

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

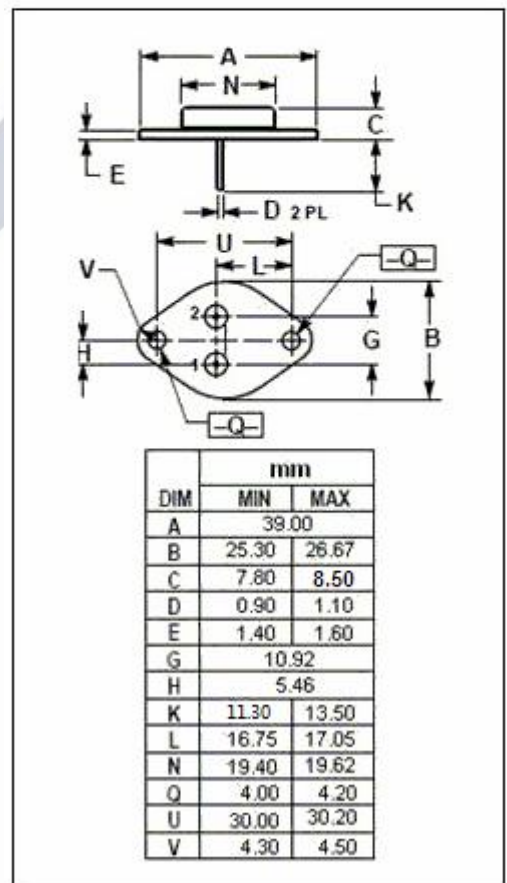
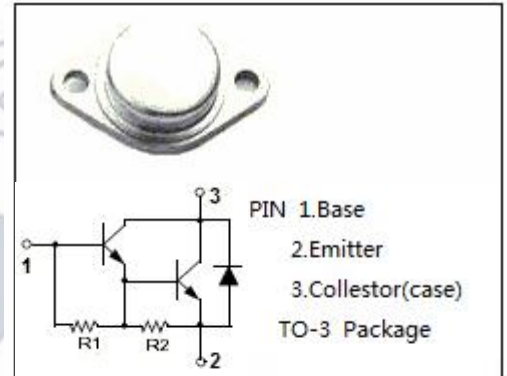
- Designed for audio output stages and general amplifier and switching applications

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

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



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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	$I_C=50\text{mA}; L=25\text{mH}$	60			V
		BDX67A		80			
		BDX67B		100			
		BDX67C		120			
$V_{CE(sat)}$	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		$V_{CE}=1/2V_{CEO}(\text{Max}); I_B=0$			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		$I_E=0; V_{CB}=10\text{V}, f_{\text{test}}=1.0\text{MHz}$		300		pF