

## **FCC Part 15, Subpart B, Class B, Radiated Emissions Test Method (Home Cradle)**

1. Each satellite radio receiver was tested at Florida Atlantic University (FAU) three-meter indoor test site. Test firm FCC registration number is 447616.
2. All radiated emissions test data was obtained by test personnel at FAU.
3. Testing consisted of determining the maximum emissions by placing the test sample three meters away from the measuring antenna. With the spectrum analyzer in max hold, the antenna placed in a vertical polarity was raised and lowered from 1 meter to 4 meters until the maximum emission was determined.
4. After the antenna was raised and lowered the turntable was rotated 360°. The spectrum analyzer set to max hold until the maximum emission was determined. The data was recorded utilizing both data points and graphical plots for each configuration.
5. Steps 3 and 4 were repeated with the antenna in horizontal polarity.
6. The RBW and VBW of the spectrum analyzer were set to 120 kHz and 300 kHz respectively. A peak detector was utilized
7. Graphical Plots indicate the maximum emission. The FCC Part 15, Subpart B, Class B, test limit line was adjusted utilizing the correction factors for each operating frequency and mode of testing. There were four (4) plots; one plot displayed the emissions from 30 MHz and 200 MHz, one plot displayed 200 MHz -1000 MHz, one set in vertical polarity and one set in horizontal polarity.



**Retlif Testing Laboratories**

Test Results No. R-11574-2

15.109(b), Radiated Emissions  
FM Direct Test Data



**Retlif Testing Laboratories**

Test Results No. R-11574-2

The following table describes the graphical test data:

| <b>Plot ID#</b> | <b>Test Description</b>                          |  |
|-----------------|--|--|
|                 |  |  |
|                 | <b>FM Direct Adaptor &amp; FM Aerial Antenna</b> |  |
| B-29            | 88.1MHz Low-Band Vertical                        |  |
| B-30            | 88.1MHz Low-Band Horizontal                      |  |
| B-31            | 96.9MHz Low-Band Vertical                        |  |
| B-32            | 96.9MHz Low-Band Horizontal                      |  |
| B-33            | 107.9MHz Low-Band Vertical                       |  |
| B-34            | 107.9MHz Low-Band Horizontal                     |  |
| B-35            | 88.1MHz High-Band Vertical                       |  |
| B-36            | 88.1MHz High-Band Horizontal                     |  |
| B-37            | 96.9MHz High-Band Vertical                       |  |
| B-38            | 96.9MHz High-Band Horizontal                     |  |
| B-39            | 107.9MHz High-Band Vertical                      |  |
| B-40            | 107.9MHz High-Band Horizontal                    |  |
|                 |  |  |

