

Silicon NPN Power Transistors

2SD2454

DESCRIPTION

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

APPLICATIONS

- Horizontal deflection output for color TV

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

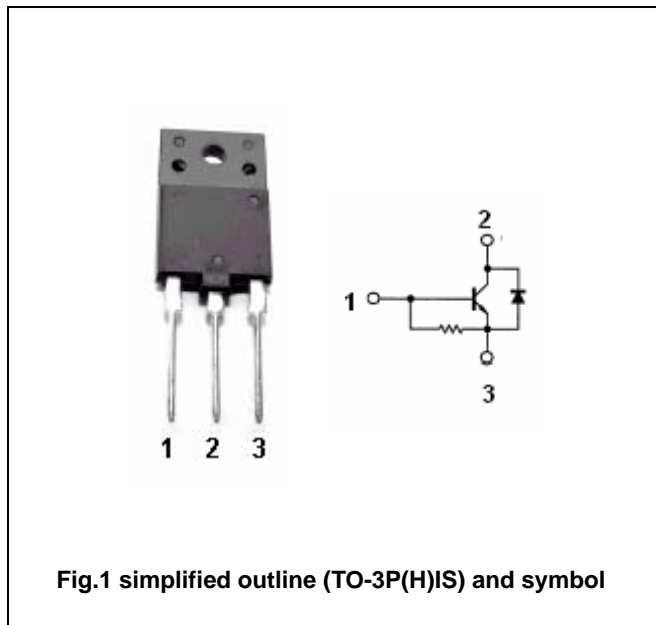


Fig.1 simplified outline (TO-3P(H)IS) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1700	V
V_{CEO}	Collector-emitter voltage	Open base	600	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		7	A
I_{CM}	Collector current-peak		14	A
I_B	Base current		3.5	A
P_C	Total power dissipation	$T_C=25$	50	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)EBO}	Base-emitter breakdown voltage	I _E =400mA ; I _C =0	5			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =6A ; I _B =1.2A			5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =6A ; I _B =1.2A		0.9	1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =1700V ; I _E =0			1.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V ; I _C =0	66		200	μA
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =5V	8	13		
h _{FE-2}	DC current gain	I _C =6A ; V _{CE} =5V	5		8	
V _F	Diode forward voltage	I _F =7A		1.5	2.0	
C _{ob}	Collector output capacitance	I _E =0 ; V _{CB} =10V, f=1MHz		250		pF
f _T	Transition frequency	I _C =0.1A ; V _{CE} =10V	1	3		MHz

