

Silicon PNP Power Transistors

2SA1673

**DESCRIPTION**

- With TO-3PML package
- Complement to type 2SC4388

**APPLICATIONS**

- Audio and general purpose

**PINNING**

PIN	DESCRIPTION
1	Emitter
2	Collector
3	Base

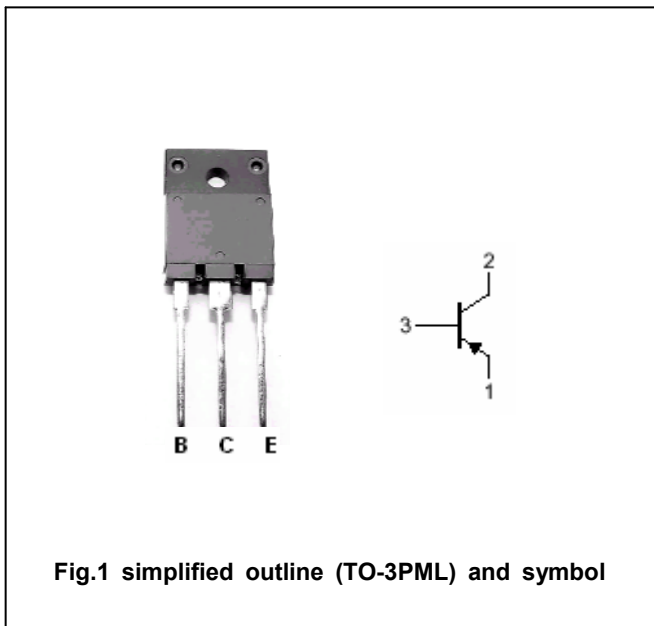


Fig.1 simplified outline (TO-3PML) and symbol

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-180	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-180	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-6	V
I <sub>C</sub>	Collector current		-15	A
I <sub>B</sub>	Base current		-4	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	85	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

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## CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=-50mA; I_B=0$	-180			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=-5A; I_B=-0.5A$			-2.0	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=-180V; I_E=0$			-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	$I_E=0; V_{CB}=-10V; f=1MHz$		500		pF

## Switching times

$t_{on}$	Turn-on time	$I_C=-10A; R_L=4\Omega$ $I_{B1}=-I_{B2}=-1A$ $V_{CC}=-40V$		0.60		$\mu s$
$t_s$	Storage time			0.90		$\mu s$
$t_f$	Fall time			0.20		$\mu s$

