



Appendix A: Transmitter Output Power



1 Average Power (Total)

CDMA2000 1X

Test Mode	Carrier Conf.	RF Ch.	Average Power [dBm]	Average Power [W]	Average Power [W/MHz]	Verdict
TM1	1(60W)	B	47.52	56.49	---	Pass
		M	47.52	56.49	---	Pass
		T	47.62	57.81	---	Pass
TM1	2(2*15W)	B	44.81	30.27	---	Pass
		M	44.78	30.06	---	Pass
		T	44.76	29.92	---	Pass
TM1	4(4*15W)	B	47.83	60.67	---	Pass
		M	47.85	60.95	---	Pass
		T	47.78	59.98	---	Pass

CDMA2000 EVDO

Test Mode	Carrier Conf.	RF Ch.	Average Power [dBm]	Average Power [W]	Average Power [W/MHz]	Verdict
TM2	1(60W)	B	47.42	55.21	---	Pass
		M	47.77	59.84	---	Pass
		T	47.52	56.49	---	Pass
TM2	2(2*15W)	B	44.84	30.48	---	Pass
		M	45.07	32.14	---	Pass
		T	44.82	30.34	---	Pass
TM2	4(4*15W)	B	47.71	59.02	---	Pass
		M	47.81	60.39	---	Pass
		T	47.85	60.95	---	Pass

LTE

Test Mode	Carrier Conf.	RF Ch.	Average Power [dBm]	Average Power [W]	Average Power [W/MHz]	Verdict
TM1.1	1.4M(60W)	B	48.05	63.83	---	Pass
		M	47.90	61.66	---	Pass
		T	48.16	65.46	---	Pass
TM1.1	3M(60W)	B	47.94	62.23	---	Pass
		M	47.97	62.66	---	Pass
		T	47.93	62.09	---	Pass
TM1.1	3M(30W)	B	45.06	32.06	---	Pass
		M	44.98	31.48	---	Pass
		T	44.99	31.55	---	Pass
TM1.1	5M(60W)	B	47.91	61.80	---	Pass



Test Mode	Carrier Conf.	RF Ch.	Average Power [dBm]	Average Power [W]	Average Power [W/MHz]	Verdict
		M	48.05	63.83	---	Pass
		T	48.13	65.01	---	Pass
TM1.1	5M(30W)	B	45.18	32.96	---	Pass
		M	45.12	32.51	---	Pass
		T	45.36	34.36	---	Pass
TM1.1	10M(60W)	B	48.14	65.16	---	Pass
		M	48.06	63.97	---	Pass
		T	48.16	65.46	---	Pass
TM1.1	10M(30W)	B	44.68	29.38	---	Pass
		M	45.11	32.43	---	Pass
		T	44.33	27.10	---	Pass
TM1.1	15M(60W)	B	47.95	62.37	---	Pass
		M	48.10	64.57	---	Pass
		T	48.15	65.31	---	Pass
TM1.1	15M(30W)	B	45.00	31.62	---	Pass
		M	45.16	32.81	---	Pass
		T	45.32	34.04	---	Pass
TM1.1	20M(60W)	B	48.06	63.97	---	Pass
		M	48.09	64.42	---	Pass
		T	48.31	67.76	---	Pass
TM1.1	20M(30W)	B	45.11	32.43	---	Pass
		M	45.15	32.73	---	Pass
		T	45.34	34.20	---	Pass
TM1.1	5M(20W)+10M(40W)	B	48.01	63.24	---	Pass
		M	48.18	65.77	---	Pass
		T	48.31	67.76	---	Pass
TM1.1	5M(10W)+10M(20W)	B	45.07	32.14	---	Pass
		M	45.35	34.28	---	Pass
		T	45.20	33.11	---	Pass

CDMA<E

Test Mode	Carrier Conf.	RF Ch.	Average Power [dBm]	Average Power [W]	Average Power [W/MHz]	Verdict
2C+1L	1X&DO+L1.4M (2*20+20W)	B	47.45	55.59	---	Pass
		M	47.39	54.83	---	Pass
		T	47.30	53.70	---	Pass
	1X&DO+L3M (2*20+20W)	B	47.60	57.54	---	Pass
		M	47.41	55.08	---	Pass
		T	47.47	55.85	---	Pass
	1X&DO+L5M	B	47.17	52.12	---	Pass



Test Mode	Carrier Conf.	RF Ch.	Average Power [dBm]	Average Power [W]	Average Power [W/MHz]	Verdict
	(2*20+20W)	M	47.17	52.12	---	Pass
		T	47.24	52.97	---	Pass
	1X&DO+L10M (2*20+20W)	B	47.56	57.02	---	Pass
		M	47.59	57.41	---	Pass
		T	47.48	55.98	---	Pass
	1X&DO+L15M (2*20+20W)	B	47.44	55.46	---	Pass
		M	47.65	58.21	---	Pass
		T	47.51	56.36	---	Pass
	1X&DO+L20M (2*20+20W)	B	47.54	56.75	---	Pass
		T	47.70	58.88	---	Pass

2 Peak-to-Average Ratio

Test Mode	Carrier Conf.	RF Ch.	Peak-to-Average Ratio [dB]	Verdict
CDMA2000-TM1	1.25M(60W)	B	6.24	Pass
		M	6.26	Pass
		T	6.26	Pass
CDMA2000-TM2	1.25M(60W)	B	6.19	Pass
		M	6.18	Pass
		T	6.15	Pass
LTE-TM1.1	1.4M(60W)	B	7.04	Pass
		M	7.04	Pass
		T	7.06	Pass
LTE-TM1.1	3M(60W)	B	7.38	Pass
		M	7.33	Pass
		T	7.78	Pass
LTE-TM1.1	5M(60W)	B	7.16	Pass
		M	7.24	Pass
		T	7.20	Pass
LTE-TM1.1	10M(60W)	B	7.19	Pass
		M	7.11	Pass
		T	7.16	Pass
LTE-TM1.1	15M(60W)	B	7.44	Pass
		M	7.36	Pass
		T	7.40	Pass
LTE-TM1.1	20M(60W)	B	7.35	Pass
		M	7.20	Pass
		T	7.33	Pass



Appendix B: Modulation Characteristics



1 Result Table

Test Mode	Digital modulation?	Verdict
CDMA2000 TM1	Yes	Pass
CDMA2000 TM2	Yes	Pass
LTE TM2.0	Yes	Pass
LTE TM3.1	Yes	Pass



2 Test Plot

2.1 Test Mode = TM1 for CDMA2000 1X



BS,1X,C0 :CODE POWER

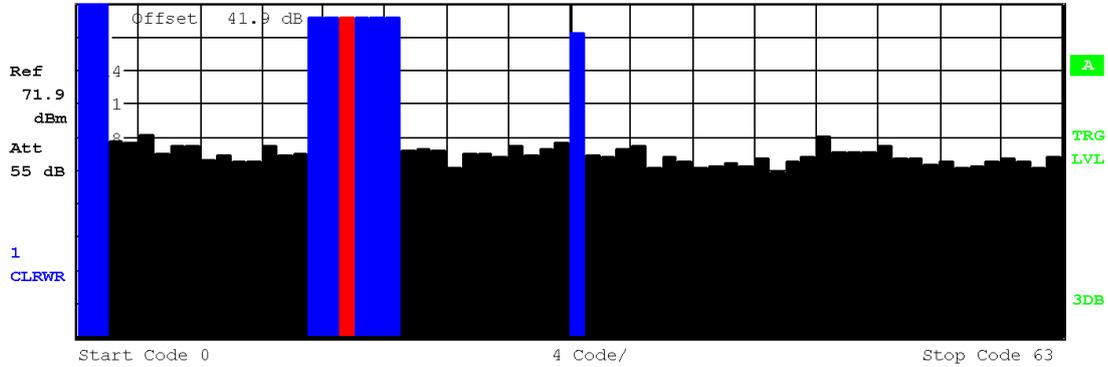
SR 19.2 ksps

Chan 17.64

dB PICH

CF 2.1325 GHz

PCG 0



RESULT SUMMARY TABLE

SR 19.2 ksps

Chan 17.64

Offset 41.9 dB

CF 2.1325 GHz

PCG 0

RESULTS FOR SET 0 PCG 0:		GLOBAL RESULTS FOR SET 0:	
Total PWR	46.62 dBm	Carr Freq Error	1.79 Hz
Pilot PWR	39.56 dBm	Carr Freq Error	0.00 ppm
RHO	0.99115	Chip Rate Error	1.34 ppm
Composite EVM	9.45 %	Trg to Frame	1.782381 μs
Pk CDE (SF 64)	-34.77 dB	Active Channels	9
IQ Imbal/Offset	0.49/0.10 %		
CHANNEL RESULTS:		Modulation	QPSK
Symbol Rate	19.2 ksps	Timing Offset	--- ns
Channel.SF	17.64	Phase Offset	--- mrad
Channel Power Rel	-3.23 dB	Channel Power Abs	36.34 dBm
Symbol EVM	4.28 % rms	Symbol EVM	8.66 % Pk

Date: 30.JAN.2012 14:35:05



2.2 Test Mode = TM2 for CDMA2000 EVDO



BS,DO,C0 :CODE POWER Type PILOT-I
 Code 0.32
 dB CF 2.1325 GHz Slot 0



GENERAL RESULTS Type ALL EXT

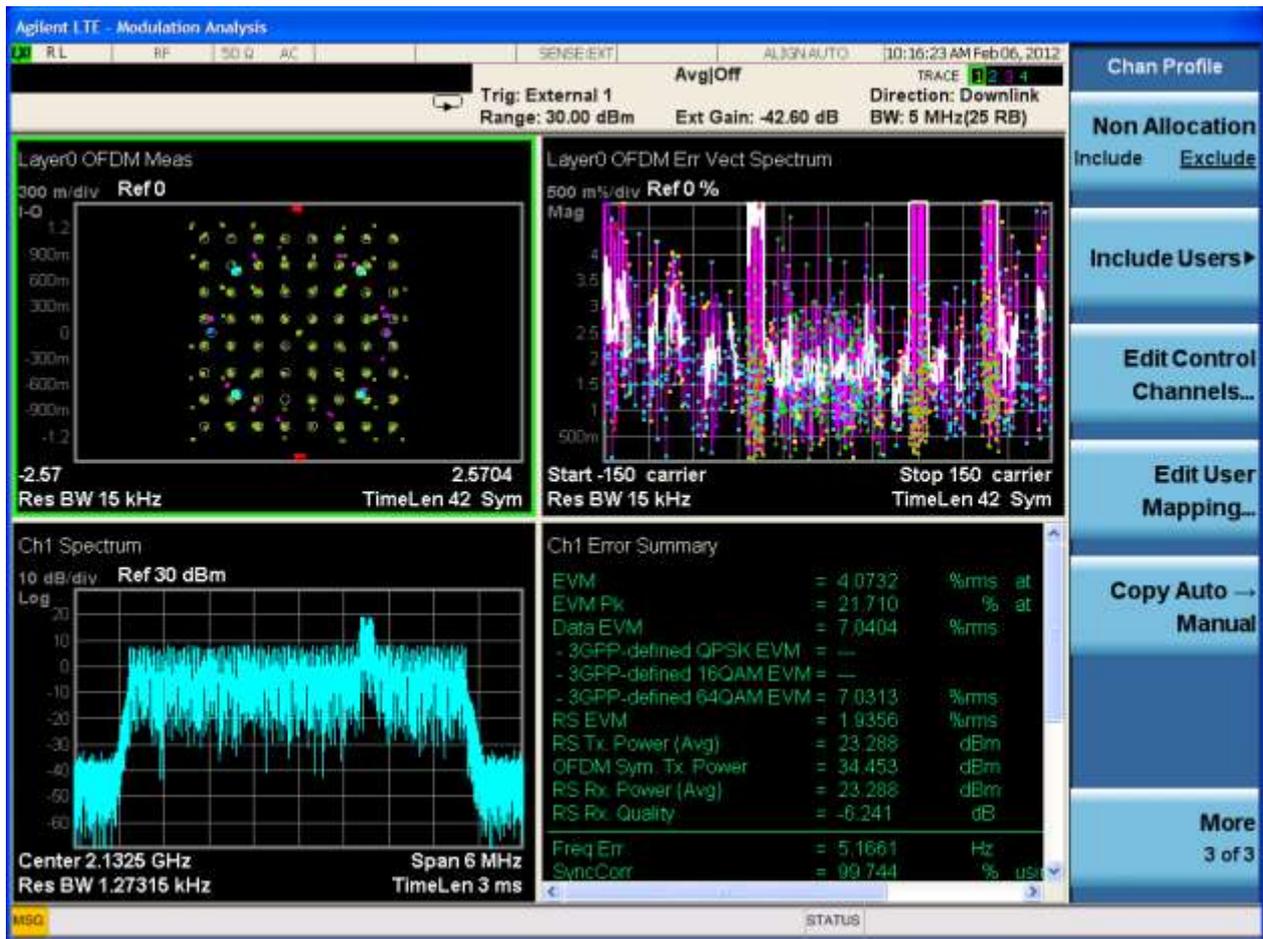
Offset 41.9 dB CF 2.1325 GHz

		Global Results for Set 0:				
Ref	Carr Freq Error	-11.99 Hz	RHO Pilot	0.99770		B
71.9	Carr Freq Error	-0.01 ppm	RHO ov-1/-2	0.98357/0.98397		
dBm	Chip Rate Error	-0.73 ppm	RHO MAC	0.99414		
Att	Trg to Frame	1.795790 μs	RHO DATA	0.98192		
55 dB			Results for Set 0 / Slot 0:			LVL
1	Power PILOT	46.97 dBm	Data Modulation Type	16-QAM		
CLRWR	Power MAC	46.81 dBm	Act. MAC Channels	34		
	Power DATA	46.73 dBm	Act. DATA Channels	16		
	Power PREAMBLE	47.04 dBm	Preamble Length	64 Chips		
	Composite EVM	10.97 %	RHO	0.98810		
	Max. Pwr DATA	-14.40 dB	Max. inact. Pwr MAC	-40.00 dB		3DB
	Min. Pwr DATA	-15.76 dB				

Date: 30.JAN.2012 14:23:28

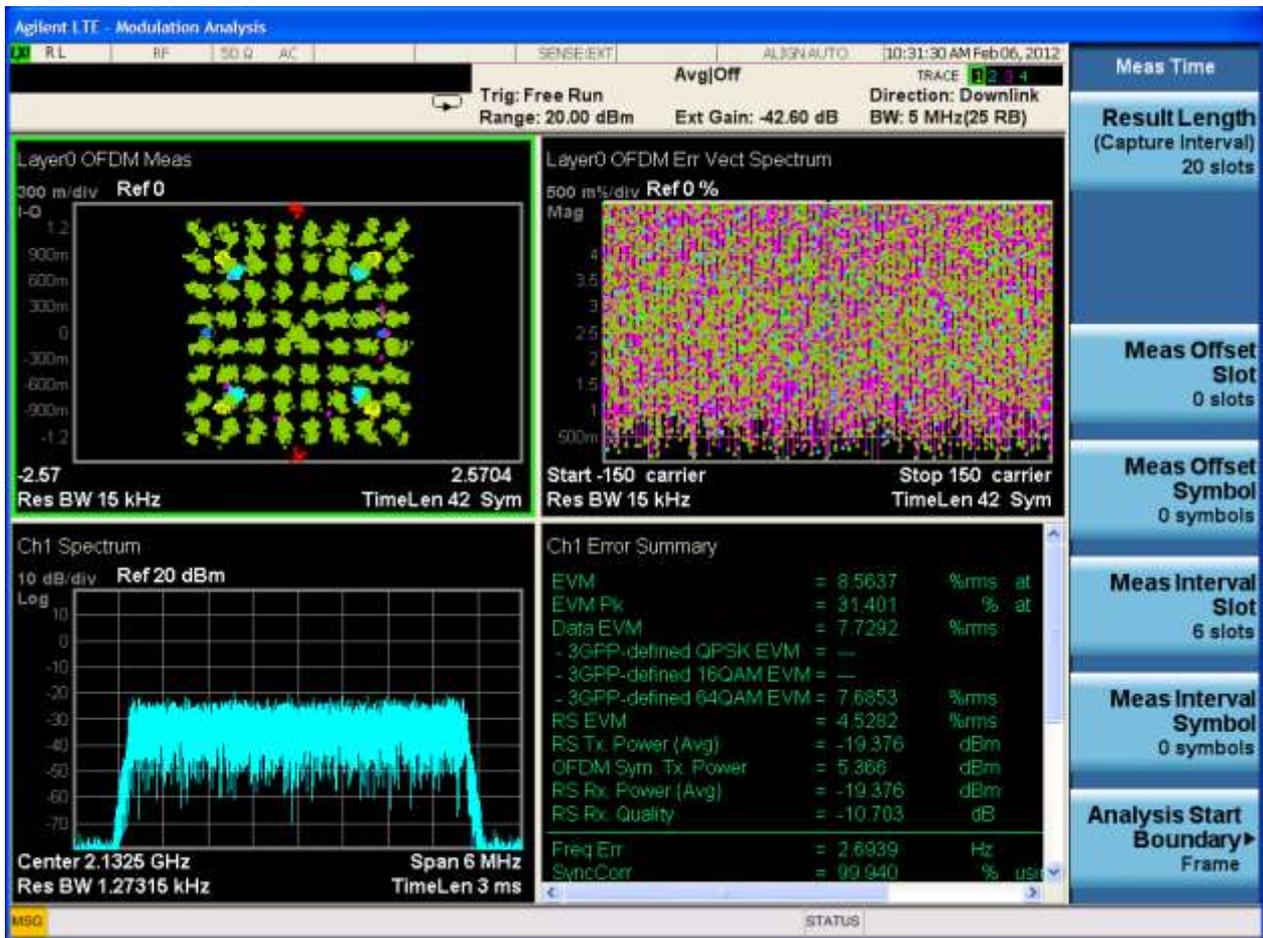


2.3 Test Mode = TM2.0 for LTE





2.4 Test Mode = TM3.1 for LTE





Appendix C: Occupied Bandwidth



1 Result Table

Test Mode	Carrier Conf.	RF Ch.	Occupied Bandwidth [MHz]	Verdict
CDMA2000 1X	1.25M	B	1.249	Pass
		M	1.250	Pass
		T	1.249	Pass
CDMA2000 EVDO	1.25M	B	1.249	Pass
		M	1.250	Pass
		T	1.249	Pass
LTE	1.4M	B	1.089	Pass
		M	1.089	Pass
		T	1.089	Pass
LTE	3M	B	2.695	Pass
		M	2.695	Pass
		T	2.690	Pass
LTE	5M	B	4.473	Pass
		M	4.473	Pass
		T	4.473	Pass
LTE	10M	B	8.936	Pass
		M	8.936	Pass
		T	8.936	Pass
LTE	15M	B	13.379	Pass
		M	13.379	Pass
		T	13.379	Pass
LTE	20M	B	17.871	Pass
		M	17.871	Pass
		T	17.871	Pass

