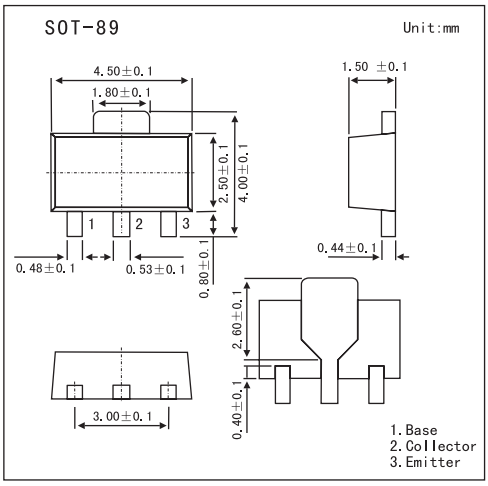
PNP Silicon Power Switching Transistor

FCX1149A



■ Features

- 2W power dissipation.
- 20A peak pulse current.
- Excellent HFE characteristics up to 10 Amps.
- Extremely low saturation voltage E.g. 45mv Typ.
- Extremely low equivalent on-resistance.

  $R_{CE(sat)}$ 67mΩ at 3A.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-30	V
Collector-emitter voltage	V_{CEO}	-25	V
Emitter-base voltage	V_{EBO}	-5	V
Continuous collector current	I_{CM}	-10	A
Peak pulse current	I_C	-3	A
Base current	I_B	-500	mA
Power dissipation	P_{tot}	1	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	-30			V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	I_C=-10mA	-25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-24V		-0.3	-100	nA
Collector Emitter Cut-Off Current	I_{CES}	V_{CE}=-20V		-0.3	-100	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-4V		-0.3	-100	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C=-0.1A, I_B=-1mA I_C=-0.5A, I_B=-3mA I_C=-1A, I_B=-7mA I_C=-3A, I_B=-100mA I_C=-4A, I_B=-140mA		-45 -100 -140 -200 -230	-80 -170 -240 -300 -350	mV
Base-emitter saturation voltage *	$V_{BE(sat)}$	I_C=-3A, I_B=-100mA		-930	-1050	mV
Base-emitter ON voltage *	$V_{BE(on)}$	I_C=-3A, V_{CE}=-2V		-840	-1000	mV
Static Forward Current Transfer Ratio*	h_{FE}	I_C=-10mA,V_{CE}=-2V I_C=-0.5A,V_{CE}=-2V I_C=-3A,V_{CE}=-2V I_C=-5A,V_{CE}=-2V I_C=-10A,V_{CE}=-2V	270 250 150 115	450 400 260 190 50	- 800	
Transitional frequency	f_T	I_C=-50mA, V_{CE}=-10V, f=50MHz		135		MHz
Output capacitance	C_{obo}	V_{CB}=-10V, f=1MHz		10		pF
Turn-on time	$t_{(on)}$	I_C=-4A, V_{CC}=-10V		150		ns
Turn-off time	$t_{(off)}$	I_{B1}=I_{B2}=-40mA		270		ns

* Pulse test: tp = 300 μs; d ⩽ 0.02.

■ Marking

Marking	149