

isc Silicon NPN Power Transistors

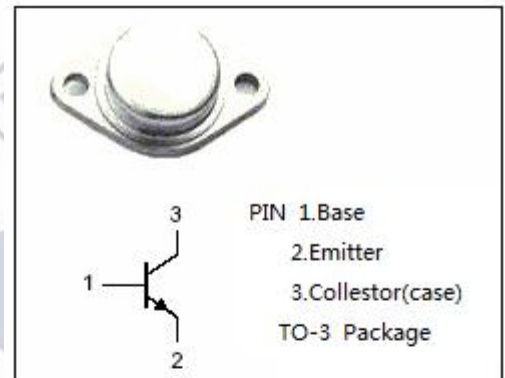
2N5931

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 20-100 @ I_C = 10A$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.0V(Max) @ I_C = 15A$

APPLICATIONS

- Designed for general purpose power amplifier and switching applications.

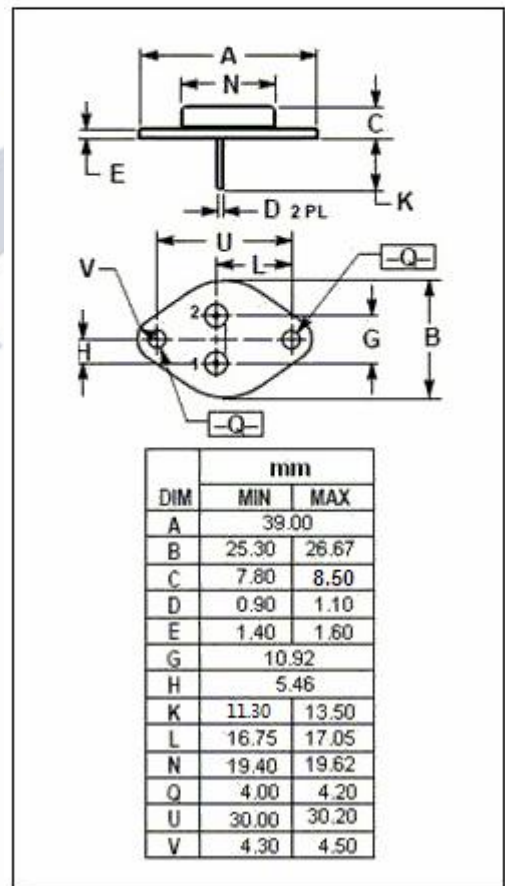


ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	170	V
V _{CEO}	Collector-Emitter Voltage	160	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°C	175	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	0.875	°C/W



isc Silicon NPN Power Transistors**2N5931****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}; I_B=0$	160			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=15\text{A}; I_B=1.5\text{A}$			1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=30\text{A}; I_B=7.5\text{A}$			4.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=30\text{A}; I_B=7.5\text{A}$			2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=10\text{A}; V_{CE}=4\text{V}$			1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=160\text{V}; I_B=0$			2.0	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=170\text{V}; I_E=0$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			1.0	mA
h_{FE-1}	DC Current Gain	$I_C=10\text{A}; V_{CE}=4\text{V}$	20		100	
h_{FE-2}	DC Current Gain	$I_C=30\text{A}; V_{CE}=4\text{V}$	4			
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=10\text{V}; f_{test}=1\text{MHz}$		30		MHz