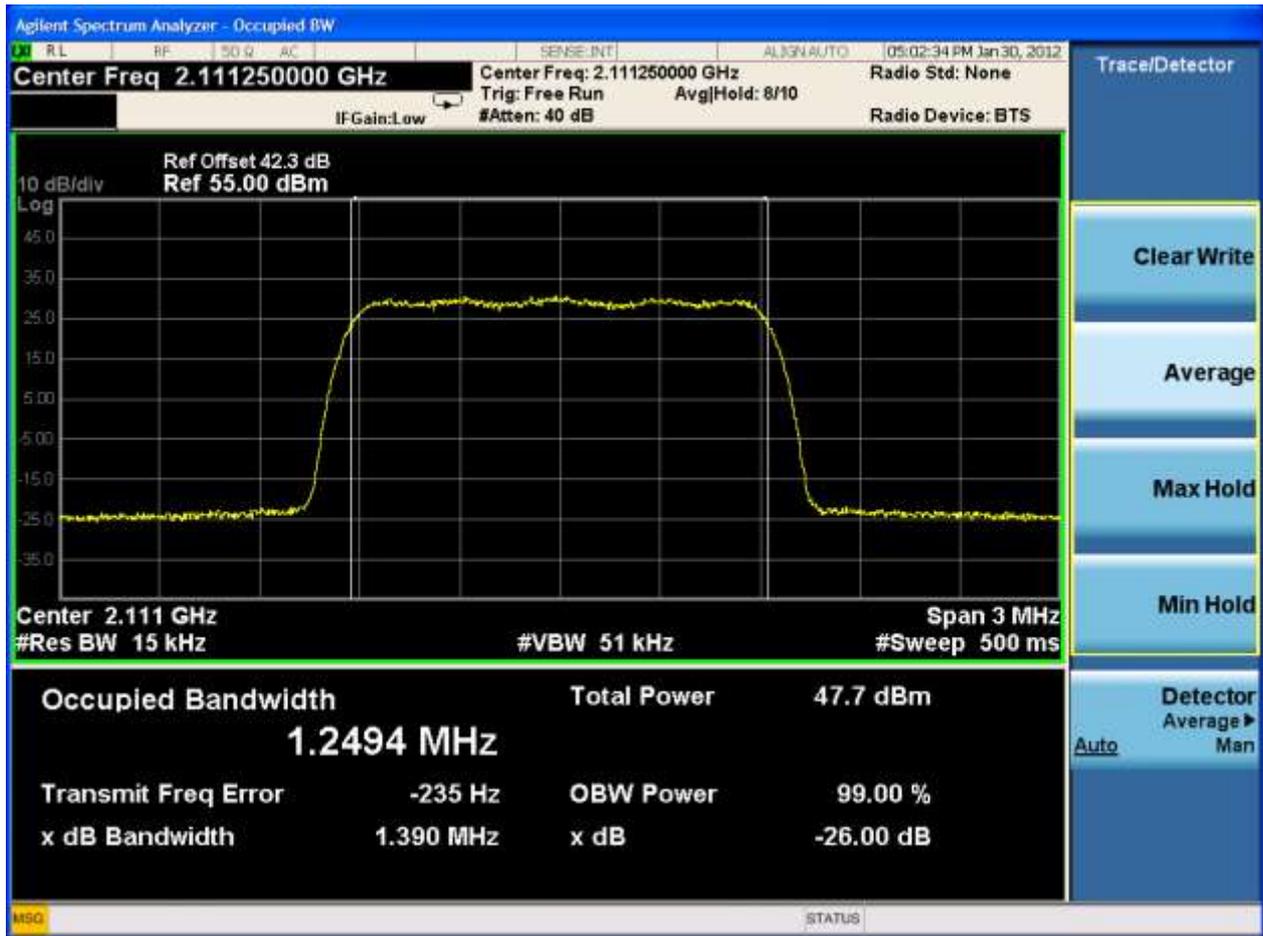


2 Test Plot

2.1 Test Mode = CDMA2000 1X

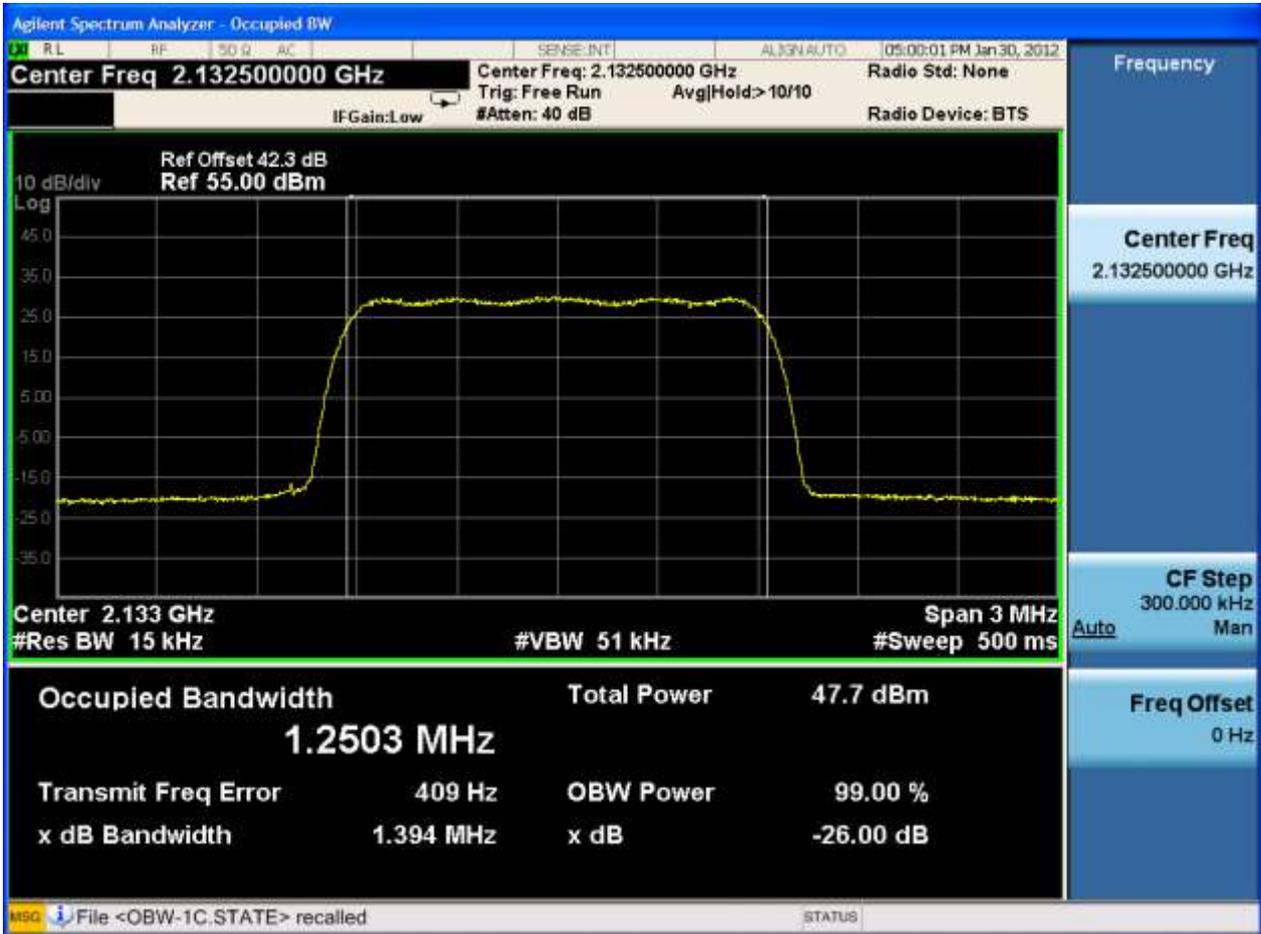
2.1.1 Carrier Conf. = 1.25M

2.1.1.1 Ch. B



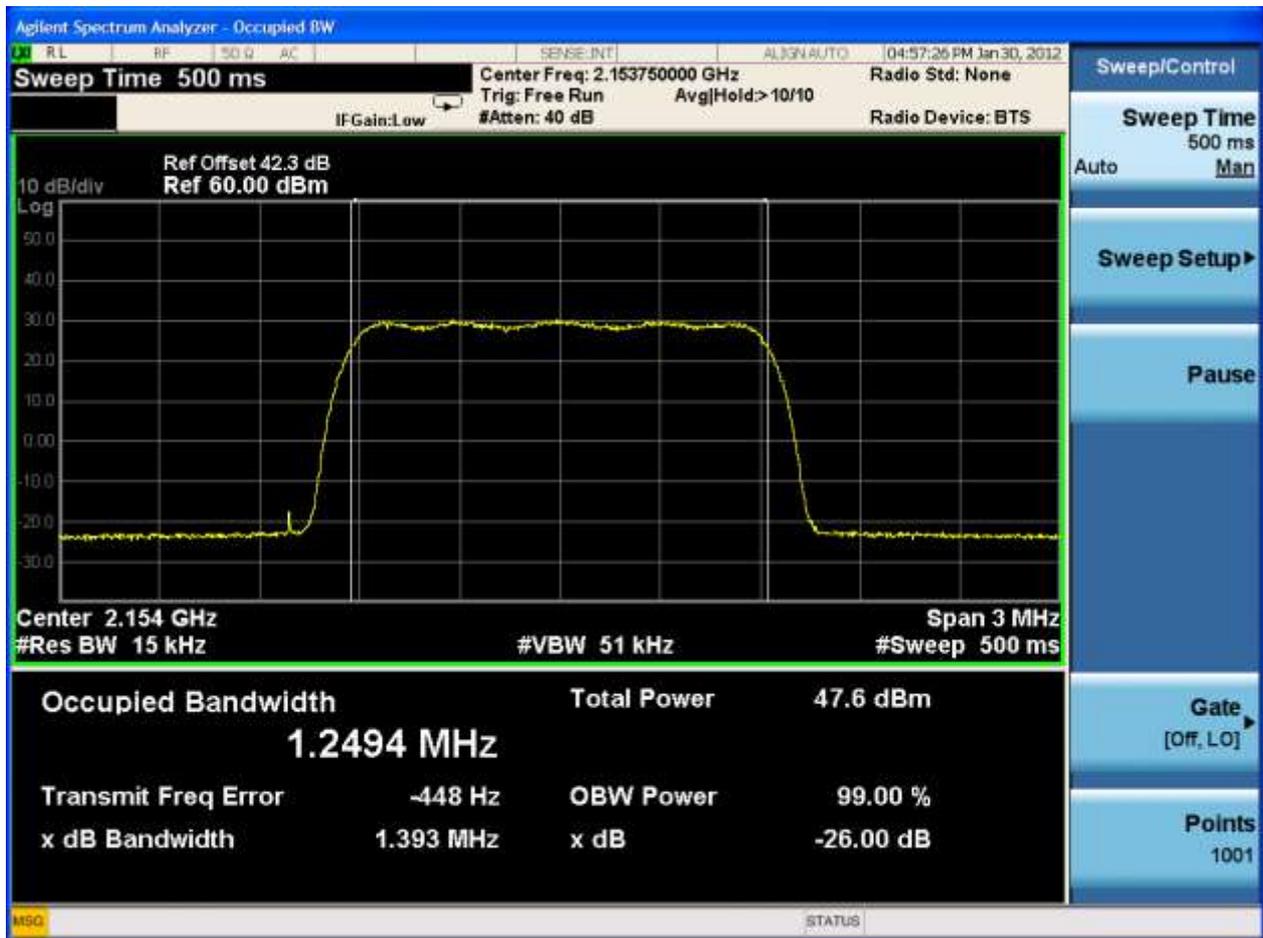


2.1.1.2 Ch. M





2.1.1.3 Ch. T

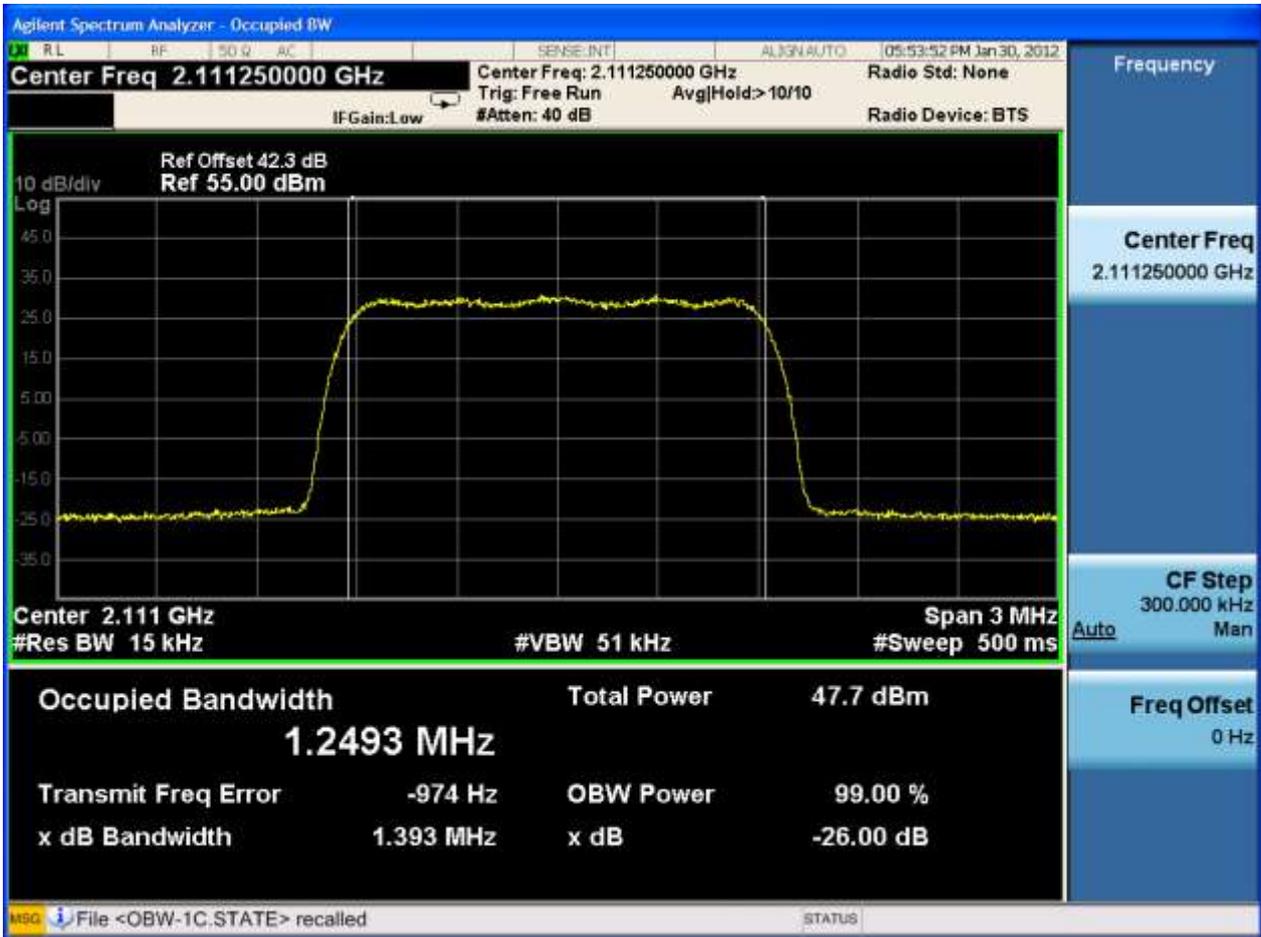




2.2 Test Mode = CDMA2000 EVDO

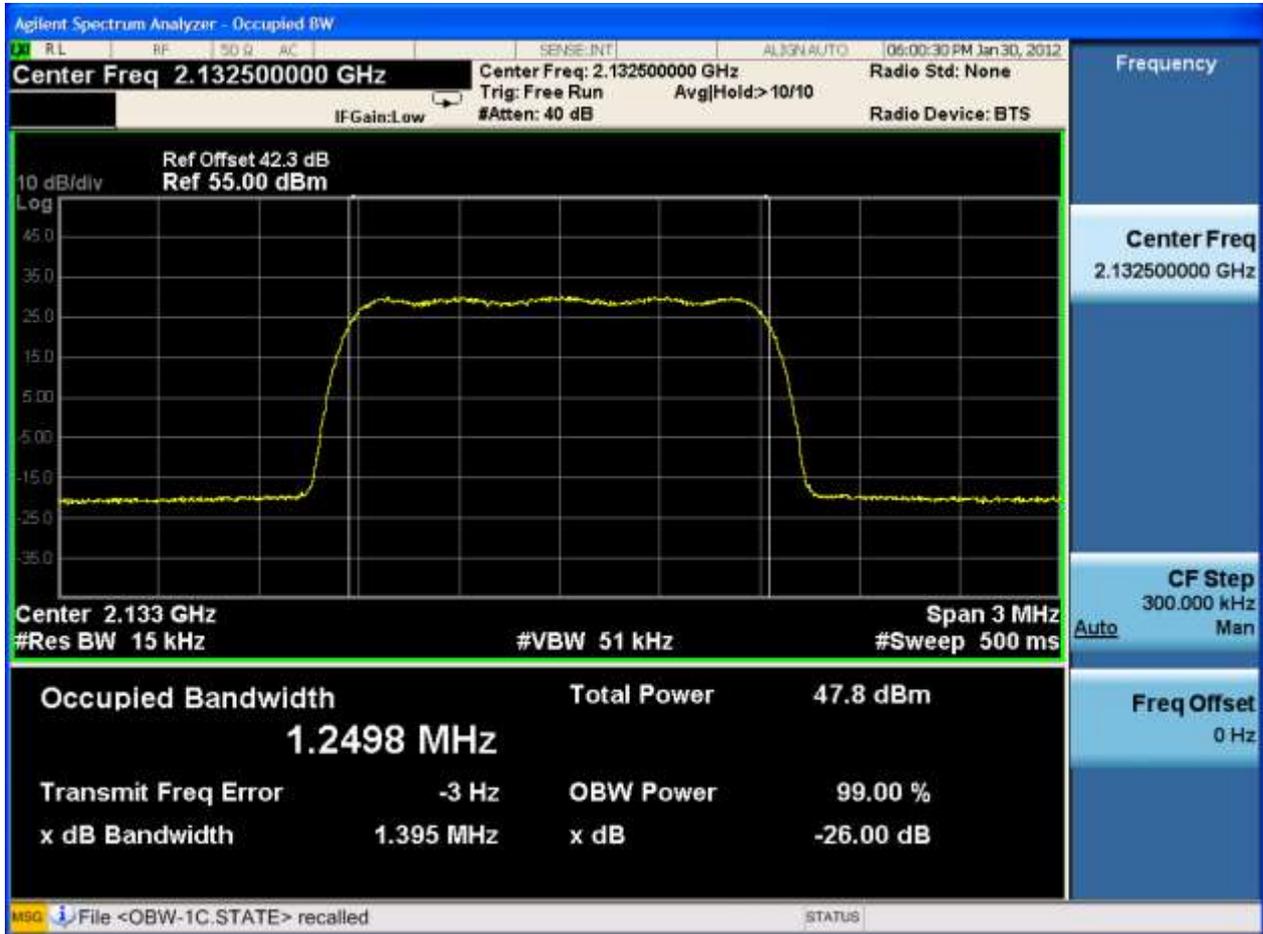
2.2.1 Carrier Conf. = 1.25M

2.2.1.1 Ch. B



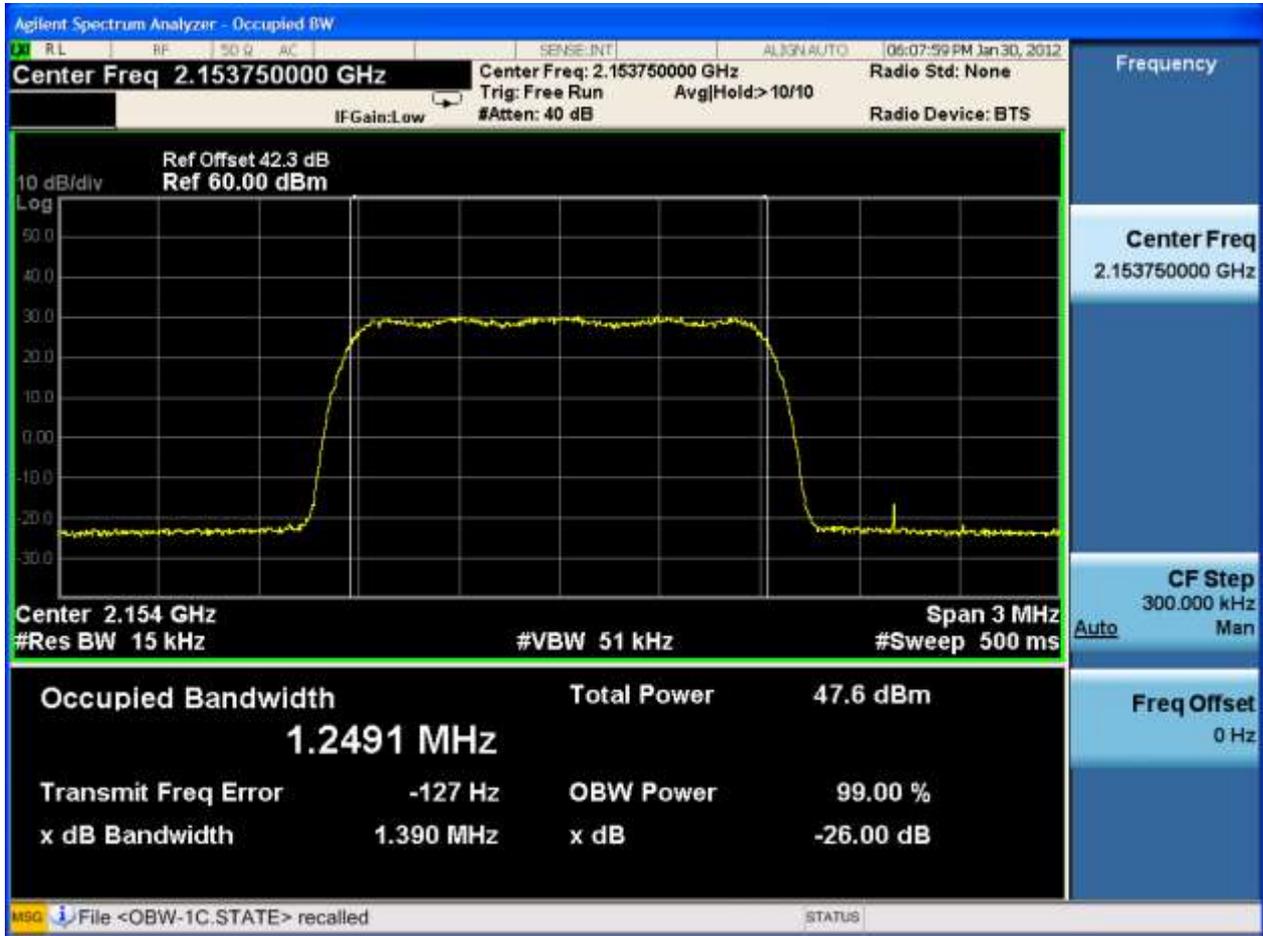


2.2.1.2 Ch. M





2.2.1.3 Ch. T

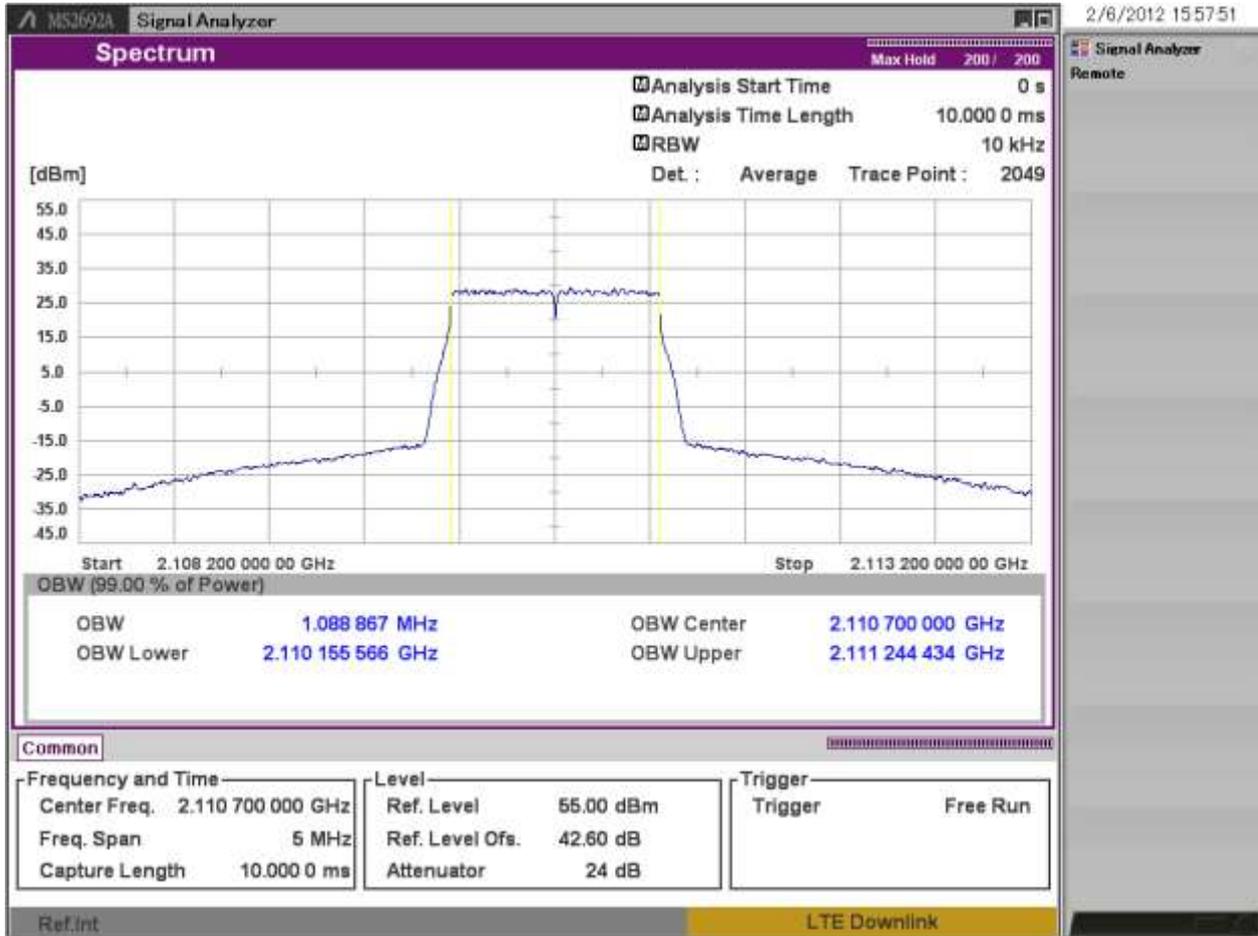




2.3 Test Mode = LTE

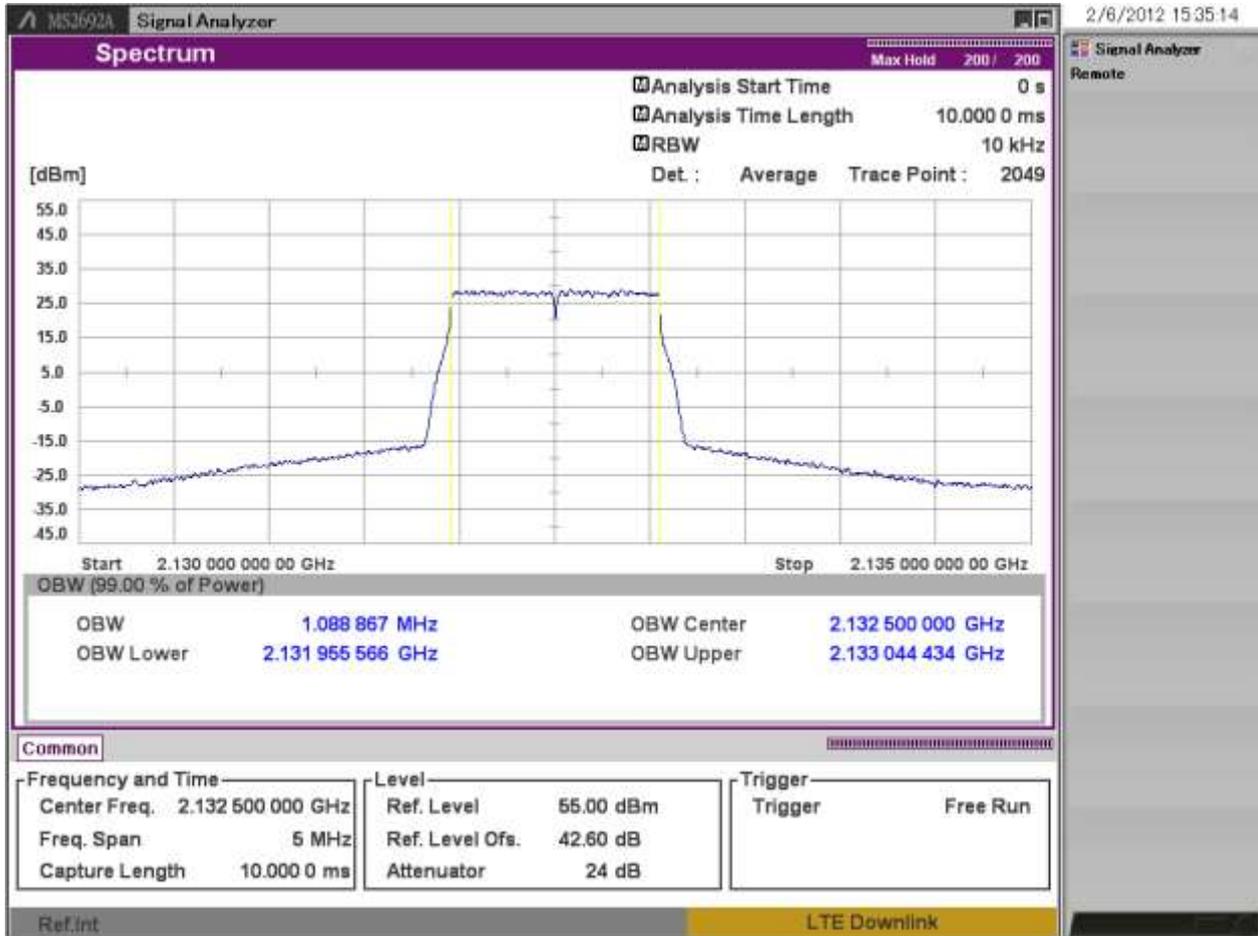
2.3.1 Carrier Conf. = 1.4M

2.3.1.1 Ch. B



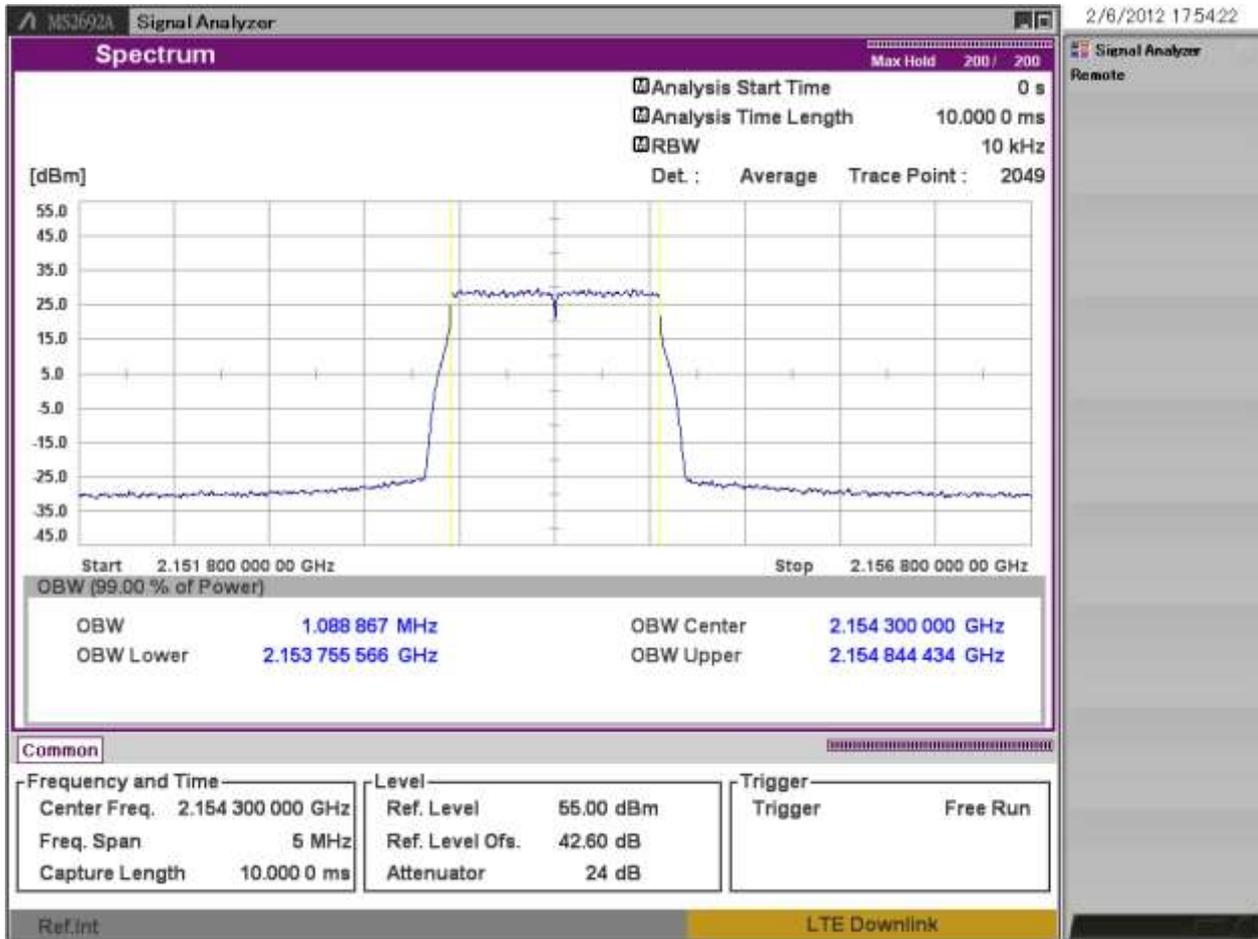


2.3.1.2 Ch. M





2.3.1.3 Ch. T

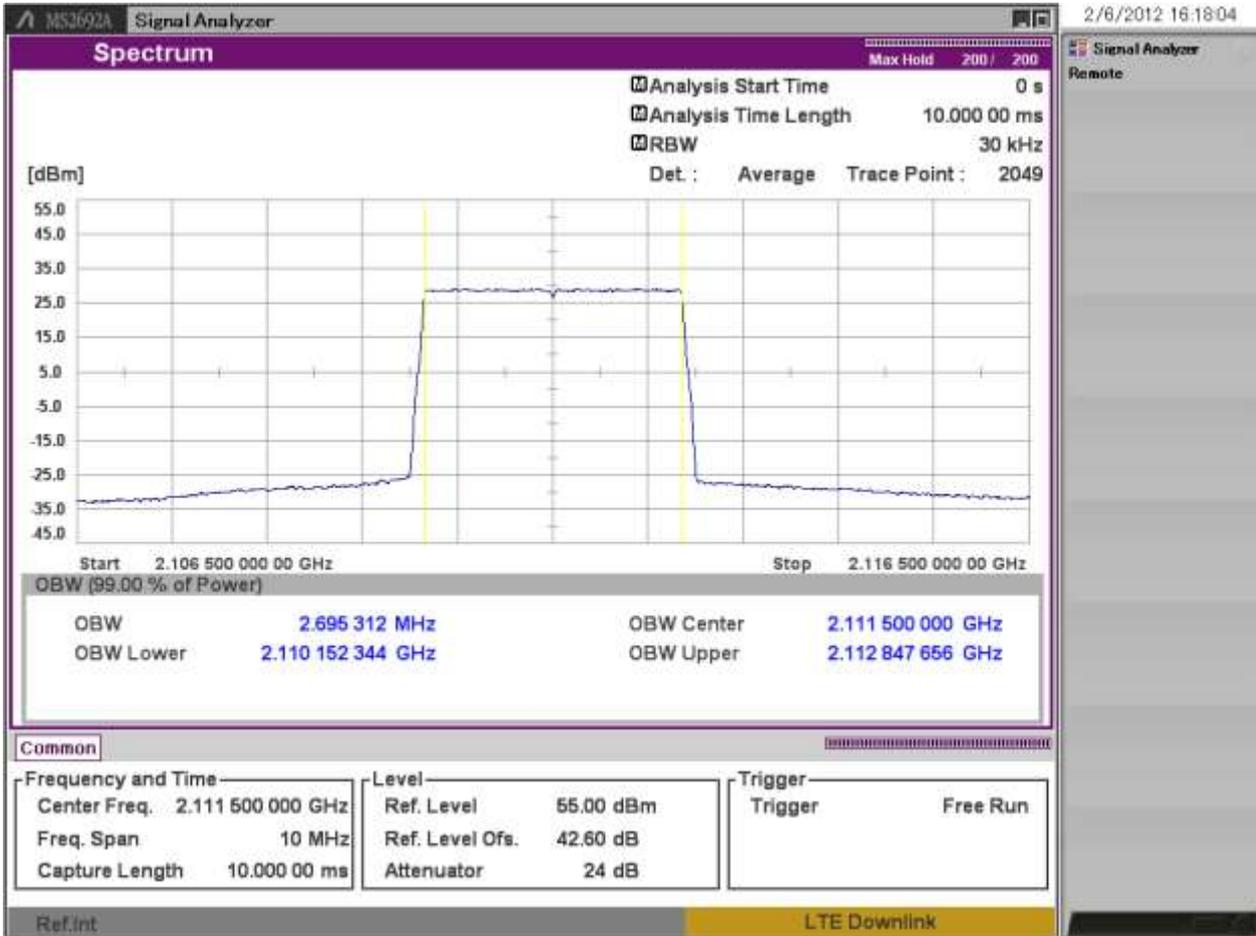




2.4 Test Mode = LTE

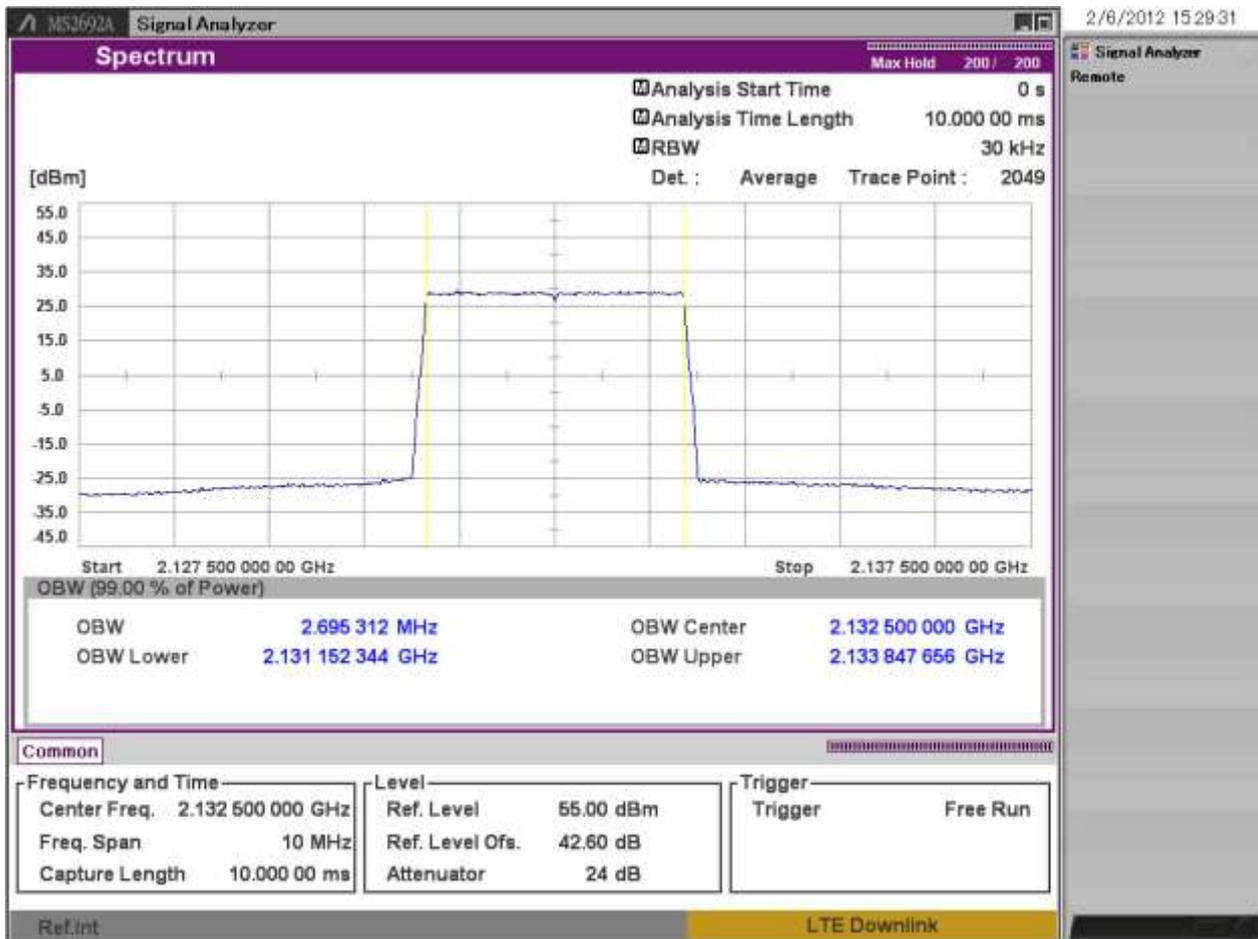
2.4.1 Carrier Conf. = 3M

2.4.1.1 Ch. B



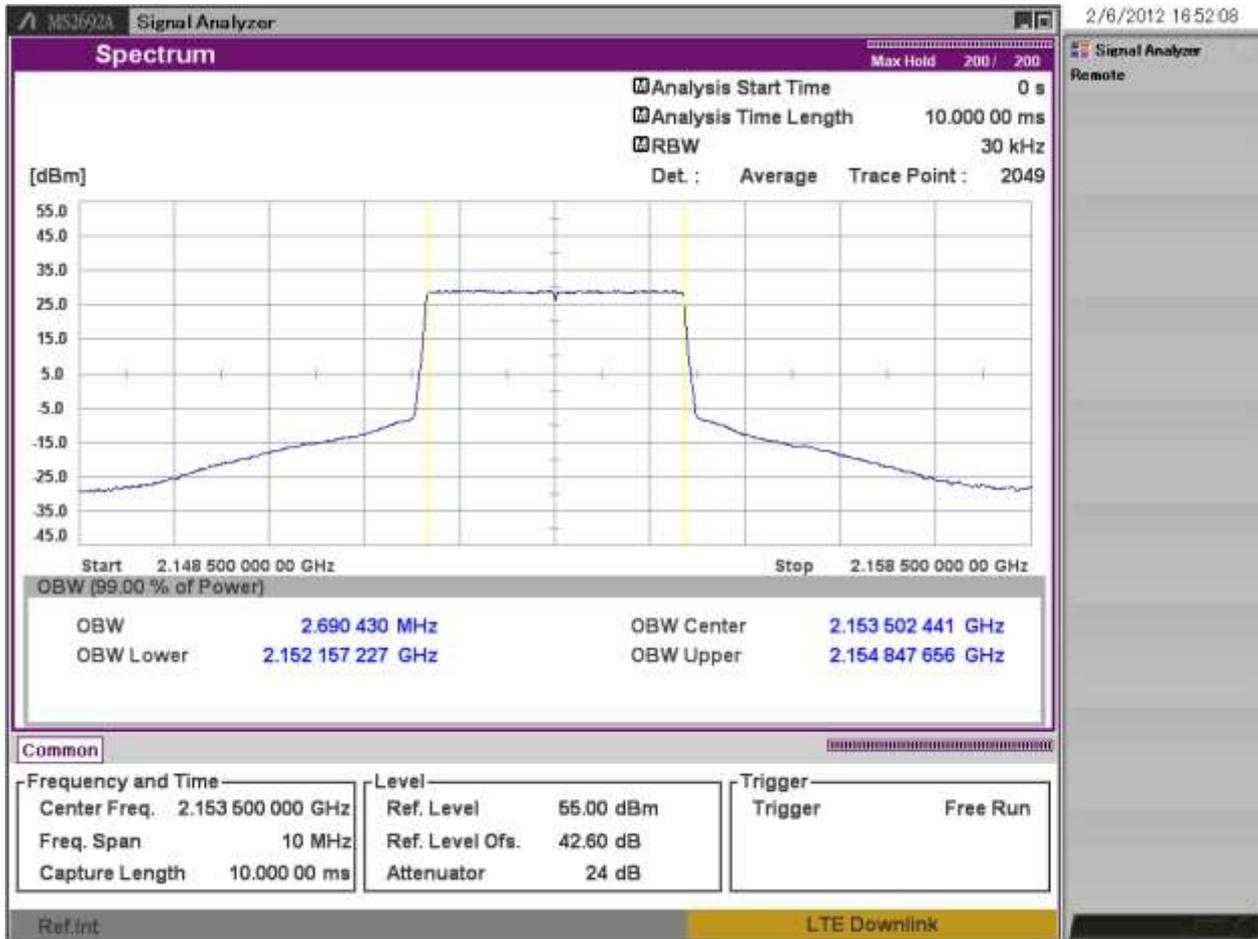


