

# SOT223 PNP SILICON PLANAR HIGH CURRENT (HIGH PERFORMANCE) POWER TRANSISTOR

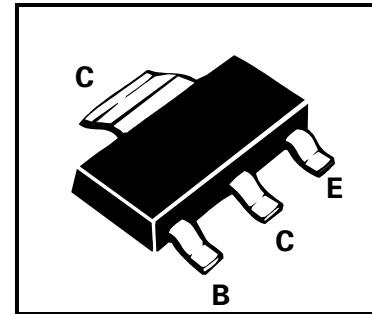
## FZT968

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### FEATURES

- \* Extremely low equivalent on-resistance;  $R_{CE(sat)}$  **44mΩ at 5A**
- \* 6 Amps continuous current (Up to 20 Amps peak )
- \* High gain and very low saturation voltage

PARTMARKING DETAIL – FZT968



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-15	V
Collector-Emitter Voltage	$V_{CEO}$	-12	V
Emitter-Base Voltage	$V_{EBO}$	-6	V
Peak Pulse Current	$I_{CM}$	-20	A
Continuous Collector Current	$I_C$	-6	A
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	3	W
Operating and Storage Temperature Range	$T_j:T_{stg}$	-55 to +150	$^{\circ}C$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	-15	-28		V	$I_C=-100\mu A$
	$V_{(BR)CEO}$	-12	-20		V	$I_C=-10mA^*$
	$V_{(BR)EBO}$	-6	-8		V	$I_E=-100\mu A$
Collector Cut-Off Current	$I_{CBO}$			-10 -1.0	nA $\mu A$	$V_{CB}=-12V$ $V_{CB}=-12V, T_{amb}=100^{\circ}C$
Emitter Cut-Off Current	$I_{EBO}$			-10	nA	$V_{EB}=-6V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-65	-130	mV	$I_C=-500mA, I_B=-5mA^*$
			-132	-170	mV	$I_C=-2A, I_B=-50mA^*$
			-360	-450	mV	$I_C=-6A, I_B=-250mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1050	-1200	mV	$I_C=-6A, I_B=-250mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-870	-1050	mV	$I_C=-6A, V_{CE}=-1V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	300	450			$I_C=-10mA, V_{CE}=-1V^*$
		300	450	1000		$I_C=-500mA, V_{CE}=-1V^*$
		200	300			$I_C=-5A, V_{CE}=-1V^*$
		150	240			$I_C=-10A, V_{CE}=-1V^*$
			50			$I_C=-20A, V_{CE}=-1V^*$
Transition Frequency	$f_T$		80		MHz	$I_C=-100mA, V_{CE}=-10V$ $f=50MHz$
Output Capacitance	$C_{obo}$		161		pF	$V_{CB}=-20V, f=1MHz$
Switching Times	$t_{on}$		120		ns	$I_C=-4A, I_B=-400mA$
	$t_{off}$		116		ns	$I_{B2}=400mA, V_{CC}=-10V$

\*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

