

Silicon NPN Power Transistors

2SD998

DESCRIPTION

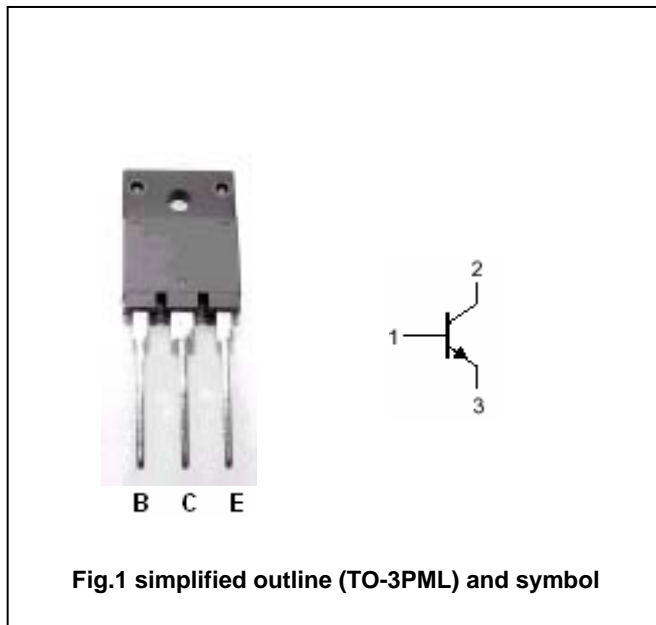
- With TO-3PML package
- Complement to type 2SB778

APPLICATIONS

- High power amplifier applications
- Recommended for 45~50W audio frequency amplifier output stage

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings (Ta=25 )

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	120	V
$V_{CEO}$	Collector-emitter voltage	Open base	120	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		10	A
$I_B$	Base current		1.0	A
$P_C$	Collector dissipation	$T_C=25$	80	W
$T_j$	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>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =50mA ; I <sub>B</sub> =0	120			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A			2.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =0.5A; V <sub>CE</sub> =5V			1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =120V; 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</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	55		160	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V		12		MHz
C <sub>OB</sub>	Collector output capacitance	f=1MHz; V <sub>CB</sub> =10V		170		pF

