



Micro Commercial Components



Micro Commercial Components
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BCX56 BCX56-10 BCX56-16

NPN Plastic-Encapsulate Transistors

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: $V_{(BR)CBO}=100V$
- Marking : BCX56=BH, BCX56-10=BK, BCX56-16=BL
- 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 | 100 | V |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | 80 | 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(Note1) | W |
| | | 0.95(Note2) | |
| | | 1.35(Note3) | |
| T_J | Junction Temperature Range | -55 to +150 | $^{\circ}C$ |
| T_{STG} | Storage Temperature Range | -55 to +150 | $^{\circ}C$ |

- [1] Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint.
 [2] Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for collector 1 cm².
 [3] Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for collector 6 cm².

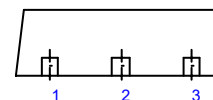
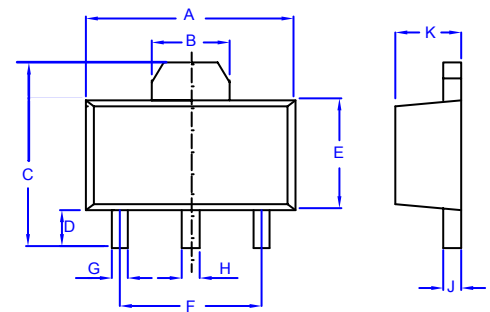
Electrical Characteristics @ 25°C Unless Otherwise Specified

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

OFF CHARACTERISTICS

| | | | | | | |
|---------------|--|----------|-----|-----|---------|-----|
| V_{CBO} | Collector-Base Voltage ($I_C=100\mu A$, $I_E=0$) | 100 | --- | --- | Vdc | |
| V_{CEO} | Collector-Emitter Voltage ($I_C=10mA$, $I_B=0$) | 80 | --- | --- | Vdc | |
| V_{EBO} | Emitter-Base Voltage ($I_E=10\mu A$, $I_C=0$) | 5.0 | --- | --- | Vdc | |
| I_{CBO} | Collector Cutoff Current ($V_{CB}=30V$, $I_E=0$) | --- | --- | 0.1 | μA | |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=5.0V$, $I_C=0$) | --- | --- | 0.1 | μA | |
| $h_{FE(1)}$ | DC Current Gain ($V_{CE}=2.0V$, $I_C=150mA$) | BCX56 | 63 | --- | 250 | --- |
| | | BCX56-10 | 63 | --- | 160 | --- |
| | | BCX56-16 | 100 | --- | 250 | --- |
| $h_{FE(2)}$ | DC Current Gain ($V_{CE}=2.0V$, $I_C=5.0mA$) | 40 | --- | --- | --- | |
| $h_{FE(3)}$ | DC Current Gain ($V_{CE}=2.0V$, $I_C=500mA$) | 25 | --- | --- | --- | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C=500mA$, $I_B=50mA$) | --- | --- | 0.5 | Vdc | |
| V_{BE} | Base-Emitter Voltage ($I_C=500mA$, $V_{CE}=2.0V$) | --- | --- | 1.0 | Vdc | |
| f_T | Transition Frequency ($V_{CE}=100V$, $I_C=50mA$, $f=100MHz$) | 130 | --- | --- | MHz | |

