



**FCC CFR47 PART 22H, 24E, AND 27L
CERTIFICATION TEST REPORT**

FOR

GSM/WCDMA TRI-BAND PHONE WITH BLUETOOTH AND WLAN

MODEL NUMBER: LG-P769, LGP769, AND P769

FCC ID: ZNFP769

REPORT NUMBER: 12U14516-2, REVISION A

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Prepared for

**LG ELECTRONICS MOBILECOMM U.S.A
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS, NJ 07632**

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	08/29/12	Initial Issue	T. Chan
A	09/11/12	Updated WCDMA Modulation	T. Chan

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS MOBILECOMM U.S.A
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS, NJ 07632

EUT DESCRIPTION: GSM/WCDMA TRI-BAND PHONE WITH BT & WLAN

MODEL: LG-P769, LGP769, AND P769

SERIAL NUMBER: 205KPQJ203332

DATE TESTED: AUGUST 20 TO SEPTEMBER 10, 2012

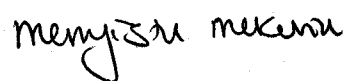
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22H, 24E, & 27L	Pass

Compliance Certification Services (UL CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL CCS By:

Tested By:



THU CHAN
ENGINEERING MANAGER
UL CCS

MENGISTU MEKURIA
EMC ENGINEER
UL CCS

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 2, FCC CFR 47 Part 22, FCC CFR Part 24, and FCC Part 27.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA Tri-Band Phone with BT and WLAN capabilities that is manufactured by LG Electronics.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted and radiated ERP / EIRP output powers as follows:

Part 22 Cellular Band					
Frequency range (MHz)	Modulation	Conducted		ERP	
		dBm	mW	dBm	mW
826.4 – 846.6	UMTS, REL 99	26.18	415.0	21.25	133.4
	UMTS, HSDPA	26.99	500.0		
	UMTS, HSUPA	27.54	567.5	22.84	192.3

Part 24 PCS Band					
Frequency range (MHz)	Modulation	Conducted		EIRP	
		dBm	mW	dBm	mW
1852.4-1907.6	UMTS, REL 99	26.75	473.2	23.57	227.5
	UMTS, HSDPA	27.00	501.2		
	UMTS, HSUPA	27.25	530.9	24.79	301.3

Part 27 AWS Band					
Frequency range (MHz)	Modulation	Conducted		EIRP	
		dBm	mW	dBm	mW
1712.4-1752.5	UMTS, REL 99	27.23	528.4	25.25	335.0
	UMTS, HSDPA	27.56	570.2		
	UMTS, HSUPA	28.60	724.4	26.35	431.5

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent 8960/Anritsu Wireless Communication Test Set.

5.4. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power.

Since the EUT is a portable device, in addition to the peak power measurements verification data shown below, the EUT also investigated on an X, Y and Z orientations and the worst-orientations among them with AC/DC adapter and headset. After the investigation X-Orientation without AC Adapter and headset were turned out to be the worst case for all bands.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-01WD	DA2220700009	DoC
Headset	LG	N/A	N/A	N/A

I/O CABLES (CONDUCTED SETUP)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	RF	1	Antenna Port	Shielded	0.1m	NA
2	RF	1	SMA	Shielded	0.7m	NA

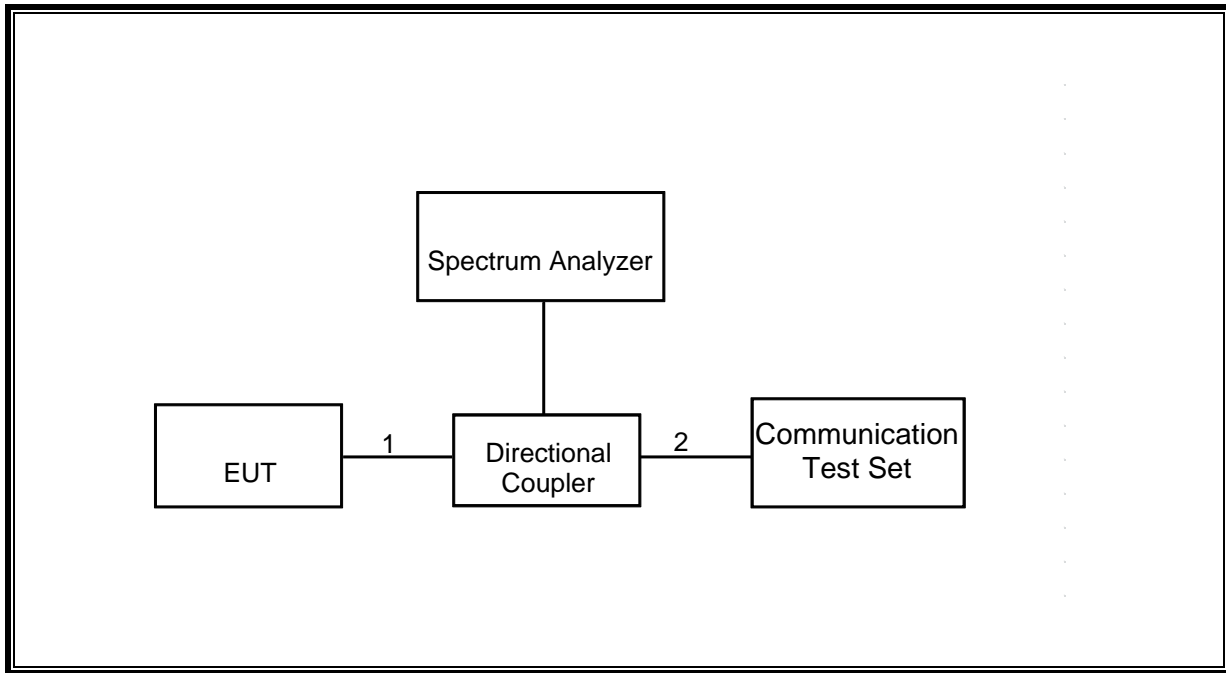
I/O CABLES (RADIATED SETUP)

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC Power	1	Mini-USB	Shielded	1.2 m	NA
2	Audio	1	Mini-Jack	Un-Shielded	1.5 m	NA

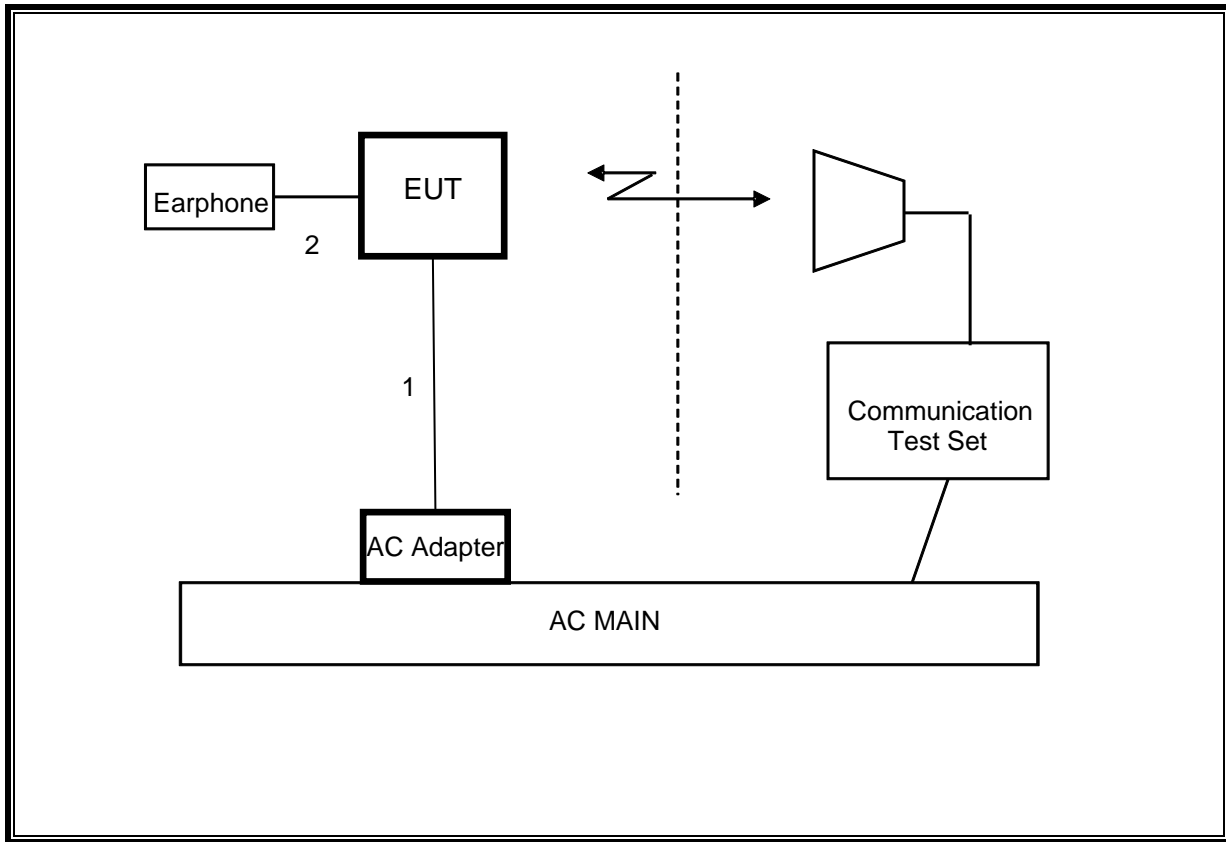
TEST SETUP

The EUT is continuously communicated to the call box during the tests.

SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	11/07/12
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	11/11/12
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	C01011	03/23/13
Antenna, Horn, 18 GHz	EMCO	3115	C00943	CNR
Antenna, Horn, 18 GHz	EMCO	3115	C00783	10/18/12
Antenna, Horn, 18 GHz	EMCO	3115	C00945	10/06/12
Antenna, Horn, 26.5 GHz	ARA	SWH-28	C01015	04/23/13
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	03/22/13
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/15/12
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01161	12/16/12
Radio Communication Analyzer	Anritsu	MT8820C	1100481	07/13/13
Communications Test Set	Agilent / HP	E5515C	C01086	06/20/13
Communication Test Set	R & S	CMU 200		06/06/13
DC power supply, 8 V @ 3 A or 15 V	Agilent / HP	E3610A	None	CNR
Vector signal generator, 6 GHz	Agilent / HP	E4438C	None	07/06/13
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	C00930	10/20/12
Antenna, Tuned Dipole 400~1000	ETS	3121C DB4	C00993	09/16/12
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02686	CNR
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02688	CNR

7. RF POWER OUTPUT VERIFICATION

7.1. RF POWER OUTPUT FOR UMTS REL 99

TEST PROCEDURE

The following summary of these settings are illustrated below:

	Mode	Rel99
	Subtest	-
WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	HSDPA FRC	Not Applicable
	HSUPA Test	Not Applicable
	Power Control Algorithm	Algorithm2
	β_c	Not Applicable
	β_d	Not Applicable
	β_{ec}	Not Applicable
	β_c/β_d	8/15
	β_{hs}	Not Applicable
	β_{ed}	Not Applicable

RESULTS

Band	UL Ch	DL Ch	Frequency	Conducted output power (dBm)
				Peak
UMTS850 (Band V)	4132	4357	826.4	26.18
	4180	4405	836.0	25.99
	4230	4455	846.0	25.99
UMTS1900 (Band II)	9262	9662	1852.4	26.75
	9400	9800	1880.0	26.35
	9538	9938	1907.6	26.53
UMTS1700 (Band IV)	1312	1537	1712.4	27.23
	1412	1637	1732.4	26.93
	1862	2087	1752.5	27.12

7.2. RF POWER OUTPUT FOR UMTS HSDPA

The following 4 Sub-tests were completed according to Release 6 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

	Mode	Rel5 HSDPA			
	Subtest	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm 2			
	β_c	2/15	12/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	β_c/β_d	2/15	12/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
MPR (dB)	0	0	0.5	0.5	
HSDPA Specific Settings	D_{ACK}	8			
	D_{NAK}	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback (Table 5.2B.4)	4ms			
	CQI Repetition Factor (Table 5.2B.4)	2			
	$A_{hs} = \beta_{hs}/\beta_c$	30/15			

Results

Band	Subtest	UL Ch	DL Ch	Frequency	Conducted output power (dBm)
					Peak
UMTS850 (Band V)	1*	4132	4357	826.4	26.99
		4180	4405	836.0	26.96
		4230	4455	846.0	26.95
	2	4132	4357	826.4	26.79
		4180	4405	836.0	26.67
		4230	4455	846.0	26.62
	3	4132	4357	826.4	26.62
		4180	4405	836.0	26.60
		4230	4455	846.0	26.64
	4	4132	4357	826.4	26.60
		4180	4405	836.0	26.56
		4230	4455	846.0	26.57
UMTS1900 (Band II)	1*	9262	9662	1852.4	27.00
		9400	9800	1880.0	26.90
		9538	9938	1907.6	26.70
	2	9262	9662	1852.4	26.99
		9400	9800	1880.0	26.98
		9538	9938	1907.6	26.78
	3	9262	9662	1852.4	26.65
		9400	9800	1880.0	26.62
		9538	9938	1907.6	26.57
	4	9262	9662	1852.4	26.85
		9400	9800	1880.0	26.88
		9538	9938	1907.6	26.87
UMTS1700 (Band IV)	1*	1312	1537	1712.4	27.40
		1412	1637	1732.4	27.25
		1862	2087	1752.5	27.56
	2	1312	1537	1712.4	27.42
		1412	1637	1732.4	27.10
		1862	2087	1752.5	27.28
	3	1312	1537	1712.4	27.05
		1412	1637	1732.4	27.12
		1862	2087	1752.5	27.15
	4	1312	1537	1712.4	27.08
		1412	1637	1732.4	27.05
		1862	2087	1752.5	27.10

7.3. RF POWER OUTPUT UMTS HSPA (HSDPA & HSUPA)

TEST PROCEDURE

The following summary of these settings are illustrated below:

	Mode	Rel6 HSUPA	Rel6 HSUPA	Rel6 HSUPA	Rel6 HSUPA	Rel6 HSUPA
	Subtest	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	β_c	11/15	6/15	15/15	2/15	15/15
	β_d	15/15	15/15	9/15	15/15	0
	β_{ec}	209/225	12/15	30/15	2/15	5/15
	β_c/β_d	11/15	6/15	15/9	2/15	-
	β_{hs}	22/15	12/15	30/15	4/15	5/15
HSDPA Specific Settings	β_{ed}	1309/225	94/75	47/15	56/75	47/15
	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback (Table 5.2B.4)	4ms				
	CQI Repetition Factor (Table 5.2B.4)	2				
	$A_{hs} = \beta_{hs}/\beta_c$	30/15				
HSUPA Specific Settings	D E-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	12
	ETFCI (from 34.121 Table C.11.1.3)	75	67	92	71	67
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E_TFCIs	E-TFCI 11 E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO 23 E-TFCI 75 E-TFCI PO 26 E-TFCI 81 E-TFCI PO 27		E-TFCI 11 E-TFCI PO 4 E-TFCI 92 E-TFCI PO 18		E-TFCI 11 E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO 23 E-TFCI 75 E-TFCI PO 26 E-TFCI 81 E-TFCI PO 27

RESULTS

Band	Subtest	UL Ch	DL Ch	Frequency	Conducted output power (dBm)
					Peak
UMTS850 (Band V)	1*	4132	4357	826.4	27.49
		4180	4405	836.0	27.54
		4230	4455	846.0	27.50
	2	4132	4357	826.4	26.90
		4180	4405	836.0	26.98
		4230	4455	846.0	26.95
	3	4132	4357	826.4	27.05
		4180	4405	836.0	27.02
		4230	4455	846.0	27.00
	4	4132	4357	826.4	26.44
		4180	4405	836.0	26.45
		4230	4455	846.0	26.50
	5	4132	4357	826.4	27.50
		4180	4405	836.0	27.45
		4230	4455	846.0	27.40
UMTS1900 (Band II)	1*	9262	9662	1852.4	27.25
		9400	9800	1880.0	27.12
		9538	9938	1907.6	27.08
	2	9262	9662	1852.4	26.64
		9400	9800	1880.0	26.65
		9538	9938	1907.6	26.67
	3	9262	9662	1852.4	26.70
		9400	9800	1880.0	26.70
		9538	9938	1907.6	26.68
	4	9262	9662	1852.4	26.73
		9400	9800	1880.0	26.70
		9538	9938	1907.6	26.72
	5	9262	9662	1852.4	27.20
		9400	9800	1880.0	27.16
		9538	9938	1907.6	27.15
UMTS1700 (Band IV)	1*	1312	1537	1712.4	28.54
		1412	1637	1732.4	28.35
		1862	2087	1752.5	28.49
	2	1312	1537	1712.4	28.43
		1412	1637	1732.4	28.08
		1862	2087	1752.5	28.28
	3	1312	1537	1712.4	27.99
		1412	1637	1732.4	27.73
		1862	2087	1752.5	27.91
	4	1312	1537	1712.4	28.17
		1412	1637	1732.4	27.92
		1862	2087	1752.5	28.12
	5	1312	1537	1712.4	28.60
		1412	1637	1732.4	28.48
		1862	2087	1752.5	28.50

