



**FCC CFR47 CERTIFICATION
TEST REPORT FOR PART 22**

TEST REPORT

FOR

**800MHZ CELLULAR (AMPS/CDMA/TDMA)
IN-BUILDING DISTRIBUTED ANTENNA SYSTEM**

MODEL: InterReach Unison Accel

FCC ID: NOOUNS-CELL-2

REPORT NUMBER: 02U1586-1

ISSUE DATE: JANUARY 06, 2003

Prepared for
LGC WIRELESS INC.
2540 JUNCTION AVENUE
SAN JOSE, CA 95134

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1. TEST RESULT CERTIFICATION

COMPANY NAME: LGC WIRELESS INC.
2540 JUNCTION AVENUE
SAN JOSE, CA 95134-1902

EUT DESCRIPTION: 800MHZ CELLULAR (AMPS/TDMA/CDMA) IN-BUILDING
DISTRIBUTED ANTENNA SYSTEM

MODEM NAME: INTERREACH UNISON ACCEL

DATE TESTED: JANUARY 06, 2003

TYPE OF EQUIPMENT	INTENTIONAL RADIATOR
EQUIPMENT TYPE	824 – 849MHz paired with 869 – 894MHz (22) Repeater.
MEASUREMENT PROCEDURE	ANSI 63.4 / 1992, TIA/EIA 603
PROCEDURE	CERTIFICATION
FCC RULE	CFR 47 PART 22 Subpart H

Compliance Certification Services, Inc. tested the above equipment for compliance with the requirement set forth in CFR 47, PART 22 Subpart H-Cellular Radiotelephone Service. The equipment in the configuration described in this report, shows the measured emission levels emanating from the equipment do not exceed the specified limit.

Note : This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

Test By:

Released For CCS By:




VIEN TRAN
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

2. EUT DESCRIPTION

This product is designed for offices, hotel rooms, small parking lots, garages or small buildings, helping to improve Cellular communications signal and coverage by extending the coverage of a base station.

Outdoor antenna receives from a Cellular base station, then remote repeater amplifies the signal. After amplification, the signal is passed through to the indoor antennas.

Conversely, signals from handsets are amplified and retransmitted to the base station.

3. TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures documented on chapter 13 of ANSI C63.4 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057.

4. TEST FACILITY

The open area test sites and conducted measurement facilities used to collect the radiated data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

5. ACCREDITATION AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code: 200065-0 to perform Electromagnetic Interference tests according to FCC PART 15 AND CISPR 22 requirements. No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government. In addition, the test facilities are listed with Federal Communications Commission (reference no: 31040/SIT (1300B3) and 31040/SIT (1300F2))

6. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

7. APPLICABLE RULES

§22.913 POWER LIMIT

22.913(a): Maximum ERP. The effective radiated power (ERP) of base station transmitters and cellular repeater must not exceed 500 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

§22.917 EMISSION LIMITS

22.917(e): Out-of-band emissions. The mean power of emissions must be attenuated below the mean power of the un-modulated carrier (P) on any frequency twice or more than twice the fundamental frequency by:

at least $43 + 10 \log P$ dB (-13dBm)

§2.1057- SPECTRUM RANGE TO BE INVESTIGATED

Lowest radio frequency signal generated in the equipment, without going below 9 kHz, up to at least the frequency shown below:

(1) If the equipment operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

(2) If the equipment operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

(3) If the equipment operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower.

(b) Particular attention should be paid to harmonics and sub-harmonics of the carrier frequency as well as to those frequencies removed from the carrier by multiples of the oscillator frequency.

Radiation at the frequencies of multiplier stages should also be checked.

(c) The amplitude of spurious emissions, which are attenuated more than 20 dB below the permissible value, need not be reported.

(d) Unless otherwise specified, measurements above 40 GHz shall be performed using a minimum resolution bandwidth of 1 MHz.

Spec limit: Frequency investigation range from 15MHz to tenth harmonic (i.e. 20 GHz.).

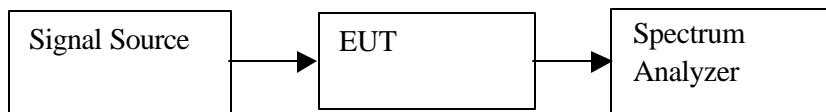
8. TEST SETUP, PROCEDURE AND RESULT

8.1. SECTION 2.1046: RF POWER OUTPUT

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Signal Generator	Rohde & Schwarz	SMIQ 03	8/12/03
EMI Receiver	HP	8593EM	6/11/03

TEST SETUP



TEST PROCEDURE

The EUT was set to maximum output power (maximum gain). RF output power was measured with Spectrum Analyzer.

RESULT

Measured with Spectrum Analyzer. Set the power amplifier to the maximum output gain.

Test result:

RF conduction Measurement

Modulation	Max Output Power(dBm)	Max Output Power(mW)
AMPS 800MHz	26.5	446.68
CDMA 800MHz	17.6	57.54
TDMA 800MHz	24.8	302.00

RF ERP Measurement:AMPS Downlink:

Frequency (GHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Fundamental Low, Mid, & High Channels (RBW=VBW=1MHz):									
0.869	98.10	26.60	0.50	0.00	0.00	26.10			V
0.869	92.10	14.60	0.50	0.00	0.00	14.10			H
0.882	100.50	27.90	0.50	0.00	0.00	27.40			V
0.882	92.30	15.30	0.50	0.00	0.00	14.80			H
0.894	99.00	26.00	0.50	0.00	0.00	25.50			V
0.894	90.20	14.00	0.50	0.00	0.00	13.50			H

AMPS Uplink:

Frequency (GHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Fundamental Low, Mid, & High Channels (RBW=VBW=1MHz):									
0.824	60.30	-12.20	0.50	0.00	0.00	-12.70			V
0.824	51.80	-18.20	0.50	0.00	0.00	-18.70			H
0.837	59.30	-11.30	0.50	0.00	0.00	-11.80			V
0.837	54.60	-18.60	0.50	0.00	0.00	-19.10			H
0.849	60.10	-12.50	0.50	0.00	0.00	-13.00			V
0.849	54.60	-18.60	0.50	0.00	0.00	-19.10			H

CDMA Downlink:

Frequency (GHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Fundamental Low, Mid, & High Channels (RBW=VBW=3MHz):									
0.869	88.20	16.90	0.50	0.00	0.00	16.40			V
0.869	81.40	10.70	0.50	0.00	0.00	10.20			H
0.882	91.80	17.80	0.50	0.00	0.00	17.30			V
0.882	85.60	11.40	0.50	0.00	0.00	10.90			H
0.894	89.80	16.30	0.50	0.00	0.00	15.80			V
0.894	80.50	9.80	0.50	0.00	0.00	9.30			H

CDMA Uplink:

Frequency (GHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Fundamental Low, Mid, & High Channels (RBW=VBW=3MHz):									
0.824	56.20	-9.20	0.50	0.00	0.00	-9.70			V
0.824	51.30	-16.20	0.50	0.00	0.00	-16.70			H
0.837	58.10	-8.60	0.50	0.00	0.00	-9.10			V
0.837	51.60	-16.20	0.50	0.00	0.00	-16.70			H
0.849	58.00	11.00	0.50	0.00	0.00	10.50			V
0.849	50.00	-16.20	0.50	0.00	0.00	-16.70			H

TDMA Downlink:

Frequency (GHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Fundamental Low, Mid, & High Channels (RBW=VBW=1MHz):									
0.869	95.50	24.60	0.50	0.00	0.00	24.10			V
0.869	87.20	14.60	0.50	0.00	0.00	14.10			H
0.882	97.00	26.30	0.50	0.00	0.00	25.80			V
0.882	88.50	15.60	0.50	0.00	0.00	15.10			H
0.894	95.80	24.40	0.50	0.00	0.00	23.90			V
0.894	87.70	14.00	0.50	0.00	0.00	13.50			H

TDMA Uplink:

Frequency (GHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Fundamental Low, Mid, & High Channels (RBW=VBW=1MHz):									
0.824	59.60	-11.30	0.50	0.00	0.00	-11.80			V
0.824	53.30	-18.70	0.50	0.00	0.00	-19.20			H
0.837	61.30	-10.20	0.50	0.00	0.00	-10.70			V
0.837	55.60	-18.30	0.50	0.00	0.00	-18.80			H
0.849	62.30	-11.50	0.50	0.00	0.00	-12.00			V
0.849	54.70	-18.10	0.50	0.00	0.00	-18.60			H

8.2. SECTION 2.1047: MODULATION CHARACTERISTICS

(NOT APPLICABLE TO THIS REPEATER, THE EUT DOESN'T HAVE A FREQUENCY TRANSLATOR OR MODULATOR INSIDE OF EUT. THE EUT IS AN AMPLIFIER TYPE REPEATER.)

