

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	70	V
V_{EBO}	Emitter-Base Voltage	6	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

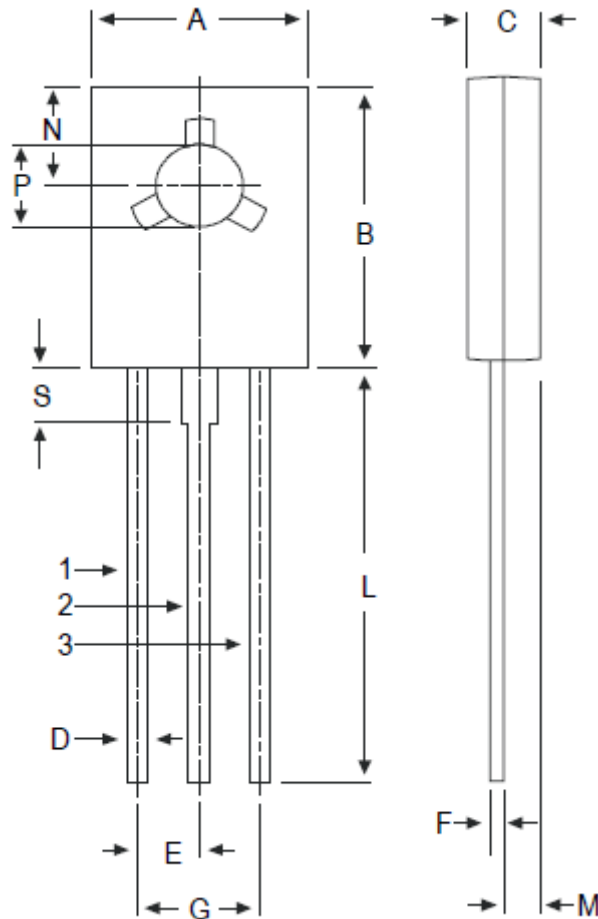
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
I_{CBO}	Collector cut-off current	$I_E = 0, V_{CB} = 50\text{ V}$	-	-	50	nA
		$I_E = 0, V_{CB} = 50\text{ V}, T_J = 150^\circ\text{C}$	-	-	10	μA
I_{EBO}	Emitter cut-off current	$I_C = 0, V_{EB} = 5\text{ V}$	-	-	50	nA
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$I_C = 0.5\text{ A}, I_B = 50\text{ mA}$	-	-	0.3	V
		$I_C = 2.0\text{ A}, I_B = 200\text{ mA}$	-	-	0.7	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage	$I_C = 0.5\text{ A}, I_B = 50\text{ mA}$	-	-	1.2	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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