8. LIMITS AND RESULTS

8.1. CONDUCTED TEST RESULTS

8.1.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

MODES TESTED

- UMTS, REL 99 & HSUPA

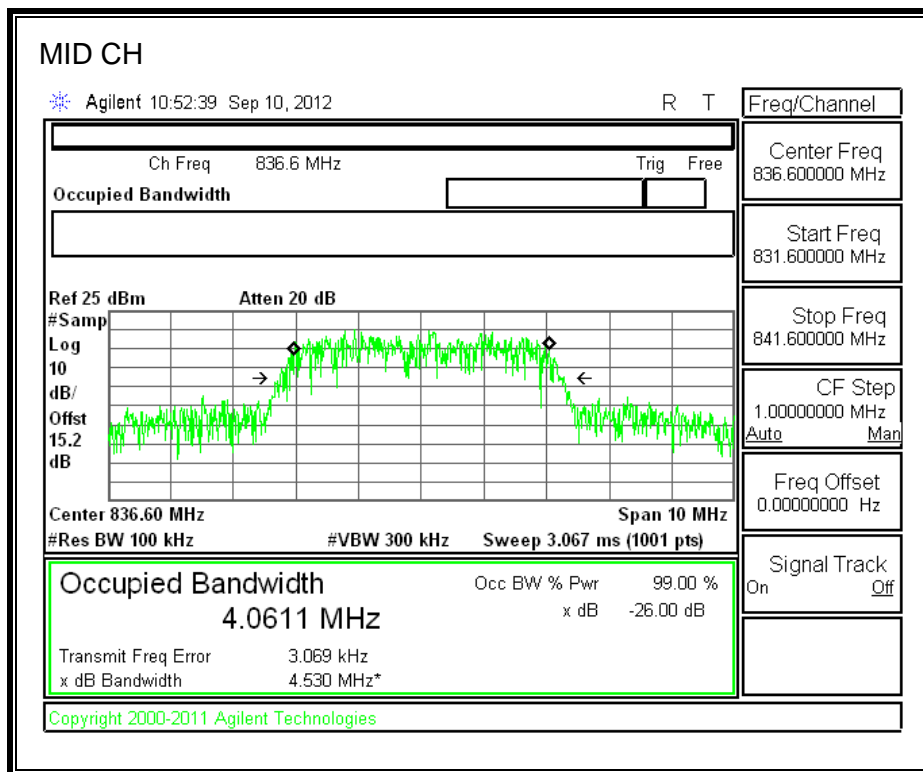
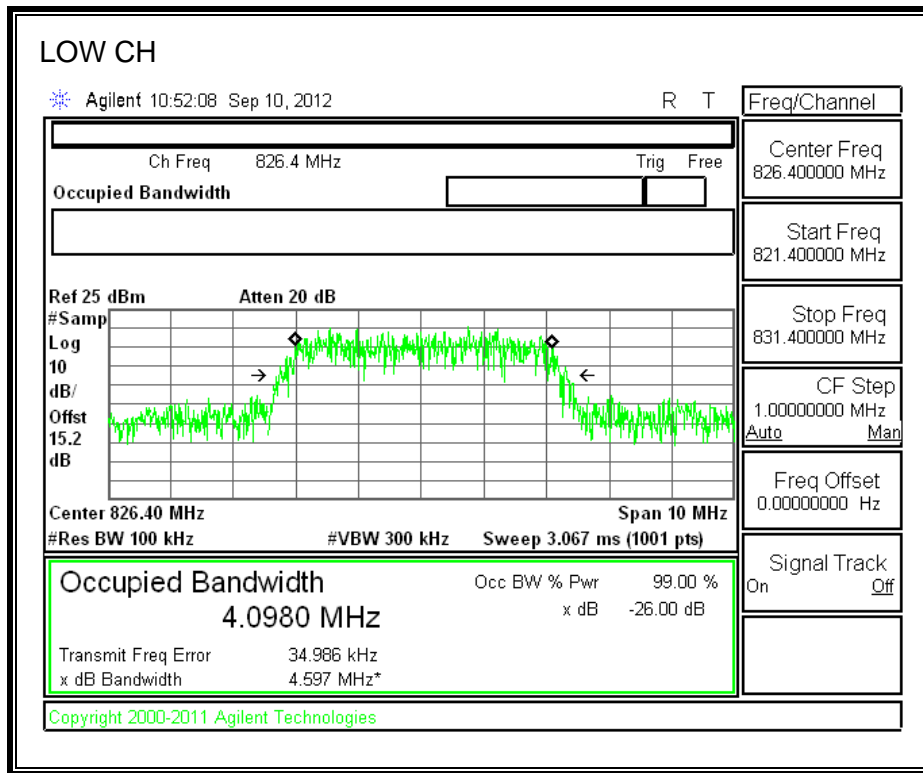
RESULTS

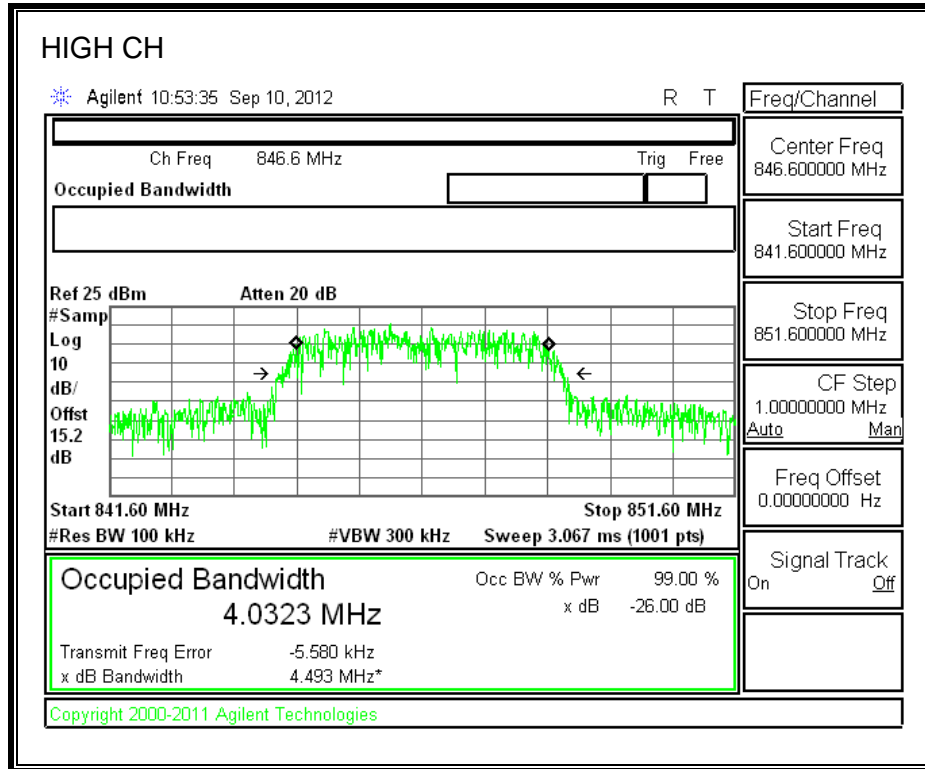
Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
Cellular	UMTS REL 99	4357	826.4	4.0980	4.597
		4405	836.0	4.0611	4.530
		4455	846.0	4.0323	4.493
PCS		9662	1852.4	4.0377	4.539
		9800	1880.0	4.0229	4.414
		9938	1907.6	4.1096	4.489
AWS		1537	1712.4	4.0284	4.546
		1637	1732.4	4.0583	4.547
		2087	1752.5	4.0803	4.514

Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
Cellular	UMTS HSUPA	4357	826.4	4.0831	4.537
		4405	836.0	4.0973	4.455
		4455	846.0	4.0985	4.608
PCS		9662	1852.4	4.0946	4.611
		9800	1880.0	4.0893	4.568
		9938	1907.6	4.1049	4.498
AWS		1537	1712.4	4.0945	4.556
		1637	1732.4	4.0283	4.536
		2087	1752.5	4.0787	4.527

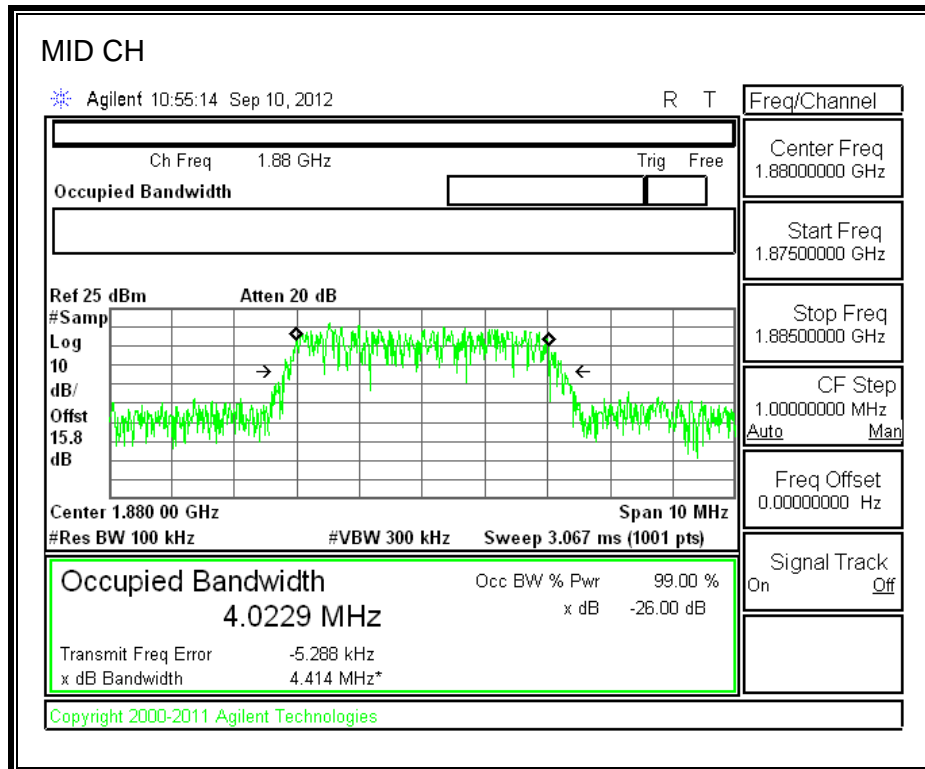
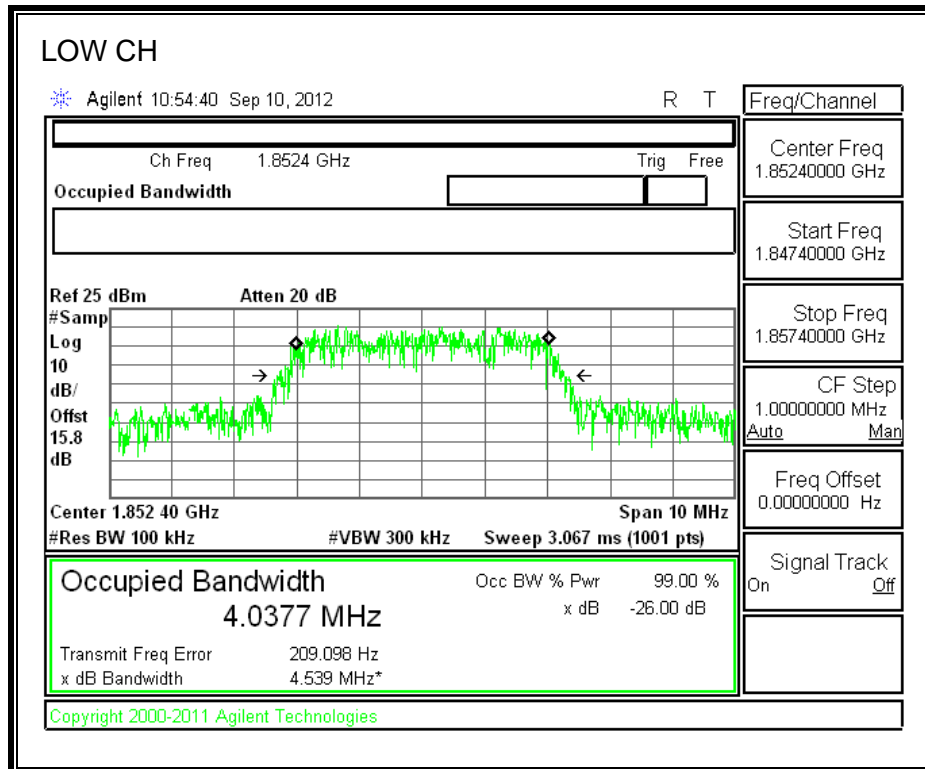
99% and 26dB Bandwidth

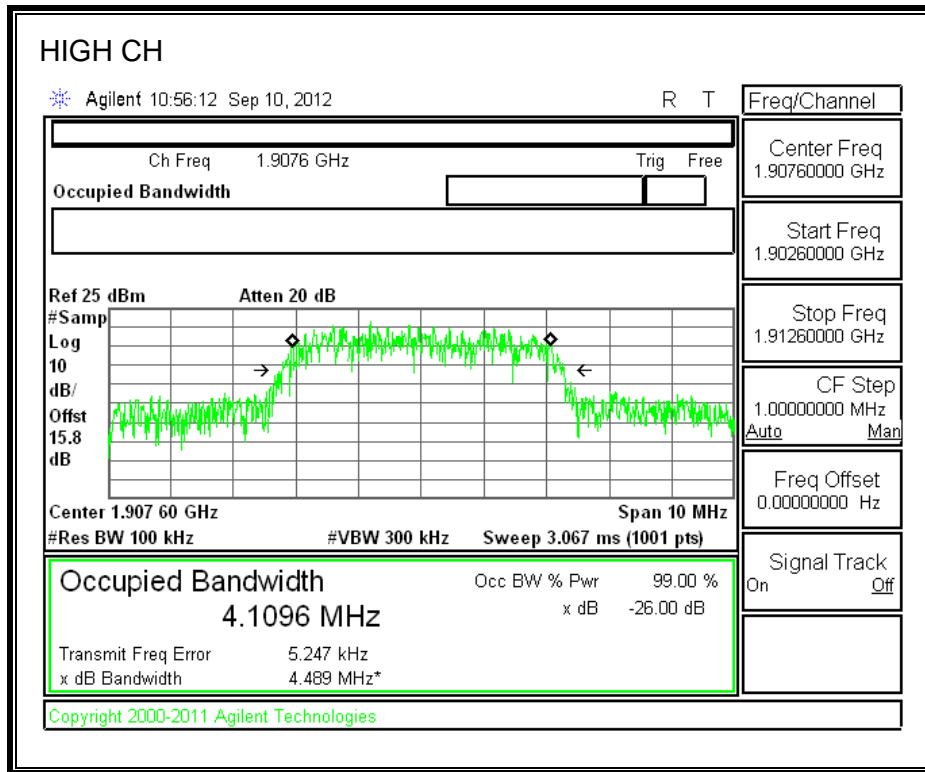
UMTS REL 99, CELL BAND



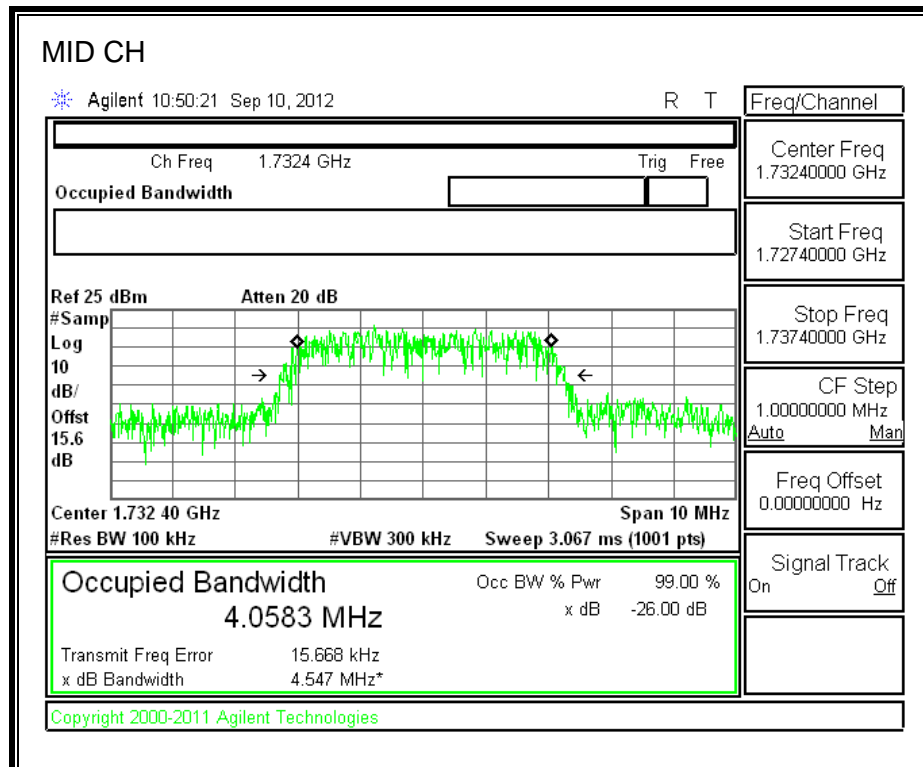
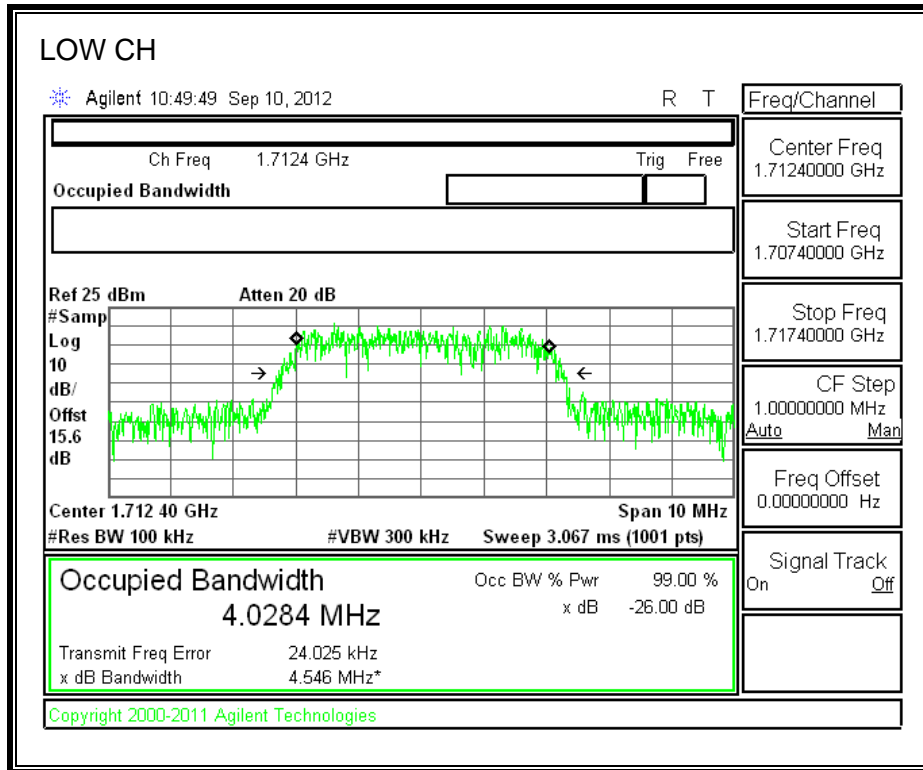


