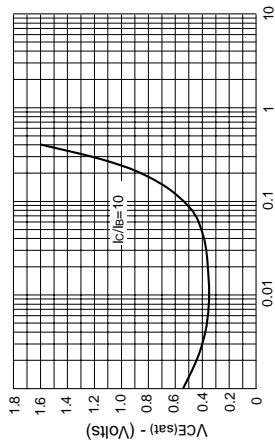


**ZTX656  
ZTX657**

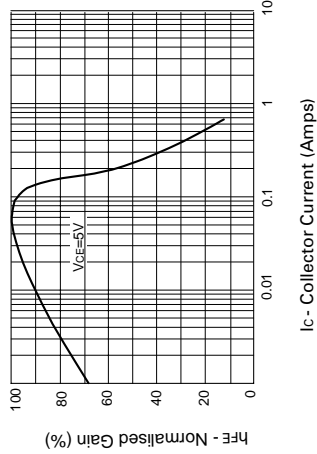
**NPN SILICON PLANAR MEDIUM POWER  
HIGH VOLTAGE TRANSISTORS**

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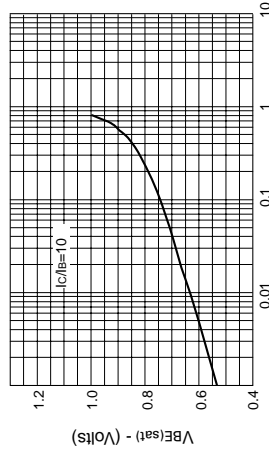
**TYPICAL CHARACTERISTICS**



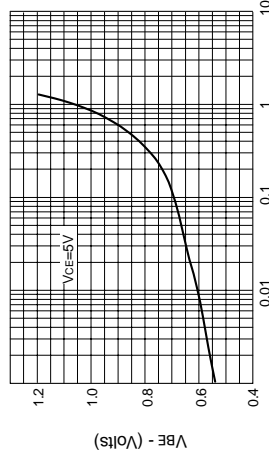
IC - Collector Current (Amps)  
**VCE(sat) v IC**



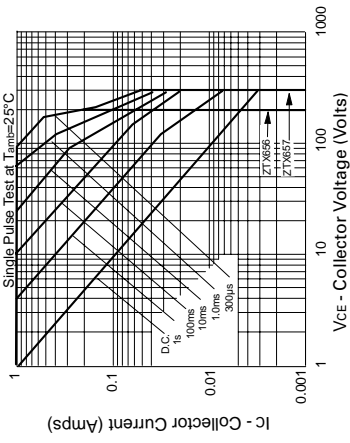
**hFE v IC**



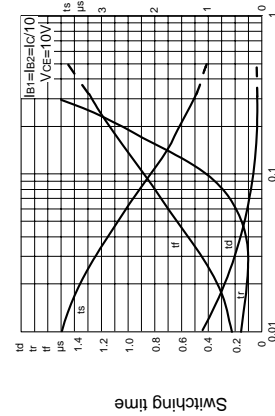
IC - Collector Current (Amps)  
**VBE(sat) v IC**



IC - Collector Current (Amps)  
**VBE(on) v IC**



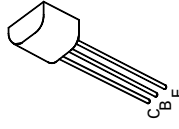
**Safe Operating Area**



IC - Collector Current (Amps)  
**Switching Speeds**

**FEATURES**

- \* 300 Volt  $V_{CEO}$
- \* 0.5 Amp continuous current
- \*  $P_{tot}=1$  Watt



**E-Line  
TO92 Compatible**

**ABSOLUTE MAXIMUM RATINGS.**

PARAMETER	SYMBOL	ZTX656	ZTX657	UNIT
Collector-Base Voltage	$V_{CBO}$	200	300	V
Collector-Emitter Voltage	$V_{CEO}$	200	300	V
Emitter-Base Voltage	$V_{EBO}$	5	5	V
Peak Pulse Current	$I_{CM}$	1	1	A
Continuous Collector Current	$I_C$	0.5	0.5	A
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	1	1	W
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 to +200		$^{\circ}C$

