

Silicon NPN Power Transistors

2SD2599

DESCRIPTION

www.datasheet4u.com

- 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

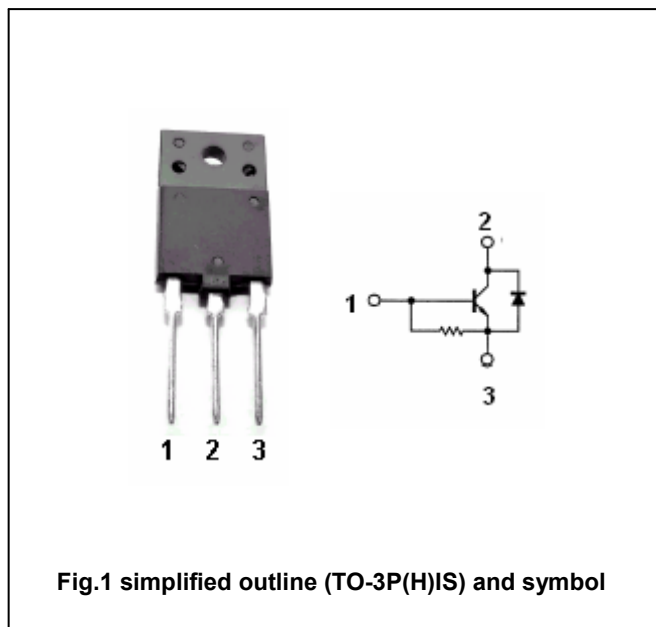


Fig.1 simplified outline (TO-3P(H)IS) and symbol

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		3.5	A
I_{CM}	Collector current-peak		7	A
I_B	Base current		1	A
P_C	Total power dissipation	$T_C=25^\circ\text{C}$	40	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

Silicon NPN Power Transistors

2SD2599

CHARACTERISTICS

www.datasheet4u.com

 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_C=300\text{mA}$; $I_B=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=3\text{A}$; $I_B=0.8\text{A}$		5	8	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=3\text{A}$; $I_B=0.8\text{A}$		0.9	1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=1500\text{V}$; $I_E=0$			1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5\text{V}$; $I_C=0$	66		200	mA
h_{FE}	DC current gain	$I_C=0.5\text{A}$; $V_{CE}=5\text{V}$	8		25	
V_F	Diode forward voltage	$I_F=3.5\text{A}$		1.5	2.0	V
C_{ob}	Collector output capacitance	$I_E=0$; $V_{CB}=10\text{V}$, $f=1\text{MHz}$		55		pF
f_T	Transition frequency	$I_C=0.1\text{A}$; $V_{CE}=10\text{V}$		3		MHz

Switching times :

t_s	Storage time	$I_{CP}=3\text{A}$; $I_{B1}=0.8\text{A}$ $f_H=15.75\text{kHz}$		7.5	10	μs
t_f	Fall time			0.5	1.0	μs

2SD2599

www.data-sheet4u.com



Silicon NPN Power Transistors

2SD2599

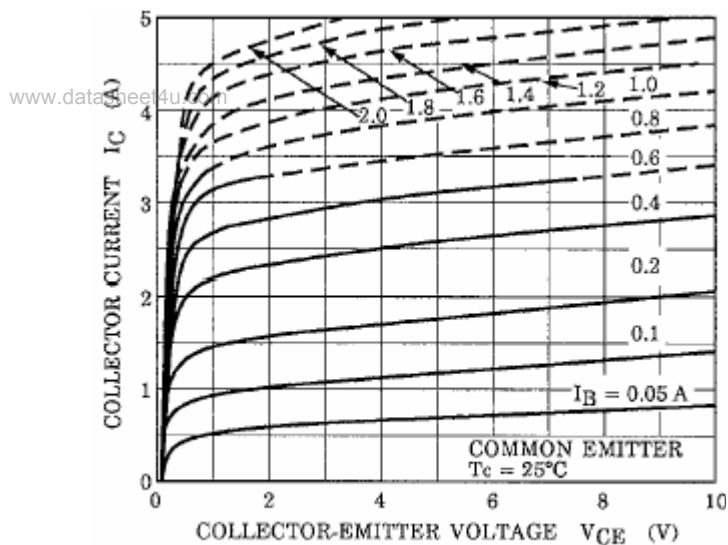


Fig.3 Static Characteristic

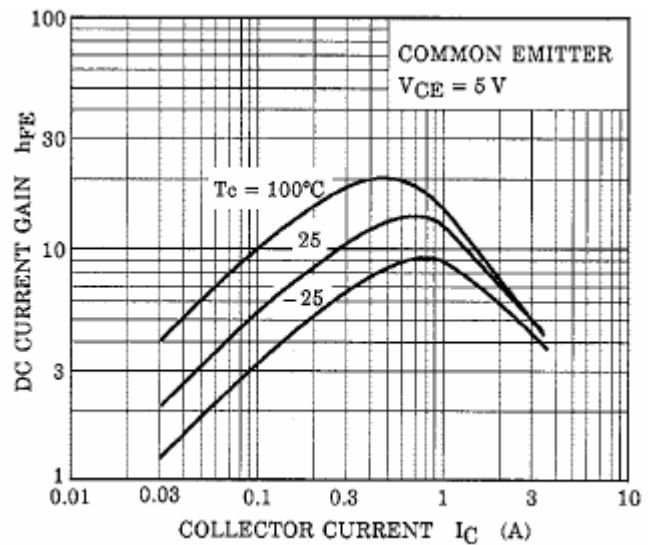


Fig.4 DC current Gain

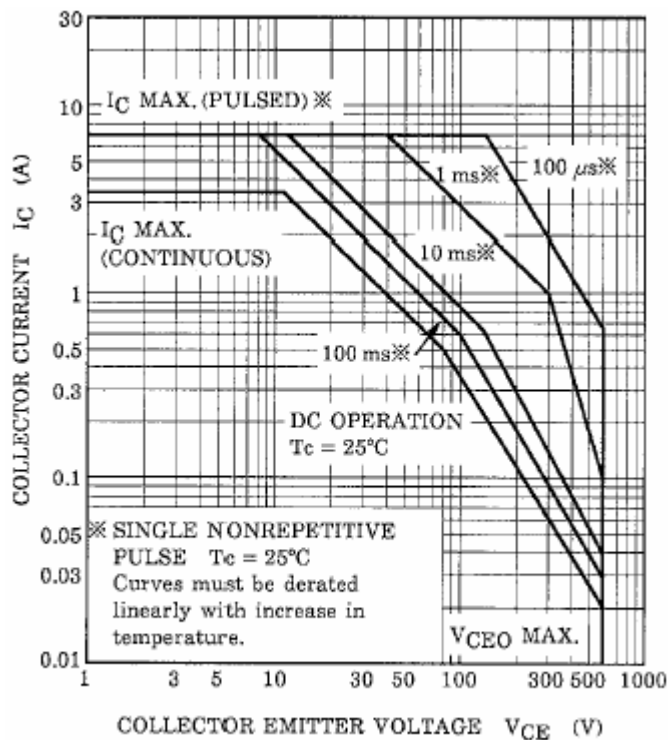


Fig.5 Safe Operating Area