

TEST RESULT SUMMARY

FCC Part 22

MANUFACTURER ADDRESS ADC Inc.
P.O. Box 1101
Minneapolis, MN 55440-1101

NAME OF EQUIPMENT Digivance® CXD 800 MHz A Band

MODEL NUMBERS **DGVF-03000000XXCRN**

TEST REPORT NUMBER WC505364.1

TEST DATES 17 October, 2005 (TÜV)
19 October, 2005 (ADC)

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 FCC Part 22.

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 FCC Part 22, Subpart C Section 22.355, "Frequency tolerance" and Subpart H Sections 22.913 "Effective radiated power limits" and 22.917 "Emission limitations for cellular".

Date: 24 October 2005

Tested By

Technical Writer



M. Schultz

G. S. Jakubowski

Not Transferable

EMC EMISSION - TEST REPORT

Test Report File No. : **WC505364.1** Date of issue: 24 October 2005

Model / Serial Nos. : **DGVF-03000000XXCRN**

Product Name : **Digivance® CXD 800 MHz A Band**

Applicant : **ADC Inc.**

Manufacturer : **ADC Inc.**

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

Test Result : **Positive** **Negative**

Test Project Number :
Reference(s) : **WC505364.1**

Total pages including
Appendices : **103**

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:

- | | | |
|---|---|------------------------------------|
| <input type="checkbox"/> - EN 50081-1 / 1991 | | |
| <input type="checkbox"/> - EN 55011 / 1991 | <input type="checkbox"/> - Group 1 | <input type="checkbox"/> - Group 2 |
| | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
| <input type="checkbox"/> - EN 55013 / 1990 | | |
| <input type="checkbox"/> - EN 55014 / 1987 | <input type="checkbox"/> - Household appliances and similar | |
| | <input type="checkbox"/> - Portable tools | |
| | <input type="checkbox"/> - Semiconductor devices | |
| <input type="checkbox"/> - EN 55014 / A2:1990 | | |
| <input type="checkbox"/> - EN 55014 / 1993 | <input type="checkbox"/> - Household appliances and similar | |
| | <input type="checkbox"/> - Portable tools | |
| | <input type="checkbox"/> - Semiconductor devices | |
| <input type="checkbox"/> - EN 55015 / 1987 | | |
| <input type="checkbox"/> - EN 55015 / A1:1990 | | |
| <input type="checkbox"/> - EN 55015 / 1993 | | |
| <input type="checkbox"/> - EN 55022 / 1987 | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
| <input type="checkbox"/> - EN 55022 / 1994 | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
| <input type="checkbox"/> - BS | | |
| <input type="checkbox"/> - VCCI | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
| <input checked="" type="checkbox"/> - FCC Part 22 Subpart H | | |
| <input type="checkbox"/> - FCC Part 15 Subpart B | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
| <input type="checkbox"/> - CISPR 11 (1990) | <input type="checkbox"/> - Group 1 | <input type="checkbox"/> - Group 2 |
| | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
| <input type="checkbox"/> - CISPR 22 (1993) | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |

22.913 Effective radiated power limits

The transmit power measurements were tested at the following test location:

- Test not applicable

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

ADC's Test equipment used:

Manufacturer	Model	Description	ADC Serial No.	Cal Due
Aeroflex	49-30-33	Attenuator	n/a	CNR
HP	HP8563E	Spectrum Analyzer	MC27690	6-22-06
HP	EPM-441A	Power Meter	MC27670	9-28-06

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

Transmit power data on next page:



**Effective Isotropic Radiated Power Test for ADC Inc.
Digivance CXD
Model Number DGVF-03000000XXCRN**

*Note: The EUT is a fixed repeater and not a base station.

This measurement was made as a direct conducted emission measurement. The output from the EUT antenna connector was connected to the spectrum analyzer. The carrier output, below, was conducted using a single CW signal generator. The spectrum analyzer level was offset to compensate for attenuators and cable loss between the EUT and the analyzer.

A CW signal was used at the low, mid and high parts of the selected band. The spectrum analyzer level was offset by 51.3 dB to compensate for attenuators and cable loss between the EUT and the analyzer.

Band A	(800 MHz)
Carrier Frequency	Carrier Output
869.0 MHz	<u>37.63</u> dBm
875.5 MHz	<u>40.47</u> dBm
880.0 MHz	<u>39.97</u> dBm

22.355 Frequency Tolerance

The Frequency Stability measurements were tested at the following test location:

- Test not applicable

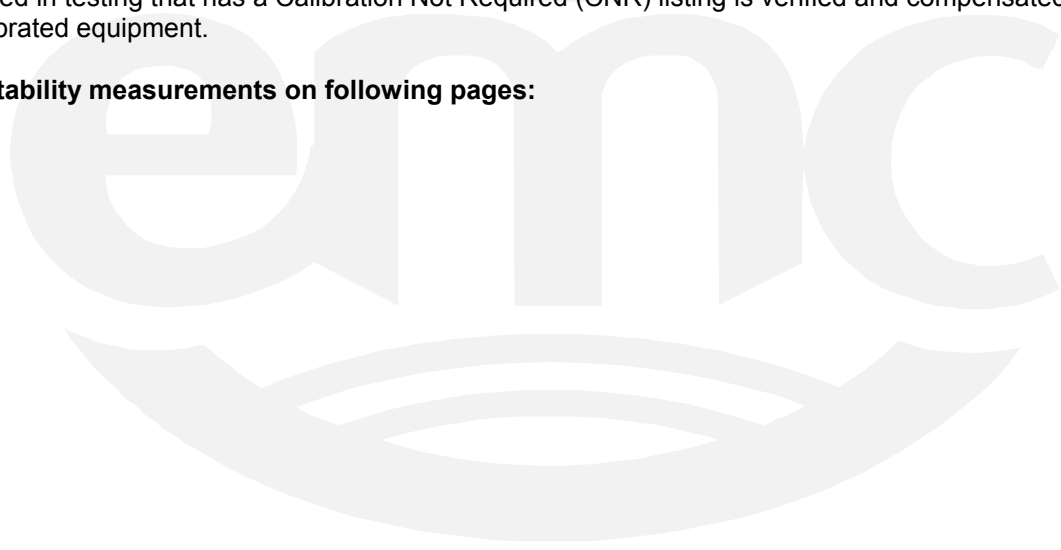
- Wild River Lab Large Test Site (Open Area Test Site)
- Wild River Lab Small Test Site (Open Area Test Site)
- ADC facility

ADC's Test equipment used:

Manufacturer	Model	Description	ADC Serial No.	Cal Due
Aeroflex	49-30-33	Attenuator	n/a	CNR
HP	5347A	Freq. counter	MC27569	7-21-06
Staco	1520CT	Variable Auto Transformer	MC/44655	CNR
Thermotron	n/a	Temperature Chamber	MC18966	3-1-06
HP	HP8563E	Spectrum Analyzer	MC27690	6-22-06
HP	EPM-441A	Power Meter	MC27670	9-28-06
Fluke	26III	Multimeter	MC22687	4-27-06

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

Frequency Stability measurements on following pages:



**Frequency Tolerance Test for ADC Inc.
Digivance CXD
Model Number DGVF-03000000XXCRN**

EUT A Band (800 MHz)

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	875.000 MHz	875.000 MHz	Yes
120 VAC	875.000 MHz	875.000 MHz	Yes
138 VAC	875.000 MHz	875.000 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
Temperature	Carrier Frequency	Measured Frequency	Meets Requirements?
-30 Deg. C	851.000 MHz	851.000 MHz	Yes
-20 Deg. C	851.000 MHz	851.000 MHz	Yes
-10 Deg. C	851.000 MHz	851.000 MHz	Yes
0 Deg. C	851.000 MHz	851.000 MHz	Yes
10 Deg. C	851.000 MHz	851.000 MHz	Yes
20 Deg. C	851.000 MHz	851.000 MHz	Yes
30 Deg. C	851.000 MHz	851.000 MHz	Yes
40 Deg. C	851.000 MHz	851.000 MHz	Yes
50 Deg. C	851.000 MHz	851.000 MHz	Yes
-30 Deg. C	875.000 MHz	875.000 MHz	Yes
-20 Deg. C	875.000 MHz	875.000 MHz	Yes
-10 Deg. C	875.000 MHz	875.000 MHz	Yes
0 Deg. C	875.000 MHz	875.000 MHz	Yes
10 Deg. C	875.000 MHz	875.000 MHz	Yes
20 Deg. C	875.000 MHz	875.000 MHz	Yes
30 Deg. C	875.000 MHz	875.000 MHz	Yes
40 Deg. C	875.000 MHz	875.000 MHz	Yes
50 Deg. C	875.000 MHz	875.000 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

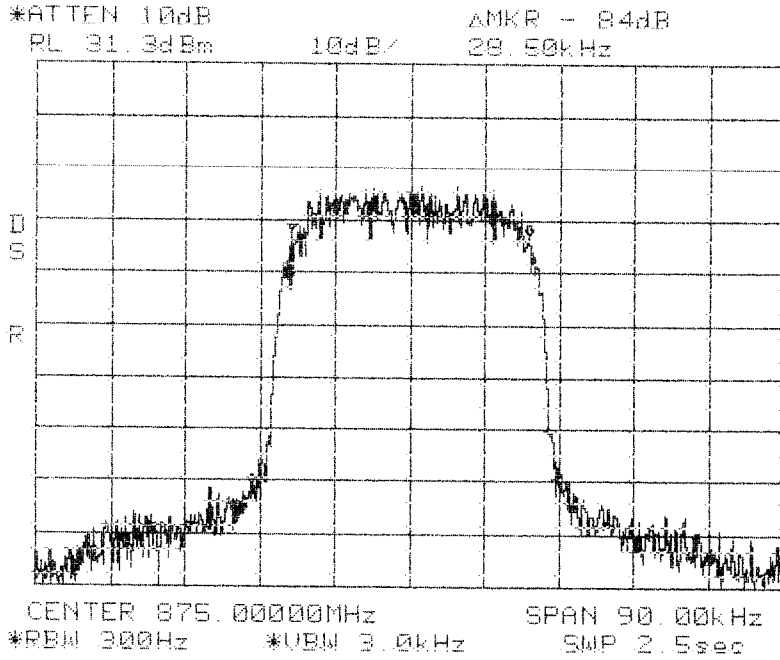
**Occupied Bandwidth Modulation Test for ADC Inc.
Digivance CXD
Model Number DGVF-03000000XXCRN**

An input/output Occupied Bandwidth test was done with modulation types: FM, TDMA, GSM, 16 QAM, and CDMA. The purpose was to determine the amount of distortion added to different types of modulation schemes by the EUT. The following plots show input signals vs. output signals.

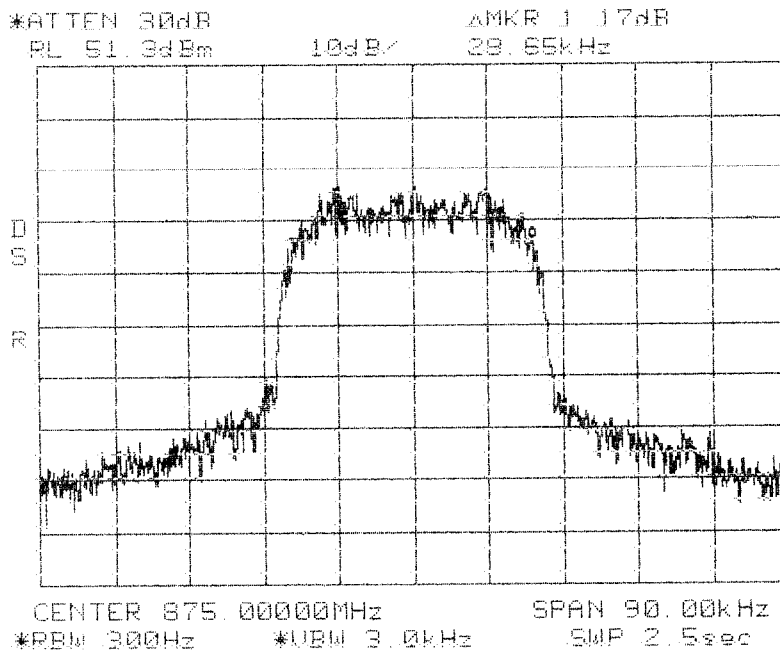
Results:

Pass (see plots)

Center: 875.0 MHz
Span: 90 kHz
RBW/VBW: 300 Hz / 3 kHz



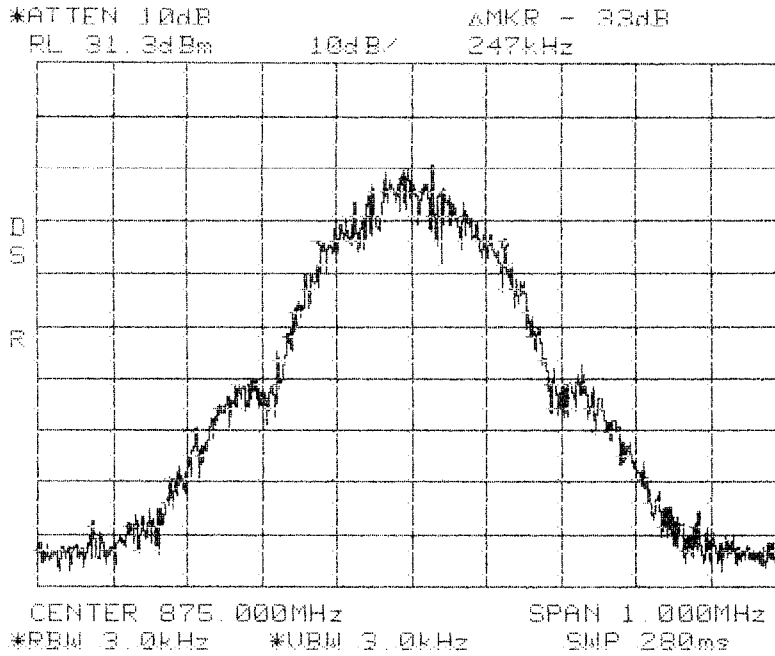
**Occupied Bandwidth
TDMA In
Cellular 800 MHz
A Band**



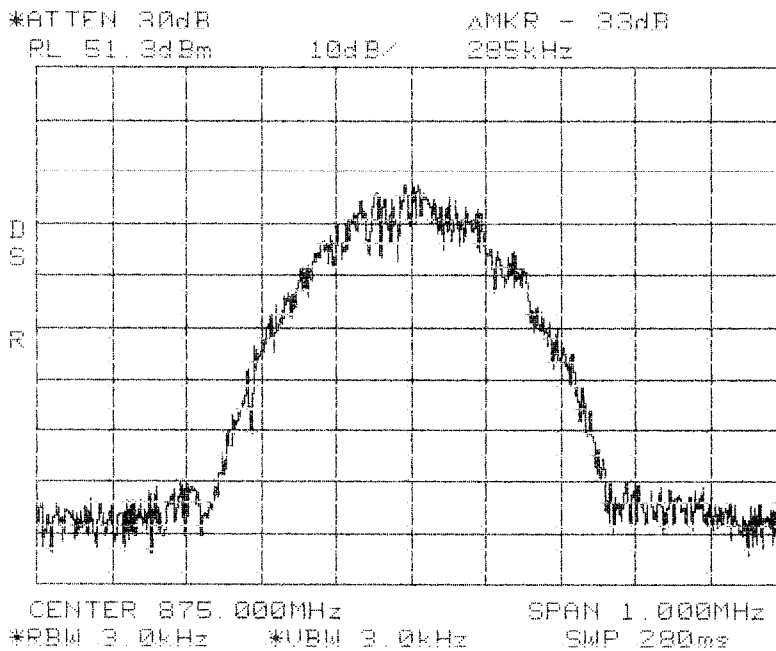
**Occupied Bandwidth
TDMA Out
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 90 kHz
RBW/VBW: 300 Hz / 3 kHz

Center: 875.0 MHz
Span: 1 MHz
RBW/VBW: 3 kHz / 3 kHz



**Occupied Bandwidth
GSM In
Cellular 800 MHz
A Band**



**Occupied Bandwidth
GSM Out
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 1 MHz
RBW/VBW: 3 kHz / 3 kHz

22.917 Emission limitations for cellular

The Emission limits measurements were performed at the following test location:

- - ADC facility (Conducted emissions)

ADC's Test equipment used:

Manufacturer	Model	Description	ADC Serial No.	Cal Due
Aeroflex	49-30-33	Attenuator	n/a	CNR
HP	HP8563E	Spectrum Analyzer	MC27690	6-22-06
HP	EPM-441A	Power Meter	MC27670	9-28-06

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

- - Wild River Lab Large Test Site (Radiated case emissions)

TÜV's Test equipment used:

Manufacturer	Model	Description	TUV asset ID	Cal Due
Electro-Metrics	EM-6917B	Biconicalog Periodic	3203	01 Apr 06
EMCO	3115	Ridge Guide Ant. 1-18 GHz	2075	24 Nov 05
Mini-Circuits	ZHL-1042J	Preamplifier	3961	Code B
Phase1 μ wave	SL18B4020	Preamplifier 1 – 18 GHz	3958	Code B
HP	8566B	Spectrum analyzer	8052	24 Mar 06
HP	85650A	Quasi-Peak Adapter	2681	03 Feb 06
HP	85662A	Analyzer Display	8051	24 Mar 06

Cal Code B = Calibration verification performed internally.

Emission Limits data on following pages:

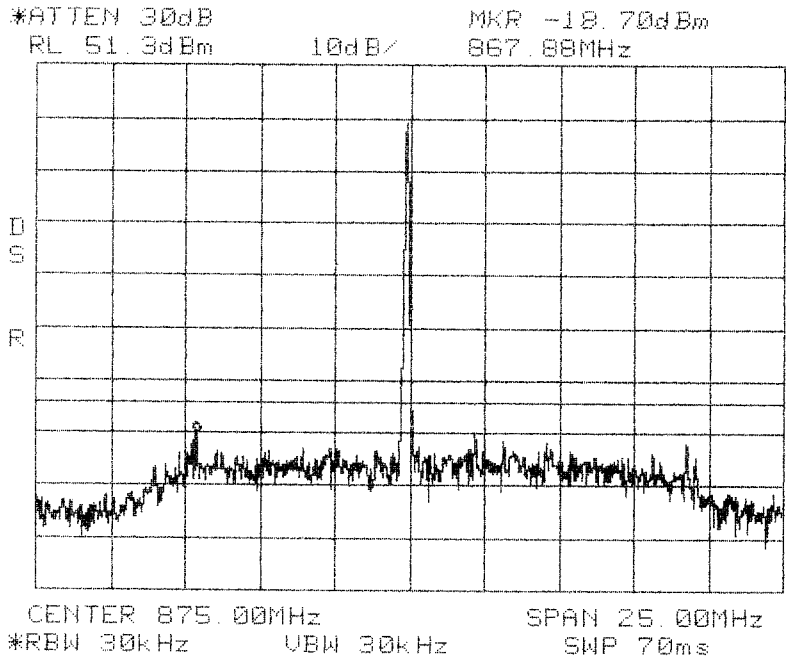
**Conducted Emission Limits Test for ADC Inc.
Digivance CXD
Model Number DGVF-03000000XXCRN**

The out of band emissions were measured directly from the EUT antenna output with a spectrum analyzer from 30 MHz to the 10th harmonic of the highest carrier frequency. Test signals used are CW, FM, TDMA, GSM, 16 QAM, and CDMA. The different signals were input one at a time to the EUT. In all cases, the out of band emissions were less than -13dBm from the equation
(19dBm - [43 + 10log(0.08W)])

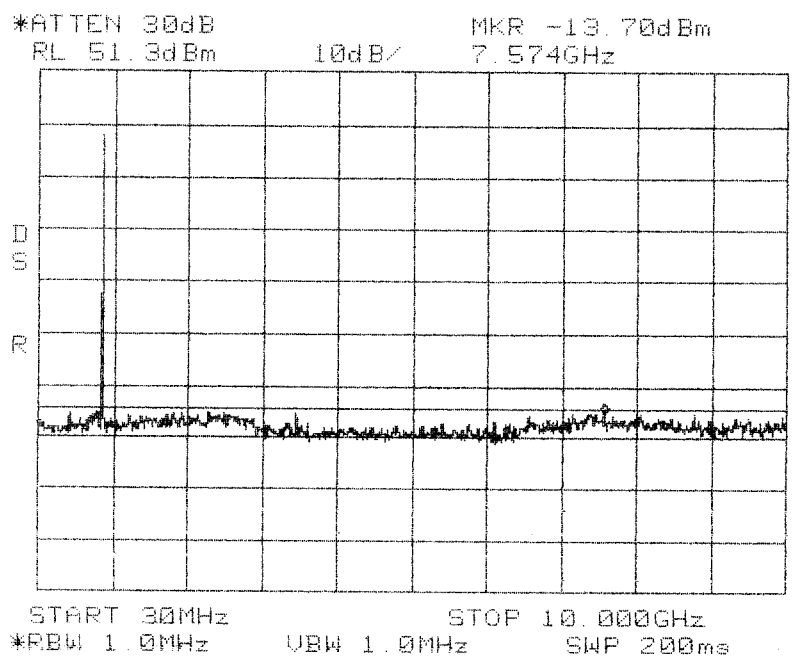
Band edge compliance is also demonstrated using a FM signal at the upper and lower limits of the band and a resolution bandwidth of 300 Hz.

Results:
Pass (See plots)

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



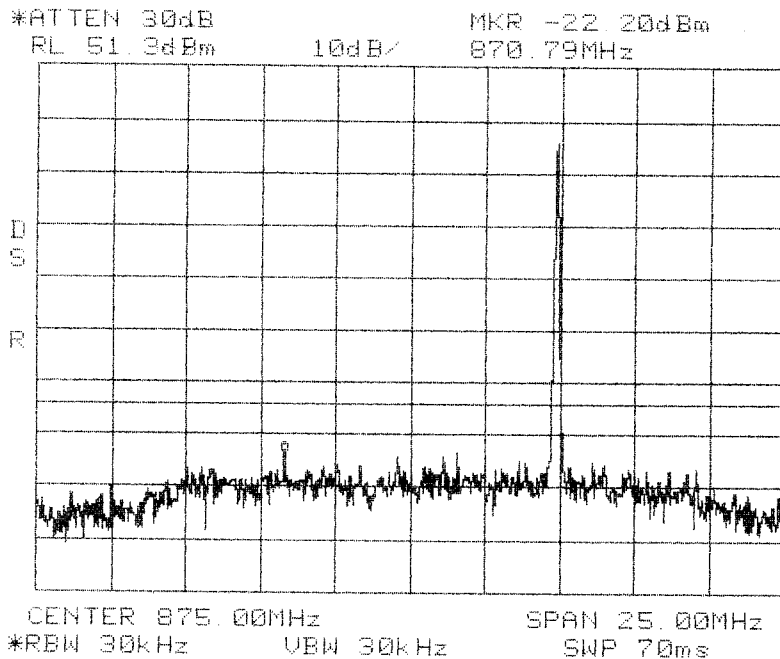
**Conducted Emissions
Mid
Cellular 800 MHz
A Band**



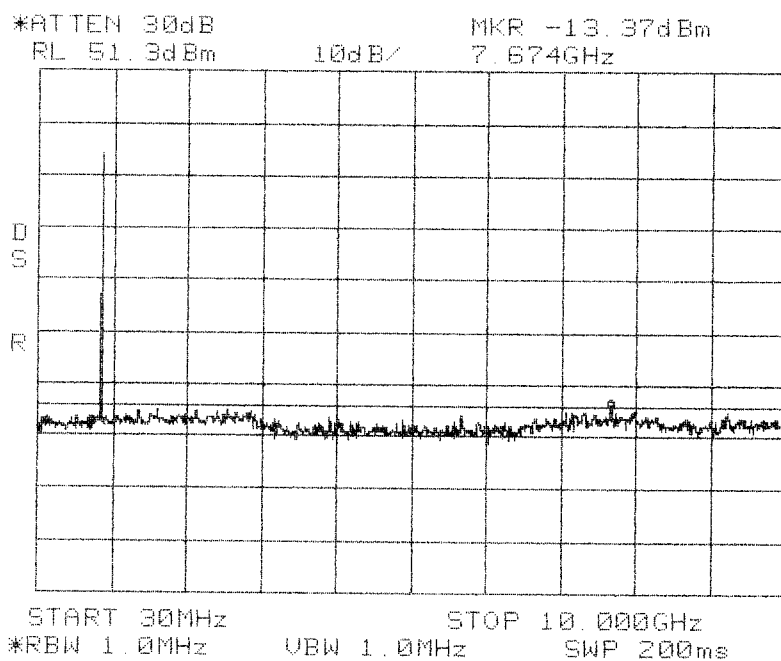
**Conducted Emissions
Mid
Cellular 800 MHz
A Band**

Span: 30 MHz to 10 GHz
RBW/VBW: 1 MHz

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



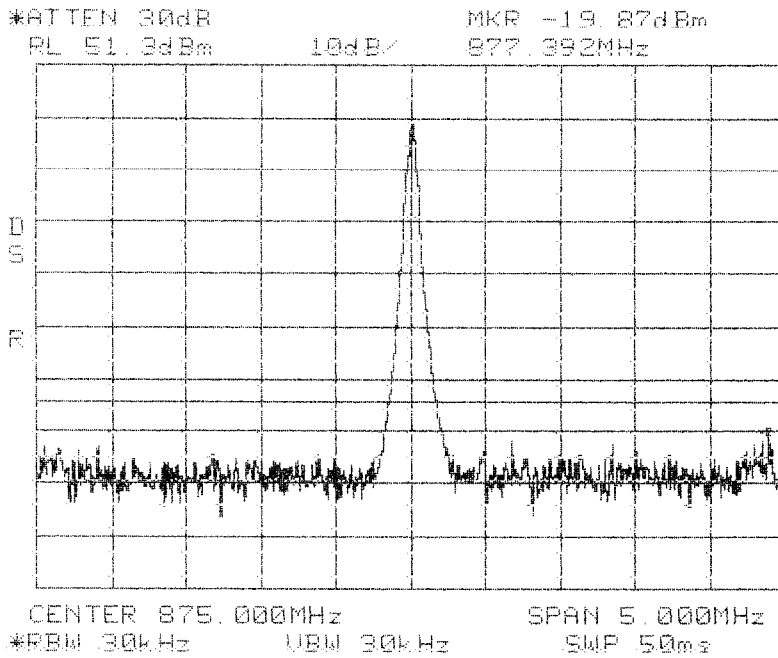
**Conducted Emissions
High
Cellular 800 MHz
A Band**



