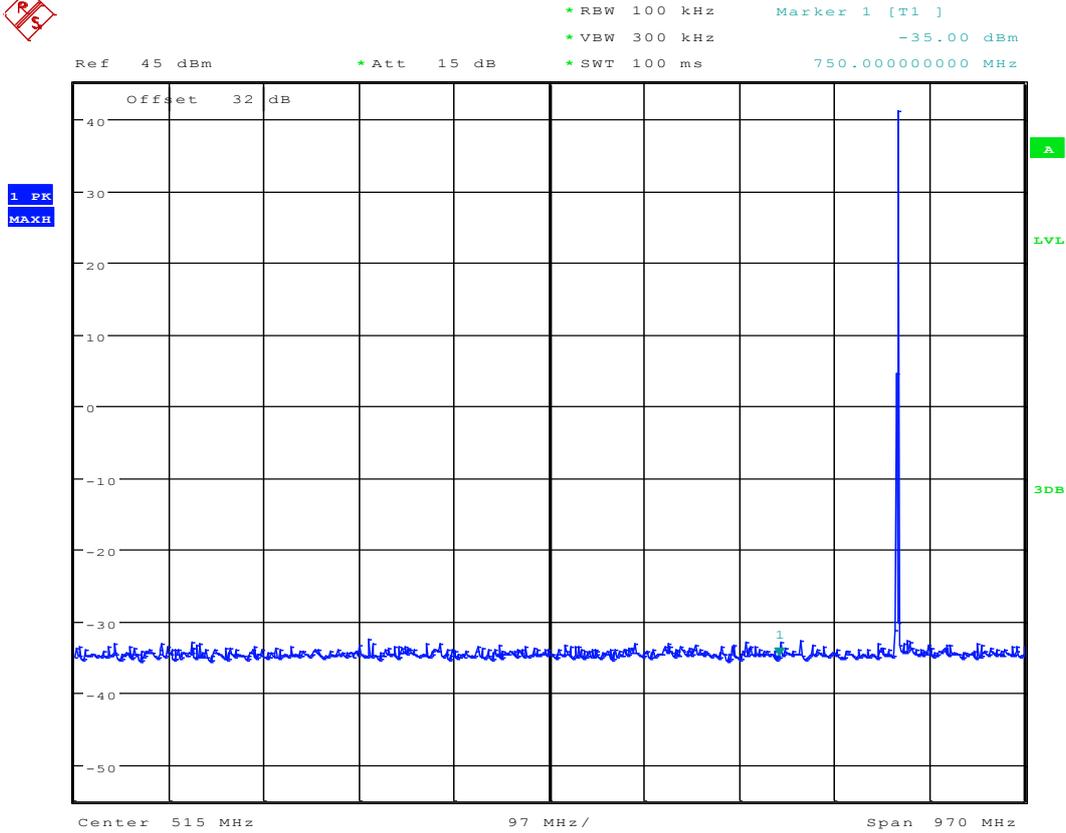
#### 2.2.1.1 Ch. B



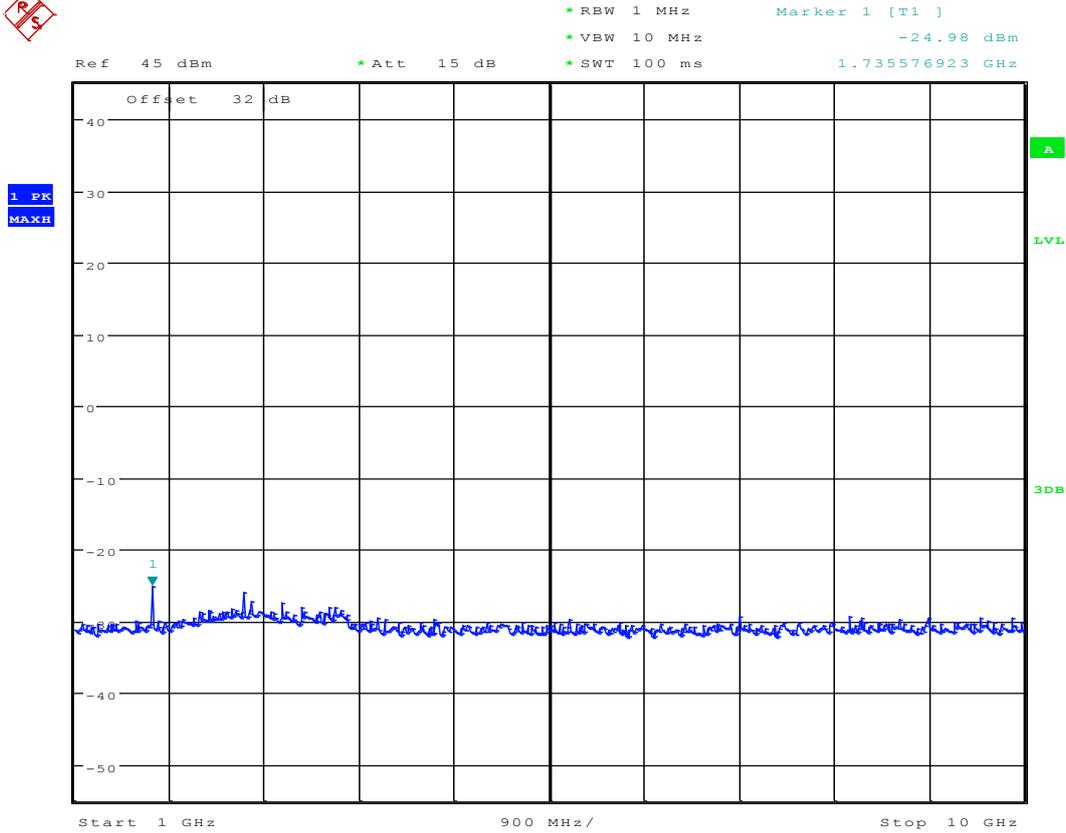
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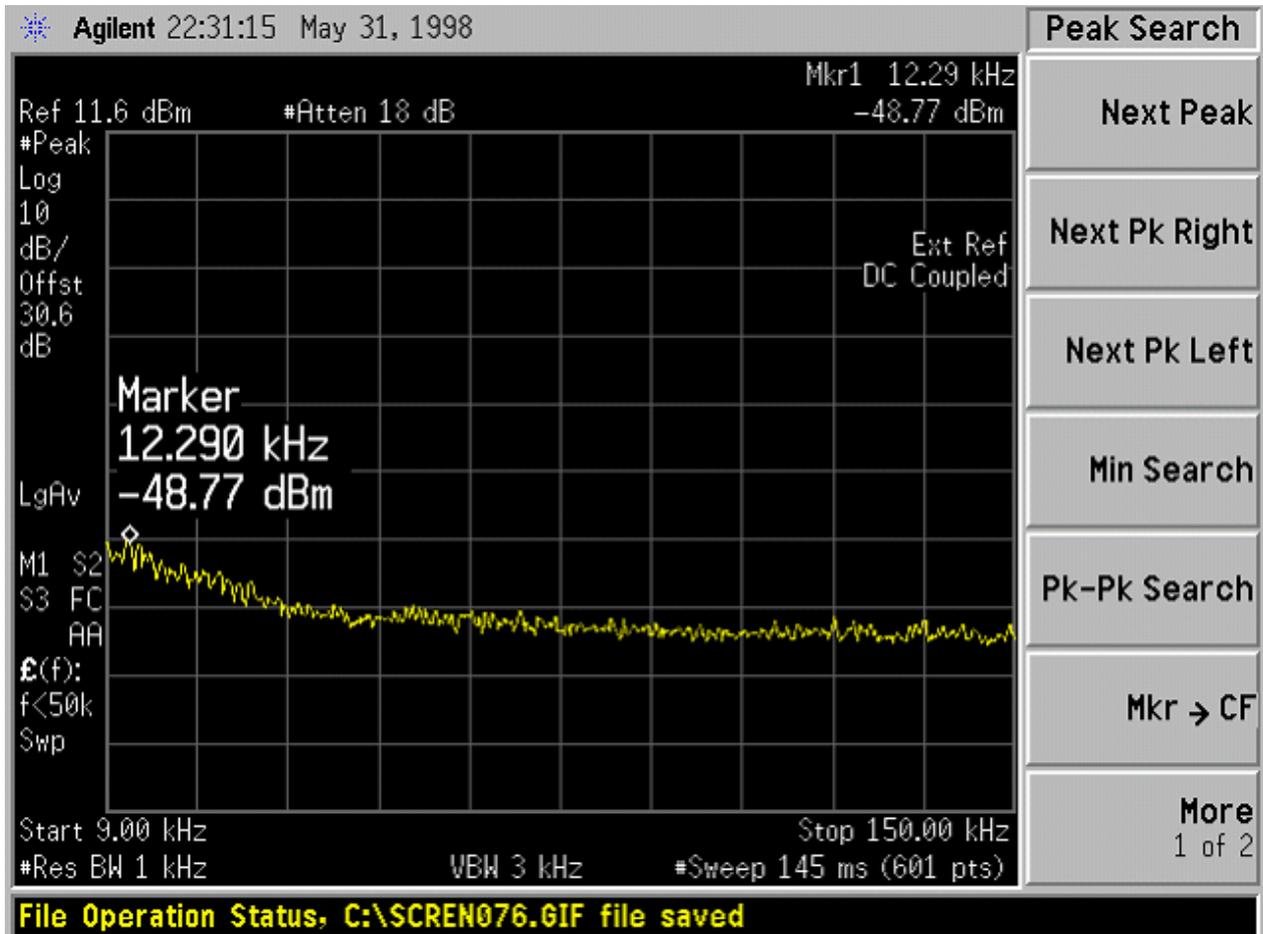


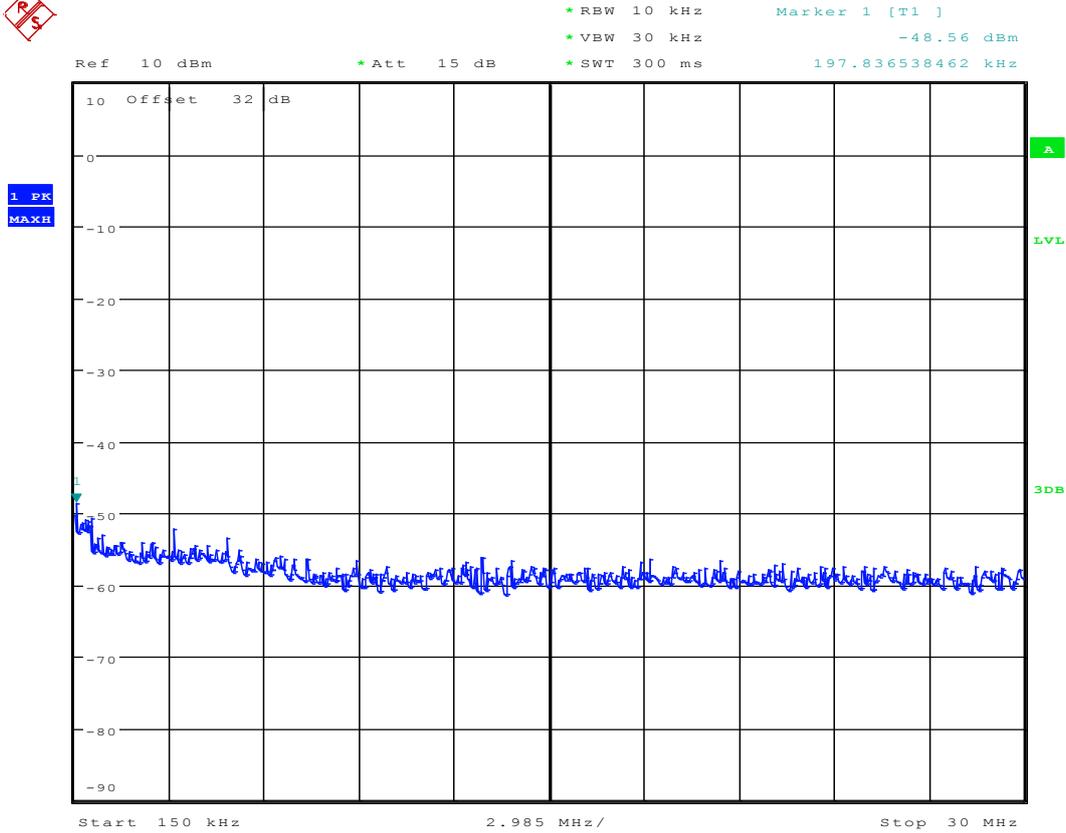
Date: 14.DEC.2011 18:34:21



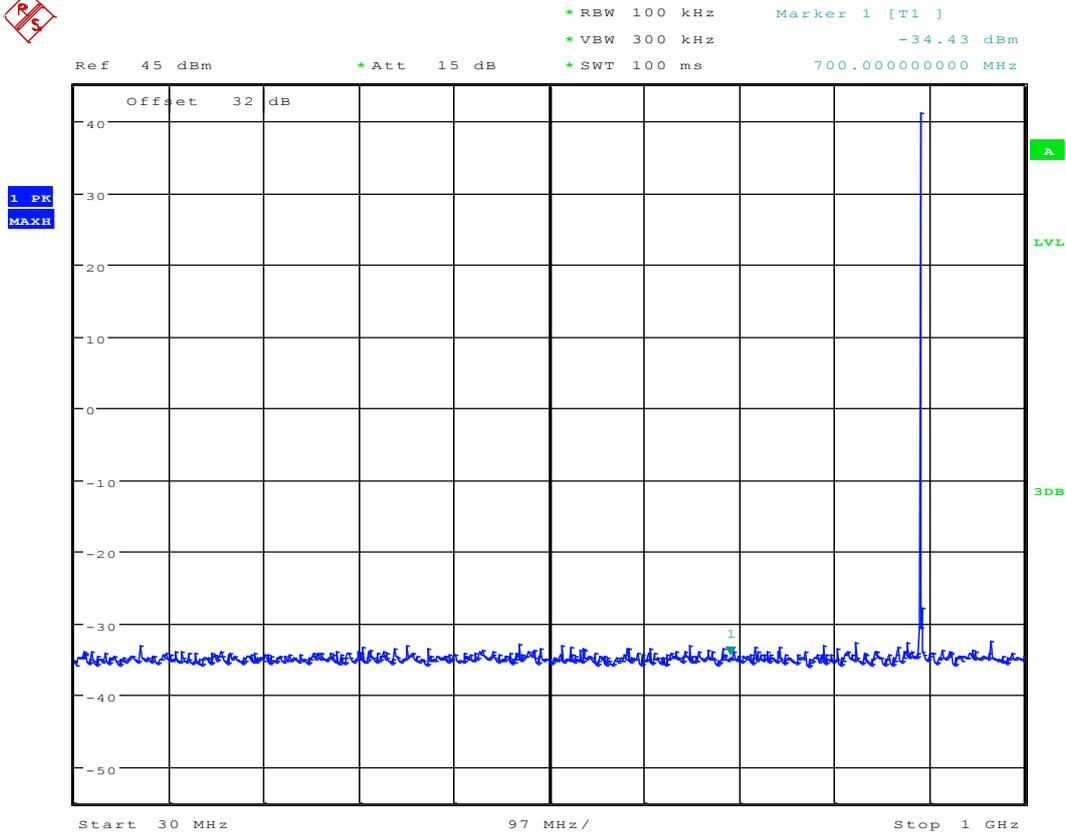
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2.2.1.2 Ch. T

