

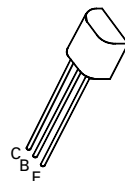
# PNP SILICON PLANAR MEDIUM POWER TRANSISTORS

## ZTX554 ZTX555

ISSUE 1 – MARCH 94

### FEATURES

- \* 150 Volt  $V_{CEO}$
- \* 1 Amp continuous current
- \*  $P_{tot} = 1$  Watt



**E-Line**  
**TO92 Compatible**

### ABSOLUTE MAXIMUM RATINGS.

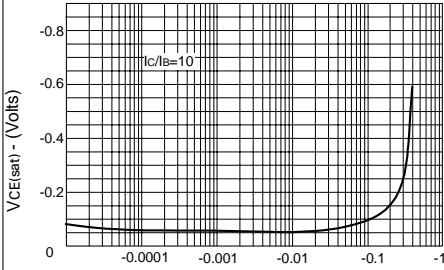
PARAMETER	SYMBOL	ZTX554	ZTX555	UNIT
Collector-Base Voltage	$V_{CBO}$	-140	-160	V
Collector-Emitter Voltage	$V_{CEO}$	-125	-150	V
Emitter-Base Voltage	$V_{EBO}$	-5		V
Peak Pulse Current	$I_{CM}$	-2		A
Continuous Collector Current	$I_C$	-1		A
Power Dissipation: at $T_{amb} = 25^\circ\text{C}$ derate above $25^\circ\text{C}$	$P_{tot}$	1 5.7		W 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	ZTX554		ZTX555		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-140		-160		V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-125		-150		V	$I_C = -10\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		-5		V	$I_E = -100\mu\text{A}$
Collector Cut-Off Current	$I_{CBO}$		-0.1		-0.1	$\mu\text{A}$ $\mu\text{A}$	$V_{CB} = -120\text{V}$ $V_{CB} = -140\text{V}$
Emitter Cut-Off Current	$I_{EBO}$		-0.1		-0.1	$\mu\text{A}$	$V_{EB} = -4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.3		-0.3	V	$I_C = -100\text{mA}$ , $I_B = -10\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1		-1	V	$I_C = -100\text{mA}$ , $I_B = -10\text{mA}^*$
Base-Emitter Turn-on Voltage	$V_{BE(on)}$		-1		-1	V	$I_C = -100\text{mA}$ , $V_{CE} = -10\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	50 50	300	50 50	300		$I_C = -10\text{mA}$ , $V_{CE} = -10\text{V}^*$ $I_C = -300\text{mA}$ , $V_{CE} = -10\text{V}^*$
Transition Frequency	$f_T$	100		100		MHz	$I_C = -50\text{mA}$ , $V_{CE} = -10\text{V}$ $f = 100\text{MHz}$
Output Capacitance	$C_{obo}$		10		10	pF	$V_{CB} = -10\text{V}$ , $f = 1\text{MHz}$

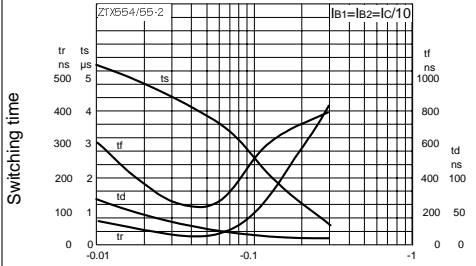
# ZTX554 ZTX555

## TYPICAL CHARACTERISTICS



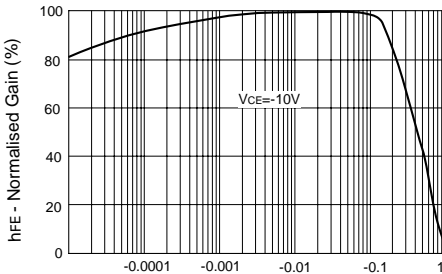
$I_C$  - Collector Current (Amps)

**$V_{CE(sat)}$  v  $I_C$**



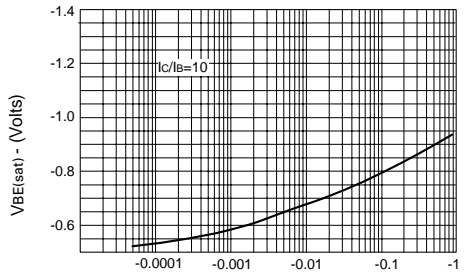
$I_C$  - Collector Current (Amps)

**Switching Speeds**



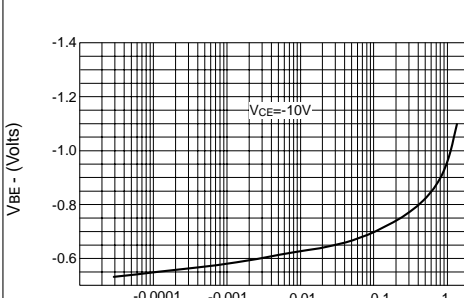
$I_C$  - Collector Current (Amps)

**$h_{FE}$  v  $I_C$**



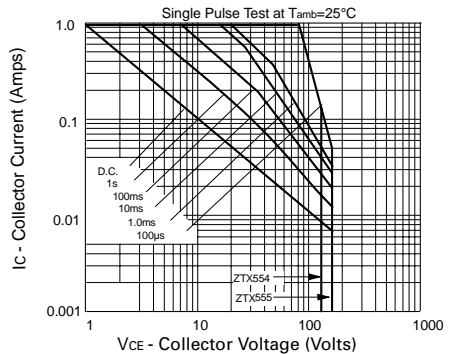
$I_C$  - Collector Current (Amps)

**$V_{BE(sat)}$  v  $I_C$**



$I_C$  - Collector Current (Amps)

**$V_{BE(on)}$  v  $I_C$**



**Safe Operating Area**