

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SD1277 2SD1277A

DESCRIPTION

- With TO-220Fa package
- Complement to type 2SB951/951A
- High DC current gain
- High-speed switching

APPLICATIONS

- For medium speed power switching

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

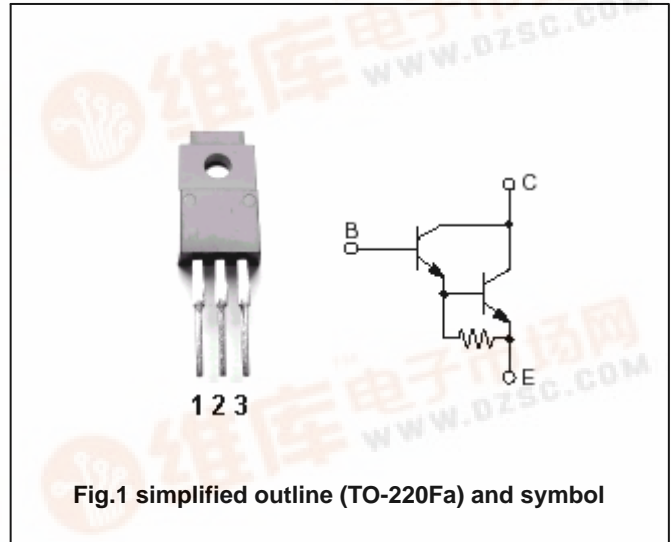


Fig.1 simplified outline (TO-220Fa) and symbol

Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2SD1277	60	V
		2SD1277A	80	
V _{CEO}	Collector-emitter voltage	2SD1277	60	V
		2SD1277A	80	
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current (DC)		8	A
I _{CM}	Collector current-Peak		12	A
P _C	Collector power dissipation	T _C =25	45	W
		T _a =25	2	
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-55~150	

Silicon NPN Power Transistors

2SD1277 2SD1277A

CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SD1277	$I_C=30mA, I_B=0$	60			V
		2SD1277A		80			
V_{CEsat}	Collector-emitter saturation voltage		$I_C=4A; I_B=8mA$			1.5	V
V_{BEsat}	Base-emitter saturation voltage		$I_C=4A; I_B=8mA$			2	V
I_{CBO}	Collector cut-off current	2SD1277	$V_{CB}=60V; I_E=0$			0.1	mA
		2SD1277A	$V_{CB}=80V; I_E=0$				
I_{EBO}	Emitter cut-off current		$V_{EB}=7V; I_C=0$			2	mA
h_{FE-1}	DC current gain		$I_C=8A; V_{CE}=3V$	500			
h_{FE-2}	DC current gain		$I_C=4A; V_{CE}=3V$	2000		10000	
f_T	Transition frequency		$I_C=0.5A; V_{CE}=10V; f=1MHz$	20			MHz
Switching times							
t_{on}	Turn-on time		$I_C=4A; I_{B1}=8mA$ $I_{B2}=-8mA; V_{CC}=50V$		0.5		μs
t_{stg}	Storage time				4.0		μs
t_f	Fall time				1.0		μs

◆ h_{FE-2} Classifications

Q	R
2000-5000	4000-10000

PACKAGE OUTLINE

