



## BDX62 – A – B – C

### PNP SILICON DARLINGTON POWER TRANSISTOR

The BDX62, BDX62A, BDX62B and BDX62C are mounted in TO-3 metal package. High current power darlington designed for power amplification and switching applications. The complementary NPN are BDX63, BDX63A, BDX63B, BDX63C. Compliance to RoHS.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
$V_{CEO}$	Collector-Emitter Voltage		BDX62	-60	V
			BDX62A	-80	
			BDX62B	-100	
			BDX62C	-120	
$V_{CEV}$	Collector-Emitter Voltage	$V_{BE} = -1.5 V$	BDX62	-60	V
			BDX62A	-80	
			BDX62B	-100	
			BDX62C	-120	
$V_{EBO}$	Emitter-Base Voltage		-5.0	V	
$I_C$	Collector Current		$I_{C(RMS)}$	-8	A
			$I_{CM}$	-12	
$I_B$	Base Current		-0.15	A	
$P_T$	Power Dissipation	@ $T_C = 25^\circ$	90	W	
$T_J$	Junction Temperature		-55 to +200	°C	
$T_S$	Storage Temperature				

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-C}$	Thermal Resistance, Junction to Case	1.94	°C/W

## BDX62 – A – B – C

### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage (*)	$I_C = -0.1\text{ A}$ $I_B = 0$ $L = 25\text{mH}$	BDX62	-60	-	-	V
			BDX62A	-80	-	-	
			BDX62B	-100	-	-	
			BDX62C	-120	-	-	
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -30\text{ V}$ $V_{CE} = -40\text{ V}$ $V_{CE} = -50\text{ V}$ $V_{CE} = -60\text{ V}$	BDX62	-	-	-0.5	mA
			BDX62A	-	-		
			BDX62B	-	-		
			BDX62C	-	-		
$I_{EBO}$	Emitter Cutoff Current	$V_{BE} = -5\text{ V}$	BDX62	-	-	-5.0	mA
			BDX62A				
			BDX62B				
			BDX62C				
$I_{CBO}$	Collector-Base Cutoff Current	$V_{CBO} = -60\text{ V}$ $V_{CBO} = -40\text{ V}$ $T_{CASE} = 200^\circ\text{C}$ $V_{CBO} = -80\text{ V}$ $V_{CBO} = -50\text{ V}$ $T_{CASE} = 200^\circ\text{C}$ $V_{CBO} = -100\text{ V}$ $V_{CBO} = -60\text{ V}$ $T_{CASE} = 200^\circ\text{C}$ $V_{CBO} = -120\text{ V}$ $V_{CBO} = -70\text{ V}$ $T_{CASE} = 200^\circ$	BDX62	-	-	-0.2	-
			BDX62	-	-	-2	
			BDX62A	-	-	-0.2	
			BDX62A	-	-	-2	
			BDX62B	-	-	-0.2	
			BDX62B	-	-	-2	
			BDX62C	-	-	-0.2	
			BDX62C	-	-	-2	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C = -3.0\text{ A}$ $I_B = -12\text{ mA}$	BDX62	-	-	-2	V
			BDX62A				
			BDX62B				
			BDX62C				
$V_F$	Forward Voltage (pulse method)	$I_F = 3\text{ A}$	BDX62	-	-	-2.5	V
			BDX62A				
			BDX62B				
			BDX62C				
$V_{BE}$	Base-Emitter Voltage (*)	$I_C = -3.0\text{ A}$ $V_{CE} = -3\text{ V}$	BDX62	-	-	-	V
			BDX62A				
			BDX62B				
			BDX62C				

## BDX62 – A – B – C

### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

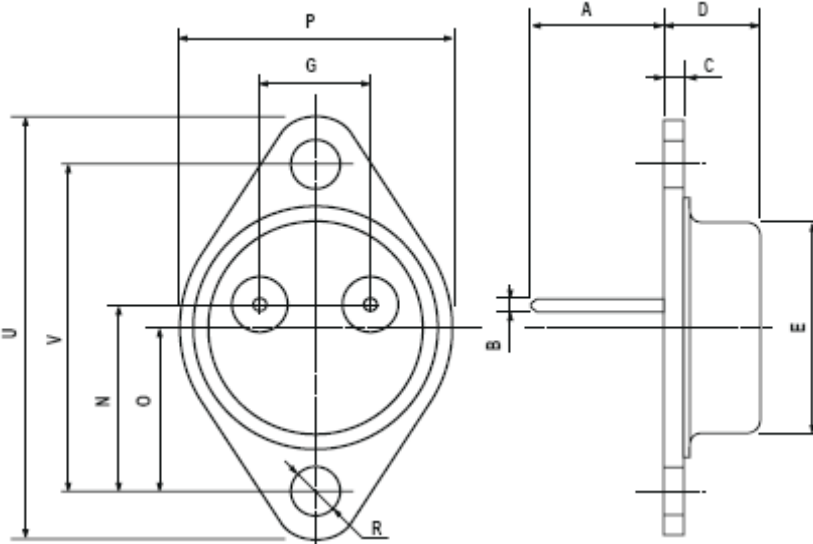
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit	
$f_{hfe}$	Cut-off frequency	$V_{CE}=3\text{ V}$ $I_C=3\text{ A}$	BDX62	-	100	-	kHz
			BDX62A				
			BDX62B				
			BDX62C				
$f_T$	Transition Frequency	$V_{CE}=-3\text{ V}$ , $I_C=-3\text{ A}$ $f=1\text{ MHz}$	BDX62	-	7	-	MHz
			BDX62A				
			BDX62B				
			BDX62C				
$h_{FE}$	D.C. current gain (*)	$V_{CE}=-3\text{ V}$ , $I_C=-0.5\text{ A}$	BDX62	-	1500	-	-
			BDX62A				
			BDX62B				
			BDX62C				
		$V_{CE}=-3\text{ V}$ , $I_C=-3\text{ A}$	BDX62	1000	-	-	
			BDX62A				
			BDX62B				
			BDX62C				
		$V_{CE}=-3\text{ V}$ , $I_C=-8\text{ A}$	BDX62	-	750	-	
			BDX62A				
			BDX62B				
			BDX62C				

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

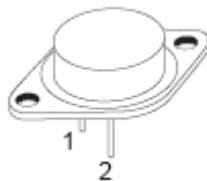
## BDX62 – A – B – C

### 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 September 2012

Information furnished is believed to be accurate and reliable. However, Comset Semiconductors assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. Data are subject to change without notice. Comset Semiconductors makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Comset Semiconductors assume any liability arising out of the application or use of any product and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Comset Semiconductors' products are not authorized for use as critical components in life support devices or systems.