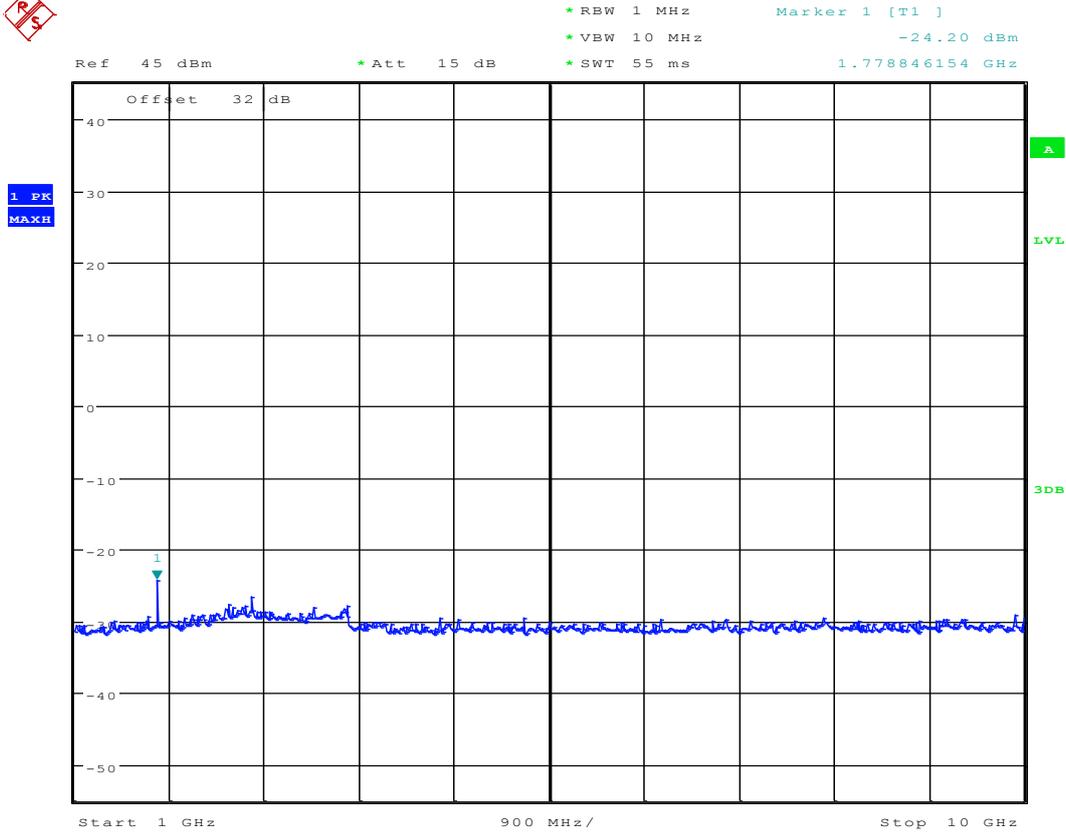




Date: 14.DEC.2011 18:41:43



Date: 14.DEC.2011 18:43:15

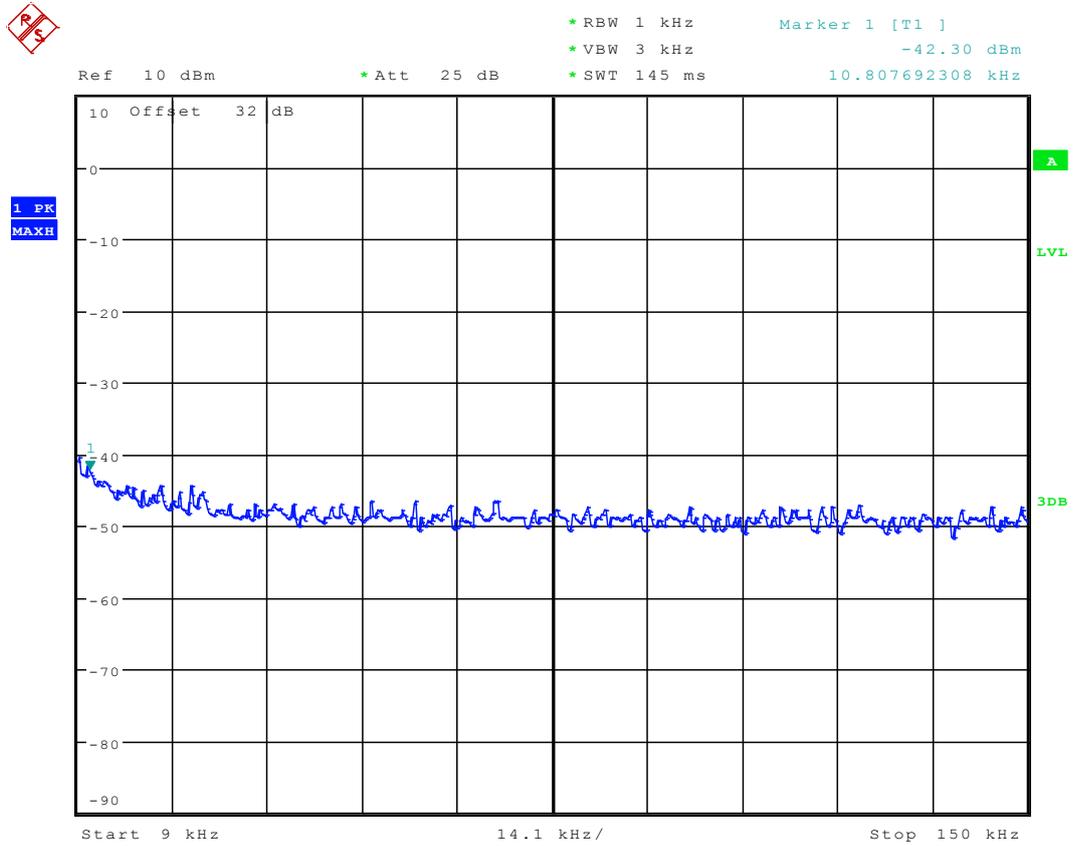


Date: 14.DEC.2011 18:44:09

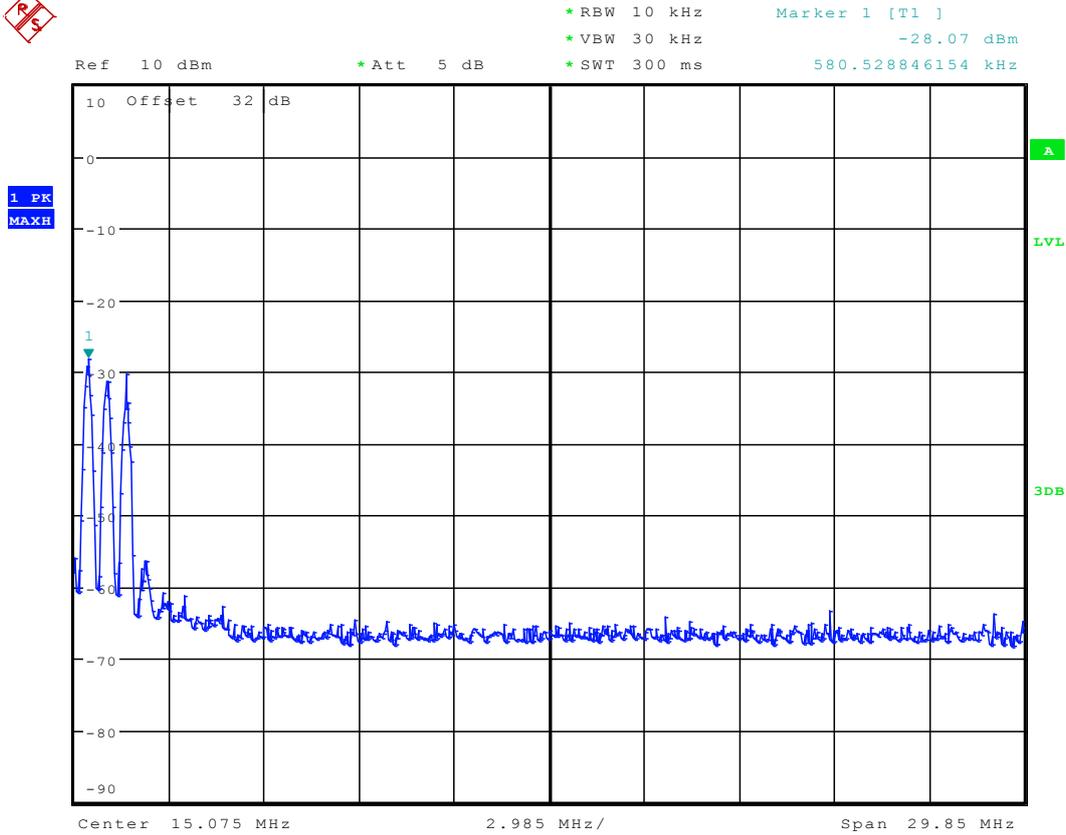


## 2.2.2 Carrier Conf. = MC 4

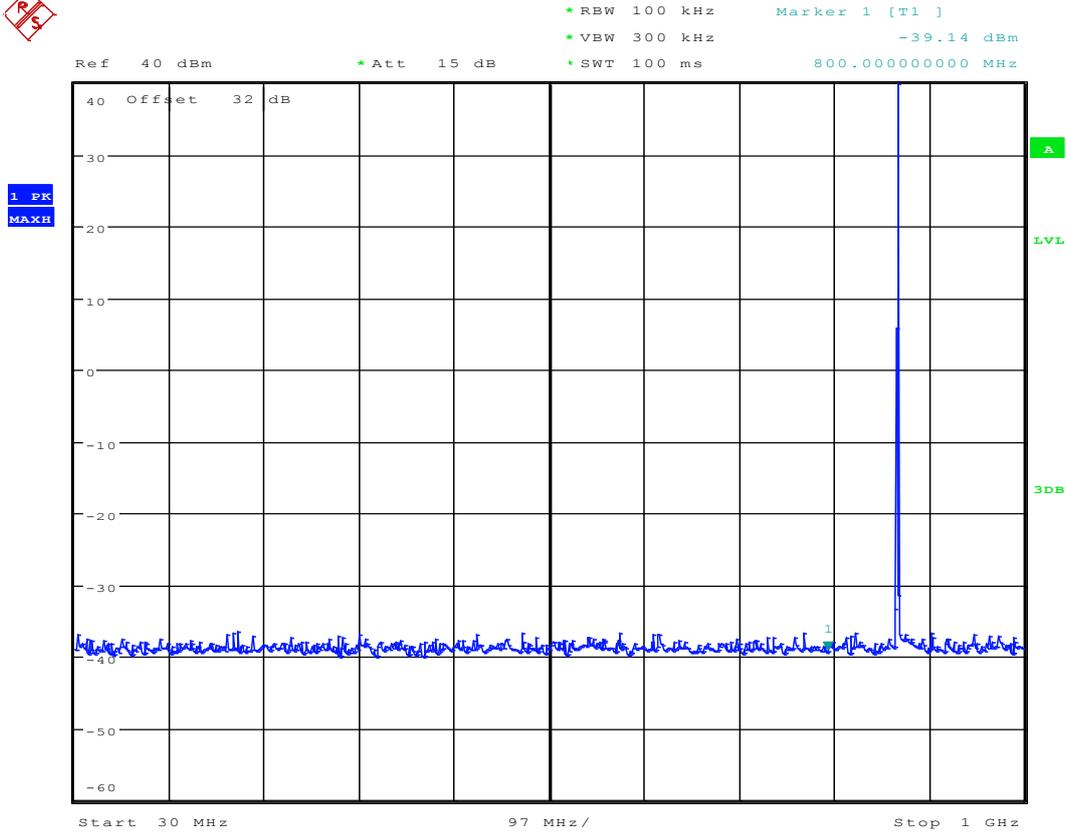
### 2.2.2.1 Ch. B



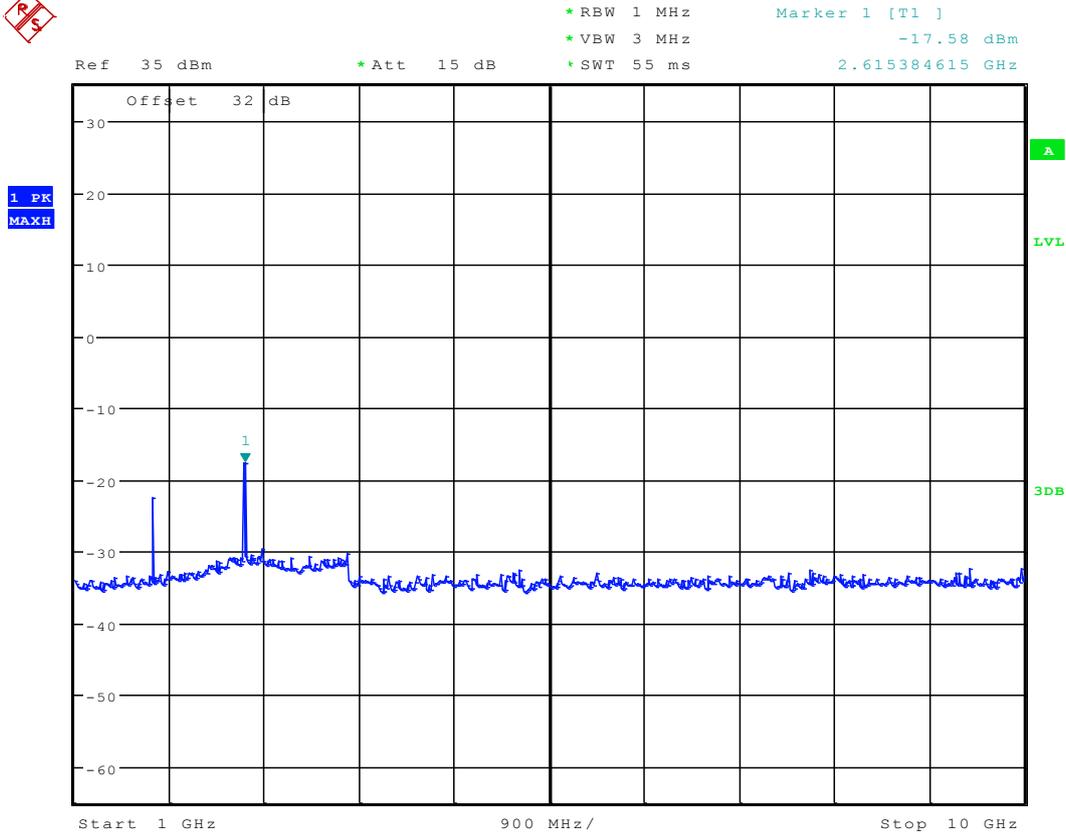
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Date: 14.DEC.2011 12:01:26



