

**Silicon NPN Power Transistors**

**2SC3254**

**DESCRIPTION**

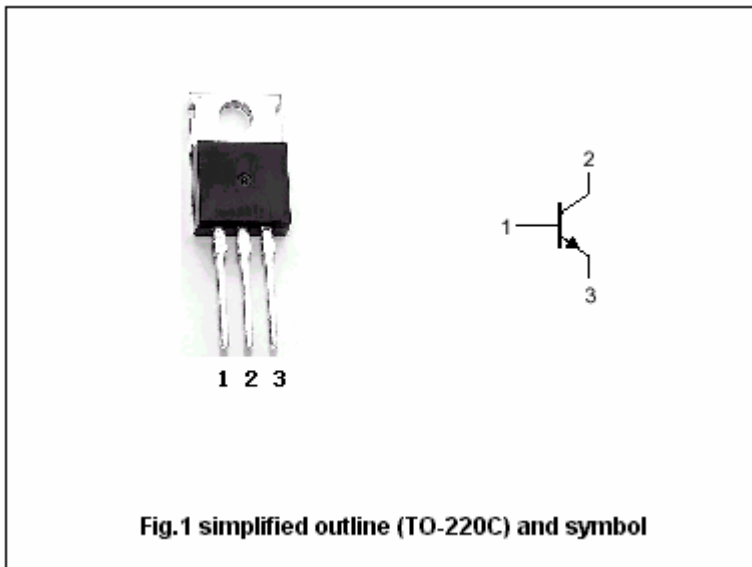
- With TO-220 package
- Short switching time
- Low collector saturation voltage
- Complement to type 2SA1290

**APPLICATIONS**

- Various inductance lamp drivers for electrical equipment
- Inverters,converters
- Power amplifier
- Switching regulator ,driver

**PINNING**

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



**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	80	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	60	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		7	A
I <sub>CM</sub>	Collector current-peak		10	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	35	W
T <sub>J</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°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> =1mA, R <sub>BE</sub> =∞	60			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =1mA, I <sub>E</sub> =0	80			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA, I <sub>C</sub> =0	7			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =3.5A; I <sub>B</sub> =0.175A			0.4	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =40V; I <sub>E</sub> =0			100	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =4V; I <sub>C</sub> =0			100	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =1A; V <sub>CE</sub> =2V	70		280	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A; V <sub>CE</sub> =5V		100		MHz

## Switching times

t <sub>on</sub>	Turn-on time	V <sub>CE</sub> =20V; I <sub>C</sub> =3A I <sub>B1</sub> =-I <sub>B2</sub> =0.15A; R <sub>L</sub> =6.67Ω		0.1		μs
t <sub>stg</sub>	Storage time			0.5		μs
t <sub>f</sub>	Fall time			0.1		μs

◆ h<sub>FE</sub> Classifications

Q	R	S
70-140	100-200	140-280

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PACKAGE OUTLINE

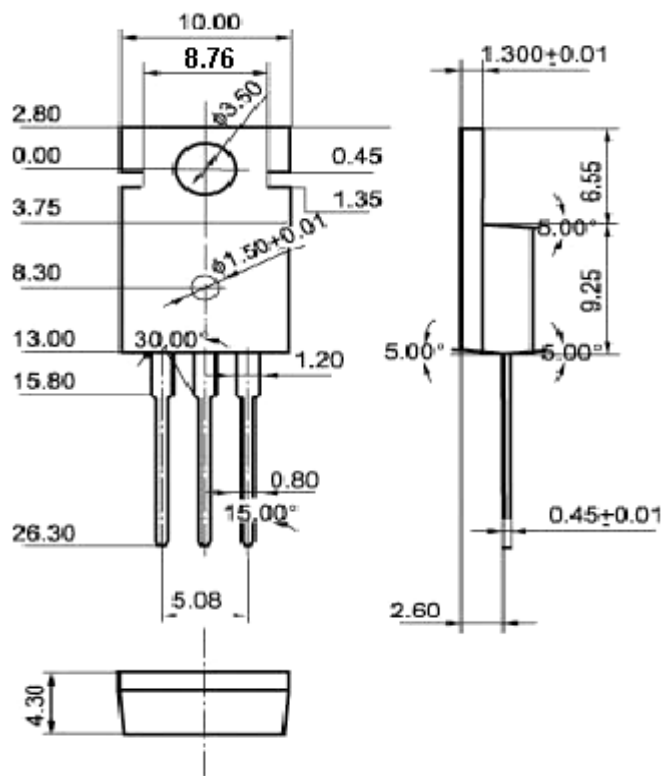


Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)

