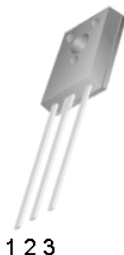




# TSB772

## Low V<sub>ce(sat)</sub> PNP Transistor

TO-126



1 2 3

Pin assignment:  
**TO-126**  
 1. Emitter  
 2. Collector  
 3. Base

**BV<sub>CEO</sub> = - 50V**

**I<sub>C</sub> = - 3A**

**V<sub>CE(SAT)</sub>, = - 0.5V(typ.) @I<sub>C</sub> / I<sub>B</sub> = - 2A / - 0.1A**

### Features

- ✧ Low V<sub>CE(SAT)</sub>.
- ✧ Excellent DC current gain characteristics

### Structure

- ✧ Epitaxial planar type.
- ✧ PNP silicon transistor

### Ordering Information

Part No.	Packing	Package
TSB772CK	Bulk Pack	TO-126

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

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V <sub>CBO</sub>	- 50V	V
Collector-Emitter Voltage	V <sub>CEO</sub>	- 50V	V
Emitter-Base Voltage	V <sub>EBO</sub>	- 6	V
Collector Current	DC	- 3	A
	Pulse	- 7 (note 1)	
Collector Power Dissipation	P <sub>D</sub>	1.0	W
Operating Junction Temperature	T <sub>J</sub>	+150	°C
Operating Junction and Storage Temperature Range	T <sub>STG</sub>	- 55 to +150	°C

Note: 1. Single pulse, Pw = 2mS

### Electrical Characteristics

Ta = 25 °C unless otherwise noted

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
<b>Static</b>						
Collector-Base Voltage	I <sub>C</sub> = - 50uA, I <sub>E</sub> = 0	BV <sub>CBO</sub>	- 50	--	--	V
Collector-Emitter Breakdown Voltage	I <sub>C</sub> = - 1mA, I <sub>B</sub> = 0	BV <sub>CEO</sub>	- 50	--	--	V
Emitter-Base Breakdown Voltage	I <sub>E</sub> = - 50uA, I <sub>C</sub> = 0	BV <sub>EBO</sub>	- 6	--	--	V
Collector Cutoff Current	V <sub>CB</sub> = - 40V, I <sub>E</sub> = 0	I <sub>CBO</sub>	--	--	- 1	uA
Emitter Cutoff Current	V <sub>EB</sub> = - 4V, I <sub>C</sub> = 0	I <sub>EBO</sub>	--	--	- 1	uA
Collector-Emitter Saturation Voltage	I <sub>C</sub> / I <sub>B</sub> = - 2.0A / - 0.2A	V <sub>CE(SAT)</sub>	--	- 0.3	- 0.5	V
DC Current Transfer Ratio	V <sub>CE</sub> = - 2V, I <sub>C</sub> = - 1A	h <sub>FE</sub>	160	--	350	
Transition Frequency	V <sub>CE</sub> = - 5V, I <sub>C</sub> = - 100mA, f = 100MHz	f <sub>T</sub>	--	80	--	MHz
Output Capacitance	V <sub>CB</sub> = - 10V, f = 1MHz	Cob		55	--	pF