2.4.1.2 Ch. M





2.4.1.3 Ch. T

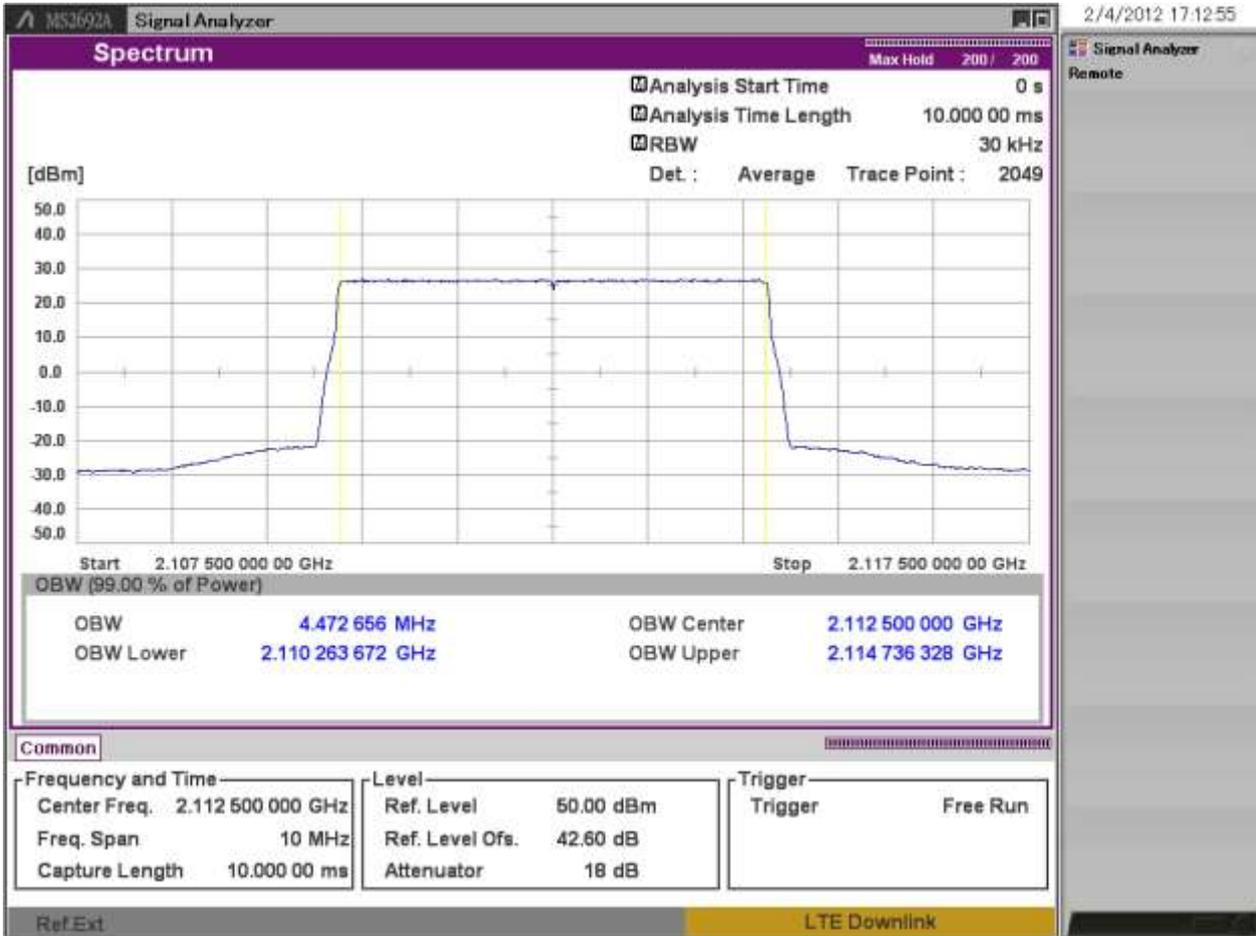




2.5 Test Mode = LTE

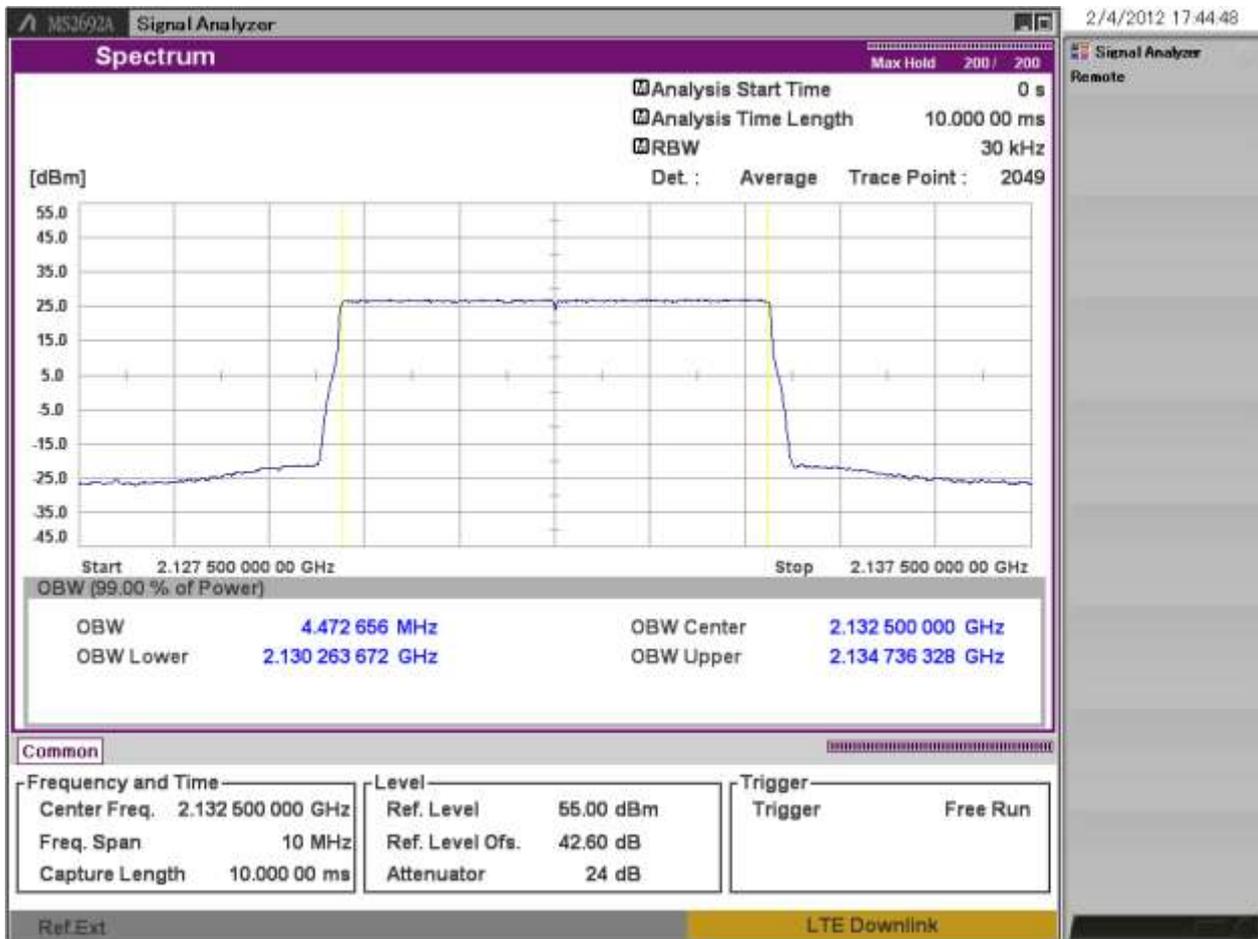
2.5.1 Carrier Conf. = 5M

2.5.1.1 Ch. B



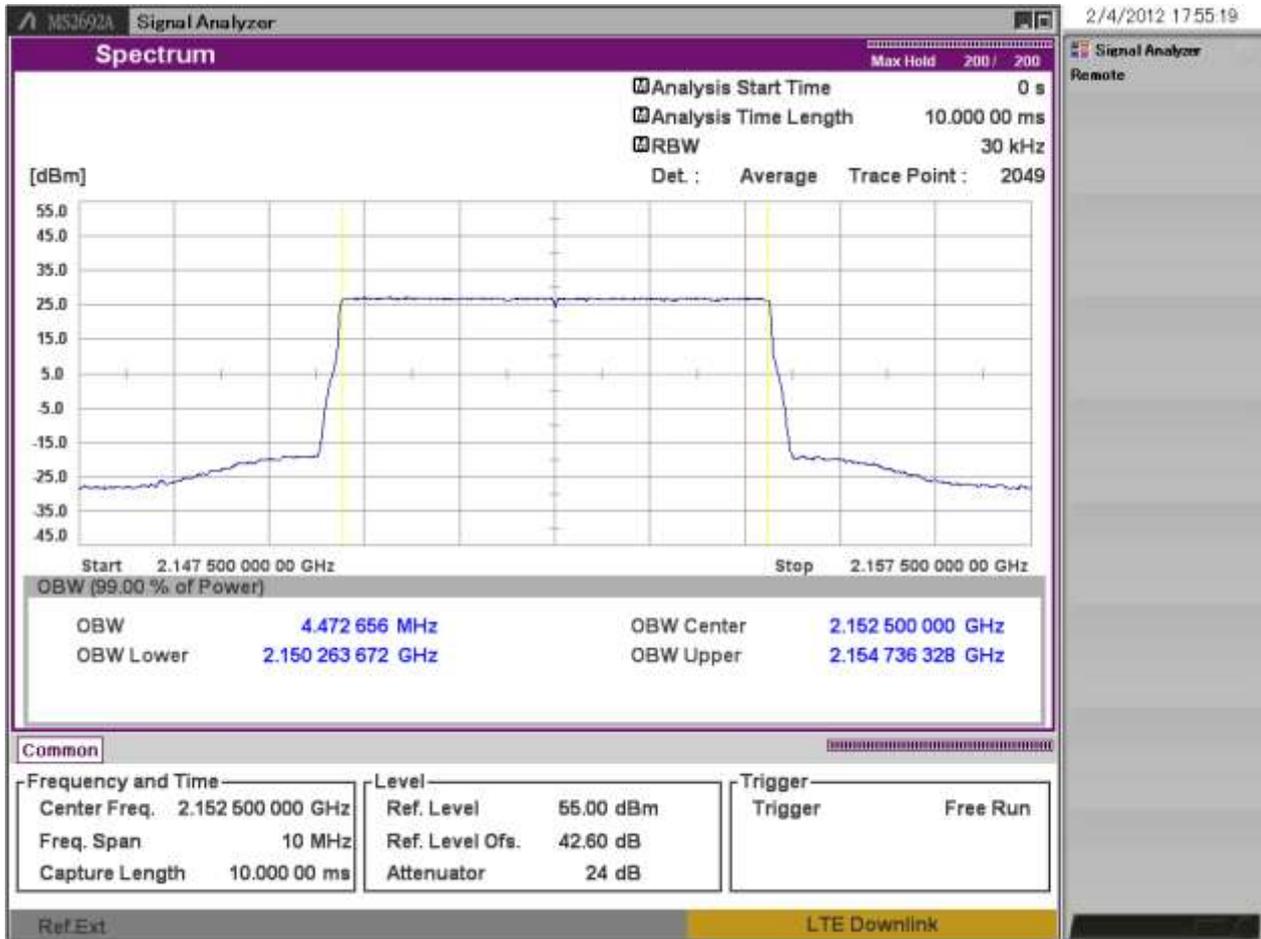


2.5.1.2 Ch. M





2.5.1.3 Ch. T

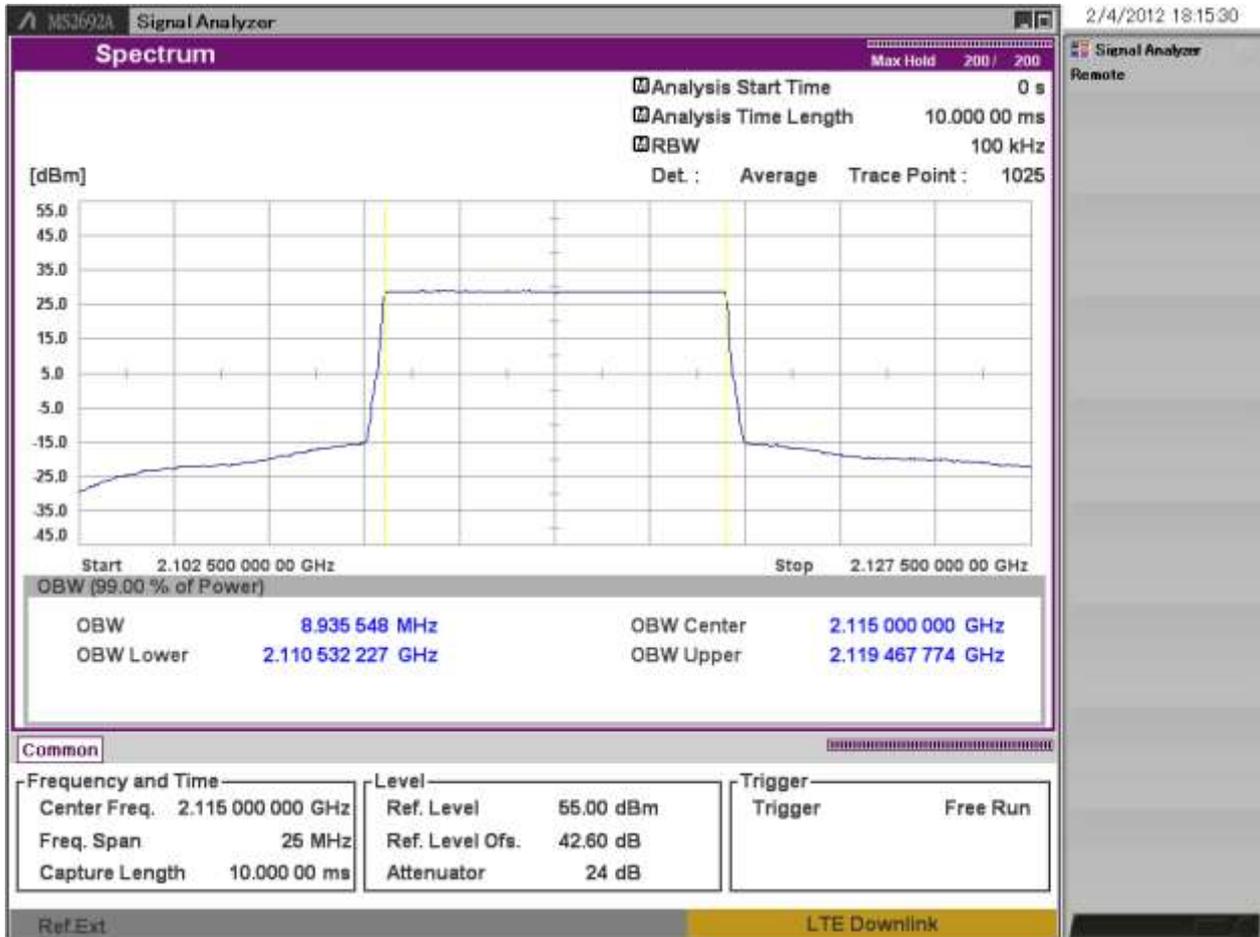




2.6 Test Mode = LTE

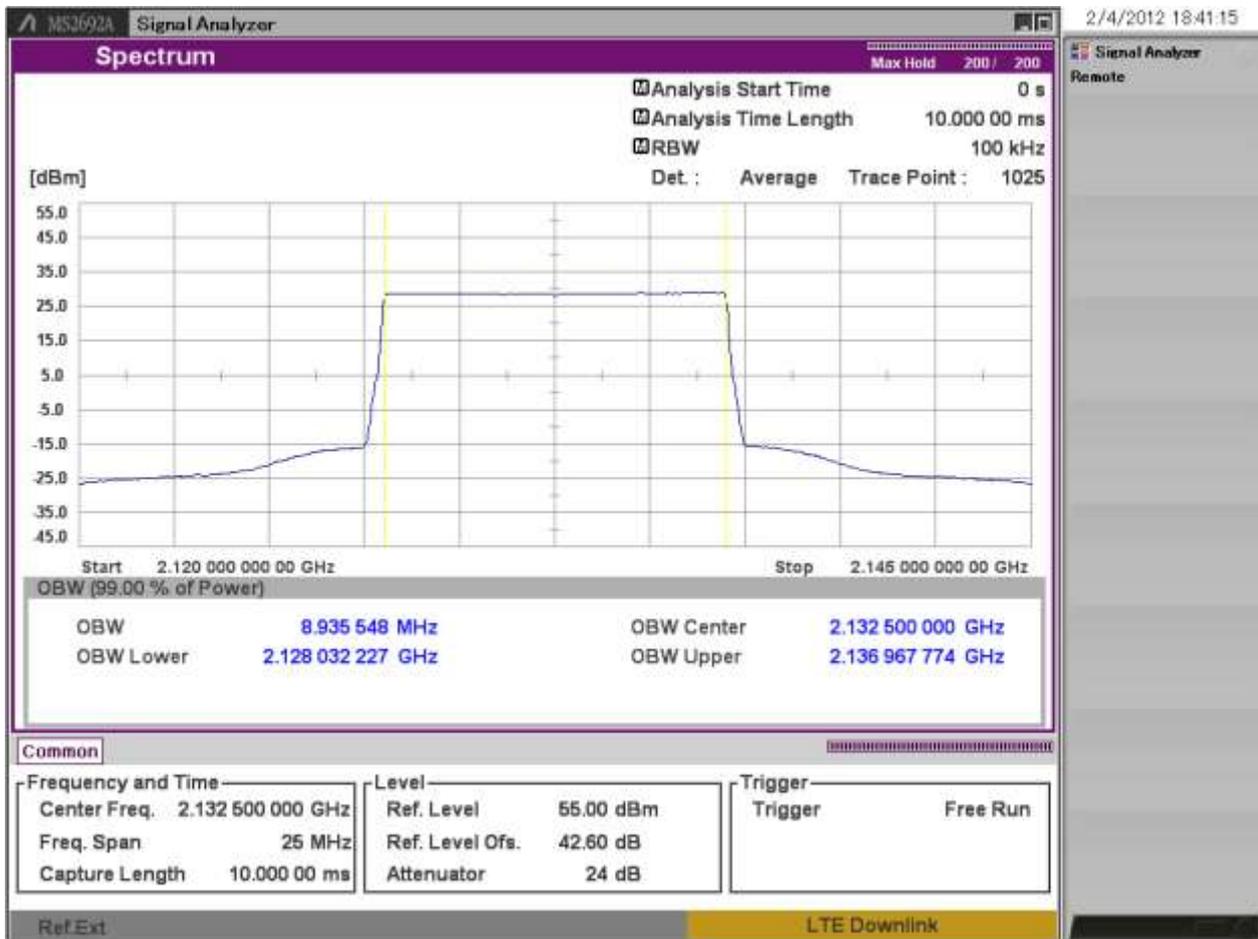
2.6.1 Carrier Conf. = 10M

2.6.1.1 Ch. B



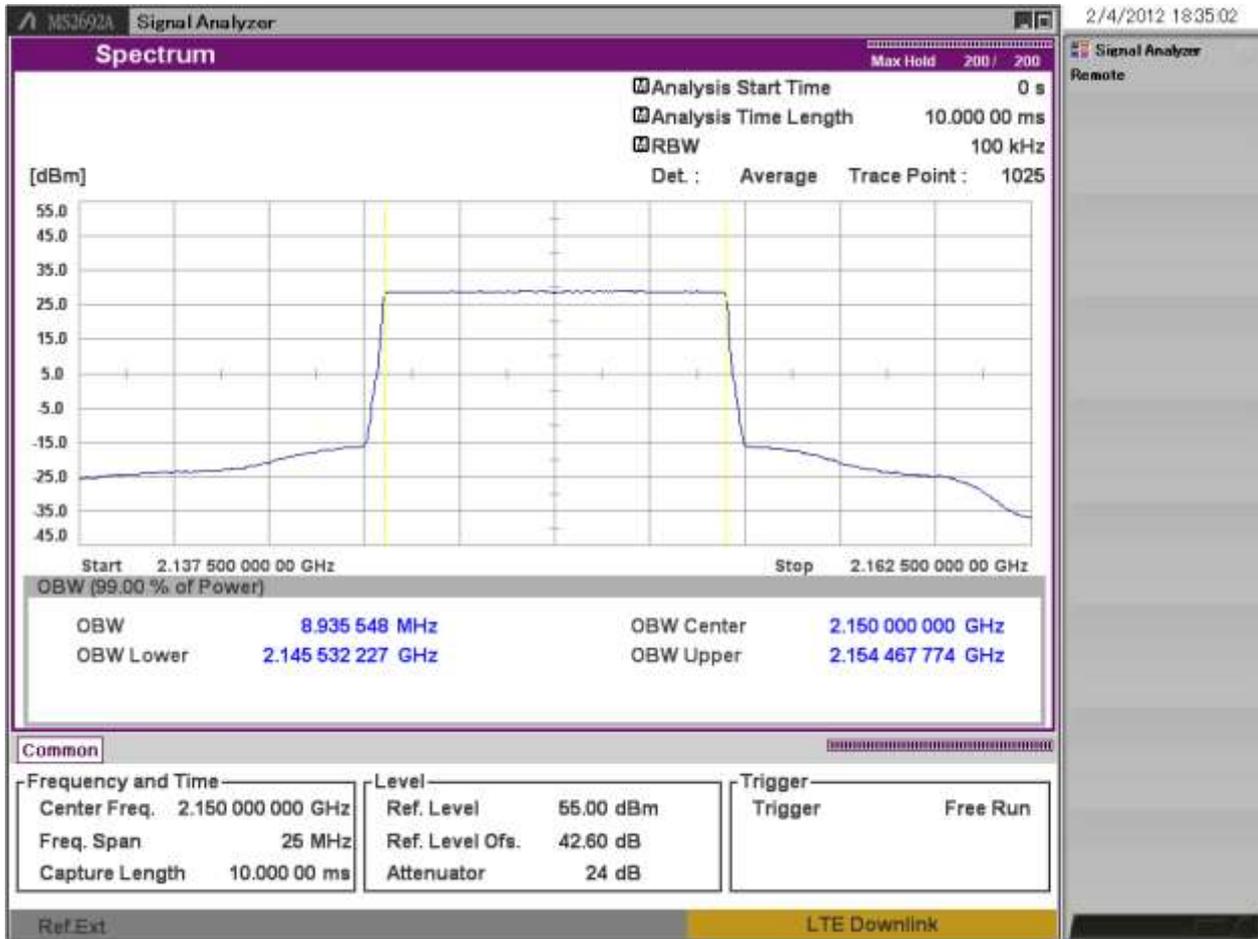


2.6.1.2 Ch. M





2.6.1.3 Ch. T

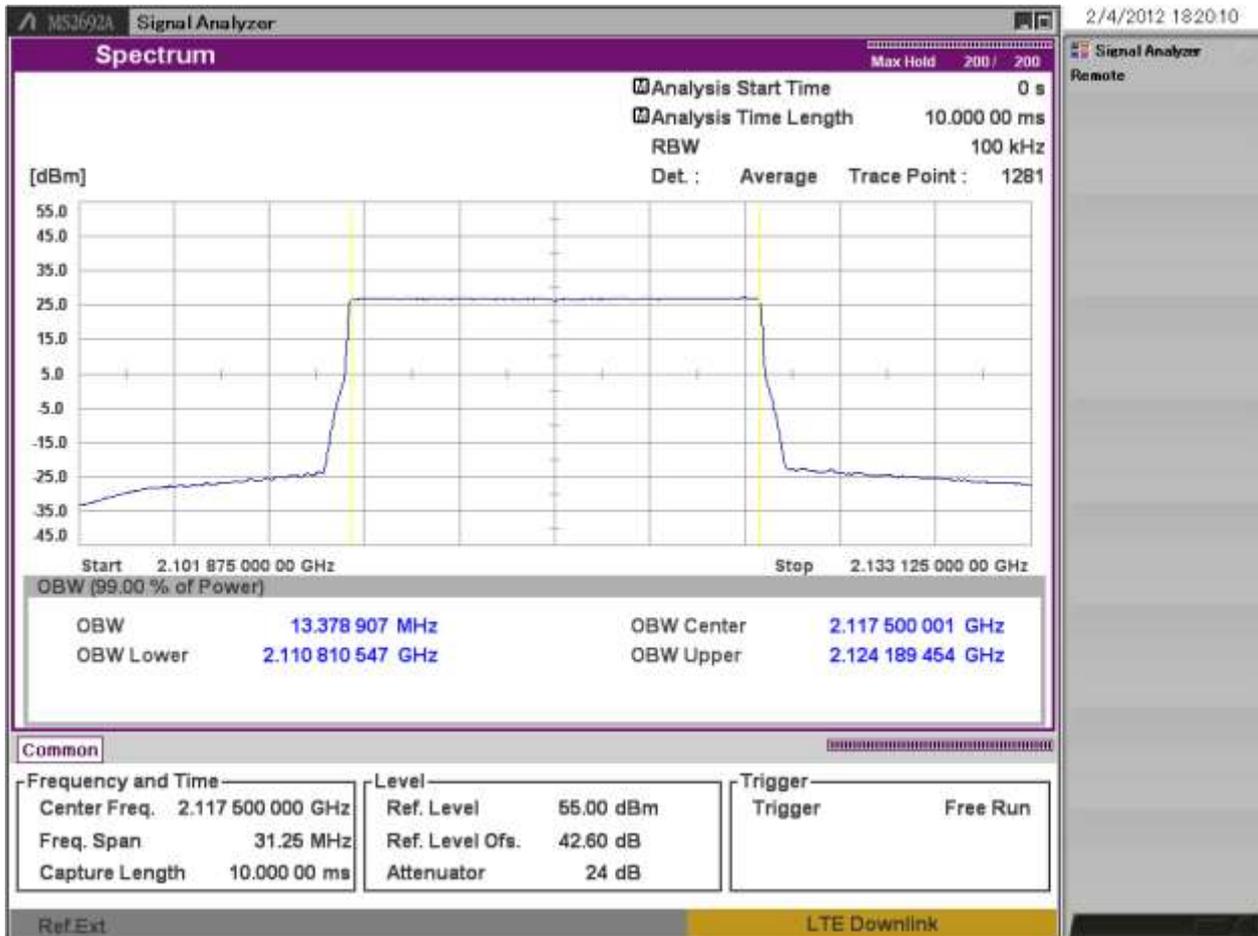




2.7 Test Mode = LTE

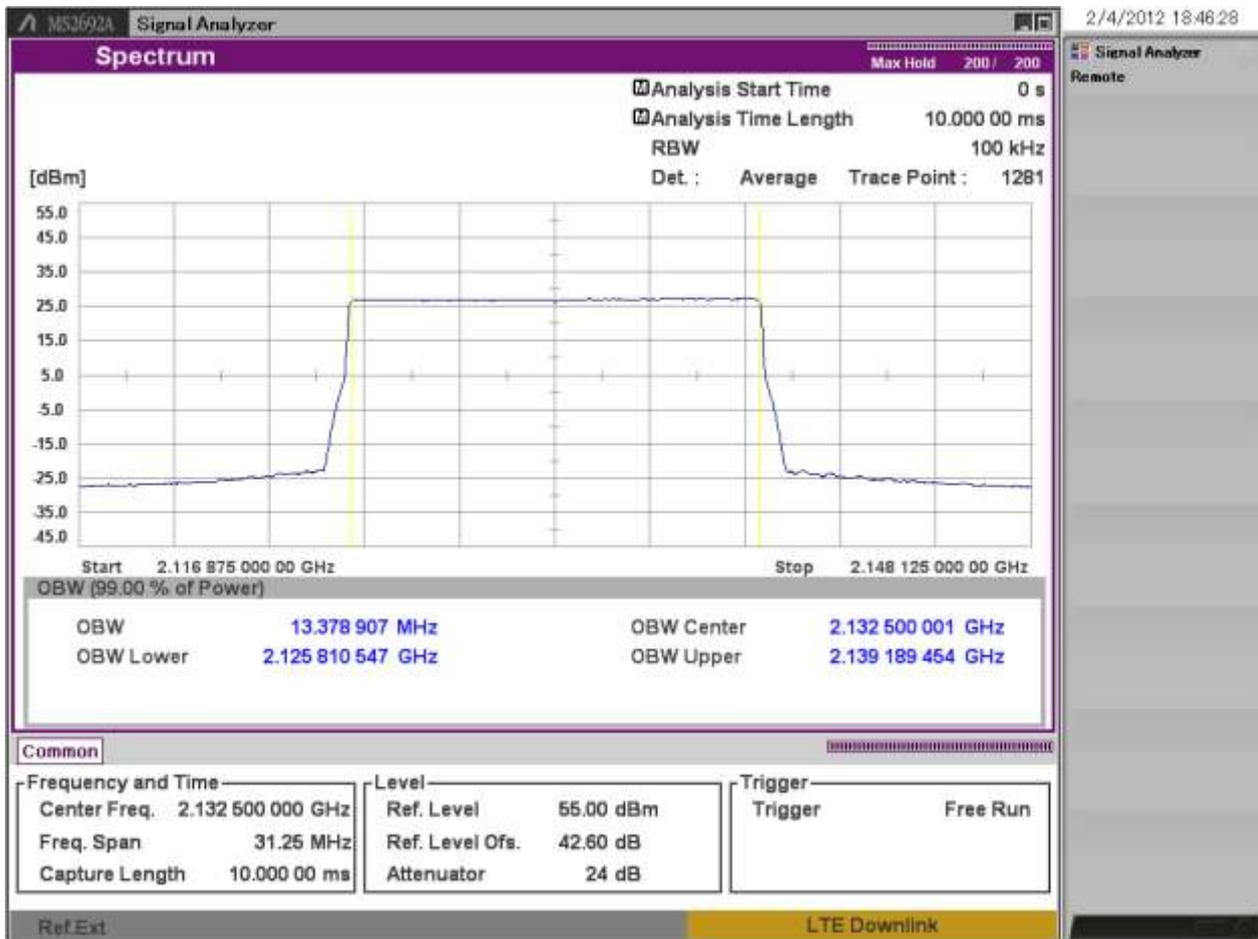
2.7.1 Carrier Conf. = 15M

2.7.1.1 Ch. B



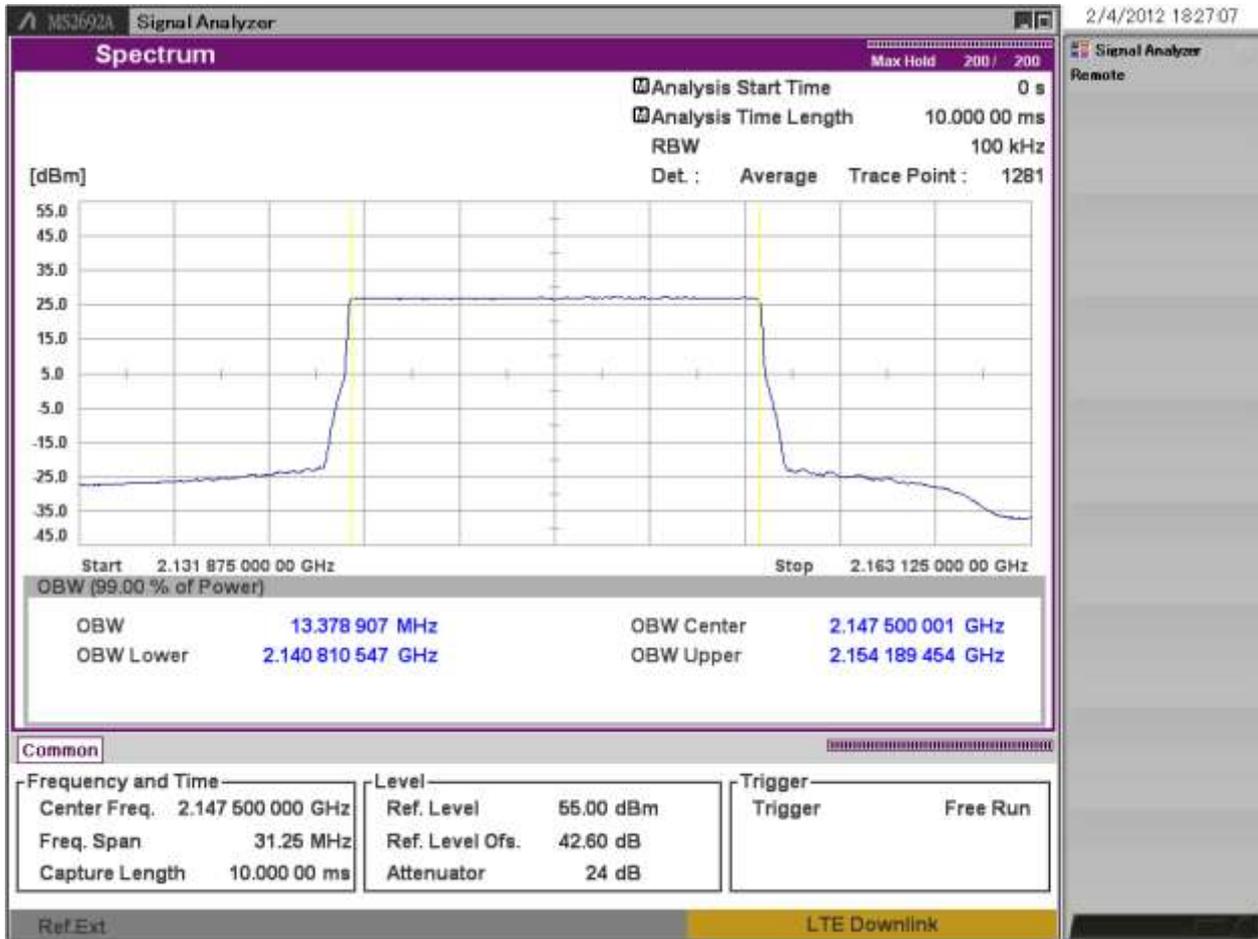


2.7.1.2 Ch. M





2.7.1.3 Ch. T

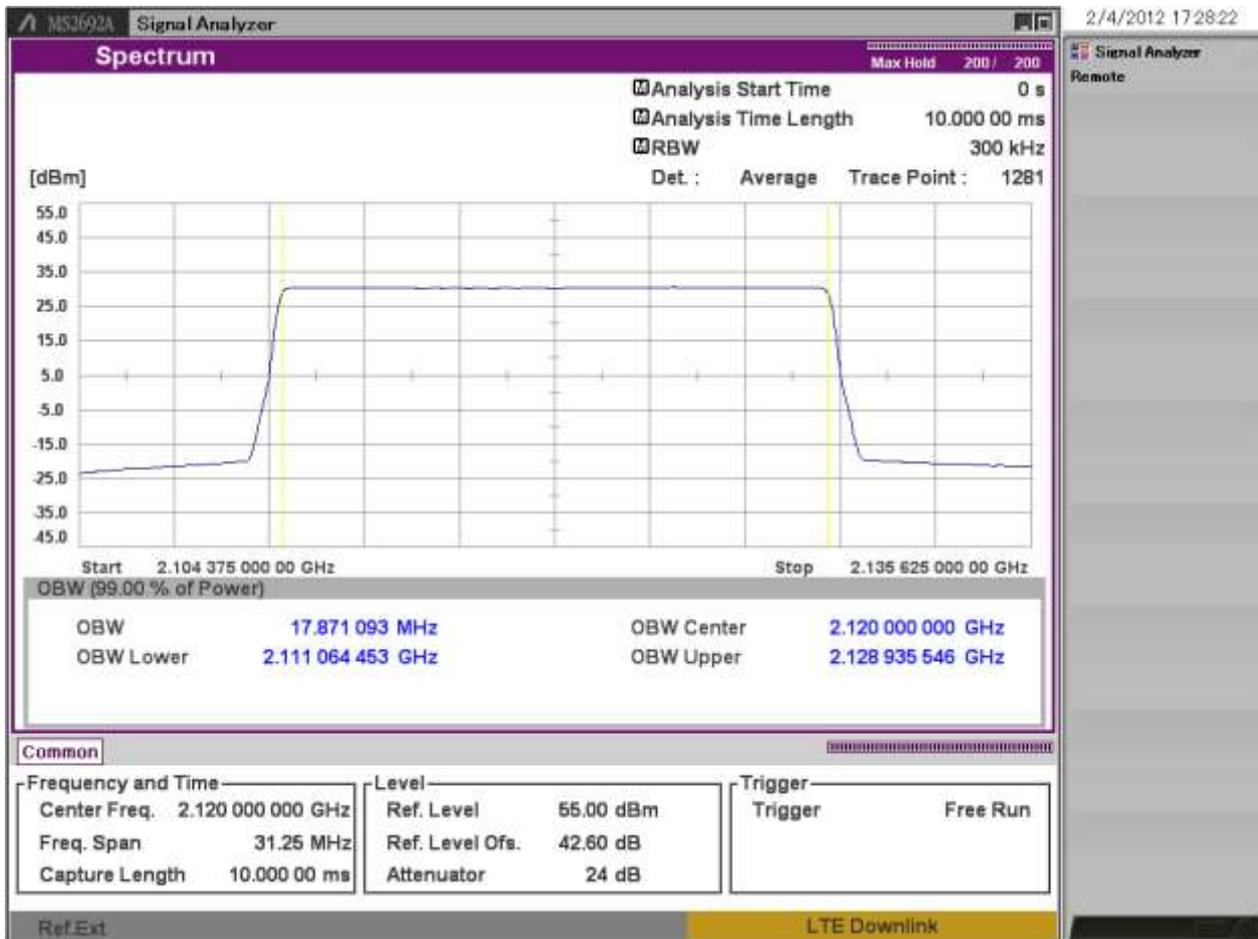




2.8 Test Mode = LTE

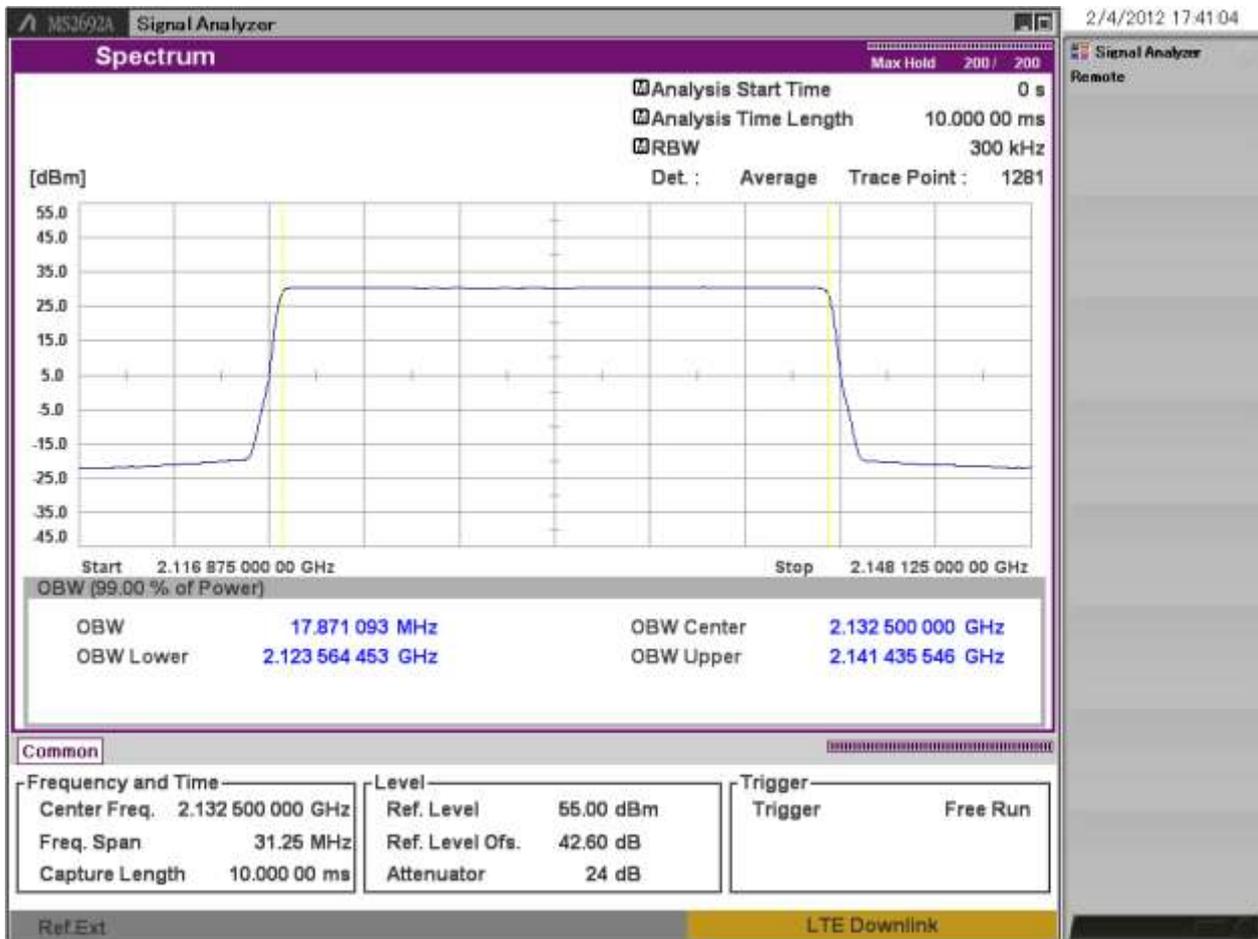
2.8.1 Carrier Conf. =20M

2.8.1.1 Ch. B



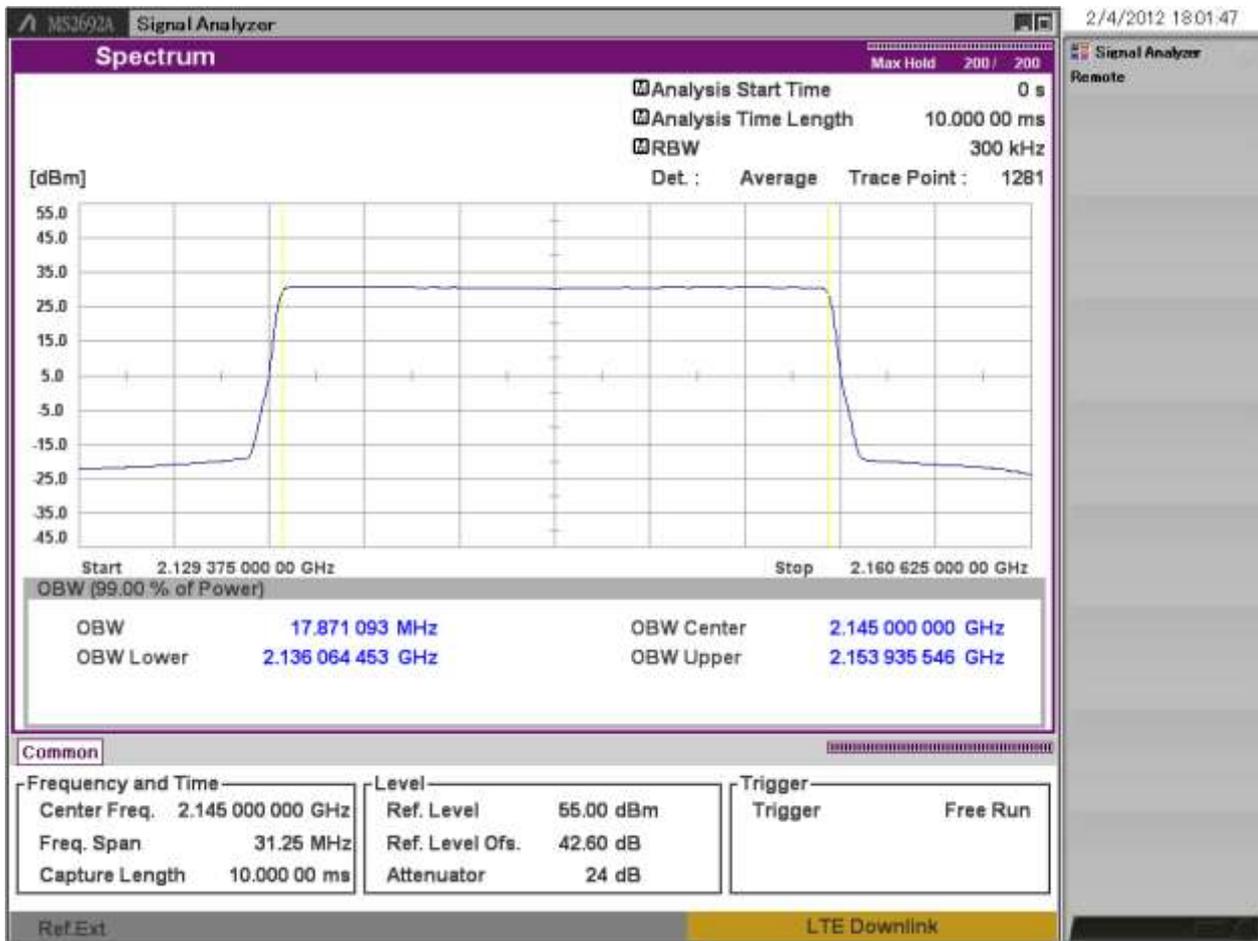


