

# H2M0080120D

## Silicon Carbide Power MOSFET

### N-Channel Enhancement Mode

#### Features

- High Blocking Voltage with Low On-Resistance
- High Speed Switching with Low Capacitances
- Easy to Parallel and Simple to Drive
- Avalanche Ruggedness
- Halogen Free, RoHS Compliant

#### Benefits

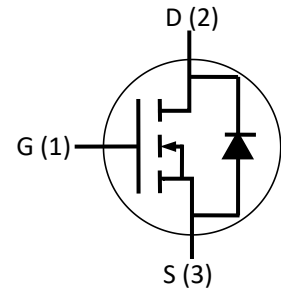
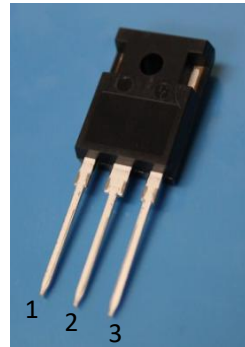
- Higher System Efficiency
- Reduced Cooling Requirements
- Increased Power Density
- Increased System Switching Frequency

#### Applications

- Solar Inverters
- Switch Mode Power Supplies
- High Voltage DC/DC Converters
- Battery Chargers
- Motor Drives

- Pulsed Power applications

#### Package



Part Number	Package
H2M0080120D	TO-247-3

#### Maximum Ratings ( $T_c = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Value	Unit	Test Conditions	Note
$V_{DSmax}$	Drain - Source Voltage	1200	V	$V_{GS}=0V, I_D=100\mu A$	
$V_{GSmax}$	Gate - Source Voltage	-10/+25	V	Absolute maximum values	
$V_{GSop}$	Gate - Source Voltage	-5/+20	V	Recommended operational values	
$I_D$	Continuous Drain Current	28 20	A	$V_{GS}=20V, T_c=25^\circ\text{C}$ $V_{GS}=20V, T_c=100^\circ\text{C}$	
$I_{DM}$	Pulse Drain Current	60	A	Pulse width limited by $T_{jmax}$	
$P_D$	Power Dissipation	166	W	$T_c=25^\circ\text{C}, T_j=150^\circ\text{C}$	Fig. 10
$T_j, T_{stg}$	Operating Junction and Storage Temperature	-55 to +150	$^\circ\text{C}$		





