

Silicon NPN Power Transistors

S2000AF

DESCRIPTION

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- With TO-3P(H)IS package
- High voltage
- Fast switching

APPLICATIONS

- Horizontal deflection for color TV

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

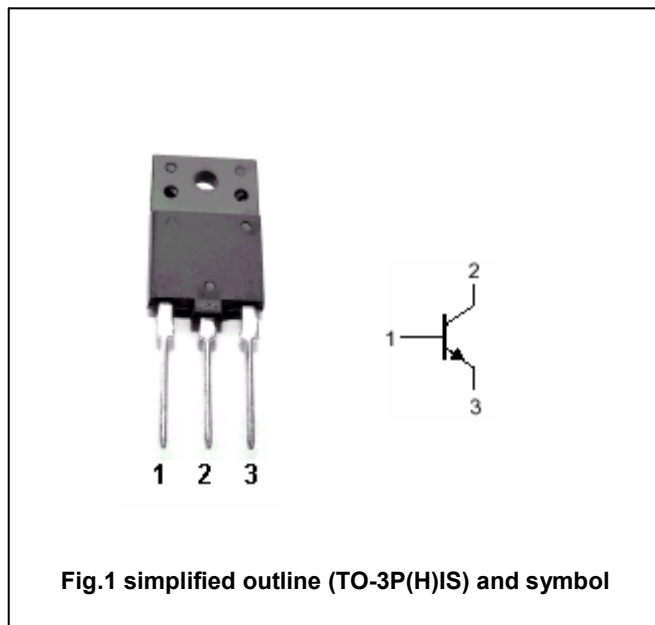


Fig.1 simplified outline (TO-3P(H)IS) and symbol

ABSOLUTE MAXIMUM RATINGS (T_C=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	1500	V
V _{CEO}	Collector-emitter voltage	Open base	700	V
V _{EBO}	Emitter-base voltage	Open collector	10	V
I _C	Collector current		8	A
I _{CM}	Collector current-peak		15	A
P _C	Collector power dissipation	T _C =25°C	50	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R _{th j-c}	Thermal resistance from junction to case	2.5	°C/W

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =100mA ; I _B =0	700			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =10mA ; I _C =0	10			V
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =4.5A ; I _B =2.0A			1.0	V
V _{BE(sat)}	Base-emitter saturation voltage	I _C =4.5A ; I _B =2.0A			1.3	V
I _{CES}	Collector cut-off current	V _{CE} =1500V; V _{BE} =0 T _C =125°C			1 2	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1	mA
h _{FE}	DC current gain	I _C =1A ; V _{CE} =5V	8			
f _T	Transition frequency	I _C =0.1A ; V _{CE} =5V; f=5MHz		7		MHz

Switching times inductive load

t _s	Storage time	I _C =4.5A ; h _{FE} =2.5; V _{CC} =140V L _C =0.9mH; L _B =3μH		7		μs
t _f	Fall time			0.55		μs

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PACKAGE OUTLINE

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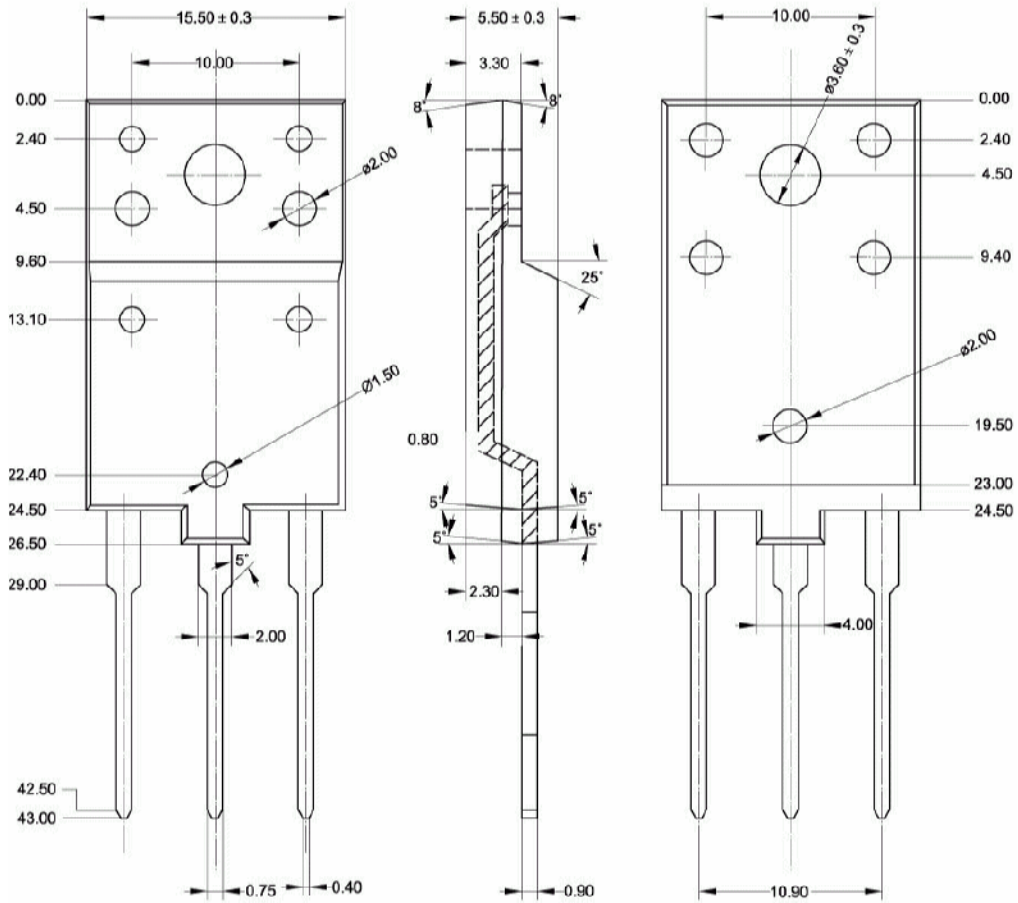


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)