

**isc Silicon PNP Darlington Power Transistor**

**BDX68/A/B/C**

**DESCRIPTION**

- High DC Current Gain-  
:  $h_{FE} = 1000(\text{Min}) @ I_C = -20\text{A}$
- Low Saturation Voltage
- Complement to Type BDX69/A/B/C

**APPLICATIONS**

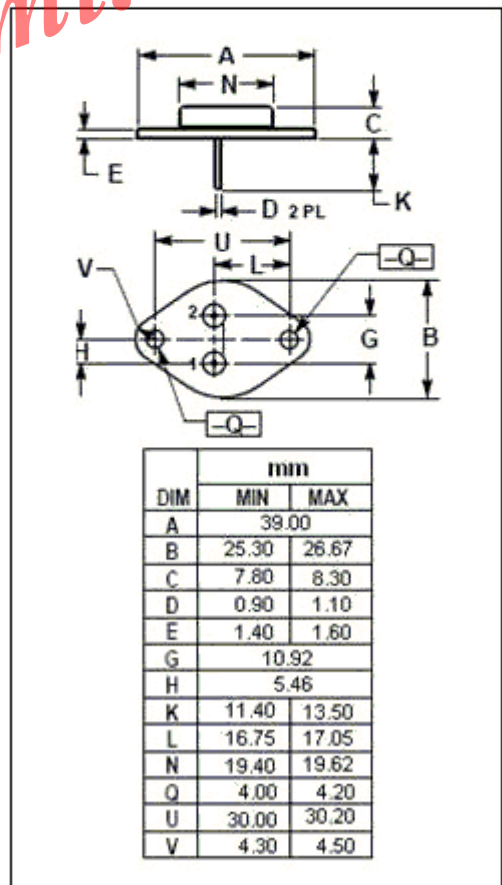
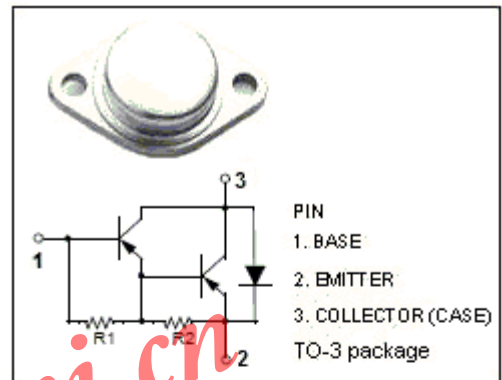
- Designed for audio output stages and general amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT	
$V_{CBO}$	Collector-Base Voltage	BDX68	-80	V
		BDX68A	-100	
		BDX68B	-120	
		BDX68C	-140	
$V_{CEO}$	Collector-Emitter Voltage	BDX68	-60	V
		BDX68A	-80	
		BDX68B	-100	
		BDX68C	-120	
$V_{EBO}$	Emitter-Base Voltage	-5	V	
$I_C$	Collector Current-Continuous	-25	A	
$I_{CM}$	Collector Current-Peak	-40	A	
$I_B$	Base Current	-500	mA	
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	150	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
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.875	$^\circ\text{C}/\text{W}$



## isc Silicon PNP Darlington Power Transistor

## BDX68/A/B/C

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BDX68	$I_C = -100\text{mA}; L = 25\text{mH}$			V	
		BDX68A		-60			
		BDX68B		-80			
		BDX68C		-100			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -20\text{A}; I_B = -80\text{mA}$			-2.0	V	
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -20\text{A}; V_{CE} = -3\text{V}$			-2.5	V	
$I_{CBO}$	Collector Cutoff Current	BDX68	$V_{CB} = -80\text{V}; I_E = 0$ $V_{CB} = -40\text{V}; I_E = 0; T_C = 200^\circ\text{C}$			mA	
		BDX68A		$V_{CB} = -100\text{V}; I_E = 0$ $V_{CB} = -50\text{V}; I_E = 0; T_C = 200^\circ\text{C}$	-2.0		-10
		BDX68B		$V_{CB} = -120\text{V}; I_E = 0$ $V_{CB} = -60\text{V}; I_E = 0; T_C = 200^\circ\text{C}$	-2.0		-10
		BDX68C		$V_{CB} = -140\text{V}; I_E = 0$ $V_{CB} = -70\text{V}; I_E = 0; T_C = 200^\circ\text{C}$	-2.0		-10
$I_{CEO}$	Collector Cutoff Current	BDX68	$V_{CE} = -30\text{V}; I_B = 0$			mA	
		BDX68A		$V_{CE} = -40\text{V}; I_B = 0$			
		BDX68B		$V_{CE} = -50\text{V}; I_B = 0$			
		BDX68C		$V_{CE} = -60\text{V}; I_B = 0$			
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-10	mA	
$h_{FE-1}$	DC Current Gain	$I_C = -5\text{A}; V_{CE} = -3\text{V}$		3000			
$h_{FE-2}$	DC Current Gain	$I_C = -20\text{A}; V_{CE} = -3\text{V}$	1000				
$h_{FE-3}$	DC Current Gain	$I_C = -30\text{A}; V_{CE} = -3\text{V}$		1000			
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}; f_{test} = 1.0\text{MHz}$		600		pF	