



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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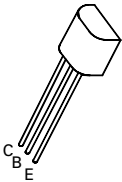
NPN SILICON PLANAR
MEDIUM POWER TRANSISTORS

ISSUE 2 – MARCH 1994

ZTX454
ZTX455

FEATURES

- * 140 Volt V_{CEO}
- * 1 Amp continuous current
- * P_{tot} = 1 Watt



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	ZTX454	ZTX455	UNIT
Collector-Base Voltage	V_{CBO}	140	160	V
Collector-Emitter Voltage	V_{CEO}	120	140	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 $T_{amb}=25^{\circ}C$	P_{tot}	1		W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +200		$^{\circ}C$

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$).

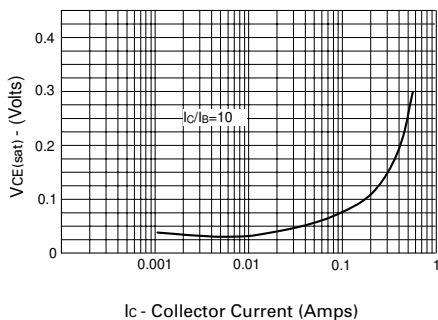
PARAMETER	SYMBOL	ZTX454		ZTX455		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	140		160		V	$I_C=100\mu A$
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	120		140		V	$I_C=10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		5		V	$I_E=100\mu A$
Collector Cut-Off Current	I_{CBO}		0.1		0.1	μA	$V_{CB}=140V$ $V_{CB}=120V$
Emitter Cut-Off Current	I_{EBO}		0.1		0.1	μA	$V_{EB}=4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.7 1.0		0.7	V	$I_C=150mA, I_B=15mA$ $I_C=200mA, I_B=20mA$
Static Forward Current Transfer Ratio	h_{FE}	100 30 10†	300	100 10†	300		$I_C=150mA, V_{CE}=10V^*$ $I_C=200mA, V_{CE}=1V^*$ $I_C=1A, V_{CE}=10V^*$
Transition Frequency	f_T	100		100		MHz	$I_C=50mA, V_{CE}=10V$ $f=100MHz$
Output Capacitance	C_{obo}		15		15	pF	$V_{CB}=10V, f=1MHz$

* Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

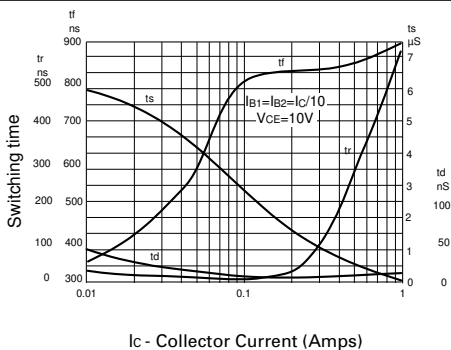
† Typical

ZTX454 ZTX455

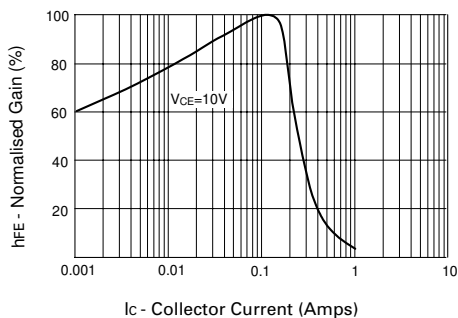
TYPICAL CHARACTERISTICS



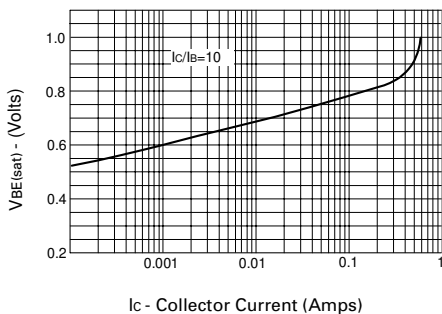
$V_{CE(sat)}$ v I_C



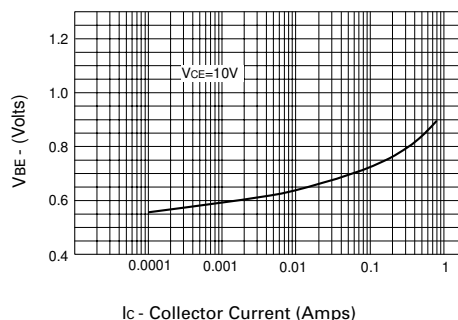
Typical Switching Speeds



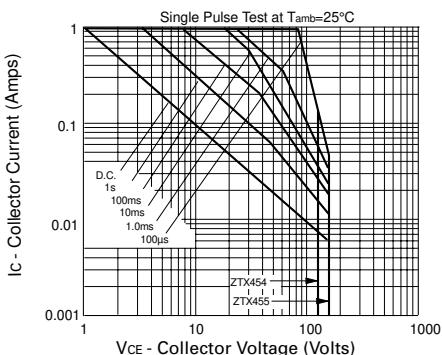
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area