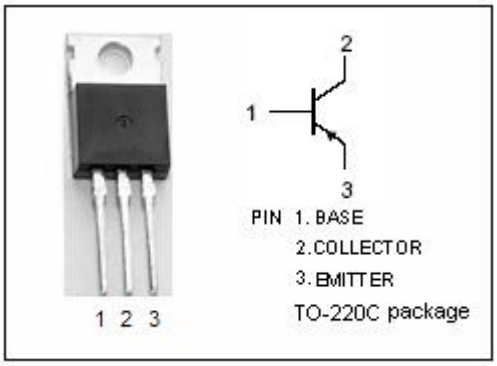
isc Silicon PNP Power Transistor — MJE15031

DESCRIPTION

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



APPLICATIONS

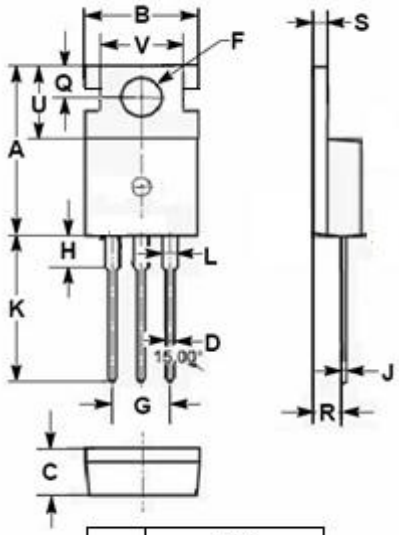
- Designed for use as high–frequency drivers in audio amplifiers.

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

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℃	2	W
	Collector Power Dissipation @T_C=25℃	50	
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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ELECTRICAL CHARACTERISTICS

T_C=25℃ 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	μA
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	μA
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