

**Micro Commercial Components** 



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# **ZTX450**

# **NPN Silicon Plastic-Encapsulate Transistor**

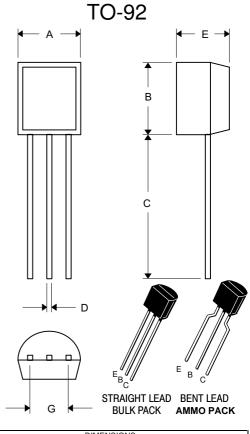
# **Features**

- Capable of 0.625Watts of Power Dissipation.
- Collector Current: 1A
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Marking: ZTX450 Halogen free available upon request by adding suffix "-HF"

| Symbol           | Rating                         | Rating      | Unit         |  |  |
|------------------|--------------------------------|-------------|--------------|--|--|
| $V_{CEO}$        | Collector-Emitter Voltage      | 45          | V            |  |  |
| $V_{CBO}$        | Collector-Base Voltage         | 60          | V            |  |  |
| $V_{EBO}$        | Emitter-Base Voltage           | 5.0         | V            |  |  |
| Ic               | Collector Current              | 1           | Α            |  |  |
| P <sub>D</sub>   | Power Dissipation              | 0.625       | W            |  |  |
| TJ               | Operating Junction Temperature | -55 to +150 | $^{\circ}$   |  |  |
| T <sub>STG</sub> | Storage Temperature            | -55 to +150 | $^{\circ}$ C |  |  |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol               | Parameter  | Min | Max  | Units |  |  |
|----------------------|--|-----|------|-------|--|--|
| OFF CHARACTERISTICS  |  |     |      |       |  |  |
| $V_{(BR)CEO}$        | Collector-Emitter Breakdown Voltage* (I <sub>C</sub> =10mAdc, I <sub>B</sub> =0)       | 45  |      | Vdc   |  |  |
| $V_{(BR)CBO}$        | Collector-Base Breakdown Voltage<br>(I <sub>C</sub> =100uAdc, I <sub>E</sub> =0) 60    |     |      | Vdc   |  |  |
| $V_{(BR)EBO}$        | Emitter-Base Breakdown Voltage (I <sub>E</sub> =100uAdc, I <sub>C</sub> =0) 5.0        |     |      | Vdc   |  |  |
| I <sub>CBO</sub>     | Collector Cutoff Current $(V_{CB}=45Vdc, I_{E}=0)$                                     |     | 0.1  | uAdc  |  |  |
| I <sub>EBO</sub>     | Emitter Cutoff Current (V <sub>EB</sub> =4.0Vdc, I <sub>C</sub> =0)                    |     | 0.1  | uAdc  |  |  |
| h <sub>FE1</sub>     | DC Current Gain<br>(I <sub>C</sub> =150mAdc, V <sub>CE</sub> =10Vdc)                   | 100 | 300  |       |  |  |
| h <sub>FE2</sub>     | DC Current Gain (I <sub>C</sub> =1Adc, V <sub>CE</sub> =10Vdc)                         | 15  |      |       |  |  |
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage (I <sub>C</sub> =150mAdc, I <sub>B</sub> =15mAdc) |     | 0.25 | Vdc   |  |  |
| V <sub>BE(sat)</sub> | Base-Emitter Saturation Voltage (I <sub>C</sub> =150mAdc, I <sub>B</sub> =15mAdc)      |     | 1.1  | Vdc   |  |  |
| f⊤                   | Transition Frequency (V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=100MHz)            | 150 |      | MHz   |  |  |
| Cob                  | Collector output capacitance (V <sub>CB</sub> =10V, f=1MHz)                            |     | 15   | pF    |  |  |



| DIMENSIONS |       |      |       |      |               |  |
|------------|-------|------|-------|------|---------------|--|
|            | INCHI | ES   | ММ    |      |               |  |
| DIM        | MIN   | MAX  | MIN   | MAX  | NOTE          |  |
| Α          | .175  | .185 | 4.45  | 4.70 |               |  |
| В          | .175  | .185 | 4.45  | 4.70 |               |  |
| С          | .500  |      | 12.70 |      |               |  |
| D          | .016  | .020 | 0.41  | 0.63 |               |  |
| E          | .135  | .145 | 3.43  | 3.68 |               |  |
| G          | .095  | .105 | 2.42  | 2.67 | Straight Lead |  |
| G          | .173  | .220 | 4.40  | 5.60 | Bent Lead     |  |

<sup>\*</sup> For ammo packing detailed specification, click here to visit our website of product packaging for details.



#### **Micro Commercial Components**

## **Ordering Information:**

| Device         | Packing                      |
|----------------|------------------------------|
| Part Number-AP | Ammo Packing: 20 Kpcs/Carton |
| Part Number-BP | Bulk: 100 Kpcs/Carton        |

Note: Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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