2.8.1.2 Ch. M





2.8.1.3 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
CDMA2000 1X	1(60W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
	4(4*15W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
CDMA2000 EVDO	1(60W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
	4(4*15W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-1.4M	1(60W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-3M	1(60W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-5M	1(60W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-10M	1(60W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-15M	1(60W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-20M	1(60W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-5M+10M	2(20W+40W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
DO+1X+1L_1.4M	3(2*20+20W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
DO+1X+1L_3M	3(2*20+20W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
DO+1X+1L_5M	3(2*20+20W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
DO+1X+1L_10M	3(2*20+20W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
DO+1X+1L_15M	3(2*20+20W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass
DO+1X+1L_20M	3(2*20+20W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass

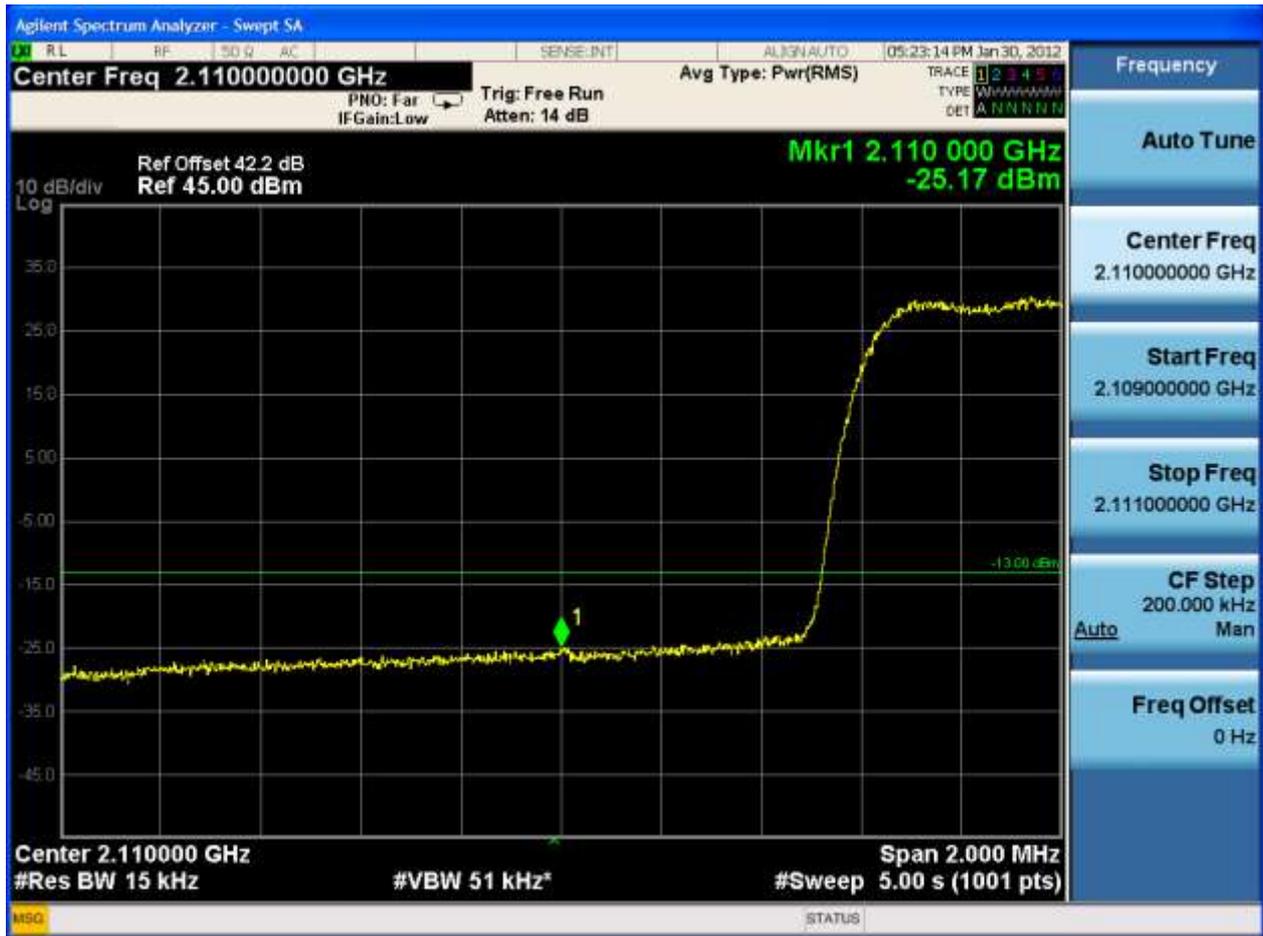


2 Test Plot

2.1 Test Mode = CDMA2000 1X

2.1.1 Carrier Conf. = 1(60W)

2.1.1.1 Ch. B





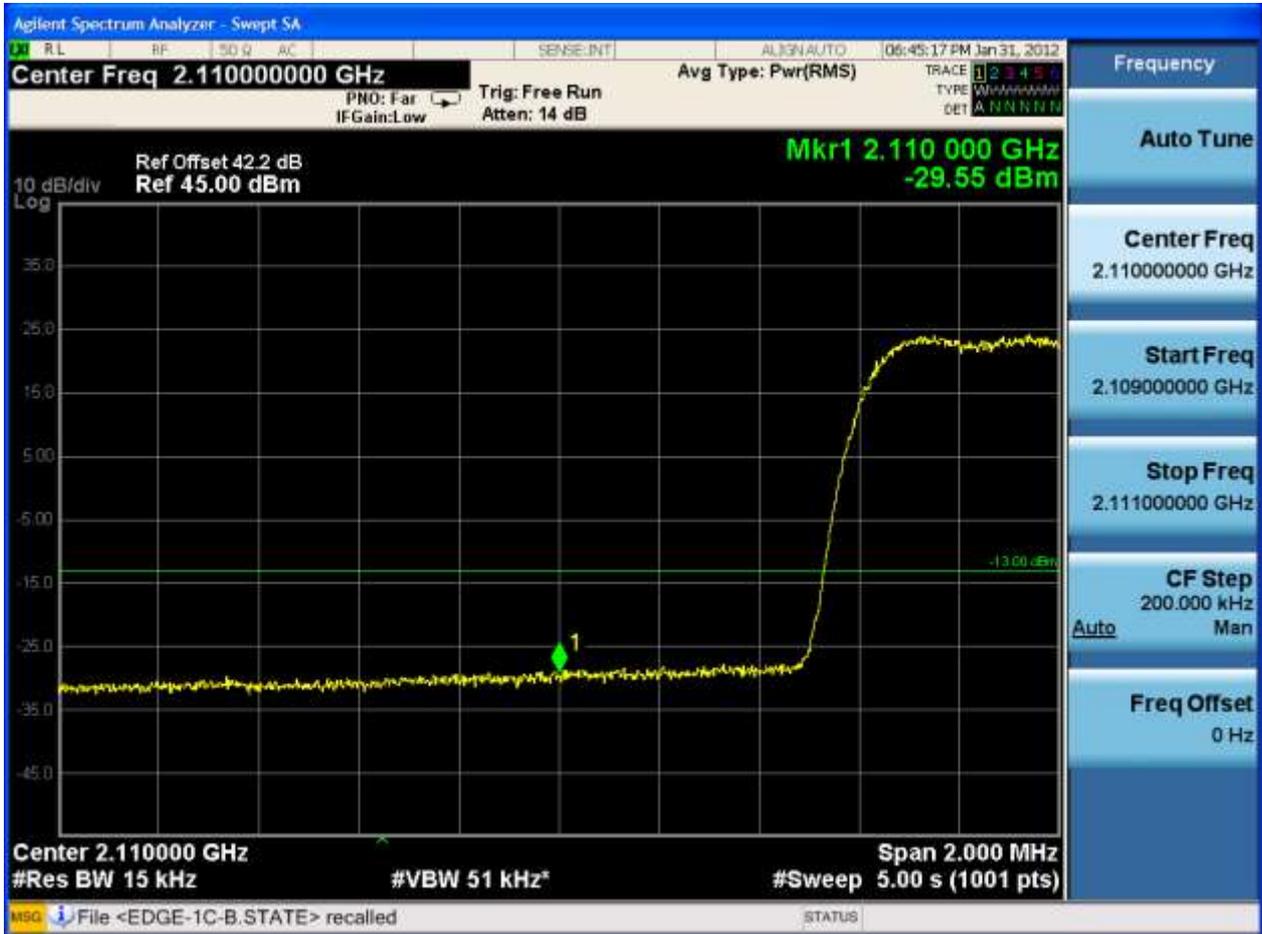
2.1.1.2 Ch. T





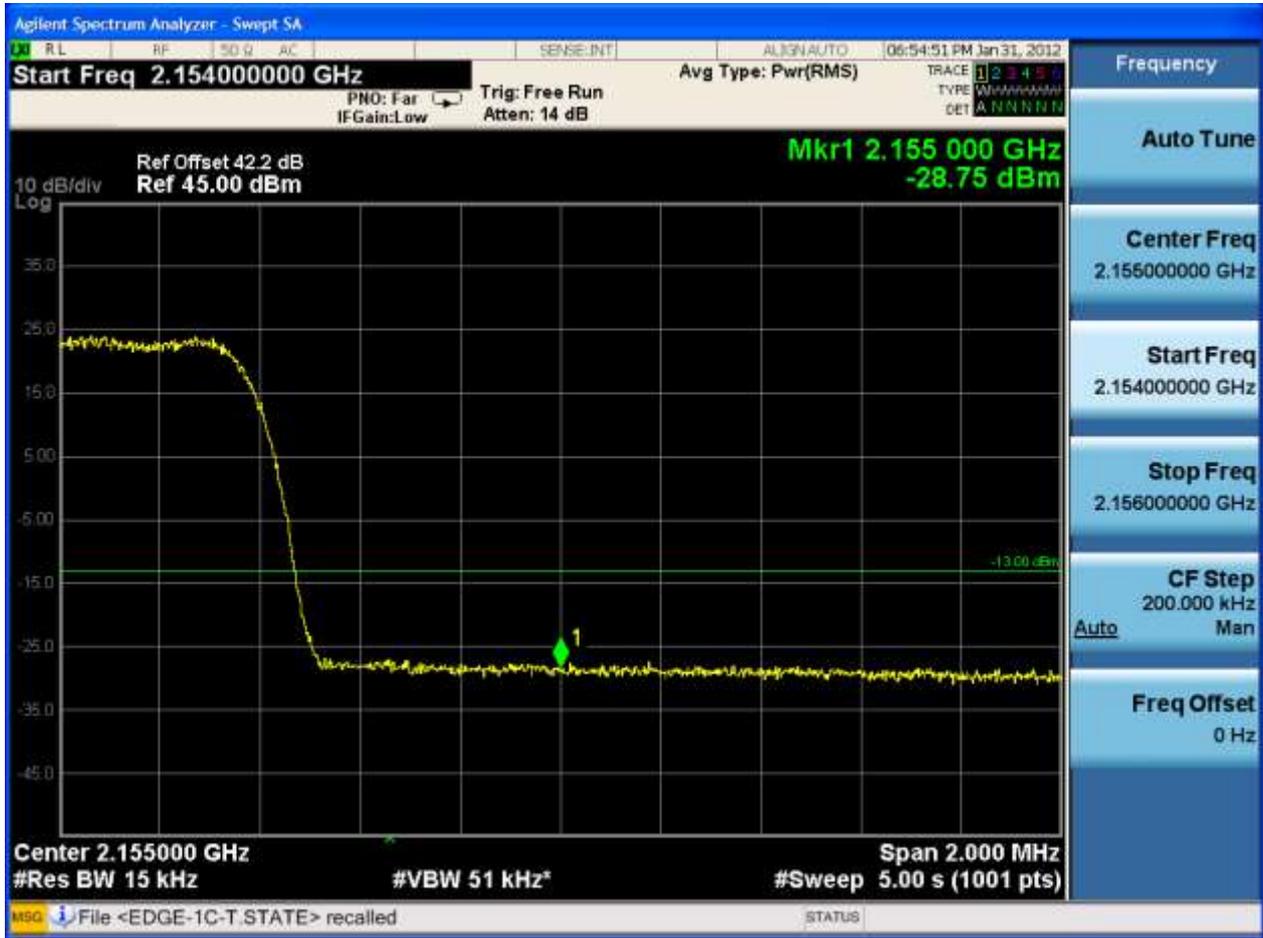
2.1.2 Carrier Conf. = 4(4*15W)

2.1.2.1 Ch. B





2.1.2.2 Ch. T





2.2 Test Mode = CDMA2000 EVDO

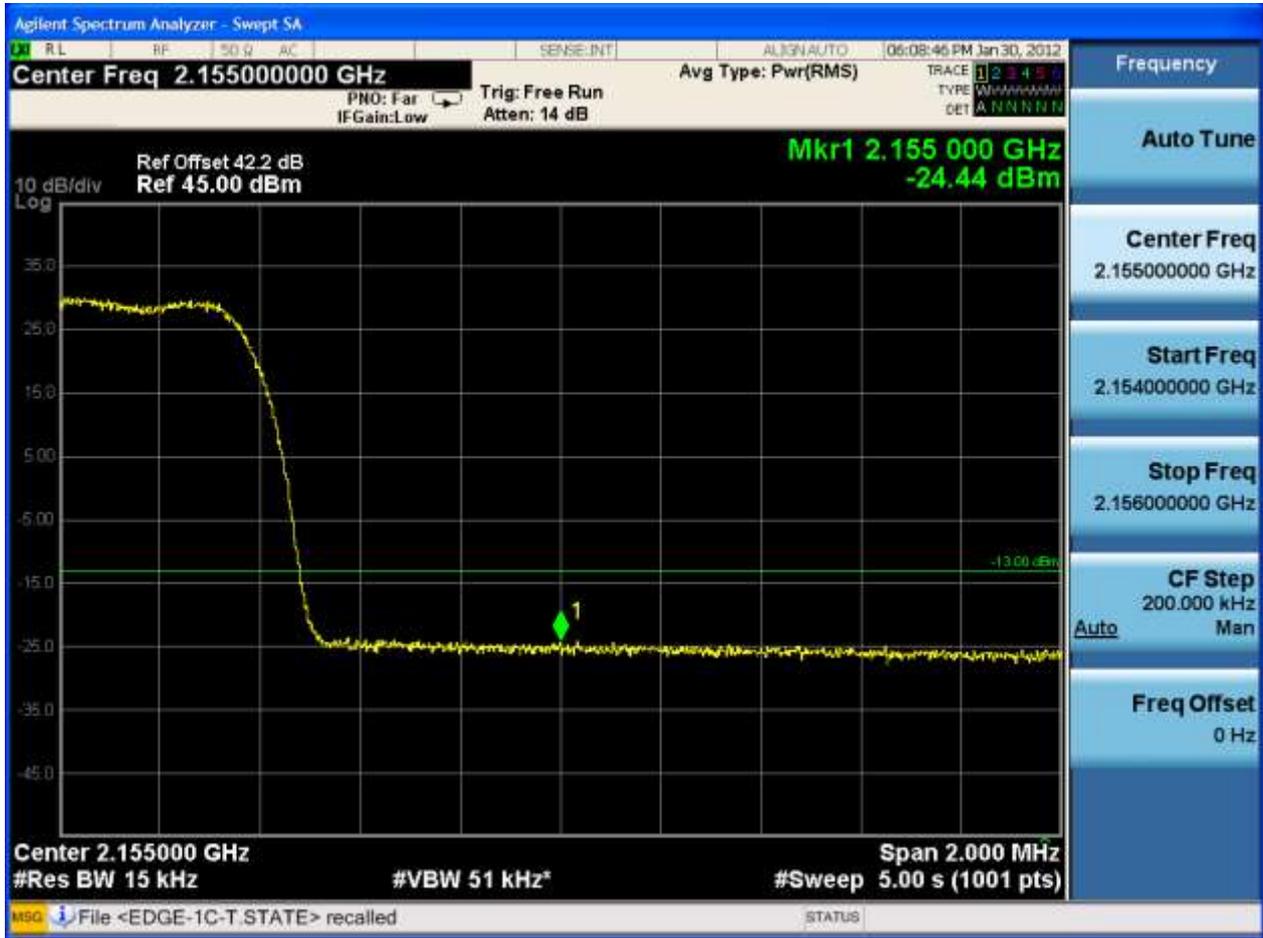
2.2.1 Carrier Conf. = 1(60W)

2.2.1.1 Ch. B





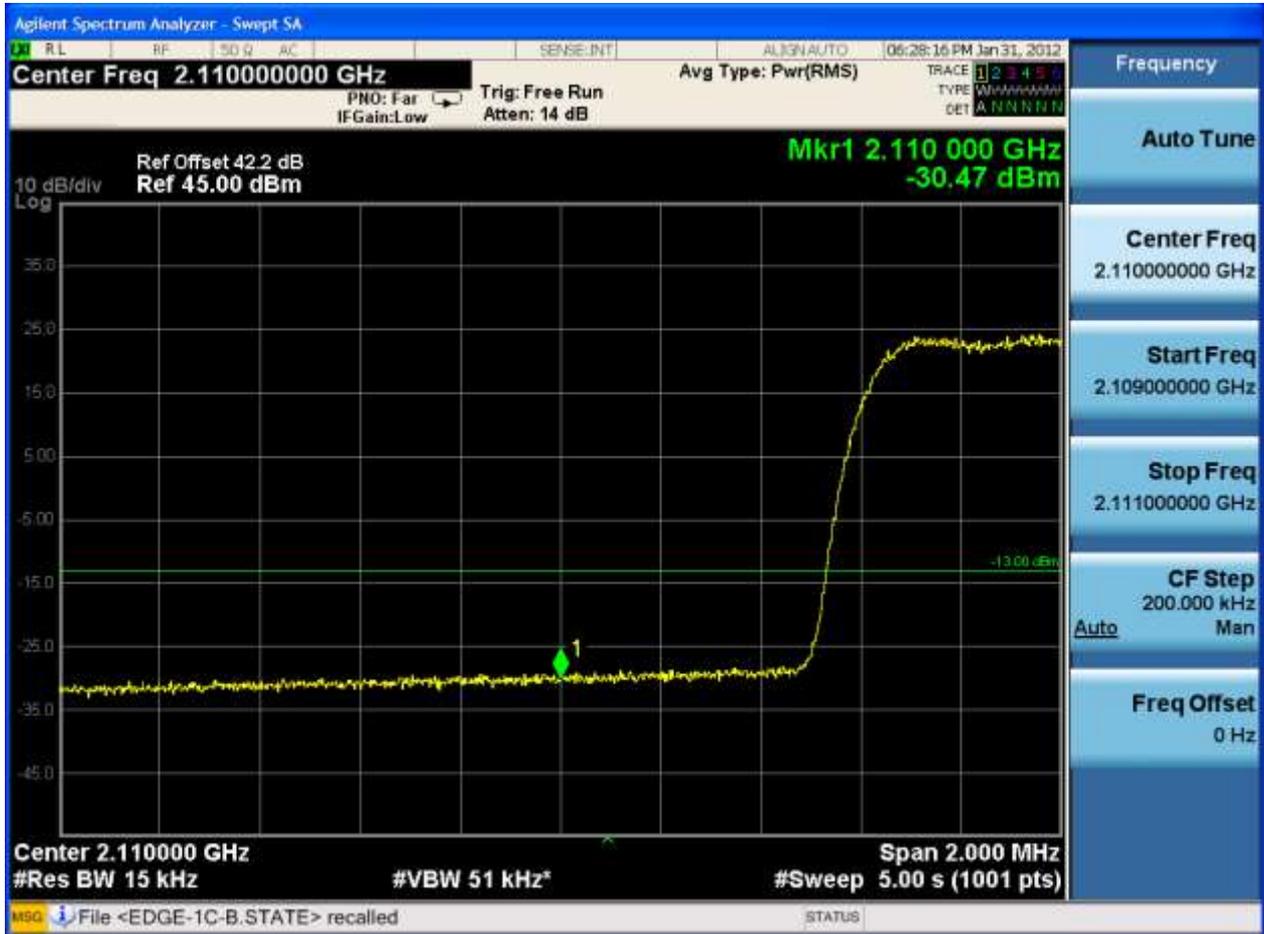
2.2.1.2 Ch. T





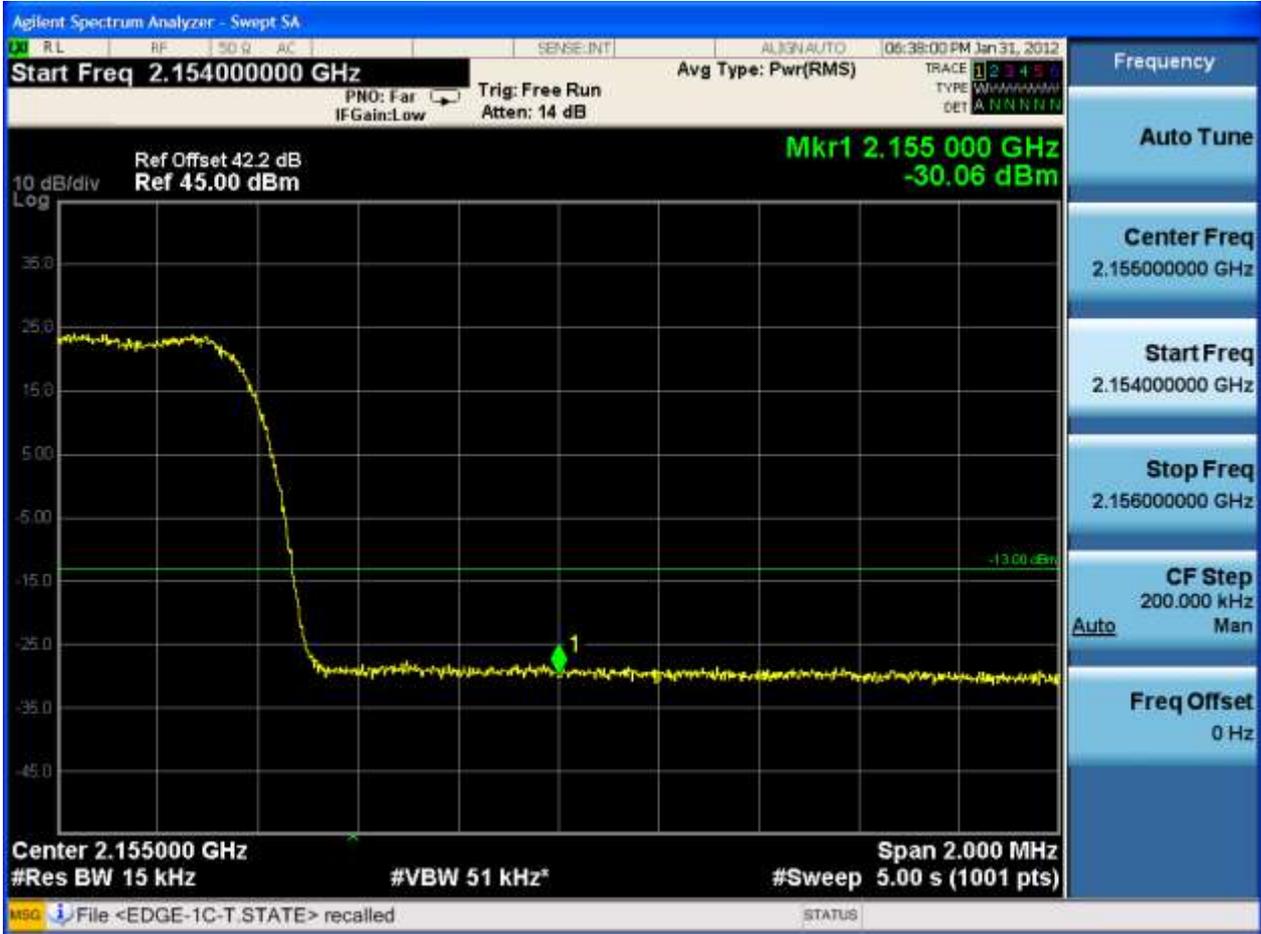
2.2.2 Carrier Conf. = 4(4*15W)

