

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

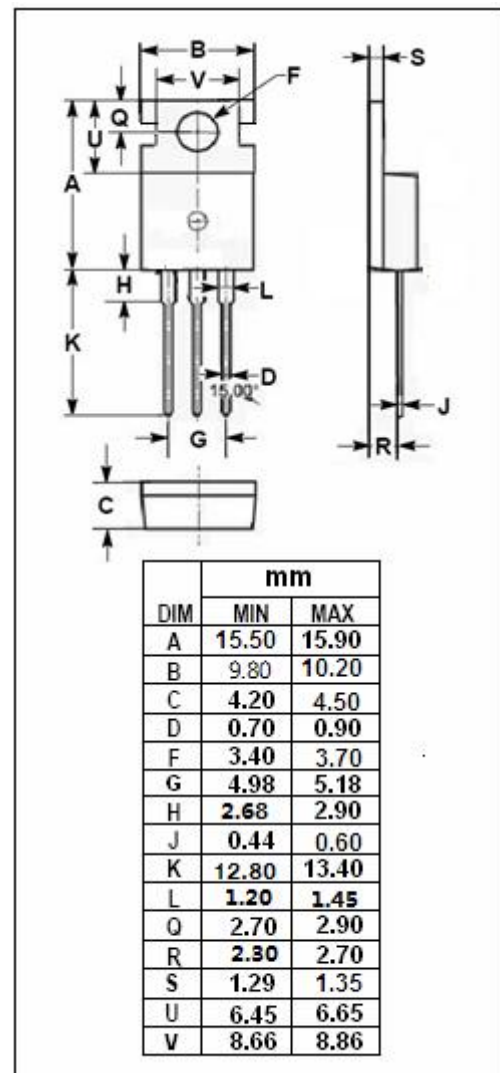
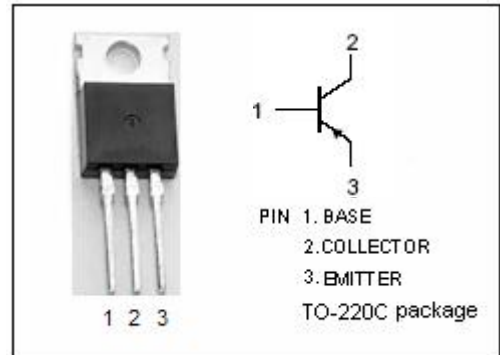
- Designed for line operated audio output amplifier, switchmode power supply drivers and other switching applications

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	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -30mA ; I _B = 0	-350		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -1A ; I _B = -0.2A		-1.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -1A ; V _{CE} = -10V		-1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -350V; I _E = 0		-1.0	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = -350V; I _B = 0		-1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0		-1.0	mA
h _{FE-1}	DC Current Gain	I _C = -0.3A ; V _{CE} = -10V	30	150	
h _{FE-2}	DC Current Gain	I _C = -1A ; V _{CE} = -10V	10		
f _T	Current Gain-Bandwidth Product	I _C = -0.2A; V _{CE} = -10V; f _{test} = 2.0MHz	10		MHz

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

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