

TLP/VF-TLP Calibration Substrate CAL-K-3010/3011C

Advanced TLP/HMM Solutions

1 Features

- High quality ceramic substrate for TLP/VF-TLP system wafer-level calibration using ground-signal (GS) RF probes
- Probetip pitch range from 50 μm up to 3 mm
- 8 reference resistors in the range of 0.1, 0.2, 0.5, 1, 5, 10, 50 and 100 Ω for calibration of the current measurement channel
- 5 reference Z-diodes in the range of 5, 7, 10, 18 and 33 V for calibration of the voltage measurement channel. Optional 68 V and 120 V Z-diodes in addition for high voltage calibration applications
- 1 silicon transient voltage suppressor (TVS) diode for reference measurement of the calibrated TLP/VF-TLP system
- 45 open-load and 45 short-circuit teststructures
- 9 (7 on HV option) custom reference device locations
- Rugged top layer metal hard gold coating
- Size 30.67 mm x 29.33 mm
- Protective case

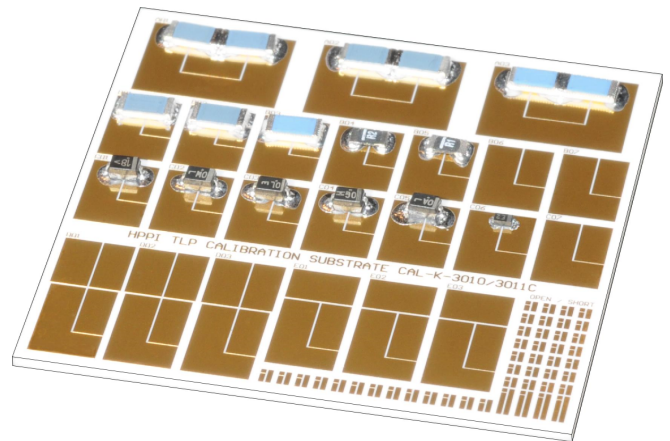


Figure 1: Ceramic calibration substrate CAL-K-3010/3011C (size 30.67 mm x 29.33 mm).

2 Description

Different values of the reference devices are available on the CAL-K-3010/3011C substrate in order to calibrate the system in the desired voltage and current range where the device under test is to be expected. This gives maximum accuracy of the TLP/VF-TLP measurement result.

The sampling oscilloscope is one of the major limitations of measurement accuracy of the TLP system. Therefore, it is recommended to calibrate the system in the expected voltage range and current range of the device under test. For this reason 8 reference resistors in the range of 0.1, 0.2, 0.5, 1, 5, 10, 50 and 100 Ω and 5 (7 on HV option) reference Z-diodes in the range of 5, 7, 10, 18 and 33 V (68 V and 120 V on HV option) are available on the CAL substrate.

The substrate material is Al_2O_3 with a rugged top layer metal hard gold coating. The test structure probing gap is 40 μm which is suitable for probetip pitch in the range from 50 μm up to 3 mm. The size of the substrate is 30.67 mm x 29.33 mm. The total height including reference devices is maximum 2.5 mm. The substrate is packed in a protective case.

The calibrations substrate is delivered including reference value data sheet.



Figure 2: Protective case.

3 Ordering Information

Pos.	Description	Part No.
01	Calibration Substrate up to 33 V	CAL-K-3010/3011C
02	Calibration Substrate up to 120 V	CAL-K-3010/3011C-HV

General

The product data contained in this data-sheet is exclusively intended for technically trained staff. You and your technical departments will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to such application. Our products are solely intended to be commercially used internally and should not be sold to consumers. This data-sheet is describing the specifications of our products for which a warranty is being granted by HPPI GmbH. Any such warranty is granted exclusively pursuant to the terms and conditions of the respective supply agreement. There will be no guarantee of any kind for the product and its specifications. For further information on technology, specific applications of our product, delivery terms, conditions and prices please contact HPPI:

High Power Pulse Instruments GmbH
 Stadlerstrasse 6A
 D-85540 Haar, Germany
 Phone : +49 (0)89 8780698 - 440
 Fax : +49 (0)89 8780698 - 444
 E-Mail : info@hppi.de

Due to technical requirements our products and/or their application may be harmful. For information please read carefully the manual or contact HPPI. Safety notes in the manual will inform you about possible risks that result from any foreseeable application of our products. Changes of this data-sheet are reserved.