

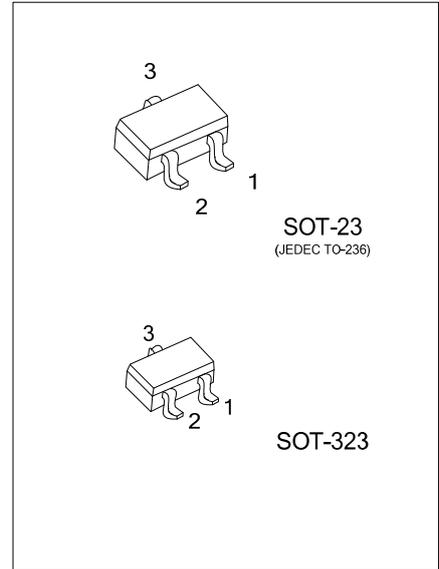


## K1875

Preliminary

JFET

### FIELD EFFECT TRANSISTOR SILICON N CHANNEL JUNCTION TYPE



#### DESCRIPTION

The UTC **K1875** is an N-channel JFET, it uses UTC's advanced technology to provide customers low input capacitance and high forward transfer admittance.

The UTC **K1875** is suitable for high frequency amplifier and audio frequency amplifier applications, etc.

#### FEATURES

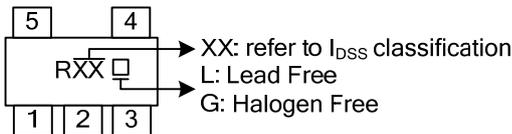
- \* High forward transfer admittance
- \* Low input capacitance

#### ORDERING INFORMATION

| Ordering Number |                 | Package | Packing   |
|-----------------|-----------------|---------|-----------|
| Lead Free       | Halogen Free    |         |           |
| K1875L-xx-AE3-R | K1875G-xx-AE3-R | SOT-23  | Tape Reel |
| K1875L-xx-AL3-R | K1875G-xx-AL3-R | SOT-323 | Tape Reel |

|                        |   |
|------------------------|---|
| <p>K1875L-xx-AE3-R</p> | <p>(1) R: Tape Reel<br/> (2) AE3: SOT-23, AL3: SOT-323<br/> (3) XX: refer to Classification of I<sub>DSS</sub><br/> (4) G: Halogen Free, L: Lead Free</p> |
|------------------------|---|

#### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

| PARAMETER                 | SYMBOL    | RATINGS | UNIT             |
|---------------------------|-----------|---------|------------------|
| Gate-Drain Voltage        | $V_{GDS}$ | -20     | V                |
| Gate-Current              | $I_G$     | 10      | mA               |
| Drain Power Dissipation   | $P_D$     | 100     | mW               |
| Junction Temperature      | $T_J$     | 125     | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{STG}$ | -55~125 | $^\circ\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

| PARAMETER                    | SYMBOL               | TEST CONDITIONS   | MIN | TYP | MAX  | UNIT |
|------------------------------|----------------------|---|-----|-----|------|------|
| Gate Leakage Current         | $I_{GSS}$            | $V_{GS}=-15\text{V}$ , $V_{DS}=0\text{V}$                 |     |     | -1.0 | nA   |
| Gate-Drain Breakdown Voltage | $V_{(BR)GDS}$        | $V_{DS}=0\text{V}$ , $I_G=-100\mu\text{A}$                | -20 |     |      | V    |
| Drain Current                | $I_{DSS}$            | $V_{DS}=5\text{V}$ , $V_{GS}=0\text{V}$                   | 6   |     | 32   | mA   |
| Gate-Source Cut-Off Voltage  | $V_{GS}(\text{OFF})$ | $V_{DS}=5\text{V}$ , $I_D=1\mu\text{A}$                   |     |     | -2.5 | V    |
| Forward Transfer Admittance  | $ Y_{fs} $           | $V_{DS}=5\text{V}$ , $V_{GS}=0\text{V}$ , $f=1\text{kHz}$ | 15  | 25  |      | mS   |
| Input Capacitance            | $C_{iss}$            | $V_{DS}=5\text{V}$ , $V_{GS}=0\text{V}$ , $f=1\text{MHz}$ |     | 7.5 | 10   | pF   |
| Reverse Transfer Capacitance | $C_{rss}$            | $V_{DG}=5\text{V}$ , $I_D=0\text{V}$ , $f=1\text{MHz}$    |     | 2   | 3    | pF   |

■ CLASSIFICATION OF  $I_{DSS}$

| RANK  | GR   | BL    | V     |
|-------|------|-------|-------|
| RANGE | 6~12 | 10~20 | 16~32 |

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