8.3. SECTION 2.1049: OCCUPIED BANDWIDTH

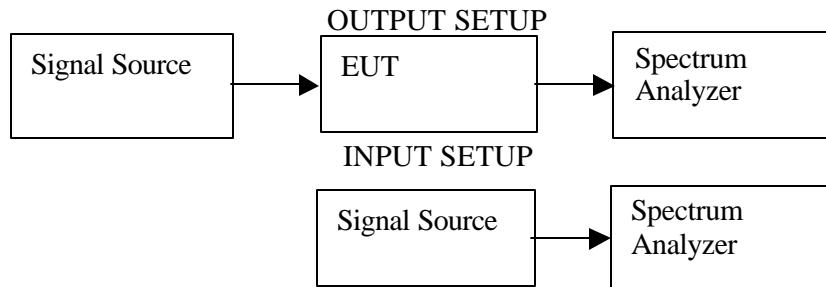
SECTION 2.1049(i)

Transmitters designed for other types of modulation – when modulated by an appropriate signal of sufficient amplitude to be representative of the type of service in which used. A description of the input signal should be supplied.

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Signal Generator	Rohde & Schwarz	SMIQ 03	8/12/03
EMI Receiver	HP	8593EM	6/11/03

TEST SETUP



TEST PROCEDURE

The EUT's occupied bandwidth output plot is compared with the input source plot to check that no distortion is created when the input signal is amplified by the EUT. Identical bandwidths, spans and center frequencies are used for both plots. Reference levels and attenuation are adjusted.

RESULT

Plots of the input and output are included.

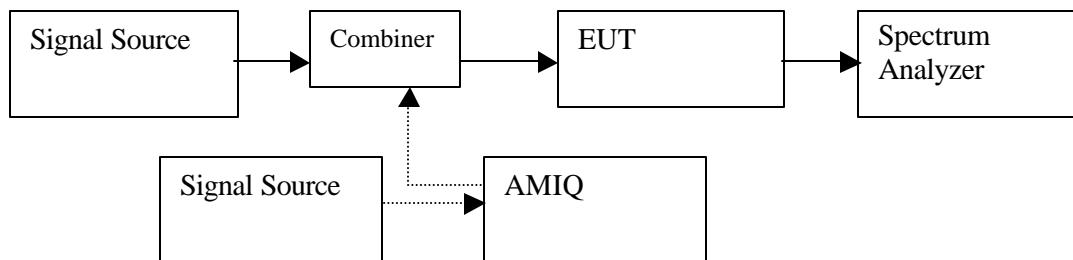
Please refer to the plots section 8.6 Measurement Result Plot and the attachment.

8.4. SECTION 2.1051: SPURIOUS EMISSION AT ANTENNA TERMINAL

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Signal Generator	Rohde & Schwarz	SMIQ 03	8/12/03
EMI Receiver	HP	8593EM	6/11/03
AMIQ	HP	E4432B-1E5-H9	9/12/03

TEST SETUP



TEST PROCEDURE

- 1) RF signal or three balanced signals (intermodulation measurement) were applied to the RF input. One set as close as possible to the bottom of the block edge and one set as close as possible to the top of the block edge. Set the RES BW to 1% of the emission bandwidth to show compliance with the -13dBm limit, in the 1 MHz bands immediately outside and adjacent to the top and bottom edges of the frequency block.
- 2) For the Out-of-Band measurements a 1 MHz RES BW was used to scan from 15 MHz to $10 \times f_0$ of the fundamental carrier for all frequency block. A display line was placed at -13dBm to show compliance for spurious, harmonics, and intermodulation emissions.

RESULT

Complies, ***Please refer to the plots section 8.6 Measurement Result Plots and the attachment.***

8.5. SECTION 2.1053: FIELD STRENGTH OF SPURIOUS RADIATION

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Spectrum Analyzer	HP	8593EM	6/11/03
Amplifier	MITEQ	NSP2600-44	4/26/03
Signal Generator	Rohde & Schwarz	SMIQ 03	8/12/03
Bicon Antenna	Eaton	94455-1	3/30/03
LP Antenna	EMCO	3146	3/30/03
Tune Dipole	Compliance Design	Robert	5/5/03
Tx Horn Antenna	EMCO	3115	1/31/03
Rx Horn Antenna	EMCO	3115	1/31/03
HPF	MICROLAB	FH-1800H	N/A
HPF	MICROLAB	FH-2400H	N/A
50 ohm terminator	SHX	TF-5	N/A

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
Above 1000	<input checked="" type="checkbox"/> Peak <input type="checkbox"/> Average	<input checked="" type="checkbox"/> 1 MHz <input type="checkbox"/> 10 MHz	<input checked="" type="checkbox"/> 1 MHz <input type="checkbox"/> 10 Hz

TEST SETUP

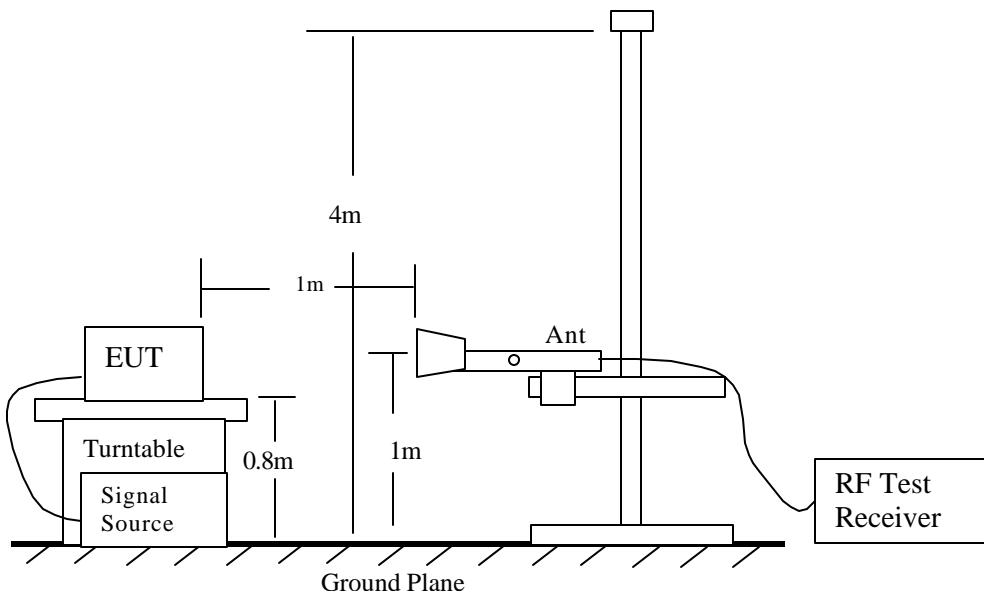


Fig 1: Radiated Emission Measurement

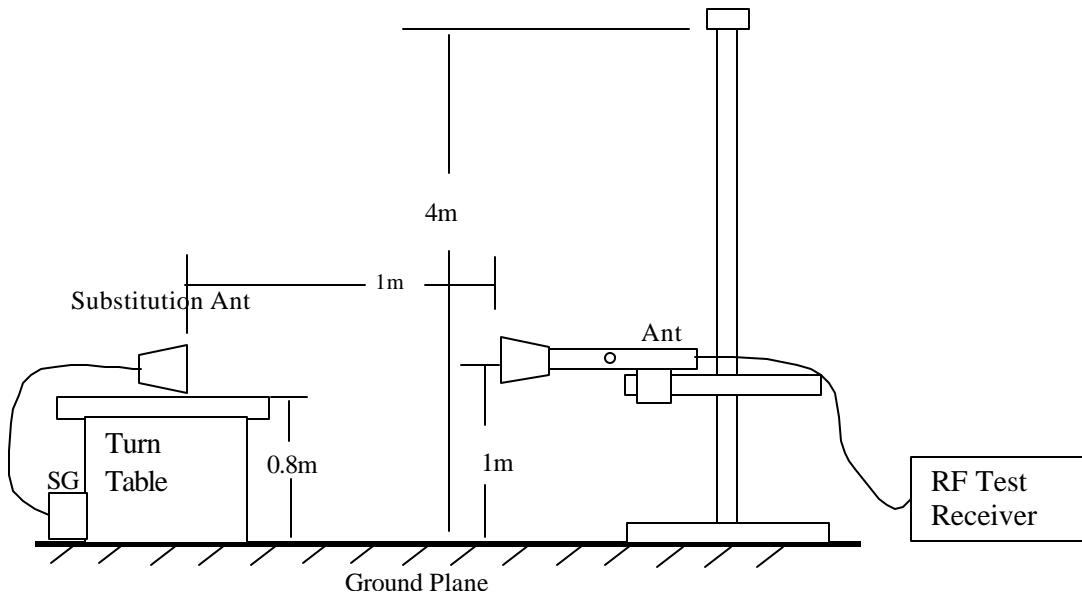


Fig 2: Radiated Emission – Substitution Method set-up

TEST PROCEDURE

- 1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.
- 2). The test antenna shall be oriented initially for vertical polarization located 1m from the EUT to correspond to the frequency of the transmitter.
- 3). The output of the test antenna shall be connected to the measuring receiver and either a peak or average detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
- 4). The transmitter shall be switched on, if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
- 5). The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
- 6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- 7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.

