

INCHANGE Semiconductor

isc Product Specification

isc Silicon PNP Power Transistors

MJE4350/4351/4352/4353

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -100V(\text{Min})$ - MJE4350
= $-120V(\text{Min})$ - MJE4351
= $-140V(\text{Min})$ - MJE4352
= $-160V(\text{Min})$ - MJE4353
- Low Saturation Voltage
- Complement to Type MJE4340/4341/4342/4343

APPLICATIONS

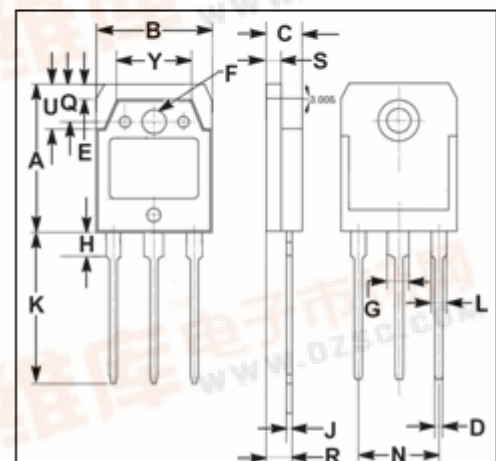
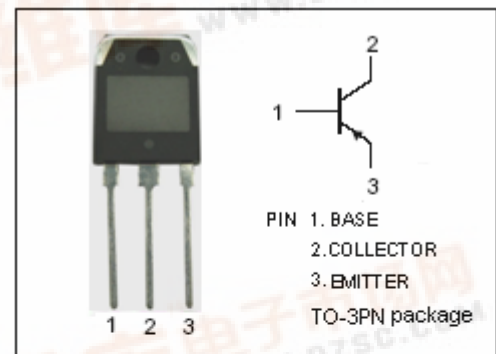
- Designed for use in high power audio amplifier applications and high voltage switching regulator circuits.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	MJE4350	-100
		MJE4351	-120
		MJE4352	-140
		MJE4353	-160
V_{CEO}	Collector-Emitter Voltage	MJE4350	-100
		MJE4351	-120
		MJE4352	-140
		MJE4353	-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	$^\circ\text{C/W}$



DIM	mm	
A	19.90	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	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

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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	MJE4350	$I_C = -0.2A; I_B = 0$	-100		V
		MJE4351		-120		
		MJE4352		-140		
		MJE4353		-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	MJE4350	$V_{CE} = -50V; I_B = 0$		-0.75	mA
		MJE4351	$V_{CE} = -60V; I_B = 0$		-0.75	
		MJE4352	$V_{CE} = -70V; I_B = 0$		-0.75	
		MJE4353	$V_{CE} = -80V; I_B = 0$		-0.75	
I_{CEX}	Collector Cutoff Current		$V_{CE} = \text{Rated } V_{CB}; V_{BE(off)} = -1.5V$ $V_{CE} = \text{Rated } V_{CB}; V_{BE(off)} = -1.5V; T_C = 150^{\circ}\text{C}$		-1.0 -5.0	mA
I_{CBO}	Collector Cutoff Current		$V_{CB} = \text{Rated } V_{CB}; I_E = 0$		-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		
f_T	Current-Gain—Bandwidth Product		$I_C = -1A; V_{CE} = -20V; f_{test} = 0.5\text{MHz}$	1.0		MHz
C_{OB}	Output Capacitance		$I_E = 0; V_{CB} = -10V; f_{test} = 0.1\text{MHz}$		800	pF