

# SOT223 PNP SILICON PLANAR HIGH VOLTAGE TRANSISTOR

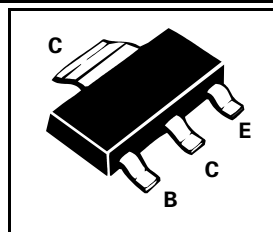
## FZT560

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### FEATURES

- \* 500 Volt  $V_{CEO}$
- \* 150mA continuous current
- \*  $P_{tot} = 2$  Watt

PARTMARKING DETAIL – FZT560



### ABSOLUTE MAXIMUM RATINGS.

| PARAMETER                                  | SYMBOL         | VALUE       | UNIT        |
|--|----------------|-------------|-------------|
| Collector-Base Voltage                     | $V_{CBO}$      | -500        | V           |
| Collector-Emitter Voltage                  | $V_{CEO}$      | -500        | V           |
| Emitter-Base Voltage                       | $V_{EBO}$      | -5          | V           |
| Peak Pulse Current                         | $I_{CM}$       | -500        | mA          |
| Continuous Collector Current               | $I_C$          | -150        | mA          |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | $P_{tot}$      | 2           | W           |
| Operating and Storage Temperature Range    | $T_j; T_{stg}$ | -55 to +150 | $^{\circ}C$ |

### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

| PARAMETER                             | SYMBOL                | MIN.                 | MAX.          | UNIT          | CONDITIONS.  |
|---------------------------------------|-----------------------|----------------------|---------------|---------------|--|
| Collector-Base Breakdown Voltage      | $V_{(BR)CBO}$         | -500                 |               | V             | $I_C = -100\mu A$  |
| Collector-Emitter Breakdown Voltage   | $V_{CEO(SUS)}$        | -500                 |               | V             | $I_C = -10mA^*$  |
| Emitter-Base Breakdown Voltage        | $V_{(BR)EBO}$         | -5                   |               | V             | $I_E = -100\mu A$  |
| Collector Cut-Off Current             | $I_{CBO}$             |                      | -100          | nA            | $V_{CB} = -500V$   |
| Collector Cut-Off Current             | $I_{CES}$             |                      | -100          | nA            | $V_{CE} = -500V$   |
| Emitter Cut-Off Current               | $I_{EBO}$             |                      | -100          | nA            | $V_{EB} = -5V$   |
| Collector-Emitter Saturation Voltage  | $V_{CE(sat)}$         |                      | -0.20<br>-0.5 | V             | $I_C = -20mA, I_B = -2mA$<br>$I_C = -50mA, I_B = -10mA^*$  |
| Base-Emitter Saturation Voltage       | $V_{BE(sat)}$         |                      | -0.9          | V             | $I_C = -50mA, I_B = -10mA^*$   |
| Base-Emitter Turn On Voltage          | $V_{BE(on)}$          |                      | -0.9          | V             | $I_C = -50mA, V_{CE} = -10V^*$   |
| Static Forward Current Transfer Ratio | $h_{FE}$              | 100<br>80<br>15 typ  | 300<br>300    |               | $I_C = -1mA, V_{CE} = -10V$<br>$I_C = -50mA, V_{CE} = -10V^*$<br>$I_C = -100mA, V_{CE} = -10V^*$ |
| Transition Frequency                  | $f_T$                 | 60                   |               | MHz           | $I_C = -10mA, V_{CE} = -20V$<br>$f = 50MHz$  |
| Output Capacitance                    | $C_{obo}$             |                      | 8             | pF            | $V_{CB} = -20, f = 1MHz$   |
| Switching times                       | $t_{on}$<br>$t_{off}$ | 110 typ.<br>1.5 typ. |               | ns<br>$\mu s$ | $V_{CE} = -100, I_C = -50mA,$<br>$I_{B1} = -5mA, I_{B2} = 10mA,$                                 |

\* Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq 2\%$

# FZT560

## TYPICAL CHARACTERISTICS

