

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

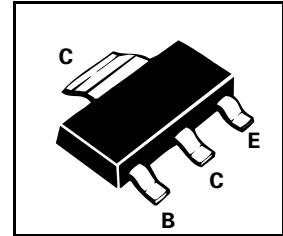
FZT968

ISSUE 3 – OCTOBER 1995

FEATURES

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

PARTMARKING DETAIL – FZT968



ABSOLUTE MAXIMUM RATINGS.

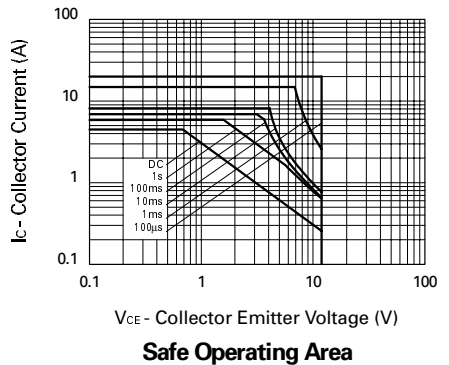
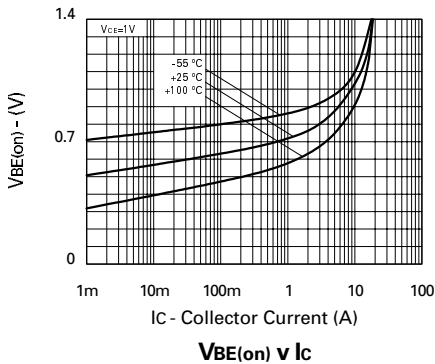
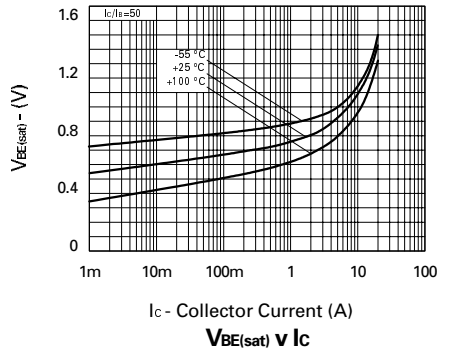
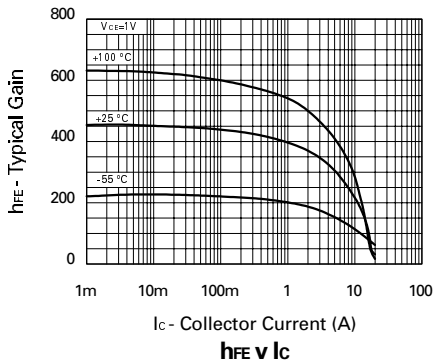
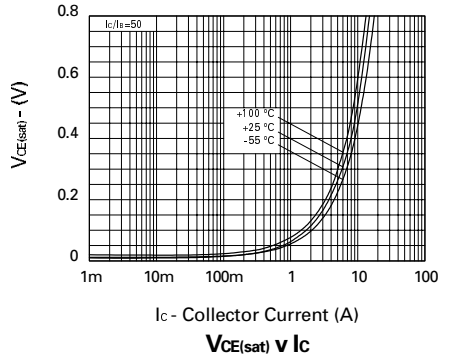
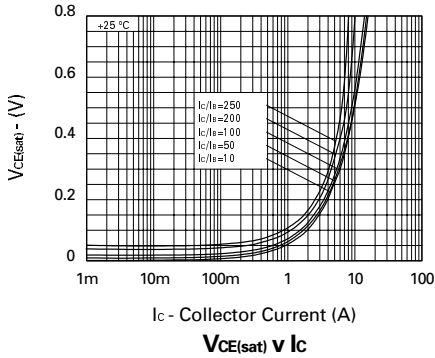
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-15	V
Collector-Emitter Voltage	V_{CEO}	-12	V
Emitter-Base Voltage	V_{EBO}	-6	V
Peak Pulse Current	I_{CM}	-20	A
Continuous Collector Current	I_C	-6	A
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	3	W
Operating and Storage Temperature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

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

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

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

TYPICAL CHARACTERISTICS



This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.