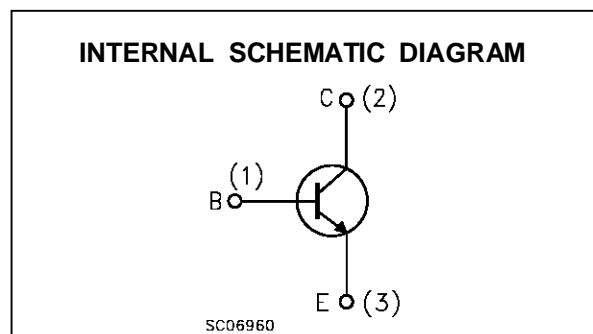
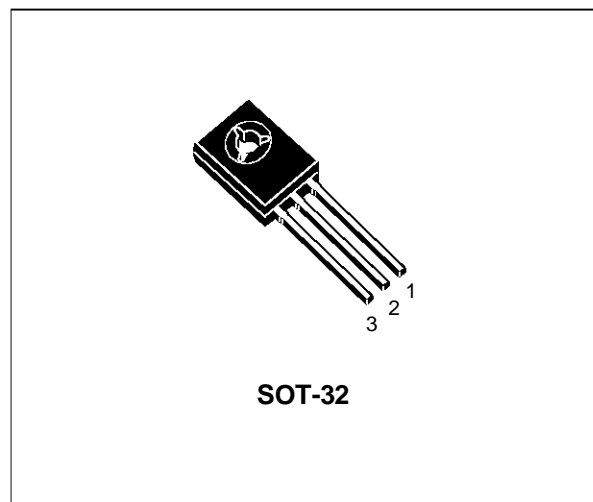


**NPN SILICON TRANSISTOR**

■ SGS-THOMSON PREFERRED SALESTYPE

**DESCRIPTION**

The BD179 is a silicon epitaxial planar NPN transistors in Jedec SOT-32 plastic package, designed for medium power linear and switching applications.



**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage ( $I_E = 0$ )	80	V
$V_{CEO}$	Collector-Emitter Voltage ( $I_B = 0$ )	80	V
$V_{EBO}$	Emitter-Base Voltage ( $I_C = 0$ )	5	V
$I_C$	Collector Current	3	A
$I_B$	Base Current	7	A
$P_{tot}$	Total Dissipation at $T_c \leq 25^\circ\text{C}$	30	W
$T_{stg}$	Storage Temperature	-65 to 150	$^\circ\text{C}$
$T_j$	Max. Operating Junction Temperature	150	$^\circ\text{C}$

## THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	4.16	$^{\circ}C/W$
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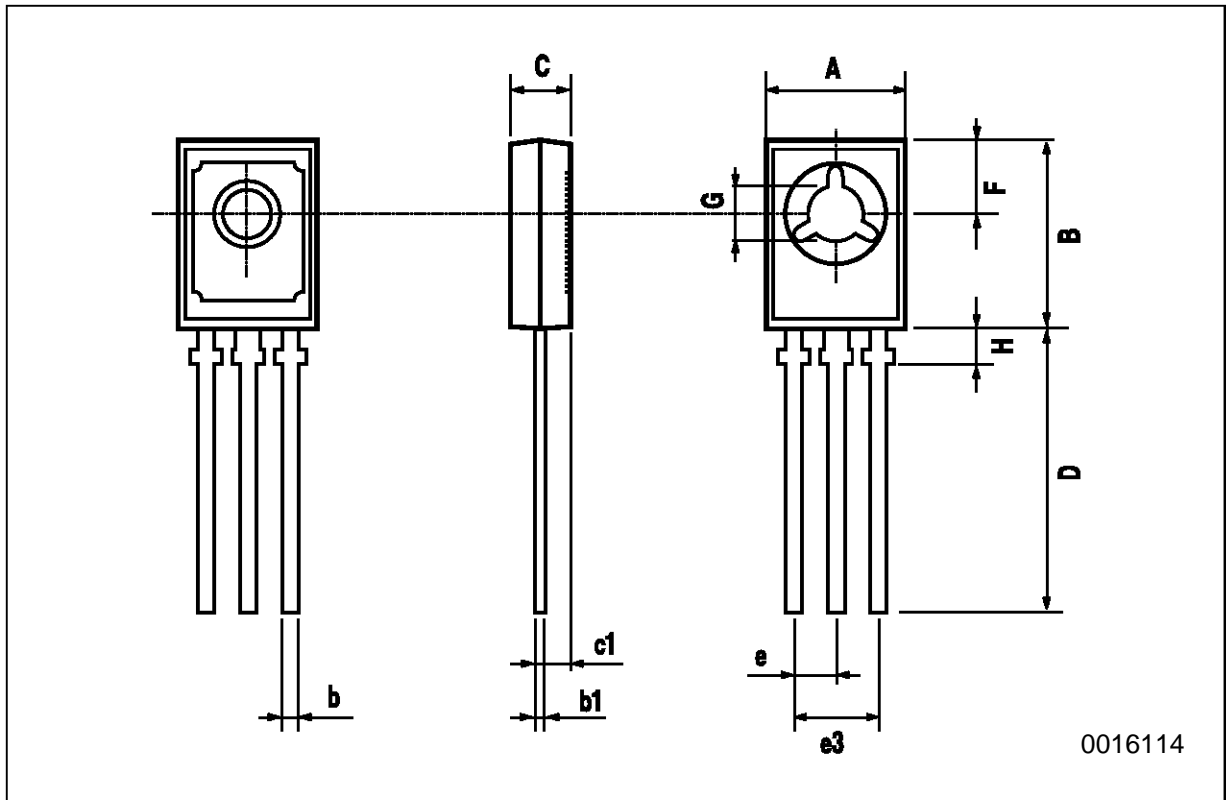
ELECTRICAL CHARACTERISTICS ( $T_{case} = 25^{\circ}C$  unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CBO}$	Collector Cut-off Current ( $I_E = 0$ )	$V_{CB} = 80 V$			100	$\mu A$
$I_{EBO}$	Emitter Cut-off Current ( $I_C = 0$ )	$V_{EB} = 5 V$			1	mA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage	$I_C = 100 mA$	80			V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = 1 A$ $I_B = 0.1 A$			0.8	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 15			
$h_{FE}$	$h_{FE}$ Groups	$I_C = 150 mA$ $V_{CE} = 2 V$ group 16	100		250	
$f_T$	Transition Frequency	$I_C = 250 mA$ $V_{CE} = 10 V$	3			MHz

\* Pulsed: Pulse duration = 300  $\mu s$ , duty cycle 1.5%

**SOT-32 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	0.04		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	
G	3		3.2	0.118		0.126
H			2.54			0.100



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