

Silicon NPN Power Transistors

2SC1678

DESCRIPTION

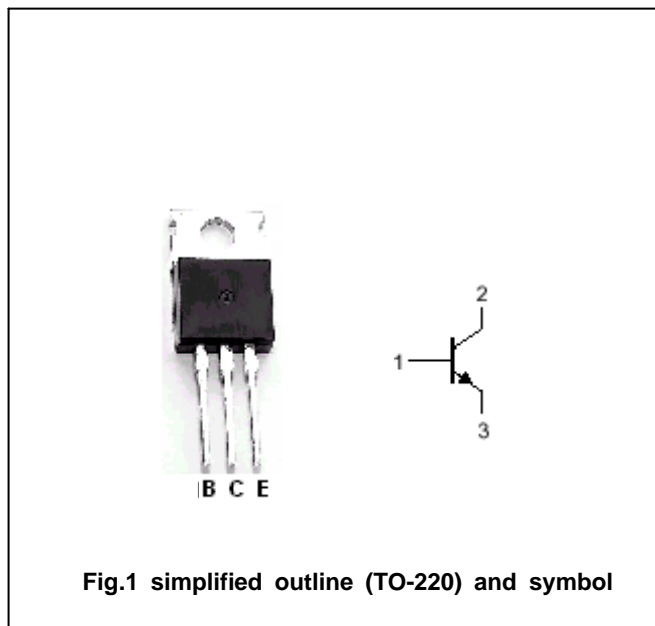
- With TO-220 package
- Low collector saturation voltage

APPLICATIONS

- 27MHz RF power amplifier applications

PINNING

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



Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	65	V
V_{CEO}	Collector-emitter voltage	Open base	65	V
V_{EBO}	Emitter-base voltage	Open collector	4	V
I_C	Collector current		3	A
I_B	Base current		0.4	A
I_E	Emitter current		-3	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	10	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =0.5A; I _B =50m A			1.0	V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =1mA; I _E =0	65			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA; I _B =0	65			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =1mA; I _C =0	4			V
I _{CBO}	Collector cut-off current	V _{CB} =30V; I _E =0			10	μ A
I _{CEO}	Collector cut-off current	V _{CE} =20V; I _B =0			100	μ A
h _{FE-1}	DC current gain	I _C =0.5A ; V _{CE} =5V	15			
h _{FE-2}	DC current gain	I _C =1.5A ; V _{CE} =5V	10			
C _{OB}	Collector output capacitance	I _E =0 ; V _{CB} =10V, f=1MHz		30		pF
f _T	Transition frequency	I _C =0.1A ; V _{CE} =5V	100			MHz

