



**FCC CFR47 PART 22H, 24E, AND 27L  
CERTIFICATION TEST REPORT  
FOR  
GSM/WCDMA TRI-BAND PHONE WITH BT, WLAN, AND NFC**

**MODEL NUMBER: E960, LGE960, LG-E960**

**FCC ID: ZNFE960**

**REPORT NUMBER: 12U14580-1**

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*Prepared for*

**LG ELECTRONICS MOBILECOMM U.S.A., INC.  
1000 SYLVAN AVENUE  
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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LG ELECTRONICS MOBILECOMM U.S.A., INC.  
1000 SYLVAN AVENUE  
ENGLEWOOD CLIFFS, NEW JERSEY 07632KOREA

**EUT DESCRIPTION:** GSM/WCDMA TRI-BAND PHONE WITH BT, WLAN, AND NFC

**MODEL:** E960, LGE960, LG-E960

**SERIAL NUMBER:** 1 (CONDUCTED) AND 207KPDT001154 (RADIATED)


**DATE TESTED:** AUGUST 4 TO 27, 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.

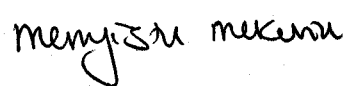
**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of 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:



THU CHAN  
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UL CCS

Tested By:



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, WLAN, and NFC 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:

#### EUT WITH INDUCTIVE COVER

Part 22 Cellular Band					
Frequency range (MHz)	Modulation	Conducted		ERP	
		dBm	mW	dBm	mW
824.2 – 848.8	GPRS	33.83	2415.5	31.14	1300.2
824.2 – 848.8	EGPRS	30.99	1256.0	28.24	666.8
826.4 – 846.6	UMTS, Rel 99	27.69	587.5	29.54	899.5
826.4 – 846.6	HSUPA, Rel 6	28.85	767.4	25.67	369.0

Part 24 PCS Band					
Frequency range (MHz)	Modulation	Conducted		EIRP	
		dBm	mW	dBm	mW
1850.2-1909.8	GPRS	30.53	1129.8	32.75	1883.6
1850.2-1909.8	EGPRS	29.01	796.2	32.21	1663.4
1852.4-1907.6	UMTS, Rel 99	27.23	528.4	29.06	805.4
1852.4-1907.6	HSUPA, Rel 6	28.41	693.4	28.96	787.0

Part 27 AWS Band					
Frequency range (MHz)	Modulation	Conducted		EIRP	
		dBm	mW	dBm	mW
1712.4-1752.5	WCDMA, Rel 99	27.97	626.6	28.26	669.9
1712.4-1752.5	HSUPA, Rel 6	29.42	875.0	29.62	916.2

# **EUT WITH INDUCTIVE CHARGER**

Part 22 Cellular Band					
Frequency range (MHz)	Modulation	Conducted		ERP	
		dBm	mW	dBm	mW
824.2 – 848.8	GPRS	33.83	2415.5	29.99	997.7
824.2 – 848.8	EGPRS	30.99	1256.0	26.76	474.2
826.4 – 846.6	UMTS, Rel 99	27.69	587.5	26.38	434.5
826.4 – 846.6	HSUPA, Rel 6	28.85	767.4	27.04	505.8

Part 24 PCS Band					
Frequency range (MHz)	Modulation	Conducted		EIRP	
		dBm	mW	dBm	mW
1850.2-1909.8	GPRS	30.53	1129.8	32.39	1733.8
1850.2-1909.8	EGPRS	29.01	796.2	31.57	1435.5
1852.4-1907.6	UMTS, Rel 99	27.23	528.4	27.90	616.6
1852.4-1907.6	HSUPA, Rel 6	28.41	693.4	28.63	729.5

Part 27 AWS Band					
Frequency range (MHz)	Modulation	Conducted		EIRP	
		dBm	mW	dBm	mW
1712.4-1752.5	WCDMA, Rel 99	27.97	626.6	27.41	550.8
1712.4-1752.5	HSUPA, Rel 6	29.42	875.0	29.32	855.1

### 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, X-Orientation with AC adapter and headset were turned out to be the worst case for Cell and PCS/AWS bands respectively.

### 5.5. DESCRIPTION OF TEST SETUP

#### SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-01WR	RA1Z0052837	DoC
AC Adapter	LG	WCA-D01WT	TA170000040	DoC
Headset	LG	N/A	N/A	N/A
Inductive Charger	LG	WCP-700	A1201WP000026	DoC

#### 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)

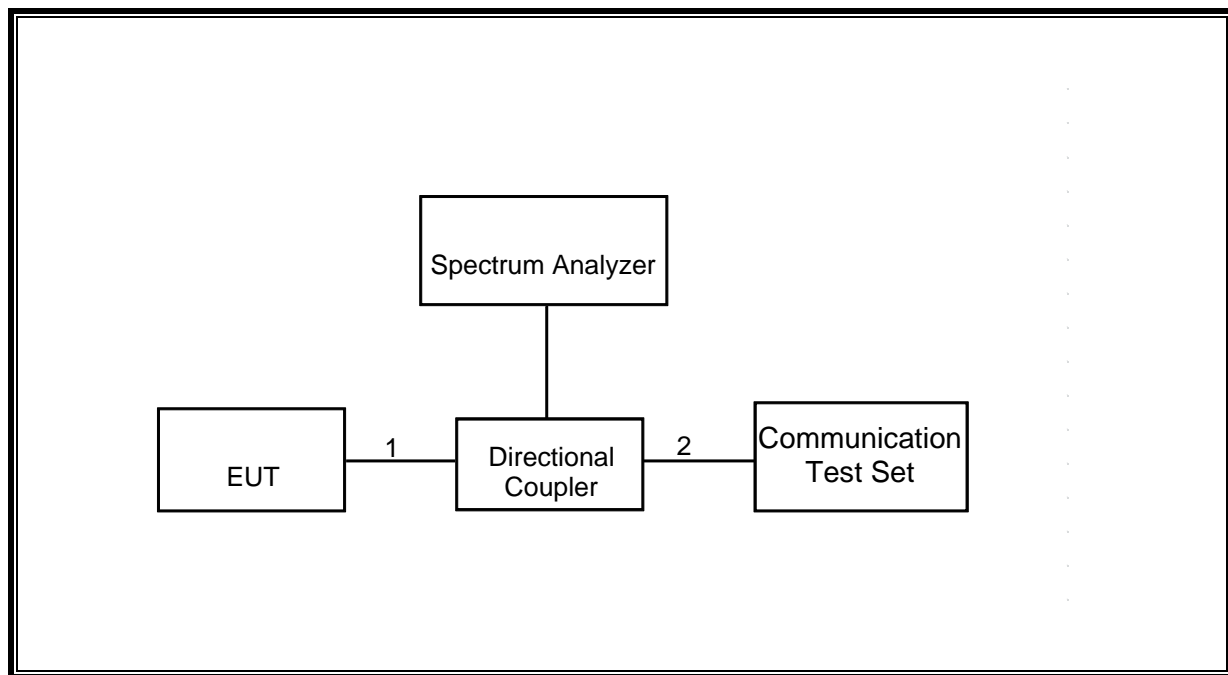
I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC Power	1	Mini-USB	Shielded	1.2 m	NA
2	Audio	1	Mini-Jack	Un-Shielded	1.5 m	NA

#### TEST SETUP

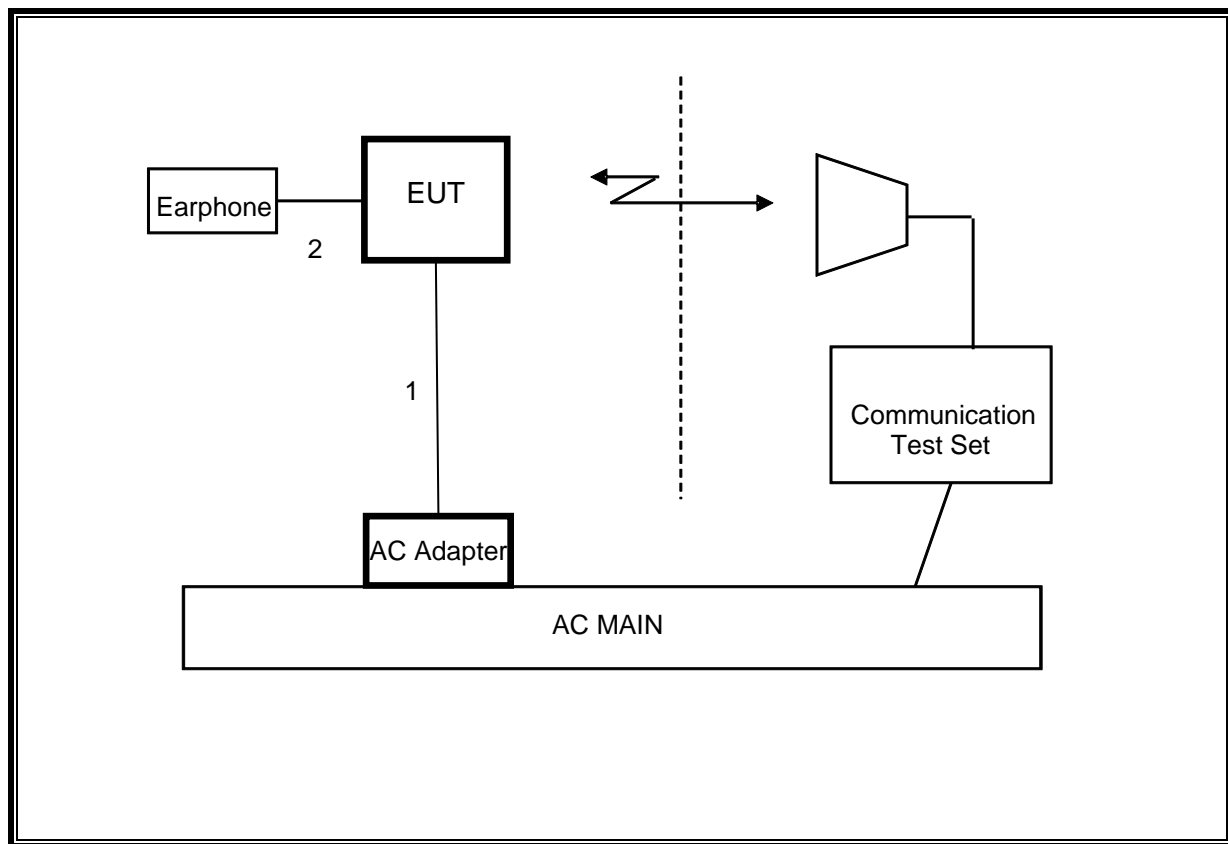
The EUT is continuously communicated to the call box during the tests.



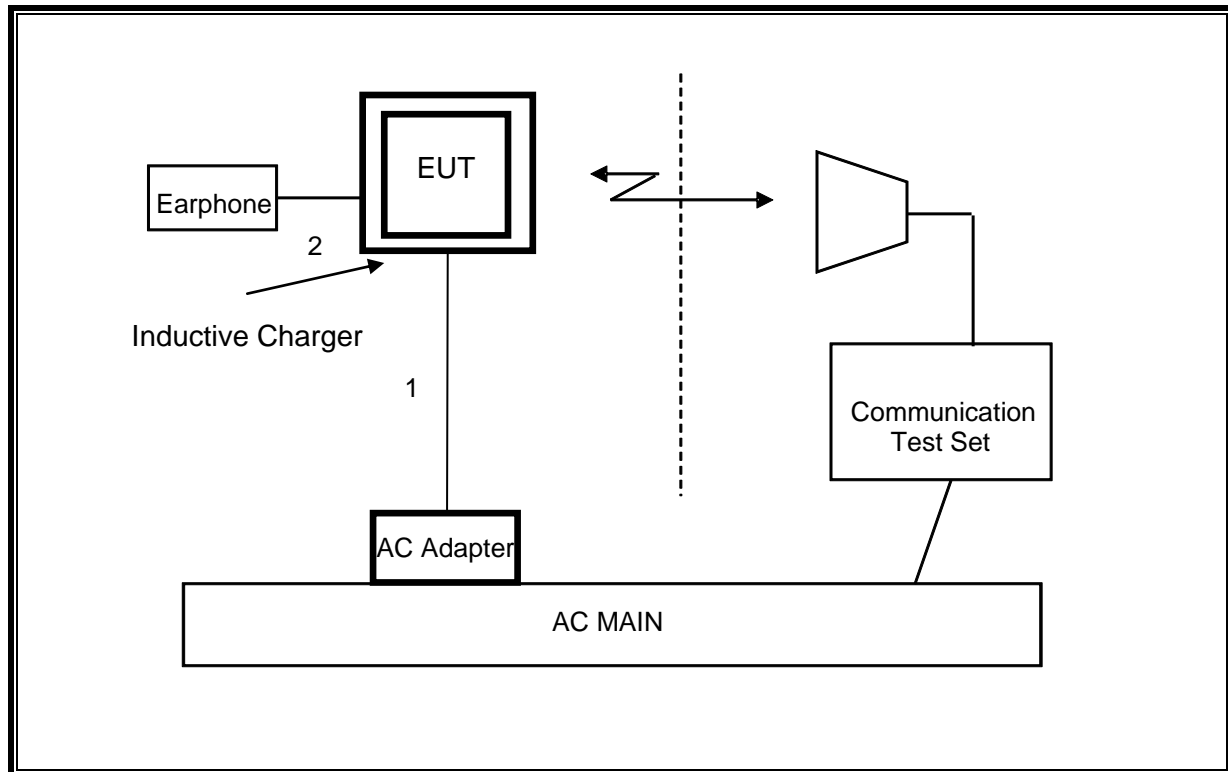
**SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)**



**SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)**



**SETUP DIAGRAM FOR EUT WITH INDUCTIVE CHARGER 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
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
Radio Communication Analyzer	Anritsu	MT8820C	1100481	07/13/13
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
Directional Coupler	RF-Lambda	RFDC5M06G15	None	CNR

## 7. RF POWER OUTPUT VERIFICATION

### 7.1. RF POWER OUTPUT FOR GSM MODE

#### TEST PROCEDURE

##### GPRS/EGPRS

Function: Menu select > GSM Mobile Station > GSM 850/900/1800/1900  
Press Connection control to choose the different menus  
Press RESET > choose all to reset all settings  
Connection Press Signal Off to turn off the signal and change settings  
Network Support > GSM+GPRS or GSM+EGPRS  
Main Service > Packet Data  
Service selection > Test Mode A – Auto Slot Config. off  
MS Signal Press Slot Config bottom on the right twice to select and change the number of time slots and power setting  
    > Slot configuration > Uplink/Gamma  
    > 33 dBm for GPRS 850/900  
    > 30 dBm for GPRS1800/1900  
BS Signal Enter the same channel number for TCH channel (test channel) and BCCH channel  
Frequency Offset > + 0 Hz  
Mode > BCCH and TCH  
BCCH Level > -85 dBm (May need to adjust if link is not stable)  
BCCH Channel > choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]  
Channel Type > Off  
P0> 4 dB  
Slot Config > Unchanged (if already set under MS Signal)  
TCH > choose desired test channel  
Hopping > Off  
Main Timeslot > 3 (Default)  
Network Coding Scheme > CS4 (GPRS) and MCS9 (EGPRS)  
Bit Stream > 2E9-1PSR Bit Pattern  
AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input  
Connection Press Signal On to turn on the signal and change settings

#### RESULTS

**GPRS for Cell and PCS Bands - Coding scheme: CS4**

Band	Ch	Frequency	Conducted Peak output power (dBm)	
			1 slot	2 slot
GPRS850	128	824.2	33.83	31.77
	190	836.6	33.80	31.68
	251	848.8	33.74	31.56
GPRS1900	512	1850.2	30.25	28.82
	661	1880.0	30.45	28.87
	810	1909.8	30.53	28.96

**EGPRS for Cell and PCS Bands - Coding scheme: MCS9**

Band	Ch	Frequency	Conducted Peak output power (dBm)	
			1 slot	2 slot
EGPRS850	128	824.2	30.99	30.96
	190	836.6	30.90	30.82
	251	848.8	30.94	30.84
EGPRS1900	512	1850.2	28.93	29.01
	661	1880.0	28.92	28.95
	810	1909.8	28.94	29.00

## 7.2. RF POWER OUTPUT FOR UMTS REL99

### 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
	$\beta_c$	Not Applicable
	$\beta_d$	Not Applicable
	$\beta_{ec}$	Not Applicable
	$\beta_c/\beta_d$	8/15
	$\beta_{hs}$	Not Applicable
	$\beta_{ed}$	Not Applicable

### RESULTS

Band	UL Ch	DL Ch	Frequency	Conducted output power (dBm) Peak
UMTS 850	4132	4357	826.4	27.50
	4183	4408	836.6	27.69
	4233	4458	846.6	27.42
Band	UL Ch	DL Ch	Frequency	Conducted output power (dBm) Peak
UMTS 1900	9262	9662	1852.4	27.23
	9400	9800	1880.0	26.99
	9538	9938	1907.6	26.75
Band	UL Ch	DL Ch	Frequency	Conducted output power (dBm) Peak
UMTS 1700	1537	1312	1712.4	27.97
	1637	1412	1732.4	27.12
	2087	1862	1752.5	27.45

### 7.3. RF POWER OUTPUT FOR HSDPA REL 5

#### TEST PROCEDURE

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			
	$\beta_c$	2/15	12/15	15/15	15/15
	$\beta_d$	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	$\beta_c/\beta_d$	2/15	12/15	15/8	15/4
	$\beta_{hs}$	4/15	24/15	30/15	30/15
HSDPA Specific Settings	MPR (dB)	0	0	0.5	0.5
	$D_{ACK}$	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	27.29
		4183	4408	836.6	27.51
		4233	4458	846.6	27.41
	2*	4132	4357	826.4	28.44
		4183	4408	836.6	28.55
		4233	4458	846.6	28.03
	3	4132	4357	826.4	28.24
		4183	4408	836.6	28.31
		4233	4458	846.6	27.96
	4	4132	4357	826.4	28.48
		4183	4408	836.6	28.53
		4233	4458	846.6	28.08
Band	Subtest	UL Ch	DL Ch	Frequency	Conducted output power (dBm) Peak
UMTS1900 (Band II)	1	9262	9662	1852.4	27.48
		9400	9800	1880.0	27.02
		9538	9938	1907.6	27.10
	2*	9262	9662	1852.4	28.14
		9400	9800	1880.0	27.93
		9538	9938	1907.6	27.63
	3	9262	9662	1852.4	28.02
		9400	9800	1880.0	27.78
		9538	9938	1907.6	27.62
	4	9262	9662	1852.4	28.13
		9400	9800	1880.0	27.97
		9538	9938	1907.6	27.82
Band	Subtest	UL Ch	DL Ch	Frequency	Conducted output power (dBm) Peak
UMTS1700 (Band IV)	1	1537	1312	1712.4	27.79
		1637	1412	1732.4	27.12
		2087	1862	1752.5	27.59
	2*	1537	1312	1712.4	28.93
		1637	1412	1732.4	28.05
		2087	1862	1752.5	28.63
	3	1537	1312	1712.4	28.88
		1637	1412	1732.4	27.93
		2087	1862	1752.5	28.47
	4	1537	1312	1712.4	28.73
		1637	1412	1732.4	28.14
		2087	1862	1752.5	28.68

## 7.4. RF POWER OUTPUT UMTS Rel 6 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				
	$\beta_c$	11/15	6/15	15/15	2/15	15/15
	$\beta_d$	15/15	15/15	9/15	15/15	0
	$\beta_{ec}$	209/225	12/15	30/15	2/15	5/15
	$\beta_c/\beta_d$	11/15	6/15	15/9	2/15	-
	$\beta_{hs}$	22/15	12/15	30/15	4/15	5/15
HSDPA Specific Settings	$\beta_{ed}$	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	28.26
		4183	4408	836.6	28.24
		4233	4458	846.6	27.90
	2	4132	4357	826.4	27.73
		4183	4408	836.6	27.71
		4233	4458	846.6	27.47
	3	4132	4357	826.4	28.29
		4183	4408	836.6	28.35
		4233	4458	846.6	28.04
	4	4132	4357	826.4	27.56
		4183	4408	836.6	27.51
		4233	4458	846.6	27.51
UMTS1900 (Band II)	1	9262	9662	1852.4	27.92
		9400	9800	1880.0	27.63
		9538	9938	1907.6	27.59
	2	9262	9662	1852.4	27.54
		9400	9800	1880.0	27.41
		9538	9938	1907.6	27.28
	3	9262	9662	1852.4	28.19
		9400	9800	1880.0	27.91
		9538	9938	1907.6	27.87
	4	9262	9662	1852.4	27.33
		9400	9800	1880.0	27.21
		9538	9938	1907.6	27.20
UMTS1700 (Band IV)	1	1537	1312	1712.4	28.71
		1637	1412	1732.4	27.93
		2087	1862	1752.5	28.49
	2	1537	1312	1712.4	28.25
		1637	1412	1732.4	27.41
		2087	1862	1752.5	28.09
	3	1537	1312	1712.4	29.37
		1637	1412	1732.4	28.23
		2087	1862	1752.5	29.16
	4	1537	1312	1712.4	27.94
		1637	1412	1732.4	27.29
		2087	1862	1752.5	27.71
UMTS850 (Band V)	5	4132	4357	826.4	28.85
		4183	4408	836.6	28.84
		4233	4458	846.6	28.30
UMTS1900 (Band II)	5	9262	9662	1852.4	28.41
		9400	9800	1880.0	28.15
		9538	9938	1907.6	28.01
UMTS1700 (Band IV)	5	1537	1312	1712.4	29.42
		1637	1412	1732.4	28.45
		2087	1862	1752.5	29.05

## **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**

- GPRS
- EGPRS
- WCDMA REL. 99
- HSUPA REL. 6

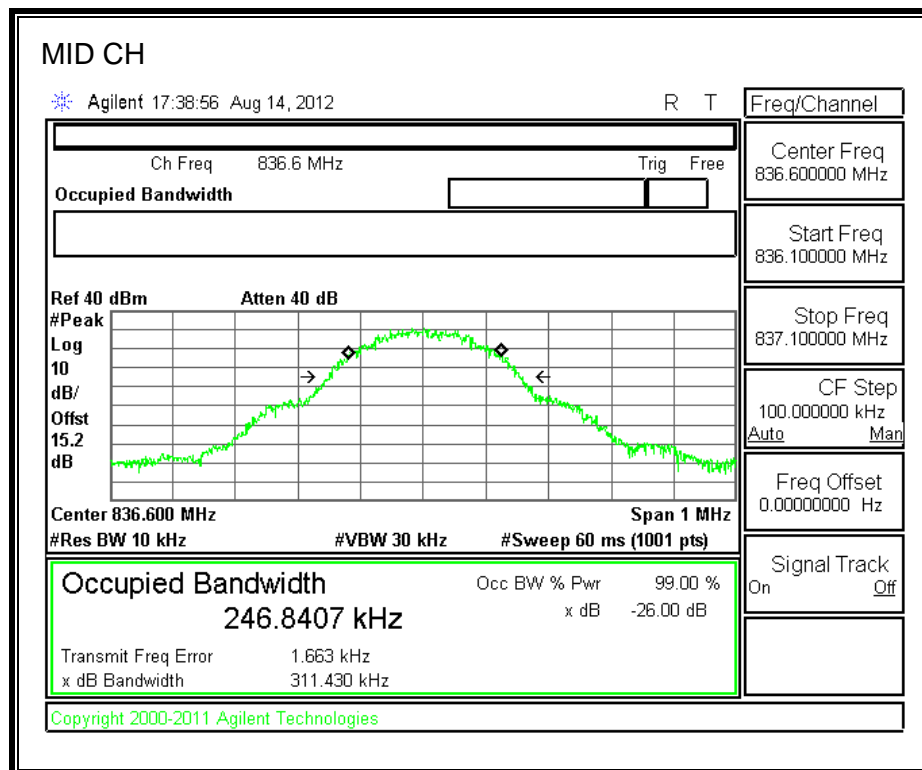
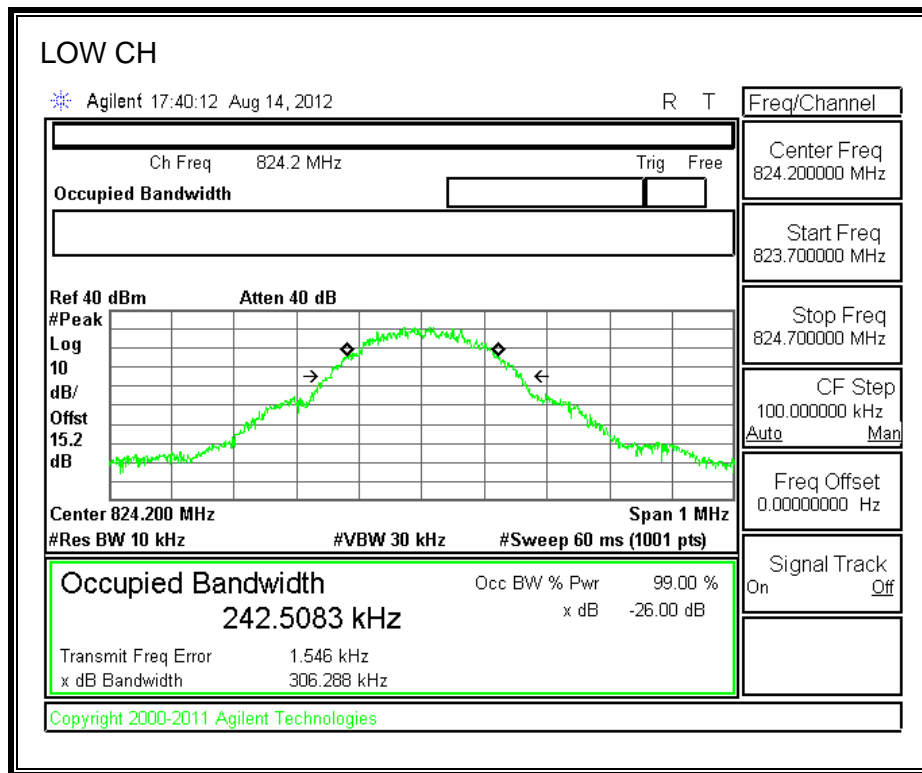
**RESULTS**

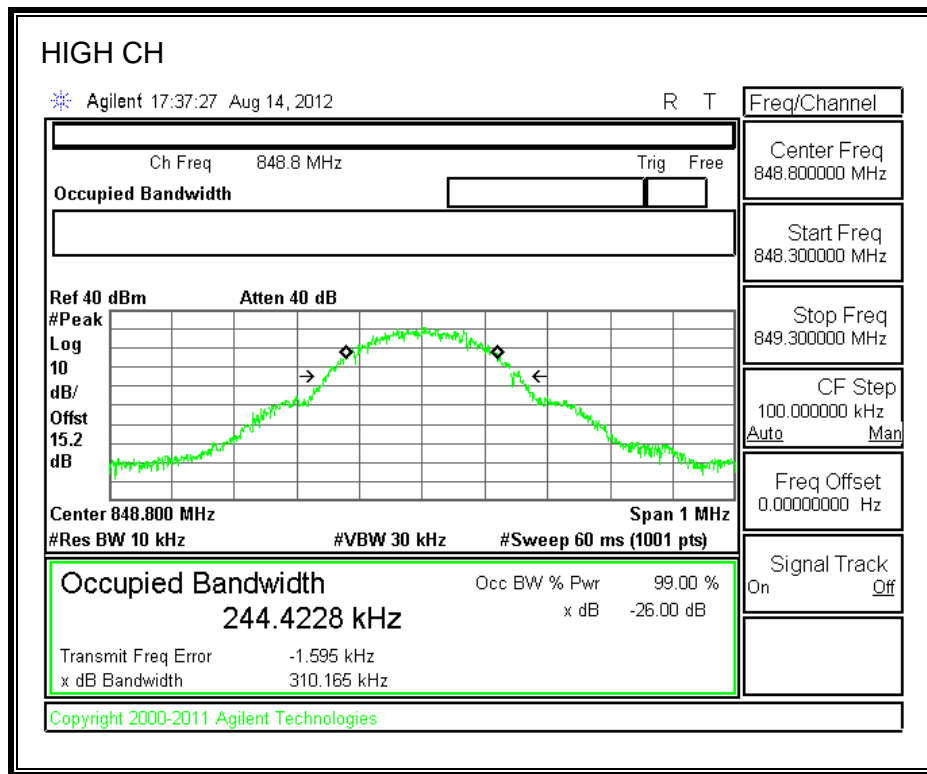
Band	Mode	Channel	f (MHz)	99% BW (kHz)	-26dB BW (kHz)
Cellular	GPRS	128	824.2	242.5083	306.288
		190	836.6	246.8407	311.430
		251	848.8	244.4228	310.165
PCS		512	1850.2	246.7197	308.311
		661	1880.0	244.4320	311.634
		810	1909.8	248.4477	303.956
Cellular	EGPRS	128	824.2	246.0736	305.168
		190	836.6	242.6475	301.771
		251	848.8	244.0288	306.322
PCS		512	1850.2	246.0736	305.168
		661	1880.0	242.6475	301.771
		810	1909.8	244.0288	306.322

Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
Cellular	WCDMA REL 99	4357	826.4	4.1445	4.556
		4408	836.6	4.1838	4.574
		4458	846.6	4.1009	4.582
PCS		9662	1852.4	4.1966	4.579
		9800	1880.0	4.1517	4.638
		9938	1907.6	4.1570	4.638
AWS		1537	1712.4	4.1079	4.574
		1637	1732.4	4.1356	4.637
		2087	1752.5	4.1795	4.603
Cellular	HSUPA REL 6	4357	826.4	4.1104	4.579
		4408	836.6	4.1966	4.540
		4458	846.6	4.1925	4.557
PCS		9662	1852.4	4.1823	4.578
		9800	1880.0	4.1196	4.589
		9938	1907.6	4.1770	4.657
AWS		1537	1712.4	4.1823	4.610
		1637	1732.4	4.1445	4.521
		2087	1752.5	4.1595	4.692

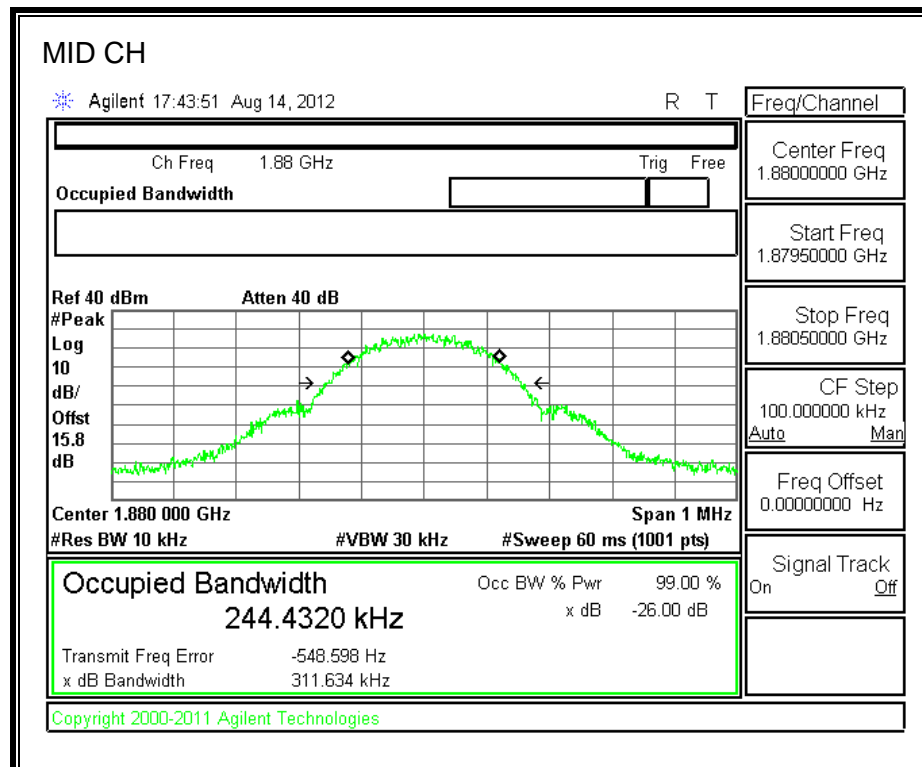
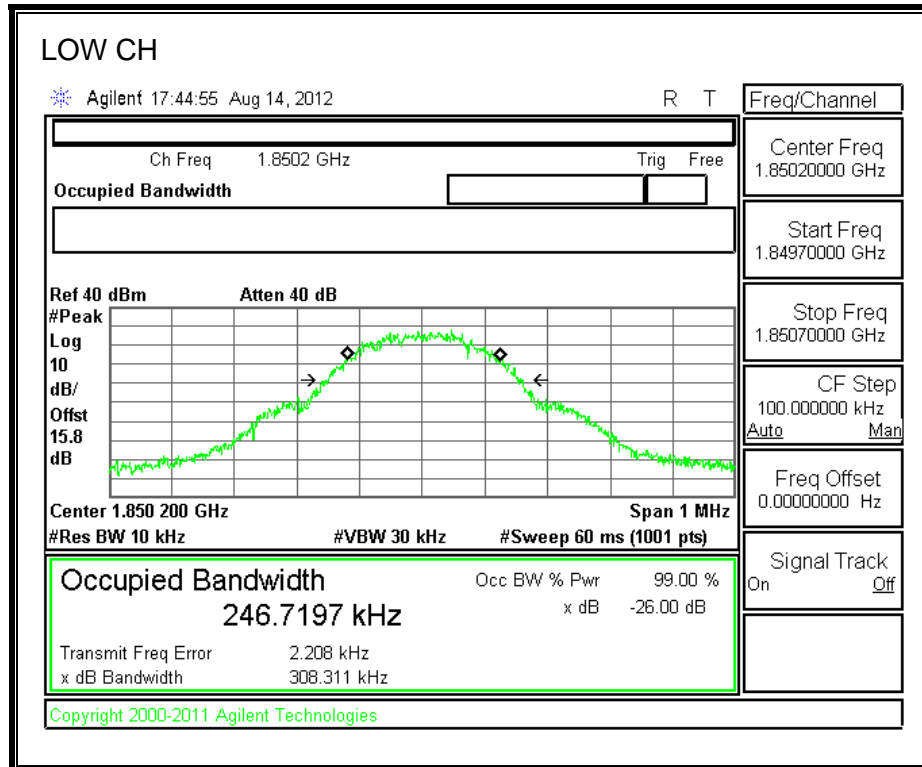
**99% and 26dB Bandwidth**