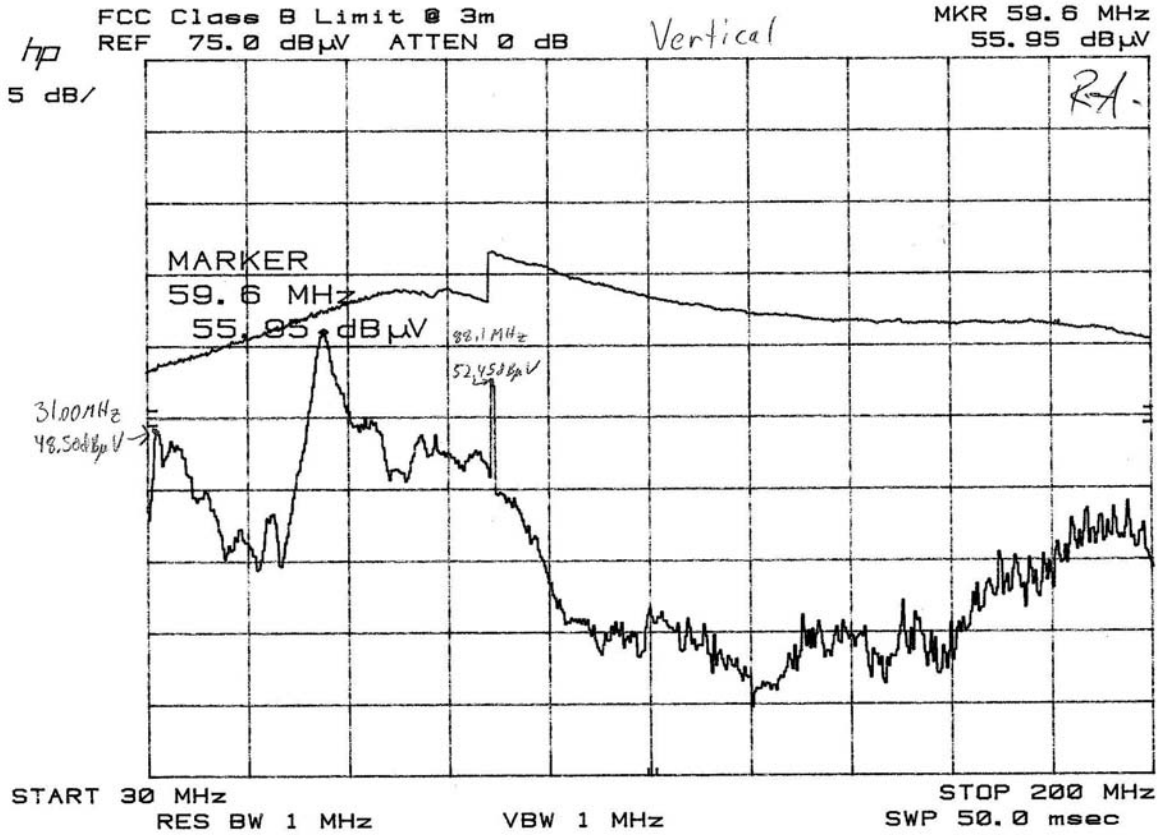


**Retlif Testing Laboratories**

Test Results No. R-11574-2

B-29

16 Aug 06

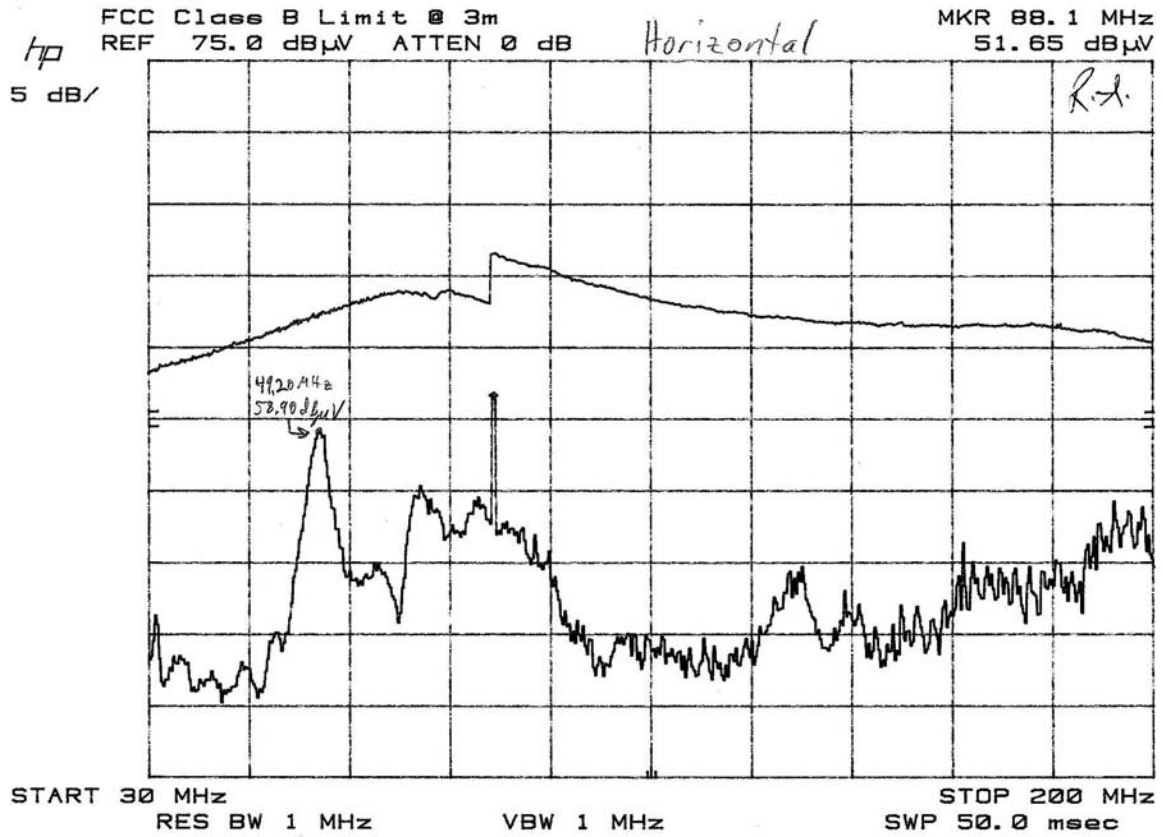


Retlif Testing Laboratories

Test Results No. R-11574-2

B-30

16 Aug 06

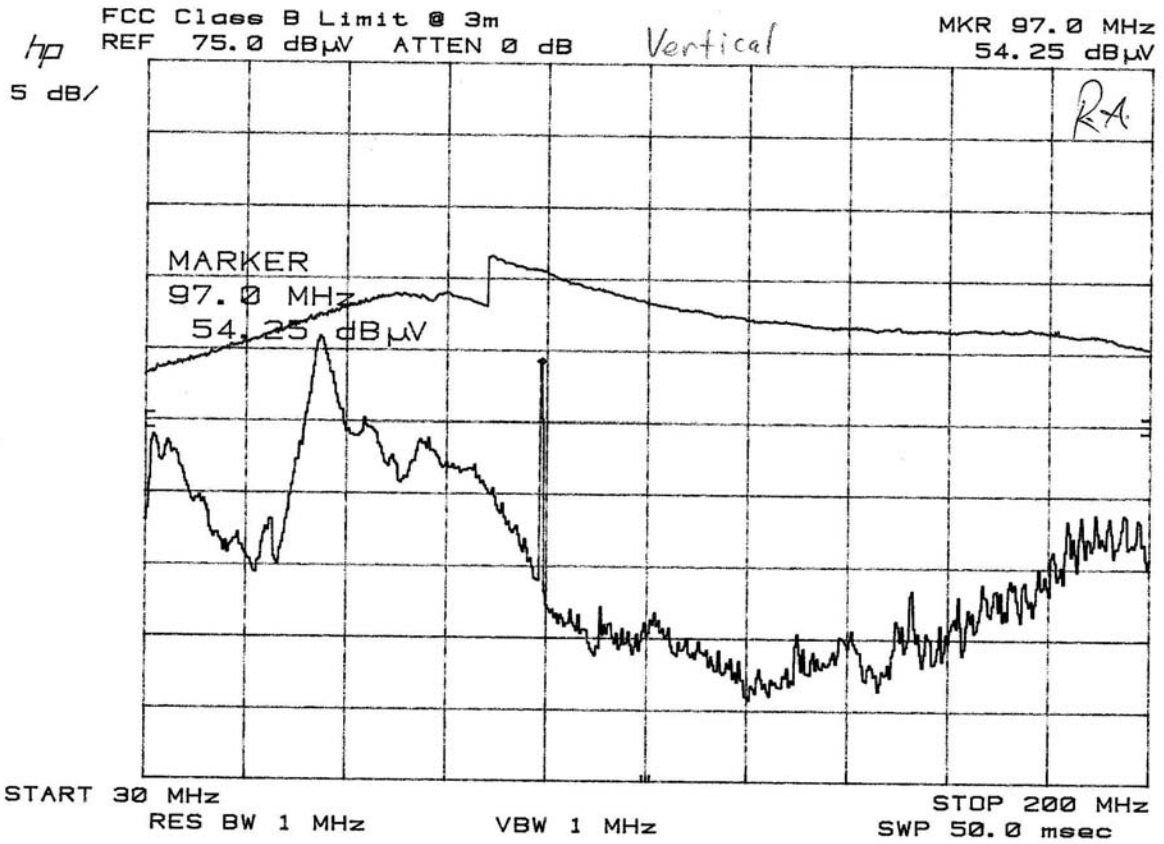


Retlif Testing Laboratories

