80V N-Ch Power MOSFET

Feature

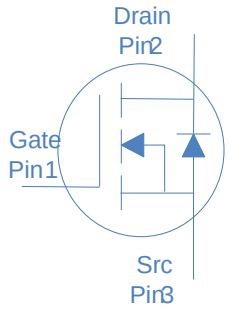
- High Speed Power Switching, Logic Level Gate
- Enhanced Body diode dv/dt capability
- Enhanced Avalanche Ruggedness
- 100% UIS Tested, 100% Rg Tested
- Lead Free

V_{DS}		80	V
$R_{DS(on),typ}$	V_{GS}=10V	4.3	mΩ
$R_{DS(on),typ}$	V_{GS}=4.5V	5.9	mΩ
$I_{D\ (Sillicon\ Limited)}$		110	A
$I_{D\ (Package\ Limited)}$		70	A

Application

- Synchronous Rectification in SMPS
- Hard Switching and High Speed Circuit
- Power Tools
- UPS
- Motor Control

TO-252



Part Number	Package	Marking
HGD058N08SL	TO-252	GD058N08SL

Absolute Maximum Ratings at T_j=25 (unless otherwise specified)

Parameter	Symbol	Conditions	Value	Unit
Continuous Drain Current (Silicon Limited)	I_D	T_C=25	110	A
		T_C=100	78	
Continuous Drain Current (Package Limited)		T_C=25	70	
Drain to Source Voltage	V_{DS}	-	80	V
Gate to Source Voltage	V_{GS}	-	±20	V
Pulsed Drain Current	I_{DM}	-	380	A
Avalanche Energy, Single Pulse	E_{AS}	L=0.3mH, T_C=25	240	mJ
Power Dissipation	P_D	T_C=25	150	W
Operating and Storage Temperature	T_J, T_{stg}	-	-55 to175	

Absolute Maximum Ratings

Parameter	Symbol	Max	Unit
Thermal Resistance Junction-Case	R	1	/W
Thermal Resistance Junction-Ambient	R	46	/W

