



**HESTORE.HU**

elektronikai alkatrész áruház

**EN:** This Datasheet is presented by the manufacturer.

Please visit our website for pricing and availability at [www.hestore.hu](http://www.hestore.hu).

**NPN SILICON TRANSISTOR**

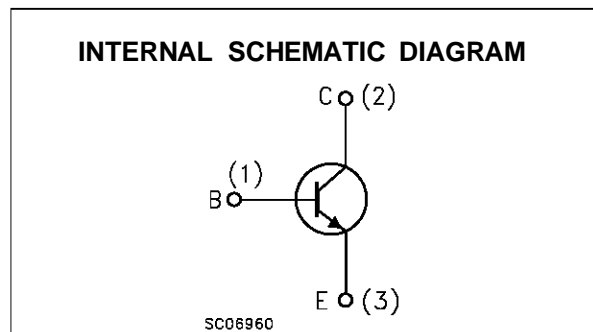
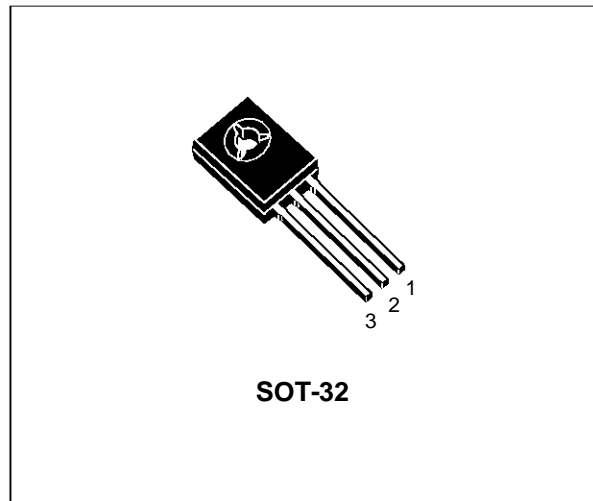
- SGS-THOMSON PREFERRED SALESTYPE
- NPN TRANSISTOR

**APPLICATION**

- GENERAL PURPOSE SWITCHING

**DESCRIPTION**

The BD179 is a silicon epitaxial planar NPN transistor 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**

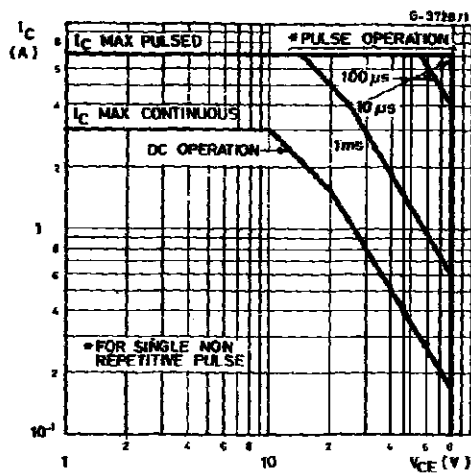
R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	4.16	°C/W
-----------------------	----------------------------------	-----	------	------

**ELECTRICAL CHARACTERISTICS** (T<sub>case</sub> = 25 °C unless otherwise specified)

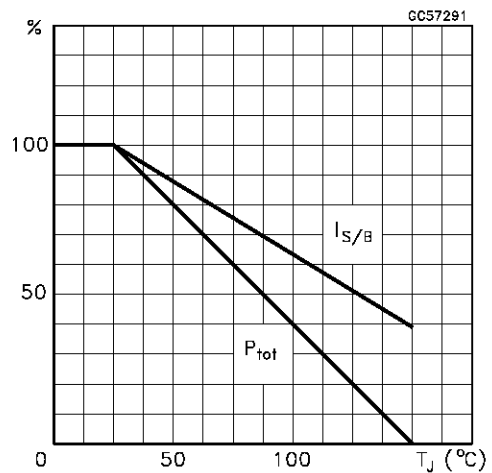
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CBO</sub>	Collector Cut-off Current (I <sub>E</sub> = 0)	V <sub>CB</sub> = 80 V			100	μA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	V <sub>EB</sub> = 5 V			1	mA
V <sub>CEO(sus)*</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 100 mA	80			V
V <sub>CE(sat)*</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 1 A I <sub>B</sub> = 0.1 A			0.8	V
V <sub>BE*</sub>	Base-Emitter Voltage	I <sub>C</sub> = 1 A V <sub>CE</sub> = 2 V			1.3	V
h <sub>FE*</sub>	DC Current Gain	I <sub>C</sub> = 150 mA V <sub>CE</sub> = 2 V I <sub>C</sub> = 1 A V <sub>CE</sub> = 2 V	40 15			
h <sub>FE</sub>	h <sub>FE</sub> Groups	I <sub>C</sub> = 150 mA V <sub>CE</sub> = 2 V group 16	100		250	
f <sub>T</sub>	Transition Frequency	I <sub>C</sub> = 250 mA V <sub>CE</sub> = 10 V	3			MHz

