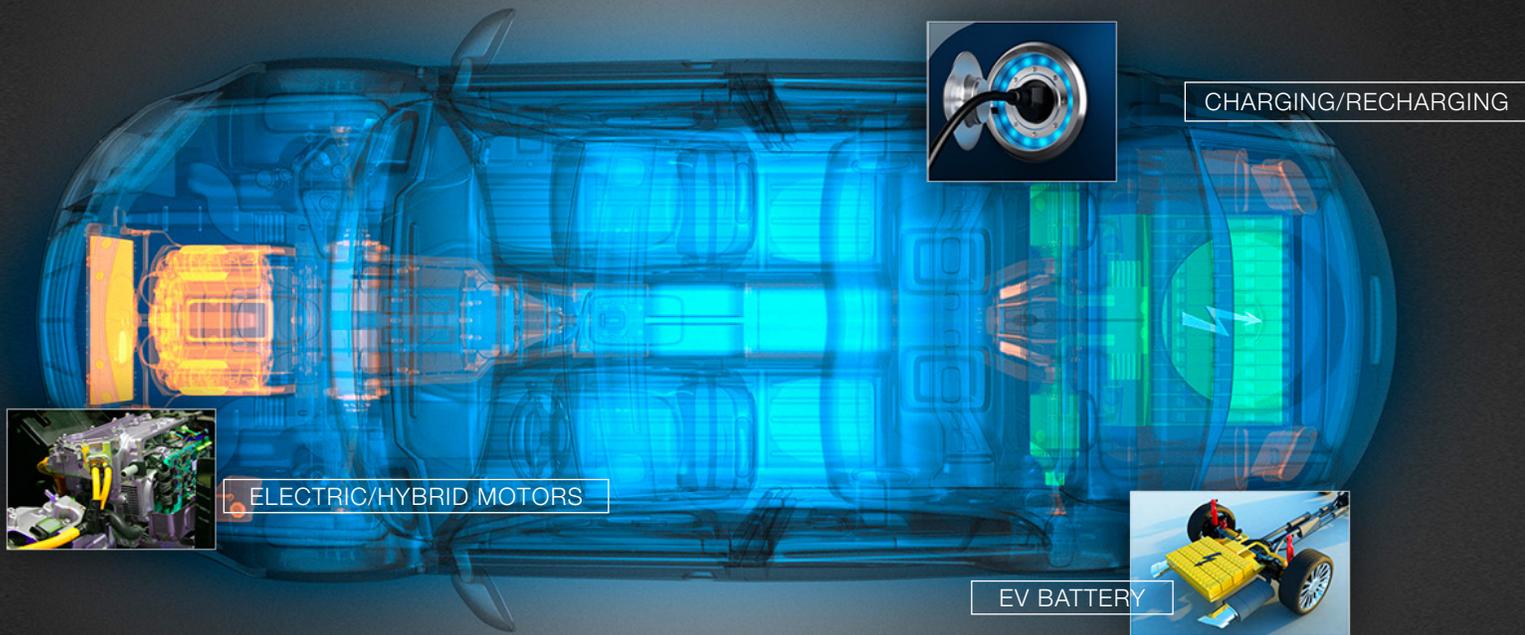


# Power Testing Applications for Today's Automobiles



## Learn How to Resolve a Test and Measurement Challenge That's Driving You — Download our Applications Kit

[www.keithley.com/automotive/power](http://www.keithley.com/automotive/power)

With today's rapid increase of electric and hybrid vehicles, more efficient power trains, and sophisticated battery management systems, test and measurement applications in the automotive industry have grown significantly. And these new applications are accompanied by new testing requirements and challenges. **Download our applications kit and learn more about:**

### ■ Testing High Power Components

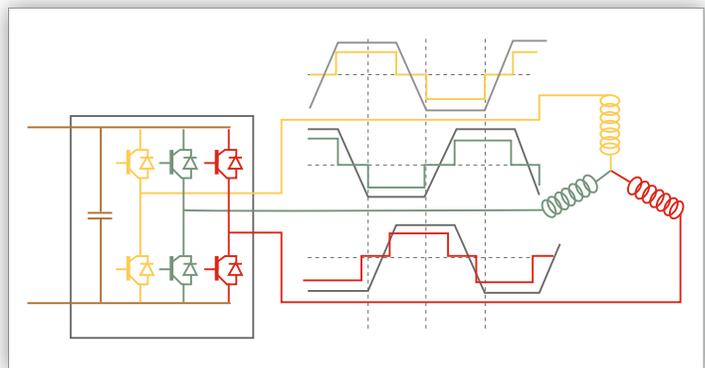
- Silicon Carbide (SiC) and Gallium Nitride (GaN) devices
- MOSFETs, IGBTs,

### ■ Characterizing the Power Source

- Battery charge/discharge testing
- Charger performance

### ■ Testing the Drive Train

- Power control electronics: EMI susceptibility and harmonics
- Motor output and efficiency



## DC and AC Power Testing Solutions for Today's Automobiles



### Parametric Curve Tracer Configurations

Characterizing and Testing High Power Devices

- Offers the best of a curve tracer and parametric analyzer
- Wide dynamic range - from  $\mu\text{V}$  to 3kV and fA to 100A



### Source Measure Unit (SMU) Instruments and DC Power Supplies

Testing Batteries and Simulating Waveforms

- SourceMeter® SMU instruments provide a fully-integrated, four-quadrant, all-in-one solution for charge/discharge testing of batteries
- Power supplies create a series of voltage steps that can simulate a wide range of battery output responses to engine loads



### Power Analyzers

Power Control and Motor Efficiency Analysis

- Three-phase measurements for testing three-phase motors
- Pulse width modulation measurement mode for motor drives
- Power conversion efficiency to determine system losses
- Harmonic measurements for system quality analysis



### Oscilloscopes and Probes

Testing Automotive DC-DC Converters

- DC-DC converter spectral analysis
- DC-DC converter turn-on time analysis
- Complete set of differential, high voltage, and current probes delivers superior performance from probe tip to scope



### Integrated Digital Multimeter Switch/Data Logger Systems

High Throughput Battery Testing and Engine Control Unit Testing

- DMM/switch system integrates a high-performance DMM with six slots and can support up to 576 two-wire multiplexer channels for automotive sub-system testing



Visit [www.keithley.com/automotive](http://www.keithley.com/automotive) to learn more.

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