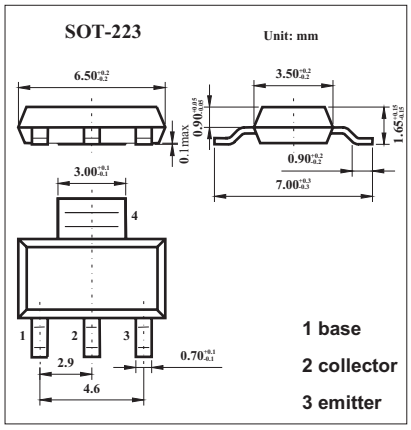
NPN Silicon Planar High Current (High Performance) Transistor

FZT869



■ Features

- Extremely low equivalent on-resistance; $R_{CE(sat)}$44mΩ at 5A.
- 7 Amp continuous collector current (20 Amp peak).
- Very low saturation voltages.
- Excellent gain charateristics specified upto 20 Amp.
- Ptot = 3 Watts.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	25	V
Emitter-base voltage	V_{EBO}	6	V
Peak pulse current	I_C	7	A
Continuous collector current	I_{CM}	20	A
Power dissipation	P_{tot}	3	W
Operating and storage temperature range	T_j,T_{stg}	-55 to +150	℃

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA	60	120		V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	I_C=10mA	25	35		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA	6	8		V
Collector Cut-Off Current	I_{CBO}	V_{CB}=50V V_{CB}=50V,Ta = 100℃			50 1	nA μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=6V			10	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C=0.5A, I_B=10mA I_C=1A, I_B=10mA I_C=2A, I_B=10mA I_C=6.5A, I_B=150mA		35 67 168	50 110 215 350	mV
Base-emitter saturation voltage *	$V_{BE(sat)}$	I_C=6.5A, I_B=300mA			1.2	V
Base-Emitter Turn-On Voltage *	$V_{BE(on)}$	I_C=6.5A, V_{CE}=1V			1.13	V
DC current gain *	h_{FE}	I_C=10mA, V_{CE}=1V I_C=1A, V_{CE}=1V I_C=7A, V_{CE}=1V I_C=20A, V_{CE}=2V	300 300 200 40	450 450 300 100		
Transitional frequency	f_T	I_C=100mA, V_{CE}=10V f=50MHz		100		MHz
Output capacitance	C_{obo}	V_{CB}=10V, f=1MHz		70		pF
Turn-on time	$t_{(on)}$	I_C=1A, V_{CC}=10V		60		ns
Turn-off time	$t_{(off)}$	I_{B1}=I_{B2}=100mA		680		ns

* Pulse test: tp = 300 μs; d ⩽ 0.02.

■ Marking

Marking	FZT869