

**Software Test 10 for  
Digivance 800 MHz 50-Watt SDR System  
Model Numbers DGVs-112710SYS and DGVs-122710SYS**

The out of band emissions were measured directly from the EUT antenna output with a spectrum analyzer from 30 MHz to the 10<sup>th</sup> harmonic of the highest carrier frequency. The Software Test 10 simulates the GSM signal created from a sequence of all ones.

**Results:**

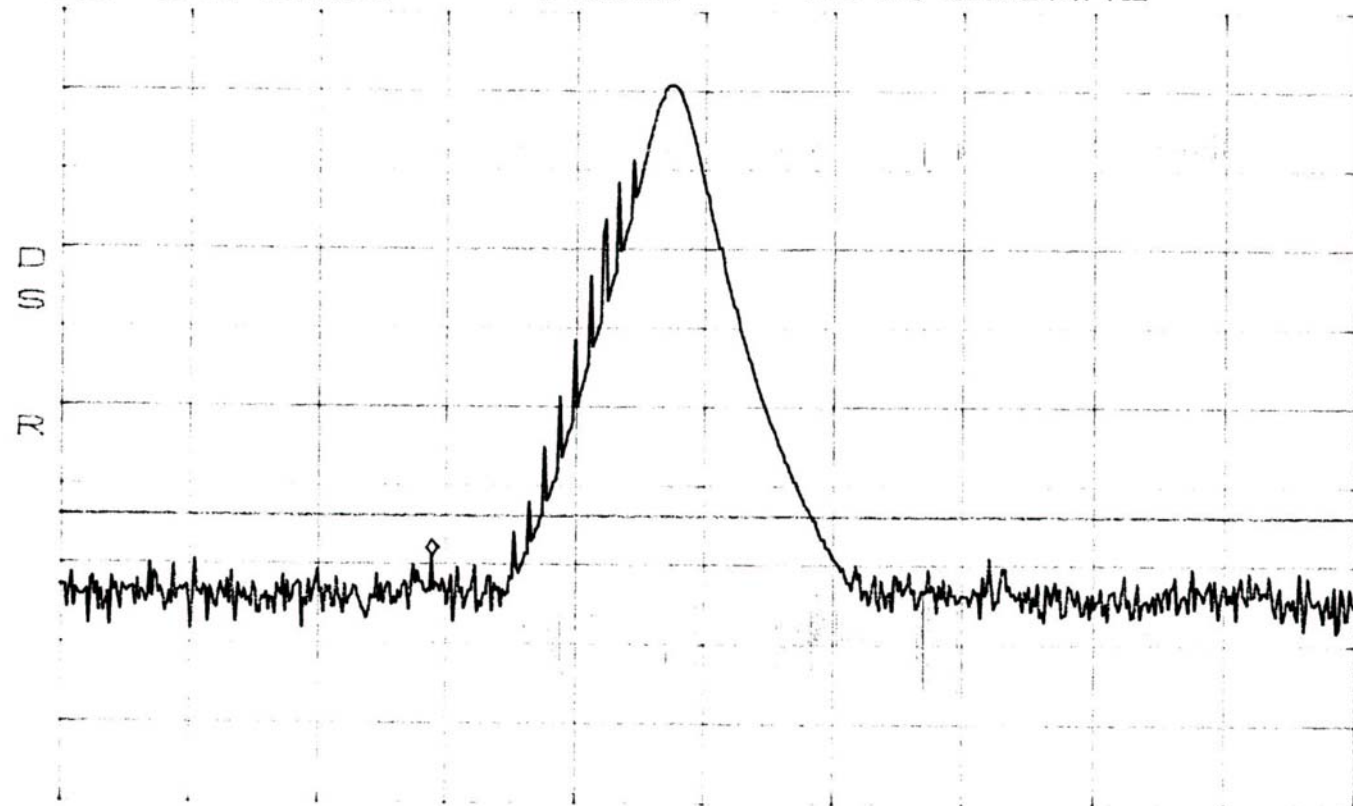
Pass (see plots)

