

Silicon NPN Power Transistors

2SD2553

DESCRIPTION

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

APPLICATIONS

- Horizontal deflection output for high resolution display,color TV
- High speed switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

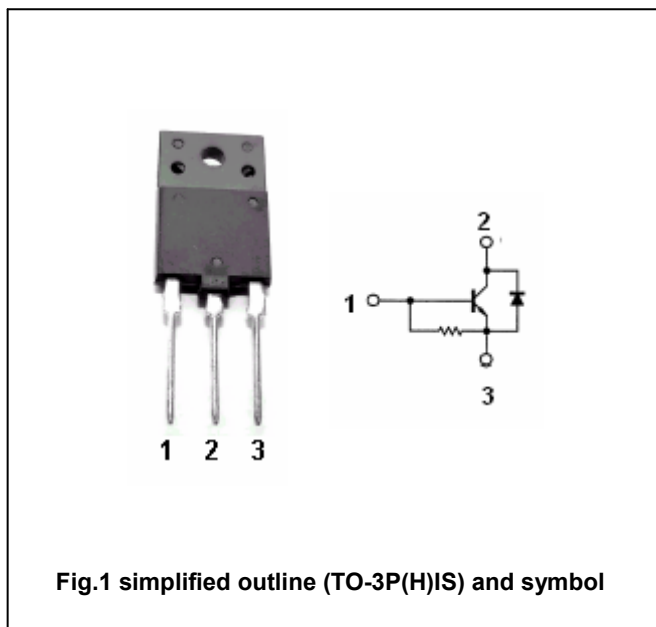


Fig.1 simplified outline (TO-3P(H)IS) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	1200	V
V _{CEO}	Collector-emitter voltage	Open base	600	V
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		8	A
I _{CM}	Collector current-peak		16	A
I _B	Base current		4	A
P _C	Total power dissipation	T _C =25°C	50	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

T_j=25°C 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 =6A; I _B =1.2A			5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =6A; I _B =1.2A		0.9	1.2	V
I _{CBO}	Collector cut-off current	V _{CB} =1200V; I _E =0			1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0	66		200	mA
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =5V	8		28	
h _{FE-2}	DC current gain	I _C =6A ; V _{CE} =5V	5		9	
V _F	Diode forward voltage	I _F =8A		1.6	2.0	V
C _{ob}	Collector output capacitance	I _E =0 ; V _{CB} =10V, f=1MHz		155		pF
f _T	Transition frequency	I _C =0.1A ; V _{CE} =10V		2		MHz