- 8). The maximum signal level detected by the measuring receiver shall be noted.
- 9). The transmitter shall be replaced by a substitution antenna.
- 10). The substitution antenna shall be oriented for vertical polarization.
- 11). The substitution antenna shall be connected to a calibrated signal generator.
- 12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- 13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
- 14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
- 15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
- 16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.
- 17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

RESULT

No non-compliance noted, as shown below

FCC Measurement Compliance Certification Services, Morgan Hill Open Field Site									
Test Engr:	Vien Tran								
Project #:	02U1586-1								
Company:	LGC Wireless Inc								
EUT Descrip.:	800MHz CELL (AMPS Output Power = 27dBm)								
EUT M/N:	InterReach Unison Accel								
Test Target:	FCC 22								
Mode Oper:	Downlink Low / Mid / High								
Frequency	SA reading	SG reading	CL	Gain	Gain	ERP	Limit	Margin	Notes
(GHz)	(dBuV)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)	
Spurious Emissions									
Lo Channel:									
0.118	76.20	-45.00	0.30	0.00	0.00	-45.30	-13.00	-32.30	V
1.738	45.80	-58.20	1.08	8.10	5.95	-53.33	-13.00	-40.33	V
2.607	44.00	-73.30	1.31	9.00	6.85	-67.76	-13.00	-54.76	V (Noise Floor)
3.476	43.50	-71.00	1.52	8.90	6.75	-65.77	-13.00	-52.77	V (Noise Floor)
4.345	46.00	-69.00	1.76	9.50	7.35	-63.41	-13.00	-50.41	V (Noise Floor)
5.214	44.00	-69.00	1.98	9.90	7.75	-63.23	-13.00	-50.23	V (Noise Floor)
6.083	46.00	-69.60	2.19	10.40	8.25	-63.54	-13.00	-50.54	V (Noise Floor)
6.952	45.00	-65.30	2.34	10.60	8.45	-59.19	-13.00	-46.19	V (Noise Floor)
7.821	45.00	-60.50	2.49	10.30	8.15	-54.84	-13.00	-41.84	V (Noise Floor)
8.690	45.00	-58.20	2.64	10.50	8.35	-52.49	-13.00	-39.49	V (Noise Floor)
0.118	81.00	-46.00	0.30	0.00	0.00	-46.30	-13.00	-33.30	H
1.738	45.00	-58.00	1.10	8.10	5.95	-53.15	-13.00	-40.15	H
2.607	44.00	-73.20	1.31	9.00	6.85	-67.66	-13.00	-54.66	H (Noise Floor)
3.476	43.00	-71.20	1.52	8.90	6.75	-65.97	-13.00	-52.97	H (Noise Floor)
4.345	43.00	-69.10	1.76	9.50	7.35	-63.51	-13.00	-50.51	H (Noise Floor)
5.214	43.00	-69.00	1.98	9.90	7.75	-63.23	-13.00	-50.23	H (Noise Floor)
6.083	43.00	-58.00	2.19	10.40	8.25	-51.94	-13.00	-38.94	H (Noise Floor)
6.952	45.00	-63.50	2.34	10.60	8.45	-57.39	-13.00	-44.39	H (Noise Floor)
7.821	45.00	-60.50	2.49	10.30	8.15	-54.84	-13.00	-41.84	H (Noise Floor)
8.690	46.00	-58.00	2.64	10.50	8.35	-52.29	-13.00	-39.29	H (Noise Floor)
Mid Channel									
0.118	76.60	-46.50	0.30	0.00	0.00	-46.80	-13.00	-33.80	V
1.763	46.00	-58.80	1.10	8.20	6.05	-53.85	-13.00	-40.85	V
2.645	44.00	-71.30	1.32	9.00	6.85	-65.77	-13.00	-52.77	V (Noise Floor)
3.562	43.00	-69.00	1.53	8.90	6.75	-63.78	-13.00	-50.78	V (Noise Floor)
0.118	80.20	-47.00	0.30	0.00	0.00	-47.30	-13.00	-34.30	H
1.763	45.00	-60.00	1.10	8.20	6.05	-55.05	-13.00	-42.05	H
2.645	46.00	-73.50	1.32	9.00	6.85	-67.97	-13.00	-54.97	H (Noise Floor)
3.562	43.00	-71.00	1.53	8.90	6.75	-65.78	-13.00	-52.78	H (Noise Floor)
High Channel									
0.118	76.30	-45.60	0.30	0.00	0.00	-45.90	-13.00	-32.90	V
1.738	46.00	-60.00	1.10	8.20	6.05	-55.05	-13.00	-42.05	V
2.607	44.10	-72.50	1.32	9.00	6.85	-66.97	-13.00	-53.97	V (Noise Floor)
3.476	45.00	-69.00	1.54	8.90	6.75	-63.79	-13.00	-50.79	V (Noise Floor)
0.118	79.30	-48.20	0.30	0.00	0.00	-48.50	-13.00	-35.50	H
1.738	46.00	-60.00	1.10	8.20	6.05	-55.05	-13.00	-42.05	H
2.607	44.10	-72.50	1.32	9.00	6.85	-66.97	-13.00	-53.97	H (Noise Floor)
3.476	45.00	-69.00	1.54	8.90	6.75	-63.79	-13.00	-50.79	H (Noise Floor)
Note: Completed scan from 30MHz to 10 GHz.									
EPR = SG reading - CL + Gain (dBd)									
Gain (dBd) = Gain (dBi) - 2.15									
Margin = EPR - Limit									
SA: Spectrum Analyzer, HP 8593EM, S/N: 3710A00205 CL: cable loss (5ft), FLEXCO									
SG: Signal Generator, HP 83732B, S/N: US34490599 Pre-Amp: Miteq NSP2600 -44, S/N: 646456									
TX Antenna: Dipole, Compliance Design, Roberts, S/N: 116RX Antenna: Bicon, Eston 94455-1, S/N: 1214 LP, EMCO 3146, S/N: 3163									
Horn, EMCO 3115, S/N: 6717 Horn, EMCO 3115, S/N: 6739									

