

**isc Silicon PNP Power Transistor**
**MJE5731**
**DESCRIPTION**

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = -350V(\text{Min})$
- DC current gain -  
:  $h_{FE} = 30 \sim 150 @ I_C = -0.3A$
- With TO-220 Package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

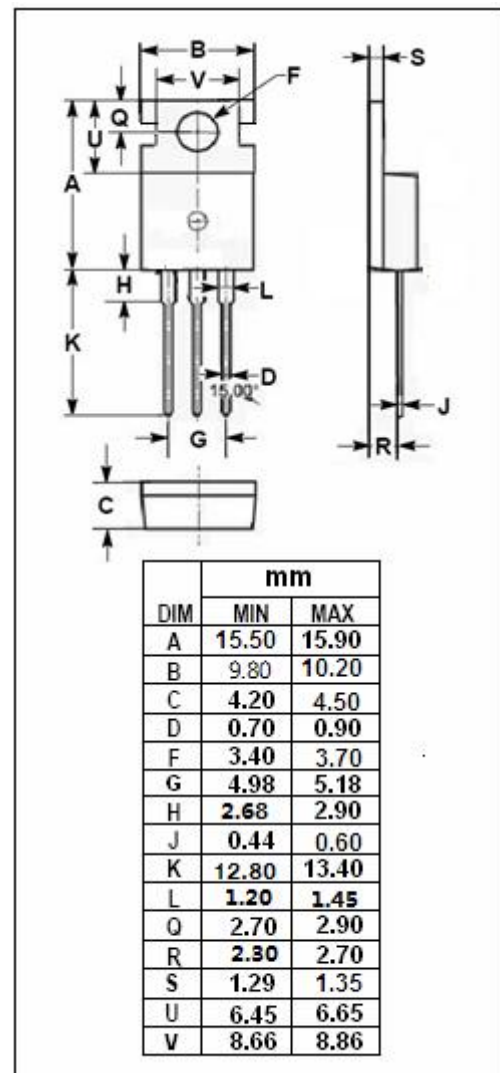
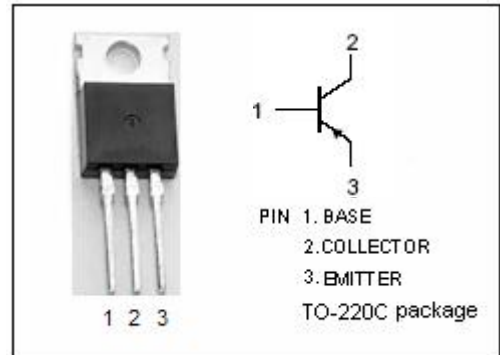
- Designed for line operated audio output amplifier, switchmode power supply drivers and other switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-350	V
$V_{CEO}$	Collector-Emitter Voltage	-350	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-1	A
$I_{CM}$	Collector Current-Peak	-3	A
$I_B$	Base Current	-1	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	40	
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ\text{C/W}$



## isc Silicon PNP Power Transistor

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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = -30mA ; I <sub>B</sub> = 0	-350		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -1A ; I <sub>B</sub> = -0.2A		-1.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = -1A ; V <sub>CE</sub> = -10V		-1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -350V; I <sub>E</sub> = 0		-1.0	mA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = -350V; I <sub>B</sub> = 0		-1.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0		-1.0	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -0.3A ; V <sub>CE</sub> = -10V	30	150	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -1A ; V <sub>CE</sub> = -10V	10		
f <sub>T</sub>	Current Gain-Bandwidth Product	I <sub>C</sub> = -0.2A; V <sub>CE</sub> = -10V; f <sub>test</sub> = 2.0MHz	10		MHz

Pulse Test: Pulse Width ≤300 μs, Duty Cycle ≤2%.

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