

**Silicon NPN Power Transistors**

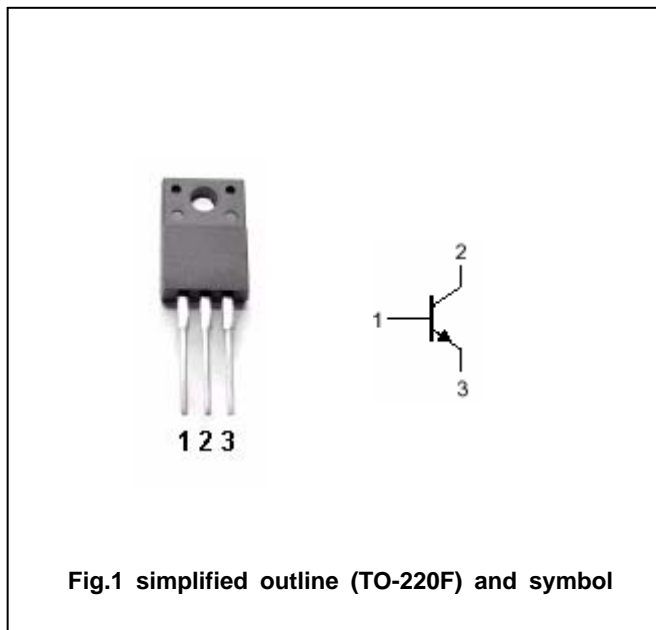
**2SC5382**

**DESCRIPTION**

- With TO-220F package
- High Voltage
- High speed switching

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	1200	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	550	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	9	V
I <sub>C</sub>	Collector current		6	A
I <sub>CM</sub>	Collector current-peak		12	A
I <sub>B</sub>	Base current		3	A
I <sub>BM</sub>	Base current-peak		6	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25	40	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-55~150	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance junction case	3.13	/W

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.1A; I <sub>B</sub> =0	550			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =3A; I <sub>B</sub> =0.6 A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =3A; I <sub>B</sub> =0.6 A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =1200V; I <sub>E</sub> =0			0.1	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =550V; I <sub>B</sub> =0			0.1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =9V; I <sub>C</sub> =0			0.1	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =3A ; V <sub>CE</sub> =5V	10			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =1mA ; V <sub>CE</sub> =5V	10			

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =3A; I <sub>B1</sub> =0.6A ; I <sub>B2</sub> =1.2A R <sub>L</sub> =50 ; V <sub>BB2</sub> =4V			1.3	μs
t <sub>s</sub>	Storage time				4.0	μs
t <sub>f</sub>	Fall time				0.3	μs

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PACKAGE OUTLINE

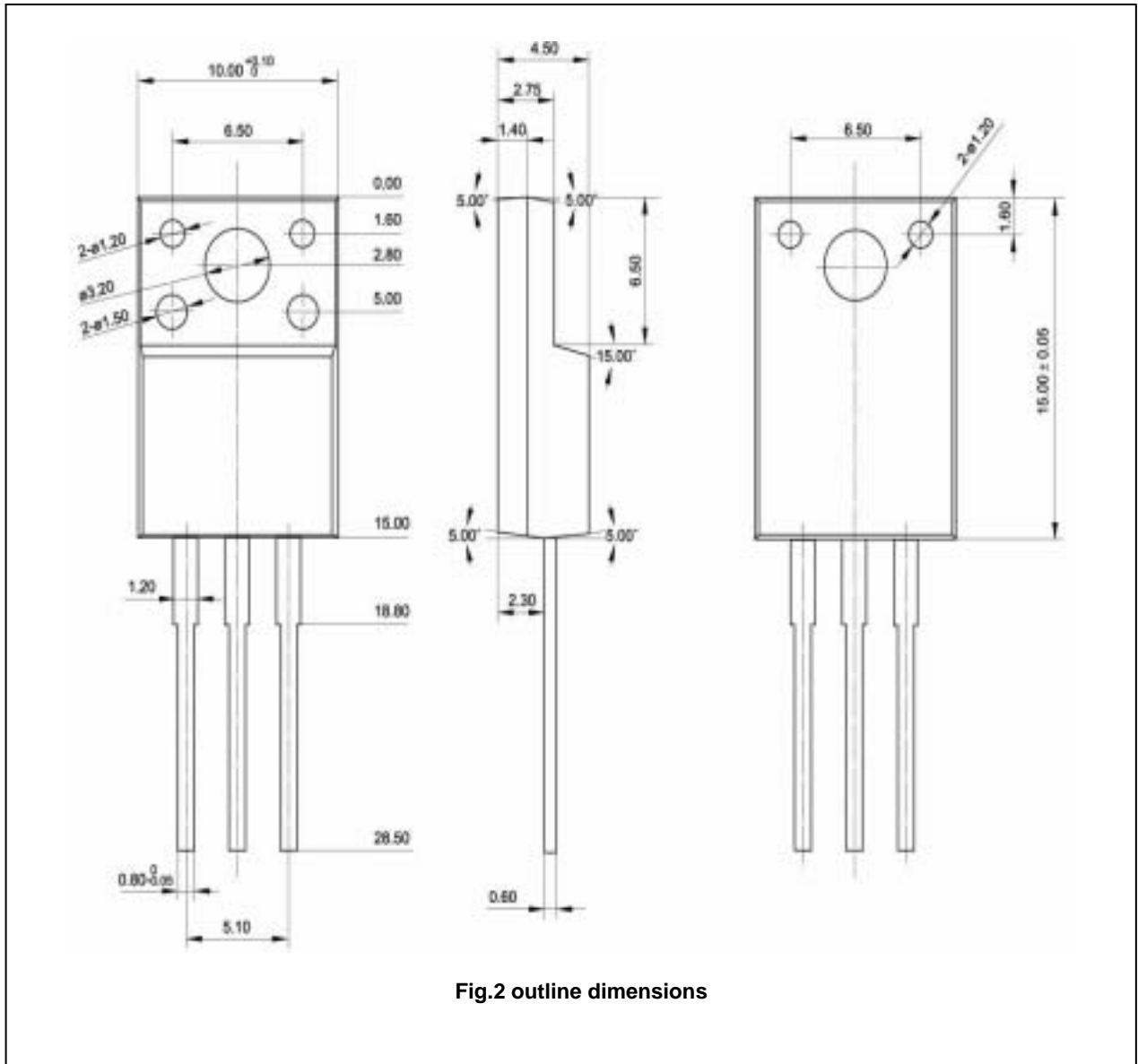


Fig.2 outline dimensions