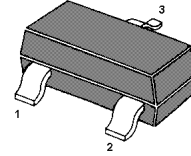
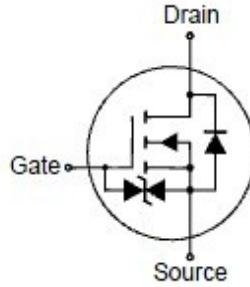


## N-Channel Enhancement Mode Field Effect Transistor

### Features

- Low on resistance  $R_{DS(ON)}$
- Low gate threshold voltage
- Low input capacitance
- ESD protected up to 2KV



1.Gate 2.Source 3.Drain  
SOT-23 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                                          | Symbol         | Value         | Unit             |
|----------------------------------------------------|----------------|---------------|------------------|
| Drain-Source Voltage                               | $V_{DSS}$      | 60            | V                |
| Gate-Source Voltage                                | $V_{GSS}$      | $\pm 20$      | V                |
| Drain Current (Continuous)                         | $I_D$          | 300           | mA               |
| Drain Current (Pulse Width $\leq 10 \mu\text{s}$ ) | $I_{DM}$       | 800           | mA               |
| Total Power Dissipation                            | $P_{tot}$      | 350           | mW               |
| Operating and Storage Temperature Range            | $T_j, T_{stg}$ | - 55 to + 150 | $^\circ\text{C}$ |

### Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                                                                                                                                  | Symbol       | Min.   | Max.     | Unit          |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|----------|---------------|
| Drain Source Breakdown Voltage<br>at $I_D = 10 \mu\text{A}$                                                                                | $BV_{DSS}$   | 60     | -        | V             |
| Zero Gate Voltage Drain Current<br>at $V_{DS} = 60 \text{ V}$                                                                              | $I_{DSS}$    | -      | 1        | $\mu\text{A}$ |
| Gate Source Leakage Current<br>at $V_{GS} = \pm 20 \text{ V}$                                                                              | $I_{GSS}$    | -      | $\pm 10$ | $\mu\text{A}$ |
| Gate Threshold Voltage<br>at $V_{DS} = 10 \text{ V}, I_D = 250 \mu\text{A}$                                                                | $V_{GS(th)}$ | 1      | 2.5      | V             |
| Static Drain Source On-Resistance<br>at $V_{GS} = 10 \text{ V}, I_D = 500 \text{ mA}$<br>at $V_{GS} = 4.5 \text{ V}, I_D = 200 \text{ mA}$ | $R_{DS(ON)}$ | -<br>- | 3<br>4   | $\Omega$      |
| Forward Transconductance<br>at $V_{DS} = 10 \text{ V}, I_D = 200 \text{ mA}$                                                               | $g_{fs}$     | 80     | -        | mS            |
| Input Capacitance<br>at $V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$                                                                         | $C_{iss}$    | -      | 50       | pF            |
| Output Capacitance<br>at $V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$                                                                        | $C_{oss}$    | -      | 25       | pF            |
| Reverse Transfer Capacitance<br>at $V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$                                                              | $C_{rss}$    | -      | 5        | pF            |