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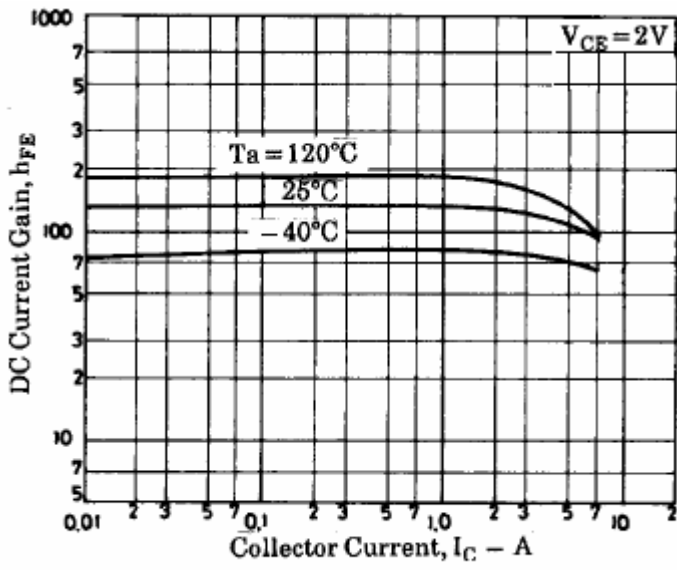


Fig.3 DC current Gain

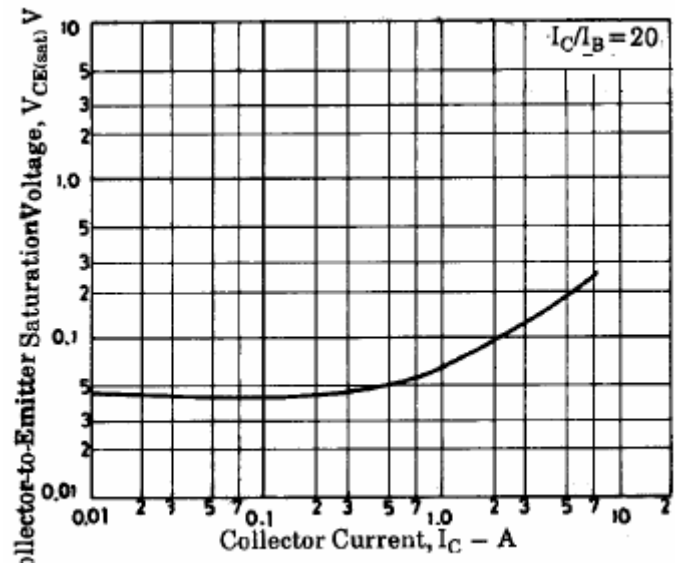


Fig.4 Collector-Emitter Saturation Voltage

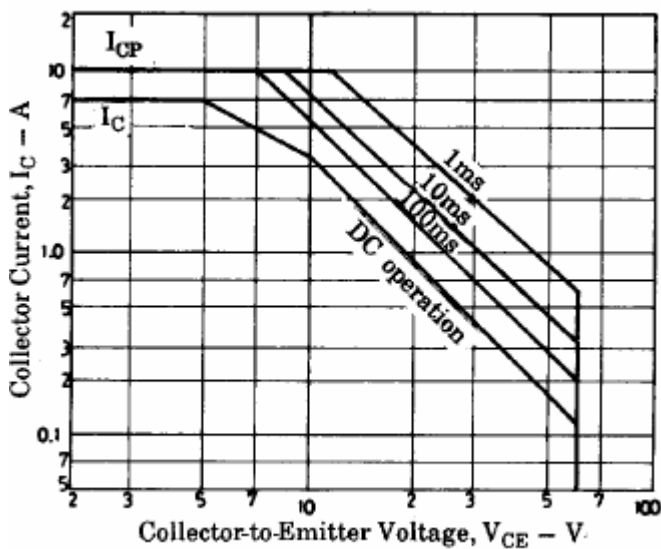


Fig.5 Safe Operating Area