

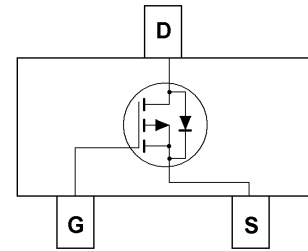
P-Channel Enhancement Mode MOSFET

Feature

- 20V/-2A, $R_{DS(ON)} = 120\text{m}\Omega(\text{MAX}) @V_{GS} = -4.5\text{V}$.
- $R_{DS(ON)} = 150\text{m}\Omega(\text{MAX}) @V_{GS} = -2.5\text{V}$.
- Super High dense cell design for extremely low $R_{DS(ON)}$
- Reliable and Rugged
- SOT-23 for Surface Mount Package



SOT-23



Applications

- Power Management
- Portable Equipment and Battery Powered Systems.

Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$ Unless Otherwise noted

| Parameter | Symbol | Limit | Units |
|--------------------------|----------|----------|-------|
| Drain-Source Voltage | V_{DS} | -20 | V |
| Gate-Source Voltage | V_{GS} | ± 10 | V |
| Drain Current-Continuous | I_D | -2 | A |

Electrical Characteristics

$T_A = 25^\circ\text{C}$ Unless Otherwise noted

| Parameter | Symbol | Test Conditions | Min | Typ. | Max | Units |
|---|--------------|---|------|------|------|------------------|
| Off Characteristics | | | | | | |
| Drain to Source Breakdown Voltage | BVDSS | $V_{GS} = 0\text{V}, I_D = -250\mu\text{A}$ | -20 | - | - | V |
| Zero-Gate Voltage Drain Current | IDSS | $V_{DS} = -20\text{V}, V_{GS} = 0\text{V}$ | - | - | -1 | μA |
| Gate Body Leakage Current, Forward | IGSSF | $V_{GS} = 10\text{V}, V_{DS} = 0\text{V}$ | - | - | 100 | nA |
| Gate Body Leakage Current, Reverse | IGSSR | $V_{GS} = -10\text{V}, V_{DS} = 0\text{V}$ | - | - | -100 | nA |
| On Characteristics | | | | | | |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{GS} = V_{DS}, I_D = -250\mu\text{A}$ | -0.4 | - | -1.0 | V |
| Static Drain-source On-Resistance | RDS(ON) | $V_{GS} = -4.5\text{V}, I_D = -2.0\text{A}$ | - | -- | 120 | $\text{m}\Omega$ |
| | | $V_{GS} = -2.5\text{V}, I_D = -1.5\text{A}$ | - | -- | 150 | $\text{m}\Omega$ |
| Drain-Source Diode Characteristics and Maximum Ratings | | | | | | |
| Drain-Source Diode Forward Voltage | VSD | $V_{GS} = 0\text{V}, I_S = -1.25\text{A}$ | | | -1.2 | V |

