

Silicon NPN Power Transistors

2N6702

DESCRIPTION

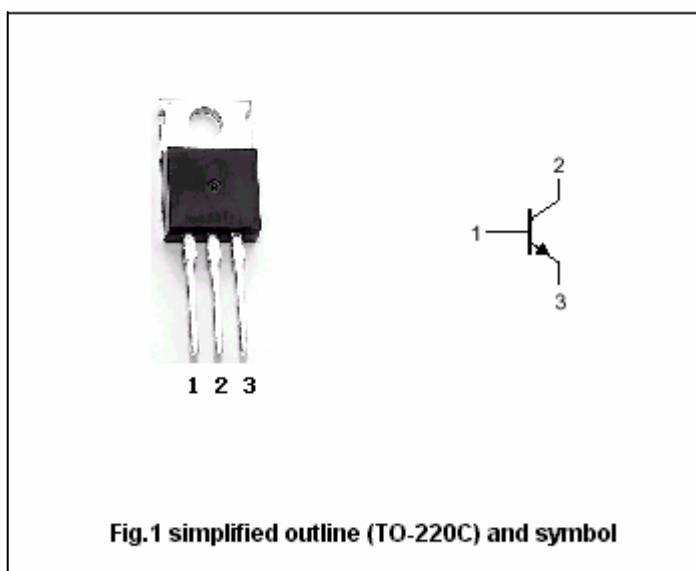
- With TO-220 package
- Fast switching speed
- Low collector saturation voltage

APPLICATIONS

- Designed for converters, inverters, pulse-width-modulated regulators and a variety of power switching circuits.

PINNING

PIN	DESCRIPTION
1	Base
2	Collector; connected to mounting base
3	Emitter

Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	140	V
V_{CEO}	Collector-emitter voltage	Open base	90	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		7	A
I_{CM}	Collector current(peak)		10	A
I_B	Base current		6	A
P_T	Total power dissipation	$T_C=25$	50	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	2.5	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	I _C =0.01A ; I _B =0	90			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =5A; I _B =0.5A			0.8	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =7A; I _B =0.7A			1.5	V
V _{BE sat}	Base-emitter saturation voltage	I _C =5A; I _B =0.5A			1.5	V
I _{CEV}	Collector cut-off current	V _{CE} =140V; V _{BE} =1.5V T _C =125			0.1 1.0	mA
I _{EBO}	Emitter cut-off current	V _{BE} =7V; I _C =0			0.1	mA
h _{FE-1}	DC current gain	I _C =0.2A ; V _{CE} =2V	30			
h _{FE-2}	DC current gain	I _C =5A ; V _{CE} =2V	20			
C _{ob}	Output capacitance	I _E =0 ; f=0.1MHz, V _{CB} =10V	50		150	pF
f _T	Transition frequency	I _C =0.5A ; V _{CE} =10V	50		200	MHz