Note : pulse test: pulse width <=380uS, duty cycle <=2%

## Electrical Characteristics Curve

Figure 1. Current Gain vs Collector Current

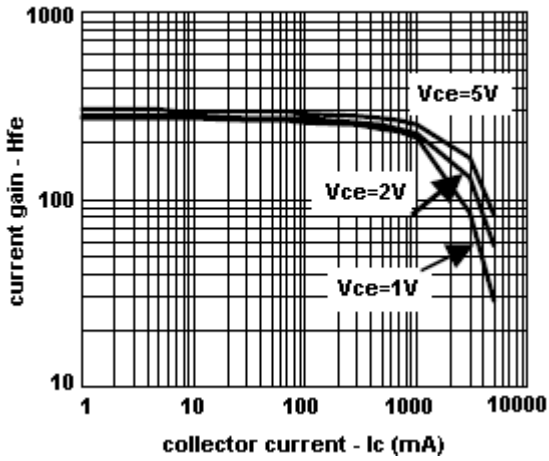


Figure 2. Saturation Voltage vs Collector Current

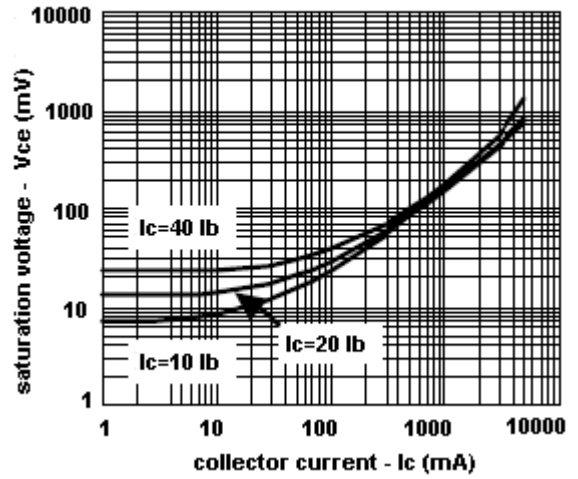


Figure 3. Saturation Voltage vs Collector Current

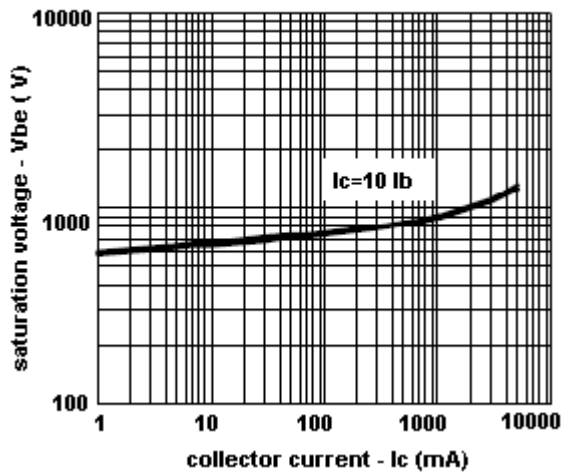
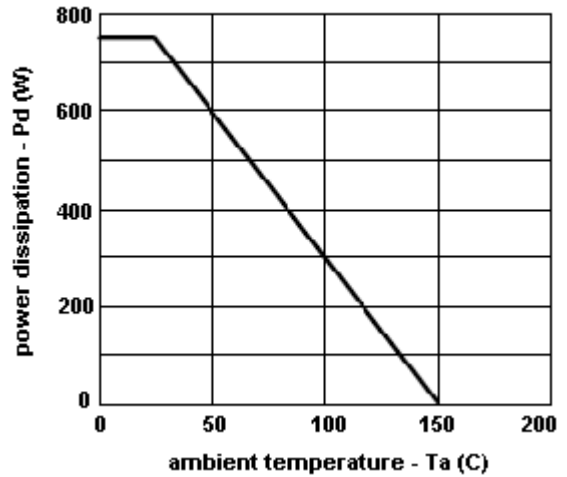
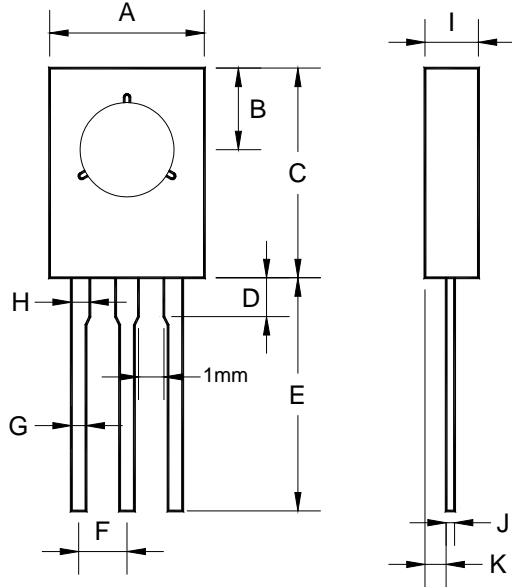


Figure 4. Power Derating Curves



## TO-126 Mechanical Drawing



TO-126 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.00 (typ)		0.315(typ)	
B	4.20 (typ)		0.165 (typ)	
C	10.58	11.00	0.417	0.433
D	2.00 (typ)		0.079 (typ)	
E	12.00(typ)		0.472(typ)	
F	2.50(typ)		0.098 (typ)	
G	0.74	0.78	0.029	0.031
H	0.8 (typ)		0.031(typ)	
I	2.56	3.00	0.101	0.118
J	0.38	0.50	0.015	0.020
K	1.1 (typ)		0.043 (typ)	