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Test Report:	2007 106556 UNDP-1 FCC
Project number:	6556-1
Applicant:	Qualcomm 5775 Morehouse Drive San Diego, CA 92121-1714
Equipment Under Test (EUT):	Universal Data Modem Platform
Model:	UNDP-1
FCC ID:	J9CUNDP-1
In Accordance With:	FCC Part 22, Subpart H Industry Canada RSS-129, Issue 2 Industry Canada RSS-132, Issue 2 FCC Part 24, Subpart E Industry Canada RSS-133, Issue 3
Tested By:	Nemko USA Inc. 11696 Sorrento Valley Road, Suite F San Diego, CA 92121
Authorized By:	Michael T. Krumweide, EMC Supervisor
Date:	OCT. 30, 2007
Total Number of Pages:	42

Report Summary

All measurements are traceable to national standards. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 22, Subpart H and FCC Part 24, Subpart E.

The assessment summary is as follows:

Apparatus Assessed: Universal Data Modem Platform Model UNDP-1

Specification: FCC Part 15 Subpart C, 15.247
Industry Canada RSS-129, Issue 2
Industry Canada RSS-128, Issue 2
Industry Canada RSS-132, Issue 2
FCC Part 22, Subpart H
FCC Part 24, Subpart E
Industry Canada RSS-133, Issue 3

Compliance Status: Complies

Exclusions: None

Non-compliances: None

Report Release History:

REVISION	DATE	COMMENTS	
-	Oct. 30, 2007	Prepared By:	Ferdinand Custodio
-	Oct. 30, 2007	Initial Release:	Mike T. Krumweide

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025.

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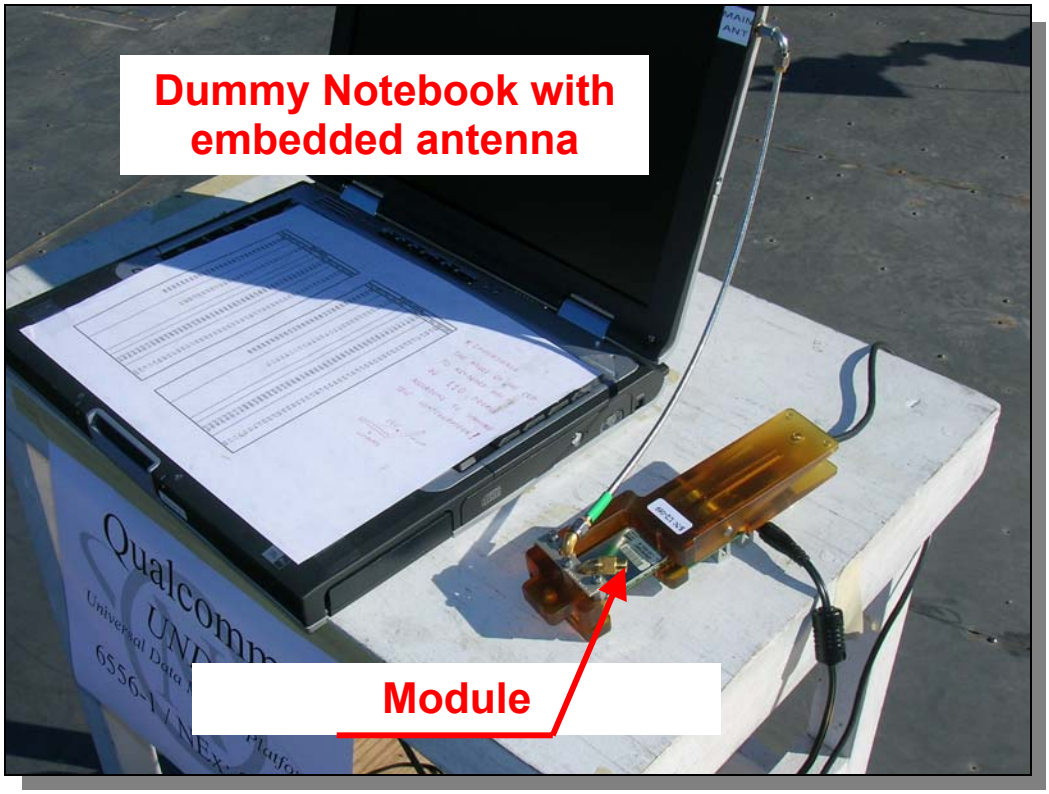
Section 1: Equipment Under Test

1.1 Product Identification

The Equipment Under Test was identified as follows:

Qualcomm UNDP-1 with Serial Number: N10DGGVRD



1.3 Theory of Operation

The UNDP-1 platform includes a universal embedded-data-connectivity modem in the form of a PCI Express Mini Card, plus the associated software suit for notebook PC applications. The data I/O and power interface to the UNDP-1 card is provided via the PCI Express mini-card connector built into the notebook computer.

The main on-board Qualcomm chipsets include:

- **Baseband:** MDM1000™
- **RF:** RFR6500™, RTR6285™
- **Power Management:** PM6653™

Key connectivity support includes:

- USB 2.0 high-speed
- Universal integrated circuit card (UICC) for RUIM/USIM
- Primary and secondary antenna connectors
- Status LED driver output
- DC power supply input and enable/disable control

Two Hirose antenna connectors are provided: 1) the primary connector supports transmission and reception by the active CDMA, UMTA, or GSM transceiver; and 2) the secondary connector supports diversity reception by the active CDMA or UMTS link plus GPS reception. The antenna elements are typically integrated into the notebook computer and connected to the UNDP-1 module via flexible RF coaxial cables.

The MDM1000 device provides all the digital baseband processing, including modem functions for all the supported airlinks. Integrated MSM1000 functions include the ARM1136-J™ and ARM926EJ-S™ processor cores; two low-power, high-performance digital signal processor (DSP) cores; and 32 MB stacked DDR SDRAM memory.

During the radiated testing, the RF primary output of UNDP-1 was connected to the input of integrated antenna built in a dummy notebook (see the setup pictures), and the secondary antenna was terminated with a 50ohm load.

Qualcomm internal test software, QRCT, was used to set the UNDP-1 at the maximum output power settings for GSM, EGPRS, CDMA1x and WCDMA Rel99 operational mode, respectively. QRCT simulates an equivalent waveform as compared to an actual signal with the properly configured physical channels and is appropriate for radiated power and spurs measurements. The measurement results shown in the later sections of the report correlate to the theoretically calculated power values under a reasonable measurement tolerance.

1.4 Technical Specifications of the EUT

Manufacturer: **Qualcomm**

Operating Frequency:

Operating band	Tx frequency range	Rx frequency range
CDMA		
▫ Cell (BC0)	824 to 849 MHz	869 to 894 MHz
▫ PCS (BC1)	1850 to 1910 MHz	1930 to 1990 MHz
UMTS (WCDMA)		
▫ Cell (band V)	824 to 849 MHz	869 to 894 MHz
▫ PCS (band II)	1850 to 1910 MHz	1930 to 1990 MHz
▫ IMT (band I)	1920 to 1980 MHz	2110 to 2170 MHz
GSM		
▫ GSM850	824 to 849 MHz	869 to 894 MHz
▫ GSM900	880 to 915 MHz	925 to 960 MHz
▫ GSM1800	1710 to 1785 MHz	1805 to 1880 MHz
▫ GSM1900	1850 to 1910 MHz	1930 to 1990 MHz
GPS position location	---	1574.42 to 1576.42 MHz
Note, only cellular band (824 - 894 MHz) and PCS band (1850 - 1990 MHz) are applicable bands in US and Canada. The tests in this report will be limited to the cellular and PCS bands.		

