

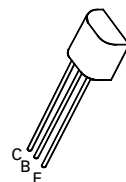
# PNP SILICON PLANAR MEDIUM POWER TRANSISTORS

ISSUE 2 – JULY 94

## ZTX754 ZTX755

### FEATURES

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



**E-Line  
TO92 Compatible**

### ABSOLUTE MAXIMUM RATINGS.

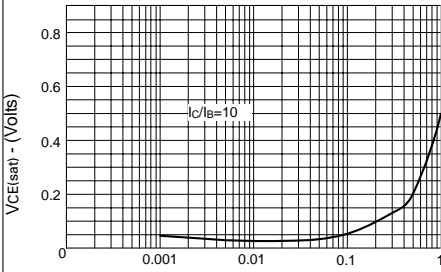
PARAMETER	SYMBOL	ZTX754	ZTX755	UNIT
Collector-Base Voltage	$V_{CBO}$	-125	-150	V
Collector-Emitter Voltage	$V_{CEO}$	-125	-150	V
Emitter-Base Voltage	$V_{EBO}$		-5	V
Peak Pulse Current	$I_{CM}$		-2	A
Continuous Collector Current	$I_C$		-1	A
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$		1	W
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	ZTX754		ZTX755		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-125		-150		V	$I_C = -100\mu\text{A}$ , $I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-125		-150		V	$I_C = -10\text{mA}$ , $I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		-5		V	$I_E = -100\mu\text{A}$ , $I_C = 0$
Collector Cut-Off Current	$I_{CBO}$		-100		-100	nA nA	$V_{CB} = -100\text{V}$ , $I_E = 0$ $V_{CB} = -125\text{V}$ , $I_E = 0$
Emitter Cut-Off Current	$I_{EBO}$		-100		-100	nA	$V_{EB} = -3\text{V}$ , $I_C = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-0.5 -0.5		-0.5 -0.5		V V	$I_C = -500\text{mA}$ , $I_B = -50\text{mA}^*$ $I_C = -1\text{A}$ , $I_B = -200\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1.1		-1.1	V	$I_C = -500\text{mA}$ , $I_B = -50\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-1.0		-1.0	V	$I_C = -500\text{mA}$ , $V_{CE} = -5\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	50 50 20		50 50 20			$I_C = -10\text{mA}$ , $V_{CE} = -5\text{V}$ $I_C = -500\text{mA}$ , $V_{CE} = -5\text{V}^*$ $I_C = -1\text{A}$ , $V_{CE} = -5\text{V}^*$
Transition Frequency	$f_T$	30		30		MHz	$I_C = -10\text{mA}$ , $V_{CE} = -20\text{V}$ $f = 20\text{MHz}$
Output Capacitance	$C_{obo}$		20		20	pF	$V_{CB} = -20\text{V}$ , $f = 1\text{MHz}$

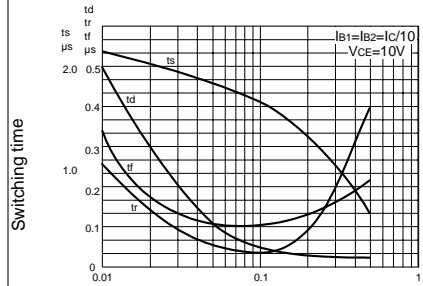
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## TYPICAL CHARACTERISTICS



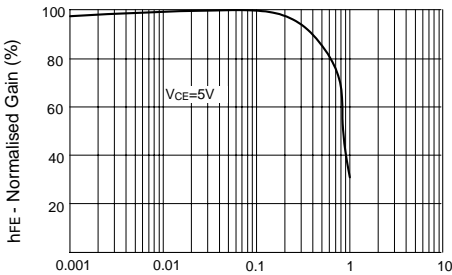
$I_C$  - Collector Current (Amps)

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



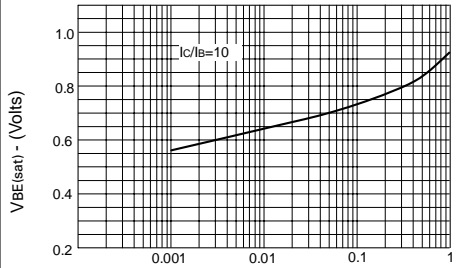
$I_C$  - Collector Current (Amps)

**Switching Speeds**



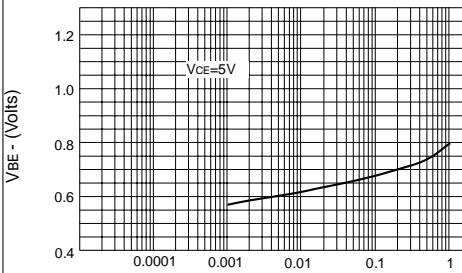
$I_C$  - Collector Current (Amps)

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



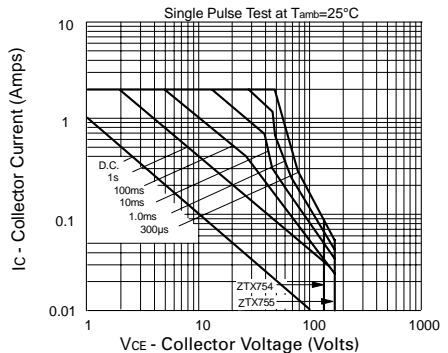
$I_C$  - Collector Current (Amps)

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



$I_C$  - Collector Current (Amps)

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



**Safe Operating Area**