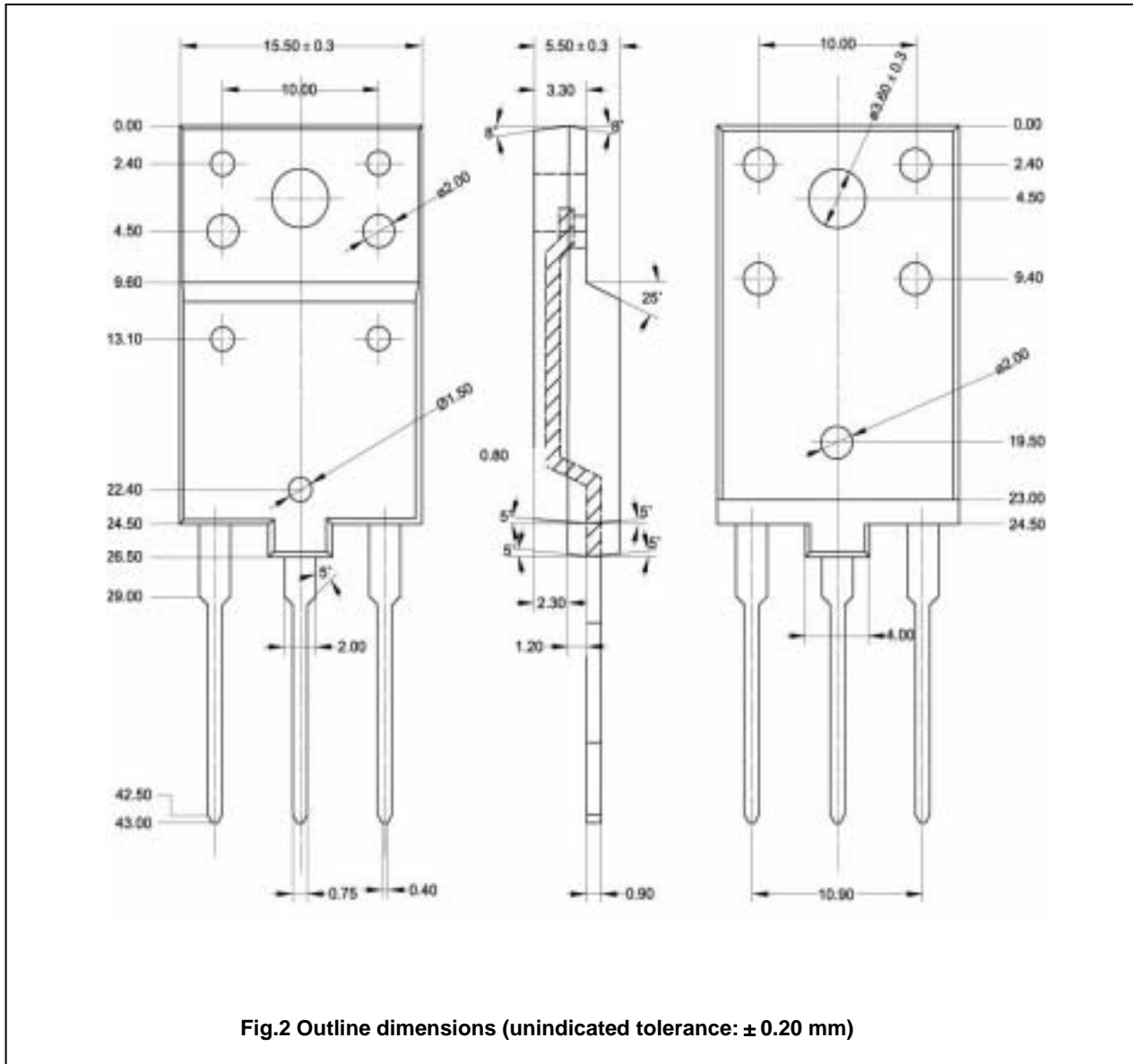
Switching times : inductive load

t _s	Storage time	I _{CP} =6A ; I _{B1} =1A f _H = 15.75kHz		9	12	μs
t _f	Fall time			0.3	0.7	μs

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PACKAGE OUTLINE



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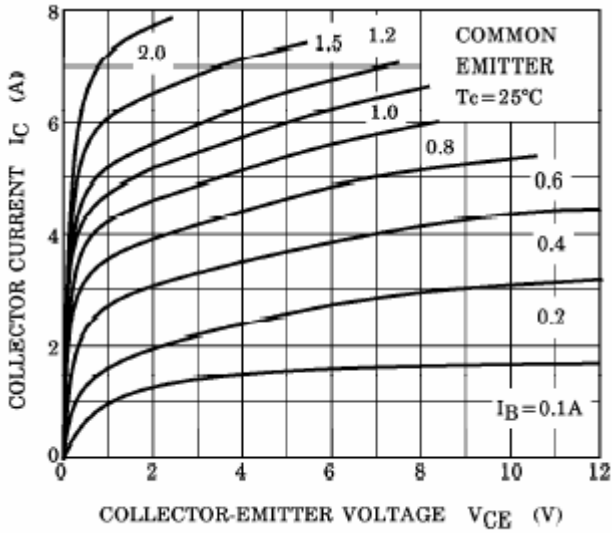


