



Silicon PNP Power Transistors

MJ15023 MJ15025

DESCRIPTION

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

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($T_a = ^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-350	V
			-400	
V_{CEO}	Collector-emitter voltage	Open base	-200	V
			-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	$T_c = 25^\circ\text{C}$	250	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{slg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal resistance junction to case	0.70	$^\circ\text{C/W}$

**Silicon PNP Power Transistors****MJ15023 MJ15025****CHARACTERISTICS****T_j=25°C unless otherwise specified**

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	MJ15023	I _C =-0.1A ; I _B =0	-200			V
		MJ15025		-250			
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	MJ15023	V _{CE} =-150V; I _B =0			-0.5	mA
		MJ15025	V _{CE} =-200V; I _B =0				
I _{CEX}	Collector cut-off current	MJ15023	V _{CE} =-200V; V _{BE(off)} =-1.5V			-0.25	mA
		MJ15025	V _{CE} =-250V; V _{BE(off)} =-1.5V				
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			600	pF
f _T	Transition frequency		I _C =-1A; V _{CE} =-10V;f=1.0MHz	4			MHz



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PACKAGE OUTLINE

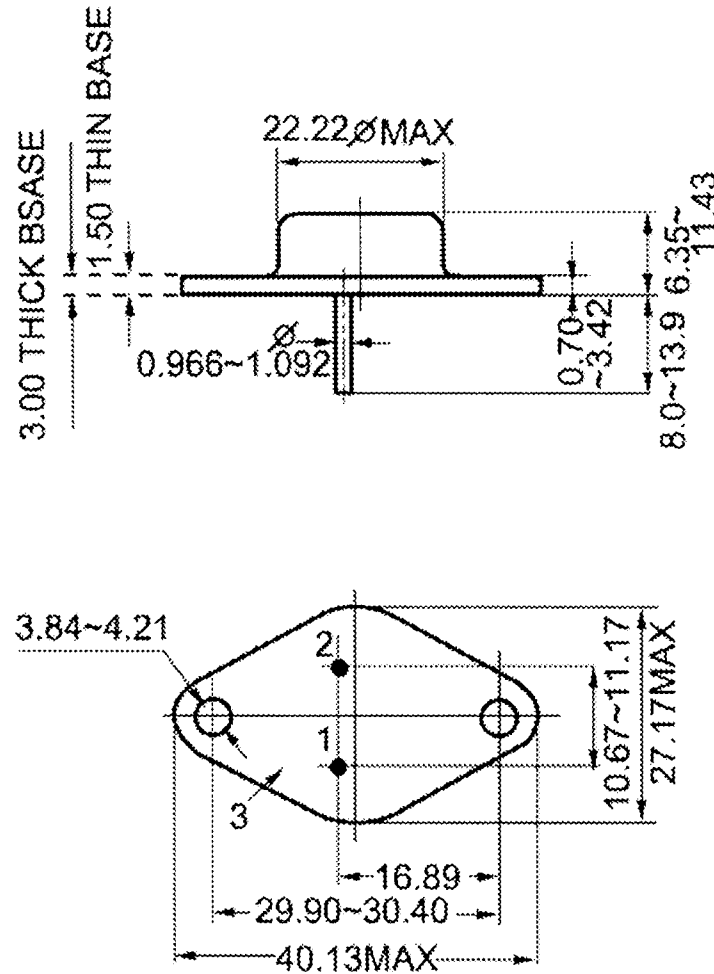


Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)