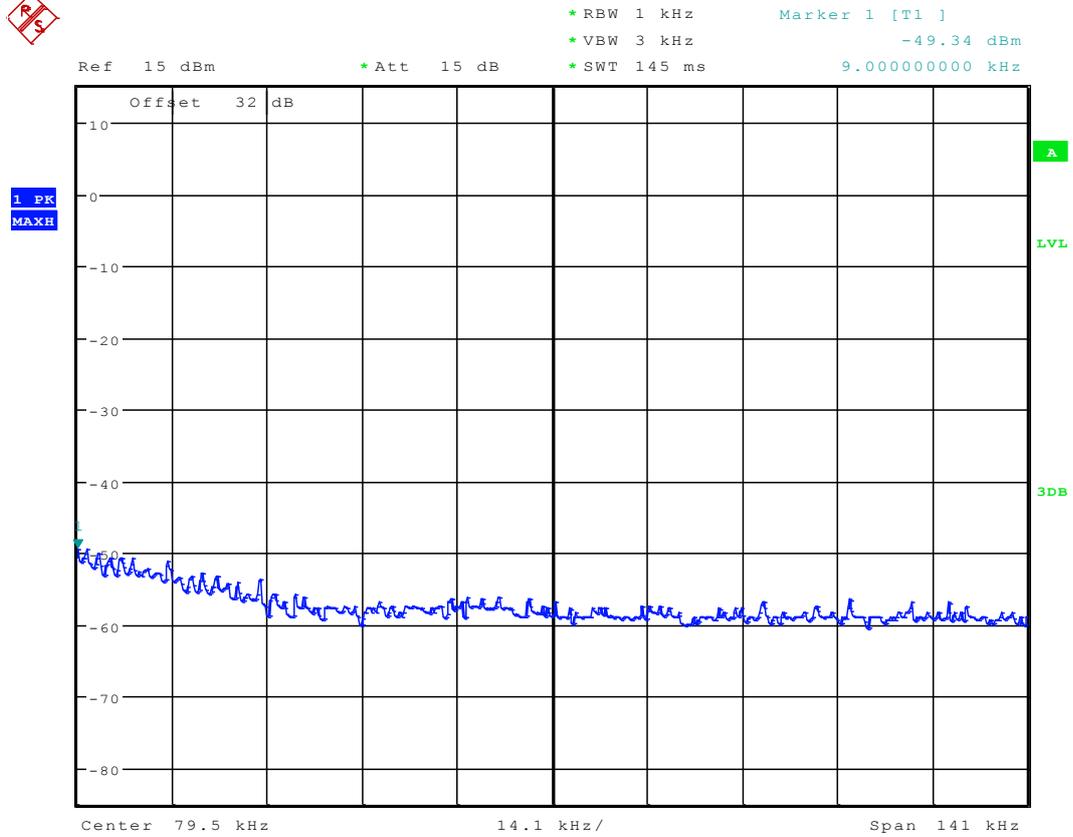
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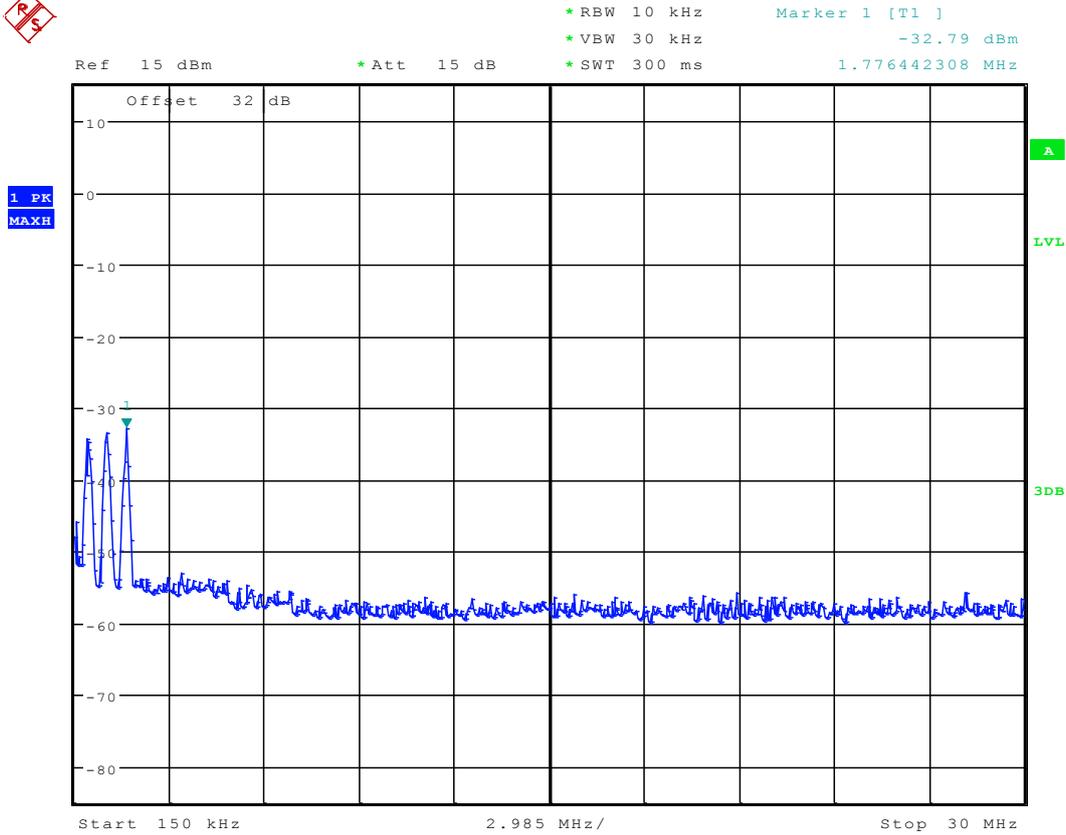
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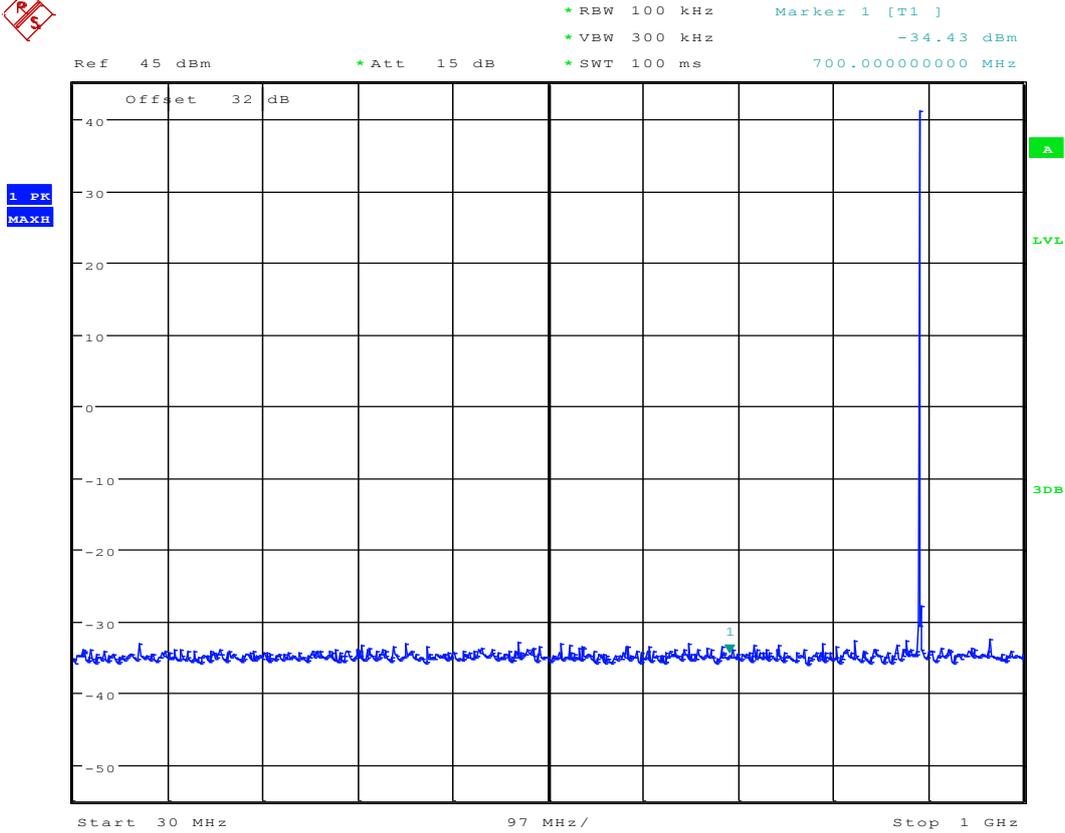
### 2.2.2.2 Ch. T



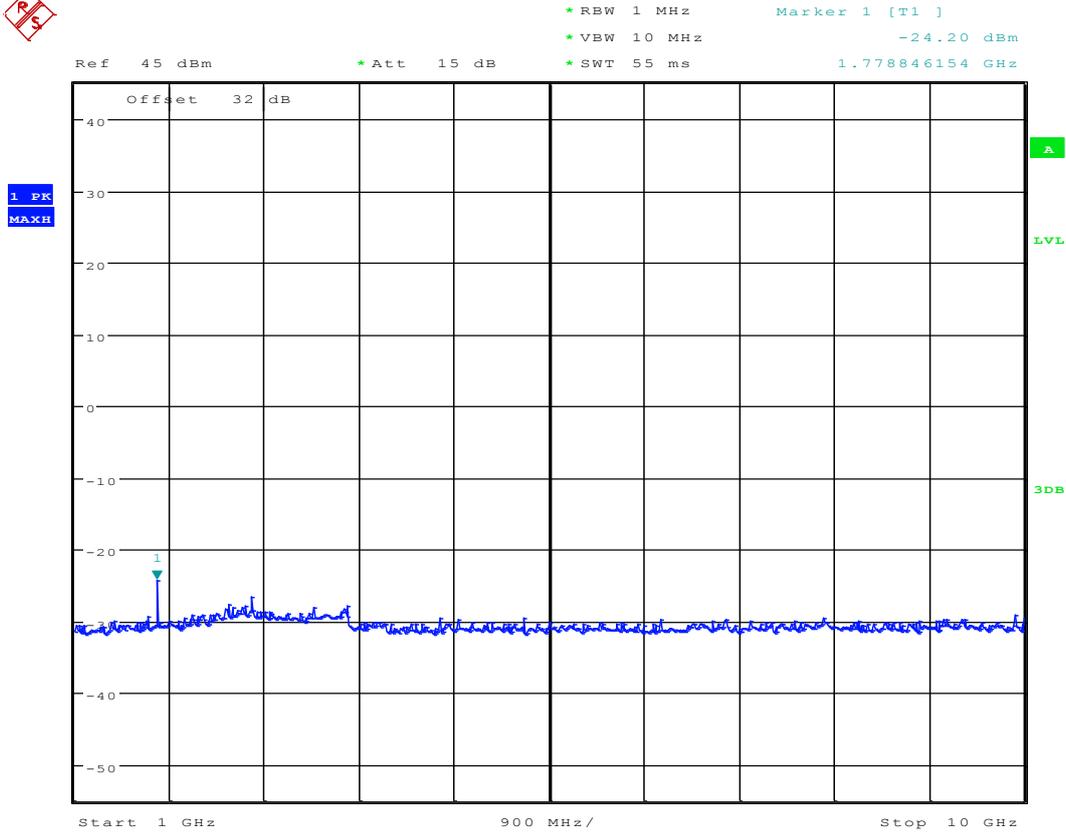
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Date: 14.DEC.2011 12:14:47