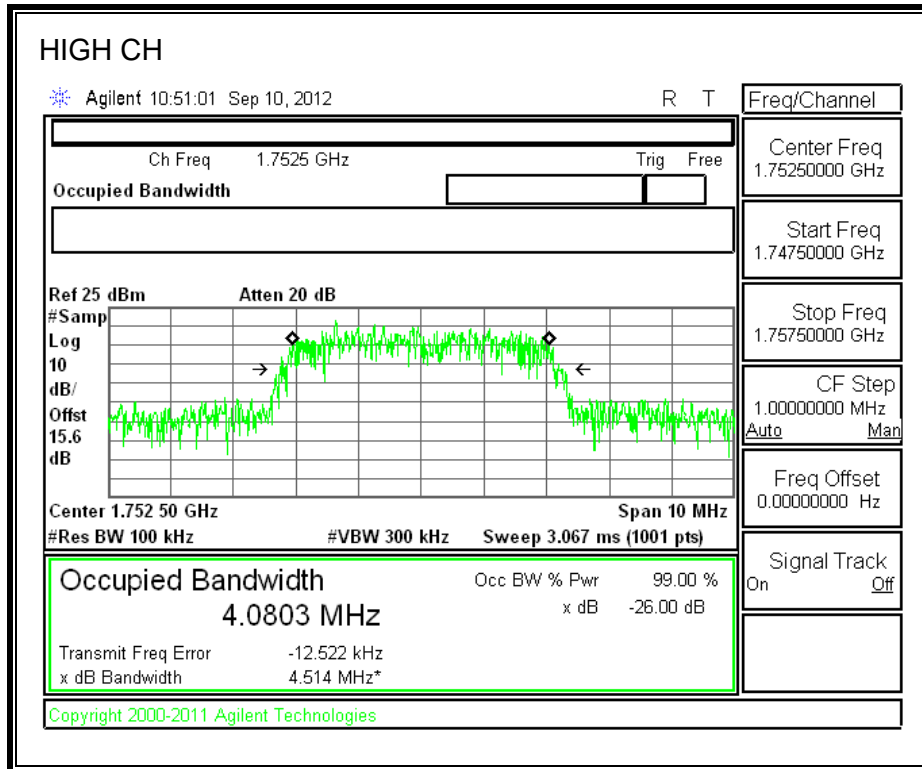
UMTS REL 99, PCS BAND



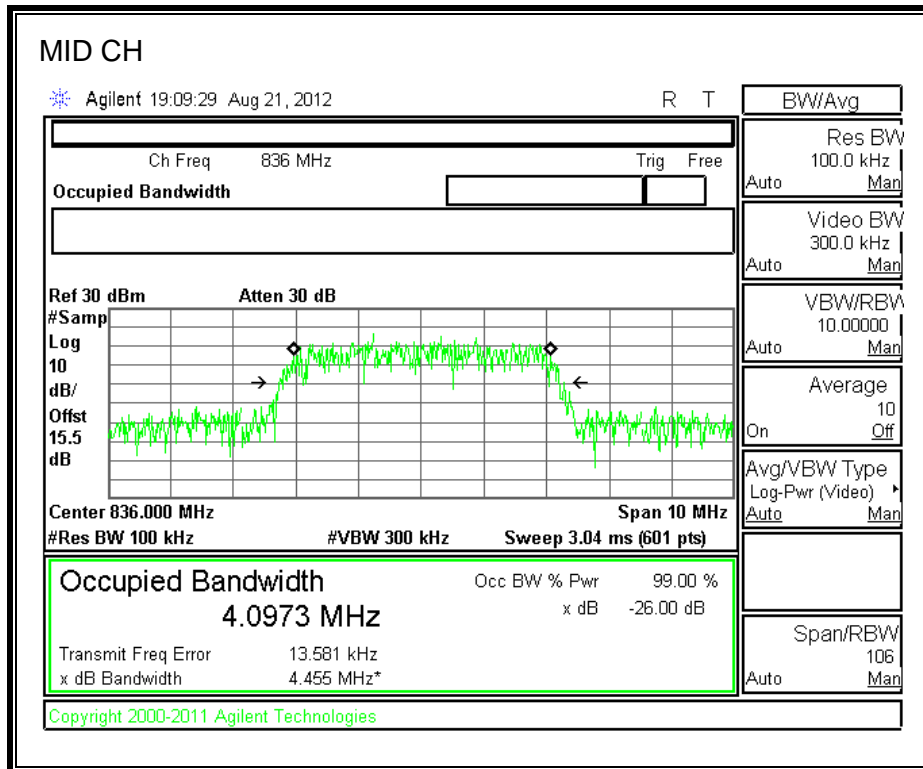
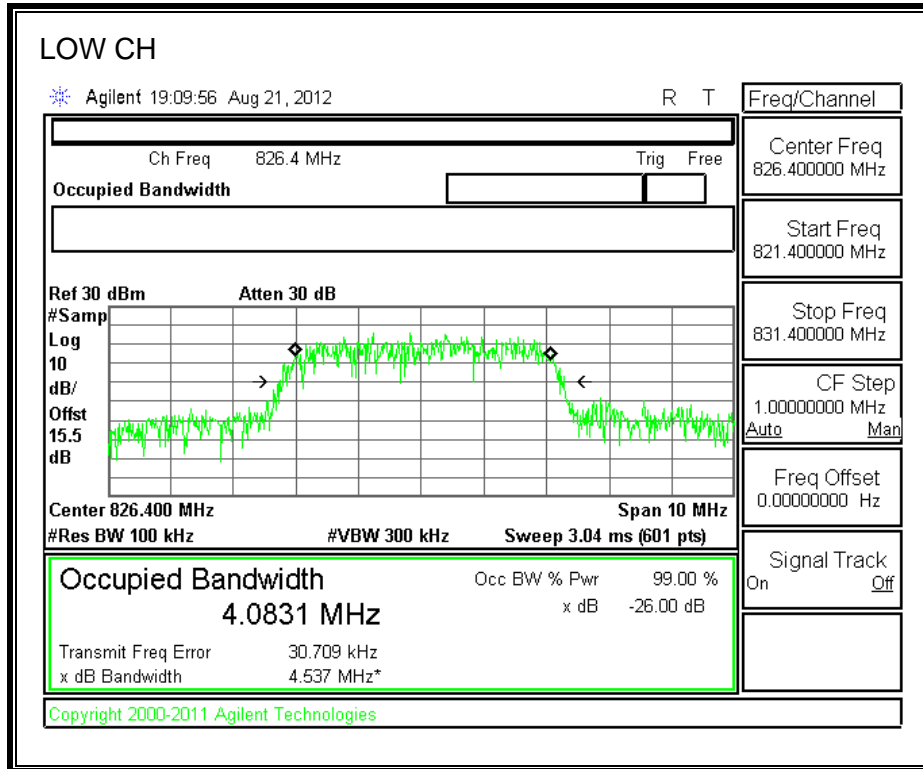


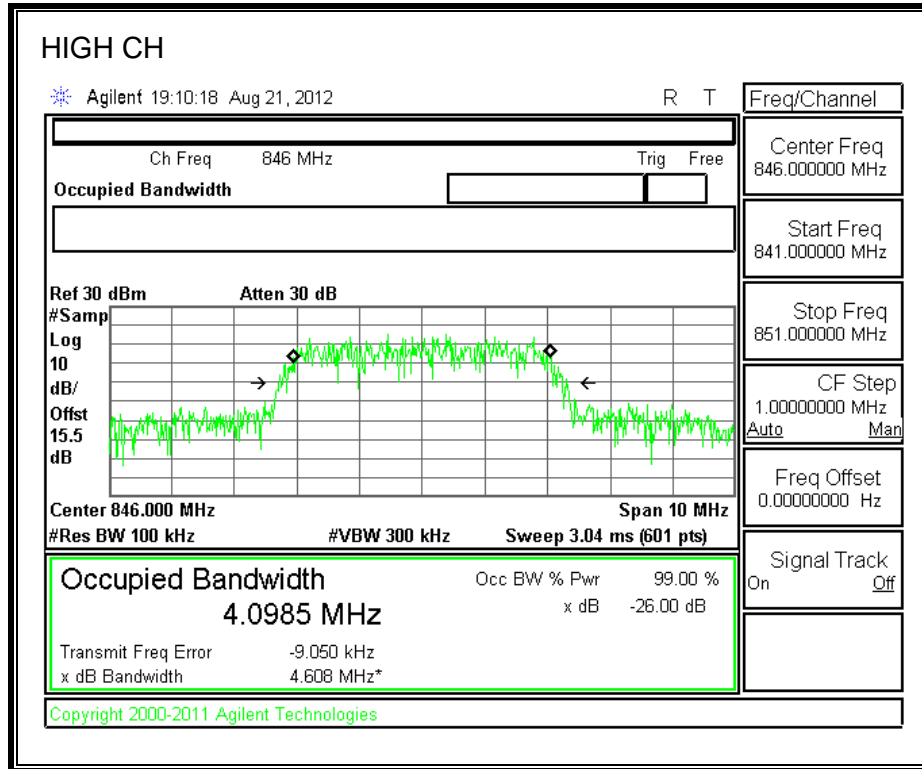
UMTS REL 99, AWS BAND



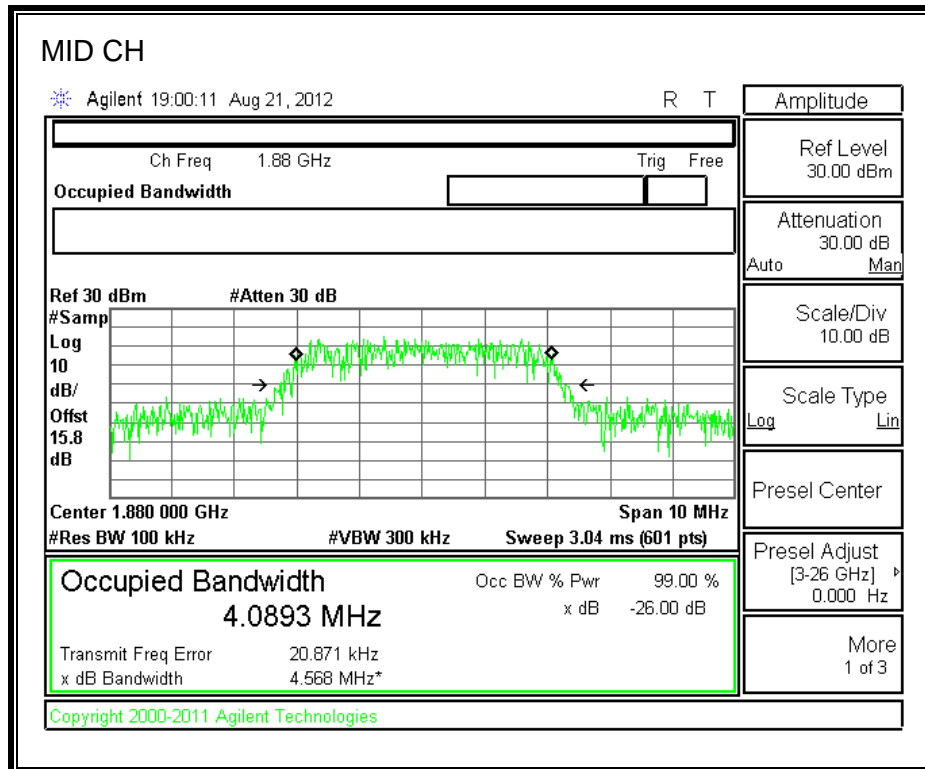
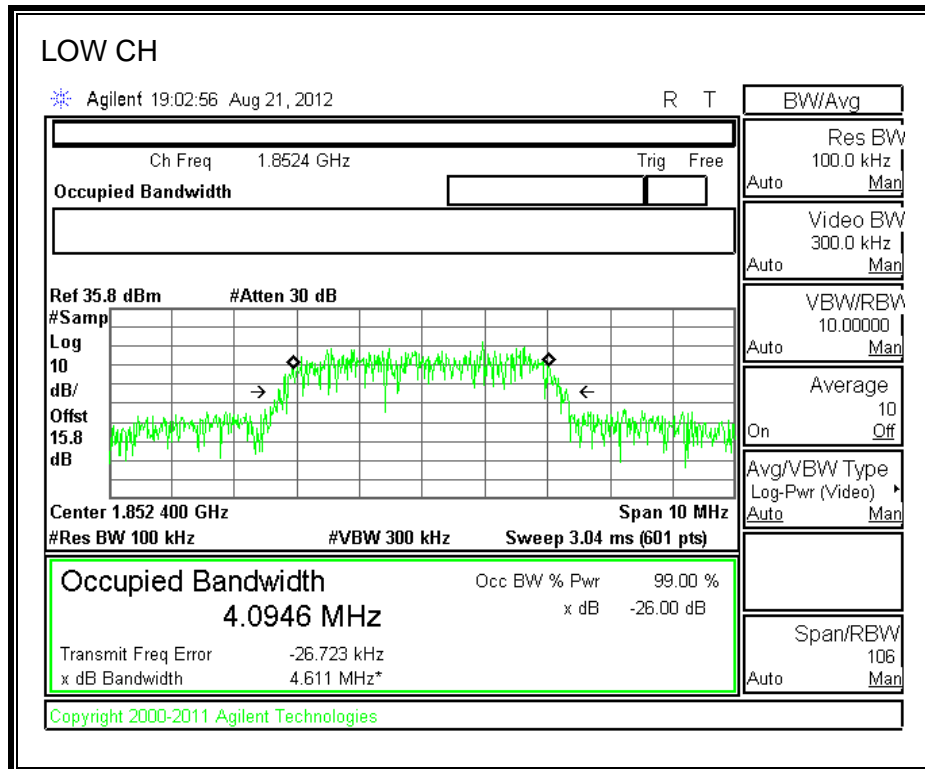


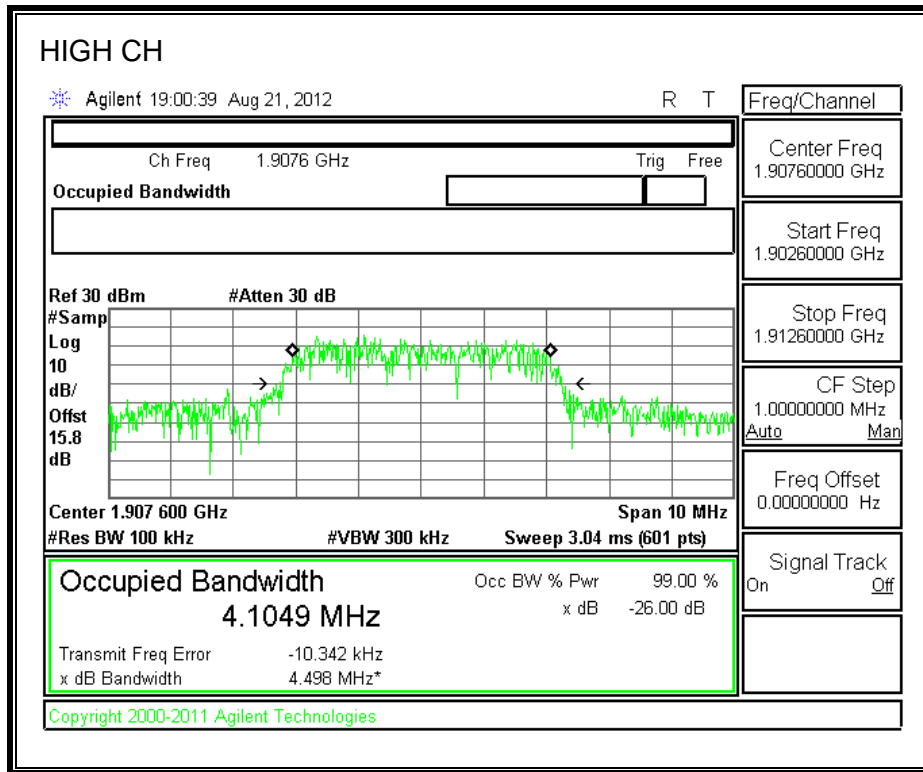
UMTS HSUPA, CELL BAND



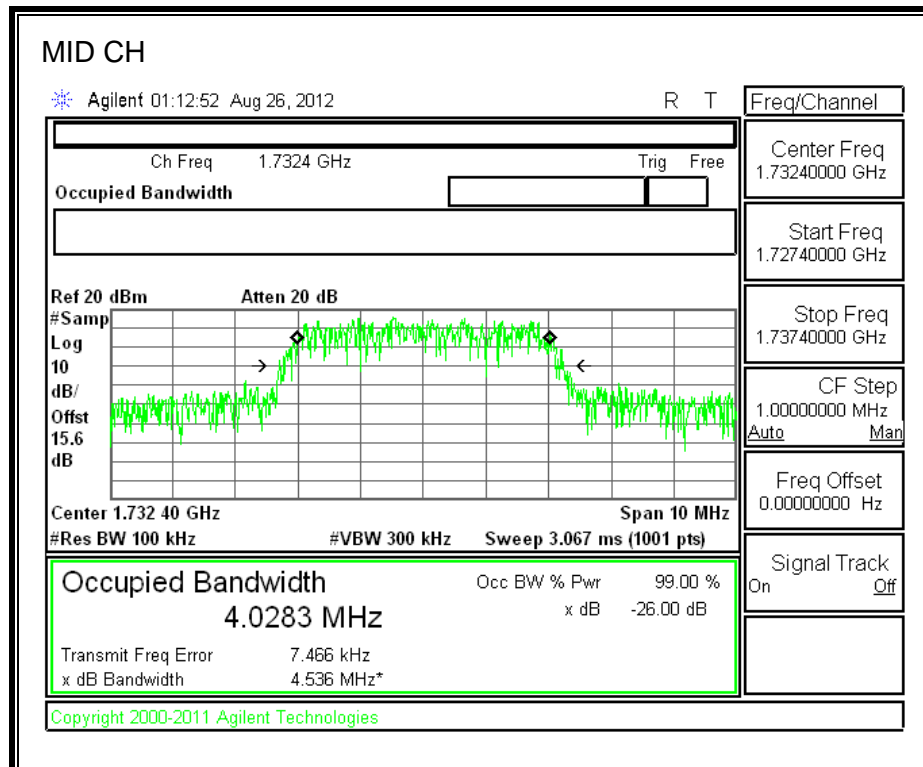
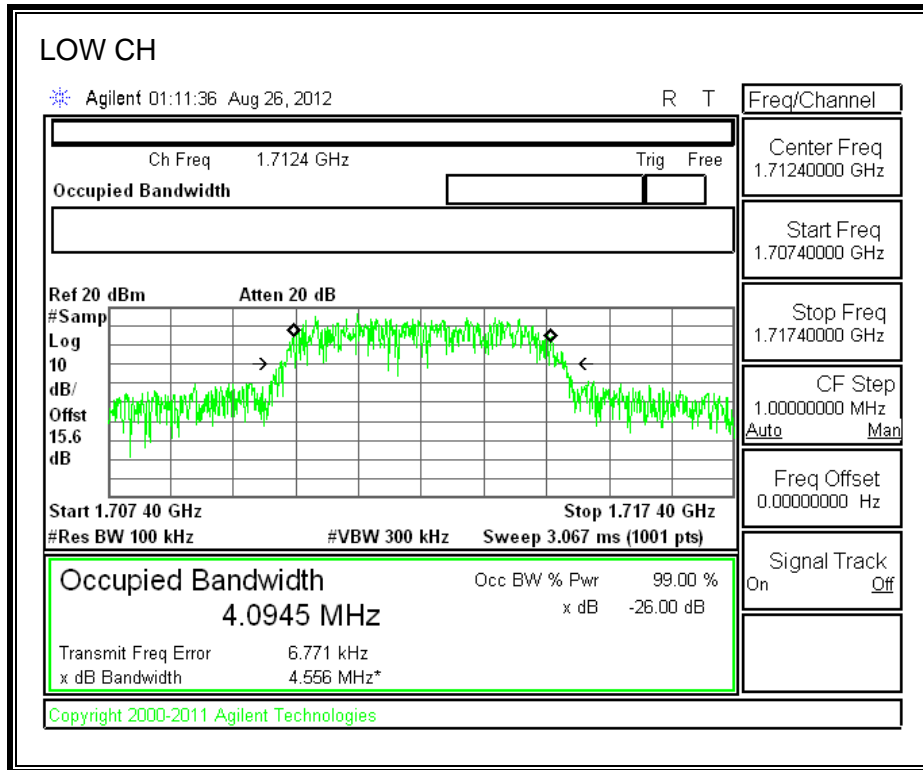


