

Silicon NPN Power Transistors

2SC4124

DESCRIPTION

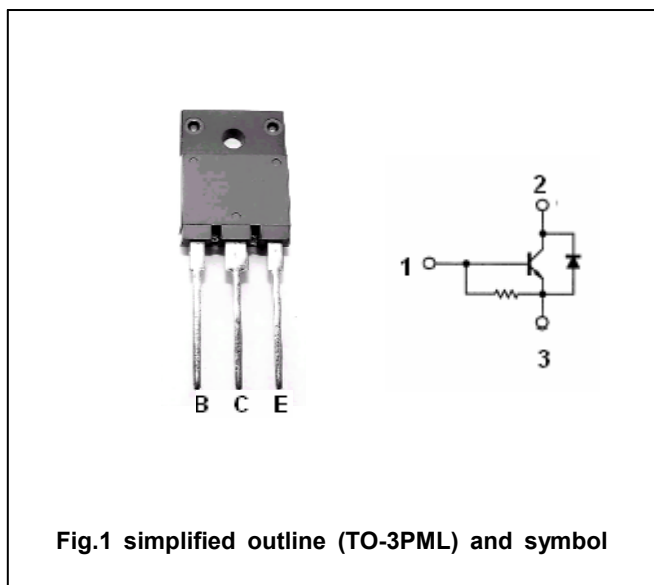
- With TO-3PML package
- High breakdown voltage, high reliability.
- High speed
- Built in damper diode

APPLICATIONS

- Ultrahigh-definition CRT display
- Horizontal deflection output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Maximum absolute ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1500	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		8	A
I_{CM}	Collector current-peak		25	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	70	W
		$T_a=25^\circ\text{C}$	3	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CEsat}	Collector-emitter saturation voltage	$I_C=6A; I_B=1.5 A$			5.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=6A; I_B=1.5 A$			1.5	V
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=100mA; I_B=0$	800			V
I_{EBO}	Emitter cut-off current	$V_{EB}=4V; I_C=0$	40		130	mA
I_{CBO}	Collector cut-off current	$V_{CB}=800V; I_E=0$			10	μA
I_{CES}	Collector cut-off current	$V_{CE}=1500V; R_{BE}=0$			1	mA
h_{FE-1}	DC current gain	$I_C=1 A; V_{CE}=5V$	8			
h_{FE-2}	DC current gain	$I_C=6A; V_{CE}=5V$	4		6	
V_F	Diode forward voltage	$I_{EC}=8A$			2.0	V

Switching times

t_{stg}	Storage time	$I_C=6A; R_L=33.3\Omega$ $I_{B1}=1.2A; I_{B2}=-2.4A$ $V_{CC}=200V$			3.0	μs
t_f	Fall time			0.1	0.2	μs

