



# DM3730/AM3703 SOM-LV Radiated Emissions Scan

## White Paper 521

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## Revision History

REV	EDITOR	DESCRIPTION	APPROVAL	DATE
A	SO, NJK	-Initial Release	PO, NJK	12/29/11

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## 1 DM3730/AM3703 SOM-LV Radiated Emissions Scans

The DM3730/AM3703 SOM-LV passes FCC class B threshold levels. This does not guarantee FCC validation for end-product designs; final testing and passage is the responsibility of the customer.

## 2 Test Setup

The following configurations of the DM3730/AM3703 SOM-LV were scanned for unintentional radiated emissions:

- SOMDM3730-10-2782IFCR (commercial temperature)
- SOMDM3730-10-1782IFXR (extended temperature)

The test results were obtained by running the DM3730/AM3703 SOM-LV on a standard Zoom DM3730 SOM-LV Development Kit baseboard, powered by the standard kit 5V power supply; no other cables were connected to the kit during the test. The unit under test used software that looped through the following interfaces: RAM, NAND flash, PMIC, Ethernet, ID Chip, and NOR flash.

The tests were conducted at the [Northwest EMC](http://www.nwemc.com/)<sup>1</sup> test facility. All scans were done in a calibrated anechoic chamber.

Table 2.1 lists the known frequencies generated on the DM3730/AM3703 SOM-LV with the functional test code running.

**Table 2.1: Frequencies Generated while Running Functional Test Code**

Source	Frequency
DPLL1	600 MHz
DPLL3	200 MHz
DPLL4	864 MHz
DPLL5	120 MHz
LPDDR interface	200 MHz (400 MHz actual)
GPMC bus	200 MHz (internal frequency)
System oscillator	26 MHz

