NPN BD433 – BD435 – BD437

SILICON NPN POWER TRANSISTORS.

The BD433-BD435-BD437 are NPN Transistors mounted in Jedec TO-126 plastic package.
They are recommended for use in medium power linear and switching applications.
PNP complements are BD434-BD436-BD438.
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CBO}	Collector-Base Voltage (I_E= 0)	BD433	22	V
		BD435	32	
		BD437	45	
V_{CEO}	Collector-Emitter Voltage (I_B= 0)	BD433	22	V
		BD435	32	
		BD437	45	
V_{EBO}	Emitter-Base Voltage (I_C= 0)		5	V
I_C	Collector Current		4	A
I_{CM}	Collector Current Peak		7	
I_B	Base Current		1	A
P_C	Total power Dissipation	T_C = 25°C	36	W
T_J	Junction Temperature		150	°C
T_{Stg}	Storage Temperature		-65 to +150	°C

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-c}	Thermal Resistance, Junction-Case	3.5	°C/W
R_{thJ-a}	Thermal Resistance, Junction-ambient in free air	100	°C/W

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
I_{CBO}	Collector cut-off current	I_E= 0, V_{CB}= 22 V	BD433	-	-	100	µA
		I_E= 0, V_{CB}= 32 V	BD435				
		I_E= 0, V_{CB}= 45 V	BD437				
I_{CES}	Collector cut-off current	V_{BE}= 0, V_{CE}= 22 V	BD433	-	-	100	
		V_{BE}= 0, V_{CE}= 32 V	BD435				
		V_{BE}= 0, V_{CE}= 45 V	BD437				
I_{EBO}	Emitter cut-offcurrent	I_C= 0 V_{EB}= 5 V	BD433	-	-	1	mA
			BD435				
			BD437				
$V_{CEO(SUS)}$	Collector-Emitter sustaning Voltage (*)	I_B= 0 I_C= 100 mA	BD433	22	-	-	V
			BD435	32	-	-	
			BD437	45	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C= 2 A I_B= 200 mA	BD433	-	-	0.5	V
			BD435				
			BD437			0.6	
V_{BE}	Base-Emitter Voltage(*)	I_C= 2 A V_{CE}= 1 V	BD433	-	-	1.1	V
			BD435				
			BD437			1.2	
h_{FE}	DC Current Gain (*)	I_C= 10 mA V_{CE}= 5 V	BD433	40	-	130	-
			BD435				
			BD437	30	-	130	
		I_C= 500 mA V_{CE}= 1 V	BD433	85	-	140	
			BD435				
			BD437				
		I_C= 2 A V_{CE}= 1 V	BD433	50	-	-	
			BD435				
			BD437	40	-	-	
f_T	Transition frequency	I_C= 250 mA V_{CE}= 1 V	BD433	3	-	-	MHz
			BD435				
			BD437				

1. Measured under pulse conditions :t_P <300µs, δ <1.5

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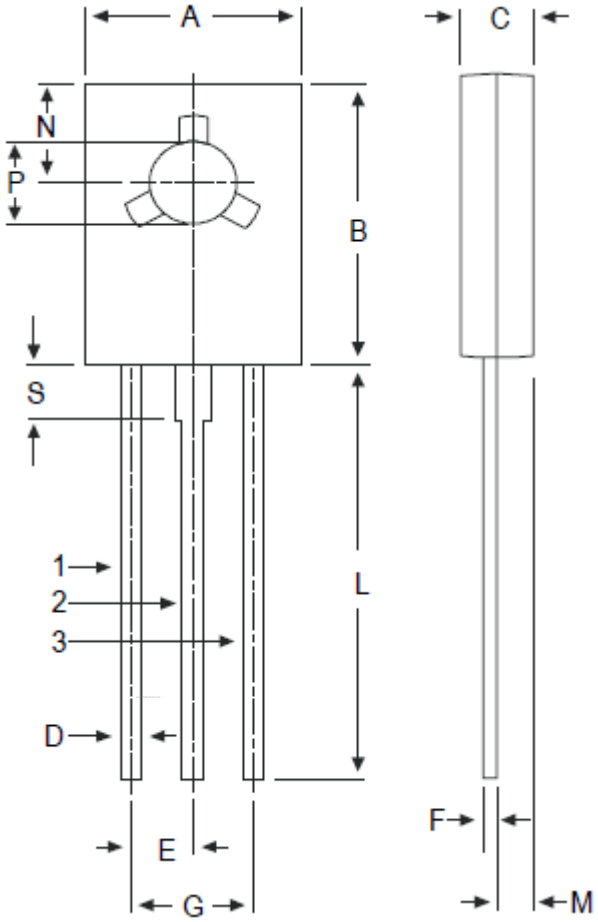
MECHANICAL DATA CASE TO-126

	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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