Test Results No. R-11574-2

B-31

16 Aug 06

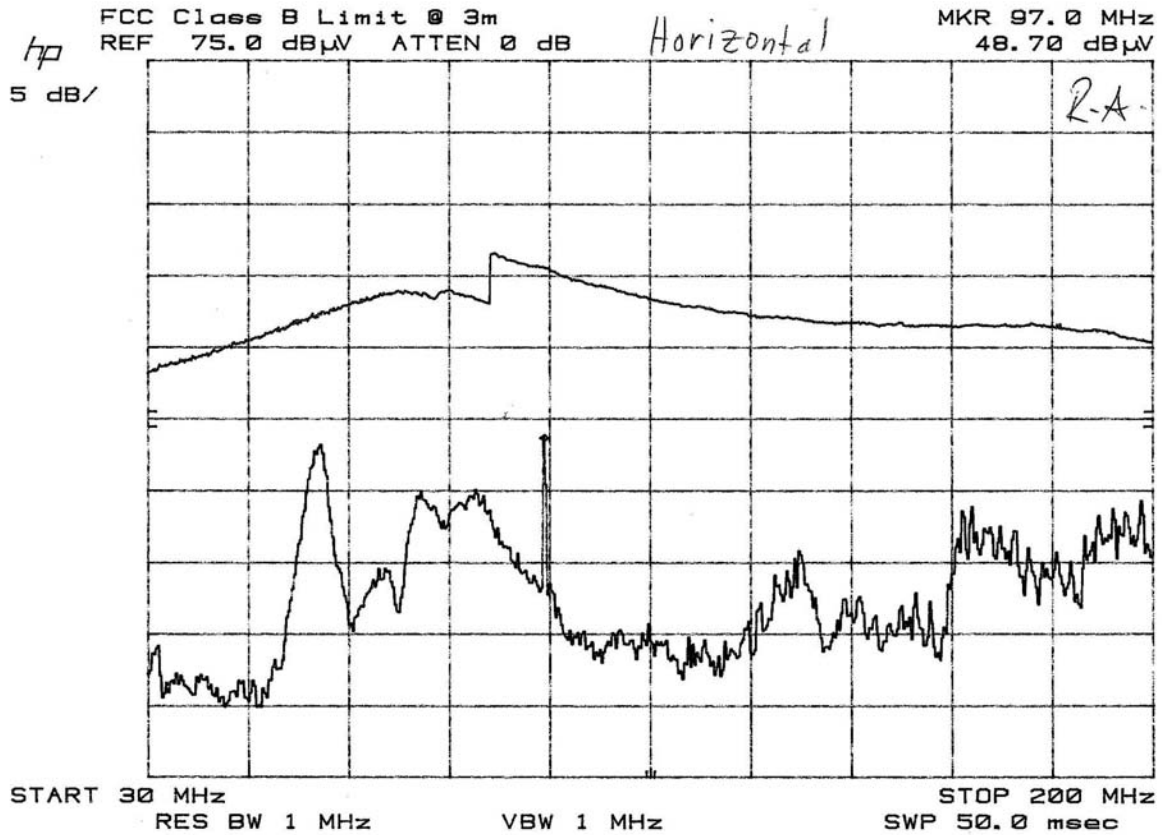


Retlif Testing Laboratories

Test Results No. R-11574-2

B-32

16 Aug 06

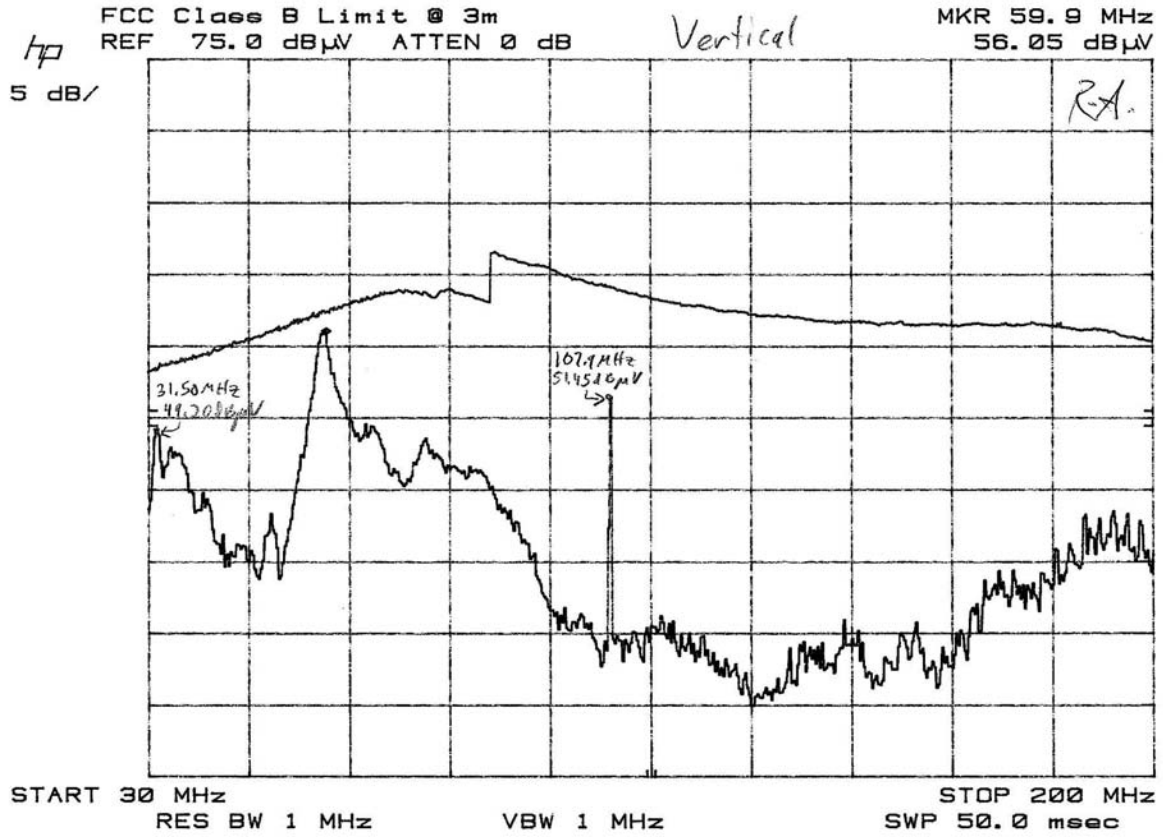


Retlif Testing Laboratories

Test Results No. R-11574-2

B-33

16 Aug 06



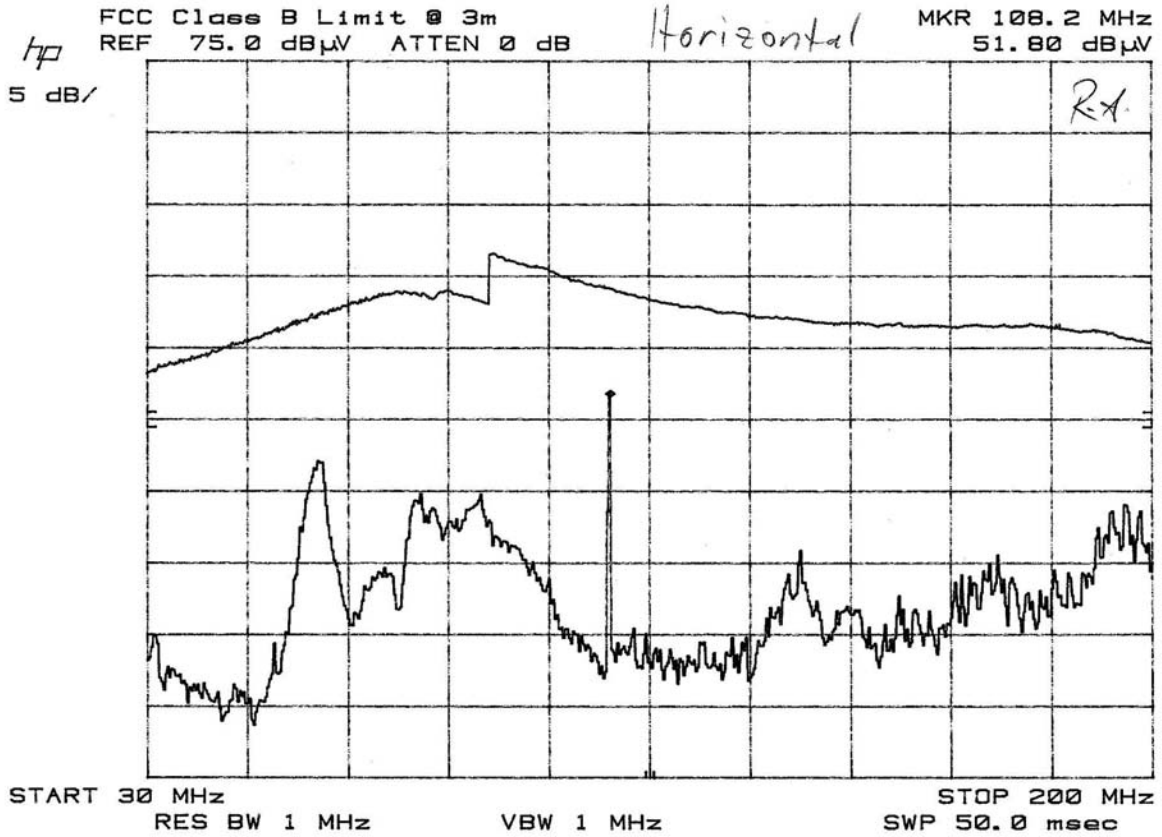
