

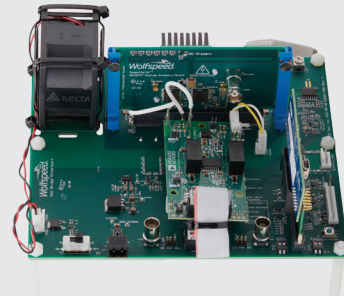
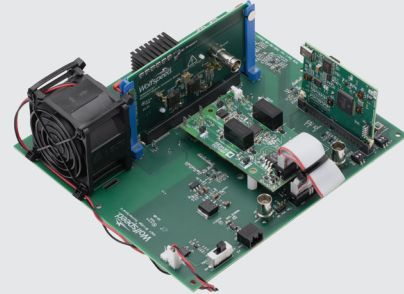


# SPEEDVAL KIT™ MODULAR EVALUATION PLATFORM

## STARTING POINT FOR ALL SILICON CARBIDE DESIGNS

The industry's most versatile Silicon Carbide evaluation platform provides customers with a flexible set of building blocks for in-circuit evaluation of Silicon Carbide system performance. Evaluate and optimize the high-speed dynamic switching performance of Wolfspeed® Silicon Carbide MOSFETs paired with your choice of compatible gate drivers, optional control cards and accessories from other industry-leading partners.

Accelerating the transition to a final design with confidence, this evaluation platform supports a range of voltages, package types and power topologies for almost any power application. The base motherboard can be configured with a range of gate driver cards, control cards and accessories to support the entire design. Each functional block is proven and tested for customers to use as an effective starting point for their Silicon Carbide designs.



### FEATURES

Multiple configurations

Quickly swap devices for testing

Verified compatible components

Can run the half-bridge board in buck or boost mode up to 15kW



### BENEFITS

Comprehensive design kit

Functional blocks as design starting points

Flexible platform for quick evaluation of multiple device choices



### USES

Switching loss measurement

Gate driver evaluation

Thermal testing

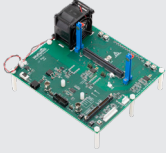
Buck/Boost operation

TO LEARN MORE, VISIT US AT [WOLFSPEED.COM/SPEEDVALKIT](https://www.wolfspeed.com/speedvalkit)

# Explore the options

The platform consists of a motherboard, power daughter cards, partner gate driver cards, and optional control cards and accessories.

## HALF-BRIDGE MOTHERBOARD



| SKU              | Description                                | Working Voltage | Current Rating |
|------------------|--|-----------------|----------------|
| MOD-MB-0900V-40A | Half-Bridge Modular Evaluation Motherboard | 900V            | 40A            |

## GATE DRIVER CARDS



| SKU                | Compatibility          | Designed By       | Gate Driver   |
|--------------------|------------------------|-------------------|---------------|
| CGD1700HB2M-UNA    | SpeedVal Kit, FM3, GM3 | Wolfspeed         | UCC21710 (TI) |
| EVAL-ADUM4146WHB1Z | SpeedVal Kit, FM3, GM3 | Analog Devices    | ADuM4146      |
| Si823H-ACWA-KIT    | SpeedVal Kit, FM3, GM3 | Skyworks          | Si823Hx       |
| UCC 21750*         | SpeedVal Kit, FM3, GM3 | Texas Instruments | UCC21750      |
| UCC 21710*         | SpeedVal Kit, FM3, GM3 | Texas Instruments | UCC21710      |

\* coming soon

## POWER DAUGHTER CARDS



| SKU                     | Blocking Voltage | R <sub>DS(on)</sub> @ 25°C | Package  |
|-------------------------|------------------|----------------------------|----------|
| MOD-PWR-MM-C3M0045065L  | 650V             | 45mΩ                       | TOLL     |
| MOD-PWR-MM-C3M0060065L  | 650V             | 60mΩ                       | TOLL     |
| MOD-PWR-MM-C3M0045065K  | 650V             | 45mΩ                       | TO-247-4 |
| MOD-PWR-MM-C3M0032120K  | 1200V            | 32mΩ                       | TO-247-4 |
| MOD-PWR-MM-C3M0075120K  | 1200V            | 75mΩ                       | TO-247-4 |
| MOD-PWR-MM-C3M0040120K  | 1200V            | 40mΩ                       | TO-247-4 |
| MOD-PWR-MM-C3M0060065K  | 650V             | 60mΩ                       | TO-247-4 |
| MOD-PWR-MM-C3M0032120J1 | 1200V            | 32mΩ                       | TO-263-7 |
| MOD-PWR-MM-C3M0040120J1 | 1200V            | 40mΩ                       | TO-263-7 |
| MOD-PWR-MM-C3M0075120J  | 1200V            | 75mΩ                       | TO-263-7 |
| MOD-PWR-MM-C3M0025065J1 | 650V             | 25mΩ                       | TO-263-7 |
| MOD-PWR-MM-C3M0045065J1 | 650V             | 45mΩ                       | TO-263-7 |
| MOD-PWR-MM-C3M0060065J  | 650V             | 60mΩ                       | TO-263-7 |

## CONTROL CARDS (OPTIONAL)



| SKU             | Designed By       |
|-----------------|-------------------|
| TMDSCNCD280039C | Texas Instruments |
| HVP-56F83783    | NXP               |

## ACCESSORY BOARDS (OPTIONAL)



| SKU                     | Current Rating (A) | Inductance at No Load (μH) | Inductance at Rated Current (μH) | Output Capacitance (μF) |
|-------------------------|--------------------|----------------------------|----------------------------------|-------------------------|
| MOD-ACC-BUCKBOOST-190μH | 40                 | 398                        | 190                              | 48                      |
| MOD-ACC-BUCKBOOST-400μH | 25                 | 693                        | 400                              | 48                      |



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