

**Silicon NPN Power Transistors**

**2SC4531**

**DESCRIPTION**

- With TO-3P(H)IS package
- High speed
- High voltage
- Low saturation voltage
- Built-in damper type

**APPLICATIONS**

- Horizontal deflection output applications

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

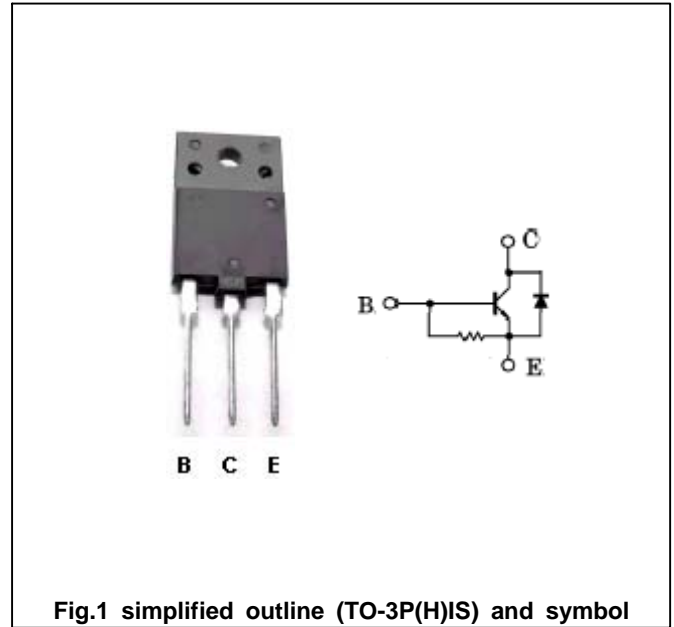


Fig.1 simplified outline (TO-3P(H)IS) and symbol

**Absolute maximum ratings(Ta=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <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		10	A
I <sub>CM</sub>	Collector current-Peak		20	A
I <sub>B</sub>	Base current		5	A
P <sub>C</sub>	Total power dissipation	T <sub>C</sub> =25	50	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-55~150	

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## CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{EBO}$	Emitter-base breakdown voltage	$I_E=200mA ; I_C=0$	5			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=7A ; I_B=1.7A$			5	V
$V_{BEsat}$	Base-emitter saturation voltage	$I_C=7A ; I_B=1.7A$			1.5	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=500V ; I_E=0$			10	$\mu A$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=5V ; I_C=0$	66	100	200	mA
$h_{FE}$	DC current gain	$I_C=1A ; V_{CE}=5V$	8			
$C_{ob}$	Collector output capacitance	$I_E=0 ; V_{CB}=10V, f=1MHz$		210		pF
$V_F$	Forward voltage(damper diode)	$I_F=7A$		1.5	1.8	V
$f_T$	Transition frequency	$I_E=0.1A ; V_{CE}=10V$	1	3		MHz

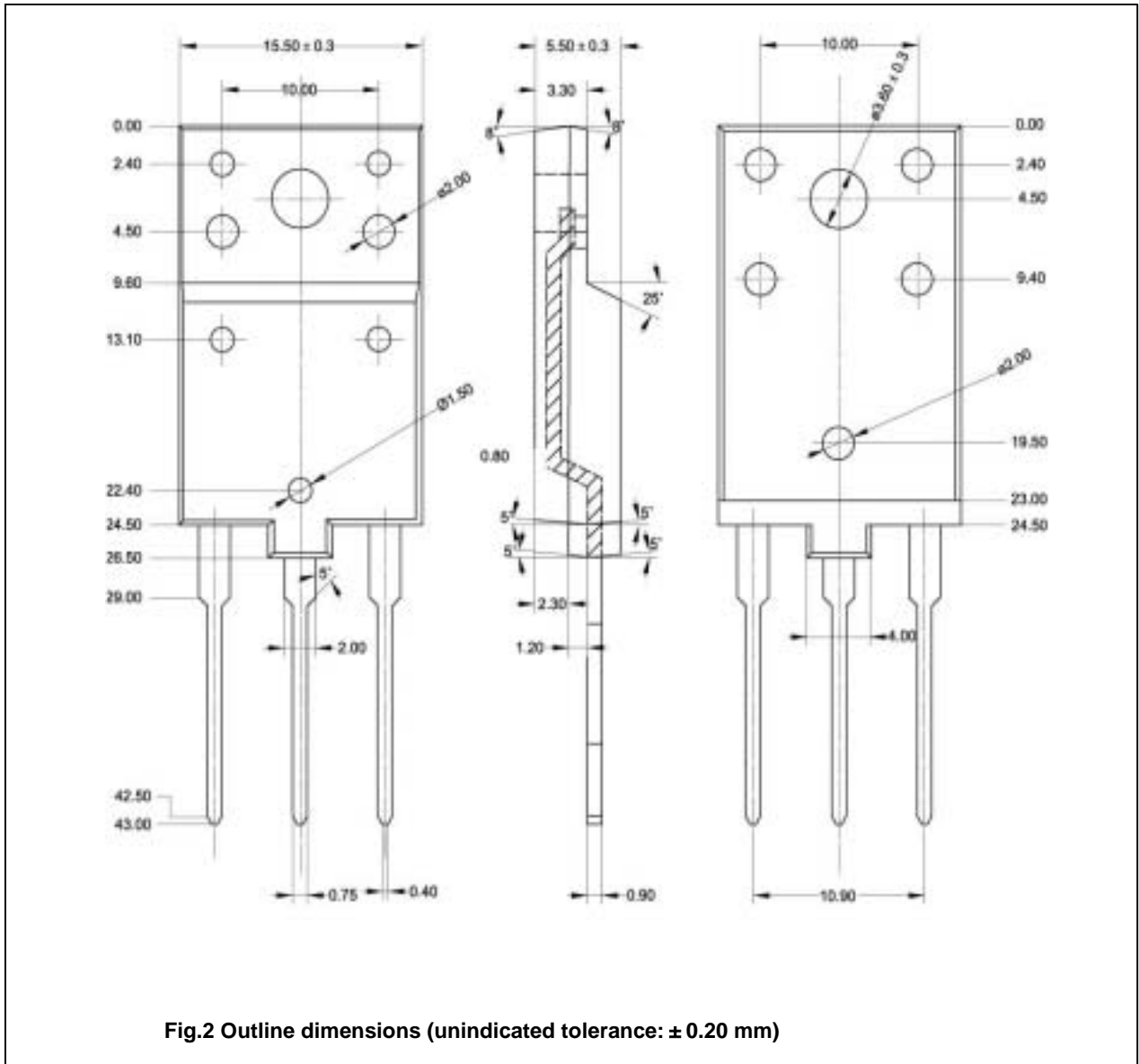
Switching times inductive load

$t_s$	Storage time	$I_{CP}=7A ; I_{B1}=1.4A$ $I_{B2}=-2.8A$ $L_Y=110 \mu H ; C_Y=19000pF$		4	6	$\mu s$
$t_f$	Fall time			0.2	0.5	$\mu s$

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PACKAGE OUTLINE



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