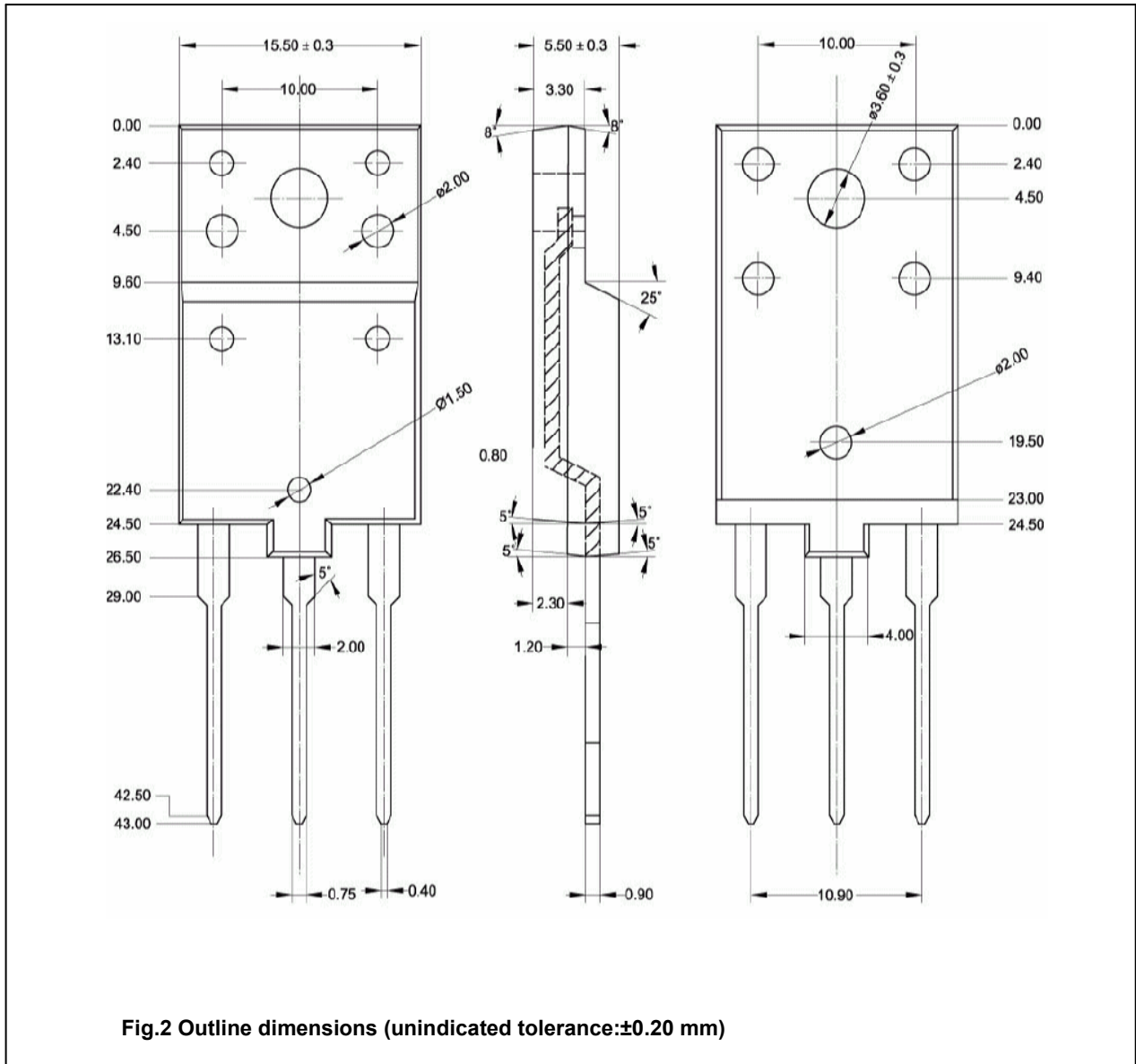
Switching times :

t _s	Storage time	I _{CP} =6A; I _{B1} =1.5A 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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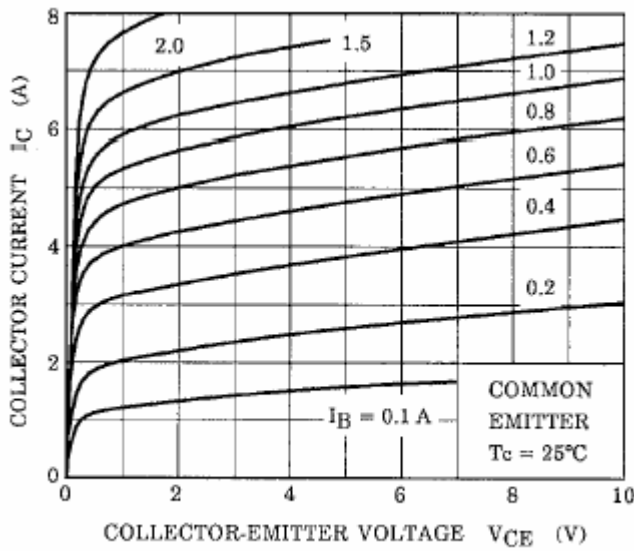


