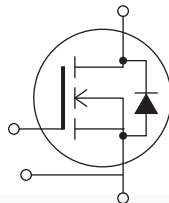


SiC MOSFET (TO-247-4L)

FMG50AQ170N6

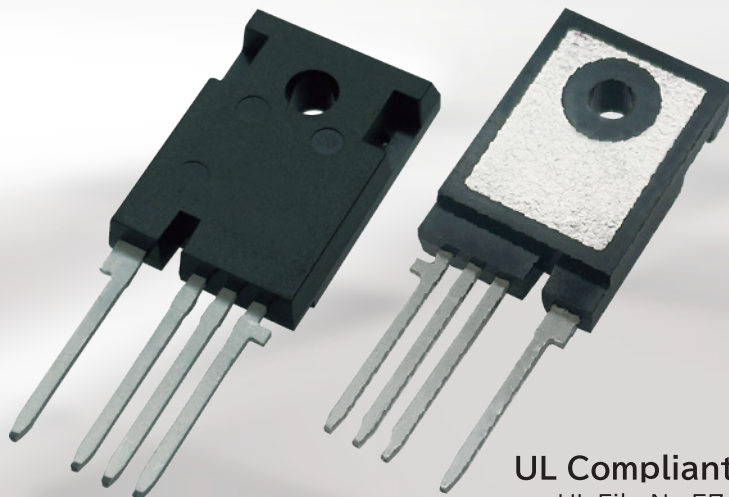
50A 1700V SiC MOSFET

TO-247-4L Package (Isolated)



Applications

- ▶ Industrial Inverters
- ▶ Switching Power Supplies
- ▶ High Frequency Power Supplies etc.



UL Compliant
UL File No.E76102

Features

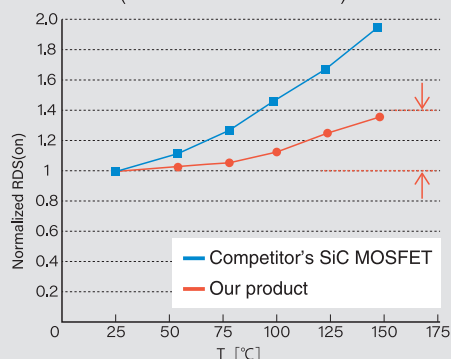
- Isolated TO-247-4L package with high heat dissipation
- No additional FWD(Flywheel Diode) required
- High short-circuit withstand time capability
- Low on-resistance even at high temperatures
- High noise immunity

Advantages brought by DioMOS* technology

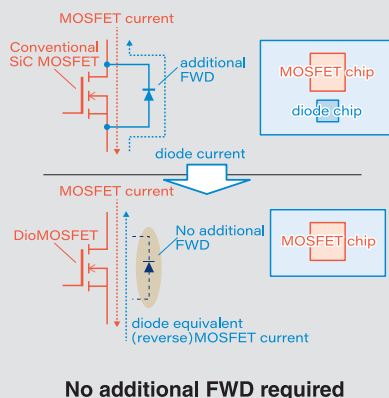
*SiC MOSFETs(DioMOS) with flywheel diode are mounted to maximize package space utilization, resulting in low RDS(on).

Low on-state resistance even at high temp.

ON Resistance temperature characteristics (normalized at 25 °C)

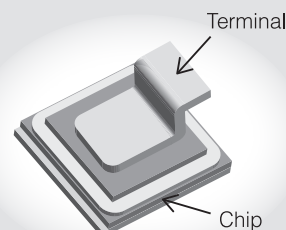


Built in FWD



Supports high current density

The unique terminal structure reduces wiring resistance and provides strong bonding, bringing out SiC chips performance with a current density four times greater than in conventional products.

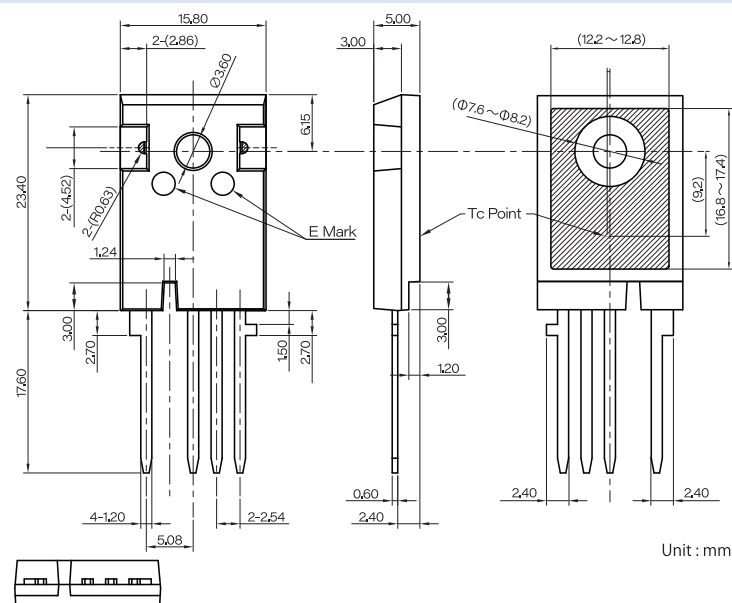


Tj=25°C unless otherwise specified

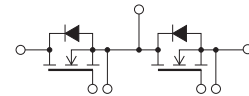
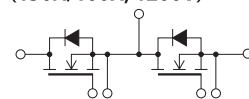
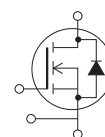
Item	Symbol	Unit	Rating	Conditions
Drain-Source Voltage	V _{DSS}	V	1700	
Continuous Drain Current	I _D	A	50	V _{GS} =20V, T _C =101°C、DC
Total Power Dissipation	P _{tot}	W	440	T _C =25°C
Operating Junction Temperature	T _j	°C	- 40 ~ +150	
Isolation Voltage	V _{iso}	V	2500	AC, RMS, 1min, Main Terminal to Case

Tj=25°C unless otherwise specified

Item	Symbol	Unit	Rating			Conditions
			Min.	Typ.	Max.	
On-State Resistance	RDS(on)	mΩ		16.3	31.0	VGS=20V, ID=50A
				22.1	41.0	VGS=20V, ID=50A, TJ=150°C
Drain Cut-off Current	IDSS	μA			100	VDS=1700V, VGS=0V
Gate-Source Threshold Voltage	VGS(th)	V	3.0	4.0	5.2	VDS=10V, ID=1.5mA
Gate-Source Leakage Current	IGSS	nA			100	VGS=20V, VDS=0V
Thermal Resistance	Rth(j-c)	°C/W		0.21	0.28	Junction to Case(per Leg)



SiC MOSFET



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- Appearance and specifications of products are subject to change without notice for improvement reasons.

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