

# Appendix A: RF Power Output

## Test Results

### Conducted Power

Test Band	Test Mode	Test Channel	Measured(dbm)	Limit (dbm)	Verdict
GSM850	GSM/TM1	LCH	32.04	38.5	PASS
		MCH	32.09	38.5	PASS
		HCH	32.10	38.5	PASS

Test Band	Test Mode	Test Channel	Measured(dbm)	Limit (dbm)	Verdict
GSM1900	GSM/TM1	LCH	28.76	33	PASS
		MCH	28.63	33	PASS
		HCH	28.34	33	PASS

Test Band	Test Mode	Test Channel	Measured(dbm)	Limit (dbm)	Verdict
WCDMA850	UMTS/TM1	LCH	22.81	38.5	PASS
		MCH	22.59	38.5	PASS
		HCH	22.63	38.5	PASS

Test Band	Test Mode	Test Channel	Measured(dbm)	Limit (dbm)	Verdict
WCDMA1900	UMTS/TM1	LCH	22.30	33	PASS
		MCH	22.33	33	PASS
		HCH	21.93	33	PASS

## Radiated Power (ERP/EIRP)

Test Band	Test Mode	Antenna Pol.	ERP Measured(dbm)	Limit (dbm)	Verdict
GSM850	GSM/TM1/MCH	H	30.16	33	PASS
		V	32.04	33	PASS

Test Band	Test Mode	Test Channel	EIRP Measured(dbm)	Limit (dbm)	Verdict
GSM1900	GSM/TM1/LCH	H	28.64	38.5	PASS
		V	30.15	38.5	PASS

Test Band	Test Mode	Test Channel	ERP Measured(dbm)	Limit (dbm)	Verdict
WCDMA850	UMTS/TM1/MCH	H	19.64	38.5	PASS
		V	21.41	38.5	PASS

Test Band	Test Mode	Test Channel	EIRP Measured(dbm)	Limit (dbm)	Verdict
WCDMA1900	UMTS/TM1/HCH	H	19.89	33	PASS
		V	20.98	33	PASS

## Appendix B: Peak-to-Average Ratio

### Test Results

Test Band	Test Mode	Test Channel	Measured (db)	Limit (db)	Verdict
GSM1900	GSM/TM1	LCH	0.14	13	PASS
		MCH	0.12	13	PASS
		HCH	0.14	13	PASS

Test Band	Test Mode	Test Channel	Measured (db)	Limit (db)	Verdict
WCDMA1900	UMTS/TM1	LCH	3.30	13	PASS
		MCH	3.21	13	PASS
		HCH	2.81	13	PASS

# Appendix C: Modulation Characteristics

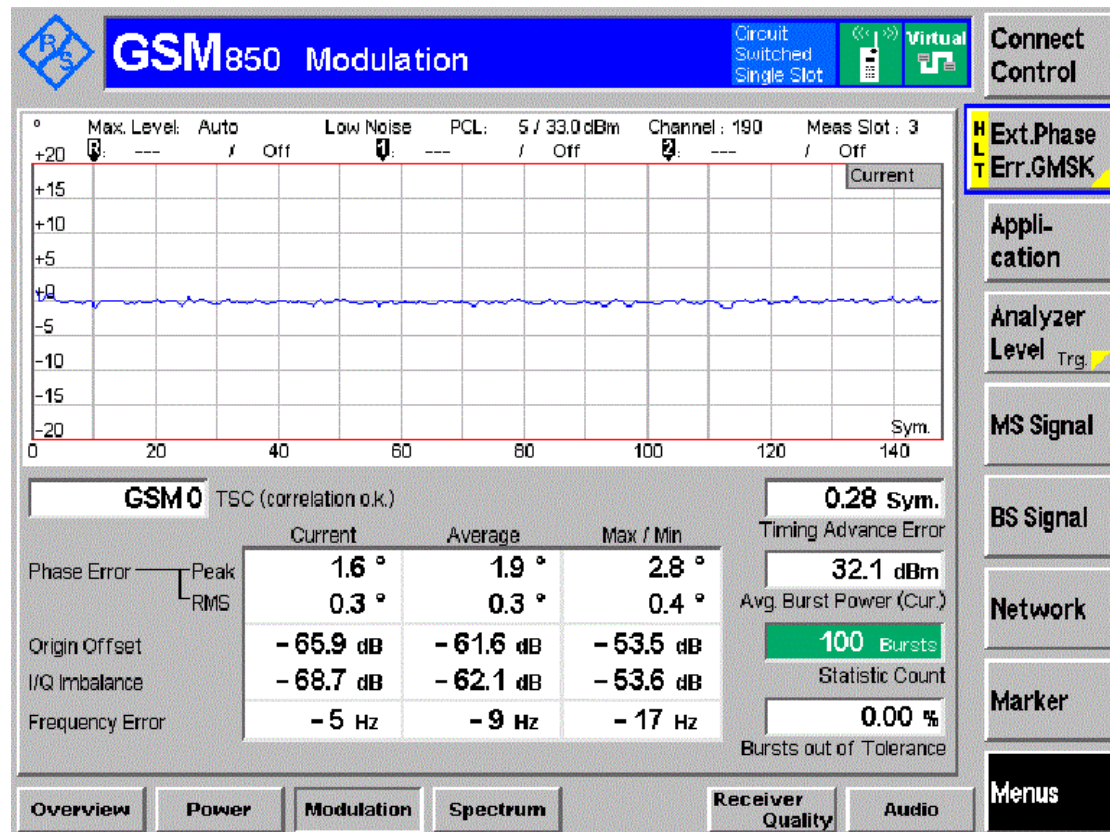
## Test Results

For GSM

Test Band=GSM850

Test Mode=GSM/TM1

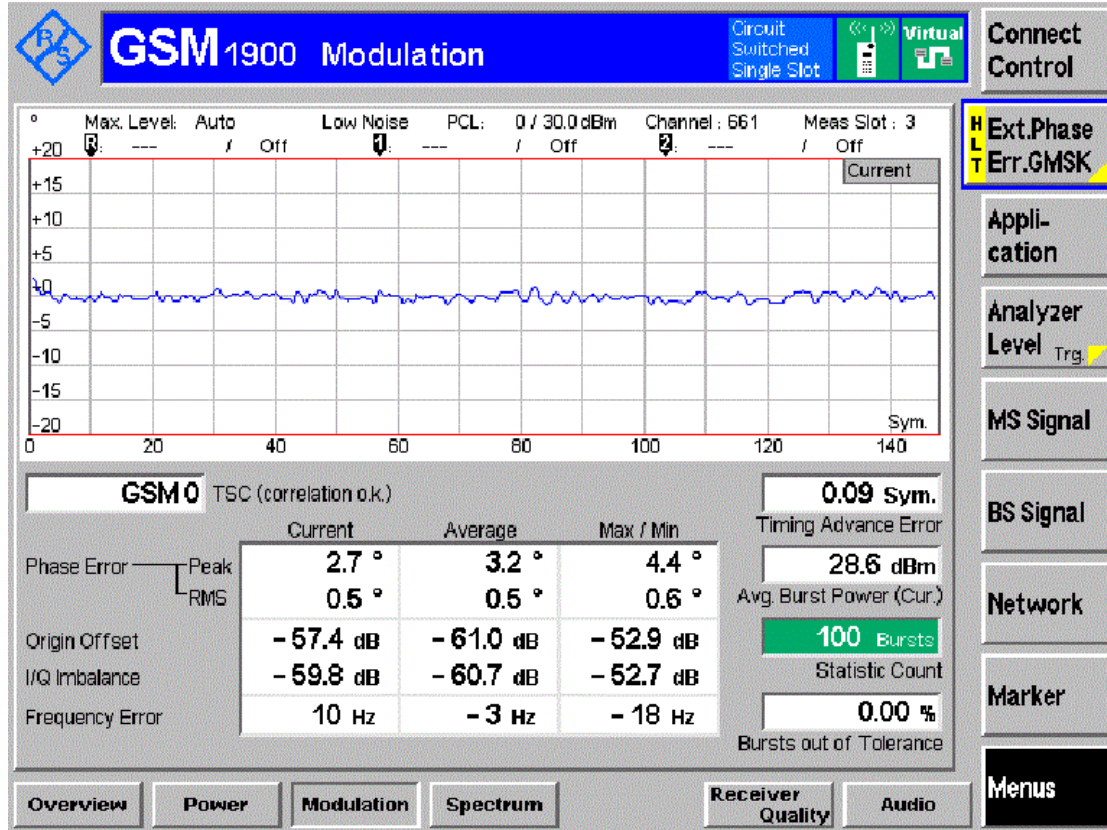
Test Channel=MCH



# Test Band=GSM1900

Test Mode=GSM/TM1

Test Channel=MCH

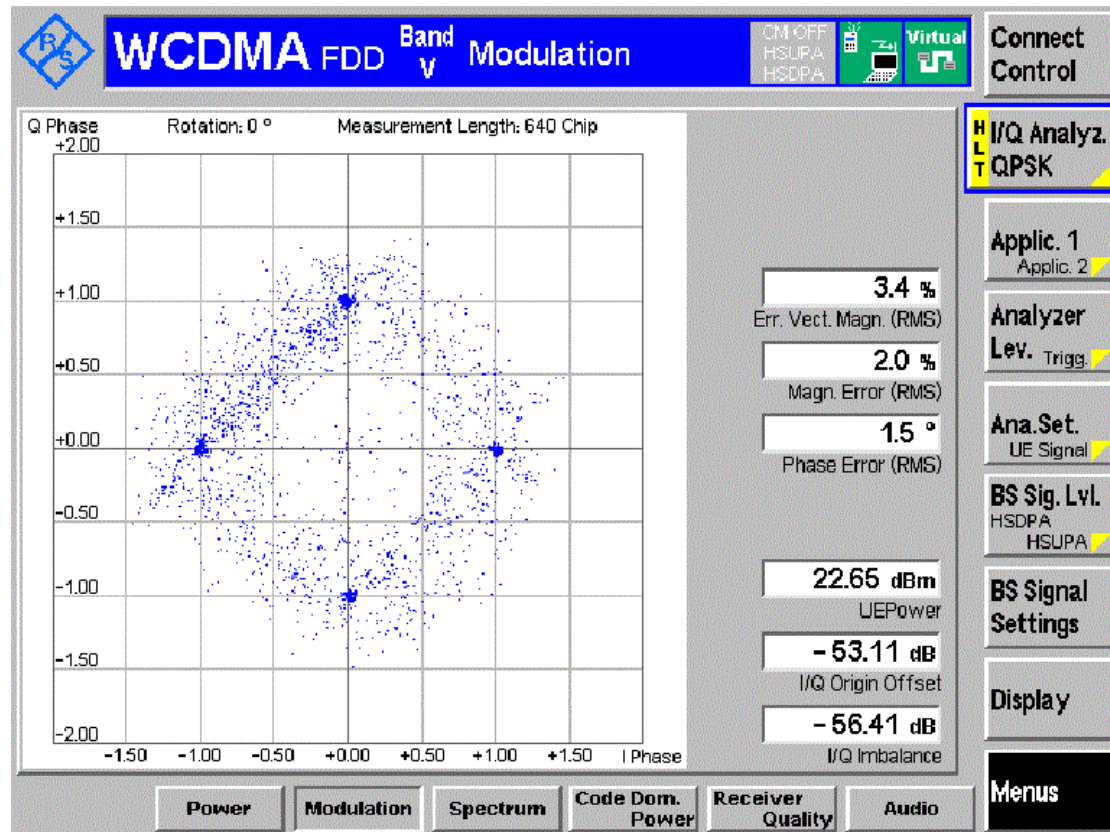


# For WCDMA

## Test Band=WCDMA850

Test Mode=UMTS/TM1

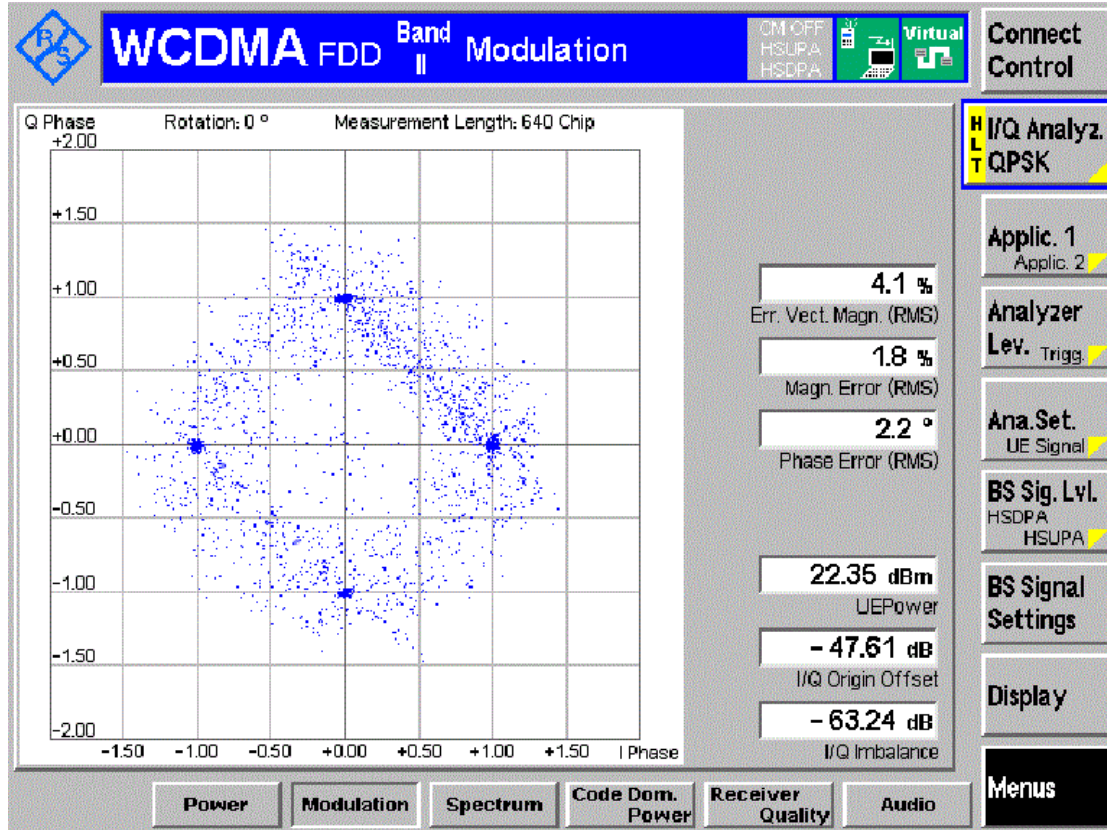
Test Channel=MCH



# Test Band=WCDMA1900

Test Mode=UMTS/TM1

Test Channel=MCH



# Appendix D:BandWidth

## Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
GSM850	GSM/TM1	LCH	245.02	314.32	PASS
		MCH	247.85	317.17	PASS
		HCH	248.57	312.31	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
GSM1900	GSM/TM1	LCH	244.56	310.92	PASS
		MCH	244.12	309.11	PASS
		HCH	245.47	311.06	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
WCDMA850	UMTS/TM1	LCH	4166.51	4691.52	PASS
		MCH	4164.81	4699.86	PASS
		HCH	4169.44	4689.83	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
WCDMA1900	UMTS/TM1	LCH	4171.30	4695.95	PASS
		MCH	4166.77	4692.90	PASS
		HCH	4171.65	4715.33	PASS

