

Silicon NPN Power Transistors

2SC1173

DESCRIPTION

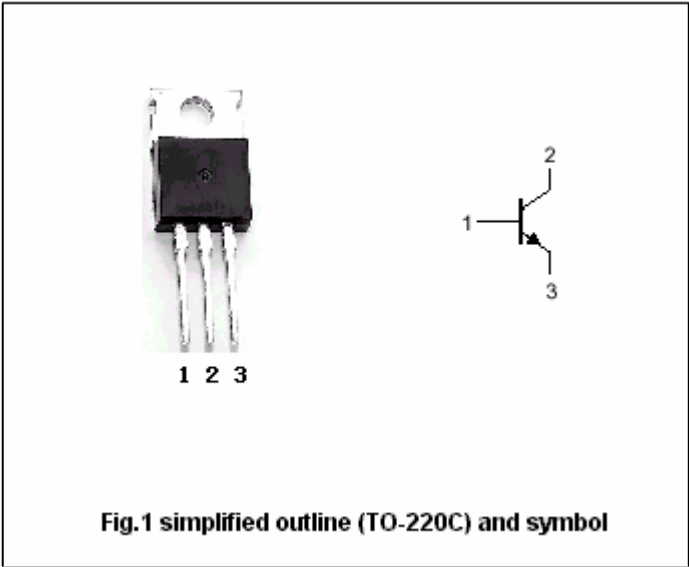
- With TO-220 package
- Complement to type 2SA473
- Collector current : $I_C=3A$
- Collector dissipation: $P_C=10W@T_C=25^{\circ}C$

APPLICATIONS

- Low frequency power amplifier
- Power regulator

PINNING

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



Absolute maximum ratings ($T_a=25^{\circ}C$)

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 (DC)		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

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA ; I_B=0$	30			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=0.5mA ; I_E=0$	30			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1mA ; I_C=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=2A ; I_B=0.2A$			0.8	V
V_{BE}	Base-emitter on voltage	$I_C=0.5A ; V_{CE}=2V$			1.0	V
I_{CBO}	Collector cut-off current	$V_{CB}=20V ; I_E=0$			1.0	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V ; I_C=0$			1.0	μA
h_{FE-1}	DC current gain	$I_C=0.5A ; V_{CE}=2V$	70		240	
h_{FE-2}	DC current gain	$I_C=2.5A ; V_{CE}=2V$	25			
C_{OB}	Output capacitance	$I_E=0 ; V_{CB}=10V ; f=1MHz$		35		pF
f_T	Transition frequency	$I_C=0.5A ; V_{CE}=2V$		100		MHz

◆ h_{FE-1} classifications

O	Y
70-140	120-240

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