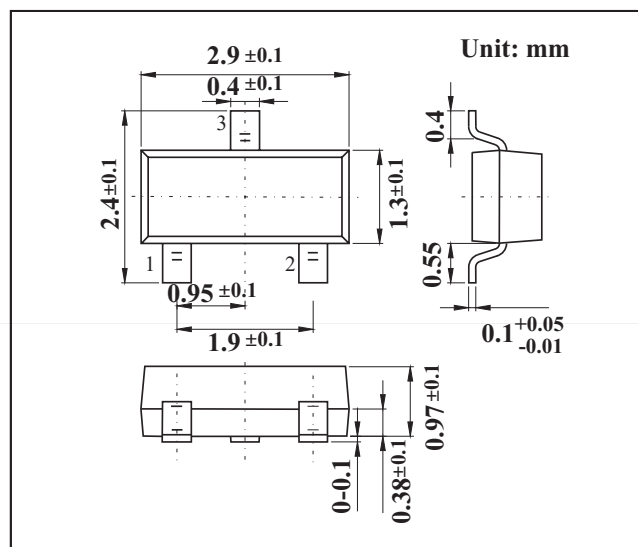


**SOT-23 Plastic-Encapsulate MOSFETS**
**Features**

- VDS (V) = -20V
- RDS(ON)<0.052 Ω (VGS = -4.5V)
- RDS(ON)<0.071 Ω (VGS = -2.5V)
- RDS(ON)<0.108 Ω (VGS = -1.8V)
- P-Channel MOSFET

**MECHANICAL DATA**

- Case style:SOT-23molded plastic
- Mounting position:any


**MAXIMUM RATINGS AND CHARACTERISTICS**

@ 25°C Ambient Temperature (unless otherwise noted)

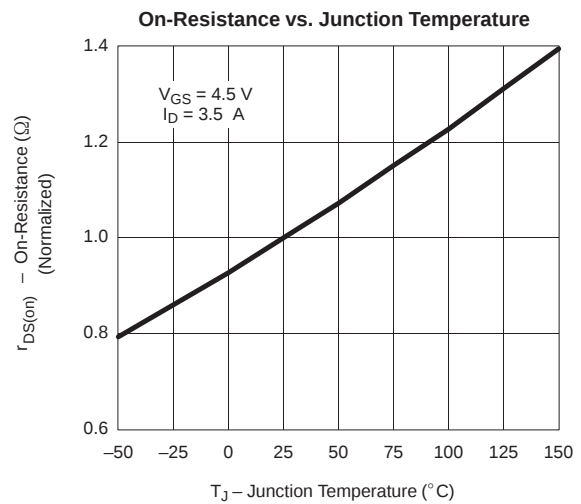
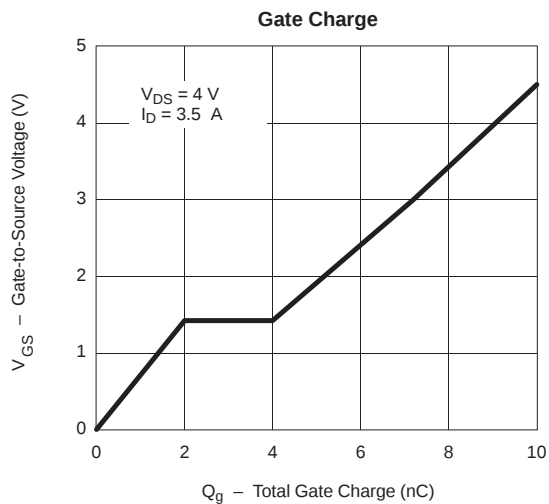
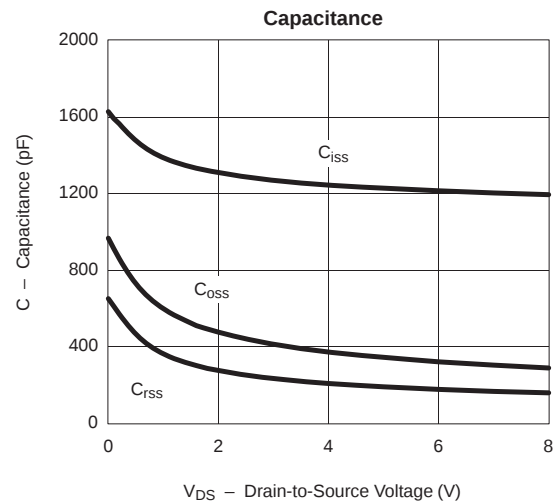
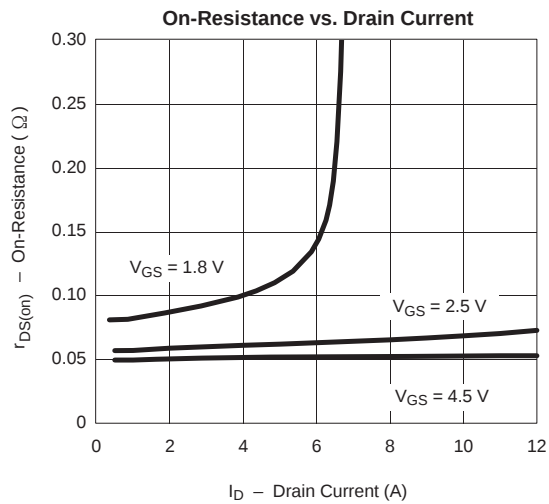
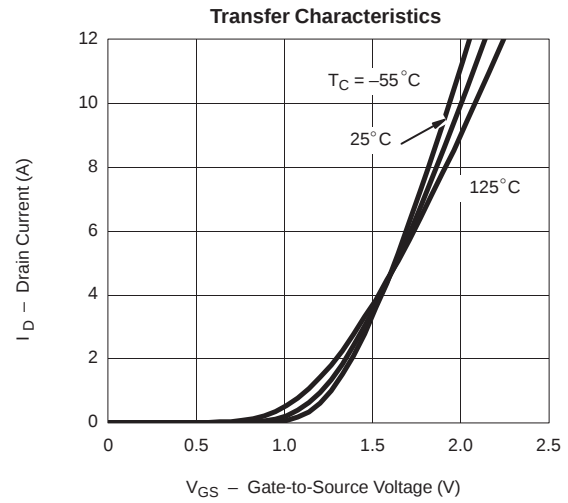
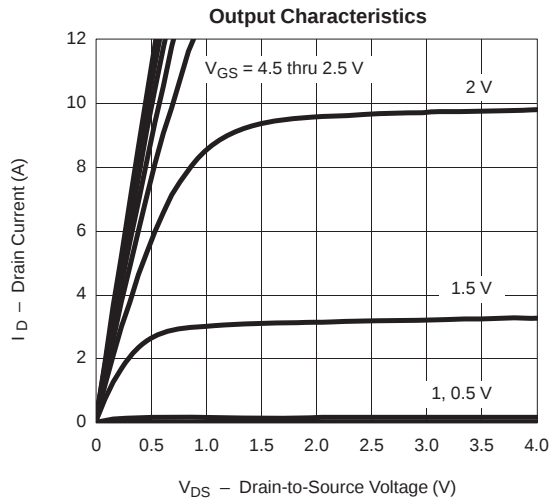
| Parameter                                        | Symbol     | Rating       | Unit |
|--------------------------------------------------|------------|--------------|------|
| Drain-source voltage Gate-source voltage         | VDS<br>VGS | -20<br>±10   | V    |
| Continuous drain current<br>TA=25°C<br>TA=70°C   | ID         | -3.5<br>-2.8 | A    |
| Pulsed drain current                             | IDM        | -12          | A    |
| Power dissipation<br>TA=25°C<br>TA=70°C          | PD         | 1.25<br>0.8  | W    |
| Thermal Resistance Junction-to-Ambient           | RθJA       | 130          | °C/W |
| Operating junction and storage temperature range | Tj,Tstg    | -55 to +150  | °C   |

