



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	-3	A
	Pulse	-7 (note)	
Collector Power Dissipation	Ta = 25°C	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, $P_w \leq 350\mu s$, Duty $\leq 2\%$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$I_C = -50\mu A, I_E = 0$	BV_{CBO}	-50	--	--	V
Collector-Emitter Breakdown Voltage	$I_C = -1mA, I_B = 0$	BV_{CEO}	-30	--	--	V
Emitter-Base Breakdown Voltage	$I_E = -50\mu A, I_C = 0$	BV_{EBO}	-5	--	--	V
Collector Cutoff Current	$V_{CB} = -30V, I_E = 0$	I_{CBO}	--	--	-1	μA
Emitter Cutoff Current	$V_{EB} = 3V, I_C = 0$	I_{EBO}	--	--	-1	μA
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 $\leq 380\mu s$, Duty Cycle $\leq 2\%$

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

Figure 1. DC Current Gain

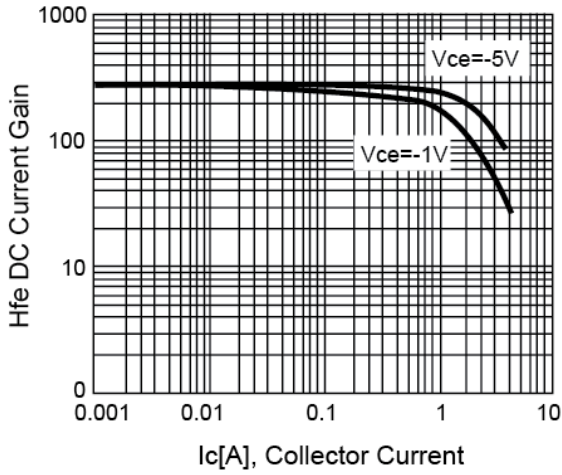


Figure 2. $V_{CE(SAT)}$ v.s. I_c

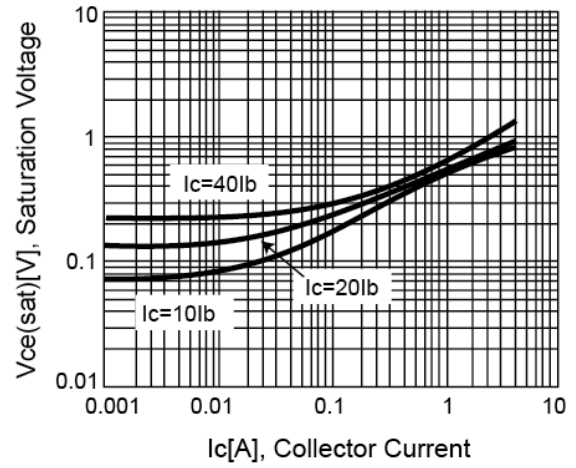


Figure 3. $V_{BE(SAT)}$ v.s. I_c

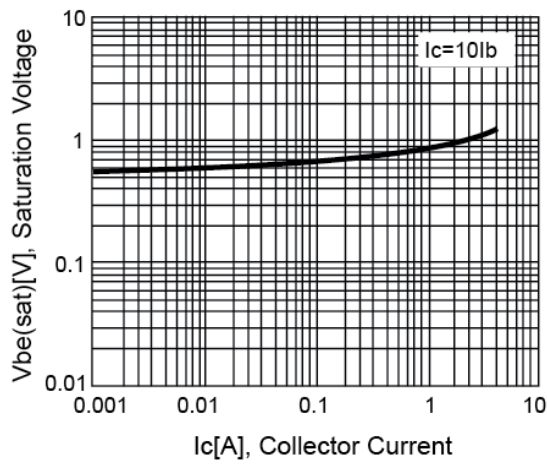
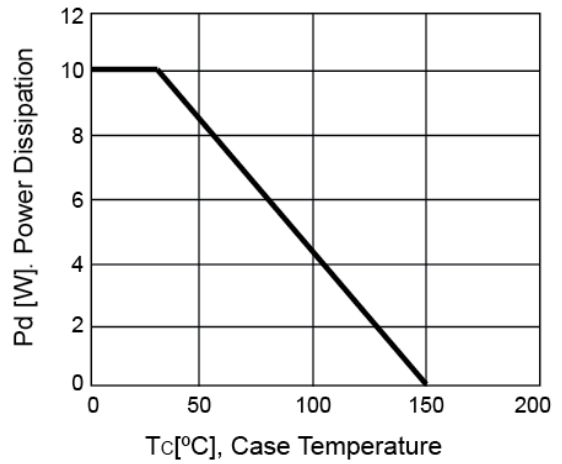
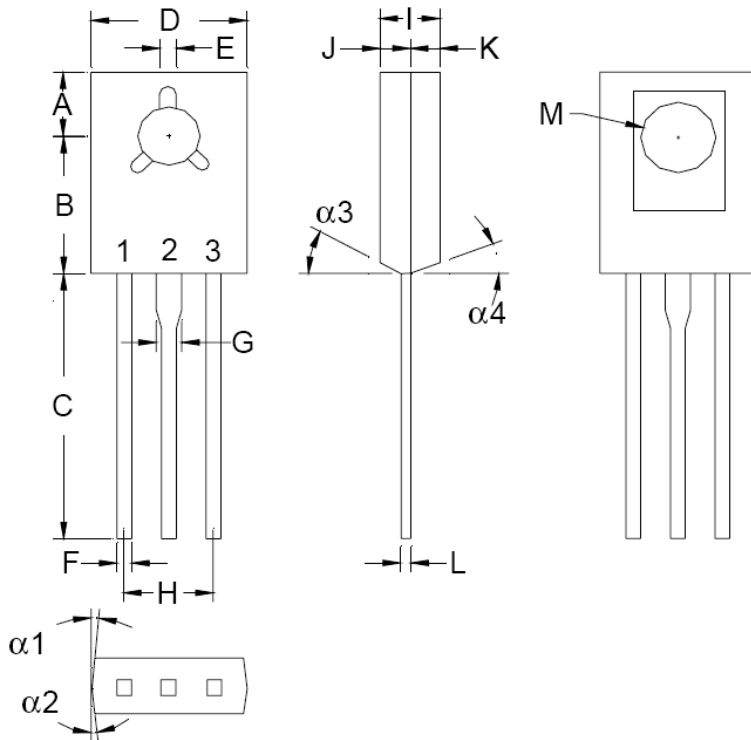


Figure 4. Power Derating Curve

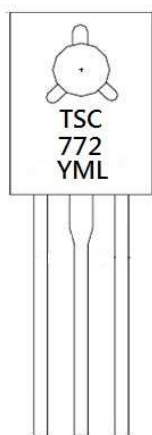


TO-126 Mechanical Drawing



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
$\alpha 1$	--	3°C	--	3°C
$\alpha 2$	--	3°C	--	3°C
$\alpha 3$	--	3°C	--	3°C
$\alpha 4$	--	3°C	--	3°C
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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