

TEST RESULT SUMMARY

Industry Canada RSS-131 Issue 2 July 2003

MANUFACTURER ADC Inc.

NAME OF EQUIPMENT Digivance Long Range Coverage Solution 800 MHz System (A and B Band)

MODEL NUMBER **DGVL-112XXSYS**
DGVL-122XXSYS

MANUFACTURER'S ADDRESS P.O. Box 1101
Minneapolis, MN 55440-1101

TEST REPORT NUMBER WC505744.1

TEST DATES 30 September 2005 (ADC)
7 November 2005 (TÜV)

According to testing performed at TÜV America Inc, the above-mentioned unit is in compliance with the electromagnetic compatibility (EMC) portions of the requirements defined in IC RSS-131 Issue 2.

It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics. Any modifications necessary for compliance made during testing on the above mentioned date(s) must be implemented in all production units for compliance to be maintained.

TÜV America Inc, as an independent testing laboratory, declares that the equipment tested as specified above conforms to the EMC requirements of IC RSS-131 Issue 2 "Zone Enhancers for the Land Mobile Service" Section 4 "Measurement Methods".

Date: 06 February 2006

Tested By

Technical Writer



Joe Sausen, Michael Schultz



Greg Jakubowski

Not Transferable

EMC Emission - TEST REPORT

Test Report File No. : **WC505744.1** Date of issue: 06 February 2006

Model Nos. : **DGVL-112XXSYS**
DGVL-122XXSYS

Product Name : Digivance Long Range Coverage Solution 800 MHz System (A and B Band)

Product Type : Transports RF between a remote antenna and a customer provided base station

Applicant : ADC Inc.

Manufacturer : ADC Inc.

License Holder : ADC Inc.

Address : P.O. Box 1101
: Minneapolis, MN 55440-1101

Test Result : ☒ **Positive** ☐ **Negative**

Test Project Number Reference(s) : **WC505744.1**

Total pages including Appendices : **56**

TÜV America Inc reports apply only to the specific samples tested under stated test conditions. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. TÜV America Inc shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV America Inc issued reports.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval. This report shall not be used by the client to claim product endorsement by NVLAP, NIST, or any agency of the US government.

TÜV America Inc and its professional staff hold government and professional organization certifications and are members of AAMI, ACIL, AEA, ANSI, IEEE, NVLAP, and VCCI

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Sign Explanations:

- ☐ - not applicable
- ☒ - applicable

EMISSIONS TEST REGULATIONS :

The emissions tests were performed according to following regulations:

- | | | |
|--|---|------------------------------------|
| ☐ - EN 50081-1 / 1991 | ☐ - Group 1 | ☐ - Group 2 |
| ☐ - EN 55011 / 1991 | ☐ - Class A | ☐ - Class B |
| ☐ - EN 55013 / 1990 | ☐ - Household appliances and similar | |
| ☐ - EN 55014 / 1987 | ☐ - Portable tools | |
| | ☐ - Semiconductor devices | |
| ☐ - EN 55014 / A2:1990 | ☐ - Household appliances and similar | |
| ☐ - EN 55014 / 1993 | ☐ - Portable tools | |
| | ☐ - Semiconductor devices | |
| ☐ - EN 55015 / 1987 | ☐ - Class A | ☐ - Class B |
| ☐ - EN 55015 / A1:1990 | ☐ - Class A | ☐ - Class B |
| ☐ - EN 55015 / 1993 | | |
| ☐ - EN 55022 / 1987 | | |
| ☐ - EN 55022 / 1991 | | |
| ☐ - BS | ☐ - Class A | ☐ - Class B |
| ☐ - VCCI | ☐ - Class A | ☐ - Class B |
| ☐ - FCC Part 15 Subpart B | ☐ - Class A | ☐ - Class B |
| ☐ - FCC Part 15 Subpart C | | |
| ☐ - FCC Part 22 | | |
| ☐ - CISPR 11 (1990) | ☐ - Group 1 | ☐ - Group 2 |
| | ☐ - Class A | ☐ - Class B |
| ☐ - CISPR 22 (1993) | ☐ - Class A | ☐ - Class B |
| ☒ - IC RSS-131 Issue 2 | | |

4.2 Passband Gain and Bandwidth

Test summary

The requirements are: ■ - MET □ - NOT MET

A plot of the 20 dB bandwidth was taken at the points where the gain had fallen by 20 dB. A measurement was taken to show the gain versus frequency response of the system, from the midband frequency f_0 of the passband up to at least $f_0 \pm 250\%$ the measured 20 dB bandwidth.

Test location

- - Wild River Lab Large Test Site (Open Area Test Site)
- - Wild River Lab Small Test Site (Open Area Test Site)
- - ADC facility

Test equipment (ADC)

Model Number	Manufacturer	Description	ADC Serial Number	Cal Due
E4436B	Agilent	Signal Generator	963739	10-16-06
EPM-441A	HP	Power Meter	MC27670	9-28-06
49-30-33	Aeroflex	Attenuator	n/a	CNR
HP8563E	HP	Spectrum Analyzer	MC27690	6-22-06

Equipment with a Calibration Not Required (CNR) listing is verified and compensated for with NIST traceable calibrated equipment.

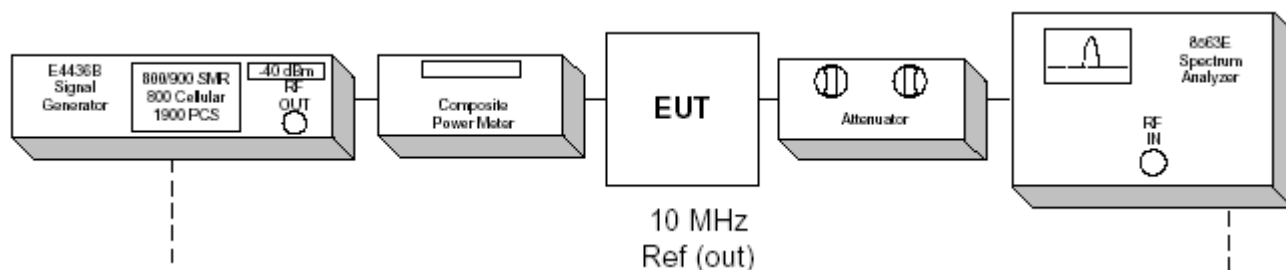
6.1 Test limit

Passband gain shall not exceed the nominal gain by more than 1.0 dB. The 20 dB bandwidth shall not exceed the nominal bandwidth that is stated by the manufacturer. Outside of the 20 dB bandwidth, the gain shall not exceed the gain at the 20 dB point.

Test Data

See page 15-16.

Test Set-up



4.3.1 Mean Output Power - Multi-channel Enhancer

Test summary

The requirements are: ■ - MET □ - NOT MET

$P_{\text{mean}} = +45.17 \text{ dBm}$ or 32.89 Watts

Test location

- - Wild River Lab Large Test Site (Open Area Test Site)
- - Wild River Lab Small Test Site (Open Area Test Site)
- - ADC facility

Test equipment (ADC)

Model Number	Manufacturer	Description	ADC Serial Number	Cal Due
E4436B	Agilent	Signal Generator	963739	10-16-06
EPM-441A	HP	Power Meter	MC27670	9-28-06
49-30-33	Aeroflex	Attenuator	n/a	CNR
HP8563E	HP	Spectrum Analyzer	MC27690	6-22-06

Equipment with a Calibration Not Required (CNR) listing is verified and compensated for with NIST traceable calibrated equipment.

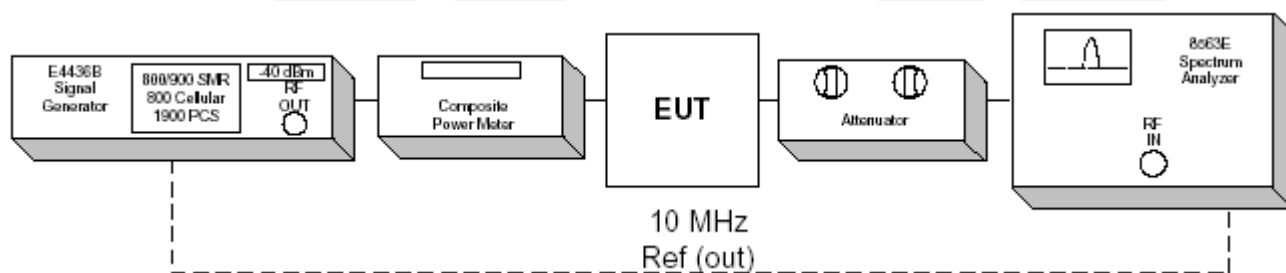
6.2 Test limit

The manufacturer's output power rating P_{rated} MUST NOT be greater than P_{mean} for all types of enhancers.

Test data

See pages 17-19.

Test Set-up



4.4.1 Spurious Emission - Multi-channel Enhancer

Test summary

The requirements are: ■ - MET □ - NOT MET

Enhancer is < 500 watts. Raised the input level to the DUT until the greater level of the intermodulation products at the enhancer output terminals, Po3 or Po4, equaled -43 dBW. The spurious emissions of the equipment under test were measured using the two-tone method, with the two tones Po1 and Po2 set to the required levels. Using a spectrum analyzer with a resolution bandwidth set at 100 kHz, a search for spurious emissions from 30 MHz to 10 times the highest RF passband frequency was conducted. The search omitted the band that contains the test tones and intermodulation products. The highest spurious emission was -22 dBm at 7.092 GHz.

Test location

- - Wild River Lab Large Test Site (Open Area Test Site)
- - Wild River Lab Small Test Site (Open Area Test Site)
- - ADC facility

Test equipment (ADC)

Model Number	Manufacturer	Description	ADC Serial Number	Cal Due
E4436B	Agilent	Signal Generator	963739	10-16-06
EPM-441A	HP	Power Meter	MC27670	9-28-06
49-30-33	Aeroflex	Attenuator	n/a	CNR
HP8563E	HP	Spectrum Analyzer	MC27690	6-22-06

Equipment with a Calibration Not Required (CNR) listing is verified and compensated for with NIST traceable calibrated equipment.

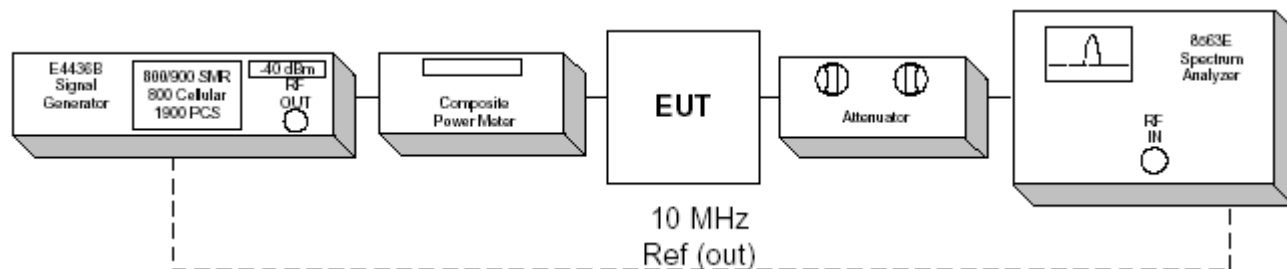
Test limit

-13 dBm

Test data

See pages 20-21.

Test Set-up



4.5 Frequency Stability of Band Translators

Test summary

The requirements are: ■ - MET □ - NOT MET

Frequency drift is < 1.5 parts per million (0.00015%) when monitored over extreme temperature and input voltage conditions.

Test location

- - Wild River Lab Large Test Site (Open Area Test Site)
- - Wild River Lab Small Test Site (Open Area Test Site)
- - ADC facility

Test equipment (ADC)

Model Number	Manufacturer	Description	ADC Serial Number	Cal Due
E4436B	Agilent	Signal Generator	963739	10-16-06
1520CT	Staco	Variable Auto Transformer	MC/44655	CNR
26III	Fluke	Multimeter	MC22687	4-27-06
Thermotron	Thermotron	Temperature Chamber	MC18966	3-1-06
5347A	HP	Freq. Counter	MC27569	7-21-06

Equipment with a Calibration Not Required (CNR) listing is verified and compensated for with NIST traceable calibrated equipment.

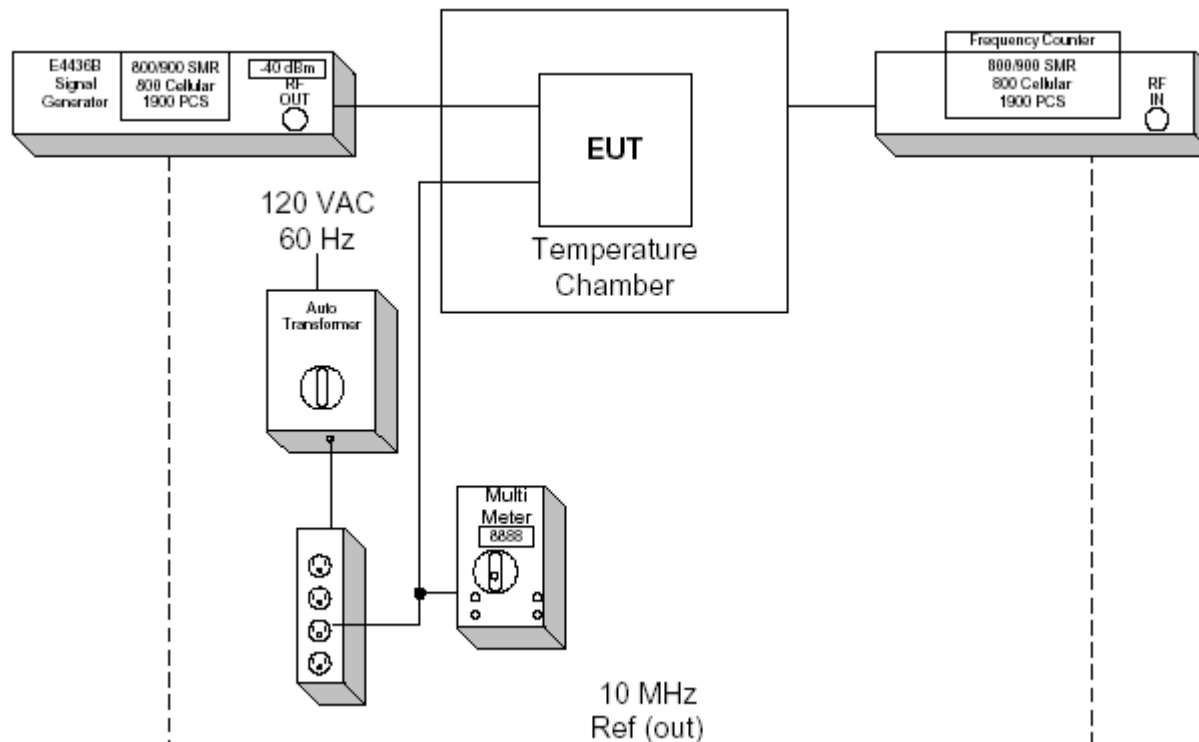
6.5 Test limit

±1.5 ppm

Test data

See pages 22-23.

Test Set-up



Spurious Case Radiation Test

A radiated emission scan was also made with the EUT's antenna replaced with a termination to demonstrate case radiation compliance to the -13 dBm requirement at the 3 carrier frequencies. Radiated emissions from the EUT are measured in the frequency range of 30 to 9000 MHz using a spectrum analyzer and appropriate broadband linearly polarized antennas. Measurements between 30 MHz and 1000 MHz are made with 120 kHz/6 dB bandwidth and quasi-peak detection and measurements above 1000 MHz are made with a 1 MHz/6 dB bandwidth and peak detection. Table top equipment is placed on a 1.0 X 1.5 meter non-conducting table 80 centimeters above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. Interface cables that are closer than 40 centimeters to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimeters from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna is positioned 10 meters horizontally from the EUT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarizations and the EUT are rotated 360 degrees. The field strength levels were measured per ANSI C63.4. The EUT is then replaced with a tuned dipole antenna (below 1 GHz) or horn antenna (above 1 GHz). The substitute antenna was placed in the same polarization as the test antenna. A signal generator was used to generate a signal level that matched the highest level measured from the EUT. The signal generator level minus the cable loss from the signal generator to the substitute antenna plus the substitute antenna gain equals the spurious power level.

