

Smiths Interconnect's S-00 Probe Use

Smiths S-00 probes are uniquely designed to incorporate the robustness of a .050" (1.27mm) pitch probe and receptacle, but can be used at a .039" (1mm) pitch.

The probe is often mistaken for a double-ended probe, but they're not. The barrel is stepped resulting in a receptacle with the same diameter as the probe.

S-00 Probes and R-00 Receptacles are shown in our Standard Board Test Probe section of our website, shown in the .039" (1mm) pitch section on PDF pages 4 and 7.

TO ASSEMBLE PROBE TO RECEPTACLE:

To assemble the probe and receptacle, the .135" long section of the probe barrel is pressed into the top of the receptacle.

Just place the probe barrel in the receptacle, and then with a plastic rod or (anything not metallic that will scrape plating from the probe tip) compress the probe plunger all the way and press the probe until you feel it engage with a receptacle detent that retains the probe. Continue pressing until you feel that the probe is seated into the receptacle.

R-00 RECEPTACLE:

R-00 receptacles are unique in that they are the same diameter of the probe barrel. The gain is the larger and stronger barrels and plungers. The downsides to this system is that:

- 1) S-00 Probes are not like standard probes and receptacles whereby the receptacle is flush with the top of the barrel. This typically requires a second plate with receptacles installed flush mounted under the probe plate. This makes the fixture more complex and ultimately, more expensive.
- 2) The receptacle can be terminated one of two ways: Traditional crimp tool where customers can crimp a wire directly to the receptacle, or, customers can use the FP-Plug for service-removable termination where desired (also shown on the receptacle page). Note that Smiths offers both options prewired. Also note that using the FP-Plug should be insulated from neighboring probes using plastic sleeve (provided with pre-wired FP-Plug option), or a heat shrink sleeve applied by the customer.



Smiths S-00 Probes (cont.)

Smiths S-00 Probes are the most robust Board Test option available for use on .039" (1mm) pitch. This increased robustness however, does come with the additional cost of more complex fixturing and possibly more components also increasing cost to test.

Naturally customers should weigh the need for robustness against additional costs associated with S-00 Probe use.

Other relative white papers that will help customers:

- Receptacle Install
- Step Files and Stock Check

Regards

Smiths Technical Team

