

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

APPLICATIONS

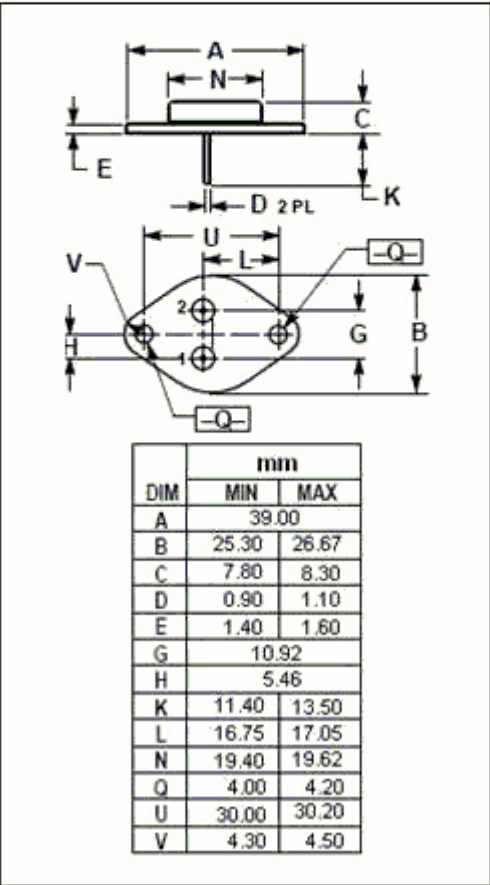
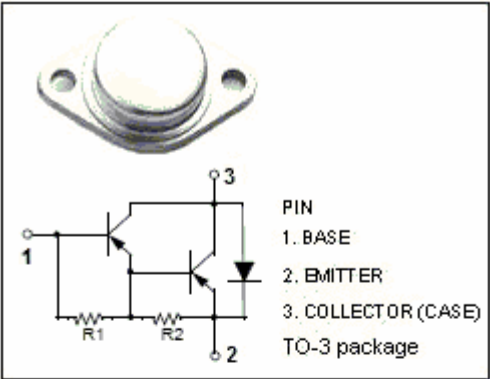
- Designed for audio output stages and general amplifier and switching applications

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

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	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 @ $T_C = 25^{\circ}C$		117	W
T_J	Junction Temperature		200	$^{\circ}C$
T_{stg}	Storage Temperature Range		-65~200	$^{\circ}C$

THERMAL CHARACTERISTICS

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



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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	BDX64	$I_C = -100\text{mA}; I_B = 0$	-60			V
		BDX64A		-80			
		BDX64B		-100			
		BDX64C		-120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		$I_C = -5\text{A}; I_B = -20\text{mA}$			-2	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C = -5\text{A}; V_{CE} = -3\text{V}$			-2.5	V
V_{ECF}	C-E Diode Forward Voltage		$I_F = -5\text{A}$			-1.8	V
I_{CEO}	Collector Cutoff Current		$V_{CE} = \frac{1}{2}V_{CE0max}; I_B = 0$			-0.2	mA
I_{CBO}	Collector Cutoff Current		$V_{CB} = V_{CB0max}; I_E = 0$			-0.4	mA
I_{CBO}	Collector Cutoff Current	BDX64	$V_{CB} = -40\text{V}; I_E = 0; T_J = 200^{\circ}\text{C}$			-3	mA
		BDX64A	$V_{CB} = -50\text{V}; I_E = 0; T_J = 200^{\circ}\text{C}$				
		BDX64B	$V_{CB} = -60\text{V}; I_E = 0; T_J = 200^{\circ}\text{C}$				
		BDX64C	$V_{CB} = -70\text{V}; I_E = 0; T_J = 200^{\circ}\text{C}$				
I_{EBO}	Emitter Cutoff Current		$V_{EB} = -5\text{V}; I_C = 0$			-5	mA
h_{FE-1}	DC Current Gain		$I_C = -1\text{A}; V_{CE} = -3\text{V}$		1500		
h_{FE-2}	DC Current Gain		$I_C = -5\text{A}; V_{CE} = -3\text{V}$	1000			
h_{FE-3}	DC Current Gain		$I_C = -12\text{A}; V_{CE} = -3\text{V}$		750		
C_{OB}	Output Capacitance		$I_E = 0; V_{CB} = -10\text{V}; f_{test} = 1\text{MHz}$		200		pF

Switching times

t_{on}	Turn-on Time	$I_C = -5\text{A}; I_{B1} = -I_{B2} = -20\text{mA}$		1		μs
t_{off}	Turn-off Time			2.5		μs