



TSB1132

Low Frequency PNP Transistor

SOT-89



Pin assignment:

1. Base
2. Collector
3. Emitter

$BV_{CEO} = -32V$

$I_C = -1A$

$V_{CE(SAT)}, = -0.15V(\text{typ.}) @ I_C / I_B = -0.5A / -50mA$

Features

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

Structure

- ✧ Epitaxial planar type.
- ✧ PNP silicon transistor

Ordering Information

Part No.	Packing	Package	Marking
TSB1132CY	Tape & Reel	SOT-89	BK

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

Parameter		Symbol	Limit	Unit
Collector-Base Voltage		V _{CBO}	- 40V	V
Collector-Emitter Voltage		V _{CEO}	- 32V	V
Emitter-Base Voltage		V _{EBO}	- 5	V
Collector Current	DC	I _C	- 1	A
	Pulse		- 2.5 (note 1)	
Collector Power Dissipation	SOT-89	P _D	0.6	W
			2 (note 2)	
Operating Junction Temperature		T _J	+150	°C
Operating Junction and Storage Temperature Range		T _{STG}	- 55 to +150	°C

Note: 1. Single pulse, $P_w = 10mS$, Duty $\leq 50\%$

2. When mounted on a 40 x 40 x 0.7mm ceramic board

Electrical Characteristics

Ta = 25 °C unless otherwise noted

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Static						
Collector-Base Voltage	$I_C = -50\mu A, I_E = 0$	BV_{CBO}	- 40			V
Collector-Emitter Breakdown Voltage	$I_C = -1mA, I_B = 0$	BV_{CEO}	- 32			V
Emitter-Base Breakdown Voltage	$I_E = -50\mu A, I_C = 0$	BV_{EBO}	- 5			V
Collector Cutoff Current	$V_{CB} = -20V, I_E = 0$	I_{CBO}			- 0.5	μA
Emitter Cutoff Current	$V_{EB} = -4V, I_C = 0$	I_{EBO}			-0.5	μA
Collector-Emitter Saturation Voltage	$I_C / I_B = -500mA / -50mA$	$V_{CE(SAT)}$		- 0.15	- 0.5	V
DC Current Transfer Ratio	$V_{CE} = -3V, I_C = -0.1A$	h_{FE}	82		390	
Transition Frequency	$V_{CE} = -5V, I_C = -50mA, f = 100MHz$	f_T		150		MHz
Output Capacitance	$V_{CB} = -10V, f=1MHz$	C_{ob}		20	30	pF