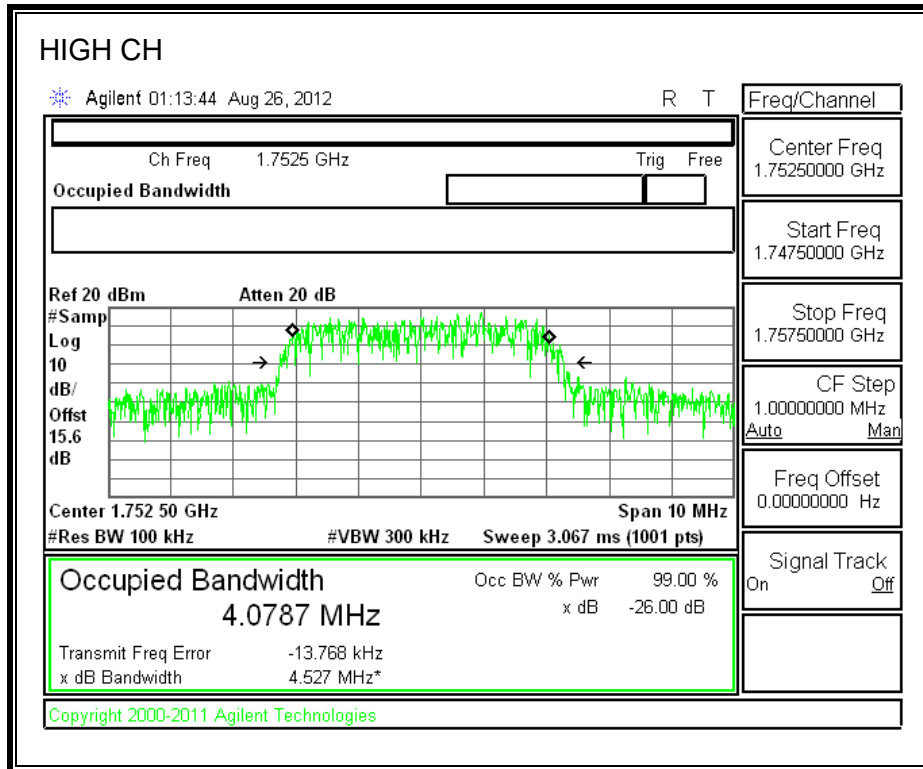
UMTS HSUPA, PCS BAND





UMTS HSUPA, AWS BAND





8.1.2. BAND EDGE

RULE PART(S)

FCC: §22.359, 24.238, and 27.53

LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

The transmitter output was connected to an CMU200 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

- Set the spectrum analyzer span to include the block edge frequency (824, 848, 1850, 1910MHz)
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

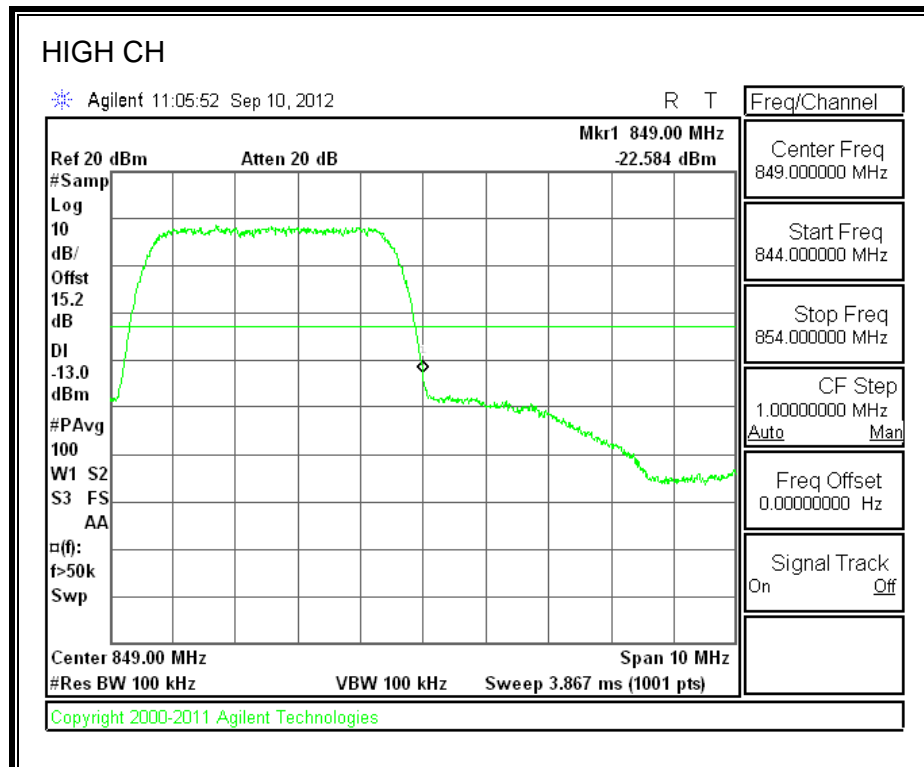
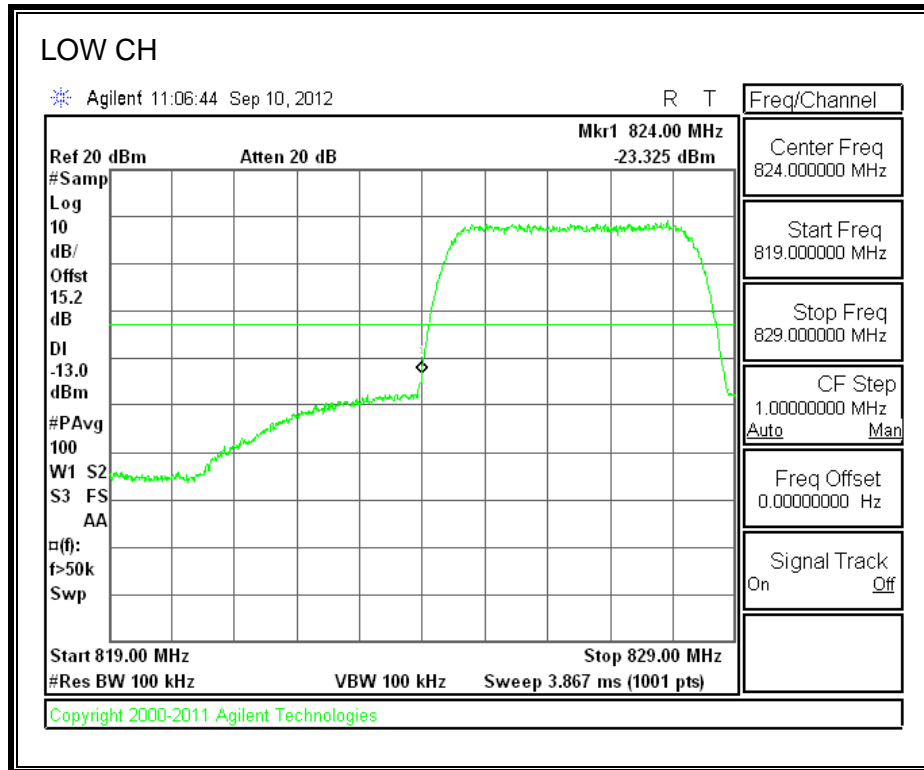
MODES TESTED

- UMTS, REL 99 & HSUPA

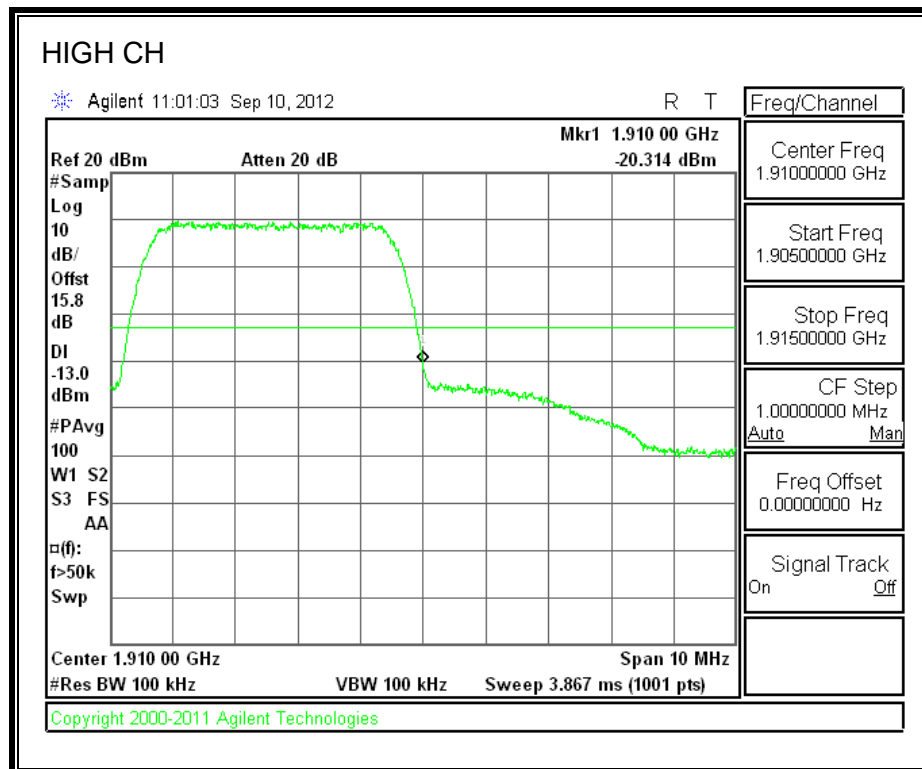
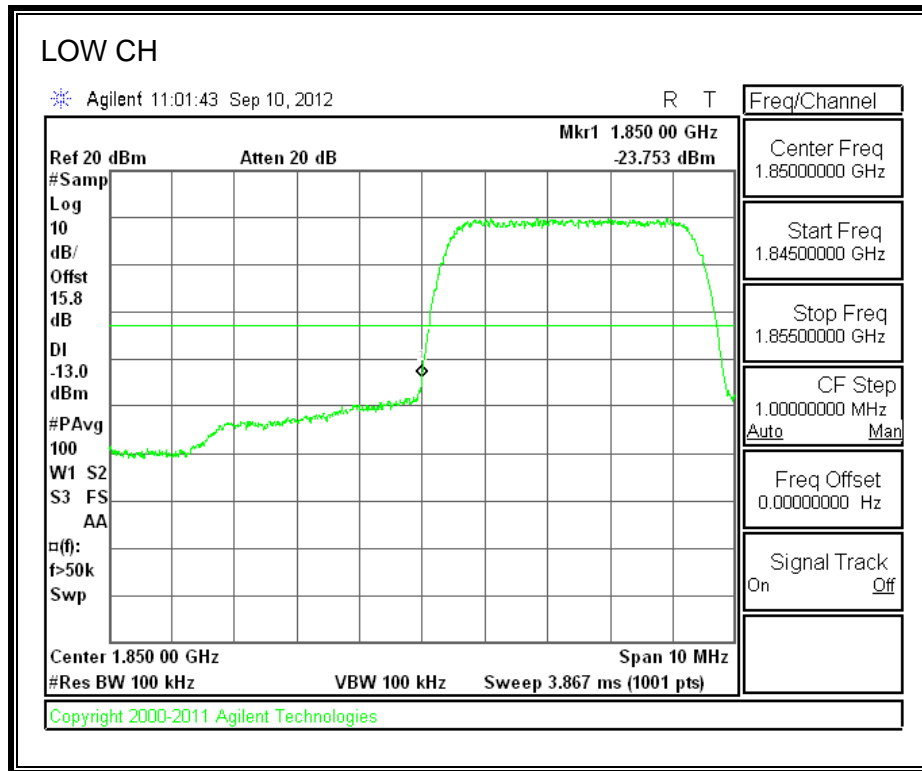
RESULTS

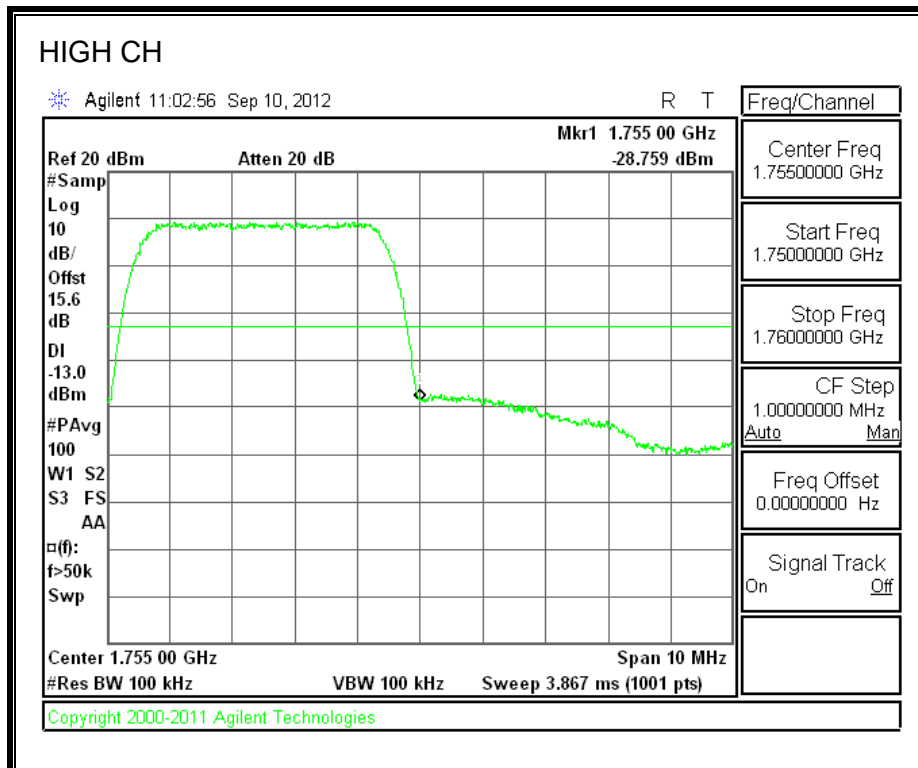
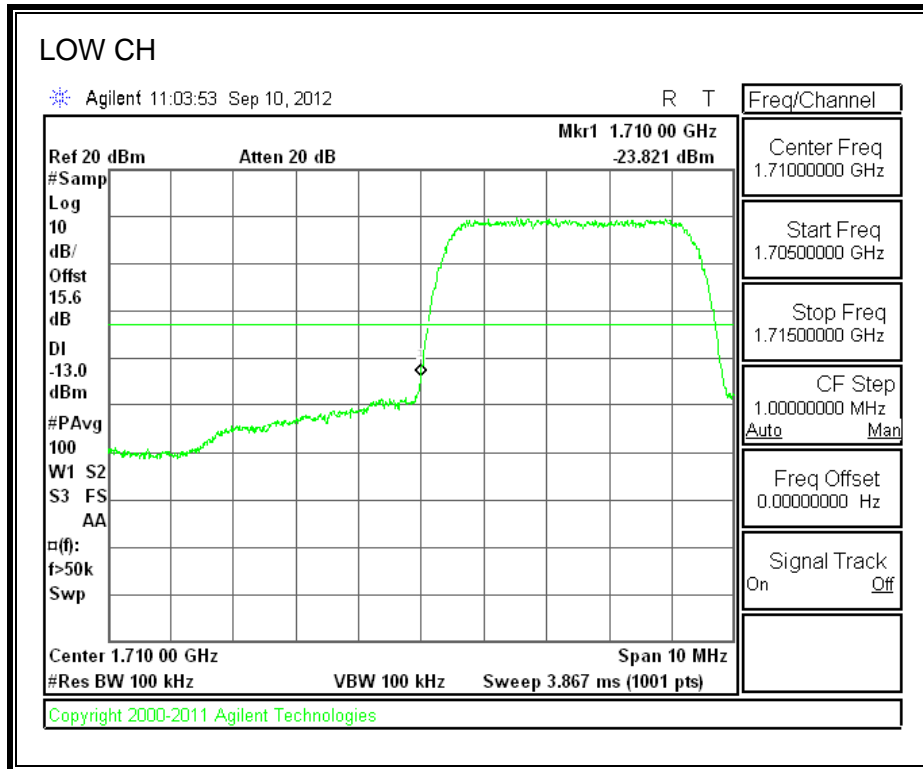
BANDEDGE

