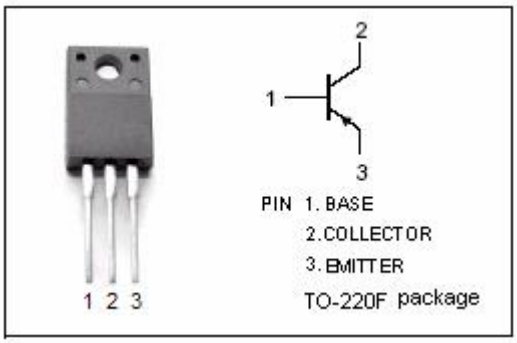
isc Silicon PNP Power Transistor — MJF15031

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 150V(Min)
- High DC current gain -
  : h_{FE} = 40 (Min) @I_C= 3.0 A
  : h_{FE} = 20 (Min) @I_C= 4.0 A
- Complement to Type MJF15030
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

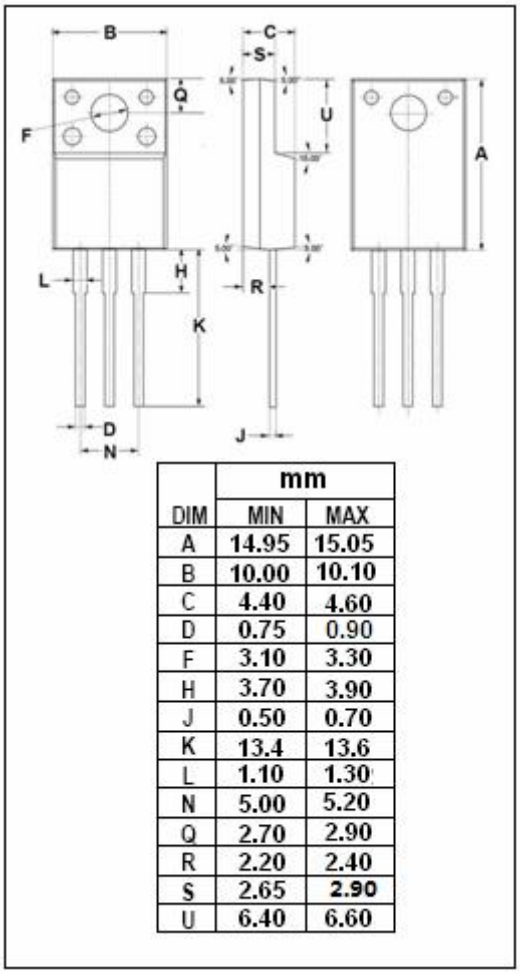


APPLICATIONS

- Designed for general-purpose amplifier and switching applications.

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℃	36	
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃



DIM	mm MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	3.5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W

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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		-100	μA
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		
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