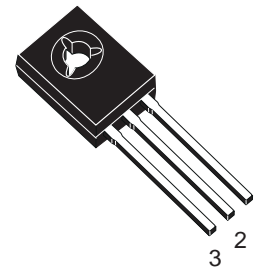


SILICON PNP TRANSISTOR

- STMicroelectronics PREFERRED SALESTYPE
- PNP TRANSISTOR

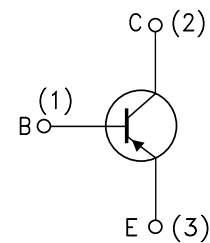
DESCRIPTION

The BD234 is a silicon Epitaxial-Base PNP power transistor in Jedec SOT-32 plastic package intended for use in medium power linear and switching applications.



SOT-32

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	-45	V
V_{CER}	Collector-Emitter Voltage ($R_{BE} = 1K\Omega$)	-45	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	-45	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	-5	V
I_C	Collector Current	-2	A
I_{CM}	Collector Peak Current ($t_p < 5ms$)	-6	A
P_{tot}	Total Dissipation at $T_c \leq 25^\circ C$	25	W
T_{stg}	Storage Temperature	-65 to 150	$^\circ C$
T_j	Max. Operating Junction Temperature	150	$^\circ C$

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	5	$^{\circ}C/W$
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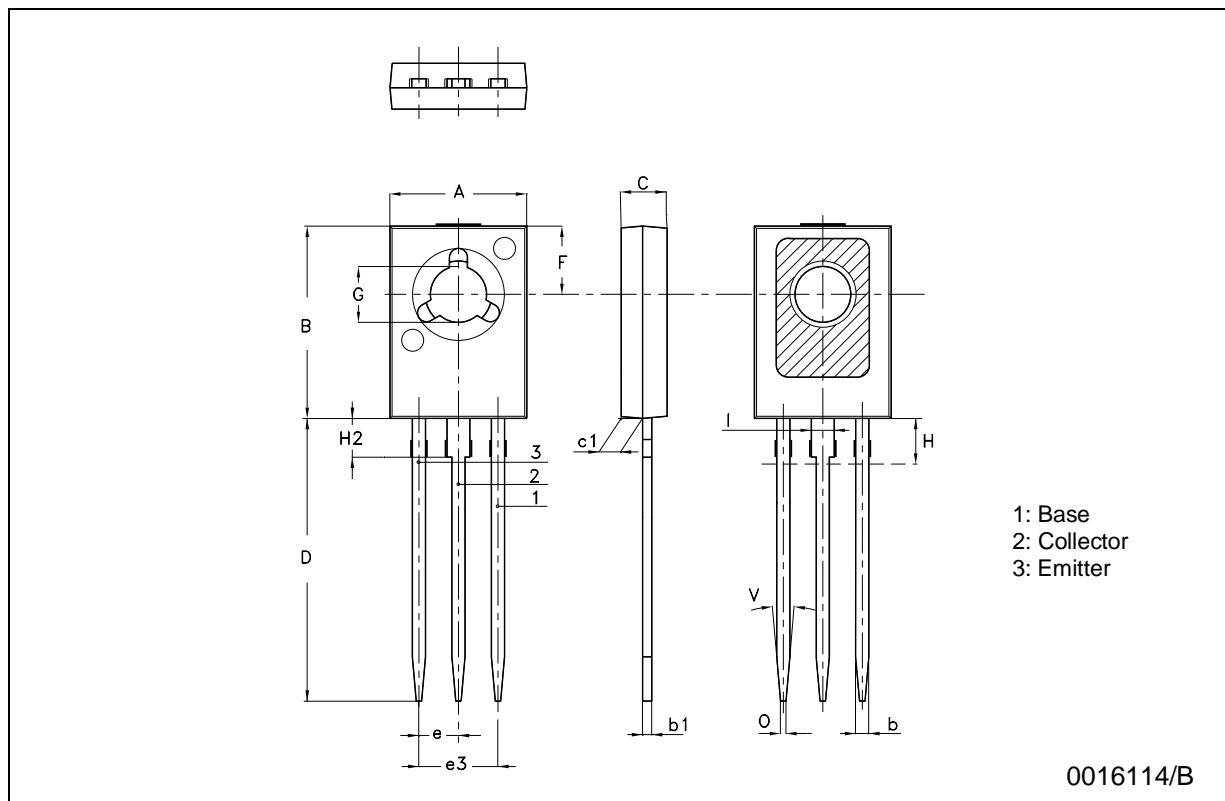
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current ($I_E = 0$)	$V_{CB} = -45 V$ $V_{CB} = -45 V$ $T_c = 150^{\circ}C$			-0.1 -2	mA mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = -5 V$			-1	mA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = -100 mA$	-45			V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = -1 A$ $I_B = -0.1 A$			-0.6	V
V_{BE}^*	Base-Emitter Voltage	$I_C = -1 A$ $V_{CE} = -2 V$			-1.3	V
h_{FE}^*	DC Current Gain	$I_C = -150 mA$ $V_{CE} = -2 V$ $I_C = -1 A$ $V_{CE} = -2 V$	40 25			
f_T	Transition frequency	$I_C = -250 mA$ $V_{CE} = -10 V$	3			MHz
h_{FE1}/h_{FE2}^*	Matched Pairs	$I_C = -150 mA$ $V_{CE} = -2 V$		1.6		

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

SOT-32 (TO-126) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	7.4		7.8	0.291		0.307
B	10.5		10.8	0.413		0.425
b	0.7		0.9	0.028		0.035
b1	0.40		0.65	0.015		0.025
C	2.4		2.7	0.094		0.106
c1	1.0		1.3	0.039		0.051
D	15.4		16.0	0.606		0.630
e		2.2			0.087	
e3		4.4			0.173	
F		3.8			0.150	
G	3		3.2	0.118		0.126
H			2.54			0.100
H2		2.15			0.084	
I		1.27			0.05	
O		0.3			0.011	
V		10°			10°	



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