Introduction

This Test Interface is a hand held test clip, designed to probe simultaneously the leads of an assembled IC. It is terminated with FOUR 25 way male "D" type connectors and will make temporary contact with the leads of the device when used as described below:

Operation

Note: It is important to ensure that the test interface is positioned correctly on the IC **BEFORE** any pressure is applied to the interface. Failure to do so could result in damaging the device/test-clip and/or shorting the leads of the IC with the microprobes.

Step 1

Position the test interface onto the body of the device to be tested, noting the orientation of pin 1 (shown in RED on the interface and the marking on the corner of the IC). There should be little resistance when the base of the interface is lowered onto the IC and at this point the microprobes **must not be** making any contact with the device. Ensure that the interface is sitting squarely on the device and that it is perpendicular to the PCB.

Step 2

Only when the test interface is positioned correctly on the device as described in Step 1 can further pressure be applied to the interface as follows:
Push the handle further until the interface reaches its maximum travel. This action will lower the high-performance microprobes onto the leads of the device and make electrical contact. When tests are complete remove the test interface from the PCB.

Features

- achieves the best combination of reliability, repeatability, and user-friendless;
- enhanced serviceability due to the modular design and quick change harnessing;
- high contact pressure at probe tip, for repeatable and reliable contact;
- high reliability and long life interchangeable microprobes;
- sweeping action gold plated contacts, for reliable contact and low ohmic resistance of interconnections;
- high current rating (for single channel, in ambient air with 70°F [20°C]) : 1.5A
- impact, solvent and temperature resistant plastics, with low friction;
- wide range of operating temperatures (commercial): [0°C to +70°C]
- clear markings on the body, indicating Pin 1 of IC being tested, to prevent probing the wrong way round;
- packaged in a hard wearing, high resistance to damage Polypropylene case with foam insets, the Test Interface can whitstanding high impact in transit.
- case can be used for safe storage when the Test Interface is not in use, and subsequent transport.
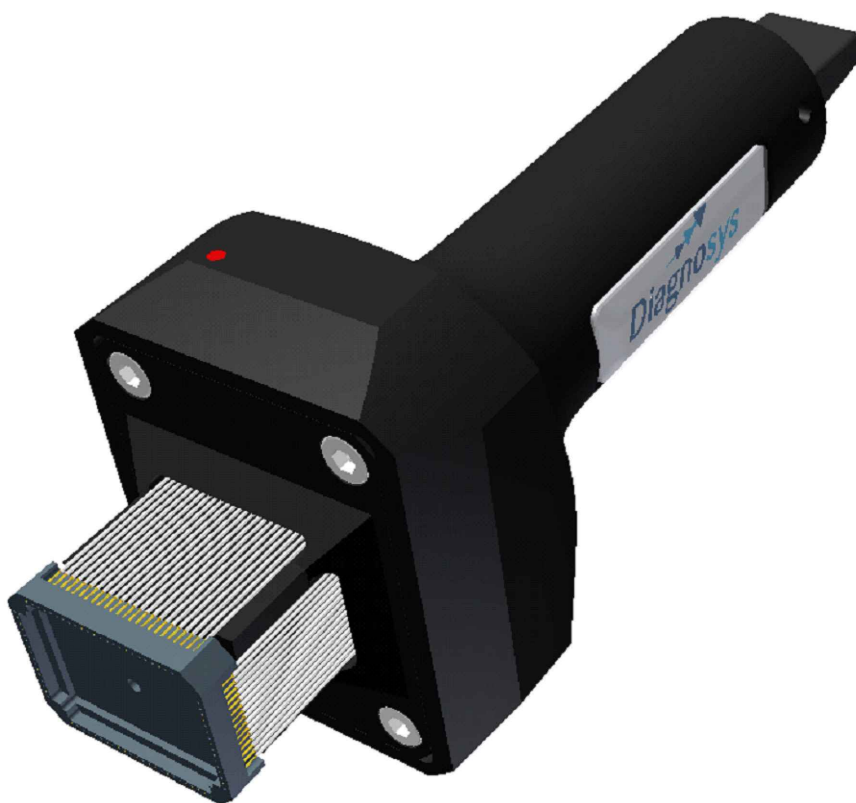
Pin Connections

Pin tables for this clip are available electronically:
- for Diagnosys employee's goto the R&D section on the Diagnosys intranet.
- for customers please contact Diagnosys sales.
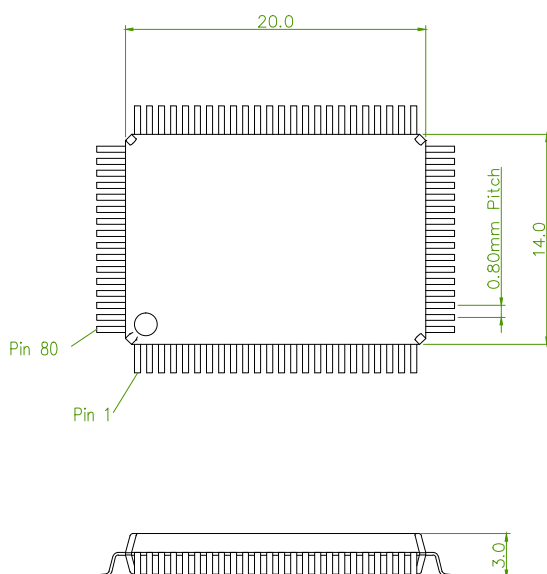
Characteristics

- It will accommodate a 80 Pin QFP, 0.8mm Pitch, Body Size LxW: 20mm x 14mm;
- Maximum number of interconnections (channels): 80
- Current rating, with all contacts loaded (maximum continuous current, non inductive): 0.5A /channel;
- Contact resistance (average): 80 mΩ /channel;
- Insulation resistance: 5MΩ Min.
- Volume resistivity of plastic parts: $10^{15}\Omega$-cm @ 50%RH.
- Fatigue life of probes: Min. 1,000,000 cycles at normal working distance;
- Working distance (normal stroke): 1.3mm;
- Microprobe force at point of contact (normal stroke): 0.3N

Maintenance

The Test Interface Head is maintenance free. The microprobes are self-cleaning. Immersion in water or contact between microprobes and any liquids should be avoided, as this could severely reduce the working life of microprobes.

Contamination is the primary cause of probe contact problems. This is generally caused by flux left as a residue on circuit boards. Other probe contaminants such as dust, fluff, oil and grime can also cause problems in other areas. Light brushing of the tips of the probes with nylon, bristle or soft metal brushes will dislodge most contaminants.