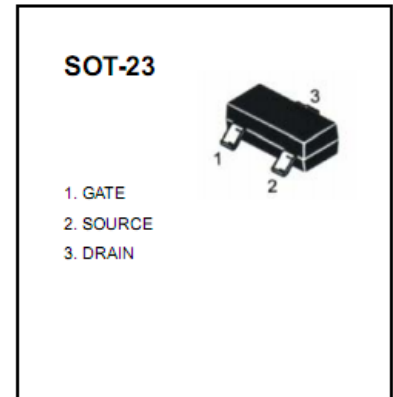
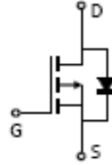


SOT-23 Plastic-Encapsulate Transistors

HX2301 MOSFET(P-Channel)

FEATURES

PWM applications
 Load switch
 Power management
 MARKING: A1SHB



MAXIMUM RATINGS (TA=25°C unless otherwise noted)

| Symbol | Parameter | Value | Units |
|------------------|----------------------|---------|-------|
| V _{DS} | Drain-Source voltage | -20 | V |
| V _{GS} | Gate-Source voltage | ±12 | V |
| I _D | Drain current | -2.3 | A |
| P _D | Power Dissipation | 0.9 | W |
| T _j | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55-150 | °C |

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|------------------------------------|----------------------|--|------|------|------|------|
| Drain-Source Breakdown Voltage | V _{(BR)DSS} | V _{GS} =0V, I _D =-250uA | -20 | | | V |
| Gate-Threshold Voltage | V _{th(GS)} | V _{DS} = V _{GS} , I _D =-250 uA | -0.4 | -0.7 | -1 | V |
| Gate-body Leakage | I _{GSS} | V _{DS} =0V, V _{GS} =±12V | | | ±100 | nA |
| Zero Gate Voltage Drain Current | I _{DSS} | V _{DS} =-20V, V _{GS} =0V | | | -1 | uA |
| Drain-Source On-Resistance | r _{DS(ON)} | V _{GS} =-4.5V, I _D =-2.3A | | 96 | 135 | mΩ |
| | | V _{GS} =-2.5V, I _D =-1A | | 108 | 170 | mΩ |
| Dynamic Characteristics | | | | | | |
| Input Capacitance | C _{iss} | V _{DS} =-10V, V _{GS} =0V, f=1MHz | | 325 | | pF |
| Output Capacitance | C _{oss} | | | 55 | | |
| Reverse Transfer Capacitance | C _{rss} | | | 35 | | |
| Switching Capacitance | | | | | | |
| Turn-on Delay Time | t _{d(on)} | V _{DD} =-10V, I _D =-1A, V _{GS} =-4.5V R _{GEN} =-60ohm R _L =10ohm | | 10 | | nS |
| Turn-on Rise Time | t _r | | | 6 | | nS |
| Turn-off Delay Time | t _{d(off)} | | | 22 | | nS |
| Turn-off Fall Time | t _f | | | 8 | | nS |
| Total Gate Charge | Q _g | V _{DS} =-10V, I _D =-1A , V _{GS} =-4.5V, | | 3 | | nC |
| Gate-Source Charge | Q _{gs} | | | 0.7 | | nC |
| Gate-Drain Charge | Q _{gd} | | | 0.8 | | nC |
| Drain-Source Diode Characteristics | | | | | | |
| Diode Forward Voltage | V _{SD} | V _{GS} =0V, I _D =-1.25A | | | -1.2 | V |
| Diode Forward Current | I _S | | | | -2.3 | A |