AuCNT Plated Contact Probes

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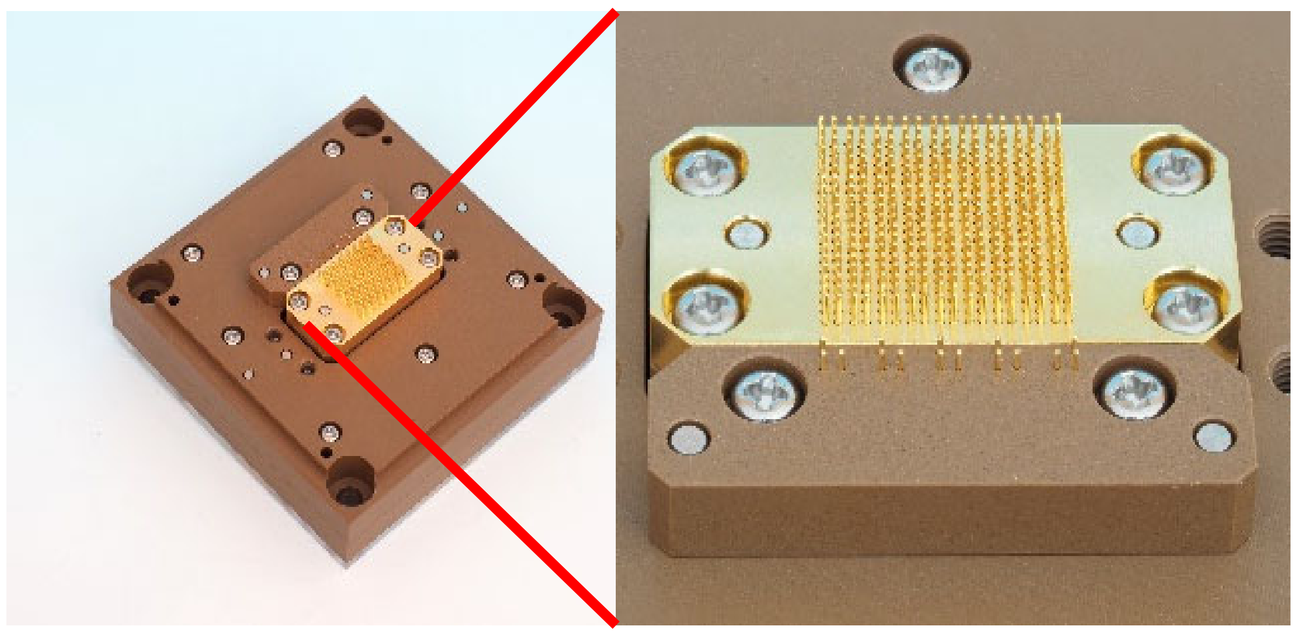
What is a Contact Probe?

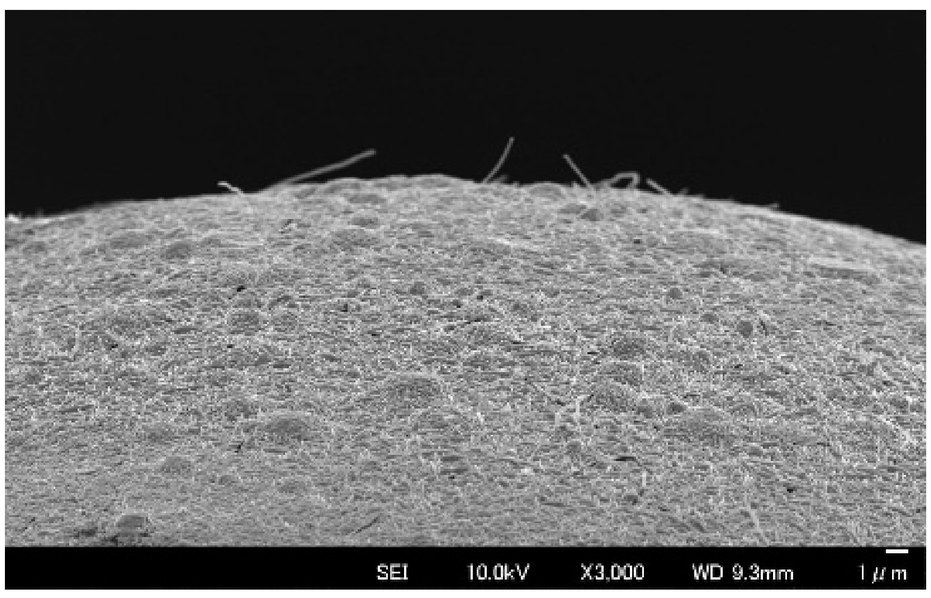
- Contact probes are essential for electrical testing of semiconductors and electronic components.
- Our CNT probe, is specifically engineered to handle testing applications that demand high current flow.

