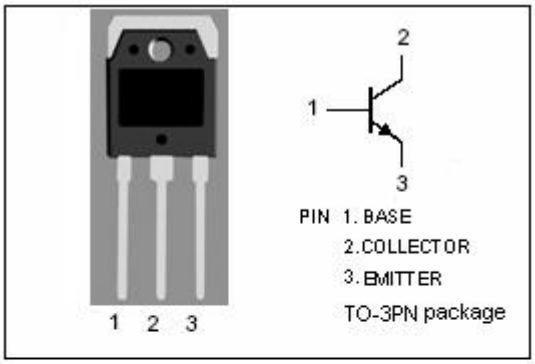
isc Silicon NPN Power Transistors — MJE4340/4341/4342/4343

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

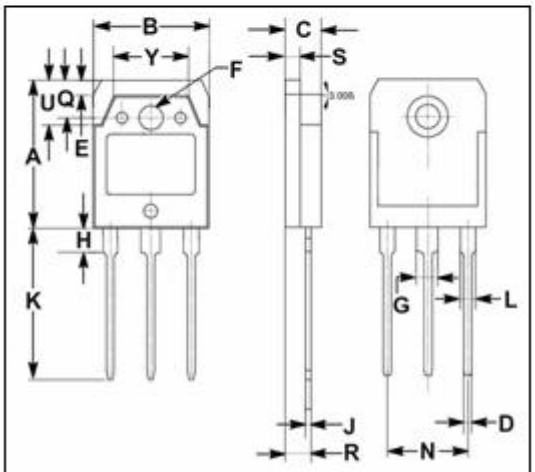


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		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		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℃		125	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃



DIM	mm MIN	MAX
A	19.60	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	20.00	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.10
Y	9.90	10.10

THERMAL CHARACTERISTICS

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

isc Silicon NPN Power Transistors MJE4340/4341/4342/4343

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

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