FCC Measurement Compliance Certification Services, Morgan Hill Open Field Site									
Frequency (GHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Lo Channel:									
1.648	50.00	-56.00	1.04	8.10	5.95	-51.09	-13.00	-38.09	V
2.472	45.00	-73.00	1.28	9.00	6.85	-67.43	-13.00	-54.43	V (Noise Floor)
3.476	43.00	-71.00	1.47	8.90	6.75	-65.72	-13.00	-52.72	V (Noise Floor)
3.296	43.00	-69.00	1.71	9.50	7.35	-63.36	-13.00	-50.36	V (Noise Floor)
4.120	43.00	-69.00	1.91	9.90	7.75	-63.16	-13.00	-50.16	V (Noise Floor)
4.944	43.00	-68.00	2.11	10.40	8.25	-61.86	-13.00	-48.86	V (Noise Floor)
5.168	43.00	-65.00	2.28	10.60	8.45	-58.83	-13.00	-45.83	V (Noise Floor)
6.592	44.50	-61.00	2.42	10.30	8.15	-55.27	-13.00	-42.27	V (Noise Floor)
7.416	45.00	-61.00	2.56	10.50	8.35	-55.21	-13.00	-42.21	V (Noise Floor)
1.648	47.00	-57.00	1.04	8.10	5.95	-52.09	-13.00	-39.09	H
2.472	43.00	-75.00	1.28	9.00	6.85	-69.43	-13.00	-56.43	H (Noise Floor)
3.476	43.00	-71.00	1.47	8.90	6.75	-65.72	-13.00	-52.72	H (Noise Floor)
3.296	43.00	-69.00	1.71	9.50	7.35	-63.36	-13.00	-50.36	H (Noise Floor)
4.120	43.00	-58.00	1.91	9.90	7.75	-52.16	-13.00	-39.16	H (Noise Floor)
4.944	43.00	-58.00	2.11	10.40	8.25	-51.86	-13.00	-38.86	H (Noise Floor)
5.168	43.00	-65.00	2.28	10.60	8.45	-58.83	-13.00	-45.83	H (Noise Floor)
6.592	44.00	-61.00	2.42	10.30	8.15	-55.27	-13.00	-42.27	H (Noise Floor)
7.416	45.00	-59.00	2.56	10.50	8.35	-53.21	-13.00	-40.21	H (Noise Floor)
Mid Channel									
1.673	48.00	-58.00	1.11	8.20	6.05	-53.06	-13.00	-40.06	V
2.591	44.00	-79.00	1.33	9.00	6.85	-73.48	-13.00	-60.48	V (Noise Floor)
3.346	44.00	-71.00	1.56	8.90	6.75	-65.81	-13.00	-52.81	V (Noise Floor)
1.673	46.00	-55.00	1.11	8.20	6.05	-50.06	-13.00	-37.06	H
2.591	44.00	-73.00	1.33	9.00	6.85	-67.48	-13.00	-54.48	H (Noise Floor)
3.346	45.00	-71.00	1.56	8.90	6.75	-65.81	-13.00	-52.81	H (Noise Floor)
High Channel									
1.698	47.50	-56.50	1.11	8.20	6.05	-51.56	-13.00	-38.56	V
2.547	43.00	-73.00	1.34	9.00	6.85	-67.49	-13.00	-54.49	V (Noise Floor)
3.396	43.00	-71.50	1.57	8.90	6.75	-66.32	-13.00	-53.32	V (Noise Floor)
1.698	64.50	-54.10	1.11	8.20	6.05	-49.16	-13.00	-36.16	H
2.547	43.00	-73.30	1.34	9.00	6.85	-67.79	-13.00	-54.79	H (Noise Floor)
3.396	43.00	-71.20	1.57	8.90	6.75	-66.02	-13.00	-53.02	H (Noise Floor)
Note: Completed scan from 30MHz to 10 GHz.									
EPR = SG reading - CL + Gain (dBd)									
Gain (dBd) = Gain (dBi) - 2.15									
Margin = EPR - Limit									
SA: Spectrum Analyzer, HP 8593EM, S/N: 3710A00205			CL: cable loss (5ft), FLEXCO						
SG: Signal Generator, HP 83732B, S/N: US34490599			Pre-Amp: Miteq NSP2600 -44, S/N: 646456						
TX Antenna: Dipole, Compliance Design, Roberts, S/N: 11			RX Antenna: Bicon, Eston 94455-1, S/N: 1214						
Horn, EMCO 3115, S/N: 6717			LP, EMCO 3146, S/N: 3163						
			Horn, EMCO 3115, S/N: 6739						

FCC Measurement Compliance Certification Services, Morgan Hill Open Field Site									
Frequency (GHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Spurious Emissions Lo Channel:									
0.118	77.50	-46.80	0.30	0.00	0.00	-47.10	-13.00	-34.10	V
1.738	45.80	-58.20	1.08	8.10	5.95	-53.33	-13.00	-40.33	V
2.607	44.00	-73.30	1.31	9.00	6.85	-67.76	-13.00	-54.76	V (Noise Floor)
3.476	43.50	-71.00	1.52	8.90	6.75	-65.77	-13.00	-52.77	V (Noise Floor)
4.345	46.00	-69.00	1.76	9.50	7.35	-63.41	-13.00	-50.41	V (Noise Floor)
5.214	44.00	-69.00	1.98	9.90	7.75	-63.23	-13.00	-50.23	V (Noise Floor)
6.083	46.00	-69.60	2.19	10.40	8.25	-63.54	-13.00	-50.54	V (Noise Floor)
6.952	45.00	-65.30	2.34	10.60	8.45	-59.19	-13.00	-46.19	V (Noise Floor)
7.821	45.00	-60.50	2.49	10.30	8.15	-54.84	-13.00	-41.84	V (Noise Floor)
8.690	45.00	-58.20	2.64	10.50	8.35	-52.49	-13.00	-39.49	V (Noise Floor)
0.118	82.50	-47.50	0.30	0.00	0.00	-47.80	-13.00	-34.80	H
1.738	45.00	-58.00	1.10	8.10	5.95	-53.15	-13.00	-40.15	H
2.607	44.00	-73.20	1.31	9.00	6.85	-67.66	-13.00	-54.66	H (Noise Floor)
3.476	43.00	-71.20	1.52	8.90	6.75	-65.97	-13.00	-52.97	H (Noise Floor)
4.345	43.00	-69.10	1.76	9.50	7.35	-63.51	-13.00	-50.51	H (Noise Floor)
5.214	43.00	-69.00	1.98	9.90	7.75	-63.23	-13.00	-50.23	H (Noise Floor)
6.083	43.00	-58.00	2.19	10.40	8.25	-51.94	-13.00	-38.94	H (Noise Floor)
6.952	45.00	-63.50	2.34	10.60	8.45	-57.39	-13.00	-44.39	H (Noise Floor)
7.821	45.00	-60.50	2.49	10.30	8.15	-54.84	-13.00	-41.84	H (Noise Floor)
8.690	46.00	-58.00	2.64	10.50	8.35	-52.29	-13.00	-39.29	H (Noise Floor)
Mid Channel									
0.118	76.60	-47.50	0.30	0.00	0.00	-47.80	-13.00	-34.80	V
1.763	46.00	-58.80	1.10	8.20	6.05	-53.85	-13.00	-40.85	V
2.645	44.00	-71.30	1.32	9.00	6.85	-65.77	-13.00	-52.77	V (Noise Floor)
3.562	43.00	-69.00	1.53	8.90	6.75	-63.78	-13.00	-50.78	V (Noise Floor)
0.118	81.00	-49.50	0.30	0.00	0.00	-49.80	-13.00	-36.80	H
1.763	45.00	-60.00	1.10	8.20	6.05	-55.05	-13.00	-42.05	H
2.645	46.00	-73.50	1.32	9.00	6.85	-67.97	-13.00	-54.97	H (Noise Floor)
3.562	43.00	-71.00	1.53	8.90	6.75	-65.78	-13.00	-52.78	H (Noise Floor)
High Channel									
0.118	75.60	-48.50	0.30	0.00	0.00	-48.80	-13.00	-35.80	V
1.738	46.00	-60.00	1.10	8.20	6.05	-55.05	-13.00	-42.05	V
2.607	44.10	-72.50	1.32	9.00	6.85	-66.97	-13.00	-53.97	V (Noise Floor)
3.476	45.00	-69.00	1.54	8.90	6.75	-63.79	-13.00	-50.79	V (Noise Floor)
0.118	79.00	-49.50	0.30	0.00	0.00	-49.80	-13.00	-36.80	H
1.738	46.00	-60.00	1.10	8.20	6.05	-55.05	-13.00	-42.05	H
2.607	44.10	-72.50	1.32	9.00	6.85	-66.97	-13.00	-53.97	H (Noise Floor)
3.476	45.00	-69.00	1.54	8.90	6.75	-63.79	-13.00	-50.79	H (Noise Floor)
Note: Completed scan from 30MHz to 10 GHz.									
EPR = SG reading - CL + Gain (dBd) Gain (dBd) = Gain (dBi) - 2.15 Margin = EPR - Limit									
SA: Spectrum Analyzer, HP 8593EM, S/N: 3710A00205 SG: Signal Generator, HP 83732B, S/N: US34490599 TX Antenna: Dipole, Compliance Design, Roberts, S/N: 111 RX Antenna: Bicon, Eston 94455-1, S/N: 1214 CL: cable loss (5ft), FLEXCO Pre-Amp: Miteq NSP2600 -44, S/N: 646456 LP, EMCO 3146, S/N: 3163 Horn, EMCO 3115, S/N: 6739									