◆  $h_{FE}$  classifications

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

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PACKAGE OUTLINE

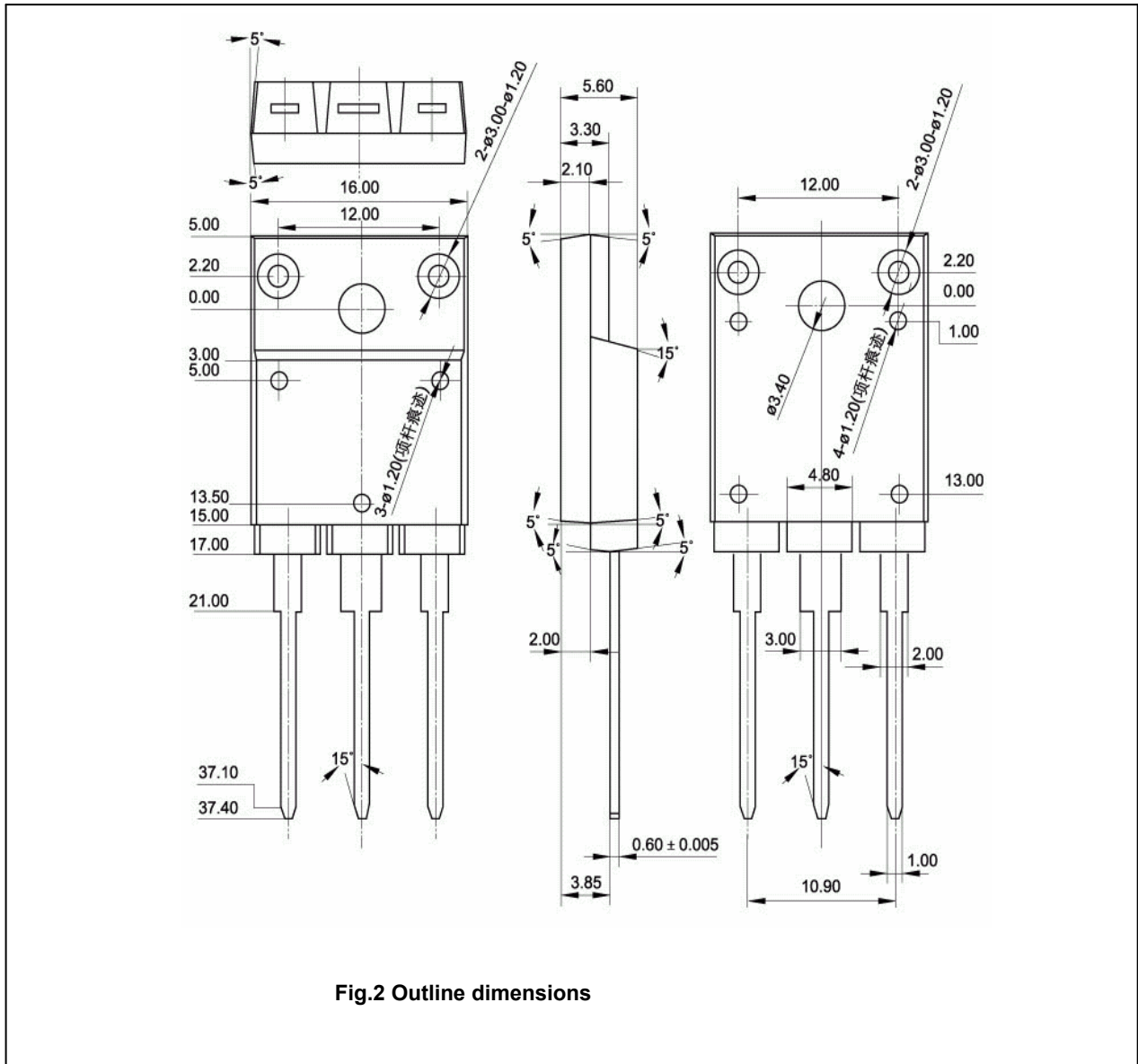


Fig.2 Outline dimensions

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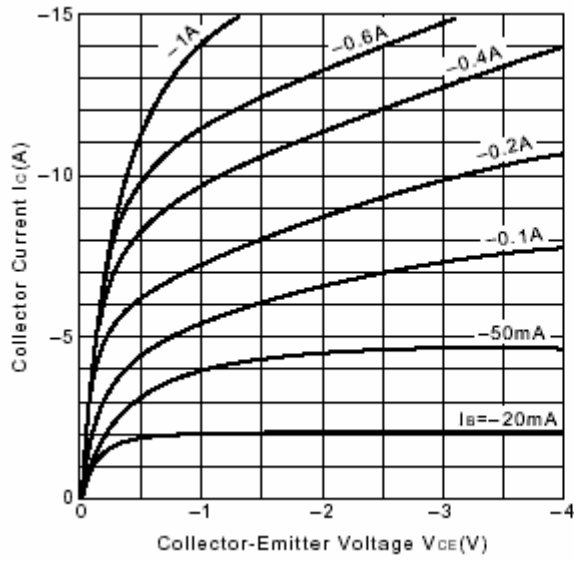


