



DrMOS

SiC769/SiC769A/SiC762



SiC769/SiC769A/SiC762 Integrated DrMOS Power Stage

The new Vishay Siliconix SiC769, SiC769A, and SiC762 integrated DrMOS solutions provide high-side and low-side n-channel MOSFETs plus a full-featured MOSFET driver IC, all in a single PowerPAK® MLF6x6 package.

KEY BENEFITS

- Proprietary MCM package technology dramatically reduces the power losses and adverse electrical effects of parasitic impedances associated with high-frequency discrete power stage implementations.
- High frequency switching improves transient response and reduces the cost of output filter components.
- Highest power density when used with multi-phase Vcore applications.
- Saves PCB area and gives more space for the user's key competitive technologies.

APPLICATIONS

- CPU and GPU core voltage regulation
- Servers, computers, workstations, game consoles, graphics boards, and PCs

Datasheets are available on our web site at www.vishay.com
 for SiC769CD - <http://www.vishay.com/doc?64981>
 for SiC769ACD - <http://www.vishay.com/doc?65708>
 for SiC762CD - <http://www.vishay.com/doc?65727>



SiC769/SiC769A/SiC762 Integrated DrMOS Power Stage

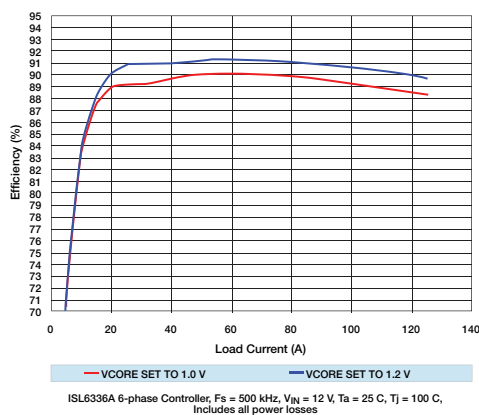
The SiC769/SiC769A/SiC762 is an integrated solution that contains PWM optimized n-channel MOSFETs (high side and low side) and a full featured MOSFET driver IC. The device complies with the Intel DrMOS standard for desktop and server Vcore power stages. The SiC769/SiC769A/SiC762 delivers up to 35 A continuous output current and operates from an input voltage range of 4 V to 24 V. The integrated MOSFETs are optimized for output voltages in the ranges of 0.8 V to 2.0 V with a nominal input voltage up to 20 V. The device can also deliver very high power at 5 V output for ASIC applications.

The SiC769/SiC769A/SiC762 incorporates an advanced MOSFET gate driver IC. This IC accepts a single PWM input from the VR controller and converts it into the high- and low-side MOSFET gate drive signals. The driver IC is designed to implement the skip mode (SMOD) function for light load efficiency improvement. Adaptive dead time control also works to improve efficiency at all load points. The SiC769/SiC769A/SiC762 has a thermal warning (THDN) that alerts the system of excessive junction temperature. The driver IC includes an enable pin, UVLO and shoot through protection.

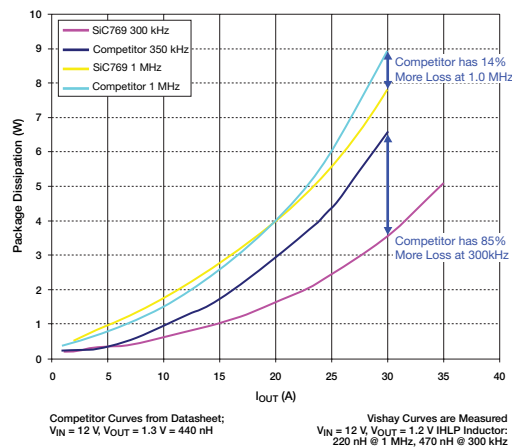
The SiC769/SiC769A/SiC762 is optimized for high frequency buck applications. Operating frequencies in excess of 1 MHz can easily be achieved. The SiC769/SiC769A/SiC762 is packaged in Vishay Siliconix high performance PowerPAK® MLF6x6 package. Compact co-packaging of components helps to reduce stray inductance, and hence increases efficiency.

PARAMETRIC DATA									
DrMOS	V _{IN} Max	V _{CIN} bias supply (V)	V _{DRV} bias supply (V)	I _{OUT} @ 500 kHz (A)	Total Phase Delay (ns)	HS r _{DS(on)} V _{GS} = 4.5 V (mΩ)	LS r _{DS(on)} V _{GS} = 5 V (mΩ)	PWM Input	Package
SiC769	20	5	5	30	52	6.2	1.7	5 V Tristate	6x6 MLP
SiC769A	20	5	5	30	52	6.2	1.7	3.3 V Tristate	6x6 MLP
SiC762	30	5	5	30	52	7.5	2.2	5 V Tristate	6x6 MLP

SiC769/SiC769A 6-pase Efficiency



Estimated Competitive Comparison

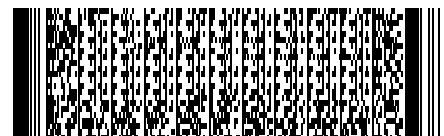


END EQUIPMENT APPLICATION COVERAGE

- Blade Server
- Rack Server
- Storage
- Notebook
- Graphics Card
- High End Desktop
- Set Top Box
- LCD TV



Build Vishay into your Design



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