Date: 14.DEC.2011 18:43:15



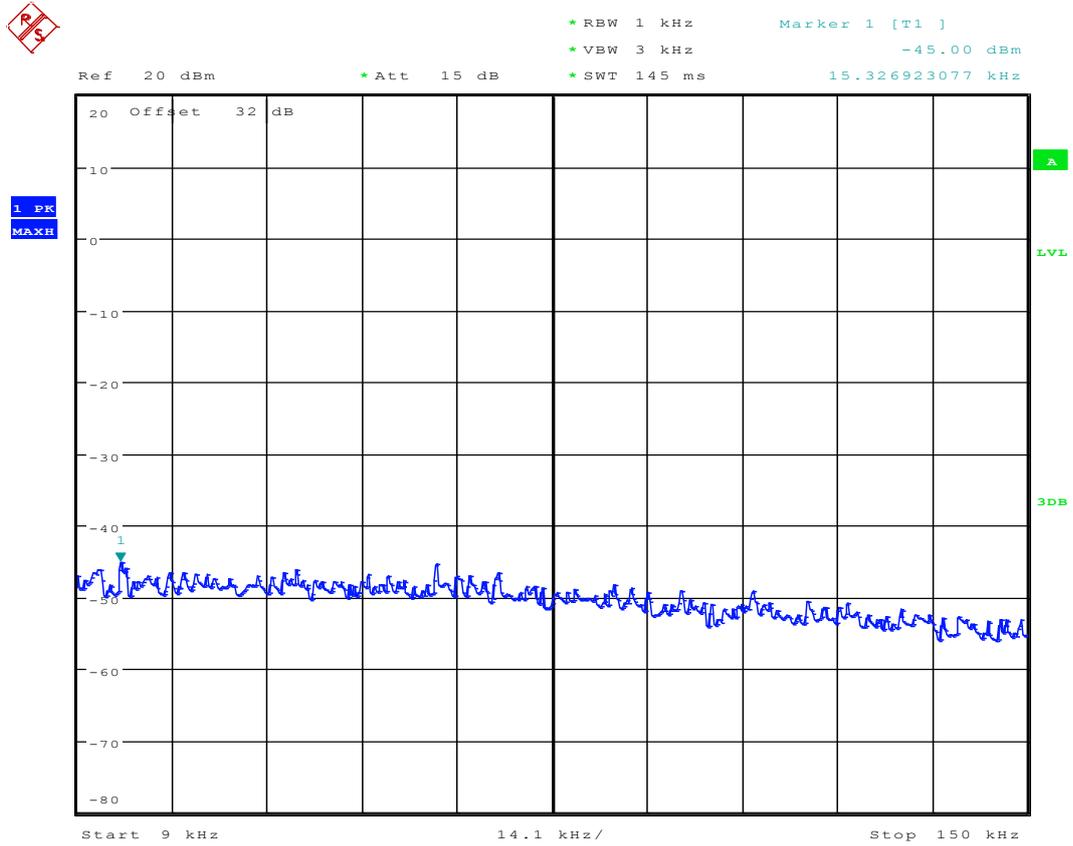
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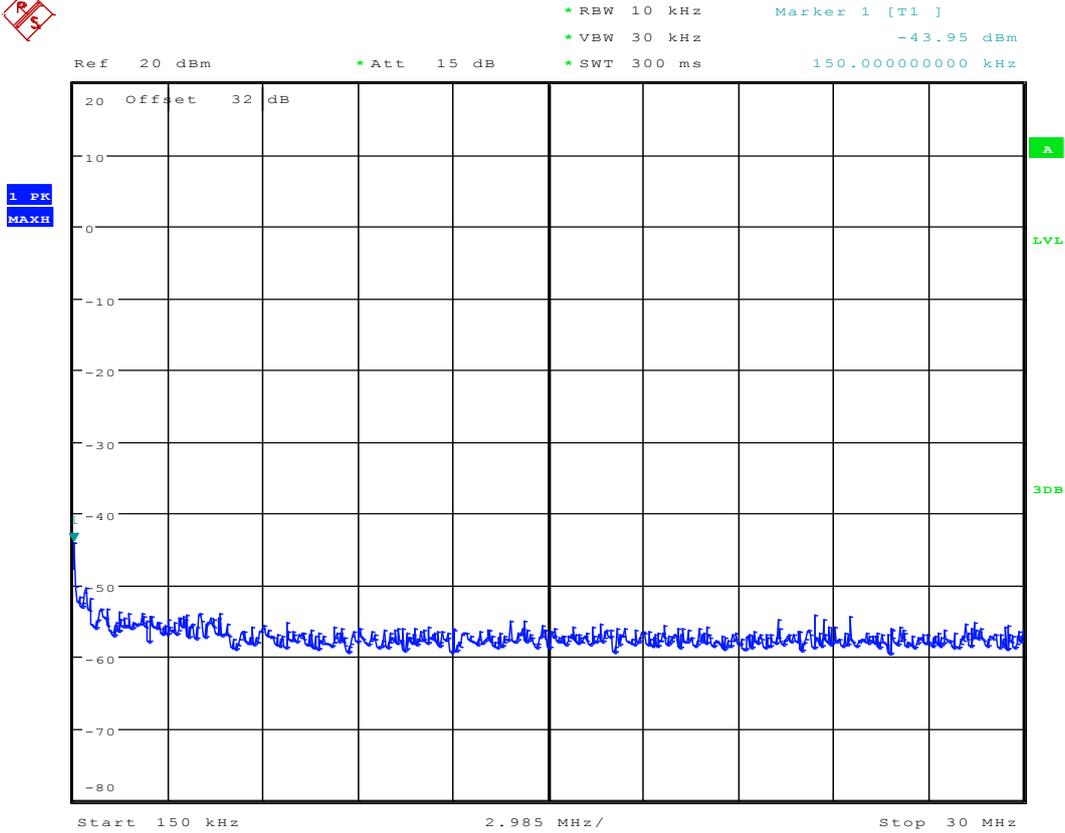
### 2.3 Test Mode = gTM 2

#### 2.3.1 Carrier Conf. = MC 1

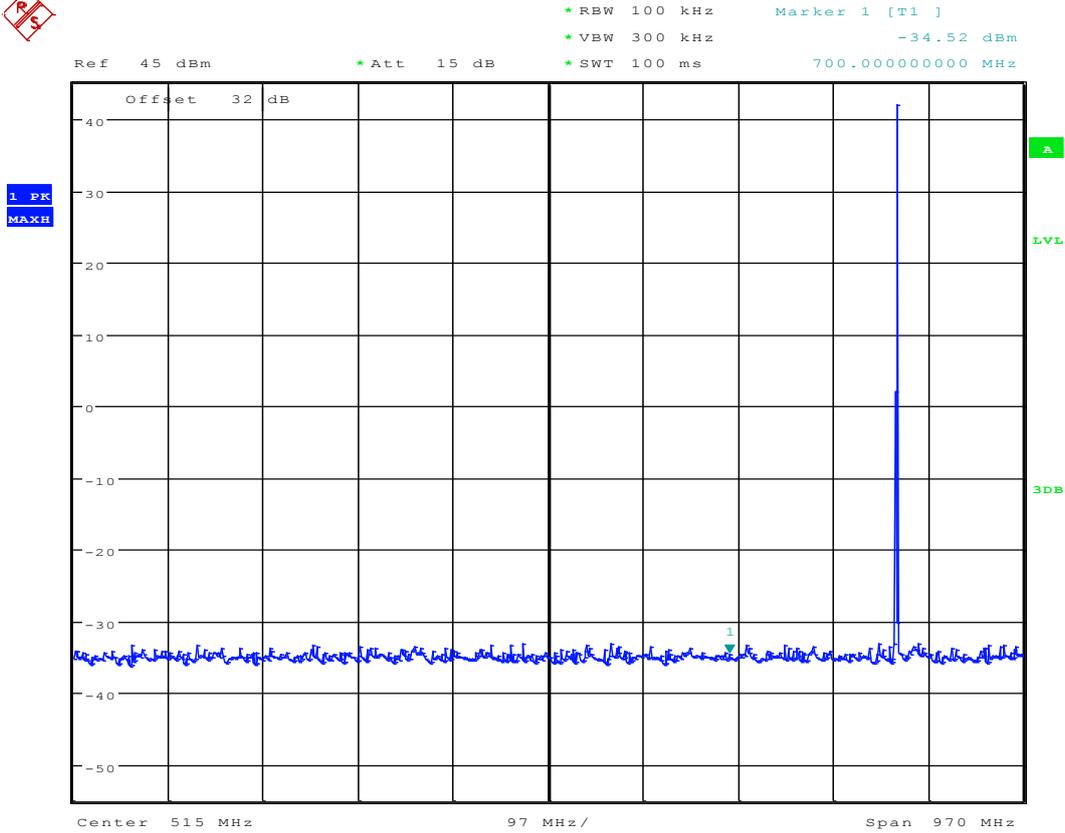
##### 2.3.1.1 Ch. B



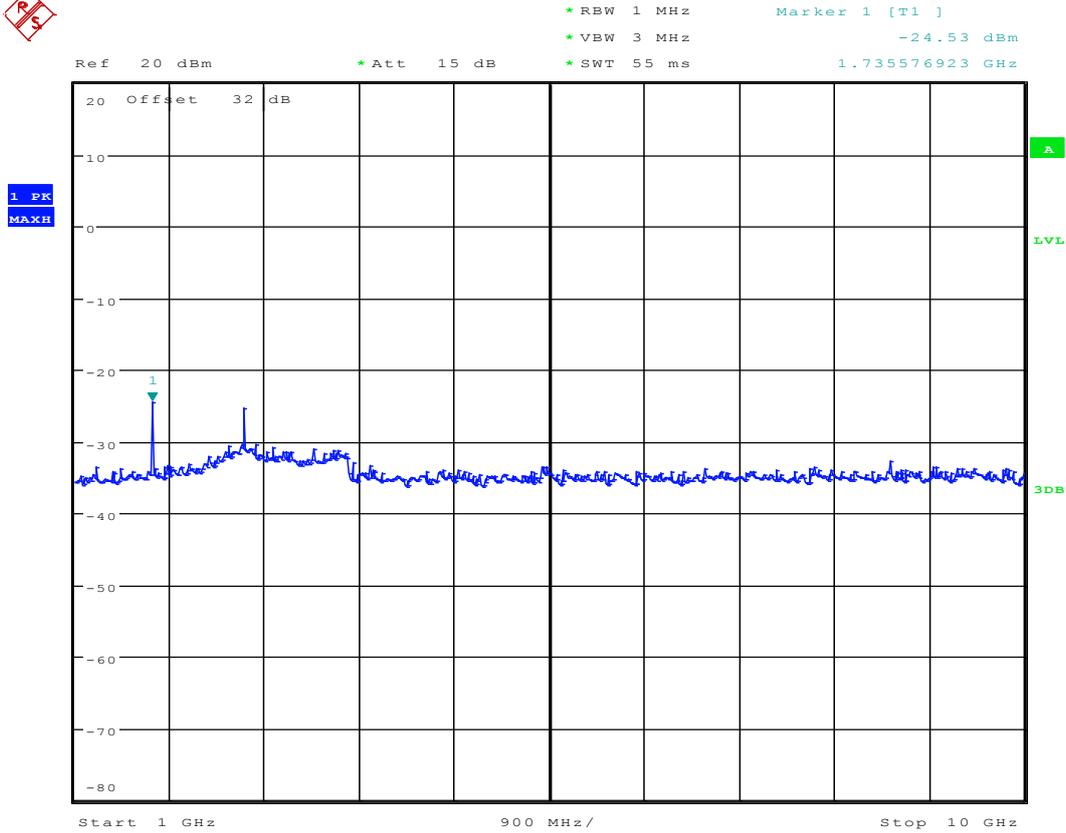
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Date: 14.DEC.2011 18:58:22



