

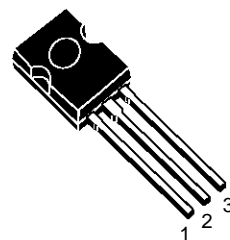
SILICON PNP POWER DARLINGTON TRANSISTORS

■ SGS-THOMSON PREFERRED SALESTYPE

DESCRIPTION

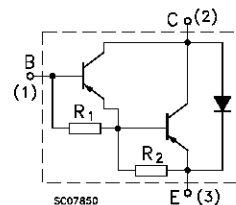
The BD336 is a silicon epitaxial-base PNP transistor in Darlington configuration mounted in SOT-82 plastic package.

They are intended for use in audio output stages, general amplifier and switching applications.



SOT-82

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage (I _E = 0)	-100	V
V _{CEO}	Collector-Emitter Voltage (I _B = 0)	-100	V
V _{EBO}	Emitter-Base Voltage (I _C = 0)	-5	V
I _C	Collector Current	-6	A
I _{CM}	Collector Peak Current (t _p < 10ms)	-10	A
I _B	Base Current	-0.15	A
P _{tot}	Total Dissipation at T _c ≤ 25 °C	60	W
T _{stg}	Storage Temperature	-65 to 150	°C
T _j	Max. Operating Junction Temperature	150	°C

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	2.08	°C/W
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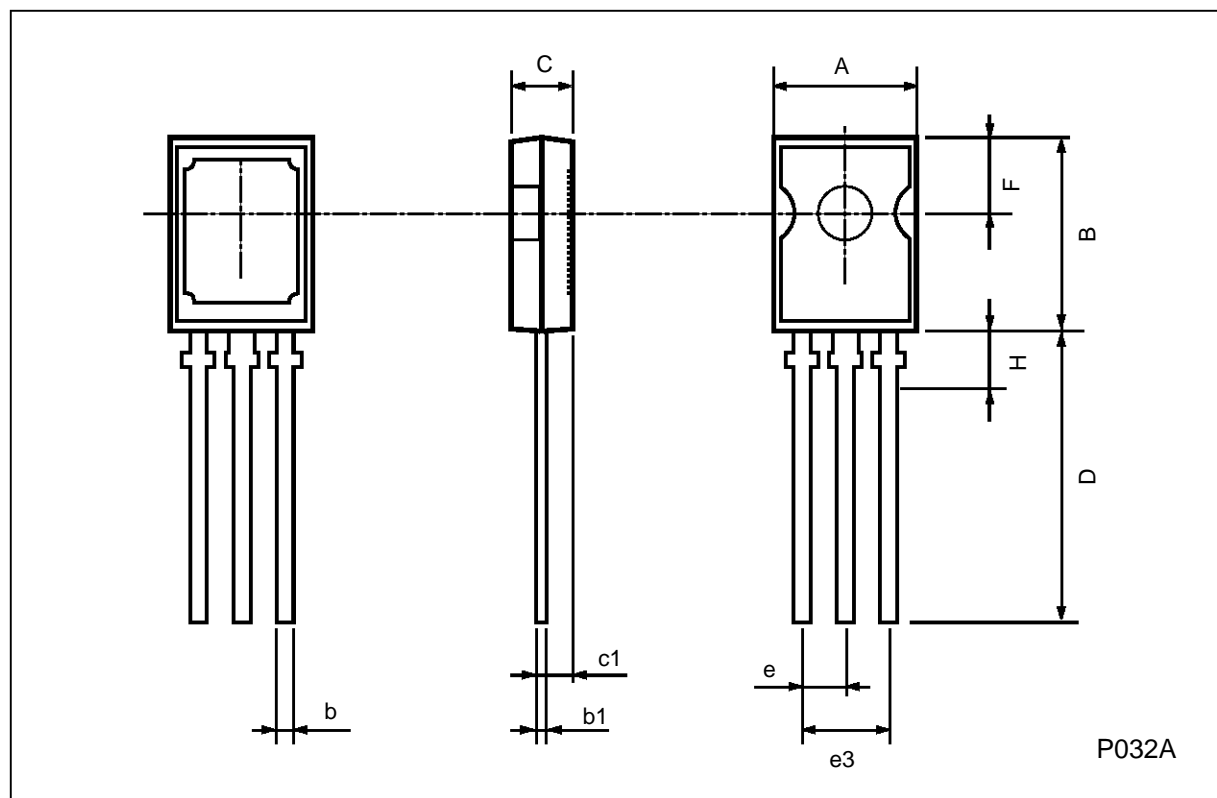
ELECTRICAL CHARACTERISTICS ($T_{case} = 25\text{ °C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current ($I_E = 0$)	$V_{CB} = -100\text{ V}$ $V_{CB} = -100\text{ V}$ $T_C = 150\text{ °C}$			-0.2 -2	mA mA
I_{CEO}	Collector Cut-off Current ($I_B = 0$)	$V_{CE} = -50\text{ V}$			-0.5	mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = -5\text{ V}$			-5	mA
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = -3\text{ A}$ $I_B = -12\text{ mA}$			-2	V
V_{BE}^*	Base-Emitter Voltage	$I_C = -3\text{ A}$ $V_{CE} = -3\text{ V}$			-2.5	V
h_{FE}^*	DC Current Gain	$I_C = -0.5\text{ A}$ $V_{CE} = -3\text{ V}$ $I_C = -3\text{ A}$ $V_{CE} = -3\text{ V}$ $I_C = -6\text{ A}$ $V_{CE} = -3\text{ V}$	750	2700 400		
V_F^*	Parallel Diode Forward Voltage	$I_F = -3\text{ A}$		-1.8		V
h_{fe}	Small Signal Current Gain	$I_C = -3\text{ A}$ $V_{CE} = -3\text{ V}$ $f = 1\text{ MHz}$		150		
t_{on}	Turn on Time	$I_C = -3\text{ A}$ $V_{CC} = -30\text{ V}$ $I_{B1} = -I_{B2} = -12\text{ mA}$		1	2	μs
t_{off}	Turn off Time			5	10	μs

* Pulsed: Pulse duration = 300 μs , duty cycle $\leq 1.5\%$

SOT-82 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	7.4		7.8	0.291		0.307
B	10.5		11.3	0.413		0.445
b	0.7		0.9	0.028		0.035
b1	0.49		0.75	0.019		0.030
C	2.4		2.7	0.04		0.106
c1		1.2			0.047	
D		15.7			0.618	
e		2.2			0.087	
e3		4.4			0.173	
F		3.8			0.150	
H			2.54		0.100	



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