

Silicon PNP Power Transistors

2SA1908

**DESCRIPTION**

- With TO-3PML package
- Complement to type 2SC5100

**APPLICATIONS**

- Audio and general purpose

**PINNING**

PIN	DESCRIPTION
1	Emitter
2	Collector
3	Base

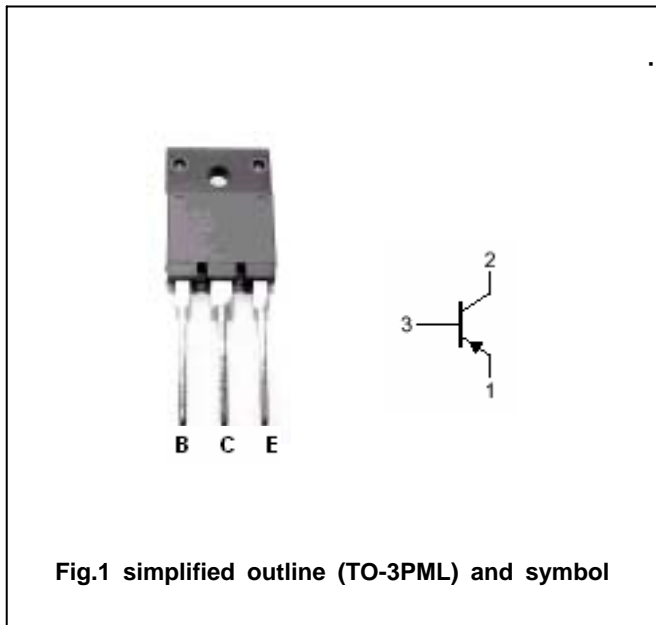


Fig.1 simplified outline (TO-3PML) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	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	-6	V
$I_C$	Collector current		-8	A
$I_B$	Base current		-3	A
$P_C$	Collector power dissipation	$T_C=25$	75	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

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**CHARACTERISTICS**

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=-50mA; I_B=0$	-120			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=-3A; I_B=-0.3A$			-0.5	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=-120V; I_E=0$			-10	$\mu A$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=-6V; I_C=0$			-10	$\mu A$
$h_{FE}$	DC current gain	$I_C=-3A; V_{CE}=-4V$	50		180	
$f_T$	Transition frequency	$I_C=-0.5A; V_{CE}=-12V$		20		MHz
$C_{OB}$	Output capacitance	$I_E=0; V_{CB}=-10V; f=1MHz$		300		pF

Switching times

$t_{on}$	Turn-on time	$I_C=-4A; R_L=10$ $I_{B1}=-I_{B2}=-0.4A$ $V_{CC}=-40V$		0.14		$\mu s$
$t_s$	Storage time			1.40		$\mu s$
$t_f$	Fall time			0.21		$\mu s$

