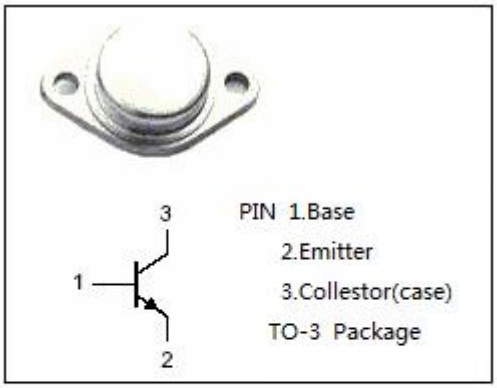
isc Silicon NPN Power Transistor 2N3771

DESCRIPTION

- Excellent Safe Operating Area
- High DC Current Gain-h_{FE}=15(Min)@I_C = 15A
- Low Saturation Voltage-
  : $V_{CE(sat)}$= 2.0V(Max)@ I_C = 15A
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.



APPLICATIONS

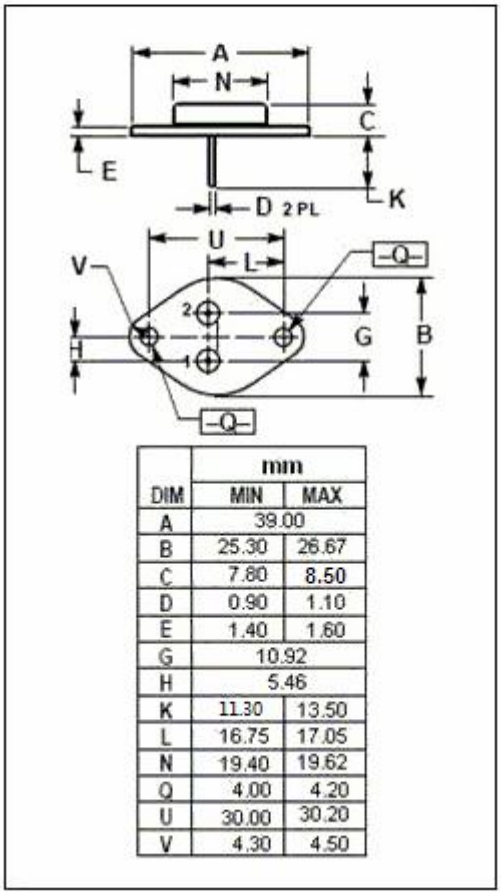
- Designed for linear amplifiers, series pass regulators, and inductive switching applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEX}	Collector-Emitter Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	30	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	7.5	A
I_{BM}	Base Current-Peak	15	A
P_C	Collector Power Dissipation @T_C=25℃	150	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃

THERMAL CHARACTERISTICS

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



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	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

isc Silicon NPN Power Transistor 2N3771

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 50mA ; I_B= 0	40		V
$V_{CEX(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 200mA ; $V_{BE(off)}$= 1.5V; R_{BE}=100Ω	50		V
$V_{CER(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 200mA ; R_{BE}= 100Ω	45		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 15A; I_B= 1.5A		2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 30A; I_B= 6A		4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 15A ; V_{CE}= 4V		2.7	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 30V; I_B= 0		10	mA
I_{CEV}	Collector Cutoff Current	V_{CE}= 50V; $V_{BE(off)}$= 1.5V V_{CE}= 30V; $V_{BE(off)}$= 1.5V,T_C=150℃		2.0 10	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 50V; I_E= 0		2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0		5.0	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}= 50kHz	0.2		MHz
$I_{s/b}$	Second Breakdown Collector Current with Base Forward Biased	V_{CE}= 25V,t= 1.0s,Nonrepetitive	6		A

isc Silicon NPN Power Transistor 2N3771

Notice：
ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.
ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.
ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.