Run 1

Frequency MHz	dBuV/m(from EUT)	Substitution power level - dBm
425.97	78.9	-20.0

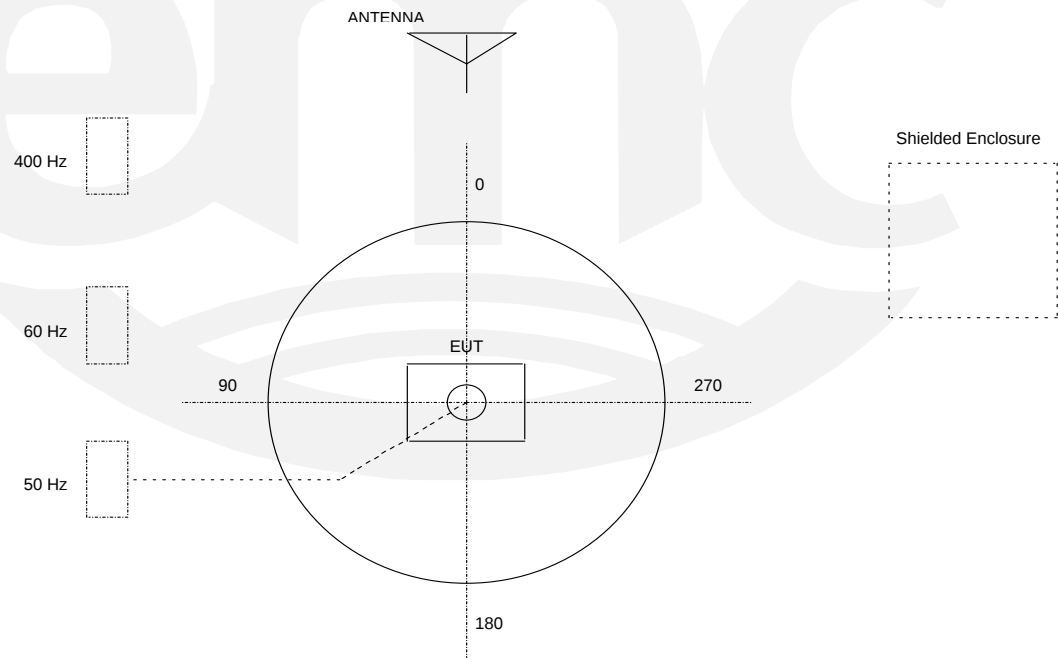
Case Radiation data is on pages 24-56.

TEST SETUP FOR EMISSIONS TESTING

WILD RIVER LAB Large Test Site

Notes:

1. Items shown in dotted lines are located on the floor below the test area. It is 5 meters vertically from the ground floor to the test area.
2. 50 Hz, 60 Hz, and 400 Hz are power panels for alternating current.
3. The antenna may be positioned horizontally 3, 10 or 30 meters from the center of the turntable.
4. The circle is a 6.7 meters diameter turntable.
5. A ground plane is in the plane of this sheet.
6. The test sample is shown in the azimuthal position representing zero degrees.



Test setup photo, radiated emissions



Test setup photo, radiated emissions



Test Operation Mode:

The device under test was operated under the following conditions during emissions testing:

- ☐ - Standby
- ☐ - Test program (H - Pattern)
- ☐ - Test program (color bar)
- ☐ - Test program (customer specific)
- ☐ - Practice operation
- ☒ - Max composite in and out



DEVIATIONS FROM STANDARD:

None.

GENERAL REMARKS:

Modifications required to pass:

- ☒ None
- ☐ As indicated on the data sheet(s)

Test Specification Deviations: Additions to or Exclusions from:

- ☒ None
- ☐ As indicated in the Test Plan

SUMMARY:

The requirements according to the technical regulations are

- ☒ - met
- ☐ - **not** met.

The device under test does

- ☒ - fulfill the general approval requirements mentioned on page 3.
- ☐ - **not** fulfill the general approval requirements mentioned on page 3.

EUT Received Date: (TÜV)	<u>07 November 2005</u>
Condition of EUT:	<u>Normal</u>
Testing Start Date: (ADC)	<u>30 September 2005</u>
Testing End Date: (TÜV)	<u>07 November 2005</u>

- TÜV AMERICA INC -

Tested By:



Joe Sausen, Michael Schultz

Reviewed By:



Greg Jakubowski

Appendix A

Test data



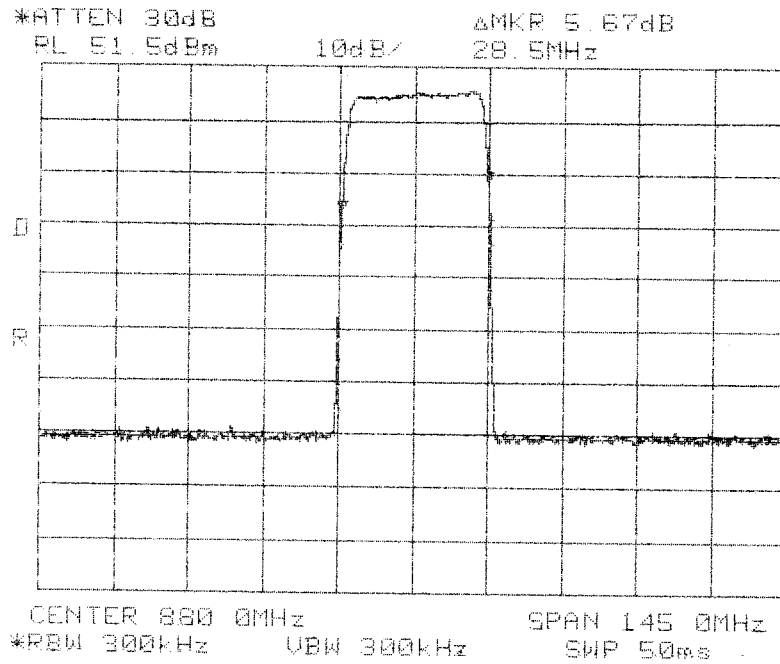
Industry Canada
Section 4.2 - 20 dB Passband Test for ADC Inc.
Digivance â Long Range Coverage Solution
Model Numbers DGVL-112XXSYS and DGVL-122XXSYS

A plot of the 20 dB bandwidth was taken at the points when the gain had fallen by 20 dB. A measurement was taken to show the gain versus frequency response of the system from the midband frequency of the passband to the midband frequency +/- 250% of the 20 dB bandwidth.

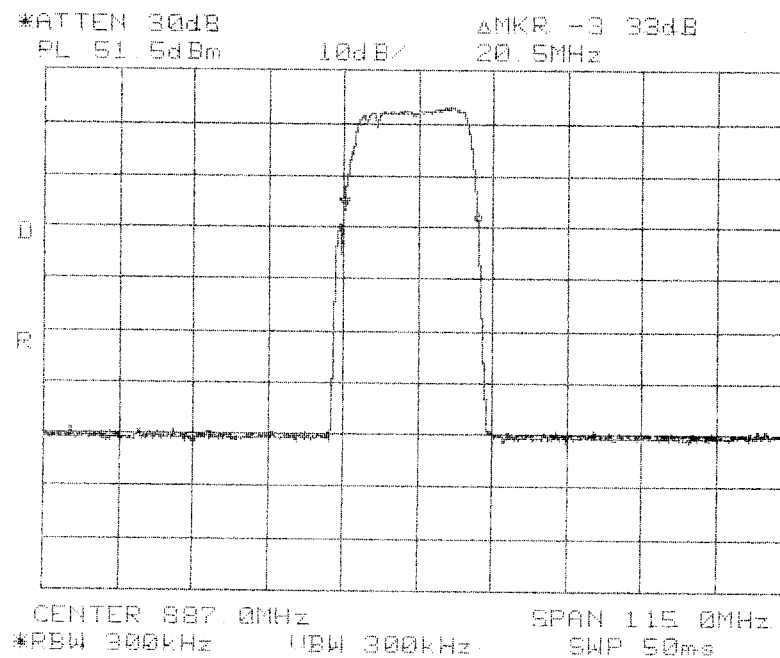
Results:

Pass (See plots)

Center: 880.0 MHz
Span: 145 MHz
RBW/VBW: 300 kHz



Section 4.2
20 dB Passband
Cellular 800 MHz
A Band



Section 4.2
20 dB Passband
Cellular 800 MHz
B Band

Center: 887.0 MHz
Span: 115 MHz
RBW/VBW: 300 kHz

Industry Canada
Section 4.3 – Mean Output Power Test for ADC Inc.
Digivance â Long Range Coverage Solution
Model Numbers DGPL-112XXXSYS and DGPL-122XXXSYS

Multi-channel Enhancer

Set the two generator frequencies f_1 and f_2 such that they and their third-order intermodulation product frequencies, $f_3 = 2f_1 - f_2$ and $f_4 = 2f_2 - f_1$, are all within the passband of the DUT.

For enhancers rated 500 watts or less: Raise the input level to the DUT until the greater level of the intermodulation products at the enhancer output terminals, P_{o3} or P_{o4} , equals -43 dBW.

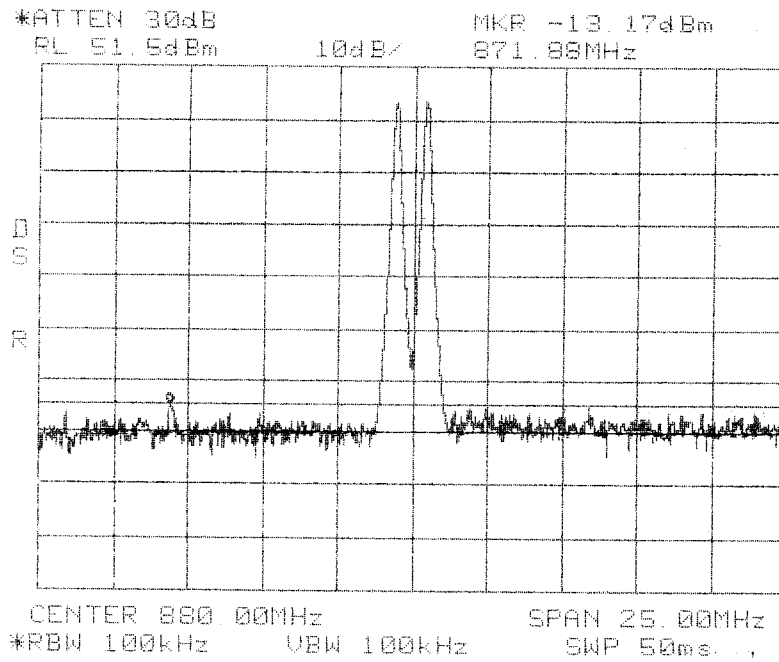
Record all signal levels and their frequencies. Calculate the mean output power (P_{mean}) under this testing condition using $P_{mean} = P_{o1} + 3$ dB.

$P_{mean} = +45.17$ dBm or 32.89 Watts

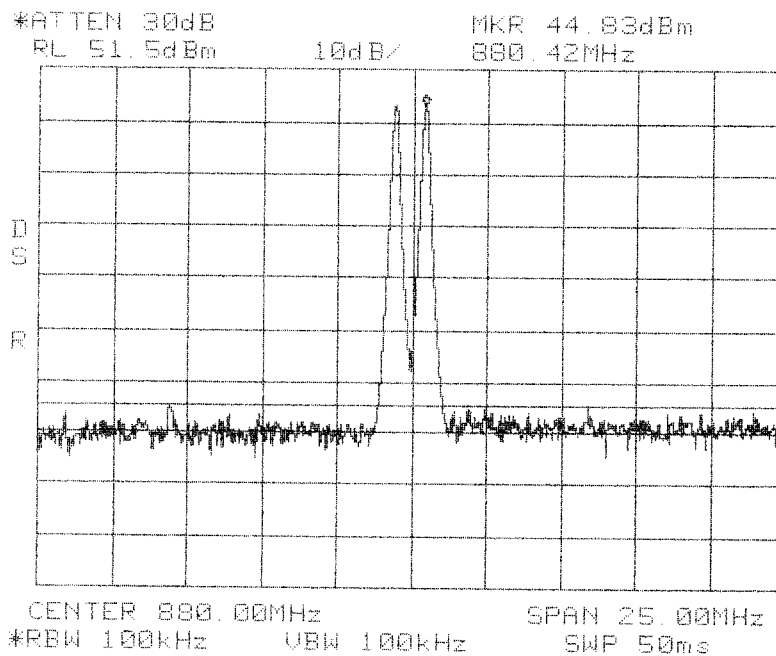
Results:

Pass (See plots)

Center: 880.0 MHz
Span: 25 MHz
RBW/VBW: 100 kHz
Spurious Peak



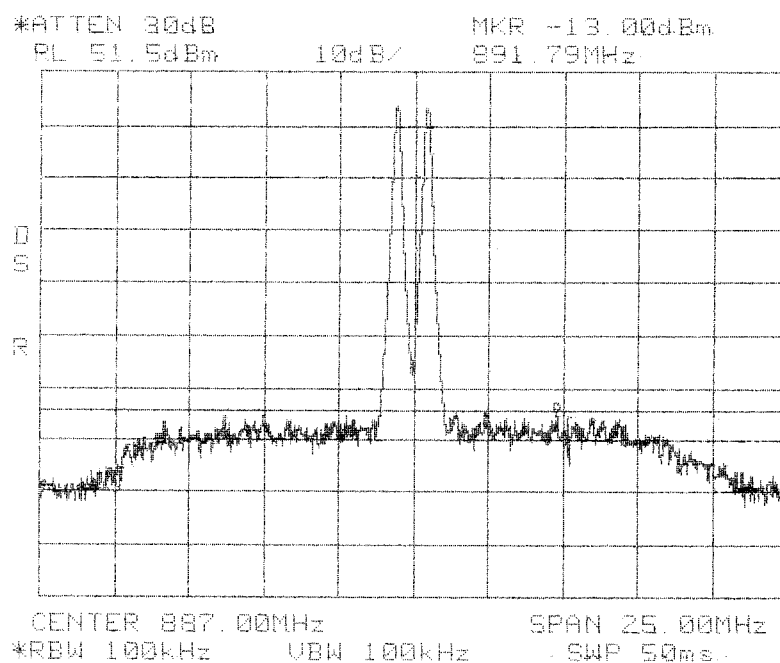
**RSS 131 - Section 4.3
Mean Output Power
Cellular 800 MHz
A Band**



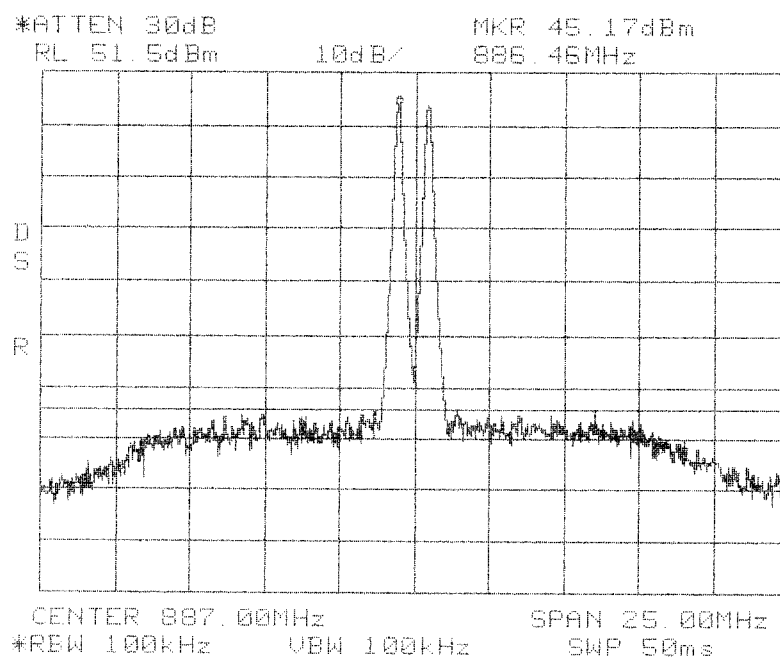
**RSS 131 - Section 4.3
Mean Output Power
Cellular 800 MHz
A Band**

Center: 880.0 MHz
Span: 25 MHz
RBW/VBW: 100 kHz
Peak

Center: 887.0 MHz
Span: 25 MHz
RBW/VBW: 100 kHz
Spurious Peak



**RSS 131 - Section 4.3
Mean Output Power
Cellular 800 MHz
B Band**



**RSS 131 - Section 4.3
Mean Output Power
Cellular 800 MHz
B Band**

Center: 887.0 MHz
Span: 25 MHz
RBW/VBW: 100 kHz
Peak

Industry Canada
Section 4.4 – Spurious Emissions Test for ADC Inc.
Digivance â Long Range Coverage Solution
Model Numbers DGPL-112XXXSYS and DGPL-122XXXSYS

Multi-channel Enhancer

For enhancers rated 500 watts or less: Raise the input level to the DUT until the greater level of the intermodulation products at the enhancer output terminals, Po3 or Po4, equals -43 dBW.