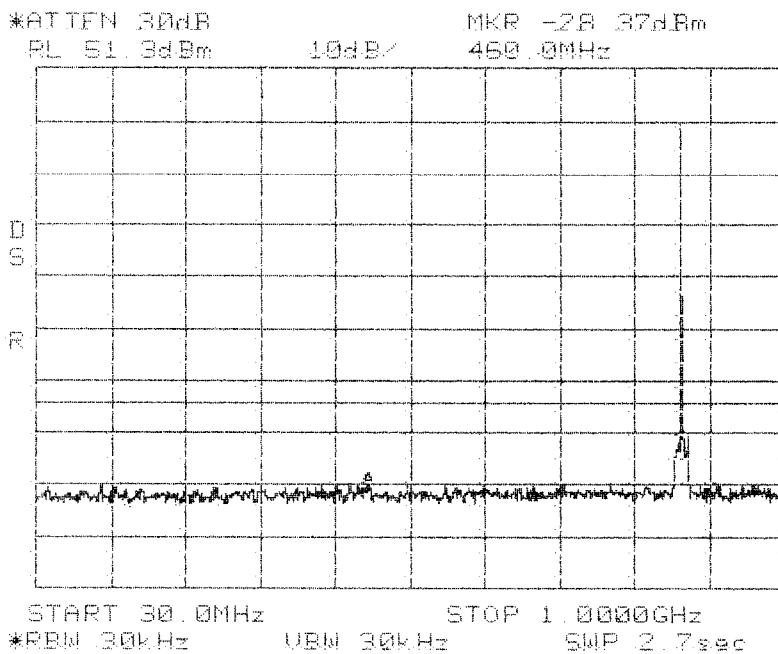
**Conducted Emissions
High
Cellular 800 MHz
A Band**

Span: 30 MHz to 10 GHz
RBW/VBW: 1 MHz

Center: 875.0 MHz
Span: 5 MHz
RBW/VBW: 30 kHz



**Conducted Emissions
TDMA
Cellular 800 MHz
A Band**

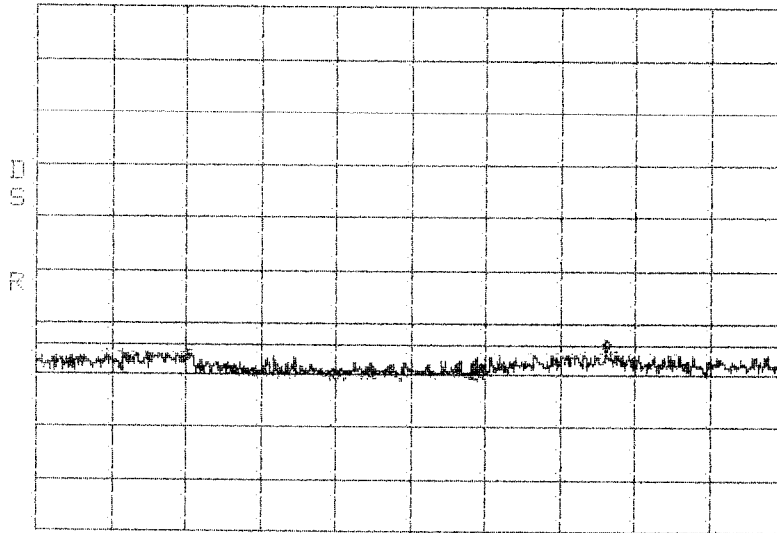


**Conducted Emissions
TDMA
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

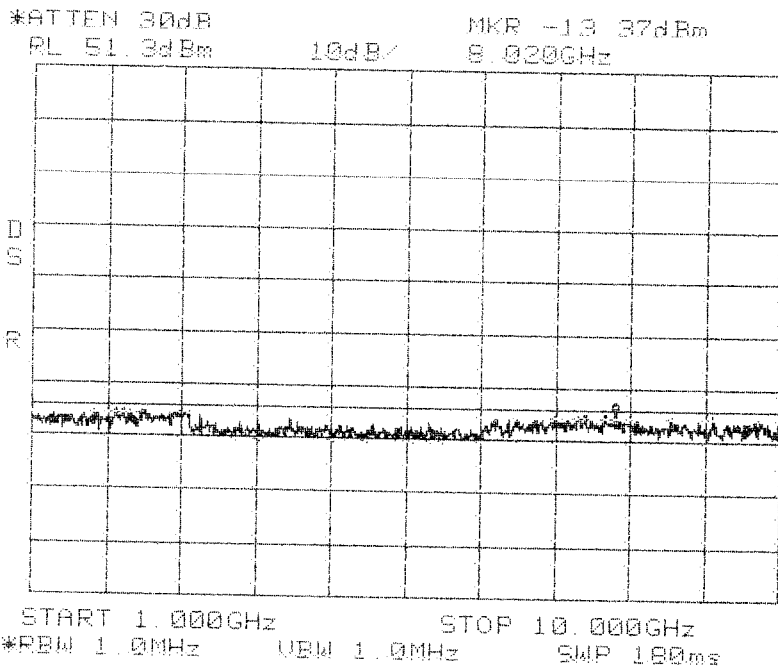
*ATTEN 30dB MKR -13.87dBm
RL 51.3dBm 10dB/ 7.955GHz



START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz VBW 1.0MHz SMP 180ms

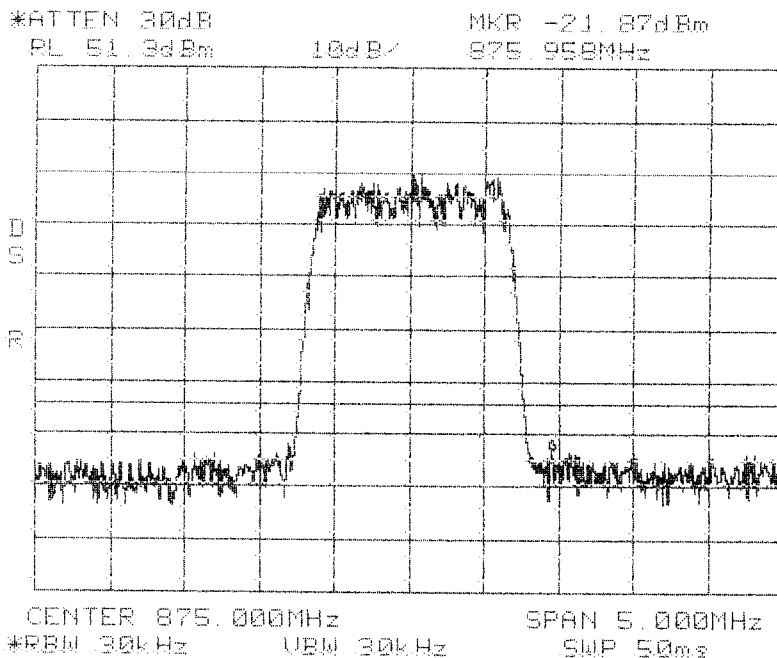
**Conducted Emissions
TDMA
Cellular 800 MHz
A Band**

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

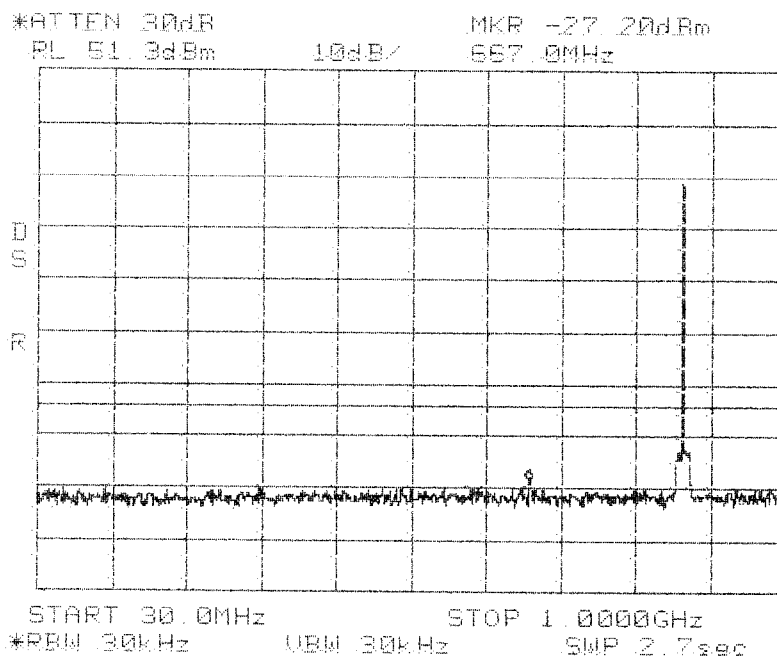


**Conducted Emissions
GSM
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 5 MHz
RBW/VBW: 30 kHz



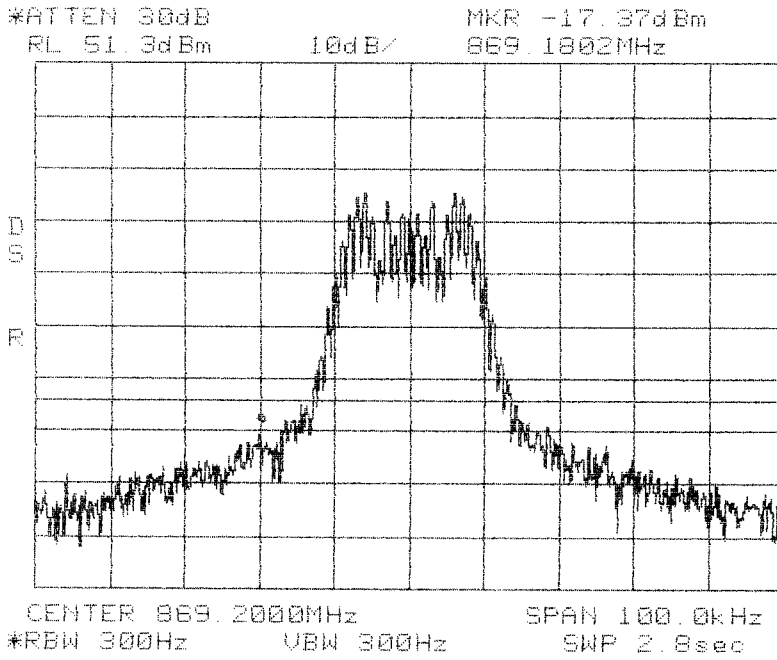
**Conducted Emissions
CDMA
Cellular 800 MHz
A Band**



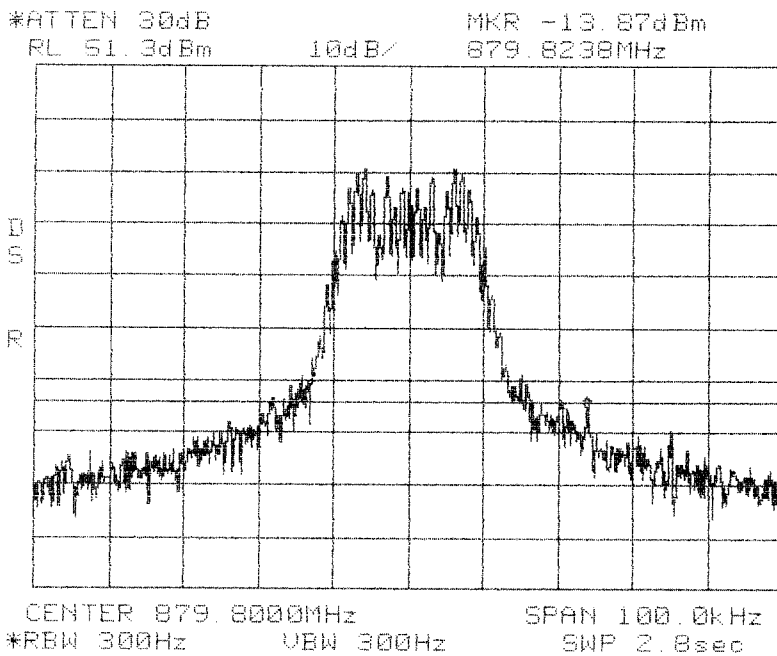
**Conducted Emissions
CDMA
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Center: 869.2 MHz
Span: 100 kHz
RBW/VBW: 300 Hz / 300 Hz



**Conducted Emissions
Band Edge
FM
Cellular 800 MHz
A Band**



**Conducted Emissions
Band Edge
FM
Cellular 800 MHz
A Band**

Center: 879.8 MHz
Span: 100 kHz
RBW/VBW: 300 Hz / 300 Hz

RADIATED EMISSIONS



Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

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List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
869 MHz						
36.222 MHz	50.45 Qp	0.76 / 17.09 / 27.24 / 0.0	41.06	V / 1.00 / 0	-42.54	n/a
40.122 MHz	52.2 Qp	0.8 / 16.18 / 27.1 / 0.0	42.08	V / 1.00 / 0	-41.52	n/a
46.854 MHz	64.7 Qp	0.9 / 14.34 / 27.1 / 0.0	52.84	V / 1.00 / 0	-30.76	n/a
51.63 MHz	58.0 Qp	0.9 / 12.81 / 27.03 / 0.0	44.68	V / 1.00 / 0	-38.92	n/a
59.658 MHz	56.45 Qp	1.0 / 10.77 / 27.0 / 0.0	41.22	V / 1.00 / 0	-42.38	n/a
64.206 MHz	58.8 Qp	1.0 / 9.95 / 27.0 / 0.0	42.75	V / 1.00 / 0	-40.85	n/a
72.024 MHz	55.85 Qp	1.1 / 8.57 / 27.0 / 0.0	38.52	V / 1.00 / 0	-45.08	n/a
90.894 MHz	56.25 Qp	1.3 / 7.5 / 26.9 / 0.0	38.15	V / 1.00 / 0	-45.45	n/a
102.606 MHz	61.5 Qp	1.4 / 8.3 / 27.0 / 0.0	44.2	V / 1.00 / 0	-39.4	n/a
109.992 MHz	55.5 Qp	1.4 / 8.4 / 27.06 / 0.0	38.24	V / 1.00 / 0	-45.36	n/a
121.848 MHz	47.2 Qp	1.51 / 8.0 / 27.09 / 0.0	29.62	V / 1.00 / 0	-53.98	n/a
194.92 MHz	48.75 Qp	1.98 / 9.99 / 27.1 / 0.0	33.62	V / 1.00 / 0	-49.98	n/a
233.86 MHz	45.45 Qp	2.15 / 10.58 / 27.2 / 0.0	30.98	V / 1.00 / 0	-52.62	n/a
240.808 MHz	42.35 Qp	2.19 / 10.8 / 27.2 / 0.0	28.14	V / 1.00 / 0	-55.46	n/a
245.56 MHz	44.85 Qp	2.23 / 10.99 / 27.2 / 0.0	30.87	V / 1.00 / 0	-52.73	n/a
257.465 MHz	40.65 Qp	2.37 / 11.69 / 27.2 / 0.0	27.51	V / 1.00 / 0	-56.09	n/a
283.732 MHz	42.9 Qp	2.43 / 12.02 / 27.43 / 0.0	29.92	V / 1.00 / 0	-53.68	n/a
288.466 MHz	44.9 Qp	2.45 / 11.99 / 27.45 / 0.0	31.89	V / 1.00 / 0	-51.71	n/a
295.007 MHz	40.6 Qp	2.48 / 12.25 / 27.48 / 0.0	27.85	V / 1.00 / 0	-55.75	n/a
328.421 MHz	36.65 Qp	2.64 / 13.1 / 27.54 / 0.0	24.85	V / 1.00 / 0	-58.75	n/a
333.334 MHz	42.9 Qp	2.66 / 13.35 / 27.56 / 0.0	31.35	V / 1.00 / 0	-52.25	n/a
343.306 MHz	43.9 Qp	2.7 / 14.32 / 27.6 / 0.0	33.32	V / 1.00 / 0	-50.28	n/a
300.682 MHz	43.2 Qp	2.51 / 12.48 / 27.5 / 0.0	30.69	V / 1.00 / 0	-52.91	n/a
324.904 MHz	43.8 Qp	2.62 / 13.04 / 27.52 / 0.0	31.94	V / 1.00 / 0	-51.66	n/a
343.3 MHz	44.35 Qp	2.7 / 14.32 / 27.6 / 0.0	33.77	V / 1.00 / 0	-49.83	n/a

Tested by: Michael Schultz

Printed

Signature

Reviewed by: G. Jakubowski

Printed

Signature

RADIATED EMISSIONS



Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

Page: 2 of 16

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
386.206 MHz	45.25 Qp	2.87 / 15.17 / 27.74 / 0.0	35.55	V / 1.00 / 0	-48.05	n/a
383.524 MHz	39.75 Qp	2.86 / 15.01 / 27.72 / 0.0	29.9	V / 1.00 / 0	-53.7	n/a
429.125 MHz	47.1 Qp	3.02 / 16.36 / 27.9 / 0.0	38.58	V / 1.00 / 0	-45.02	n/a
472.031 MHz	46.05 Qp	3.22 / 17.54 / 27.9 / 0.0	38.91	V / 1.00 / 0	-44.69	n/a
501.149 MHz	46.45 Qp	3.35 / 17.32 / 27.95 / 0.0	39.17	V / 1.00 / 0	-44.43	n/a
514.943 MHz	40.75 Qp	3.39 / 18.11 / 27.99 / 0.0	34.26	V / 1.00 / 0	-49.34	n/a
557.855 MHz	44.05 Qp	3.5 / 18.6 / 28.1 / 0.0	38.06	V / 1.00 / 0	-45.54	n/a
666.66 MHz	34.4 Qp	3.92 / 19.9 / 28.03 / 0.0	30.19	V / 1.00 / 0	-53.41	n/a
815.323 MHz	35.55 Qp	4.4 / 21.53 / 27.8 / 0.0	33.67	V / 1.00 / 0	-49.93	n/a
944.058 MHz	37.9 Qp	4.72 / 22.74 / 27.6 / 0.0	37.76	V / 1.00 / 0	-45.84	n/a
214.561 MHz	53.1 Qp	2.02 / 10.26 / 27.12 / 0.0	38.26	V / 1.00 / 0	-45.34	n/a
269.384 MHz	43.9 Qp	2.4 / 12.27 / 27.3 / 0.0	31.27	V / 1.00 / 0	-52.33	n/a
46.854 MHz	65.8 Qp	0.9 / 14.34 / 27.1 / 0.0	53.94	V / 1.00 / 45	-29.66	n/a
51.63 MHz	59.0 Qp	0.9 / 12.81 / 27.03 / 0.0	45.68	V / 1.00 / 45	-37.92	n/a
59.658 MHz	56.7 Qp	1.0 / 10.77 / 27.0 / 0.0	41.47	V / 1.00 / 45	-42.13	n/a
257.465 MHz	41.15 Qp	2.37 / 11.69 / 27.2 / 0.0	28.01	V / 1.00 / 45	-55.59	n/a
288.466 MHz	45.9 Qp	2.45 / 11.99 / 27.45 / 0.0	32.89	V / 1.00 / 45	-50.71	n/a
295.007 MHz	42.2 Qp	2.48 / 12.25 / 27.48 / 0.0	29.45	V / 1.00 / 45	-54.15	n/a
386.206 MHz	45.4 Qp	2.87 / 15.17 / 27.74 / 0.0	35.7	V / 1.00 / 45	-47.9	n/a
36.222 MHz	49.35 Qp	0.76 / 18.31 / 27.24 / 0.0	41.18	V / 1.00 / 90	-42.42	n/a
102.606 MHz	61.25 Qp	1.4 / 9.1 / 27.0 / 0.0	44.75	V / 1.00 / 90	-38.85	n/a
121.848 MHz	48.75 Qp	1.51 / 8.72 / 27.09 / 0.0	31.88	V / 1.00 / 90	-51.72	n/a
214.561 MHz	57.35 Qp	2.02 / 10.55 / 27.12 / 0.0	42.8	V / 1.00 / 90	-40.8	n/a
333.334 MHz	43.7 Qp	2.66 / 14.0 / 27.56 / 0.0	32.8	V / 1.00 / 90	-50.8	n/a

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

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List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
72.024 MHz	56.95 Qp	1.1 / 8.3 / 27.0 / 0.0	39.35	V / 1.00 / 135	-44.25	n/a
102.606 MHz	61.8 Qp	1.4 / 9.1 / 27.0 / 0.0	45.3	V / 1.00 / 135	-38.3	n/a
257.465 MHz	47.65 Qp	2.37 / 12.22 / 27.2 / 0.0	35.04	V / 1.00 / 135	-48.56	n/a
815.323 MHz	37.25 Qp	4.4 / 21.65 / 27.8 / 0.0	35.49	V / 1.00 / 135	-48.11	n/a
36.222 MHz	49.55 Qp	0.76 / 18.31 / 27.24 / 0.0	41.38	V / 1.00 / 180	-42.22	n/a
257.465 MHz	51.75 Qp	2.37 / 12.22 / 27.2 / 0.0	39.14	V / 1.00 / 180	-44.46	n/a
295.007 MHz	45.95 Qp	2.48 / 13.0 / 27.48 / 0.0	33.95	V / 1.00 / 180	-49.65	n/a
343.3 MHz	45.55 Qp	2.7 / 14.47 / 27.6 / 0.0	35.12	V / 1.00 / 180	-48.48	n/a
383.524 MHz	41.8 Qp	2.86 / 15.49 / 27.72 / 0.0	32.43	V / 1.00 / 180	-51.17	n/a
72.024 MHz	57.65 Qp	1.1 / 8.3 / 27.0 / 0.0	40.05	V / 1.00 / 225	-43.55	n/a
90.894 MHz	56.6 Qp	1.3 / 7.94 / 26.9 / 0.0	38.94	V / 1.00 / 225	-44.66	n/a
295.007 MHz	47.05 Qp	2.48 / 13.0 / 27.48 / 0.0	35.05	V / 1.00 / 225	-48.55	n/a
328.421 MHz	36.4 Qp	2.64 / 13.77 / 27.54 / 0.0	25.27	V / 1.00 / 225	-58.33	n/a
333.334 MHz	44.4 Qp	2.66 / 14.0 / 27.56 / 0.0	33.5	V / 1.00 / 225	-50.1	n/a
514.943 MHz	44.4 Qp	3.39 / 17.9 / 27.99 / 0.0	37.7	V / 1.00 / 225	-45.9	n/a
72.024 MHz	60.4 Qp	1.1 / 8.3 / 27.0 / 0.0	42.8	V / 1.00 / 270	-40.8	n/a
90.894 MHz	59.15 Qp	1.3 / 7.94 / 26.9 / 0.0	41.49	V / 1.00 / 270	-42.11	n/a
102.606 MHz	62.35 Qp	1.4 / 9.1 / 27.0 / 0.0	45.85	V / 1.00 / 270	-37.75	n/a
283.732 MHz	43.1 Qp	2.43 / 12.55 / 27.43 / 0.0	30.65	V / 1.00 / 270	-52.95	n/a
383.524 MHz	42.1 Qp	2.86 / 15.49 / 27.72 / 0.0	32.73	V / 1.00 / 270	-50.87	n/a
64.206 MHz	59.3 Qp	1.0 / 10.34 / 27.0 / 0.0	43.64	V / 1.00 / 315	-39.96	n/a
233.86 MHz	46.45 Qp	2.15 / 11.08 / 27.2 / 0.0	32.47	V / 1.00 / 315	-51.13	n/a

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

Page: 4 of 16

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
240.808 MHz	43.15 Qp	2.19 / 11.24 / 27.2 / 0.0	29.38	V / 1.00 / 315	-54.22	n/a
245.56 MHz	44.65 Qp	2.23 / 11.48 / 27.2 / 0.0	31.16	V / 1.00 / 315	-52.44	n/a
269.384 MHz	44.9 Qp	2.4 / 12.21 / 27.3 / 0.0	32.21	V / 1.00 / 315	-51.39	n/a
283.732 MHz	46.85 Qp	2.43 / 12.55 / 27.43 / 0.0	34.4	V / 1.00 / 315	-49.2	n/a
288.466 MHz	48.6 Qp	2.45 / 12.74 / 27.45 / 0.0	36.34	V / 1.00 / 315	-47.26	n/a
300.682 MHz	46.2 Qp	2.51 / 13.21 / 27.5 / 0.0	34.42	V / 1.00 / 315	-49.18	n/a
343.3 MHz	48.65 Qp	2.7 / 14.47 / 27.6 / 0.0	38.22	V / 1.00 / 315	-45.38	n/a
64.206 MHz	59.85 Qp	1.0 / 10.34 / 27.0 / 0.0	44.19	V / 3.00 / 315	-39.41	n/a
72.024 MHz	60.6 Qp	1.1 / 8.3 / 27.0 / 0.0	43.0	V / 3.00 / 315	-40.6	n/a
324.904 MHz	46.15 Qp	2.62 / 13.7 / 27.52 / 0.0	34.95	V / 3.00 / 315	-48.65	n/a
343.3 MHz	49.95 Qp	2.7 / 14.47 / 27.6 / 0.0	39.52	V / 3.00 / 315	-44.08	n/a
429.125 MHz	49.2 Qp	3.02 / 16.27 / 27.9 / 0.0	40.6	V / 3.00 / 315	-43.0	n/a
501.149 MHz	50.2 Qp	3.35 / 17.61 / 27.95 / 0.0	43.21	V / 3.00 / 315	-40.39	n/a
514.943 MHz	44.6 Qp	3.39 / 17.9 / 27.99 / 0.0	37.9	V / 3.00 / 315	-45.7	n/a
666.66 MHz	42.25 Qp	3.92 / 19.47 / 28.03 / 0.0	37.61	V / 3.00 / 315	-45.99	n/a
72.024 MHz	61.1 Qp	1.1 / 8.3 / 27.0 / 0.0	43.5	V / 3.00 / 270	-40.1	n/a
557.855 MHz	49.85 Qp	3.5 / 18.14 / 28.1 / 0.0	43.4	V / 3.00 / 180	-40.2	n/a
815.323 MHz	37.9 Qp	4.4 / 21.65 / 27.8 / 0.0	36.14	V / 3.00 / 180	-47.46	n/a
383.524 MHz	42.25 Qp	2.86 / 15.49 / 27.72 / 0.0	32.88	V / 3.00 / 135	-50.72	n/a
59.658 MHz	56.6 Qp	1.0 / 11.7 / 27.0 / 0.0	42.3	V / 3.00 / 45	-41.3	n/a
501.149 MHz	52.2 Qp	3.35 / 17.61 / 27.95 / 0.0	45.21	V / 3.00 / 0	-38.39	n/a

