

Silicon PNP Power Transistors

2SA1859 2SA1859A

DESCRIPTION

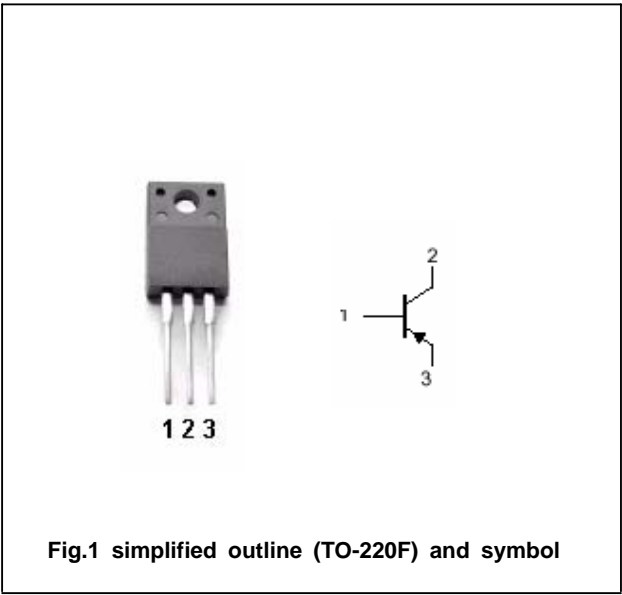
- With TO-220F package
- Complement to type 2SC4883/4883A

APPLICATIONS

- For audio output driver and TV velocity-modulation applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2SA1859	Open emitter	-150	V
		2SA1859A		-180	
V <sub>CEO</sub>	Collector-emitter voltage	2SA1859	Open base	-150	V
		2SA1859A		-180	
V <sub>EBO</sub>	Emitter-base voltage		Open collector	-6	V
I <sub>C</sub>	Collector current			-2	A
I <sub>B</sub>	Base current			-1	A
P <sub>C</sub>	Collector dissipation		T <sub>C</sub> =25℃	20	W
T <sub>j</sub>	Junction temperature			150	℃
T <sub>stg</sub>	Storage temperature			-55~150	℃

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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	2SA1859	$I_C=-10mA ; I_B=0$	-150			V
		2SA1859A		-180			
$V_{CEsat}$	Collector-emitter saturation voltage		$I_C=-0.7A ; I_B=-70mA$			-1.0	V
$I_{CBO}$	Collector cut-off current	2SA1859	$V_{CB}=-150V ; I_E=0$			-10	$\mu A$
		2SA1859A	$V_{CB}=-180V ; I_E=0$			-10	$\mu A$
$I_{EBO}$	Emitter cut-off current		$V_{EB}=-6V ; I_C=0$			-10	$\mu A$
$h_{FE}$	DC current gain		$I_C=-0.7A ; V_{CE}=-10V$	60		240	
$f_T$	Transition frequency		$I_C=-0.7A ; V_{CE}=-12V$		60		MHz
$C_{OB}$	Output capacitance		$I_E=0 ; V_{CB}=-10V ; f=1MHz$		30		pF

## Switching time

$t_{on}$	Turn-on time	$I_C=-1A ; I_{B1}=-I_{B2}=-0.1A$ $V_{CC}=-20V , R_L=20 \Omega$		0.50		$\mu s$
$t_s$	Storage time			1.00		$\mu s$
$t_f$	Fall time			0.50		$\mu s$