UMTS REL 99, CELL BAND

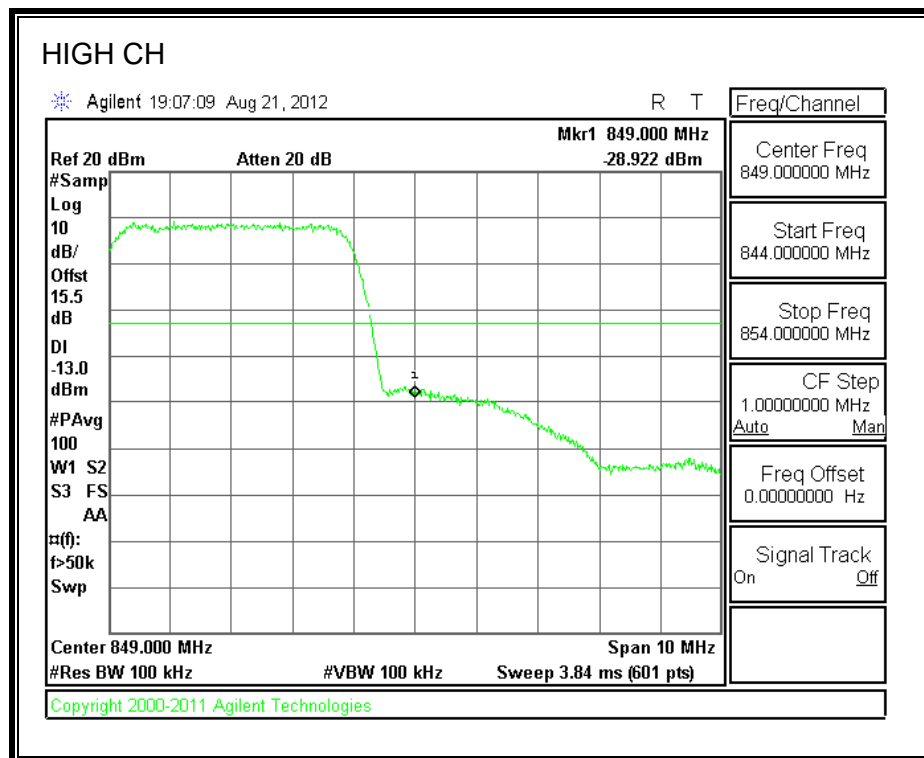
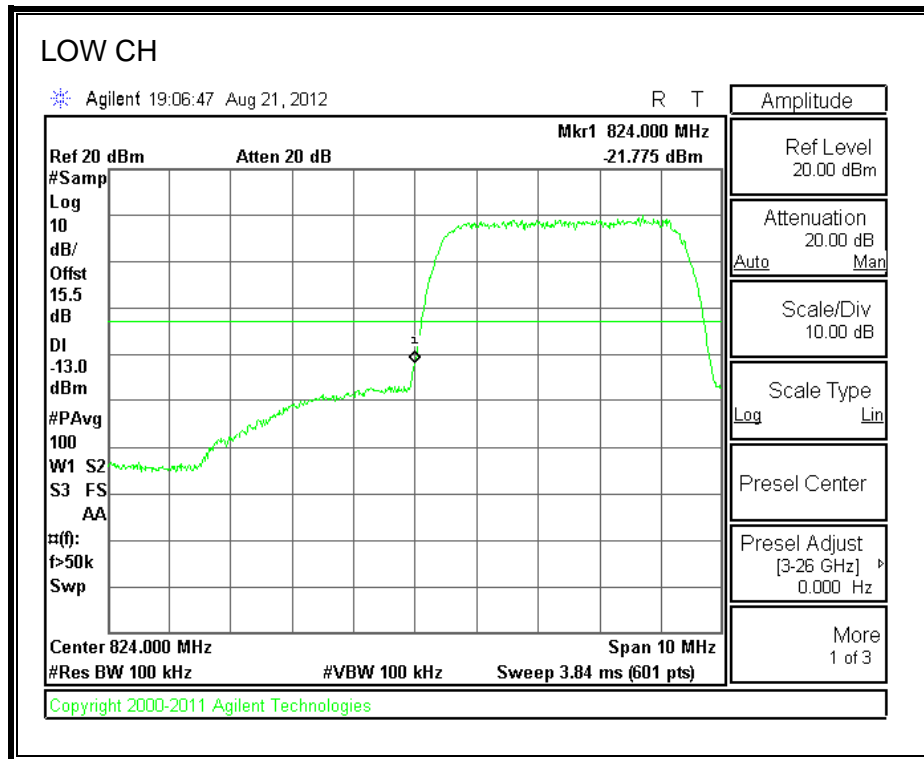


UMTS REL 99, PCS BAND

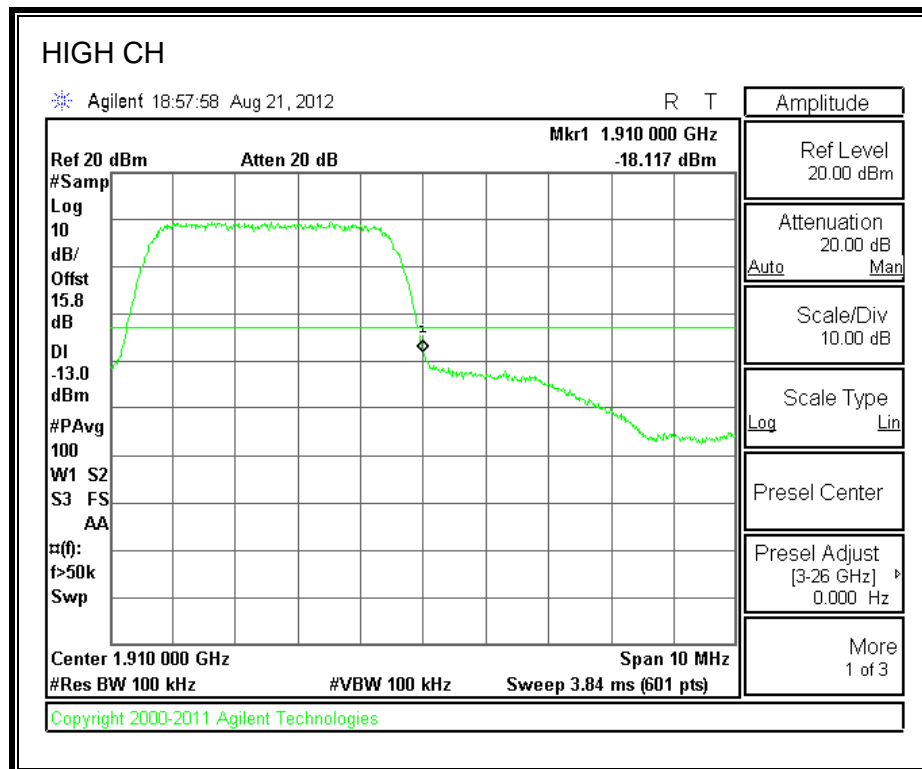
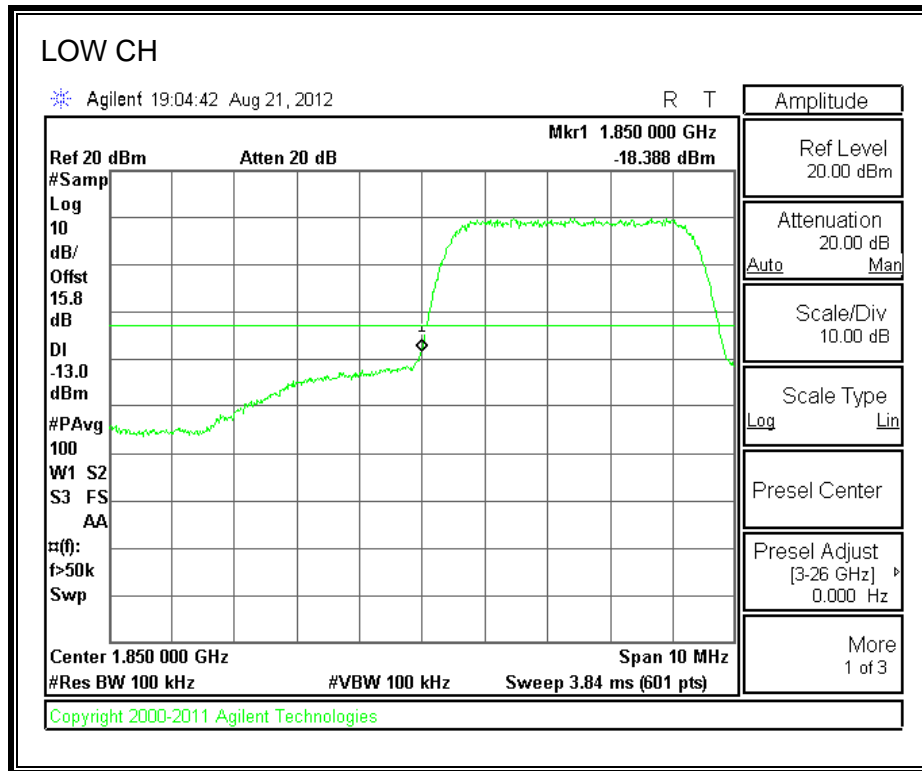




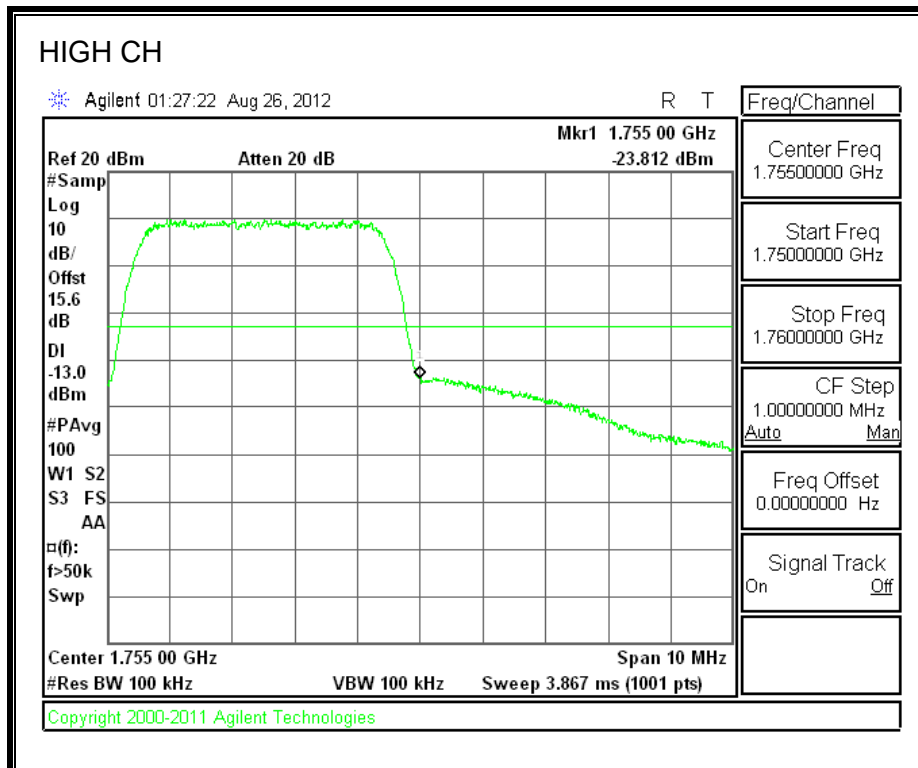
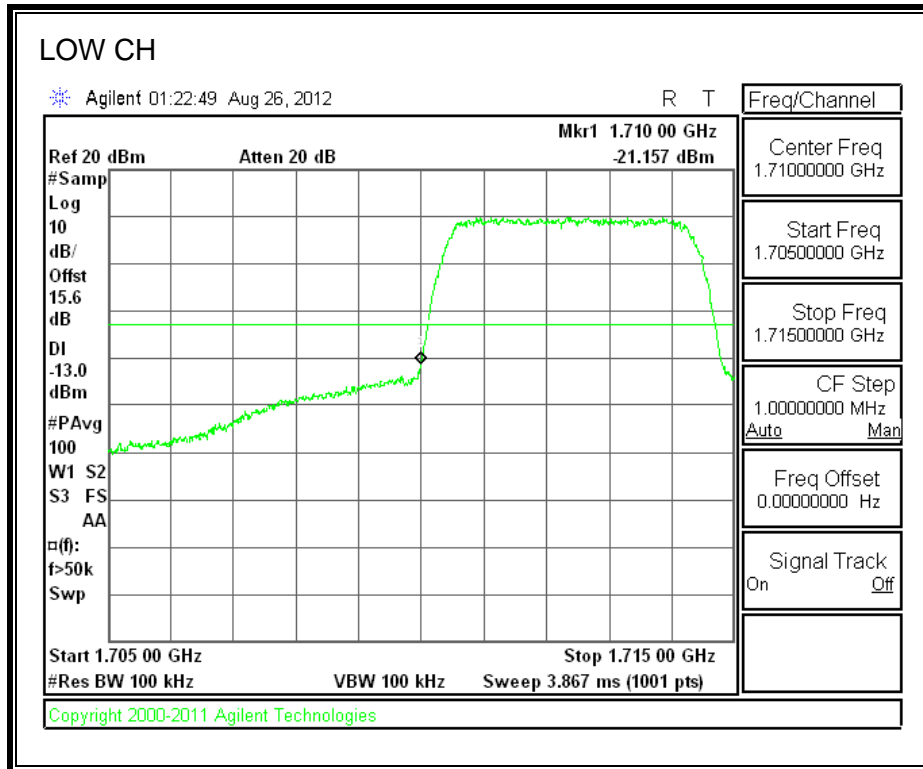
UMTS HSUPA, CELL BAND



UMTS HSUPA, PCS BAND



UMTS HSUPA, AWS BAND



8.1.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238 and §27.53

LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

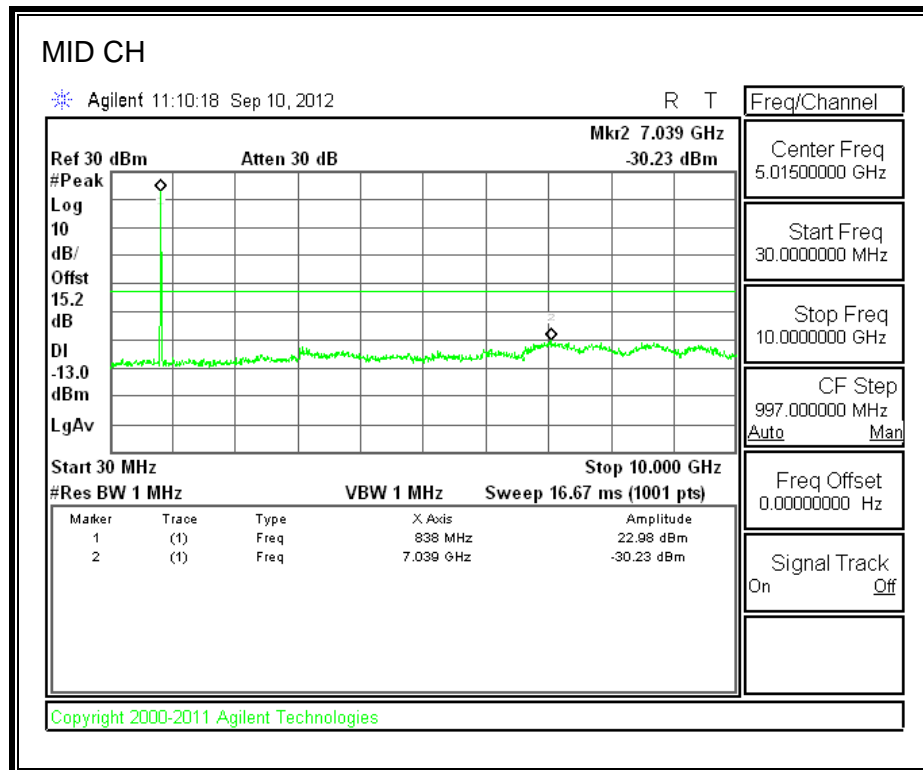
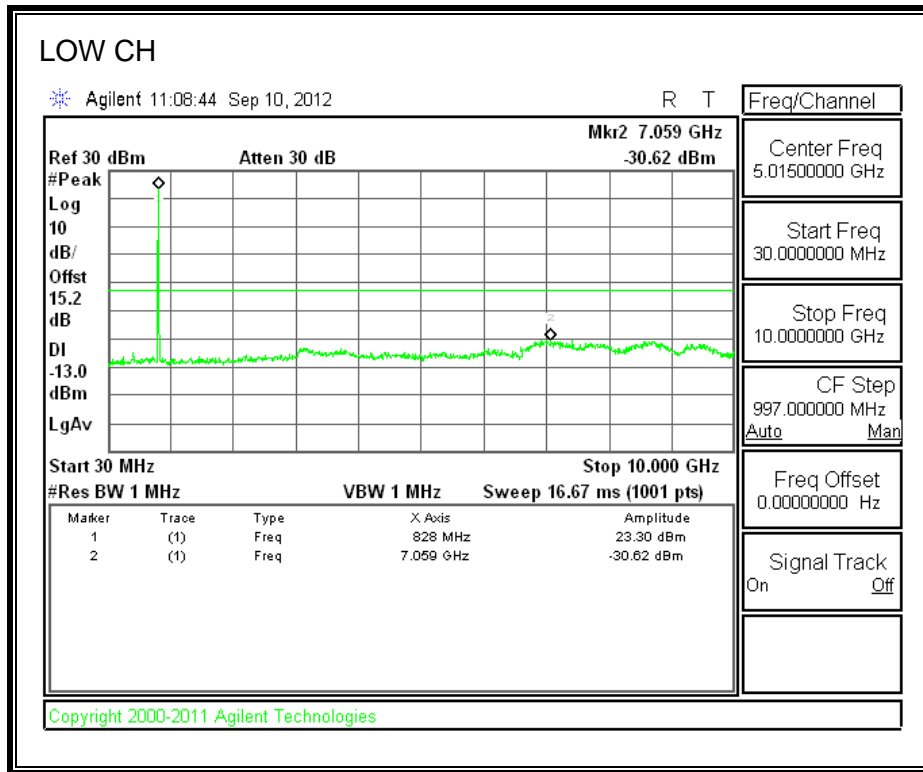
- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

