

Polar Copy

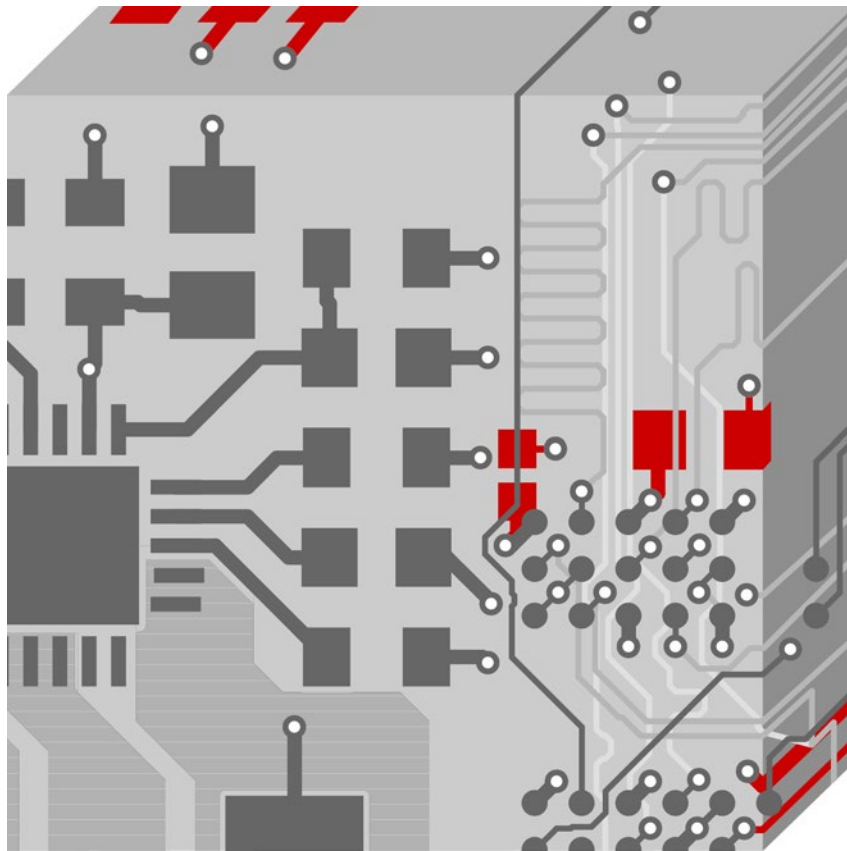


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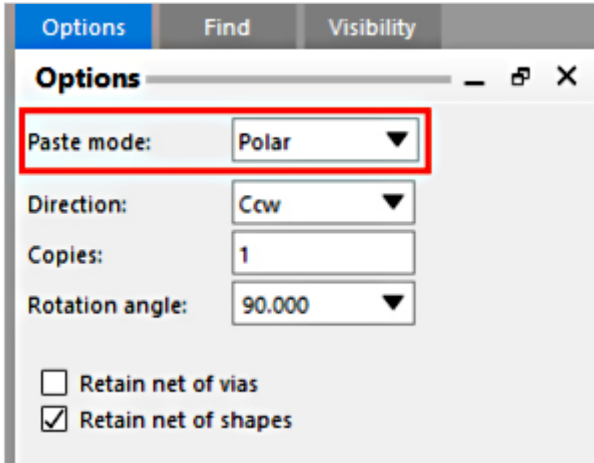
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1 Introduction

Polar Copy is a part of the copy command. To use Polar Copy, set the Polar mode in the Options window.



The polar command lets you define a pick point and a radius around it to place the copied elements.

Radius is the distance from the origin to the pick point, while angle, is the angle starting at the positive x axis. Polar coordinates make it easier, for example, to add a fixed radius arc to the drawing and symbols at odd angles.

You cannot use a polar coordinate for entering the first point in a command; polar coordinates must have an origin point, which must first be chosen or typed in. You can enter the polar command with the values for radius and angle in the command line or enter the command without values, in which case it prompts you for the radius and angle.

2 Options Tab for the Polar Copy Command

Direction	Specifies a direction for the copied elements: Cww (counter clockwise) or Cw (clockwise).
Copies	Specifies how many copies of the element the tool makes. When set to 1 (the default), the tool places the element(s) in the cursor buffer to be placed dynamically.
Angle	Specifies the incremental angle to be used when placing the copies around the origin. Enter a number between 0 and 360 or choose a number from the pop-up. The tool allows accuracy for up to three decimal places.
Copy origin	Identifies the point on the element and each copy where the radius from the polar origin should intersect. The choices for this field are described previously in the table.
Retain Net of Vias	Specifies whether the net of the chosen via should be copied to the corresponding new via.