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## PACKAGE OUTLINE

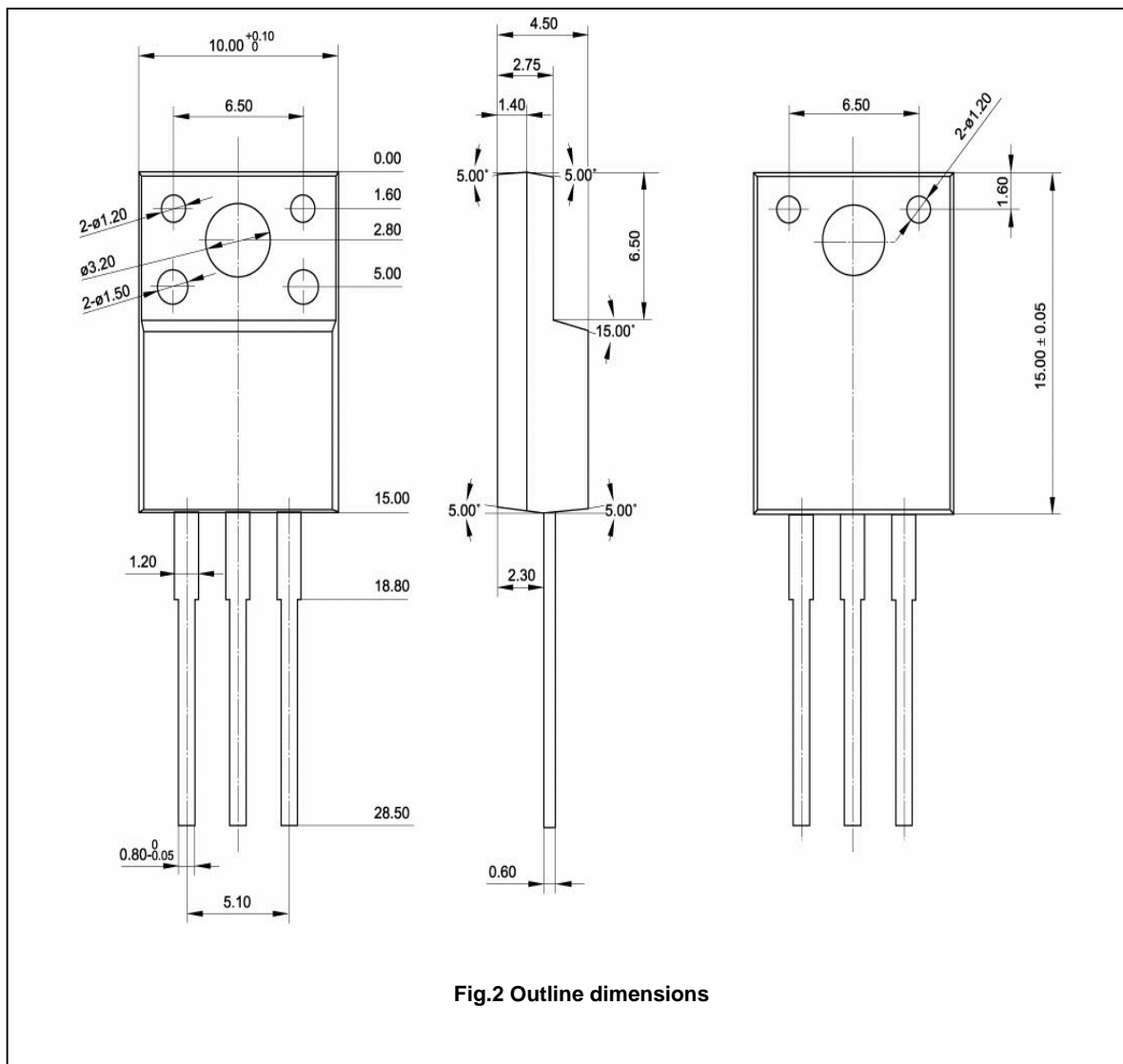


Fig.2 Outline dimensions

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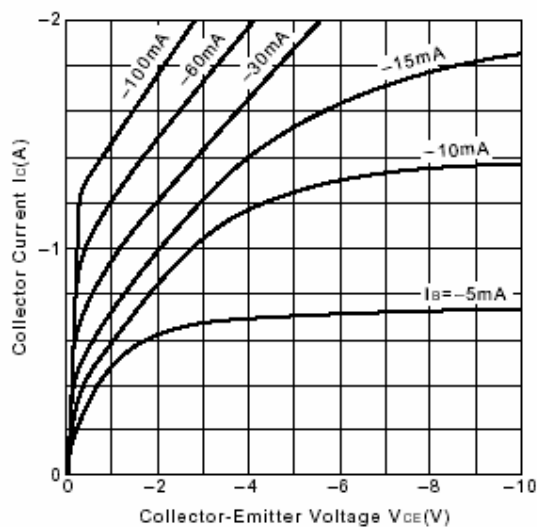


