Standard definitions and assumptions
For ATX fixtures

Unless otherwise agreed and set out in writing, the following conditions, standards and assumptions apply to the offer and construction of our fixtures.

ASSUMPTIONS ON THE EXAMINEE

- We assume a PCB with a material thickness of >= 1.5mm FR4 or comparable material
- Our standard needle force, according to which the hold-downs and supports are also placed, is 1.5N (basis for the spacing of the hold-downs and supports)
- The test point size is >=0.8mm
- We assume a voltage <25VAC or <60VDC (supply voltage, test voltage or voltage generated on the test specimen)

PLACING THE HOLD-DOWNS

The standard procedure for our design engineers is to set down the hold-down:

a) Components with a strong tilting or bending (electrolytic capacitors etc.) of more than 1 mm are determined by the designer without specifying fixed clearances around the components - individual consideration.

b) Starting with the safety distance class 1.5 (1.5mm circumferential + basic tolerance of the cover/mechanics), an attempt is made to set sufficient hold-downs. In the case of the cover for two-sided contacting (with centring), this would be at least 1.7 mm distance to the pad and component.

c) If not enough hold-down clamps can be placed in the previous process, hold-down clamps are placed with a safety distance of class 1 (1.0 mm + basic tolerance of the cover), i.e. at least 1.2 mm for double-sided covers, taking into account the adjacent components (stability, height, displacement).

d) If passage c) is also insufficient, the process is repeated with component class 0.5 (0.5mm + basic tolerance of the cover) - at least 0.7mm for double-sided covers. However, this is only permitted on components whose component body does not protrude beyond the pad and only minimal (0.2mm) displacement beyond the pad edge is possible.

STRESS CALCULATION

Unless otherwise defined, we assume a maximum permissible strain value of 800 μm/m for the optional stress analyses.

ESD STANDARDS

(do not apply to fixtures with higher voltages)

- Needle carrier made of EP105 or FR4 (without ESD surface)
- Moving plate made of EP105AS or FR4AS (with ESD surface)
- Hold-down plate made of Plexi with ESD coating
- All milled edges and clearances not antistatically treated
- Hold-down device according to ATX standard (aluminium body with insulating tip)
- ATX LP support made of insulating material
- ATX insertion aids made of stainless steel
- Fixture housing with dissipative colouring or ESD plate material

Standard definitions and assumptions
For ATX fixtures

- Use of ESD materials for milled support rings/grids
- ESD department:
  - ✔ ESD discharge or integration into the ESd chain takes place at the moving plate
  - ✔ ESD discharge from the hold-down and top pin carrier plate to the fixture carrier plate on the housing is via flexible cable. For ME, MMI or interchangeable cassettes, the discharge takes place via hold-downs on the moving plate
  - ✔ ESD discharge connection (ATX board, ESD shield) on the housing

OPTIONAL FOR EXTRA CHARGE

(only with written agreement)

- Needle carrier made of ESD material or as an ESD-painted plate and the associated free drilling of needle holes on the top and underside
- ESD repainting of milled edges and millings
- Use of insertion aids made from Semitron or comparable materials
- Use of ESD-compliant needle foils
- Conductive connection of bonnets, side parts and integration into the standard ESD chain or other additional conductive connections, e.g. also to aluminium baffle parts
- Preparation of an ESD protocol

STANDARD DOCUMENTATION

The following files are sent on a USB stick with the fixture:

- DXF of the placement foil
- DXF of the channel foil
- DXF of the drilling foil
- DXF of the probe foil
- XLS of the transfer labelling
- DXF of the hold-down devices, supoorts and catch pins
- XLS of the probe list
- YLS of the needle lable
- XLS of the transfer labelling

Further documentation is available at an extra charge