



# THE DATASHEET OF ZTX712



# PNP SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTOR

## ZTX712

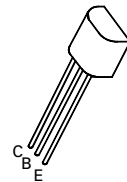
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### FEATURES

- \* 60 Volt  $V_{CE0}$
- \* 0.8 Amp continuous current
- \* Gain of 10K at  $I_C=0.5$  Amp

### APPLICATIONS

- \* Lamp, solenoid and relay drivers



E-Line  
TO92 Compatible

### ABSOLUTE MAXIMUM RATINGS.

| PARAMETER  | SYMBOL         | VALUE       | UNIT                      |
|--|----------------|-------------|---------------------------|
| Collector-Base Voltage   | $V_{CBO}$      | -80         | V                         |
| Collector-Emitter Voltage  | $V_{CEO}$      | -60         | V                         |
| Emitter-Base Voltage   | $V_{EBO}$      | -10         | V                         |
| Peak Pulse Current   | $I_{CM}$       | -2          | A                         |
| Continuous Collector Current   | $I_C$          | -800        | mA                        |
| Power Dissipation at $T_{amb} = 25^\circ\text{C}$<br>derate above $25^\circ\text{C}$ | $P_{tot}$      | 1<br>5.7    | W<br>mW/ $^\circ\text{C}$ |
| Operating and Storage Temperature Range  | $T_j; T_{stg}$ | -55 to +200 | $^\circ\text{C}$          |

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

| PARAMETER                             | SYMBOL         | MIN.      | MAX.  | UNIT | CONDITIONS.  |
|---------------------------------------|----------------|-----------|-------|------|--|
| Collector-Base Breakdown Voltage      | $V_{(BR)CBO}$  | -80       |       | V    | $I_C = -10\mu\text{A}$   |
| Collector-Emitter Breakdown Voltage   | $V_{CEO(SUS)}$ | -60       |       | V    | $I_C = -10\text{mA}^*$   |
| Emitter-Base Breakdown Voltage        | $V_{(BR)EBO}$  | -10       |       | V    | $I_E = -10\mu\text{A}$   |
| Collector Cut-Off Current             | $I_{CBO}$      |           | -100  | nA   | $V_{CB} = -60\text{V}, I_E = 0$  |
| Emitter Cut-Off Current               | $I_{EBO}$      |           | -100  | nA   | $V_{EB} = -8\text{V}, I_C = 0$   |
| Collector-Emitter Saturation Voltage  | $V_{CE(sat)}$  |           | -1.25 | V    | $I_C = -800\text{mA}, I_B = -8\text{mA}^*$   |
| Base-Emitter Turn-On Voltage          | $V_{BE(on)}$   |           | -1.8  | V    | $I_C = -800\text{mA}, V_{CE} = -5\text{V}^*$   |
| Static Forward Current Transfer Ratio | $h_{FE}$       | 5K<br>10K |       |      | $I_C = -100\text{mA}, V_{CE} = -5\text{V}^*$<br>$I_C = -500\text{mA}, V_{CE} = -5\text{V}^*$ |

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