

SavantIC Semiconductor

Product Specification

Silicon NPN Power Transistors

2N5157

DESCRIPTION

- With TO-3 package
- High breakdown voltage

APPLICATIONS

- Switching regulator
- Inverters
- Solenoid and relay drivers
- Motor controls

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

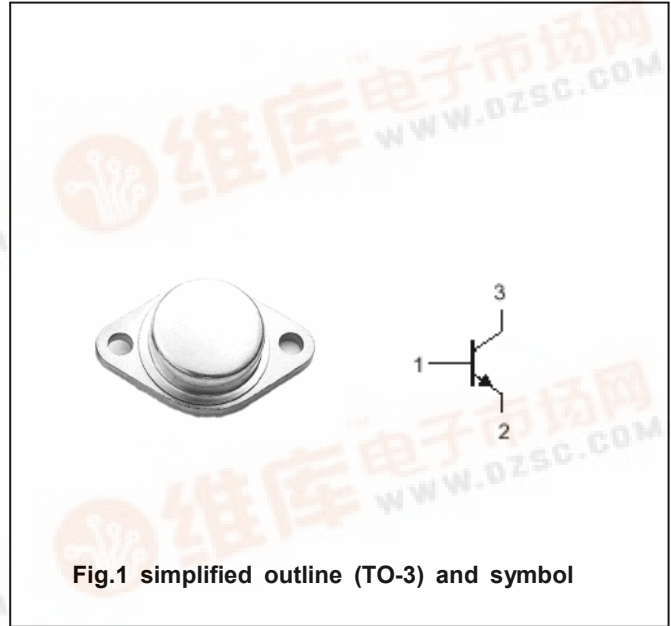


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	700	V
V _{CEO}	Collector-emitter voltage	Open base	500	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		3.5	A
P _T	Total power dissipation	T _c =25□	100	W
T _j	Junction temperature		165	□
T _{stg}	Storage temperature		-65~200	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance from junction to case	1.0	□/W

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CHARACTERISTICS

 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1\text{A}; I_B=0$	500			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=3\text{A}; I_B=0.5\text{A}$			1.2	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=3\text{A}; I_B=0.5\text{A}$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=700\text{V}; I_E=0$ $T_C=125^\circ\text{C}$			0.2 2.0	mA
I_{CEO}	Collector cut-off current	$V_{CE}=500\text{V}; I_B=0$			5.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=7\text{V}; I_C=0$			1.0	mA
h_{FE}	DC current gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	30		90	
f_T	Transition frequency	$I_C=1\text{A}; V_{CE}=10\text{V}; f=5.0\text{MHz}$		2.8		MHz

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PACKAGE OUTLINE

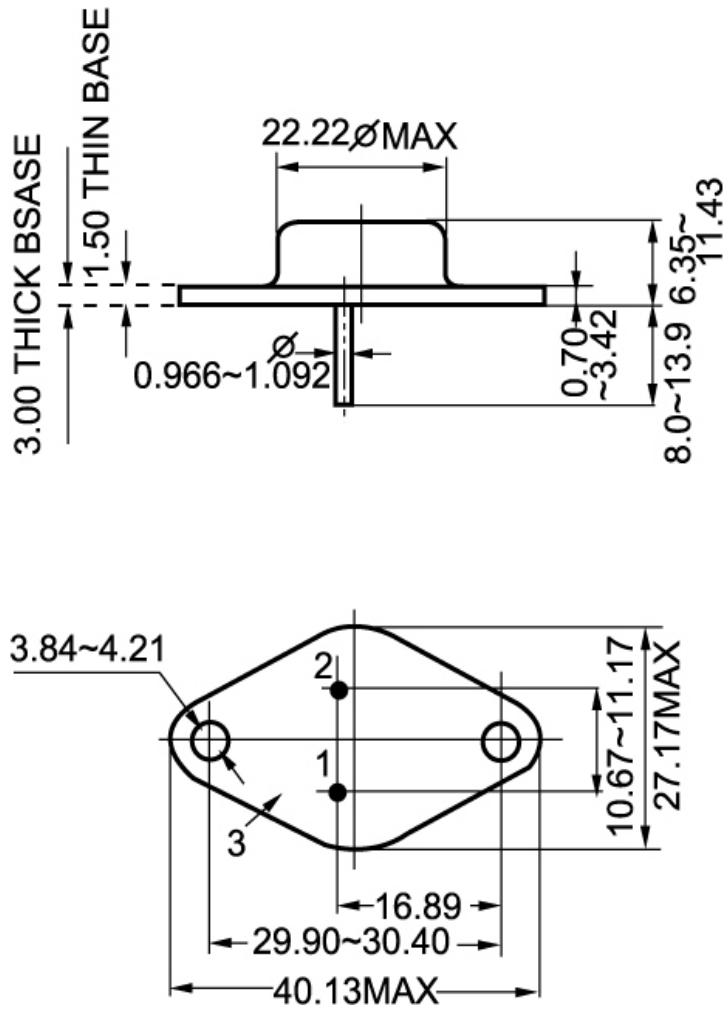


Fig.2 Outline dimensions