



Silicon NPN Power Transistors

MJ15022 MJ15024

DESCRIPTION

- With TO-3 package
- Complement to type MJ15023; MJ15025
- Excellent safe operating area
- High DC current gain
 $h_{FE} = 15 \text{ (Min) @ } I_C = 8 \text{ Adc}$

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

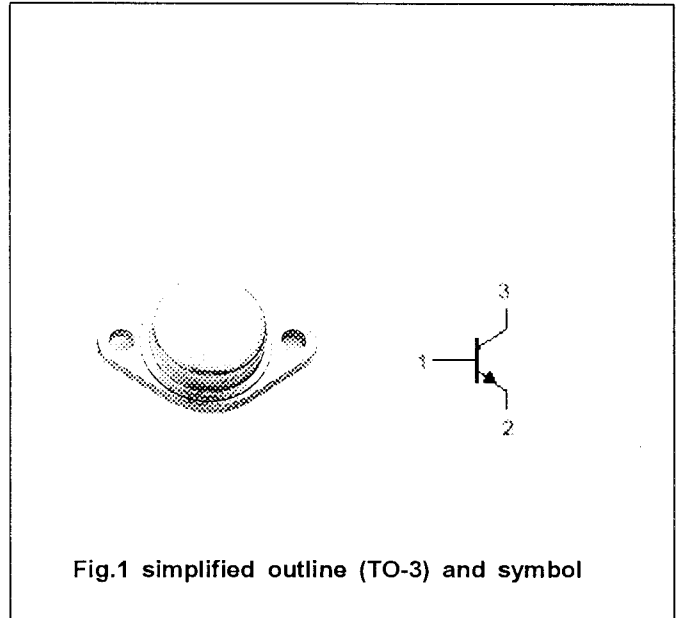


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CB0}	Collector-base voltage	MJ15022	350	V
		MJ15024	400	
V _{CEO}	Collector-emitter voltage	MJ15022	200	V
		MJ15024	250	
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		16	A
I _{CM}	Collector current-peak		30	A
I _B	Base current		5	A
P _D	Total power dissipation	T _c =25°C	250	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{thj-c}	Thermal resistance junction to case	0.70	°C/W

**Silicon NPN Power Transistors****MJ15022 MJ15024****CHARACTERISTICS****T_j=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	MJ15022	I _C =0.1A; I _B =0			V
		MJ15024				
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =8A; I _B =0.8A			1.4	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =16A; I _B =3.2A			4.0	V
V _{BE}	Base-emitter on voltage	I _C =8A; V _{CE} =4V			2.2	V
I _{CEO}	Collector cut-off current	MJ15022			0.5	mA
		MJ15024				
I _{CEX}	Collector cut-off current	MJ15022			0.25	mA
		MJ15024				
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			0.5	mA
h _{FE-1}	DC current gain	I _C =8A; V _{CE} =4V	15		60	
h _{FE-2}	DC current gain	I _C =16A; V _{CE} =4V	5			
I _{s/b}	Second breakdown collector current with base forward biased	V _{CE} =50Vdc, t=0.5 s, V _{CE} =80Vdc, t=0.5 s, Nonrepetitive	5.0 2.0			A
C _{OB}	Output capacitance	I _E =0; V _{CB} =10V; f=1.0MHz			500	pF
f _T	Transition frequency	I _C =1A; V _{CE} =10V; f=1.0MHz	4			MHz



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PACKAGE OUTLINE

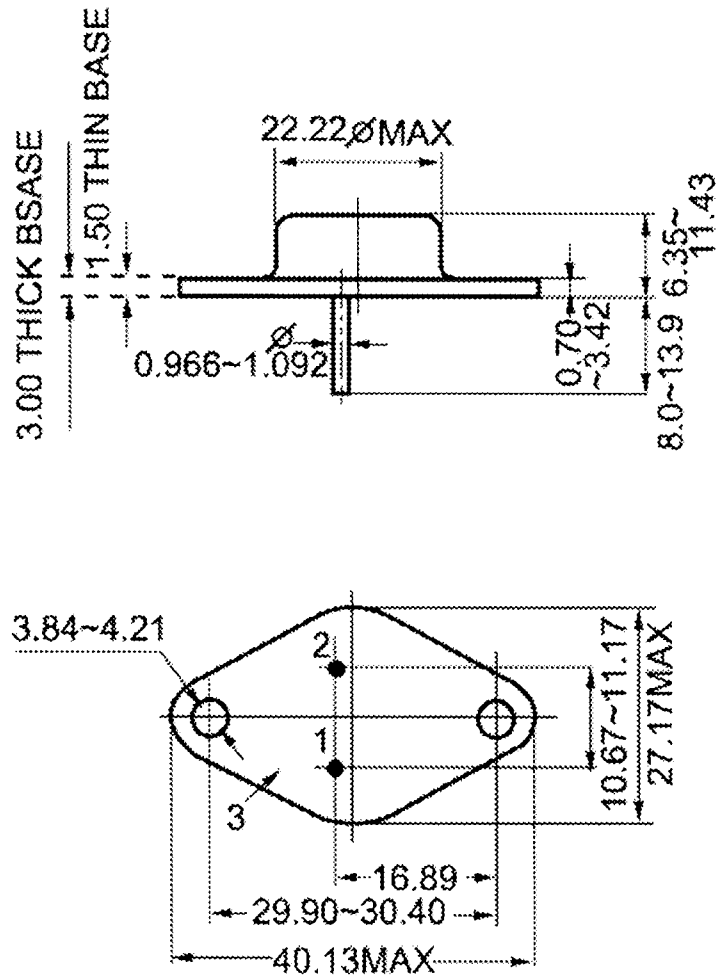


Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)