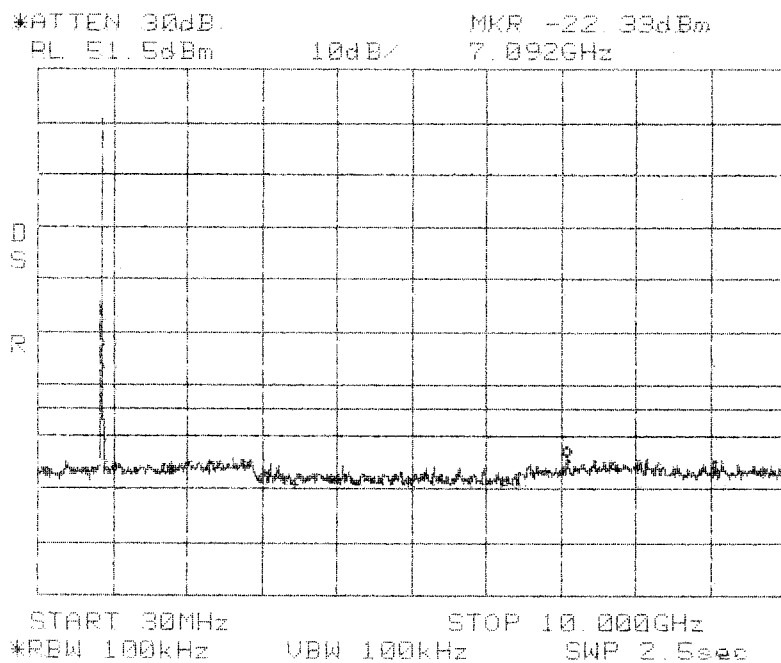
The spurious emissions of the equipment under test shall be measured using the two-tone method, with the two tones Po1 and Po2 set to the required levels.

Using a spectrum analyzer with a resolution bandwidth set at 100 kHz, a search for spurious emissions from 30 MHz to 10 times the highest RF passband frequency was conducted. The search omitted the band that contains the test tones and intermodulation products.

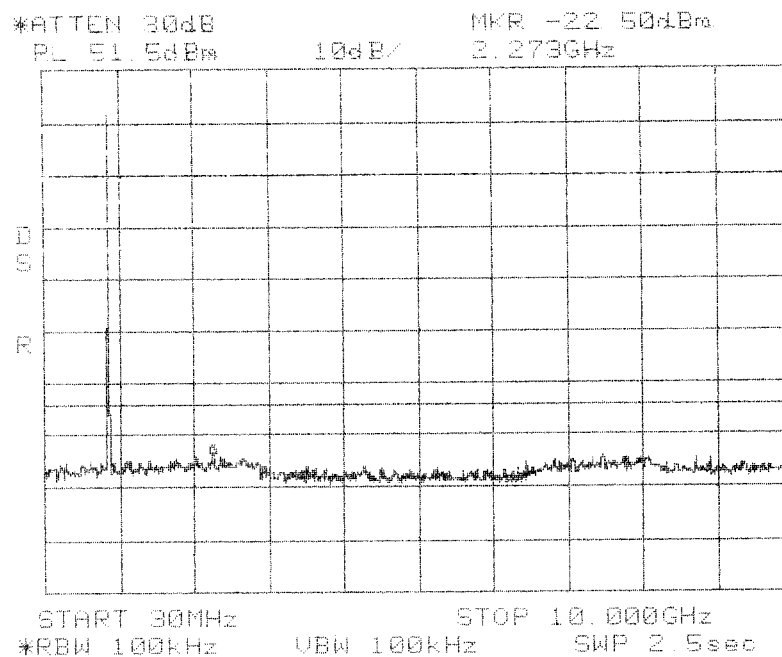
Results:

Pass (See plots)

Span: 30 MHz to 10 GHz
RBW/VBW: 100 kHz



**RSS 131 - Section 4.4
Multi-Channel Enhancer
Spurious Emissions
Cellular 800 MHz
A Band**



**RSS 131 - Section 4.4
Multi-Channel Enhancer
Spurious Emissions
Cellular 800 MHz
B Band**

Span: 30 MHz to 10 GHz
RBW/VBW: 100 kHz

Industry Canada
Section 4.5 – Frequency Tolerance Test for ADC Inc.
Digivance â Long Range Coverage Solution
Model Numbers DGVL-112XXXSYS and DGVL-122XXXSYS

The frequency stability shall be within ± 1.5 parts per million (0.00015%).

EUT A Band

Input Voltage	Carrier Frequency	Measured Frequency	Meets Requirements?
102 VAC	869.000 MHz	869.000 MHz	Yes
120 VAC	869.000 MHz	869.000 MHz	Yes
138 VAC	869.000 MHz	869.000 MHz	Yes
102 VAC	880.000 MHz	880.000 MHz	Yes
120 VAC	880.000 MHz	880.000 MHz	Yes
138 VAC	880.000 MHz	880.000 MHz	Yes
102 VAC	891.500 MHz	891.500 MHz	Yes
120 VAC	891.500 MHz	891.500 MHz	Yes
138 VAC	891.500 MHz	891.500 MHz	Yes
Temperature	Carrier Frequency	Measured Frequency	Meets Requirements?
-30 Deg. C	869.000 MHz	869.000 MHz	Yes
-20 Deg. C	869.000 MHz	869.000 MHz	Yes
-10 Deg. C	869.000 MHz	869.000 MHz	Yes
0 Deg. C	869.000 MHz	869.000 MHz	Yes
10 Deg. C	869.000 MHz	869.000 MHz	Yes
20 Deg. C	869.000 MHz	869.000 MHz	Yes
30 Deg. C	869.000 MHz	869.000 MHz	Yes
40 Deg. C	869.000 MHz	869.000 MHz	Yes
50 Deg. C	869.000 MHz	869.000 MHz	Yes
-30 Deg. C	880.000 MHz	880.000 MHz	Yes
-20 Deg. C	880.000 MHz	880.000 MHz	Yes
-10 Deg. C	880.000 MHz	880.000 MHz	Yes
0 Deg. C	880.000 MHz	880.000 MHz	Yes
10 Deg. C	880.000 MHz	880.000 MHz	Yes
20 Deg. C	880.000 MHz	880.000 MHz	Yes
30 Deg. C	880.000 MHz	880.000 MHz	Yes
40 Deg. C	880.000 MHz	880.000 MHz	Yes
50 Deg. C	880.000 MHz	880.000 MHz	Yes
-30 Deg. C	891.500 MHz	891.500 MHz	Yes
-20 Deg. C	891.500 MHz	891.500 MHz	Yes
-10 Deg. C	891.500 MHz	891.500 MHz	Yes
0 Deg. C	891.500 MHz	891.500 MHz	Yes
10 Deg. C	891.500 MHz	891.500 MHz	Yes
20 Deg. C	891.500 MHz	891.500 MHz	Yes
30 Deg. C	891.500 MHz	891.500 MHz	Yes
40 Deg. C	891.500 MHz	891.500 MHz	Yes
50 Deg. C	891.500 MHz	891.500 MHz	Yes

Industry Canada
Section 4.5 – Frequency Tolerance Test for ADC Inc.
Digivance â Long Range Coverage Solution
Model Numbers DGVL-112XXXSYS and DGVL-122XXXSYS
The frequency stability shall be within ± 1.5 parts per million (0.00015%).

EUT B Band

Input Voltage	Carrier Frequency	Measured Frequency	Meets Requirements?
102 VAC	880.000 MHz	880.000 MHz	Yes
120 VAC	880.000 MHz	880.000 MHz	Yes
138 VAC	880.000 MHz	880.000 MHz	Yes
102 VAC	887.000 MHz	887.000 MHz	Yes
120 VAC	887.000 MHz	887.000 MHz	Yes
138 VAC	887.000 MHz	887.000 MHz	Yes
102 VAC	894.000 MHz	894.000 MHz	Yes
120 VAC	894.000 MHz	894.000 MHz	Yes
138 VAC	894.000 MHz	894.000 MHz	Yes
Temperature	Carrier Frequency	Measured Frequency	Meets Requirements?
-30 Deg. C	880.000 MHz	880.000 MHz	Yes
-20 Deg. C	880.000 MHz	880.000 MHz	Yes
-10 Deg. C	880.000 MHz	880.000 MHz	Yes
0 Deg. C	880.000 MHz	880.000 MHz	Yes
10 Deg. C	880.000 MHz	880.000 MHz	Yes
20 Deg. C	880.000 MHz	880.000 MHz	Yes
30 Deg. C	880.000 MHz	880.000 MHz	Yes
40 Deg. C	880.000 MHz	880.000 MHz	Yes
50 Deg. C	880.000 MHz	880.000 MHz	Yes
-30 Deg. C	887.000 MHz	887.000 MHz	Yes
-20 Deg. C	887.000 MHz	887.000 MHz	Yes
-10 Deg. C	887.000 MHz	887.000 MHz	Yes
0 Deg. C	887.000 MHz	887.000 MHz	Yes
10 Deg. C	887.000 MHz	887.000 MHz	Yes
20 Deg. C	887.000 MHz	887.000 MHz	Yes
30 Deg. C	887.000 MHz	887.000 MHz	Yes
40 Deg. C	887.000 MHz	887.000 MHz	Yes
50 Deg. C	887.000 MHz	887.000 MHz	Yes
-30 Deg. C	894.000 MHz	894.000 MHz	Yes
-20 Deg. C	894.000 MHz	894.000 MHz	Yes
-10 Deg. C	894.000 MHz	894.000 MHz	Yes
0 Deg. C	894.000 MHz	894.000 MHz	Yes
10 Deg. C	894.000 MHz	894.000 MHz	Yes
20 Deg. C	894.000 MHz	894.000 MHz	Yes
30 Deg. C	894.000 MHz	894.000 MHz	Yes
40 Deg. C	894.000 MHz	894.000 MHz	Yes
50 Deg. C	894.000 MHz	894.000 MHz	Yes

RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 1 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
Note 880 MHz Tx setting						
38.248 MHz	43.65 Qp	0.49 / 16.7 / 27.17 / 0.0	33.67	H / 1.00 / 0	-74.24	-61.24
44.866 MHz	41.0 Qp	0.6 / 14.64 / 27.06 / 0.0	29.18	H / 1.00 / 0	-78.73	-65.73
57.616 MHz	41.05 Qp	0.6 / 11.32 / 27.0 / 0.0	25.97	H / 1.00 / 0	-81.94	-68.94
64.516 MHz	46.2 Qp	0.69 / 9.5 / 27.0 / 0.0	29.39	H / 1.00 / 0	-78.52	-65.52
68.176 MHz	47.35 Qp	0.7 / 8.66 / 27.0 / 0.0	29.71	H / 1.00 / 0	-78.2	-65.2
69.219 MHz	44.1 Qp	0.7 / 8.48 / 27.0 / 0.0	26.28	H / 1.00 / 0	-81.63	-68.63
77.674 MHz	45.15 Qp	0.76 / 7.13 / 26.94 / 0.0	26.1	H / 1.00 / 0	-81.81	-68.81
83.295 MHz	45.6 Qp	0.8 / 6.83 / 26.9 / 0.0	26.33	H / 1.00 / 0	-81.58	-68.58
99.754 MHz	44.85 Qp	0.88 / 8.28 / 27.0 / 0.0	27.01	H / 1.00 / 0	-80.9	-67.9
106.108 MHz	41.55 Qp	0.81 / 8.48 / 27.01 / 0.0	23.83	H / 1.00 / 0	-84.08	-71.08
121.408 MHz	42.4 Qp	0.9 / 7.82 / 27.1 / 0.0	24.02	H / 1.00 / 0	-83.89	-70.89
135.208 MHz	41.4 Qp	1.0 / 7.42 / 27.0 / 0.0	22.82	H / 1.00 / 0	-85.09	-72.09
141.97 MHz	70.45 Qp	1.0 / 8.32 / 26.97 / 0.0	52.79	H / 1.00 / 0	-55.12	-42.12
184.841 MHz	48.1 Qp	1.11 / 9.48 / 27.1 / 0.0	31.59	H / 1.00 / 0	-76.32	-63.32
187.54 MHz	47.5 Qp	1.13 / 9.6 / 27.1 / 0.0	31.13	H / 1.00 / 0	-76.78	-63.78
197.327 MHz	48.75 Qp	1.2 / 9.85 / 27.1 / 0.0	32.7	H / 1.00 / 0	-75.21	-62.21
212.968 MHz	57.7 Qp	1.21 / 10.16 / 27.11 / 0.0	41.96	H / 1.00 / 0	-65.95	-52.95
225.467 MHz	42.6 Qp	1.29 / 10.35 / 27.19 / 0.0	27.05	H / 1.00 / 0	-80.86	-67.86
283.98 MHz	64.95 Qp	1.5 / 11.92 / 27.43 / 0.0	50.94	H / 1.00 / 0	-56.97	-43.97
337.08 MHz	38.35 Qp	1.57 / 13.67 / 27.57 / 0.0	26.02	H / 1.00 / 0	-81.89	-68.89
354.978 MHz	43.35 Qp	1.6 / 14.6 / 27.6 / 0.0	31.95	H / 1.00 / 0	-75.96	-62.96
425.971 MHz	57.7 Qp	1.71 / 16.56 / 27.9 / 0.0	48.07	H / 1.00 / 0	-59.84	-46.84
496.97 MHz	45.15 Qp	1.9 / 16.95 / 27.93 / 0.0	36.06	H / 1.00 / 0	-71.85	-58.85
567.967 MHz	54.65 Qp	2.03 / 18.46 / 28.1 / 0.0	47.04	H / 1.00 / 0	-60.87	-47.87
638.969 MHz	46.2 Qp	2.1 / 19.08 / 28.2 / 0.0	39.18	H / 1.00 / 0	-68.73	-55.73

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 2 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
709.963 MHz	61.7 Qp	2.3 / 19.4 / 27.95 / 0.0	55.45	H / 1.00 / 0	-52.46	-39.46
780.978 MHz	42.05 Qp	2.39 / 21.11 / 27.83 / 0.0	37.72	H / 1.00 / 0	-70.19	-57.19
827.275 MHz	27.0 Qp	2.47 / 21.45 / 27.8 / 0.0	23.12	H / 1.00 / 0	-84.79	-71.79
851.983 MHz	41.7 Qp	2.51 / 21.66 / 27.78 / 0.0	38.1	H / 1.00 / 0	-69.81	-56.81
860.437 MHz	40.9 Qp	2.53 / 21.12 / 27.75 / 0.0	36.8	H / 1.00 / 0	-71.11	-58.11
868.97 MHz	29.75 Qp	2.54 / 21.46 / 27.72 / 0.0	26.03	H / 1.00 / 0	-81.88	-68.88
880.005 MHz	71.15 Qp	2.56 / 21.8 / 27.68 / 0.0	67.83	H / 1.00 / 0	-40.08	-27.08
891.468 MHz	31.0 Qp	2.58 / 21.66 / 27.64 / 0.0	27.59	H / 1.00 / 0	-80.32	-67.32
910.671 MHz	67.05 Qp	2.61 / 21.11 / 27.6 / 0.0	63.17	H / 1.00 / 0	-44.74	-31.74
922.988 MHz	52.35 Qp	2.63 / 21.63 / 27.6 / 0.0	49.01	H / 1.00 / 0	-58.9	-45.9
993.976 MHz	50.55 Qp	2.73 / 22.02 / 27.57 / 0.0	47.74	H / 1.00 / 0	-60.17	-47.17
66.764 MHz	50.05 Qp	0.7 / 8.97 / 27.0 / 0.0	32.72	H / 1.00 / 0	-75.19	-62.19
76.064 MHz	48.0 Qp	0.73 / 7.29 / 26.97 / 0.0	29.05	H / 1.00 / 0	-78.86	-65.86
163.97 MHz	53.15 Qp	1.03 / 8.08 / 27.0 / 0.0	35.26	H / 1.00 / 0	-72.65	-59.65
179.978 MHz	55.25 Qp	1.1 / 9.0 / 27.07 / 0.0	38.28	H / 1.00 / 0	-69.63	-56.63
199.238 MHz	51.35 Qp	1.2 / 9.82 / 27.1 / 0.0	35.27	H / 1.00 / 0	-72.64	-59.64

