

Silicon NPN Power Transistors

2SC5404

DESCRIPTION

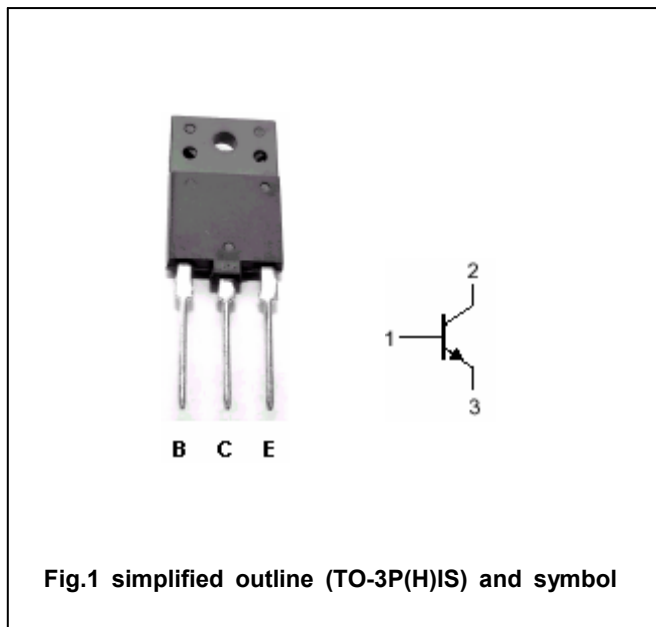
- With TO-3P(H)IS package
- High voltage;high speed
- Low collector saturation voltage

APPLICATIONS

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

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	1500	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	600	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		9	A
I <sub>CM</sub>	Collector current-Peak		18	A
I <sub>B</sub>	Base current		4.5	A
P <sub>C</sub>	Total power dissipation	T <sub>C</sub> =25°C	50	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}; I_B=0$	600			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=7\text{A}; I_B=1.75\text{A}$			3.0	V
$V_{BEsat}$	Base-emitter saturation voltage	$I_C=7\text{A}; I_B=1.75\text{A}$			1.5	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=1500\text{V}; I_E=0$			1.0	mA
$I_{EBO}$	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			10	$\mu\text{A}$
$h_{FE-1}$	DC current gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	10		40	
$h_{FE-2}$	DC current gain	$I_C=7\text{A}; V_{CE}=5\text{V}$	4		8	
$C_{ob}$	Collector output capacitance	$I_E=0; V_{CB}=10\text{V}, f=1\text{MHz}$		115		pF
$f_T$	Transition frequency	$I_E=0.1\text{A}; V_{CE}=10\text{V}$		2.5		MHz

## Switching times

$t_s$	Storage time	$I_{CP}=5.5\text{A}; I_{B1(\text{end})}=1.1\text{A}$ $f_H=64\text{kHz}$		2.5	3.5	$\mu\text{s}$
$t_f$	Fall time			0.15	0.3	$\mu\text{s}$

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PACKAGE OUTLINE

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