Software Defined Radio  
Software Test 10  
A Band - Channel 181

\*ATTEN 30dB  
RL 51.0dBm

10dB/

MKR -17.83dBm  
878.950MHz



CENTER 880.000MHz

SPAN 5.000MHz

\*RBW 100kHz

VBW 100kHz

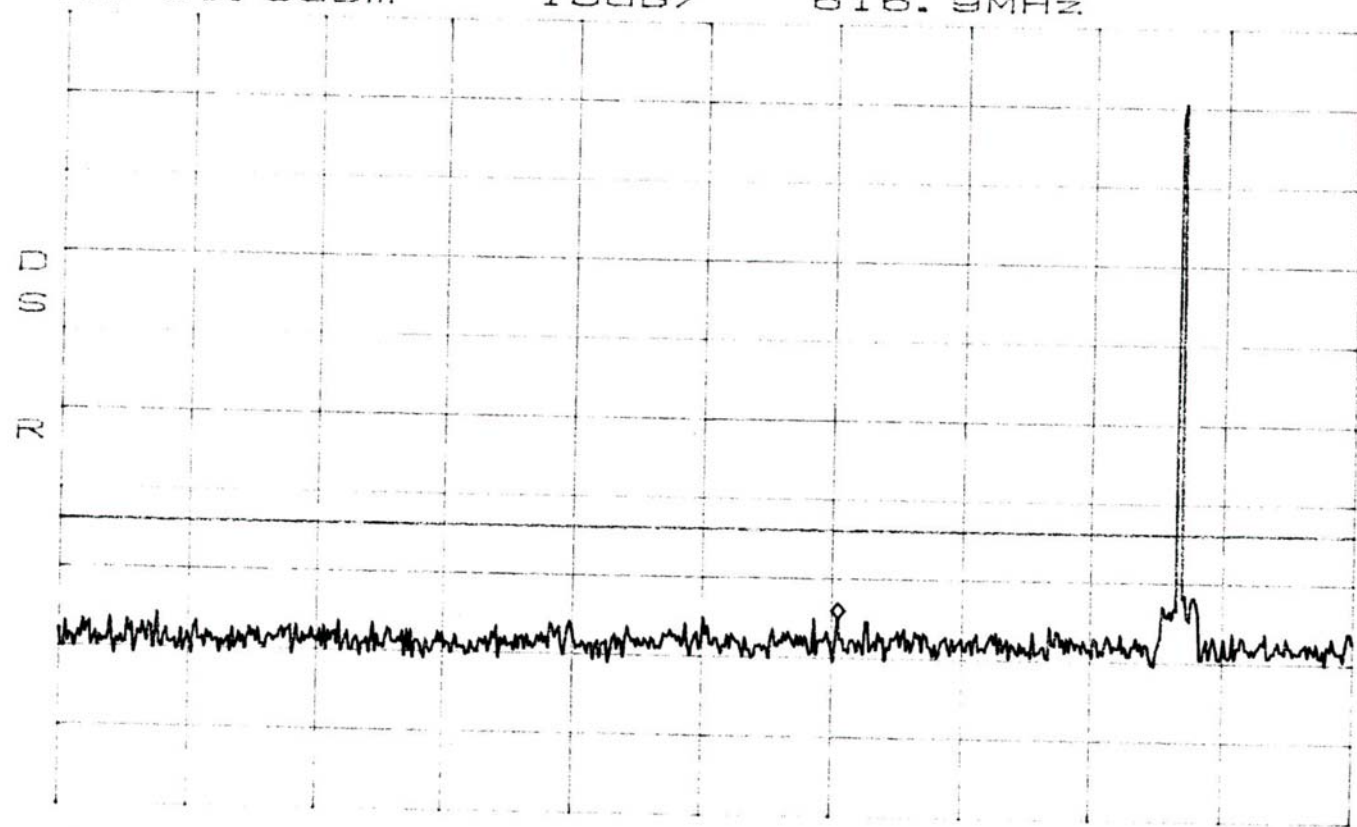
SWP 50ms

Software Defined Radio  
Software Test 10  
A Band - Channel 181

\*ATTEN 30dB  
RL 51.0dBm

10dB/

MKR -24.00dBm  
616.9MHz



START 30.0MHz STOP 1.0000GHz  
\*RBW 100kHz VBW 100kHz SWP 250ms

Software Defined Radio

Software Test 10

A Band - Channel 181

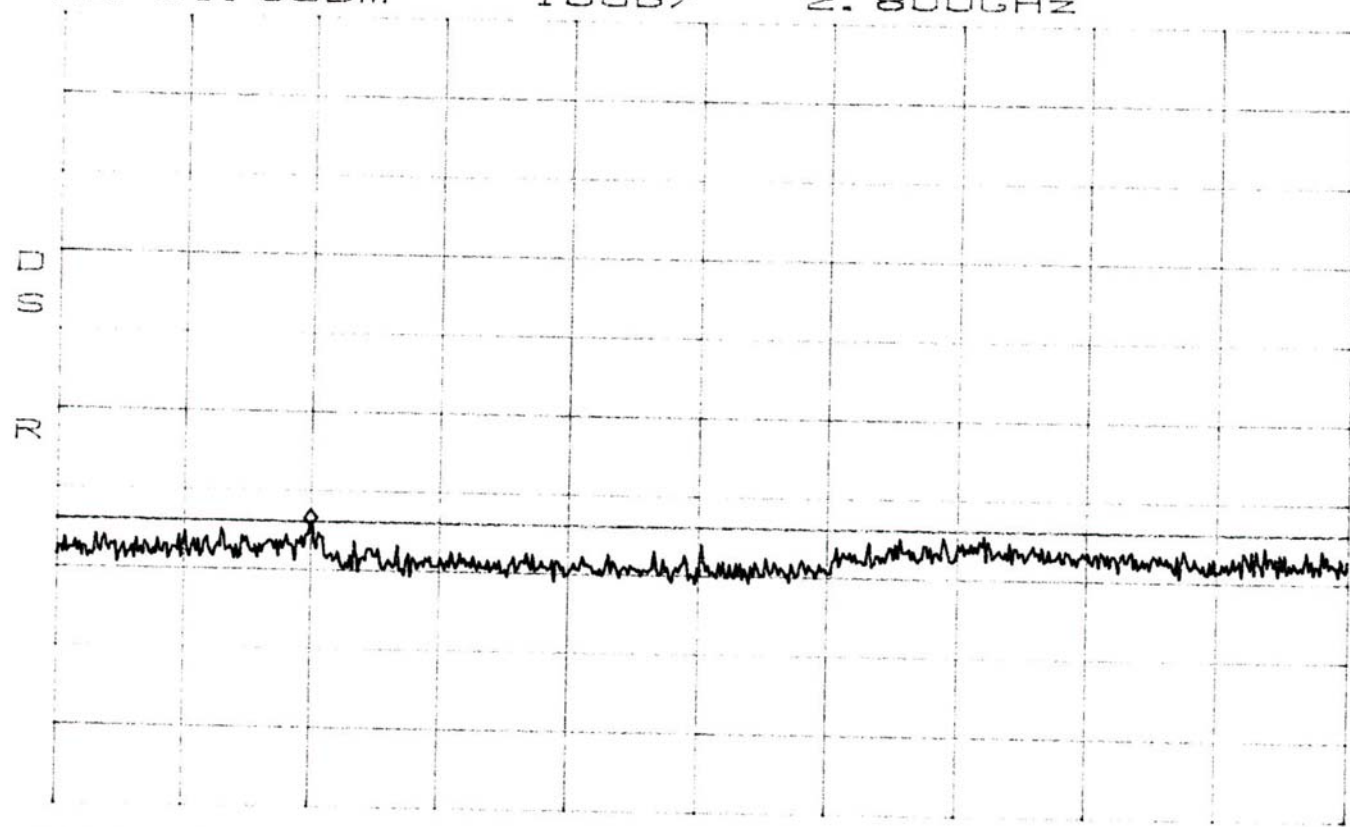
\*ATTEN 30dB

RL 51.0dBm

10dB/

MKR -13.33dBm

2.800GHz



START 1.000GHz

STOP 10.000GHz

\*RBW 1.0MHz

VBW 1.0MHz

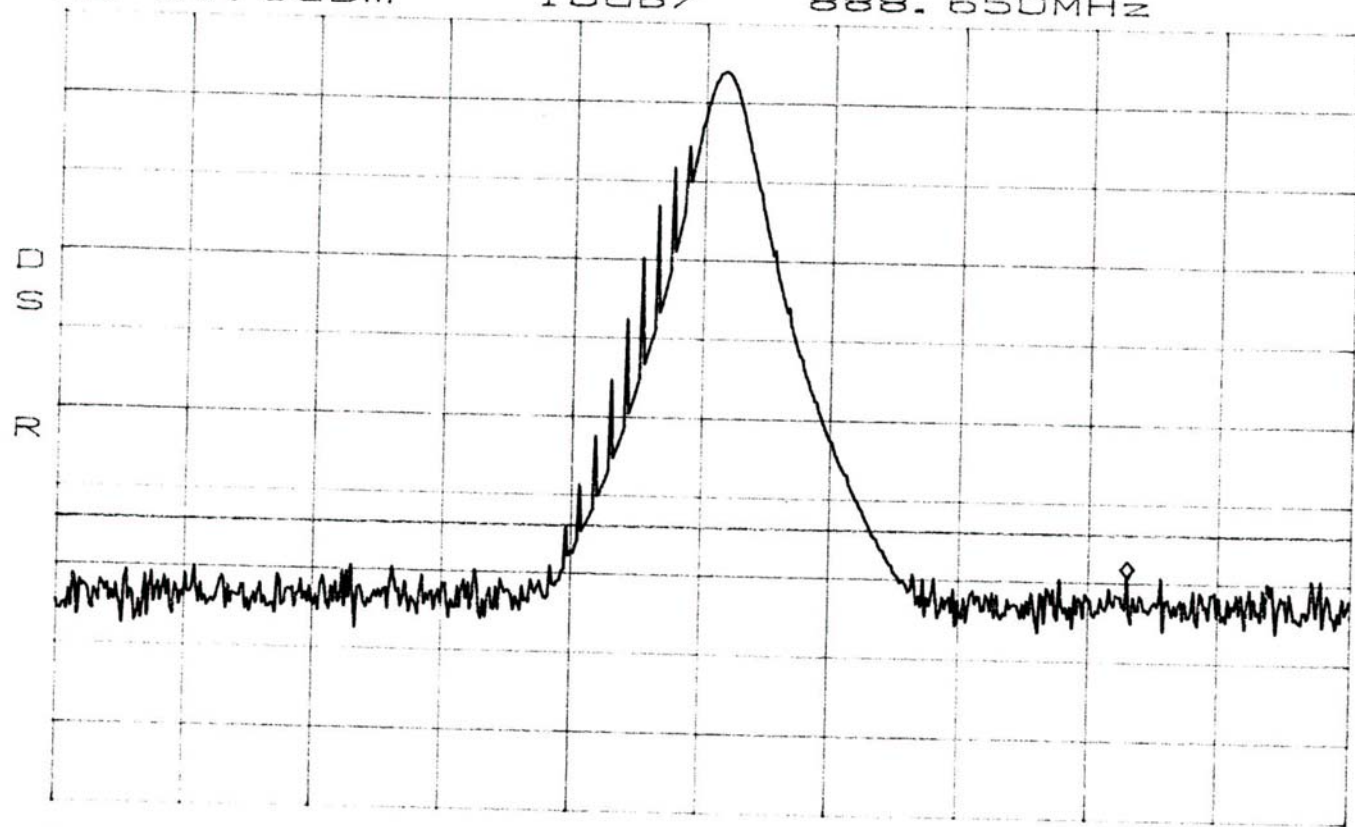
SWP 180ms

Software Defined Radio  
Software Test 10  
B Band - Channel 217

\*ATTEN 30dB  
RL 51.0dBm

10dB/

MKR -18.17dBm  
888.650MHz



CENTER 887.000MHz

\*RBW 100kHz VBW 100kHz

SPAN 5.000MHz

SWP 50ms

Software Defined Radio

Software Test 10

B Band - Channel 217

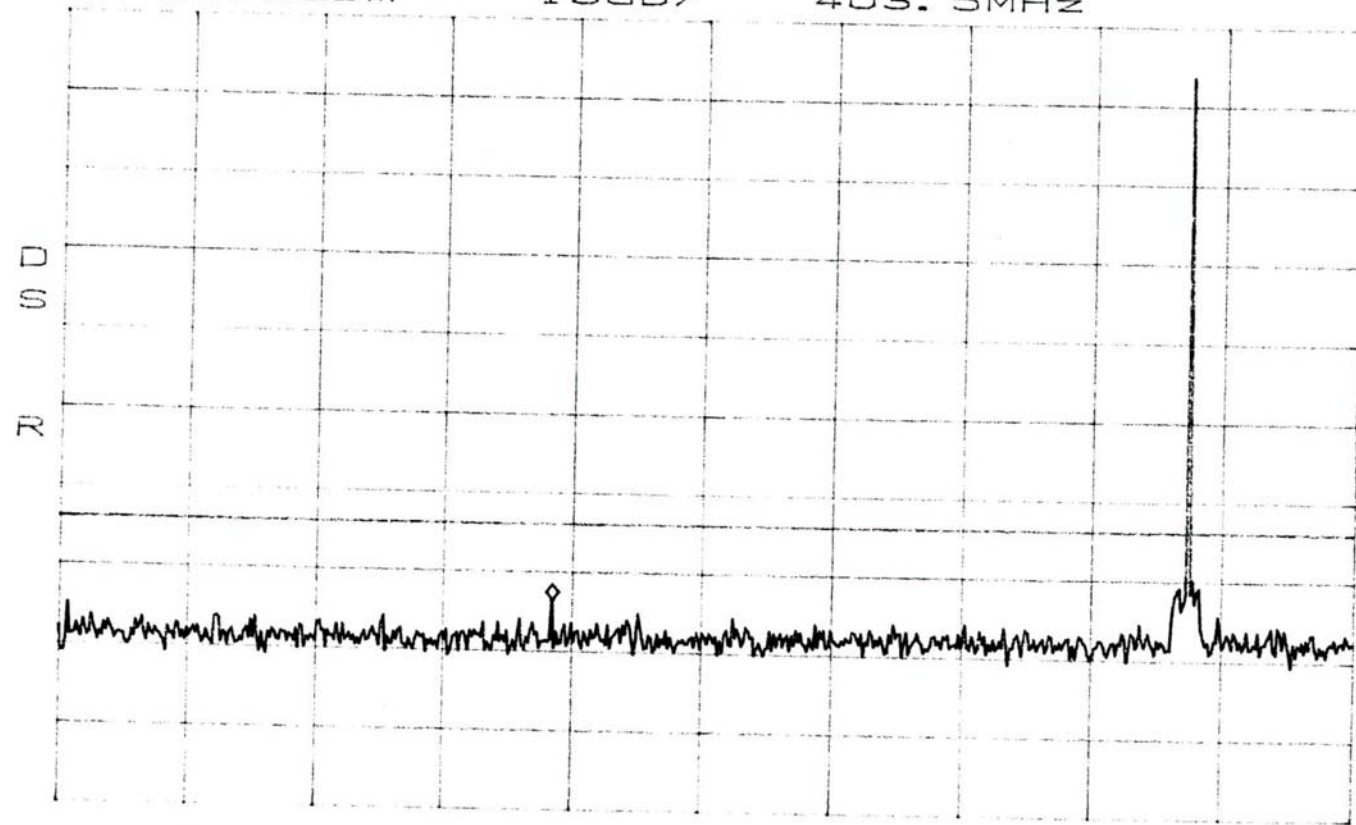
\*ATTEN 30dB

RL 51.0dBm

10dB/

MKR -22.50dBm

403.5MHz



START 30.0MHz

STOP 1.0000GHz

\*RBW 100kHz

VBW 100kHz

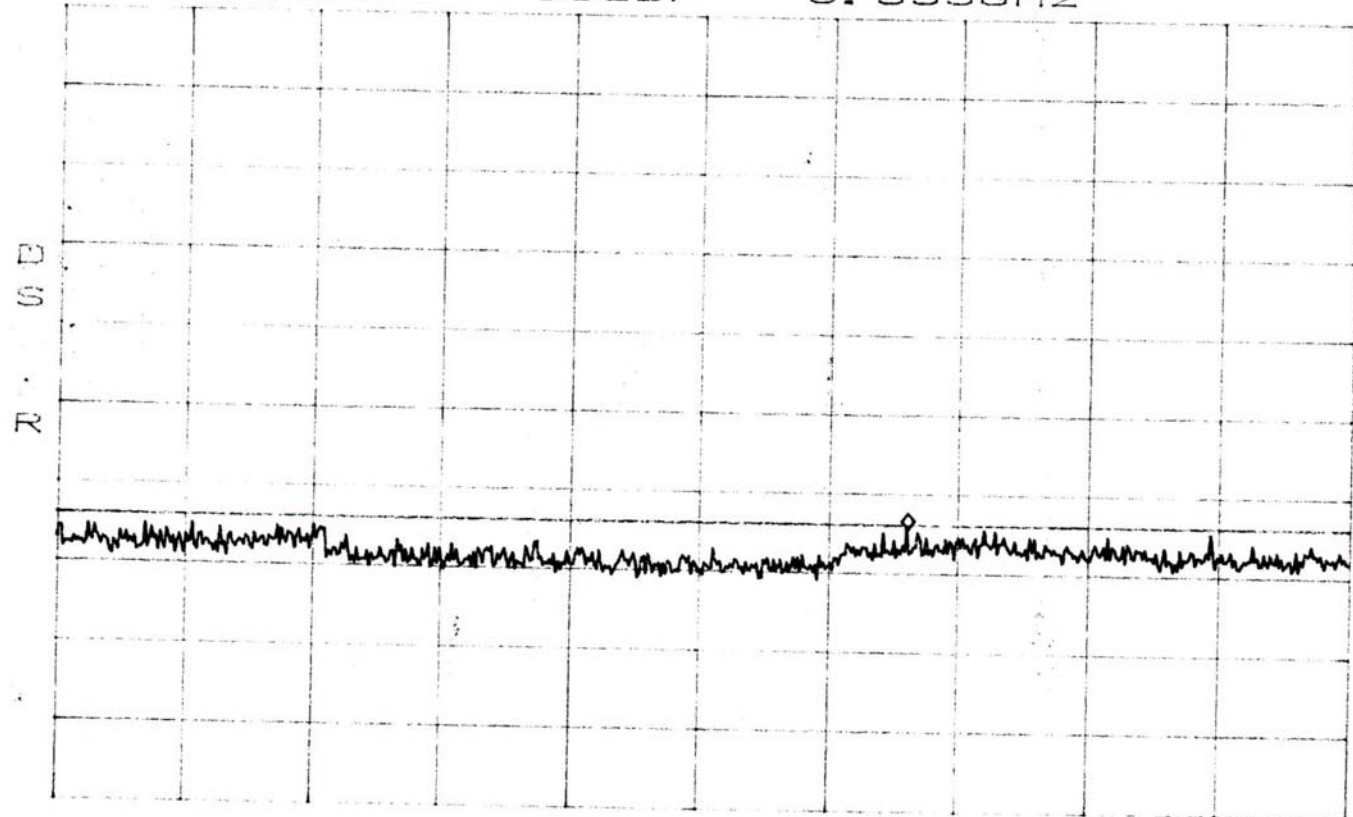
SWP 250ms

Software Defined Radio  
Software Test 10  
B Band - Channel 217

\*ATTEN 30dB  
RL 51.0dBm

10dB/

MKR -13.33dBm  
6.955GHz



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

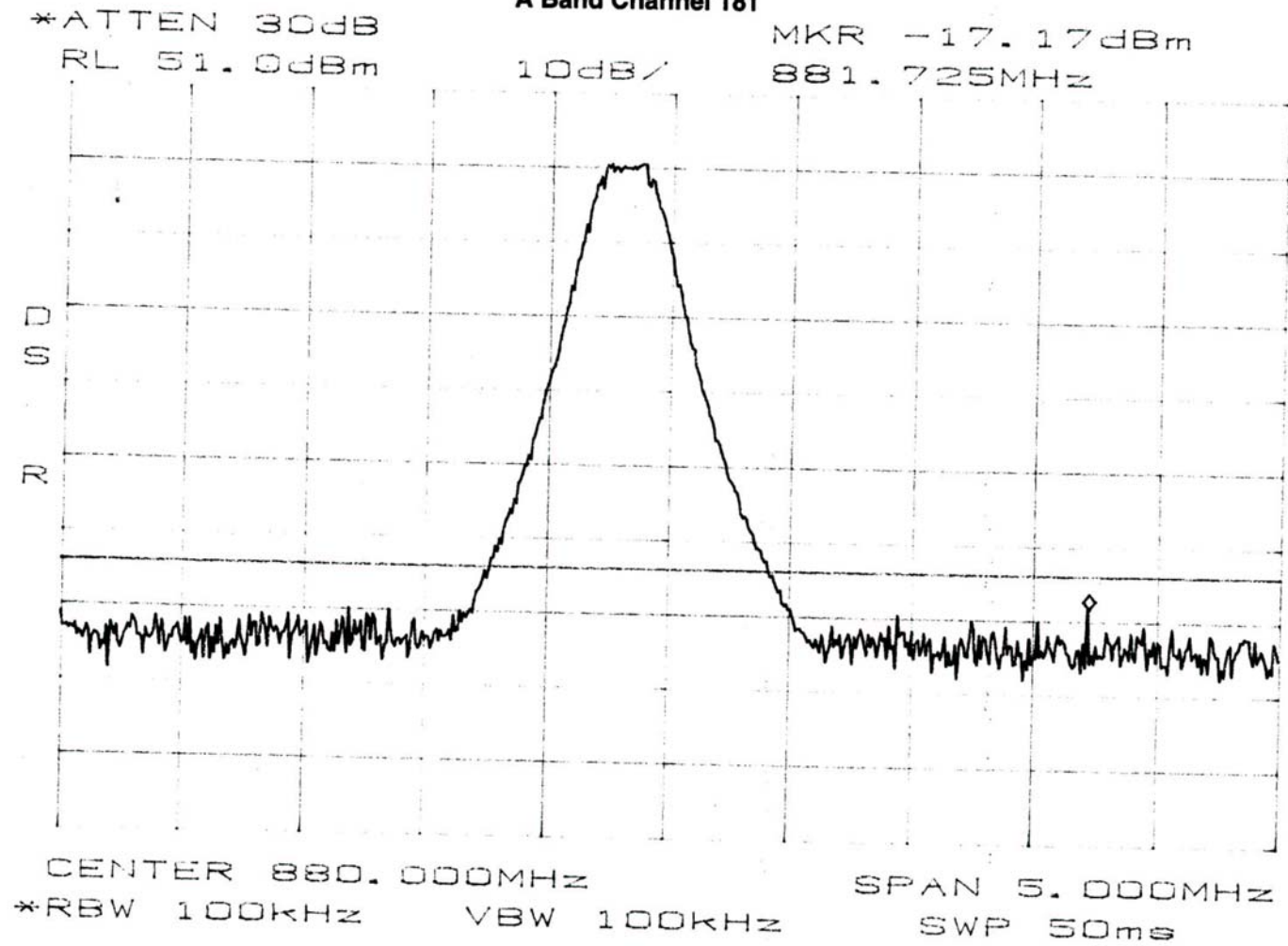
**Software Test 11 for  
Digivance 800 MHz 50-Watt SDR System  
Model Numbers DGV5-112710SYS and DGV5-122710SYS**

The out of band emissions were measured directly from the EUT antenna output with a spectrum analyzer from 30 MHz to the 10<sup>th</sup> harmonic of the highest carrier frequency. The Software Test 11 simulates the GSM signal created from a repeated sequence with 1 timeslot of valid control channel data and the remaining 7 timeslots filled with dummy bursts.

**Results:**

Pass (see plots)

Software Defined Radio  
Software Test 11  
A Band Channel 181

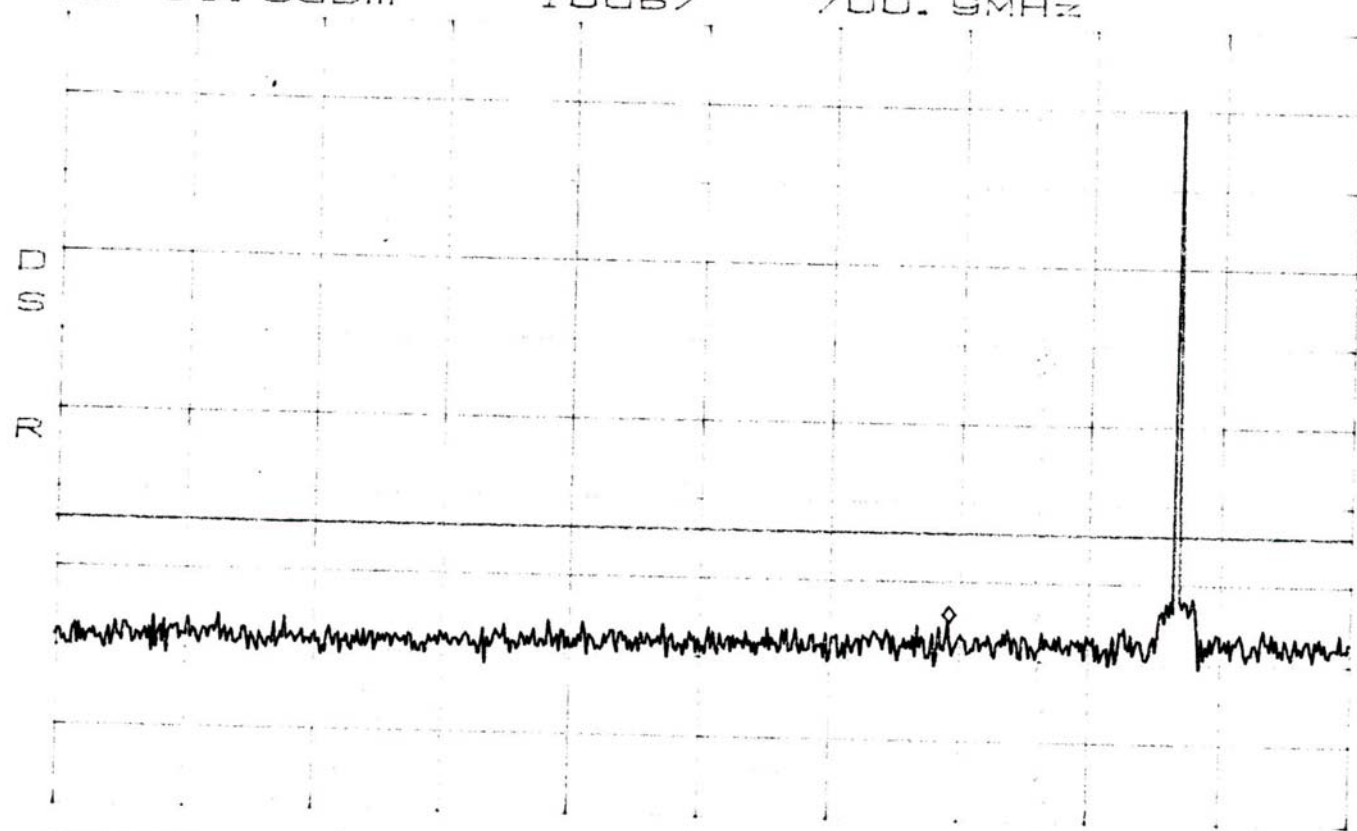


Software Defined Radio  
Software Test 11  
A Band Channel 181

\*ATTEN 30dB  
RL 51.0dBm

10dB/

MKR -24.00dBm  
700.9MHz



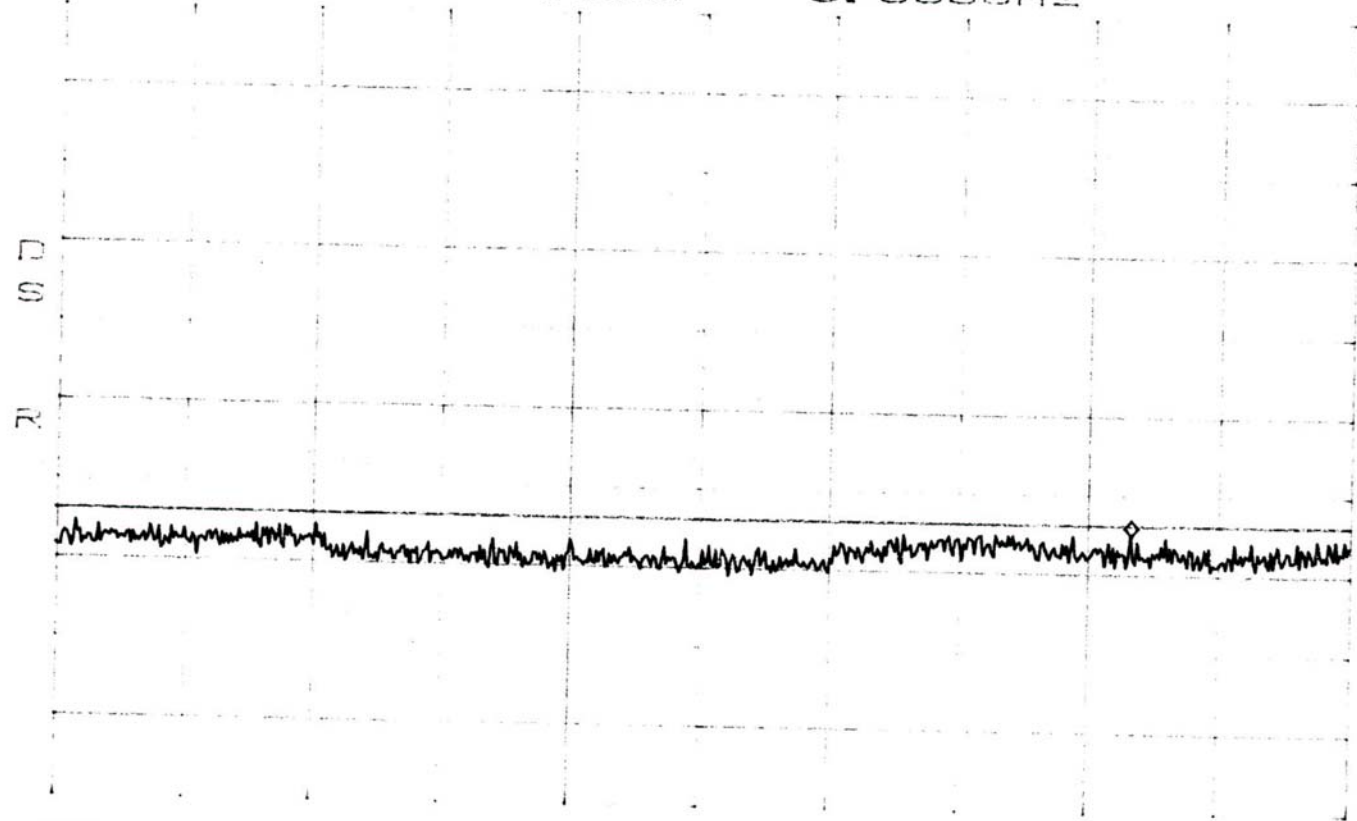
START 30.0MHz STOP 1.00000GHz  
\*RBW 100kHz VBW 100kHz SWP 250ms

