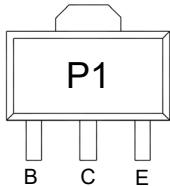


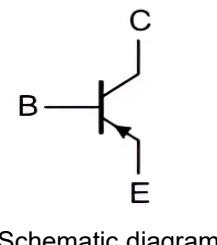
## Features

- Power dissipation

### Marking:P1



SOT-89-3L top view



Schematic diagram

Marking and pin assignment



Halogen-Free

### Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	-80	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-60	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>c</sub>	Collector Current—Continuous	-1	A
P <sub>c</sub>	Collector Power Dissipation	0.5	W
T <sub>J</sub> , T <sub>STG</sub>	Operating and Storage Temperature Range	-55~+150	°C

### Electrical Characteristics (Ta=25°C unless otherwise specified)

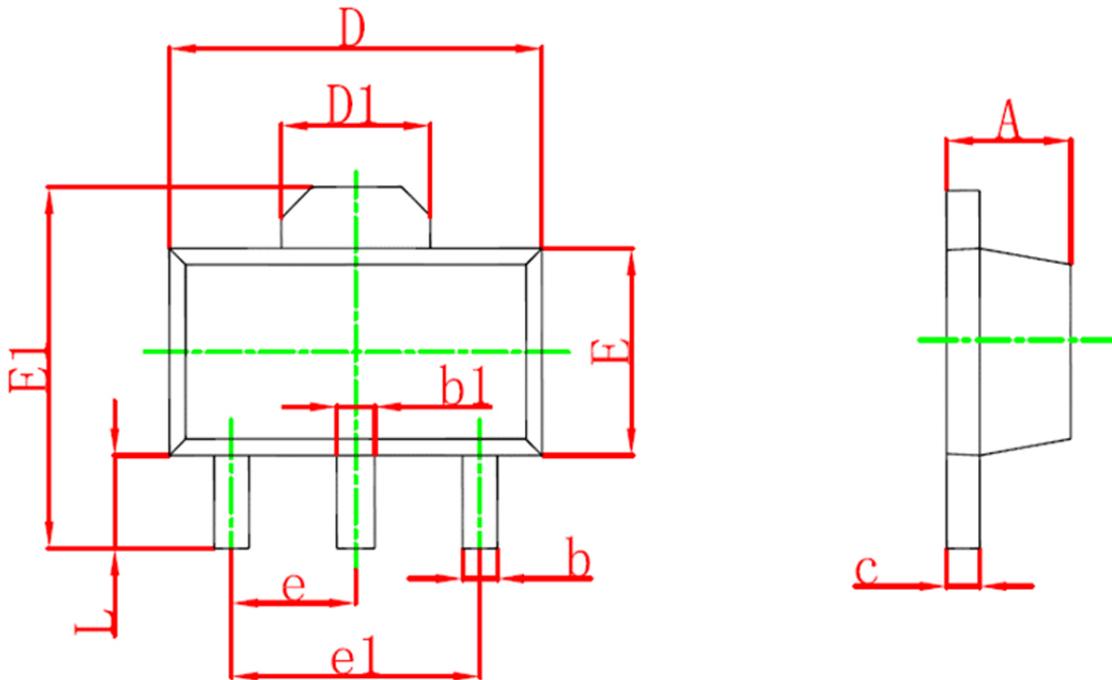
Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =-100μA, I <sub>E</sub> =0	-80	--	--	V
V <sub>(BR)CEO*</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-10mA, I <sub>E</sub> =0	-60	--	--	V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =100μA, I <sub>C</sub> =0	-5	--	--	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-60V, I <sub>E</sub> =0	--	--	-0.1	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-4V, I <sub>C</sub> =0	--	--	-0.1	μA
I <sub>CES</sub>	Collector- Emitter cut-off current	V <sub>CES</sub> =-60V, I <sub>E</sub> =0	--	--	-0.1	μA
h <sub>FE1</sub> h <sub>FE2</sub> h <sub>FE3</sub> h <sub>FE4</sub>	DC current gain	V <sub>CE</sub> =-5V, I <sub>C</sub> =-1mA	100	--	--	
		V <sub>CE</sub> =-5V, I <sub>C</sub> =-500mA	100	--	300	
		V <sub>CE</sub> =-5V, I <sub>C</sub> =-1A	80	--	--	
		V <sub>CE</sub> =-5V, I <sub>C</sub> =-2A	15	--	--	
V <sub>CE(sat)*</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-500A, I <sub>B</sub> =-50mA	--	--	-0.3	V
		I <sub>C</sub> =-1A, I <sub>B</sub> =100mA	--	--	-0.6	V
V <sub>BE(sat)*</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-1A, I <sub>B</sub> =100mA	--	--	-1.2	V
V <sub>BE*</sub>	Base-emitter voltage	V <sub>CE</sub> =-5V, I <sub>C</sub> =-1A	--	--	-1	V
f <sub>T</sub>	Transition frequency	V <sub>CE</sub> =-10V, I <sub>C</sub> =-50mA, f=100MHz	150	--	--	MHz
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =-10V, f=1MHz	--	--	10	pF

\*Pulse width=300s. Duty cycle 2%

### Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
FCX591	SOT-89-3L	P1	1,000	10,000	40,000	7"reel

## SOT-89-3L Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions in Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF		0.061 REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP		0.060 TYP	
e1	3.000 TYP		0.118 TYP	
L	0.900	1.200	0.035	0.047