◆ h<sub>FE</sub> Classifications

R	O
55-110	80-160

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PACKAGE OUTLINE

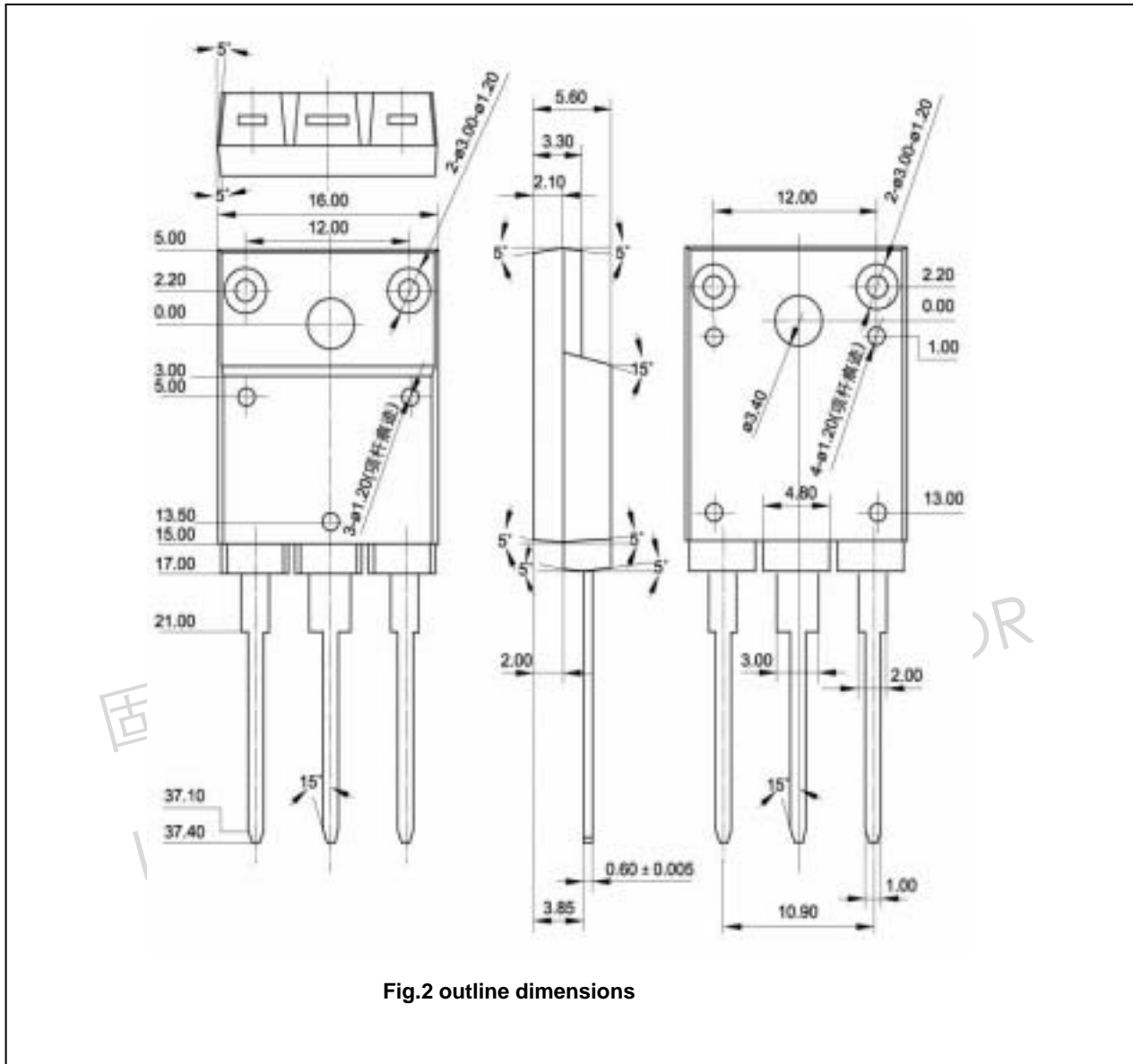


Fig.2 outline dimensions

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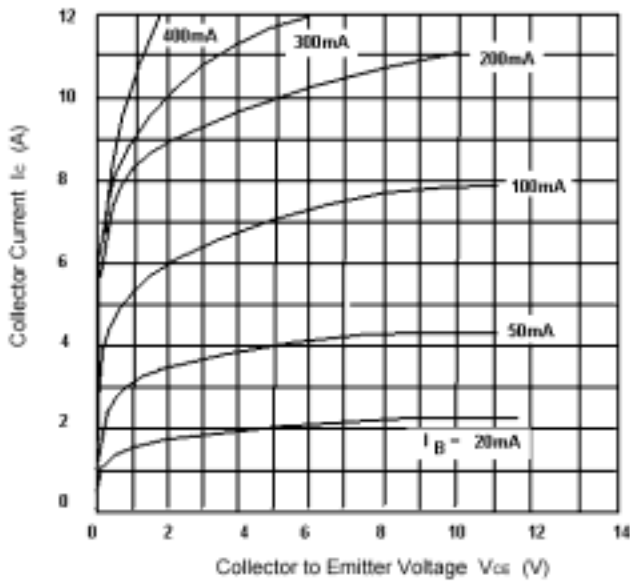


Fig.3 Static Characteristic

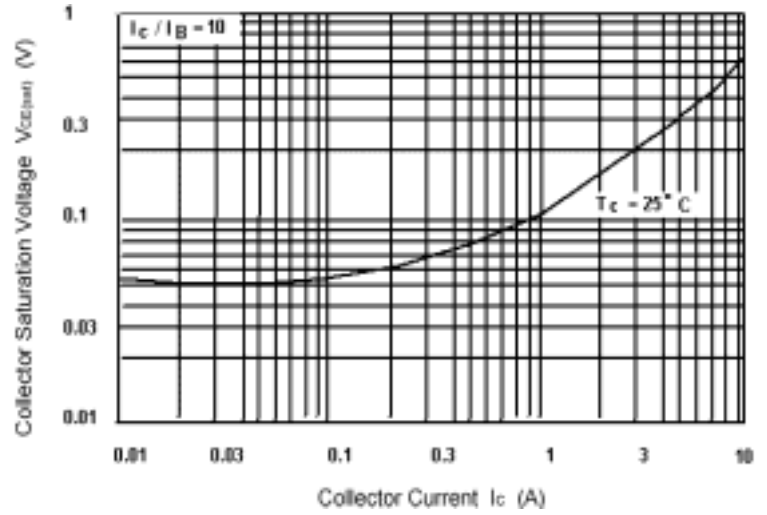


Fig.4 Collector-Emitter Saturation Voltage

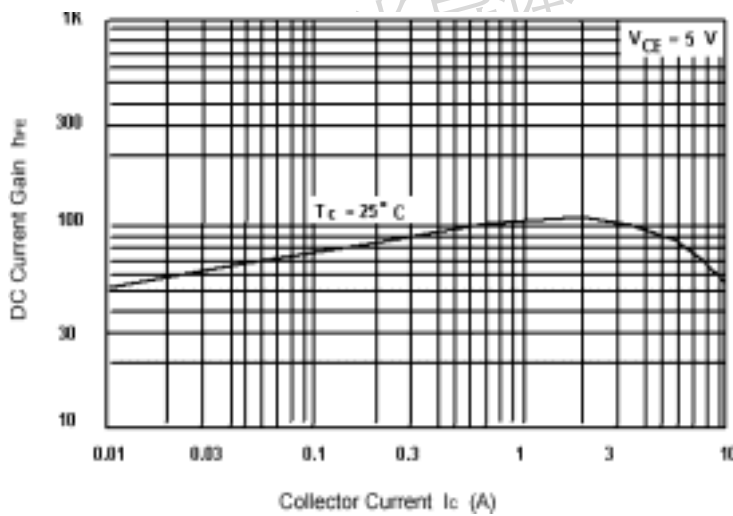


Fig.5 DC current Gain

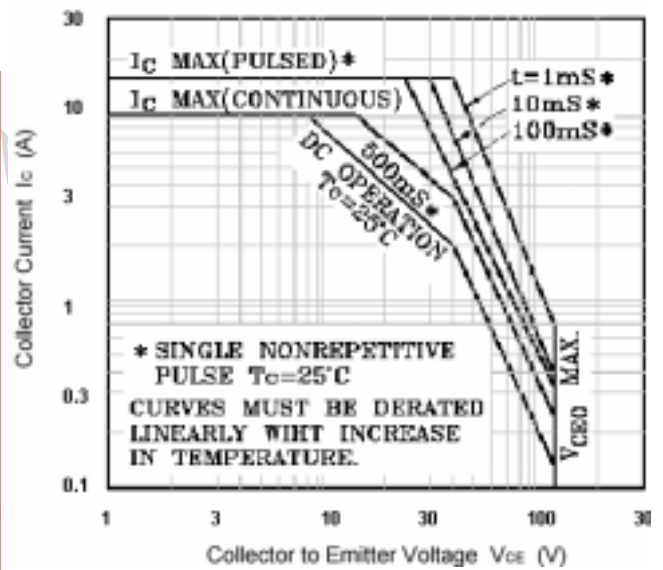


Fig.6 Safe Operating Area