**GPRS850 BAND**

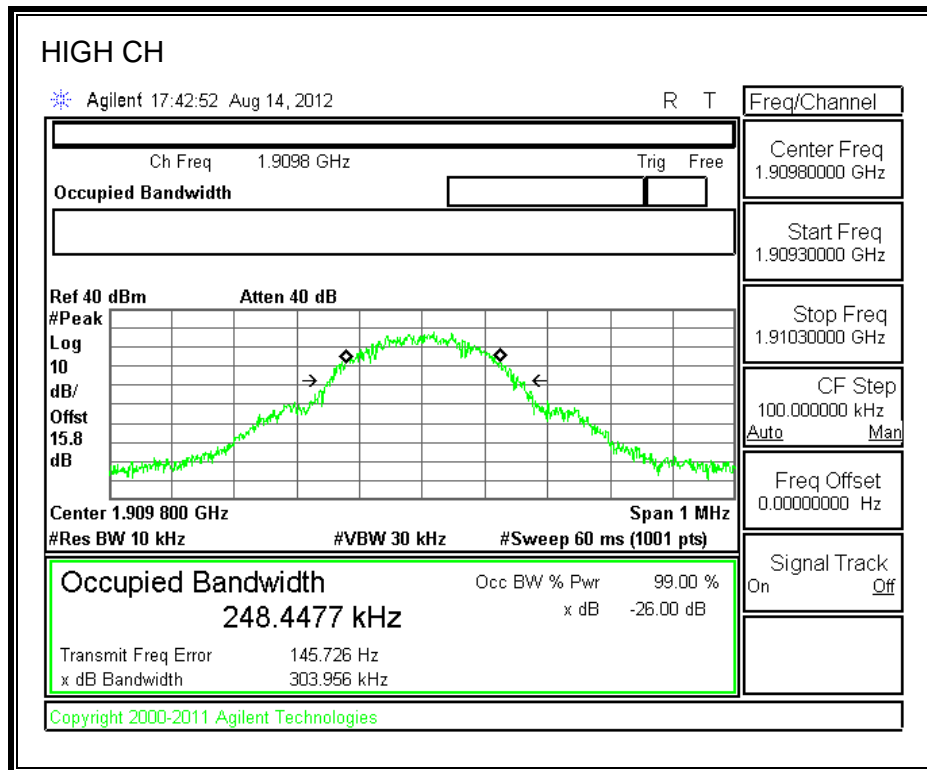




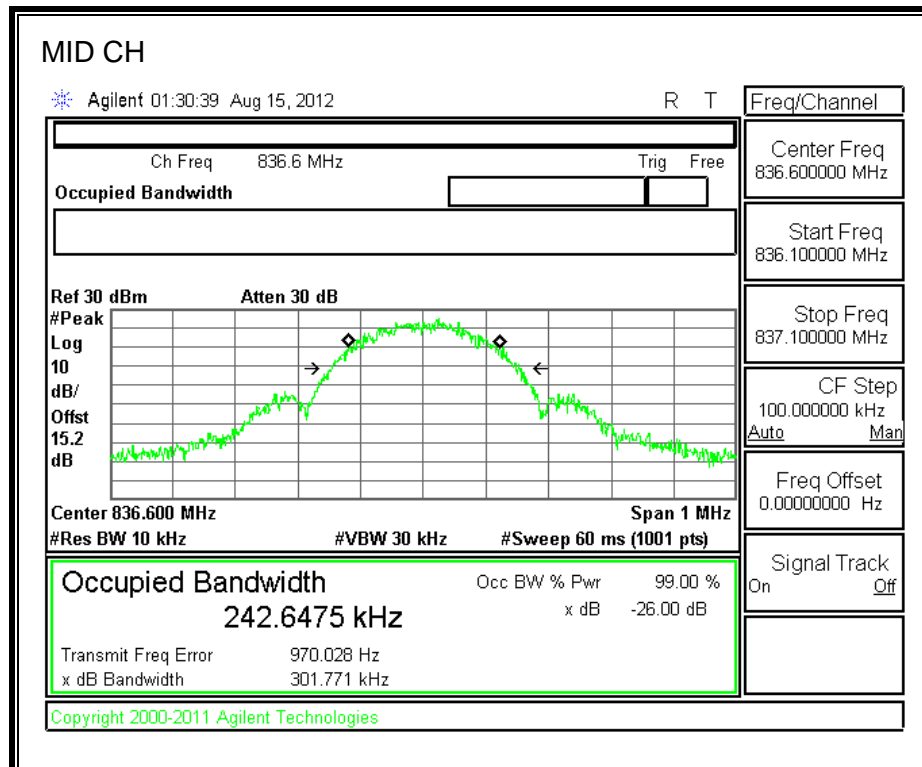
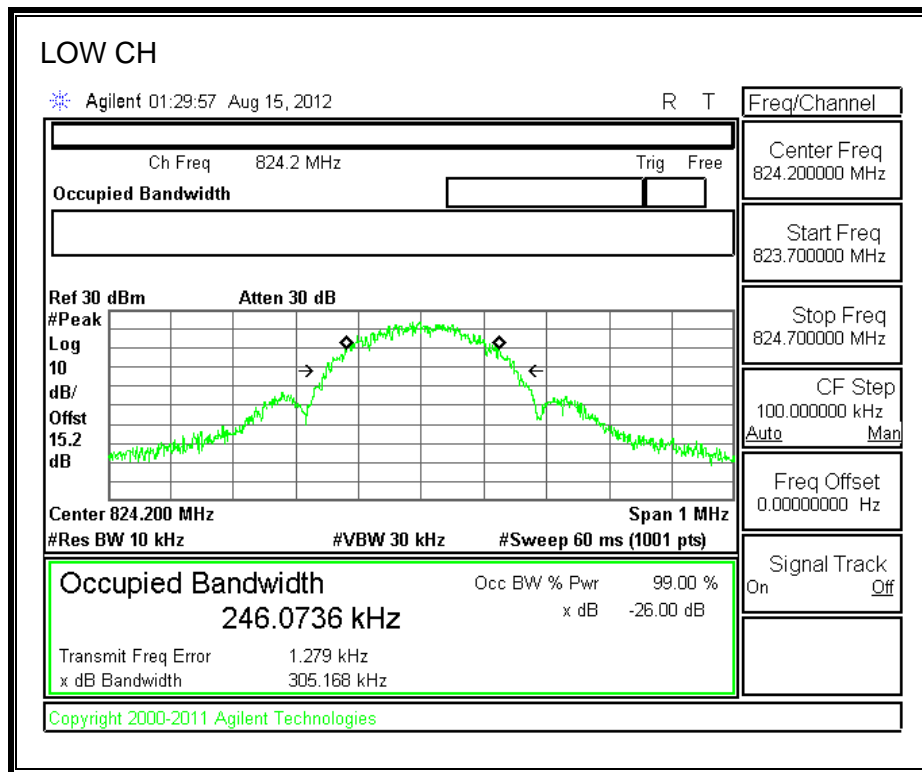
**GPRS1900 BAND**

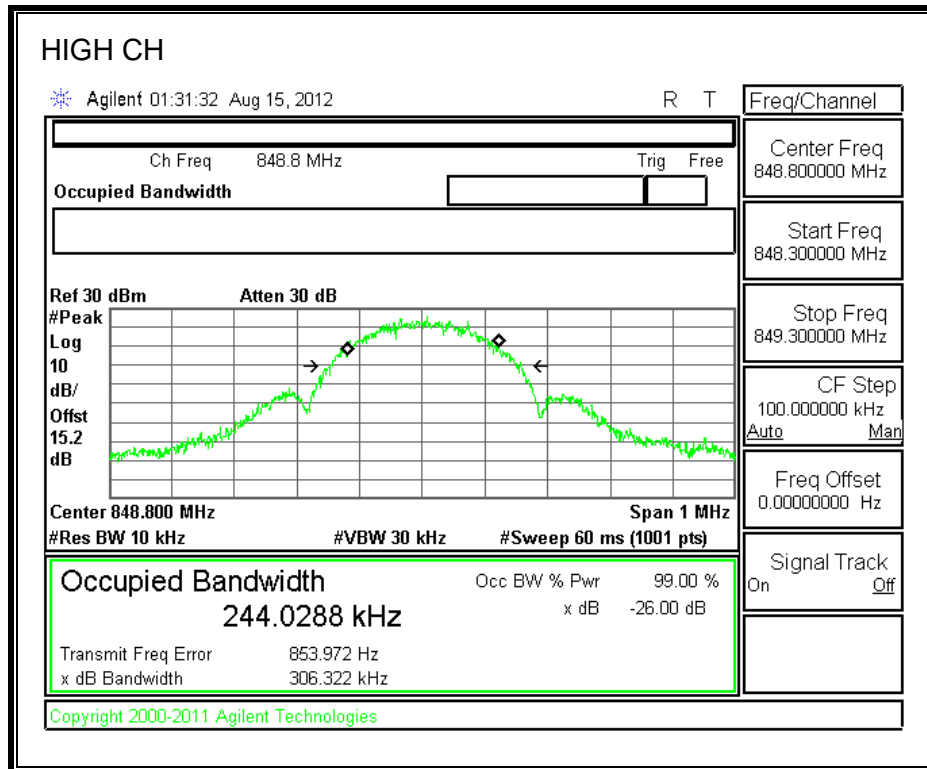




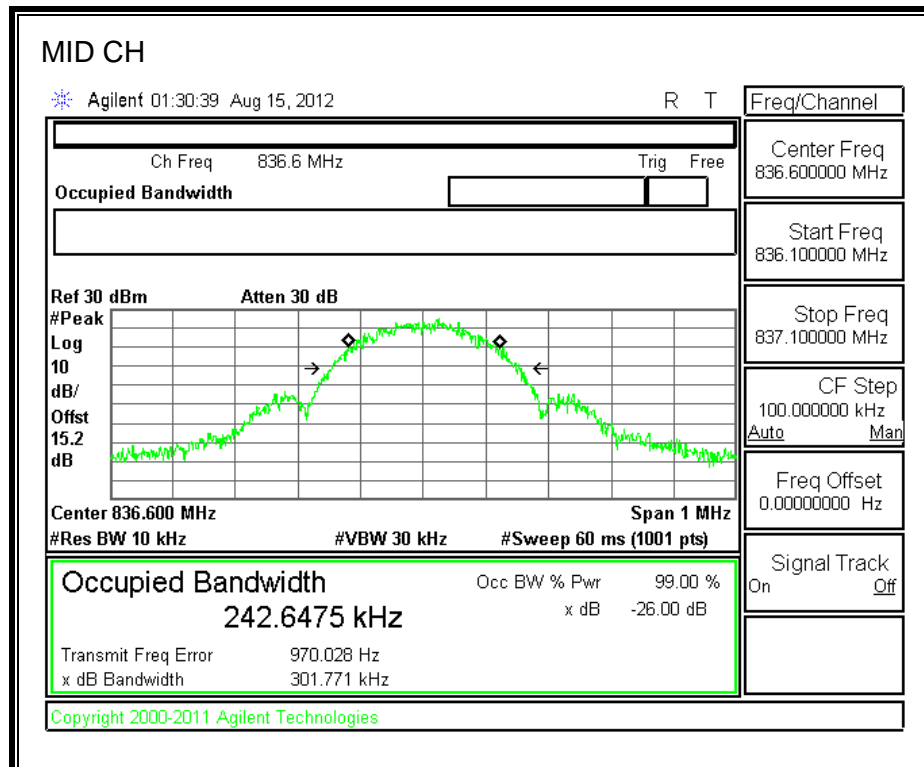
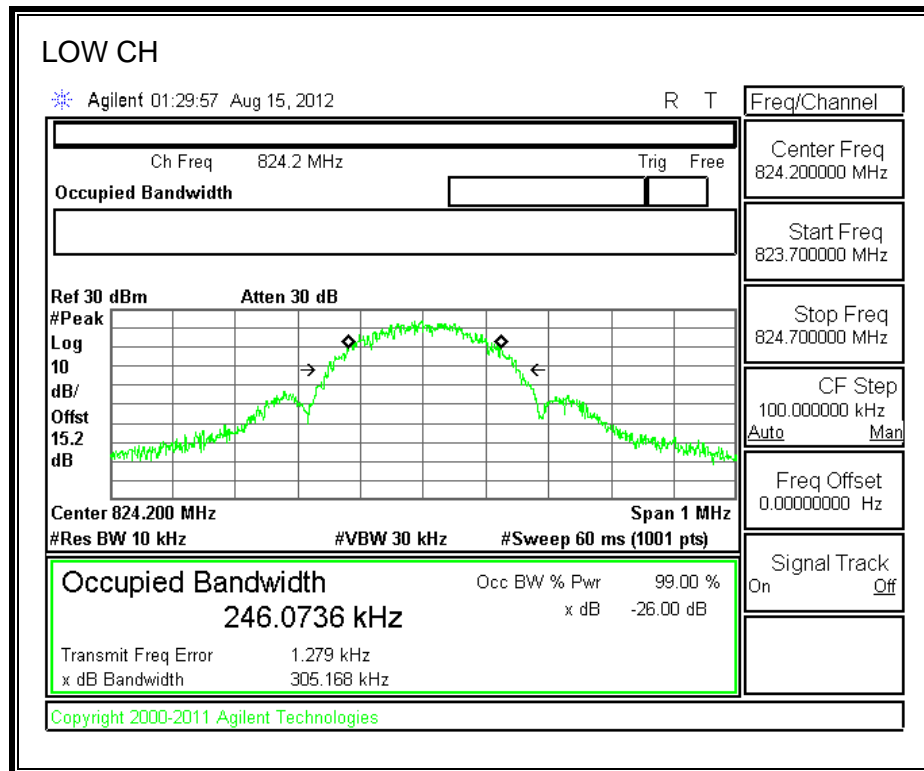


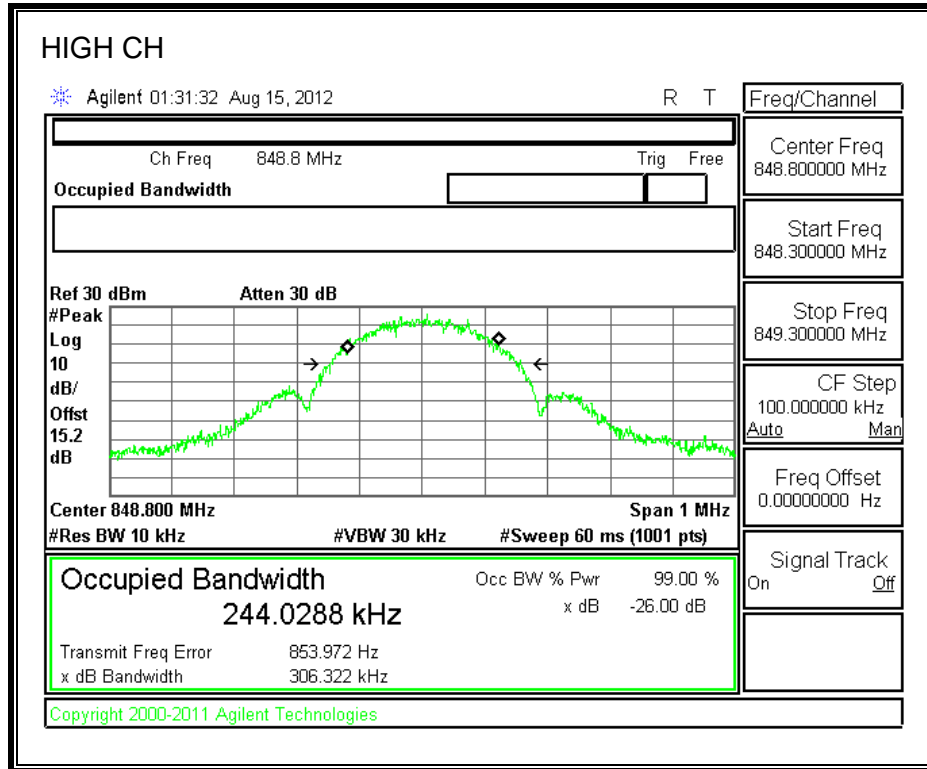
**EGPRS850 BAND**



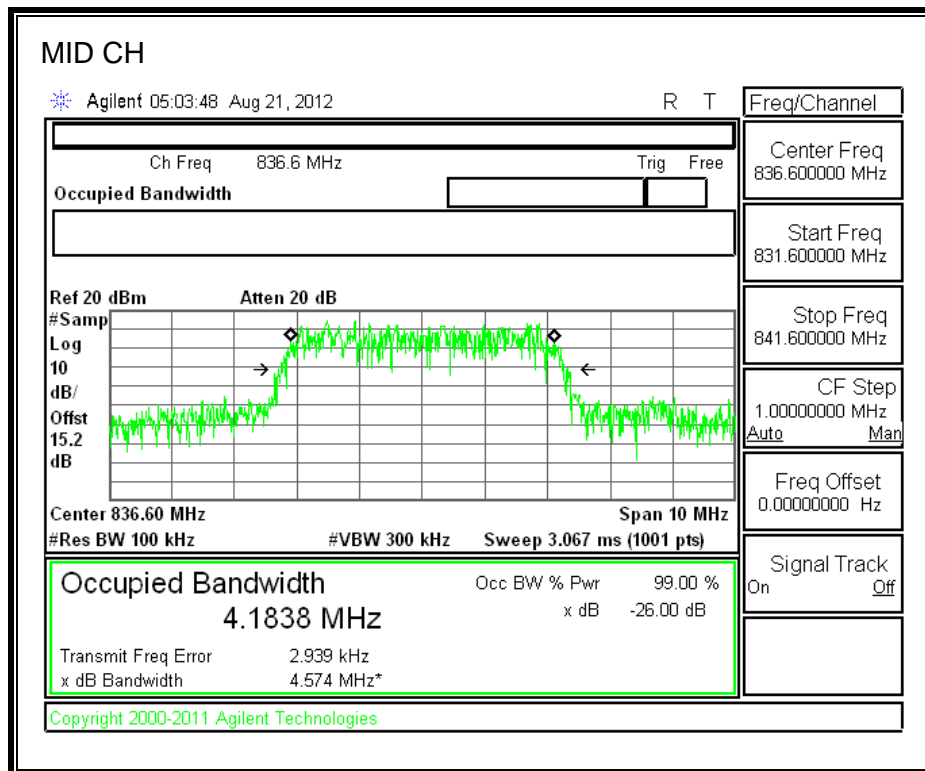
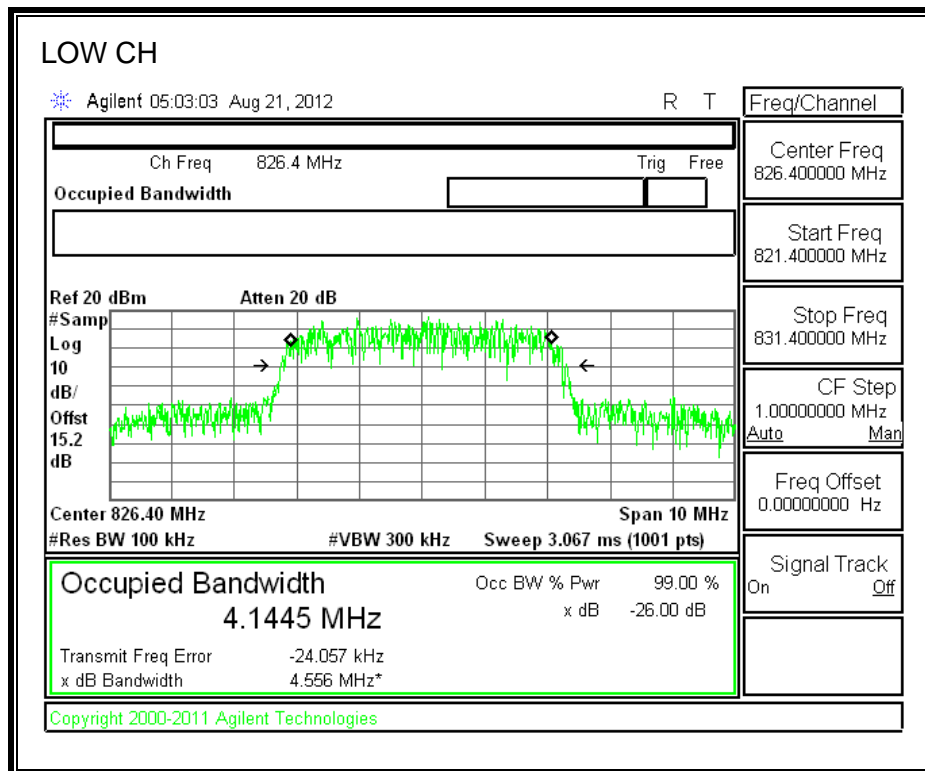


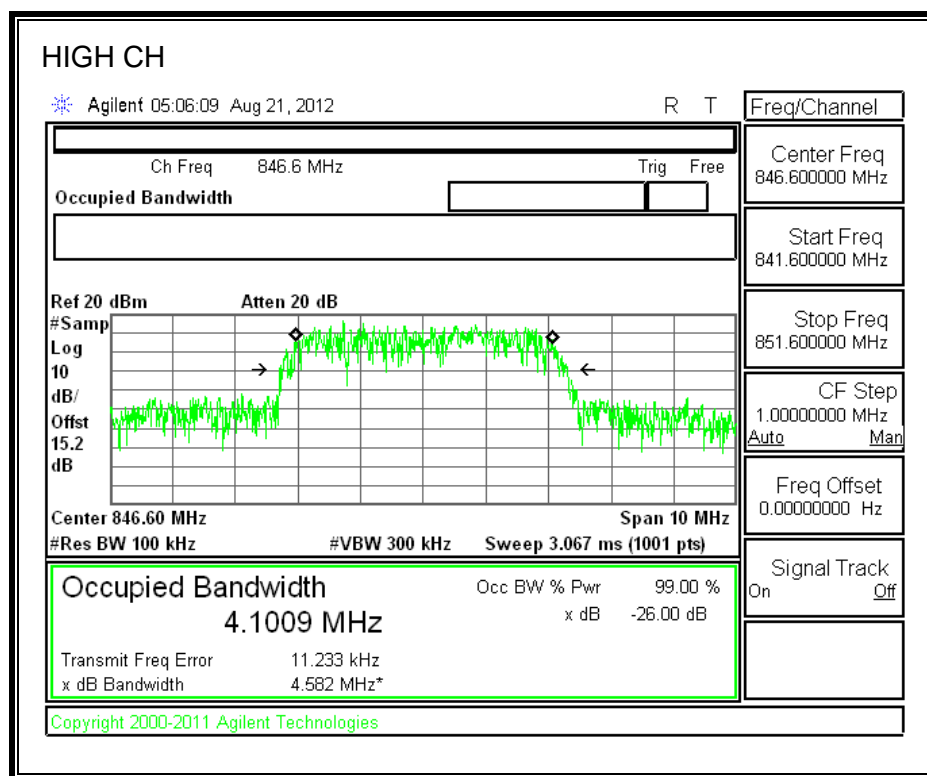
**EGPRS1900 BAND**



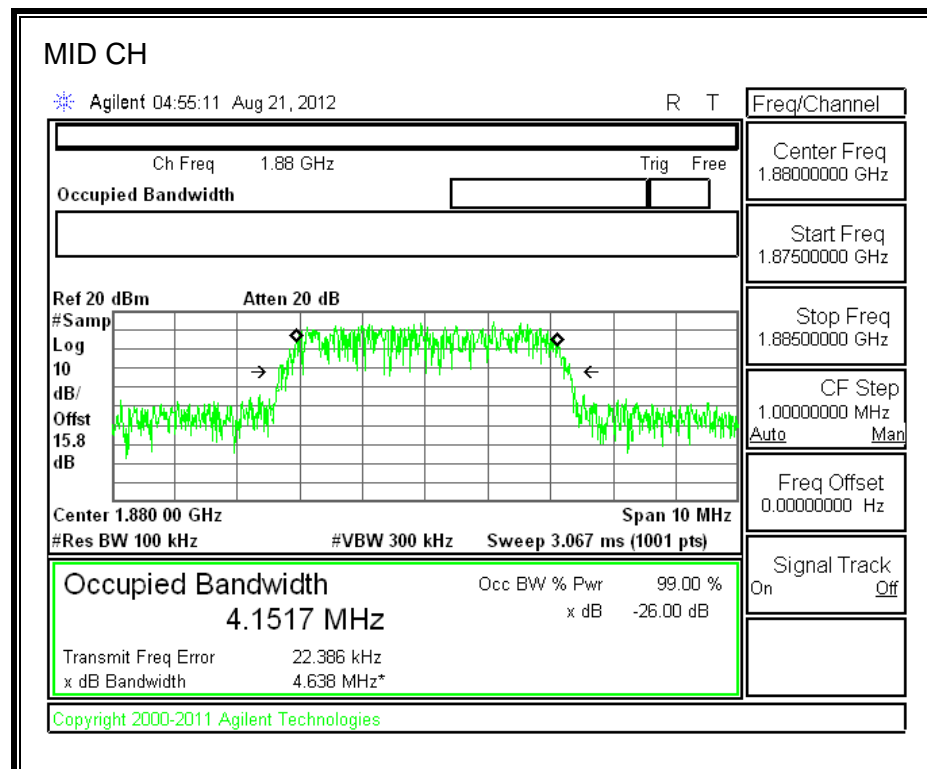
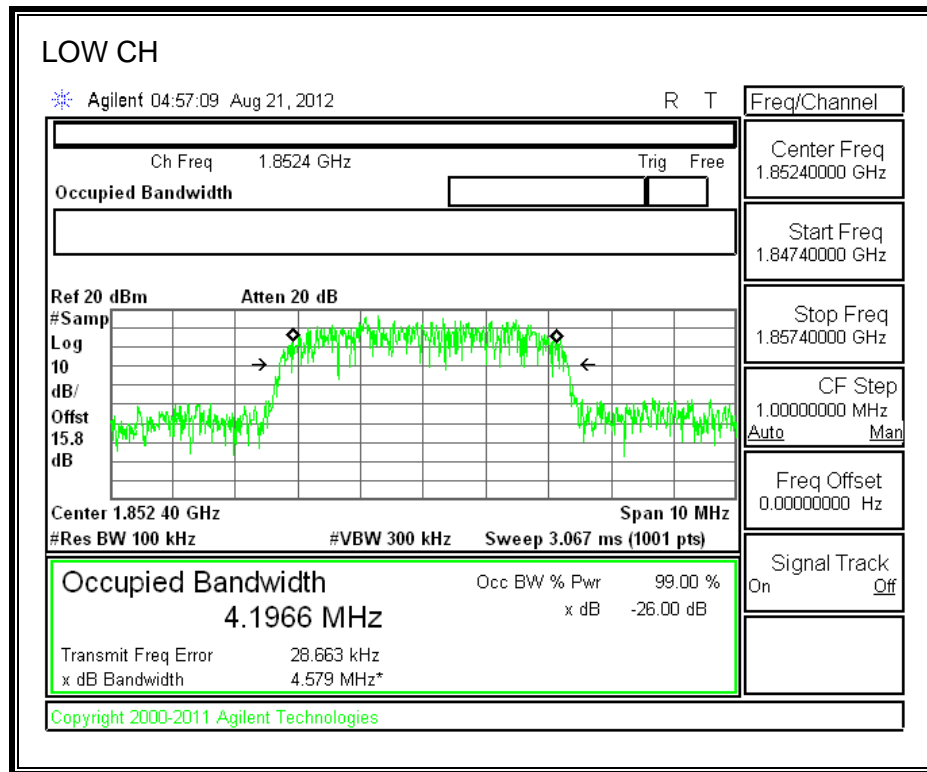


**WCDMA REL 99 CELL BAND**

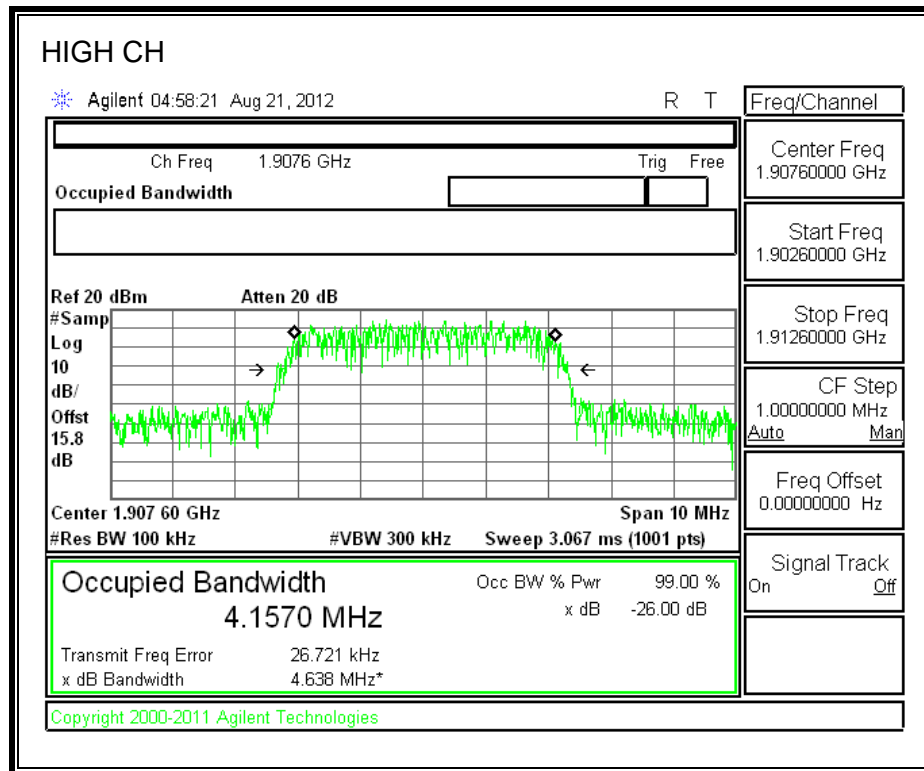




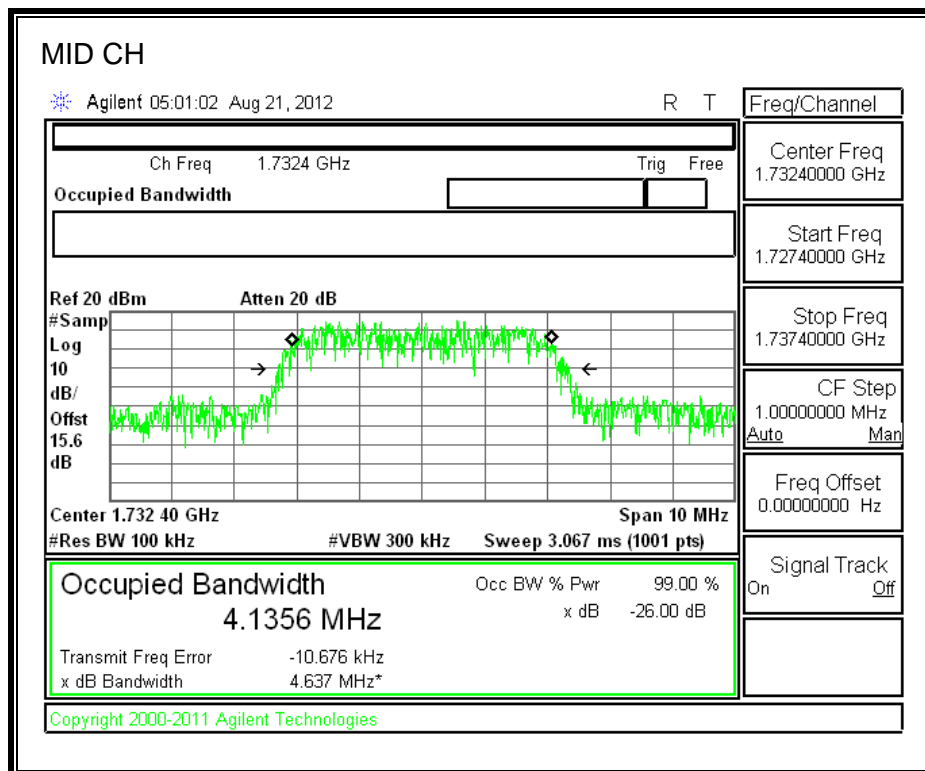
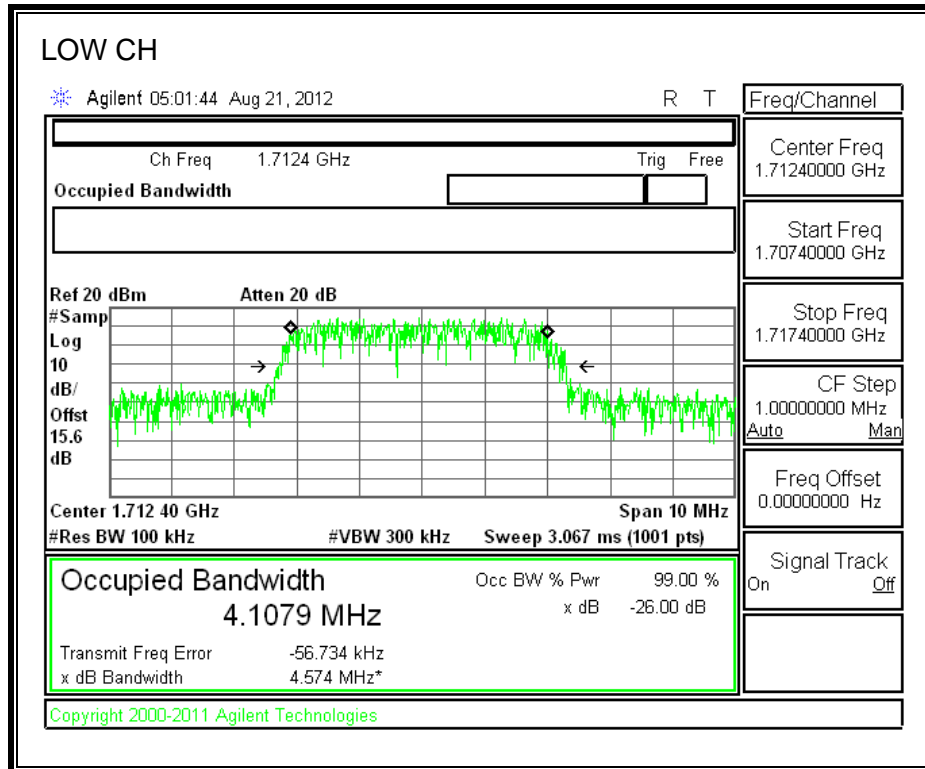
**WCDMA REL 99 PCS BAND**

