

T-2071-M (Derringer) Spurious Emissions at Antenna Terminals:

Relevant FCC Chapters:

§ 2.1051 Measurements required: Spurious emissions at antenna terminals.

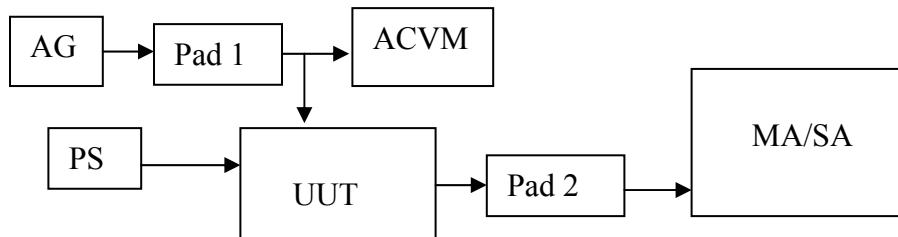
The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in § 2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

§ 2.1049 Measurements required: Occupied bandwidth. (c) (1)

§ 90.210 Emission masks. (b) (d)

Test Setup:

The setup for this test is shown below.



AG – Audio Generator – Leader LAG126S – SN 9050213

PS – Power Supply – Hewlett-Packard HP6207B – SN 1149A01889

Pad 1 – 20 dB Pad – Mini Circuits CAT20

ACVM – AC Volt Meter – Leader LMV181A – SN 2010903

UUT – T-2071-M Derringer

MA – Modulation Analyzer – Marconi 2955R – SN 132260-001

SA – Spectrum Analyzer – Advantest R3162 – SN 120401992

Pad 2 – 10 dB Pad – Mini Circuits CAT10

Test Method:

The method used for testing Spurious Emissions is identical to the method used for testing the Occupied Bandwidth. The spectrum was measured with the unit set to each of the following modes:

Narrow Band, AGC On

Wide Band, AGC On

For the purpose of calculating mask segment (b)(3), the power of the unmodulated carrier was 700 mW, therefore

$$43 + 10\log(7) = 41.45 \text{ dBc}$$

Test Results:

The results of the test are shown in Figures 13 and 14.

The unit under test passes per the criteria established in 2.1051, 2.1049, and 90.210.

Harmonic	Frequency (MHz)	Narrow and Level (dBc)	Wide band level (dBc)
F2	324	-52.7	-52.7
F3	486	>-70	>-70
F4	648	>-70	>-70
F5	810	>-70	>-70
F6	972	>-70	>-70
F7	1134	>-70	>-70
F8	1296	>-70	>-70
F9	1458	>-70	>-70
F10	1620	>-70	>-70
F11	1782	>-70	>-70
F12	1944	>-70	>-70

**Figure 13 – Spurious Emissions (Pursuant to FCC Requirement 2.1051) – Raw Data
F0 162.000000MHz – 0dB ref.**

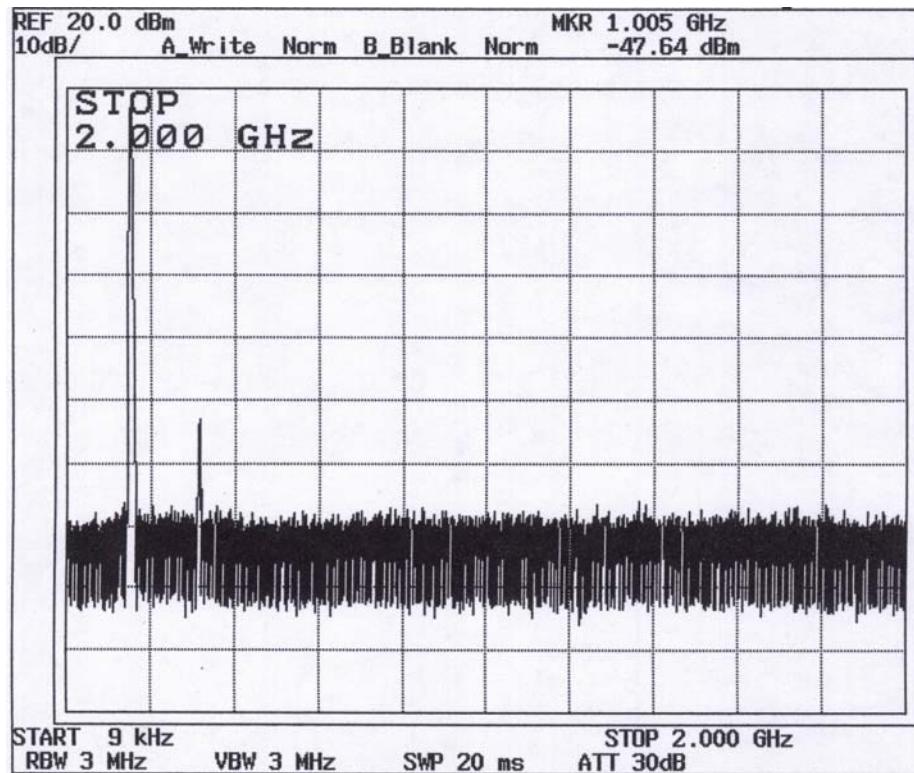


Figure 14 – Narrow Band Spurious Emissions – Spectral Display

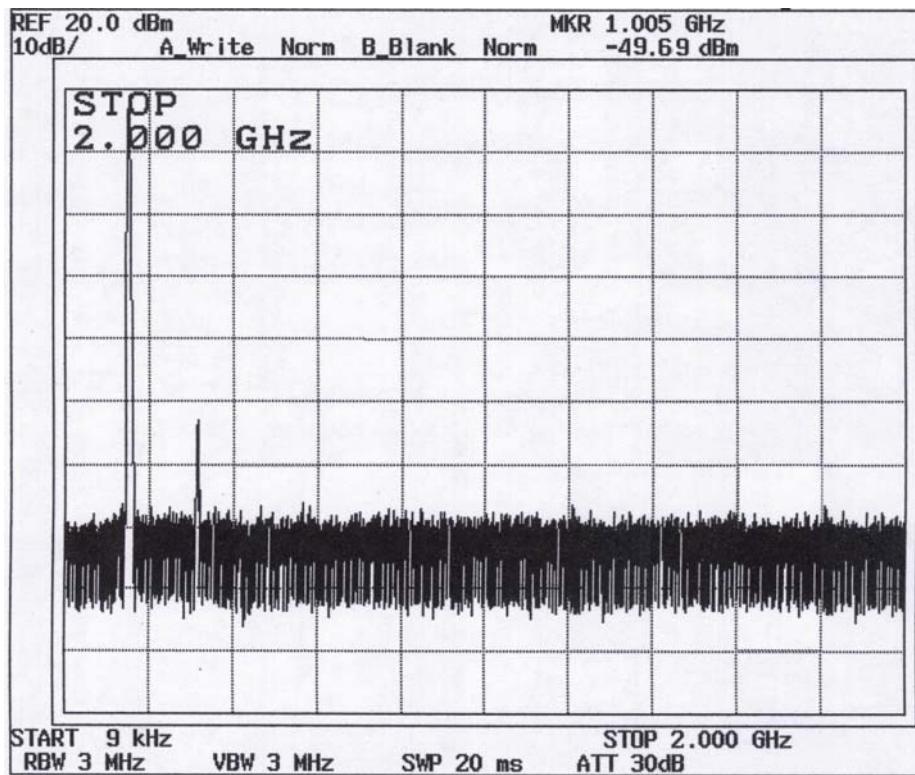


Figure 15 – Wide Band Spurious Emissions – Spectral Display