

Silicon NPN Power Transistors

2SD641

DESCRIPTION

- 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

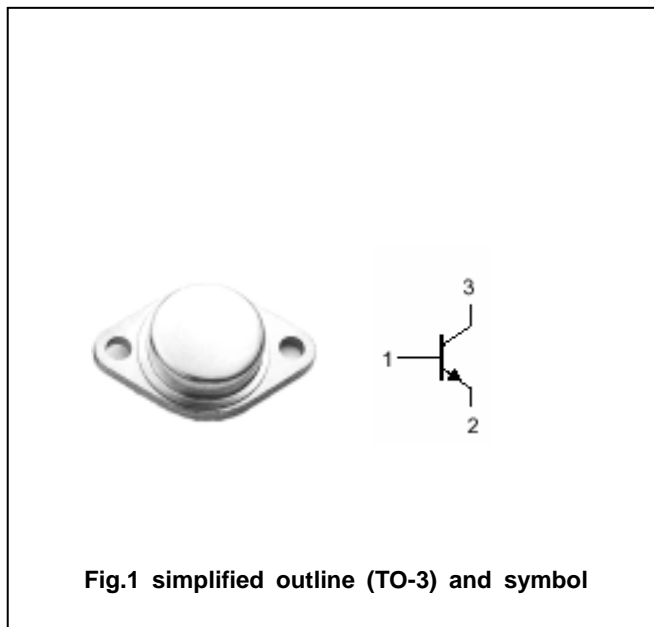


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=)

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	$T_C=25$	150	W
T_j	Junction temperature		200	
T_{stg}	Storage temperature		-65~200	

THERMAL CHARACTERISTICS

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

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CHARACTERISTICS

T_j=25 unless otherwise specified

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