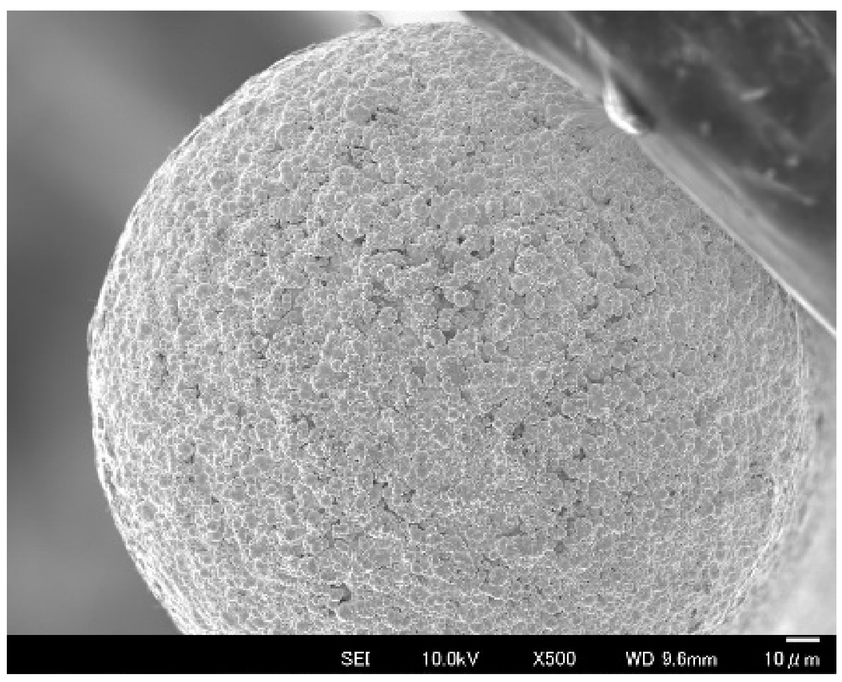


Presenting our solution crafted for high current testing applications

Au +CNT Plating Technology

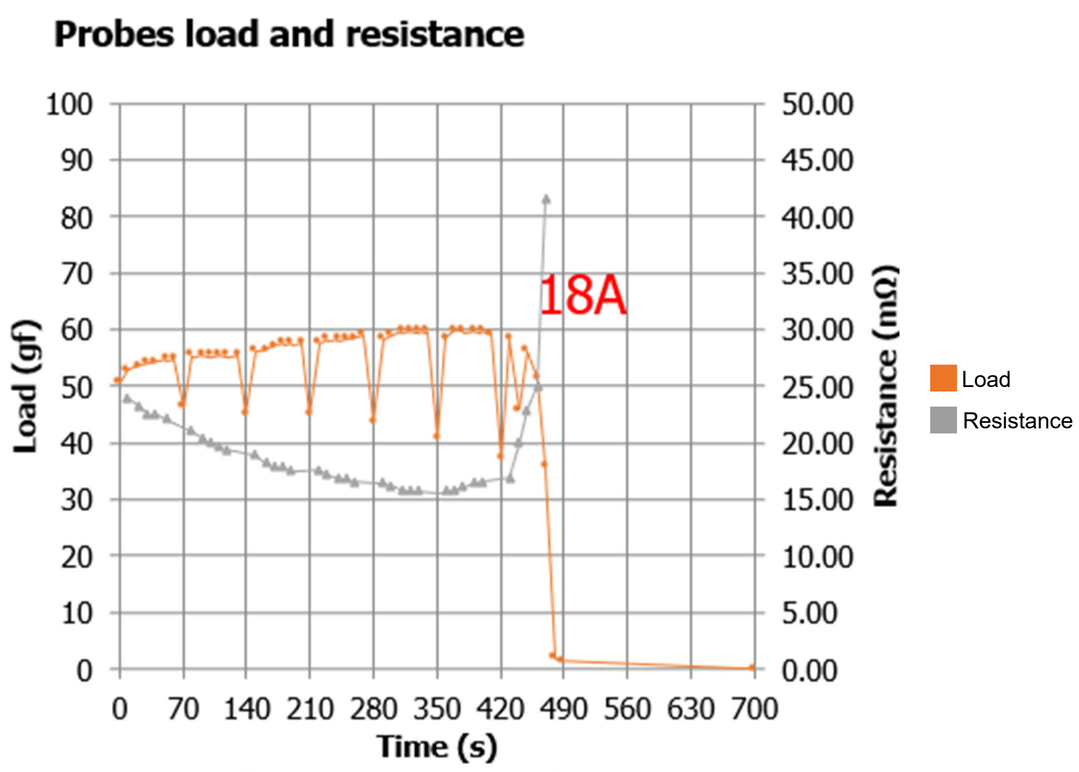
Our plating technology incorporates Carbon Nanotubes (CNT) into the gold (Au) layer, enhancing the probe's performance, added to the low contact resistance and electrical conductivity that standard gold plating provides.

