FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E
INDUSTRY CANADA RSS-132 ISSUE 2
INDUSTRY CANADA RSS-133 ISSUE 5

CERTIFICATION TEST REPORT

FOR

CDMA/1XEVDO REL 0 /EVDO REV. A WITH BLUETOOTH PHONE

MODEL NUMBER: P120EWW

FCC ID: O8F-PIXE
IC: 39Ø5A-PIXE

REPORT NUMBER: 09U12821-1, REVISION A

ISSUE DATE: OCTOBER 15, 2009

Prepared for

PALM
950 MAUDE AVENUE
SUNNYVALE, CA. 94085
UNITED STATES

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	10/08/09	Initial Issue	T. Chan
A	10/15/09	Addressed TCB's Questions	T. Chan

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COMPLIANCE CERTIFICATION SERVICES FORM NO: CCSUP4031B
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: PALM
950 MAUDE AVENUE
SUNNYVALE, CA. 94085, UNITED STATES.

EUT DESCRIPTION: CDMA/1xEVDO Rel 0 /EVDO Rev. A with Bluetooth Phone

MODEL: P120EWW

SERIAL NUMBER: PD1CS8N92017 (CDMA); PD1CS8N92027 (EV-DO)

DATE TESTED: SEPTEMBER 22-26, 2009

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 22 Subpart H	Pass
CFR 47 Part 24 Subpart E	Pass
INDUSTRY CANADA RSS-132 Issue 2	Pass
INDUSTRY CANADA RSS-133 Issue 5	Pass

Compliance Certification Services, Inc. (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 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 CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by 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 CCS By:

THU CHAN
EMC MANAGER
COMPLIANCE CERTIFICATION SERVICES

Tested By:

CHIN PANG
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

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, RSS-132 Issue 2, and RSS-133 Issue 5.

3. FACILITIES AND ACCREDITATION

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

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 CDMA/1xEVDO Rel 0 /EVDO Rev. A with Bluetooth Phone.

GENERAL INFORMATION

Power Requirements	100-240 VAC / 50-60 Hz
List of frequencies generated or used by the EUT	600MHz

ACCESSORIES

The EUT was constructed and using the following accessories:

Accessories Description	Manufacturer/ Trademark	Part Number
AC Power Adapter source #1 Input Rating: 100–240 Vac, 50/60Hz, 0.2A Output Rating: 5Vdc, 1000mA	Palm	157-10130-00
AC Power Adapter source #2 Input Rating: 100–240 Vac, 50/60Hz, 0.2A Output Rating: 5Vdc, 1000mA	Palm	157-10124-00
Inductive Charging Dock Input Rating: 5Vdc, 1000mA	Palm	157-10123-00
Battery source #1 (Cell Origin Japan) Type: Rechargeable Li-ion Polymer Rating: 3.7Vdc, 1150mAh (minimum)	Palm	157-10119-00
Battery source #2 (Cell Origin Korea) Type: Rechargeable Li-ion Polymer Rating: 3.7Vdc, 1150mAh (minimum)	Palm	157-10119-00
Wired Stereo Headset	Palm	180-10632-00
USB cable	Palm	180-10647-00

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5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum ERP & EIRP output powers as follows:

Part 22 Cellular Band

Frequency range (MHz)	Modulation	Conducted		ERP	
		dBm	mW	dBm	mW
824.7 – 848.31	1xRTT (RC2, SO 9)	28.50	707.9	27.30	537.0
824.7 – 848.31	EV-DO - REV A	29.60	912.0	27.40	549.5

Part 24 PCS Band

Frequency range (MHz)	Modulation	Conducted		EIRP	
		dBm	mW	dBm	mW
1851.25 – 1908.8	1xRTT (RC2, SO 9)	27.80	602.6	28.40	691.8
1851.25 – 1908.8	EV-DO - REV A	28.90	776.2	30.60	1148.2

5.3. DESCRIPTION OF AVAILABLE ANTENNS

The radio utilizes a PCB integrated antenna with a maximum gain of 0.2dBi for Cell band and 0.6dBi for PCS band.

5.4. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.

5.5. WORST-CASE CONFIGURATION AND MODE

Based on the following investigation results, see Section 7. RF POWER OUTPUT VERIFCATION. The highest peak power and enhanced data rate is the worst-case scenario for all measurements.

Worst case modes:
- For Cellular and PCS band: 1xRTT (RC2, SO9)
- For Cellular and PCS band: EVDO-Rev A

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

For the fundamental investigation, since the EUT is a portable device that has three orientations; therefore X, Y and Z orientations have been investigated, also with AC/DC adapter, and inductive charging dock position, and the worst case was found to be at Y orientation without AC/DC adapter.

The worst-case configuration has been evaluated on EUT with antenna @ Y-position for both 850MHz and 1900MHz bands by comparing the fundamental ERP / EIRP output power.

For the AC line conducted test, both worst configurations were tested as EUT with AC/DC adapter and EUT with inductive charging dock.

5.6. LIST OF TEST ITEMS

Description of test	Rule part		Results
	FCC	IC	
1. RF Power Output	§2.1046	RSS-132, 4.4; RSS-133, 6.4;	Complies
2. Occupied Bandwidth	§2.1049	RSS-Gen, 4.6	--
3. Block Edge (Band Edge)	§22.359, §24.238	RSS-132, 4.5; RSS-133, 6.5	Complies
4. Out of Band Emissions	§2.1051, §22.917, §24.238	RSS-132, 4.5; RSS-133, 6.5	Complies
5. Frequency Stability	§2.1055, §22.355, §24.235	RSS-132, 4.3; RSS-133, 6.3	Complies
6. Radiated Power (ERP & EIRP)	§2.1046, §22.913, §24.232	RSS-132; 4.4, RSS-133, 6.4	Complies
7. Field Strength of Spurious Radiation	§2.1053, §22.917, §24.238	RSS-132, 4.5; RSS-133, 6.5	Complies
8. Receiver Spurious Emissions (IC only)	n/a	RSS-132, 4.6; RSS-133, 6.6, RSS-Gen	Complies

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
DC Power Supply	XANTREX	XHR 60-18	NA	NA
Communication Test Set	R&S	CMU200	106291	NA
EarPhone	Palm	NA	NA	NA

I/O CABLES (CONDUCTED TEST)

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	2	US 115V	Un-shielded	2m	
2	DC	2	DC	Un-shielded	2m	
3	USB	1	USB	Un-shielded	2m	
4	RF In/Out	1	Directional Coupler	Un-shielded	1m	
5	RF In/Out	1	Communication Test Set	Un-shielded	2m	
6	RF In/Out	1	Spectrum Analyzer	Un-shielded	1m	

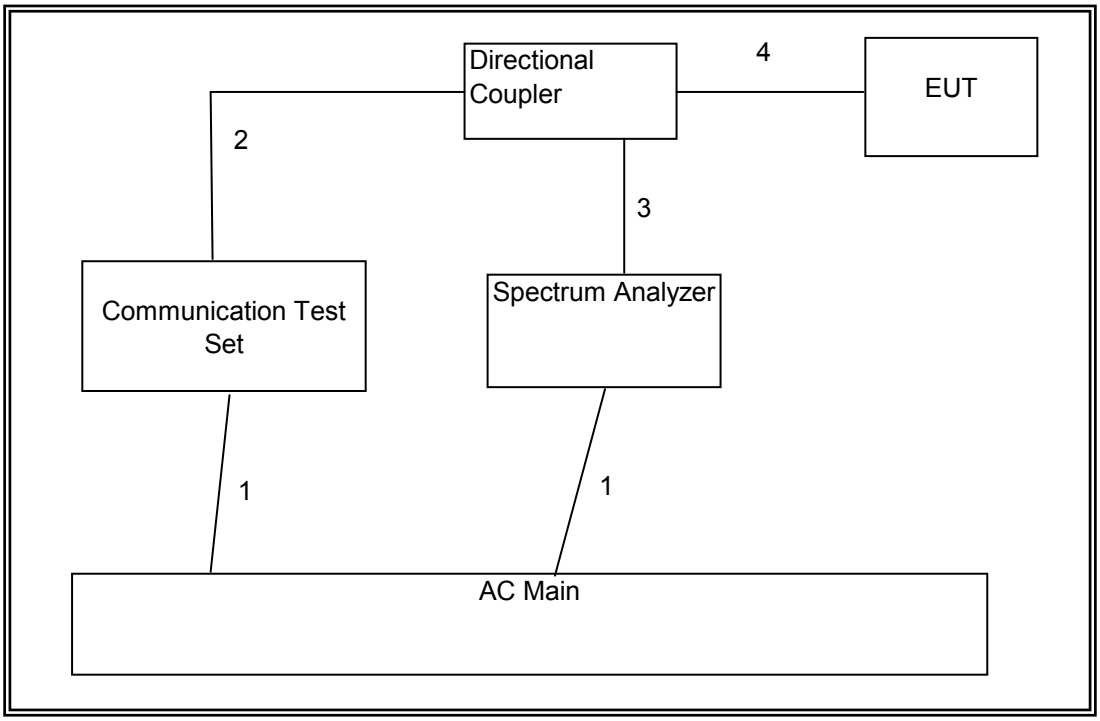
I/O CABLES (RADIATED TEST)

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	US 115V	Un-shielded	2m	No
2	DC	1	DC	Un-shielded	2m	No
3	RF In/Out	1	Horn	Un-shielded	2m	Yes
4	Audio	1	Earphone	Un-shielded	1m	Yes

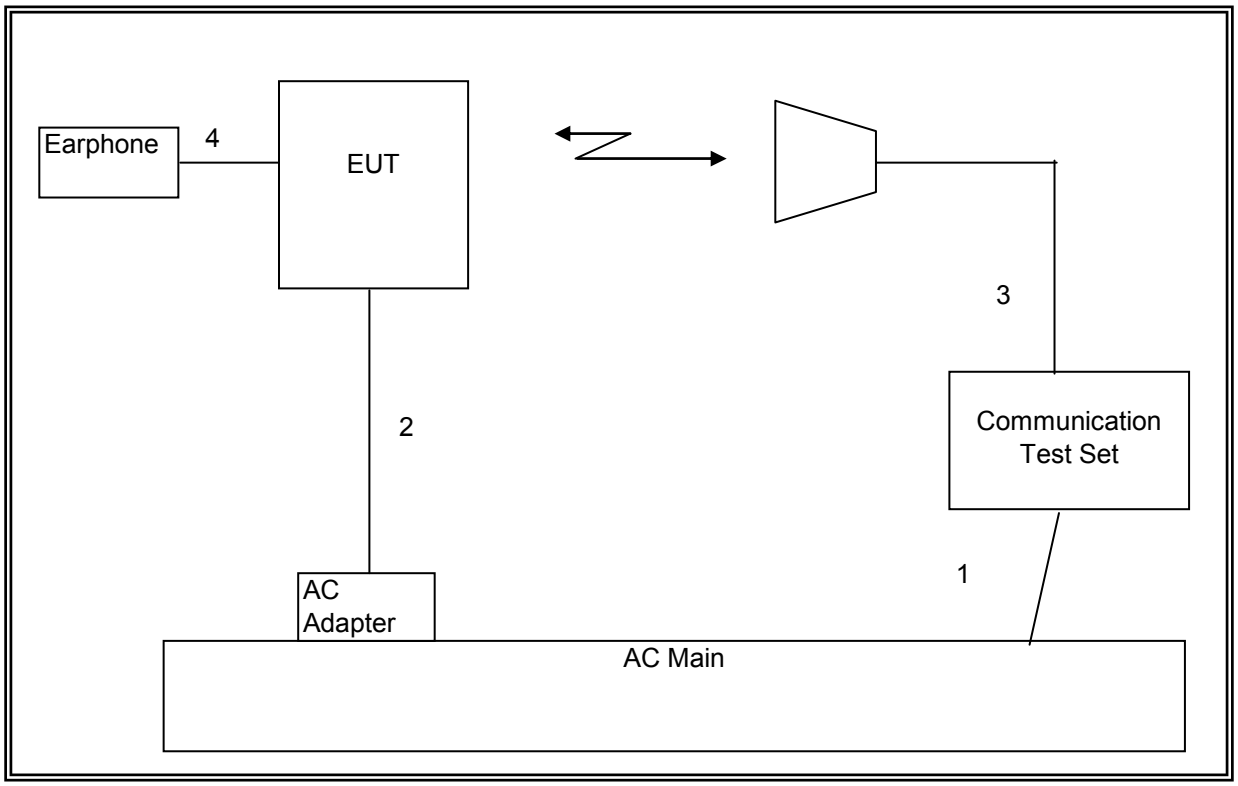
TEST SETUP

The EUT is a stand alone device. A link is established between the EUT and the CMU200 communications test set.

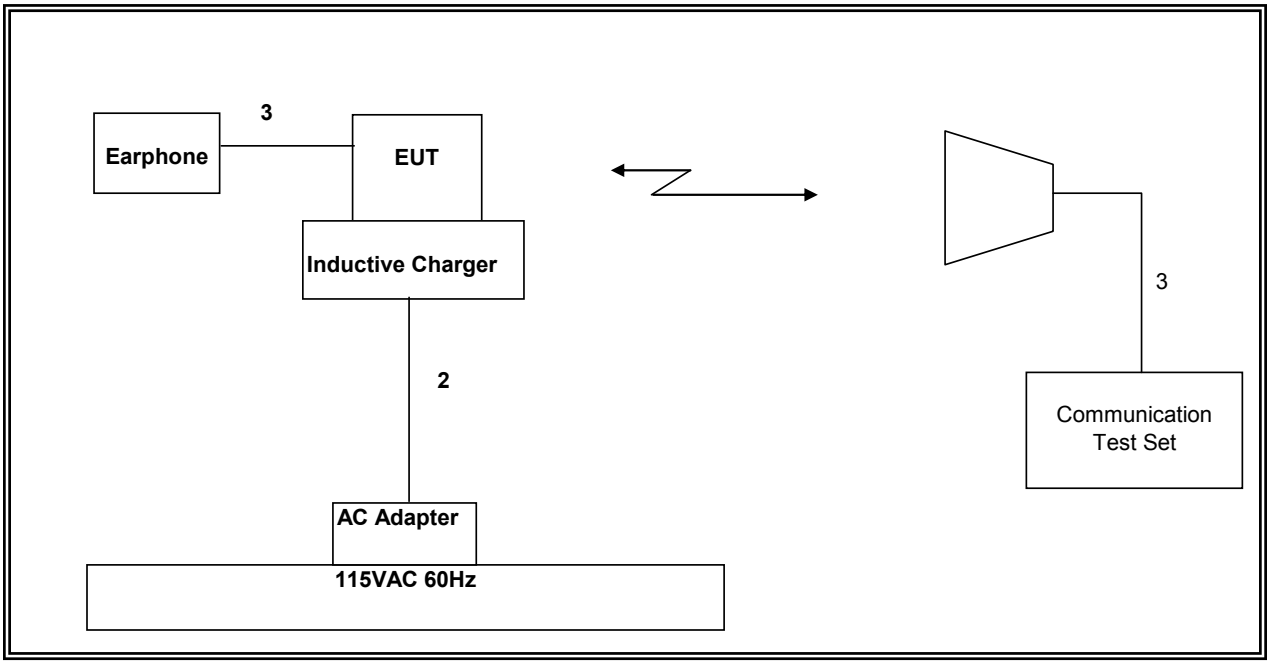
SETUP DIAGRAM FOR CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS



SETUP DIAGRAM FOR EUT WITH INDUCTIVE CHARGING DOCK



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	02/04/10
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	01/14/10
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00778	12/16/09
Antenna, Horn, 18 GHz	EMCO	3115	C00783	01/29/10
Temperature Chamber	TenneyTen	TPRC112260	Test US	03/03/10
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01178	08/31/10
Communication Test Set	R & S	CMU 200	C01131	02/27/11
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	05/06/11
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	10/29/09
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02688	CNR
Directional Coupler, 0.01 ~ 1000 MHz	Werlatone	C6021	C00907	CNR
Directional Coupler, 18 GHz	Krytar	1817	N02656	CNR
Signal Generator, 20 GHz	Agilent / HP	83732B	C00774	07/03/10
Antenna, Tuned Dipole 400~1000 MHz	ETS	3121C DB4	C00993	06/28/10

7. RF POWER OUTPUT VERIFICATION

Maximum output power is verified on the Low, Middle and High channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E for 1xRTT, section 3.1.2.3.4 of 3GPP2 C.S0033-0/TIA-866 for Rel. 0 and section 4.3.4 of 3GPP2 C.S0033-A for Rev. A

7.1. RF POWER OUTPUT FOR 1xRTT

This procedure assumes the Communication Test Set has the following applications installed and with valid license.

