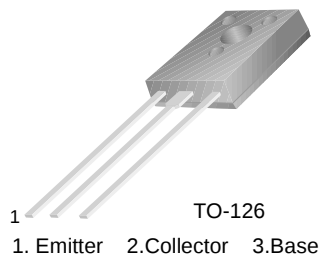


BD157/158/159

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	V
	: BD158	325	V
	: BD159	375	V
V_{CEO}	Collector-Emitter Voltage : BD157	250	V
	: BD158	300	V
	: BD159	350	V
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	$I_C = 1\text{mA}, I_B = 0$	250 300 350			V V V
	: BD157					
	: BD158					
	: BD159					
I_{CBO}	Collector Cut-off Current	$V_{CB} = 275\text{V}, I_E = 0$ $V_{CB} = 325\text{V}, I_E = 0$ $V_{CB} = 375\text{V}, I_E = 0$			100 100 100	μA μA μA
	: BD157					
	: BD158					
	: BD159					
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$			100	μA
h_{FE}	* DC Current Gain	$V_{CE} = 10\text{V}, I_C = 50\text{mA}$	30		240	

* Pulse Test: PW=300 μs , duty Cycle=1.5% Pulsed

Typical Characteristics

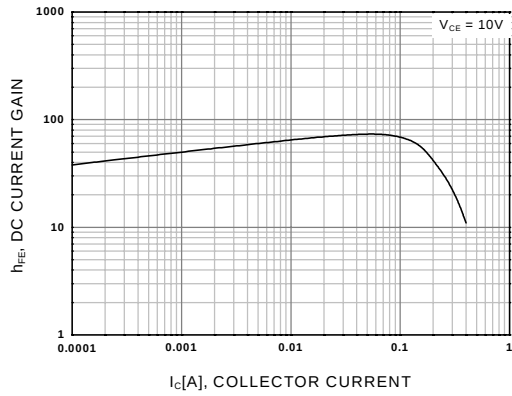


Figure 1. DC current Gain

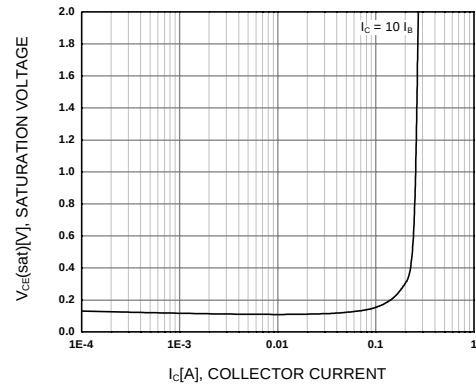


Figure 2. Collector-Emitter Saturation Voltage

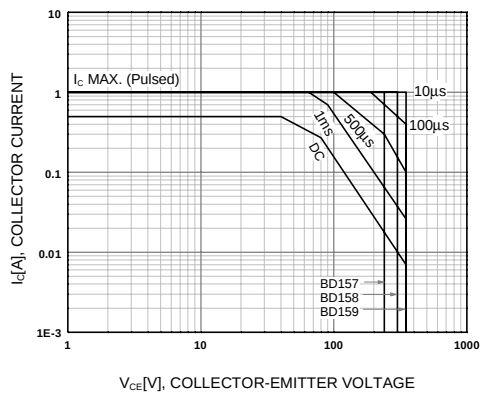


Figure 3. Safe Operating Area

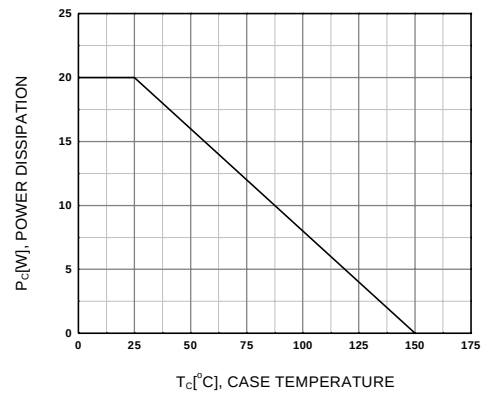


Figure 4. Power Derating

BD157/158/159

Technical drawing of a mechanical part, showing front, side, and top views with dimensions.

Front View (Left):

- Overall width: 8.00 ± 0.30
- Overall height: 14.20 MAX
- Top flange thickness: 3.90 ± 0.10
- Central hole diameter: $\varnothing 3.20 \pm 0.10$
- Bottom flange thickness: 13.06 ± 0.30
- Internal features (from top to bottom):
 - Slot width: 0.75 ± 0.10
 - Slot width: 1.60 ± 0.10
 - Slot width: 0.75 ± 0.10
- Bottom flange width: 2.28 TYP [2.28 ± 0.20]
- Bottom flange width: 2.28 TYP [2.28 ± 0.20]
- Feature #1 is indicated at the bottom center.

Side View (Right):

- Overall height: 16.10 ± 0.20
- Top flange width: 3.25 ± 0.20
- Internal features (from top to bottom):
 - Slot width: (1.00)
 - Slot width: (0.50)
 - Slot width: 1.75 ± 0.20
- Bottom flange width: $0.50^{+0.10}_{-0.05}$

Top View (Bottom):

- Shows the top surface of the part with three rectangular features.

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