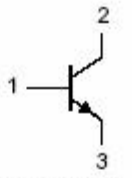
isc Silicon NPN Power Transistor — MJE3055AT

DESCRIPTION

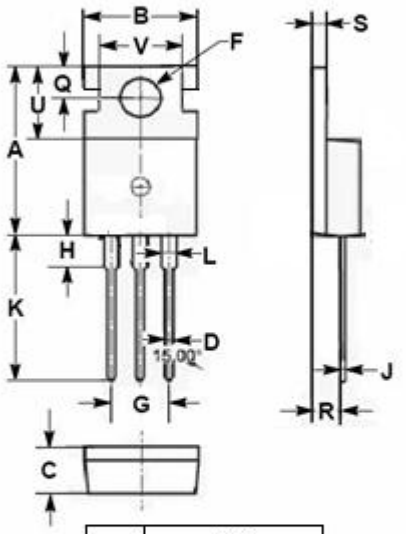
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = 80V(Min)
- High DC Current Gain-
  : h_{FE}= 150-260@I_C= 1A
- Bandwidth Product-
  : f_T = 2MHz(Min)@I_C = 500 mA
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



PIN 1. BASE
2.COLLECTOR
3. EMITTER
TO-220C package

APPLICATIONS

- Designed for use in general-purpose amplifier and switching applications.



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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current-Continuous	6	A
P_C	Collector Power Dissipation @ T_C=25℃	75	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.67	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 25mA; I_B= 0	80			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 5uA; I_B= 0	100			V
$V_{(BR)EBO}$	Emitter -Base Breakdown Voltage	I_E= 50uA; I_B= 0	6			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 0.4A			1.1	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 3.3A			8.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 4A ; V_{CE}= 4V			1.8	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 30V; I_B= 0			0.7	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 100V; I_E= 0			10	uA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0			10	uA
h_{FE-1}	DC Current Gain	I_C= 1A ; V_{CE}= 4V	150		260	
h_{FE-2}	DC Current Gain	I_C= 4A ; V_{CE}= 4V	20		100	
h_{FE-3}	DC Current Gain	I_C= 10A ; V_{CE}= 4V	5			
$I_{s/b}$	Second Breakdown Collector Current with Base Forward Biased	V_{CE}= 37V,t= 0.5s,Nonrepetitive	2.0		A	
f_T	Current Gain-Bandwidth Product	I_C= 0.5A; V_{CE}= 10V; f= 500kHz	2.0			MHz

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