

Silicon NPN Power Transistors

2SD1275 2SD1275A

DESCRIPTION

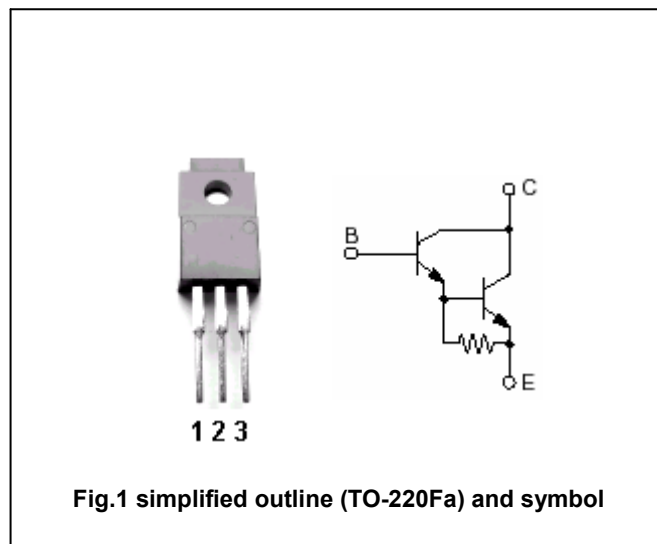
- With TO-220Fa package
- Complement to type 2SB949/949A
- High DC current gain
- High-speed switching

APPLICATIONS

- For power amplification

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SD1275	Open emitter	60	V
		2SD1275A		80	
V_{CEO}	Collector-emitter voltage	2SD1275	Open base	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	$T_C=25^\circ\text{C}$		35	W
		$T_a=25^\circ\text{C}$		2	
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	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

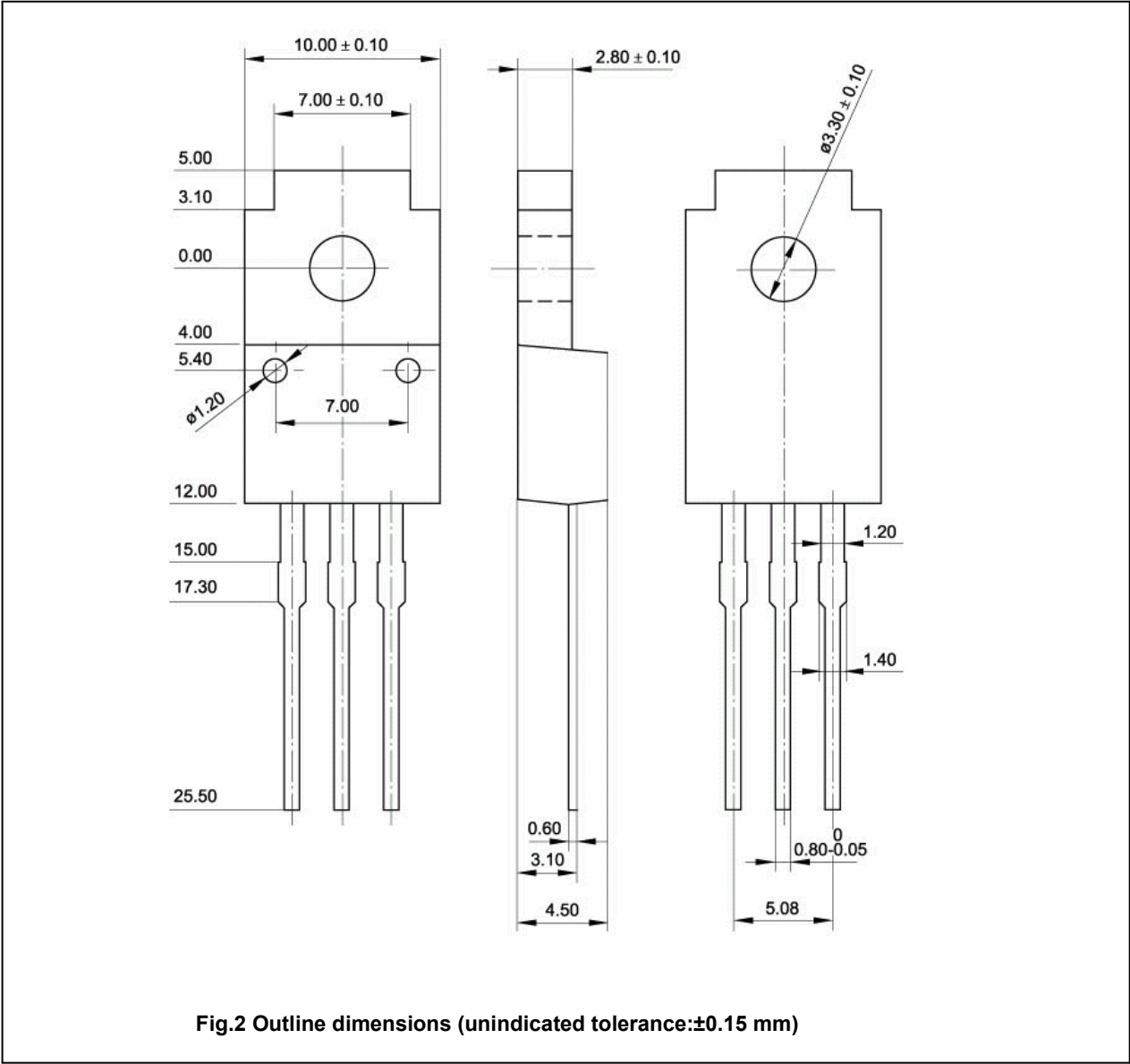


Fig.2 Outline dimensions (unindicated tolerance:±0.15 mm)