



## BDX18 – BDX18N

### PNP SILICON TRANSISTOR EPITAXIAL BASE

LF Large Signal Power Amplification  
High Current Switching

Suitable for :  
Series and shunt regulators  
High Fidelity Amplifiers  
Power-switching circuits

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
$V_{CEO}$	Collector-Emitter Voltage		BDX18 BDX18N -60	V
$V_{CER}$	Collector-Emitter Voltage	$R_{BE}=100\Omega$	BDX18 BDX18N -70 -65	V
$V_{EBO}$	Collector-Emitter Voltage		BDX18 BDX18N -7	V
$V_{CBO}$	Emitter-Base Voltage		BDX18 BDX18N -100 -70	V
$V_{CEX}$	Collector-Emitter Voltage	$V_{BE}=+1.5\text{ V}$	BDX18 BDX18N -90 -70	V
$I_C$	Collector Current		BDX18 BDX18N -15	A
$I_B$	Base Current		BDX18 BDX18N -7	A
$P_T$	Power Dissipation	@ $T_C = 25^\circ$	BDX18 BDX18N 117	Watts
$T_J$	Junction Temperature		BDX18 BDX18N -65 to +200	$^\circ\text{C}$
$T_S$	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	Mx	Unit	
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage (*)	$I_C=200\text{ mA}, I_B=0$	<b>BDX18</b> <b>BDX18N</b>	-60 -60	-	-	V
$V_{CEX(SUS)}$	Collector-Emitter Breakdown Voltage (*)	$I_C=-100\text{ mA}, V_{BE}=1.5\text{ V}$	<b>BDX18</b> <b>BDX18N</b>	-90 -70	-	-	V
$V_{CER(SUS)}$	Collector-Emitter Breakdown Voltage (*)	$I_C=-200\text{ mA}, R_{BE}=100\ \Omega$	<b>BDX18</b> <b>BDX18N</b>	-70 -65	-	-	V
$I_{CEX}$	Collector-Emitter Cutoff Current	$V_{CE}=-90\text{ V}, V_{BE}=1.5\text{ V}$ $V_{CE}=-60\text{ V}, V_{BE}=1.5\text{ V}$ $T_{CASE}=150^\circ\text{C}$	<b>BDX18</b>	-	-	-5 -10	mA
		$V_{CE}=-70\text{ V}, V_{BE}=1.5\text{ V}$ $V_{CE}=-60\text{ V}, V_{BE}=1.5\text{ V}$ $T_{CASE}=150^\circ\text{C}$	<b>BDX18N</b>	-	-	-5 -10	
$I_{EBO}$	Emitter-Base Cutoff Current	$V_{EB}=-7\text{ V}$	<b>BDX18</b> <b>BDX18N</b>	-	-	-5	mA
$V_{BE}$	Base-Emitter Voltage (*)	$I_C=-4.0\text{ A}, V_{CE}=-4.0\text{ V}$	<b>BDX18</b> <b>BDX18N</b>	-	-	-1.8	V
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage	$I_C=-4.0\text{ A}, I_B=-0.4\text{ V}$	<b>BDX18</b> <b>BDX18N</b>	-	-	-1.1	V
$f_T$	Transition Frequency	$I_C=-1\text{ A}, V_{CE}=-10\text{ V}, f=1\text{ MHz}$	<b>BDX18</b> <b>BDX18N</b>	-	4	-	MHz

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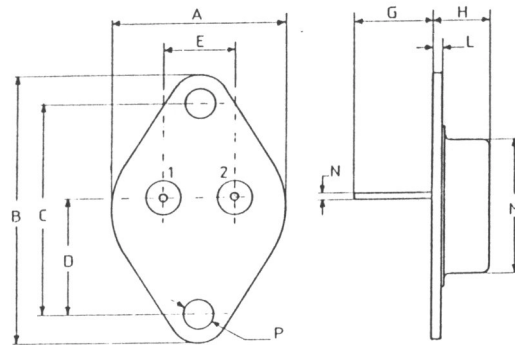
Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$h_{21E}$	Static Forward Current Transfer Ratio (*)	$V_{CE}=-4.0\text{ V}$ , $I_C=-4.0\text{ A}$	20	-	70	-

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

(1) collector-Emitter voltage limited et  $V_{CEci} = V_{\text{rated}}$  by an auxiliary circuit

## MECHANICAL DATA CASE TO-3

DIMENSIONS		
	mm	inches
A	25,51	1,004
B	38,93	1,53
C	30,12	1,18
D	17,25	0,68
E	10,89	0,43
G	11,62	0,46
H	8,54	0,34
L	1,55	0,6
M	19,47	0,77
N	1	0,04
P	4,06	0,16



Pin 1 :	Base
Pin 2 :	Collector
Case :	Emitter