Software Defined Radio  
Software Test 11  
A Band Channel 181

\*ATTEN 30dB  
RL 51.0dBm

10dB/

MKR -14.00dBm  
8.500GHz



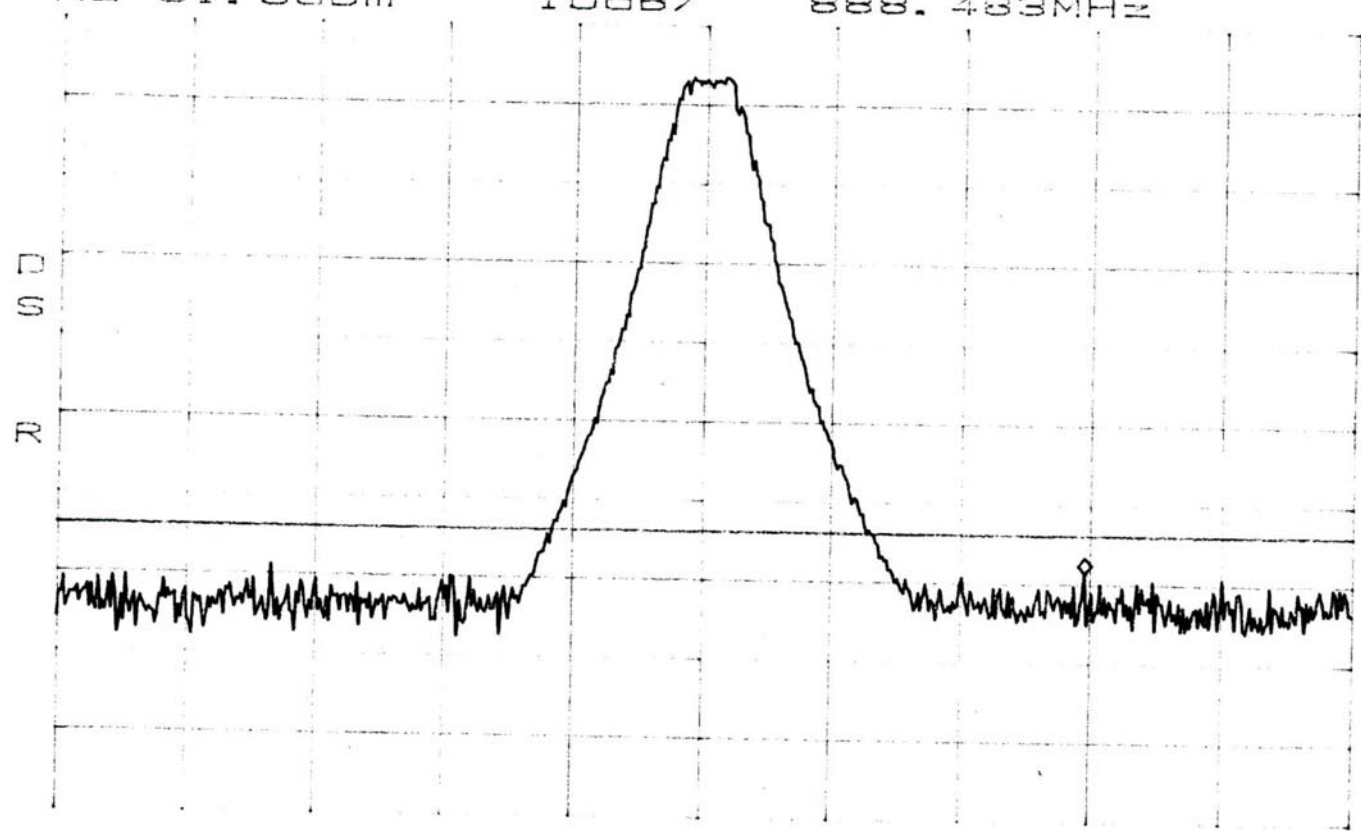
START 1.000GHz STOP 10.000GHz  
\*RBW 1.0MHz VBW 1.0MHz SWP 180ms