Fig.3 Static Characteristic

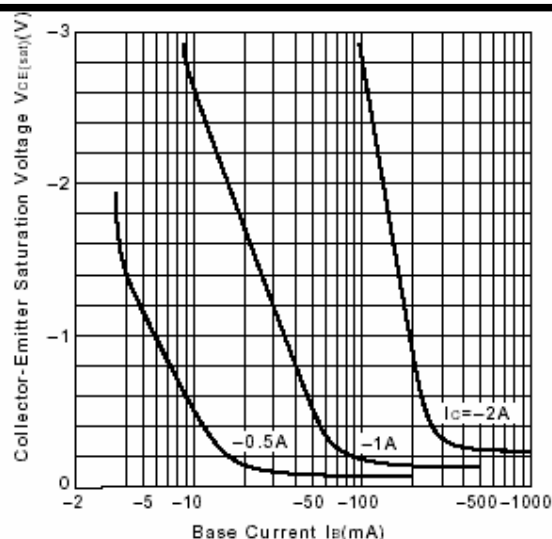
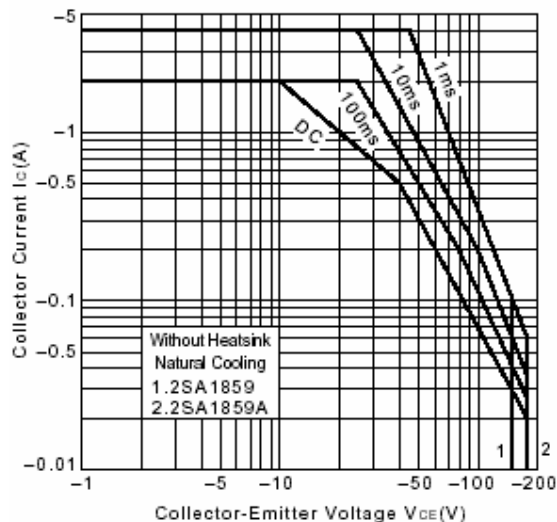
Fig.4  $V_{CE(sat)}-I_B$  Characteristics

Fig.5 Safe Operating Area

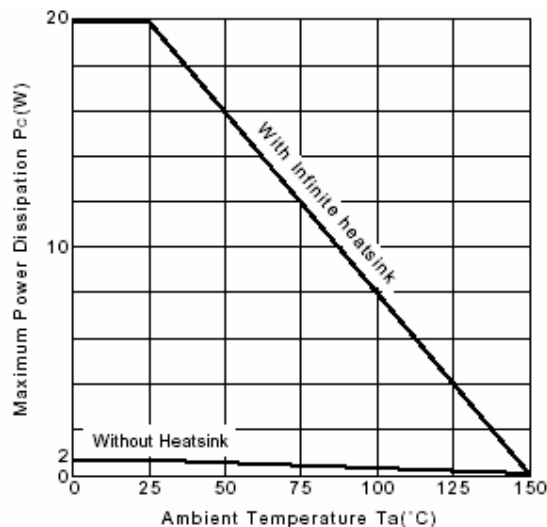


Fig.6 Power Derating

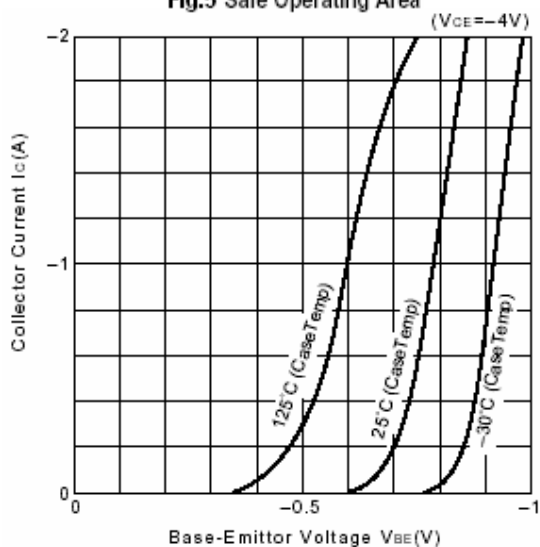
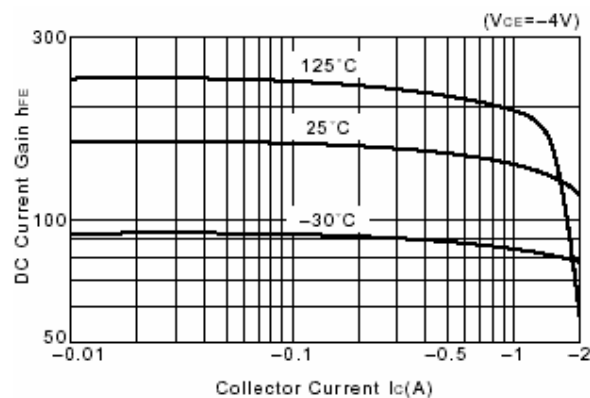
Fig.7  $I_C-V_{BE}$ 

Fig.8 DC current Gain