

**Silicon PNP Power Transistors**

**2SA940**

**DESCRIPTION**

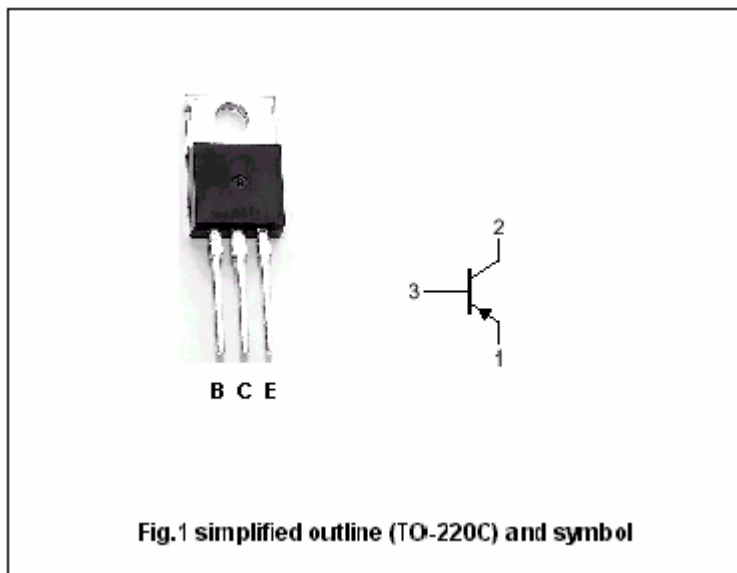
- With TO-220 package
- Complement to type 2SC2073

**APPLICATIONS**

- Power amplifier applications
- Vertical output applications

**PINNING**

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



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-150	V
$V_{CEO}$	Collector-emitter voltage	Open base	-150	V
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current (DC)		-1.5	A
$I_B$	Base current		-0.5	A
$P_C$	Collector power dissipation	$T_a=25$	1.5	W
		$T_C=25$	25	
$T_j$	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>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-0.5A; I <sub>B</sub> =-50m A			-1.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-10V		-0.75	-0.85	V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =-1mA; I <sub>E</sub> =0	-150			V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-5mA; I <sub>B</sub> =0	-150			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-1mA; I <sub>C</sub> =0	-5			V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-120V; I <sub>E</sub> =0			-10	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-10	μ A
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-10V	40		140	
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =-10V; f=1MHz		55		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-10V		4		MHz

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PACKAGE OUTLINE

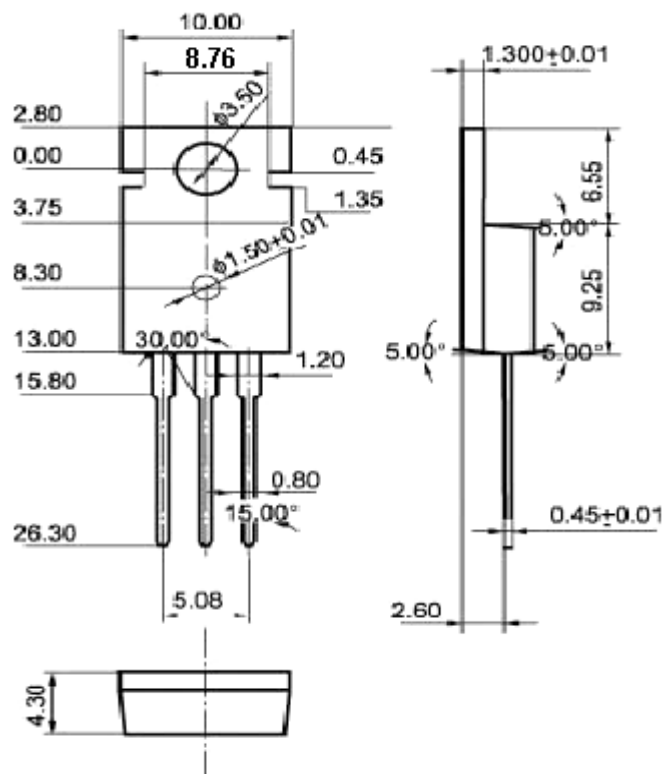


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)

