

Introduction

This Test Interface is a hand held test clip, designed to probe simultaneously the leads of an assembled IC. It is terminated with Seven 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.

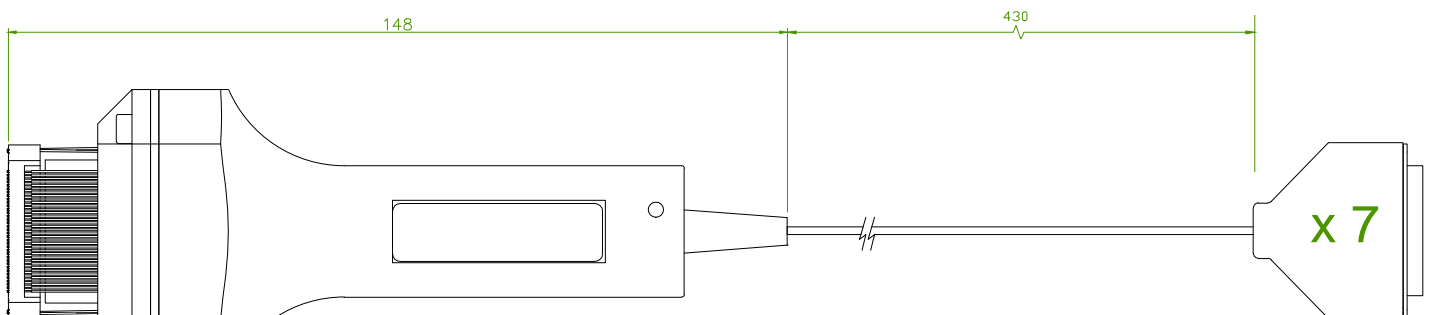
Step 2

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

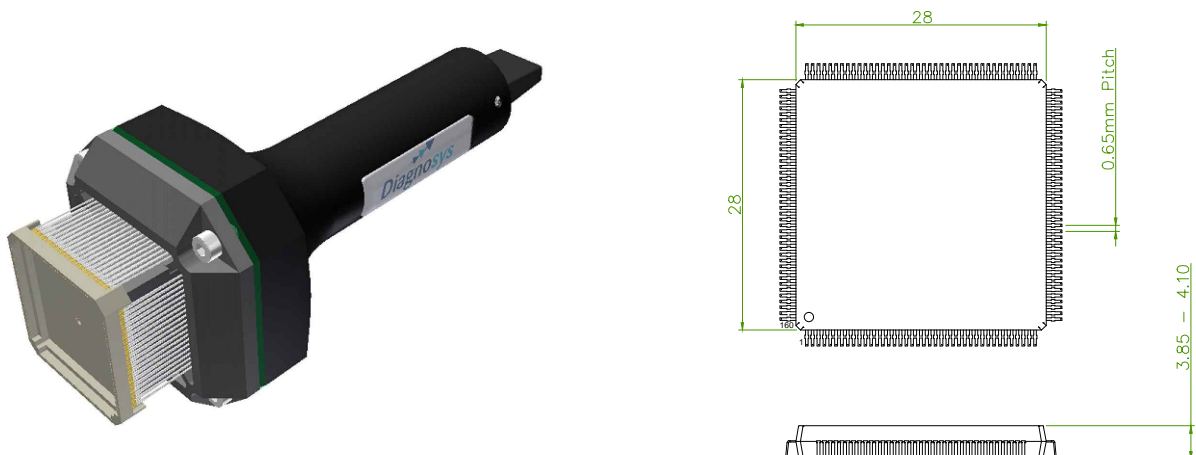
- achieves the best combination of reliability, repeatability, and user-friendliness;
- enhanced serviceability due to the modular design and quick change harnessing;
- high contact pressure at probe tip, for repeatable and reliable contact;
- high reliability and long life interchangeable microprobes;
- 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 withstand high impact in transit.
- case can be used for safe storage when the Test Interface is not in use, and subsequent transport.



NOTES

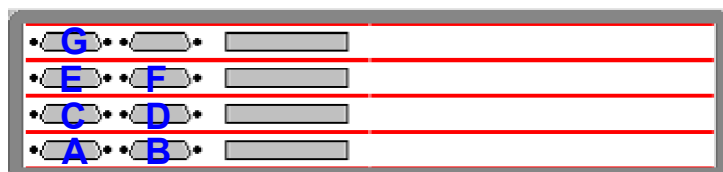
- 1) All dimensions in mm, unless otherwise specified.
- 2) Pin 1 of IC marked in red on probe body.

JEDEC MS-022 variations DD-1, DD-2



Connections Tables

Each of the seven D-Type connectors are labelled (A to G). Connect each connector of the clip to the driver card as shown in the table below.