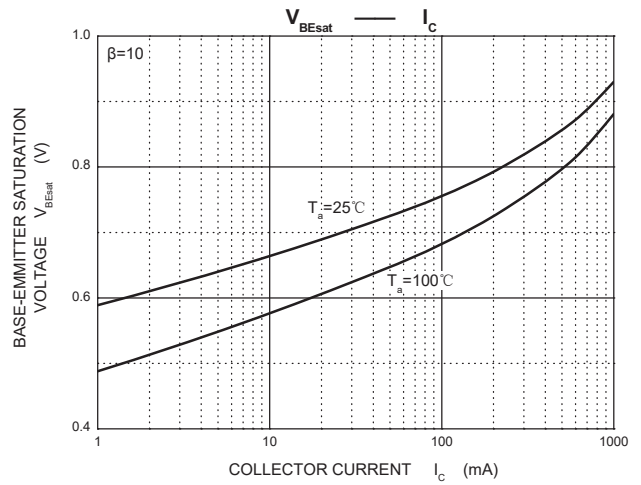
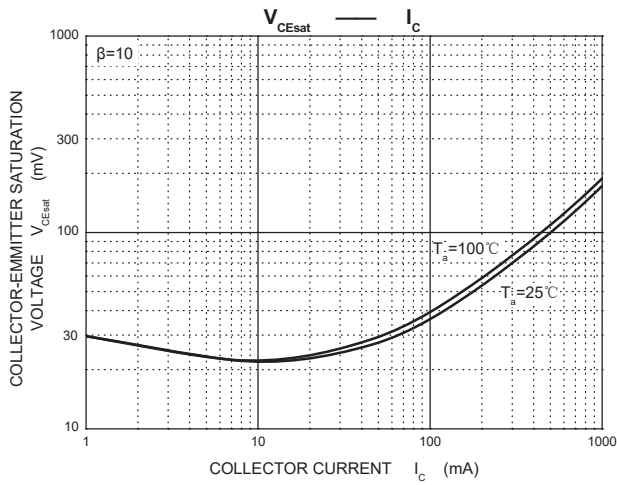
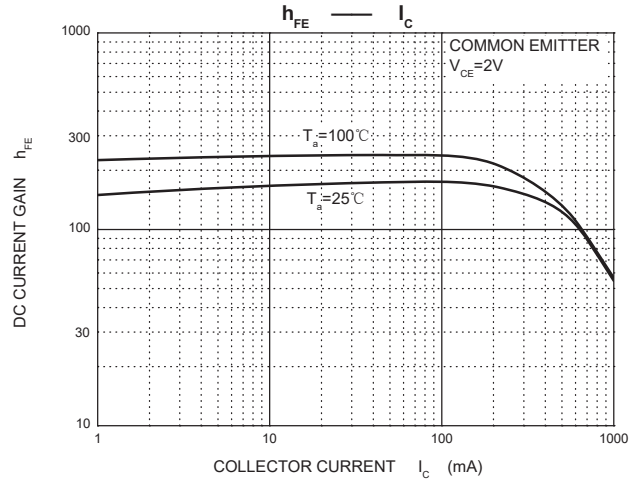
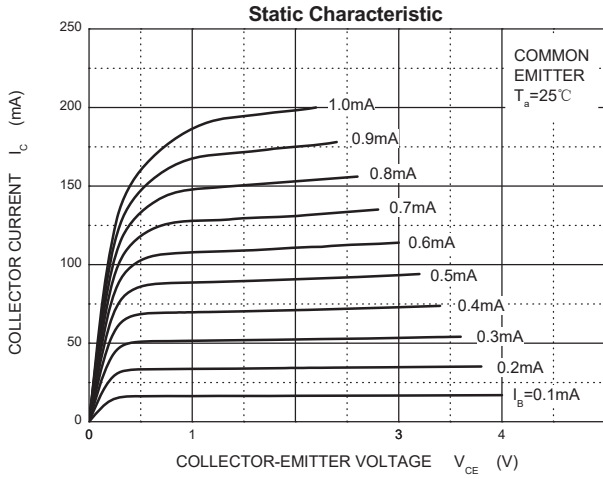
SOT-89