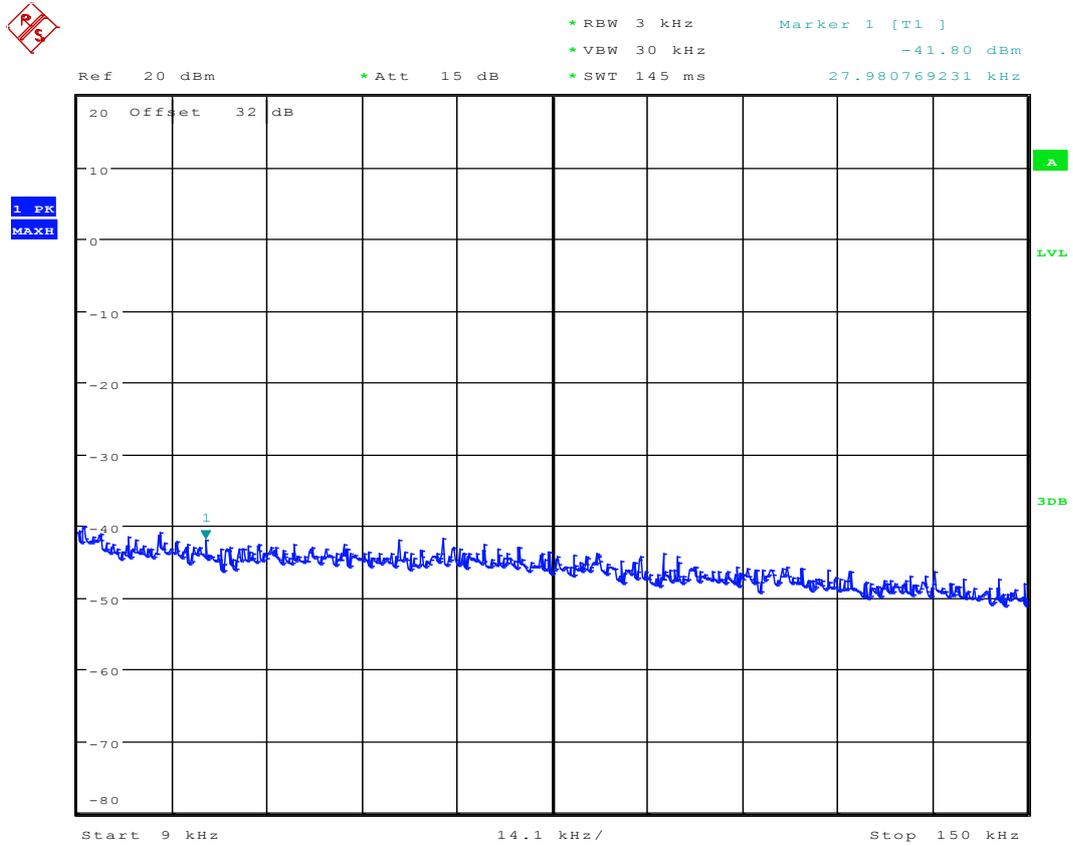
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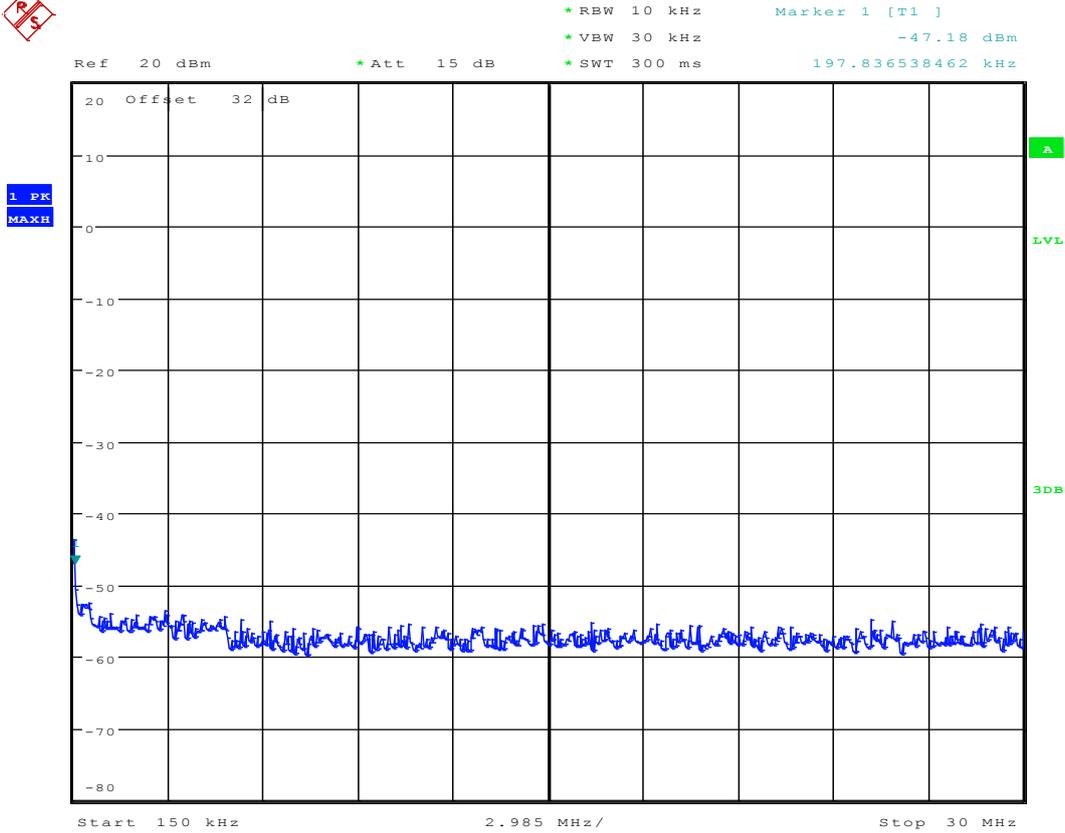
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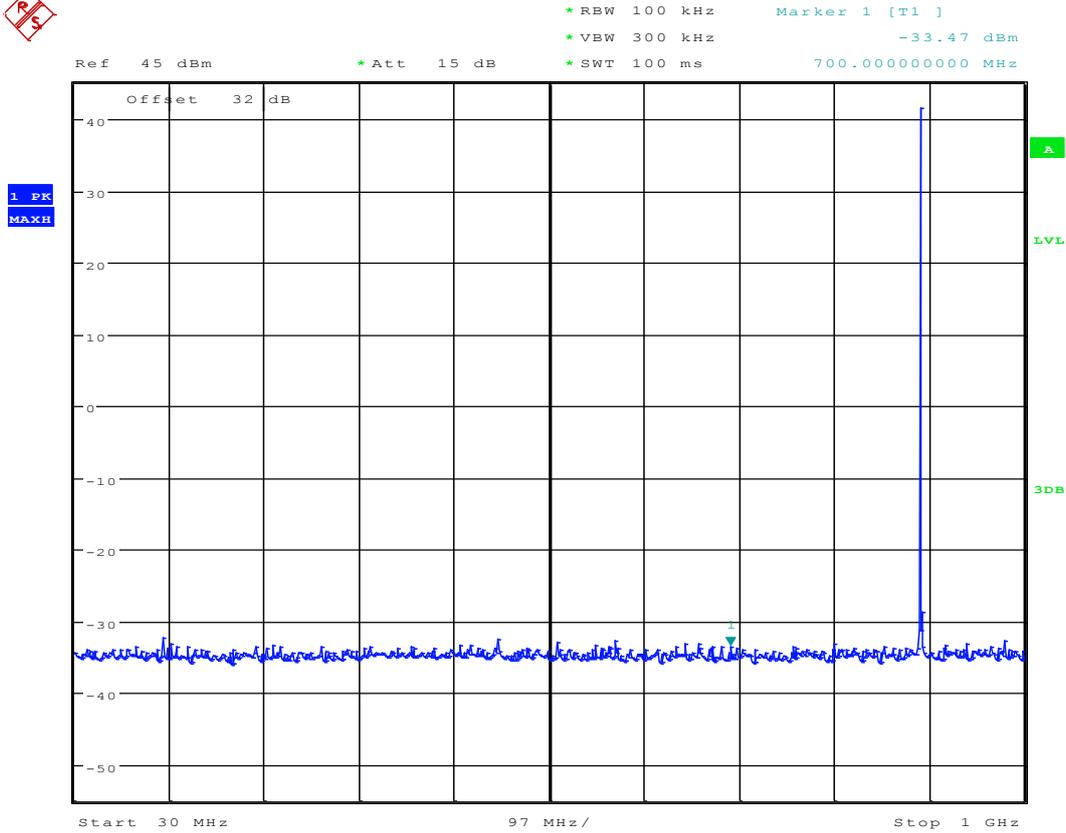
### 2.3.1.2 Ch. T



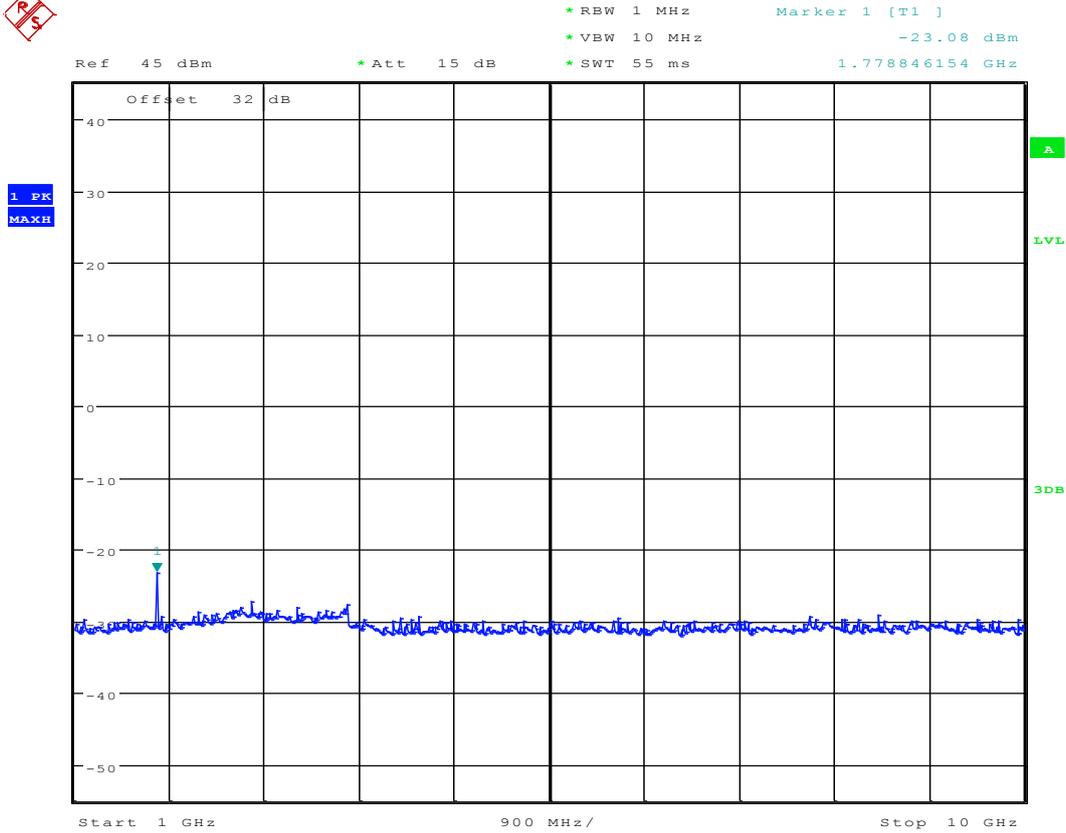
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Date: 14.DEC.2011 18:47:32



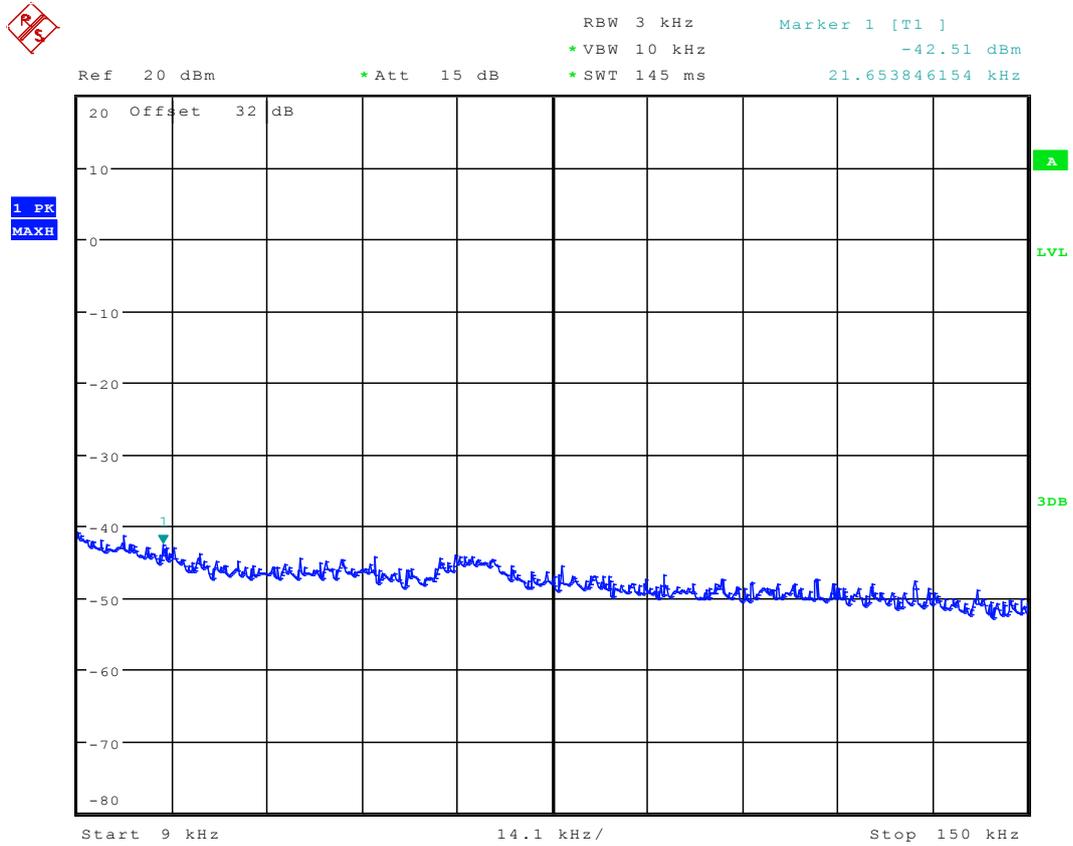
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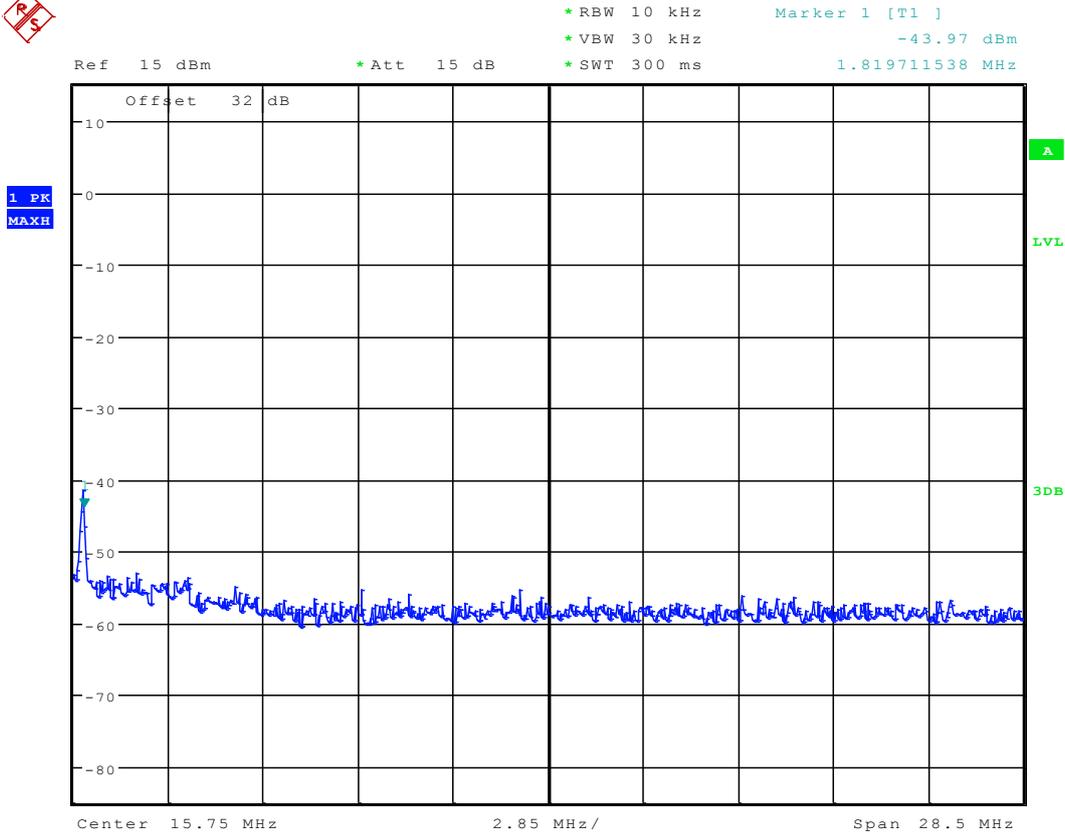
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### 2.3.2 Carrier Conf. = MC 4