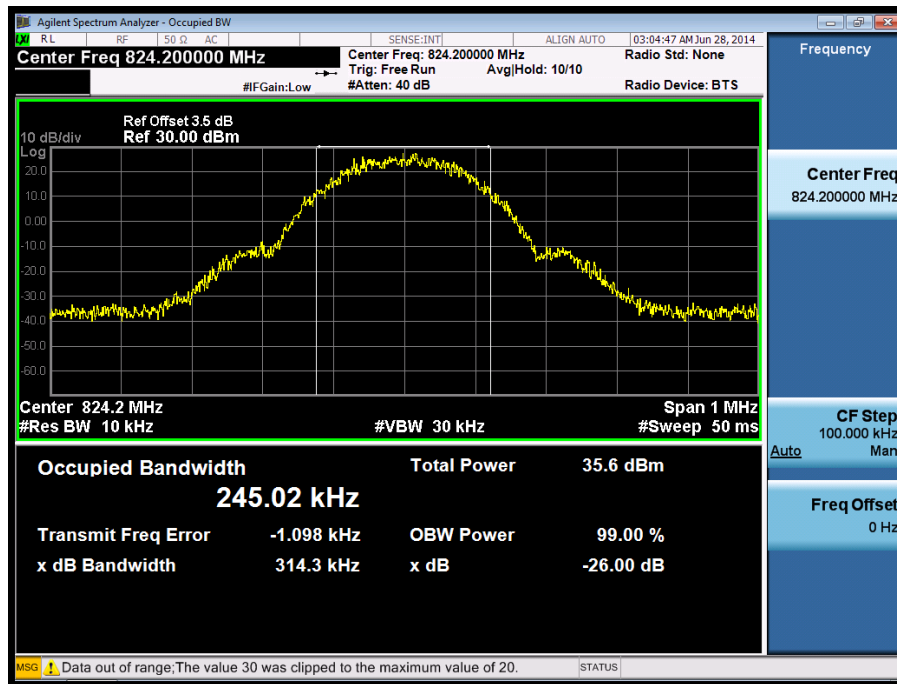


## For GSM

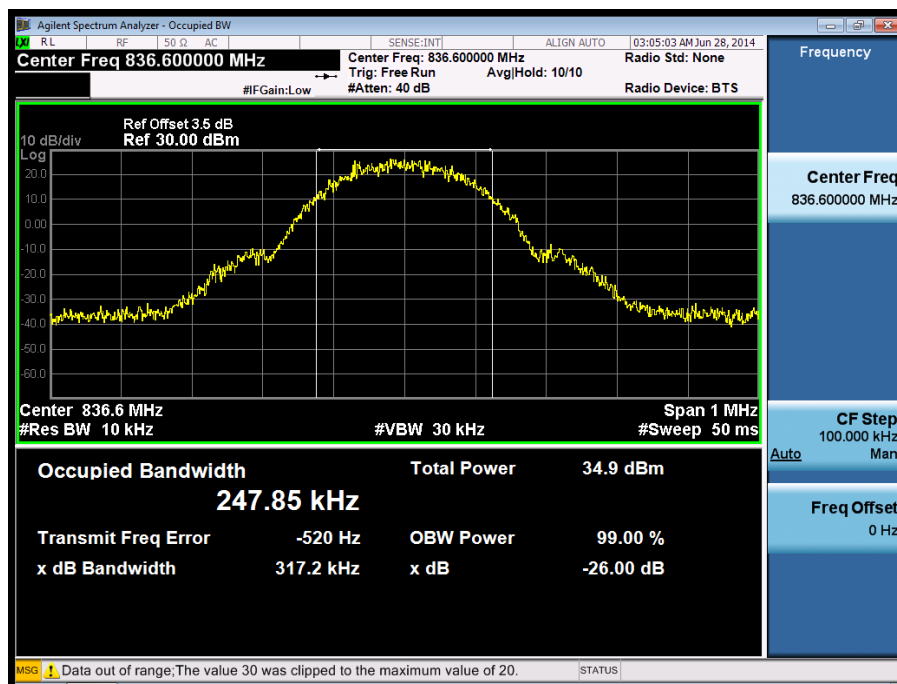
### Test Band=GSM850

Test Mode=GSM/TM1

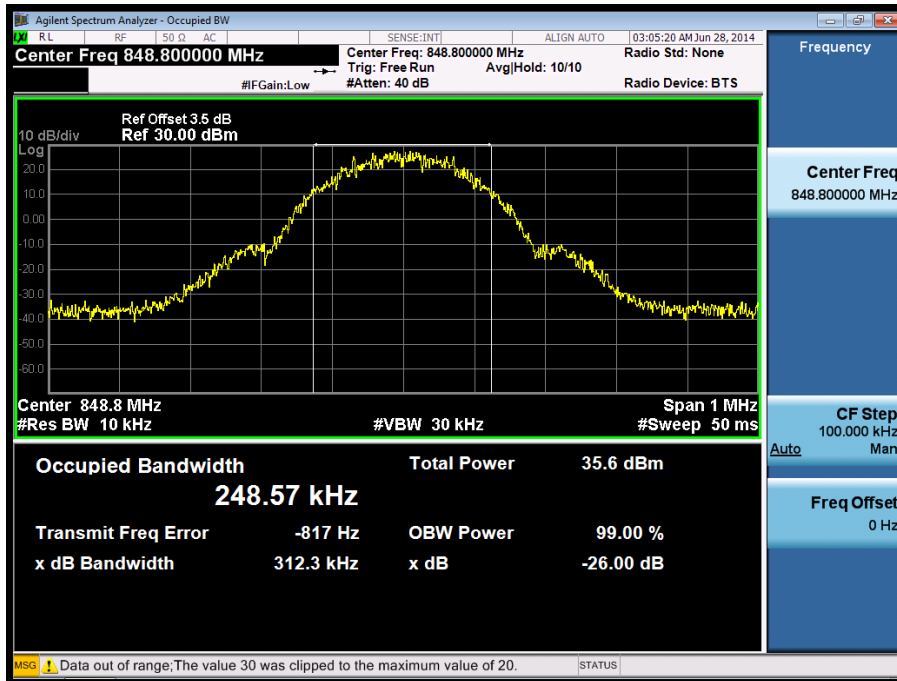
Test Channel=LCH



Test Channel=MCH



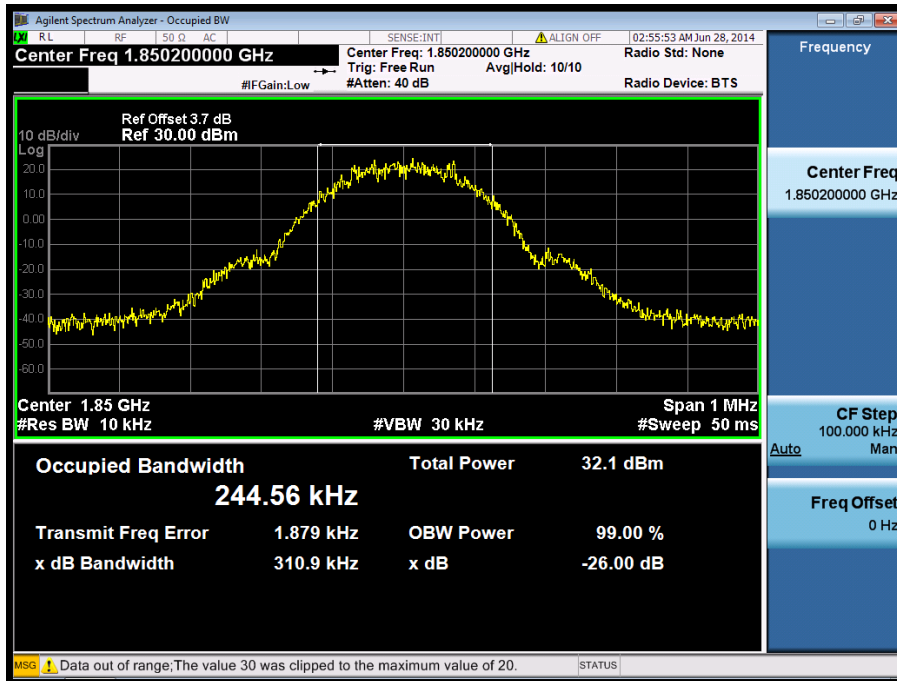
Test Channel=HCH



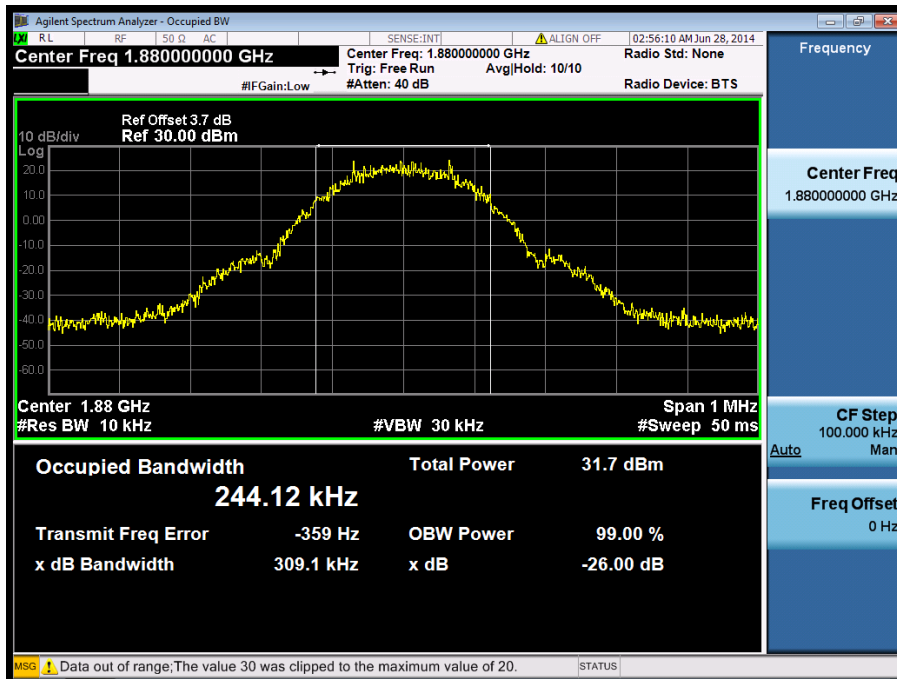
# Test Band=GSM1900

Test Mode=GSM/TM1

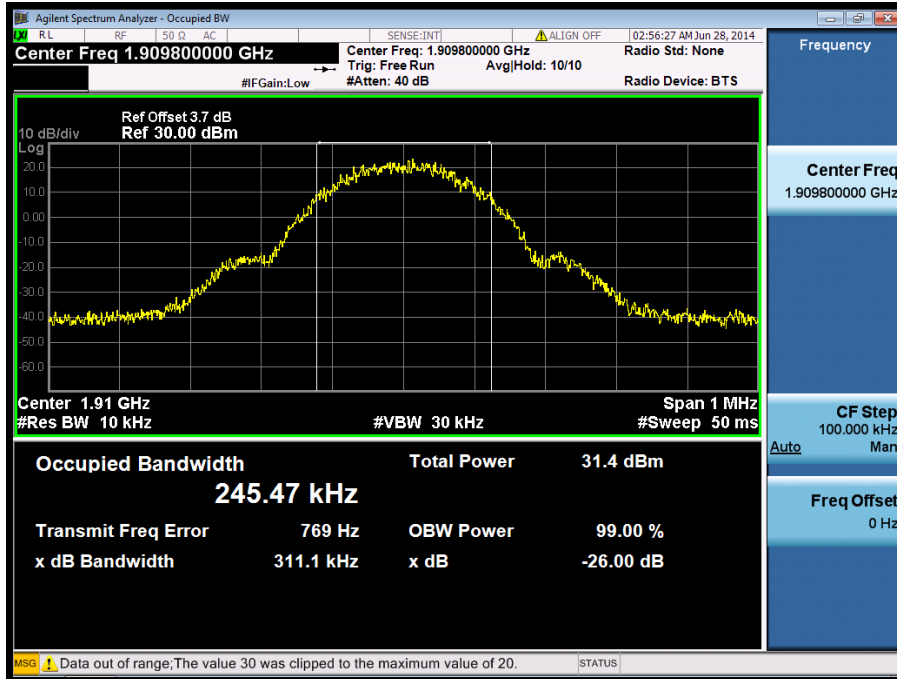
Test Channel=LCH



Test Channel=MCH



Test Channel=HCH

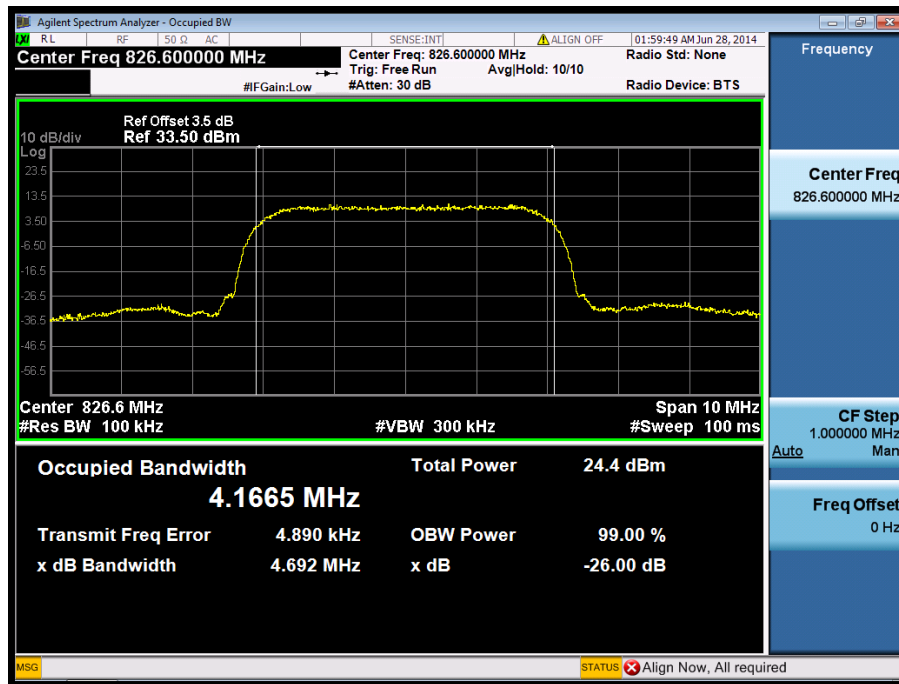


# For WCDMA

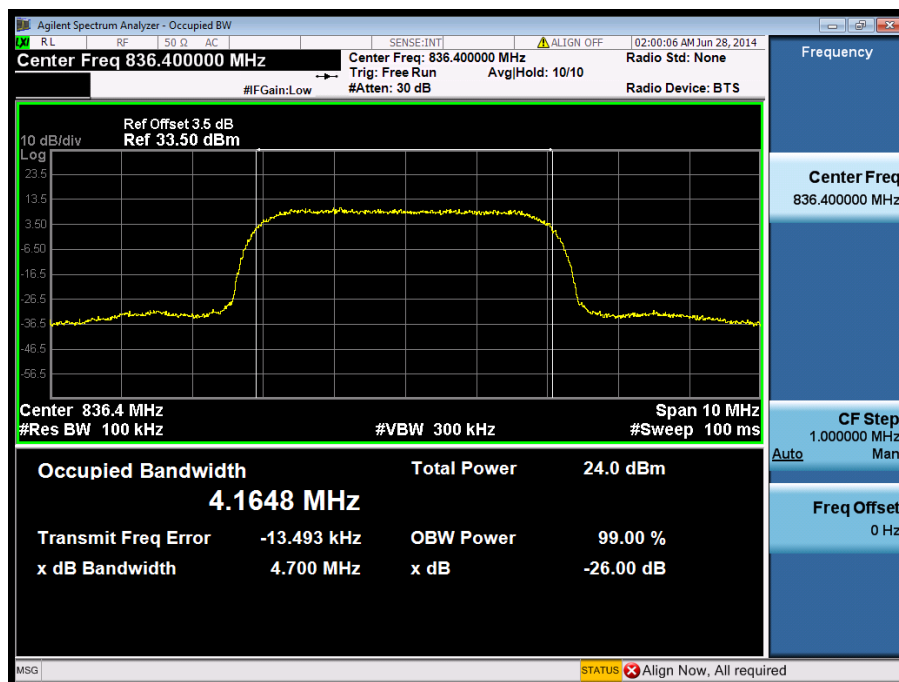
## Test Band=WCDMA850

Test Mode=UMTS/TM1

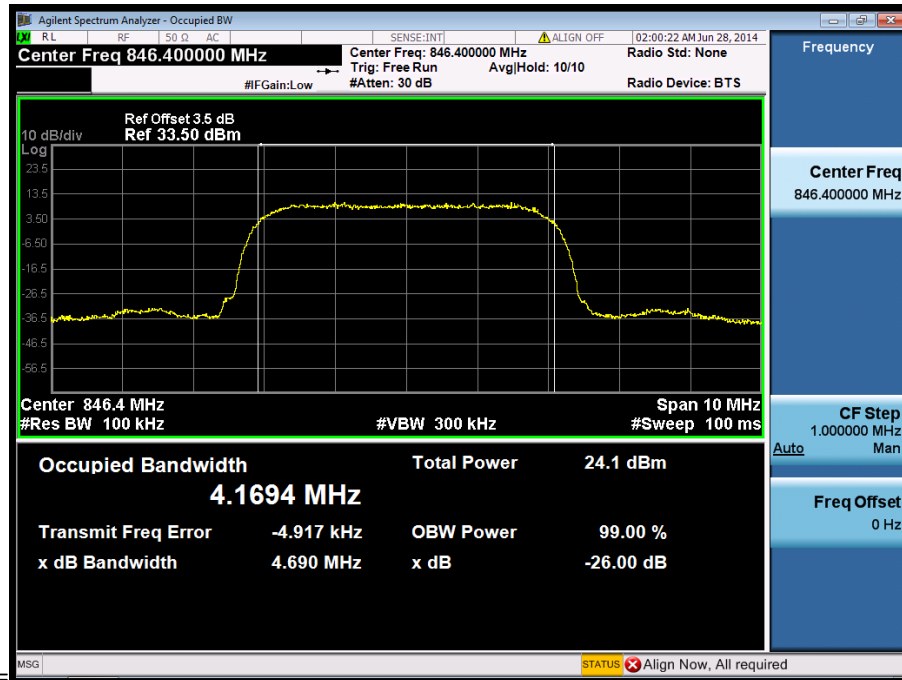
Test Channel=LCH



Test Channel=MCH



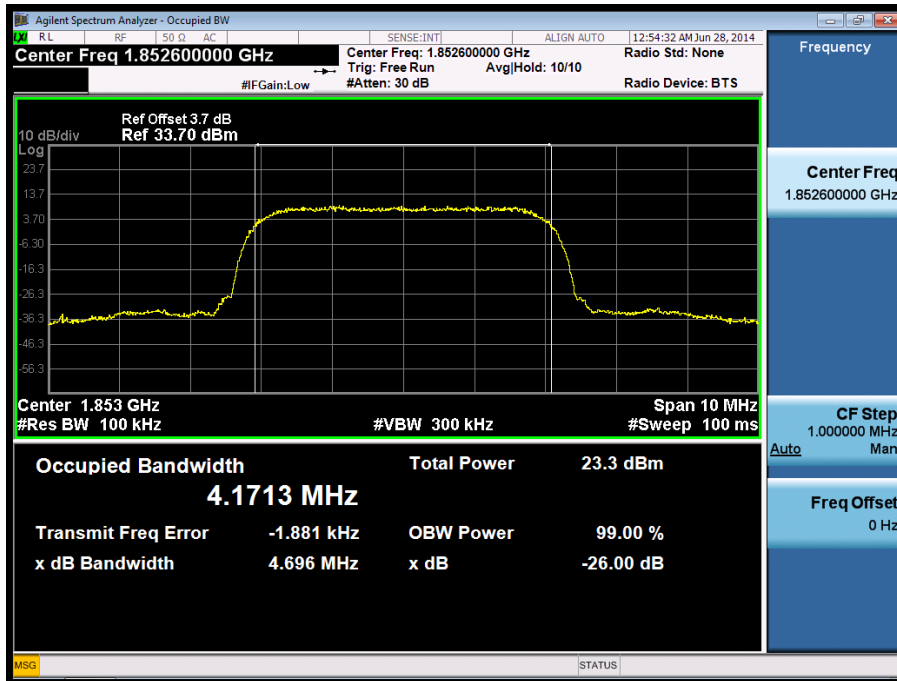
Test Channel=HCH



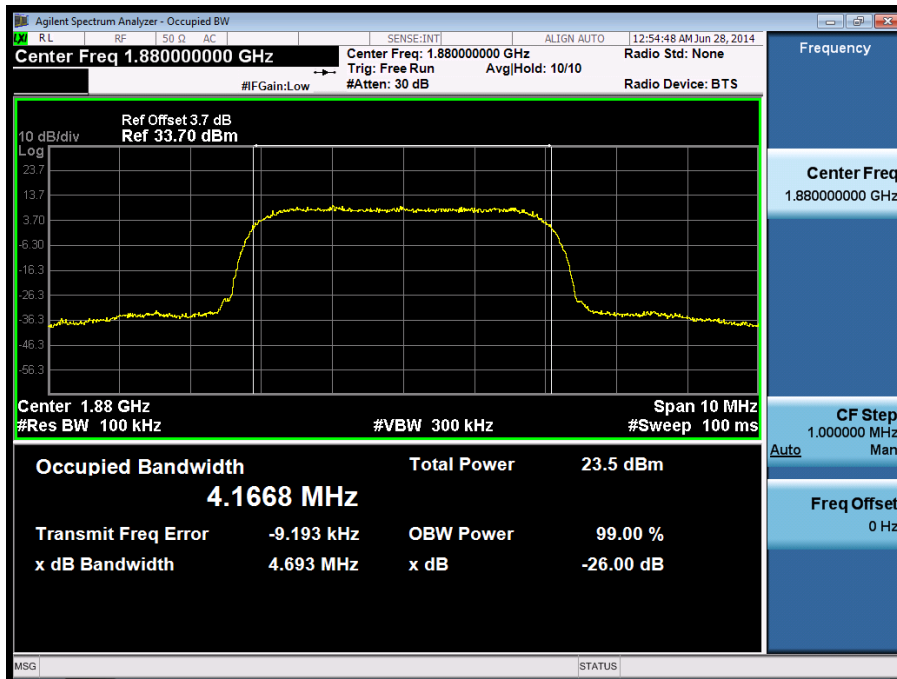
# Test Band=WCDMA1900

Test Mode=UMTS/TM1

Test Channel=LCH



Test Channel=MCH



Test Channel=HCH





# Appendix E: Band Edges Compliance

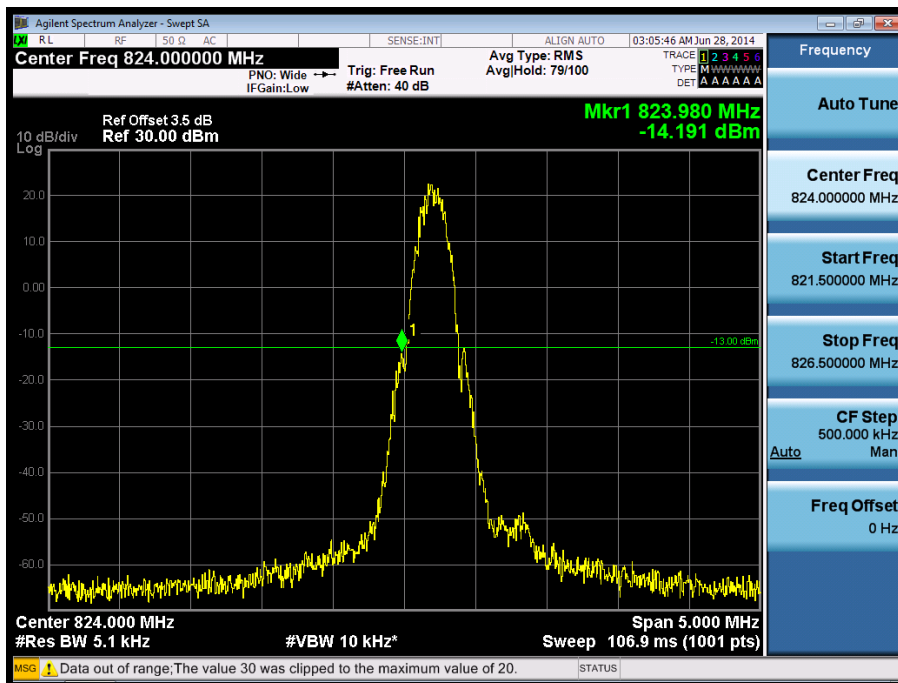
## Test Results

For GSM

