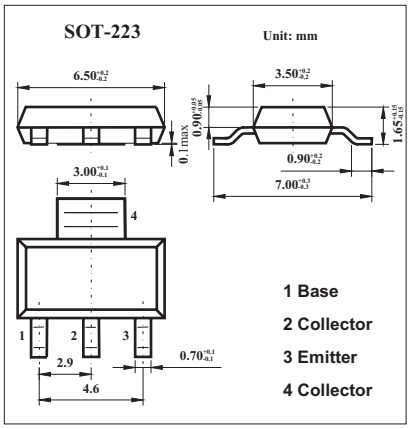
NPN Silicon Planar High Current Transistor

FZT857



■ Features

- Up to 3.5 Amps continuous collector current, up to 5 Amp peak
- V_{CEO} = 300V
- Very low saturation voltage
- Excellent hFE specified up to 3 Amps

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	350	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	6	V
Peak Pulse Current	I_{CM}	5	A
Continuous Collector Current	I_C	3.5	A
Power Dissipation at T_{amb}=25℃	P_{tot}	3	W
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	℃

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■ Electrical Characteristics Ta = 25℃ unless otherwise stated

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=100μA	350	475		V
Collector-Emitter Breakdown Voltage	$V_{(BR)CER}$	I_C=1μA, R_B≤1KΩ	350	475		V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=10mA*	300	350		V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=100μA	6	8		V
Collector Cut-Off Current	I_{CBO}	V_{CB}=300V			50	nA
		V_{CB}=300V,T_{amb}=100℃			1	μA
Collector Cut-Off Current R≤1KΩ	I_{CER}	V_{CB}=300V			50	nA
		V_{CB}=300V,T_{amb}=100℃			1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=6V			10	nA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA*			100	mV
		I_C=1A, I_B=100mA*			155	mV
		I_C=2A, I_B=200mA*			230	mV
		I_C=3.5A, I_B=600mA*			345	mV
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=3.5A, I_B=600mA*			1250	mV
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	I_C=3.5A, V_{CE}=10V*			1.12	V
Static Forward Current Transfer Ratio	h_{FE}	I_C=10mA, V_{CE}=5V	100	200		
		I_C=500mA, V_{CE}=10V*	100	200	300	
		I_C=2A, V_{CE}=10V*	15	25		
		I_C=3A, V_{CE}=10V*		15		
Transition Frequency	f_T	I_C=100mA, V_{CE}=10V,f=50MHz		80		MHz
Output Capacitance	C_{obo}	V_{CB}=20V, f=1MHz		11		pF
Switching Times	t_{on}	I_C=250mA, I_{B1}=25mA		100		ns
	t_{off}	I_{B2}=25mA, V_{CC}=50V		5300		ns

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

■ Marking

Marking	FZT857