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

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List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
514.943 MHz	49.05 Qp	3.39 / 17.9 / 27.99 / 0.0	42.35	V / 3.00 / 0	-41.25	n/a
869.006 MHz	45.55 Qp	4.54 / 21.9 / 27.72 / 0.0	44.27	V / 1.00 / 0	-39.33	n/a
Maximized Vertical frequencies 30-1000 MHz						
869.006 MHz	59.95 Qp	4.54 / 21.9 / 27.72 / 0.0	58.67	V / 1.00 / 283	-24.93	n/a
501.149 MHz	54.05 Qp	3.35 / 17.61 / 27.95 / 0.0	47.06	V / 2.40 / 0	-36.54	n/a
102.606 MHz	61.0 Qp	1.4 / 9.1 / 27.0 / 0.0	44.5	V / 1.00 / 0	-39.1	n/a
51.63 MHz	58.2 Qp	0.9 / 13.71 / 27.03 / 0.0	45.78	V / 1.00 / 0	-37.82	n/a
46.854 MHz	64.5 Qp	0.9 / 14.84 / 27.1 / 0.0	53.14	V / 1.00 / 70	-30.46	n/a
514.943 MHz	51.55 Qp	3.39 / 17.9 / 27.99 / 0.0	44.85	H / 1.00 / 45	-38.75	n/a
383.524 MHz	44.5 Qp	2.86 / 15.49 / 27.72 / 0.0	35.13	H / 1.00 / 90	-48.47	n/a
386.206 MHz	45.55 Qp	2.87 / 15.41 / 27.74 / 0.0	36.09	H / 1.00 / 90	-47.51	n/a
383.524 MHz	46.7 Qp	2.86 / 15.49 / 27.72 / 0.0	37.33	H / 1.00 / 135	-46.27	n/a
386.206 MHz	46.8 Qp	2.87 / 15.41 / 27.74 / 0.0	37.34	H / 1.00 / 135	-46.26	n/a
429.125 MHz	51.2 Qp	3.02 / 16.27 / 27.9 / 0.0	42.6	H / 1.00 / 135	-41.0	n/a
944.058 MHz	40.25 Qp	4.72 / 22.6 / 27.6 / 0.0	39.97	H / 1.00 / 180	-43.63	n/a
815.323 MHz	41.7 Qp	4.4 / 21.65 / 27.8 / 0.0	39.94	H / 1.00 / 225	-43.66	n/a
333.334 MHz	47.6 Qp	2.66 / 14.0 / 27.56 / 0.0	36.7	H / 3.00 / 225	-46.9	n/a
257.465 MHz	51.9 Qp	2.37 / 12.22 / 27.2 / 0.0	39.29	H / 3.00 / 180	-44.31	n/a
295.007 MHz	47.45 Qp	2.48 / 13.0 / 27.48 / 0.0	35.45	H / 3.00 / 180	-48.15	n/a
295.007 MHz	49.5 Qp	2.48 / 13.0 / 27.48 / 0.0	37.5	H / 3.00 / 135	-46.1	n/a
Maximized Horizontal frequencies 30-1000 MHz						

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

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List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
514.943 MHz	52.1 Qp	3.39 / 17.9 / 27.99 / 0.0	45.4	H / 1.00 / 52	-38.2	n/a
429.125 MHz	51.95 Qp	3.02 / 16.27 / 27.9 / 0.0	43.35	H / 1.00 / 135	-40.25	n/a
1.738 GHz	53.85 Pk	3.68 / 26.59 / 49.72 / 0.0	34.4	V / 1.00 / 0	n/a	-49.2
1.002 GHz	57.3 Pk	2.75 / 25.66 / 48.75 / 0.0	36.96	V / 1.00 / 0	n/a	-46.64
1.073 GHz	55.95 Pk	2.84 / 25.58 / 49.28 / 0.0	35.09	V / 1.00 / 0	n/a	-48.51
1.103 GHz	60.55 Pk	2.88 / 25.55 / 49.49 / 0.0	39.49	V / 1.00 / 0	n/a	-44.11
1.116 GHz	59.2 Pk	2.9 / 25.53 / 49.52 / 0.0	38.12	V / 1.00 / 0	n/a	-45.48
1.155 GHz	61.1 Pk	2.95 / 25.49 / 49.58 / 0.0	39.95	V / 1.00 / 0	n/a	-43.65
1.202 GHz	62.35 Pk	3.01 / 25.43 / 49.65 / 0.0	41.14	V / 1.00 / 0	n/a	-42.46
1.244 GHz	60.55 Pk	3.06 / 25.39 / 49.43 / 0.0	39.56	V / 1.00 / 0	n/a	-44.04
1.373 GHz	61.1 Pk	3.2 / 25.24 / 49.48 / 0.0	40.06	V / 1.00 / 0	n/a	-43.54
1.416 GHz	60.95 Pk	3.29 / 25.19 / 49.64 / 0.0	39.79	V / 1.00 / 0	n/a	-43.81
1.459 GHz	59.3 Pk	3.38 / 25.14 / 49.73 / 0.0	38.09	V / 1.00 / 0	n/a	-45.51
1.674 GHz	65.4 Pk	3.59 / 26.19 / 49.7 / 0.0	45.48	V / 1.00 / 0	n/a	-38.12
1.704 GHz	67.5 Pk	3.62 / 26.38 / 49.77 / 0.0	47.74	V / 1.00 / 0	n/a	-35.86
1.717 GHz	61.0 Pk	3.65 / 26.46 / 49.75 / 0.0	41.36	V / 1.00 / 0	n/a	-42.24
1.759 GHz	59.8 Pk	3.72 / 26.73 / 49.69 / 0.0	40.55	V / 1.00 / 0	n/a	-43.05
1.888 GHz	59.5 Pk	3.86 / 27.54 / 49.93 / 0.0	40.97	V / 1.00 / 0	n/a	-42.63
1.974 GHz	59.95 Pk	3.9 / 28.08 / 49.7 / 0.0	42.22	V / 1.00 / 0	n/a	-41.38
2.446 GHz	54.2 Pk	4.33 / 28.59 / 49.25 / 0.0	37.88	V / 1.00 / 0	n/a	-45.72
4.733 GHz	57.55 Pk	6.27 / 32.81 / 45.38 / 0.0	51.25	V / 1.00 / 0	n/a	-32.35
1.073 GHz	58.7 Pk	2.84 / 25.58 / 49.28 / 0.0	37.84	V / 1.00 / 45	n/a	-45.76
1.116 GHz	64.65 Pk	2.9 / 25.53 / 49.52 / 0.0	43.57	V / 1.00 / 135	n/a	-40.03
1.244 GHz	67.65 Pk	3.06 / 25.39 / 49.43 / 0.0	46.66	V / 1.00 / 135	n/a	-36.94

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

Page: 7 of 16

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
1.373 GHz	63.2 Pk	3.2 / 25.24 / 49.48 / 0.0	42.16	V / 1.00 / 135	n/a	-41.44
1.759 GHz	63.2 Pk	3.72 / 26.73 / 49.69 / 0.0	43.95	V / 1.00 / 135	n/a	-39.65
1.888 GHz	65.45 Pk	3.86 / 27.54 / 49.93 / 0.0	46.92	V / 1.00 / 135	n/a	-36.68
1.459 GHz	63.8 Pk	3.38 / 25.14 / 49.73 / 0.0	42.59	V / 1.00 / 180	n/a	-41.01
1.717 GHz	63.4 Pk	3.65 / 26.46 / 49.75 / 0.0	43.76	V / 1.00 / 180	n/a	-39.84
1.738 GHz	58.05 Pk	3.68 / 26.59 / 49.72 / 0.0	38.6	V / 1.00 / 180	n/a	-45.0
2.446 GHz	59.7 Pk	4.33 / 28.59 / 49.25 / 0.0	43.38	V / 1.00 / 225	n/a	-40.22
1.202 GHz	64.6 Pk	3.01 / 25.43 / 49.65 / 0.0	43.39	V / 1.00 / 270	n/a	-40.21
1.202 GHz	65.85 Pk	3.01 / 25.43 / 49.65 / 0.0	44.64	V / 1.50 / 135	n/a	-38.96
Maximized Vertical frequencies 1-18 GHz						
1.704 GHz	65.25 Pk	3.62 / 26.38 / 49.77 / 0.0	45.49	V / 1.00 / 0	n/a	-38.11
1.674 GHz	65.5 Pk	3.59 / 26.19 / 49.7 / 0.0	45.58	V / 1.00 / 0	n/a	-38.02
1.888 GHz	64.75 Pk	3.86 / 27.54 / 49.93 / 0.0	46.22	V / 1.33 / 130	n/a	-37.38
1.244 GHz	68.5 Pk	3.06 / 25.39 / 49.43 / 0.0	47.51	V / 1.00 / 195	n/a	-36.09
4.733 GHz	54.35 Pk	6.27 / 32.81 / 45.38 / 0.0	48.05	V / 1.00 / 0	n/a	-35.55
1.416 GHz	62.7 Pk	3.29 / 25.19 / 49.64 / 0.0	41.54	H / 1.00 / 0	n/a	-42.06
1.033 GHz	60.25 Pk	2.79 / 25.62 / 48.98 / 0.0	39.69	H / 1.00 / 135	n/a	-43.91
1.073 GHz	60.2 Pk	2.84 / 25.58 / 49.28 / 0.0	39.34	H / 1.00 / 135	n/a	-44.26
1.108 GHz	62.8 Pk	2.89 / 25.54 / 49.5 / 0.0	41.73	H / 1.00 / 135	n/a	-41.87
1.116 GHz	65.3 Pk	2.9 / 25.53 / 49.52 / 0.0	44.22	H / 1.00 / 135	n/a	-39.38
1.137 GHz	58.3 Pk	2.93 / 25.51 / 49.55 / 0.0	37.18	H / 1.00 / 135	n/a	-46.42
1.161 GHz	63.05 Pk	2.96 / 25.48 / 49.59 / 0.0	41.89	H / 1.00 / 135	n/a	-41.71
1.202 GHz	67.35 Pk	3.01 / 25.43 / 49.65 / 0.0	46.14	H / 1.00 / 135	n/a	-37.46
1.373 GHz	66.4 Pk	3.2 / 25.24 / 49.48 / 0.0	45.36	H / 1.00 / 135	n/a	-38.24

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

Page: 8 of 16

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
1.459 GHz	66.65 Pk	3.38 / 25.14 / 49.73 / 0.0	45.44	H / 1.00 / 135	n/a	-38.16
1.717 GHz	66.75 Pk	3.65 / 26.46 / 49.75 / 0.0	47.11	H / 1.00 / 135	n/a	-36.49
1.759 GHz	67.6 Pk	3.72 / 26.73 / 49.69 / 0.0	48.35	H / 1.00 / 135	n/a	-35.25
2.446 GHz	62.15 Pk	4.33 / 28.59 / 49.25 / 0.0	45.83	H / 1.00 / 135	n/a	-37.77
1.287 GHz	68.55 Pk	3.11 / 25.34 / 49.21 / 0.0	47.79	H / 1.00 / 135	n/a	-35.81
1.33 GHz	64.6 Pk	3.15 / 25.29 / 49.28 / 0.0	43.76	H / 1.00 / 135	n/a	-39.84
1.545 GHz	65.45 Pk	3.47 / 25.38 / 49.67 / 0.0	44.63	H / 1.00 / 135	n/a	-38.97
1.631 GHz	65.2 Pk	3.55 / 25.92 / 49.58 / 0.0	45.09	H / 1.00 / 135	n/a	-38.51
1.674 GHz	67.8 Pk	3.59 / 26.19 / 49.7 / 0.0	47.88	H / 1.00 / 135	n/a	-35.72
2.103 GHz	59.9 Pk	3.93 / 28.32 / 49.4 / 0.0	42.75	H / 1.00 / 135	n/a	-40.85
2.143 GHz	62.9 Pk	3.99 / 28.35 / 49.41 / 0.0	45.83	H / 1.00 / 135	n/a	-37.77
2.22 GHz	62.4 Pk	4.09 / 28.42 / 49.32 / 0.0	45.58	H / 1.00 / 135	n/a	-38.02
2.36 GHz	60.6 Pk	4.26 / 28.53 / 49.22 / 0.0	44.17	H / 1.00 / 135	n/a	-39.43
2.403 GHz	63.9 Pk	4.31 / 28.56 / 49.4 / 0.0	47.37	H / 1.00 / 135	n/a	-36.23
2.575 GHz	62.35 Pk	4.41 / 28.85 / 48.69 / 0.0	46.92	H / 1.00 / 135	n/a	-36.68
5.734 GHz	51.0 Pk	6.94 / 34.21 / 45.52 / 0.0	46.63	H / 1.00 / 135	n/a	-36.97
1.545 GHz	67.8 Pk	3.47 / 25.38 / 49.67 / 0.0	46.98	H / 1.00 / 180	n/a	-36.62
1.373 GHz	69.95 Pk	3.2 / 25.24 / 49.48 / 0.0	48.91	H / 1.00 / 225	n/a	-34.69
1.416 GHz	68.4 Pk	3.29 / 25.19 / 49.64 / 0.0	47.24	H / 1.00 / 225	n/a	-36.36
1.202 GHz	69.7 Pk	3.01 / 25.43 / 49.65 / 0.0	48.49	H / 1.50 / 225	n/a	-35.11
1.974 GHz	65.15 Pk	3.9 / 28.08 / 49.7 / 0.0	47.42	H / 1.50 / 180	n/a	-36.18
1.073 GHz	64.85 Pk	2.84 / 25.58 / 49.28 / 0.0	43.99	H / 1.50 / 135	n/a	-39.61
1.202 GHz	71.55 Pk	3.01 / 25.43 / 49.65 / 0.0	50.34	H / 1.50 / 135	n/a	-33.26

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

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List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
Maximized Horizontal frequencies 1-18 GHz						
1.202 GHz	75.85 Pk	3.01 / 25.43 / 49.65 / 0.0	54.64	H / 1.95 / 125	n/a	-28.96
1.416 GHz	69.4 Pk	3.29 / 25.19 / 49.64 / 0.0	48.24	H / 2.25 / 170	n/a	-35.36
1.373 GHz	74.0 Pk	3.2 / 25.24 / 49.48 / 0.0	52.96	H / 1.00 / 220	n/a	-30.64
2.403 GHz	66.1 Pk	4.31 / 28.56 / 49.4 / 0.0	49.57	H / 1.00 / 150	n/a	-34.03
1.674 GHz	69.4 Pk	3.59 / 26.19 / 49.7 / 0.0	49.48	H / 1.00 / 130	n/a	-34.12
1.287 GHz	72.35 Pk	3.11 / 25.34 / 49.21 / 0.0	51.59	H / 1.00 / 130	n/a	-32.01
1.759 GHz	72.45 Pk	3.72 / 26.73 / 49.69 / 0.0	53.2	H / 1.30 / 140	n/a	-30.4
875 MHz						
1.202 GHz	73.15 Pk	3.01 / 25.43 / 49.65 / 0.0	51.94	H / 2.00 / 125	n/a	-31.66
1.416 GHz	69.55 Pk	3.29 / 25.19 / 49.64 / 0.0	48.39	H / 2.25 / 170	n/a	-35.21
1.373 GHz	73.7 Pk	3.2 / 25.24 / 49.48 / 0.0	52.66	H / 1.00 / 220	n/a	-30.94
2.403 GHz	65.6 Pk	4.31 / 28.56 / 49.4 / 0.0	49.07	H / 1.00 / 150	n/a	-34.53
1.674 GHz	69.8 Pk	3.59 / 26.19 / 49.7 / 0.0	49.88	H / 1.00 / 130	n/a	-33.72
1.287 GHz	71.4 Pk	3.11 / 25.34 / 49.21 / 0.0	50.64	H / 1.00 / 130	n/a	-32.96
1.759 GHz	72.55 Pk	3.72 / 26.73 / 49.69 / 0.0	53.3	H / 1.30 / 140	n/a	-30.3
1.244 GHz	69.65 Pk	3.06 / 25.39 / 49.43 / 0.0	48.66	V / 1.00 / 195	n/a	-34.94
4.733 GHz measured 48 dBuV when the frequency was set 869 MHz						
4.733 GHz	60.95 Pk	6.27 / 32.81 / 45.38 / 0.0	54.65	V / 1.00 / 0	n/a	-28.95
880 MHz						
1.202 GHz	71.75 Pk	3.01 / 25.43 / 49.65 / 0.0	50.54	H / 2.00 / 125	n/a	-33.06
1.416 GHz	68.95 Pk	3.29 / 25.19 / 49.64 / 0.0	47.79	H / 2.30 / 170	n/a	-35.81
1.373 GHz	74.35 Pk	3.2 / 25.24 / 49.48 / 0.0	53.31	H / 1.00 / 220	n/a	-30.29

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

Page: 10 of 16

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz	DELTA2 -13 dBm >1GHz
2.403 GHz	65.75 Pk	4.31 / 28.56 / 49.4 / 0.0	49.22	H / 1.00 / 150	n/a	-34.38
1.674 GHz	69.55 Pk	3.59 / 26.19 / 49.7 / 0.0	49.63	H / 1.00 / 130	n/a	-33.97
1.287 GHz	71.35 Pk	3.11 / 25.34 / 49.21 / 0.0	50.59	H / 1.00 / 130	n/a	-33.01
1.759 GHz	73.15 Pk	3.72 / 26.73 / 49.69 / 0.0	53.9	H / 1.30 / 140	n/a	-29.7
1.244 GHz	70.2 Pk	3.06 / 25.39 / 49.43 / 0.0	49.21	V / 1.00 / 195	n/a	-34.39
4.733 GHz	60.3 Pk	6.27 / 32.81 / 45.38 / 0.0	54.0	V / 1.00 / 0	n/a	-29.6
880 MHz						
46.896 MHz	63.65 Qp	0.9 / 14.12 / 27.1 / 0.0	51.57	V / 1.00 / 70	-32.03	n/a
51.678 MHz	58.95 Qp	0.9 / 12.86 / 27.03 / 0.0	45.68	V / 1.00 / 0	-37.92	n/a
102.528 MHz	61.25 Qp	1.4 / 8.4 / 27.0 / 0.0	44.05	V / 1.00 / 0	-39.55	n/a
501.149 MHz	54.6 Qp	3.35 / 17.18 / 27.95 / 0.0	47.18	V / 2.40 / 0	-36.42	n/a
867.452 MHz	50.5 Qp	4.54 / 21.4 / 27.72 / 0.0	48.71	V / 3.50 / 283	-34.89	n/a
514.943 MHz	51.4 Qp	3.39 / 18.29 / 27.99 / 0.0	45.09	H / 1.00 / 52	-38.51	n/a
429.125 MHz	50.1 Qp	3.02 / 16.44 / 27.9 / 0.0	41.66	H / 1.00 / 130	-41.94	n/a
875 MHz						
46.92 MHz	64.4 Qp	0.9 / 14.12 / 27.1 / 0.0	52.32	V / 1.00 / 70	-31.28	n/a
51.684 MHz	59.35 Qp	0.9 / 12.86 / 27.03 / 0.0	46.08	V / 1.00 / 0	-37.52	n/a
102.528 MHz	61.05 Qp	1.4 / 8.4 / 27.0 / 0.0	43.85	V / 1.00 / 0	-39.75	n/a
501.149 MHz	54.25 Qp	3.35 / 17.18 / 27.95 / 0.0	46.83	V / 2.40 / 0	-36.77	n/a
867.452 MHz	49.9 Qp	4.54 / 21.4 / 27.72 / 0.0	48.11	V / 3.50 / 283	-35.49	n/a
514.943 MHz	51.3 Qp	3.39 / 18.29 / 27.99 / 0.0	44.99	H / 1.00 / 50	-38.61	n/a
429.125 MHz	49.85 Qp	3.02 / 16.44 / 27.9 / 0.0	41.41	H / 1.00 / 130	-42.19	n/a
SCAN COMPLETE						

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Test Report #: WC505364 Run 1 Test Area: LTS - 3m
EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: <u>5364 pt 22.dat</u>	Page: <u>11 of 16</u>
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At 643.6 MHz (run 2), the measured field strength = 42.8 dB μ V/m @ 3 meters
Substitution method was performed to determine the ERP
Matching signal generator level = -45.6 dBm
Cable loss = 2.0 dB
Dipole antenna gain = -6.2 dBi
-45.6 dBm - 2.0 dB + -6.2 dBi = -53.8 dBm ERP
Field strength (dB μ V/m) - 96.6 = ERP (dBm)
Field strength limit = -13 dBm ERP + 96.6 = 83.6 dB μ V/m @ 3 meters

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

Page: 12 of 16

Measurement summary for limit1: -13dBm < 1GHz (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz
869.006 MHz	59.95 Qp	4.54 / 21.9 / 27.72 / 0.0	58.67	V / 1.00 / 283	-24.93
46.854 MHz	65.8 Qp	0.9 / 14.34 / 27.1 / 0.0	53.94	V / 1.00 / 45	-29.66
867.452 MHz	50.5 Qp	4.54 / 21.4 / 27.72 / 0.0	48.71	V / 3.50 / 283	-34.89
501.149 MHz	54.6 Qp	3.35 / 17.18 / 27.95 / 0.0	47.18	V / 2.40 / 0	-36.42
51.684 MHz	59.35 Qp	0.9 / 12.86 / 27.03 / 0.0	46.08	V / 1.00 / 0	-37.52
102.606 MHz	62.35 Qp	1.4 / 9.1 / 27.0 / 0.0	45.85	V / 1.00 / 270	-37.75
514.943 MHz	52.1 Qp	3.39 / 17.9 / 27.99 / 0.0	45.4	H / 1.00 / 52	-38.2
64.206 MHz	59.85 Qp	1.0 / 10.34 / 27.0 / 0.0	44.19	V / 3.00 / 315	-39.41
72.024 MHz	61.1 Qp	1.1 / 8.3 / 27.0 / 0.0	43.5	V / 3.00 / 270	-40.1
557.855 MHz	49.85 Qp	3.5 / 18.14 / 28.1 / 0.0	43.4	V / 3.00 / 180	-40.2
429.125 MHz	51.95 Qp	3.02 / 16.27 / 27.9 / 0.0	43.35	H / 1.00 / 135	-40.25
214.561 MHz	57.35 Qp	2.02 / 10.55 / 27.12 / 0.0	42.8	V / 1.00 / 90	-40.8
59.658 MHz	56.6 Qp	1.0 / 11.7 / 27.0 / 0.0	42.3	V / 3.00 / 45	-41.3
40.122 MHz	52.2 Qp	0.8 / 16.18 / 27.1 / 0.0	42.08	V / 1.00 / 0	-41.52
90.894 MHz	59.15 Qp	1.3 / 7.94 / 26.9 / 0.0	41.49	V / 1.00 / 270	-42.11
36.222 MHz	49.55 Qp	0.76 / 18.31 / 27.24 / 0.0	41.38	V / 1.00 / 180	-42.22
944.058 MHz	40.25 Qp	4.72 / 22.6 / 27.6 / 0.0	39.97	H / 1.00 / 180	-43.63
815.323 MHz	41.7 Qp	4.4 / 21.65 / 27.8 / 0.0	39.94	H / 1.00 / 225	-43.66
343.3 MHz	49.95 Qp	2.7 / 14.47 / 27.6 / 0.0	39.52	V / 3.00 / 315	-44.08
257.465 MHz	51.9 Qp	2.37 / 12.22 / 27.2 / 0.0	39.29	H / 3.00 / 180	-44.31
472.031 MHz	46.05 Qp	3.22 / 17.54 / 27.9 / 0.0	38.91	V / 1.00 / 0	-44.69
109.992 MHz	55.5 Qp	1.4 / 8.4 / 27.06 / 0.0	38.24	V / 1.00 / 0	-45.36
666.66 MHz	42.25 Qp	3.92 / 19.47 / 28.03 / 0.0	37.61	V / 3.00 / 315	-45.99
295.007 MHz	49.5 Qp	2.48 / 13.0 / 27.48 / 0.0	37.5	H / 3.00 / 135	-46.1
386.206 MHz	46.8 Qp	2.87 / 15.41 / 27.74 / 0.0	37.34	H / 1.00 / 135	-46.26