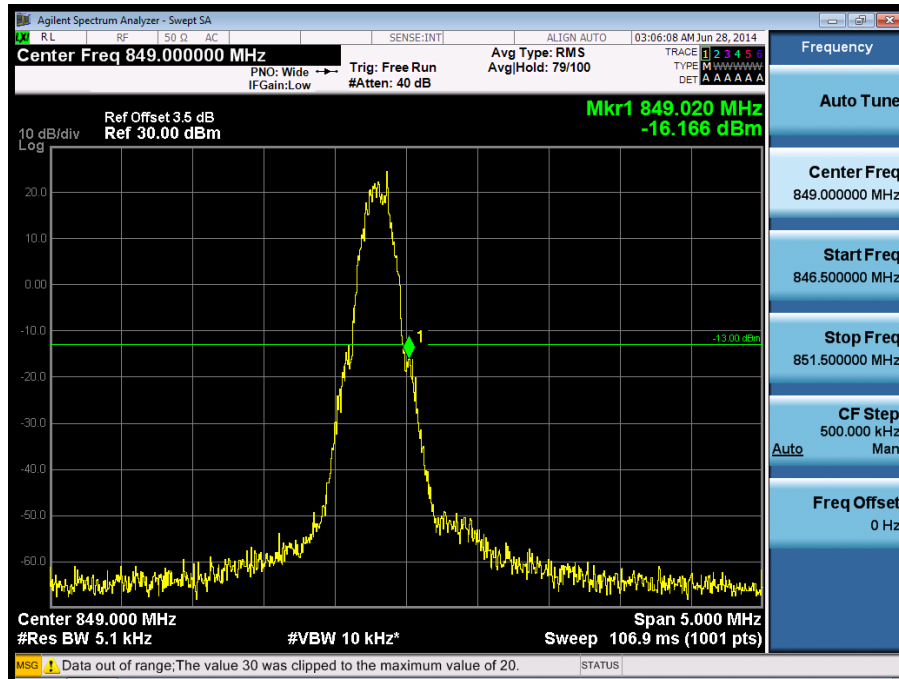
Test Band=GSM850

Test Mode=GSM/TM1

Test Channel=LCH



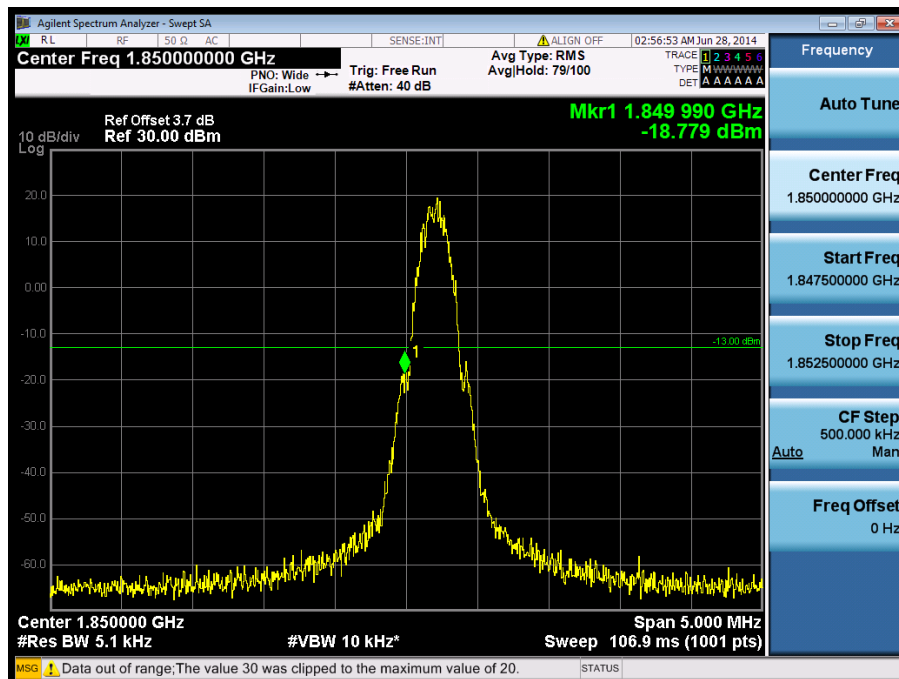
## Test Channel=HCH



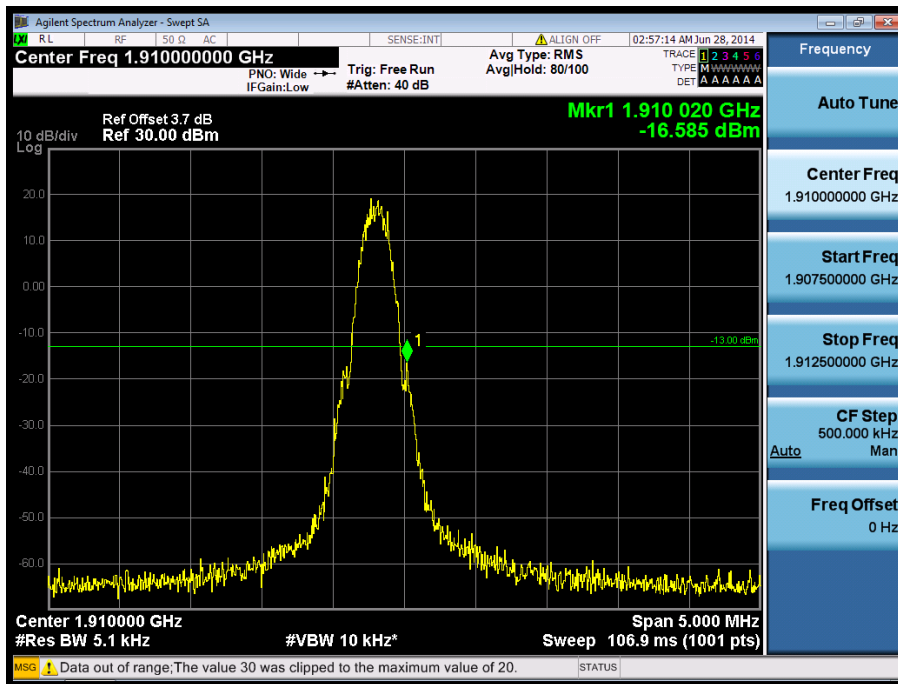
## Test Band=GSM1900

Test Mode=GSM/TM1

Test Channel=LCH



Test Channel=HCH

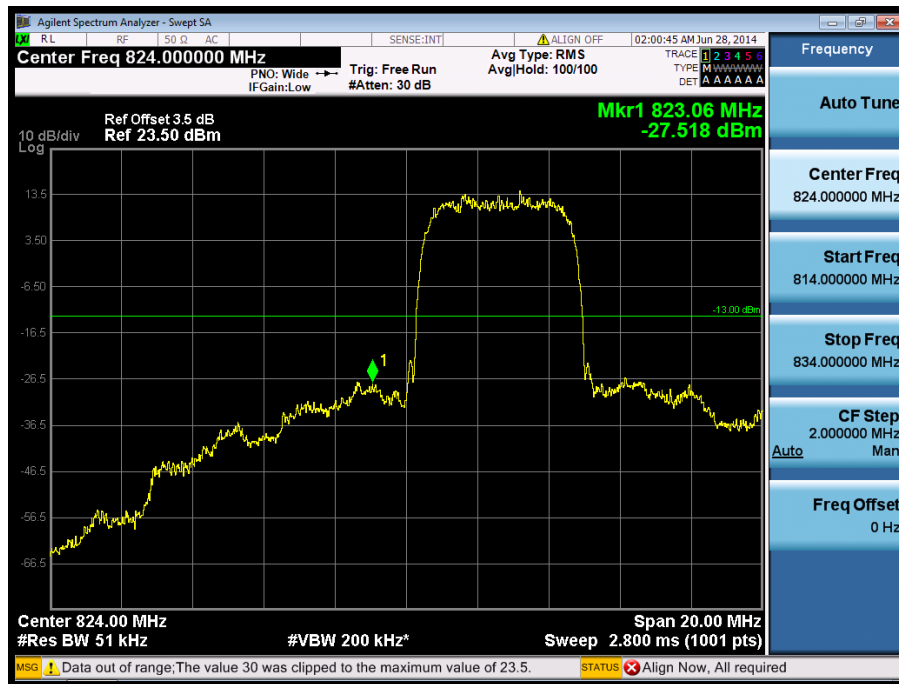


# For WCDMA

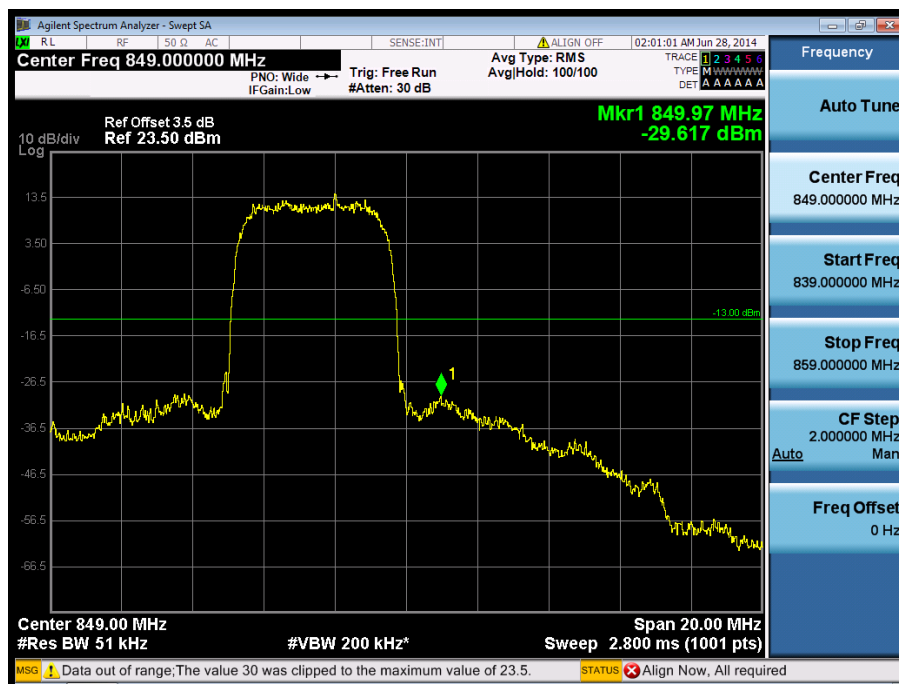
## Test Band=WCDMA850

Test Mode=UMTS/TM1

Test Channel=LCH



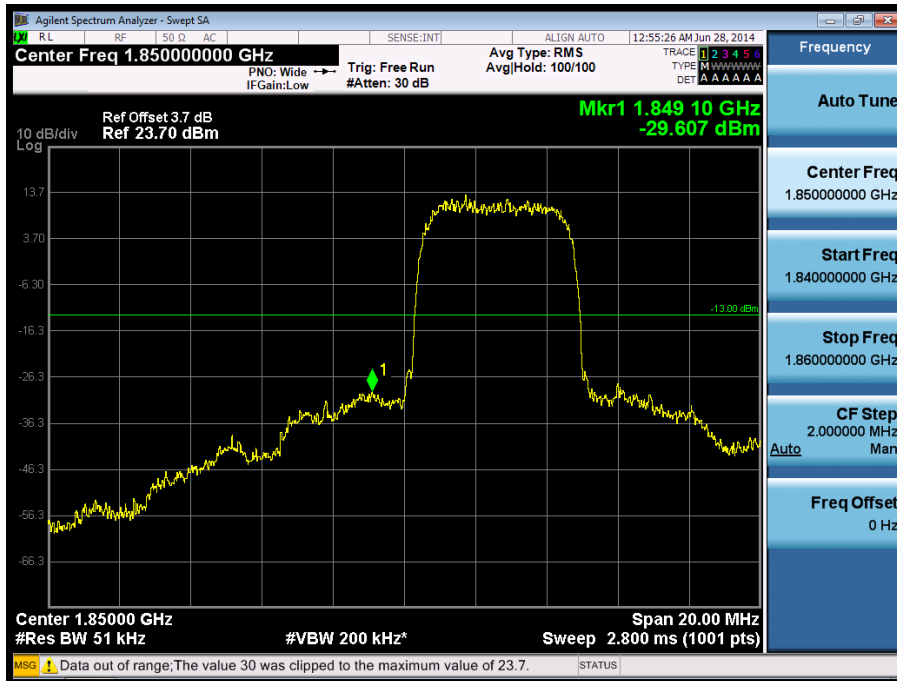
Test Channel=HCH



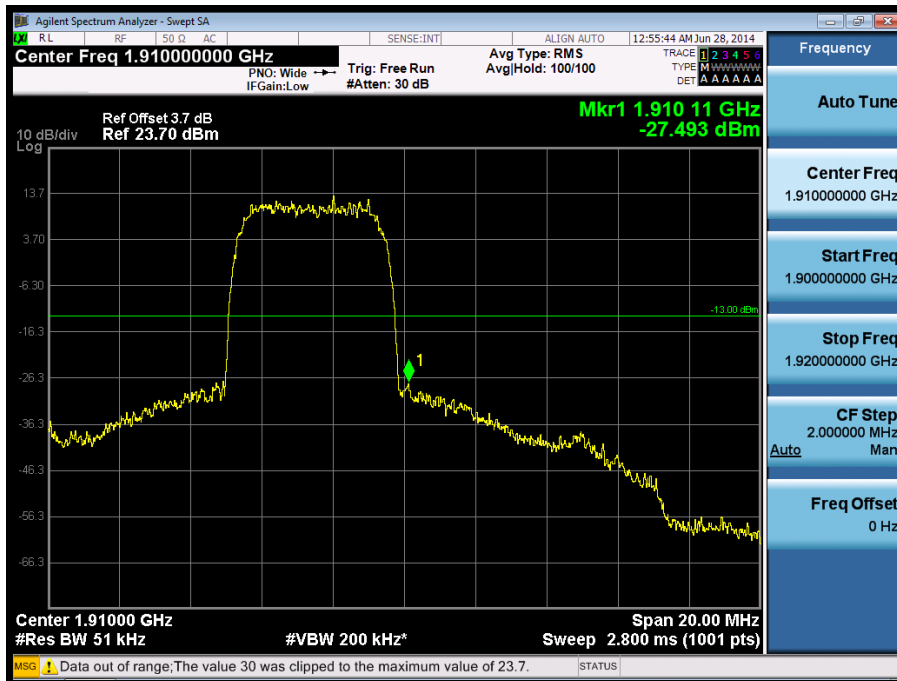
# Test Band=WCDMA1900

Test Mode=UMTSTM1

Test Channel=LCH



Test Channel=HCH



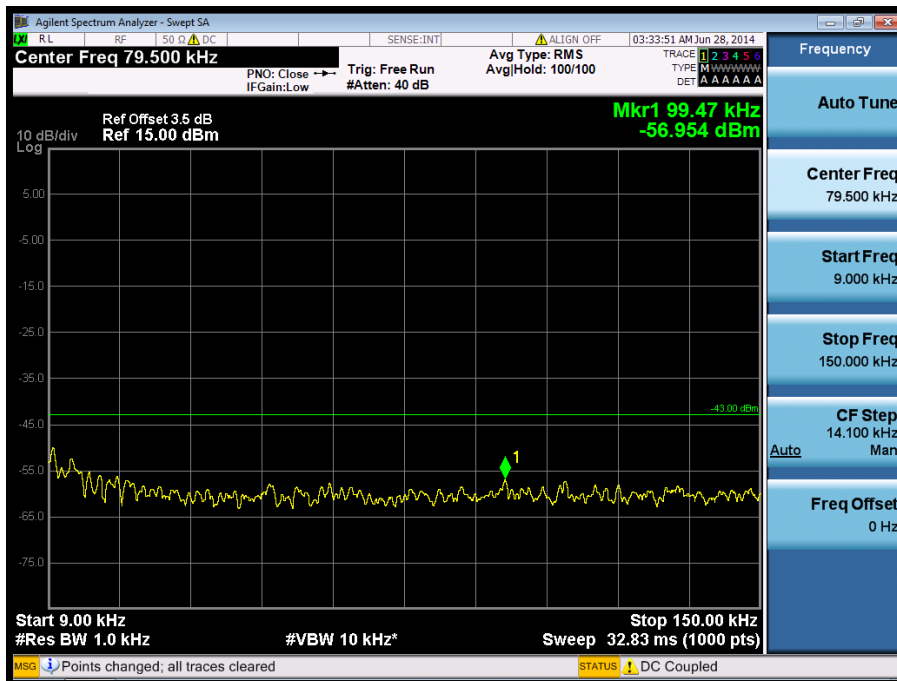
# Appendix F: Spurious Emission at Antenna Terminal

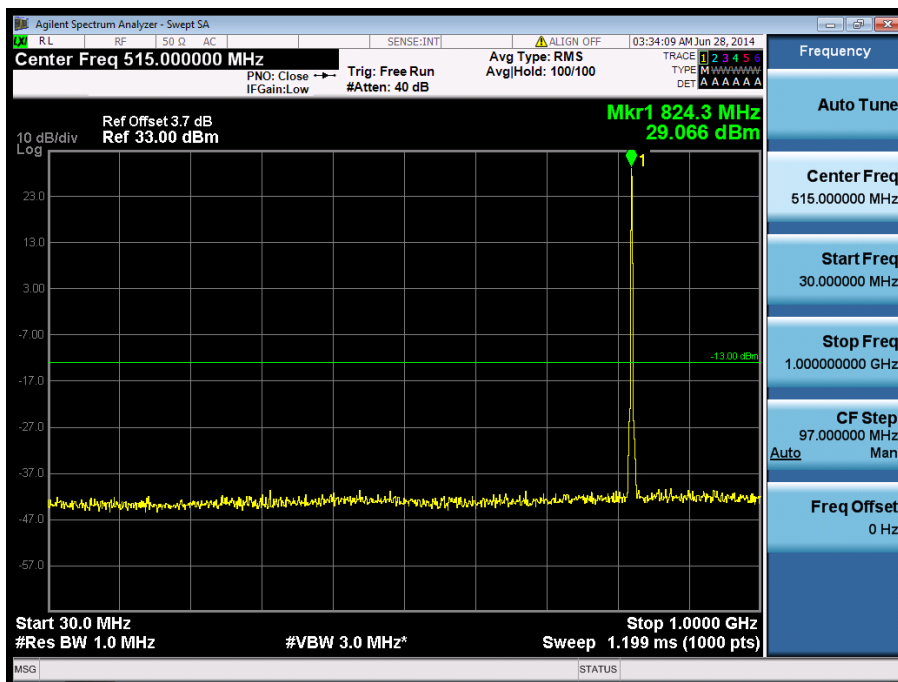
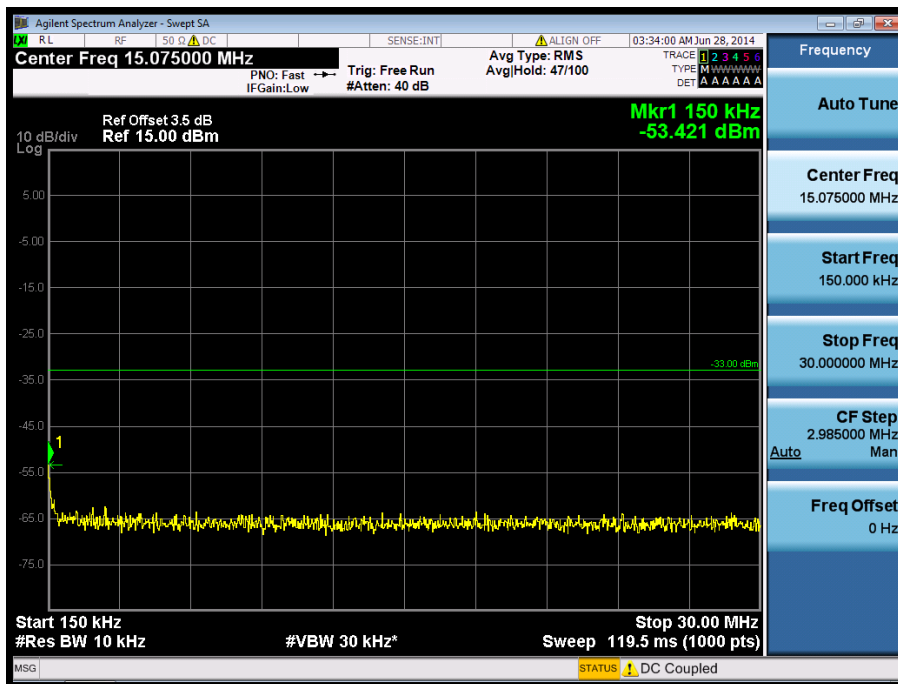
## Test Results

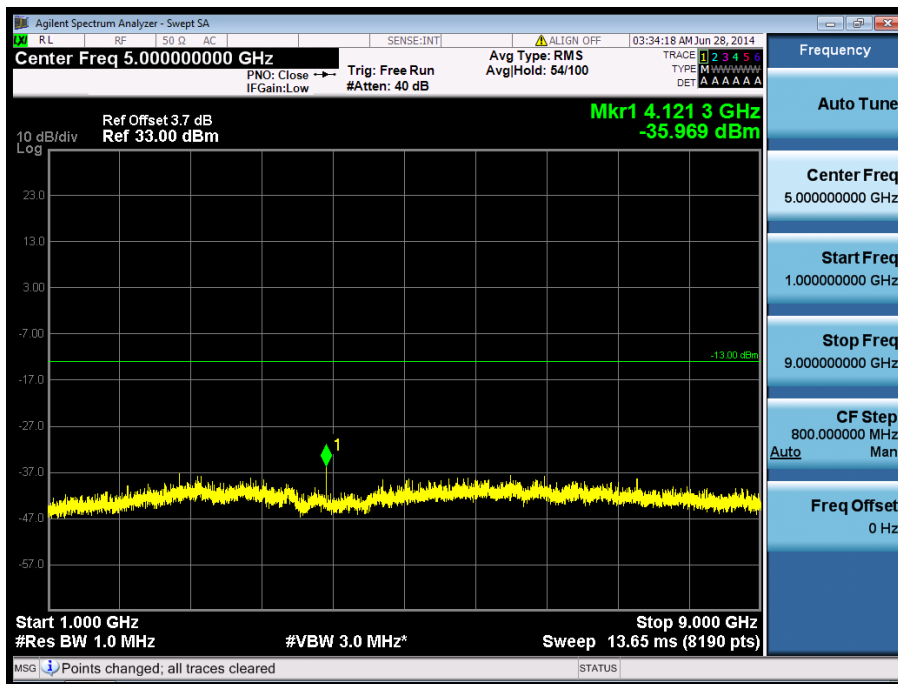
Test Band=GSM850

Test Mode=GSM/TM1

Test Channel=LCH

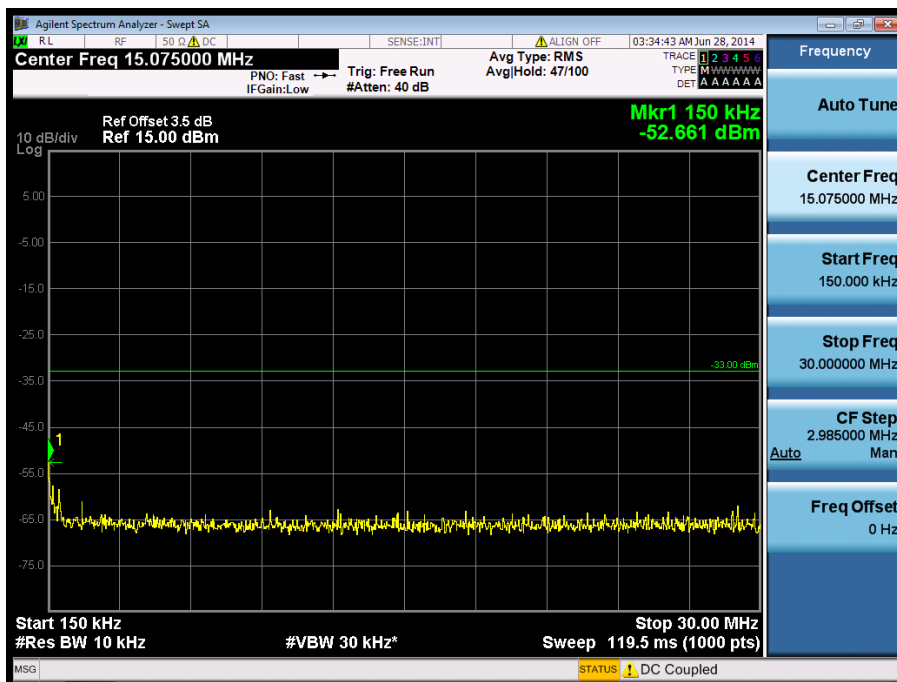
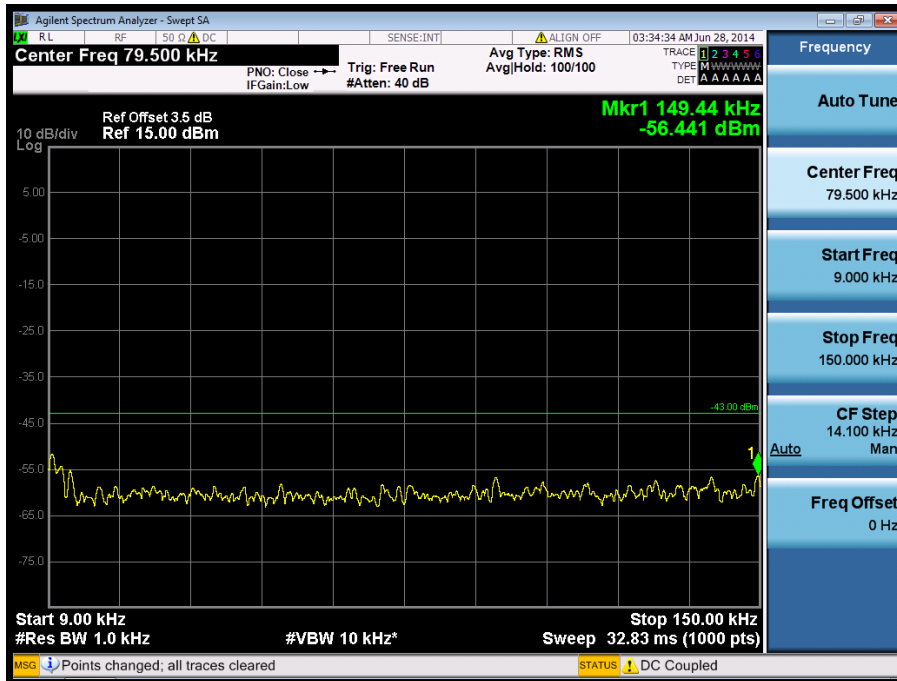


