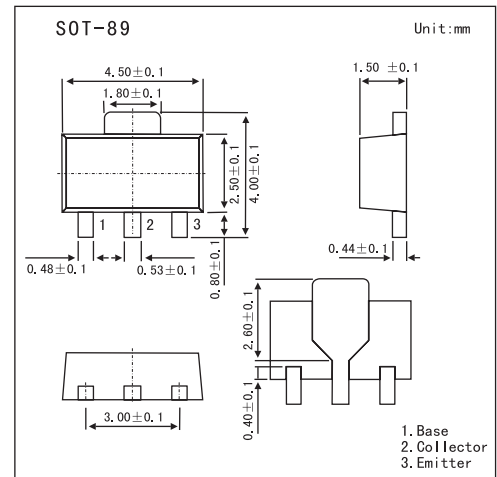


## NPN Silicon Planar Medium Power Transistor

## FCX493

## ■ Features

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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	120	V
Collector-Emitter Voltage	$V_{CE0}$	100	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Continuous Collector Current	$I_C$	1	mA
Peak Pulse Current	$I_{CM}$	2	A
Base Current	$I_B$	200	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-65 to 150	$^\circ\text{C}$

## FCX493

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Max	Unit
Breakdown Voltages	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA	120		V
Breakdown Voltages	V <sub>CEO(sus)</sub>	I <sub>C</sub> =10mA*	100		V
Breakdown Voltages	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA	5		V
Collector Cut-Off Currents	I <sub>CBO</sub>	V <sub>CB</sub> =100V		100	nA
	I <sub>CES</sub>	V <sub>CES</sub> =100V		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> =500mA, I <sub>B</sub> =50mA		0.3	V
		I <sub>C</sub> =1A, I <sub>B</sub> =100mA		0.6	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =100mA		1.15	V
Base-Emitter Turn On Voltage	V <sub>BE(on)</sub>	I <sub>C</sub> =1A, V <sub>CE</sub> =10V		1.0	V
Static Forward Current Transfer Ratio	h <sub>FE</sub>	I <sub>C</sub> =1mA, V <sub>CE</sub> =10V*	100		
		I <sub>C</sub> =250mA, V <sub>CE</sub> =10V*	100	300	
		I <sub>C</sub> =500mA, V <sub>CE</sub> =10V*	60		
		I <sub>C</sub> =1A, V <sub>CE</sub> =10V*	20		
Transition Frequency	f <sub>T</sub>	I <sub>C</sub> =50mA, V <sub>CE</sub> =10V, f=100MHz	150		MHz
Collector-Base Breakdown Voltage	C <sub>obo</sub>	V <sub>CB</sub> =10V, f=1MHz		10	pF

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

## ■ Marking

Marking	N93
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