

Silicon NPN Power Transistors

2SC5339

DESCRIPTION

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

APPLICATIONS

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

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

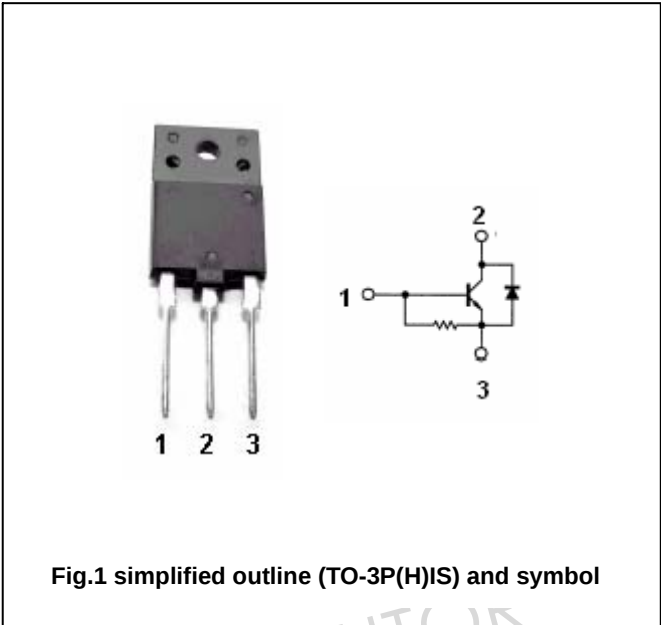


Fig.1 simplified outline (TO-3P(H)IS) and symbol

Absolute maximum ratings(Ta=25)

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		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

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=400mA$; $I_C=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=5A$; $I_B=1.25A$			5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=5A$; $I_B=1.25A$			1.3	V
I_{CBO}	Collector cut-off current	$V_{CB}=1500V$; $I_E=0$			1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V$; $I_C=0$	71		250	mA
h_{FE-1}	DC current gain	$I_C=1A$; $V_{CE}=5V$	10		30	
h_{FE-2}	DC current gain	$I_C=5A$; $V_{CE}=5V$	4		8	
C_{ob}	Collector output capacitance	$I_E=0$; $V_{CB}=10V$, $f=1MHz$		82		pF
V_F	Diode forward voltage	$I_F=5A$		1.35	1.8	V
f_T	Transition frequency	$I_E=0.1A$; $V_{CE}=10V$		2.4		MHz