Retlif Testing Laboratories

Test Results No. R-11574-2



B-34

16 Aug 06



Retlif Testing Laboratories

Test Results No. R-11574-2

B-35

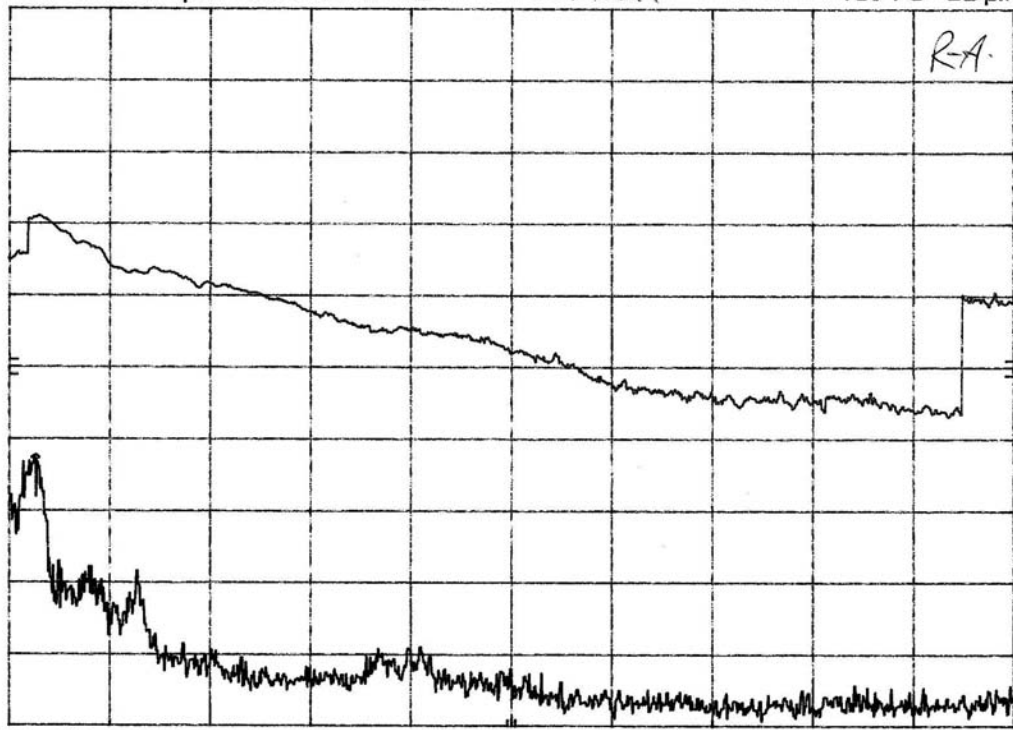
16 Aug 06

FCC Class B Limit @ 3m  
REF 75.0 dB $\mu$ V ATTEN 0 dB  
hp  
5 dB/

Vertical

MKR 220.0 MHz  
43.70 dB $\mu$ V