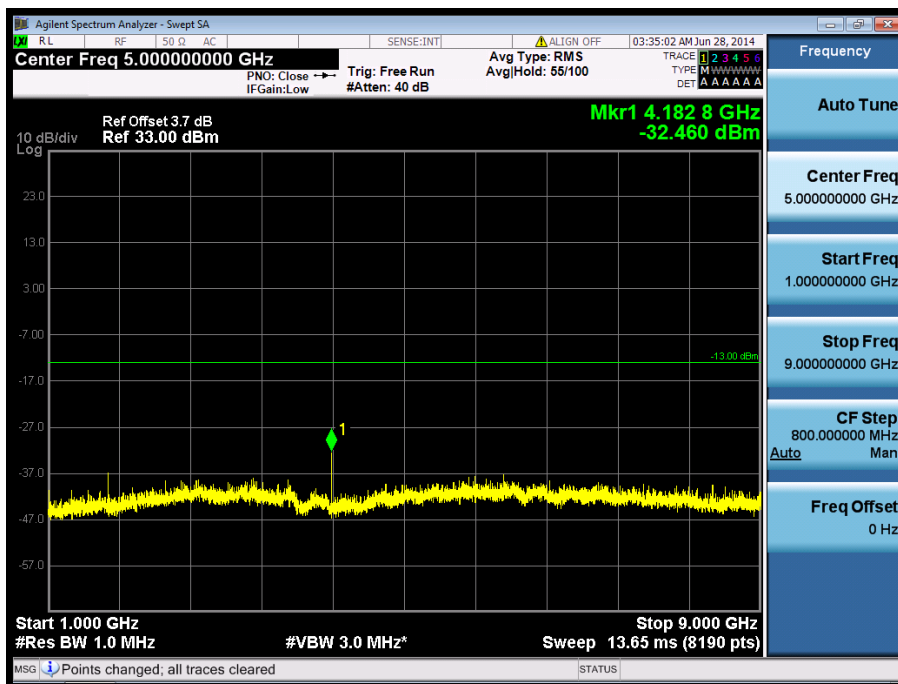
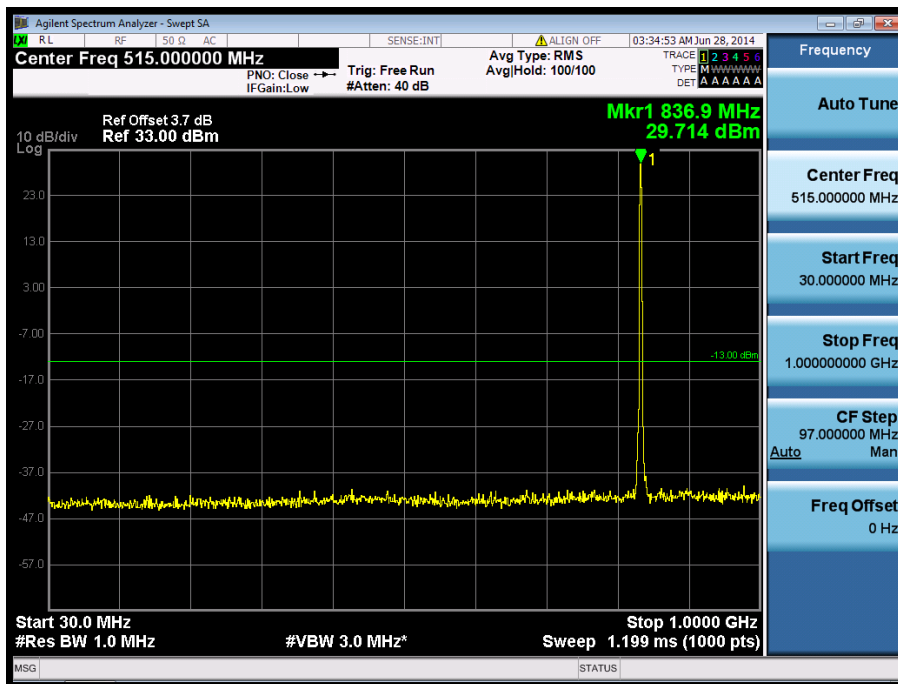




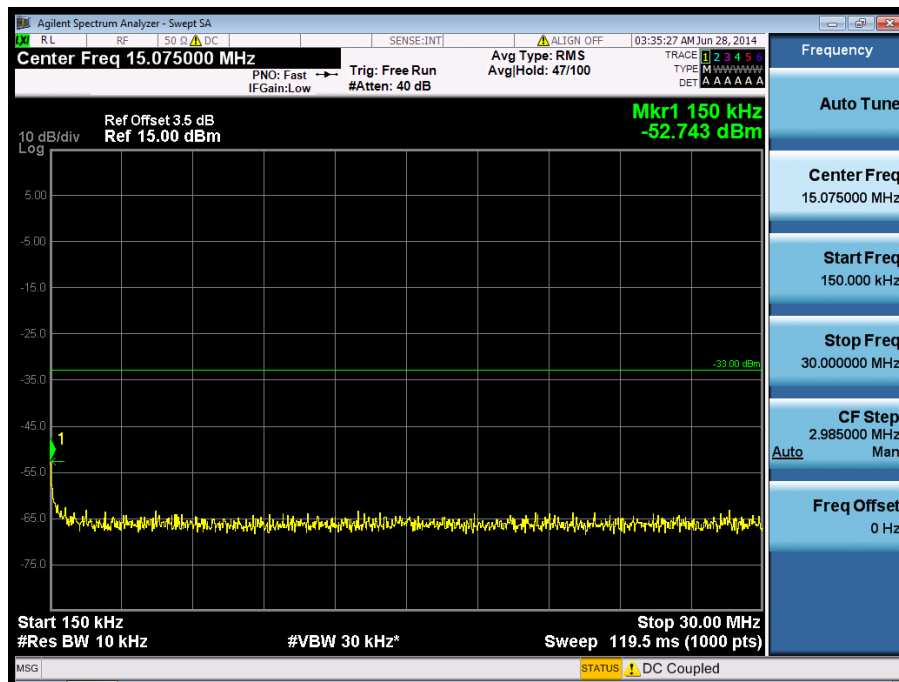
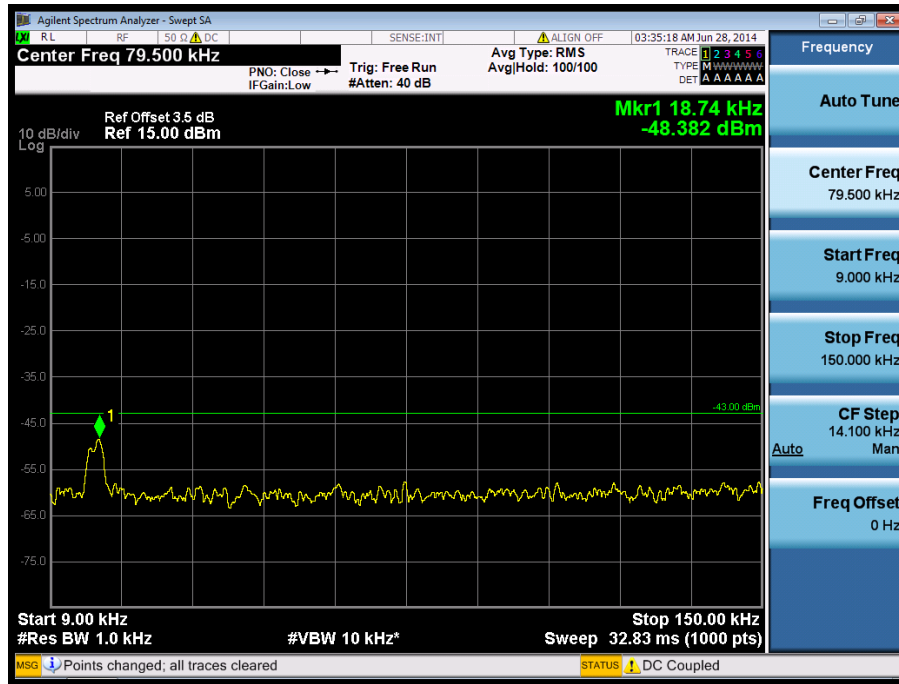


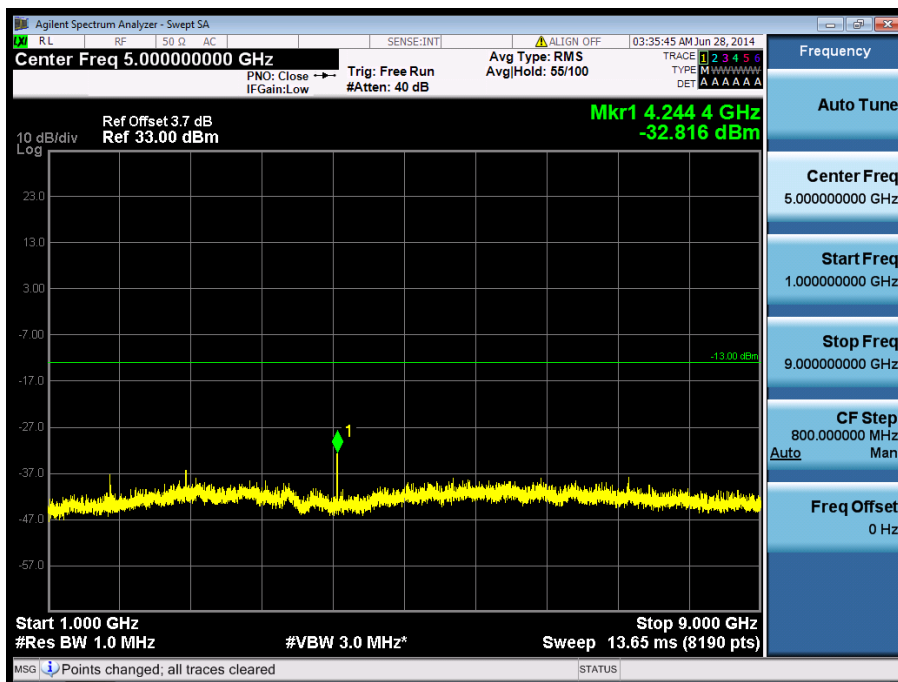
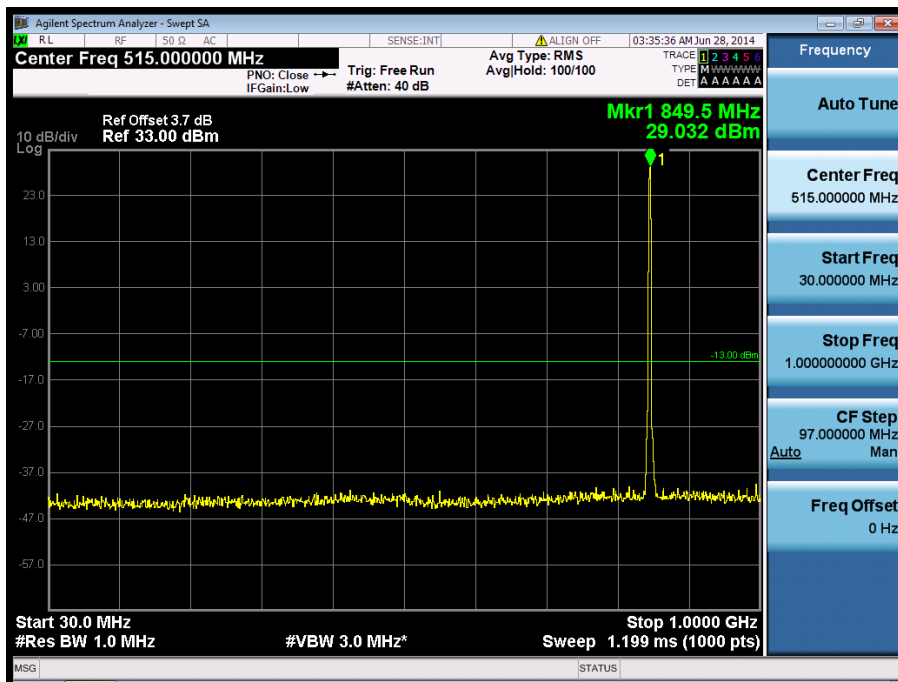
# Test Channel=MCH





# Test Channel=HCH

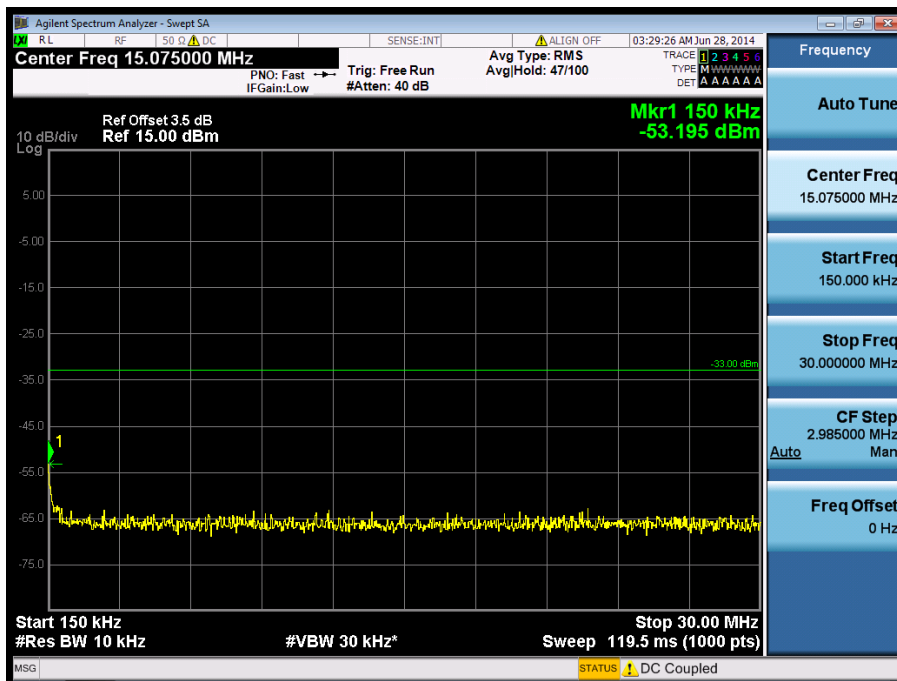
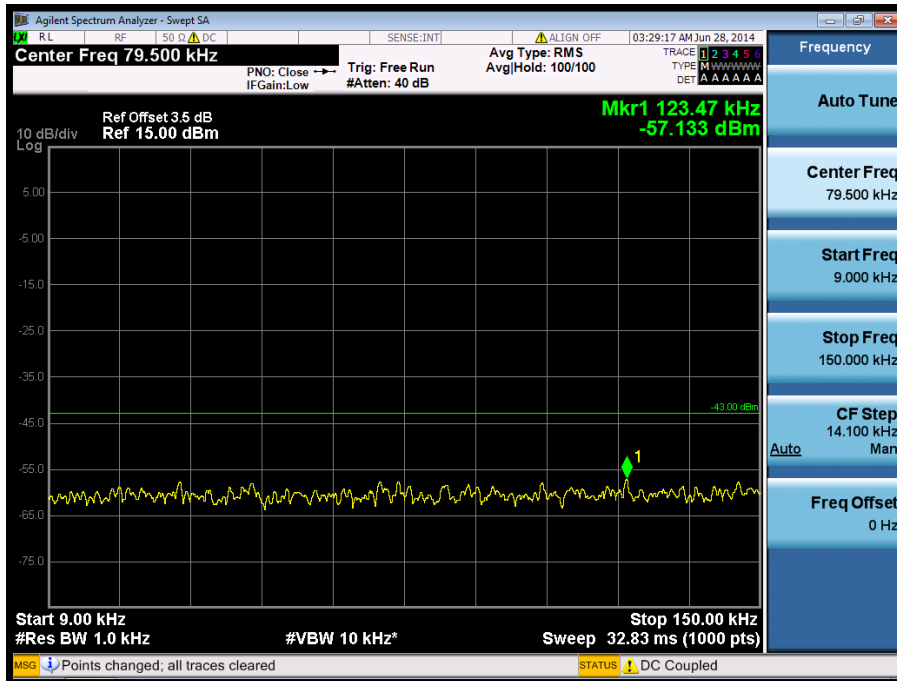




# Test Band=GSM1900

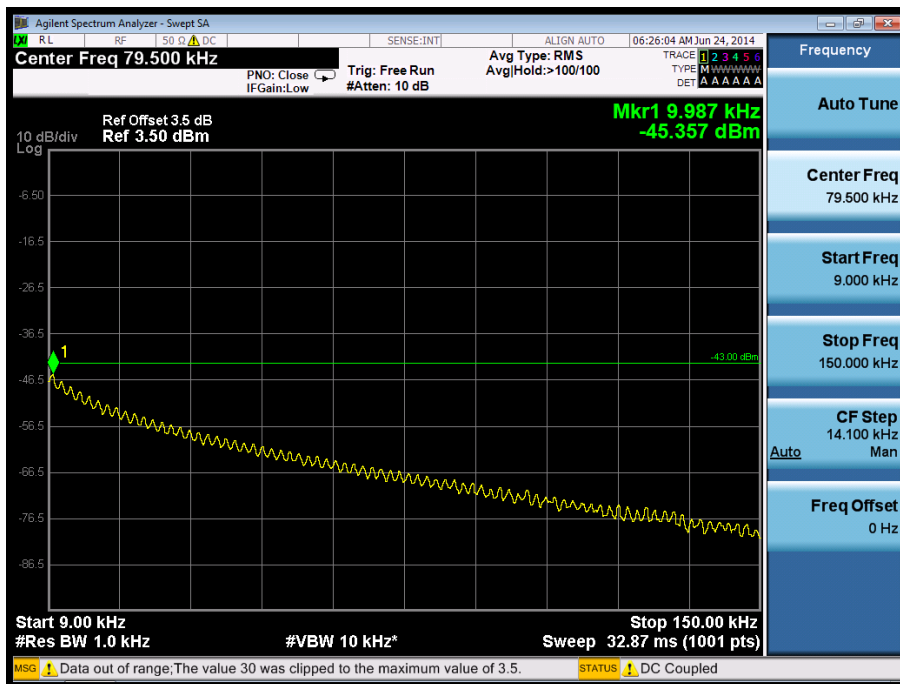
Test Mode=GSM/TM1

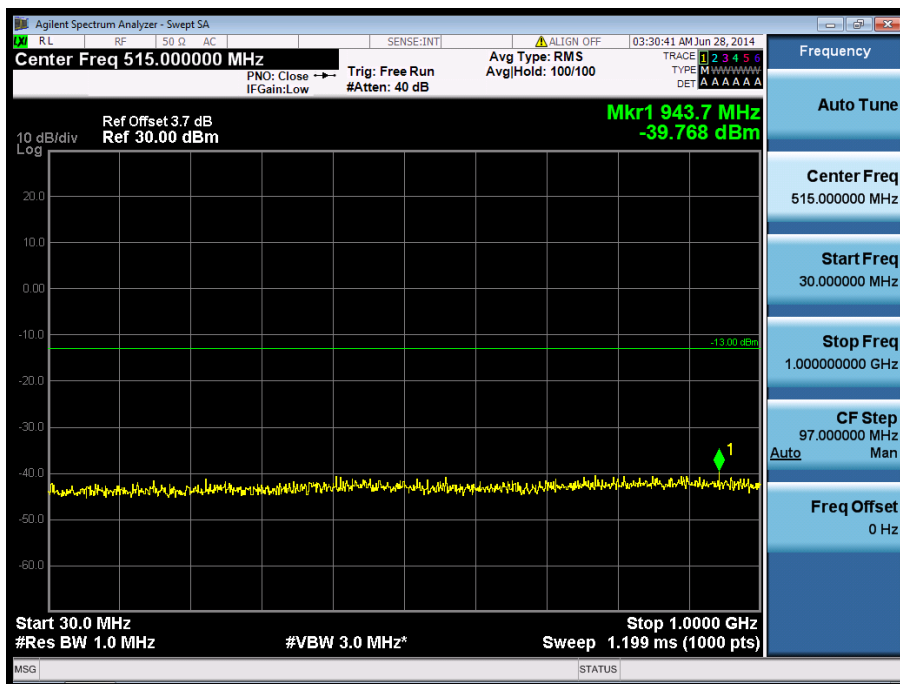
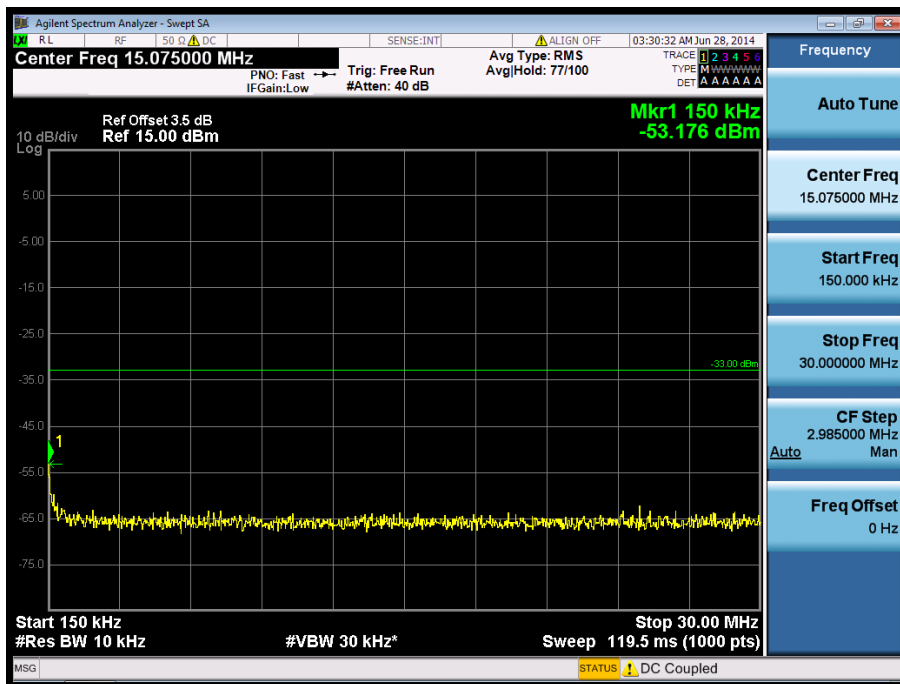
Test Channel=LCH

