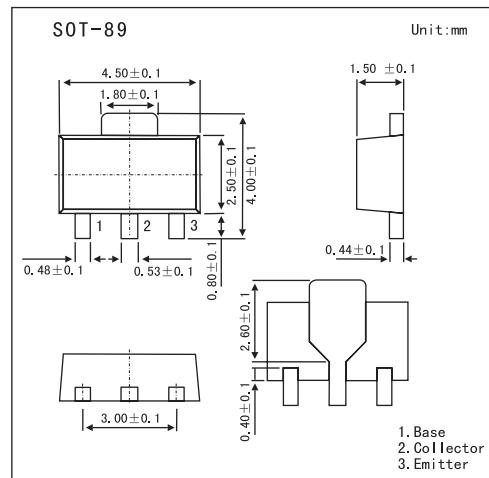


PNP Silicon Power Switching Transistor

FCX1151A

■ Features

- 2W power dissipation.
 - 5A peak pulse current.
 - Excellent HFE characteristics up to 5 Amps.
 - Extremely low saturation voltage E.g. 60mv Typ.
 - Extremely low equivalent on-resistance.
- R_{CE(sat)} 66mΩ at 3A.



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CBO}	-45	V
Collector-emitter voltage	V _{C EO}	-40	V
Emitter-base voltage	V _{EBO}	-5	V
Continuous collector current	I _{CM}	-5	A
Peak pulse current *3	I _C	-3	A
Base current	I _B	-500	mA
Power dissipation	P _{tot}	1 *1	W
		2 *2	W
Operating and storage temperature range	T _j , T _{stg}	-55 to +150	°C

*1 recommended P_{tot} calculated using FR4 measuring 15X15X0.6mm

*2 Maximum power dissipation is calculated assuming that the device is mounted on FR4 substrate measuring 40X40X0.6mm

*3 Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤2%

FCX1151A■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}$	-45			V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	$I_C=-10\text{mA}$	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-36\text{V}$		-0.3	-100	nA
Collector Emitter Cut-Off Current	I_{CES}	$V_{CE}=-32\text{V}$		-0.3	-100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-4\text{V}$		-0.3	-100	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=-0.1\text{A}, I_B=-1\text{mA}$ $I_C=-0.5\text{A}, I_B=-5\text{mA}$ $I_C=1\text{A}, I_B=-20\text{mA}$ $I_C=3\text{A}, I_B=-250\text{mA}$		-60 -120 -140 -200	-90 -180 -220 -300	mV
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=-3\text{A}, I_B=-250\text{mA}$		-985	-1050	mV
Base-emitter ON voltage *	$V_{BE(on)}$	$I_C=-3\text{A}, V_{CE}=-2\text{V}$		-850	-950	mV
Static Forward Current Transfer Ratio *	h_{FE}	$I_C=-10\text{mA}, V_{CE}=-2\text{V}$ $I_C=-0.5\text{A}, V_{CE}=-2\text{V}$ $I_C=-2\text{A}, V_{CE}=-2\text{V}$ $I_C=-3\text{A}, V_{CE}=-2\text{V}$ $I_C=-5\text{A}, V_{CE}=-2\text{V}$	270 250 180 100	450 400 300 190 45	800	
Transitional frequency	f_T	$I_C=-50\text{mA}, V_{CE}=-10\text{V}, f=50\text{MHz}$		145		MHz
Output capacitance	C_{obo}	$V_{CB}=-10\text{V}, f=1\text{MHz}$		40		pF
Turn-on time	$t_{(on)}$	$I_C=-2\text{A}, V_{CC}=-30\text{V}$		170		ns
Turn-off time	$t_{(off)}$	$I_{B1}=I_{B2}=-20\text{mA}$		460		ns

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

■ Marking

Marking	151
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