

accessories

Coupling Planes (HCP, VCP, GRP)

Indirect injection of ESD fields into the EUT can be accomplished using Horizontal and Vertical Coupling Planes. The Vertical Coupling Plane is effectively an antenna of dimensions 0.5m x 0.5m which is placed on the Horizontal Coupling Plane but isolated from it.

An ESD generator is then placed in the center of the vertical edge and at least 10 impulses of either polarity are applied. In cases where the EUT is large and cannot be placed on the test table, the Vertical Coupling Plane should be held parallel to and 0.1m from the EUT surface.

The Coupling Planes require the use of a special cable with 2 x 470kOhm resistors at either end. This is for connection to the Ground Reference Plane which should be connected to the protective earth system.



Vertical Coupling Plane VCP



Horizontal Coupling Plane HCP

EMC Standard Test Table

The all wood table construction (0.8x0.8x1.6m) is necessary because the ESD phenomena is basically a radiation. Metal objects in the table construction would therefore distort the field.

Included with the test table is a Horizontal Coupling Plane which completely covers the table upper surface. This defines the maximum EUT size as being 0.6m x 1.4m.



EMC Test Table (metal free)

Current Sensing Transducer

The ESD generator must be periodically verified in terms of its current impulse. The standard recommends use of a current sensing transducer as defined in annex B. This is also referred to as the 2 Ohm Target.

All measurement transducers manufactured by Haefely EMC Technology are calibrated at the Swisscom laboratory in Bern.

Calibration of ESD simulators is made in Contact mode with the test tip placed against the 2 Ohm Target.

The output of the target is taken to a shielded wide-band measurement system where the current impulse is measured and analysed.

