

Silicon NPN Power Transistors

2SD1275 2SD1275A

DESCRIPTION

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- With TO-220Fa package
- Complement to type 2SB949/949A
- High DC current gain
- High-speed switching

APPLICATIONS

- For power amplification

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

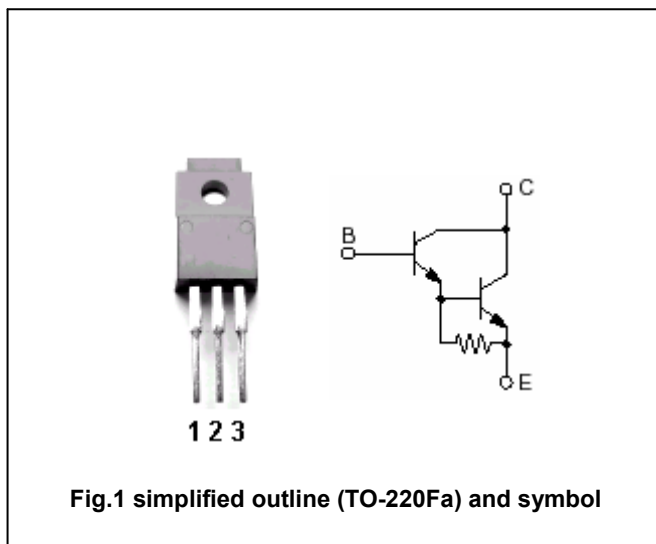


Fig.1 simplified outline (TO-220Fa) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2SD1275	60	V
		2SD1275A	80	
V _{CEO}	Collector-emitter voltage	2SD1275	60	V
		2SD1275A	80	
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		2	A
I _{CM}	Collector current-Peak		4	A
P _C	Collector power dissipation	T _C =25°C	35	W
		T _a =25°C	2	
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

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SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	2SD1275	I _C =30mA, I _B =0	60			V
		2SD1275A		80			
V _{CEsat}	Collector-emitter saturation voltage		I _C =2A; I _B =8mA			2.5	V
V _{BE}	Base-emitter voltage		V _{CE} =4V; I _C =2A			2.8	V
I _{CBO}	Collector cut-off current	2SD1275	V _{CB} =60V; I _E =0			1.0	mA
		2SD1275A	V _{CB} =80V; I _E =0				
I _{CEO}	Collector cut-off current	2SD1275	V _{CE} =30V; I _B =0			2.0	mA
		2SD1275A	V _{CE} =40V; I _B =0				
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			2.0	mA
h _{FE-1}	DC current gain		I _C =1A; V _{CE} =4V	1000			
h _{FE-2}	DC current gain		I _C =2A; V _{CE} =4V	2000		10000	
f _T	Transition frequency		I _C =0.5A; V _{CE} =10V; f=1MHz		20		MHz

Switching times

t _{on}	Turn-on time	I _C =2A; I _{B1} =8mA I _{B2} =-8mA; V _{CC} =50V		0.5		μs
t _s	Storage time			4.0		μs
t _f	Fall time			1.0		μs

◆ h_{FE-2} Classifications

Q	R
2000-5000	4000-10000

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PACKAGE OUTLINE

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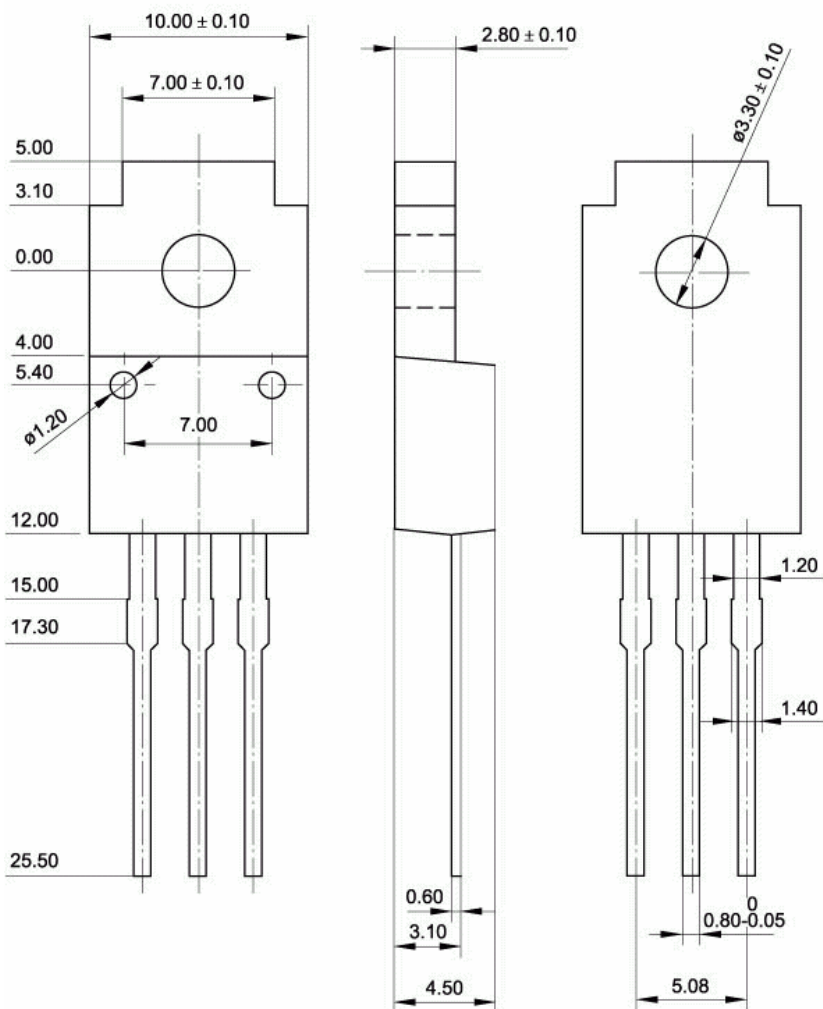


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)