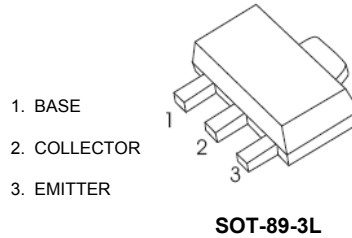


Features

- Power dissipation



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

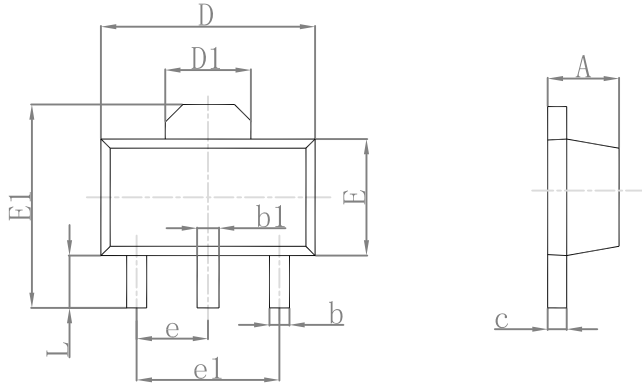
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	-80	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1	A
Collector Power Dissipation	P_C	0.5	W
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-65 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}$, $I_E=0$	-80		V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}^*$	$I_C=-10\text{mA}$, $I_B=0$	-60		V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}$, $I_C=0$	-5		V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-60\text{V}$, $I_E=0$		-0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-4\text{V}$, $I_C=0$		-0.1	μA
Collector- Emitter Cut-Off Current	I_{CES}	$V_{CES}=-60\text{V}$, $I_E=0$		-0.1	μA
DC Current Gain	h_{FE}^*	$V_{CE}=-5\text{V}$, $I_C=-1\text{mA}$ $V_{CE}=-5\text{V}$, $I_C=-500\text{mA}$ $V_{CE}=-5\text{V}$, $I_C=-1\text{A}$ $V_{CE}=-5\text{V}$, $I_C=-2\text{A}$	100 100 80 15	300	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C=-500\text{mA}$, $I_B=-50\text{mA}$ $I_C=-1\text{A}$, $I_B=-100\text{mA}$		-0.3 -0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}^*$	$I_C=-1\text{A}$, $I_B=-100\text{mA}$		-1.2	V
Base-Emitter Voltage	V_{BE}^*	$I_C=-5\text{V}$, $I_C=-1\text{A}$		-1	V
Transition Frequency	f_T	$V_{CE}=-10\text{V}$, $I_C=-50\text{mA}$ $f=100\text{MHz}$	150		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $f=1\text{MHz}$		10	pF

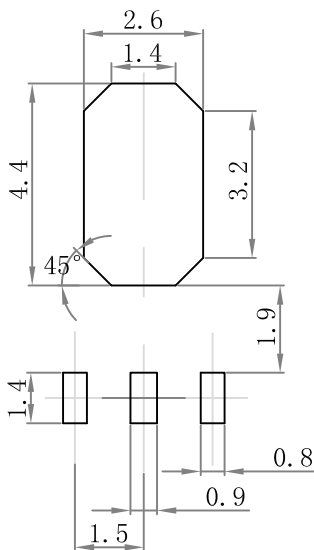
*Pulse width=300s. Duty cycle 2%

Package Outline Dimensions SOT-89-3L



Symbol	Dimensions In Millimeters		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

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Marking and Ordering Information

Device	Package	Marking	Quality	HSF Status
GSBCX591	SOT-89-3L	P1	1000pcs/Reel	RoHS Compliant