

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-
: $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 3A$

APPLICATIONS

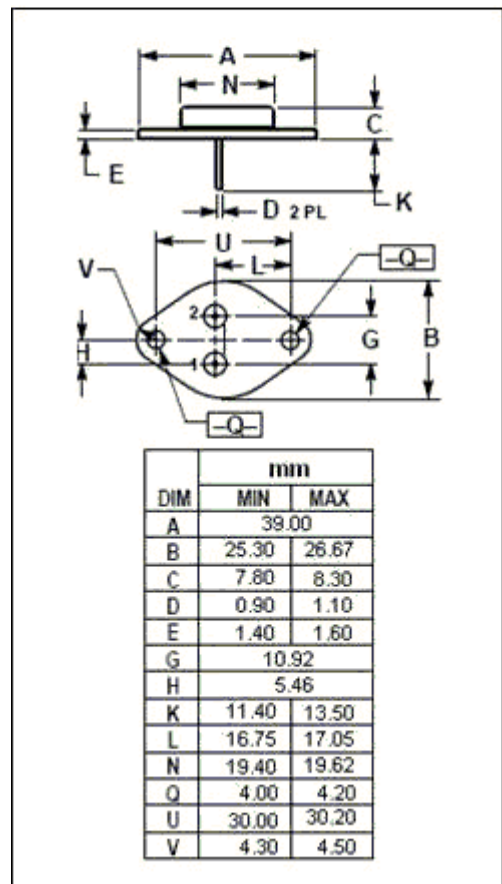
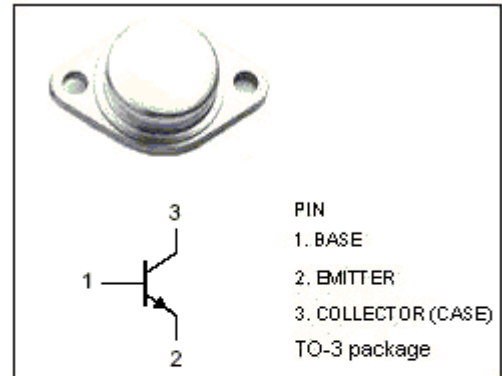
- Designed for use in industrial and commercial equipment including high fidelity audio amplifiers, series and shunt regulators and power switches.

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	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**BDY74****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}$; $I_B=0$; $L=25\text{mH}$	120		V
$V_{CEX(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}$; $V_{BE}=-1.5\text{V}$	150		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}$; $I_B=0.3\text{A}$		1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=3\text{A}$; $V_{CE}=4\text{V}$		1.7	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=130\text{V}$; $I_E=0$		1.0	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}=130\text{V}$; $V_{BE(off)}=1.5\text{V}$ $V_{CE}=130\text{V}$; $V_{BE(off)}=1.5\text{V}$, $T_C=150^{\circ}\text{C}$		1.0 10	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}$; $I_C=0$		5.0	mA
h_{FE}	DC Current Gain	$I_C=3\text{A}$; $V_{CE}=4\text{V}$	50	150	
f_T	Current Gain-Bandwidth Product	$I_C=1\text{A}$; $V_{CE}=10\text{V}$	0.8		MHz