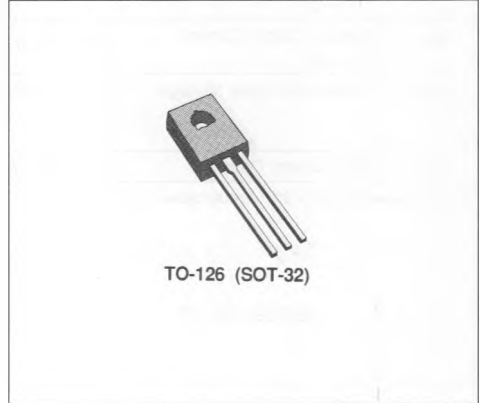


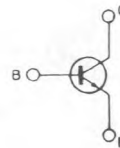
LOW POWER FAST SWITCHING

DESCRIPTION

The BD157, BD158 and BD159 are silicon epitaxial planar NPN transistors in TO-126 plastic package, intended for applications in low power linear and switching.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value			Unit
		BD157	BD158	BD159	
V_{CBO}	Collector-base Voltage ($I_E = 0$)	275	325	375	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	250	300	350	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	5			V
I_C	Collector Current	0.5			A
I_{CM}	Collector Peak Current	1			A
I_B	Base Current	0.25			A
P_{Tot}	Total Power Dissipation at $T_{case} < 25\text{ }^\circ\text{C}$	20			W
T_{stg}	Storage Temperature	- 65 to 150			$^\circ\text{C}$
T_j	Junction Temperature	150			$^\circ\text{C}$

THERMAL DATA

$R_{th(j-case)}$	Thermal Resistance Junction-case	Max	6.25	°C/W
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25\text{ °C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	$V_{CB} = \text{rated } V_{CBO}$			100	μA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 5\text{ V}$			100	μA
V_{CE0}^*	Collector-emitter Voltage	$I_C = 1\text{ mA}$ for BD157 for BD158 for BD159	250 300 350			V V V
h_{FE}^*	DC Current Gain	$I_C = 50\text{ mA}$ $V_{CE} = 10\text{ V}$	30		240	

* Pulsed : pulse duration = 300 μs , duty cycle = 1.5 %.