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat


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Measurement summary for limit1: -13dBm < 1GHz (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 -13dBm < 1GHz
383.524 MHz	46.7 Qp	2.86 / 15.49 / 27.72 / 0.0	37.33	H / 1.00 / 135	-46.27
333.334 MHz	47.6 Qp	2.66 / 14.0 / 27.56 / 0.0	36.7	H / 3.00 / 225	-46.9
288.466 MHz	48.6 Qp	2.45 / 12.74 / 27.45 / 0.0	36.34	V / 1.00 / 315	-47.26
324.904 MHz	46.15 Qp	2.62 / 13.7 / 27.52 / 0.0	34.95	V / 3.00 / 315	-48.65
300.682 MHz	46.2 Qp	2.51 / 13.21 / 27.5 / 0.0	34.42	V / 1.00 / 315	-49.18
283.732 MHz	46.85 Qp	2.43 / 12.55 / 27.43 / 0.0	34.4	V / 1.00 / 315	-49.2
194.92 MHz	48.75 Qp	1.98 / 9.99 / 27.1 / 0.0	33.62	V / 1.00 / 0	-49.98
233.86 MHz	46.45 Qp	2.15 / 11.08 / 27.2 / 0.0	32.47	V / 1.00 / 315	-51.13
269.384 MHz	44.9 Qp	2.4 / 12.21 / 27.3 / 0.0	32.21	V / 1.00 / 315	-51.39
121.848 MHz	48.75 Qp	1.51 / 8.72 / 27.09 / 0.0	31.88	V / 1.00 / 90	-51.72
245.56 MHz	44.65 Qp	2.23 / 11.48 / 27.2 / 0.0	31.16	V / 1.00 / 315	-52.44
240.808 MHz	43.15 Qp	2.19 / 11.24 / 27.2 / 0.0	29.38	V / 1.00 / 315	-54.22
328.421 MHz	36.4 Qp	2.64 / 13.77 / 27.54 / 0.0	25.27	V / 1.00 / 225	-58.33

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

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Measurement summary for limit2: -13 dBm >1GHz (Pk)					
FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA2 -13 dBm >1GHz
4.733 GHz	60.95 Pk	6.27 / 32.81 / 45.38 / 0.0	54.65	V / 1.00 / 0	-28.95
1.202 GHz	75.85 Pk	3.01 / 25.43 / 49.65 / 0.0	54.64	H / 1.95 / 125	-28.96
1.759 GHz	73.15 Pk	3.72 / 26.73 / 49.69 / 0.0	53.9	H / 1.30 / 140	-29.7
1.373 GHz	74.35 Pk	3.2 / 25.24 / 49.48 / 0.0	53.31	H / 1.00 / 220	-30.29
1.287 GHz	72.35 Pk	3.11 / 25.34 / 49.21 / 0.0	51.59	H / 1.00 / 130	-32.01
1.674 GHz	69.8 Pk	3.59 / 26.19 / 49.7 / 0.0	49.88	H / 1.00 / 130	-33.72
2.403 GHz	66.1 Pk	4.31 / 28.56 / 49.4 / 0.0	49.57	H / 1.00 / 150	-34.03
1.244 GHz	70.2 Pk	3.06 / 25.39 / 49.43 / 0.0	49.21	V / 1.00 / 195	-34.39
1.416 GHz	69.55 Pk	3.29 / 25.19 / 49.64 / 0.0	48.39	H / 2.25 / 170	-35.21
1.704 GHz	67.5 Pk	3.62 / 26.38 / 49.77 / 0.0	47.74	V / 1.00 / 0	-35.86
1.974 GHz	65.15 Pk	3.9 / 28.08 / 49.7 / 0.0	47.42	H / 1.50 / 180	-36.18
1.717 GHz	66.75 Pk	3.65 / 26.46 / 49.75 / 0.0	47.11	H / 1.00 / 135	-36.49
1.545 GHz	67.8 Pk	3.47 / 25.38 / 49.67 / 0.0	46.98	H / 1.00 / 180	-36.62
1.888 GHz	65.45 Pk	3.86 / 27.54 / 49.93 / 0.0	46.92	V / 1.00 / 135	-36.68
2.575 GHz	62.35 Pk	4.41 / 28.85 / 48.69 / 0.0	46.92	H / 1.00 / 135	-36.68
5.734 GHz	51.0 Pk	6.94 / 34.21 / 45.52 / 0.0	46.63	H / 1.00 / 135	-36.97
2.446 GHz	62.15 Pk	4.33 / 28.59 / 49.25 / 0.0	45.83	H / 1.00 / 135	-37.77
2.143 GHz	62.9 Pk	3.99 / 28.35 / 49.41 / 0.0	45.83	H / 1.00 / 135	-37.77
2.22 GHz	62.4 Pk	4.09 / 28.42 / 49.32 / 0.0	45.58	H / 1.00 / 135	-38.02
1.459 GHz	66.65 Pk	3.38 / 25.14 / 49.73 / 0.0	45.44	H / 1.00 / 135	-38.16
1.631 GHz	65.2 Pk	3.55 / 25.92 / 49.58 / 0.0	45.09	H / 1.00 / 135	-38.51
1.116 GHz	65.3 Pk	2.9 / 25.53 / 49.52 / 0.0	44.22	H / 1.00 / 135	-39.38
2.36 GHz	60.6 Pk	4.26 / 28.53 / 49.22 / 0.0	44.17	H / 1.00 / 135	-39.43

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Test Report #: WC505364 Run 1 Test Area: LTS – 3m
 EUT Model #: DGVF-03000000XXCRN Date: 10/17/2005
 EUT Serial #: NA EUT Power: 60 Hz / 120 VAC Temperature: 22.0 °C
 Test Method: FCC Pt 22 H Air Pressure: 98.0 kPa
 Customer: ADC Rel. Humidity: 36.0 %

EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

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Measurement summary for limit2: -13 dBm >1GHz (Pk)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA2 -13 dBm >1GHz
1.073 GHz	64.85 Pk	2.84 / 25.58 / 49.28 / 0.0	43.99	H / 1.50 / 135	-39.61
1.33 GHz	64.6 Pk	3.15 / 25.29 / 49.28 / 0.0	43.76	H / 1.00 / 135	-39.84
2.103 GHz	59.9 Pk	3.93 / 28.32 / 49.4 / 0.0	42.75	H / 1.00 / 135	-40.85
1.161 GHz	63.05 Pk	2.96 / 25.48 / 49.59 / 0.0	41.89	H / 1.00 / 135	-41.71
1.108 GHz	62.8 Pk	2.89 / 25.54 / 49.5 / 0.0	41.73	H / 1.00 / 135	-41.87
1.155 GHz	61.1 Pk	2.95 / 25.49 / 49.58 / 0.0	39.95	V / 1.00 / 0	-43.65
1.033 GHz	60.25 Pk	2.79 / 25.62 / 48.98 / 0.0	39.69	H / 1.00 / 135	-43.91
1.103 GHz	60.55 Pk	2.88 / 25.55 / 49.49 / 0.0	39.49	V / 1.00 / 0	-44.11
1.738 GHz	58.05 Pk	3.68 / 26.59 / 49.72 / 0.0	38.6	V / 1.00 / 180	-45.0
1.137 GHz	58.3 Pk	2.93 / 25.51 / 49.55 / 0.0	37.18	H / 1.00 / 135	-46.42
1.002 GHz	57.3 Pk	2.75 / 25.66 / 48.75 / 0.0	36.96	V / 1.00 / 0	-46.64

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Test Report #: <u>WC505364 Run 1</u>	Test Area: <u>LTS – 3m</u>
EUT Model #: <u>DGVF-03000000XXCRN</u>	Date: <u>10/17/2005</u>
EUT Serial #: <u>NA</u>	EUT Power: <u>60 Hz / 120 VAC</u>
Temperature: <u>22.0</u> °C	
Test Method: <u>FCC Pt 22 H</u>	Air Pressure: <u>98.0</u> kPa
Customer: <u>ADC</u>	Rel. Humidity: <u>36.0</u> %

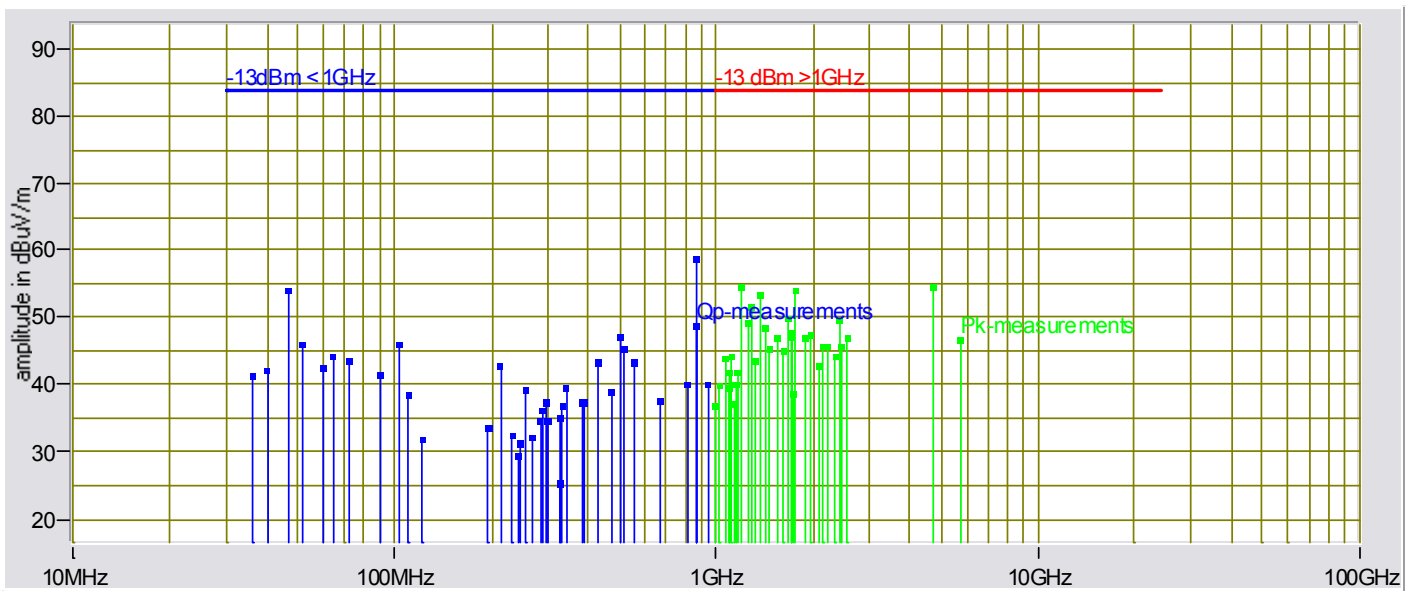
EUT Description: Digivance CXD 800 MHz A Band

Notes: 869 - 880 MHz,

Data File Name: 5364 pt 22.dat

Page: 16 of 16

Graph:



Tested by: Michael Schultz

 Printed

Michael Schultz

 Signature

Reviewed by: G. Jakubowski

 Printed

G. Jakubowski

 Signature

Intermodulation

The Intermodulation measurements were performed at the following test location:

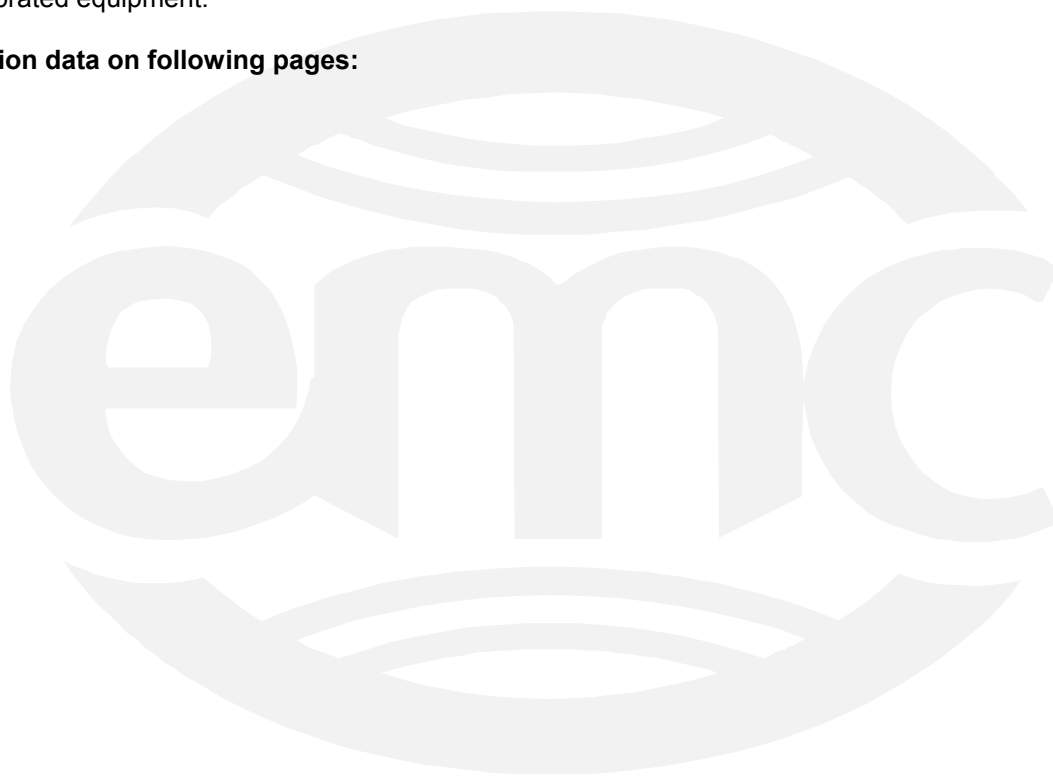
- - ADC facility

ADC's Test equipment used:

<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>ADC Serial No.</u>	<u>Cal Due</u>
Aeroflex	49-30-33	Attenuator	n/a	CNR
HP	HP8563E	Spectrum Analyzer	MC27690	6-22-06
HP	EPM-441A	Power Meter	MC27670	9-28-06

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

Intermodulation data on following pages:

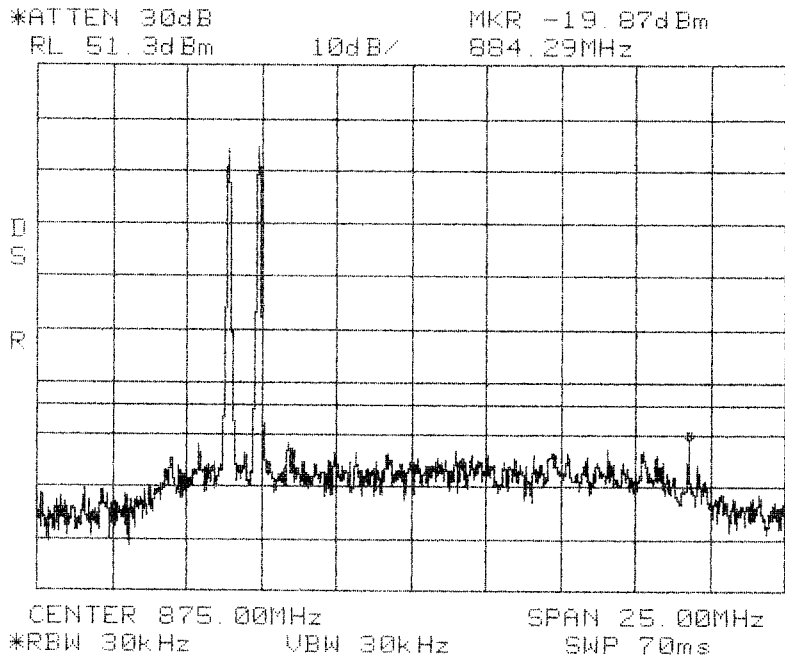


Inter-Modulation Test for ADC Inc
Digivance CXD
Model Number DGVF-03000000XXCRN

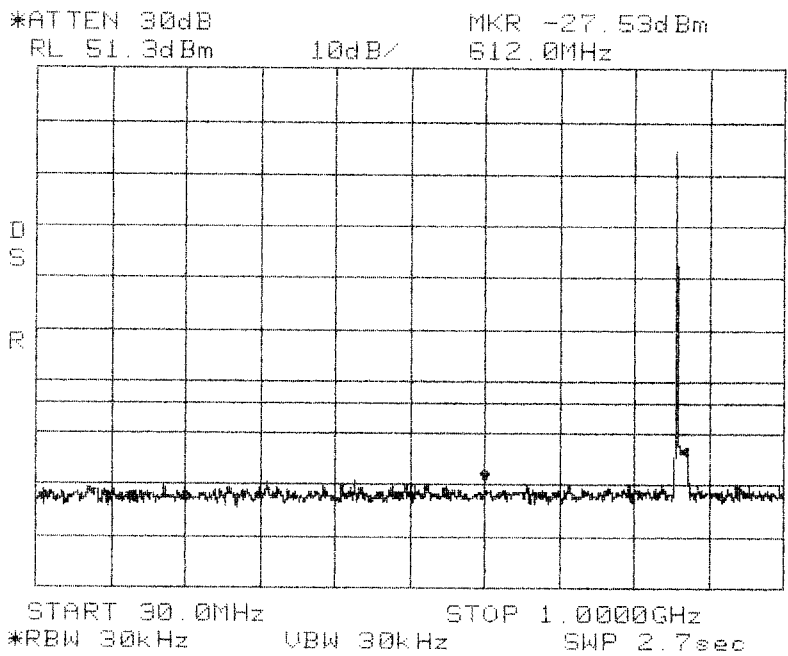
The inter-modulation products test was performed for the EUT. Three tests were performed with the modulation type. Test 1 was with 2 signals input to the EUT at lower end channels. Test 2 was with 2 signals input to the EUT at upper end channels. Test 3 was with 2 signals, one at a lower end channel and one at a higher end channel. The modulations type tested was FM, TDMA, GSM, 16 QAM, and CDMA. An investigation was made from 30 MHz to the 10th Harmonic of the highest fundamental frequency (~10 GHz). The following plots show the results.

Results:
(See Plots)

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Close
Lower
FM
Cellular 800 MHz
A Band**

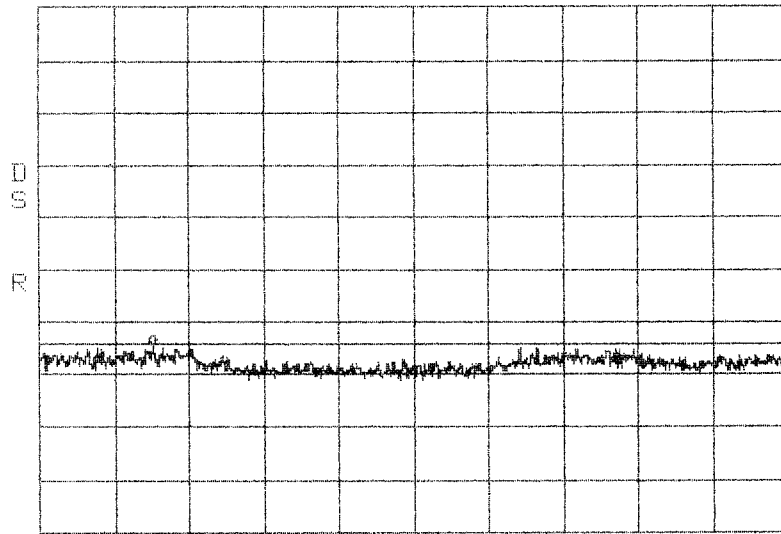


**Intermodulation
Close
Lower
FM
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

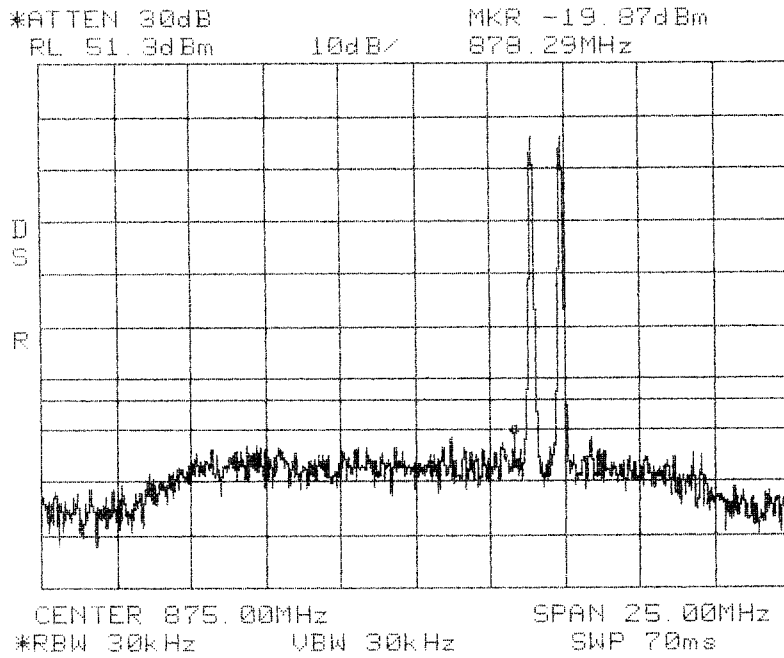
*ATTEN 30dB MKR -13.20dBm
RL 51.3dBm 10dB/ 2.365GHz



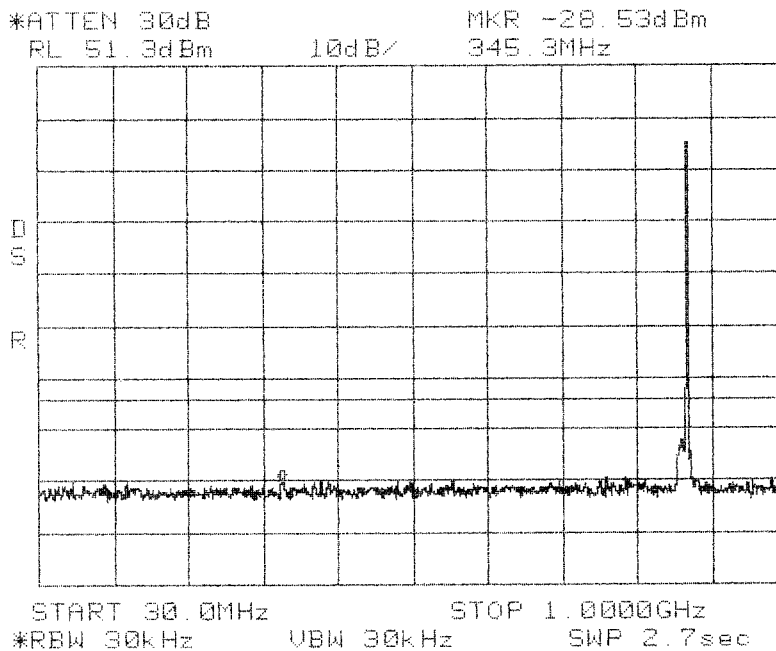
START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 180ms

**Intermodulation
Close
Lower
FM
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Close
Upper
FM
Cellular 800 MHz
A Band**

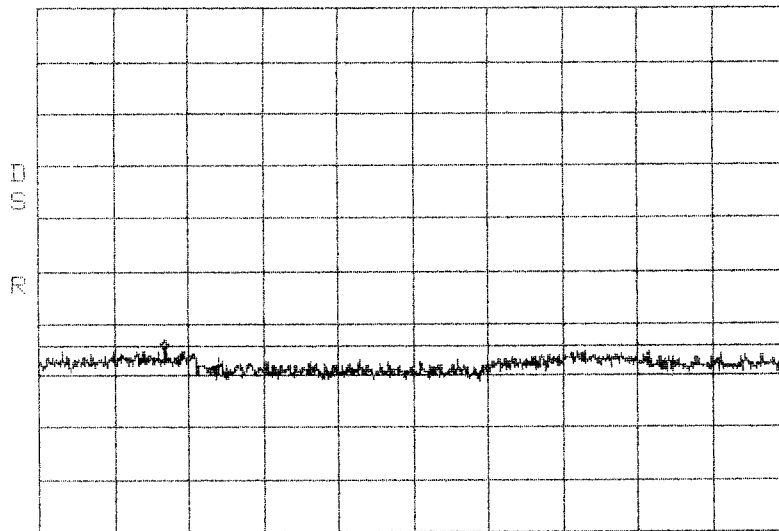


**Intermodulation
Close
Upper
FM
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

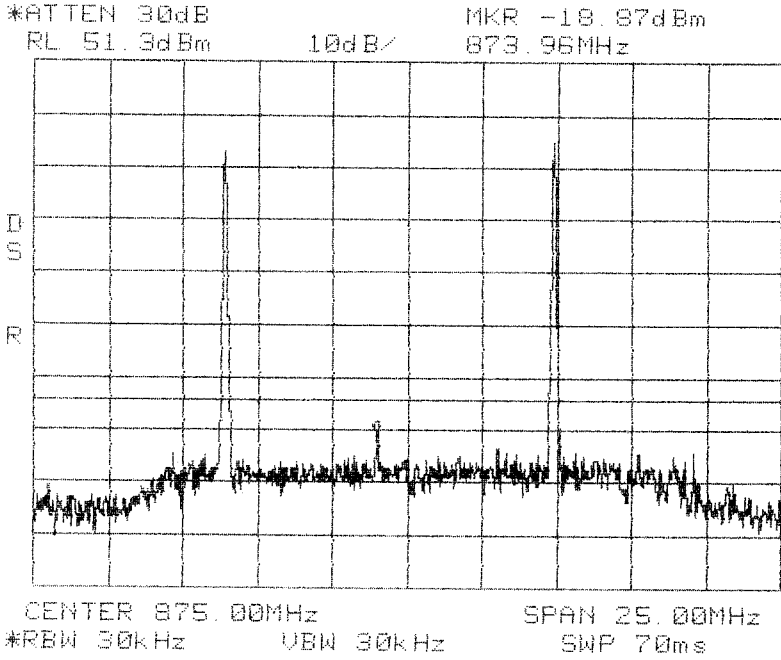
*ATTEN 30dB MKR -13.70dBm
RL 51.3dBm 10dB/ 2.515GHz