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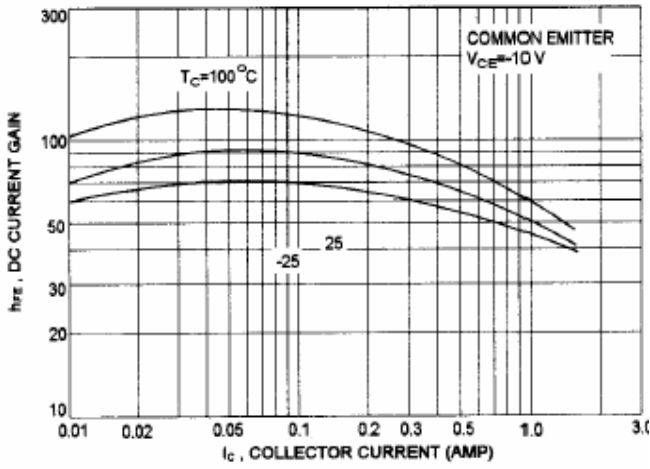


Fig.3 DC current Gain

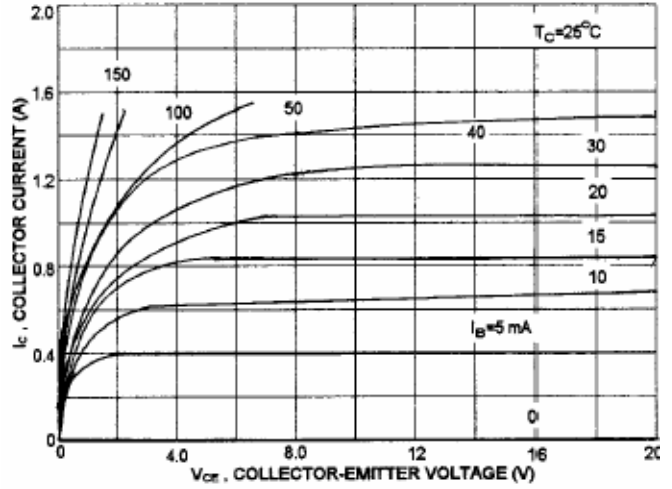


Fig.5 Static Characteristic

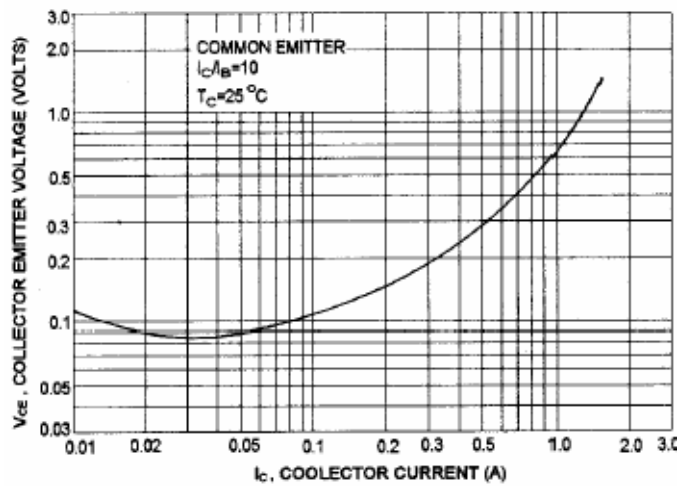


Fig.4 Collector-Emitter Saturation Voltage

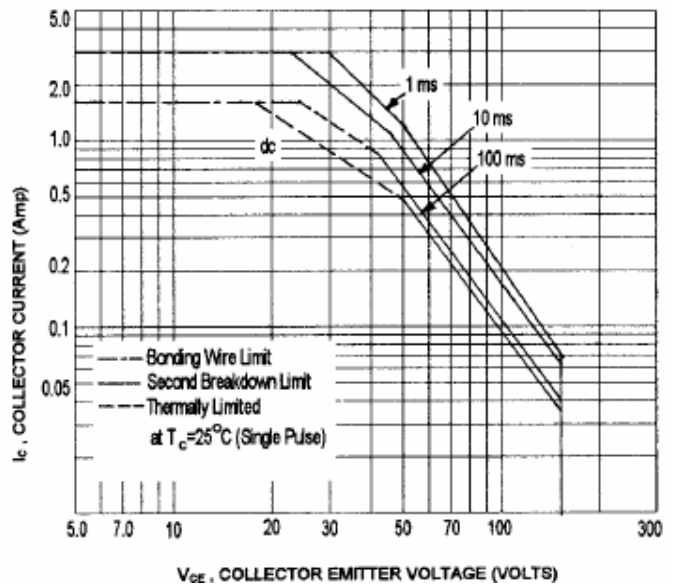


Fig.6 Safe Operating Area