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

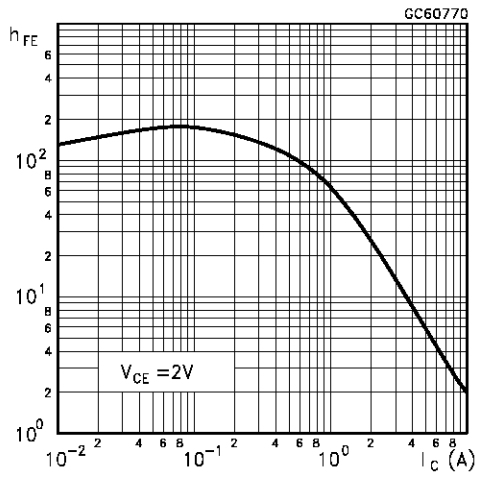
Safe Operating Area



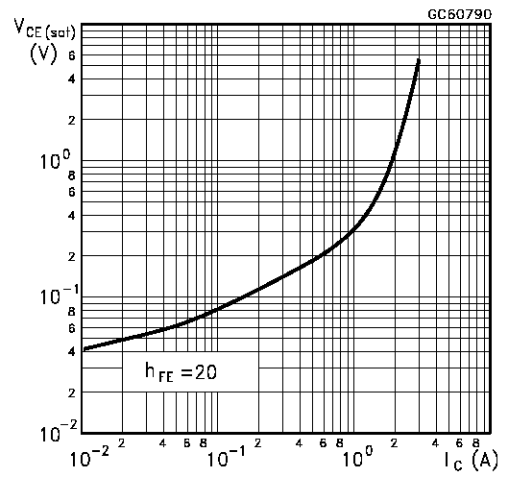
Derating Curves



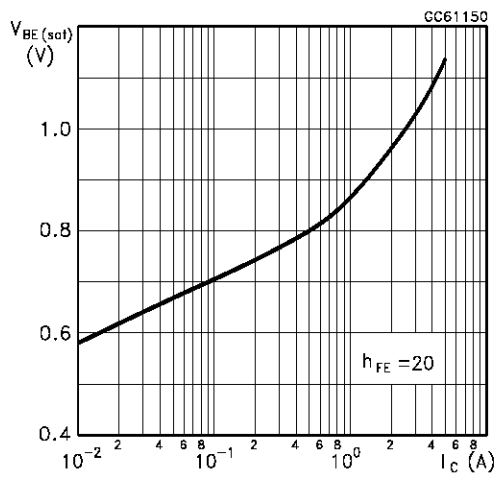
DC Current Gain



Collector-Emitter Saturation Voltage

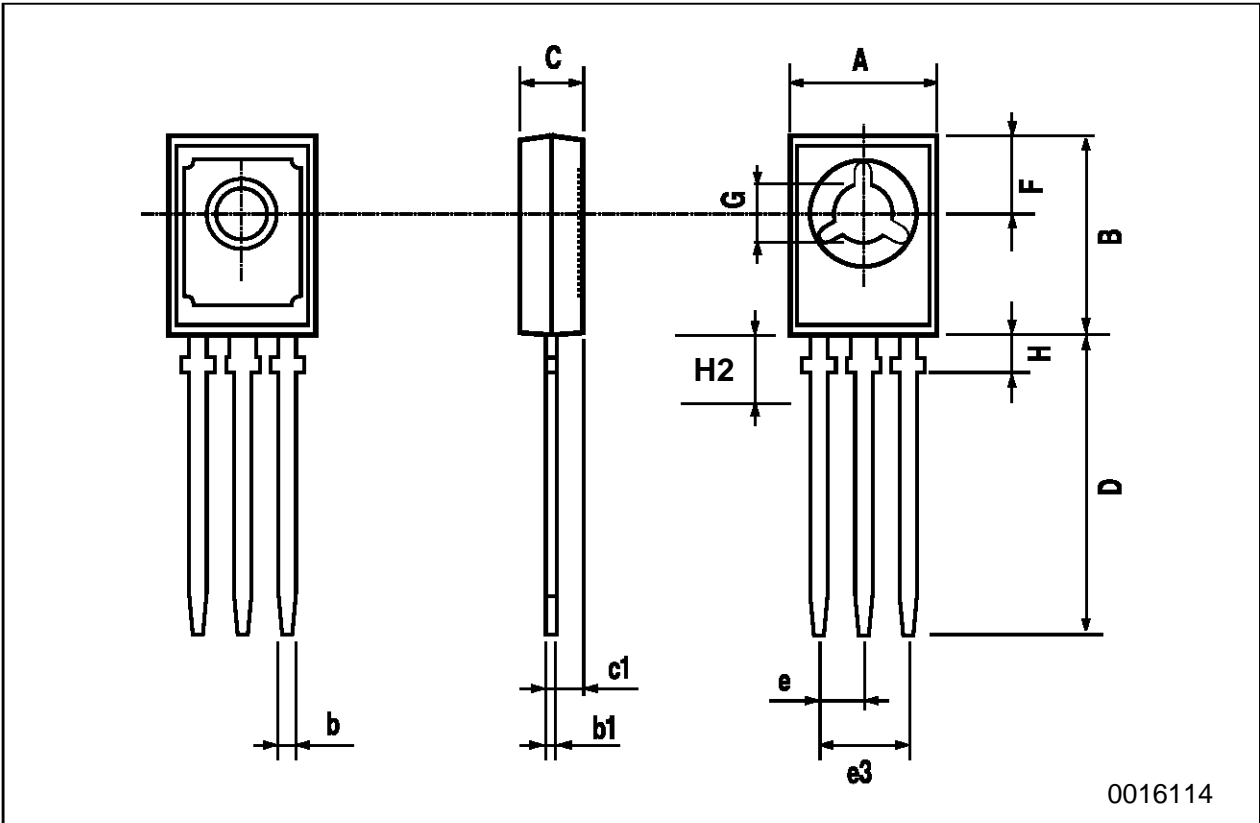


Base-Emitter Saturation Voltage



**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	



Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1997 SGS-THOMSON Microelectronics - Printed in Italy - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES  
Australia - Brazil - Canada - China - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands -  
Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A  
...