PNP BDX20

SILICON TRANSISTORS EPITAXIAL BASE

The BDX20 are mounted in TO-3 metal package.
LF Large Signal Power Amplification
High Current Fast Switching
Thermal Fatigue Inspection
Compliance to RoHS.

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 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	W
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

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	I_C=-200 mA, I_B=0	-140	-	-	V
V_{CEX}	Collector-Emitter Breakdown Voltage (*)	I_C=-100 mA, V_{BE}=1.5 V	-160	-	-	V
I_{CEX}	Collector Cutoff Current	V_{CE}=-140 V, V_{BE}=1.5 V	-	-	-1.0	mA
		V_{CE}=-140 V, V_{BE}=1.5 V T_{CASE}=150°C	-	-	-10	
I_{CBO}	Collector-Base Cutoff Current	V_{CB}=-140 V, I_E=0	-	-	-1.0	mA
I_{EBO}	Emitter-Base Cutoff Current	V_{BE}=-7.0 V, I_C=0	-	-	-5.0	mA
h_{21E}	Static Forward Current Transfer Ratio (*)	I_C=-3 A, V_{CE}=-4 V	20	-	70	-
		I_C=10 A, V_{CE}=-4 V	-	10	-	
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage (*)	I_C=-3 A, I_B=-0.3 A	-	-	-1.0	V
		I_C=-10 A, I_B=-2 A	-	-	-5.0	
V_{BE}	Base-Emitter Voltage (*)	I_C=-3 A, V_{CE}=-4 V	-	-1.7	-	V
		I_C=-10 A, V_{CE}=-4 V	-	-5.7	-	
f_T	Transition Frequency	V_{CE}=-10 V, I_C=-1 A f=1.0 MHz	4	-	-	MHz

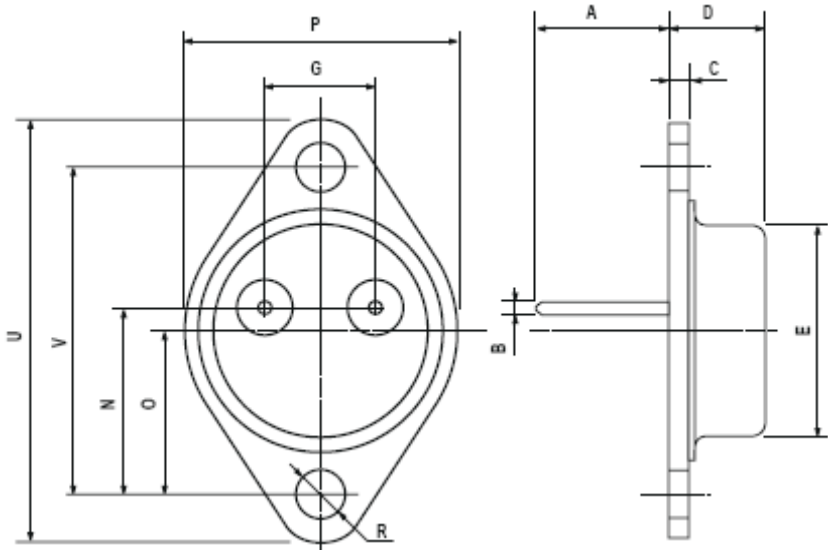
In accordance with JEDEC Registration Data

(*) Pulse Width ≈ 300 μs, Duty Cycle ∠ 2.0%

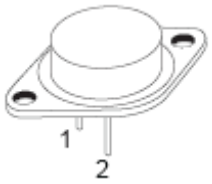
PNP BDX20

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



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