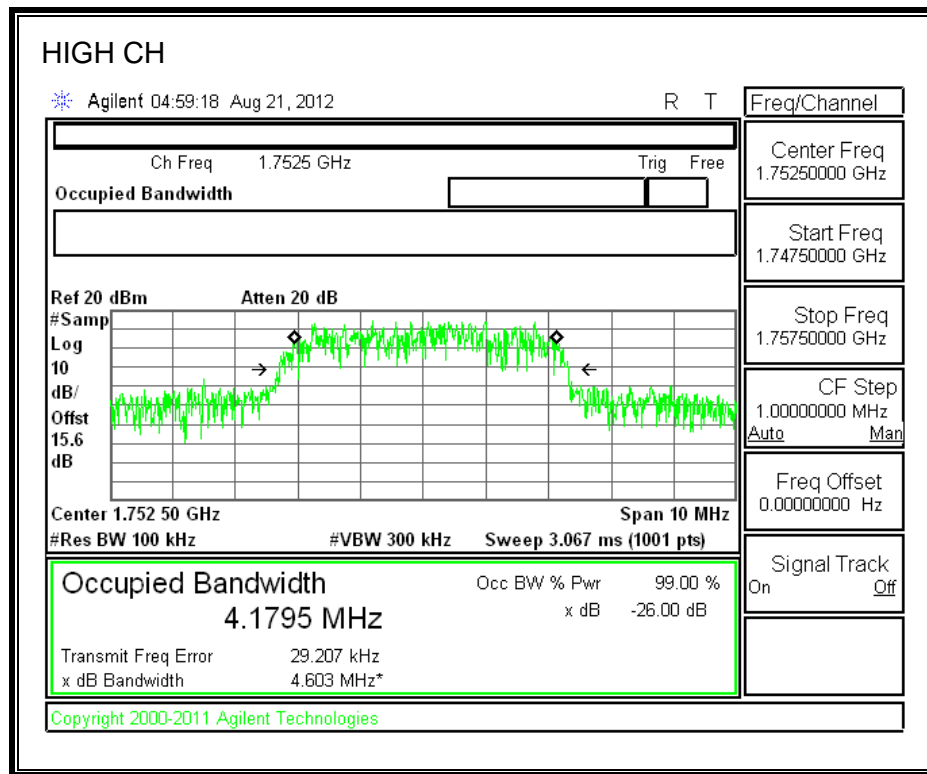




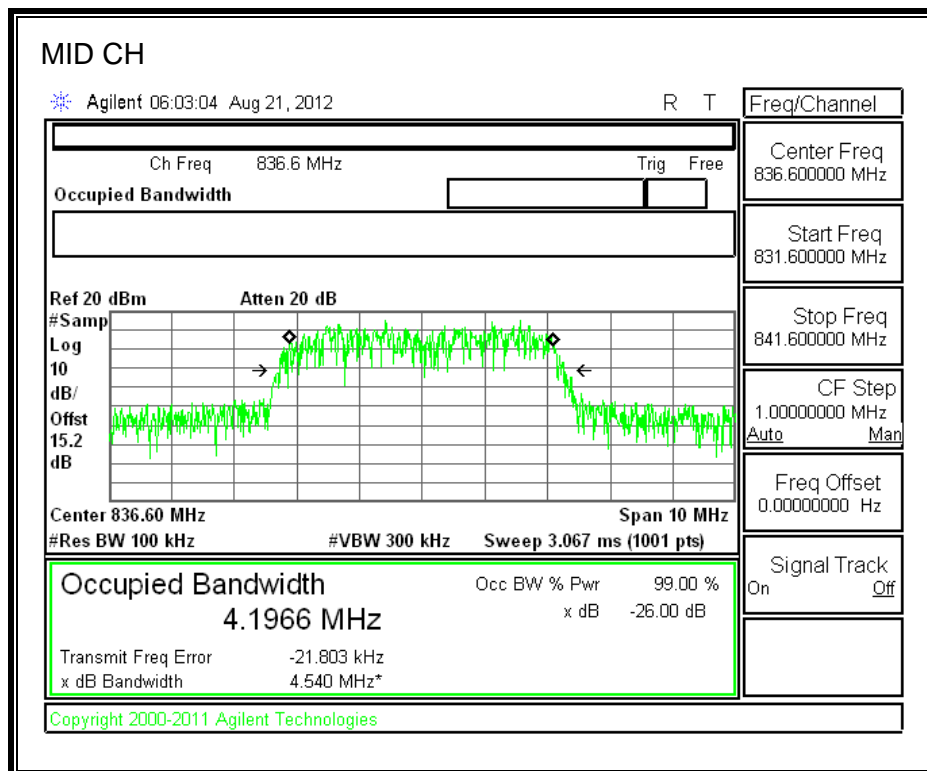
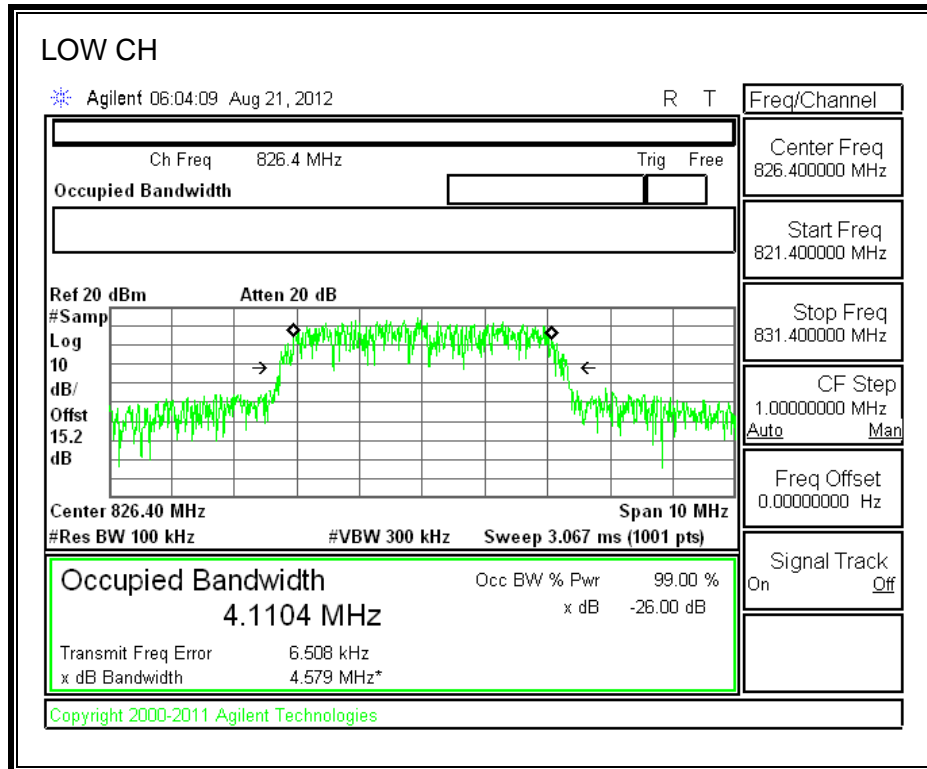


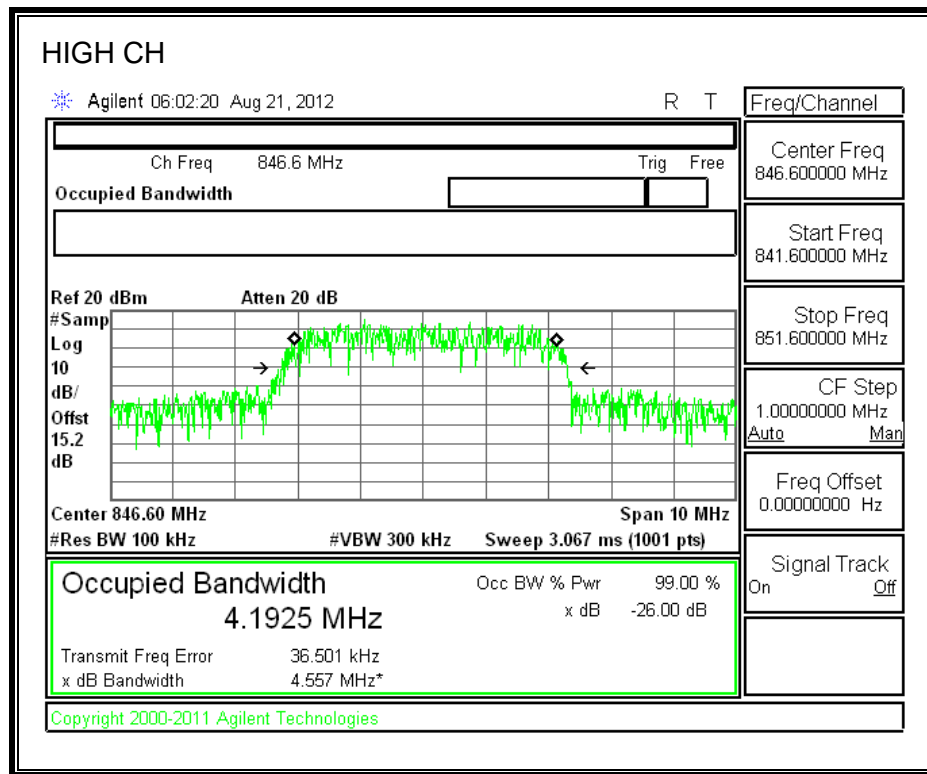
**WCDMA REL 99 AWS BAND**



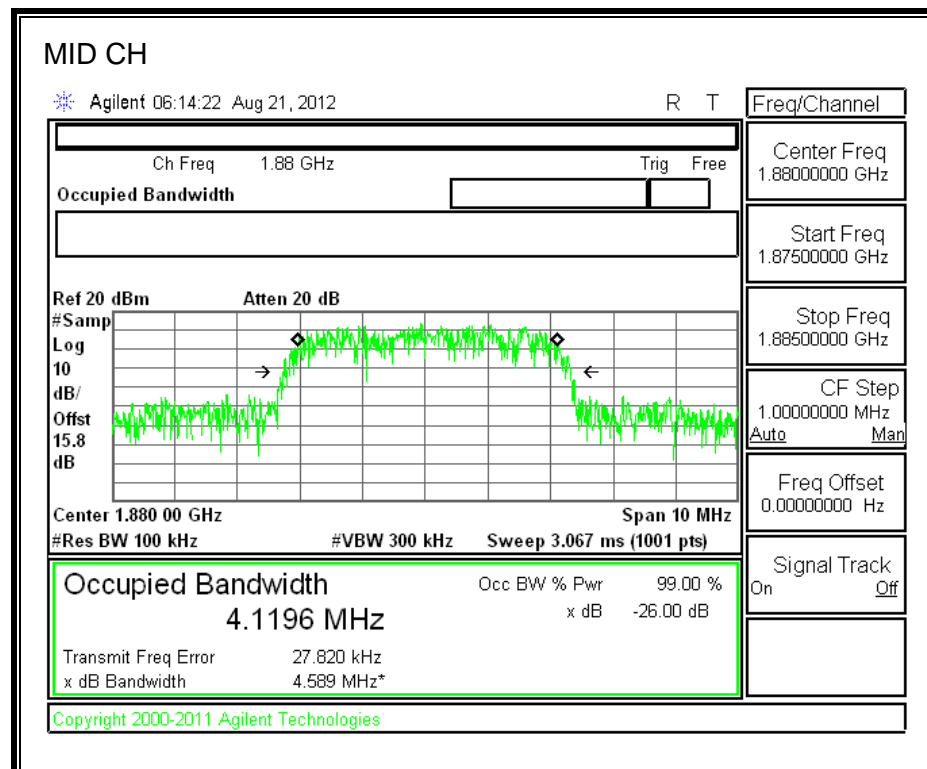
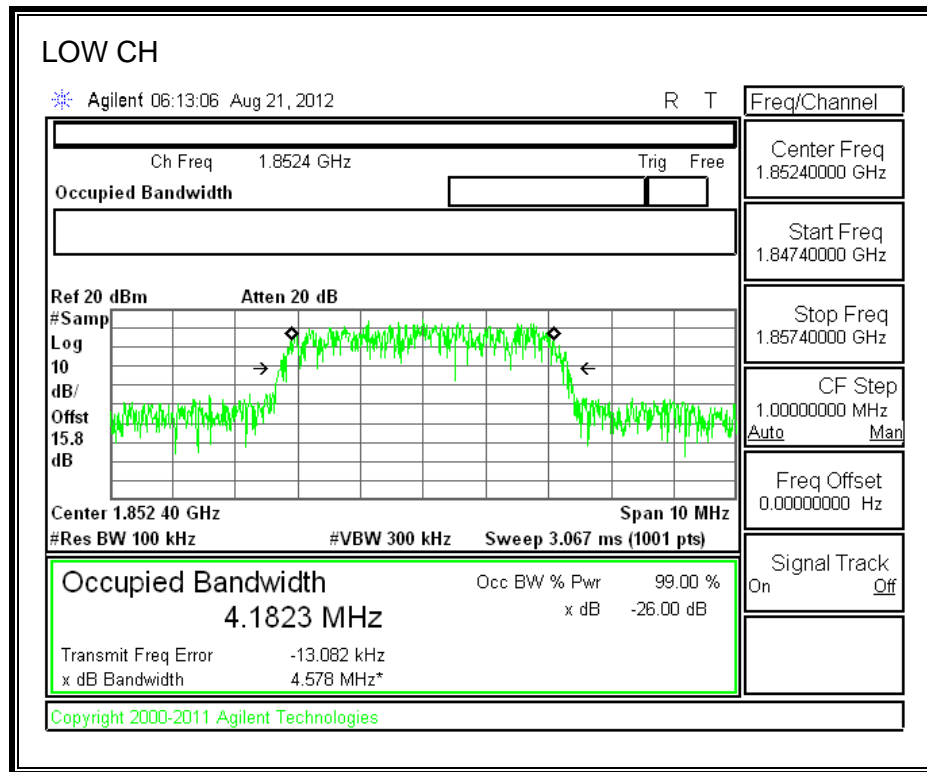


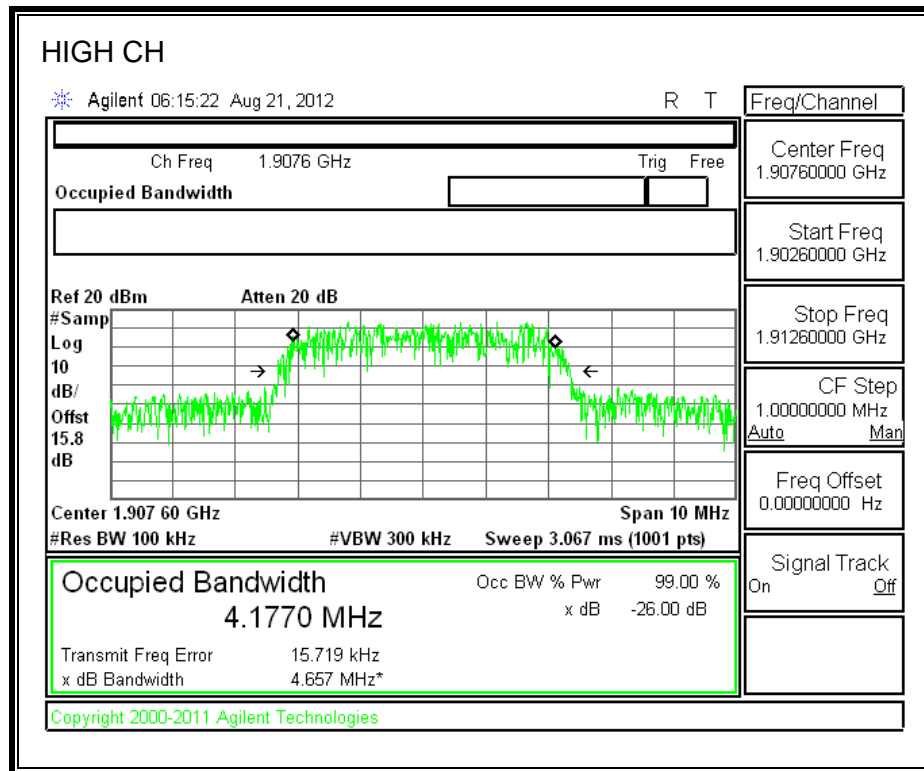
**HSUPA REL 6, CELL BAND**



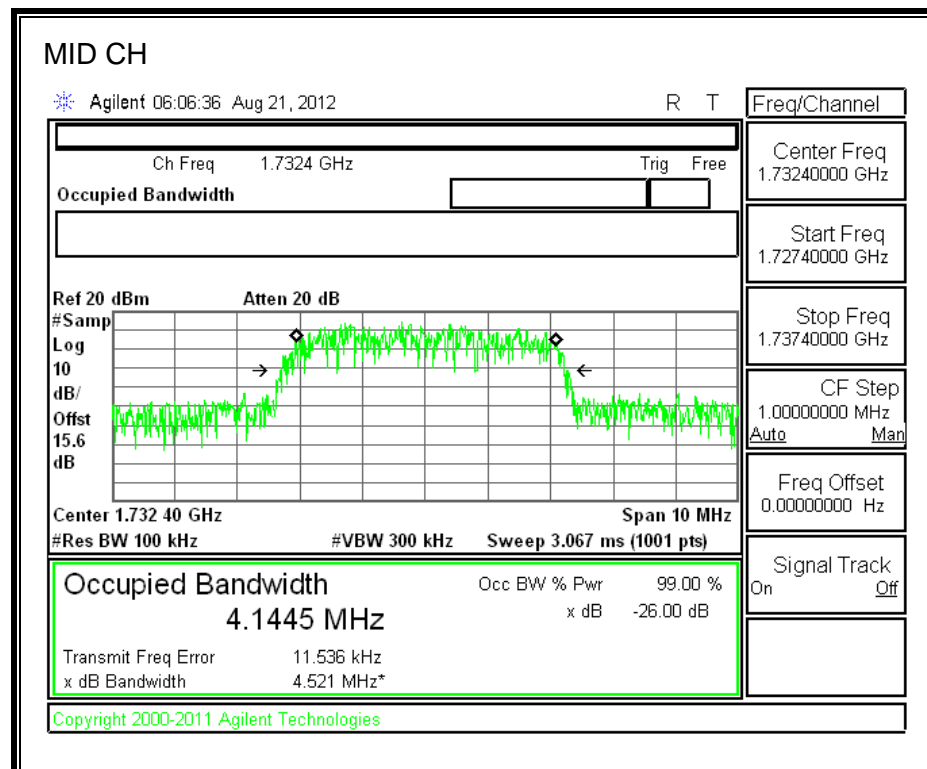
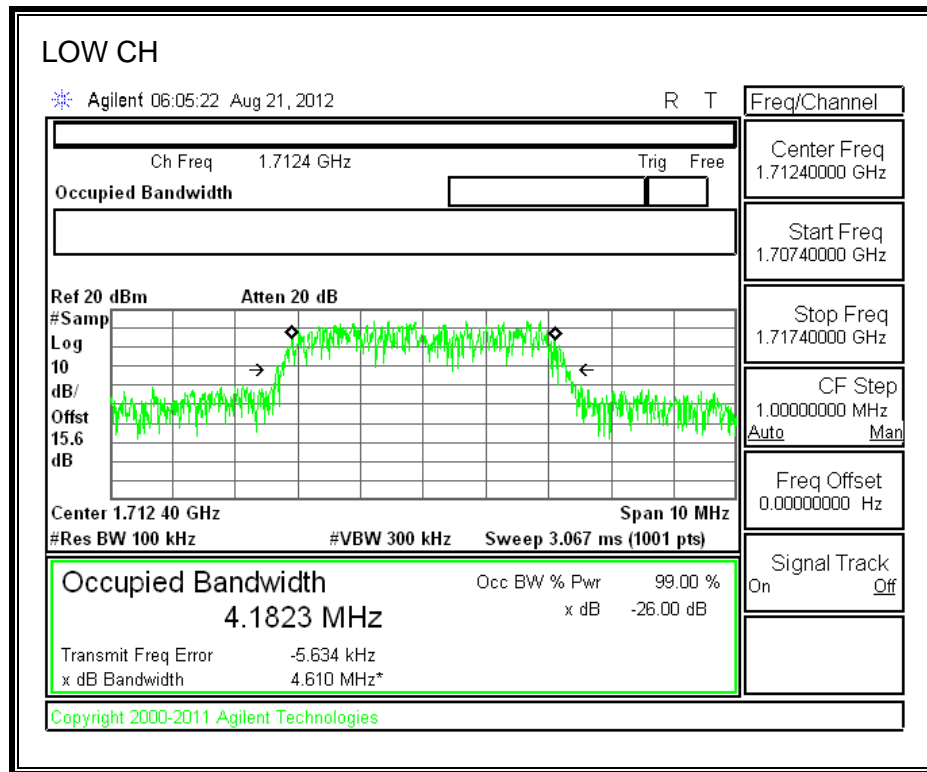


**HSUPA REL 6, PCS BAND**

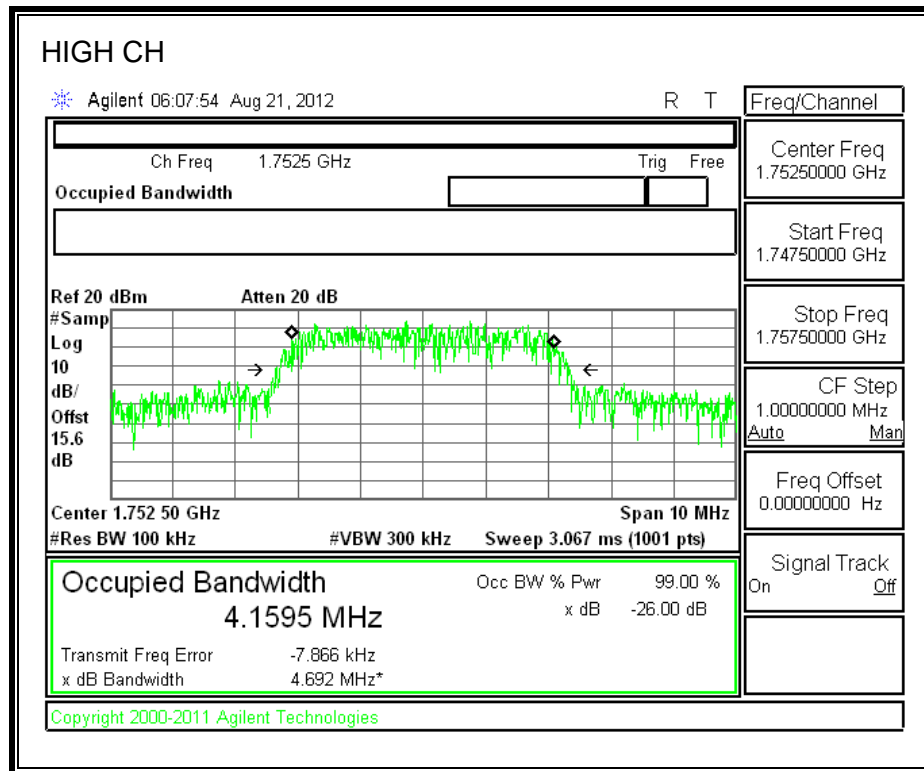




**HSUPA REL 6, AWS BAND**







### **8.1.1. 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, 1710, 1755, 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.

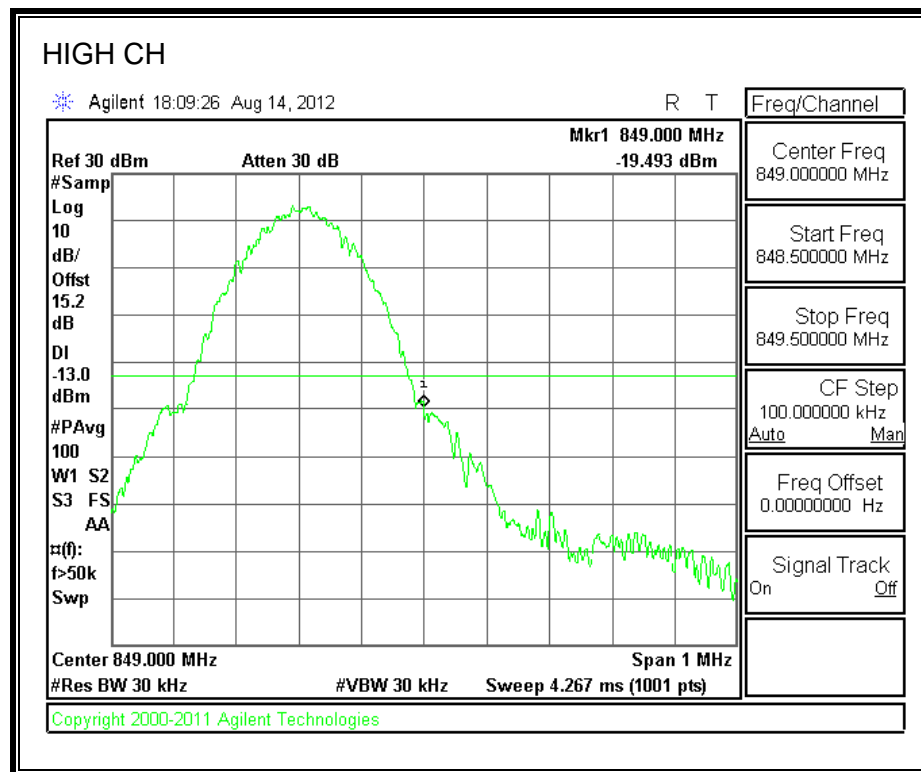
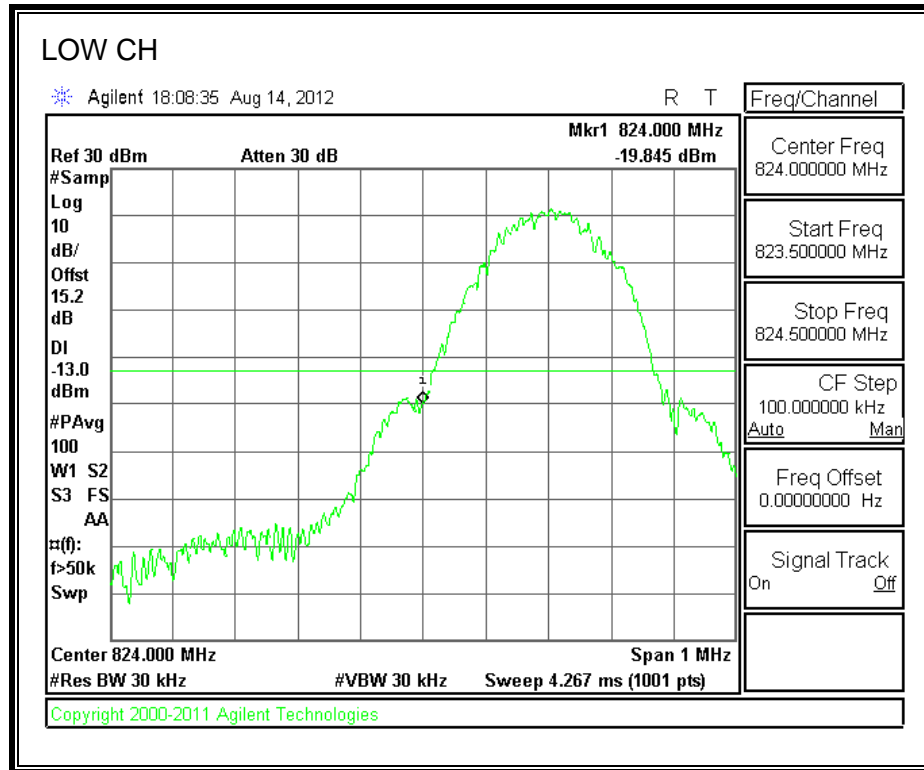
#### **MODES TESTED**

- GPRS
- EGPRS
- WCDMA REL. 99
- HSUPA REL. 6

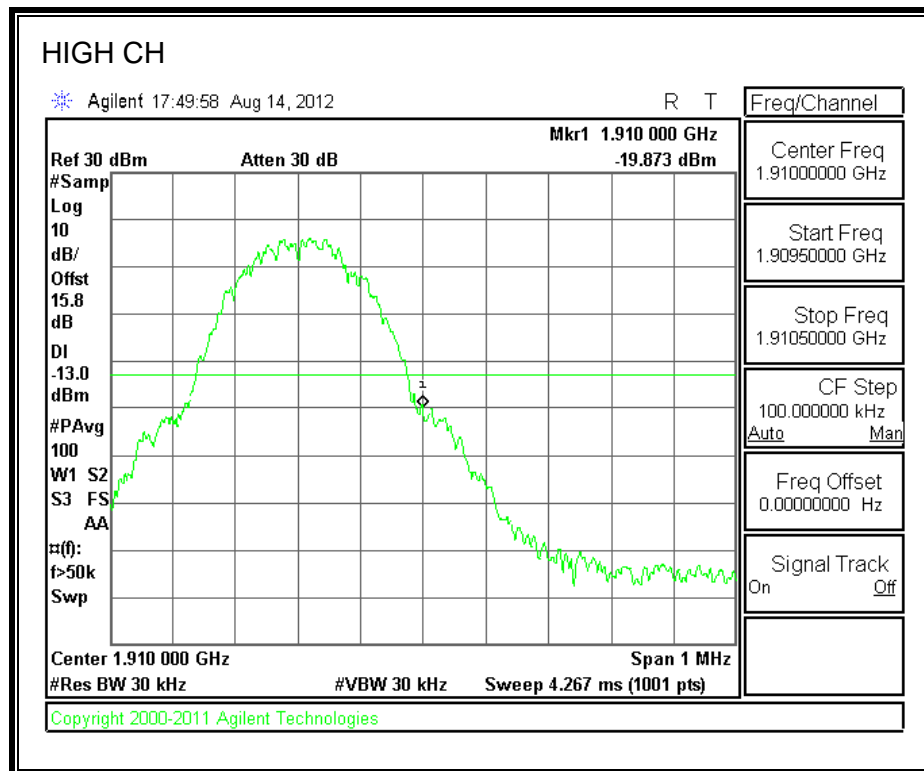
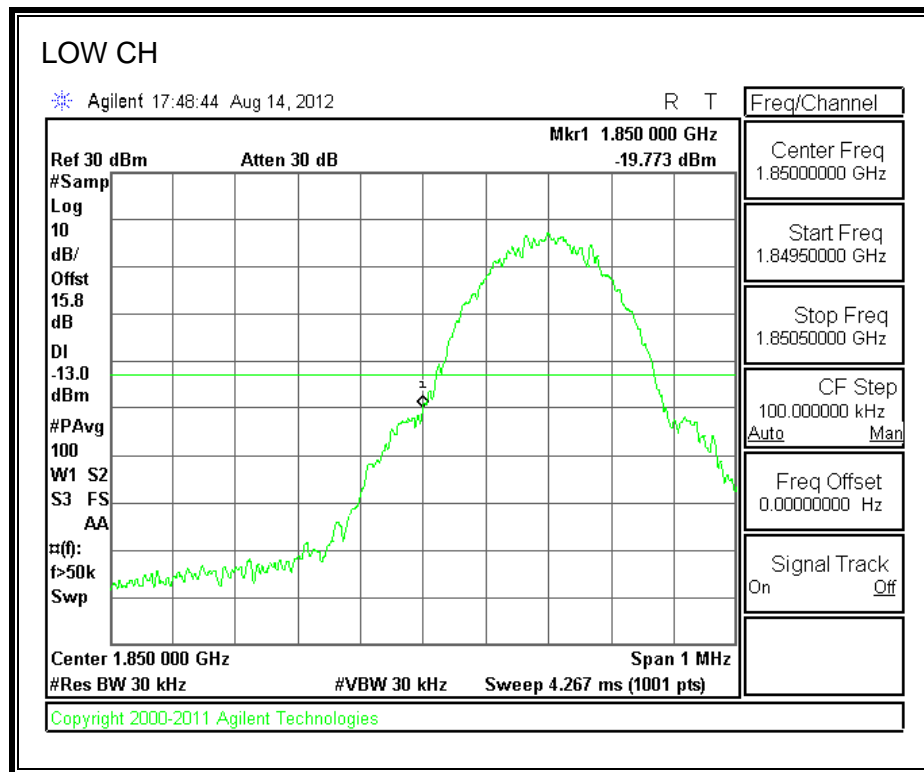
#### **RESULTS**

