

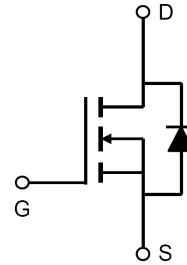
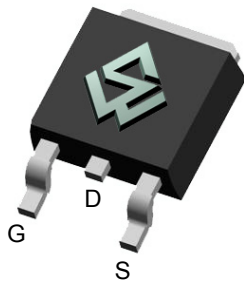
**100V Single N-Channel Enhancement-Mode MOSFET****General Description**

- 100V/60A
- Fully characterized Avalanche voltage and current.
- EAS 100% Test

Product Summary

- BV_{DSS} 100V
- $R_{DS(on)}$ @VGS = 10V < 17mΩ

TO-252 D-PAK

**Absolute Maximum Ratings** ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Maximum | Units |
|--|----------------|------------|------------------|
| Drain-Source Voltage | V_{DS} | 100 | V |
| Gate-Source Voltage | V_{GS} | ± 25 | V |
| Drain Current ($T_A=25^\circ\text{C}$) | I_D | 60 | A |
| Drain Current ($T_C=100^\circ\text{C}$) | | 35 | A |
| Pulsed Drain Current ^a | I_{DM} | 150 | A |
| Single Pulse Avalanche energy ^b | E_{AS} | 169 | mJ |
| Power Dissipation($T_C=100^\circ\text{C}$) | P_D | 45 | W |
| Junction and Storage Temperature Range | T_J, T_{STG} | -55 ~ +150 | $^\circ\text{C}$ |

Thermal Characteristics

| Parameter | Symbol | Maximum | Units |
|---|-----------------|---------|--------------------|
| Thermal Resistance, Junction-to-Case ^c | $R_{\theta JC}$ | 1.1 | $^\circ\text{C/W}$ |
| Thermal Resistance Junction-Ambient | $R_{\theta JA}$ | 50 | $^\circ\text{C/W}$ |

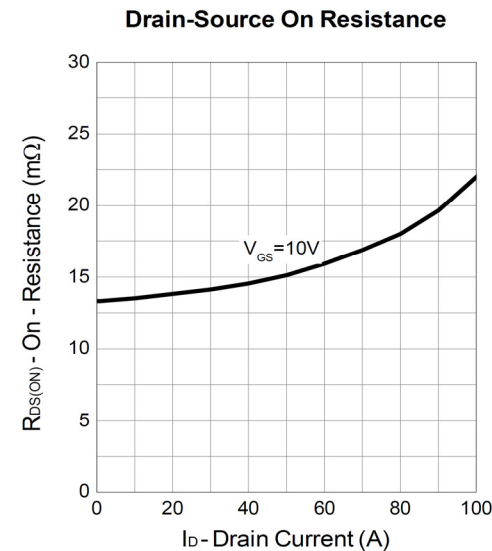
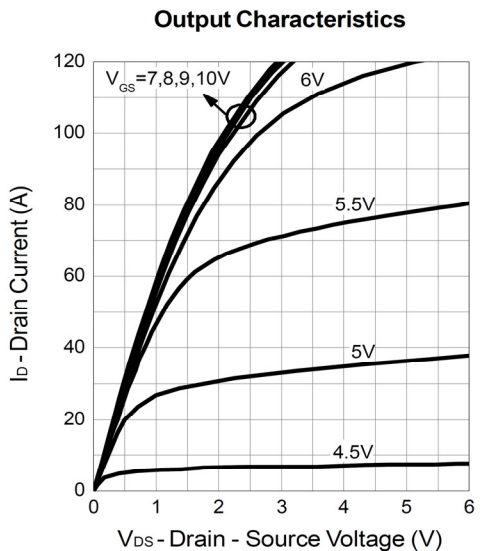
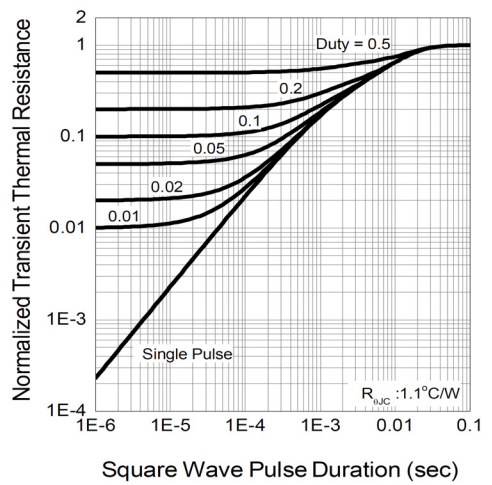
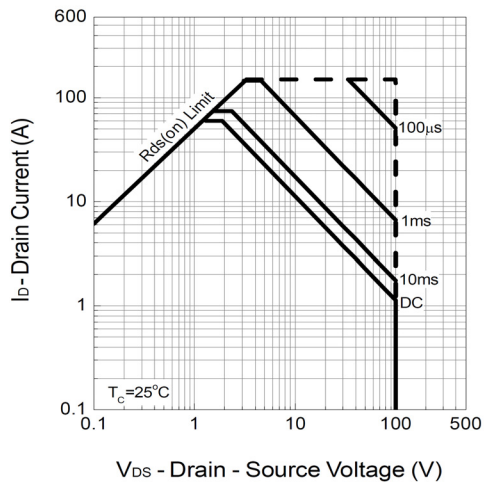
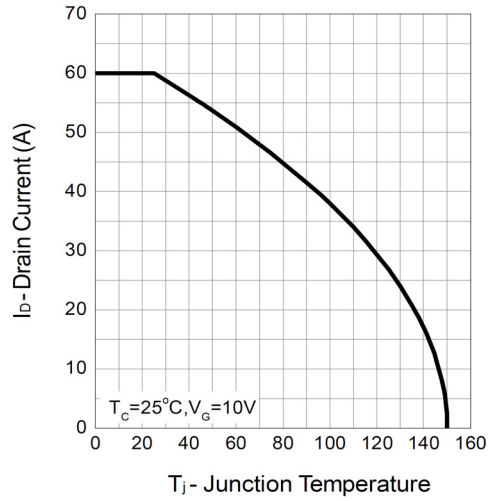
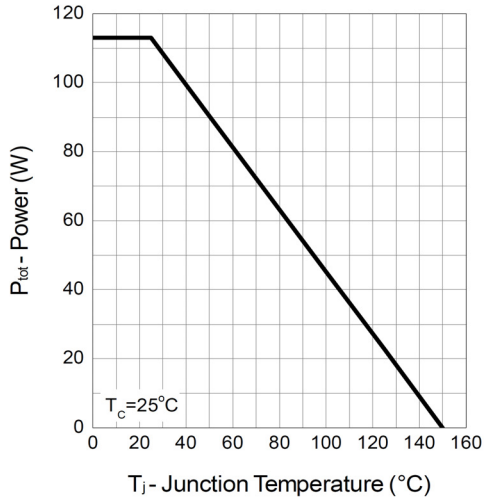


| Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | | | | |
|---|---------------------------------------|---|-----|------|-----------|------------------|
| Symbol | Parameter | Conditions | Min | Typ | Max | Units |
| Off Characteristics | | | | | | |
| BV_{DSS} | Drain-Source Breakdown Voltage | $V_{GS} = 0V, I_D = 250\mu\text{A}$ | 100 | | | V |
| I_{DSS} | Zero Gate Voltage Drain Current | $V_{DS} = 100V, V_{GS} = 0V$ | | | 1 | μA |
| I_{GSS} | Gate-Body Leakage Current | $V_{GS} = \pm 25V, V_{DS} = 0V$ | | | ± 100 | nA |
| On Characteristics | | | | | | |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$ | 2 | 3 | 4 | V |
| $R_{DS(ON)}$ | Drain-Source On-State Resistance | $V_{GS} = 10V, I_D = 25A$ | | 14 | 17 | $\text{m}\Omega$ |
| Drain-Source Diode Characteristics | | | | | | |
| V_{SD} | Diode Forward Voltage | $V_{GS} = 0V, I_S = 15A$ | | 0.8 | 1.3 | V |
| I_S | Maximum Body-Diode Continuous Current | | | | 15 | A |
| Dynamic Characteristics | | | | | | |
| C_{iss} | Input Capacitance | $V_{DS} = 50V, V_{GS} = 0V$ $f = 1.0\text{MHz}$ | | 2120 | | pF |
| C_{oss} | Output Capacitance | | | 250 | | pF |
| C_{rss} | Reverse Transfer Capacitance | | | 155 | | pF |
| Switching Characteristics | | | | | | |
| Q_g | Total Gate Charge | $V_{DS} = 50V, I_D = 10A$ $V_{GS} = 10V$ | | 41 | | nC |
| Q_{gs} | Gate-Source Charge | | | 12.6 | | nC |
| Q_{gd} | Gate-Drain Charge | | | 12.2 | | nC |
| $t_{D(ON)}$ | Turn-On Delay Time | $V_{DD} = 50V, I_D = 1A$ $V_{GS} = 10V$ $R_{GEN} = 6.8\text{ohm}$ | | 20 | | ns |
| t_r | Turn-On Rise Time | | | 9 | | ns |
| $t_{D(OFF)}$ | Turn-Off Delay Time | | | 38 | | ns |
| t_f | Turn-Off Fall Time | | | 22 | | ns |

- Repetitive rating, Pulse width limited by junction temperature $T_{J(MAX)}=150^\circ\text{C}$. Ratings are based on low frequency and duty cycles to keep initial $T_J=25^\circ\text{C}$
- EAS Condition: $T_J=25^\circ\text{C}, V_{DD}=15V, V_G=10V, L=0.5\text{mH}, R_g=25\Omega$
- The value of $R_{\theta jc}$ is measured with the device mounted on 1in^2 FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25^\circ\text{C}$. The value in any given application depends on the user's specific board design.

