

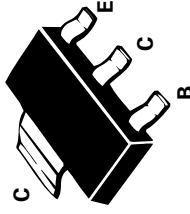
SOT223 PNP SILICON PLANAR MEDIUM POWER HIGH VOLTAGE TRANSISTOR

ISSUE 2 – DECEMBER 1995

FEATURES

- * 400 Volt V_{CE0}
- * 200mA continuous current
- * $P_{tot} = 2$ Watt

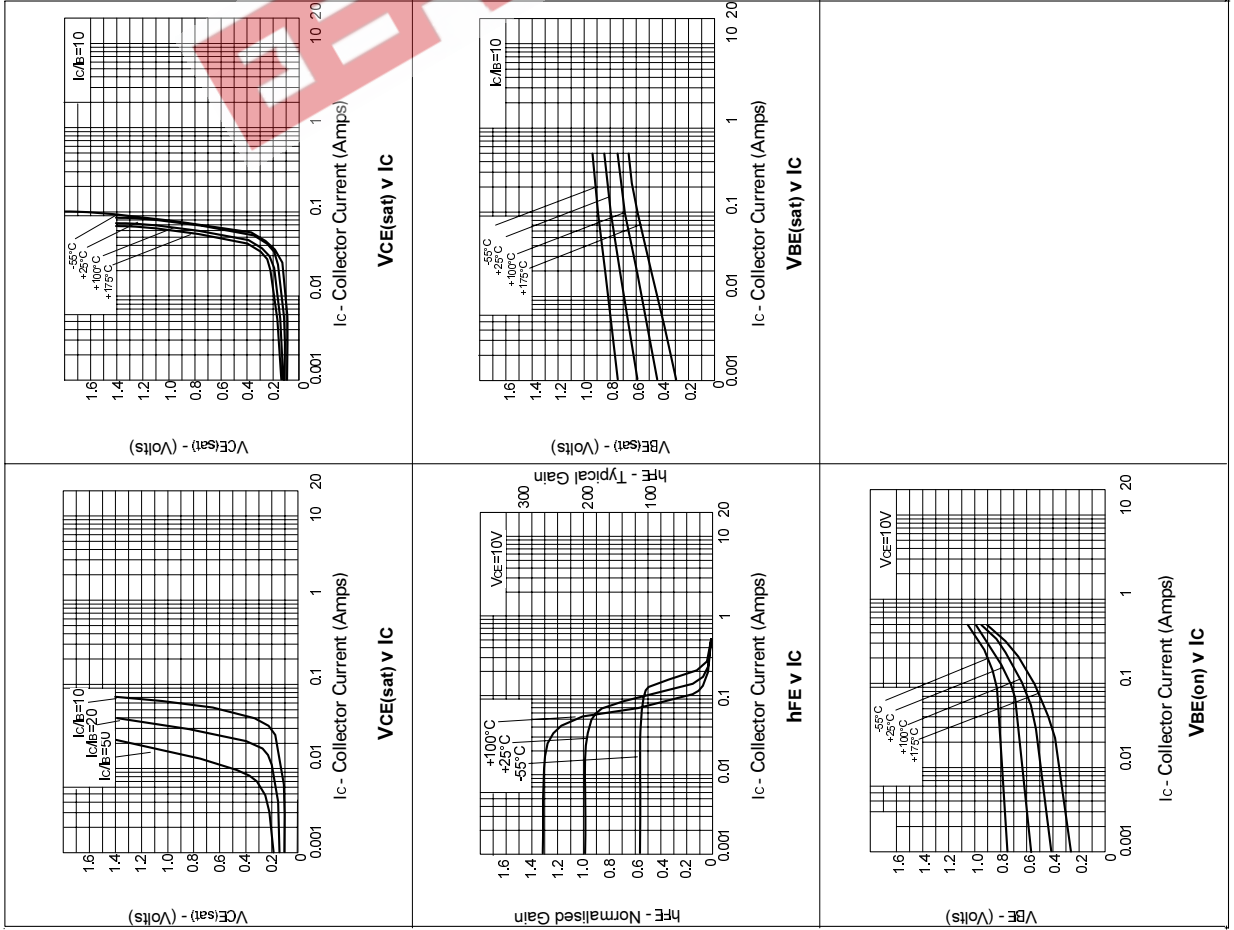
PARTMARKING DETAIL - FZT558



FZT558

FZT558

TYPICAL CHARACTERISTICS



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}	2	W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

