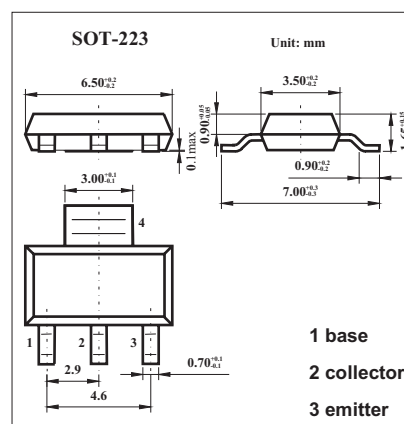


NPN Silicon Planar Medium Power High Gain Transistor

FZT789A

■ Features

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



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

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	$^\circ\text{C}$

FZT789A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Breakdown Voltages	V(BR)CBO	IC=-100μA	-25	-40		V
Breakdown Voltages *	V(BR)CEO	IC=-10mA	-25	-35		V
Breakdown Voltages	V(BR)EBO	IE=-100μA	-5	-8.5		V
Collector Cut-Off Current	ICBO	VCB=-15V VCB=-15V, Ta = 100°C			-0.1 10	μA
Emitter Cut-Off Current	IEBO	VEB=-4V			-0.1	μA
Saturation Voltages *	VCE(sat)	IC=-1A, IB=-10mA IC=-2A, IB=-20mA IC=-3A, IB=-100mA		-0.15 -0.30 -0.30	-0.25 -0.45 -0.50	V
Saturation Voltages *	VBE(sat)	IC=-1A, IB=-10mA		-0.8	-1.0	V
Base-Emitter Turn-On Voltage *	VBE(on)	IC=-1A, VCE=-2V		-0.8		V
Static Forward Current Transfer Ratio	hFE	IC=-10mA, VCE=-2V	300		800	
		IC=-1A, VCE=-2V*	250			
		IC=-2A, VCE=-2V*	200			
		IC=-6A, VCE=-2V*	100			
Transitional frequency	fT	IC=-50mA, VCE=-5V, f=50MHz	100			MHz
Input capacitance	Cibo	VEB=-0.5V, f=1MHz		225		pF
Output capacitance	Cobo	VCB=-10V, f=1MHz		25		pF
Turn-on time	t(on)	IC=-500mA, VCC=-10V		35		ns
Turn-off time	t(off)	IB1=IB2=-50mA		400		ns

* Pulse test: tp = 300 μs; d ≤ 0.02.

■ Marking

Marking	FZT789A
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