



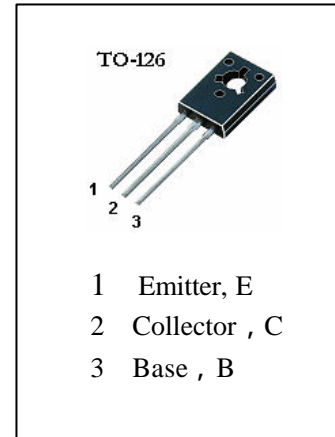
# HSBD377

## APPLICATIONS

Medium Power Linear switching Applications

### ABSOLUTE MAXIMUM RATINGS ( $T_a=25$ )

$T_{stg}$ —Storage Temperature.....	-55~150
$T_j$ —Junction Temperature.....	150
$P_C$ —Collector Dissipation ( $T_c=25$ ) .....	25W
$V_{CBO}$ —Collector-Base Voltage.....	75V
$V_{CEO}$ —Collector-Emitter Voltage.....	60V
$V_{EBO}$ —Emitter-Base Voltage.....	5V
$I_C$ —Collector Current( Pulse ) .....	3A
$I_C$ —Collector Current( DC ).....	2A
$I_b$ —Base Current.....	1A



### ELECTRICAL CHARACTERISTICS ( $T_a=25$ )

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
ICBO	Collector Cut-off Current			2	$\mu A$	$V_{CB}=60V, I_E=0$
IEBO	Emitter Cut-off Current			100	$\mu A$	$V_{EB}=5V, I_C=0$
* $H_{FE}(1)$	DC Current Gain	40		375		$V_{CE}=2V, I_C=150mA$
* $H_{FE}(2)$	DC Current Gain	20				$V_{CE}=2V, I_C=1A$
* $V_{CE(sat)}$	Collector- Emitter Saturation Voltage			1	V	$I_C=1A, I_B=0.1A$
* $V_{BE(on)}$	Base-Emitter On Voltage			1.5	V	$V_{CE}=2V, I_C=1A$
$V_{CEO(sus)}$	Collector-Emitter Sustaining Voltage	60			V	$I_C=100mA, I_B=0$
BVCBO	Collector-Base Breakdown Voltage	75			V	$I_C=100\mu A, I_E=0$
tON	Turn-On Time		50		nS	} $V_{CC}=30V, I_C=0.5A$ $I_{B1}=-I_{B2}=0.05A$
tOFF	Turn-Off Time		500		nS	

\* Pulse Test:  $PW=350\mu S$ , Duty Cycle=2% Pulsed

### $h_{FE(3)}$ Classification

Cassification	6	10	16	25
$h_{FE(3)}$	40~100	63~160	100~250	150~375