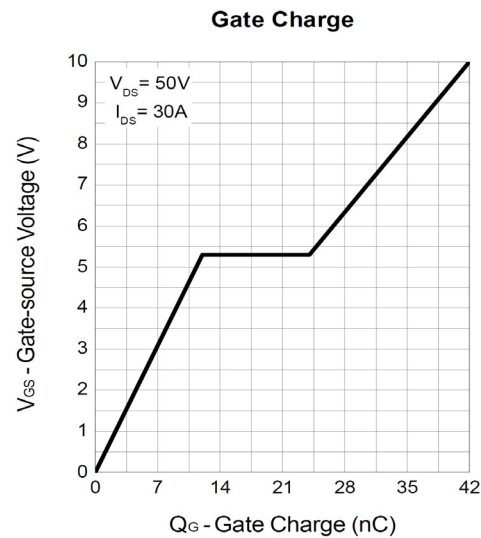
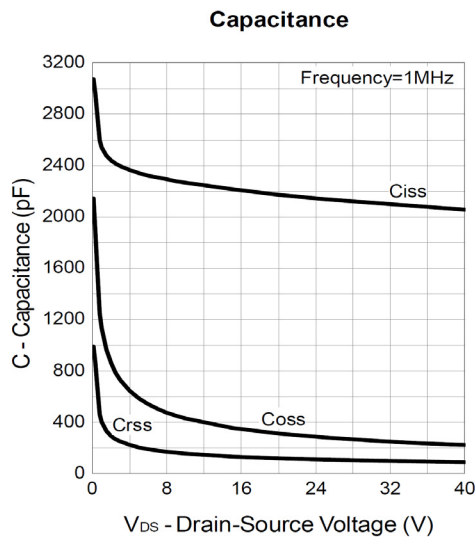
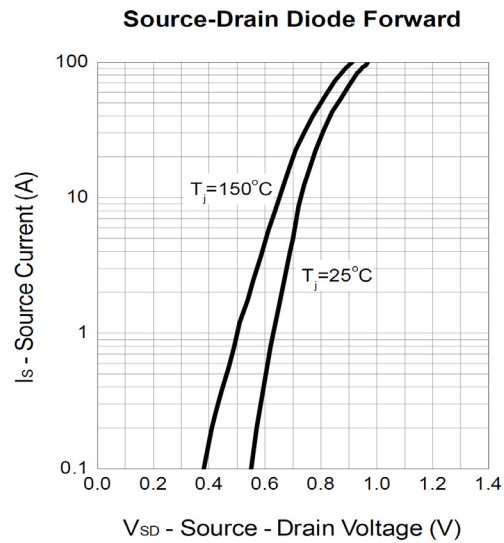
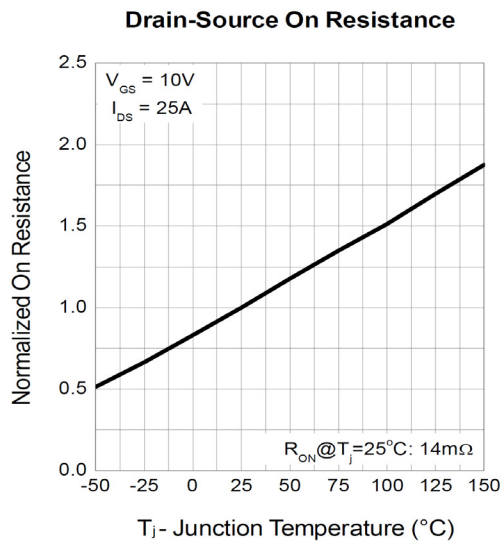
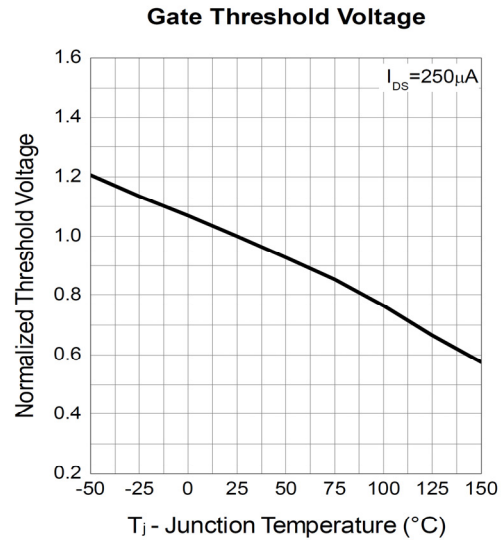
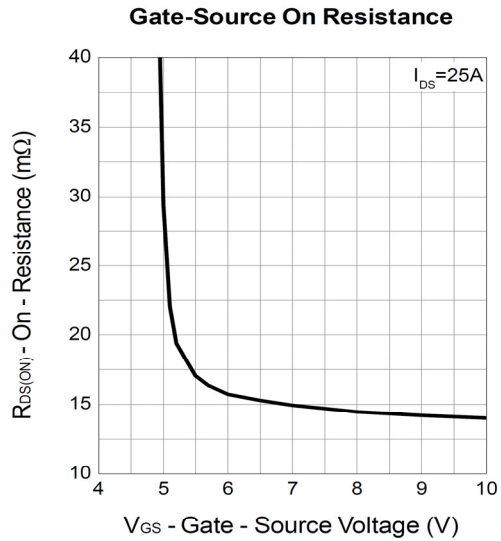


