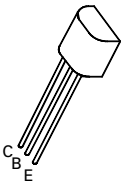


# NPN SILICON PLANAR R.F. MEDIUM POWER TRANSISTOR

ISSUE 2 – MARCH 94

## ZTX327



E-Line  
TO92 Compatible

### ABSOLUTE MAXIMUM RATINGS.

| PARAMETER                               | SYMBOL         | VALUE       | UNIT |
|-----------------------------------------|----------------|-------------|------|
| Collector-Base Voltage                  | $V_{CBO}$      | 55          | V    |
| Collector-Emitter Voltage               | $V_{CEO}$      | 30          | V    |
|                                         | $V_{CER}$      | 55          | V    |
| Emitter-Base Voltage                    | $V_{EBO}$      | 3.5         | V    |
| Continuous Collector Current            | $I_C$          | 400         | mA   |
| Power Dissipation                       | $P_{tot}$      | 1.5         | W    |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +175 | °C   |

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

| PARAMETER                            | SYMBOL             | MIN. | TYP. | MAX. | UNIT          | CONDITIONS.                                                        |
|--------------------------------------|--------------------|------|------|------|---------------|--------------------------------------------------------------------|
| Collector-Base Breakdown Voltage     | $V_{(BR)CBO}$      | 55   |      |      | V             | $I_C = 100\mu\text{A}, I_E = 0$                                    |
| Collector-Emitter Sustaining Voltage | $V_{(BR)CEO(sus)}$ | 30   |      |      | V             | $I_C = 5\text{mA}, I_B = 0$                                        |
|                                      | $V_{(BR)CER(sus)}$ | 55   |      |      |               | $I_C = 5\text{mA}, R_{BE} = 10\Omega$                              |
| Emitter-Base Breakdown Voltage       | $V_{(BR)EBO}$      | 3.5  |      |      | V             | $I_E = 100\mu\text{A}, I_C = 0$                                    |
| Collector-Emitter Cut-Off Current    | $I_{CEO}$          |      |      | 20   | $\mu\text{A}$ | $V_{CB} = 45\text{V}$                                              |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$      |      |      | 1.0  | V             | $I_C = 100\text{mA}, I_B = 20\text{mA}$                            |
| Static Forward Current Transfer      | $h_{FE}$           | 15   |      |      |               | $I_C = 50\text{mA}, V_{CE} = 5\text{V}$                            |
| Transitional Frequency               | $f_T$              | 500  | 800  |      | MHz           | $I_C = 25\text{mA}, V_{CE} = 15\text{V}$<br>$f = 100\text{MHz}$    |
| Output Capacitance                   | $C_{obo}$          |      |      | 3.0  | pF            | $V_{CE} = 15\text{V}, I_C = 25\text{mA}$<br>$f = 100\text{MHz}$    |
| R.F. power output                    | $P_{OUT}$          | 350  | 440  |      | mW            | $V_{CC} = 12\text{V}, P_{IN} = 80\text{mW}$<br>$f = 400\text{MHz}$ |
| Efficiency                           | $\eta$             | 50   | 70   |      | %             |                                                                    |

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