**MOSFET ELECTRICAL CHARACTERISTICS** Ta=25 °C unless otherwise specified

| Parameter                                      | Symbol  | Testconditions                                                                     | Min      | Typ                     | Max                     | Unit |
|------------------------------------------------|---------|------------------------------------------------------------------------------------|----------|-------------------------|-------------------------|------|
| Drain-source breakdown voltage                 | Vbss    | VGS = 0 V, ID = -250μA                                                             | -□       |                         |                         | V    |
| Gate threshold voltage                         | VGS(th) | VDS = VGS, ID = -250 μA                                                            | -0.45    |                         | -0.8                    | V    |
| Zero gate voltage drain current                | IDSS    | VDS = -20 V□ VGS = 0 V<br>VDS = -20V□ VGS = 0 V, Tj = 55 °C                        |          |                         | -1<br>-10               | μA   |
| Gate-body leakage                              | IGSS    | VDS = 0 V, VGS = ±10 V                                                             |          |                         | ±100                    | nA   |
| Drain-source on-state resistance               | rDS(on) | VGS = -4.5 V, ID = -3.5 A<br>VGS = -2.5 V, ID = -3.0 A<br>VGS = -2 V□, ID = -2.0 A |          | 0.044<br>0.060<br>0.087 | 0.052<br>0.071<br>0.108 | Ω    |
| On-state drain current                         | ID(on)  | VDS ≤ -5 V, VGS = -4.5 V<br>VDS ≤ -5 V, VGS = -2.5 V                               | -6<br>-3 |                         |                         | A    |
| Forward transconductance                       | gfs     | VDS = -5 V, ID = -3.5 A                                                            |          | 8.5                     |                         | S    |
| Input capacitance *                            | Ciss    | VDS = -10V, VGS = 0, f = 1 MHz                                                     |          | 1245                    |                         | pF   |
| Output capacitance *                           | Coss    |                                                                                    |          | 375                     |                         |      |
| Reverse transfer capacitance *                 | Crss    |                                                                                    |          | 210                     |                         |      |
| Total gate charge *                            | Qg      | VDS = -10V, VGS = -4.5 V, ID = -3.5 A                                              |          | 10                      | 15                      | nC   |
| Gate-source charge *                           | Qgs     |                                                                                    |          | 2                       |                         |      |
| Gate-drain charge *                            | Qgd     |                                                                                    |          | 2                       |                         |      |
| Turn-on Delay time                             | td(on)  | VDD = -5V, RL = 4Ω, ID = -1A, VGEN = -4.5V, RG = 6Ω                                |          | 13                      | 20                      | ns   |
| Turn-on Reise time                             | tr      |                                                                                    |          | 25                      | 40                      |      |
| Turn-off Dealy time                            | td(off) |                                                                                    |          | 55                      | 80                      |      |
| Turn-off Fall time                             | tr      |                                                                                    |          | 19                      | 35                      |      |
| Continuous source current (diode conduction) * | IS      |                                                                                    |          | -1.6                    |                         | A    |
| Diode forward voltage                          | VSD     | IS = -1.6 A, VGS = 0 V                                                             |          |                         | -1.2                    | V    |

\* Pulse test: PW ≤ 300 μs duty cycle ≤ 2%.

## RATINGS AND CHARACTERISTIC CURVES



## RATINGS AND CHARACTERISTIC CURVES