FCC Measurement									
Compliance Certification Services, Morgan Hill Open Field Site									
Test Engr:	Vien Tran								
Project #:	02U1586-1								
Company:	LGC Wireless Inc								
EUT Descrip.:	800MHz CELL (CDMA)								
EUT M/N:	InterReach Umison Accel								
Test Target:	FCC 22								
Mode Oper:	Uplink, Low / Mid / High								
Frequency	SA reading	SG reading	CL	Gain	Gain	ERP	Limit	Margin	Notes
(GHz)	(dBuV)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)	
Spurious Emissions									
Lo Channel:									
1.648	48.00	-58.00	1.04	8.10	5.95	-53.09	-13.00	-40.09	V
2.472	45.00	-73.00	1.28	9.00	6.85	-67.43	-13.00	-54.43	V (Noise Floor)
3.476	43.00	-71.00	1.47	8.90	6.75	-65.72	-13.00	-52.72	V (Noise Floor)
3.296	43.00	-69.00	1.71	9.50	7.35	-63.36	-13.00	-50.36	V (Noise Floor)
4.120	43.00	-69.00	1.91	9.90	7.75	-63.16	-13.00	-50.16	V (Noise Floor)
4.944	43.00	-68.00	2.11	10.40	8.25	-61.86	-13.00	-48.86	V (Noise Floor)
5.168	43.00	-65.00	2.28	10.60	8.45	-58.83	-13.00	-45.83	V (Noise Floor)
6.592	44.50	-61.00	2.42	10.30	8.15	-55.27	-13.00	-42.27	V (Noise Floor)
7.416	45.00	-61.00	2.56	10.50	8.35	-55.21	-13.00	-42.21	V (Noise Floor)
1.648	46.00	-58.00	1.04	8.10	5.95	-53.09	-13.00	-40.09	H
2.472	43.00	-75.00	1.28	9.00	6.85	-69.43	-13.00	-56.43	H (Noise Floor)
3.476	43.00	-71.00	1.47	8.90	6.75	-65.72	-13.00	-52.72	H (Noise Floor)
3.296	43.00	-69.00	1.71	9.50	7.35	-63.36	-13.00	-50.36	H (Noise Floor)
4.120	43.00	-58.00	1.91	9.90	7.75	-52.16	-13.00	-39.16	H (Noise Floor)
4.944	43.00	-58.00	2.11	10.40	8.25	-51.86	-13.00	-38.86	H (Noise Floor)
5.168	43.00	-65.00	2.28	10.60	8.45	-58.83	-13.00	-45.83	H (Noise Floor)
6.592	44.00	-61.00	2.42	10.30	8.15	-55.27	-13.00	-42.27	H (Noise Floor)
7.416	45.00	-59.00	2.56	10.50	8.35	-53.21	-13.00	-40.21	H (Noise Floor)
Mid Channel									
1.673	47.00	-59.00	1.11	8.20	6.05	-54.06	-13.00	-41.06	V
2.591	44.00	-79.00	1.33	9.00	6.85	-73.48	-13.00	-60.48	V (Noise Floor)
3.346	44.00	-71.00	1.56	8.90	6.75	-65.81	-13.00	-52.81	V (Noise Floor)
1.673	46.00	-55.00	1.11	8.20	6.05	-50.06	-13.00	-37.06	H
2.591	44.00	-73.00	1.33	9.00	6.85	-67.48	-13.00	-54.48	H (Noise Floor)
3.346	45.00	-71.00	1.56	8.90	6.75	-65.81	-13.00	-52.81	H (Noise Floor)
High Channel									
1.698	46.00	-58.00	1.11	8.20	6.05	-53.06	-13.00	-40.06	V
2.547	43.00	-73.00	1.34	9.00	6.85	-67.49	-13.00	-54.49	V (Noise Floor)
3.396	43.00	-71.50	1.57	8.90	6.75	-66.32	-13.00	-53.32	V (Noise Floor)
1.698	64.50	-54.10	1.11	8.20	6.05	-49.16	-13.00	-36.16	H
2.547	43.00	-73.30	1.34	9.00	6.85	-67.79	-13.00	-54.79	H (Noise Floor)
3.396	43.00	-71.20	1.57	8.90	6.75	-66.02	-13.00	-53.02	H (Noise Floor)
Note: Completed scan from 30MHz to 10 GHz.									
EPR = SG reading - CL + Gain (dBd)									
Gain (dBd) = Gain (dBi) - 2.15									
Margin = EPR - Limit									
SA: Spectrum Analyzer, HP 8593EM, S/N: 3710A00205					CL: cable loss (5ft), FLEXCO				
SG: Signal Generator, HP 83732B, S/N: US34490599					Pre-Amp: Miteq NSP2600 -44, S/N: 646456				
TX Antenna: Dipole, Compliance Design, Roberts, S/N: 11					Bicon, Eston 94455-1, S/N: 1214				
Horn, EMCO 3115, S/N: 6717					LP, EMCO 3146, S/N: 3163				
					Horn, EMCO 3115, S/N: 6739				

12/6/02 **FCC Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Vien Tran
Project #: 02U1586-1
Company: LGC Wireless Inc
EUT Descrip.: 800MHz CELL (TDMA Output Power = 24dBm)
EUT M/N: InterReach Umision Accel
Test Target: FCC 22
Mode Oper: Downlink Low / Mid / High

Frequency (GHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
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Lo Channel:

0.118	77.50	-46.80	0.30	0.00	0.00	-47.10	-13.00	-34.10	V
1.738	45.80	-58.20	1.08	8.10	5.95	-53.33	-13.00	-40.33	V
2.607	44.00	-73.30	1.31	9.00	6.85	-67.76	-13.00	-54.76	V (Noise Floor)
3.476	43.50	-71.00	1.52	8.90	6.75	-65.77	-13.00	-52.77	V (Noise Floor)
4.345	46.00	-69.00	1.76	9.50	7.35	-63.41	-13.00	-50.41	V (Noise Floor)
5.214	44.00	-69.00	1.98	9.90	7.75	-63.23	-13.00	-50.23	V (Noise Floor)
6.083	46.00	-69.60	2.19	10.40	8.25	-63.54	-13.00	-50.54	V (Noise Floor)
6.952	45.00	-65.30	2.34	10.60	8.45	-59.19	-13.00	-46.19	V (Noise Floor)
7.821	45.00	-60.50	2.49	10.30	8.15	-54.84	-13.00	-41.84	V (Noise Floor)
8.690	45.00	-58.20	2.64	10.50	8.35	-52.49	-13.00	-39.49	V (Noise Floor)
0.118	82.50	-47.50	0.30	0.00	0.00	-47.80	-13.00	-34.80	H
1.738	45.00	-58.00	1.10	8.10	5.95	-53.15	-13.00	-40.15	H
2.607	44.00	-73.20	1.31	9.00	6.85	-67.66	-13.00	-54.66	H (Noise Floor)
3.476	43.00	-71.20	1.52	8.90	6.75	-65.97	-13.00	-52.97	H (Noise Floor)
4.345	43.00	-69.10	1.76	9.50	7.35	-63.51	-13.00	-50.51	H (Noise Floor)
5.214	43.00	-69.00	1.98	9.90	7.75	-63.23	-13.00	-50.23	H (Noise Floor)
6.083	43.00	-58.00	2.19	10.40	8.25	-51.94	-13.00	-38.94	H (Noise Floor)
6.952	45.00	-63.50	2.34	10.60	8.45	-57.39	-13.00	-44.39	H (Noise Floor)
7.821	45.00	-60.50	2.49	10.30	8.15	-54.84	-13.00	-41.84	H (Noise Floor)
8.690	46.00	-58.00	2.64	10.50	8.35	-52.29	-13.00	-39.29	H (Noise Floor)

Mid Channel

0.118	76.60	-47.50	0.30	0.00	0.00	-47.80	-13.00	-34.80	V
1.763	46.00	-58.80	1.10	8.20	6.05	-53.85	-13.00	-40.85	V
2.645	44.00	-71.30	1.32	9.00	6.85	-65.77	-13.00	-52.77	V (Noise Floor)
3.562	43.00	-69.00	1.53	8.90	6.75	-63.78	-13.00	-50.78	V (Noise Floor)
0.118	80.20	-49.50	0.30	0.00	0.00	-49.80	-13.00	-36.80	H
1.763	45.00	-60.00	1.10	8.20	6.05	-55.05	-13.00	-42.05	H
2.645	46.00	-73.50	1.32	9.00	6.85	-67.97	-13.00	-54.97	H (Noise Floor)
3.562	43.00	-71.00	1.53	8.90	6.75	-65.78	-13.00	-52.78	H (Noise Floor)

High Channel

0.118	76.30	-48.50	0.30	0.00	0.00	-48.80	-13.00	-35.80	V
1.738	46.00	-60.00	1.10	8.20	6.05	-55.05	-13.00	-42.05	V
2.607	44.10	-72.50	1.32	9.00	6.85	-66.97	-13.00	-53.97	V (Noise Floor)
3.476	45.00	-69.00	1.54	8.90	6.75	-63.79	-13.00	-50.79	V (Noise Floor)
0.118	79.30	-49.50	0.30	0.00	0.00	-49.80	-13.00	-36.80	H
1.738	46.00	-60.00	1.10	8.20	6.05	-55.05	-13.00	-42.05	H
2.607	44.10	-72.50	1.32	9.00	6.85	-66.97	-13.00	-53.97	H (Noise Floor)
3.476	45.00	-69.00	1.54	8.90	6.75	-63.79	-13.00	-50.79	H (Noise Floor)

Note: Completed scan from 30MHz to 10 GHz.