Peak Output Power:

2.26W ERP in cell; **1.7W** EIRP in PCS

Emission Designator:

Mode		Tx Frequency Range (MHz)	Emission Designator
GSM \GPRS \EDGE	GMSK	824.2 – 848.8	248KGXW
		1850.2 – 1909.8	250KG7W
	8PSK	824.2 – 848.8	248KGXW
		1850.2 – 1909.8	245KG7W
WCDMA		826.4 – 846.6	4M18F9W
		1852.4 – 1907.5	4M19F9W
CDMA		824.7 – 848.31	1M28F9W
		1851.25 – 1908.75	1M28F9W

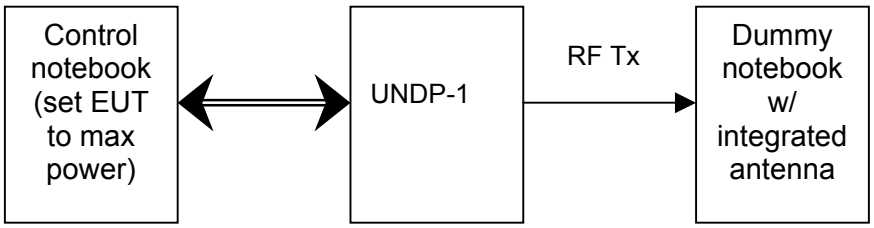
Modulation: GSM – GMSK, 8PSK
CDMA 1X-BPSK
WCDMA Release 99 – BPSK (UL)

Antenna Data: Prototype: Cellular band +2.7dBi
PCS band +4dBi

Antenna Connector: U.FL-R-SMT (Hirose)

Power Source: 3.3Vdc

1.5 Block Diagram of the EUT Setup



1.6 Summary of Test Results

Maximum Radiated Output Power

Mode	Max Power in Cell band (ERP)	Max Power in PCS band (EIRP)
GSM (GMSK)	2.26W / 33.54dBm	1.7W / 32.30dBm
EDGE (8PSK)	0.84W / 29.25dBm	0.84W / 29.25dBm
CDMA 1x	0.3W / 24.77dBm	0.44W / 26.41dBm
WCDMA Rel99	0.275W / 24.40 dBm	0.48W / 26.78 dBm

Field Strength of Spurious

Mode	Frequency (MHz)	Total Power (dBm)	Spec (dBm)	Margin (dBm)
EDGE 850	1648.40	-32.30 (ERP)	-13	-19.3
	1697.60	-32.82 (ERP)	-13	-19.8
	2509.80	-33.78 (ERP)	-13	-20.8
	2546.40	-30.83 (ERP)	-13	-17.8
GSM 850	1673.20	-32.46 (ERP)	-13	-19.5
	2509.80	-32.78 (ERP)	-13	-19.8
	2546.40	-32.33 (ERP)	-13	-19.3
WCDMA Rel99, Band II	3760.00	-28.82 (EIRP)	-13	-15.8
	3815.20	-29.02 (EIRP)	-13	-16.0

Note the table only lists the spurious which are within 20dB of the limits.

Section 2: Test Conditions

2.1 Specifications

The apparatus was assessed against the following specifications:

- FCC Part 22, Subpart H Cellular Radiotelephone Service
- FCC Part 24, Subpart E Broadband PCS
- Industry Canada, RSS-128, Issue 2 (800 MHz Dual-Mode TDMA Cellular Telephones)
- Industry Canada, RSS-129, Issue 2 (800 MHz Dual-Mode CDMA Cellular Telephones)
- Industry Canada, RSS-132, Issue 2 (Cellular Telephones Employing New Technologies Operating in the Bands 824-849 MHz and 869-894 MHz)
- Industry Canada, RSS-133, Issue 3 (2 GHz Personal Communications Services)

2.2 Deviations From Laboratory Test Procedures

No deviations were made from laboratory test procedures.

2.3 Test Environment

All tests were performed under the following environmental conditions:

Temperature range	:	13 – 26 ^{o}C
Humidity range	:	67 - 83 %
Pressure range	:	86 - 106 kPa

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2.4 Test Equipment

Nemko ID	Device	Manufacturer	Model	Serial Number	Cal Date	Cal Due Date
110	Antenna, LPA	Electrometrics	LPA-25	1217	12/18/2006	12/18/07
529	Antenna, DRWG	EMCO	3115	2505	8/27/2007	08/27/08
835	Spectrum Analyzer	Rohde & Schwarz	RHDFSEK	829058/005	6/20/2007	06/20/08
317	Preamplifier	HP	8449A	2749A00167	2/9/2007	02/09/08
877	Antenna, DRG Horn, .7-18GHz	AH Systems	SAS-571	688	7/10/2007	07/10/08

Section 3: Observations

3.1 Modifications Performed During Assessment

No modifications were performed during assessment.

3.2 Record Of Technical Judgements

No technical judgements were made during the assessment.

3.3 EUT Parameters Affecting Compliance

The user of the apparatus could not alter parameters that would affect compliance.

3.4 Test Deleted

No Tests were deleted from this assessment.

3.5 Additional Observations

There were no additional observations made during this assessment.

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Section 4: Results Summary

The results contained in this section are representative of the operation of the apparatus as originally submitted.

Name of Test	Para. No.	Result
RF Power Output	2.1046	COMPLIES
Audio Low Pass Filter Response	2.1047	NA[1]
Audio Frequency Response	2.1047	NA[1]
Modulation Limiting	2.1047	NA[1]
Occupied Bandwidth (WB Data)	2.1049	NA[2]
Spurious Emissions at antenna Terminals	2.1051	NA[2]
Field Strength of Spurious Emissions	2.1053	COMPLIES
Frequency Stability	2.1055	NA[2]

Footnotes for N/A's: [1]Digital Modulation
[2]Test methodology and results will be provided by the client

Appendix A: Test Results

Para. No. : 2.1046 RF Power Output

§ 22.913 Effective radiated power limits.

The effective radiated power (ERP) of transmitters in the Cellular Radiotelephone Service must not exceed the limits in this section.

(a) *Maximum ERP.* In general, the effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts. However, for those systems operating in areas more than 72 km (45 miles) from international borders that:

(1) Are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available population statistics from the Bureau of the Census; or,

(2) Extend coverage on a secondary basis into cellular unserved areas, as those areas are defined in §22.949, the ERP of base transmitters and cellular repeaters of such systems must not exceed 1000 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

§ 24.232 Power and antenna height limits.

(c) Mobile/portable stations are limited to 2 watts EIRP peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

(d) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

Test Conditions:

Sample Number:	N10DGGVRD	**Temperature:**	13-26°C
Date:	Oct. 3, 2007	**Humidity:**	67-83 %
Modification State:		**Tester:**	Ferdinand Custodio
		Laboratory:	Nemko SOATS

Test Results:

Complies, see tables in the following pages

Additional Observations:

- Emissions within 20 dB of the limit were substituted by a signal generator and matching antenna and were shown to comply. Please see Field Strength of Spurious Emissions test for substitution data.

Measurement Data:

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Radiated Power Data

Job # : 6556-1 Test # : 2
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Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	GSM 850 TX - GMSK				
Specification :	FCC Part 22			Reference :	
Rod. Ant. #:	NA	Temp. (°C) :	26	Date :	10/3/07
Bicon Ant.#:	NA	Humidity (%) :	81	Time :	8:00AM
Log Ant.#:	110	EUT Voltage :		Staff :	FCustodio
DRG Ant. #	529	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	1 MHz
Cable#:	SOATS	Location:	RN#: 329550-01	Video Bandwidth	1 MHz
Preamp#:	NA	Distance:	3m		
Spec An.#:	835	ERP conversion factor	7		
QP #:	NA				
PreSelect#:	NA				

Meas. Freq. (MHz)	Meas. (dBuV) pk	Ant Orientation	CF (db)	Max Level (dBm) pk	Spec. Limit (ERP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	COMMENT
824.20	105.7	H	27.4	35.9	38.5	-2.6	B/L	1.0	Pass	
836.60	105.2	H	26.5	34.4	38.5	-4.1	B	1.0	Pass	
848.80	106.4	H	26.8	35.9	38.5	-2.6	B/L	1.0	Pass	

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Radiated Power Data

Job # : 6556-1 Test # : 3
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Client Name :	Qual				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	GSM PCS Tx - GMSK				
Specification :	FCC Part 24			Reference :	
Rod. Ant. #:	NA	Temp. (°C) :	18	Date :	10/4/07
Bicon Ant.#:	NA	Humidity (%) :	67	Time :	8:00AM
Log Ant.#:	110	EUT Voltage :		Staff :	FCustodio
DRG Ant. #	529	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	1 MHz
Cable#:	40ft	Location:	RN#: 329550-01	Video Bandwidth	1 MHz
Preamp#:	NA	Distance:	3m		
Spec An.#:	835	EIRP conversion factor	5.5		
QP #:	NA				
PreSelect#:	NA				

Meas. Freq. (MHz)	Meas. (dBuV) pk	Ant Orientation	CF (db)	Max Level (dBm) pk	Spec. Limit (ERIP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	COMMENT
1850.20	95.1	H	31.2	31.1	33.0	-1.9	B	1.0	Pass	
1880.00	95.6	H	31.2	31.6	33.0	-1.4	B	1.0	Pass	
1909.80	95.6	H	31.3	31.7	33.0	-1.3	B	1.0	Pass	

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Radiated Power Data

Job # : 6556-1 Test # : 2
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Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	EDGE 850 TX - 8PSK Modulation				
Specification :	FCC Part 22			Reference :	
Rod. Ant. #:	NA	Temp. (°C) :	26	Date :	10/3/07
Bicon Ant.#:	NA	Humidity (%) :	81	Time :	8:00AM
Log Ant.#:	110	EUT Voltage :		Staff :	FCustodio
DRG Ant. #	529	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	1 MHz
Cable#:	SOATS	Location:	RN#: 329550-01	Video Bandwidth	1 MHz
Preamp#:	NA	Distance:	3m		
Spec An.#:	835	ERP conversion factor	7		
QP #:	NA				
PreSelect#:	NA				