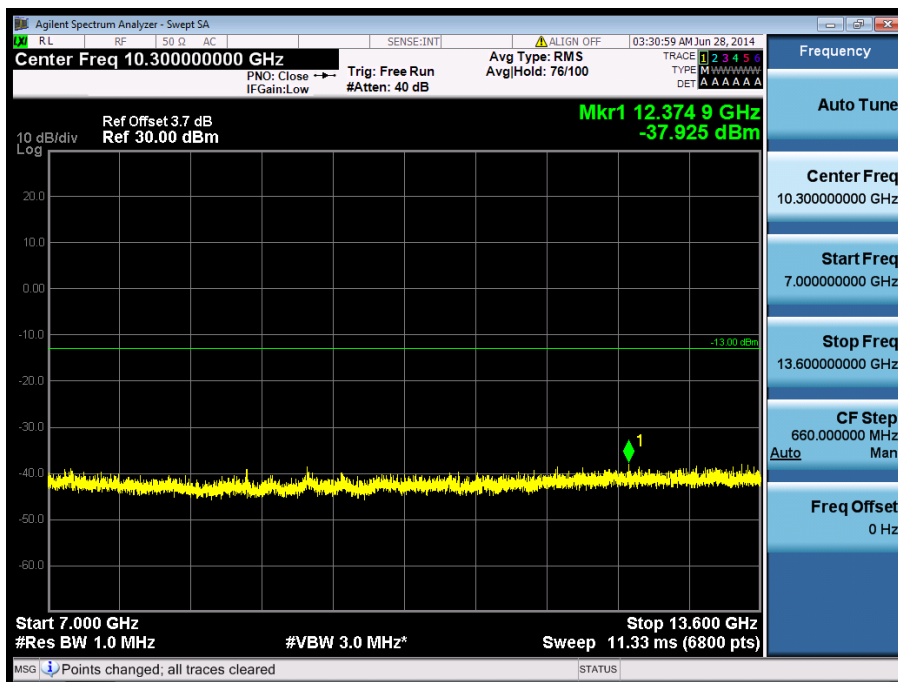
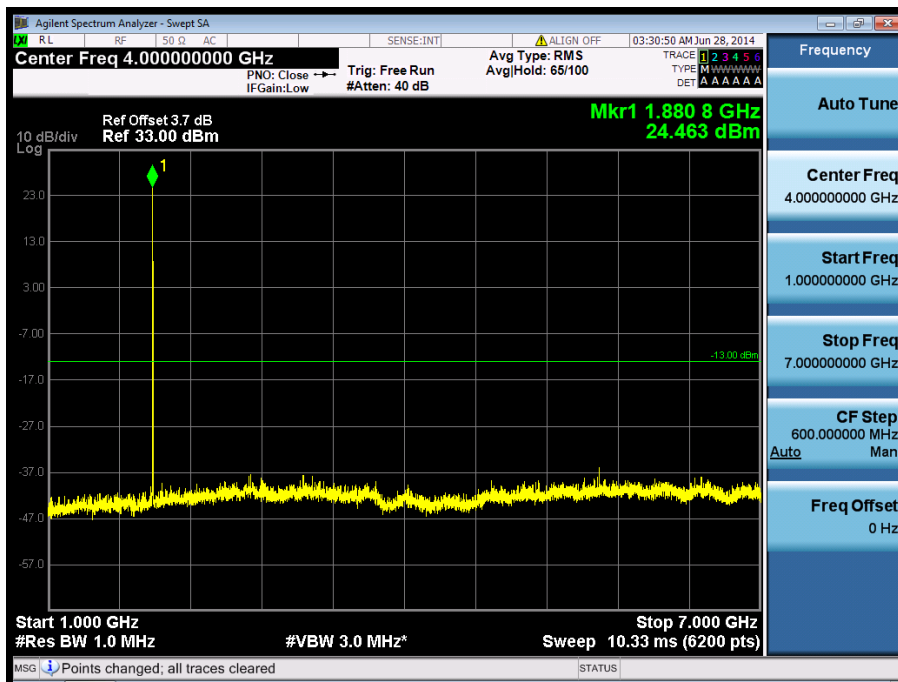




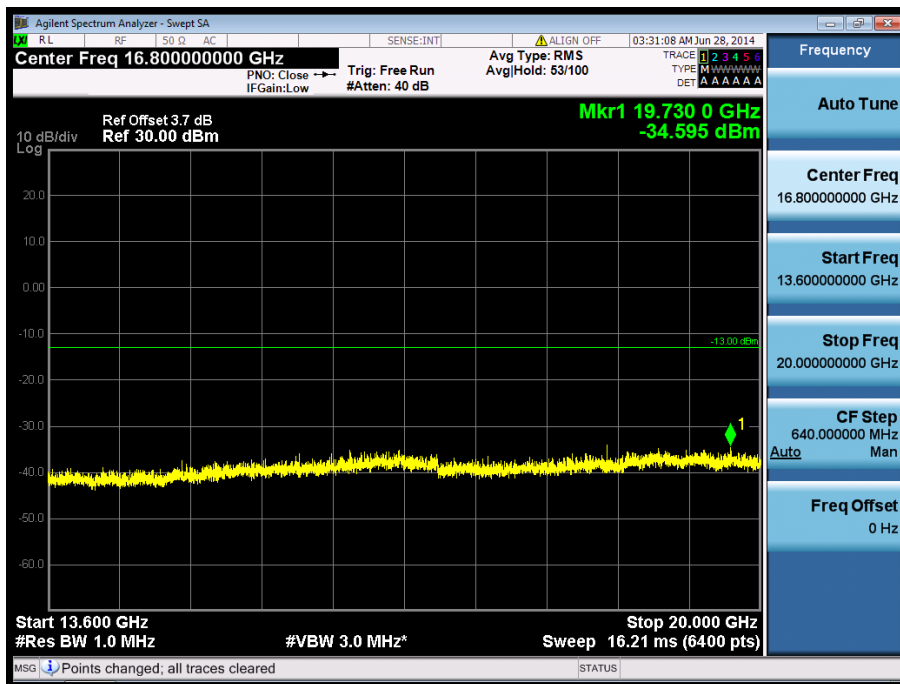
Test Channel=MCH



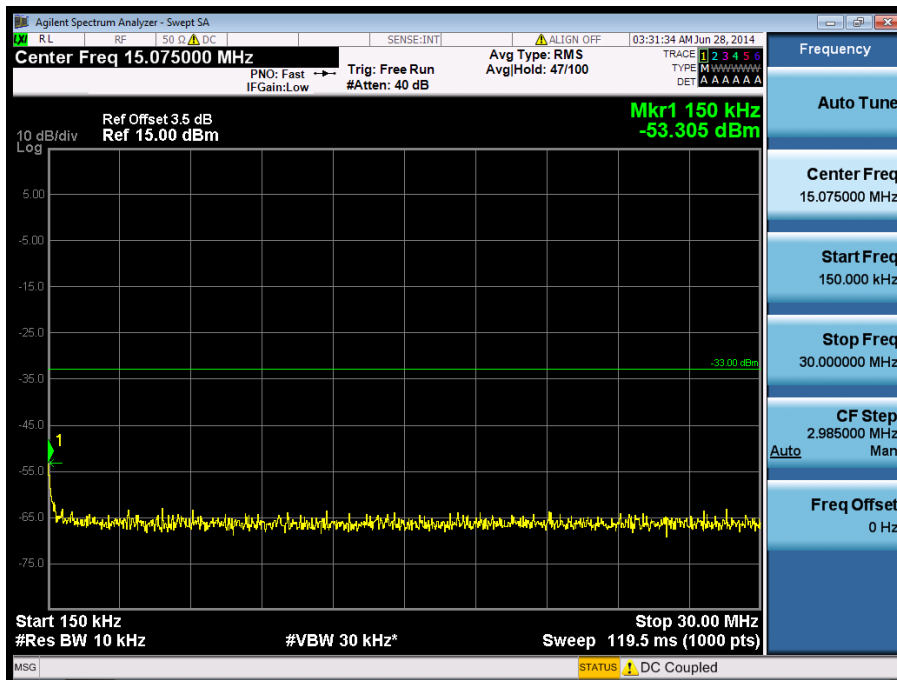
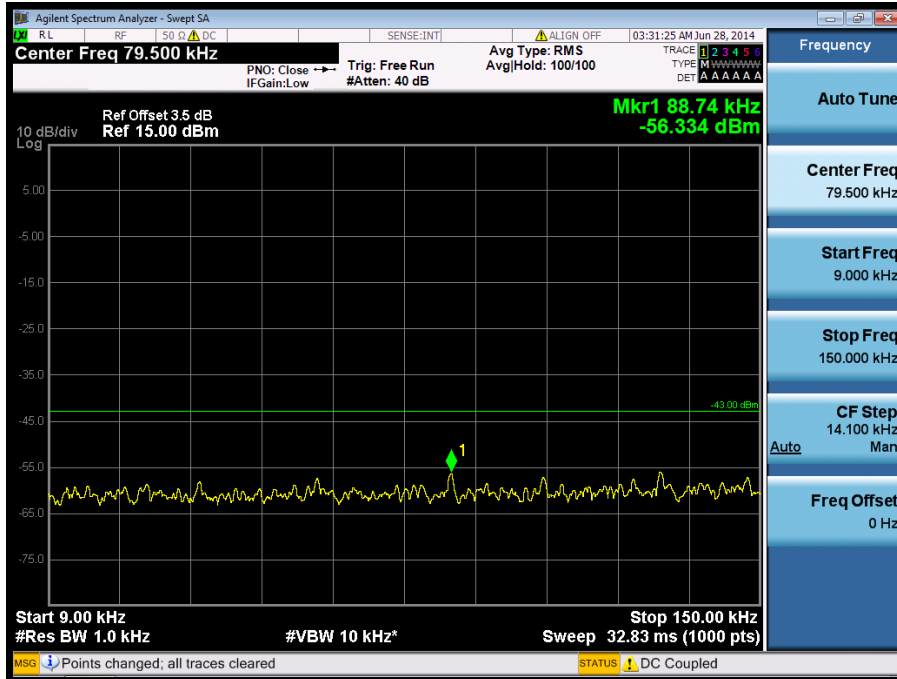


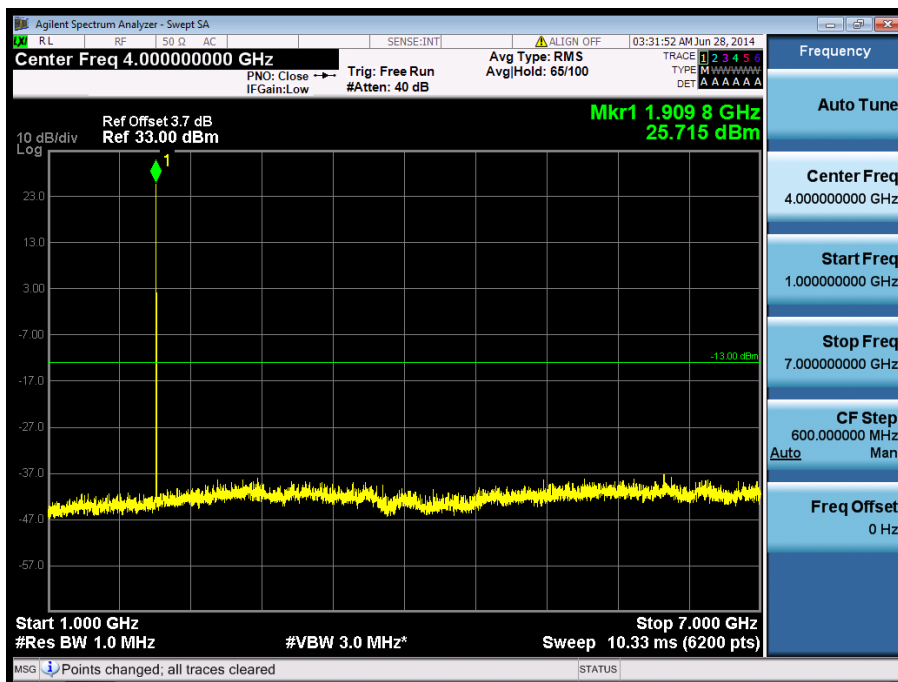
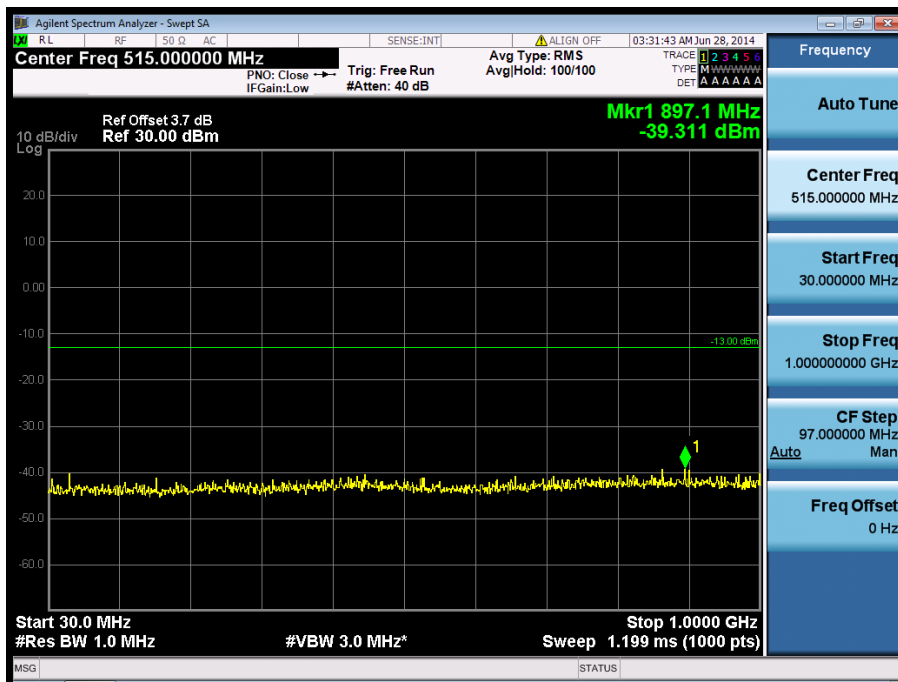


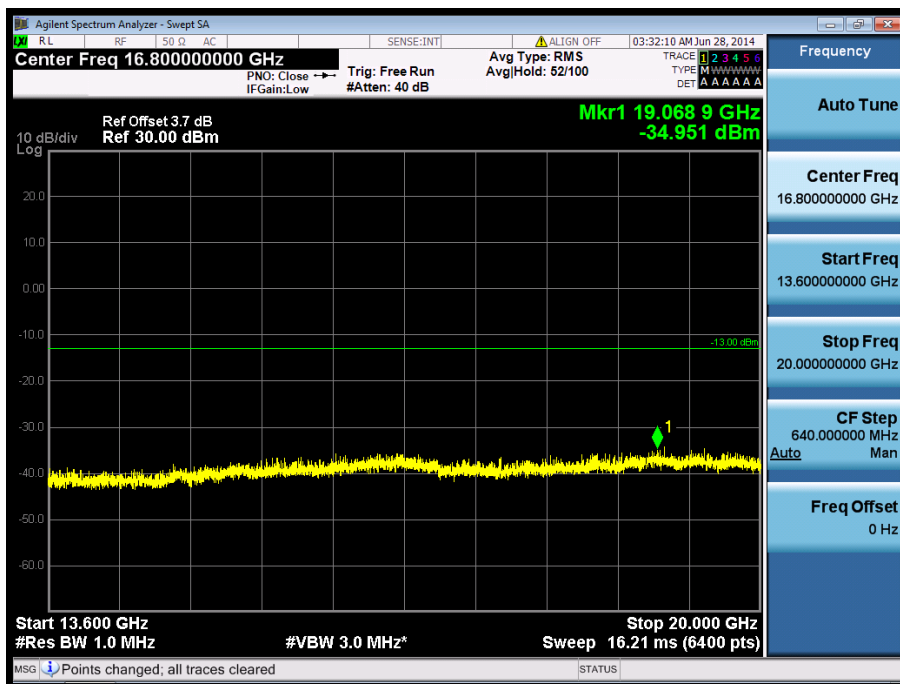
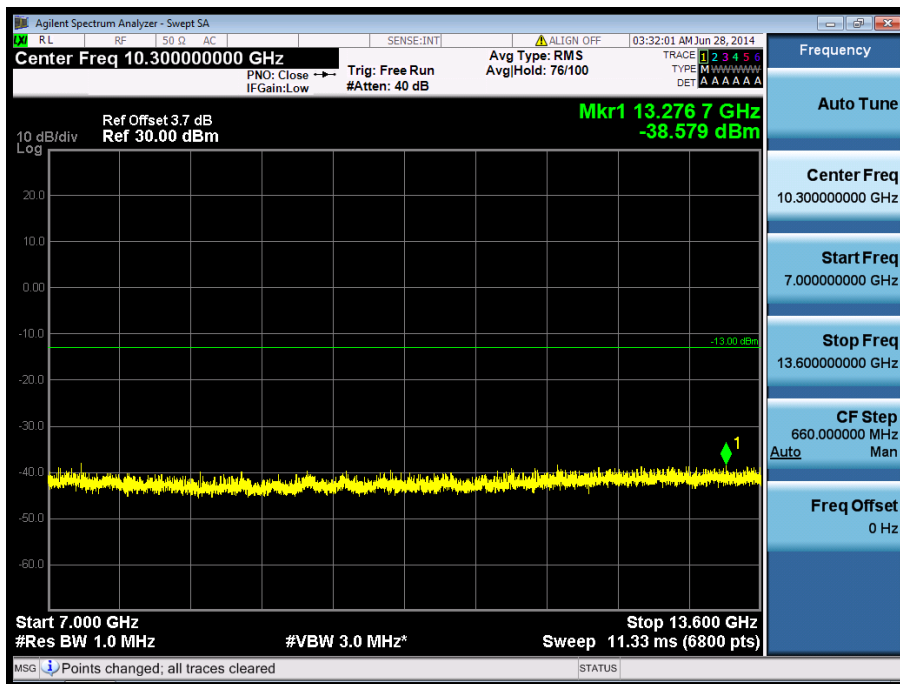




### Test Channel=HCH



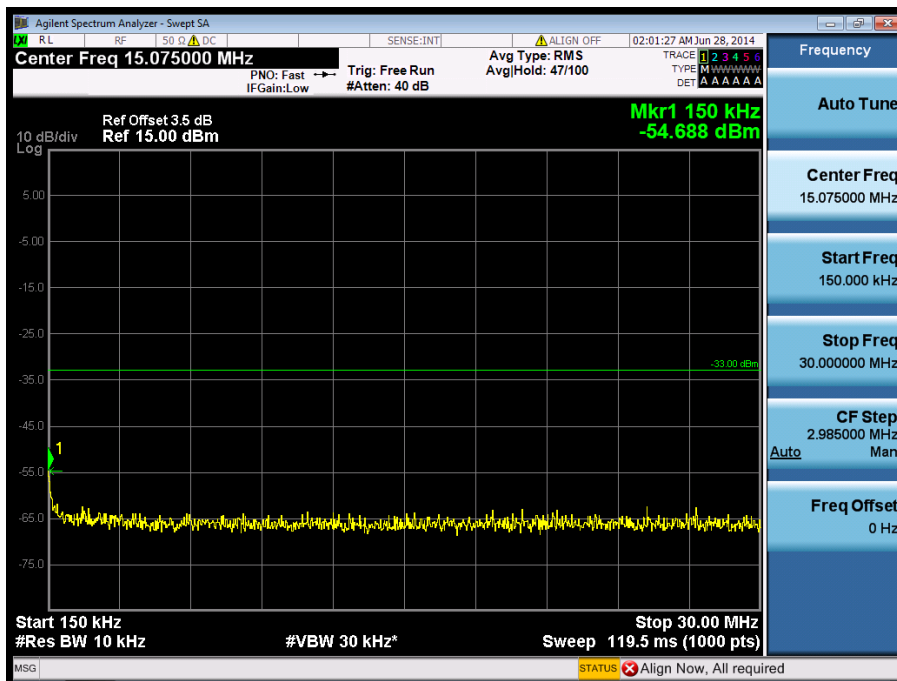
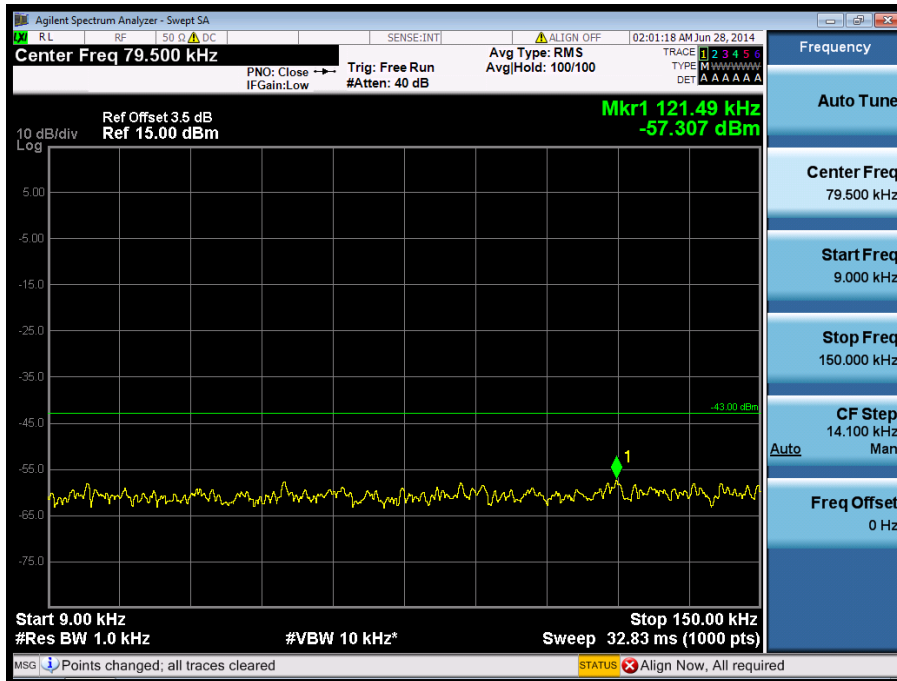


