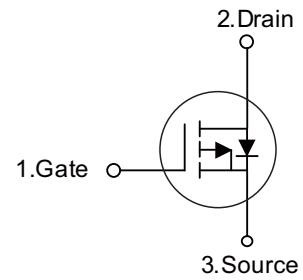


Symbol



PRODUCT CHARACTERISTICS

| | |
|--------------------------------|---------------|
| VDSS | -30V |
| $R_{DS(on)Typ}(V_{GS}@=-4.5V)$ | 36 m Ω |
| $R_{DS(on)Typ}(V_{GS}@=-10V)$ | 26 m Ω |
| ID | -5 |

APPLICATIONS

Load/Power Switching
Interfacing Switching

FEATURES

Advanced trench process technology
High Density Cell Design For Ultra Low On-Resistance



ORDER INFORMATION

| Order codes | | Package | Packing |
|--------------|-----------|-----------|-----------------|
| Halogen-Free | Halogen | | |
| N/A | MOT3734A3 | SOT-23-3L | 3000pieces/Real |

ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|-----------------------------------|----------|------|
| Drain-Source Voltage | V _{DS} | -30 | V |
| Gate-Source Voltage | V _{GS} | ±20 | V |
| Continuous Drain Current | I _D | -5.0 | A |
| Pulsed Drain Current | I _{DM} | -30 | A |
| Power Dissipation | P _D | 0.35 | W |
| Thermal Resistance from Junction to Ambient (t ≤ 10s) | R _{θJA} | 357 | °C/W |
| Operation Junction and Storage Temperature Range | T _J , T _{STG} | -55~ 150 | °C |

■ ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$, unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---------------------------------|---------------|---|------|------|-----------|------------|
| Static parameters | | | | | | |
| Drain-source breakdown voltage | $V_{(BR)DSS}$ | $V_{GS} = 0V, I_D = -250\mu A$ | -30 | - | - | V |
| Zero gate voltage drain current | I_{DSS} | $V_{DS} = -30V, V_{GS} = 0V$ | - | - | -1 | μA |
| Gate-body leakage current | I_{GSS} | $V_{GS} = \pm 20V, V_{DS} = 0V$ | - | - | ± 100 | nA |
| Gate threshold voltage | $V_{GS(th)}$ | $V_{DS} = V_{GS}, I_D = -250\mu A$ | -1.4 | -2.0 | -2.4 | V |
| Drain-source on-resistance | $R_{DS(on)}$ | $V_{GS} = -10V, I_D = -5A$ | - | 26 | 34 | m Ω |
| | | $V_{GS} = -4.5V, I_D = -5A$ | - | 36 | 50 | m Ω |
| Forward transconductance | g_{FS} | $V_{DS} = -5V, I_D = -5A$ | - | 14 | - | S |
| Diode forward voltage | V_{SD} | $I_S = -1A, V_{GS} = 0V$ | - | - | -1 | V |
| Dynamic parameters | | | | | | |
| Input Capacitance | C_{iss} | $V_{DS} = -15V, V_{GS} = 0V$ $f = 1MHz$ | - | 515 | - | pF |
| Output Capacitance | C_{oss} | | - | 100 | - | pF |
| Reverse Transfer Capacitance | C_{rss} | | - | 70 | - | pF |
| Switching parameters | | | | | | |
| Turn-on delay time | $t_{d(on)}$ | $V_{GS} = -10V, V_{DS} = -15V,$ $R_L = 2.5\Omega, R_{GEN} = 3\Omega$ | - | 7.5 | - | ns |
| Turn-on rise time | t_r | | - | 5.5 | - | ns |
| Turn-off delay time | $t_{d(off)}$ | | - | 19 | - | ns |
| Turn-off fall time | t_f | | - | 7 | - | ns |
| Total Gate Charge (10V) | Q_g | $V_{DS} = -15V, V_{GS} = -10V$ $I_D = -5A$ | - | 9.3 | - | nC |
| Gate-Source Charge | Q_{gs} | | - | 1.5 | - | nC |
| Gate-Drain Charge | Q_{gd} | | - | 1.9 | - | nC |

