

Silicon PNP Power Transistors

2SB1133

DESCRIPTION

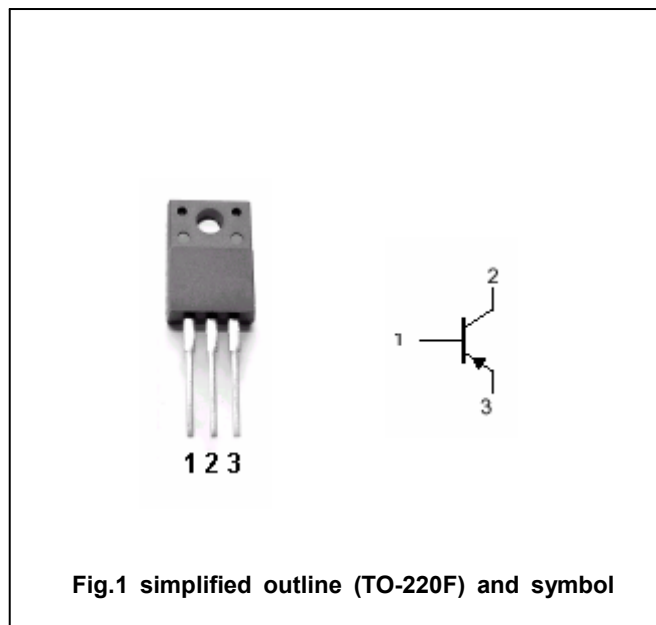
- With TO-220F package
- Complement to type 2SD1666
- Low collector saturation voltage
- Wide area of safe operation

APPLICATIONS

- For low-frequency and general-purpose amplifier applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-60	V
V_{EBO}	Emitter-base voltage	Open collector	-6	V
I_C	Collector current		-3	A
I_{CM}	Collector current-peak		-8	A
P_C	Collector dissipation	$T_a=25^\circ\text{C}$	2	W
		$T_C=25^\circ\text{C}$	25	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-40~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -5mA ; R_{BE} = \infty$	-60			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -1mA ; I_E = 0$	-60			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -1mA ; I_C = 0$	-6			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C = -2A ; I_B = -0.2A$			-1.0	V
V_{BE}	Base-emitter saturation voltage	$I_C = -0.5A ; V_{CE} = -5V$			-1.0	V
I_{CBO}	Collector cut-off current	$V_{CB} = -40V ; I_E = 0$			-100	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = -4V ; I_C = 0$			-100	μA
h_{FE-1}	DC current gain	$I_C = -0.5A ; V_{CE} = -5V$	70		280	
h_{FE-2}	DC current gain	$I_C = -3A ; V_{CE} = -5V$	20			
C_{OB}	Output capacitance	$I_E = 0 ; V_{CB} = -10V ; f = 1MHz$		110		pF
f_T	Transition frequency	$I_C = -0.5A ; V_{CE} = -5V$		40		MHz

◆ h_{FE-1} Classifications

Q	R	S
70-140	100-200	140-280

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PACKAGE OUTLINE

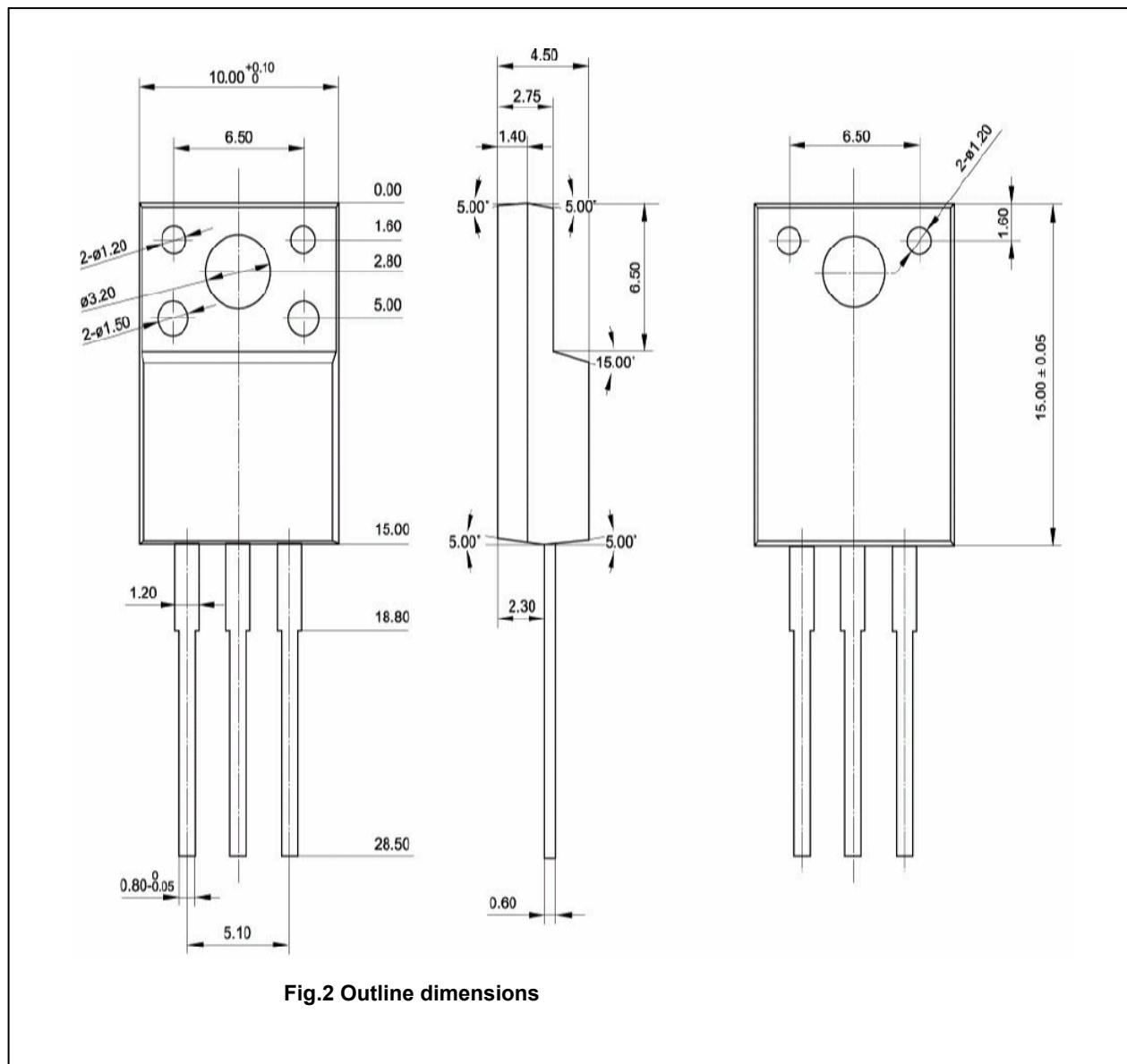


Fig.2 Outline dimensions

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