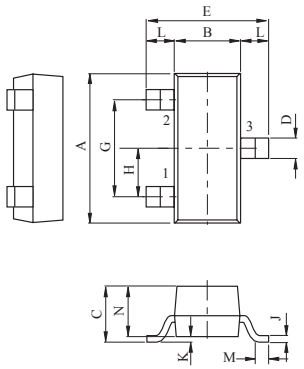
GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.

FEATURES

- Complementary to the KN4402S/4403S
- Suffix **U** : Qualified to AEC-Q101.
  ex) KN4401S-RTK/H**U**




Unit : mm

| DIM | MILLIMETERS |
|---|---|
| A | 2.93 ± 0.20 |
| B | 1.30+0.20/-0.15 |
| C | 1.0+0.3/-0.1 |
| D | 0.40+0.15/-0.05 |
| E | 2.40+0.30/-0.20 |
| G | 1.90 ± 0.10 |
| H | 0.95 ± 0.10 |
| J | 0.13+0.10/-0.05 |
| K | 0.00 ~ 0.10 |
| L | 0.55 ± 0.10 |
| M | 0.20 MIN |
| N | 1.00+0.20/-0.10 |

1. EMITTER
2. BASE
3. COLLECTOR

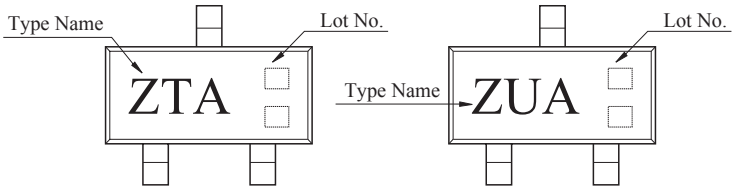
SOT-23

**MAXIMUM RATING (Ta=25℃)**

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 60 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 40 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 6 | V |
| Collector Current | $I_C$ | 600 | mA |
| Collector Power Dissipation | $P_C$ * | 350 | mW |
| Junction Temperature | $T_j$ | 150 | ℃ |
| Storage Temperature Range | $T_{stg}$ | -55 ~ 150 | ℃ |

Note : * Package Mounted On 99.5% Alumina (10x 8 x 0.6mm)

Marking




MARK SPEC

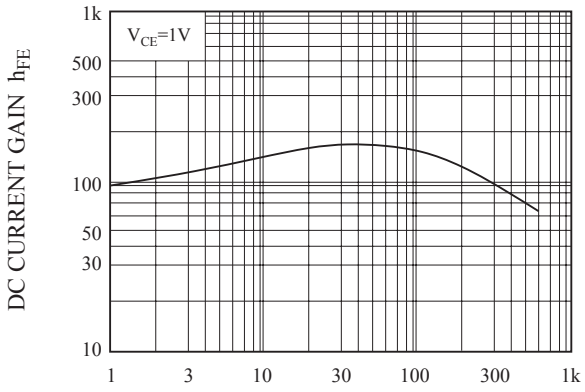
| TYPE | MARK |
|---|---|
| KN4400S | ZTA |
| KN4401S | ZUA |

