

isc Silicon NPN Power Transistor

MJ3771

DESCRIPTION

- High DC Current Gain
- Wide Area of Safe Operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

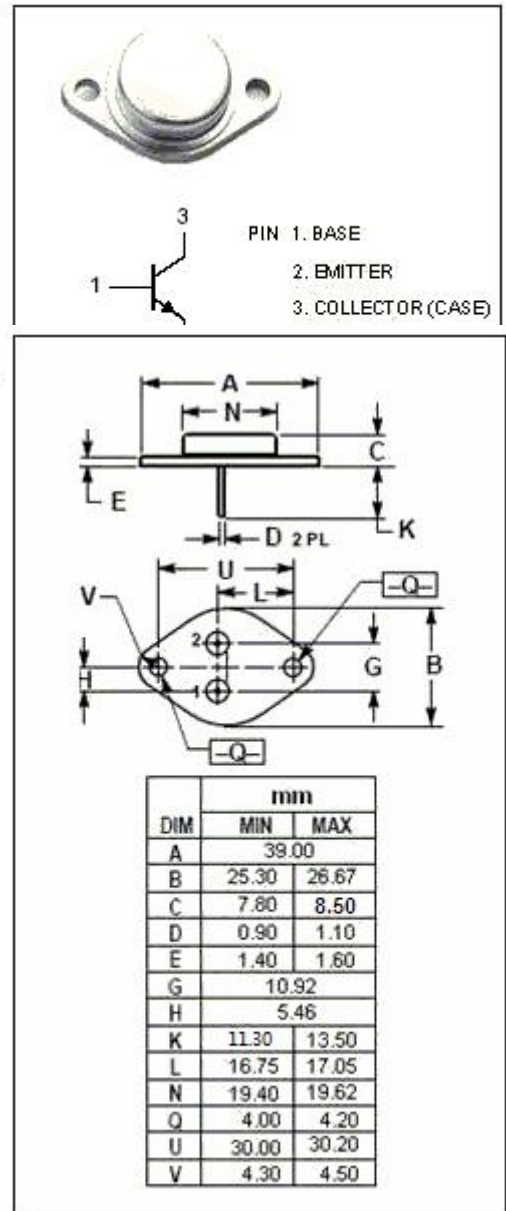
- Designed for power amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	30	A
I_B	Base Current-Continuous	7.5	A
P_D	Total Power Dissipation@ $T_c=25^{\circ}\text{C}$	200	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	0.875	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistor**MJ3771****ELECTRICAL CHARACTERISTICS****T_j=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA ; I _B = 0	50		V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 15A; I _B = 1.5A		1	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 30A; I _B = 6A		4	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 15A ; V _{CE} = 4V		1.7	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V; I _E =0		0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0		0.1	mA
h _{FE-1}	DC Current Gain	I _C = 15A ; V _{CE} = 4V	15	60	
h _{FE-2}	DC Current Gain	I _C =30A ; V _{CE} = 4V	5		

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