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

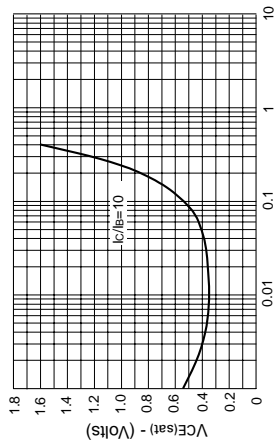
PARAMETER	SYMBOL	ZTX656		ZTX657		CONDITIONS.
		MIN.	MAX.	MIN.	MAX.	
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	200	300			$I_C=100\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	200	300			$I_C=10mA, I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5	5			$I_E=100\mu A, I_C=0$
Collector Cut-Off Current	$I_{CBO}$		100			$V_{CB}=160V, I_E=0$ $V_{CB}=200V, I_E=0$
Emitter Cut-Off Current	$I_{EBO}$		100			$V_{EB}=3V, I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	0.5		0.5		$I_C=100mA, I_B=10mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	1		1		$I_C=100mA, I_B=10mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	1		1		$I_C=100mA, V_{CE}=5V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	50 40		50 40		$I_C=100mA, V_{CE}=5V$ $I_C=10mA, V_{CE}=5V$
Transition Frequency	$f_T$	30		30		$I_C=10mA, V_{CE}=20V$ $f=20MHz$

**ZTX656  
ZTX657**

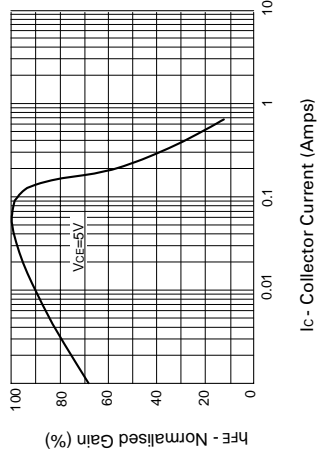
**NPN SILICON PLANAR MEDIUM POWER  
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ZTX657**

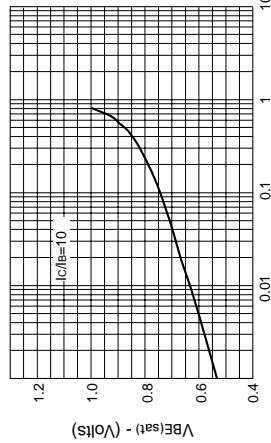
**TYPICAL CHARACTERISTICS**



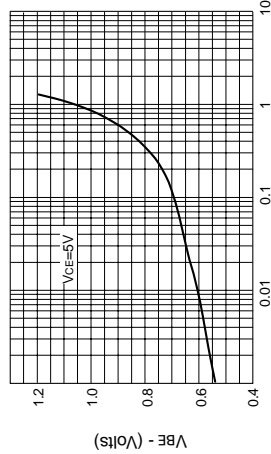
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**VCE(sat) v IC**



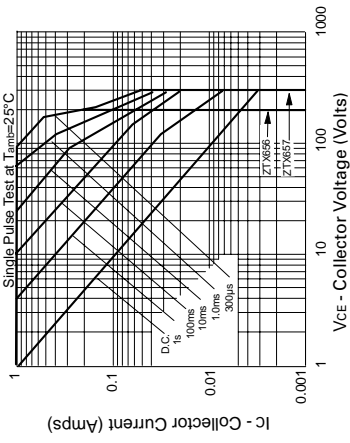
**hFE v IC**



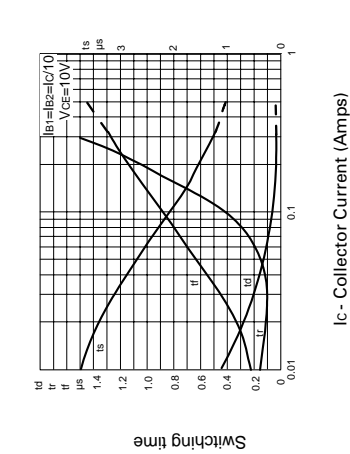
IC - Collector Current (Amps)  
**VBE(sat) v IC**



IC - Collector Current (Amps)  
**VBE(on) v IC**



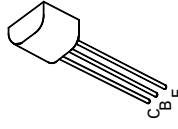
**Safe Operating Area**



**Switching Speeds**

**FEATURES**

- \* 300 Volt  $V_{CEO}$
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Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5	5			V	$I_E=100\mu A, I_C=0$
Collector Cut-Off Current	$I_{CBO}$		100		100	nA	$V_{CB}=160V, I_E=0$ $V_{CB}=200V, I_E=0$
Emitter Cut-Off Current	$I_{EBO}$		100		100	nA	$V_{EB}=3V, I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	0.5		0.5		V	$I_C=100mA, I_B=10mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	1		1		V	$I_C=100mA, I_B=10mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	1		1		V	$I_C=100mA, V_{CE}=5V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	50 40		50 40			$I_C=100mA, V_{CE}=5V$ $I_C=10mA, V_{CE}=5V$
Transition Frequency	$f_T$	30		30		MHz	$I_C=10mA, V_{CE}=20V$ $f=20MHz$