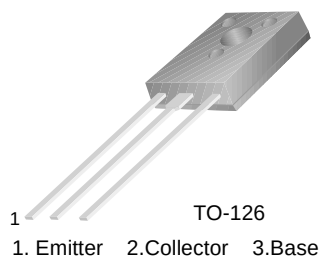


BD157/158/159

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

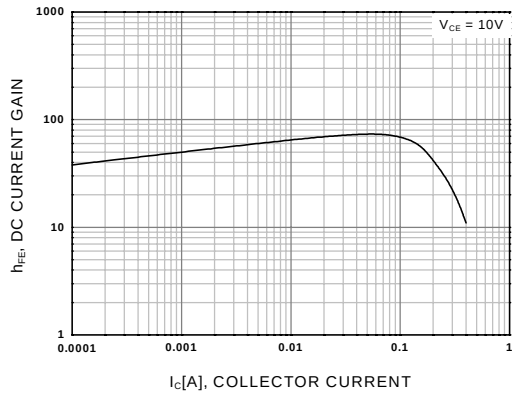


Figure 1. DC current Gain

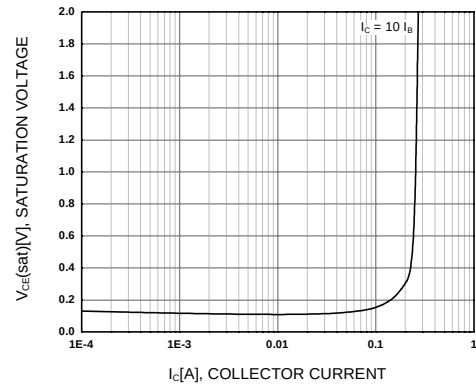


Figure 2. Collector-Emitter Saturation Voltage

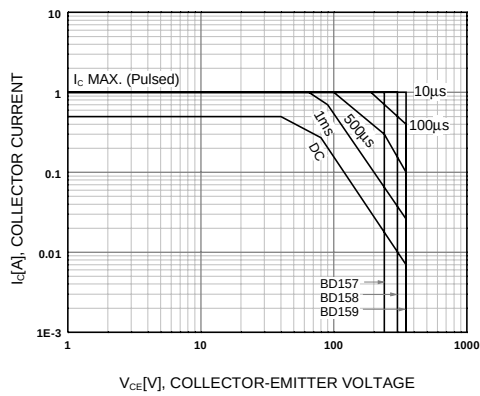


Figure 3. Safe Operating Area

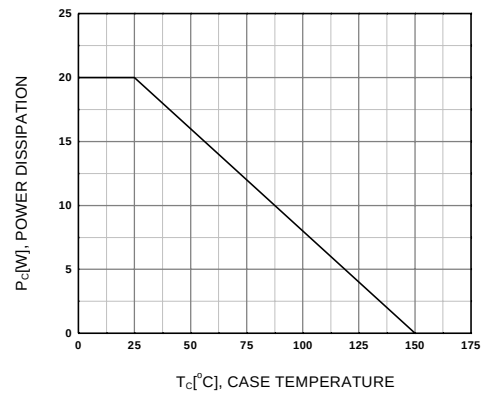
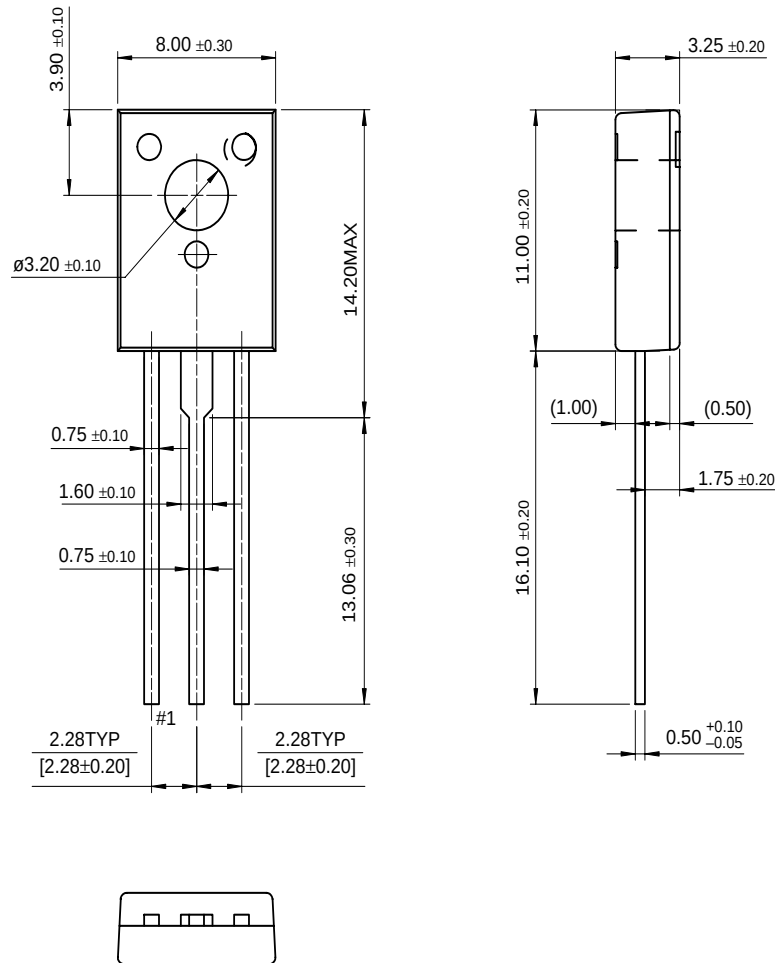


Figure 4. Power Derating

Package Dimensions

TO-126



Dimensions in Millimeters

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EcoSPARK™	ISOPLANAR™	QS™	TruTranslation™
E ² CMOS™	LittleFET™	QT Optoelectronics™	TinyLogic™
EnSigna™	MicroFET™	Quiet Series™	UHC™
FACT™	MICROWIRE™	SLIENT SWITCHER®	UltraFET®
FACT Quiet Series™	OPTOLOGIC™	SMART START™	VCX™

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