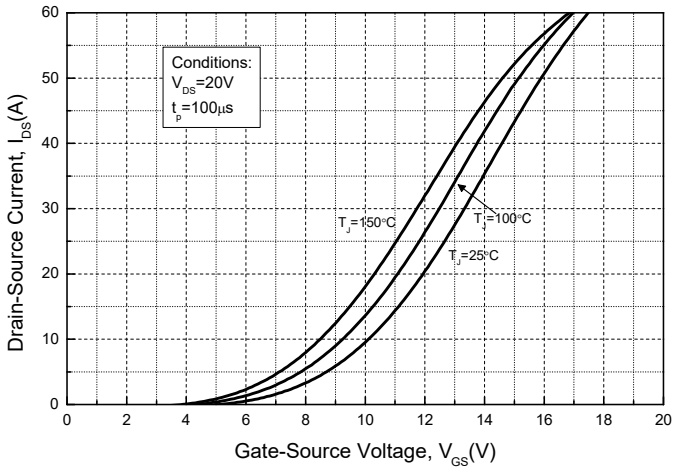


Figure 5. Transfer Characteristic for Various Junction Temperatures

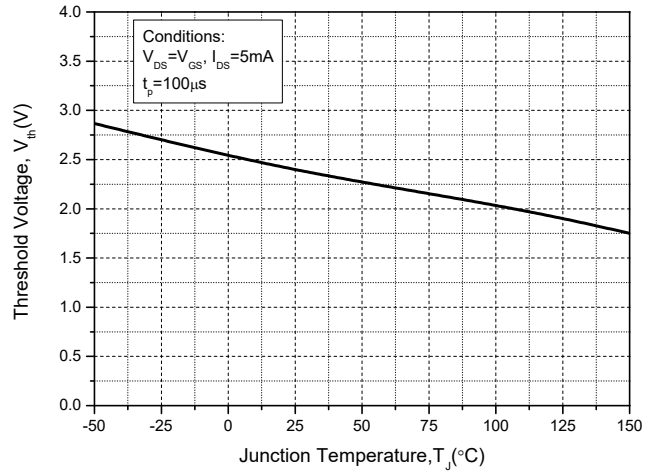


Figure 6. Threshold Voltage vs. Temperature

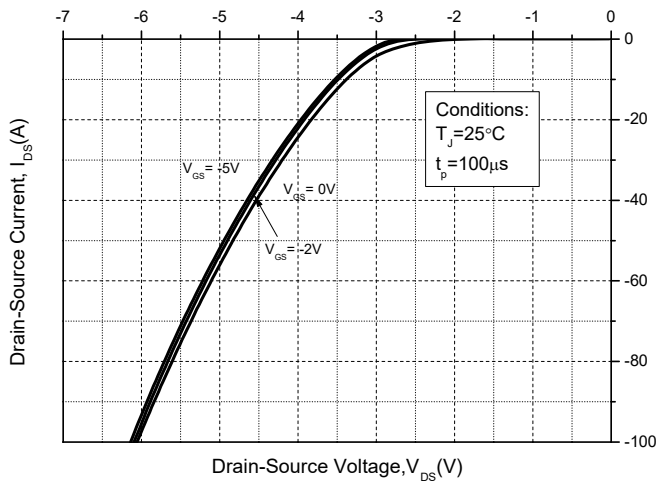


Figure 7. Body Diode Characteristics

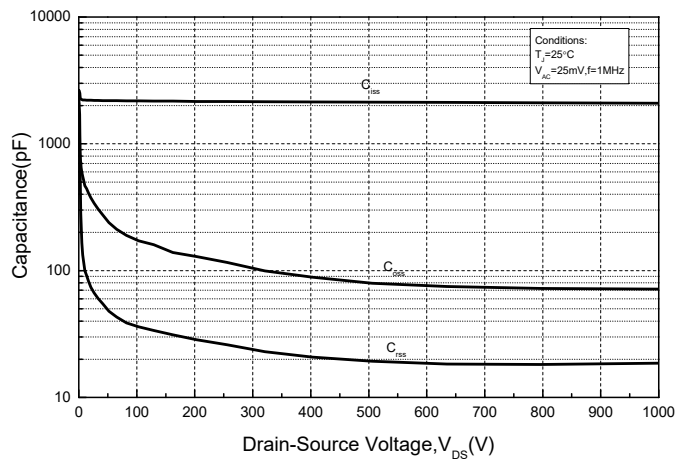


Figure 8. Capacitances vs. Drain-Source Voltage

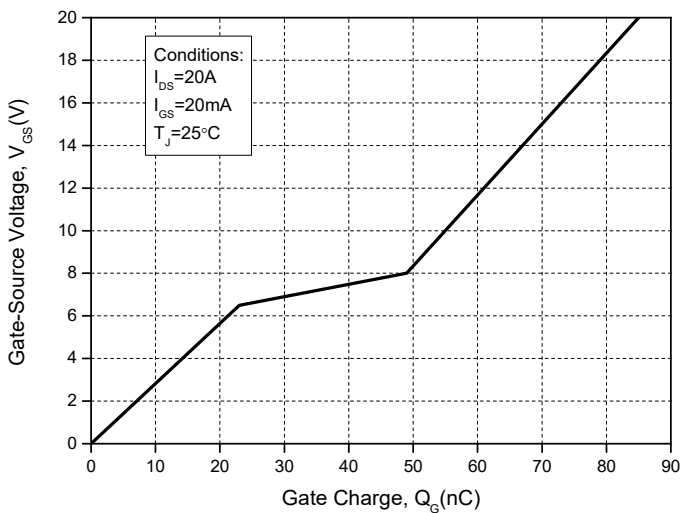


Figure 9. Gate Charge Characteristics

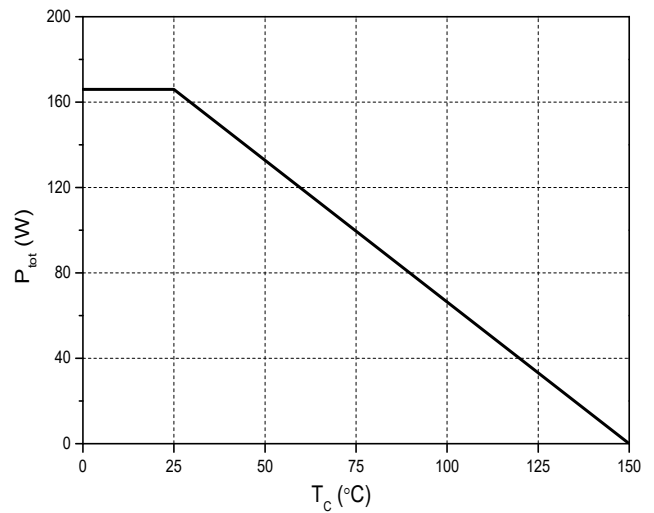


Figure 10. Power Dissipation Derating

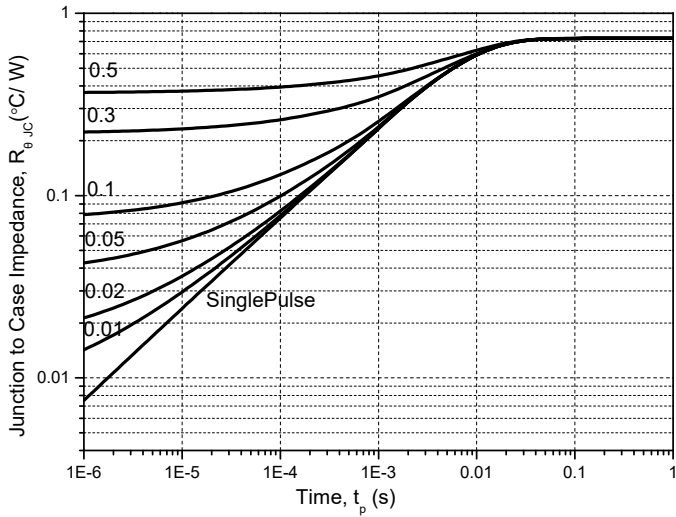


Figure 11. Transient Thermal Impedance

Package Dimensions: TO-247-3L