Meas. Freq. (MHz)	Meas. (dBuV) pk	Ant Orientation	CF (db)	Max Level (dBm) pk	Spec. Limit (ERP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	COMMENT
824.20	101.0	H	27.4	31.2	38.5	-7.3	B/L	1.0	Pass	
836.60	101.8	H	26.5	31.0	38.5	-7.5	B	1.0	Pass	
848.80	101.1	H	26.8	30.7	38.5	-7.8	B/L	1.0	Pass	

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Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	EDGE PCS Tx - 8PSK Modulation				
Specification :	FCC Part 24			Reference :	
Rod. Ant. #:	NA	Temp. (°C) :	18	Date :	10/4/07
Bicon Ant.#:	NA	Humidity (%) :	67	Time :	8:00AM
Log Ant.#:	110	EUT Voltage :		Staff :	FCustodio
DRG Ant. #	529	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	1 MHz
Cable#:	40ft	Location:	RN#: 329550-01	Video Bandwidth	1 MHz
Preamp#:	NA	Distance:	3m		
Spec An.#:	835	EIRP conversion factor	5.5		
QP #:	NA				
PreSelect#:	NA				

Meas. Freq. (MHz)	Meas. (dBuV) pk	Ant Orientation	CF (db)	Max Level (dBm) pk	Spec. Limit (ERIP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	C0MMENT
1850.20	92.4	H	31.2	28.4	33.0	-4.6	B	1.0	Pass	
1880.00	93.6	H	31.2	29.6	33.0	-3.4	B	1.0	Pass	
1909.80	92.4	H	31.3	28.4	33.0	-4.6	B	1.0	Pass	

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Client Name : Qualcomm
EUT Name : Modem Platform
EUT Model # : UNDP-1
EUT Part # :
EUT Serial # :
EUT Config. : CDMA 1X -BC0

Specification : FCC Part 22 Reference :

Rod. Ant. #:	NA	Temp. (°C) :	26	Date :	10/4/07
Bicon Ant.#:	NA	Humidity (%) :	81	Time :	8:00AM
Log Ant.#:	110	EUT Voltage :		Staff :	FCustodio
DRG Ant. #	529	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	30 kHz*
Cable#:	SOATS	Location:	RN#: 329550-01	Video Bandwidth	300 kHz*
Preamp#:	NA	Distance:	3m		
Spec An.#:	835	ERP conversion factor	7		
QP #:	NA				
PreSelect#:	NA				

*Utilized RS FSEK 30 Channel Power measurement capability (CDMA standard) average detector for channel power

Meas. Freq. (MHz)	Meas. (dBuV) pk	Ant Orientation	CF (db)	Max Level (dBm) pk	Spec. Limit (ERP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	C0MMENT
824.70	96.1	H	27.4	26.2	38.5	-12.2	B	1.0	Pass	
836.52	96.0	H	26.5	25.2	38.5	-13.2	B	1.0	Pass	
848.31	96.0	H	26.8	25.5	38.5	-12.9	B	1.0	Pass	

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Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	CDMA 1X PCS BC1				
Specification :	FCC Part 24			Reference :	
Rod. Ant. #:	NA	Temp. (°C) :	18	Date :	10/4/07
Bicon Ant.#:	NA	Humidity (%) :	67	Time :	8:00AM
Log Ant.#:	110	EUT Voltage :		Staff :	FCustodio
DRG Ant. #	877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	30 kHz*
Cable#:	40ft	Location:	RN#: 329550-01	Video Bandwidth	300 kHz*
Preamp#:	NA	Distance:	3m	*Utilized RS FSEK 30 Channel Power	
Spec An.#:	835	EIRP conversion factor	5.5	measurement capability (CDMA standard)	
QP #:	NA			average detector for channel power	
PreSelect#:	NA				

Meas. Freq. (MHz)	Meas. (dBuV) pk	Ant Orientation	CF (db)	Max Level (dBm) pk	Spec. Limit (ERIP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	COMMENT
1851.25	90.3	H	31.1	26.2	33.0	-6.8	B	1.0	Pass	
1880.00	90.3	H	31.1	26.1	33.0	-6.9	B	1.0	Pass	
1908.75	89.6	H	31.9	26.3	33.0	-6.7	B	1.0	Pass	

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Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	WCDMA Release 99 TX, Band V				
Specification :	FCC Part 22			Reference :	
Rod. Ant. #:	NA	Temp. (°C) :	13	Date :	10/25/07
Bicon Ant.#:	NA	Humidity (%) :	83	Time :	8:00AM
Log Ant.#:	110	EUT Voltage :		Staff :	JGarcia
DRG Ant. #	877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	30 kHz*
Cable#:	SOATS	Location:	RN#: 329550-01	Video Bandwidth	300 kHz*
Preamp#:	NA	Distance:	3m	*Utilized RS FSEK 30 Channel Power	
Spec An.#:	835	ERP conversion factor	7	measurement capability (WCDMA standard)	
QP #:	NA			average detector for channel power	
PreSelect#:	NA				

Meas. Freq. (MHz)	Meas. (dBuV) pk	Ant Orientation	CF (db)	Max Level (dBm) pk	Spec. Limit (ERP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	C0MMENT
826.40	94.2	H	27.4	24.3	38.5	-14.1	B	1.0	Pass	
836.40	95.1	H	26.5	24.3	38.5	-14.1	B	1.0	Pass	
846.60	94.8	H	26.8	24.3	38.5	-14.2	B	1.0	Pass	

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Client Name :	Qualcomm
EUT Name :	Modem Platform
EUT Model # :	UNDP-1
EUT Part # :	
EUT Serial # :	
EUT Config. :	WCDMA Release 99 TX, Band II

Specification :	FCC Part 24			Reference :	
Rod. Ant. #:	NA	Temp. (°C) :	18	Date :	10/25/07
Bicon Ant.#:	NA	Humidity (%) :	67	Time :	8:00AM
Log Ant.#:	110	EUT Voltage :	4.2VDC	Staff :	JGarcia
DRG Ant. #	877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	30 kHz*
Cable#:	40ft	Location:	RN#: 329550-01	Video Bandwidth	300 kHz*
Preamp#:	NA	Distance:	3m	*Utilized RS FSEK 30 Channel Power	
Spec An.#:	835	EIRP conversion factor	5.5	measurement capability (WCDMA standard)	
QP #:	NA			average detector for channel power	
PreSelect#:	NA				

Meas. Freq. (MHz)	Meas. (dBuV) pk	Ant Orientation	CF (db)	Max Level (dBm) pk	Spec. Limit (ERIP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	COMMENT
1852.40	89.5	H	31.1	25.4	33.0	-7.6	B	1.0	Pass	
1880.00	89.4	H	31.1	25.3	33.0	-7.7	B	1.0	Pass	
1907.60	89.1	H	31.9	25.8	33.0	-7.2	B	1.0	Pass	

Para. No.:2.1053 Field Strength of Spurious

§ 22.917 Emission limitations for cellular equipment.

The rules in this section govern the spectral characteristics of emissions in the Cellular Radiotelephone Service.

(a) *Out of band emissions.* 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.

(b) *Measurement procedure.* 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.

§ 24.238 Emission limitations for Broadband PCS equipment.

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(a) *Out of band emissions.* 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.

(b) *Measurement procedure.* 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.

Test Conditions:

Sample Number:	N10DGGVRD	**Temperature:**	13-29°C
Date:	Oct. 10, 2007	**Humidity:**	7-83 %
Modification State:		**Tester:**	Ferdinand Custodio
		Laboratory:	Nemko SOATS

Test Results: See attached Tables

Additional Observations:

- The Spectrum was searched up to the 10th Harmonic. Emissions within 20 dB of the limit were substituted by a signal generator and matching antenna and were shown to comply.

