BDX18 – BDX18N

PNP SILICON TRANSISTOR EPITAXIAL BASE

LF Large Signal Power Amplification
High Current Switching
Thermal Fatigue Inspection
Compliance to RoHS

Applications :

- Series and shunt regulators
- High Fidelity Amplifiers
- Power-switching circuits
- Solenoid drivers

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings			Value	Unit
V_{CEO}	Collector-Emitter Voltage		BDX18	-60	V
			BDX18N		
V_{CER}	Collector-Emitter Voltage	R_{BE}=100Ω	BDX18	-70	V
			BDX18N	-65	
V_{EBO}	Collector-Emitter Voltage		BDX18	-7	V
			BDX18N		
V_{CBO}	Emitter-Base Voltage		BDX18	-100	V
			BDX18N	-70	
V_{CEX}	Collector-Emitter Voltage	V_{BE}=+1.5 V	BDX18	-90	V
			BDX18N	-70	
I_C	Collector Current		BDX18	-15	A
			BDX18N		
I_B	Base Current		BDX18	-7	A
			BDX18N		
P_T	Power Dissipation	@ T_C = 25°		117	W
T_J	Junction Temperature			-65 to +200	°C
T_S	Storage Temperature				

BDX18 – BDX18N

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-C}	Thermal Resistance, Junction to Case	1.5	°C/W

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

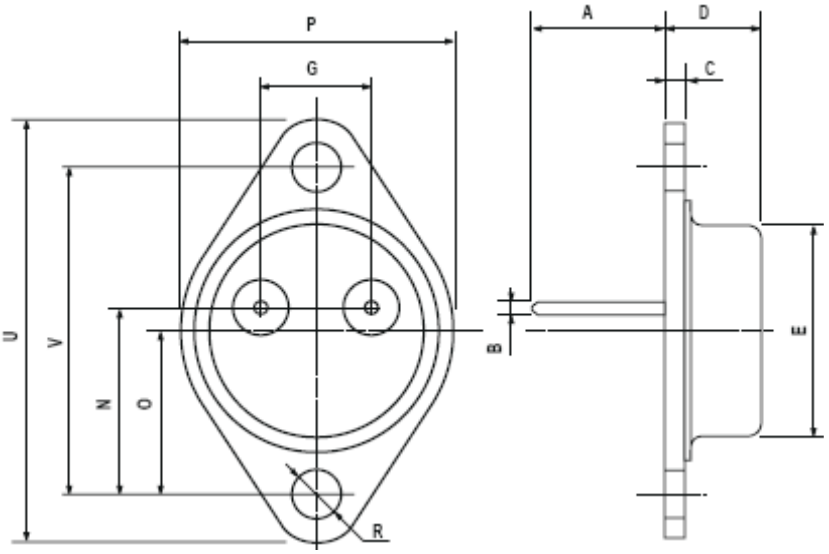
Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage (*)	I_C=200 mA I_B=0	BDX18 BDX18N	-60 -60	-	-	V
$V_{CEX(SUS)}$	Collector-Emitter Breakdown Voltage (*)	I_C=-100 mA V_{BE}=1.5 V	BDX18 BDX18N	-90 -70	- -	- -	V
$V_{CER(SUS)}$	Collector-Emitter Breakdown Voltage (*)	I_C=-200 mA R_{BE}=100 Ω	BDX18 BDX18N	-70 -65	- -	- -	V
I_{CEX}	Collector-Emitter Cutoff Current	V_{CE}=-90 V V_{BE}=1.5 V	BDX18	-	-	-5	mA
		V_{CE}=-60 V, V_{BE}=1.5 V T_{CASE}=150°C	BDX18			-10	mA
		V_{CE}=-70 V V_{BE}=1.5 V	BDX18N	-	-	-5	mA
		V_{CE}=-60 V, V_{BE}=1.5 V T_{CASE}=150°C	BDX18N	-	-	-10	mA
I_{EBO}	Emitter-Base Cutoff Current	V_{EB}=-7 V	BDX18 BDX18N	-	-	-5	mA
V_{BE}	Base-Emitter Voltage (*)	I_C=-4.0 A, V_{CE}=-4.0V	BDX18 BDX18N	-	-	-1.8	V
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage	I_C=-4.0 A, I_B=-0.4V	BDX18 BDX18N	-	-	-1.1	V
f_T	Transition Frequency	I_C =-1A, V_{CE}=-10 V f=1 MHz	BDX18 BDX18N	-	4	-	MHz
h_{21E}	Static Forward Current Transfer Ratio (*)	V_{CE}=-4.0 V, I_C=-4.0 A	BDX18 BDX18N	20	-	70	-

(*) Pulse Width ≈ 300 μs, Duty Cycle ∠ 2.0%
(1) collector-Emitter voltage limited et V_{CEci} = V rated by an auxiliary circuit

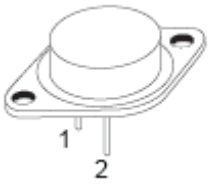
BDX18 – BDX18N

MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



Revised August 2012

www.comsetsemi.com info@comsetsemi.com