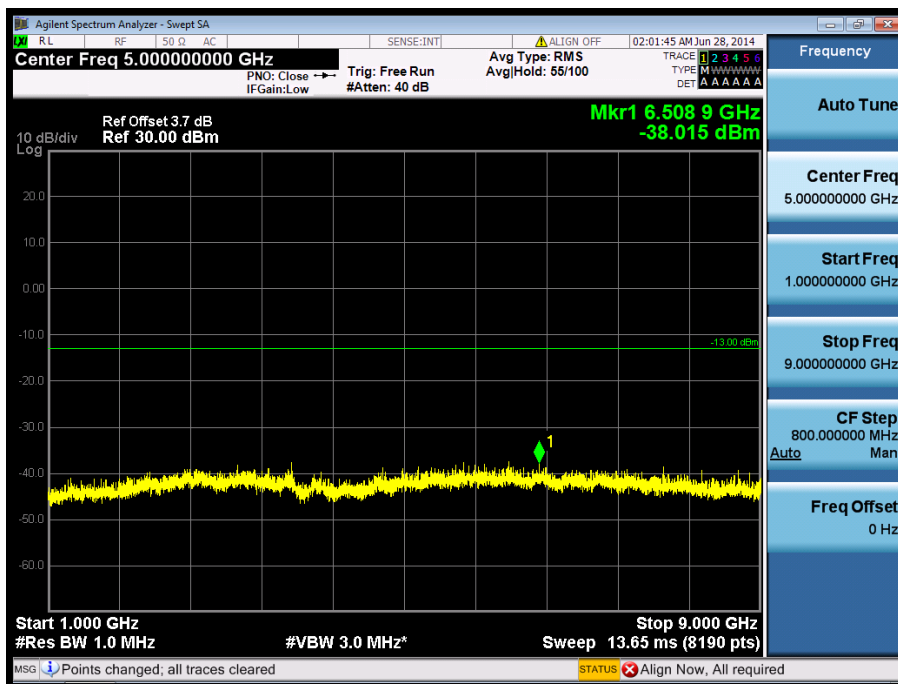
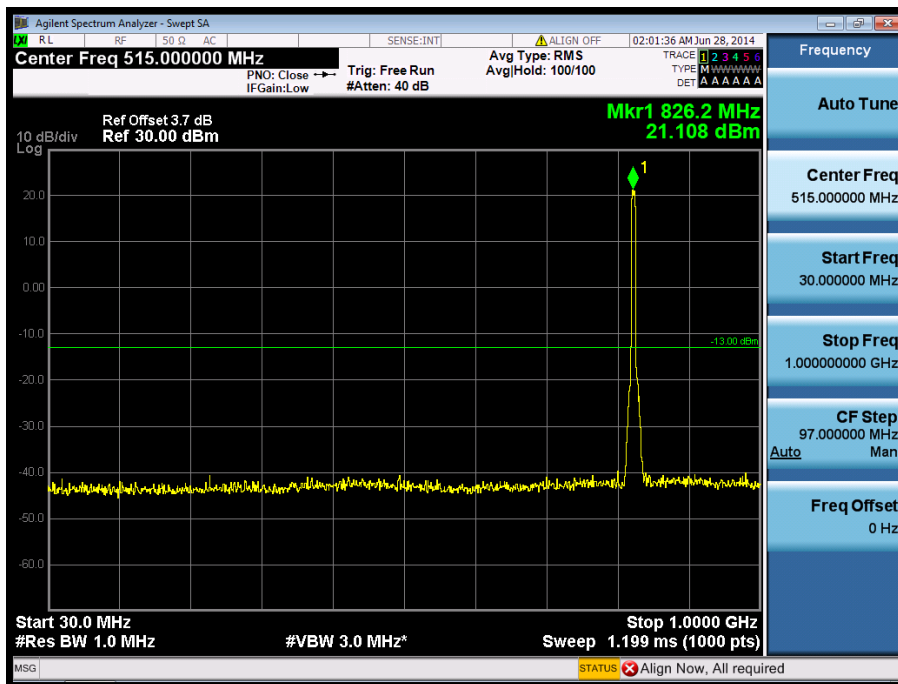


# Test Band=WCDMA850

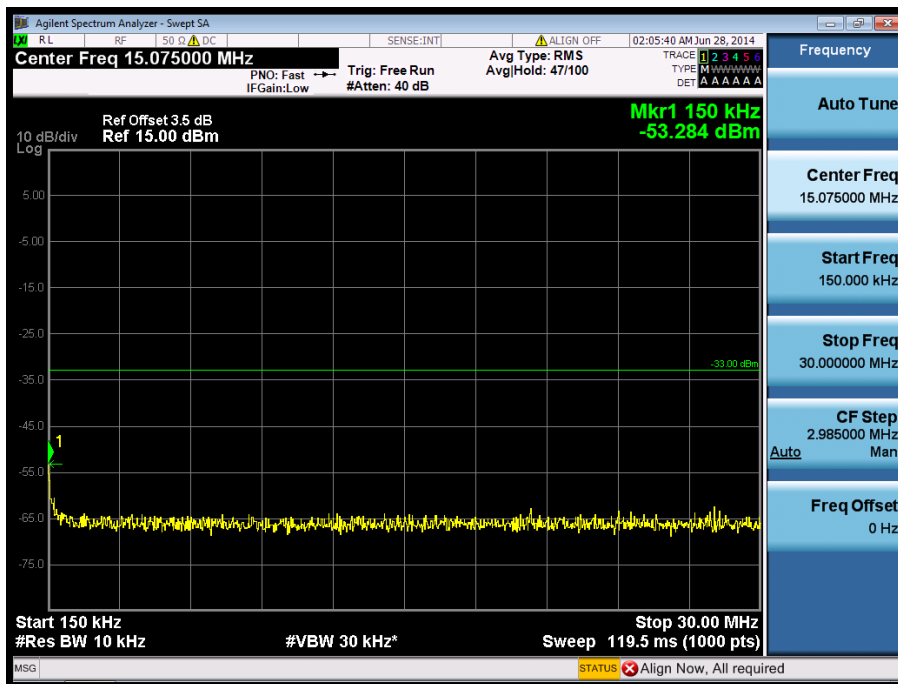
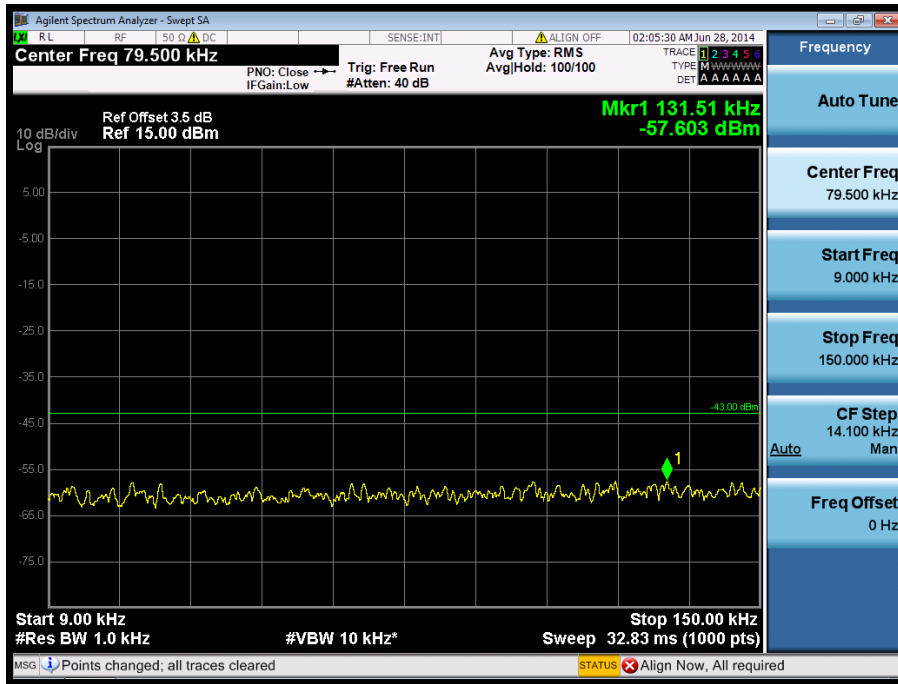
Test Mode=UMTS/TM1

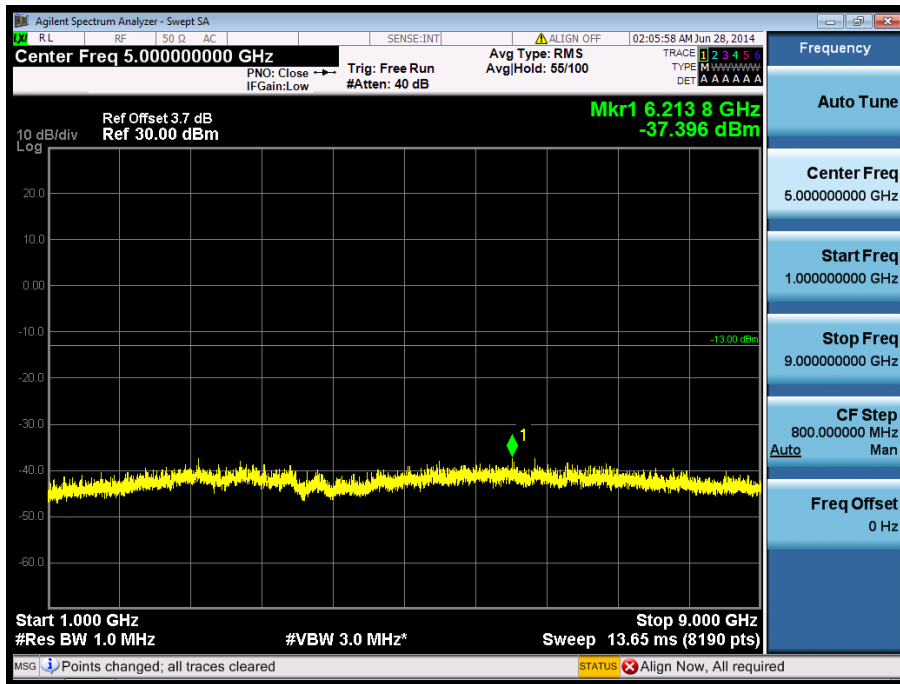
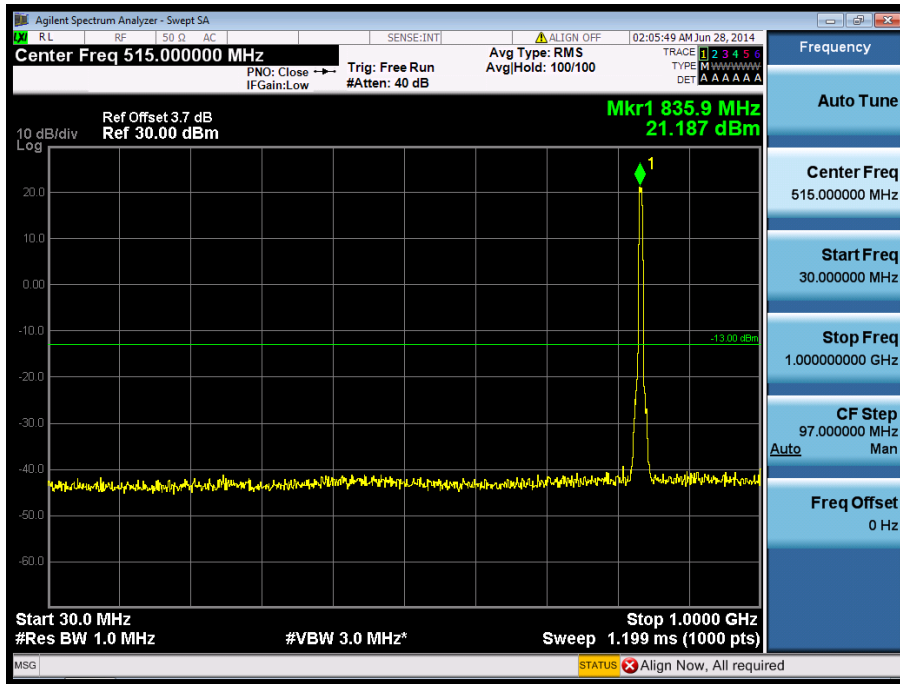
Test Channel=LCH





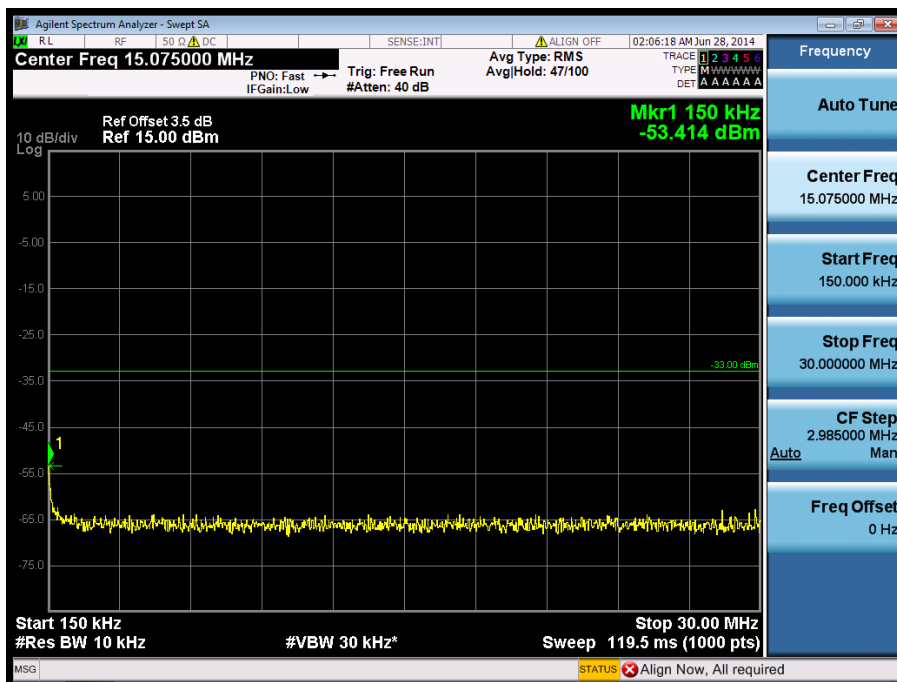
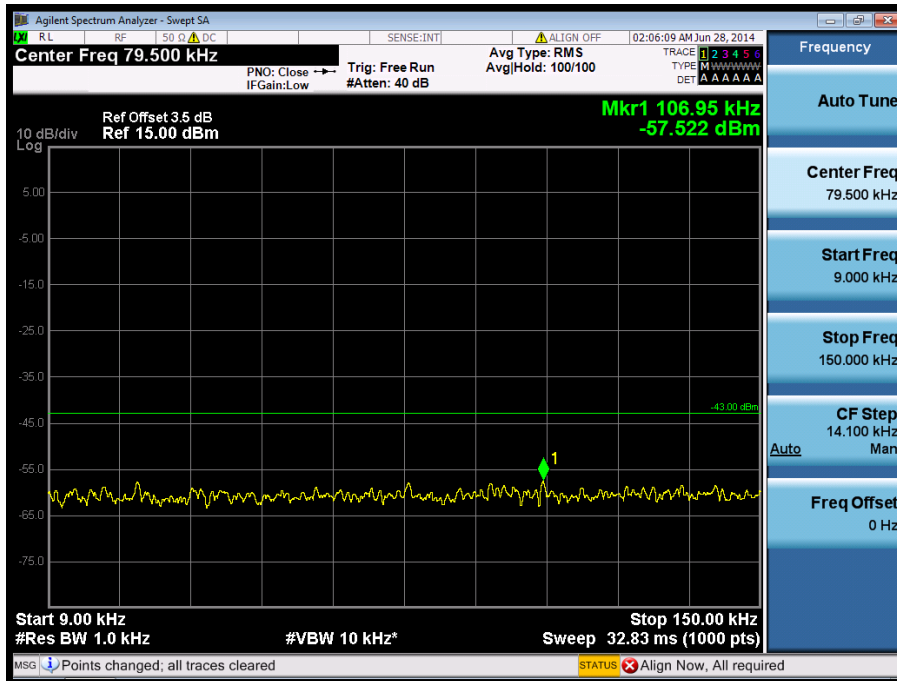
# Test Channel=MCH

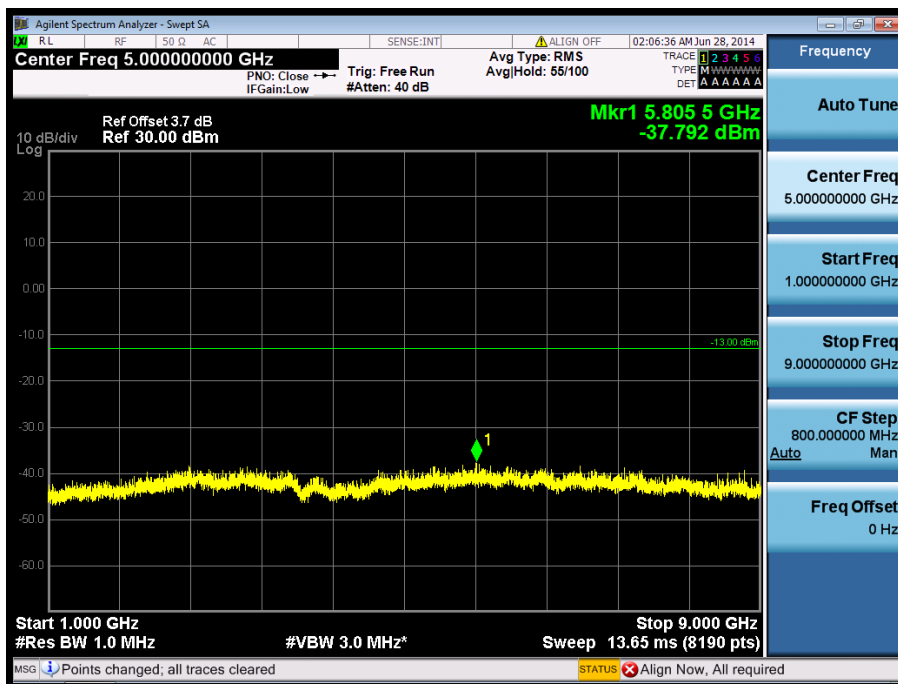
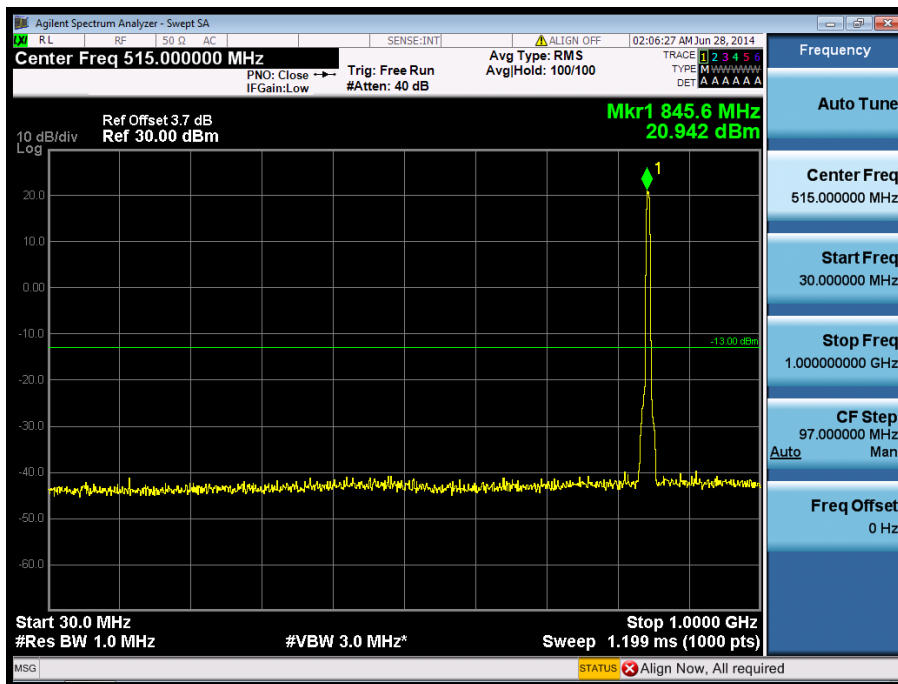






Test Channel=HCH

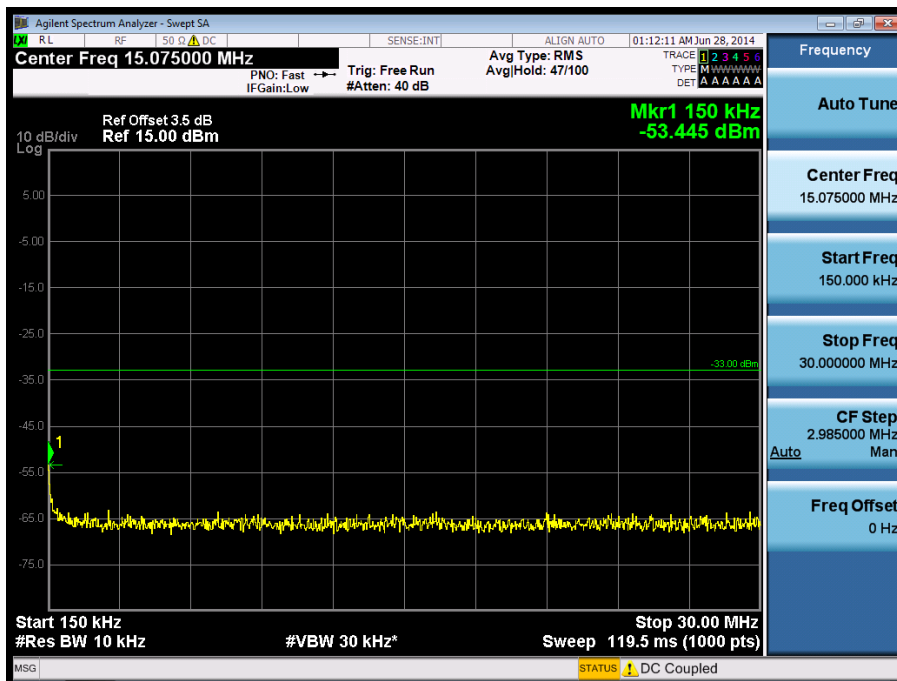
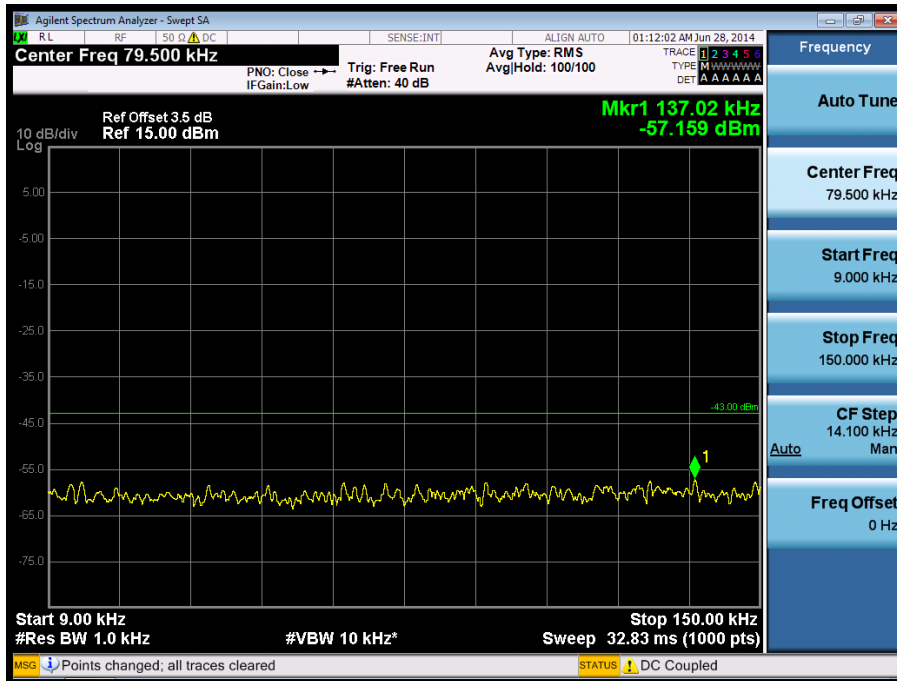


