

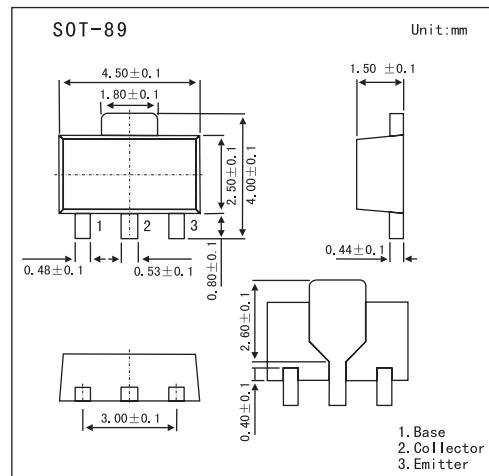
PNP Silicon Power Switching Transistor

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 $T_a = 25^\circ\text{C}$

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	°C

FCX1149A■ Electrical Characteristics $T_a = 25^\circ\text{C}$

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

* Pulse test: $t_p = 300 \mu\text{s}$; $d \leq 0.02$.

■ Marking

Marking	149
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