

Silicon NPN Power Transistors

MJ1000/1001

DESCRIPTION

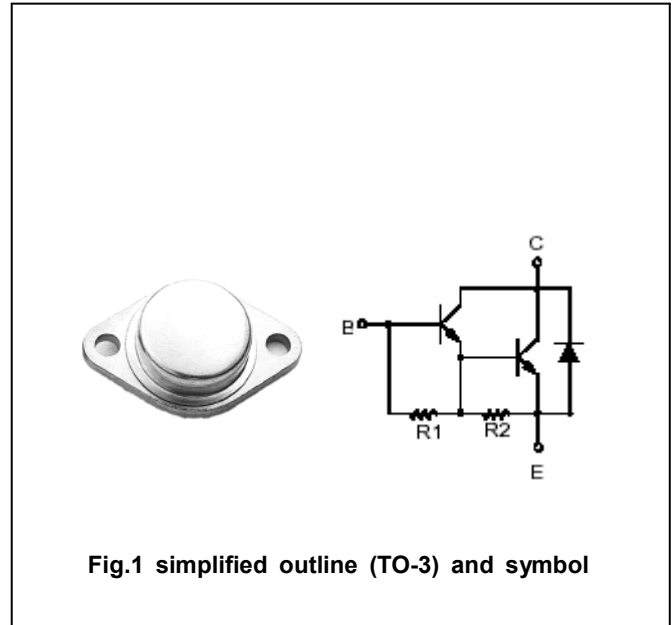
- With TO-3 package
- DARLINGTON
- High DC current gain
- Complement to type MJ900/901

APPLICATIONS

- For use as output devices in complementary general purpose amplifier applications

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

**ABSOLUTE MAXIMUM RATINGS($T_c=25^\circ\text{C}$)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	MJ1000	60	V
		MJ1001	80	
V_{CEO}	Collector-emitter voltage	MJ1000	60	V
		MJ1001	80	
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		10	A
I_B	Base current		0.1	A
P_D	Total power dissipation	$T_c=25^\circ\text{C}$	90	W
T_j	Junction temperature		200	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~200	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	MJ1000	I _C =0.1A ; I _B =0	60			V
		MJ1001		80			
V _{CE(sat)-1}	Collector-emitter saturation voltage		I _C =3A ; I _B =12mA			2.0	V
V _{CE(sat)-2}	Collector-emitter saturation voltage		I _C =8A ; I _B =40mA			4.0	V
V _{BE}	Base-emitter on voltage		I _C =3A ; V _{CE} =3V			2.5	V
I _{CER}	Collector cut-off current	MJ1000	V _{CE} =60V ; R _{BE} =1.0kΩ T _C =150 °C			1.0 5.0	mA
		MJ1001	V _{CE} =80V ; R _{BE} =1.0kΩ T _C =150 °C			1.0 5.0	
I _{CEO}	Collector cut-off current	MJ1000	V _{CE} =30V ; I _B =0			0.5	mA
		MJ1001	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 =3A ; V _{CE} =3V	1000			
h _{FE-2}	DC current gain		I _C =4A ; V _{CE} =3V	750			

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction to case	1.94	°C/W

PACKAGE OUTLINE

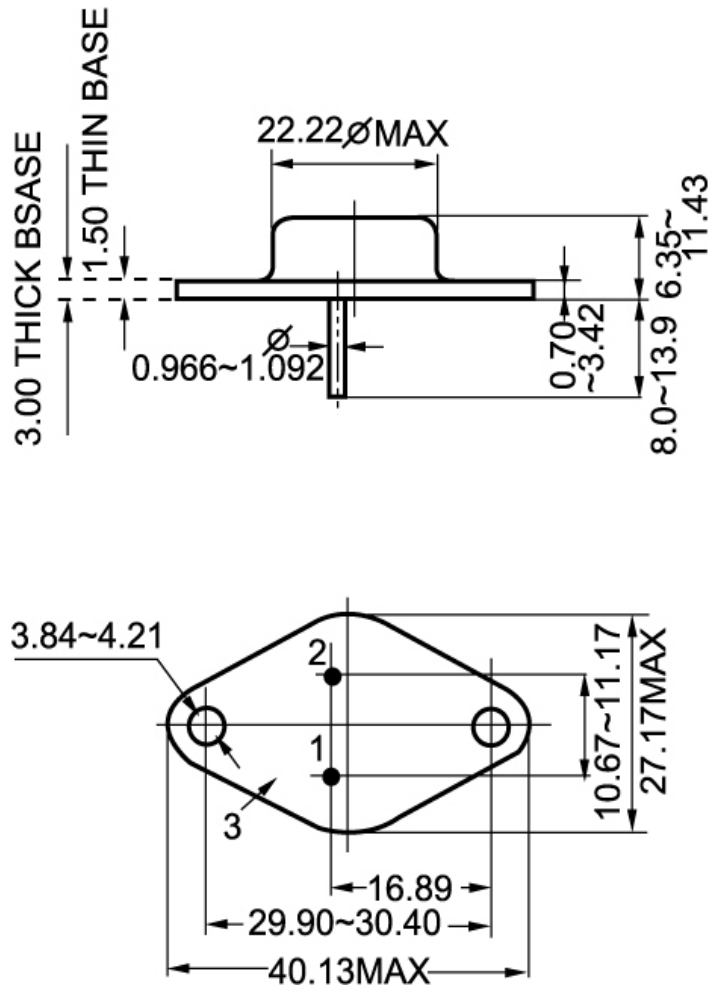


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)