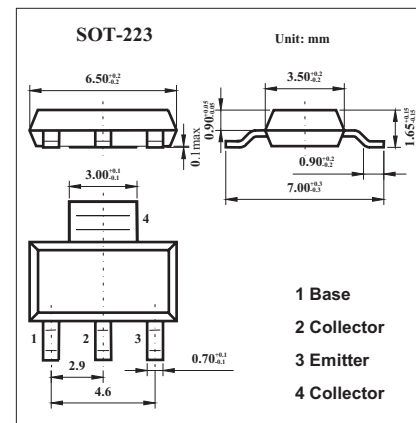


NPN Silicon Planar High Current Transistor

FZT853

■ Features

- Extremely low equivalent on-resistance; $R_{CE(sat)}$ 44m Ω at 5A
- 6 Amps continuous current, up to 20 Amps peak current
- Very low saturation voltages
- Excellent h_{FE} characteristics specified up to 10 Amps

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	200	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	6	V
Peak Pulse Current	I_{CM}	10	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	$^\circ\text{C}$

FZT853

■ Electrical Characteristics Ta = 25°C unless otherwise stated

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =100μA	150	220		V
Collector-Emitter Breakdown Voltage	V _{(BR)CER}	I _C =1μA, R _B ≤1KΩ	150	220		V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =10mA*	60	85		V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =100μA	6	8		V
Collector Cut-Off Current	I _{CBO}	V _{CB} =120V			50	nA
		V _{CB} =120V, T _{amb} =100°C			1	μA
Collector Cut-Off Current R≤1KΩ	I _{CER}	V _{CB} =120V			50	nA
		V _{CB} =120V, T _{amb} =100°C			1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =6V			10	nA
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =0.1A, I _B =50mA*			50	mV
		I _C =1A, I _B =50mA*			100	mV
		I _C =2A, I _B =50mA*			170	mV
		I _C =6A, I _B =300mA*			375	mV
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =6A, I _B =300mA*			1200	mV
Base-Emitter Turn-On Voltage	V _{BE(on)}	I _C =6A, V _{CE} =1V*			1150	V
Static Forward Current Transfer Ratio	h _{FE}	I _C =10mA, V _{CE} =1V	100	200		
		I _C =2A, V _{CE} =1V*	100	200	300	
		I _C =5A, V _{CE} =1V*	75	120		
		I _C =10A, V _{CE} =1V*	25	50		
Transition Frequency	f _T	I _C =100mA, V _{CE} =10V, f=50MHz		130		MHz
Output Capacitance	C _{obo}	V _{CB} =10V, f=1MHz		45		pF
Switching Times	t _{on}	I _C =1A, I _{B1} =100mA		45		ns
	t _{off}	I _{B2} =100mA, V _{CC} =10V		1100		ns

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle≤2%