

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Darlington Power Transistor

BDX67/A/B/C

DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = 10A$
- Low Saturation Voltage
- Complement to Type BDX66/A/B/C

APPLICATIONS

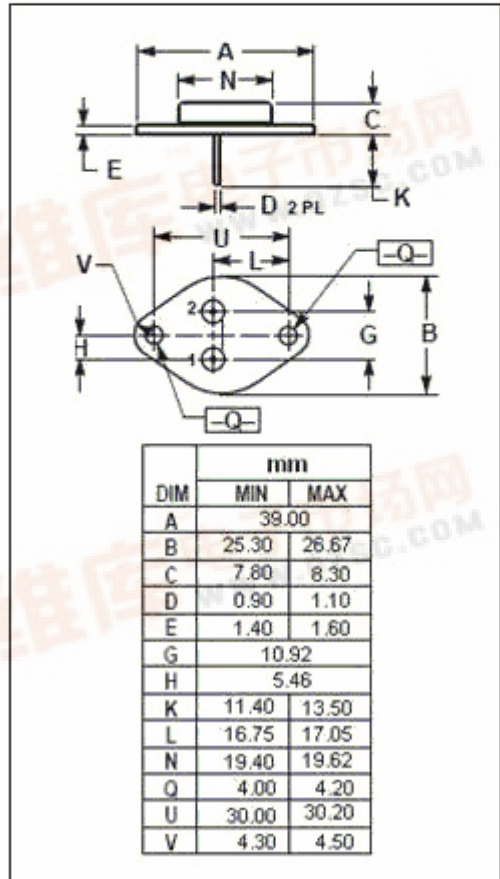
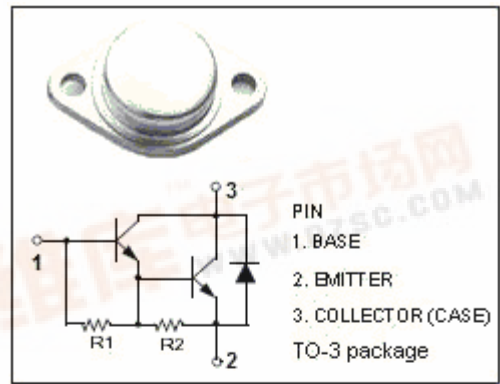
- Designed for audio output stages and general amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDX67	80
		BDX67A	100
		BDX67B	120
		BDX67C	140
V_{CEO}	Collector-Emitter Voltage	BDX67	60
		BDX67A	80
		BDX67B	100
		BDX67C	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	250	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	1.17	$^\circ\text{C/W}$



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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	BDX67	$I_C=100\text{mA}; L=25\text{mH}$			V	
		BDX67A					
		BDX67B					
		BDX67C					
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=40\text{mA}$			2.0	V	
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=10\text{A}; V_{CE}=3\text{V}$			2.5	V	
I_{CBO}	Collector Cutoff Current	BDX67	$V_{CB}=80\text{V}; I_E=0$ $V_{CB}=80\text{V}; I_E=0; T_C=150^\circ\text{C}$			1.0 5.0	mA
		BDX67A	$V_{CB}=100\text{V}; I_E=0$ $V_{CB}=100\text{V}; I_E=0; T_C=150^\circ\text{C}$			1.0 5.0	
		BDX67B	$V_{CB}=120\text{V}; I_E=0$ $V_{CB}=120\text{V}; I_E=0; T_C=150^\circ\text{C}$			1.0 5.0	
		BDX67C	$V_{CB}=140\text{V}; I_E=0$ $V_{CB}=140\text{V}; I_E=0; T_C=150^\circ\text{C}$			1.0 5.0	
I_{CEO}	Collector Cutoff Current	$V_{CE}=1/2V_{CEO(Max)}; I_B=0$			1.0	mA	
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			5.0	mA	
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=3\text{V}$		5200			
h_{FE-2}	DC Current Gain	$I_C=10\text{A}; V_{CE}=3\text{V}$	1000				
h_{FE-3}	DC Current Gain	$I_C=16\text{A}; V_{CE}=3\text{V}$		4000			
V_{ECF}	C-E Diode Forward Voltage	$I_F=10\text{A}$		2.5		V	
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}, f_{test}=1.0\text{MHz}$		300		pF	

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