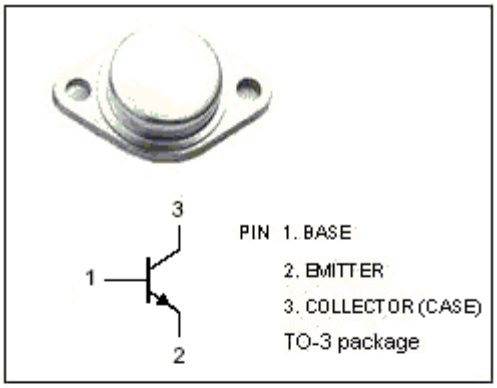
isc Silicon NPN Power Transistor MJ3771

DESCRIPTION

- Low Collector-Emitter Saturation Voltage-
  Vce(sat)=1V(Max)@Ic=15A
- Low Leakage -
  Icbo=1mA(max)@50V
- High Current-Gain-Bandwidth Product-
  f_T=2MHz(min)@Ic=1A

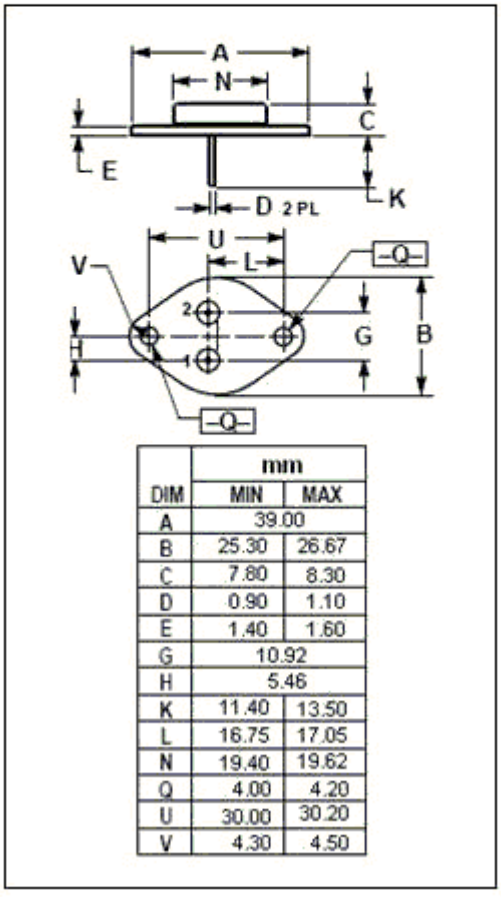


APPLICATIONS

- Designed for power amplifier and switching applications.
- For ultimate circuit performance based on the design requirements.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Base 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_C	Collector Power Dissipation@T_C=25℃	200	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature Range	-65~200	℃



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.875	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C=0.2A; I_B= 0	40			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_{CEX}	Collector Cutoff Current	V_{CE}=50V; $V_{BE(off)}$=1.5V V_{CE}=30V; $V_{BE(off)}$=1.5V, Tc=150℃			1 2	mA
I_{CBO}	Collector Cutoff Current	V_{CE}=50V; I_E= 0			1	mA
I_{CEO}	Collector Cutoff current	V_{CE}=30V; I_C= 0			2	mA
I_{EBO}	Emitter Cutoff current	V_{EB}=5V; I_C= 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			
f_T	Current-Gain-Bandwidth Product	I_C=1A; V_{CE}=4V; f_{test}=1MHz	2			MHz