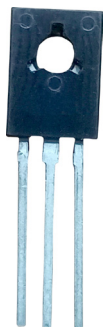


Single Bipolar Transistor multicomp^{PRO}



RoHS
Compliant

Absolute Maximum Ratings

Description	Symbol	BD131	BD132	Unit
Collector Base Voltage	V_{CBO}	70	45	V
Collector Emitter Voltage	V_{CEO}	45	45	
Emitter Base Voltage	V_{EBO}	6	4	
Collector Current Continuous	I_C	3		A
Collector Current Peak	I_{CM}	6		
Base Current Peak	I_{BM}	0.5		
Reverse Base Current Peak	$-I_{BM}$			
Total Device Dissipation upto $T_{amb}=60^{\circ}C$	P_{tot}	15		W
Junction Temperature	T_j	150		$^{\circ}C$
Storage Temperature Range	T_{stg}	-65 to +150		

Thermal Resistance

Description	Symbol	Value	Unit
From Junction to Mounting Base	$R_{th(j-mb)}$	6	K/W

Electrical Characteristics ($T_a = 25^{\circ}C$ Unless otherwise specified)

Description	Symbol	Test Condition	Min.	Max.	Unit
Collector Cut-off Current	V_{CBO}	$V_{CB}=50V, I_E=0$ BD131		50	nA
		$V_{CB}=40V, I_E=0$ BD132			
		$V_{CB}=50V, I_E=0, T_j = 150^{\circ}C$ BD131		10	μA
		$V_{CB}=40V, I_E=0, T_j = 150^{\circ}C$ BD132			
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$ BD131		50	nA
		$V_{EB}=3V, I_C=0$ BD132			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 0.5A, I_B = 50mA$		0.3	V
		$I_C = 2A, I_B = 200mA$		0.7	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 0.5A, I_B = 50mA$		1.2	
		$I_C = 2A, I_B = 200mA$		1.5	
DC Current Gain	h_{FE}	$V_{CE} = 12V, I_C = 0.5A$	40		
		$V_{CE} = 1V, I_C = 2A$	20		

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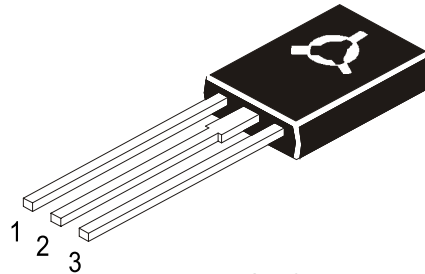
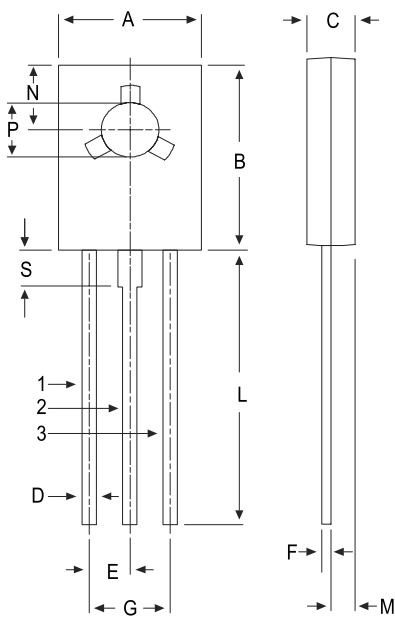
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Dynamic Characteristics

Description	Symbol	Test Condition	Min.	Max.	Unit
Collector Capacitance	C_c	$I_E = 0, V_{CB} = 5V, f = 1MHz$ BD131	--	60	pF
Transition Frequency	f_t	$I_C = 0.25A, V_{CE} = 5V, f = 35MHz,$ $T_{amb} = 25^\circ C$	60	--	MHz
DC Current Gain Ratio of the Complementary Pairs	h_{FE1}/h_{FE2}	$V_{CE} = 12V, I_C = 0.5A$	--	1.2	--

Diagram



Pin Configuration

1. Emitter
2. Collector
3. Base

DIM	MIN	MAX
A	7.4	7.8
B	10.5	10.8
C	2.4	2.7
D	0.7	0.9
E	2.25 TYP.	
F	0.49	0.75
G	4.5 TYP.	
L	15.7 TYP.	
M	1.27 TYP.	
N	3.75 TYP.	
P	3	3.2
S	2.5 TYP.	

Part Number Table

Description	Part Number
Single Bipolar Transistor, NPN, 45V, 3000mA, 15W, TO-126	BD131
Single Bipolar Transistor, PNP, 45V, 3000mA, 15W, TO-126	BD132

Dimensions : Millimetres

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