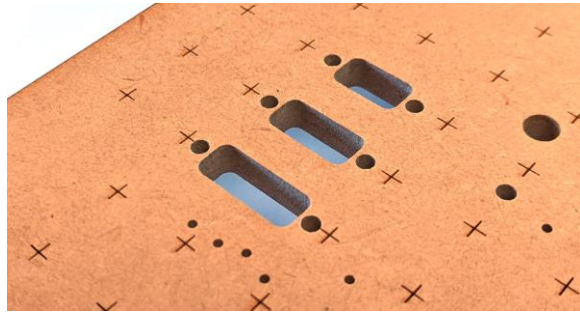## Introduction

The Merifix drilling service offers the ability to drill general purpose mounting holes, and to make slots and cutouts in the probe plate.

General purpose holes are useful for custom board supports, or mounting test equipment under the probe plate.

Cutouts in the probe plate are great for mounting custom connectors that mate with the board under test; for creating clearance for tall components on the bottom side of the board under test; or for mounting things like buttons or displays on the probe plate.

How to Specify Holes

In your CSV (comma separated values) file that lists your test point post locations, use the `M` item to specify the location of a general purpose mounting hole.

We will drill a 0.125" (3.2mm) hole on the probe plate. This is suitable as clearance for #4 or M3 machine screws.

If you need a larger hole it is straightforward to drill using this hole as a pilot.

How to Specify Cutouts

In your CSV (comma separated values) file that lists your test point post locations, use the `V` item to specify the location of the vertex (corner) of a cutout.

Specify the complete cutout by using multiple `V` items, one for each vertex, in order.

We will cut a slot in the probe plate from each vertex to the next (and back to the start) using a 0.125" (3.2mm) end mill.

If you specify two vertices you will get a straight slot. If you specify three or more vertices you will get a cutout comprising the closed polygon described by the vertices. Make sure you list the vertices in order, around the edge of the cutout.

Note that since we cut using a 0.125" (3.2mm) tool, the edge of the cutout will be 0.063" (1.6mm) beyond the specified coordinates.

All the vertices in a single cutout are grouped together using their reference (the first column in the CSV file). Make sure to give all the vertices in a cutout exactly the same reference.

If you need multiple cutouts, give each one a different reference. You can specify an arbitrary number of cutouts, and each one can have an arbitrary number of vertices.

Checkplots

The checkplots show general purpose mounting holes as grey circles 0.125" in diameter on the probe plate.

Slots and cutouts are shown using purple lines 0.125" wide that show the toolpath. If the path encloses an area (as it usually will for a cutout) this part will be missing when you receive the probe plate.
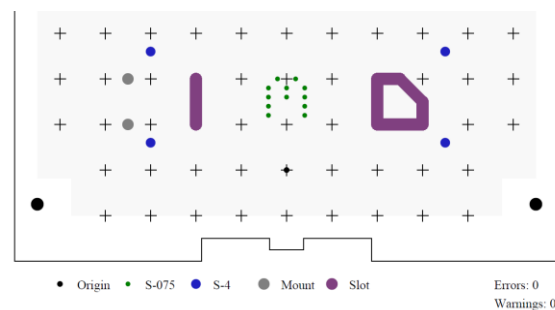
If the shape of your cutout on the checkplots looks surprising, check that you have listed the vertices in the correct order.

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