3 Procedures

3.1 Copying Elements in Rectangular Patterns

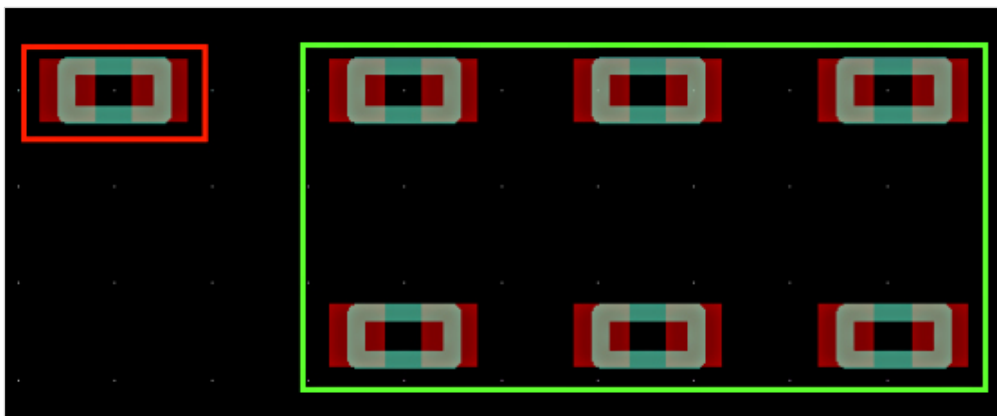
1. Hover your cursor over an element. The tool highlights the element and a datatip identifies its name.
2. Right click and choose Copy from the pop-up menu.
3. Right-click and choose Options from the pop-up menu, or in the Options tab, choose Rectangular and complete the other entries.
4. If you entered a value in the Angle field:
 - Choose Rotate from the pop-up menu.
 - Rotate the elements to the angle you need and click to lock them in that position.
5. Choose the new location for the elements. Each mouse click pastes another copy of the elements in your design.

Options

The screenshot shows the 'Options' dialog box with the following settings:

- Paste mode:** Rectangular
- Qty:** X: 3, Y: 2
- Spacing:** X: 2.5400, Y: 2.5400
- Order:** X: Right, Y: Down
- Rotation angle:** 45.000
- Retain net of vias
- Retain net of shapes

Result

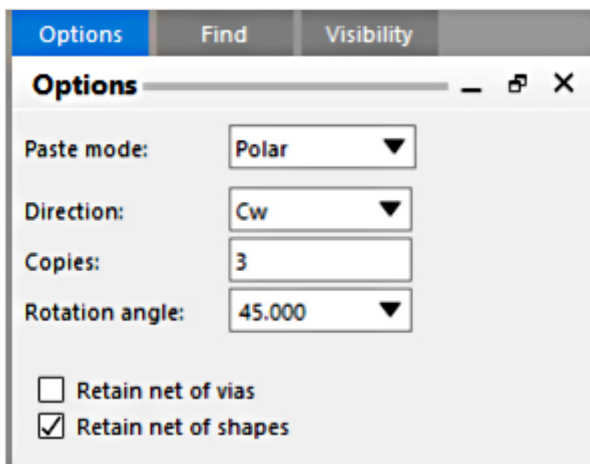


Source component marked in red. Copies marked in green.

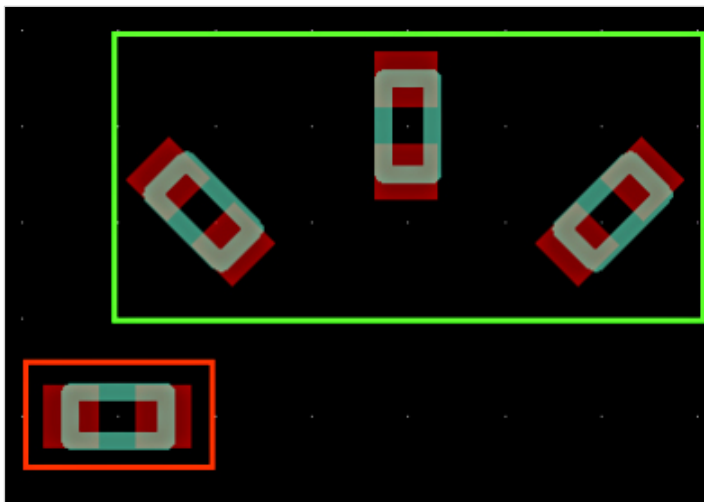
3.2 Copying Elements in Radial Patterns

1. Hover your cursor over an element. The tool highlights the element and a datatip identifies its name.
2. Right click and choose Copy from the pop-up menu.
3. Left click to specify the polar origin for the copied element.
4. Choose the new location for the element. Each left click pastes another copy of the element on your design. The tool creates a pattern of copies around the point of origin.
5. Choose Done from the pop-up menu.

Options



Result



Source component marked in red. Copies marked in green.
Position of the pattern according to polar origin and radius.

3.3 Mirroring Elements on the Same Subclass

1. Hover your cursor over an element. The tool highlights the element and a datatip identifies its name.
2. Right click and choose Copy from the pop-up menu.
3. Right-click and choose Options from the pop-up menu, or in the Options tab, choose Rectangular and complete the other entries.
4. Choose the element(s) to be copied. For a group of elements, window select an area to choose a group.
5. Right click and choose Mirror Geometry from the pop-up menu that appears.
6. Move the cursor away from the original element. The original element remains in place and a mirror image of the original, around the Y-coordinate of the copy origin, moves with the cursor.
7. Move the mirrored copy to its new position, and click to place it there.
8. From the pop-up menu, choose Done.