



New Product Announcement

DMWS120H100SM4

First SiC 1200V MOSFET in TO247-4 Package Enables Higher Power Density

The DMWS120H100SM4 is a 1200V, industrial-compliant, N-channel MOSFET—and is the first product to be released with a silicon carbide (SiC) chip material in the TO247-4 package.

It enables high density and efficiency in industrial motor drivers, photovoltaic energy systems, DC-DC converters, and power supplies for data centers and telecoms.

This device's low $R_{DS(ON)}$, coupled with a low Q_g at 15V gate drive of 52nC, enables system designers to maximize efficiency while ensuring power dissipation is kept to a minimum.

The TO247-4 package includes an additional Kelvin-sensing pin in the fourth lead that connects to the source and provides the ability to optimize switching performance.

The DMWS120H100SM4 is AEC-Q101 qualified, manufactured in IATF 16949 certified facilities, and rated to +150°C T_J .



The DIODES Advantage

The first SiC 1200V MOSFET in a TO247-4 package enables higher power density.

- **Low $R_{DS(ON)}$ and Q_g**
Minimize conduction and switching losses while improving power efficiency
- **Low R_{thJC}**
0.6°C/W of R_{thJC} enables drain currents up to 37.2A
- **Additional Kelvin-Sensing Pin**
Offers a Kelvin connection to the source and provides the ability to optimize switching performance
- **Low Input Capacitance**
Minimizes switching losses, and lowers the device's case temperature

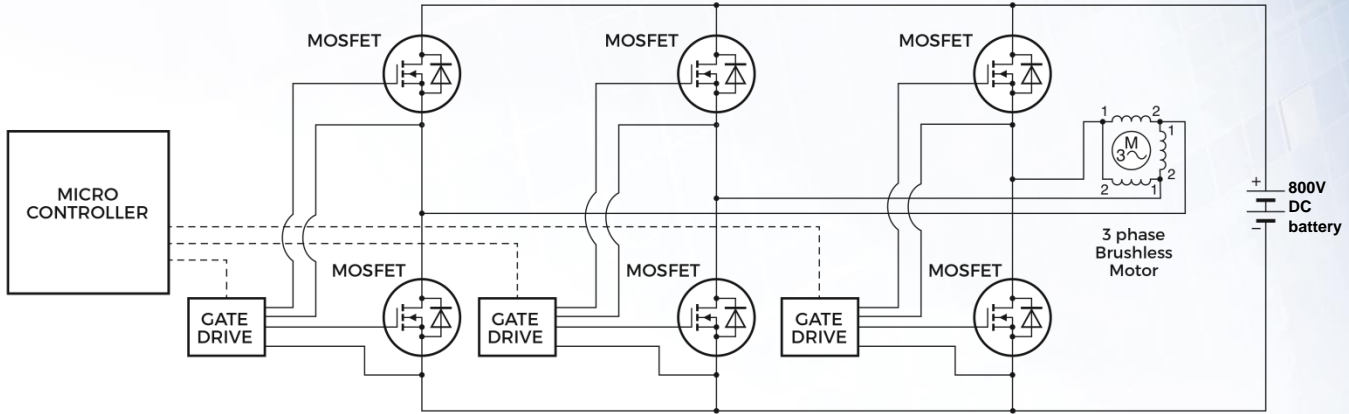
Applications

- Data center and telecom power supplies
- Industrial motor drives
- DC-DC converters
- Solar inverters
- EV battery chargers

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Typical Application



Product Portfolio

Part Number	BV _{DSS}	V _{GS}	Continuous Drain Current (A)		R _{DS(on)} @15V _{GS} (Typ)	Q _g @15V _{GS} (Typ)	Package
	V	±V	@ T _C = +25°C	@ T _C = +100°C	mΩ	nC	
DMWS120H100SM4	1,200	+15/-4	37.2	23.5	80	52	TO247-4

Ordering Information

Orderable Part Number	Package	Packing	
		Quantity	Carrier
DMWS120H100SM4	TO247-4	30 Pieces	Tubes