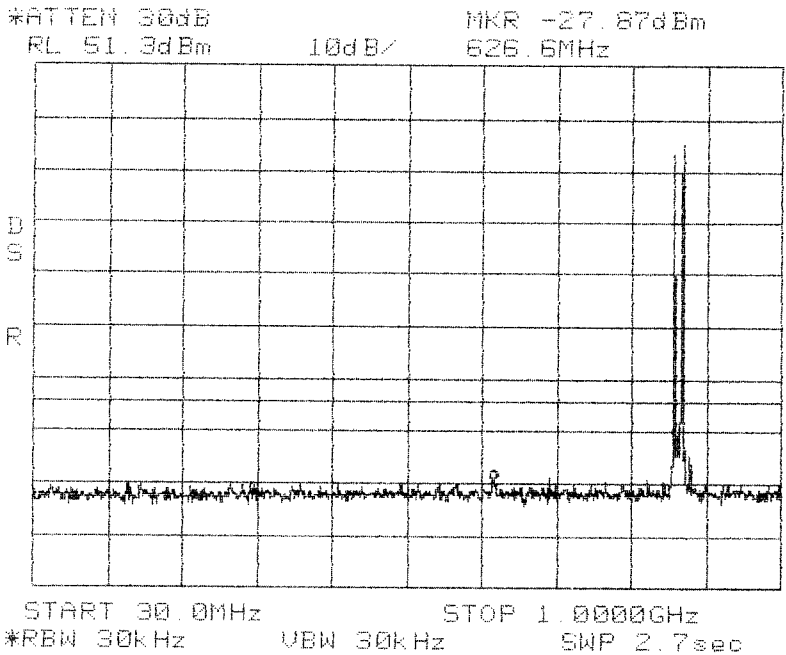
START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 180ms

**Intermodulation
Close
Upper
FM
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Apart
FM
Cellular 800 MHz
A Band**

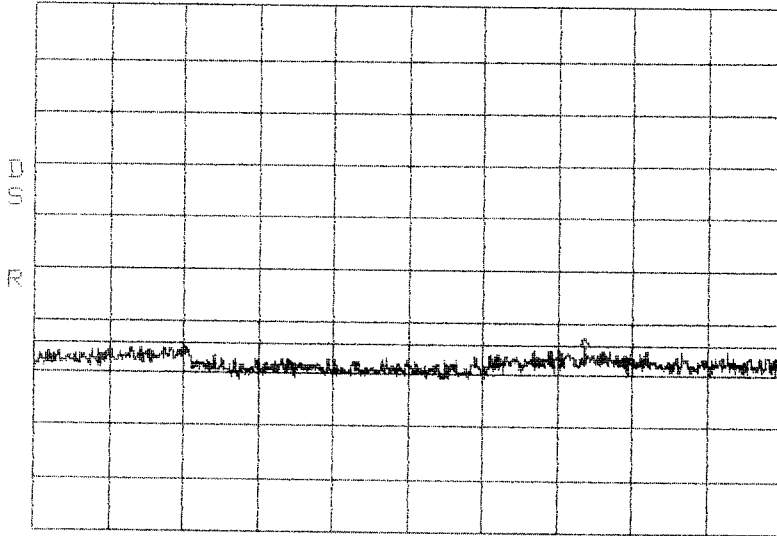


**Intermodulation
Apart
FM
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

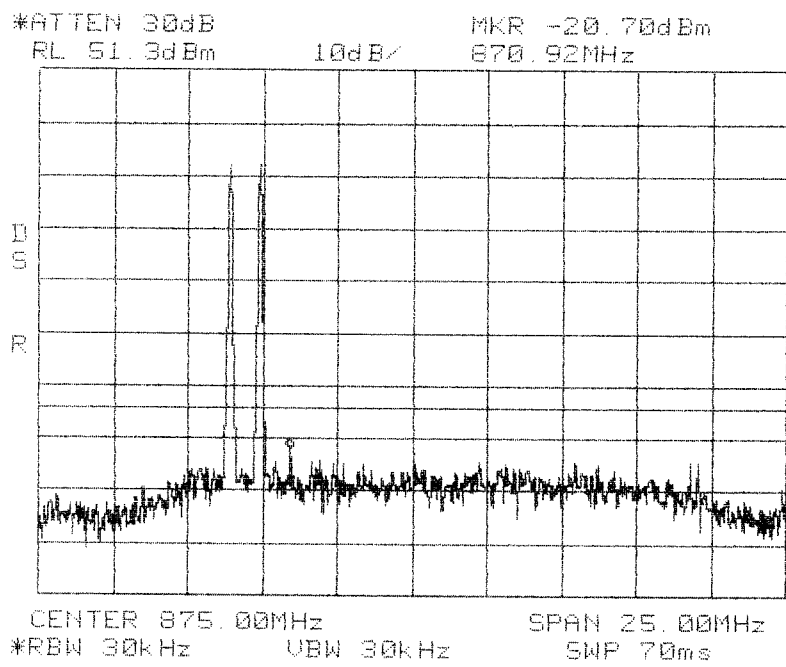
*ATTEN 30dB MKR -13.53dBm
RL 51.3dBm 10dB/ 7.630GHz



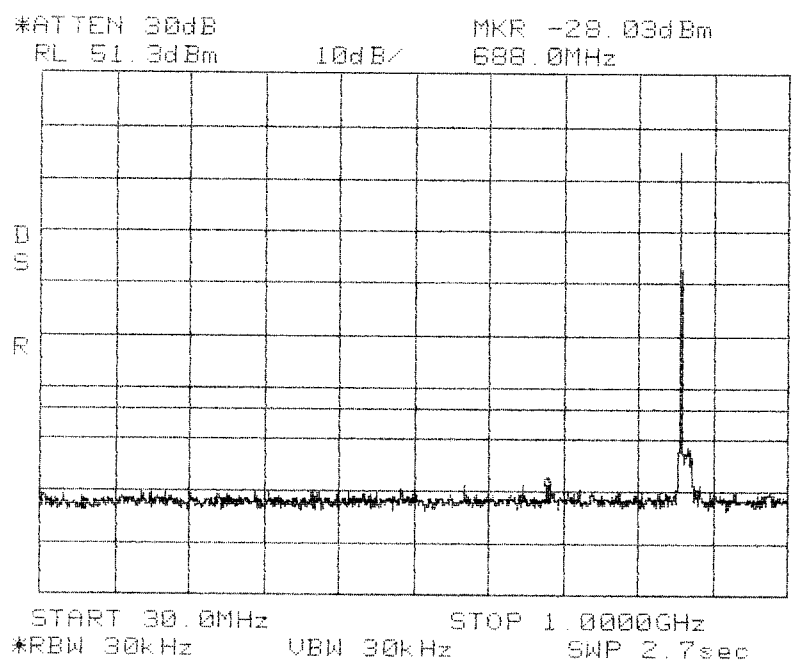
START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 100ms

**Intermodulation
Apart
FM
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Close
Lower
TDMA
Cellular 800 MHz
A Band**

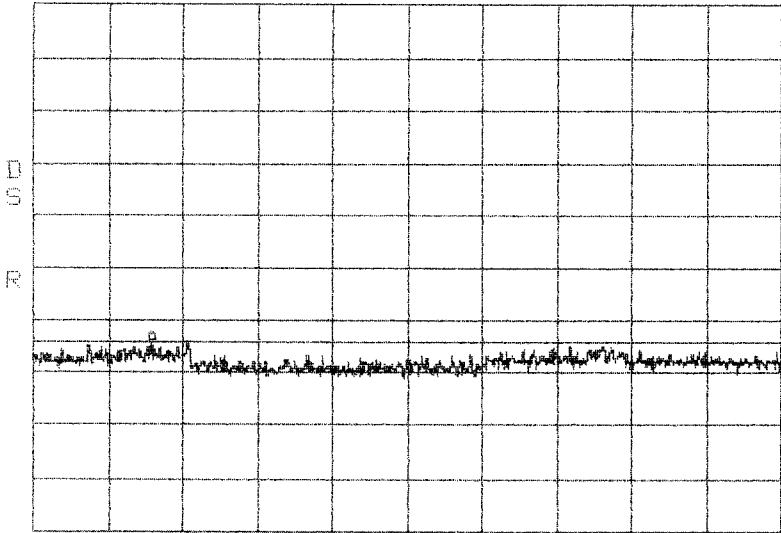


**Intermodulation
Close
Lower
TDMA
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

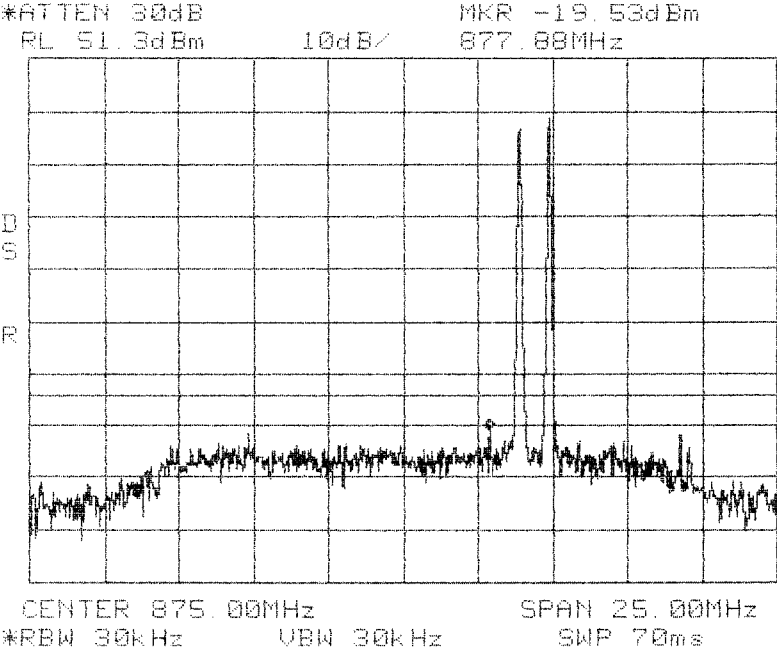
*ATTEN 30dB MKR -13.03dBm
RL 51.3dBm 10dB/ 2.425GHz



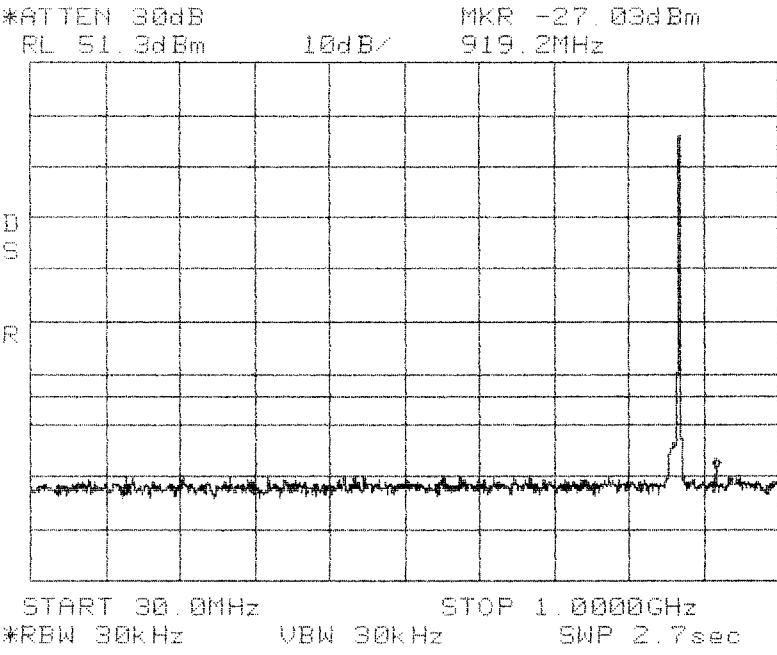
START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 180ms

**Intermodulation
Close
Lower
TDMA
Cellular 800 MHz
A Band**

Center: 880.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



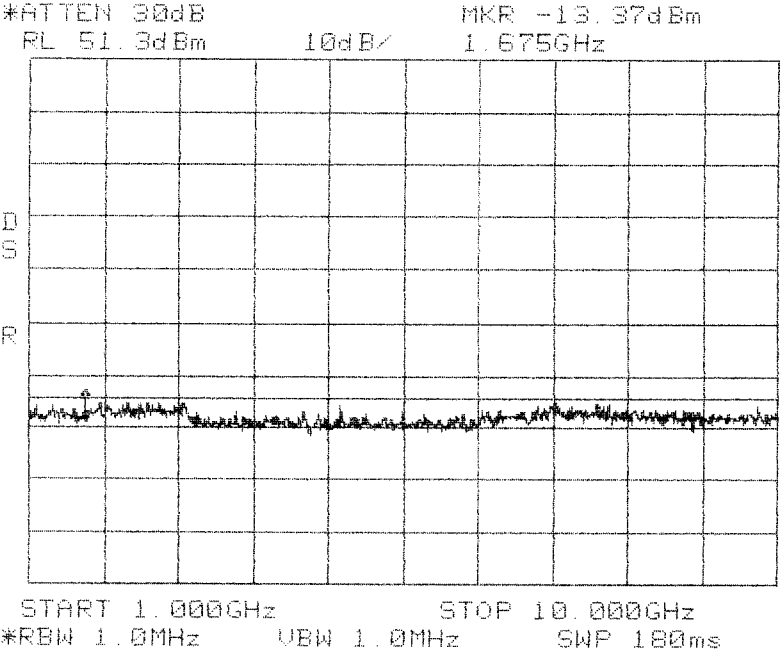
**Intermodulation
Close
Upper
TDMA
Cellular 800 MHz
A Band**



**Intermodulation
Close
Upper
TDMA
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

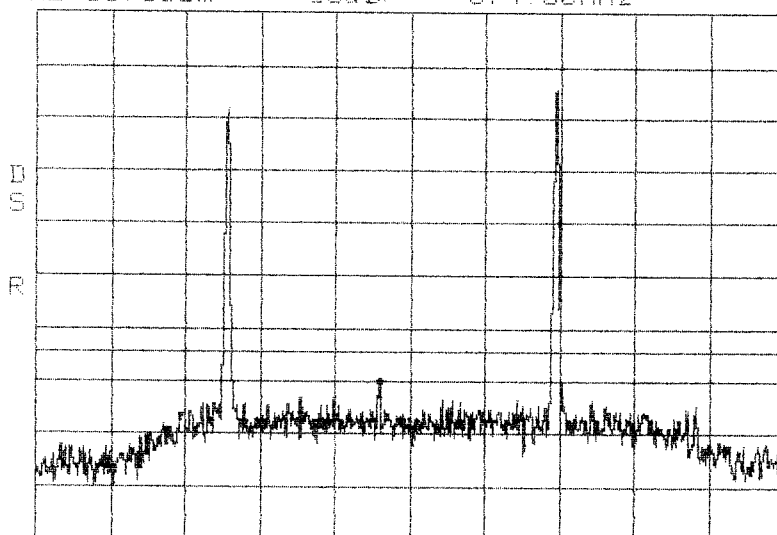
Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz



**Intermodulation
Close
Upper
TDMA
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz

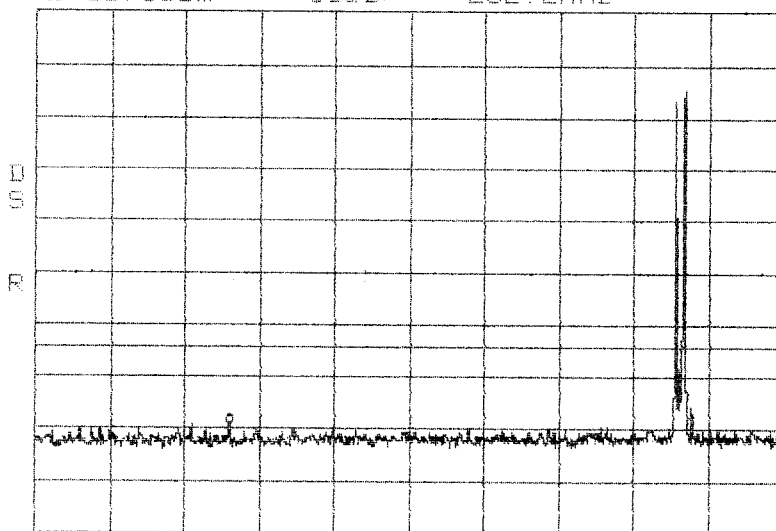
*ATTEN 30dB
RL 51.3dBm 10dB/ MKR -19.70dBm
874.00MHz



CENTER 875.00MHz SPAN 25.00MHz
*RBW 30kHz VBW 30kHz SWP 70ms

**Intermodulation
Apart
TDMA
Cellular 800 MHz
A Band**

*ATTEN 30dB
RL 51.3dBm 10dB/ MKR -27.87dBm
282.2MHz

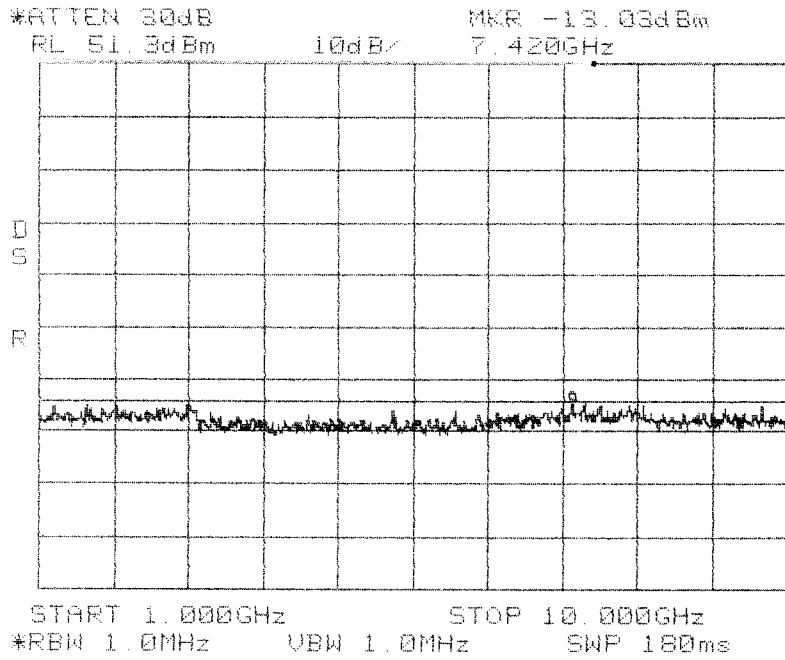


START 30.0MHz STOP 1.0000GHz
*RBW 30kHz VBW 30kHz SWP 2.7sec

**Intermodulation
Apart
TDMA
Cellular 800 MHz
A Band**

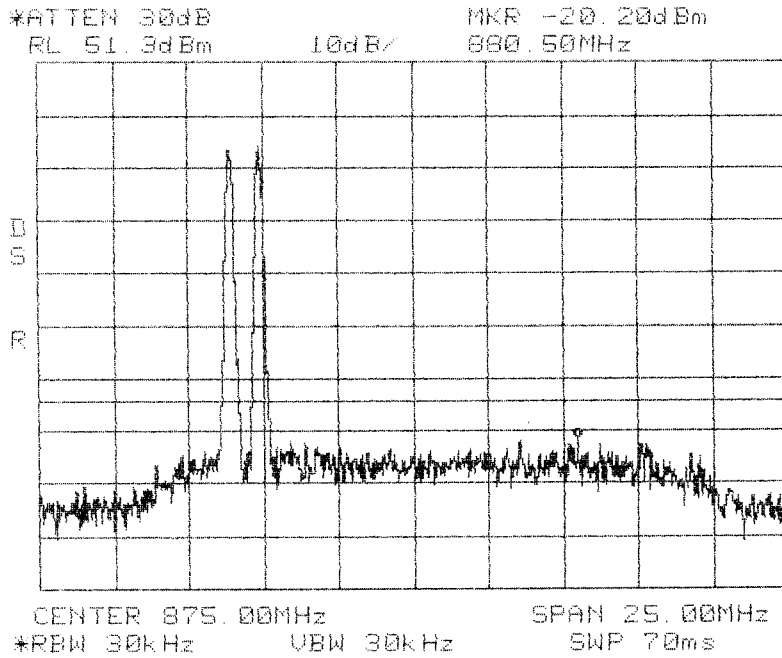
Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

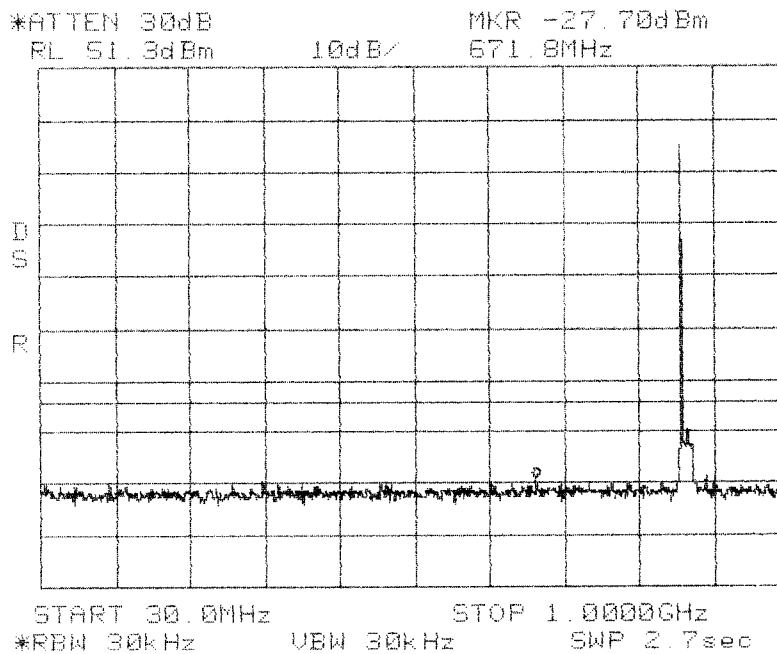


**Intermodulation
Apart
TDMA
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Close
Lower
GSM
Cellular 800 MHz
A Band**

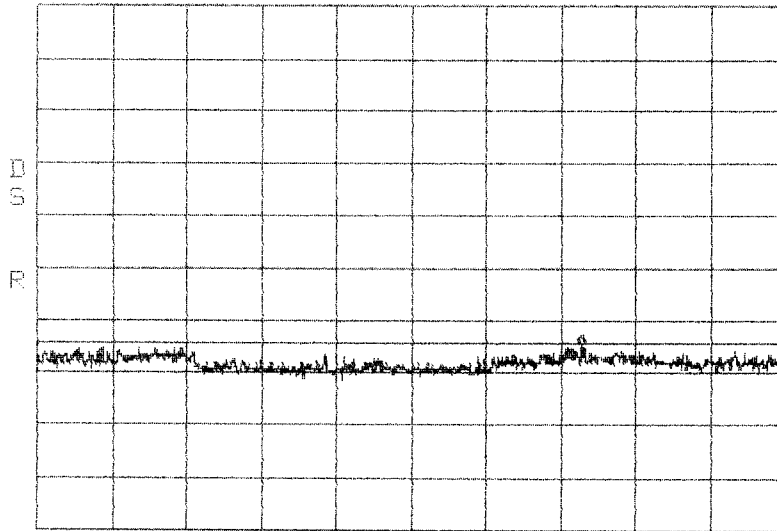


**Intermodulation
Close
Lower
GSM
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

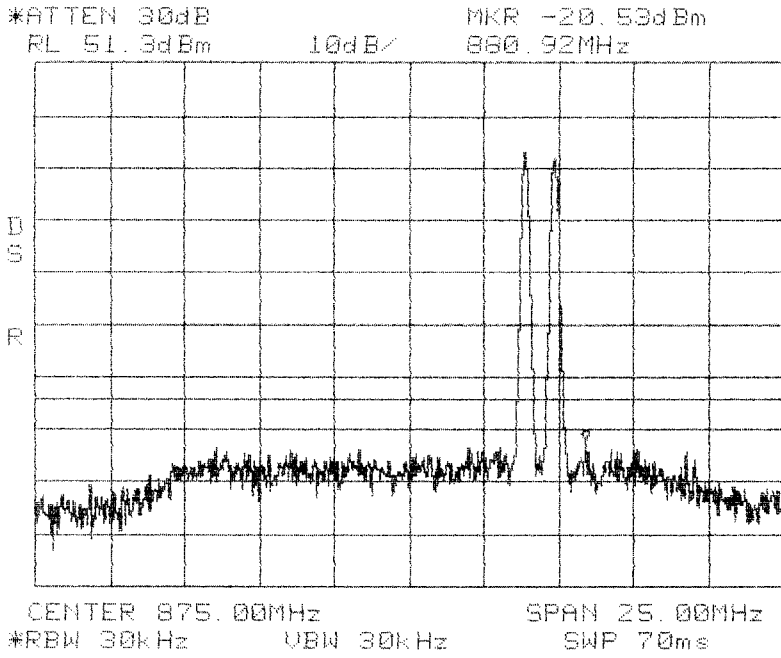
*ATTEN 30dB MKR -13.37dBm
RL 51.3dBm 10dB/ 7.555GHz



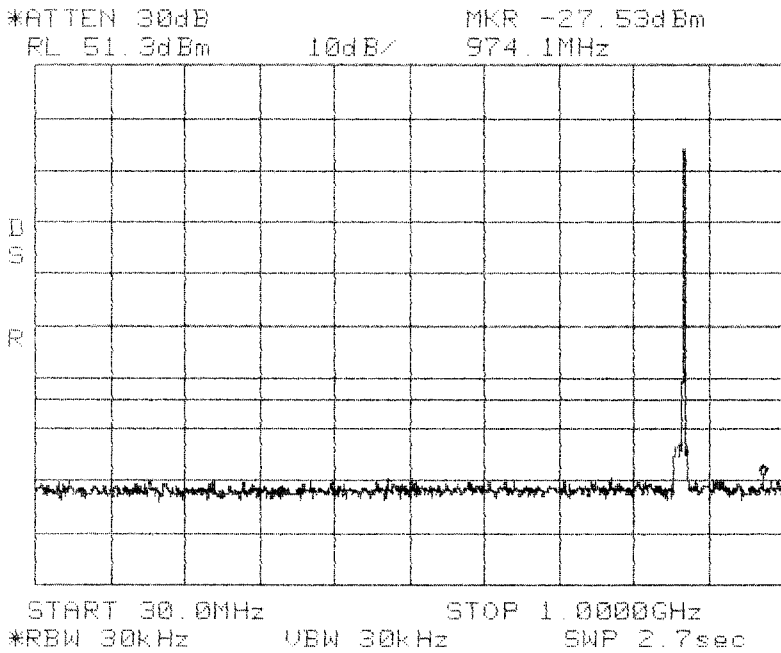
START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz UBW 1.0MHz SWP 100ms

