

Silicon NPN Power Transistors

2SD1163,2SD1163A

DESCRIPTION

- h TO-220 package
- Low collector saturation voltage

APPLICATIONS

- TV horizontal deflection output,

·Wit

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

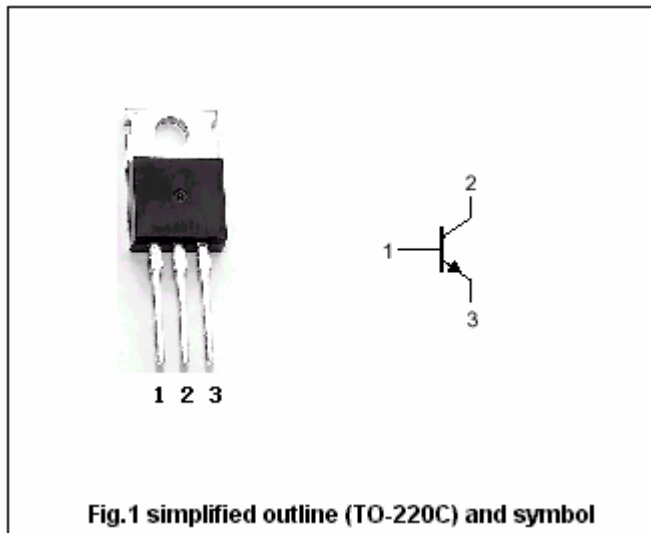


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2SD1163	300	V
		2SD1163A	350	
V _{CEO}	Collector-emitter voltage	2SD1163	120	V
		2SD1163A	150	
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current		7	A
I _{CM}	Collector current-peak		10	A
I _{C(surge)}	Collector current-surge		20	A
P _C	Collector power dissipation	T _C =25°C	40	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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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
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SD1163	$I_C=10\text{mA}; R_{BE}=\infty$	120			V
		2SD1163A		150			
$V_{(BR)EBO}$	Emitter-base breakdown voltage		$I_E=10\text{mA}; I_C=0$	6			V
V_{CEsat}	Collector-emitter saturation voltage	2SD1163	$I_C=5\text{A}, I_B=0.5\text{A}$			2.0	V
		2SD1163A		1.0			
V_{BEsat}	Base-emitter saturation voltage		$I_C=5\text{A}, I_B=0.5\text{A}$			1.2	V
I_{CBO}	Collector cut-off current	2SD1163	$V_{CB}=300\text{V}; I_E=0$			5	mA
		2SD1163A	$V_{CB}=350\text{V}; I_E=0$			5	mA
h_{FE}	DC current gain		$I_C=5\text{A}; V_{CE}=5\text{V}$	25			

Switching times

t_f	Fall time	$I_{CM}=3.5\text{A}; I_{B1}=0.45\text{A}$			0.5	μs
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PACKAGE OUTLINE

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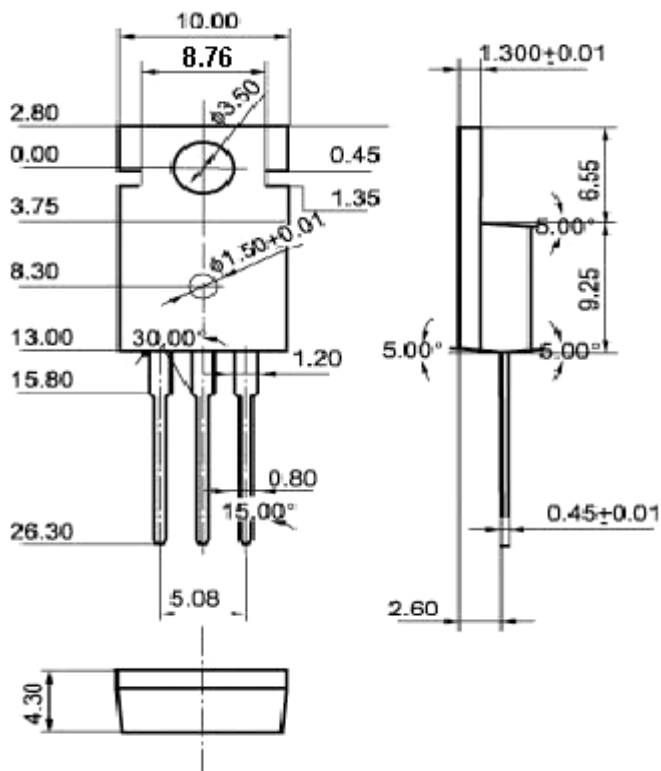


Fig.2 outline dimensions (unindicated tolerance: ±0.10 mm)