



PNP BD242 – A – B – C

MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS.

The BD242, A, B, C are the PNP transistors mounted in Jedec TO-220 plastic package. They are the silicon epitaxial-base Power Transistors for use in medium power linear and switching applications. The NPN complements are BD241, A, B, C. Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	BD242	-45	V
		BD242A	-60	
		BD242B	-80	
		BD242C	-100	
V_{CER}	Collector-Emitter Voltage ($R_{BE} = 100 \Omega$)	BD242	-55	V
		BD242A	-70	
		BD242B	-90	
		BD242C	-115	
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	BD242	-5.0	V
		BD242A		
		BD242B		
		BD242C		
I_C	Collector Current	I_C	-3	A
		I_{CM}	-5	
I_B	Base Current		-1	A
P_T	Power Dissipation	@ $T_{amb} = 25^\circ C$	2	W
		@ $T_{case} = 25^\circ C$	40	W
T_J	Junction Temperature		150	$^\circ C$
T_S	Storage Temperature		-65 to +150	

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-amb}$	Thermal Resistance, Junction-ambient	62.5	$^\circ C/W$
$R_{thJ-case}$	Thermal Resistance, Junction-case	3.13	$^\circ C/W$

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

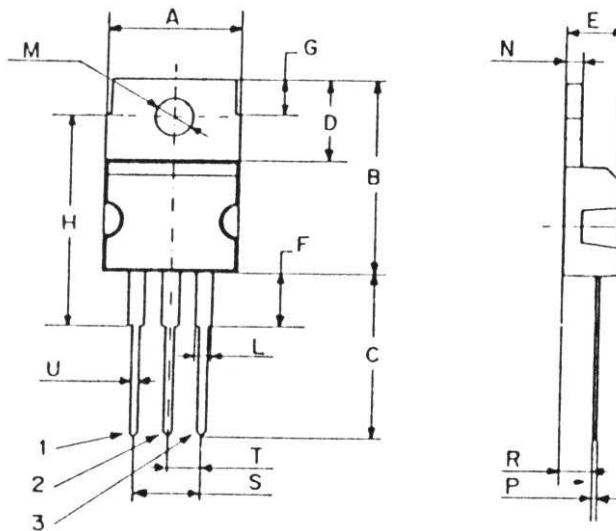
Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit	
I _{CEO}	Collector Cutoff Current	V _{CE} =-30 V	BD242	-	-	-0.3	mA	
		V _{CE} =-30 V	BD242A	-	-			
		V _{CE} =-60 V	BD242B	-	-			
		V _{CE} =-60 V	BD242C	-	-			
I _{EBO}	Emitter Cutoff Current	V _{BE} =-5 V	BD242	-	-	-1.0	mA	
			BD242A	-	-			
			BD242B	-	-			
			BD242C	-	-			
I _{CES}	Collector Cutoff Current (V _{BE} = 0)	V _{CE} =-55 V	BD242	-	-	-0.2	mA	
		V _{CE} =-70 V	BD242A	-	-			
		V _{CE} =-90 V	BD242B	-	-			
		V _{CE} =-115 V	BD242C	-	-			
V _{CEO(sus)}	Collector-Emitter Sustaining Voltage (I _B = 0) (*)	I _C =-30mA	BD242	-45			V	
			BD242A	-60				
			BD242B	-80				
			BD242C	-100				
h _{FE}	DC Current Gain (*)	V _{CE} =-4 V I _C =-1 A	BD242	25	-	-	-	
			BD242A					
			BD242B					
			BD242C					
		V _{CE} =-4 V I _C =-3 A	BD242	10	-	-		
			BD242A					
			BD242B					
			BD242C					
V _{CE(SAT)}	Collector-Emitter saturation Voltage (*)	I _C =-3 A I _B =-0.6 A	BD242	-	-	-1.2	V	
			BD242A					
			BD242B					
			BD242C					
V _{BE(on)}	Base-Emitter Voltage (*)	V _{CE} =-4 V I _C =-3 A	BD242	-	-	-1.8	V	
			BD242A					
			BD242B					
			BD242C					
h _{fe}	Small Signal Current Gain	V _{CE} =-10 V I _C =-0.5 A f = 1KHz	BD242	20		-	-	
			BD242A					
			BD242B					
			BD242C					
		V _{CE} =-10 V I _C =-0.5 A f = 1MHz	BD242	3	-	-	-	
			BD242A					
			BD242B					
			BD242C					

(*) Pulse Width $\approx 300\text{ }\mu\text{s}$, Duty Cycle $\angle 2.0\%$

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MECHANICAL DATA CASE TO-220

DIMENSIONS (mm)		
	Min.	Max.
A	9,90	10,30
B	15,65	15,90
C	13,20	13,40
D	6,45	6,65
E	4,30	4,50
F	2,70	3,15
G	2,60	3,00
H	15,75	17,15
L	1,15	1,40
M	3,50	3,70
N	-	1,37
P	0,46	0,55
R	2,50	2,70
S	4,98	5,08
T	2,49	2,54
U	0,70	0,90



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

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