

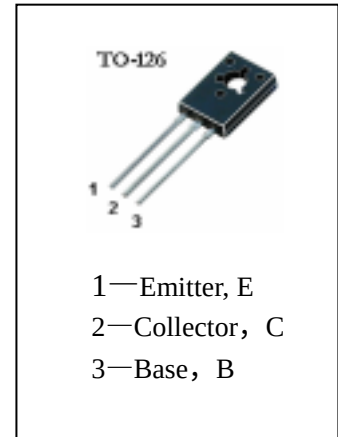


APPLICATIONS

Medium Power Linear switching Applications

ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$)

T_{stg} —Storage Temperature	-55~150°C
T_j —Junction Temperature	150°C
P_C —Collector Dissipation ($T_c=25^{\circ}\text{C}$)	12.5W
P_C —Collector Dissipation ($T_A=25^{\circ}\text{C}$)	1.25W
V_{CBO} —Collector-Base Voltage	-80V
V_{CEO} —Collector-Emitter Voltage	-80V
V_{EBO} —Emitter-Base Voltage	-5V
I_C —Collector Current (Pulse)	-3A
I_C —Collector Current (DC)	-1.5A
I_B —Base Current	-0.5A



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
I_{CBO}	Collector Cut-off Current			-0.1	μA	$V_{\text{CB}}=-30\text{V}$, $I_E=0$
I_{EBO}	Emitter-Base Cut-off Current			-10	μA	$V_{\text{EB}}=-5\text{V}$, $I_C=0$
$*h_{\text{FE}(1)}$	DC Current Gain	25				$V_{\text{CE}}=-2\text{V}$, $I_C=-5\text{mA}$
$*h_{\text{FE}(2)}$		25				$V_{\text{CE}}=-2\text{V}$, $I_C=-0.5\text{A}$
$*h_{\text{FE}(3)}$		40		250		$V_{\text{CE}}=-2\text{V}$, $I_C=-150\text{mA}$
$*V_{\text{CE(sat)}}$	Collector-Emitter Saturation Voltage			-0.5	V	$I_C=-500\text{mA}$, $I_B=-50\text{mA}$
$*V_{\text{BE(ON)}}$	Base-Emitter On Voltage			-1.0	V	$I_C=-0.5\text{A}$, $V_{\text{CE}}=-2\text{V}$
$*V_{\text{CEO(SUS)}}$	Collector-Emitter Sustaining Voltage	-80				$I_C=-30\text{mA}$, $I_B=0$

*Pulse Test: $PW=350\text{ }\mu\text{s}$, Duty Cycie=2% Pulsed

$h_{\text{FE}(3)}$ Classification

Cassification	6	10	16
$h_{\text{FE}(3)}$	40~100	63~160	100~250

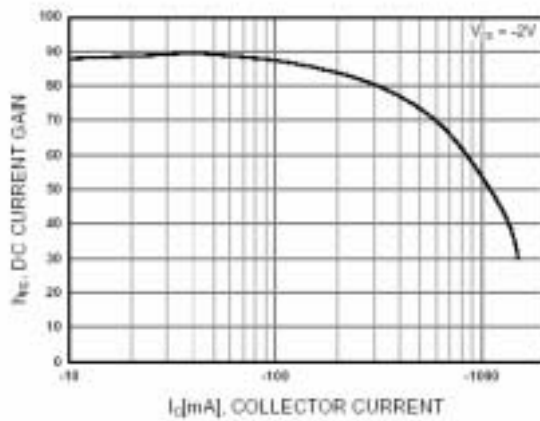


Figure 1. DC current Gain

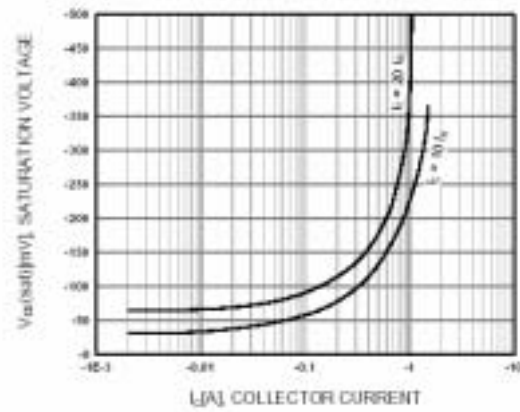


Figure 2. Collector-Emitter Saturation Voltage

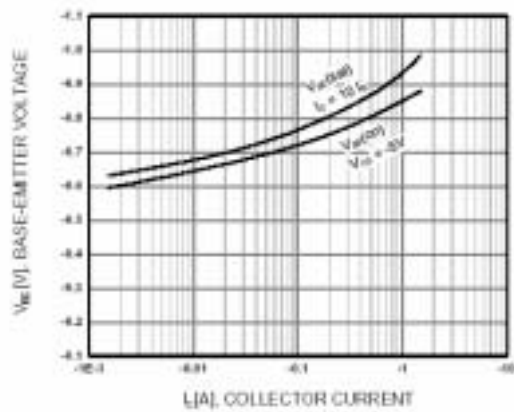


Figure 3. Base-Emitter Voltage

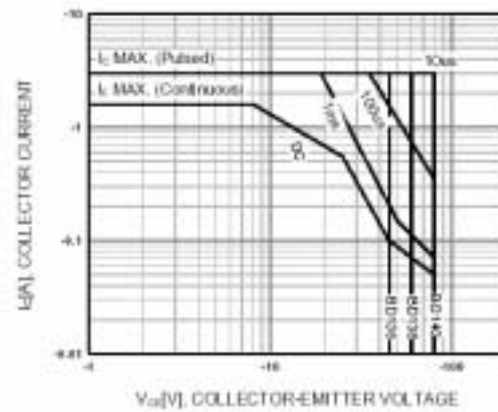


Figure 4. Safe Operating Area

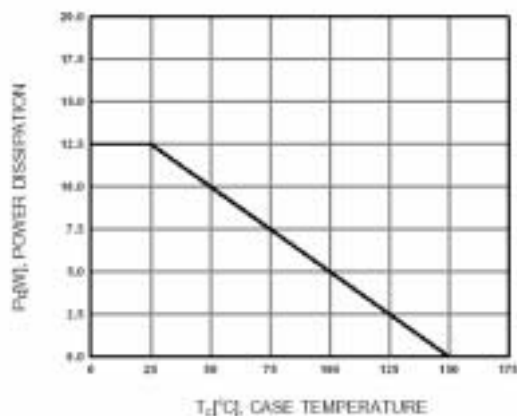


Figure 5. Power Derating