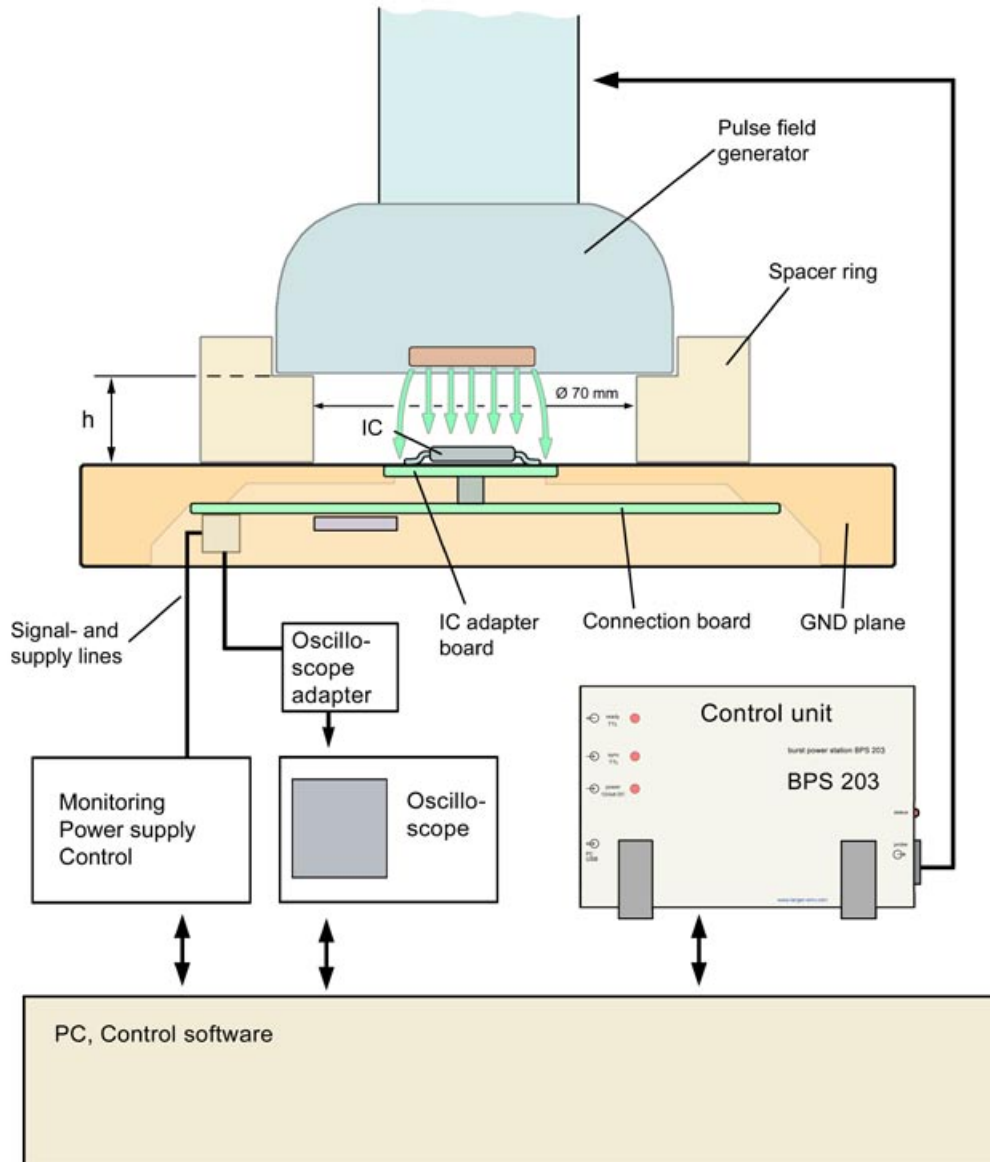


Measurements based on standard:
- IEC 61000-4-2



Measurement set-up consisting of:

- Probe
- Spacer ring
- Control unit BPS 203
- GND plane
- Connection board CB 0708
- PC with „BursterClient“ software

**ESD H-field injection probe
(IEC 61000-4-2)**

Application:

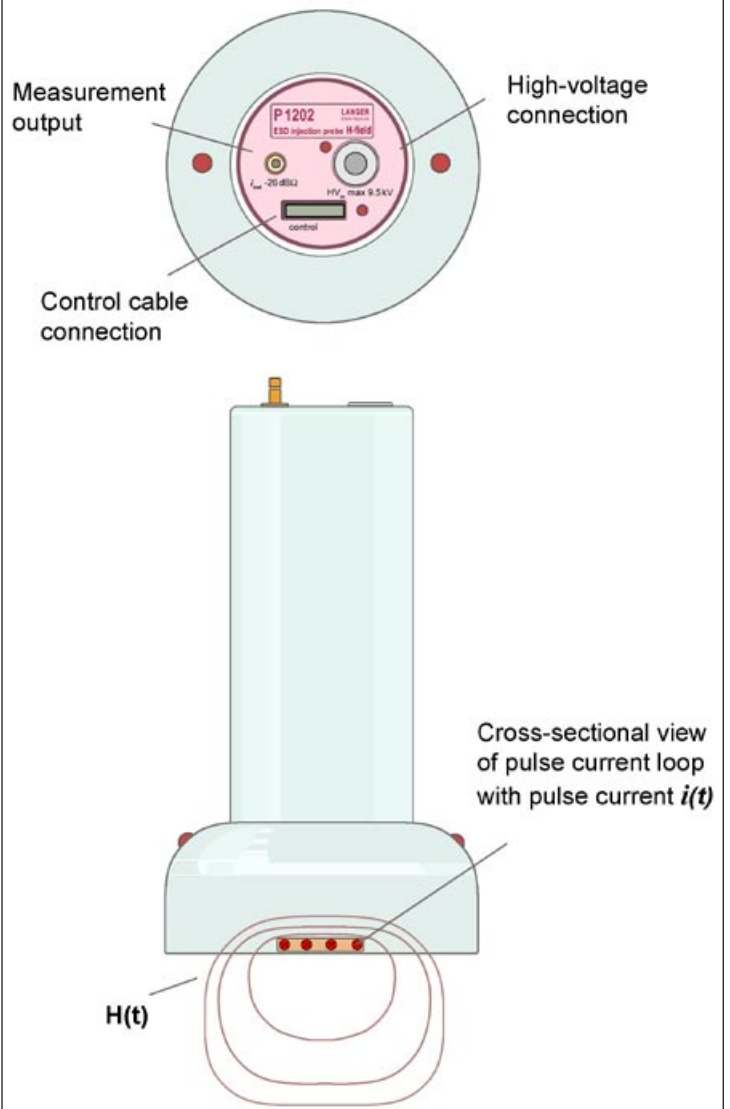
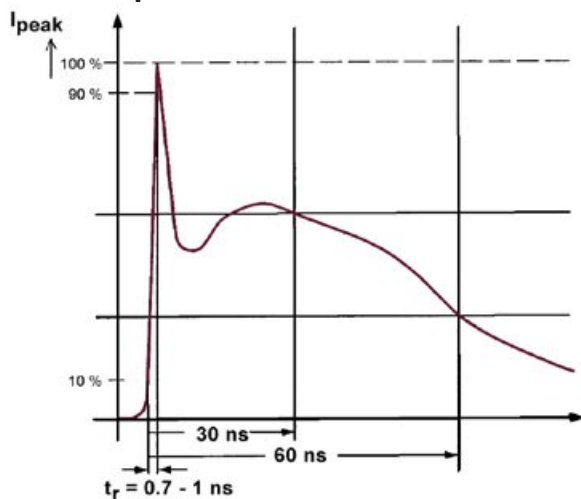
The P1202-2 probe generates an ESD magnetic field $H(t)$ and is used to evaluate the immunity of ICs, in particular multi-pole chip sets, to direct injection of magnetic field pulses.

