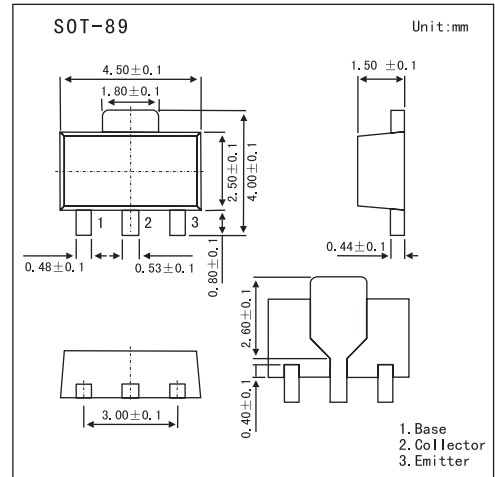


# FCX619

## ■ 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 $T_a = 25^\circ\text{C}$

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	$^\circ\text{C}$

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA	50	190		V
Collector-emitter breakdown voltage *	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA	50	65		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA	5	8.3		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =40V			100	nA
Collector Emitter Cut-Off Current	I <sub>CES</sub>	V <sub>CE</sub> =40V			100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =4V			100	nA
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> =0.1A, I <sub>B</sub> =10mA I <sub>C</sub> =1A, I <sub>B</sub> =10mA I <sub>C</sub> =2A, I <sub>B</sub> =50mA I <sub>C</sub> =2.75A, I <sub>B</sub> =100mA		13 150 190 240	25 220 260 320	mV
Base-emitter saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> =2.75A, I <sub>B</sub> =100mA		0.97	1.1	V
Base-emitter ON voltage *	V <sub>BE(on)</sub>	I <sub>C</sub> =2.75A, V <sub>CE</sub> =2V		0.89	1.0	V
DC current gain *	h <sub>FE</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =2V I <sub>C</sub> =200mA, V <sub>CE</sub> =2V I <sub>C</sub> =1A, V <sub>CE</sub> =2V I <sub>C</sub> =2A, V <sub>CE</sub> =2V I <sub>C</sub> =6A, V <sub>CE</sub> =2V	200 300 200 100	400 450 400 200 30		
Transitional frequency	f <sub>T</sub>	I <sub>C</sub> =50mA, V <sub>CE</sub> =10V, f=100MHz	100	165		MHz
Output capacitance	C <sub>obo</sub>	V <sub>CB</sub> =10V, f=1MHz		12	20	pF
Turn-on time	t <sub>(on)</sub>	I <sub>C</sub> =1A, V <sub>CC</sub> =10V		170		ns
Turn-off time	t <sub>(off)</sub>	I <sub>B1</sub> =I <sub>B2</sub> =10mA		750		ns

\* Pulse test: t<sub>p</sub> = 300 μs; d ≤ 0.02.

■ Marking

Marking	619
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