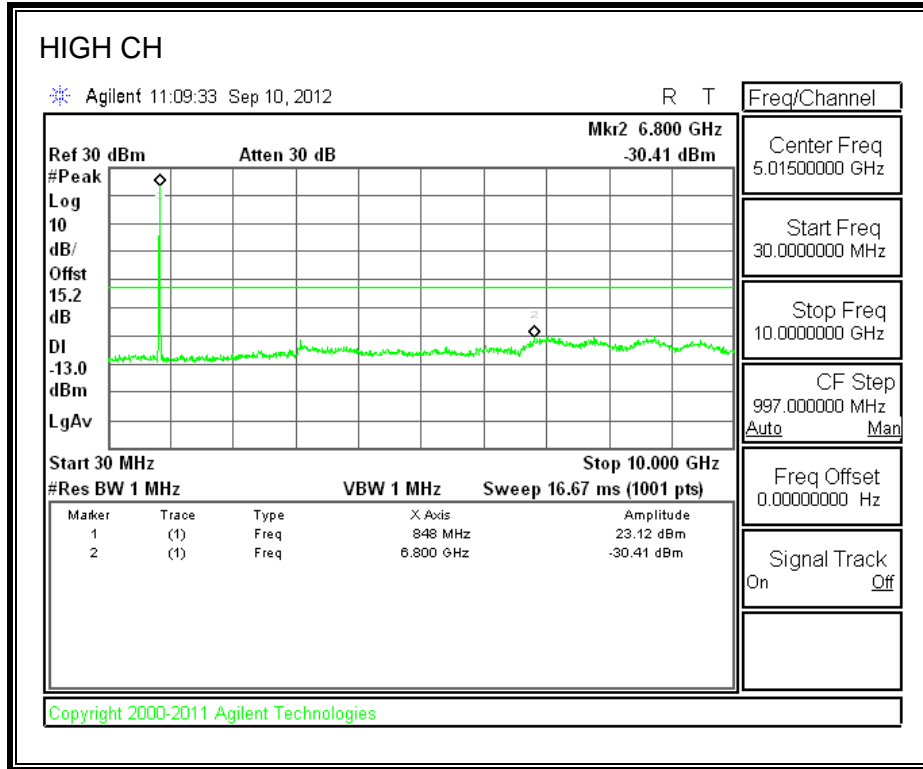
MODES TESTED

- UMTS, REL 99 & HSUPA

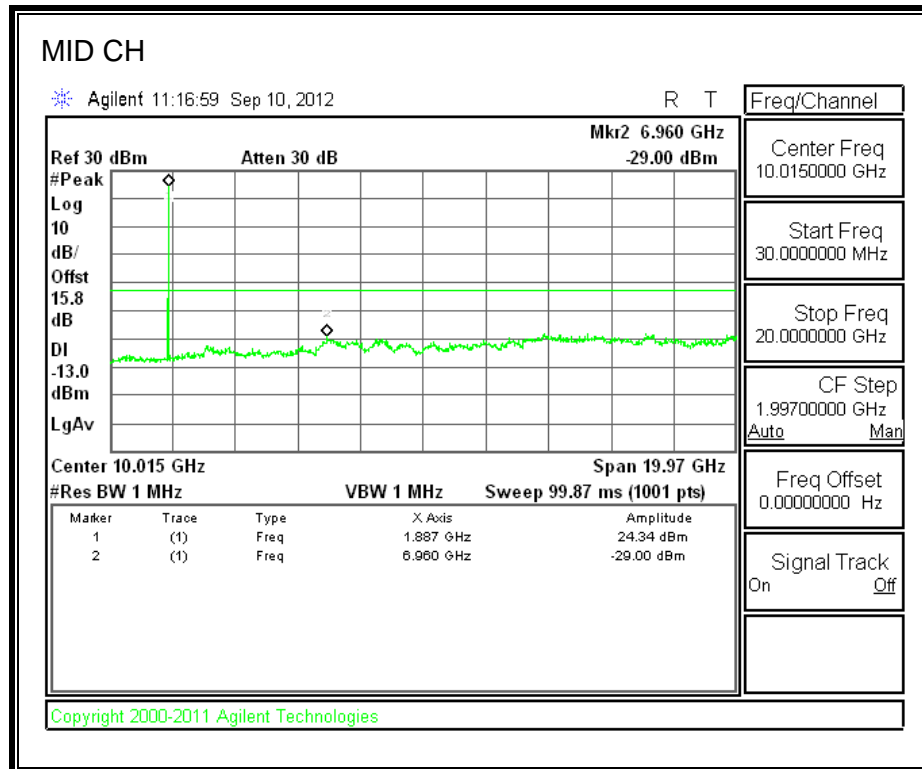
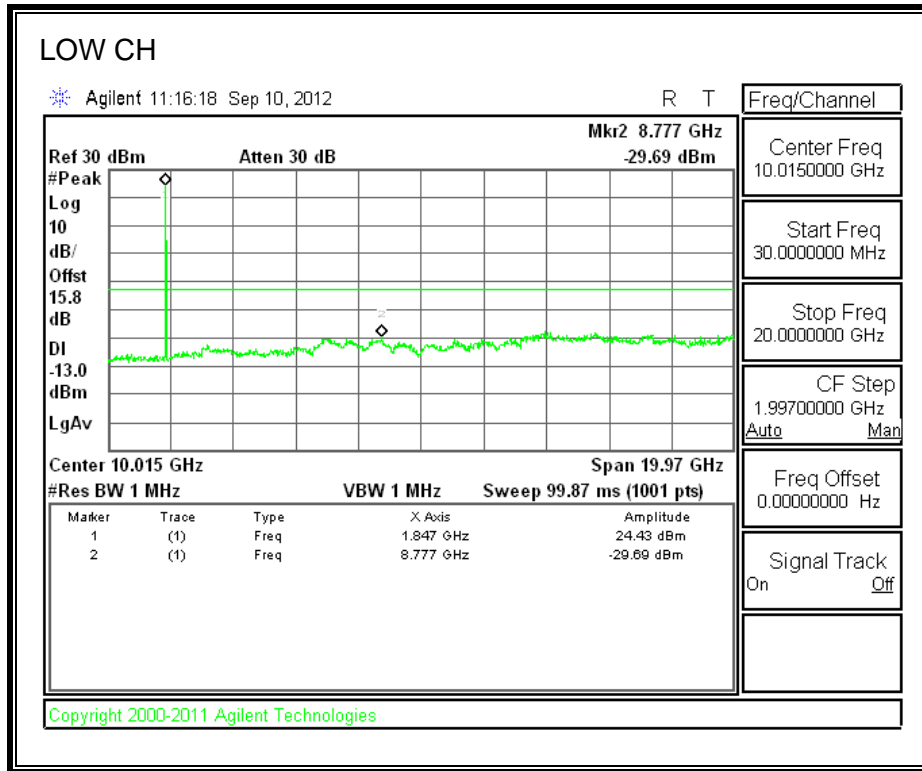
RESULTS

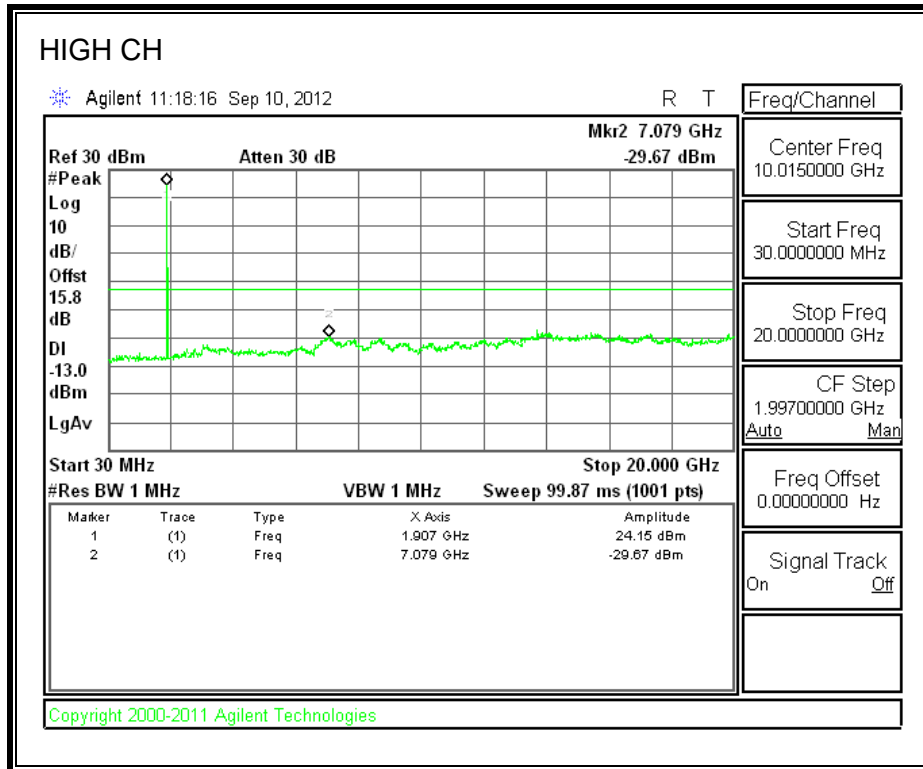
UMTS REL 99, CELL BAND



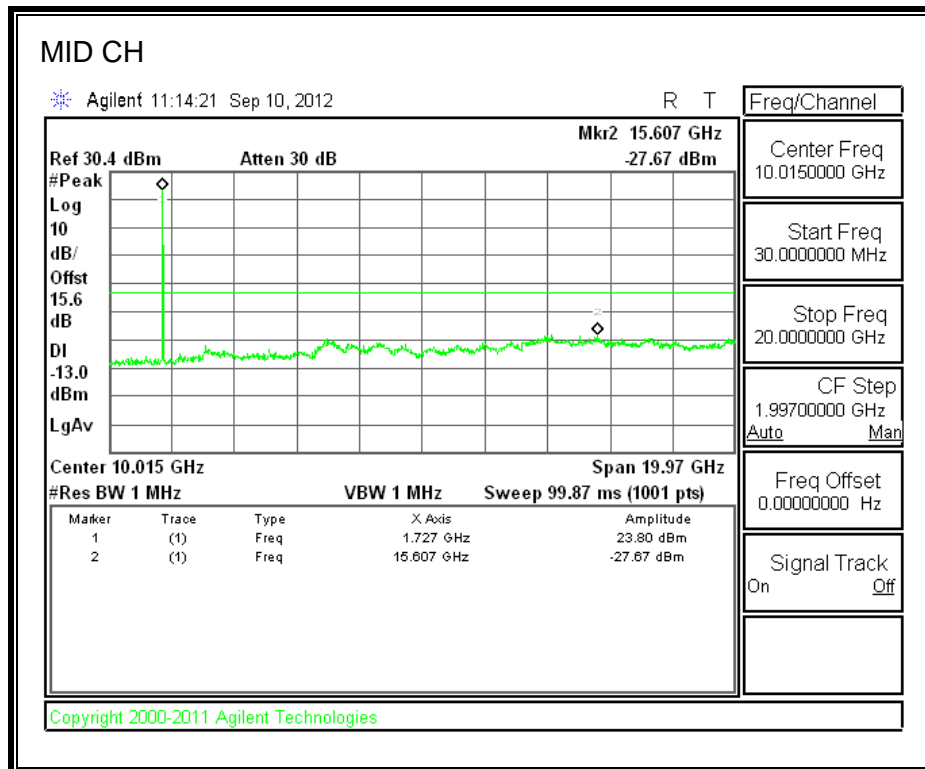
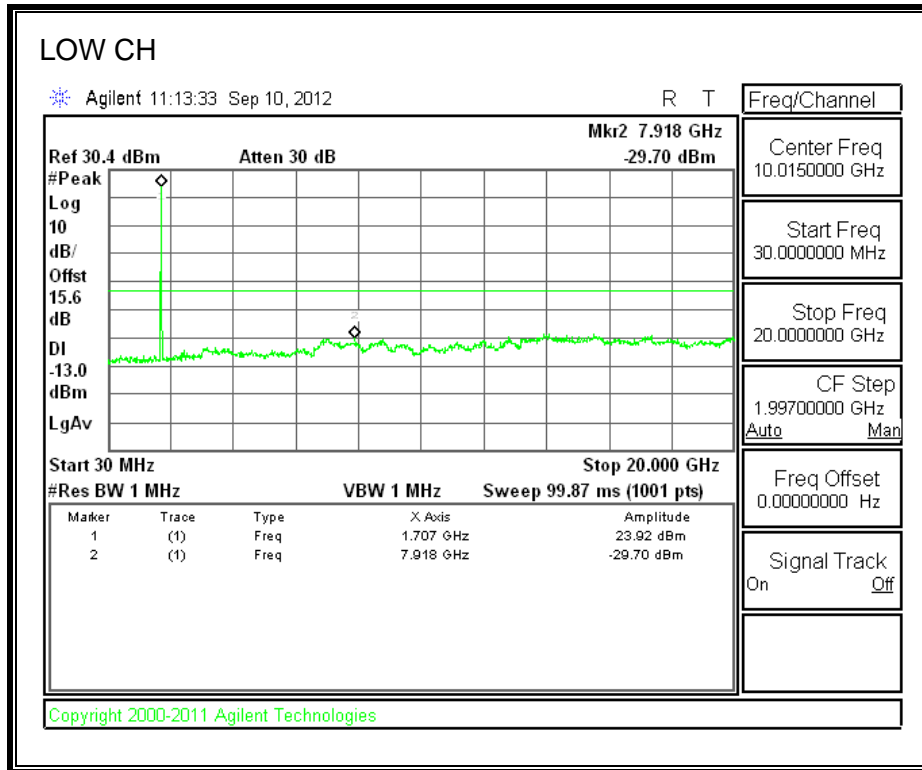


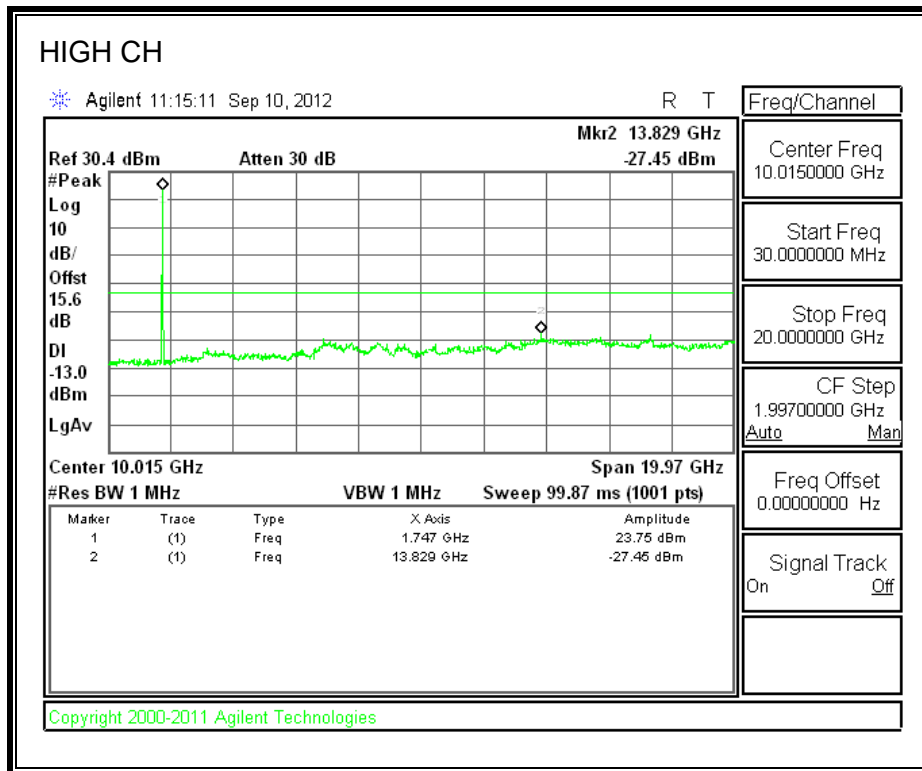
UMTS REL 99, PCS BAND



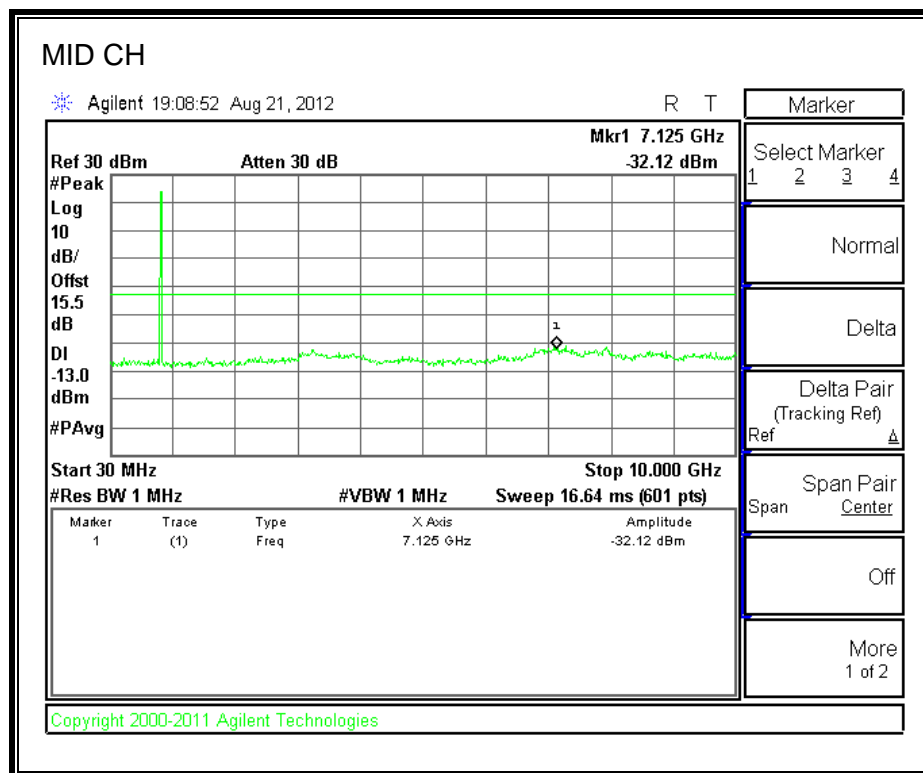
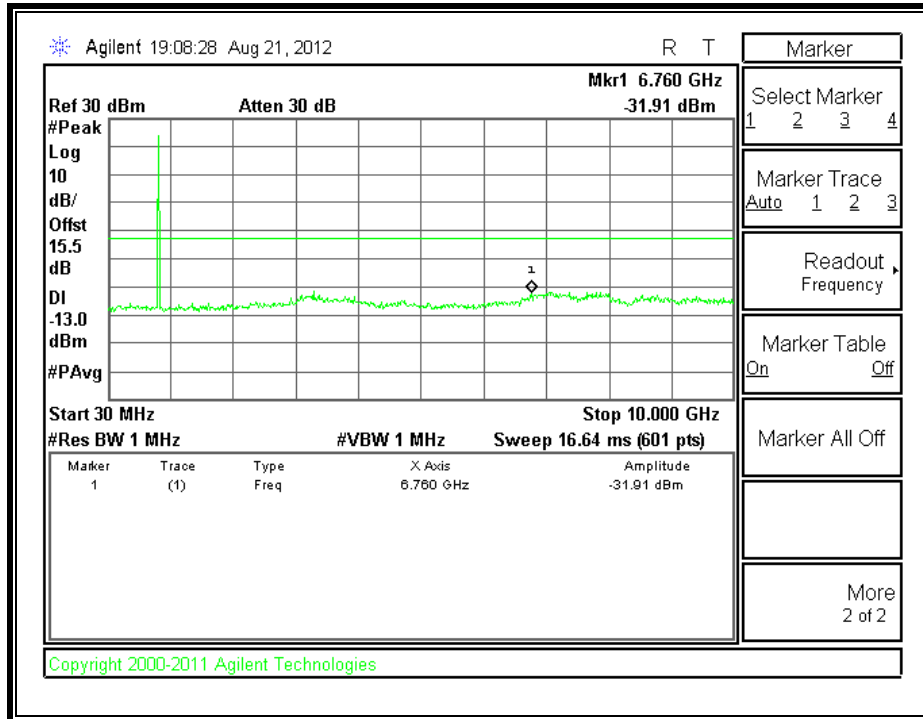