EPR = SG reading - CL + Gain (dBd)

Gain (dBd) = Gain (dBi) - 2.15

Margin = EPR - Limit

SA: Spectrum Analyzer, HP 8593EM, S/N: 3710A00205 **CL:** cable loss (5ft), FLEXCO
SG: Signal Generator, HP 83732B, S/N: US34490599 **Pre-Amp:** Miteq NSP2600 -44, S/N: 646456
TX Antenna: Dipole, Compliance Design, Roberts, S/N: 116RX Antenna: Bicon, Eston 94455-1, S/N: 1214
Horn, EMCO 3115, S/N: 6717 LP, EMCO 3146, S/N: 3163
Horn, EMCO 3115, S/N: 6739

FCC Measurement									
Compliance Certification Services, Morgan Hill Open Field Site									
Test Engr:	Vien Tran								
Project #:	02U1586-1								
Company:	LGC Wireless Inc								
EUT Descrip.:	800MHz CELL (TDMA)								
EUT M/N:	InterReach Unison Accel								
Test Target:	FCC 22								
Mode Oper:	Uplink, Low / Mid / High								
Frequency	SA reading	SG reading	CL	Gain	Gain	ERP	Limit	Margin	Notes
(GHz)	(dBuV)	(dBm)	(dB)	(dBi)	(dBd)	(dBm)	(dBm)	(dB)	
Fundamental Low, Mid, & High Channels (RBW=VBW=1MHz):									
0.824	59.60	-11.30	0.50	0.00	0.00	-11.80			V
0.824	53.30	-18.70	0.50	0.00	0.00	-19.20			H
0.837	61.30	-10.20	0.50	0.00	0.00	-10.70			V
0.837	55.60	-18.30	0.50	0.00	0.00	-18.80			H
0.849	62.30	-11.50	0.50	0.00	0.00	-12.00			V
0.849	54.70	-18.10	0.50	0.00	0.00	-18.60			H
Lo Channel:									
1.648	48.00	-58.00	1.04	8.10	5.95	-53.09	-13.00	-40.09	V
2.472	45.00	-73.00	1.28	9.00	6.85	-67.43	-13.00	-54.43	V (Noise Floor)
3.476	43.00	-71.00	1.47	8.90	6.75	-65.72	-13.00	-52.72	V (Noise Floor)
3.296	43.00	-69.00	1.71	9.50	7.35	-63.36	-13.00	-50.36	V (Noise Floor)
4.120	43.00	-69.00	1.91	9.90	7.75	-63.16	-13.00	-50.16	V (Noise Floor)
4.944	43.00	-68.00	2.11	10.40	8.25	-61.86	-13.00	-48.86	V (Noise Floor)
5.168	43.00	-65.00	2.28	10.60	8.45	-58.83	-13.00	-45.83	V (Noise Floor)
6.592	44.50	-61.00	2.42	10.30	8.15	-55.27	-13.00	-42.27	V (Noise Floor)
7.416	45.00	-61.00	2.56	10.50	8.35	-55.21	-13.00	-42.21	V (Noise Floor)
1.648	46.00	-58.00	1.04	8.10	5.95	-53.09	-13.00	-40.09	H
2.472	43.00	-75.00	1.28	9.00	6.85	-69.43	-13.00	-56.43	H (Noise Floor)
3.476	43.00	-71.00	1.47	8.90	6.75	-65.72	-13.00	-52.72	H (Noise Floor)
3.296	43.00	-69.00	1.71	9.50	7.35	-63.36	-13.00	-50.36	H (Noise Floor)
4.120	43.00	-58.00	1.91	9.90	7.75	-52.16	-13.00	-39.16	H (Noise Floor)
4.944	43.00	-58.00	2.11	10.40	8.25	-51.86	-13.00	-38.86	H (Noise Floor)
5.168	43.00	-65.00	2.28	10.60	8.45	-58.83	-13.00	-45.83	H (Noise Floor)
6.592	44.00	-61.00	2.42	10.30	8.15	-55.27	-13.00	-42.27	H (Noise Floor)
7.416	45.00	-59.00	2.56	10.50	8.35	-53.21	-13.00	-40.21	H (Noise Floor)
Mid Channel:									
1.673	47.00	-59.00	1.11	8.20	6.05	-54.06	-13.00	-41.06	V
2.591	44.00	-79.00	1.33	9.00	6.85	-73.48	-13.00	-60.48	V (Noise Floor)
3.346	44.00	-71.00	1.56	8.90	6.75	-65.81	-13.00	-52.81	V (Noise Floor)
1.673	46.00	-55.00	1.11	8.20	6.05	-50.06	-13.00	-37.06	H
2.591	44.00	-73.00	1.33	9.00	6.85	-67.48	-13.00	-54.48	H (Noise Floor)
3.346	45.00	-71.00	1.56	8.90	6.75	-65.81	-13.00	-52.81	H (Noise Floor)
High Channel:									
1.698	46.00	-58.00	1.11	8.20	6.05	-53.06	-13.00	-40.06	V
2.547	43.00	-73.00	1.34	9.00	6.85	-67.49	-13.00	-54.49	V (Noise Floor)
3.396	43.00	-71.50	1.57	8.90	6.75	-66.32	-13.00	-53.32	V (Noise Floor)
1.698	64.50	-54.10	1.11	8.20	6.05	-49.16	-13.00	-36.16	H
2.547	43.00	-73.30	1.34	9.00	6.85	-67.79	-13.00	-54.79	H (Noise Floor)
3.396	43.00	-71.20	1.57	8.90	6.75	-66.02	-13.00	-53.02	H (Noise Floor)
Note: Completed scan from 30MHz to 10 GHz.									
EPR = SG reading - CL + Gain (dBd)									
Gain (dBd) = Gain (dBi) - 2.15									
Margin = EPR - Limit									
SA: Spectrum Analyzer, HP 8593EM, S/N: 3710A00205 CL: cable loss (5ft), FLEXCO									
SG: Signal Generator, HP 83732B, S/N: US34490599 Pre-Amp: Miteq NSP2600-44, S/N: 646456									
TX Antenna: Dipole, Compliance Design, Roberts, S/N: 11 RX Antenna: Bicon, Eston 94455-1, S/N: 1214									
Horn, EMCO 3115, S/N: 6717 LP, EMCO 3146, S/N: 3163									
Horn, EMCO 3115, S/N: 6739									

8.6. MEASUREMENT RESULT PLOTS

RESULT

The following table indicates the plot number associated with the Low, Mid, High Power Outputs, Input Bandwidth, Output Bandwidth, Block Edges, Out-of-Band and Intermodulation. All measurements are in peak detector mode.

800 MHz CELL (AMPS) DLINK BASE CHANNEL (869 – 894 MHz)		
Plot #	Description	Frequency Range (MHz)
1	Low Channel Output Power	869.1
2	Mid Channel Output Power	881.5
3	High Channel Output Power	893.9
4	Low Channel Input Bandwidth	869.1
5	Mid Channel Input Bandwidth	881.5
6	High Channel Input Bandwidth	893.9
7	Low Channel Output Bandwidth	869.1
8	Mid Channel Output Bandwidth	881.5
9	High Channel Output Bandwidth	893.9
10	Low Channel, Bottom Band Edge	823.4
11	Low Channel, Out-Of-Band #1	15 to 1000
12	Low Channel, Out-Of-Band #2	1000 to 2500
13	Low Channel, Out-Of-Band #3	25000 to 10000
14	Mid Channel, Out-Of-Band #1	15 to 1000
15	Mid Channel, Out-Of-Band #2	1000 to 2500
16	Mid Channel, Out-Of-Band #3	25000 to 10000
17	High channel, Upper Band Edge	864.34
18	High Channel, Out-Of-Band #1	15 to 1000
19	High Channel, Out-Of-Band #1	1000 to 2500
20	High Channel, Out-Of-Band #1	25000 to 10000

800 MHz CELL (AMPS) DLINK INTER-MODULATION BASE CHANNEL (869 – 894 MHz)		
Plot #	Description	Frequency Range (MHz)
21	Inter-modulation, Zoom-In	Zoom - In
22	Inter-modulation, Zoom-Out	Zoom - Out
23	Inter-modulation, Out-Of-Band #1	15 to 1000
24	Inter-modulation, Out-Of-Band #2	1000 to 2500
25	Inter-modulation, Out-Of-Band #3	25000 to 10000

