

# High Performance TLP Probes HP-T26A

Advanced TLP/HMM/HBM Solutions

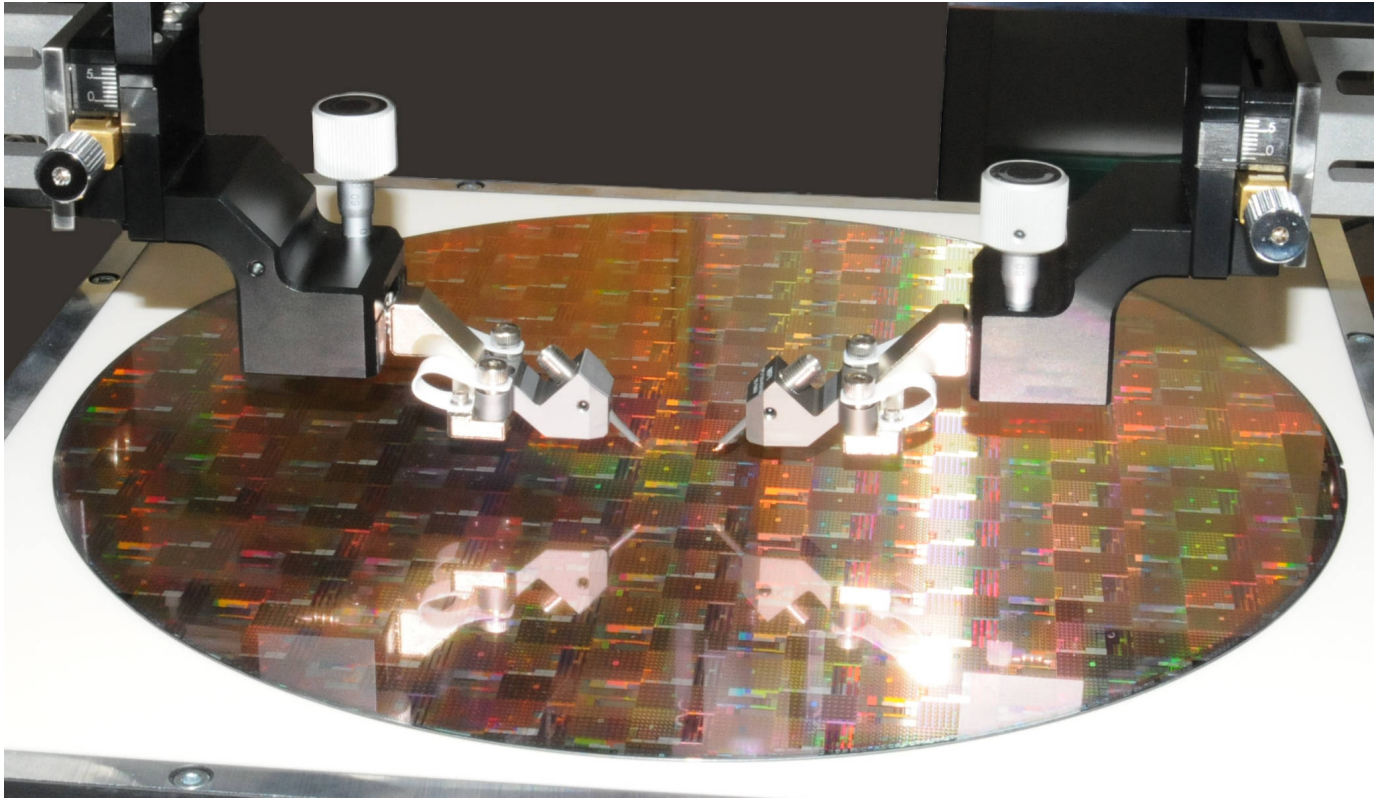


Figure 1: High Performance TLP Probes HP-T26A.  
Application example: probing a 300 mm wafer on a ATS-8300G automated test system.

## 1 Features

- 26 GHz high performance pulse force and pulse sense fixed pitch probing solution for advanced VF-TLP/TLP on-wafer measurements using MPI's T26A probes
- Electrically isolated from probe station system ground (optional)
- Probe tip touch down force sensors at [mN] resolution (optional)
- Interface adapters for different micropositioners (optional)

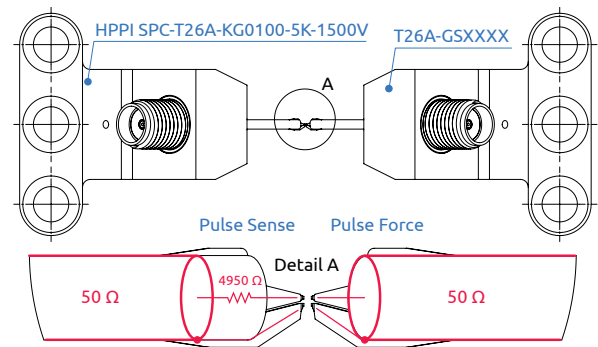


Figure 2: Typical probe tip configuration

## 2 Specifications

Nominal impedance	50	Ω
Measurement bandwidth <sup>1)</sup>	DC - 26	GHz
Fixed pitch <sup>2)</sup>	100	μm
Maximum pulse voltage <sup>3)</sup>	1.5	kV

