

## Silicon PNP Power Transistors

2SA1640

## DESCRIPTION

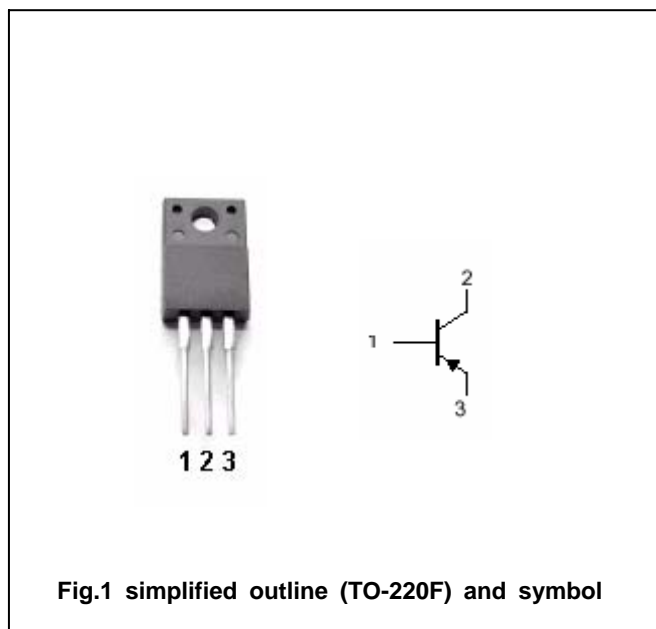
- With TO-220F package
- Low collector saturation voltage
- Good linearity of  $h_{FE}$

## APPLICATIONS

- For switching regulator ,driver and power amplifier applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-30	V
$V_{CEO}$	Collector-emitter voltage	Open base	-30	V
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current		-7	A
$I_B$	Base current		-1	A
$P_C$	Collector dissipation	$T_C=25^\circ\text{C}$	40	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-10mA ; I <sub>B</sub> =0	-30			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =-1mA ; I <sub>E</sub> =0	-30			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-1mA ; I <sub>C</sub> =0	-5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A ; I <sub>B</sub> =-0.1A			-0.4	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-3A ; I <sub>B</sub> =-0.1A			-1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-30V ; I <sub>E</sub> =0			-10	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V ; I <sub>C</sub> =0			-10	μ A
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-0.2A ; V <sub>CE</sub> =-2V	100		300	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-10V	20			MHz

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PACKAGE OUTLINE

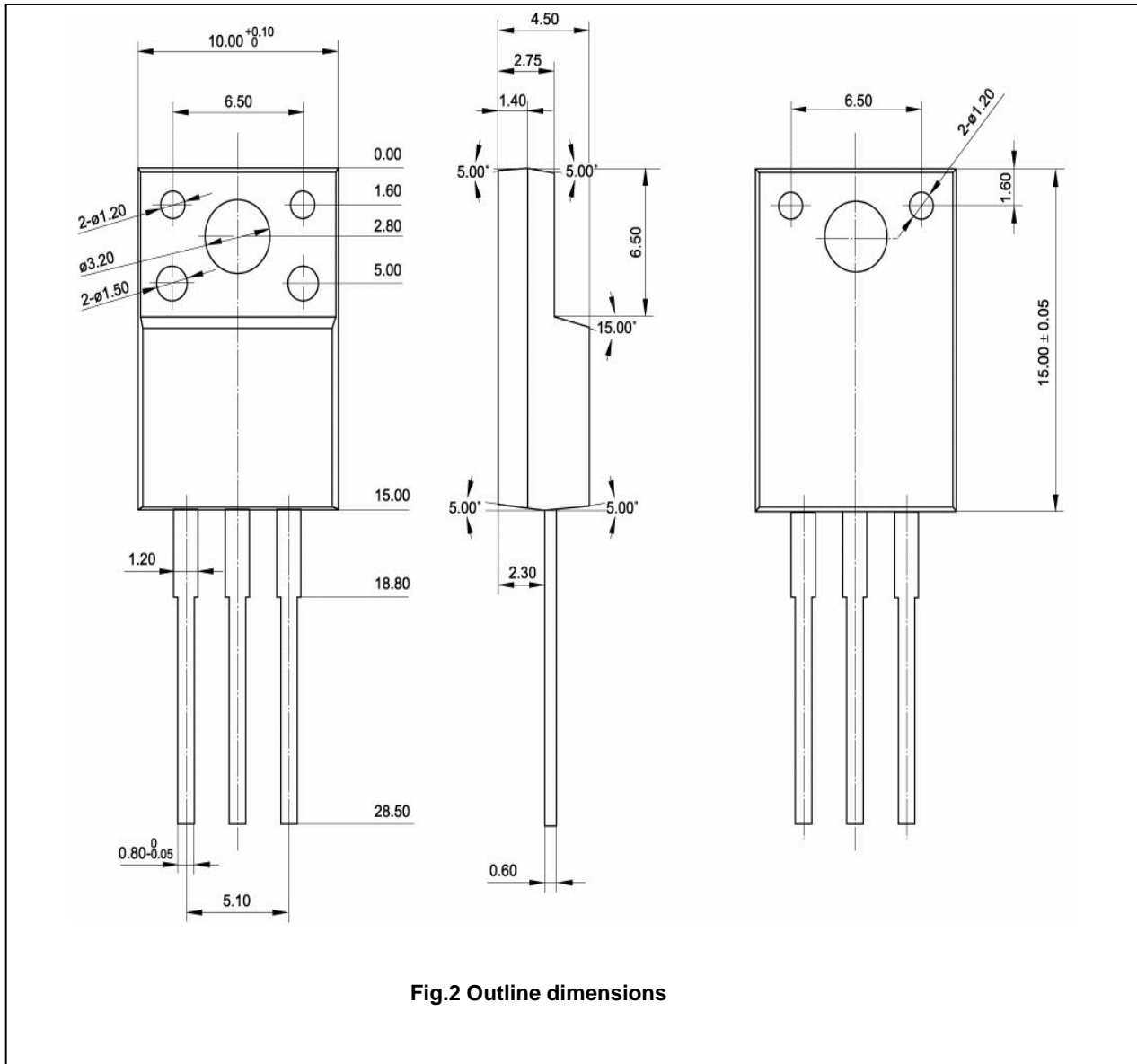


Fig.2 Outline dimensions