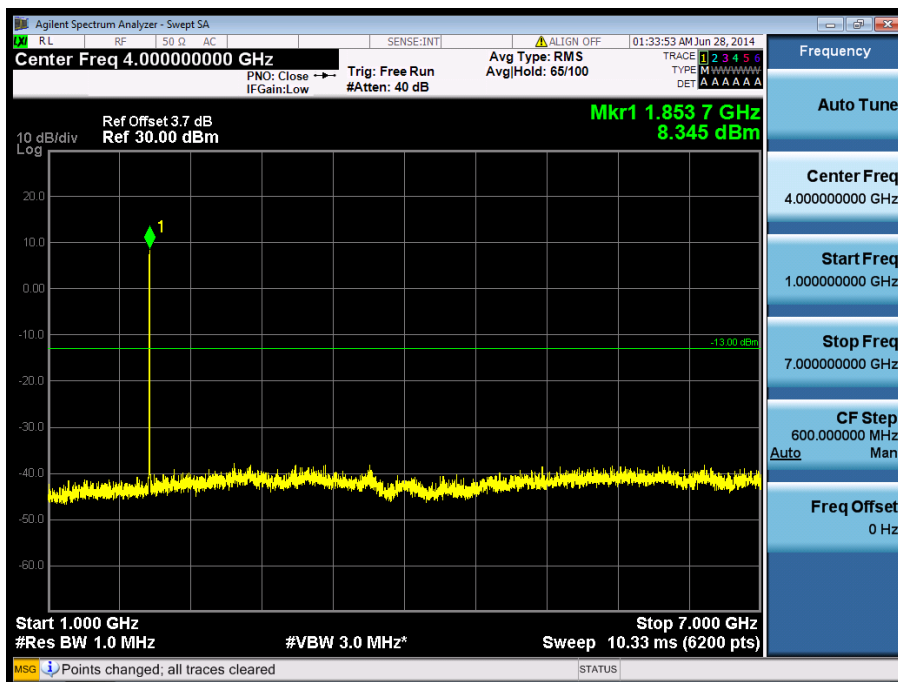
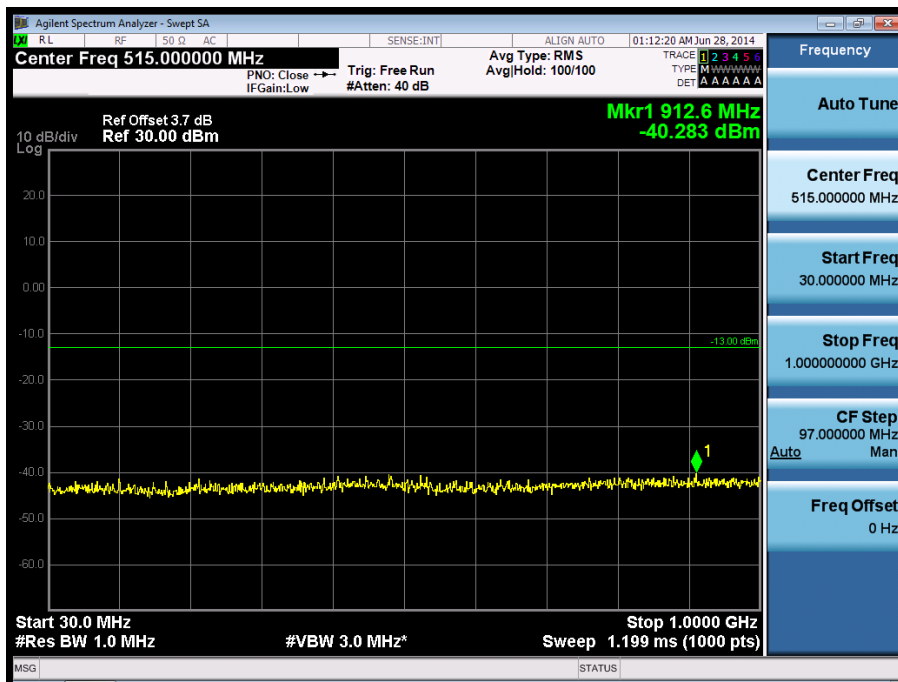


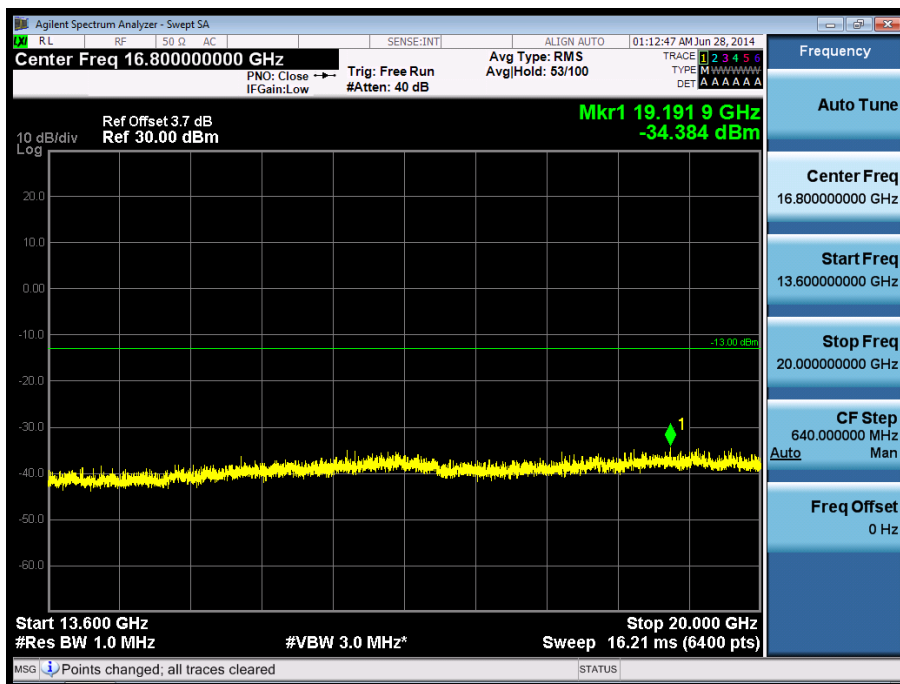
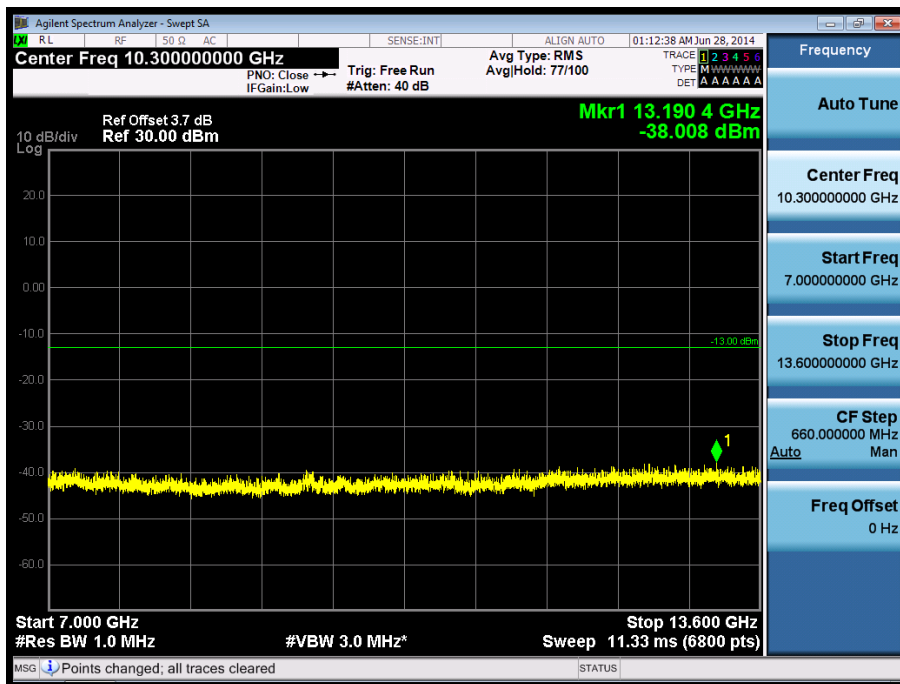
# Test Band=WCDMA1900

Test Mode=UMTS/TM1

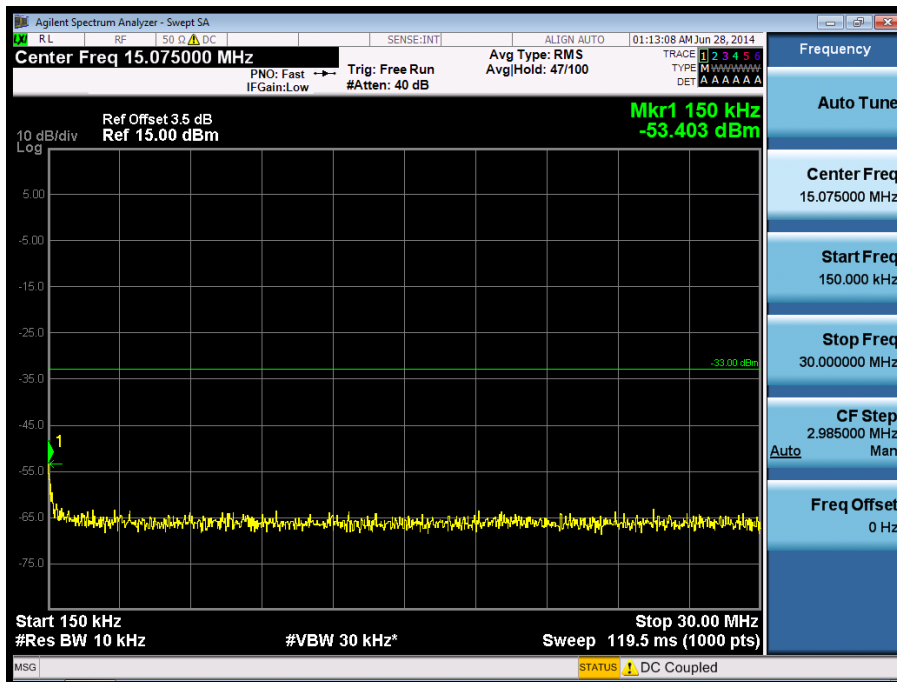
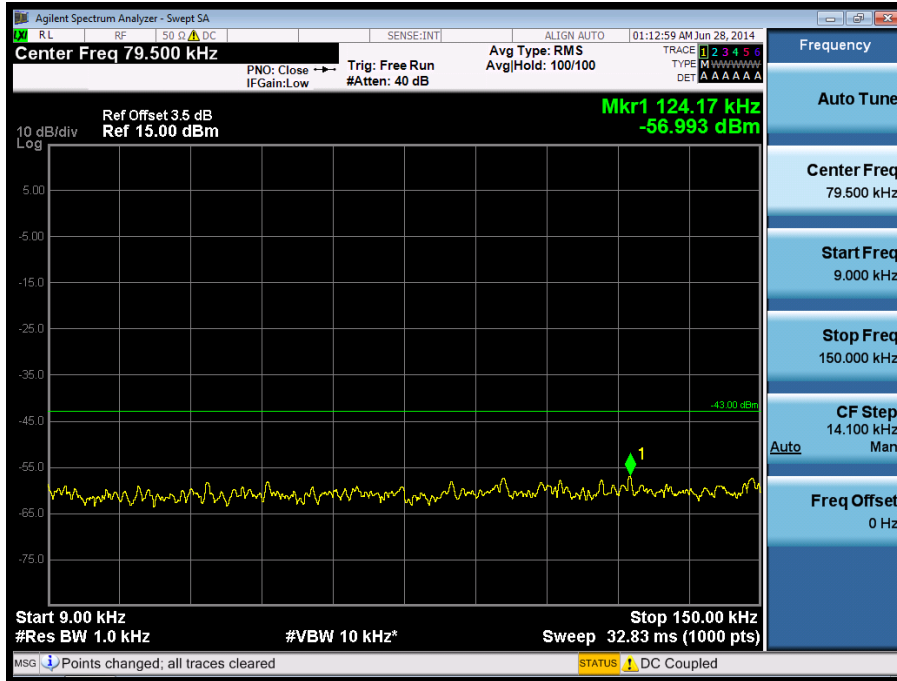
Test Channel=LCH

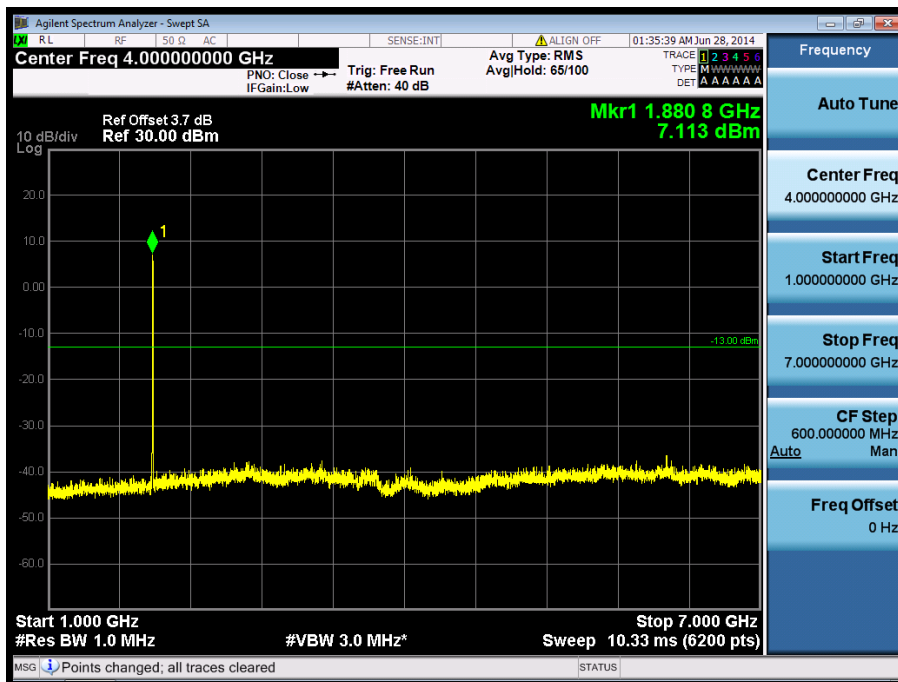
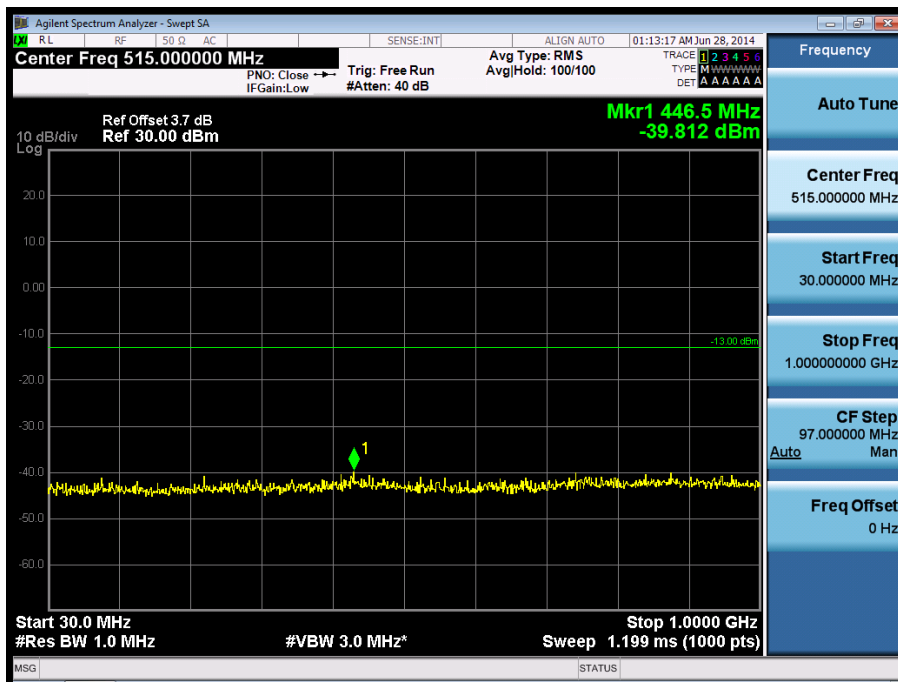


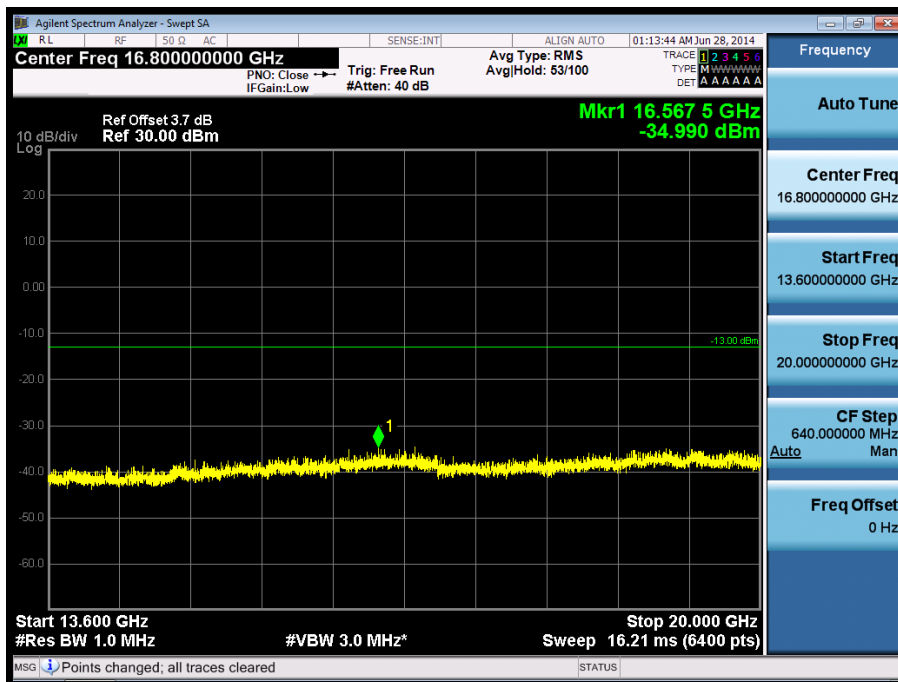
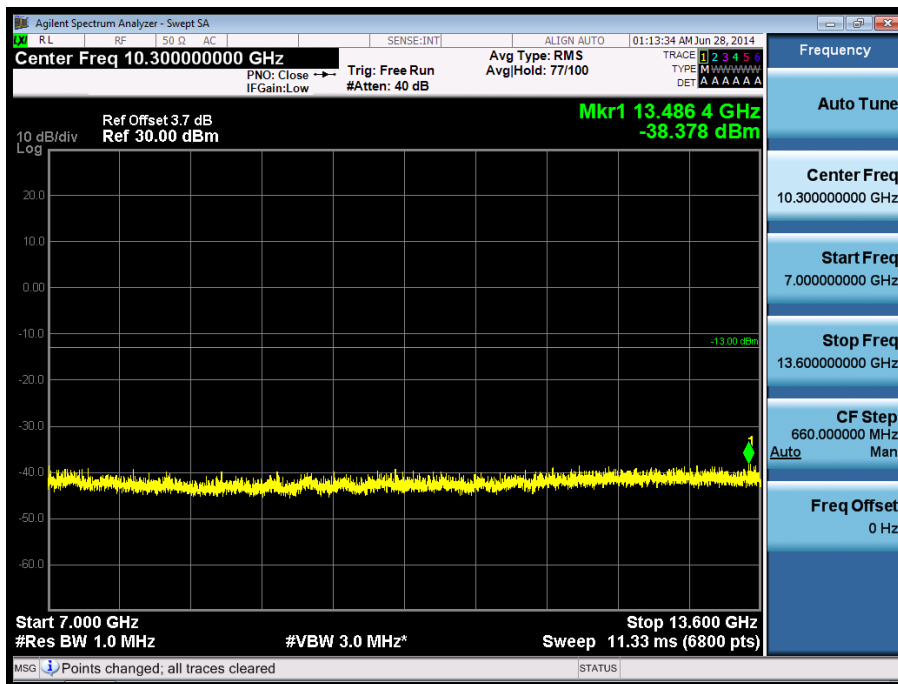




