

# MJE3055T

Rev. H Oct.-2018

## / Descriptions

Silicon NPN transistor in a TO-220 Plastic Package.

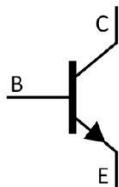
## / Features

Large DC current( $I_C=10A$ ),high  $f_T$ ( $f_T \geq 2Mhz$ ).

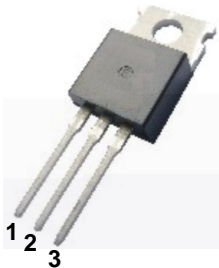
## / Applications

General purpose and switching applications.

## / Equivalent Circuit



## / Pinning



PIN1 Base      PIN 2 Collector      PIN 3 Emitter

## / $h_{FE}$ Classifications & Marking

See Marking Instructions.

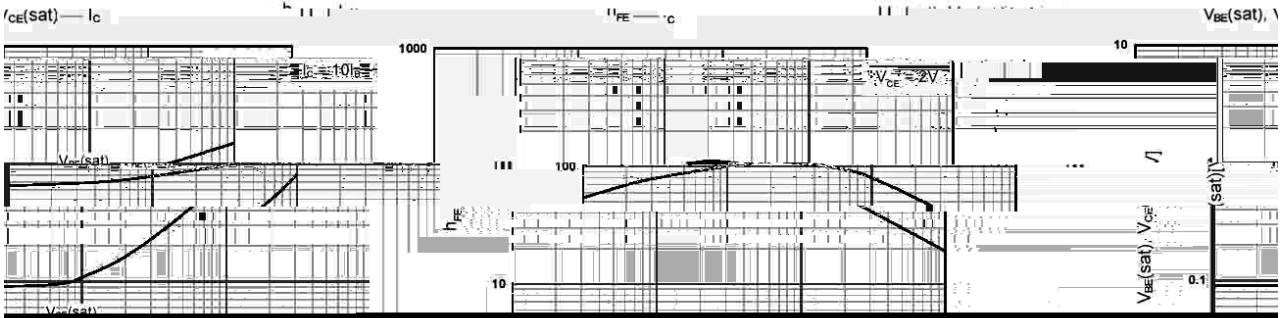
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	70	V
Collector to Emitter Voltage	$V_{CEO}$	60	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current - Continuous	$I_C$	10	A
Base Current - Continuous	$I_B$	6.0	A
Collector Power Dissipation	$P_C$	2.0	W
Collector Power Dissipation	$P_C(T_c=25 )$	75	W
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55~150	

**/ Electrical Characteristics(Ta=25 )**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=200mA$ $I_B=0$	60			V
Collector Cut-Off Current	$I_{CEO}$	$V_{CE}=30V$ $I_B=0$			700	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=5.0V$ $I_C=0$			5.0	mA
Collector Cut-Off Current	$I_{CEX}$	$V_{BE(off)}=-1.5V$ $V_{CE}=70V$			1.0	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=4.0V$ $I_C=4.0A$	20		100	
	$h_{FE(2)}$	$V_{CE}=4.0V$ $I_C=10A$	5.0			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=4.0A$ $I_B=0.4A$			1.1	V
	$V_{CE(sat)(2)}$	$I_C=10A$ $I_B=3.3A$			8.0	V
Base to Emitter On Voltage	$V_{BE(on)}$	$V_{CE}=4.0V$ $I_C=4.0A$			1.8	V
Transition Frequency	$f_T$	$V_{CE}=10V$ $I_C=500mA$	2.0			MHz

