

SOT223 PNP SILICON PLANAR HIGH GAIN MEDIUM POWER TRANSISTOR

FZT792A

ISSUE 3 - NOVEMBER 1995

FEATURES

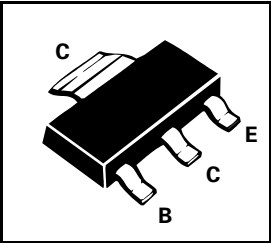
- * High gain and Very low saturation voltage

APPLICATIONS

- * Battery powered circuits

COMPLEMENTARY TYPE - FZT692B

PARTMARKING DETAIL - FZT792A



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-75	V
Collector-Emitter Voltage	V_{CEO}	-70	V
Emitter-Base Voltage	V_{EBO}	-5	V
Peak Pulse Current	I_{CM}	-5	A
Continuous Collector Current	I_C	-2	A
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	2	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	-75	-100		V	$I_C = -100\mu A$
	$V_{(BR)CEO}$	-70	-90		V	$I_C = -10mA^*$
	$V_{(BR)EBO}$	-5	-8.5		V	$I_E = -100\mu A$
Cut-Off Currents	I_{CBO}			-0.1 -10	μA μA	$V_{CB} = -40V$ $V_{CB} = -40V$, $T_{amb} = 100^{\circ}C$
	I_{EBO}			-0.1	μA	$V_{EB} = -4V$
Saturation Voltages	$V_{CE(sat)}$		-0.30 -0.30 -0.30	-0.45 -0.50 -0.50	V V V	$I_C = -500mA$, $I_B = -5mA^*$ $I_C = -1A$, $I_B = -25mA^*$ $I_C = -2A$, $I_B = -200mA^*$
	$V_{BE(sat)}$		-0.80	-0.95	V	$I_C = -1A$, $I_B = -25mA^*$

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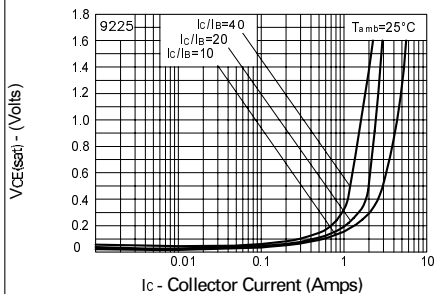
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
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	h_{FE}	300 250 200		800		$I_C = -10\text{mA}$, $V_{CE} = -2\text{V}^*$ $I_C = -500\text{mA}$, $V_{CE} = -2\text{V}^*$ $I_C = -1\text{A}$, $V_{CE} = -2\text{V}^*$
Transition Frequency	f_T	100	160		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}		22		pF	$V_{CB} = -10\text{V}$, $f = 1\text{MHz}$
Switching Times	t_{on} t_{off}		35 750		ns ns	$I_C = -500\text{mA}$, $I_{B1} = -50\text{mA}$, $I_{B2} = -50\text{mA}$, $V_{CC} = -10\text{V}$

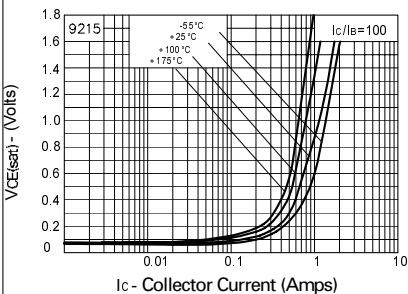
*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device

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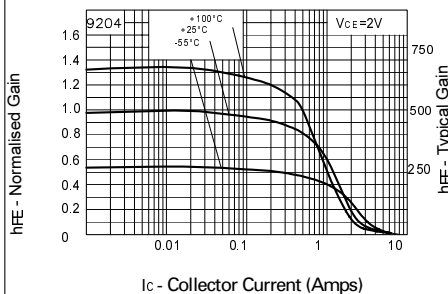
TYPICAL CHARACTERISTICS



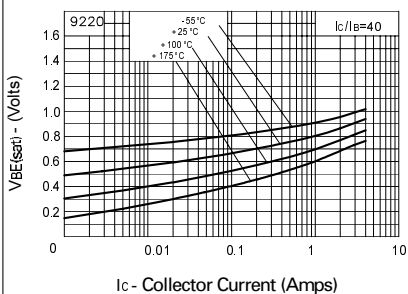
$V_{CE(sat)}$ v I_C



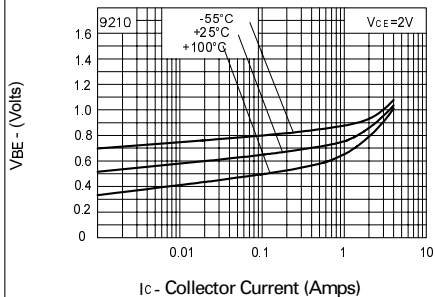
$V_{CE(sat)}$ v I_C



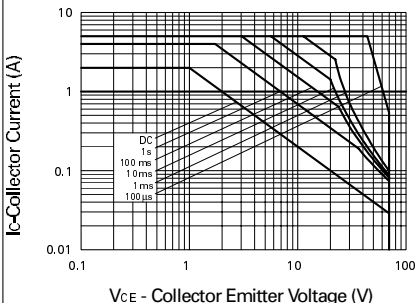
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area