Software Defined Radio  
Software Test 11  
B Band Channel 217

\*ATTEN 30dB  
RL 51.0dBm

10dB/

MKR -17.50dBm  
888.483MHz



CENTER 887.000MHz  
\*RBW 100kHz VBW 100kHz

SPAN 5.000MHz  
SWP 50ms

Software Defined Radio

Software Test 11

B Band Channel 217

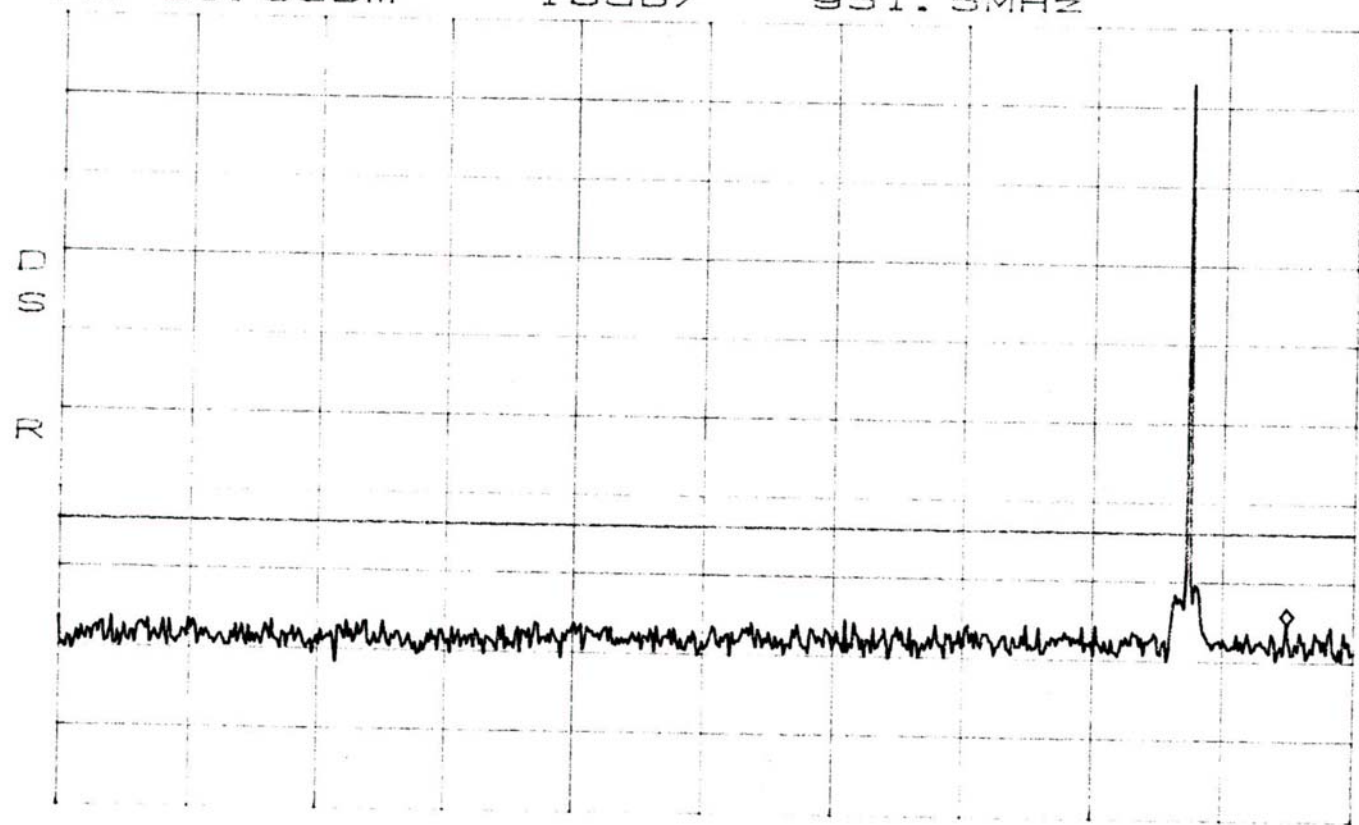
\*ATTEN 30dB

RL 51.0dBm

10dB/

MKR -24.17dBm

951.5MHz



START 30.0MHz

STOP 1.00000GHz

\*RBW 100kHz

VBW 100kHz

SWP 250ms

Software Defined Radio

Software Test 11

B Band Channel 217

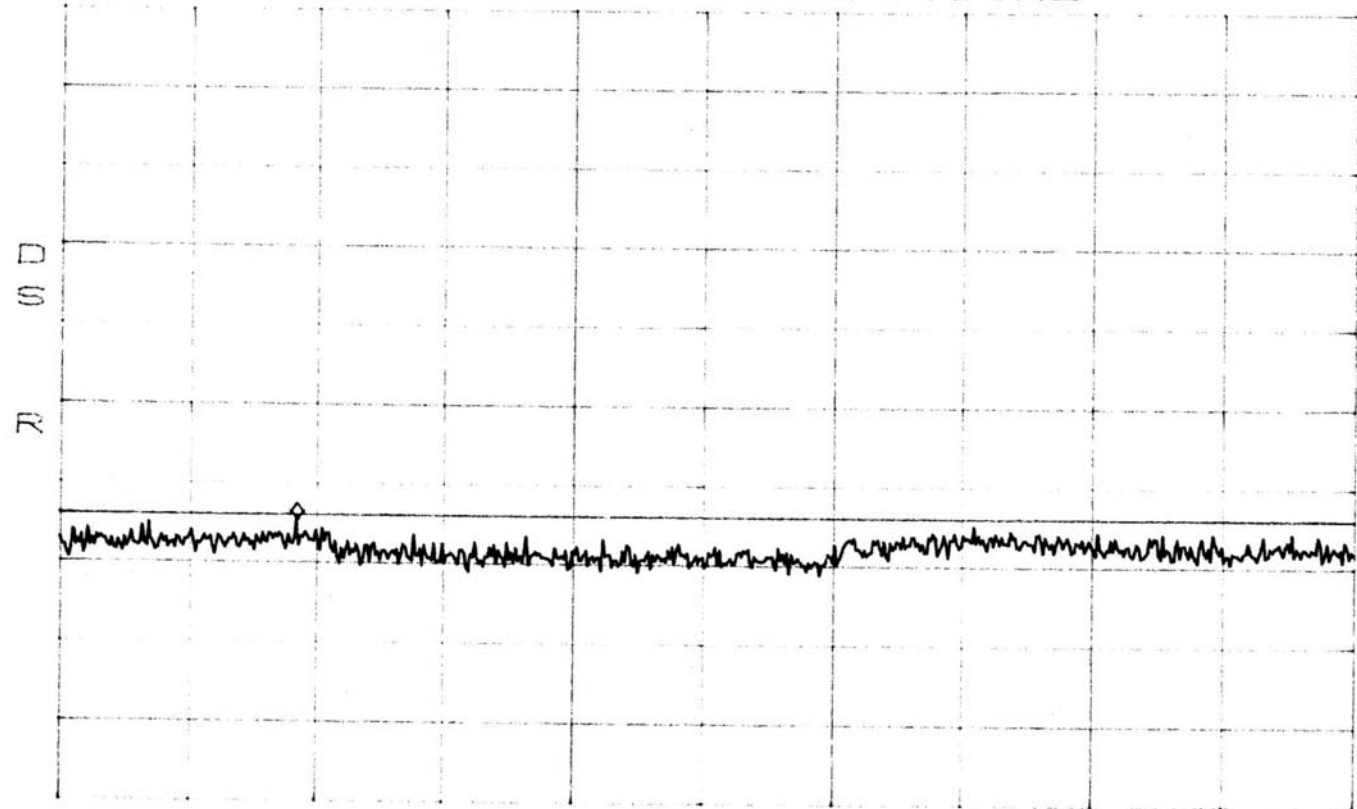
\*ATTEN 30dB

RL 51.0dBm

10dB/

MKR -13.50dBm

2.665GHz



START 1.000GHz

STOP 10.000GHz

\*RBW 1.0MHz

VBW 1.0MHz

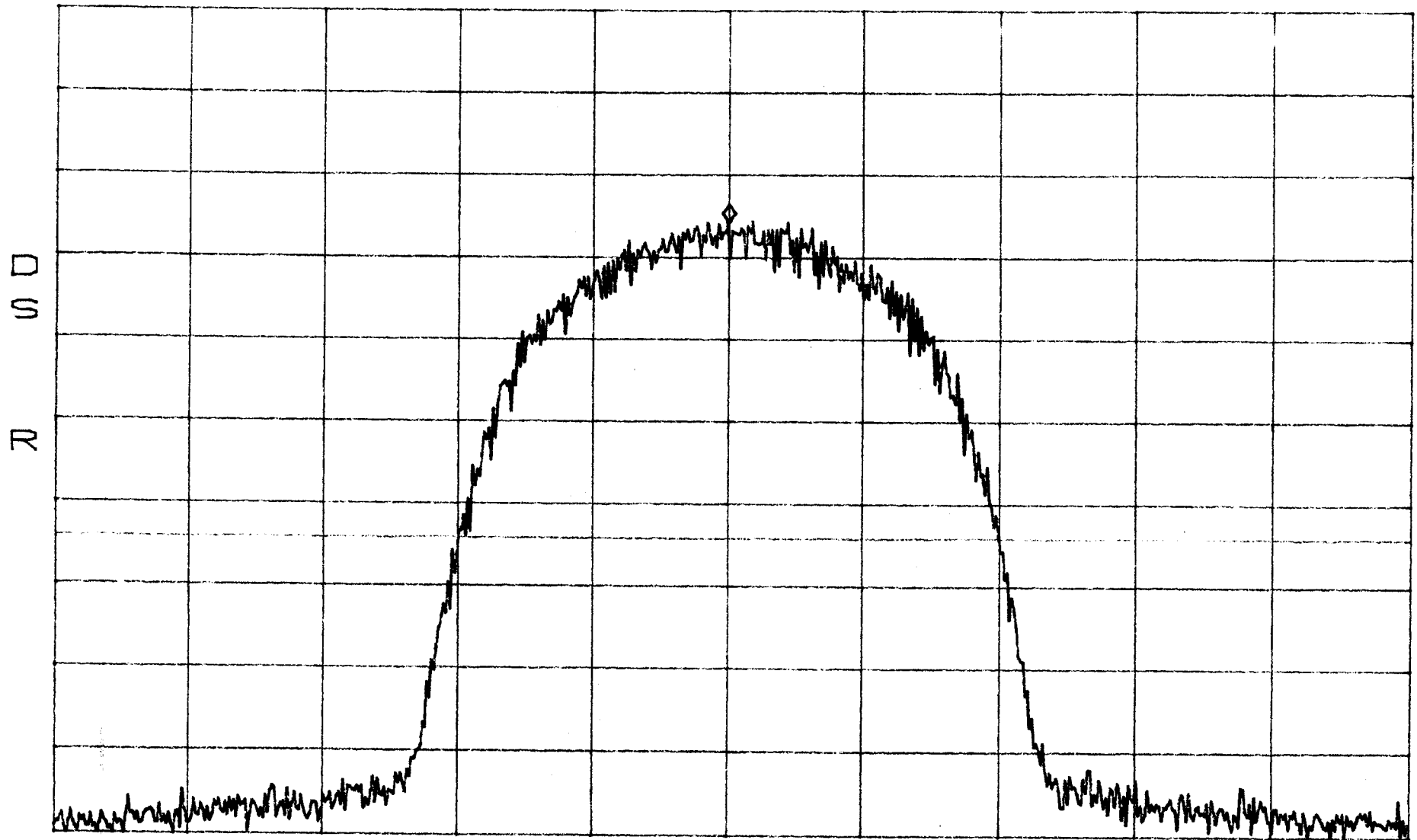
SWP 180ms

Band Edge Low  
Band A channel 128

ATTEN 30dB  
RL 51.2dBm

10dB/

MKR 25.70dBm  
869.2000MHz



CENTER 869.2000MHz  
\*RBW 300Hz VBW 300Hz

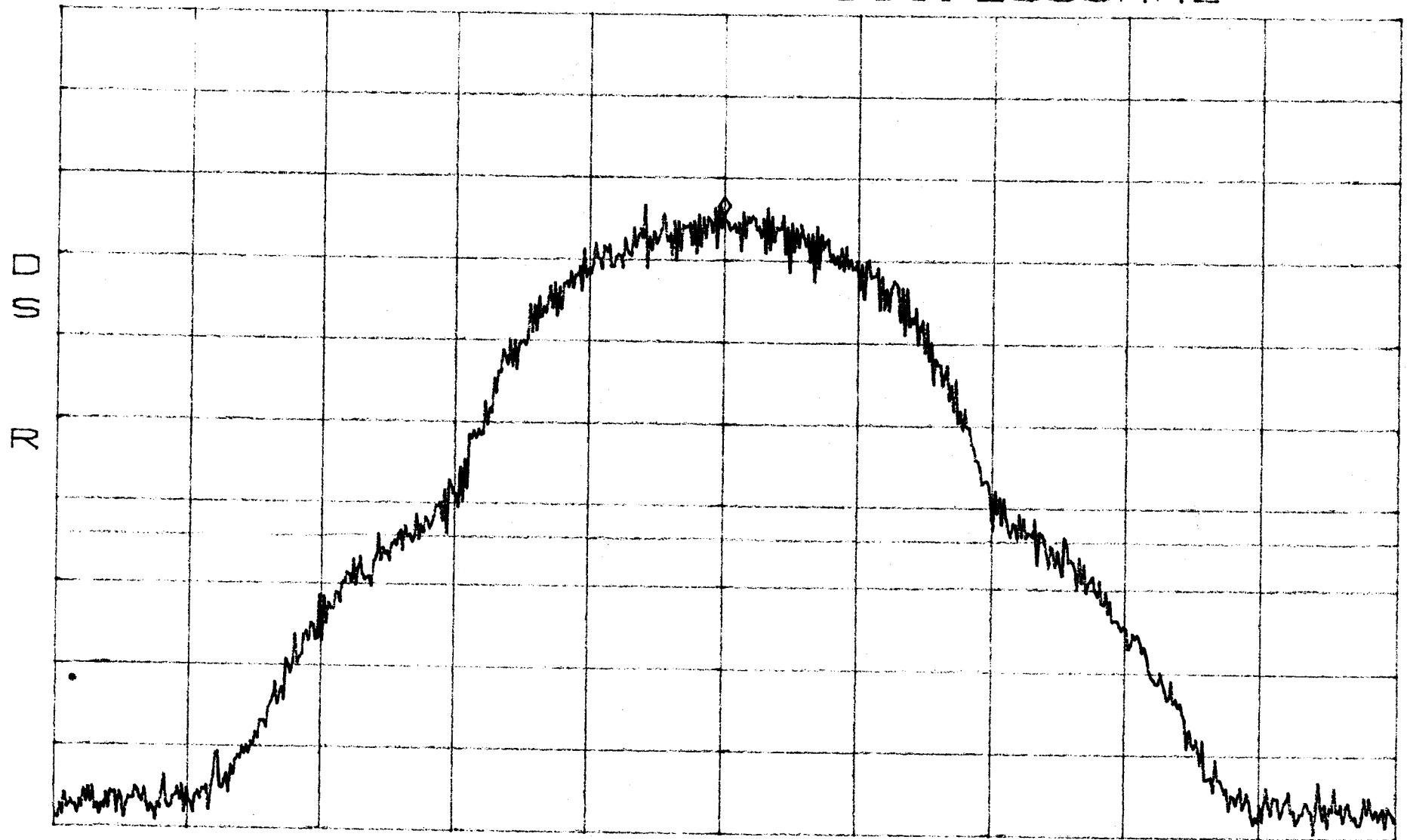
SPAN 800.0kHz  
SWP 23sec

Band Edge High  
Band A channel 238

ATTEN 30dB  
RL 51.2dBm

MKR 26.87dBm  
891.2000MHz

10dB/



CENTER 891.2000MHz  
\*RBW 300Hz VBW 300Hz

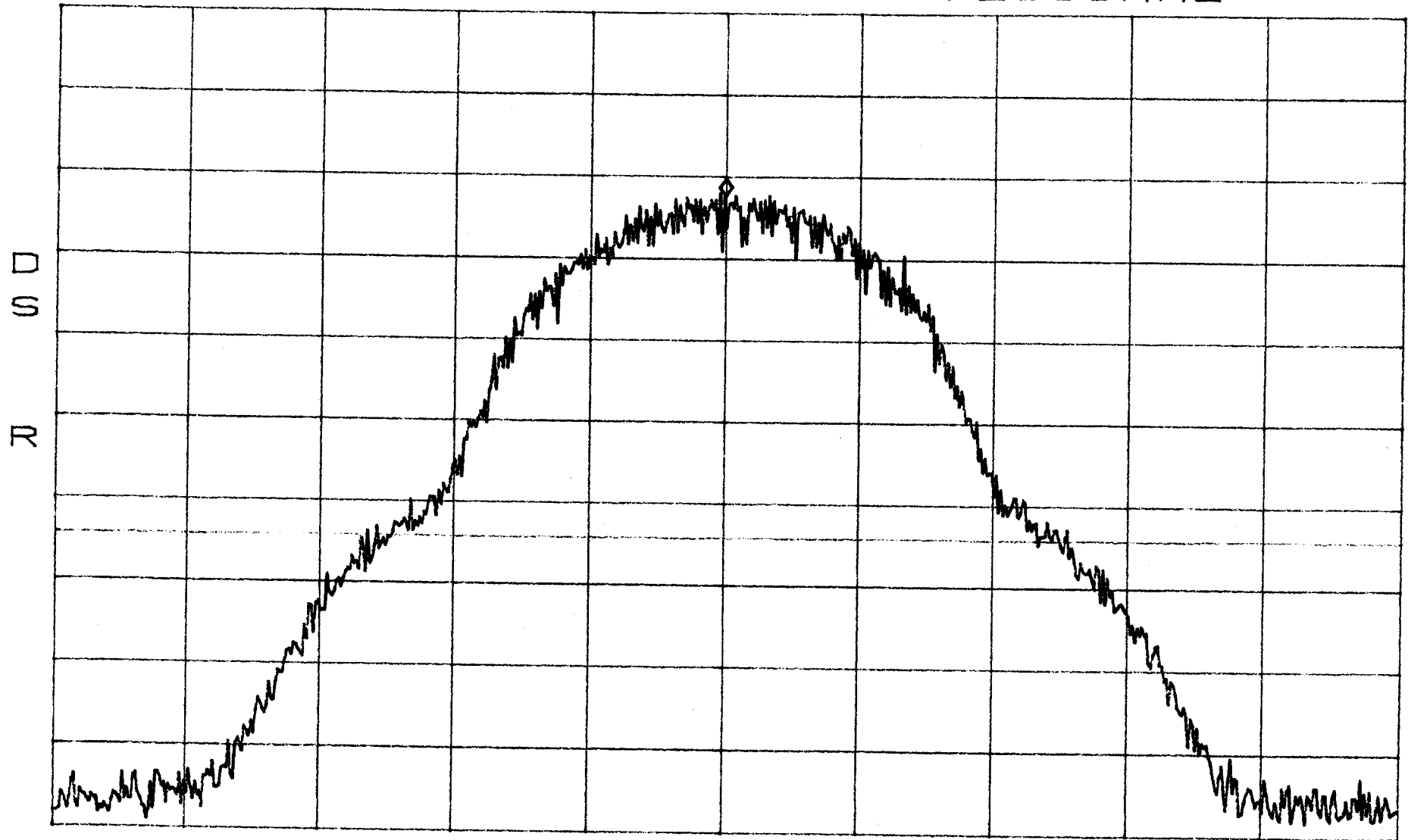
SPAN 800.0kHz  
SWP 23sec

Band Edge Low  
Band B channel 183

ATTEN 30dB  
RL 51.2dBm

10dB/

MKR 29.03dBm  
880.2000MHz



CENTER 880.2000MHz  
\*RBW 300Hz VBW 300Hz

SPAN 800.0kHz  
SWP 23sec

Band Edge High  
Band B channel 251

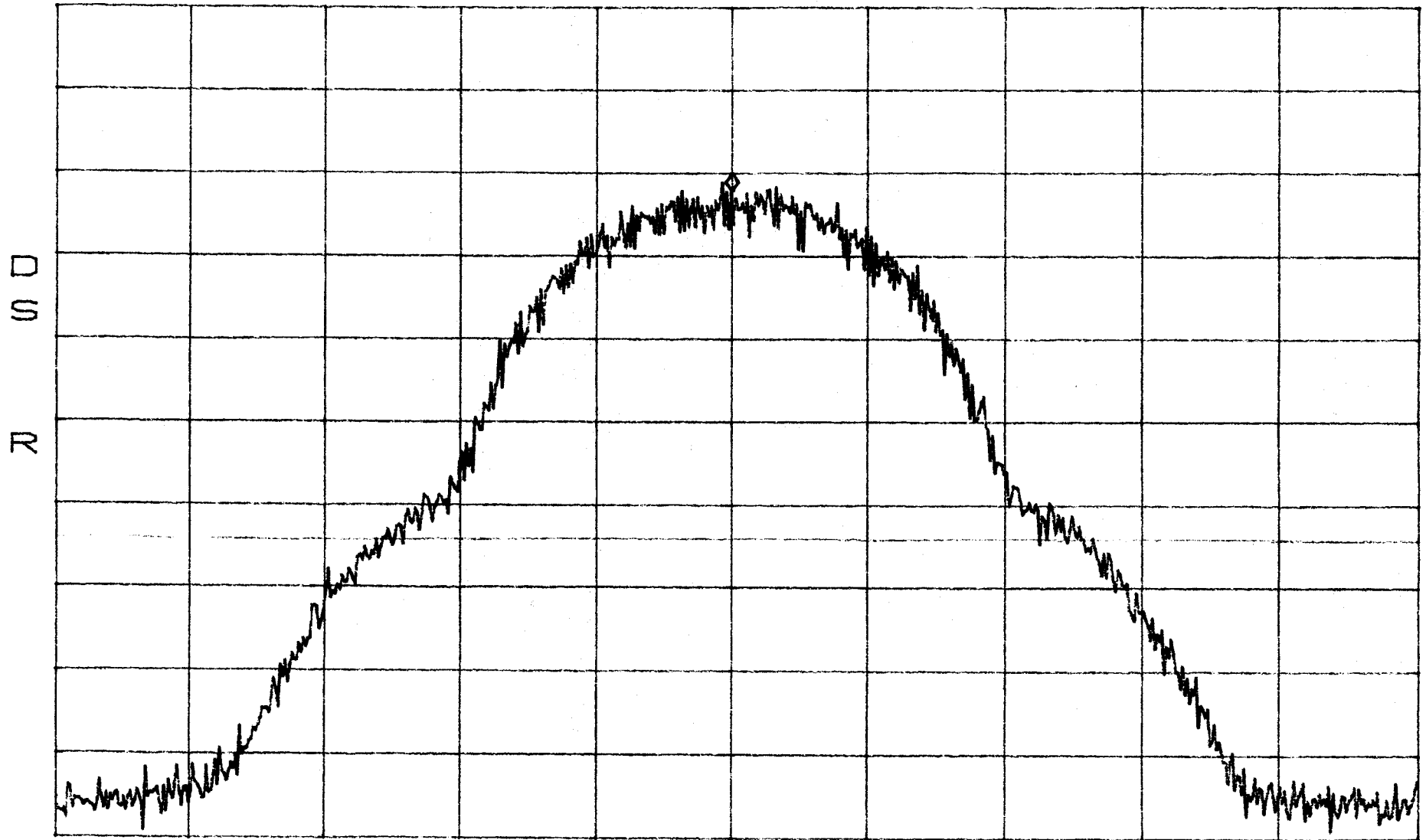
ATTEN 30dB

MKR 29.20dBm

RL 51.2dBm

10dB/

893.8000MHz



CENTER 893.8000MHz

SPAN 800.0kHz

\*RBW 300Hz

VBW 300Hz

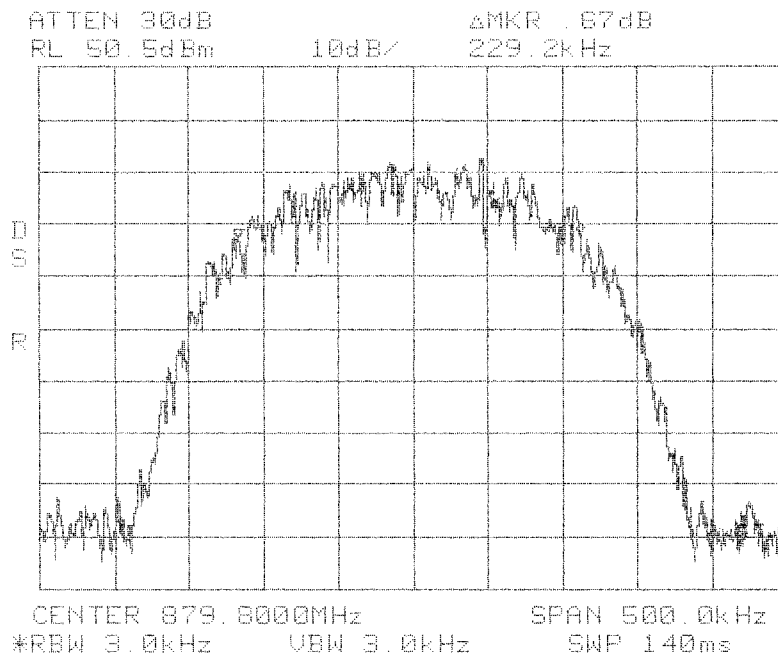
SWP 23sec

**Occupied Bandwidth Modulation Test for ADC Inc.  
Digivance 800 MHz 50-Watt WBDR System  
Model Numbers DGVs-112710SYS and DGVs-122710SYS**

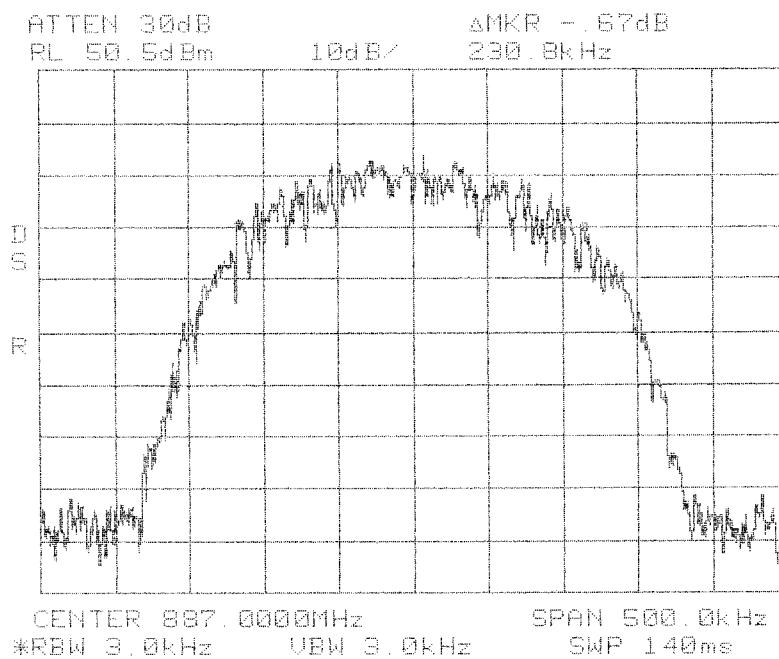
An output Occupied Bandwidth test was done with modulation type GSM. The purpose was to determine the amount of distortion added to this modulation scheme by the EUT. The following plots show output signals.