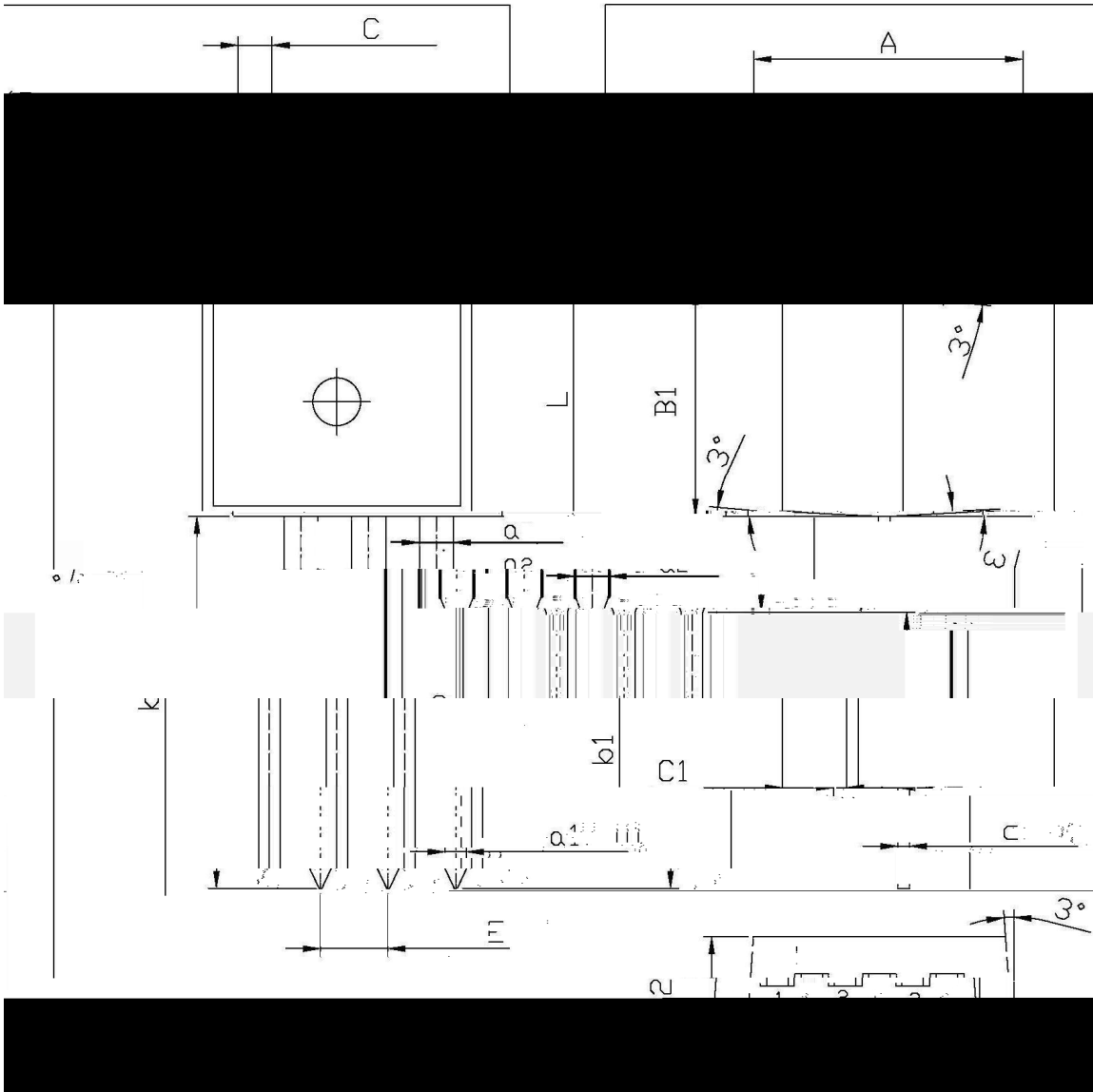
/ Electrical Characteristic Curve



/ Package Dimensions

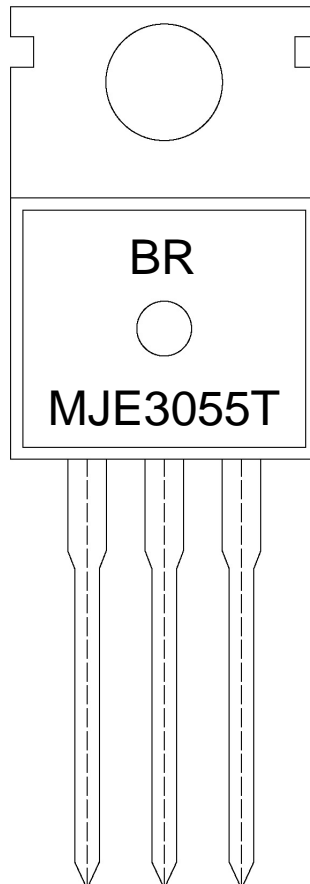
单位: mm

T0-220



Symbol	Dimensions in Millimeters		Symbol	Dimensions in Millimeters	
	Min	Max		Min	Max
A	7.8	10.2	C	1.2	1.4
B	3.56	3.64	B1	6.3	6.7
B1	9.0	9.4	C1	0.4	0.6
C	1.2	1.4	E	2.34	2.74
C1	0.4	0.6	F	1.25	1.45
E	2.34	2.74	G	0.2	0.2
F	1.25	1.45	H	0.2	0.2
G	0.2	0.2	I	0.2	0.2
H	0.2	0.2	J	0.2	0.2
I	0.2	0.2	K	0.2	0.2
J	0.2	0.2	L	0.2	0.2
K	0.2	0.2	M	0.2	0.2
L	0.2	0.2	N	0.2	0.2
M	0.2	0.2	O	0.2	0.2
N	0.2	0.2	P	0.2	0.2
O	0.2	0.2	Q	0.2	0.2
P	0.2	0.2	R	0.2	0.2
Q	0.2	0.2	S	0.2	0.2
R	0.2	0.2	T	0.2	0.2
S	0.2	0.2	U	0.2	0.2
T	0.2	0.2	V	0.2	0.2
U	0.2	0.2	W	0.2	0.2
V	0.2	0.2	X	0.2	0.2
W	0.2	0.2	Y	0.2	0.2
X	0.2	0.2	Z	0.2	0.2
Y	0.2	0.2	a	0.2	0.2
Z	0.2	0.2	b	0.2	0.2
a	0.2	0.2	c	0.2	0.2
b	0.2	0.2	d	0.2	0.2
c	0.2	0.2	e	0.2	0.2
d	0.2	0.2	f	0.2	0.2
e	0.2	0.2	g	0.2	0.2
f	0.2	0.2	h	0.2	0.2
g	0.2	0.2	i	0.2	0.2
h	0.2	0.2	j	0.2	0.2
i	0.2	0.2	k	0.2	0.2
j	0.2	0.2	l	0.2	0.2
k	0.2	0.2	m	0.2	0.2
l	0.2	0.2	n	0.2	0.2
m	0.2	0.2	o	0.2	0.2