**BANDEDGE**

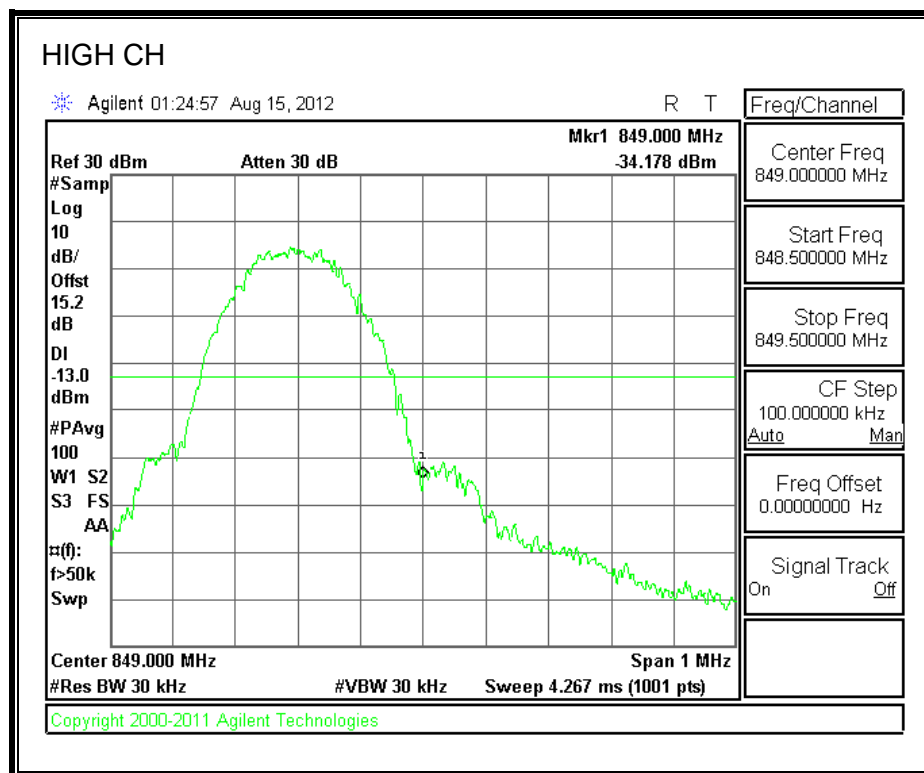
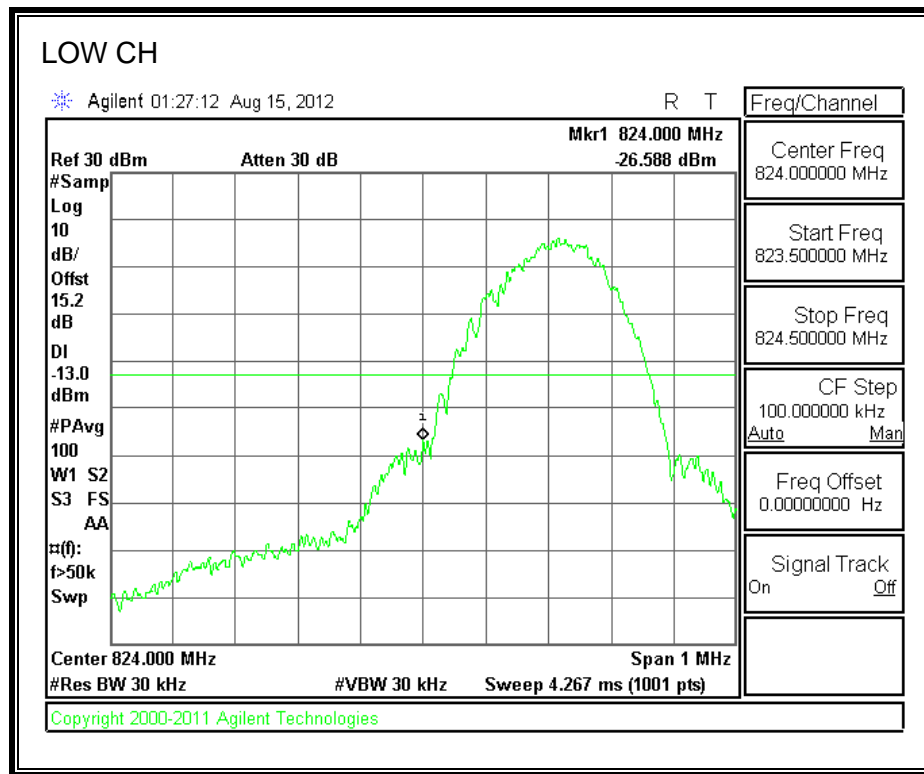
**GPRS850 BAND**



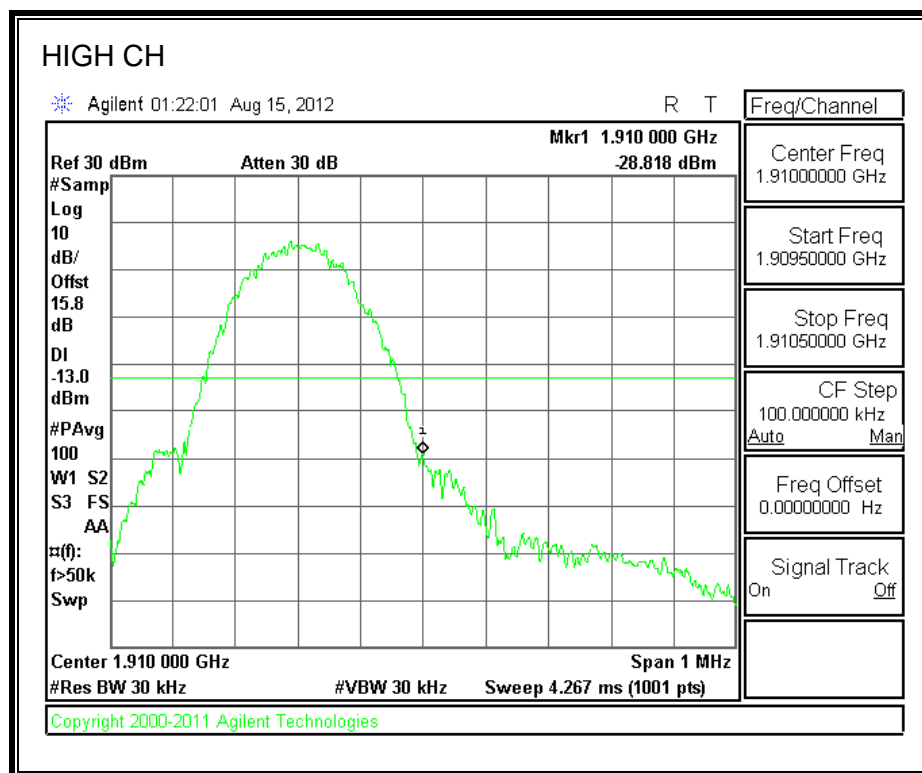
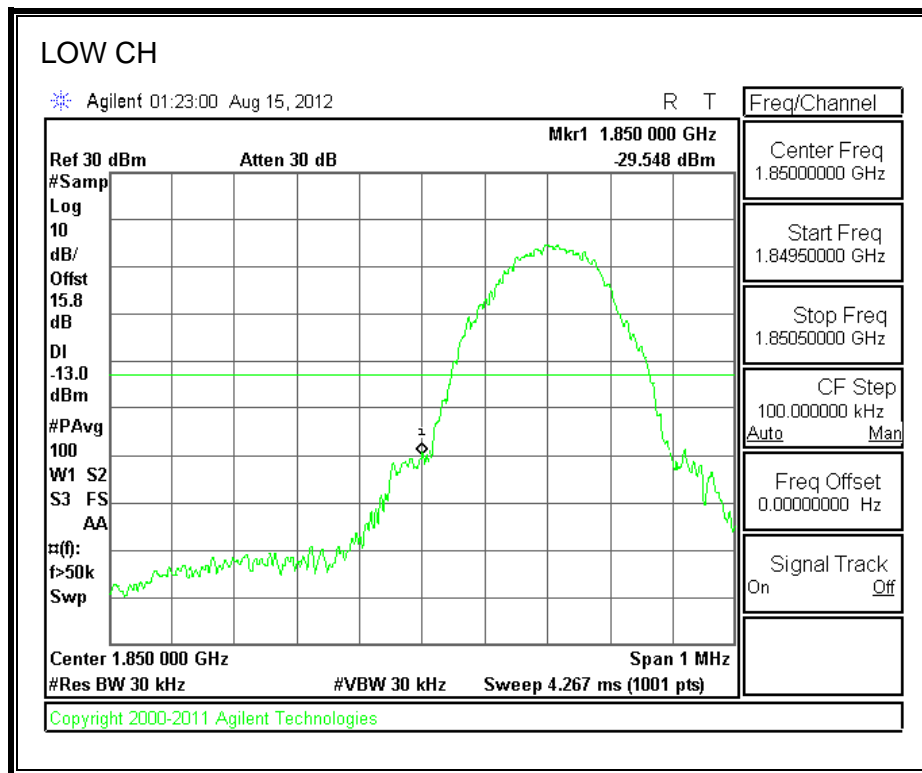
**GPRS1900 BAND**



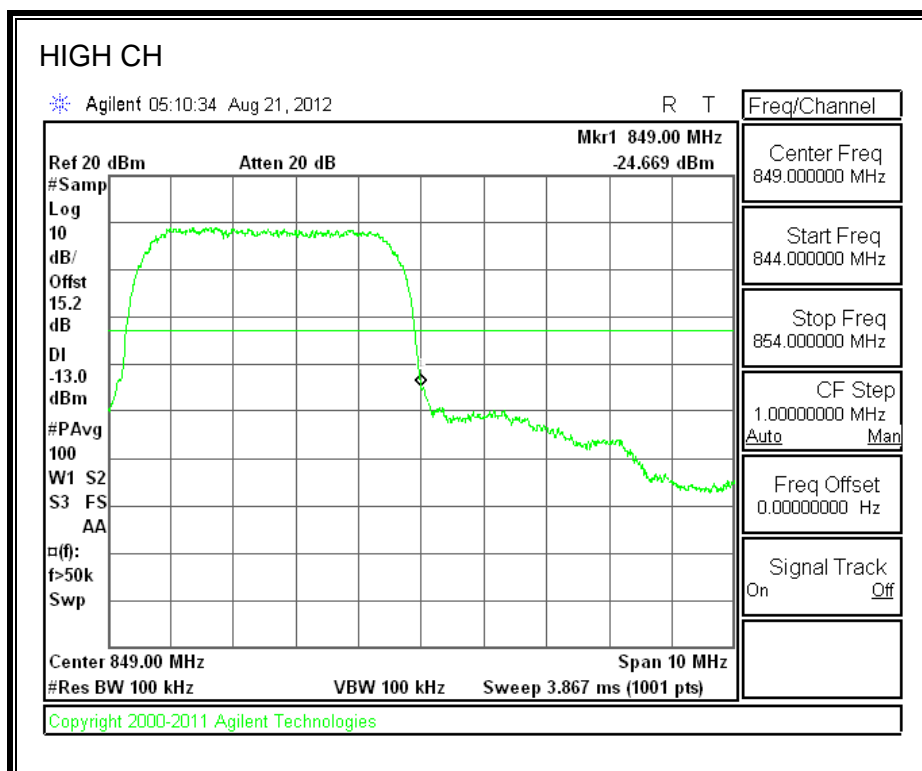
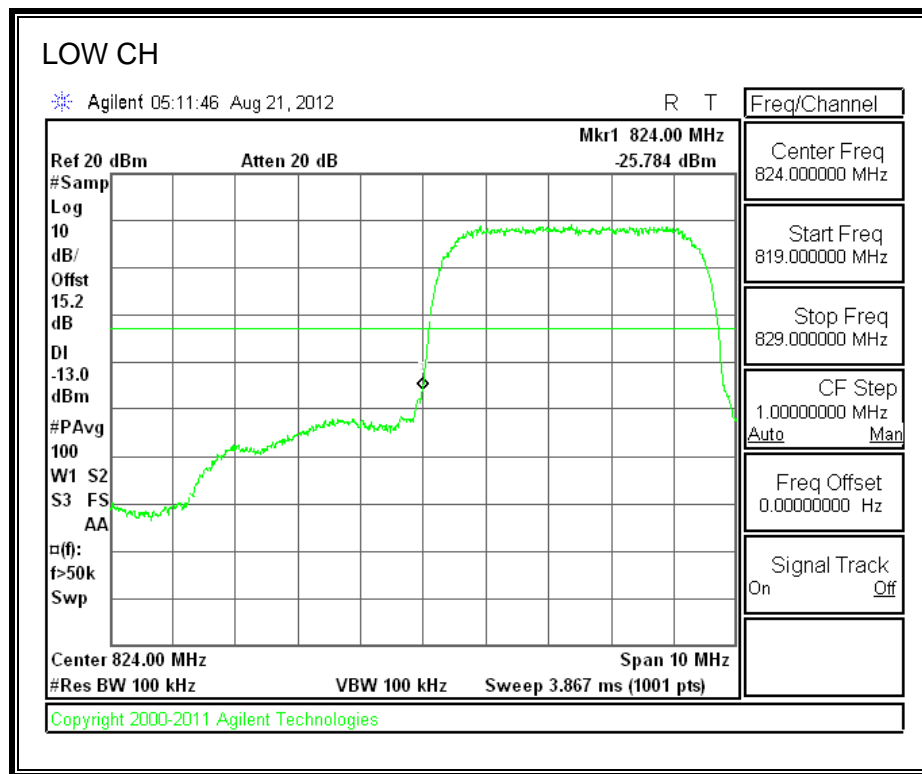
**EGPRS850 BAND**



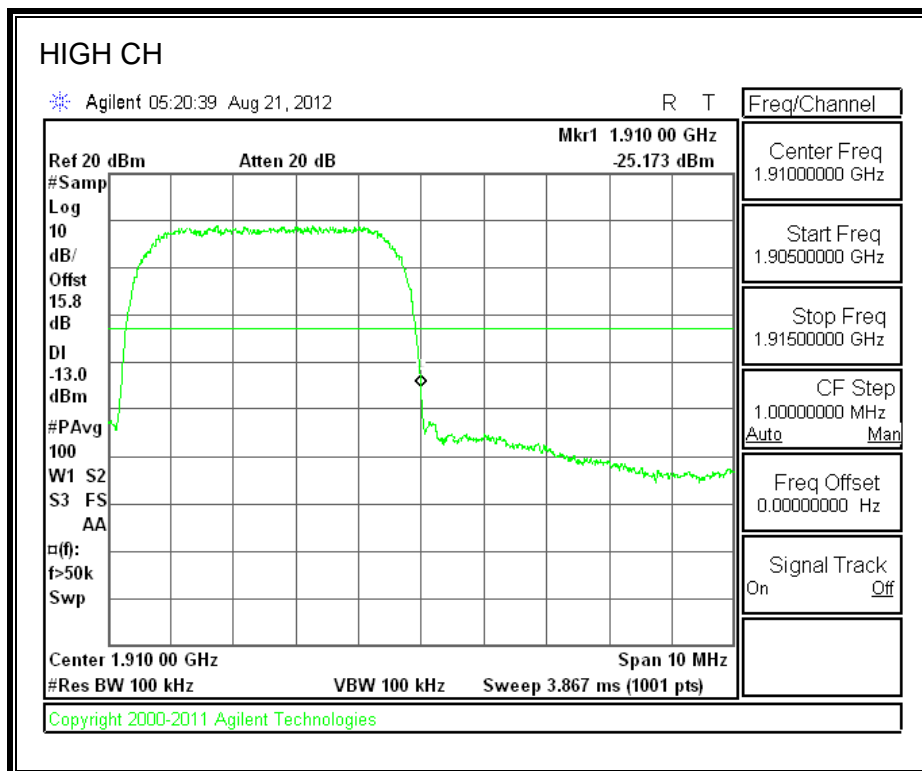
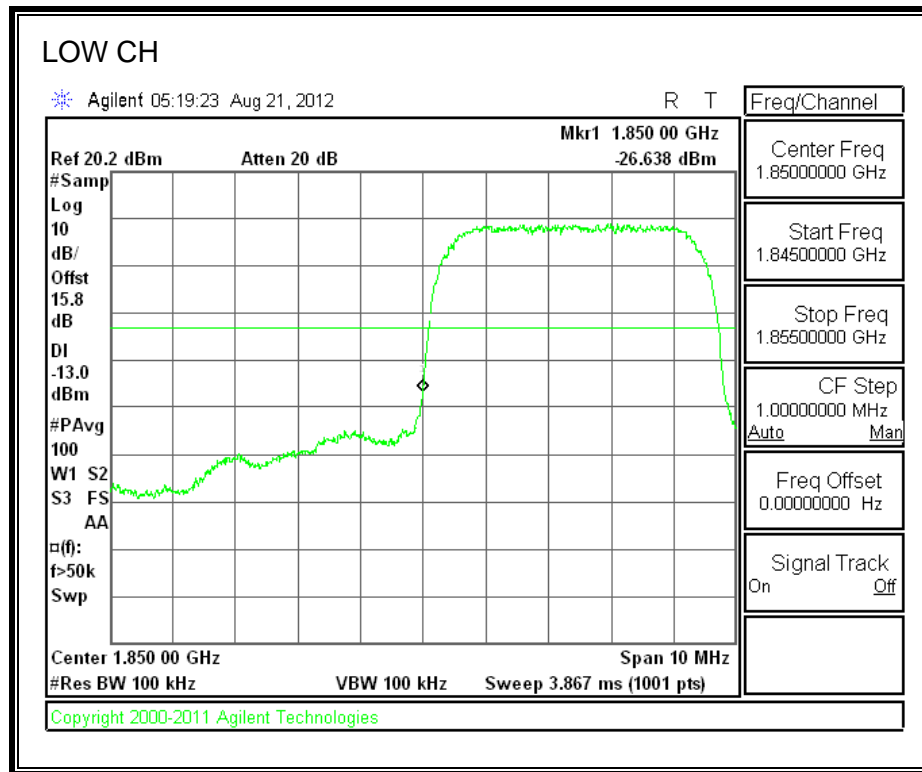
**EGPRS1900 BAND**



**WCDMA REL 99 CELL BAND**

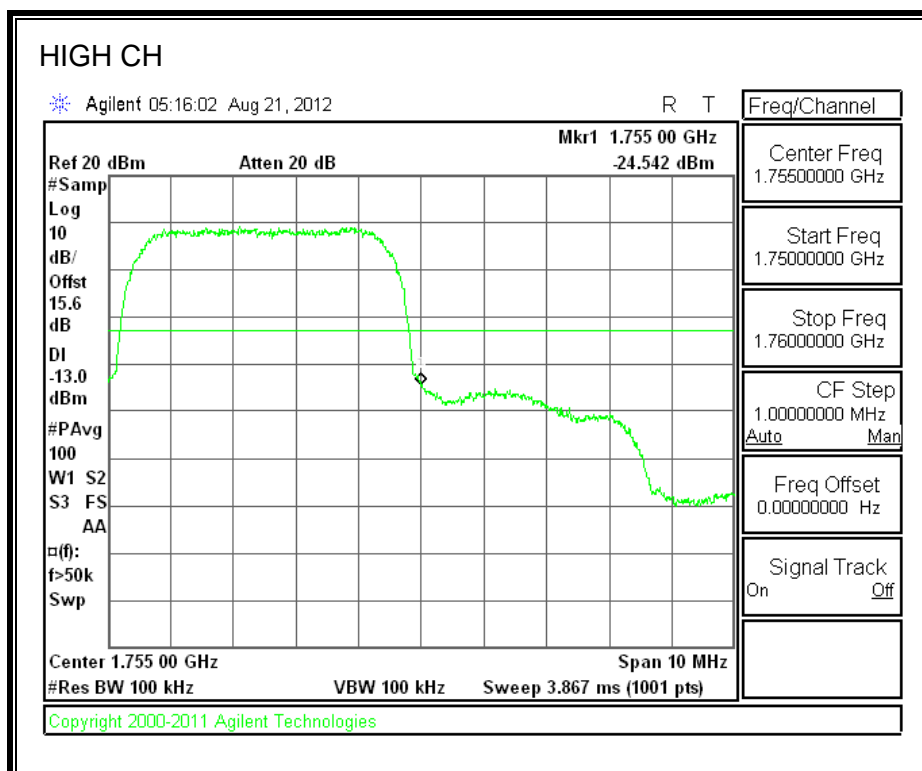
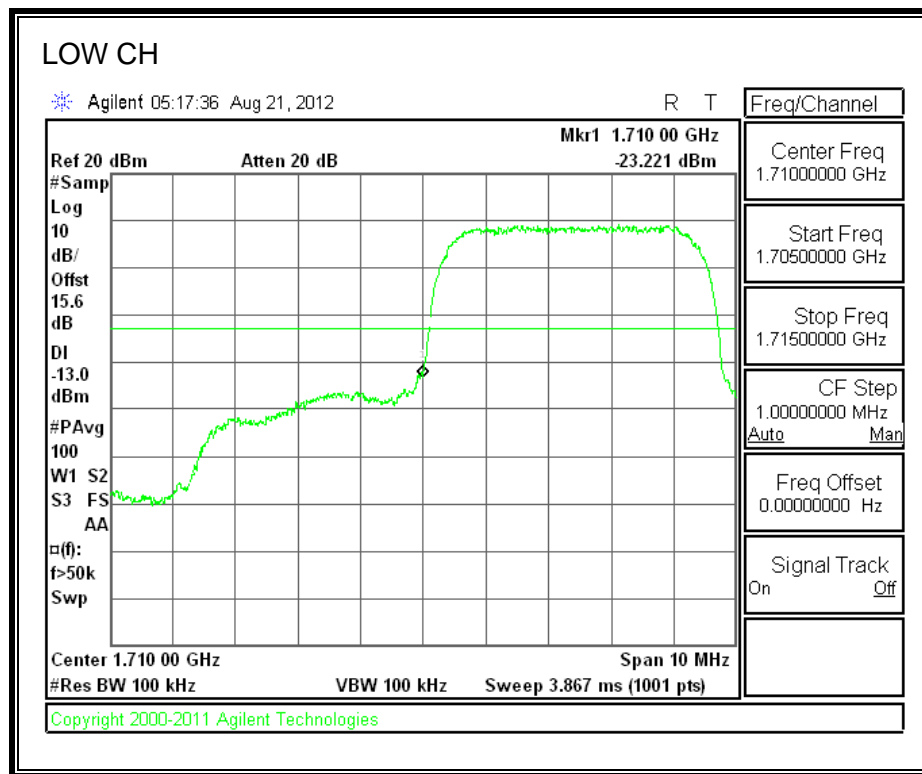


**WCDMA REL 99 PCS BAND**

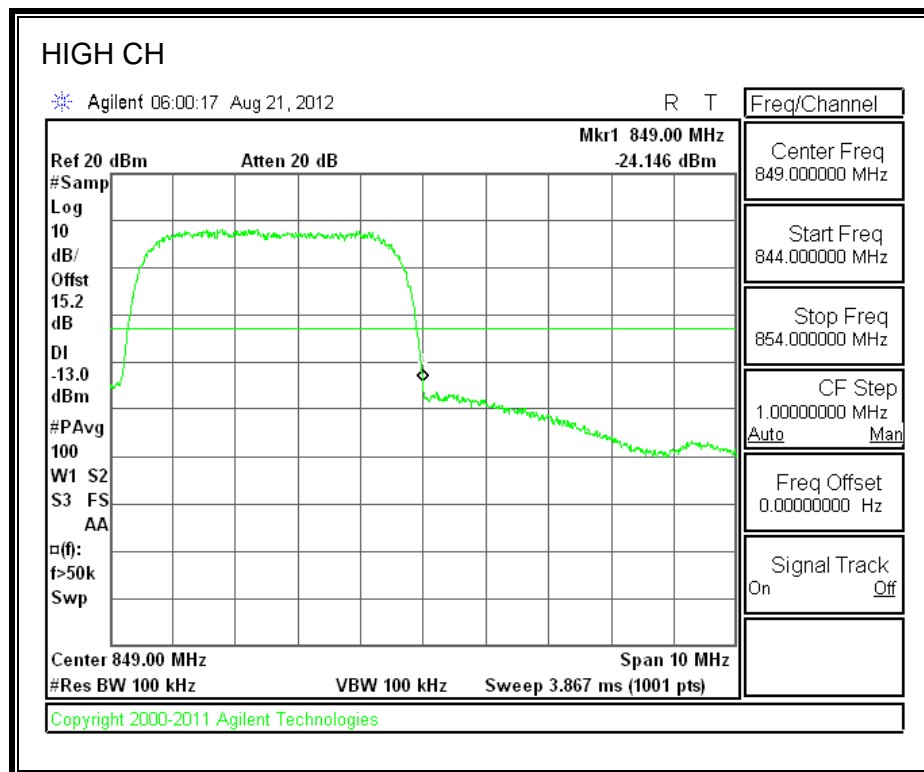
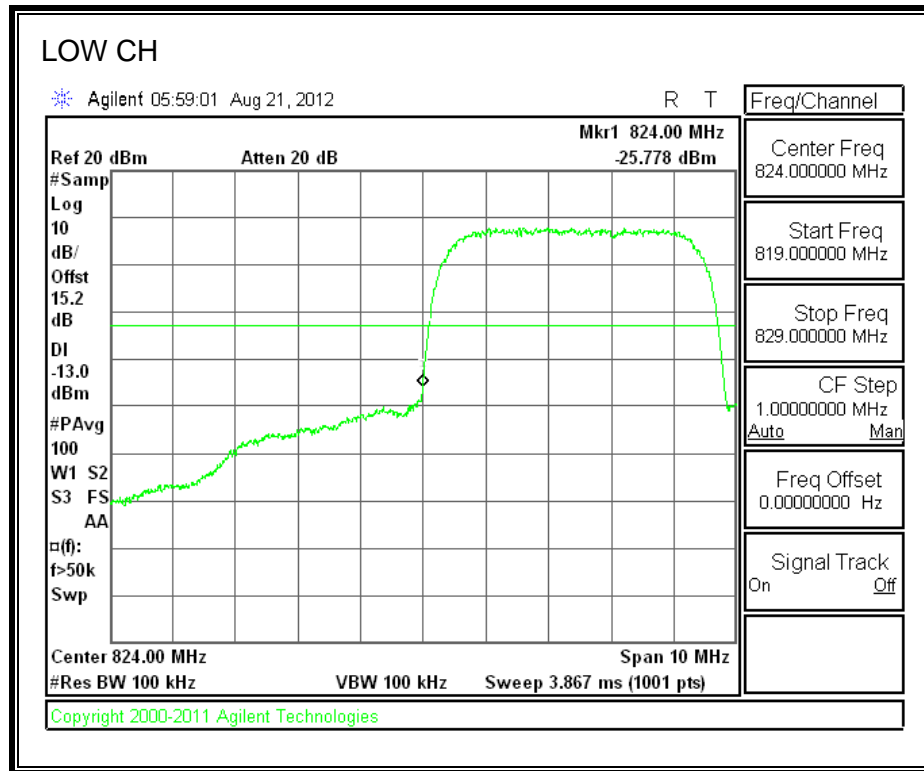




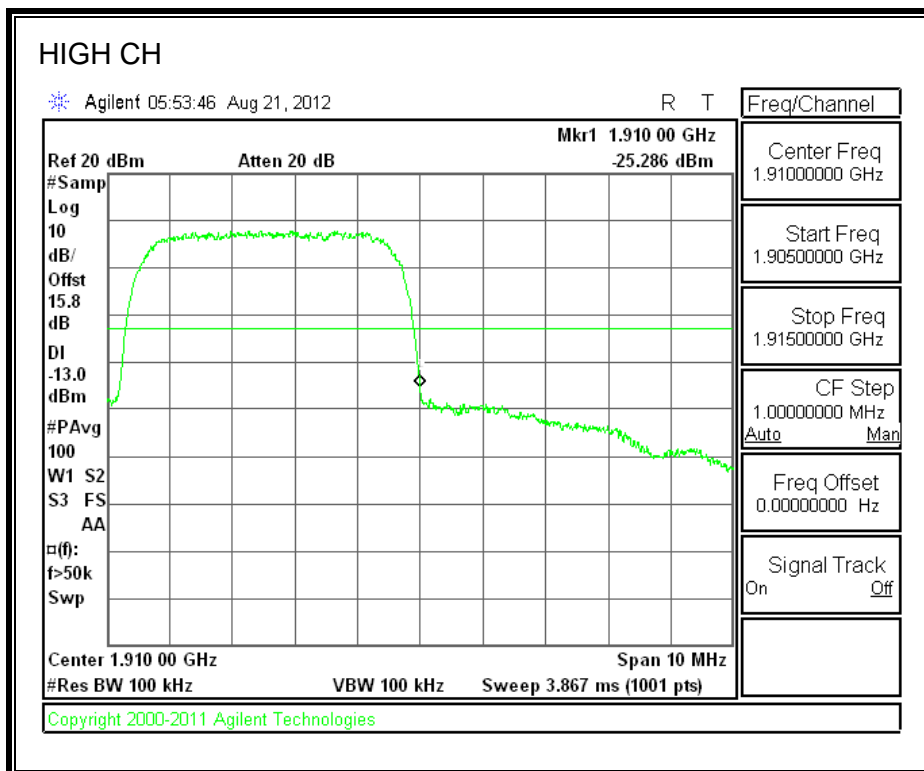
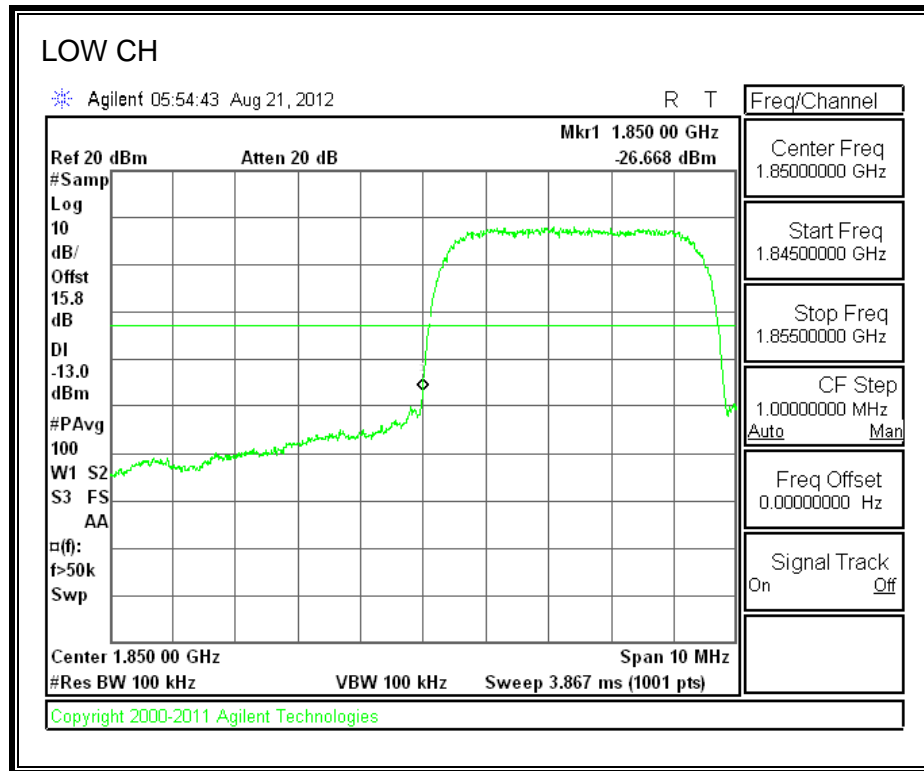
**WCDMA REL 99 AWS BAND**



