

TO-126

Pin Definition:

1. Emitter
2. Collector
3. Base

PRODUCT SUMMARY

BV_{CBO}	50V
BV_{CEO}	50V
I_C	3A
V_{CE(SAT)}	0.5V @ I _C / I _B = 2A / 200mA

Features

- Low V_{CE(SAT)} 0.25 @ I_C / I_B = 2A / 200mA (Typ.)
- Complementary part with TSB772

Structure

- Epitaxial Planar Type
- NPN Silicon Transistor

Ordering Information

Part No.	Package	Packing
TSD882CK B0	TO-126	1Kpcs / Bulk

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}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	DC	3	A
	Pulse	7 (note)	
Collector Power Dissipation	SOT-89	0.75	W
	TO-92	0.625	
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}	60	--	--	V
Collector-Emitter Breakdown Voltage	I _C = 1mA, I _B = 0	BV _{CEO}	50	--	--	V
Emitter-Base Breakdown Voltage	I _E = 50uA, I _C = 0	BV _{EBO}	5	--	--	V
Collector Cutoff Current	V _{CB} = 50V, 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)}	--	0.25	0.5	V
Base-Emitter Saturation Voltage	I _C / I _B = 2A / 200mA	*V _{BE(SAT)}	--	--	2	V
DC Current Transfer Ratio	V _{CE} = 2V, I _C = 1A	*h _{FE}	100	--	500	
Transition Frequency	V _{CE} = 6V, I _C = 50mA, f = 100MHz	f _T	--	90	--	MHz
Output Capacitance	V _{CB} = 10V, f = 1MHz	Cob	--	45	--	pF

