

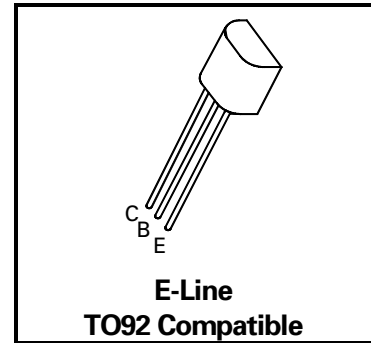
PNP SILICON PLANAR MEDIUM POWER HIGH VOLTAGE TRANSISTOR

ZTX558

ISSUE 1 – APRIL 94

FEATURES

- * 400 Volt V_{CEO}
- * 200mA continuous current
- * $P_{tot} = 1$ Watt



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-400	V
Collector-Emitter Voltage	V_{CEO}	-400	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-200	mA
Power Dissipation	P_{tot}	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +200	°C

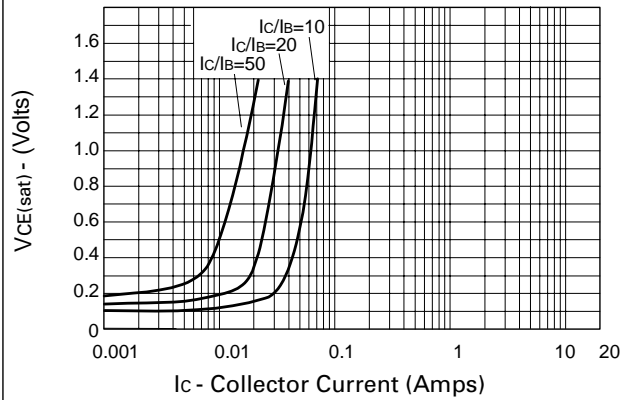
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-400			V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{BR(CEO)}$	-400			V	$I_C = -10\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			-100	nA	$V_{CB} = -320\text{V}$
Collector Cut-Off Current	I_{CES}			-100	nA	$V_{CE} = -320\text{V}$
Emitter Cut-Off Current	I_{EBO}			-100	nA	$V_{EB} = -4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.2 -0.5	V	$I_C = -20\text{mA}, I_B = -2\text{mA}$ $I_C = -50\text{mA}, I_B = -6\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-0.9	V	$I_C = -50\text{mA}, I_B = -5\text{mA}$
Base-Emitter Turn On Voltage	$V_{BE(on)}$			-0.9	V	$I_C = -50\text{mA}, V_{CE} = -10\text{V}$
Static Forward Current Transfer Ratio	h_{FE}	100 100 15		300		$I_C = -1\text{mA}, V_{CE} = -10\text{V}$ $I_C = -50\text{mA}, V_{CE} = -10\text{V}$ $I_C = -100\text{mA}, V_{CE} = -10\text{V}^*$
Transition Frequency	f_T	50			MHz	$I_C = -10\text{mA}, V_{CE} = -20\text{V}$ $f = 20\text{MHz}$
Collector-Base Breakdown Voltage	C_{obo}			5	pF	$V_{CB} = -20\text{V}, f = 1\text{MHz}$
Switching times	t_{on} t_{off}		95 1600		ns ns	$I_C = -50\text{mA}, V_C = -100\text{V}$ $I_{B1} = 5\text{mA}, I_{B2} = -10\text{mA}$

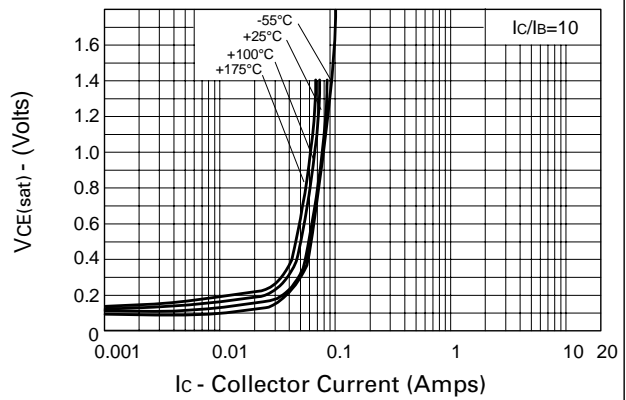
* Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

