

# CAMCAD Test Suite

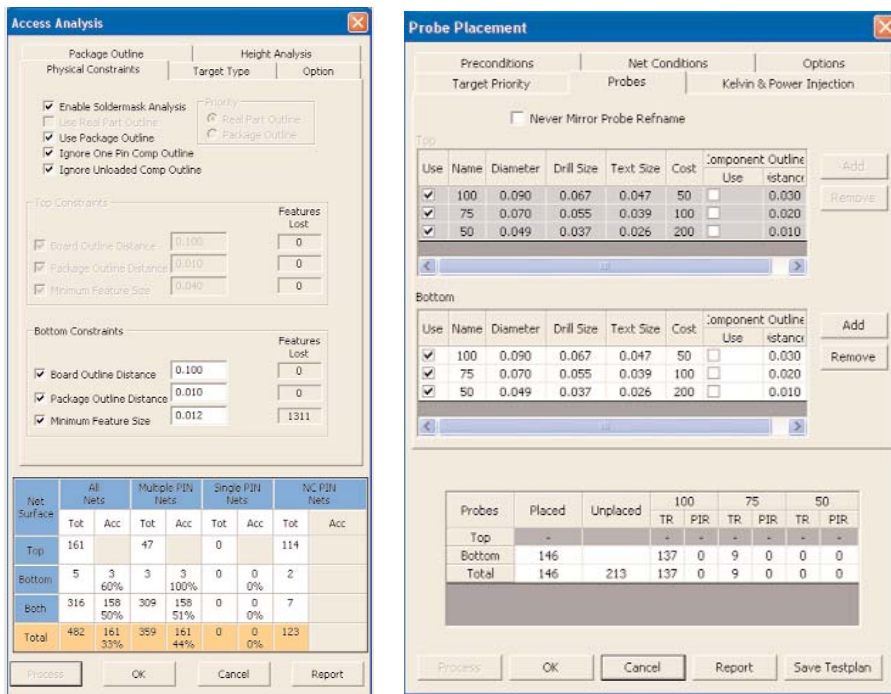


Figure 1: Shows how easy it is to define the requirements for physical DFT and obtain fast results on the accessibility of your PCB.

## Major product benefits:

- Advanced, accurate and fast DFT analysis for electrical test equipment
- Reduce duplicate tasks in a single test and inspection environment
- Ensure product quality goals are met through accurate test coverage
- Support rapid Engineering Change Order (ECO) implementation
- Accept major CAD vendor data
- Flexible equipment vendor selection
- Create programs for ICT, BST, AXI, AOI and FPT machines from a single source

## Introduction

In order to create production ready fixtures and programs Test engineers are required to perform data preparation, access and testability analysis and program generation for a wide variety of test inspection machines. CAMCAD Test Suite provides all the necessary solutions in a single suite to accomplish these tasks. From CAD readers to BOM importers to data correction to probe placement to input list generation, reporting and fixture generation information, CAMCAD Test Suite is the complete solution.

CAMCAD Test Suite eliminates the errors, redundancies and inconsistencies that occur when using the vendor supplied CAD preparation tools for each test and inspection machine. It provides a single environment where all data preparation and test analysis can be performed while supporting a broad spectrum of vendors who provide electrical test, optical and x-ray inspection machines. CAMCAD Test Suite is a key component of the CAMCAD Manufacturing flow. This flow is the process of taking CAD data, Gerber data and Bill of Materials files to create a single, intelligent, manufacturing ready data set that can drive not only test and inspection equipment but all aspects of PCB manufacturing.

The data set that is generated from CAMCAD Test Suite can be used to improve repair and debug times by quickly locating any component or probe on the printed circuit board (PCB). It can also be used to determine potential visual obscurities that may cause issues with inspection equipment. Whether generating testability feedback for layout or placing probes for electrical test equipment, CAMCAD Test Suite accelerates the analysis to save time and money on each PCB.