The probe is positioned above the IC at a defined distance (3 or 10 mm) with a spacer.

Properties:

- the ESD magnetic field is generated by a pulse current loop
- standard ESD pulse shape according IEC 61000-4-2

Pulse shape



Pulse current max.	$\pm 150 \text{ A}$
Generated max. magnetic flux density B (h = 10 mm)	$V_{\text{GEN}} \cdot 0.27 \cdot 10^{-6} \text{ Vs/m}^2$
Pulse frequency	0.1 – 10 Hz
Pulse shape	0.7 / 60 ns
High voltage V_{GEN}	$\pm 0.1 - 9.5 \text{ kV}$
Shunt for current measurement	0.1 Ω
Measurement output	50 Ω (SMB)
Current correction factor R	-26 dB Ω
$i [\text{dB}\mu\text{A}] = v[\text{dB}\mu\text{V}] - R[\text{dB}\Omega]$	

The P1202-2 probe is only operated with the BPS 203 control station. The BPS 203 supplies the high voltage and control signals for the probe and is controlled via a PC user interface. The probe has an internal 0.1 ohm shunt. This shunt is used to measure the pulse current flow. The measurement signal is led to an external SMB socket.

ESD H-field injection probe

Application:

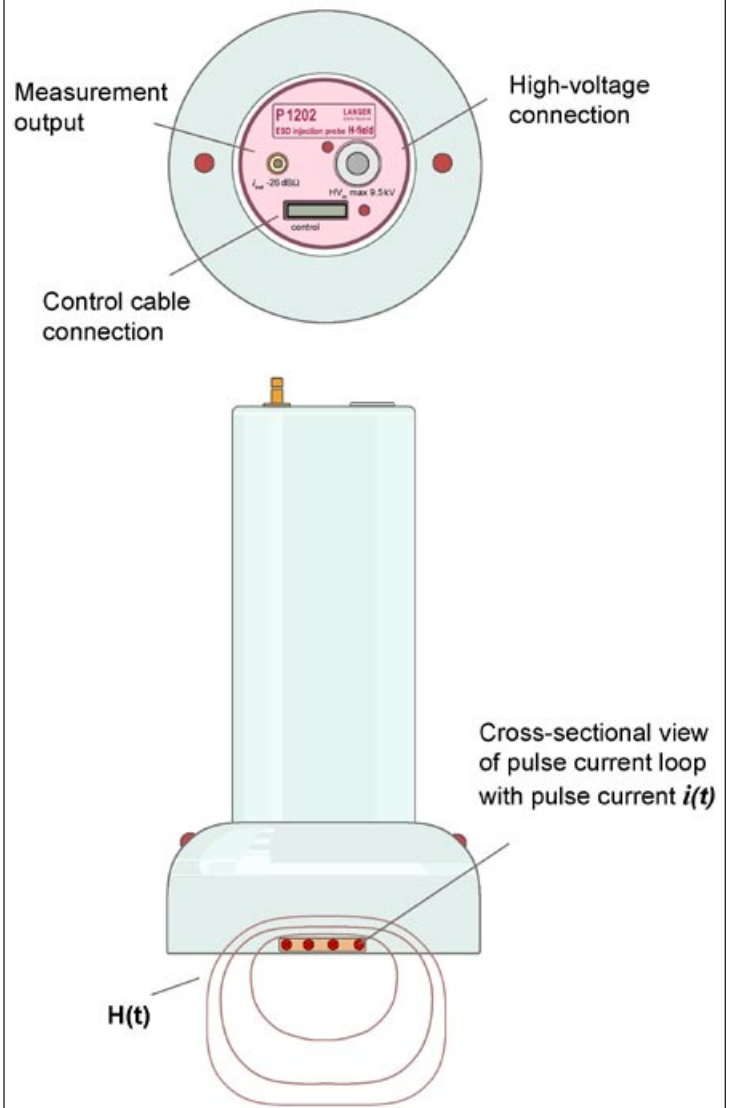
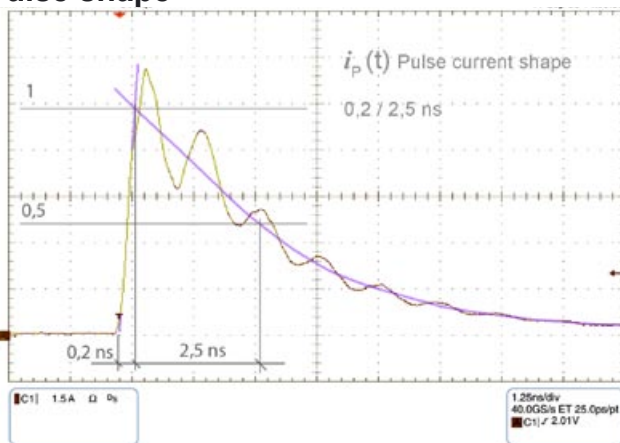
The P1202 probe generates an ESD magnetic field $H(t)$ and is used to evaluate the immunity of ICs, in particular multi-pole chip sets, to direct injection of magnetic field pulses.