**ELECTRICAL CHARACTERISTICS (Ta=25℃)**

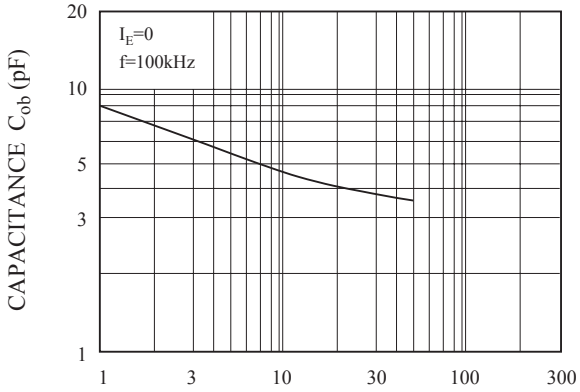
| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|---|
| Collector Cut-off Current | | $I_{CEX}$ | $V_{CE}$=35V, $V_{EB}$=0.4V | - | - | 100 | nA |
| Collector Cut-off Current | | $I_{CBO}$ | $V_{CB}$=60V, $I_E$=0 | - | - | 100 | nA |
| Emitter Cut-off Current | | $I_{EBO}$ | $V_{EB}$=6V, $I_C$=0 | - | - | 100 | nA |
| Collector-Base Breakdown Voltage | | $V_{(BR)CBO}$ | $I_C$=100μA, $I_E$=0 | 60 | - | - | V |
| Collector-Emitter Breakdown Voltage | | $V_{(BR)CEO}$ | $I_C$=1mA, $I_B$=0 | 40 | - | - | V |
| Emitter-Base Breakdown Voltage | | $V_{(BR)EBO}$ | $I_E$=100μA, $I_C$=0 | 6.0 | - | - | V |
| DC Current Gain * | KN4401S | $h_{FE}$(1) | $V_{CE}$=1V, $I_C$=0.1mA | 20 | - | - | |
| | KN4400S | $h_{FE}$(1) | $V_{CE}$=1V, $I_C$=1mA | 20 | - | - | |
| | KN4401S | $h_{FE}$(2) | | 40 | - | - | |
| | KN4400S | $h_{FE}$(2) | $V_{CE}$=1V, $I_C$=10mA | 40 | - | - | |
| | KN4401S | $h_{FE}$(3) | | 80 | - | - | |
| | KN4400S | $h_{FE}$(3) | $V_{CE}$=1V, $I_C$=150mA | 50 | - | 150 | |
| | KN4401S | $h_{FE}$(4) | | 100 | - | 300 | |
| | KN4400S | $h_{FE}$(4) | $V_{CE}$=2V, $I_C$=500mA | 20 | - | - | |
| | KN4401S | $h_{FE}$(5) | | 40 | - | - | |
| Collector-Emitter Saturation Voltage * | | $V_{CE(sat)}$ 1 | $I_C$=150mA, $I_B$=15mA | - | - | 0.4 | V |
| | | $V_{CE(sat)}$ 2 | $I_C$=500mA, $I_B$=50mA | - | - | 0.75 | |
| Base-Emitter Saturation Voltage * | | $V_{BE(sat)}$ 1 | $I_C$=150mA, $I_B$=15mA | 0.75 | - | 0.95 | V |
| | | $V_{BE(sat)}$ 2 | $I_C$=500mA, $I_B$=50mA | - | - | 1.2 | |
| Transition Frequency | KN4400S | $f_T$ | $V_{CE}$=10V, $I_C$=20mA, f=100MHz | 200 | - | - | MHz |
| | KN4401S | | | 250 | - | - | |
| Collector Output Capacitance | | $C_{ob}$ | $V_{CB}$=5V, $I_E$=0, f=1MHz | - | - | 6.5 | pF |

* Pulse Test : Pulse Width ≤ 300μS, Duty Cycle ≤ 2%.

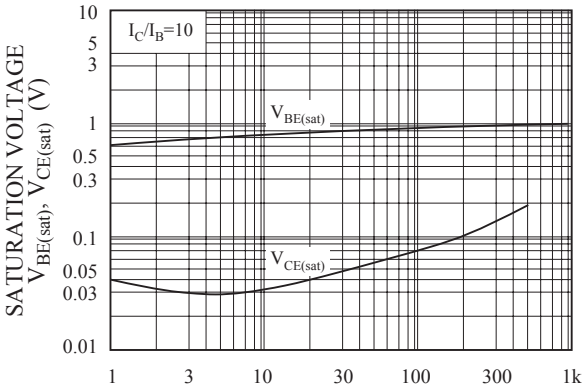
$h_{FE}$ - $I_C$




$C_{ob}$ - $V_{CB}$




$V_{BE(sat)}$, $V_{CE(sat)}$ - $I_C$




SAFE OPERATING AREA