

## 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

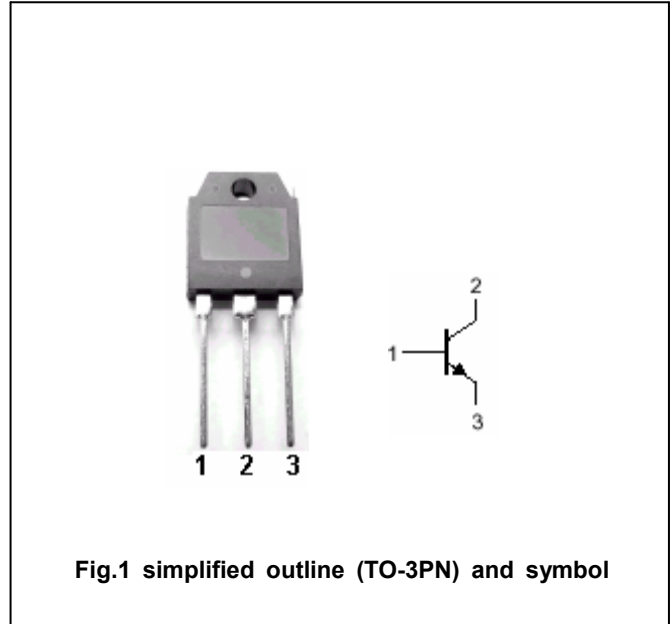


Fig.1 simplified outline (TO-3PN) and symbol

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<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	MJE4340	100			V	
		MJE4341	120				
		MJE4342	140				
		MJE4343	160				
V <sub>CE(sat)-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =8A ; I <sub>B</sub> =0.8A			2.0	V	
V <sub>CE(sat)-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =16A; I <sub>B</sub> =2.0A			3.5	V	
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =16A; I <sub>B</sub> =2.0A			3.9	V	
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =16A ; V <sub>CE</sub> =4V			3.9	V	
I <sub>CEO</sub>	Collector cut-off current	MJE4340	V <sub>CE</sub> =50V; I <sub>B</sub> =0			0.75	mA
		MJE4341	V <sub>CE</sub> =60V; I <sub>B</sub> =0				
		MJE4342	V <sub>CE</sub> =70V; I <sub>B</sub> =0				
		MJE4343	V <sub>CE</sub> =80V; I <sub>B</sub> =0				
I <sub>CEX</sub>	Collector cut-off current	V <sub>CE</sub> =RatedV <sub>CB0</sub> ; V <sub>BE</sub> =1.5V T <sub>C</sub> =150°C			1.0 5.0	mA	
I <sub>CB0</sub>	Collector cut-off current	V <sub>CB</sub> =RatedV <sub>CB</sub> ; I <sub>E</sub> =0			0.75	mA	
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			1.0	mA	
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =8A ; V <sub>CE</sub> =2V	15				
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =16A ; V <sub>CE</sub> =4V	8				
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V;f=0.1MHz			800	pF	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-1A ; V <sub>CE</sub> =20V;f=0.5MHz	1.0			MHz	

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PACKAGE OUTLINE

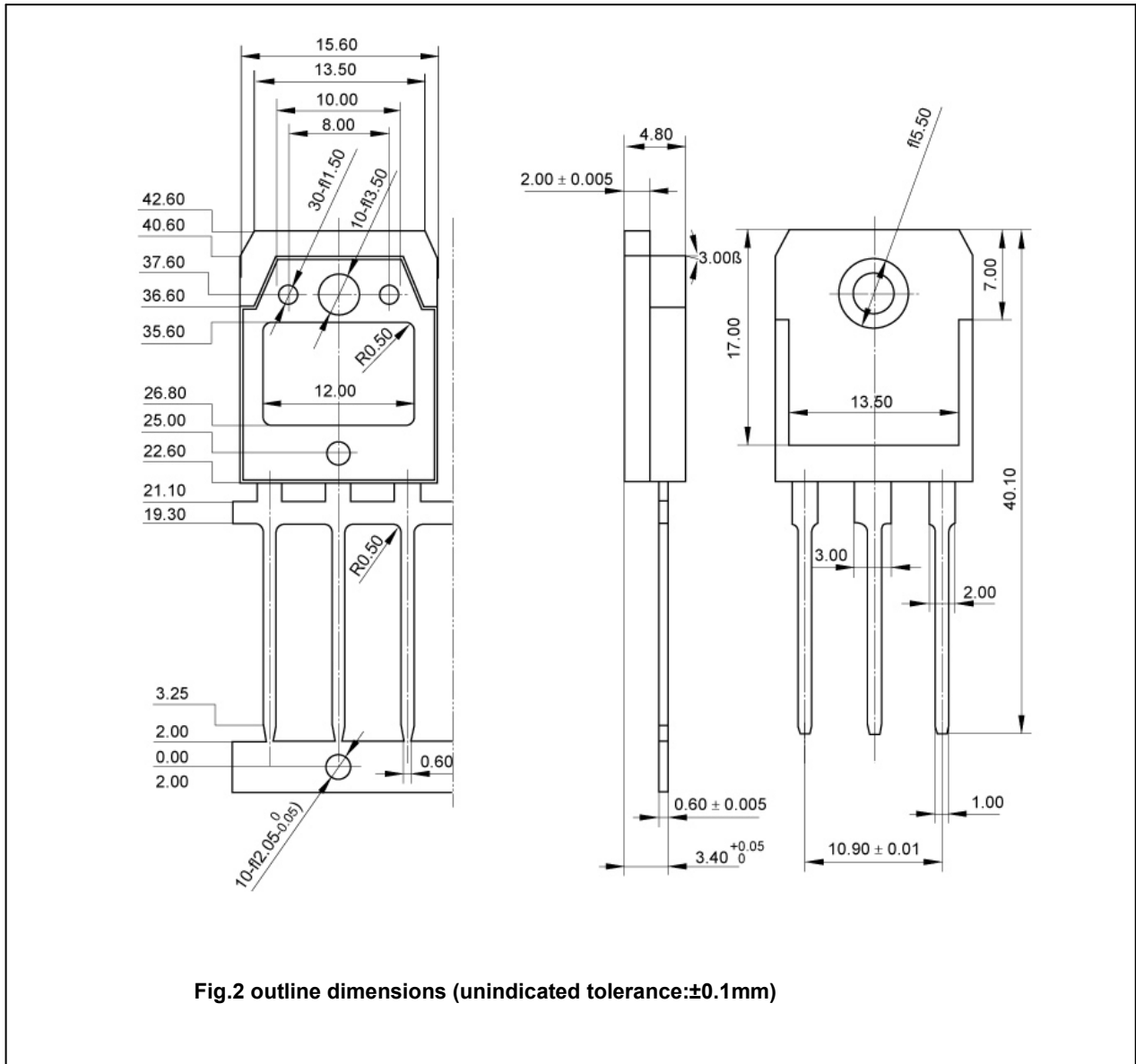


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)