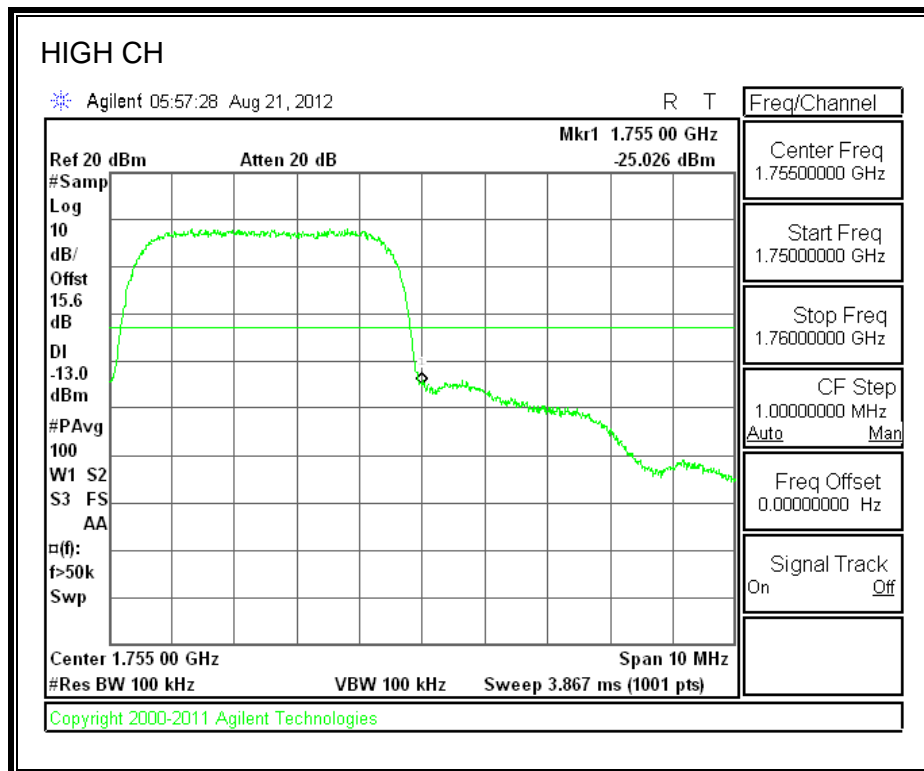
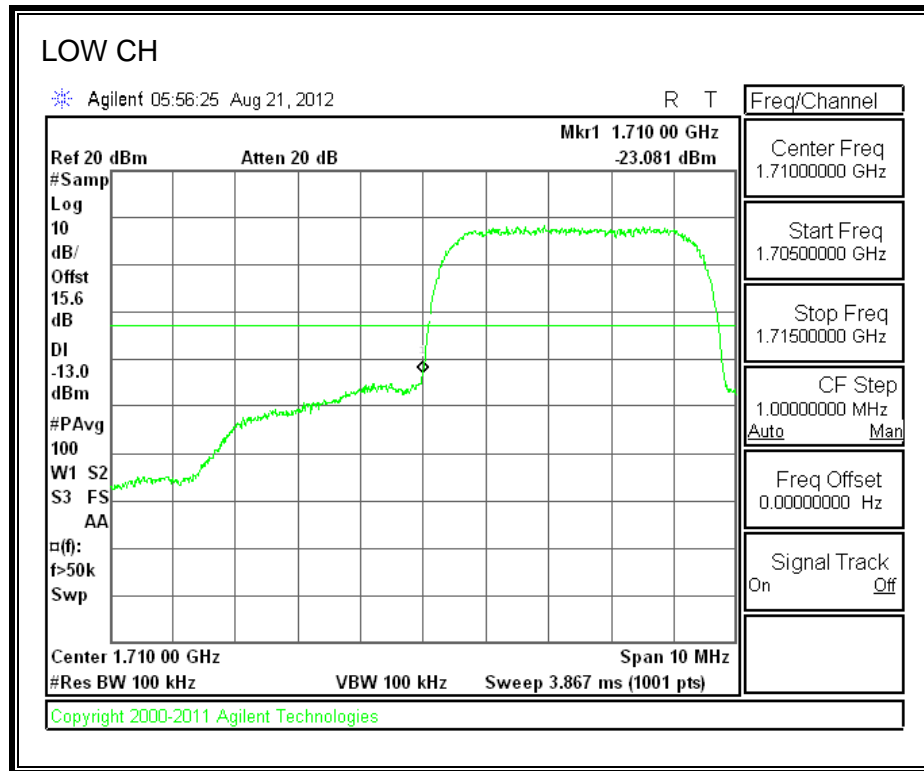
**HSUPA Rel 6 CELL BAND**



**HSUPA Rel 6 PCS BAND**



**HSUPA Rel 6 AWS BAND**



## **8.1.2. 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.

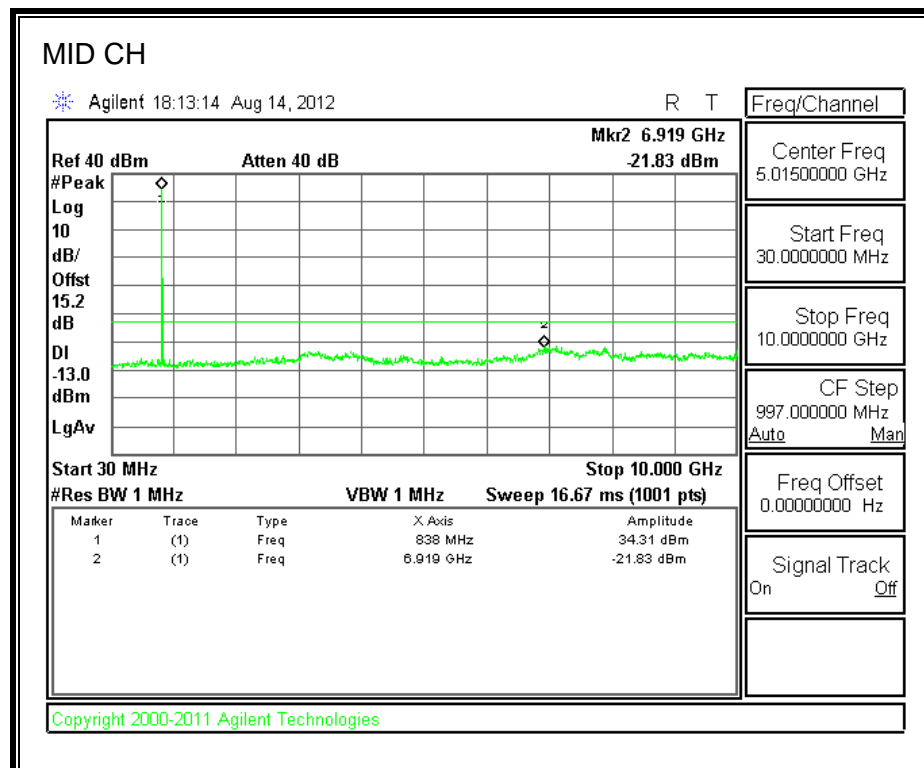
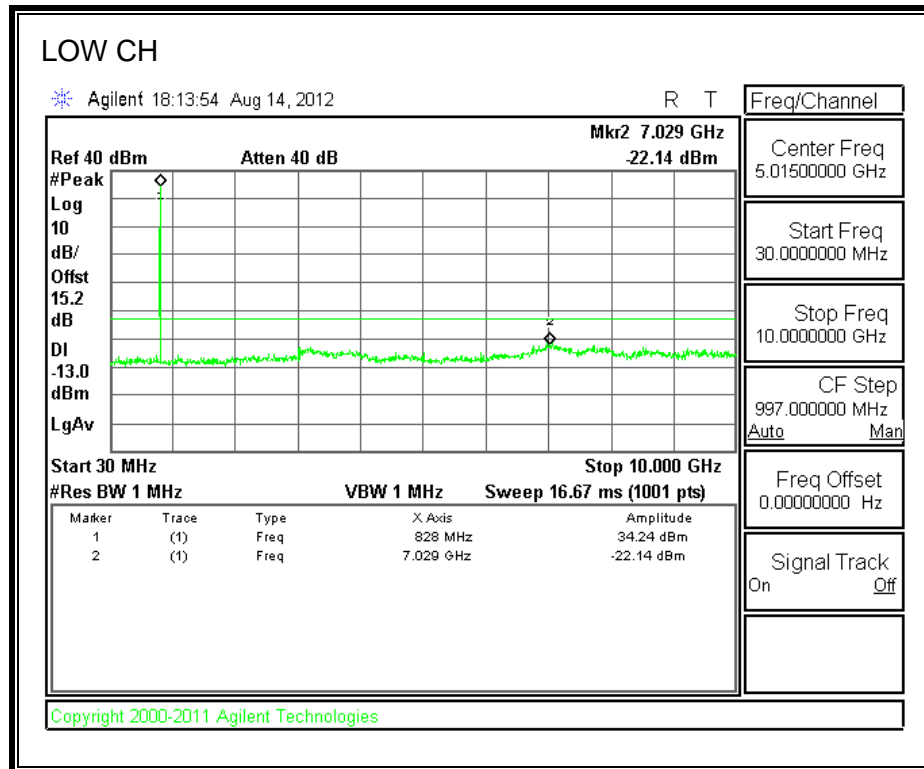
For each out of band emissions measurement:

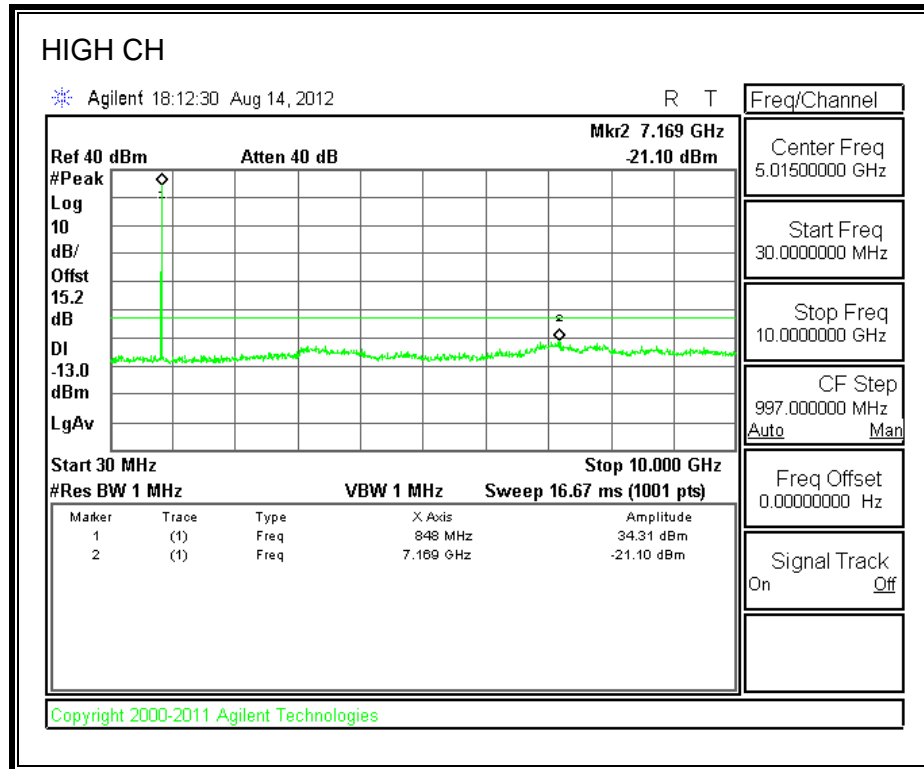
- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

### **MODES TESTED**

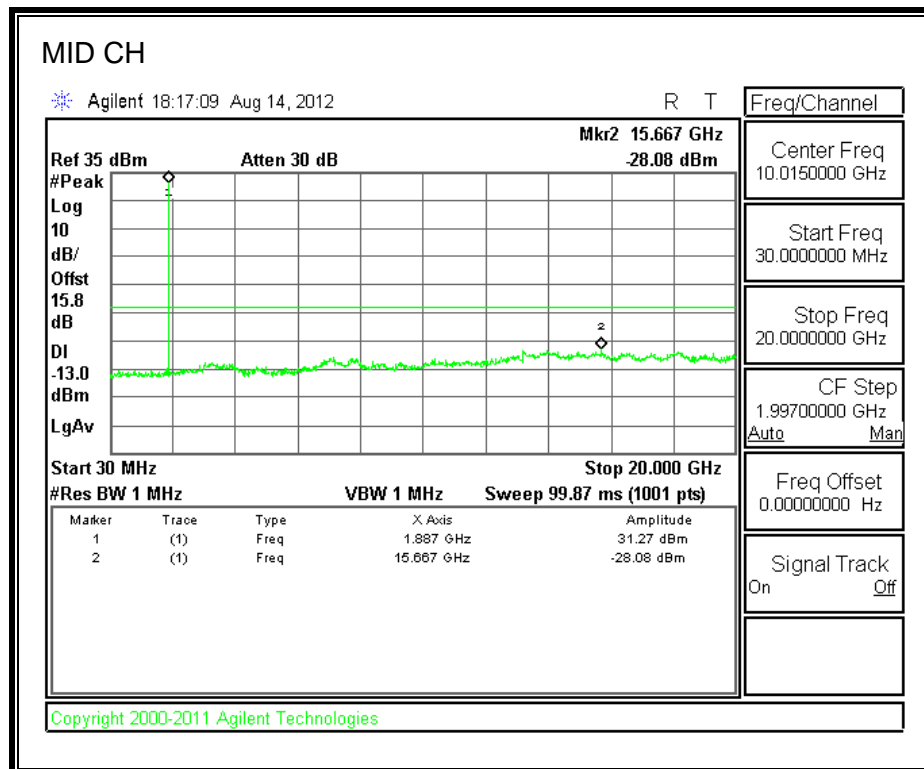
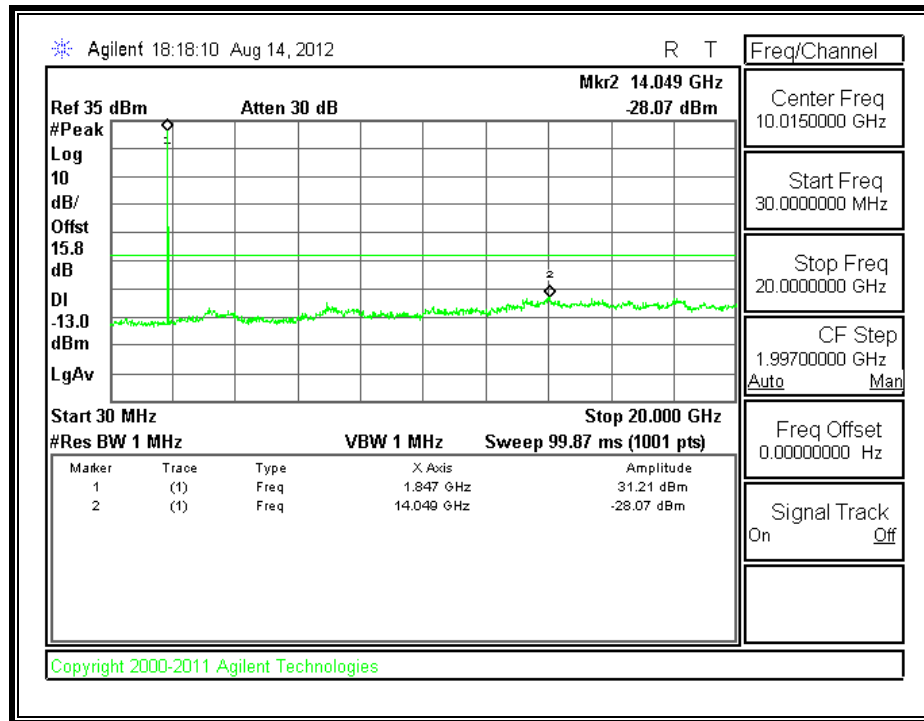
- GPRS
- EGPRS
- WCDMA REL 99
- HSUPA REL 6

### **RESULTS**

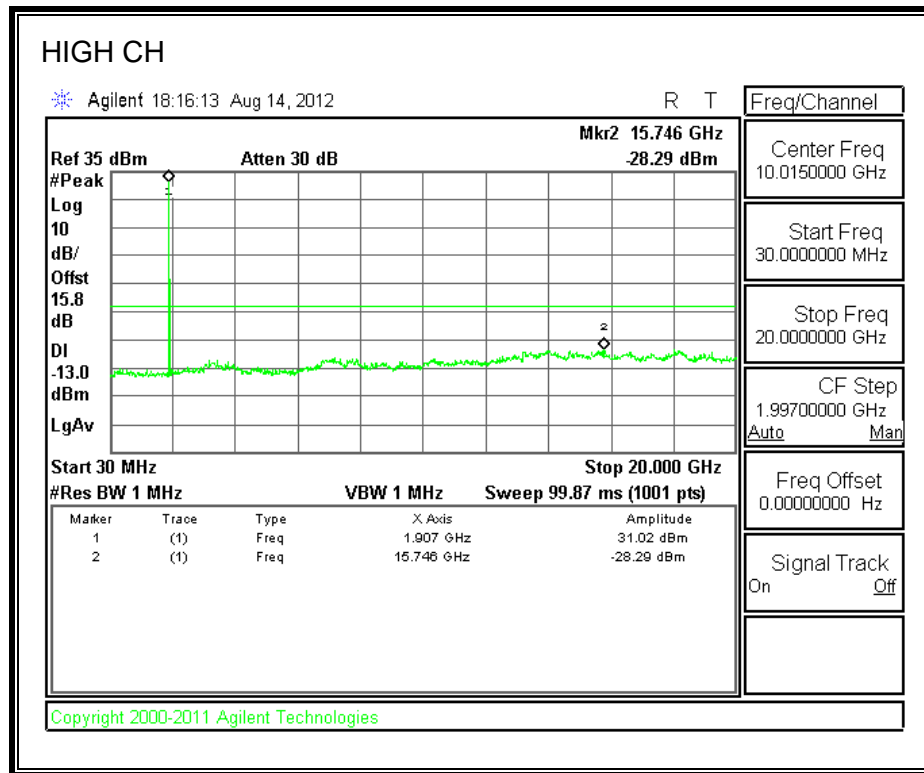
**GPRS850 BAND**



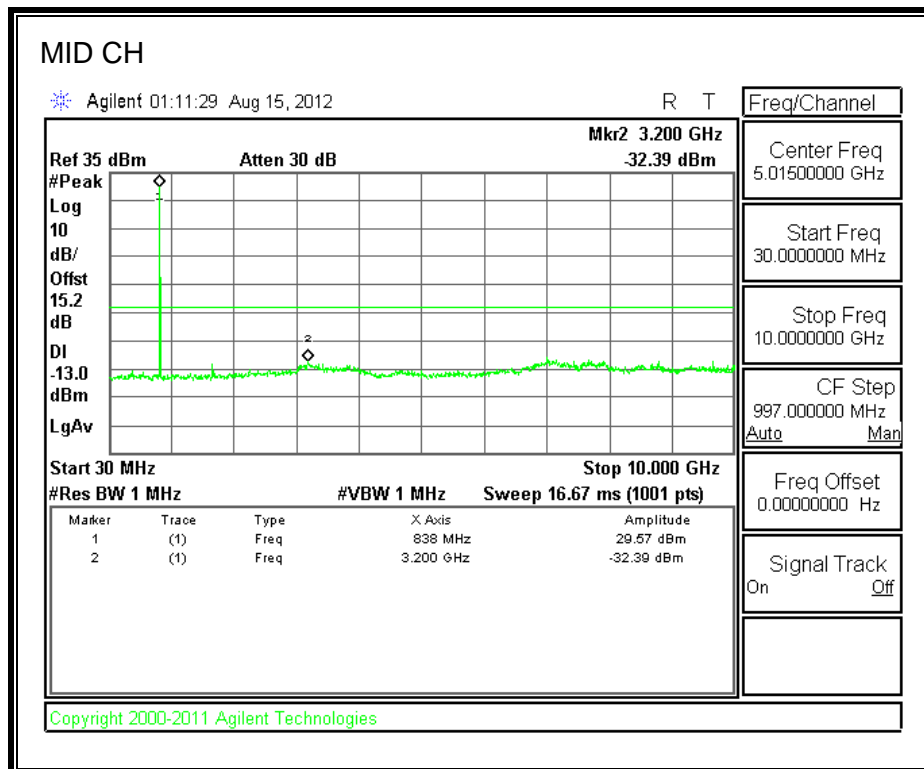
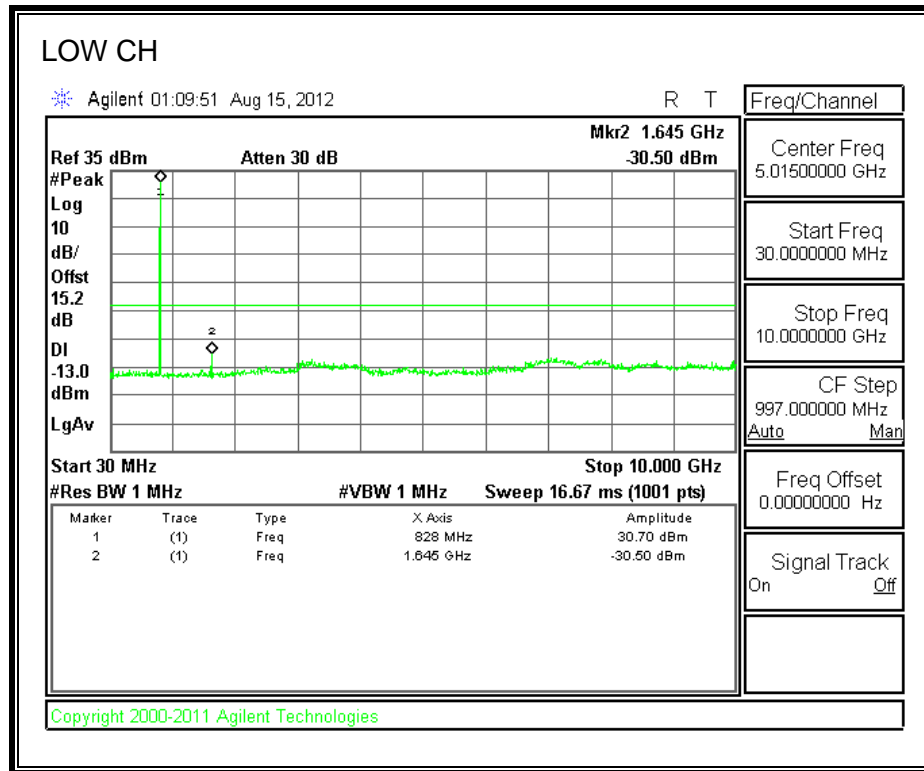
# **GPRS1900 BAND**

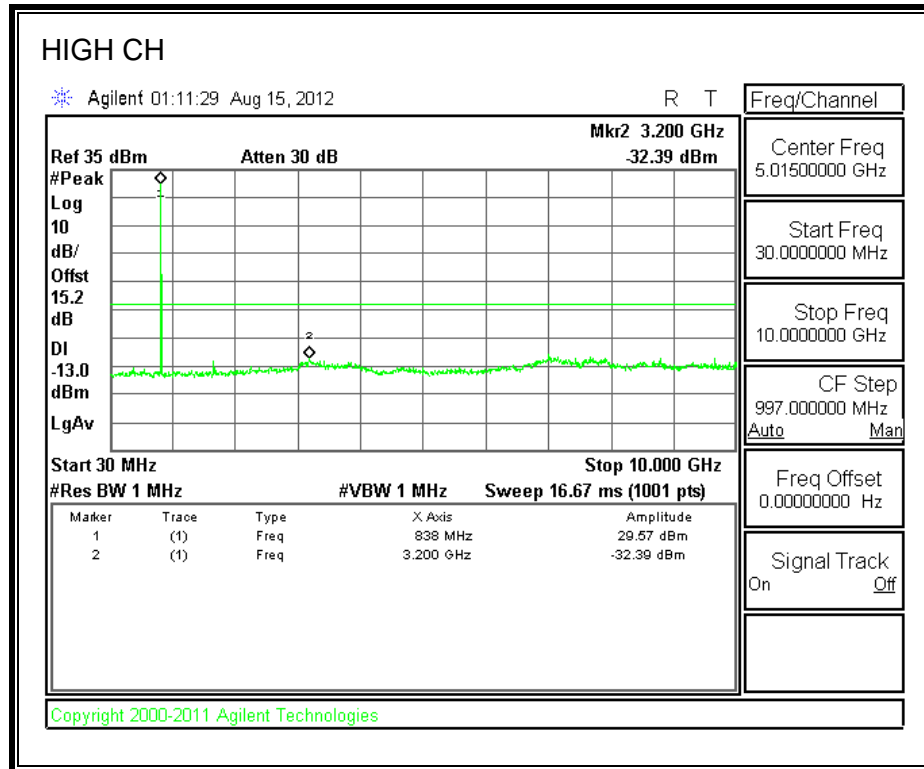




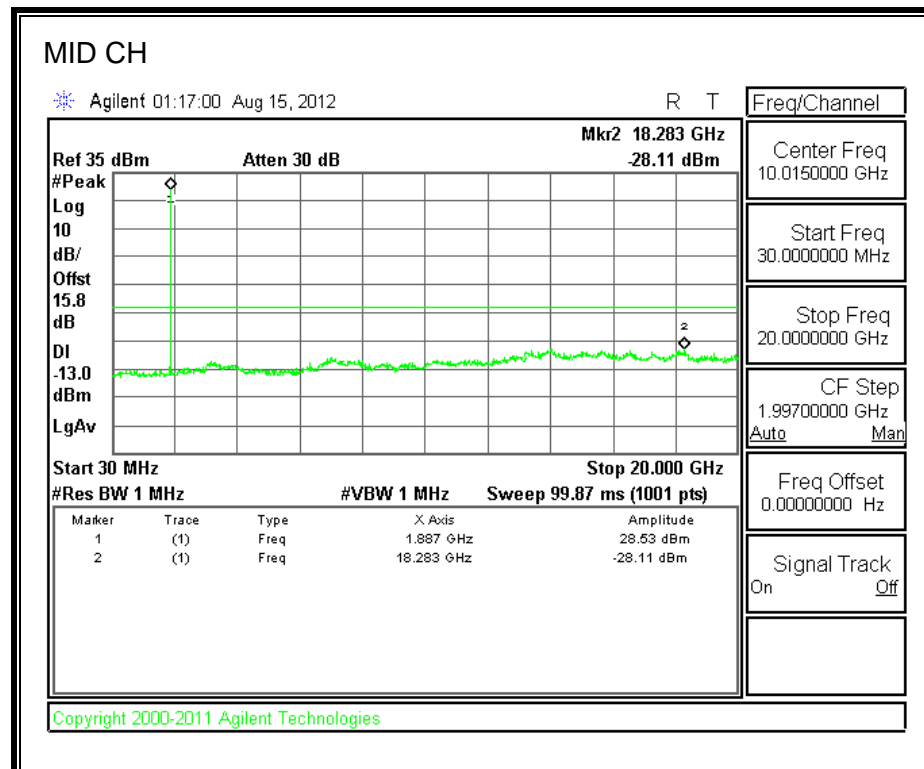
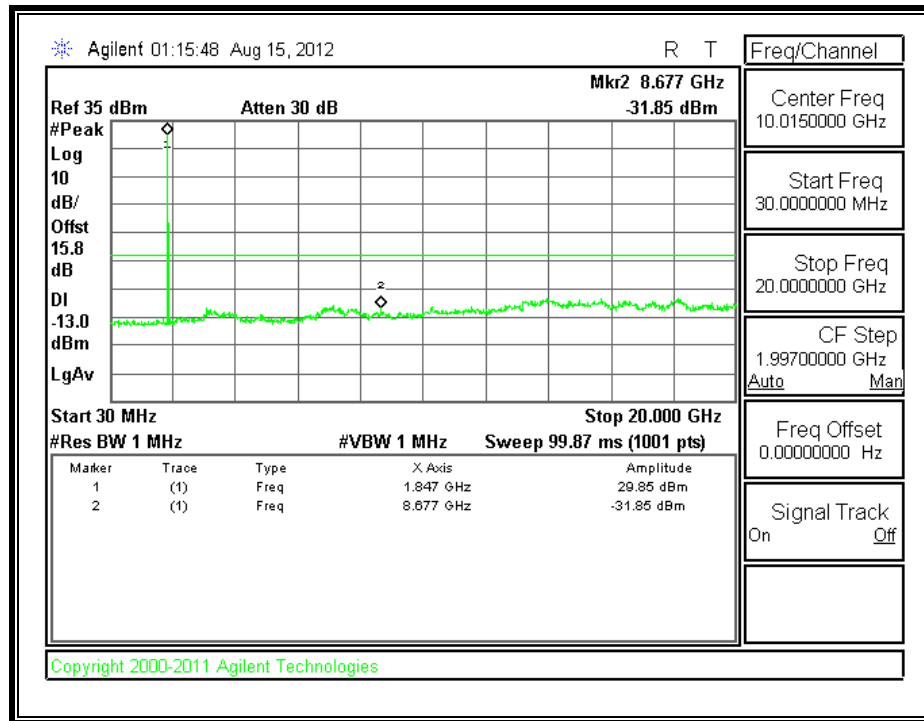


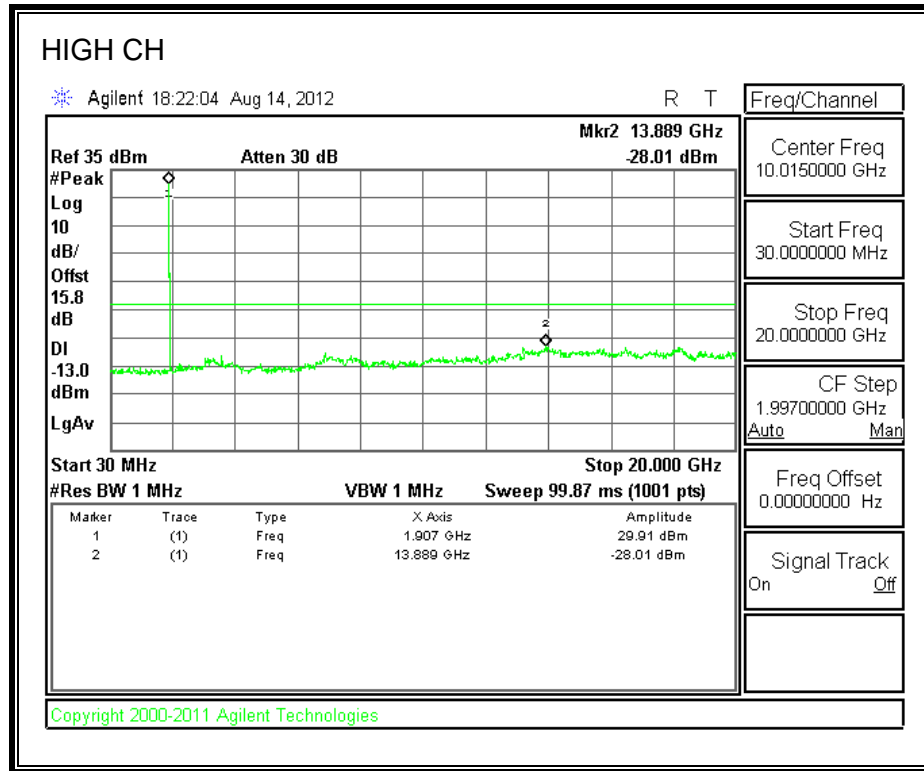
**EGPRS850 BAND**



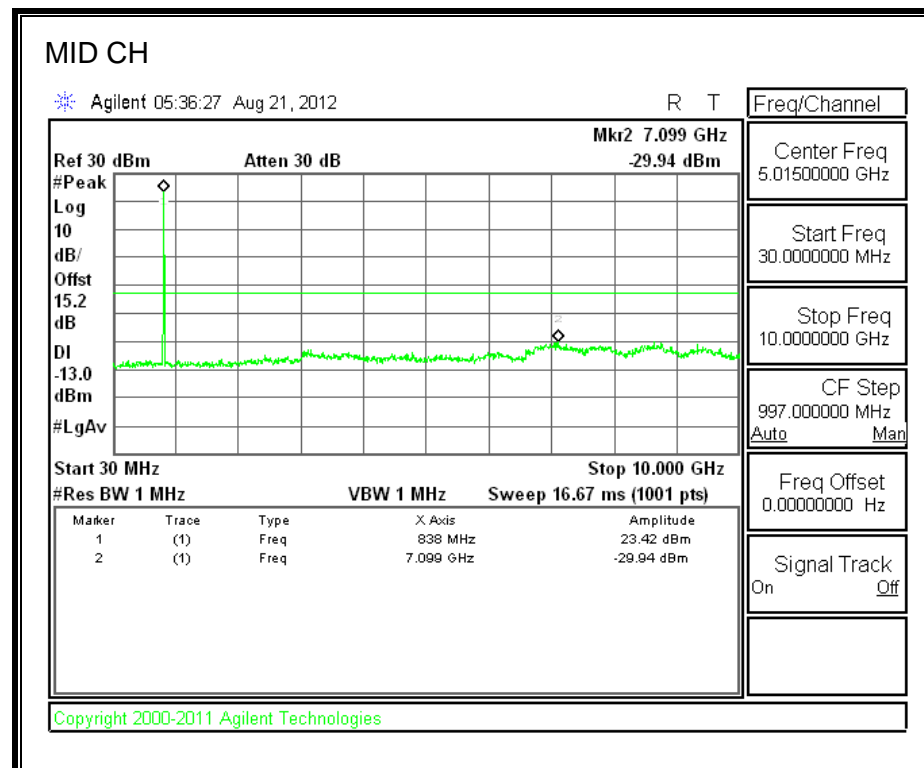
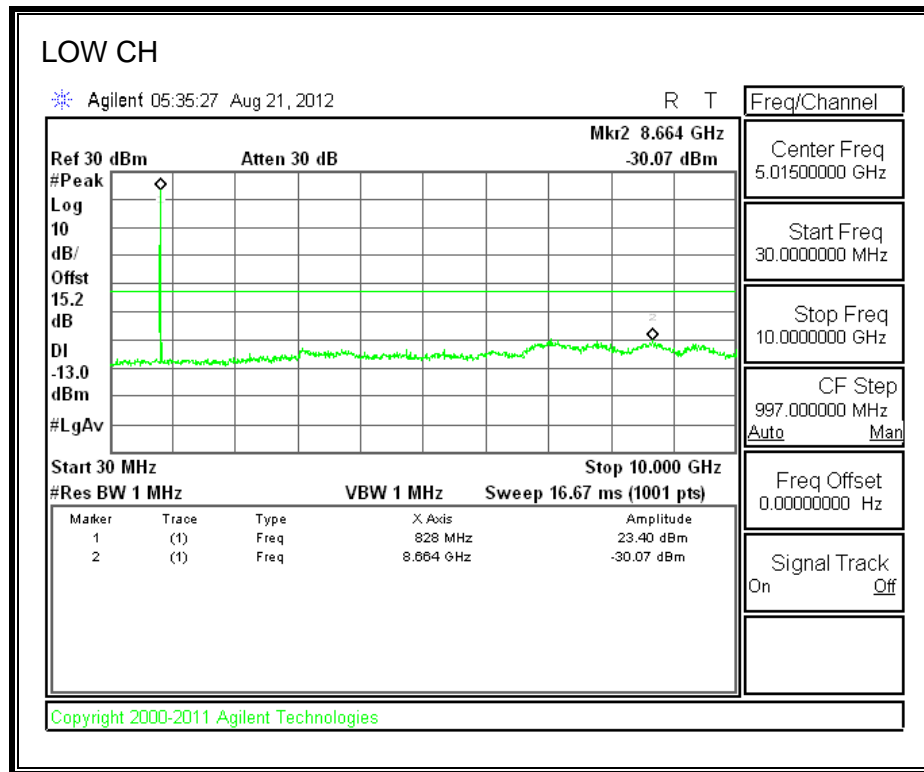