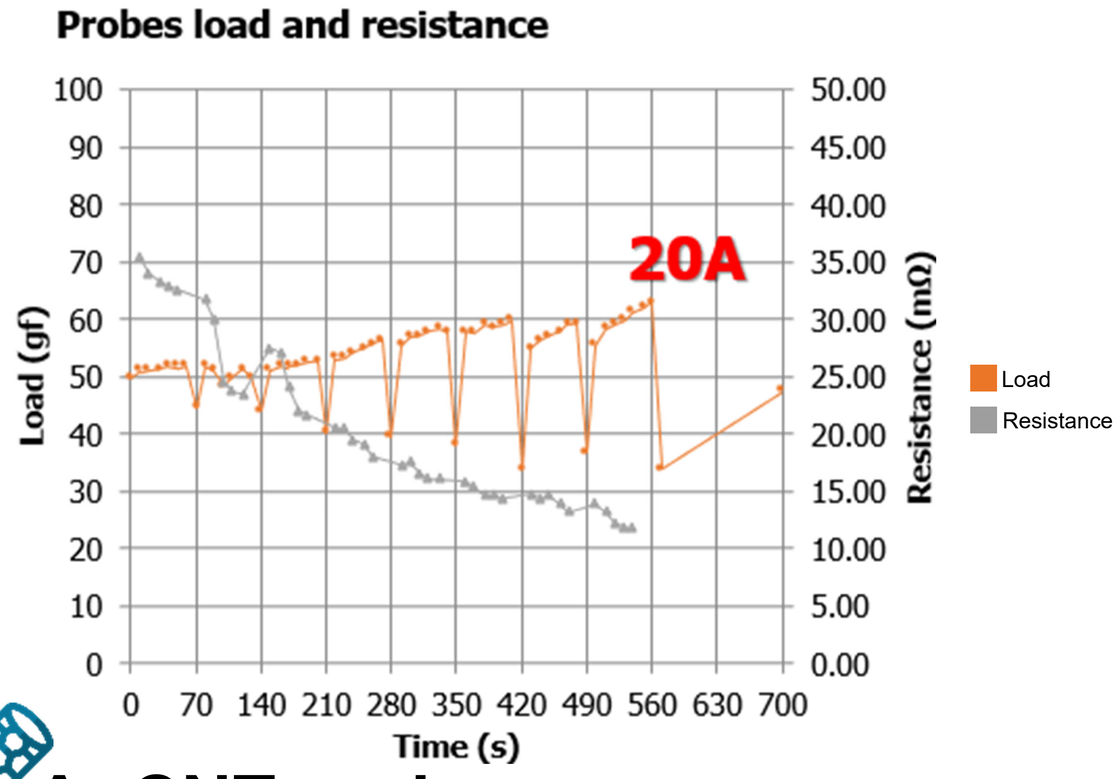




Capacity comparison test

- Two probes mounted on a metal block (0.55 mm pitch)