2.2.2.1 Ch. B





2.2.2.2 Ch. T





2.3 Test Mode = LTE

2.3.1 Carrier Conf. = 1.4M (60W)

2.3.1.1 Ch. B





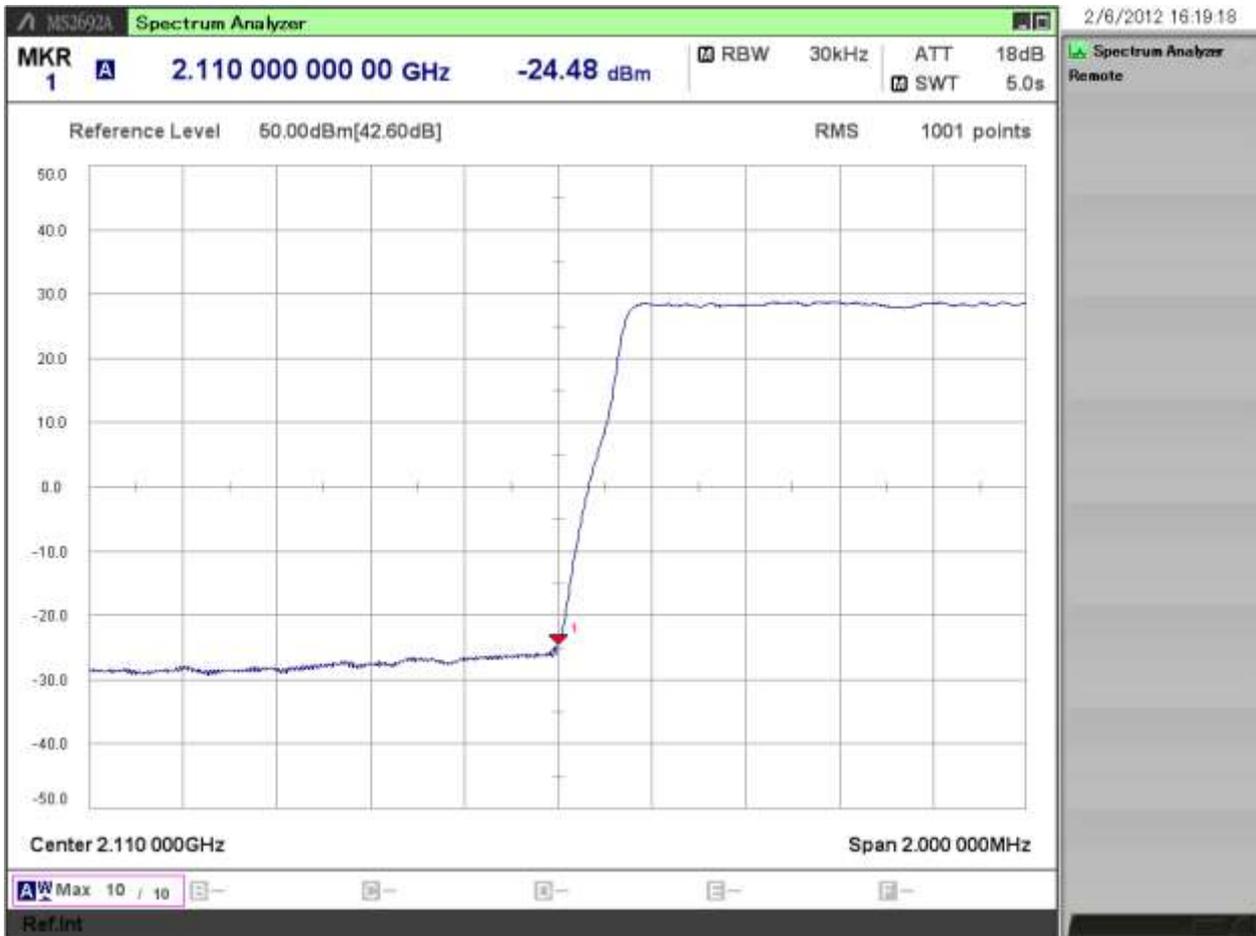
2.3.1.2 Ch. T





2.3.2 Carrier Conf. = 3M (60W)

2.3.2.1 Ch. B





2.3.2.2 Ch. T





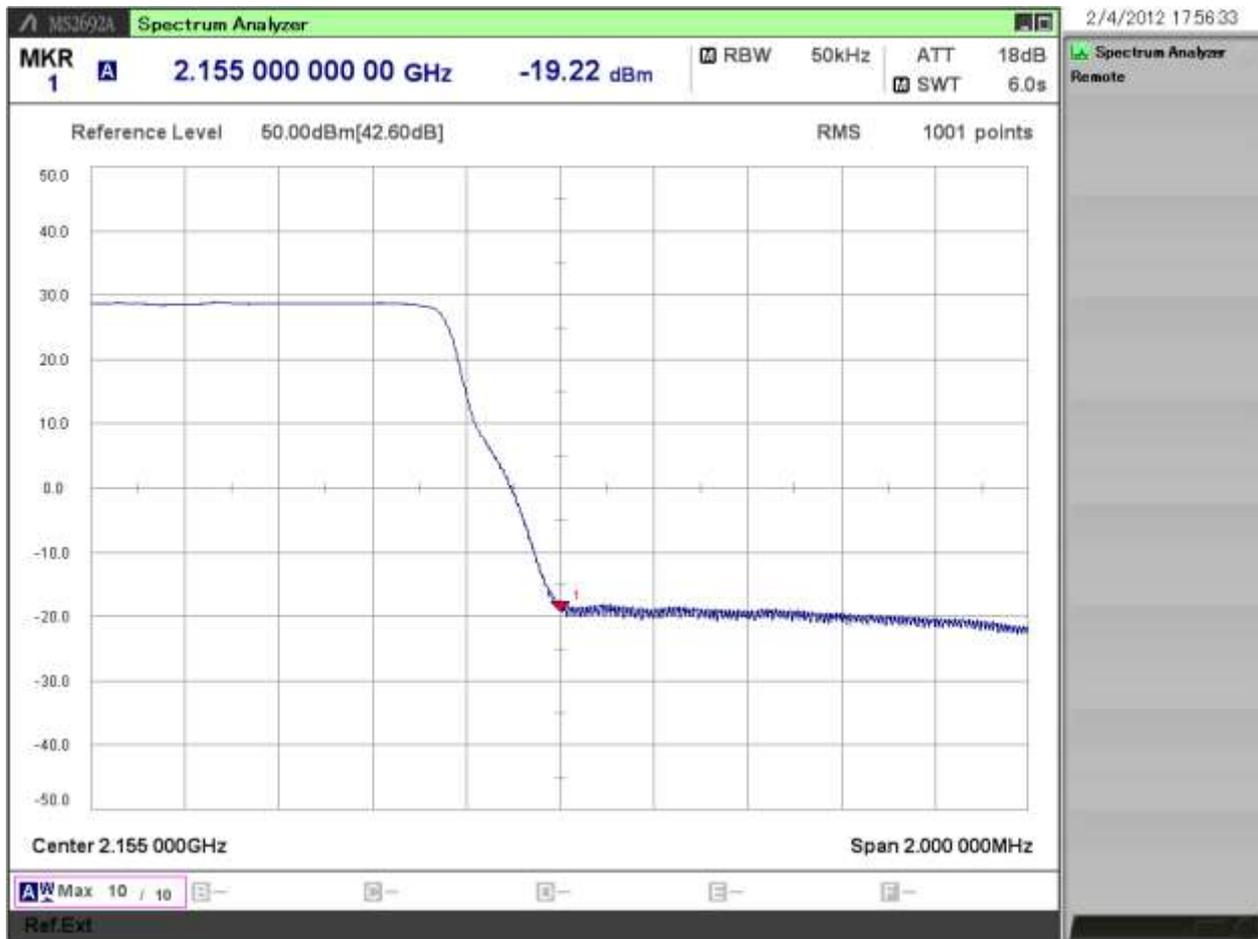
2.3.3 Carrier Conf. = 5M (60W)

2.3.3.1 Ch. B





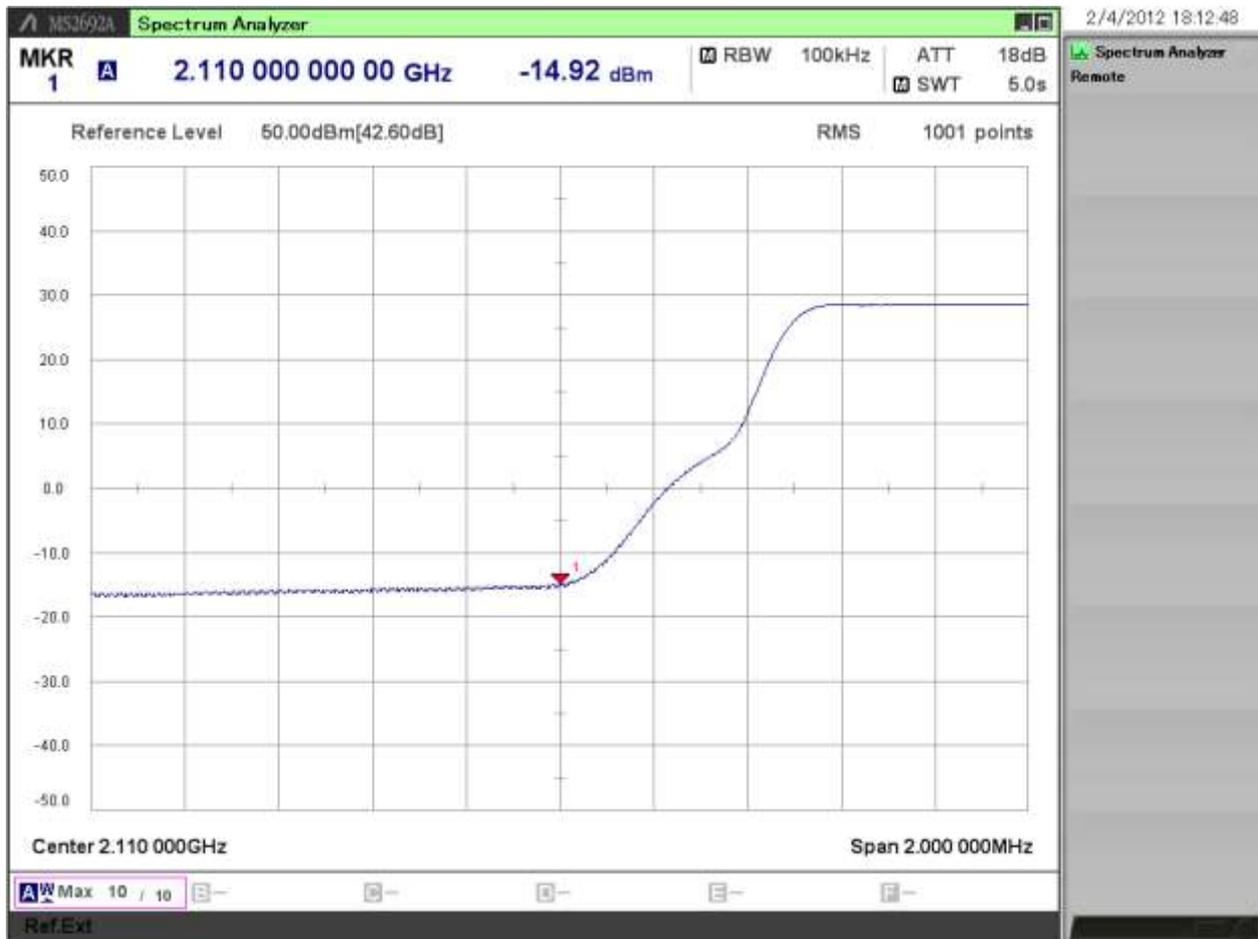
2.3.3.2 Ch. T





2.3.4 Carrier Conf. = 10M (60W)

2.3.4.1 Ch. B





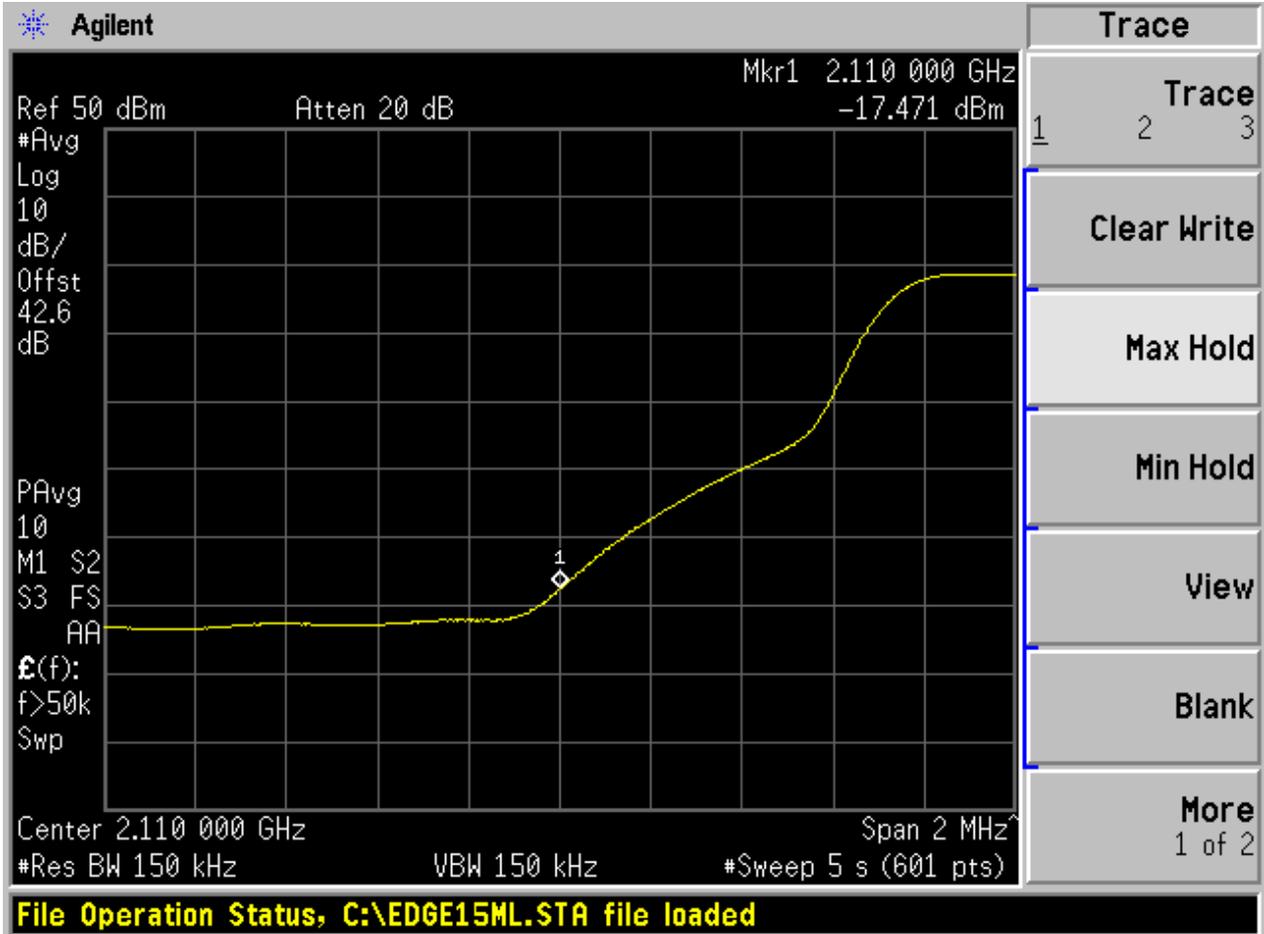
2.3.4.2 Ch. T





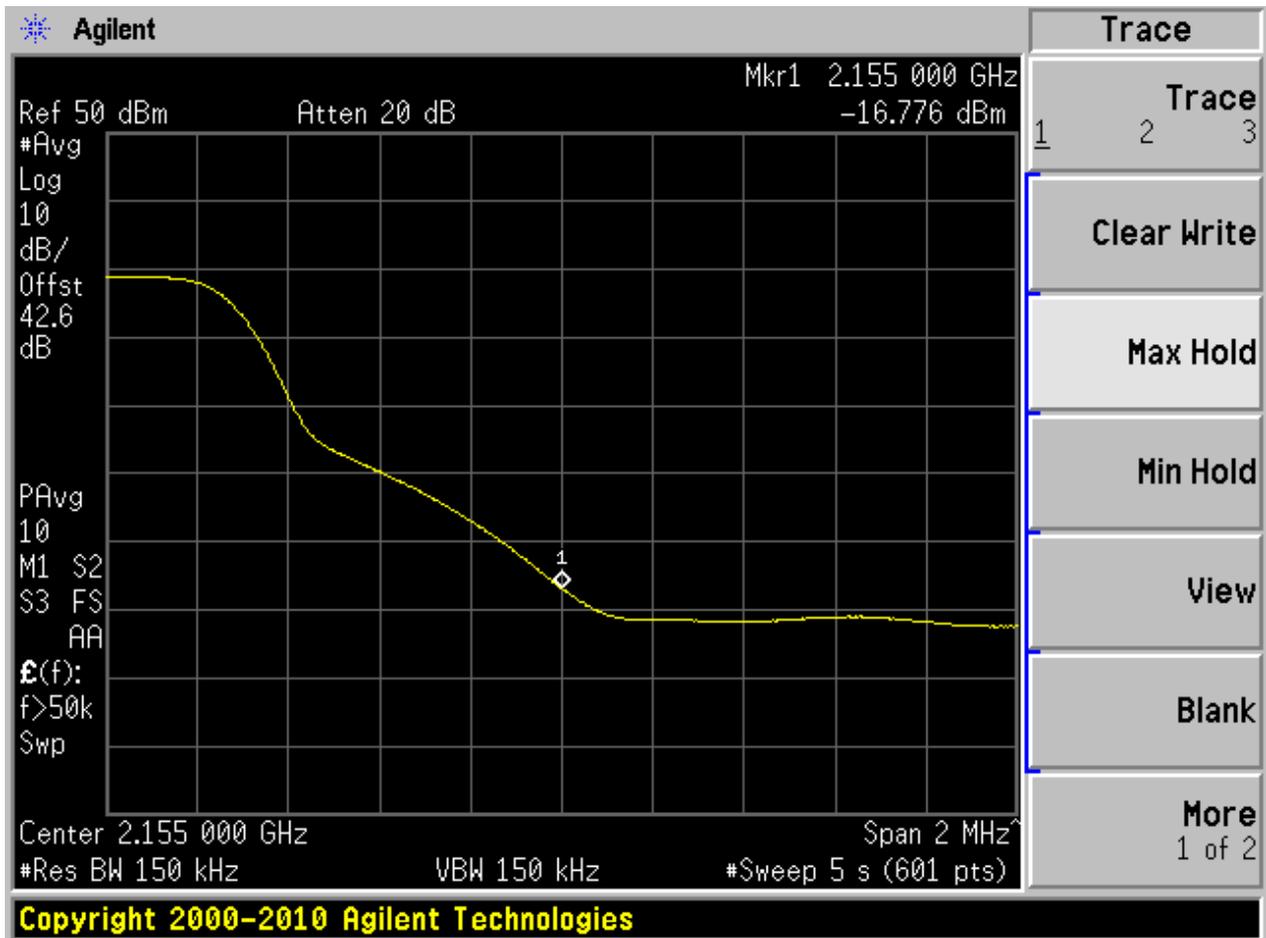
2.3.5 Carrier Conf. = 15M (60W)