**Results:**

Pass (see plots)



**Software Defined Radio  
Occupied Bandwidth  
GSM  
A BAND**  
*Channel 191*



**Software Defined Radio  
Occupied Bandwidth  
GSM  
B BAND**

Channel 217

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 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. 2 case radiation emission scans were performed. The highest emission frequency from the two scans is listed below.

|               |                  |                                |
|---------------|------------------|--------------------------------|
| Run 1         |                  |                                |
| Frequency MHz | dBuV/m(from EUT) | Substitution power level - dBm |
| 910.44        | 67.5             | -32.49                         |

Case Radiation data is on the following pages:

# RADIATED EMISSIONS



Test Report #: 2208 Run 1 Test Area: LTS

EUT Model #: DGVS-112710SYS Date: 5/7/04

EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C

Test Method: FCC Part 22 Air Pressure: 98.0 kPa

Customer: ADC Mark Miska Rel. Humidity: 35.0 %

EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 1 of 6

## List of measurements for run #: 1

| FREQ                    | LEVEL<br>(dBuV) | CABLE / ANT / PREAMP /<br>ATTEN<br>(dB) | FINAL<br>(dBm) | POL / HGT / AZ<br>(m)(DEG) | DELTA1 | DELTA (dBm)<br>part 22 case<br>radiation qp |
|-------------------------|-----------------|-----------------------------------------|----------------|----------------------------|--------|---------------------------------------------|
| Channel 128 (869.2 MHz) |                 |                                         |                |                            |        |                                             |
| 1.0 GHz                 | 38.9 Pk         | 2.74 / 26.4 / 38.2 / -100.5             | -70.66         | H / 1.00 / 0               | n/a    | -57.66*                                     |
| 1.065 GHz               | 43.15 Pk        | 2.83 / 26.44 / 39.29 / -100.5           | -67.36         | H / 1.00 / 0               | n/a    | -54.36*                                     |
| 1.136 GHz               | 40.5 Pk         | 2.93 / 26.48 / 39.9 / -100.5            | -70.49         | H / 1.00 / 0               | n/a    | -57.49*                                     |
| 1.207 GHz               | 40.6 Pk         | 3.01 / 26.52 / 40.28 / -100.5           | -70.64         | H / 1.00 / 0               | n/a    | -57.64*                                     |
| 1.278 GHz               | 51.3 Pk         | 3.1 / 26.57 / 40.56 / -100.5            | -60.09         | H / 1.00 / 0               | n/a    | -47.09*                                     |
| 1.28 GHz                | 44.0 Pk         | 3.1 / 26.57 / 40.57 / -100.5            | -67.4          | H / 1.00 / 0               | n/a    | -54.4*                                      |
| 1.491 GHz               | 44.8 Pk         | 3.42 / 26.69 / 41.53 / -100.5           | -67.11         | H / 1.00 / 0               | n/a    | -54.11*                                     |
| 1.558 GHz               | 40.45 Pk        | 3.48 / 27.04 / 41.72 / -100.5           | -71.25         | H / 1.00 / 0               | n/a    | -58.25*                                     |
| 1.633 GHz               | 42.9 Pk         | 3.55 / 27.47 / 41.92 / -100.5           | -68.5          | H / 1.00 / 0               | n/a    | -55.5*                                      |
| 1.704 GHz               | 44.0 Pk         | 3.62 / 27.88 / 42.1 / -100.5            | -67.1          | H / 1.00 / 0               | n/a    | -54.1*                                      |
| 1.738 GHz               | 59.05 Pk        | 3.68 / 28.08 / 42.19 / -100.5           | -51.88         | H / 1.00 / 0               | n/a    | -38.88*                                     |
| 1.775 GHz               | 42.5 Pk         | 3.74 / 28.3 / 42.31 / -100.5            | -68.27         | H / 1.00 / 0               | n/a    | -55.27*                                     |
| 1.78 GHz                | 41.7 Pk         | 3.75 / 28.32 / 42.32 / -100.5           | -69.05         | H / 1.00 / 0               | n/a    | -56.05*                                     |
| 1.846 GHz               | 40.15 Pk        | 3.83 / 28.71 / 42.54 / -100.5           | -70.35         | H / 1.00 / 0               | n/a    | -57.35*                                     |
| 2.333 GHz               | 47.3 Pk         | 4.23 / 30.33 / 43.62 / -100.5           | -62.26         | H / 1.00 / 0               | n/a    | -49.26*                                     |
| 2.608 GHz               | 40.95 Pk        | 4.43 / 30.92 / 43.7 / -100.5            | -67.91         | H / 1.00 / 0               | n/a    | -54.91*                                     |
| 3.477 GHz               | 42.55 Pk        | 5.26 / 32.94 / 44.3 / -100.5            | -64.05         | H / 1.00 / 0               | n/a    | -51.05*                                     |
| 8.692 GHz               | 34.7 Pk         | 9.23 / 38.51 / 43.26 / -100.5           | -61.31         | H / 1.00 / 0               | n/a    | -48.31*                                     |
| 1738 MHz maxed:         |                 |                                         |                |                            |        |                                             |
| 1.738 GHz               | 66.25 Pk        | 3.68 / 28.08 / 42.19 / -100.5           | -44.68         | H / 2.30 / 271             | n/a    | -31.68*                                     |
| 1.738 GHz               | 73.2 Pk         | 3.68 / 28.08 / 42.19 / -100.5           | -37.73         | V / 1.00 / 180             | n/a    | -24.73*                                     |
| 1.065 GHz               | 49.7 Pk         | 2.83 / 26.44 / 39.29 / -100.5           | -60.81         | V / 1.00 / 180             | n/a    | -47.81*                                     |
| 1.136 GHz               | 53.7 Pk         | 2.93 / 26.48 / 39.9 / -100.5            | -57.29         | V / 1.00 / 180             | n/a    | -44.29*                                     |
| 1.207 GHz               | 57.0 Pk         | 3.01 / 26.52 / 40.28 / -100.5           | -54.24         | V / 1.00 / 180             | n/a    | -41.24*                                     |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 1 Test Area: LTS

EUT Model #: DGVS-112710SYS Date: 5/7/04

EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C

Test Method: FCC Part 22 Air Pressure: 98.0 kPa

Customer: ADC Mark Miska Rel. Humidity: 35.0 %

EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 2 of 6

## List of measurements for run #: 1

| FREQ                     | LEVEL (dBuV) | CABLE / ANT / PREAMP / ATTEN (dB) | FINAL (dBm) | POL / HGT / AZ (m)(DEG) | DELTA1 | DELTA (dBm) part 22 case radiation qp |
|--------------------------|--------------|-----------------------------------|-------------|-------------------------|--------|---------------------------------------|
| 1.278 GHz                | 62.65 Pk     | 3.1 / 26.57 / 40.56 / -100.5      | -48.74      | V / 1.00 / 180          | n/a    | -35.74*                               |
| 1.491 GHz                | 50.6 Pk      | 3.42 / 26.69 / 41.53 / -100.5     | -61.31      | V / 1.00 / 180          | n/a    | -48.31*                               |
| 1.704 GHz                | 50.75 Pk     | 3.62 / 27.88 / 42.1 / -100.5      | -60.35      | V / 1.00 / 180          | n/a    | -47.35*                               |
| 1.775 GHz                | 46.75 Pk     | 3.74 / 28.3 / 42.31 / -100.5      | -64.02      | V / 1.00 / 180          | n/a    | -51.02*                               |
| 1.78 GHz                 | 48.3 Pk      | 3.75 / 28.32 / 42.32 / -100.5     | -62.45      | V / 1.00 / 180          | n/a    | -49.45*                               |
| 1.846 GHz                | 46.65 Pk     | 3.83 / 28.71 / 42.54 / -100.5     | -63.85      | V / 1.00 / 180          | n/a    | -50.85*                               |
| 1.738 GHz                | 66.1 Pk      | 3.68 / 28.08 / 42.19 / -100.5     | -44.83      | H / 2.60 / 180          | n/a    | -31.83*                               |
| 1278 MHz maxed:          |              |                                   |             |                         |        |                                       |
| 1.278 GHz                | 60.65 Pk     | 3.1 / 26.57 / 40.56 / -100.5      | -50.74      | H / 1.80 / 137          | n/a    | -37.74*                               |
| 2.84 GHz                 | 40.95 Pk     | 4.6 / 31.38 / 44.12 / -100.5      | -67.69      | H / 1.80 / 137          | n/a    | -54.69*                               |
| Channel 157 ( 875.0 MHz) |              |                                   |             |                         |        |                                       |
| 1750 MHz maxed:          |              |                                   |             |                         |        |                                       |
| 1.75 GHz                 | 65.5 Pk      | 3.7 / 28.15 / 42.23 / -100.5      | -45.38      | H / 1.41 / 183          | n/a    | -32.38*                               |
| 1.0 GHz                  | 37.25 Pk     | 2.74 / 26.4 / 38.2 / -100.5       | -72.31      | H / 1.41 / 183          | n/a    | -59.31*                               |
| 1.065 GHz                | 48.9 Pk      | 2.83 / 26.44 / 39.29 / -100.5     | -61.61      | H / 1.41 / 183          | n/a    | -48.61*                               |
| 1.136 GHz                | 52.7 Pk      | 2.93 / 26.48 / 39.9 / -100.5      | -58.29      | H / 1.41 / 183          | n/a    | -45.29*                               |
| 1.207 GHz                | 51.75 Pk     | 3.01 / 26.52 / 40.28 / -100.5     | -59.49      | H / 1.41 / 183          | n/a    | -46.49*                               |
| 1.278 GHz                | 58.6 Pk      | 3.1 / 26.57 / 40.56 / -100.5      | -52.79      | H / 1.41 / 183          | n/a    | -39.79*                               |
| 1.28 GHz                 | 41.35 Pk     | 3.1 / 26.57 / 40.57 / -100.5      | -70.05      | H / 1.41 / 183          | n/a    | -57.05*                               |
| 1.491 GHz                | 50.55 Pk     | 3.42 / 26.69 / 41.53 / -100.5     | -61.36      | H / 1.41 / 183          | n/a    | -48.36*                               |
| 1.633 GHz                | 48.55 Pk     | 3.55 / 27.47 / 41.92 / -100.5     | -62.85      | H / 1.41 / 183          | n/a    | -49.85*                               |
| 1.704 GHz                | 46.0 Pk      | 3.62 / 27.88 / 42.1 / -100.5      | -65.1       | H / 1.41 / 183          | n/a    | -52.1*                                |
| 1.775 GHz                | 44.25 Pk     | 3.74 / 28.3 / 42.31 / -100.5      | -66.52      | H / 1.41 / 183          | n/a    | -53.52*                               |
| 1.846 GHz                | 49.25 Pk     | 3.83 / 28.71 / 42.54 / -100.5     | -61.25      | H / 1.41 / 183          | n/a    | -48.25*                               |
| 2.84 GHz                 | 57.3 Pk      | 4.6 / 31.38 / 44.12 / -100.5      | -51.34      | H / 1.41 / 183          | n/a    | -38.34*                               |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 1 Test Area: LTS

EUT Model #: DGVS-112710SYS Date: 5/7/04

EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C

Test Method: FCC Part 22 Air Pressure: 98.0 kPa

Customer: ADC Mark Miska Rel. Humidity: 35.0 %

EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 3 of 6

## List of measurements for run #: 1

| FREQ                    | LEVEL<br>(dBuV) | CABLE / ANT / PREAMP /<br>ATTEN<br>(dB) | FINAL<br>(dBm) | POL / HGT / AZ<br>(m)(DEG) | DELTA1 | DELTA (dBm)<br>part 22 case<br>radiation qp |
|-------------------------|-----------------|-----------------------------------------|----------------|----------------------------|--------|---------------------------------------------|
| 2.625 GHz               | 42.65 Pk        | 4.44 / 30.95 / 43.7 / -100.5            | -66.16         | H / 1.41 / 183             | n/a    | -53.16*                                     |
| 1750 MHz maxed:         |                 |                                         |                |                            |        |                                             |
| 1.75 GHz                | 72.95 Pk        | 3.7 / 28.15 / 42.23 / -100.5            | -37.93         | V / 1.00 / 184             | n/a    | -24.93*                                     |
| 8.692 GHz               | 35.45 Pk        | 9.23 / 38.51 / 43.26 / -100.5           | -60.56         | V / 1.00 / 184             | n/a    | -47.56*                                     |
| 8.75 GHz                | 35.85 Pk        | 9.24 / 38.7 / 43.29 / -100.5            | -59.99         | V / 1.00 / 184             | n/a    | -46.99*                                     |
| Channel 239 (891.4 MHz) |                 |                                         |                |                            |        |                                             |
| 1782 MHz maxed:         |                 |                                         |                |                            |        |                                             |
| 1.783 GHz               | 69.1 Pk         | 3.75 / 28.34 / 42.33 / -100.5           | -41.64         | V / 1.80 / 185             | n/a    | -28.64*                                     |
| 1.136 GHz               | 41.85 Pk        | 2.93 / 26.48 / 39.9 / -100.5            | -69.14         | V / 1.80 / 185             | n/a    | -56.14*                                     |
| 1.207 GHz               | 54.2 Pk         | 3.01 / 26.52 / 40.28 / -100.5           | -57.04         | V / 1.80 / 185             | n/a    | -44.04*                                     |
| 1.278 GHz               | 59.9 Pk         | 3.1 / 26.57 / 40.56 / -100.5            | -51.49         | V / 1.80 / 185             | n/a    | -38.49*                                     |
| 1.28 GHz                | 42.95 Pk        | 3.1 / 26.57 / 40.57 / -100.5            | -68.45         | V / 1.80 / 185             | n/a    | -55.45*                                     |
| 1.491 GHz               | 54.2 Pk         | 3.42 / 26.69 / 41.53 / -100.5           | -57.71         | V / 1.80 / 185             | n/a    | -44.71*                                     |
| 1.633 GHz               | 41.65 Pk        | 3.55 / 27.47 / 41.92 / -100.5           | -69.75         | V / 1.80 / 185             | n/a    | -56.75*                                     |
| 1.704 GHz               | 45.85 Pk        | 3.62 / 27.88 / 42.1 / -100.5            | -65.25         | V / 1.80 / 185             | n/a    | -52.25*                                     |
| 1.775 GHz               | 49.65 Pk        | 3.74 / 28.3 / 42.31 / -100.5            | -61.12         | V / 1.80 / 185             | n/a    | -48.12*                                     |
| 1.846 GHz               | 42.85 Pk        | 3.83 / 28.71 / 42.54 / -100.5           | -67.65         | V / 1.80 / 185             | n/a    | -54.65*                                     |
| 1782 MHz maxed:         |                 |                                         |                |                            |        |                                             |
| 1.783 GHz               | 66.85 Pk        | 3.75 / 28.34 / 42.33 / -100.5           | -43.89         | H / 1.60 / 233             | n/a    | -30.89*                                     |
| 1.633 GHz               | 50.05 Pk        | 3.55 / 27.47 / 41.92 / -100.5           | -61.35         | H / 1.60 / 233             | n/a    | -48.35*                                     |
| Channel 128 (869.2 MHz) |                 |                                         |                |                            |        |                                             |
| 73.42 MHz               | 36.6 Qp         | 0.7 / 8.5 / 0.0 / -100.5                | -54.7          | V / 1.50 / 235             | n/a    | -41.7                                       |
| 150.17 MHz              | 32.4 Qp         | 1.0 / 9.95 / 0.0 / -100.5               | -57.15         | V / 1.50 / 235             | n/a    | -44.15                                      |
| 710.015 MHz             | 31.05 Qp        | 2.3 / 21.3 / 0.0 / -100.5               | -45.85         | V / 1.50 / 235             | n/a    | -32.85                                      |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 1 Test Area: LTS

EUT Model #: DGVS-112710SYS Date: 5/7/04

EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C

Test Method: FCC Part 22 Air Pressure: 98.0 kPa

Customer: ADC Mark Miska Rel. Humidity: 35.0 %

EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 4 of 6

## List of measurements for run #: 1

| FREQ                                                                                                                   | LEVEL<br>(dBuV) | CABLE / ANT / PREAMP /<br>ATTEN<br>(dB) | FINAL<br>(dBm) | POL / HGT / AZ<br>(m)(DEG) | DELTA1 | DELTA (dBm)<br>part 22 case<br>radiation qp |
|------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------|----------------|----------------------------|--------|---------------------------------------------|
| 910.406 MHz                                                                                                            | 39.05 Qp        | 2.61 / 23.3 / 0.0 / -100.5              | -35.54         | V / 1.70 / 235             | n/a    | -22.54                                      |
| 910.441 MHz                                                                                                            | 41.95 Qp        | 2.61 / 23.3 / 0.0 / -100.5              | -32.64         | V / 2.90 / 235             | n/a    | -19.64                                      |
| 910.441 MHz                                                                                                            | 40.15 Qp        | 2.61 / 23.3 / 0.0 / -100.5              | -34.44         | H / 2.90 / 235             | n/a    | -21.44                                      |
| Channel 157 (875.0MHz)                                                                                                 |                 |                                         |                |                            |        |                                             |
| 910.441 MHz                                                                                                            | 39.75 Qp        | 2.61 / 23.3 / 0.0 / -100.5              | -34.84         | H / 2.90 / 235             | n/a    | -21.84                                      |
| 910.441 MHz                                                                                                            | 42.1 Qp         | 2.61 / 23.3 / 0.0 / -100.5              | -32.49         | V / 2.90 / 235             | n/a    | -19.49                                      |
| Channel 239 (891.4 MHz)                                                                                                |                 |                                         |                |                            |        |                                             |
| 910.441 MHz                                                                                                            | 41.5 Qp         | 2.61 / 23.3 / 0.0 / -100.5              | -33.09         | V / 2.90 / 235             | n/a    | -20.09                                      |
| 910.441 MHz                                                                                                            | 40.2 Qp         | 2.61 / 23.3 / 0.0 / -100.5              | -34.39         | H / 2.90 / 235             | n/a    | -21.39                                      |
| substitution signal                                                                                                    |                 |                                         |                |                            |        |                                             |
| 910.43 MHz                                                                                                             | 41.6 Qp         | 2.61 / 23.3 / 0.0 / -100.5              | -32.99         | V / 1.00 / 0               | n/a    | -19.99                                      |
| signal generator level - cable loss = -26.9 dBm - 6.2 db (dipole factor w/10 dB pad) = -33.1 dBm<br>to get 67.5 dBuV/m |                 |                                         |                |                            |        |                                             |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 1 Test Area: LTS

