BD440 – BD442

SILICON PNP POWER TRANSISTORS.

The BD440-BD442 are PNP Transistors mounted in Jedec TO-126 plastic package.
They are recommended for use in medium power linear and switching applications.
NPN complements are BD439-BD441.
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CBO}	Collector-Base Voltage (I_E= 0)	BD440	-60	V
		BD442	-80	
V_{CEO}	Collector-Emitter Voltage (I_B= 0)	BD440	-60	V
		BD442	-80	
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}= -60 V	BD440	-	-	-100	µA
		I_E= 0, V_{CB}= -80 V	BD442				
I_{CES}	Collector cut-off current	V_{BE}= 0, V_{CE}= -60 V	BD440	-	-	-100	
		V_{BE}= 0, V_{CE}= -80 V	BD442				
I_{EBO}	Emitter cut-offcurrent	I_C= 0 V_{EB}= -5 V	BD440 BD442	-	-	-1	mA
$V_{CEO(SUS)}$	Collector-Emitter sustaning Voltage (*)	I_B= 0	BD440	-60	-	-	V
		I_C= -100 mA	BD442	-80	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C= -2 A I_B= -200 mA	BD440 BD442	-	-	-0.8	V
V_{BE}	Base-Emitter Voltage(*)	I_C= -10 mA V_{CE}= -5 V	BD440 BD442	-	-0.58	-	V
		I_C= -2 A V_{CE}= -1 V	BD440 BD442	-	-	-1.5	V
h_{FE}	DC Current Gain (*)	I_C= -10 mA V_{CE}= -5 V	BD440	20	-	130	-
			BD442	15	-	130	
		I_C= -500 mA V_{CE}= -1 V	BD440 BD442	40	-	140	
		I_C= -2 A V_{CE}= -1 V	BD440	25	-	-	
			BD442	15	-	-	
f_T	Transition frequency	I_C= -250 mA V_{CE}= -1 V	BD440 BD442	3	-	-	MHz

(*) Measured under pulse conditions :t_P <300µs, δ <1.5%

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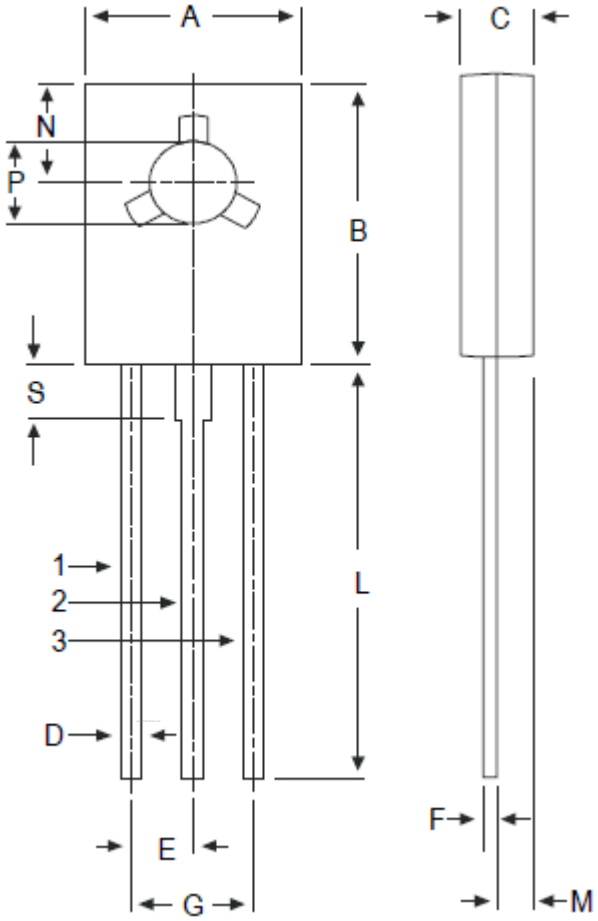
MECHANICAL DATA CASE TO-126

	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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