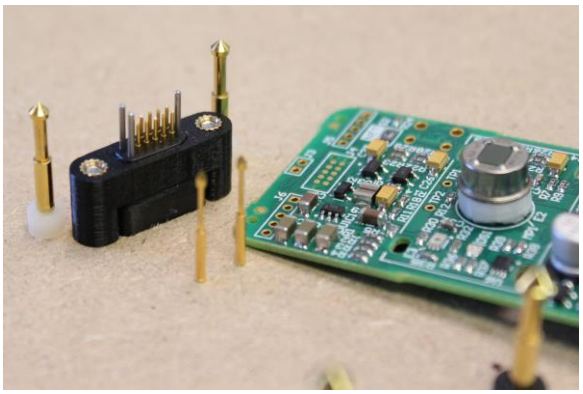
Merifix Application Note - Tag-Mount

Introduction

Tag-Mount brackets allow Tag-Connect probes to be mounted to a Merifix test fixture.



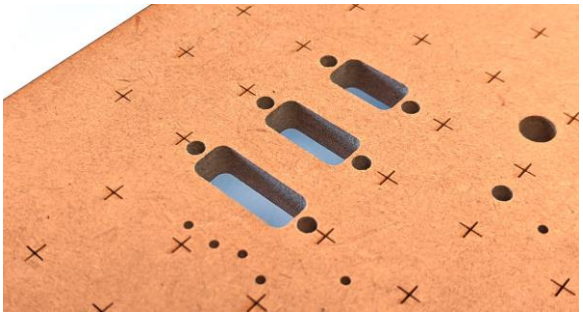
The Tag-Connect footprint includes test pads on a pitch that is smaller than regular S-075 test probes can accommodate. The Tag-Mount allows a genuine Tag-Connect probe to be used to reliably probe these pads.

If your board includes a Tag-Connect compatible footprint on the bottom side, and you wish to connect to it during test, use a Tag-Mount to fit a Tag-Connect cable to the probe plate.

Tag-Connect cables have a Tag-Connect probe on one end and typically have a rectangular connector on the other, suited to a specific use. Tag-Mount is compatible with all Tag-Connect cables of the "No-Legs" variety regardless of the wiring or terminating connector.

Drilling Service

The Merifix drilling service offers the ability to machine the correct size holes and slot in the probe plate by simply specifying the location and orientation of the Tag-Connect footprint.

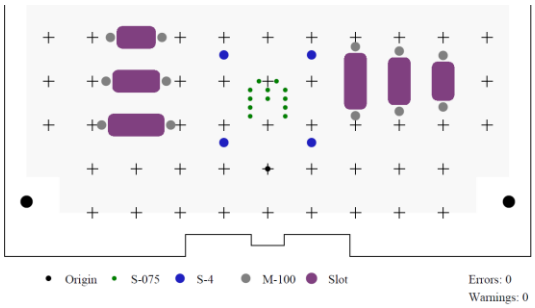


In your CSV (comma separated values) file that lists your test point post locations, use the `TC2030V` , `TC2030H` , `TC2050V` , `TC2050H` `TC2070V` or `TC2070H` item to specify the exact center of the Tag-Connect footprint.

Choose the item that corresponds to the size of Tag-Connect probe you wish to use. The `V` suffix indicates that the probe is aligned with the Y axis; the `H` suffix indicates that the probe is aligned with the X axis.

You can use multiple Tag-Connect footprints on a single fixture if required.

The Drillbot will generate two holes for securing the mount, and a cutout for the Tag-Connect probe to pass through the probe plate.



Use the downloadable checkplots to make sure the location and orientation is correct. Slots and cutouts are shown as purple lines. Mounting holes are shown in grey.

Assembly

Your probe plate should have a cutout and mounting holes for the Tag-Mount, in addition to holes for regular test and locating probes.