2.3.5.1 Ch. B





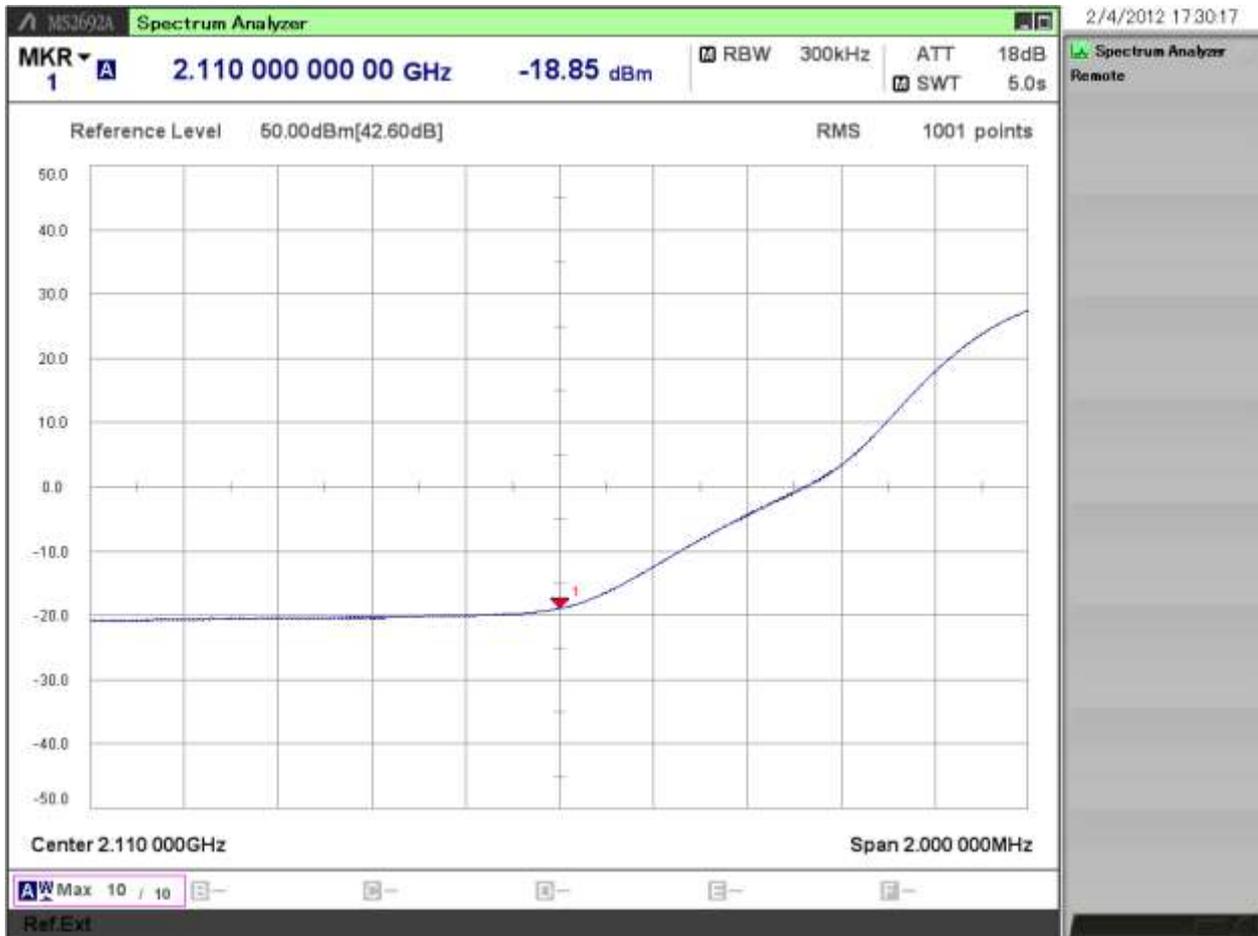
2.3.5.2 Ch. T





2.3.6 Carrier Conf. = 20M (60W)

2.3.6.1 Ch. B





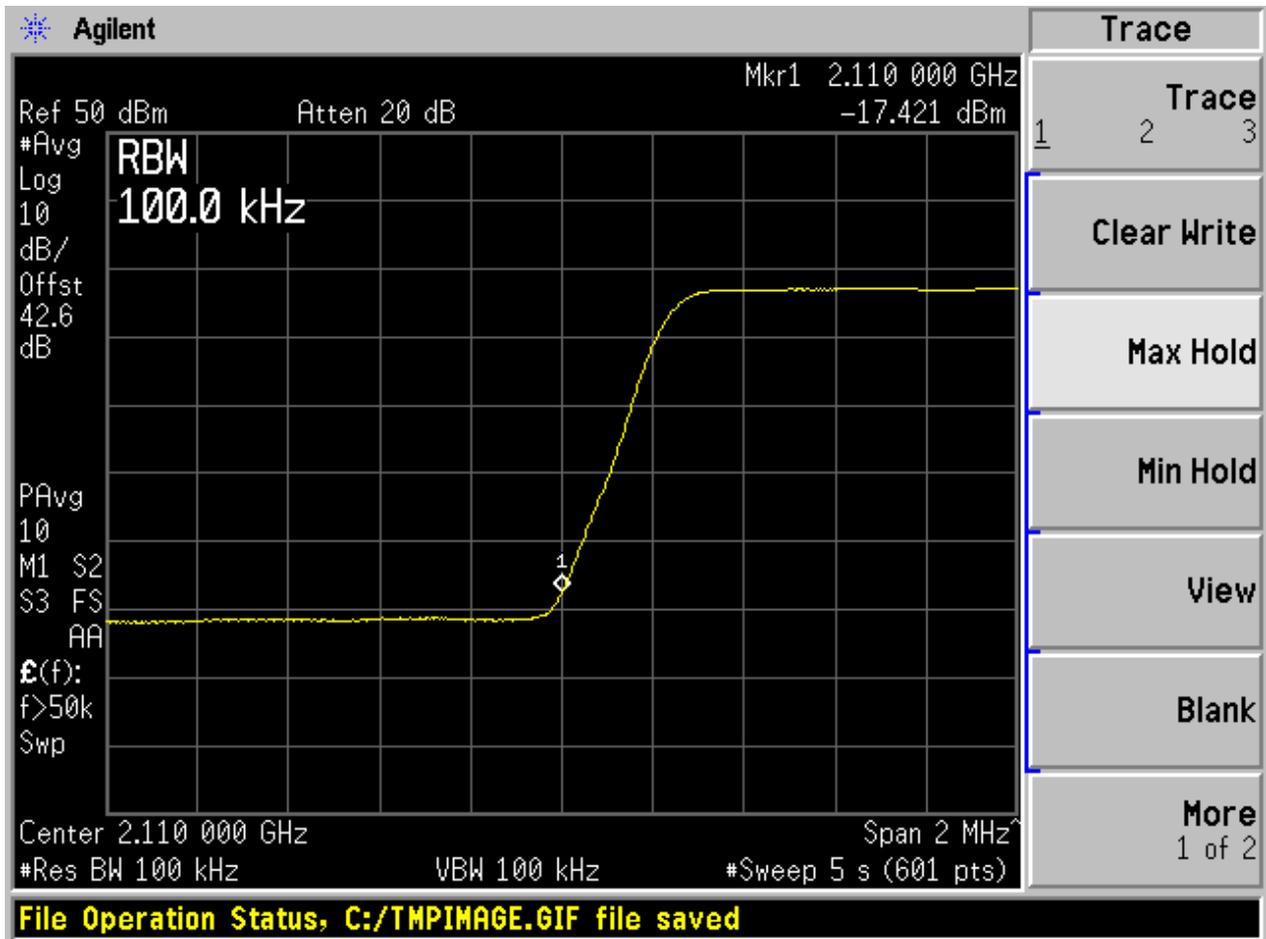
2.3.6.2 Ch. T





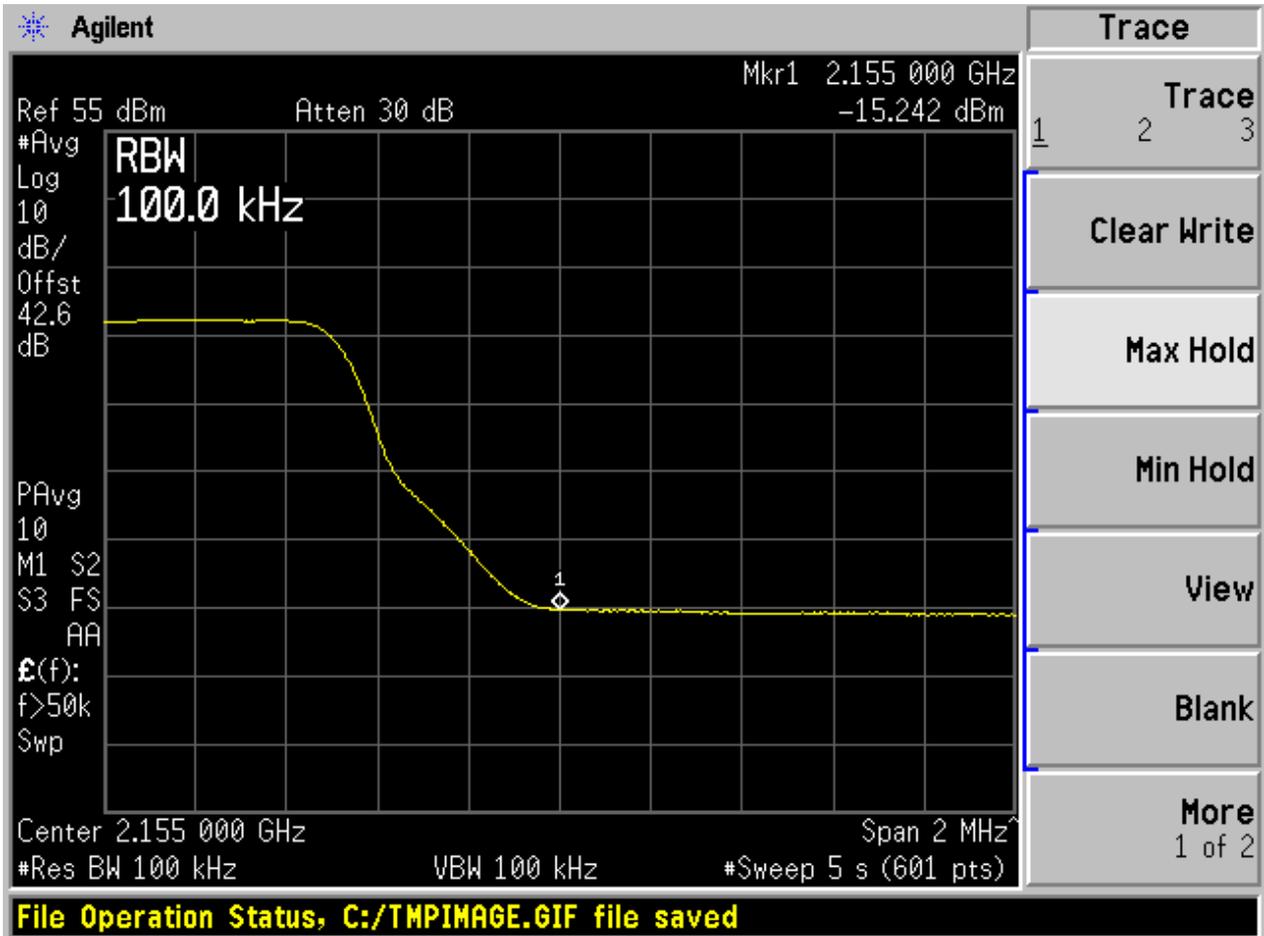
2.3.7 Carrier Conf. = 5M (20W) +10M (40W)

2.3.7.1 Ch. B





2.3.7.2 Ch. T





2.4 Test Mode = CDMA<E

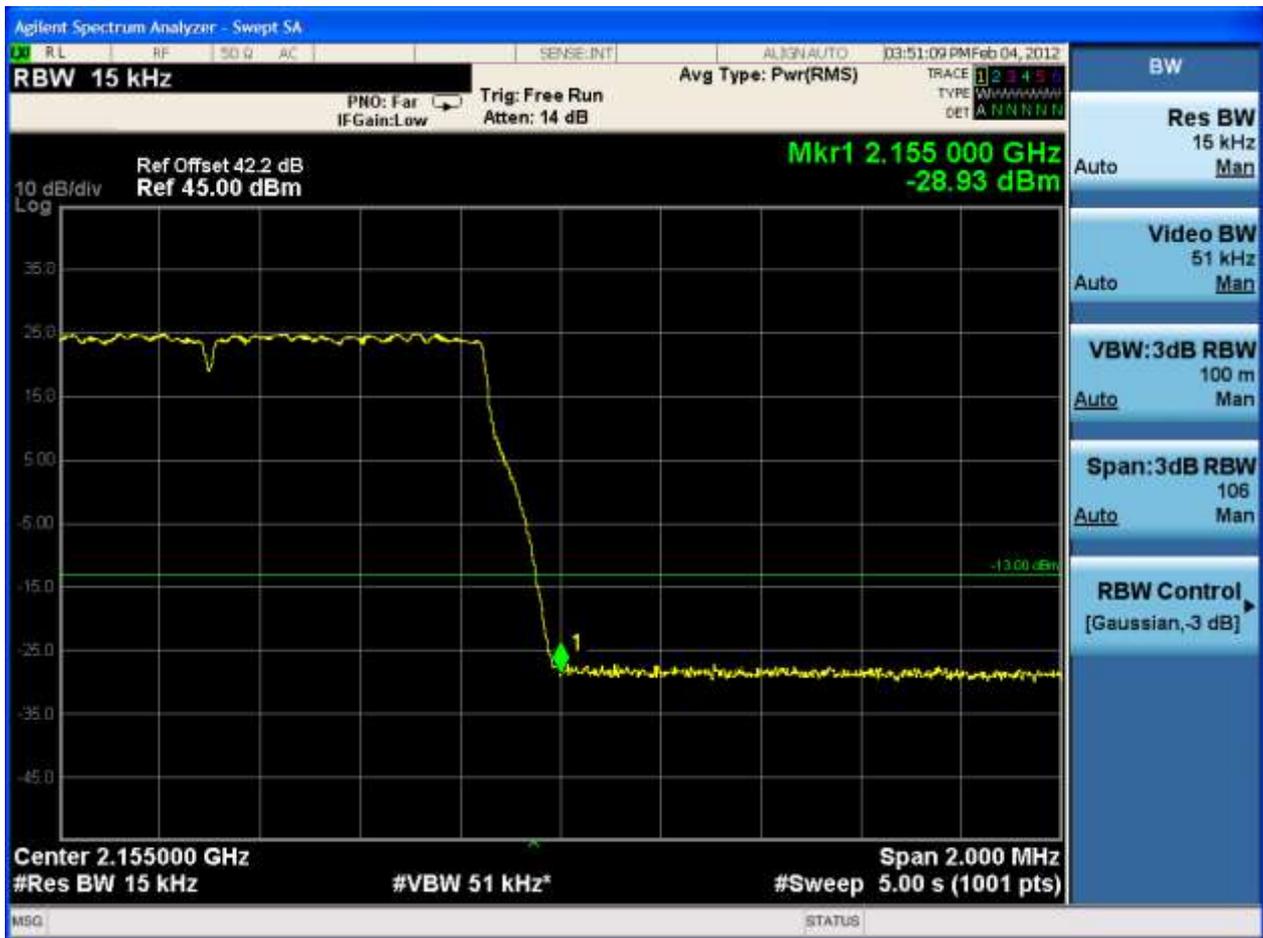
2.4.1 Carrier Conf. = 1X+DO+1L_1.4M (2*20W+20W)

2.4.1.1 Ch. B





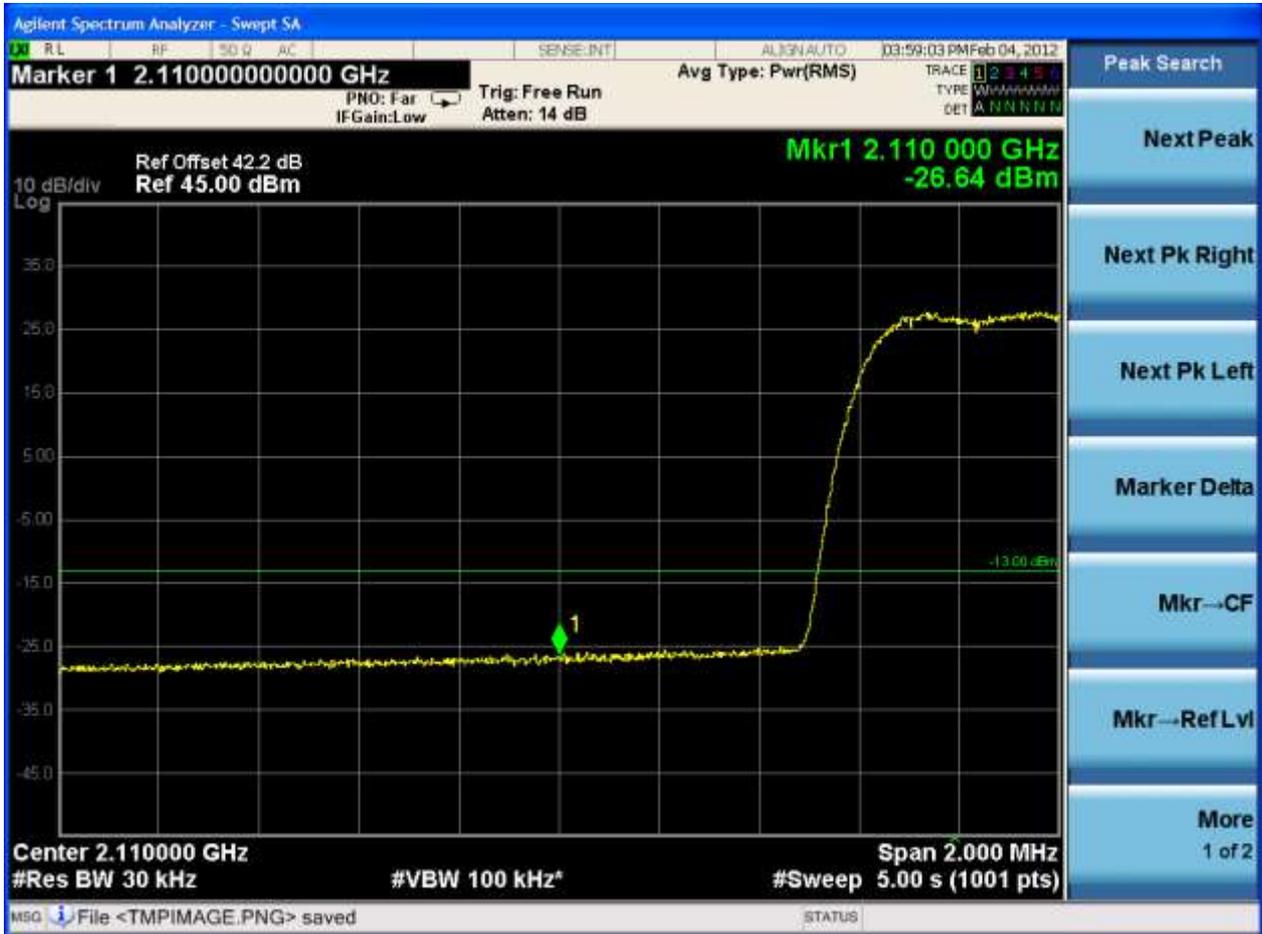
2.4.1.2 Ch. T





2.4.2 Carrier Conf. = 1X+DO+1L_3M (2*20W+20W)

2.4.2.1 Ch. B





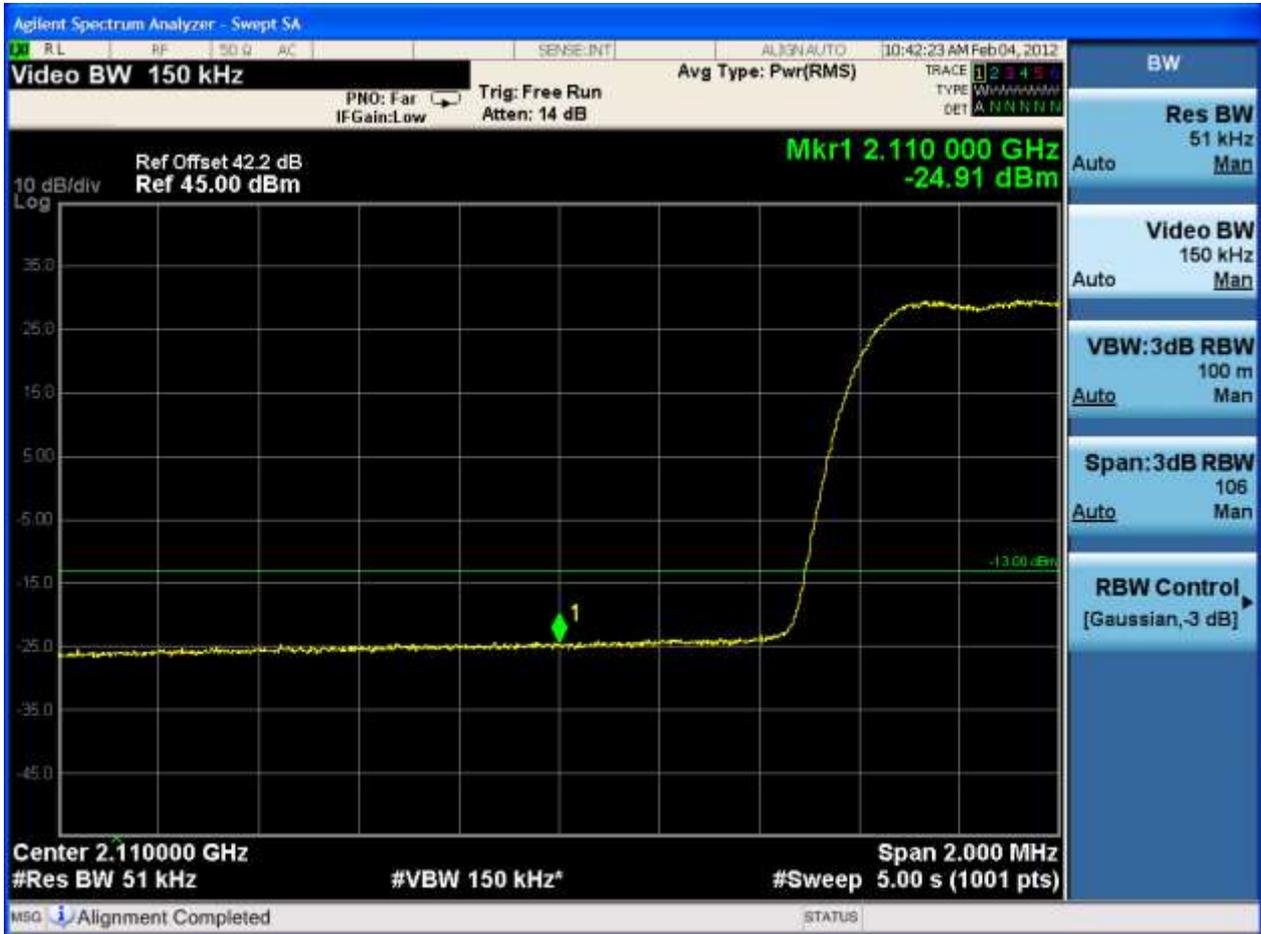
2.4.2.2 Ch. T





2.4.3 Carrier Conf. = 1X+DO+1L_5M (2*20W+20W)

2.4.3.1 Ch. B





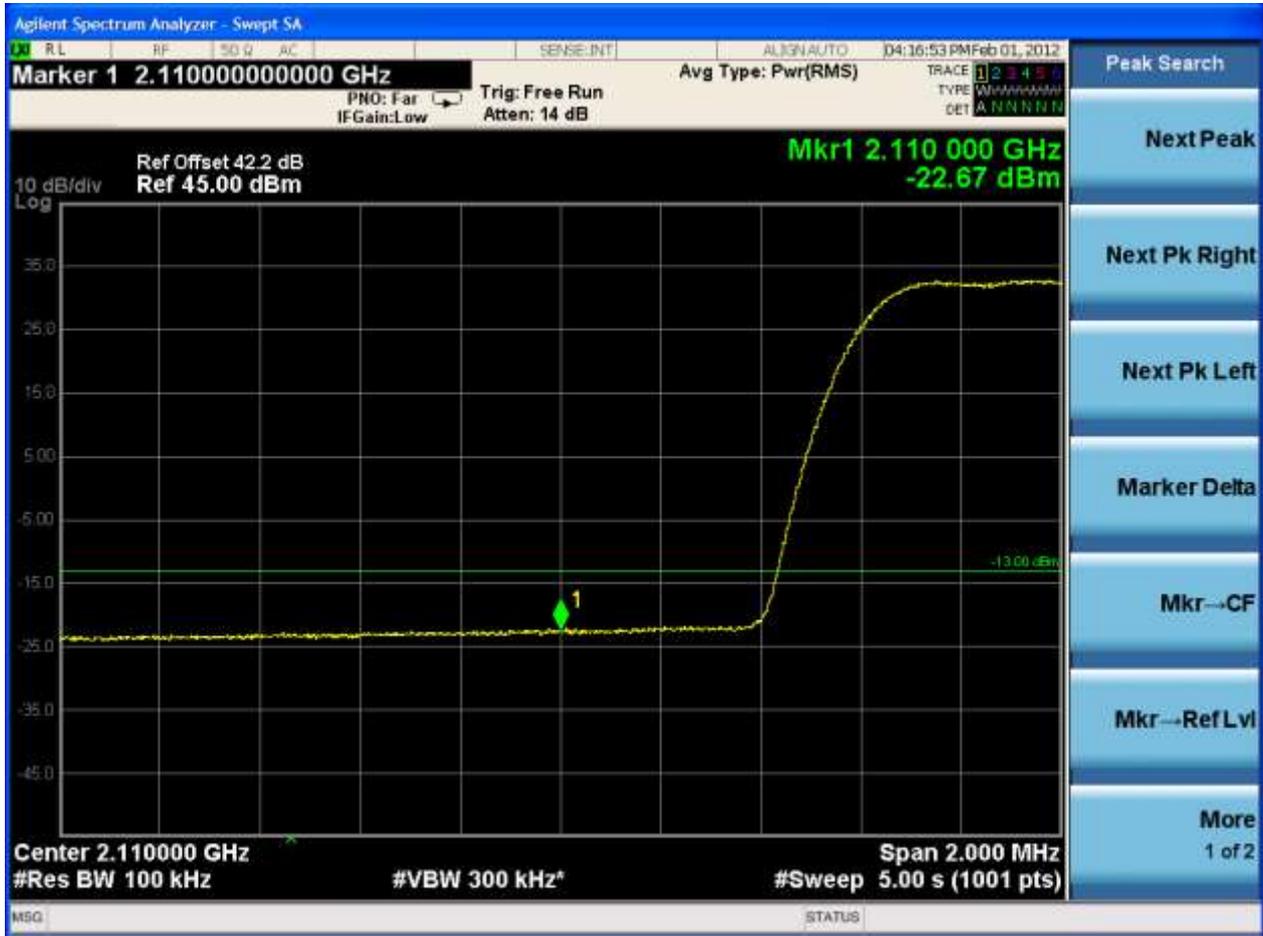
2.4.3.2 Ch. T





2.4.4 Carrier Conf. = 1X+DO+1L_10M (2*20W+20W)

2.4.4.1 Ch. B





2.4.4.2 Ch. T





2.4.5.2 Ch. T





2.4.6 Carrier Conf. = 1X+DO+1L_20M (2*20W+20W)

2.4.6.1 Ch. B





2.4.6.2 Ch. T





Appendix E: Spurious Emission at Antenna Terminals



1 Result Table

Test Mode	Carrier Conf.	RF Ch.	Spurious Emission at Antenna Terminals [dBm]	Verdict
CDMA2000 1X	1(60W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
	4(4*15)W	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
CDMA2000 EVDO	1(60W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
	4(4*15)W	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-1.4M	1(60W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-3M	1(60W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-5M	1(60W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-10M	1(60W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-15M	1(60W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-20M	1(60W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
LTE-5M+10M	2(20W+40W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
1X+ DO+1L_1.4M	3(2*20W+20W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
1X+ DO+1L_3M	3(2*20W+20W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass



Test Mode	Carrier Conf.	RF Ch.	Spurious Emission at Antenna Terminals [dBm]	Verdict
1X+ DO+1L_5M	3(2*20W+20W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
1X+ DO+1L_10M	3(2*20W+20W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
1X+ DO+1L_15M	3(2*20W+20W)	B	Below -13dBm	Pass
		M	Below -13dBm	Pass
		T	Below -13dBm	Pass
1X+ DO+1L_20M	3(2*20W+20W)	B	Below -13dBm	Pass
		T	Below -13dBm	Pass

