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 intented 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°		15	W
T_J	Junction Temperature			150	℃
T_{Stg}	Storage Temperature			-65 to +150	℃

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-mb}	Thermal Resistance, Junction to mouting base	5	K/W
R_{thJ-a}	Thermal Resistance, Junction to ambient infree air	100	K/W

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ELECTRICAL CHARACTERISTICS

TC=25℃ unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
I_{CBO}	Collector cut-off current	I_E=0 , V_{CB}=80 V	BDX35	-	-	10	µA
		I_E=0 , V_{CB}=100 V	BDX36	-	-	10	
		I_E=0 , V_{CB}=100 V	BDX37	-	-	10	
		I_E=0 , V_{CB}=80 V T_j = 100℃	BDX35	-	-	50	
		I_E=0 , V_{CB}=100 V T_j = 100℃	BDX36	-	-	50	
		I_E=0 , V_{CB}=100 V T_j = 100℃	BDX37	-	-	50	
I_{EBO}	Emitter cut-offcurrent	I_C=0, V_{EB}=4 V	BDX35	-	-	10	µA
			BDX36	-	-	10	
			BDX37	-	-	10	
		I_C=0, V_{EB}=5 V	BDX35	-	-	1	mA
			BDX36	-	-	1	
			BDX37	-	-	1	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C=5.0 A I_B=500 mA	BDX35	-	-	0,9	V
			BDX36	-	-	0,7	
			BDX37	-	-	0,9	
		I_C=7.0 A I_B=700 mA	BDX35	-	-	1,2	
			BDX36	-	-	-	
			BDX37	-	-	1,2	
		I_C=10 A, I_B=1A	BDX36	-	-	1,5	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (*)	I_C=5.0 A, I_B=500 mA	BDX35	-	-	1 ,6	V
			BDX36				
			BDX37				
		I_C=7.0 A, I_B=700 mA	BDX35	-	-	2,0	
			BDX37	-	-	2,0	
		I_C=10 A, I_B=1A	BDX36	-	-	2,5	
h_{FE}	DC Current Gain (*)	V_{CE}=10 V I_C=500m A	BDX35	45	-	450	
			BDX36				
			BDX37				
			BDX35		130	-	
			BDX36				
			BDX37	-	80		

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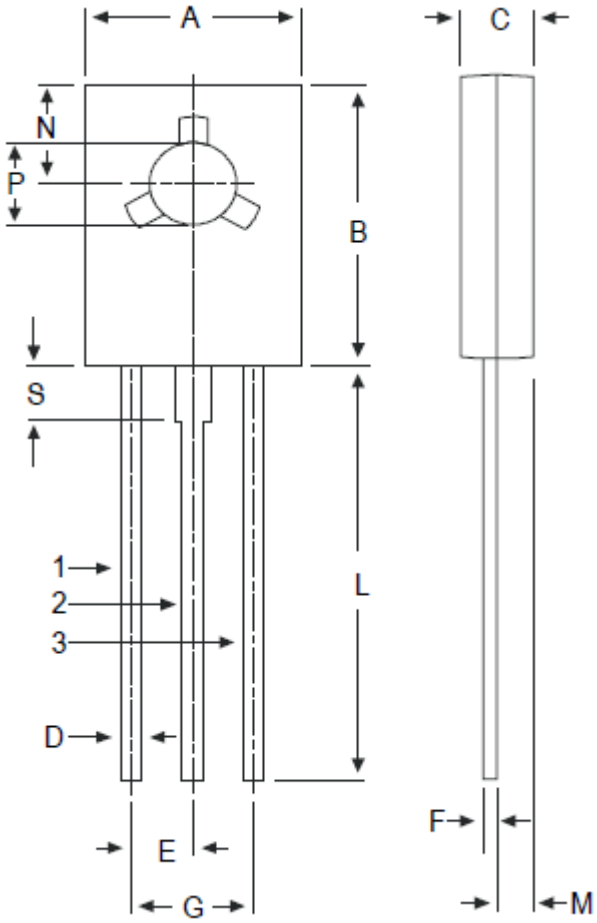
MECHANICAL DATA CASE TO-126

	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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