

CATS SmartMRC

Fast and comprehensive mask rule check

Overview

CATS™ SmartMRC offers industry's highest performance solution for mask rule check (MRC) and pattern matching. Combined with a comprehensive set of checks SmartMRC significantly improves data verification efficiency for the most complex designs at advanced technology nodes.

Accurate and Exhaustive Verification Required to Meet Mask Quality and Cost Targets

Faster time to market and cost effective mask manufacturing requires thorough and accurate verification of data prior to committing masks to fabrication. The number checks and the overall size of data over which these checks are made has increased exponentially at advanced technology nodes. To accomplish data verification in a timely manner to meet manufacturing turn-around time, a fast MRC solution is needed.

CATS SmartMRC Delivers:

Unmatched Verification performance

Supported by scalable distributed processing (DP) architecture and industry's fastest MRC engine SmartMRC delivers the highest throughput. It is now possible to process hundreds of GBytes of data in a few hours using modern compute clusters. This enables early stage MRC at fabs and final stage MRC at mask shops (Figure 1).

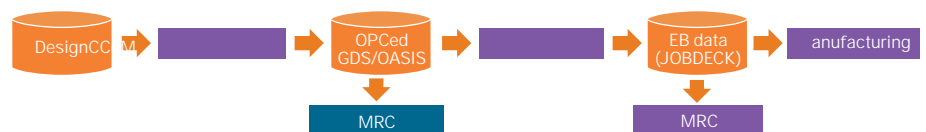


Figure 1: Early stage MRC for fabs, final stage MRC for mask shops

Comprehensive set of rule checks

SmartMRC offers a comprehensive set of checks and a flexible command language which enables users to quickly develop flows to identify errors and marginalities that are likely to have adverse effects on mask manufacturing. Figure 2 illustrates some of the checks which can be performed.

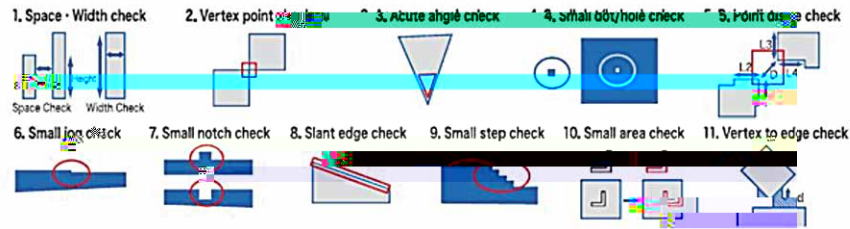


Figure 2: SmartMRC functions

In addition, SmartMRC enables users to develop flows for the following applications in Figure 3:

