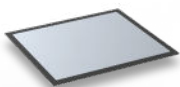


SiC and GaN Wide Bandgap Test Cell Solutions

Addressing the high-voltage and high-current demands for SiC and GaN automotive and industrial devices

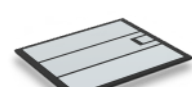
- High-voltage static parameter tests up to 6,500 V
- High-current dynamic switching test up to 5,000 A
- Patent pending Volta-Flux[™] MEMS probe architecture enabling at-speed testing of power devices
- Environmental control to prevent arcing
- Low stray inductance enables fast dynamic switching down to 25 nH
- NV-Core[™] Vision System provides full final inspection and unit-level traceability from wafer input to tape & reel output
- DI-Core[™] Data Intelligence System providing real-time equipment monitoring and data analytics for increased productivity



Power SiC Diodes



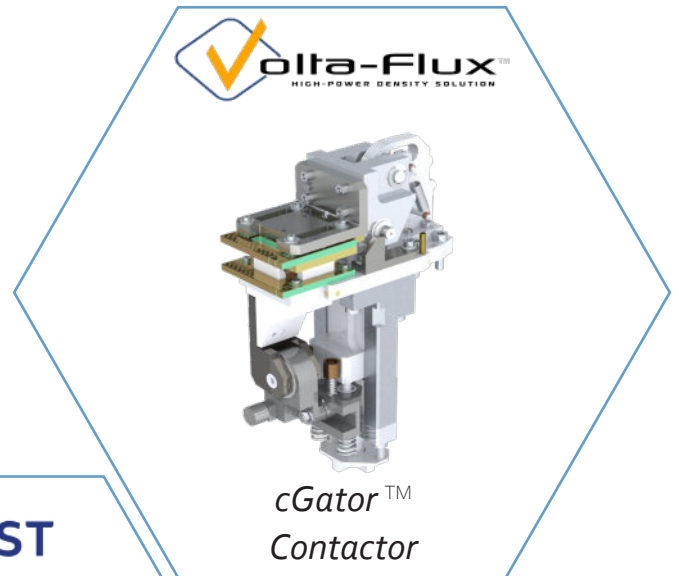
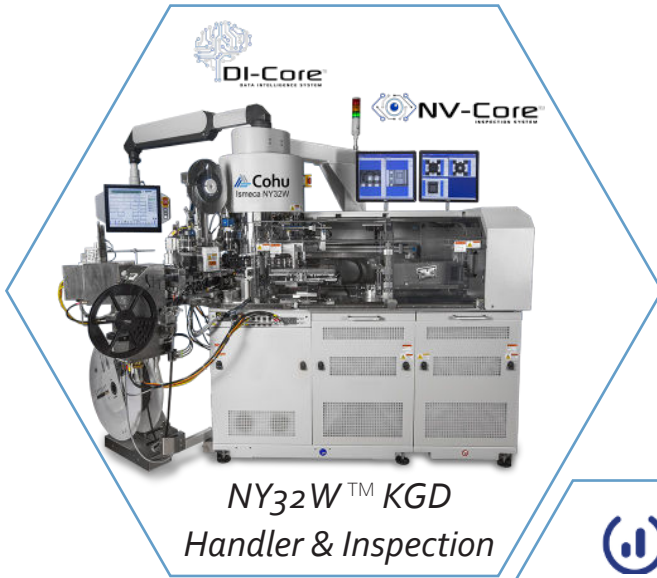
Power SiC MOSFET



Power GaN HEMT



Singulated Power KGD Test Cell Solution

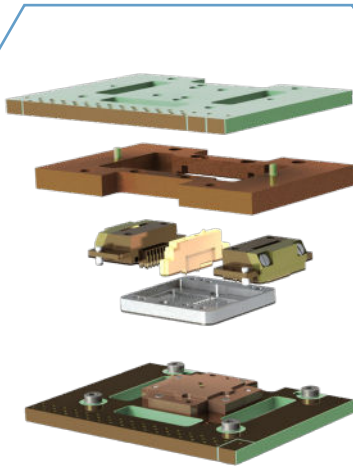


All-in-one test cell solution including handler, inspection & metrology, contactor and tester

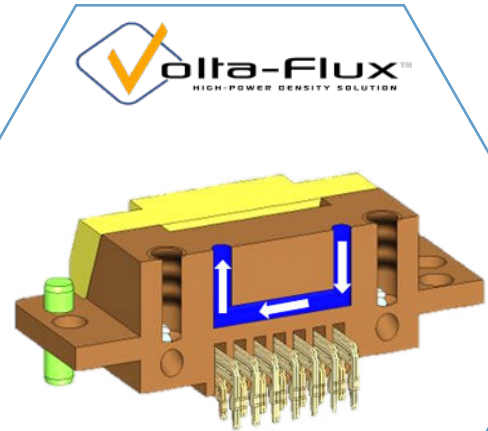
- Production-proven solution for high-volume performance
- Up to 7,000 UPH @ 150 ms test time in a complete finishing solution
- Delicate thin bare die handling down to 50 μm
- Unique single insertion with controlled probe marks less than 1 μm
- Full range of device tests: static and dynamic, gate resistance, avalanche and short circuit

