



July 22, 2009

Stewart Audio Inc

Brian McCormick  
Po Box 4058  
Mountain View, CA 94040

Our Reference: File SV17764 / Project 09CA34798

Subject: UL Standard 2043, Third Edition "Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces".

Dear McCormick:

This Report summarizes the data developed on the sample you provided which was subjected to the flame test described in UL Standard 2043, Third Edition. Testing was conducted on July 22, 2009 at our Northbrook testing facility.

**GENERAL:**

It should be understood that these results apply only to the particular sample submitted for testing. The test results indicated in this Report are not intended to imply Listing, Classification or Recognition of any product or materials.

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## TEST RECORD

### SAMPLES:

The audio amplifier evaluated is described in Table 1. Underwriters Laboratories Inc. did not witness the production of the test sample nor were we provided with information relative to the formulation or identification of component materials used in the manufacture of the test samples.

Table 1 - Sample Description

Sample Reference	Description
A	Model CVA-25/50 Audio Amplifier

### METHOD:

The test was conducted in accordance with the test procedure described in UL Standard 2043, Third Edition ("Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces"), dated August 20, 2008. This test method is used to determine the heat release rate, smoke release and optical density of the sample. The test sample was positioned and installed in the test enclosure as described in Appendix A.

### CRITERIA:

Test samples fail to meet the requirements of UL 2043 if any of the following criteria are exceeded:

- 1) The peak heat release rate shall be 100 kW or less during the test.
- 2) The peak optical density shall be 0.50 or less during the test.
- 3) The average normalized optical density shall be 0.15 or less during the test.

Note: The above criteria do not include the contribution of the propane ignition burner.

**RESULTS:**

The summary of test results is tabulated in Table 2 below. Graphs of heat release rate, smoke release rate, and normalized optical density are given in Appendix B. Pre and post-test photographs for each test are given in Appendix A. In addition, a videotape of each test was made and provided.

Table 2 - Test Results

Sample - Test Ref.	Peak Heat Release Rate (kW)	Peak Normalized Optical Density	Average Normalized Optical Density	Peak Smoke Release Rate (m <sup>2</sup> /s)	Total Smoke Released (m <sup>2</sup> )
A-1	7	0.08	0.01	0.03	4.1

Please note that the values in Table 2 above as well as the graphs in Appendix B omit the heat and smoke contribution from the propane ignition burner.

**COMPLETION OF INVESTIGATION**

Since this completes the anticipated work, we have instructed our Accounting Department to terminate the investigation and invoice you for the charges incurred to date.

If you have any questions, please do not hesitate to contact the undersigned.

Very truly yours

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## APPENDIX A

### TEST NOTES:

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#### TEST A-1

07220905

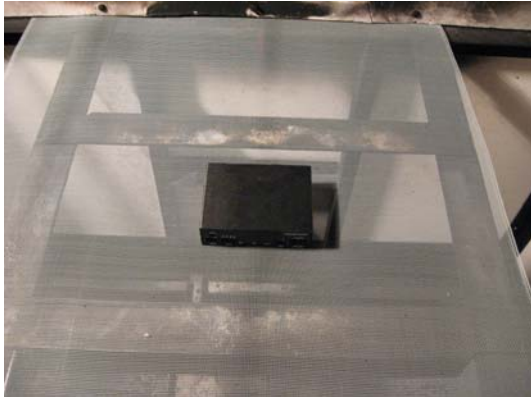
**Sample Description:** Model CVA-25/50 Audio Amplifier

