



DONGGUAN NANJING ELECTRONICS LTD.,

NPN Silicon Epitaxial Planar Transistor

KTC4075

FEATURES

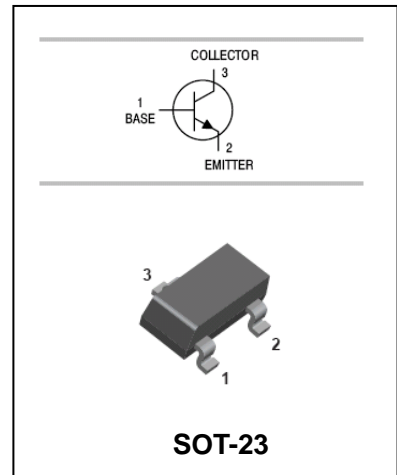
- High and excellent DC current gain.
- Complementary to KTA2014.
- Small package.

APPLICATIONS

- General purpose application.
- Switching application.

ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------------|--------------|
| KTC4075 | LO/LY/LGR/LBL | SOT-23 |



MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Symbol | Parameter | Value | Units |
|-----------------------------------|----------------------------------|---------|-------|
| V _{CB0} | Collector-Base Voltage | 60 | V |
| V _{CEO} | Collector-Emitter Voltage | 50 | V |
| V _{EBO} | Emitter-Base Voltage | 5 | V |
| I _C | Collector Current -Continuous | 150 | mA |
| I _B | Base Current | 30 | mA |
| P _C | Collector Power Dissipation | 100 | mW |
| T _j , T _{stg} | Junction and Storage Temperature | -55~150 | °C |

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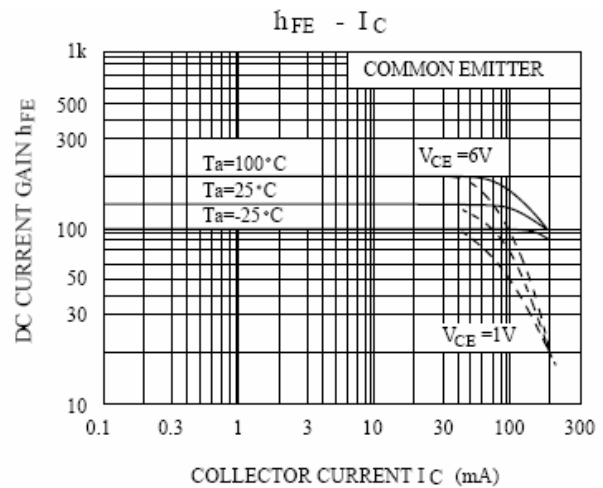
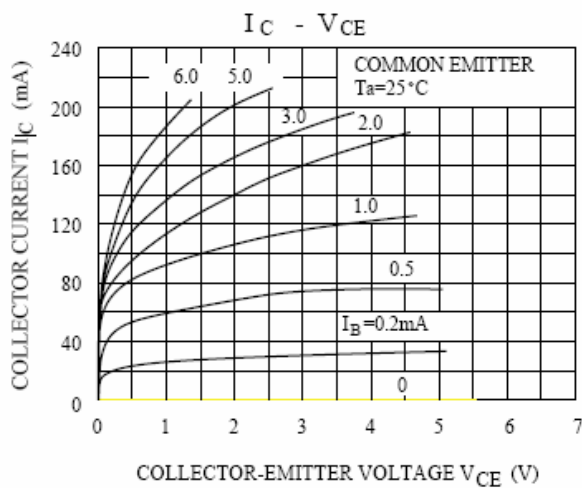
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|-----------------------------|-----|-----|------|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu A, I_E=0$ | 60 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1mA, I_B=0$ | 50 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=100\mu A, I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=60V, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5V, I_C=0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=6V, I_C=2mA$ | 70 | | 700 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100mA, I_B=10mA$ | | 0.1 | 0.25 | V |
| Transition frequency | f_T | $V_{CE}=10V, I_C=1mA$ | 80 | | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=1MHz$ | | 2.0 | 3.5 | pF |

