

# Flexible Pitch GND Fixture Clamps GF-A

Advanced TLP/HMM/HBM Solutions

## 1 Features

- Compatible with GGB Picoprobe model 10 replacement probe tips
- <1 ns rise time
- Custom GND wire length 5 mm to 100 mm
- Gold-coated spring-steel clamp with micro-machined groove for locking of the clamps on the probe tip
- High conductivity and low inductance copper HF litz wire with 200 x Ø 0.02 mm strands
- Easy to use clamping
- Tungsten/carbide probe needle

## 2 Description

The GF-A is used for flexible pitch wafer- or package-level probing using GGB's picoprobe model 10 probetips.

If very short GND wire length of 5 mm is selected, also 200 ps rise time is possible. Extreme wire length, even up to 100 mm works at 10 ns rise time.

Fig. 2 shows the packing of a GF-A set. Fig. 1 to Fig. 3 show the typical application. Additional two micropositioners are required for the GND needles. For further information about the application of the GF-A please refer to the HPPI application note [AN-010](#).

Recommendation for tungsten needle replacement: [Quater](#), 0.508 mm (20 mil), part no.: H-20242 or optional 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.

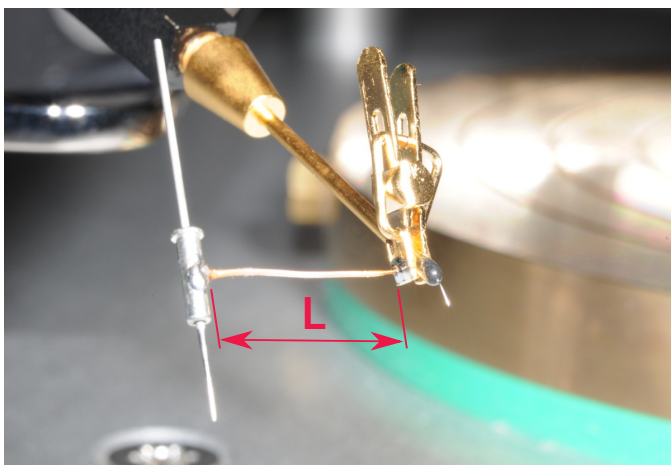


Figure 1: GF-A mounted on a picoprobe model 10 probetip. L is custom length available in the range from 5 mm to 100 mm.



Figure 2: GF-A packing (Example: L = 15 mm)

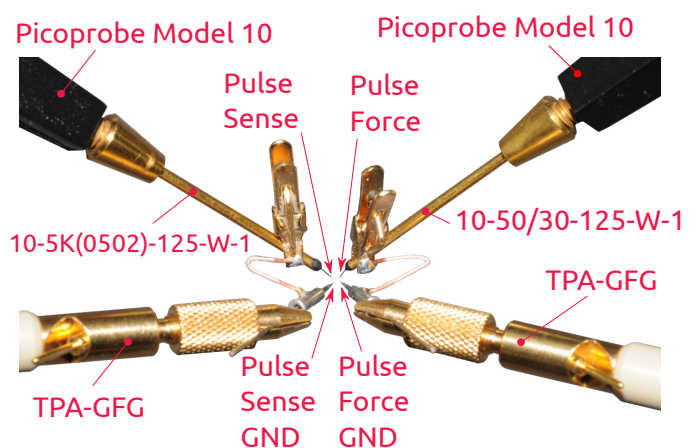


Figure 3: Flexible pitch configuration



Figure 4: Unique groove locking in the brackets of left- and right sided clamp for solid electrical contact, precise locking and easy use. Gold coating for high contact reliability. High conductivity and low inductance copper HF litz wire with 200 x Ø 0.02 mm strands.

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## 3 Assembly Instructions

Please take care that the clamps are mounted on the GGB Picoprobe Model 10 replacement probetips in the right direction. The GF-A kit consists of a left-sided and right-sided clamp, as shown in Fig. 5. On the left-sided clamp the litz wire is soldered on the bottom side of the clamp. On the right-sided clamp the litz wire is soldered on the top side of the clamp.

