

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

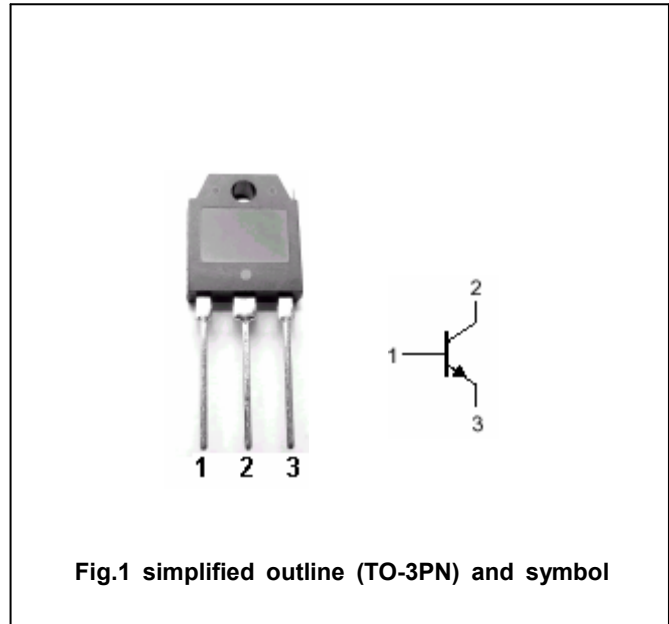


Fig.1 simplified outline (TO-3PN) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	MJE4340	100	V
		MJE4341	120	
		MJE4342	140	
		MJE4343	160	
V_{CEO}	Collector-emitter voltage	MJE4340	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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CEO(SUS)}	Collector-emitter sustaining voltage	MJE4340	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 _{CB0} ; V _{BE} =1.5V T _C =150°C			1.0 5.0	mA	
I _{CB0}	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

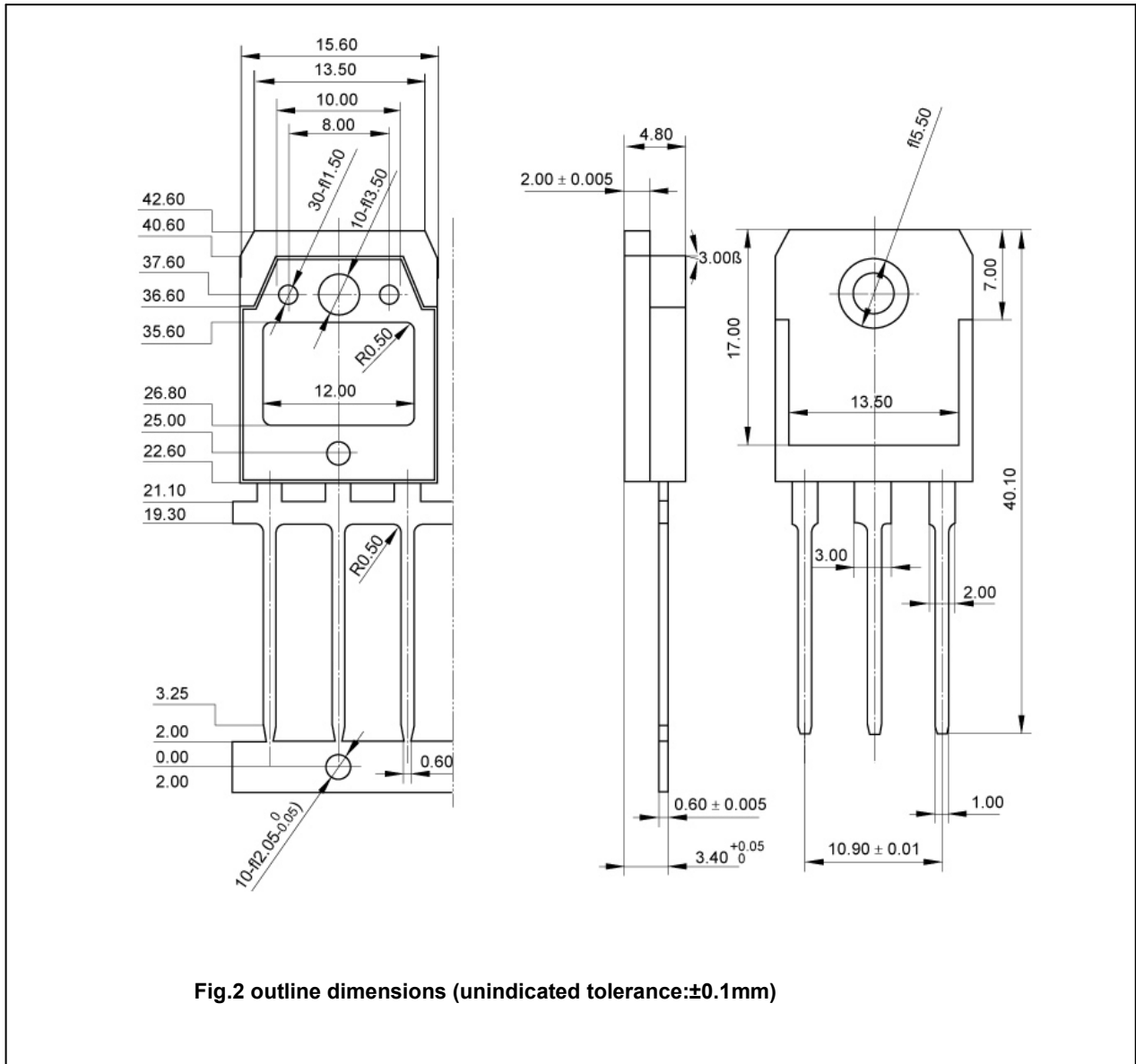


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)