

	TSB1132 Low Frequency PNP Transistor										
 SOT-89 Pin assignment: 1. Base 2. Collector 3. Emitter		$BV_{CEO} = -32V$ $I_C = -1A$ $V_{CE(SAT)} = -0.15V(typ.) @ I_C / I_B = -0.5A / -50mA$									
Features ✧ Low $V_{CE(SAT)}$. ✧ Excellent DC current gain characteristics		Ordering Information <table border="1"> <thead> <tr> <th>Part No.</th><th>Packing</th><th>Package</th><th>Marking</th></tr> </thead> <tbody> <tr> <td>TSB1132CY</td><td>Tape & Reel</td><td>SOT-89</td><td>BK</td></tr> </tbody> </table>		Part No.	Packing	Package	Marking	TSB1132CY	Tape & Reel	SOT-89	BK
Part No.	Packing	Package	Marking								
TSB1132CY	Tape & Reel	SOT-89	BK								
Structure ✧ Epitaxial planar type. ✧ PNP silicon transistor											

Absolute Maximum Rating ($T_a = 25^\circ C$ 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	$^\circ C$
Operating Junction and Storage Temperature Range		T_{STG}	- 55 to +150	$^\circ C$

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
 $T_a = 25^\circ C$ 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

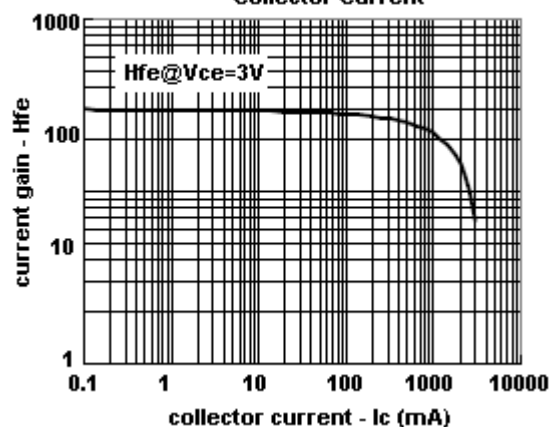


Figure 2. Saturation Voltage vs Collector Current

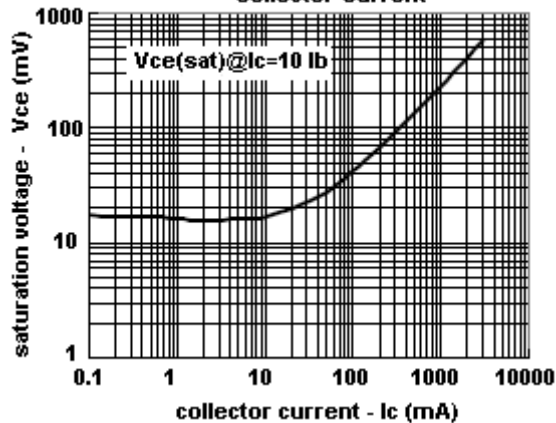


Figure 3. Saturation Voltage vs Collector Current

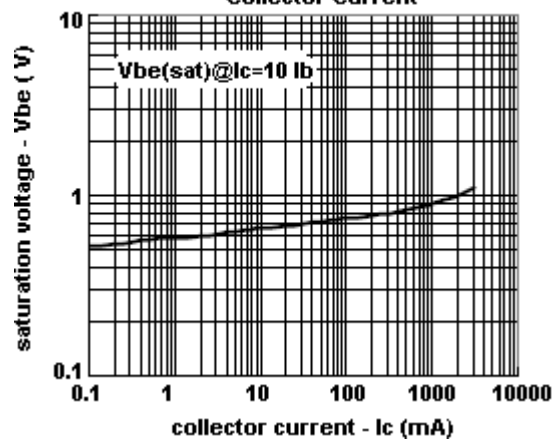
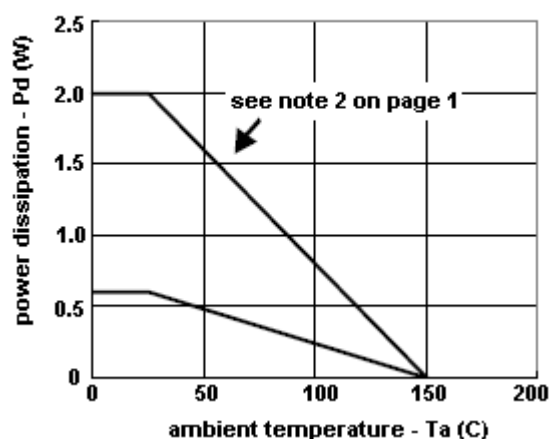
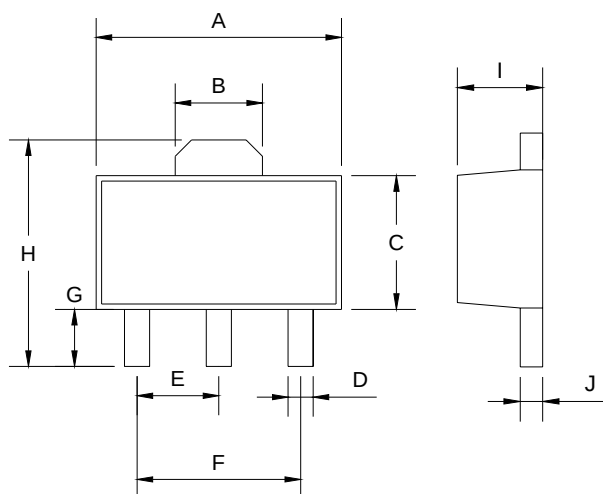


Figure 4. Power Derating Curves



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