BD246, A, B, C

PNP SINGLE-DIFFUSED MESA SILICON POWER TRANSISTORS

The BD246 series are PNP power transistors in a TO3PN envelope.
They are the power transistors for power amplifier and high-speed-switching applications.
The complementary is BD245, A, B, C
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage (I_C = -30mA)	BD246	-45	V
		BD246A	-60	
		BD246B	-80	
		BD246C	-100	
V_{CER}	Collector-Emitter Voltage (R_{BE} = 100 Ω)	BD246	-55	V
		BD246A	-70	
		BD246B	-90	
		BD246C	-115	
V_{EBO}	Emitter-Base Voltage		-5.0	V
I_C	Collector Current	I_C	-10	A
		I_{CM}	-15	
I_B	Base Current		-3	A
P_T	Power Dissipation	T_{mb} = 25° C	80	Watts
T_J	Junction Temperature		-65 to +150	°C
T_S	Storage Temperature		-65 to +150	

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJC}	Junction to Case Thermal Resistance	1.56	°C / W
R_{thJA}	Junction to free air Thermal Resistance	42	°C / W

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

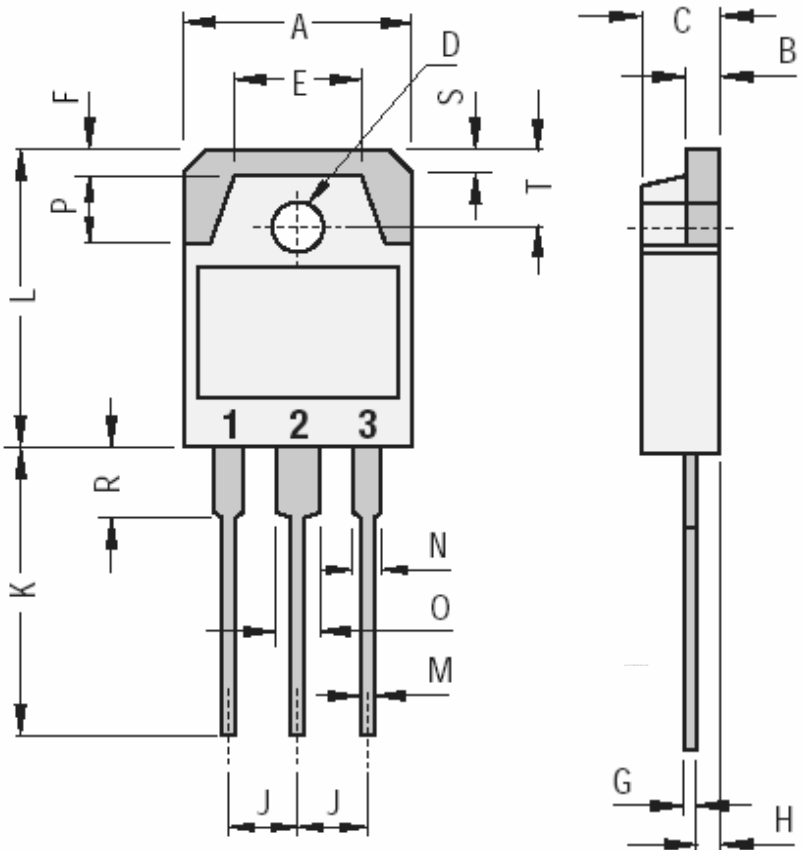
Symbol	Ratings	Test Condition(s)		Min	Typ	Mx	Unit
I_{CES}	Collector- Emitter Cut-off Current	V_{CE} = -55 V , V_{BE} = 0	BD246	-	-	-0.4	mA
		V_{CE} = -70 V , V_{BE} = 0	BD246A				
		V_{CE} = -90 V , V_{BE} = 0	BD246B				
		V_{CE} = -115 V , V_{BE} = 0	BD246C				
I_{CEO}	Collector Cut-off Current	V_{CE} = -30 V , I_B = 0	BD246	-	-	-0.7	mA
			BD246A				
		V_{CE} = -60 V , I_B = 0	BD246B				
			BD246C				
I_{EBO}	Emitter Cut-off Current	V_{EB} = -5 V , I_C = 0		-	-	-1	mA
V_{CEO}	Collector- Emitter Breakdown Voltage (*)	I_C = -30 mA, I_B = 0	BD246	-45	-	-	V
			BD246A	-60	-	-	
			BD246B	-80	-	-	
			BD246C	-100	-	-	
h_{FE}	DC Current Gain (*)	V_{CE} = -4 V, I_C = -1 A		40	-	-	-
		V_{CE} = -4 V, I_C = -3 A		20	-	-	
		V_{CE} = -4 V, I_C = -10 A		4	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C = -3 A, I_B = -300 mA		-	-	-1	V
		I_C = -10 A, I_B = -2.5 A		-	-	-4	
V_{BE}	Base-Emitter Voltage(*)	V_{CE} = -4 V, I_C = -3 A		-	-	-1.6	V
		V_{CE} = -4 V, I_C = -10 A		-	-	-3	
h_{fe}	Small Signal forward Current Transfer ratio	V_{CE} = -10 V, I_C = -500 mA, f = 1MHz		20	-	-	-
$\|h_{fe}\|$	Small Signal forward Current Transfer ratio	V_{CE} = -10 V, I_C = -500 mA, f = 1MHz		3	-	-	

RESISTIVE-LOAD-SWITCHING CHARACTERISTICS AT 25°C CASE TEMPERATURE

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
t_{on}	Turn-on Time	I_C = -1 A , $I_{B(on)}$ = -100 mA , $I_{B(off)}$ = 100 mA $V_{BE(off)}$ = 3.7 V , R_L = 20 Ω , t_p = 20 µs dc < 2%	-	0.2	-	µs
t_{off}	Turn-off Time	I_C = -1 A , $I_{B(on)}$ = -100 mA , $I_{B(off)}$ = 100 mA $V_{BE(off)}$ = 3.7 V , R_L = 20 Ω , t_p = 20 µs dc < 2%	-	0.8	-	

BD246, A, B, C

MECHANICAL DATA CASE TO3PN Non Isolated Plastic Package



DIMENSIONS (mm)		
	Min.	Max.
A	15.20	1600
B	1.90	2.10
C	4.60	5.00
D	3.10	3.30
E		9.60
F		2.00
G	0.35	0.55
H		1.40
J	5.35	5.55
K	20.00	
L	19.60	20.20
M	0.95	1.25
N		2.00
O		3.00
P		4.00
R		4.00
S		1.80
T	4.80	5.20

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

Revised August 2012