- Probes used: SB-1-NAS(G)





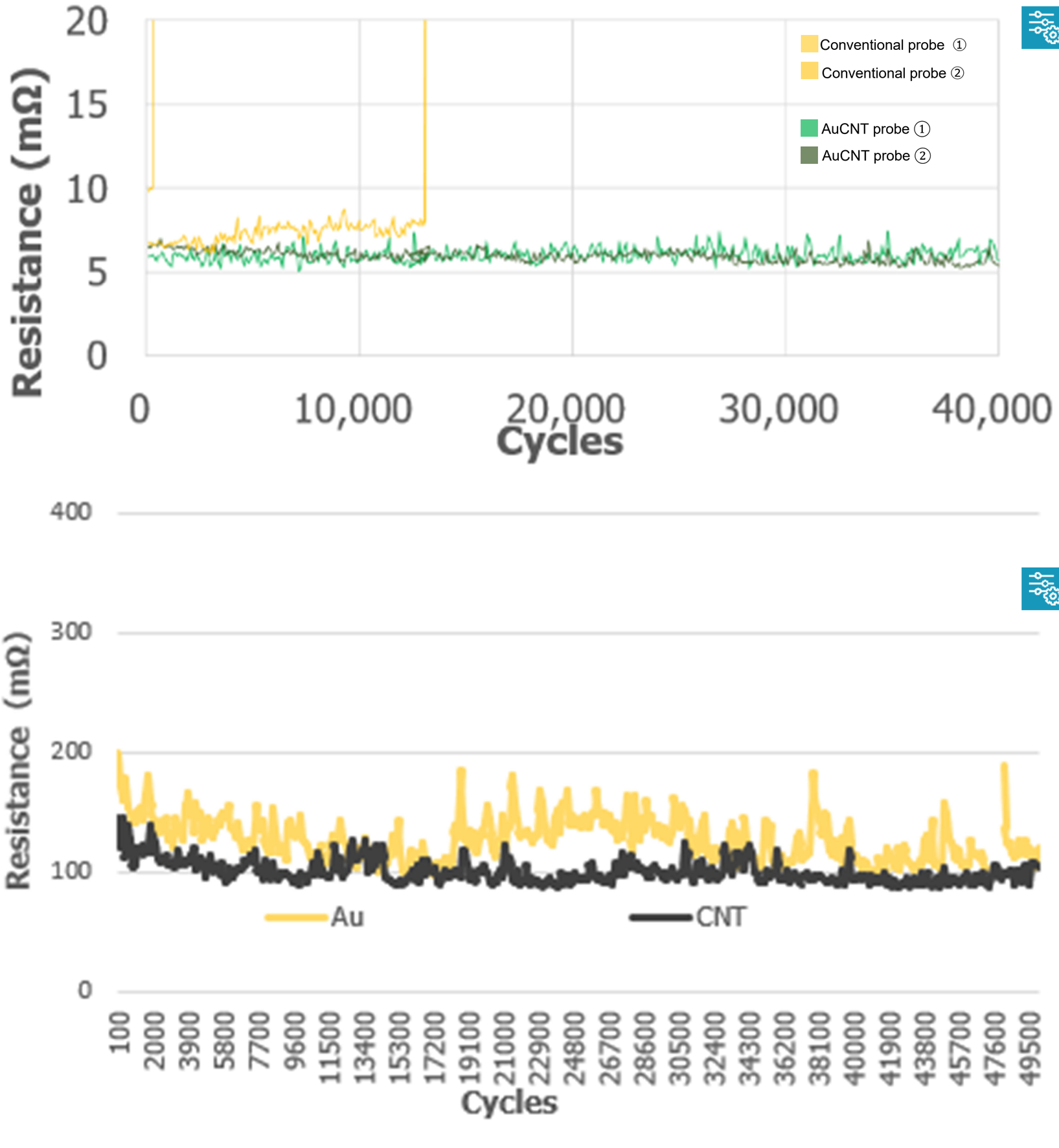
Conventional probes:

