



## NPN BD131

### SILICON PLANAR EPITAXIAL POWER TRANSISTORS

The BD131 are NPN transistors mounted in Jedec TO-126 plastic package.  
 Medium power applications.  
 PNP complements are BD132  
 Compliance to RoHS.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
$V_{CEO}$	Collector-Emitter Voltage	45	V
$V_{CBO}$	Collector-Base Voltage	45	V
$V_{EBO}$	Emitter-Base Voltage	4	V
$I_C$	Collector Current	$I_C$	3
		$I_{CM}$	6
$I_B$	Base current (peak value)	$I_{BM}$	0.5
	Reverse base current (peak value)	$I_{BM}$	0.5
$P_T$	Total power Dissipation	@ $T_{mb} = 60^\circ\text{C}$	15
$T_J$	Junction Temperature		150
$T_{Stg}$	Storage Temperature		-65 to +150

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-mb}$	Thermal Resistance, Junction to mounting base	6	K/W

#### ELECTRICAL CHARACTERISTICS

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

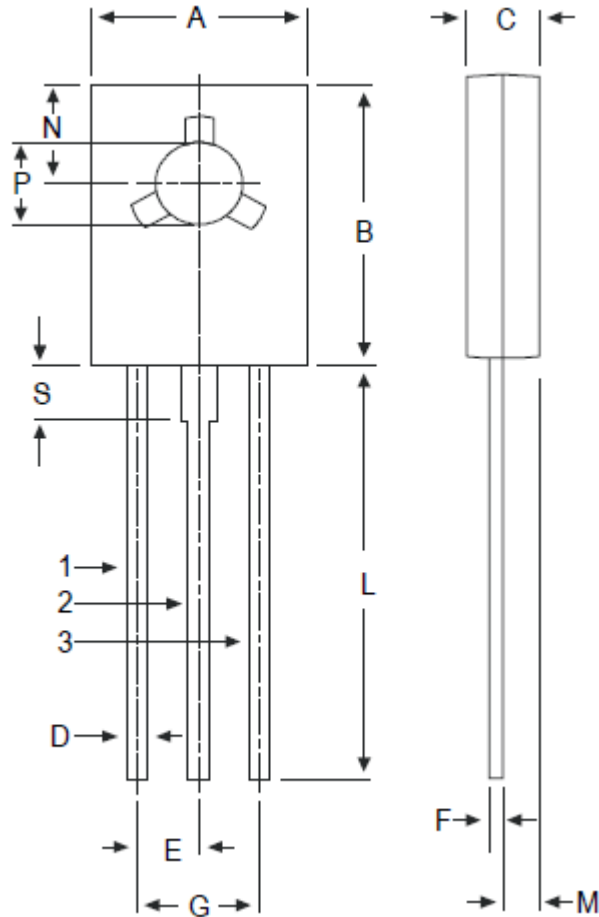
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$I_{CBO}$	Collector cut-off current	$I_E=0, V_{CB}=40\text{ V}$	-	-	5	$\mu\text{A}$
		$I_E=0, V_{CB}=40\text{ V}, T_J=150^\circ\text{C}$	-	-	500	
$I_{EBO}$	Emitter cut-off current	$I_C=0, V_{EB}=3\text{ V}$	-	-	5	$\mu\text{A}$
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$I_C=0.5\text{ A}, I_B=50\text{ mA}$	-	-	0.3	V
		$I_C=2.0\text{ A}, I_B=200\text{ mA}$	-	-	1.2	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage	$I_C=0.5\text{ A}, I_B=50\text{ mA}$	-	-	0.7	V
		$I_C=2.0\text{ A}, I_B=200\text{ mA}$	-	-	1.5	
$h_{FE}$	DC Current Gain	$V_{CE}=12\text{ V}, I_C=500\text{ mA}$	40	-	-	
		$V_{CE}=1\text{ V}, I_C=2\text{ A}$	20	-	-	

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### MECHANICAL DATA CASE TO-126

	DIMENSIONS	
	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	4.4 typ.	
L	15.7 typ.	
M	1.27 typ.	
N	3.75 typ.	
P	3.0	3.2
S	2.54 typ.	

Pin 1 :	Emitter
Pin 2 :	Collector
Pin 3 :	Base



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