

New Printed Circuit Boards from GETec available for fast surface measurements with ultra-long cantilevers

Oleg Domanov, GETec Microscopy GmbH, Seestadtstraße 27/Top 27, 1220 Vienna

Ultra-long cantilevers of up to 5 mm were adapted via a newly designed PCB to the high performance AFSEM system developed by GETec Microscopy (www.getec-afm.com) (see Fig. 1). The electrical and mechanical connection is achieved with a simple yet robust plug connector, enabling an exchange of the cantilever with its compact PCB within seconds. This cantilever concept is especially useful for non-conventional AFM sensor applications like industrial on-machine quality control.

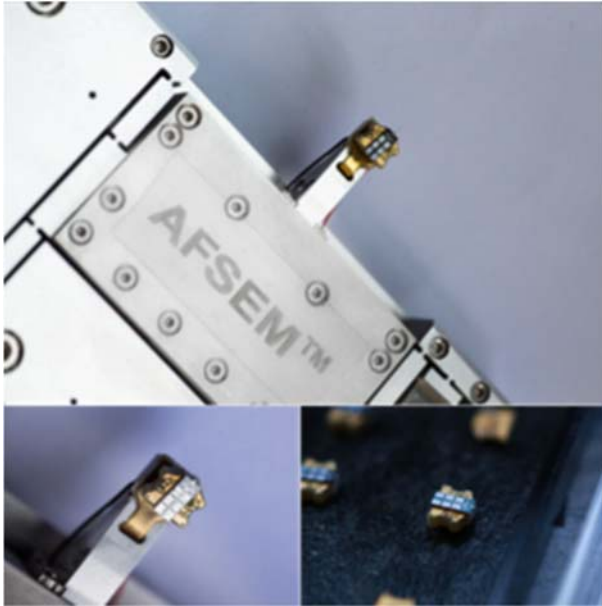


Figure 1: 5 mm long CAN-50-2-5 cantilever chip bonded onto the first version of the PCB design for the adaptation to our fast cantilever exchange plug of the high performance AFSEM system.

A second, improved design (Fig. 2) with optimized trace placing and a thinner and thus lighter PCB substrate has been produced and tested.

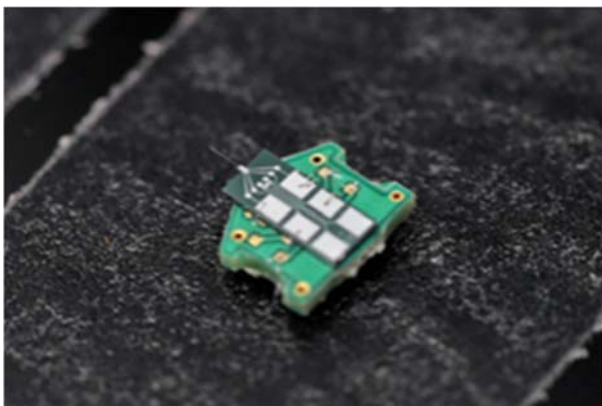


Figure 2: 5 mm long CAN-50-2-5 piezoresistive cantilever chip from the CiS GmbH bonded onto the optimized, second iteration of the PCB design for the adaptation to GETecs AFSEM system.

