

## isc Silicon NPN Power Transistors

## MJE4340/4341/4342/4343

### DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)}$  = 100V(Min)- MJE4340  
= 120V(Min)- MJE4341  
= 140V(Min)- MJE4342  
= 160V(Min)- MJE4343
- Low Saturation Voltage
- Complement to the PNP MJE4350/4351/4352/4353

### APPLICATIONS

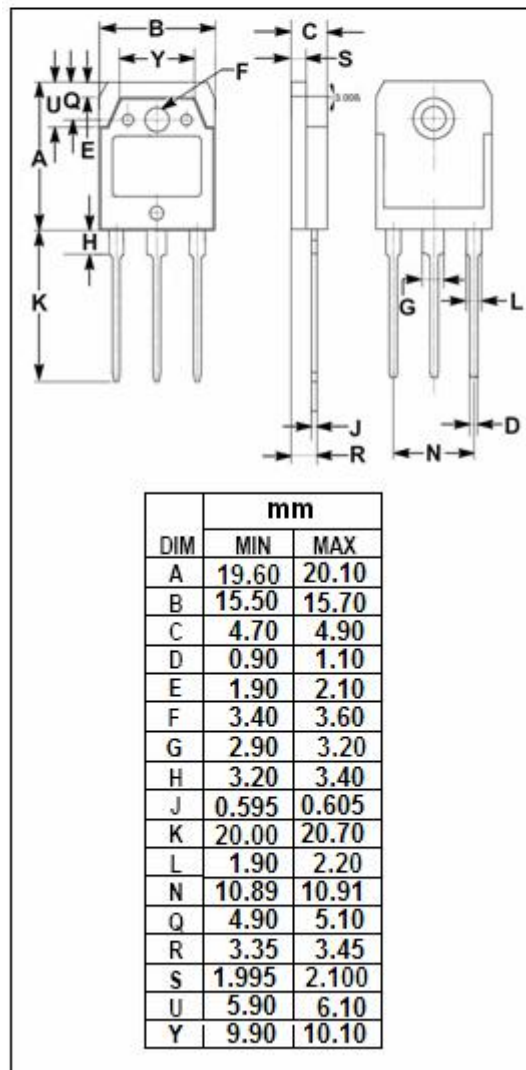
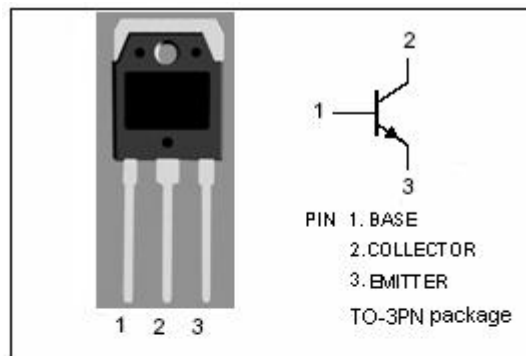
- Designed for use in high power audio amplifier applications and high voltage switching regulator circuits.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector- Base Voltage	MJE4340	100
		MJE4341	120
		MJE4342	140
		MJE4343	160
$V_{CEO}$	Collector-Emitter Voltage	MJE4340	100
		MJE4341	120
		MJE4342	140
		MJE4343	160
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	16	A
$I_{CM}$	Collector Current-Peak	20	A
$I_B$	Base Current-Continuous	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 Range	-65~150	$^{\circ}\text{C}$

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^{\circ}\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	MJE4340	$I_C= 50\text{mA}; I_B= 0$	100		V
		MJE4341		120		
		MJE4342		140		
		MJE4343		160		
$V_{CE(sat)-1}$	Collector-Emitter Voltage	Saturation	$I_C= 8\text{A}; I_B= 0.8\text{A}$		2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Voltage	Saturation	$I_C= 16\text{A}; I_B= 2\text{A}$		3.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		$I_C= 16\text{A}; I_B= 2\text{A}$		3.9	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C= 16\text{A}; V_{CE}= 4\text{V}$		3.9	V
$I_{CEO}$	Collector Cutoff Current	MJE4340	$V_{CE}= 100\text{V}; I_B= 0$		0.75	mA
		MJE4341	$V_{CE}= 120\text{V}; I_B= 0$		0.75	
		MJE4342	$V_{CE}= 140\text{V}; I_B= 0$		0.75	
		MJE4343	$V_{CE}= 160\text{V}; I_B= 0$		0.75	
$I_{CBO}$	Collector Cutoff Current		$V_{CB}= \text{Rated } V_{CB}; I_E=0$		0.75	mA
$I_{EBO}$	Emitter Cutoff Current		$V_{EB}= 7\text{V}; I_C=0$		1.0	mA
$h_{FE-1}$	DC Current Gain		$I_C= 8\text{A}; V_{CE}= 2\text{V}$	15		
$h_{FE-2}$	DC Current Gain		$I_C= 16\text{A}; V_{CE}= 4\text{V}$	8		

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