

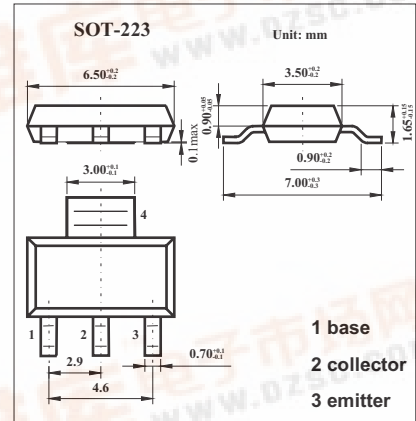
SMD Type Transistors

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 characteristics specified upto 20 Amp.
- P_{tot} = 3 Watts.



Absolute Maximum Ratings $T_a = 25^\circ C$

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	$^\circ C$

FZT869

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A$	60	120		V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	$I_C=10mA$	25	35		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A$	6	8		V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=50V$ $V_{CB}=50V, T_a = 100^\circ C$			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: $t_p = 300 \mu s$; $d \leq 0.02$.

■ Marking

Marking	FZT869
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