<sup>1)</sup> 50 Ω probe tip

<sup>2)</sup> other values on request

<sup>3)</sup> depending on probe tip pitch and pulse width

Fig. 2 shows a typical probe tip configuration of a 50 Ω pulse force probe (right side) and a 5 kΩ pulse sense probe (left side). The so called “5 kΩ pulse sense probe” has a built-in 4950 Ω resistor in the probe tip frontend. When operated into a 50 Ω load resistance, the voltage scale factor

results to

$$k = \frac{V_{IN}}{V_{OUT}} = \frac{4950 \Omega + 50 \Omega}{50 \Omega} = 100 \quad (1)$$

where  $V_{IN}$  is the input voltage at the probe tip and  $V_{OUT}$  is the output voltage of the pulse sense probe tip, connected to a 50 Ω load, such as the oscilloscope input. Probe tips with other scale factors and built-in resistors can be ordered on request (e.g. 1.5 kΩ or 1 kΩ).

The HP-T26A probearm kit is optimized to be used on the ATS-8300G automated test system. Probe tip touch down force sensors for collision avoidance and contact reliability are available (optional). The probe tip can be electrically isolated from the probe station system ground (optional).

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## 3 Physical Dimensions

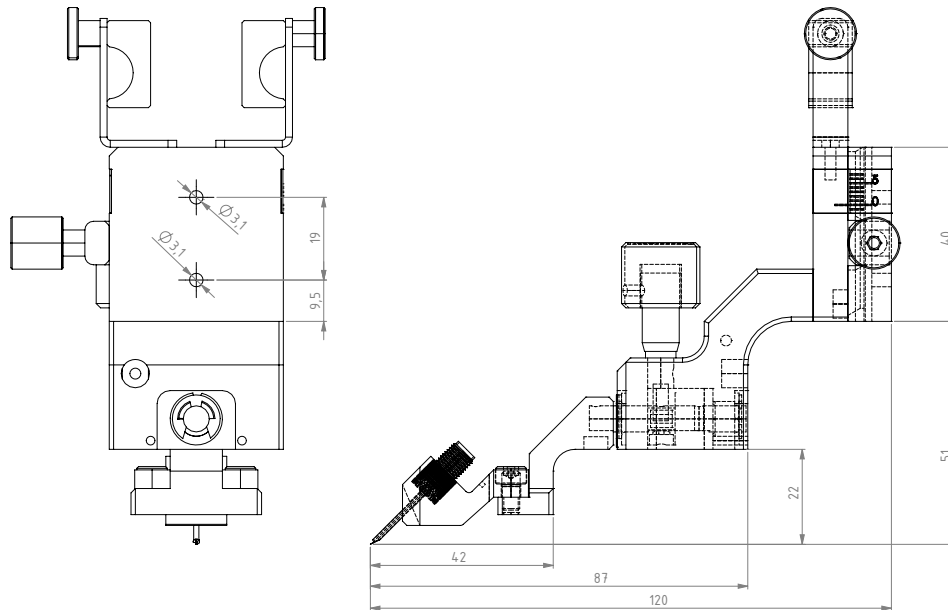


Figure 3: Physical dimensions (right sided probearm) in [mm]

## 4 Ordering Information

Pos.	Description	Part No.
01	High Performance TLP Probes	HP-T26A
02	Probe tip force sensors (optional)	FS-06A
03	Electrical probe tip system ground isolator (optional)	PA-R-E-FE
04	Micropositioner interface adapter (optional)	IF-xxx

### List of Parts

The High Performance TLP Probes HP-T26A consists typically of the following parts:

Qty.	Description	Part No.
2	Probe arm RF EAST / STD	PA-R-E
1	26 GHz TITAN RF PROBE / 45-GS - 50 Ω	T26A-GSXXXX
1	Special TITAN RF probe for HPPI systems 1500 V resistor / K(S)G - 5 kΩ	HPPI SPC-T26A-KG0100-5K-1500V
4	Bracket screws including washer	UNC #4-40 x 5/16"
4	Bracket screws including washer	M3 x 8 mm
1	Allen key	2.5 mm
1	Allen key	3 mm
1	Allen key	3/32 "
2	Probe tip force sensors (optional)	FS-06A
2	Electrical system ground isolators (optional)	PA-R-E-FE
2	Micropositioner interface adapter (optional)	IF-xxx

### 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 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:

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