

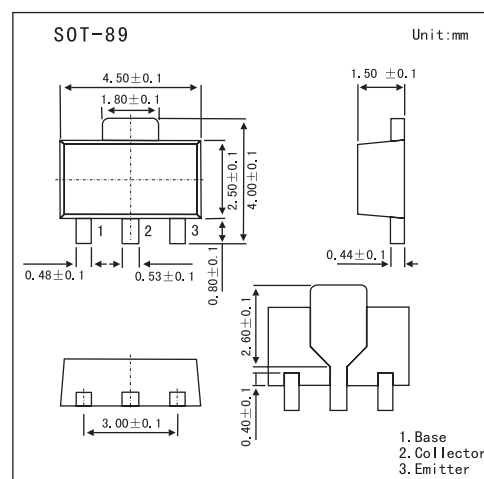
PNP Silicon Power Switching Transistor

FCX717

■ Features

- 2W power dissipation.
- 10A peak pulse current.
- Excellent HFE characteristics up to 10 Amps.
- Extremely low saturation voltage E.g. 12mv Typ.
- Extremely low equivalent on-resistance.

$R_{CE(sat)}$ 77m Ω at 3A.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-12	V
Collector-emitter voltage	V_{CEO}	-12	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	$^\circ\text{C}$

FCX717

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A$	-12	-35		V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	$I_C = -10mA$	-12	-25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A$	-5	-8.5		V
Collector cut-off current	I_{CBO}	$V_{CB} = -10V$			-100	nA
Collector Emitter Cut-Off Current	I_{CES}	$V_{CE} = -10V$			-100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -4V$			-100	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = -0.1A, I_B = -10mA$ $I_C = -1A, I_B = -10mA$ $I_C = -3A, I_B = -50mA$		-12 -110 -230	-20 -150 -320	mV
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = -3A, I_B = -50mA$		-0.92	-1.05	V
Base-emitter ON voltage *	$V_{BE(on)}$	$I_C = -3A, V_{CE} = -2V$		-0.85	-1.0	V
Static Forward Current Transfer Ratio *	h_{FE}	$I_C = -10mA, V_{CE} = -2V$ $I_C = -0.1A, V_{CE} = -2V$ $I_C = -3A, V_{CE} = -2V$ $I_C = -8A, V_{CE} = -2V$ $I_C = -10A, V_{CE} = -2V$	300 300 160 60 45	475 450 240 100 70		
Transitional frequency	f_T	$I_C = -50mA, V_{CE} = -10V, f = 100MHz$	80	110		MHz
Output capacitance	C_{obo}	$V_{CB} = -10V, f = 1MHz$		21	30	pF
Turn-on time	$t_{(on)}$	$I_C = -2A, V_{CC} = -6V$		70		ns
Turn-off time	$t_{(off)}$			130		ns

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

■ Marking

Marking	717
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