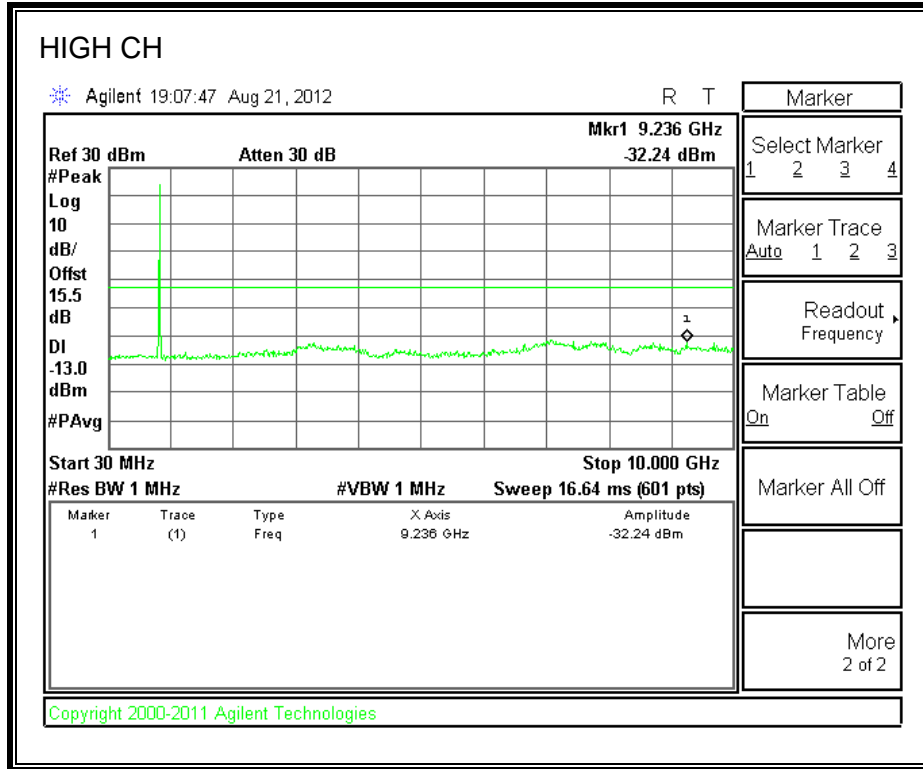
UMTS REL 99, AWS Band



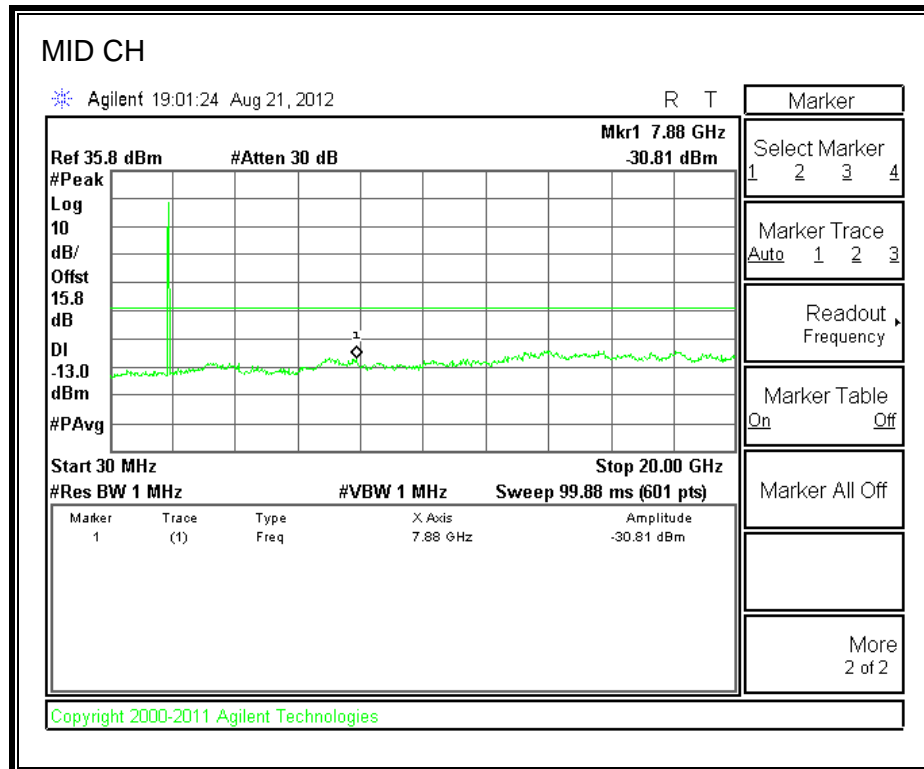
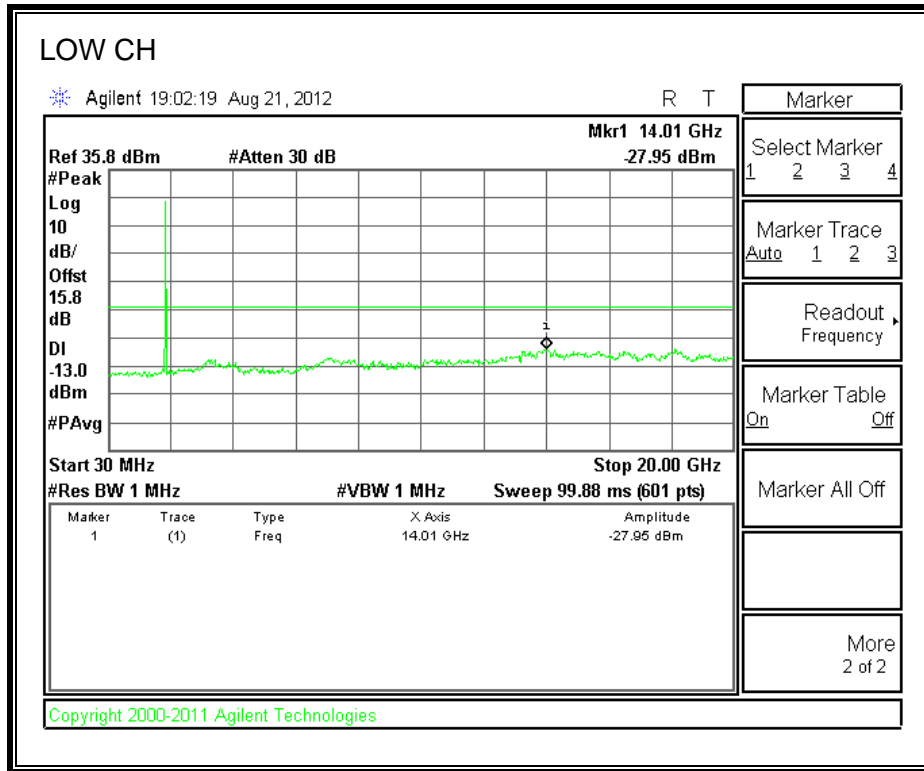


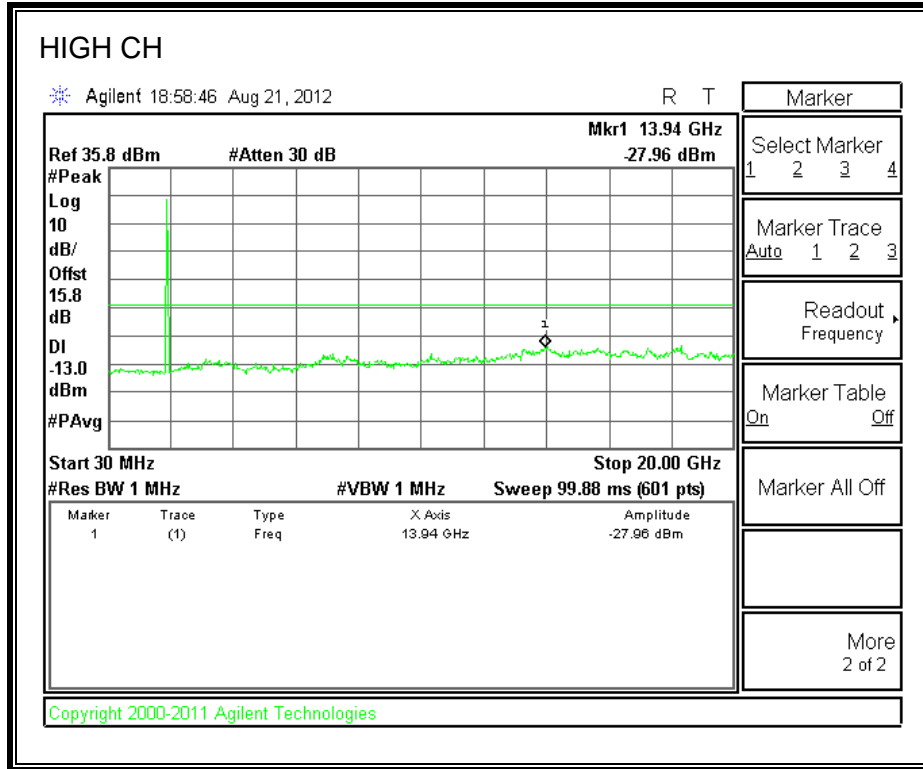
UMTS HSUPA, CELL BAND



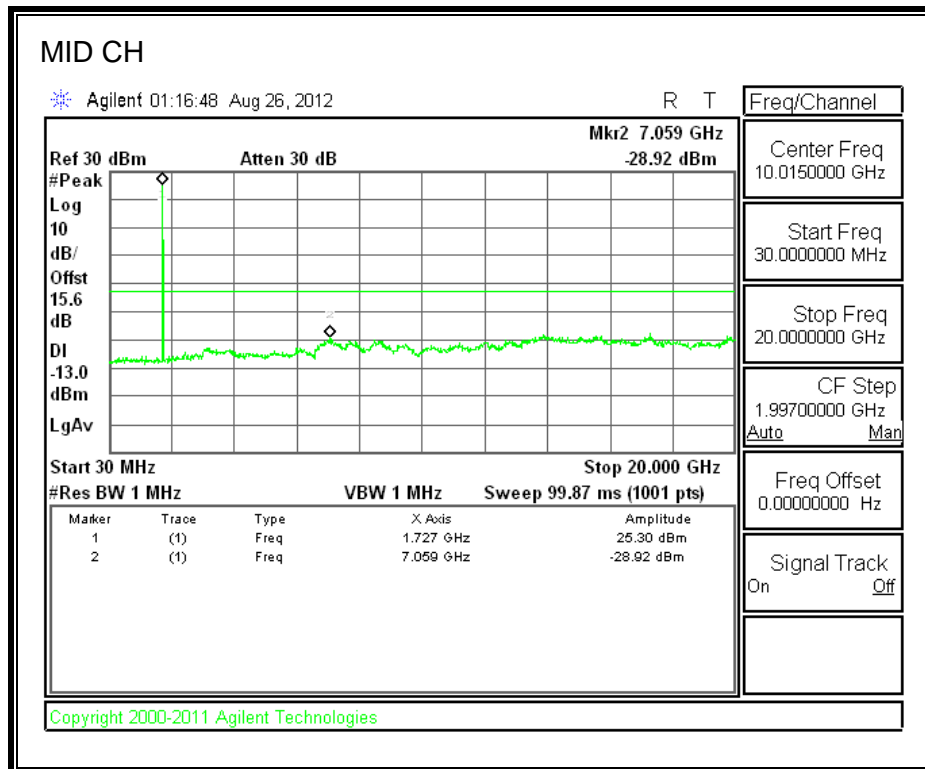
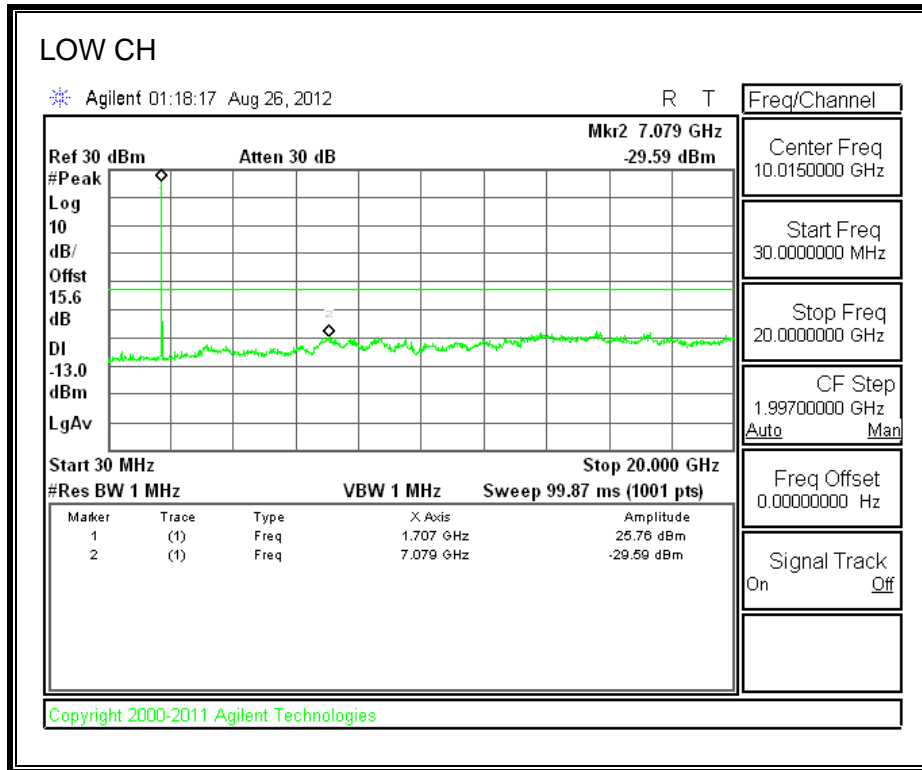


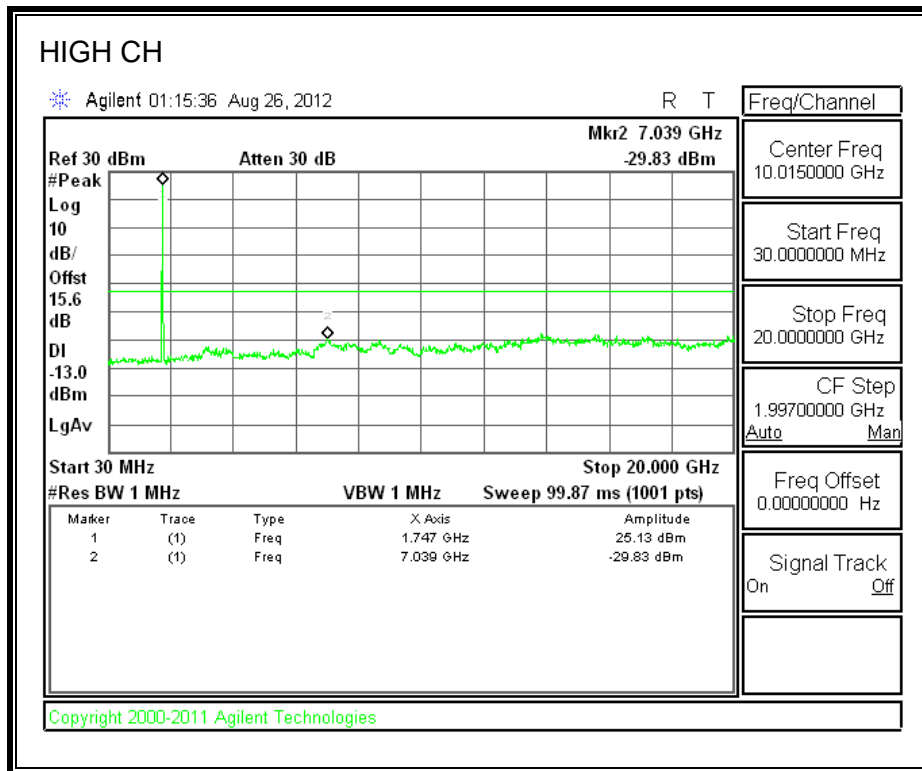
UMTS HSUPA, PCS BAND





UMTS HSUPA, AWS Band





8.1.4. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, and §27.54

LIMITS

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

§27.54 - The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

TEST PROCEDURE

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50°C is reached. Reference power supply voltage for these tests is 3.7Vdc.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case). The test voltage ranges from 3.40 to 4.26 VDC.

MODES TESTED

- UMTS, REL 99 & HSUPA REL 6

RESULTS

See the following pages.

