

isc Silicon NPN Darlington Power Transistor
MJE1100
DESCRIPTION

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

APPLICATIONS

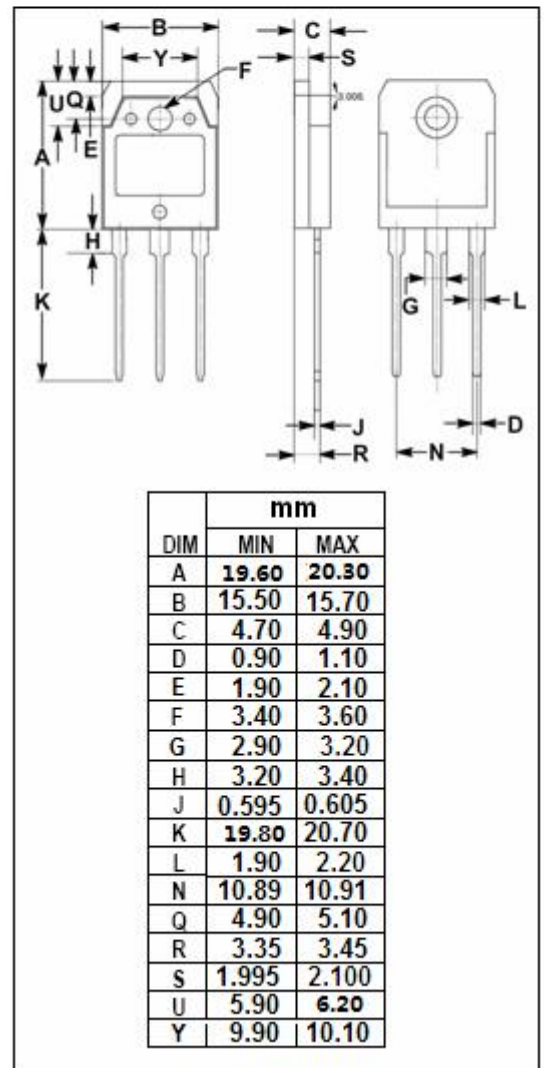
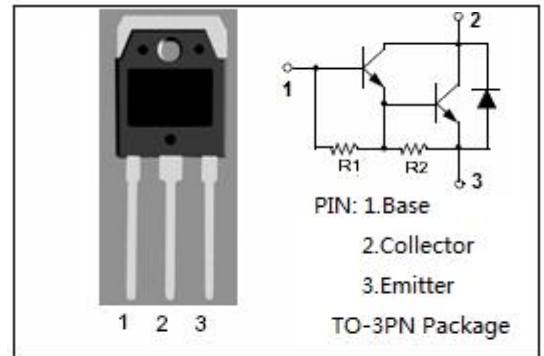
- Designed for driver and output stages in complementary audio amplifier and general-purpose applications.

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

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 @ $T_C = 25^\circ\text{C}$	70	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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



isc Silicon NPN Darlington Power Transistor**MJE1100****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

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

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