

**Micro Commercial Components** 



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# **Features**

- Low Collector-Emitter Saturation Voltage
- Large Collector Current
- High Power Dissipation
- Complement to 2SD1691
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

# Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	-60	V
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-7.0	V
lc	Collector Current	-5.0	Α
Pc	Collector Power Dissipation	1.25	W
$R_{thJA}$	Thermal Resistance From Junction To Ambient	100	°C/W
$T_J$	Junction Temperature	-55 to +150	°C
$T_{STG}$	Storage Temperature	-55 to +150	C

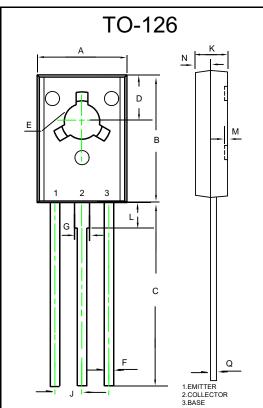
### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage $(I_C=-100 \text{mAdc}, I_E=0)$	-60		Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I <sub>C</sub> =-1.0mAdc, I <sub>B</sub> =0)	-60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E$ =-100mAdc, $I_C$ =0)	-7		Vdc
Ісво	Collector-Base Cutoff Current $(V_{CB}$ =-50Vdc, $I_E$ =0)		-10	μAdc
l <sub>EBO</sub>	Emitter-Base Cutoff Current (V <sub>EB</sub> =7.0Vdc, I <sub>C</sub> =0)		-10	μAdc
h <sub>FE-1</sub>	DC Current Gain (I <sub>C</sub> =-2.0Adc, V <sub>CE</sub> =-1.0Vdc)	100	400	
h <sub>FE-2</sub>	DC Current Gain (I <sub>C</sub> =-0.1Adc, V <sub>CE</sub> =-1.0Vdc)	60		
h <sub>FE-3</sub>	DC Current Gain (I <sub>C</sub> =-5.0Adc, V <sub>CE</sub> =-2.0Vdc)	50		
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage ( $I_C$ =-2.0Adc, $I_B$ =-0.2Adc)		-0.3	Vdc
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage (I <sub>C</sub> =-2.0Adc,I <sub>B</sub> =-0.2Adc)		-1.2	Vdc

## CLASSIFICATION OF h<sub>FE(1)</sub>

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RANK O		Y	G	
RANGE	100-200	160-320	200-400	

# PNP Plastic-Encapsulate Transistors



	DIMENSIONS				
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
Α	0.291	0.307	7.40	7.80	
В	0.417	0.433	10.60	11.00	
С	0.602	0.618	15.30	15.70	
D	0.154	0.161	3.90	4.10	
Е	0.118	0.126	3.00	3.20	
F	0.026	0.034	0.66	0.86	
G	0.046	0.054	1.17	1.37	
J	0.090TYP		2.29	OTYP	
K	0.098	0.114	2.50	2.90	
L	0.083	0.091	2.10	2.30	
M	0.000	0.012	0.00	0.30	
N	0.043	0.059	1.10	1.50	
Q	0.018	0.024	0.45	0.60	

Revision: **A** 2016/01/31



### 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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