CELL UMTS-MID CHANNEL

Reference Frequency: Cellular Mid Channel 835.999991MHz @ 20°C				
Limit: to stay +/- 2.5 ppm = 2090.000 Hz				
DC Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	835.999986	0.006	2.5
3.80	40	835.999988	0.004	2.5
3.80	30	835.999990	0.001	2.5
3.80	20	835.999991	0	2.5
3.80	10	835.999996	-0.006	2.5
3.80	0	836.000002	-0.013	2.5
3.80	-10	835.999990	0.001	2.5
3.80	-20	836.000005	-0.017	2.5
3.80	-30	836.000011	-0.024	2.5

Reference Frequency: Cellular Mid Channel 835.999991MHz @ 20°C				
Limit: to stay +/- 2.5 ppm = 2090.000 Hz				
DC Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	835.999991	0.000	2.5
4.20	20	835.999994	-0.004	2.5
3.50	20	835.999995	-0.005	2.5

PCS, UMTS-1900 MID CHANNEL

Reference Frequency: PCS Mid Channel 1879.999985MHz @ 20°C				
Limit: within the authorized block or +/- 2.5 ppm = 4700.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	1879.999978	0.004	2.5
3.80	40	1879.999980	0.003	2.5
3.80	30	1879.999983	0.001	2.5
3.80	20	1879.999985	0	2.5
3.80	10	1879.999991	-0.003	2.5
3.80	0	1879.999998	-0.007	2.5
3.80	-10	1879.999980	0.003	2.5
3.80	-20	1879.999983	0.001	2.5
3.80	-30	1879.999977	0.004	2.5

Reference Frequency: PCS Mid Channel 1879.999985MHz @ 20°C				
Limit: within the authorized block or +/- 2.5 ppm = 4700.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	1879.999985	0	2.5
4.20	20	1879.999996	-0.006	2.5
3.30	20	1879.999988	-0.002	2.5

AWS UMTS – MID CHANNEL

Reference Frequency: AWS Mid Channel 1732.3999845MHz @ 20°C				
Limit: within the authorized block or +/- 2.5 ppm = 4331.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	1732.399986	-0.001	2.5
3.80	40	1732.399986	-0.001	2.5
3.80	30	1732.399985	-0.001	2.5
3.80	20	1732.399984	0	2.5
3.80	10	1732.399988	-0.002	2.5
3.80	0	1732.399986	-0.001	2.5
3.80	-10	1732.399987	-0.002	2.5
3.80	-20	1732.399986	-0.001	2.5
3.80	-30	1732.400000	-0.009	2.5

Reference Frequency: AWS Mid Channel 1732.3999845MHz @ 20°C				
Limit: within the authorized block or +/- 2.5 ppm = 4331.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	1732.399984	0	2.5
4.20	20	1732.399986	-0.001	2.5
3.50	20	1732.399986	-0.001	2.5

8.2. RADIATED TEST RESULTS

8.2.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, §27.50

LIMITS

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50 (d) (2) - Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band are limited to a peak EIRP of 1 watt.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.2.17

MODES TESTED

- UMTS, REL 99 & HSUPA

RESULTS

Mode	Band	Channel	f (MHz)	ERP / EIRP	
				dBm	mW
UMTS, REL 99	CELL	4357	826.40	21.25	133.35
		4405	836.00	21.00	125.89
		4455	846.00	21.09	128.53
	PCS	9662	1852.40	23.58	228.03
		9800	1880.00	23.55	226.46
		9938	1907.60	23.57	227.51
	AWS	1537	1712.40	23.79	239.33
		1637	1732.40	23.77	238.23
		2087	1752.40	25.25	334.97
UMTS, HSUPA	CELL	4357	826.40	22.84	192.31
		4405	836.00	22.75	188.36
		4455	846.00	22.10	162.18
	PCS	9662	1852.40	24.41	276.06
		9800	1880.00	24.79	301.30
		9938	1907.60	24.72	296.48
	AWS	1537	1712.40	24.83	304.09
		1637	1732.40	24.94	311.89
		2087	1752.40	26.35	431.52

ERP UMTS REL 99, 850MHz BAND

High Frequency Substitution Measurement Compliance Certification Services Chamber B								
Company:	LG ELECTRONICS							
Project #:	12U14516							
Date:	09/09/12							
Test Engineer:	MENGISTU MEKURIA							
Configuration:	EUT ONLY							
Mode:	TX, 850 MHz BAND, WCDMA MODE							
Test Equipment:								
Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)								
Substitution: Dipole S/N: 1629, 4ft SMA Cable (245182002) Warehouse.								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
826.40	13.75	V	0.5	0.0	13.25	38.5	-25.2	
826.40	21.75	H	0.5	0.0	21.25	38.5	-17.2	
836.60	11.62	V	0.5	0.0	11.12	38.5	-27.3	
836.60	21.50	H	0.5	0.0	21.00	38.5	-17.4	
846.60	13.33	V	0.5	0.0	12.83	38.5	-25.6	
846.60	21.59	H	0.5	0.0	21.09	38.5	-17.4	
Rev. 3.17.11								

EIRP UMTS REL 99, 1900MHz BAND

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
Company:		LG ELECTRONICS						
Project #:		12U14516						
Date:		09/09/12						
Test Engineer:		MENGISTU MEKURIA						
Configuration:		EUT ONLY						
Mode:		TX, 1900 MHz BAND, WCDMA MODE						
Test Equipment:								
Receiving: Horn T59, and Camber B SMA Cables								
Substitution: Horn T217 Substitution, 4ft SMA Cable (245182002) Warehouse								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.852	4.5	V	0.85	8.62	12.22	33.0	-20.8	
1.852	16.0	H	0.85	8.47	23.58	33.0	-9.4	
1.880	3.4	V	0.85	8.46	11.03	33.0	-22.0	
1.880	15.9	H	0.85	8.36	23.44	33.0	-9.6	
1.908	4.2	V	0.85	8.30	11.60	33.0	-21.4	
1.908	16.2	H	0.85	8.25	23.57	33.0	-9.4	
Rev. 3.17.11								

EIRP UMTS REL 99, 1700MHz BAND

High Frequency Fundamental Measurement Compliance Certification Services Chamber B									
Company:		LG ELECTRONICS							
Project #:		12U14516							
Date:		09/10/12							
Test Engineer:		MENGISTU MEKURIA							
Configuration:		EUT ALONE							
Mode:		TX, 1700 MHz BAND, WCDMA MODE							
Test Equipment:									
Receiving: Horn T59, and Camber B SMA Cables									
Substitution: Horn T217 Substitution, 4ft SMA Cable (245182002) Warehouse									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
1.712	4.9	V	0.85	8.62	12.66	30.0	-17.3		
1.712	16.2	H	0.85	8.47	23.79	30.0	-6.2		
1.732	5.1	V	0.85	8.46	12.68	30.0	-17.3		
1.732	16.3	H	0.85	8.36	23.77	30.0	-6.2		
1.753	7.1	V	0.85	8.30	14.50	30.0	-15.5		
1.753	17.9	H	0.85	8.25	25.25	30.0	-4.8		
Rev. 3.17.11									

ERP UMS HSUPA, 850MHz BAND

High Frequency Substitution Measurement Compliance Certification Services Chamber B								
Company:		LG ELECTRONICS						
Project #:		12U14516						
Date:		08/20/12						
Test Engineer:		Chin Pang						
Configuration:		EUT only						
Mode:		TX, 850 MHz BAND, WCDMA HSUPA MODE						
Test Equipment:								
Receiving: Sunol T122, and Chamber B N-type Cable (Setup this one for testing EUT)								
Substitution: Dipole S/N: 1629, 4ft SMA Cable (245182002) Warehouse.								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
826.40	17.87	V	0.5	0.0	17.37	38.5	-21.1	
826.40	23.34	H	0.5	0.0	22.84	38.5	-15.6	
Mid Ch								
836.60	16.93	V	0.5	0.0	16.43	38.5	-22.0	
836.60	23.25	H	0.5	0.0	22.75	38.5	-15.7	
High Ch								
846.60	18.81	V	0.5	0.0	18.31	38.5	-20.1	
846.60	22.60	H	0.5	0.0	22.10	38.5	-16.3	
Rev. 3.17.11								

EIRP UMTS HSUPA, 1900MHz BAND

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
Company:		LG ELECTRONICS						
Project #:		12U14516						
Date:		08/21/12						
Test Engineer:		Chin Pang						
Configuration:		EUT only						
Mode:		TX, 1900 WCDMA HSUPA						
Test Equipment:								
Receiving: Horn T59, and Camber B SMA Cables								
Substitution: Horn T217 Substitution, 4ft SMA Cable (245182002) Warehouse								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	11.5	V	0.85	8.62	19.28	33.0	-13.7	
1.852	16.8	H	0.85	8.47	24.41	33.0	-8.6	
Mid Ch								
1.880	11.0	V	0.85	8.46	18.64	33.0	-14.4	
1.880	17.3	H	0.85	8.36	24.79	33.0	-8.2	
High Ch								
1.908	11.6	V	0.85	8.30	19.08	33.0	-13.9	
1.908	17.3	H	0.85	8.25	24.72	33.0	-8.3	
Rev. 3.17.11								

EIRP UMTS HSUPA, 1700MHz BAND

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
Company:		LG ELECTRONICS						
Project #:		12U14516						
Date:		08/25/12						
Test Engineer:		MENGI STU MEKURIA						
Configuration:		EUT WITH CHARGER						
Mode:		TX, 1700 MHz BAND, HSUPA MODE						
Test Equipment:								
Receiving: Horn T59, and Camber B SMA Cables								
Substitution: Horn T217 Substitution, 4ft SMA Cable (245182002) Warehouse								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Channel								
1.712	7.6	V	0.85	8.62	15.32	30.0	-14.7	
1.712	17.2	H	0.85	8.47	24.83	30.0	-5.2	
Mid Channel								
1.732	6.8	V	0.85	8.46	14.43	30.0	-15.6	
1.732	17.4	H	0.85	8.36	24.94	30.0	-5.1	
Hi Channel								
1.753	7.6	V	0.85	8.30	15.01	30.0	-15.0	
1.753	19.0	H	0.85	8.25	26.35	30.0	-3.7	
Rev. 3.17.11								

8.2.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, and §27.53

LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

MODES TESTED

- UMTS, REL 99 & HSUPA

RESULTS

ERP UMTS REL 99, CELL BAND

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
Company:		LG ELECTRONICS							
Project #:		12U14516							
Date:		09/10/12							
Test Engineer:		MENGISTU MEKURIA							
Configuration:		EUT with AC Adapter and Earphone							
Mode:		TX, 850MHz BAND WCDMA MODE							
Chamber		Pre-amplifier			Filter		Limit		
5m Chamber B		T145 8449B			Filter 1		Part 22		
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (826.4MHz)									
1.653	-17.6	V	3.0	35.5	1.0	-52.2	-13.0	-39.2	
2.479	-10.9	V	3.0	35.4	1.0	-45.3	-13.0	-32.3	
1.653	-9.5	H	3.0	35.5	1.0	-44.0	-13.0	-31.0	
2.479	-17.8	H	3.0	35.4	1.0	-52.2	-13.0	-39.2	
Mid Ch, (836MHz)									
1.672	-16.4	V	3.0	35.5	1.0	-50.9	-13.0	-37.9	
2.510	-13.7	V	3.0	35.4	1.0	-48.1	-13.0	-35.1	
1.672	-13.3	H	3.0	35.5	1.0	-47.8	-13.0	-34.8	
2.510	-18.7	H	3.0	35.4	1.0	-53.1	-13.0	-40.1	
High Ch, (846MHz)									
1.692	-16.1	V	3.0	35.5	1.0	-50.6	-13.0	-37.6	
2.538	-10.6	V	3.0	35.4	1.0	-45.1	-13.0	-32.1	
1.692	-7.1	H	3.0	35.5	1.0	-41.6	-13.0	-28.6	
2.538	-16.5	H	3.0	35.4	1.0	-51.0	-13.0	-38.0	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

EIRP UMTS REL 99, PCS BAND

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG ELECTRONICS
Project #: 12U14516
Date: 09/10/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT with AC Adapter and Earphone
Mode: TX, 1900MHz BAND WCDMA MODE

Chamber

5m Chamber B

Pre-amplifier

T145 8449B

Filter

Filter 1

Limit

Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1852.4MHz)									
3.705	-6.3	V	3.0	35.4	1.0	-40.6	-13.0	-27.6	
5.557	-10.4	V	3.0	35.4	1.0	-44.8	-13.0	-31.8	
3.705	-10.1	H	3.0	35.4	1.0	-44.4	-13.0	-31.4	
5.557	-6.6	H	3.0	35.4	1.0	-41.0	-13.0	-28.0	
Mid Ch, (1880.00MHz)									
3.760	-8.1	V	3.0	35.3	1.0	-42.5	-13.0	-29.5	
5.640	-13.3	V	3.0	35.4	1.0	-47.7	-13.0	-34.7	
3.760	-10.9	H	3.0	35.3	1.0	-45.2	-13.0	-32.2	
5.640	-11.5	H	3.0	35.4	1.0	-45.9	-13.0	-32.9	
High Ch, (1907.60MHz)									
3.815	-10.0	V	3.0	35.3	1.0	-44.3	-13.0	-31.3	
5.723	-13.2	V	3.0	35.4	1.0	-47.6	-13.0	-34.6	
3.815	-11.7	H	3.0	35.3	1.0	-46.0	-13.0	-33.0	
5.723	-11.3	H	3.0	35.4	1.0	-45.8	-13.0	-32.8	

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.

EIRP UMTS REL 99, AWS BAND

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG ELECTRONICS
Project #: 12U14516
Date: 09/10/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT with AC Adapter and Earphone
Mode: TX, 1700MHz BAND WCDMA MODE

Chamber

5m Chamber B

Pre-amplifier

T145 8449B

Filter

Filter 1

Limit

Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1712.4MHz)									
3.425	-7.5	V	3.0	35.5	1.0	-41.9	-13.0	-28.9	
5.137	-6.4	V	3.0	35.3	1.0	-40.7	-13.0	-27.7	
3.425	-10.4	H	3.0	35.5	1.0	-44.9	-13.0	-31.9	
5.137	-11.8	H	3.0	35.3	1.0	-46.1	-13.0	-33.1	
Mid Ch, (1732.4MHz)									
3.465	0.4	V	3.0	35.5	1.0	-34.0	-13.0	-21.0	
5.197	-14.5	V	3.0	35.3	1.0	-48.9	-13.0	-35.9	
3.465	-5.6	H	3.0	35.5	1.0	-40.0	-13.0	-27.0	
5.197	-15.6	H	3.0	35.3	1.0	-49.9	-13.0	-36.9	
High Ch, (1752.5MHz)									
3.505	-4.6	V	3.0	35.4	1.0	-39.1	-13.0	-26.1	
5.258	-13.6	V	3.0	35.3	1.0	-48.0	-13.0	-35.0	
3.505	-8.4	H	3.0	35.4	1.0	-42.9	-13.0	-29.9	
5.258	-20.2	H	3.0	35.3	1.0	-54.5	-13.0	-41.5	

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.

ERP UMTS HSUPA, CELL BAND

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG ELECTRONICS
Project #: 12U14516
Date: 08/22/12
Test Engineer: Chin pang
Configuration: EUT with AC Adapter and Earphone
Mode: TX, WCDMA, Cell HSDPA

Chamber

5m Chamber B

Pre-amplifier

T145 8449B

Filter

Filter 1

Limit

Part 22

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (826.4MHz)									
1.653	-17.2	V	3.0	35.5	1.0	-51.7	-13.0	-38.7	
2.479	-16.3	V	3.0	35.4	1.0	-50.7	-13.0	-37.7	
1.653	-10.7	H	3.0	35.5	1.0	-45.3	-13.0	-32.3	
2.479	-19.2	H	3.0	35.4	1.0	-53.6	-13.0	-40.6	
Mid Ch, (836MHz)									
1.672	-15.9	V	3.0	35.5	1.0	-50.4	-13.0	-37.4	
2.510	-19.2	V	3.0	35.4	1.0	-53.6	-13.0	-40.6	
1.672	-14.5	H	3.0	35.5	1.0	-49.1	-13.0	-36.1	
2.510	-20.1	H	3.0	35.4	1.0	-54.5	-13.0	-41.5	
High Ch, (846MHz)									
1.692	-15.6	V	3.0	35.5	1.0	-50.1	-13.0	-37.1	
2.538	-16.1	V	3.0	35.4	1.0	-50.5	-13.0	-37.5	
1.692	-8.4	H	3.0	35.5	1.0	-42.9	-13.0	-29.9	
2.538	-17.9	H	3.0	35.4	1.0	-52.4	-13.0	-39.4	

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.

EIRP UMTS HSUPA, PCS BAND

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG ELECTRONICS
Project #: 12U14516
Date: 08/22/12
Test Engineer: Chin Pang
Configuration: EUT with AC Adapter and Earphone
Mode: TX, 1900MHz BAND HSUPA

Chamber

Pre-amplifier

Filter

Limit

5m Chamber B

T145 8449B

Filter 1

Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch. (1852.4MHz)									
3.705	-6.9	V	3.0	35.4	1.0	-41.2	-13.0	-28.2	
5.557	-2.8	V	3.0	35.4	1.0	-37.2	-13.0	-24.2	
3.705	-9.7	H	3.0	35.4	1.0	-44.0	-13.0	-31.0	
5.557	-3.0	H	3.0	35.4	1.0	-37.4	-13.0	-24.4	
Mid Ch. (1880.00MHz)									
3.760	-8.7	V	3.0	35.3	1.0	-43.1	-13.0	-30.1	
5.640	-5.7	V	3.0	35.4	1.0	-40.1	-13.0	-27.1	
3.760	-10.5	H	3.0	35.3	1.0	-44.8	-13.0	-31.8	
5.640	-7.8	H	3.0	35.4	1.0	-42.3	-13.0	-29.3	
High Ch. (1907.60MHz)									
3.815	-10.6	V	3.0	35.3	1.0	-44.9	-13.0	-31.9	
5.723	-5.6	V	3.0	35.4	1.0	-40.1	-13.0	-27.1	
3.815	-11.3	H	3.0	35.3	1.0	-45.6	-13.0	-32.6	
5.723	-7.7	H	3.0	35.4	1.0	-42.1	-13.0	-29.1	

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.

EIRP UMTS HSUPA, AWS BAND

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG ELECTRONICS
Project #: 12U14516
Date: 08/25/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT with AC Adapter and Earphone
Mode: TX, 1700MHz BAND HSUPA MODE

Chamber

5m Chamber A

Pre-amplifier

T144 8449B

Filter

Filter 1

Limit

Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch. (1712.4MHz)									
3.425	-8.4	V	3.0	37.0	1.0	-44.4	-13.0	-31.4	
5.137	-3.0	V	3.0	36.3	1.0	-38.3	-13.0	-25.3	
3.425	-12.0	H	3.0	37.0	1.0	-48.0	-13.0	-35.0	
5.137	-5.0	H	3.0	36.3	1.0	-40.3	-13.0	-27.3	
Mid Ch. (1732.4MHz)									
3.465	-0.5	V	3.0	37.0	1.0	-36.5	-13.0	-23.5	
5.197	-11.1	V	3.0	36.2	1.0	-46.3	-13.0	-33.3	
3.465	-7.2	H	3.0	37.0	1.0	-43.2	-13.0	-30.2	
5.197	-8.8	H	3.0	36.2	1.0	-44.1	-13.0	-31.1	
High Ch. (1752.5MHz)									
3.505	-5.6	V	3.0	37.0	1.0	-41.5	-13.0	-28.5	
5.258	-10.2	V	3.0	36.3	1.0	-45.4	-13.0	-32.4	
3.505	-10.1	H	3.0	37.0	1.0	-46.0	-13.0	-33.0	
5.258	-13.4	H	3.0	36.3	1.0	-48.7	-13.0	-35.7	

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.