◆  **$h_{FE}$  classifications**

O	P	Y
50-100	70-140	90-180

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PACKAGE OUTLINE

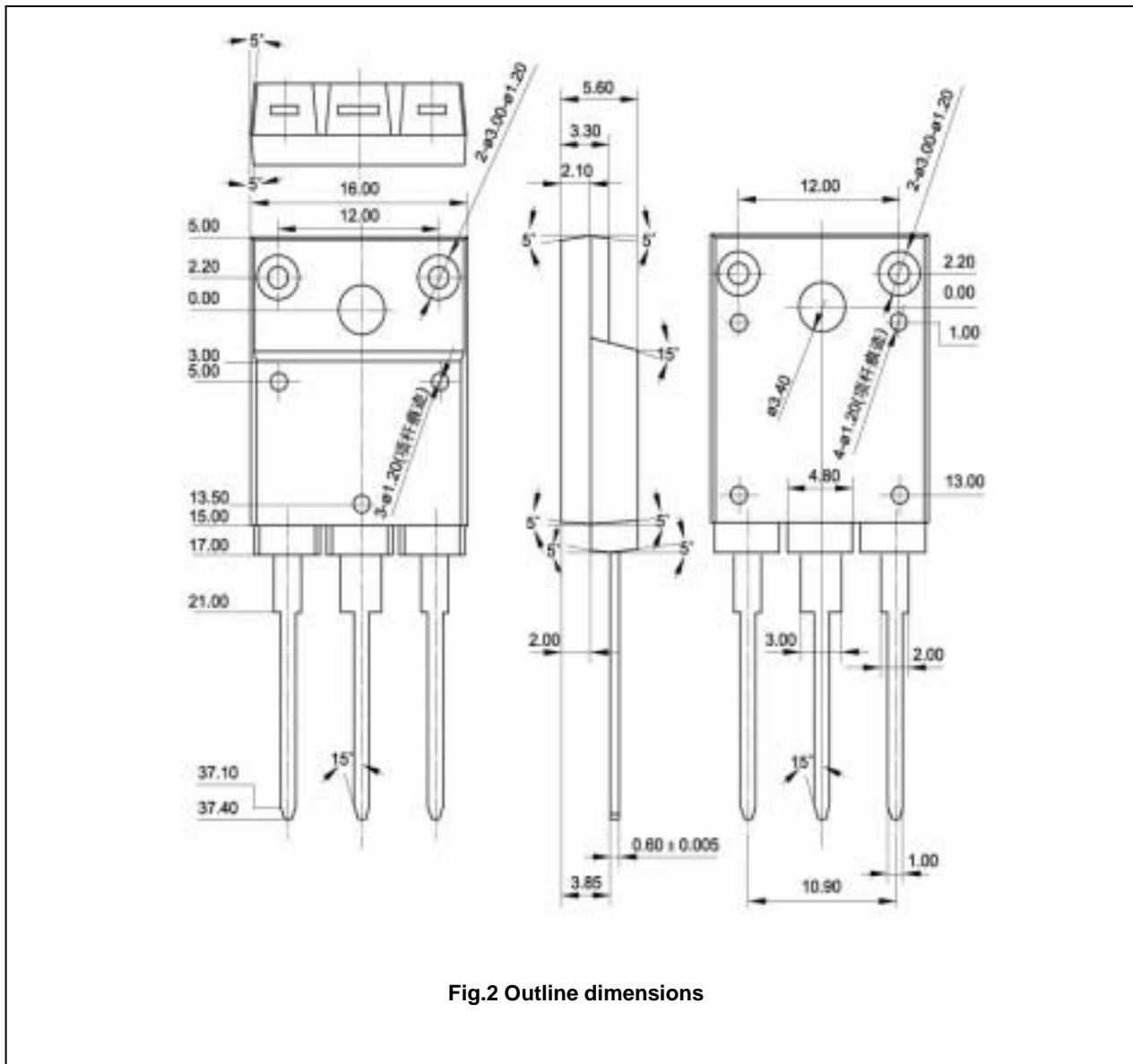


Fig.2 Outline dimensions

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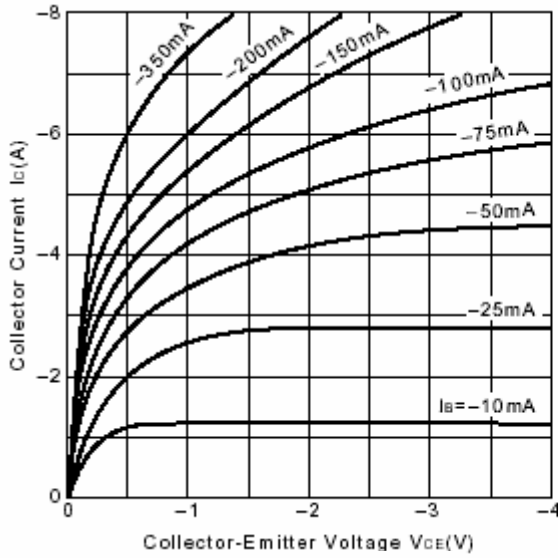