# Test Channel=MCH

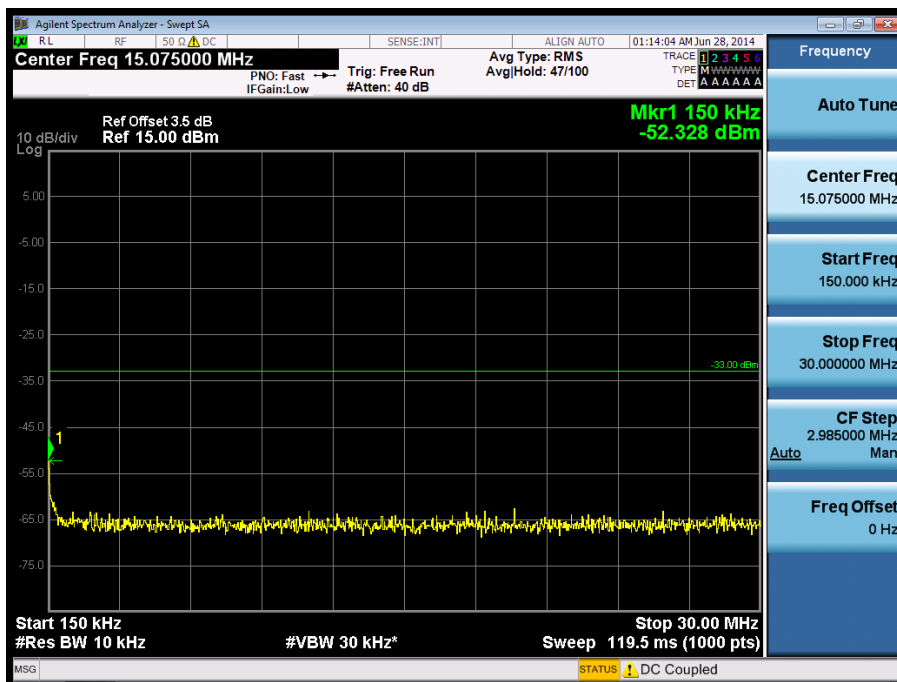
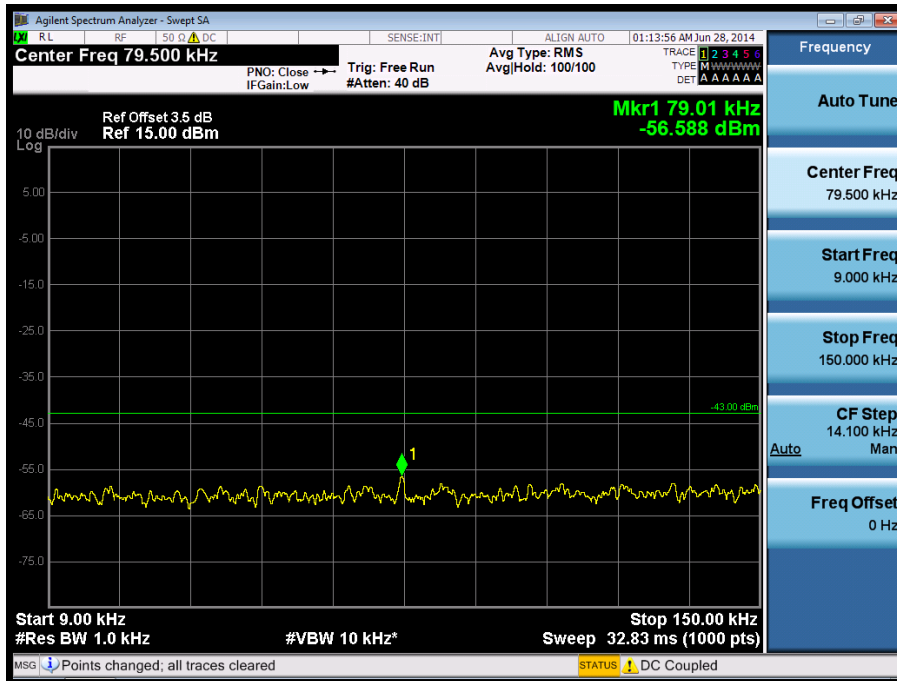


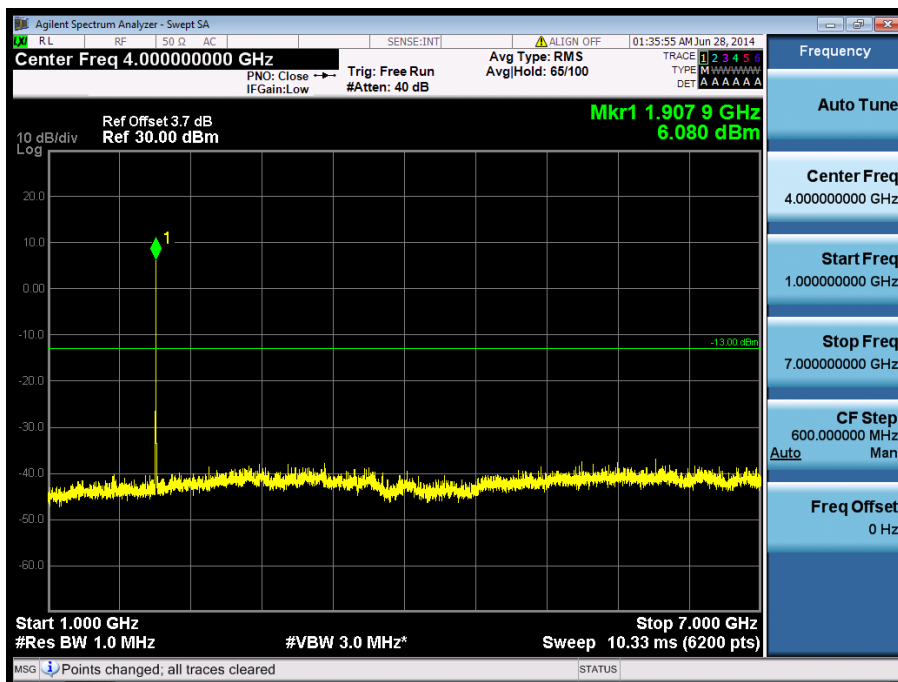
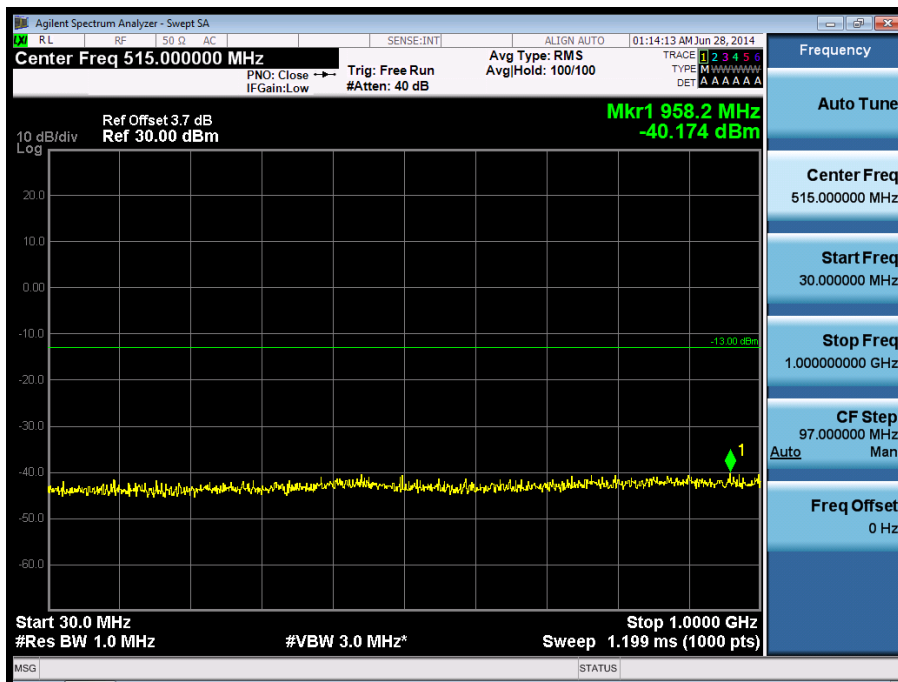


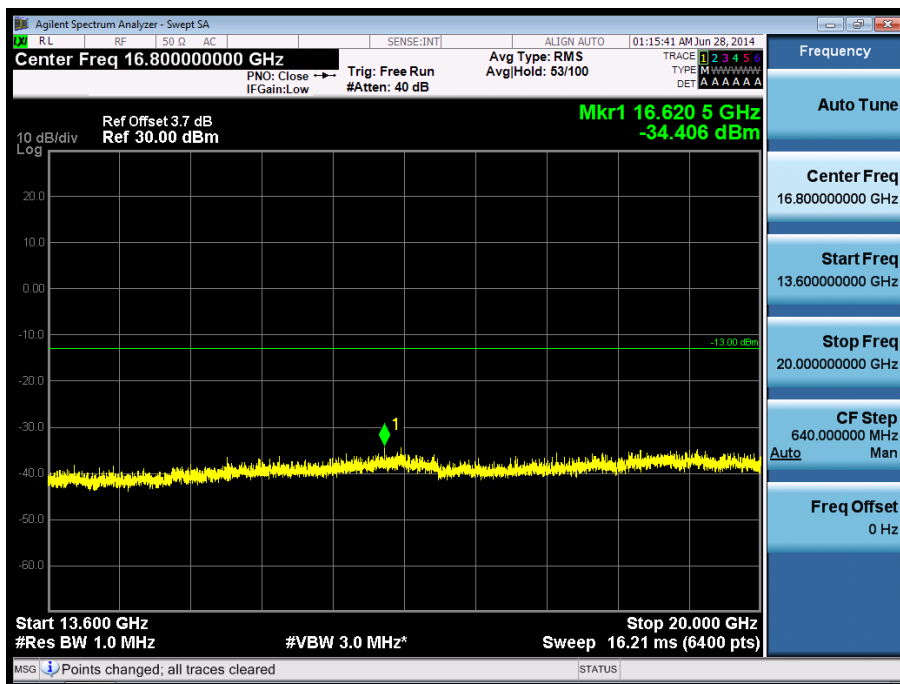
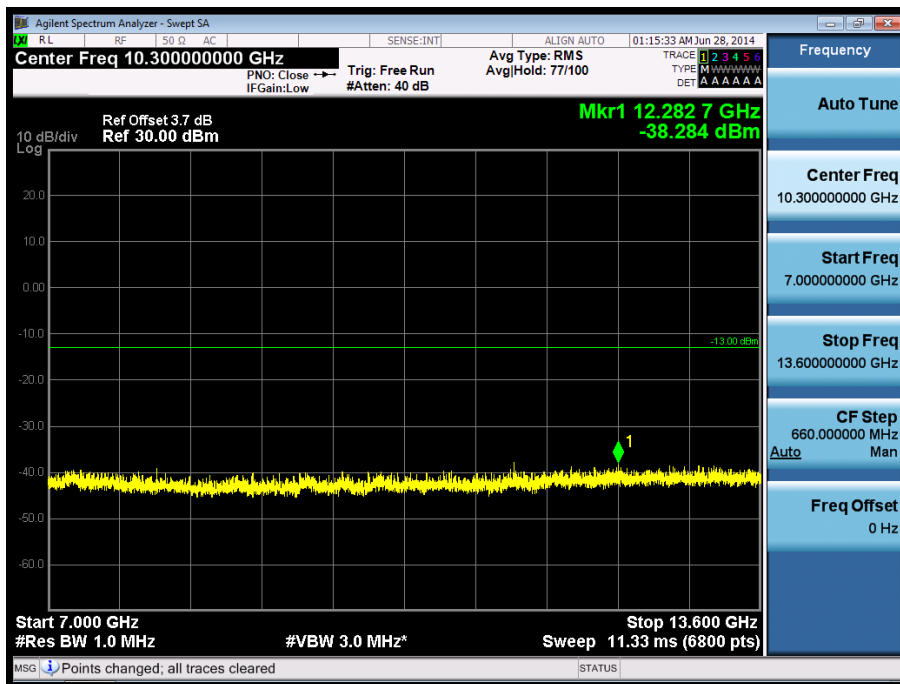




### Test Channel=HCH







# Appendix G:Frequency Stability

## Test Results

### Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM1	LCH	TN	VL	-13.21	-0.02	± 2.5	PASS
			TN	VN	-12.27	-0.01	± 2.5	PASS
			TN	VH	-13.27	-0.02	± 2.5	PASS
		MCH	TN	VL	-15.24	-0.02	± 2.5	PASS
			TN	VN	-14.26	-0.02	± 2.5	PASS
			TN	VH	-16.35	-0.02	± 2.5	PASS
		HCH	TN	VL	-11.56	-0.01	± 2.5	PASS
			TN	VN	-12.36	-0.01	± 2.5	PASS
			TN	VH	-12.36	-0.01	± 2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM1900	TM1	LCH	TN	VL	-20.40	-0.01	± 2.5	PASS
			TN	VN	-21.14	-0.01	± 2.5	PASS
			TN	VH	-22.36	-0.01	± 2.5	PASS
		MCH	TN	VL	-15.63	-0.01	± 2.5	PASS
			TN	VN	-16.54	-0.01	± 2.5	PASS
			TN	VH	-15.67	-0.01	± 2.5	PASS
		HCH	TN	VL	18.21	0.01	± 2.5	PASS
			TN	VN	19.65	0.01	± 2.5	PASS
			TN	VH	17.89	0.01	± 2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
WCDMA850	TM1	LCH	TN	VL	7.55	0.01	±2.5	PASS
			TN	VN	8.46	0.01	±2.5	PASS
			TN	VH	7.48	0.01	±2.5	PASS
		MCH	TN	VL	7.55	0.01	±2.5	PASS
			TN	VN	8.58	0.01	±2.5	PASS
			TN	VH	7.34	0.01	±2.5	PASS
		HCH	TN	VL	7.68	0.01	±2.5	PASS
			TN	VN	7.57	0.01	±2.5	PASS
			TN	VH	8.01	0.01	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
WCDMA1900	TM1	LCH	TN	VL	41.66	0.02	±2.5	PASS
			TN	VN	41.56	0.02	±2.5	PASS
			TN	VH	41.03	0.02	±2.5	PASS
		MCH	TN	VL	41.72	0.02	±2.5	PASS
			TN	VN	42.06	0.02	±2.5	PASS
			TN	VH	43.17	0.02	±2.5	PASS
		HCH	TN	VL	42.23	0.02	±2.5	PASS
			TN	VN	42.79	0.02	±2.5	PASS
			TN	VH	41.58	0.02	±2.5	PASS

### Frequency Error vs. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM1	LCH	VN	-30	-21.24	-0.03	±2.5	PASS
			VN	-20	-21.24	-0.03	±2.5	PASS
			VN	-10	-21.79	-0.03	±2.5	PASS
			VN	0	-21.31	-0.03	±2.5	PASS
			VN	10	-21.98	-0.03	±2.5	PASS
			VN	20	-23.79	-0.03	±2.5	PASS
			VN	30	-23.62	-0.03	±2.5	PASS
			VN	40	-20.14	-0.02	±2.5	PASS
			VN	50	-17.39	-0.02	±2.5	PASS

GSM850	TM1	MCH	VN	-30	-24.06	-0.03	$\pm 2.5$	PASS
			VN	-20	-22.09	-0.03	$\pm 2.5$	PASS
			VN	-10	-22.61	-0.03	$\pm 2.5$	PASS
			VN	0	-23.79	-0.03	$\pm 2.5$	PASS
			VN	10	-24.47	-0.03	$\pm 2.5$	PASS
			VN	20	-24.04	-0.03	$\pm 2.5$	PASS
			VN	30	-25.04	-0.03	$\pm 2.5$	PASS
			VN	40	-22.29	-0.03	$\pm 2.5$	PASS
			VN	50	-22.01	-0.03	$\pm 2.5$	PASS
GSM850	TM1	HCH	VN	-30	-20.34	-0.02	$\pm 2.5$	PASS
			VN	-20	-18.38	-0.02	$\pm 2.5$	PASS
			VN	-10	-18.71	-0.02	$\pm 2.5$	PASS
			VN	0	-17.92	-0.02	$\pm 2.5$	PASS
			VN	10	-20.49	-0.02	$\pm 2.5$	PASS
			VN	20	-20.85	-0.02	$\pm 2.5$	PASS
			VN	30	-22.59	-0.03	$\pm 2.5$	PASS
			VN	40	-24.97	-0.03	$\pm 2.5$	PASS
			VN	50	-26.77	-0.03	$\pm 2.5$	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM1900	TM1	LCH	VN	-30	31.35	0.02	± 2.5	PASS
			VN	-20	29.80	0.02	± 2.5	PASS
			VN	-10	31.34	0.02	± 2.5	PASS
			VN	0	31.64	0.02	± 2.5	PASS
			VN	10	32.13	0.02	± 2.5	PASS
			VN	20	34.48	0.02	± 2.5	PASS
			VN	30	36.13	0.02	± 2.5	PASS
			VN	40	38.15	0.02	± 2.5	PASS
			VN	50	38.50	0.02	± 2.5	PASS
GSM1900	TM1	MCH	VN	-30	37.71	0.02	± 2.5	PASS
			VN	-20	39.34	0.02	± 2.5	PASS
			VN	-10	38.87	0.02	± 2.5	PASS
			VN	0	38.54	0.02	± 2.5	PASS
			VN	10	38.44	0.02	± 2.5	PASS
			VN	20	37.02	0.02	± 2.5	PASS
			VN	30	37.32	0.02	± 2.5	PASS
			VN	40	36.36	0.02	± 2.5	PASS
			VN	50	35.01	0.02	± 2.5	PASS
GSM1900	TM1	HCH	VN	-30	43.09	0.02	± 2.5	PASS
			VN	-20	43.88	0.02	± 2.5	PASS
			VN	-10	44.54	0.02	± 2.5	PASS
			VN	0	45.10	0.02	± 2.5	PASS
			VN	10	45.85	0.02	± 2.5	PASS
			VN	20	45.33	0.02	± 2.5	PASS
			VN	30	44.87	0.02	± 2.5	PASS
			VN	40	45.72	0.02	± 2.5	PASS
			VN	50	44.36	0.02	± 2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
WCDMA8 50	TM1	LCH	VN	-30	8.16	0.01	± 2.5	PASS
			VN	-20	8.15	0.01	± 2.5	PASS
			VN	-10	7.83	0.01	± 2.5	PASS
			VN	0	7.80	0.01	± 2.5	PASS
			VN	10	7.83	0.01	± 2.5	PASS
			VN	20	7.75	0.01	± 2.5	PASS
			VN	30	7.69	0.01	± 2.5	PASS
			VN	40	7.90	0.01	± 2.5	PASS
			VN	50	8.15	0.01	± 2.5	PASS
WCDMA8 50	TM1	MCH	VN	-30	7.41	0.01	± 2.5	PASS
			VN	-20	7.39	0.01	± 2.5	PASS
			VN	-10	7.08	0.01	± 2.5	PASS
			VN	0	7.05	0.01	± 2.5	PASS
			VN	10	7.08	0.01	± 2.5	PASS
			VN	20	7.01	0.01	± 2.5	PASS
			VN	30	6.94	0.01	± 2.5	PASS
			VN	40	7.15	0.01	± 2.5	PASS
			VN	50	7.40	0.01	± 2.5	PASS
WCDMA8 50	TM1	HCH	VN	-30	7.07	0.01	± 2.5	PASS
			VN	-20	7.06	0.01	± 2.5	PASS
			VN	-10	6.74	0.01	± 2.5	PASS
			VN	0	6.71	0.01	± 2.5	PASS
			VN	10	6.74	0.01	± 2.5	PASS
			VN	20	6.66	0.01	± 2.5	PASS
			VN	30	6.60	0.01	± 2.5	PASS
			VN	40	6.81	0.01	± 2.5	PASS
			VN	50	7.06	0.01	± 2.5	PASS



Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
WCDMA1 900	TM1	LCH	VN	-30	48.01	0.03	± 2.5	PASS
			VN	-20	48.11	0.03	± 2.5	PASS
			VN	-10	47.79	0.03	± 2.5	PASS
			VN	0	46.21	0.02	± 2.5	PASS
			VN	10	50.19	0.03	± 2.5	PASS
			VN	20	50.87	0.03	± 2.5	PASS
			VN	30	52.99	0.03	± 2.5	PASS
			VN	40	52.40	0.03	± 2.5	PASS
			VN	50	56.23	0.03	± 2.5	PASS
WCDMA1 900	TM1	MCH	VN	-30	37.09	0.02	± 2.5	PASS
			VN	-20	36.03	0.02	± 2.5	PASS
			VN	-10	36.87	0.02	± 2.5	PASS
			VN	0	36.69	0.02	± 2.5	PASS
			VN	10	38.08	0.02	± 2.5	PASS
			VN	20	39.17	0.02	± 2.5	PASS
			VN	30	38.97	0.02	± 2.5	PASS
			VN	40	35.93	0.02	± 2.5	PASS
			VN	50	34.65	0.02	± 2.5	PASS
WCDMA1 900	TM1	HCH	VN	-30	42.78	0.02	± 2.5	PASS
			VN	-20	39.58	0.02	± 2.5	PASS
			VN	-10	40.20	0.02	± 2.5	PASS
			VN	0	38.22	0.02	± 2.5	PASS
			VN	10	41.29	0.02	± 2.5	PASS
			VN	20	41.25	0.02	± 2.5	PASS
			VN	30	40.64	0.02	± 2.5	PASS
			VN	40	44.35	0.02	± 2.5	PASS
			VN	50	42.84	0.02	± 2.5	PASS

# Appendix H: Radiated spurious emission

## GSM 850

Test Frequency Range: 30MHz-10GHz

MCH

Frequency (MHz)	Amp. Level (dBm)	Limit (dBm)	Margin (dB)	polarity
1698	-48.96	-13	35.96	H
4245	-39.86	-13	26.86	H
7643	-27.16	-13	14.16	H
1698	-41.56	-13	28.56	V
7643	-30.56	-13	17.56	V

Remark: No outstanding emissions can be detected.

# GSM 1900

Test Frequency Range: 30MHz-20GHz

MCH

Frequency (MHz)	Amp. Level (dBm)	Limit (dBm)	Margin (dB)	polarity
3565	-46.76	-13	33.76	H
8950	-30.16	-13	17.16	H
1845	-55.86	-13	42.86	V
10560	-28.66	-13	15.66	V

Remark: No outstanding emissions can be detected.

## WCDMA Band II

Test Frequency Range: 30MHz-20GHz

MCH

Frequency (MHz)	Amp. Level (dBm)	Limit (dBm)	Margin (dB)	polarity
245	-65.96	-13	52.96	H
245	-61.16	-13	48.16	V
8441	-29.16	-13	16.16	H
8927	-28.76	-13	15.76	V

Remark: No outstanding emissions can be detected.

## WCDMA Band V

Test Frequency Range: 30MHz-10GHz

MCH

Frequency (MHz)	Amp. Level (dBm)	Limit (dBm)	Margin (dB)	polarity
3864	-43.06	-13	30.06	H
8441	-27.96	-13	14.96	H
4234	-43.06	-13	30.06	V
8441	-29.06	-13	16.06	V

Remark: No outstanding emissions can be detected.