

**Silicon PNP Darlington Power Transistor**

**BDX62/A/B/C**

**DESCRIPTION**

- Collector Current  $I_C = -8A$
- High DC Current Gain  $h_{FE} = 1000(\text{Min}) @ I_C = -3A$
- Complement to Type BDX63/A/B/C

**APPLICATIONS**

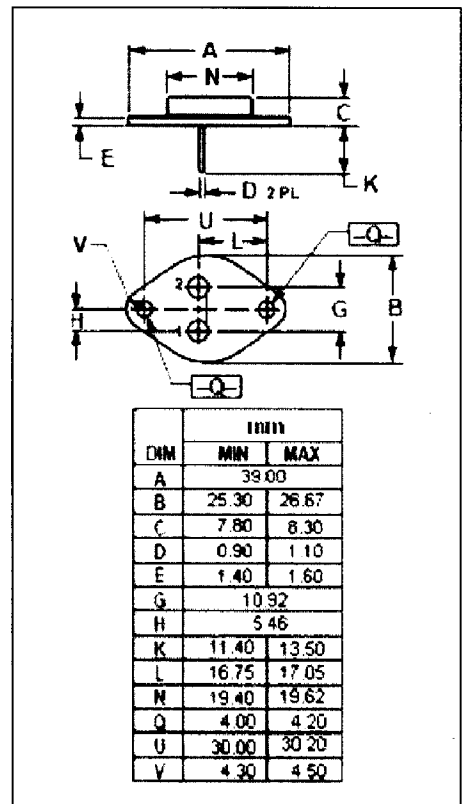
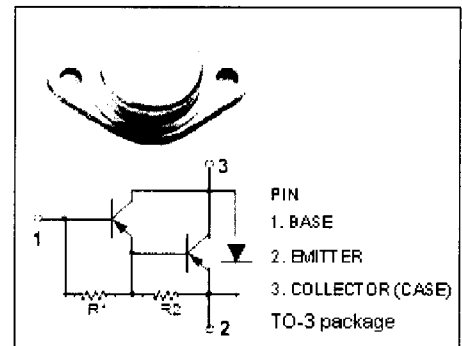
- Designed for audio output stages and general amplifier and switching applications

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )**

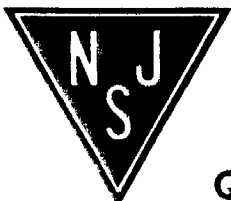
SYMBOL	PARAMETER	VALUE	UNIT	
$V_{CBO}$	Collector-Base Voltage	BDX62	-80	V
		BDX62A	-100	
		BDX62B	-120	
		BDX62C	-140	
$V_{CEO}$	Collector-Emitter Voltage	BDX62	-60	V
		BDX62A	-80	
		BDX62B	-100	
		BDX62C	-120	
$V_{EBO}$	Emitter-Base Voltage	-5	V	
$I_C$	Collector Current-Continuous	-8	A	
$I_{CM}$	Collector Current-Peak	-12	A	
$I_B$	Base Current-Continuous	-0.15	A	
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	90	W	
$T_J$	Junction Temperature	200	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature Range	-65~200	$^\circ\text{C}$	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th-jc}$	Thermal Resistance, Junction to Case	1.94	$^\circ\text{C/W}$



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# Silicon PNP Darlington Power Transistor

# BDX62/A/B/C

## ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	BDX62	-60			V	
		BDX62A	-80				
		BDX62B	-100				
		BDX62C	-120				
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -3A; I_B = -12mA$			-2	V	
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -3A; V_{CE} = -3V$			-2.5	V	
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = \frac{1}{2}V_{CE0}; I_B = 0$			-0.2	mA	
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = V_{CB0max}; I_E = 0$			-0.2	mA	
$I_{CBO}$	Collector Cutoff Current	BDX62	$V_{CB} = -40V; I_E = 0; T_J = 200^\circ\text{C}$			-2	mA
		BDX62A	$V_{CB} = -50V; I_E = 0; T_J = 200^\circ\text{C}$				
		BDX62B	$V_{CB} = -60V; I_E = 0; T_J = 200^\circ\text{C}$				
		BDX62C	$V_{CB} = -70V; I_E = 0; T_J = 200^\circ\text{C}$				
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5V; I_C = 0$			-5	mA	
$h_{FE-1}$	DC Current Gain	$I_C = -0.5A; V_{CE} = -3V$		1500			
$h_{FE-2}$	DC Current Gain	$I_C = -3A; V_{CE} = -3V$	1000				
$h_{FE-3}$	DC Current Gain	$I_C = -8A; V_{CE} = -3V$		750			
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = -10V; f_{test} = 1\text{MHz}$		100		pF	
Switching times							
$t_{on}$	Turn-on Time	$I_C = -3A; I_{B1} = -I_{B2} = -12mA$		0.5		$\mu\text{s}$	
$t_{off}$	Turn-off Time			2.5		$\mu\text{s}$	