



Micro Commercial Components

Micro Commercial Components  
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# MJE13007F

**NPN**

**Power Transistor**  
**8.0 A 400 Volts**

## Features

- Halogen free available upon request by adding suffix "-HF"
- Power dissipation: 2W( $T_a=25^\circ\text{C}$ )
- Collector current: 8A
- Operating and storage junction temperature range  
 $T_J, T_{stg}$ :  $-55^\circ\text{C}$   $+150^\circ\text{C}$
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings @ 25°C Unless Otherwise Noted

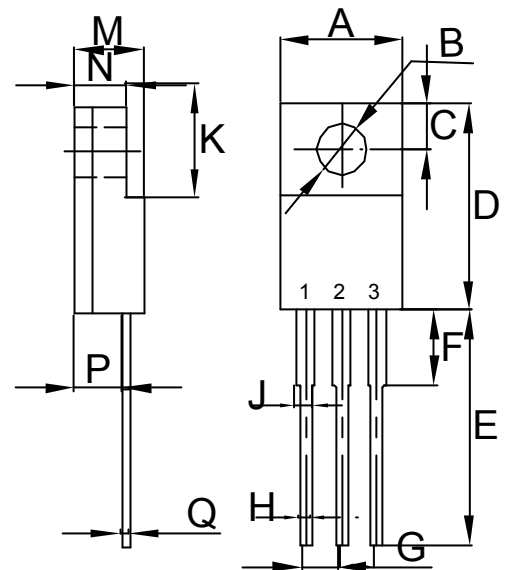
Symbol	Rating	Type	Min	Max	Unit
$V_{CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=10\text{mA}, I_E=0$ )	---	400	---	V
$V_{CBO}$	Collector-Base Breakdown Voltage ( $I_C=1\text{mA}, I_E=0$ )	---	700	---	V
$V_{EBO}$	Emitter-Base Breakdown Voltage ( $I_E=1\text{mA}, I_C=0$ )	---	9.0	---	V
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=700\text{V}, I_E=0$ )	---	---	1	mA
$I_{EBO}$	Emitter Cutoff Current ( $V_{BE}=9.0\text{V}, I_C=0$ )	---	---	100	$\mu\text{A}$
$h_{FE}$	DC Current Gain ( $I_C=2.0\text{A}, V_{CE}=5.0\text{V}$ ) ( $I_C=5.0\text{A}, V_{CE}=5.0\text{V}$ )	---	8.0 5.0	40 30	---
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage ( $I_C=2.0\text{A}, I_B=0.4\text{A}$ )	---	---	1.0	V
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage ( $I_C=2.0\text{A}, I_B=0.4\text{A}$ )	---	---	1.2	V
$f_T$	Current Gain-Bandwidth Product ( $I_C=500\text{mA}, V_{CE}=10\text{V}, f=1.0\text{MHz}$ )	---	4.0	---	MHz
$C_{ob}$	Output Capacitance ( $V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ )	80	---	---	pF
$t_r$	Fall Time ( $V_{CC}=125\text{V}, I_C=5.0\text{A}, I_{B1}=-I_{B2}=1.0\text{A}$ )	---	---	0.7	$\mu\text{s}$
$t_s$	Storage Time	---	---	3	$\mu\text{s}$

## Classification of $h_{FE(1)}$

Rank						
Range	8-15	15-20	20-25	25-30	30-35	35-40

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

## ITO-220AB



PIN 1. Base  
PIN 2. Collector  
PIN 3. Emitter

DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.388	.407	9.85	10.35	
B	.128	.145	3.25	3.55	
C	.101	.111	2.57	2.83	
D	.570	.610	14.9	15.5	
E	.496	.520	12.6	13.2	
F	.148	.167	3.75	4.25	
G	.096	.101	2.44	2.57	
H	.019	.029	.47	.73	
J	.048	.058	1.17	1.43	
K	.266	.285	6.75	7.25	
M	.165	.190	4.25	4.75	
N	.110	.130	2.81	3.31	
P	.097	.107	2.72	2.48	
Q	.019	.029	.47	.73	



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### Ordering Information :

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

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

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