

**Silicon NPN Power Transistors**

**MJF122**

**DESCRIPTION**

- With TO-220F package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type MJF127

**APPLICATIONS**

- Designed for general-purpose amplifier and switching applications.

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

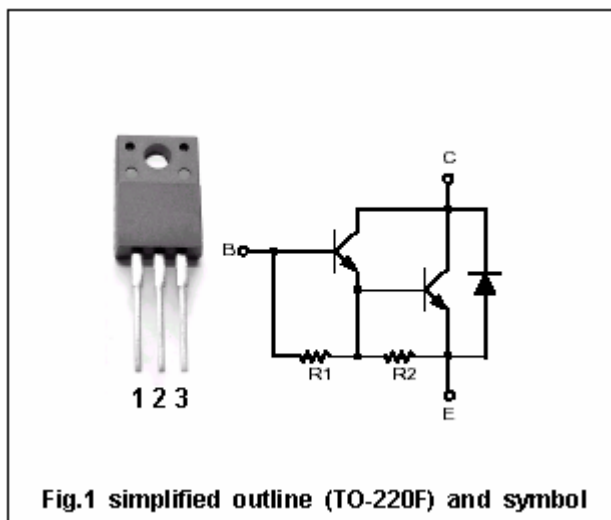


Fig.1 simplified outline (TO-220F) and symbol

**ABSOLUTE MAXIMUM RATINGS(T<sub>C</sub>=25 °C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	100	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	100	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current-DC		5	A
I <sub>CM</sub>	Collector current-Pulse		8	A
I <sub>B</sub>	Base current-DC		120	mA
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25 °C	30	W
		T <sub>a</sub> =25 °C	2	
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

## Silicon NPN Power Transistors

## MJF122

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.1A, I <sub>B</sub> =0	100			V
V <sub>CE(sat)-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =3A, I <sub>B</sub> =12mA			2.0	V
V <sub>CE(sat)-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A, I <sub>B</sub> =20mA			3.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =3.0A; V <sub>CE</sub> =3V			2.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =100V, I <sub>E</sub> =0			10	μA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =50V, I <sub>B</sub> =0			10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			2.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.5A; V <sub>CE</sub> =3V	1000			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =3.0A; V <sub>CE</sub> =3V	2000			
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =10V, f=0.1MHz			200	pF

Silicon NPN Power Transistors

MJF122

PACKAGE OUTLINE

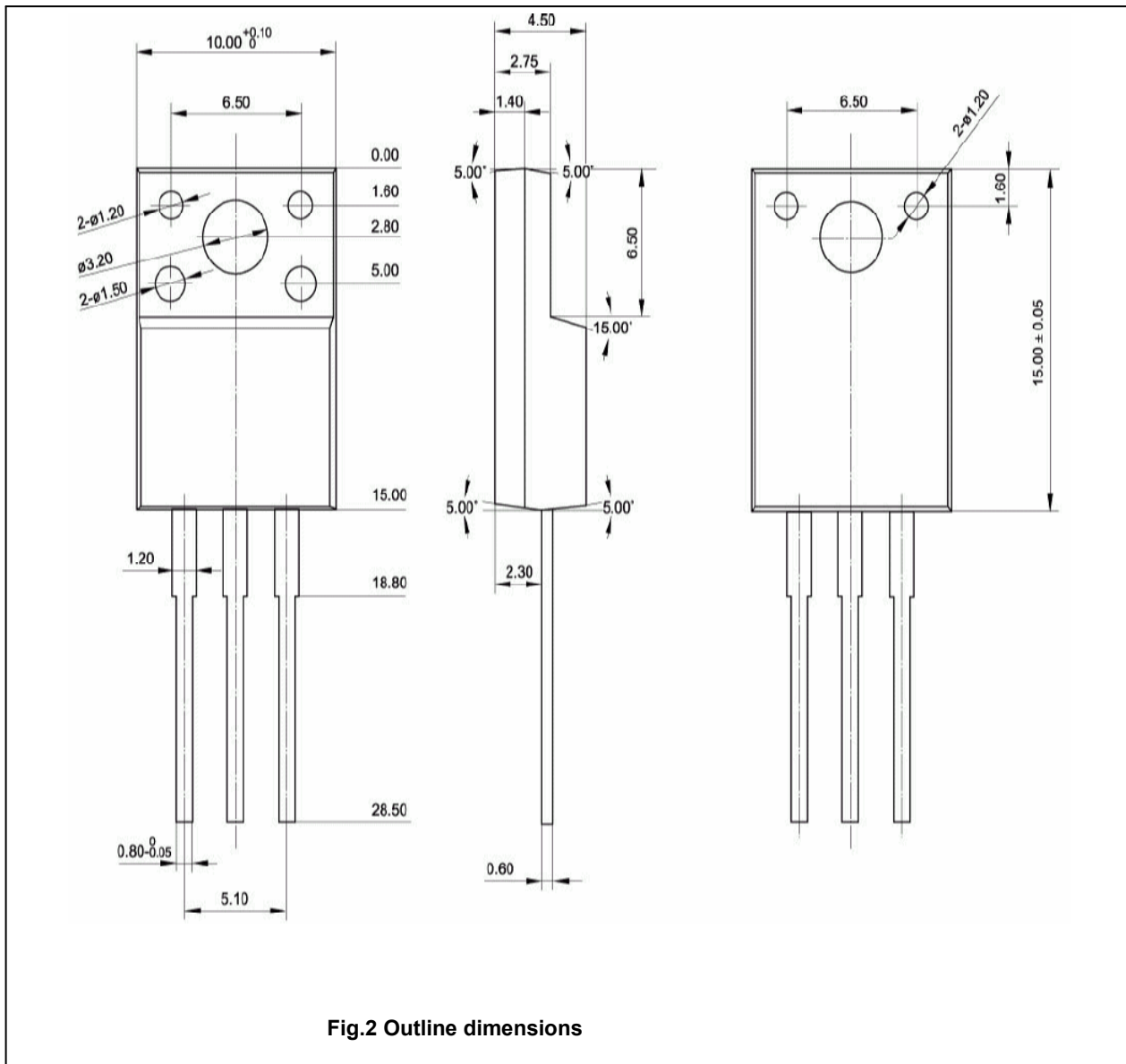


Fig.2 Outline dimensions