Fig.3 Static Characteristic

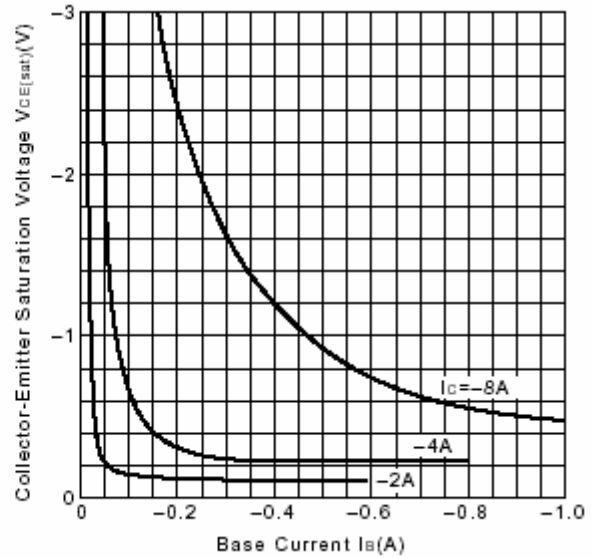


Fig.4  $V_{CE(sat)}-I_B$  Characteristics

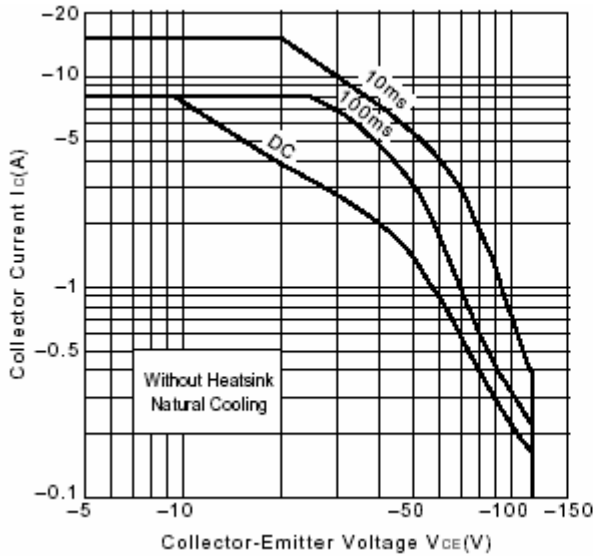


Fig.5 Safe Operating Area

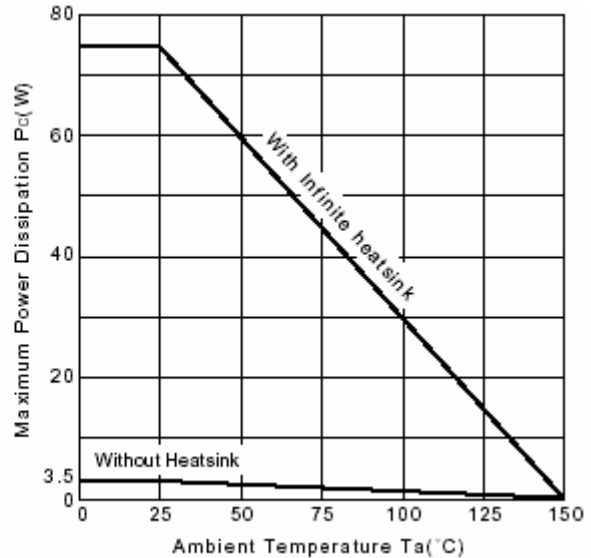


Fig.6  $P_c-T_a$  Derating

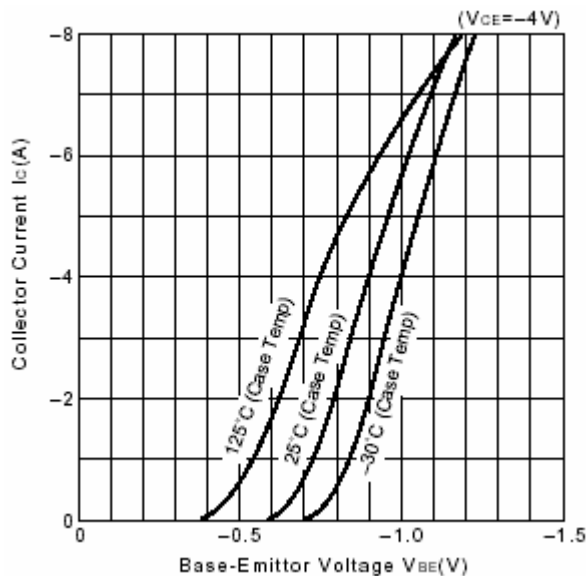


Fig.7  $I_C-V_{BE}$

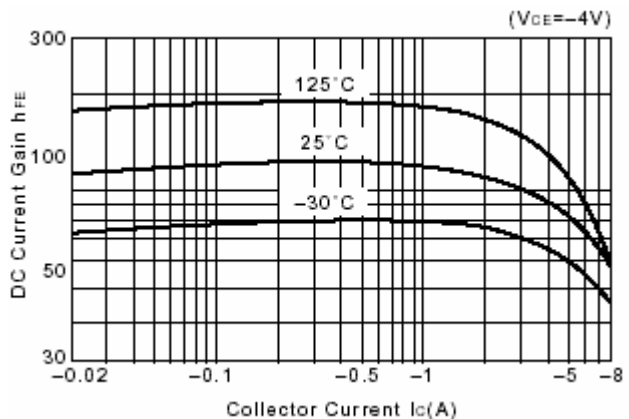


Fig.8 DC current Gain