

## PNP Transistors

### General description

SOT-89-3L Plastic-Encapsulate Transistors

### SOT-89-3L

### FEATURES

- Low speed switching
- Power Dissipation of 500mW
- High Stability and High Reliability

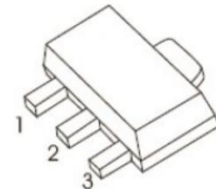
### MECHANICAL DATA

- SOT-89-3L Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

1. BASE

2. COLLECTOR

3. EMITTER



**Marking: B772**

### Maximum Ratings & Thermal Characteristics T<sub>A</sub> = 25°C unless otherwise noted

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CBO</sub>	-40	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-30	V
Emitter -Base Voltage	V <sub>EBO</sub>	-6	V
Collector Current-Continuous	I <sub>C</sub>	-3	A
Collector Power Dissipation	P <sub>C</sub>	500	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55-+150	°C
Thermal resistance From junction to ambient	R <sub>θJA</sub>	250	°C/W

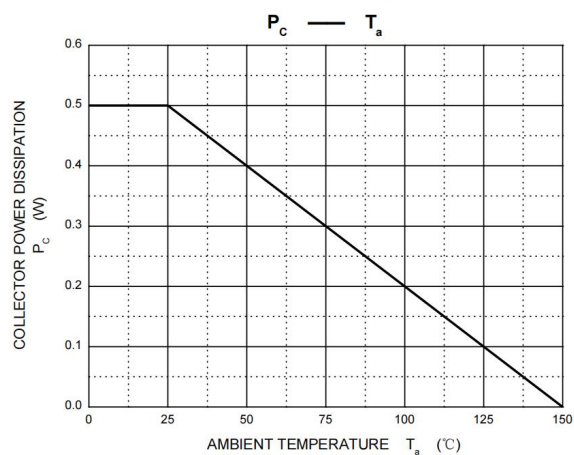
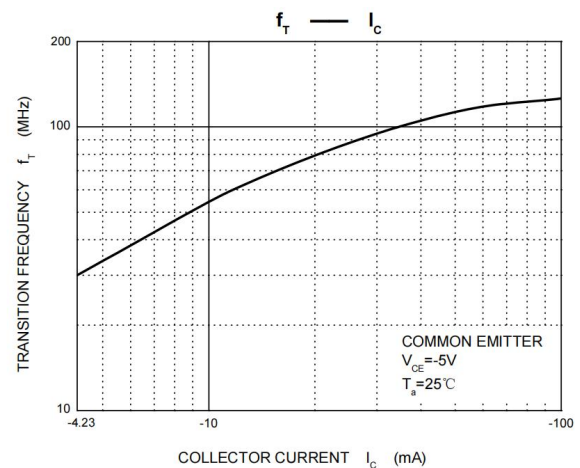
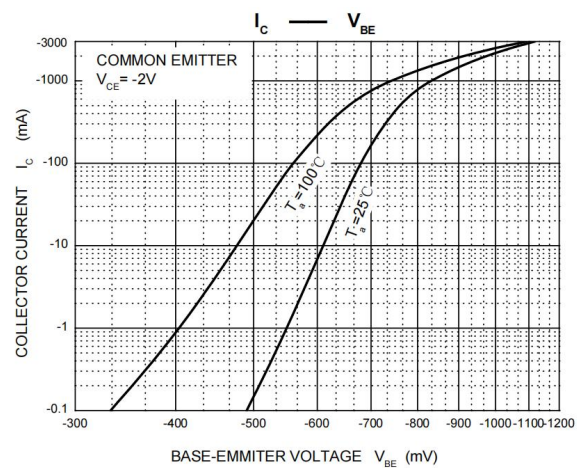
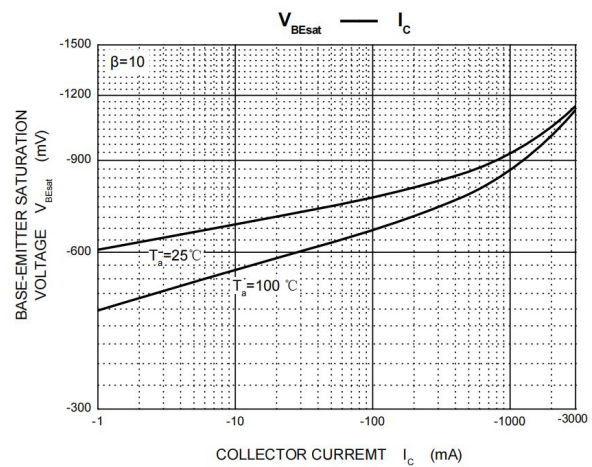
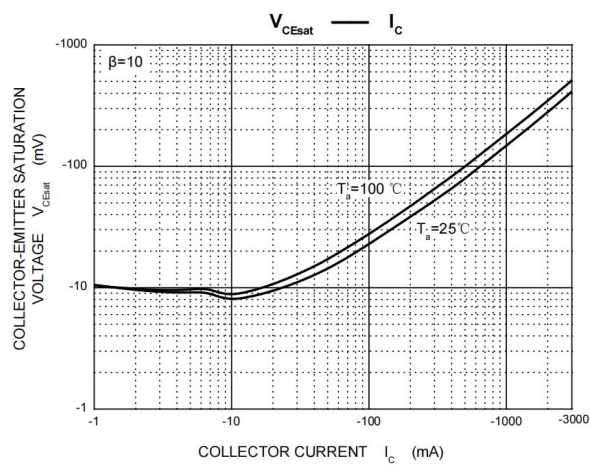
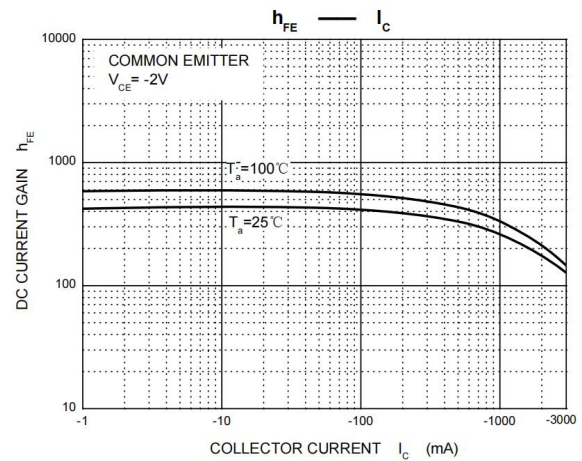
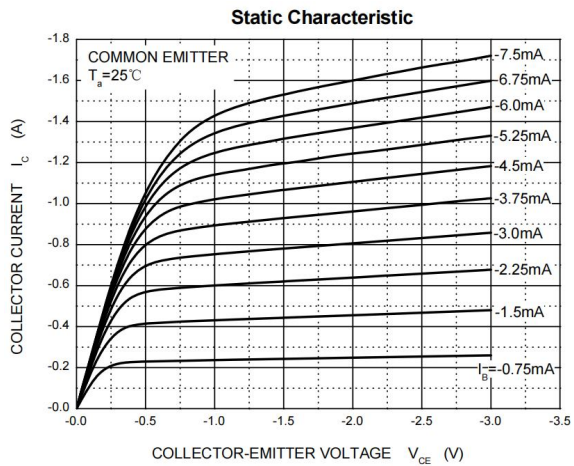
### Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise noted

