

ABSTRACT

DESIGN BASED DEVICE RISK ASSESSMENT

The present invention includes defining a multiple patterns of interest utilizing design data of the device; generating a design based classification database, the DBC database including design data associated with each of the POIs; receiving one or more inspection results; comparing the inspection results to each of the plurality of POIs in order to identify an occurrence of at least one of the POIs in the inspection results; determining yield impact of each POI utilizing process yield data; monitoring a frequency of occurrence of each of the POIs and the criticality of the POIs in order to identify process excursions of the device; and determining a device risk level by calculating a normalized polygon frequency for the device utilizing a frequency of occurrence for each of the critical polygons and a criticality for each of the critical polygons, the critical polygons defined utilizing design data of the device.

FIG. 1A