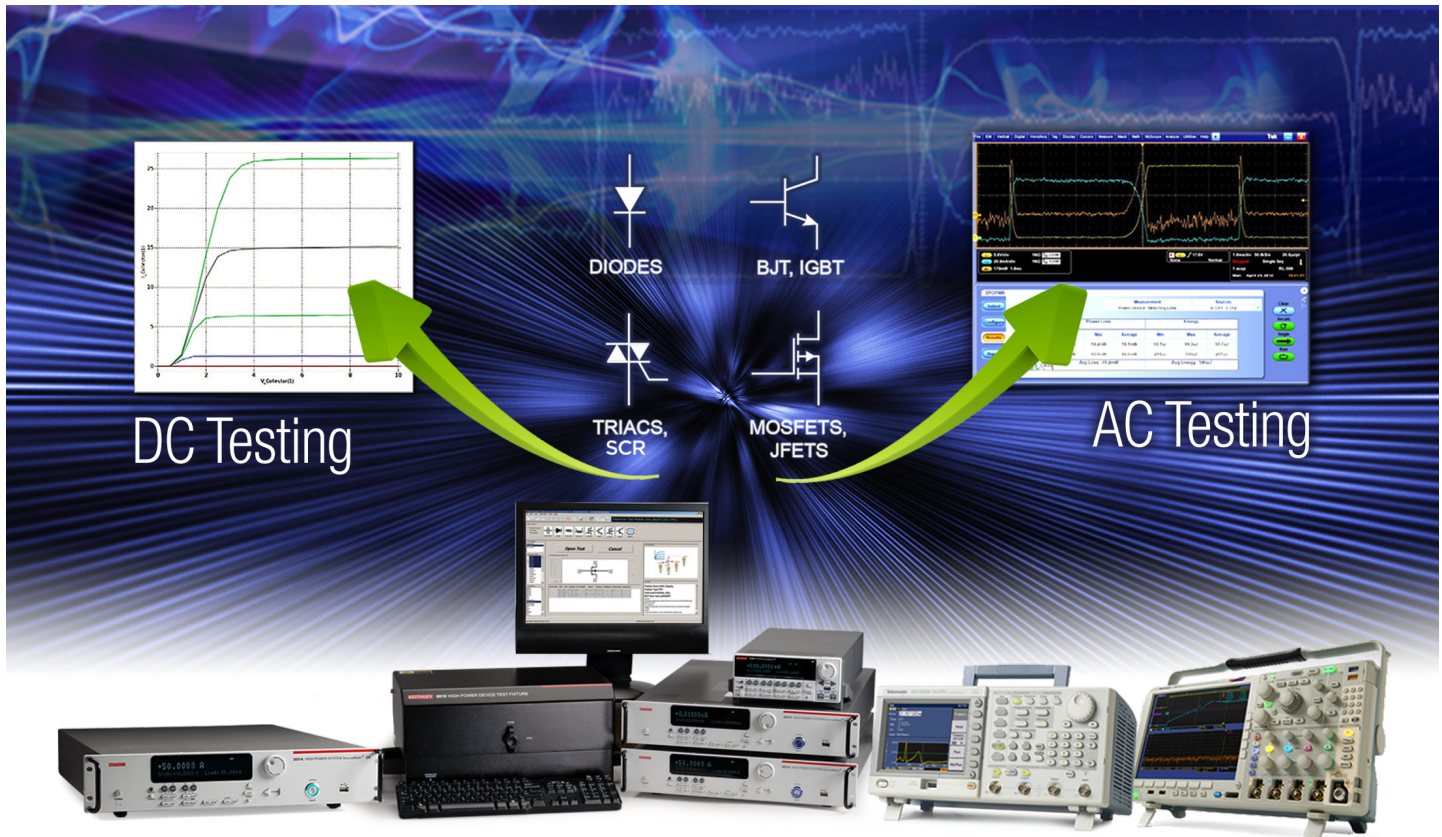


# Power Semiconductor Device Testing Solutions for Design Validation, Characterization, and Reliability



## Learn Tips and Techniques for Practical DC and AC Testing of Today's Power Semiconductor Devices

You face considerable challenges testing today's power semiconductor devices, especially those that use advanced materials like Silicon Carbide (SiC) and Gallium Nitride (GaN).

- Higher voltages and power levels
- Faster switching times
- Higher peak currents
- Lower leakage times

The Tektronix/Keithley product portfolio spans DC and AC (time domain) measurements. We offer unique static and dynamic test and measurement solutions for design validation, characterization, and reliability testing of power semiconductor devices.

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# Explore our DC and AC Power Semiconductor Device Testing Solutions

Visit our reference library at [www.keithley.com/powerdevice](http://www.keithley.com/powerdevice) to learn more.

## Source Measure Unit (SMU) Instruments

- Single- or dual-channel, high speed, precision, DC characterization, and test instruments
- From 100A to 0.1fA, 3kV to 100 $\mu$ V, up to 2000W pulsed power, single- or dual-channel
- TSP-Link<sup>®</sup> technology links Series 2600 SMU instruments to form powerful multi-channel systems that rival the system speed of large ATEs



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## Parametric Curve Tracer Configurations

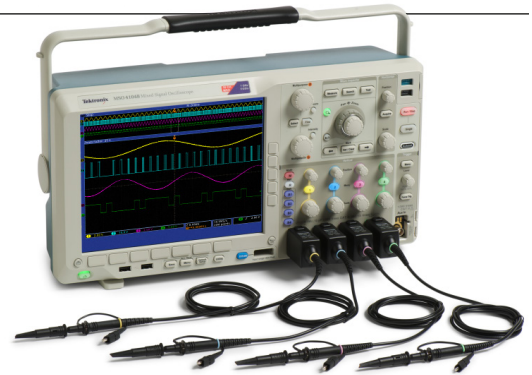
- Offers the best of a curve tracer and parametric analyzer
- Test management software includes both Trace Mode for real-time graphing and Parametric Mode for parameter extraction
- Wide Dynamic Range offered
  - From  $\mu$ V to 3kV
  - From fA to 100A
- Flexible, reconfigurable system adapts for evolving power test requirements



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## Oscilloscopes and Power Probes

- Fast rise time to handle switching signal frequency components
- High sample rate to capture transitions
- Deep record length for long acquisition
- Power analysis application software available
- Probing solutions
  - High-voltage (up to 40kVpk), differential (up to 6kV) and current (up to 750Apk)



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## Arbitrary Function Generators

- Function, arbitrary waveform, and pulse capabilities allow complete control loop characterization
- 12 standard waveforms and up to 20V p-p provide unmatched performance and versatility
- Pulse generation with variable duty cycle, slope times, noise add and pulse width modulation capability
- Floating output with the capability to add external offset of up-to 42V
- Expand the number of channels by synchronizing multiple units



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