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

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

Figure 1. DC Current Gain

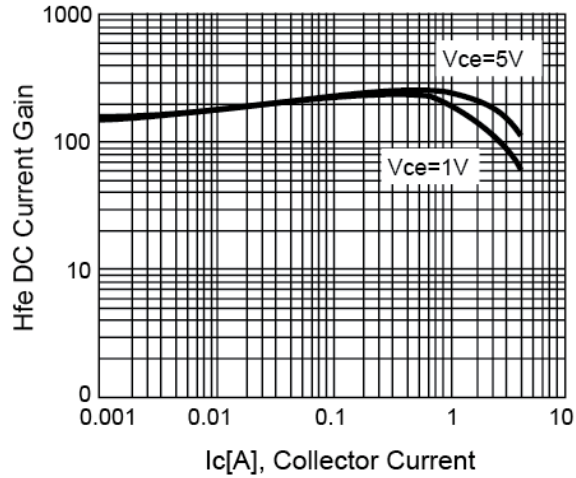


Figure 2. $V_{CE(SAT)}$ v.s. I_c

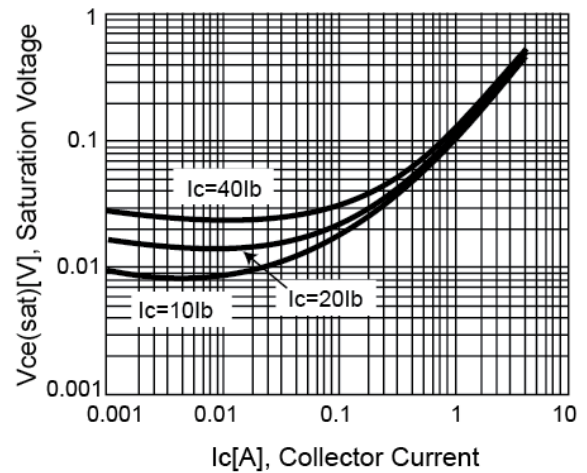


Figure 3. $V_{BE(SAT)}$ v.s. I_c

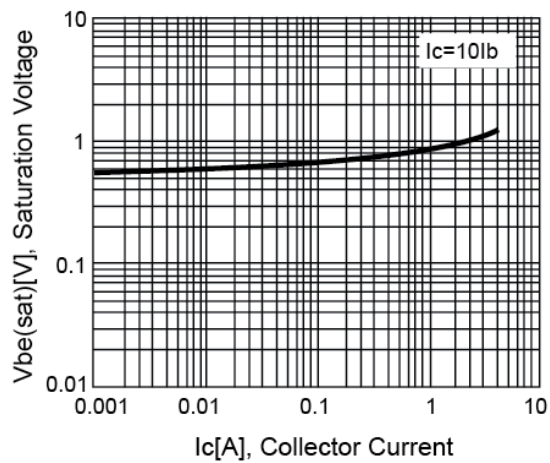
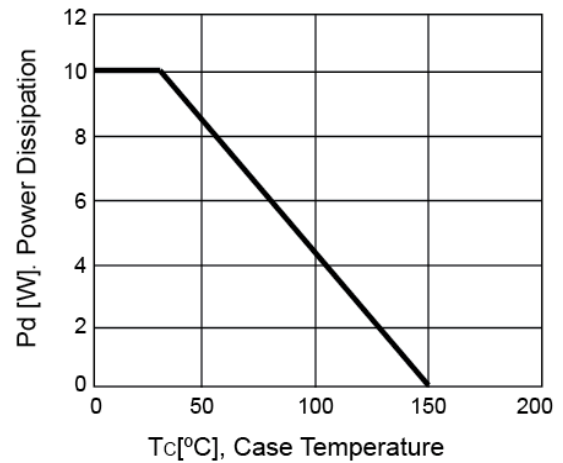
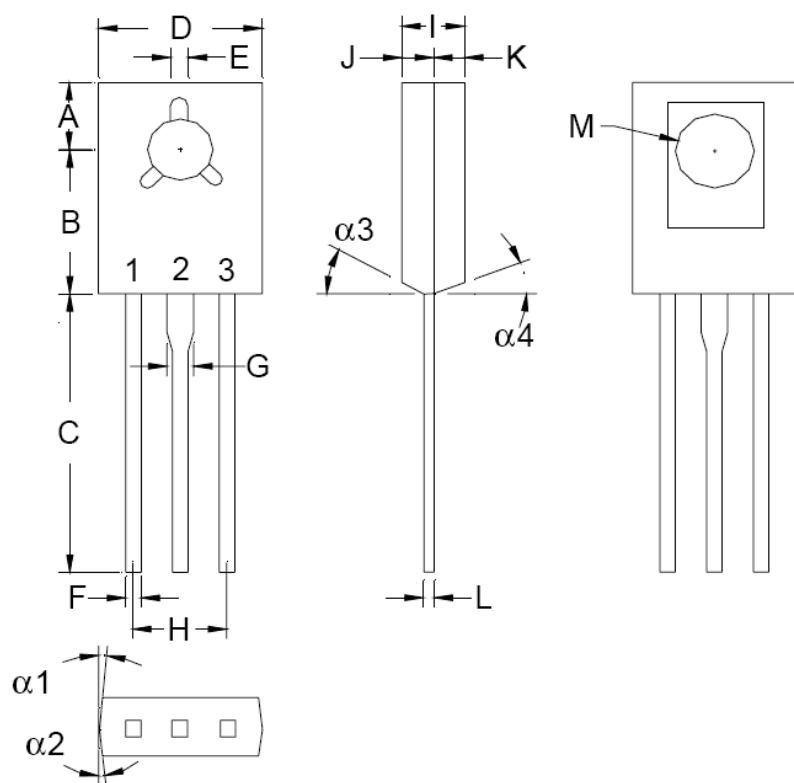


Figure 4. Power Derating Curve



TO-18 Mechanical Drawing



TO-18 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
$\alpha 1$	--	3°	--	3°
$\alpha 2$	--	3°	--	3°
$\alpha 3$	--	3°	--	3°
$\alpha 4$	--	3°	--	3°
A	0.150	0.153	3.81	3.91
B	0.275	0.279	6.99	7.09
C	0.531	0.610	13.50	15.50
D	0.285	0.303	7.52	7.72
E	0.034	0.041	0.95	1.05
F	0.028	0.031	0.71	0.81
G	0.048	0.052	1.22	1.32
H	0.170	0.189	4.34	4.80
I	0.095	0.105	2.41	2.66
J	0.045	0.055	1.14	1.39
K	0.045	0.055	1.14	1.39
L	--	0.021	--	0.55
M	0.137	0.152	3.50	3.86

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