

# SOT223 NPN SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

FZT692B

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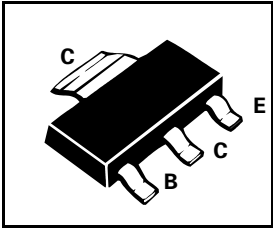
## FEATURES

- \* 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	$\mu A$	$V_{CB}=55V$
	$I_{EBO}$			0.1	$\mu A$	$V_{EB}=4V$
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 $\mu s$ . Duty cycle  $\leq 2\%$

Spice parameter data is available upon request for this device

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## TYPICAL CHARACTERISTICS