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Radiated Emissions Data

Job # : 6556-1 Test # : 1
Page 1 of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Serial # :					
EUT Config. :	GSM 850, GMSK, TX				
Specification :	FCC Part 22			Reference :	
Rod. Ant. #:		Temp. (°C) :	16	Date :	10/05/07
Bicon Ant.#:		Humidity (%) :	70	Staff :	Ferdinand Custodio
Log Ant.#:	110	EUT Voltage :	NA	Peak Bandwidth:	1 MHz
DRG Ant. #	877	EUT Frequency :	NA	Video Bandwidth	1 MHz
Dipole Ant.#:		Phase:	NA		
Cable#:	40ft	Location:	RN # 329550-01		
Preamp#:	317	Distance:	3m		
Spec An.#:	835	ERP conversion factor	7		

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (ERP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
1648.40	66.0	62.8	-3.5	-34.7	-13.0	-21.7	B	1.0	Pass	*
2472.60	59.4	57.4	1.8	-36.0	-13.0	-23.0	B	1.0	Pass	*
3296.80	54.5	53.2	2.8	-40.0	-13.0	-27.0	B	1.0	Pass	*
4121.00	48.5	48.5	4.4	-44.3	-13.0	-31.3			Pass	NF
4945.20			6.8		-13.0					NF
5769.40			9.2		-13.0					NF
6593.60			12.6		-13.0					NF
7417.80			15.6		-13.0					NF
8242.00			17.1		-13.0					NF
9066.20			18.5		-13.0					NF
1673.20	68.5	66.1	-3.5	-32.3	-13.0	-19.3	B	1.0	Pass	*
2509.80	62.2	59.0	2.7	-32.3	-13.0	-19.3	B	1.0	Pass	*
3346.40	53.4	54.9	3.1	-39.4	-13.0	-26.4	B	1.0	Pass	*
4183.00	48.5	48.5	4.4	-44.3	-13.0	-31.3			Pass	NF
5019.60			8.2		-13.0					NF
5856.20			9.4		-13.0					NF
6692.80			13.0		-13.0					NF
7529.40			15.3		-13.0					NF
8366.00			17.0		-13.0					NF
9202.60			19.5		-13.0					NF
1697.60	63.0	63.5	-3.5	-37.3	-13.0	-24.3	B	1.0	Pass	*
2546.40	61.0	62.5	2.7	-32.0	-13.0	-19.0	B	1.0	Pass	*
3395.20	52.8	52.9	3.1	-41.3	-13.0	-28.3	B	1.0	Pass	*
4244.00	48.5	48.5	4.1	-44.7	-13.0	-31.7			Pass	NF
5092.80			8.2		-13.0					NF
5941.60			10.0		-13.0					NF
6790.40			13.4		-13.0					NF
7639.20			15.7		-13.0					NF
8488.00			17.3		-13.0					NF
9336.80			19.2		-13.0					NF

* = Signal Measured NF = Noise Floor, no signal observed, even at lower RBW.

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Radiated Emissions Data

Job # : 6556-1 Test # : 6
Page 1 of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Serial # :					
EUT Config. :	GSM PCS, GMSK, TX				
Specification :	FCC Part 24			Reference :	
Rod. Ant. #:		Temp. (°C) :	16	Date :	10/05/07
Bicon Ant.#:		Humidity (%) :	70	Staff :	Ferdinand Custodio
Log Ant.#:	110	EUT Voltage :	NA	Peak Bandwidth:	1 MHz
DRG Ant. #	877	EUT Frequency :	NA	Video Bandwidth	1 MHz
Dipole Ant.#:		Phase:	NA		
Cable#:	40ft	Location:	RN # 329550-01		
Preamp#:	317	Distance:	3m		
Spec An.#:	835	EIRP conversion factor	5.5		

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (ERIP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
3700.40	55.93	50.76	2.3	-37.1	-13.0	-24.1	B	1.0	Pass	*
5550.60	53.36	50.70	8.8	-33.1	-13.0	-20.1	B	1.0	Pass	*
7400.80	45.36	45.36	15.6	-34.3	-13.0	-21.3		1.0	Pass	NF
9251.00			19.5		-13.0					NF
11101.20			24.5		-13.0					NF
12951.40			26.5		-13.0					NF
14801.60			34.3		-13.0					NF
16651.80			43.0		-13.0					NF
18502.00			58.9		-13.0					NF
20352.2			70.6		-13.0					NF
3760.00	52.59	51.24	2.3	-40.4	-13.0	-27.4	B	1.0	Pass	*
5640.00	50.59	49.19	9.0	-35.7	-13.0	-22.7	B	1.0	Pass	*
7520.00	45.36	45.36	15.3	-34.6	-13.0	-21.6		1.0	Pass	NF
9400.00			19.2		-13.0					NF
11280.00			24.4		-13.0					NF
13160.00			26.8		-13.0					NF
15040.00			36.0		-13.0					NF
16920.00			43.5		-13.0					NF
18800.00			59.0		-13.0					NF
20680			71.8		-13.0					NF
3819.60	55.91	54.16	2.7	-36.6	-13.0	-23.6		1.0	Pass	*
5729.40	49.01	49.30	9.2	-36.8	-13.0	-23.8		1.0	Pass	*
7639.20	45.36	45.36	15.7	-34.2	-13.0	-21.2		1.0	Pass	NF
9549.00			19.4		-13.0					NF
11458.80			24.3		-13.0					NF
13368.60			26.3		-13.0					NF
15278.40			34.4		-13.0					NF
17188.20			47.3		-13.0					NF
19098.00			61.5		-13.0					NF
21007.80			72.3		-13.0					NF

* = Signal Measured NF = Noise Floor, no signal observed, even at lower RBW.

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Radiated Emissions Data

Job # : 6556-1 Test # : 1
Page 1 of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Serial # :					
EUT Config. :	EDGE 850, 8PSK, TX				
Specification :	FCC Part 22			Reference :	
Rod. Ant. #:		Temp. (°C) :	16	Date :	10/05/07
Bicon Ant.#:		Humidity (%) :	70	Staff :	Ferdinand Custodio
Log Ant.#:	110	EUT Voltage :	NA	Peak Bandwidth:	1 MHz
DRG Ant. #	877	EUT Frequency :	NA	Video Bandwidth	1 MHz
Dipole Ant.#:		Phase:	NA		
Cable#:	40ft	Location:	RN # 329550-01		
Preamp#:	317	Distance:	3m		
Spec An.#:	835	ERP conversion factor	7		

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (ERP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
1648.40	65.4	69.9	-3.5	-30.9	-13.0	-17.9	B	1.0	Pass	*
2472.60	58.7	59.7	1.8	-35.7	-13.0	-22.7	B	1.0	Pass	*
3296.80	51.2	50.5	2.8	-43.3	-13.0	-30.3	B	1.0	Pass	*
4121.00	48.5	48.5	4.4	-44.3	-13.0	-31.3			Pass	NF
4945.20			6.8		-13.0					NF
5769.40			9.2		-13.0					NF
6593.60			12.6		-13.0					NF
7417.80			15.6		-13.0					NF
8242.00			17.1		-13.0					NF
9066.20			18.5		-13.0					NF
1673.20	66.7	67.6	-3.5	-33.2	-13.0	-20.2	B	1.0	Pass	*
2509.80	63.0	60.7	2.7	-31.5	-13.0	-18.5	B	1.0	Pass	*
3346.40	53.1	51.3	3.1	-41.1	-13.0	-28.1	B	1.0	Pass	*
4183.00	48.5	48.5	4.4	-44.3	-13.0	-31.3			Pass	NF
5019.60			8.2		-13.0					NF
5856.20			9.4		-13.0					NF
6692.80			13.0		-13.0					NF
7529.40			15.3		-13.0					NF
8366.00			17.0		-13.0					NF
9202.60			19.5		-13.0					NF
1697.60	68.5	67.0	-3.5	-32.3	-13.0	-19.3	B	1.0	Pass	*
2546.40	64.6	58.2	2.7	-29.9	-13.0	-16.9	B	1.0	Pass	*
3395.20	51.4	49.8	3.1	-42.8	-13.0	-29.8	B	1.0	Pass	*
4244.00	48.5	48.5	4.1	-44.7	-13.0	-31.7			Pass	NF
5092.80			8.2		-13.0					NF
5941.60			10.0		-13.0					NF
6790.40			13.4		-13.0					NF
7639.20			15.7		-13.0					NF
8488.00			17.3		-13.0					NF
9336.80			19.2		-13.0					NF

* = Signal Measured NF = Noise Floor, no signal observed, even at lower RBW.

