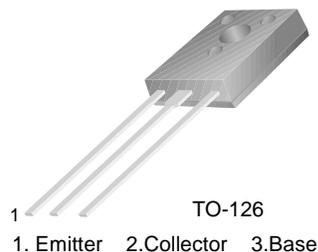


## BD157/158/159

### Low Power Fast Switching Output Stages

- For T.V Radio Audio Output Amplifiers



### NPN Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	: BD157	275
		: BD158	325
		: BD159	375
$V_{CEO}$	Collector-Emitter Voltage	: BD157	250
		: BD158	300
		: BD159	350
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current (DC)	0.5	A
$I_{CP}$	*Collector Current (Pulse)	1.0	A
$I_B$	Base Current	0.25	A
$P_C$	Collector Dissipation ( $T_C=25^\circ\text{C}$ )	20	W
$T_J$	Junction Temperature	50	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	- 65 ~ 150	$^\circ\text{C}$

#### Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CEO}$	*Collector-Emitter Breakdown Voltage : BD157 : BD158 : BD159	$I_C = 1\text{mA}, I_B = 0$	250			V
			300			V
			350			V
$I_{CBO}$	Collector Cut-off Current : BD157 : BD158 : BD159	$V_{CB} = 275\text{V}, I_E = 0$			100	$\mu\text{A}$
		$V_{CB} = 325\text{V}, I_E = 0$			100	$\mu\text{A}$
		$V_{CB} = 375\text{V}, I_E = 0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$			100	$\mu\text{A}$
$h_{FE}$	* DC Current Gain	$V_{CE} = 10\text{V}, I_C = 50\text{mA}$	30		240	

\* Pulse Test: PW=300 $\mu\text{s}$ , duty Cycle=1.5% Pulsed

# Typical Characteristics

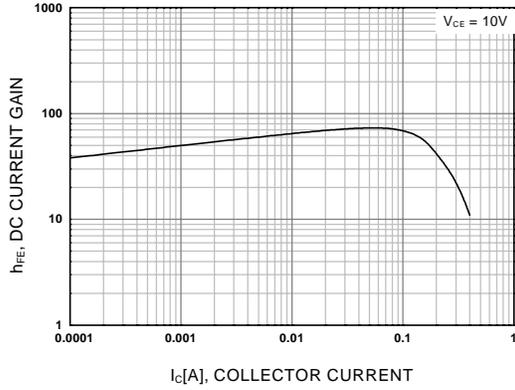


Figure 1. DC current Gain

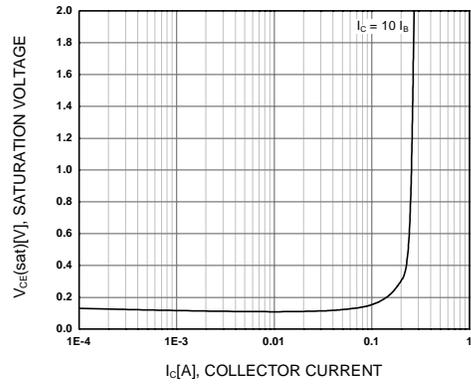


Figure 2. Collector-Emitter Saturation Voltage

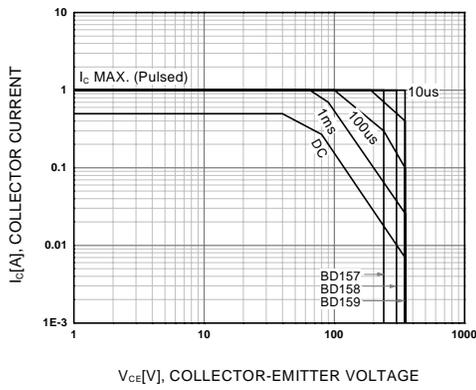


Figure 3. Safe Operating Area

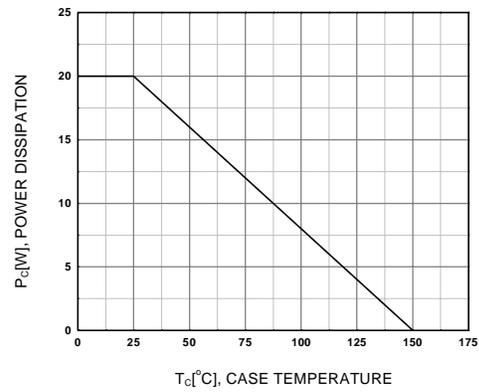
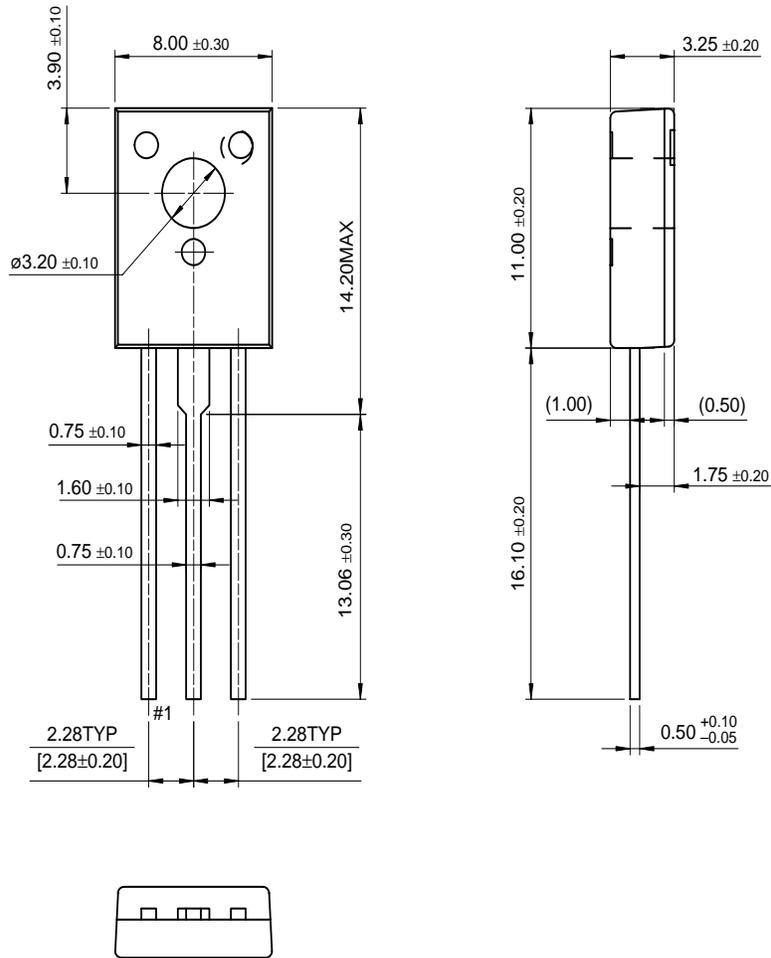


Figure 4. Power Derating

# Package Dimensions

## TO-126

BD157/158/159



Dimensions in Millimeters

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CROSSVOLT™	POP™	UHC™
E <sup>2</sup> CMOS™	PowerTrench®	VCX™
FACT™	QFET™	
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