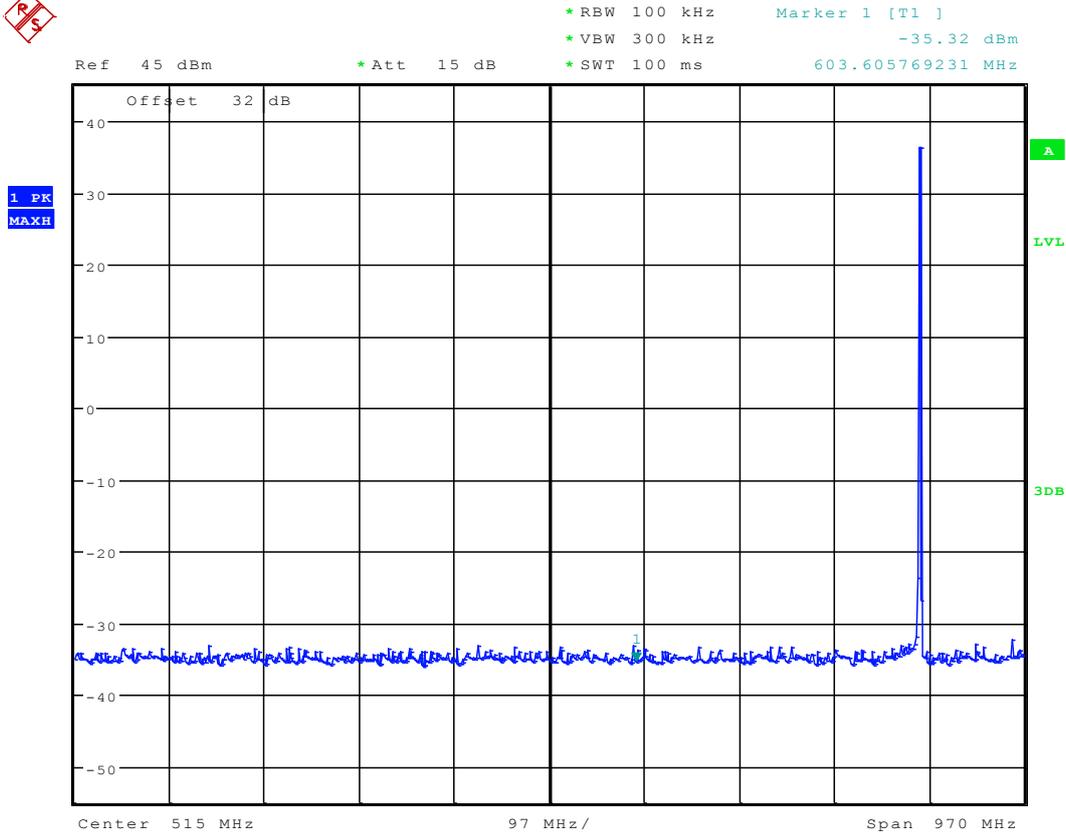
#### 2.3.2.1 Ch. B



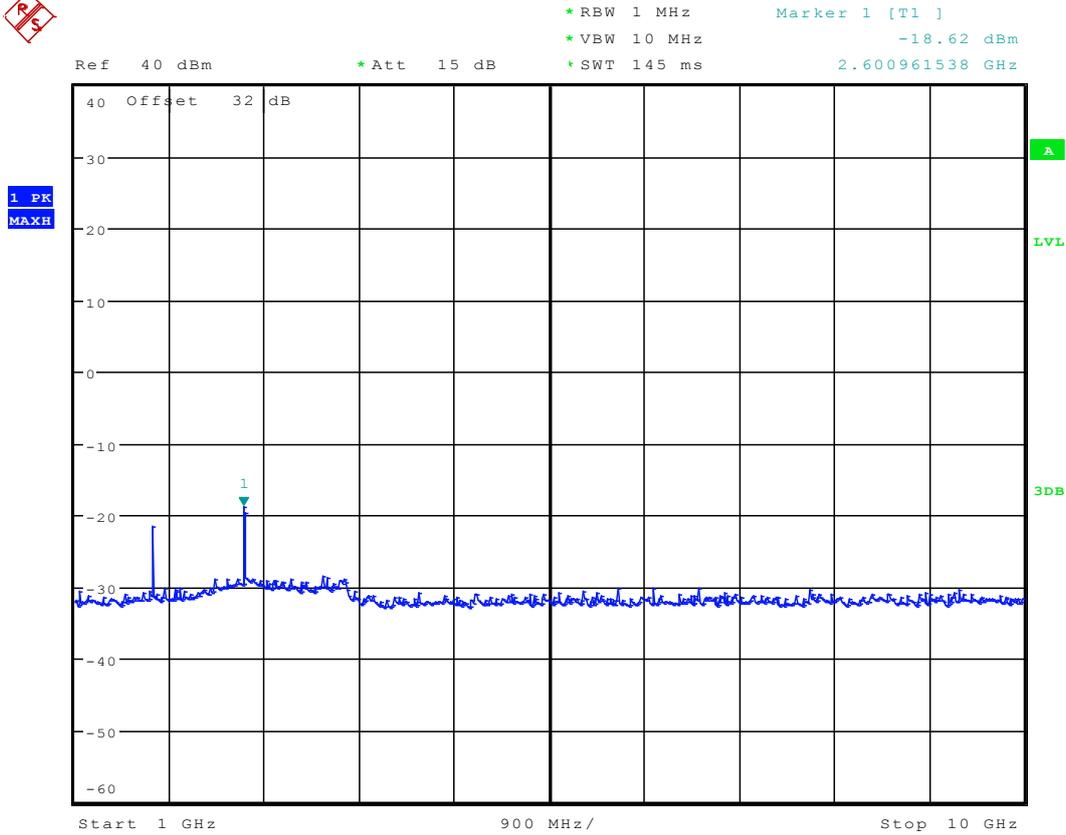
Date: 14.DEC.2011 12:36:23



Date: 14.DEC.2011 12:23:39



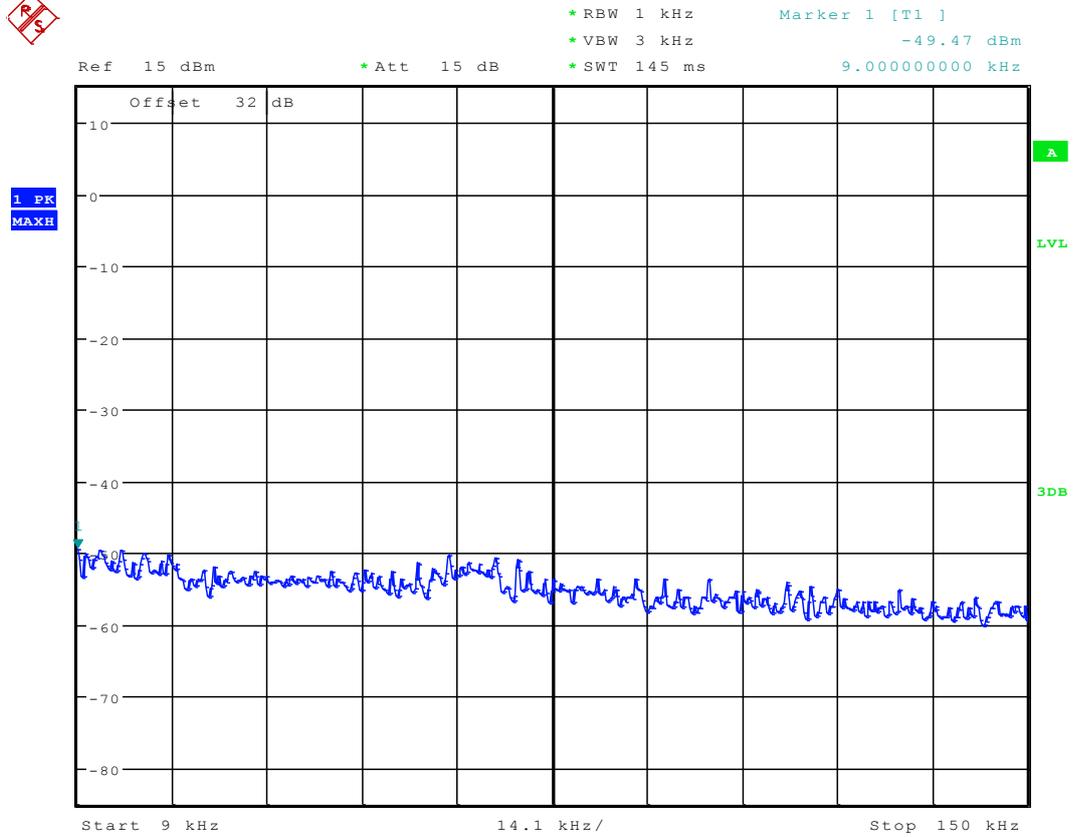
Date: 14.DEC.2011 12:22:24



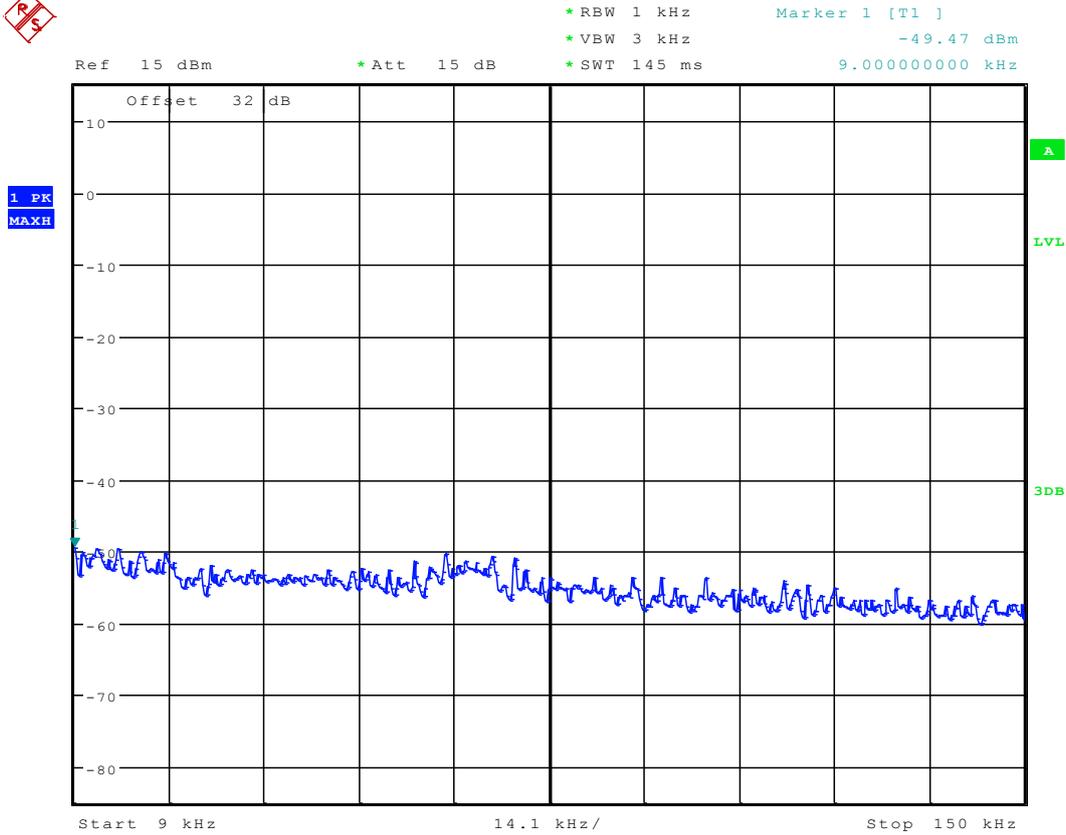
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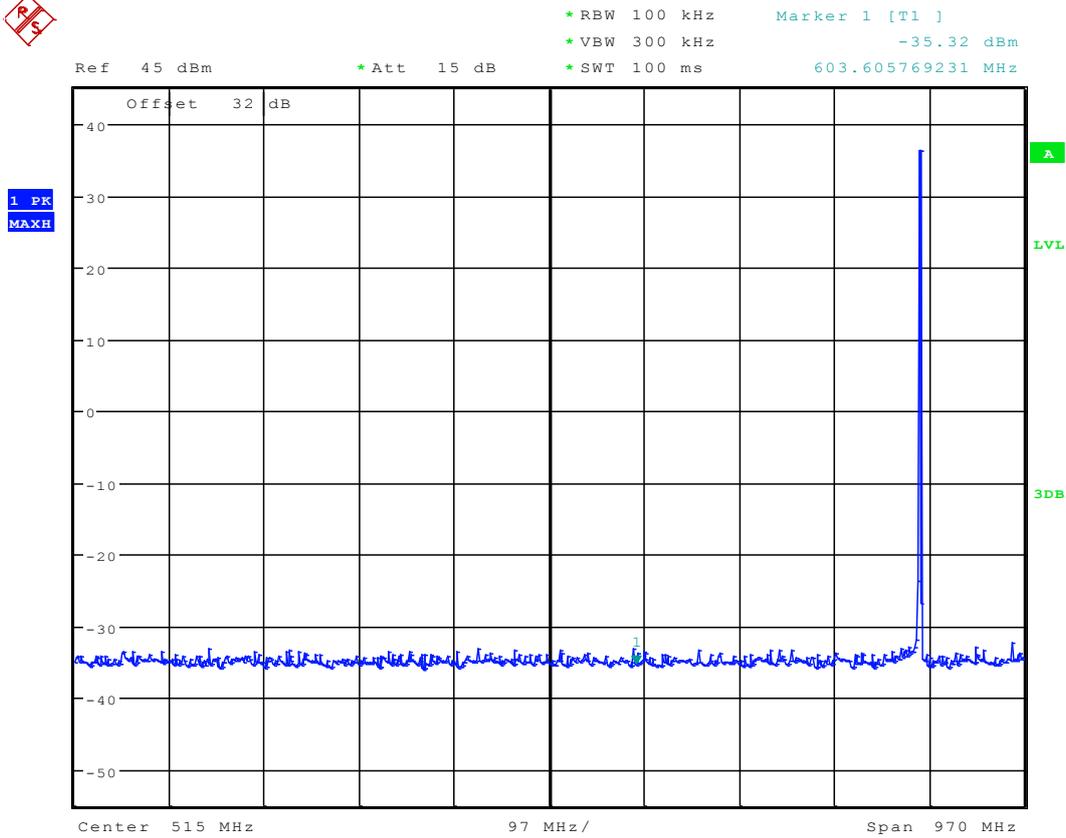
### 2.3.2.2 Ch. T



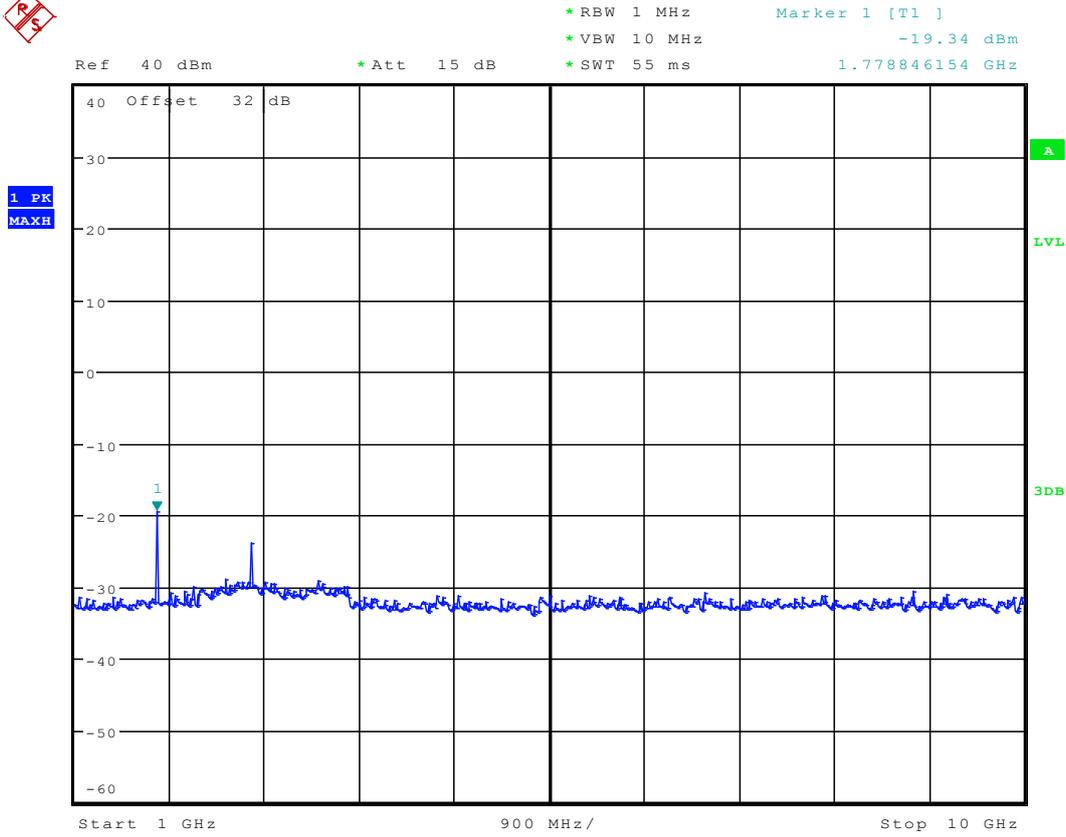
Date: 14.DEC.2011 12:24:19



Date: 14.DEC.2011 12:24:19



Date: 14.DEC.2011 12:22:24



Date: 14.DEC.2011 12:21:12



# Appendix F: Field Strength of Spurious Radiation



## 1 Result Table

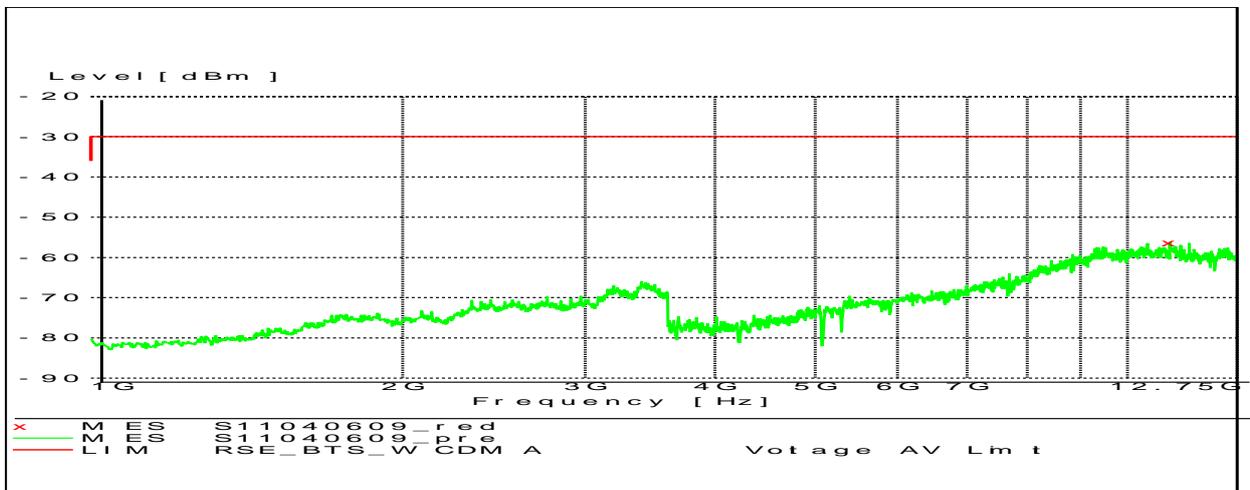
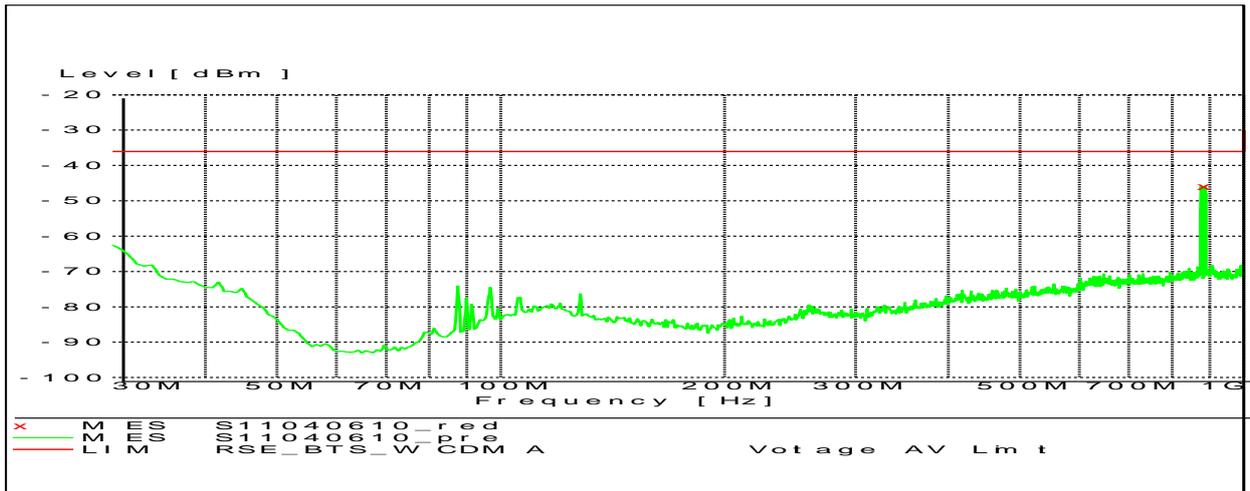
Test Mode	Carrier Conf.	RF Ch.	Field Strength of Spurious Radiation [dBm]	Verdict
uTM 1	MC 1	M	< -13	Pass

## 2 Test Plot

### 2.1 Test Mode = uTM 1

#### 2.1.1 Carrier Conf. = MC 1

##### 2.1.1.1 Ch. M





# Appendix G: Frequency Stability



## 1 Frequency Error vs. Temperature:

Test Mode	Carrier Conf.	RF Ch.	Volt.	Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Verdict
