



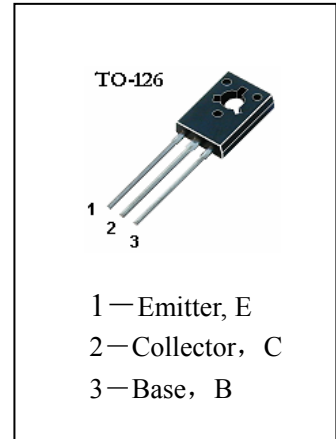
# HSBD136

## APPLICATIONS

Medium Power Linear switching Applications

### ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)

T <sub>stg</sub>	Storage Temperature	.....	-55~150°C
T <sub>j</sub>	Junction Temperature	.....	150°C
P <sub>C</sub>	Collector Dissipation (T <sub>c</sub> =25°C)	.....	12.5W
P <sub>C</sub>	Collector Dissipation (T <sub>A</sub> =25°C)	.....	1.25W
V <sub>CBO</sub>	Collector-Base Voltage	.....	-45V
V <sub>CEO</sub>	Collector-Emitter Voltage	.....	-45V
V <sub>EBO</sub>	Emitter-Base Voltage	.....	-5V
I <sub>C</sub>	Collector Current (Pulse)	.....	-3A
I <sub>C</sub>	Collector Current (DC)	.....	-1.5A
I <sub>B</sub>	Base Current	.....	-0.5A



### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
I <sub>CBO</sub>	Collector Cut-off Current			-0.1	μ A	V <sub>CB</sub> =-30V, I <sub>E</sub> =0
I <sub>EBO</sub>	Emitter-Base Cut-off Current			-10	μ A	V <sub>EB</sub> =-5V, I <sub>C</sub> =0
h <sub>FE(1)</sub>	DC Current Gain	25				V <sub>CE</sub> =-2V, I <sub>C</sub> =-5mA
h <sub>FE(2)</sub>		25				V <sub>CE</sub> =-2V, I <sub>C</sub> =-0.5A
*h <sub>FE(3)</sub>		40		250		V <sub>CE</sub> =-2V, I <sub>C</sub> =-150mA
*V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage			-0.5	V	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA
*V <sub>BE(ON)</sub>	Base-Emitter On Voltage			-1.0	V	I <sub>C</sub> =-0.5A, V <sub>CE</sub> =-2V
*V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	-45				I <sub>C</sub> =-30mA, I <sub>B</sub> =0

\*Pulse Test: PW=350 μ s, Duty Cycle=2% Pulsed

### h<sub>FE(3)</sub> Classification

Classification	6	10	16
h <sub>FE(3)</sub>	40~100	63~160	100~250