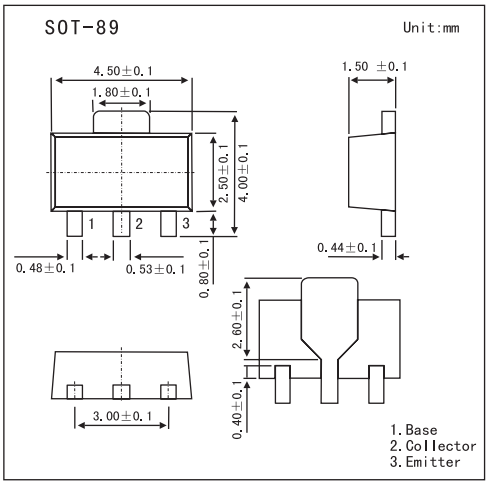
NPN Silicon Power Switching Transistor

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.

  $R_{CE(sat)}$ 87mΩ at 2.75A.

Absolute Maximum Ratings Ta = 25℃

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	℃

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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	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: tp = 300 μs; d ⩽ 0.02.

■ Marking

Marking	619