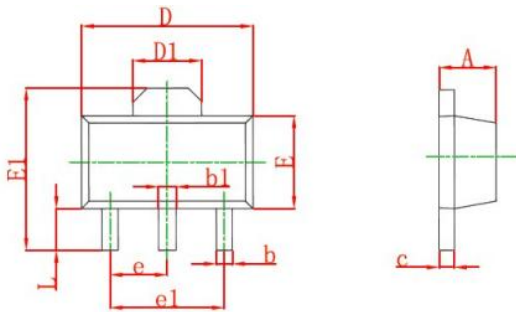
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-100uA, I <sub>E</sub> =0	-40		V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =0	-30		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-100uA, I <sub>C</sub> =0	-6		V
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> =-30V, I <sub>B</sub> =0		-10	uA
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-40V, I <sub>E</sub> =0		-1.0	uA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-6V, I <sub>C</sub> =0		-1.0	uA
DC current gain	h <sub>FE</sub> (1)	V <sub>CE</sub> =-2V, I <sub>C</sub> =-1A	60	400	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-2A, I <sub>B</sub> =-200mA		-0.50	V
Base -emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-2A, I <sub>B</sub> =-200mA		-1.50	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-100mA, f=10MHz	50		MHz

### CLASSIFICATION OF h<sub>FE</sub>(1)

RANK	R	O	Y	GR
RANGE	60-120	100-200	160-320	200-400

## Typical characteristics

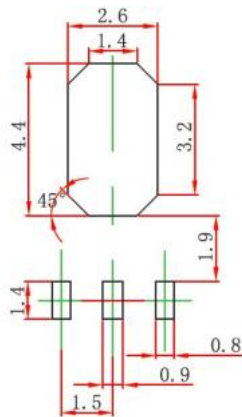


**SOT-89-3L PACKAGE OUTLINE** Plastic surface mounted package


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

Precautions: PCB Design

Recommended land dimensions for SOT-89-3 diode. Electrode patterns for PCBs


**NOTE:**

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

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