Note : pulse test: pulse width $\leq 380\mu S$, duty cycle $\leq 2\%$

Classification Of h_{FE}

Rank	P	Q	R
Range	82 - 180	120 - 270	180 - 390

Electrical Characteristics Curve

Figure 1. Current Gain vs
Collector Current

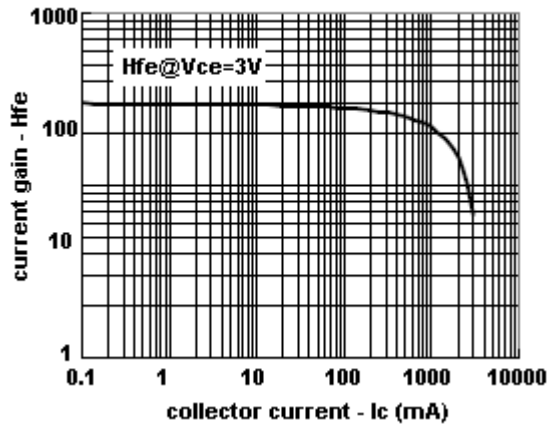


Figure 2. Saturation Voltage vs
Collector Current

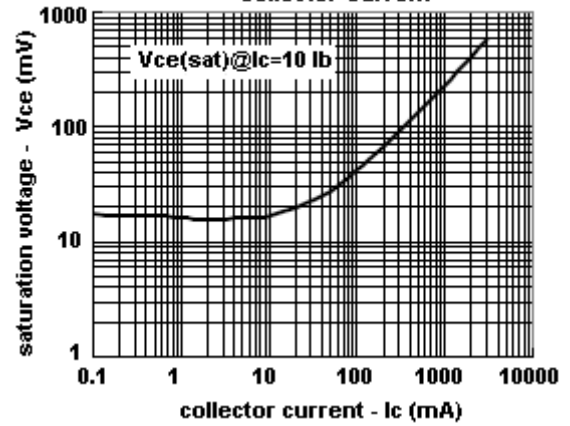


Figure 3. Saturation Voltage vs
Collector Current

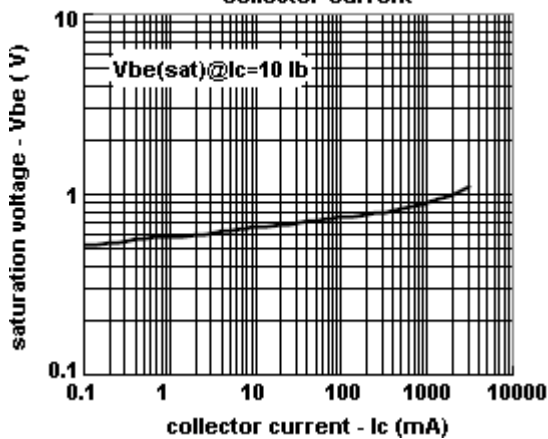
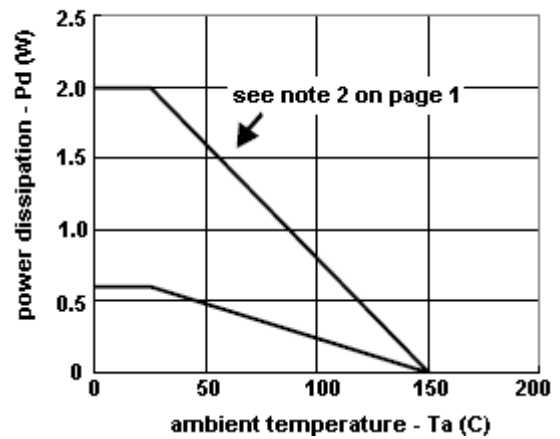
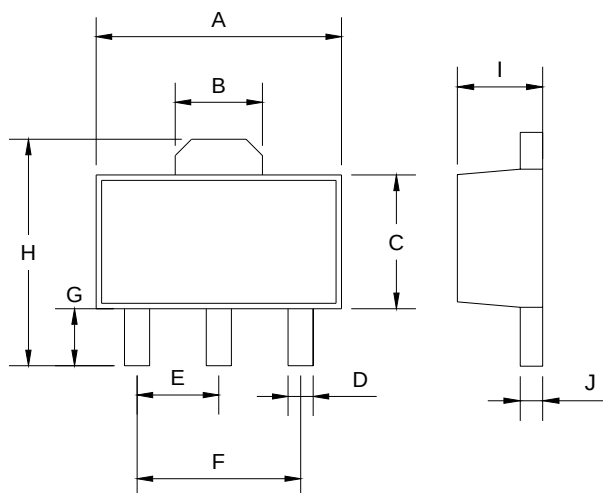


Figure 4. Power Derating Curves



SOT-89 Mechanical Drawing



SOT-89 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.40	4.60	0.173	0.181
B	1.50	1.7	0.059	0.070
C	2.30	2.60	0.090	0.102
D	0.40	0.52	0.016	0.020
E	1.50	1.50	0.059	0.059
F	3.00	3.00	0.118	0.118
G	0.89	1.20	0.035	0.047
H	4.05	4.25	0.159	0.167
I	1.4	1.6	0.055	0.068
J	0.35	0.44	0.014	0.017