

Silicon NPN Power Transistors

2SD2101

**DESCRIPTION**

- With TO-220Fa package
- DARLINGTON

**APPLICATIONS**

- Low frequency power amplifier

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

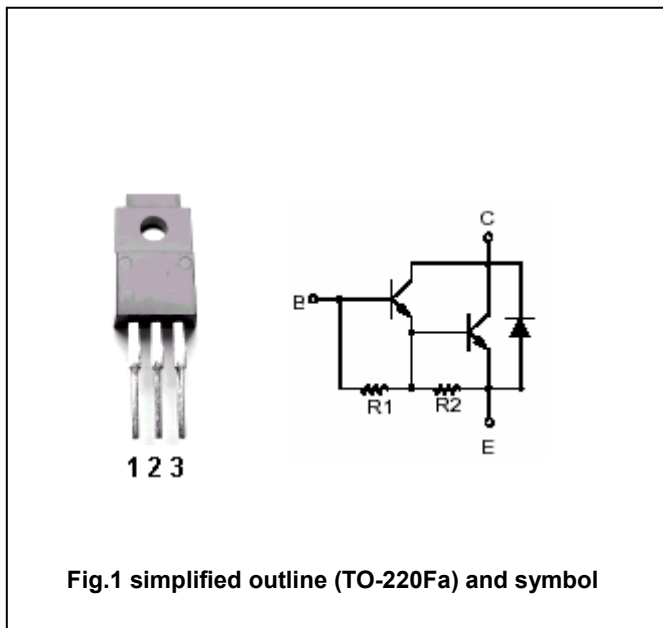


Fig.1 simplified outline (TO-220Fa) and symbol

**Absolute maximum ratings(Ta=25℃)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	200	V
V <sub>CEO</sub>	Collector -emitter voltage	Open base	200	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	7	V
I <sub>C</sub>	Collector current		10	A
I <sub>CP</sub>	Collector current peak		15	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25℃	30	W
		T <sub>a</sub> =25℃	2	
T <sub>j</sub>	Junction temperature		150	℃
T <sub>stg</sub>	Storage temperature		-55~150	℃

## Silicon NPN Power Transistors

## 2SD2101

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =50mA; I <sub>C</sub> =0	7			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =0.1mA; I <sub>C</sub> =0	200			V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =25mA; R <sub>BE</sub> =∞	200			V
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =5A; L=5mH	170			V
V <sub>CE(sat-1)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =10mA			1.5	V
V <sub>CE(sat-2)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A ; I <sub>B</sub> =100mA			3.0	V
V <sub>BE(sat-1)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =10mA			2.0	V
V <sub>BE(sat-2)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =10A ; I <sub>B</sub> =100mA			3.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =180V; I <sub>E</sub> =0			10	μA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =180V; R <sub>BE</sub> =∞			50	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =5A ; V <sub>CE</sub> =3V	1500			

Silicon NPN Power Transistors

2SD2101

PACKAGE OUTLINE