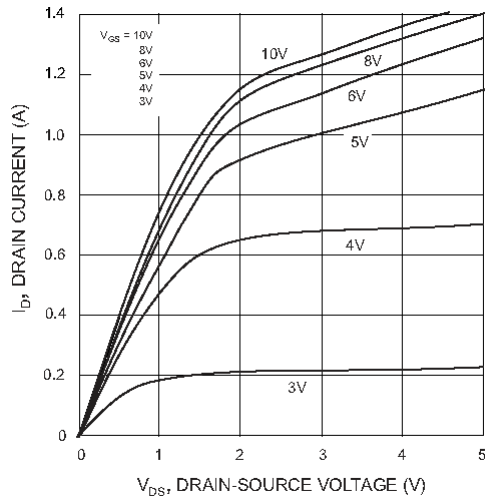


Fig. 1 Typical Output Characteristics

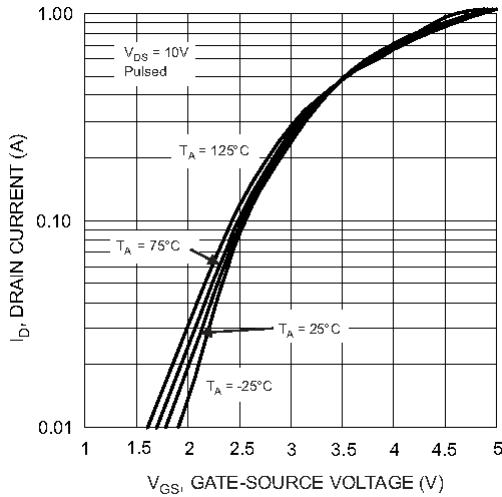


Fig. 2 Typical Transfer Characteristics

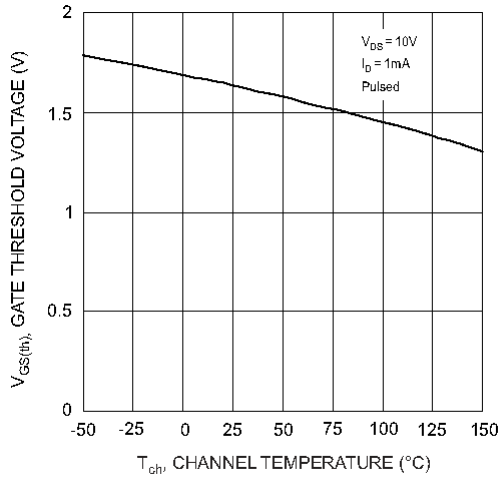


Fig. 3 Gate Threshold Voltage vs. Channel Temperature

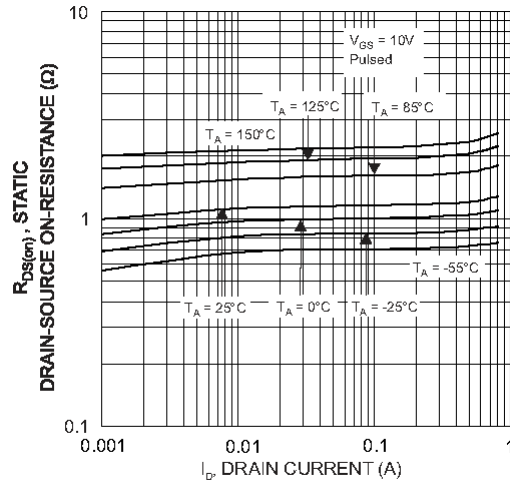


Fig. 4 Static Drain-Source On-Resistance vs. Drain Current

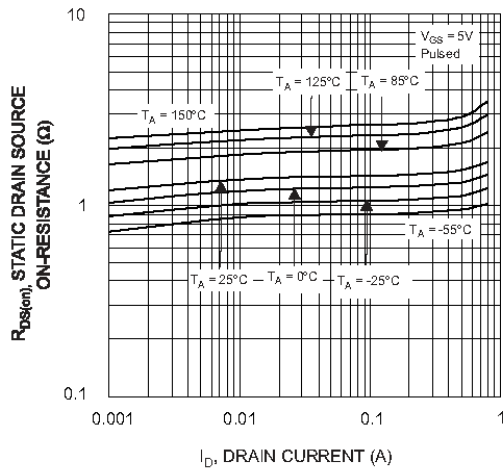


Fig. 5 Static Drain-Source On-Resistance vs. Drain Current

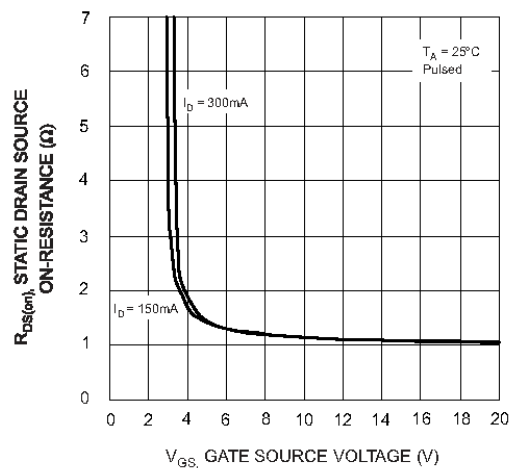


Fig. 6 Static Drain-Source On-Resistance vs. Gate-Source Voltage