

**JOULE TECHNOLOGIES, INC
4167 WEST ORLEANS STREET
MCHENRY IL 60050**

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TEST PROBES:

- Use .100 as first choice .075 as second, then .050 probes.
- All probes will be steel tips unless otherwise specified.
- All nets probed from bottom unless absolutely necessary to probe from topside.
- Ensure all probes are at 2/3 travel when board is vacuumed down.
- Keep all probe tips at the same height for the same plane.
- Use the following table to specify probe and socket numbers

	PROBE: PADS	PROBE: LEADS	PROBE: VIAS	SOCKETS
100 MIL	100PRP2553SS	100PRP2534SS	100PRP2551SS	100SDN250W
75 MIL	075PRP2553SS	075PRP2534SS	075PRP2551SS	075SDN250W
50 MIL	050PTP2553SS	050PRP2544SS	050PRP2551SS	50SRB25P8

PROBE PLATE

- Drill all test points and thru holes, used or unused.

MECHANICAL OVERCLAMP and MOLDED GASKETS

- Ensure no board flex.
- Independent vacuum pocket for overclamps
- Ensure top hold down fingers meet bottom pegs.
- Ensure hold down fingers do not damage components.
- All molded gaskets are ESD dissipative

TOOLING PINS

- Two diagonal, three if large board.
- Located in probe plate (not top plate) at all times unless specified.
- Include tooling pin(s) to ensure UUT cannot be loaded backwards.
- Include one spare tooling pin for each one used

STANDOFFS

- Use Delrin pegs that press fit into hole
 - Design to minimize board flex. (board stress analysis if possible)
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- Ensure standoffs do not damage components.

CYCLE COUNTER

- Use standard cycle counter on all fixtures.

WIRING

- Use 26 AWG (28 AWG for Agilent) on all sense line wiring unless otherwise specified
- Wires should be dressed neatly and in such a way as to avoid wire breakage upon opening and closing the fixture.
- Allow enough wire for repairs in case of breakage.
- Use Red for VCC and black for all GND wires
- All wire wraps shall be modified wraps (one turn of insulation and seven turns of wire)
- No more than three wires shall be wrapped on any one probe or personality pin location
- A point-to-point wiring check shall be performed on all sense line wires
- A point-to-point wiring check shall be performed on internally and/or externally add hardware (ex. TestJet mux cards)

GROUND PLANE

- Required on all fixtures (except Agilent 3070's)
- Allow enough space around all sockets and opens express feed thru openings so as not to short against plate.

SHORTING PLATE and PLEXI DUST COVERS

- Include shorting plate of the same dimensions as the UUT
- Include plexi cover of the same dimensions as the UUT
- Include plexi cover for one-up testing on fixtures testing panels

SILKSCREEN

- Silkscreen node numbers on probe plate
- Silkscreen node numbers (or component outline) on top plate

BOARD ORIENTATION

- UUT silkscreen readable unless otherwise specified.
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TEST JET/OPENS XPRESS

- Include one of each size sensor plate for spares.
- Mux board must be securely fastened to inside of fixture with standoffs and screws.
- Ensure limited flex on Opens Express probes.
- Sensor Plate size should be equal to component size. (+/- .015)

ENGINEERING DOCUMENTATION

- Fixture BOM to be included
- Node maps for all GenRad and Teradyne fixtures

MISC

- Small spares kit located inside fixture with minimum of 10 of each style probe and socket.
 - Alum-a-grip handles.
 - On Agilent fixtures, counter bore the funnel plate for visual location of the personality pins
 - Label fixture with UUT number
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