SPTECH Silicon NPN Power Transistors

DESCRIPTION

- With TO-3PML package
- Complement to type 2SA1908

APPLICATIONS

- Audio and general purpose

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

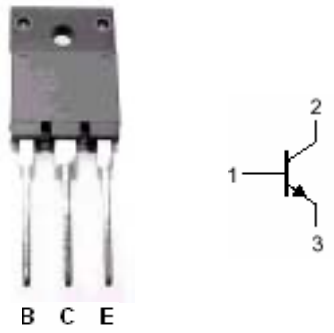


Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings(Tc=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	160	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=3 A;I_B=0.3 A			0.5	V
I_{CBO}	Collector cut-off current	V_{CB}=160V ;I_E=0			10	μA
I_{EBO}	Emitter cut-off current	V_{EB}=6V; I_C=0			10	μA
h_{FE}	DC current gain	I_C=3A ; V_{CE}=4V	50		180	
f_T	Transition frequency	I_E=-0.5A ; V_{CE}=12V		20		MHz
C_{OB}	Output capacitance	I_E=0; V_{CB}=10V;f=1MHz		200		pF
Switching times						
t_{on}	Turn-on time	I_C=4A;R_L=10Ω I_{B1}=-I_{B2}=0.4A V_{CC}=40V		0.13		μs
t_s	Storage time			3.50		μs
t_f	Fall time			0.32		μs

◆ **h_{FE} classifications**

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

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PACKAGE OUTLINE

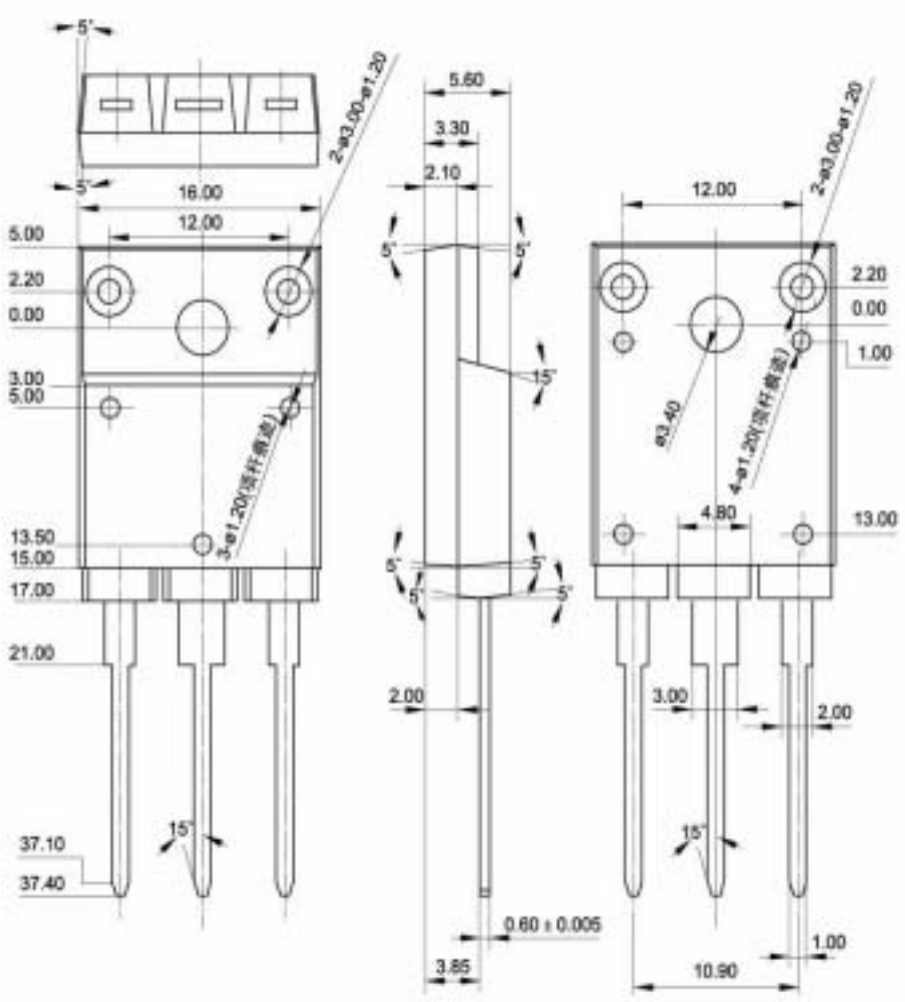


Fig.2 Outline dimensions

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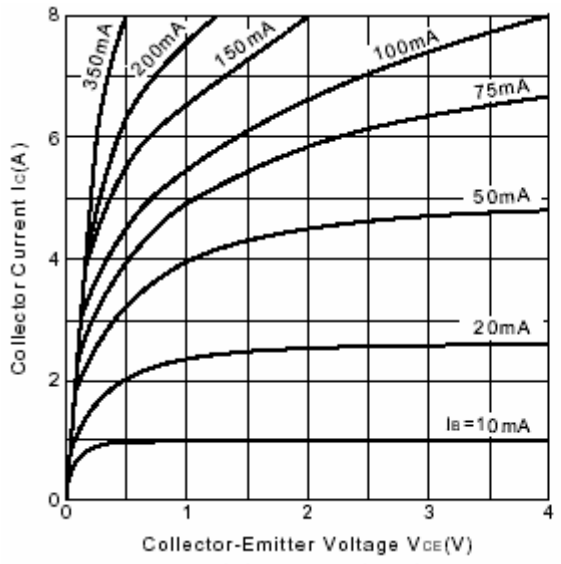


