

Silicon NPN Power Transistors

MJE4340/4341/4342/4343

DESCRIPTION

- With TO-3PN package
- Respectively complement to type MJE4350/4351/4352/4353
- DC current gain $h_{FE}=8(\text{Min})@I_C=16\text{A}$

APPLICATIONS

- For use in high power audio amplifier and switching regulator circuits

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

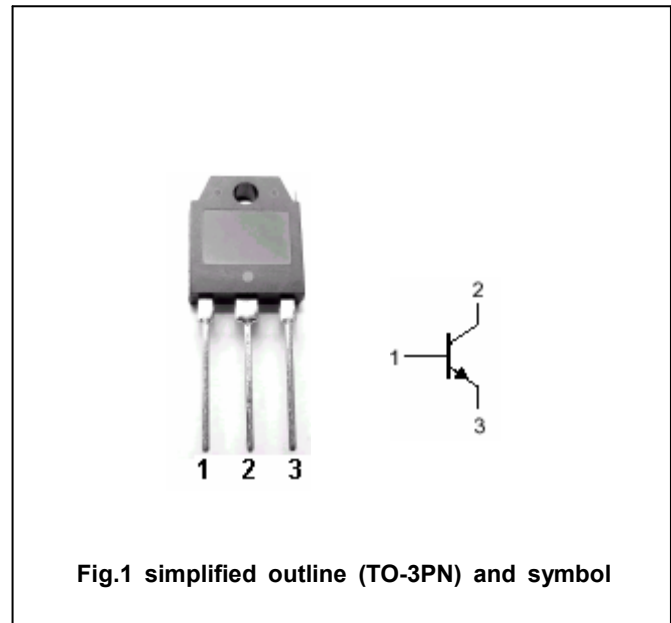


Fig.1 simplified outline (TO-3PN) and symbol

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	MJE4340	Open emitter	100	V
		MJE4341		120	
		MJE4342		140	
		MJE4343		160	
V_{CEO}	Collector-emitter voltage	MJE4340	Open base	100	V
		MJE4341		120	
		MJE4342		140	
		MJE4343		160	
V_{EBO}	Emitter-base voltage		Open collector	7	V
I_C	Collector current			16	A
I_{CM}	Collector current-peak			20	A
I_B	Base current			5	A
P_C	Collector power dissipation		$T_C=25^\circ\text{C}$	125	W
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.0	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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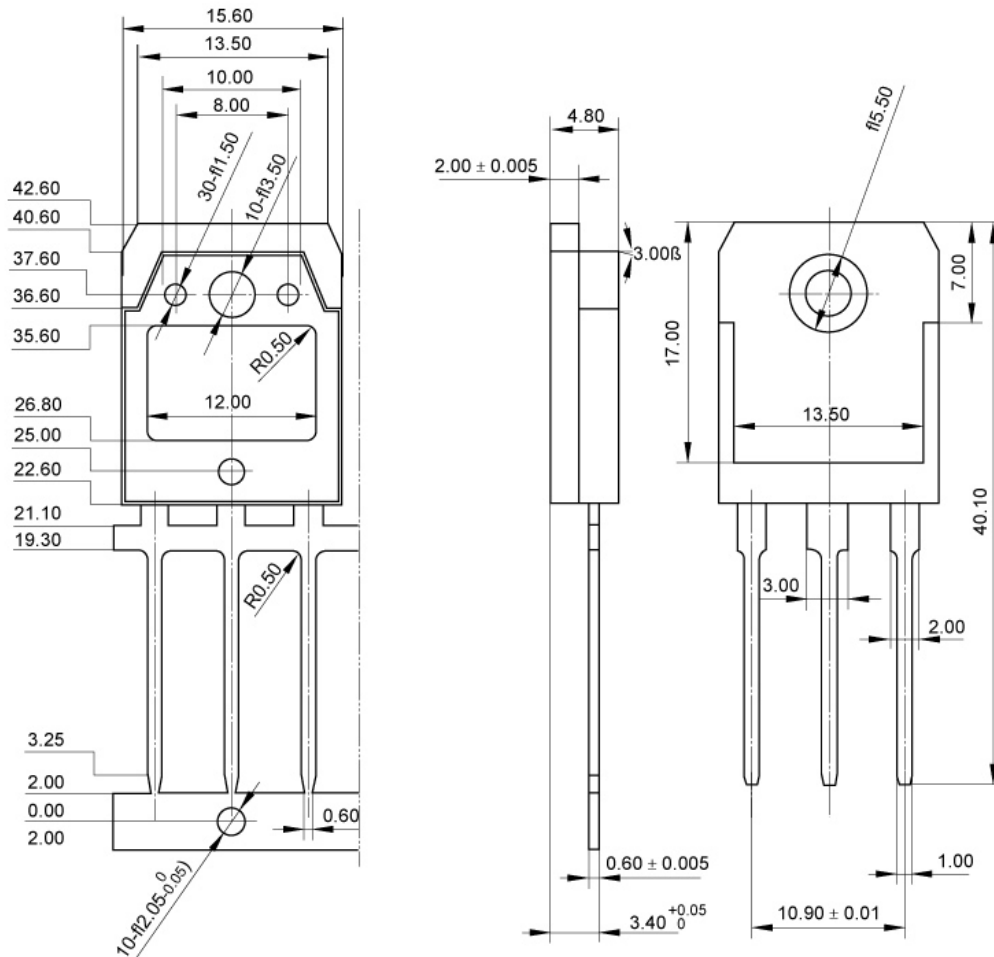
SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(SUS)}	Collector-emitter sustaining voltage	MJE4340	I _C =100mA ; I _B =0	100			V
		MJE4341		120			
		MJE4342		140			
		MJE4343		160			
V _{CE(sat)-1}	Collector-emitter saturation voltage		I _C =8A ; I _B =0.8A			2.0	V
V _{CE(sat)-2}	Collector-emitter saturation voltage		I _C =16A ; I _B =2.0A			3.5	V
V _{BE(sat)}	Base-emitter saturation voltage		I _C =16A ; I _B =2.0A			3.9	V
V _{BE}	Base-emitter on voltage		I _C =16A ; V _{CE} =4V			3.9	V
I _{CEO}	Collector cut-off current	MJE4340	V _{CE} =50V ; I _B =0			0.75	mA
		MJE4341	V _{CE} =60V ; I _B =0				
		MJE4342	V _{CE} =70V ; I _B =0				
		MJE4343	V _{CE} =80V ; I _B =0				
I _{CEX}	Collector cut-off current		V _{CE} =RatedV _{CBO} ; V _{BE} =1.5V T _C =150°C			1.0 5.0	mA
I _{CBO}	Collector cut-off current		V _{CB} =RatedV _{CB} ; I _E =0			0.75	mA
I _{EBO}	Emitter cut-off current		V _{EB} =7V ; I _C =0			1.0	mA
h _{FE-1}	DC current gain		I _C =8A ; V _{CE} =2V	15			
h _{FE-2}	DC current gain		I _C =16A ; V _{CE} =4V	8			
C _{OB}	Output capacitance		I _E =0 ; V _{CB} =10V ; f=0.1MHz			800	pF
f _T	Transition frequency		I _C =-1A ; V _{CE} =20V ; f=0.5MHz	1.0			MHz

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PACKAGE OUTLINE

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