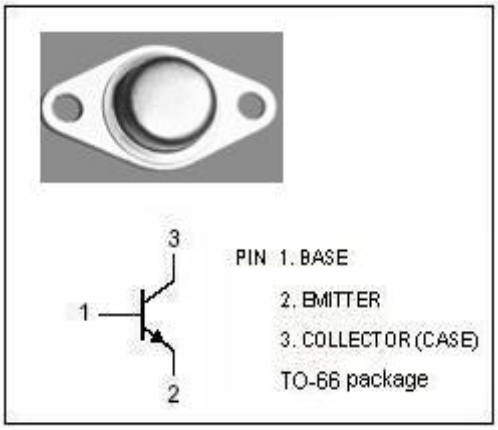
isc Silicon NPN Power Transistor — BDY72

DESCRIPTION

- Contunuous Collector Current-I_C= 3A
- Collector Power Dissipation-
  : P_C= 25W @T_C= 25℃

Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)}$= 120V(Min)

- Minimum Lot-to-Lot variations for robust device performance and reliable operation

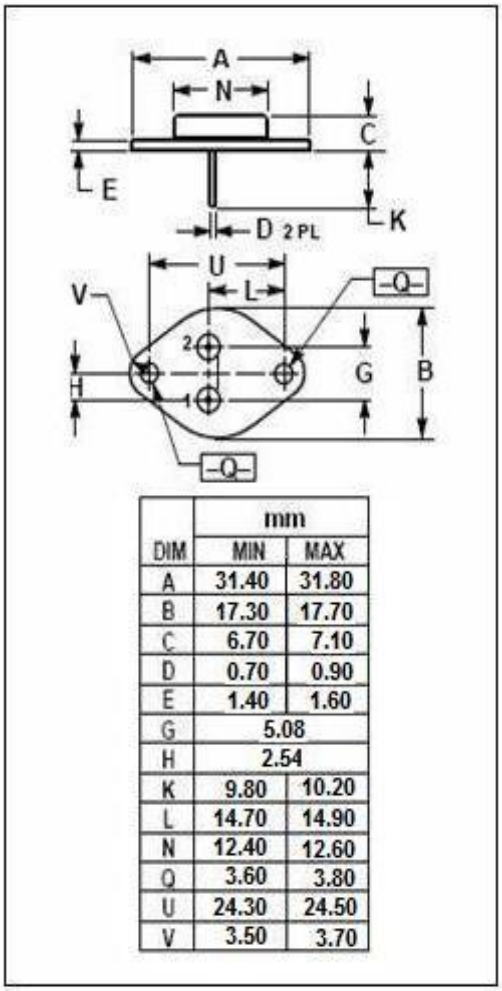


APPLICATIONS

- Designed for use in general purpose switching and linear amplifier applications requiring high breakdown voltages.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{CEX}	Collector-Emitter Voltage V_{BE}= -1.5V	150	V
V_{CER}	Collector-Emitter Voltage R_{BE}= 100Ω	130	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation@T_C=25℃	25	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃



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

THERMAL CHARACTERISTICS

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

isc Silicon NPN Power Transistor BDY72

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA; I_B= 0	120		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}= 140V; I_B= 0		1	mA
I_{CEX}	Collector Cutoff Current	V_{CE}= 130V; $V_{BE(off)}$= 1.5V V_{CE}= 130V; $V_{BE(off)}$= 1.5V, T_C=150℃		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	60	180	
f_T	Current Gain-Bandwidth Product	I_C= 0.2A; V_{CE}= 10V	0.8		MHz