



NPN BDX35 – BDX36 – BDX37

SILICON PLANAR EPITAXIAL POWER TRANSISTORS

The BDX35, BDX36 and BDX37 are NPN transistors mounted in Jedec TO-126 plastic package. They are intended for use in high current switching applications and switching regulator circuits. Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage	BDX35	60	V
		BDX36	60	
		BDX37	80	
V_{CBO}	Collector-Base Voltage	BDX35	100	V
		BDX36	120	
		BDX37	120	
V_{CES}	Collector-Emitter Voltage ($V_{BE}=0$)	BDX35	100	V
		BDX36	120	
		BDX37	120	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current	I_C	5	A
		I_{CM}	10	
I_B	Base current	I_B	1	A
		I_{BM}	2	
P_T	Power Dissipation	@ $T_{mb} = 75^\circ$	15	W
T_J	Junction Temperature		150	$^\circ\text{C}$
T_{Stg}	Storage Temperature		-65 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-mb}	Thermal Resistance, Junction to mounting base	5	K/W
R_{thJ-a}	Thermal Resistance, Junction to ambient in free air	100	K/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	$I_E=0, V_{CB}=80\text{ V}$	BDX35	-	-	10	μA
		$I_E=0, V_{CB}=100\text{ V}$	BDX36	-	-	10	
		$I_E=0, V_{CB}=100\text{ V}$	BDX37	-	-	10	
		$I_E=0, V_{CB}=80\text{ V}$ $T_j = 100^\circ\text{C}$	BDX35	-	-	50	
		$I_E=0, V_{CB}=100\text{ V}$ $T_j = 100^\circ\text{C}$	BDX36	-	-	50	
		$I_E=0, V_{CB}=100\text{ V}$ $T_j = 100^\circ\text{C}$	BDX37	-	-	50	
I_{EBO}	Emitter cut-off current	$I_C=0, V_{EB}=4\text{ V}$	BDX35	-	-	10	μA
			BDX36	-	-	10	
			BDX37	-	-	10	
		$I_C=0, V_{EB}=5\text{ V}$	BDX35	-	-	1	mA
			BDX36	-	-	1	
			BDX37	-	-	1	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=5.0\text{ A}$ $I_B=500\text{ mA}$	BDX35	-	-	0,9	V
			BDX36	-	-	0,7	
			BDX37	-	-	0,9	
		$I_C=7.0\text{ A}$ $I_B=700\text{ mA}$	BDX35	-	-	1,2	
			BDX36	-	-	-	
			BDX37	-	-	1,2	
$I_C=10\text{ A}, I_B=1\text{ A}$	BDX36	-	-	1,5			
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (*)	$I_C=5.0\text{ A}, I_B=500\text{ mA}$	BDX35	-	-	1,6	V
			BDX36	-	-		
			BDX37	-	-		
		$I_C=7.0\text{ A}, I_B=700\text{ mA}$	BDX35	-	-	2,0	
			BDX37	-	-	2,0	
			BDX36	-	-	2,5	
h_{FE}	DC Current Gain (*)	$V_{CE}=10\text{ V}$ $I_C=500\text{ mA}$	BDX35	45	-	450	
			BDX36				
			BDX37				
			BDX35	130	-		
			BDX36				
			BDX37			-	

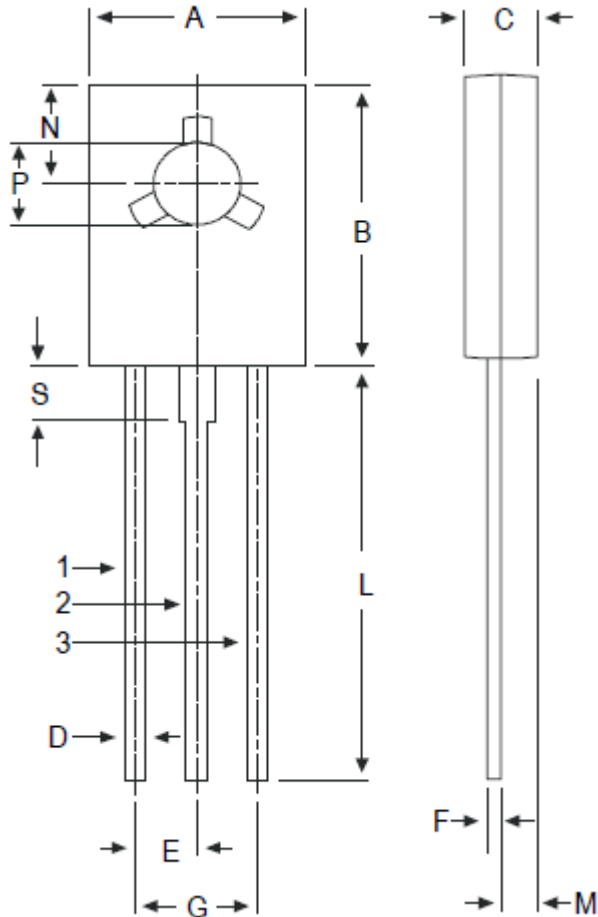


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MECHANICAL DATA CASE TO-126

	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



Revised August 2012

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