

P-Channel Enhancement Mode MOSFET

Feature

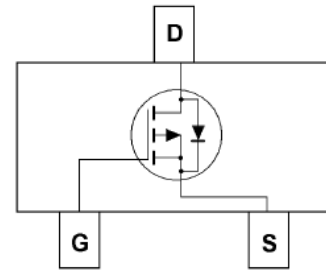
- -30V/-3.8A, $R_{DS(ON)}=55m\Omega(MAX)$ @ $V_{GS} = -10V$.
 $R_{DS(ON)} = 70m\Omega(MAX)$ @ $V_{GS} = -4.5V$.
 $R_{DS(ON)}=120m\Omega(MAX)$ @ $V_{GS} = -2.5V$.
- Super High dense cell design for extremely low $R_{DS(ON)}$
- Reliable and Rugged
- SOT-23 for Surface Mount Package



SOT-23

Applications

- Power Management
- Portable Equipment and Battery Powered Systems.



Absolute Maximum Ratings $T_A=25^\circ C$ Unless Otherwise noted

| Parameter | Symbol | Limit | Units |
|--------------------------|----------|----------|-------|
| Drain-Source Voltage | V_{DS} | -30 | V |
| Gate-Source Voltage | V_{GS} | ± 12 | V |
| Drain Current-Continuous | I_D | -3.8 | A |

Electrical Characteristics $T_A=25^\circ C$ Unless Otherwise noted

| Parameter | Symbol | Test Conditions | Min | Typ. | Max | Units |
|---|--------------|--------------------------------|------|------|------|-----------|
| Off Characteristics | | | | | | |
| Drain to Source Breakdown Voltage | BVDSS | $V_{GS}=0V, I_D=-250\mu A$ | -30 | - | - | V |
| Zero-Gate Voltage Drain Current | I_{DSS} | $V_{DS}=-24V, V_{GS}=0V$ | - | - | -1 | μA |
| Gate Body Leakage Current, Forward | I_{GSSF} | $V_{GS}=12V, V_{DS}=0V$ | - | - | 100 | nA |
| Gate Body Leakage Current, Reverse | I_{GSSR} | $V_{GS}=-12V, V_{DS}=0V$ | - | - | -100 | nA |
| On Characteristics | | | | | | |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{GS}=V_{DS}, I_D=-250\mu A$ | -0.7 | - | -1.3 | V |
| Static Drain-source On-Resistance | $R_{DS(ON)}$ | $V_{GS} = -10V, I_D = -4.2A$ | - | 50 | 55 | $m\Omega$ |
| | | $V_{GS} = -4.5V, I_D = -4.0A$ | - | 60 | 70 | $m\Omega$ |
| | | $V_{GS} = -2.5V, I_D = -1.0A$ | - | 80 | 120 | $m\Omega$ |
| Drain-Source Diode Characteristics and Maximum Ratings | | | | | | |
| Drain-Source Diode Forward Voltage | VSD | $V_{GS} = 0V, I_S = -1.0A$ | | | -1.0 | V |

