

**Inchange Semiconductor**

**Product Specification**

**Silicon NPN Power Transistors**

**2SD1541**

**DESCRIPTION**

- With TO-3PFa package
- High voltage ,and high reliability
- Built-in damper diode
- High speed switching
- Wide area of safe operation

**APPLICATIONS**

- For horizontal deflection output applications

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

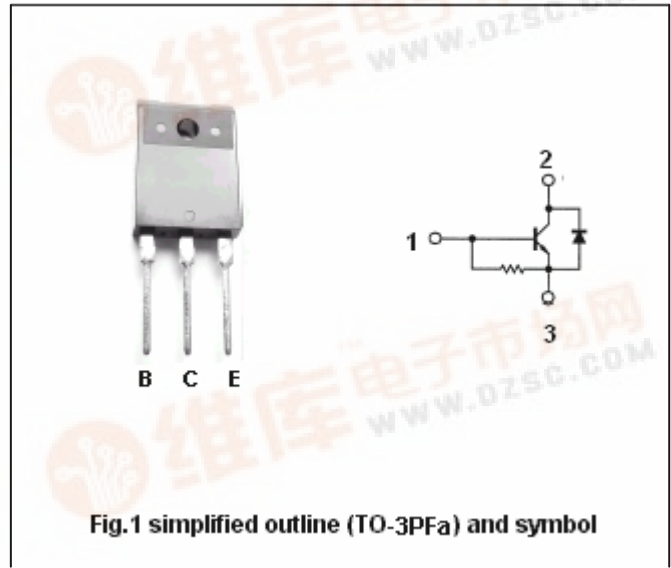


Fig.1 simplified outline (TO-3PFa) and symbol

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	1500	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		3	A
$I_{CM}$	Collector current-peak		10	A
$I_{BM}$	Base current		3.5	A
$P_C$	Collector power dissipation	$T_C=25^\circ C$	50	W
$T_j$	Junction temperature		130	°C
$T_{stg}$	Storage temperature		-55~130	°C

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## 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> =500mA ; I <sub>C</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2A ; I <sub>B</sub> =0.75A			5.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =2A ; I <sub>B</sub> =0.75A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =750V; I <sub>E</sub> =0			50	μ A
		V <sub>CB</sub> =1500V; I <sub>E</sub> =0			1	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =2A ; V <sub>CE</sub> =10V	4		12	
V <sub>F</sub>	Diode forward voltage	I <sub>C</sub> =-4A			2.2	V

## Switching times

t <sub>stg</sub>	Storage time	I <sub>C</sub> =2A I <sub>Bend</sub> =0.75A; L <sub>Leak</sub> =5 μ H	3.0		7.0	μ s
t <sub>f</sub>	Fall time				0.75	μ s

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PACKAGE OUTLINE

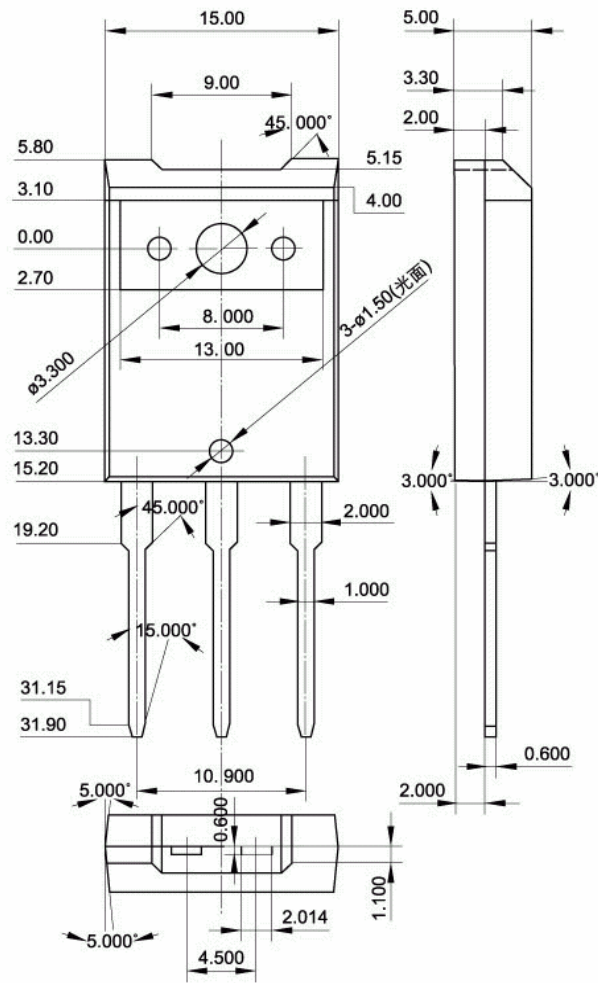


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.30\text{mm}$ )