Manual Probearm TPA-GFM

Advanced TLP/HMM/HBM Solutions

1 Features

- Electrically isolated probearm for GND needle contact or general purpose DC, twin-wire HBM, HMM or flexible pitch VF-TLP/TLP/HMM/HBM force/sense probing based on the HPPI GF-A (optional) flexible pitch setup
- Suitable to mount the GF-A (optional) ground fixture needle for flexible pitch measurements. In addition a cable (e.g. for HBM) can be directly connected to the contact pin.
- High mechanical stability

2 Description

The probe arm TPA-GFM is recommended to be used for GND needle contact or general purpose DC, twin-wire HBM, HMM or flexible pitch VF-TLP/TLP/HMM/HBM force/sense probing.

Fig. 1 shows the physical dimensions of the probearm in [mm]. A probe needle is fixed by knurled nut in a clamp which is electrically insulated from the shaft and the flange metal. The shaft can be rotated and fixed in the flange by a shoulder/fitting screw. The shaft can be rotated and fixed manually along its axis. The flange footprint is compatible with typical micropositioner interfaces. The length L of the shaft or flange footprint can be adapted on request. A bracket optimized for smaller micropositioners, such as Quater XYZ 500 TIM/MIM used on the HPPI PS-5026B portable wafer probe station, are available on request.

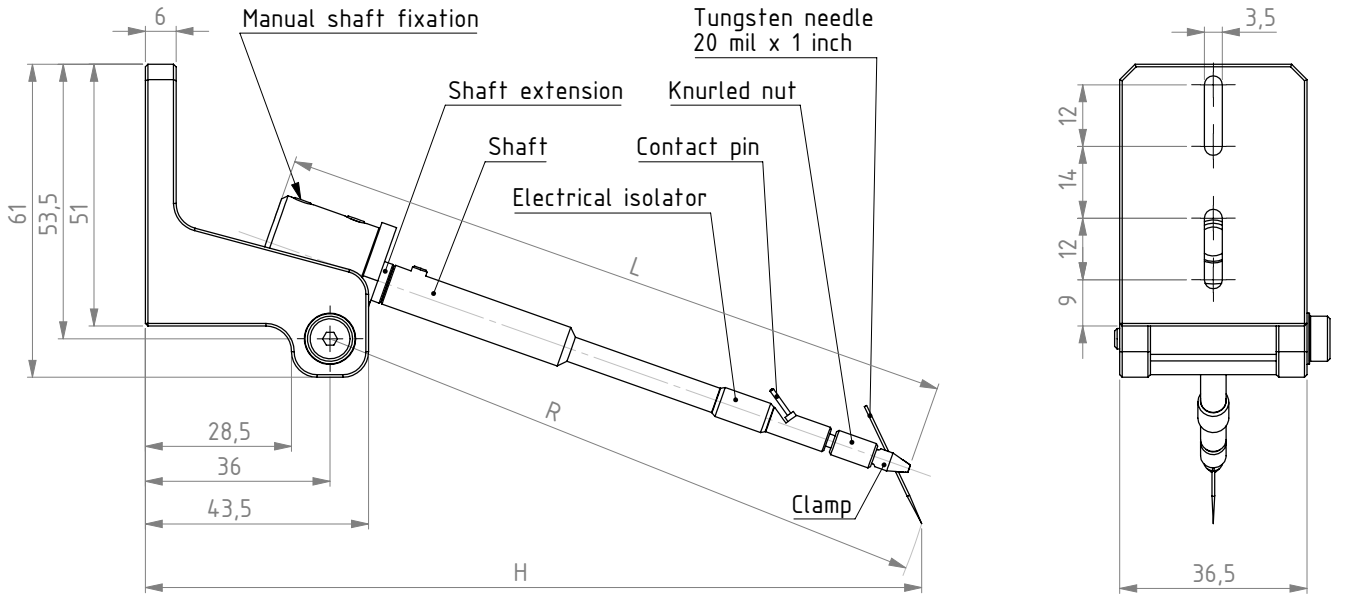

Figure 1: Physical dimensions TPA-GFM in [mm]. For dimensions L, R, H please options in Tab. 1.

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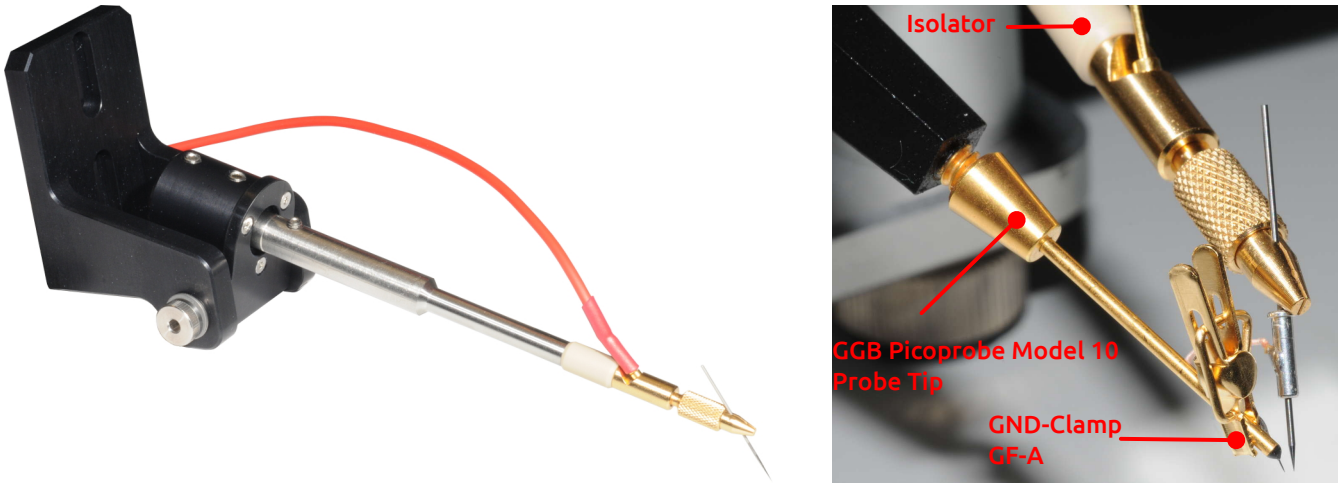
Fig. 2 shows two different methods how to use the TPA-GFM. In Fig. 2(a) a single wire is connected to the contact pin of the probe tip. This setup can be used for HBM, HMM pulse or GND probing as well as general purpose DC probing.

