

Silicon NPN Power Transistors

2SD2499

DESCRIPTION

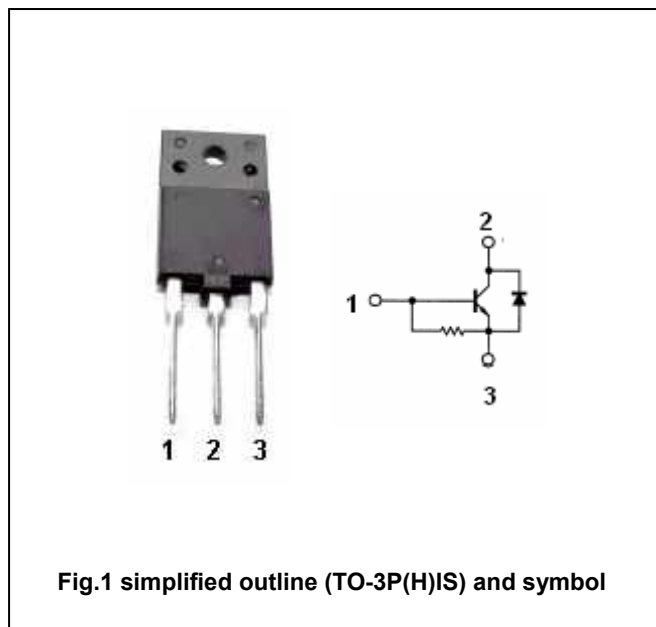
- With TO-3P(H)IS package
- High voltage;high speed
- Low saturation voltage
- Bult-in damper diode

APPLICATIONS

- Horizontal deflection output for color TV

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Absolute maximum 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	600	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		6	A
I_{CM}	Collector current-peak		12	A
I_B	Base current		3	A
P_C	Total 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_j=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)EBO}	Emitter-base breakdown voltage	I _C =400mA ; I _B =0	5			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =4A; I _B =0.8A			5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =4A; I _B =0.8A		1.05	1.3	V
I _{CBO}	Collector cut-off current	V _{CB} =1500V; I _E =0			1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0	67		200	mA
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =5V	8		25	
h _{FE-2}	DC current gain	I _C =4A ; V _{CE} =5V	5		9	
V _F	Diode forward voltage	I _F =6A		1.6	2.0	V
C _{ob}	Collector output capacitance	I _E =0 ; V _{CB} =10V,f=1MHz		95		pF
f _T	Transition frequency	I _C =0.1A ; V _{CE} =10V		2		MHz

Switching times :

t _s	Storage time	I _{CP} =4A;I _{B1} =0.8A f _H =15.75kHz		7.5	11	μs
t _f	Fall time			0.3	0.6	μs