Maximized Horizontal frequencies 30-1000 MHz 880 MHz Tx setting

910.695 MHz	75.8 Qp	2.61 / 21.11 / 27.6 / 0.0	71.92	H / 1.00 / 135	-35.99	-22.99
709.963 MHz	66.31 Qp	2.3 / 19.4 / 27.95 / 0.0	60.06	H / 1.00 / 175	-47.85	-34.85
66.764 MHz	54.73 Qp	0.7 / 8.97 / 27.0 / 0.0	37.4	H / 1.00 / 175	-70.51	-57.51
68.176 MHz	56.64 Qp	0.7 / 8.66 / 27.0 / 0.0	39.0	H / 1.00 / 175	-68.91	-55.91
69.219 MHz	54.46 Qp	0.7 / 8.48 / 27.0 / 0.0	36.64	H / 1.00 / 175	-71.27	-58.27
76.064 MHz	58.23 Qp	0.73 / 7.29 / 26.97 / 0.0	39.28	H / 1.00 / 175	-68.63	-55.63
141.97 MHz	72.95 Qp	1.0 / 8.32 / 26.97 / 0.0	55.29	H / 2.00 / 90	-52.62	-39.62
283.98 MHz	68.64 Qp	1.5 / 11.92 / 27.43 / 0.0	54.63	H / 2.00 / 90	-53.28	-40.28

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 3 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
38.248 MHz	57.35 Qp	0.49 / 16.7 / 27.17 / 0.0	47.37	V / 1.00 / 0	-60.54	-47.54
44.866 MHz	59.15 Qp	0.6 / 14.64 / 27.06 / 0.0	47.33	V / 1.00 / 0	-60.58	-47.58
57.616 MHz	55.45 Qp	0.6 / 11.32 / 27.0 / 0.0	40.37	V / 1.00 / 0	-67.54	-54.54
64.516 MHz	52.7 Qp	0.69 / 9.5 / 27.0 / 0.0	35.89	V / 1.00 / 0	-72.02	-59.02
66.764 MHz	57.0 Qp	0.7 / 8.97 / 27.0 / 0.0	39.67	V / 1.00 / 0	-68.24	-55.24
69.219 MHz	55.85 Qp	0.7 / 8.48 / 27.0 / 0.0	38.03	V / 1.00 / 0	-69.88	-56.88
77.674 MHz	57.95 Qp	0.76 / 7.13 / 26.94 / 0.0	38.9	V / 1.00 / 0	-69.01	-56.01
83.295 MHz	60.7 Qp	0.8 / 6.83 / 26.9 / 0.0	41.43	V / 1.00 / 0	-66.48	-53.48
99.754 MHz	50.2 Qp	0.88 / 8.28 / 27.0 / 0.0	32.36	V / 1.00 / 0	-75.55	-62.55
106.108 MHz	51.15 Qp	0.81 / 8.48 / 27.01 / 0.0	33.43	V / 1.00 / 0	-74.48	-61.48
121.408 MHz	54.85 Qp	0.9 / 7.82 / 27.1 / 0.0	36.47	V / 1.00 / 0	-71.44	-58.44
135.208 MHz	53.3 Qp	1.0 / 7.42 / 27.0 / 0.0	34.72	V / 1.00 / 0	-73.19	-60.19
179.978 MHz	56.1 Qp	1.1 / 9.0 / 27.07 / 0.0	39.13	V / 1.00 / 0	-68.78	-55.78
184.841 MHz	50.2 Qp	1.11 / 9.48 / 27.1 / 0.0	33.69	V / 1.00 / 0	-74.22	-61.22
187.54 MHz	48.8 Qp	1.13 / 9.6 / 27.1 / 0.0	32.43	V / 1.00 / 0	-75.48	-62.48
197.327 MHz	50.1 Qp	1.2 / 9.85 / 27.1 / 0.0	34.05	V / 1.00 / 0	-73.86	-60.86
199.238 MHz	52.1 Qp	1.2 / 9.82 / 27.1 / 0.0	36.02	V / 1.00 / 0	-71.89	-58.89
212.968 MHz	58.45 Qp	1.21 / 10.16 / 27.11 / 0.0	42.71	V / 1.00 / 0	-65.2	-52.2
425.971 MHz	58.8 Qp	1.71 / 16.56 / 27.9 / 0.0	49.17	V / 1.00 / 0	-58.74	-45.74
496.97 MHz	51.6 Qp	1.9 / 16.95 / 27.93 / 0.0	42.51	V / 1.00 / 0	-65.4	-52.4
638.969 MHz	47.7 Qp	2.1 / 19.08 / 28.2 / 0.0	40.68	V / 1.00 / 0	-67.23	-54.23
860.437 MHz	41.0 Qp	2.53 / 21.12 / 27.75 / 0.0	36.9	V / 1.00 / 0	-71.01	-58.01
Maximized Vertical frequencies 30-1000 MHz 880 MHz Tx setting						
38.235 MHz	59.08 Qp	0.49 / 16.71 / 27.17 / 0.0	49.11	V / 1.00 / 0	-58.8	-45.8

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 4 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
425.971 MHz	62.29 Qp	1.71 / 16.56 / 27.9 / 0.0	52.66	V / 1.00 / 270	-55.25	-42.25
64.516 MHz	58.47 Qp	0.69 / 9.5 / 27.0 / 0.0	41.66	V / 1.00 / 270	-66.25	-53.25
76.064 MHz	61.97 Qp	0.73 / 7.29 / 26.97 / 0.0	43.02	V / 1.00 / 270	-64.89	-51.89
Note 887 MHz Tx setting (mid range)						
887.0 MHz	78.99 Qp	2.57 / 21.66 / 27.66 / 0.0	75.56	H / 1.00 / 0	-32.35	-19.35
199.238 MHz	53.05 Qp	1.2 / 9.82 / 27.1 / 0.0	36.97	H / 1.00 / 0	-70.94	-57.94
225.467 MHz	45.7 Qp	1.29 / 10.35 / 27.19 / 0.0	30.15	H / 1.00 / 0	-77.76	-64.76
354.978 MHz	45.75 Qp	1.6 / 14.6 / 27.6 / 0.0	34.35	H / 1.00 / 0	-73.56	-60.56
860.437 MHz	46.6 Qp	2.53 / 21.12 / 27.75 / 0.0	42.5	H / 1.00 / 0	-65.41	-52.41
868.97 MHz	30.0 Qp	2.54 / 21.46 / 27.72 / 0.0	26.28	H / 1.00 / 0	-81.63	-68.63
Maximized Horizontal frequencies 30-1000 MHz 887 MHz Tx setting						
44.829 MHz	48.85 Qp	0.6 / 14.65 / 27.06 / 0.0	37.04	H / 2.00 / 35	-70.87	-57.87
77.674 MHz	64.5 Qp	0.76 / 7.13 / 26.94 / 0.0	45.45	H / 2.50 / 150	-62.46	-49.46
128.608 MHz	57.19 Qp	0.98 / 7.46 / 27.02 / 0.0	38.61	H / 2.50 / 0	-69.3	-56.3
212.968 MHz	61.41 Qp	1.21 / 10.16 / 27.11 / 0.0	45.67	H / 1.00 / 90	-62.24	-49.24
283.98 MHz	73.84 Qp	1.5 / 11.92 / 27.43 / 0.0	59.83	H / 1.00 / 90	-48.08	-35.08
354.978 MHz	61.94 Qp	1.6 / 14.6 / 27.6 / 0.0	50.54	H / 1.00 / 160	-57.37	-44.37
425.971 MHz	63.47 Qp	1.71 / 16.56 / 27.9 / 0.0	53.84	H / 1.00 / 80	-54.07	-41.07
638.969 MHz	56.66 Qp	2.1 / 19.08 / 28.2 / 0.0	49.64	H / 1.00 / 135	-58.27	-45.27
709.963 MHz	66.67 Qp	2.3 / 19.4 / 27.95 / 0.0	60.42	H / 1.00 / 0	-47.49	-34.49
860.449 MHz	48.37 Qp	2.53 / 21.12 / 27.75 / 0.0	44.27	H / 1.00 / 0	-63.64	-50.64
860.449 MHz	51.6 Qp	2.53 / 21.12 / 27.75 / 0.0	47.5	H / 1.00 / 45	-60.41	-47.41
910.695 MHz	76.69 Qp	2.61 / 21.11 / 27.6 / 0.0	72.81	H / 1.00 / 140	-35.1	-22.1

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 5 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
44.866 MHz	59.6 Qp	0.6 / 14.64 / 27.06 / 0.0	47.78	V / 1.00 / 0	-60.13	-47.13
57.616 MHz	55.75 Qp	0.6 / 11.32 / 27.0 / 0.0	40.67	V / 1.00 / 0	-67.24	-54.24
66.764 MHz	58.35 Qp	0.7 / 8.97 / 27.0 / 0.0	41.02	V / 1.00 / 0	-66.89	-53.89
99.754 MHz	51.6 Qp	0.88 / 8.28 / 27.0 / 0.0	33.76	V / 1.00 / 0	-74.15	-61.15
135.208 MHz	55.4 Qp	1.0 / 7.42 / 27.0 / 0.0	36.82	V / 1.00 / 0	-71.09	-58.09
197.327 MHz	52.4 Qp	1.2 / 9.85 / 27.1 / 0.0	36.35	V / 1.00 / 0	-71.56	-58.56
827.275 MHz	27.35 Qp	2.47 / 21.45 / 27.8 / 0.0	23.47	V / 1.00 / 0	-84.44	-71.44
Maximized Vertical frequencies 30-1000 MHz 887 MHz Tx setting						
44.866 MHz	61.33 Qp	0.6 / 14.64 / 27.06 / 0.0	49.51	V / 1.00 / 0	-58.4	-45.4
66.764 MHz	64.58 Qp	0.7 / 8.97 / 27.0 / 0.0	47.25	V / 1.00 / 156	-60.66	-47.66
68.864 MHz	67.96 Qp	0.7 / 8.53 / 27.0 / 0.0	50.19	V / 1.00 / 156	-57.72	-44.72
77.674 MHz	61.9 Qp	0.76 / 7.13 / 26.94 / 0.0	42.85	V / 1.00 / 156	-65.06	-52.06
128.608 MHz	60.3 Qp	0.98 / 7.46 / 27.02 / 0.0	41.72	V / 1.00 / 180	-66.19	-53.19
496.97 MHz	57.41 Qp	1.9 / 16.95 / 27.93 / 0.0	48.32	V / 1.00 / 180	-59.59	-46.59
567.967 MHz	55.47 Qp	2.03 / 18.46 / 28.1 / 0.0	47.86	V / 1.00 / 180	-60.05	-47.05
910.761 MHz	73.08 Qp	2.61 / 21.12 / 27.6 / 0.0	69.2	H / 1.00 / 135	-38.71	-25.71
Note 894 MHz Tx setting						
894.0 MHz	87.99 Qp	2.58 / 21.76 / 27.64 / 0.0	84.7	H / 1.00 / 255	-23.21	-10.21
827.275 MHz	27.5 Qp	2.47 / 21.45 / 27.8 / 0.0	23.62	H / 1.00 / 255	-84.29	-71.29
868.97 MHz	30.05 Qp	2.54 / 21.46 / 27.72 / 0.0	26.33	H / 1.00 / 255	-81.58	-68.58
891.468 MHz	31.25 Qp	2.58 / 21.66 / 27.64 / 0.0	27.84	H / 1.00 / 255	-80.07	-67.07
199.238 MHz	53.8 Qp	1.2 / 9.82 / 27.1 / 0.0	37.72	H / 1.00 / 15	-70.19	-57.19
225.467 MHz	47.05 Qp	1.29 / 10.35 / 27.19 / 0.0	31.5	H / 1.00 / 15	-76.41	-63.41

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 6 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
337.08 MHz	42.65 Qp	1.57 / 13.67 / 27.57 / 0.0	30.32	H / 1.00 / 15	-77.59	-64.59
Maximized Horizontal frequencies 30-1000 MHz 894 MHz Tx setting						
910.787 MHz	75.06 Qp	2.61 / 21.12 / 27.6 / 0.0	71.18	H / 1.00 / 15	-36.73	-23.73
68.176 MHz	59.78 Qp	0.7 / 8.66 / 27.0 / 0.0	42.14	H / 1.00 / 130	-65.77	-52.77
69.219 MHz	60.14 Qp	0.7 / 8.48 / 27.0 / 0.0	42.32	H / 1.00 / 130	-65.59	-52.59
199.238 MHz	56.96 Qp	1.2 / 9.82 / 27.1 / 0.0	40.88	H / 1.00 / 130	-67.03	-54.03
638.969 MHz	58.66 Qp	2.1 / 19.08 / 28.2 / 0.0	51.64	H / 1.00 / 130	-56.27	-43.27
851.983 MHz	47.21 Qp	2.51 / 21.66 / 27.78 / 0.0	43.61	H / 1.00 / 130	-64.3	-51.3
780.978 MHz	46.05 Qp	2.39 / 21.11 / 27.83 / 0.0	41.72	H / 1.00 / 65	-66.19	-53.19
425.971 MHz	64.35 Qp	1.71 / 16.56 / 27.9 / 0.0	54.72	H / 1.00 / 80	-53.19	-40.19
283.98 MHz	73.5 Qp	1.5 / 11.92 / 27.43 / 0.0	59.49	H / 1.00 / 80	-48.42	-35.42
Maximized Vertical frequencies 30-1000 MHz 894 MHz Tx setting						
57.616 MHz	56.95 Qp	0.6 / 11.32 / 27.0 / 0.0	41.87	V / 1.00 / 130	-66.04	-53.04
83.295 MHz	60.9 Qp	0.8 / 6.83 / 26.9 / 0.0	41.63	V / 1.00 / 130	-66.28	-53.28
99.754 MHz	53.15 Qp	0.88 / 8.28 / 27.0 / 0.0	35.31	V / 1.00 / 130	-72.6	-59.6
197.327 MHz	53.05 Qp	1.2 / 9.85 / 27.1 / 0.0	37.0	V / 1.00 / 130	-70.91	-57.91
Maximized Vertical frequencies 30-1000 MHz 894 MHz Tx setting						
827.275 MHz	30.05 Qp	2.47 / 21.45 / 27.8 / 0.0	26.17	V / 1.00 / 130	-81.74	-68.74
993.976 MHz	49.95 Qp	2.73 / 22.02 / 27.57 / 0.0	47.14	V / 1.00 / 325	-60.77	-47.77
117.976 MHz	57.05 Qp	0.9 / 8.02 / 27.1 / 0.0	38.87	V / 1.00 / 0	-69.04	-56.04
60.196 MHz	59.8 Qp	0.6 / 10.64 / 27.0 / 0.0	44.04	V / 1.00 / 0	-63.87	-50.87
44.859 MHz	60.0 Qp	0.6 / 14.64 / 27.06 / 0.0	48.18	V / 1.00 / 0	-59.73	-46.73
131.325 MHz	58.25 Qp	1.0 / 7.4 / 27.0 / 0.0	39.65	V / 1.00 / 0	-68.26	-55.26
425.971 MHz	62.8 Qp	1.71 / 16.56 / 27.9 / 0.0	53.17	V / 1.00 / 0	-54.74	-41.74

