

Silicon NPN Power Transistors

2SC1678

DESCRIPTION

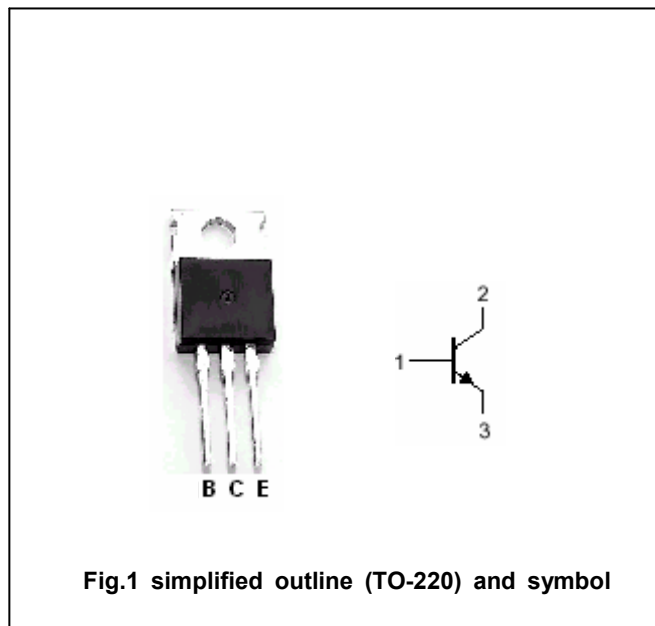
- With TO-220 package
- Low collector saturation voltage

APPLICATIONS

- 27MHz RF power amplifier applications

PINNING

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

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

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

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=0.5A; I_B=50mA$			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	μA
I_{CEO}	Collector cut-off current	$V_{CE}=20V; I_B=0$			100	μA
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

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PACKAGE OUTLINE

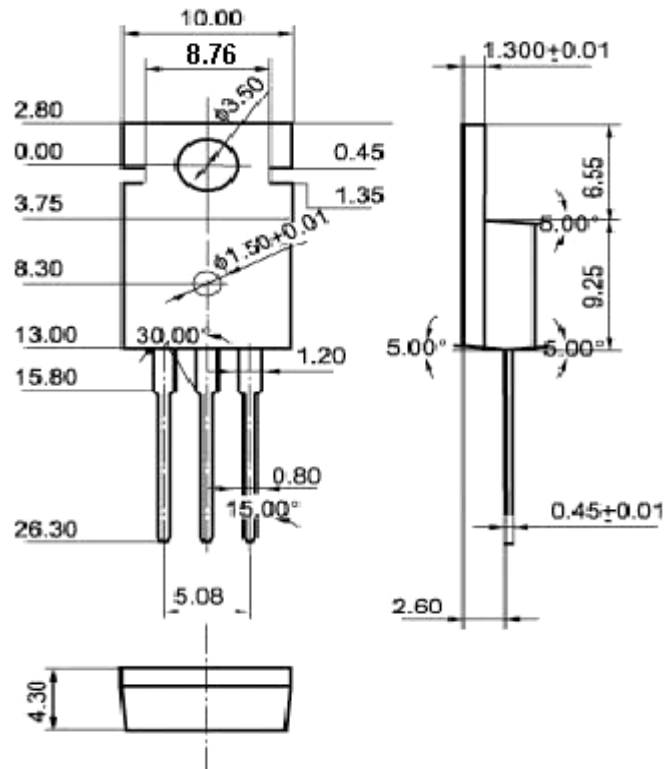


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)