

Silicon NPN Power Transistors

2SC5250

DESCRIPTION

- With TO-3PML package
- High breakdown voltage
- High speed switching
- Built-in damper diode

APPLICATIONS

- Character display horizontal deflection output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

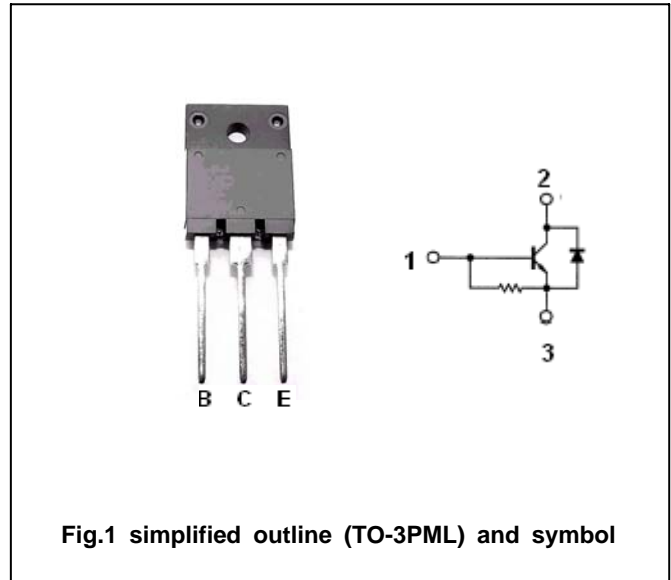


Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings( $T_a=25^{\circ}\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CEO}$	Collector-emitter voltage	Open base	1500	V
$V_{EBO}$	Emitter-base voltage	Open collector	6	V
$I_C$	Collector current		8	A
$I_{CP}$	Collector current-peak		16	A
$I_D$	Diode current		8	A
$P_C$	Collector power dissipation	$T_C=25^{\circ}\text{C}$	50	W
$T_j$	Junction temperature		150	$^{\circ}\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^{\circ}\text{C}$

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## CHARACTERISTICS

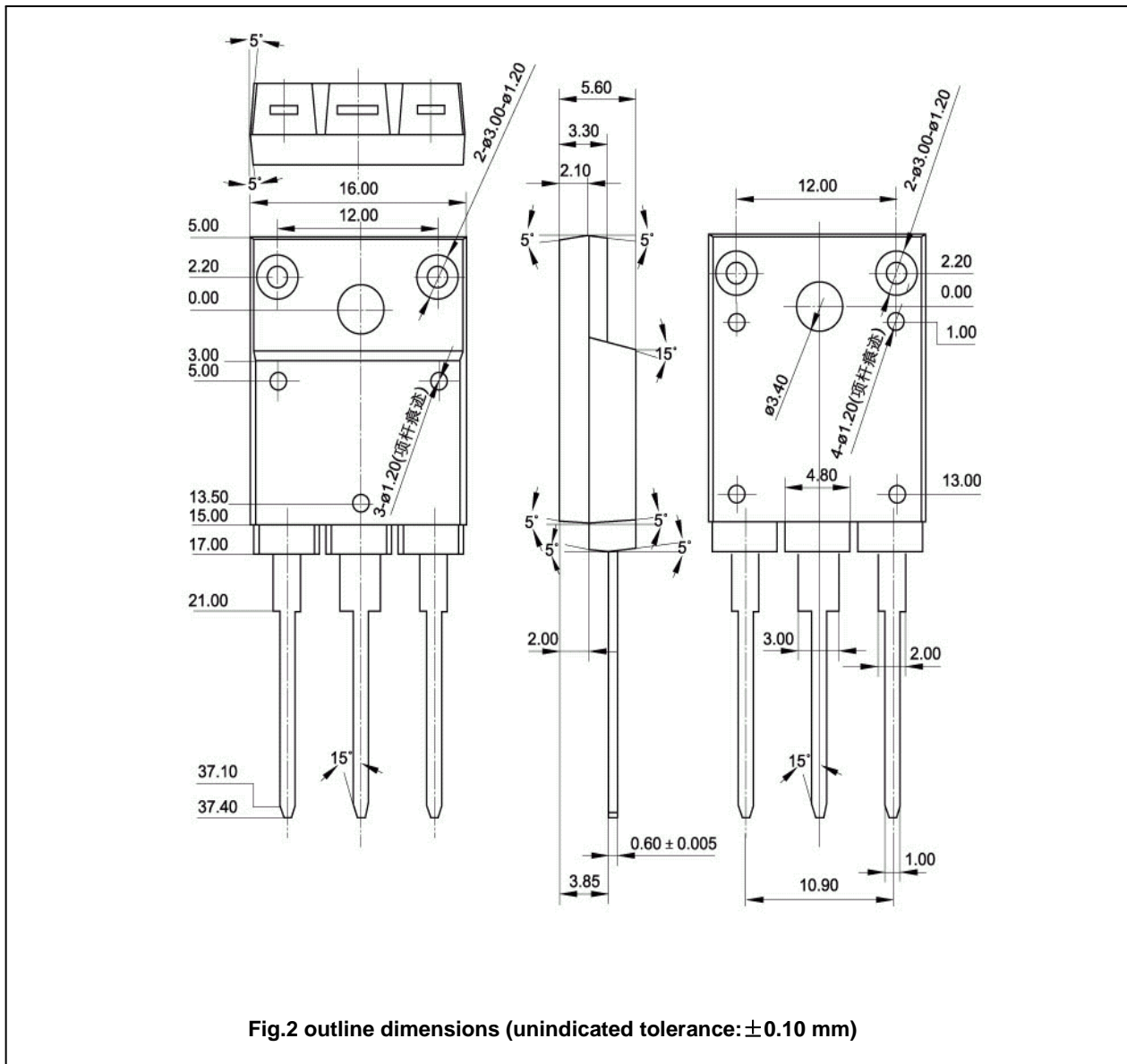
T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>C</sub> =400mA ; I <sub>B</sub> =0	6			V
I <sub>CEs</sub>	Collector cut-off current	V <sub>CE</sub> =1500V; R <sub>BE</sub> =0			500	μ A
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	6		25	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =5A ; V <sub>CE</sub> =5V	4		7	
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =1.25A			5	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =1.25A			1.5	V
V <sub>ECF</sub>	Forward voltage of damper diode	I <sub>F</sub> =8A			2	V
t <sub>f</sub>	Fall time	I <sub>CP</sub> =5A; I <sub>B1</sub> =1A; f <sub>H</sub> =31.5kHz		0.2	0.4	μ s

