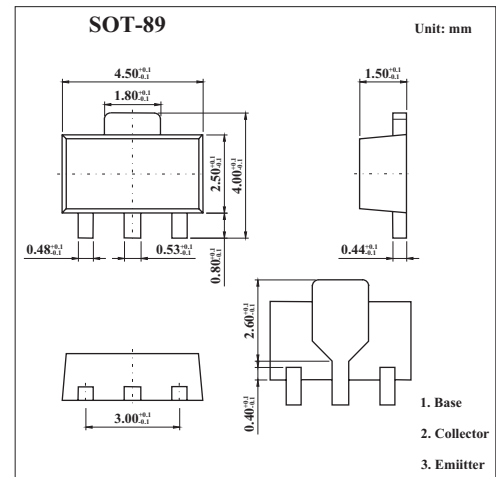


Power High Performance Transistor

FCX589

■ Features

- PNP silicon planar medium.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-50	V
Collector-emitter voltage	V_{CE0}	-30	V
Emitter-base voltage	V_{EB0}	-5	V
Peak pulse current	I_C	-1	A
Continuous collector current	I_{CM}	-2	A
Base current	I_B	-200	mA
Power dissipation	P_{tot}	1	W
Operating and storage temperature range	T_j, T_{stg}	-65 to +150	$^\circ\text{C}$

FCX589■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Breakdown Voltages	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$	-50			V
Breakdown Voltages *	$V_{(BR)CEO}$	$I_C = -10\text{mA}$	-30			V
Breakdown Voltages	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}$	-5			V
Collector-base cut-off current	I_{CBO}	$V_{CB} = -30\text{V}$			-100	nA
Collector -Emitter Cut-Off Current	I_{CES}	$V_{CE} = -30\text{V}$			-100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -4\text{V}$			-100	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = -1\text{A}, I_B = -100\text{mA}$ $I_C = -2\text{A}, I_B = -200\text{mA}$			-0.35 -0.65	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = -1\text{A}, I_B = -100\text{mA}$			-1.2	V
Base-Emitter Turn-on Voltage *	$V_{BE(on)}$	$I_C = -1\text{A}, V_{CE} = -2\text{V}$			-1.1	V
Static Forward Current Transfer Ratio	h_{FE}	$I_C = -1\text{mA}, V_{CE} = -2\text{V}^*$	100			
		$I_C = -500\text{mA}, V_{CE} = -2\text{V}^*$	100		300	
		$I_C = -1\text{A}, V_{CE} = -2\text{V}^*$	80			
		$I_C = -2\text{A}, V_{CE} = -2\text{V}^*$	40			
Transitional frequency	f_T	$I_C = -100\text{mA}, V_{CE} = -5\text{V}, f = 100\text{MHz}$	100			MHz
Output capacitance	C_{obo}	$V_{CB} = -10\text{V}, f = 1\text{MHz}$			15	pF

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

■ Marking

Marking	P89
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