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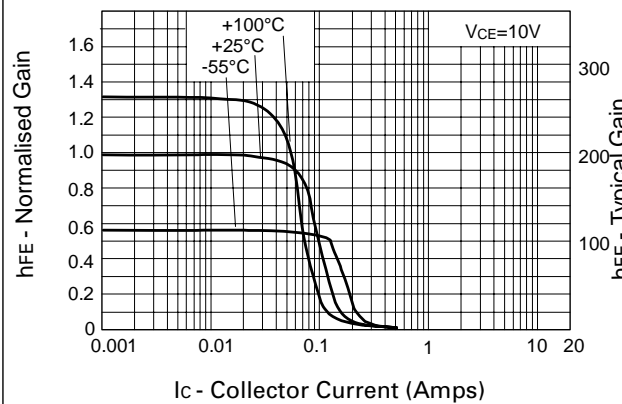
TYPICAL CHARACTERISTICS



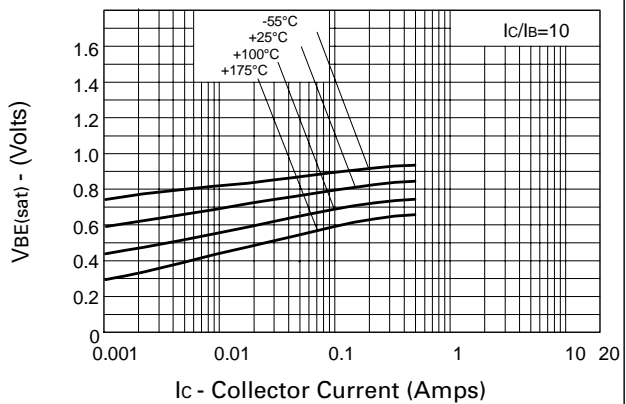
$V_{CE(sat)}$ v I_C



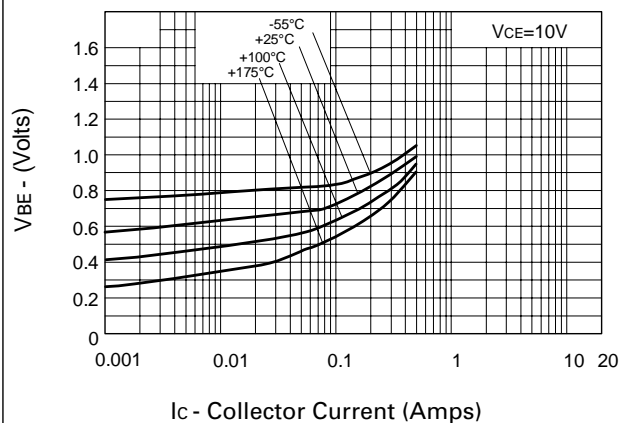
$V_{CE(sat)}$ v I_C



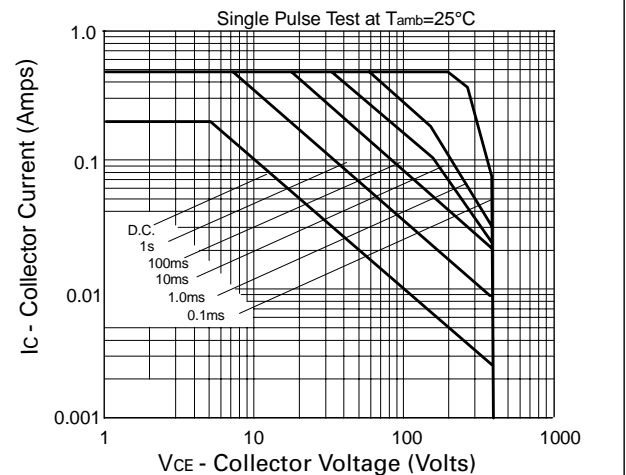
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area