

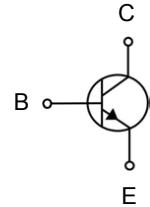
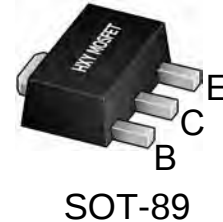


## Features

- Collector Current:  $I_C = 1A$
- Power Dissipation of 500mw

## Package Marking and Ordering Information

| Product ID   | Pack   | Marking  | Qty(PCS) |
|--------------|--------|----------|----------|
| BCX54-16,115 | SOT-89 | BCX54-16 | 1000     |



## Maximum Ratings ( $T_a = 25^\circ C$ unless otherwise noted)

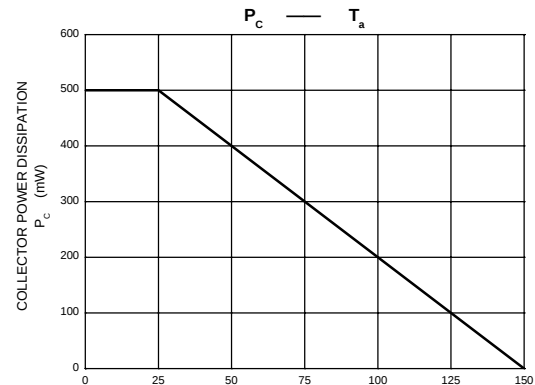
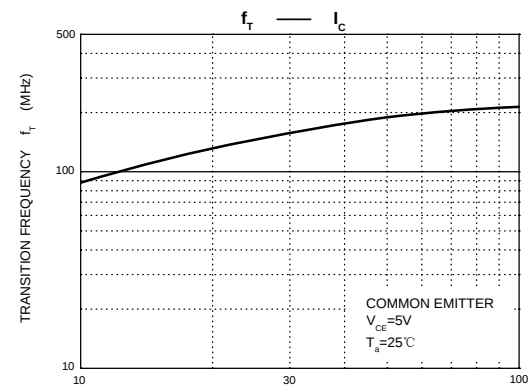
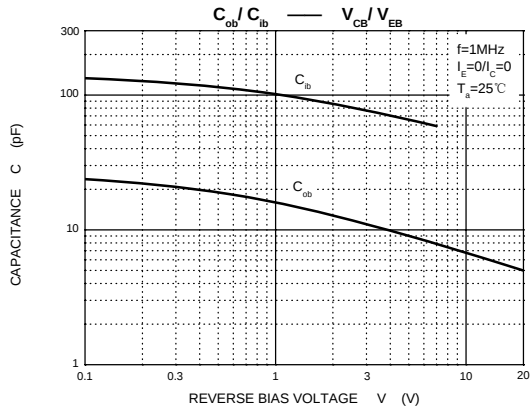
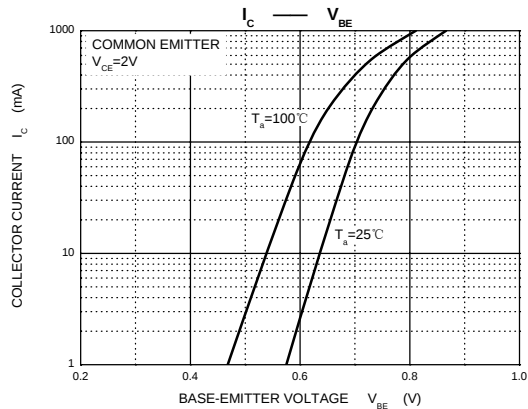
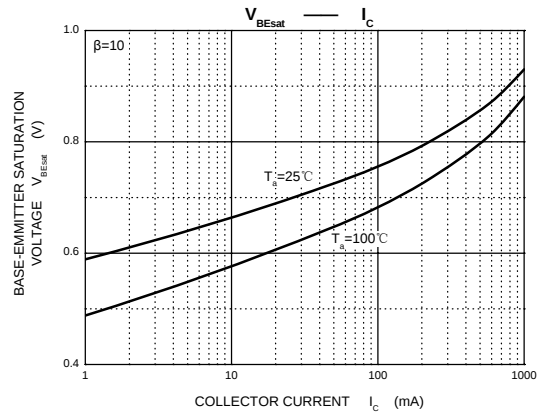
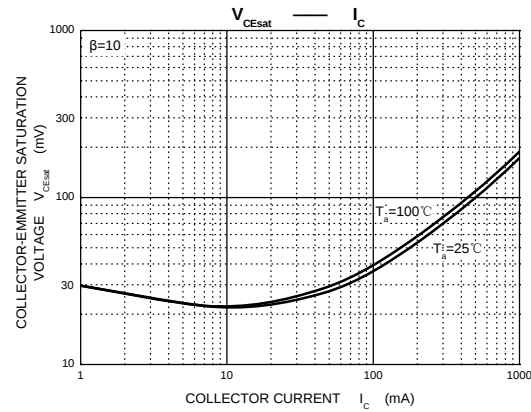
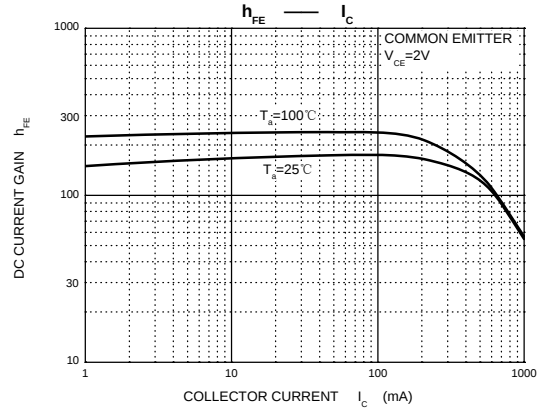
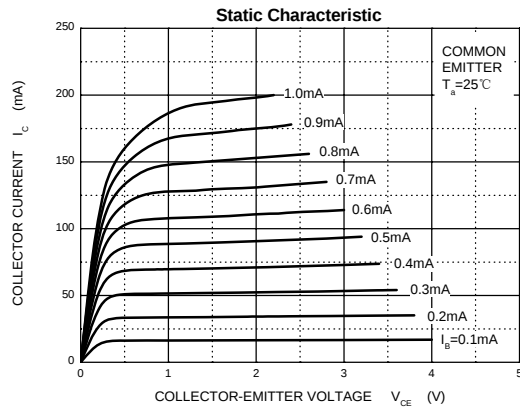
| Symbol    | Parameter                    | Value   | Unit       |
|-----------|------------------------------|---------|------------|
| $V_{CBO}$ | Collector-Base Voltage       | 45      | V          |
| $V_{CEO}$ | Collector-Emitter Voltage    | 45      | V          |
| $V_{EBO}$ | Emitter-Base Voltage         | 5       | V          |
| $I_C$     | Collector Current-Continuous | 1       | A          |
| $P_C$     | Collector Power Dissipation  | 500     | mW         |
| $T_j$     | Junction Temperature         | 150     | $^\circ C$ |
| $T_{stg}$ | Storage Temperature          | -55-150 | $^\circ C$ |

