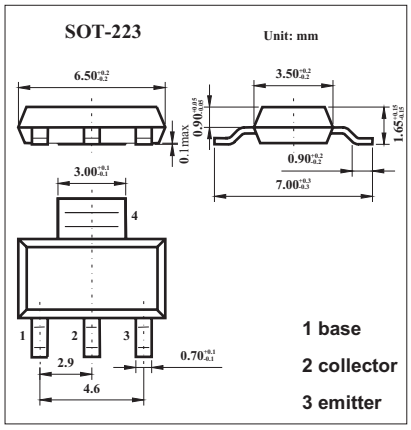
NPN Silicon Planar Medium Power High Gain Transistor

FZT789A



Features

- Low equivalent on-resistance; $R_{CE(sat)}$ 93mΩ at 3A.
- Gain of 300 at Ic=2 Amps and Very low saturation voltage.

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-25	V
Collector-emitter voltage	V_{CEO}	-25	V
Emitter-base voltage	V_{EBO}	-5	V
Continuous collector current	I_{CM}	-6	A
Peak pulse current	I_C	-3	A
Power dissipation	P_{tot}	2	W
Operating and storage temperature range	T_j,T_{stg}	-55 to +150	℃

FZT789A

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Breakdown Voltages	$V_{(BR)CBO}$	I_C=-100μA	-25	-40		V
Breakdown Voltages *	$V_{(BR)CEO}$	I_C=-10mA	-25	-35		V
Breakdown Voltages	$V_{(BR)EBO}$	I_E=-100μA	-5	-8.5		V
Collector Cut-Off Current	I_{CBO}	V_{CB}=-15V V_{CB}=-15V,Ta = 100℃			-0.1 10	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-4V			-0.1	μA
Saturation Voltages *	$V_{CE(sat)}$	I_C=-1A, I_B=-10mA I_C=-2A, I_B=-20mA I_C=-3A, I_B=-100mA		-0.15 -0.30 -0.30	-0.25 -0.45 -0.50	V
Saturation Voltages *	$V_{BE(sat)}$	I_C=-1A, I_B=-10mA		-0.8	-1.0	V
Base-Emitter Turn-On Voltage *	$V_{BE(on)}$	I_C=-1A, V_{CE}=-2V		-0.8		V
Static Forward Current Transfer Ratio	h_{FE}	I_C=-10mA, V_{CE}=-2V	300		800	
		I_C=-1A, V_{CE}=-2V*	250			
		I_C=-2A, V_{CE}=-2V*	200			
		I_C=-6A, V_{CE}=-2V*	100			
Transitional frequency	f_T	I_C=-50mA, V_{CE}=-5V, f=50MHz	100			MHz
Input capacitance	C_{ibo}	V_{EB}=-0.5V, f=1MHz		225		pF
Output capacitance	C_{obo}	V_{CB}=-10V, f=1MHz		25		pF
Turn-on time	$t_{(on)}$	I_C=-500mA, V_{CC}=-10V		35		ns
Turn-off time	$t_{(off)}$	I_{B1}=I_{B2}=-50mA		400		ns

* Pulse test: tp = 300 μs; d ⩽ 0.02.

■ Marking

Marking	FZT789A