

isc Silicon NPN Power Transistor

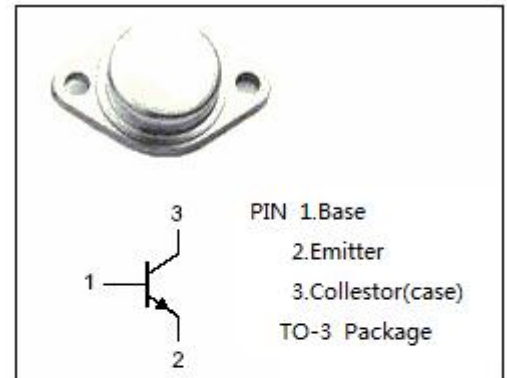
BDY77

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120V$ (Min)
- Low Collector-Emitter Saturation Voltage
- Excellent Safe Operating Area
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

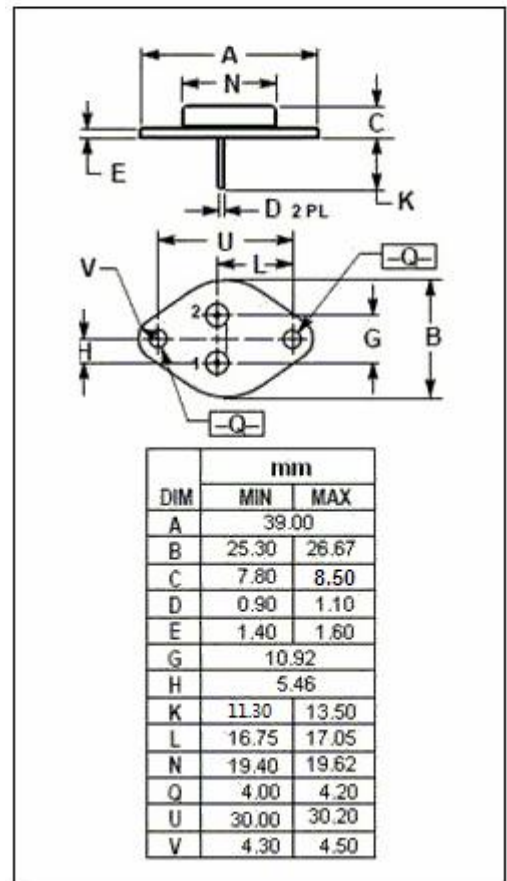
APPLICATIONS

- Designed for high power audio, disk head positioners, linear amplifiers, switching regulators, solenoid drivers, and DC-DC converters or inverters.



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_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	16	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	4	A
P_C	Collector Power Dissipation @ $T_c=25^\circ C$	150	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-65~150	$^\circ C$



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.17	$^\circ C/W$

isc Silicon NPN Power Transistor**BDY77****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}$; $I_B= 0$	120		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 8\text{A}$; $I_B= 0.8\text{A}$		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 16\text{A}$; $I_B= 3.2\text{A}$		2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 8\text{A}$; $V_{CE}= 2\text{V}$		2.0	V
I_{CEO}	Collector Cutoff Current	$V_{CE}= 120\text{V}$; $I_B= 0$		0.5	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}= 150\text{V}$; $V_{BE(off)}= 1.5\text{V}$		2.0	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}= 150\text{V}$; $I_E= 0$		0.2	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 7\text{V}$; $I_C= 0$		0.1	mA
h_{FE-1}	DC Current Gain	$I_C= 8\text{A}$; $V_{CE}= 4\text{V}$	40	120	
h_{FE-2}	DC Current Gain	$I_C= 16\text{A}$; $V_{CE}= 4\text{V}$	10		

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