



FZT788B

SOT223 PNP SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

ISSUE 3 - OCTOBER 1995

FEATURES

- * Low equivalent on-resistance; $R_{CE(sat)}$ 93mΩ at 3A
- * Gain of 300 at $I_C=2$ Amps and Very low saturation voltage

APPLICATIONS

- * Battery powered circuits

COMPLEMENTARY TYPE – FZT688B

PARTMARKING DETAIL – FZT788B

ABSOLUTE MAXIMUM RATINGS.

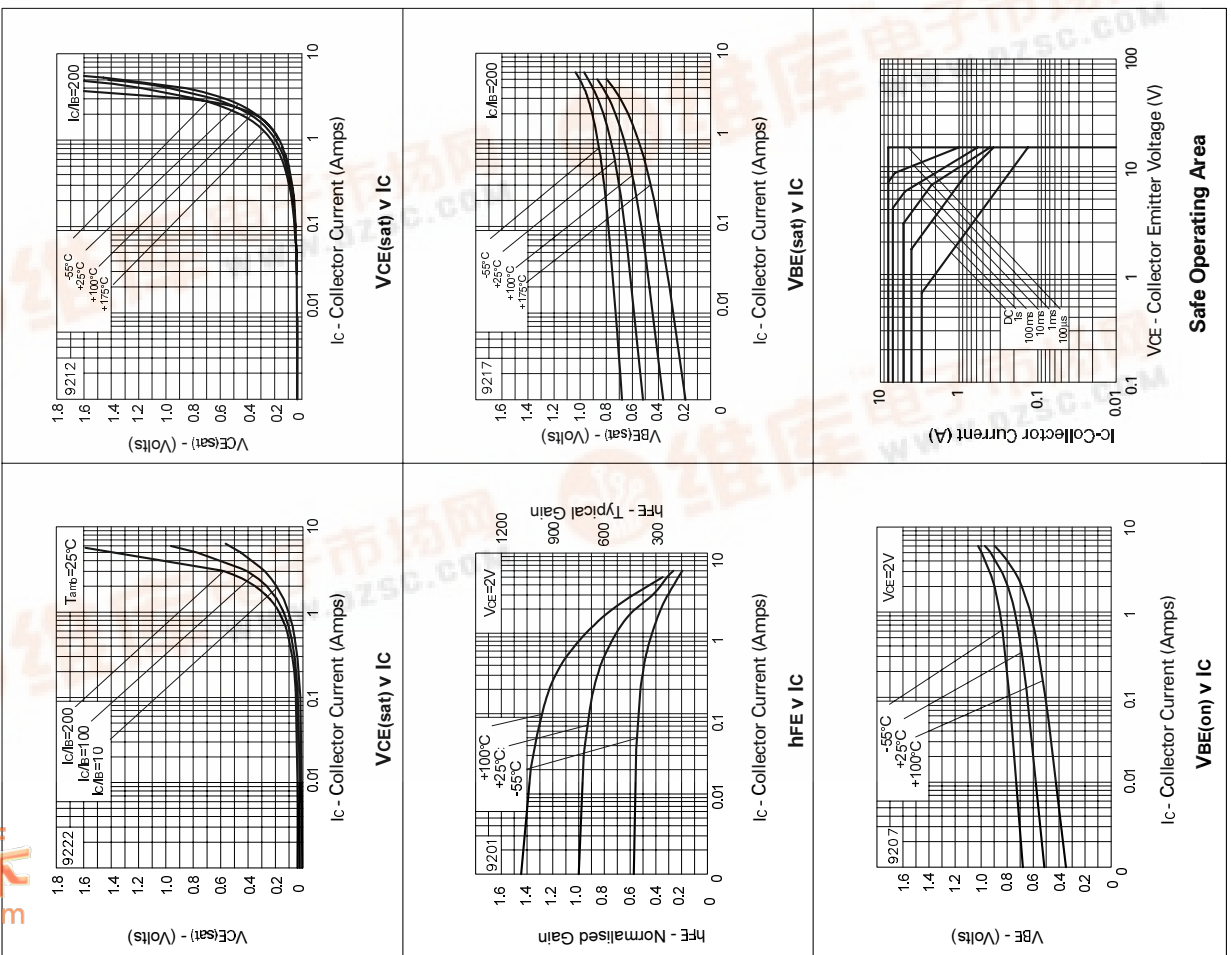
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-15	V
Collector-Emitter Voltage	V_{CEO}	-15	V
Emitter-Base Voltage	V_{EBO}	-5	V
Peak Pulse Current	I_{CM}	-8	A
Continuous Collector Current	I_C	-3	A
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	2	W
Operating and Storage Temperature 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	$V_{(BR)CBO}$	-15			V	$I_C=100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-15			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}			-0.1	μA	$V_{CB}=10\text{V}$
Emitter Cut-Off Current	I_{EBO}			-0.1	μA	$V_{EB}=4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.15	V	$I_C=0.5\text{A}, I_B=2.5\text{mA}^*$
				-0.25	V	$I_C=1\text{A}, I_B=5\text{mA}^*$
				-0.45	V	$I_C=2\text{A}, I_B=10\text{mA}^*$
				-0.5	V	$I_C=3\text{A}, I_B=50\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-0.9	V	$I_C=1\text{A}, I_B=5\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-0.75		V	$I_C=1\text{A}, V_{CE}=2\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	500		1500		$I_C=10\text{mA}, V_{CE}=2\text{V}^*$
		400				$I_C=1\text{A}, V_{CE}=2\text{V}^*$
		300				$I_C=2\text{A}, V_{CE}=2\text{V}^*$
		150				$I_C=6\text{A}, V_{CE}=2\text{V}^*$
Transition Frequency	f_T	100			MHz	$I_C=50\text{mA}, V_{CE}=5\text{V}$ $f=50\text{MHz}$
Input Capacitance	C_{ibo}		225		pF	$V_{EB}=0.5\text{V}, f=1\text{MHz}$
Output Capacitance	C_{obo}		25		pF	$V_{CB}=10\text{V}, f=1\text{MHz}$
Switching Times	t_{on}		35		ns	$I_C=500\text{mA}, I_B=50\text{mA}$
	t_{off}		400		ns	$I_B=50\text{mA}, V_{CE}=10\text{V}$