- Current: 18A (around 9A per probe)
- Observation: load decrease.
- Up to 8A per probe.

AuCNT probes:

- Current: 20A (10A per probe)
- Observation: load decrease, 5%.
- **Up to 10A per probe.**

Endurance test comparison against Au and Al



Testing conditions:

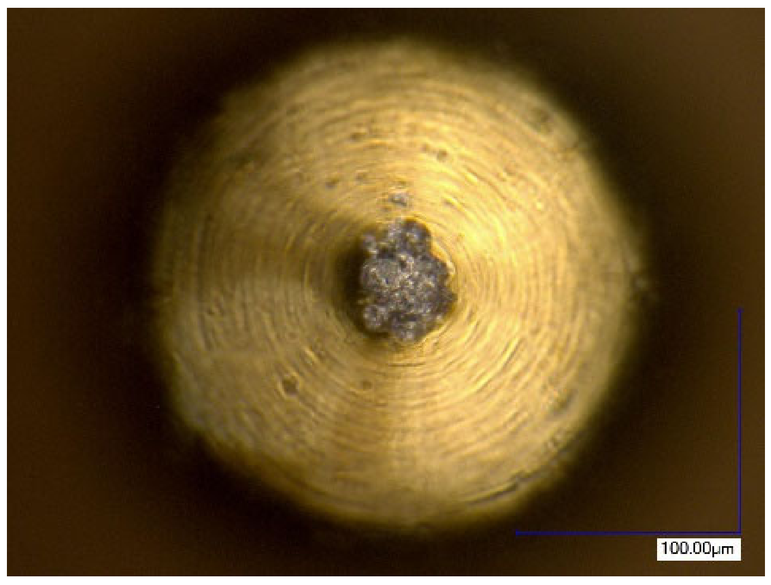
- Current:
  120A for 1ms
- Target Material:
  Au film on Cu block
- Contact probes:
  SL-1 (2mm pitch)

Testing conditions:

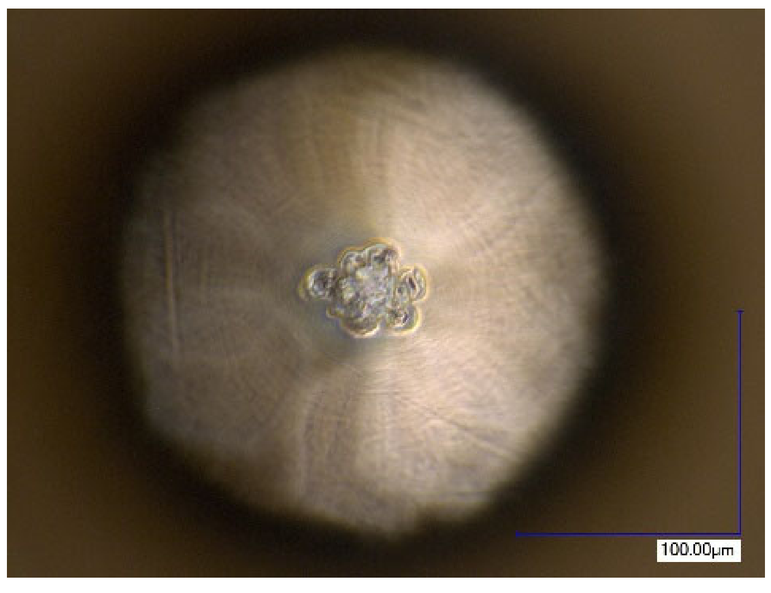
- Current:
  3A for 13ms
- Target Material:
  Aluminum (Al)
- Contact probes:
  SJ (0.5mm pitch)

