

Excellent Integrated System Limited

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[Diodes Incorporated](#)
[ZTX453](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

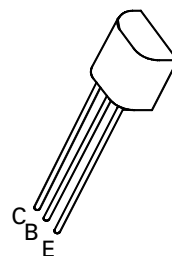
NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

ISSUE 2 – MARCH 1994

FEATURES

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

ZTX452
ZTX453



E-Line
T092 Compatible

ABSOLUTE MAXIMUM RATINGS.

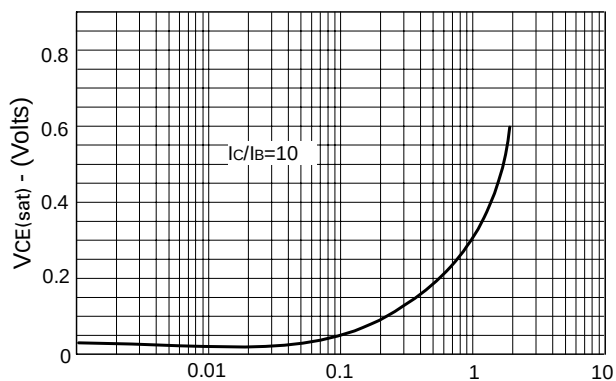
PARAMETER	SYMBOL	ZTX452	ZTX453	UNIT
Collector-Base Voltage	V_{CBO}	100	120	V
Collector-Emitter Voltage	V_{CEO}	80	100	V
Emitter-Base Voltage	V_{EBO}	5		V
Peak Pulse Current	I_{CM}	2		A
Continuous Collector Current	I_C	1		A
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	1		W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +200		$^{\circ}C$

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

PARAMETER	SYMBOL	ZTX452		ZTX453		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	100		120		V	$I_C = 100\mu A$
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	80		100		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	$V_{CB} = 80V$ $V_{CB} = 100V$
Emitter Cut-Off Current	I_{EBO}		0.1		0.1	μA	$V_{EB} = 4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.7		0.7	V	$I_C = 150mA, I_B = 15mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.3		1.3	V	$I_C = 150mA, I_B = 15mA^*$
Static Forward Current Transfer Ratio	h_{FE}	40 10	150	40 10	200		$I_C = 150mA, V_{CE} = 10V^*$ $I_C = 1A, V_{CE} = 10V^*$
Transition Frequency	f_T	150		150		MHz	$I_C = 50mA, V_{CE} = 10V$ $f = 100MHz$
Output Capacitance	C_{obo}		15		15	pF	$V_{CB} = 10V, f = 1MHz$

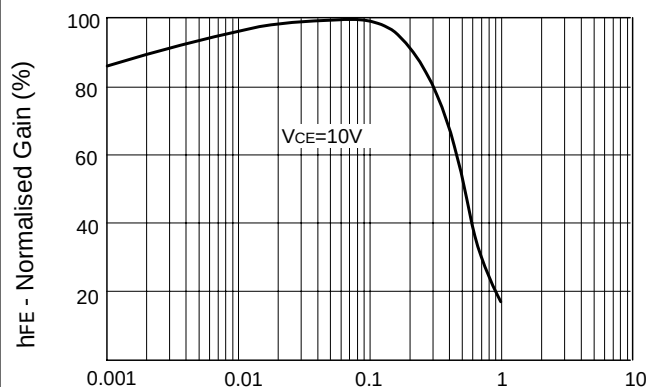
ZTX452 ZTX453

TYPICAL CHARACTERISTICS



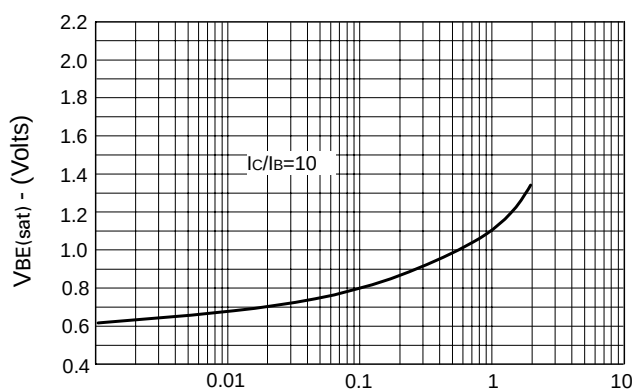
IC - Collector Current (Amps)

VCE(sat) v IC



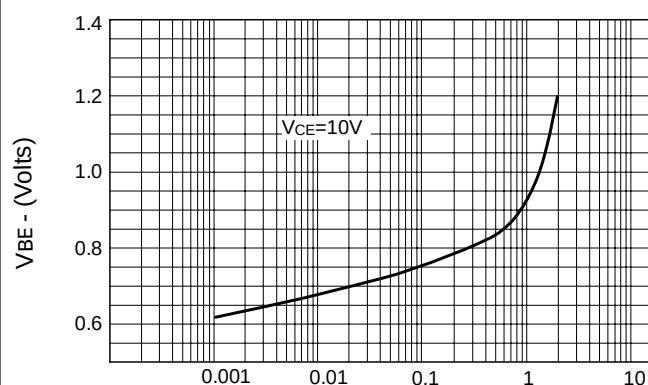
IC - Collector Current (Amps)

hFE v IC



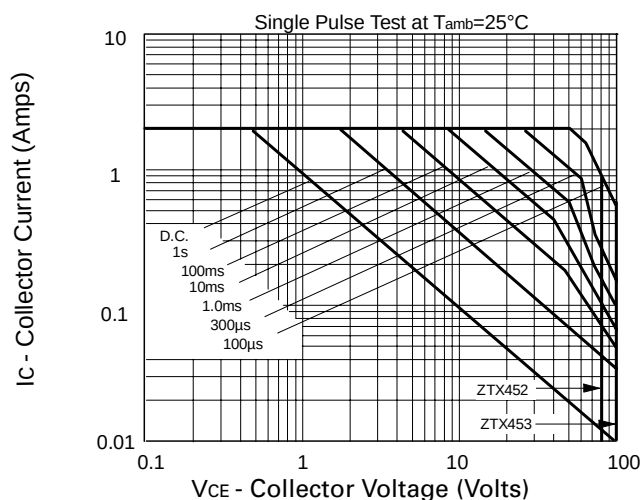
IC - Collector Current (Amps)

VBE(sat) v IC



IC - Collector Current (Amps)

VBE(on) v IC



Safe Operating Area