■ TYPICAL CHARACTERISTICS

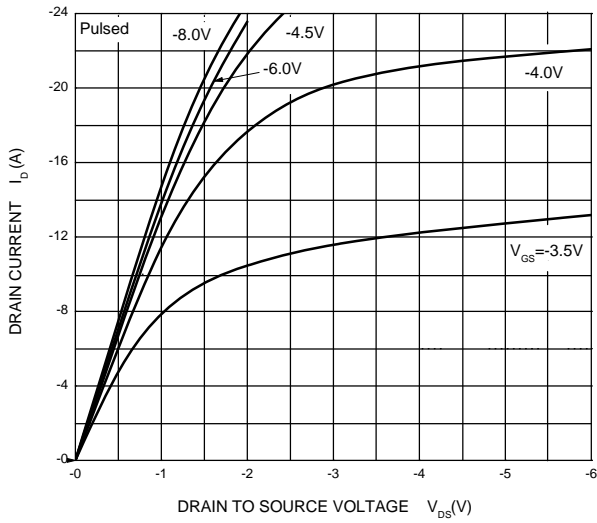


Fig 1 output characteristics

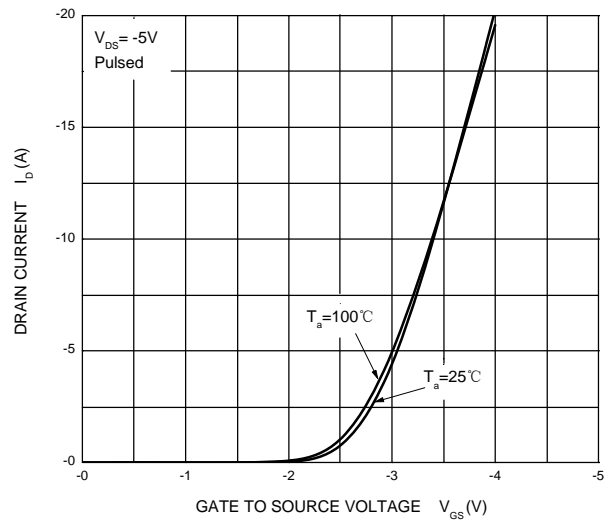


Fig 2 transfer characteristics

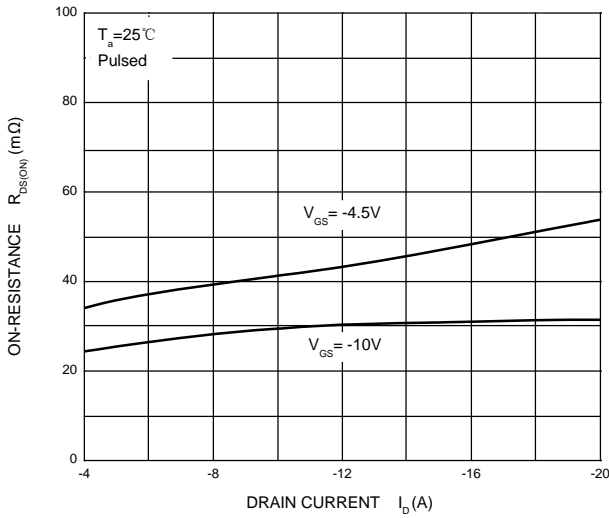


Fig 3 rdson vs id

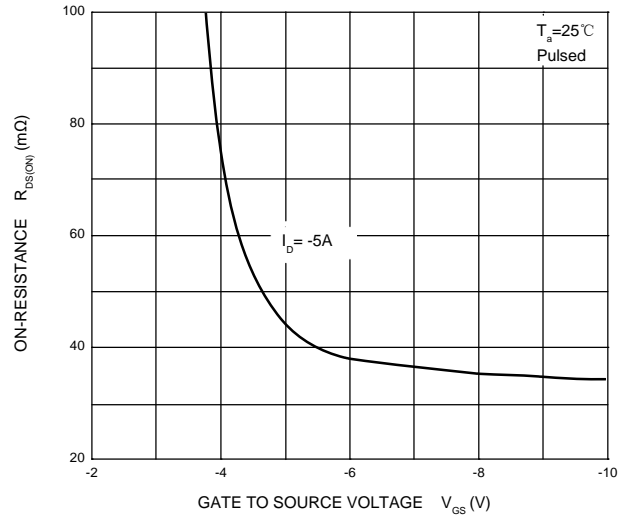


Fig 4 rdson vs vgs

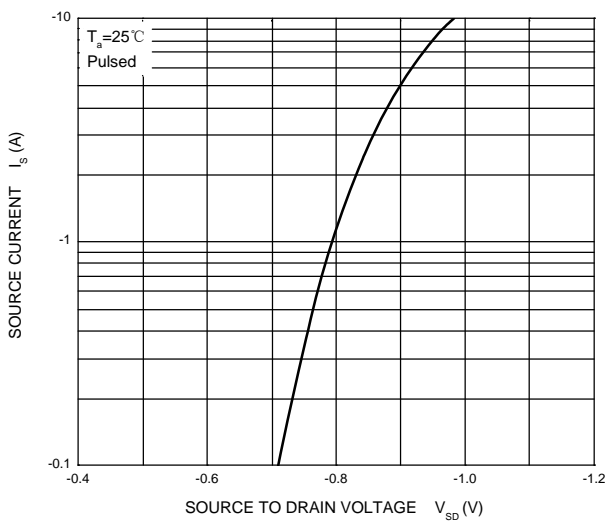


Fig 5 I_s vs V_{sd}

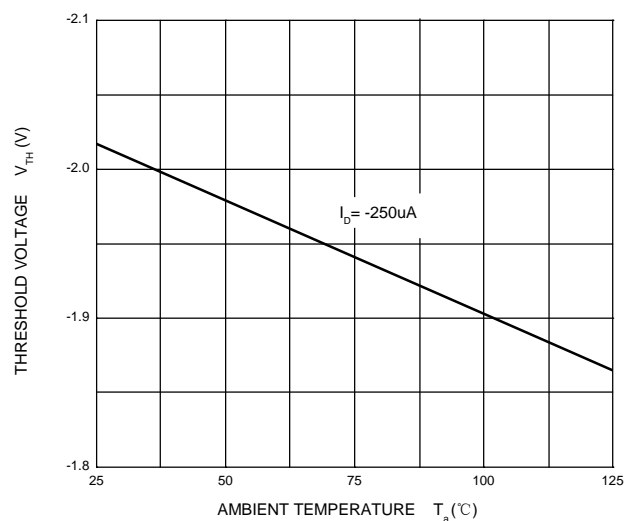


Fig 6 threshold voltage

■ SOT-23-3L PACKAGE OUTLINE DIMENSIONS