Pin : 1 ->> Channel : 79	Pin : 51 ->> Channel : 151	Pin : 101 ->> Channel : 58
Pin : 2 ->> Channel : 75	Pin : 52 ->> Channel : 125	Pin : 102 ->> Channel : 25
Pin : 3 ->> Channel : 23	Pin : 53 ->> Channel : 150	Pin : 103 ->> Channel : 52
Pin : 4 ->> Channel : 102	Pin : 54 ->> Channel : 129	Pin : 104 ->> Channel : 29
Pin : 5 ->> Channel : 19	Pin : 55 ->> Channel : 155	Pin : 105 ->> Channel : 56
Pin : 6 ->> Channel : 103	Pin : 56 ->> Channel : 128	Pin : 106 ->> Channel : 33
Pin : 7 ->> Channel : 16	Pin : 57 ->> Channel : 156	Pin : 107 ->> Channel : 57
Pin : 8 ->> Channel : 99	Pin : 58 ->> Channel : 124	Pin : 108 ->> Channel : 32
Pin : 9 ->> Channel : 15	Pin : 59 ->> Channel : 146	Pin : 109 ->> Channel : 53
Pin : 10 ->> Channel : 97	Pin : 60 ->> Channel : 130	Pin : 110 ->> Channel : 28
Pin : 11 ->> Channel : 14	Pin : 61 ->> Channel : 168	Pin : 111 ->> Channel : 49
Pin : 12 ->> Channel : 101	Pin : 62 ->> Channel : 133	Pin : 112 ->> Channel : 34
Pin : 13 ->> Channel : 24	Pin : 63 ->> Channel : 158	Pin : 113 ->> Channel : 54
Pin : 14 ->> Channel : 105	Pin : 64 ->> Channel : 139	Pin : 114 ->> Channel : 37
Pin : 15 ->> Channel : 2	Pin : 65 ->> Channel : 159	Pin : 115 ->> Channel : 55
Pin : 16 ->> Channel : 104	Pin : 66 ->> Channel : 142	Pin : 116 ->> Channel : 42
Pin : 17 ->> Channel : 12	Pin : 67 ->> Channel : 160	Pin : 117 ->> Channel : 51
Pin : 18 ->> Channel : 100	Pin : 68 ->> Channel : 140	Pin : 118 ->> Channel : 46
Pin : 19 ->> Channel : 11	Pin : 69 ->> Channel : 163	Pin : 119 ->> Channel : 82
Pin : 20 ->> Channel : 106	Pin : 70 ->> Channel : 137	Pin : 120 ->> Channel : 76
Pin : 21 ->> Channel : 152	Pin : 71 ->> Channel : 167	Pin : 121 ->> Channel : 81
Pin : 22 ->> Channel : 109	Pin : 72 ->> Channel : 141	Pin : 122 ->> Channel : 80
Pin : 23 ->> Channel : 148	Pin : 73 ->> Channel : 72	Pin : 123 ->> Channel : 59
Pin : 24 ->> Channel : 114	Pin : 74 ->> Channel : 143	Pin : 124 ->> Channel : 44
Pin : 25 ->> Channel : 154	Pin : 75 ->> Channel : 62	Pin : 125 ->> Channel : 60
Pin : 26 ->> Channel : 118	Pin : 76 ->> Channel : 139	Pin : 126 ->> Channel : 41
Pin : 27 ->> Channel : 157	Pin : 77 ->> Channel : 63	Pin : 127 ->> Channel : 50
Pin : 28 ->> Channel : 116	Pin : 78 ->> Channel : 136	Pin : 128 ->> Channel : 45
Pin : 29 ->> Channel : 162	Pin : 79 ->> Channel : 92	Pin : 129 ->> Channel : 21
Pin : 30 ->> Channel : 113	Pin : 80 ->> Channel : 94	Pin : 130 ->> Channel : 47
Pin : 31 ->> Channel : 166	Pin : 81 ->> Channel : 85	Pin : 131 ->> Channel : 17
Pin : 32 ->> Channel : 117	Pin : 82 ->> Channel : 90	Pin : 132 ->> Channel : 43
Pin : 33 ->> Channel : 164	Pin : 83 ->> Channel : 71	Pin : 133 ->> Channel : 20
Pin : 34 ->> Channel : 119	Pin : 84 ->> Channel : 135	Pin : 134 ->> Channel : 40
Pin : 35 ->> Channel : 161	Pin : 85 ->> Channel : 67	Pin : 135 ->> Channel : 22
Pin : 36 ->> Channel : 115	Pin : 86 ->> Channel : 134	Pin : 136 ->> Channel : 39
Pin : 37 ->> Channel : 165	Pin : 87 ->> Channel : 64	Pin : 137 ->> Channel : 18
Pin : 38 ->> Channel : 112	Pin : 88 ->> Channel : 144	Pin : 138 ->> Channel : 38
Pin : 39 ->> Channel : 91	Pin : 89 ->> Channel : 69	Pin : 139 ->> Channel : 13
Pin : 40 ->> Channel : 95	Pin : 90 ->> Channel : 122	Pin : 140 ->> Channel : 48
Pin : 41 ->> Channel : 89	Pin : 91 ->> Channel : 65	Pin : 141 ->> Channel : 10
Pin : 42 ->> Channel : 93	Pin : 92 ->> Channel : 132	Pin : 142 ->> Channel : 26
Pin : 43 ->> Channel : 153	Pin : 93 ->> Channel : 68	Pin : 143 ->> Channel : 4
Pin : 44 ->> Channel : 120	Pin : 94 ->> Channel : 131	Pin : 144 ->> Channel : 36
Pin : 45 ->> Channel : 149	Pin : 95 ->> Channel : 70	Pin : 145 ->> Channel : 8
Pin : 46 ->> Channel : 110	Pin : 96 ->> Channel : 126	Pin : 146 ->> Channel : 35
Pin : 47 ->> Channel : 145	Pin : 97 ->> Channel : 66	Pin : 147 ->> Channel : 9
Pin : 48 ->> Channel : 111	Pin : 98 ->> Channel : 127	Pin : 148 ->> Channel : 30
Pin : 49 ->> Channel : 147	Pin : 99 ->> Channel : 61	Pin : 149 ->> Channel : 5
Pin : 50 ->> Channel : 121	Pin : 100 ->> Channel : 123	Pin : 150 ->> Channel : 31

Characteristics

- It will accommodate a 160 Pin QFP, 0.65mm Pitch, Body Size LxW: 28mm x 28mm; JEDEC MS-022 variations DD-1, DD-2
- Maximum number of interconnections (channels): 160
- 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: 10¹⁵Ω-cm @ 50%RH.
- Fatigue life of probes: Min. 1,000,000 cycles at normal working distance;
- Working distance (normal stroke): 1.1mm;
- 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.