

Silicon NPN Power Transistors

2SC5143

DESCRIPTION

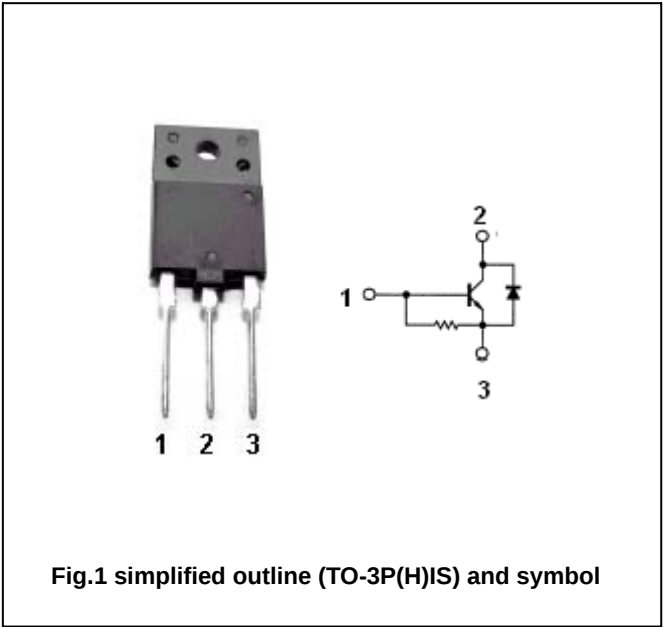
- With TO-3P(H)IS package
- High speed
- High voltage
- Low saturation voltage
- Built-in damper diode

APPLICATIONS

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

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	1700	V
V _{CEO}	Collector-emitter voltage	Open base	700	V
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		10	A
I _{CM}	Collector current-Peak		20	A
I _B	Base current		5	A
P _T	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°C 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	$I_C=6A$; $I_B=1.5A$			3.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=6A$; $I_B=1.5A$		0.9	1.2	V
I_{CBO}	Collector cut-off current	$V_{CB}=1700V$; $I_E=0$			1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V$; $I_C=0$	83		250	mA
h_{FE-1}	DC current gain	$I_C=1A$; $V_{CE}=5V$	8		25	
h_{FE-2}	DC current gain	$I_C=6A$; $V_{CE}=5V$	4		8.5	
C_{ob}	Collector output capacitance	$I_E=0$; $V_{CB}=10V, f=1MHz$		185		pF
V_F	Diode forward voltage	$I_F=6A$			1.8	V
f_T	Transition frequency	$I_E=0.1A$; $V_{CE}=10V$		2		MHz
Switching times (inductive load)						
t_s	Storage time	$I_{CP}=5A$; $I_{B1(end)}=1A$ $f_H=31.5kHz$		4	6	μs
t_f	Fall time			0.2	0.5	μs

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PACKAGE OUTLINE

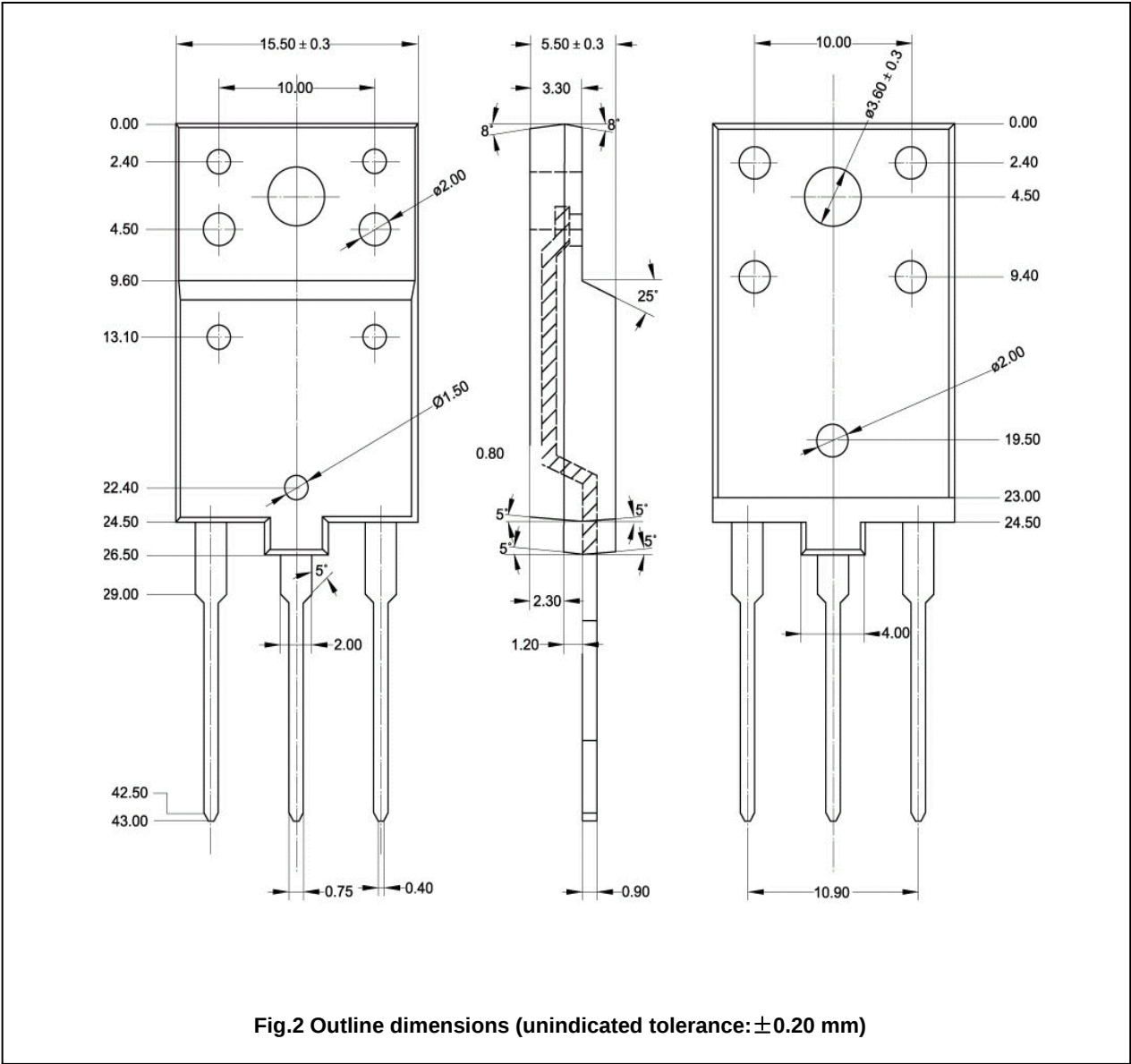


Fig.2 Outline dimensions (unindicated tolerance: ± 0.20 mm)

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