



Micro Commercial Components



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20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

# MJE3055

## NPN Silicon Plastic-Encapsulate Transistor

### Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 2.0Watts of Power Dissipation.
- Collector-current 10A
- Collector-base Voltage 70V
- Operating and storage junction temperature range: -55°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Mounting Torque: 5 in-lbs Maximum

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
<b>OFF CHARACTERISTICS</b>				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=200mA, I_B=0$ )	60		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=1000\mu A, I_E=0$ )	70		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=1000\mu A, I_C=0$ )	5		Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=70Vdc, I_E=0$ )		1000	$\mu A$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5.0Vdc, I_C=0$ )		5000	$\mu A$

### ON CHARACTERISTICS

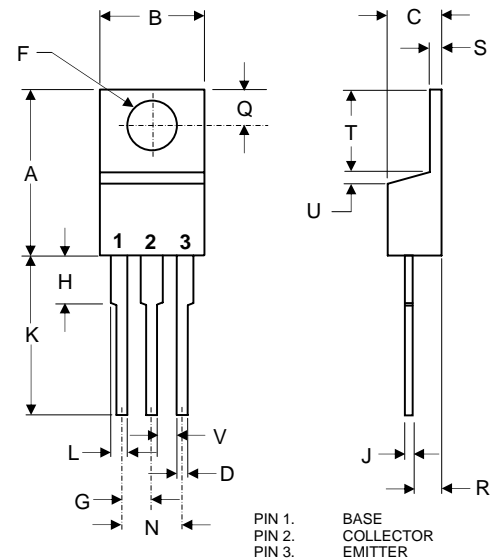
$h_{FE(1)}$	DC Current Gain ( $I_C=4.0A, V_{CE}=4.0Vdc$ )	20	100	
$h_{FE(2)}$	DC Current Gain ( $I_C=10A, V_{CE}=4Vdc$ )	5.0		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=4A, I_B=0.4A$ ) ( $I_C=10A, I_B=3.3A$ )		1.1 1.2	Vdc Vdc
$V_{BE}$	Base-Emitter Voltage ( $I_C=4A, V_{CE}=4V$ )		1.8	Vdc

### SMALL-SIGNAL CHARACTERISTICS

$f_T$	Transistor Frequency ( $I_C=0.5A, V_{CE}=10Vdc, f=1.0MHz$ )	2.0		MHz
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Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

### TO-220



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.560	.625	14.22	15.88	
B	.380	.420	9.65	10.67	
C	.140	.190	3.56	4.82	
D	.020	.045	0.51	1.14	
F	.139	.161	3.53	4.09	∅
G	.190	.110	2.29	2.79	
H	---	.250	---	6.35	
J	.012	.025	0.30	0.64	
K	.500	.580	12.70	14.73	
L	.045	.060	1.14	1.52	
N	.190	.210	4.83	5.33	
Q	.100	.135	2.54	3.43	
R	.080	.115	2.04	2.92	
S	.045	.055	1.14	1.39	
T	.230	.270	5.84	6.86	
U	-----	.050	-----	1.27	
V	.045	-----	1.15	-----	

**MJE3055**

**Typical Characteristics**

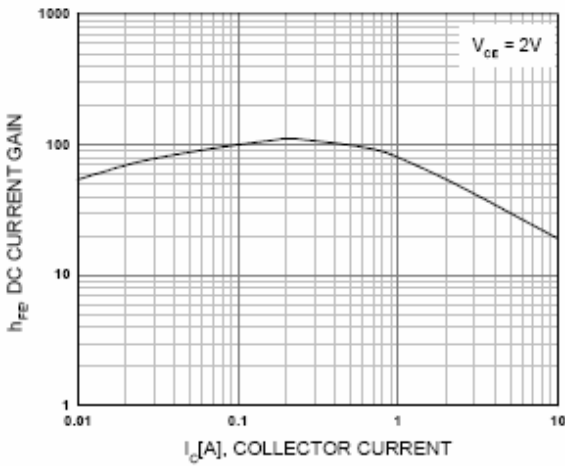


Figure 1. DC current Gain

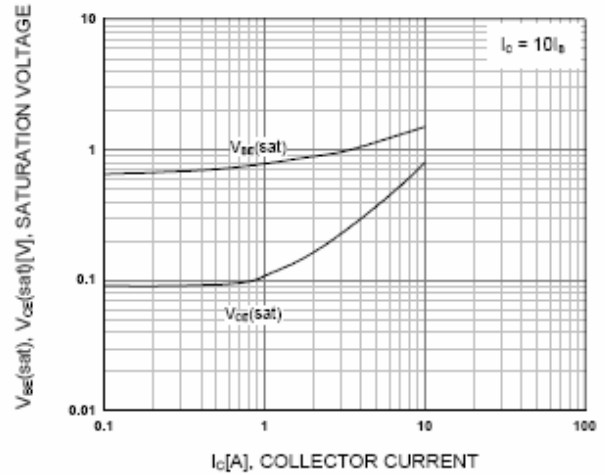


Figure 2. Base-Emitter Saturation Voltage  
 Collector-Emitter Saturation Voltage

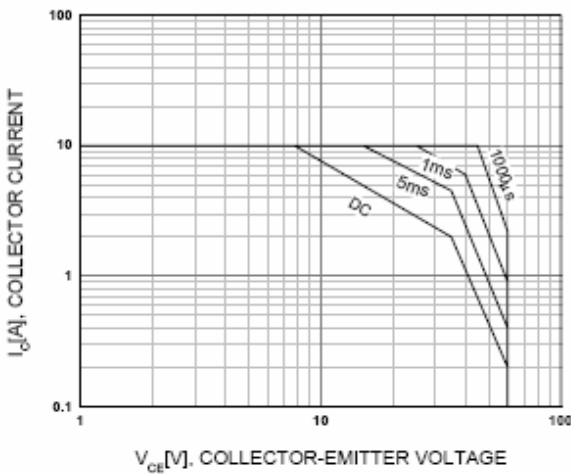


Figure 3. Safe Operating Area

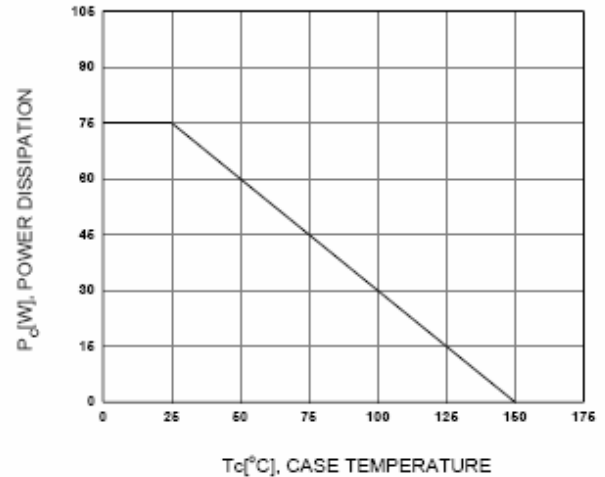


Figure 4. Power Derating



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### Ordering Information :

Device	Packing
Part Number-BP	Bulk; 1 Kpcs/Box

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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