R-A



START 200 MHz RES BW 1 MHz VBW 1 MHz STOP 1.000 GHz SWP 200 msec



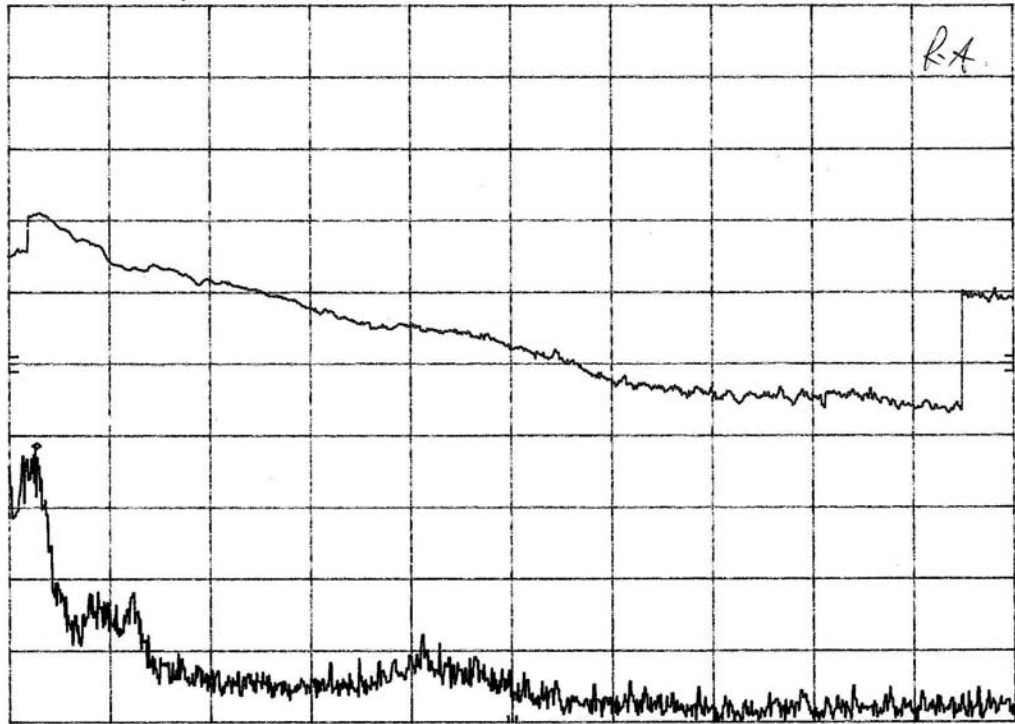
Retlif Testing Laboratories

Test Results No. R-11574-2

B-36

16 Aug 06

FCC Class B Limit @ 3m  
REF 75.0 dB $\mu$ V ATTEN 0 dB  
MKR 220.8 MHz  
44.30 dB $\mu$ V  
Horizontal  
5 dB/