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Radiated Emissions Data

Job # : 6556-1 Test # : 6
Page 1 of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Serial # :					
EUT Config. :	EDGE PCS, 8PSK, TX				
Specification :	FCC Part 24			Reference :	
Rod. Ant. #:		Temp. (°C) :	16	Date :	10/05/07
Bicon Ant.#:		Humidity (%) :	70	Staff :	Ferdinand Custodio
Log Ant.#:	110	EUT Voltage :	NA	Peak Bandwidth:	1 MHz
DRG Ant. #	877	EUT Frequency :	NA	Video Bandwidth	1 MHz
Dipole Ant.#:		Phase:	NA		
Cable#:	40ft	Location:	RN # 329550-01		
Preamp#:	317	Distance:	3m		
Spec An.#:	835	EIRP conversion factor	5.5		

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (ERIP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
3700.40	57.19	55.37	2.3	-35.8	-13.0	-22.8	B	1.0	Pass	*
5550.60	50.90	50.63	8.8	-35.6	-13.0	-22.6	B	1.0	Pass	*
7400.80	45.36	45.36	15.6	-34.3	-13.0	-21.3		1.0	Pass	NF
9251.00			19.5		-13.0					NF
11101.20			24.5		-13.0					NF
12951.40			26.5		-13.0					NF
14801.60			34.3		-13.0					NF
16651.80			43.0		-13.0					NF
18502.00			58.9		-13.0					NF
20352.2			70.6		-13.0					NF
3760.00	52.59	50.91	2.3	-40.4	-13.0	-27.4	B	1.0	Pass	*
5640.00	49.32	49.07	9.0	-36.9	-13.0	-23.9	B	1.0	Pass	*
7520.00	45.36	45.36	15.3	-34.6	-13.0	-21.6		1.0	Pass	NF
9400.00			19.2		-13.0					NF
11280.00			24.4		-13.0					NF
13160.00			26.8		-13.0					NF
15040.00			36.0		-13.0					NF
16920.00			43.5		-13.0					NF
18800.00			59.0		-13.0					NF
20680			71.8		-13.0					NF
3819.60	55.03	54.78	2.7	-37.5	-13.0	-24.5		1.0	Pass	*
5729.40	50.93	49.00	9.2	-35.2	-13.0	-22.2		1.0	Pass	*
7639.20	45.36	45.36	15.7	-34.2	-13.0	-21.2		1.0	Pass	NF
9549.00			19.4		-13.0					NF
11458.80			24.3		-13.0					NF
13368.60			26.3		-13.0					NF
15278.40			34.4		-13.0					NF
17188.20			47.3		-13.0					NF
19098.00			61.5		-13.0					NF
21007.80			72.3		-13.0					NF

* = Signal Measured NF = Noise Floor, no signal observed, even at lower RBW.

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Radiated Emissions Data

Job # : 6556-1 Test # : 1
Page 1 of 1

Client Name : Qualcomm
EUT Name : Modem Platform
EUT Model # : UNDP-1
EUT Serial # :
EUT Config. : CDMA 1X , BC0

Specification : FCC Part 22 Reference :

Rod. Ant. #:		Temp. (°C) :	16	Date :	10/05/07
Bicon Ant.#:		Humidity (%) :	70	Staff :	Ferdinand Custodio
Log Ant.#:	110	EUT Voltage :	NA	Peak Bandwidth:	1 MHz
DRG Ant. #	877	EUT Frequency :	NA	Video Bandwidth	1 MHz
Dipole Ant.#:		Phase:	NA		
Cable#:	40ft	Location:	RN # 329550-01		
Preamp#:	317	Distance:	3m		
Spec An.#:	835	ERP conversion factor	7		

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (ERP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
1649.40	52.9	51.8	-3.5	-47.9	-13.0	-34.9	B	1.0	Pass	*
2474.10	50.0	50.1	1.8	-45.3	-13.0	-32.3	B	1.0	Pass	*
3298.80	47.1	47.1	2.8	-47.4	-13.0	-34.4			Pass	NF
4123.50			4.4		-13.0					NF
4948.20			6.8		-13.0					NF
5772.90			9.2		-13.0					NF
6597.60			12.6		-13.0					NF
7422.30			15.6		-13.0					NF
8247.00			17.1		-13.0					NF
9071.70			18.5		-13.0					NF
1673.04	56.5	50.4	-3.5	-44.3	-13.0	-31.3	B	1.0	Pass	*
2509.56	50.0	48.9	2.7	-44.5	-13.0	-31.5	B	1.0	Pass	*
3346.08	47.1	47.1	3.1	-47.1	-13.0	-34.1			Pass	NF
4182.60			4.4		-13.0					NF
5019.12			8.2		-13.0					NF
5855.64			9.4		-13.0					NF
6692.16			13.0		-13.0					NF
7528.68			15.3		-13.0					NF
8365.20			17.0		-13.0					NF
9201.72			19.5		-13.0					NF
1696.62	56.0	51.4	-3.5	-44.8	-13.0	-31.8	B	1.0	Pass	*
2544.93	49.3	49.3	2.7	-45.2	-13.0	-32.2	B	1.0	Pass	*
3393.24	47.1	47.1	3.1	-47.1	-13.0	-34.1			Pass	NF
4241.55			4.1		-13.0					NF
5089.86			8.2		-13.0					NF
5938.17			10.0		-13.0					NF
6786.48			13.4		-13.0					NF
7634.79			15.7		-13.0					NF
8483.10			17.3		-13.0					NF
9331.41			19.2		-13.0					NF

* = Signal Measured NF = Noise Floor, no signal observed, even at lower RBW.

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Radiated Emissions Data

Job # : 6556-1 Test # : 6
Page 1 of 1

Client Name : Qualcomm
EUT Name : Modem Platform
EUT Model # : UNDP-1
EUT Serial # :
EUT Config. : CDMA 1X , BC1, TX

Specification : FCC Part 24 Reference :
Rod. Ant. #: Temp. (°C) : 16 Date : 10/05/07
Bicon Ant.#: Humidity (%) : 70 Staff : Ferdinand Custodio
Log Ant.#: 110 EUT Voltage : NA Peak Bandwidth: 1 MHz
DRG Ant. # 877 EUT Frequency NA Video Bandwidth 1 MHz
Dipole Ant.#: Phase: NA
Cable#: 40ft Location: RN # 329550-01
Preamp#: 317 Distance: 3m
Spec An.#: 835 EIRP conversion 5.5

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (ERIP (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
3702.50	56.40	53.98	2.3	-36.6	-13.0	-23.6	B	1.0	Pass	*
5553.75	44.80	44.80	8.8	-41.7	-13.0	-28.7			Pass	NF
7405.00			15.6		-13.0					NF
9256.25			19.5		-13.0					NF
11107.50			24.5		-13.0					NF
12958.75			26.5		-13.0					NF
14810.00			34.3		-13.0					NF
16661.25			43.0		-13.0					NF
18512.50			58.9		-13.0					NF
20363.75			70.6		-13.0					NF
3760.00	54.90	54.75	2.3	-38.1	-13.0	-25.1	B	1.0	Pass	*
5640.00	45.40	45.40	9.0	-40.8	-13.0	-27.8		1.0	Pass	NF
7520.00			15.3		-13.0					NF
9400.00			19.2		-13.0					NF
11280.00			24.4		-13.0					NF
13160.00			26.8		-13.0					NF
15040.00			36.0		-13.0					NF
16920.00			43.5		-13.0					NF
18800.00			59.0		-13.0					NF
20680			71.8		-13.0					NF
3817.50	55.91	56.59	2.7	-35.9	-13.0	-22.9	B	1.0	Pass	*
5726.25	45.00	45.00	9.2	-41.1	-13.0	-28.1		1.0	Pass	NF
7635.00			15.7		-13.0					NF
9543.75			19.4		-13.0					NF
11452.50			24.3		-13.0					NF
13361.25			26.3		-13.0					NF
15270.00			34.4		-13.0					NF
17178.75			47.3		-13.0					NF
19087.50			61.5		-13.0					NF
20996.25			72.3		-13.0					NF

* = Signal Measured NF = Noise Floor, no signal observed, even at lower RBW.