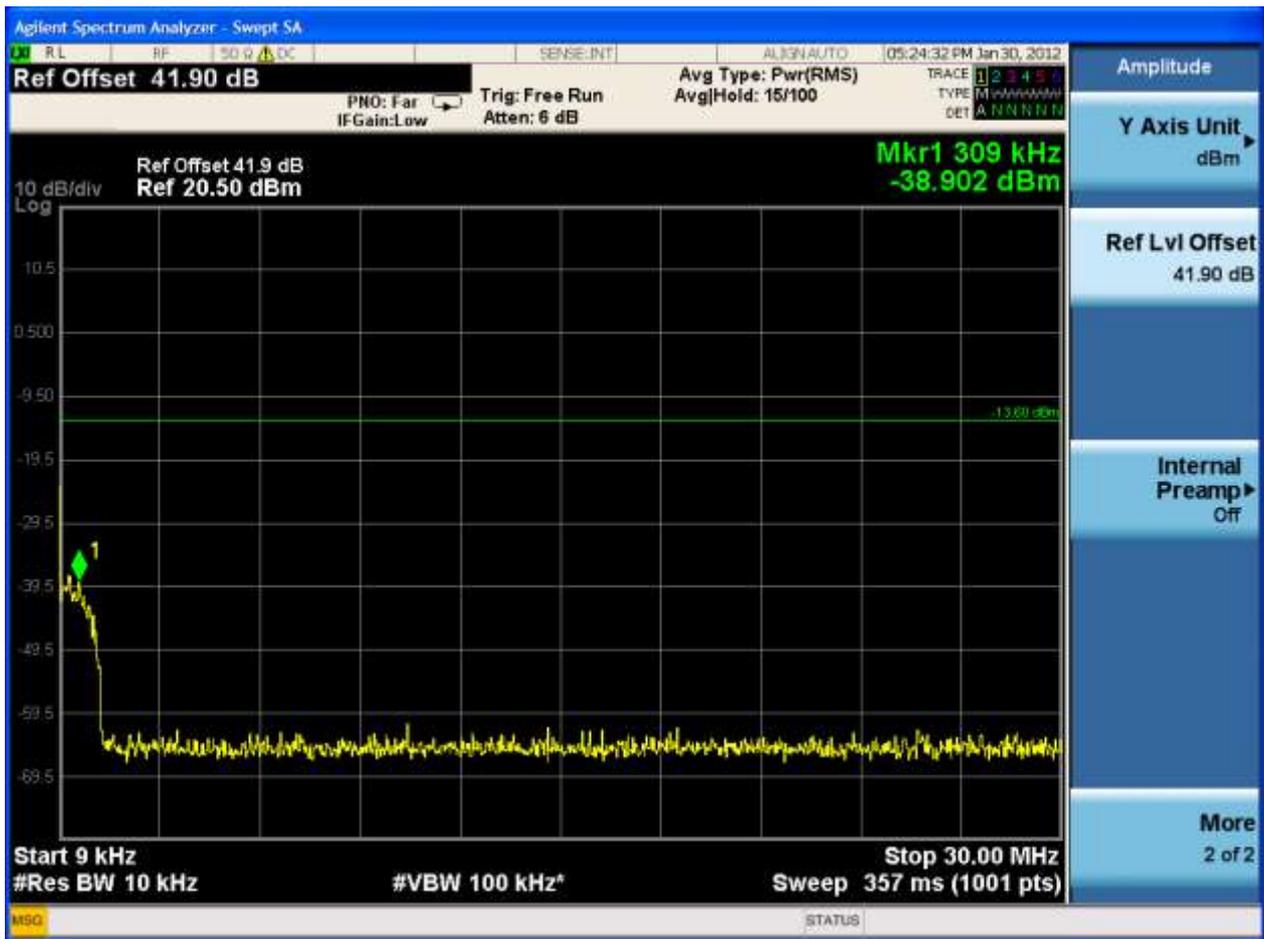


2 Test Plot

2.1 Test Mode = CDMA2000 1X

2.1.1 Carrier Conf. = 1(60W)

2.1.1.1 Ch. B



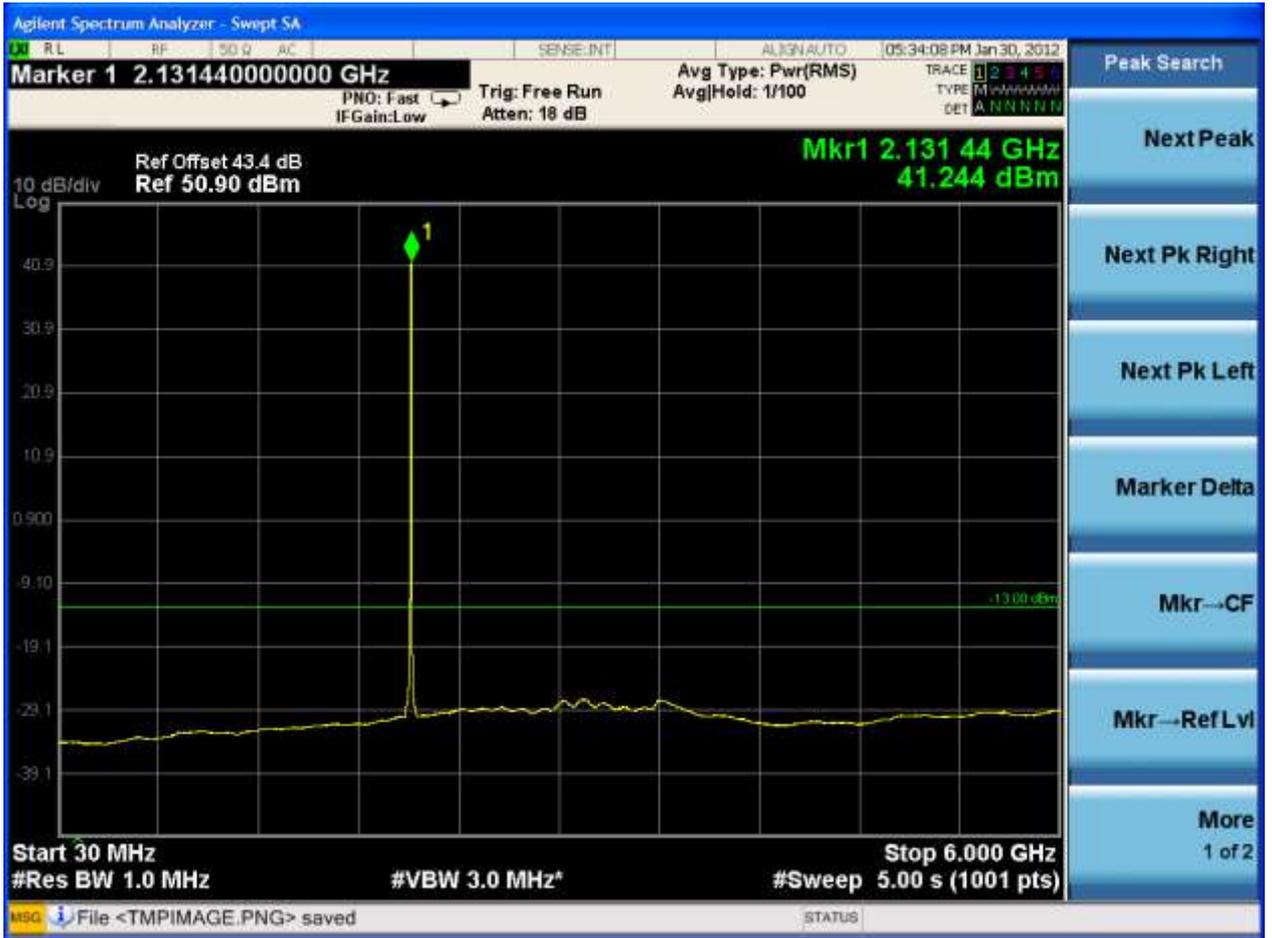






2.1.1.2 Ch.M



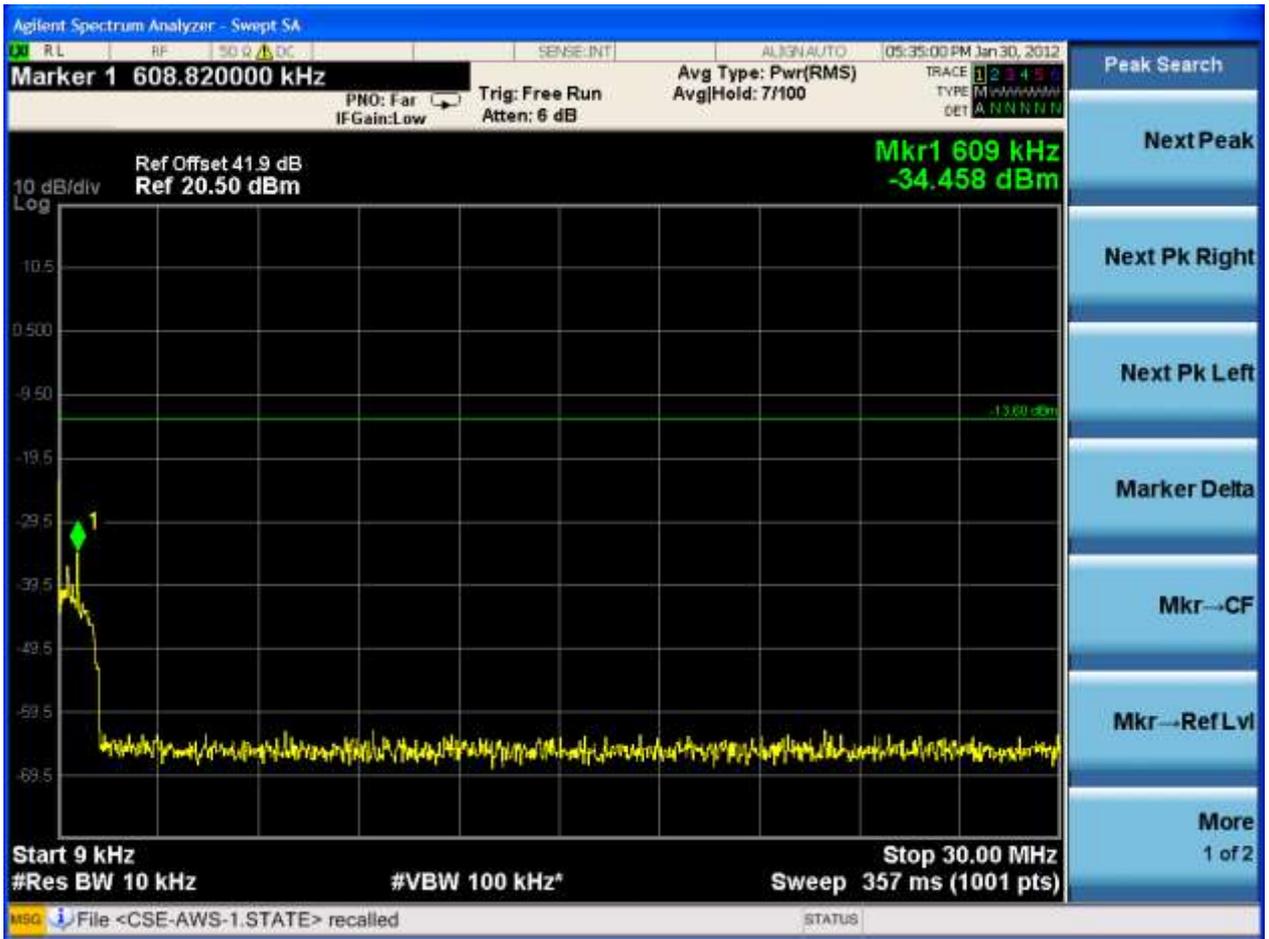


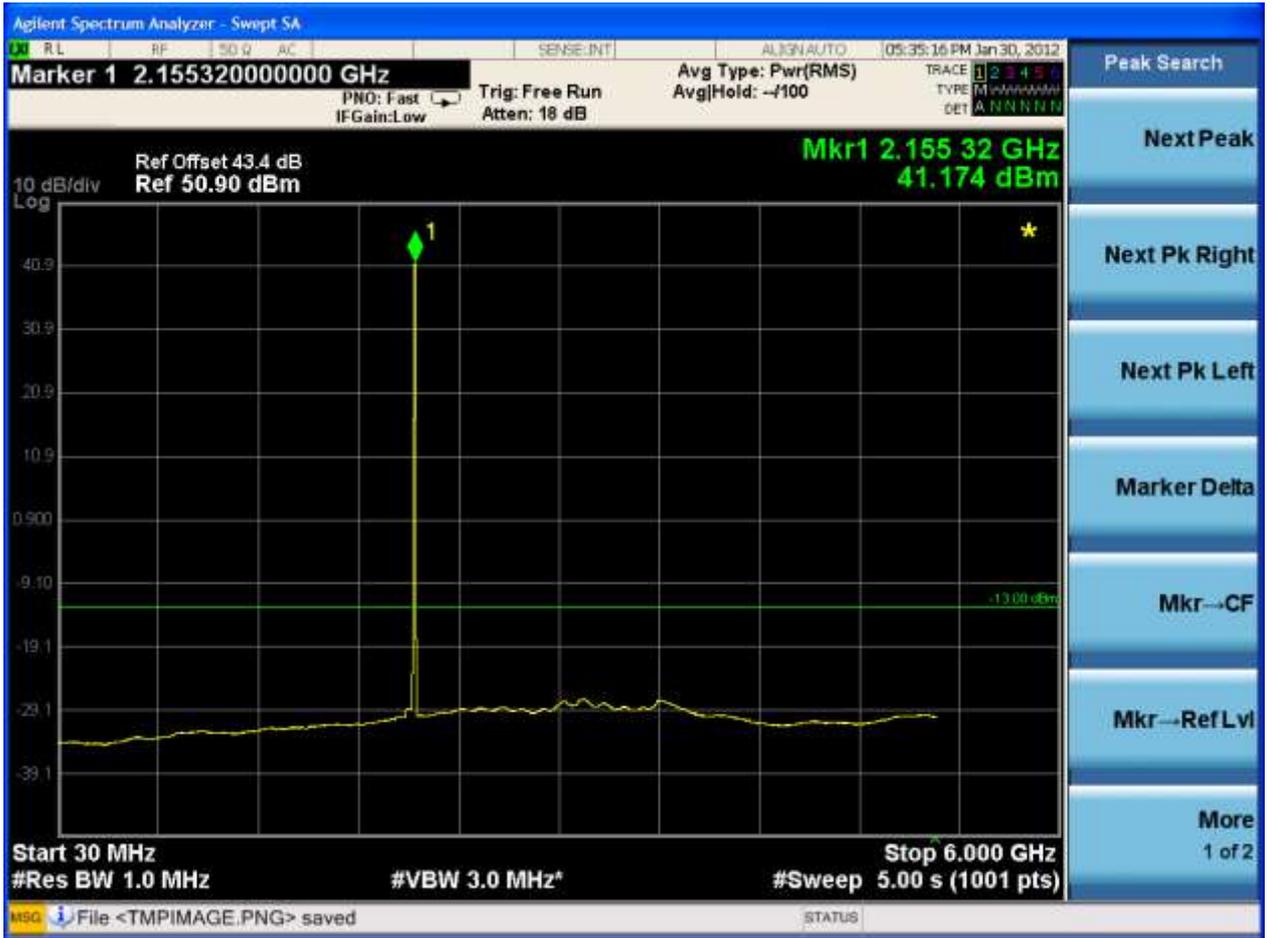






2.1.1.3 Ch.T



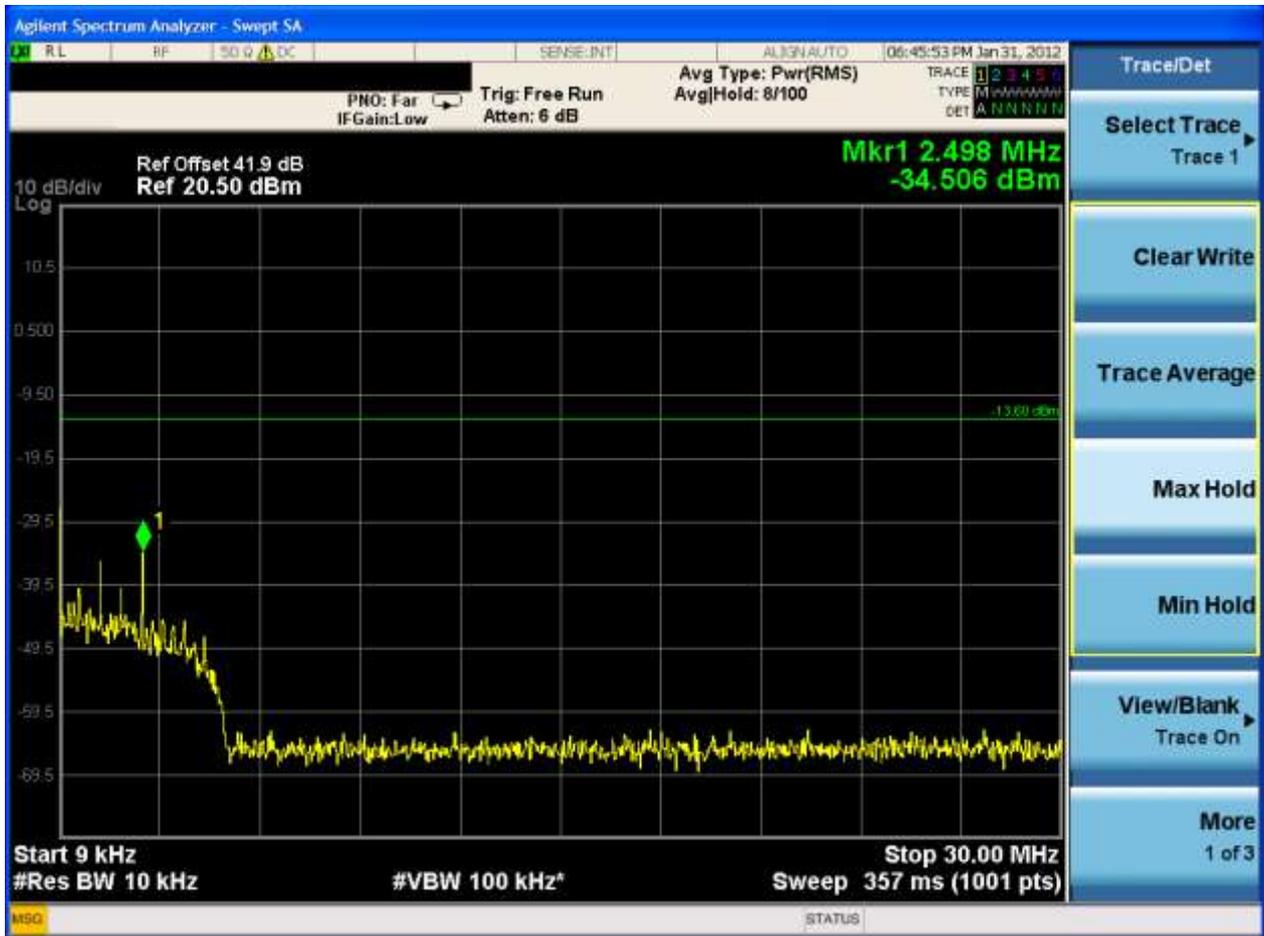






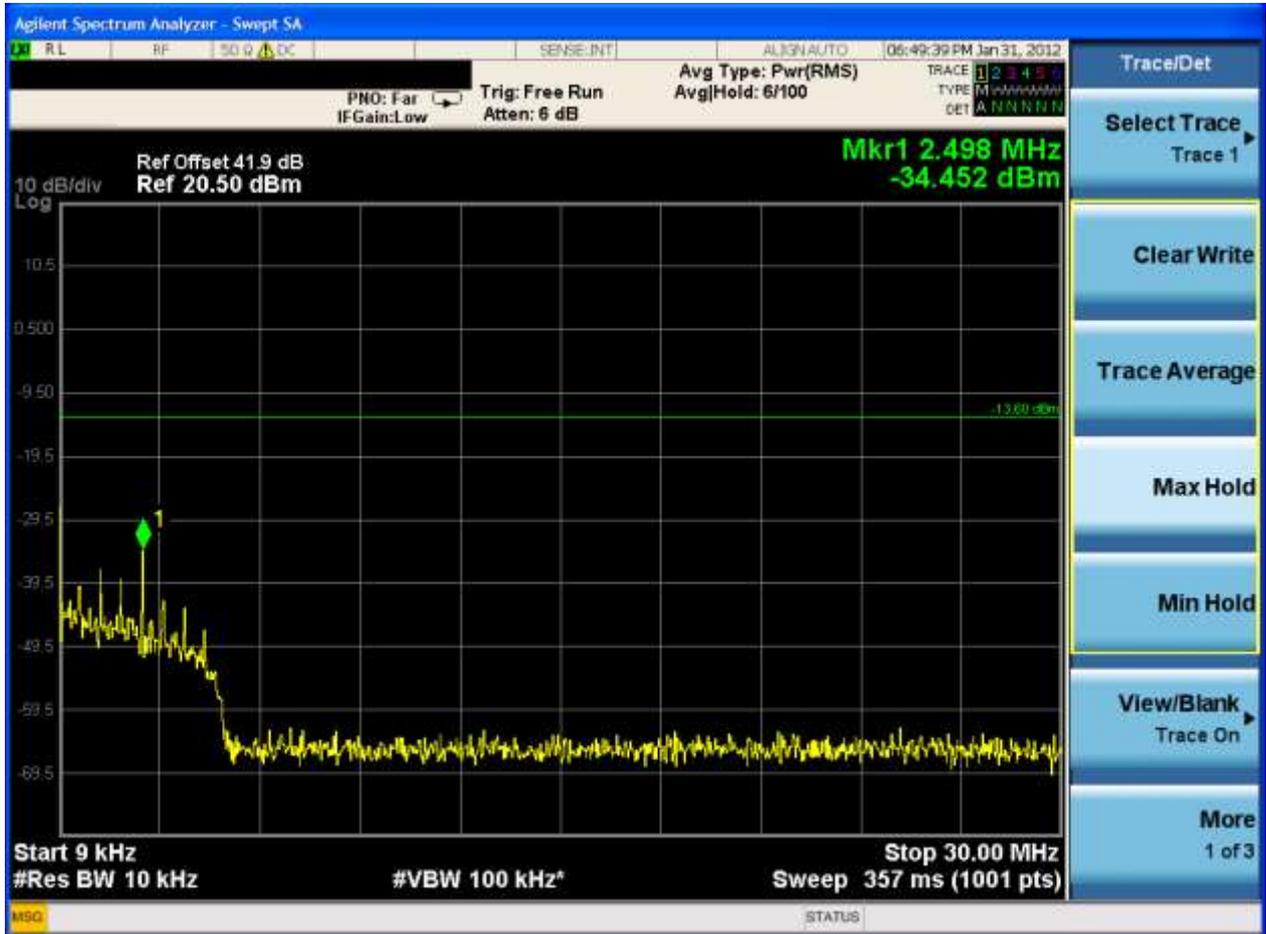
2.1.2 Carrier Conf. = 4(4*15W)

2.1.2.1 Ch. B





2.1.2.2 Ch. M







2.1.2.3 Ch. T



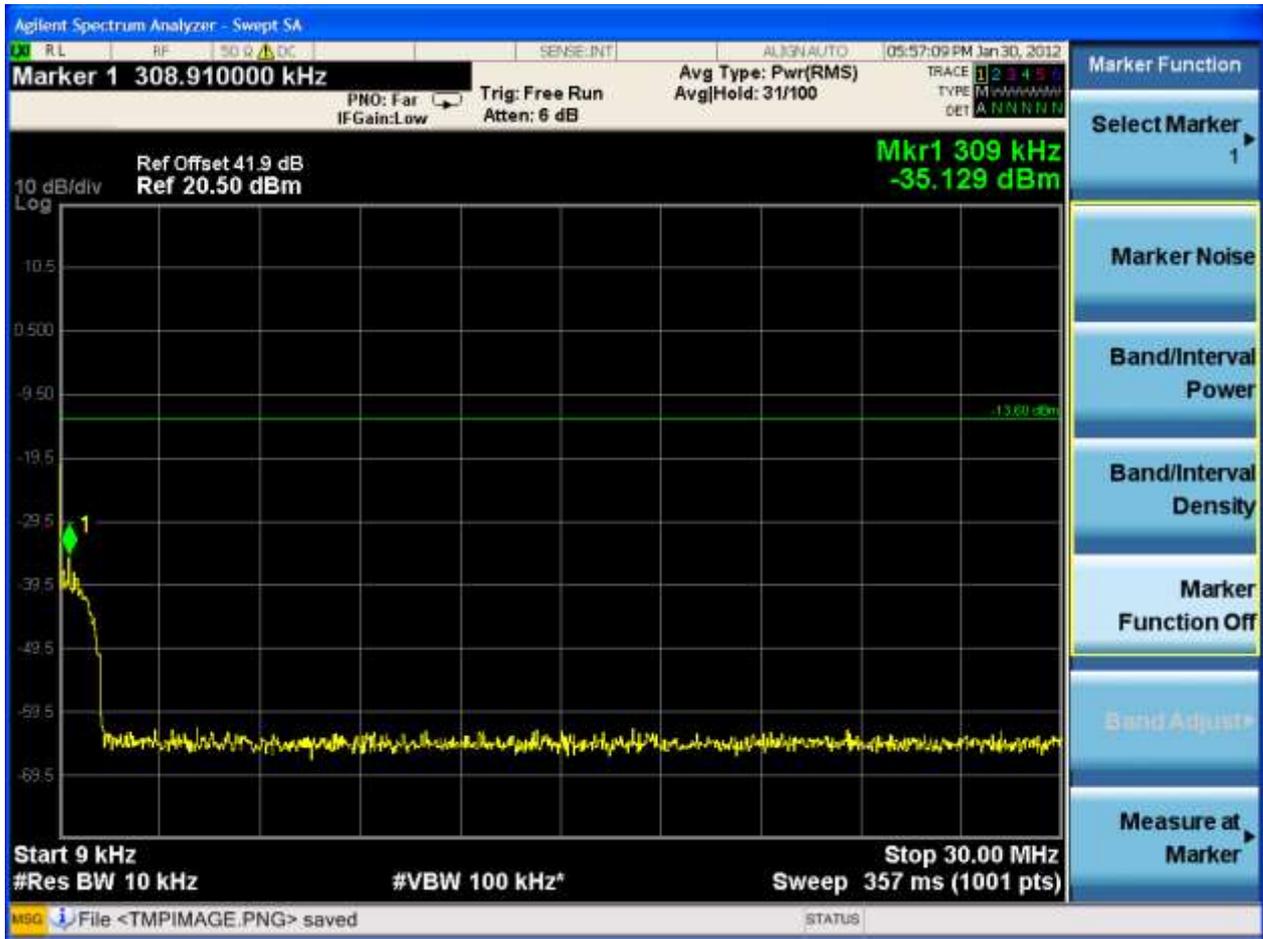




2.2 Test Mode = CDMA2000 EVDO

2.2.1 Carrier Conf. = 1 (60W)

2.2.1.1 Ch. B

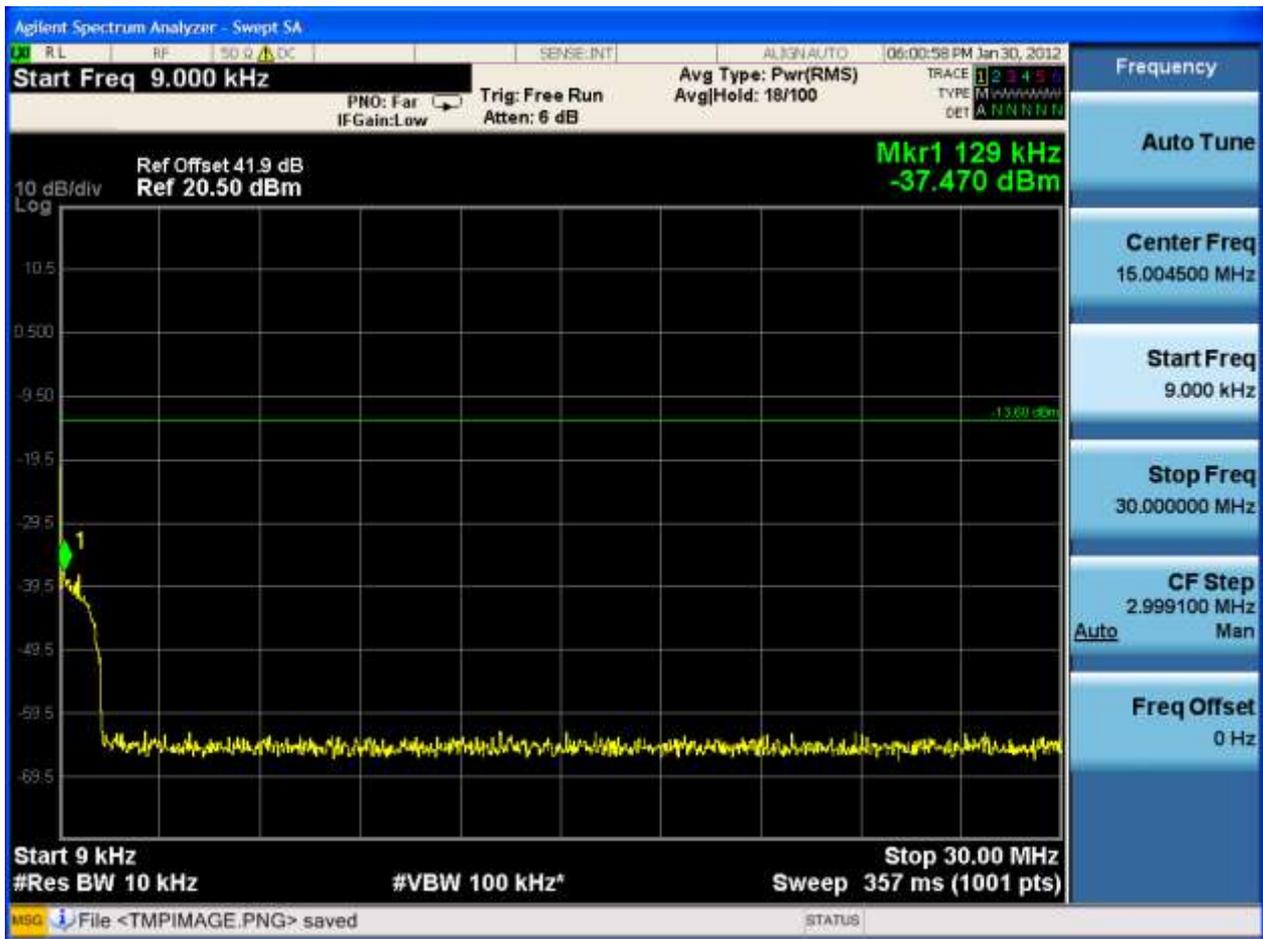








2.2.1.2 Ch. M









2.2.1.3 Ch. T









2.2.2 Carrier Conf. = 4(4*15W)

2.2.2.1 Ch. B