Typical Characteristics

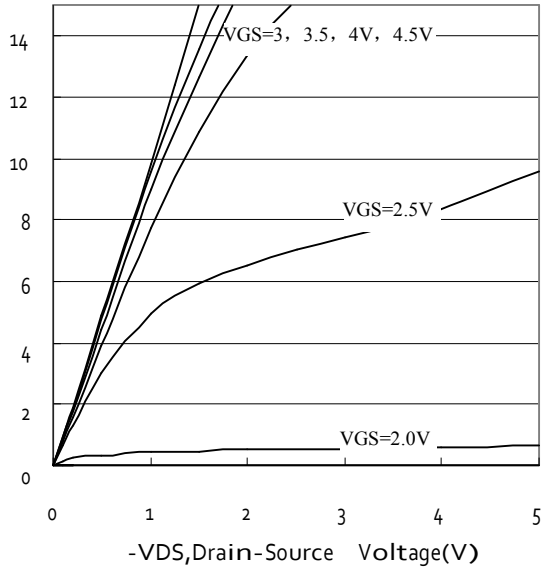


Figure 1. Output Characteristics

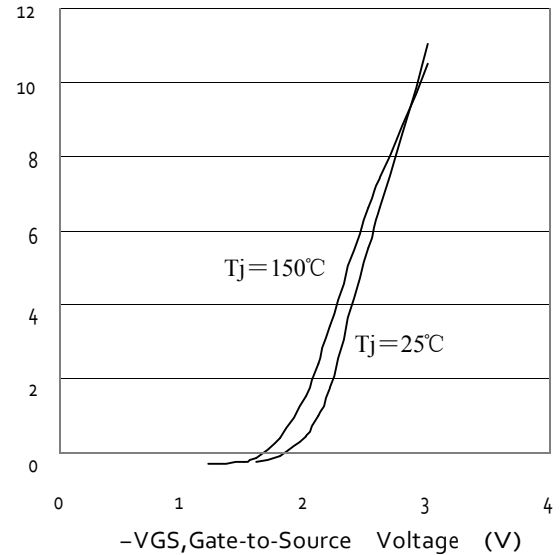


Figure 2. Transfer Characteristics

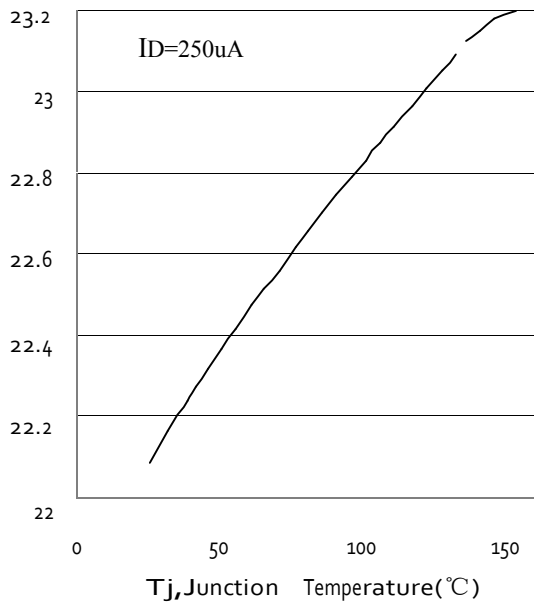


Figure 3. Breakdown Voltage Variation with Temperature

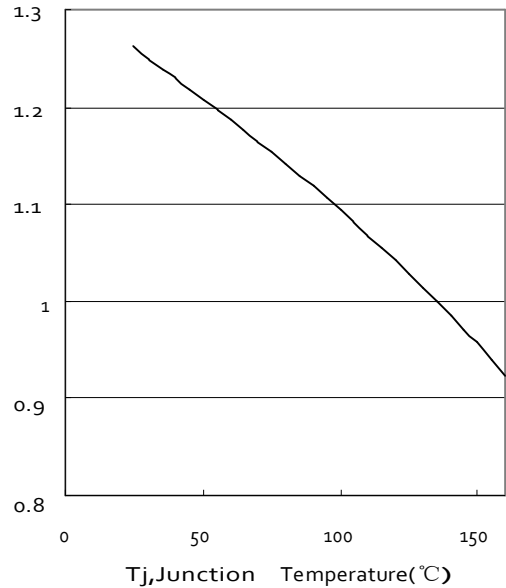


Figure 4. Gate Threshold Variation with Temperature

Typical Characteristics

