

## Silicon NPN Power Transistors

2SD2101

## DESCRIPTION

www.datasheet4u.com

- With TO-220Fa package
- DARLINGTON

## APPLICATIONS

- Low frequency power amplifier

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

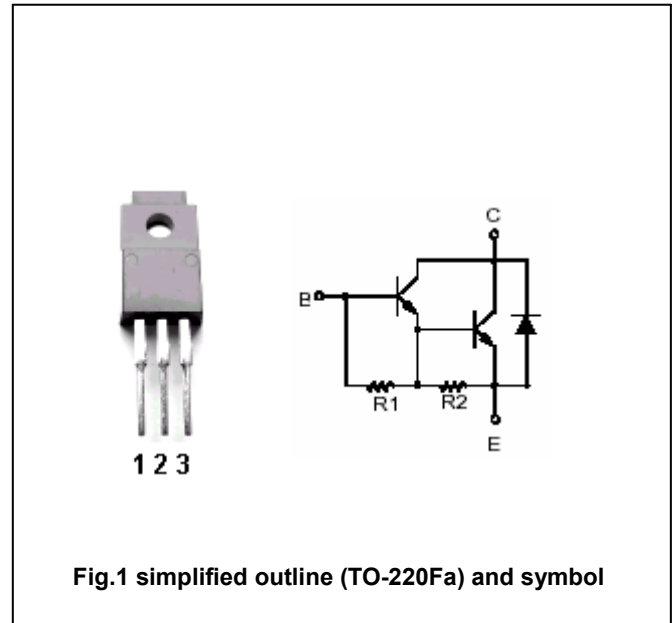


Fig.1 simplified outline (TO-220Fa) and symbol

## Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	200	V
$V_{CEO}$	Collector -emitter voltage	Open base	200	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		10	A
$I_{CP}$	Collector current peak		15	A
$P_C$	Collector power dissipation	$T_C=25^\circ\text{C}$	30	W
		$T_a=25^\circ\text{C}$	2	
$T_j$	Junction temperature		150	℃
$T_{stg}$	Storage temperature		-55~150	℃

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## CHARACTERISTICS

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 $T_j=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=50\text{mA}; I_C=0$	7			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=0.1\text{mA}; I_E=0$	200			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=25\text{mA}; R_{BE}=\infty$	200			V
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=5\text{A}; L=5\text{mH}$	170			V
$V_{CE(sat-1)}$	Collector-emitter saturation voltage	$I_C=5\text{A}; I_B=10\text{mA}$			1.5	V
$V_{CE(sat-2)}$	Collector-emitter saturation voltage	$I_C=10\text{A}; I_B=100\text{mA}$			3.0	V
$V_{BE(sat-1)}$	Base-emitter saturation voltage	$I_C=5\text{A}; I_B=10\text{mA}$			2.0	V
$V_{BE(sat-2)}$	Base-emitter saturation voltage	$I_C=10\text{A}; I_B=100\text{mA}$			3.5	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=180\text{V}; I_E=0$			10	$\mu\text{A}$
$I_{CEO}$	Collector cut-off current	$V_{CE}=180\text{V}; R_{BE}=\infty$			50	$\mu\text{A}$
$h_{FE}$	DC current gain	$I_C=5\text{A}; V_{CE}=3\text{V}$	1500			

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PACKAGE OUTLINE

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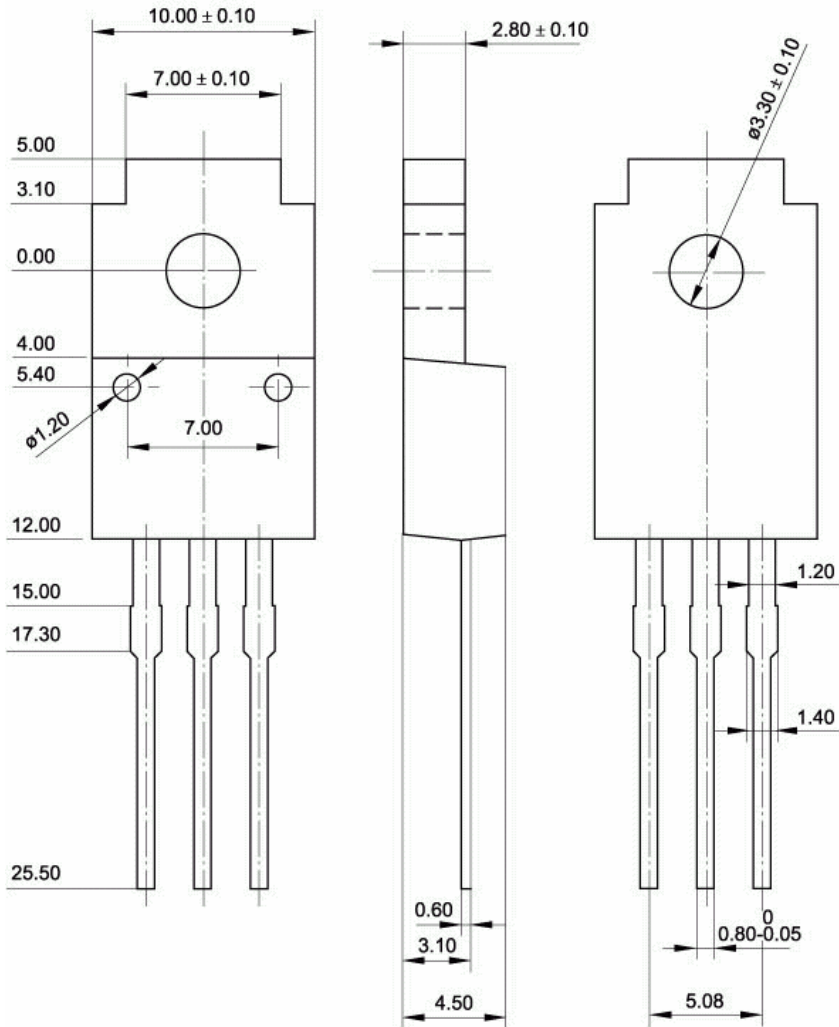


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.15$  mm)