



Micro Commercial Components

Micro Commercial Components  
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## Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Power Dissipation:  $P_{CM}=0.5W$  ( $T_{amb}=25^{\circ}C$ )
- Collector Current:  $I_{CM}=-1.0A$
- Collector-Base Voltage:  $V_{(BR)CBO}=-45V$
- Marking Code: BCX51=AA, BCX51-10=AC, BCX51-16=AD
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

| Symbol        | Rating                              | Value       | Unit        |
|---------------|-------------------------------------|-------------|-------------|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage    | -45         | V           |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | -45         | V           |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage      | -5          | V           |
| $I_C$         | Collector Current DC                | -1.0        | A           |
| $P_C$         | Collector Power Dissipation         | 0.5         | W           |
| $T_J$         | Junction Temperature Range          | -55 to +150 | $^{\circ}C$ |
| $T_{STG}$     | Storage Temperature Range           | -55 to +150 | $^{\circ}C$ |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

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

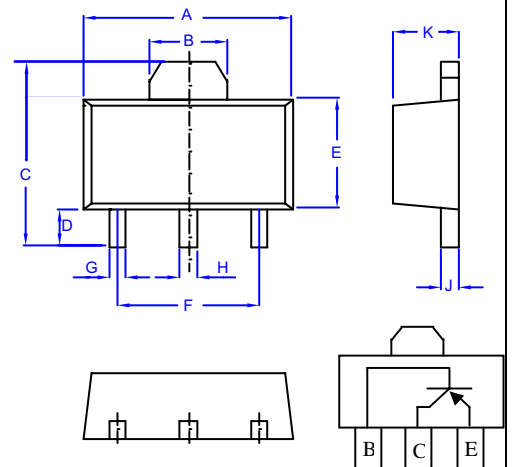
### OFF CHARACTERISTICS

|               |   |     |     |      |         |
|---------------|---|-----|-----|------|---------|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage<br>( $I_C=-100\mu A, I_E=0$ )      | -45 | --- | ---  | V       |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage<br>( $I_C=-1mA, I_B=0$ )        | -45 | --- | ---  | V       |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage<br>( $I_E=10\mu A, I_C=0$ )          | -5  | --- | ---  | V       |
| $I_{CBO}$     | Collector Cutoff Current<br>( $V_{CB}=-30V, I_E=0$ )                | --- | --- | -0.1 | $\mu A$ |
| $I_{EBO}$     | Emitter Cutoff Current<br>( $V_{EB}=-5.0V, I_C=0$ )                 | --- | --- | -0.1 | $\mu A$ |
| $h_{FE(1)}$   | DC Current Gain<br>( $V_{CE}=-2.0V, I_C=-150mA$ )                   |     |     |      |         |
|               | BCX51   | 63  | --- | 250  | ---     |
|               | BCX51-10  | 63  | --- | 160  | ---     |
|               | BCX51-16  | 100 | --- | 250  | ---     |
| $h_{FE(2)}$   | DC Current Gain<br>( $V_{CE}=2.0V, I_C=-5.0mA$ )                    | 63  |     |      |         |
| $h_{FE(3)}$   | DC Current Gain<br>( $V_{CE}=-2.0V, I_C=-500mA$ )                   | 40  |     |      |         |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage<br>( $I_C=-500mA, I_B=-50mA$ ) | --- | --- | -0.5 | V       |
| $V_{BE(on)}$  | Base-Emitter Voltage<br>( $I_C=-500mA, V_{CE}=-2.0V$ )              | --- | --- | -1   | V       |
| $f_T$         | Transition Frequency<br>( $V_{CE}=-5V, I_C=-10mA, f=100MHz$ )       | 50  | --- | ---  | MHz     |

**BCX51**  
**BCX51-10**  
**BCX51-16**

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

**SOT-89**



| DIM | DIMENSINS |      |      |      | NOTES |
|-----|-----------|------|------|------|-------|
|     | INCHES    |      | MM   |      |       |
| A   | .173      | .181 | 4.39 | 4.60 |       |
| B   | .061      | ---- | 1.55 | ---- | REF.  |
| C   | .154      | .165 | 3.91 | 4.25 |       |
| 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 |

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

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