

**Silicon NPN Power Transistors**

**2SC2654**

**DESCRIPTION**

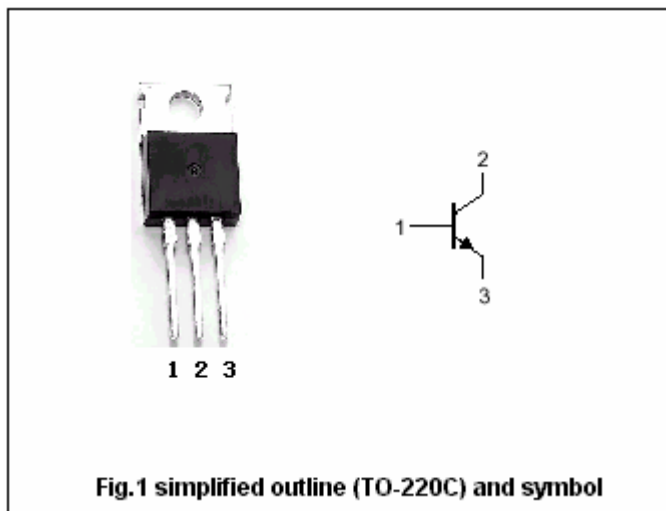
- With TO-220 package
- Complement to type 2SA1129
- Low collector saturation vottage

**APPLICATIONS**

- For low-frequency power amplifiers and mid-speed switching applications

**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	100	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	40	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	7	V
I <sub>C</sub>	Collector current (DC)		7	A
I <sub>CM</sub>	Collector current-peak		15	A
I <sub>B</sub>	Base current (DC)		3.5	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25°C	40	W
		T <sub>a</sub> =25°C	1.5	
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>CE(sat)-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =3A ; I <sub>B</sub> =0.1A			0.3	V
V <sub>CE(sat)-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =0.5A			0.6	V
V <sub>BE(sat)-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =3A ; I <sub>B</sub> =0.1A			1.5	V
V <sub>BE(sat)-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =0.5A			2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =40V; I <sub>E</sub> =0			10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			10	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =3A ; V <sub>CE</sub> =1V	40		320	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =5A ; V <sub>CE</sub> =1V	20			

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =5.0A I <sub>B1</sub> =0.5 A , I <sub>B2</sub> =-0.5A V <sub>CC</sub> ≈20V, R <sub>L</sub> =4.0Ω			1.0	μs
t <sub>s</sub>	Storage time				2.5	μs
t <sub>f</sub>	Fall time				1.0	μs

◆ h<sub>FE-1</sub> Classifications

M	L	K	J
40-80	60-120	100-200	160-320

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PACKAGE OUTLINE

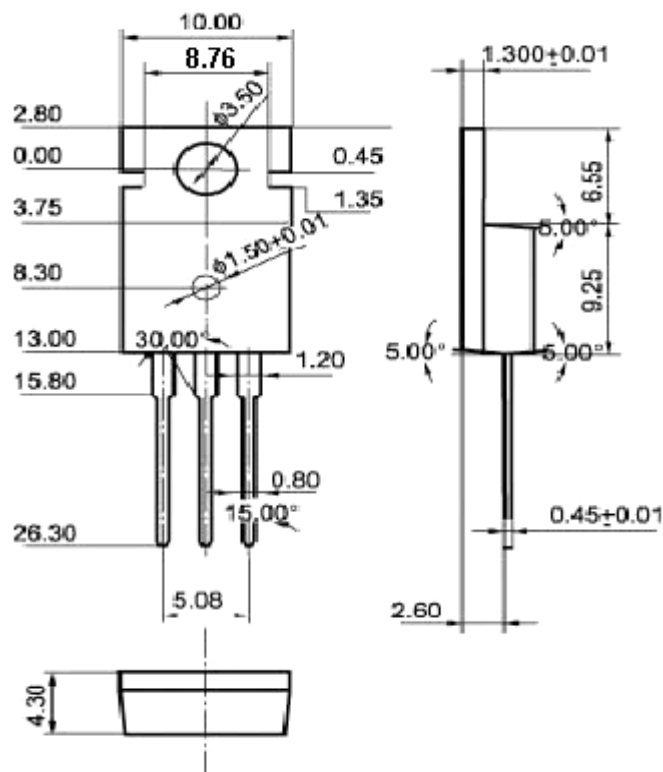


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)