

TLP/VF-TLP/HMM/HBM Calibration Substrate CAL-03A

Advanced TLP/HMM/HBM Solutions

1 Features

- High quality AlN ceramic substrate for TLP/VF-TLP/HMM/HBM system wafer-level calibration using ground-signal (GS) RF probes
- Probetip pitch range from 50 µm up to 3 mm
- 11 reference resistors in the range of 0.1, 0.2, 0.5, 1, 2, 5, 10, 50, 100, 500 Ω and 1 M Ω for calibration of the current measurement channel and SMU verification
- 8 reference Z-diodes in the range of 5, 6.5 (TVS), 8.75 (Low-Cap TVS), 10, 20, 30 (Low-Cap TVS), 68 and 120 V for calibration of the voltage measurement channel
- 6 open-load and 6 short-circuit test-structures
- 2 timing de-skew landing-pad structures
- 3 custom reference device positions
- Rugged NiCr/Au/Ni/Au top metal
- Laser marked serial number
- Probe pitch verification ruler 100 μm, 200 μm, 300 µm, 400 µm, 500 µm, 600 µm
- Size 24 mm x 24 mm (fits on AUX chuck)
- Calibration data sheet
- Protective case

Description 2

Different values of the reference devices are available on the CAL-03A 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/HMM/HBM measurement result. The digital oscilloscope is one of the major limitations of measurement accuracy of the 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 11 reference resistors in the range of 0.1, 0.2, 0.5, 1, 2, 5, 10, 50, 100, 500Ω and $1 M\Omega$ and 8 reference Z- and TVS diodes in the range of 5, 6.5 (TVS), 8.75 (Low-Cap TVS), 10, 20, 30 (Low-Cap TVS), 68 and 120 V are available on the CAL substrate. The substrate material is AlN with a high

precision NiCr/Au/Ni/Au metal stack. 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 24 mm x 24 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 a reference value data sheet.

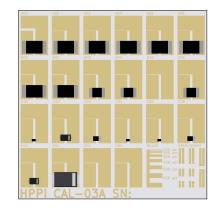


Figure 1: CAL-03A (size: 24 mm x 24 mm)



Figure 2: Protective case.

3 **Ordering Information**

Pos.	Description		Part No.
01	TLP/VF-TLP/HMM/HBM	Calibra-	CAL-03A
	tion Substrate		

General

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