**800 MHz CELL (AMPS) UPLINK BASE CHANNEL
(824 – 849 MHz)**

Plot #	Description	Frequency Range (MHz)
1	Low Channel Output Power	824.1
2	Mid Channel Output Power	836.5
3	High Channel Output Power	848.9
4	Low Channel Input Bandwidth	824.1
5	Mid Channel Input Bandwidth	836.5
6	High Channel Input Bandwidth	848.9
7	Low Channel Output Bandwidth	824.1
8	Mid Channel Output Bandwidth	836.5
9	High Channel Output Bandwidth	848.9
10	Low Channel, Bottom Band Edge	816.18
11	Low Channel, Out-Of-Band #1	15 to 1000
12	Low Channel, Out-Of-Band #2	1000 to 2500
13	Low Channel, Out-Of-Band #3	2500 to 10000
14	Mid Channel, Out-Of-Band #1	15 to 1000
15	Mid Channel, Out-Of-Band #2	1000 to 2500
16	Mid Channel, Out-Of-Band #3	2500 to 10000
17	High channel, Upper Band Edge	890.8
18	High Channel, Out-Of-Band #1	15 to 1000
19	High Channel, Out-Of-Band #1	1000 to 2500
20	High Channel, Out-Of-Band #1	2500 to 10000

**800 MHz CELL (AMPS) UPLINK INTER-MODULATION
BASE CHANNEL (824 – 849 MHz)**

Plot #	Description	Frequency Range (MHz)
21	Inter-modulation, Zoom-In	Zoom – In
22	Inter-modulation, Zoom-Out	Zoom - Out
23	Inter-modulation, Out-Of-Band #1	15 to 1000
24	Inter-modulation, Out-Of-Band #2	1000 to 2500
25	Inter-modulation, Out-Of-Band #3	2500 to 10000

**800 MHz CELL (CDMA) DOWLINK BASE CHANNEL
(869 – 894 MHz)**

Plot #	Description	Frequency Range (MHz)
1	Low Channel Output Power	870.5
2	Mid Channel Output Power	881.5
3	High Channel Output Power	892.5
4	Low Channel Input Bandwidth	870.5
5	Mid Channel Input Bandwidth	881.5
6	High Channel Input Bandwidth	892.5
7	Low Channel Output Bandwidth	870.5
8	Mid Channel Output Bandwidth	881.5
9	High Channel Output Bandwidth	892.5
10	Low Channel, Bottom Band Edge	862.28
11	Low Channel, Out-Of-Band #1	15 to 1000
12	Low Channel, Out-Of-Band #2	1000 to 2500
13	Low Channel, Out-Of-Band #3	2500 to 10000
14	Mid Channel, Out-Of-Band #1	15 to 1000
15	Mid Channel, Out-Of-Band #2	1000 to 2500
16	Mid Channel, Out-Of-Band #3	2500 to 10000
17	High channel, Upper Band Edge	900.78
18	High Channel, Out-Of-Band #1	15 to 1000
19	High Channel, Out-Of-Band #1	1000 to 2500
20	High Channel, Out-Of-Band #1	2500 to 10000

**800 MHz CELL (CDMA) DOWLINK INTER-MODULATION
BASE CHANNEL (869 – 894 MHz)**

Plot #	Description	Frequency Range (MHz)
21	Inter-modulation, Zoom-In	Zoom - In
22	Inter-modulation, Zoom-Out	Zoom - Out
23	Inter-modulation, Out-Of-Band #1	15 to 1000
24	Inter-modulation, Out-Of-Band #2	1000 to 2500
25	Inter-modulation, Out-Of-Band #3	2500 to 10000

**800 MHz CELL (CDMA) UPLINK BASE CHANNEL
(824 – 849 MHz)**

Plot #	Description	Frequency Range (MHz)
1	Low Channel Output Power	825.5
2	Mid Channel Output Power	836.5
3	High Channel Output Power	847.5
4	Low Channel Input Bandwidth	825.5
5	Mid Channel Input Bandwidth	836.5
6	High Channel Input Bandwidth	847.5
7	Low Channel Output Bandwidth	825.5
8	Mid Channel Output Bandwidth	836.5
9	High Channel Output Bandwidth	847.5
10	Low Channel, Bottom Band Edge	804.5
11	Low Channel, Out-Of-Band #1	15 to 1000
12	Low Channel, Out-Of-Band #2	1000 to 2500
13	Low Channel, Out-Of-Band #3	2500 to 10000
14	Mid Channel, Out-Of-Band #1	15 to 1000
15	Mid Channel, Out-Of-Band #2	1000 to 2500
16	Mid Channel, Out-Of-Band #3	2500 to 10000
17	High channel, Upper Band Edge	868.32
18	High Channel, Out-Of-Band #1	15 to 1000
19	High Channel, Out-Of-Band #2	1000 to 2500
20	High Channel, Out-Of-Band #3	2500 to 10000

**800 MHz CELL (CDMA) UPLINK INTER-MODULATION
BASE CHANNEL (824 – 849 MHz)**

Plot #	Description	Frequency Range (MHz)
21	Inter-modulation, Zoom-In	Zoom - In
22	Inter-modulation, Zoom-Out	Zoom -Out
23	Inter-modulation, Out-Of-Band #1	15 to 1000
24	Inter-modulation, Out-Of-Band #2	1000 to 2500
25	Inter-modulation, Out-Of-Band #3	2500 to 10000

**800 MHz CELL (TDMA) DLINK BASE CHANNEL
(869 – 894 MHz)**

Plot #	Description	Frequency Range (MHz)
1	Low Channel Output Power	869.1
2	Mid Channel Output Power	881.5
3	High Channel Output Power	893.9
4	Low Channel Input Bandwidth	869.1
5	Mid Channel Input Bandwidth	881.5
6	High Channel Input Bandwidth	893.9
7	Low Channel Output Bandwidth	869.1
8	Mid Channel Output Bandwidth	881.5
9	High Channel Output Bandwidth	893.9
10	Low Channel, Bottom Band Edge	861
11	Low Channel, Out-Of-Band #1	15 to 1000
12	Low Channel, Out-Of-Band #2	1000 to 2500
13	Low Channel, Out-Of-Band #3	2500 to 10000
14	Mid Channel, Out-Of-Band #1	15 to 1000
15	Mid Channel, Out-Of-Band #2	1000 to 2500
16	Mid Channel, Out-Of-Band #3	2500 to 10000
17	High channel, Upper Band Edge	902.42
18	High Channel, Out-Of-Band #1	15 to 1000
19	High Channel, Out-Of-Band #1	1000 to 2500
20	High Channel, Out-Of-Band #1	2500 to 10000

**800 MHz CELL (TDMA) DLINK INTER-MODULATION
BASE CHANNEL (869 – 894 MHz)**

Plot #	Description	Frequency Range (MHz)
21	Inter-modulation, Zoom-In	Zoom – In
22	Inter-modulation, Zoom-Out	Zoom - Out
23	Inter-modulation, Out-Of-Band #1	15 to 1000
24	Inter-modulation, Out-Of-Band #2	1000 to 2500
25	Inter-modulation, Out-Of-Band #3	2500 to 10000