Fig. 2(b) shows the combination of the TPA-GFM with the GF-A (optional) flexible pitch GND clamp designed for GGB Picoprobe model 10 probe tips. This combination ensures lowest possible GND inductance for fast rise time flexible pitch probing.



(a) TPA-GFM with separate cable connected to the contact pin

(b) TPA-GFM with GF-A (optional) flexible pitch setup

Figure 2: Two methods how to use the TPA-GFM

2.1 Probehead Needle Assembly Procedure

Special attention is required for mounting the needle in the probe head (Fig. 3):

1. Use only needle with Ø 0.508 mm (Ø 20 mil)! – thicker diameter will damage the clamp
2. Feed-in the needle from bottom (back) side
3. Gently fasten the knurled nut

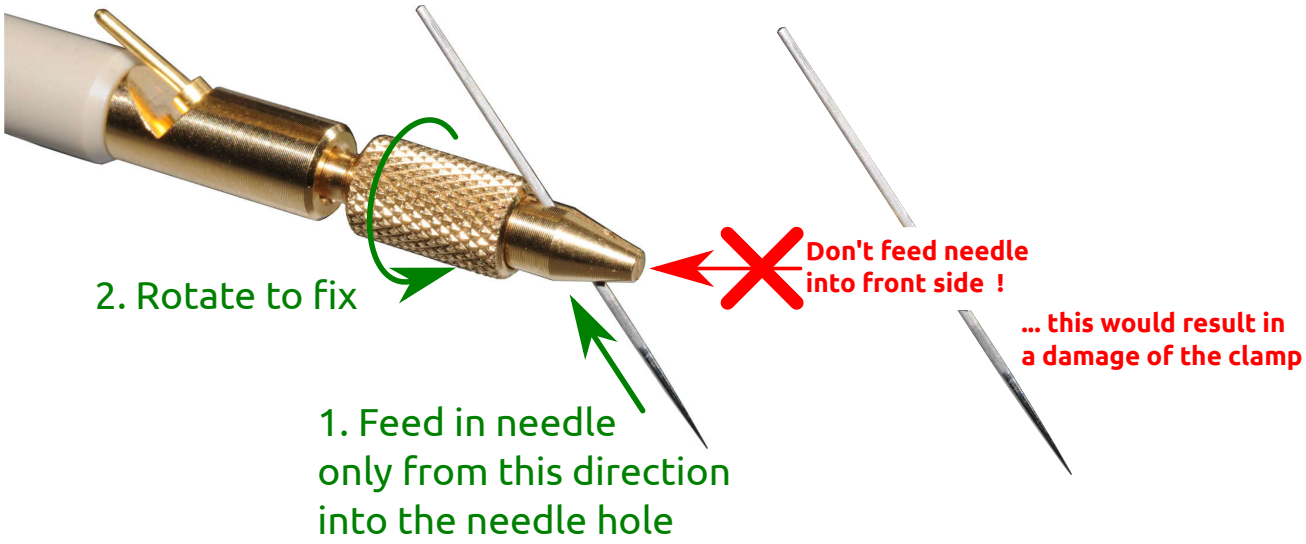


Figure 3: Probehead needle assembly. Use only needle with Ø 0.508 mm (Ø 20 mil)!

2.2 Replacement Probe Needles

Recommendation for probe needle replacement: Quater, 0.508 mm (20 mil), part no.: H-20242 or from American Probe Technologies Inc., probe model # 72TC-D3/75 x 1 ", tungsten carbide probes with 1 " length, 15° taper and 7.5 µm tip radius.

3 Ordering Information

Pos. 02 – 05 are optional. A bracket with smaller size for QUATER micropositioner XYZ 500 TIM on the HPPI probe station PS-5026B is available on request.

Pos.	Description	Part No.
01	Flexible probearm set including: • Bracket, shaft, isolator, probe tip with standard dimensions shown in Fig. 1: L = 133 mm, R = 121 mm, H = typ. 151 mm • 1 pcs. probe needle 0.508 mm (20 mil) diameter and 25.4 mm (1000 mil) length • Cable for contact pin as shown in Fig. 2(a) • Case for transportation and storage (Fig. 4)	TPA-GFM
02	Flexible Pitch GND Fixture Clamps GF-A (5 mm wire length)	GF-A / 5 mm
03	Flexible Pitch GND Fixture Clamps GF-A (10 mm wire length)	GF-A / 10 mm
04	Flexible Pitch GND Fixture Clamps GF-A (15 mm wire length)	GF-A / 15 mm
05	25 mm shaft extension for TPA-GFM (see Fig. 1): L = 158 mm, R = 146 mm, typ. H = 175 mm	TPA-GFM-SE25

Table 1: Ordering information

Figure 4: Case for transportation and storage

General

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