Fig 1. Typical Output Characteristics

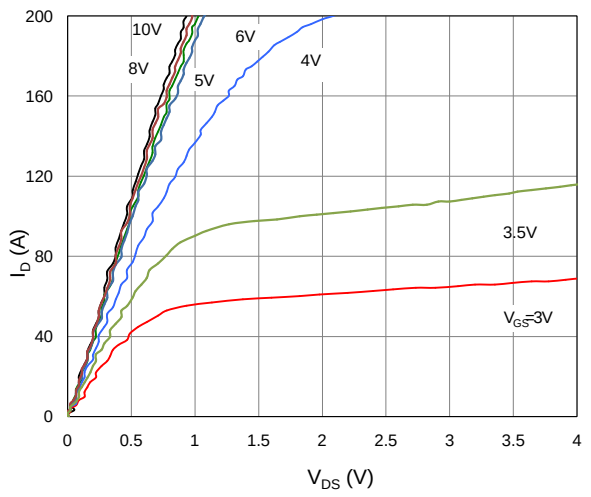


Figure 2. On-Resistance vs. Gate-Source Voltage

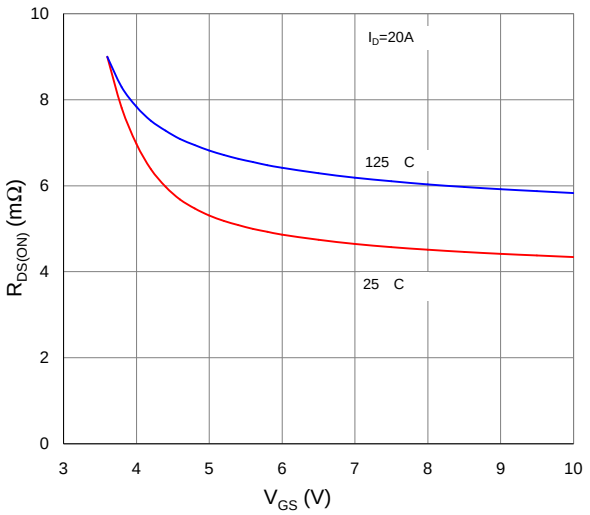


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

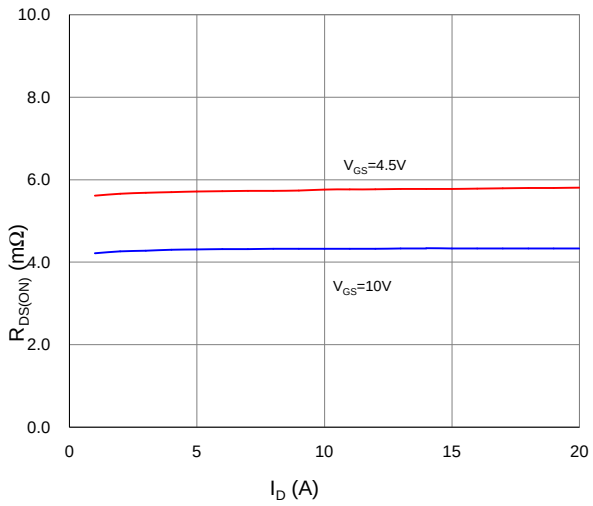


Figure 4. Normalized On-Resistance vs. Junction Temperature

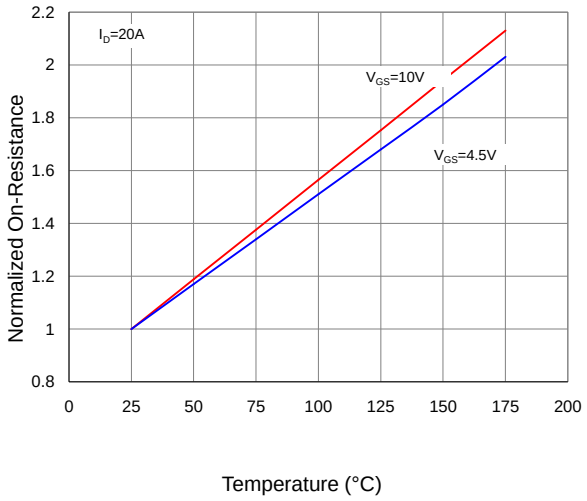


Figure 5. Typical Transfer Characteristics

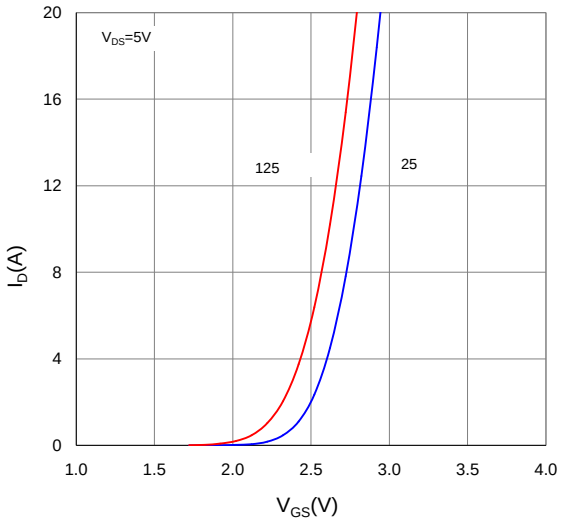
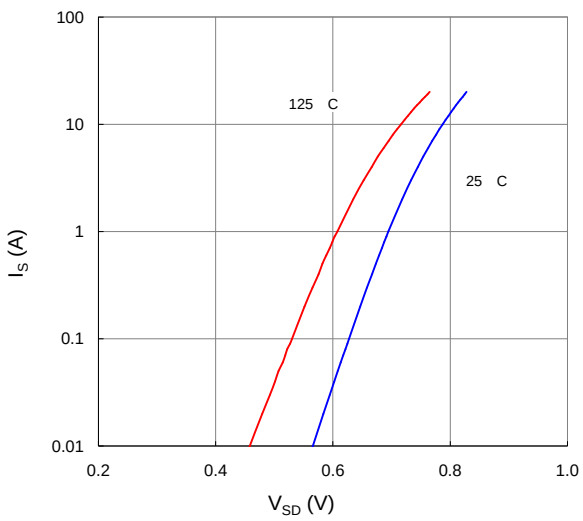


Figure 6. Typical Source-Drain Diode Forward Voltage



TO-252, 2 leads