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

TYPICAL CHARACTERISTICS



查询FZT788供应商

捷多邦, 专业PCB打样工厂, 24小时加急出货

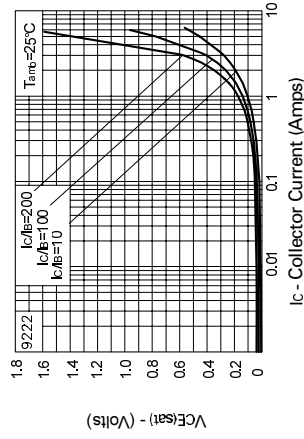
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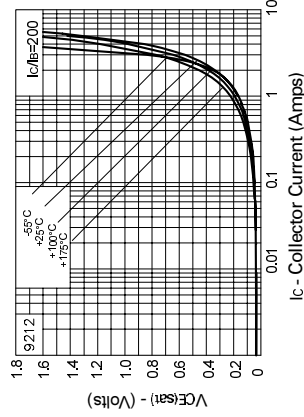
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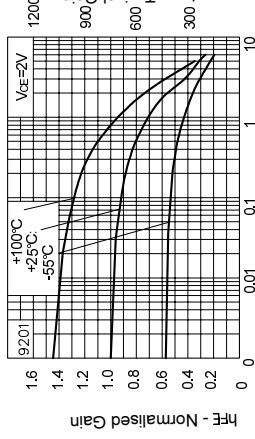
TYPICAL CHARACTERISTICS



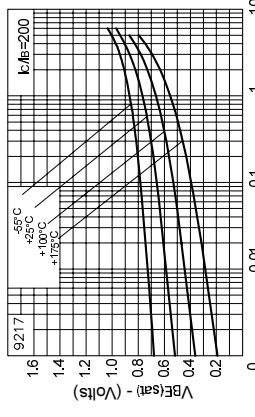
VCE(sat) v IC



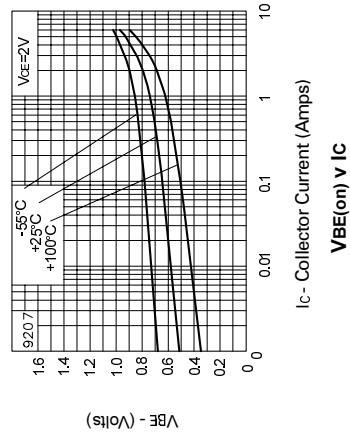
VCE(sat) v IC



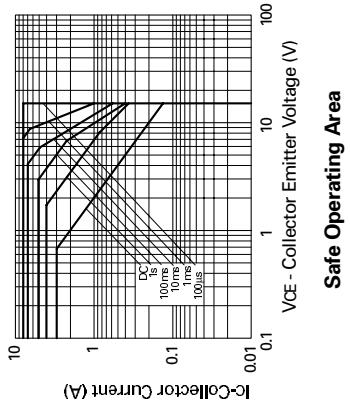
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area

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Emitter-Base Breakdown Voltage	$V_{(BRE)BO}$	-5			V	$I_E=100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			-0.1	μA	$V_{CB}=10\text{V}$
Emitter Cut-Off Current	I_{EBO}			-0.1	μA	$V_{EB}=4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.15	V	$I_C=0.5\text{A}, I_B=2.5\text{mA}^*$
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Static Forward Current Transfer Ratio	h_{FE}	500		1500		$I_C=10\text{mA}, V_{CE}=2\text{V}^*$
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Output Capacitance	C_{obo}		25		pF	$V_{CB}=10\text{V}, f=1\text{MHz}$
Switching Times	t_{on}		35		ns	$I_C=500\text{mA}, I_B=50\text{mA}$
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