

## Silicon PNP Power Transistors

## MJF45H11

## DESCRIPTION

- With TO-220F package
- Fast switching speeds
- Low collector saturation voltage
- Complement to type MJF44H11

## APPLICATIONS

- For general purpose power amplification and switching regulators, converters and power amplifiers applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

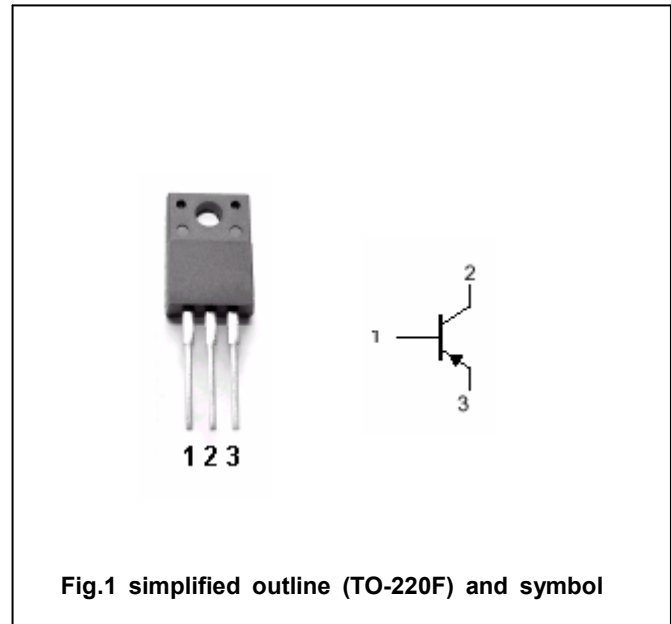


Fig.1 simplified outline (TO-220F) and symbol

ABSOLUTE MAXIMUM RATINGS( $T_c=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-80	V
$V_{CEO}$	Collector-emitter voltage	Open base	-80	V
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current (DC)		-10	A
$I_{CM}$	Collector current-Peak		-20	A
$P_D$	Total power dissipation	$T_c=25^\circ\text{C}$	36	W
		$T_a=25^\circ\text{C}$	2.0	
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-C}$	Thermal resistance from junction to case	3.5	$^\circ\text{C}/\text{W}$
$R_{th\ j-A}$	Thermal resistance from junction to ambient	62.5	$^\circ\text{C}/\text{W}$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =-30mA I <sub>B</sub> =0,	-80			V
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-8A; I <sub>B</sub> =-0.4A			-1.0	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-8A ; I <sub>B</sub> =-0.8A			-1.5	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =RatedBV <sub>CEO</sub> ; V <sub>BE</sub> =0			-10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-10	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-2A ; V <sub>CE</sub> =-1V	60			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-4A ; V <sub>CE</sub> =-1V	40			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-10V, f=20MHz		40		MHz
C <sub>cb</sub>	Collector capacitance	f=1MHz ; V <sub>CB</sub> =-10V		230		pF

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-5A I <sub>B1</sub> =- I <sub>B2</sub> =-0.5A		0.3		μs
t <sub>s</sub>	Storage time			0.5		μs
t <sub>f</sub>	Fall time			0.14		μs

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PACKAGE OUTLINE

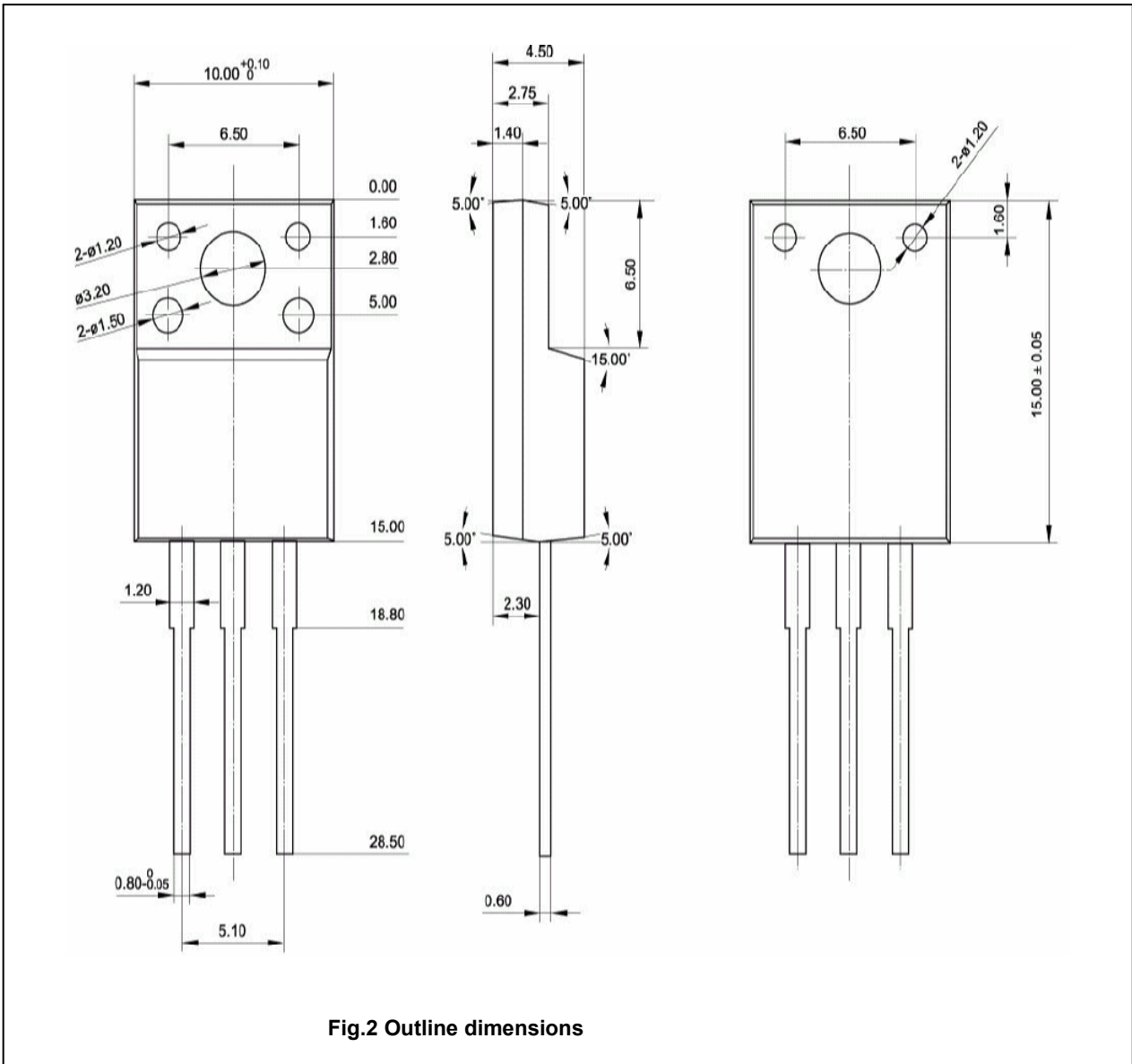


Fig.2 Outline dimensions