

Silicon NPN Power Transistors

MJ21194

DESCRIPTION

- With TO-3 package
- Complement to type MJ21193
- Excellent gain linearity

APPLICATIONS

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

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

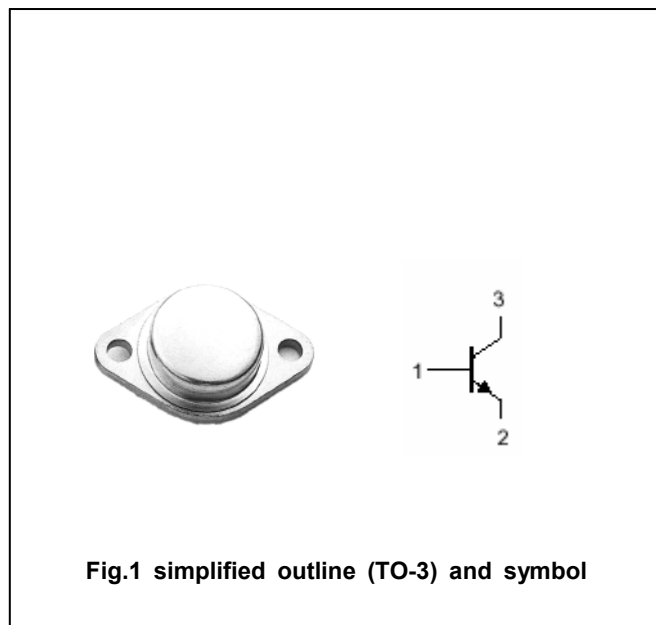


Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{CBO}	Collector-base voltage	Open emitter	400	V
V_{CEO}	Collector-emitter voltage	Open base	250	V
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		-65~200	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R_{th-j-c}	Thermal resistance from junction to case	0.7	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(SUS)}	Collector-emitter sustaining voltage	I _C =100mA ; I _B =0	250			V
V _{CE(sat)-1}	Collector-emitter saturation voltage	I _C =8A ; I _B =0.8A			1.4	V
V _{CE(sat)-2}	Collector-emitter saturation voltage	I _C =16A ; I _B =3.2A			4.0	V
V _{BE(ON)}	Base-emitter on voltage	I _C =8A ; V _{CE} =5V			2.2	V
I _{C EX}	Collector cut-off current	V _{CE} =250V ; V _{BE(off)} =1.5V			100	μA
I _{CEO}	Collector cut-off current	V _{CE} =200V ; I _B =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =5V ; I _C =0			100	μA
h _{FE-1}	DC current gain	I _C =8A ; V _{CE} =5V	25		75	
h _{FE-2}	DC current gain	I _C =16A ; V _{CE} =5V	8			
f _T	Transition frequency	I _C =1A ; V _{CE} =10V, f=1MHz	4			MHz
C _{OB}	Collector output capacitance	f=1MHz ; V _{CB} =10V, I _E =0			500	pF
I _{S/b}	Second breakdown current with base forward biased	V _{CE} =50V ; t=1s (non-repetitive) V _{CE} =80V ; t=1s (non-repetitive)	5.0 2.5			A

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PACKAGE OUTLINE

