

Silicon NPN Power Transistors

2SD1275 2SD1275A

DESCRIPTION

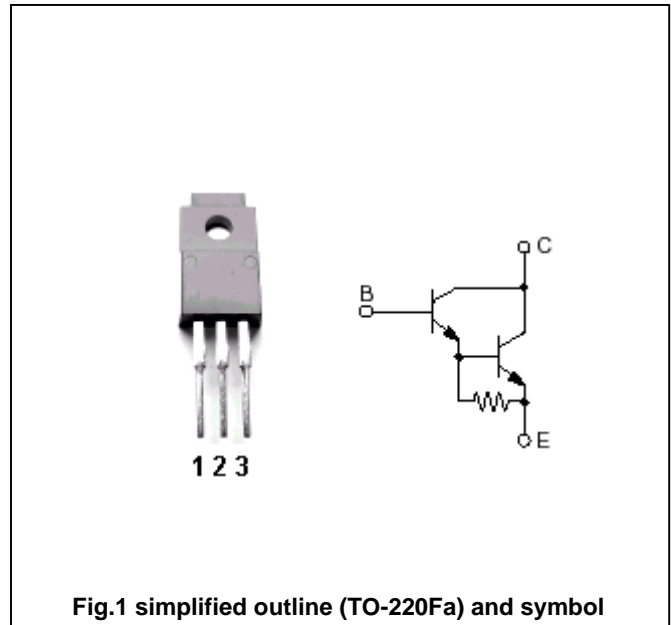
- With TO-220Fa package
- Complement to type 2SB949,2SB949A
- High forward current transfer ratio h_{FE}
- High-speed switching

APPLICATIONS

- For power amplification

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



ABSOLUTE MAXIMUM RATINGS AT Tc=25

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SD1275	60	V
		2SD1275A		
V_{CEO}	Collector-emitter voltage	2SD1275	60	V
		2SD1275A		
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current (DC)		2	A
I_{CM}	Collector current-Peak		4	A
P_C	Collector power dissipation	$T_C=25$	35	W
		$T_a=25$	2	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{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	mA
		2SD1275A		V _{CB} =80V; I _E =0			
I _{CEO}	Collector cut-off current	2SD1275	V _{CE} =30V; I _B =0			2	mA
		2SD1275A		V _{CE} =40V; I _B =0			
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			2	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		μs
t _f	Fall time			1		μs

◆ h_{FE-2} Classifications

Q	R
2000-5000	4000-10000

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PACKAGE OUTLINE

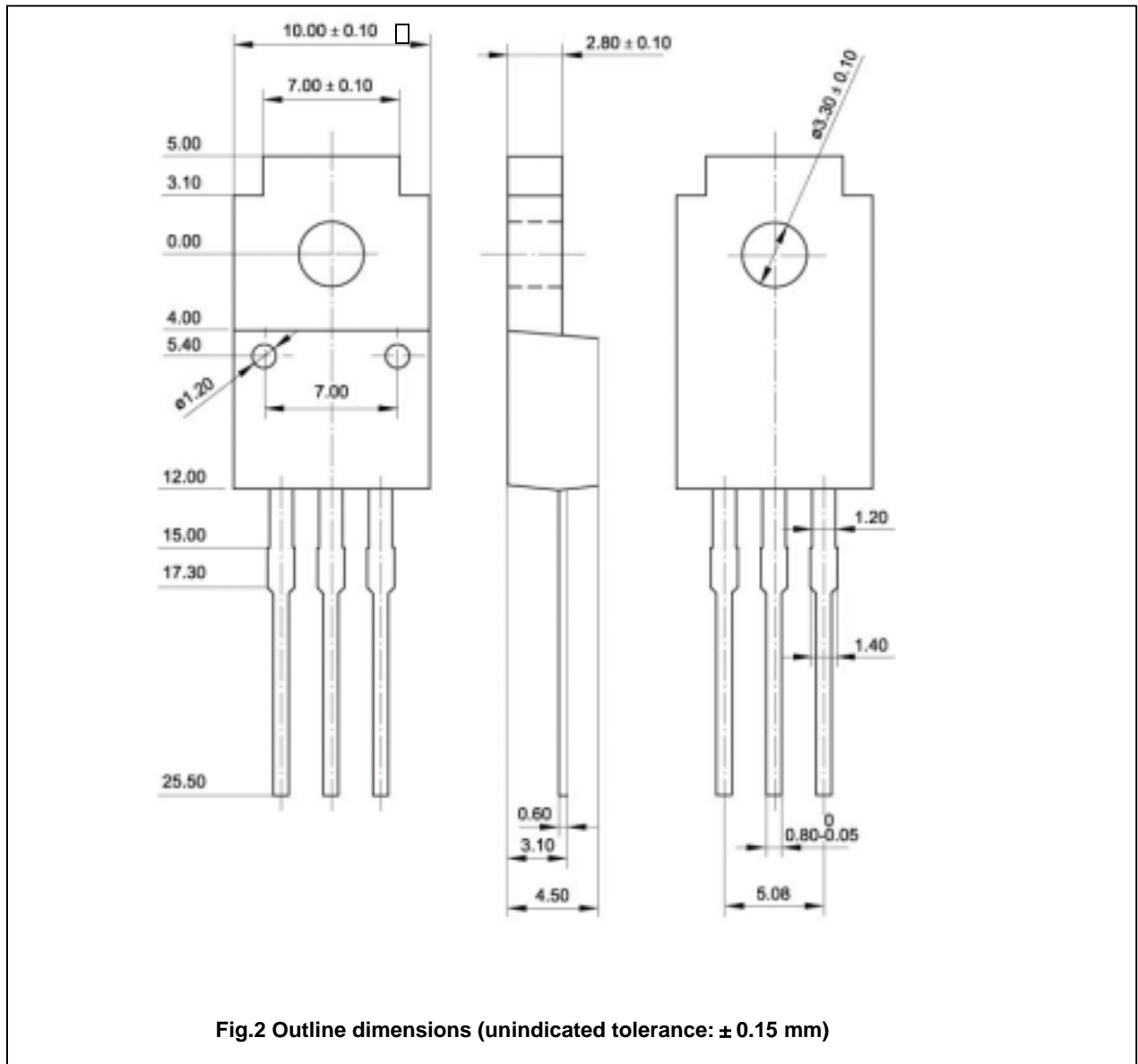


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)