

**Silicon NPN Power Transistors**

**2SC1096**

**DESCRIPTION**

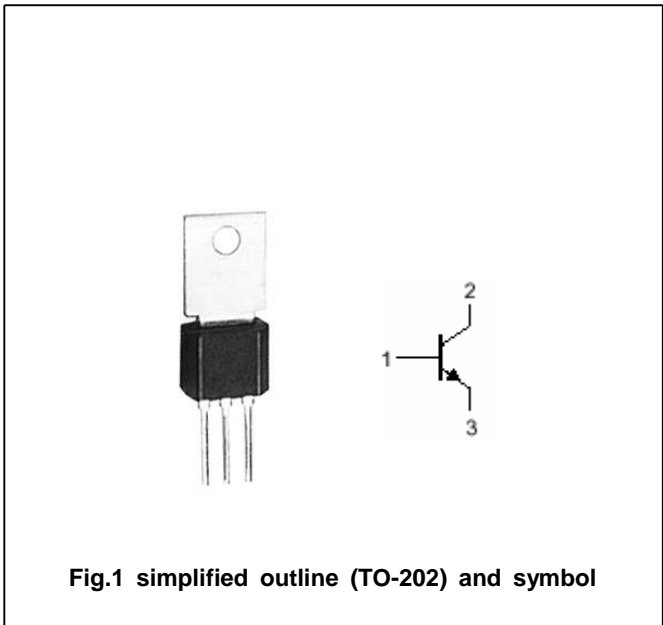
- With TO-202 package
- Low breakdown voltage
- High current
- High  $f_T$

**APPLICATIONS**

- For audio frequency power amplifier and low speed switching applications
- Suitable for output stages of 3 to 5 watts car radio sets and car stereo

**PINNING(see Fig.2)**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	40	V
$V_{CEO}$	Collector-emitter voltage	Open base	30	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		3	A
$I_{CM}$	Collector current-peak		6	A
$I_B$	Base current		0.6	A
$P_C$	Collector power dissipation	$T_a=25?$	1.2	W
		$T_C=25?$	10	
$T_j$	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> =3A ; I <sub>B</sub> =0.3A			2.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =3A ; I <sub>B</sub> =0.3A			2.0	V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA ; I <sub>B</sub> =0	30			V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =30V ; I <sub>E</sub> =0			1.0	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =3V ; I <sub>C</sub> =0			1.0	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =20mA ; V <sub>CE</sub> =5V	20			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =1.0A ; V <sub>CE</sub> =5V	40		250	
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V ; f=1.0MHz		55		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.1A ; V <sub>CE</sub> =5V		65		MHz

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

N	M	L	K
40-60	50-100	80-160	120-250

PACKAGE OUTLINE

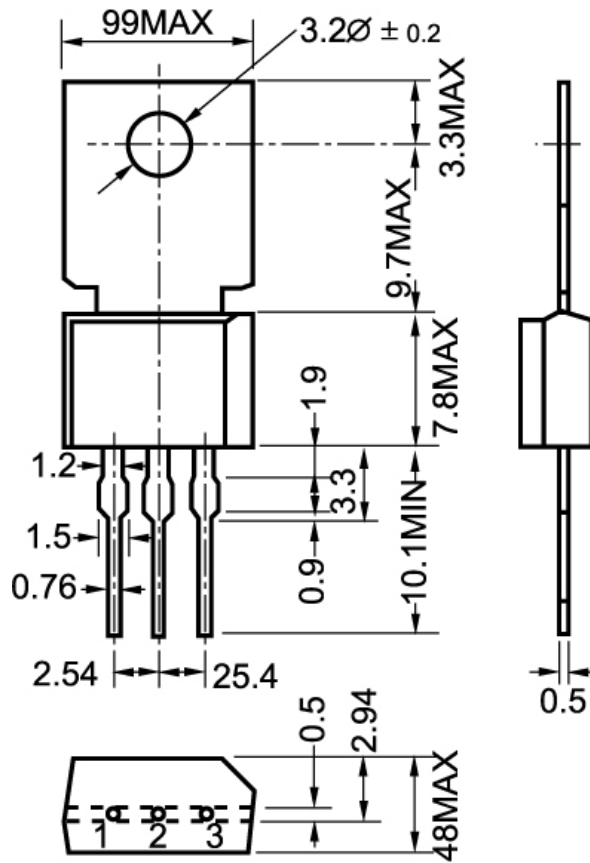


Fig.2 outline dimensions