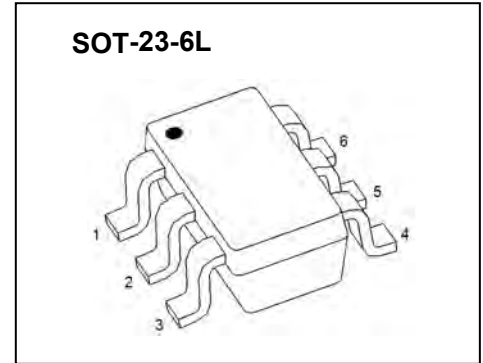


Plastic-Encapsulate MOSFETS

Dual P-Channel MOSFET

| $V_{(BR)DSS}$ | $R_{DS(on)MAX}$ | I_D |
|---------------|-----------------|-------|
| -20 V | 112mΩ@-4.5V | -2.8A |
| | 142mΩ@-2.5V | |



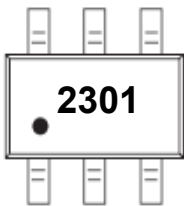
FEATURE

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$
- Low Gate Charge
- High Power and Current Handling Capability
- Surface Mount Package

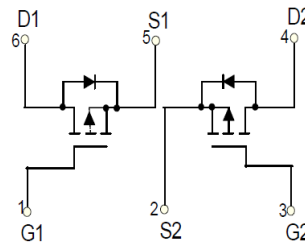
APPLICATION

- Battery Protection
- Load Switch
- Power Management

MARKING



Equivalent Circuit



ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}C$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------------|----------|---------------|
| Drain-Source Voltage | V_{DS} | -20 | V |
| Gate-Source Voltage | V_{GS} | ±8 | V |
| Continuous Drain Current | I_D | -2.8 | A |
| Pulsed Drain Current (note 1) | I_{DM} | -10 | A |
| Continuous Source-Drain Diode Current | I_s | -0.72 | A |
| Thermal Resistance from Junction to Ambient (note 2) | $R_{\theta JA}$ | 357 | $^{\circ}C/W$ |
| Junction Temperature | T_J | 150 | $^{\circ}C$ |
| Storage Temperature | T_{STG} | -55~+150 | $^{\circ}C$ |

MOSFET ELECTRICAL CHARACTERISTICS

T_a=25 °C unless otherwise specified

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|---|----------------------|--|------|------|------|------|
| STATIC CHARACTERISTICS | | | | | | |
| Drain-source breakdown voltage | V _{(BR)DSS} | V _{GS} = 0V, I _D = -250μA | -20 | | | V |
| Zero gate voltage drain current | I _{DSS} | V _{DS} = -20V, V _{GS} = 0V | | | -1 | μA |
| Gate-body leakage current | I _{GSS} | V _{GS} = ±8V, V _{DS} = 0V | | | ±100 | nA |
| Gate threshold voltage (note 3) | V _{GS(th)} | V _{DS} = V _{GS} , I _D = -250μA | -0.4 | | -1 | V |
| Drain-source on-resistance (note 3) | R _{DS(on)} | V _{GS} = -4.5V, I _D = -2.8A | | 90 | 112 | mΩ |
| | | V _{GS} = -2.5V, I _D = -2A | | 110 | 142 | mΩ |
| Forward transconductance (note 3) | g _{FS} | V _{DS} = -5V, I _D = -2.8A | | 6.5 | | S |
| Diode forward voltage (note 3) | V _{SD} | I _S = -0.7A | | -0.8 | -1.2 | V |
| DYNAMIC CHARACTERISTICS (note 4) | | | | | | |
| Input Capacitance | C _{iss} | V _{DS} = -10V, V _{GS} = 0V, f = 1MHz | | 405 | | pF |
| Output Capacitance | C _{oss} | | | 75 | | pF |
| Reverse Transfer Capacitance | C _{rss} | | | 55 | | pF |
| SWITCHING CHARACTERISTICS (note 4) | | | | | | |
| Turn-on delay time | t _{d(on)} | V _{DD} = 10V, V _{gen} = -4.5V I _D = -1A, R _I = 10Ω , R _g = 1Ω | | 11 | 20 | ns |
| Turn-on rise time | t _r | | | 35 | 60 | ns |
| Turn-off delay time | t _{d(off)} | | | 30 | 50 | ns |
| Turn-off fall time | t _f | | | 10 | 20 | ns |
| Total Gate Charge | Q _g | V _{DS} = -10V, V _{GS} = -4.5V, I _D = -3A | | 5.5 | 10 | nC |
| | | V _{DS} = -10V, V _{GS} = -2.5V, I _D = -3A | | 3.3 | 6 | nC |
| Gate-Source Charge | Q _{gs} | V _{DS} = -10V, V _{GS} = -2.5V, I _D = -3A | | 0.7 | | nC |
| Gate-Drain Charge | Q _{gd} | V _{DS} = -10V, V _{GS} = -2.5V, I _D = -3A | | 1.3 | | nC |

