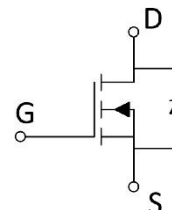
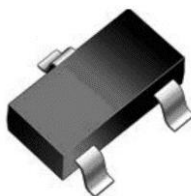


## P-Channel Enhancement Mode MOSFET

### Features

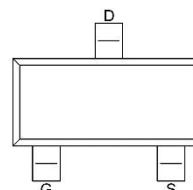
- $V_{DS}=-30V, I_D=-5.8A$
- $R_{DS(ON)}=65m\Omega$  (TYP.)  $V_{GS}=10V$
- Reliable and Rugged
- Avalanche Rated
- Low On-Resistance

### SOT23-3L



### Applications

- Load Switch
- Power management in portable/desktop PCs
- DC/DC conversion



### Ordering Information

| Device  | package   | Device Marking | Package Qty. |
|---------|-----------|----------------|--------------|
| KJ3401A | SOT-23    | A1/R1          | 3000/PCS     |
| KJ3401A | SOT-23-3L | X1/WA          | 3000/PCS     |

### Absolute Maximum Ratings ( $T_C=25^{\circ}C$ , unless otherwise noted)

| Parameter                               | Symbol          | Value    | Unit          |
|-----------------------------------------|-----------------|----------|---------------|
| Drain-Source Voltage                    | $V_{DS}$        | -30      | V             |
| Gate-Source Voltage                     | $V_{GS}$        | $\pm 12$ | V             |
| Continuous Drain Current                | $I_D$           | -4.2     | A             |
| Pulsed Drain Current                    | $I_{DM}$        | -16      | A             |
| Maximum Power Dissipation               | $P_D$           | 1.25     | W             |
| Thermal Resistance, Junction-to-Ambient | $R_{\theta JA}$ | 100      | $^{\circ}C/W$ |
| Operating, Storage Temperature Range    | $T_J, T_{STG}$  | -55~150  | $^{\circ}C$   |

## Electrical Characteristics

| Parameter                        | Symbol       | Test Conditions               | Min. | Typ. | Max.      | Unit       |
|----------------------------------|--------------|-------------------------------|------|------|-----------|------------|
| Drain-Source Breakdown Voltage   | $BV_{DSS}$   | $V_{GS}=0V, I_D=250\mu A$     | -30  | -    | -         | V          |
| Zero Gate Voltage Drain Current  | $I_{DSS}$    | $V_{DS}=24V, V_{GS}=0V$       | -    | -    | 1         | $\mu A$    |
| Gate -Source Leakage Current     | $I_{GSS}$    | $V_{GS}=\pm 12V, V_{DS}=0V$   | -    | -    | $\pm 100$ | nA         |
| Gate Threshold Voltage           | $V_{GS(th)}$ | $V_{DS}=V_{GS}, I_D=250\mu A$ | 0.5  | 1.8  | 1.1       | V          |
| Drain-Source On-stage Resistance | $R_{DS(ON)}$ | $V_{GS}=10V, I_D=4.2A$        | -    | 50   | 65        | m $\Omega$ |
|                                  |              | $V_{GS}=4.5V, I_D=4A$         | -    | 60   | 75        |            |

## Dynamic Characteristics

| Parameter                    | Symbol       | Test Conditions                                                  | Min. | Typ. | Max. | Unit     |
|------------------------------|--------------|------------------------------------------------------------------|------|------|------|----------|
| Input capacitance            | $C_{iss}$    | $V_{DS}=15V$<br>$V_{GS}=0V$<br>$f=1MHz$                          | -    | 954  | -    | pF       |
| Output capacitance           | $C_{oss}$    |                                                                  | -    | 115  | -    |          |
| Reverse transfer capacitance | $C_{rss}$    |                                                                  | -    | 77   | -    |          |
| Gate Resistance              | $R_g$        | $f=1MHz$                                                         | -    | 1.4  | -    | $\Omega$ |
| Turn-on delay Time           | $t_{d(on)}$  | $V_{GS}=10V$<br>$V_{DS}=15V$<br>$R_L=2.7\Omega$<br>$R_G=3\Omega$ | -    | -    | 6.3  | ns       |
| Rise time                    | $t_r$        |                                                                  | -    | -    | 3.2  |          |
| Turn-off delay Time          | $t_{d(off)}$ |                                                                  | -    | -    | 38.2 |          |
| Fall time                    | $t_f$        |                                                                  | -    | -    | 12   |          |

## Reverse Diode Characteristics

| Parameter                  | Symbol   | Test Conditions        | Min. | Typ. | Max. | Unit |
|----------------------------|----------|------------------------|------|------|------|------|
| Body Diode Forward Voltage | $V_{SD}$ | $V_{GS}=0V, I_{SD}=1A$ | -    | -    | 1    | V    |

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