Fig.3 Static Characteristic

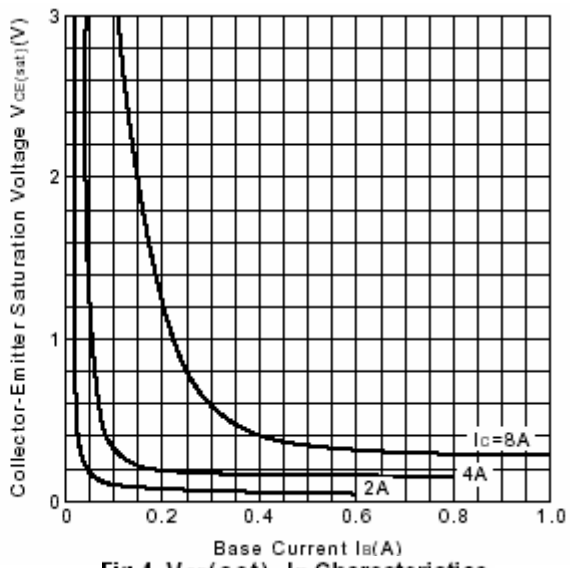


Fig.4 VCE(sat)–IB Characteristics

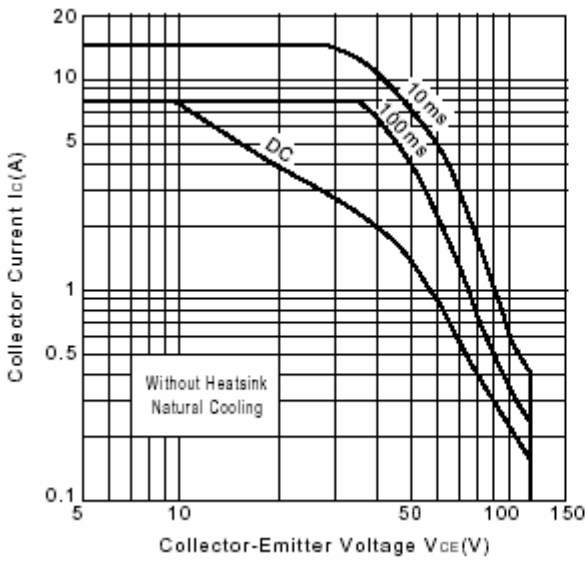


Fig.5 Safe Operating Area

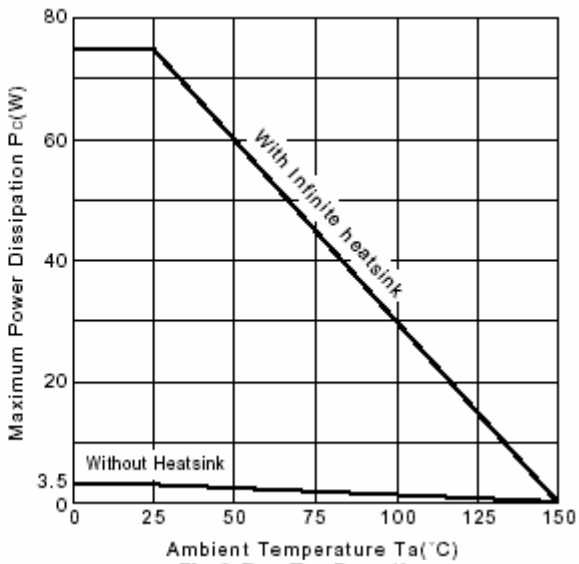


Fig.6 Pc–Ta Derating

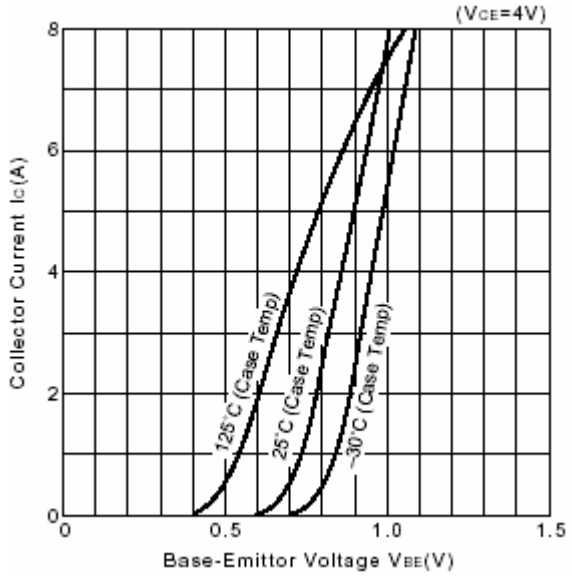


Fig.7 IC–VBE

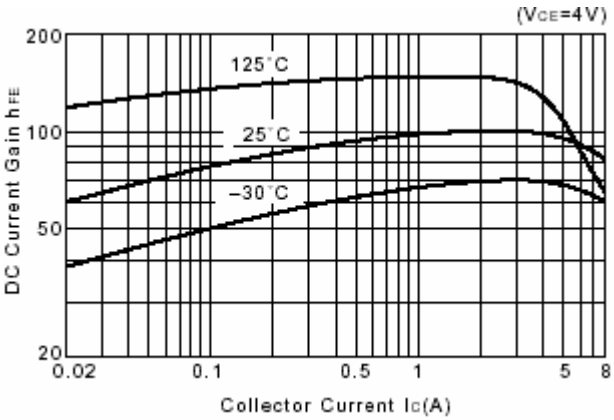


Fig.8 DC current Gain