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PACKAGE OUTLINE

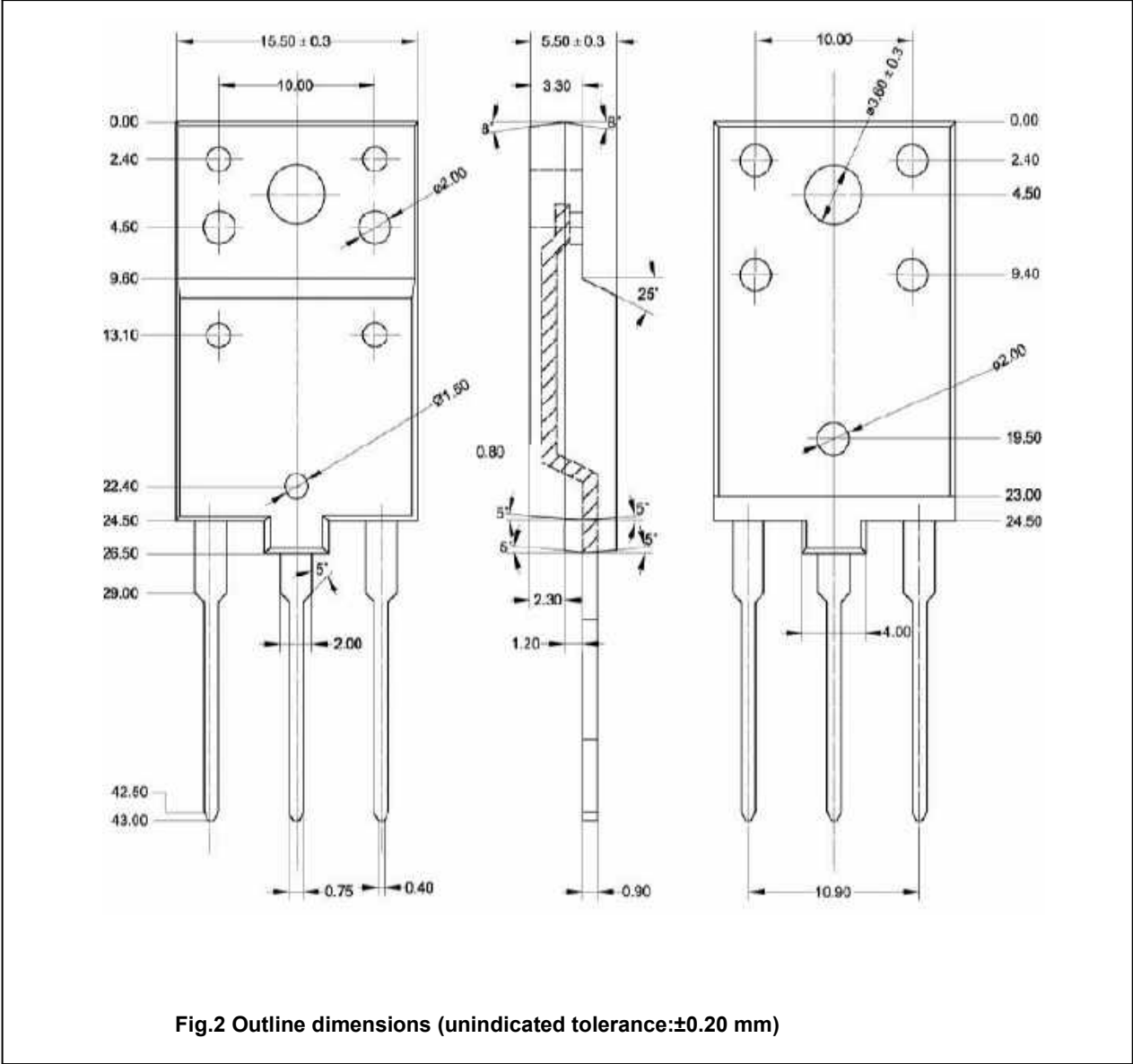


Fig.2 Outline dimensions (unindicated tolerance:±0.20 mm)

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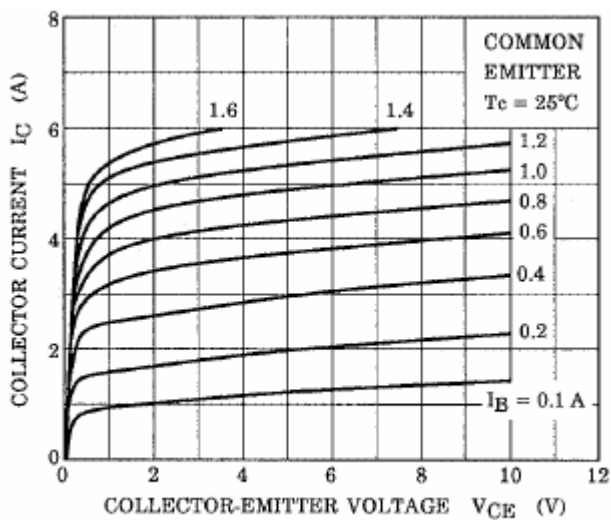


Fig.3 Static Characteristic

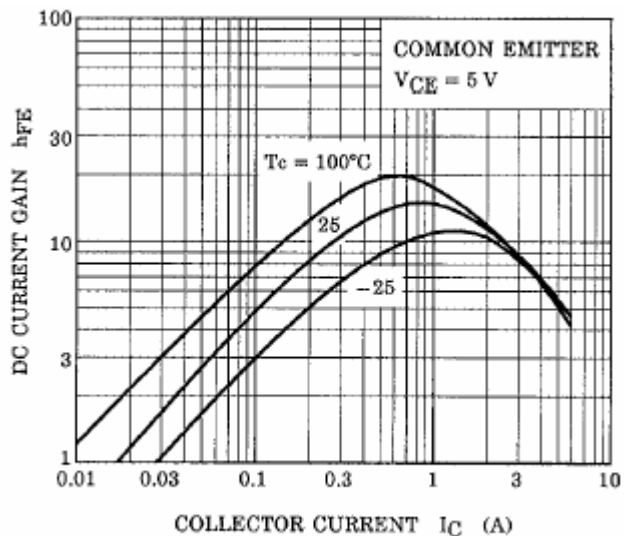


Fig.4 DC current Gain

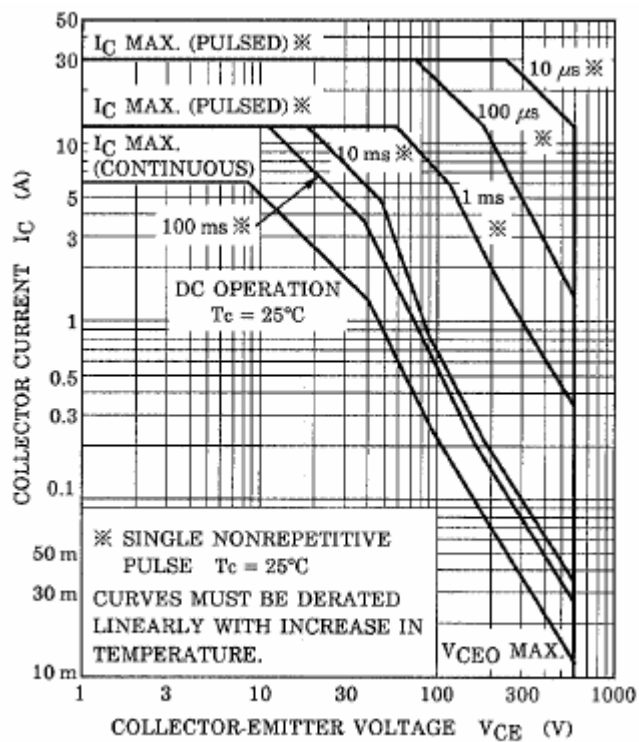


Fig.5 Safe Operating Area