

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.

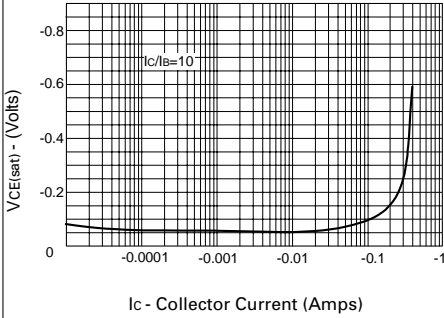
PARAMETER	SYMBOL	ZTX554	ZTX555	UNIT
Collector-Base Voltage	V_{CBO}	-140	-160	V
Collector-Emitter Voltage	V_{CEO}	-125	-150	V
Emitter-Base Voltage	V_{EBO}	-5		V
Peak Pulse Current	I_{CM}	-2		A
Continuous Collector Current	I_C	-1		A
Power Dissipation: at $T_{amb} = 25^\circ\text{C}$ derate above 25°C	P_{tot}	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).

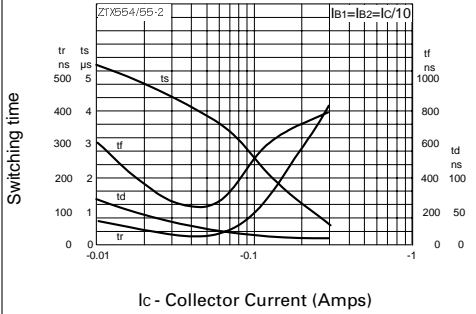
PARAMETER	SYMBOL	ZTX554		ZTX555		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-140		-160		V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-125		-150		V	$I_C = -10\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		-5		V	$I_E = -100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}		-0.1		-0.1	μA μA	$V_{CB} = -120\text{V}$ $V_{CB} = -140\text{V}$
Emitter Cut-Off Current	I_{EBO}		-0.1		-0.1	μA	$V_{EB} = -4\text{V}$
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	$V_{CB} = -10\text{V}$, $f = 1\text{MHz}$

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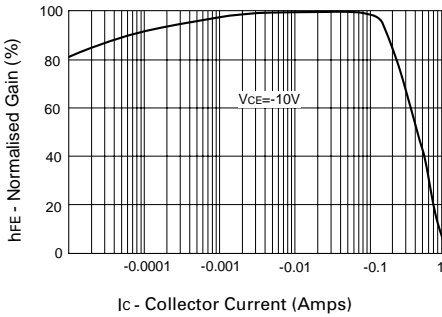
TYPICAL CHARACTERISTICS



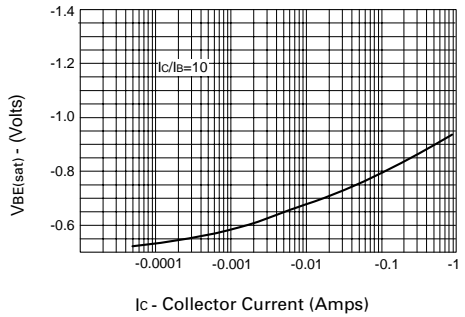
VCE(sat) v IC



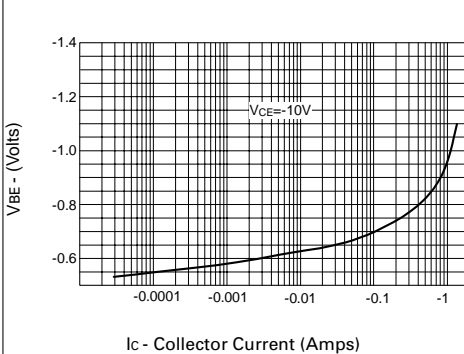
Switching Speeds



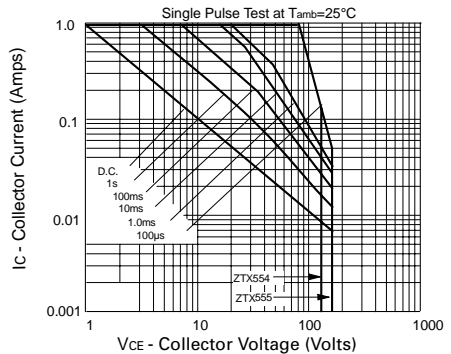
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area