Application	Rev, License
CDMA2000 Mobile Test	B.13.08, L

- Call Setup > Shift & Preset
- Cell Info > Cell Parameters > System ID (SID) > 8
  > Network ID (NID) > 65535
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > Please see following table or details
- FCH Service Option (SO) Setup > Please see following table or details
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps
  > R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Rvs Power Ctrl > Active bits
  - Rvs Power Ctrl > All Up bits (Maximum TxPout)
  -

RF Power Output Results for 1XRTT

RF Power Output for 1xRTT - Cell Band							
Radio Configuration (RC)	Service Option (SO)	Conducted Output Power (dBm)					
		Ch. 1013/824.7MHz		Ch. 384/836.52MHz		Ch. 777/848.31MHz	
		Average	Peak	Average	Peak	Average	Peak
RC1 (Fwd1, Rvs1)	1 (Voice)						
	2 (Loopback)	23.84	28.3	23.65	28.30	23.84	27.60
	3 (Voice)						
	55 (Loopback)	23.85	28.30	23.65	28.30	23.90	27.60
	68 (Voice)						
RC2 (Fwd2, Rvs2)	9 (Loopback)	23.83	28.30	**23.84**	**28.50**	23.90	27.50
	17 (Voice)						
	55 (Loopback)	23.83	28.20	23.63	28.30	23.94	27.50
	32768 (Voice)						
RC3 (Fwd3, Rvs3)	1 (Voice)						
	2 (Loopback)	23.90	27.90	23.67	27.90	23.89	27.30
	3 (Voice)						
	55 (Loopback)	23.92	27.80	23.70	27.80	23.84	27.20
	32 (+ F-SCH)	23.92	27.80	23.66	27.90	23.93	27.20
	32 (+ SCH)	23.90	27.80	23.65	27.80	23.91	27.20
RC4 (Fwd4, Rvs3)	1 (Voice)						
	2 (Loopback)	23.91	27.80	23.69	27.80	23.90	27.20
	3 (Voice)						
	55 (Loopback)	23.93	27.80	23.70	27.80	23.82	27.20
	32 (+ F-SCH)	24.09	28.00	23.76	28.00	24.00	27.50
	32 (+ SCH)	24.00	27.90	23.77	27.90	23.94	27.50
RC5 (Fwd5, Rvs4)	9 (Loopback)	23.88	27.80	23.63	27.80	23.90	27.20
	17 (Voice)						
	55 (Loopback)	23.94	27.80	23.68	27.80	23.85	27.20
	32768 (Voice)						

RF Power Output Results for 1XRTT

RF Power Output for 1xRTT - PCS Band							
Radio Configuration (RC)	Service Option (SO)	Conducted Output Power (dBm)					
		Ch. 25/1851.25MHz		Ch. 600/1880MHz		Ch. 1175/1908.75 MHz	
		Average	Peak	Average	Peak	Average	Peak
RC1 (Fwd1, Rvs1)	1 (Voice)						
	2 (Loopback)	23.12	27.70	22.86	27.15	22.70	27.00
	3 (Voice)						
	55 (Loopback)	23.14	27.60	22.78	26.70	22.80	26.70
	68 (Voice)						
RC2 (Fwd2, Rvs2)	9 (Loopback)	23.11	**27.80**	22.86	27.20	22.71	27.00
	17 (Voice)						
	55 (Loopback)	23.10	27.78	22.71	27.00	22.80	27.20
	32768 (Voice)						
RC3 (Fwd3, Rvs3)	1 (Voice)						
	2 (Loopback)	23.15	27.50	22.76	26.70	22.89	26.70
	3 (Voice)						
	55 (Loopback)	23.10	2730	22.78	26.70	22.87	26.80
	32 (+ F-SCH)	23.19	27.50	22.75	26.90	23.00	27.30
	32 (+ SCH)	23.20	27.50	22.74	26.80	22.95	27.30
RC4 (Fwd4, Rvs3)	1 (Voice)						
	2 (Loopback)	23.20	27.30	22.72	26.70	22.76	26.80
	3 (Voice)						
	55 (Loopback)	23.11	27.30	22.70	26.70	22.86	26.80
	32 (+ F-SCH)	23.20	27.50	22.80	26.90	22.78	27.00
	32 (+ SCH)	23.17	27.50	22.78	26.80	22.76	27.00
RC5 (Fwd5, Rvs4)	9 (Loopback)	23.11	27.40	22.74	26.60	22.70	26.70
	17 (Voice)						
	55 (Loopback)	23.19	27.40	22.83	26.70	22.78	26.80
	32768 (Voice)						

7.2. RF POWER OUTPUT FOR EVDO REV 0

This procedure assumes the Communication Test Set has the following applications installed and with valid license.

Application	Rev, License
1xEV-DO Terminal Test	A.09.13

EVDO Release 0 - RTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Parms:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > RTAP
  - RTAP Rate > 153.6 kbps
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press “Start Data Connection” when “Session Open” appear in “Active Cell”
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Parms:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > FTAP (default)
  - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press “Start Data Connection” when “Session Open” appear in “Active Cell”
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

RF Power Output for EV-DO Rel 0

Cell Band

FTAP Rate	RTAP Rate	Channel	f (MHz)	Conducted power (dBm)	
				Average	Peak
307.2 kbps (2 slot, QPSK)	153.6 kbps	1013	824.70	23.92	28.50
		384	836.52	23.72	28.80
		777	848.31	23.90	27.80

PCS Band

FTAP Rate	RTAP Rate	Channel	f (MHz)	Conducted power (dBm)	
				Average	Peak
307.2 kbps (2 slot, QPSK)	153.6 kbps	25	1851.25	23.18	28.10
		600	1880.00	22.80	27.20
		1175	1908.75	22.70	27.10

7.3. RF POWER OUTPUT FOR EVDO REV A

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application	Rev, License
1xEV-DO Terminal Test	A.09.13

EVDO Release A – RETAP
- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > RETAP
- R-Data Pkt Size > 4096
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2 > PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

EVDO Release A - FETAP
- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > FETAP
- F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2 > PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

RF Power Output Results for EV-DO Rev A

Cell Band

FETAP-Traffic Format	RETAP-Data Payload Size	Channel	f (MHz)	Conducted power (dBm)	
				Average	Peak
307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	1013	824.70	24.50	29.00
		384	836.52	24.30	29.60
		777	848.31	24.36	28.10

PCS Band

FETAP-Traffic Format	RETAP-Data Payload Size	Channel	f (MHz)	Conducted power (dBm)	
				Average	Peak
307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	25	1851.25	23.90	28.90
		600	1880.00	23.35	28.00
		1175	1908.75	23.42	27.80

8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049
IC: RSS-Gen, 4.6

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

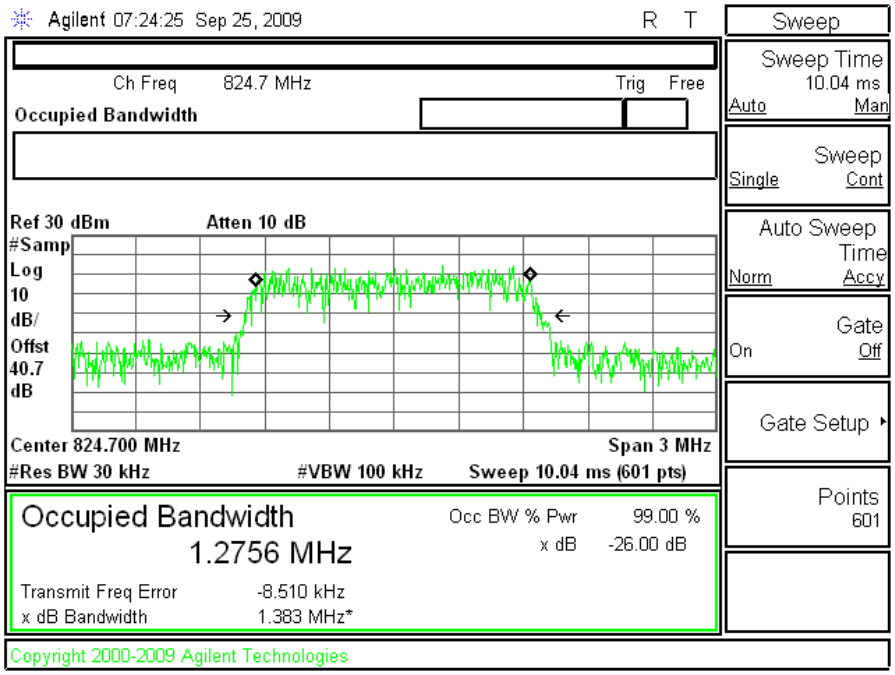
- 1xRTT - RC1, SO55
- EV-DO - REV A

RESULTS

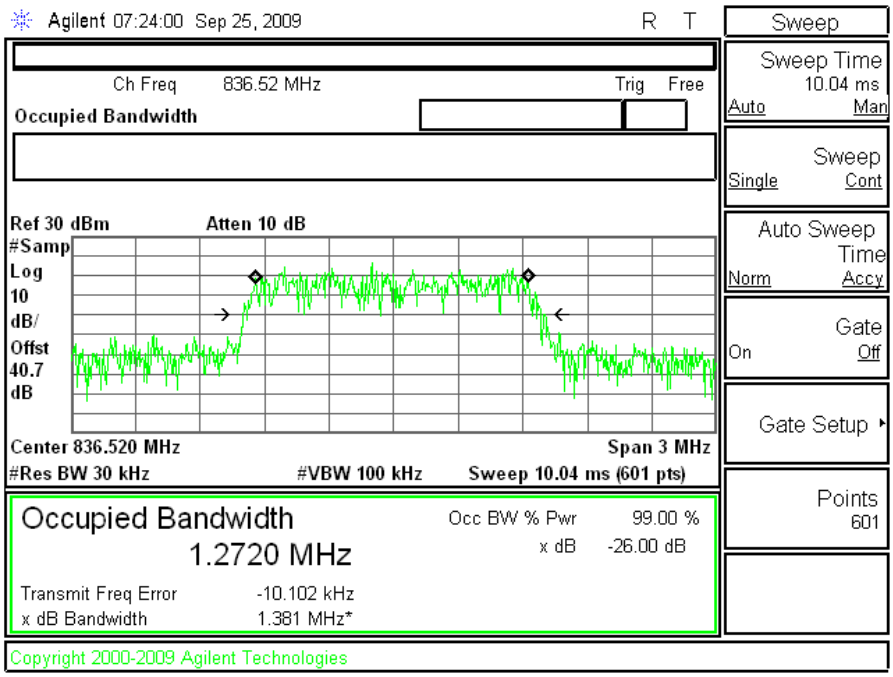
Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB BW MHz)
Cellular	1xRTT	1013	824.70	1.2756	1.383
		384	836.52	1.2720	1.381
		777	848.31	1.2785	1.408
	EV-DO REV A	1013	824.70	1.2742	1.400
		384	836.52	1.2729	1.402
		777	848.31	1.2765	1.437
PCS	1xRTT	25	1851.25	1.2744	1.383
		600	1880.0	1.2743	1.396
		1175	1908.75	1.2713	1.408
	EV-DO REV A	25	1851.25	1.2742	1.386
		600	1880.0	1.2734	1.410
		1175	1908.75	1.2722	1.398

Plots for 1xRTT Mode (Cellular Band)

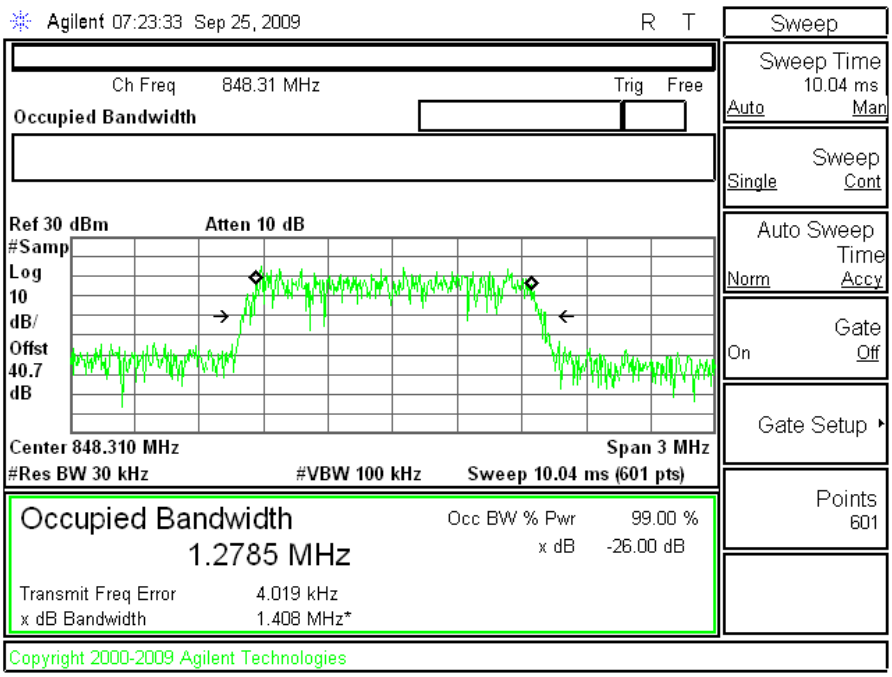
1xRTT Ch 1013



1xRTT, Ch 384

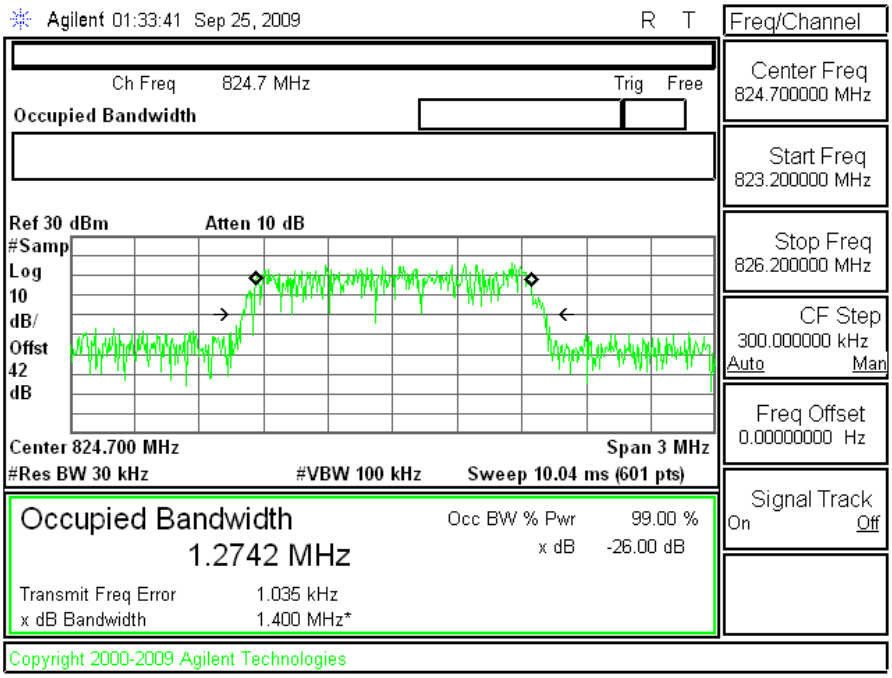


1xRTT Ch 777

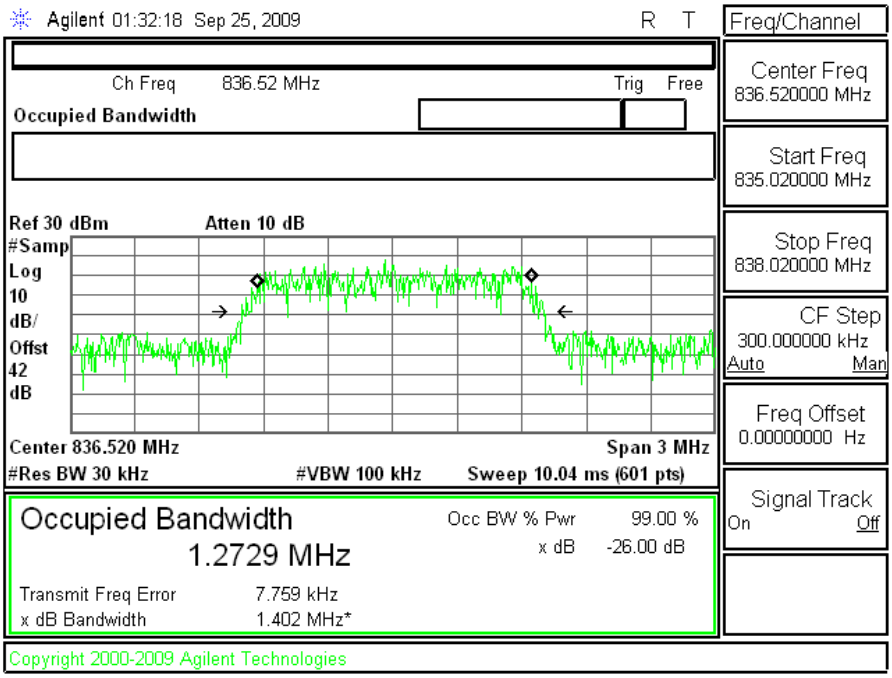


Plots for EVDO-REV A Mode (Cellular Band)