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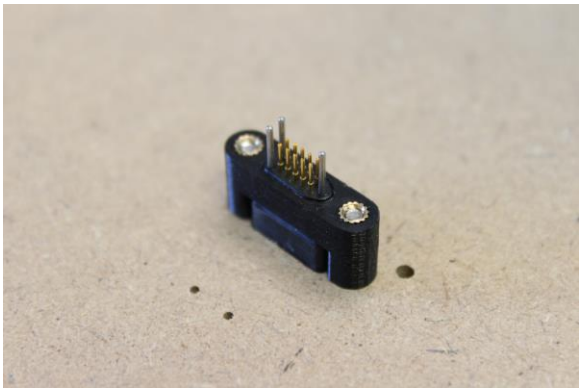
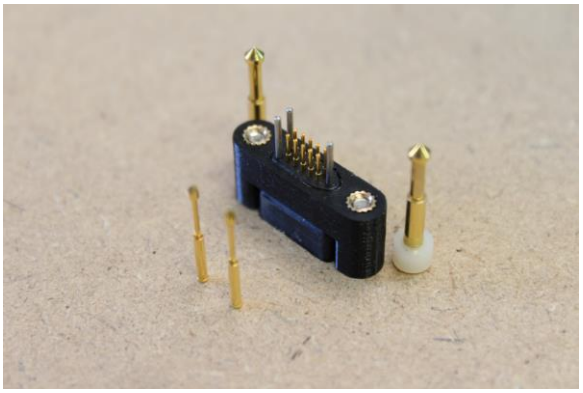
Fit the Tag-Mount to the top side of the probe plate using the supplied screws. Ensure the mount is oriented correctly - the opening for the Tag-Connect probe has one flat end and one pointed end, matching the probe.

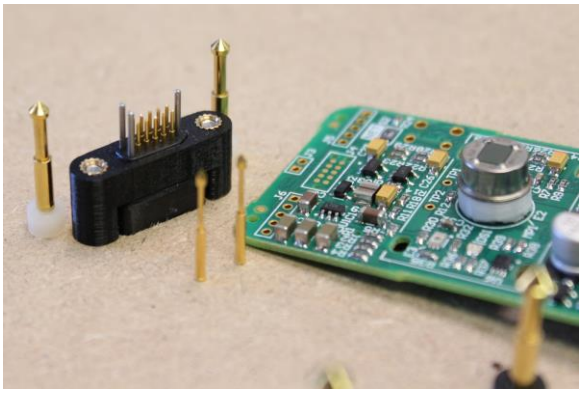
Fit the Tag-Connect probe from the underside of the probe plate. The hole in the probe plate is a clearance fit and the opening in the Tag-Mount is a snug slip fit.



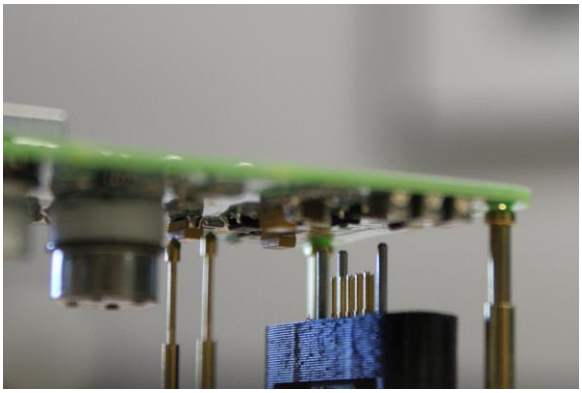
Fit the remaining test and locating probes to the probe plate in the normal way.



Assemble the remainder of the fixture and test using a sample board.



Check the mechanical operation and alignment. At this stage the Tag-Connect probe is just pressed in to the Tag-Mount so it may move down as the fixture is closed, but it will be possible to check the positioning, orientation and smooth operation.



Once everything is satisfactory, secure the Tag-Connect probe into the Tag-Mount bracket using cyanoacrylate adhesive. Ensure that the probe is fully inserted into the mount, so that the top surface of the Tag-Connect probe body aligns with the top of the Tag-Mount.

You may wish to have the fixture closed with a test board in place to ensure that everything is properly aligned as the adhesive cures. In this case you will need to hold the Tag-Connect probe pressed into the mount against the spring force of the test probes.

You can now connect the other end of the Tag-Connect cable to the appropriate programmer, debugger or other test equipment, and wire up the remainder of the fixture.