UcamX
Secure Etch Compensation
Secure Etch Compensation

- The workings of an etchant and the way it affects the etched copper image is a complicated matter.

- A second finding is that the geometry of copper shapes influences the way the etchant will shape the final copper.

- Secure Etch takes this principle as its starting point and is designed to apply different etch factors to the different geometrical shapes in the data.

- The geometrical shapes on a board are divided into 4 categories:
  - Pads
  - Tracks
  - SMDs
  - Regions (copper areas like planes, shielding areas,...)
Secure Etch Compensation

- So Secure Etch Compensation
  - Applies an etch compensation to a feature, based on the feature type.
  - Allows to impose discrete clearance values between different feature type combinations.
  - Secure Etch ensures that the compensation values are applied to the maximum wherever possible.
  - To respect the required clearance, however, it may sacrifice some of the compensation locally.

- SEC is fit for intelligently compensating all regular PCB products
Secure Etch Compensation

- **Features**
  - Different compensation values for different feature types
  - Full compensation applied wherever possible, local correction to ensure minimal clearance – all done fully automatically
  - Different clearance values for different feature type combinations
  - Micron unit of measurement input
  - Easy-to-use interface and uncomplicated setup
  - Stores and retrieves different Secure Etch Compensation setups
  - Original data saved for on-screen reference
Secure Etch Compensation

- **Benefits**
  - Discrete compensation for SMDs to pass end-customer measuring procedures (feature measured at the top of the copper)
  - Track width compensation to achieve nominal values on impedance tracks or coils – no scrap due to impedance fail
  - Ability to leave uncritical large copper areas uncompensated
  - Ability to “trim” copper regions creates more space for compensating nearby tracks or pads
  - Ability to exclude e.g. Texts or logos from compensation
  - Dedicated undo function
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