

isc Silicon PNP Darlington Power Transistor

BDX64/A/B/C

DESCRIPTION

- Collector Current $-I_C = -12A$
- High DC Current Gain $-h_{FE} = 1000(\text{Min}) @ I_C = -5A$
- Complement to Type BDX65/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

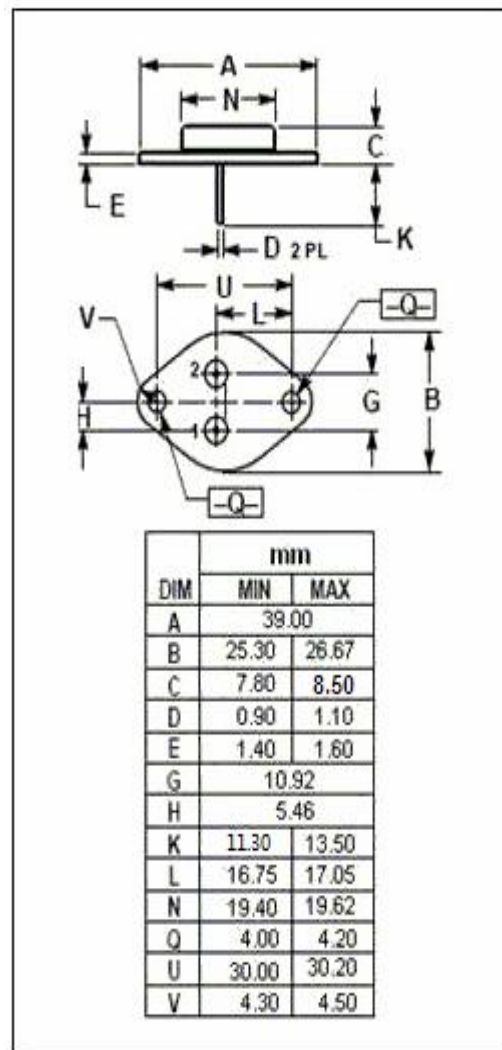
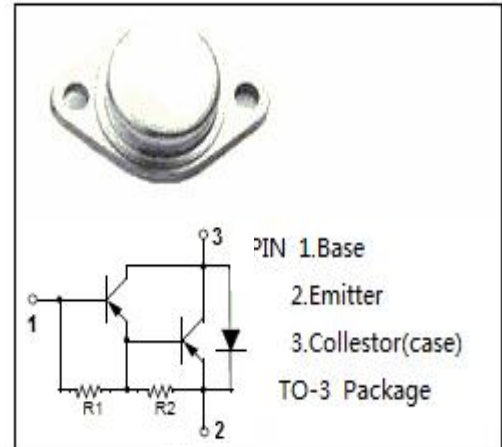
- Designed for audio output stages and general amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CBO}	Collector-Base Voltage	BDX64	-80	V
		BDX64A	-100	
		BDX64B	-120	
		BDX64C	-140	
V_{CEO}	Collector-Emitter Voltage	BDX64	-60	V
		BDX64A	-80	
		BDX64B	-100	
		BDX64C	-120	
V_{EBO}	Emitter-Base Voltage	-5	V	
I_C	Collector Current-Continuous	-12	A	
I_{CM}	Collector Current-Peak	-16	A	
I_B	Base Current-Continuous	-0.2	A	
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	117	W	
T_J	Junction Temperature	200	$^\circ\text{C}$	
T_{stg}	Storage Temperature Range	-55~200	$^\circ\text{C}$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.5	$^\circ\text{C}/\text{W}$



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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	BDX64	-60			V	
		BDX64A	-80				
		BDX64B	-100				
		BDX64C	-120				
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -5A; I _B = -20mA			-2	V	
V _{BE(on)}	Base-Emitter On Voltage	I _C = -5A; V _{CE} = -3V			-2.5	V	
V _{ECF}	C-E Diode Forward Voltage	I _F = -5A			-1.8	V	
I _{CEO}	Collector Cutoff Current	V _{CE} = 1/2V _{CE0max} ; I _B = 0			-0.2	mA	
I _{CBO}	Collector Cutoff Current	V _{CB} = V _{CB0max} ; I _E = 0			-0.4	mA	
I _{CBO}	Collector Cutoff Current	BDX64	V _{CB} = -40V; I _E = 0; T _J = 150°C			-2	mA
		BDX64A	V _{CB} = -50V; I _E = 0; T _J = 150°C				
		BDX64B	V _{CB} = -60V; I _E = 0; T _J = 150°C				
		BDX64C	V _{CB} = -70V; I _E = 0; T _J = 150°C				
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		1500			
h _{FE-2}	DC Current Gain	I _C = -5A; V _{CE} = -3V	1000				
h _{FE-3}	DC Current Gain	I _C = -12A; V _{CE} = -3V		750			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = -10V; f _{test} = 1MHz		200		pF	
Switching times							
t _{on}	Turn-on Time	I _C = -5A; I _{B1} = -I _{B2} = -20mA		1		μs	
t _{off}	Turn-off Time			2.5		μs	

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