TSB1184A

Low Vce(sat) PNP Transistor



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

BV_{CEO} = - 50V
Ic = - 3A
$V_{CE\ (SAT)}$, = - 0.3V(typ.) @Ic / Ib = - 2A / - 0.1A

Features

- Low $V_{CE\ (SAT)}$.
- Excellent DC current gain characteristics

Structure

- Epitaxial planar type.
- PNP silicon transistor

Ordering Information

Part No.	Packing	Package
TSB1184ACP	Tape & Reel	TO-252

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

Parameter		Symbol	Limit	Unit
Collector-Base Voltage		V_{CBO}	- 50V	V
Collector-Emitter Voltage		V_{CEO}	- 50V	V
Emitter-Base Voltage		V_{EBO}	- 6	V
Collector Current	DC	I_C	- 3	A
	Pulse		- 7 (note 1)	
Collector Power Dissipation	TO-252	P_D	1.0	W
Operating Junction Temperature		T_J	+150	°C
Operating Junction and Storage Temperature Range		T_{STG}	- 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
Static						
Collector-Base Voltage	I_C = - 50uA, I_E = 0	BV_{CBO}	- 50	--	--	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}	- 6	--	--	V
Collector Cutoff Current	V_{CB} = - 40V, I_E = 0	I_{CBO}	--	--	- 1	uA
Emitter Cutoff Current	V_{EB} = - 4V, I_C = 0	I_{EBO}	--	--	- 1	uA
Collector-Emitter Saturation Voltage	I_C / I_B = - 2.0A / - 0.2A	$V_{CE(SAT)}$	--	- 0.3	- 0.5	V
DC Current Transfer Ratio	V_{CE} = - 2V, I_C = - 1A	h_{FE}	120	--	560	
Transition Frequency	V_{CE} = - 5V, I_C = - 100mA, f = 100MHz	f_T	--	80	--	MHz
Output Capacitance	V_{CB} = - 10V, f=1MHz	Cob		55	--	pF

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

Classification Of h_{FE}

Rank	Q	R	S
Range	120 - 270	180 - 390	270 - 560

Electrical Characteristics Curve

Figure 1. Current Gain vs Collector Current

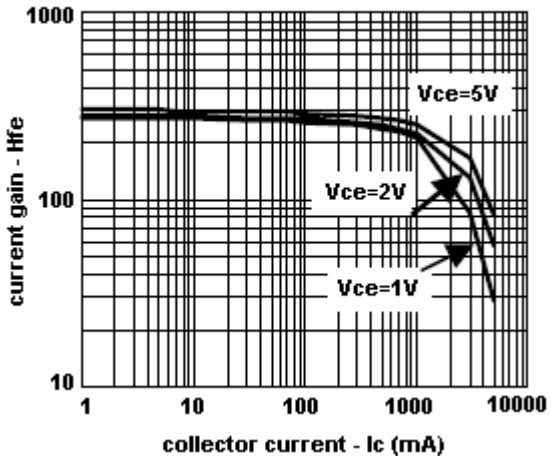


Figure 2. Saturation Voltage vs Collector Current

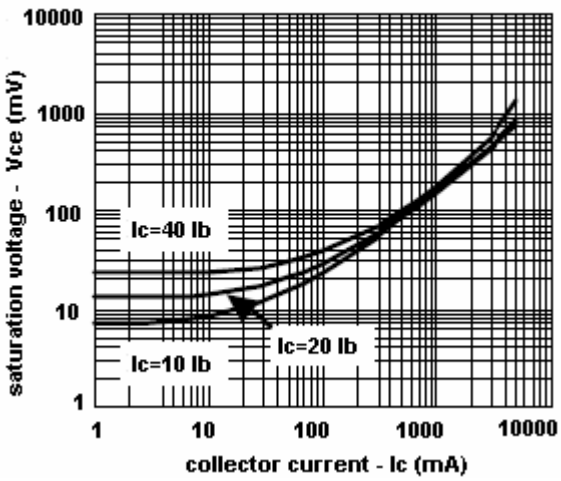


Figure 3. Saturation Voltage vs Collector Current

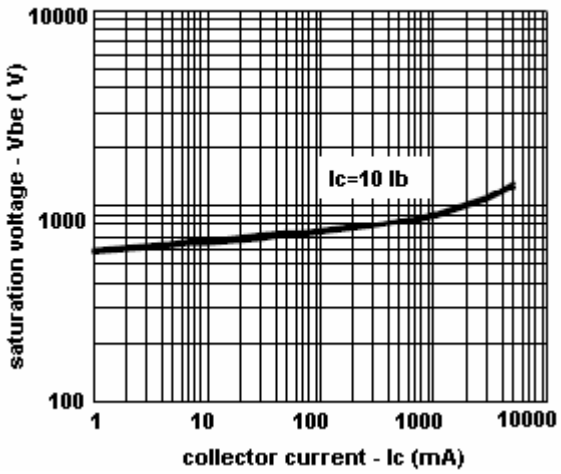
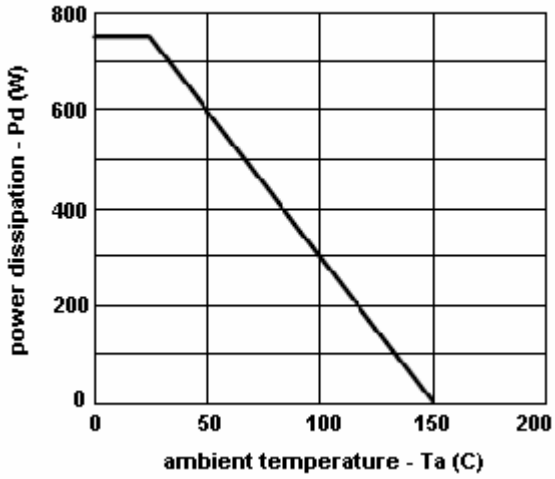
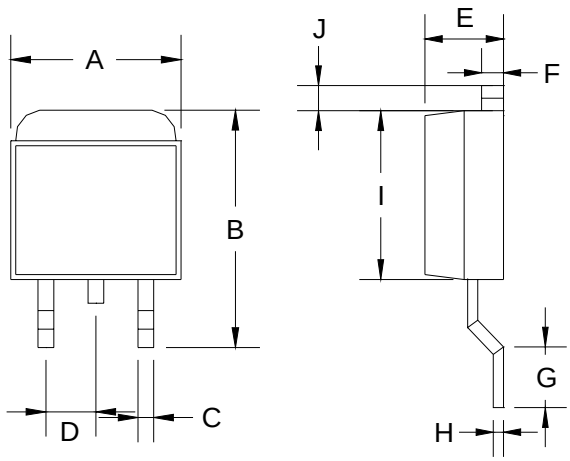


Figure 4. Power Derating Curves



TO-252 Mechanical Drawing



TO-252 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.570	6.840	0.259	0.269
B	9.250	10.400	0.364	0.409
C	0.550	0.700	0.022	0.028
D	2.560	2.670	0.101	0.105
E	2.300	2.390	0.090	0.094
F	0.490	0.570	0.019	0.022
G	1.460	1.580	0.057	0.062
H	0.520	0.570	0.020	0.022
I	5.340	5.550	0.210	0.219
J	1.460	1.640	0.057	0.065