

isc Silicon NPN Power Transistors

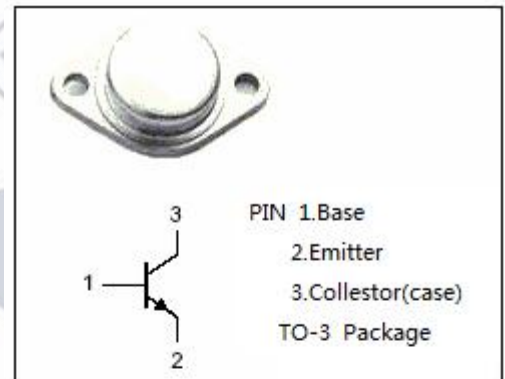
2N5937

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 20-100 @ I_C = 30A$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 2.0V(Max) @ I_C = 20A$

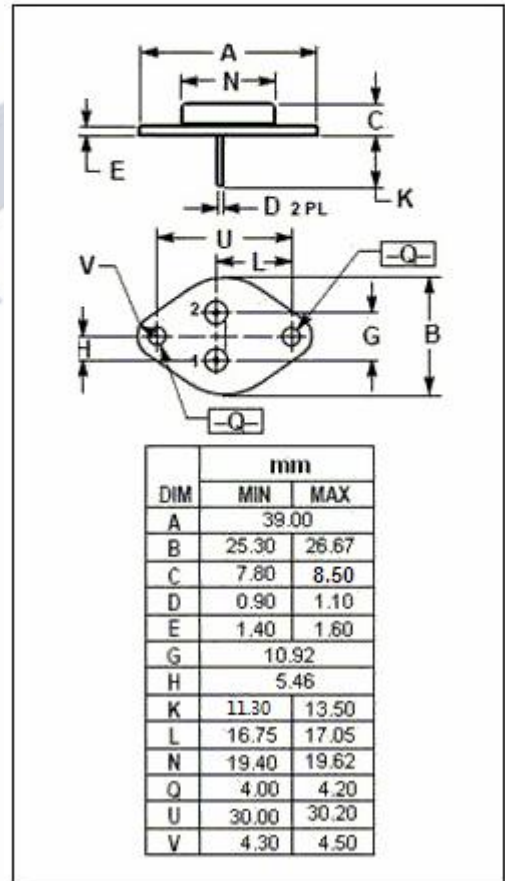
APPLICATIONS

- Designed for use in power switching circuits, audio amplifiers, series and shunt-regulators, driver and output stages, DC-DC converters, inverters, and solenoid /relay driver service.



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

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 @ $T_C = 25^\circ C$	175	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-65~150	$^\circ C$



THERMAL CHARACTERISTICS

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

isc Silicon NPN Power Transistors**2N5937****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
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 20\text{A}$; $I_B= 1.3\text{A}$			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 30\text{A}$; $V_{CE}= 4\text{V}$			3.5	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}	DC Current Gain	$I_C= 30\text{A}$; $V_{CE}= 4\text{V}$	20		100	
f_T	Current-Gain—Bandwidth Product	$I_C= 1\text{A}$; $V_{CE}= 10\text{V}$; $f_{test}= 1\text{MHz}$		30		MHz