EUT Model #: DGVS-112710SYS Date: 5/7/04

EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C

Test Method: FCC Part 22 Air Pressure: 98.0 kPa

Customer: ADC Mark Miska Rel. Humidity: 35.0 %

EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 5 of 6

## Measurement summary for limit2: part 22 case radiation qp (Qp)

| FREQ        | LEVEL (dBuV) | CABLE / ANT / PREAMP / ATTEN (dB) | FINAL (dBm) | POL / HGT / AZ (m)(DEG) | DELTA (dBm) part 22 case radiation qp |
|-------------|--------------|-----------------------------------|-------------|-------------------------|---------------------------------------|
| 910.441 MHz | 42.1 Qp      | 2.61 / 23.3 / 0.0 / -100.5        | -32.49      | V / 2.90 / 235          | -19.49                                |
| 710.015 MHz | 31.05 Qp     | 2.3 / 21.3 / 0.0 / -100.5         | -45.85      | V / 1.50 / 235          | -32.85                                |
| 73.42 MHz   | 36.6 Qp      | 0.7 / 8.5 / 0.0 / -100.5          | -54.7       | V / 1.50 / 235          | -41.7                                 |
| 150.17 MHz  | 32.4 Qp      | 1.0 / 9.95 / 0.0 / -100.5         | -57.15      | V / 1.50 / 235          | -44.15                                |
| 1.0 GHz     | 38.9 Pk      | 2.74 / 26.4 / 38.2 / -100.5       | -70.66      | H / 1.00 / 0            | -57.66*                               |
| 1.065 GHz   | 49.7 Pk      | 2.83 / 26.44 / 39.29 / -100.5     | -60.81      | V / 1.00 / 180          | -47.81*                               |
| 1.136 GHz   | 53.7 Pk      | 2.93 / 26.48 / 39.9 / -100.5      | -57.29      | V / 1.00 / 180          | -44.29*                               |
| 1.207 GHz   | 57.0 Pk      | 3.01 / 26.52 / 40.28 / -100.5     | -54.24      | V / 1.00 / 180          | -41.24*                               |
| 1.278 GHz   | 62.65 Pk     | 3.1 / 26.57 / 40.56 / -100.5      | -48.74      | V / 1.00 / 180          | -35.74*                               |
| 1.28 GHz    | 44.0 Pk      | 3.1 / 26.57 / 40.57 / -100.5      | -67.4       | H / 1.00 / 0            | -54.4*                                |
| 1.491 GHz   | 54.2 Pk      | 3.42 / 26.69 / 41.53 / -100.5     | -57.71      | V / 1.80 / 185          | -44.71*                               |
| 1.558 GHz   | 40.45 Pk     | 3.48 / 27.04 / 41.72 / -100.5     | -71.25      | H / 1.00 / 0            | -58.25*                               |
| 1.633 GHz   | 50.05 Pk     | 3.55 / 27.47 / 41.92 / -100.5     | -61.35      | H / 1.60 / 233          | -48.35*                               |
| 1.704 GHz   | 50.75 Pk     | 3.62 / 27.88 / 42.1 / -100.5      | -60.35      | V / 1.00 / 180          | -47.35*                               |
| 1.738 GHz   | 73.2 Pk      | 3.68 / 28.08 / 42.19 / -100.5     | -37.73      | V / 1.00 / 180          | -24.73*                               |
| 1.775 GHz   | 49.65 Pk     | 3.74 / 28.3 / 42.31 / -100.5      | -61.12      | V / 1.80 / 185          | -48.12*                               |
| 1.78 GHz    | 48.3 Pk      | 3.75 / 28.32 / 42.32 / -100.5     | -62.45      | V / 1.00 / 180          | -49.45*                               |
| 1.846 GHz   | 49.25 Pk     | 3.83 / 28.71 / 42.54 / -100.5     | -61.25      | H / 1.41 / 183          | -48.25*                               |
| 2.333 GHz   | 47.3 Pk      | 4.23 / 30.33 / 43.62 / -100.5     | -62.26      | H / 1.00 / 0            | -49.26*                               |
| 2.608 GHz   | 40.95 Pk     | 4.43 / 30.92 / 43.7 / -100.5      | -67.91      | H / 1.00 / 0            | -54.91*                               |
| 3.477 GHz   | 42.55 Pk     | 5.26 / 32.94 / 44.3 / -100.5      | -64.05      | H / 1.00 / 0            | -51.05*                               |
| 8.692 GHz   | 35.45 Pk     | 9.23 / 38.51 / 43.26 / -100.5     | -60.56      | V / 1.00 / 184          | -47.56*                               |
| 2.84 GHz    | 57.3 Pk      | 4.6 / 31.38 / 44.12 / -100.5      | -51.34      | H / 1.41 / 183          | -38.34*                               |
| 1.75 GHz    | 72.95 Pk     | 3.7 / 28.15 / 42.23 / -100.5      | -37.93      | V / 1.00 / 184          | -24.93*                               |
| 2.625 GHz   | 42.65 Pk     | 4.44 / 30.95 / 43.7 / -100.5      | -66.16      | H / 1.41 / 183          | -53.16*                               |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 1 Test Area: LTS  
EUT Model #: DGVS-112710SYS Date: 5/7/04  
EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C  
Test Method: FCC Part 22 Air Pressure: 98.0 kPa  
Customer: ADC Mark Miska Rel. Humidity: 35.0 %  
EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 6 of 6

## Measurement summary for limit2: part 22 case radiation qp (Qp)

| FREQ      | LEVEL<br>(dBuV) | CABLE / ANT / PREAMP /<br>ATTEN<br>(dB) | FINAL<br>(dBm) | POL / HGT / AZ<br>(m)(DEG) | DELTA (dBm)<br>part 22 case<br>radiation qp |
|-----------|-----------------|-----------------------------------------|----------------|----------------------------|---------------------------------------------|
| 8.75 GHz  | 35.85 Pk        | 9.24 / 38.7 / 43.29 / -100.5            | -59.99         | V / 1.00 / 184             | -46.99*                                     |
| 1.783 GHz | 69.1 Pk         | 3.75 / 28.34 / 42.33 / -100.5           | -41.64         | V / 1.80 / 185             | -28.64*                                     |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 2 Test Area: LTS

EUT Model #: DGVS-122710SYS Date: 5/7/04

EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C

Test Method: FCC Part 22 Air Pressure: 98.0 kPa

Customer: ADC Mark Miska Rel. Humidity: 35.0 %

EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 1 of 6

## List of measurements for run #: 2

| FREQ                    | LEVEL<br>(dBuV) | CABLE / ANT / PREAMP /<br>ATTEN<br>(dB) | FINAL<br>(dBm) | POL / HGT / AZ<br>(m)(DEG) | DELTA (dBm)<br>part 22 case<br>radiation qp | DELTA2 |
|-------------------------|-----------------|-----------------------------------------|----------------|----------------------------|---------------------------------------------|--------|
| Channel 182 (880.0 MHz) |                 |                                         |                |                            |                                             |        |
| 1760 MHz maxed:         |                 |                                         |                |                            |                                             |        |
| 1.76 GHz                | 68.15 Pk        | 3.72 / 28.21 / 42.26 / -100.5           | -42.69         | H / 1.10 / 230             | -29.69*                                     | n/a    |
| 1.0 GHz                 | 40.35 Pk        | 2.74 / 26.4 / 38.2 / -100.5             | -69.21         | H / 1.10 / 230             | -56.21*                                     | n/a    |
| 1.065 GHz               | 51.1 Pk         | 2.83 / 26.44 / 39.29 / -100.5           | -59.41         | H / 1.10 / 230             | -46.41*                                     | n/a    |
| 1.136 GHz               | 47.0 Pk         | 2.93 / 26.48 / 39.9 / -100.5            | -63.99         | H / 1.10 / 230             | -50.99*                                     | n/a    |
| 1.207 GHz               | 55.95 Pk        | 3.01 / 26.52 / 40.28 / -100.5           | -55.29         | H / 1.10 / 230             | -42.29*                                     | n/a    |
| 1.278 GHz               | 45.9 Pk         | 3.1 / 26.57 / 40.56 / -100.5            | -65.49         | H / 1.10 / 230             | -52.49*                                     | n/a    |
| 1.491 GHz               | 53.95 Pk        | 3.42 / 26.69 / 41.53 / -100.5           | -57.96         | H / 1.10 / 230             | -44.96*                                     | n/a    |
| 1.633 GHz               | 63.3 Pk         | 3.55 / 27.47 / 41.92 / -100.5           | -48.1          | H / 1.10 / 230             | -35.1*                                      | n/a    |
| 1.704 GHz               | 40.5 Pk         | 3.62 / 27.88 / 42.1 / -100.5            | -70.6          | H / 1.10 / 230             | -57.6*                                      | n/a    |
| 1.775 GHz               | 45.8 Pk         | 3.74 / 28.3 / 42.31 / -100.5            | -64.97         | H / 1.10 / 230             | -51.97*                                     | n/a    |
| 1.846 GHz               | 46.85 Pk        | 3.83 / 28.71 / 42.54 / -100.5           | -63.65         | H / 1.10 / 230             | -50.65*                                     | n/a    |
| 2.333 GHz               | 50.1 Pk         | 4.23 / 30.33 / 43.62 / -100.5           | -59.46         | H / 1.10 / 230             | -46.46*                                     | n/a    |
| 2.84 GHz                | 47.8 Pk         | 4.6 / 31.38 / 44.12 / -100.5            | -60.84         | H / 1.10 / 230             | -47.84*                                     | n/a    |
| 1.76 GHz                | 68.95 Pk        | 3.72 / 28.21 / 42.26 / -100.5           | -41.89         | V / 2.10 / 239             | -28.89*                                     | n/a    |
| 1.704 GHz               | 45.6 Pk         | 3.62 / 27.88 / 42.1 / -100.5            | -65.5          | V / 2.10 / 239             | -52.5*                                      | n/a    |
| 1.775 GHz               | 52.0 Pk         | 3.74 / 28.3 / 42.31 / -100.5            | -58.77         | V / 2.10 / 239             | -45.77*                                     | n/a    |
| 2.64 GHz                | 37.55 Pk        | 4.44 / 30.98 / 43.7 / -100.5            | -71.23         | V / 2.10 / 239             | -58.23*                                     | n/a    |
| 3.52 GHz                | 39.9 Pk         | 5.33 / 33.05 / 44.35 / -100.5           | -66.56         | V / 2.10 / 239             | -53.56*                                     | n/a    |
| 8.8 GHz                 | 37.0 Pk         | 9.25 / 38.86 / 43.31 / -100.5           | -58.7          | V / 2.10 / 239             | -45.7*                                      | n/a    |
| Channel 217 (887.0 MHz) |                 |                                         |                |                            |                                             |        |
| 1774 MHz maxed:         |                 |                                         |                |                            |                                             |        |
| 1.774 GHz               | 61.25 Pk        | 3.74 / 28.29 / 42.31 / -100.5           | -49.53         | V / 2.80 / 227             | -36.53*                                     | n/a    |
| 3.548 GHz               | 37.65 Pk        | 5.38 / 33.12 / 44.38 / -100.5           | -68.73         | V / 2.80 / 227             | -55.73*                                     | n/a    |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 2 Test Area: LTS

EUT Model #: DGVS-122710SYS Date: 5/7/04

EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C

Test Method: FCC Part 22 Air Pressure: 98.0 kPa

Customer: ADC Mark Miska Rel. Humidity: 35.0 %

EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 2 of 6

## List of measurements for run #: 2

| FREQ                    | LEVEL<br>(dBuV) | CABLE / ANT / PREAMP /<br>ATTEN<br>(dB) | FINAL<br>(dBm) | POL / HGT / AZ<br>(m)(DEG) | DELTA (dBm)<br>part 22 case<br>radiation qp | DELTA2 |
|-------------------------|-----------------|-----------------------------------------|----------------|----------------------------|---------------------------------------------|--------|
| 8.87 GHz                | 36.55 Pk        | 9.26 / 39.08 / 43.34 / -100.5           | -58.95         | V / 2.80 / 227             | -45.95*                                     | n/a    |
| 1.774 GHz               | 65.7 Pk         | 3.74 / 28.29 / 42.31 / -100.5           | -45.08         | H / 1.40 / 258             | -32.08*                                     | n/a    |
| 1.775 GHz               | 53.0 Pk         | 3.74 / 28.3 / 42.31 / -100.5            | -57.77         | H / 1.40 / 258             | -44.77*                                     | n/a    |
| 2.84 GHz                | 58.45 Pk        | 4.6 / 31.38 / 44.12 / -100.5            | -50.19         | H / 1.30 / 197             | -37.19*                                     | n/a    |
| 1.136 GHz               | 49.8 Pk         | 2.93 / 26.48 / 39.9 / -100.5            | -61.19         | H / 1.30 / 197             | -48.19*                                     | n/a    |
| 1.775 GHz               | 54.75 Pk        | 3.74 / 28.3 / 42.31 / -100.5            | -56.02         | H / 1.30 / 197             | -43.02*                                     | n/a    |
| 1.846 GHz               | 51.6 Pk         | 3.83 / 28.71 / 42.54 / -100.5           | -58.9          | H / 1.30 / 197             | -45.9*                                      | n/a    |
| 2.84 GHz                | 59.0 Pk         | 4.6 / 31.38 / 44.12 / -100.5            | -49.64         | H / 1.30 / 197             | -36.64*                                     | n/a    |
| 3.548 GHz               | 48.7 Pk         | 5.38 / 33.12 / 44.38 / -100.5           | -57.68         | H / 1.30 / 197             | -44.68*                                     | n/a    |
| 3.548 GHz               | 48.9 Pk         | 5.38 / 33.12 / 44.38 / -100.5           | -57.48         | H / 1.40 / 229             | -44.48*                                     | n/a    |
| Channel 251 (893.8 MHz) |                 |                                         |                |                            |                                             |        |
| 1.788 GHz               | 69.1 Pk         | 3.76 / 28.37 / 42.35 / -100.5           | -41.62         | V / 1.40 / 229             | -28.62*                                     | n/a    |
| 2.681 GHz               | 40.05 Pk        | 4.47 / 31.06 / 43.79 / -100.5           | -68.71         | V / 1.00 / 235             | -55.71*                                     | n/a    |
| 3.575 GHz               | 48.2 Pk         | 5.43 / 33.18 / 44.41 / -100.5           | -58.11         | V / 1.00 / 235             | -45.11*                                     | n/a    |
| 3.575 GHz               | 47.15 Pk        | 5.43 / 33.18 / 44.41 / -100.5           | -59.16         | V / 1.00 / 243             | -46.16*                                     | n/a    |
| 1.788 GHz               | 66.9 Pk         | 3.76 / 28.37 / 42.35 / -100.5           | -43.82         | H / 1.50 / 234             | -30.82*                                     | n/a    |
| 1.065 GHz               | 52.25 Pk        | 2.83 / 26.44 / 39.29 / -100.5           | -58.26         | H / 1.50 / 234             | -45.26*                                     | n/a    |
| 1.278 GHz               | 48.7 Pk         | 3.1 / 26.57 / 40.56 / -100.5            | -62.69         | H / 1.50 / 234             | -49.69*                                     | n/a    |
| 1.633 GHz               | 63.65 Pk        | 3.55 / 27.47 / 41.92 / -100.5           | -47.75         | H / 1.50 / 234             | -34.75*                                     | n/a    |
| 3.575 GHz               | 52.5 Pk         | 5.43 / 33.18 / 44.41 / -100.5           | -53.81         | H / 1.20 / 313             | -40.81*                                     | n/a    |
| 1.065 GHz               | 55.05 Pk        | 2.83 / 26.44 / 39.29 / -100.5           | -55.46         | H / 1.20 / 313             | -42.46*                                     | n/a    |
| 2.681 GHz               | 48.75 Pk        | 4.47 / 31.06 / 43.79 / -100.5           | -60.01         | H / 1.20 / 313             | -47.01*                                     | n/a    |
| 8.938 GHz               | 36.95 Pk        | 9.27 / 39.3 / 43.38 / -100.5            | -58.35         | H / 1.20 / 313             | -45.35*                                     | n/a    |

