microPRO™ XS OCF

SELECTIVE LASER ANNEALING FOR OHMIC CONTACT FORMATION (OCF)

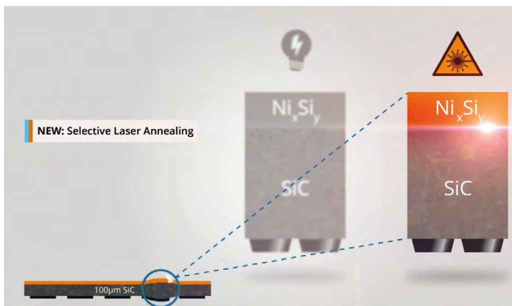
The microPRO XS OCF system provides selective laser annealing with high repeatability and throughput in a versatile system. Combining a state-of-the-art laser optic module with 3D-Micromac's modular processing platform, the microPRO XS is ideally suited for ohmic contact formation (OCF) in silicon carbide (SiC) power devices. It forms ohmic interfaces a while preventing the generation of large carbon clusters and heat-related damage to the front side of the wafer.

HIGHLIGHTS

- Prevents the generation of large carbon clusters
- Avoids heat-related damage to the front side of the wafer
- Standard wafer size: 150 mm (200 mm option available)
- Wafer handling available
- Best-in-class cost per wafer
- Small footprint
- Flexible recipe programming and wide parameter range

3D MICROMAC

microPRO™ XS OCF - SYSTEM CONFIGURATION



BENEFITS

- Forms ohmic Ni-silicide interfaces - especially suitable for thin wafer
- Homogeneous process results by spot scanning
- Very high energy homogeneity
- Freely programmable geometry for test patterns
- Full range of services available, including feasibility studies, recipe development, contract manufacturing, pilot production and global customer support

Suitable for	• Ohmic contact formation (OCF) for silicon carbide (SiC) power device wafers
Wafer size	• Standard wafer diameter: up to 150 mm • Optional wafer diameter: up to 200 mm • Standard wafer thickness: 100 - 500 µm • Capability for wafers on glass carrier
Laser source and beam delivery	• ns UV DPSS laser • Fluency on wafer level: 0.5 ... 4 J/cm² • Flat top laser spot profile • Galvo scanning device • Integrated monitoring of laser energy and beam profile
Alignment	• Automatic wafer alignment
Process chamber	• Inert gas chamber • Standard: nitrogen, others on request • O_2 concentration monitoring
Options	• Fully automated open cassette wafer handling - thin wafer approved • ID Reader for wafer and/or cassette • SECS/GEM implementation • Filter fan unit/active exhaust system
Standards	• Compatible with common SEMI standards • Laser safety class 1 • CE conformity
Footprint	• 1,340 x 3,200 mm² including handling

Rev. 2020-01 Changes in accordance to technical progress are reserved.
3D-Micromac® is a registered trademark in the EU and other countries.

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