



LH7A400-10 Radiated Emissions Scan: 30 MHz – 1 GHz

White Paper 246

Erik Reynolds

Logic Product Development

Published: July 2004

This file contains source code, ideas, techniques, and information (the Information) which are Proprietary and Confidential Information of Logic Product Development, Inc. This information may not be used by or disclosed to any third party except under written license, and shall be subject to the limitations prescribed under license.

No warranties of any nature are extended by this document. Any product and related material disclosed herein are only furnished pursuant and subject to the terms and conditions of a duly executed license or agreement to purchase or lease equipments. The only warranties made by Logic Product Development, if any, with respect to the products described in this document are set forth in such license or agreement. Logic Product Development cannot accept any financial or other responsibility that may be the result of your use of the information in this document or software material, including direct, indirect, special or consequential damages.

Logic Product Development may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering the subject matter in this document. Except as expressly provided in any written agreement from Logic Product Development, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.

The information contained herein is subject to change without notice. Revisions may be issued to advise of such changes and/or additions.

© Copyright 2002, Logic Product Development, Inc. All Rights Reserved.

REVISION HISTORY

REV	EDITOR	DESCRIPTION	APPROVAL	DATE
A	Erik Reynolds	Release online	ELH	07/03
B	Erik Reynolds, James Wicks	Reformat to White Paper Document	ECR	07/04

1 LH7A400-10 Radiated Emissions Pre-Scan: 30 MHz – 1 GHz

1.1 Pre-Scan Test Results

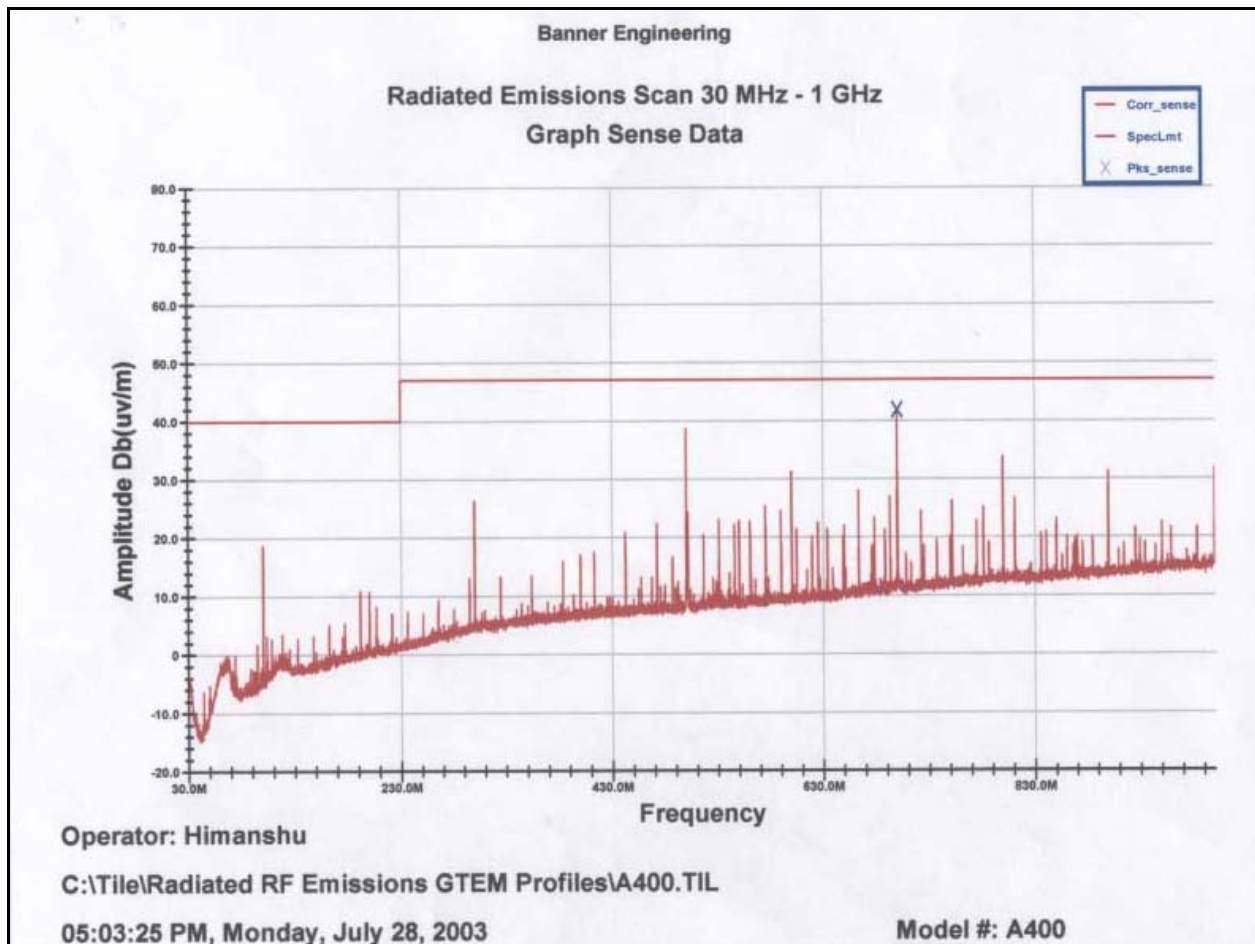


Figure 1.1: LH7A400-10 Test Results

The horizontal line across the graph denotes the maximum emissions level for FCC Class A. FCC Class B level is 10dB lower than Class A (shown).

