

Silicon PNP Power Transistors

2SB1381

DESCRIPTION

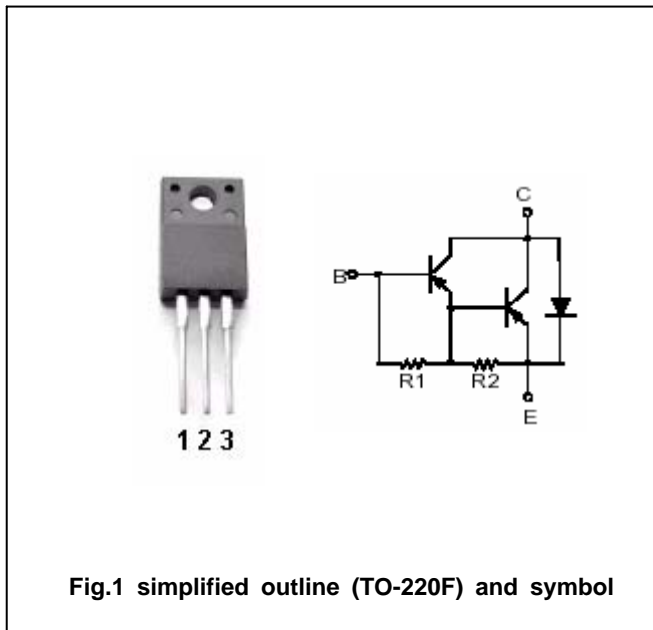
- With TO-220F package
- Complement to type 2SD2079
- Low collector saturation voltage
- High DC current gain

APPLICATIONS

- High power switching applications
- Hammer drive,pulse motor drive 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	-100	V
$V_{CEO}$	Collector-emitter voltage	Open base	-100	V
$V_{EBO}$	Emitter-base voltage	Open collector	-7	V
$I_C$	Collector current		-5	A
$I_{CM}$	Collector current-peak		-8	A
$I_B$	Base current		-0.5	A
$P_C$	Collector dissipation	$T_a=25$	2	W
		$T_C=25$	30	
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-30mA ; I <sub>B</sub> =0	-100			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-2.5A; I <sub>B</sub> =-5mA			-1.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-5A; I <sub>B</sub> =-20mA			-3.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-2.5A; I <sub>B</sub> =-5mA			-2.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-100V; I <sub>E</sub> =0			-100	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-6V; I <sub>C</sub> =0			-2.5	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-2.5A ; V <sub>CE</sub> =-3V	1500		15000	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-7A ; V <sub>CE</sub> =-3V	500			

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>B1</sub> =-I <sub>B2</sub> =-5mA V <sub>CC</sub> =-25V , R <sub>L</sub> =10		0.8		μ s
t <sub>s</sub>	Storage time			2.5		μ s
t <sub>f</sub>	Fall time			2.0		μ s

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PACKAGE OUTLINE

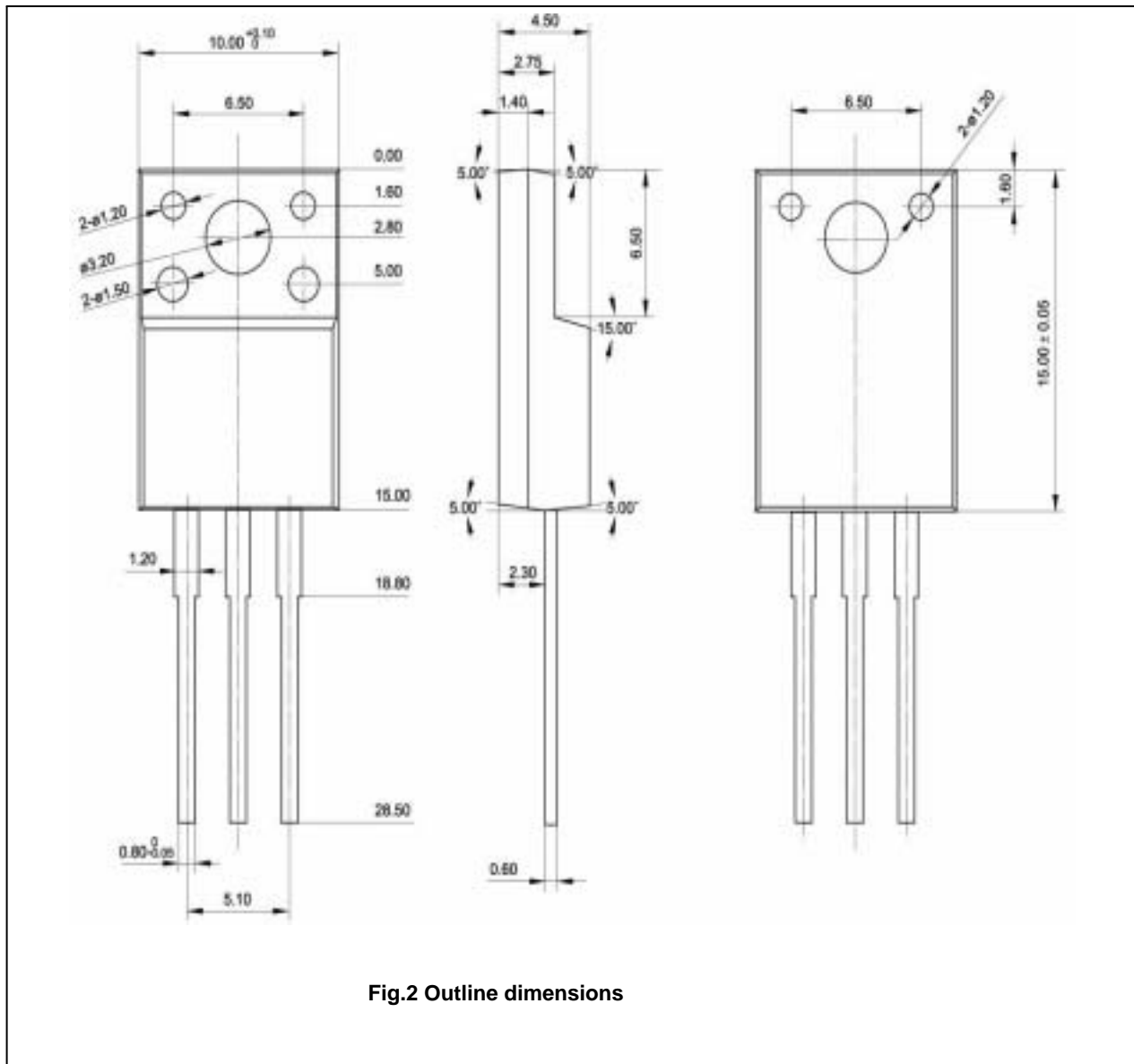


Fig.2 Outline dimensions