



Micro Commercial Components

Micro Commercial Components  
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**2SB1188-P**  
**2SB1188-Q**  
**2SB1188-R**

## Features

- Case Material: Molded Plastic. UL Flammability Classificatio Rating 94-0 and MSL Rating 1
- Power dissipation:  $P_{CM} = 0.5W(T_{amb}=25^{\circ}C)$
- Collector current:  $I_{CM} = -2A$
- Collector-base voltage:  $V_{(BR)CBO} = -40V$
- Operating and storage junction temperature range  
 $T_J, T_{stg}: -55^{\circ}C$  to  $+150^{\circ}C$

**PNP**  
**Plastic-Encapsulate**  
**Transistors**

## Electrical Characteristics @ 25°C Unless Otherwise Specified

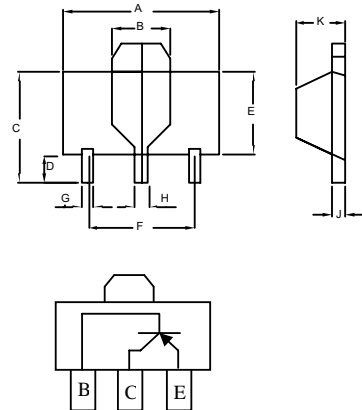
| Symbol        | Parameter  | Min  | Typ | Max  | Unit    |
|---------------|--|------|-----|------|---------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage<br>( $I_C = -1mA, I_B = 0$ )         | -32  | --- | ---  | V       |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage<br>( $I_C = -50 \mu A, I_E = 0$ )       | -40  | --- | ---  | V       |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage<br>( $I_E = -50 \mu A, I_C = 0$ )         | -5.0 | --- | ---  | V       |
| $I_{CBO}$     | Collector cut-off Current<br>( $V_{CB} = -20V, I_E = 0$ )                | ---  | --- | -1.0 | $\mu A$ |
| $I_{EBO}$     | Emitter cut-off Current<br>( $V_{EB} = -4V, I_C = 0$ )                   | ---  | --- | -1.0 | $\mu A$ |
| $h_{FE}$      | DC current gain *<br>( $V_{CE} = -3V, I_C = -0.5A$ )                     | 82   | --- | 390  | ---     |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage*<br>( $I_C = -2A, I_E = -0.2A$ )    | ---  | --- | -0.8 | V       |
| $f_T$         | Transition Frequency<br>( $V_{CE} = -5.0Vdc, I_C = -0.5Adc, F = 30MHZ$ ) | ---  | 80  | ---  | MHZ     |
| Cob           | output capacitance<br>( $V_{CB} = -10V, I_E = 0, f = 1MHz$ )             | ---  | --- | 65   | PF      |

\* Measured using pulse current.

## CLASSIFICATION OF $h_{FE}$

| Rank    | P      | Q       | R       |
|---------|--------|---------|---------|
| Range   | 82-180 | 120-270 | 180-390 |
| Marking | BCP    | BCQ     | BCR     |

## SOT-89



| DIM | DIMENSINS |      |      |      | NOTES |
|-----|-----------|------|------|------|-------|
|     | INCHES    |      | MM   |      |       |
|     | MIN       | MAX  | MIN  | MAX  |       |
| A   | .173      | .181 | 4.39 | 4.60 |       |
| B   | .063      | .071 | 1.60 | 1.80 |       |
| C   | .154      | .165 | 3.91 | 4.19 |       |
| D   | .031      | .039 | 0.80 | 1.00 |       |
| E   | .092      | .100 | 2.34 | 2.54 |       |
| F   | .118      | ---- | 3.00 | ---- | TYP   |
| G   | .013      | .019 | 0.33 | 0.48 |       |
| H   | .015      | .021 | 0.38 | 0.53 |       |
| J   | .015      | .016 | 0.38 | 0.41 |       |
| K   | .055      | .063 | 1.40 | 1.60 |       |

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## Ordering Information

|                  |                      |
|------------------|----------------------|
| Device           | Packing              |
| (Part Number)-TP | Tape&Reel;1Kpcs/Reel |

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