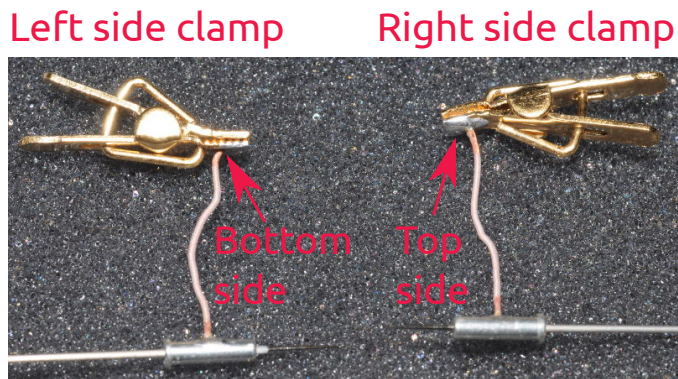


Figure 5: The GF-A set consists of a left-side and right-side clamp

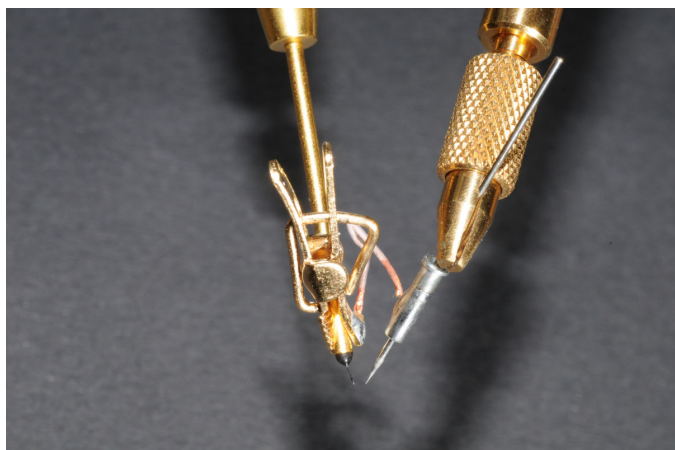


Figure 6: Example: mounted right-sided clamp

**Note:** It is important to distinguish between left-sided and right-sided clamp and probe tips in order to achieve tight locking of the clamps on the probe tip. The clamps can be easily locked and released with a tweezer or even by hand. High contact and clamping reliability is ensured by the micro-machined locking groove in the probe tip clamp brackets.

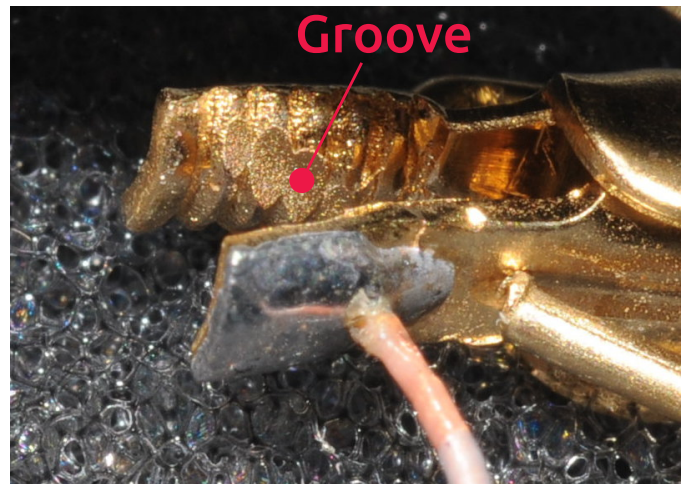


Figure 7: Right-sided clamp groove direction



Figure 8: Left-sided locked probe tip

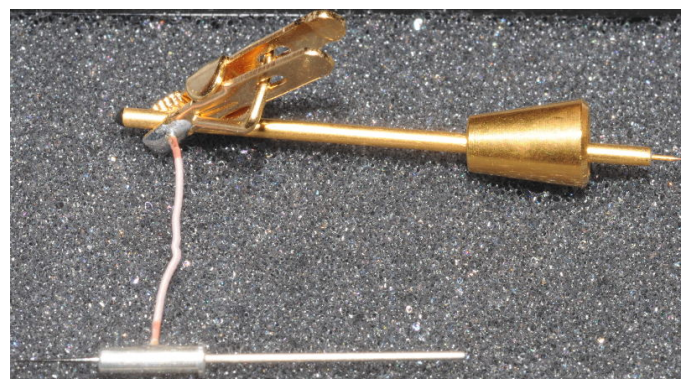


Figure 9: Right-sided locked probe tip

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## 4 Ordering Information

The ground fixture clamp GF-A can be ordered as follows:

