

isc Silicon NPN Power Transistor

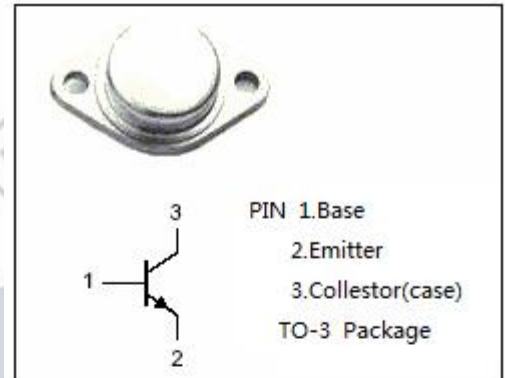
2N5971

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 80V(\text{Min})$
- Low Saturation Voltage-
: $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 5A$
- Excellent Safe Operating Area

APPLICATIONS

- Designed for use in high power audio amplifier applications and high voltage switching regulator circuits.

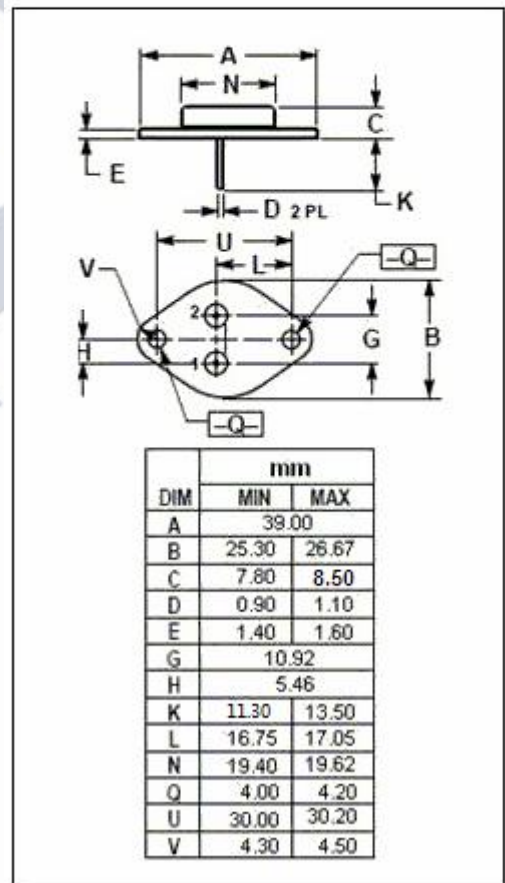


ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	15	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	150	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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



isc Silicon NPN Power Transistor**2N5971****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}$; $I_B= 0$	80		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 5\text{A}$; $I_B= 0.5\text{A}$		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 15\text{A}$; $I_B= 3\text{A}$		4.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 5\text{A}$; $I_B= 0.5\text{A}$		1.8	V
I_{CEO}	Collector Cutoff Current	$V_{CE}= 80\text{V}$; $I_B= 0$		1.0	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}= 80\text{V}$; $I_E= 0$		1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 6\text{V}$; $I_C= 0$		1.0	mA
h_{FE-1}	DC Current Gain	$I_C= 5\text{A}$; $V_{CE}= 4\text{V}$	50	150	
h_{FE-2}	DC Current Gain	$I_C= 15\text{A}$; $V_{CE}= 4\text{V}$	5		
f_T	Current Gain-Bandwidth Product	$I_C= 0.2\text{A}$; $V_{CE}= 10\text{V}$	4		MHz