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 7 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
Note 894 MHz Tx setting						
1.065 GHz	68.23 Av	2.83 / 25.59 / 49.22 / 0.0	47.43	H / 1.00 / 135	-60.48	-47.48
1.136 GHz	68.82 Av	2.93 / 25.51 / 49.55 / 0.0	47.7	H / 1.00 / 135	-60.21	-47.21
1.207 GHz	71.2 Av	3.01 / 25.43 / 49.62 / 0.0	50.02	H / 1.00 / 135	-57.89	-44.89
1.278 GHz	69.35 Av	3.1 / 25.35 / 49.25 / 0.0	48.54	H / 1.00 / 135	-59.37	-46.37
1.349 GHz	56.97 Av	3.18 / 25.27 / 49.37 / 0.0	36.04	H / 1.00 / 135	-71.87	-58.87
1.42 GHz	61.03 Av	3.3 / 25.19 / 49.65 / 0.0	39.86	H / 1.00 / 135	-68.05	-55.05
1.491 GHz	65.6 Av	3.42 / 25.11 / 49.8 / 0.0	44.33	H / 1.00 / 135	-63.58	-50.58
1.562 GHz	57.5 Av	3.49 / 25.49 / 49.62 / 0.0	36.86	H / 1.00 / 135	-71.05	-58.05
1.633 GHz	69.18 Av	3.55 / 25.93 / 49.58 / 0.0	49.08	H / 1.00 / 135	-58.83	-45.83
1.704 GHz	66.16 Av	3.62 / 26.38 / 49.76 / 0.0	46.4	H / 1.00 / 135	-61.51	-48.51
1.775 GHz	57.97 Av	3.74 / 26.83 / 49.67 / 0.0	38.87	H / 1.00 / 135	-69.04	-56.04
1.846 GHz	59.23 Av	3.83 / 27.27 / 49.79 / 0.0	40.54	H / 1.00 / 135	-67.37	-54.37
1.917 GHz	53.08 Av	3.88 / 27.72 / 49.91 / 0.0	34.77	H / 1.00 / 135	-73.14	-60.14
1.988 GHz	51.73 Av	3.9 / 28.17 / 49.65 / 0.0	34.14	H / 1.00 / 135	-73.77	-60.77
2.13 GHz	61.38 Av	3.97 / 28.34 / 49.41 / 0.0	44.29	H / 1.00 / 135	-63.62	-50.62
2.272 GHz	50.07 Av	4.15 / 28.46 / 49.07 / 0.0	33.61	H / 1.00 / 135	-74.3	-61.3
2.414 GHz	50.19 Av	4.31 / 28.57 / 49.36 / 0.0	33.71	H / 1.00 / 135	-74.2	-61.2
2.556 GHz	46.86 Av	4.4 / 28.8 / 48.79 / 0.0	31.27	H / 1.00 / 135	-76.64	-63.64
2.84 GHz	51.25 Av	4.6 / 29.62 / 48.37 / 0.0	37.1	H / 1.00 / 135	-70.81	-57.81
2.982 GHz	48.85 Av	4.74 / 30.03 / 48.19 / 0.0	35.42	H / 1.00 / 135	-72.49	-59.49
3.266 GHz	46.88 Av	5.0 / 30.67 / 47.55 / 0.0	35.0	H / 1.00 / 135	-72.91	-59.91
4.544 GHz	42.21 Av	6.15 / 32.39 / 45.32 / 0.0	35.43	H / 1.00 / 135	-72.48	-59.48
5.988 GHz	51.74 Av	7.09 / 34.35 / 45.66 / 0.0	47.52	H / 1.00 / 135	-60.39	-47.39
7.2 GHz	44.12 Av	8.1 / 35.86 / 45.78 / 0.0	42.3	H / 1.00 / 135	-65.61	-52.61

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 8 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
1.349 GHz	60.54 Av	3.18 / 25.27 / 49.37 / 0.0	39.61	H / 1.00 / 0	-68.3	-55.3
1.805 GHz	56.07 Av	3.79 / 27.01 / 49.66 / 0.0	37.22	H / 1.00 / 0	-70.69	-57.69
2.84 GHz	53.07 Av	4.6 / 29.62 / 48.37 / 0.0	38.92	H / 1.00 / 0	-68.99	-55.99
1.788 GHz	60.26 Av	3.76 / 26.91 / 49.66 / 0.0	41.28	H / 1.00 / 45	-66.63	-53.63
1.349 GHz	62.62 Av	3.18 / 25.27 / 49.37 / 0.0	41.69	H / 1.00 / 90	-66.22	-53.22
1.788 GHz	62.59 Av	3.76 / 26.91 / 49.66 / 0.0	43.61	H / 1.00 / 90	-64.3	-51.3
1.42 GHz	62.47 Av	3.3 / 25.19 / 49.65 / 0.0	41.3	H / 1.00 / 135	-66.61	-53.61
2.414 GHz	54.45 Av	4.31 / 28.57 / 49.36 / 0.0	37.97	H / 1.00 / 135	-69.94	-56.94
3.266 GHz	46.48 Av	5.0 / 30.67 / 47.55 / 0.0	34.6	H / 1.00 / 135	-73.31	-60.31
1.562 GHz	62.02 Av	3.49 / 25.49 / 49.62 / 0.0	41.38	H / 1.00 / 135	-66.53	-53.53
1.704 GHz	70.24 Av	3.62 / 26.38 / 49.76 / 0.0	50.48	H / 1.00 / 135	-57.43	-44.43
1.788 GHz	67.91 Av	3.76 / 26.91 / 49.66 / 0.0	48.93	H / 1.00 / 180	-58.98	-45.98
1.805 GHz	59.25 Av	3.79 / 27.01 / 49.66 / 0.0	40.4	H / 1.00 / 180	-67.51	-54.51
1.846 GHz	62.23 Av	3.83 / 27.27 / 49.79 / 0.0	43.54	H / 1.00 / 180	-64.37	-51.37
3.124 GHz	49.22 Av	4.87 / 30.35 / 47.17 / 0.0	37.28	H / 1.00 / 180	-70.63	-57.63
4.544 GHz	42.55 Av	6.15 / 32.39 / 45.32 / 0.0	35.77	H / 1.00 / 180	-72.14	-59.14
6.986 GHz	48.78 Av	8.1 / 35.34 / 45.74 / 0.0	46.48	H / 1.00 / 180	-61.43	-48.43
1.278 GHz	72.09 Av	3.1 / 25.35 / 49.25 / 0.0	51.28	H / 1.00 / 225	-56.63	-43.63
1.846 GHz	63.69 Av	3.83 / 27.27 / 49.79 / 0.0	45.0	H / 1.00 / 225	-62.91	-49.91
1.988 GHz	54.44 Av	3.9 / 28.17 / 49.65 / 0.0	36.85	H / 1.00 / 225	-71.06	-58.06
2.272 GHz	54.68 Av	4.15 / 28.46 / 49.07 / 0.0	38.22	H / 1.00 / 225	-69.69	-56.69
1.42 GHz	65.04 Av	3.3 / 25.19 / 49.65 / 0.0	43.87	H / 1.00 / 315	-64.04	-51.04
2.84 GHz	56.07 Av	4.6 / 29.62 / 48.37 / 0.0	41.92	H / 1.00 / 315	-65.99	-52.99
2.982 GHz	50.35 Av	4.74 / 30.03 / 48.19 / 0.0	36.92	H / 1.00 / 315	-70.99	-57.99

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 9 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
Maximized Horizontal frequencies 1-10 GHz 894 MHz Tx setting						
1.065 GHz	70.33 Av	2.83 / 25.59 / 49.22 / 0.0	49.53	H / 1.25 / 135	-58.38	-45.38
1.136 GHz	66.58 Av	2.93 / 25.51 / 49.55 / 0.0	45.46	H / 1.15 / 115	-62.45	-49.45
1.42 GHz	71.87 Av	3.3 / 25.19 / 49.65 / 0.0	50.7	H / 1.20 / 150	-57.21	-44.21
1.788 GHz	74.09 Av	3.76 / 26.91 / 49.66 / 0.0	55.11	H / 1.15 / 133	-52.8	-39.8
2.13 GHz	64.1 Av	3.97 / 28.34 / 49.41 / 0.0	47.01	H / 1.15 / 200	-60.9	-47.9
2.414 GHz	57.54 Av	4.31 / 28.57 / 49.36 / 0.0	41.06	H / 1.15 / 200	-66.85	-53.85
2.698 GHz	54.68 Av	4.48 / 29.21 / 48.26 / 0.0	40.11	H / 1.15 / 200	-67.8	-54.8
2.84 GHz	62.43 Av	4.6 / 29.62 / 48.37 / 0.0	48.28	H / 1.30 / 150	-59.63	-46.63
7.2 GHz	47.71 Av	8.1 / 35.86 / 45.78 / 0.0	45.89	H / 1.30 / 150	-62.02	-49.02
Maximized Vertical frequencies 1-10 GHz 894 Mhz Tx setting						
1.065 GHz	70.49 Av	2.83 / 25.59 / 49.22 / 0.0	49.69	V / 1.20 / 110	-58.22	-45.22
1.349 GHz	63.55 Av	3.18 / 25.27 / 49.37 / 0.0	42.62	V / 1.20 / 110	-65.29	-52.29
1.491 GHz	68.22 Av	3.42 / 25.11 / 49.8 / 0.0	46.95	V / 1.20 / 110	-60.96	-47.96
1.805 GHz	58.96 Av	3.79 / 27.01 / 49.66 / 0.0	40.11	V / 1.20 / 110	-67.8	-54.8
Note 887 MHz Tx setting (mid settting)						
Maximized Horizontal frequencies 1-10 GHz 887 MHz Tx setting						
1.774 GHz	71.63 Av	3.74 / 26.82 / 49.67 / 0.0	52.52	H / 1.00 / 100	-55.39	-42.39
1.065 GHz	70.29 Av	2.83 / 25.59 / 49.22 / 0.0	49.49	H / 1.30 / 135	-58.42	-45.42
1.136 GHz	67.42 Av	2.93 / 25.51 / 49.55 / 0.0	46.3	H / 1.20 / 130	-61.61	-48.61

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 10 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
1.42 GHz	71.94 Av	3.3 / 25.19 / 49.65 / 0.0	50.77	H / 1.20 / 130	-57.14	-44.14
2.13 GHz	62.67 Av	3.97 / 28.34 / 49.41 / 0.0	45.58	H / 1.20 / 200	-62.33	-49.33
2.414 GHz	57.74 Av	4.31 / 28.57 / 49.36 / 0.0	41.26	H / 1.20 / 200	-66.65	-53.65
2.698 GHz	51.92 Av	4.48 / 29.21 / 48.26 / 0.0	37.35	H / 1.20 / 200	-70.56	-57.56
2.84 GHz	61.28 Av	4.6 / 29.62 / 48.37 / 0.0	47.13	H / 1.30 / 150	-60.78	-47.78
7.2 GHz	47.29 Av	8.1 / 35.86 / 45.78 / 0.0	45.47	H / 1.30 / 150	-62.44	-49.44
Maximized Vertical frequencies 1-10 GHz 887 MHz Tx setting						
1.278 GHz	68.77 Av	3.1 / 25.35 / 49.25 / 0.0	47.96	V / 1.40 / 150	-59.95	-46.95
1.562 GHz	67.16 Av	3.49 / 25.49 / 49.62 / 0.0	46.52	V / 1.00 / 270	-61.39	-48.39
1.774 GHz	69.32 Av	3.74 / 26.82 / 49.67 / 0.0	50.21	V / 1.00 / 300	-57.7	-44.7
4.435 GHz	61.18 Av	6.1 / 32.32 / 45.71 / 0.0	53.88	V / 1.30 / 165	-54.03	-41.03
7.2 GHz	49.63 Av	8.1 / 35.86 / 45.78 / 0.0	47.81	V / 1.30 / 165	-60.1	-47.1
Note 880 MHz Tx setting						
Maximized Horizontal frequencies 1-10 GHz 880 MHz Tx setting						
1.76 GHz	78.03 Av	3.72 / 26.73 / 49.69 / 0.0	58.79	H / 1.30 / 130	-49.12	-36.12
1.065 GHz	70.81 Av	2.83 / 25.59 / 49.22 / 0.0	50.01	H / 1.30 / 130	-57.9	-44.9
1.136 GHz	66.36 Av	2.93 / 25.51 / 49.55 / 0.0	45.24	H / 1.15 / 116	-62.67	-49.67
1.42 GHz	71.24 Av	3.3 / 25.19 / 49.65 / 0.0	50.07	H / 1.15 / 116	-57.84	-44.84
2.13 GHz	64.26 Av	3.97 / 28.34 / 49.41 / 0.0	47.17	H / 1.15 / 200	-60.74	-47.74
2.414 GHz	58.1 Av	4.31 / 28.57 / 49.36 / 0.0	41.62	H / 1.15 / 200	-66.29	-53.29
2.698 GHz	53.26 Av	4.48 / 29.21 / 48.26 / 0.0	38.69	H / 1.15 / 200	-69.22	-56.22
2.84 GHz	60.34 Av	4.6 / 29.62 / 48.37 / 0.0	46.19	H / 1.30 / 150	-61.72	-48.72
7.2 GHz	47.18 Av	8.1 / 35.86 / 45.78 / 0.0	45.36	H / 1.30 / 150	-62.55	-49.55

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS
EUT Model #: DGVL-122110SYS Date: 11/7/2005
EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
Test Method: FCC part 22 Air Pressure: 98.0 kPa
Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat

Page: 11 of 12

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
Maximized Vertical frequencies 1-10 GHz 880 MHz Tx setting						
1.76 GHz	77.2 Av	3.72 / 26.73 / 49.69 / 0.0	57.96	V / 1.30 / 130	-49.95	-36.95
1.278 GHz	72.27 Av	3.1 / 25.35 / 49.25 / 0.0	51.46	V / 1.20 / 165	-56.45	-43.45
1.562 GHz	66.86 Av	3.49 / 25.49 / 49.62 / 0.0	46.22	V / 1.00 / 270	-61.69	-48.69
2.13 GHz	63.14 Av	3.97 / 28.34 / 49.41 / 0.0	46.05	V / 1.00 / 175	-61.86	-48.86
2.64 GHz	68.95 Av	4.44 / 29.04 / 48.44 / 0.0	53.99	V / 1.00 / 200	-53.92	-40.92
7.2 GHz	48.22 Av	8.1 / 35.86 / 45.78 / 0.0	46.4	V / 1.00 / 200	-61.51	-48.51
Scan complete						