2 FCC Class A Testing

2.1 Test Equipment

The LH7A400 Card Engine was pre-scanned to the FCC Class A standard using a PC Workstation running TILE software, and the following:

Model Number	Manufacturer	Description	Serial Number	Calibration Date
HP8591 EM	Hewlett Packard	Spectrum Analyzer	3509A00168	4/6/2004

HP8447 F	Hewlett Packard	OPT Space H64 Amplifier	311A06087	5/10/2004
5305	EMCO	5300 Series Anechoic Chamber	9412-1126	None Required

2.2 Test Setup

The test results were obtained by running the card engine on a modified low cost EVB Board (FCC board). The modified board consisted only of a DB-9 serial port connection and power jack. All other headers and connectors were taken off of the layout and not populated for this FCC board. This was done to minimize as much as possible the radiation from the baseboard and to focus on emissions generated by the card engine.

The card engine was placed in the Anechoic Cell and the radiation emissions were measured by the Spectrum Analyzer. Data was then sent to the PC Workstation where the custom TILE software program calculated the numbers and populated the results in easy to read graphs.

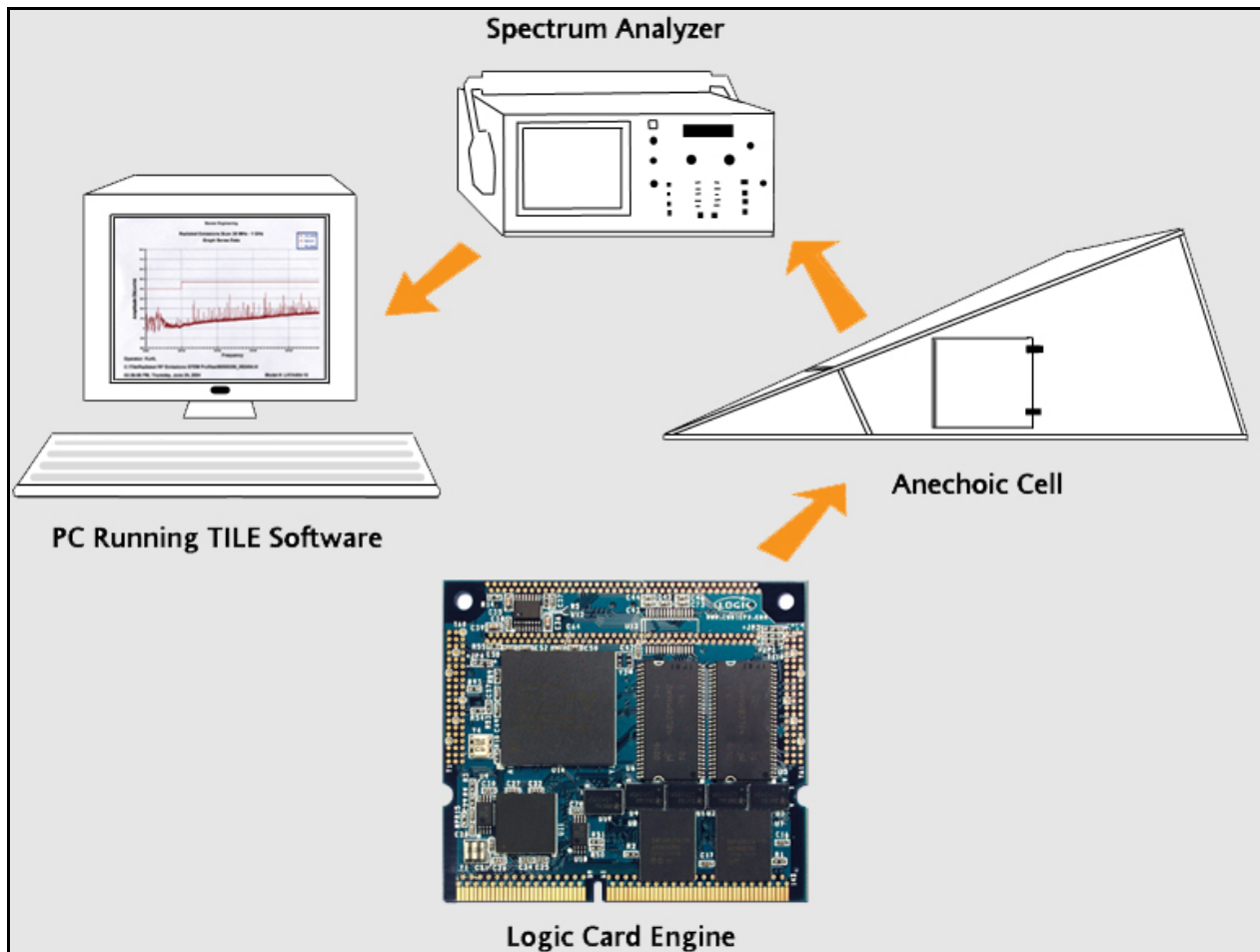


Figure 2.1: Test Results Diagram (Card Engine Baseboard Not Shown)