## Fast and Accurate Design for Test

Complete soldermask analysis is critical for accurate testability analysis and probe placement. CAMCAD Test Suite is the only solution that can use the intelligent CAD data in combination with the Gerber soldermask data as a basis for its DFT analysis. By using this data, the actual exposed metal area is accurately calculated on each PCB to ensure the correct results are generated. For complex regions CAMCAD Test Suite digitizes the area to accurately calculate the exposed metal. Inferior solutions estimate this area as a rectangle, either over or under-estimating the true probeable area in an effort to cut the analysis time. CAMCAD Test Suite gives designers the best of both worlds: fast execution time and accurate analysis results.

CAMCAD Test Suite supports both flying probe and in-circuit test fixture methods for access analysis. Different types of target - surface mount, through-hole, test pad, via, connector - can be prioritized to achieve the desired probe solution.

Building on its significant data preparation capabilities while adding complete access analysis and probe placement

reporting, CAMCAD Test Suite provides the tools to get the job done right the first time. It supports In-circuit Test (ICT), Boundary Scan (BST), Automatic X-Ray (AXI), Automatic Optical (AOI) and Flying Probe (FPT) test and inspection systems.

## Features of CAMCAD Test Suite

- Easy to use, intuitive graphical user interface
- Complete analysis of both padstack soldermask and area soldermask data
- Configurable body violation tests
- Programmable Kelvin allocation for resistors, capacitors and inductors
- Configurable board edge proximity violation test
- Supports all industry-leading test and inspection systems
- Cross-link between layout and schematic views
- Full reporting of access analysis, probe placement, board complexity and others
- All the necessary data to improve program and fixture creation, repair and debug activities broad complexity and other essential information

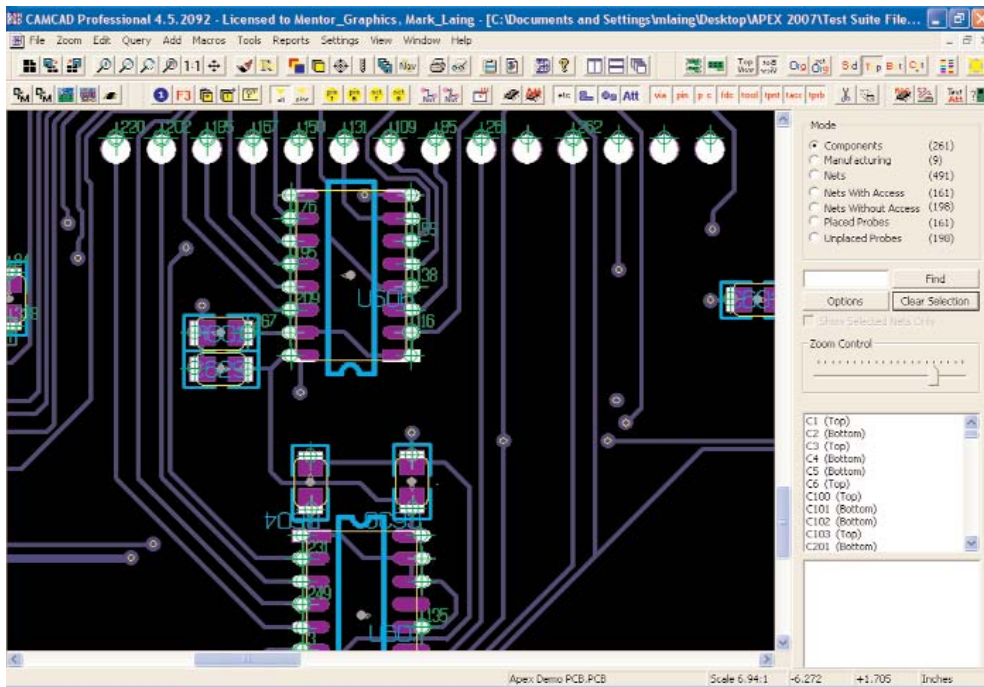


Figure 2: Shows automatic probe offsets. On surface mount components the probes are centered in the exposed metal region whereas on the PTH pins along the top they have been positioned in the annular ring.

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