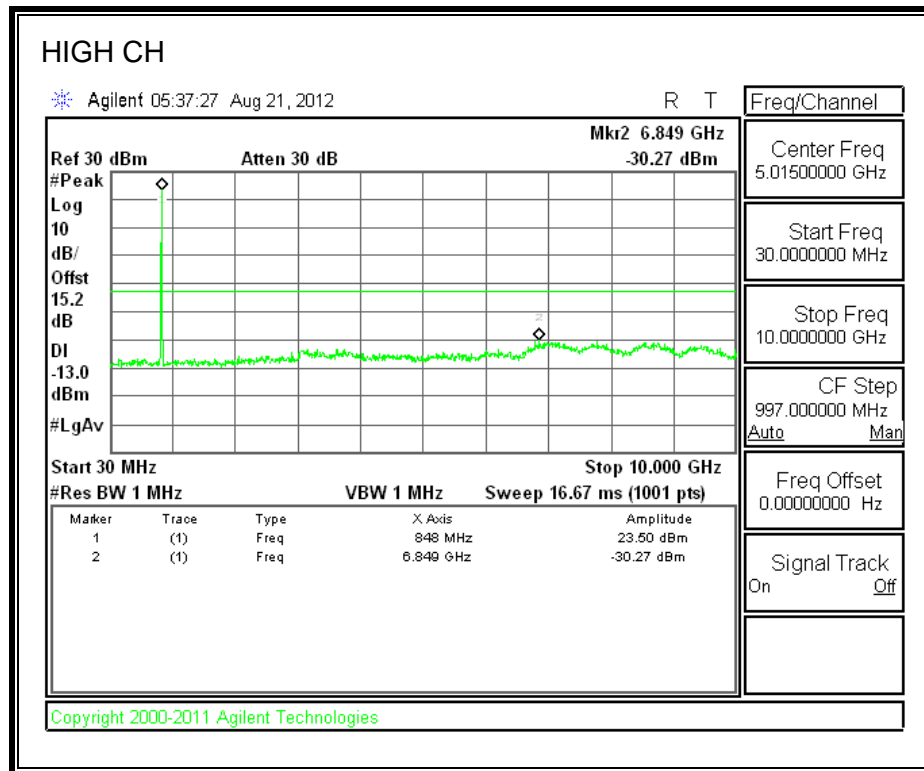
# EGPRS1900 BAND



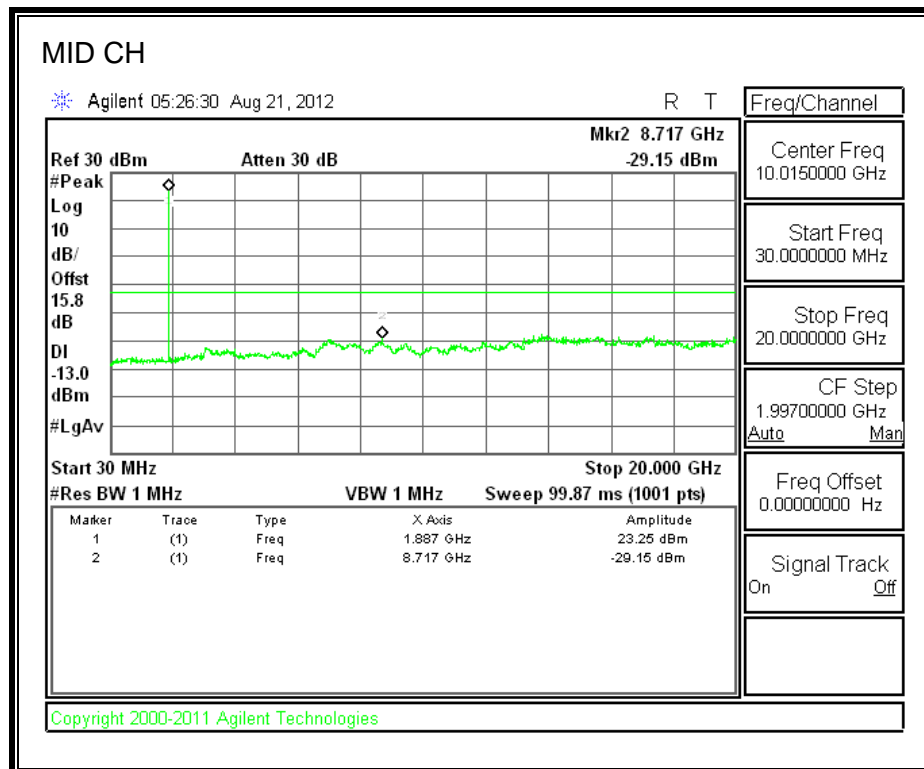
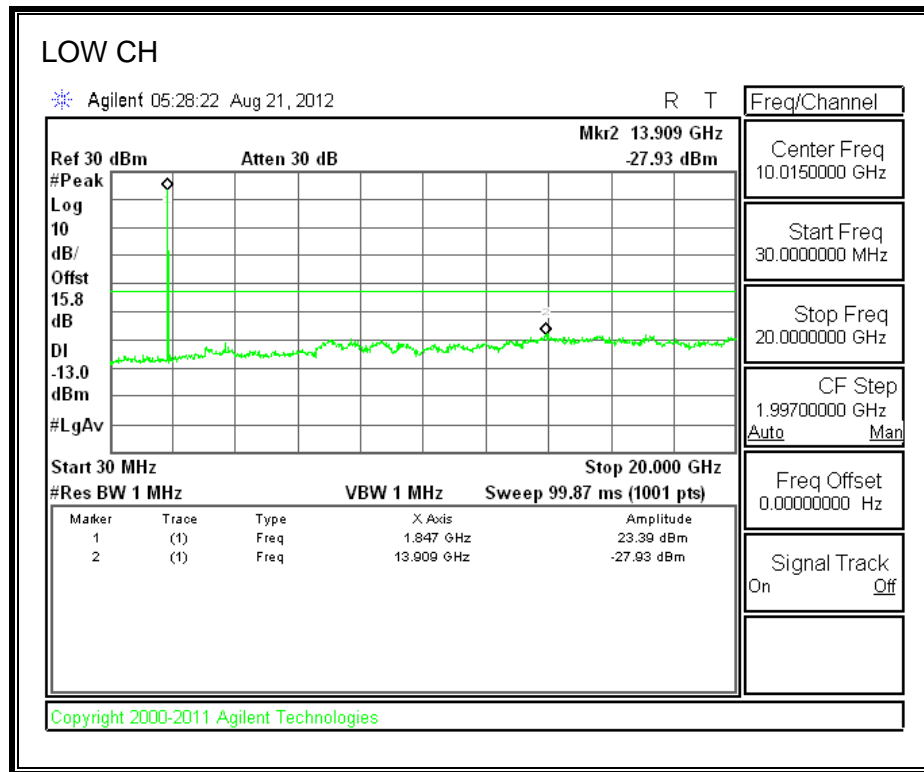


**WCDMA REL 99 CELL Band**

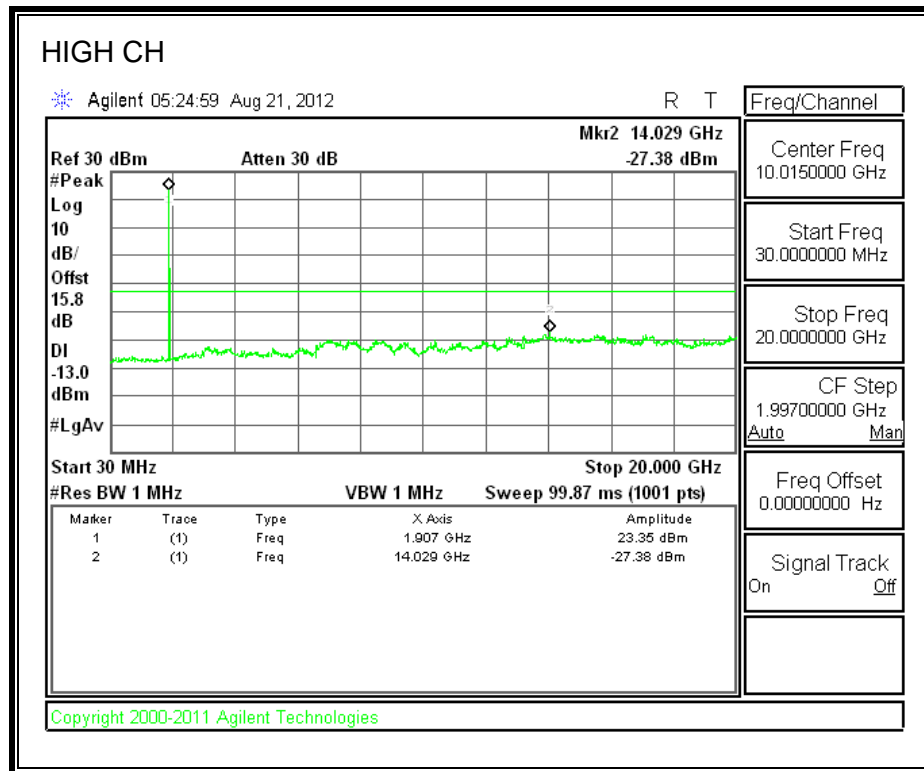




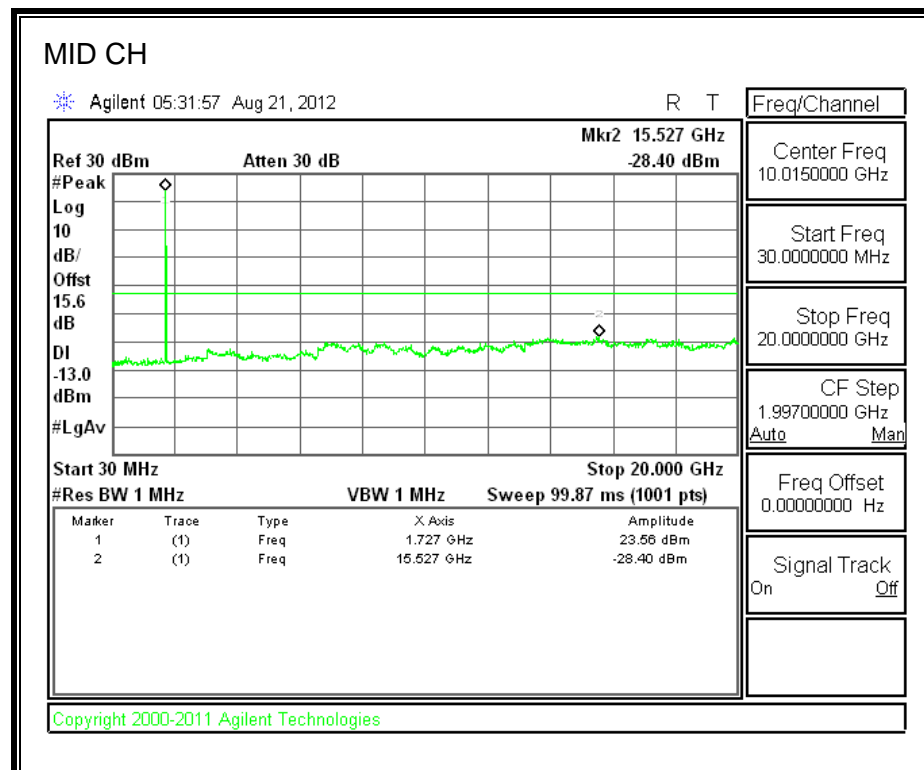
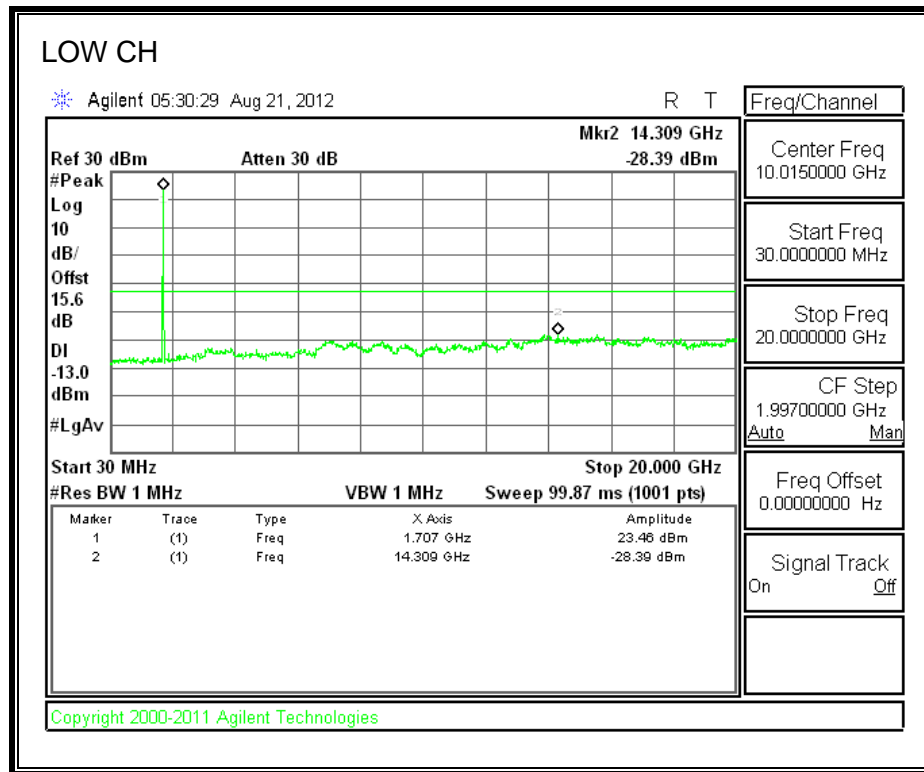
**WCDMA REL 99 PCS Band**

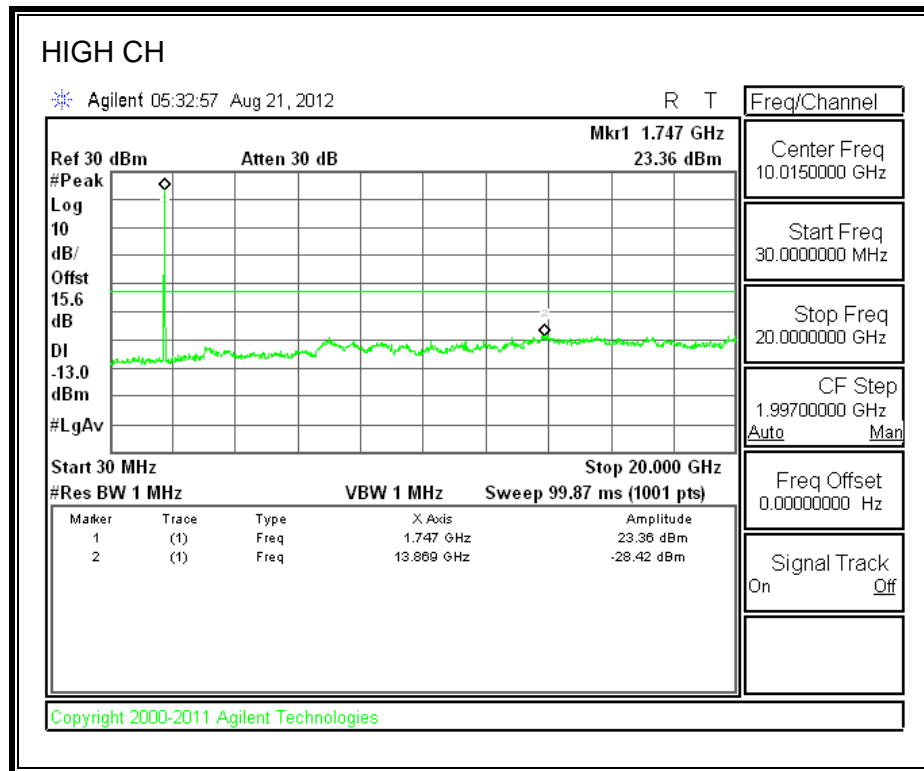




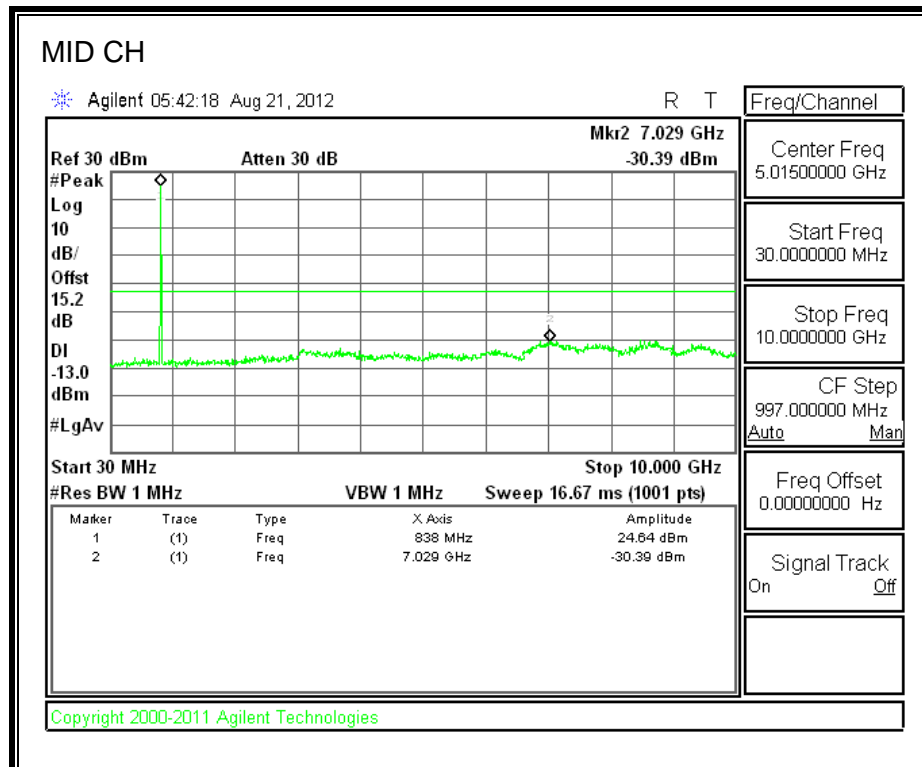
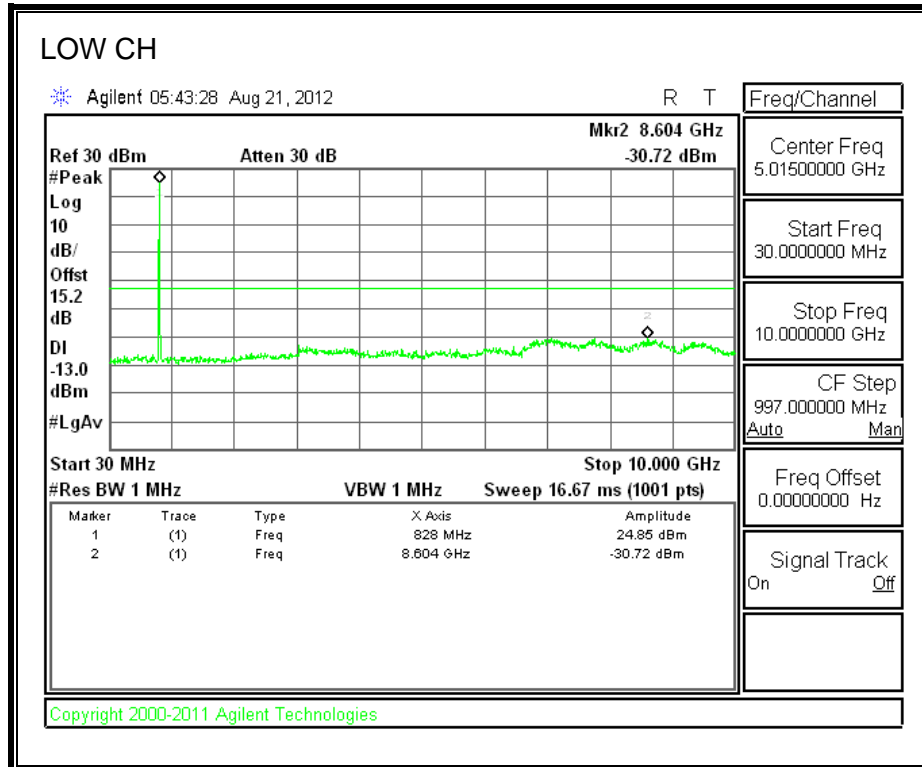


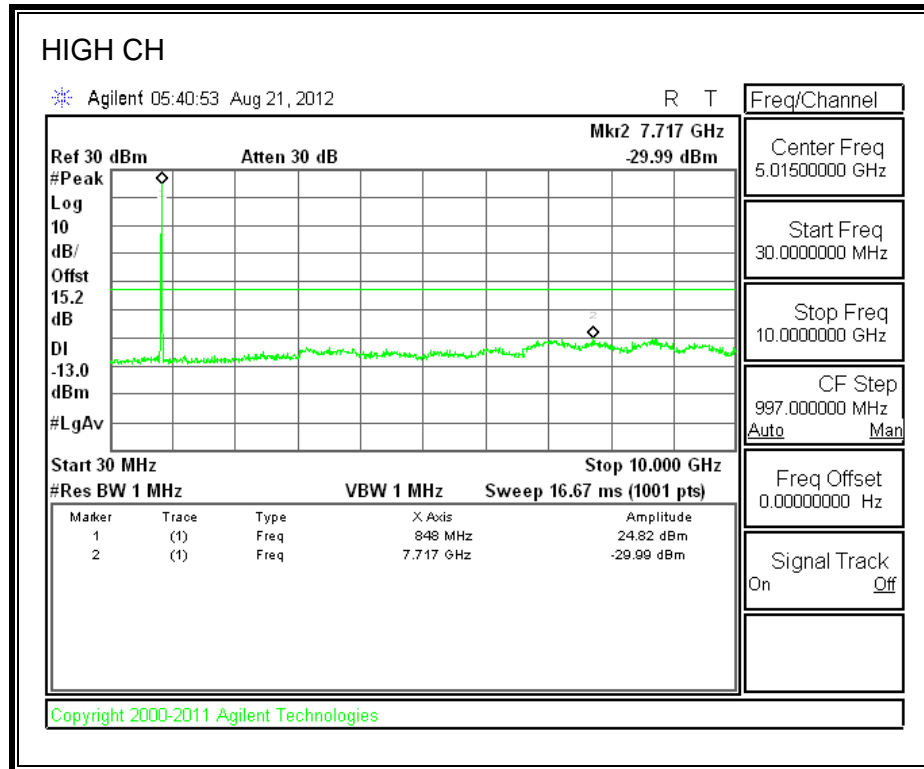
**WCDMA REL99, AWS Band**



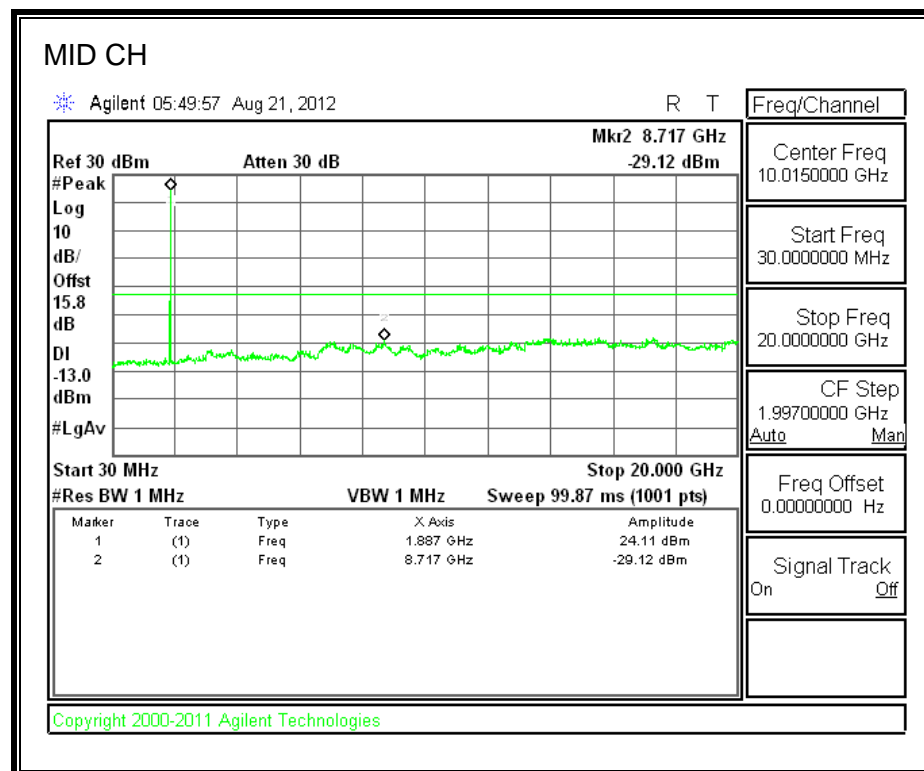
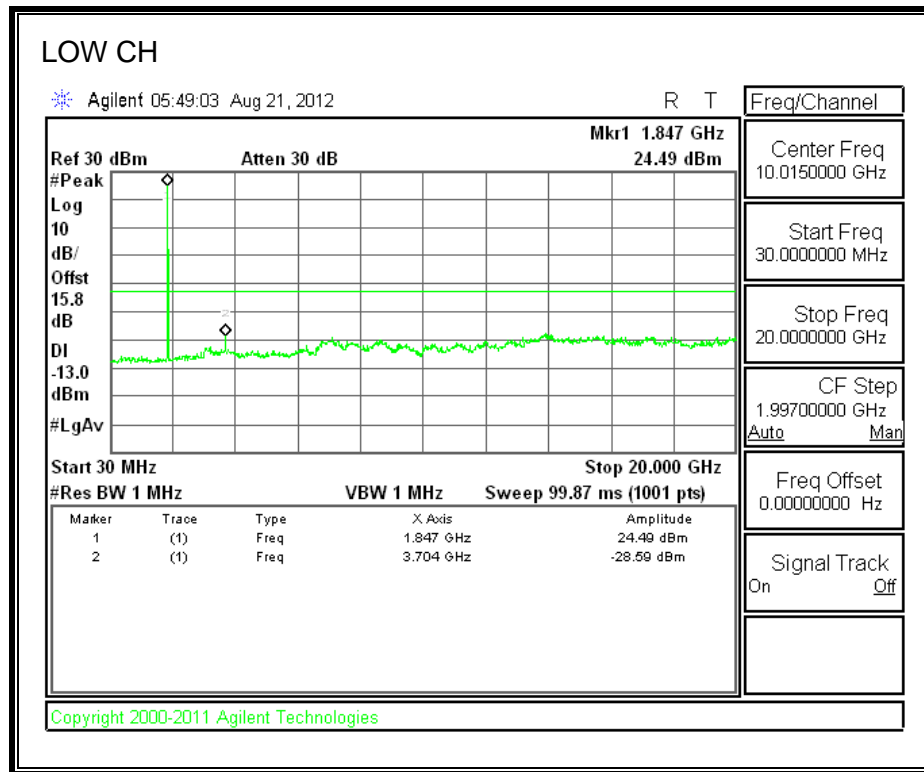


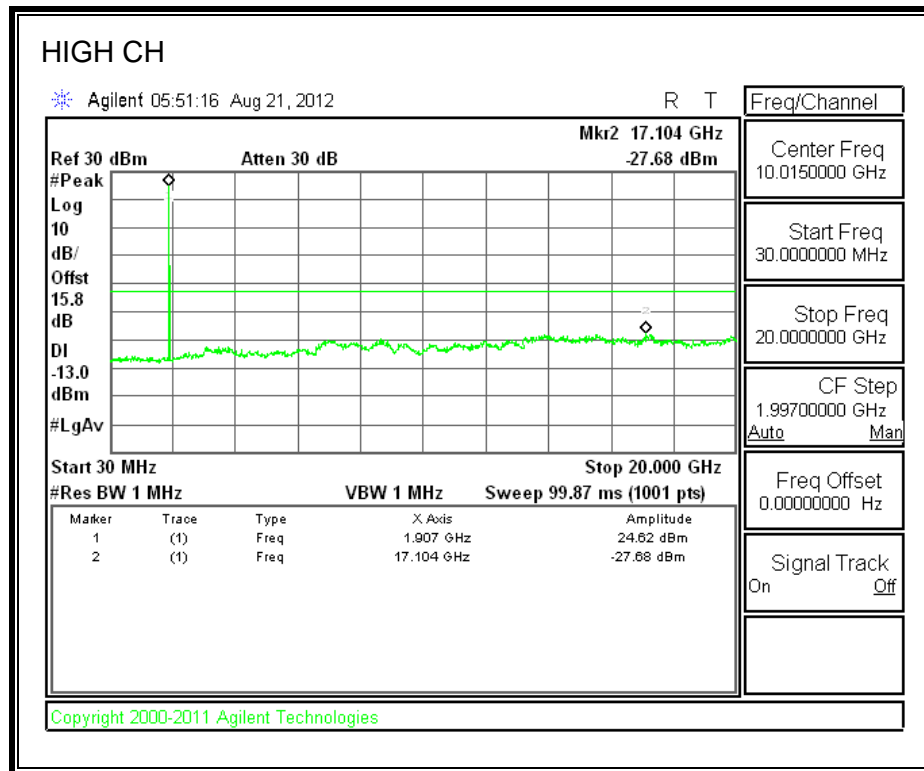
**HSUPA REL 6 CELL Band**



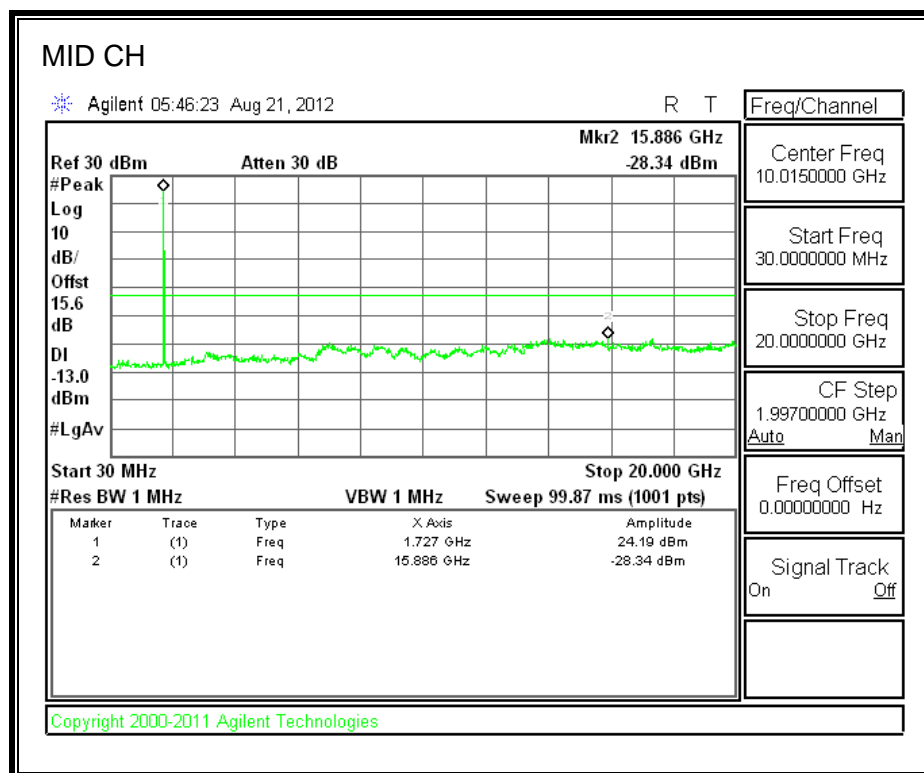
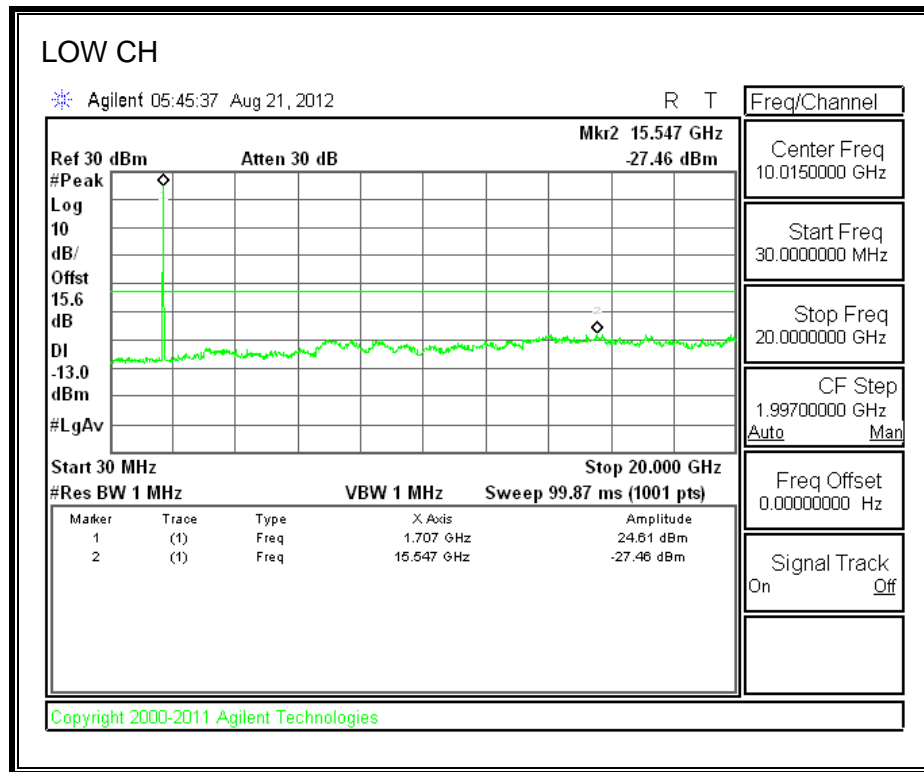


**HSUPA REL 6 PCS Band**

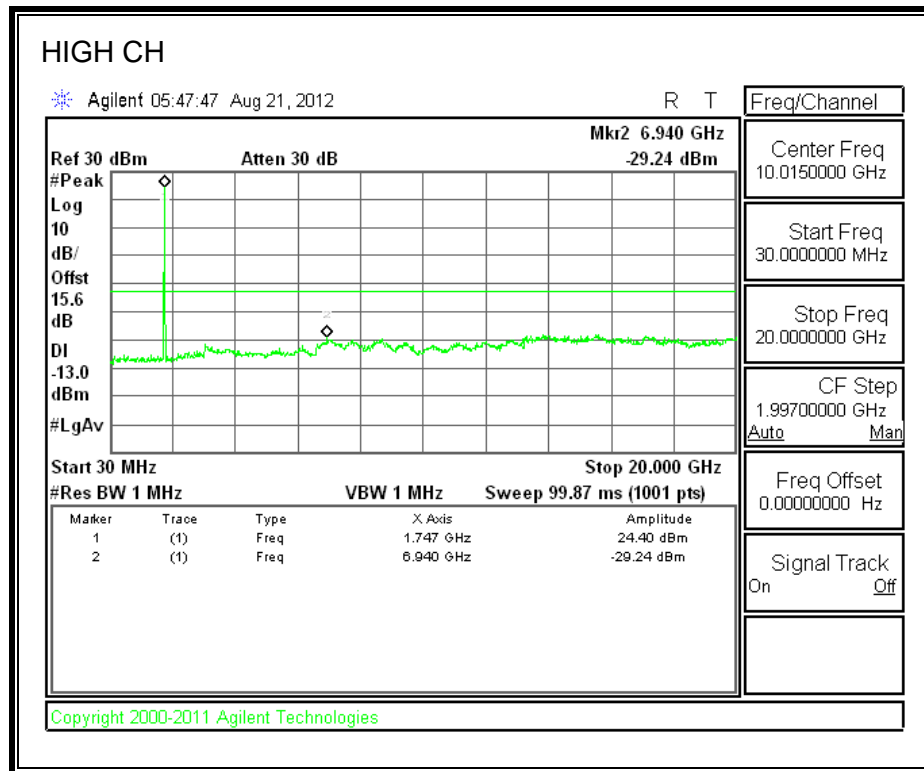




**HSUPA\_REL6, AWS Band**







### **8.1.1. 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  $\pm 2.5$  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 3.50 to 4.26 VDC.

