

Silicon NPN Power Transistors

2SD641

DESCRIPTION

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- With TO-3 package
- High voltage ,high speed

APPLICATIONS

- Converters
- Inverters
- Switching regulators
- Motor controls

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

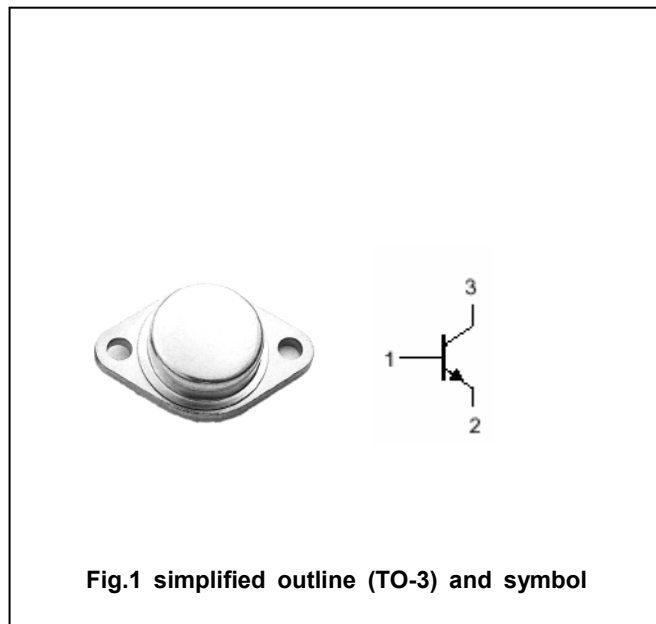


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a = \square$)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{CBO}	Collector-base voltage	Open emitter	600	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		15	A
I_{CM}	Collector current-Peak		30	A
I_B	Base current		6	A
P_T	Total power dissipation	$T_C = 25\square$	150	W
T_j	Junction temperature		200	$\square$
T_{stg}	Storage temperature		-65~200	$\square$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-mb}$	Thermal resistance from junction to mounting base	1.0	$\square/W$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA$; $I_B=0$	400			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1mA$; $I_C=0$	7			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=10A$; $I_B=2A$			1.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=10A$; $I_B=2A$			2.0	V
I_{CBO}	Collector cut-off current	$V_{CB}=500V$; $I_E=0$			0.5	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V$; $I_C=0$			0.1	mA
h_{FE}	DC current gain	$I_C=5A$; $V_{CE}=5V$	20		140	
f_T	Transition frequency	$I_C=0.5A$; $V_{CE}=10V$		4		MHz
C_{OB}	Collector output capacitance	$I_E=0$; $V_{CB}=10V$; $f=1MHz$		150		pF

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PACKAGE OUTLINE

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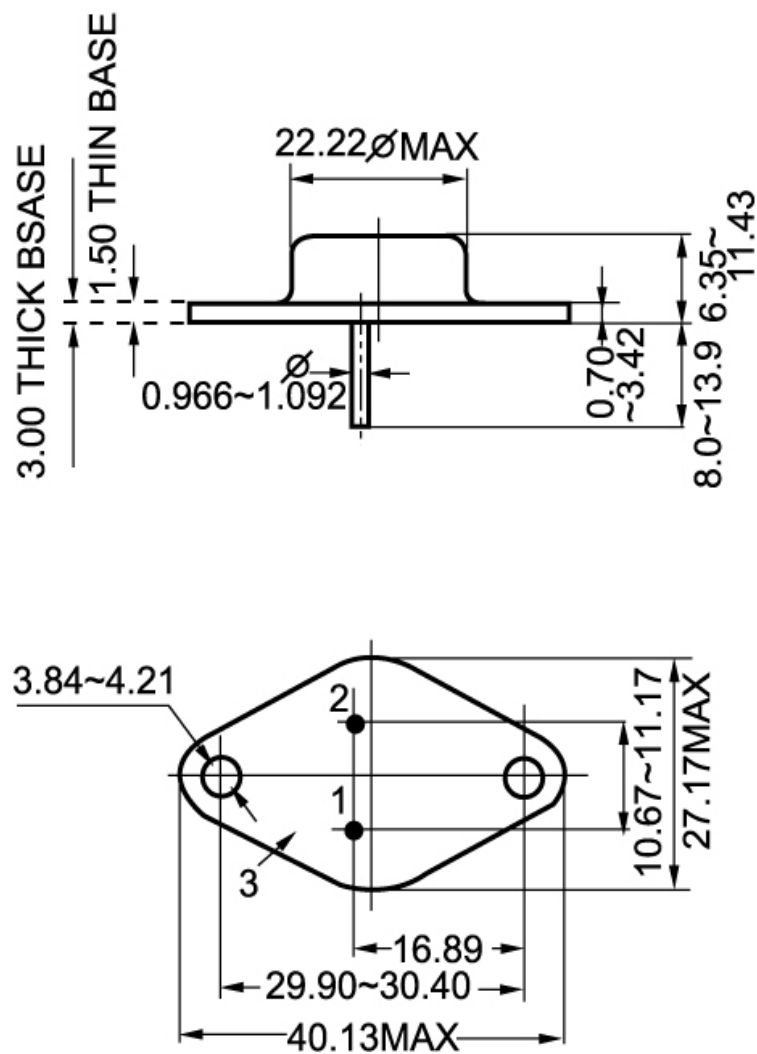


Fig.2 Outline dimensions