MCF5373 Fire Engine Radiated Emissions Scan: 30 MHz – 1 GHz

White Paper 386

Logic Product Development
Published: June 2008

REVISION HISTORY

REV	EDITOR	DESCRIPTION	APPROVAL	DATE
A	Jed Anderson	Initial release	JCA	06/12/08

1   MCF5373 Fire Engine Radiated Emissions Pre-Scan: 30 MHz – 1 GHz

1.1   Pre-Scan Test Results

Banner Engineering

Radiated Emissions Scan 30 MHz - 1 GHz
Graph Sense Data
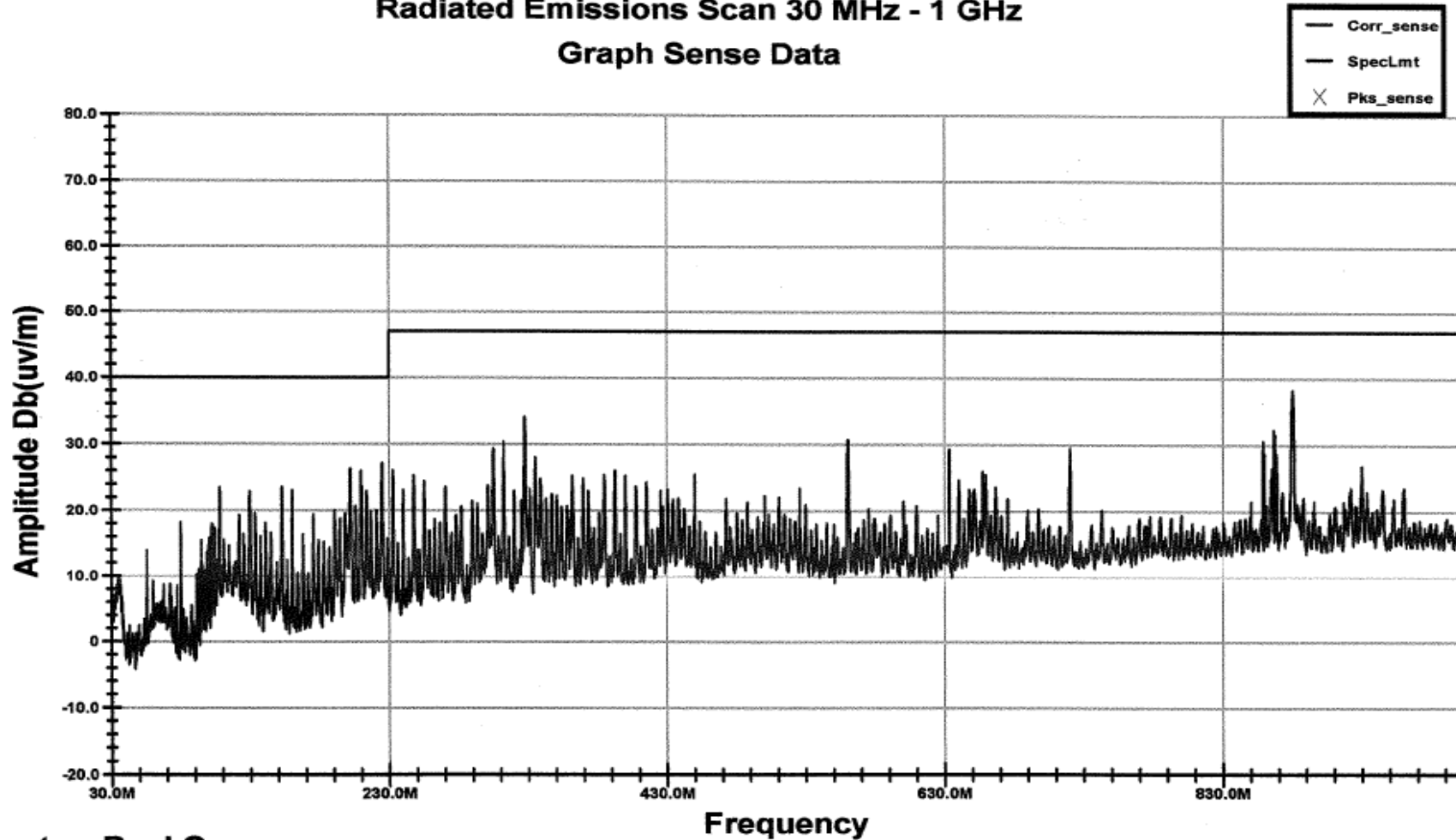
Operator: Paul O

C:\Tile\Radiated RF Emissions GTEM Profiles\Logic_Super-T.til

11:38:04 AM, Tuesday, September 05, 2006　　　　　　　**Model #: Freescale Super-T**

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 MCF5373 Fire 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
HP8591EM	Hewlett Packard	Spectrum Analyzer	3509A00168	4/6/2006
HP8447F	Hewlett Packard	OPT Space H64 Amplifier	311A06087	5/10/2006
5305	EMCO	5300 Series Anechoic Chamber	9412-1126	None Required

2.2 Test Setup

The test results were obtained by running the Fire 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 Fire Engine.

The Fire 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.