#### **MODES TESTED**

- GPRS
- EGPRS
- WCDMA, Rel 99
- HSUPA REL 6

#### **RESULTS**

See the following pages.

**CELL, GSM MODULATION – MID CHANNEL**

Reference Frequency: Cellular Mid Channel 836.600005MHz @ 20°C Limit: to stay +- 2.5 ppm = 2091.500 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	836.600006	-0.001	2.5
3.80	40	836.599997	0.010	2.5
3.80	30	836.599997	0.010	2.5
<b>3.80</b>	<b>20</b>	<b>836.600005</b>	<b>0</b>	<b>2.5</b>
3.80	10	836.600005	0.000	2.5
3.80	0	836.600005	0.000	2.5
3.80	-10	836.600000	0.006	2.5
3.80	-20	836.599994	0.013	2.5
3.80	-30	836.599995	0.012	2.5
Reference Frequency: Cellular Mid Channel 836.600005MHz @ 20°C Limit: to stay +- 2.5 ppm = 2091.500 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
<b>3.70</b>	<b>20</b>	<b>836.600005</b>	<b>0</b>	<b>2.5</b>
3.50	20	836.599996	0.011	2.5
4.26	20	836.599986	0.023	2.5

**PCS, GSM MODULATION – MID CHANNEL**

Reference Frequency: PCS Mid Channel 1879.999991MHz @ 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	1879.999996	-0.003	2.5
3.80	40	1879.999994	-0.002	2.5
3.80	30	1879.999994	-0.002	2.5
<b>3.80</b>	<b>20</b>	<b>1879.999991</b>	<b>0</b>	<b>2.5</b>
3.80	10	1879.999988	0.002	2.5
3.80	0	1879.999983	0.004	2.5
3.80	-10	1879.999976	0.008	2.5
3.80	-20	1879.999968	0.012	2.5
3.80	-30	1879.999971	0.011	2.5

Reference Frequency: PCS Mid Channel 1879.999991MHz @ 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)
<b>3.80</b>	<b>20</b>	<b>1879.999991</b>	<b>0</b>	<b>2.5</b>
3.50	20	1879.999993	-0.001	2.5
4.26	20	1879.999983	0.004	2.5

**CELL WCDMA – MID CHANNEL**

Reference Frequency: Cellular Mid Channel 836.599999MHz @ 20°C Limit: to stay +/- 2.5 ppm = 2091.500 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	836.600001	-0.002	2.5
3.80	40	836.600000	-0.001	2.5
3.80	30	836.600000	-0.001	2.5
<b>3.80</b>	<b>20</b>	<b>836.599999</b>	<b>0</b>	<b>2.5</b>
3.80	10	836.600000	-0.001	2.5
3.80	0	836.600001	-0.002	2.5
3.80	-10	836.600001	-0.002	2.5
3.80	-20	836.600001	-0.002	2.5
3.80	-30	836.600001	-0.002	2.5

Reference Frequency: Cellular Mid Channel 836.599999MHz @ 20°C Limit: to stay +/- 2.5 ppm = 2091.500 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
<b>3.80</b>	<b>20</b>	<b>836.599999</b>	<b>0</b>	<b>2.5</b>
3.50	20	836.600000	-0.001	2.5
4.26	20	836.600001	-0.002	2.5

**PCS WCDMA – MID CHANNEL**

Reference Frequency: PCS Mid Channel 1879.999994MHz @ 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	1879.999993	0.001	2.5
3.80	40	1879.999991	0.002	2.5
3.80	30	1879.999993	0.001	2.5
<b>3.80</b>	<b>20</b>	<b>1879.999994</b>	<b>0</b>	<b>2.5</b>
3.80	10	1879.999993	0.001	2.5
3.80	0	1879.999994	0.000	2.5
3.80	-10	1879.999993	0.001	2.5
3.80	-20	1879.999993	0.001	2.5
3.80	-30	1879.999994	0.000	2.5

Reference Frequency: PCS Mid Channel 1879.999994MHz @ 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)
<b>3.80</b>	<b>20</b>	<b>1879.999994</b>	<b>0</b>	<b>2.5</b>
3.50	20	1879.999993	0.001	2.5
4.26	20	1879.999993	0.001	2.5

**AWS WCDMA – MID CHANNEL**

Reference Frequency: PCS Mid Channel 1732.399996MHz @ 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	1732.399997	-0.001	2.5
3.80	40	1732.399996	0.000	2.5
3.80	30	1732.399996	0.000	2.5
<b>3.80</b>	<b>20</b>	<b>1732.399996</b>	<b>0</b>	<b>2.5</b>
3.80	10	1732.399997	-0.001	2.5
3.80	0	1732.399997	-0.001	2.5
3.80	-10	1732.399996	0.000	2.5
3.80	-20	1732.399996	0.000	2.5
3.80	-30	1732.399996	0.000	2.5

Reference Frequency: PCS Mid Channel 1732.399996MHz @ 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)
<b>3.80</b>	<b>20</b>	<b>1732.399996</b>	<b>0</b>	<b>2.5</b>
3.50	20	1732.399995	0.001	2.5
4.26	20	1732.399995	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**

- GPRS
- EGPRS
- WCDMA REL. 99
- HSUPA REL 6

#### **RESULTS**

**EUT WITH INDUCTIVE COVER****CELLULAR BAND (ERP)**

Mode	Channel	f (MHz)	ERP	
			dBm	mW
GPRS	128	824.20	29.55	901.57
	192	836.60	30.82	1207.81
	251	848.80	<b>31.14</b>	1300.17
EGPRS	128	824.20	27.04	505.82
	192	836.60	27.75	595.66
	251	848.80	<b>28.24</b>	666.81
UMTS, Rel 99	4357	826.40	25.49	354.00
	4408	836.60	24.33	271.02
	4458	846.60	<b>29.54</b>	899.50
HSUPA, Rel 6	4357	826.40	25.65	367.28
	4408	836.60	25.45	350.75
	4458	846.60	<b>25.67</b>	368.98

**PCS BAND (EIRP)**

Mode	Channel	f (MHz)	EIRP	
			dBm	mW
GPRS	512	1850.20	31.64	1458.81
	661	1880.00	32.55	1798.87
	810	1909.80	<b>32.75</b>	1883.65
EGPRS	512	1850.20	30.68	1169.50
	661	1880.00	31.95	1566.75
	810	1909.80	<b>32.21</b>	1663.41
UMTS,REL 99	9662	1852.40	28.39	690.24
	9800	1880.00	28.42	695.02
	9938	1907.60	<b>29.06</b>	805.38
HSUPA, Rel 6	9662	1852.40	28.41	693.43
	9800	1880.00	28.44	698.23
	9938	1907.60	<b>28.96</b>	787.05

**AWS BAND (EIRP)**

Mode	Channel	f (MHz)	EIRP	
			dBm	mW
UMTS,REL 99	1537	1712.40	<b>28.26</b>	669.88
	1637	1732.40	27.98	628.06
	2087	1752.40	28.04	636.80
HSUPA, Rel 6	1537	1712.40	<b>29.62</b>	916.22
	1637	1732.40	27.92	619.44
	2087	1752.40	28.46	701.46

**ERP GPRS850 BAND**

**High Frequency Substitution Measurement  
Compliance Certification Services Chamber B**

**Company:** LG ELECTRONICS  
**Project #:** 12U14580  
**Date:** 08/15/12  
**Test Engineer:** MENGISTU MEKURIA  
**Configuration:** EUT WITH HEADSET  
**Mode:** TX, 850 MHz BAND, GPRS MODE

**Test Equipment:**

Receiving: Sunol T122, and 5m 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
824.20	23.86	V	0.5	0.0	23.36	38.5	-15.1	
824.20	30.05	H	0.5	0.0	29.55	38.5	-8.9	
836.60	22.37	V	0.5	0.0	21.87	38.5	-16.6	
836.60	31.32	H	0.5	0.0	30.82	38.5	-7.6	
848.80	24.51	V	0.5	0.0	24.01	38.5	-14.4	
848.80	31.64	H	0.5	0.0	31.14	38.5	-7.3	

Rev. 3.17.11



**ERP EGPRS850 BAND**

High Frequency Substitution Measurement Compliance Certification Services Chamber B								
<b>Company:</b>	LG ELECTRONICS							
<b>Project #:</b>	12U14580							
<b>Date:</b>	08/15/12							
<b>Test Engineer:</b>	MENGISTU MEKURIA							
<b>Configuration:</b>	EUT WITH HEADSET							
<b>Mode:</b>	TX, 850 MHz BAND, EGPRS MODE							
<b>Test Equipment:</b>								
Receiving: Sunol T122, and 5m 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
824.20	21.14	V	0.5	0.0	20.64	38.5	-17.8	
824.20	27.54	H	0.5	0.0	27.04	38.5	-11.4	
836.60	19.71	V	0.5	0.0	19.21	38.5	-19.2	
836.60	28.25	H	0.5	0.0	27.75	38.5	-10.7	
848.80	21.30	V	0.5	0.0	20.80	38.5	-17.6	
848.80	28.74	H	0.5	0.0	28.24	38.5	-10.2	
Rev. 3.17.11								

**ERP WCDMA REL 99, 850MHz BAND**

High Frequency Substitution Measurement Compliance Certification Services Chamber B								
<b>Company:</b>	LG ELECTRONICS							
<b>Project #:</b>	12U14580							
<b>Date:</b>	08/20/12							
<b>Test Engineer:</b>	MENGISTU MEKURIA							
<b>Configuration:</b>	EUT ALONE							
<b>Mode:</b>	TX, 850 MHz BAND, WCDMA MODE							
<b>Test Equipment:</b>								
Receiving: Sunol T122, and 5m 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
826.40	17.97	V	0.5	0.0	17.47	38.5	-21.0	
826.40	25.99	H	0.5	0.0	25.49	38.5	-13.0	
836.60	16.15	V	0.5	0.0	15.65	38.5	-22.8	
836.60	24.83	H	0.5	0.0	24.33	38.5	-14.1	
846.60	21.99	V	0.5	0.0	21.49	38.5	-17.0	
846.60	30.04	H	0.5	0.0	29.54	38.5	-8.9	
Rev. 3.17.11								

**ERP HSUPA REL 6, 850MHz BAND**

High Frequency Substitution Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/20/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT ALONE						
<b>Mode:</b>		TX, 850 MHz BAND, HSUPA MODE						
<b>Test Equipment:</b>								
Receiving: Sunol T122, and 5m 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
826.40	18.41	V	0.5	0.0	17.91	38.5	-20.5	
826.40	26.15	H	0.5	0.0	25.65	38.5	-12.8	
836.60	16.59	V	0.5	0.0	16.09	38.5	-22.4	
836.60	25.95	H	0.5	0.0	25.45	38.5	-13.0	
846.60	18.16	V	0.5	0.0	17.66	38.5	-20.8	
846.60	26.17	H	0.5	0.0	25.67	38.5	-12.8	
Rev. 3.17.11								

**EIRP GPRS1900 BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/15/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH HEADSET AND AC ADAPTER						
<b>Mode:</b>		TX, 1900 MHz BAND, GPRS MODE						
<b>Test Equipment:</b>								
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
1.850	15.8	V	0.85	8.62	23.56	33.0	-9.4	
1.850	24.0	H	0.85	8.47	31.64	33.0	-1.4	
1.880	15.9	V	0.85	8.46	23.49	33.0	-9.5	
1.880	25.0	H	0.85	8.36	32.55	33.0	-0.5	
1.910	15.9	V	0.85	8.30	23.37	33.0	-9.6	
1.910	25.4	H	0.85	8.25	32.75	33.0	-0.3	
Rev. 3.17.11								

**EIRP EGPRS1900 BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/15/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH HEADSET AND AC ADAPTER						
<b>Mode:</b>		TX, 1900 MHz BAND, EGPRS MODE						
<b>Test Equipment:</b>								
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
1.850	16.6	V	0.85	8.62	24.36	33.0	-8.6	
1.850	23.1	H	0.85	8.47	30.68	33.0	-2.3	
1.880	16.6	V	0.85	8.46	24.19	33.0	-8.8	
1.880	24.4	H	0.85	8.36	31.95	33.0	-1.1	
1.910	16.8	V	0.85	8.30	24.20	33.0	-8.8	
1.910	24.8	H	0.85	8.25	32.21	33.0	-0.8	
Rev. 3.17.11								

**EIRP WCDMA REL 99, 1900MHz BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/17/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEADSET						
<b>Mode:</b>		TX, 1900 MHz BAND, WCDMA MODE						
<b>Test Equipment:</b>								
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	14.1	V	0.85	8.62	21.83	33.0	-11.2	
1.852	20.8	H	0.85	8.47	28.39	33.0	-4.6	
1.880	13.8	V	0.85	8.46	21.36	33.0	-11.6	
1.880	20.9	H	0.85	8.36	28.42	33.0	-4.6	
1.908	13.5	V	0.85	8.30	20.91	33.0	-12.1	
1.908	21.7	H	0.85	8.25	29.06	33.0	-3.9	
Rev. 3.17.11								

**EIRP HSUPA REL 6, 1900MHz BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/19/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEADSET						
<b>Mode:</b>		TX, 1900 MHz BAND, HSUPA MODE						
<b>Test Equipment:</b>								
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	15.0	V	0.85	8.62	22.73	33.0	-10.3	
1.852	20.8	H	0.85	8.47	28.41	33.0	-4.6	
1.880	15.3	V	0.85	8.46	22.89	33.0	-10.1	
1.880	20.9	H	0.85	8.36	28.44	33.0	-4.6	
1.908	15.8	V	0.85	8.30	23.25	33.0	-9.7	
1.908	21.6	H	0.85	8.25	28.98	33.0	-4.0	
Rev. 3.17.11								

**EIRP WCDMA REL 99, 1700MHz BAND****High Frequency Fundamental Measurement  
Compliance Certification Services Chamber B**

**Company:** LG ELECTRONICS  
**Project #:** 12U14580  
**Date:** 08/17/12  
**Test Engineer:** MENGISTU MEKURIA  
**Configuration:** EUT WITH AC ADAPTER AND HEADSET  
**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	13.2	V	0.85	8.62	20.97	30.0	-9.0	
1.712	20.6	H	0.85	8.47	28.26	30.0	-1.7	
1.732	12.6	V	0.85	8.46	20.23	30.0	-9.8	
1.732	20.5	H	0.85	8.36	27.98	30.0	-2.0	
1.753	13.8	V	0.85	8.30	21.21	30.0	-8.8	
1.753	20.6	H	0.85	8.25	28.04	30.0	-2.0	

Rev. 3.17.11



**EIRP HSUPA REL 6, 1700MHz BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/17/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEADSET						
<b>Mode:</b>		TX, 1700 MHz BAND, HSUPA MODE						
<b>Test Equipment:</b>								
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	15.2	V	0.85	8.62	22.98	30.0	-7.0	
1.712	22.0	H	0.85	8.47	29.62	30.0	-0.4	
1.732	13.6	V	0.85	8.46	21.25	30.0	-8.8	
1.732	20.4	H	0.85	8.36	27.92	30.0	-2.1	
1.753	13.8	V	0.85	8.30	21.21	30.0	-8.8	
1.753	21.1	H	0.85	8.25	28.46	30.0	-1.5	
Rev. 3.17.11								

**EUT WITH INDUCTIVE CHARGER****CELLULAR BAND (ERP)**

Mode	Channel	f (MHz)	ERP	
			dBm	mW
GPRS	128	824.20	29.10	812.83
	192	836.60	<b>29.99</b>	997.70
	251	848.80	29.56	903.65
EGPRS	128	824.20	26.16	413.05
	192	836.60	26.44	440.55
	251	848.80	<b>26.76</b>	474.24
WCDMA, Rel 99	4357	826.40	<b>26.38</b>	434.51
	4408	836.60	25.11	324.34
	4458	846.60	24.83	304.09
HSUPA, Rel 6	4357	826.40	<b>27.04</b>	505.82
	4408	836.60	25.95	393.55
	4458	846.60	25.24	334.20

**PCS BAND (EIRP)**

Mode	Channel	f (MHz)	EIRP	
			dBm	mW
GPRS	512	1850.20	28.64	731.14
	661	1880.00	31.00	1258.93
	810	1909.80	<b>32.39</b>	1733.80
EGPRS	512	1850.20	28.04	636.80
	661	1880.00	30.11	1025.65
	810	1909.80	<b>31.57</b>	1435.49
WCDMA,REL 99	9662	1852.40	26.79	477.53
	9800	1880.00	27.43	553.35
	9938	1907.60	<b>27.90</b>	616.60
HSUPA, Rel 6	9662	1852.40	27.44	554.63
	9800	1880.00	28.23	665.27
	9938	1907.60	<b>28.63</b>	729.46

**AWS BAND (EIRP)**

Mode	Channel	f (MHz)	EIRP	
			dBm	mW
WCDMA,REL 99	1537	1712.40	<b>27.41</b>	550.81
	1637	1732.40	25.78	378.44
	2087	1752.40	26.74	472.06
HSUPA, Rel 6	1537	1712.40	<b>29.32</b>	855.07
	1637	1732.40	26.71	468.81
	2087	1752.40	28.08	642.69

**ERP GPRS850 BAND**

### High Frequency Substitution Measurement Compliance Certification Services Chamber B

**Company:** LG ELECTRONICS  
**Project #:** 12U14580  
**Date:** 08/16/12  
**Test Engineer:** MENGISTU MEKURIA  
**Configuration:** EUT WITH INDUCTIVE CHARGER  
**Mode:** TX, 850 MHz BAND, GPRS MODE

**Test Equipment:**

Receiving: Sunol T122, and 5m 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
824.20	27.47	V	0.5	0.0	26.97	38.5	-11.5	
824.20	29.60	H	0.5	0.0	29.10	38.5	-9.3	
836.60	26.45	V	0.5	0.0	25.95	38.5	-12.5	
836.60	30.49	H	0.5	0.0	29.99	38.5	-8.5	
848.80	27.87	V	0.5	0.0	27.37	38.5	-11.1	
848.80	30.06	H	0.5	0.0	29.56	38.5	-8.9	

Rev. 3.17.11

**ERP EGPRS850 BAND**

High Frequency Substitution Measurement Compliance Certification Services Chamber B								
<b>Company:</b>	LG ELECTRONICS							
<b>Project #:</b>	12U14580							
<b>Date:</b>	08/16/12							
<b>Test Engineer:</b>	MENGISTU MEKURIA							
<b>Configuration:</b>	EUT WITH INDUCTIVE CHARGER							
<b>Mode:</b>	TX, 850 MHz BAND, EGPRS MODE							
<b>Test Equipment:</b>								
Receiving: Sunol T122, and 5m 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
824.20	24.58	V	0.5	0.0	24.08	38.5	-14.4	
824.20	26.66	H	0.5	0.0	26.16	38.5	-12.3	
836.60	24.23	V	0.5	0.0	23.73	38.5	-14.7	
836.60	26.94	H	0.5	0.0	26.44	38.5	-12.0	
848.80	24.96	V	0.5	0.0	24.46	38.5	-14.0	
848.80	27.26	H	0.5	0.0	26.76	38.5	-11.7	
Rev. 3.17.11								

**ERP WCDMA REL 99, 850MHz BAND****High Frequency Substitution Measurement  
Compliance Certification Services Chamber B**

**Company:** LG ELECTRONICS  
**Project #:** 12U14580  
**Date:** 08/20/12  
**Test Engineer:** MENGISTU MEKURIA  
**Configuration:** EUT WITH INDUCTIVE CHARGER  
**Mode:** TX, 850 MHz BAND, WCDMA MODE

**Test Equipment:**

Receiving: Sunol T122, and 5m 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
826.40	20.87	V	0.5	0.0	20.37	38.5	-18.1	
826.40	26.88	H	0.5	0.0	26.38	38.5	-12.1	
836.60	19.87	V	0.5	0.0	19.37	38.5	-19.1	
836.60	25.61	H	0.5	0.0	25.11	38.5	-13.3	
846.60	22.06	V	0.5	0.0	21.56	38.5	-16.9	
846.60	25.33	H	0.5	0.0	24.83	38.5	-13.6	

Rev. 3.17.11

**ERP HSUPA REL 6, 850MHz BAND**

High Frequency Substitution Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/20/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER						
<b>Mode:</b>		TX, 850 MHz BAND, HSUPA MODE						
<b>Test Equipment:</b>								
Receiving: Sunol T122, and 5m 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
826.40	22.10	V	0.5	0.0	21.60	38.5	-16.8	
826.40	27.54	H	0.5	0.0	27.04	38.5	-11.4	
836.60	20.71	V	0.5	0.0	20.21	38.5	-18.2	
836.60	26.45	H	0.5	0.0	25.95	38.5	-12.5	
846.60	22.33	V	0.5	0.0	21.83	38.5	-16.6	
846.60	25.74	H	0.5	0.0	25.24	38.5	-13.2	
Rev. 3.17.11								

**EIRP GPRS1900 BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/16/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH HEADSET AND INDUCTIVE CHARGER						
<b>Mode:</b>		TX, 1900 MHz BAND, GPRS MODE						
<b>Test Equipment:</b>								
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
1.850	12.4	V	0.85	8.62	20.18	33.0	-12.8	
1.850	21.0	H	0.85	8.47	28.64	33.0	-4.4	
1.880	12.2	V	0.85	8.46	19.85	33.0	-13.2	
1.880	23.5	H	0.85	8.36	31.00	33.0	-2.0	
1.910	13.1	V	0.85	8.30	20.51	33.0	-12.5	
1.910	25.0	H	0.85	8.25	32.39	33.0	-0.6	
Rev. 3.17.11								

**EIRP EGPRS1900 BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/16/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH HEADSET AND INDUCTIVE CHARGER						
<b>Mode:</b>		TX, 1900 MHz BAND, EGPRS MODE						
<b><u>Test Equipment:</u></b>								
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
1.850	11.7	V	0.85	8.62	19.47	33.0	-13.5	
1.850	20.4	H	0.85	8.47	28.04	33.0	-5.0	
1.880	11.8	V	0.85	8.46	19.43	33.0	-13.6	
1.880	22.6	H	0.85	8.36	30.11	33.0	-2.9	
1.910	12.1	V	0.85	8.30	19.51	33.0	-13.5	
1.910	24.2	H	0.85	8.25	31.57	33.0	-1.4	
Rev. 3.17.11								



**EIRP WCDMA REL 99, 1900MHz BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/19/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER						
<b>Mode:</b>		TX, 1900 MHz BAND, WCDMA MODE						
<b><u>Test Equipment:</u></b>								
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	11.1	V	0.85	8.62	18.83	33.0	-14.2	
1.852	19.2	H	0.85	8.47	26.79	33.0	-6.2	
1.880	9.6	V	0.85	8.46	17.21	33.0	-15.8	
1.880	19.9	H	0.85	8.36	27.43	33.0	-5.6	
1.908	9.6	V	0.85	8.30	17.00	33.0	-16.0	
1.908	20.5	H	0.85	8.25	27.90	33.0	-5.1	
Rev. 3.17.11								

**EIRP HSUPA REL 6, 1900MHz BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/19/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER						
<b>Mode:</b>		TX, 1900 MHz BAND, HSUPA MODE						
<b>Test Equipment:</b>								
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	11.2	V	0.85	8.62	19.00	33.0	-14.0	
1.852	19.8	H	0.85	8.47	27.44	33.0	-5.6	
1.880	10.5	V	0.85	8.46	18.12	33.0	-14.9	
1.880	20.7	H	0.85	8.36	28.23	33.0	-4.8	
1.908	9.9	V	0.85	8.30	17.30	33.0	-15.7	
1.908	21.2	H	0.85	8.25	28.63	33.0	-4.4	
Rev. 3.17.11								

**EIRP WCDMA REL 99, 1700MHz BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/17/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER						
<b>Mode:</b>		TX, 1700 MHz BAND, WCDMA MODE						
<b><u>Test Equipment:</u></b>								
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	14.4	V	0.85	8.62	22.18	30.0	-7.8	
1.712	19.8	H	0.85	8.47	27.41	30.0	-2.6	
1.732	13.0	V	0.85	8.46	20.62	30.0	-9.4	
1.732	18.3	H	0.85	8.36	25.78	30.0	-4.2	
1.753	13.8	V	0.85	8.30	21.20	30.0	-8.8	
1.753	19.3	H	0.85	8.25	26.74	30.0	-3.3	
Rev. 3.17.11								

**EIRP HSUPA REL 6, 1700MHz BAND**

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
<b>Company:</b>		LG ELECTRONICS						
<b>Project #:</b>		12U14580						
<b>Date:</b>		08/20/12						
<b>Test Engineer:</b>		MENGISTU MEKURIA						
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER						
<b>Mode:</b>		TX, 1700 MHz BAND, HSUPA MODE						
<b>Test Equipment:</b>								
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	15.5	V	0.85	8.62	23.28	30.0	-6.7	
1.712	21.7	H	0.85	8.47	29.32	30.0	-0.7	
1.732	14.0	V	0.85	8.46	21.57	30.0	-8.4	
1.732	19.2	H	0.85	8.36	26.71	30.0	-3.3	
1.753	14.9	V	0.85	8.30	22.35	30.0	-7.7	
1.753	20.7	H	0.85	8.25	28.08	30.0	-1.9	
Rev. 3.17.11								

### **8.2.1. 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**

- GPRS
- EGPRS
- WCDMA REL. 99
- HSUPA REL 6

#### **RESULTS**

**EUT WITH INDUCTIVE COVER**

**ERP GPRS850MHz BAND**

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT with AC Adapter and Earphone							
<b>Mode:</b>		TX, 850MHz BAND GPRS MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
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
<b>Low Ch, (824.2MHz)</b>									
1.648	2.5	V	3.0	35.5	1.0	-32.0	-13.0	-19.0	
2.473	-10.0	V	3.0	35.4	1.0	-44.5	-13.0	-31.5	
3.297	-20.2	V	3.0	35.5	1.0	-54.7	-13.0	-41.7	
1.648	2.2	H	3.0	35.5	1.0	-32.4	-13.0	-19.4	
2.473	-3.4	H	3.0	35.4	1.0	-37.8	-13.0	-24.8	
3.297	-21.1	H	3.0	35.5	1.0	-55.7	-13.0	-42.7	
<b>Mid Ch, (836.6MHz)</b>									
1.673	2.9	V	3.0	35.5	1.0	-31.6	-13.0	-18.6	
2.510	-9.7	V	3.0	35.4	1.0	-44.1	-13.0	-31.1	
3.346	-21.3	V	3.0	35.5	1.0	-55.8	-13.0	-42.8	
1.673	-0.6	H	3.0	35.5	1.0	-35.1	-13.0	-22.1	
2.510	-10.3	H	3.0	35.4	1.0	-44.7	-13.0	-31.7	
3.346	-21.2	H	3.0	35.5	1.0	-55.7	-13.0	-42.7	
<b>High Ch, (848.8MHz)</b>									
1.698	-2.2	V	3.0	35.5	1.0	-36.7	-13.0	-23.7	
2.546	-11.9	V	3.0	35.4	1.0	-46.4	-13.0	-33.4	
3.395	-20.2	V	3.0	35.5	1.0	-54.7	-13.0	-41.7	
1.698	-1.2	H	3.0	35.5	1.0	-35.7	-13.0	-22.7	
2.546	-10.7	H	3.0	35.4	1.0	-45.1	-13.0	-32.1	
3.395	-20.8	H	3.0	35.5	1.0	-55.3	-13.0	-42.3	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**ERP EGPRS850MHz BAND**

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT with AC Adapter and Earphone							
<b>Mode:</b>		TX, 850MHz BAND EGPRS MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
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
<b>Low Ch, (824.2MHz)</b>									
1.648	2.5	V	3.0	35.5	1.0	-32.0	-13.0	-19.0	
2.473	-16.2	V	3.0	35.4	1.0	-50.6	-13.0	-37.6	
3.297	-19.9	V	3.0	35.5	1.0	-54.4	-13.0	-41.4	
1.648	3.6	H	3.0	35.5	1.0	-30.9	-13.0	-17.9	
2.473	-14.5	H	3.0	35.4	1.0	-48.9	-13.0	-35.9	
3.297	-20.4	H	3.0	35.5	1.0	-54.9	-13.0	-41.9	
<b>Mid Ch, (836.6MHz)</b>									
1.673	2.9	V	3.0	35.5	1.0	-31.6	-13.0	-18.6	
2.510	-15.9	V	3.0	35.4	1.0	-50.3	-13.0	-37.3	
3.346	-21.0	V	3.0	35.5	1.0	-55.5	-13.0	-42.5	
1.673	0.8	H	3.0	35.5	1.0	-33.7	-13.0	-20.7	
2.510	-21.3	H	3.0	35.4	1.0	-55.7	-13.0	-42.7	
3.346	-20.4	H	3.0	35.5	1.0	-54.9	-13.0	-41.9	
<b>High Ch, (848.8MHz)</b>									
1.698	-2.2	V	3.0	35.5	1.0	-36.7	-13.0	-23.7	
2.546	-18.1	V	3.0	35.4	1.0	-52.5	-13.0	-39.5	
3.395	-19.9	V	3.0	35.5	1.0	-54.4	-13.0	-41.4	
1.698	0.2	H	3.0	35.5	1.0	-34.3	-13.0	-21.3	
2.546	-21.7	H	3.0	35.4	1.0	-56.2	-13.0	-43.2	
3.395	-20.1	H	3.0	35.5	1.0	-54.6	-13.0	-41.6	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**ERP WCDMA REL 99, 850MHz BAND**

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEADSET							
<b>Mode:</b>		TX, 850MHz BAND WCDMA MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
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
<b>Low Ch, (826.4MHz)</b>									
1.653	-19.3	V	3.0	35.5	1.0	-53.8	-13.0	-40.8	
2.479	-15.3	V	3.0	35.4	1.0	-49.7	-13.0	-36.7	
1.653	-12.4	H	3.0	35.5	1.0	-46.9	-13.0	-33.9	
2.479	-23.2	H	3.0	35.4	1.0	-57.6	-13.0	-44.6	
<b>Mid Ch, (836.6MHz)</b>									
1.673	-14.1	V	3.0	35.5	1.0	-48.7	-13.0	-35.7	
2.510	-22.4	V	3.0	35.4	1.0	-56.8	-13.0	-43.8	
1.673	-13.7	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
2.510	-22.3	H	3.0	35.4	1.0	-56.7	-13.0	-43.7	
<b>High Ch, (846.6MHz)</b>									
1.693	-8.0	V	3.0	35.5	1.0	-42.5	-13.0	-29.5	
2.540	-21.8	V	3.0	35.4	1.0	-56.2	-13.0	-43.2	
1.693	-5.5	H	3.0	35.5	1.0	-40.0	-13.0	-27.0	
2.540	-22.3	H	3.0	35.4	1.0	-56.7	-13.0	-43.7	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									



**ERP HSUPA REL 6, 850MHz BAND**

<b>Compliance Certification Services</b> <b>Above 1GHz High Frequency Substitution Measurement</b>									
<b>Company:</b> LG ELECTRONICS <b>Project #:</b> 12U14580 <b>Date:</b> 08/21/12 <b>Test Engineer:</b> MENGISTU MEKURIA <b>Configuration:</b> EUT WITH AC ADAPTER AND HEADSET <b>Mode:</b> TX, 850MHz BAND HSUPA MODE									
<div style="border: 1px solid black; background-color: #e0f7fa; padding: 2px; display: inline-block;"><b>Chamber</b></div> <div style="border: 1px solid black; background-color: #e0f7fa; padding: 2px; display: inline-block;">5m Chamber B</div>		<div style="border: 1px solid black; background-color: #e0f7fa; padding: 2px; display: inline-block;"><b>Pre-amplifier</b></div> <div style="border: 1px solid black; background-color: #e0f7fa; padding: 2px; display: inline-block;">T145 8449B</div>		<div style="border: 1px solid black; background-color: #e0f7fa; padding: 2px; display: inline-block;"><b>Filter</b></div> <div style="border: 1px solid black; background-color: #e0f7fa; padding: 2px; display: inline-block;">Filter 1</div>		<div style="border: 1px solid black; background-color: #e0f7fa; padding: 2px; display: inline-block;"><b>Limit</b></div> <div style="border: 1px solid black; background-color: #e0f7fa; padding: 2px; display: inline-block;">Part 22</div>			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
<b>Low Ch, (826.4MHz)</b>									
1.653	-15.7	V	3.0	35.5	1.0	-50.2	-13.0	-37.2	
2.479	-14.3	V	3.0	35.4	1.0	-48.7	-13.0	-35.7	
1.653	-11.3	H	3.0	35.5	1.0	-45.8	-13.0	-32.8	
2.479	-23.2	H	3.0	35.4	1.0	-57.6	-13.0	-44.6	
<b>Mid Ch, (836.6MHz)</b>									
1.673	-10.5	V	3.0	35.5	1.0	-45.0	-13.0	-32.0	
2.510	-21.4	V	3.0	35.4	1.0	-55.8	-13.0	-42.8	
1.673	-12.6	H	3.0	35.5	1.0	-47.2	-13.0	-34.2	
2.510	-22.3	H	3.0	35.4	1.0	-56.8	-13.0	-43.8	
<b>High Ch, (846.6MHz)</b>									
1.693	-4.3	V	3.0	35.5	1.0	-38.9	-13.0	-25.9	
2.540	-20.8	V	3.0	35.4	1.0	-55.2	-13.0	-42.2	
1.693	-4.4	H	3.0	35.5	1.0	-38.9	-13.0	-25.9	
2.540	-22.3	H	3.0	35.4	1.0	-56.8	-13.0	-43.8	
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.									

