

isc Silicon PNP Darlington Power Transistor

BDX66/A/B/C

DESCRIPTION

- Collector Current $-I_C = -16A$
- High DC Current Gain $-h_{FE} = 1000(\text{Min}) @ I_C = -10A$
- Complement to Type BDX67/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

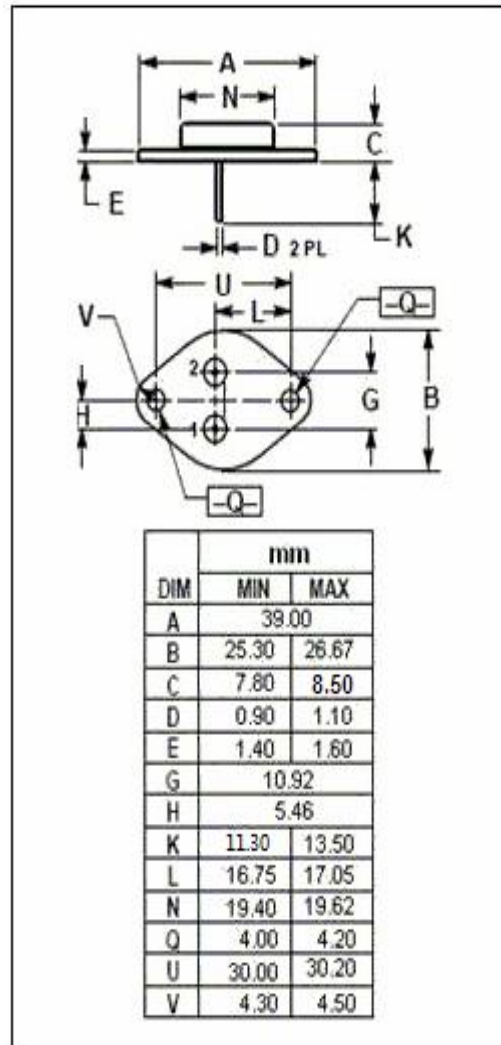
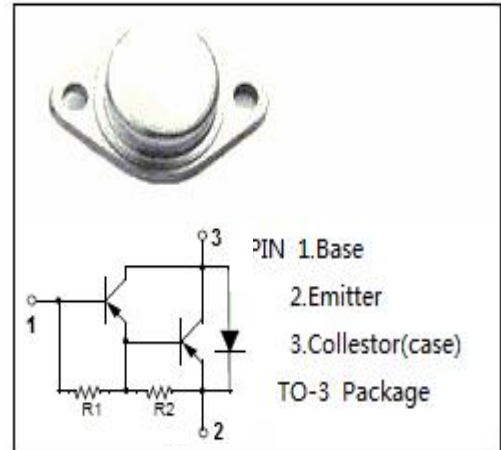
- Designed for audio output stages and general amplifier and switching applications

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ C$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDX66	-80
		BDX66A	-100
		BDX66B	-120
		BDX66C	-140
V_{CEO}	Collector-Emitter Voltage	BDX66	-60
		BDX66A	-80
		BDX66B	-100
		BDX66C	-120
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-16	A
I_{CM}	Collector Current-Peak	-20	A
I_B	Base Current-Continuous	-0.25	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ C$	150	W
T_J	Junction Temperature	200	$^\circ C$
T_{stg}	Storage Temperature Range	-55~200	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.17	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	BDX66	I _C = -50mA ;I _B =0	-60			V
		BDX66A		-80			
		BDX66B		-100			
		BDX66C		-120			
V _{CE(sat)}	Collector-Emitter Saturation Voltage		I _C = -10A; I _B = -40mA			-2	V
V _{BE(on)}	Base-Emitter On Voltage		I _C = -10A ; V _{CE} = -3V			-2.5	V
V _{ECF}	C-E Diode Forward Voltage		I _F = -10A		-2		V
I _{CEO}	Collector Cutoff Current		V _{CE} = 1/2V _{CEOmax} ; I _B = 0			-1	mA
I _{CBO}	Collector Cutoff Current	BDX66	V _{CB} = -40V;I _E = 0;T _J = 150℃			-5	mA
		BDX66A	V _{CB} = -50V;I _E = 0;T _J = 150℃				
		BDX66B	V _{CB} = -60V;I _E = 0;T _J = 150℃				
		BDX66C	V _{CB} = -70V;I _E = 0;T _J = 150℃				
I _{CBO}	Collector Cutoff Current		V _{CB} = V _{CB0max} ;I _E = 0			-1	mA
I _{EBO}	Emitter Cutoff Current		V _{EB} = -5V; I _C =0			-5	mA
h _{FE-1}	DC Current Gain		I _C = -1A ; V _{CE} = -3V		2000		
h _{FE-2}	DC Current Gain		I _C = -10A ; V _{CE} = -3V	1000			
h _{FE-3}	DC Current Gain		I _C = -16A ; V _{CE} = -3V		1000		
C _{OB}	Output Capacitance		I _E = 0 ; V _{CB} = -10V; f _{test} = 1MHz		300		pF
Switching times							
t _{on}	Turn-on Time		I _C = -10A; I _{B1} = -I _{B2} = -40mA		1		μ s
t _{off}	Turn-off Time				3.5		μ s

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