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Radiated Emissions Data

Job # : 6556-1 Test # : 2
Page 1 of 1

Client Name : Qualcomm
EUT Name : Modem Platform
EUT Model # : UNDP-1
EUT Serial # :
EUT Config. : WCDMA Release 99 TX Band V, TX

Specification : FCC Part 22 Reference :
Rod. Ant. #: Temp. (°C) : 16 Date : 10/15/07
Bicon Ant.#: Humidity (%) : 70 Staff : Ferdinand Custodio
Log Ant.#: 110 EUT Voltage : NA Peak Bandwidth: 1 MHz
DRG Ant. # 877 EUT Frequency NA Video Bandwidth 1 MHz
Dipole Ant.#: Phase: NA
Cable#: 40ft Location: RN # 329550-01
Preamp#: 317 Distance: 3m
Spec An.#: 835 ERP conversion 7

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (ERP (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
1652.80	54.8	54.4	-3.5	-46.0	-13.0	-33.0	F	1.0	Pass	*
2479.20	48.2	48.2	1.8	-47.2	-13.0	-34.2			Pass	NF
3305.60			2.8		-13.0					NF
4132.00			4.4		-13.0					NF
4958.40			6.8		-13.0					NF
5784.80			9.2		-13.0					NF
6611.20			12.6		-13.0					NF
7437.60			15.6		-13.0					NF
8264.00			17.1		-13.0					NF
9090.40			18.5		-13.0					NF
1672.80	52.6	53.9	-3.5	-46.9	-13.0	-33.9	L	1.0	Pass	*
2509.20	48.2	48.2	2.7	-46.3	-13.0	-33.3			Pass	NF
3345.60			3.1		-13.0					NF
4182.00			4.4		-13.0					NF
5018.40			8.2		-13.0					NF
5854.80			9.4		-13.0					NF
6691.20			13.0		-13.0					NF
7527.60			15.3		-13.0					NF
8364.00			17.0		-13.0					NF
9200.40			19.5		-13.0					NF
1693.20	56.3	54.9	-3.5	-44.4	-13.0	-31.4	F	1.0	Pass	*
2539.80	48.2	48.2	2.7	-46.3	-13.0	-33.3			Pass	NF
3386.40			3.1		-13.0					NF
4233.00			4.1		-13.0					NF
5079.60			8.2		-13.0					NF
5926.20			10.0		-13.0					NF
6772.80			13.4		-13.0					NF
7619.40			15.7		-13.0					NF
8466.00			17.3		-13.0					NF
9312.60			19.2		-13.0					NF

* = Signal Measured NF = Noise Floor, no signal observed, even at lower RBW.

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Radiated Emissions Data

Job # : 6556-1 Test # : 6
Page 1 of 1

Client Name : Qualcomm
EUT Name : Modem Platform
EUT Model # : UNDP-1
EUT Serial # :
EUT Config. : WCDMA Release 99, Band II, TX

Specification : FCC Part 24 Reference :

Rod. Ant. #:		Temp. (°C) :	16	Date :	10/05/07
Bicon Ant.#:		Humidity (%) :	70	Staff :	Ferdinand Custodio
Log Ant.#:	110	EUT Voltage :	NA	Peak Bandwidth:	1 MHz
DRG Ant. #	877	EUT Frequency :	NA	Video Bandwidth	1 MHz
Dipole Ant.#:		Phase:	NA		
Cable#:	40ft	Location:	RN # 329550-01		
Preamp#:	317	Distance:	3m		
Spec An.#:	835	EIRP conversion factor	5.5		

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (ERIP) (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
3704.80	56.27	55.96	2.3	-36.7	-13.0	-23.7	B	1.0	Pass	*
5557.20	52.17	50.70	8.8	-34.3	-13.0	-21.3	B	1.0	Pass	*
7409.60	44.50	44.50	15.6	-35.1	-13.0	-22.1			Pass	NF
9262.00			19.5		-13.0					NF
11114.40			24.5		-13.0					NF
12966.80			26.5		-13.0					NF
14819.20			34.3		-13.0					NF
16671.60			43.0		-13.0					NF
18524.00			58.9		-13.0					NF
20376.40			70.6		-13.0					NF
3760.00	65.38	65.32	2.3	-27.6	-13.0	-14.6	B	1.0	Pass	*
5640.00	47.16	48.51	9.0	-37.7	-13.0	-24.7	B	1.0	Pass	NF
7520.00	44.80	44.80	15.3	-35.1	-13.0	-22.1			Pass	NF
9400.00			19.2		-13.0					NF
11280.00			24.4		-13.0					NF
13160.00			26.8		-13.0					NF
15040.00			36.0		-13.0					NF
16920.00			43.5		-13.0					NF
18800.00			59.0		-13.0					NF
20680			71.8		-13.0					NF
3815.20	62.08	64.18	2.7	-28.4	-13.0	-15.4		1.0	Pass	*
5722.80	48.07	47.43	9.2	-38.0	-13.0	-25.0		1.0	Pass	*
7630.40	44.60	44.60	15.7	-34.9	-13.0	-21.9		1.0	Pass	NF
9538.00			19.4		-13.0					NF
11445.60			24.3		-13.0					NF
13353.20			26.3		-13.0					NF
15260.80			34.4		-13.0					NF
17168.40			47.3		-13.0					NF
19076.00			61.5		-13.0					NF
20983.60			72.3		-13.0					NF

* = Signal Measured NF = Noise Floor, no signal observed, even at lower RBW.

Para. No.:2.1053 Field Strength of Spurious (Substitution Method including Fundamental)

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Substitution Method For Radiated Emissions

Complete	X			Job # : 6556-1	Test # : 1
Preliminary				Page 1	of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	EDGE PCS, 8PSK				
Specification :	FCC Part 24			Reference :	
Rod. Ant. #:	NA	Temp. (deg. C) :	29	Date :	10/8/2007
Bicon Ant.#:	NA	Humidity (%) :	7	Time :	
Log Ant.#:	NA	EUT Voltage :	NA	Staff :	FSCustodio
DRG Ant. #	529/877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Cable#:	60ft	Location:	RN# 329550-01		
Preamp#:	NA	Distance:	3m		
Spec An.#:	835				
QP #:	835				
PreSelect#:	NA				

Part 24 Substitution

Target Frequency	Target Level	Horn Gain	Cable loss	Signal Generator	Total (EIRP)	Spec	Margin
MHz	dBuV/m	dBi	dB	dBm	dBm	dBm	dBm
1850.20	92.4	8.16	7.48	28.04	28.72	33	-4.3
1880.00	93.6	8.21	7.48	28.52	29.25	33	-3.7
1909.80	92.4	8.26	7.83	28.63	29.06	33	-3.9

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Substitution Method For Radiated Emissions

Complete	X			Job # : 6556-1	Test # : 1
Preliminary				Page 1	of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	EDGE 850, 8PSK				
Specification :	FCC Part 22			Reference :	
Rod. Ant. #:	NA	Temp. (deg. C) :	29	Date :	10/8/2007
Bicon Ant.#:	NA	Humidity (%) :	7	Time :	
Log Ant.#:	NA	EUT Voltage :	NA	Staff :	FSCustodio
DRG Ant. #	529/877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Cable#:	60ft	Location:	RN# 329550-01		
Preamp#:	NA	Distance:	3m		
Spec An.#:	835				
QP #:	835				
PreSelect#:	NA				

Part 22 Substitution (Fundamental)

Target Frequency	Target Level	dipole	Cable loss	Signal Generator	Total (ERP)	Spec	Margin
MHz	dBuV/m		dB	dBm	dBm	dBm	dBm
824.20	101.0		4.90	33.08	28.18	38.45	-10.3
836.60	101.8		5.00	34.25	29.25	38.45	-9.2
848.80	101.1		5.00	33.47	28.47	38.45	-10.0

Part 22 Substitution (Harmonics)

Target Frequency	Target Level	Horn Gain	Cable loss	Signal Generator	Total (ERP)	Spec	Margin
MHz	dBuV/m	dBi	dB	dBm	dBm	dBm	dBm
1648.40	69.9	7.84	7.04	-33.1	-32.30	-13	-19.3
1697.60	68.5	7.92	7.04	-33.7	-32.82	-13	-19.8
2509.80	63.0	9.1	8.79	-34.1	-33.78	-13	-20.8
2546.40	64.6	9.16	8.79	-31.2	-30.83	-13	-17.8

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Substitution Method For Radiated Emissions

Complete	X			Job # : 6556-1	Test # : 1
Preliminary				Page 1	of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	GSM 850, GMSK				
Specification :	FCC Part 22			Reference :	
Rod. Ant. #:	NA	Temp. (deg. C) :	29	Date :	10/8/2007
Bicon Ant.#:	NA	Humidity (%) :	7	Time :	
Log Ant.#:	NA	EUT Voltage :	NA	Staff :	FSCustodio
DRG Ant. #	529/877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Cable#:	60ft	Location:	RN# 329550-01		
Preamp#:	NA	Distance:	3m		
Spec An.#:	835				
QP #:	835				
PreSelect#:	NA				

Part 22 Substitution (Fundamental)

Target Frequency	Target Level	dipole	Cable loss	Signal Generator	Total (ERP)	Spec	Margin
MHz	dBuV/m		dB	dBm	dBm	dBm	dBm
824.20	105.7		4.90	38.01	33.11	38.45	-5.3
836.60	105.2		5.00	37.99	32.99	38.45	-5.5
848.80	106.4		5.00	38.54	33.54	38.45	-4.9

Part 22 Substitution (Harmonics)

Target Frequency	Target Level	Horn Gain	Cable loss	Signal Generator	Total (EIRP)	Spec	Margin
MHz	dBuV/m	dBi	dB	dBm	dBm	dBm	dBm
1673.20	68.5	7.88	7.04	-33.3	-32.46	-13	-19.5
2509.80	62.2	9.11	8.79	-33.1	-32.78	-13	-19.8
2546.40	62.5	9.16	8.79	-32.7	-32.33	-13	-19.3

