



Silicon PNP Power Transistors

MJ15023 MJ15025

DESCRIPTION

- With TO-3 package
- Complement to type MJ15022; MJ15024
- Excellent safe operating area
- High DC current gain  
 $h_{FE} = 15$  (Min) @  $I_C = 8$  Adc

APPLICATIONS

- Designed for high power audio, disk head positioners and other linear applications

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

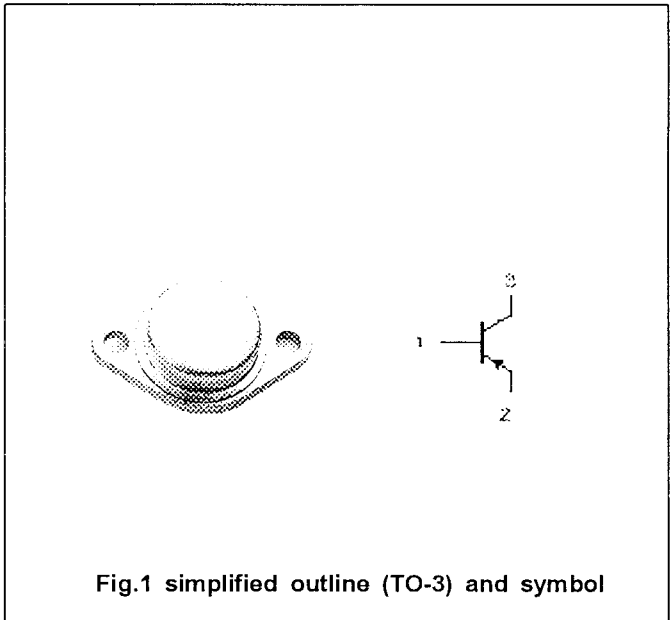


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	MJ15023	-350	V
		MJ15025	-400	
V <sub>CEO</sub>	Collector-emitter voltage	MJ15023	-200	V
		MJ15025	-250	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-16	A
I <sub>CM</sub>	Collector current-peak		-30	A
I <sub>B</sub>	Base current		-5	A
P <sub>D</sub>	Total power dissipation	T <sub>c</sub> =25°C	250	W
T <sub>J</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>thj-c</sub>	Thermal resistance junction to case	0.70	°C/W

**Silicon PNP Power Transistors****MJ15023 MJ15025****CHARACTERISTICS****T<sub>j</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	MJ15023	I <sub>C</sub> =-0.1A; I <sub>B</sub> =0	-200			V
		MJ15025		-250			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-8A; I <sub>B</sub> =-0.8A			-1.4	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-16A; I <sub>B</sub> =-3.2A			-4.0	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =-8A; V <sub>CE</sub> =-4V			-2.2	V
I <sub>CEO</sub>	Collector cut-off current	MJ15023	V <sub>CE</sub> =-150V; I <sub>B</sub> =0			-0.5	mA
		MJ15025	V <sub>CE</sub> =-200V; I <sub>B</sub> =0				
I <sub>CEx</sub>	Collector cut-off current	MJ15023	V <sub>CE</sub> =-200V; V <sub>BE(off)</sub> =-1.5V			-0.25	mA
		MJ15025	V <sub>CE</sub> =-250V; V <sub>BE(off)</sub> =-1.5V				
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-0.5	mA
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =-8A; V <sub>CE</sub> =-4V	15		60	
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-16A; V <sub>CE</sub> =-4V	5			
I <sub>s/b</sub>	Second breakdown collector current with base forward biased		V <sub>CE</sub> =-50Vdc, t=0.5 s, V <sub>CE</sub> =-80Vdc, t=0.5 s, Nonrepetitive	-5.0 -2.0			A
C <sub>OB</sub>	Output capacitance		I <sub>E</sub> =0; V <sub>CB</sub> =-10V; f=1.0MHz			600	pF
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =-1A; V <sub>CE</sub> =-10V; f=1.0MHz	4			MHz



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PACKAGE OUTLINE

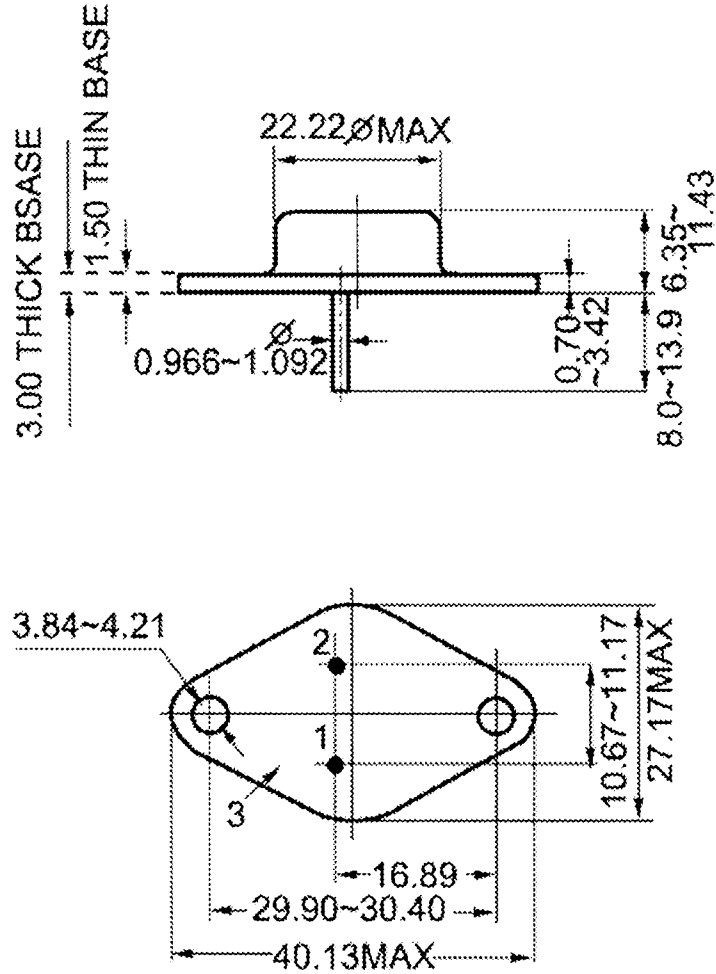


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1\text{mm}$ )