Comparison of tip cleaning after testing (For Al testing)

Conventional probes

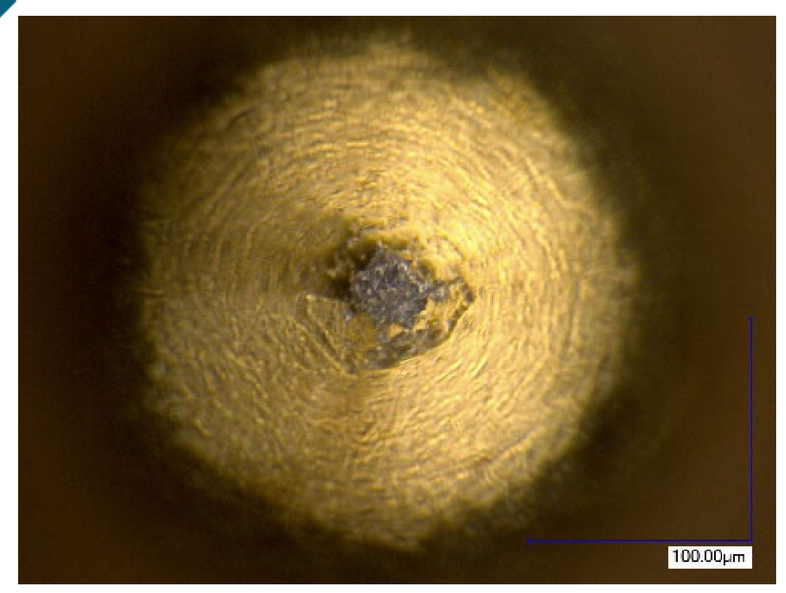


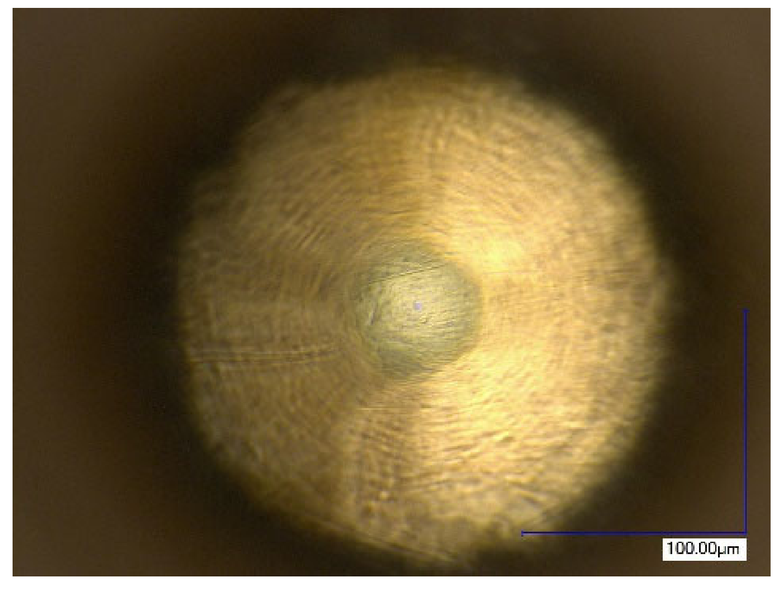
After testing



After Cleaning

The plating was peeled off, and residues from Al remain.





CNT probes

The residues were successfully removed without damaging the plating.

High-current performance with the AuCNT probes

- Current Capacity: AuCNT probes offer higher current capacity than traditional probes.
- Durability: AuCNT probes exhibit greater endurance under identical current conditions.
- Contact Resistance: AuCNT probes optimize overall performance reducing resistance.

AuCNT Probes vs. Conventional Probes

	Conventional probes	Au-CNT probes
Curren(φ0.3mm)	8A	10A
Durability (at 120 A)	About 10K times	More than 40K times
Contact resistance to Al	23mΩ	3mΩ

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