

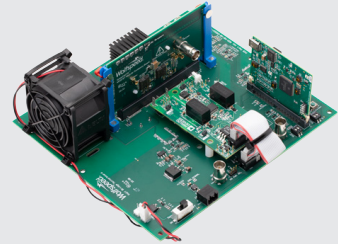


SPEEDVAL™ KIT MODULAR EVALUATION PLATFORM

STARTING POINT FOR ALL SILICON CARBIDE DESIGNS

Wolfspeed's SpeedVal™ Kit Modular Evaluation Platform speeds the transition from silicon to silicon carbide with a flexible set of building blocks for in-circuit evaluation of system performance. Evaluate and optimize the high-speed dynamic switching performance of Wolfspeed silicon carbide MOSFETs paired with your choice of gate drivers from industry-leading partners. Additionally, the newly released 3-phase motherboard enables precise control and firmware development with flexible control options to test simple static loads or advanced motor control function.

This evaluation platform supports a range of voltages, package types and power topologies for almost any power application. The base motherboards can be configured with a range of gate driver cards and control cards with a unique card-edge connection enabling users to quickly change silicon carbide devices meaning testing that once took weeks can now be completed in minutes.



Half-Bridge Motherboard



Three-Phase Motherboard



FEATURES

Multiple configurations

Quickly swap devices for testing

Verified compatible components

Flexible system interfaces including CAN, resolver, encoder, and digital I/O



BENEFITS

Comprehensive design kit

Functional blocks as design starting points

Flexible platform for quick evaluation of multiple device choices

Full power testing up to 30 kW with no design work



USES

Switching loss measurement

Gate driver evaluation

Thermal testing

Buck/Boost operation

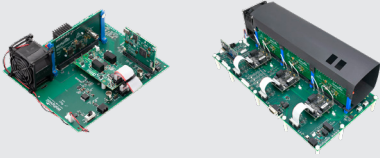
3-Phase inverter operation

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.

MOTHERBOARDS



SKU	Description	Working Voltage	Current Rating
MOD-MB-0900V-40A	Half-Bridge Modular Evaluation Motherboard	900V	40A
MOD-MB-3P-0900V-40A-N	3-Phase Modular Evaluation Motherboard	900V	40A

GATE DRIVER CARDS



SKU	Compatibility	Designed By	Gate Driver
CGD1700HB2M-UNA	SpeedVal Kit, FM, GM	Wolfspeed	UCC21710 (TI)
EVAL-ADUM4146WHB1Z	SpeedVal Kit, FM, GM	Analog Devices	ADuM4146
Si823H-AxWA-KIT	SpeedVal Kit, FM, GM	Skyworks	Si823Hx
UCC21750QDWEVM-054	SpeedVal Kit, FM, GM	Texas Instruments	UCC21750
UCC21710QDWEVM-054	SpeedVal Kit, FM, GM	Texas Instruments	UCC21710
EVAL-ADUM4122WHB1Z	SpeedVal Kit, FM, GM	Analog Devices	ADuM4122
EVAL-ADUM4121WHB1Z	SpeedVal Kit, FM, GM	Analog Devices	ADuM4121

POWER DAUGHTER CARDS



SKU	Blocking Voltage	$R_{DS(on)}$ @ 25°C	Package	Qualification
MOD-PWR-MM-C3M0015065K	650V	15mΩ	TO-247-4	Industrial
MOD-PWR-MM-C3M0025065(K/J1/L)	650V	25mΩ	TO-247-4 / TO-263-7 / TOLL	Industrial
MOD-PWR-MM-C3M0045065(K/J1/L)	650V	45mΩ	TO-247-4 / TO-263-7 / TOLL	Industrial
MOD-PWR-MM-C3M0060065(K/J/L)	650V	60mΩ	TO-247-4 / TO-263-7 / TOLL	Industrial
MOD-PWR-MM-E3M0060065D	650V	60mΩ	TO-247-3	Automotive
MOD-PWR-MM-C3M0120065K	650V	120mΩ	TO-247-4	Industrial
MOD-PWR-MM-C3M0065090J	900V	65mΩ	TO-263-7	Industrial
MOD-PWR-MM-C3M0016120K	1200V	16mΩ	TO-247-4	Industrial
MOD-PWR-MM-E3M0016120K	1200V	16mΩ	TO-247-4	Automotive
MOD-PWR-MM-C3M0021120K	1200V	21mΩ	TO-247-4	Industrial
MOD-PWR-MM-C3M0032120(K/J1)	1200V	32mΩ	TO-247-4 / TO-263-7	Industrial
MOD-PWR-MM-C3M0040120(K/J1)	1200V	40mΩ	TO-247-4 / TO-263-7	Industrial
MOD-PWR-MM-C3M0075120(K/D/J)	1200V	75mΩ	TO-247-4 / TO-247-3 / TO-263-7	Industrial
MOD-PWR-MM-E3M0160120K	1200V	160mΩ	TO-247-4	Automotive
MOD-PWR-MM-C3M0160120J	1200V	160mΩ	TO-263-7	Industrial

CONTROL CARDS (OPTIONAL)



SKU	Designed By
TMDSNCND280039C	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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