**800 MHz CELL (TDMA) UPLINK BASE CHANNEL
(824 – 849 MHz)**

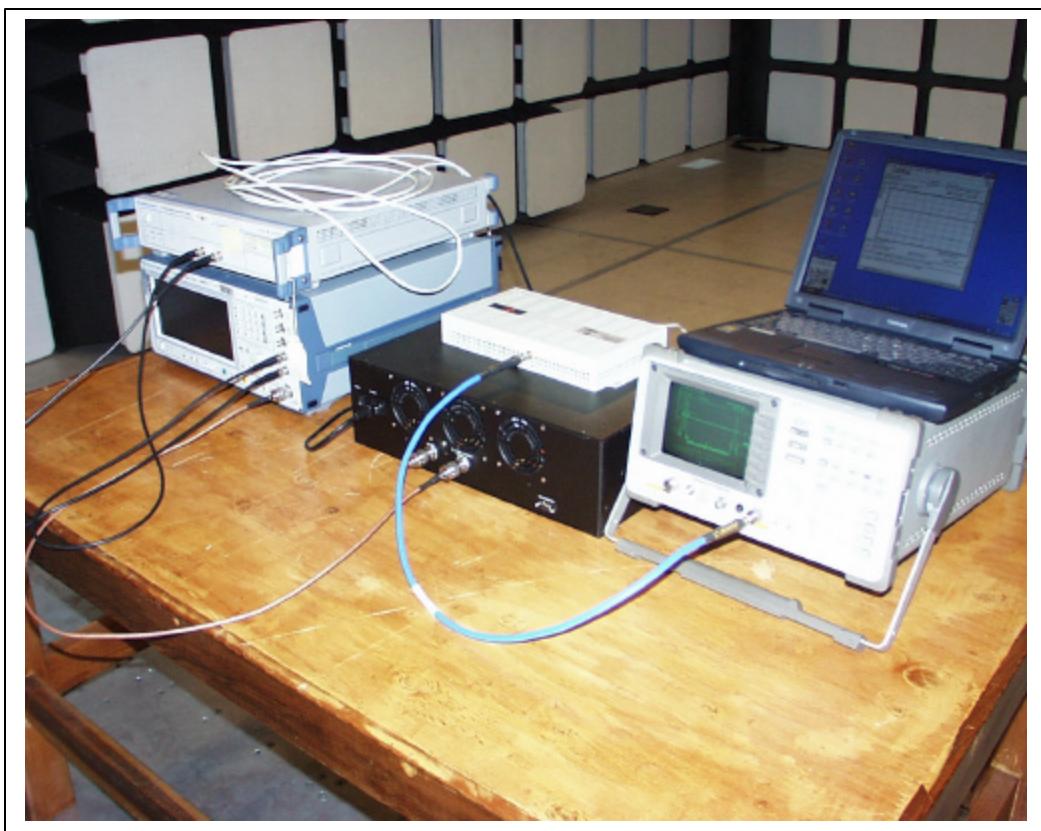
Plot #	Description	Frequency Range (MHz)
1	Low Channel Output Power	824.1
2	Mid Channel Output Power	836.5
3	High Channel Output Power	848.9
4	Low Channel Input Bandwidth	824.1
5	Mid Channel Input Bandwidth	836.5
6	High Channel Input Bandwidth	848.9
7	Low Channel Output Bandwidth	824.1
8	Mid Channel Output Bandwidth	836.5
9	High Channel Output Bandwidth	848.9
10	Low Channel, Bottom Band Edge	816.3
11	Low Channel, Out-Of-Band #1	15 to 1000
12	Low Channel, Out-Of-Band #2	1000 to 2500
13	Low Channel, Out-Of-Band #3	2500 to 1000
14	Mid Channel, Out-Of-Band #1	15 to 1000
15	Mid Channel, Out-Of-Band #2	1000 to 2500
16	Mid Channel, Out-Of-Band #3	2500 to 1000
17	High channel, Upper Band Edge	856.94
18	High Channel, Out-Of-Band #1	15 to 1000
19	High Channel, Out-Of-Band #2	1000 to 2500
20	High Channel, Out-Of-Band #3	2500 to 1000

**800 MHz CELL (TDMA) UPLINK INTER-MODULATION
BASE CHANNEL (824 – 849 MHz)**

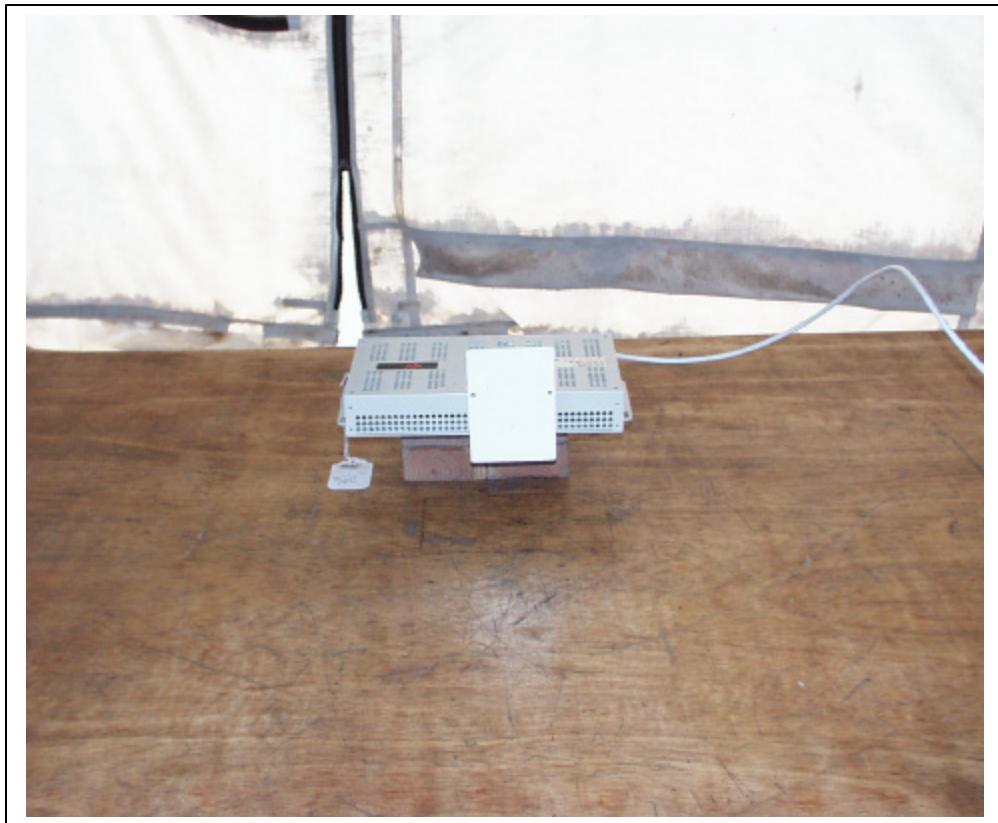
Plot #	Description	Frequency Range (MHz)
21	Inter-modulation, Zoom-In	Zoom – In
22	Inter-modulation, Zoom-Out	Zoom -Out
23	Inter-modulation, Out-Of-Band #1	15 to 1000
24	Inter-modulation, Out-Of-Band #2	1000 to 2500
25	Inter-modulation, Out-Of-Band #3	2500 to 1000

9. ATTACHMENT

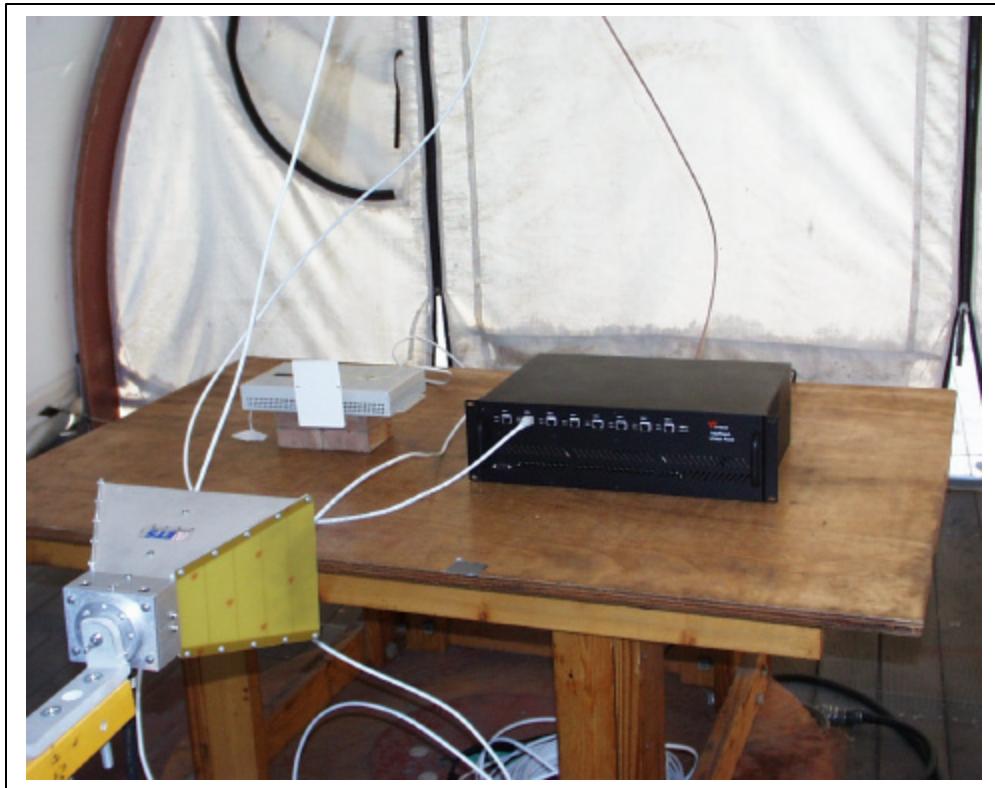
9.1. EUT SETUP PHOTOS



CONDUCTED MEASUREMENT



FUNDAMENTAL MEASUREMENT



HARMONIC & SPURIOUS MEASUREMENT



SUBSTITUTION MEASUREMENTS

END OF REPORT

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