CLASSIFICATION OF h_{FE}

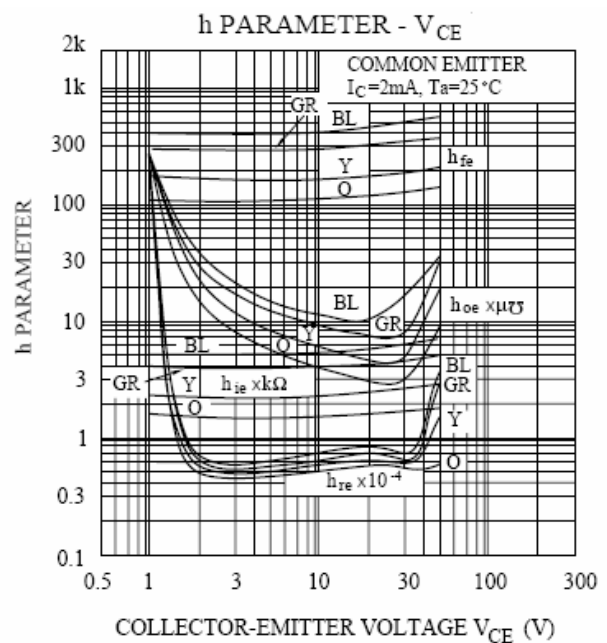
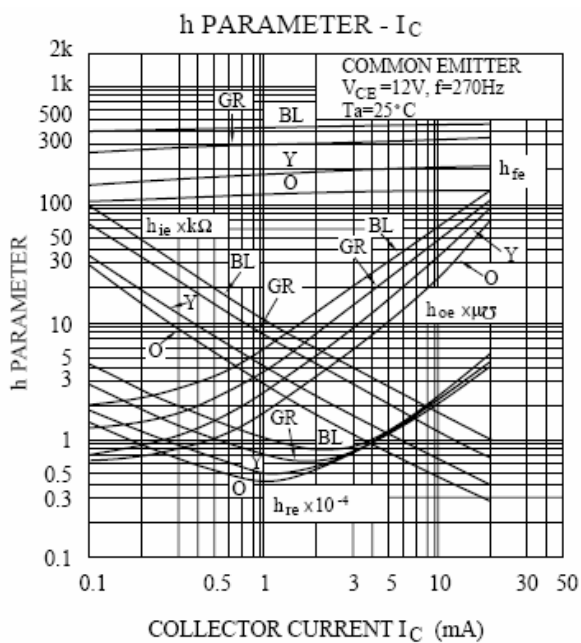
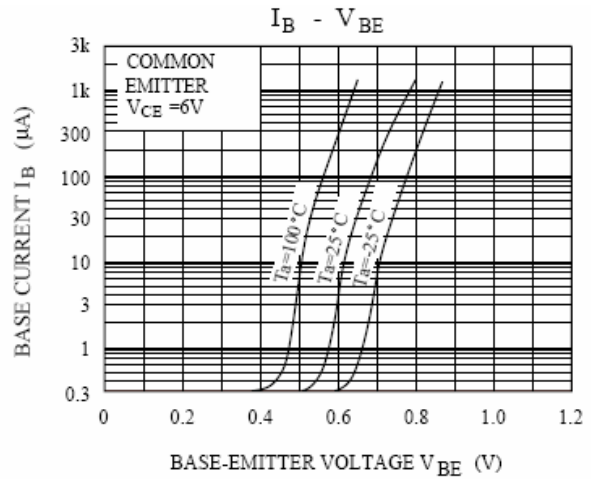
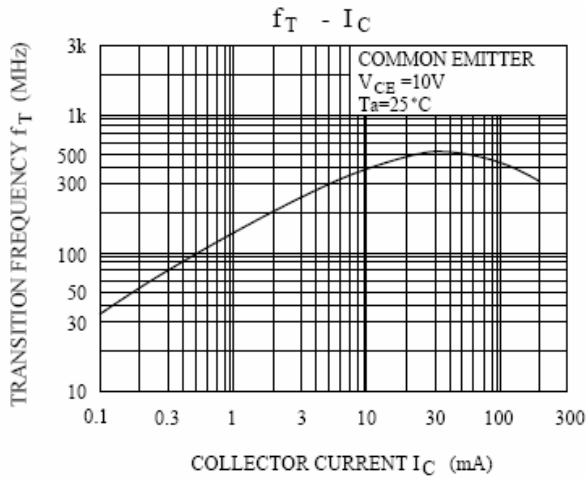
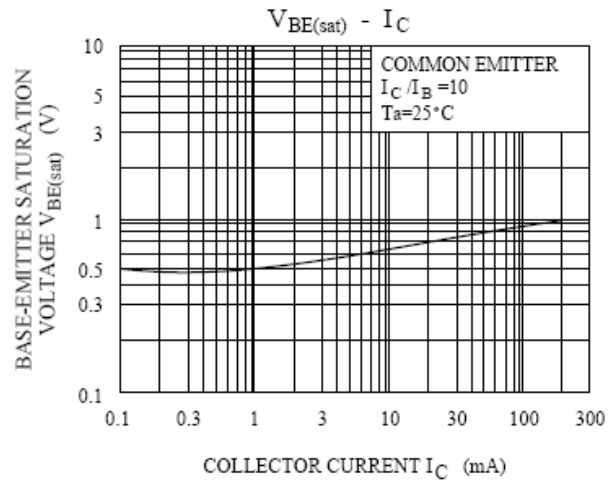
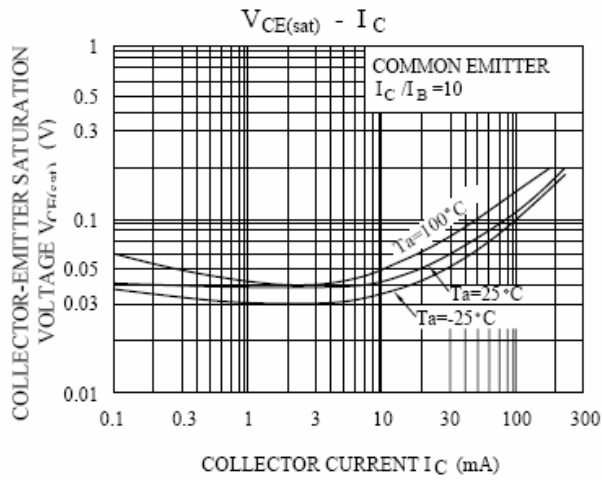
| Rank | O | Y | GR | BL |
|-------|--------|---------|---------|---------|
| Range | 70-140 | 120-240 | 200-400 | 350-700 |