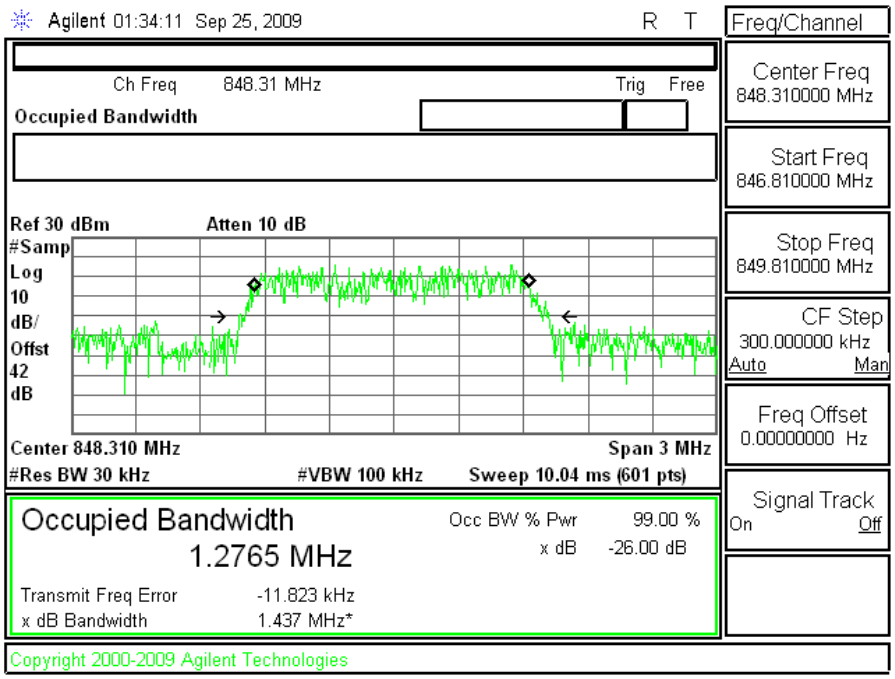
EVDO-REV A, Ch 1013



EVDO-REV A, Ch 384

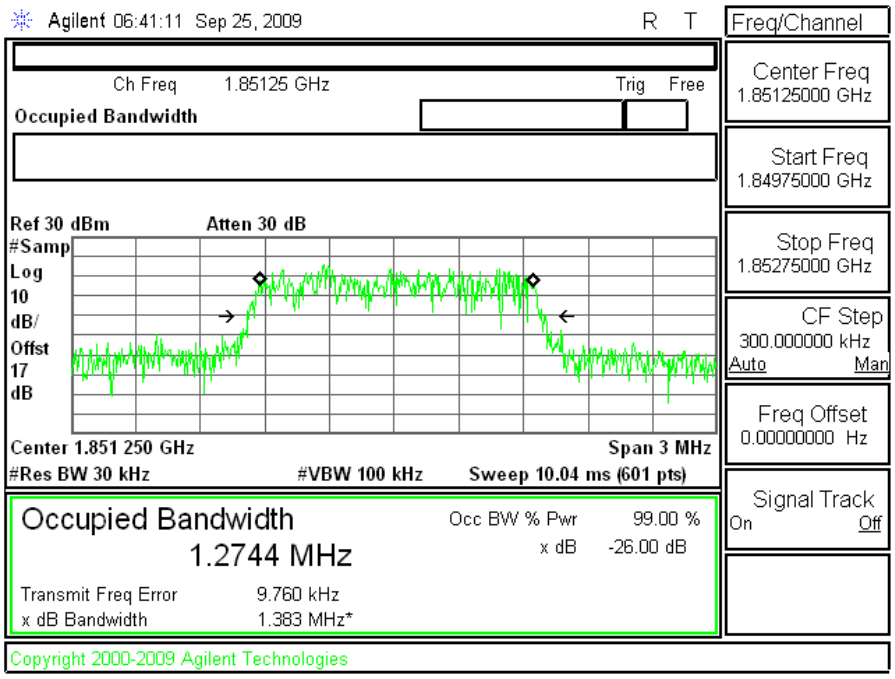


EVDO-REV A Ch 777

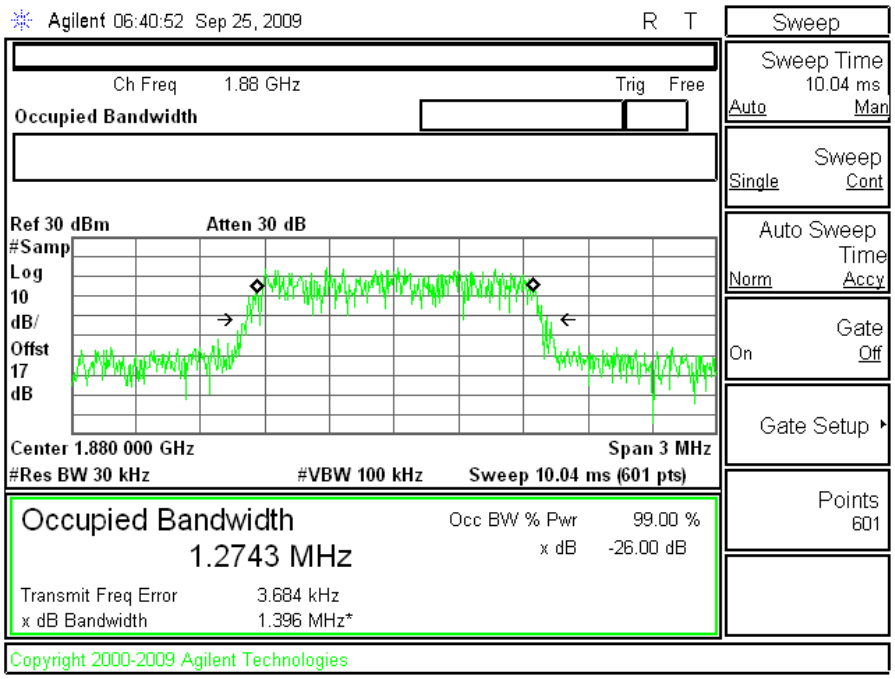


Plots for 1xRTT Mode (PCS Band)

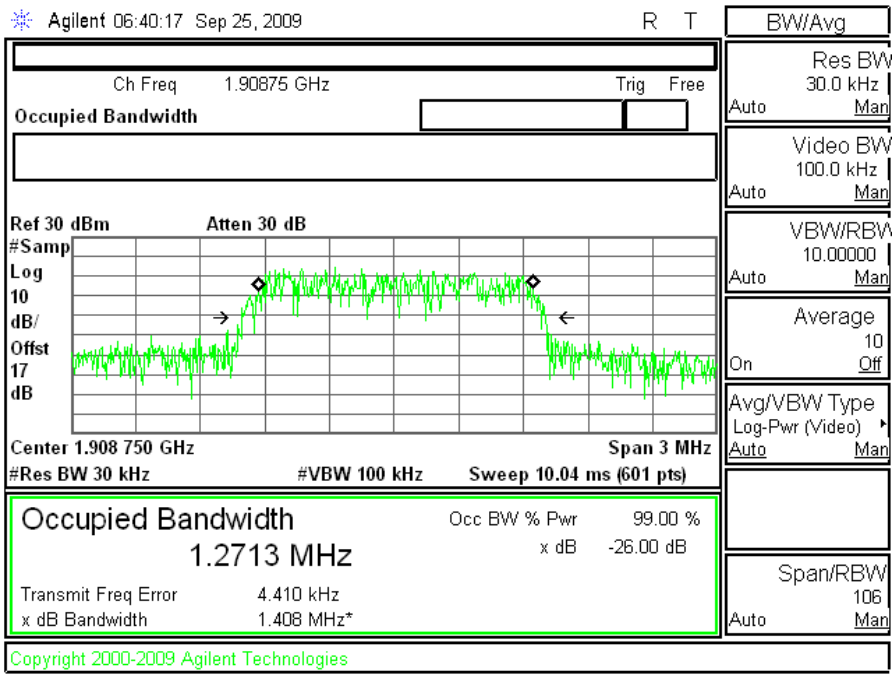
1xRTT, Ch 25



1xRTT, Ch 600

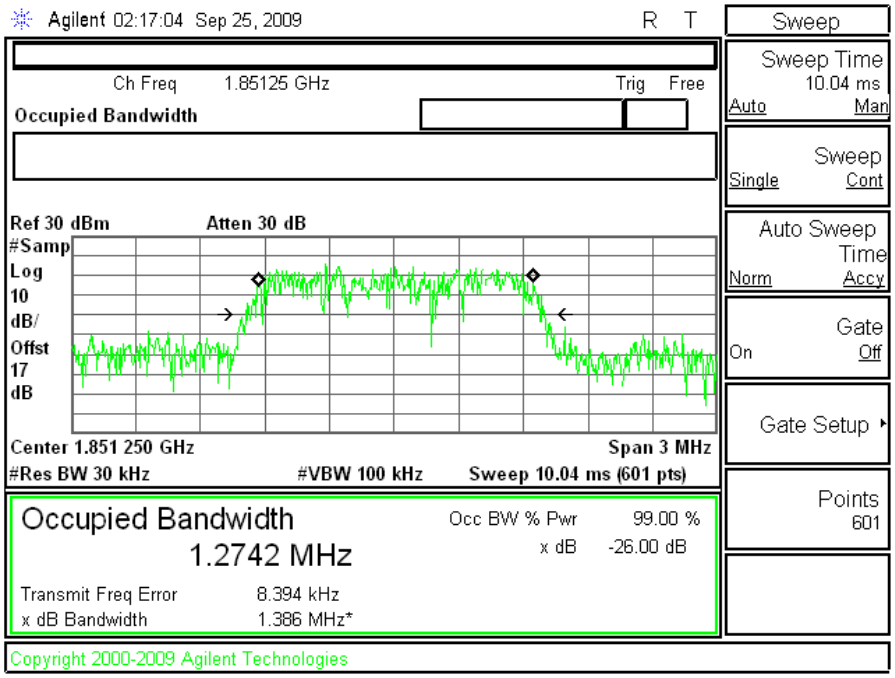


1xRTT, Ch 1175

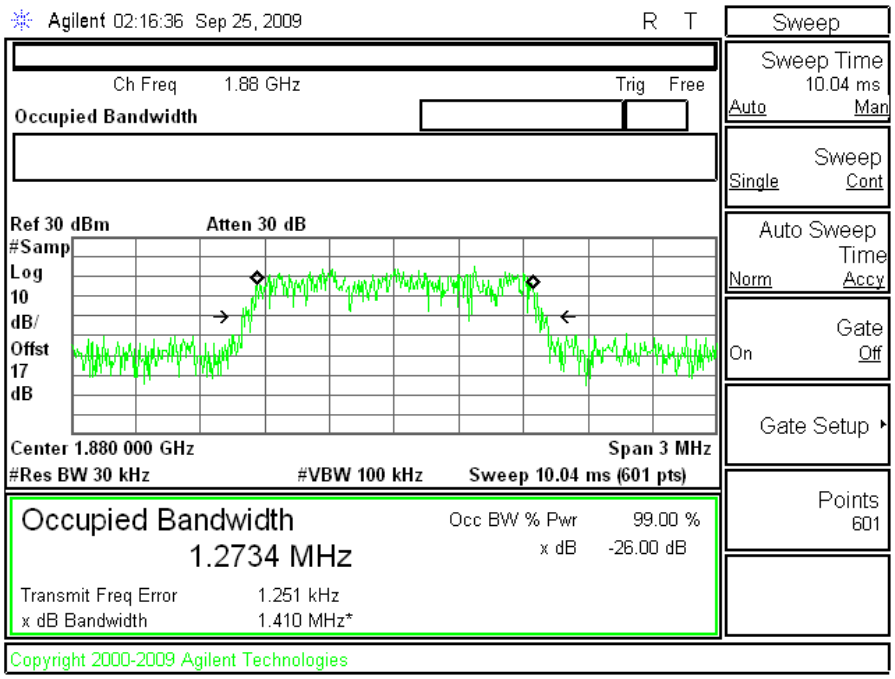


Plots for EVDO, REV A Mode (PCS Band)

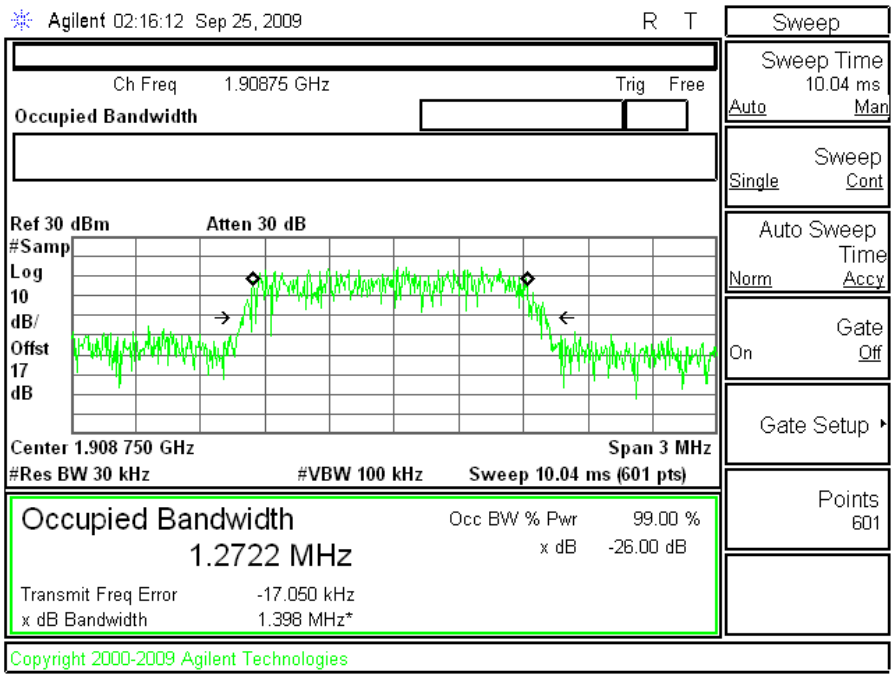
EVDO-REV A, Ch 25



EVDO-REV A, Ch 600



EVDO-REV A, Ch 1175



8.2. BAND EDGE

RULE PART(S)

FCC: §22.359, 24.238
IC: RSS-132, 4.5; RSS-133, 6.5

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 a Agilent 8960 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.
For each band edge measurement:

