



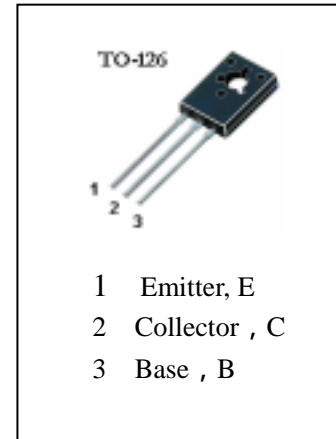
HSBD238

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..... 100V
- V_{CEO} —Collector-Emitter Voltage..... -80V
- V_{CER} —Collector-Emitter Voltage..... -100V
- V_{EBO} —Emitter-Base Voltage..... -5V
- I_C —Collector Current(Pulse)..... -6A
- I_C —Collector Current (DC) -2A



ELECTRICAL CHARACTERISTICS ($T_a=25$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
I_{CBO}	Collector Cut-off Current			-100	μA	$V_{CB}=-100V, I_E=0$
I_{EBO}	Emitter-Base Cut-off Current			-1	mA	$V_{EB}=-5V, I_C=0$
$h_{FE(1)}$	DC Current Gain	40				$V_{CE}=-2V, I_C=-150mA$
* $h_{FE(2)}$		25				$V_{CE}=-2V, I_C=-1A$
* $V_{CE(sat)}$	Collector-Emitter Saturation Voltage			-0.6	V	$I_C=-1A, I_B=-0.1A$
* $V_{BE(ON)}$	Base-Emitter On Voltage			-1.3	V	$I_C=-1A, V_{CE}=-2V$
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	-80				$I_C=-100mA, I_B=0$
fT	Current Gain-Bandwidth Product	3			MHZ	$I_C=-250mA, V_{CE}=-10V$

* Pulse Test: PW=350 μS , Duty Cycle 1.5% Pulsed



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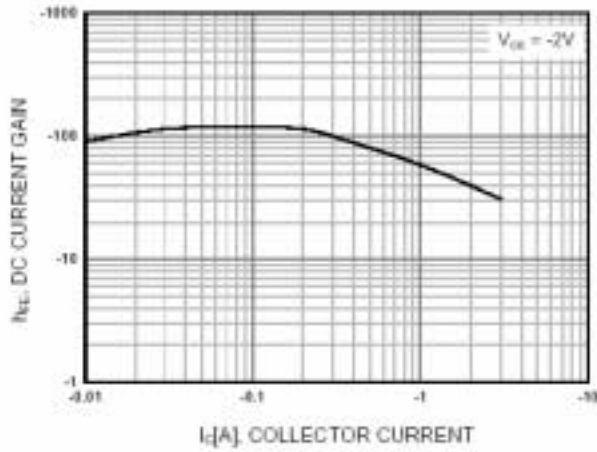


Figure 1. DC current Gain

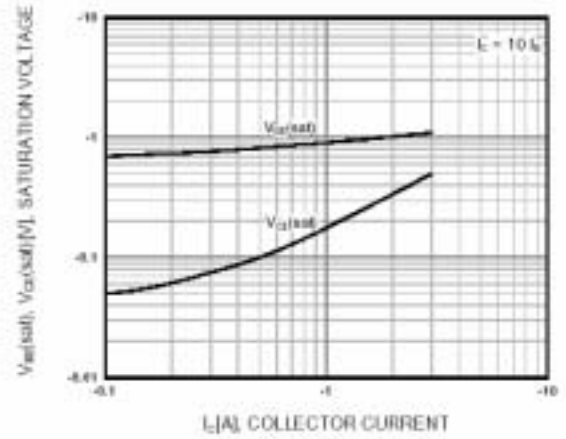


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

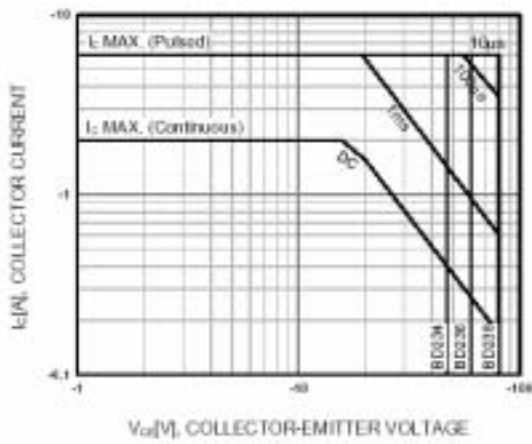


Figure 3. Safe Operating Area

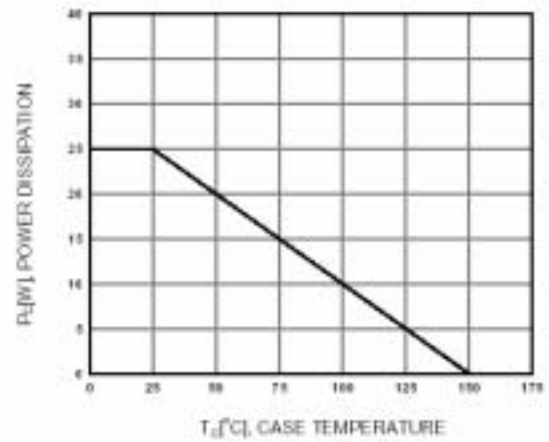


Figure 4. Power Derating