SGS-THOMSON
MICROELECTRONICS

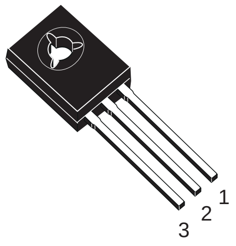
BD234

SILICON PNP TRANSISTOR

- SGS-THOMSON PREFERRED SALESTYPE
- PNP TRANSISTOR

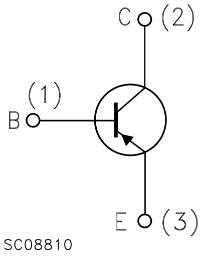
DESCRIPTION

The BD234 is a silicon epitaxial-base PNP power transistor in Jedec SOT-32 plastic package inteded 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} = 1KΩ)	-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	-6	A
P_{tot}	Total Dissipation at $T_c \leq 25$ °C	25	W
T_{stg}	Storage Temperature	-65 to 150	°C
T_j	Max. Operating Junction Temperature	150	°C

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	5	$^oC/W$

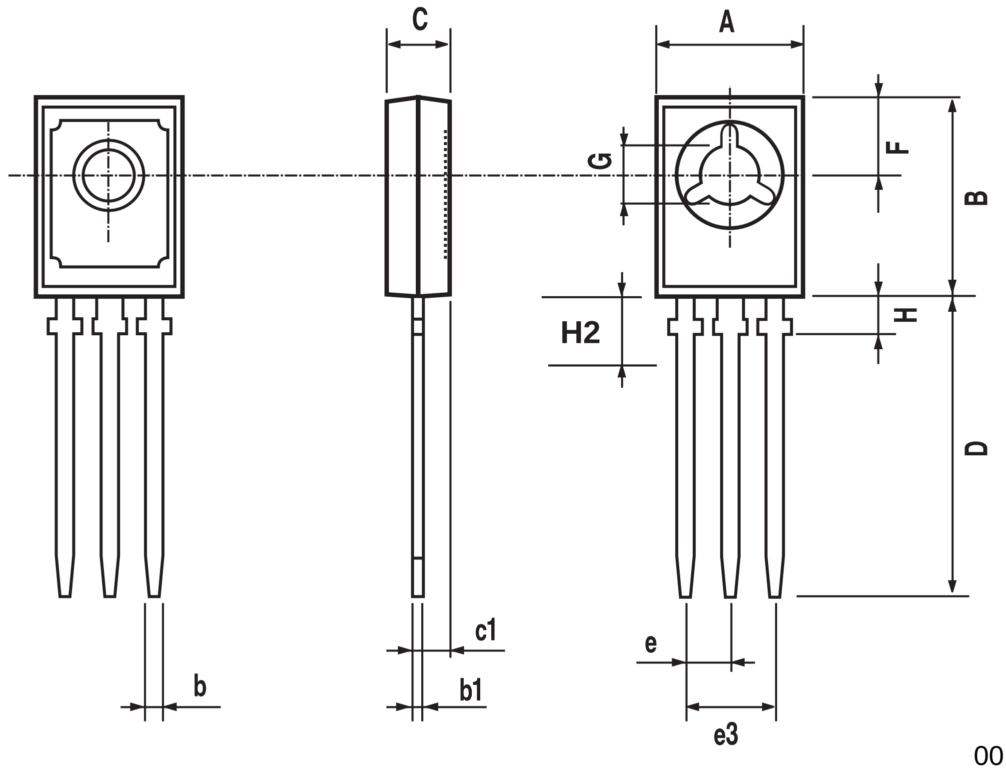
ELECTRICAL CHARACTERISTICS (T$_{case}$ = 25 ^{o}C unless otherwise specified)

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 ^{o}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_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		0.445
b	0.7		0.9	0.028		0.035
b1	0.49		0.75	0.019		0.030
C	2.4		2.7	0.040		0.106
c1	1.0		1.3	0.039		0.050
D	15.4		16.0	0.606		0.629
e		2.2			0.087	
e3	4.15		4.65	0.163		0.183
F		3.8			0.150	
G	3		3.2	0.118		0.126
H			2.54			0.100
H2		2.15			0.084	



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