

**Inchange Semiconductor**

**Product Specification**

**Silicon NPN Power Transistors**

**2SC3230**

**DESCRIPTION**

- With TO-220 package
- Complement to type 2SA1276
- Good linearity of  $h_{FE}$

**APPLICATIONS**

- General purpose applications
- Cordless telephone tx final amplifier application for 1.7MHz system

**PINNING**

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

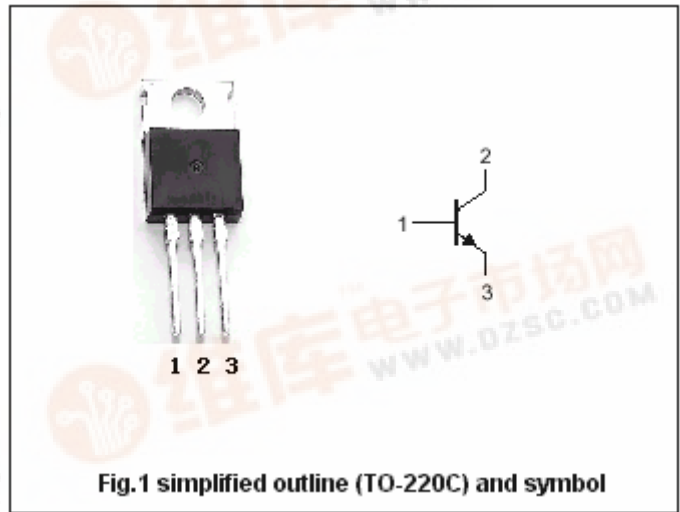


Fig.1 simplified outline (TO-220C) and symbol

**Absolute maximum ratings (Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	30	V
$V_{CEO}$	Collector-emitter voltage	Open base	30	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		3	A
$I_E$	Emitter current		-3	A
$P_C$	Collector power dissipation	$T_C=25^\circ C$	10	W
$T_j$	Junction temperature		150	$^\circ C$
$T_{stg}$	Storage temperature		-55~150	$^\circ C$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA ; I <sub>B</sub> =0	30			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	5			V
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2A ; I <sub>B</sub> =0.2 A		0.3	0.8	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =2V		0.75	1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =20V; I <sub>E</sub> =0			1.0	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			1.0	μ A
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =2V	70		240	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =2.5A ; V <sub>CE</sub> =2V	25			
C <sub>OB</sub>	Collector output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =10V, f=1MHz		35		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =2V		100		MHz

◆ h<sub>FE-1</sub> Classifications

O	Y
70-140	120-240

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PACKAGE OUTLINE

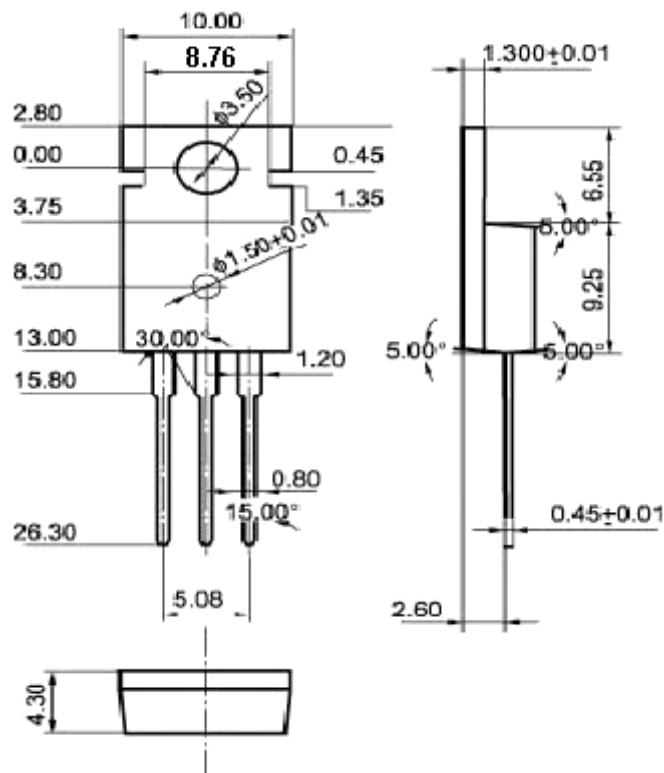


Fig.2 outline dimensions (unindicated tolerance: ±0.10 mm)