

**isc Silicon NPN Power Transistor**
**BDY72**
**DESCRIPTION**

- Continuous Collector Current- $I_C = 3A$
- Collector Power Dissipation-  
:  $P_C = 25W @ T_C = 25^\circ C$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 120V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

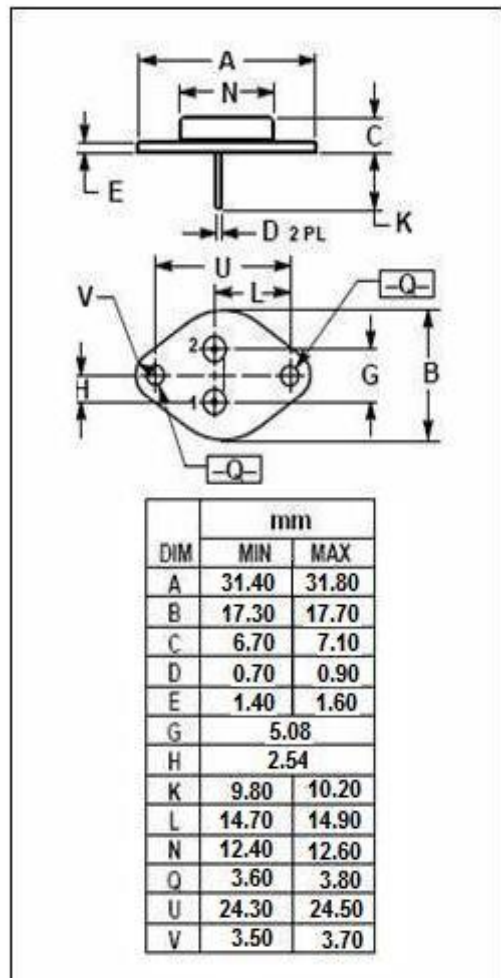
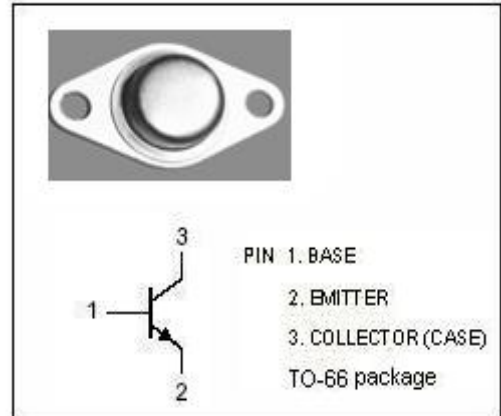
- Designed for use in general purpose switching and linear amplifier applications requiring high breakdown voltages.

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

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 $R_{BE} = 100\Omega$	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@ $T_C = 25^\circ C$	25	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	7.0	$^\circ C/W$



**isc Silicon NPN Power Transistor****BDY72****ELECTRICAL CHARACTERISTICS**T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 30mA; I <sub>B</sub> = 0	120		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 0.5A; I <sub>B</sub> = 50mA		1.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 4V		1.7	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 140V; I <sub>B</sub> = 0		1	mA
I <sub>CEx</sub>	Collector Cutoff Current	V <sub>CE</sub> = 130V; V <sub>BE(off)</sub> = 1.5V V <sub>CE</sub> = 130V; V <sub>BE(off)</sub> = 1.5V, T <sub>C</sub> =150°C		1.0 5.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> = 0		1.0	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 4V	60	180	
f <sub>T</sub>	Current Gain-Bandwidth Product	I <sub>C</sub> = 0.2A; V <sub>CE</sub> = 10V	0.8		MHz

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