<sup>1</sup> <http://www.nwemc.com/>

2.1 30 MHz to 1 GHz Scans

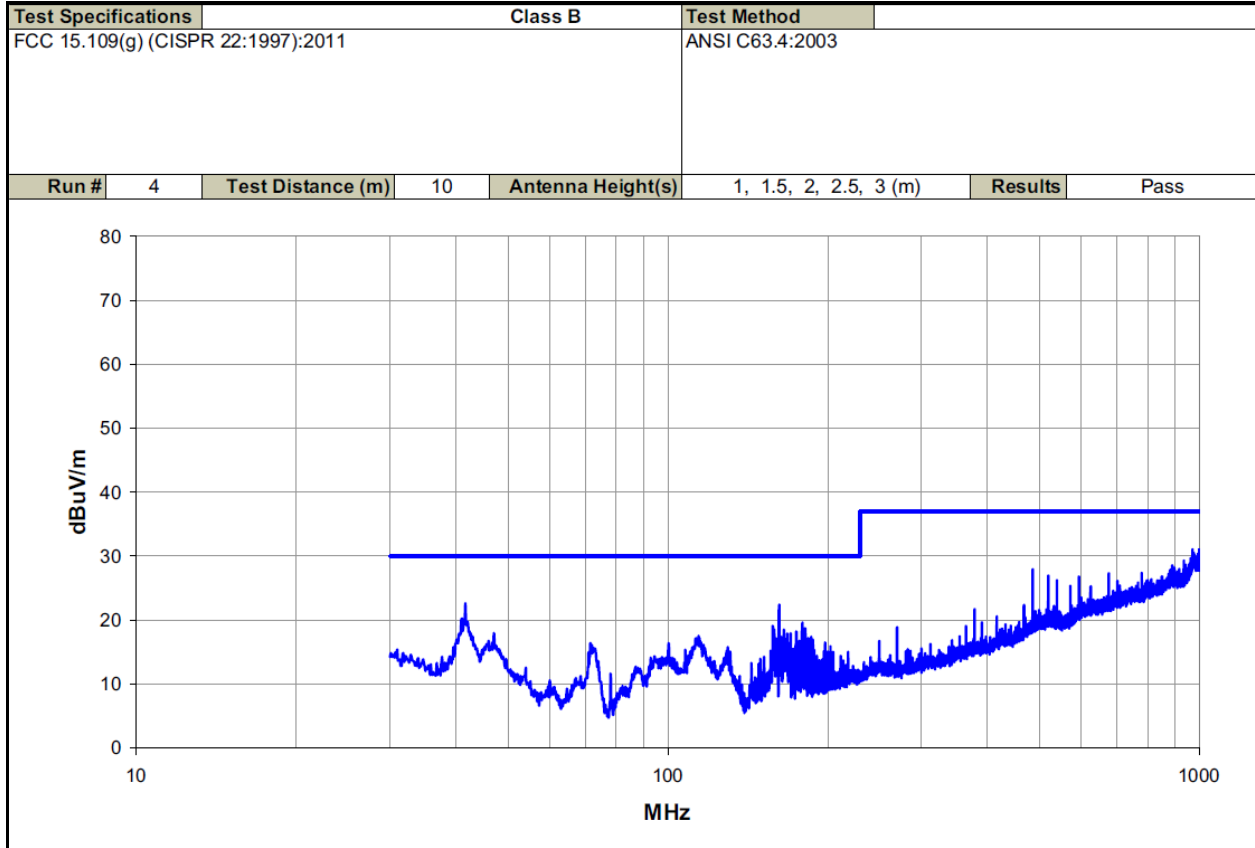


Figure 2.1: RE Scan Class B Test Results for SOMDM3730-10-2782IFCR

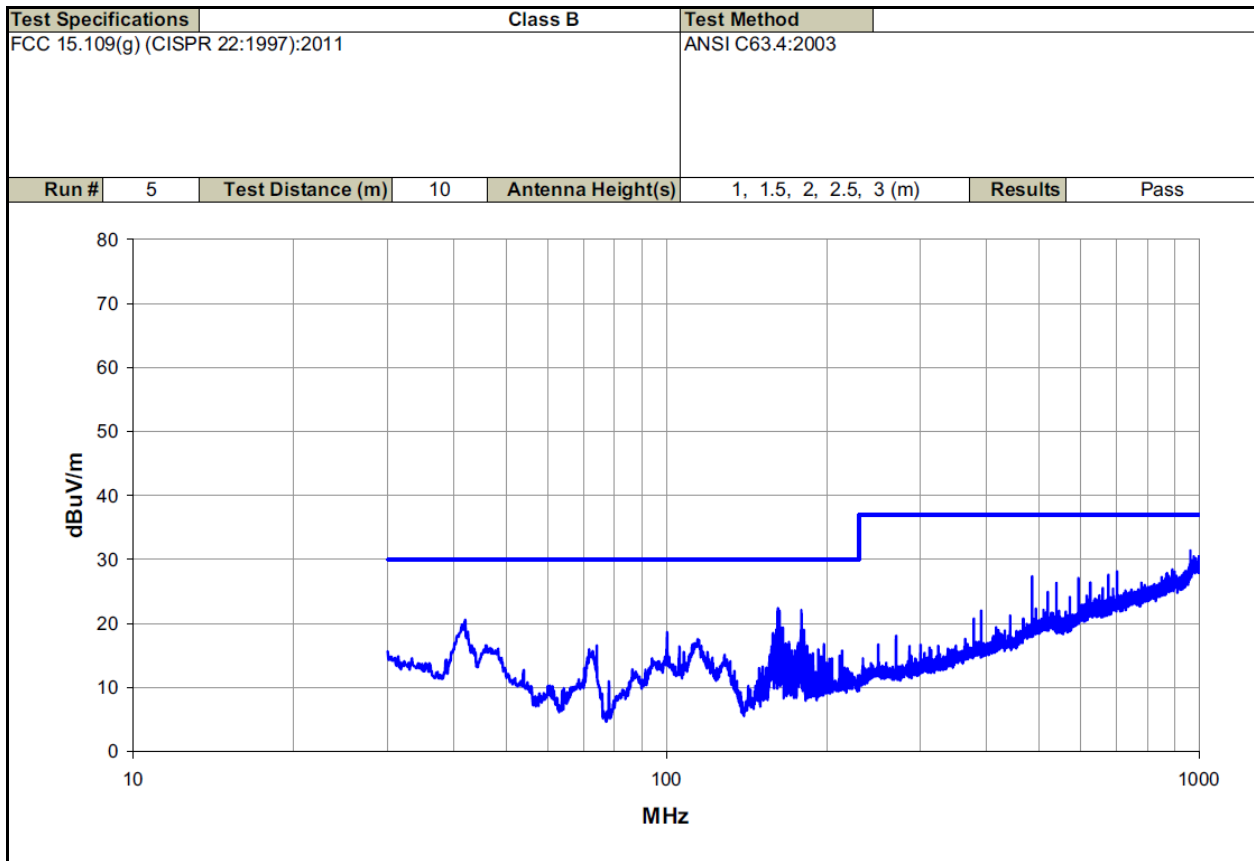


Figure 2.2: RE Scan Class B Test Results for SOMDM3730-10-1782IFXR

## 2.2 High Frequency: 1 GHz to 10 GHz Scans

Both configurations of the DM3730/AM3703 SOM-LV were also tested from 1 GHz to 10 GHz. No excessive harmonics were observed in either testing; therefore, test results for these scans have not been provided.

## 3 Summary

These radiated emissions scans provide a baseline for the performance of the DM3730/AM3703 SOM-LV alone. Radiated emissions testing of a final product designed around the DM3730/AM3703 SOM-LV is the responsibility of the developer.