

**Silicon NPN Power Transistors**

**2SD2012**

**DESCRIPTION**

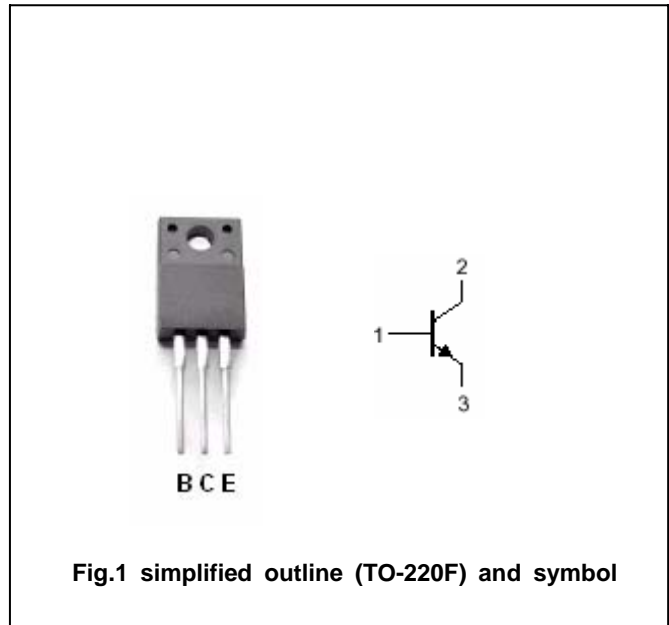
- With TO-220F package
- Complement to type 2SB1366
- Low collector saturation voltage
- Collector power dissipation:  
 $P_C=25W(T_C=25^\circ C)$

**APPLICATIONS**

- Audio frequency power amplifier and general purpose switching applications

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	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	7	V
$I_C$	Collector current		3	A
$I_B$	Base current		0.5	A
$P_C$	Collector dissipation	$T_a=25^\circ C$	2.0	W
		$T_C=25^\circ C$	25	
$T_j$	Junction temperature		150	°C
$T_{stg}$	Storage temperature		-55~150	°C

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =50mA ; I <sub>B</sub> =0	60			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2A ; I <sub>B</sub> =0.2A			1.0	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =0.5A; V <sub>CE</sub> =5V			1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =60V; I <sub>E</sub> =0			100	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			100	μ A
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =5V	100		320	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =2A ; V <sub>CE</sub> =5V	20			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V		3		MHz
C <sub>OB</sub>	Collector output capacitance	f=1MHz; V <sub>CB</sub> =10V		35		pF

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PACKAGE OUTLINE

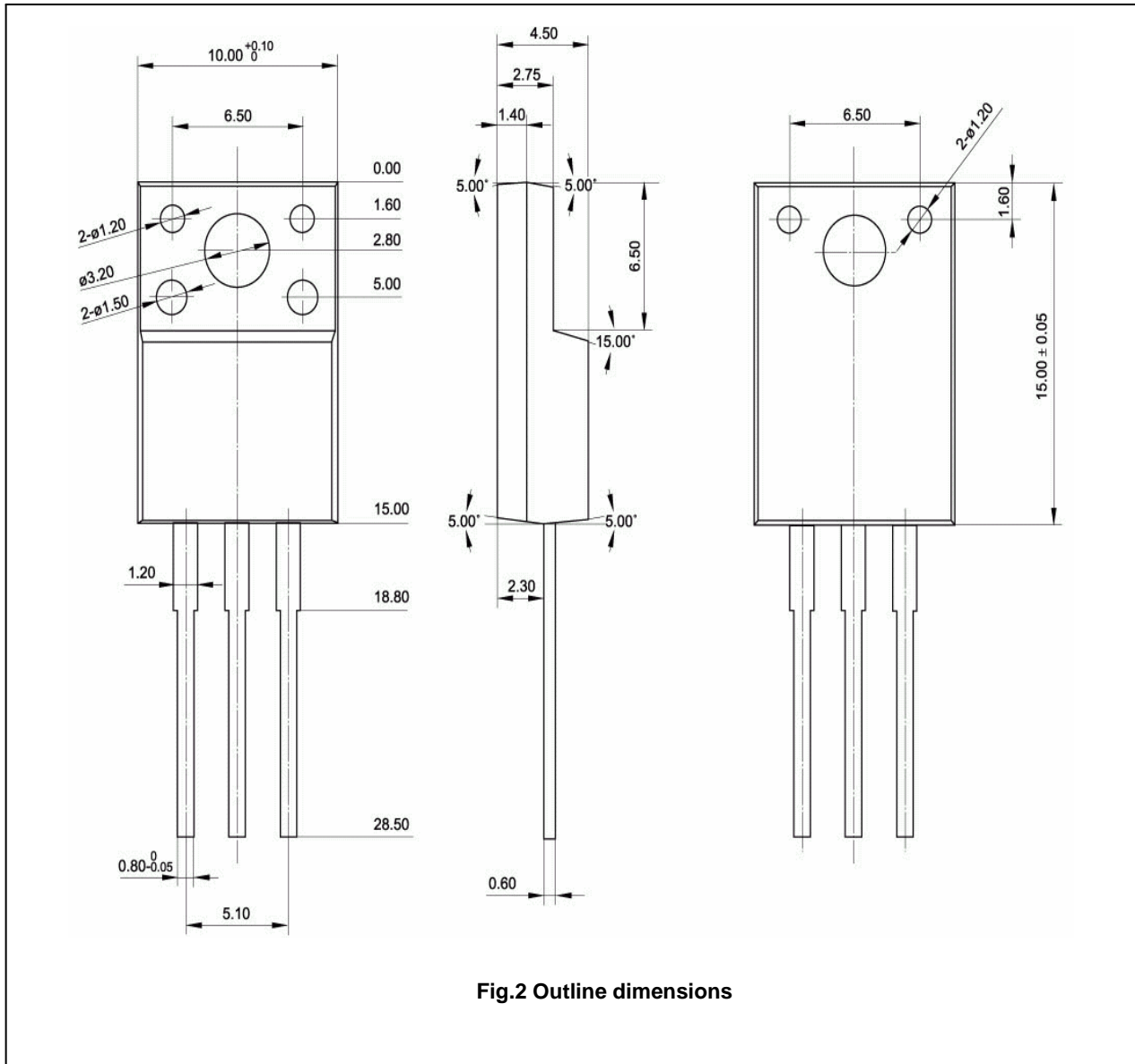


Fig.2 Outline dimensions