n	0.2	0.2	p	0.2	0.2
o	0.2	0.2	q	0.2	0.2
p	0.2	0.2	r	0.2	0.2
q	0.2	0.2	s	0.2	0.2
r	0.2	0.2	t	0.2	0.2
s	0.2	0.2	u	0.2	0.2
t	0.2	0.2	v	0.2	0.2
u	0.2	0.2	w	0.2	0.2
v	0.2	0.2	x	0.2	0.2
w	0.2	0.2	y	0.2	0.2
x	0.2	0.2	z	0.2	0.2
y	0.2	0.2			
z	0.2	0.2			

/ Marking Instructions



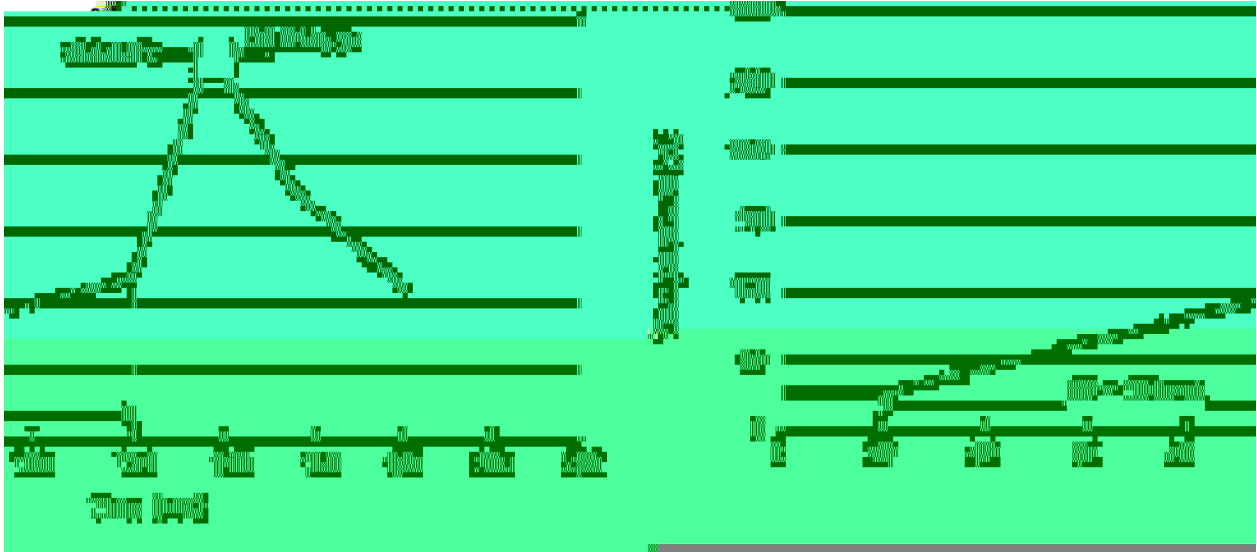
Note:

BR: Company Code

MJE3055T: Product Type.

\*\*\*\*: Lot No. Code, code change with Lot No.

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |     |     |    |          |   |
|---|-----|-----|----|----------|---|
| 1 | 25  | 150 | 60 | 90sec;   | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 255 | 5   | 5  | 0.5sec;  | 2.Peak Temp.:255 5 , Duration:5 0.5sec. |
| 3 |     |     | 2  | 10 /sec. | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

270 ± 5                      10 ± 1 sec.                      Temp.:270±5                      Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	只袋	袋盒	只盒	盒箱	只箱	袋	盒	箱

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	只套管	套管盒	只盒	盒箱	只箱	套管	盒	箱

/ Notices