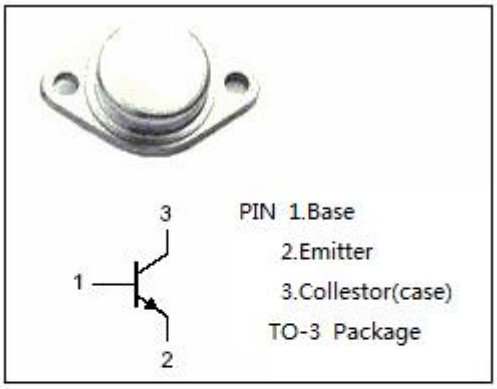
isc Silicon NPN Power Transistor BDX12

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 120V (Min)
- Excellent Safe Operating Area
- Low Collector-Emitter Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.



APPLICATIONS

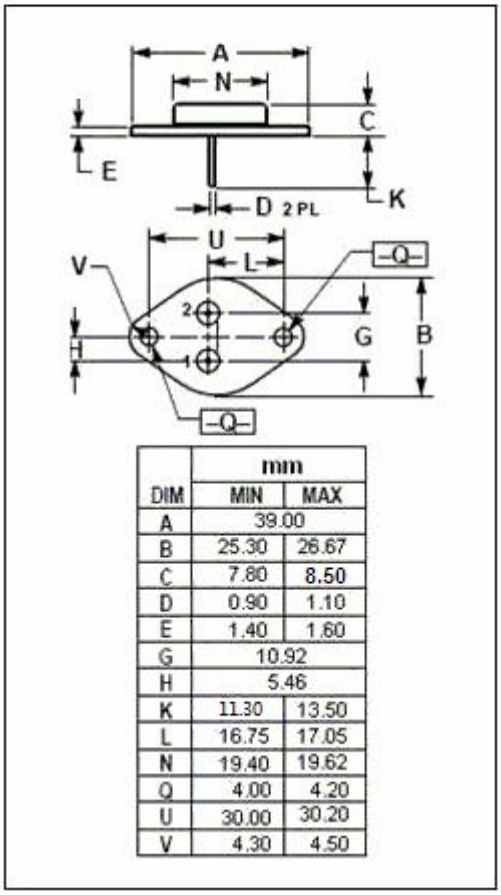
- Designed for application in industrial and commercial equipment including high fidelity audio amplifier,series and shunt regulators and power switches

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	140	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	5	A
P_C	Collector Power Dissipation@T_C=25℃	100	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.75	℃/W



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$*	Collector-Emitter Sustaining Voltage	I_C=50mA; I_B= 0	120		V
I_{CBO}	Collector Cutoff Current	V_{CB}=140V ; I_E= 0		0.1	mA
I_{CEO}	Collector Cutoff Current	V_{CE}=120V;I_B= 0		0.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0		0.1	mA
$V_{CE(sat)-1}$*	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 200mA		1.0	V
$V_{CE(sat)-2}$*	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 500mA		2.0	V
$V_{BE(ON)-1}$*	Base-Emitter On Voltage	I_C=2A;V_{CE}= 4V		2.0	V
$V_{BE(ON)-2}$*	Base-Emitter On Voltage	I_C=5A;V_{CE}= 4V		3.0	V
h_{FE-1}*	DC Current Gain	I_C=2A; V_{CE}= 4V	20	70	
h_{FE-2}*	DC Current Gain	I_C= 5A; V_{CE}= 4V	10		

*:Pulse test:Pulse width=300us,duty cycle≤2%