TAIWAN SEMICONDUCTOR

RoHS COMPLIANCE

TSB772

Low Vcesat PNP Transistor

TO-126

Pin Definition:
1. Emitter
2. Collector
3. Base

PRODUCT SUMMARY

BV_{CBO}	-50V
BV_{CEO}	-30V
I_C	-3A
$V_{CE(SAT)}$	-0.5V @ I_C / I_B = -2A / -200mA

Features

- Low $V_{CE(SAT)}$ -0.3 @ I_C / I_B = 2A / 200mA (Typ.)
- Complementary part with TSD882

Structure

- Epitaxial Planar Type
- PNP Silicon Transistor

Ordering Information

Part No.	Package	Packing
TSB772CK B0	TO-126	250pcs / Bulk
TSB772CK B0G	TO-126	250pcs / Bulk

Note: "G" denote for Halogen Free Product

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

Parameter		Symbol	Limit	Unit
Collector-Base Voltage		V_{CBO}	-50	V
Collector-Emitter Voltage		V_{CEO}	-30	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current	DC	I_C	-3	A
	Pulse		-7 (note)	
Collector Power Dissipation	Ta = 25°C	P_D	1	W
	Tc = 25°C		10	
Operating Junction Temperature		T_J	+150	°C
Operating Junction and Storage Temperature Range		T_{STG}	- 55 to +150	°C

Note: Single pulse, Pw≤350us, Duty≤2%

Electrical Specifications (Ta = 25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	I_C = -50uA, I_E = 0	BV_{CBO}	-50	--	--	V
Collector-Emitter Breakdown Voltage	I_C = -1mA, I_B = 0	BV_{CEO}	-30	--	--	V
Emitter-Base Breakdown Voltage	I_E = -50uA, I_C = 0	BV_{EBO}	-5	--	--	V
Collector Cutoff Current	V_{CB} = -30V, I_E = 0	I_{CBO}	--	--	-1	uA
Emitter Cutoff Current	V_{EB} = 3V, I_C = 0	I_{EBO}	--	--	-1	uA
Collector-Emitter Saturation Voltage	I_C / I_B = -2A / -200mA	*$V_{CE(SAT)}$	--	-0.3	-0.5	V
Base-Emitter Saturation Voltage	I_C / I_B = -2A / -200mA	*$V_{BE(SAT)}$	--	-1	-2	V
DC Current Transfer Ratio	V_{CE} = -2V, I_C = -1A	*h_{FE}	100	--	500	
Transition Frequency	V_{CE} =-5V, I_C=-100mA, f=100MHz	f_T	--	80	--	MHz
Output Capacitance	V_{CB} = -10V, f=1MHz	Cob	--	55	--	pF

* Pulse Test: Pulse Width ≤380uS, Duty Cycle≤2%

Electrical Characteristics Curve (Ta = 25°C, unless otherwise noted)

