

SOT223 NPN SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

ISSUE 3 - OCTOBER 1995

FZT692B

FEATURES

- * High Gain + Very low saturation voltage

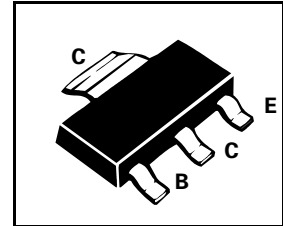
APPLICATIONS

- * Darlington replacement
- * Relay drivers, DC-DC converters

PARTMARKING DETAIL - FZT692B

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	70	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 $T_{amb} = 25^{\circ}C$)

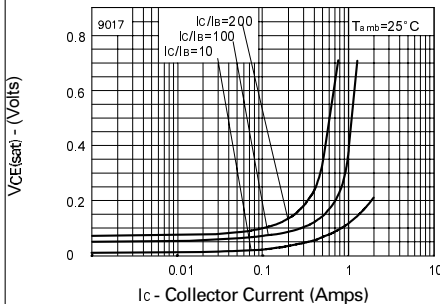
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	70			V	$I_C=100\mu A$
	$V_{(BR)CEO}$	70			V	$I_C=10mA^*$
	$V_{(BR)EBO}$	5			V	$I_E=100\mu A$
Cut-Off Currents	I_{CBO}			0.1	μA	$V_{CB}=55V$
	I_{EBO}			0.1	μA	$V_{EB}=4V$
Saturation Voltages	$V_{CE(sat)}$			0.15	V	$I_C=0.1A, I_B=0.5mA^*$
				0.5	V	$I_C=1A, I_B=10mA^*$
				0.5	V	$I_C=2A, I_B=200mA^*$
	$V_{BE(sat)}$			0.9	V	$I_C=1A, I_B=10mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			0.9	V	$I_C=1A, V_{CE}=2V^*$
Static Forward Current Transfer Ratio	h_{FE}	500 400 150				$I_C=100mA, V_{CE}=2V^*$ $I_C=500mA, V_{CE}=2V^*$ $I_C=1A, V_{CE}=2V^*$
Transition Frequency	f_T	150			MHz	$I_C=50mA, V_{CE}=5V, f=50MHz$
Input Capacitance	C_{ibo}		200		pF	$V_{EB}=0.5V, f=1MHz$
Output Capacitance	C_{obo}		12		pF	$V_{CB}=10V, f=1MHz$
Switching Times	t_{on}		46		ns	$I_C=500mA, I_{B1}=50mA$
	t_{off}		1440		ns	$I_{B2}=50mA, V_{CC}=10V$

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

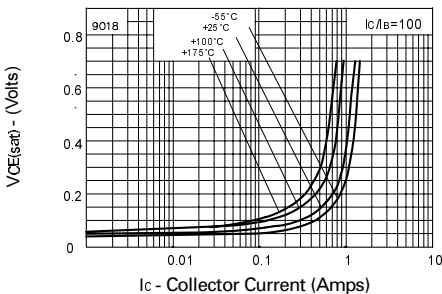
Spice parameter data is available upon request for this device

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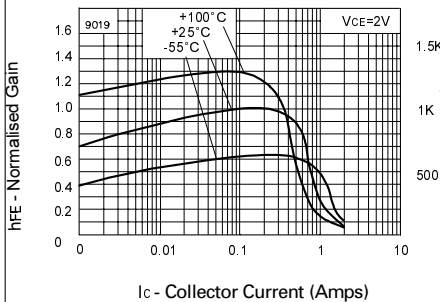
TYPICAL CHARACTERISTICS



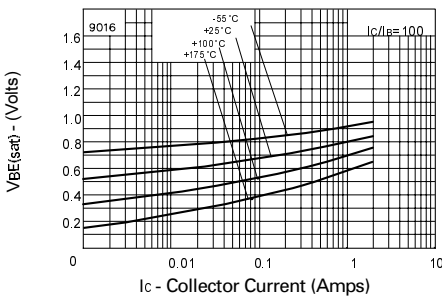
VCE(sat) v IC



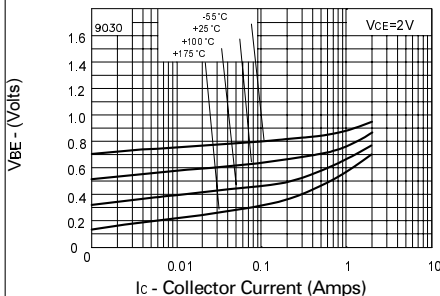
VCE(sat) v IC



hFE v IC



VBE(sat) v IC



VBE(on) v IC

