



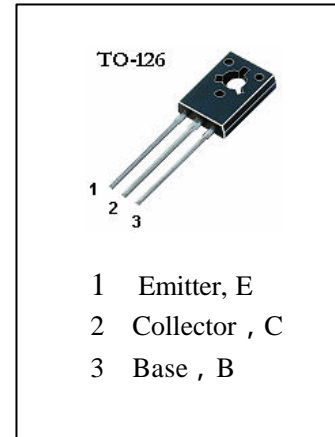
HSBD375

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.....	50V
V_{CEO} —Collector-Emitter Voltage.....	45V
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	μA	$V_{CB}=45V, I_E=0$
IEBO	Emitter Cut-off Current			100	μA	$V_{EB}=5V, I_C=0$
* $H_{FE}(1)$	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	45			V	$I_C=100mA, I_B=0$
BVCBO	Collector-Base Breakdown Voltage	50			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

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