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RADIATED EMISSIONS



Test Report #: WC505744 Run 2 Test Area: LTS

EUT Model #: DGVL-122110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

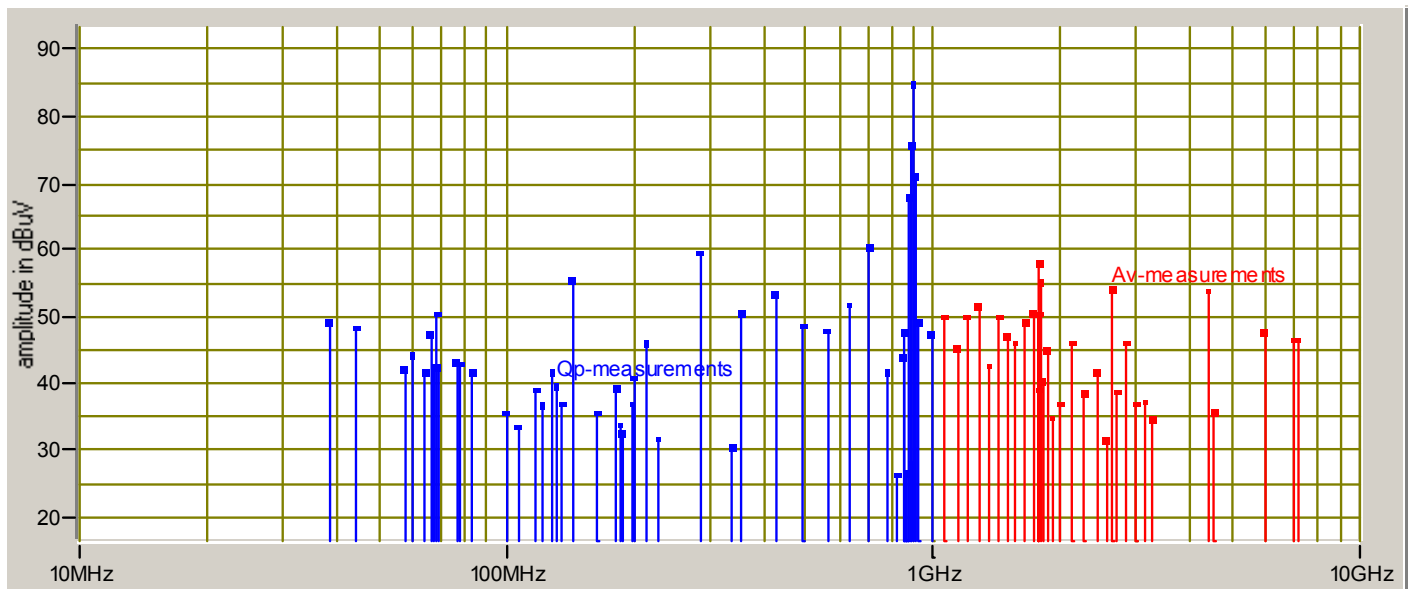
Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "B" Band

Data File Name: 5744-1.dat Page: 12 of 12

Graph:



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RADIATED EMISSIONS



Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 1 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
Note! 869 MHz setting:						
44.866 MHz	44.45 Qp	0.6 / 15.68 / 27.06 / 0.0	33.67	H / 1.00 / 0	-74.24	-61.24
57.616 MHz	39.3 Qp	0.6 / 12.17 / 27.0 / 0.0	25.07	H / 1.00 / 0	-82.84	-69.84
64.516 MHz	49.05 Qp	0.69 / 10.44 / 27.0 / 0.0	33.18	H / 1.00 / 0	-74.73	-61.73
68.176 MHz	50.3 Qp	0.7 / 9.63 / 27.0 / 0.0	33.63	H / 1.00 / 0	-74.28	-61.28
77.674 MHz	47.3 Qp	0.76 / 7.86 / 26.94 / 0.0	28.97	H / 1.00 / 0	-78.94	-65.94
99.754 MHz	44.85 Qp	0.88 / 8.93 / 27.0 / 0.0	27.66	H / 1.00 / 0	-80.25	-67.25
106.108 MHz	43.3 Qp	0.81 / 9.23 / 27.01 / 0.0	26.33	H / 1.00 / 0	-81.58	-68.58
121.408 MHz	47.1 Qp	0.9 / 8.95 / 27.1 / 0.0	29.85	H / 1.00 / 0	-78.06	-65.06
135.208 MHz	49.75 Qp	1.0 / 8.3 / 27.0 / 0.0	32.05	H / 1.00 / 0	-75.86	-62.86
142.0 MHz	54.0 Qp	1.0 / 9.43 / 26.97 / 0.0	37.46	H / 1.00 / 0	-70.45	-57.45
184.841 MHz	44.1 Qp	1.11 / 9.84 / 27.1 / 0.0	27.95	H / 1.00 / 0	-79.96	-66.96
197.327 MHz	46.75 Qp	1.2 / 10.82 / 27.1 / 0.0	31.67	H / 1.00 / 0	-76.24	-63.24
212.987 MHz	58.25 Qp	1.21 / 10.62 / 27.11 / 0.0	42.97	H / 1.00 / 0	-64.94	-51.94
225.467 MHz	44.6 Qp	1.29 / 10.89 / 27.19 / 0.0	29.59	H / 1.00 / 0	-78.32	-65.32
283.98 MHz	45.95 Qp	1.5 / 12.51 / 27.43 / 0.0	32.54	H / 1.00 / 0	-75.37	-62.37
337.08 MHz	36.2 Qp	1.57 / 14.24 / 27.57 / 0.0	24.44	H / 1.00 / 0	-83.47	-70.47
354.978 MHz	52.4 Qp	1.6 / 14.8 / 27.6 / 0.0	41.2	H / 1.00 / 0	-66.71	-53.71
426.001 MHz	52.75 Qp	1.71 / 16.37 / 27.9 / 0.0	42.94	H / 1.00 / 0	-64.97	-51.97
497.0 MHz	42.8 Qp	1.9 / 17.29 / 27.93 / 0.0	34.05	H / 1.00 / 0	-73.86	-60.86
567.993 MHz	49.4 Qp	2.03 / 18.32 / 28.1 / 0.0	41.65	H / 1.00 / 0	-66.26	-53.26
710.003 MHz	50.35 Qp	2.3 / 20.52 / 27.95 / 0.0	45.22	H / 1.00 / 0	-62.69	-49.69
780.978 MHz	44.45 Qp	2.39 / 21.44 / 27.83 / 0.0	40.45	H / 1.00 / 0	-67.46	-54.46
827.323 MHz	37.3 Qp	2.47 / 21.58 / 27.8 / 0.0	33.55	H / 1.00 / 0	-74.36	-61.36
851.983 MHz	41.0 Qp	2.51 / 21.93 / 27.78 / 0.0	37.66	H / 1.00 / 0	-70.25	-57.25

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RADIATED EMISSIONS



Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 2 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
860.437 MHz	36.7 Qp	2.53 / 22.01 / 27.75 / 0.0	33.49	H / 1.00 / 0	-74.42	-61.42
910.651 MHz	58.75 Qp	2.61 / 22.42 / 27.6 / 0.0	56.18	H / 1.00 / 0	-51.73	-38.73
922.988 MHz	42.7 Qp	2.63 / 22.7 / 27.6 / 0.0	40.43	H / 1.00 / 0	-67.48	-54.48
993.986 MHz	43.45 Qp	2.73 / 23.22 / 27.57 / 0.0	41.84	H / 1.00 / 0	-66.07	-53.07
Fundamental Frequency measurement.						
868.97 MHz	86.35 Qp	2.54 / 22.1 / 27.72 / 0.0	83.27	H / 1.00 / 0	-24.64	-11.64
868.97 MHz	86.45 Pk	2.54 / 22.1 / 27.72 / 0.0	83.37	H / 1.00 / 0	-24.54	-11.54
910 MHz maxed:						
910.651 MHz	70.4 Qp	2.61 / 22.42 / 27.6 / 0.0	67.83	H / 1.20 / 129	-40.08	-27.08
910.671 MHz	71.95 Qp	2.61 / 22.42 / 27.6 / 0.0	69.38	H / 1.20 / 129	-38.53	-25.53
57.616 MHz	46.85 Qp	0.6 / 12.17 / 27.0 / 0.0	32.62	H / 1.20 / 129	-75.29	-62.29
68.176 MHz	52.6 Qp	0.7 / 9.63 / 27.0 / 0.0	35.93	H / 1.20 / 129	-71.98	-58.98
77.674 MHz	52.25 Qp	0.76 / 7.86 / 26.94 / 0.0	33.92	H / 1.20 / 129	-73.99	-60.99
106.108 MHz	47.1 Qp	0.81 / 9.23 / 27.01 / 0.0	30.13	H / 1.20 / 129	-77.78	-64.78
121.408 MHz	51.1 Qp	0.9 / 8.95 / 27.1 / 0.0	33.85	H / 1.20 / 129	-74.06	-61.06
142.0 MHz	61.65 Qp	1.0 / 9.43 / 26.97 / 0.0	45.11	H / 1.20 / 129	-62.8	-49.8
184.841 MHz	48.9 Qp	1.11 / 9.84 / 27.1 / 0.0	32.75	H / 1.20 / 129	-75.16	-62.16
197.327 MHz	47.8 Qp	1.2 / 10.82 / 27.1 / 0.0	32.72	H / 1.20 / 129	-75.19	-62.19
212.987 MHz	53.25 Qp	1.21 / 10.62 / 27.11 / 0.0	37.97	H / 1.20 / 129	-69.94	-56.94
283.98 MHz	61.15 Qp	1.5 / 12.51 / 27.43 / 0.0	47.74	H / 1.20 / 129	-60.17	-47.17
354.978 MHz	56.35 Qp	1.6 / 14.8 / 27.6 / 0.0	45.15	H / 1.20 / 129	-62.76	-49.76
426.001 MHz	53.05 Qp	1.71 / 16.37 / 27.9 / 0.0	43.24	H / 1.20 / 129	-64.67	-51.67
567.993 MHz	55.3 Qp	2.03 / 18.32 / 28.1 / 0.0	47.55	H / 1.20 / 129	-60.36	-47.36

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RADIATED EMISSIONS



Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 3 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
710.003 MHz	58.35 Qp	2.3 / 20.52 / 27.95 / 0.0	53.22	H / 1.20 / 129	-54.69	-41.69
780.978 MHz	49.65 Qp	2.39 / 21.44 / 27.83 / 0.0	45.65	H / 1.20 / 129	-62.26	-49.26
827.275 MHz	40.65 Qp	2.47 / 21.58 / 27.8 / 0.0	36.9	H / 1.20 / 129	-71.01	-58.01
860.437 MHz	45.95 Qp	2.53 / 22.01 / 27.75 / 0.0	42.74	H / 1.20 / 129	-65.17	-52.17
922.988 MHz	49.0 Qp	2.63 / 22.7 / 27.6 / 0.0	46.73	H / 1.20 / 129	-61.18	-48.18
993.986 MHz	46.7 Qp	2.73 / 23.22 / 27.57 / 0.0	45.09	H / 1.20 / 129	-62.82	-49.82
710 MHz maxed:						
709.963 MHz	60.65 Qp	2.3 / 20.52 / 27.95 / 0.0	55.52	H / 1.17 / 117	-52.39	-39.39
68.176 MHz	55.65 Qp	0.7 / 9.63 / 27.0 / 0.0	38.98	H / 1.17 / 117	-68.93	-55.93
142.0 MHz	64.85 Qp	1.0 / 9.43 / 26.97 / 0.0	48.31	H / 1.17 / 117	-59.6	-46.6
184.841 MHz	49.1 Qp	1.11 / 9.84 / 27.1 / 0.0	32.95	H / 1.17 / 117	-74.96	-61.96
780.978 MHz	50.9 Qp	2.39 / 21.44 / 27.83 / 0.0	46.9	H / 1.17 / 117	-61.01	-48.01
142 MHz maxed:						
141.97 MHz	72.25 Qp	1.0 / 9.42 / 26.97 / 0.0	55.7	H / 2.23 / 100	-52.21	-39.21
77.674 MHz	55.9 Qp	0.76 / 7.86 / 26.94 / 0.0	37.57	H / 2.23 / 100	-70.34	-57.34
121.408 MHz	54.3 Qp	0.9 / 8.95 / 27.1 / 0.0	37.05	H / 2.23 / 100	-70.86	-57.86
425.971 MHz	61.0 Qp	1.71 / 16.37 / 27.9 / 0.0	51.18	H / 2.23 / 100	-56.73	-43.73
860.437 MHz	48.05 Qp	2.53 / 22.01 / 27.75 / 0.0	44.84	H / 2.23 / 100	-63.07	-50.07
993.976 MHz	48.4 Qp	2.73 / 23.22 / 27.57 / 0.0	46.79	H / 2.23 / 100	-61.12	-48.12
425 MHz maxed:						
425.971 MHz	60.45 Qp	1.71 / 16.37 / 27.9 / 0.0	50.63	H / 2.38 / 100	-57.28	-44.28
851.983 MHz	43.0 Qp	2.51 / 21.93 / 27.78 / 0.0	39.66	H / 2.38 / 100	-68.25	-55.25

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Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 4 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
38.248 MHz	56.2 Qp	0.49 / 17.5 / 27.17 / 0.0	47.02	V / 1.00 / 0	-60.89	-47.89
44.866 MHz	59.4 Qp	0.6 / 15.68 / 27.06 / 0.0	48.62	V / 1.00 / 0	-59.29	-46.29
57.616 MHz	56.05 Qp	0.6 / 12.17 / 27.0 / 0.0	41.82	V / 1.00 / 0	-66.09	-53.09
64.516 MHz	51.2 Qp	0.69 / 10.44 / 27.0 / 0.0	35.33	V / 1.00 / 0	-72.58	-59.58
68.176 MHz	57.3 Qp	0.7 / 9.63 / 27.0 / 0.0	40.63	V / 1.00 / 0	-67.28	-54.28
77.674 MHz	59.9 Qp	0.76 / 7.86 / 26.94 / 0.0	41.57	V / 1.00 / 0	-66.34	-53.34
99.754 MHz	54.45 Qp	0.88 / 8.93 / 27.0 / 0.0	37.26	V / 1.00 / 0	-70.65	-57.65
106.108 MHz	48.3 Qp	0.81 / 9.23 / 27.01 / 0.0	31.33	V / 1.00 / 0	-76.58	-63.58
121.408 MHz	57.2 Qp	0.9 / 8.95 / 27.1 / 0.0	39.95	V / 1.00 / 0	-67.96	-54.96
135.208 MHz	54.25 Qp	1.0 / 8.3 / 27.0 / 0.0	36.55	V / 1.00 / 0	-71.36	-58.36
197.327 MHz	50.9 Qp	1.2 / 10.82 / 27.1 / 0.0	35.82	V / 1.00 / 0	-72.09	-59.09
212.987 MHz	58.9 Qp	1.21 / 10.62 / 27.11 / 0.0	43.62	V / 1.00 / 0	-64.29	-51.29
497.0 MHz	46.9 Qp	1.9 / 17.29 / 27.93 / 0.0	38.15	V / 1.00 / 0	-69.76	-56.76
910 MHz maxed:						
910.683 MHz	68.0 Qp	2.61 / 22.42 / 27.6 / 0.0	65.43	V / 1.93 / 176	-42.48	-29.48
425.971 MHz	62.55 Qp	1.71 / 16.37 / 27.9 / 0.0	52.73	V / 1.93 / 176	-55.18	-42.18
425 MHz maxed:						
425.971 MHz	62.6 Qp	1.71 / 16.37 / 27.9 / 0.0	52.78	V / 2.02 / 165	-55.13	-42.13
142 MHz maxed:						
141.97 MHz	73.5 Qp	1.0 / 9.42 / 26.97 / 0.0	56.95	V / 1.02 / 151	-50.96	-37.96
496.97 MHz	49.7 Qp	1.9 / 16.95 / 27.93 / 0.0	40.61	V / 1.02 / 151	-67.3	-54.3