uTM 1	MC 1	M	100%	-30 °C	1.69	0.002	0.002	Pass
				-20 °C	-1.45	-0.0017	-0.0017	Pass
				-10 °C	-1.28	-0.0015	-0.0015	Pass
				0 °C	1.22	-0.0015	-0.0015	Pass
				10 °C	1.32	0.0015	0.0015	Pass
				20 °C	1.49	0.0017	0	Pass
				30 °C	1.52	0.002	0.002	Pass
				40 °C	1.59	0.002	0.002	Pass
				50 °C	2.11	0.0024	0.0024	Pass

## 2 Frequency Error vs. Voltage:

Test Mode	Carrier Conf.	RF Ch.	Temp.	Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Verdict
uTM 1	MC 1	M	20 °C	85 %	-1.75	-0.002	-0.002	Pass
				100 %	1.58	0.002	0.002	Pass
				115 %	1.53	0.002	0.002	Pass



# Appendix H: Receiver Spurious Emissions (Conducted)



NOTE: The requirements are only applicable to IC requirements.

## 1 Result Table

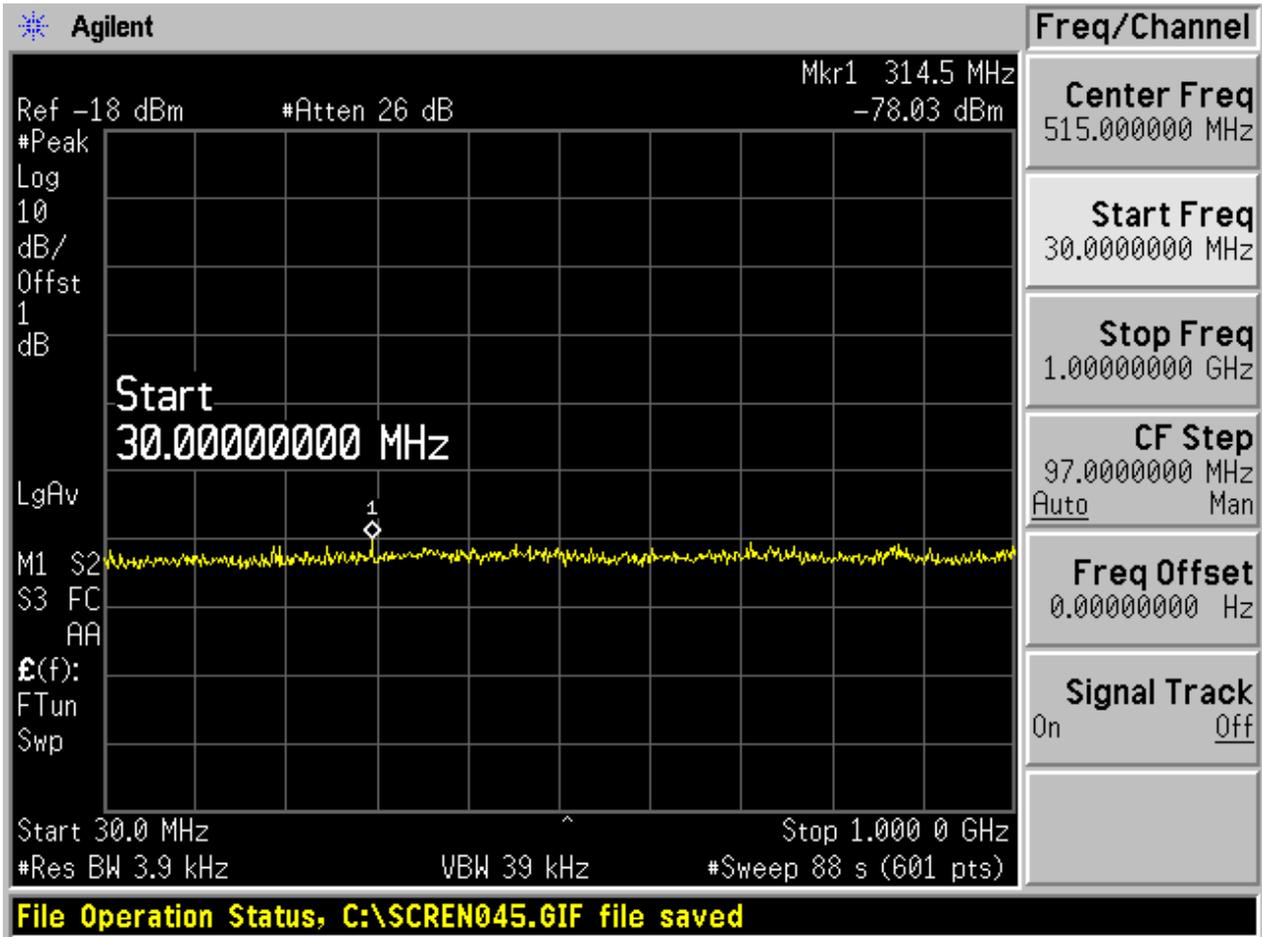
Test Mode	Carrier Conf.	RF Ch.	Receiver Spurious Emissions (Conducted) [dBm]	Verdict
uTM 1	MC 1	M	-66.15	Pass
gTM 1	MC 1	M	-63.06	Pass
gTM 2	MC 1	M	-62.82	Pass