Pos.	Description	Part No.
01	Flexible Pitch GND Fixture Clamps [xx] mm. Specify wire length [xx] in mm	GF-A / xx mm

Table 1: GF-A Ordering Information

**Example:** GF-A / 15 mm

One GF-A set (Fig. 2) consists of two parts:

Qty.	Description	Part No.
1	Left Clamp and Needle	GF-A-LC-N-xx
1	Right Clamp and Needle	GF-A-RC-N-xx

Table 2: GF-A parts (Fig. 2, Fig. 5 and Fig. 10)

### 4.1 Single Part Number Scheme

All parts can be ordered in different style separately. Specify wire length xx in [mm].

Description	Part No.	Picture
Left Clamp and Needle	GF-A-LC-N-xx	Fig. 11
Right Clamp and Needle	GF-A-RC-N-xx	Fig. 12
Left Clamp and Right Clamp	GF-A-LC-RC-xx	Fig. 13
Right Clamp and Right Clamp	GF-A-RC-RC-xx	Fig. 14
Left Clamp and Left Clamp	GF-A-LC-LC-xx	Fig. 15
Three Right-Side Clamps	GF-A-RC-RC-RC-xx	Fig. 16

Table 3: GF-A part numbering scheme. Specify litz wire length [xx] in mm.

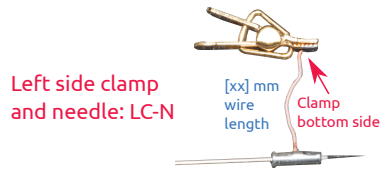


Figure 11: GF-A-LC-N-xx

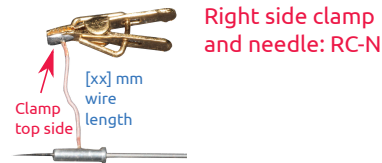


Figure 12: GF-A-RC-N-xx

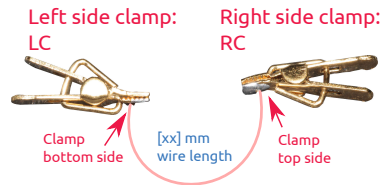


Figure 13: GF-A-LC-RC-xx

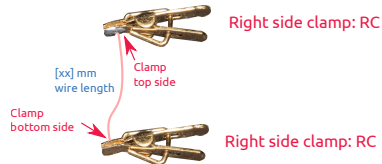


Figure 14: GF-A-RC-RC-xx

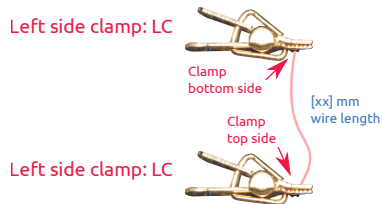


Figure 15: GF-A-LC-LC-xx

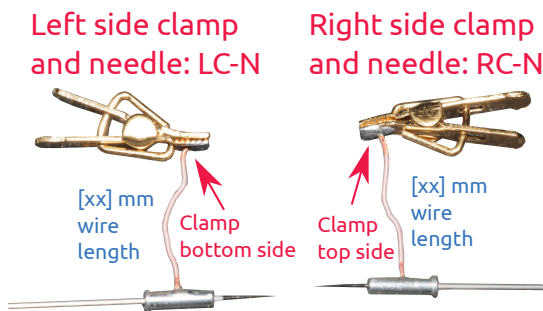


Figure 10: GF-A-LC-N-xx and GF-A-RC-N-x

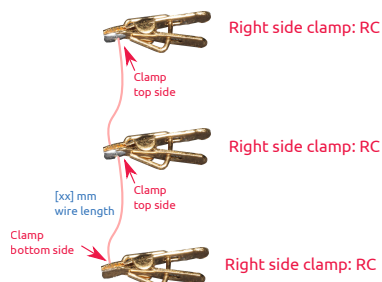


Figure 16: GF-A-RC-RC-RC-xx

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## Advanced TLP/HMM/HBM Solutions

### General

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