Far-Field Application

Preliminary Datasheet

EMxpert™

The World's Fastest Pre-Compliance Verification of PCBs

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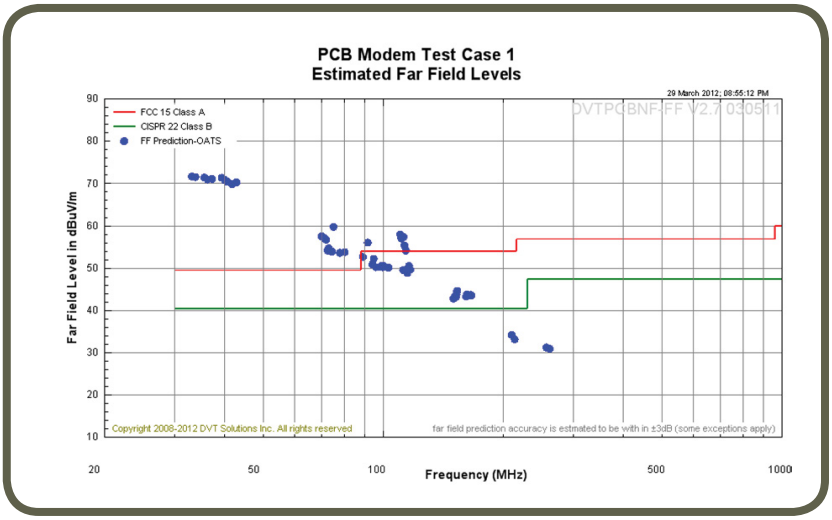
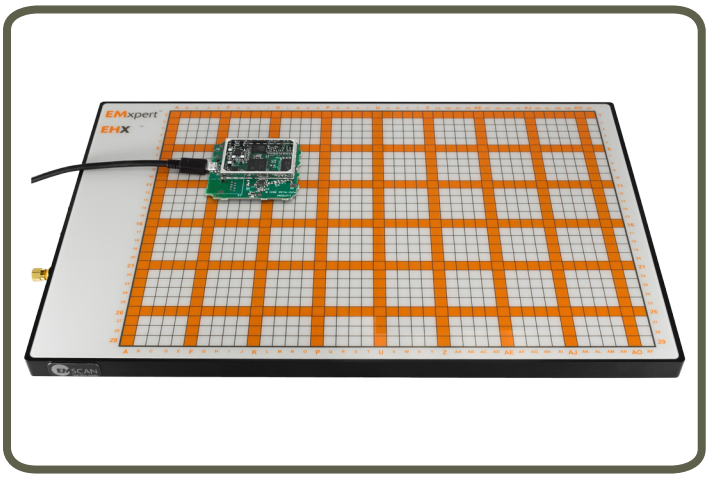
Far-Field Application, enables EMxpert users to predict the Open Area Test Site (OATS) or Semi Anechoic Chamber (SAC) radiated EMI levels of a printed circuit board (PCB). The application supports regulatory compliance limits Class A or Class B FCC, CISPR and Industry Canada, 10m, 3m and 1m test distances.



Far-Field Application predicts electrical far-field levels from existing EMxpert very-near-field magnetic measurements in seconds once the user selects among the available far-field models which closely matches the physical design of their PCB. Any PCB usually consists of physical design such as ASICs, plane splits, traces, loops and slots.

EMxpert users can execute real-time analysis of their PCB and/or product designs and test multiple design iterations, on their lab bench, in seconds at each stage of the design process. EMxpert also gives engineers the freedom to do rapid prototyping and explore new designs, new materials and new forms.



With EMxpert by EMSCAN and Far-Field Application by DVT Solutions Inc., engineers and designers won't waste time waiting in line for an EMC chamber time availability. They can change the clock circuit, add or change filter and/or ferrite, shield to their design and verify EMC performance of final products quickly and then go to the chamber for final certification requirements with their mind at ease, knowing that their design will achieve a first time pass.

EMSCAN real-time results

Far-Field Application Features

Part number	3000-0304
Frequency range	20 MHz - 1 GHz
Far-field accuracy	Estimated to be +/- 3 dB, subject to changes
Near-field input data	Amplitude only of H-field (x & y or resultant component)
Average prediction time	300ms per frequency
Far-field distance	1m, 3m, 10m
Supported far-field test specifications	Open Area Test Site, Semi Anechoic Chamber, Anechoic Chamber ANSI C63.4, CISPR 22, ICES-003
PCB models	ASIC Loop Slot Split Open Ended Line or Trace
Supported operating systems	Windows 7®, Windows Vista® and Windows XP®
Required EMxpert option	Absorber mat to control possible resonance included for free (Part #: 3000-0820)

EMxpert Scanner Specifications

Broadband frequency coverage	EMX: 50 kHz to 4 GHz EHX: 150 kHz to 8 GHz
Antenna array	2,436 loops forming 1,218 (42 x 29) H-field probes
Measurement sensitivity	EMX: -135 dBm to 35 dBm (Dependant on spectrum analyzer performance) EHX: to be determined
Spatial resolution	3.75 mm
Scan area	L 31.6 cm x W 21.8 cm (L 12.44” x W 8.58”)
Frequency accuracy of peaks	Peak marking accuracy of spectrum analyzer
Probe to probe uniformity	Calibrated before shipment. Firmware correction factors adjust for frequency dependant probe responses with +/- 3dB accuracy
Measurement plane isolation	EMX: > 20 dB EHX: to be determined
Maximum radiated power load	10 W / 40 dBm
In situ scanning	6U Size C scanner fits into VXI and VME chassis
Scanner connections	Spectrum analyzer: RF SMA to type N coaxial cable Adaptor: Proprietary DB25

EMSCAN real-time results
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