

isc Silicon NPN Power Transistor
BDY74
DESCRIPTION

- Excellent Safe Operating Area
- Collector-Emitter Sustaining Voltage-
: $V_{CE(SUS)} = 120V(\text{Min.})$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 3A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

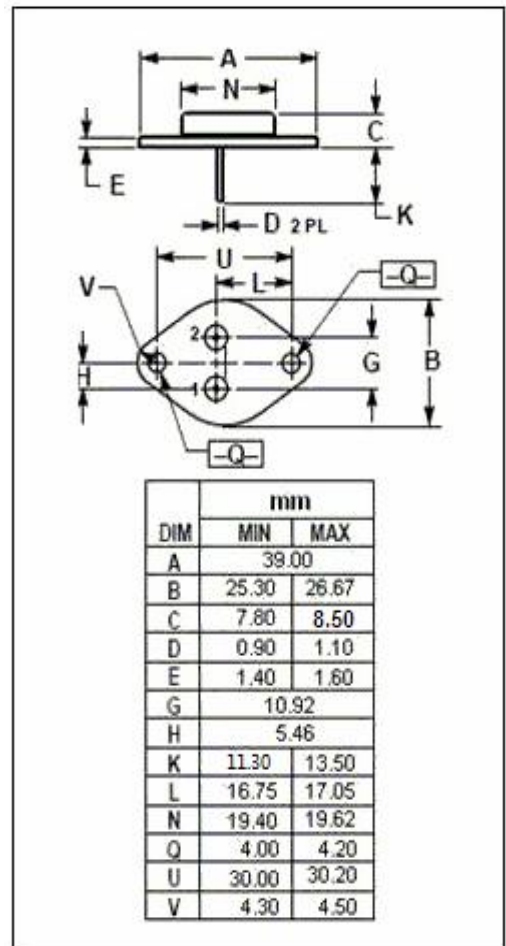
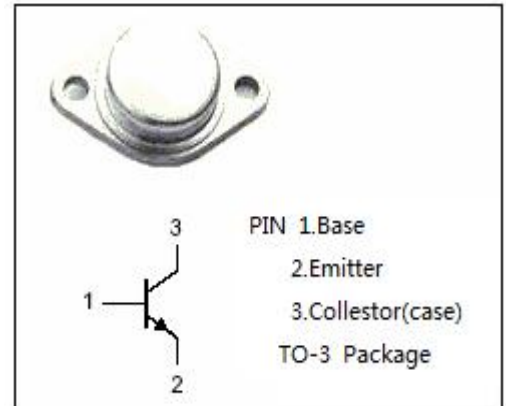
- Designed for use in industrial and commercial equipment including high fidelity audio amplifiers, series and shunt regulators and power switches.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CP}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	7	A
P_C	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	117	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.5	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C 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 _{CEX(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 100mA; V _{BE} = -1.5V	150		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 0.3A		1.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 3A; V _{CE} = 4V		1.7	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 130V; I _E = 0		1.0	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°C		1.0 10	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0		5.0	mA
h _{FE}	DC Current Gain	I _C = 3A; V _{CE} = 4V	50	150	
f _T	Current Gain-Bandwidth Product	I _C = 1A; V _{CE} = 10V	0.8		MHz

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