START 200 MHz RES BW 1 MHz VBW 1 MHz STOP 1.000 GHz SWP 200 msec

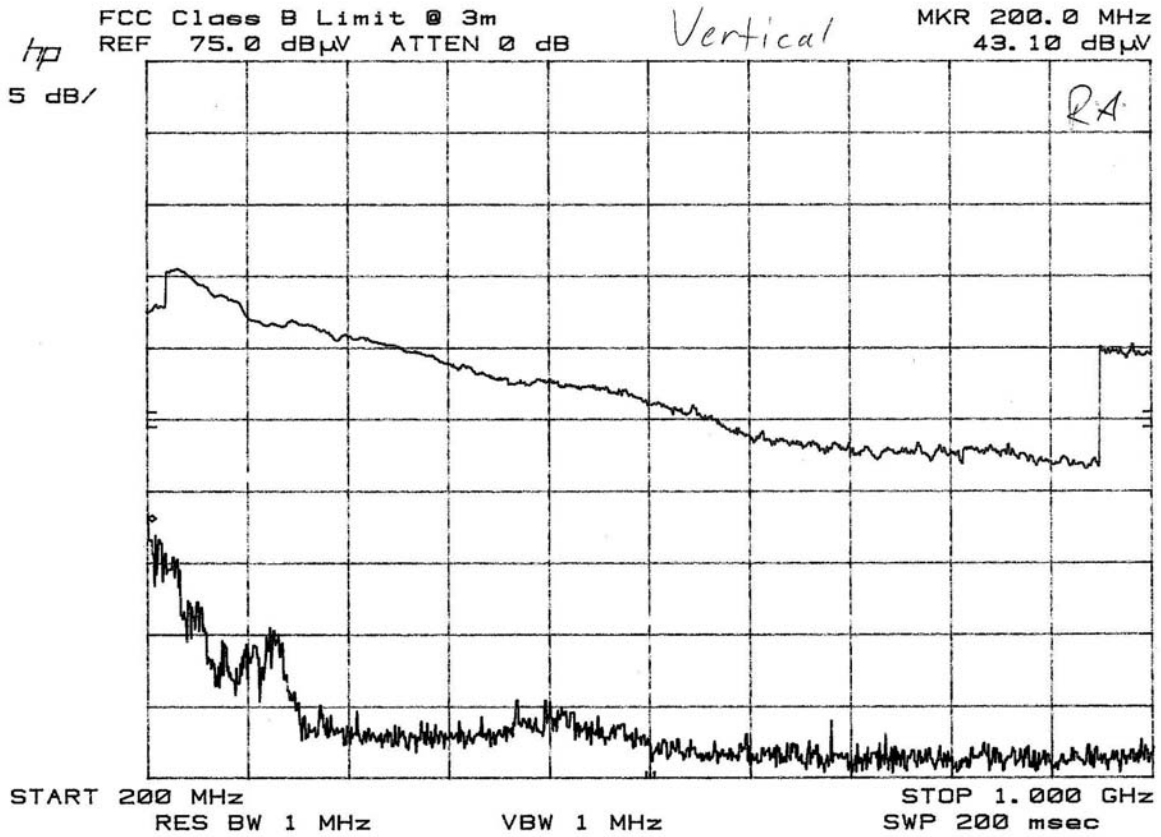


Retlif Testing Laboratories

Test Results No. R-11574-2

B-37

16 Aug 06

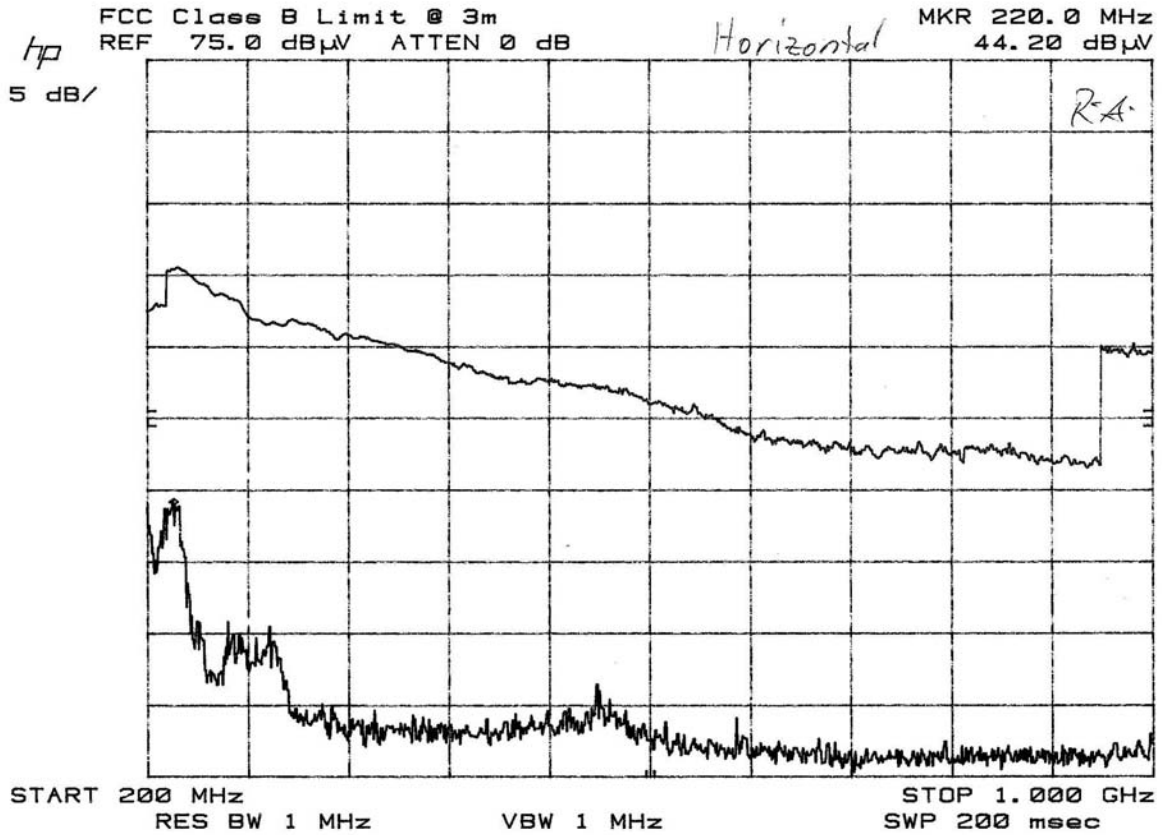


Retlif Testing Laboratories