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Substitution Method For Radiated Emissions

Complete	X			Job # : 6556-1	Test # : 1
Preliminary				Page 1	of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	GSM PCS, GMSK				
Specification :	FCC Part 24			Reference :	
Rod. Ant. #:	NA	Temp. (deg. C) :	29	Date :	10/8/2007
Bicon Ant.#:	NA	Humidity (%) :	7	Time :	
Log Ant.#:	NA	EUT Voltage :	NA	Staff :	FSCustodio
DRG Ant. #	529/877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Cable#:	60ft	Location:	RN# 329550-01		
Preamp#:	NA	Distance:	3m		
Spec An.#:	835				
QP #:	835				
PreSelect#:	NA				

Part 24 Substitution

Target Frequency	Target Level	Horn Gain	Cable loss	Signal Generator	Total (EIRP)	Spec	Margin
MHz	dBuV/m	dBi	dB	dBm	dBm	dBm	dBm
1850.20	95.1	8.16	7.48	30.41	31.09	33	-1.9
1880.00	95.6	8.21	7.48	30.58	31.31	33	-1.7
1909.80	95.6	8.26	7.83	31.87	32.30	33	-0.7

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Substitution Method For Radiated Emissions

Complete	X			Job # : 6556-1	Test # : 1
Preliminary				Page 1	of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	CDMA 1X , BC0				
Specification :	FCC Part 22			Reference :	
Rod. Ant. #:	NA	Temp. (deg. C) :	13	Date :	10/16/2007
Bicon Ant.#:	NA	Humidity (%) :	83	Time :	
Log Ant.#:	NA	EUT Voltage :	NA	Staff :	FSCustodio
DRG Ant. #	529/877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Cable#:	60ft	Location:	RN# 329550-01		
Preamp#:	NA	Distance:	3m		
Spec An.#:	835				
QP #:	835				
PreSelect#:	NA				

Part 22 Substitution (Fundamental)

Target Frequency	Target Level	dipole	Cable loss	Signal Generator	Total (ERP)	Spec	Margin
MHz	dBuV/m		dB	dBm	dBm	dBm	dBm
824.70	96.1		4.90	29.67	24.77	38.45	-13.7
836.52	96.0		5.00	29.24	24.24	38.45	-14.2
848.31	96.0		5.00	29.43	24.43	38.45	-14.0

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Substitution Method For Radiated Emissions

Complete	X			Job # : 6556-1	Test # : 1
Preliminary				Page 1	of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	CDMA 1X , BC1				
Specification :	FCC Part 24			Reference :	
Rod. Ant. #:	NA	Temp. (deg. C) :	29	Date :	10/8/2007
Bicon Ant.#:	NA	Humidity (%) :	7	Time :	
Log Ant.#:	NA	EUT Voltage :	NA	Staff :	FSCustodio
DRG Ant. #	529/877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Cable#:	60ft	Location:	RN# 329550-01		
Preamp#:	NA	Distance:	3m		
Spec An.#:	835				
QP #:	835				
PreSelect#:	NA				

Part 24 Substitution

Target Frequency	Target Level	Horn Gain	Cable loss	Signal Generator	Total (EIRP)	Spec	Margin
MHz	dBuV/m	dBi	dB	dBm	dBm	dBm	dBm
1851.25	90.3	8.16	7.48	25.28	25.96	33	-7.0
1880.00	90.3	8.21	7.48	25.25	25.98	33	-7.0
1908.75	89.6	8.25	7.83	25.99	26.41	33	-6.6

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Substitution Method For Radiated Emissions

Complete	X			Job # :	6556-1
Preliminary				Page	1
Test # :	1				
of	1				

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	WCDMA Release 99 TX Band V				
Specification :	FCC Part 22			Reference :	
Rod. Ant. #:	NA	Temp. (deg. C) :	13	Date :	10/25/2007
Bicon Ant.#:	NA	Humidity (%) :	83	Time :	
Log Ant.#:	NA	EUT Voltage :	NA	Staff :	JGarcia
DRG Ant. #	529/877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Cable#:	60ft	Location:	RN# 329550-01		
Preamp#:	NA	Distance:	3m		
Spec An.#:	835				
QP #:	835				
PreSelect#:	NA				

Part 22 Substitution (Fundamental)

Target Frequency	Target Level	dipole	Cable loss	Signal Generator	Total (ERP)	Spec	Margin
MHz	dBuV/m		dB	dBm	dBm	dBm	dBm
826.40	94.2		4.90	29.3	24.40	38.45	-14.1
836.40	95.1		5.00	29.2	24.20	38.45	-14.3
846.60	94.8		5.00	29.3	24.30	38.45	-14.2

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Substitution Method For Radiated Emissions

Complete	X			Job # : 6556-1	Test # : 1
Preliminary				Page 1	of 1

Client Name :	Qualcomm				
EUT Name :	Modem Platform				
EUT Model # :	UNDP-1				
EUT Part # :					
EUT Serial # :					
EUT Config. :	WCDMA Release 99, Band II				
Specification :	FCC Part 24			Reference :	
Rod. Ant. #:	NA	Temp. (deg. C) :	13	Date :	10/26/2007
Bicon Ant.#:	NA	Humidity (%) :	83	Time :	
Log Ant.#:	NA	EUT Voltage :	NA	Staff :	JGarcia
DRG Ant. #	529/877	EUT Frequency :	NA	Photo ID:	
Dipole Ant.#:	NA	Phase:	NA	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Cable#:	60ft	Location:	RN# 329550-01		
Preamp#:	NA	Distance:	3m		
Spec An.#:	835				
QP #:	835				
PreSelect#:	NA				

Part 24 Substitution (Fundamental)

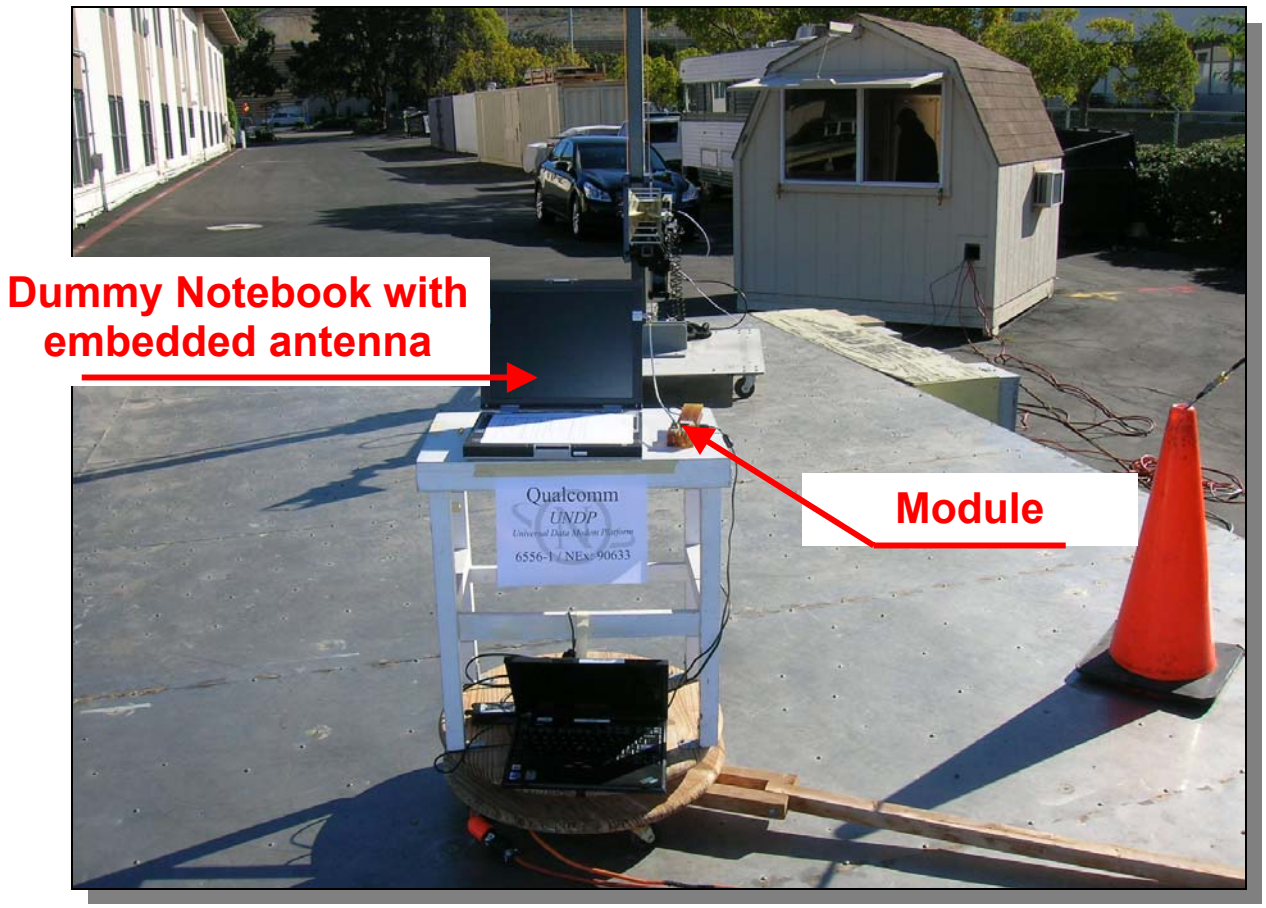
Target Frequency	Target Level	Horn Gain	Cable loss	Signal Generator	Total (EIRP)	Spec	Margin
MHz	dBuV/m	dBi	dB	dBm	dBm	dBm	dBm
1852.40	89.5	8.16	7.48	26.1	26.78	33	-6.2
1880.00	89.4	8.21	7.48	25.5	26.23	33	-6.8
1907.60	89.1	8.25	7.83	26.1	26.52	33	-6.5