cGator™

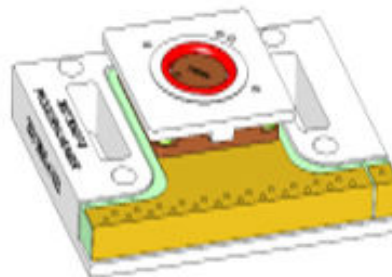
Singulated Power Contactor



*cGator™
Contactor*



*Field replaceable
MEMS Probes*



*Innovative pressure
control enables
high-voltage test*

Common contact architecture enabling power at-speed testing

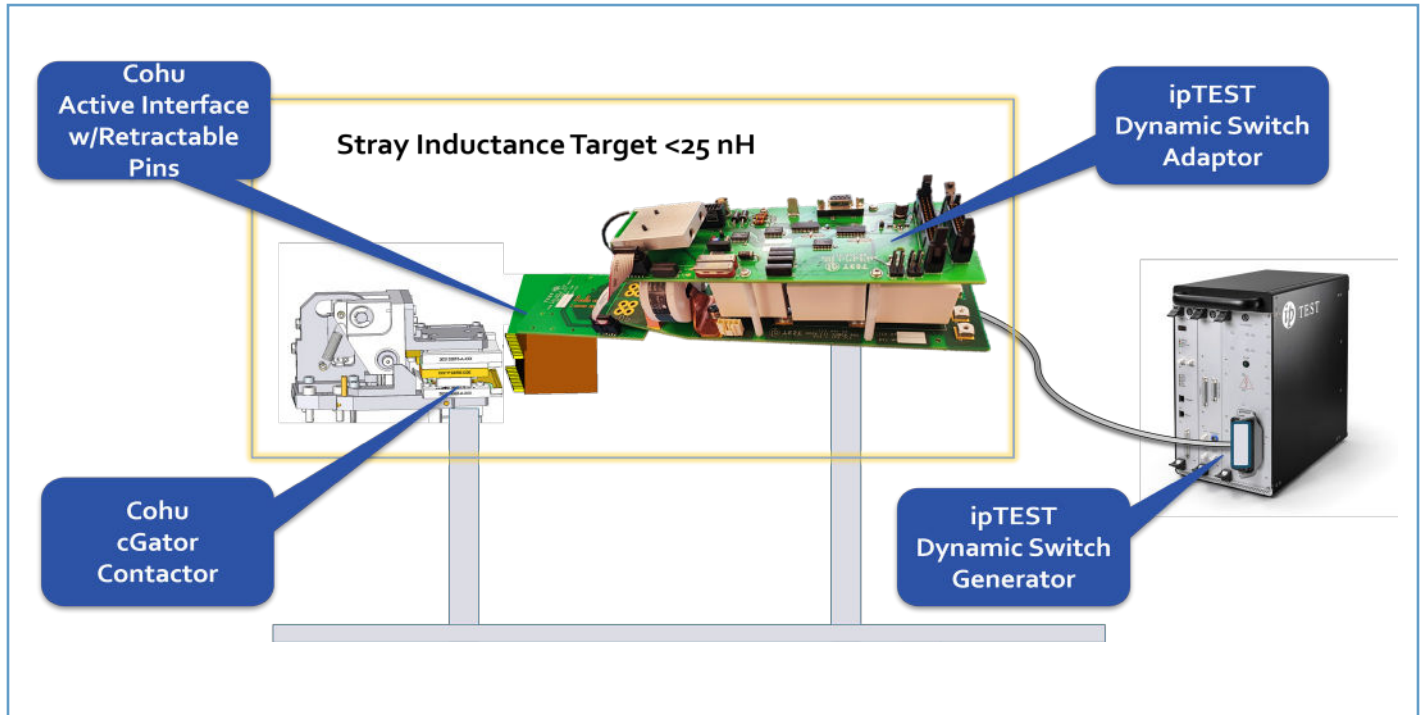
- Field replaceable MEMS probes provide significantly lower cost of test
- Unique single insertion with controlled probe marks less than 1 μm
- Innovative pressure control to prevent arcing during high-voltage test
- Patent pending Volta-Flux™ high-power density solution enables efficient die heat dissipation under test
- Suitable for dynamic high-current switching and short circuit test
- Unique top/bottom die contacting with precisely controlled probe marks
- High-power test parameters up to 6,500 V and 5,000 A

Cohu Partner



ipTEST M2 Platform

SiC & GaN Power Device Test



Optimized low stray inductance interface enables high-speed switching short circuit test

- Low stray inductance DUT and tester interface down to 25 nH
- High-speed dynamic switching test generator up to 1,200 V and 5,000 A
- Compact footprint enabling test resources to get as close as possible to test site
- Dynamic switching tests single, double and multi-pulse
- HV - Off-state tests: BVDSS, IDSS, IGSS, etc.
- LV - On-state tests: Rds(on), Vds(on), Gfs, etc.
- UIS - Unclamped Inductive Load Switching:
 - Avalanche tests UIL, EAR, EAS
- Rg - Gate resistance: RGS, CGS with bias
- Inductive load switching, short-circuit, diodes recovery, Eon, Eoff, tr, tf, Qff, Irr.