Fig.3 Static Characteristic

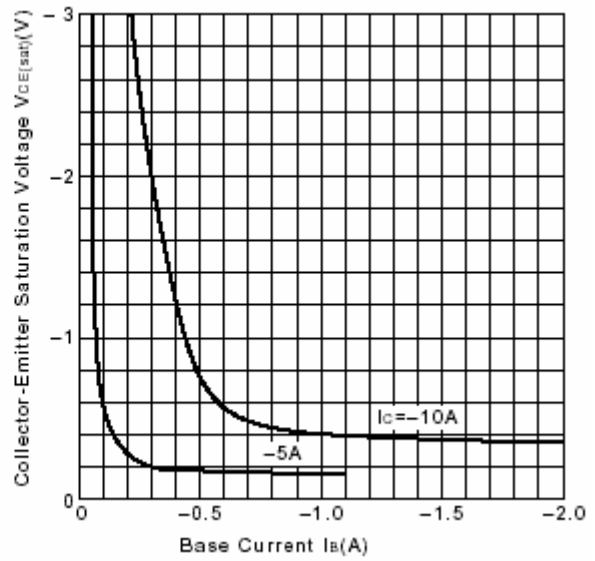


Fig.4  $V_{CE(sat)}$ - $I_B$  Characteristics

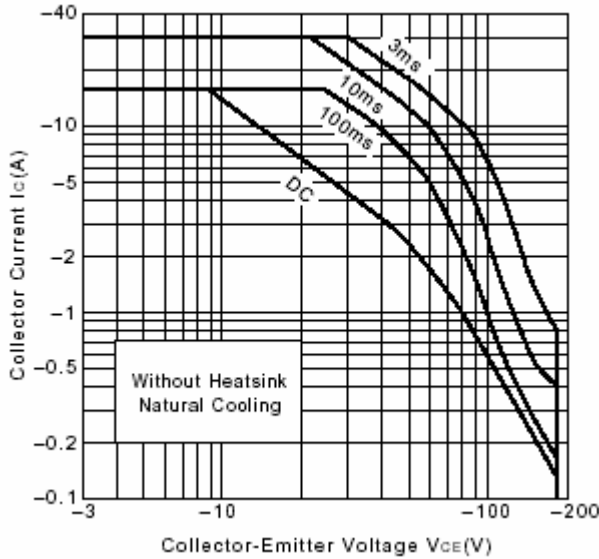


Fig.5 Safe Operating Area

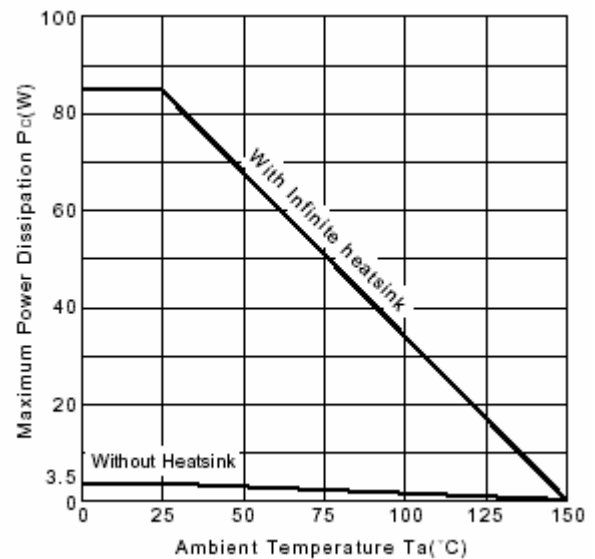


Fig.6  $P_c$ - $T_a$  Derating

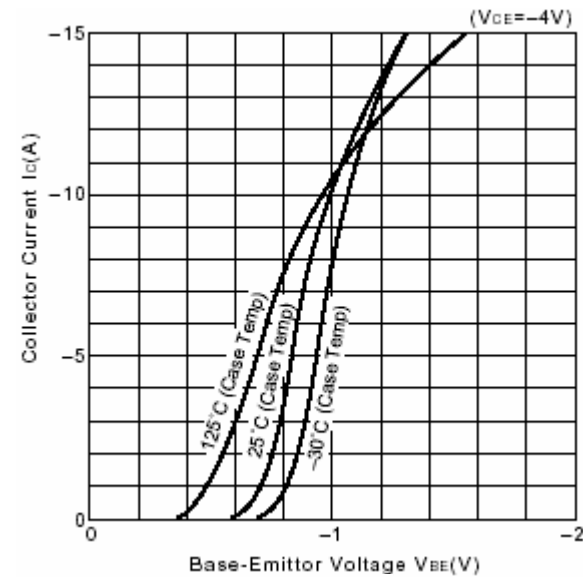


Fig.7  $I_C$ - $V_{BE}$

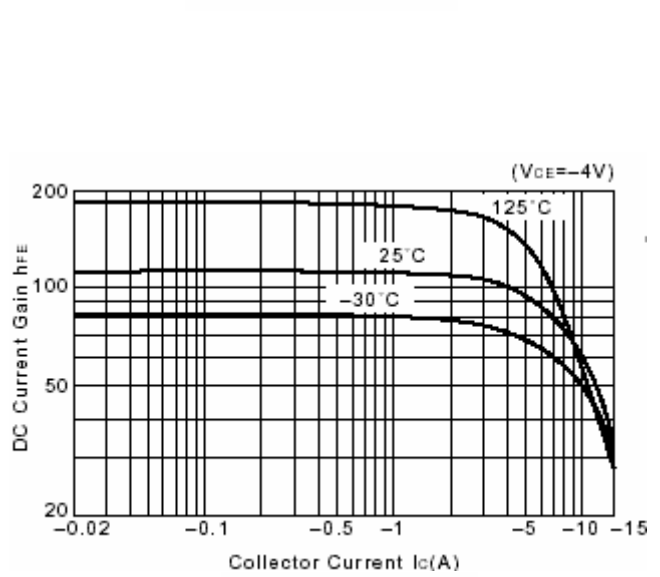


Fig.8 DC current Gain