

Silicon PNP Power Transistors

2SB942 2SB942A

DESCRIPTION

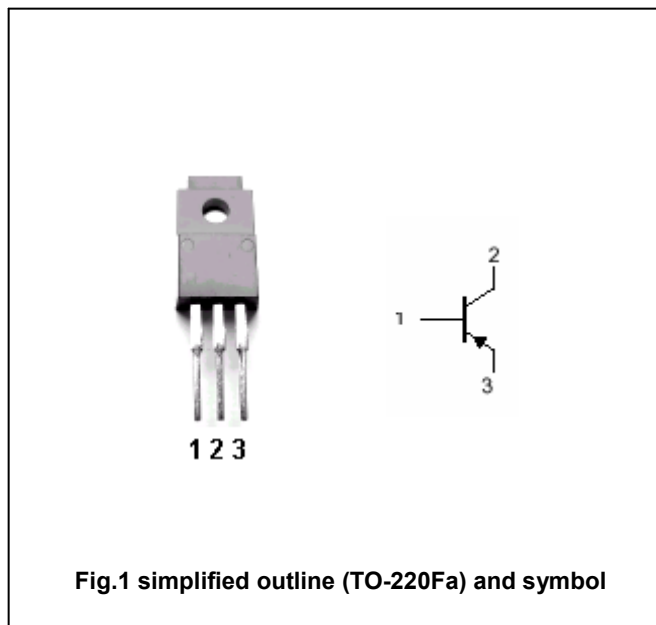
- With TO-220Fa package
- High forward current transfer ratio h_{FE} which has satisfactory linearity
- Low collector saturation voltage
- Complement to type 2SD1267/1267A

APPLICATIONS

- For low-frequency power amplification

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SB942	Open emitter	-60	V
		2SB942A		-80	
V_{CEO}	Collector-emitter voltage	2SB942	Open base	-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	$T_a=25$		2	W
		$T_C=25$		40	
T_j	Junction temperature			150	
T_{stg}	Storage temperature			-55~150	

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CE0}	Collector-emitter voltage	2SB942	$I_C = -30\text{mA}$, $I_B = 0$	-60			V
		2SB942A		-80			
V_{CEsat}	Collector-emitter saturation voltage		$I_C = -4\text{A}$, $I_B = -0.4\text{A}$			-1.5	V
V_{BE}	Base-emitter voltage		$I_C = -3\text{A}$; $V_{CE} = -4\text{V}$			-2	V
I_{EBO}	Emitter cut-off current		$V_{EB} = -5\text{V}$; $I_C = 0$			-1	mA
I_{CEO}	Collector cut-off current	2SB942	$V_{CE} = -30\text{V}$; $I_B = 0$			-0.7	mA
		2SB942A	$V_{CE} = -60\text{V}$; $I_B = 0$				
I_{CES}	Collector cut-off current	2SB942	$V_{CE} = -60\text{V}$; $V_{BE} = 0$			-0.4	mA
		2SB942A	$V_{CE} = -80\text{V}$; $V_{BE} = 0$				
h_{FE-1}	DC current gain		$I_C = -1\text{A}$; $V_{CE} = -4\text{V}$	70		250	
h_{FE-2}	DC current gain		$I_C = -3\text{A}$; $V_{CE} = -4\text{V}$	15			
f_T	Transition frequency		$I_C = -0.1\text{A}$; $V_{CE} = -10\text{V}$, $f = 10\text{MHz}$		30		MHz

Switching times

t_{on}	Turn-on time	$I_C = -4\text{A}$ $I_{B1} = -0.4\text{A}$, $I_{B2} = 0.4\text{A}$		0.2		μs
t_{stg}	Storage time			0.5		μs
t_f	Fall time			0.2		μs

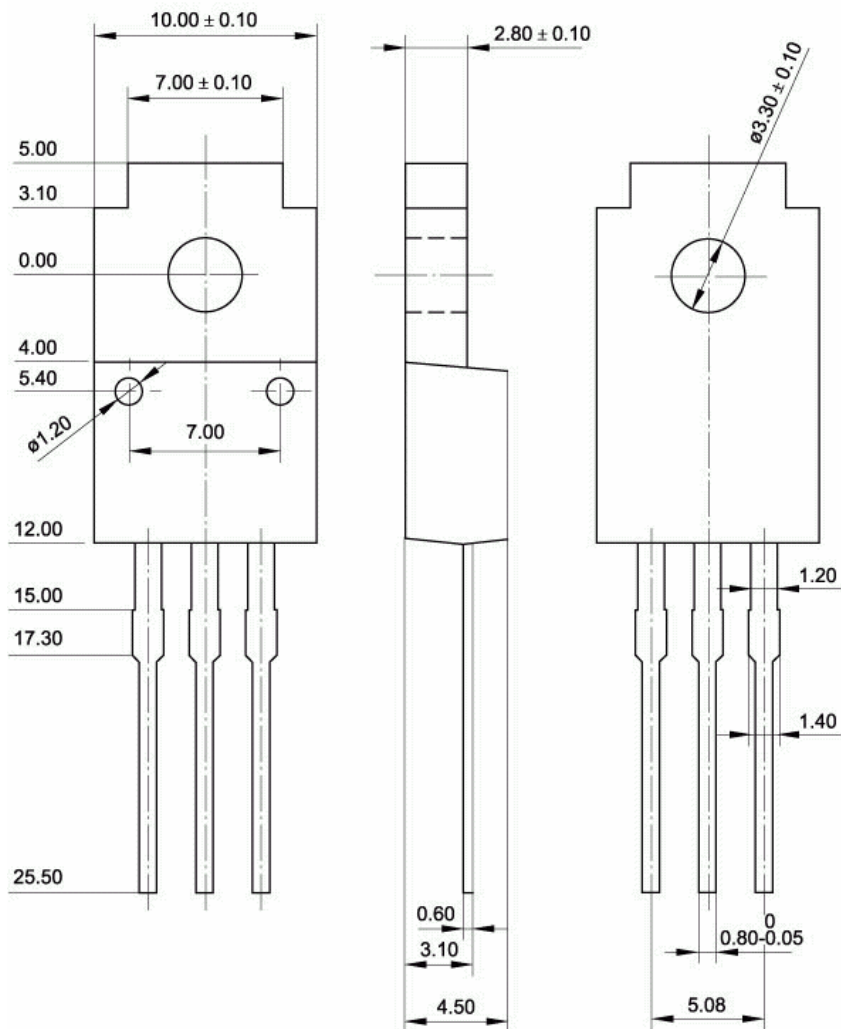
◆ h_{FE-1} Classifications

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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