

Obsolete

M.C.C.

Micro Commercial Components



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2N5323

## Features

- 10 Watts Power Dissipation.
- Metal can case.
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)

## Maximum Ratings

| Symbol    | Rating                         | Rating      | Unit               |
|-----------|--------------------------------|-------------|--------------------|
| $V_{CEO}$ | Collector-Emitter Voltage      | 50          | V                  |
| $V_{CBO}$ | Collector-Base Voltage         | 75          | V                  |
| $V_{EBO}$ | Emitter-Base Voltage           | 5.0         | V                  |
| $I_C$     | Collector Current, Continuous  | 2.0         | A                  |
| $I_B$     | Base Current                   | 1.0         | A                  |
| $T_J$     | Operating Junction Temperature | -55 to +150 | $^{\circ}\text{C}$ |
| $T_{STG}$ | Storage Temperature            | -55 to +150 | $^{\circ}\text{C}$ |

## Thermal Characteristics

| Symbol   | Rating  | Max         | Unit                              |
|----------|---|-------------|-----------------------------------|
| $P_D$    | Total Device Dissipation<br>Derate above $25^{\circ}\text{C}$ | 10<br>0.057 | W<br>$\text{mW}/^{\circ}\text{C}$ |
| $R_{JC}$ | Thermal Resistance, Junction to Case                          | 17.5        | $^{\circ}\text{C}/\text{W}$       |

## Electrical Characteristics @ $25^{\circ}\text{C}$ Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|--------|-----------|-----|-----|-------|
|--------|-----------|-----|-----|-------|

### OFF CHARACTERISTICS

|               |  |     |            |             |
|---------------|--|-----|------------|-------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage<br>( $I_C=100\text{mA}$ , $I_B=0$ )  | 50  | ---        | Vdc         |
| $I_{CEX}$     | Collector Cutoff Current<br>( $V_{CE}=75\text{Vdc}$ , $V_{EB(off)}=1.5\text{Vdc}$<br>( $V_{CE}=45\text{Vdc}$ , $V_{EB(off)}=1.5\text{Vdc}$ , $T_C=150^{\circ}\text{C}$ ) | --- | 0.1<br>5.0 | $\text{mA}$ |
| $I_{EBO}$     | Emitter Cutoff Current<br>( $V_{EB}=5.0\text{Vdc}$ , $I_C=0$ )   | --- | 0.1        | $\text{mA}$ |

### ON CHARACTERISTICS

|               |   |     |     |     |
|---------------|---|-----|-----|-----|
| $h_{FE}$      | DC Current Gain <sup>(1)</sup><br>( $V_{CE}=4.0\text{Vdc}$ , $I_C=500\text{mA}$ )                 | 40  | 250 | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage <sup>(1)</sup><br>( $I_C=500\text{mA}$ , $I_B=50\text{mA}$ ) | --- | 1.2 | Vdc |
| $V_{BE(on)}$  | Base-Emitter On Voltage<br>( $I_C=500\text{mA}$ , $V_{CE}=4.0\text{Vdc}$ )                        | --- | 1.4 | Vdc |

### SMALL-SIGNAL CHARACTERISTICS

|          |  |     |     |     |
|----------|--|-----|-----|-----|
| $h_{fe}$ | Small-signal current gain<br>( $V_{CE}=4.0\text{Vdc}$ , $I_C=50\text{mA}$ , $f=10\text{MHz}$ ) | 5.0 | --- | --- |
|----------|--|-----|-----|-----|

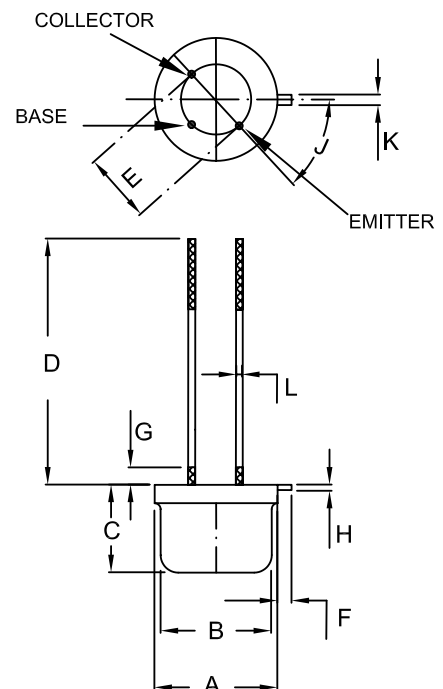
### SWITCHING CHARACTERISTICS

|           |   |     |      |    |
|-----------|---|-----|------|----|
| $t_{on}$  | Turn-On Time<br>( $V_{CC}=30\text{Vdc}$ , $I_C=500\text{mA}$ , $I_{B1}=50\text{mA}$ )         | --- | 100  | ns |
| $t_{off}$ | Turn-Off Time<br>( $V_{CC}=30\text{Vdc}$ , $I_C=500\text{mA}$ , $I_{B1}=I_{B2}=50\text{mA}$ ) | --- | 1000 | ns |

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

## PNP Silicon Switching Transistor

TO-39



### DIMENSIONS

| DIM | INCHES |      | MM    |       | NOTE |
|-----|--------|------|-------|-------|------|
|     | MIN    | MAX  | MIN   | MAX   |      |
| A   | .335   | .370 | 8.509 | 9.40  | Φ    |
| B   | .305   | .335 | 7.747 | 8.509 | Φ    |
| C   | .240   | .260 | 6.096 | 6.604 |      |
| D   | .50    | .75  | 12.7  | 19.05 |      |
| E   | .200   |      | 5.08  |       | ΦTYP |
| F   | .029   | .045 | 7.366 | 11.43 |      |
| G   | -----  | .050 | ----- | 1.27  |      |
| H   | .009   | .031 | 0.229 | 7.874 |      |
| J   | 44°    | 46°  | 44°   | 46°   |      |
| K   | .028   | .034 | 0.711 | 0.864 |      |
| L   | .016   | .021 | 0.406 | 0.533 |      |

[www.mccsemi.com](http://www.mccsemi.com)

## Ordering Information :

| Device         | Packing         |
|----------------|-----------------|
| Part Number-BP | Bulk; 50pcs/Box |

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