The probe is positioned above the IC at a defined distance (3 or 10 mm) with a spacer.

Properties:

- the ESD magnetic field is generated by a pulse current loop
- slope rate of 200 ps
- this has a similar effect as high frequency ESD transients

Pulse shape



Pulse current max.	$\pm 150 \text{ A}$
Generated max. magnetic flux density B (h = 10 mm)	$V_{\text{GEN}} \cdot 0.27 \cdot 10^{-6} \text{ Vs/m}^2$
Pulse frequency	0.1 – 10 Hz
Pulse shape	0.2 / 2.5 ns
High voltage V_{GEN}	$\pm 0.1 - 9.5 \text{ kV}$
Shunt for current measurement	0.1Ω
Measurement output	$50 \Omega \text{ (SMB)}$
Current correction factor R	$-26 \text{ dB}\Omega$
$i [\text{dB}\mu\text{A}] = v[\text{dB}\mu\text{V}] - R[\text{dB}\Omega]$	

The P1202 probe is only operated with the BPS 203 control station. The BPS 203 supplies the high voltage and control signals for the probe and is controlled via a PC user interface. The probe has an internal 0.1 ohm shunt. This shunt is used to measure the pulse current flow. The measurement signal is led to an external SMB socket.

ESD E-field injection probe

Application:

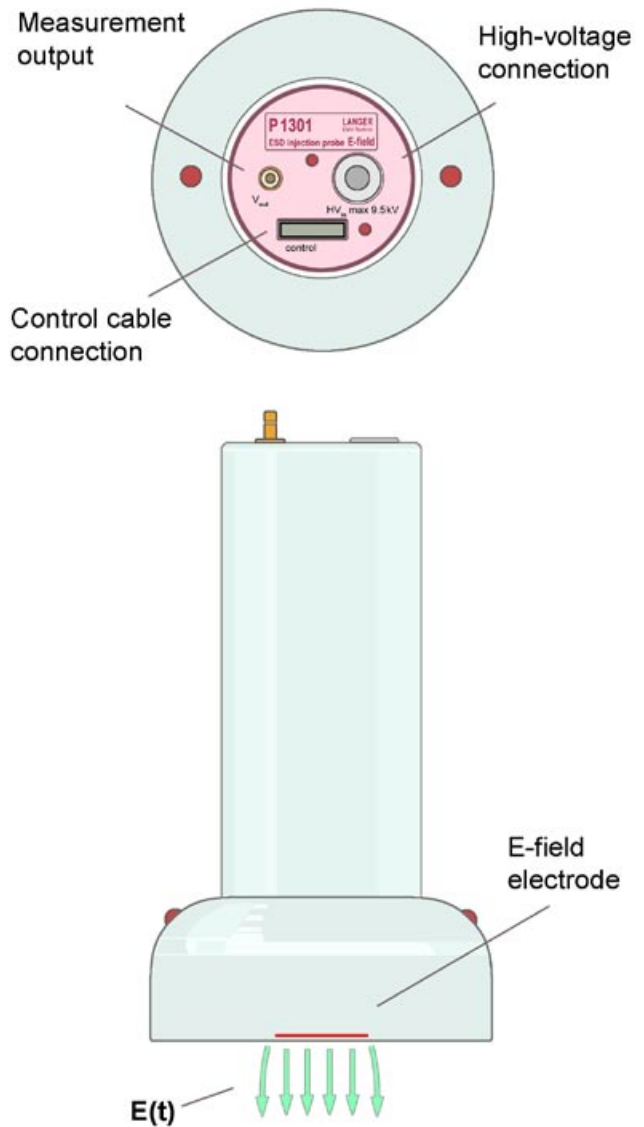
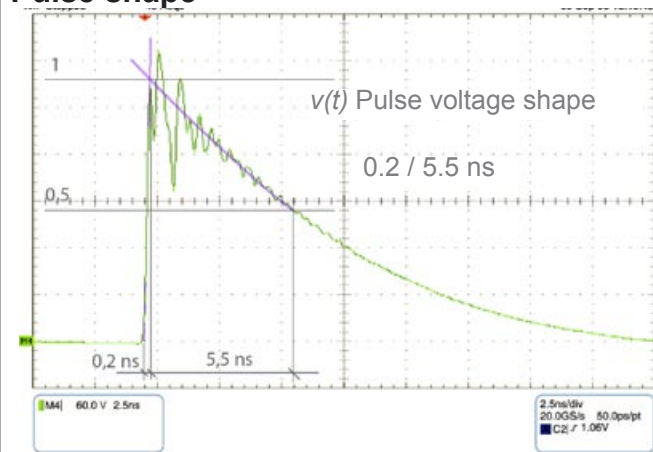
The P1301 probe generates an ESD electric field $E(t)$ and is used to evaluate the immunity of ICs, in particular multi-pole chip sets, to direct injection of electric field pulses.

The probe is positioned above the IC at a defined distance (3 or 10 mm) with a spacer.

Properties:

- the ESD electric field is generated by a field electrode
- it produces a electric field pulse with a slope rate of 200 ps
- this has a similar effect as high frequency ESD transients

Pulse shape



Pulse voltage	$\pm 0.1 - 9.5 \text{ kV}$
Pulse frequency	$0.1 - 10 \text{ Hz}$
Pulse shape	$0.2 / 5.5 \text{ ns}$
High voltage	$\pm 0.1 - 9.5 \text{ kV}$

The P1301 probe is only operated with the BPS 203 control station. The BPS 203 supplies the high voltage and control signals for the probe and is controlled via a PC user interface.

Burst power station for ESD probes

Application:

The BPS 203 is used together with the ESD probes P331 and P331-2. (plus 3.5: P1202, P1202-2, P1301)

Properties:

It supplies and drives the ESD probes.

The BPS 203 is connected to the PC via USB and supported by Software „BPS203_Client“.

- regulate the pulse frequency and the pulse voltage
- single pulse and pulse sequences



Size (width/height/depth)	175/122/61 (mm)
Weight	0.35 kg
Control interface	USB
Pulse voltage range	+/- 100 V to +/-10.5 kV (depending on the connected probe)
Polarity	+/- or alternating
Pulse frequency range	0.1 Hz - 30 Hz (depending on the connected probe)
Supply voltage	12 V / 1A DC

Software:

BPS203_Client

- Self configuratin of the BPS 203 due to probe change
- Auto detection of the BPS 203 and the probe
- Display of hardware parameters (BPS 203 and probes)
- System requirement: min Windows 2000