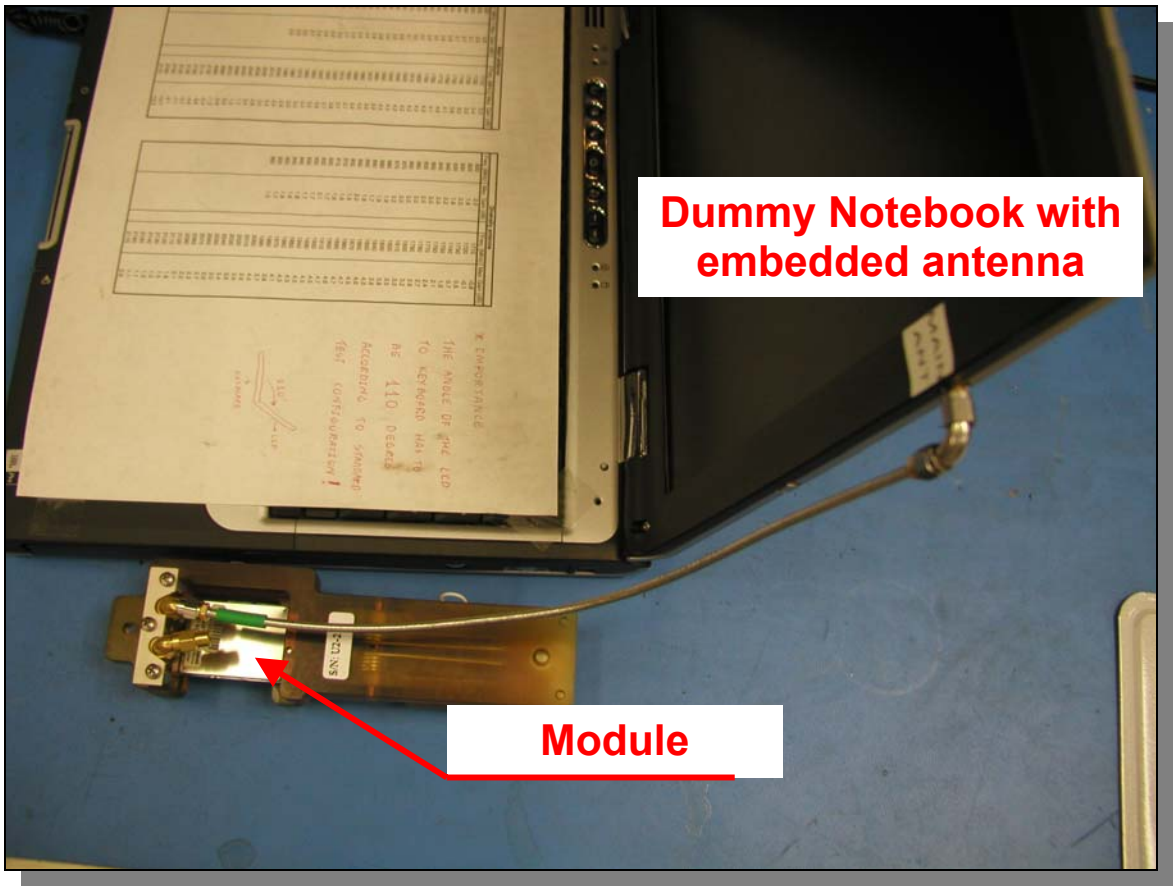
Part 24 Substitution (Harmonics)

Target Frequency	Target Level	Horn Gain	Cable loss	Signal Generator	Total (EIRP)	Spec	Margin
MHz	dBuV/m	dBi	dB	dBm	dBm	dBm	dBm
3760.00	65.4	9.88	11.20	-27.5	-28.82	-13	-15.8
3815.20	64.2	9.88	11.50	-27.4	-29.02	-13	-16.0

Appendix B : Setup Photographs

1. Spurious Emissions Setup:




Dummy Notebook with embedded antenna
Module

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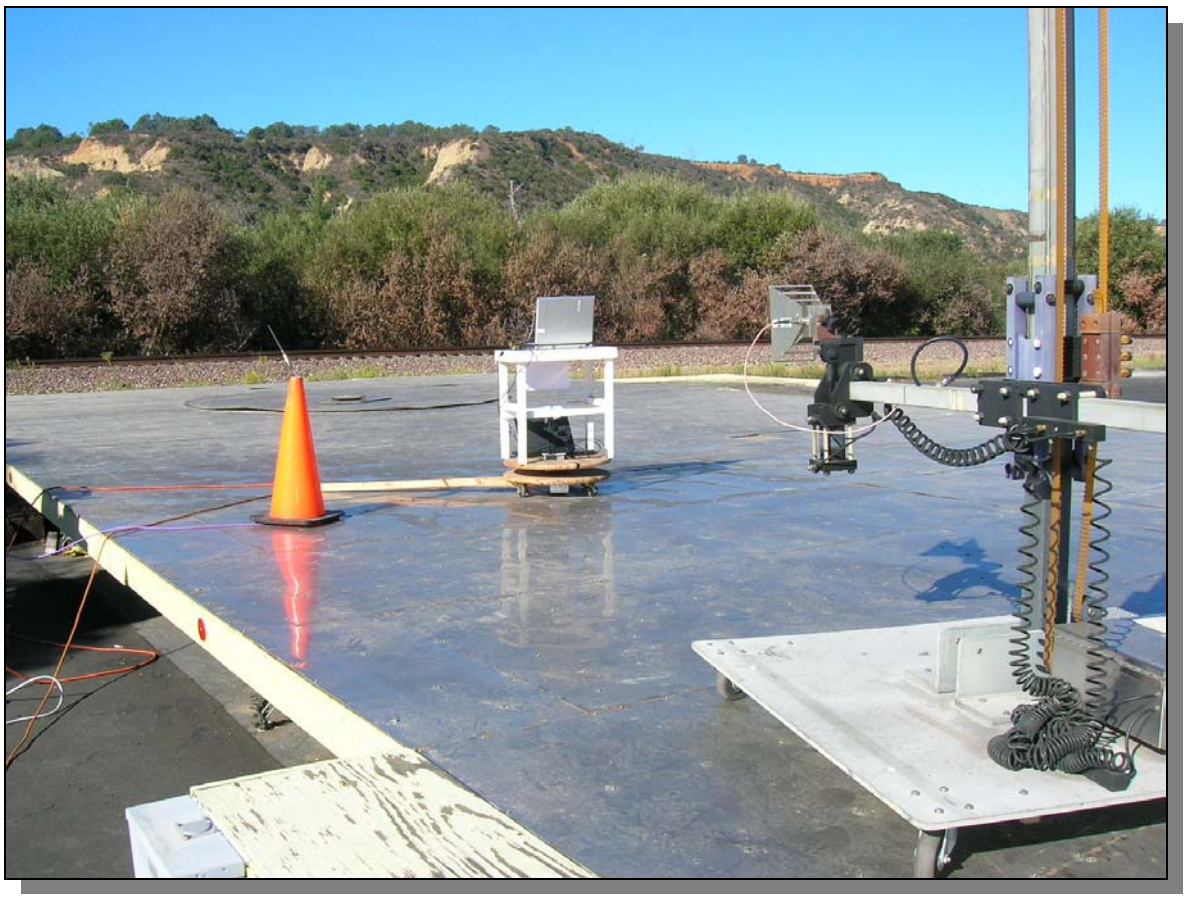

Appendix C : Block Diagram of Test Setups

Test Site For Radiated Emissions