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



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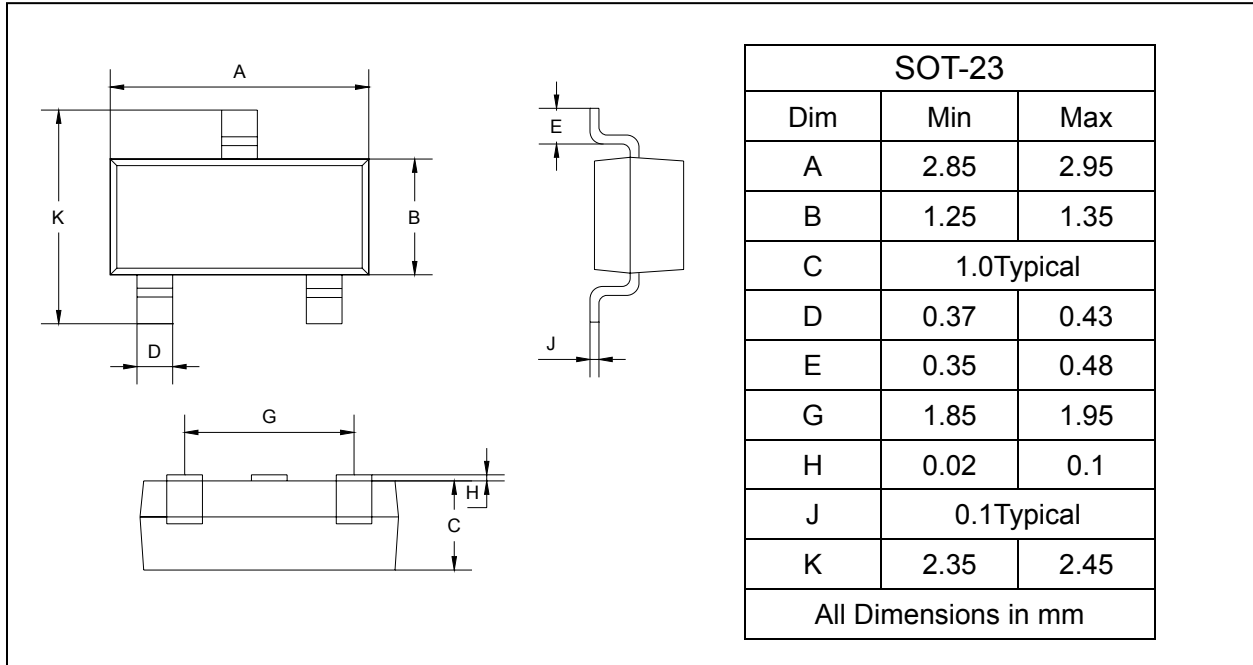
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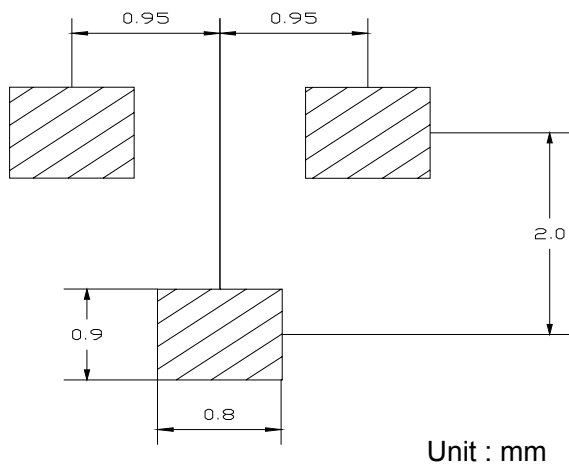
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

| Device | Package | Shipping |
|---------|---------|----------------|
| KTC4075 | SOT-23 | 3000/Tape&Reel |