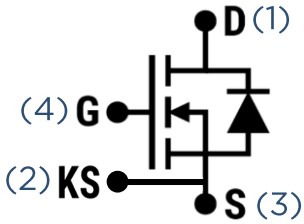
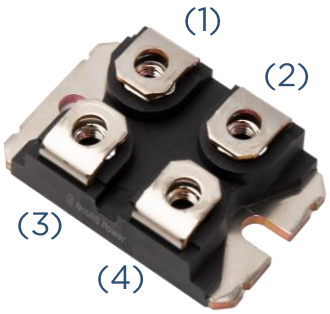
N3T200MP330S
3300 V 200 mΩ Silicon Carbide MOSFET

V_{DS}	I_D	$R_{DS(on)}$	Package
3300 V	20 A	200 mΩ	SOT-227

COMING SOON - 100 mΩ MOSFET





Features
- State-of-the-art SiC MOSFET technology
- Reliable gate oxide process
- 100% avalanche tested
- Electrically isolated baseplate

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

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

Electrical Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	Note
Drain-Source Voltage	$V_{(BR)DSS}$	T_C = 25 °C	3300	-	-	V	
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 0 V, V_{GS} = 0 V	-	1	100	µA	Fig. 6
Gate-Source Voltage	$V_{GS(max)}$		-10	-	25	V	
	$V_{GS,op}$	Recommended Operation	-	-5/+20	-		
Gate Threshold Voltage	$V_{GS(th)}$	V_{GS} = V_{DS} , I_D = 2.5 mA	2	2.64	3	V	Fig. 4
Drain-Source On-State Resistance	$R_{DS(on)}$	V_{GS} = 20 V, T_C = 25 °C	-	200	-	mΩ	Fig. 1
Continuous Drain Current	I_D	V_{GS} = 20 V, T_C = 25 °C	-	20	-	A	
Diode Forward Voltage	V_{SD}	V_{GS} = -5 V, I_{SD} = 10 A	-	5	-	V	Fig. 5

Typical Performance

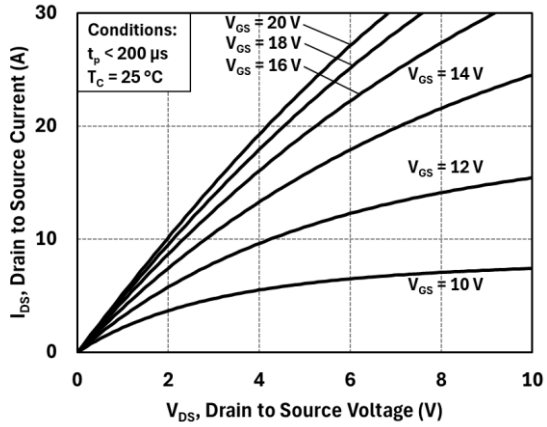


Figure 1: Output Characteristics at 25 °C

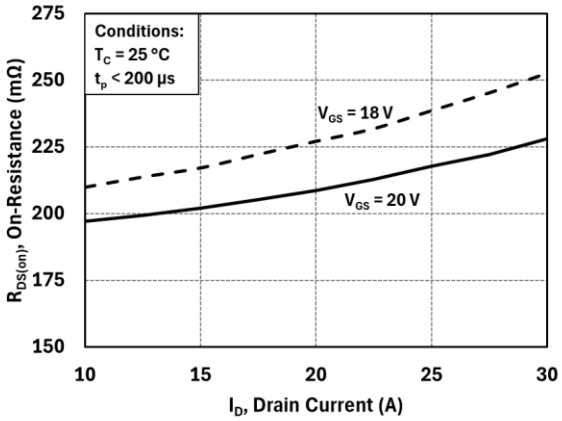


Figure 2: On-Resistance vs. Drain Current

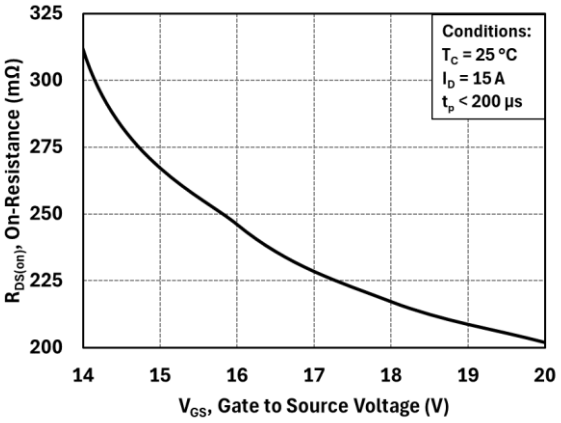


Figure 3: On-Resistance vs. Gate Voltage

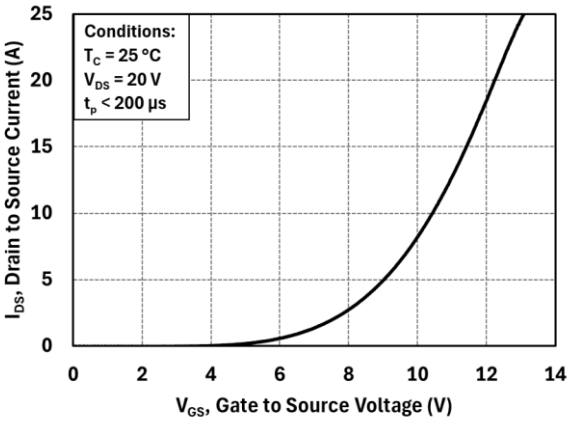


Figure 4: Transfer Characteristics

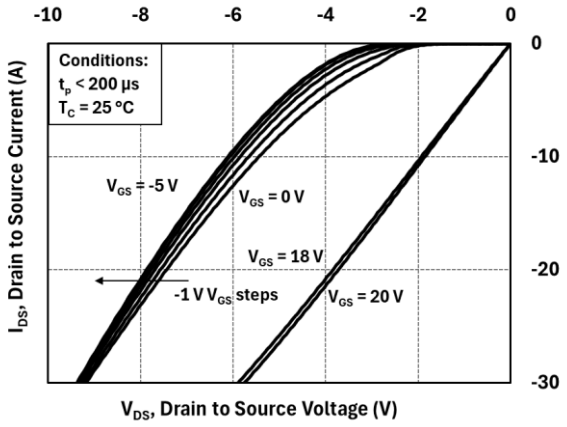


Figure 5: Third Quadrant Behavior

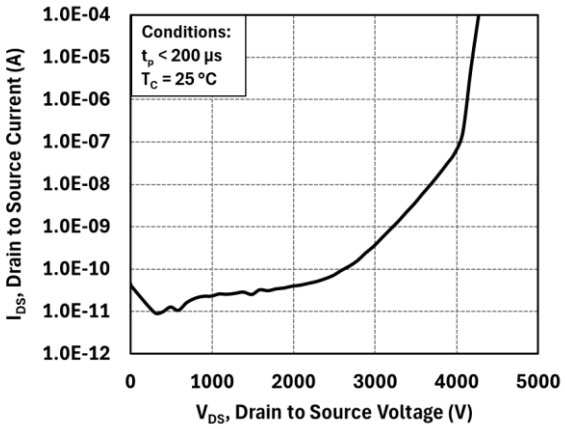


Figure 6: Blocking Behavior