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Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 5 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
1.065 GHz	46.95 Pk	2.83 / 25.59 / 27.53 / 0.0	47.84	H / 1.00 / 151	-60.07	-47.07
1.065 GHz	45.62 Av	2.83 / 25.59 / 27.53 / 0.0	46.51	H / 1.00 / 151	-61.4	-48.4
1.136 GHz	47.0 Pk	2.93 / 25.51 / 27.57 / 0.0	47.86	H / 1.00 / 151	-60.05	-47.05
1.136 GHz	44.98 Av	2.93 / 25.51 / 27.57 / 0.0	45.84	H / 1.00 / 151	-62.07	-49.07
1.207 GHz	44.2 Pk	3.01 / 25.43 / 27.5 / 0.0	45.14	H / 1.00 / 151	-62.77	-49.77
1.278 GHz	40.15 Pk	3.1 / 25.35 / 27.5 / 0.0	41.1	H / 1.00 / 151	-66.81	-53.81
1.278 GHz	62.5 Pk	3.1 / 25.35 / 49.25 / 0.0	41.69	H / 1.00 / 151	-66.22	-53.22
1.349 GHz	64.15 Pk	3.18 / 25.27 / 49.37 / 0.0	43.22	H / 1.00 / 151	-64.69	-51.69
1.42 GHz	67.65 Pk	3.3 / 25.19 / 49.65 / 0.0	46.48	H / 1.00 / 151	-61.43	-48.43
1.491 GHz	61.95 Pk	3.42 / 25.11 / 49.8 / 0.0	40.68	H / 1.00 / 151	-67.23	-54.23
1.562 GHz	60.25 Pk	3.49 / 25.49 / 49.62 / 0.0	39.61	H / 1.00 / 151	-68.3	-55.3
1.633 GHz	57.05 Pk	3.55 / 25.93 / 49.58 / 0.0	36.95	H / 1.00 / 151	-70.96	-57.96
1.704 GHz	67.9 Pk	3.62 / 26.38 / 49.76 / 0.0	48.14	H / 1.00 / 151	-59.77	-46.77
1.775 GHz	60.3 Pk	3.74 / 26.83 / 49.67 / 0.0	41.2	H / 1.00 / 151	-66.71	-53.71
1.846 GHz	54.9 Pk	3.83 / 27.27 / 49.79 / 0.0	36.21	H / 1.00 / 151	-71.7	-58.7
1.917 GHz	53.2 Pk	3.88 / 27.72 / 49.91 / 0.0	34.89	H / 1.00 / 151	-73.02	-60.02
1.988 GHz	56.4 Pk	3.9 / 28.17 / 49.65 / 0.0	38.81	H / 1.00 / 151	-69.1	-56.1
2.13 GHz	55.7 Pk	3.97 / 28.34 / 49.41 / 0.0	38.61	H / 1.00 / 151	-69.3	-56.3
2.201 GHz	50.2 Pk	4.06 / 28.4 / 49.42 / 0.0	33.25	H / 1.00 / 151	-74.66	-61.66
2.414 GHz	54.75 Pk	4.31 / 28.57 / 49.36 / 0.0	38.27	H / 1.00 / 151	-69.64	-56.64
2.556 GHz	52.1 Pk	4.4 / 28.8 / 48.79 / 0.0	36.51	H / 1.00 / 151	-71.4	-58.4
2.84 GHz	59.15 Pk	4.6 / 29.62 / 48.37 / 0.0	45.0	H / 1.00 / 151	-62.91	-49.91
2.911 GHz	49.4 Pk	4.67 / 29.82 / 48.48 / 0.0	35.42	H / 1.00 / 151	-72.49	-59.49
3.124 GHz	52.8 Pk	4.87 / 30.35 / 47.17 / 0.0	40.86	H / 1.00 / 151	-67.05	-54.05

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Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 6 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
3.266 GHz	44.35 Pk	5.0 / 30.67 / 47.55 / 0.0	32.47	H / 1.00 / 151	-75.44	-62.44
4.544 GHz	44.85 Pk	6.15 / 32.39 / 45.32 / 0.0	38.07	H / 1.00 / 151	-69.84	-56.84
5.254 GHz	42.1 Pk	6.65 / 33.75 / 44.74 / 0.0	37.75	H / 1.00 / 151	-70.16	-57.16
7.2 GHz	51.3 Pk	8.1 / 35.86 / 45.78 / 0.0	49.48	H / 1.00 / 151	-58.43	-45.43
6.986 GHz	49.75 Pk	8.1 / 35.34 / 45.74 / 0.0	47.45	H / 1.00 / 151	-60.46	-47.46
5.988 GHz	46.05 Pk	7.09 / 34.35 / 45.66 / 0.0	41.83	H / 1.00 / 151	-66.08	-53.08
5.214 GHz	45.7 Pk	6.63 / 33.69 / 44.66 / 0.0	41.36	H / 1.00 / 151	-66.55	-53.55
4.387 GHz	48.3 Pk	6.1 / 32.33 / 45.84 / 0.0	40.89	H / 1.00 / 151	-67.02	-54.02
4.345 GHz	56.7 Pk	6.1 / 32.34 / 45.87 / 0.0	49.27	H / 1.00 / 151	-58.64	-45.64
4.32 GHz	47.7 Pk	6.1 / 32.35 / 45.89 / 0.0	40.27	H / 1.00 / 151	-67.64	-54.64
3.476 GHz	53.85 Pk	5.26 / 31.14 / 47.32 / 0.0	42.93	H / 1.00 / 151	-64.98	-51.98
3.195 GHz	50.75 Pk	4.94 / 30.51 / 47.65 / 0.0	38.55	H / 1.00 / 151	-69.36	-56.36
3.124 GHz	53.05 Pk	4.87 / 30.35 / 47.17 / 0.0	41.11	H / 1.00 / 151	-66.8	-53.8
2.982 GHz	50.25 Pk	4.74 / 30.03 / 48.19 / 0.0	36.82	H / 1.00 / 151	-71.09	-58.09
7.2 GHz maxed:						
7.2 GHz	51.4 Pk	8.1 / 35.86 / 45.78 / 0.0	49.58	H / 1.10 / 124	-58.33	-45.33
5.988 GHz	50.1 Pk	7.09 / 34.35 / 45.66 / 0.0	45.88	H / 1.10 / 124	-62.03	-49.03
2.414 GHz	56.35 Pk	4.31 / 28.57 / 49.36 / 0.0	39.87	H / 1.10 / 124	-68.04	-55.04
1.917 GHz	57.6 Pk	3.88 / 27.72 / 49.91 / 0.0	39.29	H / 1.10 / 124	-68.62	-55.62
1.846 GHz	61.3 Pk	3.83 / 27.27 / 49.79 / 0.0	42.61	H / 1.10 / 124	-65.3	-52.3
1.633 GHz	66.6 Pk	3.55 / 25.93 / 49.58 / 0.0	46.5	H / 1.10 / 124	-61.41	-48.41
1.491 GHz	72.15 Pk	3.42 / 25.11 / 49.8 / 0.0	50.88	H / 1.10 / 124	-57.03	-44.03
1.278 GHz	66.35 Pk	3.1 / 25.35 / 49.25 / 0.0	45.54	H / 1.10 / 124	-62.37	-49.37
1.207 GHz	69.05 Pk	3.01 / 25.43 / 49.62 / 0.0	47.87	H / 1.10 / 124	-60.04	-47.04

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Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 7 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
1.065 GHz	69.7 Pk	2.83 / 25.59 / 49.22 / 0.0	48.9	H / 1.10 / 124	-59.01	-46.01
1.49 GHz maxed:						
1.491 GHz	73.1 Pk	3.42 / 25.11 / 49.8 / 0.0	51.83	H / 1.15 / 111	-56.08	-43.08
1.491 GHz	72.53 Av	3.42 / 25.11 / 49.8 / 0.0	51.26	H / 1.15 / 111	-56.65	-43.65
1.065 GHz	70.3 Pk	2.83 / 25.59 / 49.22 / 0.0	49.5	H / 1.15 / 111	-58.41	-45.41
1.065 GHz	69.88 Av	2.83 / 25.59 / 49.22 / 0.0	49.08	H / 1.15 / 111	-58.83	-45.83
1.207 GHz	62.05 Pk	3.01 / 25.43 / 49.62 / 0.0	40.87	H / 1.15 / 111	-67.04	-54.04
1.278 GHz	70.05 Pk	3.1 / 25.35 / 49.25 / 0.0	49.24	H / 1.15 / 111	-58.67	-45.67
4.34 GHz maxed:						
4.345 GHz	57.5 Pk	6.1 / 32.34 / 45.87 / 0.0	50.07	H / 1.27 / 54	-57.84	-44.84
4.345 GHz	55.37 Av	6.1 / 32.34 / 45.87 / 0.0	47.94	H / 1.27 / 54	-59.97	-46.97
3.476 GHz	58.5 Pk	5.26 / 31.14 / 47.32 / 0.0	47.58	H / 1.27 / 54	-60.33	-47.33
1.136 GHz	59.35 Pk	2.93 / 25.51 / 49.55 / 0.0	38.23	V / 1.27 / 54	-69.68	-56.68
4.34 GHz maxed:						
4.345 GHz	67.65 Pk	6.1 / 32.34 / 45.87 / 0.0	60.22	V / 1.45 / 28	-47.69	-34.69
4.345 GHz	66.56 Av	6.1 / 32.34 / 45.87 / 0.0	59.13	V / 1.45 / 28	-48.78	-35.78
4.387 GHz	57.5 Pk	6.1 / 32.33 / 45.84 / 0.0	50.09	V / 1.45 / 28	-57.82	-44.82
3.266 GHz	49.9 Pk	5.0 / 30.67 / 47.55 / 0.0	38.02	V / 1.45 / 28	-69.89	-56.89
1.349 GHz	66.05 Pk	3.18 / 25.27 / 49.37 / 0.0	45.12	V / 1.45 / 28	-62.79	-49.79
1.136 GHz	62.0 Pk	2.93 / 25.51 / 49.55 / 0.0	40.88	V / 1.45 / 28	-67.03	-54.03
1.4999 GHz maxed:						

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Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 8 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
1.491 GHz	69.8 Pk	3.42 / 25.11 / 49.8 / 0.0	48.53	V / 1.95 / 145	-59.38	-46.38
No further significant EUT emissions up to 10 GHz, vert and hor ant.						
NOTE! 880 MHz Tx frequency:						
1.136 GHz	64.85 Pk	2.93 / 25.51 / 49.55 / 0.0	43.73	H / 1.95 / 145	-64.18	-51.18
3.52 GHz	50.15 Pk	5.33 / 31.24 / 47.26 / 0.0	39.47	H / 1.95 / 145	-68.44	-55.44
1.76 GHz	70.1 Pk	3.72 / 26.73 / 49.69 / 0.0	50.86	H / 1.95 / 145	-57.05	-44.05
2.64 GHz	55.2 Pk	4.44 / 29.04 / 48.44 / 0.0	40.24	H / 1.95 / 145	-67.67	-54.67
2.698 GHz	52.05 Pk	4.48 / 29.21 / 48.26 / 0.0	37.48	H / 1.95 / 145	-70.43	-57.43
4.4 GHz	58.5 Pk	6.1 / 32.33 / 45.83 / 0.0	51.1	H / 1.95 / 145	-56.81	-43.81
4.431 GHz	49.4 Pk	6.1 / 32.32 / 45.73 / 0.0	42.09	H / 1.95 / 145	-65.82	-52.82
5.28 GHz	47.05 Pk	6.67 / 33.78 / 44.8 / 0.0	42.7	H / 1.95 / 145	-65.21	-52.21
1.759 GHz maxed:						
1.76 GHz	75.75 Pk	3.72 / 26.73 / 49.69 / 0.0	56.51	H / 1.95 / 310	-51.4	-38.4
2.13 GHz	59.35 Pk	3.97 / 28.34 / 49.41 / 0.0	42.26	H / 1.95 / 310	-65.65	-52.65
1.759 GHz maxed:						
1.76 GHz	79.85 Pk	3.72 / 26.73 / 49.69 / 0.0	60.61	V / 1.20 / 168	-47.3	-34.3
1.278 GHz	71.9 Pk	3.1 / 25.35 / 49.25 / 0.0	51.09	V / 1.20 / 186	-56.82	-43.82
1.917 GHz	60.55 Pk	3.88 / 27.72 / 49.91 / 0.0	42.24	V / 1.20 / 186	-65.67	-52.67
2.64 GHz	64.2 Pk	4.44 / 29.04 / 48.44 / 0.0	49.24	V / 1.20 / 186	-58.67	-45.67
4.4 GHz	62.8 Pk	6.1 / 32.33 / 45.83 / 0.0	55.4	V / 1.20 / 186	-52.51	-39.51
4.431 GHz	52.55 Pk	6.1 / 32.32 / 45.73 / 0.0	45.24	V / 1.20 / 186	-62.67	-49.67
NOTE! 891.5 MHz Tx frequency:						

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Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 9 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
7.2 GHz	47.2 Pk	8.1 / 35.86 / 45.78 / 0.0	45.38	V / 1.23 / 186	-62.53	-49.53
4.99 GHz	46.3 Pk	6.49 / 33.37 / 44.66 / 0.0	41.5	V / 1.23 / 186	-66.41	-53.41
4.477 GHz	46.3 Pk	6.11 / 32.3 / 45.58 / 0.0	39.14	V / 1.23 / 186	-68.77	-55.77
4.457 GHz	61.15 Pk	6.1 / 32.31 / 45.64 / 0.0	53.92	V / 1.23 / 186	-53.99	-40.99
4.438 GHz	47.4 Pk	6.1 / 32.31 / 45.7 / 0.0	40.11	V / 1.23 / 186	-67.8	-54.8
3.692 GHz	46.15 Pk	5.56 / 31.67 / 46.95 / 0.0	36.42	V / 1.23 / 186	-71.49	-58.49
3.566 GHz	49.3 Pk	5.41 / 31.36 / 47.12 / 0.0	38.95	V / 1.23 / 186	-68.96	-55.96
3.55 GHz	48.5 Pk	5.38 / 31.31 / 47.17 / 0.0	38.03	V / 1.23 / 186	-69.88	-56.88
3.053 GHz	47.25 Pk	4.81 / 30.2 / 47.53 / 0.0	34.72	V / 1.23 / 186	-73.19	-60.19
2.769 GHz	49.1 Pk	4.53 / 29.41 / 48.26 / 0.0	34.77	V / 1.23 / 186	-73.14	-60.14
2.674 GHz	61.55 Pk	4.46 / 29.14 / 48.33 / 0.0	46.82	V / 1.23 / 186	-61.09	-48.09
2.272 GHz	52.0 Pk	4.15 / 28.46 / 49.07 / 0.0	35.54	V / 1.23 / 186	-72.37	-59.37
1.802 GHz	60.2 Pk	3.79 / 27.0 / 49.65 / 0.0	41.34	V / 1.23 / 186	-66.57	-53.57
1.783 GHz	68.35 Pk	3.76 / 26.88 / 49.66 / 0.0	49.32	V / 1.23 / 186	-58.59	-45.59
4.457 GHz maxed:						
4.457 GHz	64.3 Pk	6.1 / 32.31 / 45.64 / 0.0	57.07	V / 1.55 / 21	-50.84	-37.84
3.692 GHz	50.05 Pk	5.56 / 31.67 / 46.95 / 0.0	40.32	V / 1.55 / 21	-67.59	-54.59
4.477 GHz	53.05 Pk	6.11 / 32.3 / 45.58 / 0.0	45.89	V / 1.55 / 21	-62.02	-49.02
4.457 GHz maxed:						
4.457 GHz	61.45 Pk	6.1 / 32.31 / 45.64 / 0.0	54.22	H / 2.00 / 24	-53.69	-40.69
3.566 GHz	53.2 Pk	5.41 / 31.36 / 47.12 / 0.0	42.85	H / 2.00 / 24	-65.06	-52.06
1.135 GHz maxed:						
1.562 GHz	62.9 Pk	3.49 / 25.49 / 49.62 / 0.0	42.26	H / 2.13 / 121	-65.65	-52.65
1.136 GHz	67.4 Pk	2.93 / 25.51 / 49.55 / 0.0	46.28	H / 2.13 / 121	-61.63	-48.63