**Intermodulation
Close
Lower
GSM
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Close
Upper
GSM
Cellular 800 MHz
A Band**

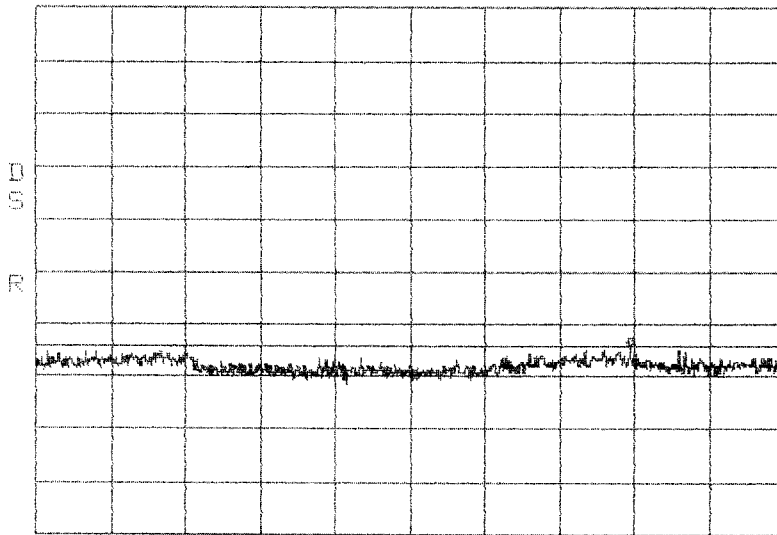


**Intermodulation
Close
Upper
GSM
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

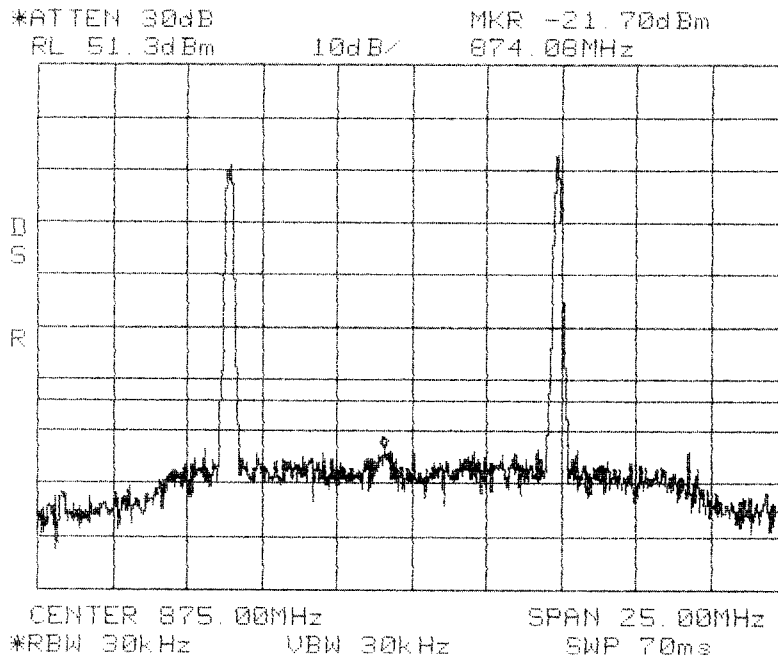
*ATTEN 30dB MKR -13.20dBm
RL 51.3dBm 10dB/ 8.155GHz



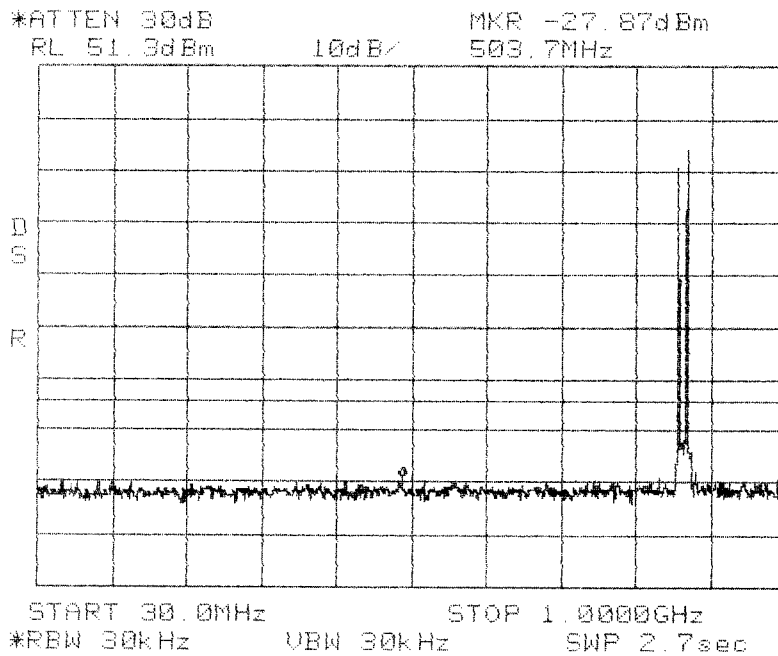
**Intermodulation
Close
Upper
GSM
Cellular 800 MHz
A Band**

START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz UBW 1.0MHz SNP 100ms

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Apart
GSM
Cellular 800 MHz
A Band**

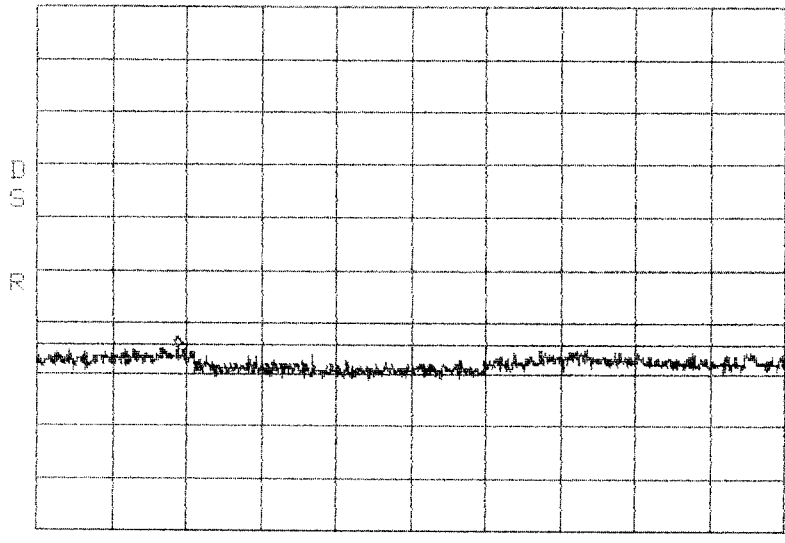


**Intermodulation
Apart
GSM
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

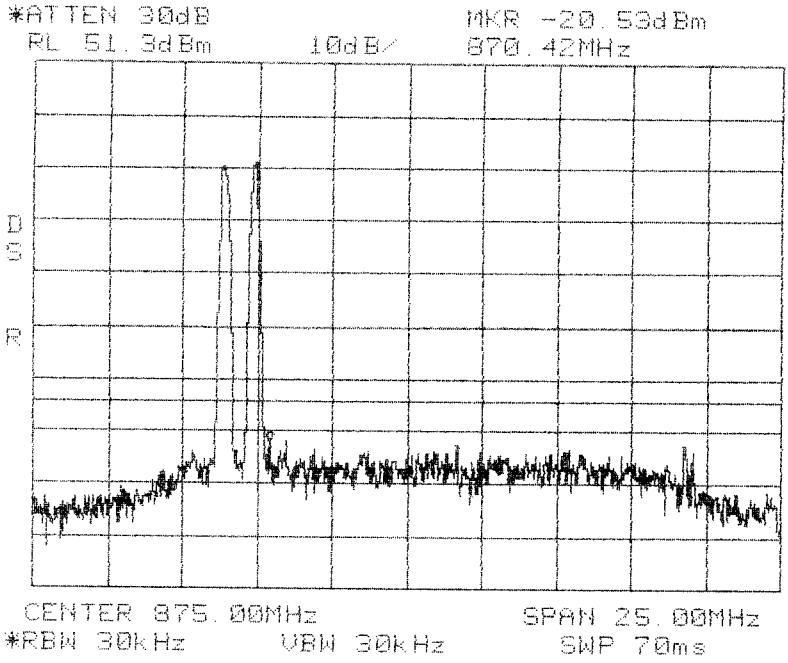
*ATTEN 30dB MKR -13.53dBm
RL 51.3dBm 10dB/ 2.695GHz



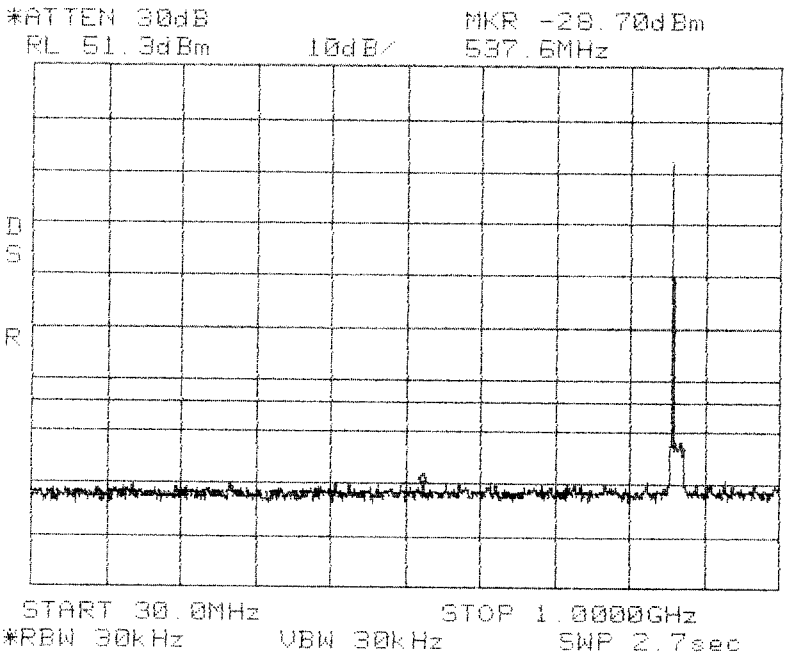
START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 180ms

Intermodulation Apart GSM Cellular 800 MHz A Band

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Close
Lower
16QAM
Cellular 800 MHz
A Band**

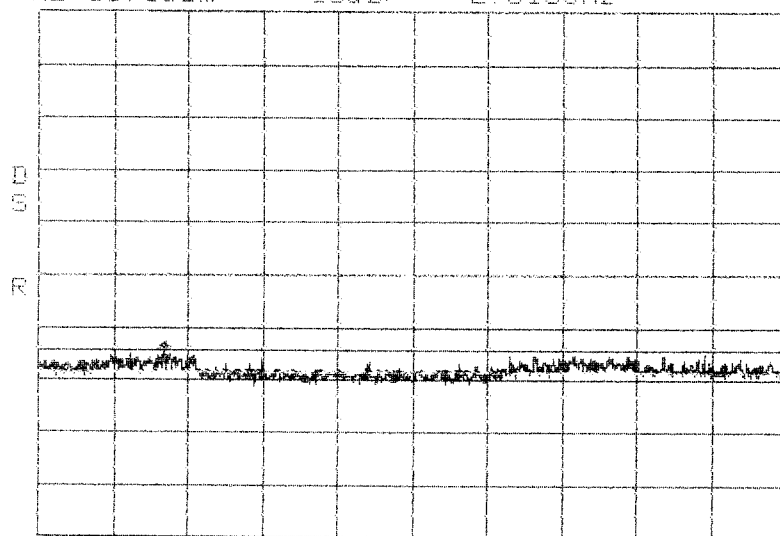


**Intermodulation
Close
Lower
16QAM
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

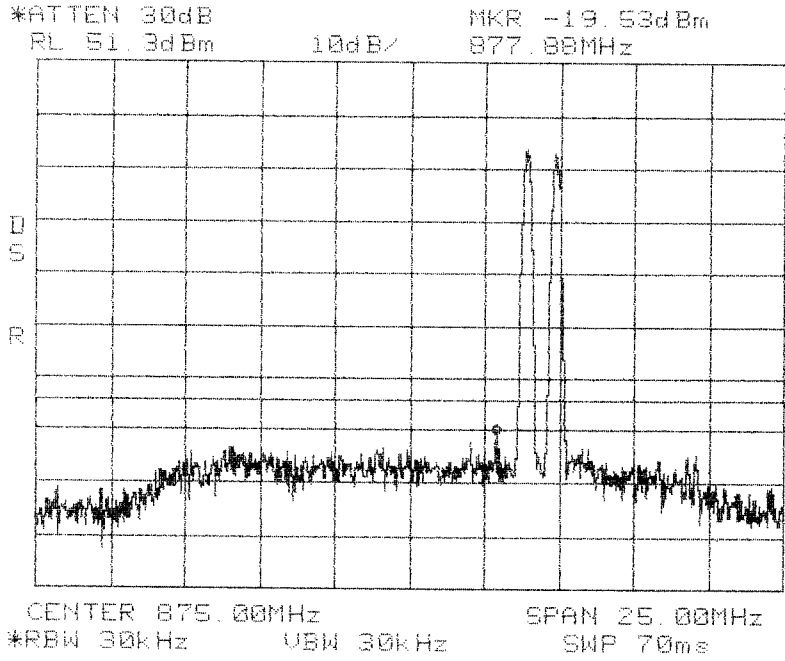
*ATTEN 30dB MKR -13.37dBm
RL 51.3dBm 10dB/ 2.515GHz



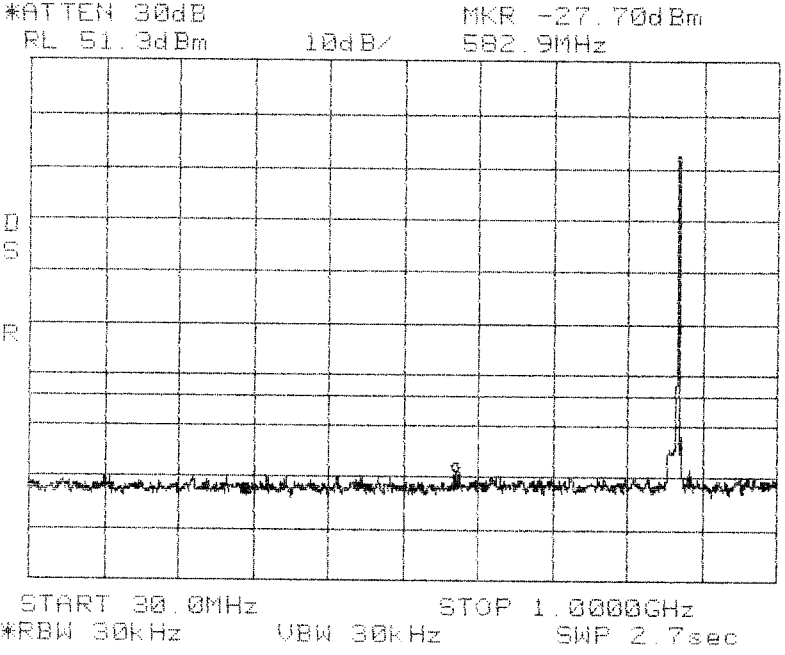
START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 180ms

**Intermodulation
Close
Lower
16QAM
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



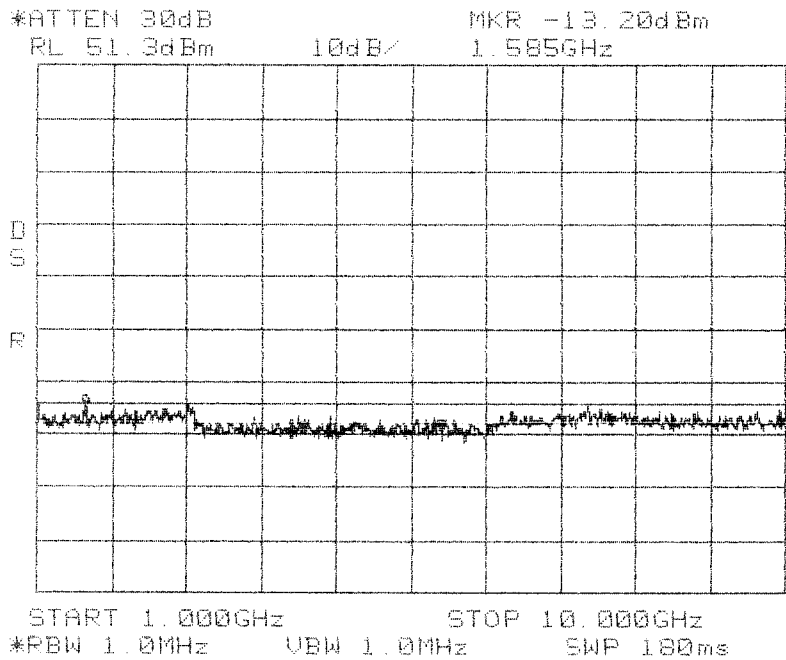
**Intermodulation
Close
Upper
16QAM
Cellular 800 MHz
A Band**



**Intermodulation
Close
Upper
16QAM
Cellular 800 MHz
A Band**

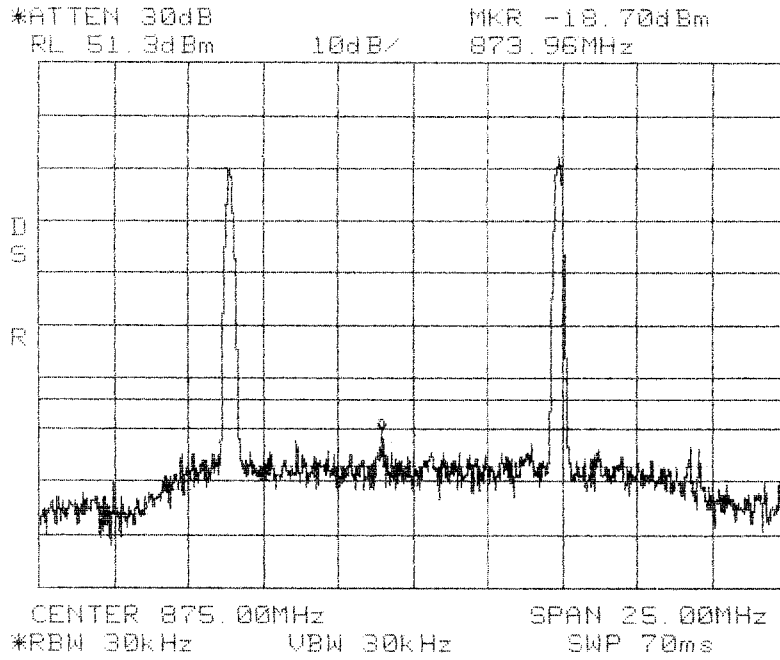
Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

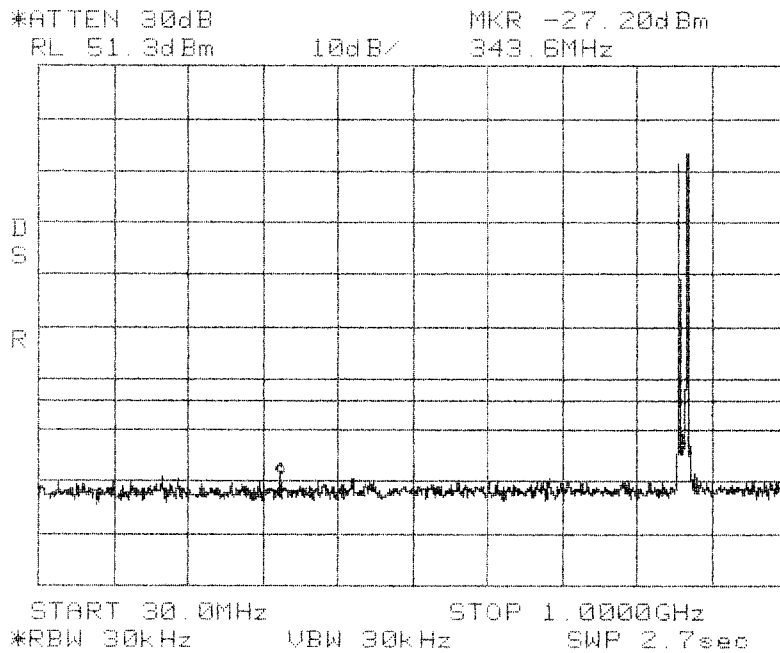


**Intermodulation
Close
Upper
16QAM
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Apart
16QAM
Cellular 800 MHz
A Band**

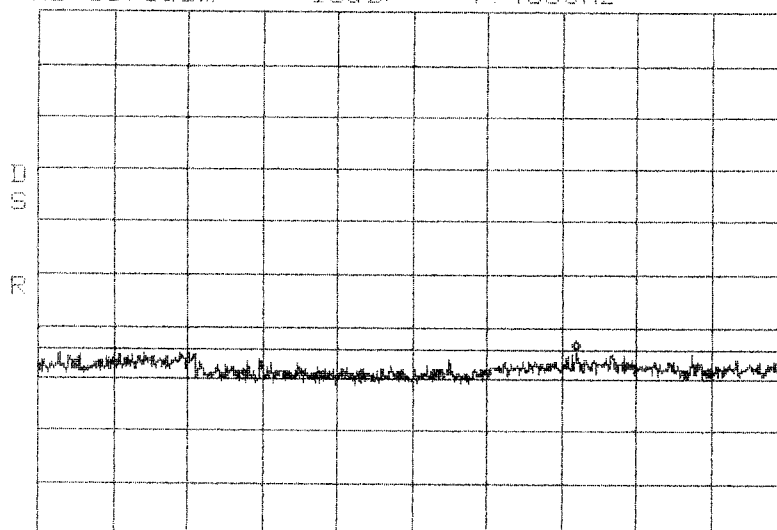


**Intermodulation
Apart
16QAM
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

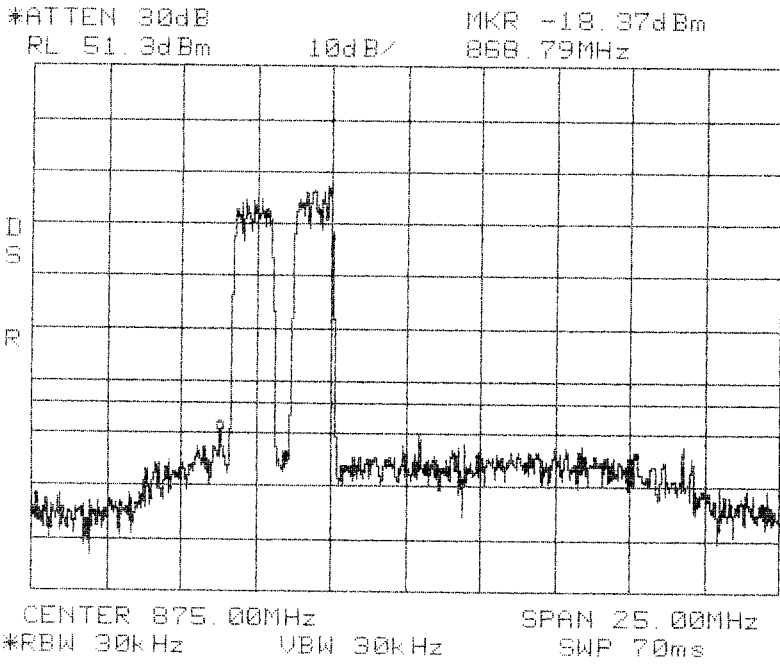
*ATTEN 30dB MKR -13.03dBm
RL 51.3dBm 10dB/ 7.480GHz



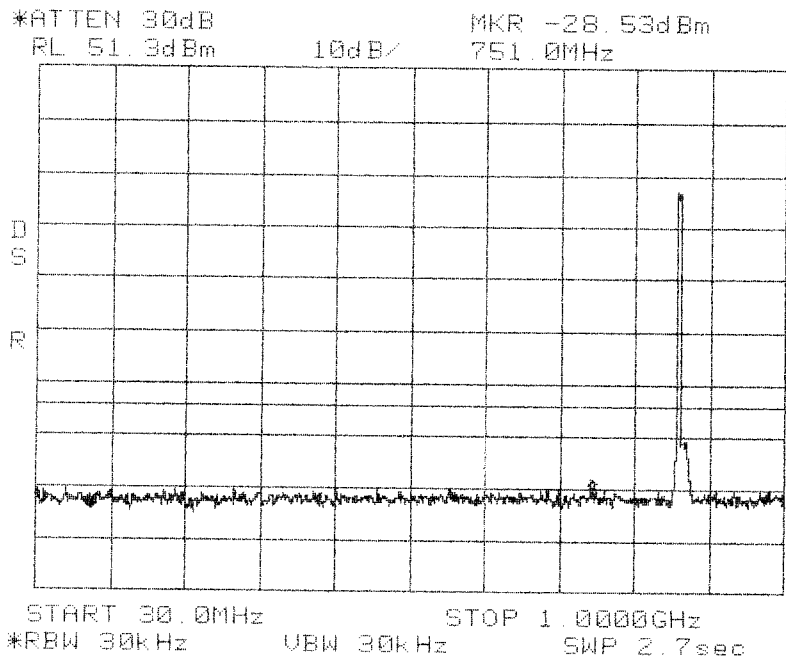
START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz UBW 1.0MHz SWP 180ms

**Intermodulation
Apart
16QAM
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Close
Lower
CDMA
Cellular 800 MHz
A Band**

