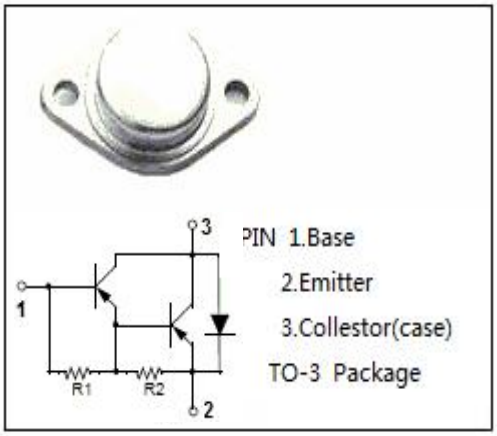
isc Silicon PNP Darlington Power Transistor — BDX68/A/B/C

DESCRIPTION

- High DC Current Gain-
  : h_{FE}= 1000(Min)@ I_C= -20A
- Low Saturation Voltage
- Complement to Type BDX69/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

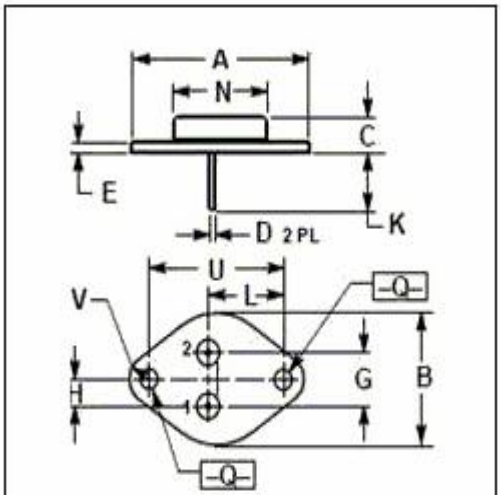


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃		150	W
T_J	Junction Temperature		200	℃
T_{stg}	Storage Temperature Range		-65~200	℃



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.875	℃/W

isc Silicon PNP Darlington Power Transistor BDX68/A/B/C

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BDX68	I_C= -50mA; L= 25mH	-60			V
		BDX68A		-80			
		BDX68B		-100			
		BDX68C		-120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		I_C= -20A; I_B= -80mA			-2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C= -20A; V_{CE}= -3V			-2.5	V
I_{CBO}	Collector Cutoff Current	BDX68	V_{CB}= -80V; I_E= 0 V_{CB}= -40V; I_E= 0; T_C=200℃			-2.0 -10	mA
		BDX68A	V_{CB}= -100V; I_E= 0 V_{CB}= -50V; I_E= 0; T_C=200℃			-2.0 -10	
		BDX68B	V_{CB}= -120V; I_E= 0 V_{CB}= -60V; I_E= 0; T_C=200℃			-2.0 -10	
		BDX68C	V_{CB}= -140V; I_E= 0 V_{CB}= -70V; I_E= 0; T_C=200℃			-2.0 -10	
I_{CEO}	Collector Cutoff Current	BDX68	V_{CE}= -30V; I_B= 0			-6.0	mA
		BDX68A	V_{CE}= -40V; I_B= 0				
		BDX68B	V_{CE}= -50V; I_B= 0				
		BDX68C	V_{CE}= -60V; I_B= 0				
I_{EBO}	Emitter Cutoff Current		V_{EB}= -5V; I_C= 0			-10	mA
h_{FE-1}	DC Current Gain		I_C= -5A; V_{CE}= -3V		3000		
h_{FE-2}	DC Current Gain		I_C= -20A; V_{CE}= -3V	1000			
h_{FE-3}	DC Current Gain		I_C= -30A; V_{CE}= -3V		1000		
C_{OB}	Output Capacitance		I_E= 0 ; V_{CB}= -10V, f_{test}= 1.0MHz		600		pF