Test Results No. R-11574-2

B-38

16 Aug 06



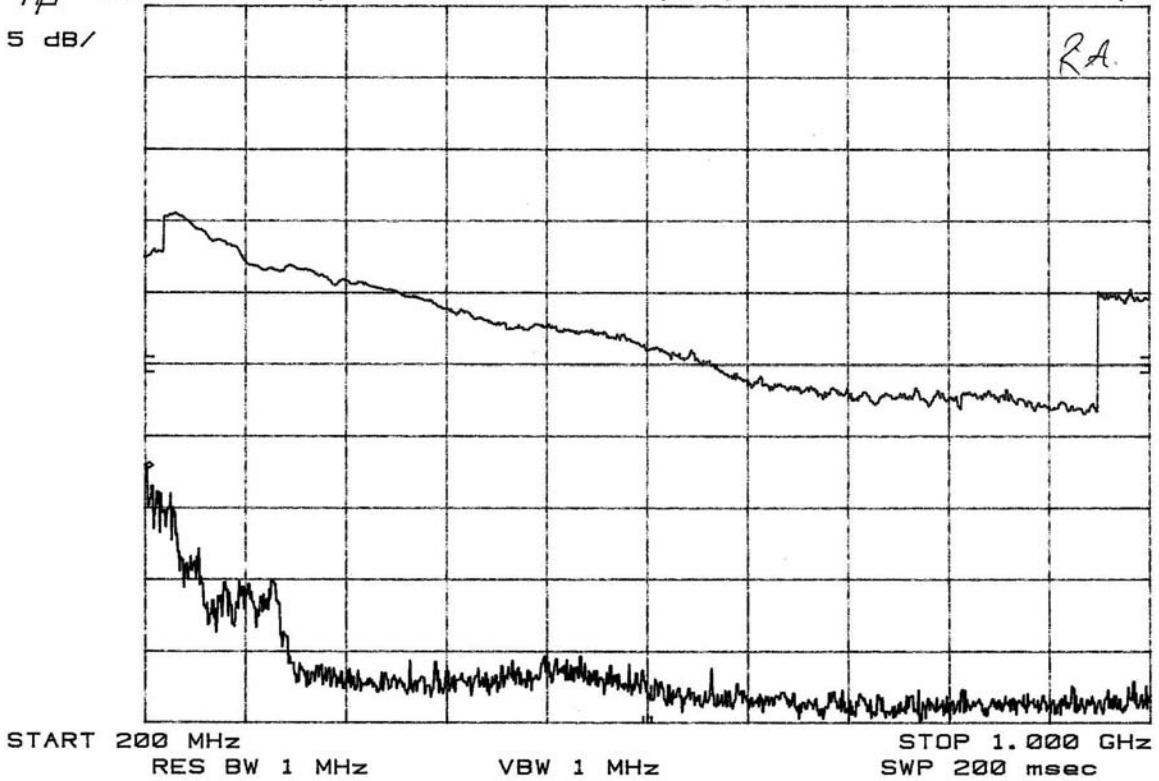
Retlif Testing Laboratories

Test Results No. R-11574-2

B-39

16 Aug 06

FCC Class B Limit @ 3m  
REF 75.0 dB $\mu$ V ATTEN 0 dB  
MKR 200.0 MHz  
42.95 dB $\mu$ V  
Vertical  
5 dB/