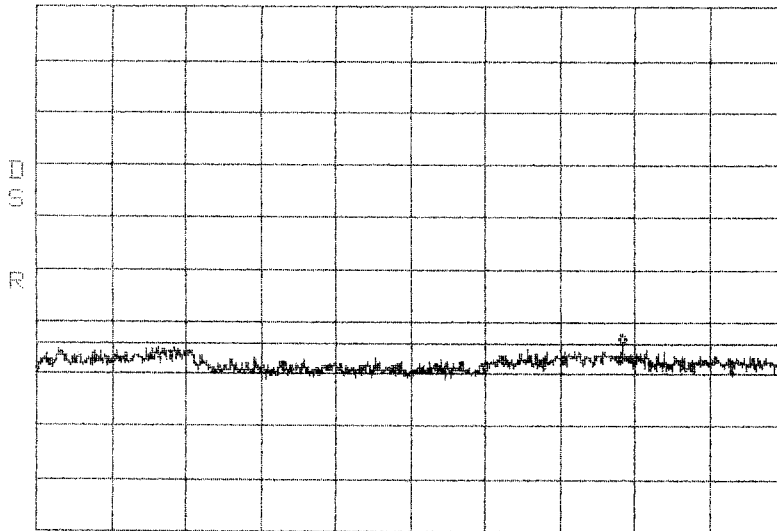


**Intermodulation
Close
Lower
CDMA
Cellular 800 MHz
A Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

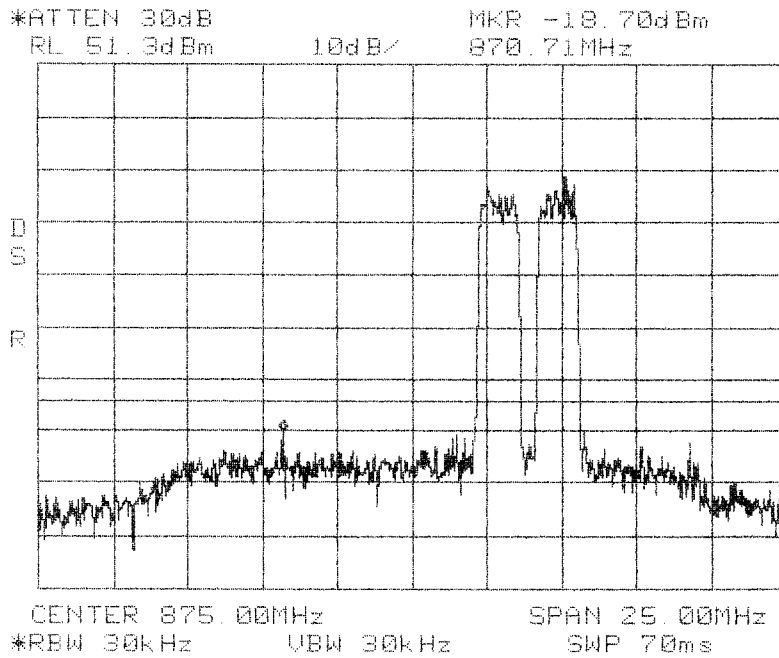
*ATTEN 30dB MKR -13.03dBm
RL 51.3dBm 10dB/ 8.050GHz



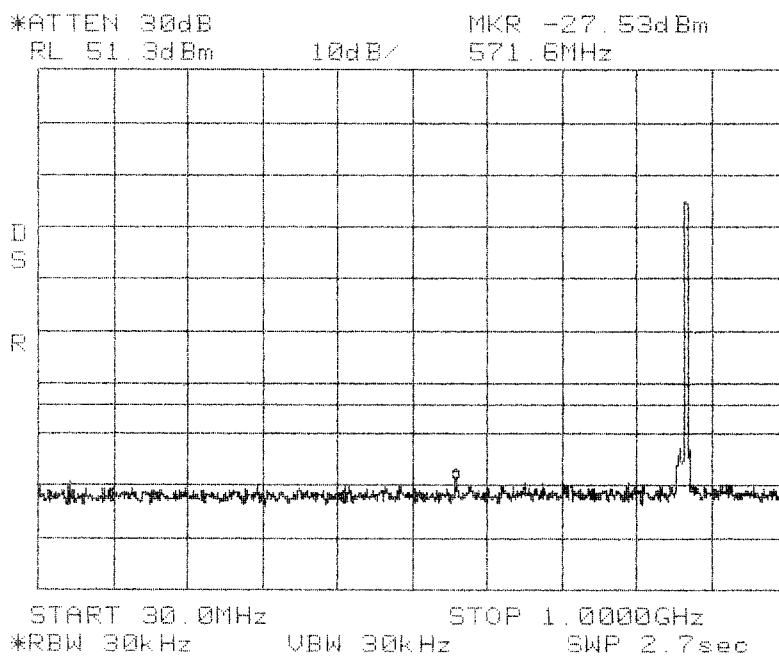
START 1.000GHz STOP 10.000GHz
*RBW 1.0MHz VBW 1.0MHz SWP 180ms

**Intermodulation
Close
Lower
CDMA
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



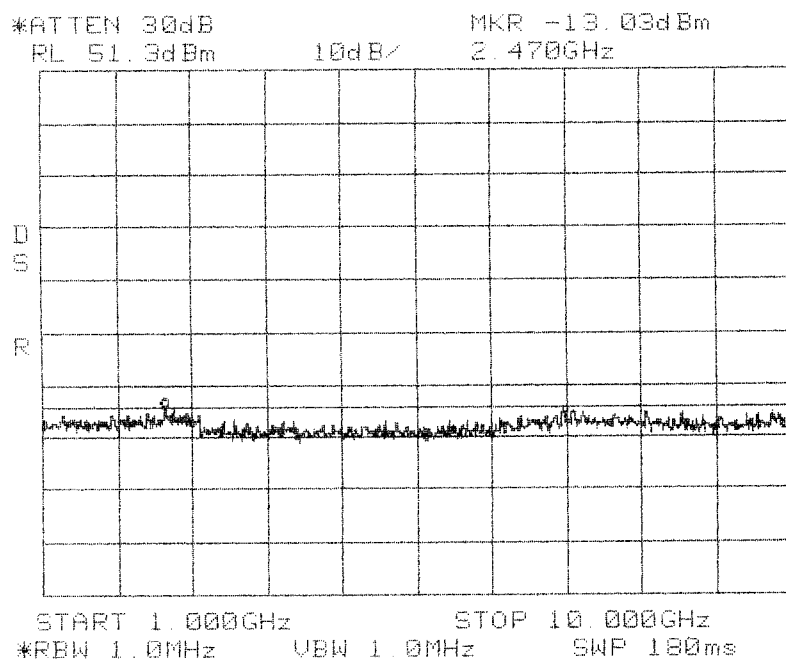
**Intermodulation
Close
Upper
CDMA
Cellular 800 MHz
A Band**



**Intermodulation
Close
Upper
CDMA
Cellular 800 MHz
A Band**

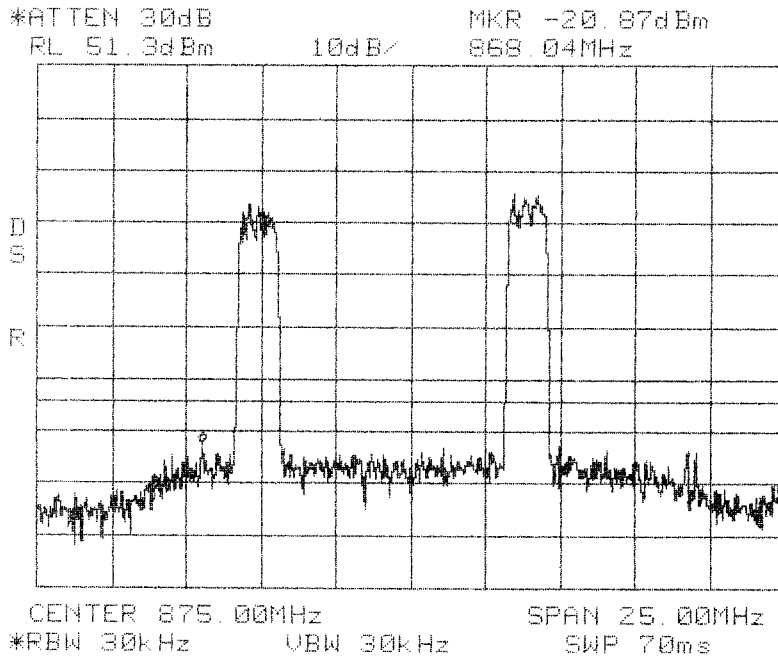
Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

Span: 1 GHz to 10 GHz
RBW/VBW: 1 MHz

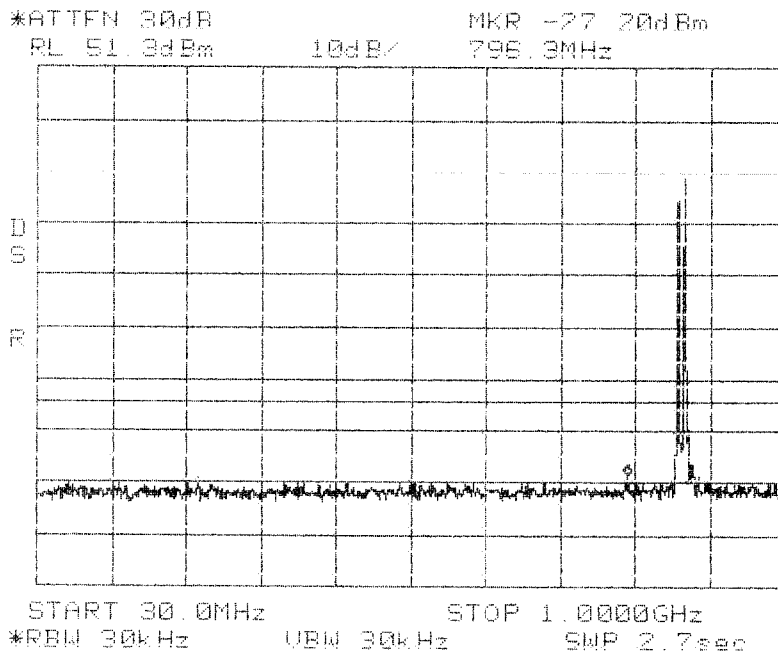


**Intermodulation
Close
Upper
CDMA
Cellular 800 MHz
A Band**

Center: 875.0 MHz
Span: 25 MHz
RBW/VBW: 30 kHz



**Intermodulation
Apart
CDMA
Cellular 800 MHz
A Band**



**Intermodulation
Apart
CDMA
Cellular 800 MHz
A Band**

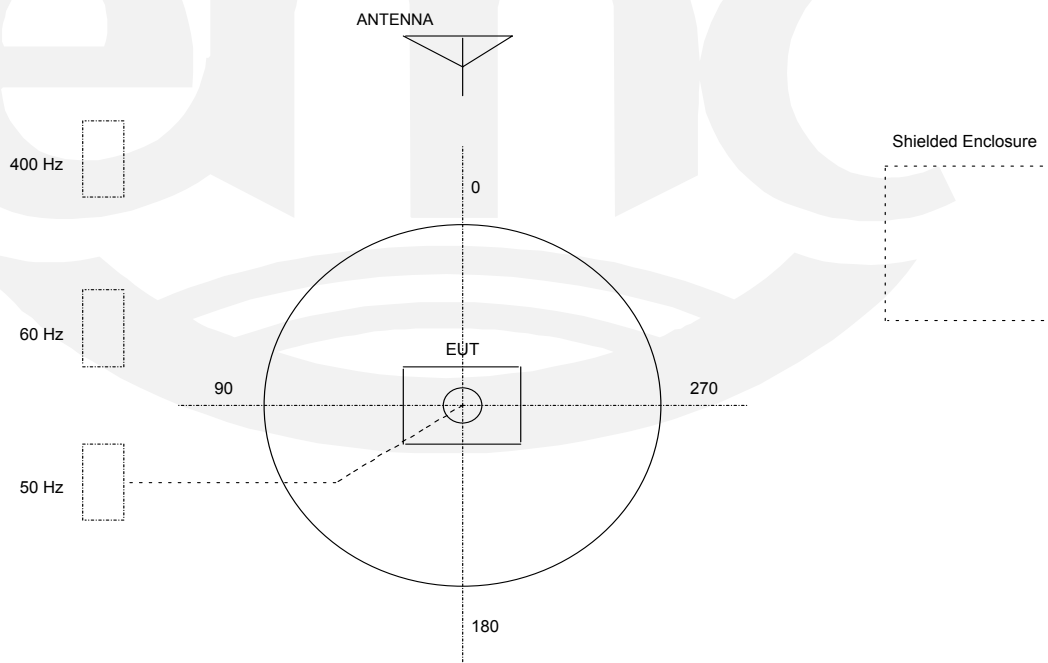
Span: 30 MHz to 1 GHz
RBW/VBW: 30 kHz

TEST SETUP FOR EMISSIONS TESTING

WILD RIVER LAB Large Test Site

Notes:

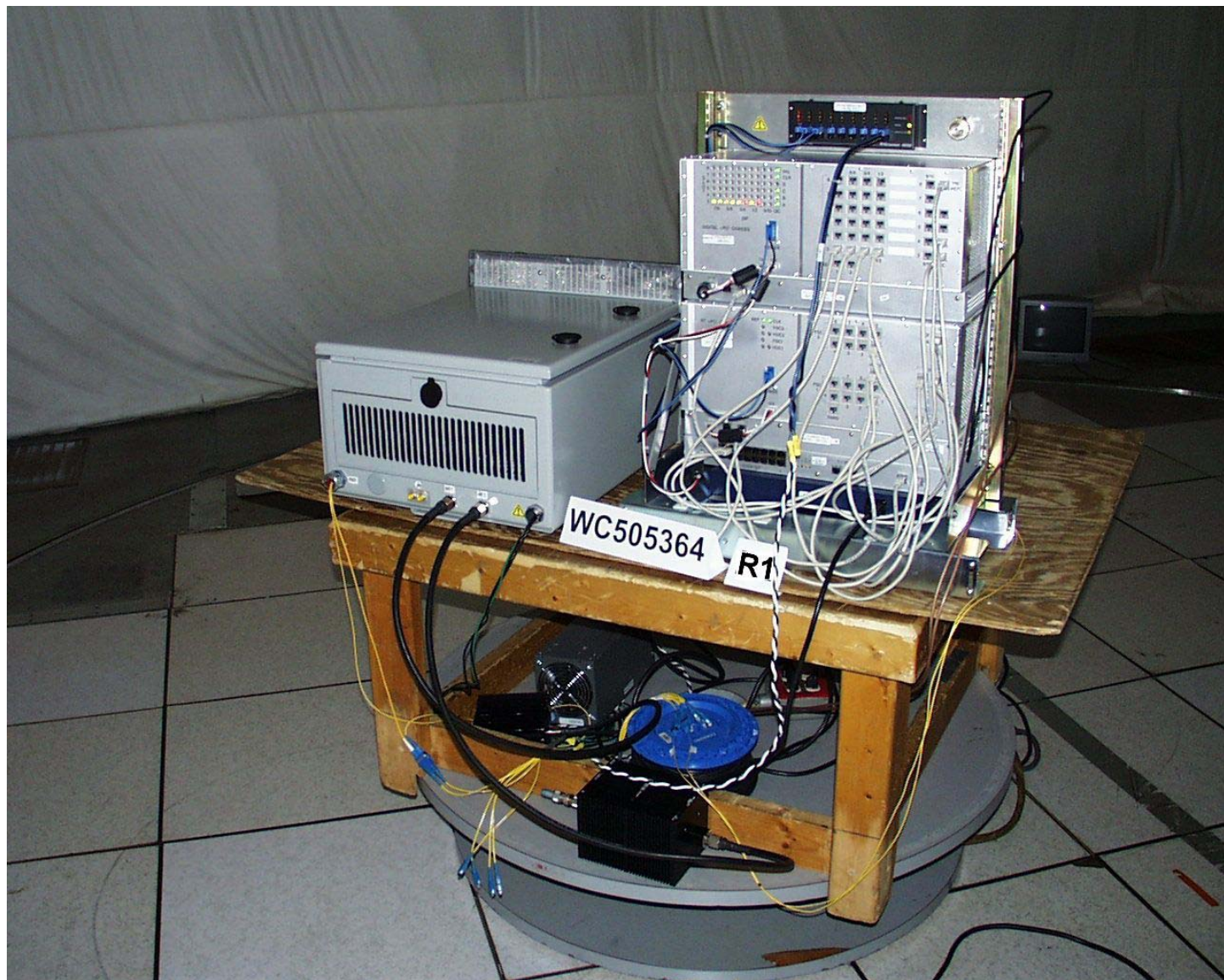
1. Items shown in dotted lines are located on the floor below the test area. It is 5 meters vertically from the ground floor to the test area.
2. 50 Hz, 60 Hz, and 400 Hz are power panels for alternating current.
3. The antenna may be positioned horizontally 3, 10 or 30 meters from the center of the turntable.
4. The circle is a 6.7 meter 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 photos (TÜV run 1)

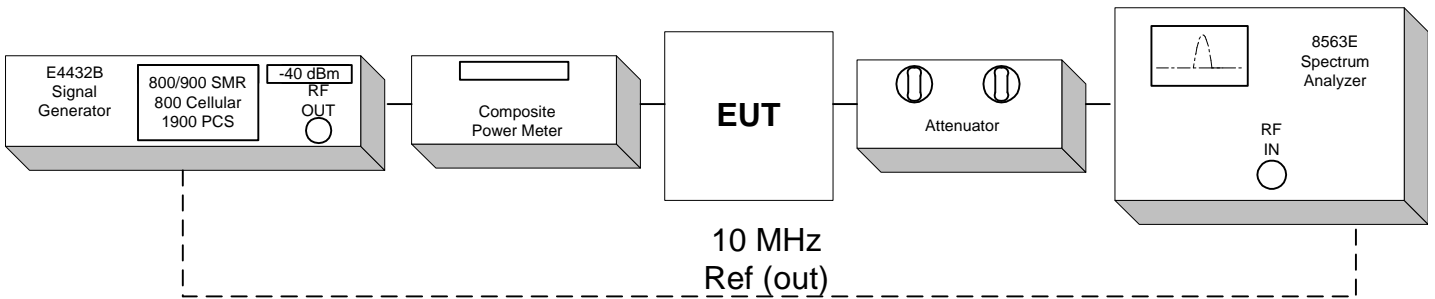


Test-setup photos (TÜV run 1)



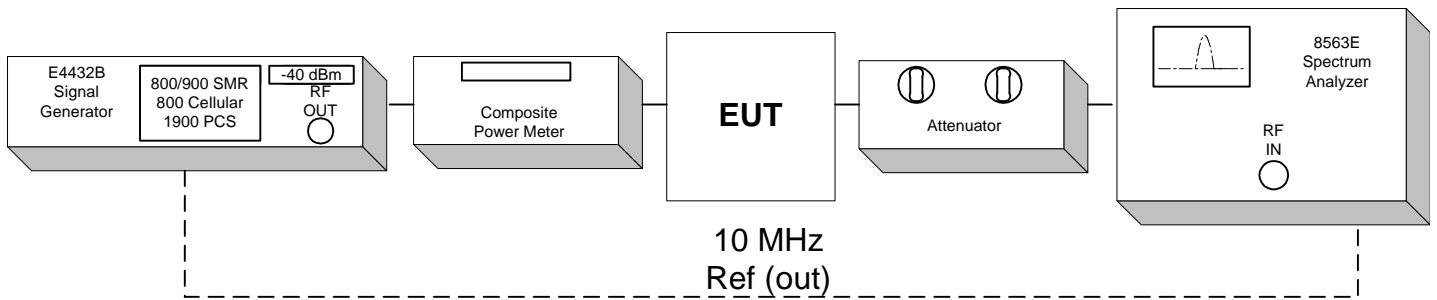
**Conducted Emission Limits Test for ADC Inc.
Digivance CXD
Model Number DGVF-03000000XXCRN**

Test Set-up



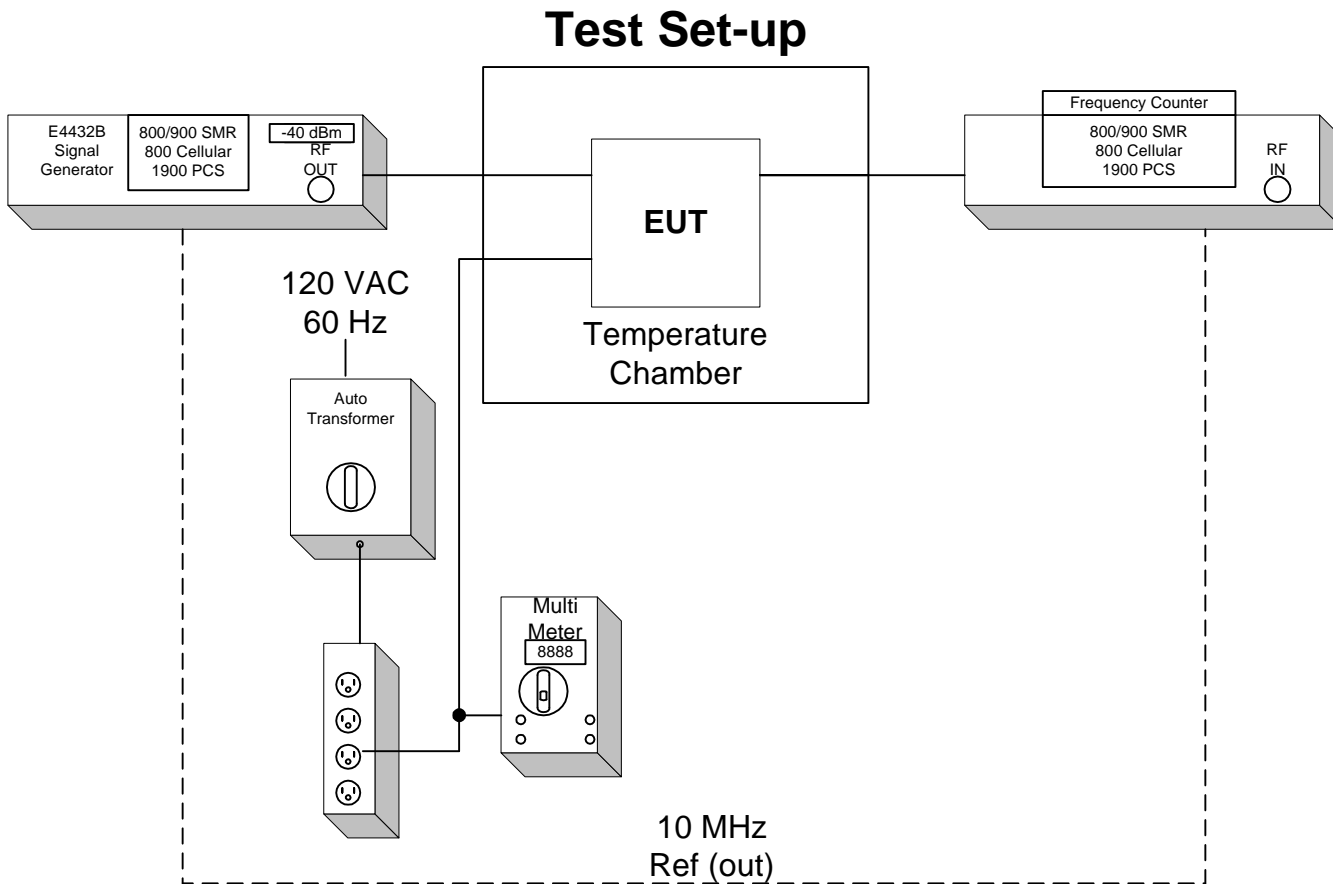
**Effective Isotropic Radiated Power Limit Test for ADC Inc.
Digivance CXD
Model Number DGVF-03000000XXCRN**

Test Set-up

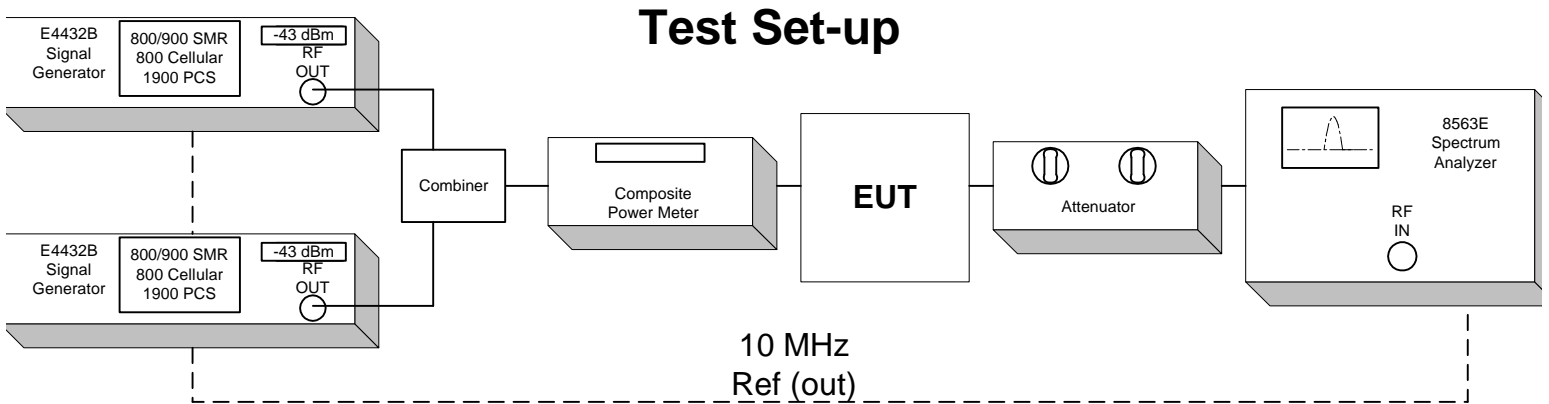


**Frequency Tolerance Test for ADC Inc.
Digivance CXD
Model Number DGVF-03000000XXCRN**

EUT Host is specified for indoor use only with temperature range of 0° to +50° C, and was tested with its range.
EUT Remote is specified with a temperature range of -30° to +50° C and was tested with its range.

