

## EMBEDDED PASSIVE ANALYSIS

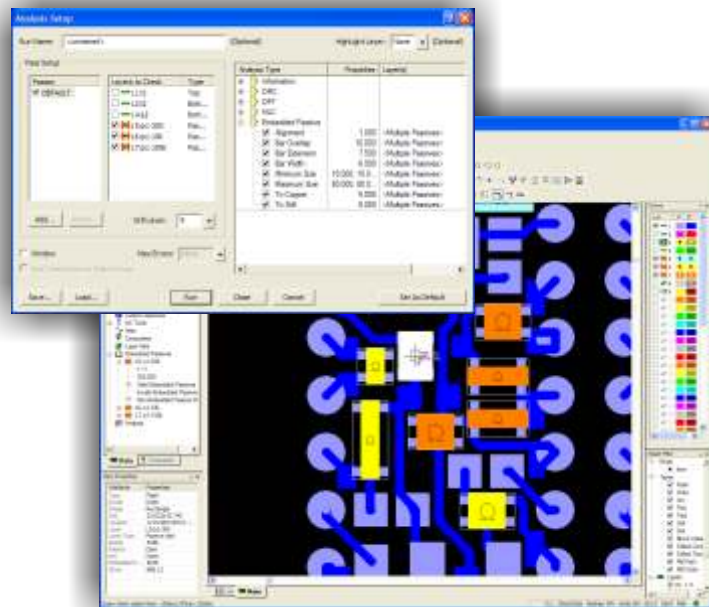
Have you considered using Embedded Passive Technology within your product design environment, but struggled with the current lack of features offered by your design tool provider?

Embedded passives are not new to the EDA industry; however their use continues to be somewhat limited due to a lack of software tools. WISE Software is proud to be the first software tool provider to offer Design for Manufacture Analysis capabilities specific to Embedded Passive Technology. Regardless of whether you are a designer or a manufacturer, GerbTool's Embedded Passive Analysis module can help you validate your data prior to production, and thus help to eliminate costly revision spins and scrap boards due to component failures.

What can the Embedded Passive Analysis module do for you? By using GerbTool's optional Embedded Passive Analysis module you are treated to support of both *additive* (screen print) and *subtractive* (etched) passive resistor materials. Within each of these core material environments, GerbTool allows for intelligent tagging of multiple material layers, which you can subsequently link to your corresponding conductive layers. After you assign your Ohms Per Square for each passive-to-conductive layer set, GerbTool's automated features kick-in and identify all the passive devices within your design. Once they are identified, you can interactively query any passive device and see its calculated resistance value based upon the area of the passive and the conductive termination pads it is paired with. There is no need to worry about whether your passive shapes were drawn or flashed, as GerbTool will take care of any conversion for you.

Reports and queries are but a small part of what the Embedded Passive Analysis module can do. The real benefits are in the DfM analysis itself. Here you can perform a variety of checks, either individually or grouped together with other DRC/DfM checks. As a baseline, GerbTool will look for proper alignment of all passive devices with respects to their conductive termination pads. If a misalignment is present, GerbTool can automatically correct this problem and center the passive device on the termination pads accordingly. Beyond alignment, you can perform more advanced checks to insure that each passive device has the proper amount of overlap with its termination pads, that the termination pads are wide enough to carry the passive device, the termination pads extend beyond the passive device enough to allow for alignment tolerances during production, and more. Of course, these checks only address additive material. Similar checks are available for subtractive materials as well! (See reverse side for figures detailing specific checks performed by the Embedded Passive Analysis module.) All of the analysis features are rules-driven and can be setup according to material vendor specifications or a particular shop's capabilities – the choice is yours.

Finally, no more guess work when trying to work with Embedded Passive Technology! With GerbTool's Embedded Passive Analysis module, you can bridge to gap between your design and manufacturing environments, and rest assured that your discrete embedded passive resistors can be produced.

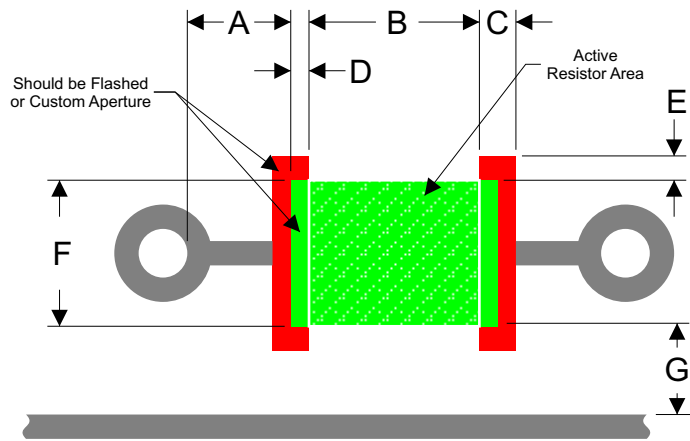


### Highlights:

- Intelligent support for both Additive and Subtractive discrete resistor materials.
- Automated Embedded Passive identification process.
- Built-in reporting of passive locations, values, and device names.
- Real-time resistor value calculations during query and modification.
- Robust rules-driven DfM analysis features consisting of: Alignment, Termination Overlap, Termination Extension, Termination Width, Min. Passive Size, Max. Passive Size, Passive-to-Copper, and Drill-to-Passive.
- Automated etch compensation for Subtractive processing.

Contact us at 800-786-5800 or visit us on the Web at <http://www.wssi.com...>

## ADDITIVE

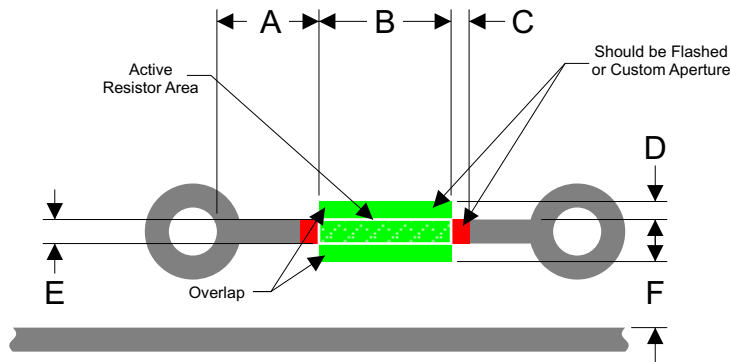


■ = Terminator  
■ = Passive

### Analysis Key

A	= Drill-to-Passive
B/min	= EP Size
B/max	= EP Size
C	= Termination Width
D	= Overlap
E	= Extension Distance
F/min	= EP Size
F/max	= EP Size
G	= Passive-to-Copper

## SUBTRACTIVE



■ = Terminator\*  
■ = Passive

### Analysis Key

A	= Drill-to-Passive
B/min	= EP Size
B/max	= EP Size
C	= Termination Width
D	= Overlap
E/min	= EP Size
E/max	= EP Size
F	= Passive-to-Copper

\* - Terminator should still be a "flashed" pad so as to provide a viable end-point for netlisting.