

N3T035MP120K

1200 V 35 mΩ Silicon Carbide MOSFET

V_{DS}	I_D	$R_{DS(on)}$	Package
1200 V	76 A	35 mΩ	TO-247-4

Features

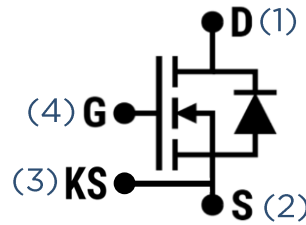
- State-of-the-art SiC MOSFET technology
- Reliable gate oxide process
- 100% avalanche tested
- Low input capacitance
- Low internal gate resistance
- Low body diode forward voltage drop

Benefits

- Higher system efficiency
- Reduced cooling requirements
- Increased power density
- Increased system switching frequency
- Enhanced system reliability
- Reduced total harmonic distortion

Maximum Ratings

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	Note
Drain-Source Voltage	$V_{(BR)DSS}$	$T_C = 25\text{ °C}$	1200	-	-	V	
Gate-Source Voltage	$V_{GS(max)}$		-10	-	25	V	
	$V_{GS,op}$	Recommended Operation	-	-5/+20	-		
Continuous Drain Current	I_D	$V_{GS} = 20\text{ V}, T_C = 25\text{ °C}$	-	-	76	A	Fig. 13
		$V_{GS} = 20\text{ V}, T_C = 100\text{ °C}$	-	-	54		
Pulsed Drain Current	$I_{D(pulse)}$	$T_C = 25\text{ °C}$ t_p limited by $T_{j(max)}$	-	-	160	A	Fig. 12
Power Dissipation	P_{tot}	$T_C = 25\text{ °C}$	-	-	319	W	Fig. 14
Avalanche Energy, Single Pulse	E_{AS}	$L = 26\text{ mH}, I_{AS} = 5.5\text{ A}$	-	393	-	mJ	
Operating and Storage Temperature	T_J, T_{stg}		-55	-	175	°C	



(1) (2) (3) (4)

Applications

- Motor drives
- Solar PV inverters
- EV onboard chargers
- Server power supplies
- Energy storage systems
- EV fast charging stations
- Solid-state power controllers
- Uninterruptible power supplies

Typical Performance

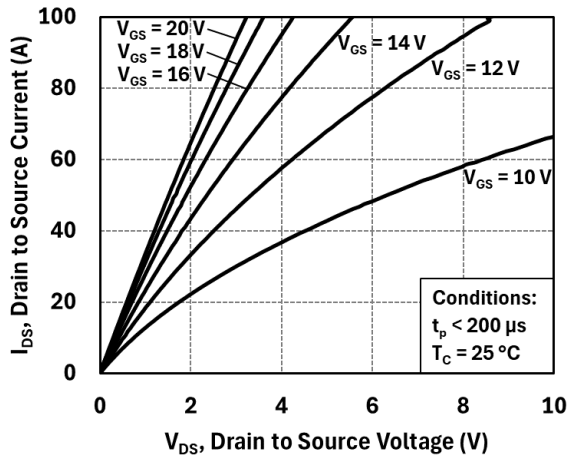


Figure 1: Output Characteristics at 25 °C

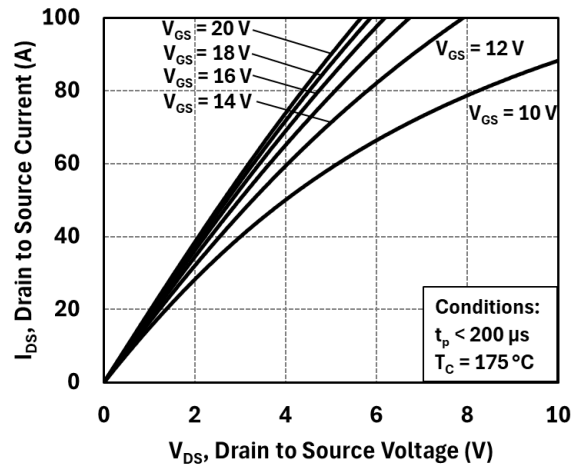


Figure 2: Output Characteristics at 175 °C

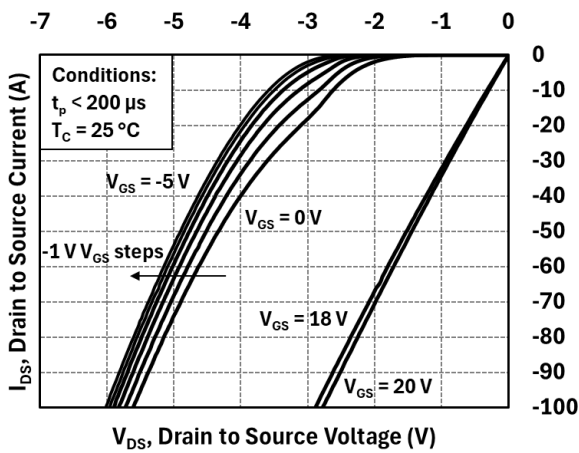


Figure 3: Body Diode Characteristics at 25 °C

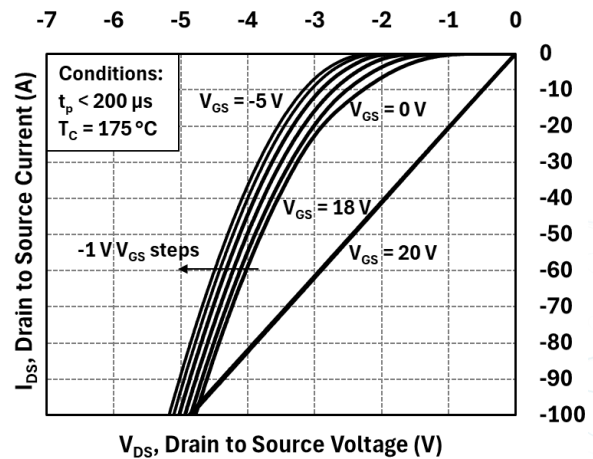



Figure 4: Body Diode Characteristics at 175 °C

NoMIS Power and  NoMIS Power are registered trademarks of NoMIS Power Corporation in the United States and/or other countries. NoMIS Power reserves the right to make changes without further notice to any products herein. NoMIS Power makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does NoMIS Power assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. NoMIS Power does not convey any license under its patent rights nor the rights of others.

NoMIS Power Corporation

251 Fuller Rd, Albany, NY 12203, USA

together@NoMISPower.com | NoMISPower.com