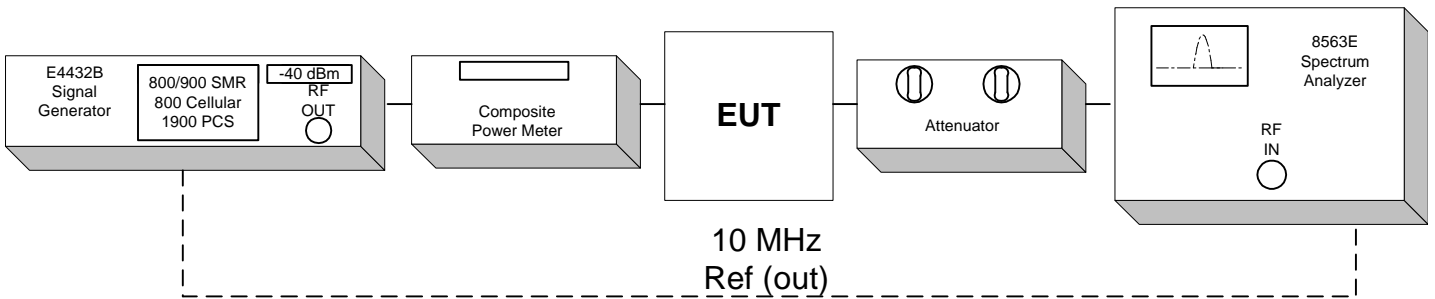


**Inter-Modulation Test for ADC Inc.
Digivance CXD
Model Number DGVF-03000000XXCRN**



**Occupied Bandwidth Modulation Test for ADC Inc.
Digivance CXD
Model Number DGVF-03000000XXCRN**

Test Set-up



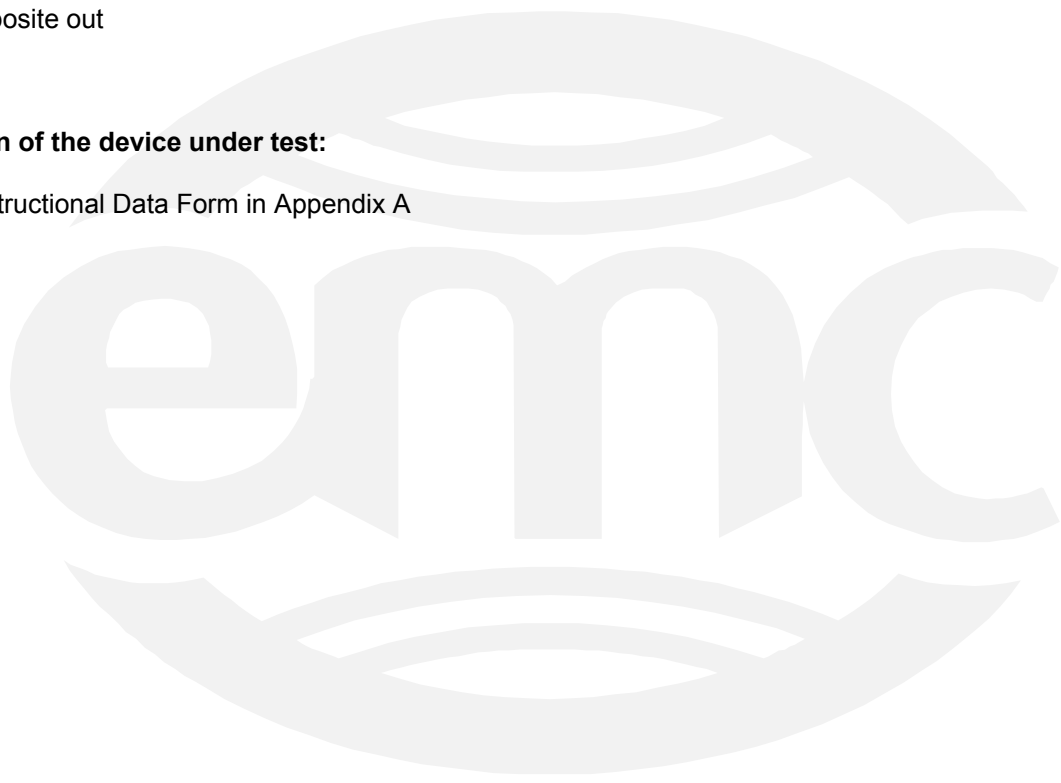
Test Operation Mode:

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 out

Configuration of the device under test:

- See Constructional Data Form in Appendix A



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): 17 October, 2005

Condition of EUT: Normal

Testing Start Date (TÜV): 17 October, 2005

Testing End Date: (ADC) 19 October, 2005

- TÜV AMERICA INC -

Tested By:



M. Schultz

Reviewed By:



G. S. Jakubowski

Appendix A

Constructional Data Form

and

Block Diagrams



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 base station.

EUT Name: Digivance® CXD 800 MHz A Band

Model No.: DGVF-03000000XXCRN Serial No.: None

Product Options: Receive Diversity

Configurations to be tested: Cellular 800 MHz A Band

Test Objective

- EMC Directive 89/336/EEC (EMC) FCC: Class A B Part 22
- Std: VCCI: Class A B
- Machinery Directive 89/392/EEC (EMC) BCIC: 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)

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

EMC Test Plan and Constructional Data Form

(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, TUV 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: 18" Width: 11" Height: 23" Weight: 95 LBS

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: 176-238 VAC (If battery powered, make sure battery life is sufficient to complete testing.)

of Phases: 1

Current (Amps/phase(max)): 6/4 Current (Amps/phase(nominal)): 4

Other _____

Other Special Requirements

none

Typical Installation and/or Operating Environment

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

Host indoor only with Remote Unit indoor or outdoor. System is typically employed as a Microcell.

EUT Power Cable

- Permanent OR Removable Length (in meters): 1
- 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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Foil over braid	Coaxial	Metallized 9-pin D-Sub	Characteristic Impedance	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RF "N" type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Braid	Coaxial	N	50 Ohms	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RF "SMA" type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	63	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Braid	Coaxial	SMA	50 Ohms	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12V DC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A	3 Pin Standoff		3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fiber	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A	SC	N/A	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PA CNTRL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	8 Pin Standoff		3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AC power	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A				3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Battery Connection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A	2 Pin Standoff		1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RJ-45	<input checked="" type="checkbox"/>	<input type="checkbox"/>	117	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A	RJ-45		1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RS-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A	9 Pin D-Sub		1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fan Power	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A	18 Pin Standoff		1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
USB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A	USB		1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>

EMC Test Plan and Constructional Data Form



EUT Software.

Revision Level: SNMP v1 & v2

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 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 #
HUB	OP-DC-DIGCH2	None	
RAN	DGVF-0204000023CRN	None	
Digivance CXD System consist of the HUB and RAN.		None	

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>
Power Supply	Xantrex HPD 60-5	MC 27764	
Signal Generator	Agilent E4436B	963739	
Ethernet Switch	Netgear	N/A	

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>
			<input type="checkbox"/> Switched-mode: (Frequency) _____ <input type="checkbox"/> Linear <input type="checkbox"/> Other: _____
			<input type="checkbox"/> Switched-mode: (Frequency) _____ <input type="checkbox"/> Linear <input type="checkbox"/> Other: _____

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

Form

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

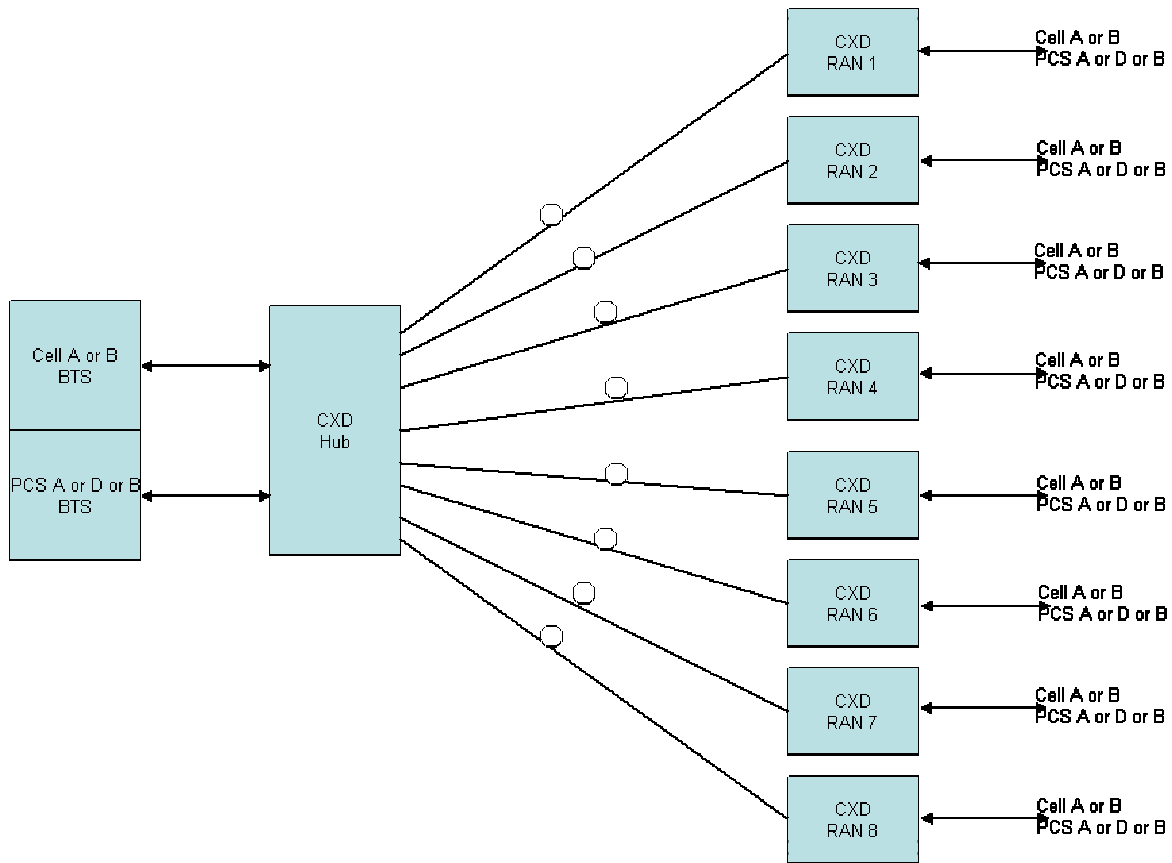


Figure 1 CXD Architecture

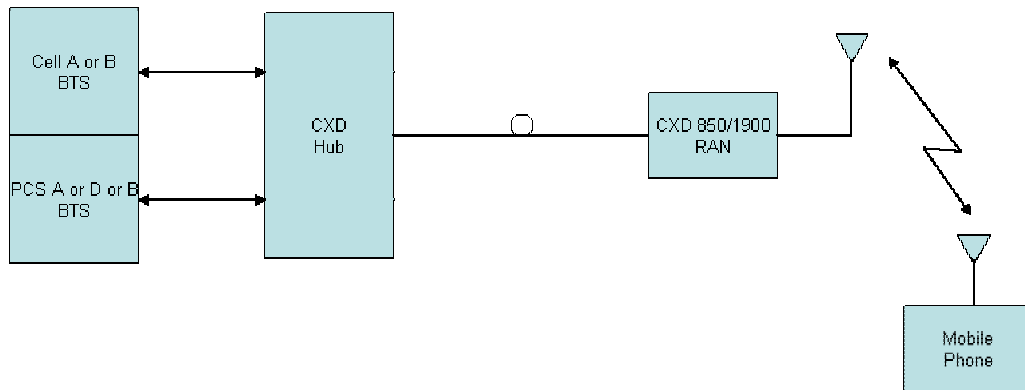


Figure 2 CXD Top Level Diagram

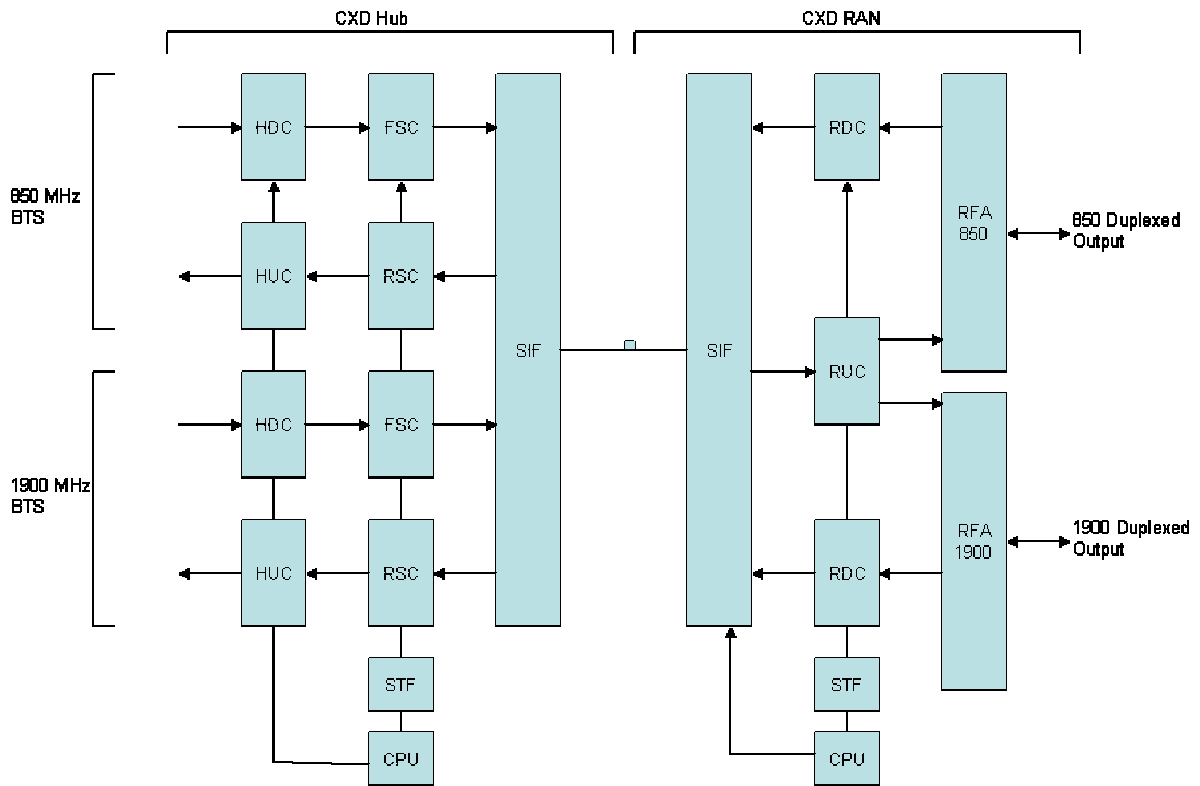


Figure 3 CXD System Block Diagram

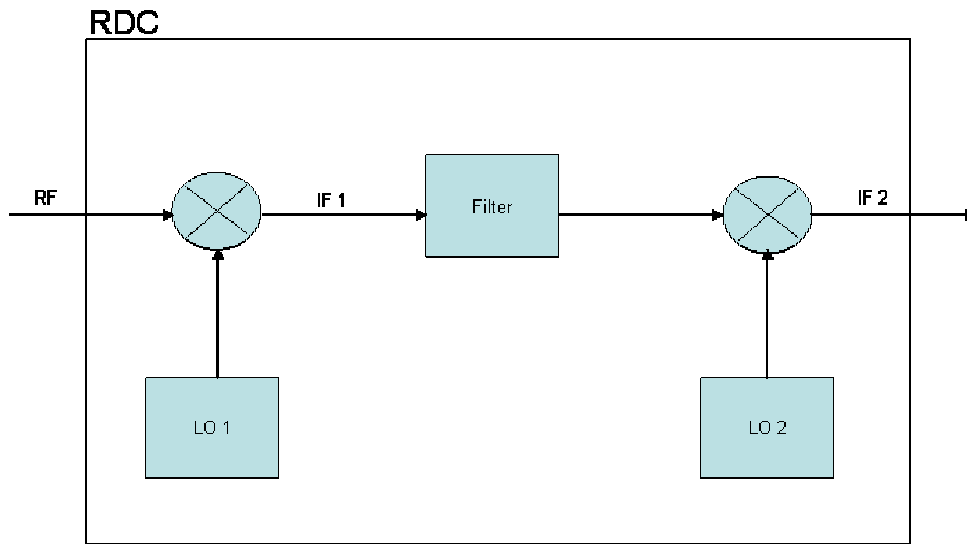


Figure 4. RDC Block diagram

The frequency plan for the RDC module is shown in the following table.

Table 1. RDC Cell Band Frequency Plan

Band	Band Width	LO 2	LO 1	Center In Freq	Inter Freq	Mid Out Freq
800 A	11000000	250500000	1110000000	830000000	280000000	29500000
800 B, A', B'	14000000	249500000	1122000000	842000000	280000000	30500000

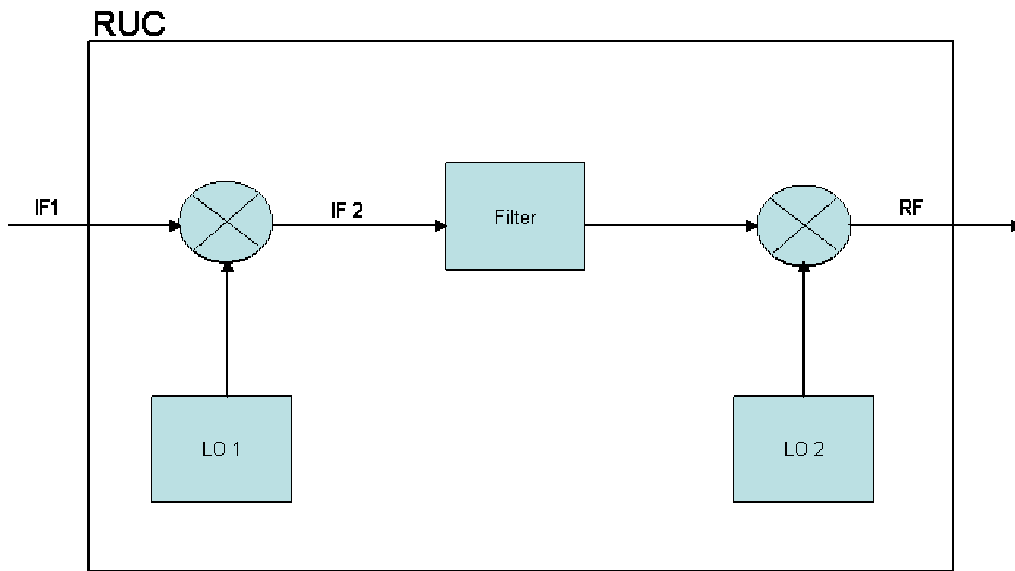


Figure 5. RUC Block diagram

The frequency plan for the RUC module is shown in the following table.

Table 2. RUC Cell Band Frequency Plan

Band	Band Width	LO 1	LO 2	In Freq	Out Freq	IF	Test Out
800 A, A"	11000000	1200800000	294,800,000	36,000,000	870,000,000	330,800,000	873,816,000
800 B, A', B'	14000000	1212800000	294,800,000	37,200,000	880,800,000	332,000,000	885,816,000

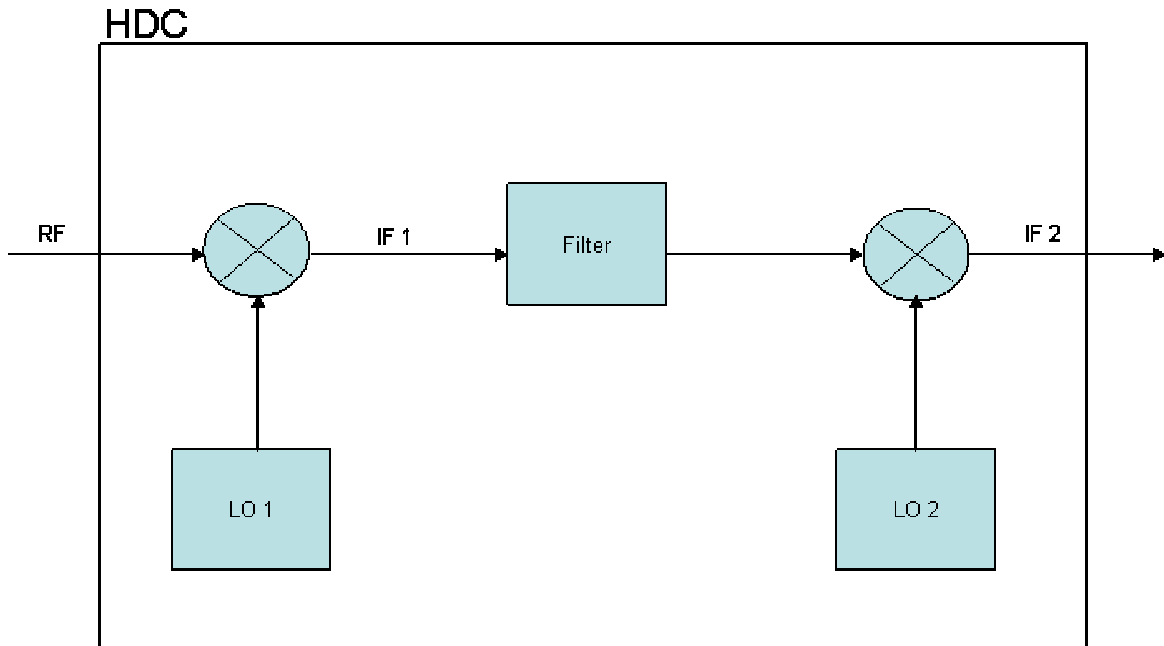


Figure 6. HDC Block diagram

The frequency plan for the HDC module is shown in the following table.

Table 3. HDC Cell Band Frequency Plan

Band	Band Width	LO 1	LO 2	In Freq	Out Freq	IF
800 A, A''	11000000	1200800000	294,800,000	870,000,000	36,000,000	330,800,000
800 B, A', B'	14000000	1212800000	294,800,000	880,800,000	37,200,000	332,000,000

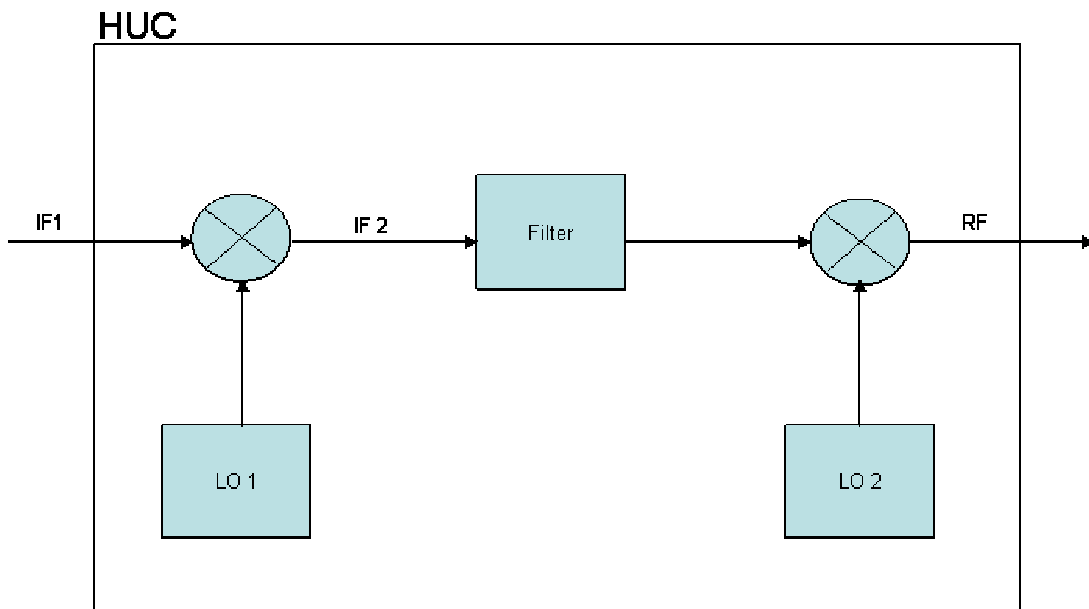


Figure 7. HUC Block diagram

The frequency plan for the HUC module is shown in the following table.

Table 4. HUC Cell Band Frequency Plan

Band	Band Width	LO 2	LO 1	Mid In Freq	Inter Freq	Mid Out Freq
800 A	11000000	250500000	1110000000	29500000	280000000	830000000
800 B, A', B'	14000000	249500000	1122000000	30500000	280000000	842000000

Appendix B

Measurement Protocol



MEASUREMENT PROTOCOL

GENERAL INFORMATION

Environmental conditions in the lab,

ADC Inc.

Temperature: 78 °F
 Relative Humidity: 28 %
 Atmospheric pressure: 29.15" Hg
 Power supply system: 60 Hz, 120 VAC;

TUV America Large Test Site

Temperature: 22 °C
 Relative Humidity: 40 %
 Atmospheric pressure: 99.0 kPa
 Power supply system: 60 Hz, 120 VAC;

The FCC guideline for measuring a device which draws its power from a device which connects to the AC mains, indicates that it must be demonstrated that it does not cause the device which connects to the AC mains to become non-compliant. If it can be demonstrated that it will be compliant in a representative host, it does not have to demonstrate compliance in every possible host. Thus, the testing proves the EUT's RF board, when connected to a compliant host connected to the AC mains, allows the host to remain compliant. The host that was provided for the testing operated at 60 Hz 120 VAC.

Test Methodology

Conducted and radiated 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.

Conducted Emissions

The final level, in dB μ V, equals the EMI receiver level plus the cable loss and LISN factor.

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)	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

Test Equipment

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

Substitution Method

A radiated emission scan was also made, at TÜV 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.

