

# ICI 03 L-EFT set

## IC EM Pulse Injection Langer Pulse

**LANGER**  
EMV-Technik



### Short description

The ICI 03 L-EFT set consists of three different ICI sources emitting electric, magnetic field and current pulses. This allows high precision and very high resolution IC analysis and body bias injection. These sources allow side channel analysis e.g. to test security-critical circuits. Special features include very high resolution probe tips (allowing for the testing of extremely small areas) and a very low trigger to pulse jitter (allowing for the disruption of very specific points in the program sequence).

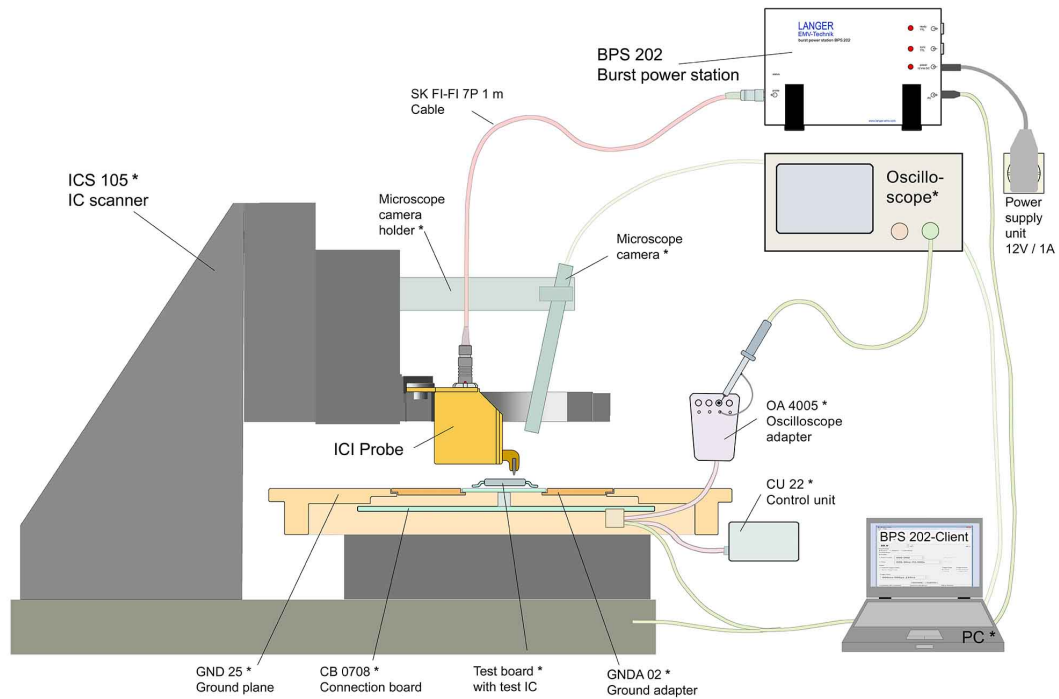
### Scope of delivery

- 1x ICI HH500-15 L-EFT, Pulse Magnetic Field Source
- 1x ICI E450 L-EFT, Pulse E-Field Source
- 1x ICI I900 L-EFT, Pulse Current Source (FBBI)
- 1x BPS 202, Burst Power Station
- 1x BPS 202-Client, BPS 202-Client Software / USB
- 1x NT Ex EU, Power Supply Unit
- 1x ICI 01 L-EFT acc, Accessories
- 1x ICI case, System Case
- 1x ICI m, ICI Set User Manual

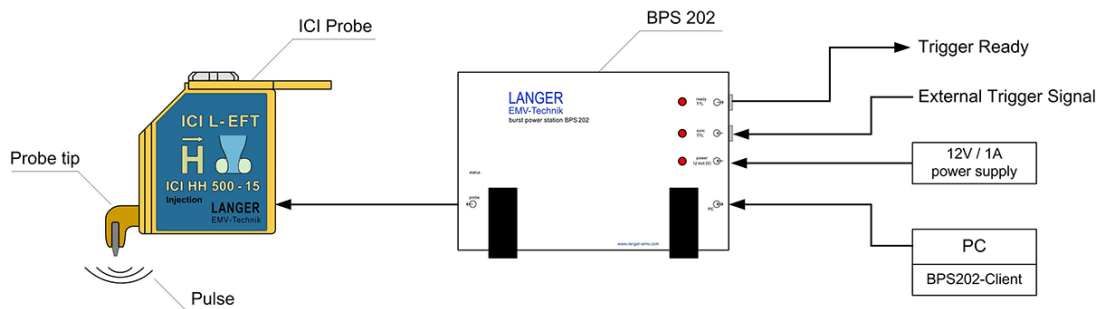
## Technical parameters

| Pulse parameter                                       |                                                                |
|-------------------------------------------------------|----------------------------------------------------------------|
| Rise time                                             | < 2 ns                                                         |
| Repetition frequency                                  | 0.1 Hz - 20 kHz                                                |
| Polarity (set by software)                            | + / - / alternating                                            |
| <b>Trigger-pulse delay (Bypass Mode - Delay Line)</b> |                                                                |
| min. Trigger-pulse delay (typ.)                       | 100 ns                                                         |
| max. Trigger-pulse delay (typ.)                       | 450 ns                                                         |
| max. Jitter (typ.)                                    | ± 1 ns                                                         |
| <b>Trigger-pulse delay (Timer Mode)</b>               |                                                                |
| min. Trigger-pulse delay (typ.)                       | 200 ns                                                         |
| max. Trigger-pulse delay (typ.)                       | 100 ms                                                         |
| max. Jitter (typ.)                                    | ± 15 ns                                                        |
| Trigger delay, min. increment                         | 10 ns                                                          |
| <b>Supply voltage</b>                                 | BPS 202                                                        |
| <b>Software</b>                                       | BPS 202-Client / DLL (32 Bit / 64 Bit)<br>Win XP SP3 or higher |

## Schematic set-up with mover



## Schema of measurement set-up



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ICI probe in application

