

isc Silicon PNP Power Transistor
MJE15031
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 150V(\text{Min})$
- High Current Gain-Bandwidth Product-
: $f_T = 30\text{MHz}(\text{Min}) @ I_C = 0.5A$
- DC current gain -
: $h_{FE} = 40(\text{Min}) @ I_C = 3.0 A$
: $h_{FE} = 20(\text{Min}) @ I_C = 4.0 A$
- Complement to Type MJE15030
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

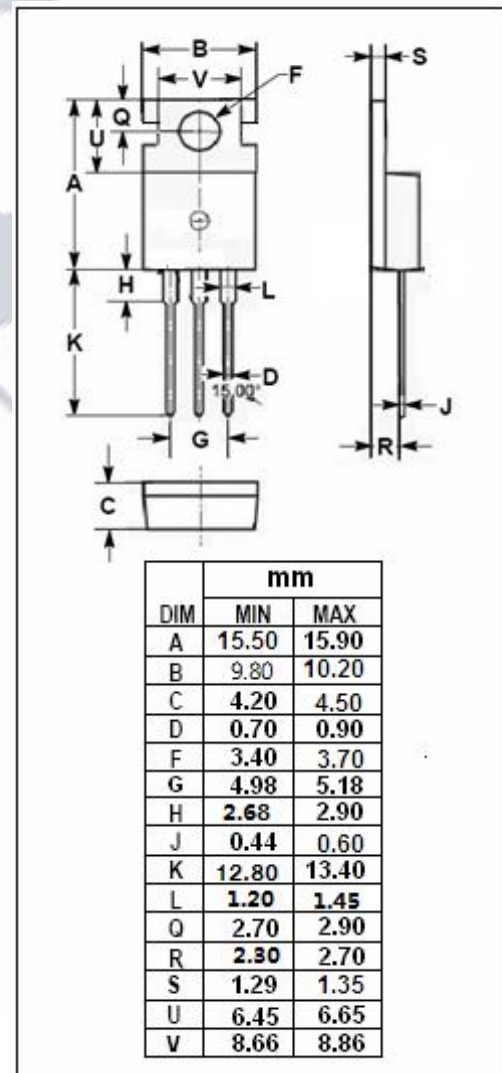
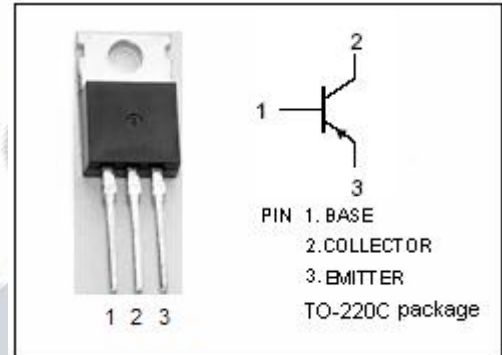
- Designed for use as high-frequency drivers in audio amplifiers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-150	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-8	A
I_{CM}	Collector Current-Peak	-16	A
I_B	Base Current	-2	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	50	
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	2.5	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ\text{C/W}$



isc Silicon PNP Power Transistor**MJE15031****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -10mA ; I _B = 0	-150		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -1A ; I _B = -0.1A		-0.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -1A ; V _{CE} = -2V		-1.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -150V ; I _E = 0		-10	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = -150V ; I _B = 0		-0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V ; I _C = 0		-10	μ A
h _{FE-1}	DC Current Gain	I _C = -0.1A ; V _{CE} = -2V	40		
h _{FE-2}	DC Current Gain	I _C = -2A ; V _{CE} = -2V	40	200	
h _{FE-3}	DC Current Gain	I _C = -3A ; V _{CE} = -2V	40		
h _{FE-4}	DC Current Gain	I _C = -4A ; V _{CE} = -2V	20		
f _T	Current Gain-Bandwidth Product	I _C = -0.5A ; V _{CE} = -10V ; f _{test} = 10MHZ	20		MHZ