Figure 1. DC Current Gain

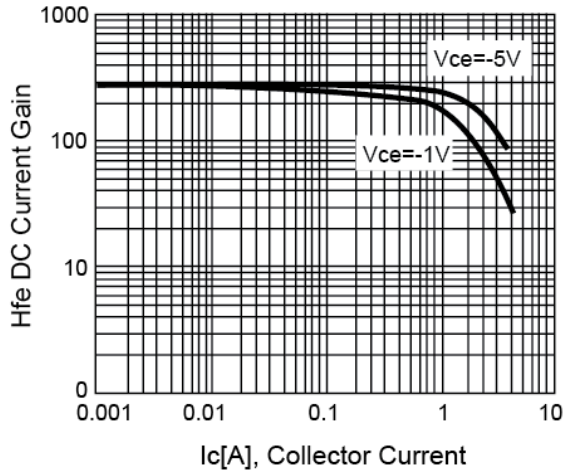


Figure 2. $V_{CE(SAT)}$ v.s. Ic

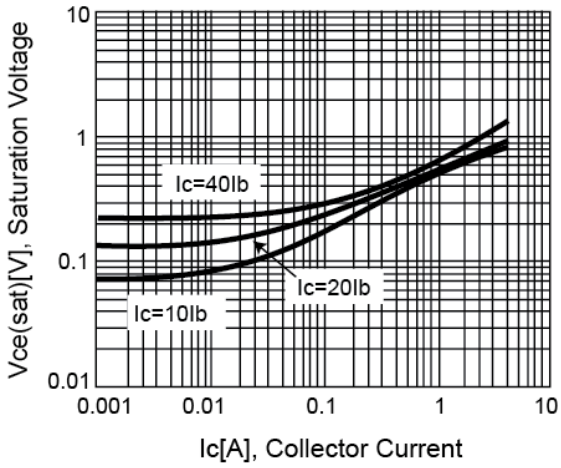


Figure 3. $V_{BE(SAT)}$ v.s. Ic

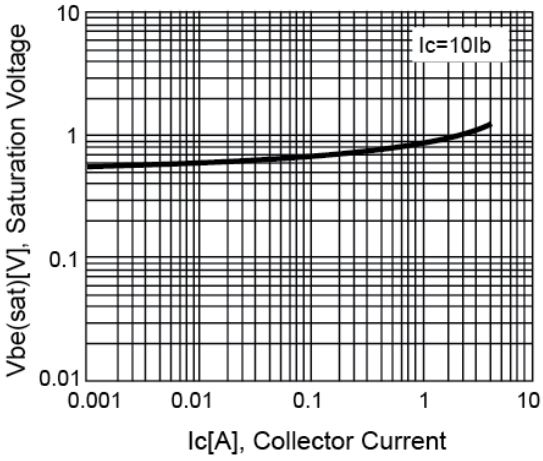
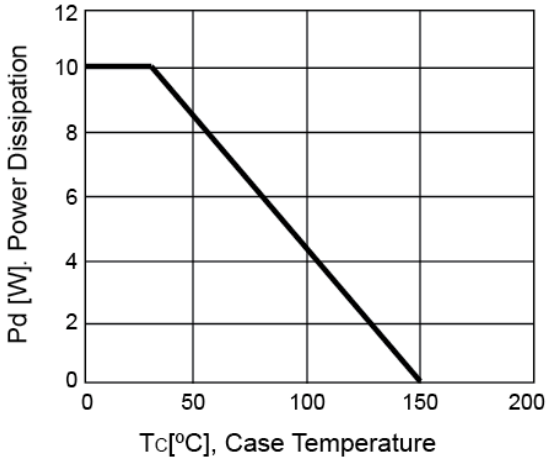


Figure 4. Power Derating Curve



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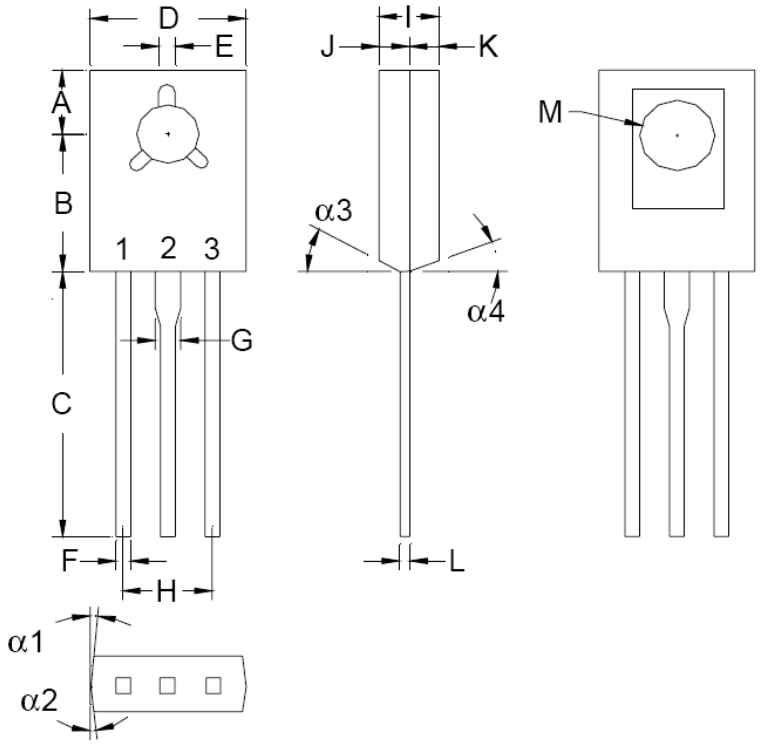
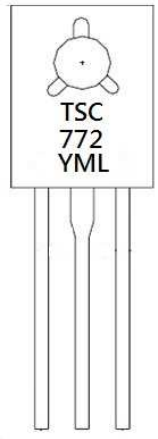
TO-126 Mechanical Drawing



TO-126 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
∝1	--	3ºC	--	3ºC
∝2	--	3ºC	--	3ºC
∝3	--	3ºC	--	3ºC
∝4	--	3ºC	--	3ºC
A	3.81	3.91	0.150	0.153
B	6.99	7.09	0.275	0.279
C	13.50	15.50	0.531	0.610
D	7.52	7.72	0.285	0.303
E	0.95	1.05	0.034	0.041
F	0.71	0.81	0.028	0.031
G	1.22	1.32	0.048	0.052
H	4.34	4.80	0.170	0.189
I	2.41	2.66	0.095	0.105
J	1.14	1.39	0.045	0.055
K	1.14	1.39	0.045	0.055
L	--	0.55	--	0.021
M	3.50	3.86	0.137	0.152

Marking Diagram



Y = Year Code
M = Month Code
(**A**=Jan, **B**=Feb, **C**=Mar, **D**=Apl, **E**=May, **F**=Jun, **G**=Jul, **H**=Aug, **I**=Sep, **J**=Oct, **K**=Nov, **L**=Dec)
= Month Code for Halogen Free Product
(**O**=Jan, **P**=Feb, **Q**=Mar, **R**=Apl, **S**=May, **T**=Jun, **U**=Jul, **V**=Aug, **W**=Sep, **X**=Oct, **Y**=Nov, **Z**=Dec)
L = Lot Code

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