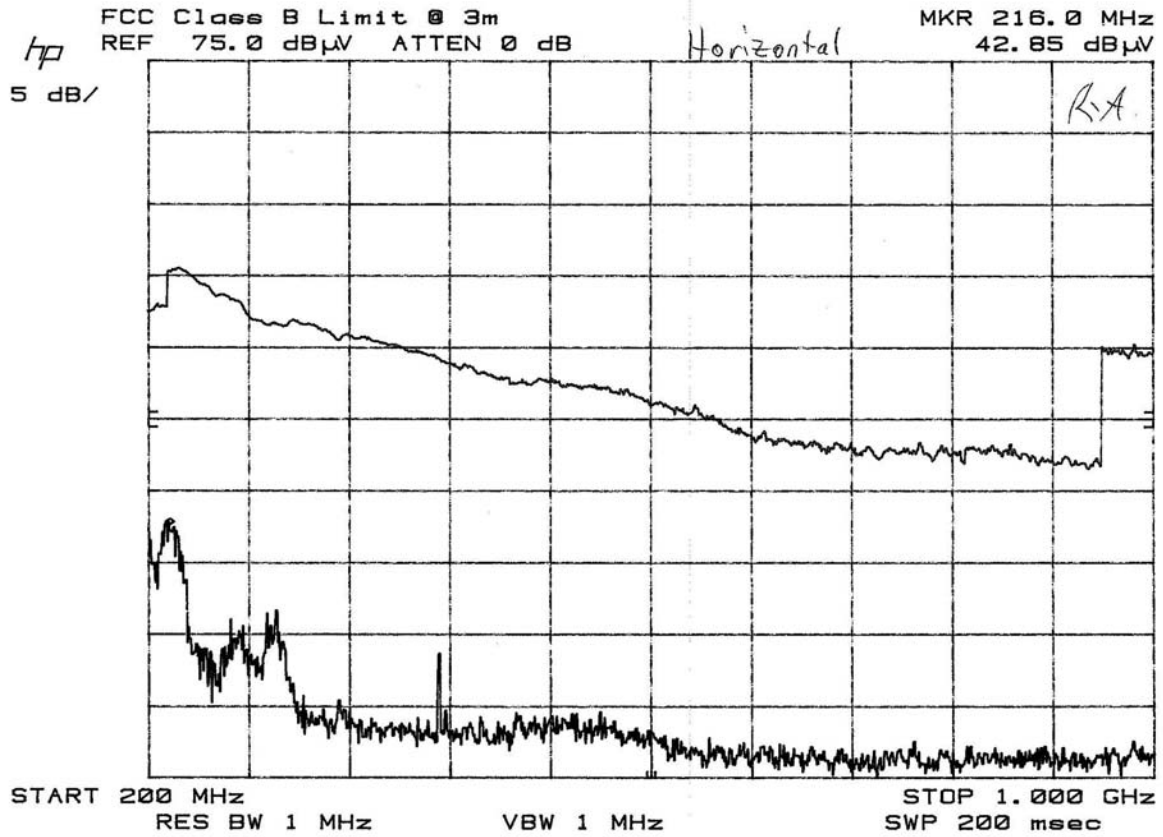


Retlif Testing Laboratories

Test Results No. R-11574-2

B-40

16 Aug 06



Retlif Testing Laboratories

Test Results No. R-11574-2

## Tabular Test Data

| Xpress with FM Direct Data Points |                      |                         |              |             | Correction Factors | Corrected Readings | Limit      |
|-----------------------------------|----------------------|-------------------------|--------------|-------------|--------------------|--------------------|------------|
| Plot ID                           | Peak Frequency (MHz) | Peak Power (dB $\mu$ V) | Rotation (°) | Height (cm) | dB                 | Peak Power (dBuV)  | DbuV/meter |
| B-29                              | 56.90                | 55.95                   | 236          | 100         | -18.3              | 37.65              | 40         |
|                                   | 31.00                | 48.50                   | 112          | 100         | -13.7              | 34.80              | 40         |
|                                   | 88.10                | 52.45                   | 269          | 130         | -18.5              | 33.95              | 43.5       |
| B-30                              | 58.90                | 49.20                   | 299          | 148         | -18.3              | 30.90              | 40         |
|                                   | 88.10                | 51.65                   | 158          | 340         | -18.5              | 33.15              | 43.5       |
| B-31                              | 96.90                | 54.25                   | 312          | 100         | -17.5              | 36.75              | 43.5       |
|                                   | 59.20                | 55.55                   | 265          | 142         | -18.3              | 37.25              | 40         |
|                                   | 31.50                | 48.95                   | 73           | 100         | -13.7              | 35.25              | 40         |
| B-32                              | 96.90                | 48.70                   | 29           | 188         | -17.5              | 31.20              | 43.5       |
|                                   | 59.10                | 47.95                   | 63           | 222         | -18.3              | 29.65              | 40         |
| B-33                              | 107.90               | 51.45                   | 300          | 100         | -16.5              | 34.95              | 43.5       |
|                                   | 59.90                | 56.05                   | 279          | 100         | -18.3              | 37.75              | 40         |
|                                   | 31.50                | 49.20                   | 80           | 100         | -13.7              | 35.50              | 40         |
| B-34                              | 107.90               | 51.80                   | 278          | 107         | -16.7              | 35.10              | 43.5       |
| B-35                              | 220.00               | 43.70                   | 51           | 100         | -13.8              | 29.90              | 46         |
| B-36                              | 220.80               | 44.30                   | 144          | 255         | -13.8              | 30.50              | 46         |
| B-37                              | 43.10                | 43.10                   | 326          | 121         | -14.4              | 28.70              | 40         |
| B-38                              | 220.00               | 44.20                   | 161          | 182         | -13.8              | 30.40              | 46         |
| B-39                              | 200.00               | 42.95                   | 81           | 100         | -14                | 28.95              | 46         |
| B-40                              | 216.00               | 42.85                   | 260          | 142         | -13.8              | 29.05              | 46         |

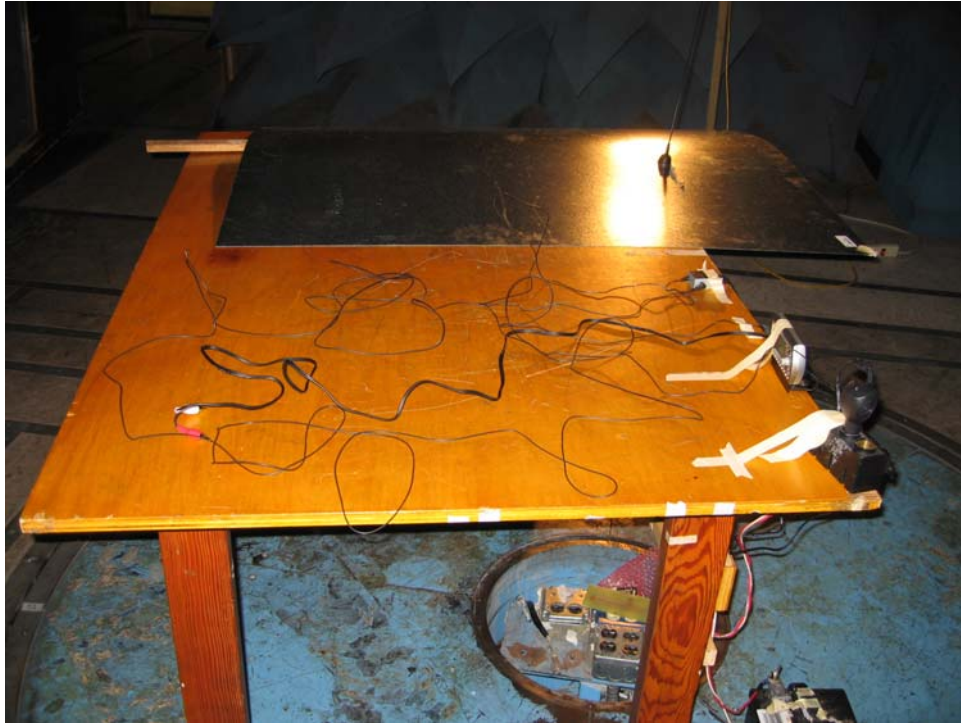


**Retlif Testing Laboratories**

Test Results No. R-11574-2



**Test Setup Photograph  
Radiated Emissions**



FM Direct Test Setup



**Retlif Testing Laboratories**

Test Results No. R-11574-2

## EQUIPMENT LIST

### FCC Part 15, Subpart B and C, Radiated Emissions

| Type                       | Manufacturer    | Model No. | Cal Date | Due Date |
|----------------------------|-----------------|-----------|----------|----------|
| Spectrum Analyzer          | Hewlett Packard | 8566B     | 8-23-04  | 8-23-06  |
| Spectrum analyzer display  | Hewlett Packard |           | 8-23-04  | 8-23-06  |
| Quasi-peak adapter         | Hewlett Packard | 85650A    | 8-23-04  | 8-23-06  |
| Biconnical Antenna         | EMCO            | 3108      | 2-24-06  | 2-24-08  |
| Log Periodic Antenna       | EMCO            | 3146      | 2-24-06  | 2-24-08  |
| Amplifier                  | Hewlett Packard | 8447D     | 8-01-05  | 8-01-07  |
| Rx System cable (RE tests) |                 |           | 8-04-05  | 8-04-07  |



**Retlif Testing Laboratories**

Test Results No. R-11574-2