

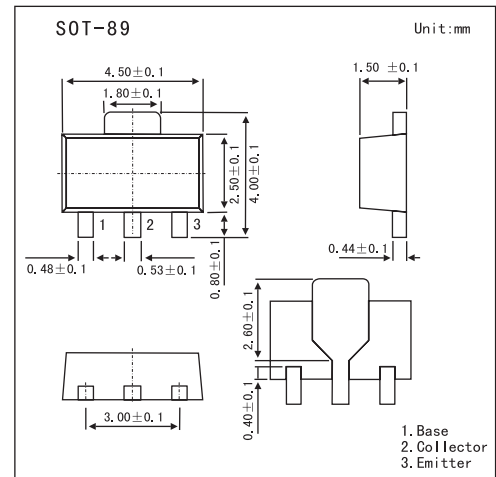
NPN Silicon Power Switching Transistor

FCX619

■ Features

- 2W power dissipation.
- 6A peak pulse current.
- Excellent HFE characteristics up to 6 amps.
- Extremely low saturation voltage E.g. 13mv Typ.
- Extremely low equivalent on-resistance.

$R_{CE(sat)}$ 87m Ω at 2.75A.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	5	V
Continuous collector current	I_{CM}	6	A
Peak pulse current	I_C	3.0	A
Base current	I_B	500	mA
Power dissipation	P_{tot}	1.5	W
Operating and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	I _C =100μA	50	190		V
Collector-emitter breakdown voltage *	V(BR)CEO	I _C =10mA	50	65		V
Emitter-base breakdown voltage	V(BR)EBO	I _E =100μA	5	8.3		V
Collector cut-off current	I _{CBO}	V _{CB} =40V			100	nA
Collector Emitter Cut-Off Current	I _{CES}	V _{CE} =40V			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 =2A, I _B =50mA I _C =2.75A, I _B =100mA		13 150 190 240	25 220 260 320	mV
Base-emitter saturation voltage *	V _{BE(sat)}	I _C =2.75A, I _B =100mA		0.97	1.1	V
Base-emitter ON voltage *	V _{BE(on)}	I _C =2.75A, V _{CE} =2V		0.89	1.0	V
DC current gain *	h _{FE}	I _C =10mA, V _{CE} =2V I _C =200mA, V _{CE} =2V I _C =1A, V _{CE} =2V I _C =2A, V _{CE} =2V I _C =6A, V _{CE} =2V	200 300 200 100	400 450 400 200 30		
Transitional frequency	f _T	I _C =50mA, V _{CE} =10V, f=100MHz	100	165		MHz
Output capacitance	C _{obo}	V _{CB} =10V, f=1MHz		12	20	pF
Turn-on time	t _(on)	I _C =1A, V _{CC} =10V		170		ns
Turn-off time	t _(off)	I _{B1} =I _{B2} =10mA		750		ns

* Pulse test: t_p = 300 μs; d ≤ 0.02.

■ Marking

Marking	619
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