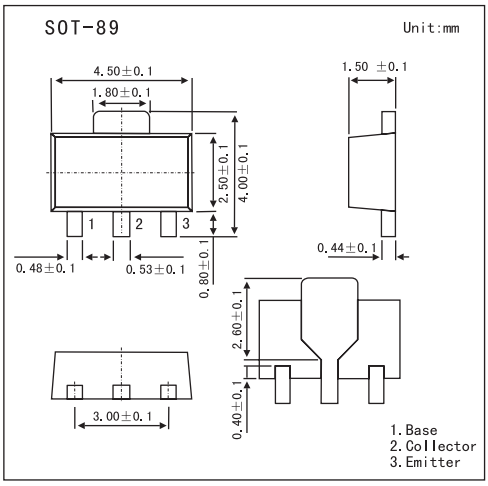
TY Semicondutor®

Product specification

FCX690B



■ Features

- 2W power dissipation.
- 6A peak pulse current.
- Gain of 400 @Ic=1Amp.
- Very low saturation voltage.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	45	V
Collector-emitter voltage	V_{CEO}	45	V
Emitter-base voltage	V_{EBO}	5	V
Continuous collector current	I_{CM}	6	A
Peak pulse current	I_C	2	A
Power dissipation	P_{tot}	1	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	45			V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	I_C=10mA	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA	5			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=9V			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4V			0.1	μA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C=0.1A, I_B=0.5mA I_C=1A, I_B=5mA			80 300	mV
Base-emitter saturation voltage *	$V_{BE(sat)}$	I_C=1A, I_B=10mA			1.1	V
Base-emitter ON voltage *	$V_{BE(on)}$	I_C=1A, V_{CE}=2V			1.0	V
Static Forward Current Transfer Ratio*	h_{FE}	I_C=100mA,V_{CE}=2V I_C=1A,V_{CE}=2V I_C=2A,V_{CE}=2V	500 400 150			
Transitional frequency	f_T	I_C=50mA, V_{CE}=5V, f=50MHz	150			MHz
Input capacitance	C_{ibo}	V_{EB}=0.5V, f=1MHz		200		pF
Output capacitance	C_{obo}	V_{CB}=10V, f=1MHz		16		pF
Turn-on time	$t_{(on)}$	I_C=500mA, V_{CC}=10V		33		ns
Turn-off time	$t_{(off)}$	I_{B1}=I_{B2}=50mA		1300		ns

* Pulse test: tp = 300 μs; d ⩽ 0.02.

■ Marking

Marking	690