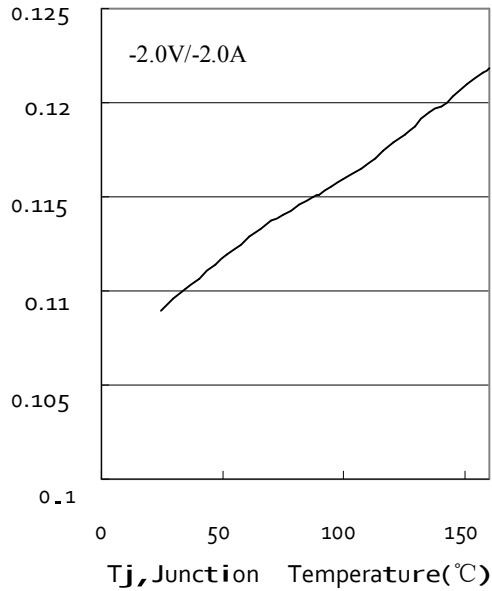


Figure 5. On-Resistance Variation with Temperature

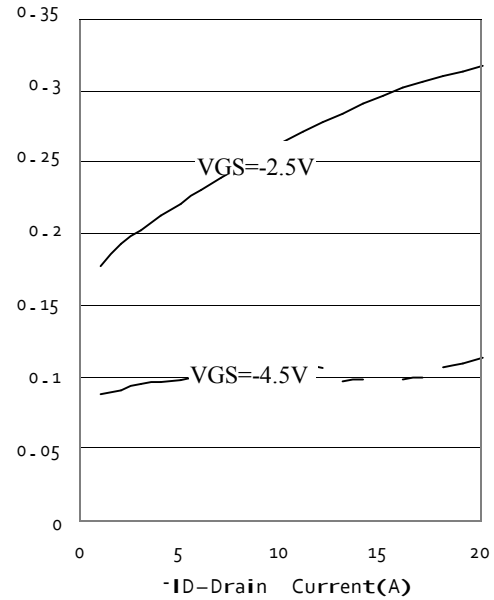


Figure 6. On-Resistance vs. Drain Current

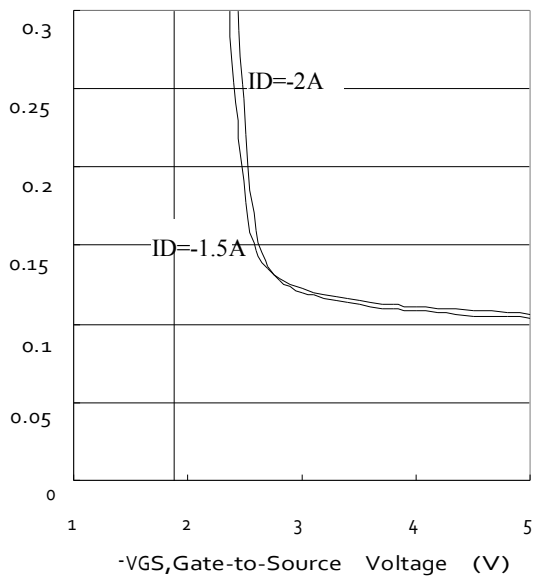


Figure 7. On-Resistance vs. Gate-to-Source Voltage

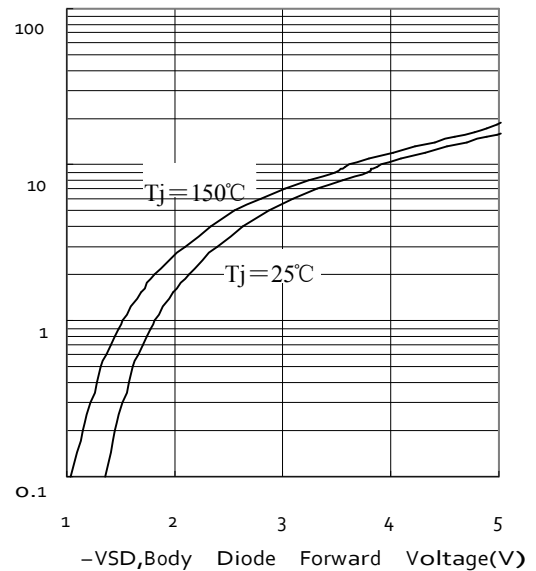


Figure 8. Source-Drain Diode Forward Voltage

Package Outline Dimensions (UNIT: mm)

SOT-23