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	$V_{CB} = -320V$
Collector Cut-Off Current	I_{CES}		-100		nA	$V_{CE} = -320V$
Emitter Cut-Off Current	I_{EBO}		-100		nA	$V_{EB} = -4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-0.2			V	$I_C = -20\text{mA}$, $I_B = -2\text{mA}^*$
		-0.5			V	$I_C = -50\text{mA}$, $I_B = -6\text{mA}^*$
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	$I_C = -50\text{mA}$, $V_{CE} = -10V^*$
Static Forward Current Transfer Ratio	h_{FE}	100				$I_C = -1\text{mA}$, $V_{CE} = -10V$
		100				$I_C = -50\text{mA}$, $V_{CE} = -10V^*$
		15				$I_C = -100\text{mA}$, $V_{CE} = -10V^*$
Transition Frequency	f_T	50			MHz	$I_C = -10\text{mA}$, $V_{CE} = -20V$, $f = 20\text{MHz}$
Collector-Base Breakdown Voltage	C_{ob0}			5	pF	$V_{CB} = -20V$, $f = 1\text{MHz}$
Switching times	t_{on}	95			ns	$I_C = -50\text{mA}$, $V_{CE} = -100V$
	t_{off}	1600			ns	$I_B = -5\text{mA}$, $I_{B2} = -10\text{mA}$

* Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device

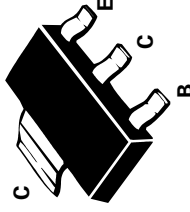
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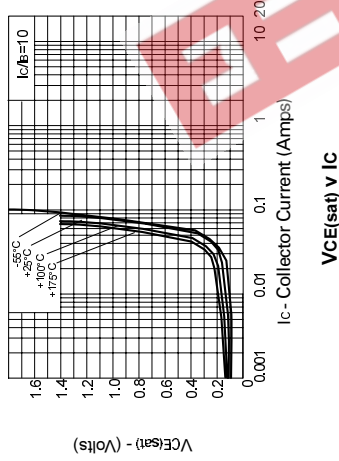
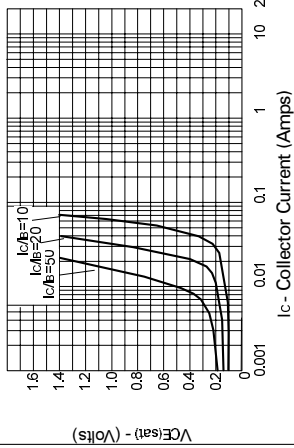
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PARTMARKING DETAIL - FZT558



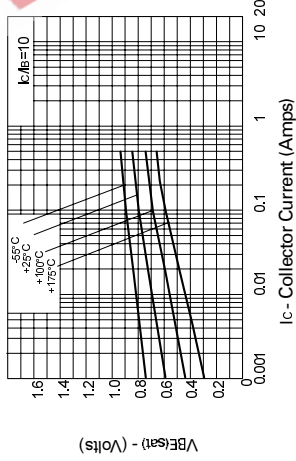
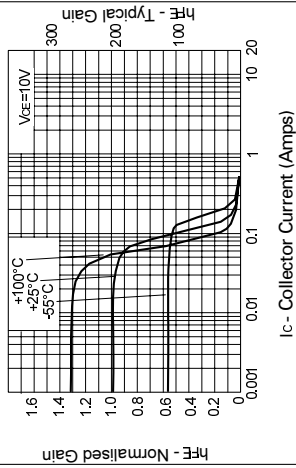
FZT558

TYPICAL CHARACTERISTICS



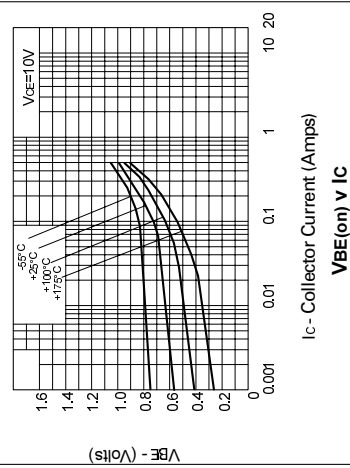
VCE(sat) v IC

VCE(sat) v IC



hFE v IC

VBE(sat) v IC



VBE(on) v IC

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Base-Emitter Turn On Voltage	$V_{BE(on)}$		-0.9		V	$I_C = -50mA, V_{CE} = -10V^*$
Static Forward Current Transfer Ratio	h_{FE}	100				$I_C = -1mA, V_{CE} = -10V$
		100				$I_C = -50mA, V_{CE} = -10V^*$
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Transition Frequency	f_T	50			MHz	$I_C = -10mA, V_{CE} = -20V, f = 20MHz$
Collector-Base Breakdown Voltage	C_{ob0}		5		pF	$V_{CB} = -20V, f = 1MHz$
Switching times	t_{on}	95			ns	$I_C = -50mA, V_{CE} = -100V$
	t_{off}	1600			ns	$I_B = -5mA, I_{B2} = -10mA$

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