Typical Characteristics



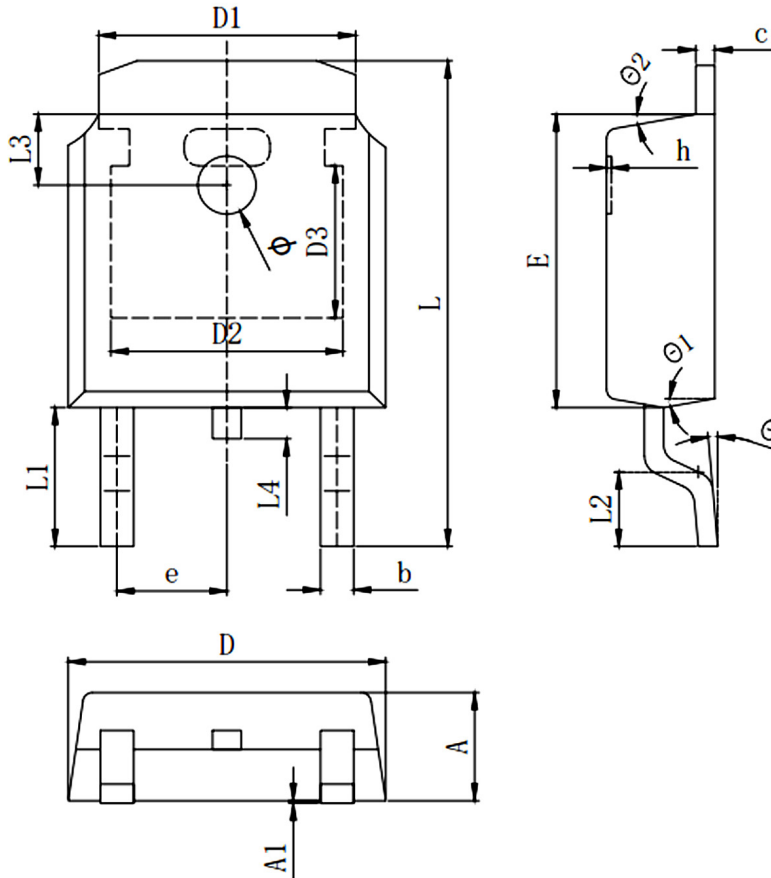


Typical Characteristics





TO-252 D-PAK Package



| Symbols | Millimeters | | |
|------------|-------------|--------|--------|
| | MIN. | Mom. | MAX. |
| A | 2.200 | 2.300 | 2.400 |
| A1 | 0.000 | | 0.127 |
| b | 0.640 | 0.690 | 0.740 |
| c(电镀后) | 0.460 | 0.520 | 0.580 |
| D | 6.500 | 6.600 | 6.700 |
| D1 | 5.334 REF | | |
| D2 | 4.826 REF | | |
| D3 | 3.166 REF | | |
| E | 6.000 | 6.100 | 6.200 |
| e | 2.286 TYP | | |
| h | 0.000 | 0.100 | 0.200 |
| L | 9.900 | 10.100 | 10.300 |
| L1 | 2.888 REF | | |
| L2 | 1.400 | 1.550 | 1.700 |
| L3 | 1.600 REF | | |
| L4 | 0.600 | 0.800 | 1.000 |
| ϕ | 1.100 | 1.200 | 1.300 |
| θ | 0° | | 8° |
| θ_1 | 9° TYP | | |
| θ_2 | 9° TYP | | |

单击下面可查看定价，库存，交付和生命周期等信息

[>>SiliconWisdom\(矽睿半导体\)](#)