

isc Silicon NPN Power Transistor

BDX24

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 40V$ (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

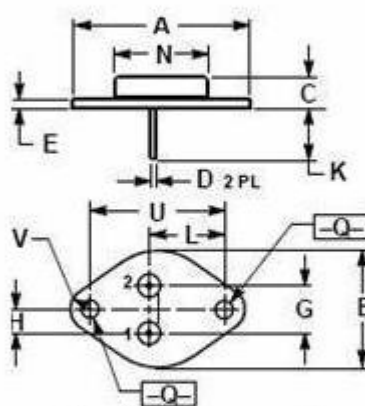
- Designed for general purpose switching and amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	4	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation@ $T_C=25^{\circ}C$	29	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-65~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	7.0	$^{\circ}C/W$



DIM	mm	
	MIN	MAX
A	31.40	31.80
B	17.30	17.90
C	6.70	7.10
D	0.70	0.90
E	1.40	1.80
G	5.08	
H	2.54	
K	9.80	10.50
L	14.70	14.90
N	12.40	12.70
Q	3.60	3.80
U	24.30	24.50
V	3.50	3.70

isc Silicon NPN Power Transistor**BDX24****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	40		V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 0.5A; I _B = 50mA		1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 1A		3.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 0.5A; V _{CE} = 4V		1.7	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 40V; I _B = 0		0.5	mA
I _{CBO}	Collector Cutoff Current	V _{CB} =50V ; I _E = 0		0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0		0.1	mA
h _{FE-1}	DC Current Gain	I _C = 0.5A ; V _{CE} = 4V	25	100	
h _{FE-2}	DC Current Gain	I _C = 3A; V _{CE} = 4V	5		
f _T	Current Gain-Bandwidth Product	I _C = 0.2A; V _{CE} = 10V; f=1.0MHz	3		MHz

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