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

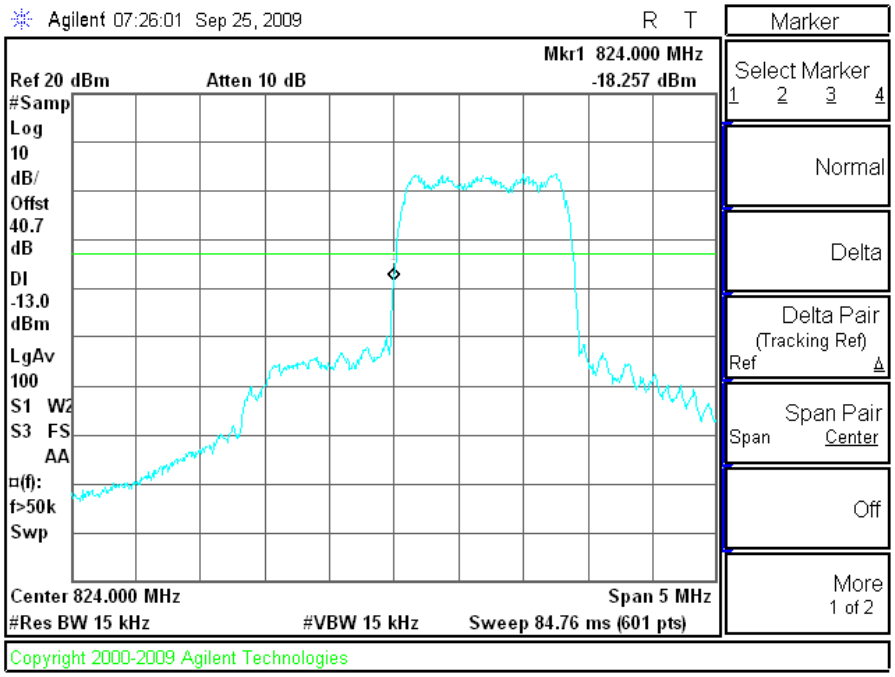
MODES TESTED

- 1xRTT - RC1, SO55
- EV-DO - REV A

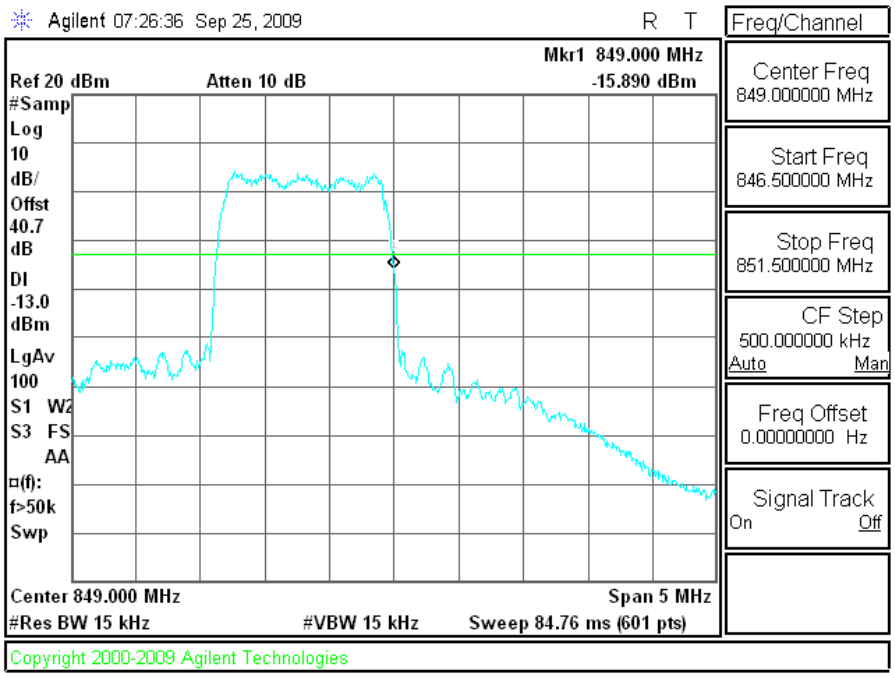
RESULTS

Plots for 1xRTT mode (Cellular Band)

1xRTT, Ch 1013 (824.7 MHz)

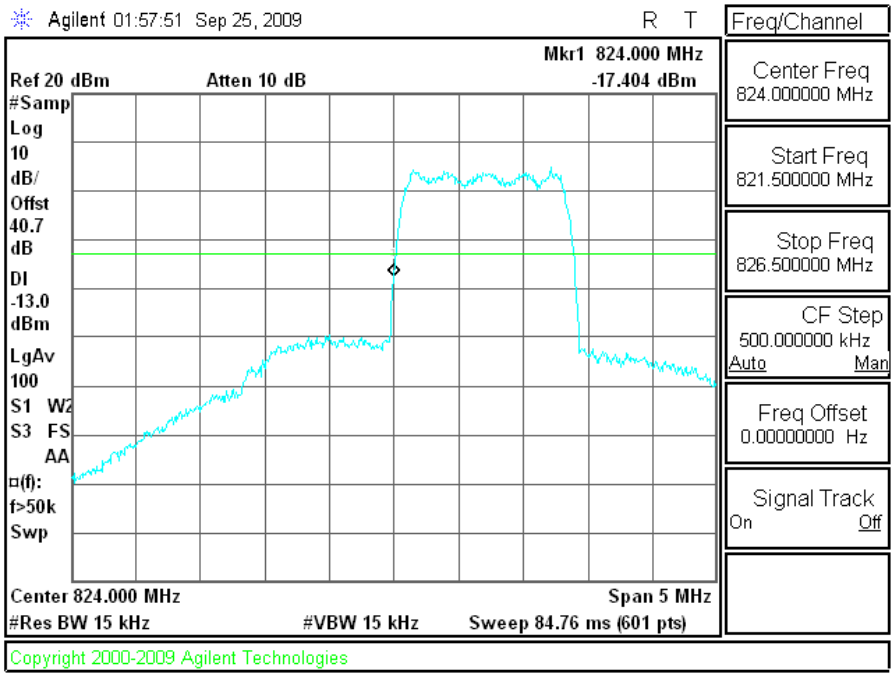


1xRTT, Ch 777 (848.31 MHz)

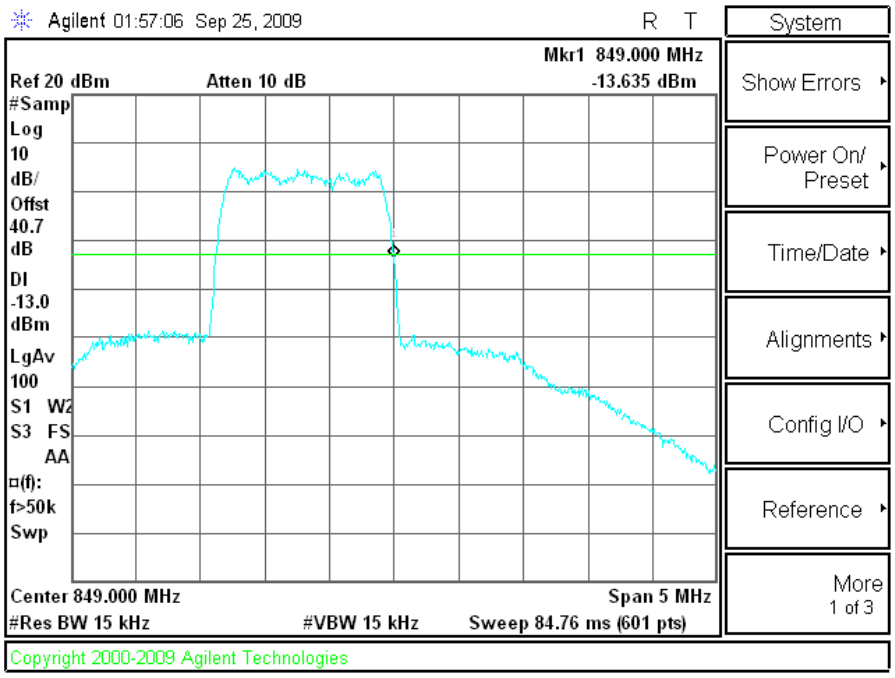


Plots for EVDO-REV A mode (Cellular Band)

EVDO-REV A Ch 1013 (824.7 MHz)

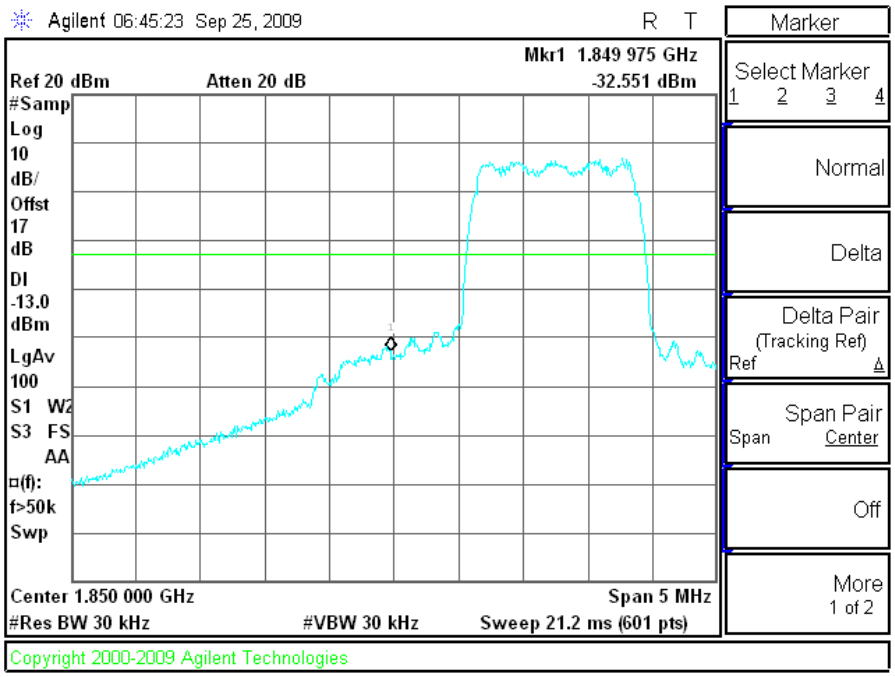


EVDO-REV A, Ch 777 (848.31 MHz)

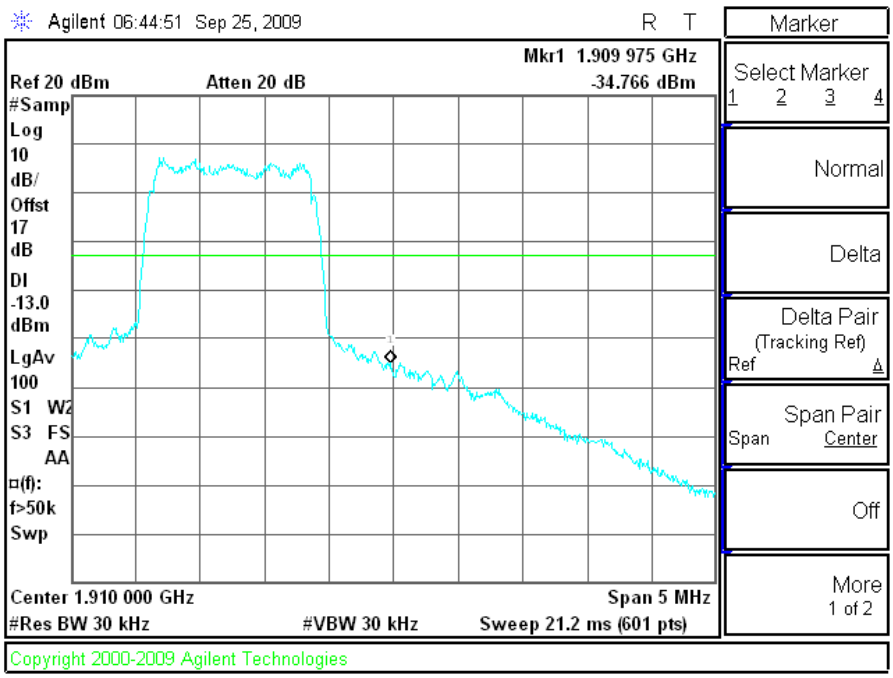


Plots for 1xRTT mode (PCS Band)

1xRTT, Ch 25 (1851.25 MHz)

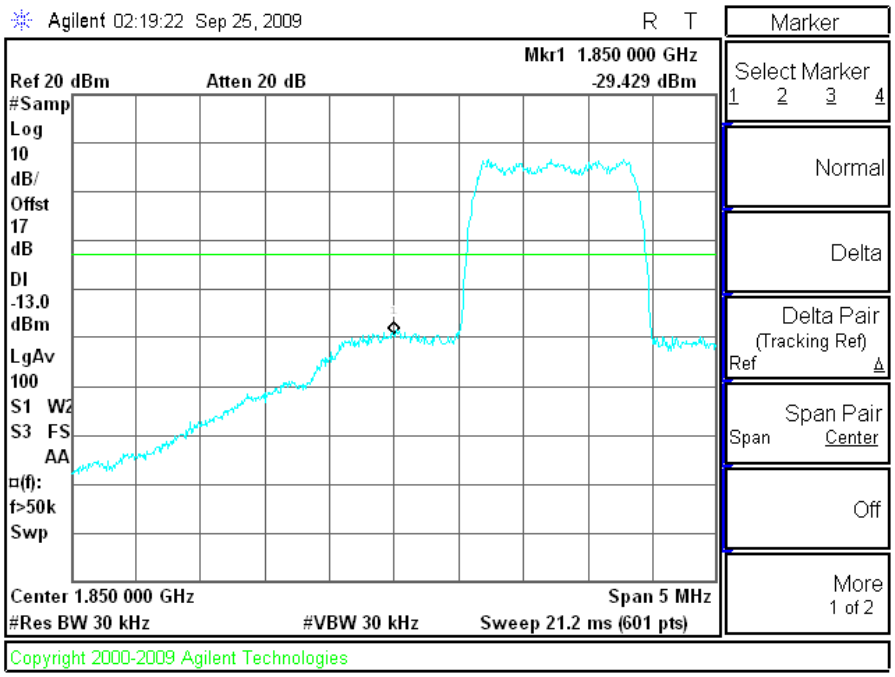


1xRTT Ch 1175 (1908.75 MHz)

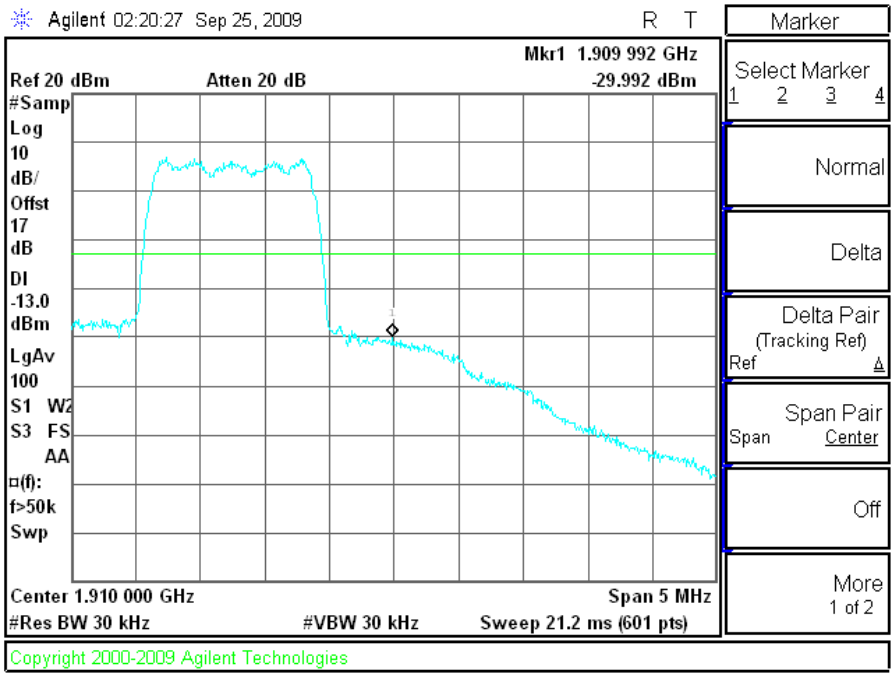


Plots for EVDO-REV A mode (PCS Band)

EVDO-REV A Ch 25(1851.25 MHz)



EVDO-REV A Ch 1175(1908.75 MHz)



8.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238
IC: RSS-132, 4.5; RSS-133, 6.5

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.