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: Greg Jakubowski

Printed

Signature

RADIATED EMISSIONS



Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

Page: 10 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
993 MHz maxed:						
993.976 MHz	52.45 Qp	2.73 / 22.02 / 27.57 / 0.0	49.64	H / 1.43 / 118	-58.27	-45.27
Fundamental tx frequency:						
891.468 MHz	80.15 Pk	2.58 / 21.66 / 27.64 / 0.0	76.74	H / 1.43 / 118	-31.17	-18.17
891.468 MHz	79.85 Qp	2.58 / 21.66 / 27.64 / 0.0	76.44	H / 1.43 / 118	-31.47	-18.47
638.969 MHz	53.7 Qp	2.1 / 19.08 / 28.2 / 0.0	46.68	H / 1.43 / 118	-61.23	-48.23
187.54 MHz	52.4 Qp	1.13 / 9.6 / 27.1 / 0.0	36.03	H / 1.43 / 118	-71.88	-58.88
83.295 MHz	70.7 Qp	0.8 / 6.83 / 26.9 / 0.0	51.43	H / 1.43 / 118	-56.48	-43.48
69.219 MHz	60.6 Qp	0.7 / 8.48 / 27.0 / 0.0	42.78	H / 1.43 / 118	-65.13	-52.13
354.978 MHz	58.2 Qp	1.6 / 14.6 / 27.6 / 0.0	46.8	V / 1.43 / 118	-61.11	-48.11
NOTE! 880 Tx frequency:						
68.176 MHz	62.6 Qp	0.7 / 8.66 / 27.0 / 0.0	44.96	V / 1.43 / 118	-62.95	-49.95
69.219 MHz	62.95 Qp	0.7 / 8.48 / 27.0 / 0.0	45.13	V / 1.43 / 118	-62.78	-49.78
880.005 MHz	77.15 Pk	2.56 / 21.8 / 27.68 / 0.0	73.83	V / 1.43 / 118	-34.08	-21.08
880.005 MHz	77.15 Qp	2.56 / 21.8 / 27.68 / 0.0	73.83	V / 1.43 / 118	-34.08	-21.08
184.841 MHz	52.9 Qp	1.11 / 9.48 / 27.1 / 0.0	36.39	H / 1.43 / 118	-71.52	-58.52
425.9 MHz maxed:						
425.971 MHz	64.53 Qp	1.71 / 16.56 / 27.9 / 0.0	54.9	H / 1.00 / 65	-53.01	-40.01
860.437 MHz	50.0 Qp	2.53 / 21.12 / 27.75 / 0.0	45.9	H / 1.00 / 65	-62.01	-49.01
910 MHz maxed:						
910.723 MHz	71.0 Qp	2.61 / 21.11 / 27.6 / 0.0	67.12	H / 1.11 / 246	-40.79	-27.79
567.967 MHz	57.35 Qp	2.03 / 18.46 / 28.1 / 0.0	49.74	H / 1.11 / 246	-58.17	-45.17
212.968 MHz	61.3 Qp	1.21 / 10.16 / 27.11 / 0.0	45.56	H / 1.11 / 246	-62.35	-49.35

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: Greg Jakubowski

Printed

Signature

RADIATED EMISSIONS



Test Report #: WC505744 Run 1 Test Area: LTS

EUT Model #: DGVL-112110SYS Date: 11/7/2005

EUT Serial #: na EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C

Test Method: FCC part 22 Air Pressure: 98.0 kPa

Customer: ADC Telecommunications Rel. Humidity: 35.0 %

EUT Description: LRCS 800 MHz

Notes: "A" Band

Data File Name: 5744-1.dat

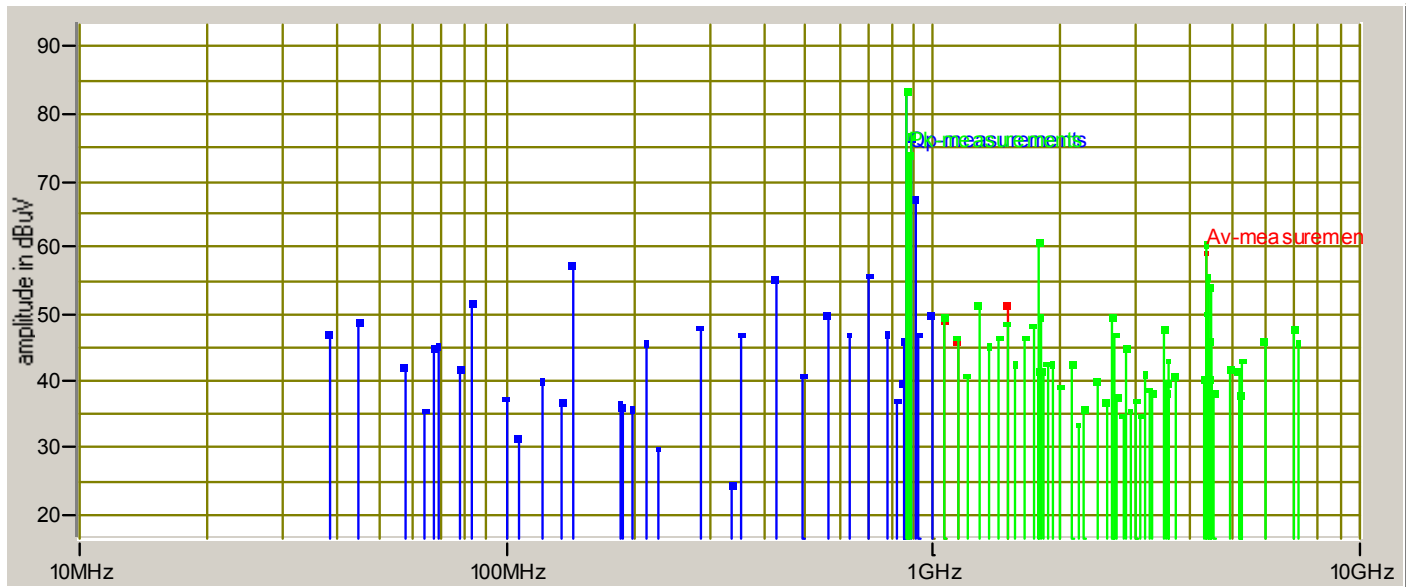
Page: 11 of 11

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13dBm Limit
------	-----------------	---	---------------------	----------------------------	----------------	--------------------------

No further significant EUT emissions 30 MHz to 10 GHz, vert and hor ant.

Graph:



Tested by: J. C. Sausen

Printed

Signature

Reviewed by: Greg Jakubowski

Printed

Signature

Appendix B

Constructional Data Form



EMC Test Plan and Constructional Data Form

PLEASE COMPLETE THIS DOCUMENT IN FULL, ENTERING N/A IF THE FIELD IS NOT APPLICABLE.

Applicant -- NOTE: This information will be input into your test report as shown below.
Press the F1 key at any time to get HELP for the current field selected.

Company: ADC Inc.

Address: P.O. Box 1101
Minneapolis, MN 55440-1101

Contact: Mark F. Miska Position: Compliance Engineer

Phone: 952-403-8340 Fax: 952-403-8858

E-mail Address: mark.miska@adc.com

General Equipment Description -- NOTE: This information will be input into your test report as shown below.

EUT Description Transports RF between a remote antenna and a customer provided base station.

EUT Name Digivance Long Range Coverage Solution 800 MHz System (A and B Band)

Model No.: DGVL-112XXSYS Serial No.: None
and DGVL-122XXSYS

Product Options: Receive Diversity and Reverse Link Monitor

Configurations to be tested: 800 MHz A Band and B Band Version with Diversity and RLM

Test Objective

- | | |
|--|---|
| ☐ EMC Directive 89/336/EEC (EMC) | ☒ FCC: Class ☐ A ☐ B Part <u>22</u> |
| Std: _____ | ☐ VCCI: Class ☐ A ☐ B |
| ☐ Machinery Directive 89/392/EEC (EMC) | ☐ BCIQ: Class ☐ A ☐ B |
| Std: _____ | ☐ Canada: Class ☐ A ☐ B |
| ☐ Medical Device Directive 93/42/EEC (EMC) | ☐ Australia: Class ☐ A ☐ B |
| Std: _____ | ☐ Other: _____ |
| ☐ Vehicle Directive 72/245/EEC (EMC) | |
| Std: _____ | |
| ☐ FDA Reviewers Guidance for Premarket Notification Submissions (EMC) | |

EMC Test Plan and Constructional Data Form



TÜV Product Service Certification Requested

- ☐ Attestation of Conformity (AoC)
 ☐ International EMC Mark (IEM)
- ☐ Certificate of Conformity (CoC)
 ☐ Compliance Document
- Protection Class (N/A for vehicles)
 ☐ Class I
 ☐ Class II
 ☐ Class III
- (Press **F1** when field is selected to show additional information on Protection Class.)

Attendance

Test will be: ☒ Attended by the customer ☐ Unattended by the customer

Failure - Complete this section if testing will not be attended by the customer.

If a failure occurs, TÜV Product Service should:

- ☐ Call contact listed above, if not available then stop testing. (After hrs phone): _____
- ☐ Continue testing to complete test series.
- ☐ Continue testing to define corrective action.
- ☐ Stop testing.

EUT Specifications and Requirements

Length: 19 Width: 8" Height: 12 Weight: 37 LB

Power Requirements

Regulations require testing to be performed at typical power ratings in the countries of intended use. (i.e., European power is typically 230 VAC 50 Hz or 400 VAC 50 Hz, single and three phase, respectively)

Voltage: 115 VAC (If battery powered, make sure battery life is sufficient to complete testing.)

of Phases: 1

Current (Amps/phase(max)): 6.7 Current (Amps/phase(nominal)): 7.3

Other _____

Other Special Requirements

None

Typical Installation and/or Operating Environment

(ie. Hospital, Small Business, Industrial/Factory, etc.)

Host indoor only with STM and LPA indoor or outdoor. System is typically employed as a Microcell.

EMC Test Plan and Constructional Data Form



EUT Power Cable

☐ Permanent	OR	☒ Removable	Length (in meters): <u>1</u>
☐ Shielded	OR	☒ Unshielded	
☐ Not Applicable			

EMC Test Plan and Constructional Data Form

EUT Interface Ports and Cables												
Interface			Shielding									
Type	Analog	Digital	Qty	Yes	No	Type	Termination	Connector Type	Port Termination	Length (in meters)	Removable	Permanent
EXAMPLE:												
RS232	☐	☒	2	☒	☐	Foil over braid	Coaxial	Metallized 9-pin D-Sub	Characteristic Impedance	6	☒	☐
RF "N" type	☒	☐	5	☒	☐	Braid	Coaxial	N	50 Ohms	>3	☒	☐
Alarm	☒	☐	1	☐	☒	Not Specified	N/A	6 Pin Standoff		>3	☒	☐
Alarm	☒	☐	1	☐	☒	Not Specified	N/A	4 Pin Standoff		>3	☒	☐
Fiber	☐	☒	3	☐	☒	N/A	N/A	SC	N/A	>3	☒	☐
9 Pin Din	☐	☒	4	☒	☐	Not Specified	AC Coupled	Din		>3	☒	☐
Net in	☐	☒	1	☐	☒	Not Specified	N/A	Cat 5		>3	☒	☐
Net out	☐	☒	1	☐	☒	Not Specified	N/A	Cat 5		3	☒	☐
DC power block	☒	☐	1	☐	☒	None		Terminal		>3	☒	☐
AC power	☒	☐	1	☐	☒	None				<3	☒	☐
STM to Amp Interconnect	☒	☒	1	☒	☒	Varied	Chassis	Special		.3	☒	☐
Battery Connection	☐	☐	1	☐	☒	N/A	N/A	2 Pin Standoff		<1	☒	☐
	☐	☐		☐	☐						☐	☐

EMC Test Plan and Constructional Data Form

EUT Software.

Revision Level: Version 7.00.00.01

Description: Digivance Element Management System (DEMS). System Management and Interface Matching Software.

EUT Operating Modes to be Tested -- list the operating modes to be used during test. It is recommended the equipment be tested while operating in a typical operation mode. FCC testing of personal computers and/or peripherals requires that a simple program generate a complete line of upper case H's. Provide a general description of all software, firmware, and PLD algorithms used in the equipment. List all code modules as described above, with the revision level used during testing. Consult with your TÜV Product Service Representative if additional assistance is required.

1. Max composite in and out
- 2.
- 3.

EUT System Components -- List and describe all components which are part of the EUT. For FCC testing a minimum configuration is required. (ie. Mouse, Printer, Monitor, External Disk Drive, Motherboard, etc.)

Description	Model #	Serial #	FCC ID #
Host Unit	DGVL-102010HU	None	
STM A Band	DGVL-112101STM	None	
STM B Band	DGVL-122010STM	None	
Amp	DGVL-102000LPA	None	
Digivance LRCS 800 MHz System Model DGVL-112XXSYS and DGVL-122XXSYS consist of the HU, STM, and LPA.			

EMC Test Plan and Constructional Data Form



Support Equipment -- List and describe all support equipment which is not part of the EUT. (i.e. peripherals, simulators, etc)			
<i>Description</i>	<i>Model #</i>	<i>Serial #</i>	<i>FCC ID #</i>
Signal Generator	HP E4432B	MC22109	
DC Power Supply	Xantrex HPD 60-5	MC27884	

Oscillator Frequencies			
<i>Frequency</i>	<i>Derived Frequency</i>	<i>Component # / Location</i>	<i>Description of Use</i>

Power Supply			
<i>Manufacturer</i>	<i>Model #</i>	<i>Serial #</i>	<i>Type</i>
ADC			☐ Switched-mode: (Frequency) _____ ☐ Linear ☐ Other: _____
			☐ Switched-mode: (Frequency) _____ ☐ Linear ☐ Other: _____

Power Line Filters		
<i>Manufacturer</i>	<i>Model #</i>	<i>Location in EUT</i>
None		

EMC Test Plan and Constructional Data Form**Critical EMI Components (Capacitors, ferrites, etc.)**

<i>Description</i>	<i>Manufacturer</i>	<i>Part # or Value</i>	<i>Qty</i>	<i>Component # / Location</i>
None				

EMC Critical Detail -- Describe other EMC Design details used to reduce high frequency noise.

None

(PLEASE INSERT "ELECTRONIC SIGNATURE" BELOW IF POSSIBLE)

Authorization Signatures

Customer authorization to perform tests
according to this test plan.

Date

Test Plan/CDF Prepared By (please print)

Date

Reviewed by TÜV Product Service Associate

Date

Appendix C

Measurement Protocol



MEASUREMENT PROTOCOL

Environmental conditions in the lab, (TUV)

Temperature: 22 °C

Relative Humidity: 35 %

Atmospheric pressure: 98.0 kPa

Test Methodology

Emission testing is performed according to the procedures in ANSI C63.4-2003.

Measurement Uncertainty

The test system for conducted emissions is defined as the LISN, tuned receiver or spectrum analyzer, and coaxial cable. The test system has a measurement uncertainty of ± 1.8 dB. The test system for radiated emissions is defined as the antenna, the pre-amplifier, the spectrum analyzer and the coaxial cable. The test system has a measurement uncertainty of ± 4.8 dB. The equipment comprising the test systems is calibrated on an annual basis.

Justification

The Equipment Under Test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions. A cable is connected to each available port and either terminated with a peripheral into its characteristic impedance or left unterminated. When appropriate, the cables are manually manipulated with respect to each other to obtain maximum emissions from the unit.

Radiated Emissions

The final level, in dB μ V/m, equals the reading from the spectrum analyzer (Level dB μ V), adding the antenna correction factor and cable loss factor (Factor dB) to it, and subtracting the preamp gain (and duty cycle correction factor, if applicable). This result then has the limit subtracted from it to provide the Delta, which gives the tabular data as shown in the data sheets in Attachment A.

Example:

FREQ (MHz)	LEVEL (dB μ V)	CABLE/ANT/PREAMP (dB) (dB/m) (dB)	FINAL (dB μ V/m)	POL/HGT/AZ (m) (deg)	DELTA1
60.80	42.5Qp +	1.2 + 10.9 - 25.5 =	29.1	V 1.0 0.0	-10.9

Substitution Method

A radiated emission scan was also made, at TUV America's Wild River Lab Large Test Site, with the EUT's antenna replaced with a termination to demonstrate case radiation compliance to the -13 dBm requirement. Radiated emissions from the EUT are measured in the frequency range of 30 to 10000 MHz using a spectrum analyzer and appropriate broadband linearly polarized antennas. Table top equipment is placed on a 1.0 X 1.5 meter non-conducting table 80 centimeters above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. Interface cables that are closer than 40 centimeters to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimeters from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna is positioned 3 meters horizontally from the EUT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarizations and the EUT are rotated 360 degrees. The field strength levels were measured per ANSI C63.4. The EUT is then replaced with a tuned dipole antenna (below 1 GHz) or horn antenna (above 1 GHz). The substitute antenna was placed in the same polarization as the test antenna. A signal generator was used to generate a signal level that matched the highest level measured from the EUT. The signal generator level minus the cable loss from the signal generator to the substitute antenna plus the substitute antenna gain equals the spurious power level.

Test Equipment

All measurement instrumentation is traceable to the National Institute of Standards and Technology and is calibrated according to internal procedure.