

Silicon PNP Power Transistors

2SB1023

DESCRIPTION

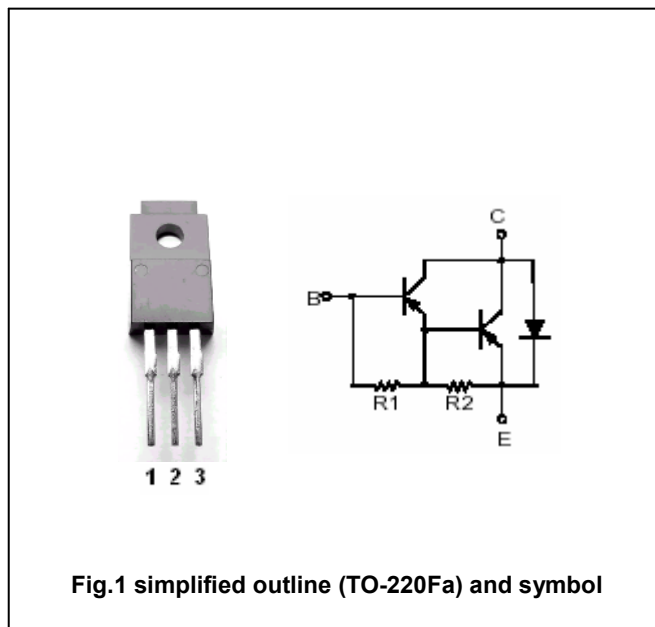
- With TO-220Fa package
- High DC current gain
- Low saturation voltage
- Complement to type 2SD1413

APPLICATIONS

- Power amplifier and switching applications
- Hammer drive,pulse motor drive applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector -emitter voltage	Open base	-40	V
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current		-3	A
I_B	Base current		-0.5	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	20	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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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	$I_C=-25mA; I_B=0$	-40			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=-2A; I_B=-4mA$			-1.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=-2A; I_B=-4mA$			-2.0	V
I_{CBO}	Collector cut-off current	$V_{CB}=-60V; I_E=0$			-20	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=-5V; I_C=0$			-2.5	mA
h_{FE-1}	DC current gain	$I_C=-1A; V_{CE}=-2V$	2000			
h_{FE-2}	DC current gain	$I_C=-3A; V_{CE}=-2V$	1000			

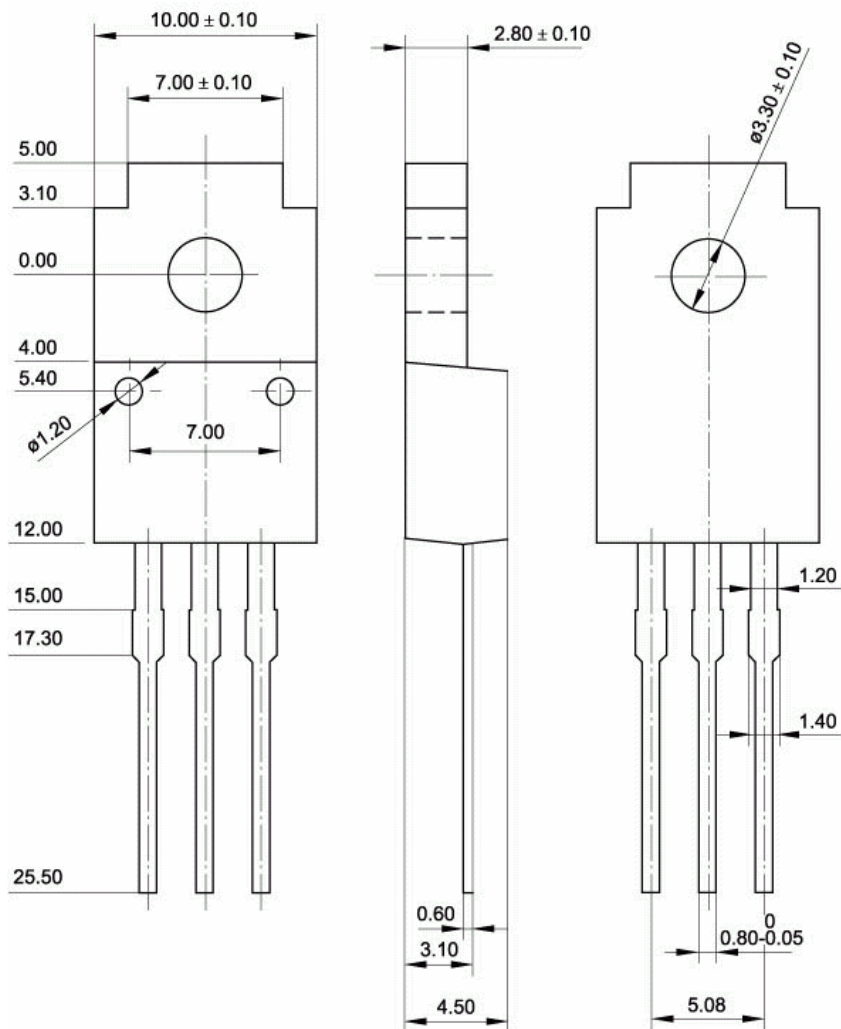
Switching times

t_{on}	Turn-on time	$I_{B1}=-I_{B2}=-6mA$ $V_{CC}=-30V, R_L=10\Omega$		0.30		μs
t_{stg}	Storage time			0.60		μs
t_f	Fall time			0.25		μs

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PACKAGE OUTLINE

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