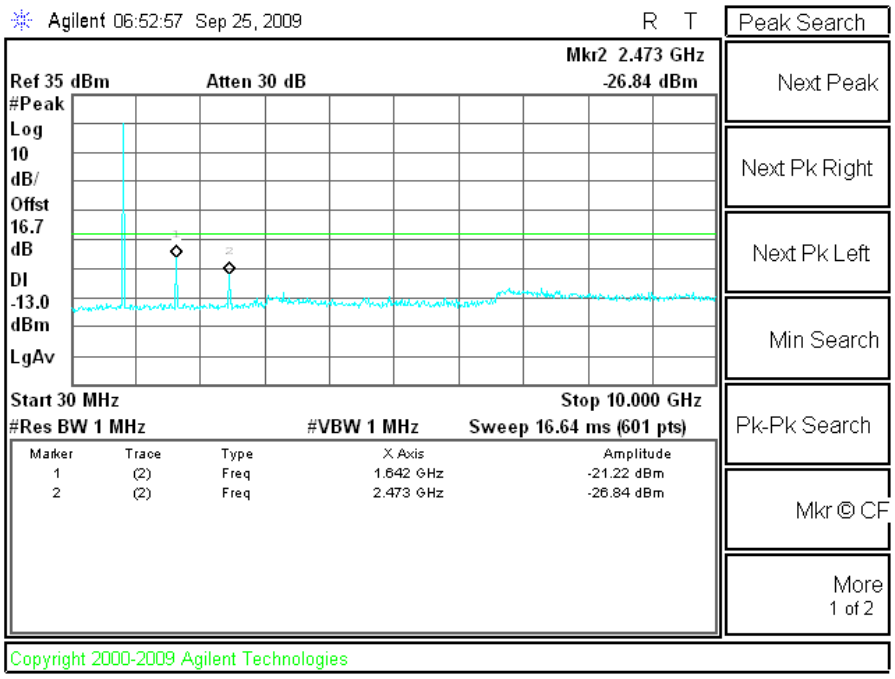
MODES TESTED

- 1xRTT – RC1, SO55
- EV-DO – Rev A

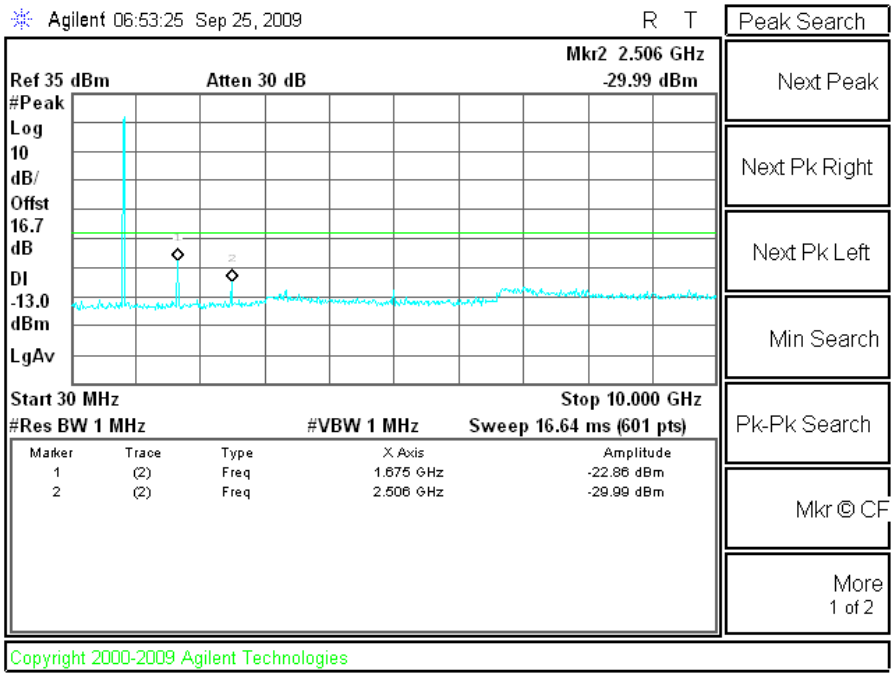
RESULTS

Plots for 1xRTT Mode (Cellular Band)

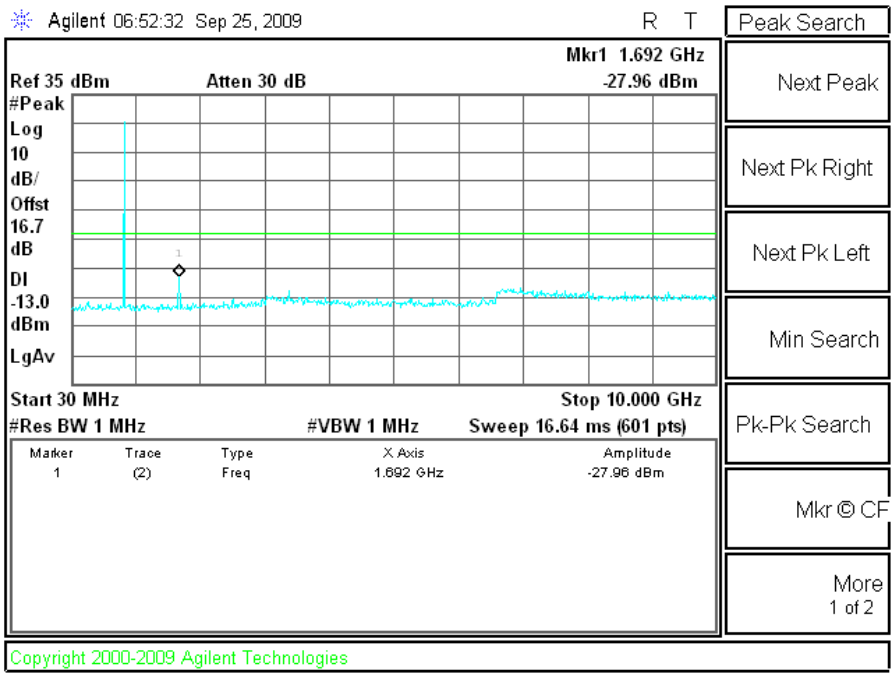
1xRTT, Ch 1013



1xRTT, Ch 384

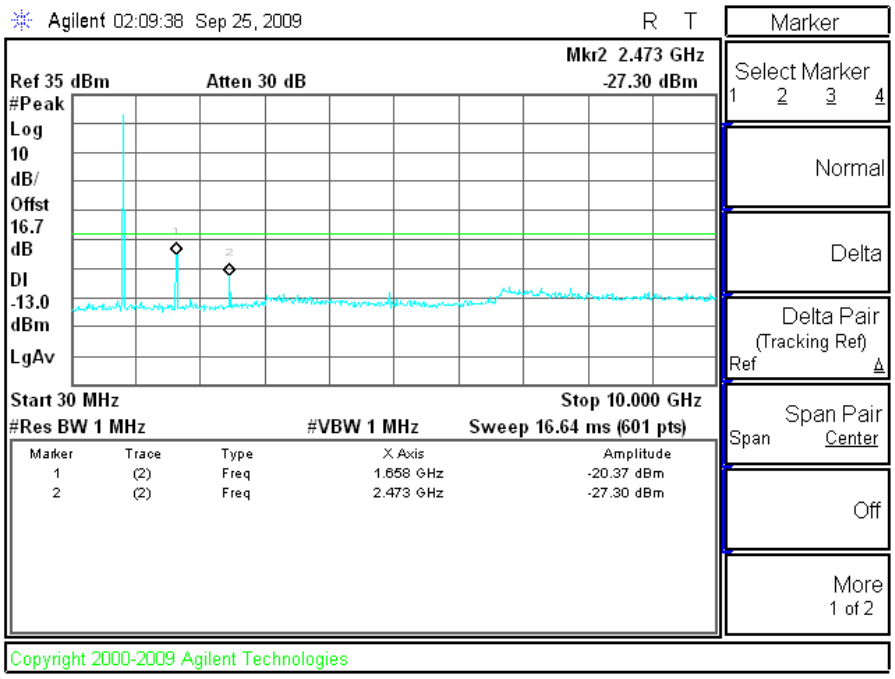


1xRTT, Ch 777

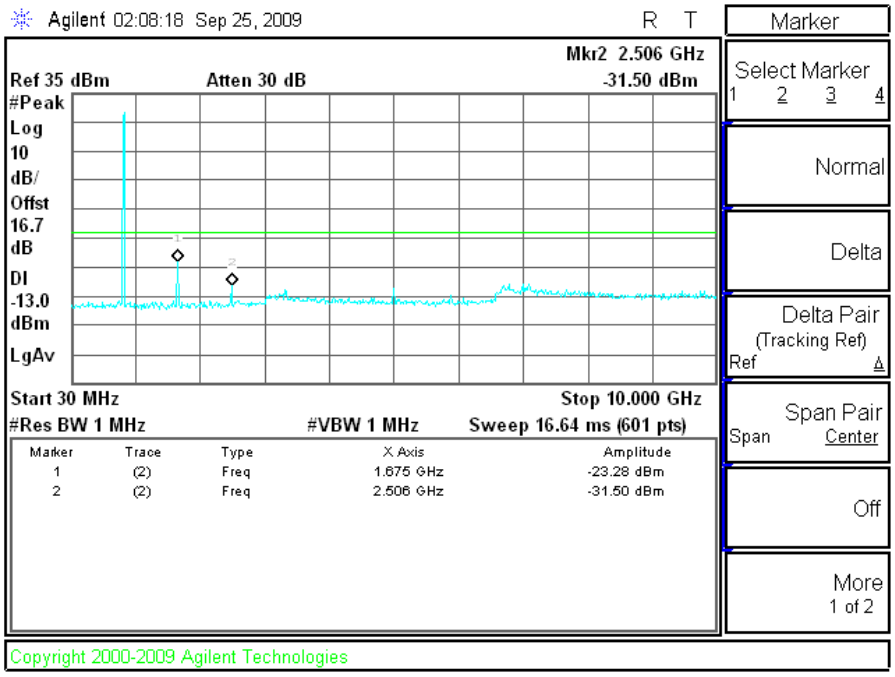


Plots for EVDO-REV A Mode (Cellular Band)

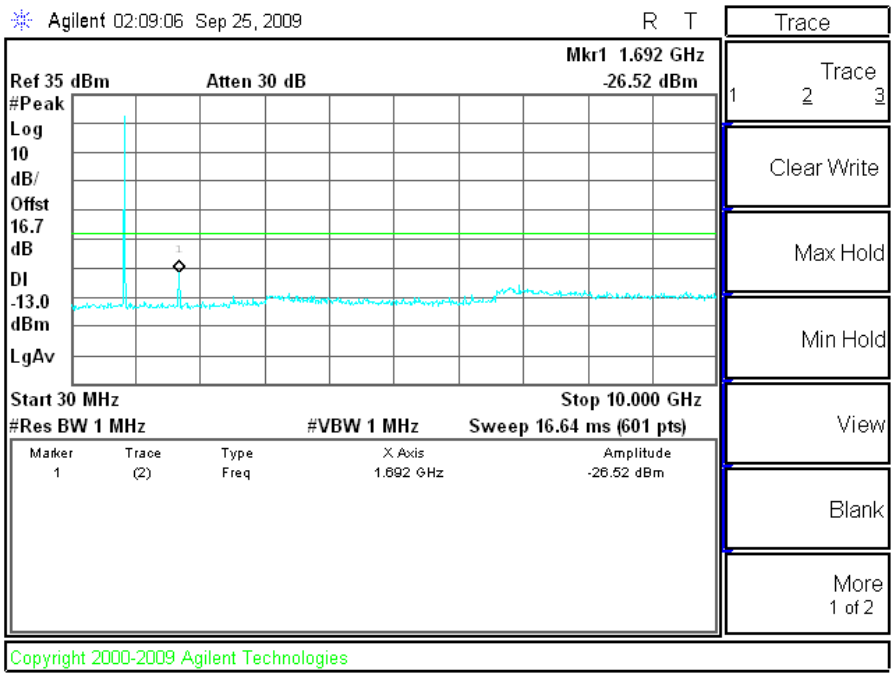
EVDO-REV A, Ch 1013



EVDO-REV A, Ch 384

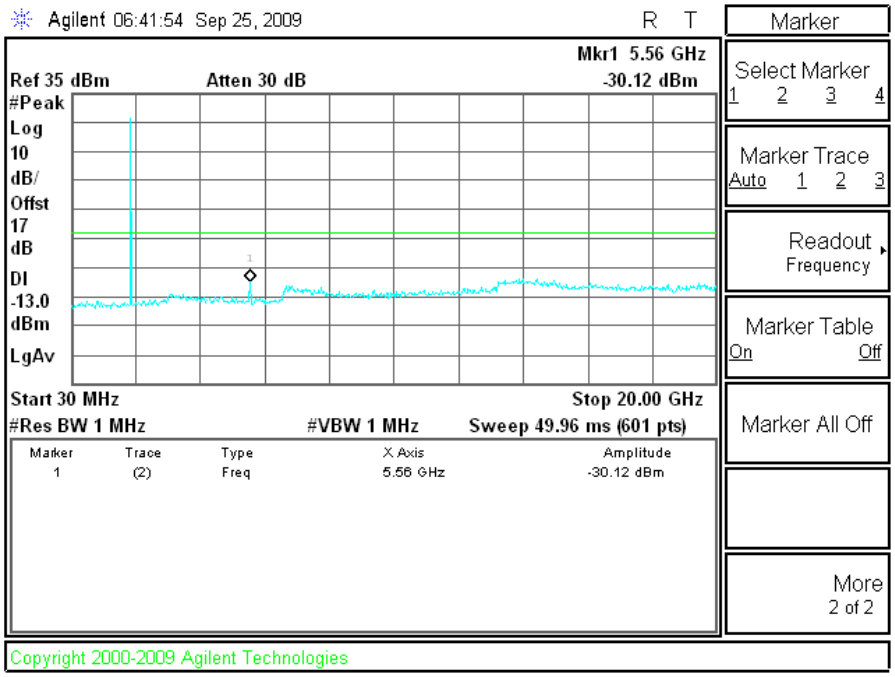


EVDO-REV A, Ch 777

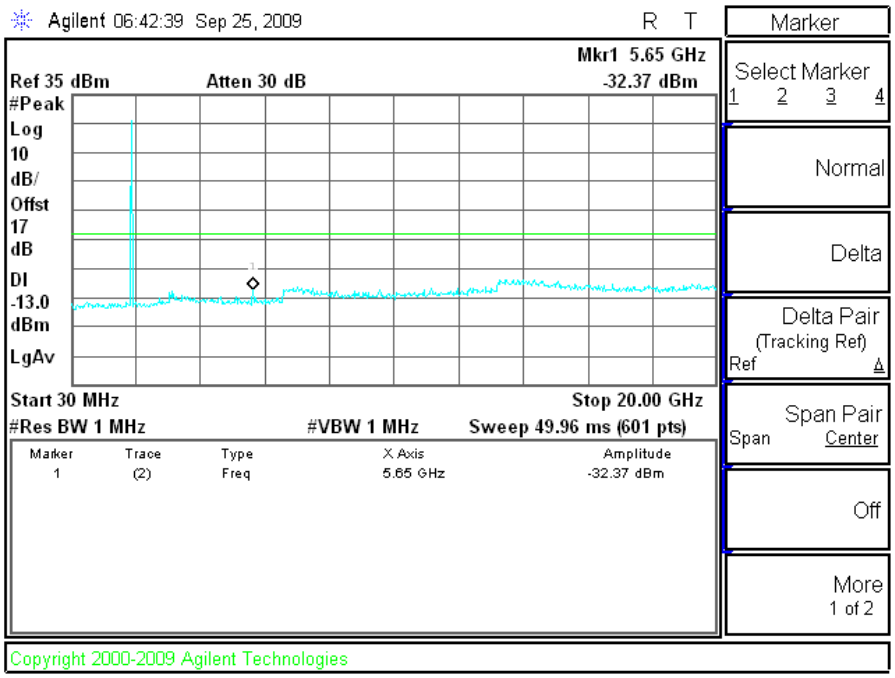


Plots for 1xRTT Mode (PCS Band)

