

Silicon NPN Power Transistors

2SD386 2SD386A

**DESCRIPTION**

- With TO-220C package
- High voltage : $V_{CBO}=200V$ (min)

**APPLICATIONS**

- For TV vertical deflection output applications

**PINNING**

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

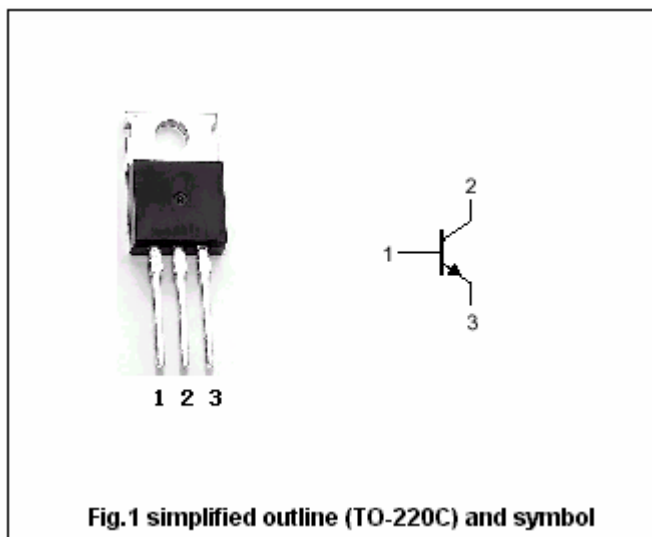


Fig.1 simplified outline (TO-220C) and symbol

**Absolute maximum ratings( $T_a=25^\circ$ )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	200	V
$V_{CEO}$	Collector-emitter voltage	2SD386	120	V
		2SD386A	150	
$V_{EBO}$	Emitter-base voltage	Open collector	6	V
$I_C$	Collector current	2SD386	3	A
		2SD386A	2	
$I_{CM}$	Collector current-Peak		10	A
$P_C$	Collector dissipation	$T_C=25^\circ$	25	W
		$T_a=25^\circ$	1.75	
$T_j$	Junction temperature		150	$^\circ$
$T_{stg}$	Storage temperature		-40~150	$^\circ$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	2SD386	I <sub>C</sub> =25mA; I <sub>B</sub> =0	120			V
		2SD386A		150			
V <sub>CEsat</sub>	Collector-emitter saturation voltage	2SD386	I <sub>C</sub> =1A; I <sub>B</sub> =0.1A			1.0	V
		2SD386A				1.5	
V <sub>BEsat</sub>	Base-emitter saturation voltage		I <sub>C</sub> =1A; I <sub>B</sub> =0.1A			1.8	V
I <sub>CBO</sub>	Collector cut-off current		V <sub>CB</sub> =180V; I <sub>E</sub> =0			1.0	mA
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =5V; I <sub>C</sub> =0			5.0	mA
h <sub>FE</sub>	DC current gain		I <sub>C</sub> =0.5A; V <sub>CE</sub> =2V	40		320	
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =0.5A; V <sub>CE</sub> =5V		8		MHz

◆ h<sub>FE</sub> Classifications

C	D	E	F
40-80	60-120	100-200	160-320

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PACKAGE OUTLINE

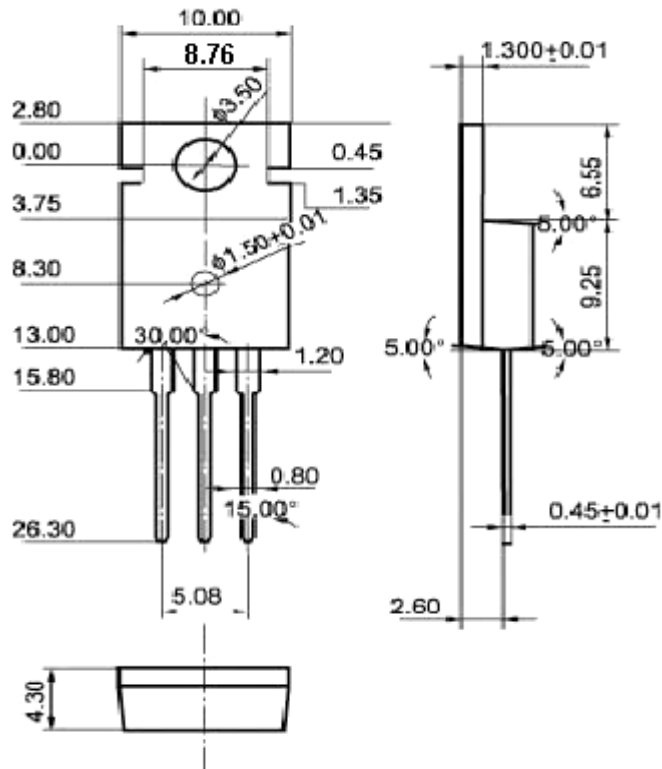


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.10\text{mm}$ )