**EIRP GPRS1900MHz BAND**

<b>Compliance Certification Services</b> <b>Above 1GHz High Frequency Substitution Measurement</b>									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEAD SET							
<b>Mode:</b>		TX, 1900MHz BAND GPRS MODE							
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
<b>Low Ch, (1850.20MHz)</b>									
3.705	-9.0	V	3.0	35.4	1.0	-43.4	-13.0	-30.4	
5.557	-17.6	V	3.0	35.4	1.0	-52.0	-13.0	-39.0	
3.705	-10.7	H	3.0	35.4	1.0	-45.1	-13.0	-32.1	
5.557	-16.5	H	3.0	35.4	1.0	-50.9	-13.0	-37.9	
<b>Mid Ch, (1880.00MHz)</b>									
3.760	-11.2	V	3.0	35.3	1.0	-45.5	-13.0	-32.5	
5.640	-17.5	V	3.0	35.4	1.0	-51.9	-13.0	-38.9	
3.760	-12.0	H	3.0	35.3	1.0	-46.4	-13.0	-33.4	
5.640	-16.7	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
<b>High Ch, (1909.80MHz)</b>									
3.815	-14.6	V	3.0	35.3	1.0	-49.0	-13.0	-36.0	
5.723	-15.0	V	3.0	35.4	1.0	-49.4	-13.0	-36.4	
3.815	-10.2	H	3.0	35.3	1.0	-44.5	-13.0	-31.5	
5.723	-15.2	H	3.0	35.4	1.0	-49.7	-13.0	-36.7	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**EIRP EGPRS1900MHz BAND**

Compliance Certification Services									
Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEAD SET							
<b>Mode:</b>		TX, 1900MHz BAND EGPRS MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
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
<b>Low Ch, (1850.20MHz)</b>									
3.705	-10.1	V	3.0	35.4	1.0	-44.5	-13.0	-31.5	
5.557	-16.9	V	3.0	35.4	1.0	-51.4	-13.0	-38.4	
3.705	-11.9	H	3.0	35.4	1.0	-46.3	-13.0	-33.3	
5.557	-16.4	H	3.0	35.4	1.0	-50.9	-13.0	-37.9	
<b>Mid Ch, (1880.00MHz)</b>									
3.760	-12.3	V	3.0	35.3	1.0	-46.6	-13.0	-33.6	
5.640	-16.8	V	3.0	35.4	1.0	-51.3	-13.0	-38.3	
3.760	-13.2	H	3.0	35.3	1.0	-47.6	-13.0	-34.6	
5.640	-16.7	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
<b>High Ch, (1909.80MHz)</b>									
3.815	-15.7	V	3.0	35.3	1.0	-50.0	-13.0	-37.0	
5.723	-14.3	V	3.0	35.4	1.0	-48.7	-13.0	-35.7	
3.815	-11.4	H	3.0	35.3	1.0	-45.7	-13.0	-32.7	
5.723	-15.2	H	3.0	35.4	1.0	-49.7	-13.0	-36.7	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**EIRP WCDMA REL 99, 1900MHz BAND**

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEADSET							
<b>Mode:</b>		TX, 1900MHz BAND WCDMA MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
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
<b>Low Ch, (18524MHz)</b>									
3.705	-5.7	V	3.0	35.4	1.0	-40.1	-13.0	-27.1	
5.557	-17.9	V	3.0	35.4	1.0	-52.3	-13.0	-39.3	
3.705	-8.1	H	3.0	35.4	1.0	-42.5	-13.0	-29.5	
5.557	-16.6	H	3.0	35.4	1.0	-51.0	-13.0	-38.0	
<b>Mid Ch, (1880.00MHz)</b>									
3.760	-5.3	V	3.0	35.3	1.0	-39.7	-13.0	-26.7	
5.640	-17.8	V	3.0	35.4	1.0	-52.2	-13.0	-39.2	
3.760	-8.7	H	3.0	35.3	1.0	-43.0	-13.0	-30.0	
5.640	-15.6	H	3.0	35.4	1.0	-50.0	-13.0	-37.0	
<b>High Ch, (1907.60MHz)</b>									
3.815	-7.9	V	3.0	35.3	1.0	-42.2	-13.0	-29.2	
5.723	-17.9	V	3.0	35.4	1.0	-52.3	-13.0	-39.3	
3.815	-12.1	H	3.0	35.3	1.0	-46.4	-13.0	-33.4	
5.723	-16.4	H	3.0	35.4	1.0	-50.9	-13.0	-37.9	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**EIRP HSUPA REL 6, 1900MHz BAND**

Compliance Certification Services									
Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEADSET							
<b>Mode:</b>		TX, 1900MHz BAND HSUPA MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
5m Chamber A		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
<b>Low Ch, (1852.40MHz)</b>									
3.705	-7.1	V	3.0	35.4	1.0	-41.5	-13.0	-28.5	
5.557	-17.8	V	3.0	35.4	1.0	-52.2	-13.0	-39.2	
3.705	-8.8	H	3.0	35.4	1.0	-43.1	-13.0	-30.1	
5.557	-17.6	H	3.0	35.4	1.0	-52.0	-13.0	-39.0	
<b>Mid Ch, (1880.00MHz)</b>									
3.760	-6.7	V	3.0	35.3	1.0	-41.1	-13.0	-28.1	
5.640	-17.7	V	3.0	35.4	1.0	-52.1	-13.0	-39.1	
3.760	-9.4	H	3.0	35.3	1.0	-43.7	-13.0	-30.7	
5.640	-16.6	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
<b>High Ch, (1907.60MHz)</b>									
3.815	-9.3	V	3.0	35.3	1.0	-43.6	-13.0	-30.6	
5.723	-17.8	V	3.0	35.4	1.0	-52.2	-13.0	-39.2	
3.815	-12.8	H	3.0	35.3	1.0	-47.1	-13.0	-34.1	
5.723	-17.5	H	3.0	35.4	1.0	-51.9	-13.0	-38.9	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**EIRP WCDMA REL 99, 1700MHz BAND**

Compliance Certification Services									
Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEADSET							
<b>Mode:</b>		TX, 1700MHz BAND WCDMA MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
5m Chamber B		T145 8449B		Filter 1		Part 27			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
<b>Low Ch, (1712.4MHz)</b>									
3.425	-21.2	V	3.0	35.5	1.0	-55.7	-13.0	-42.7	
5.137	-19.4	V	3.0	35.3	1.0	-53.7	-13.0	-40.7	
3.425	-18.2	H	3.0	35.5	1.0	-52.7	-13.0	-39.7	
5.137	-17.2	H	3.0	35.3	1.0	-51.5	-13.0	-38.5	
<b>Mid Ch, (1732.4MHz)</b>									
3.465	-21.1	V	3.0	35.5	1.0	-55.6	-13.0	-42.6	
5.197	-18.2	V	3.0	35.3	1.0	-52.5	-13.0	-39.5	
3.465	-19.1	H	3.0	35.5	1.0	-53.6	-13.0	-40.6	
5.197	-17.7	H	3.0	35.3	1.0	-52.0	-13.0	-39.0	
<b>High Ch, (1752.5MHz)</b>									
3.505	-19.9	V	3.0	35.4	1.0	-54.3	-13.0	-41.3	
5.258	-17.5	V	3.0	35.3	1.0	-51.9	-13.0	-38.9	
3.505	-19.9	H	3.0	35.4	1.0	-54.3	-13.0	-41.3	
5.258	-16.7	H	3.0	35.3	1.0	-51.1	-13.0	-38.1	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**EIRP HSUPA REL 6, 1700MHz BAND**

Compliance Certification Services									
Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH AC ADAPTER AND HEADSET							
<b>Mode:</b>		TX, 1700MHz BAND HSUPA MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
5m Chamber B		T145 8449B		Filter 1		Part 27			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
<b>Low Ch, (1712.40MHz)</b>									
3.425	-18.5	V	3.0	35.5	1.0	-53.0	-13.0	-40.0	
5.137	-18.9	V	3.0	35.3	1.0	-53.3	-13.0	-40.3	
3.425	-17.9	H	3.0	35.5	1.0	-52.3	-13.0	-39.3	
5.137	-16.5	H	3.0	35.3	1.0	-50.9	-13.0	-37.9	
<b>Mid Ch, (1732.40MHz)</b>									
3.465	-18.5	V	3.0	35.5	1.0	-52.9	-13.0	-39.9	
5.197	-17.7	V	3.0	35.3	1.0	-52.1	-13.0	-39.1	
3.465	-18.7	H	3.0	35.5	1.0	-53.2	-13.0	-40.2	
5.197	-17.0	H	3.0	35.3	1.0	-51.3	-13.0	-38.3	
<b>High Ch, (1752.50MHz)</b>									
3.505	-17.2	V	3.0	35.4	1.0	-51.7	-13.0	-38.7	
5.258	-17.1	V	3.0	35.3	1.0	-51.5	-13.0	-38.5	
3.505	-19.5	H	3.0	35.4	1.0	-53.9	-13.0	-40.9	
5.258	-16.1	H	3.0	35.3	1.0	-50.4	-13.0	-37.4	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									



**EUT WITH INDUCTIVE CHARGER****ERP GPRS850MHz BAND**

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
Company:		LG ELECTRONICS							
Project #:		12U14580							
Date:		08/21/12							
Test Engineer:		MENGISTU MEKURIA							
Configuration:		EUT WITH INDUCTIVE CHARGER AND HEADSET							
Mode:		TX, 850MHz BAND GPRSMODE							
Chamber		Pre-amplifier		Filter		Limit			
5m Chamber B		T144 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
<b>Low Ch, (824.2MHz)</b>									
1.648	0.0	V	3.0	38.2	1.0	-37.2	-13.0	-24.2	
2.473	-9.7	V	3.0	37.5	1.0	-46.2	-13.0	-33.2	
3.297	-21.2	V	3.0	37.1	1.0	-57.4	-13.0	-44.4	
4.121	-18.9	V	3.0	36.5	1.0	-54.4	-13.0	-41.4	
1.648	2.6	H	3.0	38.2	1.0	-34.6	-13.0	-21.6	
2.473	-12.3	H	3.0	37.5	1.0	-48.8	-13.0	-35.8	
3.297	-20.3	H	3.0	37.1	1.0	-56.4	-13.0	-43.4	
4.121	-19.5	H	3.0	36.5	1.0	-55.1	-13.0	-42.1	
<b>Mid Ch, (836.6MHz)</b>									
1.673	0.4	V	3.0	38.1	1.0	-36.8	-13.0	-23.8	
2.510	-10.0	V	3.0	37.5	1.0	-46.5	-13.0	-33.5	
3.346	-18.7	V	3.0	37.1	1.0	-54.8	-13.0	-41.8	
4.183	-18.8	V	3.0	36.5	1.0	-54.3	-13.0	-41.3	
1.673	5.7	H	3.0	38.1	1.0	-31.4	-13.0	-18.4	
2.510	-9.8	H	3.0	37.5	1.0	-46.3	-13.0	-33.3	
3.346	-18.0	H	3.0	37.1	1.0	-54.1	-13.0	-41.1	
4.183	-19.0	H	3.0	36.5	1.0	-54.5	-13.0	-41.5	
<b>High Ch, (848.8MHz)</b>									
1.698	-0.3	V	3.0	38.1	1.0	-37.4	-13.0	-24.4	
2.546	-8.7	V	3.0	37.5	1.0	-45.1	-13.0	-32.1	
3.395	-10.6	V	3.0	37.1	1.0	-46.6	-13.0	-33.6	
4.244	-17.9	V	3.0	36.5	1.0	-53.4	-13.0	-40.4	
1.698	9.5	H	3.0	38.1	1.0	-27.6	-13.0	-14.6	
2.546	-12.3	H	3.0	37.5	1.0	-48.8	-13.0	-35.8	
3.395	-12.4	H	3.0	37.1	1.0	-48.4	-13.0	-35.4	
4.244	-19.2	H	3.0	36.5	1.0	-54.7	-13.0	-41.7	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									



**ERP EGPRS850MHz BAND**

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER AND HEADSET							
<b>Mode:</b>		TX, 850MHz BAND EGPRS MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
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
<b>Low Ch, (824.2MHz)</b>									
1.648	-1.4	V	3.0	35.5	1.0	-35.9	-13.0	-22.9	
2.473	-6.9	V	3.0	35.4	1.0	-41.3	-13.0	-28.3	
3.297	-19.5	V	3.0	35.5	1.0	-54.1	-13.0	-41.1	
4.121	-18.9	V	3.0	35.2	1.0	-53.1	-13.0	-40.1	
1.648	0.8	H	3.0	35.5	1.0	-33.8	-13.0	-20.8	
2.473	-2.8	H	3.0	35.4	1.0	-37.2	-13.0	-24.2	
3.297	-20.3	H	3.0	35.5	1.0	-54.8	-13.0	-41.8	
4.121	-19.0	H	3.0	35.2	1.0	-53.3	-13.0	-40.3	
<b>Mid Ch, (836.6MHz)</b>									
1.673	-1.0	V	3.0	35.5	1.0	-35.5	-13.0	-22.5	
2.510	-7.2	V	3.0	35.4	1.0	-41.6	-13.0	-28.6	
3.346	-17.1	V	3.0	35.5	1.0	-51.6	-13.0	-38.6	
4.183	-18.8	V	3.0	35.2	1.0	-53.0	-13.0	-40.0	
1.673	3.9	H	3.0	35.5	1.0	-30.6	-13.0	-17.6	
2.510	-0.2	H	3.0	35.4	1.0	-34.7	-13.0	-21.7	
3.346	-18.0	H	3.0	35.5	1.0	-52.5	-13.0	-39.5	
4.183	-18.5	H	3.0	35.2	1.0	-52.8	-13.0	-39.8	
<b>High Ch, (848.8MHz)</b>									
1.698	-1.7	V	3.0	35.5	1.0	-36.2	-13.0	-23.2	
2.546	-5.8	V	3.0	35.4	1.0	-40.3	-13.0	-27.3	
3.395	-8.9	V	3.0	35.5	1.0	-43.4	-13.0	-30.4	
4.244	-17.9	V	3.0	35.2	1.0	-52.2	-13.0	-39.2	
1.698	7.7	H	3.0	35.5	1.0	-26.8	-13.0	-13.8	
2.546	-2.8	H	3.0	35.4	1.0	-37.2	-13.0	-24.2	
3.395	-12.4	H	3.0	35.5	1.0	-46.9	-13.0	-33.9	
4.244	-18.7	H	3.0	35.2	1.0	-53.0	-13.0	-40.0	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**ERP WCDMA REL 99, 850MHz BAND**

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER AND HEADSET.							
<b>Mode:</b>		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
<b>Low Ch, (826.4MHz)</b>									
1.653	-30.5	V	3.0	35.5	1.0	-65.0	-13.0	-52.0	
2.479	-13.0	V	3.0	35.4	1.0	-47.4	-13.0	-34.4	
1.653	-13.9	H	3.0	35.5	1.0	-48.4	-13.0	-35.4	
2.479	-19.8	H	3.0	35.4	1.0	-54.2	-13.0	-41.2	
<b>Mid Ch, (836.6MHz)</b>									
1.673	-20.6	V	3.0	35.5	1.0	-55.1	-13.0	-42.1	
2.510	-19.6	V	3.0	35.4	1.0	-54.0	-13.0	-41.0	
1.673	-18.8	H	3.0	35.5	1.0	-53.3	-13.0	-40.3	
2.510	-25.5	H	3.0	35.4	1.0	-59.9	-13.0	-46.9	
<b>High Ch, (846.6MHz)</b>									
1.693	-10.4	V	3.0	35.5	1.0	-44.9	-13.0	-31.9	
2.540	-20.7	V	3.0	35.4	1.0	-55.1	-13.0	-42.1	
1.693	-5.8	H	3.0	35.5	1.0	-40.3	-13.0	-27.3	
2.540	-24.4	H	3.0	35.4	1.0	-58.8	-13.0	-45.8	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**ERP HSUPA REL 6, 850MHz BAND**

<b>Compliance Certification Services</b> <b>Above 1GHz High Frequency Substitution Measurement</b>									
<b>Company:</b> LG ELECTRONICS <b>Project #:</b> 12U14580 <b>Date:</b> 08/21/12 <b>Test Engineer:</b> MENGISTU MEKURIA <b>Configuration:</b> EUT WITH INDUCTIVE CHARGER AND HEADSET. <b>Mode:</b> TX, 850MHz BAND HSUPA MODE									
<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid black; display: inline-block;"><b>Chamber</b></div> <div style="border: 1px solid black; display: inline-block; padding: 2px;">5m Chamber B</div>		<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid black; display: inline-block;"><b>Pre-amplifier</b></div> <div style="border: 1px solid black; display: inline-block; padding: 2px;">T145 8449B</div>		<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid black; display: inline-block;"><b>Filter</b></div> <div style="border: 1px solid black; display: inline-block; padding: 2px;">Filter 1</div>		<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid black; display: inline-block;"><b>Limit</b></div> <div style="border: 1px solid black; display: inline-block; padding: 2px;">Part 22</div>			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
<b>Low Ch, (826.4MHz)</b>									
1.653	-26.7	V	3.0	35.5	1.0	-61.2	-13.0	-48.2	
2.479	-14.3	V	3.0	35.4	1.0	-48.7	-13.0	-35.7	
1.653	-10.9	H	3.0	35.5	1.0	-45.4	-13.0	-32.4	
2.479	-18.3	H	3.0	35.4	1.0	-52.8	-13.0	-39.8	
<b>Mid Ch, (836.6MHz)</b>									
1.673	-16.8	V	3.0	35.5	1.0	-51.3	-13.0	-38.3	
2.510	-20.9	V	3.0	35.4	1.0	-55.3	-13.0	-42.3	
1.673	-15.7	H	3.0	35.5	1.0	-50.3	-13.0	-37.3	
2.510	-24.0	H	3.0	35.4	1.0	-58.5	-13.0	-45.5	
<b>High Ch, (846.6MHz)</b>									
1.693	-6.6	V	3.0	35.5	1.0	-41.1	-13.0	-28.1	
2.540	-22.0	V	3.0	35.4	1.0	-56.5	-13.0	-43.5	
1.693	-2.8	H	3.0	35.5	1.0	-37.3	-13.0	-24.3	
2.540	-22.9	H	3.0	35.4	1.0	-57.3	-13.0	-44.3	
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.									

**EIRP GPRS1900MHz BAND**

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER AND HEADSET							
<b>Mode:</b>		TX, 1900MHz BAND GPRS MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
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
<b>Low Ch, (1850.2MHz)</b>									
3.700	-8.5	V	3.0	35.4	1.0	-42.9	-13.0	-29.9	
5.551	-17.8	V	3.0	35.4	1.0	-52.2	-13.0	-39.2	
3.700	-12.6	H	3.0	35.4	1.0	-47.0	-13.0	-34.0	
5.551	-18.1	H	3.0	35.4	1.0	-52.5	-13.0	-39.5	
<b>Mid Ch, (1880.00MHz)</b>									
3.760	-12.4	V	3.0	35.3	1.0	-46.7	-13.0	-33.7	
5.640	-16.8	V	3.0	35.4	1.0	-51.2	-13.0	-38.2	
3.760	-18.3	H	3.0	35.3	1.0	-52.6	-13.0	-39.6	
5.640	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
<b>High Ch, (1909.80MHz)</b>									
3.820	-15.8	V	3.0	35.3	1.0	-50.1	-13.0	-37.1	
5.729	-14.3	V	3.0	35.4	1.0	-48.7	-13.0	-35.7	
3.820	-16.4	H	3.0	35.3	1.0	-50.7	-13.0	-37.7	
5.729	-15.5	H	3.0	35.4	1.0	-49.9	-13.0	-36.9	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**EIRP EGPRS1900MHz BAND**

Compliance Certification Services									
Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER AND HEADSET							
<b>Mode:</b>		TX, 1900MHz BAND EGPRS MODE							
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
<b>Low Ch, (1850.2MHz)</b>									
3.700	-9.7	V	3.0	35.4	1.0	-44.0	-13.0	-31.0	
5.551	-18.1	V	3.0	35.4	1.0	-52.5	-13.0	-39.5	
3.700	-12.5	H	3.0	35.4	1.0	-46.9	-13.0	-33.9	
5.551	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
<b>Mid Ch, (1880.00MHz)</b>									
3.760	-13.6	V	3.0	35.3	1.0	-47.9	-13.0	-34.9	
5.640	-17.1	V	3.0	35.4	1.0	-51.5	-13.0	-38.5	
3.760	-18.2	H	3.0	35.3	1.0	-52.5	-13.0	-39.5	
5.640	-15.6	H	3.0	35.4	1.0	-50.1	-13.0	-37.1	
<b>High Ch, (1909.80MHz)</b>									
3.820	-17.0	V	3.0	35.3	1.0	-51.3	-13.0	-38.3	
5.729	-14.5	V	3.0	35.4	1.0	-49.0	-13.0	-36.0	
3.820	-16.3	H	3.0	35.3	1.0	-50.6	-13.0	-37.6	
5.729	-14.1	H	3.0	35.4	1.0	-48.6	-13.0	-35.6	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

**EIRP WCDMA REL 99, 1900MHz BAND**

<b>Compliance Certification Services</b> <b>Above 1GHz High Frequency Substitution Measurement</b>									
<b>Company:</b> LG ELECTRONICS <b>Project #:</b> 12U14580 <b>Date:</b> 08/21/12 <b>Test Engineer:</b> MENGISTU MEKURIA <b>Configuration:</b> EUT WITH INDUCTIVE CHARGER AND HEADSET. <b>Mode:</b> TX, 1900MHz BAND WCDMA MODE									
<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid #009688; display: inline-block;">Chamber</div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">5m Chamber B</div>		<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid #009688; display: inline-block;">Pre-amplifier</div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">T145 8449B</div>		<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid #009688; display: inline-block;">Filter</div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">Filter 1</div>		<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid #009688; display: inline-block;">Limit</div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">Part 24</div>			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
<b>Low Ch, (1852.40MHz)</b>									
3.705	-8.7	V	3.0	35.4	1.0	-43.1	-13.0	-30.1	
5.557	-19.0	V	3.0	35.4	1.0	-53.4	-13.0	-40.4	
3.705	-7.8	H	3.0	35.4	1.0	-42.1	-13.0	-29.1	
5.557	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
<b>Mid Ch, (1880.00MHz)</b>									
3.760	-9.8	V	3.0	35.3	1.0	-44.1	-13.0	-31.1	
5.640	-18.1	V	3.0	35.4	1.0	-52.5	-13.0	-39.5	
3.760	-7.8	H	3.0	35.3	1.0	-42.2	-13.0	-29.2	
5.640	-16.4	H	3.0	35.4	1.0	-50.8	-13.0	-37.8	
<b>High Ch, (1907.60MHz)</b>									
3.815	-11.1	V	3.0	35.3	1.0	-45.4	-13.0	-32.4	
5.723	-18.6	V	3.0	35.4	1.0	-53.0	-13.0	-40.0	
3.815	-11.9	H	3.0	35.3	1.0	-46.2	-13.0	-33.2	
5.723	-16.6	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.									

**EIRP HSUPA REL 6, 1900MHz BAND**

Compliance Certification Services									
Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER AND HEADSET.							
<b>Mode:</b>		TX, 1900MHz BAND HSUPA MODE							
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
<b>Low Ch, (1852.40MHz)</b>									
3.705	-8.7	V	3.0	35.4	1.0	-43.1	-13.0	-30.1	
5.557	-18.3	V	3.0	35.4	1.0	-52.7	-13.0	-39.7	
3.705	-7.1	H	3.0	35.4	1.0	-41.4	-13.0	-28.4	
5.557	-16.9	H	3.0	35.4	1.0	-51.3	-13.0	-38.3	
<b>Mid Ch, (1880.00MHz)</b>									
3.760	-9.8	V	3.0	35.3	1.0	-44.1	-13.0	-31.1	
5.640	-17.3	V	3.0	35.4	1.0	-51.7	-13.0	-38.7	
3.760	-7.1	H	3.0	35.3	1.0	-41.4	-13.0	-28.4	
5.640	-16.4	H	3.0	35.4	1.0	-50.9	-13.0	-37.9	
<b>High Ch, (1907.60MHz)</b>									
3.815	-11.0	V	3.0	35.3	1.0	-45.3	-13.0	-32.3	
5.723	-17.8	V	3.0	35.4	1.0	-52.3	-13.0	-39.3	
3.815	-11.2	H	3.0	35.3	1.0	-45.5	-13.0	-32.5	
5.723	-16.6	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									



**EIRP WCDMA REL 99, 1700MHz BAND**

<b>Compliance Certification Services</b> <b>Above 1GHz High Frequency Substitution Measurement</b>									
<b>Company:</b> LG ELECTRONICS <b>Project #:</b> 12U14580 <b>Date:</b> 08/21/12 <b>Test Engineer:</b> MENGISTU MEKURIA <b>Configuration:</b> EUT WITH INDUCTIVE CHARGER AND HEADSET. <b>Mode:</b> TX, 1700MHz BAND WCDMA MODE									
<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid #009688; display: inline-block;"><b>Chamber</b></div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">5m Chamber B</div>		<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid #009688; display: inline-block;"><b>Pre-amplifier</b></div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">T145 8449B</div>		<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid #009688; display: inline-block;"><b>Filter</b></div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">Filter 1</div>		<div style="background-color: #e0f7fa; padding: 2px; border: 1px solid #009688; display: inline-block;"><b>Limit</b></div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">Part 27</div>			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
<b>Low Ch, (1712.4MHz)</b>									
3.425	-18.6	V	3.0	35.5	1.0	-53.1	-13.0	-40.1	
5.137	-17.7	V	3.0	35.3	1.0	-52.0	-13.0	-39.0	
3.425	-20.6	H	3.0	35.5	1.0	-55.1	-13.0	-42.1	
5.137	-17.0	H	3.0	35.3	1.0	-51.3	-13.0	-38.3	
<b>Mid Ch, (1732.4MHz)</b>									
3.465	-20.2	V	3.0	35.5	1.0	-54.7	-13.0	-41.7	
5.197	-19.4	V	3.0	35.3	1.0	-53.7	-13.0	-40.7	
3.465	-21.6	H	3.0	35.5	1.0	-56.1	-13.0	-43.1	
5.197	-15.6	H	3.0	35.3	1.0	-50.0	-13.0	-37.0	
<b>High Ch, (1752.5MHz)</b>									
3.505	-21.6	V	3.0	35.4	1.0	-56.1	-13.0	-43.1	
5.258	-18.5	V	3.0	35.3	1.0	-52.9	-13.0	-39.9	
3.505	-21.6	H	3.0	35.4	1.0	-56.0	-13.0	-43.0	
5.258	-16.4	H	3.0	35.3	1.0	-50.8	-13.0	-37.8	
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.									



**EIRP HSUPA REL 6, 1700MHz BAND**

Compliance Certification Services									
Above 1GHz High Frequency Substitution Measurement									
<b>Company:</b>		LG ELECTRONICS							
<b>Project #:</b>		12U14580							
<b>Date:</b>		08/21/12							
<b>Test Engineer:</b>		MENGISTU MEKURIA							
<b>Configuration:</b>		EUT WITH INDUCTIVE CHARGER AND HEADSET.							
<b>Mode:</b>		TX, 1700MHz BAND HSUPA MODE							
<b>Chamber</b>		<b>Pre-amplifier</b>		<b>Filter</b>		<b>Limit</b>			
5m Chamber B		T145 8449B		Filter 1		Part 27			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
<b>Low Ch, (1712.4MHz)</b>									
3.425	-16.4	V	3.0	35.5	1.0	-50.9	-13.0	-37.9	
5.137	-17.2	V	3.0	35.3	1.0	-51.5	-13.0	-38.5	
3.425	-18.9	H	3.0	35.5	1.0	-53.4	-13.0	-40.4	
5.137	-17.6	H	3.0	35.3	1.0	-51.9	-13.0	-38.9	
<b>Mid Ch, (1732.4MHz)</b>									
3.465	-18.0	V	3.0	35.5	1.0	-52.5	-13.0	-39.5	
5.197	-18.9	V	3.0	35.3	1.0	-53.2	-13.0	-40.2	
3.465	-19.8	H	3.0	35.5	1.0	-54.3	-13.0	-41.3	
5.197	-16.2	H	3.0	35.3	1.0	-50.6	-13.0	-37.6	
<b>High Ch, (1752.5MHz)</b>									
3.505	-19.4	V	3.0	35.4	1.0	-53.8	-13.0	-40.8	
5.258	-18.0	V	3.0	35.3	1.0	-52.3	-13.0	-39.3	
3.505	-19.8	H	3.0	35.4	1.0	-54.3	-13.0	-41.3	
5.258	-17.0	H	3.0	35.3	1.0	-51.4	-13.0	-38.4	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									