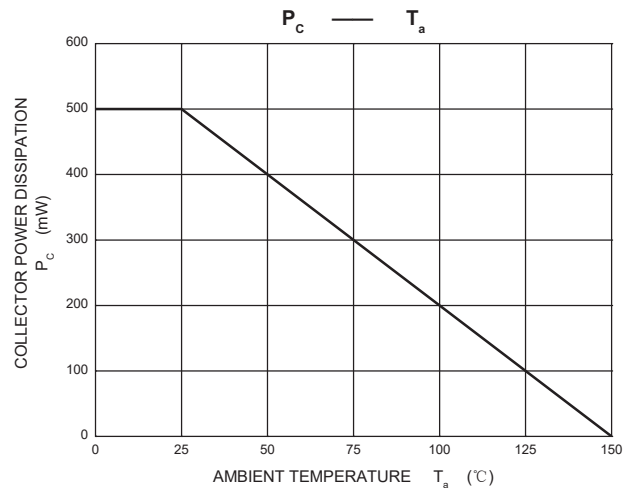
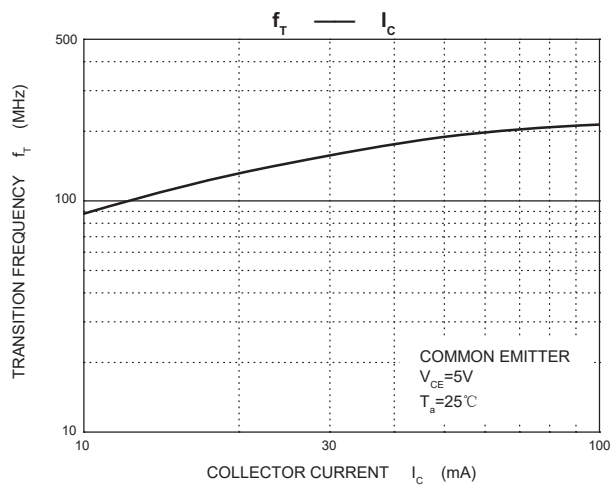
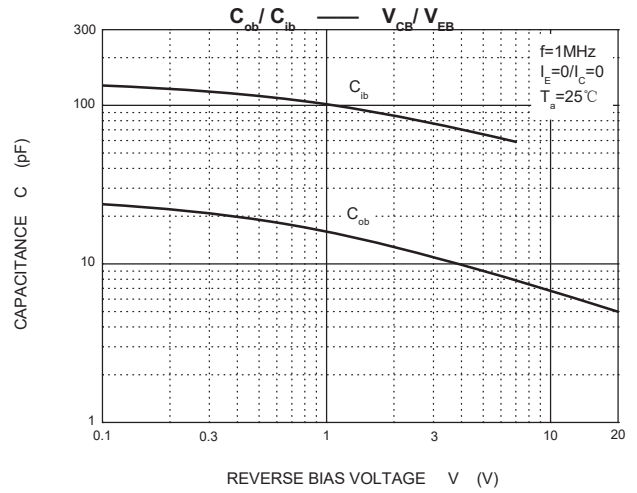
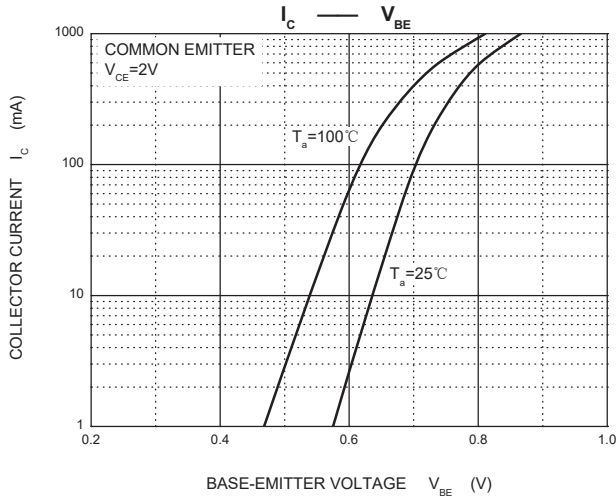
1. BASE
2. COLLECTOR
3. EMITTER

| DIM | DIMENSINS | | | | NOTES |
|-----|-----------|-------|------|-------|-------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| 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 | |

Typical Characteristics



Typical Characteristics





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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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