893 MHz maxed:

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 2 Test Area: LTS

EUT Model #: DGVS-122710SYS Date: 5/7/04

EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C

Test Method: FCC Part 22 Air Pressure: 98.0 kPa

Customer: ADC Mark Miska Rel. Humidity: 35.0 %

EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 3 of 6

## List of measurements for run #: 2

| FREQ                  | LEVEL (dBuV) | CABLE / ANT / PREAMP / ATTEN (dB) | FINAL (dBm) | POL / HGT / AZ (m)(DEG) | DELTA (dBm) part 22 case radiation qp | DELTA2 |
|-----------------------|--------------|-----------------------------------|-------------|-------------------------|---------------------------------------|--------|
| 910.39 MHz            | 33.35 Qp     | 2.61 / 23.3 / 0.0 / -100.5        | -41.24      | H / 1.80 / 246          | -28.24                                | n/a    |
| 710.02 MHz            | 32.4 Qp      | 2.3 / 21.3 / 0.0 / -100.5         | -44.5       | H / 1.80 / 246          | -31.5                                 | n/a    |
| 168.506 MHz           | 31.2 Qp      | 1.07 / 9.1 / 0.0 / -100.5         | -59.13      | H / 1.80 / 246          | -46.13                                | n/a    |
| 142.004 MHz           | 41.2 Qp      | 1.0 / 9.78 / 0.0 / -100.5         | -48.52      | H / 1.80 / 246          | -35.52                                | n/a    |
| 80.624 MHz            | 33.55 Qp     | 0.8 / 7.51 / 0.0 / -100.5         | -58.64      | H / 1.80 / 246          | -45.64                                | n/a    |
| 910.39 MHz            | 34.85 Qp     | 2.61 / 23.3 / 0.0 / -100.5        | -39.74      | H / 1.80 / 266          | -26.74                                | n/a    |
| 910.39 MHz            | 40.85 Pk     | 2.61 / 23.3 / 0.0 / -100.5        | -33.74      | V / 1.50 / 231          | -20.74*                               | n/a    |
| 80.624 MHz            | 31.15 Qp     | 0.8 / 7.51 / 0.0 / -100.5         | -61.04      | V / 1.50 / 231          | -48.04                                | n/a    |
| 710.02 MHz            | 35.5 Qp      | 2.3 / 21.3 / 0.0 / -100.5         | -41.4       | V / 1.50 / 231          | -28.4                                 | n/a    |
| 910.39 MHz            | 38.25 Qp     | 2.61 / 23.3 / 0.0 / -100.5        | -36.34      | V / 1.50 / 231          | -23.34                                | n/a    |
| Channel 217 (887 MHz) |              |                                   |             |                         |                                       |        |
| 710.02 MHz            | 35.35 Qp     | 2.3 / 21.3 / 0.0 / -100.5         | -41.55      | V / 1.50 / 231          | -28.55                                | n/a    |
| 910.39 MHz            | 37.55 Qp     | 2.61 / 23.3 / 0.0 / -100.5        | -37.04      | V / 1.50 / 231          | -24.04                                | n/a    |
| 74.924 MHz            | 36.4 Qp      | 0.71 / 8.2 / 0.0 / -100.5         | -55.19      | V / 1.50 / 231          | -42.19                                | n/a    |
| 142.004 MHz           | 39.9 Qp      | 1.0 / 9.78 / 0.0 / -100.5         | -49.82      | V / 1.50 / 231          | -36.82                                | n/a    |
| 710.02 MHz            | 35.25 Qp     | 2.3 / 21.3 / 0.0 / -100.5         | -41.65      | V / 1.50 / 231          | -28.65                                | n/a    |
| 910.39 MHz            | 37.55 Qp     | 2.61 / 23.3 / 0.0 / -100.5        | -37.04      | V / 1.50 / 231          | -24.04                                | n/a    |
| 910.39 MHz            | 39.1 Pk      | 2.61 / 23.3 / 0.0 / -100.5        | -35.49      | H / 1.50 / 323          | -22.49*                               | n/a    |
| 142.004 MHz           | 40.6 Qp      | 1.0 / 9.78 / 0.0 / -100.5         | -49.12      | H / 1.50 / 323          | -36.12                                | n/a    |
| Channel 182 (880 MHz) |              |                                   |             |                         |                                       |        |
| 910.414 MHz           | 36.55 Qp     | 2.61 / 23.3 / 0.0 / -100.5        | -38.04      | H / 1.50 / 323          | -25.04                                | n/a    |
| 142.004 MHz           | 40.6 Qp      | 1.0 / 9.78 / 0.0 / -100.5         | -49.12      | H / 1.50 / 323          | -36.12                                | n/a    |
| 710.02 MHz            | 32.25 Qp     | 2.3 / 21.3 / 0.0 / -100.5         | -44.65      | V / 1.50 / 323          | -31.65                                | n/a    |
| 910.403 MHz           | 36.22 Qp     | 2.61 / 23.3 / 0.0 / -100.5        | -38.37      | V / 1.50 / 323          | -25.37                                | n/a    |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 2 Test Area: LTS  
EUT Model #: DGVS-122710SYS Date: 5/7/04  
EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C  
Test Method: FCC Part 22 Air Pressure: 98.0 kPa  
Customer: ADC Mark Miska Rel. Humidity: 35.0 %  
EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 4 of 6

## List of measurements for run #: 2

| FREQ        | LEVEL<br>(dBuV) | CABLE / ANT / PREAMP /<br>ATTEN<br>(dB) | FINAL<br>(dBm) | POL / HGT / AZ<br>(m)(DEG) | DELTA (dBm)<br>part 22 case<br>radiation qp | DELTA2 |
|-------------|-----------------|-----------------------------------------|----------------|----------------------------|---------------------------------------------|--------|
| 910.403 MHz | 39.2 Qp         | 2.61 / 23.3 / 0.0 / -100.5              | -35.39         | V / 1.70 / 235             | -22.39                                      | n/a    |
| 74.924 MHz  | 36.25 Qp        | 0.71 / 8.2 / 0.0 / -100.5               | -55.34         | V / 1.50 / 235             | -42.34                                      | n/a    |
| 710.02 MHz  | 37.7 Qp         | 2.3 / 21.3 / 0.0 / -100.5               | -39.2          | V / 1.50 / 235             | -26.2                                       | n/a    |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 2 Test Area: LTS

EUT Model #: DGVS-122710SYS Date: 5/7/04

EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C

Test Method: FCC Part 22 Air Pressure: 98.0 kPa

Customer: ADC Mark Miska Rel. Humidity: 35.0 %

EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 5 of 6

## Measurement summary for limit1: part 22 case radiation qp (Qp)

| FREQ        | LEVEL (dBuV) | CABLE / ANT / PREAMP / ATTEN (dB) | FINAL (dBm) | POL / HGT / AZ (m)(DEG) | DELTA (dBm) part 22 case radiation qp |
|-------------|--------------|-----------------------------------|-------------|-------------------------|---------------------------------------|
| 910.403 MHz | 39.2 Qp      | 2.61 / 23.3 / 0.0 / -100.5        | -35.39      | V / 1.70 / 235          | -22.39                                |
| 710.02 MHz  | 37.7 Qp      | 2.3 / 21.3 / 0.0 / -100.5         | -39.2       | V / 1.50 / 235          | -26.2                                 |
| 142.004 MHz | 41.2 Qp      | 1.0 / 9.78 / 0.0 / -100.5         | -48.52      | H / 1.80 / 246          | -35.52                                |
| 74.924 MHz  | 36.4 Qp      | 0.71 / 8.2 / 0.0 / -100.5         | -55.19      | V / 1.50 / 231          | -42.19                                |
| 80.624 MHz  | 33.55 Qp     | 0.8 / 7.51 / 0.0 / -100.5         | -58.64      | H / 1.80 / 246          | -45.64                                |
| 168.506 MHz | 31.2 Qp      | 1.07 / 9.1 / 0.0 / -100.5         | -59.13      | H / 1.80 / 246          | -46.13                                |
| 1.76 GHz    | 68.95 Pk     | 3.72 / 28.21 / 42.26 / -100.5     | -41.89      | V / 2.10 / 239          | -28.89*                               |
| 1.0 GHz     | 40.35 Pk     | 2.74 / 26.4 / 38.2 / -100.5       | -69.21      | H / 1.10 / 230          | -56.21*                               |
| 1.065 GHz   | 55.05 Pk     | 2.83 / 26.44 / 39.29 / -100.5     | -55.46      | H / 1.20 / 313          | -42.46*                               |
| 1.136 GHz   | 49.8 Pk      | 2.93 / 26.48 / 39.9 / -100.5      | -61.19      | H / 1.30 / 197          | -48.19*                               |
| 1.207 GHz   | 55.95 Pk     | 3.01 / 26.52 / 40.28 / -100.5     | -55.29      | H / 1.10 / 230          | -42.29*                               |
| 1.278 GHz   | 48.7 Pk      | 3.1 / 26.57 / 40.56 / -100.5      | -62.69      | H / 1.50 / 234          | -49.69*                               |
| 1.491 GHz   | 53.95 Pk     | 3.42 / 26.69 / 41.53 / -100.5     | -57.96      | H / 1.10 / 230          | -44.96*                               |
| 1.633 GHz   | 63.65 Pk     | 3.55 / 27.47 / 41.92 / -100.5     | -47.75      | H / 1.50 / 234          | -34.75*                               |
| 1.704 GHz   | 45.6 Pk      | 3.62 / 27.88 / 42.1 / -100.5      | -65.5       | V / 2.10 / 239          | -52.5*                                |
| 1.775 GHz   | 54.75 Pk     | 3.74 / 28.3 / 42.31 / -100.5      | -56.02      | H / 1.30 / 197          | -43.02*                               |
| 1.846 GHz   | 51.6 Pk      | 3.83 / 28.71 / 42.54 / -100.5     | -58.9       | H / 1.30 / 197          | -45.9*                                |
| 2.333 GHz   | 50.1 Pk      | 4.23 / 30.33 / 43.62 / -100.5     | -59.46      | H / 1.10 / 230          | -46.46*                               |
| 2.84 GHz    | 59.0 Pk      | 4.6 / 31.38 / 44.12 / -100.5      | -49.64      | H / 1.30 / 197          | -36.64*                               |
| 2.64 GHz    | 37.55 Pk     | 4.44 / 30.98 / 43.7 / -100.5      | -71.23      | V / 2.10 / 239          | -58.23*                               |
| 3.52 GHz    | 39.9 Pk      | 5.33 / 33.05 / 44.35 / -100.5     | -66.56      | V / 2.10 / 239          | -53.56*                               |
| 8.8 GHz     | 37.0 Pk      | 9.25 / 38.86 / 43.31 / -100.5     | -58.7       | V / 2.10 / 239          | -45.7*                                |
| 1.774 GHz   | 65.7 Pk      | 3.74 / 28.29 / 42.31 / -100.5     | -45.08      | H / 1.40 / 258          | -32.08*                               |
| 3.548 GHz   | 48.9 Pk      | 5.38 / 33.12 / 44.38 / -100.5     | -57.48      | H / 1.40 / 229          | -44.48*                               |
| 8.87 GHz    | 36.55 Pk     | 9.26 / 39.08 / 43.34 / -100.5     | -58.95      | V / 2.80 / 227          | -45.95*                               |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

# RADIATED EMISSIONS



Test Report #: 2208 Run 2 Test Area: LTS  
EUT Model #: DGVS-122710SYS Date: 5/7/04  
EUT Serial #: \_\_\_\_\_ EUT Power: 60 Hz / 110 VAC Temperature: 23.0 °C  
Test Method: FCC Part 22 Air Pressure: 98.0 kPa  
Customer: ADC Mark Miska Rel. Humidity: 35.0 %  
EUT Description: Digivance 800 MHz 50 Watt SDRS

Notes: \_\_\_\_\_

Data File Name: 2208convertedtodbm.dat

Page: 6 of 6

## Measurement summary for limit1: part 22 case radiation qp (Qp)

| FREQ       | LEVEL<br>(dBuV) | CABLE / ANT / PREAMP /<br>ATTEN<br>(dB) | FINAL<br>(dBm) | POL / HGT / AZ<br>(m)(DEG) | DELTA (dBm)<br>part 22 case<br>radiation qp |
|------------|-----------------|-----------------------------------------|----------------|----------------------------|---------------------------------------------|
| 1.788 GHz  | 69.1 Pk         | 3.76 / 28.37 / 42.35 / -100.5           | -41.62         | V / 1.40 / 229             | -28.62*                                     |
| 2.681 GHz  | 48.75 Pk        | 4.47 / 31.06 / 43.79 / -100.5           | -60.01         | H / 1.20 / 313             | -47.01*                                     |
| 3.575 GHz  | 52.5 Pk         | 5.43 / 33.18 / 44.41 / -100.5           | -53.81         | H / 1.20 / 313             | -40.81*                                     |
| 8.938 GHz  | 36.95 Pk        | 9.27 / 39.3 / 43.38 / -100.5            | -58.35         | H / 1.20 / 313             | -45.35*                                     |
| 910.39 MHz | 40.85 Pk        | 2.61 / 23.3 / 0.0 / -100.5              | -33.74         | V / 1.50 / 231             | -20.74*                                     |

Tested by: J. C. Sausen

Printed

Signature

Reviewed by: T. K. Swanson

Printed

Signature

## Equipment Under Test (EUT) Test Operation Mode - Emission tests :

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
- ☐ - Normal Operating Mode
- ☒ - Max composite out.

### Configuration of the device under test:

The following peripheral devices and interface cables were connected during the measurement:

- |                                  |              |
|----------------------------------|--------------|
| <input type="checkbox"/> - _____ | Type : _____ |
| <input type="checkbox"/> - _____ | Type : _____ |
| <input type="checkbox"/> - _____ | Type : _____ |
| <input type="checkbox"/> - _____ | Type : _____ |
| <input type="checkbox"/> - _____ | Type : _____ |
| <input type="checkbox"/> - _____ | Type : _____ |
| <input type="checkbox"/> - _____ | Type : _____ |
| <input type="checkbox"/> - _____ | Type : _____ |

☒ - unshielded power cable

☒ - unshielded cables

☒ - shielded cables

MPS.No.: \_\_\_\_\_

☐ - customer specific cables

☐ - \_\_\_\_\_

☐ - \_\_\_\_\_

**DEVIATIONS FROM STANDARD:**

None

**GENERAL REMARKS:****SUMMARY:**

The requirements according to the technical regulations are

■ - met

□ - **not** met.

The device under test does

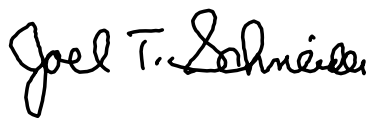
■ - fulfill the general approval requirements mentioned on page 3.

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

Testing Start Date: 07 May 2004

Testing End Date: 07 May 2004

- TÜV PRODUCT SERVICE INC -



Reviewed By:  
J. T. Schneider



Tested By:  
J. C. Sausen

### Test Equipment List

#### ADC Test equipment used :

|     | Model Number | Manufacturer         | Description               | Serial Number | Cal Due   |
|-----|--------------|----------------------|---------------------------|---------------|-----------|
| ■ - | 49-30-33     | Aeroflex             | Attenuator                | N/A           | CNR       |
| ■ - | HP8563E      | HP                   | Spectrum Analyzer         | MC27690       | 24 May 04 |
| ■ - |              | Rohde & Schwarz      | Power Meter               | MC21671       | March 05  |
| ■ - | 1520CT       | Staco                | Variable Auto Transformer | MC/44655      | CNR       |
| ■ - | 79III        | Fluke                | Multimeter                | MC16178       | Feb 06    |
| ■ - | 5347A        | HP                   | Freq. Counter             | MC27569       | Jan 05    |
| ■ - |              | Tenney Environmental | Temperature Chamber       | MC24315       | Oct 05    |

Note: Any equipment used in testing that has a Calibration Not Required (CNR) listing is verified and compensated for with NIST traceable calibrate equipment.

#### TUV Test equipment used :

|     | TUV ID | Model Number | Manufacturer             | Description               | Serial Number | Cal Due  |
|-----|--------|--------------|--------------------------|---------------------------|---------------|----------|
| ■ - | 3204   | EM-6917B     | Electro-Metrics          | Biconicalog Periodic      | 102           | 10-24-04 |
| ■ - | 2075   | 3115         | Electro-Mechanics (EMCO) | Ridge Guide Ant. 1-18 GHz | 9001-3275     | 11-19-04 |
| ■ - | 8052   | 8566B        | Hewlett-Packard          | Spectrum Analyzer         | 2115a00853    | 10-17-04 |
| ■ - | 8051   | 85662A       | Hewlett-Packard          | Analyzer Display          | 2112A02220    | 10-17-04 |
| ■   | 2682   | 85650A       | Hewlett-Packard          | Quasi-Peak Adapter        | 2811A01127    | 2-23-05  |
| ■ - | 3962   | ZHL-1042J    | Mini-Circuits            | Preamplifier              | D120403-2     | Code B   |
| ■ - | 3957   | SL18B4020    | Phase One Microwave      | Preamplifier 1 – 18 GHz   | 0001          | Code B   |
| ■ - | 2396   | 2520         | Wavetek                  | Signal Generator          | 6271013       | 6-04-04  |
| ■ - | 3236   | UHAP-10dB    | Schwarzbeck              | Dipole Antenna 300-1000   | 164           | N/A      |

Cal Code B = Calibration verification performed internally.

Cal Code Y = Calibration not required when used with other calibrated equipment.

All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST) and is calibrated annually.