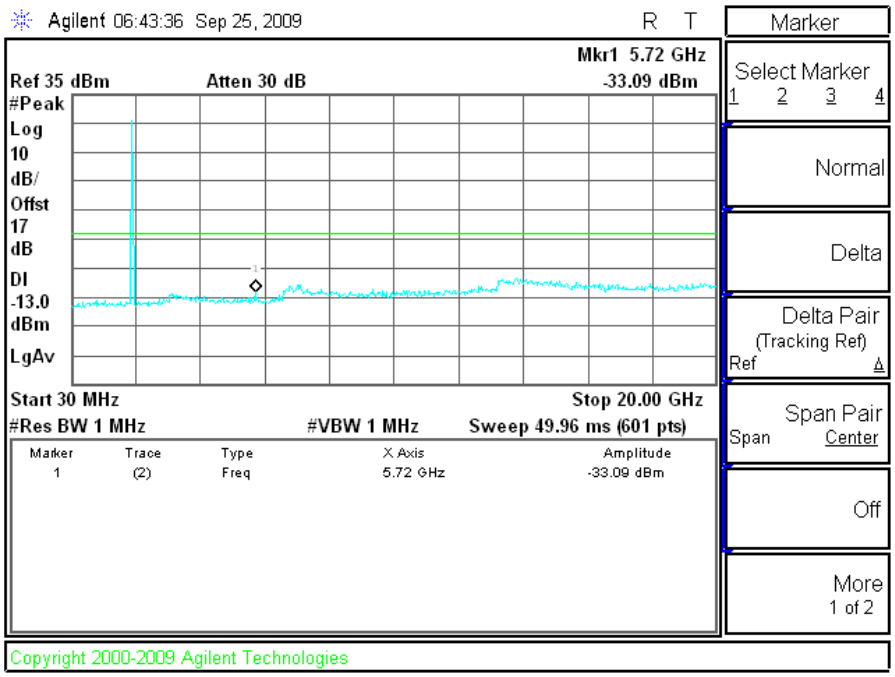
1xRTT Ch 25



1xRTT Ch 600

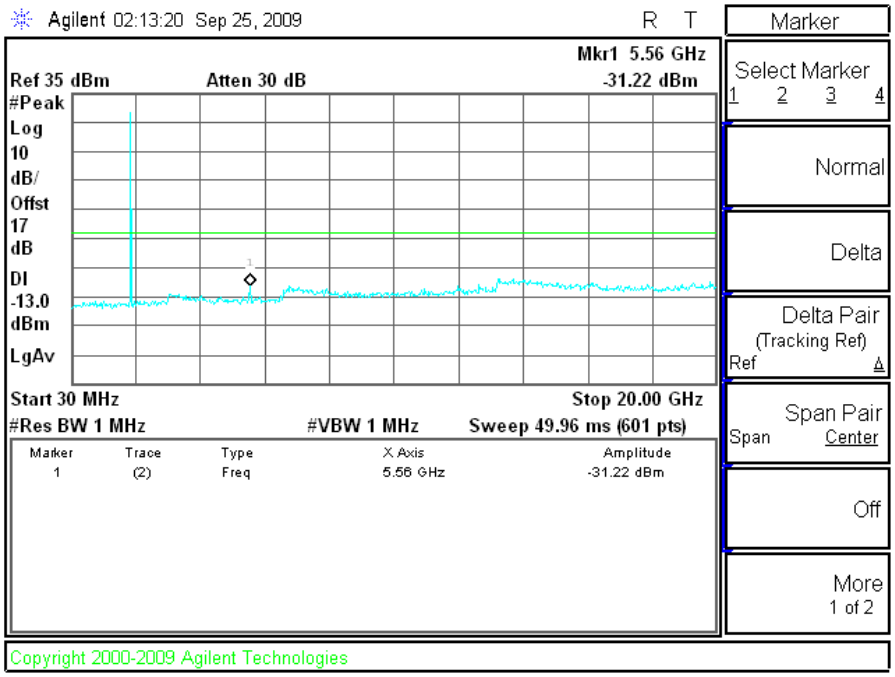


1xRTT Ch 1175

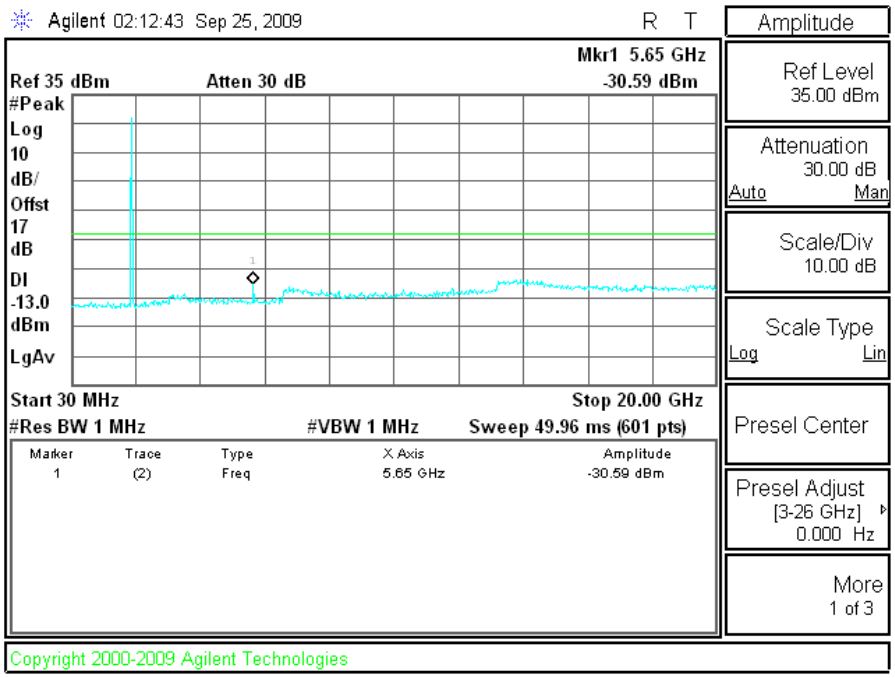


Plots for EVDO-REV A Mode (PCS Band)

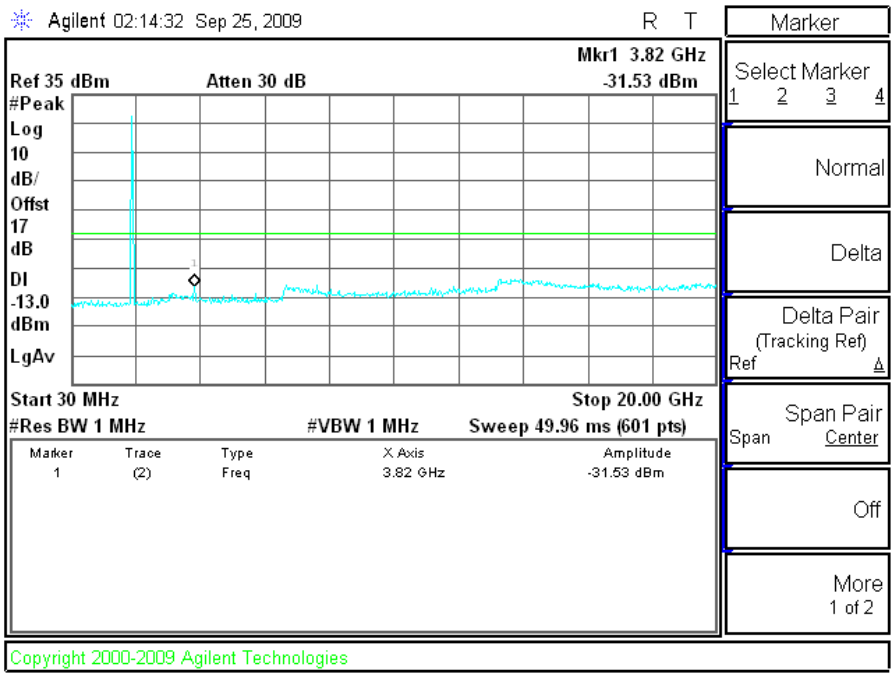
EVDO-REV A, Ch 25



EVDO-REV A, Ch 600



EVDO-REV A, Ch 1175



8.4. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235
IC: RSS-132, 4.3; RSS-133, 6.3

LIMITS

- §22.355 & RSS-132 4.3 - The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.
- RSS-133 6.3 - The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.
- §24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Use Agilent 8960 with Frequency Error measurement capability.

- Temp. = −20° to +50°C
- Voltage = 115 Vdc (85% - 115%)

Frequency Stability vs Temperature:
The EUT is place inside a temperature chamber. The temperature is set to 20ºC 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 +50ºC is reached.
Frequency Stability vs Voltage:
The peak frequency error is recorded (worst-case).

MODES TESTED

- EV-DO – Rev A

RESULTS

See the following pages.

CELL, EVDO Rev A – MID CHANNEL

Reference Frequency: Cellular Mid Channel 836.852000MHz @ 20°C Limit: to stay +- 2.5 ppm = 2091.300 Hz				
DC Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measureed with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
4.20	50	836.519980	0.024	2.5
4.20	40	836.519993	0.008	2.5
4.20	30	836.519992	0.010	2.5
4.20	***20***	***836.520000***	***0***	2.5
4.20	10	836.519991	0.011	2.5
4.20	0	836.519993	0.008	2.5
4.20	-10	836.520018	-0.022	2.5
4.20	-20	836.520016	-0.019	2.5

Reference Frequency: Cellular Mid Channel 836.520000MHz @ 20°C Limit: to stay +- 2.5 ppm = 2091.300 Hz				
DC Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measureed with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
4.20	***20***	***836.520000***	***0.00***	***2.5***
3.57	20	836.520009	*-0.011*	2.5
3.3 (end point voltage)	20	836.520015	*-0.018*	2.5

PCS, EVDO-REV A – MID CHANNEL

Reference Frequency: PCS Mid Channel 1880.000000MHz @ 20°C Limit: within the authorized block or +- 2.5 ppm = 4700.000 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (°C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
4.20	50	1880.000028	-0.015	2.5
4.20	40	1880.000008	-0.004	2.5
4.20	30	1880.000005	-0.003	2.5
4.20	***20***	***1880.000000***	***0***	***2.5***
4.20	10	1880.000011	-0.006	2.5
4.20	0	1879.999994	0.003	2.5
4.20	-10	1879.999989	0.006	2.5
4.20	-20	1879.999962	0.020	2.5

Reference Frequency: PCS Mid Channel 1880.000000MHz @ 20°C Limit: within the authorized block or +- 2.5 ppm = 4700.000 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (°C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
4.20	***20***	***1880.000000***	***0***	***2.5***
3.57	20	1880.000008	-0.004	2.5
3.3 (end point voltage)	20	1880.000012	-0.006	2.5

9. RADIATED TEST RESULTS

9.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232
IC: RSS-132; 4.4, RSS-133, 6.4

LIMITS

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

24.232(c) & RSS-133 § 6.4 - 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.

RSS-132 4.4, SRSP503 5.1.3 - The maximum ERP shall be 11.5 Watts for mobile stations.

TEST PROCEDURE

ANSI / TIA / EIA 603C
RSS-132; RSS-133

MODES TESTED

- 1xRTT – RC1, SO55
- Ev-DO – Rev A

RESULTS for Cellular Band (ERP)

Mode	Channel	f (MHz)	ERP(Standard backcover)		ERP (Inductive Cover)	
			dBm	mW	dBm	mW
1xRTT (RC2, SO 9)	1013	824.70	27.00	501.19	27.20	524.81
	384	836.52	27.20	524.81	26.50	446.68
	777	848.75	27.30	537.03	26.60	457.09
EVDO-REV A	1013	824.70	27.00	501.19	27.20	524.81
	384	836.52	27.40	549.54	26.10	407.38
	777	848.75	27.30	537.03	26.00	398.11

RESULTS for PCS Band (EIRP)

Mode	Channel	f (MHz)	EIRP(Standard Cover)		EIRP (Inductive Cover)	
			dBm	mW	dBm	mW
1xRTT (RC2, SO 9)	25	1851.25	27.70	588.84	28.70	741.31
	600	1880.00	28.10	645.65	29.30	851.14
	1175	1908.75	28.40	691.83	27.60	575.44
EVDO-REV A	25	1851.25	29.70	933.25	28.50	707.95
	600	1880.00	29.30	851.14	29.50	891.25
	1175	1908.75	30.60	1148.15	27.20	524.81

EUT WITH STANDARD COVER

ERP for 1xRTT Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services 3m Chamber

Company: Palm
Project #: 09U12821
Date: 9/23/2009
Test Engineer: Chin Pang
Configuration:EUT with AC Adapter
Mode:TX, Cell CDMA2000
Worst Case:Y Position

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.70	-3.8	V	30.8	27.0	38.5	-11.5	
824.70	-8.0	H	28.9	20.9	38.5	-17.5	
Md ch							
836.52	-4.62	V	31.8	27.2	38.5	-11.2	
836.52	-10.2	H	28.8	18.6	38.5	-19.8	
High Ch							
848.31	-5.5	V	32.8	27.3	38.5	-11.2	
848.31	-9.3	H	29.6	20.3	38.5	-18.2	

Rev. 1.24.7

ERP for EVDO-REV A Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services 3m Chamber

Company: Palm
Project #: 09U12821
Date: 9/23/2009
Test Engineer: Chin Pang
Configuration:EUT with Earphone and AC Adapter
Mode:TX, Cell , EVDO-Rev A

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.70	-3.8	V	30.8	27.0	38.5	-11.5	
824.70	-3.2	H	28.9	25.7	38.5	-12.8	
Mid Ch							
836.52	-4.42	V	31.8	27.4	38.5	-11.0	
836.52	-3.58	H	28.8	25.2	38.5	-13.2	
High Ch							
848.31	-5.5	V	32.8	27.3	38.5	-11.1	
848.31	-4.2	H	29.6	25.5	38.5	-13.0	

Rev. 1.24.7

EIRP for 1xRTT Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services 3m Chamber

Company:Palm
Project #:09U12821
Date: 9/23/2009
Test Engineer: Chin Pang
Configuration:EUT with Earphone and AC Adapter
Mode:TX, PCS, CDMA2000

Test Equipment:
Receiving: Horn T60, and 3m Camber SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (SN # 208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low ch							
1.851	-11.0	V	38.7	27.7	33.0	-5.3	
1.851	-18.2	H	36.8	18.7	33.0	-14.4	
Mid Ch							
1.880	-11.8	V	39.9	28.1	33.0	-4.9	
1.880	-17.8	H	38.8	21.1	33.0	-11.9	
High Ch							
1.909	-12.5	V	40.9	28.4	33.0	-4.6	
1.909	-17.6	H	37.6	20.0	33.0	-13.0	

Rev. 1.24.7

EIRP for EVDO-REV A Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services 3m Chamber

Company:Palm
Project #:09U12821
Date: 9/24/2009
Test Engineer: Chin Pang
Configuration:EUT with earphone and AC Adapter
Mode:TX, PCS, EV-DO Rev A
Worst Case: Y position

Test Equipment:
Receiving: Horn T60, and 3m Camber SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (SN # 208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low ch							
1.851	-9.0	V	38.7	29.7	33.0	-3.3	
1.851	-13.7	H	36.8	23.1	33.0	-9.9	
Mid Ch							
1.880	-10.6	V	39.9	29.3	33.0	-3.7	
1.880	-13.7	H	38.8	25.2	33.0	-7.8	
High Ch							
1.909	-10.3	V	40.9	30.6	33.0	-2.4	
1.909	-13.4	H	37.6	24.2	33.0	-8.8	

Rev. 1.24.7

EUT WITH INDUCTIVE BACKCOVER

ERP for 1xRTT Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services 3m Chamber

Company: Palm
Project #: 09U12821
Date: 9/24/2009
Test Engineer: Chin Pang
Configuration:EUT with Inductive backcover
Mode:TX, Cell CDMA2000

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.70	-9.5	V	30.8	21.3	38.5	-17.1	
824.70	-1.7	H	28.9	27.2	38.5	-11.3	
Mid Ch							
836.52	-10.30	V	31.8	21.5	38.5	-16.9	
836.52	-2.32	H	28.8	26.5	38.5	-11.9	
High Ch							
848.31	-11.3	V	32.8	21.5	38.5	-16.9	
848.31	-3.0	H	29.6	26.6	38.5	-11.8	

Rev. 1.24.7

ERP for EVDO-REV A Mode (Cellular Band)

Compliance Certification Services 3m Chamber

Company: Palm
Project #: 09U12821
Date: 9/23/2009
Test Engineer: Chin Pang
Configuration:EUT with Inductive backcover
Mode:TX, Cell EV-DO Rev A
AC Adapter P/N: 157-10130-00

Test Equipment:
Receiving: Sunol T185, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.70	-11.7	V	30.8	19.1	38.5	-19.4	
824.70	-1.7	H	28.9	27.2	38.5	-11.3	
Mid Ch							
836.52	-11.90	V	31.8	19.9	38.5	-18.5	
836.52	-2.69	H	28.8	26.1	38.5	-12.3	
High Ch							
848.31	-15.3	V	32.8	17.5	38.5	-20.9	
848.31	-3.7	H	29.6	26.0	38.5	-12.5	

Rev. 1.24.7

EIRP for 1xRTT Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services 3m Chamber

Company:Palm
Project #:09U12821
Date: 9/24/2009
Test Engineer: Chin Pang
Configuration:EUT with Inductive Cover
Mode:TX, PCS, CDMA2000 1xRTT

Test Equipment:
Receiving: Horn T60, and 3m Camber SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (SN # 208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low CH							
1.850	-12.3	V	38.7	26.4	33.0	-6.6	
1.850	-8.1	H	36.8	28.7	33.0	-4.3	
Mid Ch							
1.880	-12.1	V	39.9	27.8	33.0	-5.2	
1.880	-9.5	H	38.8	29.3	33.0	-3.7	
High Ch							
1.910	-14.3	V	40.9	26.6	33.0	-6.4	
1.910	-10.0	H	37.6	27.6	33.0	-5.4	

Rev. 1.24.7

EIRP for EVDO-REV A Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services 3m Chamber

Company:Palm
Project #:09U12821
Date: 9/24/2009
Test Engineer: Chin Pang
Configuration:EUT with Inductive backcover
Mode:TX, PCS, EV-DO Rev A

Test Equipment:
Receiving: Horn T60, and 3m Camber SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (SN # 208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low ch							
1.850	-11.0	V	38.7	27.7	33.0	-5.3	
1.850	-8.3	H	36.8	28.5	33.0	-4.5	
Mid Ch							
1.880	-11.8	V	39.9	28.1	33.0	-4.9	
1.880	-9.3	H	38.8	29.5	33.0	-3.5	
High Ch							
1.910	-12.9	V	40.9	28.0	33.0	-5.0	
1.910	-10.4	H	37.6	27.2	33.0	-5.8	