Fig.3 Static Characteristic

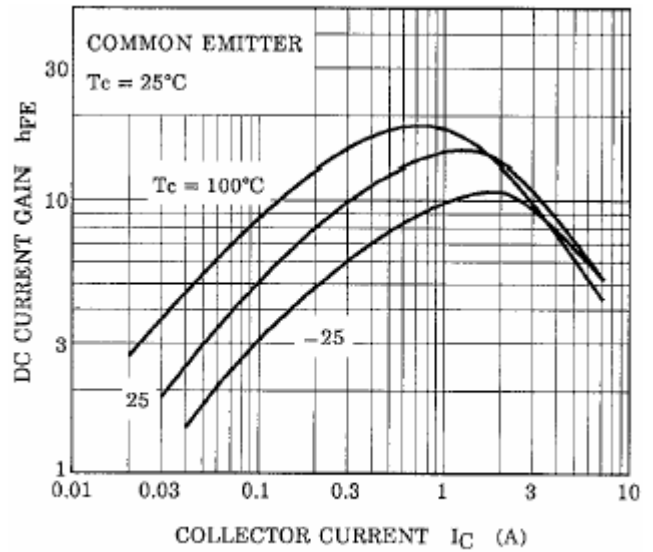


Fig.4 DC current Gain

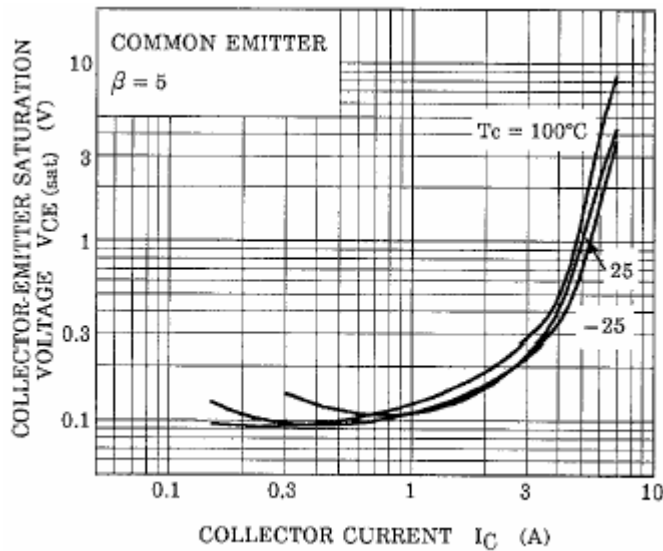


Fig.5 Collector-Emitter Saturation Voltage

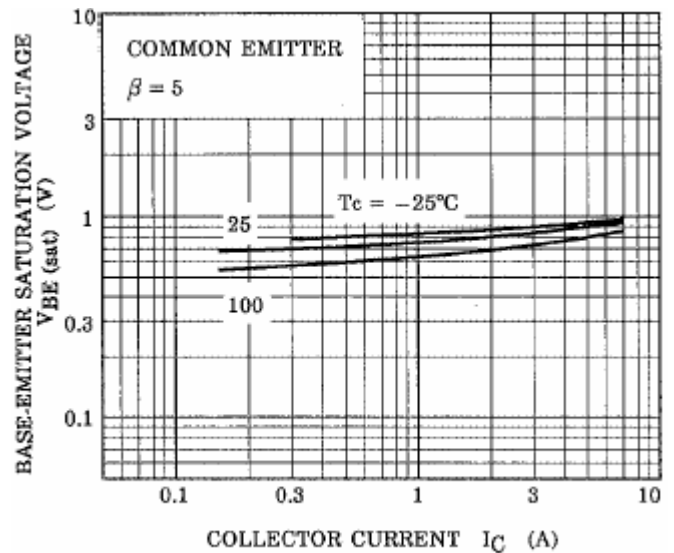


Fig.6 Base-Emitter Saturation Voltage

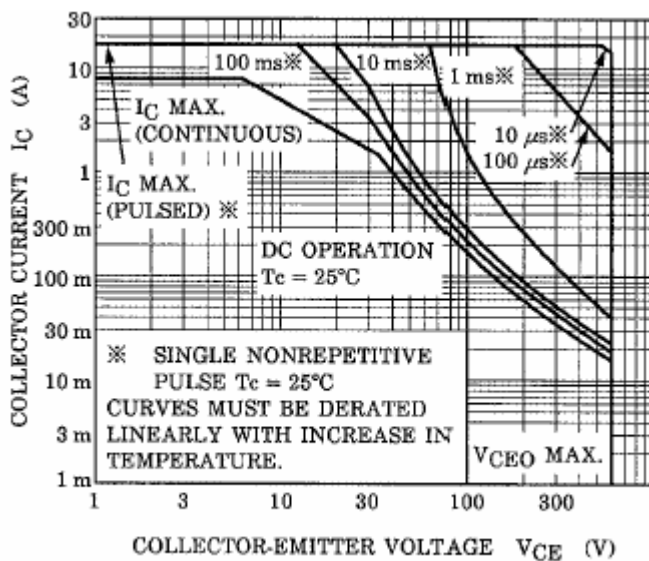


Fig.7 Safe Operating Area