Notes :

1. Repetitive rating: Pulse width limited by maximum junction temperature
2. Surface Mounted on FR4 board, t ≤ 10 sec.
3. Pulse test : Pulse width ≤ 300μs, duty cycle ≤ 2%.
4. Guaranteed by design, not subject to production.



CHINA BASE
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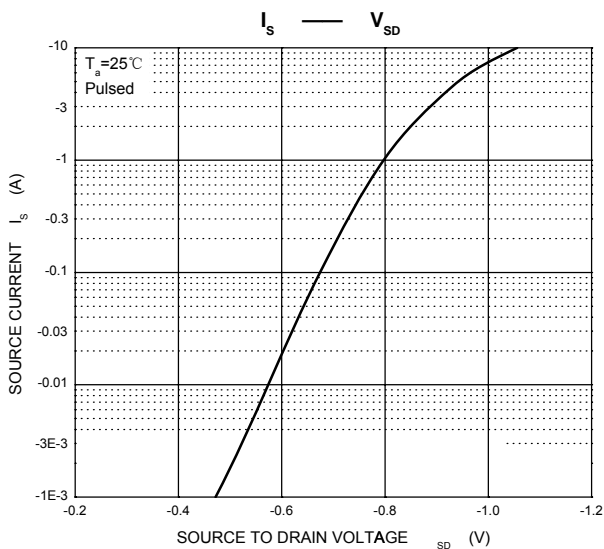
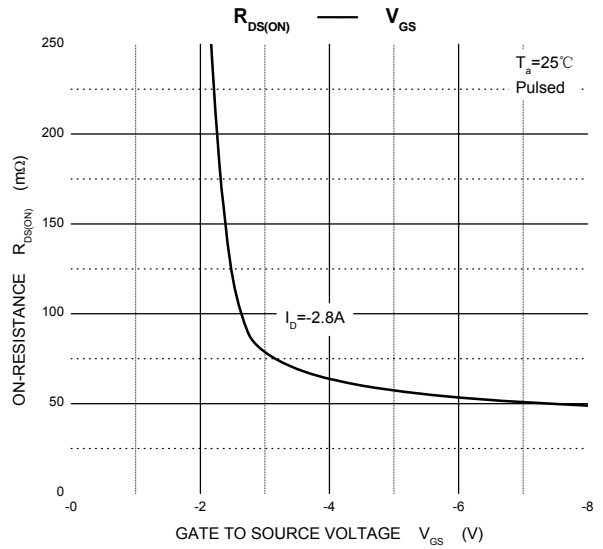
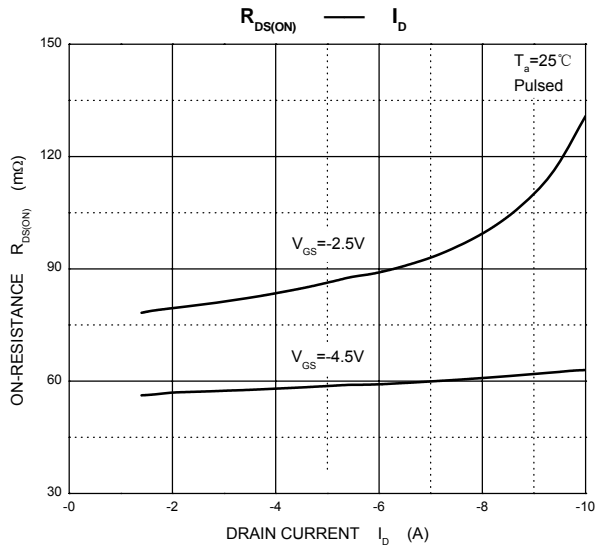
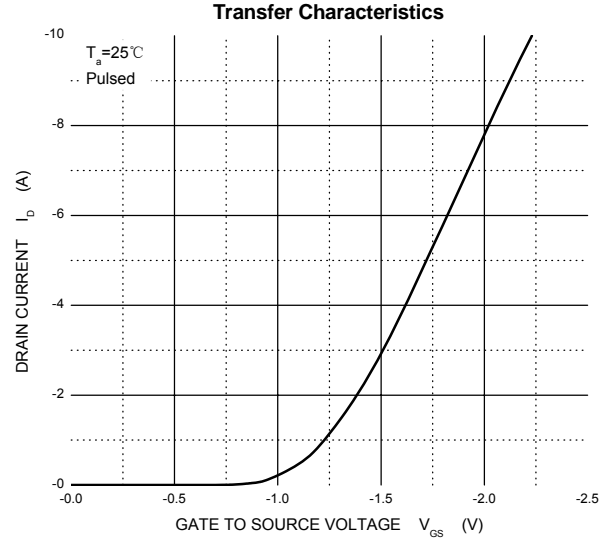
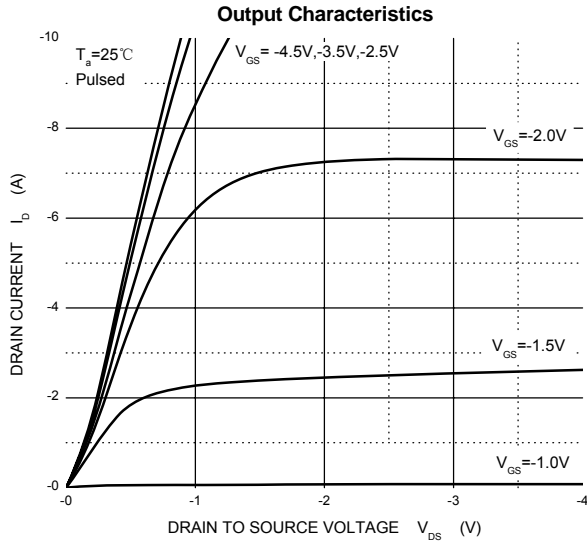
SOT-23-6L

