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EMERSON™



DGS test systems

Application-oriented gate stress test for SiC and GaN power semiconductors

Some effects of new failure mechanisms in SiC and GaN wide bandgap materials are not visible with traditional tests, but nevertheless have an influence on the real application.

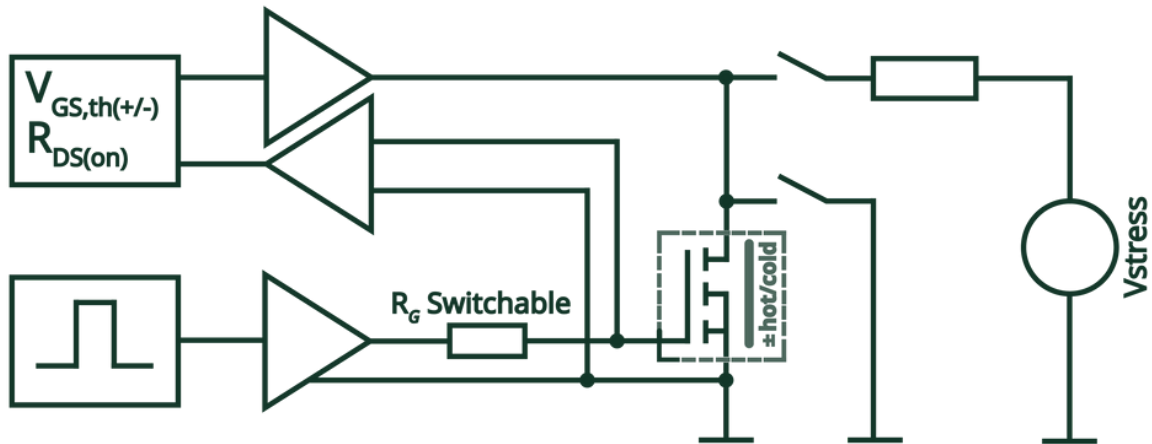
This gap in the qualification is closed by DGS tests (Dynamic Gate Stress), whose requirements clearly exceed the previous test procedures, and which are more strongly oriented to the application.

DGS is a test using fast voltage shifts to stimulate fault mechanisms at the gate terminal. This test system covers all relevant test specifications. Besides that, it runs fully automated with a detailed reporting for further data analysis.

System Features

For DGS test, NI offers systems that convert the extended requirements from industry into automated dynamic tests. To be able to meet quickly changing requirements, we pay special attention to flexibility.

In addition to the stimuli, the DGS test system also offers numerous in-situ measurements to determine relevant parameters in a defined period of time. These in-situ measurements show efficiently the long term effects of dynamic gate stress on the gate oxide and enable you to provide precise statements to your customer.



	DGS test system
DGS stimuli	<ul style="list-style-type: none"> • Up to 240 DUT • Hot/cold plate ranging from 20°C to 200°C • High voltage drain stimuli up to 1.5 kV, SW configurable • High dV/dt stimuli of the gate with up to 1V/ns • Software configurable V = ± 30V max. • Up to 500kHz frequency, software definable • Possibility to test application specific with own gate drivers
Dynamic testing output stage	<ul style="list-style-type: none"> • Maximum drain voltage up to 1500V • Configurable output frequency between 0Hz and 500kHz (maximum frequency depending on voltage and DUT capacitance) • Configurable duty cycle settings between 25% and 75% in 5% steps



Get more information about DGS test systems by scanning the QR code or write us an e-mail to set-info@ni.com!