

isc Silicon NPN Power Transistor

BDY71

DESCRIPTION

- Continuous Collector Current- $I_C = 4A$
- Collector Power Dissipation-
: $P_C = 29W @ T_C = 25^\circ C$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

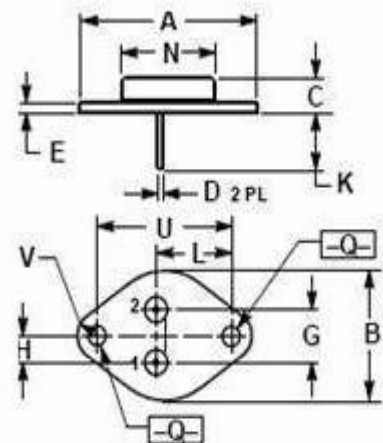
- Designed for general purpose switching and amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	90	V
V_{CEX}	Collector-Emitter Voltage $V_{BE} = -1.5V$	90	V
V_{CER}	Collector-Emitter Voltage $R_{BE} = 100 \Omega$	60	V
V_{CEO}	Collector-Emitter Voltage	55	V
V_{EBO}	Emitter-Base Voltage	7	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	200	$^\circ C$
T_{stg}	Storage Temperature	-65~200	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	6.0	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	31.40	31.80
B	17.30	17.70
C	6.70	7.10
D	0.70	0.90
E	1.40	1.60
G	5.08	
H	2.54	
K	9.80	10.20
L	14.70	14.90
N	12.40	12.60
Q	3.60	3.80
U	24.30	24.50
V	3.50	3.70

isc Silicon NPN Power Transistor**BDY71****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 30mA; I _B = 0	55		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	7		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 0.5A; I _B = 50mA		1.0	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} = 30V; I _B = 0		0.5	mA
I _{CEV}	Collector Cutoff Current	V _{CE} = 90V; V _{BE(off)} = 1.5V V _{CE} = 30V; V _{BE(off)} = 1.5V, T _C =150°C		1.0 5.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0		1.0	mA
h _{FE}	DC Current Gain	I _C = 0.5A ; V _{CE} = 4V	80	200	
f _T	Current Gain-Bandwidth Product	I _C = 0.2A; V _{CE} = 10V	0.8		MHz

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