**Test Notes:** The sample was positioned face up on fine wire mesh and situated above the center of the test burner.

**Post Test Observations:** The sample was still burning with wispy smoke at the conclusion of the test.

#### **Photos:**

**Pre-Test**



**Post-Test**

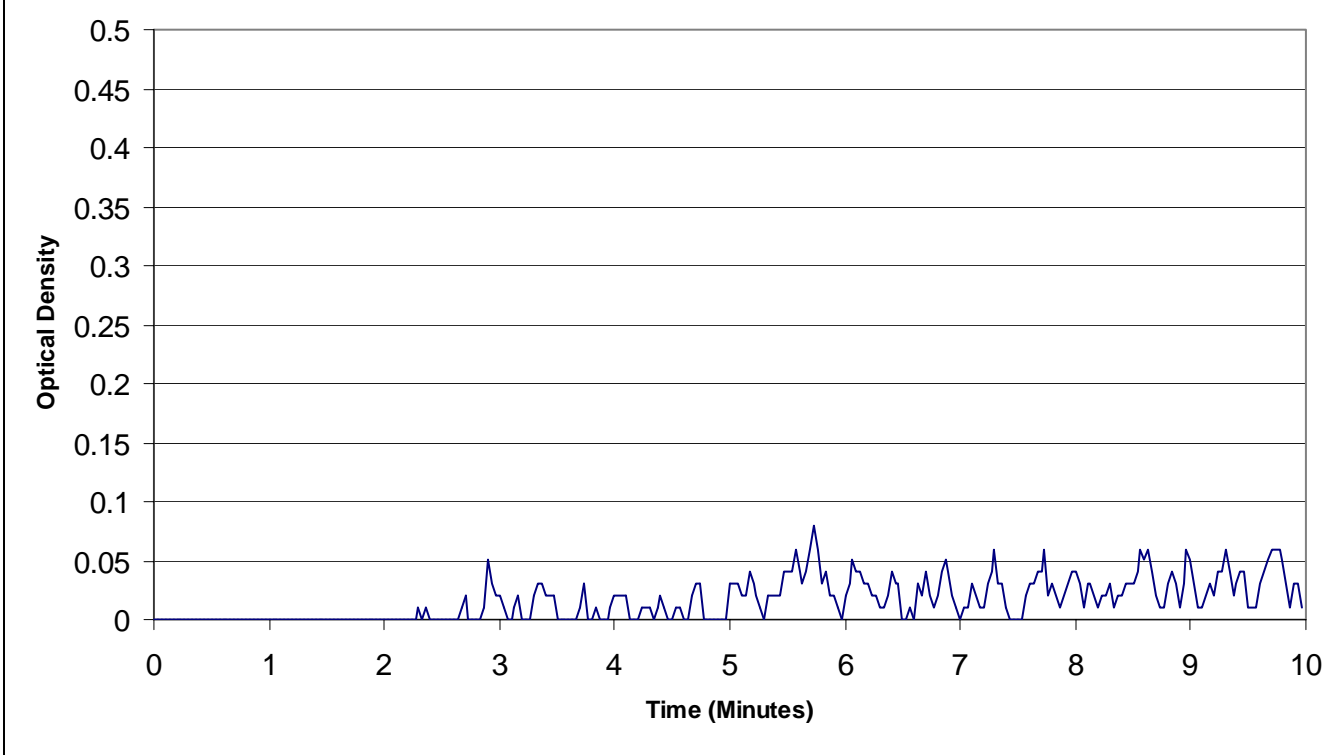


**APPENDIX B**

**GRAPHICAL DATA**

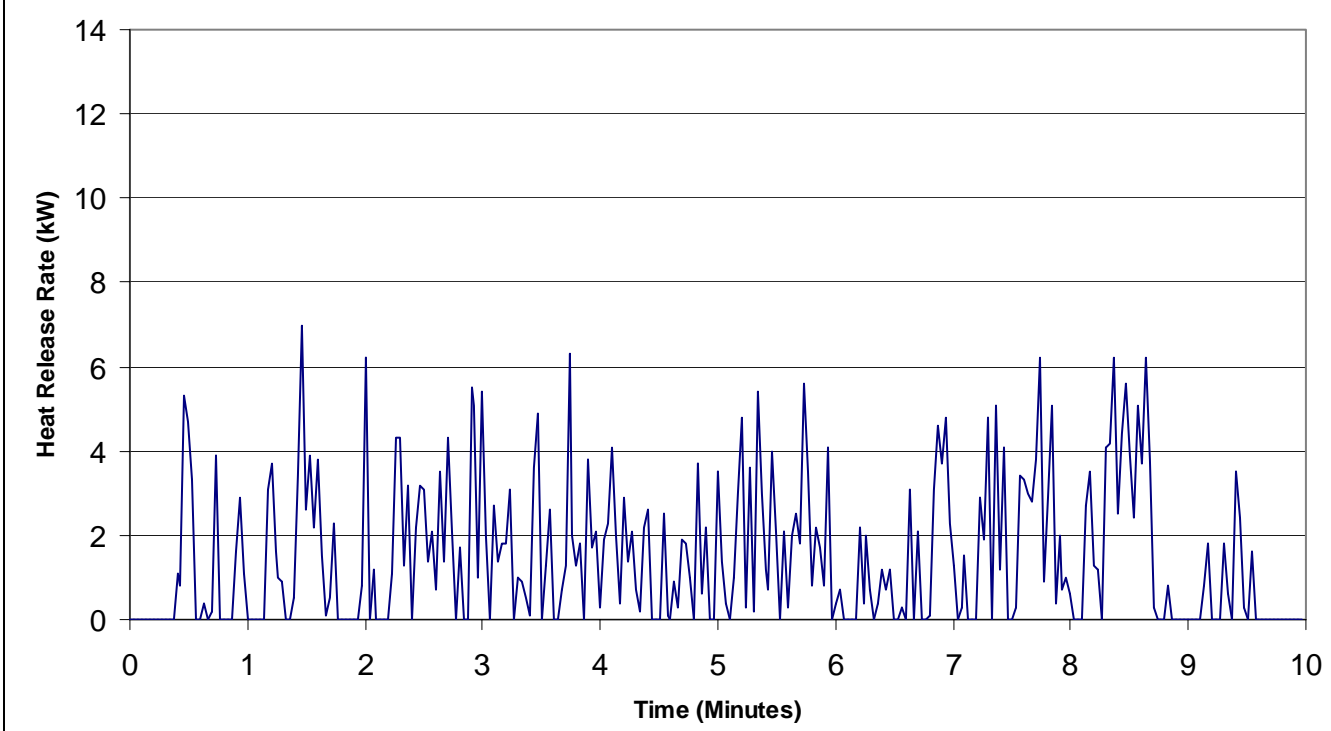
**File SV17764, Project 09CA34798**

**UL 2043 Test  
Stewart Audio Inc  
Model CVA-25/50 Audio Amplifier**



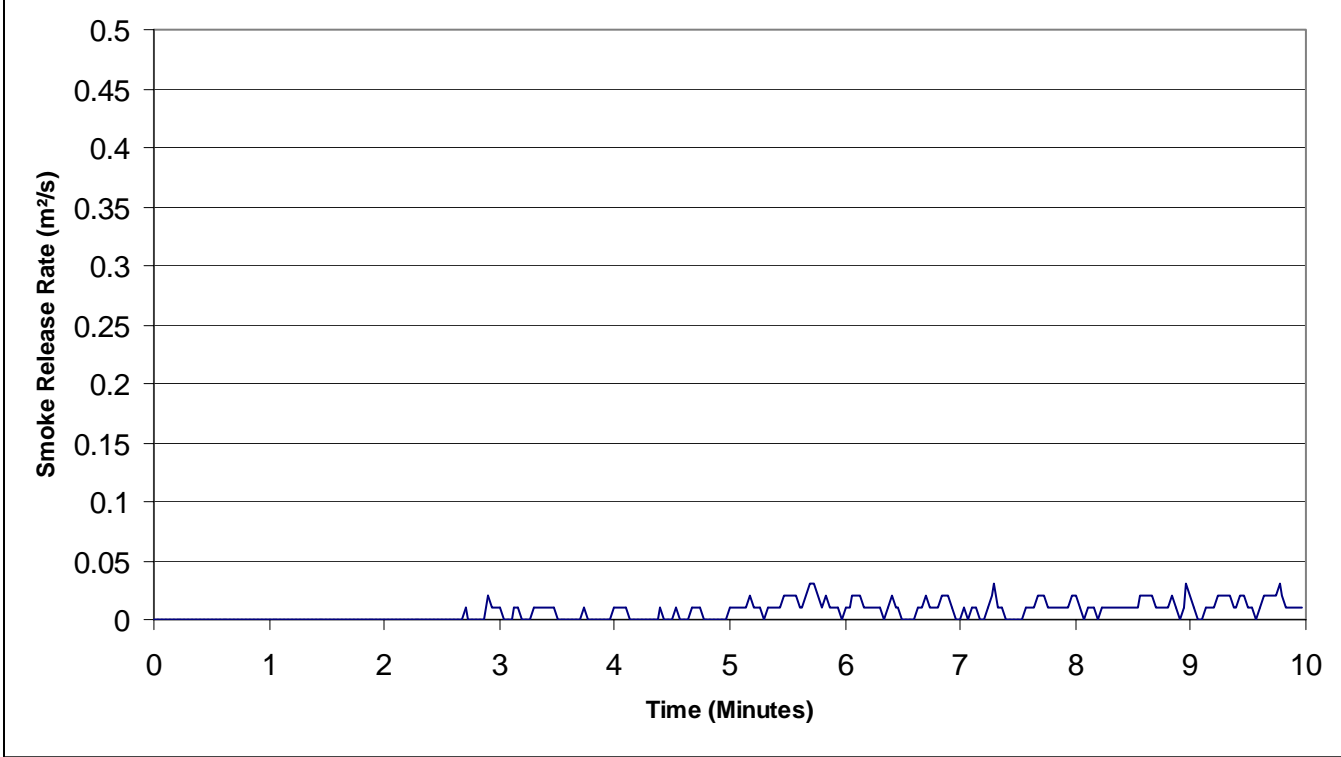
<b>Test Number</b>	<b>Test Code</b>	<b>Description</b>	<b>Peak Normalized Optical Density</b>	<b>Average Normalized Optical Density</b>
A-1	07220905	Model CVA-25/50 Audio Amplifier	0.08	0.01

**UL 2043 Test  
Stewart Audio Inc  
Model CVA-25/50 Audio Amplifier**



Test Number	Test Code	Description	Peak Heat Release Rate (kW)
A-1	07220905	Model CVA-25/50 Audio Amplifier	7

**UL 2043 Test  
Stewart Audio Inc  
Model CVA-25/50 Audio Amplifier**



Test Number	Test Code	Description	Peak Smoke Release Rate (m <sup>2</sup> /s)	Total Smoke Released (m <sup>2</sup> )
A-1	07220905	Model CVA-25/50 Audio Amplifier	0.03	4.1