

## Silicon NPN Power Transistors

2SC1173

**DESCRIPTION**

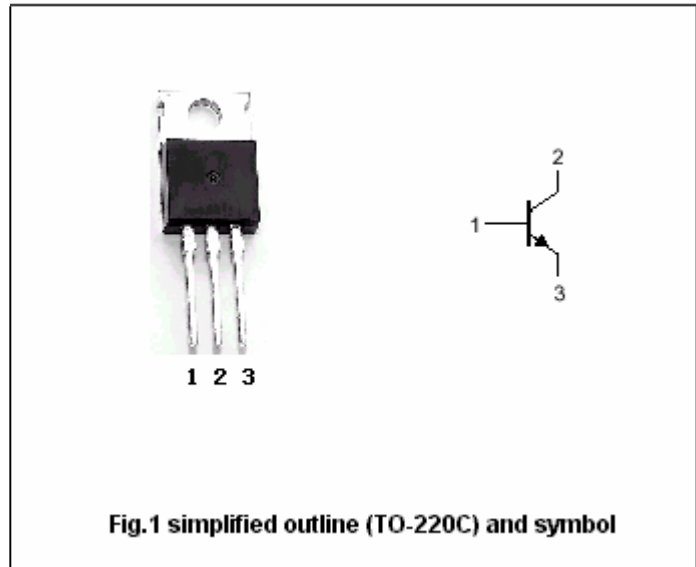
- With TO-220 package
- Complement to type 2SA473
- Collector current : $I_C=3A$
- Collector dissipation: $P_C=10W @T_C=25?$

**APPLICATIONS**

- Low frequency power amplifier
- Power regulator

**PINNING**

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

**Absolute maximum ratings (Ta=25?)**

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 (DC)		3	A
$P_C$	Collector power dissipation	$T_C=25?$	10	W
$T_j$	Junction temperature		150	?
$T_{stg}$	Storage temperature		-55~150	?

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## CHARACTERISTICS

T<sub>j</sub>=25° 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)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =0.5mA ; I <sub>E</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>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2A I <sub>B</sub> =0.2A			0.8	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =2V			1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =20V; I <sub>E</sub> =0			1.0	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			1.0	μA
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>	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

U **h<sub>FE-1</sub> classifications**

O	Y
70-140	120-240

PACKAGE OUTLINE

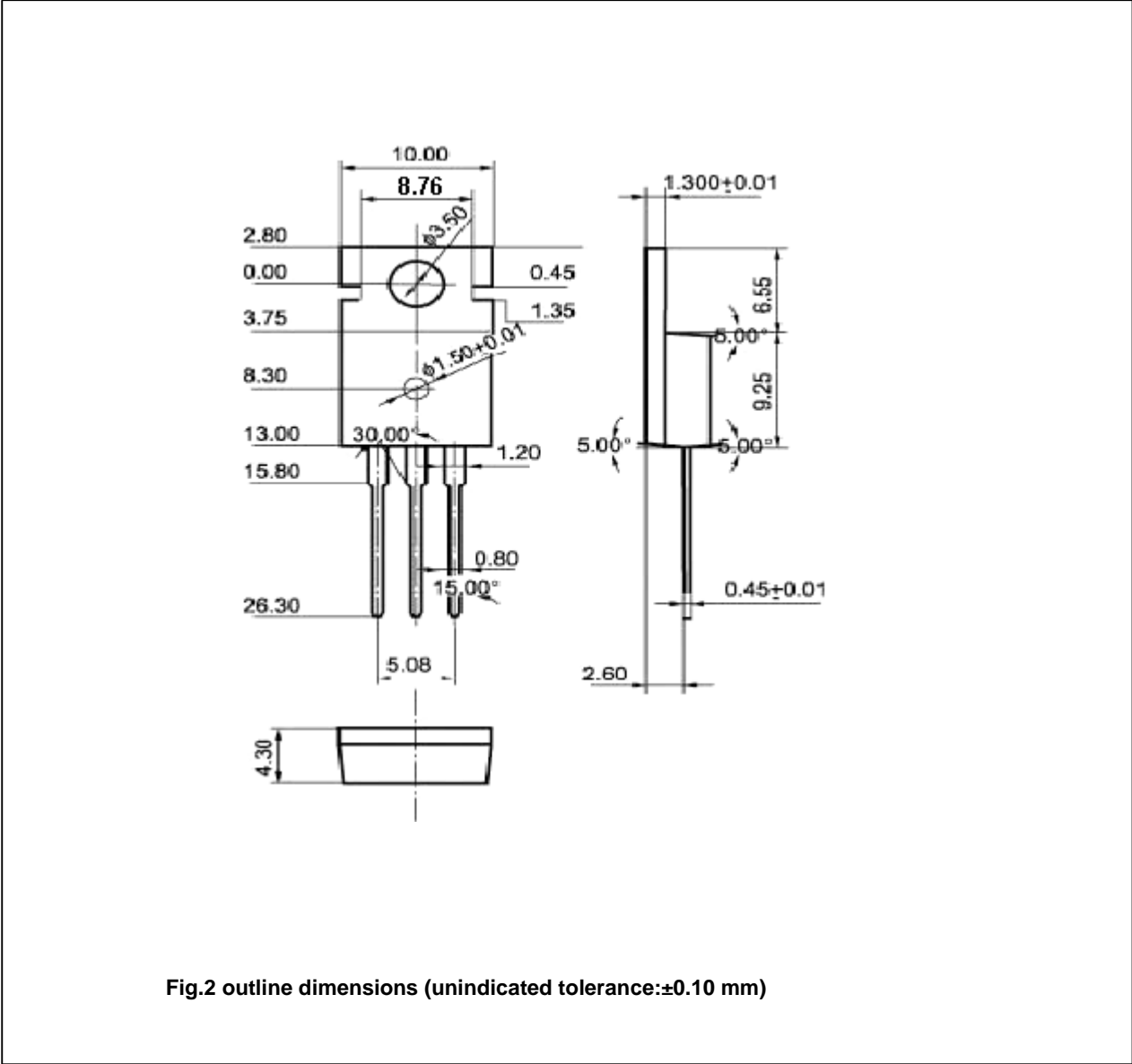


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)