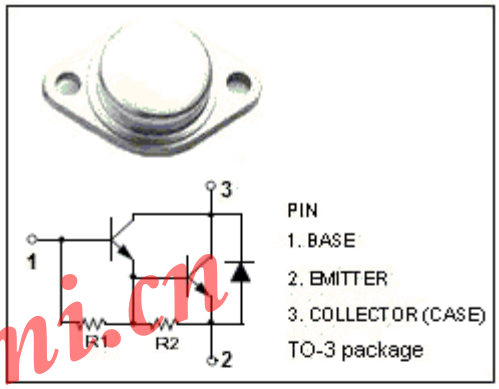
isc Silicon NPN Darlington Power Transistor BDX87/A/B/C

DESCRIPTION

- High DC Current Gain-
  : h_{FE}= 750(Min)@ I_C= 6A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 45V(Min)- BDX87; 60V(Min)- BDX87A
  80V(Min)- BDX87B; 100V(Min)- BDX87C
- Complement to Type BDX88/A/B/C

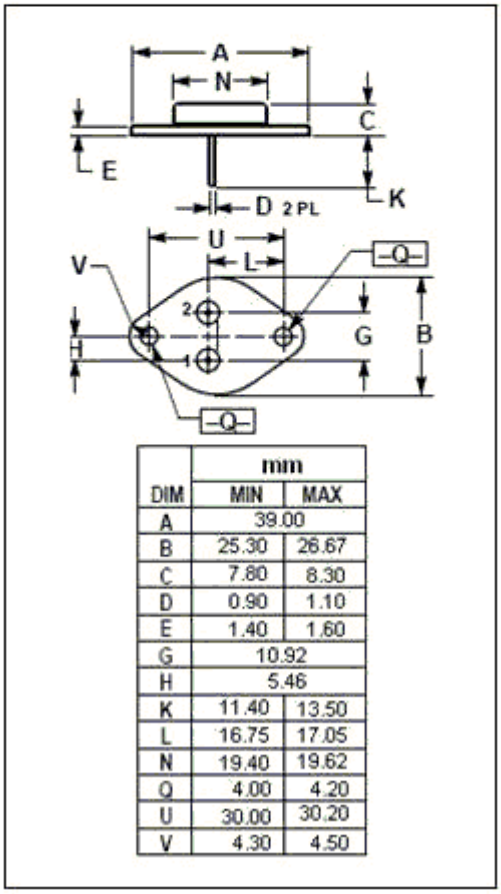
APPLICATIONS

- Designed for use in power linear and switching applications.



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDX87	45	V
		BDX87A	60	
		BDX87B	80	
		BDX87C	100	
V_{CEO}	Collector-Emitter Voltage	BDX87	45	V
		BDX87A	60	
		BDX87B	80	
		BDX87C	100	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current-Continuous		12	A
I_{CM}	Collector Current-Peak		18	A
I_B	Base Current		200	mA
P_C	Collector Power Dissipation @ T_C=25℃		120	W
T_J	Junction Temperature		200	℃
T_{stg}	Storage Temperature Range		-65~200	℃



DIM	mm	
	MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.45	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BDX87	I_C= 100mA; I_B= 0	45			V
		BDX87A		60			
		BDX87B		80			
		BDX87C		100			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		I_C= 6A; I_B= 24mA			2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		I_C= 12A; I_B= 120mA			3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		I_C= 12A; I_B= 120mA			4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C= 6A; V_{CE}= 3V			2.8	V
I_{CBO}	Collector Cutoff Current	BDX87	V_{CB}= 45V; I_E= 0 V_{CB}= 45V; I_E= 0; T_C= 150℃			0.5 5.0	mA
		BDX87A	V_{CB}= 60V; I_E= 0 V_{CB}= 60V; I_E= 0; T_C= 150℃			0.5 5.0	
		BDX87B	V_{CB}= 80V; I_E= 0 V_{CB}= 80V; I_E= 0; T_C= 150℃			0.5 5.0	
		BDX87C	V_{CB}= 100V; I_E= 0 V_{CB}= 100V; I_E= 0; T_C= 150℃			0.5 5.0	
I_{CEO}	Collector Cutoff Current	BDX87	V_{CE}= 22V; I_B= 0			1.0	mA
		BDX87A	V_{CE}= 30V; I_B= 0				
		BDX87B	V_{CE}= 40V; I_B= 0				
		BDX87C	V_{CE}= 50V; I_B= 0				
I_{EBO}	Emitter Cutoff Current		V_{EB}= 5V; I_C= 0			2.0	mA
h_{FE-1}	DC Current Gain		I_C= 5A; V_{CE}= 3V	1000			
h_{FE-2}	DC Current Gain		I_C= 6A; V_{CE}= 3V	750		18000	
h_{FE-3}	DC Current Gain		I_C= 12A; V_{CE}= 3V	100			