

HIGH SPEED SWITCHING APPLICATION.

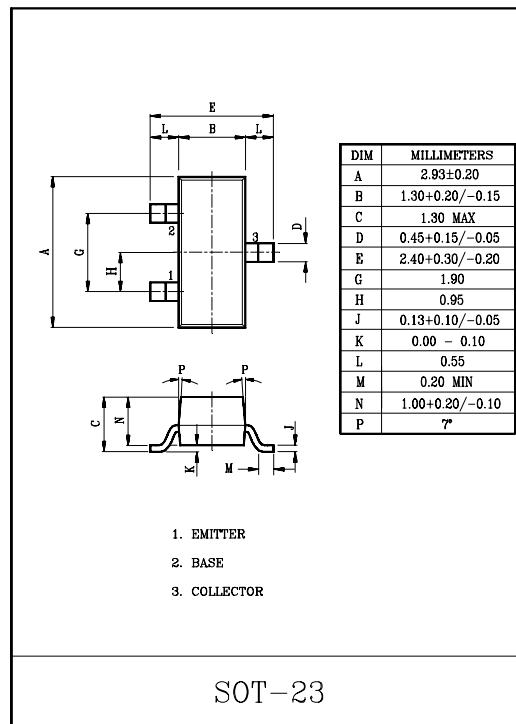
#### FEATURES

- Excellent High Frequency Characteristics.
- Excellent Switching Characteristics.

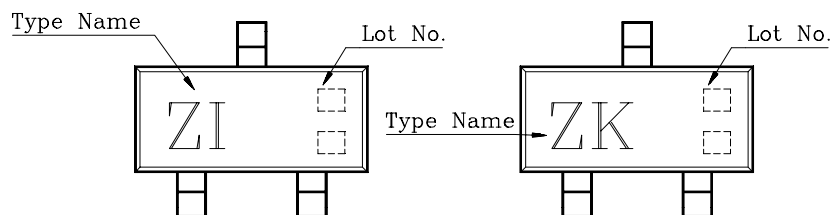
#### MAXIMUM RATINGS(Ta=25℃)

| CHARACTERISTIC                          | SYMBOL    | RATING  | UNIT |
|-----------------------------------------|-----------|---------|------|
| Collector-Base Voltage                  | $V_{CBO}$ | 40      | V    |
| Collector-Emitter Voltage               | $V_{CEO}$ | 15      | V    |
| Emitter-Base Voltage                    | $V_{EBO}$ | 4.5     | V    |
| Collector Current                       | $I_C$     | 500     | mA   |
| Collector Power Dissipation<br>(Ta=25℃) | * $P_C$   | 350     | mW   |
| Junction Temperature                    | $T_j$     | 150     | ℃    |
| Storage Temperature Range               | $T_{stg}$ | -55~150 | ℃    |

\* Package Mounted On 99.5% Alumina 10x8x0.6mm



#### Marking



#### MARK SPEC

| TYPE      | MARK |
|-----------|------|
| KTN2369S  | Z I  |
| KTN2369AS | Z K  |

# KTN2369S/AS

## ELECTRICAL CHARACTERISTICS (Ta=25℃)

| CHARACTERISTIC                         |           | SYMBOL               | TEST CONDITION                                                                                 | MIN. | TYP. | MAX. | UNIT |
|----------------------------------------|-----------|----------------------|------------------------------------------------------------------------------------------------|------|------|------|------|
| Collector Cut-off Current              |           | I <sub>CBO</sub>     | V <sub>CB</sub> =20V, I <sub>E</sub> =0                                                        | –    | –    | 0.4  | μA   |
|                                        |           |                      | V <sub>CB</sub> =20V, I <sub>E</sub> =0, Ta=125℃                                               | –    | –    | 30   |      |
| Collector-Base Breakdown Voltage       |           | V <sub>(BR)CBO</sub> | I <sub>C</sub> =10μA, I <sub>E</sub> =0                                                        | 40   | –    | –    | V    |
| Collector-Emitter Breakdown Voltage *  |           | V <sub>(BR)CEO</sub> | I <sub>C</sub> =10mA, I <sub>B</sub> =0                                                        | 15   | –    | –    |      |
| Emitter-Base Breakdown Voltage         |           | V <sub>(BR)EBO</sub> | I <sub>E</sub> =10μA, I <sub>C</sub> =0                                                        | 4.5  | –    | –    |      |
| DC Current Gain *                      | KTN2369S  | h <sub>FE</sub>      | I <sub>C</sub> =10mA, V <sub>CE</sub> =1.0V                                                    | 40   | –    | 120  |      |
|                                        | KTN2369AS |                      |                                                                                                | –    | –    | 120  |      |
|                                        | KTN2369S  |                      | I <sub>C</sub> =10mA, V <sub>CE</sub> =1.0V, Ta=-55℃                                           | 20   | –    | –    |      |
|                                        | KTN2369AS |                      | I <sub>C</sub> =10mA, V <sub>CE</sub> =0.35V, Ta=-55℃                                          | 20   | –    | –    |      |
|                                        | KTN2369AS |                      | I <sub>C</sub> =100mA, V <sub>CE</sub> =2.0V                                                   | 20   | –    | –    |      |
|                                        | KTN2369S  |                      | I <sub>C</sub> =100mA, V <sub>CE</sub> =20V                                                    | 20   | –    | –    |      |
| Collector-Emitter Saturation Voltage * |           | V <sub>CE(sat)</sub> | I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA                                                    | –    | –    | 0.25 | V    |
| Base-Emitter Saturation Voltage *      |           | V <sub>BE(sat)</sub> | I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA                                                    | 0.70 | –    | 0.85 | V    |
| Collector Output Capacitance           |           | C <sub>ob</sub>      | V <sub>CB</sub> =5.0V, I <sub>E</sub> =0, f=1.0MHz                                             | –    | –    | 4.0  | pF   |
| Storage Time                           | KTN2369AS | t <sub>stg</sub>     | I <sub>C</sub> =100mA, I <sub>B1</sub> =-I <sub>B2</sub> =10mA, V <sub>CC</sub> =10V           | –    | –    | 13   | nS   |
| Turn-on Time                           |           | t <sub>on</sub>      | I <sub>C</sub> =10mA, I <sub>B1</sub> =3.0mA, V <sub>CC</sub> =3.0V<br>I <sub>B2</sub> =-1.5mA | –    | –    | 12   |      |
| Turn-off Time                          | KTN2369AS | t <sub>off</sub>     | I <sub>C</sub> =10mA, I <sub>B1</sub> =3.0mA, I <sub>B2</sub> =-1.5mA, V <sub>CC</sub> =3.0V   | –    | –    | 15   |      |

\*Pulse Test : Pulse Width ≤300μS, Duty Cycle≤2.0%