

Silicon PNP Power Transistors

MJ2500/2501

DESCRIPTION

- With TO-3 package
- DARLINGTON
- High DC current gain
- Complement to type MJ3000/3001

APPLICATIONS

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

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

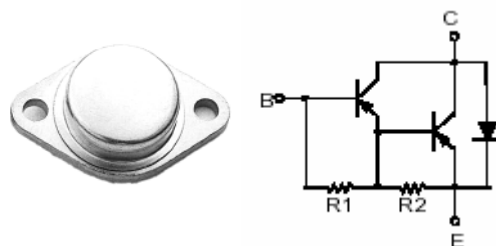


Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	MJ2500	Open emitter	-60	V
		MJ2501		-80	
V_{CEO}	Collector-emitter voltage	MJ2500	Open base	-60	V
		MJ2501		-80	
V_{EBO}	Emitter-base voltage		Open collector	-5	V
I_C	Collector current			-10	A
I_B	Base current			-0.2	A
P_D	Total power dissipation		$T_c=25^\circ\text{C}$	150	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	MJ2500	I _C =-0.1A ; I _B =0	-60			V
		MJ2501		-80			
V _{CE(sat)-1}	Collector-emitter saturation voltage		I _C =-5A; I _B =-20mA			-2.0	V
V _{CE(sat)-2}	Collector-emitter saturation voltage		I _C =-10A; I _B =-50mA			-4.0	V
V _{BE}	Base-emitter on voltage		I _C =-5A ; V _{CE} =-3V			-3.0	V
I _{CER}	Collector cut-off current	MJ2500	V _{CE} =-60V; R _{BE} =1.0kΩ T _C =150°C			1.0 5.0	mA
		MJ2501	V _{CE} =-80V; R _{BE} =1.0kΩ T _C =150°C			1.0 5.0	
I _{CEO}	Collector cut-off current	MJ2500	V _{CE} =-30V; I _B =0			-1.0	mA
		MJ2501	V _{CE} =-40V; I _B =0				
I _{EBO}	Emitter cut-off current		V _{EB} =-5V; I _C =0			-2.0	mA
h _{FE}	DC current gain		I _C =-5A ; V _{CE} =-3V	1000			

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction to case	1.17	°C/W

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PACKAGE OUTLINE

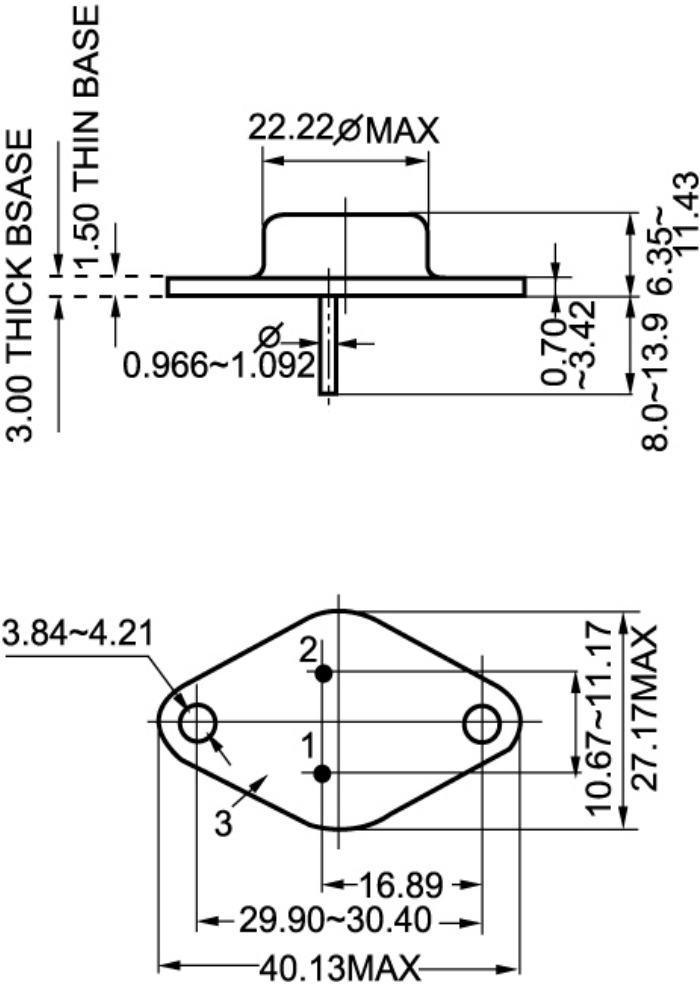


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)