Rev. 1.24.7

9.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238
IC: RSS-132, 4.5; RSS-233, 6.5

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

- 1xRTT – RC1, SO55
- Ev-DO – Rev A

RESULTS

EUT WITH STANDARD COVER

1xRTT Mode (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:Palm
Project #:09U12821
Date:9/24/2009
Test Engineer:Chin Pang
Configuration:EUT/Earphone/AC adapter
Mode:TX, Cell, 1xRTT CDMA2000

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz										
1.649	-36.4	H	3.0	37.2	35.5	1.0	-33.7	-13.0	-20.7	
2.474	-57.5	H	3.0	39.8	35.4	1.0	-52.1	-13.0	-39.1	
1.649	-33.6	V	3.0	36.8	35.5	1.0	-31.3	-13.0	-18.3	
2.474	-55.7	V	3.0	41.7	35.4	1.0	-48.4	-13.0	-35.4	
Mid Ch, 836.52MHz										
1.673	-35.3	H	3.0	37.5	35.5	1.0	-32.4	-13.0	-19.4	
2.510	-57.4	H	3.0	39.9	35.4	1.0	-51.9	-13.0	-38.9	
1.673	-30.2	V	3.0	37.1	35.5	1.0	-27.6	-13.0	-14.6	
2.510	-57.0	V	3.0	41.8	35.4	1.0	-49.6	-13.0	-36.6	
High Ch, 848.31MHz										
1.697	-37.7	H	3.0	37.7	35.5	1.0	-34.5	-13.0	-21.5	
2.545	-60.0	H	3.0	40.1	35.4	1.0	-54.3	-13.0	-41.3	
1.697	-37.5	V	3.0	37.4	35.5	1.0	-34.6	-13.0	-21.6	
2.545	-59.8	V	3.0	42.0	35.4	1.0	-52.3	-13.0	-39.3	

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

EVDO-REV A Mode (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:Palm
Project #:09U12821
Date:9/24/2009
Test Engineer:Chin Pang
Configuration:EUT/Earphone/AC adapter
Mode:TX, Cell, EVDO-Rev A

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz										
1.649	-30.8	H	3.0	37.2	35.5	1.0	-28.1	-13.0	-15.1	
2.474	-56.5	H	3.0	39.8	35.4	1.0	-51.1	-13.0	-38.1	
1.649	-29.1	V	3.0	36.8	35.5	1.0	-26.8	-13.0	-13.8	
2.474	-55.0	V	3.0	41.7	35.4	1.0	-47.7	-13.0	-34.7	
Mid Ch, 836.52MHz										
1.673	-37.2	H	3.0	37.5	35.5	1.0	-34.3	-13.0	-21.3	
2.510	-59.2	H	3.0	39.9	35.4	1.0	-53.7	-13.0	-40.7	
1.673	-30.5	V	3.0	37.1	35.5	1.0	-27.9	-13.0	-14.9	
2.510	-61.0	V	3.0	41.8	35.4	1.0	-53.6	-13.0	-40.6	
High Ch, 848.31MHz										
1.697	-35.7	H	3.0	37.7	35.5	1.0	-32.5	-13.0	-19.5	
2.545	-56.6	H	3.0	40.1	35.4	1.0	-50.9	-13.0	-37.9	
1.697	-29.8	V	3.0	37.4	35.5	1.0	-26.9	-13.0	-13.9	
2.545	-59.5	V	3.0	42.0	35.4	1.0	-52.0	-13.0	-39.0	

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

1xRTT Mode (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:Palm
Project #:09U12821
Date: 9/24/2009
Test Engineer:Chin Pang
Configuration:EUT/Earphone/AC Adapter
Mode:TX, PCS, 1xRTT CDMA2000

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low ch, 1851.25MHz										
5.553	-67.3	H	3.0	50.0	35.4	1.0	-51.7	-13.0	-38.7	
7.405	-66.0	H	3.0	53.0	35.7	1.0	-47.7	-13.0	-34.7	
5.553	-66.5	V	3.0	49.2	35.4	1.0	-51.7	-13.0	-38.7	
7.405	-66.0	V	3.0	51.3	35.7	1.0	-49.4	-13.0	-36.4	
Mid Ch, 1880MHz										
5.640	-61.6	H	3.0	50.2	35.4	1.0	-45.9	-13.0	-32.9	
7.520	-59.3	H	3.0	53.1	35.7	1.0	-40.9	-13.0	-27.9	
5.640	-62.0	V	3.0	49.3	35.4	1.0	-47.1	-13.0	-34.1	
7.520	-58.8	V	3.0	51.4	35.7	1.0	-42.1	-13.0	-29.1	
High Ch, 1908.75MHz										
3.818	-66.3	H	3.0	45.7	35.3	1.0	-54.9	-13.0	-41.9	
5.726	-67.0	H	3.0	50.3	35.4	1.0	-51.1	-13.0	-38.1	
7.635	-65.1	H	3.0	53.2	35.7	1.0	-46.6	-13.0	-33.6	
3.818	-66.0	V	3.0	45.4	35.3	1.0	-54.9	-13.0	-41.9	
5.726	-67.1	V	3.0	49.4	35.4	1.0	-52.2	-13.0	-39.2	
7.635	-66.0	V	3.0	51.6	35.7	1.0	-49.1	-13.0	-36.1	

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

EVDO-REV A Mode (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:Palm
Project #:09U12821
Date:9/24/2009
Test Engineer:Chin Pang
Configuration:EUT/ earphone/AC Adapter
Mode:TX, PCS EV-DO Rev A

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.25MHz										
7.405	-65.0	H	3.0	53.0	35.7	1.0	-46.7	-13.0	-33.7	
9.256	-61.6	H	3.0	55.1	35.6	1.0	-41.1	-13.0	-28.1	
7.405	-66.1	V	3.0	51.3	35.7	1.0	-49.5	-13.0	-36.5	
9.256	-65.3	V	3.0	53.6	35.6	1.0	-46.3	-13.0	-33.3	
Mid Ch, 1880MHz										
7.520	-66.5	H	3.0	53.1	35.7	1.0	-48.1	-13.0	-35.1	
9.400	-63.3	H	3.0	55.2	35.6	1.0	-42.6	-13.0	-29.6	
5.640	-67.0	V	3.0	49.3	35.4	1.0	-52.1	-13.0	-39.1	
9.400	-65.0	V	3.0	53.7	35.6	1.0	-45.8	-13.0	-32.8	
High Ch, 1908.75MHz										
7.635	-60.8	H	3.0	53.2	35.7	1.0	-42.3	-13.0	-29.3	
9.544	-56.7	H	3.0	55.4	35.6	1.0	-35.8	-13.0	-22.8	
7.635	-65.0	V	3.0	51.6	35.7	1.0	-48.1	-13.0	-35.1	
9.544	-63.3	V	3.0	53.9	35.6	1.0	-43.9	-13.0	-30.9	

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

EUT WITH INDUCTIVE COVER

1xRTT Mode (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:Palm
Project #:09U12821
Date:9/25/2009
Test Engineer:Chin Pang
Configuration:EUT with Inductive backcover
Mode:TX, Cell, 1xRTT CDMA2000

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz										
1.649	-41.3	H	3.0	37.2	35.5	1.0	-38.6	-13.0	-25.6	
2.474	-50.4	H	3.0	39.8	35.4	1.0	-45.0	-13.0	-32.0	
1.649	-44.5	V	3.0	36.8	35.5	1.0	-42.2	-13.0	-29.2	
2.474	-52.7	V	3.0	41.7	35.4	1.0	-45.4	-13.0	-32.4	
Mid Ch, 836.52MHz										
1.673	-38.4	H	3.0	37.5	35.5	1.0	-35.5	-13.0	-22.5	
2.510	-56.3	H	3.0	39.9	35.4	1.0	-50.8	-13.0	-37.8	
1.673	-42.5	V	3.0	37.1	35.5	1.0	-39.9	-13.0	-26.9	
2.510	-58.3	V	3.0	41.8	35.4	1.0	-50.9	-13.0	-37.9	
High Ch, 848.31MHz										
1.697	-40.2	H	3.0	37.7	35.5	1.0	-37.0	-13.0	-24.0	
2.545	-56.8	H	3.0	40.1	35.4	1.0	-51.1	-13.0	-38.1	
1.697	-45.0	V	3.0	37.4	35.5	1.0	-42.1	-13.0	-29.1	
2.545	-56.0	V	3.0	42.0	35.4	1.0	-48.5	-13.0	-35.5	

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

EVDO-REV A Mode (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:Palm
Project #:09U12821
Date:9/25/2009
Test Engineer:Chin Pang
Configuration:EUT with Inductive Backcover
Mode:TX, Cell, EVDO-Rev A

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz										
1.649	-36.5	H	3.0	37.2	35.5	1.0	-33.8	-13.0	-20.8	
2.474	-55.3	H	3.0	39.8	35.4	1.0	-49.9	-13.0	-36.9	
1.649	-38.9	V	3.0	36.8	35.5	1.0	-36.6	-13.0	-23.6	
2.474	-57.2	V	3.0	41.7	35.4	1.0	-49.9	-13.0	-36.9	
Mid Ch, 836.52MHz										
1.673	-37.3	H	3.0	37.5	35.5	1.0	-34.4	-13.0	-21.4	
2.510	-57.4	H	3.0	39.9	35.4	1.0	-51.9	-13.0	-38.9	
1.673	-38.5	V	3.0	37.1	35.5	1.0	-35.9	-13.0	-22.9	
2.510	-58.7	V	3.0	41.8	35.4	1.0	-51.3	-13.0	-38.3	
High Ch, 848.31MHz										
1.697	-38.6	H	3.0	37.7	35.5	1.0	-35.4	-13.0	-22.4	
2.545	-54.8	H	3.0	40.1	35.4	1.0	-49.1	-13.0	-36.1	
1.697	-39.2	V	3.0	37.4	35.5	1.0	-36.3	-13.0	-23.3	
2.545	-55.8	V	3.0	42.0	35.4	1.0	-48.3	-13.0	-35.3	

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

1xRTT Mode (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:Palm
Project #:09U12821
Date: 9/25/2009
Test Engineer:Chin Pang
Configuration:EUT with Inductive backcover
Mode:TX, PCS, 1xRTT CDMA2000

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low ch, 1851.25MHz										
5.553	-62.1	H	3.0	50.0	35.4	1.0	-46.5	-13.0	-33.5	
7.405	-69.6	H	3.0	53.0	35.7	1.0	-51.3	-13.0	-38.3	
5.553	-67.3	V	3.0	49.2	35.4	1.0	-52.5	-13.0	-39.5	
7.405	-69.6	V	3.0	51.3	35.7	1.0	-53.0	-13.0	-40.0	
Mid Ch, 1880MHz										
5.640	-58.2	H	3.0	50.2	35.4	1.0	-42.5	-13.0	-29.5	
7.520	-68.3	H	3.0	53.1	35.7	1.0	-49.9	-13.0	-36.9	
5.640	-66.2	V	3.0	49.3	35.4	1.0	-51.3	-13.0	-38.3	
7.520	-69.4	V	3.0	51.4	35.7	1.0	-52.7	-13.0	-39.7	
High Ch, 1908.75MHz										
3.818	-56.0	H	3.0	45.7	35.3	1.0	-44.6	-13.0	-31.6	
5.726	-66.4	H	3.0	50.3	35.4	1.0	-50.5	-13.0	-37.5	
7.635	-60.3	H	3.0	53.2	35.7	1.0	-41.8	-13.0	-28.8	
3.818	-64.0	V	3.0	45.4	35.3	1.0	-52.9	-13.0	-39.9	
5.726	-61.5	V	3.0	49.4	35.4	1.0	-46.6	-13.0	-33.6	
7.635	-65.6	V	3.0	51.6	35.7	1.0	-48.7	-13.0	-35.7	

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

EVDO-REV A Mode (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:Palm
Project #:09U12821
Date:9/24/2009
Test Engineer:Chin Pang
Configuration:EUT with Inductive backcover
Mode:TX, PCS EV-DO Rev A

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.25MHz										
7.405	-62.8	H	3.0	53.0	35.7	1.0	-44.5	-13.0	-31.5	
9.256	-68.3	H	3.0	55.1	35.6	1.0	-47.8	-13.0	-34.8	
7.405	-64.3	V	3.0	51.3	35.7	1.0	-47.7	-13.0	-34.7	
9.256	-66.7	V	3.0	53.6	35.6	1.0	-47.7	-13.0	-34.7	
Mid Ch, 1880MHz										
7.520	-62.4	H	3.0	53.1	35.7	1.0	-44.0	-13.0	-31.0	
9.400	-67.2	H	3.0	55.2	35.6	1.0	-46.5	-13.0	-33.5	
5.640	-65.3	V	3.0	49.3	35.4	1.0	-50.4	-13.0	-37.4	
9.400	-67.2	V	3.0	53.7	35.6	1.0	-48.0	-13.0	-35.0	
High Ch, 1908.75MHz										
7.635	-60.8	H	3.0	53.2	35.7	1.0	-42.3	-13.0	-29.3	
9.544	-65.0	H	3.0	55.4	35.6	1.0	-44.2	-13.0	-31.2	
7.635	-63.6	V	3.0	51.6	35.7	1.0	-46.7	-13.0	-33.7	
9.544	-66.0	V	3.0	53.9	35.6	1.0	-46.6	-13.0	-33.6	

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

9.3. RECEIVER SPURIOUS EMISSIONS

RULE PART(S)

FCC: N/A
IC: RSS-132, 4.6; RSS-133, 6.6, RSS-Gen

LIMIT

RSS-Gen 6 (a) - If a radiated measurement is made, all spurious emissions shall comply with the limits of Table 1.

Table 1 - Spurious Emission Limits for Receivers:

Spurious Frequency (MHz)	Field Strength(microvolt/m at 3 meters)
30 - 88	100
88 - 216	150
216 - 960	200
Above 960	500

TEST PROCEDURE

RSS-Gen 4.10 - The search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is the higher, to at least 3 times the highest tuneable or local oscillator frequency, whichever is the higher, without exceeding 40 GHz.

RESULTS

See the following pages.

