

Silicon PNP Power Transistors

2SB942 2SB942A

DESCRIPTION

- With TO-220Fa package
- High forward current transfer ratio h_{FE} which has satisfactory linearity
- Low collector saturation voltage
- Complement to type 2SD1267/1267A

APPLICATIONS

- For low-frequency power amplification

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

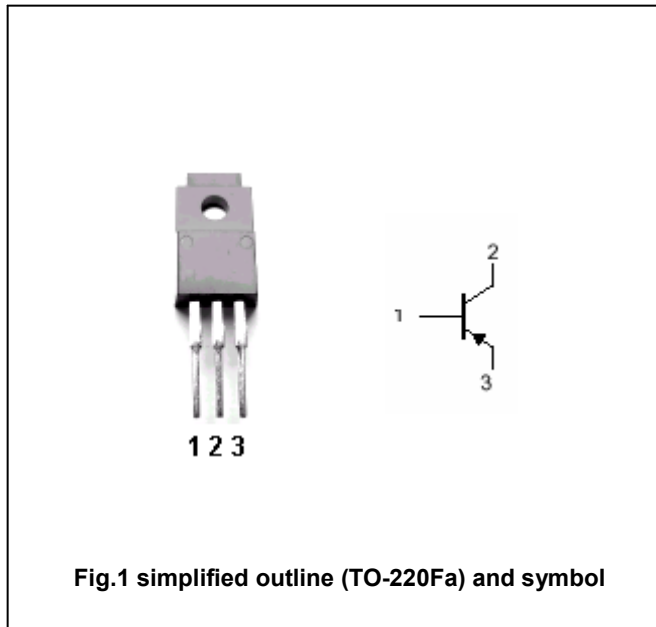


Fig.1 simplified outline (TO-220Fa) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2SB942	-60	V
		2SB942A	-80	
V _{CEO}	Collector-emitter voltage	2SB942	-60	V
		2SB942A	-80	
V _{EBO}	Emitter-base voltage	Open collector	-5	V
I _C	Collector current		-4	A
I _{CM}	Collector current-peak		-8	A
P _C	Collector power dissipation	T _a =25°C	2	W
		T _C =25°C	40	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO}	Collector-emitter voltage	2SB942	I _C =-30mA, I _B =0	-60			V
		2SB942A		-80			
V _{CEsat}	Collector-emitter saturation voltage		I _C =-4A, I _B =-0.4A			-1.5	V
V _{BE}	Base-emitter voltage		I _C =-3A; V _{CE} =-4V			-2	V
I _{EBO}	Emitter cut-off current		V _{EB} =-5V; I _C =0			-1	mA
I _{CEO}	Collector cut-off current	2SB942	V _{CE} =-30V; I _B =0			-0.7	mA
		2SB942A	V _{CE} =-60V; I _B =0				
I _{CES}	Collector cut-off current	2SB942	V _{CE} =-60V; V _{BE} =0			-0.4	mA
		2SB942A	V _{CE} =-80V; V _{BE} =0				
h _{FE-1}	DC current gain		I _C =-1A; V _{CE} =-4V	70		250	
h _{FE-2}	DC current gain		I _C =-3A; V _{CE} =-4V	15			
f _T	Transition frequency		I _C =-0.1A; V _{CE} =-10V, f=10MHz		30		MHz

Switching times

t _{on}	Turn-on time	I _C =-4A I _{B1} =-0.4A, I _{B2} =0.4A		0.2		μs
t _{stg}	Storage time			0.5		μs
t _f	Fall time			0.2		μs

◆ h_{FE-1} Classifications

Q	P
70-150	120-250

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PACKAGE OUTLINE



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

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