

COMSET
SEMICONDUCTORS

BDX20

PNP SILICON TRANSISTORS EPITAXIAL BASE

LF Large Signal Power Amplification
High Current Fast Switching
Thermal Fatigue Inspection

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
V_{CBO}	Collector to Base Voltage	-60	V
V_{CEO}	#Collector-Emitter Voltage	-140	V
V_{CEX}	Collector-Emitter Voltage $V_{BE}=1.5\text{ V}$	-160	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current – Continuous	-10	A
I_B	Base Current – Continuous	-7	A
P_{TOT}	Total Device Dissipation	117	Watts
T_J	Junction Temperature	200	°C
T_S	Storage Temperature	-65 to +200	°C

THERMAL CHARACTERISTICS

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

BDX20

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

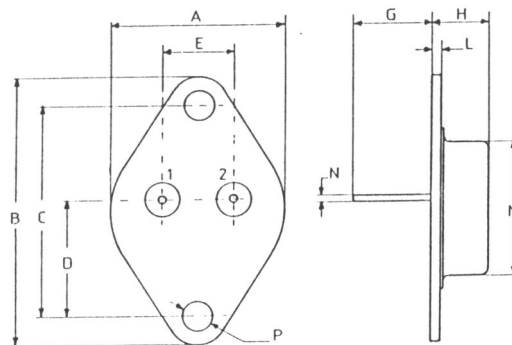
Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage (*)	$I_C=-200\text{ mA}, I_B=0$	-140	-	-	V
V_{CEX}	Collector-Emitter Breakdown Voltage (*)	$I_C=-100\text{ mA}, V_{BE}=1.5\text{ V}$	-160	-	-	V
I_{CEX}	Collector Cutoff Current	$V_{CE}=-140\text{ V}, V_{BE}=1.5\text{ V}$	-	-	-1.0	mA
		$V_{CE}=-140\text{ V}, V_{BE}=1.5\text{ V}, T_{CASE}=150^\circ\text{C}$	-	-	-10	
I_{CBO}	Collector-Base Cutoff Current	$V_{CB}=-140\text{ V}, I_E=0$	-	-	-1.0	mA
I_{EBO}	Emitter-Base Cutoff Current	$V_{BE}=-7.0\text{ V}, I_C=0$	-	-	-5.0	mA
h_{21E}	Static Forward Current Transfer Ratio (*)	$I_C=-3.0\text{ A}, V_{CE}=-4.0\text{ V}$	20	-	70	-
		$I_C=10\text{ A}, V_{CE}=-4.0\text{ V}$	-	10	-	
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage (*)	$I_C=-3.0\text{ A}, I_B=-0.3\text{ A}$	-	-	-1.0	V
		$I_C=-10\text{ A}, I_B=-2\text{ A}$	-	-	-5.0	
V_{BE}	Base-Emitter Voltage (*)	$I_C=-3.0\text{ A}, V_{CE}=-4.0\text{ V}$	-	-1.7	-	V
		$I_C=-10\text{ A}, V_{CE}=-4.0\text{ V}$	-	-5.7	-	
f_T	Transition Frequency	$V_{CE}=-10\text{ V}, I_C=-1.0\text{ A}, f=1.0\text{ MHz}$	4	-	-	MHz

In accordance with JEDEC Registration Data

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

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