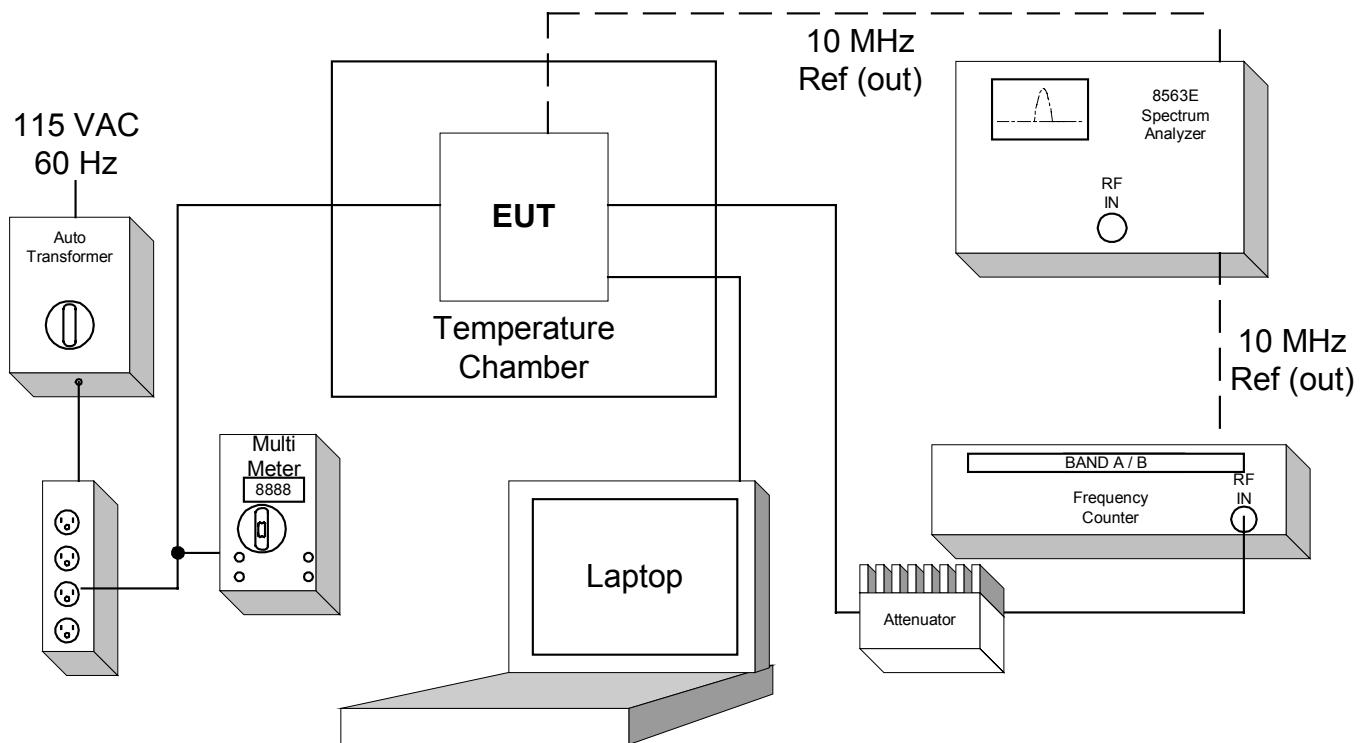
## TEST SETUP PHOTOS FOR EMISSIONS TESTING



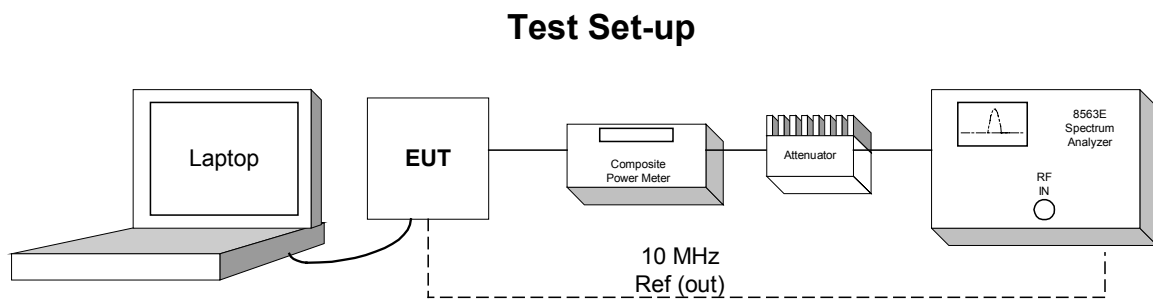
# Frequency Tolerance Test for ADC Inc Digivance 800 MHz 50-Watt SDR System

EUT Server is specified for indoor use only with temperature range of 10° to +35° C, and was tested with its range. EUT STM and LPA are specified with a temperature range of -30° to +50° C and were tested with their range.

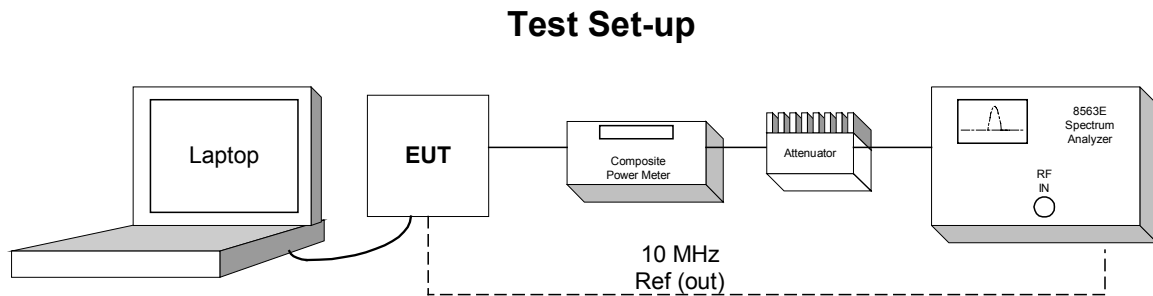
## Test Set-up



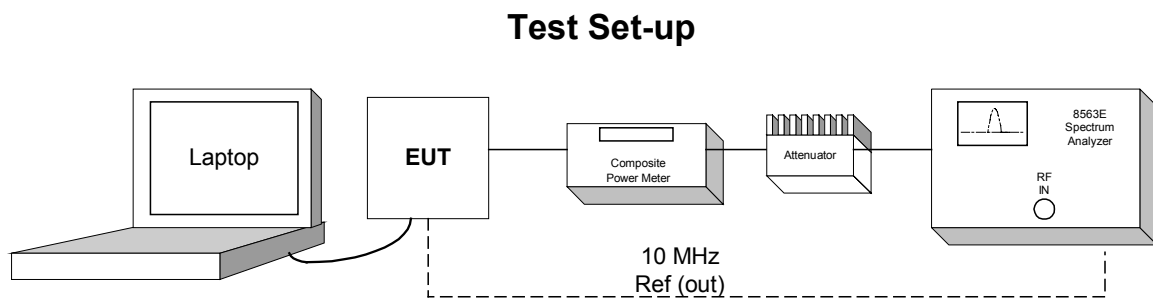
**Effective Isotropic Radiated Power Limit Test for ADC Inc.**  
**Digivance 800 MHz 50-Watt SDR System**  
**Model Numbers DGVS-112710SYS and DGVS-122710SYS**



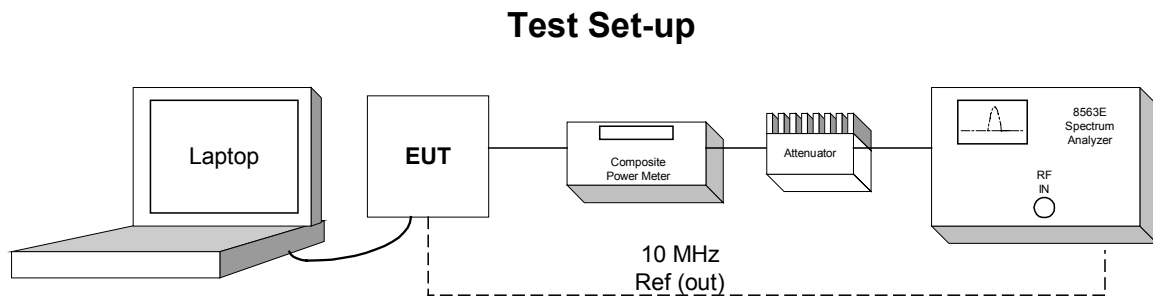
**Inter-Modulation Test for ADC Inc.  
Digivance 800 MHz 50-Watt SDR System  
Model Numbers DGV5-112710SYS and DGV5-122710SYS**



**Conducted Emission Limits Test for ADC Inc.**  
**Digivance 800 MHz 50-Watt SDR System**  
**Model Numbers DGV5-112710SYS and DGV5-122710SYS**



**Occupied Bandwidth Modulation Test for ADC Inc.  
Digivance 800 MHz 50-Watt SDR System  
Model Numbers DGVS-112710SYS and DGVS-122710SYS**



## Radiated Emissions Test Setup

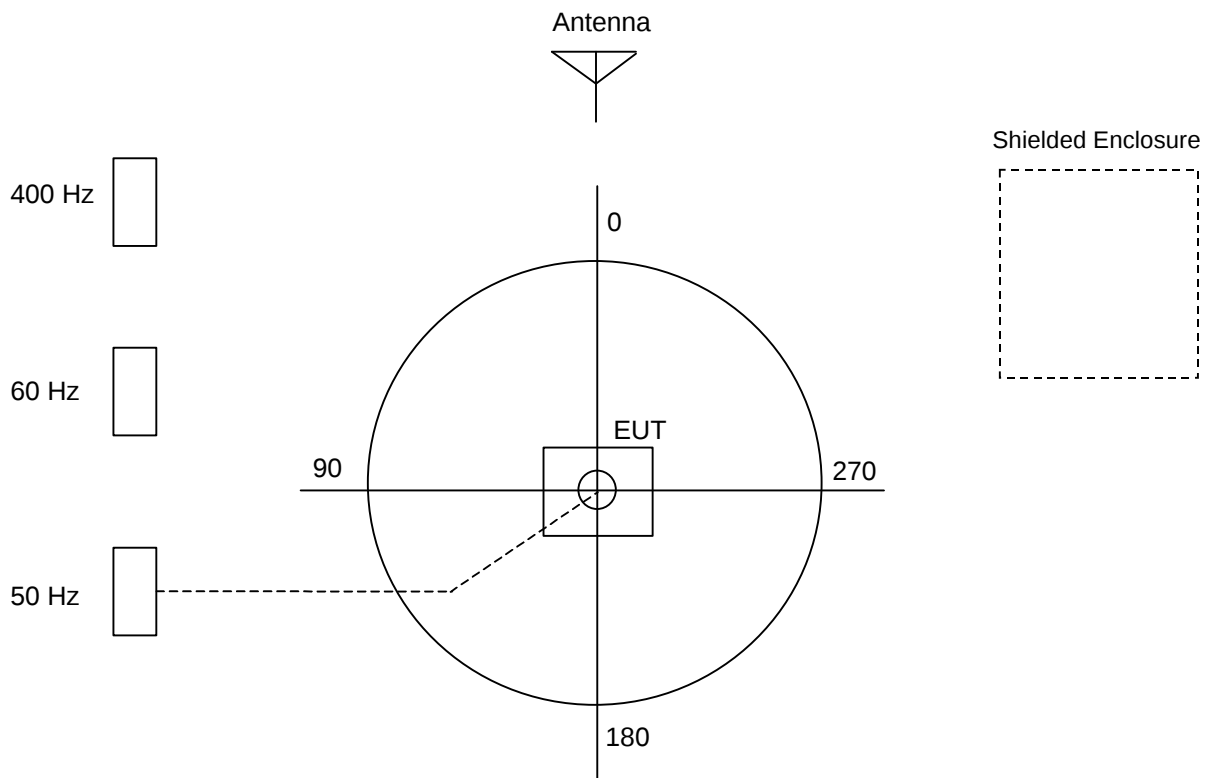


## TEST SETUP FOR EMISSIONS TESTING

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.



**Appendix A**

Product Information 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: 952-403-8560

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 Wide Band Digital Radio base station.

EUT Name Digivance Wide Band Digital Radio 800 MHz 50-Watt System

Model No.: DGVS-112710SYS and DGVS-122710SYS Serial No.: None

Product Options: Receive Diversity

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

**Test Objective**

- |                                                                                              |                                                                                                              |
|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> EMC Directive 89/336/EEC (EMC)                                      | <input checked="" type="checkbox"/> FCC: Class <input type="checkbox"/> A <input type="checkbox"/> B Part 22 |
| Std: _____                                                                                   | <input type="checkbox"/> VCCI: Class <input type="checkbox"/> A <input type="checkbox"/> B                   |
| <input type="checkbox"/> Machinery Directive 89/392/EEC (EMC)                                | <input type="checkbox"/> BCIQ: Class <input type="checkbox"/> A <input type="checkbox"/> B                   |
| Std: _____                                                                                   | <input type="checkbox"/> Canada: Class <input type="checkbox"/> A <input type="checkbox"/> B                 |
| <input type="checkbox"/> Medical Device Directive 93/42/EEC (EMC)                            | <input type="checkbox"/> Australia: Class <input type="checkbox"/> A <input type="checkbox"/> B              |
| Std: _____                                                                                   | <input checked="" type="checkbox"/> Other: <u>FCC Part 15 Class B</u>                                        |
| <input type="checkbox"/> Vehicle Directive 72/245/EEC (EMC)                                  |                                                                                                              |
| Std: _____                                                                                   |                                                                                                              |
| <input type="checkbox"/> 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: 20" Width: 17.11" Height: 3.5" Weight: 48 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: 100-120/200-240 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.)

Server/PCIx card indoor only with STM and LPA indoor or outdoor. System is typically employed as a GSM base station.

EMC Test Plan and Constructional Data Form



|                                         |    |                                                |                              |
|-----------------------------------------|----|------------------------------------------------|------------------------------|
| <b>EUT Power Cable</b>                  |    |                                                |                              |
| <input type="checkbox"/> Permanent      | OR | <input checked="" type="checkbox"/> Removable  | Length (in meters): <u>1</u> |
| <input type="checkbox"/> Shielded       | OR | <input checked="" type="checkbox"/> Unshielded |                              |
| <input type="checkbox"/> 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                |
| <b>EXAMPLE:</b>                |                                     |                                     |           |                                     |                                     |                 |             |                        |                          |                    |                                     |                          |
| 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                  | >3                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| RF "SMR" type                  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 2         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Braid           | Coaxial     | SMA                    | 50 Ohms                  | >3                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Alarm                          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 1         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Not Specified   | N/A         | 4 Pin Standoff         |                          | >3                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Fiber                          | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 3         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | N/A             | N/A         | SC                     | N/A                      | >3                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9 Pin Din                      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 2         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Not Specified   | AC Coupled  | Din                    |                          | >3                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| AC power                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 1         | <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"/>            | 1         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | N/A             | N/A         | 2 Pin Standoff         |                          | 1                  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| STM to Amp Interconnect        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 1         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Varied          |             | Terminal               |                          | 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"/> |
|                                | <input type="checkbox"/>            | <input type="checkbox"/>            |           | <input type="checkbox"/>            | <input type="checkbox"/>            |                 |             |                        |                          |                    | <input type="checkbox"/>            | <input type="checkbox"/> |
|                                | <input type="checkbox"/>            | <input type="checkbox"/>            |           | <input type="checkbox"/>            | <input type="checkbox"/>            |                 |             |                        |                          |                    | <input 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: Version 0.00.00.12

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 # |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|----------|
| Host Unit                                                                                                                                       | DGVS-800010HU  | None     |          |
| STM A Band                                                                                                                                      | DGVL-112010STM | None     |          |
| STM B Band                                                                                                                                      | DGVL-122010STM | None     |          |
| LPA                                                                                                                                             | DGVL-102000LPA | None     |          |
|                                                                                                                                                 |                | None     |          |
|                                                                                                                                                 |                | None     |          |
| Digivance Wide Band Digital Radio<br>800 MHz 50-Watt System Models<br>DGVS-112710SYS and DGVS-<br>122710SYS consist of the HU,<br>STM, and LPA. |                | 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> |
|--------------------|-------------------|-----------------|-----------------|
| Server             | HP Proliant DL380 | D402LJC1H278    |                 |
| Monitor            | N/A               |                 |                 |
| Keyboard           | 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) _____<br><input type="checkbox"/> Linear <input type="checkbox"/> Other: _____ |
|                     |                |                 | <input type="checkbox"/> Switched-mode: (Frequency) _____<br><input type="checkbox"/> Linear <input type="checkbox"/> Other: _____ |

### Power Line Filters

| <i>Manufacturer</i> | <i>Model #</i> | <i>Location in EUT</i> |
|---------------------|----------------|------------------------|
| None                |                |                        |
|                     |                |                        |

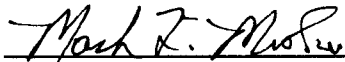
**EMC Test Plan and Constructional Data Form****Critical EMI Components (Capacitors, ferrites, etc.)**

| Description | Manufacturer | Part # or Value | Qty | Component # / Location |
|-------------|--------------|-----------------|-----|------------------------|
| 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.

7-7-04

Date

Test Plan/CDF Prepared By (please print)

Date

Reviewed by TÜV Product Service Associate

Date