## Electrical Characteristics ( $T_a = 25^\circ C$ unless otherwise specified)

| Parameter                            | Symbol          | Test conditions                       | Min | Typ | Max | Unit    |
|--------------------------------------|-----------------|---------------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$   | $I_C = 100\mu A, I_E = 0$             | 45  |     |     | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}^*$ | $I_C = 10mA, I_B = 0$                 | 45  |     |     | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$   | $I_E = 10\mu A, I_C = 0$              | 5   |     |     | V       |
| Collector cut-off current            | $I_{CBO}$       | $V_{CB} = 30V, I_E = 0$               |     |     | 0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$       | $V_{EB} = 5V, I_C = 0$                |     |     | 0.1 | $\mu A$ |
| DC current gain                      | $h_{FE(1)}^*$   | $V_{CE} = 2V, I_C = 5mA$              | 40  |     |     |         |
|                                      | $h_{FE(2)}^*$   | $V_{CE} = 2V, I_C = 150mA$            | 100 |     | 250 |         |
|                                      | $h_{FE(3)}^*$   | $V_{CE} = 2V, I_C = 0.5A$             | 25  |     |     |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}^*$ | $I_C = 0.5A, I_B = 50mA$              |     |     | 0.5 | V       |
| Base-emitter voltage                 | $V_{BE}^*$      | $V_{CE} = 2V, I_C = 0.5A$             |     |     | 1   | V       |
| Transition frequency                 | $f_T$           | $V_{CE} = 5V, I_C = 10mA, f = 100MHz$ |     | 130 |     | MHz     |

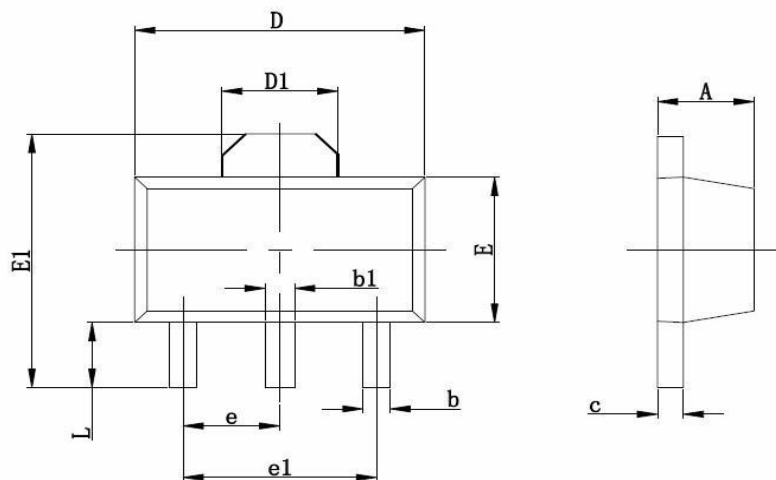


## Typical Characteristics





## SOT-89 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 1.400                     | 1.600 | 0.055                | 0.063 |
| b      | 0.320                     | 0.520 | 0.013                | 0.020 |
| b1     | 0.400                     | 0.580 | 0.016                | 0.023 |
| c      | 0.350                     | 0.440 | 0.014                | 0.017 |
| D      | 4.400                     | 4.600 | 0.173                | 0.181 |
| D1     | 1.550 REF.                |       | 0.061 REF.           |       |
| E      | 2.300                     | 2.600 | 0.091                | 0.102 |
| E1     | 3.940                     | 4.250 | 0.155                | 0.167 |
| e      | 1.500 TYP.                |       | 0.060 TYP.           |       |
| e1     | 3.000 TYP.                |       | 0.118 TYP.           |       |
| L      | 0.900                     | 1.200 | 0.035                | 0.047 |



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