CB2301-2.8A



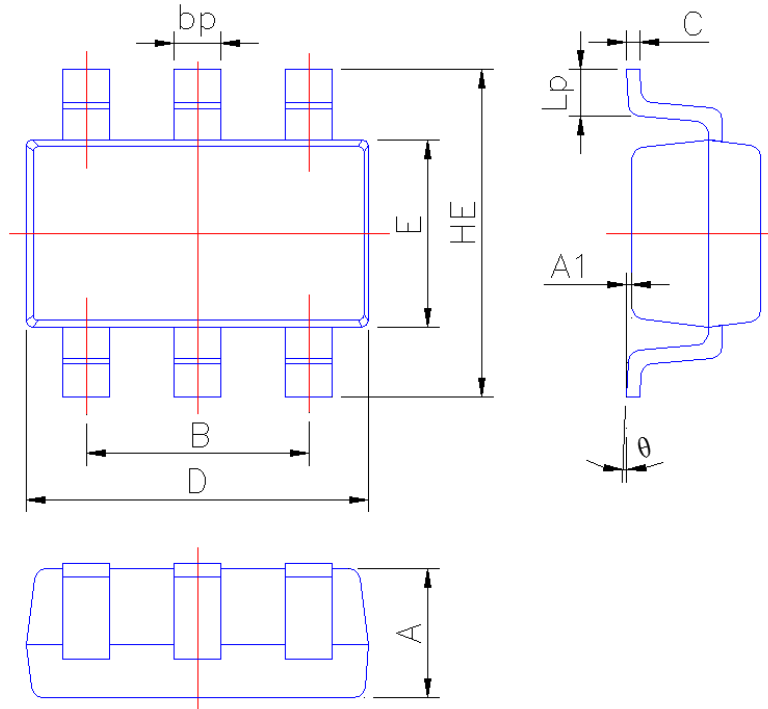
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Typical Characteristics





SOT-23-6L Package Outline Dimensions



| Symbol | Dimension in Millimeters | |
|----------|--------------------------|-------|
| | Min | Max |
| A | 1.05 | 1.20 |
| A1 | 0.010 | 0.100 |
| B | 1.80 | 2.00 |
| bp | 0.35 | 0.50 |
| C | 0.12 | 0.20 |
| D | 2.80 | 3.00 |
| E | 1.50 | 1.70 |
| HE | 2.60 | 3.00 |
| Lp | 0.25 | 0.55 |
| θ | 2° | 6° |