NV-Core™

Inspection System



- Full 6-Sided post testing die inspection
- Micro-scale defect detection down to 50 μm
- Vision assisted accurate die placement
- Completed unit-level traceability from wafer input to tape & reel output
- Pre-tape pocket integrity, in-tape device quality, and post-sealing quality inspection capabilities



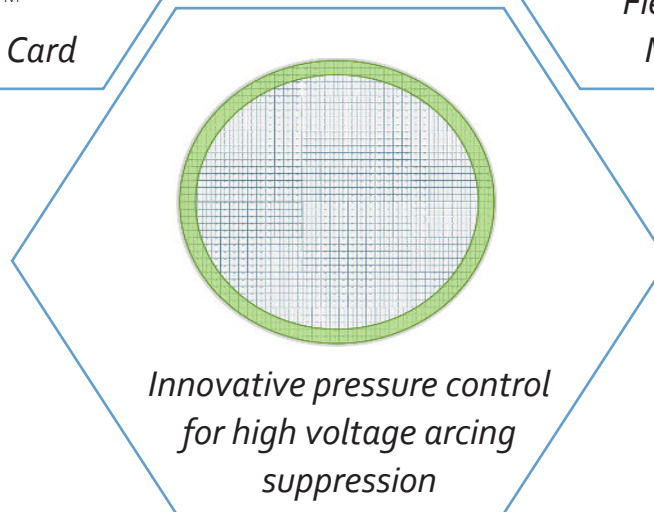
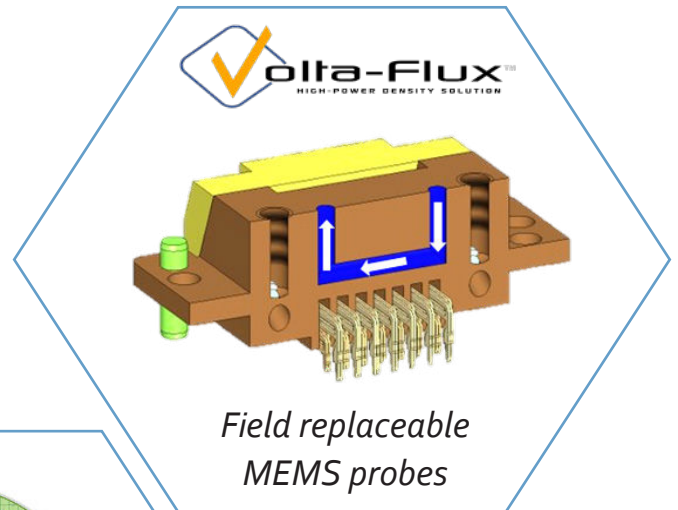
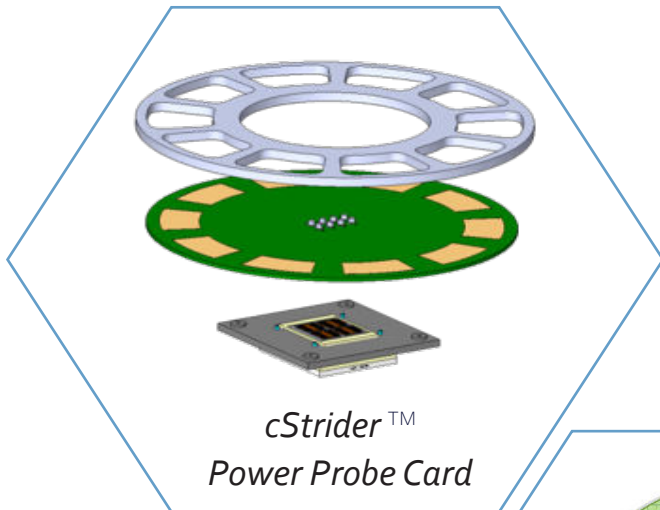
DI-Core™

Data Intelligence System

- Real-time equipment monitoring and management
- Preventative maintenance
- Central recipe management
- Optimized yield and defect detection through real-time Artificial Intelligence inspection
- Knowledge database and unified reports



Wafer Probing High Parallel Test Solution



Identical contact elements for power KGD and wafer probing

- New innovative pressure-level control during high-voltage test process enables probing efficiency on wafer edges
- Scalable design provides flexibility to field-upgrade test parallelism from x1 up to x32
- Single pin replacement allows on-site repair providing significantly lower cost of test
- High voltage test up to 2,500 V
- Maximum current up to 1,000 A

All specifications are subject to change without notification and are for reference only. For detailed performance specifications, please contact Cohu.

REV20240112

www.cohu.com/wide-bandgap-test

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