

GENERAL PURPOSE APPLICATION.  
HIGH VOLTAGE APPLICATION.

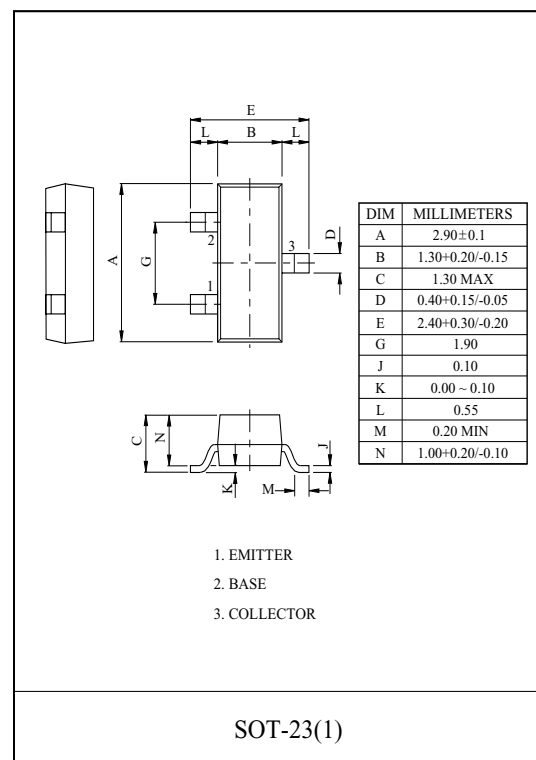
## FEATURES

- High Collector Breakdown Voltage  
:  $V_{CBO}=180V$ ,  $V_{CEO}=160V$
- Low Leakage Current.  
:  $I_{CBO}=50nA(\text{Max.})$   $V_{CB}=120V$
- Low Saturation Voltage  
:  $V_{CE(\text{sat})}=0.2V(\text{Max.})$   $I_C=50mA$ ,  $I_B=5mA$

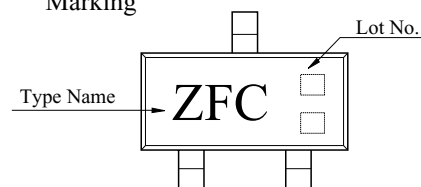
## MAXIMUM RATING (Ta=25°C)

| CHARACTERISTIC              | SYMBOL    | RATING  | UNIT |
|-----------------------------|-----------|---------|------|
| Collector-Base Voltage      | $V_{CBO}$ | 180     | V    |
| Collector-Emitter Voltage   | $V_{CEO}$ | 160     | V    |
| Emitter-Base Voltage        | $V_{EBO}$ | 6       | V    |
| Collector Current           | $I_C$     | 600     | mA   |
| Base Current                | $I_B$     | 100     | mA   |
| Collector Power Dissipation | $P_C^*$   | 350     | mW   |
| Junction Temperature        | $T_j$     | 150     | °C   |
| Storage Temperature Range   | $T_{stg}$ | -55 150 | °C   |

Note : \* Package Mounted On 99.5% Alumina  $10 \times 8 \times 0.6\text{mm}$



## Marking



## ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC                         | SYMBOL               | TEST CONDITION                       | MIN. | TYP. | MAX. | UNIT |
|----------------------------------------|----------------------|--------------------------------------|------|------|------|------|
| Collector Cut-off Current              | $I_{CBO}$            | $V_{CB}=120V$ , $I_E=0$              | -    | -    | 50   | nA   |
| Emitter Cut-off Current                | $I_{EBO}$            | $V_{EB}=4V$ , $I_C=0$                | -    | -    | 50   | nA   |
| Collector-Base Breakdown Voltage       | $V_{(BR)CBO}$        | $I_C=0.1mA$ , $I_E=0$                | 180  | -    | -    | V    |
| Collector-Emitter Breakdown Voltage *  | $V_{(BR)CEO}$        | $I_C=1mA$ , $I_B=0$                  | 160  | -    | -    | V    |
| Emitter-Base Breakdown Voltage         | $V_{(BR)EBO}$        | $I_E=0.1mA$ , $I_C=0$                | 5    | -    | -    | V    |
| DC Current Gain *                      | $h_{FE}$             | $V_{CE}=5V$ , $I_C=10mA$             | 150  | -    | 250  |      |
| Collector-Emitter Saturation Voltage * | $V_{CE(\text{sat})}$ | $I_C=50mA$ , $I_B=5mA$               | -    | -    | 0.5  | V    |
| Base-Emitter Saturation Voltage *      | $V_{BE(\text{sat})}$ | $I_C=50mA$ , $I_B=5mA$               | -    | -    | 1.0  | V    |
| Transition Frequency                   | $f_T$                | $V_{CE}=5V$ , $I_C=10mA$ , $f=30MHz$ | 100  | -    | 300  | MHz  |

\* Pulse Test : Pulse Width  $\leq 300 \mu s$ , Duty Cycle  $\leq 2\%$ .