

Silicon NPN Power Transistors

2SC5404

DESCRIPTION

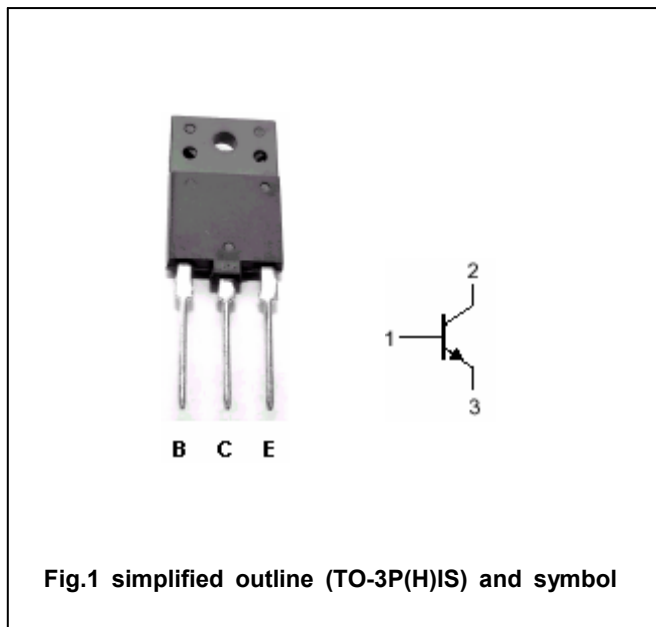
- With TO-3P(H)IS package
- High voltage;high speed
- Low collector saturation voltage

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 _{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		9	A
I _{CM}	Collector current-Peak		18	A
I _B	Base current		4.5	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

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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	μA
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	μs
t_f	Fall time			0.15	0.3	μs

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PACKAGE OUTLINE

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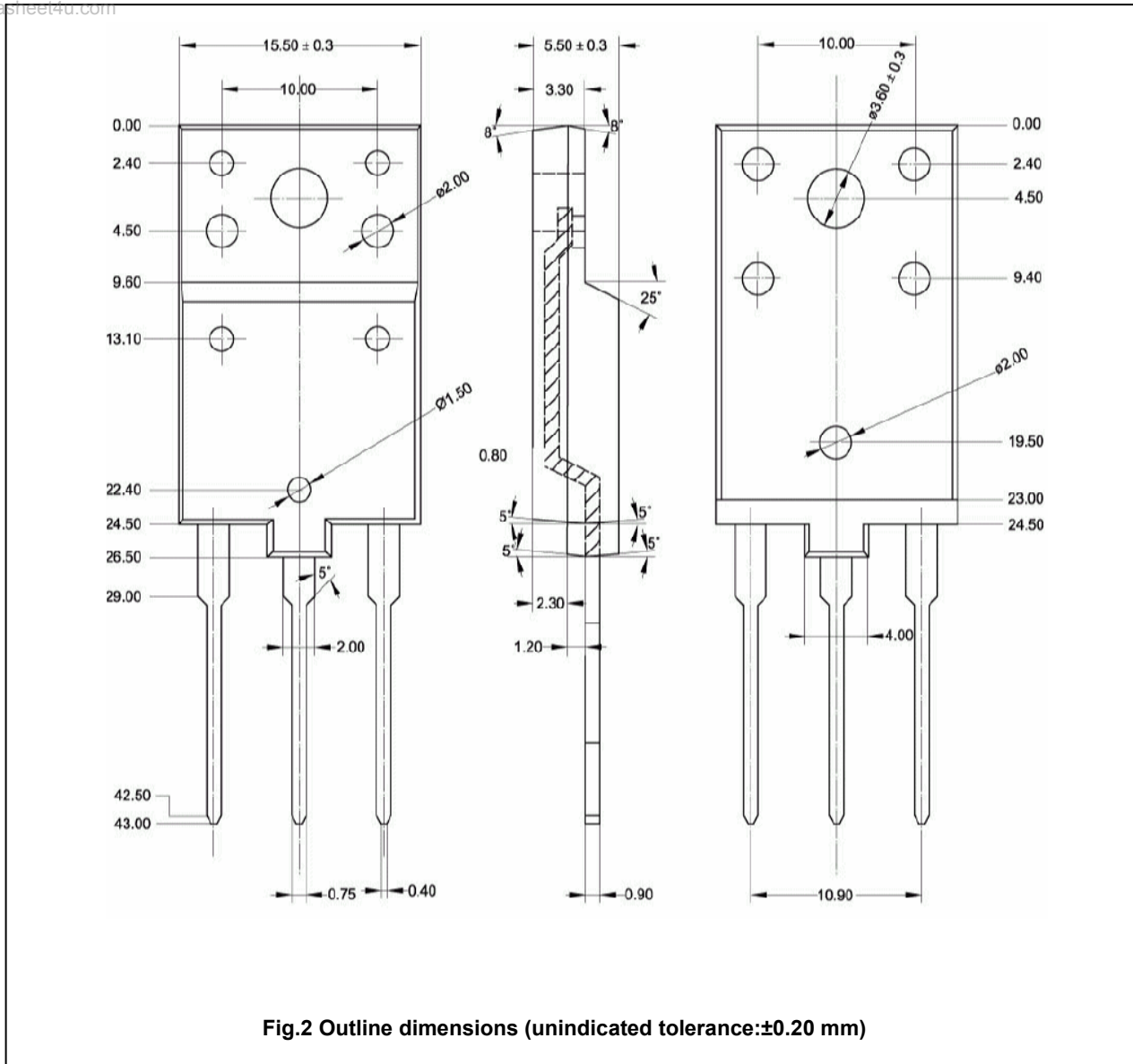


Fig.2 Outline dimensions (unindicated tolerance: ± 0.20 mm)