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PACKAGE OUTLINE



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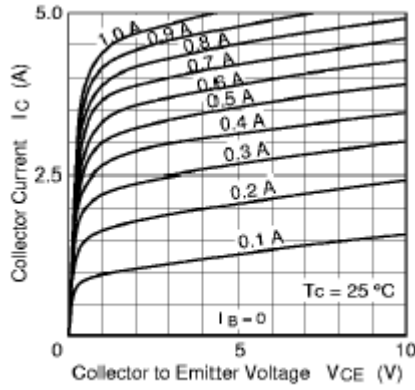


Fig.3 Static Characteristic

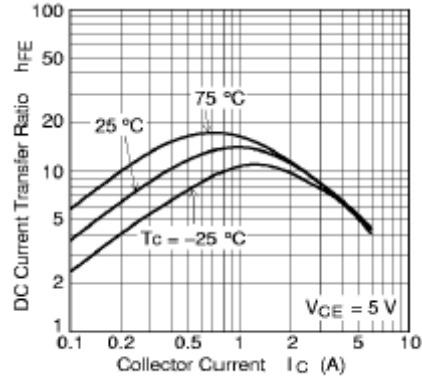


Fig.4 DC current Gain

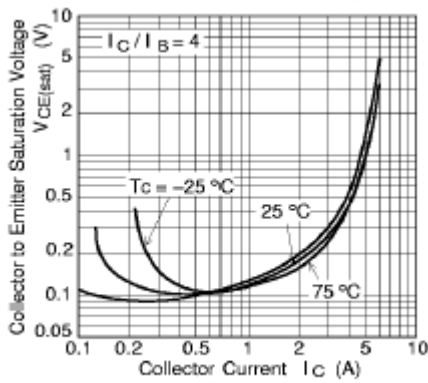


Fig.5 Collector-Emitter Saturation Voltage

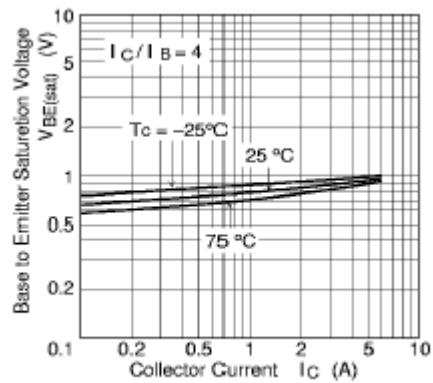


Fig.6 Base-Emitter Saturation Voltage

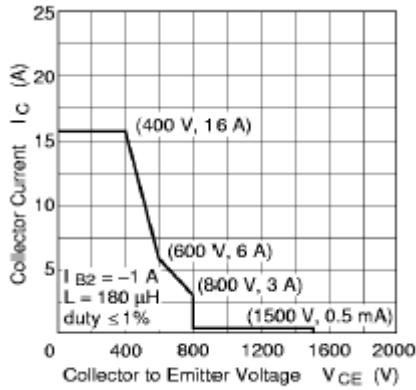


Fig.7 Safe Operating Area