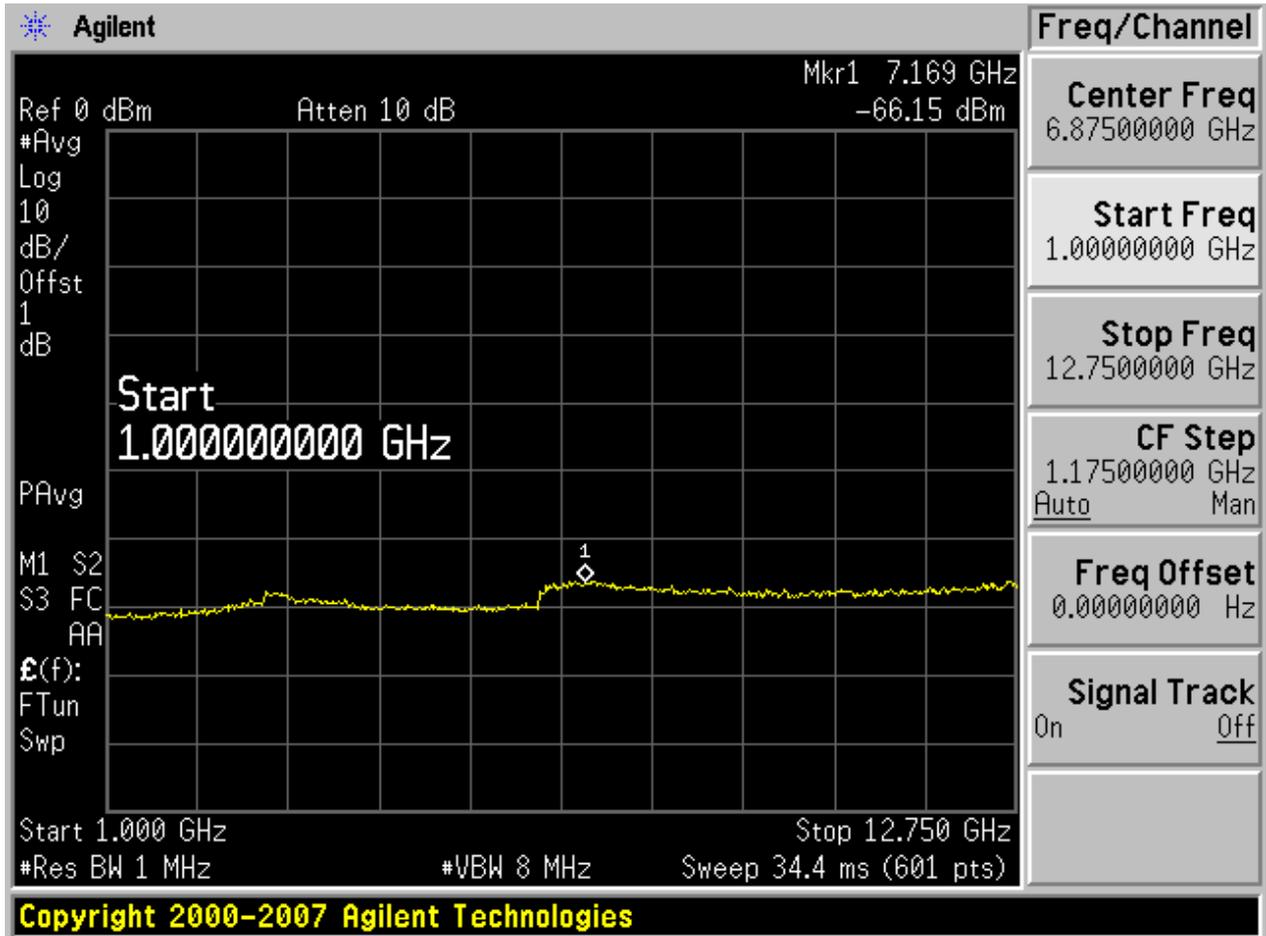
## 2 Test Plot

### 2.1 Test Mode = uTM 1

#### 2.1.1 Carrier Conf. = MC 1

##### 2.1.1.1 Ch. M



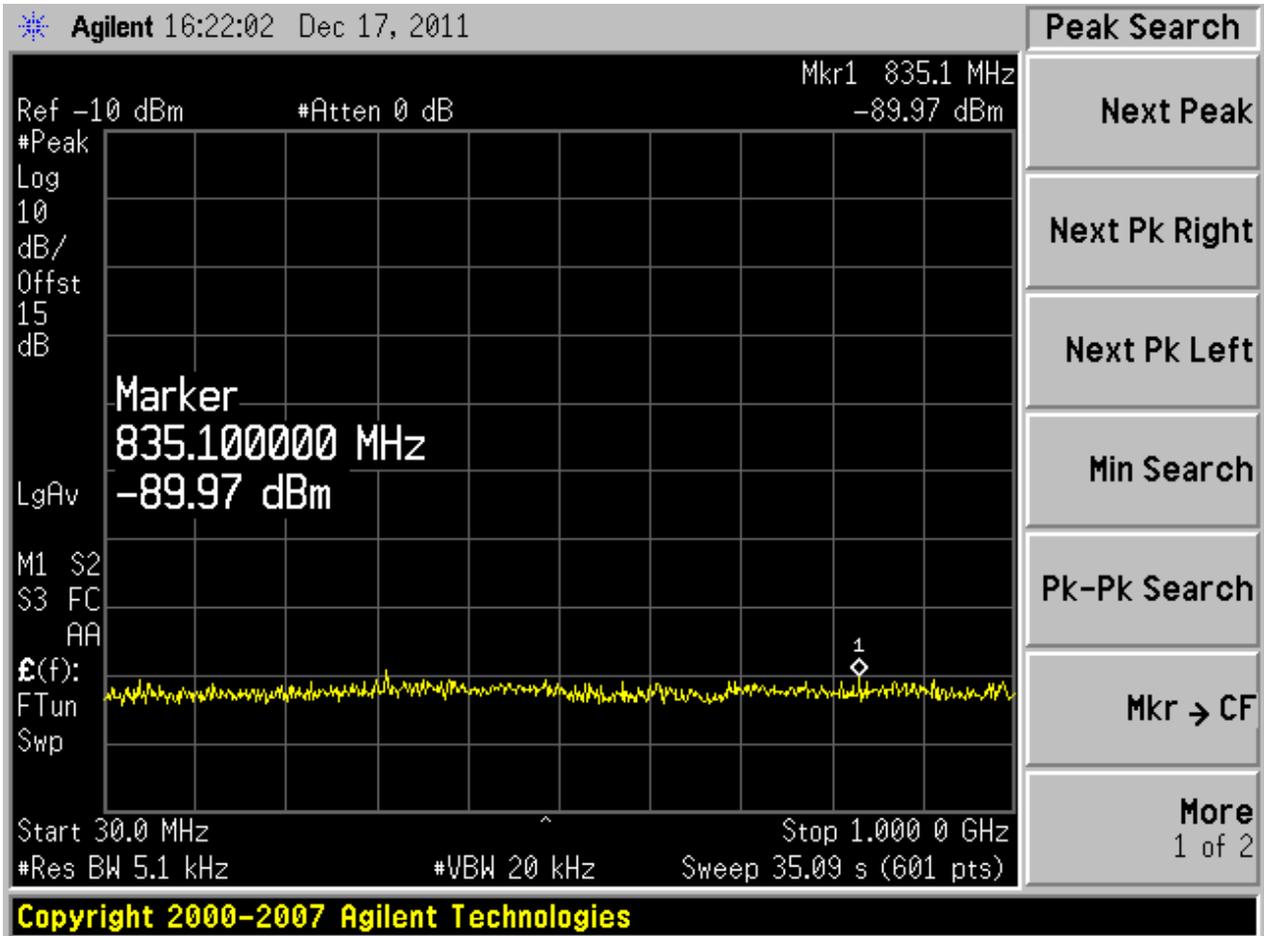


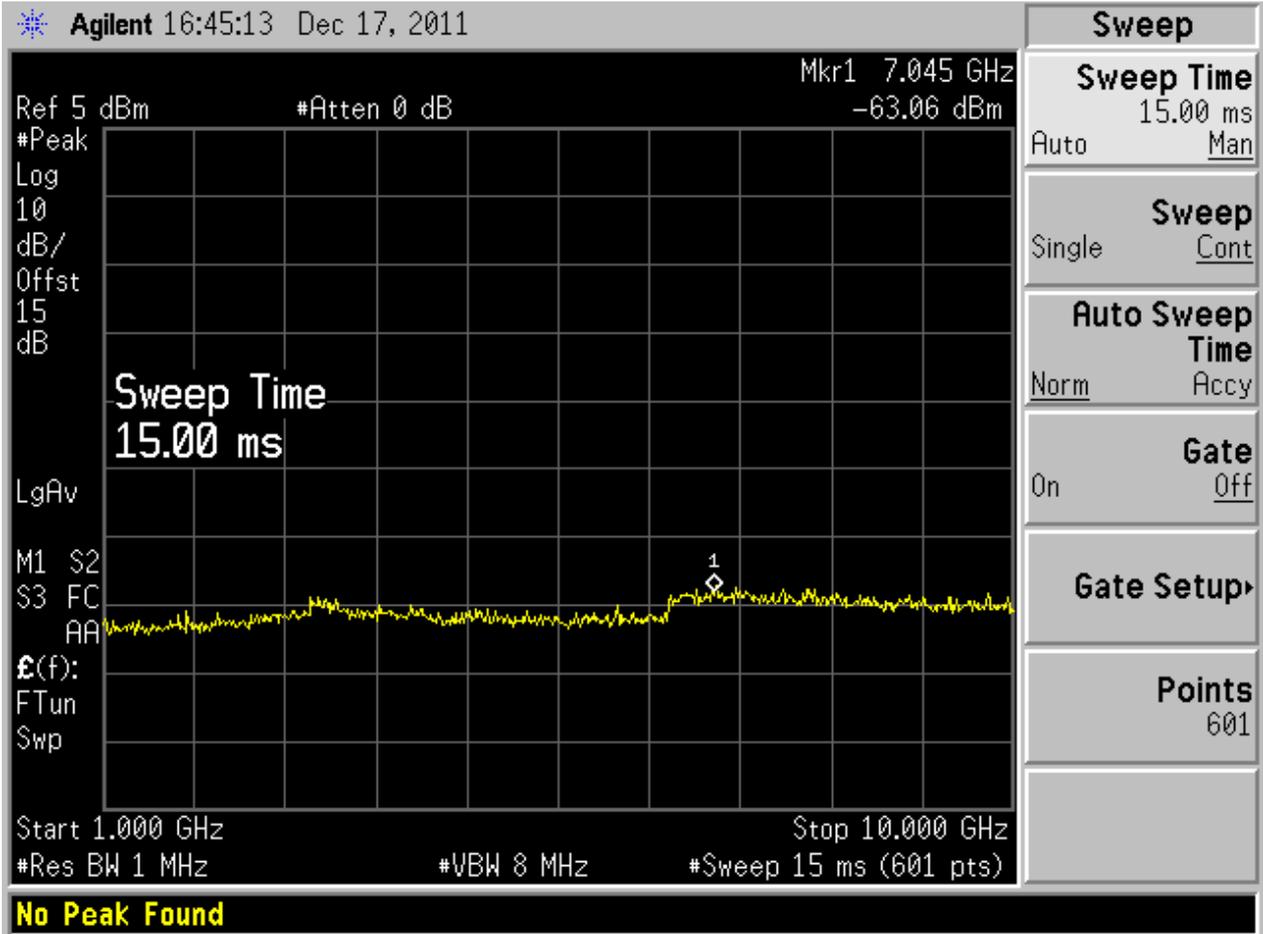


2.2 Test Mode = gTM 1

2.2.1 Carrier Conf. = MC 1

2.2.1.1 Ch. M





### 2.3 Test Mode = gTM 2

#### 2.3.1 Carrier Conf. = MC 1

##### 2.3.1.1 Ch. M