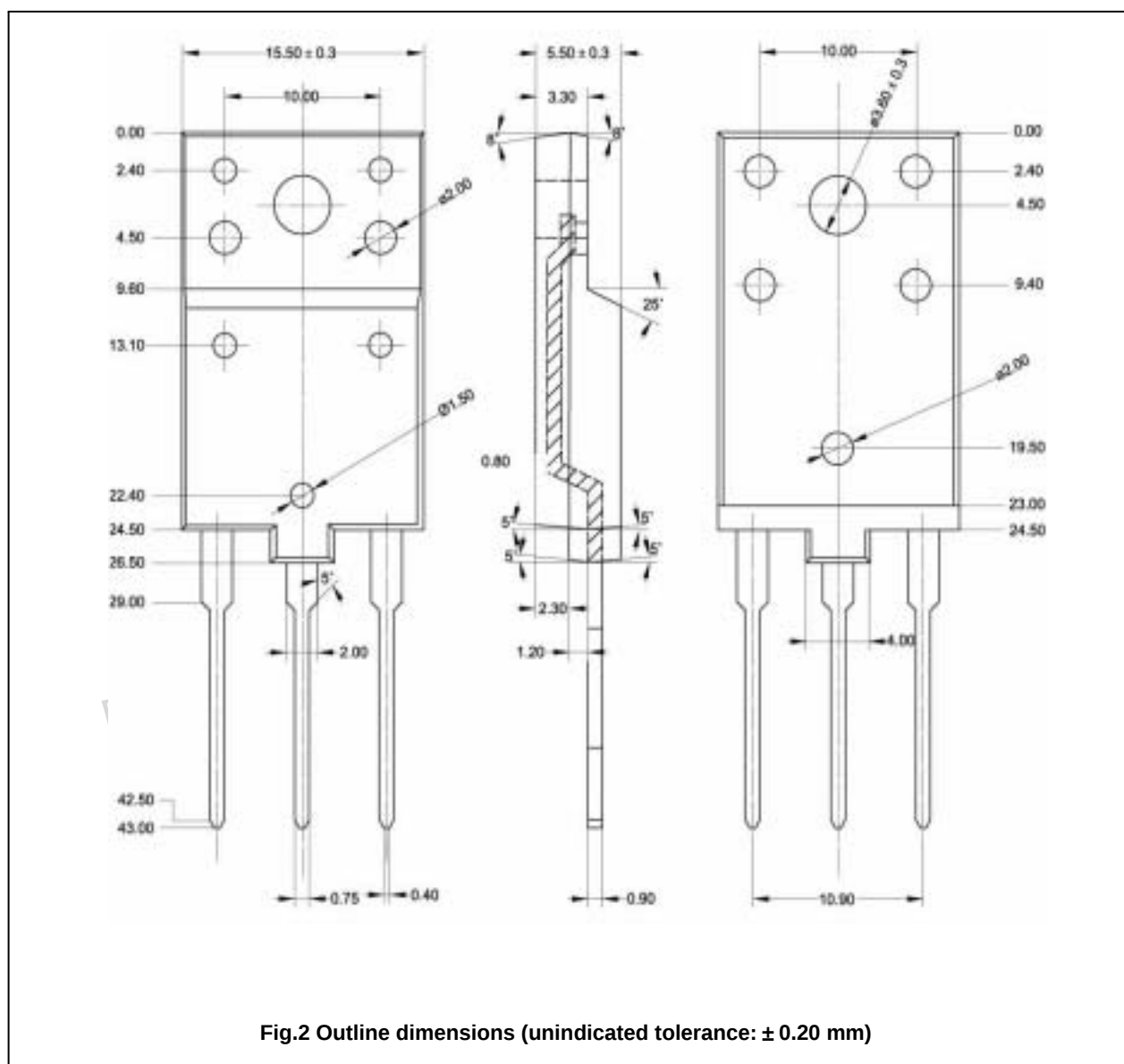
Switching times

t_s	Storage time	$I_{CP}=5A$; $I_{B1(end)}=1.1A$ $f_H=31.5kHz$		4	6	μs
t_f	Fall time			0.2	0.5	μs

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PACKAGE OUTLINE



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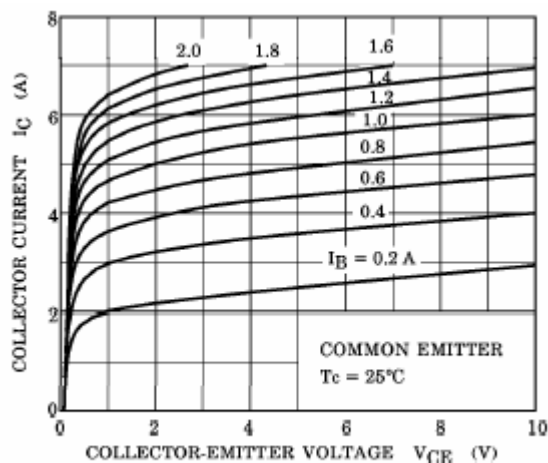


Fig.3 Static Characteristic

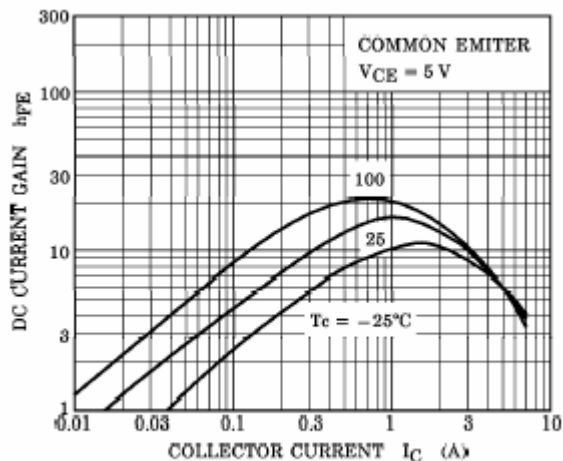


Fig.4 DC current Gain

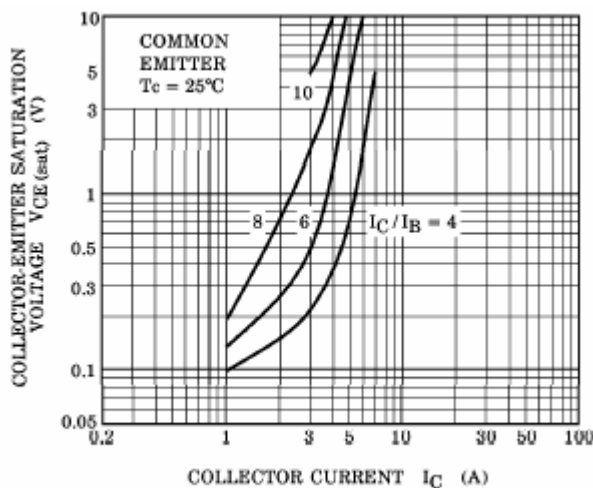


Fig.5 Collector-Emitter Saturation Voltage

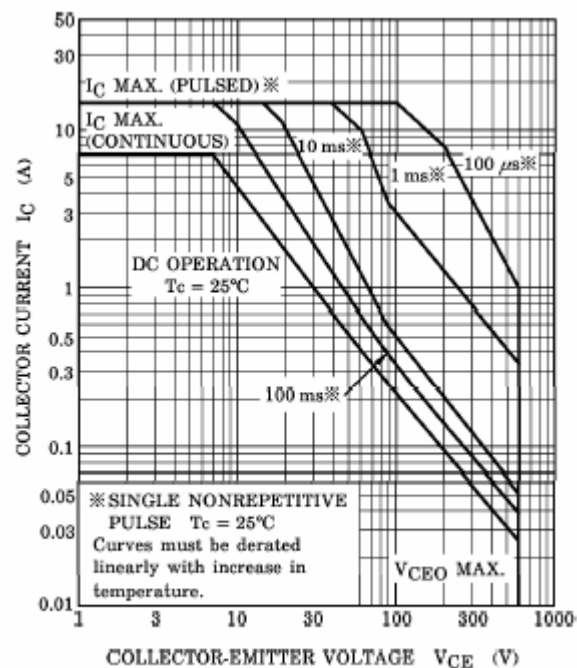


Fig.6 Safe Operating Area