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PACKAGE OUTLINE

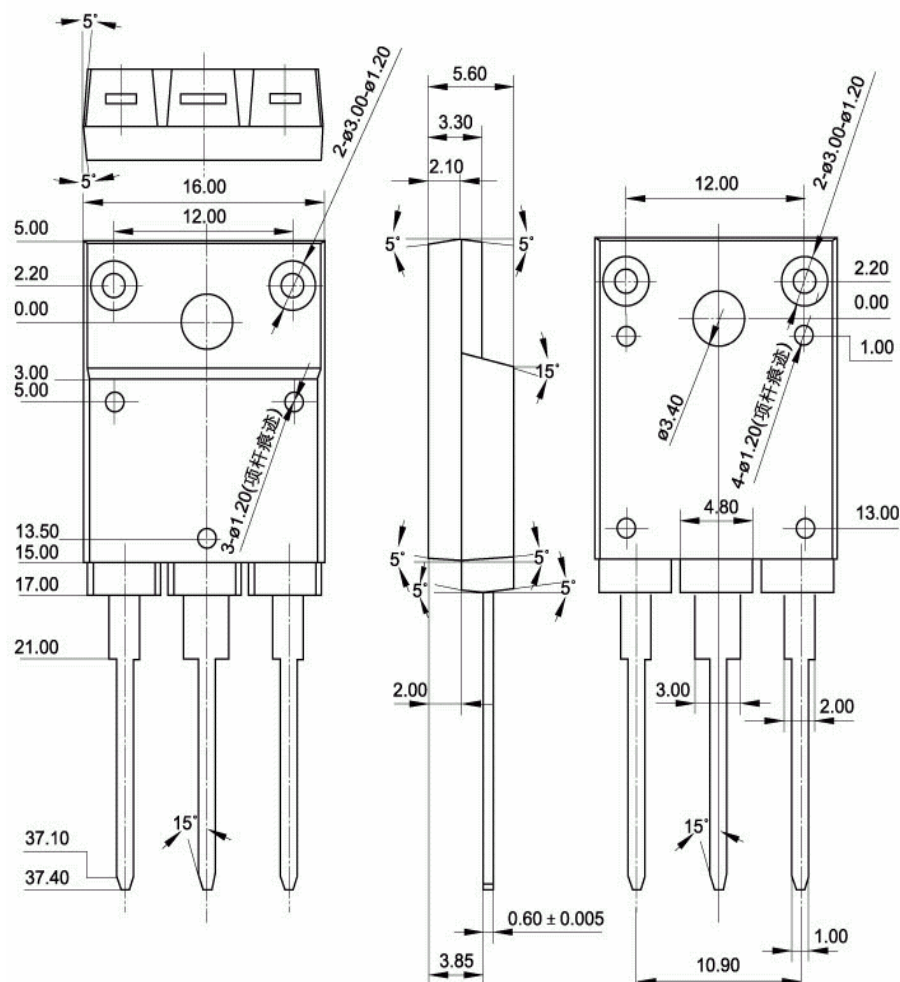


Fig.2 Outline dimensions

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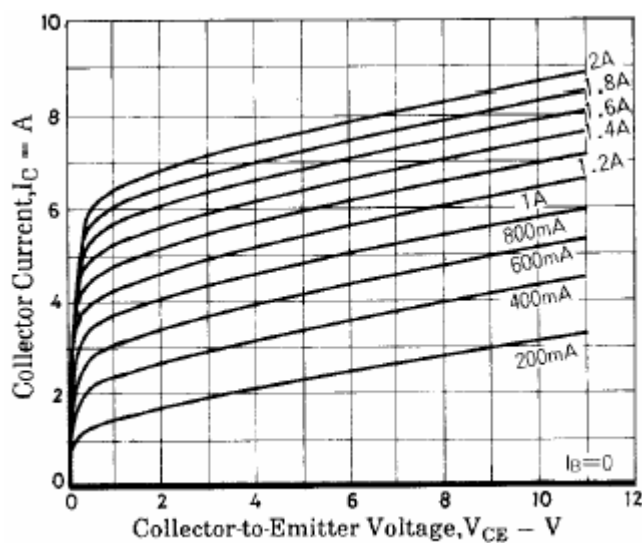


Fig.3 Static Characteristic

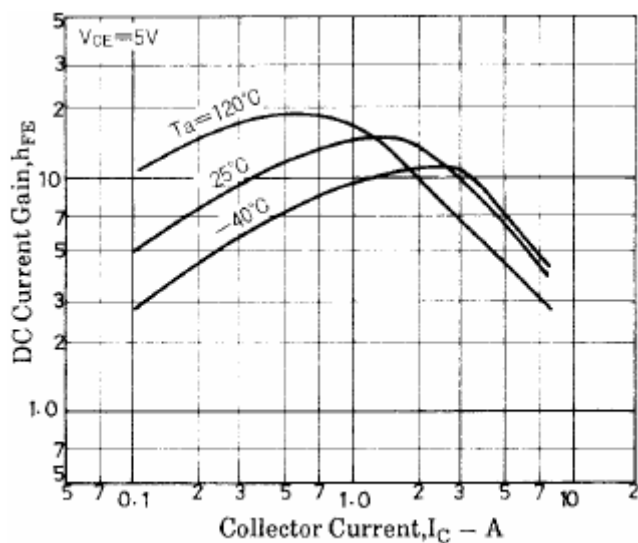


Fig.4 DC current Gain

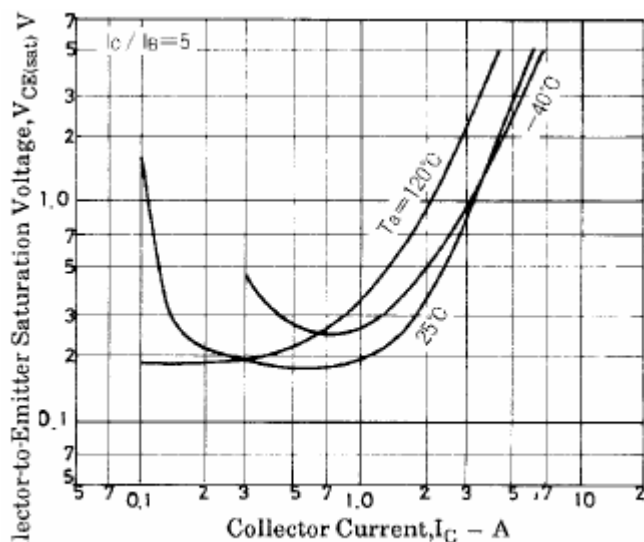


Fig.5 Collector-Emitter Saturation Voltage

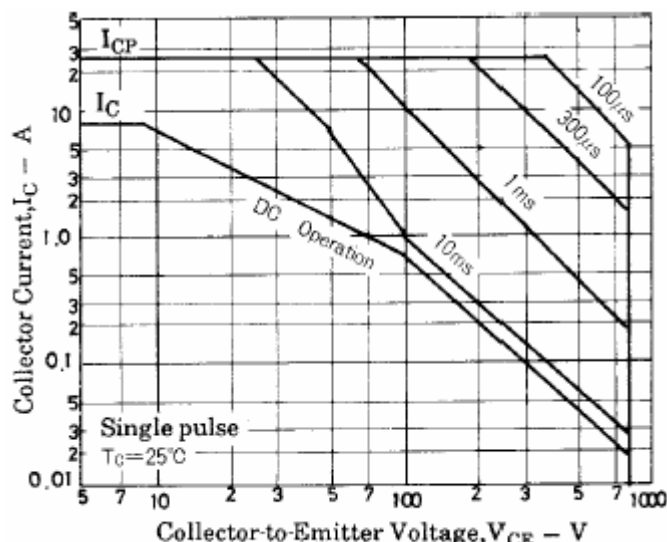


Fig.6 Safe Operating Area