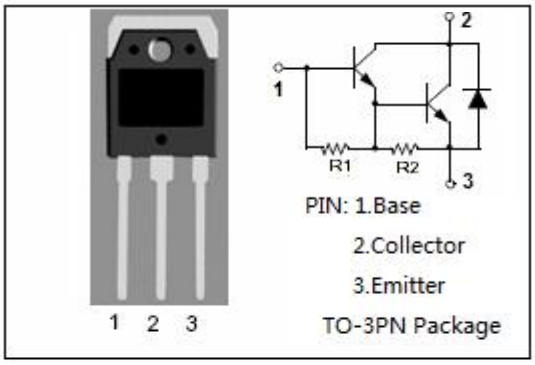
isc Silicon NPN Darlington Power Transistor MJE1100

DESCRIPTION

- High DC Current Gain-h_{FE}= 750(Min)@ I_C= 3A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 60V(Min)
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

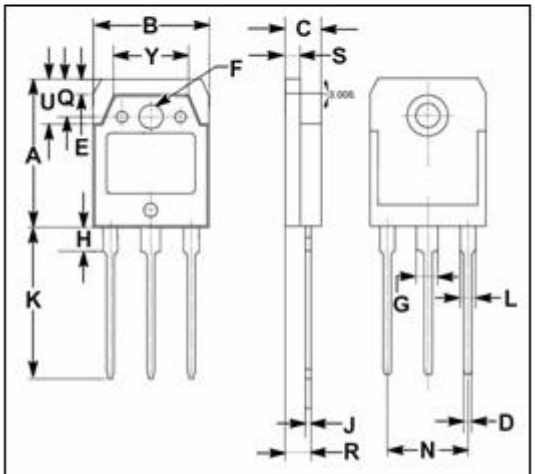
- Designed for driver and output stages in complementary audio amplifier and general-purpose applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CER}	Collector-Emitter Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
I_B	Base Current-Continuous	0.1	A
P_C	Collector Power Dissipation @ T_C=25℃	70	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	1.8	℃/W



DIM	mm MIN	mm MAX
A	19.60	20.30
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	19.80	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	6.20
Y	9.90	10.10

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 30mA ;I_B=0	60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 12mA			2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 3A ; V_{CE}= 3V			2.5	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 30V; I_B= 0			0.5	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 60V;I_E= 0 V_{CB}= 60V;I_E= 0;T_C= 100℃			0.2 2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0			2.0	mA
h_{FE}	DC Current Gain	I_C= 3A ; V_{CE}= 3V	750			