Fig.3 Static Characteristic

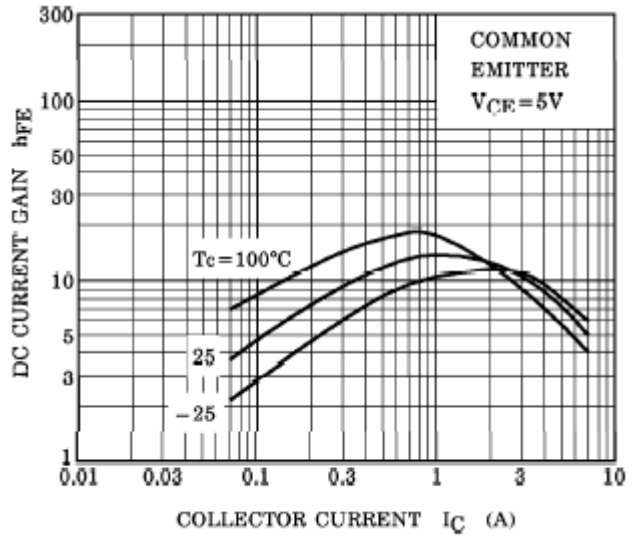


Fig.4 DC current Gain

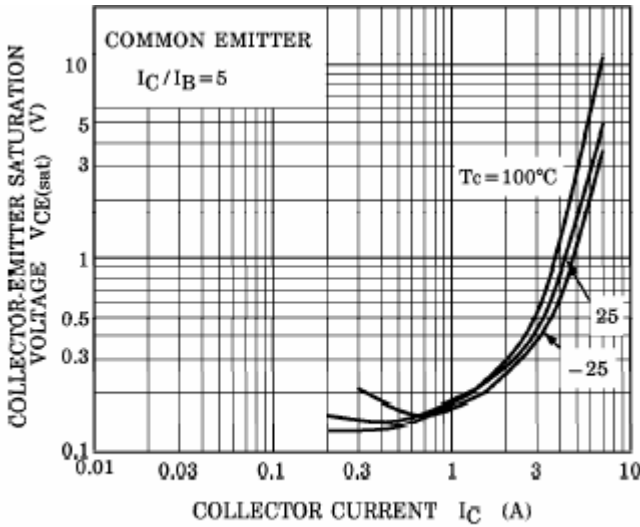


Fig.5 Collector-Emitter Saturation Voltage

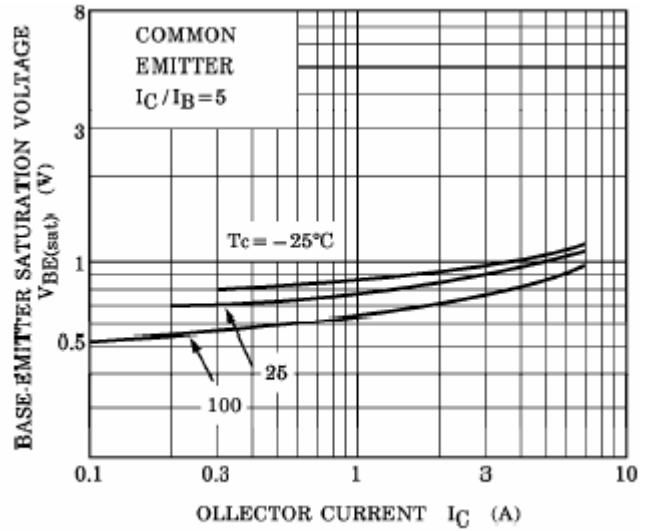


Fig.5 Collector-Emitter Saturation Voltage

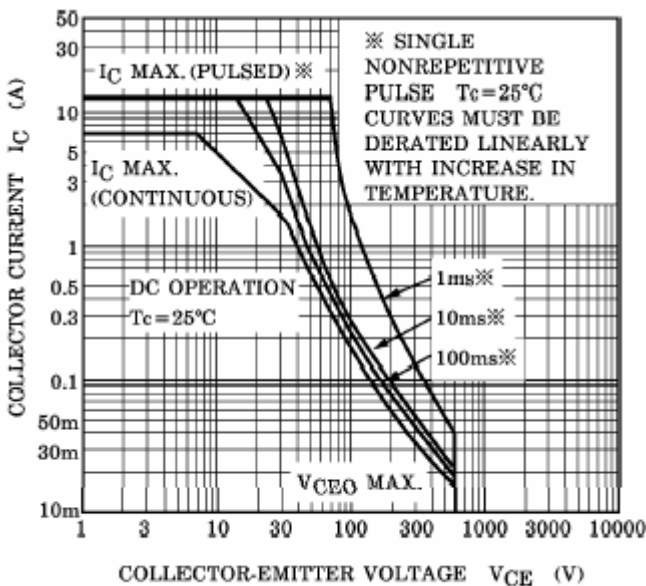


Fig.7 Safe Operating Area