RECEIVER SPURIOUS EMISSIONS FOR 30 TO 1000 MHz

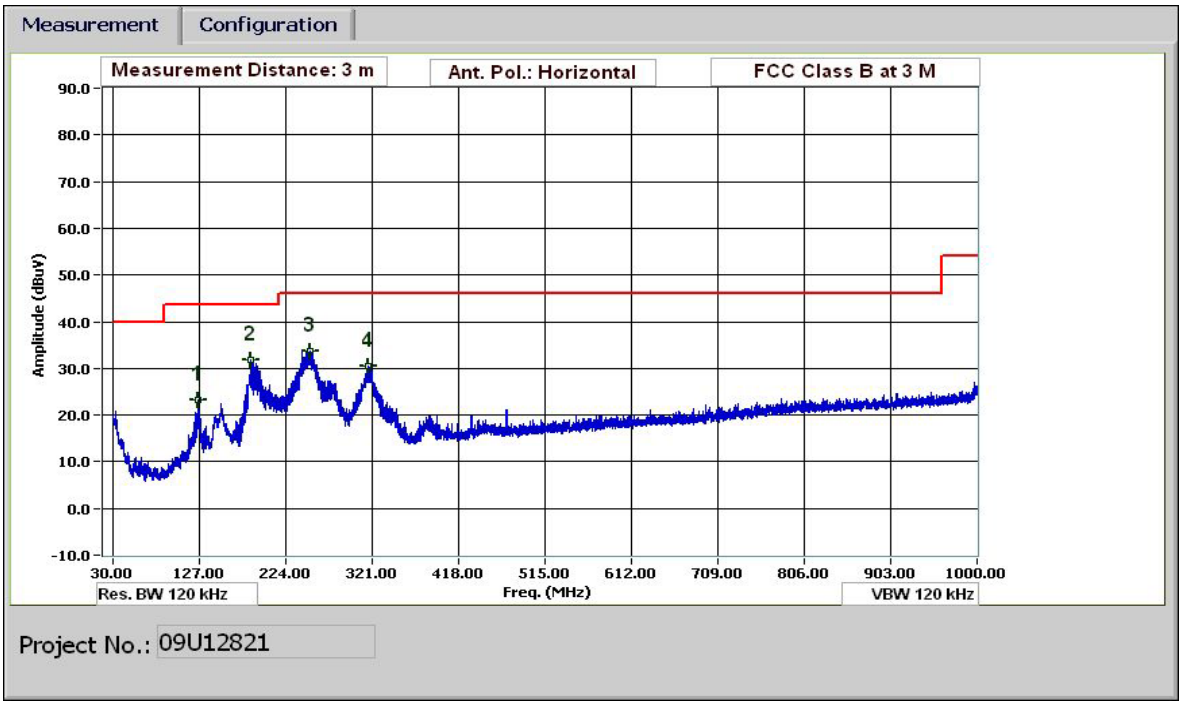
30-1000MHz Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Chin Pang
Date: 09/25/09
Project #: 09U12821
Company: Palm
EUT Description: Smart Phone
EUT M/N: TBD
Test Target: FCC Class B
Mode Oper: Normal

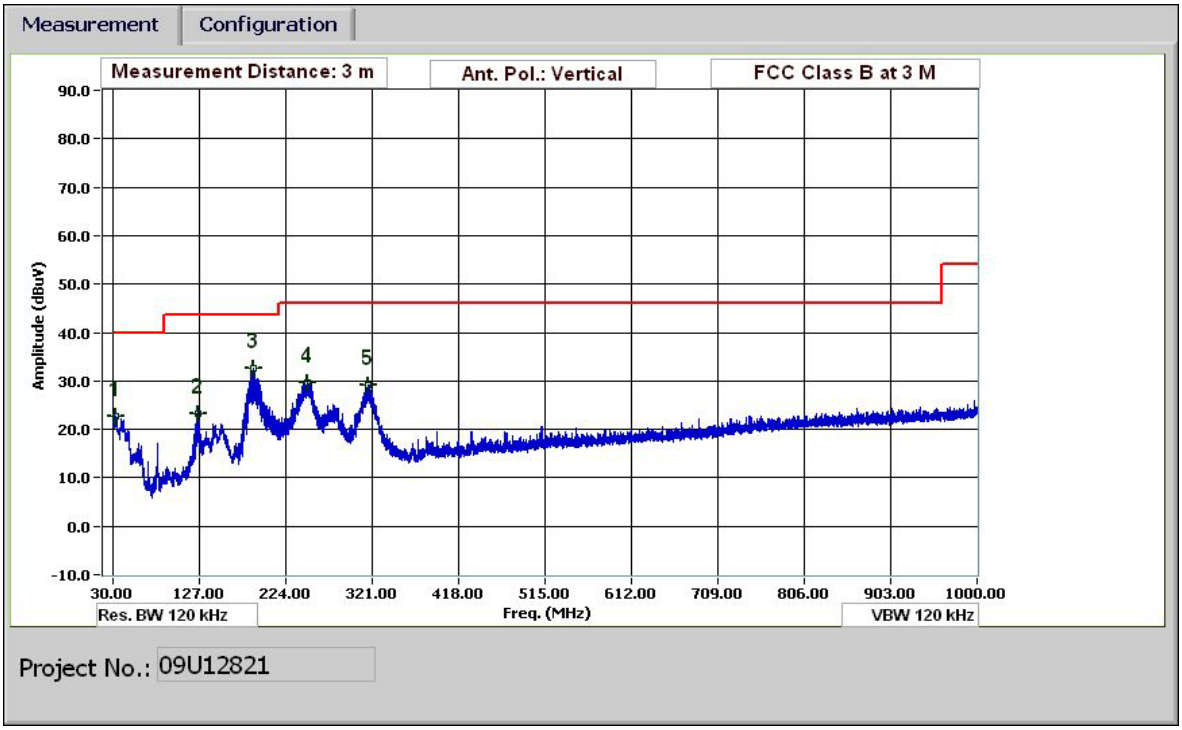
f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters		
Read	Analyzer Reading	Filter	Filter Insert Loss		
AF	Antenna Factor	Corr.	Calculated Field Strength		
CL	Cable Loss	Limit	Field Strength Limit		

f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filter dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
vert													
32.880	3.0	32.8	19.0	0.5	29.7	0.0	0.0	22.7	40.0	-17.3	V	EP	
124.804	3.0	37.9	13.8	1.0	29.4	0.0	0.0	23.3	43.5	-20.2	V	EP	
188.287	3.0	49.3	11.2	1.2	29.0	0.0	0.0	32.6	43.5	-10.9	V	EP	
247.809	3.0	45.3	11.8	1.4	28.8	0.0	0.0	29.7	46.0	-16.3	V	EP	
316.692	3.0	42.7	13.6	1.6	28.9	0.0	0.0	29.0	46.0	-17.0	V	EP	
125.164	3.0	37.9	13.8	1.0	29.4	0.0	0.0	23.4	43.5	-20.1	H	EP	
184.566	3.0	48.7	11.0	1.2	29.0	0.0	0.0	32.0	43.5	-11.5	H	EP	
250.809	3.0	49.2	11.8	1.4	28.8	0.0	0.0	33.7	46.0	-12.3	H	EP	
316.332	3.0	44.0	13.6	1.6	28.9	0.0	0.0	30.4	46.0	-15.6	H	EP	

HORIZONTAL PLOT



VERTICAL PLOT



RECEIVER SPURIOUS EMISSIONS FOR ABOVE 1GHz

Note: No emissions were found within above 1GHz of 20dB below the system noise floor.

10. POWER LINE CONDUCTED EMISSION

LIMIT

RSS-Gen 7.2.2

Except when the requirements applicable to a given device state otherwise, for any licence-exempt radio communication device equipped to operate from the public utility AC power supply, either directly or indirectly, the radio frequency voltage that is conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in Table 2. The tighter limit applies at the frequency range boundaries.

Table 2 – AC Power Lines Conducted Emission Limits

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

RESULTS

EUT WITH STANDARD COVER

6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.16	61.06	--	45.60	0.00	65.62	55.62	-4.56	-10.02	L1
0.32	53.30	--	39.15	0.00	59.84	49.84	-6.54	-10.69	L1
0.80	48.54	--	33.48	0.00	56.00	46.00	-7.46	-12.52	L1
0.16	54.67	--	41.67	0.00	65.62	55.62	-10.95	-13.95	L2
0.32	48.54	--	37.18	0.00	59.84	49.84	-11.30	-12.66	L2
0.77	49.76	--	33.09	0.00	56.00	46.00	-6.24	-12.91	L2
6 Worst Data									

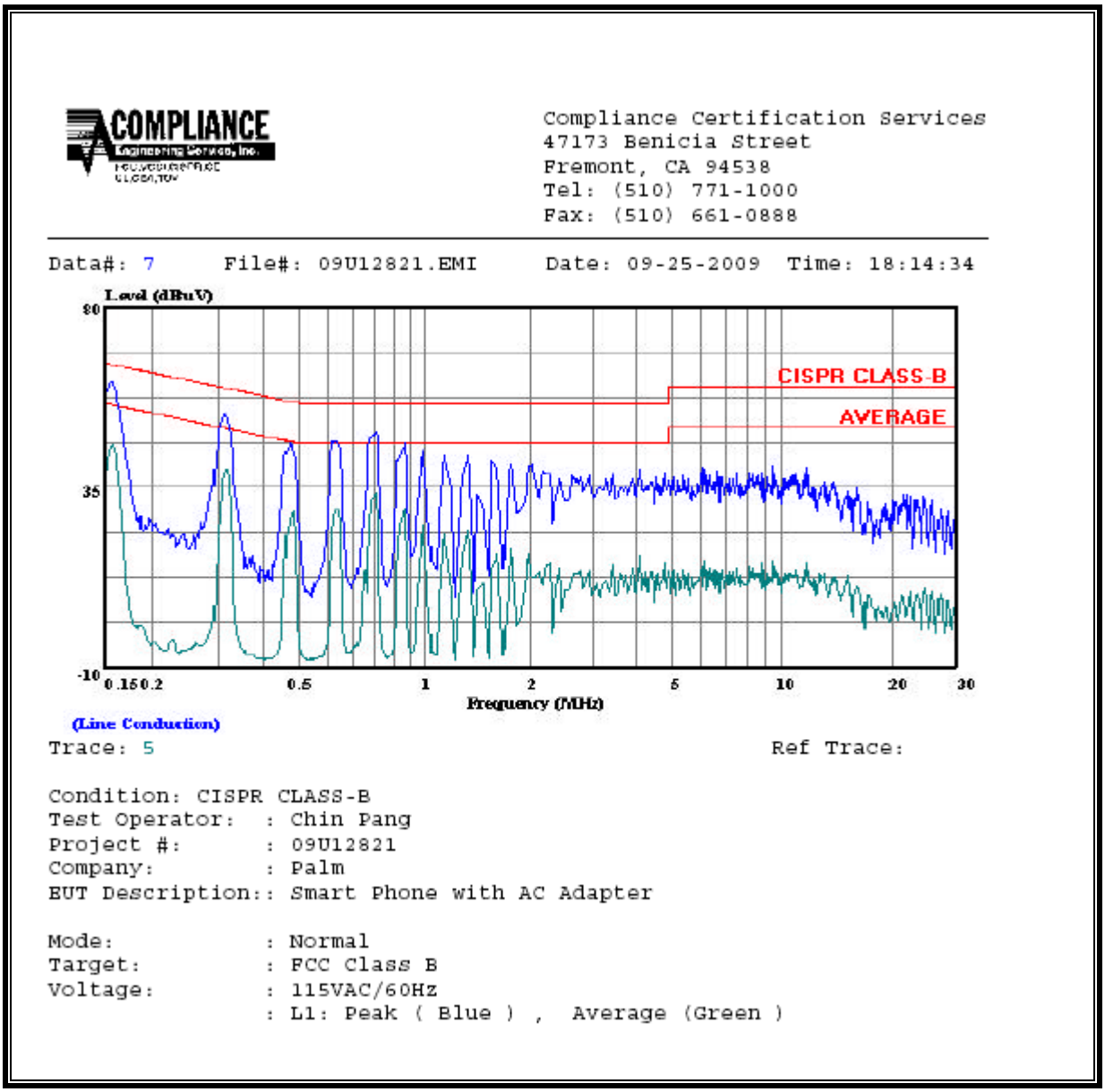
EUT WITH INDUCTIVE CHARGING DOCK

6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.25	49.49	--	44.02	0.00	61.66	51.66	-12.17	-7.64	L1
0.51	50.10	--	43.25	0.00	56.00	46.00	-5.90	-2.75	L1
0.76	44.01	--	36.57	0.00	56.00	46.00	-11.99	-9.43	L1
0.25	50.74	--	43.53	0.00	61.82	51.82	-11.08	-8.29	L2
0.50	52.46	--	43.29	0.00	56.02	46.02	-3.56	-2.73	L2
0.76	45.77	--	36.31	0.00	56.00	46.00	-10.23	-9.69	L2
6 Worst Data									

EUT WITH STANDARD COVER

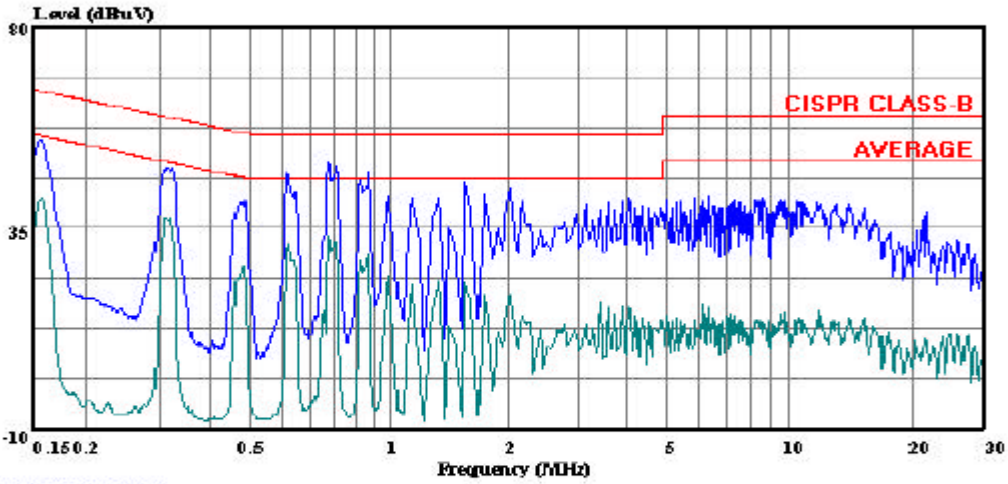
LINE 1 RESULTS



LINE 2 RESULTS

Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 14 File#: 09U12821.EMI Date: 09-25-2009 Time: 18:28:54



(Line Conduction)

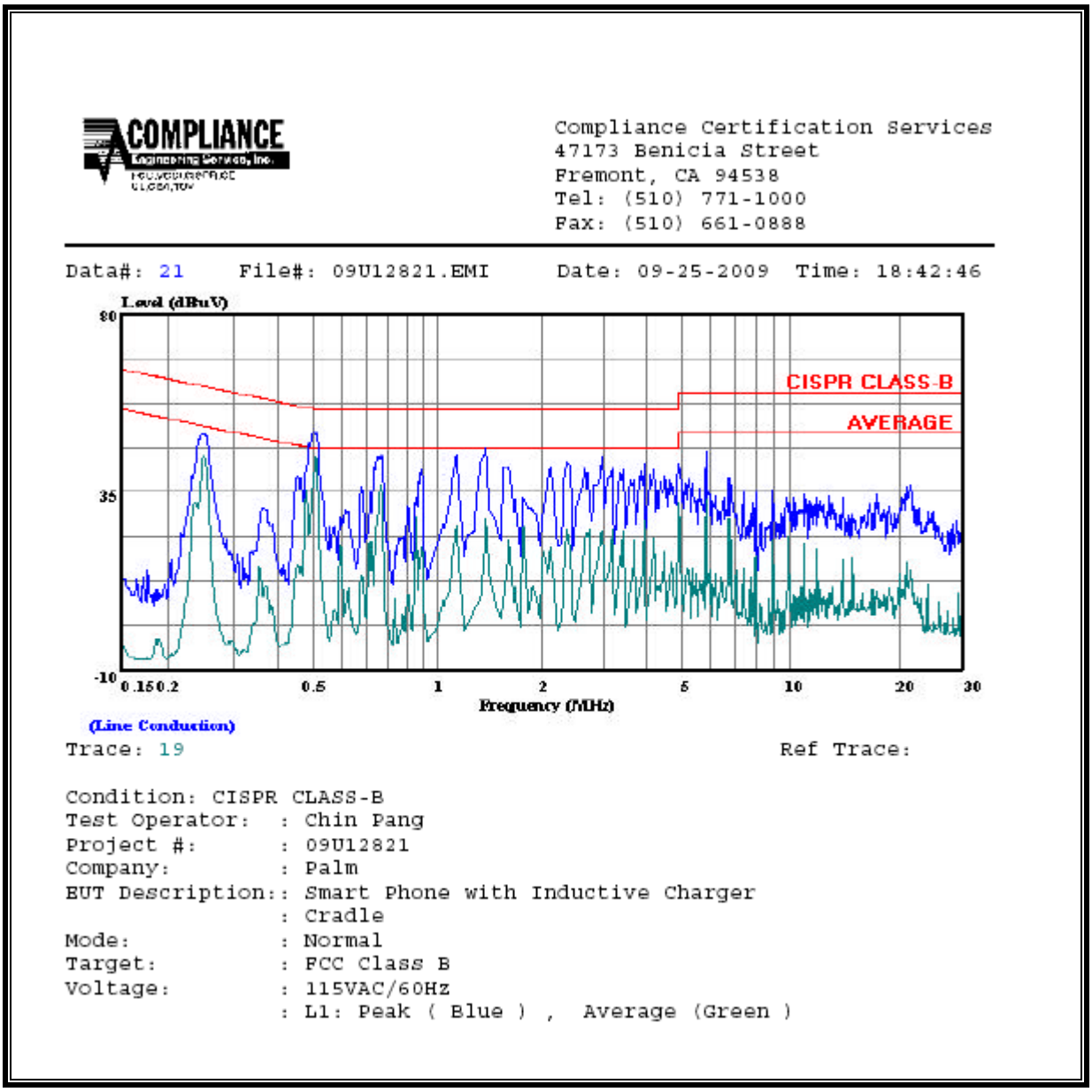
Trace: 12 Ref Trace:

Condition: CISPR CLASS-B
Test Operator: : Chin Pang
Project #: : 09U12821
Company: : Palm
EUT Description:: Smart Phone with AC adapter

Mode: : Normal
Target: : FCC Class B
Voltage: : 115VAC/60Hz
: L2: Peak (Blue) , Average (Green)

EUT WITH INDUCTIVE CHARGING DOCK

LINE 1 RESULTS



LINE 2 RESULTS