Typical Characteristics

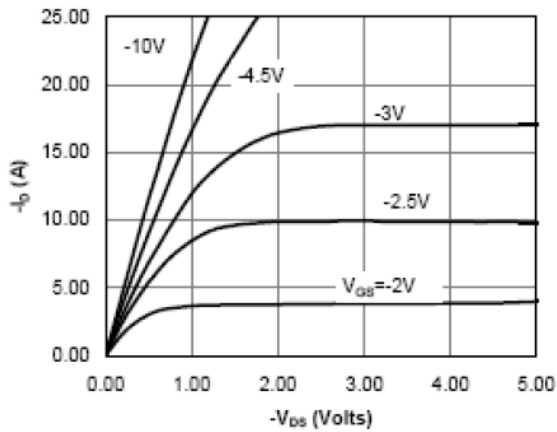


Fig 1: On-Region Characteristics

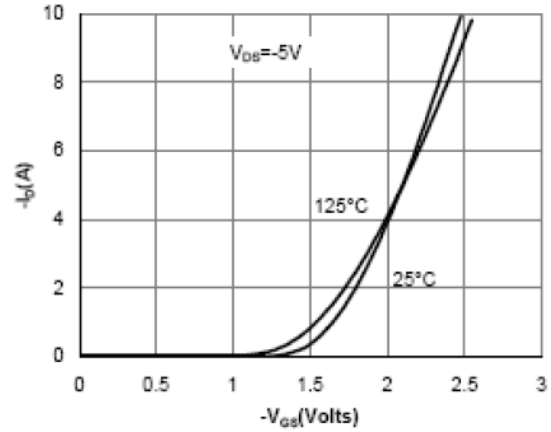


Figure 2: Transfer Characteristics

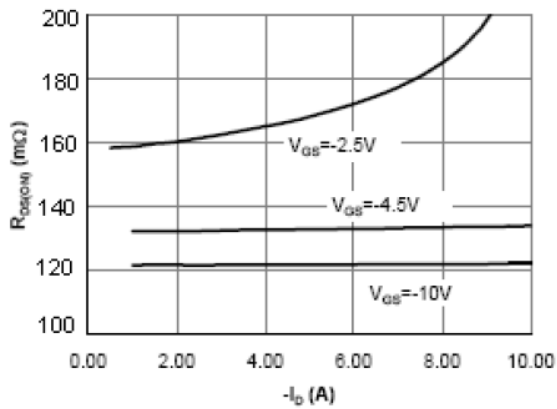


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

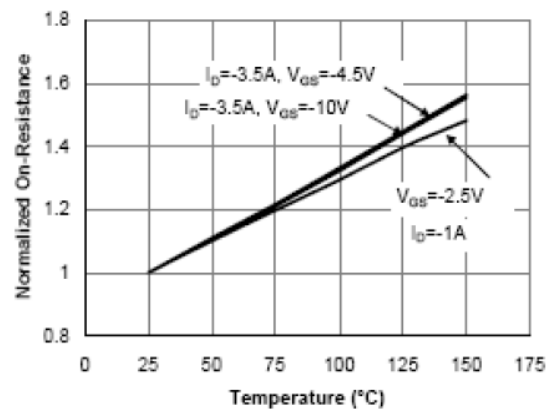


Figure 4: On-Resistance vs. Junction Temperature

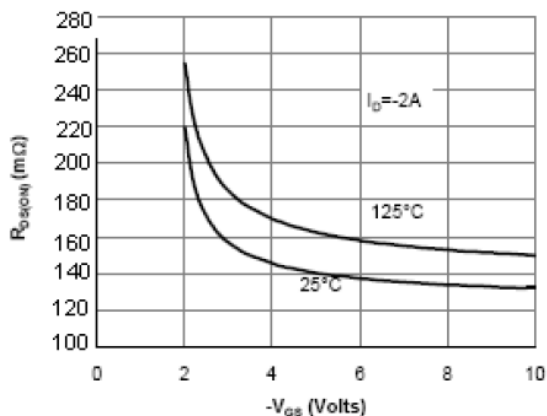


Figure 5: On-Resistance vs. Gate-Source Voltage

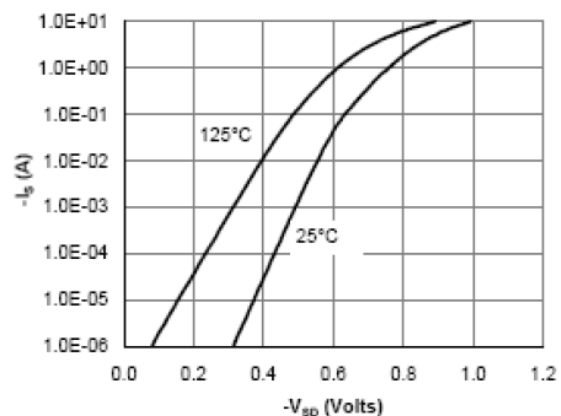


Figure 6: Body-Diode Characteristics